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10/27/2023 11:05:09 AM

2023 PERIODIC REVIEW REPORT

HETTLING PARK

TOWN OF CLERMONT, COLUMBIA COUNTY, NY

CPL PROJECT NO.: R22.00245.00

DOCUMENT DATE: OCTOBER 13TH, 2023

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I. Executive Summary

CPL has prepared this Periodic Review Report (PRR) for the Hettling Park (the Site) in the Town of Clermont, Columbia County, NY (Figure 1). The period of review for this report is January 20, 2022 to September 10, 2023. This PRR was prepared in accordance with the requirements in Section 6.3(b) NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010 and guidelines provided by the NYSDEC.

1.1 Site History and Remedial Program

The Site, Hettling Park (formerly Hettling Farm) has been remediated from its previous contaminated state. The New York State Department of Environmental Conservation (NYSDEC) produced a Record of Decision for the Site in March of 2008. The description of the Site characteristics are as follows:

> *"The Former Hettling Farm Site is located in the Town of Clermont, in Columbia County, New York. The Site consists of 20.5 acres and is located along the western side of U.S. Route 9, approximately 1,100 feet north of the intersection of U.S. Route 9 and County Route 6. The Site's general location is in a rural setting, and presently consists of vacant land which has historically been utilized for agricultural purposes. The Site is bordered on the west and north by other lands belonging to Hettling, by private property and a cemetery to the southwest, and by private and Town lands to the south. The Site rises gradually from its eastern border with Route 9, to the property boundary on the west side. An artificial ditch and intermittent stream, constructed for drainage and/or irrigation, roughly bisect the Site flowing south to north.*
>
> *The soils at the Site consist of sand, gravel, and varying percentages of silt and cobbles. Distinct clay layers consisting of greyish-brown and or blueish-grey clay of various thicknesses were encountered at different areas around the Site. Bedrock at the Site is composed of shale and was encountered at depths ranging from 6.5 feet below ground surface up on the west side of the Site, to greater than 20 feet below ground surface in the east side of the Site.*
>
> *A majority of the 20.5 acres of the Site were historically utilized for agricultural purposes. Generally, the lands to the west of the artificial ditch and intermittent stream were primarily utilized as apple orchards and the lands on the eastern portion were utilized for cultivation of row crops, vegetables and/or vineyards and orchards. The use of persistent inorganic and organic pesticides as well as the application of fertilizers resulted in the deposition of these hazardous substances in the Site media. In addition, there was evidence that waste material may have been disposed on the surface and in the subsurface adjacent to the Site. A large stockpile of railroad ties and poles,*

which may have been treated with coal tar creosote and/or chromated copper arsenate (CCA) for preservation, were disposed on the surface in the north section of the site."

Arcadis was hired to design and implement one of the various plans the NYSDEC produced for the remediation of the Site.

A Remedial Investigation / Alternatives Analysis Work Plan (RI) was performed by C.T. Male Associates, P.C. (July 2006) to characterize the nature and extent of contamination at the site. The results of the RI are described in detail in the Record of Decision (ROD) dated March 2008. In April 2009, a supplemental soil investigation was performed in addition to the RI. The site was remediated in accordance with the NYSDEC-approved ROD and the Final Engineering Report. Remediation of sediments on the Former Hettling Farm site was completed in 2019. The remedial action also includes continued environmental monitoring.

A Site Management Plan (SMP), dated January 2019, was developed to provide a detailed description of all procedures required to manage remaining contamination at the site after completion of the Remedial Action.

1.2 Remedy Evaluation and Recommendations Summary

In summary, this PRR is intended to evaluate the ongoing management of the selected remedial program for the site as outlined in the Site Management Plan (SMP) dated January 2019. Based on information reviewed as part of this PRR, implementation of investigation and maintenance activities is required in order to ensure that the remedy is performing properly and effectively and is protective of public health and the environment.

In order to maintain compliance with the requirements presented in the SMP, a summary of recommended investigation and maintenance activities is provided below.

- Continue groundwater sampling on an annual basis in order to evaluate trends in groundwater criteria.
- Sample surface/sediment locations if discharge is present in these locations and actively flowing to evaluate trends.
- Continue annual routine site inspection and maintenance of the landfill.
- Repair deficiencies noted in routine site inspections.

II. Site Overview

This PRR has been prepared for the Former Hettling Farm site, located in the Town of Clermont, Columbia County, New York. This PRR covers the period of January 2022 through September 2023. The NYSDEC has assigned the Site the ID No. E411015. This site is currently not on the NYSDEC's registry of inactive hazardous waste sites. The Site is a Class C site. A Class C site is a site that has been determined that the remediation has been satisfactorily completed under a remedial program but requires continued operation and maintenance.

2.1 Objectives of the Periodic Review

The periodic review process is used for determining if a remedy continues to be properly managed as set forth in the guidance documents for the Site and is protective of human health and the environment. The objectives of the periodic review for sites in the State Superfund Program are as follows:

- Determine if the remedy remains in place, is performing properly and effectively, and is protective of public health and the environment;
- Evaluate compliance with the decision document(s) and the SMP; Evaluate the condition of the remedy;
- Verify, if appropriate, that the intent of Institutional Controls (IC) continues to be met, and that Engineering Controls (EC) remain in place, are effective and protective of public health and the environment;
- Evaluate the implemented remedies' effectiveness towards moving the Site to closure.

2.2 Remedial History

The Former Hettling Park site is an approximately 20.5-acre former orchard/farming. Based upon the soil investigation, the main farming areas were identified at the site to have soil contamination and agricultural waste. Numerous types of testing were completed during the soil investigation; Surface soil, subsurface soil, groundwater, surface water, sediments, and soil vapor. Surface soil and subsurface soil investigations both produced areas of concern outlined within the SI report and echoed with in the ROD. Arsenic was found in the surface soils at a level that

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exceeded the Part 375 of the Protection for Public Health – Restricted Use Commercial criteria. Like surface soils, the subsurface soils were sampled via test pits in the locations where anomalies were detected in the electromagnetic survey and analyzed against the Part 375, SCO for arsenic (16 ppm). Groundwater, surface water, sediments and soil vapor were all found to have no significant site-related contamination at levels of concern of the SCO so no remedial alternatives were needed for these scenarios.

A RI was performed to characterize the nature and extent of contamination at the site. The results of the RI are described in detail in the ROD dated March 2008. The site was remediated in accordance with the NYSDEC-approved ROD and the Final Closure Plan. A Part 360 cap was installed at the site. The potential for soil vapor intrusion was evaluated by the NYSDOH and the NYSDEC, and no further actions were deemed necessary. The remedial action also includes continued environmental monitoring (annual groundwater and surface water sampling).

A SMP, dated January 2019, was developed to provide a detailed description of all procedures required to manage remaining contamination at the site after completion of the Remedial Action.

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III. Evaluate Remedy Performance, Effectiveness, and Protectiveness

The SMP describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the site, the soil cover system, and all affected site media. Groundwater samples were collected on July 26th, 2023 for each of the monitoring wells on site. The monitoring described herein consisted of the sampling and analysis on monitoring wells MW-1, MW-2, MW-4, MW-5, and MW-7A with a surface water sample SW-1.

During the implementation of the Corrective Actions Plan as part of the 2020 PRR it was determined by this office and the NYSDEC via their representative TRC Companies that MW-3 and MW-6 were not present and as such will be removed from future sampling. MW-7 was found to have a blockage during the same window of sampling, as part of the Corrective Action Plan this well was to be decommissioned and a new well to be installed (March 3rd, 2023) and sampled in its place. Information regarding the newly drilled well in included in Appendix D of this report.

In 2019, the SMP and accompanying Environmental Easement was implemented. As a result, the site requires annual monitoring for the first five years after the installation of the cap (2020-2025). The current monitoring program for the site is summarized in the Table 1 below.

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Table 1:Sampling Requirements

Task	Frequency	Matrix	Reporting
Groundwater Monitoring	Annually for the First Five Years	Groundwater	Field Parameters TAL Metals 1,4-Dioxane PFAs
Surface water Monitoring	Annually for the First Five Years	Surface water	Field Parameters TAL Metals 1,4-Dioxane PFAs
Cover System	Inspection during each groundwater monitoring event	Soil, Asphalt, and Gravel cover	Visual Inspection

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IV. IC/EC Plan Compliance Report

A series of institutional controls (IC) and engineering controls (EC) at the Site currently consist of an environmental monitoring to ensure effectiveness of the remedy.

The following table (Table 2) is a comparison of the IC and EC identified in the SMP and the actual site conditions:

Table 2: Comparison of IC's and EC's

DER-10	Remedial Actions	Actual Site Conditions
Source Removal	Contaminated railroad ties and poles as well as contaminated surface soil / subsurface soil to covered or removed from site	Contaminated railroad ties and poles disposed of off site at an approved location.
Containment/ Isolation	Installation of a final cover	Engineered cover system installed included soil cover (Type II), stone cover (Type III), and asphalt cover (Type IV)
Long Term Monitoring	Long term monitoring of groundwater	Long term monitoring of groundwater performed on an annual basis
Long Term Monitoring	Long term monitoring of surface water	Sampled Annually if there is standing water present in drainage ditch

4.1 IC/EC Requirements and Compliance

Determination of compliance with the IC/EC at the Site is made based on the following criteria:

- The EC(s) applied at the site are in place and previous deficiencies have been rectified.

- Nothing has occurred that would impair the ability of such controls to protect the public health and the environment, or constitute a violation or failure to comply with any element of the SMP for such controls,
- Access to the Site will continue to be provided to the NYSDEC to evaluate the remedy, including access to evaluate the continued maintenance of such controls.

Currently, certification that the site IC and EC's are in compliance with the requirements stated above.

4.2 IC/EC Certification

See Appendix A.

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V. Monitoring Plan Compliance Report

The current Monitoring Plan was prepared by Arcadis CE, Inc. dated January 2019. A copy of the plan is included within the SMP. This PRR assesses whether the site has been managed as set forth in Monitoring Plan.

5.1 Components of the Monitoring Plan

The monitoring plan consists of the following:

- Sampling locations, protocol, and frequency;
- Information on all designed monitoring systems;
- Analytical sampling program requirements;
- Reporting requirements;
- Quality Assurance/Quality Control (QA/QC) requirements;
- Inspection and maintenance requirements for monitoring wells;
- Monitoring well decommissioning procedures; and
- Annual Inspection and documentation of Site conditions.

The groundwater monitoring was performed July 26th, 2023 for the second set of sampling since the cover was installed. The groundwater samples will continue to be monitored for the next 3 years. The groundwater monitoring consisted of sampling and analysis of five monitoring wells MW-1, MW-2, MW-4, MW-5 and MW-7A along with surface water samples SW-1 as wells MW-3 & MW-6 have been abandoned in place and MW-7 has been replaced. In 2019, the SMP and accompanying Environmental Easement was implemented.

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5.2 Summary of Monitoring Completed During Reporting Period

Table 3: Monitoring Summary

The monitoring completed during the reporting period of January 2021 through December 2023 consisted of the following:

Activity	Compliance Date(s)
Site Management Plan	January 2019
Corrective Actions Plan	July 2021 -March 2023
Groundwater and Surface Water Quality Monitoring	July 2023

5.3 Comparisons with Remedial Objectives

The sections below discuss the results of the groundwater and surface water sampling conducted in accordance with the guidance documents. A summary of results is provided for each parameter tested.

5.3.1 Summary of Sampling Results

Groundwater samples were collected from the five (5) monitoring wells. A summary of the results can be found in Appendix B.

The samples were collected, analyzed and the results were compared with the Water Quality Regulations for groundwater as promulgated by NYCRR 6 Part 703.5 (f). The laboratory test results define the following: sample collection dates, field observations, analytical test results and monitoring well alphanumeric designation.

The New York State Department of Environmental Conservation, Division of Water T.O.G.S.-1.1.1, Ambient Water Quality Standards and Guidance Values and 6 NYCRR Part 703 define the quality criteria for the sampled waters. The monitoring well samples were compared to the "GA" classification criteria.

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Below is the data summary table listing parameters that have exceeded the standard or guidance value in the current period. All sample results are presented in comparable units to the guidance values. Following the summary table is a brief discussion of the parameters that are monitored and further discussion for those parameters that exceeded the guidance values/standards.

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Parameter[1]	Maximum Allowable Concentration (Laboratory Reporting Limit)[3] (ug/L)	MW-1 (d)	MW-2* (d)	MW-4 (d)	MW-5 (u)	MW-7 (u)	MW-7 DUP (u)	SW-1	SW-1 DUP
Aluminum	2000.0 ug/L (100.0 ug/L)[3]	ND	OBSERVATION ONLY (Poor Recovery)	ND	ND	463	394	NA	NA
Antimony	6.0 ug/L (60.0 ug/L)[3]	ND	-	ND	ND	ND	ND	NA	NA
Arsenic	50.0 ug/L (5.0 ug/L)[3]	ND	-	ND	ND	ND	ND	NA	NA
Barium	2000.0 ug/L (10.0 ug/L)[3]	24.7	-	19.9	54.4	74.7	71.0	44.8	43.5
Beryllium	3.0 ug/L (5.0 ug/L)[3]	ND	-	ND	ND	ND	ND	ND	ND
Cadmium	10.0 ug/L (5.0 ug/L)[3]	ND	-	ND	ND	ND	ND	ND	ND
Calcium[2]	(50 ug/L)[3]	16100	-	7100	18400	18900	17800	18300	18900
Chromium	100.0 ug/L (5.0 ug/L)[3]	6.5	-	11.3	ND	9.25	8.81	ND	ND
Cobalt	5.0 ug/L (50.0 ug/L)[3]	ND	-	ND	ND	1.79	1.61	1.38	1.41
Copper	200.0 ug/L (5.0 ug/L)[3]	3.16	-	8.31	4.54	ND	ND	ND	ND
Iron	300.0 ug/L (50.0 ug/L)[3]	ND	-	31.3	60.8	**1140**	**1020**	**3350**	**3540**
Lead	50.0 ug/L (5.0 ug/L)[3]	ND	-	ND	ND	2.78	3.6	ND	ND
Magnesium	35000.0 ug/L (50.0 ug/L)[3]	4000	-	2410	4290	7200	6790	4510	4720
Manganese	600.0 ug/L (20.0 ug/L)[3]	ND	-	10.5	14.0	**747**	**657**	561	**664**
Mercury	1.4 ug/L (0.2 ug/L)[3]	ND	-	ND	ND	ND	ND	ND	ND
Nickel	200.0 ug/L (20.0 ug/L)[3]	0.71	-	ND	ND	3.31	2.93	ND	ND
Potassium[2]	(50 ug/L)[3]	3750	-	172	395	829	765	954	984
Selenium	20.0 ug/L (5.0 ug/L)[3]	ND	-	ND	ND	ND	ND	ND	ND
Silver	100.0 ug/L (10.0 ug/L)[3]	ND	-	ND	ND	ND	ND	ND	ND
Sodium	20000 ug/L (500 ug/L)[3]	**43700**	-	3030	2310	2620	2440	2730	2840
Thallium	0.5 ug/L (10.0 ug/L)[3]	ND	-	**3.37**	ND	**3.57**	**5.22**	ND	ND
Vanadium[2]	(20 ug/L)[3]	ND	-	ND	ND	ND	ND	ND	ND

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Zinc	5000.0 ug/L (10.0 ug/L)[3]	ND	-	ND	ND	ND	ND	ND	ND
1-4 Dioxane[3] [4]	1 ug/L[4] (.04 ug/L)[3]	ND	-	ND	ND	ND	ND	ND	ND

Table 4: TAL Metals & 1-4 Dioxane Laboratory Results

Sampling Date: July 27h, 2023

Notes:

(u) = Upgradient Monitoring Well

(d) = Downgradient Monitoring Well

* = Wells produced no data during sampling.

[1]Standard or Guidance Value (GV) per NYS DEC Division of Water, T.O.G.S. – 1.1.1 and 6 NYCRR §703

[2]Standard or Guidance Value (GA) per NYS DEC Division of Water, T.O.G.S. – 1.1.1 and 6 NYCRR §703 not provided

[3]Reporting Limit used during lab analysis by ALS Environmental using Method 8270D SIM and Adirondack Environmental using method EPA 245.1 Rev 3.0 for Mercury and EPA 200.7 for Metals

\- = Either non-detect or not exceeded or no sample taken this period

[4]NYSDEC Guidance Value for 1-4 dioxane = 1 ug/L per correspondence dated March 10, 2021

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Parameter	**NYSDEC Part 375 Maximum Detection Level****	**Laboratory Reporting Limit (MRL)**	**MW-1** (Downgradient)	**MW-4** (Upgradient)	**MW-5** (Upgradient)	**MW-7** (Upgradient)	**MW-7 Dup** (Upgradient)	**SW-1** (Upgradient)	**SW-1 Dup** (Upgradient)
	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
Perfluorobutanesulfonic acid (PFBS)	100.00	2.00	**5.88**	ND	ND	ND	ND	ND	ND
Perfluorohexanoic acid (PFHxA)	100.00	2.00	**4.40**	ND	ND	ND	ND	ND	ND
Perfluoroheptanoic acid (PFHpA)	100.00	2.00	ND	ND	ND	ND	ND	ND	ND
Perfluorohexanesulfonic acid (PFHxS)	100.00	2.00	ND	ND	ND	ND	ND	ND	ND
Perfluorooctanoic acid (PFOA)	10.00	2.00	**7.54**	ND	ND	ND	ND	ND	ND
Perfluorooctanesulfonic acid (PFOS)	10.00	2.00	ND	ND	ND	ND	ND	ND	ND
Perfluorononanoic acid (PFNA)	100.00	2.00	ND	ND	ND	ND	ND	ND	ND
Perfluorodecanoic acid (PFDA)	100.00	2.00	ND	ND	ND	ND	ND	ND	ND
PerFluoroUndecanoic Acid (PFUnA)	100.00	2.00	ND	ND	ND	ND	ND	ND	ND
Perfluorododecanoic acid (PFDoA)	100.00	2.00	ND	ND	ND	ND	ND	ND	ND
Perfluorotridecanoic acid (PFTrDA)	100.00	2.00	ND	ND	ND	ND	ND	ND	ND
Perfluorotetradecanoic acid (PFTA)	100.00	2.00	ND	ND	ND	ND	ND	ND	ND

N-Methyl perFluoroOctaneSulfonAmidoacetic Acid (NMeFOSAA)	100.00	2.00	ND	ND	ND	ND	ND	ND	ND
N-Ethyl perFluoroOctaneSulfonamidoAcetic Acid (NEtFOSAA)	100.00	2.00	ND	ND	ND	ND	ND	ND	ND
Perfluoropentanoic acid (PFPeA)	100.00	2.00	**8.33**	ND	ND	ND	ND	ND	ND
Perfluorooctane Sulfonamide (FOSA)	100.00	2.00	ND	ND	ND	ND	ND	ND	ND
Sodium Perfluoro -1-heptanesulfonate (PFHpS)	100.00	2.00	ND	ND	ND	ND	ND	ND	ND
Perfluorodecanesulfonic acid (PFDS)	100.00	2.00	ND	ND	ND	ND	ND	ND	ND
Sodium H1, H1, H2,H2-Perfluoro -1-octanesulfonate (6:2FTS)	100.00	2.00	ND	ND	ND	ND	ND	ND	ND
Sodium H1, H1, H2,H2-Perfluoro -1-decanesulfonate (8:2FTS)	100.00	2.00	ND	ND	ND	ND	ND	ND	ND
Perfluorobutanoic acid (PFBA)	100.00	2.00	ND	ND	ND	ND	ND	ND	ND
MPFOA (ng/mL)	100.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Concentration of PFAs	500.00		26.12	0.00	0.00	0.00	0.00	0.00	0.00

Table 5:PFA's Laboratory Results

Notes: *Emerging Containments were tested in accordance with method SPE Ext-PFAS-EPA 537m
**Contamination Limits are described within the NYSDEC's Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAs

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5.3.2 Discussion of Sampling Results

Aluminum:

The standard of aluminum at a concentration of 2000.0 ug/l was not exceeded by any wells. Only detectable concentration was located in an upgradient well, this indicates a naturally occurring metal in the soil media and not contributed to by the constructed soil cap.

Antimony:

The standard for antimony at a concentration of 6.0 ug/l was not exceeded by any wells for this report period. No concentration was detected in any sample.

Arsenic:

The standard for Arsenic at a concentration of 50.0 ug/l was not exceeded by any wells for this report period. No concentration was detected in any sample.

Barium:

The standard for Barium at a concentration of 2000.0 ug/l was not exceeded by any wells. Levels indicated above represent naturally occurring Barium throughout the soil media.

Beryllium:

The standard for beryllium at a concentration of 3.0 ug/l was not exceeded by any wells. No concentration was detected in any sample.

Cadmium:

The standard for cadmium at a concentration of 10.0 ug/l was not exceeded by any wells. No concentration was detected in any sample.

Calcium:

There is no standard for calcium, levels will continue to be monitored. Concentrations across the wells (downgradient & upgradient) show consistent levels of calcium. Indicating it is a naturally occurring metal in the soil media.

Chromium:

The standard for chromium at a concentration of 100.0 ug/l was not exceeded by any wells. Concentrations across the wells (downgradient & upgradient) show consistent levels of chromium. Indicating it is a naturally occurring metal in the soil media.

Cobalt:

The standard for cobalt at a concentration of 5.0 ug/l was not exceeded by any wells. Concentrations are present in the upgradient well MW-7 and in the surface water sample indicating it is a naturally occurring metal in the soil media.

Copper:

The standard for copper at a concentration of 200.0 ug/l was not exceeded by any wells. Concentrations are present in both upgradient and downgradient wells at consistent levels indicating it is a naturally occurring metal in the soil media.

Iron:

The standard for iron at a concentration of 300.0 ug/l was exceeded by downgradient well MW-7 and SW-1. Results will be closely observed in future monitoring events to establish any long-term trends. As both MW-7 and SW-1 are upgradient of the soil cap this is evidence that cap is not contributing to the iron concentration in the groundwater and that it a naturally occurring metal in the native soil media.

Lead:

The standard for lead at a concentration of 50.0 ug/l was not exceeded by any wells. Lead is present in only one upgradient well. Indicating that it is a naturally occurring metal in the soil media.

Magnesium:

The standard for magnesium at a concentration of 35000.0 ug/l was not exceeded by any wells. Magnesium levels are present throughout the wells, levels are consistent between the wells indicating that the metal is naturally occurring in the soil media.

Manganese:

The standard for manganese at a concentration of 600.0 ug/l was

exceeded by downgradient well MW-7, MW-7 DUP and SW-1 DUP. Results will be closely observed in future monitoring events to establish any long-term trends. As these sampling locations are upgradient of the constructed cap the assumption can be made that the high concentration levels are not associated with the constructed cap and are naturally occurring in the soil media.

Mercury:

The standard for mercury at a concentration of 1.4 ug/l was not exceeded by any wells. No concentration was detected in any sample.

Nickel:

The standard for nickel at a concentration of 200.0 ug/l was not exceeded by any wells. The low concentrations in both upgradient and downgradient wells indicate a certain level of the metal is present in the native soil media.

Potassium:

There is no standard for Potassium, levels will continue to be monitored. Levels of potassium concentrations are consistent with the previous years of data as well as concentrations across the wells tested in this window. It can be assumed that certain levels of potassium are naturally occurring in the native soil media.

Selenium:

The standard for selenium at a concentration of 20.0 ug/l was not exceeded by any wells.

Silver:

The standard for silver at a concentration of 100.0 ug/l was not exceeded by any wells. No concentration was detected in any sample.

Sodium:

The sodium standard of 20000.0 ug/l was exceeded at one down gradient monitoring wells MW-1 with a reported result of 43700.0 ug/l. Results will be closely observed in future monitoring events to establish any long-term trends. MW-1 is located near US Rt 9, due to its proximity to the main road and the use of road salt during the

winter months it can assumed that the groundwater table is affected by the use of road salt and not the upgradient engineered soil cap.

Thallium:

The thallium standard of 0.5 ug/l was exceeded at one up gradient and one downgradient monitoring well MW-4 and MW-7 with a reported result of 3.37 and 3.57 respectively ug/l. A similar result was found during the analysis of the duplicate sample MW-7 DUP which was also taken from monitoring well MW-7. The reported result in MW-7 DUP was 5.22 ug/l. Results will be closely observed in future monitoring events to establish any long-term trends. With the concentrations being present in both upgradient and downgradient wells this indicates that the metal is naturally occurring in the native soil media.

Vanadium:

There is no standard for vanadium, levels will continue to be monitored. No concentration was detected in any sample.

Zinc:

The standard for zinc at a concentration of 5000.0 ug/l was not exceeded by any wells. No concentration was detected in any sample.

1,4-Dioxane:

The NYSDEC guidance value for 1,4-Dioxane is 1 ug/L, however the lab was examining the samples with a reporting limit of 0.04 ug/L. All samples registered as Non detects (ND). Results for 1,4-Dioxane will be closely monitored during future observation events to establish any long-term trend due to past detections.

Perfluorinated Alkyl Acids (PFAs):

The NYSDEC DER (Division of Environmental Remediation) has prepared guidance for the sampling, analysis, and assessment of PFAs as the EPA has yet to release anything of note on the subject. Within the document, released in January 2021, PFOA and PFOS were determined to have a maximum limit within any water sample (groundwater or surface water) which would require further assessment of ten (10) nanograms per liter (ng/L). MW-1 had results for several of the PFAs that were tested for over the maximum limit

described above. PFBS, PFHxA, PFOA, and PFPeA were all found during sampling of MW-1 with the results being 5.88 ng/L, 4.40 ng/L, 7.54 ng/L, and 8.33 ng/L respectively. These concentrations are under the defined maximum concentration. As this well is a downgradient well of the installed cap and the upgradient wells MW-5 and MW-7 had concentrations not detectable it is reasonable to assume that some of the additional concentration is being contributed directly from the soil cap, this however cannot be substantiated as there is no evidence of elevated levels in MW-4 (also a downgradient well). Moving forward this monitoring well and the PFOA concentration should be examined further. PFOS has detections that fall below the maximum limit of 10 ng/L as described within the January document. Moving forward PFOS should continue to be monitored to determine if any potential contamination will occur in the future. PFAs have been a larger concern in recent years and as such will continue to be observed diligently in the future to establish any long-term trends.

5.4 Monitoring Well Changes

As part of the 2020 PRR it was determined that MW-3 & MW-6 were missing. The Town's representative, CPL, met with a representative from TRC Companies on behalf of the NYSDEC to try and locate the missing wells. There was no evidence that the wells were present, using gps location devices and metal detectors nothing presented itself as a damaged or buried monitoring well. It was agreed that these two wells would be abandoned and removed from the sampling requirements. During that same PRR it was brought to the attention of the Town that MW-7 had a blockage. After discussions with the NYSDEC, a Corrective Actions Plan was prepared and implemented to decommission the blocked well and install a new well in its place. On March 9th, 2023, MW-7 was decommissioned and a new monitoring well matching the previous version's specifications was installed by Terracon on behalf of the Town of Clermont. Information relating to the decommissioning and installation of the new well are included in Appendix C.

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5.5 Annual Cap Inspection and Site Conditions

A site inspection of the cap was performed on September 12th, 2023. The inspection report can be found in Appendix C. The integrity of the installed cap is in good condition with no obvious intrusions or noticeable coloring on the top of the cap. The drainage ditch had no discoloration or sheen. There was no dead grass or soil erosion within the cap area. The gravel/asphalt portion of the cap is in good condition. No cracks or sink holes are present, no discoloration or evidence of spills and no evidence of disturbance to area. Pictures from the inspection are included within Appendix C.

5.6 Conclusions and Recommendations for Changes

As this is the second year of the annual groundwater and stormwater sampling, it is difficult to identify trends for if the installed cap is functioning properly. The metal concentrations that showed some concentrations that were potentially a concern were Iron, Manganese, Sodium, Calcium, Potassium, and Thallium. Of those chemicals iron, manganese, sodium and thallium had results over their maximum allowable concentration. MW-1 may have an abundance of Sodium as it is located adjacent to the state road. Road salt usage could have an impact on the groundwater in that specific area as levels of sodium in MW-5 are substantially less. SW-1 may have above maximum levels in iron and manganese with high calcium even compared to the monitoring wells in the coming years surface waters should be monitored closely. Analytes will continue to be analyzed to monitor the concentrations within the site to determine if the engineered soil cap is working properly.

DRAFT

VI. Overall PRR Conclusions and Recommendations

The following sections summarize the overall compliance with the SMP, performance and effectiveness of the remedy based on media sampling results and future submission of the PRR.

6.1 Compliance with SMP

The SMP Compliance Schedule has been met for the requirements described in the SMP. The monitoring and inspections performed to date have followed the SMP and the current long-term monitoring program.

In accordance with the SMP, the NYSDEC will be notified of any impacts to the cover system or other issues discovered during the monitoring and inspections that may limit the effectiveness of the engineering controls within seven days of discovery.

A copy of the Site Management Periodic Review Report Notice and Institutional and Engineering Controls Certification Form is included in Appendix A.

6.2 Performance and Effectiveness of the Remedy

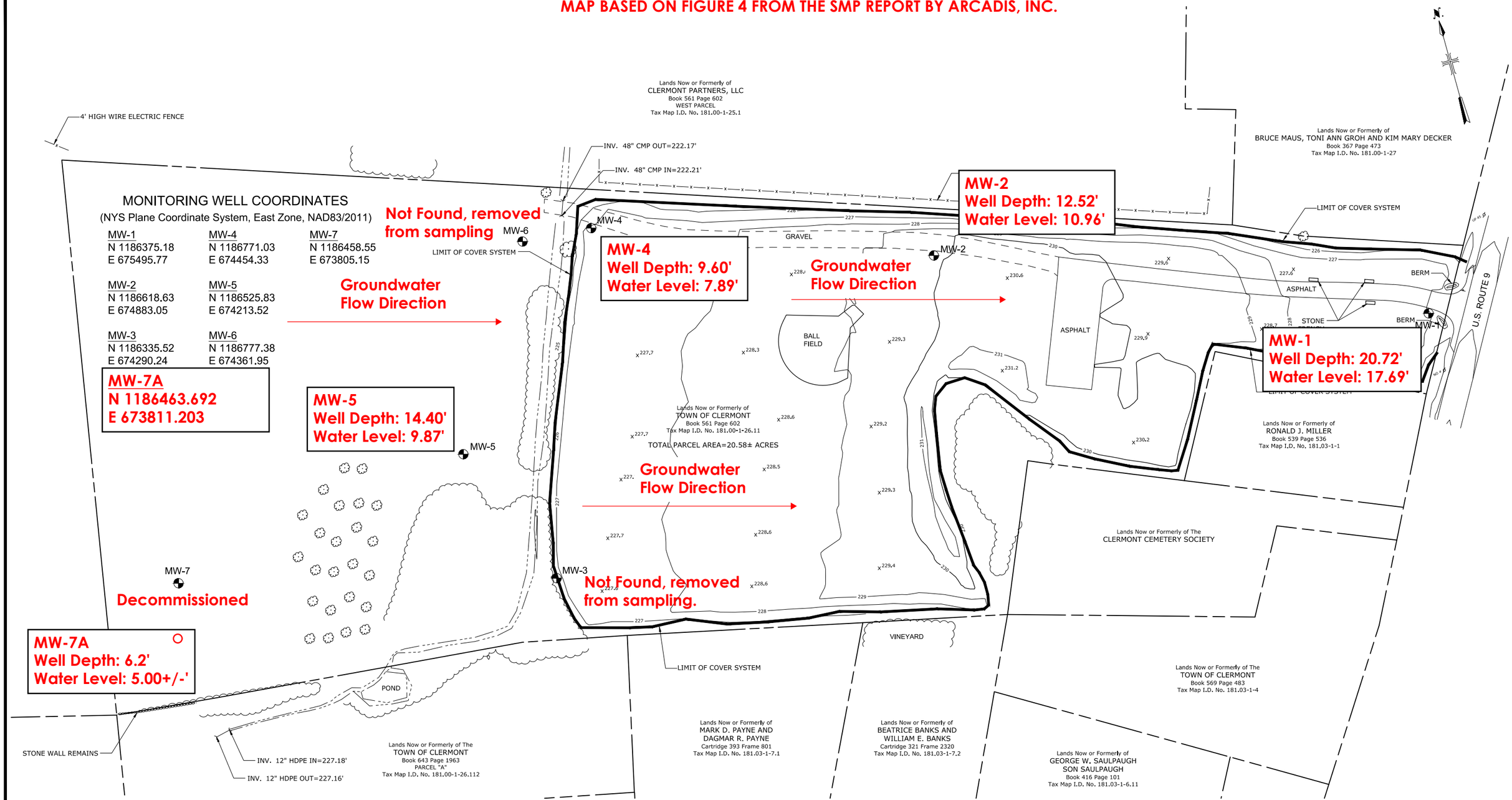
The completed final capping system is expected to significantly eliminate surface water and precipitation infiltration into the waste mass thereby reducing impacts to local groundwater quality as the waste mass desiccates. Most of the exceedances of groundwater standards or guidance values at down gradient monitoring wells and sampling points can be attributed, in part, to either naturally occurring background concentrations. Monitoring data indicates that the former hettling farm site is not contributing to the elevated levels recorded in the monitoring wells. Future monitoring events will be studied to observe long-term trends in groundwater and surface water quality.

6.3 Future Submittals

Future PRR's will be submitted to the Department annually. The report will be prepared in accordance with NYSDEC DER-10 and submitted within 45-days of the end of each certification period. A summary of the sampling results will also be incorporated into the Periodic Review Report as well as submitted electronically via the Equis Software.

FIGURES

MAP BASED ON FIGURE 4 FROM THE SMP REPORT BY ARCADIS, INC.



	FORMER HETTLING FARM SITE NYSDEC SITE NO. E411015 TOWN OF CLERMONT, COLUMBIA COUNTY, NEW YORK	**MONITORING WELLS LOCATION & DEPTH**	**April 2023** **Figure 1**

APPENDIX A

Enclosure 1

Certification Instructions

I. Verification of Site Details (Box 1 and Box 2):

Answer the three questions in the Verification of Site Details Section. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional Controls/ Engineering Controls (IC/ECs)(Boxes 3, 4, and 5)

1.1.1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party should petition the Department separately to request approval to remove the control.

2. In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

3. If you cannot certify "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why the **Certification** cannot be rendered, as well as a plan of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) must be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 6 and Box 7**):**

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page as follows:

- For the Institutional Controls on the use of the property, the certification statement in Box 6 shall be completed and may be made by the property owner or designated representative.

- For the Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional, as noted on the form.

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. **E411015**

Site Name Former Hettling Property

Site Address: 1795 Route 9 Zip Code: 12526
City/Town: Clermont
County: Columbia
Site Acreage: 20.570

Reporting Period: July 01, 2021 to July 01, 2022
July 01, 2021 to December 31, 2023

	YES	NO
1. Is the information above correct?	☐	☒
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	☐	☒
This was addressed during 2020 PRR. Parcel Use is a Town Park.		
7. Are all ICs in place and functioning as designed?	☒	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. E411015 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
181-1-26.11	Williams Banks, Town of Clermont	Landuse Restriction Site Management Plan Soil Management Plan Monitoring Plan

Environmental easement which limits the use and development of property to restricted-residential use and requires compliance with approved SMP. SMP will require: (a) management and monitoring of final cover system; (b) compliance with soil excavation plan; (c) monitoring of groundwater and required water quality testing in accordance with local and county requirements for any use of groundwater as a potable water source; (d) identification of any use restrictions on-site; (e)provisions for maintenance of remedy components. A periodic certification of the IC/ECs will be required by property owner.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
181-1-26.11	Cover System Monitoring Wells

A cover system to allow restricted-residential use of the site.

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
X	☐

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

(a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
X	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

_____ _____

Signature of Owner, Remedial Party or Designated Representative Date

IC CERTIFICATIONS
SITE NO. E411015

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as _____(Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

_____ _____
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification Date

EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as a Qualified Environmental Professional for the _____
(Owner or Remedial Party)

_____	_____	_____
Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification	Stamp (Required for PE)	Date

Enclosure 3
Periodic Review Report (PRR) General Guidance

I. Executive Summary: (1/2-page or less)
   A. Provide a brief summary of site, nature and extent of contamination, and remedial history.
   B. Effectiveness of the Remedial Program - Provide overall conclusions regarding;
      1. progress made during the reporting period toward meeting the remedial objectives for the site
      2. the ultimate ability of the remedial program to achieve the remedial objectives for the site.
   C. Compliance
      1. Identify any areas of non-compliance regarding the major elements of the Site Management Plan (SMP, i.e., the Institutional/Engineering Control (IC/EC) Plan, the Monitoring Plan, and the Operation & Maintenance (O&M) Plan).
      2. Propose steps to be taken and a schedule to correct any areas of non-compliance.
   D. Recommendations
      1. recommend whether any changes to the SMP are needed
      2. recommend any changes to the frequency for submittal of PRRs (increase, decrease)
      3. recommend whether the requirements for discontinuing site management have been met.

II. Site Overview (one page or less)
   A. Describe the site location, boundaries (figure), significant features, surrounding area, and the nature and extent of contamination prior to site remediation.
   B. Describe the chronology of the main features of the remedial program for the site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection.

III. Evaluate Remedy Performance, Effectiveness, and Protectiveness
   Using tables, graphs, charts and bulleted text to the extent practicable, describe the effectiveness of the remedy in achieving the remedial goals for the site. Base findings, recommendations, and conclusions on objective data. Evaluations and should be presented simply and concisely.

IV. IC/EC Plan Compliance Report (if applicable)
   A. IC/EC Requirements and Compliance
      1. Describe each control, its objective, and how performance of the control is evaluated.
      2. Summarize the status of each goal (whether it is fully in place and its effectiveness).
      3. Corrective Measures: describe steps proposed to address any deficiencies in ICECs.
      4. Conclusions and recommendations for changes.
   B. IC/EC Certification
      1. The certification must be complete (even if there are IC/EC deficiencies), and certified by the appropriate party as set forth in a Department-approved certification form(s).

V. Monitoring Plan Compliance Report (if applicable)
   A. Components of the Monitoring Plan (tabular presentations preferred) - Describe the requirements of the monitoring plan by media (i.e., soil, groundwater, sediment, etc.) and by any remedial technologies being used at the site.
   B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during this PRR reporting period. Tables and/or figures should be used to show all data.
   C. Comparisons with Remedial Objectives - Compare the results of all monitoring with the remedial objectives for the site. Include trend analyses where possible.
   D. Monitoring Deficiencies - Describe any ways in which monitoring did not fully comply with the monitoring plan.
   E. Conclusions and Recommendations for Changes - Provide overall conclusions regarding the monitoring completed and the resulting evaluations regarding remedial effectiveness.

VI. Operation & Maintenance (O&M) Plan Compliance Report (if applicable)
   A. Components of O&M Plan - Describe the requirements of the O&M plan including required activities, frequencies, recordkeeping, etc.
   B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during this PRR reporting period.
   C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluated

the ability of each component of the remedy subject to O&M requirements to perform as designed/expected.

D. O&M Deficiencies - Identify any deficiencies in complying with the O&M plan during this PRR reporting period.

E. Conclusions and Recommendations for Improvements - Provide an overall conclusion regarding O&M for the site and identify any suggested improvements requiring changes in the O&M Plan.

VII. Overall PRR Conclusions and Recommendations

A. Compliance with SMP - For each component of the SMP (i.e., IC/EC, monitoring, O&M), summarize;
   1. whether all requirements of each plan were met during the reporting period
   2. any requirements not met
   3. proposed plans and a schedule for coming into full compliance.

B. Performance and Effectiveness of the Remedy - Based upon your evaluation of the components of the SMP, form conclusions about the performance of each component and the ability of the remedy to achieve the remedial objectives for the site.

C. Future PRR Submittals
   1. Recommend, with supporting justification, whether the frequency of the submittal of PRRs should be changed (either increased or decreased).
   2. If the requirements for site closure have been achieved, contact the Departments Project Manager for the site to determine what, if any, additional documentation is needed to support a decision to discontinue site management.

VIII. Additional Guidance

Additional guidance regarding the preparation and submittal of an acceptable PRR can be obtained from the Departments Project Manager for the site.

APPENDIX B

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 13, 2023

Bryce Recer
CPL
9 Elks Lane
Poughkeepsie, NY 12601

TEL: (518) 751-2180

Work Order No: 230727002

RE: Hettling Park Groundwater Samplin

Dear Bryce Recer:

"I certify that this data package is in compliance with the terms and conditions of the protocol, both technically and for completeness, to the best of my knowledge, for other than the conditions detailed in the Case Narrative. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Director or his designee, as verified by the following signature."

Tara Daniels
Laboratory Director

Workorder Sample Summary

Client: CPL

Work Order: 230727002

ProjectName: Hettling Park Groundwater Sampling

ProjLocation:

AES Sample No	ClientSampID	Matrix	CollectionDate	DateReceived
230727002-001	MW-1	Groundwater	7/26/2023 3:55:00 PM	7/27/2023 8:16:00 AM
230727002-002	MW-4	Groundwater	7/26/2023 2:35:00 PM	7/27/2023 8:16:00 AM
230727002-003	MW-5	Groundwater	7/26/2023 1:50:00 PM	7/27/2023 8:16:00 AM
230727002-004	MW-7	Groundwater	7/26/2023 12:30:00 PM	7/27/2023 8:16:00 AM
230727002-005	MW-7 Dup	Groundwater	7/26/2023 12:30:00 PM	7/27/2023 8:16:00 AM
230727002-006	SW-1	Surface Water	7/26/2023 2:50:00 PM	7/27/2023 8:16:00 AM
230727002-007	SW-1 Dup	Surface Water	7/26/2023 2:50:00 PM	7/27/2023 8:16:00 AM
230727002-008	MW-2	Groundwater	7/26/2023 3:15:00 PM	7/27/2023 8:16:00 AM

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Case Narrative

Client: CPL – Hettling Park Groundwater

Case: 230727002

SDG: MW-1

Semi-Volatile Organics

1) The samples were analyzed using EPA Method 8270 SIM following the criteria for NYSDEC ASP. The samples were analyzed only for the compound 1,4-Dioxane.

2) The samples received on 7/27/23 had a temperature of 4 ^{o}C.

3) Sample MW-7 (AES sample number 230727002-004) was used for the water matrix spike and the matrix spike duplicate analysis. All recoveries were within acceptable limits.

4) Sample SW-1 (AES sample number 230727002-006) was used for the water matrix spike and the matrix spike duplicate analysis. All recoveries were within acceptable limits.

5) The internal standard recovery for sample SW-1 MSD (AES sample number 230727002-006 MSD) was higher than the specified limit. Since this was for the matrix spike duplicate. The sample is not required to be re-analyzed. No further action was taken.

Inorganics – Metals

1) The samples were analyzed for TAL Metals as specified on the chain of custody.

2) The recovery for Aluminum, Calcium, Iron and Magnesium in the ICSA and the ICSAB check standards may be outside the required limit. The required concentration for these analytes in the check standards is 500,000 ug/L, 500,000 ug/L, 200,000 ug/L and 500,000 ug/L, respectively. The linear range on this instrument for Aluminum, Calcium, Iron and Magnesium is 250,000 ug/L, 250,000 ug/L, 100,000 ug/L and 250,000 ug/L, respectively. At this level accurate recovery of Aluminum, Calcium, Iron and Magnesium in the check standards is not possible. No further action is required.

3) Sample MW-7 (AES sample number 230727002-004) was used as the matrix spike sample. All recoveries were within acceptable limits.

4) Sample MW-7 (AES sample number 230727002-004) was used as the Mercury matrix spike sample. All recoveries were within acceptable limits.

5) Sample SW-1 (AES sample number 230727002-006) was used as the matrix spike sample. All recoveries were within acceptable limits.

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6) Sample SW-1 (AES sample number 230727002-006) was used as the Mercury matrix spike sample. All recoveries were within acceptable limits.

7) Sample MW-7 (AES sample number 230727002-004) was used as the duplicate sample. The recoveries between sample MW-7 (AES sample number 230727002-004) and the duplicate sample for the elements Aluminum, Chromium, Iron and Lead were outside the required limits for sample duplication. The elements Aluminum and Iron for sample MW-7 (AES sample number 230727002-004) are flagged with a "Z" to denote the recovery outside of acceptable limits. The recoveries for Chromium and Lead were greater than 20 %, but not outside of required limits. The results for Chromium and Lead were less than five (5) times the CRDL. The acceptable limit for duplication is then +/- the CRDL. Using this criteria, the recovery for Chromium and Lead are within acceptable limits. All other recoveries were within acceptable limits.

8) Sample MW-7 (AES sample number 230727002-004) was used as the Mercury duplicate sample. All recoveries were within acceptable limits.

9) Sample SW-1 (AES sample number 230727002-006) was used as the duplicate sample. All recoveries were within acceptable limits.

10) Sample SW-1 (AES sample number 230727002-006) was used as the Mercury duplicate sample. All recoveries were within acceptable limits.

11) The element Manganese for sample SW-1 (AES sample number 230727002-006) did not meet the serial dilution criteria of 10 %. This indicates a possible chemical or physical interference.

Sub-Contract Analyses

1) The samples were analyzed by Summit Environmental Technologies in Cuyahoga Falls, Ohio for EPA Method 537 for PFOA/PFOS. Summit Environmental Technologies is a New York State Department of Health-approved environmental laboratory (ELAP ID: 11777).

"I certify that this data package is in compliance with the terms and conditions of the protocol, both technically and for completeness, to the best of my knowledge, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature."

Laboratory Director
Date: 9/13/23

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546 ♦ Fax: 518-434-0891

EXPERIENCE IS THE SOLUTION

CHAIN OF CUSTODY RECORD

AES Work Order#: 230727002

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: **Bryce Recer**	Address		
Send Report to: **Brecer@cplteam.com**	Project Name (Location): Hettling Park Groundwater Sampling	Samplers Name: Derek Merker	
Client Phone No:	PO #:	Samplers Signature:	
Client Fax No:			

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Analysis
001	MW-1	7/26/23	15:55	A (P)	GW		X	3	TAL Metals, 1,4-Dioxane, PFAS, Field SWL, pH, Temp, Spec. Cond., eH, DO, Turbidity
002	MW-4	7/26/23	14:35	A (P)	GW		X	3	" "
003	MW-5	7/26/23	13:50	A (P)	GW		X	3	" "
004	MW-7	7/26/23	12:30	A (P)	GW		X	9	" "
005	MW-7 Dup	7/26/23	12:30	A (P)	GW		X	3	" "
006	SW-1	7/26/23	14:50	A (P)	SF		X	9	TAL Metals, 1,4-Dioxane, PFAS
007	SW-1 Dup	7/26/23	14:50	A (P)	SF		X	3	" "
008	MW-2	7/26/23	15:15	A (P)	GW		X	0	Observation Only
				A P					
				A P					
				A P					
				A P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Requested:
Normal CLP Cat B

Special Instructions/Remarks:
Extra volume collected from MW-7 for MS/MSD.
Extra volume collected from SW-1 for MS/MSD.

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	**Received for Laboratory by:**	Date: 7/27/23	Time: 8:16 AM

Sample Temperature
Ambient (Chilled)
Chilling Process begun
Notes: 4°C

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
Notes:

Demo
230727002

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-1
Work Order:	230727002	**Collection Date:**	7/26/2023 3:55:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-001
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Conductivity (E120.1)	***458***	1.0		umhos/cm		7/26/2023 3:55:00 PM
Dissolved Oxygen (E360.1)	***6.55***	0.10		mg/L		7/26/2023 3:55:00 PM
eH (Orion)	***251.5***			millivolts		7/26/2023 3:55:00 PM
pH (E150.1)	***6.3***			su		7/26/2023 3:55:00 PM
Static Water Level	***16.05***			ft		7/26/2023 3:55:00 PM
Temperature (E170.1)	***15***			deg C		7/26/2023 3:55:00 PM
Turbidity (E180.1)	***2.88***	1.0		NTU		7/26/2023 3:55:00 PM
MERCURY - EPA 245.1 REV 3.0						Analyst: **AF**
(Prep: E245.1 - 8/8/2023)						
Mercury	***ND***	0.20		µg/L	1	8/8/2023 2:09:42 PM
ICP METALS - EPA 6010C						Analyst: **KH**
(Prep: SW3010A - 8/4/2023)						
Aluminum	***ND***	100		µg/L	1	8/8/2023 11:29:00 AM
Antimony	***ND***	60.0		µg/L	1	8/8/2023 11:29:00 AM
Arsenic	***ND***	5.00		µg/L	1	8/8/2023 11:29:00 AM
Barium	***24.7***	10.0		µg/L	1	8/8/2023 11:29:00 AM
Beryllium	***ND***	5.00		µg/L	1	8/8/2023 11:29:00 AM
Cadmium	***ND***	5.00		µg/L	1	8/8/2023 11:29:00 AM
Calcium	***16100***	50.0		µg/L	1	8/8/2023 11:29:00 AM
Chromium	***6.50***	5.00		µg/L	1	8/8/2023 11:29:00 AM
Cobalt	***ND***	50.0		µg/L	1	8/8/2023 11:29:00 AM
Copper	***3.16***	5.00	J	µg/L	1	8/8/2023 11:29:00 AM
Iron	***ND***	50.0		µg/L	1	8/8/2023 11:29:00 AM
Lead	***ND***	5.00		µg/L	1	8/8/2023 11:29:00 AM
Magnesium	***4000***	50.0		µg/L	1	8/8/2023 11:29:00 AM
Manganese	***ND***	20.0		µg/L	1	8/8/2023 11:29:00 AM
Nickel	***ND***	20.0		µg/L	1	8/8/2023 11:29:00 AM
Potassium	***3750***	50.0		µg/L	1	8/8/2023 11:29:00 AM
Selenium	***ND***	5.00		µg/L	1	8/8/2023 11:29:00 AM
Silver	***ND***	10.0		µg/L	1	8/8/2023 11:29:00 AM
Sodium	***43700***	500		µg/L	10	8/8/2023 11:32:00 AM
Thallium	***ND***	10.0		µg/L	1	8/8/2023 11:29:00 AM
Vanadium	***ND***	20.0		µg/L	1	8/8/2023 11:29:00 AM
Zinc	***ND***	10.0		µg/L	1	8/8/2023 11:29:00 AM
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
1,4-Dioxane	***ND***	0.35		µg/L	1	8/2/2023 3:49:00 PM

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quanititation limits
- B - Analyte detected in the associated Method Blank
- X - Value exceeds Maximum Contaminant Level
- E - Value above quantitation range-Estimate
- S - LCS Spike below accepted limits (+ above)
- Z - RPD outside accepted recovery limits
- N - Matrix Spike below accepted limits (+ above)
- T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-1
Work Order:	230727002	**Collection Date:**	7/26/2023 3:55:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-001
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
Surr: 1,4-Dioxane-d8	***52.6***	50-120		%REC	1	8/2/2023 3:49:00 PM

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quanititation limits
- B - Analyte detected in the associated Method Blank
- X - Value exceeds Maximum Contaminant Level
- E - Value above quantitation range-Estimate
- S - LCS Spike below accepted limits (+ above)
- Z - RPD outside accepted recovery limits
- N - Matrix Spike below accepted limits (+ above)
- T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-4
Work Order:	230727002	**Collection Date:**	7/26/2023 2:35:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-002
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Conductivity (E120.1)	***87***	1.0		umhos/cm		7/26/2023 2:35:00 PM
Dissolved Oxygen (E360.1)	***2.04***	0.10		mg/L		7/26/2023 2:35:00 PM
eH (Orion)	***316.3***			millivolts		7/26/2023 2:35:00 PM
pH (E150.1)	***5.7***			su		7/26/2023 2:35:00 PM
Static Water Level	***4.55***			ft		7/26/2023 2:35:00 PM
Temperature (E170.1)	***19***			deg C		7/26/2023 2:35:00 PM
Turbidity (E180.1)	***1.99***	1.0		NTU		7/26/2023 2:35:00 PM
MERCURY - EPA 245.1 REV 3.0						Analyst: **AF**
(Prep: E245.1 - 8/8/2023)						
Mercury	***ND***	0.20		µg/L	1	8/8/2023 2:11:26 PM
ICP METALS - EPA 6010C						Analyst: **KH**
(Prep: SW3010A - 8/4/2023)						
Aluminum	***ND***	100		µg/L	1	8/8/2023 11:36:00 AM
Antimony	***ND***	60.0		µg/L	1	8/8/2023 11:36:00 AM
Arsenic	***ND***	5.00		µg/L	1	8/8/2023 11:36:00 AM
Barium	***19.9***	10.0		µg/L	1	8/8/2023 11:36:00 AM
Beryllium	***ND***	5.00		µg/L	1	8/8/2023 11:36:00 AM
Cadmium	***ND***	5.00		µg/L	1	8/8/2023 11:36:00 AM
Calcium	***7100***	50.0		µg/L	1	8/8/2023 11:36:00 AM
Chromium	***11.3***	5.00		µg/L	1	8/8/2023 11:36:00 AM
Cobalt	***ND***	50.0		µg/L	1	8/8/2023 11:36:00 AM
Copper	***8.31***	5.00		µg/L	1	8/8/2023 11:36:00 AM
Iron	***31.3***	50.0	J	µg/L	1	8/8/2023 11:36:00 AM
Lead	***ND***	5.00		µg/L	1	8/8/2023 11:36:00 AM
Magnesium	***2410***	50.0		µg/L	1	8/8/2023 11:36:00 AM
Manganese	***10.5***	20.0	J	µg/L	1	8/8/2023 11:36:00 AM
Nickel	***ND***	20.0		µg/L	1	8/8/2023 11:36:00 AM
Potassium	***172***	50.0		µg/L	1	8/8/2023 11:36:00 AM
Selenium	***ND***	5.00		µg/L	1	8/8/2023 11:36:00 AM
Silver	***ND***	10.0		µg/L	1	8/8/2023 11:36:00 AM
Sodium	***3030***	50.0		µg/L	1	8/8/2023 11:36:00 AM
Thallium	***3.37***	10.0	J	µg/L	1	8/8/2023 11:36:00 AM
Vanadium	***ND***	20.0		µg/L	1	8/8/2023 11:36:00 AM
Zinc	***ND***	10.0		µg/L	1	8/8/2023 11:36:00 AM
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
1,4-Dioxane	***ND***	0.35		µg/L	1	8/2/2023 4:14:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
X - Value exceeds Maximum Contaminant Level
E - Value above quantitation range-Estimate
S - LCS Spike below accepted limits (+ above)
Z - RPD outside accepted recovery limits
N - Matrix Spike below accepted limits (+ above)
T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-4
Work Order:	230727002	**Collection Date:**	7/26/2023 2:35:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-002
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
Surr: 1,4-Dioxane-d8	***84.4***	50-120		%REC	1	8/2/2023 4:14:00 PM

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quanititation limits
- B - Analyte detected in the associated Method Blank
- X - Value exceeds Maximum Contaminant Level
- E - Value above quantitation range-Estimate
- S - LCS Spike below accepted limits (+ above)
- Z - RPD outside accepted recovery limits
- N - Matrix Spike below accepted limits (+ above)
- T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-5
Work Order:	230727002	**Collection Date:**	7/26/2023 1:50:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-003
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Conductivity (E120.1)	***147***	1.0		umhos/cm		7/26/2023 1:50:00 PM
Dissolved Oxygen (E360.1)	***3.41***	0.10		mg/L		7/26/2023 1:50:00 PM
eH (Orion)	***292.1***			millivolts		7/26/2023 1:50:00 PM
pH (E150.1)	***6.5***			su		7/26/2023 1:50:00 PM
Static Water Level	***5.80***			ft		7/26/2023 1:50:00 PM
Temperature (E170.1)	***18***			deg C		7/26/2023 1:50:00 PM
Turbidity (E180.1)	***4.54***	1.0		NTU		7/26/2023 1:50:00 PM
MERCURY - EPA 245.1 REV 3.0						Analyst: **AF**
(Prep: E245.1 - 8/8/2023)						
Mercury	***ND***	0.20		µg/L	1	8/8/2023 2:13:10 PM
ICP METALS - EPA 6010C						Analyst: **KH**
(Prep: SW3010A - 8/4/2023)						
Aluminum	***ND***	100		µg/L	1	8/8/2023 11:40:00 AM
Antimony	***ND***	60.0		µg/L	1	8/8/2023 11:40:00 AM
Arsenic	***ND***	5.00		µg/L	1	8/8/2023 11:40:00 AM
Barium	***54.4***	10.0		µg/L	1	8/8/2023 11:40:00 AM
Beryllium	***ND***	5.00		µg/L	1	8/8/2023 11:40:00 AM
Cadmium	***ND***	5.00		µg/L	1	8/8/2023 11:40:00 AM
Calcium	***18400***	50.0		µg/L	1	8/8/2023 11:40:00 AM
Chromium	***ND***	5.00		µg/L	1	8/8/2023 11:40:00 AM
Cobalt	***ND***	50.0		µg/L	1	8/8/2023 11:40:00 AM
Copper	***4.54***	5.00	J	µg/L	1	8/8/2023 11:40:00 AM
Iron	***60.8***	50.0		µg/L	1	8/8/2023 11:40:00 AM
Lead	***ND***	5.00		µg/L	1	8/8/2023 11:40:00 AM
Magnesium	***4290***	50.0		µg/L	1	8/8/2023 11:40:00 AM
Manganese	***14.0***	20.0	J	µg/L	1	8/8/2023 11:40:00 AM
Nickel	***ND***	20.0		µg/L	1	8/8/2023 11:40:00 AM
Potassium	***395***	50.0		µg/L	1	8/8/2023 11:40:00 AM
Selenium	***ND***	5.00		µg/L	1	8/8/2023 11:40:00 AM
Silver	***ND***	10.0		µg/L	1	8/8/2023 11:40:00 AM
Sodium	***2310***	50.0		µg/L	1	8/8/2023 11:40:00 AM
Thallium	***ND***	10.0		µg/L	1	8/8/2023 11:40:00 AM
Vanadium	***ND***	20.0		µg/L	1	8/8/2023 11:40:00 AM
Zinc	***ND***	10.0		µg/L	1	8/8/2023 11:40:00 AM
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
1,4-Dioxane	***ND***	0.35		µg/L	1	8/2/2023 4:40:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
X - Value exceeds Maximum Contaminant Level
E - Value above quantitation range-Estimate
S - LCS Spike below accepted limits (+ above)
Z - RPD outside accepted recovery limits
N - Matrix Spike below accepted limits (+ above)
T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-5
Work Order:	230727002	**Collection Date:**	7/26/2023 1:50:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-003
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
Surr: 1,4-Dioxane-d8	***67.8***	50-120		%REC	1	8/2/2023 4:40:00 PM

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quanititation limits
- B - Analyte detected in the associated Method Blank
- X - Value exceeds Maximum Contaminant Level
- E - Value above quantitation range-Estimate
- S - LCS Spike below accepted limits (+ above)
- Z - RPD outside accepted recovery limits
- N - Matrix Spike below accepted limits (+ above)
- T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-7
Work Order:	230727002	**Collection Date:**	7/26/2023 12:30:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-004
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Conductivity (E120.1)	***204***	1.0		umhos/cm		7/26/2023 12:30:00 PM
Dissolved Oxygen (E360.1)	***0.71***	0.10		mg/L		7/26/2023 12:30:00 PM
eH (Orion)	***166.8***			millivolts		7/26/2023 12:30:00 PM
pH (E150.1)	***6.4***			su		7/26/2023 12:30:00 PM
Static Water Level	***5.78***			ft		7/26/2023 12:30:00 PM
Temperature (E170.1)	***22***			deg C		7/26/2023 12:30:00 PM
Turbidity (E180.1)	***44***	1.0		NTU		7/26/2023 12:30:00 PM
MERCURY - EPA 245.1 REV 3.0						Analyst: **AF**
(Prep: E245.1 - 8/8/2023)						
Mercury	***ND***	0.20		µg/L	1	8/8/2023 2:14:54 PM
ICP METALS - EPA 6010C						Analyst: **KH**
(Prep: SW3010A - 8/4/2023)						
Aluminum	***463***	100	Z	µg/L	1	8/8/2023 11:44:00 AM
Antimony	***ND***	60.0		µg/L	1	8/8/2023 11:44:00 AM
Arsenic	***ND***	5.00		µg/L	1	8/8/2023 11:44:00 AM
Barium	***74.7***	10.0		µg/L	1	8/8/2023 11:44:00 AM
Beryllium	***ND***	5.00		µg/L	1	8/8/2023 11:44:00 AM
Cadmium	***ND***	5.00		µg/L	1	8/8/2023 11:44:00 AM
Calcium	***18900***	50.0		µg/L	1	8/8/2023 11:44:00 AM
Chromium	***9.25***	5.00		µg/L	1	8/8/2023 11:44:00 AM
Cobalt	***1.79***	50.0	J	µg/L	1	8/8/2023 11:44:00 AM
Copper	***ND***	5.00		µg/L	1	8/8/2023 11:44:00 AM
Iron	***1140***	50.0	Z	µg/L	1	8/8/2023 11:44:00 AM
Lead	***2.78***	5.00	J	µg/L	1	8/8/2023 11:44:00 AM
Magnesium	***7200***	50.0		µg/L	1	8/8/2023 11:44:00 AM
Manganese	***747***	20.0		µg/L	1	8/8/2023 11:44:00 AM
Nickel	***3.31***	20.0	J	µg/L	1	8/8/2023 11:44:00 AM
Potassium	***829***	50.0		µg/L	1	8/8/2023 11:44:00 AM
Selenium	***ND***	5.00		µg/L	1	8/8/2023 11:44:00 AM
Silver	***ND***	10.0		µg/L	1	8/8/2023 11:44:00 AM
Sodium	***2620***	50.0		µg/L	1	8/8/2023 11:44:00 AM
Thallium	***3.57***	10.0	J	µg/L	1	8/8/2023 11:44:00 AM
Vanadium	***ND***	20.0		µg/L	1	8/8/2023 11:44:00 AM
Zinc	***ND***	10.0		µg/L	1	8/8/2023 11:44:00 AM
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
1,4-Dioxane	***ND***	0.35		µg/L	1	8/2/2023 5:04:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
X - Value exceeds Maximum Contaminant Level
E - Value above quantitation range-Estimate
S - LCS Spike below accepted limits (+ above)
Z - RPD outside accepted recovery limits
N - Matrix Spike below accepted limits (+ above)
T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-7
Work Order:	230727002	**Collection Date:**	7/26/2023 12:30:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-004
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
Surr: 1,4-Dioxane-d8	***54.3***	50-120		%REC	1	8/2/2023 5:04:00 PM

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quanititation limits
- B - Analyte detected in the associated Method Blank
- X - Value exceeds Maximum Contaminant Level
- E - Value above quantitation range-Estimate
- S - LCS Spike below accepted limits (+ above)
- Z - RPD outside accepted recovery limits
- N - Matrix Spike below accepted limits (+ above)
- T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-7 Dup
Work Order:	230727002	**Collection Date:**	7/26/2023 12:30:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-005
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Conductivity (E120.1)	***204***	1.0		umhos/cm		7/26/2023 12:30:00 PM
Dissolved Oxygen (E360.1)	***0.71***	0.10		mg/L		7/26/2023 12:30:00 PM
eH (Orion)	***166.8***			millivolts		7/26/2023 12:30:00 PM
pH (E150.1)	***6.4***			su		7/26/2023 12:30:00 PM
Static Water Level	***5.78***			ft		7/26/2023 12:30:00 PM
Temperature (E170.1)	***22***			deg C		7/26/2023 12:30:00 PM
Turbidity (E180.1)	***44***	1.0		NTU		7/26/2023 12:30:00 PM
MERCURY - EPA 245.1 REV 3.0						Analyst: **AF**
(Prep: E245.1 - 8/8/2023)						
Mercury	***ND***	0.20		µg/L	1	8/8/2023 2:23:38 PM
ICP METALS - EPA 6010C						Analyst: **KH**
(Prep: SW3010A - 8/4/2023)						
Aluminum	***394***	100		µg/L	1	8/8/2023 12:13:00 PM
Antimony	***ND***	60.0		µg/L	1	8/8/2023 12:13:00 PM
Arsenic	***ND***	5.00		µg/L	1	8/8/2023 12:13:00 PM
Barium	***71.0***	10.0		µg/L	1	8/8/2023 12:13:00 PM
Beryllium	***ND***	5.00		µg/L	1	8/8/2023 12:13:00 PM
Cadmium	***ND***	5.00		µg/L	1	8/8/2023 12:13:00 PM
Calcium	***17800***	50.0		µg/L	1	8/8/2023 12:13:00 PM
Chromium	***8.81***	5.00		µg/L	1	8/8/2023 12:13:00 PM
Cobalt	***1.61***	50.0	J	µg/L	1	8/8/2023 12:13:00 PM
Copper	***ND***	5.00		µg/L	1	8/8/2023 12:13:00 PM
Iron	***1020***	50.0		µg/L	1	8/8/2023 12:13:00 PM
Lead	***3.60***	5.00	J	µg/L	1	8/8/2023 12:13:00 PM
Magnesium	***6790***	50.0		µg/L	1	8/8/2023 12:13:00 PM
Manganese	***657***	20.0		µg/L	1	8/8/2023 12:13:00 PM
Nickel	***2.93***	20.0	J	µg/L	1	8/8/2023 12:13:00 PM
Potassium	***765***	50.0		µg/L	1	8/8/2023 12:13:00 PM
Selenium	***ND***	5.00		µg/L	1	8/8/2023 12:13:00 PM
Silver	***ND***	10.0		µg/L	1	8/8/2023 12:13:00 PM
Sodium	***2440***	50.0		µg/L	1	8/8/2023 12:13:00 PM
Thallium	***5.11***	10.0	J	µg/L	1	8/8/2023 12:13:00 PM
Vanadium	***ND***	20.0		µg/L	1	8/8/2023 12:13:00 PM
Zinc	***ND***	10.0		µg/L	1	8/8/2023 12:13:00 PM
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
1,4-Dioxane	***ND***	0.35		µg/L	1	8/4/2023 10:31:00 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
X - Value exceeds Maximum Contaminant Level
E - Value above quantitation range-Estimate
S - LCS Spike below accepted limits (+ above)
Z - RPD outside accepted recovery limits
N - Matrix Spike below accepted limits (+ above)
T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-7 Dup
Work Order:	230727002	**Collection Date:**	7/26/2023 12:30:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-005
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
Surr: 1,4-Dioxane-d8	***67.8***	50-120		%REC	1	8/4/2023 10:31:00 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
X - Value exceeds Maximum Contaminant Level
E - Value above quantitation range-Estimate
S - LCS Spike below accepted limits (+ above)
Z - RPD outside accepted recovery limits
N - Matrix Spike below accepted limits (+ above)
T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	SW-1
Work Order:	230727002	**Collection Date:**	7/26/2023 2:50:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-006
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY - EPA 245.1 REV 3.0						Analyst: **AF**
(Prep: E245.1 - 8/8/2023)						
Mercury	***ND***	0.20		µg/L	1	8/8/2023 2:25:24 PM
ICP METALS - EPA 6010C						Analyst: **KH**
(Prep: SW3010A - 8/4/2023)						
Aluminum	***ND***	100		µg/L	1	8/8/2023 12:16:00 PM
Antimony	***ND***	60.0		µg/L	1	8/8/2023 12:16:00 PM
Arsenic	***ND***	5.00		µg/L	1	8/8/2023 12:16:00 PM
Barium	***44.8***	10.0		µg/L	1	8/8/2023 12:16:00 PM
Beryllium	***ND***	5.00		µg/L	1	8/8/2023 12:16:00 PM
Cadmium	***ND***	5.00		µg/L	1	8/8/2023 12:16:00 PM
Calcium	***18300***	50.0		µg/L	1	8/8/2023 12:16:00 PM
Chromium	***ND***	5.00		µg/L	1	8/8/2023 12:16:00 PM
Cobalt	***1.38***	50.0	J	µg/L	1	8/8/2023 12:16:00 PM
Copper	***ND***	5.00		µg/L	1	8/8/2023 12:16:00 PM
Iron	***3350***	50.0		µg/L	1	8/8/2023 12:16:00 PM
Lead	***ND***	5.00		µg/L	1	8/8/2023 12:16:00 PM
Magnesium	***4510***	50.0		µg/L	1	8/8/2023 12:16:00 PM
Manganese	***561***	20.0		µg/L	1	8/8/2023 12:16:00 PM
Nickel	***ND***	20.0		µg/L	1	8/8/2023 12:16:00 PM
Potassium	***954***	50.0		µg/L	1	8/8/2023 12:16:00 PM
Selenium	***ND***	5.00		µg/L	1	8/8/2023 12:16:00 PM
Silver	***ND***	10.0		µg/L	1	8/8/2023 12:16:00 PM
Sodium	***2730***	50.0		µg/L	1	8/8/2023 12:16:00 PM
Thallium	***ND***	10.0		µg/L	1	8/8/2023 12:16:00 PM
Vanadium	***ND***	20.0		µg/L	1	8/8/2023 12:16:00 PM
Zinc	***ND***	10.0		µg/L	1	8/8/2023 12:16:00 PM
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
1,4-Dioxane	***ND***	0.35		µg/L	1	8/2/2023 5:57:00 PM
Surr: 1,4-Dioxane-d8	***58.7***	50-120		%REC	1	8/2/2023 5:57:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
X - Value exceeds Maximum Contaminant Level
E - Value above quantitation range-Estimate
S - LCS Spike below accepted limits (+ above)
Z - RPD outside accepted recovery limits
N - Matrix Spike below accepted limits (+ above)
T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	SW-1 Dup
Work Order:	230727002	**Collection Date:**	7/26/2023 2:50:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-007
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY - EPA 245.1 REV 3.0						Analyst: **AF**
(Prep: E245.1 - 8/8/2023)						
Mercury	***ND***	0.20		µg/L	1	8/8/2023 2:30:42 PM
ICP METALS - EPA 6010C						Analyst: **KH**
(Prep: SW3010A - 8/4/2023)						
Aluminum	***ND***	100		µg/L	1	8/8/2023 12:34:00 PM
Antimony	***ND***	60.0		µg/L	1	8/8/2023 12:34:00 PM
Arsenic	***ND***	5.00		µg/L	1	8/8/2023 12:34:00 PM
Barium	***43.5***	10.0		µg/L	1	8/8/2023 12:34:00 PM
Beryllium	***ND***	5.00		µg/L	1	8/8/2023 12:34:00 PM
Cadmium	***ND***	5.00		µg/L	1	8/8/2023 12:34:00 PM
Calcium	***18900***	50.0		µg/L	1	8/8/2023 12:34:00 PM
Chromium	***ND***	5.00		µg/L	1	8/8/2023 12:34:00 PM
Cobalt	***1.41***	50.0	J	µg/L	1	8/8/2023 12:34:00 PM
Copper	***ND***	5.00		µg/L	1	8/8/2023 12:34:00 PM
Iron	***3540***	50.0		µg/L	1	8/8/2023 12:34:00 PM
Lead	***ND***	5.00		µg/L	1	8/8/2023 12:34:00 PM
Magnesium	***4720***	50.0		µg/L	1	8/8/2023 12:34:00 PM
Manganese	***664***	20.0		µg/L	1	8/8/2023 12:34:00 PM
Nickel	***ND***	20.0		µg/L	1	8/8/2023 12:34:00 PM
Potassium	***984***	50.0		µg/L	1	8/8/2023 12:34:00 PM
Selenium	***ND***	5.00		µg/L	1	8/8/2023 12:34:00 PM
Silver	***ND***	10.0		µg/L	1	8/8/2023 12:34:00 PM
Sodium	***2840***	50.0		µg/L	1	8/8/2023 12:34:00 PM
Thallium	***ND***	10.0		µg/L	1	8/8/2023 12:34:00 PM
Vanadium	***ND***	20.0		µg/L	1	8/8/2023 12:34:00 PM
Zinc	***ND***	10.0		µg/L	1	8/8/2023 12:34:00 PM
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
1,4-Dioxane	***ND***	0.35		µg/L	1	8/2/2023 6:22:00 PM
Surr: 1,4-Dioxane-d8	***53.3***	50-120		%REC	1	8/2/2023 6:22:00 PM

Qualifiers:

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B - Analyte detected in the associated Method Blank
X - Value exceeds Maximum Contaminant Level
E - Value above quantitation range-Estimate
S - LCS Spike below accepted limits (+ above)
Z - RPD outside accepted recovery limits
N - Matrix Spike below accepted limits (+ above)
T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-2
Work Order:	230727002	**Collection Date:**	7/26/2023 3:15:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-008
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	***Poor Recovery***			NA		7/26/2023 3:15:00 PM

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quanititation limits
- B - Analyte detected in the associated Method Blank
- X - Value exceeds Maximum Contaminant Level
- E - Value above quantitation range-Estimate
- S - LCS Spike below accepted limits (+ above)
- Z - RPD outside accepted recovery limits
- N - Matrix Spike below accepted limits (+ above)
- T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-1
Work Order:	230727002	**Collection Date:**	7/26/2023 3:55:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-001
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
1,4-Dioxane	***ND***	0.35		µg/L	1	8/2/2023 3:49:00 PM
Surr: 1,4-Dioxane-d8	***52.6***	50-120		%REC	1	8/2/2023 3:49:00 PM

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quanititation limits
- B - Analyte detected in the associated Method Blank
- X - Value exceeds Maximum Contaminant Level
- E - Value above quantitation range-Estimate
- S - LCS Spike below accepted limits (+ above)
- Z - RPD outside accepted recovery limits
- N - Matrix Spike below accepted limits (+ above)
- T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-4
Work Order:	230727002	**Collection Date:**	7/26/2023 2:35:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-002
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
1,4-Dioxane	***ND***	0.35		µg/L	1	8/2/2023 4:14:00 PM
Surr: 1,4-Dioxane-d8	***84.4***	50-120		%REC	1	8/2/2023 4:14:00 PM

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quanititation limits
- B - Analyte detected in the associated Method Blank
- X - Value exceeds Maximum Contaminant Level
- E - Value above quantitation range-Estimate
- S - LCS Spike below accepted limits (+ above)
- Z - RPD outside accepted recovery limits
- N - Matrix Spike below accepted limits (+ above)
- T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-5
Work Order:	230727002	**Collection Date:**	7/26/2023 1:50:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-003
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
1,4-Dioxane	***ND***	0.35		µg/L	1	8/2/2023 4:40:00 PM
Surr: 1,4-Dioxane-d8	***67.8***	50-120		%REC	1	8/2/2023 4:40:00 PM

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quanititation limits
- B - Analyte detected in the associated Method Blank
- X - Value exceeds Maximum Contaminant Level
- E - Value above quantitation range-Estimate
- S - LCS Spike below accepted limits (+ above)
- Z - RPD outside accepted recovery limits
- N - Matrix Spike below accepted limits (+ above)
- T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-7
Work Order:	230727002	**Collection Date:**	7/26/2023 12:30:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-004
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
1,4-Dioxane	***ND***	0.35		µg/L	1	8/2/2023 5:04:00 PM
Surr: 1,4-Dioxane-d8	***54.3***	50-120		%REC	1	8/2/2023 5:04:00 PM

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quanititation limits
- B - Analyte detected in the associated Method Blank
- X - Value exceeds Maximum Contaminant Level
- E - Value above quantitation range-Estimate
- S - LCS Spike below accepted limits (+ above)
- Z - RPD outside accepted recovery limits
- N - Matrix Spike below accepted limits (+ above)
- T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-7 Dup
Work Order:	230727002	**Collection Date:**	7/26/2023 12:30:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-005
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
1,4-Dioxane	***ND***	0.35		µg/L	1	8/4/2023 10:31:00 AM
Surr: 1,4-Dioxane-d8	***67.8***	50-120		%REC	1	8/4/2023 10:31:00 AM

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quanititation limits
- B - Analyte detected in the associated Method Blank
- X - Value exceeds Maximum Contaminant Level
- E - Value above quantitation range-Estimate
- S - LCS Spike below accepted limits (+ above)
- Z - RPD outside accepted recovery limits
- N - Matrix Spike below accepted limits (+ above)
- T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	SW-1
Work Order:	230727002	**Collection Date:**	7/26/2023 2:50:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-006
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
1,4-Dioxane	***ND***	0.35		µg/L	1	8/2/2023 5:57:00 PM
Surr: 1,4-Dioxane-d8	***58.7***	50-120		%REC	1	8/2/2023 5:57:00 PM

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quanititation limits
- B - Analyte detected in the associated Method Blank
- X - Value exceeds Maximum Contaminant Level
- E - Value above quantitation range-Estimate
- S - LCS Spike below accepted limits (+ above)
- Z - RPD outside accepted recovery limits
- N - Matrix Spike below accepted limits (+ above)
- T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	SW-1 Dup
Work Order:	230727002	**Collection Date:**	7/26/2023 2:50:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-007
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 8270 SIM FOR 1,4 DIOXANE						Analyst: **MT**
(Prep: SW3535A - 8/1/2023)						
1,4-Dioxane	***ND***	0.35		µg/L	1	8/2/2023 6:22:00 PM
Surr: 1,4-Dioxane-d8	***53.3***	50-120		%REC	1	8/2/2023 6:22:00 PM

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quanititation limits
- B - Analyte detected in the associated Method Blank
- X - Value exceeds Maximum Contaminant Level
- E - Value above quantitation range-Estimate
- S - LCS Spike below accepted limits (+ above)
- Z - RPD outside accepted recovery limits
- N - Matrix Spike below accepted limits (+ above)
- T - Tentitively Identified Compound-Estimated Conc.

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102724

mblk

SeqNo: **3603514** *PrepDate:8/1/2023 2:* TestNo: **SW8270D** RunNo: ***223273***
Samp ID: **MB-102724** *PrepRef:(SW3535A)* Units: **µg/L** Analysis Date: **8/2/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	ND	0.350									
Surr: 1,4-Dioxane-d8	3.907	0	5	0	78.1	50	120	0	0		

mblk

SeqNo: **3606593** *PrepDate:8/1/2023 2:* TestNo: **SW8270D** RunNo: ***223433***
Samp ID: **MB-102724** *PrepRef:(SW3535A)* Units: **µg/L** Analysis Date: **8/2/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	ND	0.350									
Surr: 1,4-Dioxane-d8	3.907	0	5	0	78.1	50	120	0	0		

lcs

SeqNo: **3603515** *PrepDate:8/1/2023 2:* TestNo: **SW8270D** RunNo: ***223273***
Samp ID: **LCS-102724** *PrepRef:(SW3535A)* Units: **µg/L** Analysis Date: **8/2/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	3.834	0.350	5	0	76.7	50	120	0	0		
Surr: 1,4-Dioxane-d8	3.828	0	5	0	76.6	50	120	0	0		

lcs

SeqNo: **3606594** *PrepDate:8/1/2023 2:* TestNo: **SW8270D** RunNo: ***223433***
Samp ID: **LCS-102724** *PrepRef:(SW3535A)* Units: **µg/L** Analysis Date: **8/2/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	3.834	0.350	5	0	76.7	50	120	0	0		
Surr: 1,4-Dioxane-d8	3.828	0	5	0	76.6	50	120	0	0		

MS

SeqNo: **3606611** *PrepDate:8/1/2023 2:* TestNo: **SW8270D** RunNo: ***223433***
Samp ID: **230727002-004** ***(MW-7)*** *PrepRef:(SW3535A)* Units: **µg/L** Analysis Date: **8/2/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	3.763	0.350	5	0	75.3	50	120	0	0		
Surr: 1,4-Dioxane-d8	3.483	0	5	0	69.7	50	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102724

MS

SeqNo: **3606613** *PrepDate:8/1/2023 2:* TestNo: **SW8270D** RunNo: ***223433***
Samp ID: **230727002-006** ***(SW-1)*** *PrepRef:(SW3535A)* Units: **µg/L** Analysis Date: **8/2/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	3.549	0.350	5	0	71	50	120	0	0		
Surr: 1,4-Dioxane-d8	2.88	0	5	0	57.6	50	120	0	0		

MSD

SeqNo: **3606612** *PrepDate:8/1/2023 2:* TestNo: **SW8270D** RunNo: ***223433***
Samp ID: **230727002-004** ***(MW-7)*** *PrepRef:(SW3535A)* Units: **µg/L** Analysis Date: **8/2/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	2.817	0.350	5	0	56.3	50	120	3.763	28.8	20	Z
Surr: 1,4-Dioxane-d8	2.361	0	5	0	47.2	50	120	0	0	0	S

MSD

SeqNo: **3606614** *PrepDate:8/1/2023 2:* TestNo: **SW8270D** RunNo: ***223433***
Samp ID: **230727002-006** ***(SW-1)*** *PrepRef:(SW3535A)* Units: **µg/L** Analysis Date: **8/2/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	3.887	0.350	5	0	77.7	50	120	3.549	9.08	20	
Surr: 1,4-Dioxane-d8	3.528	0	5	0	70.6	50	120	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

QC Batch Summary Report

Batch: R223433 **Analyst:** MT

SampID	SampType	DF	TestName:	Analysis Date/Time:
dftpp	tune	1	EPA 8270 SIM for 1,4 dioxane	11/15/2021 9:58:00 AM
diox@100	ICAL	1	EPA 8270 SIM for 1,4 dioxane	11/15/2021 10:25:00 AM
diox@200 (Sig #1); d	ICAL	1	EPA 8270 SIM for 1,4 dioxane	11/15/2021 10:37:00 AM
diox@010	ICAL	1	EPA 8270 SIM for 1,4 dioxane	11/15/2021 10:48:00 AM
diox@020	ICAL	1	EPA 8270 SIM for 1,4 dioxane	11/15/2021 10:59:00 AM
diox@500	ICAL	1	EPA 8270 SIM for 1,4 dioxane	11/15/2021 11:10:00 AM
dftpp	tune	1	EPA 8270 SIM for 1,4 dioxane	8/2/2023 9:41:00 AM
DIOX@100	ccv	1	EPA 8270 SIM for 1,4 dioxane	8/2/2023 2:10:00 PM
MB-102724	mblk	1	EPA 8270 SIM for 1,4 dioxane	8/2/2023 2:47:00 PM
LCS-102724	lcs	1	EPA 8270 SIM for 1,4 dioxane	8/2/2023 3:00:00 PM
230727002-001b	SAMP	1	EPA 8270 SIM for 1,4 dioxane	8/2/2023 3:49:00 PM
230727002-002b	SAMP	1	EPA 8270 SIM for 1,4 dioxane	8/2/2023 4:14:00 PM
230727002-003b	SAMP	1	EPA 8270 SIM for 1,4 dioxane	8/2/2023 4:40:00 PM
230727002-004b	SAMP	1	EPA 8270 SIM for 1,4 dioxane	8/2/2023 5:04:00 PM
230727002-006b	SAMP	1	EPA 8270 SIM for 1,4 dioxane	8/2/2023 5:57:00 PM
230727002-007b	SAMP	1	EPA 8270 SIM for 1,4 dioxane	8/2/2023 6:22:00 PM
230727002-004BMS	MS	1	EPA 8270 SIM for 1,4 dioxane	8/2/2023 6:47:00 PM
230727002-004BMSD	MSD	1	EPA 8270 SIM for 1,4 dioxane	8/2/2023 6:59:00 PM
230727002-006BMS	MS	1	EPA 8270 SIM for 1,4 dioxane	8/2/2023 7:24:00 PM
230727002-006BMSD	MSD	1	EPA 8270 SIM for 1,4 dioxane	8/2/2023 7:36:00 PM
dftpp	tune	1	EPA 8270 SIM for 1,4 dioxane	8/4/2023 9:41:00 AM
diox 100	ccv	1	EPA 8270 SIM for 1,4 dioxane	8/4/2023 10:07:00 AM
230727002-005B	samp	1	EPA 8270 SIM for 1,4 dioxane	8/4/2023 10:31:00 AM

Adirondack Environmental Servies, Inc.

Client: CPL

WorkOrder 230727002

Project: Hettling Park Groundwater Sampling

Test: Sim-14diox

Internal Standard Summary Report

Batch: R223433

SampID	Analysis Time	Tetrahydrofuran-d8
DIOX@100	8/2/2023 2:10:00 PM	28254 RT: 3.028
DIOX@100	8/2/2023 2:10:00 PM	28254 RT: 3.028
MB-102724	8/2/2023 2:47:00 PM	36935 RT: 3.152
MB-102724	8/2/2023 2:47:00 PM	36935 RT: 3.152
LCS-102724	8/2/2023 3:00:00 PM	24884 RT: 2.996
LCS-102724	8/2/2023 3:00:00 PM	24884 RT: 2.996
230727002-001B	8/2/2023 3:49:00 PM	35655 RT: 3.09
230727002-002B	8/2/2023 4:14:00 PM	34399 RT: 3.163
230727002-003B	8/2/2023 4:40:00 PM	36777 RT: 3.111
230727002-004B	8/2/2023 5:04:00 PM	28184 RT: 3.048
230727002-006B	8/2/2023 5:57:00 PM	20753 RT: 3.048
230727002-007B	8/2/2023 6:22:00 PM	31090 RT: 3.079
230727002-004BMS	8/2/2023 6:47:00 PM	33749 RT: 3.131
230727002-004B	8/2/2023 6:59:00 PM	29184 RT: 3.09
230727002-004BMSD	8/2/2023 6:59:00 PM	29184 RT: 3.09
230727002-006BMS	8/2/2023 7:24:00 PM	60399 RT: 3.079
230727002-006BMSD	8/2/2023 7:36:00 PM	28138 RT: 3.038
diox 100	8/4/2023 10:07:00 AM	28130 RT: 3.132
230727002-005B	8/4/2023 10:31:00 AM	31479 RT: 3.059

Adirondack Environmental Services, Inc

Date: 25-Aug-23

Test Code: Sim-14diox
Test Number: SW8270D
Test Name: EPA 8270 SIM for 1,4 dioxane
Matrix: Water **Units:** µg/L

METHOD DETECTION / REPORTING LIMITS

Updated: 02-Aug-23

Type	Analyte	MDL	PQL
A	1,4-Dioxane	0.23	0.35
I	Tetrahydrofuran-d8	0	0
S	1,4-Dioxane-d8	0	0

Response Factor Report GCMS-B

Method Path : C:\msdchem\2\methods\
Method File : simdiox111521.M
Title : 14Dioxane-Sim
Last Update : Mon Jan 10 10:51:30 2022
Response Via : Initial Calibration

Calibration Files
1 =B3747.D 2 =B3748.D 3 =B3745.D 4 =B3746.D 5 =B3749.D

	Compound	1	2	3	4	5	Avg	%RSD
1) I	Tetrahydrofuran-d8	----------ISTD----------						
2)	1,4-Dioxane-d8...	0.721	1.049	0.790	1.023	0.891	0.895	15.96
3)	1,4-Dioxane	1.286	1.761	1.262	1.623	1.530	1.493	14.46

(#) = Out of Range

Continuing Calibration Report GCMS-B

Method Path : C:\msdchem\2\methods\
Method File : simdiox111521.M
Title : 14Dioxane-Sim
Last Update : Wed Aug 09 11:26:33 2023
Response Via : Initial Calibration

CC Data File: b2923.D

Min. RRF : 0.000 Min. Rel. Area : 50%
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%
1 I	Tetrahydrofuran-d8	1.000	1.000	0.0	5#
2	1,4-Dioxane-d8(surr)	0.895	0.777	13.1	5#
3	1,4-Dioxane	1.493	1.604	-7.5	7#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Continuing Calibration Report GCMS-B

Method Path : C:\msdchem\2\methods\
Method File : simdiox111521.M
Title : 14Dioxane-Sim
Last Update : Wed Aug 09 11:25:39 2023
Response Via : Initial Calibration

CC Data File: b2978.D

Min. RRF : 0.000 Min. Rel. Area : 50%
Max. RRF Dev : 25% Max. Rel. Area : 150%

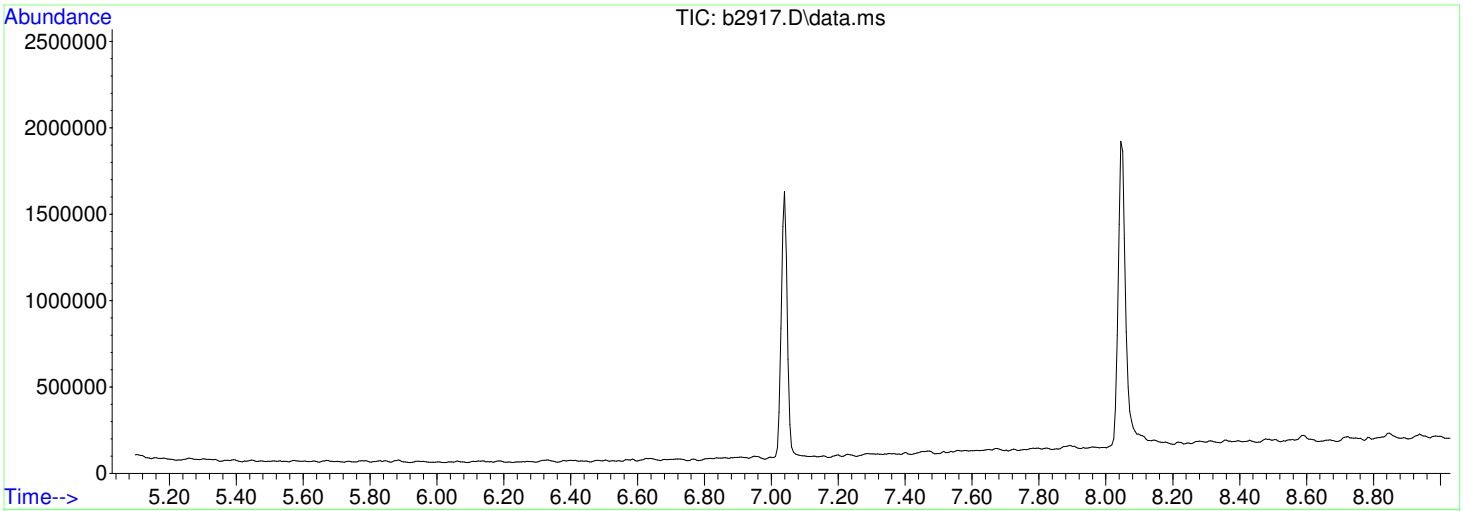
	Compound	AvgRF	CCRF	%Dev	Area%
1 I	Tetrahydrofuran-d8	1.000	1.000	0.0	5#
2	1,4-Dioxane-d8(surr)	0.895	0.853	4.6	6#
3	1,4-Dioxane	1.493	1.522	-2.0	6#

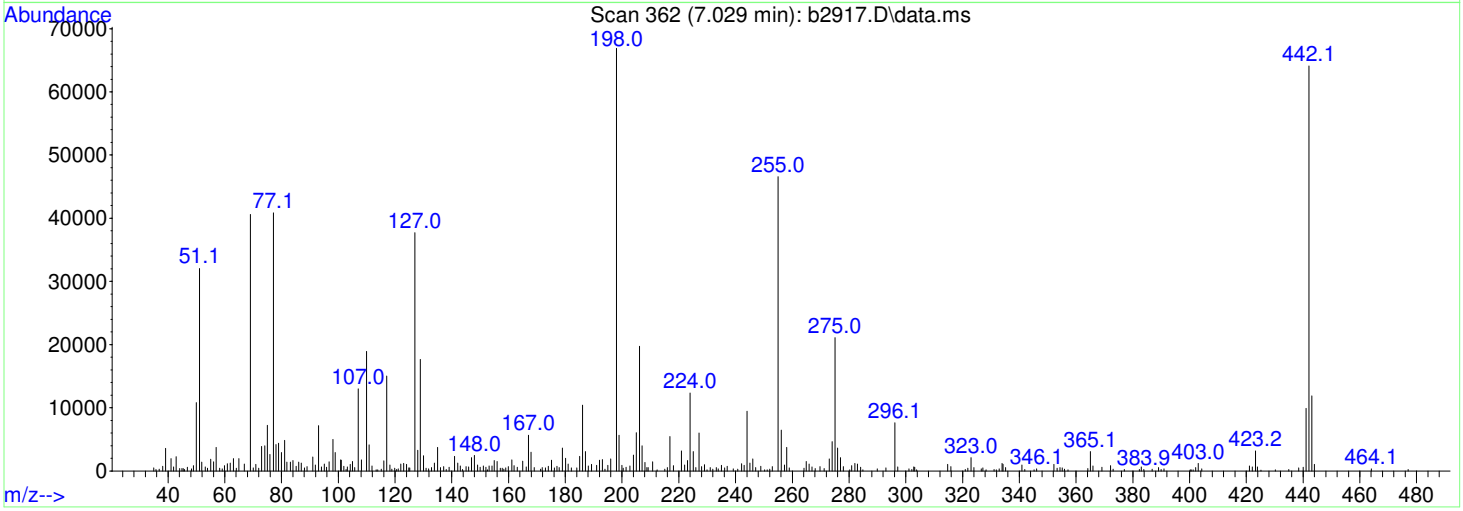
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : D:\2\data\080223\
Data File : b2917.D
Acq On : 2 Aug 2023 9:41 am
Operator :
Sample : dftpp
Misc : tune
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\2\methods\simdiox111521.M
Title : 14Dioxane-Sim
Last Update : Thu Aug 03 08:50:46 2023





Spectrum Information: Scan 362

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	47.9	32064	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	1.2	470	PASS
127	198	10	80	56.3	37688	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	66912	PASS
199	198	5	9	8.4	5639	PASS
275	198	10	60	31.6	21112	PASS
365	198	1	100	4.6	3081	PASS
441	442	0.01	24	15.4	9905	PASS
442	198	50	125	95.8	64128	PASS
443	442	15	24	18.5	11864	PASS

Quantitation Report (QT Reviewed)

Data Path : D:\2\data\080223\
Data File : b2923.D
Acq On : 2 Aug 2023 2:10 pm
Operator :
Sample : diox@100 (Sig #1); dioz@100 (Sig #2)
Misc : ccv
ALS Vial : 1 Sample Multiplier: 1

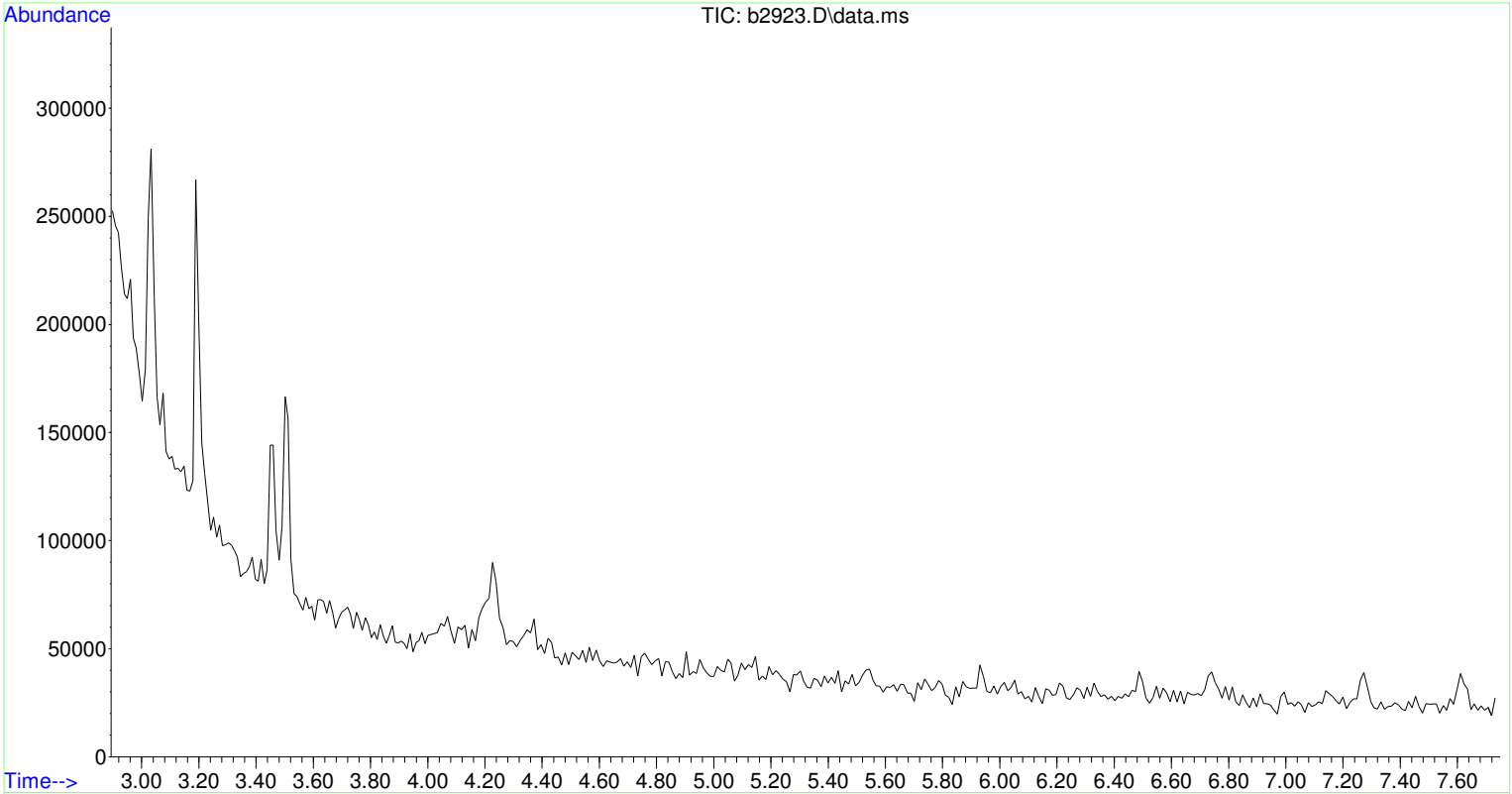
Quant Time: Aug 02 14:20:58 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Wed Aug 02 14:20:55 2023
Response via : Initial Calibration

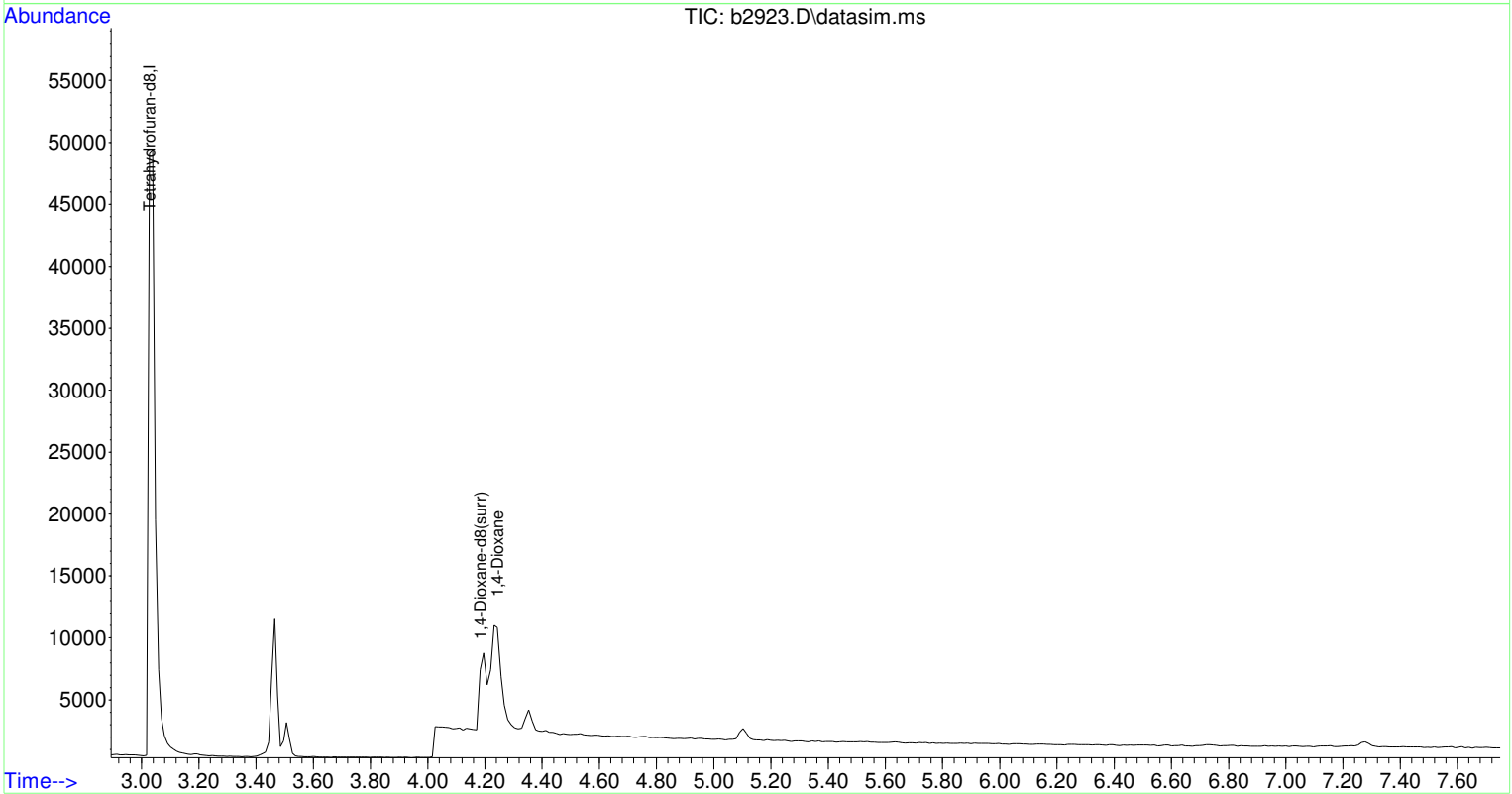
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tetrahydrofuran-d8	3.028	46	28254	500.00	ug	# 0.00
Target Compounds						Qvalue
2] 1,4-Dioxane-d8(surr)	4.183	64	4391	86.85	ug	# 1
3] 1,4-Dioxane	4.244	88	9064	107.46	ug	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\2\data\080223\
Data File : b2923.D
Acq On : 2 Aug 2023 2:10 pm
Operator :
Sample : diox@100 (Sig #1); dioz@100 (Sig #2)
Misc : ccv
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 02 14:20:58 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Wed Aug 02 14:20:55 2023
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : D:\2\data\080223\
Data File : b2926.D
Acq On : 2 Aug 2023 2:47 pm
Operator :
Sample : mb-102724 (Sig #1); mb- (Sig #2)
Misc : mblk
ALS Vial : 3 Sample Multiplier: 1

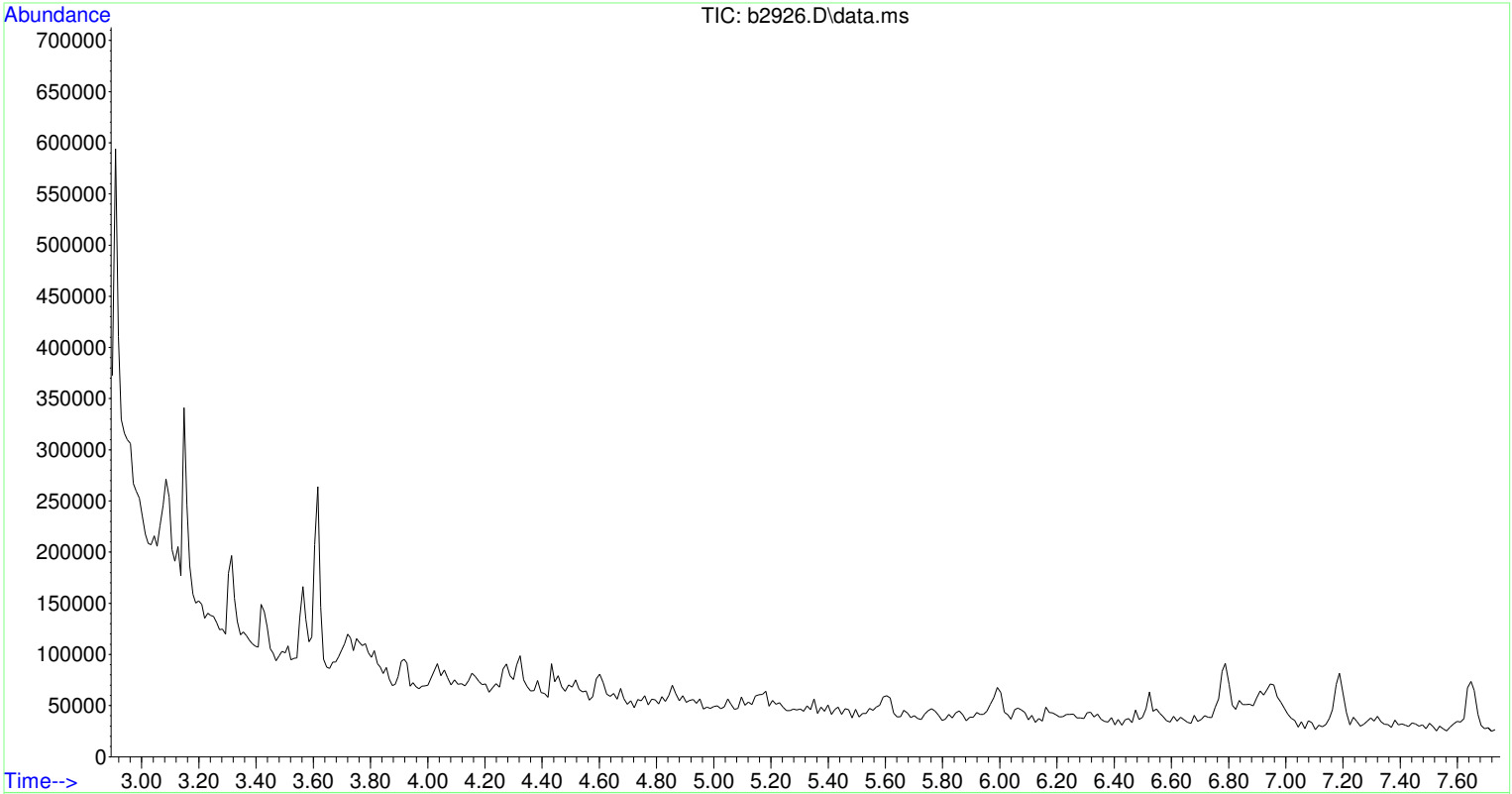
Quant Time: Aug 02 14:57:17 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Mar 16 08:46:58 2023
Response via : Initial Calibration

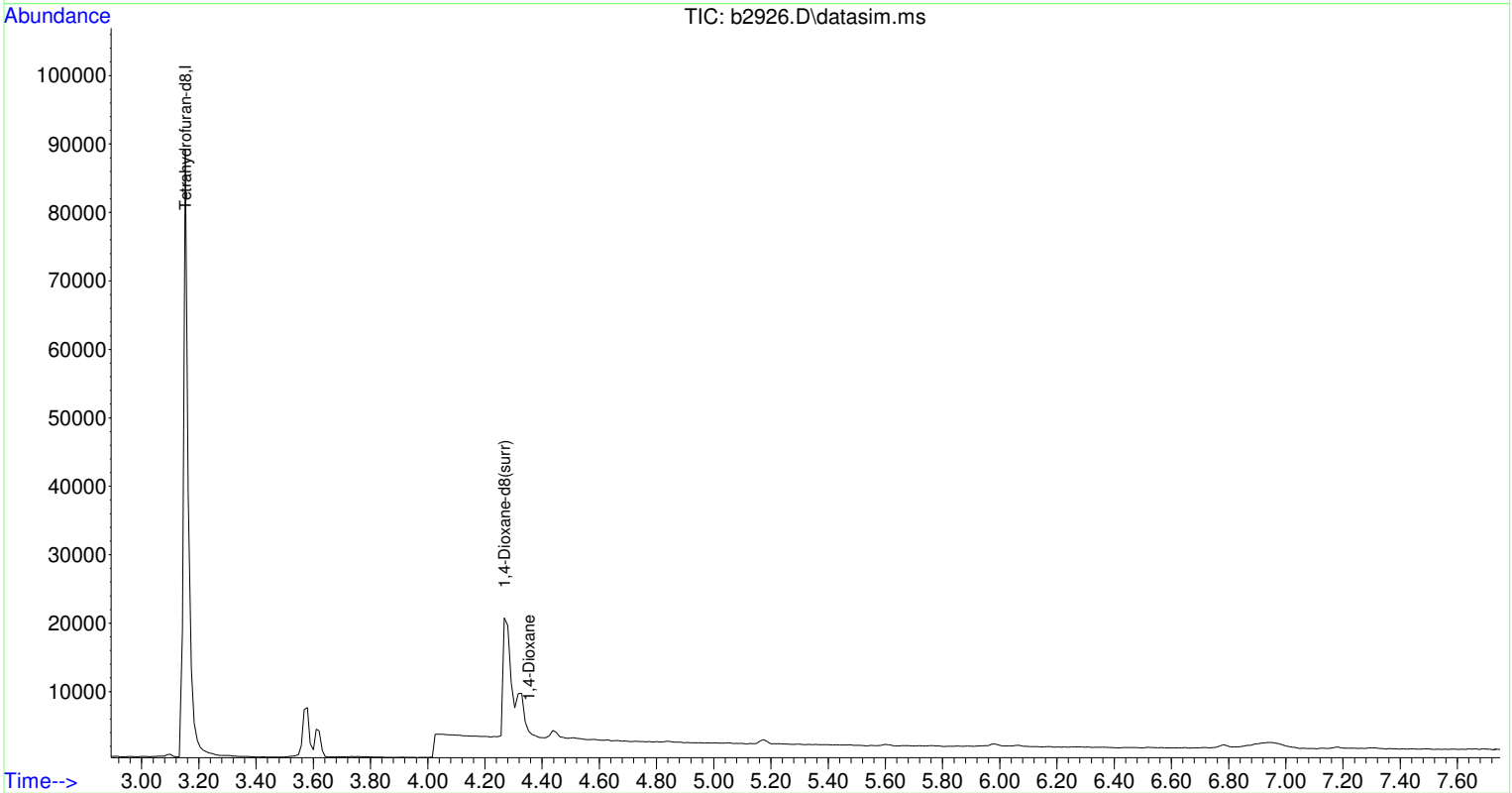
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tetrahydrofuran-d8	3.152	46	36935	500.00	ug	# 0.03
Target Compounds						Qvalue
2] 1,4-Dioxane-d8(surr)	4.268	64	12909	195.33	ug	# 51
3] 1,4-Dioxane	4.353	88	980	8.89	ug	# 22

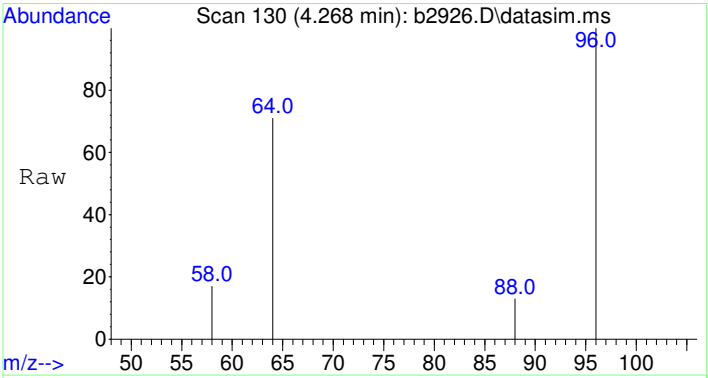
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\2\data\080223\
Data File : b2926.D
Acq On : 2 Aug 2023 2:47 pm
Operator :
Sample : mb-102724 (Sig #1); mb- (Sig #2)
Misc : mblk
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 02 14:57:17 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Mar 16 08:46:58 2023
Response via : Initial Calibration



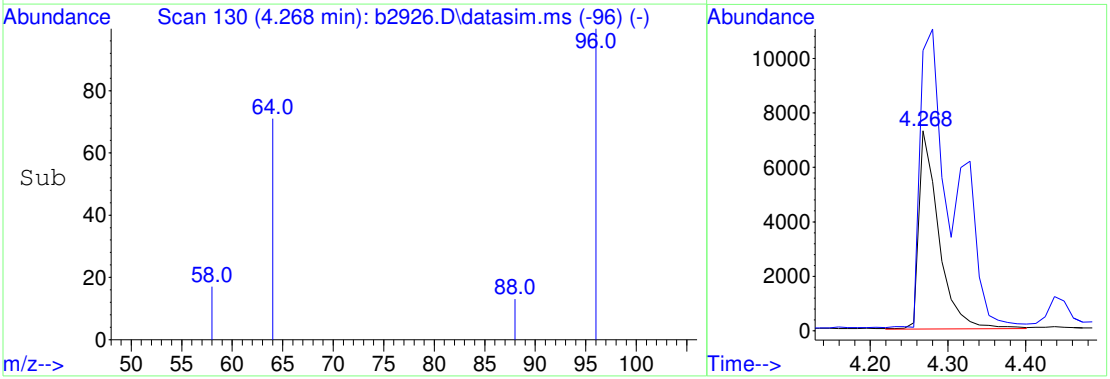


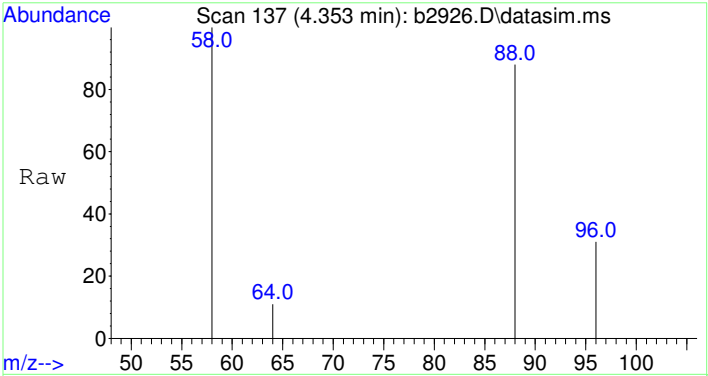


#2
1,4-Dioxane-d8(surr)
Concen: 195.33 ug
RT: 4.268 min Scan# 130
Delta R.T. -0.045 min
Lab File: b2926.D
Acq: 2 Aug 2023 2:47 pm

Tgt Ion: 64 Resp: 12909

Ion	Ratio	Lower	Upper
64	100		
96	168.8	92.2	138.2#

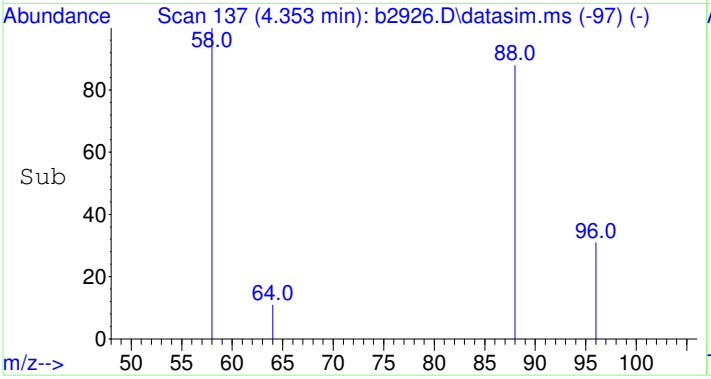


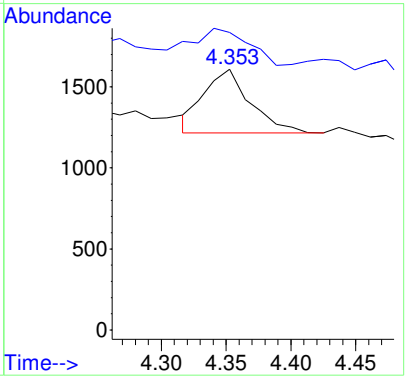


#3
1,4-Dioxane
Concen: 8.89 ug
RT: 4.353 min Scan# 137
Delta R.T. -0.022 min
Lab File: b2926.D
Acq: 2 Aug 2023 2:47 pm

Tgt Ion: 88 Resp: 980

Ion	Ratio	Lower	Upper
88	100		
58	0.0	46.0	69.0#





Quantitation Report (QT Reviewed)

Data Path : D:\2\data\080223\
Data File : b2927.D
Acq On : 2 Aug 2023 3:00 pm
Operator :
Sample : lcs-102724 (Sig #1); lcs (Sig #2)
Misc : lcs
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 02 15:22:35 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Mar 16 08:46:58 2023
Response via : Initial Calibration

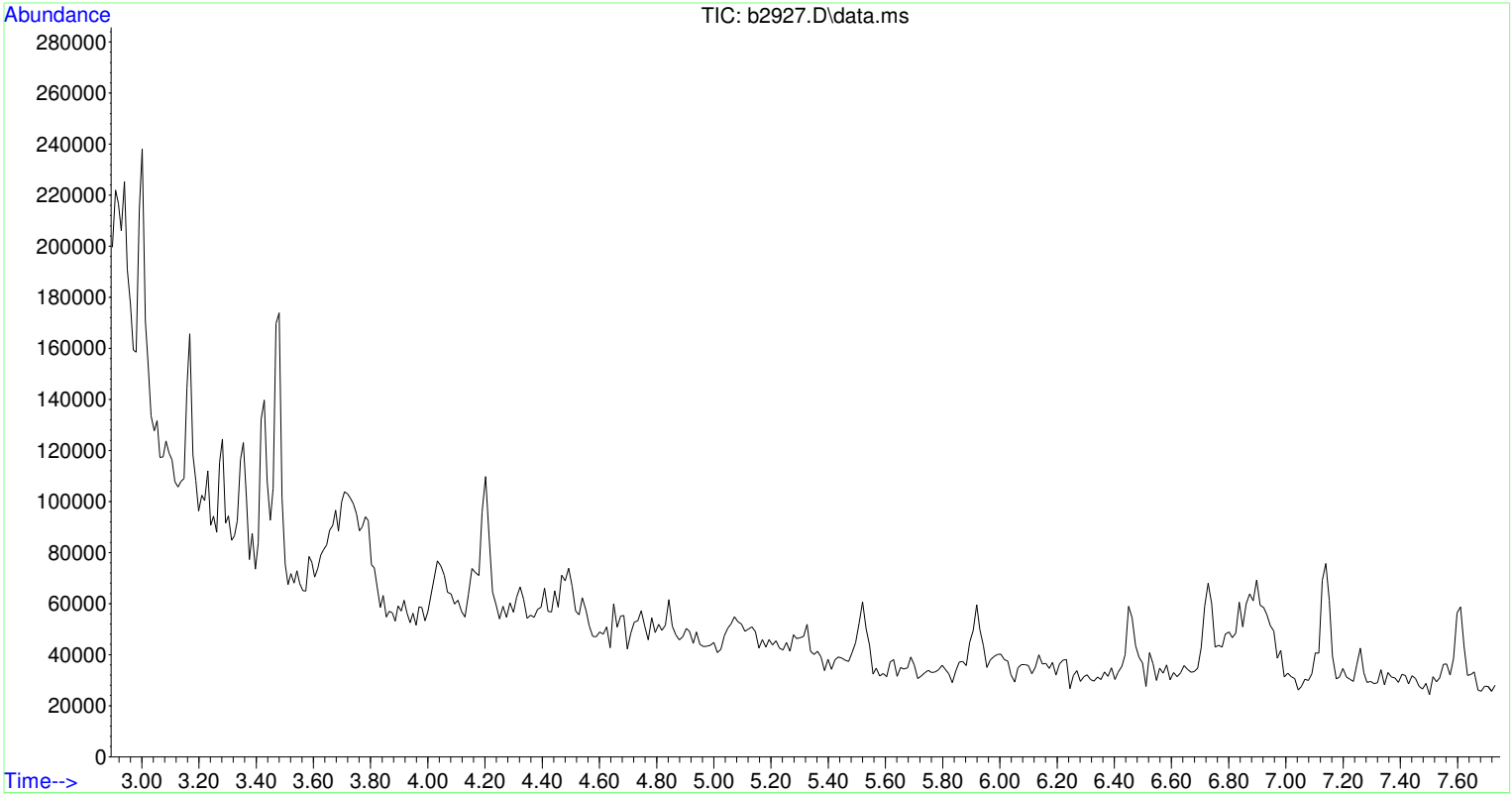
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tetrahydrofuran-d8	2.996	46	24884	500.00	ug	# 0.00
Target Compounds						Qvalue
2] 1,4-Dioxane-d8(surr)	4.159	64	8522	191.39	ug	82
3] 1,4-Dioxane	4.207	88	14240m	191.70	ug	

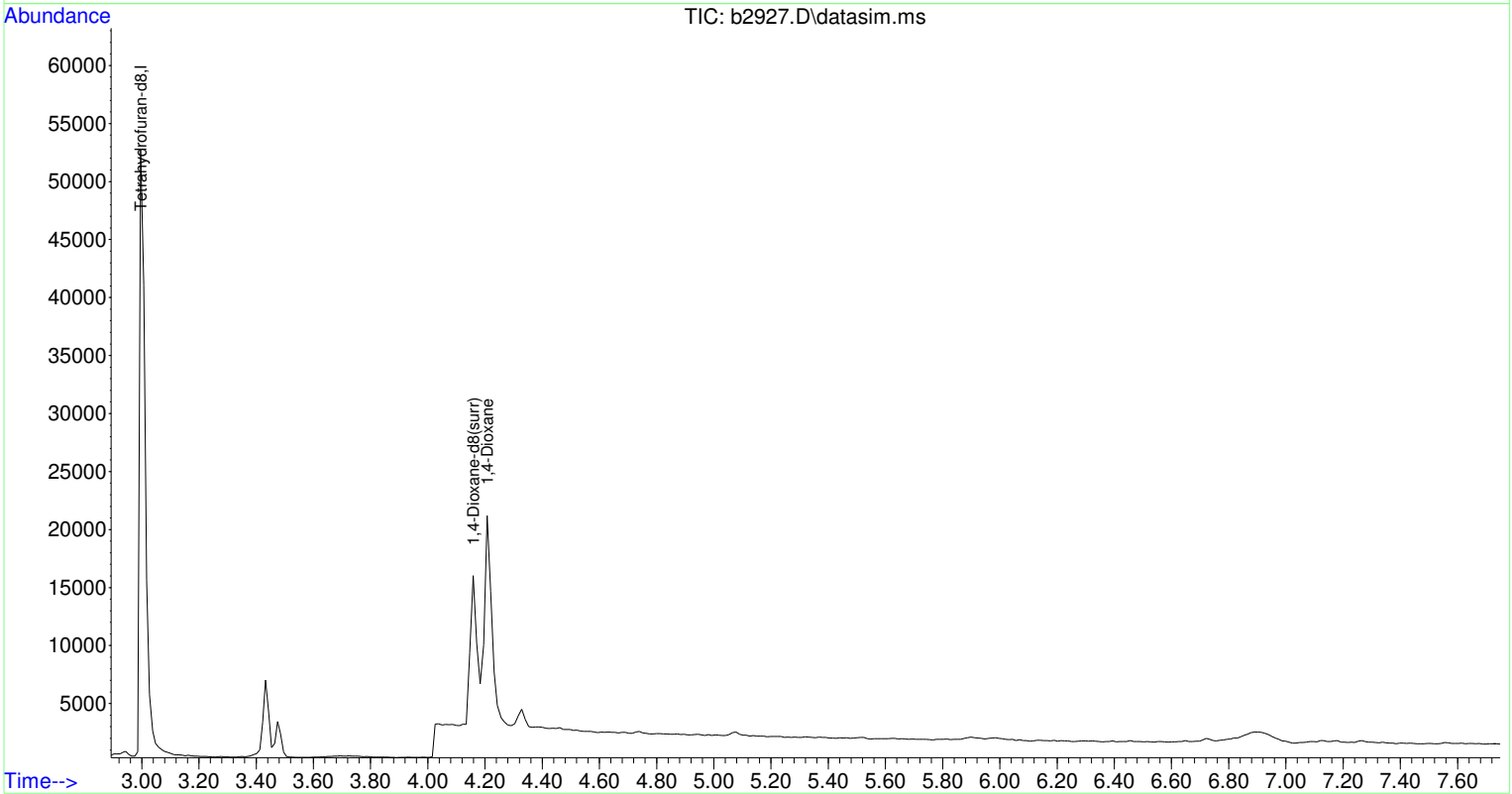
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\2\data\080223\
Data File : b2927.D
Acq On : 2 Aug 2023 3:00 pm
Operator :
Sample : lcs-102724 (Sig #1); lcs (Sig #2)
Misc : lcs
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 02 15:22:35 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Mar 16 08:46:58 2023
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : D:\2\data\080223\
Data File : b2931.D
Acq On : 2 Aug 2023 3:49 pm
Operator :
Sample : 230727002-001b
Misc :
ALS Vial : 8 Sample Multiplier: 1

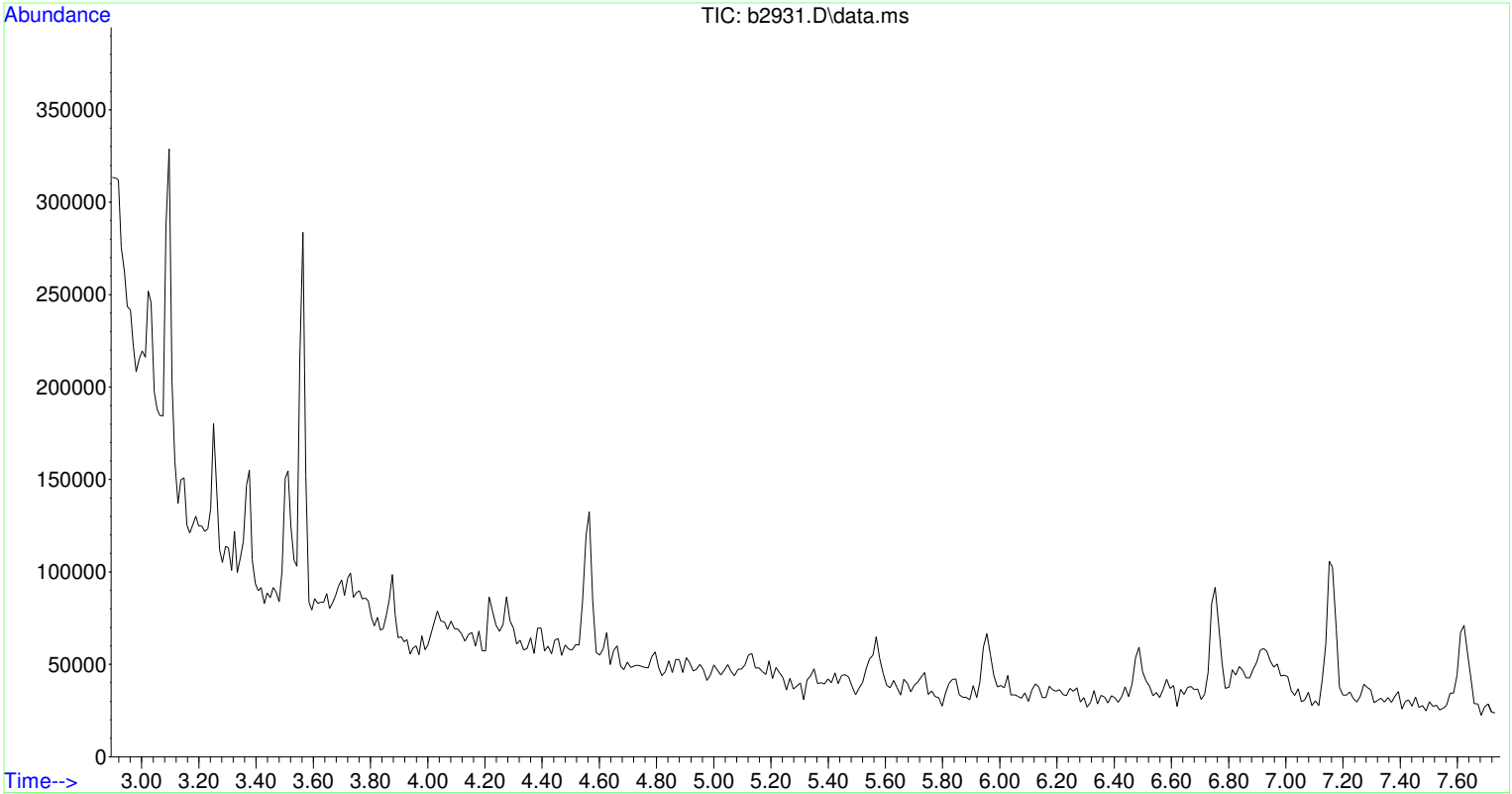
Quant Time: Aug 03 08:42:19 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Mar 16 08:46:58 2023
Response via : Initial Calibration

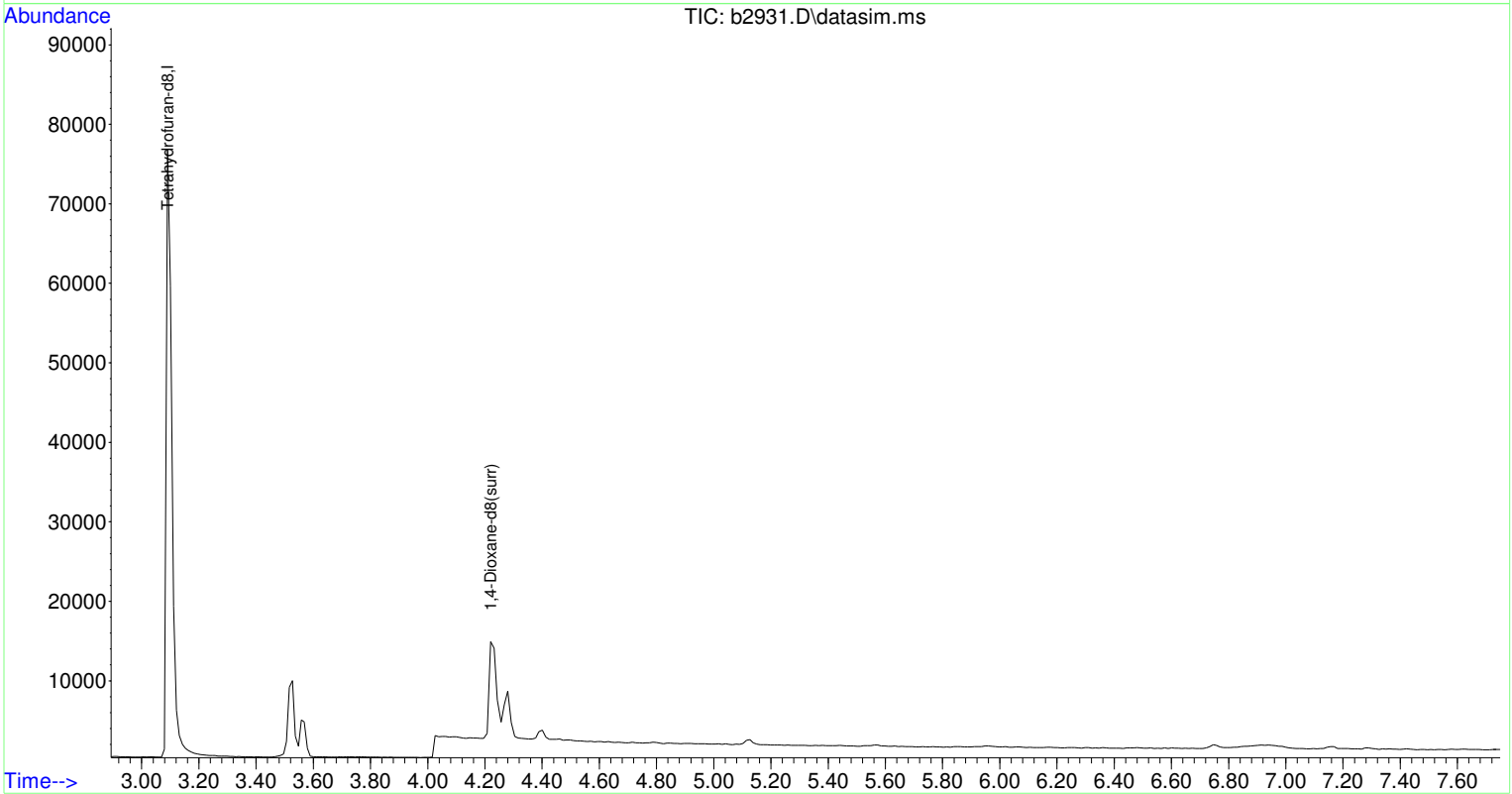
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tetrahydrofuran-d8	3.090	46	35655	500.00	ug	# 0.05
Target Compounds						Qvalue
2] 1,4-Dioxane-d8(surr)	4.220	64	8394	131.57	ug	# 60

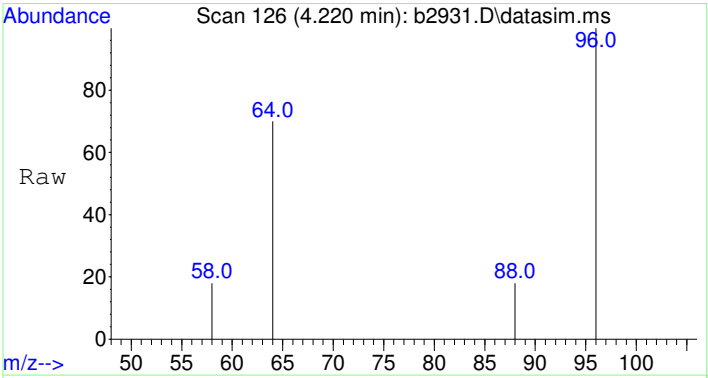
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\2\data\080223\
Data File : b2931.D
Acq On : 2 Aug 2023 3:49 pm
Operator :
Sample : 230727002-001b
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 03 08:42:19 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Mar 16 08:46:58 2023
Response via : Initial Calibration



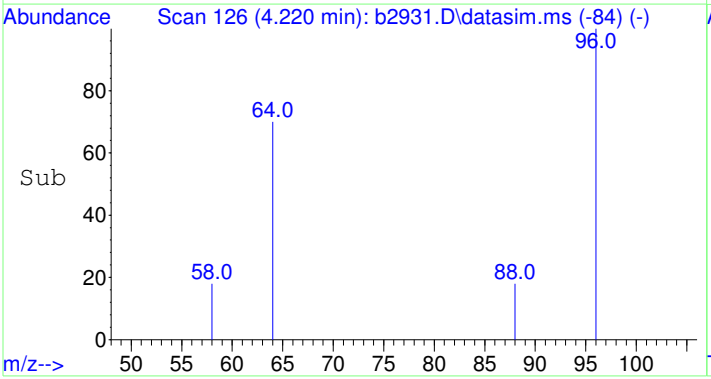


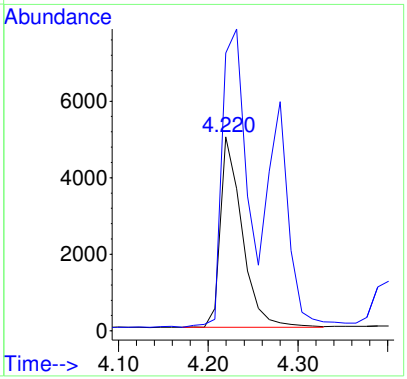


#2
1,4-Dioxane-d8(surr)
Concen: 131.57 ug
RT: 4.220 min Scan# 126
Delta R.T. 0.036 min
Lab File: b2931.D
Acq: 2 Aug 2023 3:49 pm

Tgt Ion: 64 Resp: 8394

Ion	Ratio	Lower	Upper
64	100		
96	176.4	104.1	156.1#





Quantitation Report (QT Reviewed)

Data Path : D:\2\data\080223\
Data File : b2933.D
Acq On : 2 Aug 2023 4:14 pm
Operator :
Sample : 230727002-002b
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 03 08:44:49 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Aug 03 08:44:46 2023
Response via : Initial Calibration

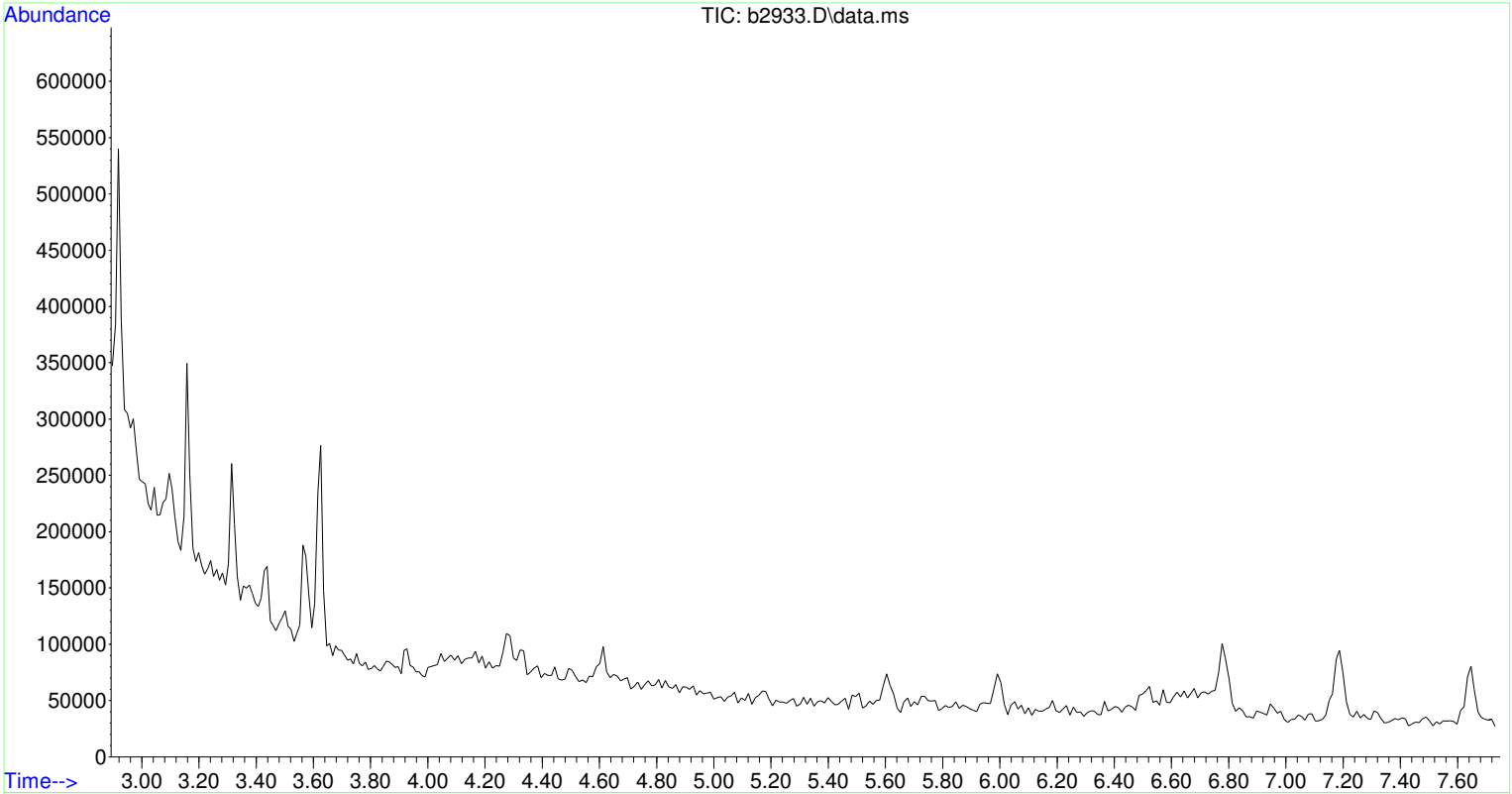
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tetrahydrofuran-d8	3.163	46	34399	500.00	ug	0.00
Target Compounds						Qvalue
2] 1,4-Dioxane-d8(surr)	4.280	64	12994	211.11	ug	87
3] 1,4-Dioxane	4.340	88	635m	6.18	ug	

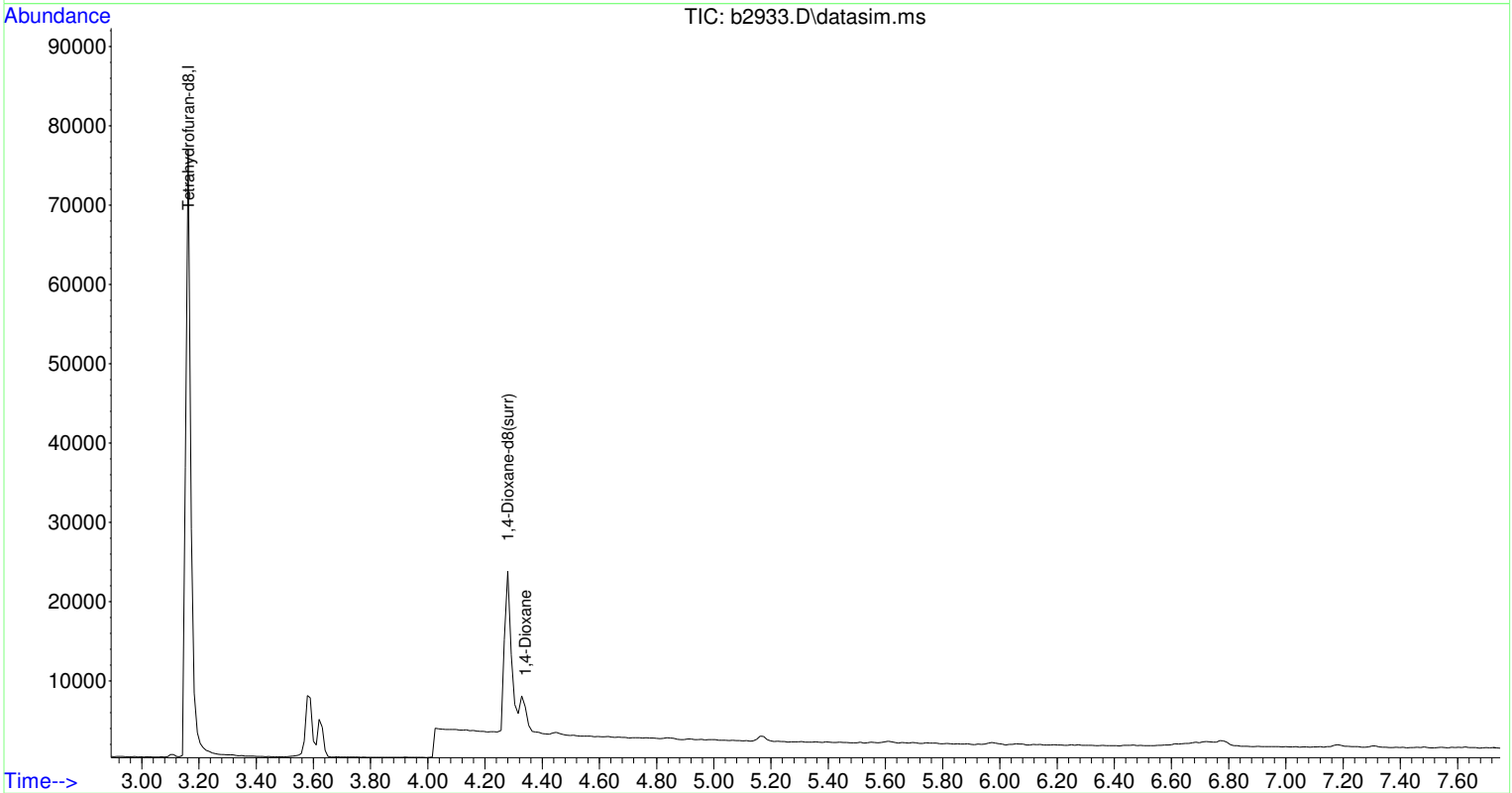
(#) = qualifier out of range (m) = manual integration (+) = signals summed

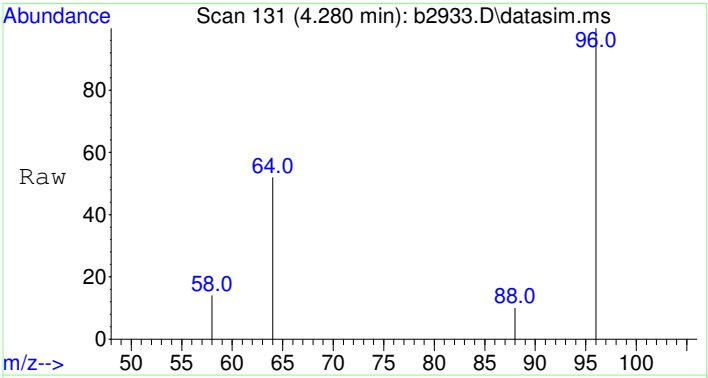
Quantitation Report (QT Reviewed)

Data Path : D:\2\data\080223\
Data File : b2933.D
Acq On : 2 Aug 2023 4:14 pm
Operator :
Sample : 230727002-002b
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 03 08:44:49 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Aug 03 08:44:46 2023
Response via : Initial Calibration



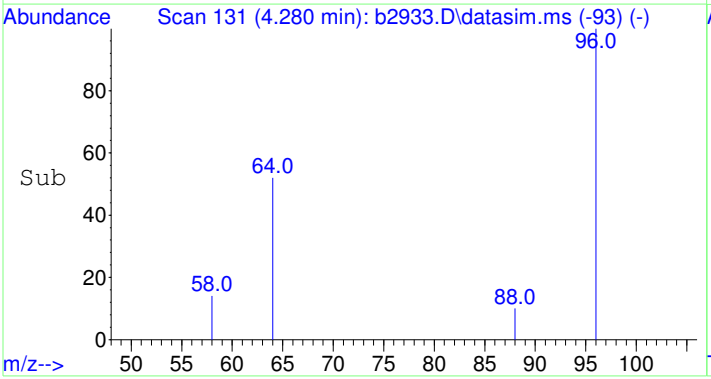


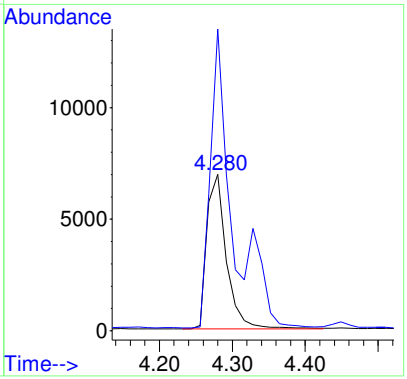


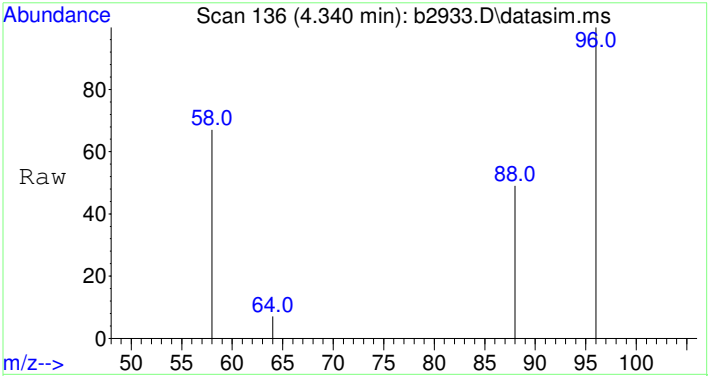
#2
1,4-Dioxane-d8(surr)
Concen: 211.11 ug
RT: 4.280 min Scan# 131
Delta R.T. 0.000 min
Lab File: b2933.D
Acq: 2 Aug 2023 4:14 pm

Tgt Ion: 64 Resp: 12994

Ion	Ratio	Lower	Upper
64	100		
96	173.6	154.4	231.6



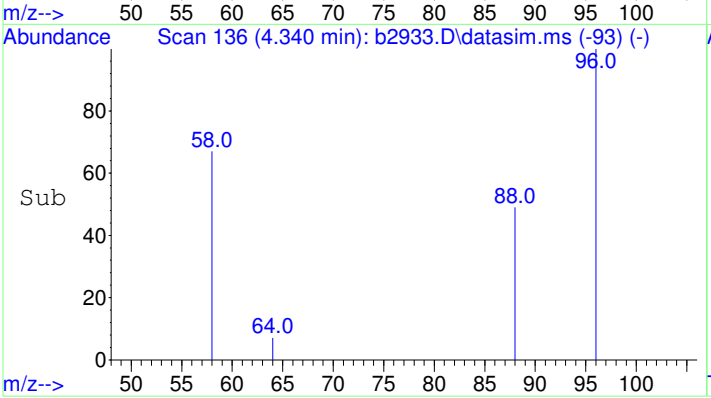


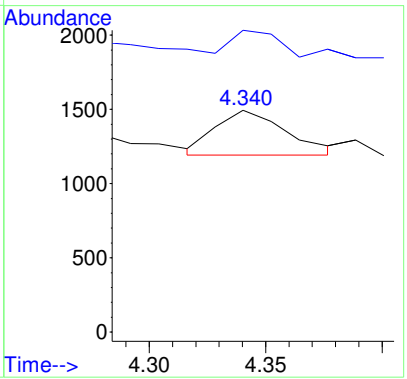


#3
1,4-Dioxane
Concen: 6.18 ug m
RT: 4.340 min Scan# 136
Delta R.T. 0.000 min
Lab File: b2933.D
Acq: 2 Aug 2023 4:14 pm

Tgt Ion: 88 Resp: 635

Ion	Ratio	Lower	Upper
88	100		
58	0.0	108.9	163.3#





Quantitation Report (QT Reviewed)

Data Path : D:\2\data\080223\
Data File : b2935.D
Acq On : 2 Aug 2023 4:40 pm
Operator :
Sample : 230727002-003b
Misc :
ALS Vial : 10 Sample Multiplier: 1

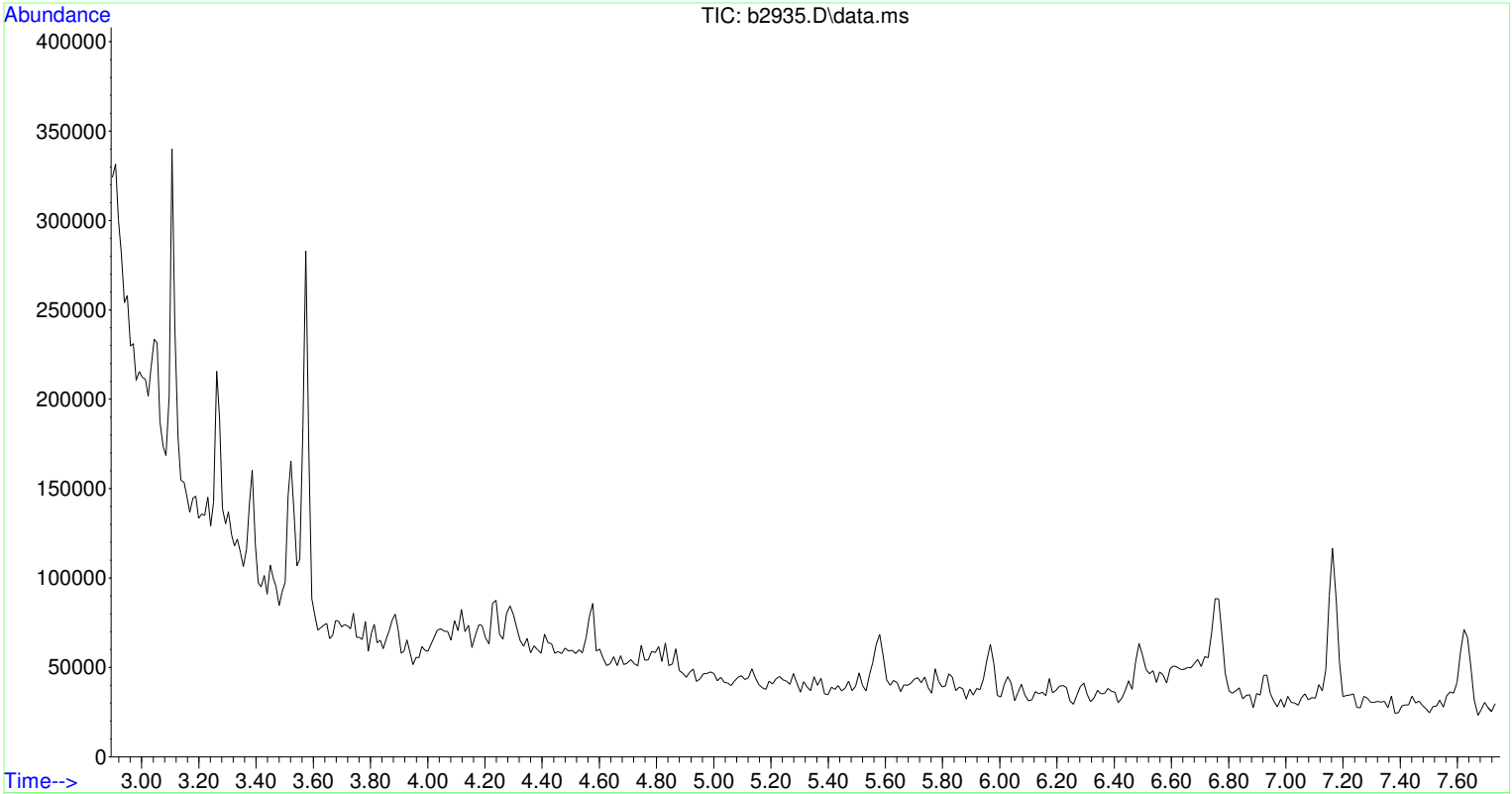
Quant Time: Aug 03 08:45:44 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Mar 16 08:46:58 2023
Response via : Initial Calibration

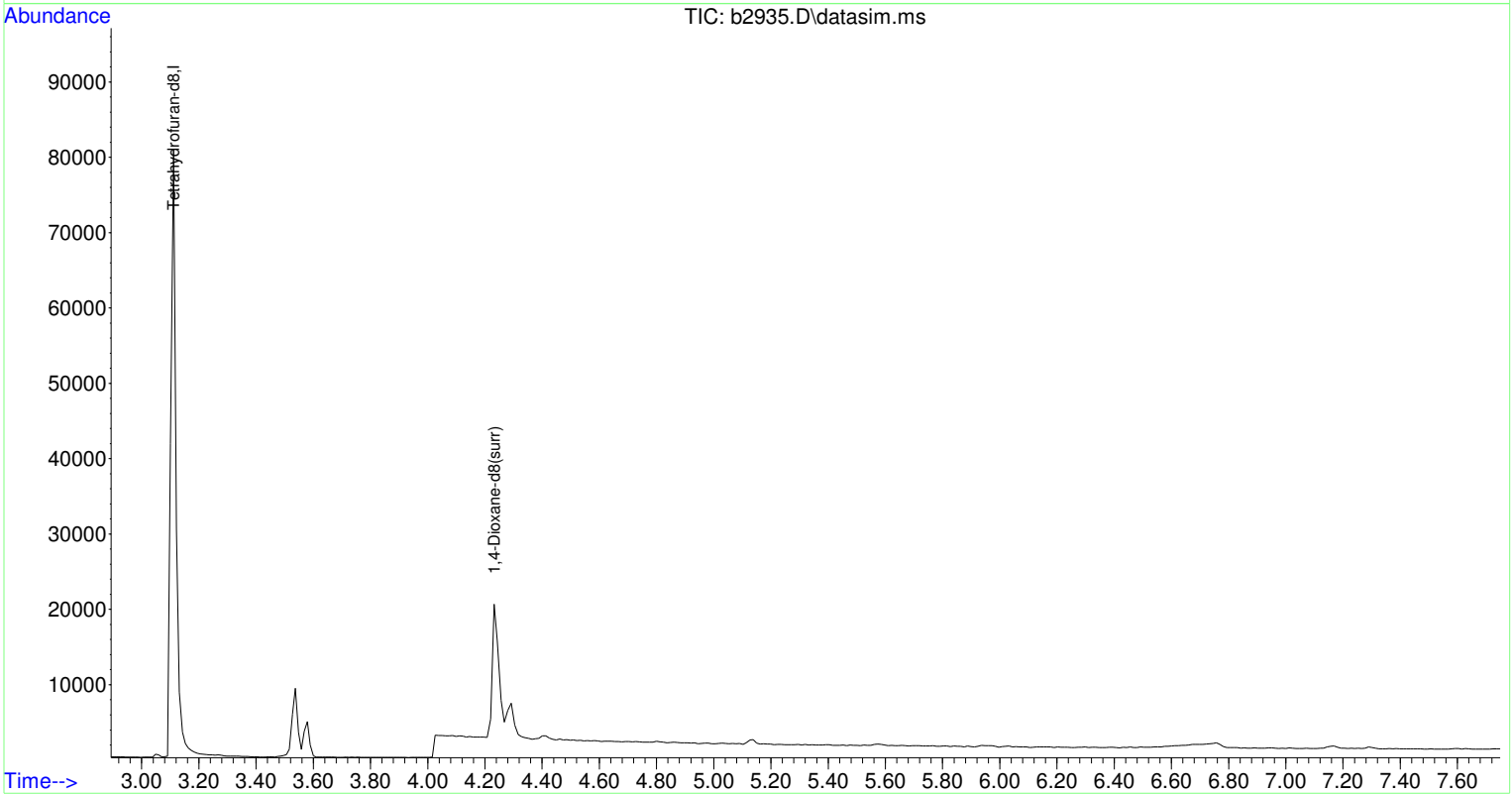
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tetrahydrofuran-d8	3.111	46	36777	500.00	ug	-0.05
Target Compounds						Qvalue
2] 1,4-Dioxane-d8(surr)	4.232	64	11153	169.48	ug	82

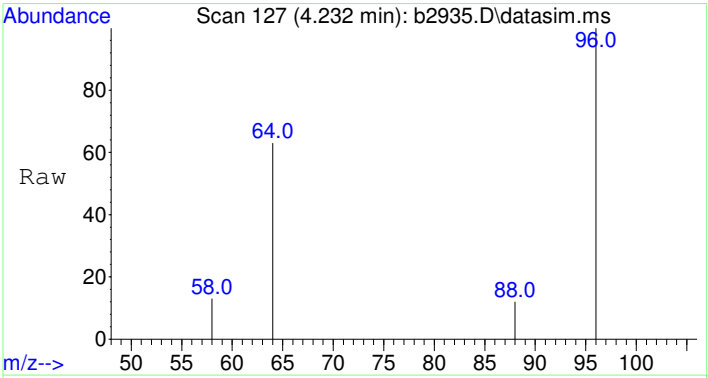
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\2\data\080223\
Data File : b2935.D
Acq On : 2 Aug 2023 4:40 pm
Operator :
Sample : 230727002-003b
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 03 08:45:44 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Mar 16 08:46:58 2023
Response via : Initial Calibration



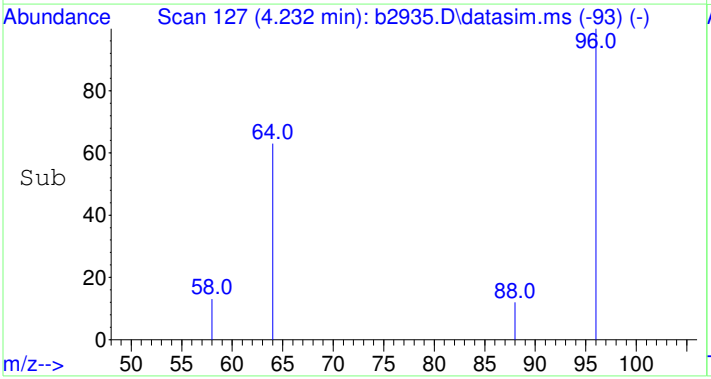


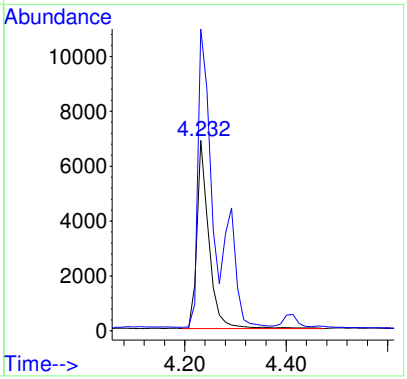


#2
1,4-Dioxane-d8(surr)
Concen: 169.48 ug
RT: 4.232 min Scan# 127
Delta R.T. -0.048 min
Lab File: b2935.D
Acq: 2 Aug 2023 4:40 pm

Tgt Ion: 64 Resp: 11153

Ion	Ratio	Lower	Upper
64	100		
96	166.1	154.4	231.6





Quantitation Report (Not Reviewed)

Data Path : D:\2\data\080223\
Data File : b2937.D
Acq On : 2 Aug 2023 5:04 pm
Operator :
Sample : 230727002-004b
Misc :
ALS Vial : 12 Sample Multiplier: 1

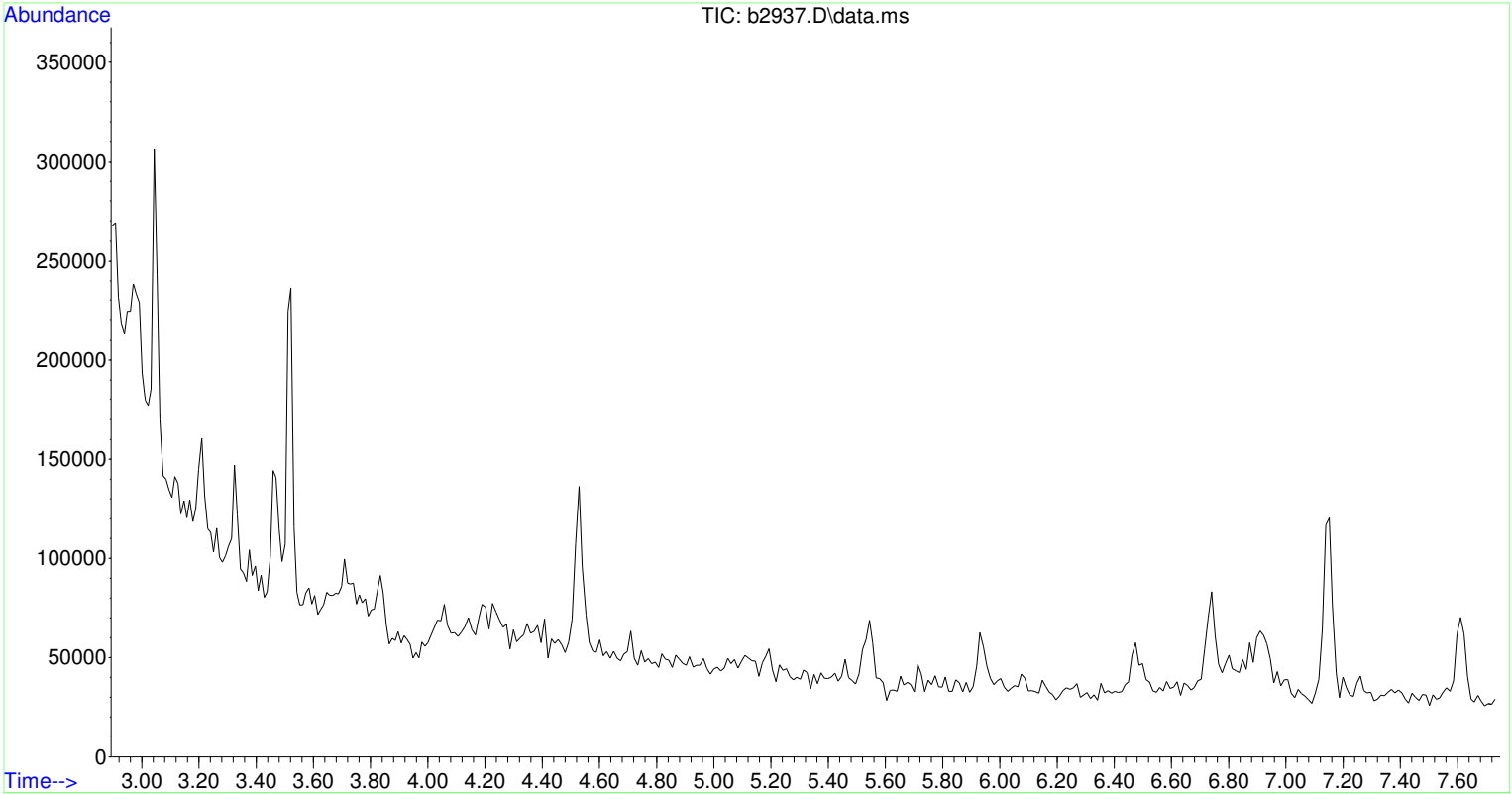
Quant Time: Aug 03 08:46:42 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Aug 03 08:46:33 2023
Response via : Initial Calibration

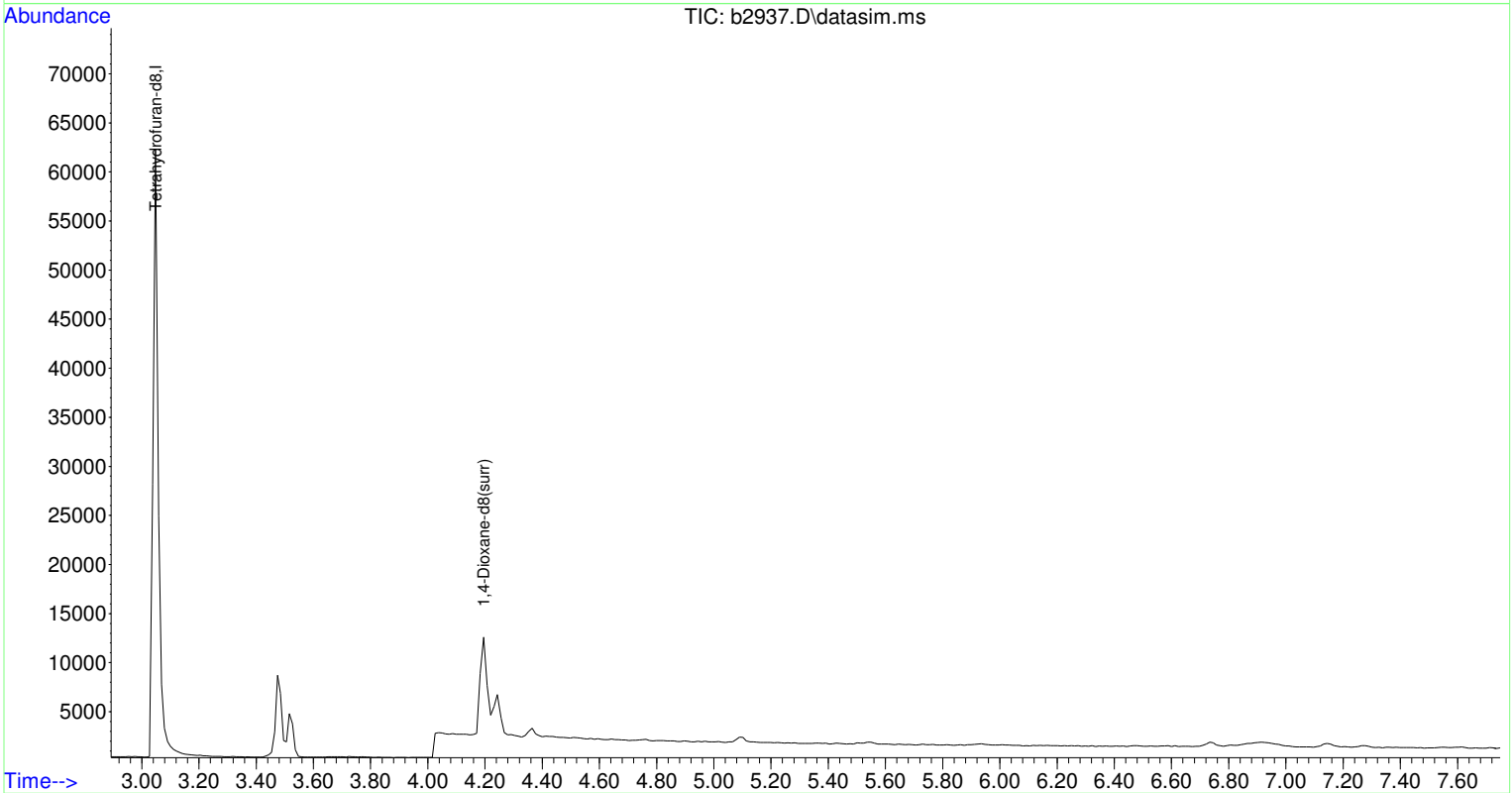
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tetrahydrofuran-d8	3.048	46	28184	500.00	ug	0.00
Target Compounds						Qvalue
2] 1,4-Dioxane-d8(surr)	4.195	64	6847	135.77	ug	89

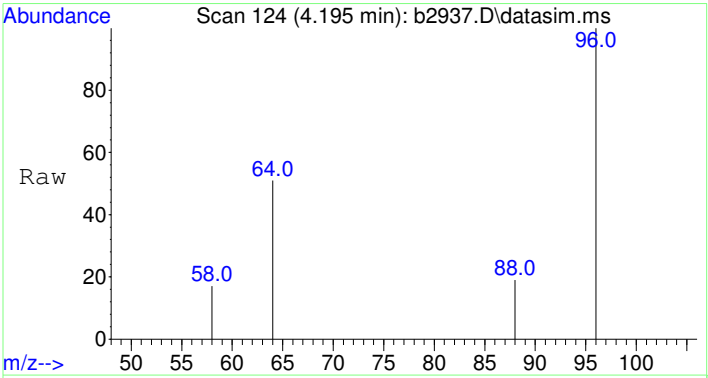
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\2\data\080223\
Data File : b2937.D
Acq On : 2 Aug 2023 5:04 pm
Operator :
Sample : 230727002-004b
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 03 08:46:42 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Aug 03 08:46:33 2023
Response via : Initial Calibration



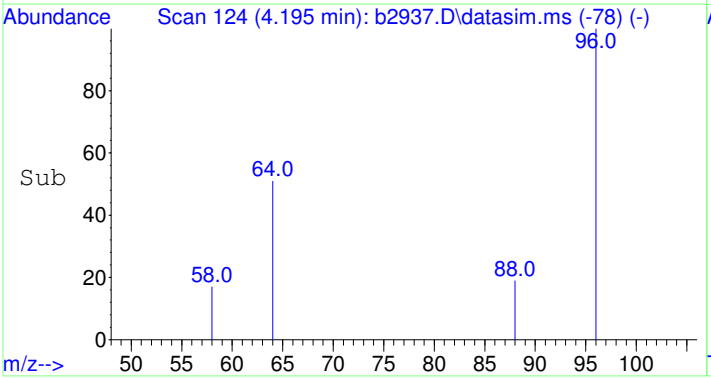


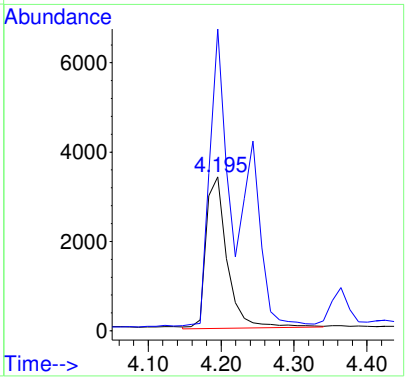


#2
1,4-Dioxane-d8(surr)
Concen: 135.77 ug
RT: 4.195 min Scan# 124
Delta R.T. 0.070 min
Lab File: b2937.D
Acq: 2 Aug 2023 5:04 pm

Tgt Ion: 64 Resp: 6847

Ion	Ratio	Lower	Upper
64	100		
96	176.9	154.4	231.6





Quantitation Report (QT Reviewed)

Data Path : D:\2\data\080223\
Data File : b2941.D
Acq On : 2 Aug 2023 5:57 pm
Operator :
Sample : 230727002-006b
Misc :
ALS Vial : 14 Sample Multiplier: 1

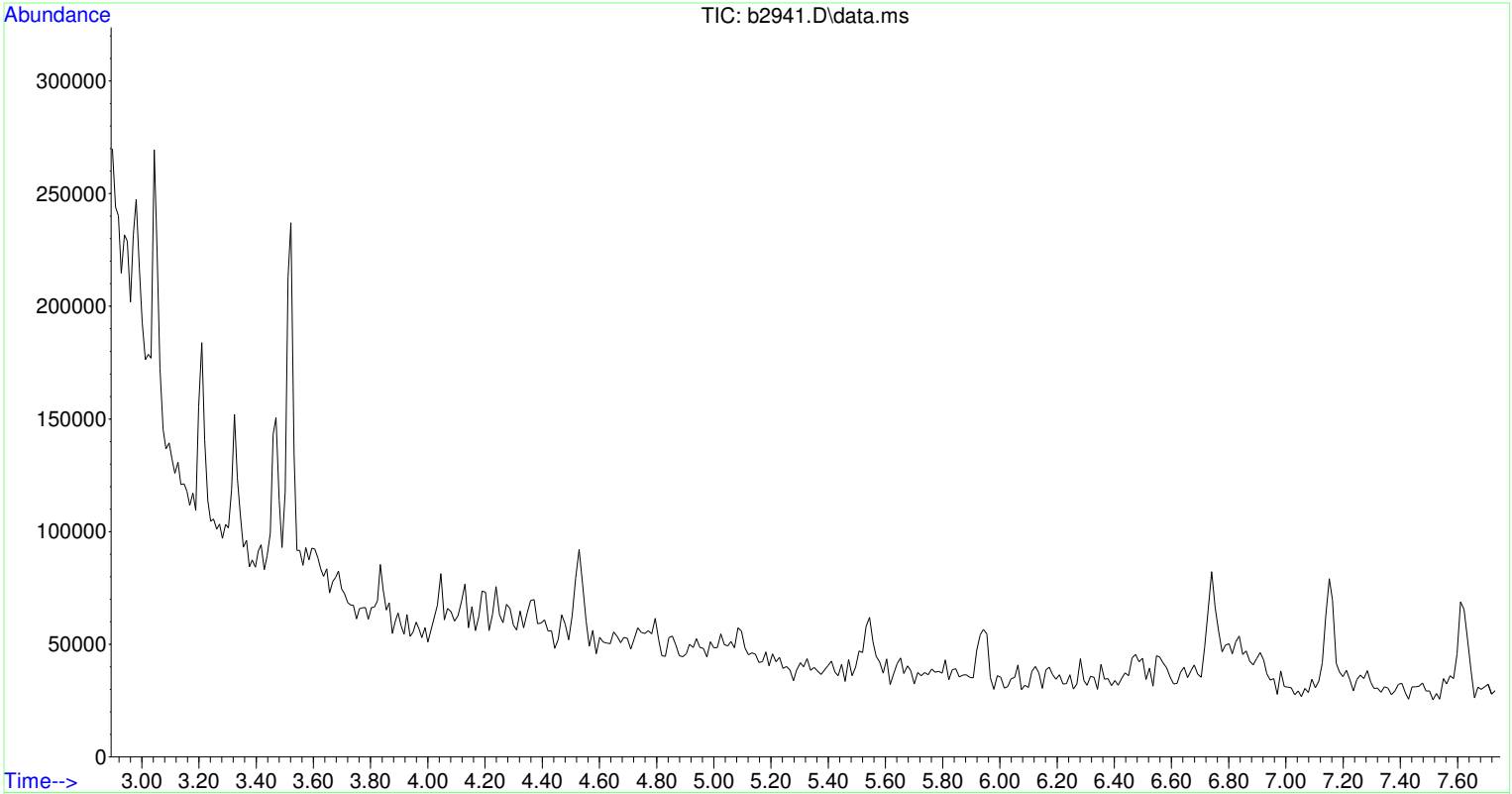
Quant Time: Aug 03 08:47:54 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Mar 16 08:46:58 2023
Response via : Initial Calibration

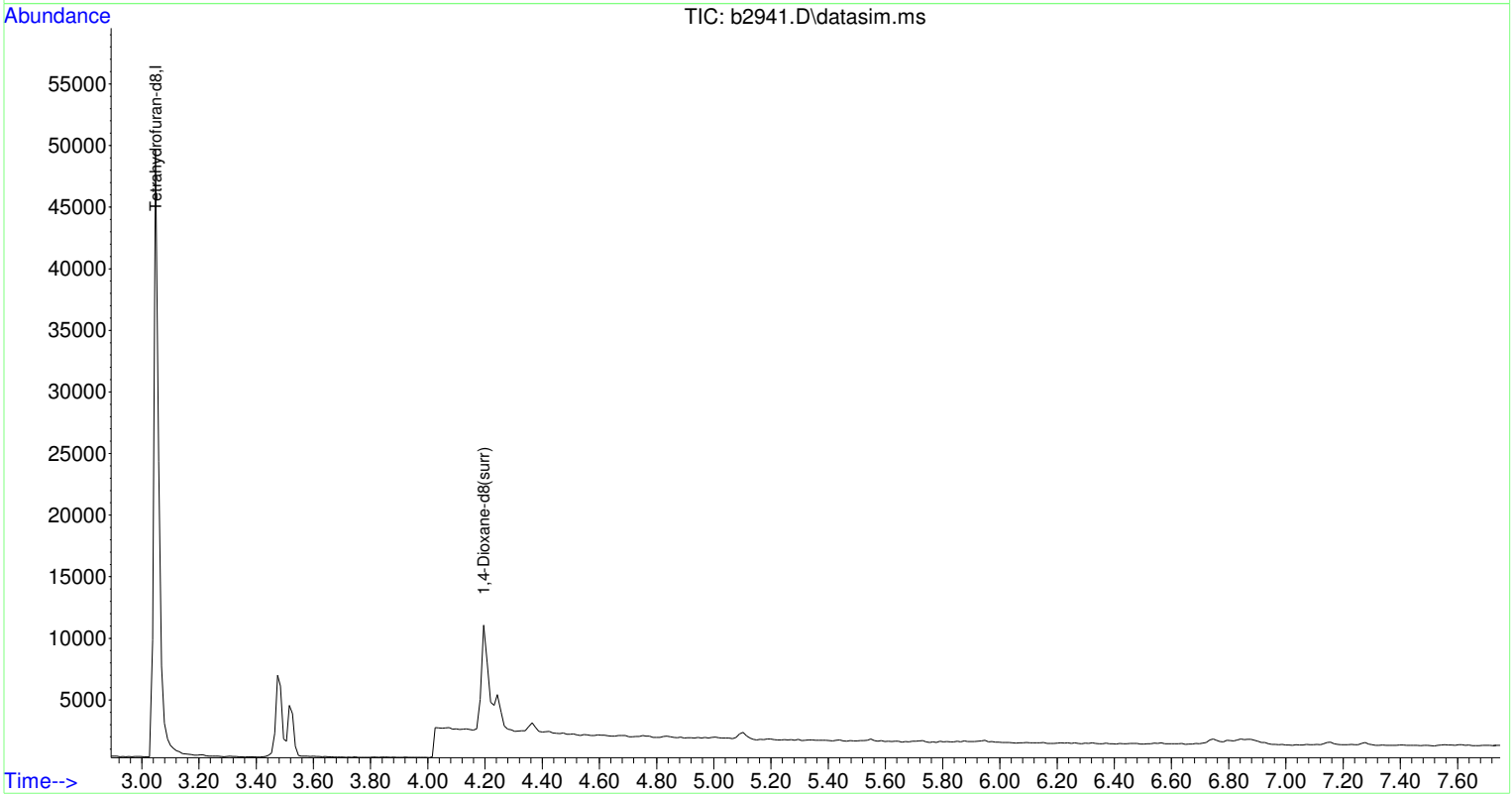
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tetrahydrofuran-d8	3.048	46	20753	500.00	ug	0.00
Target Compounds						Qvalue
2] 1,4-Dioxane-d8(surr)	4.195	64	5451	146.79	ug	# 51

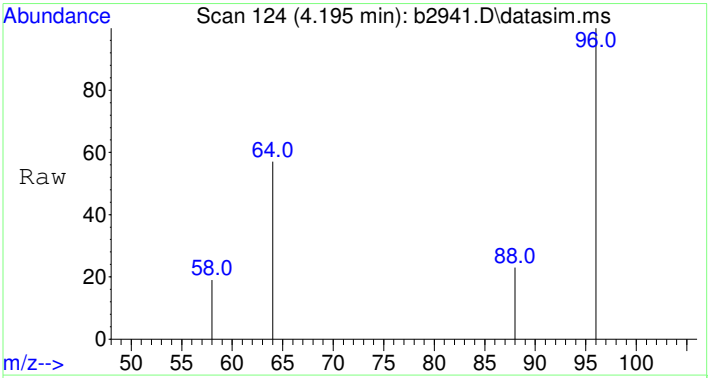
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\2\data\080223\
Data File : b2941.D
Acq On : 2 Aug 2023 5:57 pm
Operator :
Sample : 230727002-006b
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 03 08:47:54 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Mar 16 08:46:58 2023
Response via : Initial Calibration



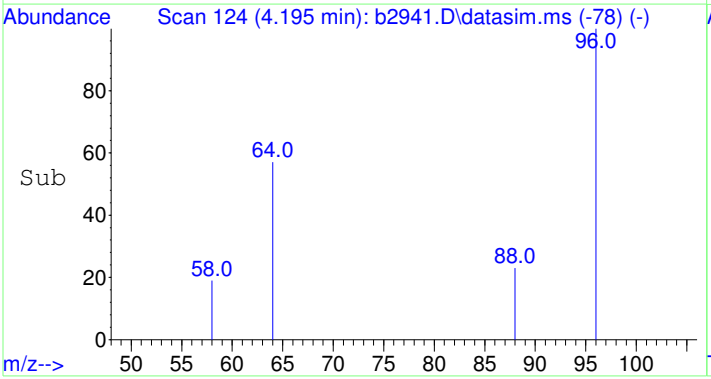


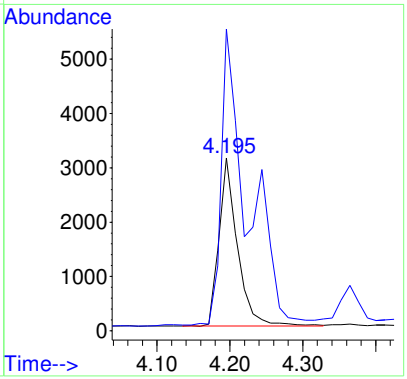


#2
1,4-Dioxane-d8(surr)
Concen: 146.79 ug
RT: 4.195 min Scan# 124
Delta R.T. 0.070 min
Lab File: b2941.D
Acq: 2 Aug 2023 5:57 pm

Tgt Ion: 64 Resp: 5451

Ion	Ratio	Lower	Upper
64	100		
96	265.1	154.4	231.6#





Quantitation Report (QT Reviewed)

Data Path : D:\2\data\080223\
Data File : b2943.D
Acq On : 2 Aug 2023 6:22 pm
Operator :
Sample : 230727002-007b
Misc :
ALS Vial : 16 Sample Multiplier: 1

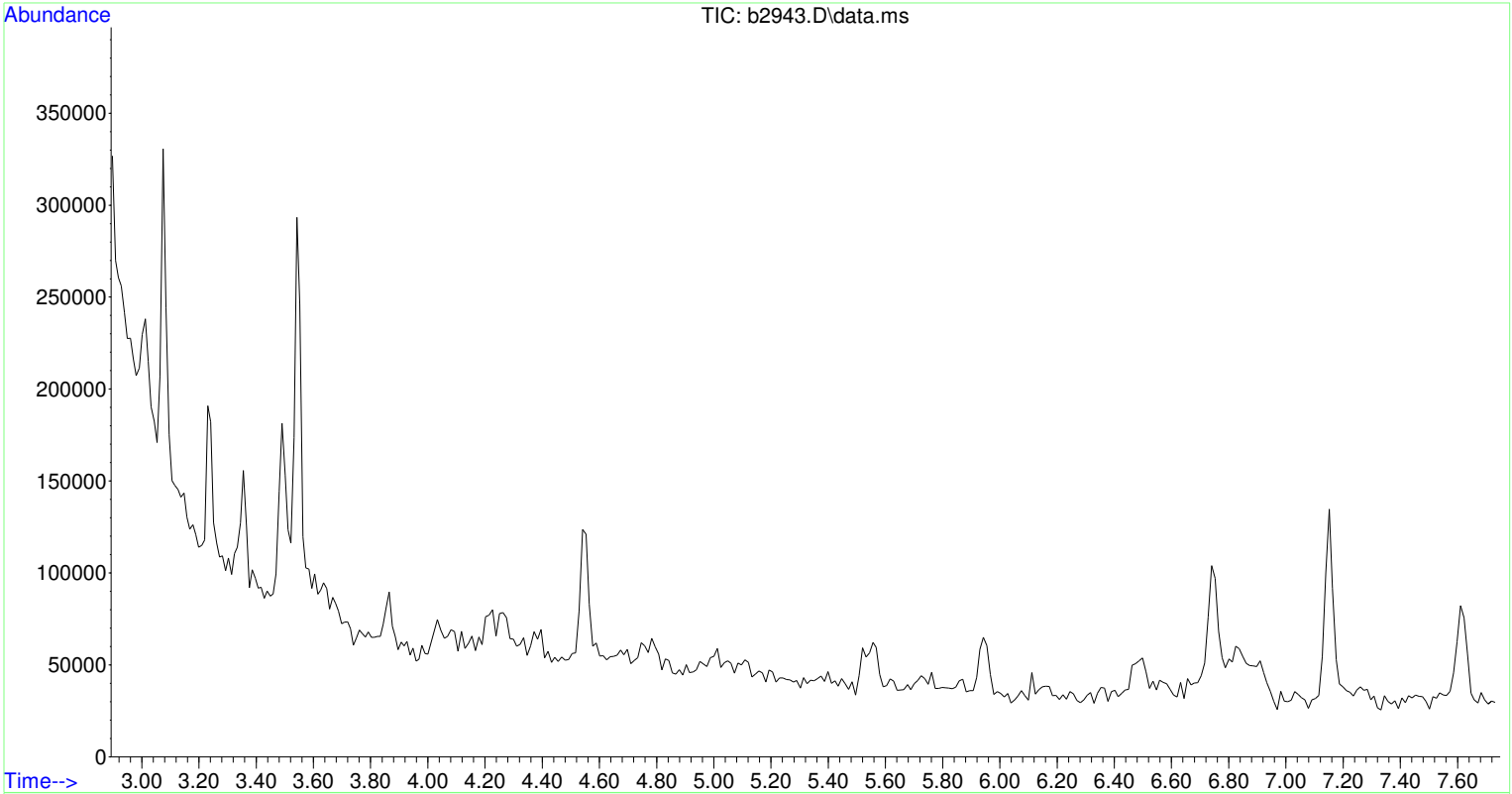
Quant Time: Aug 03 08:49:53 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Mar 16 08:46:58 2023
Response via : Initial Calibration

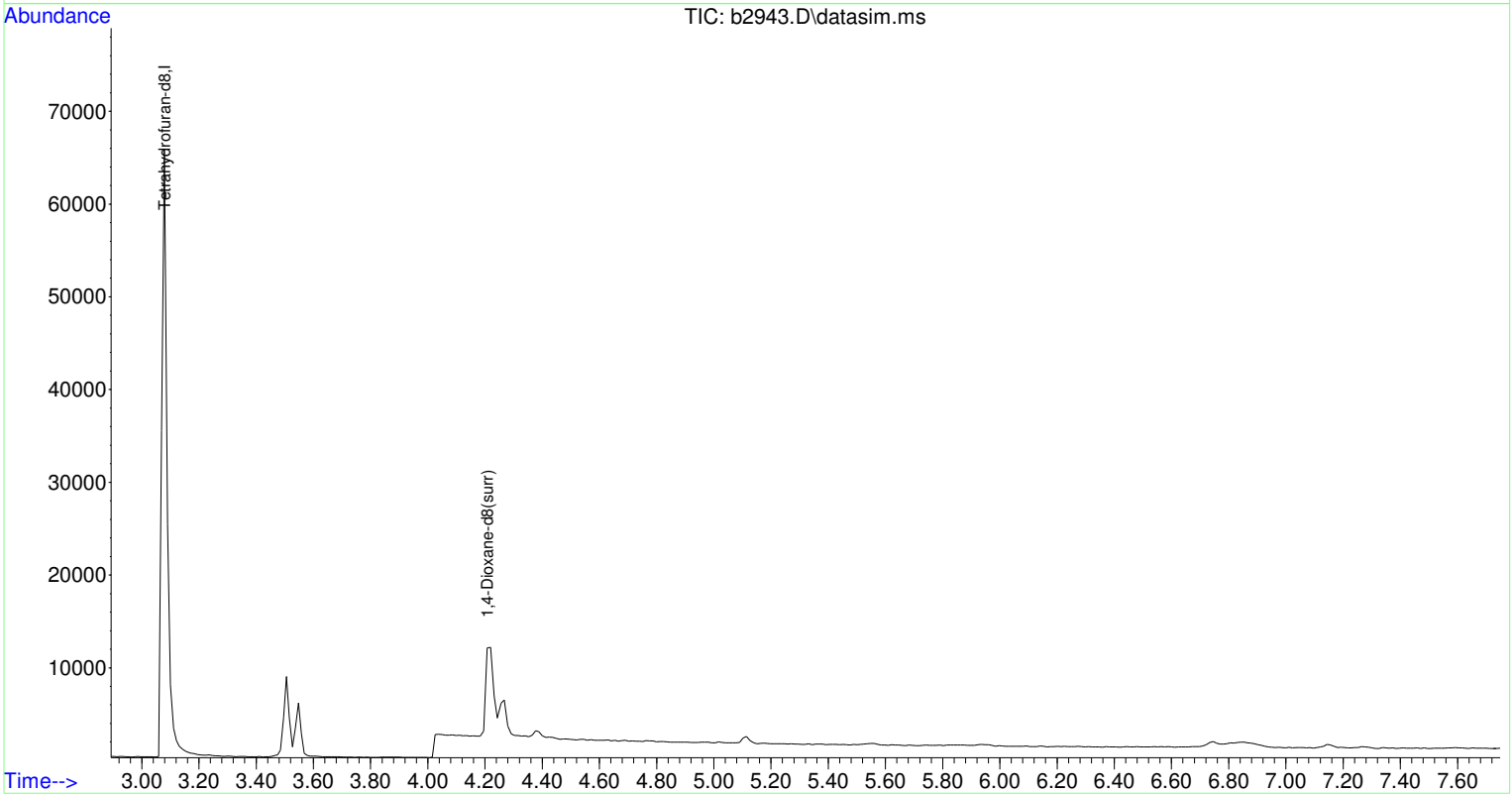
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tetrahydrofuran-d8	3.079	46	31090	500.00	ug	0.03
Target Compounds						Qvalue
2] 1,4-Dioxane-d8(surr)	4.207	64	7406	133.13	ug	87

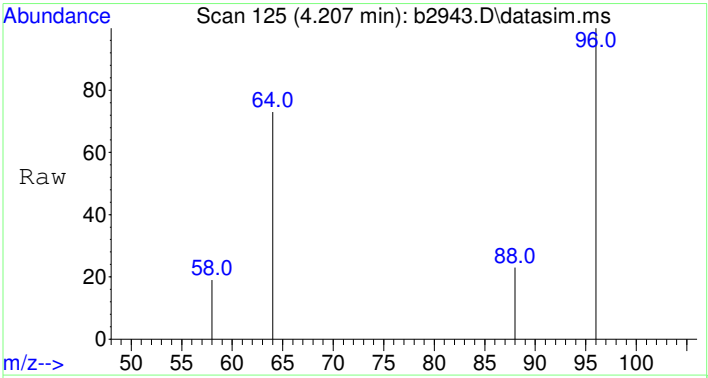
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\2\data\080223\
Data File : b2943.D
Acq On : 2 Aug 2023 6:22 pm
Operator :
Sample : 230727002-007b
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 03 08:49:53 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Mar 16 08:46:58 2023
Response via : Initial Calibration



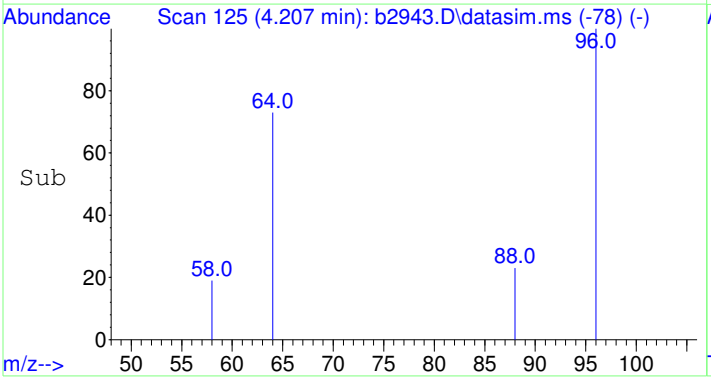


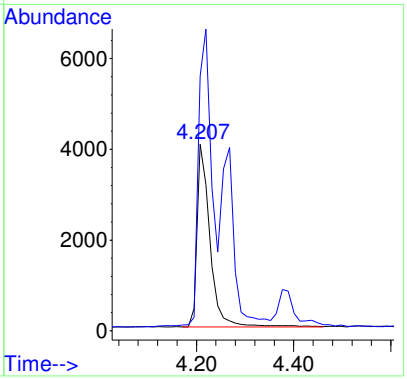


#2
1,4-Dioxane-d8(surr)
Concen: 133.13 ug
RT: 4.207 min Scan# 125
Delta R.T. 0.082 min
Lab File: b2943.D
Acq: 2 Aug 2023 6:22 pm

Tgt Ion: 64 Resp: 7406

Ion	Ratio	Lower	Upper
64	100		
96	174.1	154.4	231.6





Quantitation Report (QT Reviewed)

Data Path : D:\2\data\080223\
Data File : b2945.D
Acq On : 2 Aug 2023 6:47 pm
Operator :
Sample : 230727002-00bms
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 03 08:50:53 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Aug 03 08:50:37 2023
Response via : Initial Calibration

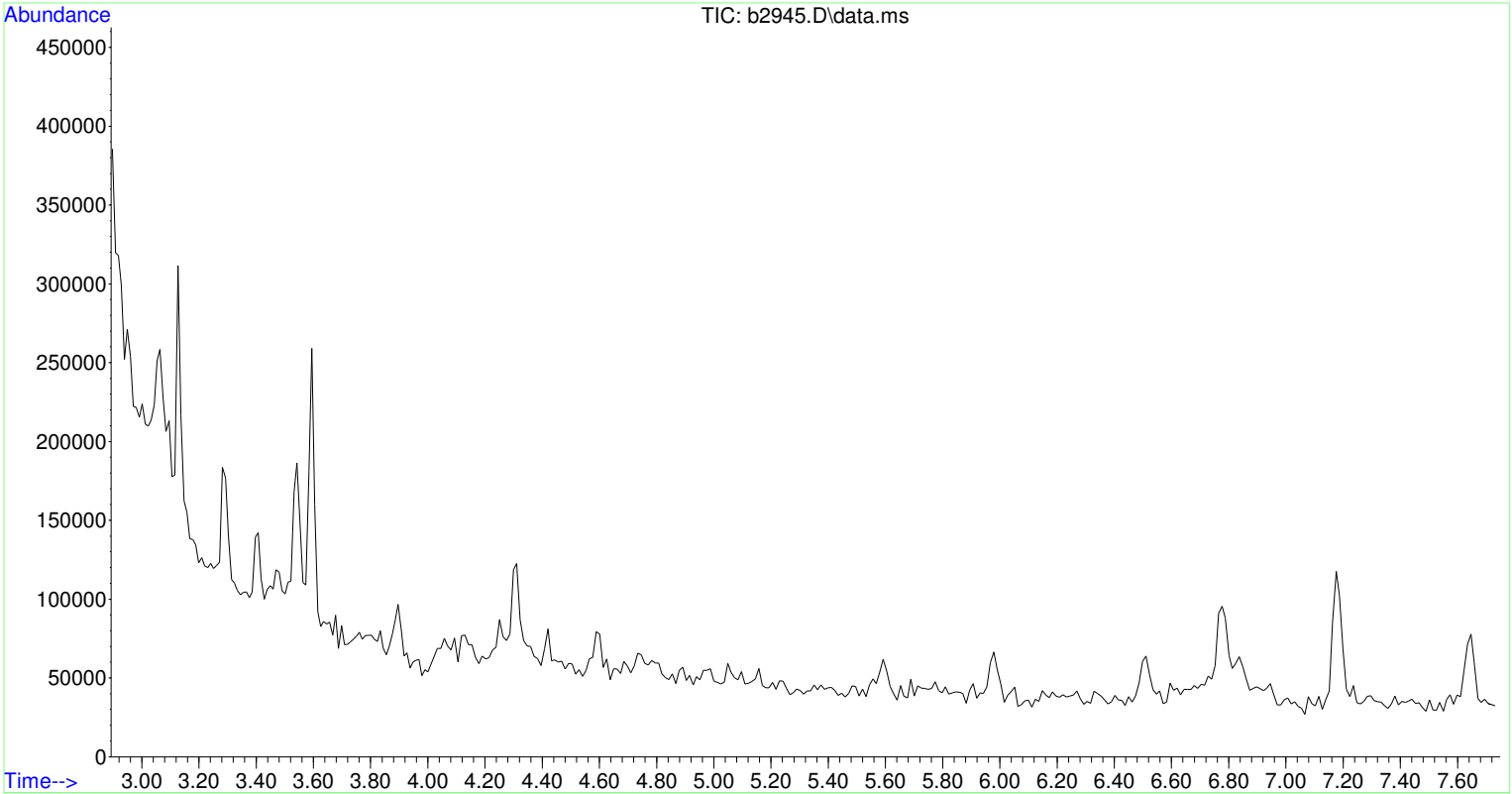
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Tetrahydrofuran-d8	3.131	46	33749	500.00	ug		0.00
Target Compounds							Qvalue
2] 1,4-Dioxane-d8(surr)	4.256	64	10518	174.17	ug		83
3] 1,4-Dioxane	4.304	88	18958	188.17	ug	#	25

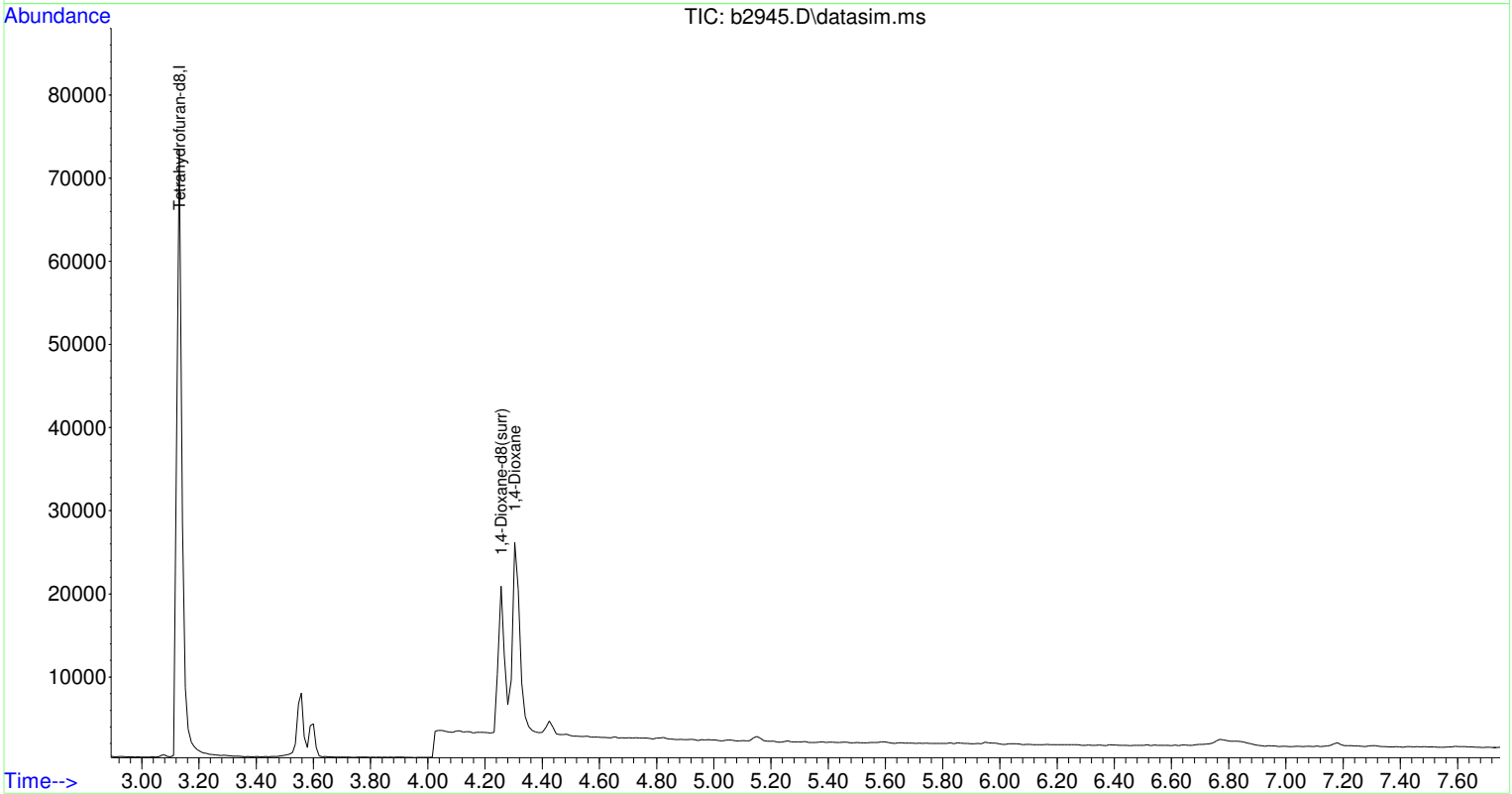
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\2\data\080223\
Data File : b2945.D
Acq On : 2 Aug 2023 6:47 pm
Operator :
Sample : 230727002-00bms
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 03 08:50:53 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Aug 03 08:50:37 2023
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : D:\2\data\080223\
Data File : b2946.D
Acq On : 2 Aug 2023 6:59 pm
Operator :
Sample : 230727002-00bmsd
Misc :
ALS Vial : 18 Sample Multiplier: 1

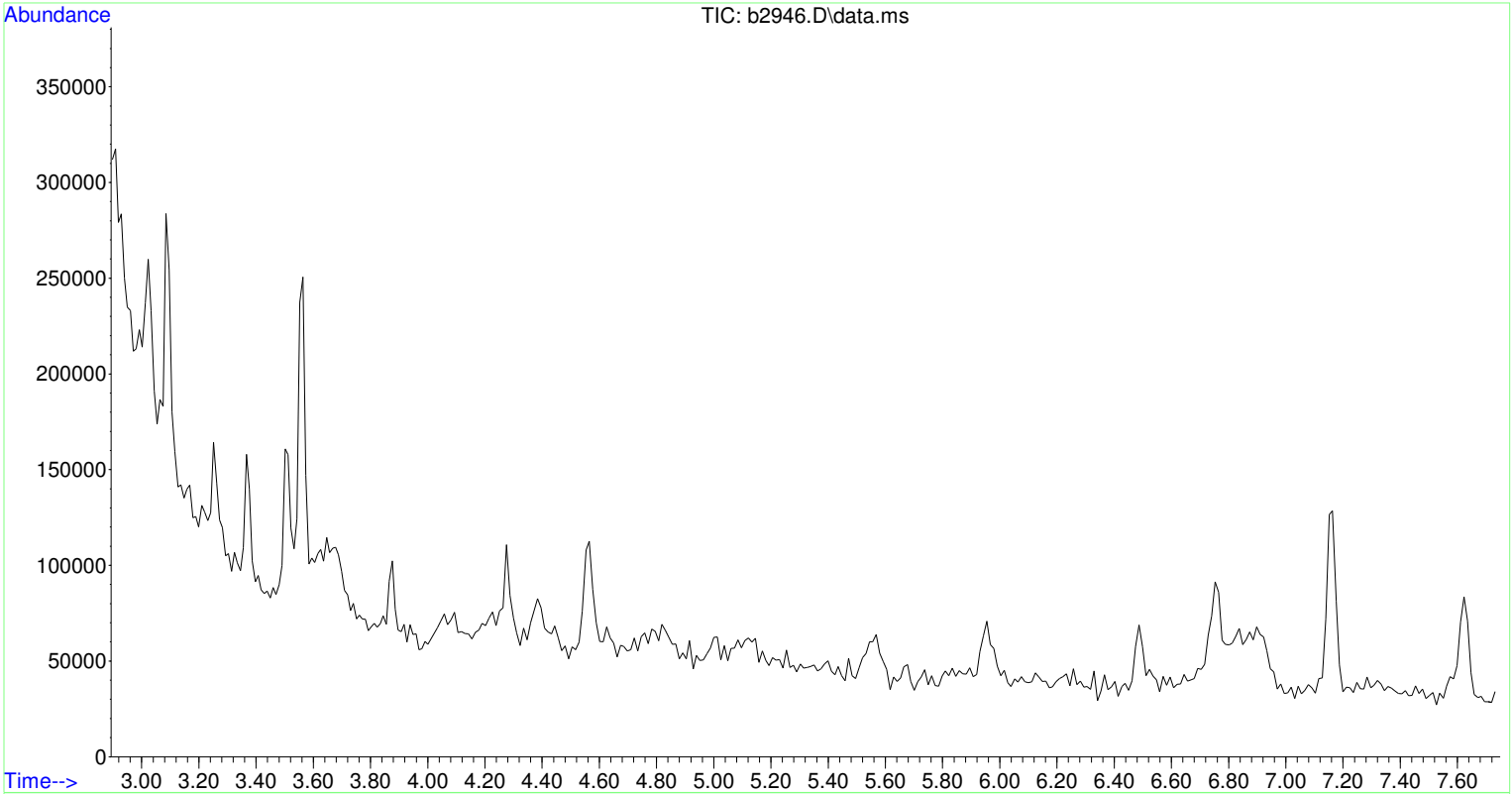
Quant Time: Aug 03 08:51:45 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Aug 03 08:50:46 2023
Response via : Initial Calibration

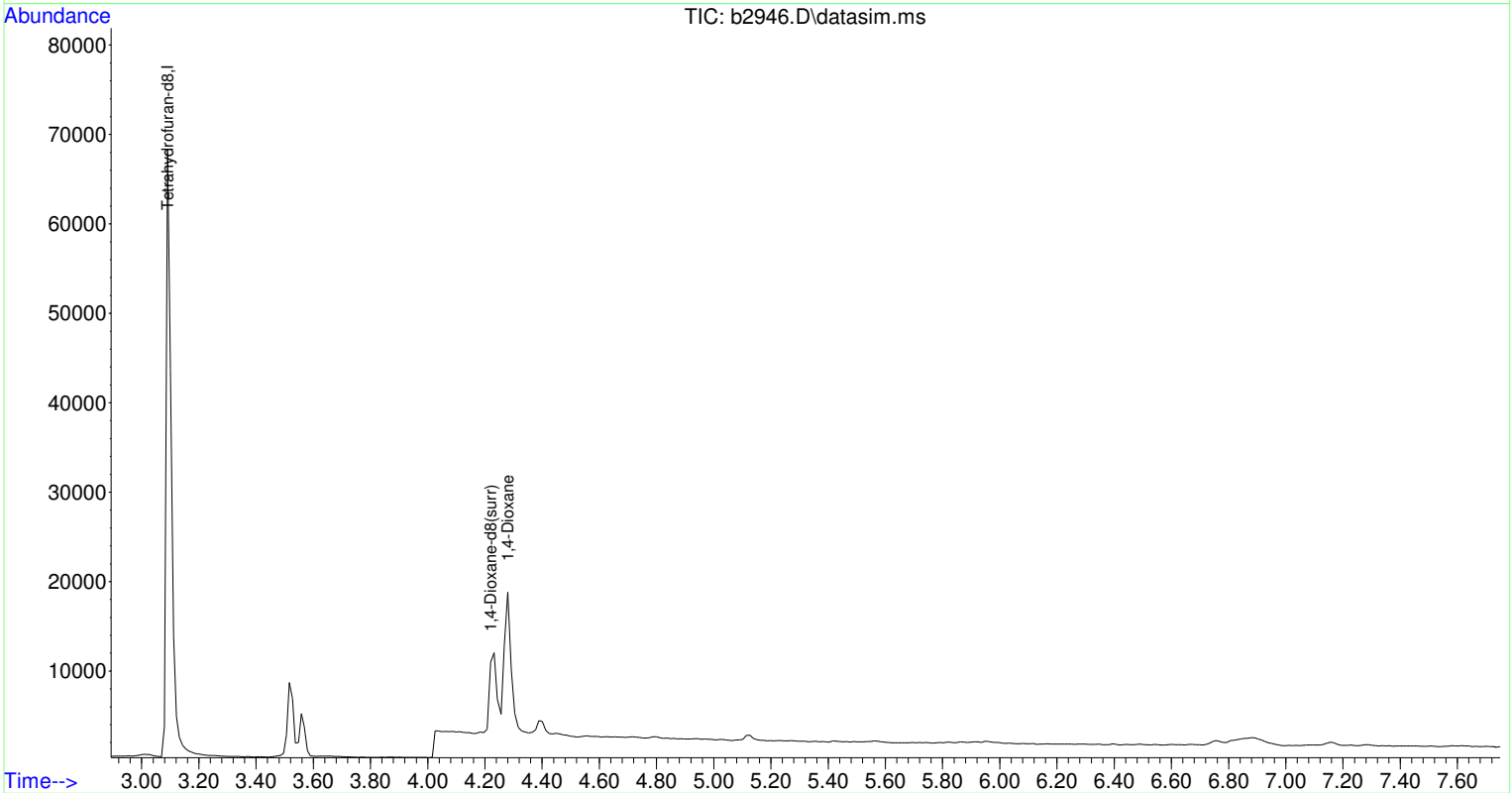
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Tetrahydrofuran-d8	3.090	46	29184	500.00	ug		-0.04
Target Compounds							Qvalue
2] 1,4-Dioxane-d8(surr)	4.220	64	6164	118.04	ug		99
3] 1,4-Dioxane	4.280	88	12273	140.87	ug	#	24

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\2\data\080223\
Data File : b2946.D
Acq On : 2 Aug 2023 6:59 pm
Operator :
Sample : 230727002-00bmsd
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 03 08:51:45 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Aug 03 08:50:46 2023
Response via : Initial Calibration





Quantitation Report (Not Reviewed)

Data Path : D:\2\data\080223\
Data File : b2948.D
Acq On : 2 Aug 2023 7:24 pm
Operator :
Sample : 230727002-006bms
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 03 08:52:46 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Aug 03 08:50:46 2023
Response via : Initial Calibration

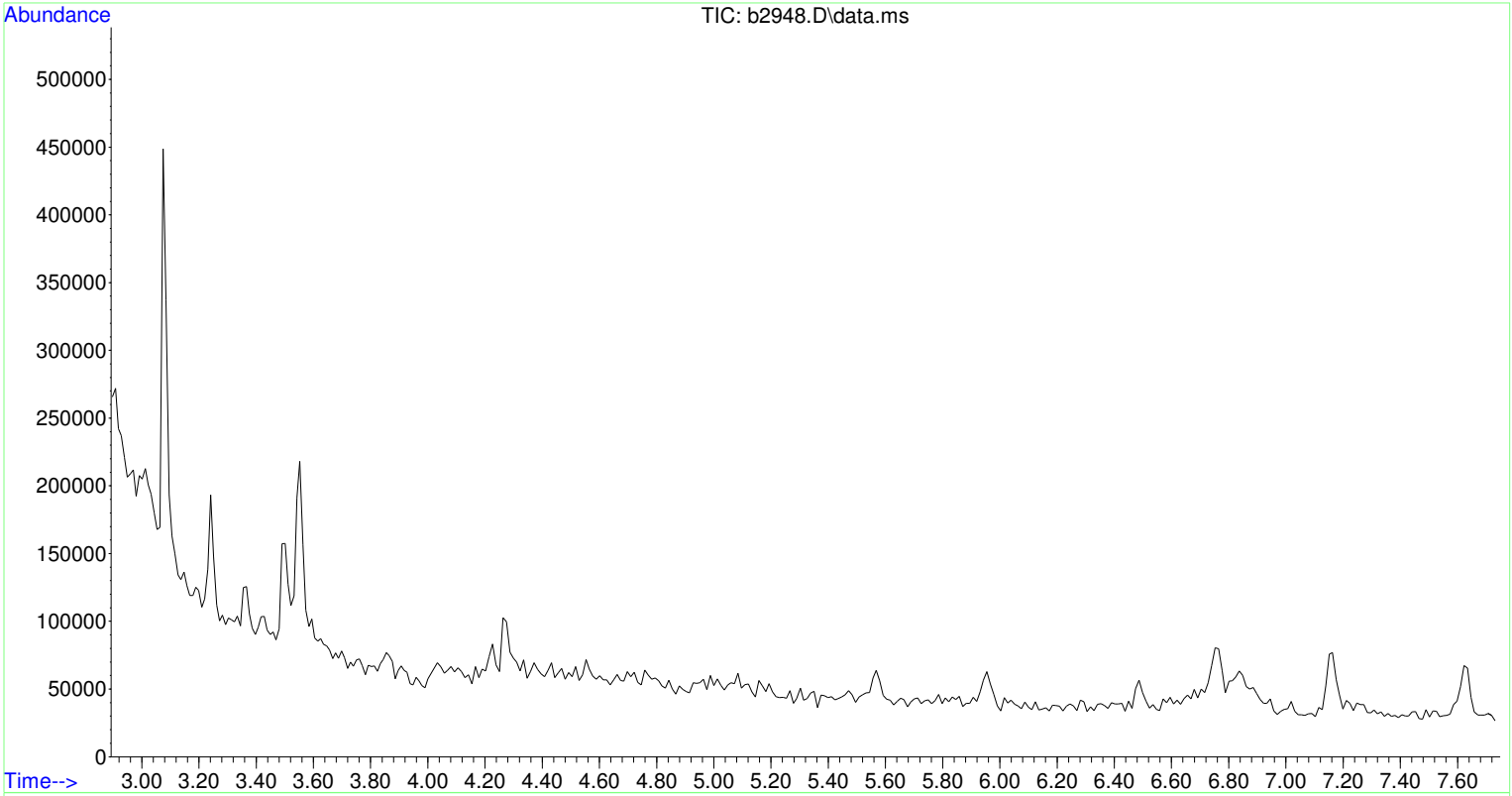
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Tetrahydrofuran-d8	3.079	46	60399	500.00	ug		-0.05
Target Compounds							Qvalue
2] 1,4-Dioxane-d8(surr)	4.219	64	7783	72.01	ug		81
3] 1,4-Dioxane	4.280	88	15998	88.73	ug	#	21

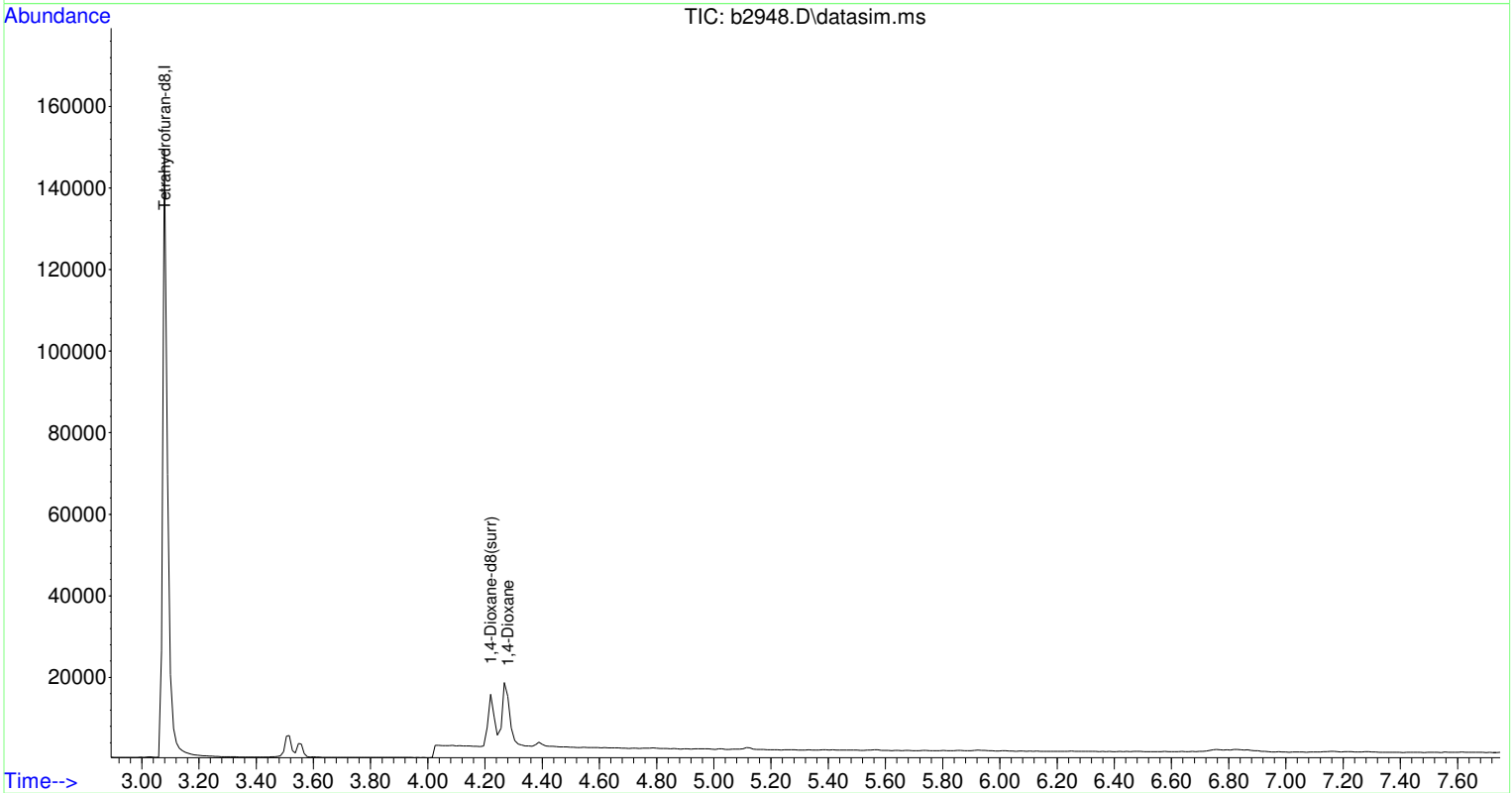
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : D:\2\data\080223\
Data File : b2948.D
Acq On : 2 Aug 2023 7:24 pm
Operator :
Sample : 230727002-006bms
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 03 08:52:46 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Aug 03 08:50:46 2023
Response via : Initial Calibration





Quantitation Report (Not Reviewed)

Data Path : D:\2\data\080223\
Data File : b2949.D
Acq On : 2 Aug 2023 7:36 pm
Operator :
Sample : 230727002-006bmsd
Misc :
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 03 08:53:58 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Aug 03 08:53:54 2023
Response via : Initial Calibration

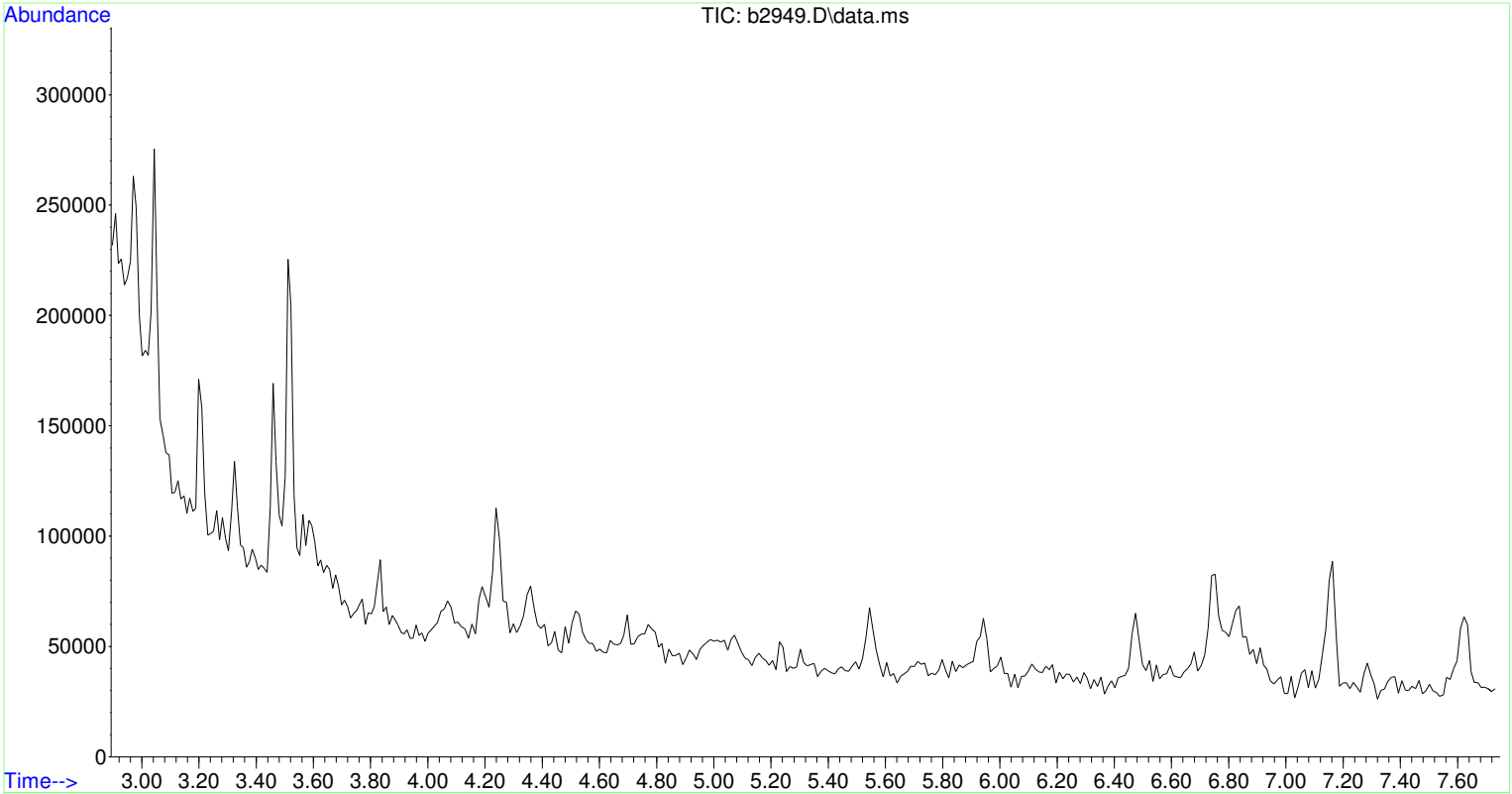
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Tetrahydrofuran-d8	3.038	46	28138	500.00	ug		# 0.00
Target Compounds							Qvalue
2] 1,4-Dioxane-d8(surr)	4.183	64	8881	176.39	ug		90
3] 1,4-Dioxane	4.244	88	16323	194.33	ug	#	36

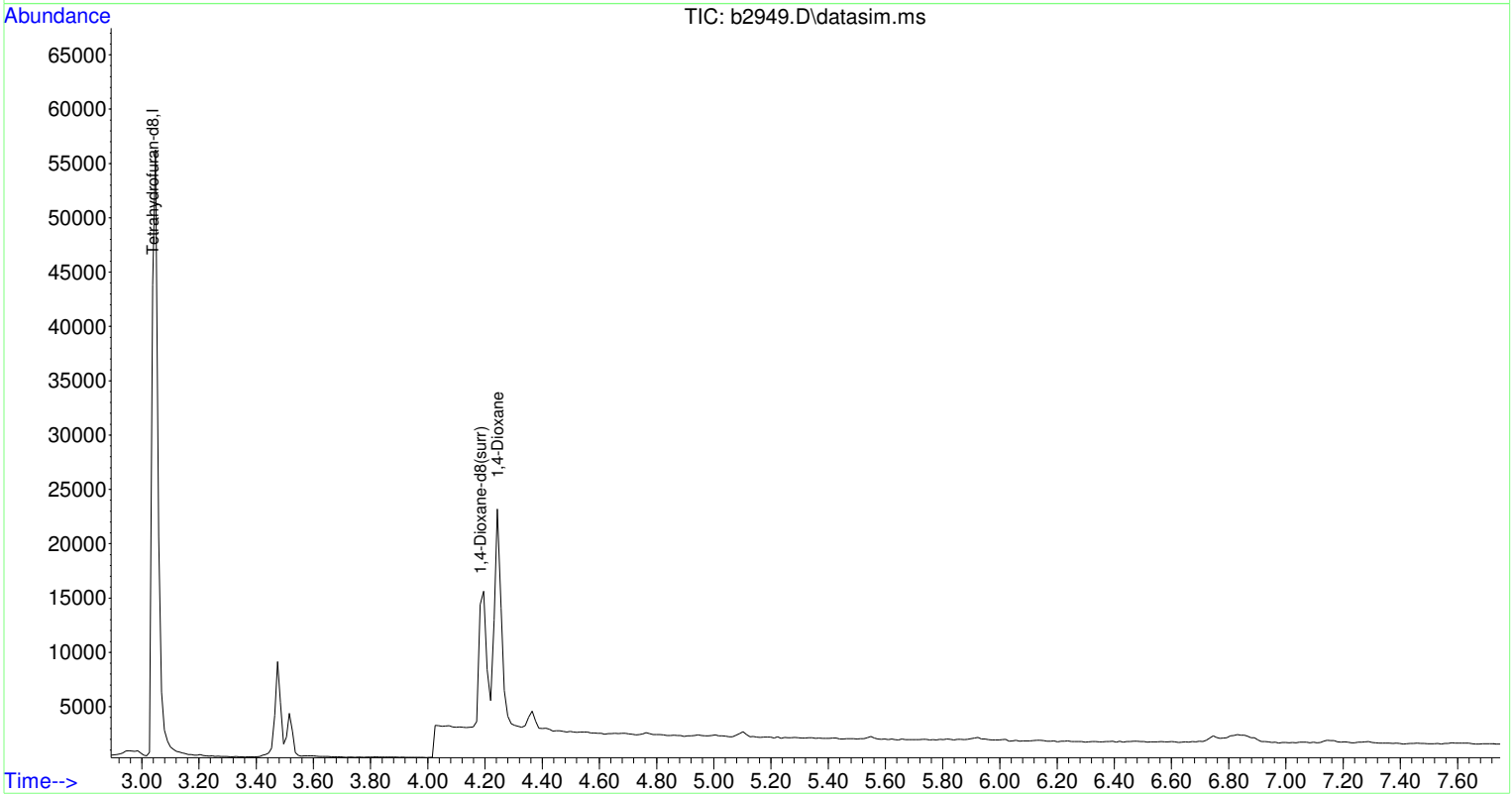
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : D:\2\data\080223\
Data File : b2949.D
Acq On : 2 Aug 2023 7:36 pm
Operator :
Sample : 230727002-006bmsd
Misc :
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 03 08:53:58 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Aug 03 08:53:54 2023
Response via : Initial Calibration

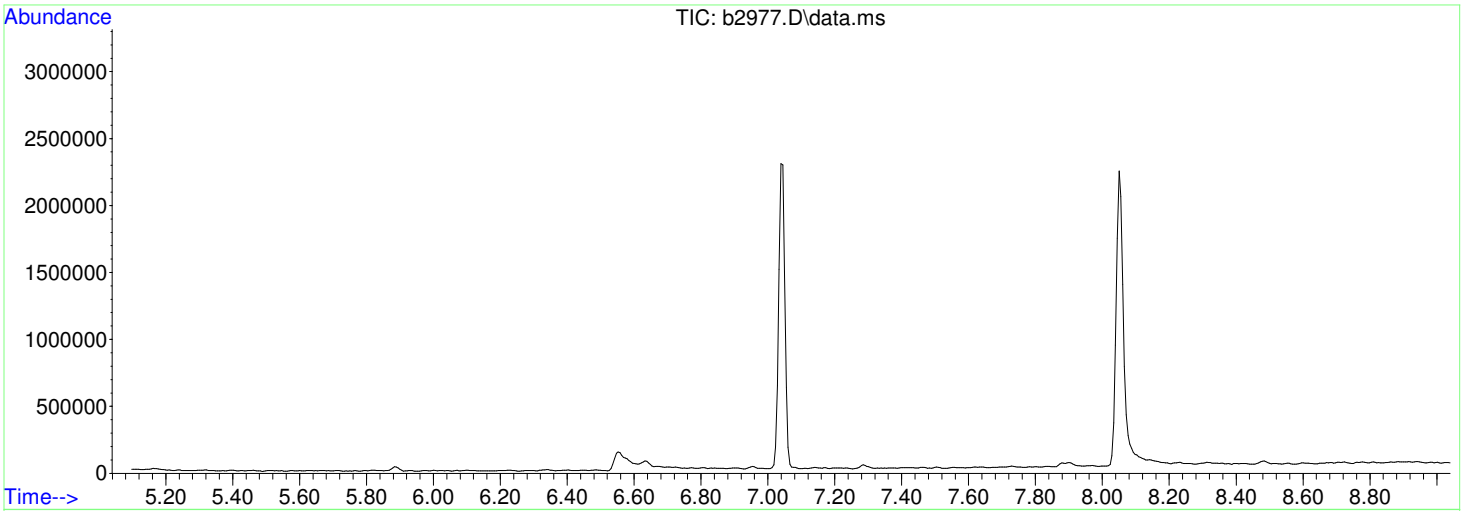




Data Path : D:\2\data\080423\
Data File : b2977.D
Acq On : 4 Aug 2023 9:41 am
Operator :
Sample : dftpp
Misc : tune
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\2\qtmethods-b\meth02080723.M
Title : e8270 Calibration
Last Update : Tue Aug 08 08:03:04 2023



Spectrum Information: Scan 364

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	40.3	86664	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	517	PASS
127	198	10	80	49.0	105392	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	215104	PASS
199	198	5	9	7.6	16346	PASS
275	198	10	60	29.5	63408	PASS
365	198	1	100	5.9	12599	PASS
441	442	0.01	24	15.1	39888	PASS
442	442	50	125	100.0	263296	PASS
443	442	15	24	19.1	50272	PASS

Quantitation Report (QT Reviewed)

Data Path : D:\2\data\080423\
Data File : b2978.D
Acq On : 4 Aug 2023 10:07 am
Operator :
Sample : diox 100
Misc : ccv
ALS Vial : 3 Sample Multiplier: 1

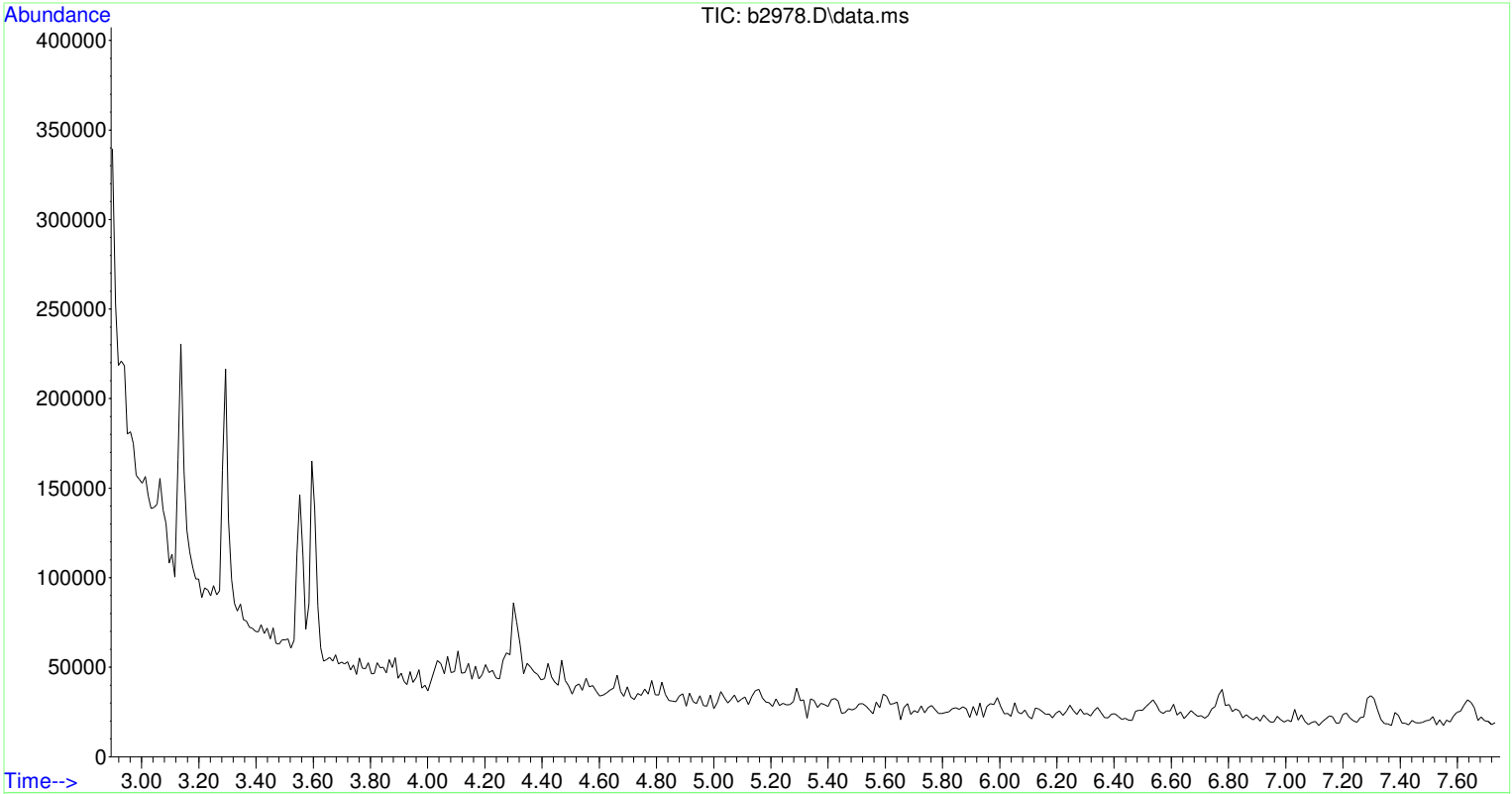
Quant Time: Aug 04 10:41:25 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Aug 03 08:50:46 2023
Response via : Initial Calibration

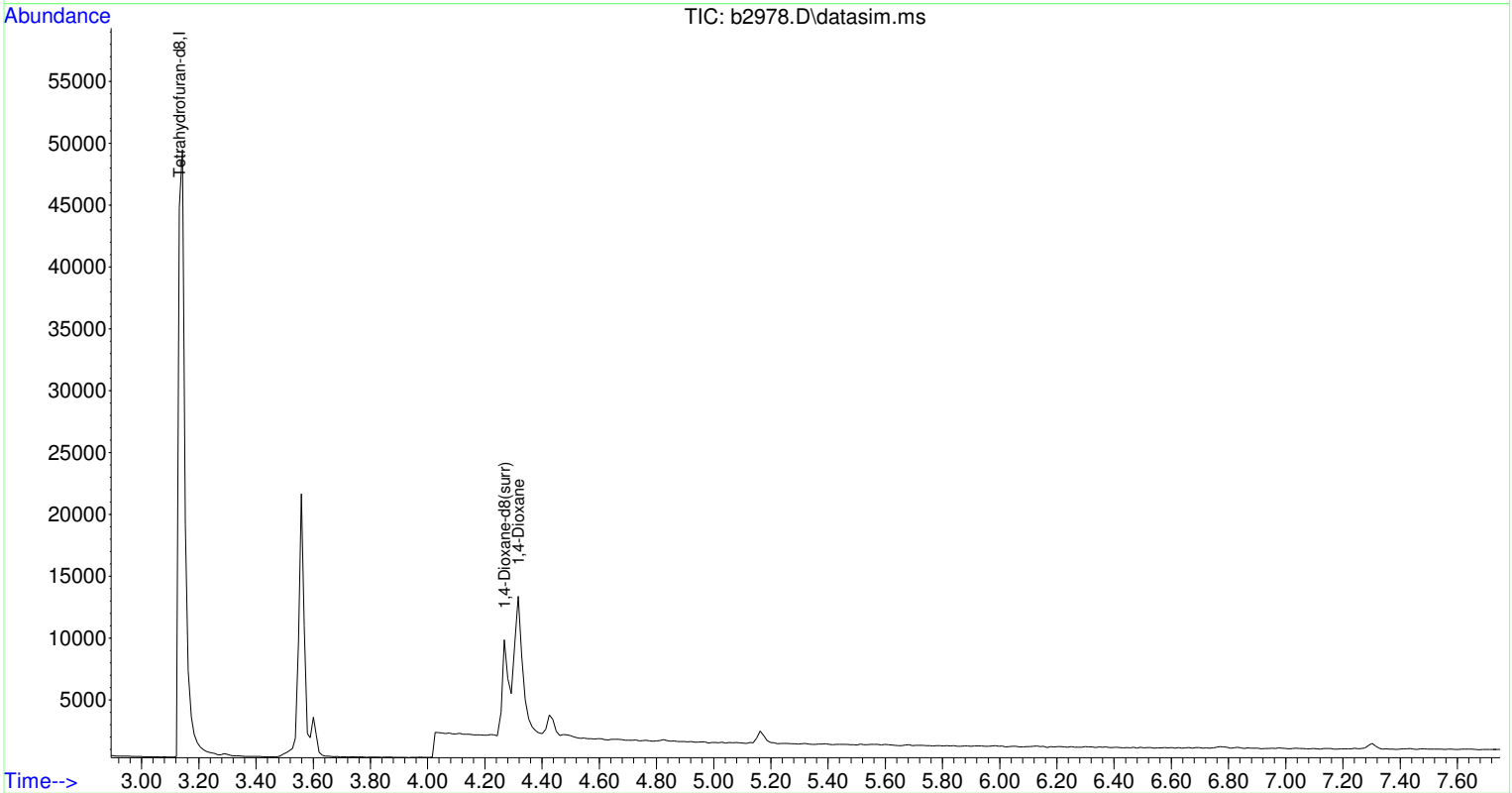
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tetrahydrofuran-d8	3.132	46	28130	500.00	ug	#-0.04
Target Compounds						Qvalue
2] 1,4-Dioxane-d8(surr)	4.268	64	4801	95.38	ug	# 1
3] 1,4-Dioxane	4.317	88	8563	101.97	ug	# 28

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\2\data\080423\
Data File : b2978.D
Acq On : 4 Aug 2023 10:07 am
Operator :
Sample : diox 100
Misc : ccv
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 04 10:41:25 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Thu Aug 03 08:50:46 2023
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : D:\2\data\080423\
Data File : b2980.D
Acq On : 4 Aug 2023 10:31 am
Operator :
Sample : 230727002-005a
Misc : samp
ALS Vial : 5 Sample Multiplier: 1

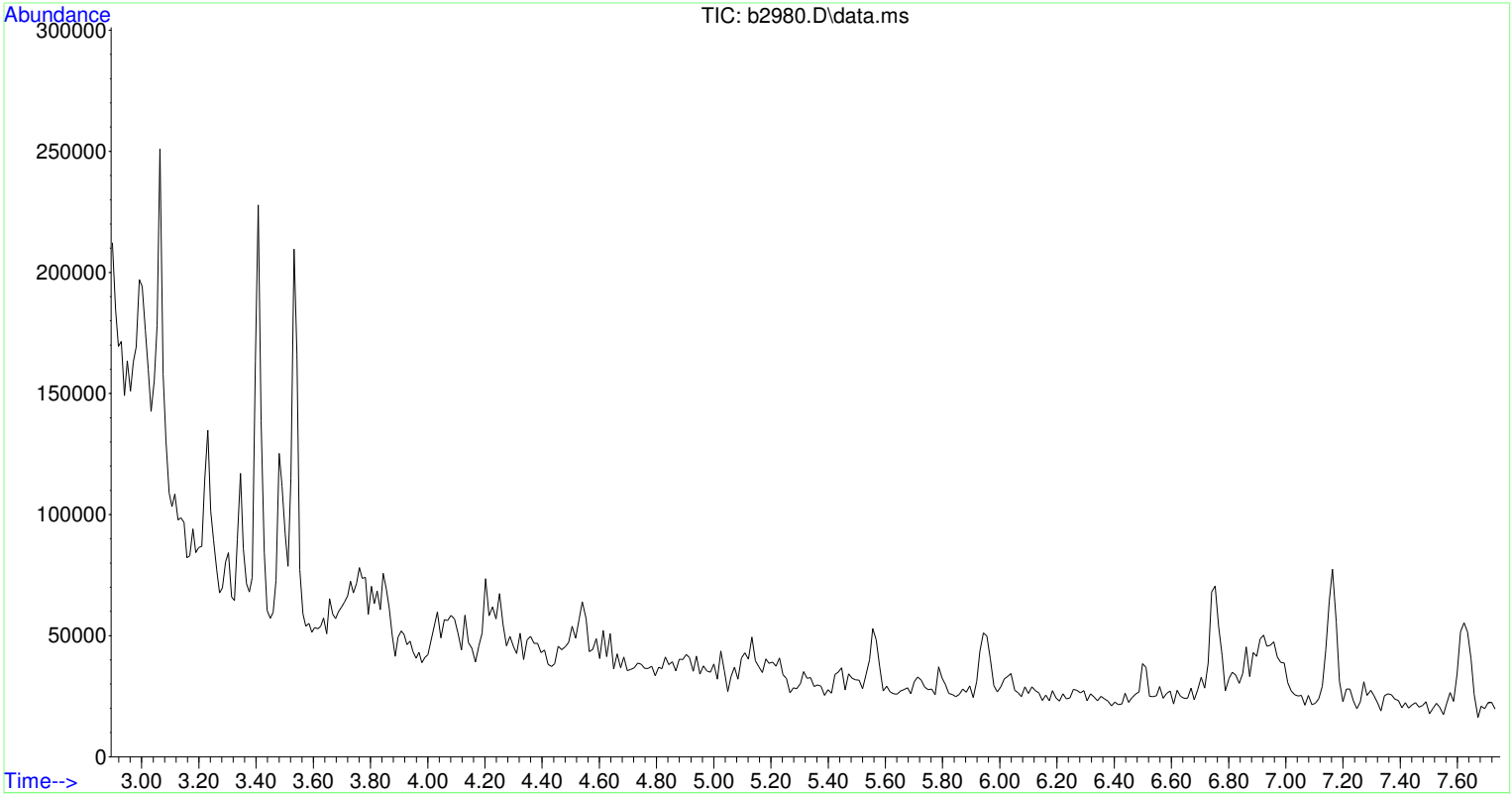
Quant Time: Aug 04 10:41:55 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Fri Aug 04 10:41:53 2023
Response via : Initial Calibration

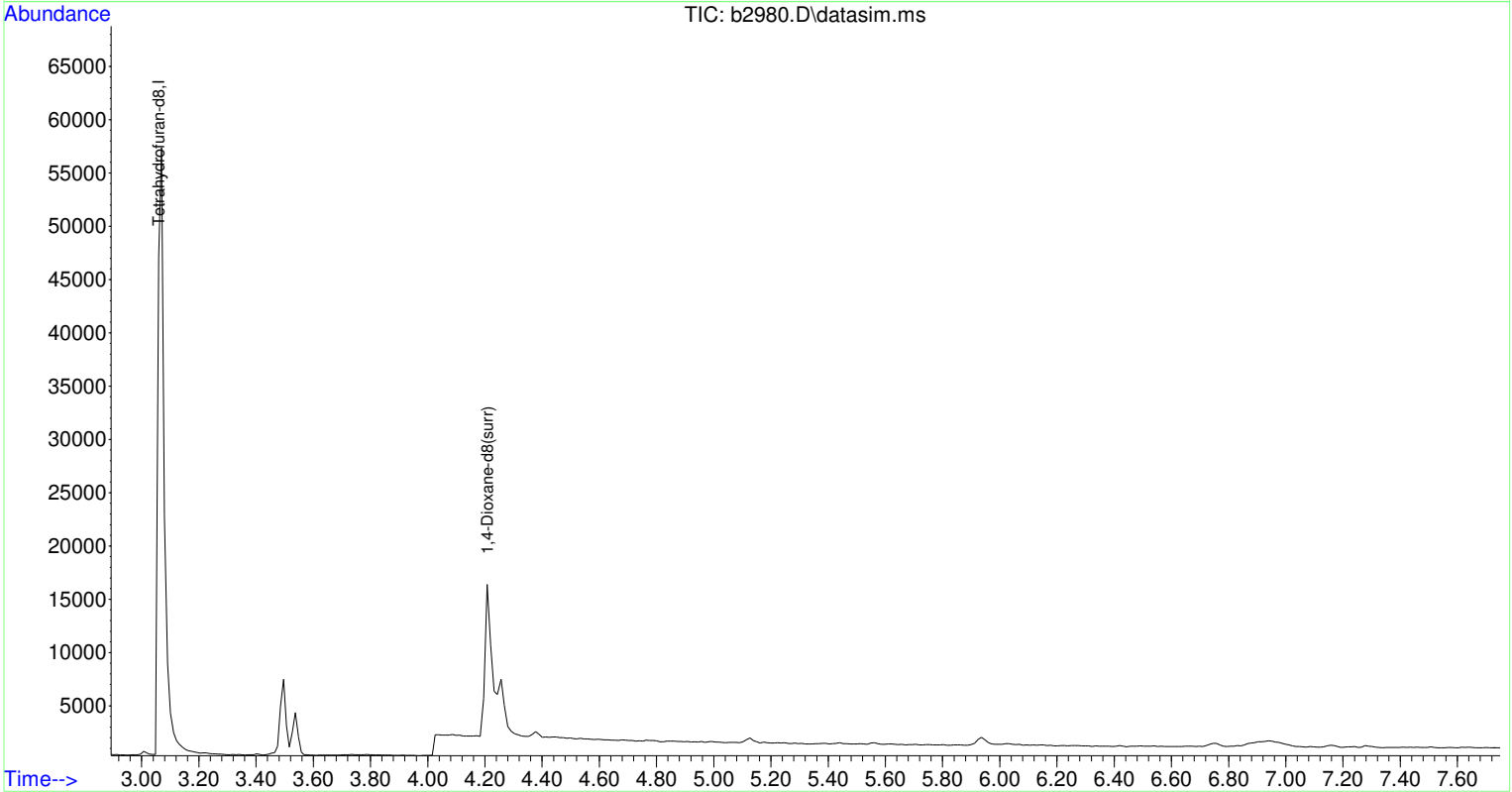
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tetrahydrofuran-d8	3.059	46	31479	500.00	ug	# 0.00
Target Compounds						Qvalue
2] 1,4-Dioxane-d8(surr)	4.208	64	9553	169.60	ug	# 62

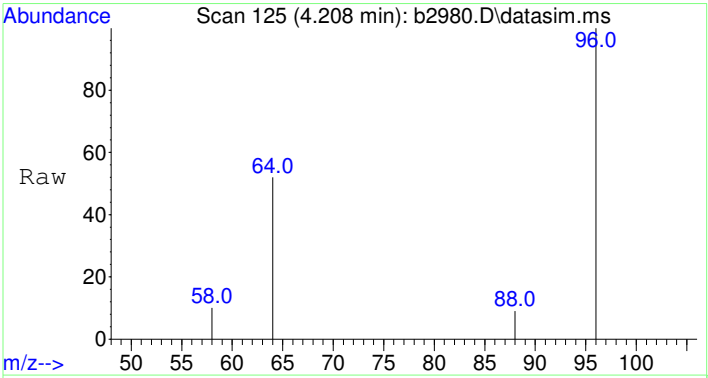
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\2\data\080423\
Data File : b2980.D
Acq On : 4 Aug 2023 10:31 am
Operator :
Sample : 230727002-005a
Misc : samp
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 04 10:41:55 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Fri Aug 04 10:41:53 2023
Response via : Initial Calibration



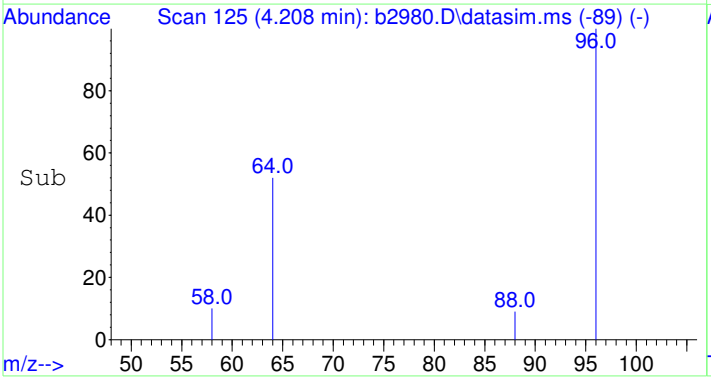


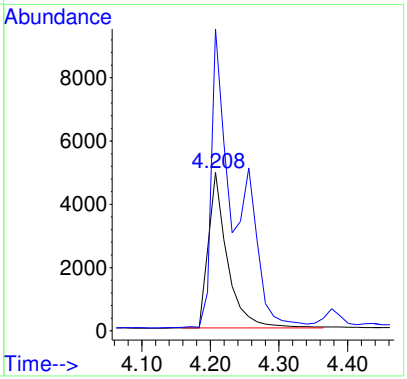


#2
1,4-Dioxane-d8(surr)
Concen: 169.60 ug
RT: 4.208 min Scan# 125
Delta R.T. -0.030 min
Lab File: b2980.D
Acq: 4 Aug 2023 10:31 am

Tgt Ion: 64 Resp: 9553

Ion	Ratio	Lower	Upper
64	100		
96	249.5	154.4	231.6#

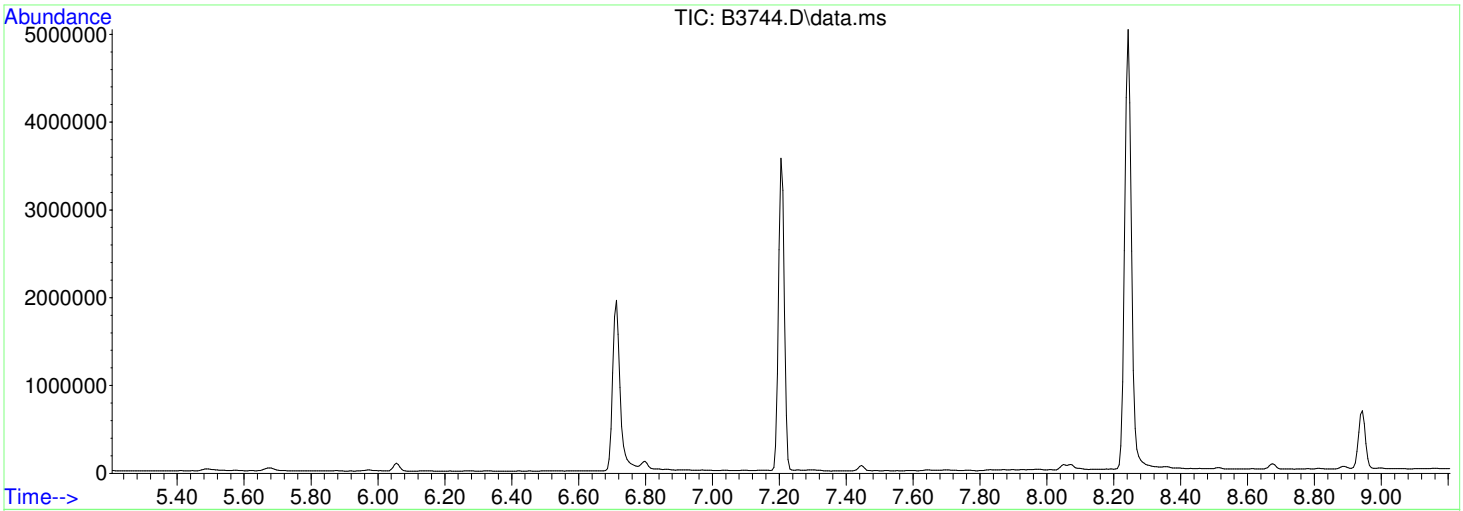




Data Path : D:\2\data\
Data File : B3744.D
Acq On : 15 Nov 2021 9:58 am
Operator :
Sample : dftpp
Misc : tune
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\2\methods\simdiox111521.M
Title : 14Dioxane-Sim
Last Update : Mon Jan 10 10:51:30 2022



Spectrum Information: Scan 395

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	65.3	204480	PASS
68	69	0.00	2	1.7	3525	PASS
70	69	0.00	2	0.7	1505	PASS
127	198	10	80	63.9	200000	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	313152	PASS
199	198	5	9	6.7	21040	PASS
275	198	10	60	28.7	89880	PASS
365	198	1	100	4.5	14230	PASS
441	442	0.01	24	15.0	58512	PASS
442	442	50	125	100.0	390272	PASS
443	442	15	24	19.6	76512	PASS

Quantitation Report (Not Reviewed)

Data Path : D:\2\data\
Data File : B3745.D
Acq On : 15 Nov 2021 10:25 am
Operator :
Sample : diox@100
Misc :
ALS Vial : 3 Sample Multiplier: 1

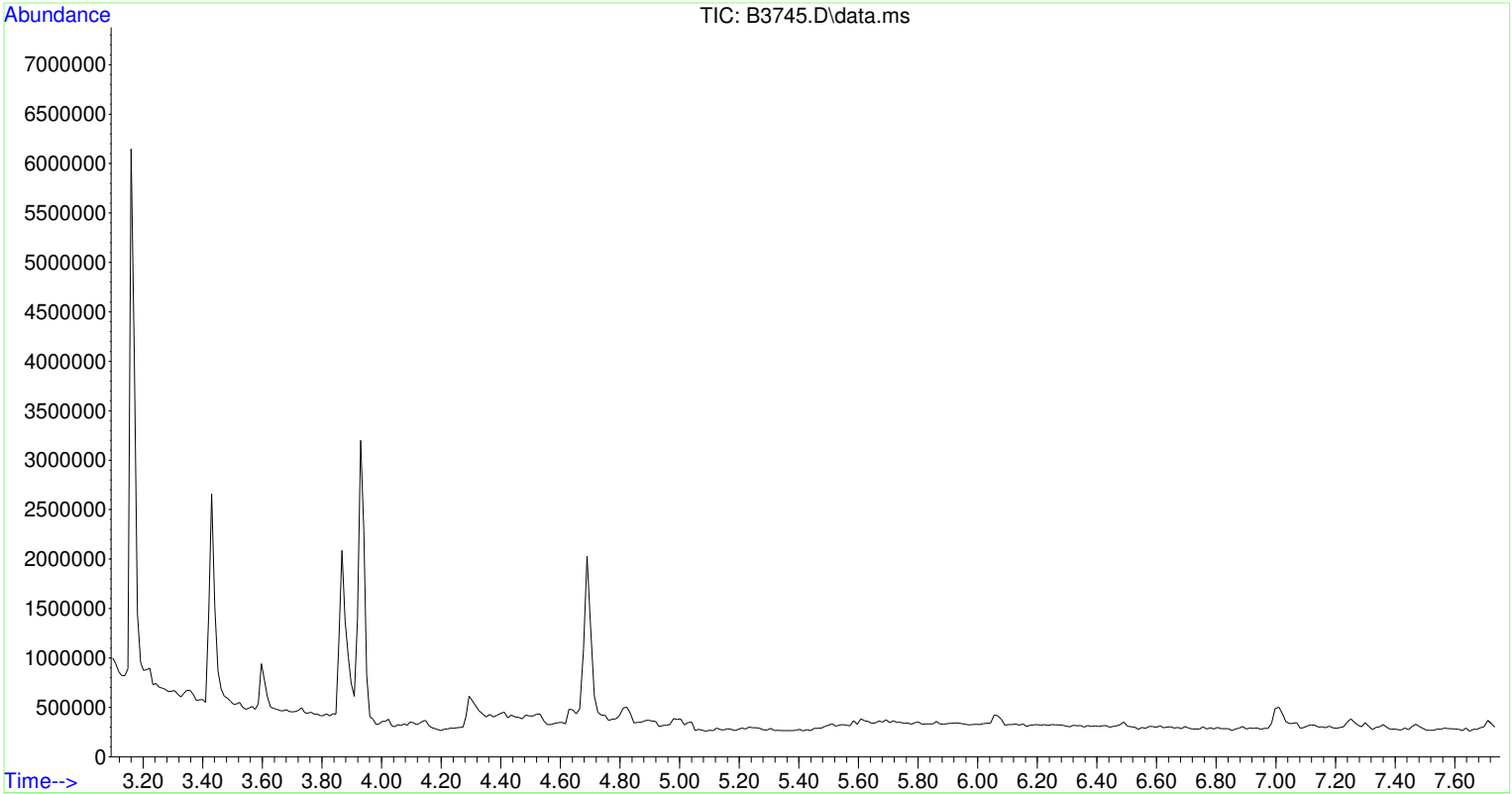
Quant Time: Jan 20 16:22:41 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Mon Jan 10 10:51:30 2022
Response via : Initial Calibration

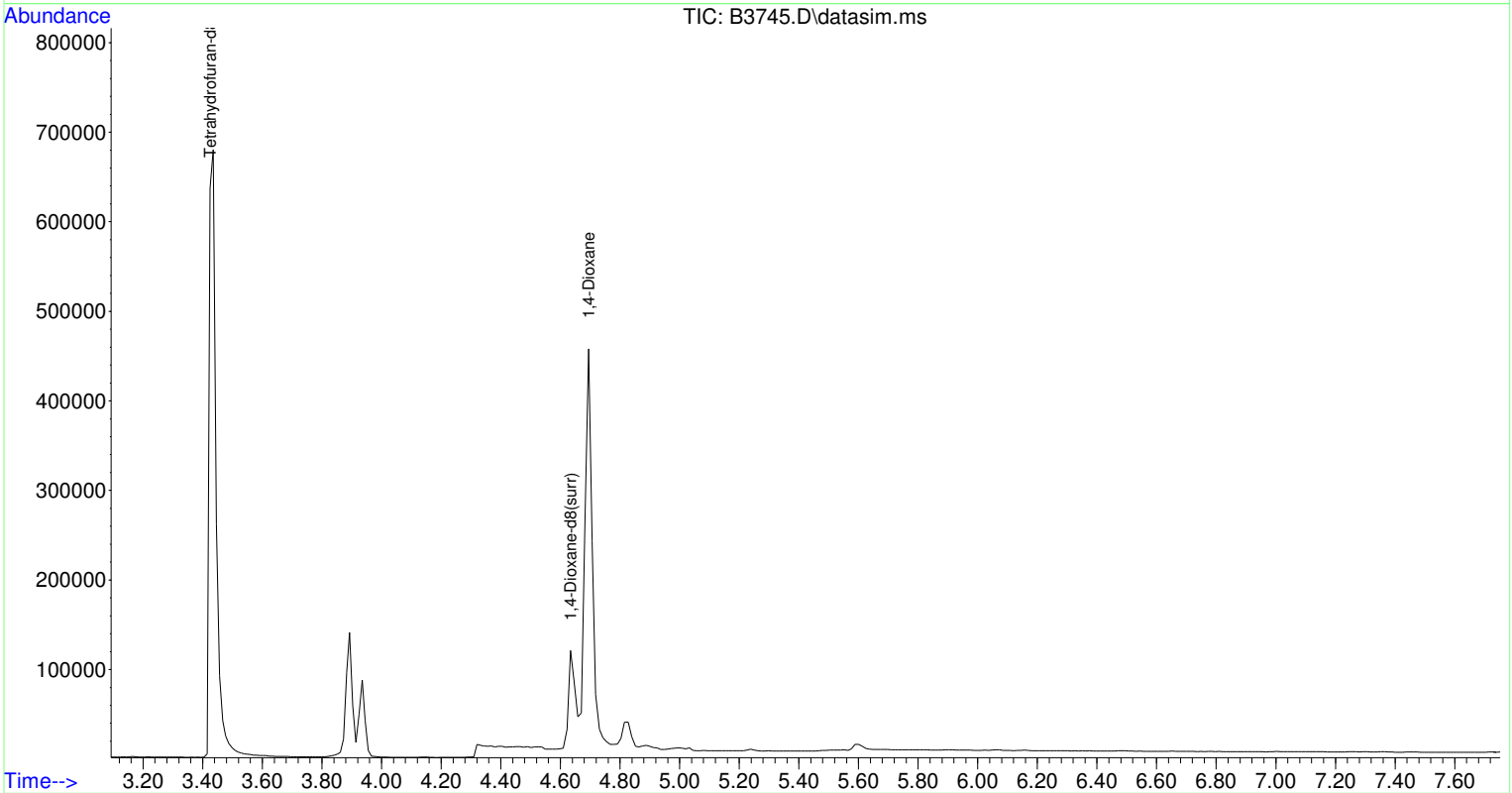
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tetrahydrofuran-d8	3.425	46	524312	500.00	ug	#-0.09
Target Compounds						Qvalue
2] 1,4-Dioxane-d8(surr)	4.634	64	82862	88.32	ug	# 59
3] 1,4-Dioxane	4.694	88	132436	84.61	ug	# 82

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\2\data\
Data File : B3745.D
Acq On : 15 Nov 2021 10:25 am
Operator :
Sample : diox@100
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 20 16:22:41 2023
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Mon Jan 10 10:51:30 2022
Response via : Initial Calibration





Quantitation Report (Not Reviewed)

Data Path : D:\2\data\
Data File : B3746.D
Acq On : 15 Nov 2021 10:37 am
Operator :
Sample : diox@200 (Sig #1); diox@100 (Sig #2)
Misc :
ALS Vial : 4 Sample Multiplier: 1

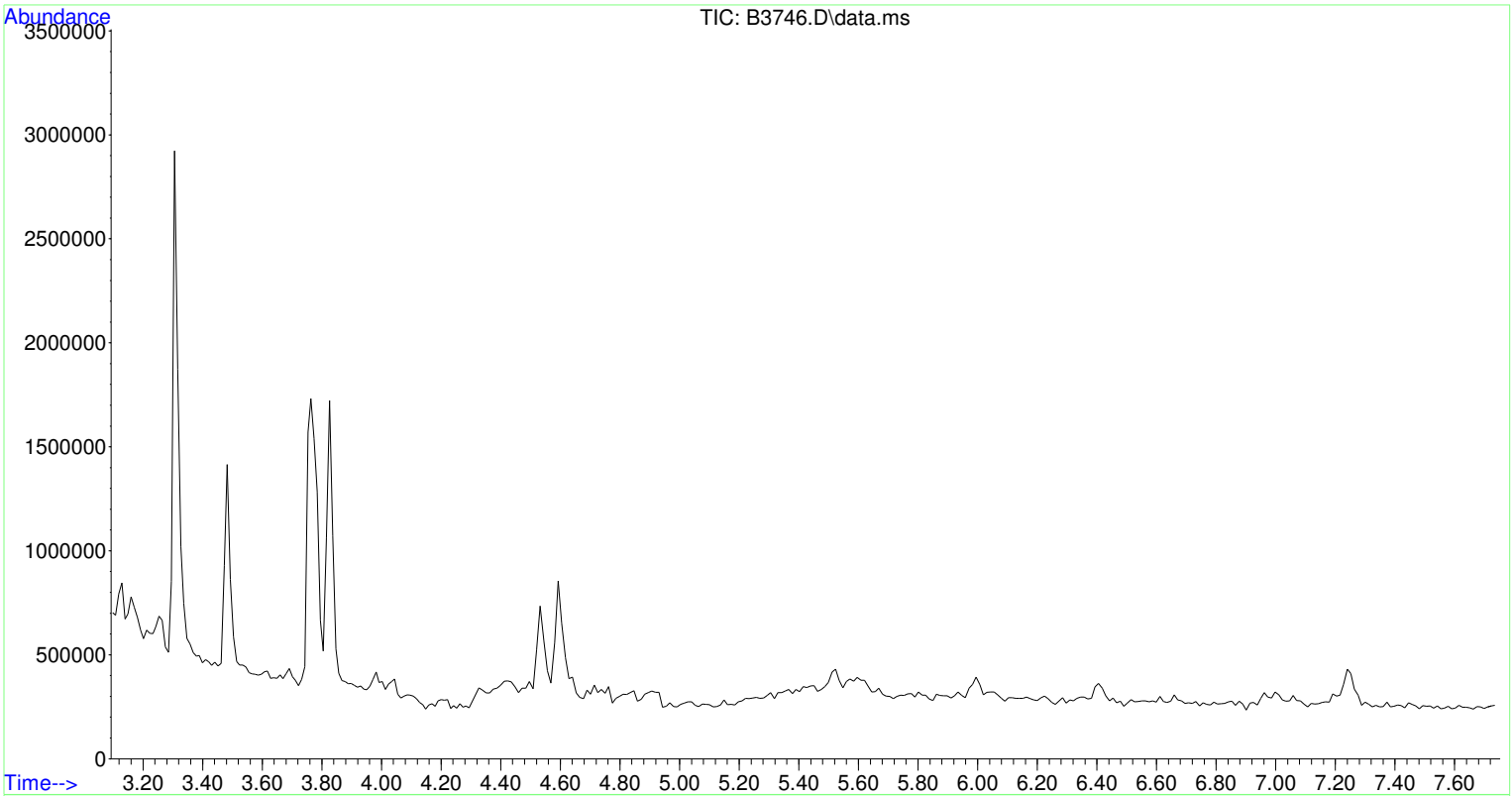
Quant Time: Jan 06 16:07:47 2022
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Wed Dec 08 10:17:46 2021
Response via : Initial Calibration

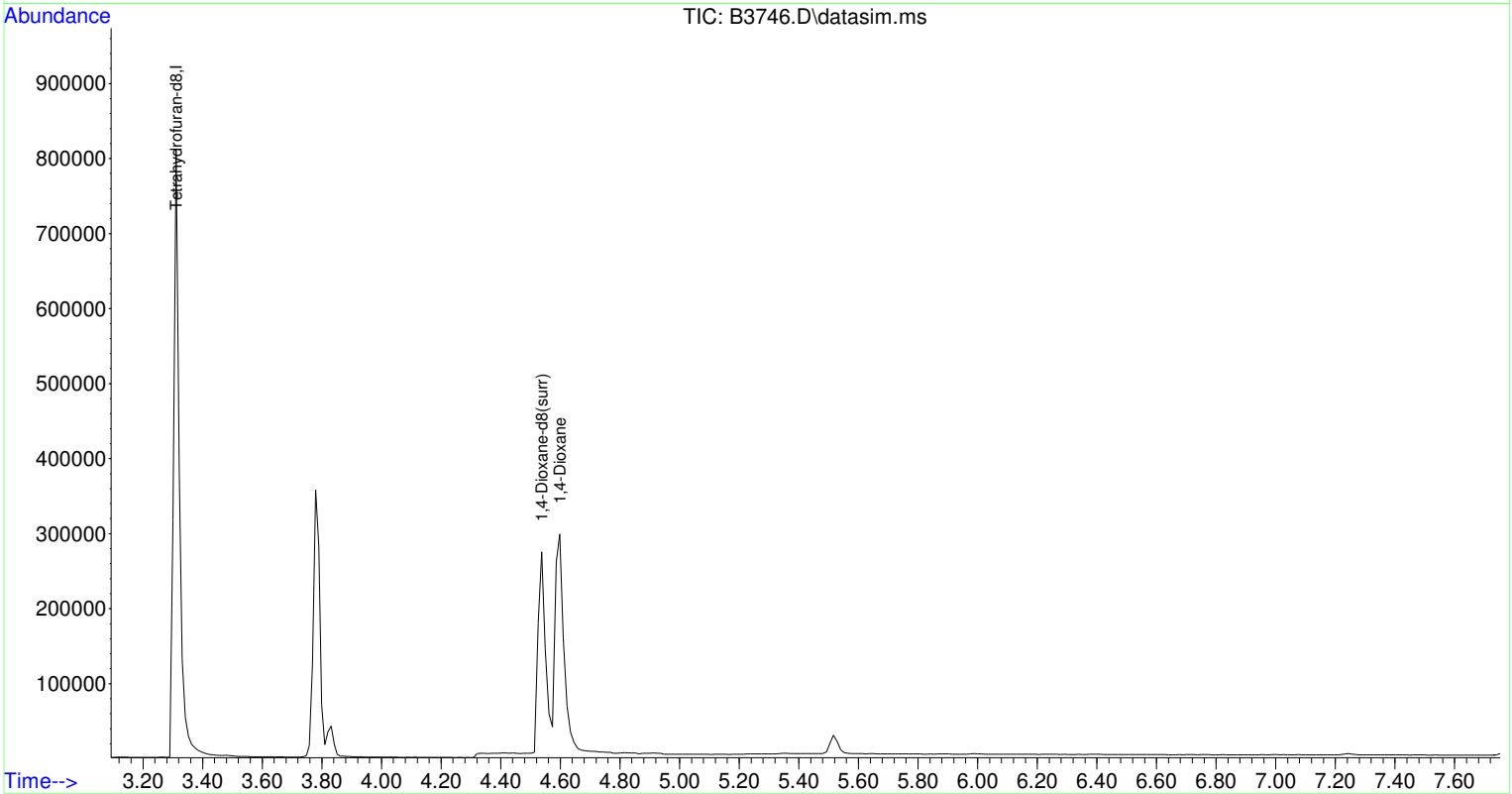
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tetrahydrofuran-d8	3.311	46	523450	500.00	ug	-0.08
Target Compounds						Qvalue
2] 1,4-Dioxane-d8(surr)	4.537	64	214181	228.67	ug	96
3] 1,4-Dioxane	4.598	88	339853	217.49	ug	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\2\data\
Data File : B3746.D
Acq On : 15 Nov 2021 10:37 am
Operator :
Sample : diox@200 (Sig #1); diox@100 (Sig #2)
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jan 06 16:07:47 2022
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Wed Dec 08 10:17:46 2021
Response via : Initial Calibration





Quantitation Report (Not Reviewed)

Data Path : D:\2\data\
Data File : B3747.D
Acq On : 15 Nov 2021 10:48 am
Operator :
Sample : diox@010
Misc :
ALS Vial : 5 Sample Multiplier: 1

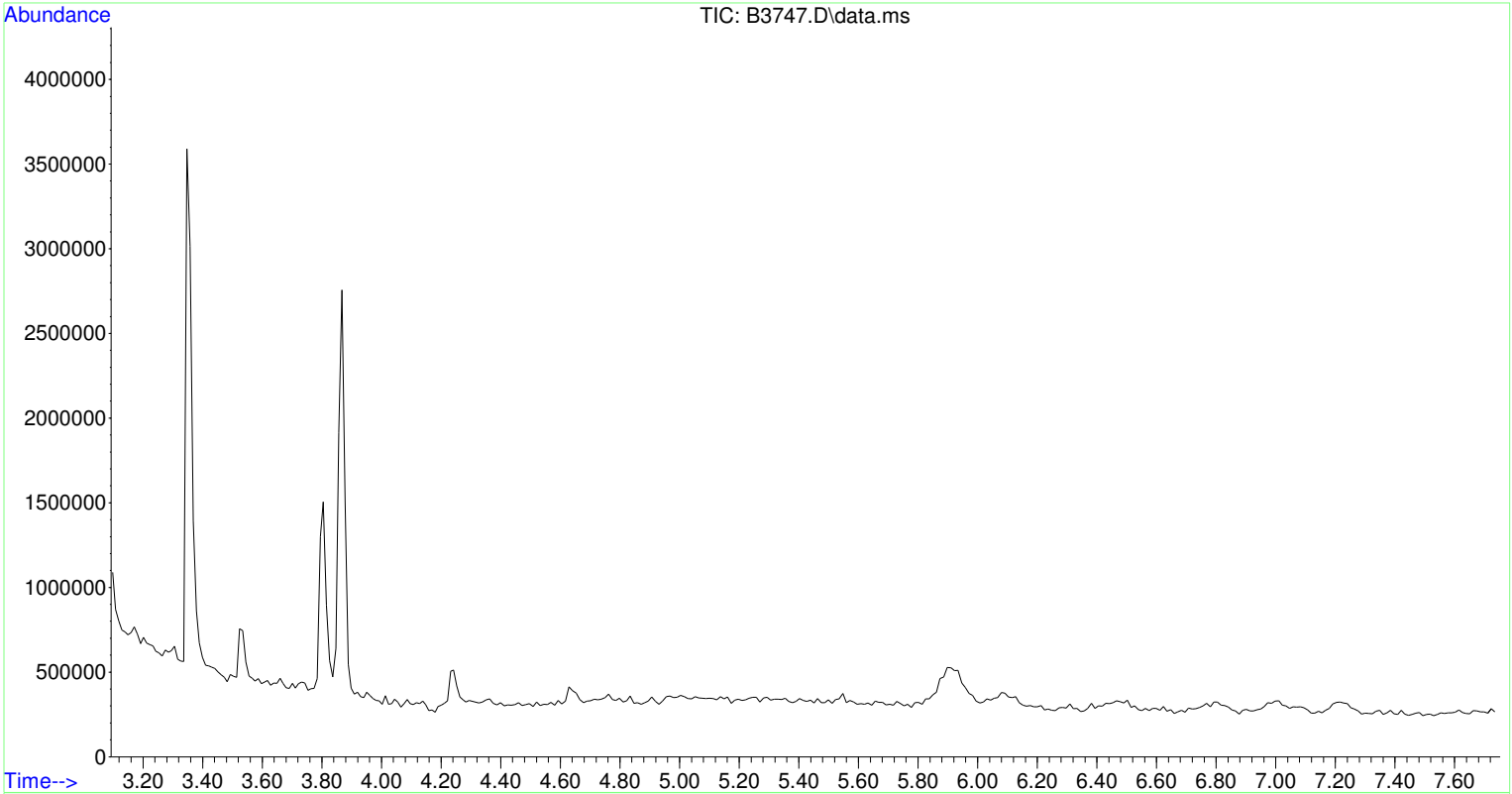
Quant Time: Jan 06 16:07:49 2022
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Wed Dec 08 10:17:46 2021
Response via : Initial Calibration

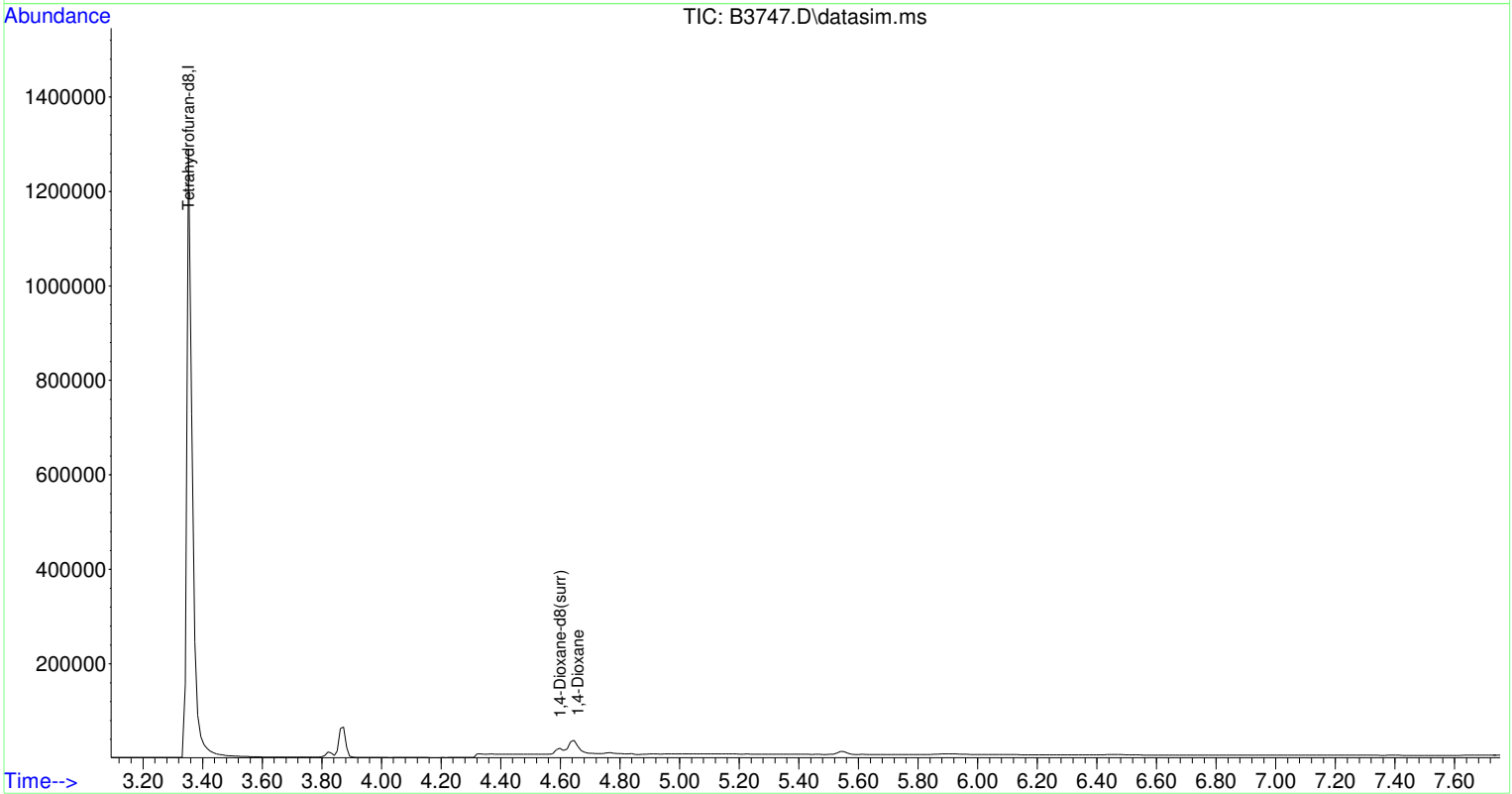
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tetrahydrofuran-d8	3.353	46	762938	500.00	ug	-0.04
Target Compounds						Qvalue
2] 1,4-Dioxane-d8(surr)	4.598	64	10995	8.05	ug	# 1
3] 1,4-Dioxane	4.658	88	19623	8.62	ug	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\2\data\
Data File : B3747.D
Acq On : 15 Nov 2021 10:48 am
Operator :
Sample : diox@010
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jan 06 16:07:49 2022
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Wed Dec 08 10:17:46 2021
Response via : Initial Calibration





Quantitation Report (Not Reviewed)

Data Path : D:\2\data\
Data File : B3748.D
Acq On : 15 Nov 2021 10:59 am
Operator :
Sample : diox@020
Misc :
ALS Vial : 6 Sample Multiplier: 1

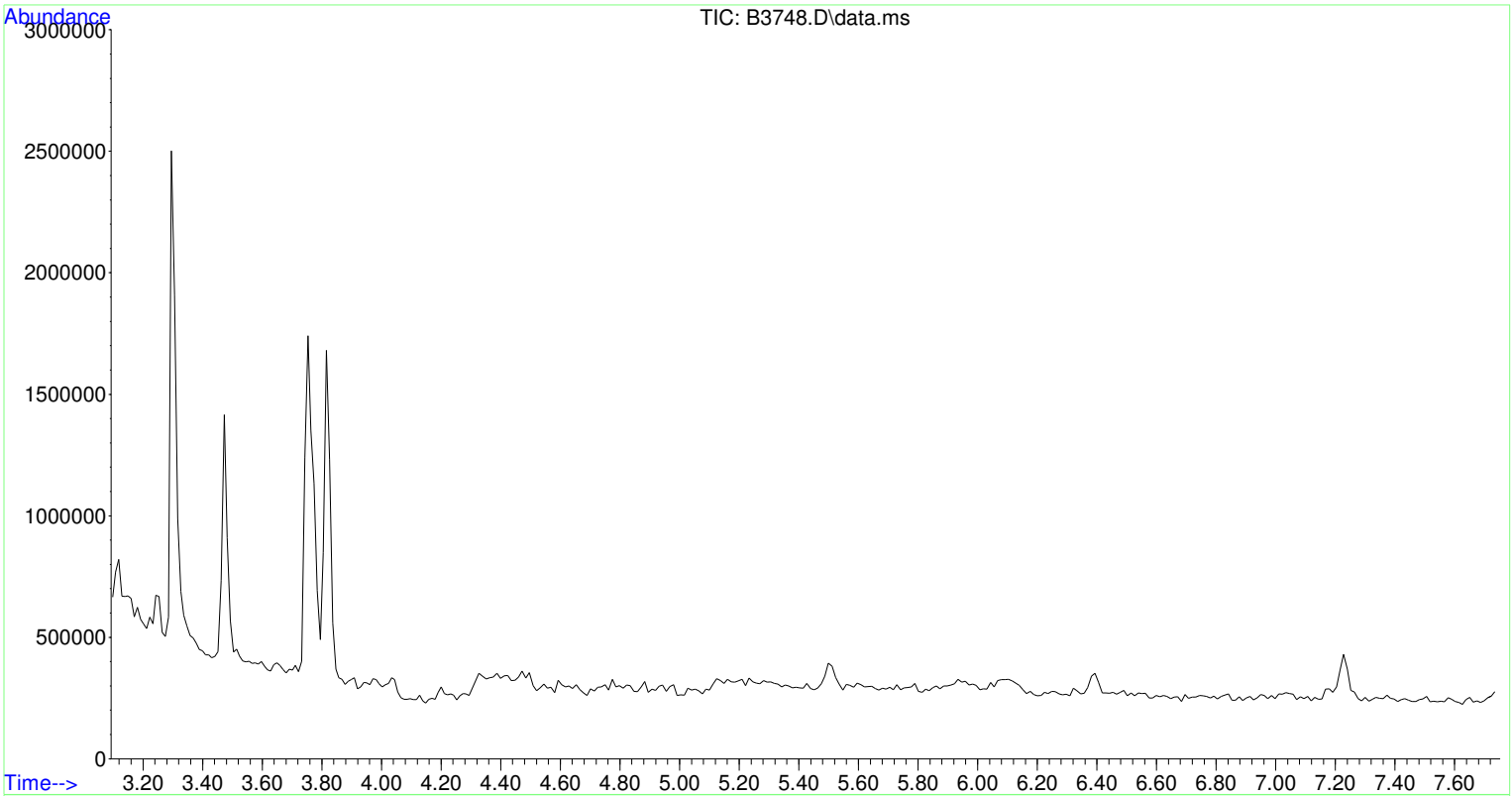
Quant Time: Jan 06 16:07:51 2022
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Wed Dec 08 10:17:46 2021
Response via : Initial Calibration

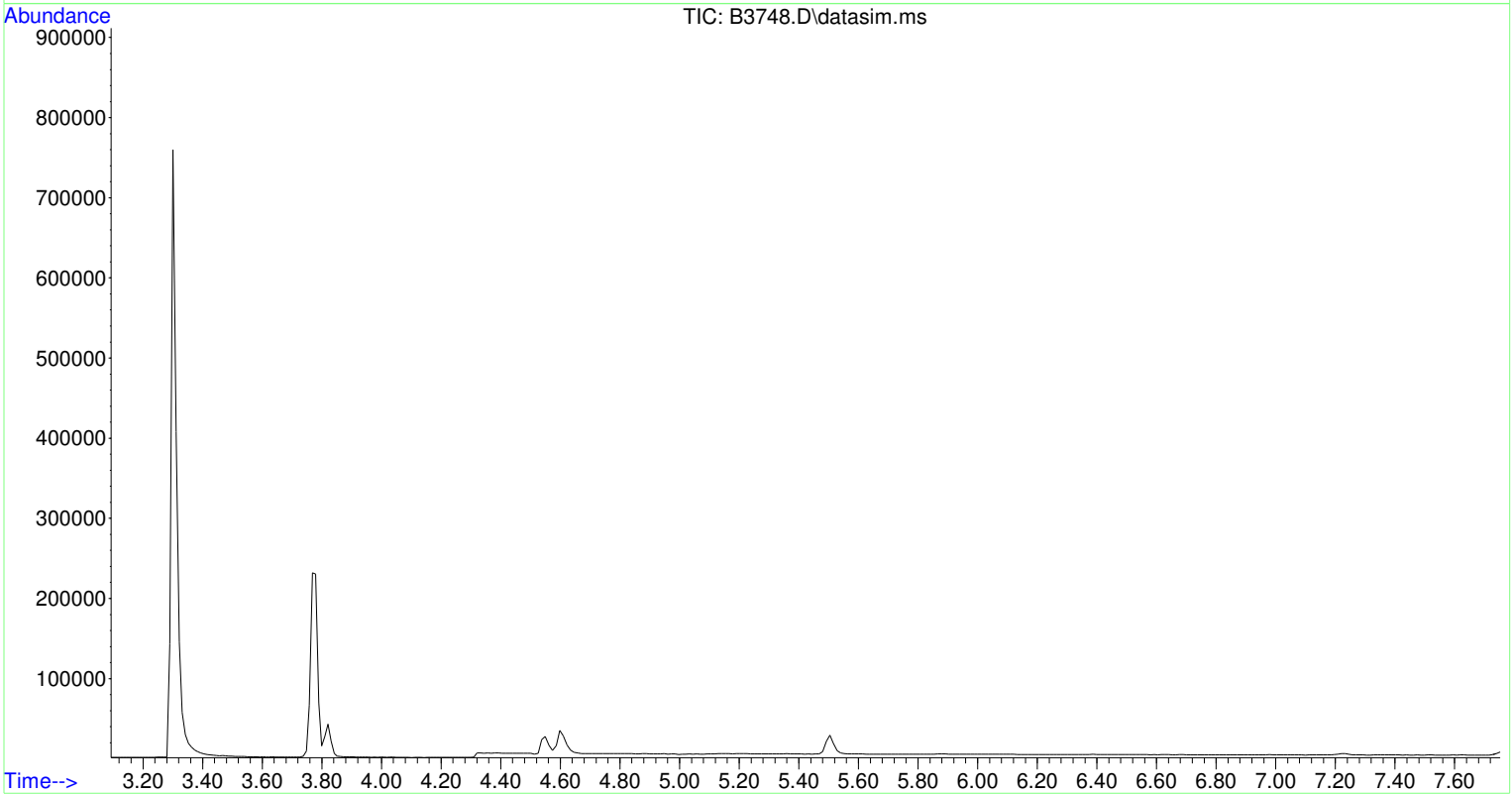
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tetrahydrofuran-d8	0.000	46	0	0.00	ug	-3.39
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\2\data\
Data File : B3748.D
Acq On : 15 Nov 2021 10:59 am
Operator :
Sample : diox@020
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jan 06 16:07:51 2022
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Wed Dec 08 10:17:46 2021
Response via : Initial Calibration





Quantitation Report (Not Reviewed)

Data Path : D:\2\data\
Data File : B3749.D
Acq On : 15 Nov 2021 11:10 am
Operator :
Sample : diox@500
Misc :
ALS Vial : 7 Sample Multiplier: 1

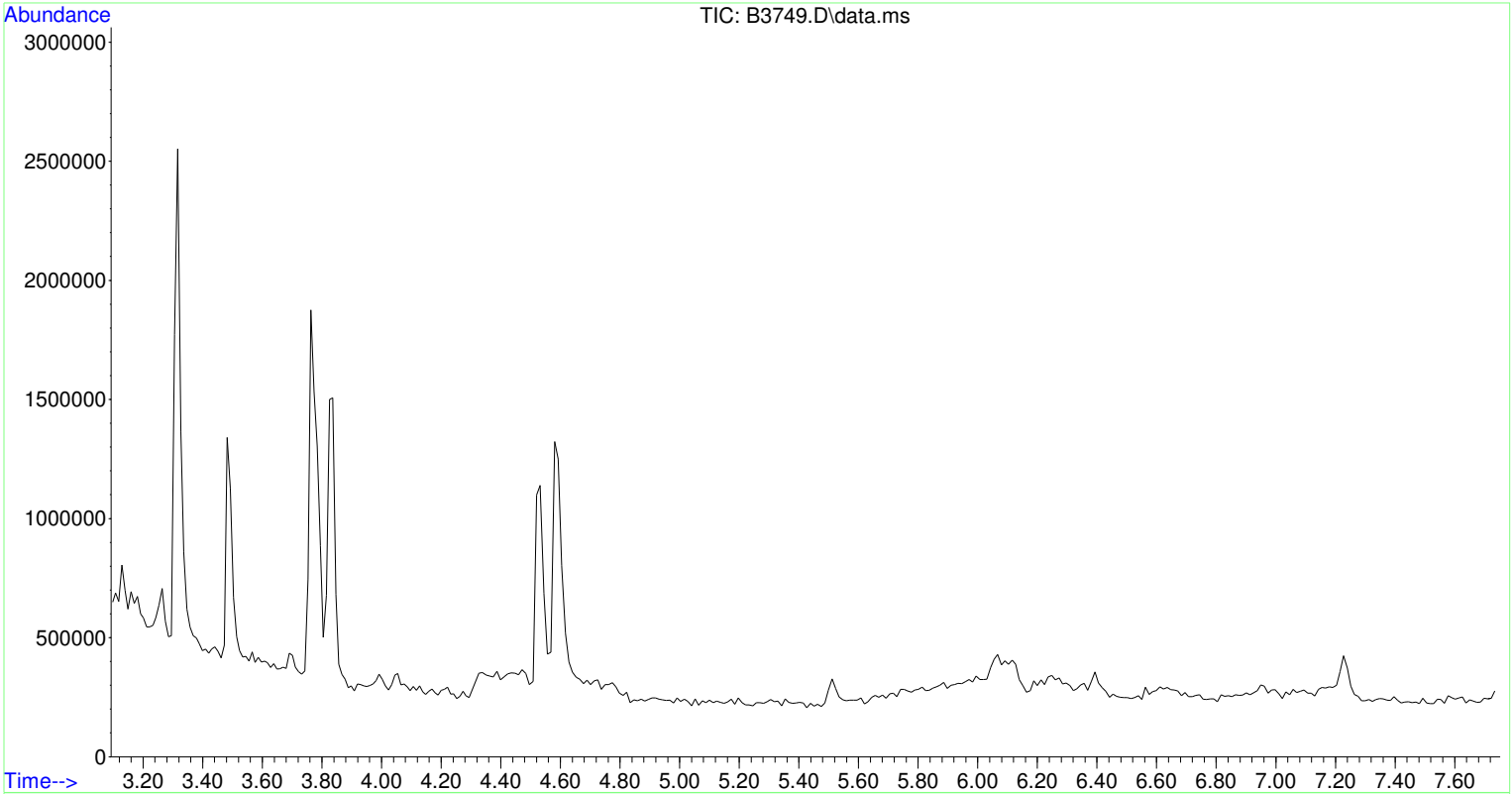
Quant Time: Jan 06 16:07:53 2022
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Wed Dec 08 10:17:46 2021
Response via : Initial Calibration

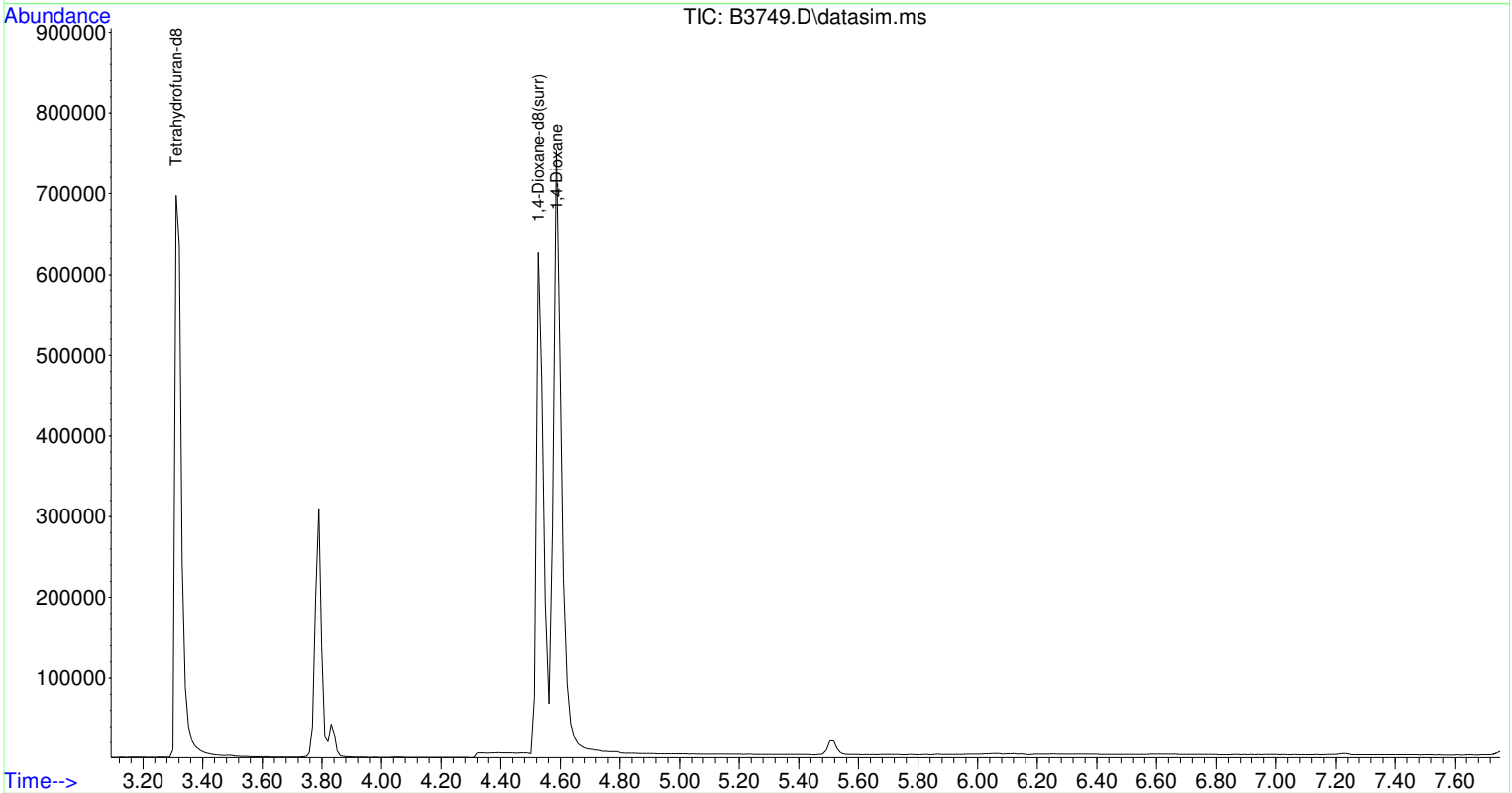
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tetrahydrofuran-d8	3.311	46	512515	500.00	ug	-0.08
Target Compounds						Qvalue
2] 1,4-Dioxane-d8(surr)	4.525	64	456657	497.95	ug	95
3] 1,4-Dioxane	4.586	88	784540	512.78	ug	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\2\data\
Data File : B3749.D
Acq On : 15 Nov 2021 11:10 am
Operator :
Sample : diox@500
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jan 06 16:07:53 2022
Quant Method : C:\msdchem\2\methods\simdiox111521.M
Quant Title : 14Dioxane-Sim
QLast Update : Wed Dec 08 10:17:46 2021
Response via : Initial Calibration





Adirondack Environmental Services, Inc

PREP BATCH REPORT

Prep Start Date: **8/1/2023 2:27:50 P**
Prep End Date: **8/2/2023**

Comments:

Prep Factor Units: **mL / mL**

Prep Batch **102724** Prep Code: **3535-14DIOXA** Technician: **Monica Traver**

Sample ID	Matrix	pH	ResCl	SampAmt	Sol Added	Fin Vol	factor	PrepStart	PrepEnd	ExPos	TareWt	CleanUp
230727002-001B	Groundwater		No	500	0	10	0.020	8/1/2023	8/2/2023	1-1a	0	
230727002-002B	Groundwater		No	500	0	10	0.020	8/1/2023	8/2/2023	2-2	0	
230727002-003B	Groundwater		No	500	0	10	0.020	8/1/2023	8/2/2023	2-3	0	
230727002-004B	Groundwater		No	500	0	10	0.020	8/1/2023	8/2/2023	1-2a	0	
230727002-004BMS	Groundwater		No	500	0	10	0.020	8/1/2023	8/2/2023	1-3	0	
230727002-004BMSD	Groundwater		No	500	0	10	0.020	8/1/2023	8/2/2023	2-2	0	
230727002-005B	Groundwater		No	500	0	10	0.020	8/1/2023	8/2/2023	1-2	0	
230727002-006B	Surface Water		No	500	0	10	0.020	8/1/2023	8/2/2023	1-3a	0	
230727002-006BMS	Surface Water		No	500	0	10	0.020	8/1/2023	8/2/2023	2-3	0	
230727002-006BMSD	Surface Water		No	500	0	10	0.020	8/1/2023	8/2/2023	2-2	0	
230727002-007B	Surface Water		No	500	0	10	0.020	8/1/2023	8/2/2023	1-1	0	
230801049-001D	Groundwater		No	500	0	10	0.020	8/1/2023	8/2/2023	2-3	0	
LCS-102724				500	0	10	0.020	8/1/2023	8/2/2023	2-3a	0	
MB-102724				500	0	10	0.020	8/1/2023	8/2/2023	2-2a	0	

Prep Start Date: **8/1/2023 2:27:50 P**
Prep End Date: **8/2/2023**

Comments:

Prep Factor Units: **mL** / **mL**

Prep Batch **102724** Prep Code: **3535-14DIOXA** Technician: **Monica Traver**

Sample ID	Matrix	pH	ResCl	SampAmt	Sol Added	Fin Vol	factor	PrepStart	PrepEnd	ExPos	TareWt	CleanUp

Number	Reagent Name
7777	Methanol
7919	Methanol
8338	Dichloromethane

Solution ID	Solution Name	SampType	AmtAdd	units
8043	O-THF-d8		5	µl
bna9-1a	1,4-Dioxaned8 @5ug/ml		0.5	ml
bna9-1b	1,4-DIOXANE @ug/ml		0.5	ml

Standard (1) Lot No.: _____ Standard (2) Lot No.: _____

Analyst	Date	Time	File ID	Sample ID	DF	QA/QC Checks		Manual Integration		Comments
						Surrogate Check	Internal Std Check			
QLHJ	8/2/23		B2915	DFTPP		NO Penta				
			16	SSTD050		split 2:1		auto good - no Penta.		
			clipped big section of col. / new seal disk.							
			BBTC1	OK						
			B2917	NO PENTA - DFTPP-50			OK			
			B2918	SSTD050		Penta @ 8	2ndpk - mill			
			B2919	PhenSm@2			Penta - NONE			
			B2920	713090-2A	X	OK	OK	use u / B2901		
			B2921	D10X0100		Adjust times				
			B2922	↓						
			B2923	↓	X		28254	86.85	107.46	
			B2924	BTC						
			B2925	MB - 102724				172		
			26	↓	X	OK	OK	195	8.9	
			27	LCS	X	OK	OK	191	192	

REVIEW _____ DATE _____

Standard (1) Lot No.: _____ Standard (2) Lot No.: _____

Analyst	Date	Time	File ID	Sample ID	DF	QA/QC Checks		Manual Integration		Comments
						Surrogate Check	Internal Std Check	d8	d10	
		5	B2928	BTC				—	—	
		6	29	801049-1D	X	Ok	Ok	238	213	
		7	B2930	BTC						
SAD		8	31 ✓	727002-1B	X	Ok	Ok	132	—	
		7	32	BTC						
28254		9	33 ✓	-2B	X	Ok	Ok	2M	6.	
		7	34	BTC						
		10	35 ✓	-3B	X	Ok	Ok	169.		
		11	36	BTC						
		12	37 ✓	-4B	X	Ok	Ok	136		
		11	38	BTC						
		13	39	-5B	RE	110	Ok	110	RE.	←
		11	B2940	BTC						
		14	41 ✓	-6B	X	Ok	Ok	147		
		15	42	BTC						
		16	43 ✓	-7B	X	Ok	Ok	133		
		15	44	BTC						
		17	45 ✓ MS	-4B	X	Ok	Ok	174	188	
		18	46 ✓ MSD	↓	X	Ok	Ok	116	141	←

REVIEW _____ DATE _____

Standard (1) Lot No.: _____ Standard (2) Lot No.: _____

Analyst	Date	Time	File ID	Sample ID	DF	QA/QC Checks		Manual Integration	Comments
						Surrogate Check	Internal Std Check		
		15	B2947	BTC					
		19	48	✓MS -6B	✓	↓ 1/2	↑ DBL	144 176	
		20	49	✓MSD - ↓	✓	OK	OK	176 194	
		15	50	BTC					
		21	51	B - II		OK	OK	181	
		22	52	LCS - II		OK	OK	186 198	
MHT	8/3/23		B8TC1						
			B2953	DFTPP					
			B2954	SSTD050				Ponta - 16	
			55	↓		Little better		Pulsed Split - Ponta - 27	
			56	↓		4:1			
			57	↓		5:1			
			58-59-60 -		Primers				
			B2961	DFTPP					
			62	SSTD050					
			63	Pulsed	Split	50 PSI	1.5 min	Little better	
			64	160		10:1	50 PSI	1.5 min need to go way earlier	
			65	160					
			66	~~25~~ 160					

→ changed split vent trap

REVIEW _____ DATE _____

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-1
Work Order:	230727002	**Collection Date:**	7/26/2023 3:55:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-001
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY - EPA 245.1 REV 3.0						Analyst: **AF**
(Prep: E245.1 - 8/8/2023)						
Mercury	***ND***	0.20		µg/L	1	8/8/2023 2:09:42 PM
ICP METALS - EPA 6010C						Analyst: **KH**
(Prep: SW3010A - 8/4/2023)						
Aluminum	***ND***	100		µg/L	1	8/8/2023 11:29:00 AM
Antimony	***ND***	60.0		µg/L	1	8/8/2023 11:29:00 AM
Arsenic	***ND***	5.00		µg/L	1	8/8/2023 11:29:00 AM
Barium	***24.7***	10.0		µg/L	1	8/8/2023 11:29:00 AM
Beryllium	***ND***	5.00		µg/L	1	8/8/2023 11:29:00 AM
Cadmium	***ND***	5.00		µg/L	1	8/8/2023 11:29:00 AM
Calcium	***16100***	50.0		µg/L	1	8/8/2023 11:29:00 AM
Chromium	***6.50***	5.00		µg/L	1	8/8/2023 11:29:00 AM
Cobalt	***ND***	50.0		µg/L	1	8/8/2023 11:29:00 AM
Copper	***3.16***	5.00	J	µg/L	1	8/8/2023 11:29:00 AM
Iron	***ND***	50.0		µg/L	1	8/8/2023 11:29:00 AM
Lead	***ND***	5.00		µg/L	1	8/8/2023 11:29:00 AM
Magnesium	***4000***	50.0		µg/L	1	8/8/2023 11:29:00 AM
Manganese	***ND***	20.0		µg/L	1	8/8/2023 11:29:00 AM
Nickel	***ND***	20.0		µg/L	1	8/8/2023 11:29:00 AM
Potassium	***3750***	50.0		µg/L	1	8/8/2023 11:29:00 AM
Selenium	***ND***	5.00		µg/L	1	8/8/2023 11:29:00 AM
Silver	***ND***	10.0		µg/L	1	8/8/2023 11:29:00 AM
Sodium	***43700***	500		µg/L	10	8/8/2023 11:32:00 AM
Thallium	***ND***	10.0		µg/L	1	8/8/2023 11:29:00 AM
Vanadium	***ND***	20.0		µg/L	1	8/8/2023 11:29:00 AM
Zinc	***ND***	10.0		µg/L	1	8/8/2023 11:29:00 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
X - Value exceeds Maximum Contaminant Level
E - Value above quantitation range-Estimate
S - LCS Spike below accepted limits (+ above)
Z - RPD outside accepted recovery limits
N - Matrix Spike below accepted limits (+ above)
T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-4
Work Order:	230727002	**Collection Date:**	7/26/2023 2:35:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-002
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY - EPA 245.1 REV 3.0						Analyst: **AF**
(Prep: E245.1 - 8/8/2023)						
Mercury	***ND***	0.20		µg/L	1	8/8/2023 2:11:26 PM
ICP METALS - EPA 6010C						Analyst: **KH**
(Prep: SW3010A - 8/4/2023)						
Aluminum	***ND***	100		µg/L	1	8/8/2023 11:36:00 AM
Antimony	***ND***	60.0		µg/L	1	8/8/2023 11:36:00 AM
Arsenic	***ND***	5.00		µg/L	1	8/8/2023 11:36:00 AM
Barium	***19.9***	10.0		µg/L	1	8/8/2023 11:36:00 AM
Beryllium	***ND***	5.00		µg/L	1	8/8/2023 11:36:00 AM
Cadmium	***ND***	5.00		µg/L	1	8/8/2023 11:36:00 AM
Calcium	***7100***	50.0		µg/L	1	8/8/2023 11:36:00 AM
Chromium	***11.3***	5.00		µg/L	1	8/8/2023 11:36:00 AM
Cobalt	***ND***	50.0		µg/L	1	8/8/2023 11:36:00 AM
Copper	***8.31***	5.00		µg/L	1	8/8/2023 11:36:00 AM
Iron	***31.3***	50.0	J	µg/L	1	8/8/2023 11:36:00 AM
Lead	***ND***	5.00		µg/L	1	8/8/2023 11:36:00 AM
Magnesium	***2410***	50.0		µg/L	1	8/8/2023 11:36:00 AM
Manganese	***10.5***	20.0	J	µg/L	1	8/8/2023 11:36:00 AM
Nickel	***ND***	20.0		µg/L	1	8/8/2023 11:36:00 AM
Potassium	***172***	50.0		µg/L	1	8/8/2023 11:36:00 AM
Selenium	***ND***	5.00		µg/L	1	8/8/2023 11:36:00 AM
Silver	***ND***	10.0		µg/L	1	8/8/2023 11:36:00 AM
Sodium	***3030***	50.0		µg/L	1	8/8/2023 11:36:00 AM
Thallium	***3.37***	10.0	J	µg/L	1	8/8/2023 11:36:00 AM
Vanadium	***ND***	20.0		µg/L	1	8/8/2023 11:36:00 AM
Zinc	***ND***	10.0		µg/L	1	8/8/2023 11:36:00 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
X - Value exceeds Maximum Contaminant Level
E - Value above quantitation range-Estimate
S - LCS Spike below accepted limits (+ above)
Z - RPD outside accepted recovery limits
N - Matrix Spike below accepted limits (+ above)
T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-5
Work Order:	230727002	**Collection Date:**	7/26/2023 1:50:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-003
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY - EPA 245.1 REV 3.0						Analyst: **AF**
(Prep: E245.1 - 8/8/2023)						
Mercury	***ND***	0.20		µg/L	1	8/8/2023 2:13:10 PM
ICP METALS - EPA 6010C						Analyst: **KH**
(Prep: SW3010A - 8/4/2023)						
Aluminum	***ND***	100		µg/L	1	8/8/2023 11:40:00 AM
Antimony	***ND***	60.0		µg/L	1	8/8/2023 11:40:00 AM
Arsenic	***ND***	5.00		µg/L	1	8/8/2023 11:40:00 AM
Barium	***54.4***	10.0		µg/L	1	8/8/2023 11:40:00 AM
Beryllium	***ND***	5.00		µg/L	1	8/8/2023 11:40:00 AM
Cadmium	***ND***	5.00		µg/L	1	8/8/2023 11:40:00 AM
Calcium	***18400***	50.0		µg/L	1	8/8/2023 11:40:00 AM
Chromium	***ND***	5.00		µg/L	1	8/8/2023 11:40:00 AM
Cobalt	***ND***	50.0		µg/L	1	8/8/2023 11:40:00 AM
Copper	***4.54***	5.00	J	µg/L	1	8/8/2023 11:40:00 AM
Iron	***60.8***	50.0		µg/L	1	8/8/2023 11:40:00 AM
Lead	***ND***	5.00		µg/L	1	8/8/2023 11:40:00 AM
Magnesium	***4290***	50.0		µg/L	1	8/8/2023 11:40:00 AM
Manganese	***14.0***	20.0	J	µg/L	1	8/8/2023 11:40:00 AM
Nickel	***ND***	20.0		µg/L	1	8/8/2023 11:40:00 AM
Potassium	***395***	50.0		µg/L	1	8/8/2023 11:40:00 AM
Selenium	***ND***	5.00		µg/L	1	8/8/2023 11:40:00 AM
Silver	***ND***	10.0		µg/L	1	8/8/2023 11:40:00 AM
Sodium	***2310***	50.0		µg/L	1	8/8/2023 11:40:00 AM
Thallium	***ND***	10.0		µg/L	1	8/8/2023 11:40:00 AM
Vanadium	***ND***	20.0		µg/L	1	8/8/2023 11:40:00 AM
Zinc	***ND***	10.0		µg/L	1	8/8/2023 11:40:00 AM

Qualifiers:

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Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-7
Work Order:	230727002	**Collection Date:**	7/26/2023 12:30:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-004
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY - EPA 245.1 REV 3.0						Analyst: **AF**
(Prep: E245.1 - 8/8/2023)						
Mercury	***ND***	0.20		µg/L	1	8/8/2023 2:14:54 PM
ICP METALS - EPA 6010C						Analyst: **KH**
(Prep: SW3010A - 8/4/2023)						
Aluminum	***463***	100	Z	µg/L	1	8/8/2023 11:44:00 AM
Antimony	***ND***	60.0		µg/L	1	8/8/2023 11:44:00 AM
Arsenic	***ND***	5.00		µg/L	1	8/8/2023 11:44:00 AM
Barium	***74.7***	10.0		µg/L	1	8/8/2023 11:44:00 AM
Beryllium	***ND***	5.00		µg/L	1	8/8/2023 11:44:00 AM
Cadmium	***ND***	5.00		µg/L	1	8/8/2023 11:44:00 AM
Calcium	***18900***	50.0		µg/L	1	8/8/2023 11:44:00 AM
Chromium	***9.25***	5.00		µg/L	1	8/8/2023 11:44:00 AM
Cobalt	***1.79***	50.0	J	µg/L	1	8/8/2023 11:44:00 AM
Copper	***ND***	5.00		µg/L	1	8/8/2023 11:44:00 AM
Iron	***1140***	50.0	Z	µg/L	1	8/8/2023 11:44:00 AM
Lead	***2.78***	5.00	J	µg/L	1	8/8/2023 11:44:00 AM
Magnesium	***7200***	50.0		µg/L	1	8/8/2023 11:44:00 AM
Manganese	***747***	20.0		µg/L	1	8/8/2023 11:44:00 AM
Nickel	***3.31***	20.0	J	µg/L	1	8/8/2023 11:44:00 AM
Potassium	***829***	50.0		µg/L	1	8/8/2023 11:44:00 AM
Selenium	***ND***	5.00		µg/L	1	8/8/2023 11:44:00 AM
Silver	***ND***	10.0		µg/L	1	8/8/2023 11:44:00 AM
Sodium	***2620***	50.0		µg/L	1	8/8/2023 11:44:00 AM
Thallium	***3.57***	10.0	J	µg/L	1	8/8/2023 11:44:00 AM
Vanadium	***ND***	20.0		µg/L	1	8/8/2023 11:44:00 AM
Zinc	***ND***	10.0		µg/L	1	8/8/2023 11:44:00 AM

Qualifiers:

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T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	MW-7 Dup
Work Order:	230727002	**Collection Date:**	7/26/2023 12:30:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-005
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY - EPA 245.1 REV 3.0						Analyst: **AF**
(Prep: E245.1 - 8/8/2023)						
Mercury	***ND***	0.20		µg/L	1	8/8/2023 2:23:38 PM
ICP METALS - EPA 6010C						Analyst: **KH**
(Prep: SW3010A - 8/4/2023)						
Aluminum	***394***	100		µg/L	1	8/8/2023 12:13:00 PM
Antimony	***ND***	60.0		µg/L	1	8/8/2023 12:13:00 PM
Arsenic	***ND***	5.00		µg/L	1	8/8/2023 12:13:00 PM
Barium	***71.0***	10.0		µg/L	1	8/8/2023 12:13:00 PM
Beryllium	***ND***	5.00		µg/L	1	8/8/2023 12:13:00 PM
Cadmium	***ND***	5.00		µg/L	1	8/8/2023 12:13:00 PM
Calcium	***17800***	50.0		µg/L	1	8/8/2023 12:13:00 PM
Chromium	***8.81***	5.00		µg/L	1	8/8/2023 12:13:00 PM
Cobalt	***1.61***	50.0	J	µg/L	1	8/8/2023 12:13:00 PM
Copper	***ND***	5.00		µg/L	1	8/8/2023 12:13:00 PM
Iron	***1020***	50.0		µg/L	1	8/8/2023 12:13:00 PM
Lead	***3.60***	5.00	J	µg/L	1	8/8/2023 12:13:00 PM
Magnesium	***6790***	50.0		µg/L	1	8/8/2023 12:13:00 PM
Manganese	***657***	20.0		µg/L	1	8/8/2023 12:13:00 PM
Nickel	***2.93***	20.0	J	µg/L	1	8/8/2023 12:13:00 PM
Potassium	***765***	50.0		µg/L	1	8/8/2023 12:13:00 PM
Selenium	***ND***	5.00		µg/L	1	8/8/2023 12:13:00 PM
Silver	***ND***	10.0		µg/L	1	8/8/2023 12:13:00 PM
Sodium	***2440***	50.0		µg/L	1	8/8/2023 12:13:00 PM
Thallium	***5.11***	10.0	J	µg/L	1	8/8/2023 12:13:00 PM
Vanadium	***ND***	20.0		µg/L	1	8/8/2023 12:13:00 PM
Zinc	***ND***	10.0		µg/L	1	8/8/2023 12:13:00 PM

Qualifiers:

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N - Matrix Spike below accepted limits (+ above)
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Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	SW-1
Work Order:	230727002	**Collection Date:**	7/26/2023 2:50:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-006
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY - EPA 245.1 REV 3.0						Analyst: **AF**
(Prep: E245.1 - 8/8/2023)						
Mercury	***ND***	0.20		µg/L	1	8/8/2023 2:25:24 PM
ICP METALS - EPA 6010C						Analyst: **KH**
(Prep: SW3010A - 8/4/2023)						
Aluminum	***ND***	100		µg/L	1	8/8/2023 12:16:00 PM
Antimony	***ND***	60.0		µg/L	1	8/8/2023 12:16:00 PM
Arsenic	***ND***	5.00		µg/L	1	8/8/2023 12:16:00 PM
Barium	***44.8***	10.0		µg/L	1	8/8/2023 12:16:00 PM
Beryllium	***ND***	5.00		µg/L	1	8/8/2023 12:16:00 PM
Cadmium	***ND***	5.00		µg/L	1	8/8/2023 12:16:00 PM
Calcium	***18300***	50.0		µg/L	1	8/8/2023 12:16:00 PM
Chromium	***ND***	5.00		µg/L	1	8/8/2023 12:16:00 PM
Cobalt	***1.38***	50.0	J	µg/L	1	8/8/2023 12:16:00 PM
Copper	***ND***	5.00		µg/L	1	8/8/2023 12:16:00 PM
Iron	***3350***	50.0		µg/L	1	8/8/2023 12:16:00 PM
Lead	***ND***	5.00		µg/L	1	8/8/2023 12:16:00 PM
Magnesium	***4510***	50.0		µg/L	1	8/8/2023 12:16:00 PM
Manganese	***561***	20.0		µg/L	1	8/8/2023 12:16:00 PM
Nickel	***ND***	20.0		µg/L	1	8/8/2023 12:16:00 PM
Potassium	***954***	50.0		µg/L	1	8/8/2023 12:16:00 PM
Selenium	***ND***	5.00		µg/L	1	8/8/2023 12:16:00 PM
Silver	***ND***	10.0		µg/L	1	8/8/2023 12:16:00 PM
Sodium	***2730***	50.0		µg/L	1	8/8/2023 12:16:00 PM
Thallium	***ND***	10.0		µg/L	1	8/8/2023 12:16:00 PM
Vanadium	***ND***	20.0		µg/L	1	8/8/2023 12:16:00 PM
Zinc	***ND***	10.0		µg/L	1	8/8/2023 12:16:00 PM

Qualifiers:

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N - Matrix Spike below accepted limits (+ above)
T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: *07-Sep-23*

CLIENT:	CPL	**Client Sample ID:**	SW-1 Dup
Work Order:	230727002	**Collection Date:**	7/26/2023 2:50:00 PM
Reference:	Hettling Park Groundwater Sampling /	**Lab Sample ID:**	230727002-007
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY - EPA 245.1 REV 3.0						Analyst: **AF**
(Prep: E245.1 - 8/8/2023)						
Mercury	***ND***	0.20		µg/L	1	8/8/2023 2:30:42 PM
ICP METALS - EPA 6010C						Analyst: **KH**
(Prep: SW3010A - 8/4/2023)						
Aluminum	***ND***	100		µg/L	1	8/8/2023 12:34:00 PM
Antimony	***ND***	60.0		µg/L	1	8/8/2023 12:34:00 PM
Arsenic	***ND***	5.00		µg/L	1	8/8/2023 12:34:00 PM
Barium	***43.5***	10.0		µg/L	1	8/8/2023 12:34:00 PM
Beryllium	***ND***	5.00		µg/L	1	8/8/2023 12:34:00 PM
Cadmium	***ND***	5.00		µg/L	1	8/8/2023 12:34:00 PM
Calcium	***18900***	50.0		µg/L	1	8/8/2023 12:34:00 PM
Chromium	***ND***	5.00		µg/L	1	8/8/2023 12:34:00 PM
Cobalt	***1.41***	50.0	J	µg/L	1	8/8/2023 12:34:00 PM
Copper	***ND***	5.00		µg/L	1	8/8/2023 12:34:00 PM
Iron	***3540***	50.0		µg/L	1	8/8/2023 12:34:00 PM
Lead	***ND***	5.00		µg/L	1	8/8/2023 12:34:00 PM
Magnesium	***4720***	50.0		µg/L	1	8/8/2023 12:34:00 PM
Manganese	***664***	20.0		µg/L	1	8/8/2023 12:34:00 PM
Nickel	***ND***	20.0		µg/L	1	8/8/2023 12:34:00 PM
Potassium	***984***	50.0		µg/L	1	8/8/2023 12:34:00 PM
Selenium	***ND***	5.00		µg/L	1	8/8/2023 12:34:00 PM
Silver	***ND***	10.0		µg/L	1	8/8/2023 12:34:00 PM
Sodium	***2840***	50.0		µg/L	1	8/8/2023 12:34:00 PM
Thallium	***ND***	10.0		µg/L	1	8/8/2023 12:34:00 PM
Vanadium	***ND***	20.0		µg/L	1	8/8/2023 12:34:00 PM
Zinc	***ND***	10.0		µg/L	1	8/8/2023 12:34:00 PM

Qualifiers:

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T - Tentitively Identified Compound-Estimated Conc.

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

PS

SeqNo: **3606453** ***PrepDate:*** TestNo: **E200.7** RunNo: ***223428***
Samp ID: **230727002-004** ***(MW-7)*** ***PrepRef:(SW3010A)*** Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	4443	200	4000	462.6	99.5	75	125	0	0		
Antimony	1046	60.0	1000	0	105	75	125	0	0		
Arsenic	82.04	10.0	80	0	103	75	125	0	0		
Barium	4225	200	4000	74.71	104	75	125	0	0		
Beryllium	108.5	5.00	100	0	108	75	125	0	0		
Cadmium	103.5	5.00	100	0	103	75	125	0	0		
Chromium	430.9	10.0	400	9.251	105	75	125	0	0		
Cobalt	985.3	50.0	1000	1.794	98.3	75	125	0	0		
Copper	532	25.0	500	0	106	75	125	0	0		
Iron	3143	100	2000	1144	100	75	125	0	0		
Lead	43.23	3.00	40	2.781	101	75	125	0	0		
Manganese	1743	15.0	1000	746.6	99.6	75	125	0	0		
Nickel	1013	40.0	1000	3.314	101	75	125	0	0		
Selenium	20.96	5.00	20	0	105	75	125	0	0		
Silver	93.43	10.0	100	0	93.4	75	125	0	0		
Thallium	101.2	10.0	100	3.567	97.6	75	125	0	0		
Vanadium	1052	50.0	1000	0	105	75	125	0	0		
Zinc	1014	20.0	1000	0	101	75	125	0	0		

SD

SeqNo: **3606456** ***PrepDate:*** TestNo: **E200.7** RunNo: ***223428***
Samp ID: **230727002-004** ***(MW-7)*** ***PrepRef:(SW3010A)*** Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	425.6	1000	0	0	0	0	0	462.6	0	0	J
Antimony	ND	300	0	0	0	0	0	0	0	0	
Arsenic	ND	50.0	0	0	0	0	0	0	0	0	
Barium	76.64	1000	0	0	0	0	0	74.71	0	0	J
Beryllium	ND	25.0	0	0	0	0	0	0	0	0	
Cadmium	ND	25.0	0	0	0	0	0	0	0	0	
Calcium	18990	25000	0	0	0	0	0	18930	0	0	J
Chromium	ND	50.0	0	0	0	0	0	9.251	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

SD

SeqNo: **3606456** *PrepDate:* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **230727002-004** ***(MW-7)*** *PrepRef:(SW3010A)* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cobalt	2.933	250	0	0	0	0	0	1.794	0	0	J
Copper	ND	120	0	0	0	0	0	0	0	0	
Iron	1131	500	0	0	0	0	0	1144	1.12	0	
Lead	ND	15.0	0	0	0	0	0	2.781	0	0	
Magnesium	7220	25000	0	0	0	0	0	7198	0	0	J
Manganese	743.9	75.0	0	0	0	0	0	746.6	0.364	0	
Nickel	ND	200	0	0	0	0	0	3.314	0	0	
Potassium	798.2	25000	0	0	0	0	0	829	0	0	J
Selenium	ND	25.0	0	0	0	0	0	0	0	0	
Silver	ND	50.0	0	0	0	0	0	0	0	0	
Sodium	1883	25000	0	0	0	0	0	2618	0	0	J
Thallium	21.21	50.0	0	0	0	0	0	3.567	0	0	J
Vanadium	ND	250	0	0	0	0	0	0	0	0	
Zinc	ND	100	0	0	0	0	0	0	0	0	

PS

SeqNo: **3606461** *PrepDate:* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **230727002-006** ***(SW-1)*** *PrepRef:(SW3010A)* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	4044	200	4000	0	101	75	125	0	0		
Antimony	1064	60.0	1000	0	106	75	125	0	0		
Arsenic	72.47	10.0	80	0	90.6	75	125	0	0		
Barium	4239	200	4000	44.79	105	75	125	0	0		
Beryllium	110.4	5.00	100	0	110	75	125	0	0		
Cadmium	106.1	5.00	100	0	106	75	125	0	0		
Chromium	432.4	10.0	400	0	108	75	125	0	0		
Cobalt	1015	50.0	1000	1.377	101	75	125	0	0		
Copper	539.8	25.0	500	0	108	75	125	0	0		
Iron	5421	100	2000	3348	104	75	125	0	0		
Lead	44.62	3.00	40	0	112	75	125	0	0		
Manganese	1591	15.0	1000	560.6	103	75	125	0	0		
Nickel	1043	40.0	1000	0	104	75	125	0	0		
Selenium	22.42	5.00	20	0	112	75	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

PS

SeqNo: **3606461** *PrepDate:* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **230727002-006** ***(SW-1)*** ***PrepRef:(SW3010A)*** Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	99.74	10.0	100	0	99.7	75	125	0	0		
Thallium	106.1	10.0	100	0	106	75	125	0	0		
Vanadium	1067	50.0	1000	0	107	75	125	0	0		
Zinc	1035	20.0	1000	0	103	75	125	0	0		

SD

SeqNo: **3606462** *PrepDate:* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **230727002-006** ***(SW-1)*** ***PrepRef:(SW3010A)*** Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	1000	0	0	0	0	0	0	0	0	
Antimony	ND	300	0	0	0	0	0	0	0	0	
Arsenic	ND	50.0	0	0	0	0	0	0	0	0	
Barium	52.9	1000	0	0	0	0	0	44.79	0	0	J
Beryllium	ND	25.0	0	0	0	0	0	0	0	0	
Cadmium	ND	25.0	0	0	0	0	0	0	0	0	
Calcium	20590	25000	0	0	0	0	0	18260	0	0	J
Chromium	31.91	50.0	0	0	0	0	0	0	0	0	J
Cobalt	2.004	250	0	0	0	0	0	1.377	0	0	J
Copper	ND	120	0	0	0	0	0	0	0	0	
Iron	3672	500	0	0	0	0	0	3348	9.23	0	
Lead	ND	15.0	0	0	0	0	0	0	0	0	
Magnesium	4955	25000	0	0	0	0	0	4505	0	0	J
Manganese	626.6	75.0	0	0	0	0	0	560.6	11.1	0	
Nickel	ND	200	0	0	0	0	0	0	0	0	
Potassium	999.5	25000	0	0	0	0	0	953.6	0	0	J
Selenium	ND	25.0	0	0	0	0	0	0	0	0	
Silver	ND	50.0	0	0	0	0	0	0	0	0	
Sodium	2135	25000	0	0	0	0	0	2729	0	0	J
Thallium	34.22	50.0	0	0	0	0	0	0	0	0	J
Vanadium	ND	250	0	0	0	0	0	0	0	0	
Zinc	ND	100	0	0	0	0	0	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

MBLK

SeqNo: **3606444** *PrepDate:8/4/2023 1* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **MB-102812** *PrepRef:(SW3010A)* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200									
Antimony	ND	60.0									
Arsenic	ND	10.0									
Barium	ND	200									
Beryllium	ND	5.00									
Cadmium	ND	5.00									
Calcium	ND	5000									
Chromium	ND	10.0									
Cobalt	ND	50.0									
Copper	ND	25.0									
Iron	ND	100									
Lead	ND	3.00									
Magnesium	ND	5000									
Manganese	ND	15.0									
Nickel	ND	40.0									
Potassium	ND	5000									
Selenium	ND	5.00									
Silver	ND	10.0									
Sodium	ND	5000									
Thallium	ND	10.0									
Vanadium	ND	50.0									
Zinc	ND	20.0									

LCS

SeqNo: **3606445** *PrepDate:8/4/2023 1* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **LCS-102812** *PrepRef:(SW3010A)* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	1954	200	2000	0	97.7	80	120	0	0		
Antimony	2031	60.0	2000	0	102	80	120	0	0		
Arsenic	1951	10.0	2000	0	97.5	80	120	0	0		
Barium	1955	200	2000	0	97.7	80	120	0	0		
Beryllium	1946	5.00	2000	0	97.3	80	120	0	0		
Cadmium	2042	5.00	2000	0	102	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

LCS

SeqNo: **3606445** *PrepDate:8/4/2023 1* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **LCS-102812** *PrepRef:(SW3010A)* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	1896	5000	2000	0	94.8	80	120	0	0		J
Chromium	1966	10.0	2000	0	98.3	80	120	0	0		
Cobalt	1878	50.0	2000	0	93.9	80	120	0	0		
Copper	1993	25.0	2000	0	99.6	80	120	0	0		
Iron	1926	100	2000	0	96.3	80	120	0	0		
Lead	2066	3.00	2000	0	103	80	120	0	0		
Magnesium	1880	5000	2000	0	94	80	120	0	0		J
Manganese	1890	15.0	2000	0	94.5	80	120	0	0		
Nickel	1991	40.0	2000	0	99.5	80	120	0	0		
Potassium	9809	5000	10000	0	98.1	80	120	0	0		
Selenium	1951	5.00	2000	0	97.6	80	120	0	0		
Silver	493	10.0	500	0	98.6	80	120	0	0		
Sodium	1901	5000	2000	0	95	80	120	0	0		J
Thallium	2076	10.0	2000	0	104	80	120	0	0		
Vanadium	1960	50.0	2000	0	98	80	120	0	0		
Zinc	1994	20.0	2000	0	99.7	80	120	0	0		

MS

SeqNo: **3606452** *PrepDate:8/4/2023 1* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **230727002-004** ***(MW-7)*** *PrepRef:(SW3010A)* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2269	200	2000	462.6	90.3	75	125	0	0		
Antimony	501.2	60.0	500	0	100	75	125	0	0		
Arsenic	36.18	10.0	40	0	90.4	75	125	0	0		
Barium	2019	200	2000	74.71	97.2	75	121	0	0		
Beryllium	51.03	5.00	50	0	102	75	120	0	0		
Cadmium	49.42	5.00	50	0	98.8	75	114	0	0		
Chromium	207.8	10.0	200	9.251	99.3	75	125	0	0		
Cobalt	464.4	50.0	500	1.794	92.5	75	117	0	0		
Copper	254.4	25.0	250	0	102	75	123	0	0		
Iron	2047	100	1000	1144	90.3	75	125	0	0		
Lead	23.6	3.00	20	2.781	104	75	125	0	0		
Manganese	1153	15.0	500	746.6	81.3	75	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

MS

SeqNo: **3606452** *PrepDate:8/4/2023 1* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **230727002-004** ***(MW-7)*** *PrepRef:(SW3010A)* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nickel	477.6	40.0	500	3.314	94.9	75	120	0	0		
Selenium	8.791	5.00	10	0	87.9	75	125	0	0		
Silver	40.93	10.0	50	0	81.9	75	125	0	0		
Thallium	51.38	10.0	50	3.567	95.6	75	125	0	0		
Vanadium	495.5	50.0	500	0	99.1	75	125	0	0		
Zinc	486.6	20.0	500	0	97.3	78.5	123	0	0		

MS

SeqNo: **3606460** *PrepDate:8/4/2023 1* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **230727002-006** ***(SW-1)*** *PrepRef:(SW3010A)* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	1857	200	2000	0	92.9	75	125	0	0		
Antimony	497.7	60.0	500	0	99.5	75	125	0	0		
Arsenic	37.33	10.0	40	0	93.3	75	125	0	0		
Barium	1980	200	2000	44.79	96.8	75	121	0	0		
Beryllium	50.59	5.00	50	0	101	75	120	0	0		
Cadmium	49.52	5.00	50	0	99	75	114	0	0		
Chromium	202.1	10.0	200	0	101	75	125	0	0		
Cobalt	468.5	50.0	500	1.377	93.4	75	117	0	0		
Copper	248.4	25.0	250	0	99.3	75	123	0	0		
Iron	4415	100	1000	3348	107	75	125	0	0		
Lead	21.04	3.00	20	0	105	75	125	0	0		
Manganese	1042	15.0	500	560.6	96.2	75	125	0	0		
Nickel	479.9	40.0	500	0	96	75	120	0	0		
Selenium	10.85	5.00	10	0	109	75	125	0	0		
Silver	41.88	10.0	50	0	83.8	75	125	0	0		
Thallium	49.55	10.0	50	0	99.1	75	125	0	0		
Vanadium	483.1	50.0	500	0	96.6	75	125	0	0		
Zinc	485	20.0	500	0	97	78.5	123	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

DUP

SeqNo: **3606451** *PrepDate:8/4/2023 1* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **230727002-004** ***(MW-7)*** *PrepRef:(SW3010A)* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	693.6	200	0	0	0	0	0	462.6	40.0	20	Z
Antimony	ND	60.0	0	0	0	0	0	0	0	20	
Arsenic	ND	10.0	0	0	0	0	0	0	0	20	
Barium	78.82	200	0	0	0	0	0	74.71	0	20	J
Beryllium	ND	5.00	0	0	0	0	0	0	0	20	
Cadmium	ND	5.00	0	0	0	0	0	0	0	20	
Calcium	18270	5000	0	0	0	0	0	18930	3.57	20	
Chromium	11.93	10.0	0	0	0	0	0	9.251	25.3	20	Z
Cobalt	2.933	50.0	0	0	0	0	0	1.794	0	20	J
Copper	3.949	25.0	0	0	0	0	0	0	0	20	J
Iron	1768	100	0	0	0	0	0	1144	42.9	20	Z
Lead	4.494	3.00	0	0	0	0	0	2.781	47.1	20	Z
Magnesium	6924	5000	0	0	0	0	0	7198	3.88	20	
Manganese	900.3	15.0	0	0	0	0	0	746.6	18.7	20	
Nickel	4.629	40.0	0	0	0	0	0	3.314	0	20	J
Potassium	831.3	5000	0	0	0	0	0	829	0	20	J
Selenium	ND	5.00	0	0	0	0	0	0	0	20	
Silver	ND	10.0	0	0	0	0	0	0	0	20	
Sodium	2512	5000	0	0	0	0	0	2618	0	20	J
Thallium	ND	10.0	0	0	0	0	0	3.567	0	20	
Vanadium	ND	50.0	0	0	0	0	0	0	0	20	
Zinc	9.075	20.0	0	0	0	0	0	0	0	20	J

DUP

SeqNo: **3606459** *PrepDate:8/4/2023 1* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **230727002-006** ***(SW-1)*** *PrepRef:(SW3010A)* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0	20	
Antimony	ND	60.0	0	0	0	0	0	0	0	20	
Arsenic	ND	10.0	0	0	0	0	0	0	0	20	
Barium	77.78	200	0	0	0	0	0	44.79	0	20	J
Beryllium	ND	5.00	0	0	0	0	0	0	0	20	
Cadmium	ND	5.00	0	0	0	0	0	0	0	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

DUP

SeqNo: **3606459** *PrepDate:8/4/2023 1* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **230727002-006** ***(SW-1)*** *PrepRef:(SW3010A)* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	18150	5000	0	0	0	0	0	18260	0.571	20	
Chromium	ND	10.0	0	0	0	0	0	0	0	20	
Cobalt	1.494	50.0	0	0	0	0	0	1.377	0	20	J
Copper	ND	25.0	0	0	0	0	0	0	0	20	
Iron	3327	100	0	0	0	0	0	3348	0.623	20	
Lead	ND	3.00	0	0	0	0	0	0	0	20	
Magnesium	4573	5000	0	0	0	0	0	4505	0	20	J
Manganese	612.5	15.0	0	0	0	0	0	560.6	8.86	20	
Nickel	ND	40.0	0	0	0	0	0	0	0	20	
Potassium	990.9	5000	0	0	0	0	0	953.6	0	20	J
Selenium	ND	5.00	0	0	0	0	0	0	0	20	
Silver	ND	10.0	0	0	0	0	0	0	0	20	
Sodium	2954	5000	0	0	0	0	0	2729	0	20	J
Thallium	6.073	10.0	0	0	0	0	0	0	0	20	J
Vanadium	ND	50.0	0	0	0	0	0	0	0	20	
Zinc	ND	20.0	0	0	0	0	0	0	0	20	

CCB

SeqNo: **3606443** *PrepDate:* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **CCB-1** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	9.333	200	0	0	0	0	0	0	0		
Antimony	ND	60.0	0	0	0	0	0	0	0		
Arsenic	ND	10.0	0	0	0	0	0	0	0		
Barium	0.6347	200	0	0	0	0	0	0	0		
Beryllium	ND	5.00	0	0	0	0	0	0	0		
Boron	2.354	50.0	0	0	0	0	0	0	0		
Cadmium	0.09095	5.00	0	0	0	0	0	0	0		
Calcium	ND	5000	0	0	0	0	0	0	0		
Chromium	4.789	10.0	0	0	0	0	0	0	0		
Cobalt	0.1752	50.0	0	0	0	0	0	0	0		
Copper	0.6388	25.0	0	0	0	0	0	0	0		
Iron	ND	100	0	0	0	0	0	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

CCB

SeqNo: **3606443** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **CCB-1** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	3.00	0	0	0	0	0	0	0		
Lithium	1.5	100	0	0	0	0	0	0	0		
Magnesium	ND	5000	0	0	0	0	0	0	0		
Manganese	0.04224	15.0	0	0	0	0	0	0	0		
Molybdenum	ND	50.0	0	0	0	0	0	0	0		
Nickel	0.04387	40.0	0	0	0	0	0	0	0		
Potassium	17.68	5000	0	0	0	0	0	0	0		
Selenium	ND	5.00	0	0	0	0	0	0	0		
Silver	ND	10.0	0	0	0	0	0	0	0		
Sodium	ND	5000	0	0	0	0	0	0	0		
Strontium	0.7875	20.0	0	0	0	0	0	0	0		
Thallium	3.277	10.0	0	0	0	0	0	0	0		
Tin	ND	50.0	0	0	0	0	0	0	0		
Titanium	ND	50.0	0	0	0	0	0	0	0		
Vanadium	3.376	50.0	0	0	0	0	0	0	0		
Zinc	ND	20.0	0	0	0	0	0	0	0		

CCB

SeqNo: **3606455** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **CCB-2** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	11.11	200	0	0	0	0	0	0	0		
Antimony	ND	60.0	0	0	0	0	0	0	0		
Arsenic	0.1891	10.0	0	0	0	0	0	0	0		
Barium	1.38	200	0	0	0	0	0	0	0		
Beryllium	ND	5.00	0	0	0	0	0	0	0		
Boron	1.133	50.0	0	0	0	0	0	0	0		
Cadmium	0.1383	5.00	0	0	0	0	0	0	0		
Calcium	ND	5000	0	0	0	0	0	0	0		
Chromium	ND	10.0	0	0	0	0	0	0	0		
Cobalt	0.2681	50.0	0	0	0	0	0	0	0		
Copper	0.6137	25.0	0	0	0	0	0	0	0		
Iron	ND	100	0	0	0	0	0	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

CCB

SeqNo: **3606455** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **CCB-2** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	3.00	0	0	0	0	0	0	0		
Lithium	ND	100	0	0	0	0	0	0	0		
Magnesium	10.78	5000	0	0	0	0	0	0	0		
Manganese	0.05614	15.0	0	0	0	0	0	0	0		
Molybdenum	ND	50.0	0	0	0	0	0	0	0		
Nickel	0.3466	40.0	0	0	0	0	0	0	0		
Potassium	8.804	5000	0	0	0	0	0	0	0		
Selenium	ND	5.00	0	0	0	0	0	0	0		
Silver	ND	10.0	0	0	0	0	0	0	0		
Sodium	17.46	5000	0	0	0	0	0	0	0		
Strontium	7.316	20.0	0	0	0	0	0	0	0		
Thallium	1.06	10.0	0	0	0	0	0	0	0		
Tin	ND	50.0	0	0	0	0	0	0	0		
Titanium	ND	50.0	0	0	0	0	0	0	0		
Vanadium	ND	50.0	0	0	0	0	0	0	0		
Zinc	ND	20.0	0	0	0	0	0	0	0		

CCB

SeqNo: **3606467** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **CCB-3** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0		
Antimony	ND	60.0	0	0	0	0	0	0	0		
Arsenic	ND	10.0	0	0	0	0	0	0	0		
Barium	0.8356	200	0	0	0	0	0	0	0		
Beryllium	0.00349	5.00	0	0	0	0	0	0	0		
Boron	2.341	50.0	0	0	0	0	0	0	0		
Cadmium	0.1515	5.00	0	0	0	0	0	0	0		
Calcium	ND	5000	0	0	0	0	0	0	0		
Chromium	ND	10.0	0	0	0	0	0	0	0		
Cobalt	0.2946	50.0	0	0	0	0	0	0	0		
Copper	ND	25.0	0	0	0	0	0	0	0		
Iron	ND	100	0	0	0	0	0	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

CCB

SeqNo: **3606467** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **CCB-3** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.479	3.00	0	0	0	0	0	0	0		
Lithium	ND	100	0	0	0	0	0	0	0		
Magnesium	ND	5000	0	0	0	0	0	0	0		
Manganese	0.1112	15.0	0	0	0	0	0	0	0		
Molybdenum	ND	50.0	0	0	0	0	0	0	0		
Nickel	0.2829	40.0	0	0	0	0	0	0	0		
Potassium	6.436	5000	0	0	0	0	0	0	0		
Selenium	ND	5.00	0	0	0	0	0	0	0		
Silver	ND	10.0	0	0	0	0	0	0	0		
Sodium	ND	5000	0	0	0	0	0	0	0		
Strontium	3.827	20.0	0	0	0	0	0	0	0		
Thallium	2.699	10.0	0	0	0	0	0	0	0		
Tin	ND	50.0	0	0	0	0	0	0	0		
Titanium	0.7099	50.0	0	0	0	0	0	0	0		
Vanadium	4.642	50.0	0	0	0	0	0	0	0		
Zinc	ND	20.0	0	0	0	0	0	0	0		

CCB

SeqNo: **3606472** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **CCB-4** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0		
Antimony	ND	60.0	0	0	0	0	0	0	0		
Arsenic	ND	10.0	0	0	0	0	0	0	0		
Barium	1.869	200	0	0	0	0	0	0	0		
Beryllium	ND	5.00	0	0	0	0	0	0	0		
Boron	2.245	50.0	0	0	0	0	0	0	0		
Cadmium	0.1875	5.00	0	0	0	0	0	0	0		
Calcium	ND	5000	0	0	0	0	0	0	0		
Chromium	1.816	10.0	0	0	0	0	0	0	0		
Cobalt	0.345	50.0	0	0	0	0	0	0	0		
Copper	ND	25.0	0	0	0	0	0	0	0		
Iron	ND	100	0	0	0	0	0	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

CCB

SeqNo: **3606472** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **CCB-4** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	3.00	0	0	0	0	0	0	0		
Lithium	4.974	100	0	0	0	0	0	0	0		
Magnesium	ND	5000	0	0	0	0	0	0	0		
Manganese	0.1208	15.0	0	0	0	0	0	0	0		
Molybdenum	ND	50.0	0	0	0	0	0	0	0		
Nickel	0.1076	40.0	0	0	0	0	0	0	0		
Potassium	11.53	5000	0	0	0	0	0	0	0		
Selenium	ND	5.00	0	0	0	0	0	0	0		
Silver	ND	10.0	0	0	0	0	0	0	0		
Sodium	0.4264	5000	0	0	0	0	0	0	0		
Strontium	4.502	20.0	0	0	0	0	0	0	0		
Thallium	1.55	10.0	0	0	0	0	0	0	0		
Tin	0.3442	50.0	0	0	0	0	0	0	0		
Titanium	ND	50.0	0	0	0	0	0	0	0		
Vanadium	1.688	50.0	0	0	0	0	0	0	0		
Zinc	ND	20.0	0	0	0	0	0	0	0		

CCV

SeqNo: **3606442** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **CCV-1** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2013	200	2000	0	101	90	110	0	0		
Antimony	2118	60.0	2000	0	106	90	110	0	0		
Arsenic	2013	10.0	2000	0	101	90	110	0	0		
Barium	2006	200	2000	0	100	90	110	0	0		
Beryllium	1998	5.00	2000	0	99.9	90	110	0	0		
Boron	2144	50.0	2000	0	107	90	110	0	0		
Cadmium	2088	5.00	2000	0	104	90	110	0	0		
Calcium	1971	5000	2000	0	98.6	90	110	0	0		
Chromium	2026	10.0	2000	0	101	90	110	0	0		
Cobalt	1960	50.0	2000	0	98	90	110	0	0		
Copper	2045	25.0	2000	0	102	90	110	0	0		
Iron	1997	100	2000	0	99.8	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

CCV | SeqNo: **3606442** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **CCV-1** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2137	3.00	2000	0	107	90	110	0	0		
Lithium	2003	100	2000	0	100	90	110	0	0		
Magnesium	1953	5000	2000	0	97.7	90	110	0	0		
Manganese	1952	15.0	2000	0	97.6	90	110	0	0		
Molybdenum	2112	50.0	2000	0	106	90	110	0	0		
Nickel	2039	40.0	2000	0	102	90	110	0	0		
Potassium	9015	5000	10000	0	90.1	90	110	0	0		
Selenium	1978	5.00	2000	0	98.9	90	110	0	0		
Silver	510.1	10.0	500	0	102	90	110	0	0		
Sodium	1899	5000	2000	0	95	90	110	0	0		
Strontium	2047	20.0	2000	0	102	90	110	0	0		
Thallium	2177	10.0	2000	0	109	90	110	0	0		
Tin	2022	50.0	2000	0	101	90	110	0	0		
Titanium	ND	50.0	0	0	0	90	110	0	0		
Vanadium	2043	50.0	2000	0	102	90	110	0	0		
Zinc	2037	20.0	2000	0	102	90	110	0	0		

CCV | SeqNo: **3606454** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **CCV-2** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2031	200	2000	0	102	90	110	0	0		
Antimony	2148	60.0	2000	0	107	90	110	0	0		
Arsenic	2047	10.0	2000	0	102	90	110	0	0		
Barium	2027	200	2000	0	101	90	110	0	0		
Beryllium	2018	5.00	2000	0	101	90	110	0	0		
Boron	2088	50.0	2000	0	104	90	110	0	0		
Cadmium	2121	5.00	2000	0	106	90	110	0	0		
Calcium	1977	5000	2000	0	98.8	90	110	0	0		
Chromium	2041	10.0	2000	0	102	90	110	0	0		
Cobalt	1993	50.0	2000	0	99.7	90	110	0	0		
Copper	2056	25.0	2000	0	103	90	110	0	0		
Iron	2022	100	2000	0	101	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

CCV | SeqNo: **3606454** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **CCV-2** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2072	3.00	2000	0	104	90	110	0	0		
Lithium	2019	100	2000	0	101	90	110	0	0		
Magnesium	1958	5000	2000	0	97.9	90	110	0	0		
Manganese	1982	15.0	2000	0	99.1	90	110	0	0		
Molybdenum	2144	50.0	2000	0	107	90	110	0	0		
Nickel	2068	40.0	2000	0	103	90	110	0	0		
Potassium	9142	5000	10000	0	91.4	90	110	0	0		
Selenium	2007	5.00	2000	0	100	90	110	0	0		
Silver	518.2	10.0	500	0	104	90	110	0	0		
Sodium	1918	5000	2000	0	95.9	90	110	0	0		
Strontium	2061	20.0	2000	0	103	90	110	0	0		
Thallium	2032	10.0	2000	0	102	90	110	0	0		
Tin	2057	50.0	2000	0	103	90	110	0	0		
Titanium	ND	50.0	0	0	0	90	110	0	0		
Vanadium	2060	50.0	2000	0	103	90	110	0	0		
Zinc	2067	20.0	2000	0	103	90	110	0	0		

CCV | SeqNo: **3606466** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **CCV-3** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2010	200	2000	0	101	90	110	0	0		
Antimony	2115	60.0	2000	0	106	90	110	0	0		
Arsenic	1988	10.0	2000	0	99.4	90	110	0	0		
Barium	1994	200	2000	0	99.7	90	110	0	0		
Beryllium	1987	5.00	2000	0	99.4	90	110	0	0		
Boron	2065	50.0	2000	0	103	90	110	0	0		
Cadmium	2093	5.00	2000	0	105	90	110	0	0		
Calcium	1964	5000	2000	0	98.2	90	110	0	0		
Chromium	2025	10.0	2000	0	101	90	110	0	0		
Cobalt	1966	50.0	2000	0	98.3	90	110	0	0		
Copper	2049	25.0	2000	0	102	90	110	0	0		
Iron	1999	100	2000	0	99.9	90	110	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

CCV | SeqNo: **3606466** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **CCV-3** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2038	3.00	2000	0	102	90	110	0	0		
Lithium	2007	100	2000	0	100	90	110	0	0		
Magnesium	1976	5000	2000	0	98.8	90	110	0	0		
Manganese	1952	15.0	2000	0	97.6	90	110	0	0		
Molybdenum	2124	50.0	2000	0	106	90	110	0	0		
Nickel	2046	40.0	2000	0	102	90	110	0	0		
Potassium	9058	5000	10000	0	90.6	90	110	0	0		
Selenium	1948	5.00	2000	0	97.4	90	110	0	0		
Silver	509.2	10.0	500	0	102	90	110	0	0		
Sodium	1903	5000	2000	0	95.1	90	110	0	0		
Strontium	2048	20.0	2000	0	102	90	110	0	0		
Thallium	2022	10.0	2000	0	101	90	110	0	0		
Tin	2016	50.0	2000	0	101	90	110	0	0		
Titanium	ND	50.0	0	0	0	90	110	0	0		
Vanadium	2028	50.0	2000	0	101	90	110	0	0		
Zinc	2038	20.0	2000	0	102	90	110	0	0		

CCV | SeqNo: **3606471** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **CCV-4** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2027	200	2000	0	101	90	110	0	0		
Antimony	2114	60.0	2000	0	106	90	110	0	0		
Arsenic	2013	10.0	2000	0	101	90	110	0	0		
Barium	1982	200	2000	0	99.1	90	110	0	0		
Beryllium	1999	5.00	2000	0	100	90	110	0	0		
Boron	2140	50.0	2000	0	107	90	110	0	0		
Cadmium	2099	5.00	2000	0	105	90	110	0	0		
Calcium	1956	5000	2000	0	97.8	90	110	0	0		
Chromium	2005	10.0	2000	0	100	90	110	0	0		
Cobalt	1960	50.0	2000	0	98	90	110	0	0		
Copper	2037	25.0	2000	0	102	90	110	0	0		
Iron	1990	100	2000	0	99.5	90	110	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

CCV

SeqNo: **3606471** *PrepDate:* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **CCV-4** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2034	3.00	2000	0	102	90	110	0	0		
Lithium	2011	100	2000	0	101	90	110	0	0		
Magnesium	1942	5000	2000	0	97.1	90	110	0	0		
Manganese	1958	15.0	2000	0	97.9	90	110	0	0		
Molybdenum	2120	50.0	2000	0	106	90	110	0	0		
Nickel	2038	40.0	2000	0	102	90	110	0	0		
Potassium	9038	5000	10000	0	90.4	90	110	0	0		
Selenium	1964	5.00	2000	0	98.2	90	110	0	0		
Silver	511.8	10.0	500	0	102	90	110	0	0		
Sodium	1884	5000	2000	0	94.2	90	110	0	0		
Strontium	2061	20.0	2000	0	103	90	110	0	0		
Thallium	2100	10.0	2000	0	105	90	110	0	0		
Tin	2020	50.0	2000	0	101	90	110	0	0		
Titanium	ND	50.0	0	0	0	90	110	0	0		
Vanadium	2054	50.0	2000	0	103	90	110	0	0		
Zinc	2030	20.0	2000	0	102	90	110	0	0		

CRI

SeqNo: **3606439** *PrepDate:* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **CRI-1** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	50	150	0	0		
Antimony	120.1	60.0	120	0	100	50	150	0	0		
Arsenic	16.33	10.0	20	0	81.7	50	150	0	0		
Barium	1.051	200	0	0	0	50	150	0	0		
Beryllium	9.686	5.00	10	0	96.9	50	150	0	0		
Cadmium	10.18	5.00	10	0	102	50	150	0	0		
Calcium	ND	5000	0	0	0	50	150	0	0		
Chromium	18.16	10.0	20	0	90.8	50	150	0	0		
Cobalt	95.61	50.0	100	0	95.6	50	150	0	0		
Copper	51.88	25.0	50	0	104	50	150	0	0		
Iron	ND	100	0	0	0	50	150	0	0		
Lead	6.002	3.00	6	0	100	50	150	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

CRI

SeqNo: **3606439** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **CRI-1** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	ND	5000	0	0	0	50	150	0	0		
Manganese	27.16	15.0	30	0	90.5	50	150	0	0		
Nickel	79.47	40.0	80	0	99.3	50	150	0	0		
Potassium	7.638	5000	0	0	0	50	150	0	0		
Selenium	9.918	5.00	10	0	99.2	50	150	0	0		
Silver	16.56	10.0	20	0	82.8	50	150	0	0		
Sodium	4.107	5000	0	0	0	50	150	0	0		
Thallium	22.17	10.0	20	0	111	50	150	0	0		
Vanadium	105.9	50.0	100	0	106	50	150	0	0		
Zinc	40.86	20.0	40	0	102	50	150	0	0		

CRI

SeqNo: **3606468** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **CRI-2** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	3.888	200	0	0	0	50	150	0	0		
Antimony	123.6	60.0	120	0	103	50	150	0	0		
Arsenic	22.31	10.0	20	0	112	50	150	0	0		
Barium	1.277	200	0	0	0	50	150	0	0		
Beryllium	9.747	5.00	10	0	97.5	50	150	0	0		
Cadmium	10.33	5.00	10	0	103	50	150	0	0		
Calcium	ND	5000	0	0	0	50	150	0	0		
Chromium	21.59	10.0	20	0	108	50	150	0	0		
Cobalt	95.81	50.0	100	0	95.8	50	150	0	0		
Copper	53.83	25.0	50	0	108	50	150	0	0		
Iron	ND	100	0	0	0	50	150	0	0		
Lead	6.932	3.00	6	0	116	50	150	0	0		
Magnesium	ND	5000	0	0	0	50	150	0	0		
Manganese	27.34	15.0	30	0	91.1	50	150	0	0		
Nickel	80	40.0	80	0	100	50	150	0	0		
Potassium	3.748	5000	0	0	0	50	150	0	0		
Selenium	12.92	5.00	10	0	129	50	150	0	0		
Silver	22.21	10.0	20	0	111	50	150	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
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B - Analyte detected in the associated Method Blank

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

CRI

SeqNo: **3606468** *PrepDate:* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **CRI-2** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	ND	5000	0	0	0	50	150	0	0		
Thallium	18.28	10.0	20	0	91.4	50	150	0	0		
Vanadium	102.5	50.0	100	0	103	50	150	0	0		
Zinc	40.81	20.0	40	0	102	50	150	0	0		

ICB

SeqNo: **3606438** *PrepDate:* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **ICB-1** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0		
Antimony	ND	60.0	0	0	0	0	0	0	0		
Arsenic	ND	10.0	0	0	0	0	0	0	0		
Barium	0.5418	200	0	0	0	0	0	0	0		
Beryllium	ND	5.00	0	0	0	0	0	0	0		
Cadmium	0.05116	5.00	0	0	0	0	0	0	0		
Calcium	ND	5000	0	0	0	0	0	0	0		
Chromium	2.801	10.0	0	0	0	0	0	0	0		
Cobalt	0.2575	50.0	0	0	0	0	0	0	0		
Copper	ND	25.0	0	0	0	0	0	0	0		
Iron	ND	100	0	0	0	0	0	0	0		
Lead	ND	3.00	0	0	0	0	0	0	0		
Magnesium	ND	5000	0	0	0	0	0	0	0		
Manganese	0.02814	15.0	0	0	0	0	0	0	0		
Nickel	0.1873	40.0	0	0	0	0	0	0	0		
Potassium	15.7	5000	0	0	0	0	0	0	0		
Selenium	ND	5.00	0	0	0	0	0	0	0		
Silver	ND	10.0	0	0	0	0	0	0	0		
Sodium	3.095	5000	0	0	0	0	0	0	0		
Thallium	0.7706	10.0	0	0	0	0	0	0	0		
Vanadium	ND	50.0	0	0	0	0	0	0	0		
Zinc	ND	20.0	0	0	0	0	0	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

ICV

SeqNo: **3606437** *PrepDate:* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **ICV-1** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2037	200	2000	0	102	90	110	0	0		
Antimony	2096	60.0	2000	0	105	90	110	0	0		
Arsenic	1960	10.0	2000	0	98	90	110	0	0		
Barium	2006	200	2000	0	100	90	110	0	0		
Beryllium	1984	5.00	2000	0	99.2	90	110	0	0		
Cadmium	2062	5.00	2000	0	103	90	110	0	0		
Calcium	1950	5000	2000	0	97.5	90	110	0	0		
Chromium	2031	10.0	2000	0	102	90	110	0	0		
Cobalt	1935	50.0	2000	0	96.8	90	110	0	0		
Copper	2053	25.0	2000	0	103	90	110	0	0		
Iron	1974	100	2000	0	98.7	90	110	0	0		
Lead	2006	3.00	2000	0	100	90	110	0	0		
Magnesium	1943	5000	2000	0	97.2	90	110	0	0		
Manganese	1924	15.0	2000	0	96.2	90	110	0	0		
Nickel	2014	40.0	2000	0	101	90	110	0	0		
Potassium	10150	5000	10000	0	102	90	110	0	0		
Selenium	1937	5.00	2000	0	96.9	90	110	0	0		
Silver	513.9	10.0	500	0	103	90	110	0	0		
Sodium	1995	5000	2000	0	99.8	90	110	0	0		
Thallium	1999	10.0	2000	0	99.9	90	110	0	0		
Vanadium	2030	50.0	2000	0	101	90	110	0	0		
Zinc	2012	20.0	2000	0	101	90	110	0	0		

ICSA

SeqNo: **3606440** *PrepDate:* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **ICSA-1** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	486400	200	500000	0	97.3	80	120	0	0		
Antimony	ND	60.0	0	0	0	0	0	0	0		
Arsenic	ND	10.0	0	0	0	0	0	0	0		
Barium	1.294	200	0	0	0	0	0	0	0		
Beryllium	1.783	5.00	0	0	0	0	0	0	0		
Cadmium	ND	5.00	0	0	0	0	0	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

ICSA

SeqNo: **3606440** *PrepDate:* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **ICSA-1** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	423400	5000	500000	0	84.7	80	120	0	0		
Chromium	ND	10.0	0	0	0	0	0	0	0		
Cobalt	0.5123	50.0	0	0	0	0	0	0	0		
Copper	ND	25.0	0	0	0	0	0	0	0		
Iron	124700	100	200000	0	62.3	80	120	0	0		S
Lead	ND	3.00	0	0	0	0	0	0	0		
Magnesium	502800	5000	500000	0	101	80	120	0	0		
Manganese	ND	15.0	0	0	0	0	0	0	0		
Nickel	ND	40.0	0	0	0	0	0	0	0		
Potassium	ND	5000	0	0	0	0	0	0	0		
Selenium	ND	5.00	0	0	0	0	0	0	0		
Silver	ND	10.0	0	0	0	0	0	0	0		
Sodium	36.86	5000	0	0	0	0	0	0	0		
Thallium	ND	10.0	0	0	0	0	0	0	0		
Vanadium	7.175	50.0	0	0	0	0	0	0	0		
Zinc	ND	20.0	0	0	0	0	0	0	0		

ICSA

SeqNo: **3606469** *PrepDate:* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **ICSA-2** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	491400	200	500000	0	98.3	80	120	0	0		
Antimony	0.2484	60.0	0	0	0	0	0	0	0		
Arsenic	ND	10.0	0	0	0	0	0	0	0		
Barium	1.94	200	0	0	0	0	0	0	0		
Beryllium	1.813	5.00	0	0	0	0	0	0	0		
Cadmium	ND	5.00	0	0	0	0	0	0	0		
Calcium	429700	5000	500000	0	85.9	80	120	0	0		
Chromium	ND	10.0	0	0	0	0	0	0	0		
Cobalt	0.4646	50.0	0	0	0	0	0	0	0		
Copper	ND	25.0	0	0	0	0	0	0	0		
Iron	125900	100	200000	0	62.9	80	120	0	0		S
Lead	ND	3.00	0	0	0	0	0	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

ICSA | SeqNo: **3606469** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **ICSA-2** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	509900	5000	500000	0	102	80	120	0	0		
Manganese	ND	15.0	0	0	0	0	0	0	0		
Nickel	ND	40.0	0	0	0	0	0	0	0		
Potassium	ND	5000	0	0	0	0	0	0	0		
Selenium	ND	5.00	0	0	0	0	0	0	0		
Silver	ND	10.0	0	0	0	0	0	0	0		
Sodium	39.26	5000	0	0	0	0	0	0	0		
Thallium	ND	10.0	0	0	0	0	0	0	0		
Vanadium	5.064	50.0	0	0	0	0	0	0	0		
Zinc	ND	20.0	0	0	0	0	0	0	0		

ICSA | SeqNo: **3606470** | ***PrepDate:*** | TestNo: **E200.7** | RunNo: ***223428***
Samp ID: **ICSAB-2** | ***PrepRef:*** | Units: **µg/L** | Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	486300	200	500000	0	97.3	80	120	0	0		
Antimony	2.903	60.0	0	0	0	0	0	0	0		
Arsenic	4.108	10.0	0	0	0	0	0	0	0		
Barium	500.9	200	0	0	0	0	0	0	0		
Beryllium	477.1	5.00	0	0	0	0	0	0	0		
Cadmium	927.5	5.00	0	0	0	0	0	0	0		
Calcium	422500	5000	500000	0	84.5	80	120	0	0		
Chromium	486.1	10.0	0	0	0	0	0	0	0		
Cobalt	420.6	50.0	0	0	0	0	0	0	0		
Copper	551.1	25.0	0	0	0	0	0	0	0		
Iron	124100	100	200000	0	62.1	80	120	0	0		S
Lead	947.9	3.00	0	0	0	0	0	0	0		
Magnesium	505600	5000	500000	0	101	80	120	0	0		
Manganese	452.4	15.0	0	0	0	0	0	0	0		
Nickel	953.1	40.0	0	0	0	0	0	0	0		
Potassium	1.697	5000	0	0	0	0	0	0	0		
Selenium	ND	5.00	0	0	0	0	0	0	0		
Silver	1055	10.0	0	0	0	0	0	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102812

ICSA

SeqNo: **3606470** *PrepDate:* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **ICSAB-2** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	49.7	5000	0	0	0	0	0	0	0		
Thallium	ND	10.0	0	0	0	0	0	0	0		
Vanadium	476	50.0	0	0	0	0	0	0	0		
Zinc	862.5	20.0	0	0	0	0	0	0	0		

ICSAB

SeqNo: **3606441** *PrepDate:* TestNo: **E200.7** RunNo: ***223428***
Samp ID: **ICSAB-1** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	486700	200	500000	0	97.3	80	120	0	0		
Antimony	4.071	60.0	0	0	0	0	0	0	0		
Arsenic	ND	10.0	0	0	0	0	0	0	0		
Barium	506	200	500	0	101	80	120	0	0		
Beryllium	476.4	5.00	500	0	95.3	80	120	0	0		
Cadmium	924.6	5.00	1000	0	92.5	80	120	0	0		
Calcium	424500	5000	500000	0	84.9	80	120	0	0		
Chromium	486.8	10.0	500	0	97.4	80	120	0	0		
Cobalt	419.5	50.0	500	0	83.9	80	120	0	0		
Copper	554.7	25.0	500	0	111	80	120	0	0		
Iron	126000	100	200000	0	63	80	120	0	0		S
Lead	956	3.00	1000	0	95.6	80	120	0	0		
Magnesium	504800	5000	500000	0	101	80	120	0	0		
Manganese	455.4	15.0	500	0	91.1	80	120	0	0		
Nickel	951.3	40.0	1000	0	95.1	80	120	0	0		
Potassium	6.294	5000	0	0	0	0	0	0	0		
Selenium	ND	5.00	0	0	0	0	0	0	0		
Silver	1060	10.0	1000	0	106	80	120	0	0		
Sodium	56.36	5000	0	0	0	0	0	0	0		
Thallium	ND	10.0	0	0	0	0	0	0	0		
Vanadium	481.5	50.0	500	0	96.3	80	120	0	0		
Zinc	867.4	20.0	1000	0	86.7	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
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CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102867

mblk

SeqNo: **3606133** *PrepDate:8/8/2023 9:* TestNo: **E245.1** RunNo: ***223412***
Samp ID: **MB-102867** *PrepRef:(E245.1)* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.200									

lcs

SeqNo: **3606134** *PrepDate:8/8/2023 9:* TestNo: **E245.1** RunNo: ***223412***
Samp ID: **LCS-102867** *PrepRef:(E245.1)* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.11	0.200	2	0	106	85	115	0	0		

ms

SeqNo: **3606140** *PrepDate:8/8/2023 9:* TestNo: **E245.1** RunNo: ***223412***
Samp ID: **230727002-004** ***(MW-7)*** *PrepRef:(E245.1)* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.107	0.200	2	0	105	80.8	119	0	0		

ms

SeqNo: **3606146** *PrepDate:8/8/2023 9:* TestNo: **E245.1** RunNo: ***223412***
Samp ID: **230727002-006** ***(SW-1)*** *PrepRef:(E245.1)* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.052	0.200	2	0	103	80.8	119	0	0		

dup

SeqNo: **3606139** *PrepDate:8/8/2023 9:* TestNo: **E245.1** RunNo: ***223412***
Samp ID: **230727002-004** ***(MW-7)*** *PrepRef:(E245.1)* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.200	0	0	0	0	0	0	0	16.5	

dup

SeqNo: **3606145** *PrepDate:8/8/2023 9:* TestNo: **E245.1** RunNo: ***223412***
Samp ID: **230727002-006** ***(SW-1)*** *PrepRef:(E245.1)* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.200	0	0	0	0	0	0	0	16.5	

Qualifiers:
ND - Not Detected at the Reporting Limit
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CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102867

ccb SeqNo: **3606131** *PrepDate:* TestNo: **E245.1** RunNo: ***223412***
Samp ID: **ICB** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0049	0.200	0	0	0	0	0	0	0		

ccb SeqNo: **3606142** *PrepDate:* TestNo: **E245.1** RunNo: ***223412***
Samp ID: **CCB** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0042	0.200	0	0	0	0	0	0	0		

ccb SeqNo: **3606154** *PrepDate:* TestNo: **E245.1** RunNo: ***223412***
Samp ID: **CCB** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0039	0.200	0	0	0	0	0	0	0		

ccb SeqNo: **3606166** *PrepDate:* TestNo: **E245.1** RunNo: ***223412***
Samp ID: **CCB** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0057	0.200	0	0	0	0	0	0	0		

ccb SeqNo: **3606172** *PrepDate:* TestNo: **E245.1** RunNo: ***223412***
Samp ID: **CCB** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0061	0.200	0	0	0	0	0	0	0		

ccv SeqNo: **3606130** *PrepDate:* TestNo: **E245.1** RunNo: ***223412***
Samp ID: **ICV** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.959	0.200	2	0	98	85	115	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: CPL
Work Order: 230727002
Project: Hettling Park Groundwater Sampling

ANALYTICAL QC SUMMARY REPORT

BatchID: 102867

ccv
SeqNo: **3606141** *PrepDate:* TestNo: **E245.1** RunNo: ***223412***
Samp ID: **CCV** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.972	0.200	2	0	98.6	85	115	0	0		

ccv
SeqNo: **3606153** *PrepDate:* TestNo: **E245.1** RunNo: ***223412***
Samp ID: **CCV** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.952	0.200	2	0	97.6	85	115	0	0		

ccv
SeqNo: **3606165** *PrepDate:* TestNo: **E245.1** RunNo: ***223412***
Samp ID: **CCV** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.967	0.200	2	0	98.4	85	115	0	0		

ccv
SeqNo: **3606171** *PrepDate:* TestNo: **E245.1** RunNo: ***223412***
Samp ID: **CCV** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.956	0.200	2	0	97.8	85	115	0	0		

cra
SeqNo: **3606132** *PrepDate:* TestNo: **E245.1** RunNo: ***223412***
Samp ID: **0.2ppb** *PrepRef:* Units: **µg/L** Analysis Date: **8/8/2023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1826	0.200	0.2	0	91.3	70	130	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services, Inc

Date: 08-Mar-23

Test Code: CLPHG
Test Number: E245.1
Test Name: Mercury
Matrix: Water **Units:** µg/L

METHOD DETECTION / REPORTING LIMITS

Updated: 22-Dec-22

Type	Analyte	MDL	PQL
A	Mercury	0.13	0.2

Adirondack Environmental Services, Inc

Date: 10-Jan-23

Test Code: CLPW
Test Number: E200.7
Test Name: ICP Metals Water
Matrix: Water **Units:** µg/L

METHOD DETECTION / REPORTING LIMITS

Updated: 09-Nov-22

Type	Analyte	MDL	PQL
A	Aluminum	27.6	200
A	Antimony	4.7	60
A	Arsenic	2.7	10
A	Barium	1.8	200
A	Beryllium	0.3	5
A	Boron	3.3	50
A	Cadmium	0.3	5
A	Calcium	17.3	5000
A	Chromium	3	10
A	Cobalt	0.4	50
A	Copper	1.8	25
A	Iron	16.8	100
A	Lead	1.9	3
A	Lithium	24.6	100
A	Magnesium	32.7	5000
A	Manganese	3.4	15
A	Molybdenum	3.7	50
A	Nickel	2.3	40
A	Potassium	38.3	5000
A	Selenium	1.9	5
A	Silver	8.4	10
A	Sodium	254	5000
A	Strontium	12.5	20
A	Thallium	3.2	10
A	Tin	6.3	50
A	Titanium	0	50
A	Vanadium	9.3	50
A	Zinc	4.7	20

Seq. No.	1	AS Loc:	1	Date:	8/8/2023			
Sample ID:	Blank							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	[0.00] µg/L		0.0001	0.0002		0.0001		1:47:51PM
	[0.00] µg/L		0.0001	0.0000		0.0001		1:48:20PM
Mean:	[0.00] µg/L		0.0001	0.0001		0.0001		
SD:	0.00 µg/L							
%RSD:	9.12							

Seq. No.	2	AS Loc:	2	Date:	8/8/2023			
Sample ID:	0.2ppb							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	[0.200] µg/L		0.0020	0.0081		0.0021		1:49:35PM
	[0.200] µg/L		0.0020	0.0079		0.0021		1:50:04PM
Mean:	[0.200] µg/L		0.0020	0.0080		0.0021		
SD:	0.00 µg/L							
%RSD:	0.55							

Seq. No.	3	AS Loc:	3	Date:	8/8/2023			
Sample ID:	0.5ppb							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	[0.500] µg/L		0.0056	0.0220		0.0057		1:51:19PM
	[0.500] µg/L		0.0056	0.0221		0.0057		1:51:48PM
Mean:	[0.500] µg/L		0.0056	0.0221		0.0057		
SD:	0.00 µg/L							
%RSD:	0.01							

Seq. No.	4	AS Loc:	4	Date:	8/8/2023			
Sample ID:	1.00ppb							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	[1.000] µg/L		0.0111	0.0445		0.0112		1:53:04PM
	[1.000] µg/L		0.0109	0.0440		0.0110		1:53:34PM
Mean:	[1.000] µg/L		0.0110	0.0442		0.0111		
SD:	0.00 µg/L							
%RSD:	1.12							

Seq. No.	5	AS Loc:	5	Date:	8/8/2023			
Sample ID:	2.00ppb							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	[2.000] µg/L		0.0211	0.0865		0.0212		1:54:50PM
	[2.000] µg/L		0.0209	0.0842		0.0210		1:55:20PM
Mean:	[2.000] µg/L		0.0210	0.0854		0.0211		
SD:	0.00 µg/L							
%RSD:	0.89							

Seq. No.	6	AS Loc:	6	Date:	8/8/2023			
Sample ID:	5.00ppb							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	[5.000] µg/L		0.0538	0.2211		0.0539		1:56:35PM
	[5.000] µg/L		0.0535	0.2190		0.0536		1:57:05PM
Mean:	[5.000] µg/L		0.0537	0.2201		0.0538		
SD:	0.00 µg/L							
%RSD:	0.45							

Seq. No.	7	AS Loc:	7	Date:	8/8/2023			
Sample ID:	10.00ppb							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	[10.000] µg/L		0.1086	0.4502		0.1087		1:58:18PM
	[10.000] µg/L		0.1075	0.4419		0.1076		1:58:48PM
Mean:	[10.000] µg/L		0.1081	0.4461		0.1082		
SD:	0.00 µg/L							
%RSD:	0.72							

Seq. No.	8	AS Loc:	5	Date:	8/8/2023			
Sample ID:	ICV							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7	8/8/2023 2:00:36PM All analyte(s) passed QC.							
	1.970 µg/L	1.970 µg/L	0.0212	0.0854		0.0213		2:00:04PM
	1.947 µg/L	1.947 µg/L	0.0210	0.0842		0.0210		2:00:33PM
Mean:	1.959 µg/L	1.959 µg/L	0.0211	0.0848		0.0212		
SD:	0.0159 µg/L	µg/L						
%RSD:	0.81							

8/8/2023 2:00:36PM QC value within limits for Hg 253.7 Recovery = 97.93%

Seq. No.	9	AS Loc:	1	Date:	8/8/2023			
Sample ID:	ICB							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7	8/8/2023 2:02:21PM All analyte(s) passed QC.							
	0.0073 µg/L	0.0073 µg/L	0.0000	-0.0003		0.0001		2:01:48PM
	0.0025 µg/L	0.0025 µg/L	0.0000	-0.0007		0.0000		2:02:18PM
Mean:	0.0049 µg/L	0.0049 µg/L	0.0000	-0.0005		0.0001		
SD:	0.00336 µg/L	µg/L						
%RSD:	68.52							

8/8/2023 2:02:21PM QC value within limits for Hg 253.7 Recovery = Not calculated

Seq. No.	10	AS Loc:	2	Date:	8/8/2023			
Sample ID:	0.2ppb							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	0.1797 µg/L	0.1797 µg/L	0.0019	0.0079		0.0020		2:03:32PM
	0.1854 µg/L	0.1854 µg/L	0.0019	0.0078		0.0020		2:04:02PM
Mean:	0.1826 µg/L	0.1826 µg/L	0.0019	0.0079		0.0020		
SD:	0.00404 µg/L	0.00404 µg/L						
%RSD:	2.21							

Seq. No.	11	AS Loc:	5	Date:	8/8/2023			
Sample ID:	2.0ppb							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	1.980 µg/L	1.980 µg/L	0.0213	0.0859		0.0214		2:05:18PM
	1.951 µg/L	1.951 µg/L	0.0210	0.0848		0.0211		2:05:48PM
Mean:	1.965 µg/L	1.965 µg/L	0.0211	0.0854		0.0212		
SD:	0.0202 µg/L	0.0202 µg/L						
%RSD:	1.03							

Seq. No.	12	AS Loc:	38	Date:	8/8/2023			
Sample ID:	MB-102867							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	0.0055 µg/L	0.0055 µg/L	0.0000	-0.0005		0.0001		2:07:04PM
	0.0050 µg/L	0.0050 µg/L	0.0000	-0.0007		0.0001		2:07:33PM
Mean:	0.0052 µg/L	0.0052 µg/L	0.0000	-0.0006		0.0001		
SD:	0.00037 µg/L	0.00037 µg/L						
%RSD:	7.14							

Seq. No.	13	AS Loc:	39	Date:	8/8/2023			
Sample ID:	LCS-102867							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	2.124 µg/L	2.124 µg/L	0.0229	0.0919		0.0229		2:08:48PM
	2.096 µg/L	2.096 µg/L	0.0226	0.0901		0.0226		2:09:17PM
Mean:	2.110 µg/L	2.110 µg/L	0.0227	0.0910		0.0228		
SD:	0.0196 µg/L	0.0196 µg/L						
%RSD:	0.93							

Seq. No.	14	AS Loc:	40	Date:	8/8/2023			
Sample ID:	230727002-001A							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	0.0801 µg/L	0.0801 µg/L	0.0008	0.0025		0.0009		2:10:31PM
	0.0886 µg/L	0.0886 µg/L	0.0009	0.0027		0.0010		2:11:01PM
Mean:	0.0843 µg/L	0.0843 µg/L	0.0008	0.0026		0.0009		
SD:	0.00603 µg/L	0.00603 µg/L						
%RSD:	7.15							

Seq. No.	15	AS Loc:	41	Date:	8/8/2023			
Sample ID:	230727002-002A							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	0.1230 µg/L	0.1230 µg/L	0.0013	0.0047		0.0013		2:12:15PM
	0.1191 µg/L	0.1191 µg/L	0.0012	0.0044		0.0013		2:12:45PM
Mean:	0.1211 µg/L	0.1211 µg/L	0.0012	0.0045		0.0013		
SD:	0.00275 µg/L	0.00275 µg/L						
%RSD:	2.27							

Seq. No.	16	AS Loc:	42	Date:	8/8/2023			
Sample ID:	230727002-003A							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	0.0829 µg/L	0.0829 µg/L	0.0008	0.0023		0.0009		2:13:59PM
	0.0858 µg/L	0.0858 µg/L	0.0009	0.0030		0.0009		2:14:29PM
Mean:	0.0844 µg/L	0.0844 µg/L	0.0008	0.0027		0.0009		
SD:	0.00210 µg/L	0.00210 µg/L						
%RSD:	2.49							

Seq. No.	17	AS Loc:	43	Date:	8/8/2023			
Sample ID:	230727002-004A							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	0.0910 µg/L	0.0910 µg/L	0.0009	0.0031		0.0010		2:15:43PM
	0.0905 µg/L	0.0905 µg/L	0.0009	0.0031		0.0010		2:16:13PM
Mean:	0.0907 µg/L	0.0907 µg/L	0.0009	0.0031		0.0010		
SD:	0.00033 µg/L	0.00033 µg/L						
%RSD:	0.37							

Seq. No.	18	AS Loc:	44	Date:	8/8/2023			
Sample ID:	230727002-004ADP							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	0.0803 µg/L	0.0803 µg/L	0.0008	0.0025		0.0009		2:17:28PM
	0.0826 µg/L	0.0826 µg/L	0.0008	0.0029		0.0009		2:17:57PM
Mean:	0.0815 µg/L	0.0815 µg/L	0.0008	0.0027		0.0009		
SD:	0.00162 µg/L	0.00162 µg/L						
%RSD:	1.99							

Seq. No.	19	AS Loc:	45	Date:	8/8/2023			
Sample ID:	230727002-004AMS							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	2.112 µg/L	2.112 µg/L	0.0227	0.0934		0.0228		2:19:13PM
	2.103 µg/L	2.103 µg/L	0.0226	0.0929		0.0227		2:19:42PM
Mean:	2.107 µg/L	2.107 µg/L	0.0227	0.0932		0.0228		
SD:	0.0063 µg/L	0.0063 µg/L						
%RSD:	0.30							

Seq. No.	20	AS Loc:	5	Date:	8/8/2023			
Sample ID:	CCV							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7	8/8/2023 2:21:30PM All analyte(s) passed QC.							
	1.973 µg/L	1.973 µg/L	0.0212	0.0860		0.0213		2:20:58PM
	1.971 µg/L	1.971 µg/L	0.0212	0.0856		0.0213		2:21:28PM
Mean:	1.972 µg/L	1.972 µg/L	0.0212	0.0858		0.0213		
SD:	0.0013 µg/L	µg/L						
%RSD:	0.06							

8/8/2023 2:21:30PM QC value within limits for Hg 253.7 Recovery = 98.60%

Seq. No.	21	AS Loc:	1	Date:	8/8/2023			
Sample ID:	CCB							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7	8/8/2023 2:23:15PM All analyte(s) passed QC.							
	0.0057 µg/L	0.0057 µg/L	0.0000	-0.0005		0.0001		2:22:43PM
	0.0027 µg/L	0.0027 µg/L	0.0000	-0.0006		0.0000		2:23:13PM
Mean:	0.0042 µg/L	0.0042 µg/L	0.0000	-0.0006		0.0001		
SD:	0.00211 µg/L	µg/L						
%RSD:	50.08							

8/8/2023 2:23:15PM QC value within limits for Hg 253.7 Recovery = Not calculated

Seq. No.	22	AS Loc:	46	Date:	8/8/2023			
Sample ID:	230727002-005A							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	0.0796 µg/L	0.0796 µg/L	0.0008	0.0026		0.0009		2:24:28PM
	0.0810 µg/L	0.0810 µg/L	0.0008	0.0027		0.0009		2:24:58PM
Mean:	0.0803 µg/L	0.0803 µg/L	0.0008	0.0026		0.0009		
SD:	0.00099 µg/L	0.00099 µg/L						
%RSD:	1.24							

Seq. No.	23	AS Loc:	47	Date:	8/8/2023			
Sample ID:	230727002-006A							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	0.0817 µg/L	0.0817 µg/L	0.0008	0.0028		0.0009		2:26:14PM
	0.0817 µg/L	0.0817 µg/L	0.0008	0.0027		0.0009		2:26:43PM
Mean:	0.0817 µg/L	0.0817 µg/L	0.0008	0.0027		0.0009		
SD:	0.00002 µg/L	0.00002 µg/L						
%RSD:	0.03							

Seq. No.	24	AS Loc:	48	Date:	8/8/2023			
Sample ID:	230727002-006ADP							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	0.0720 µg/L	0.0720 µg/L	0.0007	0.0019		0.0008		2:28:00PM
	0.0766 µg/L	0.0766 µg/L	0.0008	0.0026		0.0008		2:28:29PM
Mean:	0.0743 µg/L	0.0743 µg/L	0.0007	0.0023		0.0008		
SD:	0.00330 µg/L	0.00330 µg/L						
%RSD:	4.45							

Seq. No.	25	AS Loc:	49	Date:	8/8/2023			
Sample ID:	230727002-006AMS							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	2.069 µg/L	2.069 µg/L	0.0223	0.0890		0.0223		2:29:46PM
	2.036 µg/L	2.036 µg/L	0.0219	0.0898		0.0220		2:30:16PM
Mean:	2.052 µg/L	2.052 µg/L	0.0221	0.0894		0.0222		
SD:	0.0228 µg/L	0.0228 µg/L						
%RSD:	1.11							

Seq. No.	26	AS Loc:	50	Date:	8/8/2023			
Sample ID:	230727002-007A							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7								
	0.0699 µg/L	0.0699 µg/L	0.0007	0.0020		0.0008		2:31:32PM
	0.0740 µg/L	0.0740 µg/L	0.0007	0.0024		0.0008		2:32:01PM
Mean:	0.0719 µg/L	0.0719 µg/L	0.0007	0.0022		0.0008		
SD:	0.00293 µg/L	0.00293 µg/L						
%RSD:	4.07							

Seq. No.	32	AS Loc:	5	Date:	8/8/2023			
Sample ID:	CCV							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7	8/8/2023 2:42:29PM All analyte(s) passed QC.							
	1.952 µg/L	1.952 µg/L	0.0210	0.0851		0.0211		2:41:57PM
	1.952 µg/L	1.952 µg/L	0.0210	0.0852		0.0211		2:42:26PM
Mean:	1.952 µg/L	1.952 µg/L	0.0210	0.0851		0.0211		
SD:	0.0000 µg/L	µg/L						
%RSD:	0.00							

8/8/2023 2:42:29PM QC value within limits for Hg 253.7 Recovery = 97.58%

Seq. No.	33	AS Loc:	1	Date:	8/8/2023			
Sample ID:	CCB							
Analyte	**Conc (Calib)**	**Conc (Sample)**	**Corr. Absorbance**	**Pk Area**	**BG Area**	**Pk Ht**	**BG Ht**	**Time**
Hg 253.7	8/8/2023 2:44:14PM All analyte(s) passed QC.							
	0.0051 µg/L	0.0051 µg/L	0.0000	-0.0006		0.0001		2:43:42PM
	0.0027 µg/L	0.0027 µg/L	0.0000	-0.0008		0.0000		2:44:11PM
Mean:	0.0039 µg/L	0.0039 µg/L	0.0000	-0.0007		0.0001		
SD:	0.00170 µg/L	µg/L						
%RSD:	43.69							

8/8/2023 2:44:14PM QC value within limits for Hg 253.7 Recovery = Not calculated

Sample Report

Report Author
Printed: 8/9/2023 8:55 am

Ag - 1ppm

Acquire Date: 08-Aug-2023 9:46 am Sample Type: Calib. Std.

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Ag	14.649	Cts/S	.036	.24511

200.7-6

Acquire Date: 08-Aug-2023 10:00 am Sample Type: Calib. Std.

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
As	10.580	Cts/S	.149	1.4106
Cr	14.015	Cts/S	.064	.46003
Li	90.843	Cts/S	.703	.77378
Se	9.9404	Cts/S	.1371	1.3793
Si	11.697	Cts/S	.063	.53535
Sn	19.722	Cts/S	.103	.52222
V_	6.5572	Cts/S	.0333	.50725

200.7-1

Acquire Date: 08-Aug-2023 10:09 am Sample Type: Calib. Std.

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	1163.4	Cts/S	8.3	.71314
Al	62.478	Cts/S	.450	.71967
Ca	52.907	Cts/S	.369	.69659
K_	392.24	Cts/S	1.91	.48727
Mg	35.962	Cts/S	.358	.99426
Na	2110.1	Cts/S	11.9	.56480
Ni	387.30	Cts/S	.55	.14127
Zn	1033.1	Cts/S	1.4	.13634

200.7-2

Acquire Date: 08-Aug-2023 10:19 am Sample Type: Calib. Std.

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Ba	616.16	Cts/S	1.77	.28804
Be	404.03	Cts/S	.63	.15502
Co	232.51	Cts/S	.15	.06514
Cu	14.420	Cts/S	.001	.00995
Fe	2118.1	Cts/S	.5	.02493

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

200.7-2

Acquire Date: 08-Aug-2023 10:19 am Sample Type: Calib. Std.

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Mn	700.37	Cts/S	.98	.13992
Sr	54.791	Cts/S	.266	.48620

200.7-3

Acquire Date: 08-Aug-2023 10:24 am Sample Type: Calib. Std.

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
B_	14.279	Cts/S	.005	.03668
Cd	98.528	Cts/S	.287	.29176
Pb	10.896	Cts/S	.053	.48843
Tl	3.1720	Cts/S	.0227	.71696

200.7-4

Acquire Date: 08-Aug-2023 10:37 am Sample Type: Calib. Std.

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Mo	385.02	Cts/S	.17	.04496
Sb	87.184	Cts/S	.040	.04622
Ti	253.91	Cts/S	.59	.23429

Blank

Acquire Date: 08-Aug-2023 10:43 am Sample Type: Calib. Std.

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	-1.6646	Cts/S	.0274	1.6479
Ag	.03969	Cts/S	.00724	18.246
Al	.06658	Cts/S	.07455	111.96
As	.03927	Cts/S	.01452	36.967
Au	.23513	Cts/S	.00784	3.3356
B_	.17465	Cts/S	.00435	2.4935
Ba	3.9664	Cts/S	.4267	10.757
Be	1.0639	Cts/S	.0137	1.2887
Ca	-.00960	Cts/S	.04255	443.10
Cd	.04968	Cts/S	.03185	64.119
Co	-.01234	Cts/S	.00087	7.0762
Cr	-.16005	Cts/S	.01992	12.443
Cu	.29028	Cts/S	.03635	12.522
Fe	1.4104	Cts/S	.1239	8.7877
K_	-.02081	Cts/S	.11182	537.37

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

Blank

Acquire Date: 08-Aug-2023 10:43 am Sample Type: Calib. Std.

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Li	-16.242	Cts/S	.244	1.5025
Mg	-.06797	Cts/S	.02550	37.518
Mn	1.7107	Cts/S	.0088	.51528
Mo	.10677	Cts/S	.03841	35.973
Na	-78.350	Cts/S	.373	.47622
Ni	.02746	Cts/S	.00218	7.9501
Pb	-.05462	Cts/S	.01004	18.382
Pd	.05826	Cts/S	.02354	40.404
Sb	.02654	Cts/S	.00262	9.8717
Se	.06211	Cts/S	.01405	22.617
Si	.15813	Cts/S	.03923	24.809
Sn	.00154	Cts/S	.00393	254.57
Sr	.01541	Cts/S	.01831	118.79
Ti	-.07907	Cts/S	.05689	71.950
Tl	-.02901	Cts/S	.00436	15.040
V_	-.01665	Cts/S	.01569	94.280
Zn	.17342	Cts/S	.01397	8.0575
Zr	-.18172	Cts/S	.00197	1.0816

ICV-1

Acquire Date: 08-Aug-2023 10:47 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	1918.8	ppb	3.8	.20064
Ag	513.94	ppb	2.95	.57401
Al	2036.6	ppb	7.7	.37874
As	1959.5	ppb	1.9	.09554
Au	18.593	ppb	.551	2.9658
B_	2051.4	ppb	9.3	.45130
Ba	2006.1	ppb	5.1	.25375
Be	1984.1	ppb	5.3	.26921
Ca	1949.5	ppb	9.9	.50753
Cd	2062.5	ppb	5.6	.27085
Co	1935.1	ppb	5.5	.28622
Cr	2030.7	ppb	13.3	.65674
Cu	2052.6	ppb	6.4	.31109
Fe	1974.5	ppb	6.0	.30343
K_	10151.	ppb	27	.26833
Li	1997.3	ppb	5.3	.26299
Mg	1943.1	ppb	12.0	.61864

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

ICV-1

Acquire Date: 08-Aug-2023 10:47 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Mn	1923.9	ppb	4.9	.25692
Mo	2056.6	ppb	9.7	.47227
Na	1995.3	ppb	3.1	.15519
Ni	2014.5	ppb	6.5	.32032
Pb	2006.0	ppb	4.3	.21566
Pd	<.00000	ppb	.941	4.7987
Sb	2096.0	ppb	4.8	.22783
Se	1937.1	ppb	8.8	.45269
Si	4778.6	ppb	41.2	.86267
Sn	1987.0	ppb	4.6	.23188
Sr	2040.0	ppb	5.1	.25243
Ti	<.00000	ppb	1.1229	38.075
Tl	1998.9	ppb	11.6	.57861
V_	2029.9	ppb	16.0	.78976
Zn	2011.9	ppb	3.9	.19360
Zr	<.00000	ppb	.75488	342.88

ICB-1

Acquire Date: 08-Aug-2023 10:52 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	2.7032	ppb	.6906	25.548
Ag	<.00000	ppb	1.3634	32.407
Al	<.00000	ppb	4.87207	4,364.7
As	<.00000	ppb	2.7586	133.32
Au	.22785	ppb	.41727	183.13
B_	2.4332	ppb	1.3128	53.951
Ba	.54181	ppb	.09626	17.767
Be	<.00000	ppb	.00480	4.3579
Ca	<.00000	ppb	3.2506	70.710
Cd	.05116	ppb	.01077	21.058
Co	.25749	ppb	.28156	109.35
Cr	2.8010	ppb	1.1502	41.063
Cu	<.00000	ppb	6.4889	70.708
Fe	<.00000	ppb	.29683	61.580
K_	15.700	ppb	2.950	18.790
Li	1.8504	ppb	1.3394	72.385
Mg	<.00000	ppb	7.0773	229.85
Mn	.02814	ppb	.08186	290.84
Mo	<.00000	ppb	1.23621	230.25

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

ICB-1

Acquire Date: 08-Aug-2023 10:52 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Na	3.0952	ppb	.5379	17.380
Ni	.18728	ppb	.07897	42.168
Pb	<.00000	ppb	.67845	100.27
Pd	<.00000	ppb	8.8763	128.56
Sb	<.00000	ppb	1.7524	50.000
Se	<.00000	ppb	1.0137	32.339
Si	<.00000	ppb	8.498	18.124
Sn	<.00000	ppb	.30986	70.720
Sr	3.9391	ppb	6.6851	169.71
Ti	<.00000	ppb	.30885	188.64
Tl	.77058	ppb	1.09209	141.72
V_	<.00000	ppb	.5972	6.1526
Zn	<.00000	ppb	.14796	832.33
Zr	<.00000	ppb	.13834	37.702

CRI-1

Acquire Date: 08-Aug-2023 10:56 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	3.1911	ppb	2.5939	81.284
Ag	16.564	ppb	1.362	8.2212
Al	<.00000	ppb	5.1854	423.95
As	16.330	ppb	7.262	44.471
Au	.38851	ppb	.11266	28.999
B_	.24527	ppb	.23561	96.062
Ba	1.0513	ppb	.3090	29.393
Be	9.6862	ppb	.0233	.24059
Ca	<.00000	ppb	10.0955	130.38
Cd	10.185	ppb	.041	.40396
Co	95.613	ppb	.064	.06739
Cr	18.157	ppb	8.814	48.542
Cu	51.875	ppb	3.151	6.0734
Fe	<.00000	ppb	.0707	2.5756
K_	7.6381	ppb	1.8509	24.232
Li	<.00000	ppb	10.3835	440.54
Mg	<.00000	ppb	2.1758	37.681
Mn	27.162	ppb	.055	.20311
Mo	<.00000	ppb	.0568	2.6940
Na	4.1071	ppb	.5708	13.898
Ni	79.474	ppb	.370	.46567

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

CRI-1

Acquire Date: 08-Aug-2023 10:56 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Pb	6.0021	ppb	1.1157	18.589
Pd	<.00000	ppb	7.101	66.545
Sb	120.06	ppb	4.24	3.5281
Se	9.9180	ppb	2.1170	21.345
Si	1.1995	ppb	42.5137	3,544.4
Sn	<.00000	ppb	.79666	2,542.0
Sr	1.1252	ppb	4.9338	438.48
Ti	<.00000	ppb	1.93059	1,770.2
Tl	22.173	ppb	.271	1.2201
V_	105.92	ppb	2.99	2.8252
Zn	40.855	ppb	.114	.27800
Zr	.09797	ppb	.58859	600.77

ICSA-1

Acquire Date: 08-Aug-2023 11:02 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	16.288	ppb	1.010	6.2032
Ag	<.00000	ppb	.869	2.2898
Al	486360.	ppb	4,211	.86592
As	<.00000	ppb	3.255	12.015
Au	49.918	ppb	1.233	2.4702
B_	<.00000	ppb	.276	1.6867
Ba	1.2940	ppb	.2282	17.636
Be	1.7832	ppb	.0342	1.9204
Ca	423370.	ppb	1,196	.28252
Cd	<.00000	ppb	.0804	6.5614
Co	.51227	ppb	.16890	32.970
Cr	<.00000	ppb	.5238	8.3076
Cu	<.00000	ppb	1.3149	15.330
Fe	124660.	ppb	600	.48108
K_	<.00000	ppb	4.9508	88.610
Li	<.00000	ppb	8.056	26.264
Mg	502790.	ppb	4,472	.88941
Mn	<.00000	ppb	.0568	.59024
Mo	<.00000	ppb	.1017	1.1871
Na	36.861	ppb	1.915	5.1957
Ni	<.00000	ppb	.101	.69330
Pb	<.00000	ppb	.4028	6.8155
Pd	<.00000	ppb	4.882	39.888

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

ICSA-1

Acquire Date: 08-Aug-2023 11:02 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Sb	<.00000	ppb	.60072	121.22
Se	<.00000	ppb	1.9096	26.499
Si	.00215	ppb	.00517	240.01
Sn	2.0029	ppb	1.0178	50.818
Sr	15.532	ppb	14.802	95.303
Ti	<.00000	ppb	.387	1.7721
Tl	<.00000	ppb	.271	1.6754
V_	7.1747	ppb	22.0830	307.79
Zn	<.00000	ppb	.2168	13.524
Zr	.61177	ppb	.13834	22.613

ICSAB-1

Acquire Date: 08-Aug-2023 11:06 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	33.218	ppb	2.054	6.1823
Ag	1060.0	ppb	.3	.02623
Al	486670.	ppb	296	.06086
As	<.00000	ppb	6.2154	103.55
Au	54.047	ppb	.341	.63064
B_	<.00000	ppb	.338	2.0220
Ba	506.03	ppb	2.37	.46770
Be	476.42	ppb	.72	.15102
Ca	424490.	ppb	178	.04190
Cd	924.63	ppb	7.18	.77694
Co	419.46	ppb	3.48	.82962
Cr	486.79	ppb	10.51	2.1599
Cu	554.70	ppb	6.74	1.2143
Fe	125970.	ppb	303	.24063
K_	6.2945	ppb	2.3506	37.344
Li	<.00000	ppb	13.341	34.772
Mg	504830.	ppb	197	.03899
Mn	s 455.46	ppb	6.95	1.5260
Mo	<.00000	ppb	.1134	2.3109
Na	56.363	ppb	.726	1.2889
Ni	951.32	ppb	8.62	.90616
Pb	956.03	ppb	6.86	.71752
Pd	<.00000	ppb	3.551	10.287
Sb	4.0710	ppb	.8511	20.906
Se	<.00000	ppb	6.973	60.591

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

ICSAB-1

Acquire Date: 08-Aug-2023 11:06 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Si	<.00000	ppb	1.703	4.2922
Sn	3.7551	ppb	.3098	8.2492
Sr	<.00000	ppb	6.6850	395.95
Ti	<.00000	ppb	.231	1.0574
Tl	<.00000	ppb	1.395	10.000
V_	481.51	ppb	12.52	2.6000
Zn	867.37	ppb	9.44	1.0883
Zr	.09796	ppb	.24217	247.21

CCV-1

Acquire Date: 08-Aug-2023 11:10 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	1919.5	ppb	15.7	.81956
Ag	510.13	ppb	1.48	.29091
Al	2012.6	ppb	17.9	.89076
As	2012.9	ppb	14.6	.72442
Au	19.416	ppb	.001	.00304
B_	2144.4	ppb	15.1	.70456
Ba	2006.3	ppb	10.2	.50824
Be	1997.5	ppb	13.0	.65132
Ca	1971.3	ppb	7.9	.39985
Cd	2087.8	ppb	4.2	.19962
Co	1959.6	ppb	2.9	.14853
Cr	2025.7	ppb	15.6	.76987
Cu	2045.4	ppb	17.3	.84511
Fe	1996.8	ppb	1.1	.05497
K_	9014.9	ppb	30.1	.33343
Li	2003.1	ppb	10.1	.50272
Mg	1953.3	ppb	25.6	1.3106
Mn	1951.5	ppb	6.1	.31257
Mo	2112.4	ppb	7.2	.33943
Na	1899.4	ppb	9.4	.49292
Ni	2038.8	ppb	1.7	.08227
Pb	2136.7	ppb	.4	.01919
Pd	<.00000	ppb	1.331	10.347
Sb	2117.9	ppb	6.2	.29318
Se	1977.6	ppb	17.7	.89673
Si	4815.4	ppb	95.2	1.9776
Sn	2021.9	ppb	10.6	.52551

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

CCV-1

Acquire Date: 08-Aug-2023 11:10 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Sr	2046.8	ppb	17.2	.84043
Ti	<.00000	ppb	1.3902	32.226
Tl	2176.8	ppb	3.9	.17921
V_	2043.2	ppb	4.8	.23303
Zn	2036.8	ppb	2.4	.11876
Zr	<.00000	ppb	.55366	90.557

CCB-1

Acquire Date: 08-Aug-2023 11:17 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	4.1444	ppb	2.6594	64.169
Ag	<.00000	ppb	.8057	18.572
Al	9.3330	ppb	2.5158	26.956
As	<.00000	ppb	2.2462	51.916
Au	.09420	ppb	.26421	280.47
B_	2.3545	ppb	1.4227	60.424
Ba	.63473	ppb	.44635	70.322
Be	<.00000	ppb	.00992	6.6890
Ca	<.00000	ppb	11.2908	115.23
Cd	.09095	ppb	.13656	150.15
Co	.17517	ppb	.14264	81.429
Cr	4.7886	ppb	9.0702	189.41
Cu	.63880	ppb	2.31044	361.68
Fe	<.00000	ppb	.12335	16.474
K_	17.680	ppb	1.251	7.0781
Li	1.5002	ppb	1.4572	97.131
Mg	<.00000	ppb	.542	4.6956
Mn	.04224	ppb	.07945	188.10
Mo	<.00000	ppb	1.2810	99.254
Na	<.00000	ppb	.2681	26.314
Ni	.04387	ppb	.07895	179.95
Pb	<.00000	ppb	2.1531	149.74
Pd	<.00000	ppb	1.3306	60.539
Sb	<.00000	ppb	.5508	20.742
Se	<.00000	ppb	.6740	9.1150
Si	<.00000	ppb	35.709	269.83
Sn	<.00000	ppb	1.15080	525.14
Sr	.78752	ppb	.95468	121.23
Ti	<.00000	ppb	1.38986	195.86

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

CCB-1

Acquire Date: 08-Aug-2023 11:17 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Tl	3.2770	ppb	1.3626	41.579
V_	3.3763	ppb	.0001	.00363
Zn	<.00000	ppb	.06325	46.097
Zr	.53868	ppb	1.21100	224.81

MB-W

Acquire Date: 08-Aug-2023 11:20 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	1.4997	ppb	.1348	8.9889
Ag	<.00000	ppb	5.2681	116.71
Al	.66709	ppb	9.43011	1,413.6
As	<.00000	ppb	5.4073	222.33
Au	.46908	ppb	.26462	56.411
B_	.38105	ppb	.19204	50.399
Ba	.64087	ppb	.16998	26.523
Be	<.00000	ppb	.13629	208.67
Ca	<.00000	ppb	4.6200	90.915
Cd	.08150	ppb	.09646	118.36
Co	.02919	ppb	.14640	501.53
Cr	2.6188	ppb	3.3212	126.82
Cu	1.5302	ppb	5.4370	355.31
Fe	<.00000	ppb	.0258	2.3366
K_	3.5364	ppb	6.6515	188.09
Li	<.00000	ppb	3.7785	65.888
Mg	8.0845	ppb	22.8688	282.87
Mn	<.00000	ppb	.02475	48.598
Mo	<.00000	ppb	.1927	8.2052
Na	<.00000	ppb	.9531	23.313
Ni	.12355	ppb	.32679	264.50
Pb	<.00000	ppb	.8374	74.241
Pd	<.00000	ppb	2.2191	54.398
Sb	<.00000	ppb	.5508	16.730
Se	<.00000	ppb	.1923	3.4630
Si	<.00000	ppb	25.504	78.583
Sn	.68857	ppb	.48683	70.701
Sr	6.5283	ppb	9.0730	138.98
Ti	<.00000	ppb	.23169	35.344
Tl	<.00000	ppb	3.0670	97.847
V_	<.00000	ppb	1.7905	32.633

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

MB-W

Acquire Date: 08-Aug-2023 11:20 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Zn	<.00000	ppb	.00842	2.5190
Zr	<.00000	ppb	.44996	229.69

LCS-W

Acquire Date: 08-Aug-2023 11:24 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	1838.8	ppb	35.1	1.9065
Ag	492.96	ppb	6.15	1.2468
Al	1953.8	ppb	14.3	.73421
As	1950.7	ppb	7.2	.36806
Au	18.158	ppb	.643	3.5420
B_	2090.1	ppb	9.5	.45466
Ba	1954.7	ppb	29.0	1.4843
Be	1946.1	ppb	22.2	1.1388
Ca	1896.5	ppb	6.5	.34503
Cd	2042.3	ppb	9.0	.44265
Co	1877.8	ppb	4.4	.23466
Cr	1965.5	ppb	32.4	1.6465
Cu	1993.0	ppb	33.9	1.7020
Fe	1926.2	ppb	1.3	.06739
K_	9808.7	ppb	123.4	1.2580
Li	1959.7	ppb	27.0	1.3783
Mg	1879.6	ppb	48.5	2.5803
Mn	1889.9	ppb	6.0	.31524
Mo	2064.1	ppb	12.6	.61129
Na	1900.9	ppb	33.9	1.7816
Ni	1990.6	ppb	4.6	.22948
Pb	2065.7	ppb	5.7	.27695
Pd	<.00000	ppb	4.438	20.204
Sb	2031.0	ppb	16.2	.79734
Se	1951.3	ppb	2.6	.13200
Si	9776.1	ppb	105.6	1.0805
Sn	1981.4	ppb	6.2	.31379
Sr	1983.4	ppb	20.9	1.0535
Ti	<.00000	ppb	.3863	23.576
Tl	2076.4	ppb	9.2	.44097
V_	1959.9	ppb	21.5	1.0985
Zn	1994.0	ppb	3.1	.15521
Zr	<.00000	ppb	.93451	318.22

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

230727002-001A

Acquire Date: 08-Aug-2023 11:29 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	57488.	ppb	271	.47157
Ag	<.00000	ppb	.2479	3.3272
Al	<.00000	ppb	.000	.00020
As	<.00000	ppb	.6904	10.428
Au	<.00000	ppb	.20838	40.996
B_	45.044	ppb	.113	.25158
Ba	24.744	ppb	.291	1.1745
Be	<.00000	ppb	.05843	80.931
Ca	16059.	ppb	11	.06984
Cd	.13829	ppb	.06966	50.374
Co	.09820	ppb	.04880	49.690
Cr	6.5028	ppb	1.7884	27.502
Cu	3.1630	ppb	7.6292	241.20
Fe	10.424	ppb	.260	2.4952
K_	3752.6	ppb	18.2	.48569
Li	77.531	ppb	3.180	4.1014
Mg	3999.5	ppb	2.7	.06865
Mn	.19176	ppb	.04253	22.181
Mo	<.00000	ppb	.4536	30.096
Na	51014.	ppb	200	.39153
Ni	.33867	ppb	.09018	26.627
Pb	<.00000	ppb	.43860	129.58
Pd	<.00000	ppb	.8876	23.572
Sb	<.00000	ppb	1.4520	105.16
Se	<.00000	ppb	4.8193	71.067
Si	4456.6	ppb	5.1	.11505
Sn	9.9833	ppb	.2651	2.6558
Sr	113.34	ppb	21.65	19.099
Ti	<.00000	ppb	.23174	26.515
Tl	2.5060	ppb	.0003	.01065
V_	<.00000	ppb	1.7905	60.603
Zn	1.3724	ppb	.0338	2.4598
Zr	<.00000	ppb	.69222	403.82

230727002-001A

Acquire Date: 08-Aug-2023 11:32 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

230727002-001A

Acquire Date: 08-Aug-2023 11:32 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	4307.4	ppb	29.9	.69492
Ag	<.00000	ppb	7.5611	169.15
Al	<.00000	ppb	13.2020	258.26
As	1.0957	ppb	5.5237	504.13
Au	.34867	ppb	.32127	92.142
B_	4.3240	ppb	.0996	2.3045
Ba	2.7495	ppb	.5720	20.804
Be	<.00000	ppb	.02431	58.938
Ca	1486.0	ppb	15.6	1.0491
Cd	<.00000	ppb	.01070	10.660
Co	.22032	ppb	.13140	59.643
Cr	1.8061	ppb	.0004	.02089
Cu	.55851	ppb	2.25044	402.93
Fe	<.00000	ppb	.0956	6.7197
K_	270.21	ppb	4.30	1.5930
Li	19.168	ppb	3.759	19.614
Mg	330.34	ppb	2.72	.82294
Mn	<.00000	ppb	.01281	132.09
Mo	<.00000	ppb	.3061	11.750
Na	4369.5	ppb	17.8	.40838
Ni	.30288	ppb	.24236	80.019
Pb	1.4085	ppb	1.4743	104.67
Pd	<.00000	ppb	3.10703	991.24
Sb	<.00000	ppb	.7010	21.523
Se	<.00000	ppb	.8198	10.024
Si	388.32	ppb	8.51	2.1909
Sn	1.2833	ppb	.0887	6.9087
Sr	12.156	ppb	10.346	85.113
Ti	.27297	ppb	2.16273	792.30
Tl	4.7231	ppb	3.6810	77.936
V_	<.00000	ppb	6.5654	119.66
Zn	<.00000	ppb	.04227	9.4401
Zr	<.00000	ppb	.62293	110.65

230727002-002A

Acquire Date: 08-Aug-2023 11:36 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	3008.6	ppb	1.0	.03359
Ag	<.00000	ppb	.7437	17.677

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

230727002-002A

Acquire Date: 08-Aug-2023 11:36 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Al	22.337	ppb	3.928	17.586
As	<.00000	ppb	1.7759	47.824
Au	<.00000	ppb	.26512	31.465
B_	15.509	ppb	.360	2.3182
Ba	19.909	ppb	.824	4.1373
Be	<.00000	ppb	.15572	167.59
Ca	7104.7	ppb	39.7	.55882
Cd	.22544	ppb	.14999	66.533
Co	.05839	ppb	.17268	295.74
Cr	11.289	ppb	6.771	59.975
Cu	8.3089	ppb	1.4037	16.894
Fe	31.252	ppb	.094	.30097
K_	171.93	ppb	2.05	1.1903
Li	11.061	ppb	1.352	12.220
Mg	2409.4	ppb	3.9	.16049
Mn	10.466	ppb	.069	.65561
Mo	<.00000	ppb	.1361	4.7409
Na	3026.2	ppb	10.8	.35707
Ni	.92441	ppb	.23098	24.987
Pb	<.00000	ppb	.3585	24.449
Pd	<.00000	ppb	3.1069	31.935
Sb	<.00000	ppb	.2003	7.0716
Se	<.00000	ppb	2.0727	37.551
Si	6496.7	ppb	47.8	.73512
Sn	.34430	ppb	.00002	.00481
Sr	51.324	ppb	7.798	15.194
Ti	.05454	ppb	1.54483	2,832.3
Tl	3.3733	ppb	3.4088	101.05
V_	<.00000	ppb	4.1780	329.96
Zn	2.2680	ppb	.0295	1.3003
Zr	.36705	ppb	.55381	150.88

230727002-003A

Acquire Date: 08-Aug-2023 11:40 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	2316.3	ppb	8.6	.36990
Ag	<.00000	ppb	.3098	7.7699
Al	7.4438	ppb	33.4720	449.67
As	<.00000	ppb	1.9552	54.295

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

230727002-003A

Acquire Date: 08-Aug-2023 11:40 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Au	<.00000	ppb	.79421	100.62
B_	14.922	ppb	.028	.18506
Ba	54.360	ppb	.452	.83138
Be	<.00000	ppb	.07788	83.569
Ca	18361.	ppb	95	.52002
Cd	.10230	ppb	.15797	154.43
Co	.11678	ppb	.06006	51.430
Cr	2.8898	ppb	11.7509	406.64
Cu	4.5445	ppb	2.8057	61.739
Fe	60.811	ppb	.249	.41022
K_	395.49	ppb	1.80	.45510
Li	19.459	ppb	8.676	44.587
Mg	4287.7	ppb	10.3	.24117
Mn	13.999	ppb	.054	.38686
Mo	<.00000	ppb	.2494	8.9926
Na	2310.1	ppb	5.9	.25654
Ni	.04384	ppb	.20278	462.59
Pb	<.00000	ppb	1.67289	191.34
Pd	<.00000	ppb	.8876	11.783
Sb	<.00000	ppb	3.0544	103.93
Se	<.00000	ppb	2.6019	30.179
Si	5551.1	ppb	44.2	.79614
Sn	<.00000	ppb	.57549	65.672
Sr	170.95	ppb	3.18	1.8621
Ti	.05490	ppb	1.39013	2,532.2
Tl	.67431	ppb	2.04371	303.08
V_	<.00000	ppb	1.7903	141.47
Zn	.84635	ppb	.06361	7.5158
Zr	.17161	ppb	.76131	443.63

230727002-004A

Acquire Date: 08-Aug-2023 11:44 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	2615.9	ppb	10.1	.38665
Ag	<.00000	ppb	5.2059	65.997
Al	462.62	ppb	21.21	4.5836
As	<.00000	ppb	2.6179	86.622
Au	5.8475	ppb	.2269	3.8808
B_	17.090	ppb	.210	1.2293

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

230727002-004A

Acquire Date: 08-Aug-2023 11:44 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Ba	74.710	ppb	.171	.22936
Be	<.00000	ppb	.03900	27.627
Ca	18934.	ppb	43	.22831
Cd	.09089	ppb	.01339	14.727
Co	1.7941	ppb	.0150	.83541
Cr	9.2506	ppb	4.4712	48.334
Cu	.76427	ppb	.20511	26.838
Fe	1144.1	ppb	3.6	.31402
K_	828.95	ppb	5.53	.66724
Li	12.707	ppb	1.687	13.276
Mg	7197.5	ppb	31.4	.43636
Mn	746.61	ppb	1.25	.16769
Mo	<.00000	ppb	.2154	11.732
Na	2617.5	ppb	5.4	.20781
Ni	3.3144	ppb	.0957	2.8880
Pb	2.7807	ppb	1.2751	45.855
Pd	<.00000	ppb	10.6515	141.41
Sb	<.00000	ppb	2.0527	62.344
Se	<.00000	ppb	4.385	37.627
Si	5427.7	ppb	8.6	.15907
Sn	<.00000	ppb	.5753	51.070
Sr	117.39	ppb	20.05	17.082
Ti	1.4746	ppb	.3090	20.953
Tl	3.5670	ppb	2.8627	80.254
V_	<.00000	ppb	3.5812	42.430
Zn	3.9019	ppb	.0184	.47220
Zr	.26927	ppb	1.10739	411.26

230727002-004ADP

Acquire Date: 08-Aug-2023 11:49 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	2510.3	ppb	2.5	.10042
Ag	.04395	ppb	2.04527	4,653.4
Al	693.59	ppb	10.21	1.4724
As	<.00000	ppb	3.7476	256.21
Au	6.8778	ppb	.0947	1.3774
B_	15.909	ppb	.383	2.4104
Ba	78.818	ppb	.709	.89919
Be	<.00000	ppb	.11685	261.79

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

230727002-004ADP

Acquire Date: 08-Aug-2023 11:49 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Ca	18270.	ppb	25	.13628
Cd	.22536	ppb	.03214	14.264
Co	2.9327	ppb	.0788	2.6886
Cr	11.931	ppb	.000	.00089
Cu	3.9487	ppb	2.4262	61.445
Fe	1768.2	ppb	3.5	.19607
K_	831.34	ppb	1.15	.13882
Li	5.5648	ppb	7.9387	142.66
Mg	6923.8	ppb	6.6	.09483
Mn	900.26	ppb	3.05	.33923
Mo	<.00000	ppb	.0453	2.5246
Na	2512.2	ppb	4.4	.17531
Ni	4.6291	ppb	.2084	4.5021
Pb	4.4945	ppb	1.3150	29.257
Pd	<.00000	ppb	8.8769	707.44
Sb	<.00000	ppb	.7510	26.187
Se	<.00000	ppb	1.8794	19.283
Si	5399.2	ppb	11.9	.22090
Sn	.87618	ppb	.84082	95.964
Sr	110.42	ppb	5.41	4.9019
Ti	2.0207	ppb	.4634	22.935
Tl	3.0851	ppb	.5452	17.673
V_	2.1099	ppb	6.5654	311.16
Zn	9.0747	ppb	.0069	.07577
Zr	.31801	ppb	.48453	152.36

230727002-004AMS

Acquire Date: 08-Aug-2023 11:53 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	2572.0	ppb	2.5	.09795
Ag	40.932	ppb	.371	.90755
Al	2269.4	ppb	36.3	1.5989
As	36.179	ppb	1.524	4.2120
Au	9.3936	ppb	.3217	3.4249
B_	16.771	ppb	.105	.62727
Ba	2019.2	ppb	7.6	.37686
Be	51.033	ppb	.272	.53328
Ca	18357.	ppb	56	.30392
Cd	49.421	ppb	.064	.13010

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

230727002-004AMS

Acquire Date: 08-Aug-2023 11:53 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Co	464.43	ppb	.92	.19885
Cr	207.83	ppb	2.30	1.1073
Cu	254.43	ppb	1.99	.78216
Fe	2046.8	ppb	.2	.01216
K_	806.07	ppb	.26	.03190
Li	2.9096	ppb	4.8725	167.46
Mg	6993.0	ppb	21.7	.31057
Mn	1153.1	ppb	1.2	.10702
Mo	<.00000	ppb	.18139	28.277
Na	2558.1	ppb	5.1	.19812
Ni	477.62	ppb	1.20	.25129
Pb	23.596	ppb	.598	2.5332
Pd	<.00000	ppb	.0001	.00080
Sb	501.19	ppb	.15	.02993
Se	8.7908	ppb	3.0543	34.745
Si	5346.2	ppb	11.9	.22352
Sn	1.1891	ppb	.6638	55.824
Sr	115.14	ppb	6.68	5.8052
Ti	<.00000	ppb	.0772	4.4167
Tl	51.379	ppb	1.772	3.4493
V_	495.46	ppb	5.96	1.2037
Zn	486.59	ppb	1.07	.22088
Zr	.07334	ppb	.76144	1,038.3

230727002-004AA

Acquire Date: 08-Aug-2023 11:58 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	2734.8	ppb	28.1	1.0280
Ag	93.432	ppb	3.346	3.5817
Al	4442.9	ppb	30.3	.68243
As	82.035	ppb	4.555	5.5526
Au	15.108	ppb	.076	.50104
B_	17.899	ppb	.006	.03459
Ba	4224.9	ppb	43.9	1.0396
Be	108.46	ppb	.37	.34531
Ca	19380.	ppb	54	.27959
Cd	103.48	ppb	.40	.39083
Co	985.28	ppb	2.85	.28956
Cr	430.88	ppb	6.39	1.4820

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

230727002-004AA

Acquire Date: 08-Aug-2023 11:58 am Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Cu	532.05	ppb	8.71	1.6369
Fe	3143.3	ppb	8.6	.27406
K_	859.21	ppb	11.00	1.2802
Li	<.00000	ppb	9.077	77.526
Mg	7385.2	ppb	64.8	.87705
Mn	1742.8	ppb	3.1	.17813
Mo	.53693	ppb	.26074	48.562
Na	2737.6	ppb	30.2	1.1026
Ni	1013.4	ppb	1.6	.15568
Pb	43.227	ppb	.797	1.8438
Pd	<.00000	ppb	5.770	39.117
Sb	1045.6	ppb	2.9	.27295
Se	20.956	ppb	1.349	6.4389
Si	5540.9	ppb	25.5	.45996
Sn	.71973	ppb	.53105	73.785
Sr	120.88	ppb	24.03	19.883
Ti	.60070	ppb	3.86191	642.90
Tl	101.21	ppb	.27	.26939
V_	1052.1	ppb	13.7	1.3044
Zn	1014.5	ppb	.7	.06941
Zr	.12232	ppb	.20765	169.76

CCV-2

Acquire Date: 08-Aug-2023 12:02 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	1954.6	ppb	7.4	.37972
Ag	518.23	ppb	.80	.15521
Al	2030.9	ppb	6.1	.30153
As	2047.0	ppb	3.1	.14991
Au	19.577	ppb	.606	3.0939
B_	2088.5	ppb	7.7	.36742
Ba	2027.3	ppb	3.3	.16500
Be	2018.2	ppb	5.7	.28070
Ca	1976.8	ppb	16.4	.83059
Cd	2121.3	ppb	20.1	.94807
Co	1993.4	ppb	22.9	1.1501
Cr	2041.0	ppb	4.5	.21932
Cu	2056.4	ppb	3.0	.14615
Fe	2021.6	ppb	24.1	1.1903

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

CCV-2

Acquire Date: 08-Aug-2023 12:02 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
K_	9142.5	ppb	18.8	.20521
Li	2018.9	ppb	2.2	.11099
Mg	1958.3	ppb	10.9	.55624
Mn	1982.5	ppb	19.2	.96593
Mo	2144.1	ppb	14.4	.66983
Na	1918.0	ppb	2.0	.10511
Ni	2068.2	ppb	22.3	1.0784
Pb	2071.6	ppb	23.5	1.1340
Pd	<.00000	ppb	2.219	15.712
Sb	2147.8	ppb	13.2	.61350
Se	2006.7	ppb	1.6	.08209
Si	4828.6	ppb	35.7	.73908
Sn	2057.2	ppb	24.1	1.1728
Sr	2060.6	ppb	6.5	.31691
Ti	<.00000	ppb	1.08121	132.05
Tl	2031.9	ppb	19.2	.94616
V_	2060.1	ppb	21.5	1.0426
Zn	2067.1	ppb	23.0	1.1137
Zr	<.00000	ppb	.55369	323.93

CCB-2

Acquire Date: 08-Aug-2023 12:05 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	23.467	ppb	.622	2.6502
Ag	<.00000	ppb	1.1154	31.816
Al	11.111	ppb	3.141	28.264
As	.18910	ppb	3.05655	1,616.4
Au	.44197	ppb	.22782	51.546
B_	1.1334	ppb	.7855	69.299
Ba	1.3801	ppb	.3035	21.991
Be	<.00000	ppb	.05384	43.385
Ca	<.00000	ppb	2.9076	46.222
Cd	.13828	ppb	.11245	81.316
Co	.26808	ppb	.00377	1.4079
Cr	<.00000	ppb	9.19428	2,558.8
Cu	.61374	ppb	.19844	32.333
Fe	<.00000	ppb	.12105	12.737
K_	8.8044	ppb	5.4998	62.466
Li	<.00000	ppb	5.9766	70.997

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

CCB-2

Acquire Date: 08-Aug-2023 12:05 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Mg	10.780	ppb	3.812	35.361
Mn	.05614	ppb	.07440	132.52
Mo	<.00000	ppb	.6575	37.969
Na	17.461	ppb	1.879	10.761
Ni	.34664	ppb	.07879	22.731
Pb	<.00000	ppb	.63701	751.46
Pd	<.00000	ppb	9.7625	222.14
Sb	<.00000	ppb	.35024	36.643
Se	<.00000	ppb	.6736	18.476
Si	<.00000	ppb	5.110	10.899
Sn	<.00000	ppb	.1327	13.248
Sr	7.3157	ppb	8.2775	113.15
Ti	<.00000	ppb	.2322	16.357
Tl	1.0596	ppb	4.7728	450.45
V_	<.00000	ppb	4.1791	47.159
Zn	<.00000	ppb	.10974	87.608
Zr	<.00000	ppb	.31184	319.24

230727002-004AL

Acquire Date: 08-Aug-2023 12:09 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	456.99	ppb	2.27	.49620
Ag	<.00000	ppb	.3718	13.258
Al	85.121	ppb	18.539	21.780
As	2.1302	ppb	4.8132	225.95
Au	1.6467	ppb	.3039	18.453
B_	3.4617	ppb	.1309	3.7806
Ba	15.327	ppb	.093	.60648
Be	<.00000	ppb	.14104	679.00
Ca	3797.7	ppb	2.2	.05805
Cd	<.00000	ppb	.09639	1,020.7
Co	.58662	ppb	.03386	5.7719
Cr	2.4294	ppb	9.0685	373.27
Cu	<.00000	ppb	7.8615	170.53
Fe	226.28	ppb	.72	.31781
K_	159.65	ppb	4.19	2.6261
Li	3.5335	ppb	.7263	20.554
Mg	1444.1	ppb	19.5	1.3523
Mn	148.78	ppb	.43	.28630

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

230727002-004AL

Acquire Date: 08-Aug-2023 12:09 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Mo	<.00000	ppb	.0226	.89930
Na	376.59	ppb	1.20	.31956
Ni	.95229	ppb	.02234	2.3458
Pb	.25138	ppb	.31811	126.54
Pd	<.00000	ppb	2.2185	78.533
Sb	<.00000	ppb	.7509	49.325
Se	<.00000	ppb	2.7465	36.305
Si	1065.1	ppb	6.7	.63280
Sn	1.8778	ppb	.9292	49.482
Sr	31.288	ppb	18.306	58.506
Ti	<.00000	ppb	.6954	28.940
Tl	4.2411	ppb	.8173	19.271
V_	<.00000	ppb	1.79068	424.46
Zn	.76672	ppb	.12476	16.272
Zr	.36716	ppb	2.00736	546.73

230727002-005A

Acquire Date: 08-Aug-2023 12:13 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	2447.0	ppb	5.4	.21887
Ag	<.00000	ppb	5.20553	2,968.7
Al	394.02	ppb	13.17	3.3414
As	<.00000	ppb	5.6029	179.98
Au	5.0048	ppb	.0941	1.8807
B_	16.679	ppb	.110	.66211
Ba	70.951	ppb	.245	.34473
Be	<.00000	ppb	.07280	116.94
Ca	17775.	ppb	22	.12207
Cd	.19508	ppb	.01074	5.5047
Co	1.6084	ppb	.0525	3.2625
Cr	8.8062	ppb	1.0206	11.590
Cu	<.00000	ppb	3.3887	134.28
Fe	1021.6	ppb	3.7	.36599
K_	764.77	ppb	2.87	.37465
Li	14.068	ppb	6.220	44.218
Mg	6788.0	ppb	1.6	.02360
Mn	657.23	ppb	1.93	.29432
Mo	<.00000	ppb	.3288	15.361
Na	2439.0	ppb	.4	.01844

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

230727002-005A

Acquire Date: 08-Aug-2023 12:13 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Ni	2.9281	ppb	.0452	1.5448
Pb	3.5987	ppb	.9963	27.685
Pd	<.00000	ppb	2.663	22.328
Sb	<.00000	ppb	.4006	16.163
Se	<.00000	ppb	1.880	16.714
Si	5106.3	ppb	26.8	.52393
Sn	2.3470	ppb	.4424	18.851
Sr	111.30	ppb	7.01	6.3005
Ti	2.1302	ppb	3.3980	159.51
Tl	5.1093	ppb	4.7712	93.384
V_	<.00000	ppb	4.1764	76.143
Zn	2.7595	ppb	.0181	.65730
Zr	.56311	ppb	.89995	159.82

230727002-006A

Acquire Date: 08-Aug-2023 12:16 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	2713.6	ppb	4.2	.15345
Ag	<.00000	ppb	.1862	3.7595
Al	15.334	ppb	.632	4.1185
As	<.00000	ppb	6.50341	2,401.4
Au	5.2988	ppb	.0189	.35691
B_	12.483	ppb	.452	3.6185
Ba	44.790	ppb	.597	1.3334
Be	<.00000	ppb	.14574	281.23
Ca	18255.	ppb	84	.45926
Cd	.06627	ppb	.04285	64.661
Co	1.3774	ppb	.0113	.81735
Cr	1.2128	ppb	9.0663	747.56
Cu	<.00000	ppb	.5240	24.364
Fe	3348.0	ppb	10.8	.32369
K_	953.62	ppb	4.69	.49216
Li	7.8384	ppb	1.6237	20.714
Mg	4505.4	ppb	3.8	.08371
Mn	560.59	ppb	4.69	.83651
Mo	<.00000	ppb	.1814	9.1232
Na	2729.2	ppb	20.2	.73972
Ni	.58559	ppb	.21409	36.559
Pb	1.4669	ppb	.2390	16.293

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

230727002-006A

Acquire Date: 08-Aug-2023 12:16 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Pd	<.00000	ppb	4.882	34.568
Sb	<.00000	ppb	1.8024	65.267
Se	<.00000	ppb	.241	1.9110
Si	5535.7	ppb	19.3	.34935
Sn	<.00000	ppb	.17702	19.507
Sr	120.20	ppb	7.47	6.2121
Ti	1.2563	ppb	.9266	73.754
Tl	2.6031	ppb	1.7722	68.079
V_	3.3761	ppb	2.3873	70.713
Zn	1.6318	ppb	.0020	.12212
Zr	<.00000	ppb	.20725	77.061

230727002-006ADP

Acquire Date: 08-Aug-2023 12:19 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	2943.3	ppb	14.1	.47928
Ag	<.00000	ppb	4.0903	52.436
Al	13.558	ppb	11.315	83.458
As	<.00000	ppb	4.4936	346.68
Au	5.3925	ppb	.3027	5.6130
B_	12.360	ppb	.043	.34920
Ba	77.784	ppb	.110	.14175
Be	<.00000	ppb	.15586	196.95
Ca	18151.	ppb	157	.86535
Cd	.04923	ppb	.02946	59.838
Co	1.4942	ppb	.1314	8.7908
Cr	.94038	ppb	2.30060	244.65
Cu	<.00000	ppb	4.7650	315.88
Fe	3327.2	ppb	15.9	.47695
K_	990.87	ppb	5.28	.53278
Li	20.972	ppb	6.380	30.422
Mg	4573.1	ppb	25.7	.56241
Mn	612.54	ppb	2.56	.41780
Mo	<.00000	ppb	.0227	.77269
Na	2954.5	ppb	28.5	.96380
Ni	.56567	ppb	.27605	48.800
Pb	1.6361	ppb	.5580	34.108
Pd	<.00000	ppb	3.9943	60.608
Sb	<.00000	ppb	.1502	4.2006

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

230727002-006ADP

Acquire Date: 08-Aug-2023 12:19 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Se	<.00000	ppb	2.602	19.333
Si	5580.6	ppb	6.6	.11896
Sn	<.00000	ppb	.48680	70.711
Sr	123.70	ppb	2.54	2.0560
Ti	.76457	ppb	1.15851	151.52
Tl	6.0733	ppb	2.5901	42.647
V_	<.00000	ppb	16.114	152.73
Zn	1.3399	ppb	.0367	2.7376
Zr	.14679	ppb	.31140	212.13

230727002-006AMS

Acquire Date: 08-Aug-2023 12:23 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	2856.2	ppb	4.6	.16047
Ag	41.880	ppb	.856	2.0433
Al	1857.3	ppb	17.8	.95679
As	37.334	ppb	.442	1.1835
Au	9.4069	ppb	.3405	3.6196
B_	12.649	ppb	.080	.63479
Ba	1980.3	ppb	.8	.03918
Be	50.591	ppb	.040	.07832
Ca	19314.	ppb	20	.10495
Cd	49.515	ppb	.262	.52912
Co	468.48	ppb	1.76	.37479
Cr	202.07	ppb	5.06	2.5051
Cu	248.36	ppb	.68	.27535
Fe	4414.8	ppb	18.8	.42589
K_	1005.0	ppb	.9	.09078
Li	13.263	ppb	2.325	17.530
Mg	4767.4	ppb	7.8	.16303
Mn	1041.5	ppb	3.9	.37822
Mo	<.00000	ppb	.1474	12.506
Na	2866.5	ppb	7.2	.25108
Ni	479.94	ppb	2.00	.41575
Pb	21.042	ppb	1.155	5.4906
Pd	<.00000	ppb	2.661	16.309
Sb	497.68	ppb	1.01	.20217
Se	10.852	ppb	1.759	16.210
Si	5850.2	ppb	35.6	.60777

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

230727002-006AMS

Acquire Date: 08-Aug-2023 12:23 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Sn	<.00000	ppb	.5311	28.765
Sr	127.25	ppb	1.31	1.0270
Ti	<.00000	ppb	1.0822	73.454
Tl	49.547	ppb	.545	1.0998
V_	483.06	ppb	7.88	1.6315
Zn	484.96	ppb	1.82	.37491
Zr	<.00000	ppb	.72563	248.16

230727002-006AA

Acquire Date: 08-Aug-2023 12:27 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	2928.9	ppb	40.1	1.3707
Ag	99.739	ppb	.125	.12545
Al	4043.8	ppb	31.9	.78778
As	72.471	ppb	.409	.56404
Au	15.723	ppb	.151	.96151
B_	13.957	ppb	.124	.88544
Ba	4239.1	ppb	50.4	1.1878
Be	110.36	ppb	1.13	1.0222
Ca	19435.	ppb	121	.62214
Cd	106.08	ppb	.34	.31917
Co	1015.0	ppb	.4	.03723
Cr	432.40	ppb	9.96	2.3031
Cu	539.78	ppb	6.34	1.1738
Fe	5421.4	ppb	5.0	.09285
K_	1018.2	ppb	15.8	1.5558
Li	<.00000	ppb	7.7680	163.22
Mg	4777.0	ppb	35.3	.73970
Mn	1591.4	ppb	.5	.02893
Mo	.47279	ppb	.14734	31.165
Na	2934.7	ppb	40.1	1.3674
Ni	1043.2	ppb	.6	.05559
Pb	44.618	ppb	1.116	2.5015
Pd	<.00000	ppb	1.3315	13.686
Sb	1064.3	ppb	4.6	.43384
Se	22.421	ppb	.434	1.9360
Si	5832.9	ppb	91.7	1.5728
Sn	1.6898	ppb	1.1063	65.472
Sr	144.63	ppb	7.01	4.8436

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

230727002-006AA

Acquire Date: 08-Aug-2023 12:27 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Ti	<.00000	ppb	.77240	1,414.8
Tl	106.13	ppb	1.23	1.1570
V_	1067.3	ppb	6.6	.61397
Zn	1034.7	ppb	1.6	.15084
Zr	<.00000	ppb	.83056	308.60

230727002-006AL

Acquire Date: 08-Aug-2023 12:30 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	525.20	ppb	.81	.15509
Ag	<.00000	ppb	.6818	44.453
Al	5.6663	ppb	10.2133	180.25
As	1.1250	ppb	3.9345	349.72
Au	1.6456	ppb	.1891	11.493
B_	1.8550	ppb	.1732	9.3360
Ba	10.581	ppb	.253	2.3911
Be	<.00000	ppb	.04353	31.592
Ca	4118.7	ppb	17.2	.41675
Cd	.03786	ppb	.07767	205.12
Co	.40076	ppb	.04880	12.176
Cr	6.3822	ppb	1.4065	22.038
Cu	<.00000	ppb	4.2944	309.88
Fe	734.39	ppb	7.43	1.0116
K_	199.90	ppb	.58	.28910
Li	3.5148	ppb	6.5225	185.57
Mg	990.95	ppb	7.19	.72517
Mn	125.33	ppb	.99	.78700
Mo	<.00000	ppb	.0567	1.7898
Na	427.02	ppb	.62	.14524
Ni	.43819	ppb	.23100	52.717
Pb	<.00000	ppb	.63742	106.72
Pd	<.00000	ppb	11.095	75.224
Sb	<.00000	ppb	.5507	17.880
Se	<.00000	ppb	2.4576	25.573
Si	1172.1	ppb	56.0	4.7742
Sn	1.2204	ppb	.2655	21.755
Sr	31.401	ppb	7.962	25.356
Ti	<.00000	ppb	.3866	32.183
Tl	6.8445	ppb	2.0448	29.875

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

230727002-006AL

Acquire Date: 08-Aug-2023 12:30 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
V_	5.0638	ppb	7.1616	141.43
Zn	2.2519	ppb	.0409	1.8178
Zr	<.00000	ppb	.41567	188.83

230727002-007A

Acquire Date: 08-Aug-2023 12:34 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	2819.1	ppb	1.5	.05225
Ag	<.00000	ppb	2.1688	55.606
Al	17.658	ppb	5.830	33.019
As	<.00000	ppb	.0337	1.2161
Au	6.3293	ppb	.4542	7.1758
B_	12.618	ppb	.025	.19625
Ba	43.509	ppb	.654	1.5022
Be	.01595	ppb	.02117	132.76
Ca	18930.	ppb	32	.16650
Cd	.11362	ppb	.15802	139.08
Co	1.4146	ppb	.0413	2.9186
Cr	<.00000	ppb	3.9741	301.85
Cu	<.00000	ppb	1.2970	48.125
Fe	3539.4	ppb	13.6	.38460
K_	983.60	ppb	2.68	.27274
Li	17.579	ppb	10.421	59.278
Mg	4723.3	ppb	.8	.01649
Mn	663.81	ppb	2.33	.35100
Mo	<.00000	ppb	.1587	6.5124
Na	2835.0	ppb	3.0	.10758
Ni	.54974	ppb	.01690	3.0746
Pb	1.4653	ppb	1.1954	81.576
Pd	<.00000	ppb	3.993	31.033
Sb	<.00000	ppb	.0000	.00000
Se	<.00000	ppb	1.301	10.909
Si	5812.1	ppb	53.1	.91383
Sn	<.00000	ppb	.0885	7.2525
Sr	139.72	ppb	4.84	3.4642
Ti	.16468	ppb	1.70030	1,032.5
Tl	2.8922	ppb	.2726	9.4267
V_	.42784	ppb	11.33131	2,648.5
Zn	1.1830	ppb	.1179	9.9663

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

230727002-007A

Acquire Date: 08-Aug-2023 12:34 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Zr	.09934	ppb	.10578	106.48

CCV-3

Acquire Date: 08-Aug-2023 12:55 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	1928.2	ppb	5.7	.29627
Ag	509.19	ppb	3.50	.68798
Al	2010.5	ppb	.3	.01702
As	1987.5	ppb	20.2	1.0159
Au	18.921	ppb	.852	4.5008
B_	2065.0	ppb	9.4	.45551
Ba	1994.0	ppb	.5	.02482
Be	1987.1	ppb	1.0	.05191
Ca	1964.2	ppb	1.3	.06736
Cd	2092.6	ppb	19.9	.94978
Co	1965.6	ppb	23.5	1.1953
Cr	2025.2	ppb	9.7	.47930
Cu	2049.0	ppb	4.2	.20464
Fe	1998.6	ppb	18.4	.91928
K_	9058.4	ppb	13.5	.14872
Li	2006.9	ppb	7.2	.35916
Mg	1975.7	ppb	.4	.02122
Mn	1952.3	ppb	20.5	1.0480
Mo	2123.6	ppb	17.2	.81147
Na	1902.5	ppb	7.1	.37460
Ni	2046.4	ppb	22.7	1.1082
Pb	2037.7	ppb	25.0	1.2262
Pd	<.00000	ppb	10.651	77.133
Sb	2114.9	ppb	10.9	.51376
Se	1948.4	ppb	13.4	.69012
Si	4812.0	ppb	18.4	.38204
Sn	2016.1	ppb	26.1	1.2951
Sr	2048.5	ppb	16.9	.82494
Ti	<.00000	ppb	1.0810	86.075
Tl	2022.1	ppb	11.0	.54370
V_	2028.1	ppb	16.8	.83031
Zn	2038.2	ppb	23.0	1.1274
Zr	.02469	ppb	.34586	1,400.8

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

CCB-3

Acquire Date: 08-Aug-2023 12:58 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	4.6194	ppb	.0003	.00741
Ag	<.00000	ppb	.0001	.00195
Al	<.00000	ppb	7.2294	135.52
As	<.00000	ppb	.62345	146.84
Au	.24094	ppb	.01878	7.7940
B_	2.3410	ppb	1.3306	56.837
Ba	.83559	ppb	.13178	15.770
Be	.00349	ppb	.00983	281.61
Ca	<.00000	ppb	6.6734	119.90
Cd	.15153	ppb	.15269	100.76
Co	.29461	ppb	.02628	8.9202
Cr	<.00000	ppb	3.3222	108.16
Cu	<.00000	ppb	1.8419	25.391
Fe	<.00000	ppb	.36686	39.400
K_	6.4361	ppb	.2498	3.8819
Li	<.00000	ppb	5.0282	150.00
Mg	<.00000	ppb	31.5808	2,731.9
Mn	.11125	ppb	.16980	152.63
Mo	<.00000	ppb	1.51927	172.29
Na	<.00000	ppb	.10234	13.231
Ni	.28286	ppb	.05632	19.912
Pb	.47901	ppb	.39864	83.220
Pd	<.00000	ppb	.0002	.00218
Sb	<.00000	ppb	.5508	22.546
Se	<.00000	ppb	.1449	6.8568
Si	<.00000	ppb	34.0080	353.73
Sn	<.00000	ppb	.70810	98.381
Sr	3.8269	ppb	2.0695	54.077
Ti	.70993	ppb	.15439	21.747
Tl	2.6990	ppb	4.0901	151.54
V_	4.6422	ppb	.5968	12.857
Zn	<.00000	ppb	.25767	239.99
Zr	<.00000	ppb	.38057	55.534

CRI-2

Acquire Date: 08-Aug-2023 1:01 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

CRI-2

Acquire Date: 08-Aug-2023 1:01 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	1.9419	ppb	.9596	49.416
Ag	22.210	ppb	4.318	19.441
Al	3.8880	ppb	7.7002	198.05
As	22.308	ppb	1.111	4.9803
Au	.44207	ppb	.22787	51.545
B_	<.00000	ppb	.58759	584.73
Ba	1.2771	ppb	1.0470	81.986
Be	9.7474	ppb	.0438	.44983
Ca	<.00000	ppb	4.7904	127.74
Cd	10.327	ppb	.012	.11586
Co	95.806	ppb	.355	.37055
Cr	21.589	ppb	8.302	38.457
Cu	53.833	ppb	3.127	5.8087
Fe	<.00000	ppb	.1220	4.7151
K_	3.7481	ppb	4.2504	113.40
Li	<.00000	ppb	4.8885	52.178
Mg	<.00000	ppb	7.6220	104.23
Mn	27.339	ppb	.128	.46979
Mo	<.00000	ppb	.0339	1.5394
Na	<.00000	ppb	.6285	29.923
Ni	80.000	ppb	.112	.14028
Pb	6.9321	ppb	.9961	14.369
Pd	<.00000	ppb	3.106	24.143
Sb	123.57	ppb	.98	.79667
Se	12.917	ppb	2.124	16.443
Si	<.00000	ppb	44.200	91.899
Sn	<.00000	ppb	.30987	61.881
Sr	5.7393	ppb	.6367	11.093
Ti	1.5294	ppb	1.3129	85.846
Tl	18.283	ppb	3.985	21.794
V_	102.54	ppb	7.76	7.5654
Zn	40.812	ppb	.146	.35893
Zr	.41630	ppb	.41526	99.748

ICSA-2

Acquire Date: 08-Aug-2023 1:06 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	13.299	ppb	.051	.38211
Ag	<.00000	ppb	.1470	3.3604

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

ICSA-2

Acquire Date: 08-Aug-2023 1:06 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Al	491420.	ppb	706	.14359
As	<.00000	ppb	10.296	49.072
Au	50.850	ppb	.568	1.1177
B_	<.00000	ppb	.715	4.1838
Ba	1.9399	ppb	.0995	5.1283
Be	1.8133	ppb	.1446	7.9748
Ca	429710.	ppb	203	.04734
Cd	<.00000	ppb	.0054	.46847
Co	.46455	ppb	.08634	18.587
Cr	<.00000	ppb	8.2937	102.19
Cu	<.00000	ppb	6.5127	92.361
Fe	125860.	ppb	196	.15563
K_	<.00000	ppb	.8528	10.487
Li	<.00000	ppb	10.825	30.811
Mg	509870.	ppb	1,532	.30038
Mn	<.00000	ppb	.0616	.62072
Mo	<.00000	ppb	.7143	8.4131
Na	39.261	ppb	3.041	7.7454
Ni	<.00000	ppb	.034	.22944
Pb	<.00000	ppb	1.5530	57.144
Pd	<.00000	ppb	12.870	124.28
Sb	.24845	ppb	1.85287	745.78
Se	<.00000	ppb	1.237	10.518
Si	<.00000	ppb	20.365	65.107
Sn	1.7215	ppb	.5312	30.854
Sr	5.2888	ppb	1.5940	30.140
Ti	<.00000	ppb	.085	.38805
Tl	<.00000	ppb	.137	.81868
V_	5.0644	ppb	1.1934	23.565
Zn	<.00000	ppb	.1080	7.7349
Zr	.24525	ppb	.03554	14.493

ICSAB-2

Acquire Date: 08-Aug-2023 1:10 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	27.789	ppb	.472	1.6976
Ag	1055.1	ppb	2.9	.27817
Al	486340.	ppb	641	.13185
As	4.1079	ppb	2.3283	56.678

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

ICSAB-2

Acquire Date: 08-Aug-2023 1:10 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Au	54.543	ppb	.890	1.6324
B_	<.00000	ppb	.230	1.3687
Ba	500.89	ppb	.67	.13389
Be	477.09	ppb	.32	.06640
Ca	422530.	ppb	879	.20812
Cd	927.53	ppb	6.02	.64911
Co	420.57	ppb	2.42	.57491
Cr	486.09	ppb	7.21	1.4826
Cu	551.09	ppb	3.99	.72350
Fe	124140.	ppb	616	.49591
K_	1.6974	ppb	.5501	32.407
Li	<.00000	ppb	1.971	5.6104
Mg	505650.	ppb	792	.15657
Mn	452.38	ppb	5.42	1.1984
Mo	<.00000	ppb	.0681	1.2486
Na	49.703	ppb	1.733	3.4858
Ni	953.11	ppb	6.50	.68223
Pb	947.93	ppb	6.87	.72511
Pd	<.00000	ppb	.444	1.7470
Sb	2.9028	ppb	2.7035	93.134
Se	<.00000	ppb	1.5018	53.677
Si	<.00000	ppb	54.407	452.57
Sn	4.5374	ppb	.0884	1.9490
Sr	9.6794	ppb	.7956	8.2195
Ti	<.00000	ppb	.772	3.5598
Tl	<.00000	ppb	5.012	38.760
V_	476.04	ppb	2.38	.49941
Zn	862.50	ppb	6.81	.78946
Zr	.22027	ppb	.13850	62.876

CCV-4

Acquire Date: 08-Aug-2023 1:13 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	1921.7	ppb	7.0	.36171
Ag	511.77	ppb	1.74	.34023
Al	2026.7	ppb	.1	.00660
As	2013.4	ppb	4.3	.21275
Au	19.269	ppb	.851	4.4187
B_	2140.4	ppb	7.1	.33197

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

CCV-4

Acquire Date: 08-Aug-2023 1:13 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Ba	1982.4	ppb	10.3	.52135
Be	1999.2	ppb	7.5	.37373
Ca	1955.6	ppb	9.4	.48006
Cd	2098.8	ppb	1.6	.07727
Co	1959.6	ppb	1.6	.08373
Cr	2004.8	ppb	.5	.02661
Cu	2036.8	ppb	1.2	.05768
Fe	1989.6	ppb	4.1	.20637
K_	9037.8	ppb	3.9	.04350
Li	2011.3	ppb	7.3	.36421
Mg	1941.6	ppb	20.7	1.0668
Mn	1957.5	ppb	1.6	.08072
Mo	2119.5	ppb	3.4	.16163
Na	1884.2	ppb	1.5	.08099
Ni	2037.7	ppb	.0	.00214
Pb	2034.1	ppb	2.3	.11430
Pd	<.00000	ppb	10.652	41.392
Sb	2114.4	ppb	3.9	.18533
Se	1964.0	ppb	11.5	.58707
Si	4803.9	ppb	50.9	1.0605
Sn	2019.8	ppb	1.9	.09266
Sr	2060.7	ppb	9.5	.46230
Ti	<.00000	ppb	3.0122	125.35
Tl	2100.4	ppb	5.0	.23607
V_	2054.0	ppb	5.4	.26266
Zn	2030.1	ppb	1.0	.05149
Zr	.17129	ppb	.06918	40.389

CCB-4

Acquire Date: 08-Aug-2023 1:17 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
2Na	<.00000	ppb	.38713	40.123
Ag	<.00000	ppb	3.0989	49.797
Al	<.00000	ppb	7.7012	103.43
As	<.00000	ppb	4.5791	108.28
Au	.12048	ppb	.07571	62.843
B_	2.2447	ppb	1.9987	89.042
Ba	1.8688	ppb	.3719	19.898
Be	<.00000	ppb	.01945	15.279

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

CCB-4

Acquire Date: 08-Aug-2023 1:17 pm Sample Type: Unknown

Correction Factor:1.0000 SW: 1.0000 NW: 1.0000 IV: 1.0000 FV: 1.0000 AF: 1.0000

Elem	Avg	Units	Stddev	%RSD
Ca	<.00000	ppb	10.9509	164.56
Cd	.18751	ppb	.24106	128.56
Co	.34504	ppb	.01501	4.3513
Cr	1.8155	ppb	.1746	9.6145
Cu	<.00000	ppb	1.6659	155.09
Fe	<.00000	ppb	.35634	35.997
K_	11.528	ppb	7.852	68.107
Li	4.9742	ppb	1.6652	33.477
Mg	<.00000	ppb	14.1566	408.48
Mn	.12084	ppb	.21839	180.73
Mo	<.00000	ppb	1.49653	183.01
Na	.42640	ppb	.40882	95.878
Ni	.10757	ppb	.40566	377.12
Pb	<.00000	ppb	.59777	1,060.6
Pd	<.00000	ppb	15.0905	200.36
Sb	<.00000	ppb	1.4520	48.250
Se	<.00000	ppb	.5783	9.1731
Si	<.00000	ppb	15.303	43.898
Sn	.34425	ppb	.08851	25.712
Sr	4.5024	ppb	12.2567	272.23
Ti	<.00000	ppb	.6951	63.629
Tl	1.5500	ppb	2.5957	167.47
V_	1.6880	ppb	9.5495	565.74
Zn	<.00000	ppb	.13090	68.533
Zr	<.00000	ppb	.10379	13.252

Color Legend: Pass/Unchecked Internal Standard Check Fail Check Warn

Adirondack Environmental Services, Inc

PREP BATCH REPORT

Prep Code: **HG_PREP**
Technician: **Anna Fonda**
Prep Start Date: **8/8/2023 9:13:50 AM**
Prep End Date: **8/8/2023 11:13:00 AM**

Comments: Temp: 95 Start time: 913 End time: 1113

Prep Batch: **102867** Page: *1 of 2*

Prep Factor Units **mL** / **mL**

Sample ID	Matrix	pH	Res Cl	SampAmt	Sol Added	Fin Vol	factor	PrepStart	PrepEnd	ExPos	TareWt	CleanUp
MB-102867				50	0	50	1.000	8/8/2023	8/8/2023		0	
MB-102867												
LCS-102867				50	0	50	1.000	8/8/2023	8/8/2023		0	
LCS-102867												
230727002-001A	Groundwater	1		50	0	50	1.000	8/8/2023	8/8/2023		0	
230727002-001A			CPL	MW-1								
230727002-002A	Groundwater	1		50	0	50	1.000	8/8/2023	8/8/2023		0	
230727002-002A			CPL	MW-4								
230727002-003A	Groundwater	1		50	0	50	1.000	8/8/2023	8/8/2023		0	
230727002-003A			CPL	MW-5								
230727002-004A	Groundwater	1		50	0	50	1.000	8/8/2023	8/8/2023		0	
230727002-004A			CPL	MW-7								
230727002-004ADP	Groundwater	1		50	0	50	1.000	8/8/2023	8/8/2023		0	
230727002-004ADP												
		bottle 1 of 3 used										
230727002-004AMS	Groundwater	1		50	0	50	1.000	8/8/2023	8/8/2023		0	
230727002-004AMS												
		bottle 2 of 3 used										
230727002-005A	Groundwater	1		50	0	50	1.000	8/8/2023	8/8/2023		0	
230727002-005A			CPL	MW-7 Dup								
		bottle 3 of 3 used										
230727002-006A	Surface Water	1		50	0	50	1.000	8/8/2023	8/8/2023		0	
230727002-006A			CPL	SW-1								
230727002-006ADP	Surface Water	1		50	0	50	1.000	8/8/2023	8/8/2023		0	
230727002-006ADP												
		bottle 1 of 3 used										
230727002-006AMS	Surface Water	1		50	0	50	1.000	8/8/2023	8/8/2023		0	
230727002-006AMS												
		bottle 2 of 3 used										
230727002-007A	Surface Water	1		50	0	50	1.000	8/8/2023	8/8/2023		0	
230727002-007A			CPL	SW-1 Dup								
		bottle 3 of 3 used										

Prep Factor Units **mL** / **mL**

Sample ID	Matrix	pH	Res Cl	SampAmt	Sol Added	Fin Vol	factor	PrepStart	PrepEnd	ExPos	*TareWt*	CleanUp

Number	Reagent Name
8203	Hot Block Digestion Vessels - 100m
8290	Sulfuric Acid
8361	Nitric Acid, ACS

Solution ID	Solution Name	SampType	AmtAdd	units
MR-HYDROXYL	Hydroxlamine, 12%		3	ml
MR-KMNO4 5%-	Potassium Permanganate		7.5	ml
MR-POTASSIUM	Potassium Persulfate, 5%		4	ml
MSP-HG 0.1 PP	0.1 PPM Hg		1	ml

Adirondack Environmental Services, Inc

PREP BATCH REPORT

Prep Code: **3010CLP**
Technician: **Anna Fonda**
Prep Start Date: **8/4/2023 12:55:22 PM**
Prep End Date: **8/4/2023 2:25:00 PM**

Comments: Temp: 95 Start time: 1255 End time: 1425

Prep Batch: **102812** Page: *1 of 2*

Prep Factor Units **mL** / **mL**

Sample ID	Matrix	pH	Res Cl	SampAmt	Sol Added	Fin Vol	factor	PrepStart	PrepEnd	ExPos	TareWt	CleanUp
MB-102812				50	0	50	1.000	8/4/2023	8/4/2023		0	
MB-102812												
LCS-102812				50	0	50	1.000	8/4/2023	8/4/2023		0	
LCS-102812												
230727002-001A	Groundwater	1		50	0	50	1.000	8/4/2023	8/4/2023		0	
230727002-001A			CPL	MW-1								
230727002-002A	Groundwater	1		50	0	50	1.000	8/4/2023	8/4/2023		0	
230727002-002A			CPL	MW-4								
230727002-003A	Groundwater	1		50	0	50	1.000	8/4/2023	8/4/2023		0	
230727002-003A			CPL	MW-5								
230727002-004A	Groundwater	1		50	0	50	1.000	8/4/2023	8/4/2023		0	
230727002-004A			CPL	MW-7								
		bottle 1 of 3 used										
230727002-004ADP	Groundwater	1		50	0	50	1.000	8/4/2023	8/4/2023		0	
230727002-004ADP												
		bottle 2 of 3 used										
230727002-004AMS	Groundwater	1		50	0	50	1.000	8/4/2023	8/4/2023		0	
230727002-004AMS												
		bottle 3 of 3 used										
230727002-005A	Groundwater	1		50	0	50	1.000	8/4/2023	8/4/2023		0	
230727002-005A			CPL	MW-7 Dup								
230727002-006A	Surface Water	1		50	0	50	1.000	8/4/2023	8/4/2023		0	
230727002-006A			CPL	SW-1								
230727002-006ADP	Surface Water	1		50	0	50	1.000	8/4/2023	8/4/2023		0	
230727002-006ADP												
		bottle 1 of 3 used										
230727002-006AMS	Surface Water	1		50	0	50	1.000	8/4/2023	8/4/2023		0	
230727002-006AMS												
		bottle 2 of 3 used										
230727002-007A	Surface Water	1		50	0	50	1.000	8/4/2023	8/4/2023		0	
230727002-007A			CPL	SW-1 Dup								
		bottle 3 of 3 used										

Prep Factor Units **mL** / **mL**

Sample ID	Matrix	pH	Res Cl	SampAmt	Sol Added	Fin Vol	factor	PrepStart	PrepEnd	ExPos	*TareWt*	CleanUp

Number	Reagent Name
8201	Hot Block Digestion Vessels - 50mL
8251	Hydrochoric Acid
8361	Nitric Acid, ACS

Solution ID	Solution Name	SampType	AmtAdd	units
8095	M-ICP-SSWS-M		0.5	ml
MWS-200.7-6-12	200.7-6		50	ml

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **23080060**

Date Reported: **8/11/2023**

CLIENT: Adirondack Environmental Service **Collection Date:** 7/26/2023 3:55:00 PM

Project: 230727002

Lab ID: 23080060-001 **Matrix:** NON-POTABLE WATER

Client Sample ID: 230727002-001C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PFAS BY EPA 537.1 MODIFIED					**E537.1**	**E537.1** Analyst: **AEH**
PERFLUORINATED ALKYL ACIDS (EPA 537.1 MODIFIED)						
PFBS	0.00588	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFHxA	0.00440	0.00344		µg/L	1	8/10/2023 1:16:00 PM
HFPO-DA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFHpA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFHxS	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
NaDONA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFOA	0.00754	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFOS	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFNA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
9CL-PF3ONS	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFDA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
N-MeFOSAA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFUnA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
N-EtFOSAA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
11ClPF3OUdS	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFDoA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFTrDA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFTeDA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
Surr: 13C2-PFDA	94.7	30 - 150		%Rec	1	8/10/2023 1:16:00 PM
Surr: 13C2-PFHxA	80.0	30 - 150		%Rec	1	8/10/2023 1:16:00 PM
Surr: 13C3-HFPO-DA	75.5	30 - 150		%Rec	1	8/10/2023 1:16:00 PM
Surr: NETFOSAA-d5	88.9	30 - 150		%Rec	1	8/10/2023 1:16:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceeded
M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	W	Sample container temperature is out of limit as specified at testcode

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **23080060**

Date Reported: **8/11/2023**

CLIENT: Adirondack Environmental Service
Collection Date: 7/26/2023 2:35:00 PM
Project: 230727002
Lab ID: 23080060-002
Matrix: NON-POTABLE WATER
Client Sample ID: 230727002-002C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PFAS BY EPA 537.1 MODIFIED					**E537.1**	**E537.1** Analyst: **AEH**
PERFLUORINATED ALKYL ACIDS (EPA 537.1 MODIFIED)						
PFBS	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFHxA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
HFPO-DA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFHpA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFHxS	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
NaDONA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFOA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFOS	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFNA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
9CL-PF3ONS	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFDA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
N-MeFOSAA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFUnA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
N-EtFOSAA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
11ClPF3OUdS	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFDoA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFTrDA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFTeDA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
Surr: 13C2-PFDA	77.0	30 - 150		%Rec	1	8/10/2023 1:29:00 PM
Surr: 13C2-PFHxA	65.3	30 - 150		%Rec	1	8/10/2023 1:29:00 PM
Surr: 13C3-HFPO-DA	66.8	30 - 150		%Rec	1	8/10/2023 1:29:00 PM
Surr: NETFOSAA-d5	47.3	30 - 150		%Rec	1	8/10/2023 1:29:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceeded
M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	W	Sample container temperature is out of limit as specified at testcode

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

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Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **23080060**

Date Reported: **8/11/2023**

CLIENT: Adirondack Environmental Service
Collection Date: 7/26/2023 1:50:00 PM
Project: 230727002
Lab ID: 23080060-003
Matrix: NON-POTABLE WATER
Client Sample ID: 230727002-003C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PFAS BY EPA 537.1 MODIFIED					**E537.1**	**E537.1** Analyst: **AEH**
PERFLUORINATED ALKYL ACIDS (EPA 537.1 MODIFIED)						
PFBS	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFHxA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
HFPO-DA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFHpA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFHxS	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
NaDONA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFOA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFOS	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFNA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
9CL-PF3ONS	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFDA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
N-MeFOSAA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFUnA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
N-EtFOSAA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
11ClPF3OUdS	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFDoA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFTrDA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFTeDA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
Surr: 13C2-PFDA	103	30 - 150		%Rec	1	8/10/2023 1:41:00 PM
Surr: 13C2-PFHxA	83.9	30 - 150		%Rec	1	8/10/2023 1:41:00 PM
Surr: 13C3-HFPO-DA	80.5	30 - 150		%Rec	1	8/10/2023 1:41:00 PM
Surr: NETFOSAA-d5	92.9	30 - 150		%Rec	1	8/10/2023 1:41:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceeded
M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	W	Sample container temperature is out of limit as specified at testcode

Original

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Analytical Report

(consolidated)

WO#: **23080060**

Date Reported: **8/11/2023**

CLIENT: Adirondack Environmental Service **Collection Date:** 7/26/2023 12:30:00 PM

Project: 230727002

Lab ID: 23080060-004 **Matrix:** NON-POTABLE WATER

Client Sample ID: 230727002-004C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PFAS BY EPA 537.1 MODIFIED					**E537.1**	**E537.1** Analyst: **AEH**
PERFLUORINATED ALKYL ACIDS (EPA 537.1 MODIFIED)						
PFBS	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFHxA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
HFPO-DA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFHpA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFHxS	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
NaDONA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFOA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFOS	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFNA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
9CL-PF3ONS	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFDA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
N-MeFOSAA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFUnA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
N-EtFOSAA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
11ClPF3OUdS	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFDoA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFTrDA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFTeDA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
Surr: 13C2-PFDA	84.4	30 - 150		%Rec	1	8/10/2023 1:54:00 PM
Surr: 13C2-PFHxA	77.1	30 - 150		%Rec	1	8/10/2023 1:54:00 PM
Surr: 13C3-HFPO-DA	72.5	30 - 150		%Rec	1	8/10/2023 1:54:00 PM
Surr: NETFOSAA-d5	88.9	30 - 150		%Rec	1	8/10/2023 1:54:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceeded
M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	W	Sample container temperature is out of limit as specified at testcode

Original

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Analytical Report

(consolidated)

WO#: **23080060**

Date Reported: **8/11/2023**

CLIENT: Adirondack Environmental Service **Collection Date:** 7/26/2023 12:30:00 PM

Project: 230727002

Lab ID: 23080060-005 **Matrix:** NON-POTABLE WATER

Client Sample ID: 230727002-005C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PFAS BY EPA 537.1 MODIFIED					**E537.1**	**E537.1** Analyst: **AEH**
PERFLUORINATED ALKYL ACIDS (EPA 537.1 MODIFIED)						
PFBS	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFHxA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
HFPO-DA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFHpA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFHxS	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
NaDONA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFOA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFOS	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFNA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
9CL-PF3ONS	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFDA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
N-MeFOSAA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFUnA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
N-EtFOSAA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
11ClPF3OUdS	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFDoA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFTrDA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFTeDA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
Surr: 13C2-PFDA	98.1	30 - 150		%Rec	1	8/10/2023 2:07:00 PM
Surr: 13C2-PFHxA	91.7	30 - 150		%Rec	1	8/10/2023 2:07:00 PM
Surr: 13C3-HFPO-DA	88.2	30 - 150		%Rec	1	8/10/2023 2:07:00 PM
Surr: NETFOSAA-d5	101	30 - 150		%Rec	1	8/10/2023 2:07:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceeded
M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	W	Sample container temperature is out of limit as specified at testcode

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **23080060**

Date Reported: **8/11/2023**

CLIENT: Adirondack Environmental Service
Collection Date: 7/26/2023 2:50:00 PM
Project: 230727002
Lab ID: 23080060-006
Matrix: NON-POTABLE WATER
Client Sample ID: 230727002-006C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PFAS BY EPA 537.1 MODIFIED					**E537.1**	**E537.1** Analyst: **AEH**
PERFLUORINATED ALKYL ACIDS (EPA 537.1 MODIFIED)						
PFBS	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFHxA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
HFPO-DA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFHpA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFHxS	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
NaDONA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFOA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFOS	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFNA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
9CL-PF3ONS	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFDA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
N-MeFOSAA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFUnA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
N-EtFOSAA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
11ClPF3OUdS	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFDoA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFTrDA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFTeDA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
Surr: 13C2-PFDA	97.7	30 - 150		%Rec	1	8/10/2023 2:20:00 PM
Surr: 13C2-PFHxA	51.8	30 - 150		%Rec	1	8/10/2023 2:20:00 PM
Surr: 13C3-HFPO-DA	56.0	30 - 150		%Rec	1	8/10/2023 2:20:00 PM
Surr: NETFOSAA-d5	97.9	30 - 150		%Rec	1	8/10/2023 2:20:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit
H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **23080060**

Date Reported: **8/11/2023**

CLIENT: Adirondack Environmental Service **Collection Date:** 7/26/2023 2:50:00 PM

Project: 230727002

Lab ID: 23080060-007 **Matrix:** NON-POTABLE WATER

Client Sample ID: 230727002-007C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PFAS BY EPA 537.1 MODIFIED					**E537.1**	**E537.1** Analyst: **AEH**
PERFLUORINATED ALKYL ACIDS (EPA 537.1 MODIFIED)						
PFBS	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFHxA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
HFPO-DA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFHpA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFHxS	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
NaDONA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFOA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFOS	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFNA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
9CL-PF3ONS	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFDA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
N-MeFOSAA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFUnA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
N-EtFOSAA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
11ClPF3OUdS	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFDoA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFTrDA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFTeDA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
Surr: 13C2-PFDA	119	30 - 150		%Rec	1	8/10/2023 2:32:00 PM
Surr: 13C2-PFHxA	56.4	30 - 150		%Rec	1	8/10/2023 2:32:00 PM
Surr: 13C3-HFPO-DA	59.0	30 - 150		%Rec	1	8/10/2023 2:32:00 PM
Surr: NETFOSAA-d5	98.5	30 - 150		%Rec	1	8/10/2023 2:32:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceeded
M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	W	Sample container temperature is out of limit as specified at testcode

Original

Summit Environmental Technologies, Inc.

Level IV Data Package

Work Order # 23080060

Prepared for:

Adirondack Environmental Service
314 N. Pearl St.
Albany, NY 12207

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Summit Environmental Technologies, Inc.
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August 11, 2023

Subreports
Adirondack Environmental Service
314 N. Pearl St.
Albany, NY 12207
TEL: 518-434-4546
FAX: 518-434-0891

RE: 230727002

Dear Subreports:

Order No.: 23080060

Summit Environmental Technologies, Inc. received 7 sample(s) on 8/1/2023 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,



Brian J. Fackelman
Project Manager
3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

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Case Narrative

WO#: **23080060**
Date: **8/11/2023**

CLIENT: Adirondack Environmental Service
Project: 230727002

WorkOrder Narrative:
23080060: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Workorder Sample Summary

WO#: **23080060**
11-Aug-23

CLIENT: Adirondack Environmental Service
Project: 230727002

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
23080060-001	230727002-001C		7/26/2023 3:55:00 PM	8/1/2023 9:40:00 AM	Non-Potable Water
23080060-002	230727002-002C		7/26/2023 2:35:00 PM	8/1/2023 9:40:00 AM	Non-Potable Water
23080060-003	230727002-003C		7/26/2023 1:50:00 PM	8/1/2023 9:40:00 AM	Non-Potable Water
23080060-004	230727002-004C		7/26/2023 12:30:00 PM	8/1/2023 9:40:00 AM	Non-Potable Water
23080060-005	230727002-005C		7/26/2023 12:30:00 PM	8/1/2023 9:40:00 AM	Non-Potable Water
23080060-006	230727002-006C		7/26/2023 2:50:00 PM	8/1/2023 9:40:00 AM	Non-Potable Water
23080060-007	230727002-007C		7/26/2023 2:50:00 PM	8/1/2023 9:40:00 AM	Non-Potable Water

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Analytical Report

(consolidated)

WO#: **23080060**

Date Reported: **8/11/2023**

CLIENT: Adirondack Environmental Service **Collection Date:** 7/26/2023 3:55:00 PM

Project: 230727002

Lab ID: 23080060-001 **Matrix:** NON-POTABLE WATER

Client Sample ID: 230727002-001C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PFAS BY EPA 537.1 MODIFIED				**E537.1**	**E537.1**	Analyst: **AEH**
PERFLUORINATED ALKYL ACIDS (EPA 537.1 MODIFIED)						
PFBS	0.00588	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFHxA	0.00440	0.00344		µg/L	1	8/10/2023 1:16:00 PM
HFPO-DA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFHpA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFHxS	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
NaDONA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFOA	0.00754	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFOS	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFNA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
9CL-PF3ONS	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFDA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
N-MeFOSAA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFUnA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
N-EtFOSAA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
11ClPF3OUdS	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFDoA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFTrDA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
PFTeDA	ND	0.00344		µg/L	1	8/10/2023 1:16:00 PM
Surr: 13C2-PFDA	94.7	30 - 150		%Rec	1	8/10/2023 1:16:00 PM
Surr: 13C2-PFHxA	80.0	30 - 150		%Rec	1	8/10/2023 1:16:00 PM
Surr: 13C3-HFPO-DA	75.5	30 - 150		%Rec	1	8/10/2023 1:16:00 PM
Surr: NETFOSAA-d5	88.9	30 - 150		%Rec	1	8/10/2023 1:16:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceeded
M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	W	Sample container temperature is out of limit as specified at testcode

Original

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Analytical Report

(consolidated)

WO#: **23080060**

Date Reported: **8/11/2023**

CLIENT: Adirondack Environmental Service **Collection Date:** 7/26/2023 2:35:00 PM

Project: 230727002

Lab ID: 23080060-002 **Matrix:** NON-POTABLE WATER

Client Sample ID: 230727002-002C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PFAS BY EPA 537.1 MODIFIED				**E537.1**	**E537.1**	Analyst: **AEH**
PERFLUORINATED ALKYL ACIDS (EPA 537.1 MODIFIED)						
PFBS	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFHxA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
HFPO-DA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFHpA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFHxS	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
NaDONA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFOA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFOS	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFNA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
9CL-PF3ONS	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFDA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
N-MeFOSAA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFUnA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
N-EtFOSAA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
11ClPF3OUdS	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFDoA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFTrDA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
PFTeDA	ND	0.00349		µg/L	1	8/10/2023 1:29:00 PM
Surr: 13C2-PFDA	77.0	30 - 150		%Rec	1	8/10/2023 1:29:00 PM
Surr: 13C2-PFHxA	65.3	30 - 150		%Rec	1	8/10/2023 1:29:00 PM
Surr: 13C3-HFPO-DA	66.8	30 - 150		%Rec	1	8/10/2023 1:29:00 PM
Surr: NETFOSAA-d5	47.3	30 - 150		%Rec	1	8/10/2023 1:29:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceeded
M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	W	Sample container temperature is out of limit as specified at testcode

Original

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Analytical Report

(consolidated)

WO#: **23080060**

Date Reported: **8/11/2023**

CLIENT: Adirondack Environmental Service **Collection Date:** 7/26/2023 1:50:00 PM

Project: 230727002

Lab ID: 23080060-003 **Matrix:** NON-POTABLE WATER

Client Sample ID: 230727002-003C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PFAS BY EPA 537.1 MODIFIED				**E537.1**	**E537.1**	Analyst: **AEH**
PERFLUORINATED ALKYL ACIDS (EPA 537.1 MODIFIED)						
PFBS	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFHxA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
HFPO-DA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFHpA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFHxS	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
NaDONA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFOA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFOS	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFNA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
9CL-PF3ONS	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFDA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
N-MeFOSAA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFUnA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
N-EtFOSAA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
11ClPF3OUdS	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFDoA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFTrDA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
PFTeDA	ND	0.00348		µg/L	1	8/10/2023 1:41:00 PM
Surr: 13C2-PFDA	103	30 - 150		%Rec	1	8/10/2023 1:41:00 PM
Surr: 13C2-PFHxA	83.9	30 - 150		%Rec	1	8/10/2023 1:41:00 PM
Surr: 13C3-HFPO-DA	80.5	30 - 150		%Rec	1	8/10/2023 1:41:00 PM
Surr: NETFOSAA-d5	92.9	30 - 150		%Rec	1	8/10/2023 1:41:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceeded
M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	W	Sample container temperature is out of limit as specified at testcode

Original

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Analytical Report

(consolidated)

WO#: **23080060**

Date Reported: **8/11/2023**

CLIENT: Adirondack Environmental Service **Collection Date:** 7/26/2023 12:30:00 PM

Project: 230727002

Lab ID: 23080060-004 **Matrix:** NON-POTABLE WATER

Client Sample ID: 230727002-004C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PFAS BY EPA 537.1 MODIFIED				**E537.1**	**E537.1**	Analyst: **AEH**
PERFLUORINATED ALKYL ACIDS (EPA 537.1 MODIFIED)						
PFBS	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFHxA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
HFPO-DA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFHpA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFHxS	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
NaDONA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFOA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFOS	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFNA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
9CL-PF3ONS	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFDA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
N-MeFOSAA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFUnA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
N-EtFOSAA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
11ClPF3OUdS	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFDoA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFTrDA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
PFTeDA	ND	0.00346		µg/L	1	8/10/2023 1:54:00 PM
Surr: 13C2-PFDA	84.4	30 - 150		%Rec	1	8/10/2023 1:54:00 PM
Surr: 13C2-PFHxA	77.1	30 - 150		%Rec	1	8/10/2023 1:54:00 PM
Surr: 13C3-HFPO-DA	72.5	30 - 150		%Rec	1	8/10/2023 1:54:00 PM
Surr: NETFOSAA-d5	88.9	30 - 150		%Rec	1	8/10/2023 1:54:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceeded
M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	W	Sample container temperature is out of limit as specified at testcode

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC. Analytical Laboratories

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Analytical Report

(consolidated)

WO#: **23080060**

Date Reported: **8/11/2023**

CLIENT: Adirondack Environmental Service **Collection Date:** 7/26/2023 12:30:00 PM

Project: 230727002

Lab ID: 23080060-005 **Matrix:** NON-POTABLE WATER

Client Sample ID: 230727002-005C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PFAS BY EPA 537.1 MODIFIED				**E537.1**	**E537.1**	Analyst: **AEH**
PERFLUORINATED ALKYL ACIDS (EPA 537.1 MODIFIED)						
PFBS	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFHxA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
HFPO-DA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFHpA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFHxS	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
NaDONA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFOA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFOS	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFNA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
9CL-PF3ONS	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFDA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
N-MeFOSAA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFUnA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
N-EtFOSAA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
11ClPF3OUdS	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFDoA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFTrDA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
PFTeDA	ND	0.00354		µg/L	1	8/10/2023 2:07:00 PM
Surr: 13C2-PFDA	98.1	30 - 150		%Rec	1	8/10/2023 2:07:00 PM
Surr: 13C2-PFHxA	91.7	30 - 150		%Rec	1	8/10/2023 2:07:00 PM
Surr: 13C3-HFPO-DA	88.2	30 - 150		%Rec	1	8/10/2023 2:07:00 PM
Surr: NETFOSAA-d5	101	30 - 150		%Rec	1	8/10/2023 2:07:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceeded
M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	W	Sample container temperature is out of limit as specified at testcode

Original

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Analytical Report

(consolidated)

WO#: **23080060**

Date Reported: **8/11/2023**

CLIENT: Adirondack Environmental Service **Collection Date:** 7/26/2023 2:50:00 PM

Project: 230727002

Lab ID: 23080060-006 **Matrix:** NON-POTABLE WATER

Client Sample ID: 230727002-006C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PFAS BY EPA 537.1 MODIFIED				**E537.1**	**E537.1**	Analyst: **AEH**
PERFLUORINATED ALKYL ACIDS (EPA 537.1 MODIFIED)						
PFBS	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFHxA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
HFPO-DA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFHpA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFHxS	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
NaDONA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFOA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFOS	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFNA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
9CL-PF3ONS	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFDA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
N-MeFOSAA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFUnA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
N-EtFOSAA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
11ClPF3OUdS	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFDoA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFTrDA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
PFTeDA	ND	0.00352		µg/L	1	8/10/2023 2:20:00 PM
Surr: 13C2-PFDA	97.7	30 - 150		%Rec	1	8/10/2023 2:20:00 PM
Surr: 13C2-PFHxA	51.8	30 - 150		%Rec	1	8/10/2023 2:20:00 PM
Surr: 13C3-HFPO-DA	56.0	30 - 150		%Rec	1	8/10/2023 2:20:00 PM
Surr: NETFOSAA-d5	97.9	30 - 150		%Rec	1	8/10/2023 2:20:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit
H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode

Original

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Analytical Report

(consolidated)

WO#: **23080060**

Date Reported: **8/11/2023**

CLIENT: Adirondack Environmental Service **Collection Date:** 7/26/2023 2:50:00 PM

Project: 230727002

Lab ID: 23080060-007 **Matrix:** NON-POTABLE WATER

Client Sample ID: 230727002-007C

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PFAS BY EPA 537.1 MODIFIED				**E537.1**	**E537.1**	Analyst: **AEH**
PERFLUORINATED ALKYL ACIDS (EPA 537.1 MODIFIED)						
PFBS	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFHxA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
HFPO-DA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFHpA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFHxS	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
NaDONA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFOA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFOS	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFNA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
9CL-PF3ONS	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFDA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
N-MeFOSAA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFUnA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
N-EtFOSAA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
11ClPF3OUdS	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFDoA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFTrDA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
PFTeDA	ND	0.00358		µg/L	1	8/10/2023 2:32:00 PM
Surr: 13C2-PFDA	119	30 - 150		%Rec	1	8/10/2023 2:32:00 PM
Surr: 13C2-PFHxA	56.4	30 - 150		%Rec	1	8/10/2023 2:32:00 PM
Surr: 13C3-HFPO-DA	59.0	30 - 150		%Rec	1	8/10/2023 2:32:00 PM
Surr: NETFOSAA-d5	98.5	30 - 150		%Rec	1	8/10/2023 2:32:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceeded
M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	W	Sample container temperature is out of limit as specified at testcode

Original

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23080060**

11-Aug-23

Client: Adirondack Environmental Service
Project: 230727002 **BatchID:** **67469**

Sample ID: **MB-67469** SampType: **MBLK** TestCode: **SVOC-EPA 5** Units: **µg/L** Prep Date: **8/3/2023** RunNo: **168895**
Client ID: **PBW** Batch ID: **67469** TestNo: **E537.1** **E537.1** Analysis Date: **8/10/2023** SeqNo: **4535902**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
PFBS	ND	0.00400									
PFHxA	ND	0.00400									
HFPO-DA	ND	0.00400									
PFHpA	ND	0.00400									
PFHxS	ND	0.00400									
NaDONA	ND	0.00400									
PFOA	ND	0.00400									
PFOS	ND	0.00400									
PFNA	ND	0.00400									
9CL-PF3ONS	ND	0.00400									
PFDA	ND	0.00400									
N-MeFOSAA	ND	0.00400									
PFUnA	ND	0.00400									
N-EtFOSAA	ND	0.00400									
11ClPF3OUdS	ND	0.00400									
PFDoA	ND	0.00400									
PFTrDA	ND	0.00400									
PFTeDA	ND	0.00400									
Surr: 13C2-PFDA	0.0316		0.04000		79.0	30	150				
Surr: 13C2-PFHxA	0.0330		0.04000		82.6	30	150				
Surr: 13C3-HFPO-DA	0.0254		0.04000		63.6	30	150				
Surr: NETFOSAA-d5	0.100		0.1600		62.7	30	150				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23080060**

11-Aug-23

Client: Adirondack Environmental Service
Project: 230727002 **BatchID:** **67469**

Sample ID: **LCS-67469** SampType: **LCS** TestCode: **SVOC-EPA 5** Units: **µg/L** Prep Date: **8/3/2023** RunNo: **168895**
Client ID: **LCSW** Batch ID: **67469** TestNo: **E537.1** **E537.1** Analysis Date: **8/10/2023** SeqNo: **4535903**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
PFBS	0.0319	0.00400	0.03540	0	90.1	59	130				
PFHxA	0.0272	0.00400	0.04000	0	68.0	60	130				
HFPO-DA	0.0220	0.00400	0.04000	0	55.1	54	130				QLR
PFHpA	0.0304	0.00400	0.04000	0	76.1	61	130				
PFHxS	0.0323	0.00400	0.03650	0	88.5	50	133				
NaDONA	0.0266	0.00400	0.03780	0	70.3	54	130				
PFOA	0.0273	0.00400	0.04000	0	68.4	59	130				
PFOS	0.0326	0.00400	0.03704	0	87.9	62	130				
PFNA	0.0308	0.00400	0.04000	0	76.9	58	136				
9CL-PF3ONS	0.0276	0.00400	0.03740	0	73.7	64	130				
PFDA	0.0302	0.00400	0.04000	0	75.5	63	130				
N-MeFOSAA	0.0289	0.00400	0.04000	0	72.4	57	130				QLR
PFUnA	0.0299	0.00400	0.04000	0	74.7	55	138				
N-EtFOSAA	0.0310	0.00400	0.04000	0	77.5	61	135				
11ClPF3OUdS	0.0317	0.00400	0.03780	0	83.9	57	130				
PFDoA	0.0309	0.00400	0.04000	0	77.2	48	136				
PFTrDA	0.0302	0.00400	0.04000	0	75.5	50	137				
PFTeDA	0.0290	0.00400	0.04000	0	72.4	39	141				
Surr: 13C2-PFDA	0.0372		0.04000		93.1	30	157				
Surr: 13C2-PFHxA	0.0387		0.04000		96.7	30	175				
Surr: 13C3-HFPO-DA	0.0297		0.04000		74.3	30	150				
Surr: NETFOSAA-d5	0.144		0.1600		90.3	70	170				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23080060**

11-Aug-23

Client: Adirondack Environmental Service

Project: 230727002 **BatchID:** **67469**

Sample ID: **LCSD-67469** SampType: **LCSD** TestCode: **SVOC-EPA 5** Units: **µg/L** Prep Date: **8/3/2023** RunNo: **168895**

Client ID: **LCSS02** Batch ID: **67469** TestNo: **E537.1** **E537.1** Analysis Date: **8/10/2023** SeqNo: **4535904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
PFBS	0.0310	0.00400	0.03540	0	87.6	59	130	0.03188	2.77	20	
PFHxA	0.0299	0.00400	0.04000	0	74.7	60	130	0.02718	9.42	20	
HFPO-DA	0.0285	0.00400	0.04000	0	71.1	54	130	0.02204	25.4	20	R
PFHpA	0.0342	0.00400	0.04000	0	85.5	61	130	0.03044	11.6	20	
PFHxS	0.0325	0.00400	0.03650	0	89.0	50	133	0.03229	0.630	20	
NaDONA	0.0319	0.00400	0.03780	0	84.3	54	130	0.02658	18.1	20	
PFOA	0.0314	0.00400	0.04000	0	78.5	59	130	0.02735	13.8	20	
PFOS	0.0329	0.00400	0.03704	0	88.8	62	130	0.03255	1.06	20	
PFNA	0.0319	0.00400	0.04000	0	79.8	58	136	0.03077	3.66	20	
9CL-PF3ONS	0.0295	0.00400	0.03740	0	79.0	64	130	0.02757	6.86	20	
PFDA	0.0324	0.00400	0.04000	0	81.0	63	130	0.03019	7.03	20	
N-MeFOSAA	0.0378	0.00400	0.04000	0	94.6	57	130	0.02894	26.6	20	R
PFUnA	0.0268	0.00400	0.04000	0	66.9	55	138	0.02988	11.0	20	
N-EtFOSAA	0.0359	0.00400	0.04000	0	89.7	61	135	0.03101	14.5	20	
11ClPF3OUdS	0.0310	0.00400	0.03780	0	82.1	57	130	0.03170	2.09	20	
PFDoA	0.0312	0.00400	0.04000	0	78.1	48	136	0.03088	1.17	20	
PFTrDA	0.0306	0.00400	0.04000	0	76.5	50	137	0.03022	1.32	20	
PFTeDA	0.0325	0.00400	0.04000	0	81.4	39	141	0.02895	11.7	20	
Surr: 13C2-PFDA	0.0445		0.04000		111	30	157		0	20	
Surr: 13C2-PFHxA	0.0406		0.04000		102	30	175		0	20	
Surr: 13C3-HFPO-DA	0.0404		0.04000		101	30	150		0	20	
Surr: NETFOSAA-d5	0.161		0.1600		101	70	170		0	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

Summit Environmental Technologies, In
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-448
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **23080060**
Date: **8/11/2023**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B/MB+	The analyte was detected in the associated blank.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor
DF	Dilution Factor	**RF**	Response Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

Adirondack Environmental Service
314 N Pearl St.
Albany, NY 12207
(518) 434-4546

230727002 23080060 230727002

CHAIN-OF-CUSTODY RECORD

Accl #:

7/31/2023

Subcontractor:
Summit Environmental Technologies, Inc
3310 Win Street
Cuyhoga Falls, OH 44223
TEL: (800) 278-0140

Invoice to: Accounts Receivable
314 No Pearl St
Albany, NY 12207
OR: ARAES@adkenv.com

(All invoices MUST have PO)
Purchase Order 230727002

Page 1 of 1

AES ID	ClientID	Matrix	Collection Date	No. of Btls	Air Vol (Liters)	Requested Tests: PFAS_GW					
230727002-001C	MW-1	Groundwater	7/26/2023 3 55 00 PM	1	0	1					2 bHs
230727002-002C	MW-4	Groundwater	7/26/2023 2 35 00 PM	1	0	1					2 bHs
230727002-003C	MW-5	Groundwater	7/26/2023 1 50 00 PM	1	0	1					2 bHs
230727002-004C	MW-7	Groundwater	7/26/2023 12 30 00 PM	3	0	1					6 bHs
230727002-005C	MW-7 Dup	Groundwater	7/26/2023 12 30 00 PM	1	0	1					2 bHs
230727002-006C	SW-1	Surface Water	7/26/2023 2 50 00 PM	3	0	1					6 bHs
230727002-007C	SW-1 Dup	Surface Water	7/26/2023 2 50 00 PM	1	0	1					2 bHs

Comments: 1.0 10.0: 1.0 e; Fedex, cooler, ice

* Please e-mail results when they are ready.* E-mail: SubReports@adirondackenvironmental.com

		Date/Time			Date/Time
Relinquished by:	Secreah Cuniga	7/31/23 2:10 PM	Received by:	Tym Richards	8/1/23, 0940
Relinquished by:			Received by:		

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: **ADI-NY-12207** Work Order Number: **23080060** RcptNo: **1**

Logged by:	**Tegan A. Richards**	**8/1/2023 9:40:00 AM**	Tegan Richards
Completed By:	**Jacqueline Rasile**	**8/2/2023 1:47:17 AM**	
Reviewed By:	**Brian J. Fackelman**	**8/2/2023 7:02:26 PM**	

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? FedEx

Log In

3. Coolers are present? Yes ☑ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☑ No ☐
   Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☑
   No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Not Present			

Summit Environmental Technologies, Inc.
PFOA/PFOS Prep Logbook

Method: EPA 537.1 (circled) EPA 533 (circle one)

Date:	8/3/23	Analyst:	DHH
LIMS Batch ID:	67469	Instrument ID:	SVOA-LC-TRIPLE-QUAD
Analyte Spike #:	78976	Balance ID:	SVOA-Bal-2
IS/IPS Spike #:	76716	SUR/IDA Spike #:	76713
LCMS H_2O:	DIW	Preservative :	___ Ammonium Acetate X Trizma 49137
SPE Cartridge:	11350	Phosphate Elution Buffer:	N/A
Methanol Solvent:	47275	Pipetter ID#:	PFAS 100 PFAS 1000
pH Strip ID #:	47893	Chlorine Strip ID#:	47507

#	Sample ID	Matrix	Wt. Bottle + Sample	Wt. Empty Bottle	Final Volume (mL)	pH	Residual Chlorine	Comments
1	MB	DIW	—	—	250	7	0	
2	LCS	DIW	—	—	250	7	0	10ppb
3	LCSD	DIW	—	—	250	7	0	10ppb
4	23072092-001A	DW	293.8	30.8	263	7	0	
5	23080060-001A	NPW	319.1	27.4	290.7	6	0	
6	23080060-002A	NPW	313.8	27.3	286.5	6	0	
7	23080060-003A	NPW	314.5	27.5	287	6	0	
8	23080060-004A	NPW	316.4	27.3	289.1	6	0	
9	23080060-005A	NPW	310.1	27.3	282.8	6	0	
10	23080060-006A	NPW	311.5	27.6	283.9	6	0	
11	23080060-007A	NPW	306.6	27.4	279.2	6	0	
~~12~~	~~2307160S.1A~~							? AEH 8/4/23
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

Note: when using the balance, 1 gram = 1 mL

Initial Calibration Report - Instrument 1

Agilent | Trusted Answers

Method Path	D:\MassHunter\Methods\Quant
Method File	EPA 537 Quant Method 20230809.m
Batch Name	D:\MassHunter\Data\20230809_ICAL_SAMP-537\QuantResults\20230809_ICAL-537.batch.bin
Last Calib Update	8/10/2023 3:46:40 PM

Level Name	Calibration Files	Acq. Date-Time	Level Last Update Time
1	D:\MassHunter\Data\20230809_ICAL_SAMP-537\537_1.0_0007.d	8/10/2023 7:19:17 AM	8/10/2023 3:46:40 PM
2	D:\MassHunter\Data\20230809_ICAL_SAMP-537\537_2.0_0008.d	8/10/2023 7:31:59 AM	8/10/2023 3:46:40 PM
3	D:\MassHunter\Data\20230809_ICAL_SAMP-537\537_5.0_0009.d	8/10/2023 7:44:42 AM	8/10/2023 3:46:40 PM
4	D:\MassHunter\Data\20230809_ICAL_SAMP-537\537_10.0_0010.d	8/10/2023 7:57:26 AM	8/10/2023 3:46:40 PM
5	D:\MassHunter\Data\20230809_ICAL_SAMP-537\537_15.0_0011.d	8/10/2023 8:10:09 AM	8/10/2023 3:46:40 PM
6	D:\MassHunter\Data\20230809_ICAL_SAMP-537\537_20.0_0012.d	8/10/2023 8:22:52 AM	8/10/2023 3:46:40 PM
7	D:\MassHunter\Data\20230809_ICAL_SAMP-537\537_25.0_0013.d	8/10/2023 8:35:35 AM	8/10/2023 3:46:40 PM
8	D:\MassHunter\Data\20230809_ICAL_SAMP-537\537_30.0_0014.d	8/10/2023 8:48:18 AM	8/10/2023 3:46:40 PM

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
I 13C2-PFOA					---------- ISTD ----------						
S 13C2-PFHxA	Avg RF	0.1011	0.0971	0.1061	0.1022	0.1046	0.1084	0.1066	0.1094	0.1044	3.914
T PFHxA	Linear	0.1072	0.1090	0.1160	0.1298	0.1332	0.1403	0.1409	0.1286	0.1256	10.620
S 13C3-HFPO-DA	Avg RF	0.0021	0.0020	0.0023	0.0022	0.0022	0.0022	0.0023	0.0022	0.0022	3.896
T HFPO-DA	Quadratic	0.0021	0.0020	0.0023	0.0024	0.0025	0.0027	0.0027	0.0026	0.0024	11.205
T PFHpA	Linear	0.0928	0.0996	0.1072	0.1155	0.1193	0.1352	0.1241	0.1168	0.1138	11.951
T NaDONA	Quadratic	0.3083	0.3041	0.3382	0.3987	0.3895	0.4325	0.4333	0.4024	0.3759	13.879
T PFOA	Linear	0.0785	0.0780	0.0899	0.0879	0.1002	0.1038	0.0968	0.0809	0.0895	11.195
T PFNA	Quadratic	0.0497	0.0508	0.0508	0.0561	0.0653	0.0601	0.0625	0.0564	0.0564	10.318
T PFDA	Quadratic	0.0404	0.0493	0.0414	0.0568	0.0538	0.0600	0.0659	0.0508	0.0523	16.771
S 13C2-PFDA	Avg RF	0.0485	0.0554	0.0449	0.0555	0.0623	0.0545	0.0585	0.0544	0.0543	10.003
T PFUdA	Linear	0.0395	0.0499	0.0460	0.0469	0.0578	0.0550	0.0547	0.0494	0.0499	11.841
T PFDoA	Quadratic	0.0438	0.0436	0.0509	0.0598	0.0599	0.0608	0.0580	0.0545	0.0539	13.179
T PFTrDA	Quadratic	0.0370	0.0360	0.0392	0.0446	0.0511	0.0531	0.0543	0.0456	0.0451	16.098
T PFTA	Linear	0.0220	0.0235	0.0261	0.0273	0.0270	0.0293	0.0296	0.0254	0.0263	10.016
I 13C4-PFOS					---------- ISTD ----------						
T PFBS	Quadratic	0.2167	0.2354	0.2344	0.2507	0.2629	0.2694	0.2450	0.2518	0.2458	6.856
T PFHxS	Quadratic	0.1363	0.1465	0.1429	0.1597	0.1740	0.1706	0.1590	0.1716	0.1576	9.093
T PFOS	Quadratic	0.0960	0.1085	0.1023	0.1171	0.1088	0.1261	0.1122	0.1174	0.1111	8.478
T 9Cl-PF3ONS	Quadratic	0.2704	0.2950	0.3076	0.3314	0.3656	0.3833	0.3379	0.3619	0.3316	11.648
T 11ClPF3OUdS	Quadratic	0.3300	0.3625	0.3267	0.3938	0.4438	0.4456	0.4015	0.4651	0.3961	13.437
I NMeFOSAA-d3					---------- ISTD ----------						
T N-MeFOSAA	Quadratic	0.0851	0.0850	0.0767	0.0952	0.0905	0.1047	0.1005	0.0984	0.0920	10.216
S NETFOSAA-d5	Avg RF	0.0567	0.0471	0.0512	0.0447	0.0480	0.0425	0.0469	0.0486	0.0482	8.939
T N-EtFOSAA	Quadratic	0.0862	0.0647	0.0840	0.0810	0.0749	0.0869	0.0863	0.0852	0.0811	9.550

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Compounds with Curve fitting not using Avg Response Factor:

Compound	Curve Fit	Curve Fit Formula	Curve Fit R2
T PFBS	Quadratic	y = 3.592582E-004 * x ^ 2 + 0.251132 * x	0.997592
T PFHxA	Linear	y = 0.133222 * x	0.995335
T HFPO-DA	Quadratic	y = 6.337994E-006 * x ^ 2 + 0.002465 * x	0.998183
T PFHpA	Linear	y = 0.113813 * x	0.982649
T PFHxS	Quadratic	y = 0.001741 * x ^ 2 + 0.153938 * x	0.997178
T NaDONA	Quadratic	y = 0.002229 * x ^ 2 + 0.362844 * x	0.995569
T PFOA	Linear	y = 0.092499 * x	0.986940
T PFNA	Quadratic	y = 7.600097E-005 * x ^ 2 + 0.057661 * x	0.993852
T PFOS	Quadratic	y = 9.298025E-004 * x ^ 2 + 0.109193 * x	0.996142
T 9Cl-PF3ONS	Quadratic	y = 0.003948 * x ^ 2 + 0.326238 * x	0.995429
T PFDA	Quadratic	y = 1.945097E-004 * x ^ 2 + 0.052297 * x	0.981781
T N-MeFOSAA	Quadratic	y = 0.002105 * x ^ 2 + 0.086166 * x	0.996339
T PFUdA	Linear	y = 0.052361 * x	0.992347
T N-EtFOSAA	Quadratic	y = 0.001337 * x ^ 2 + 0.076464 * x	0.997019
T 11ClPF3OUdS	Quadratic	y = 0.009507 * x ^ 2 + 0.361544 * x	0.994527
T PFDoA	Quadratic	y = 8.028880E-006 * x ^ 2 + 0.057075 * x	0.994620
T PFTrDA	Quadratic	y = 1.930615E-004 * x ^ 2 + 0.045061 * x	0.988144
T PFTA	Linear	y = 0.027451 * x	0.993447

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Quantitation Results Report

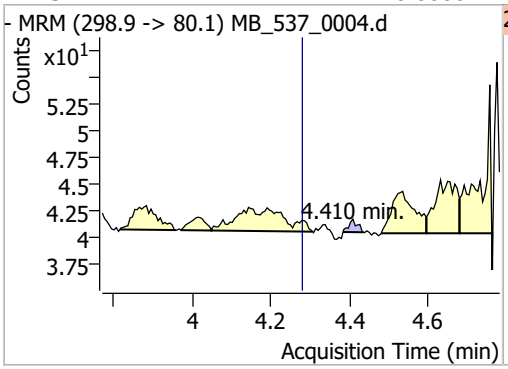
Agilent | Trusted Answers

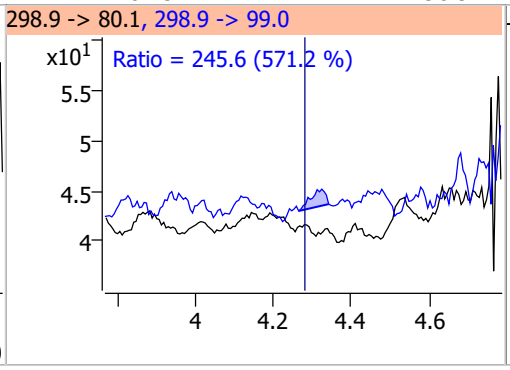
Data File	MB_537_0004.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 6:53:48 AM
Sample Name	MB_537	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809_ICAL-537.batch.bin	Last Calib Update	8/10/2023 3:46:40 PM
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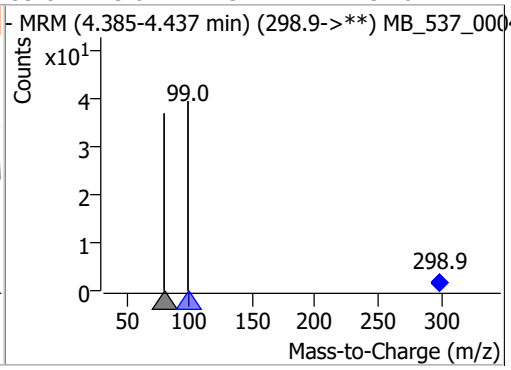
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.595	502.9 -> 80.1	765915	3.0000	ng/ml		0.023
13C2-PFOA	6.184	415.0 -> 370.0	1035495	1.0000	ng/ml		0.021
NMeFOSAA-d3	7.079	573.0 -> 418.9	1525291	4.0000	ng/ml		0.051
System Monitoring Compounds							
13C2-PFHxA	4.997	314.9 -> 269.7	1248862	11.5485	ng/ml		-0.002
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 115.48%			
13C3-HFPO-DA	5.219	287.0 -> 169.0	25711	11.4454	ng/ml		-0.004
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 114.45%			
13C2-PFDA	6.928	514.9 -> 469.9	610396	10.8637	ng/ml		0.041
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 108.64%			
NETFOSAA-d5	7.222	589.0 -> 419.0	855460	46.5244	ng/ml		0.058
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 116.31%			
Target Compounds							**QValue**
PFBS	4.410	298.9 -> 80.1	2	0.0000	ng/ml	#	1
PFHxA	4.998	313.0 -> 269.0	1060	0.0077	ng/ml		100
HFPO-DA	5.220	285.0 -> 169.1	84	0.0328	ng/ml		66
PFHpA	5.676	362.9 -> 318.9	165	0.0014	ng/ml	#	52
PFHxS	6.230	398.9 -> 79.9	109	0.0028	ng/ml		29
NaDONA	5.762	377.0 -> 250.9	53	0.0001	ng/ml	#	61
PFOA	6.178	413.0 -> 369.1	732	0.0076	ng/ml		93
PFNA	6.583	463.0 -> 418.9	123	0.0021	ng/ml	#	91
PFOS	6.596	498.9 -> 80.1	492	0.0177	ng/ml	#	74
9Cl-PF3ONS	6.776	531.0 -> 351.0	25	0.0003	ng/ml	#	95
PFDA	6.929	513.0 -> 468.9	56	0.0010	ng/ml	#	1
N-MeFOSAA	7.073	570.0 -> 418.9	177	0.0054	ng/ml	#	25
PFUdA	7.421	563.0 -> 518.8	358	0.0066	ng/ml	#	62
N-EtFOSAA	7.643	584.0 -> 419.0	580	0.0199	ng/ml		9
11ClPF3OUdS	7.273	631.0 -> 450.8	4	0.0000	ng/ml		99
PFDoA	6.925	613.0 -> 568.9	28038	0.4744	ng/ml	#	96
PFTrDA	7.684	663.0 -> 618.8	105	0.0022	ng/ml		99
PFTA	7.750	712.9 -> 669.0	40	0.0014	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

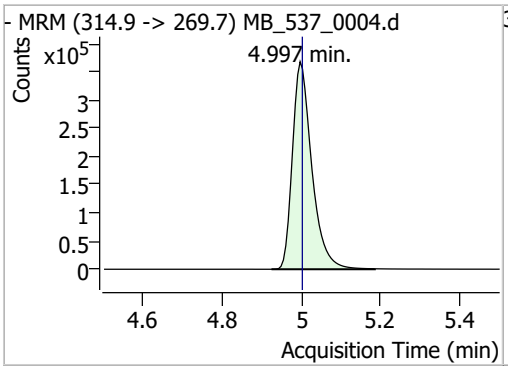
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.0000	4.41	0.13	2	298.9 -> 99.0	245.6	34.4	51.6

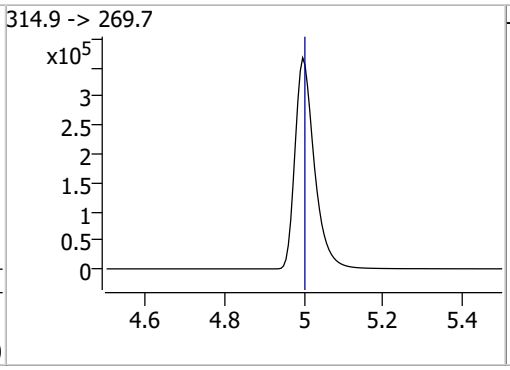


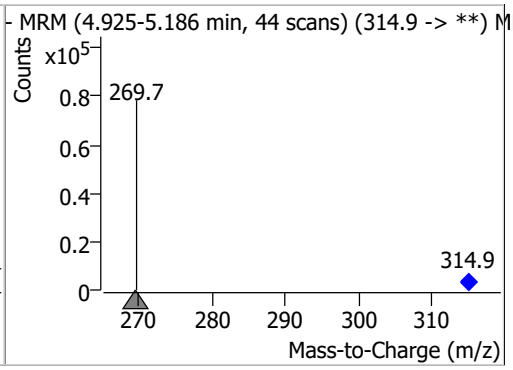




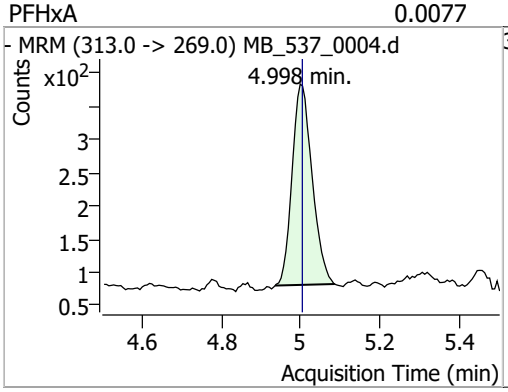
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	11.5485	5.00	0.00	1248862				

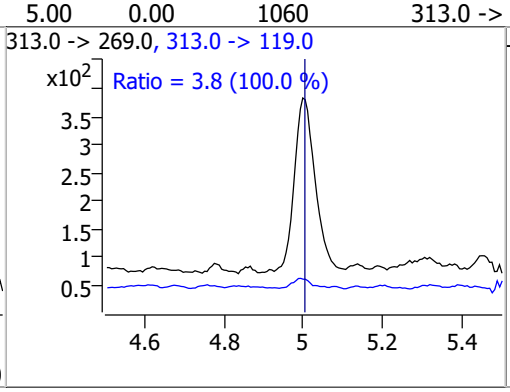


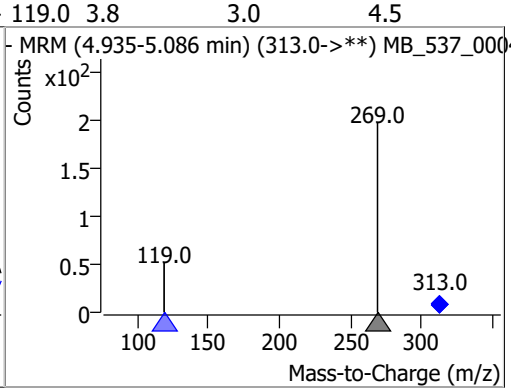




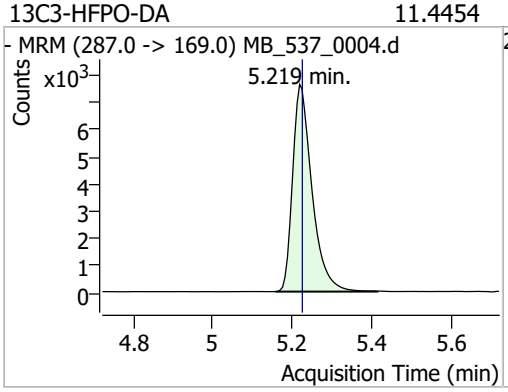
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.0077	5.00	0.00	1060	313.0 -> 119.0	3.8	3.0	4.5

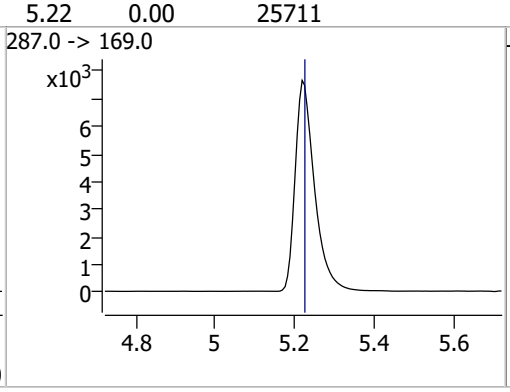


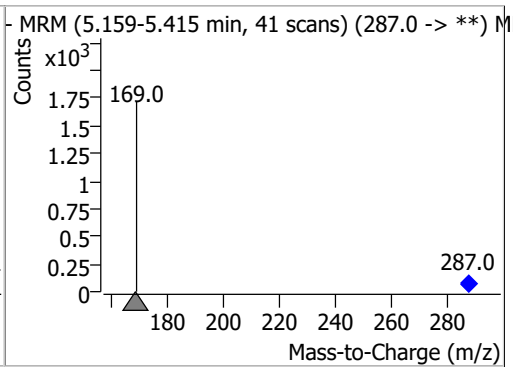




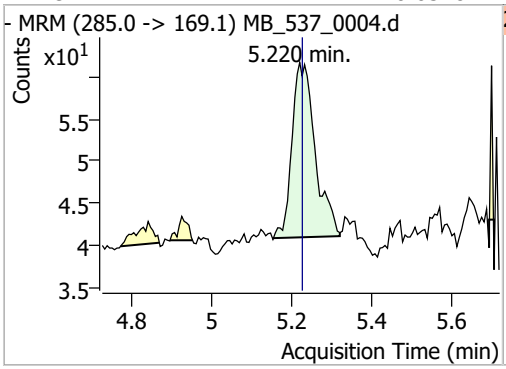
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	11.4454	5.22	0.00	25711				

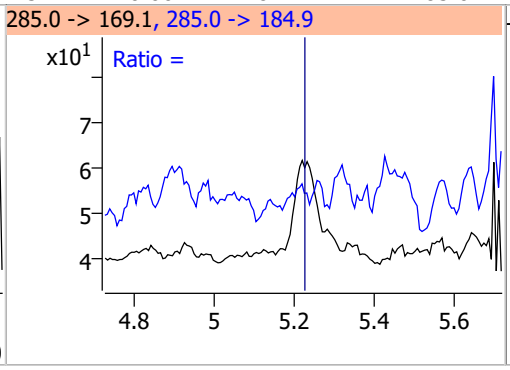


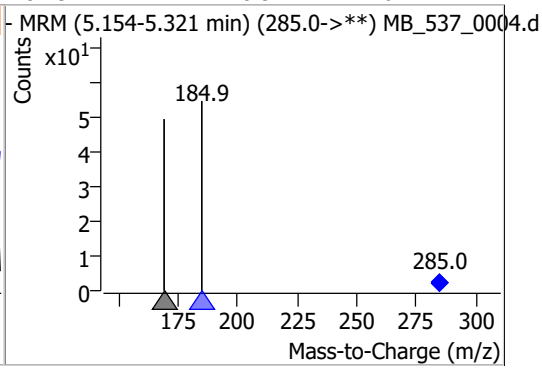




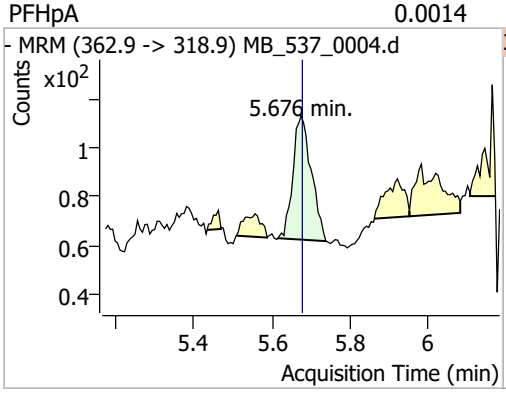
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0328	5.22	0.00	84	285.0 -> 184.9		10.9	16.4

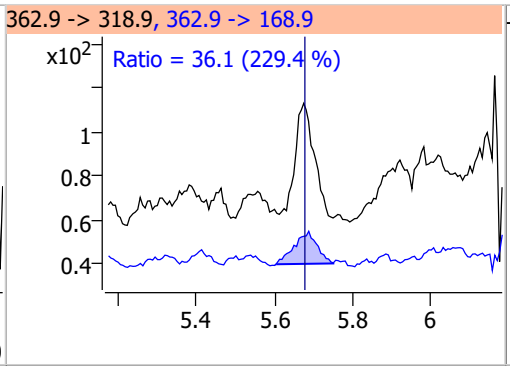


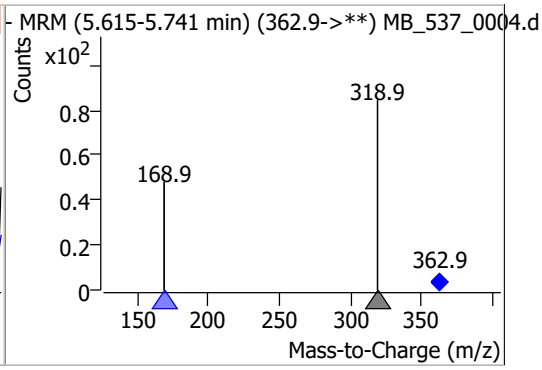




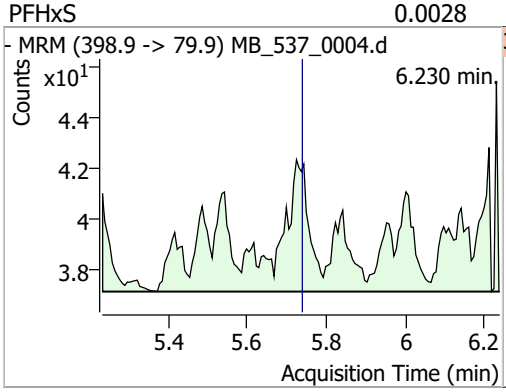
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.0014	5.68	0.00	165	362.9 -> 168.9	36.1	12.6	18.9

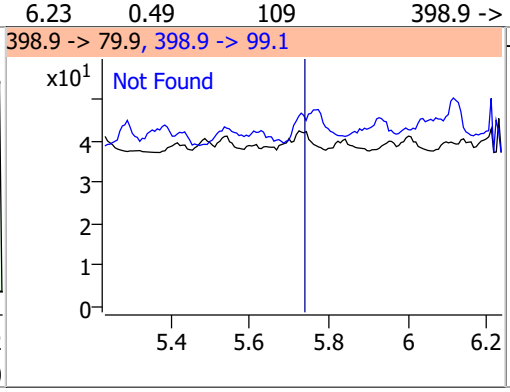


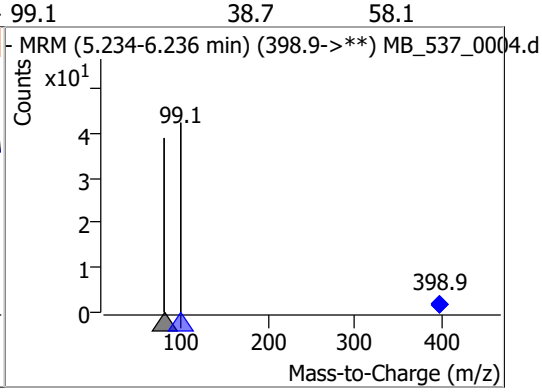




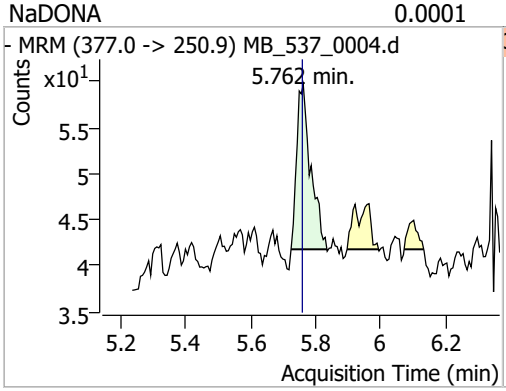
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.0028	6.23	0.49	109	398.9 -> 99.1		38.7	58.1

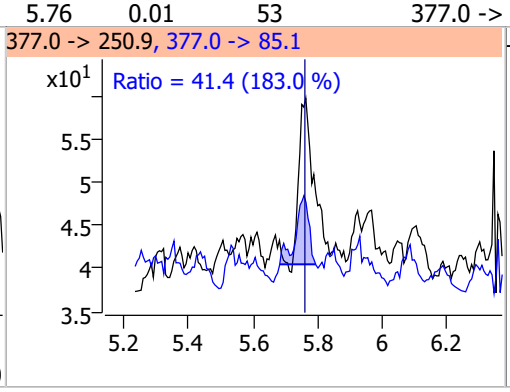


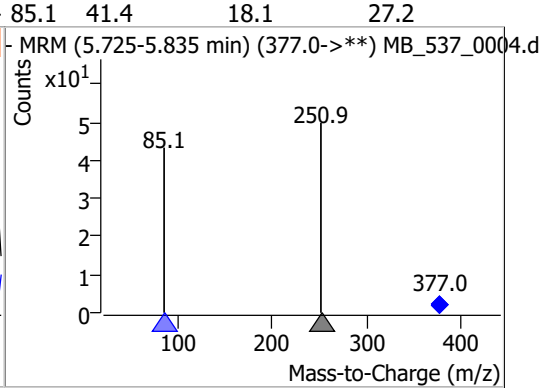




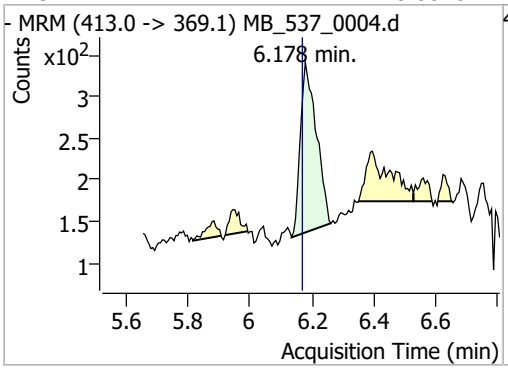
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0001	5.76	0.01	53	377.0 -> 85.1	41.4	18.1	27.2

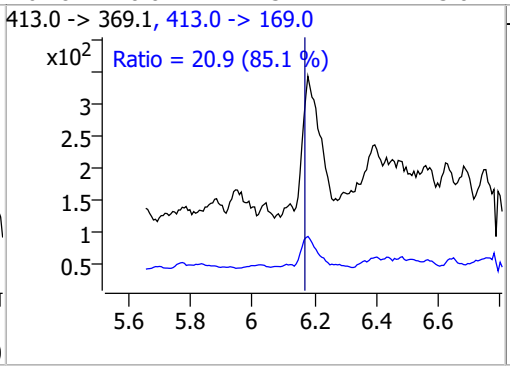


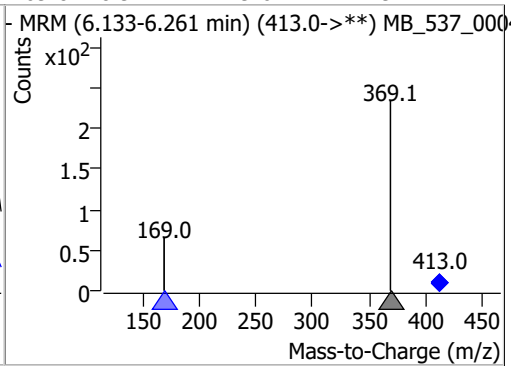




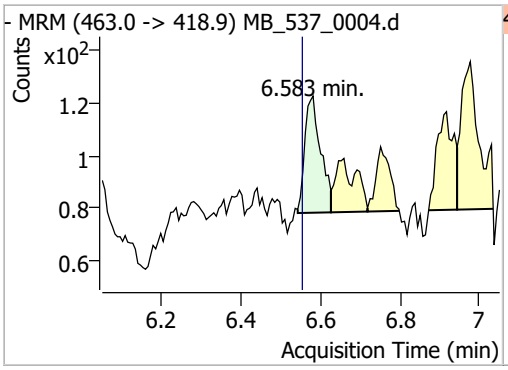
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.0076	6.18	0.01	732	413.0 -> 169.0	20.9	19.6	29.4

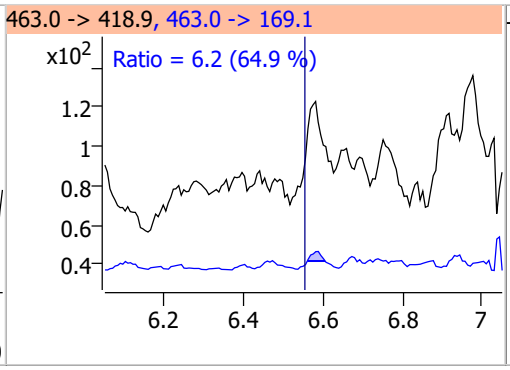


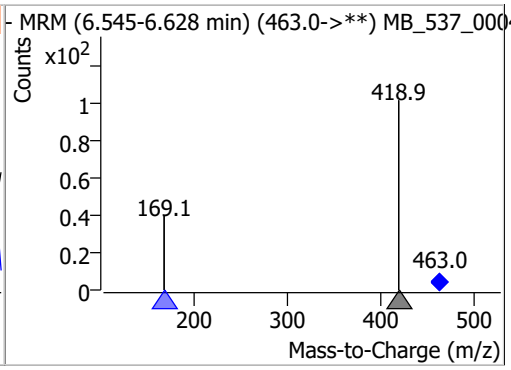




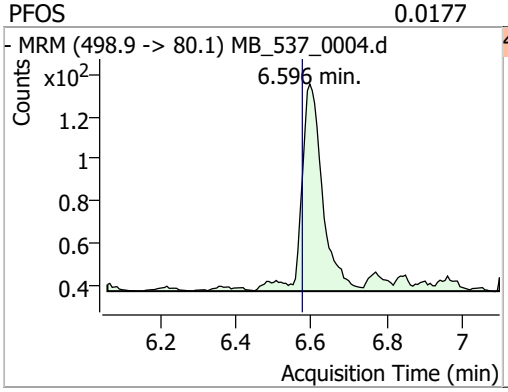
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.0021	6.58	0.03	123	463.0 -> 169.1	6.2	7.7	11.5

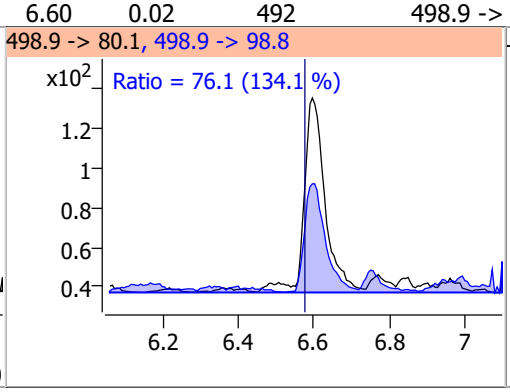


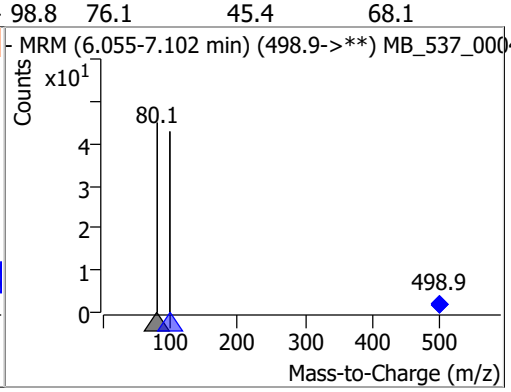




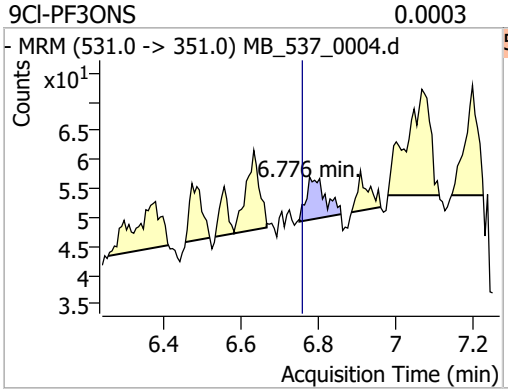
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.0177	6.60	0.02	492	498.9 -> 98.8	76.1	45.4	68.1

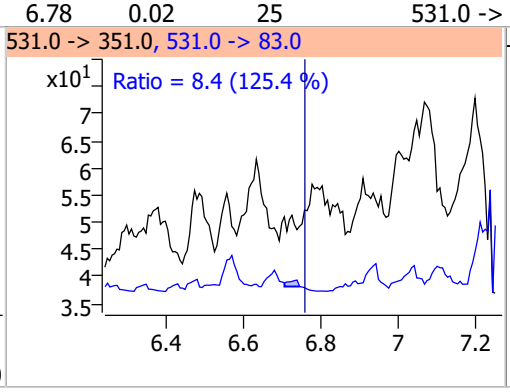


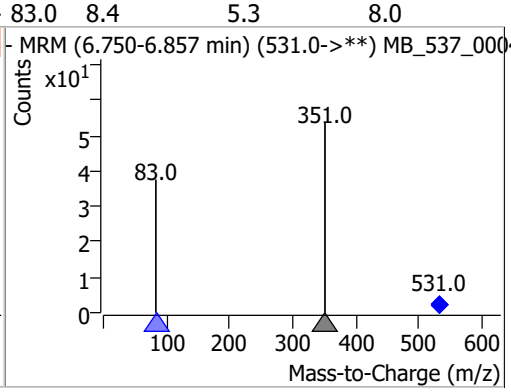




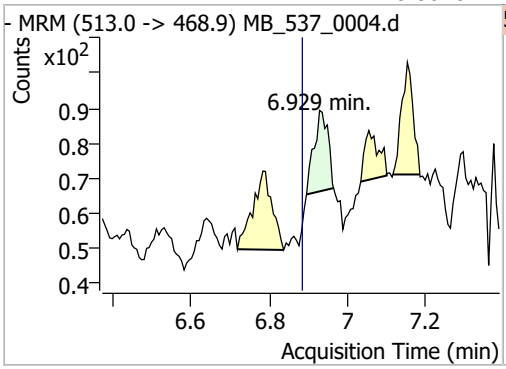
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0003	6.78	0.02	25	531.0 -> 83.0	8.4	5.3	8.0

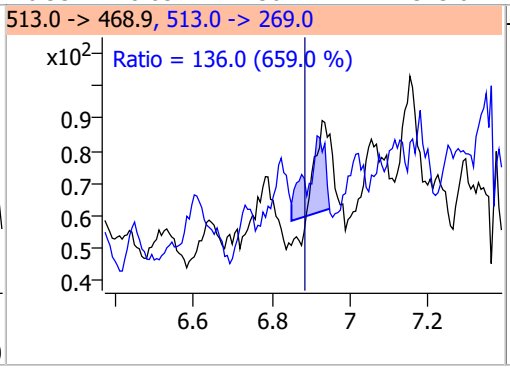


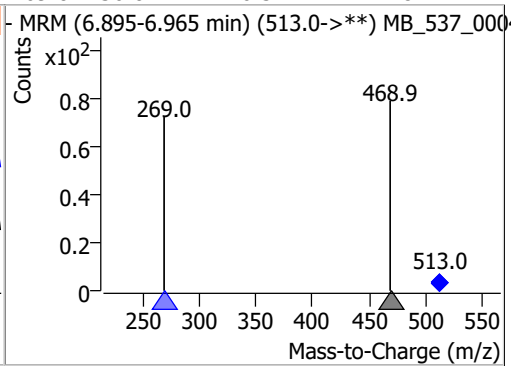




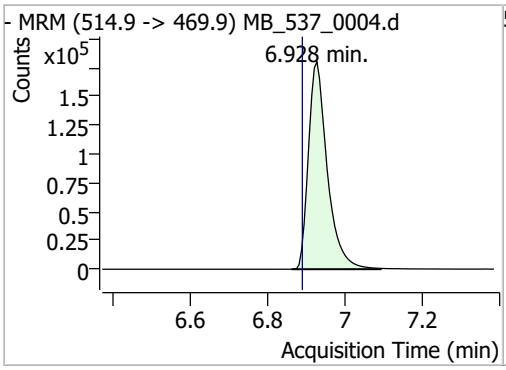
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0010	6.93	0.05	56	513.0 -> 269.0	136.0	16.5	24.8

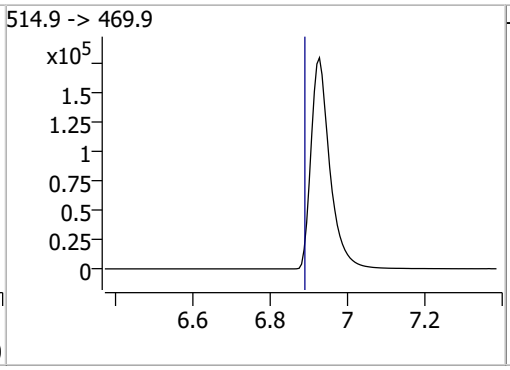


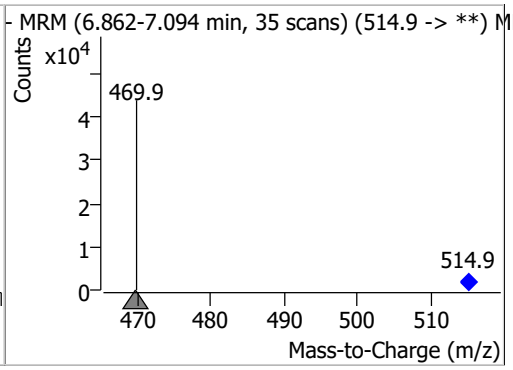




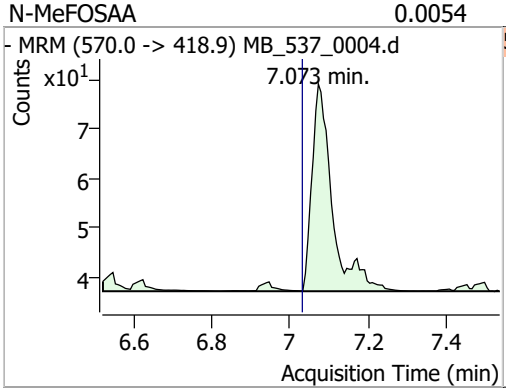
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	10.8637	6.93	0.04	610396				

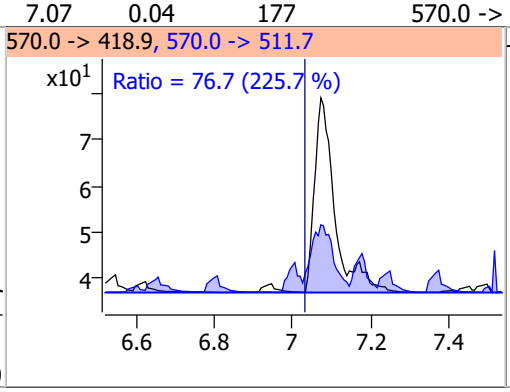


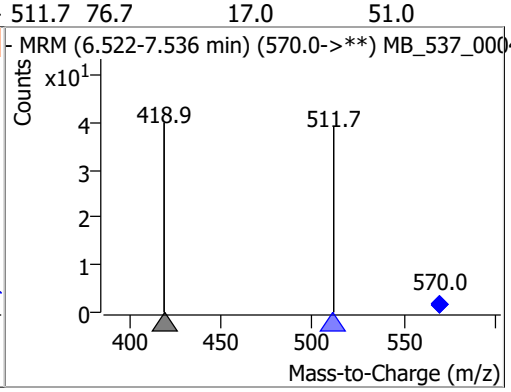




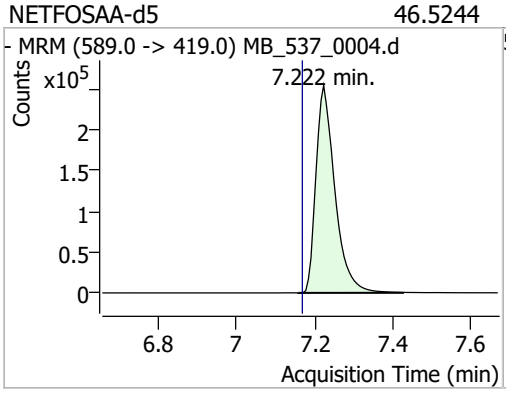
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0054	7.07	0.04	177	570.0 -> 511.7	76.7	17.0	51.0

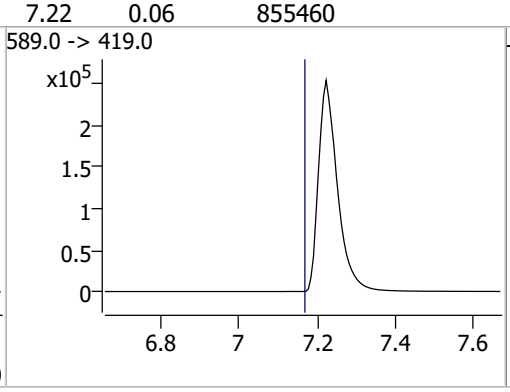


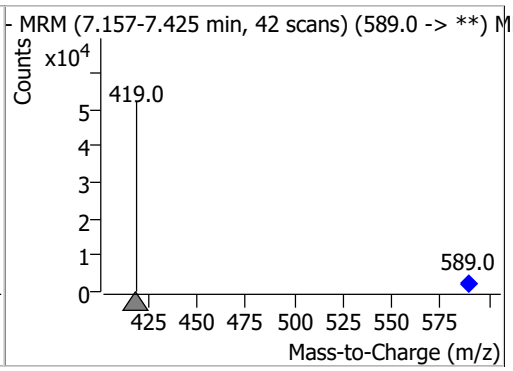




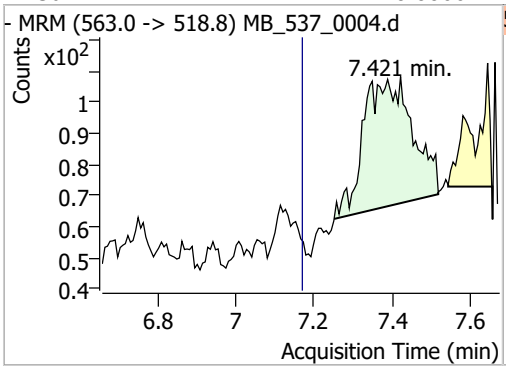
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	46.5244	7.22	0.06	855460				

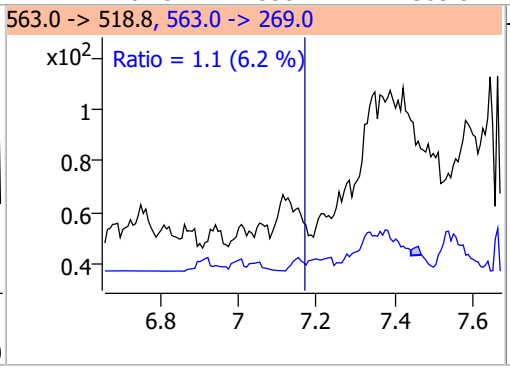


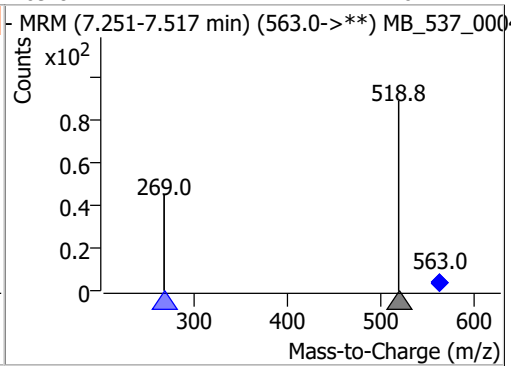




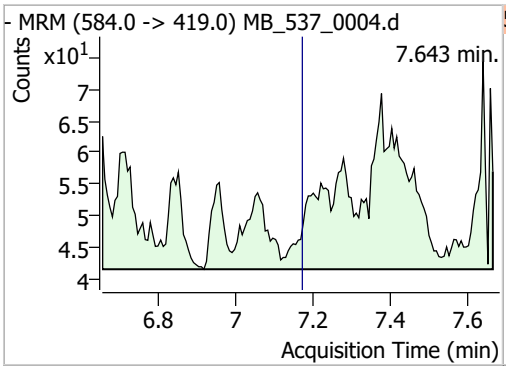
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0066	7.42	0.25	358	563.0 -> 269.0	1.1	14.4	21.6

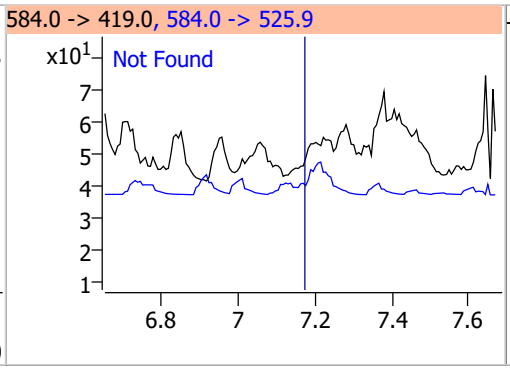


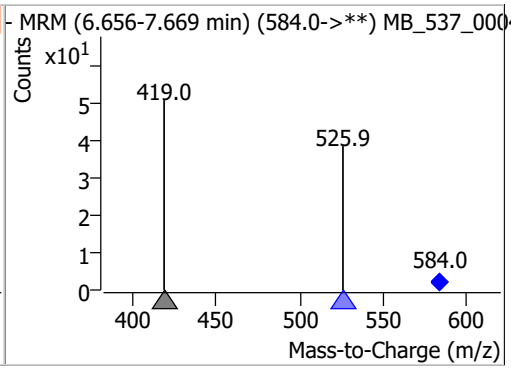




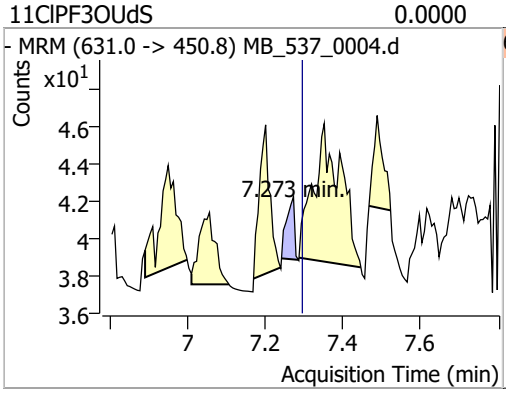
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0199	7.64	0.47	580	584.0 -> 525.9		40.4	121.1

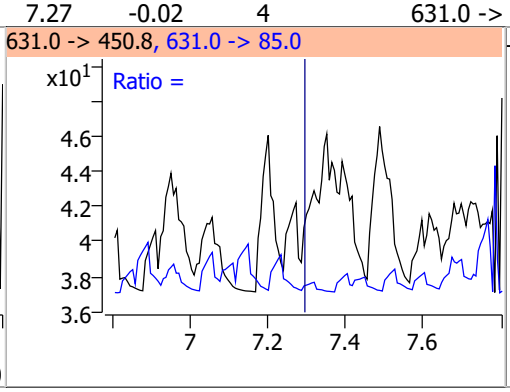


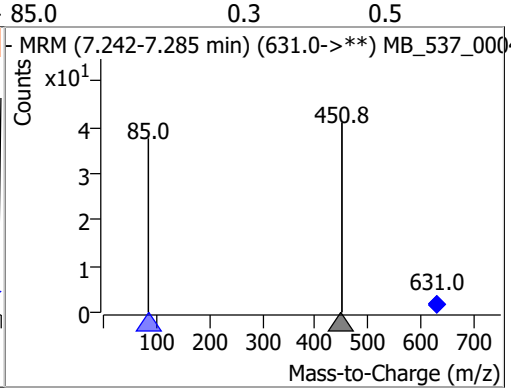




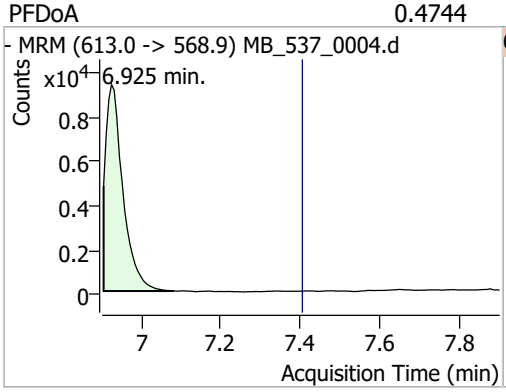
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0000	7.27	-0.02	4	631.0 -> 85.0		0.3	0.5

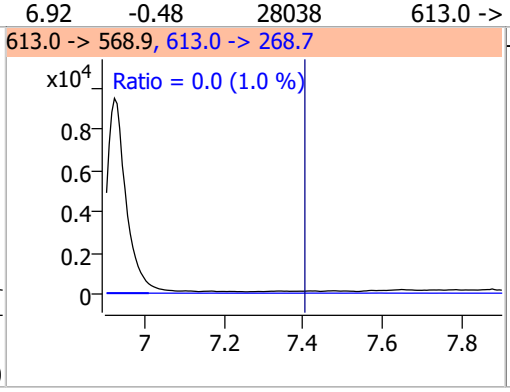


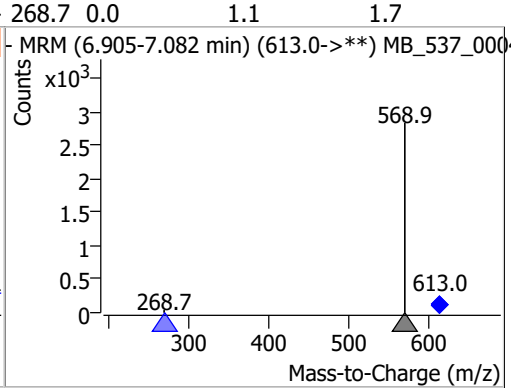




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.4744	6.92	-0.48	28038	613.0 -> 268.7	0.0	1.1	1.7

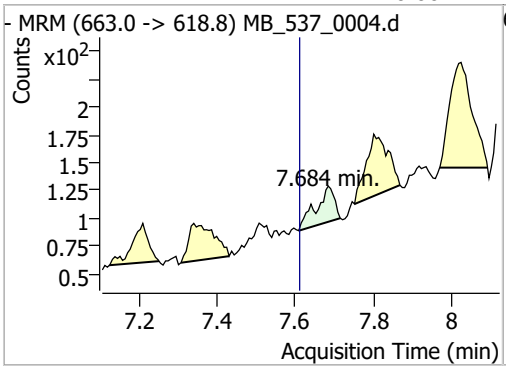


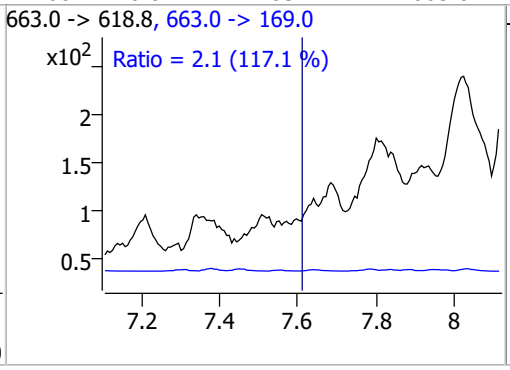


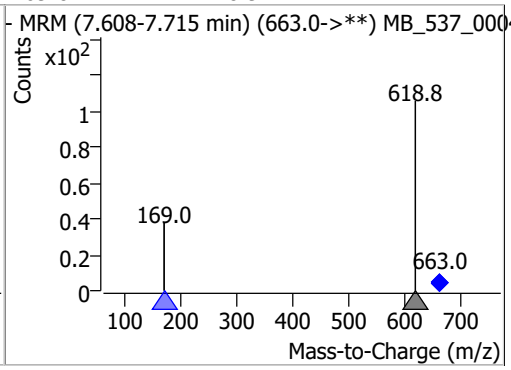


Quantitation Results Report

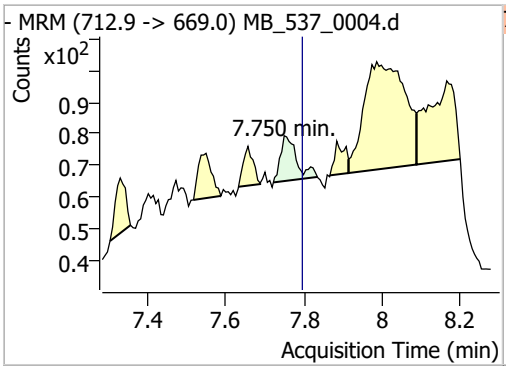
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0022	7.68	0.07	105	663.0 -> 169.0	2.1	0.9	2.7

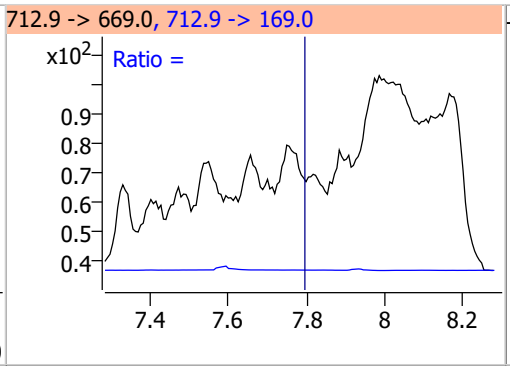


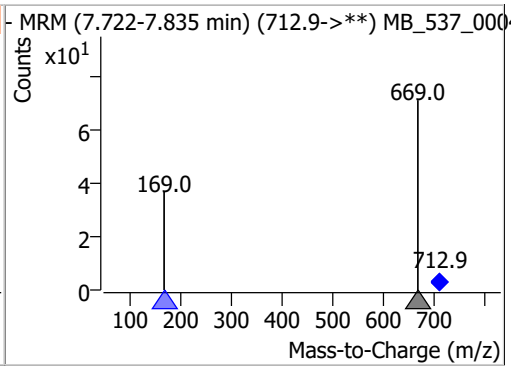




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0014	7.75	-0.04	40	712.9 -> 169.0		0.0	0.1







Quantitation Results Report

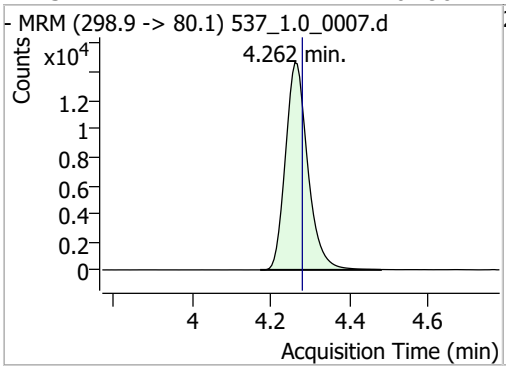
Agilent | Trusted Answers

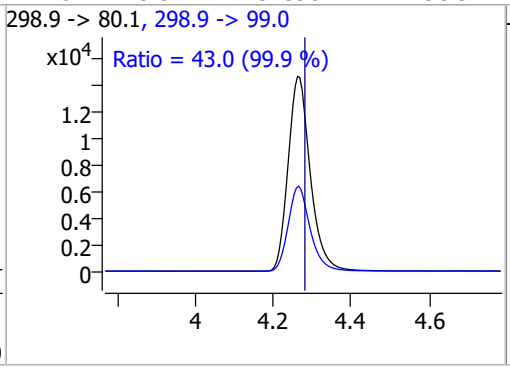
Data File	537_1.0_0007.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 7:19:17 AM
Sample Name	CAL2_537_1.0	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809_ICAL-537.batch.bin	Last Calib Update	8/10/2023 3:46:40 PM
Ref Library			

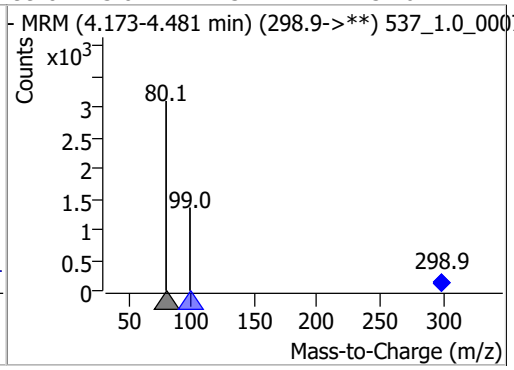
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.595	502.9 -> 80.1	861777	3.0000	ng/ml		0.023
13C2-PFOA	6.177	415.0 -> 370.0	1041838	1.0000	ng/ml		0.014
NMeFOSAA-d3	7.072	573.0 -> 418.9	1348712	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.997	314.9 -> 269.7	1053373	9.6814	ng/ml		-0.002
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 96.81%			
13C3-HFPO-DA	5.219	287.0 -> 169.0	21677	9.5909	ng/ml		-0.004
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 95.91%			
13C2-PFDA	6.922	514.9 -> 469.9	505130	8.9354	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 89.35%			
NETFOSAA-d5	7.222	589.0 -> 419.0	764967	47.0497	ng/ml		0.058
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 117.62%			
Target Compounds							QValue
PFBS	4.262	298.9 -> 80.1	57598	0.7981	ng/ml		100
PFHxA	4.992	313.0 -> 269.0	111639	0.8043	ng/ml		100
HFPO-DA	5.220	285.0 -> 169.1	2161	0.8395	ng/ml	#	93
PFHpA	5.676	362.9 -> 318.9	96682	0.8154	ng/ml		98
PFHxS	5.737	398.9 -> 79.9	37344	0.8418	ng/ml		95
NaDONA	5.756	377.0 -> 250.9	303495	0.7989	ng/ml		99
PFOA	6.178	413.0 -> 369.1	81808	0.8489	ng/ml		91
PFNA	6.577	463.0 -> 418.9	51782	0.8610	ng/ml	#	94
PFOS	6.589	498.9 -> 80.1	26684	0.8487	ng/ml		97
9Cl-PF3ONS	6.789	531.0 -> 351.0	75920	0.8075	ng/ml	#	95
PFDA	6.922	513.0 -> 468.9	42079	0.7701	ng/ml		99
N-MeFOSAA	7.079	570.0 -> 418.9	28691	0.9816	ng/ml		97
PFUdA	7.211	563.0 -> 518.8	41136	0.7541	ng/ml	#	90
N-EtFOSAA	7.223	584.0 -> 419.0	29060	1.1216	ng/ml		95
11ClPF3OUdS	7.352	631.0 -> 450.8	93640	0.8946	ng/ml	#	100
PFDoA	7.469	613.0 -> 568.9	45616	0.7670	ng/ml	#	99
PFTrDA	7.690	663.0 -> 618.8	38529	0.8178	ng/ml		99
PFTA	7.884	712.9 -> 669.0	22969	0.8031	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

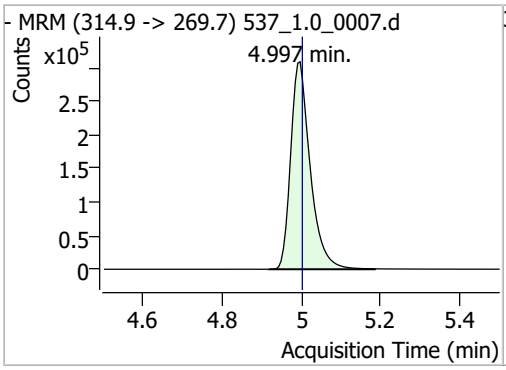
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.7981	4.26	-0.02	57598	298.9 -> 99.0	43.0	34.4	51.6

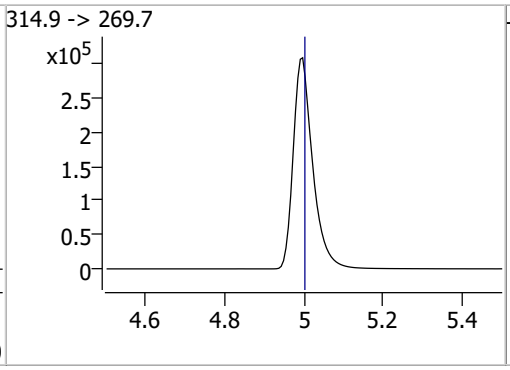


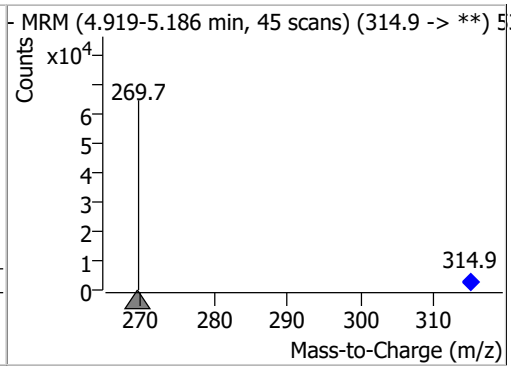




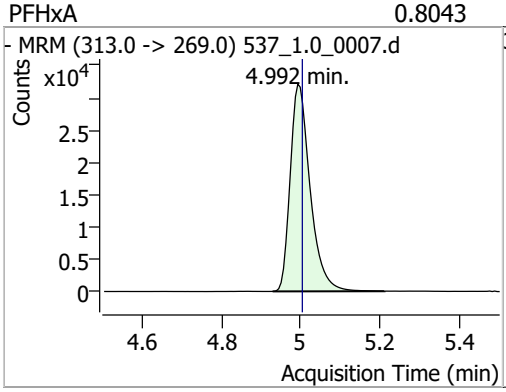
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	9.6814	5.00	0.00	1053373				

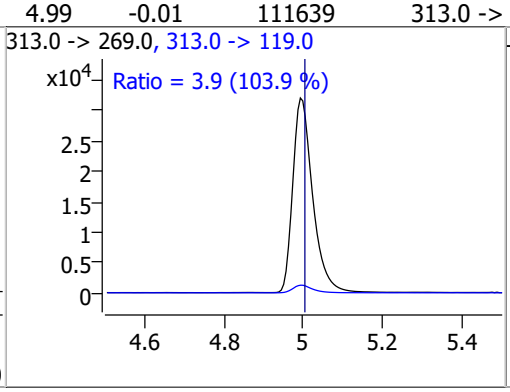


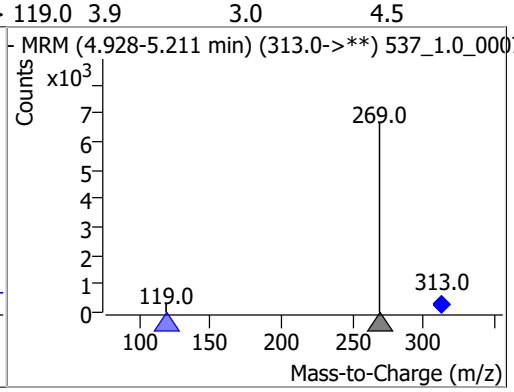




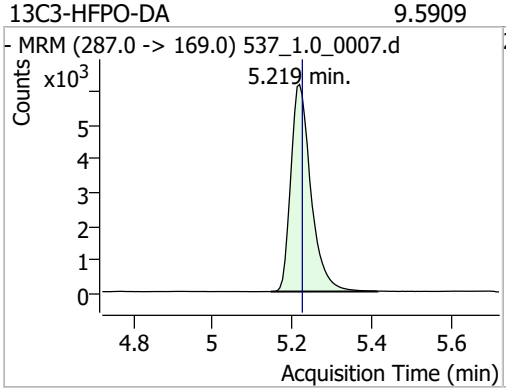
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.8043	4.99	-0.01	111639	313.0 -> 119.0	3.9	3.0	4.5

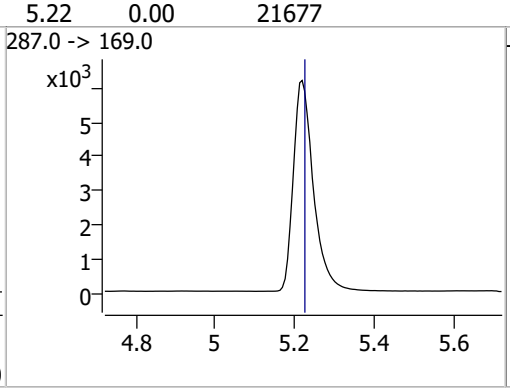


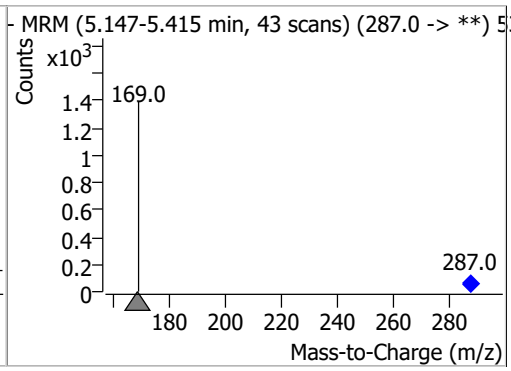




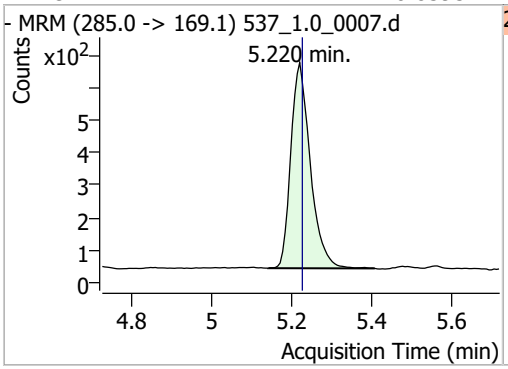
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	9.5909	5.22	0.00	21677				

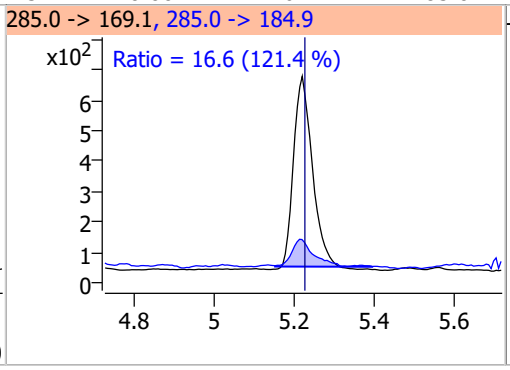


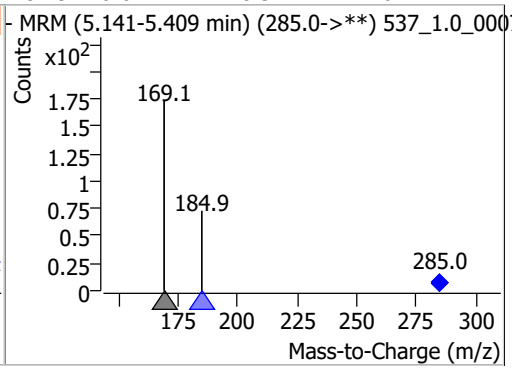




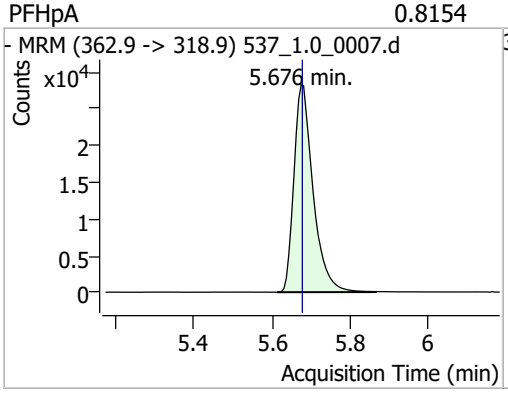
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.8395	5.22	0.00	2161	285.0 -> 184.9	16.6	10.9	16.4

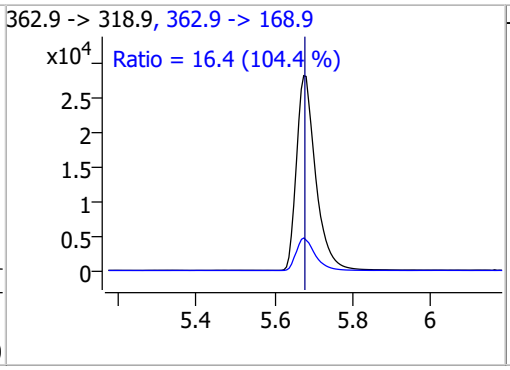


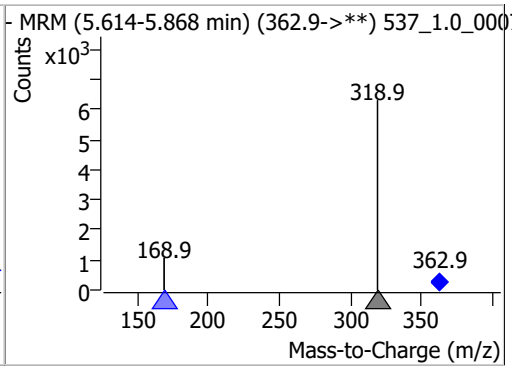




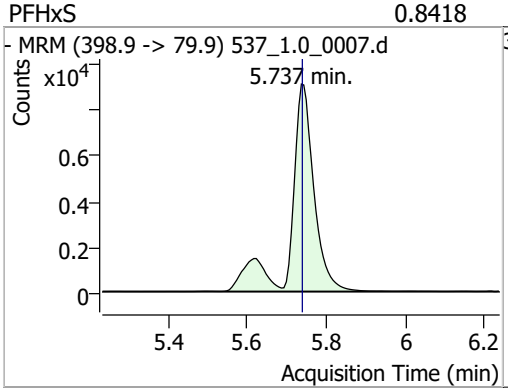
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.8154	5.68	0.00	96682	362.9 -> 168.9	16.4	12.6	18.9

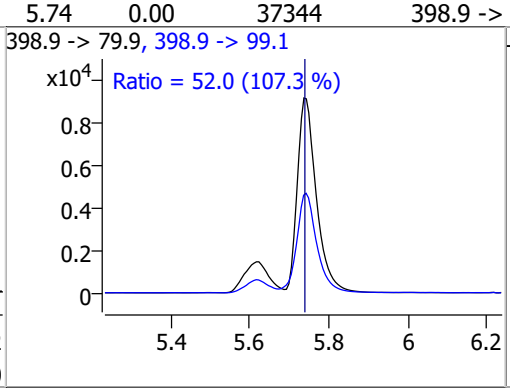


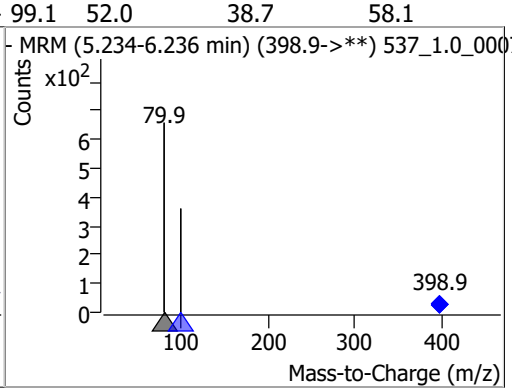




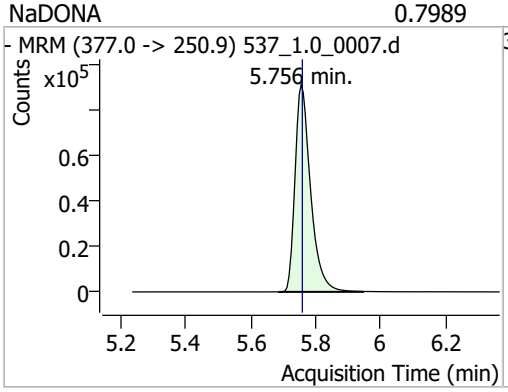
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.8418	5.74	0.00	37344	398.9 -> 99.1	52.0	38.7	58.1

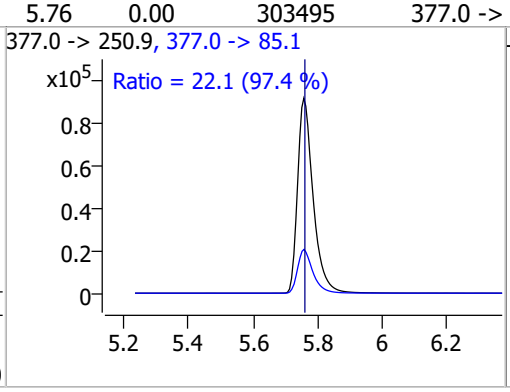


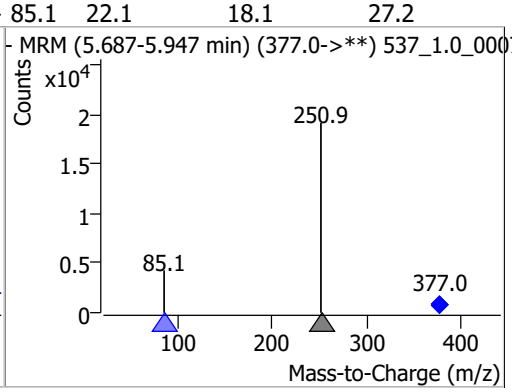




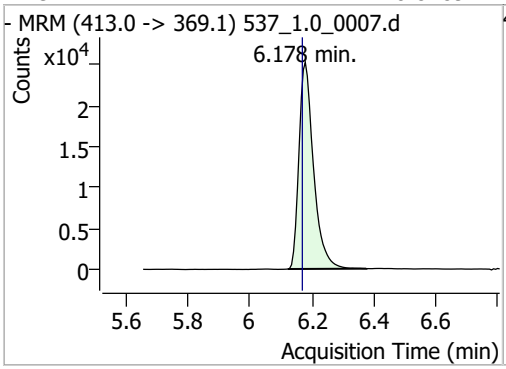
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.7989	5.76	0.00	303495	377.0 -> 85.1	22.1	18.1	27.2

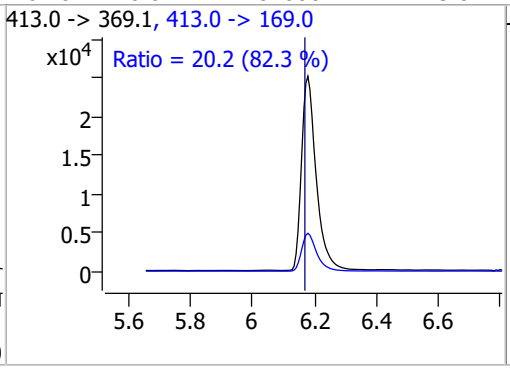


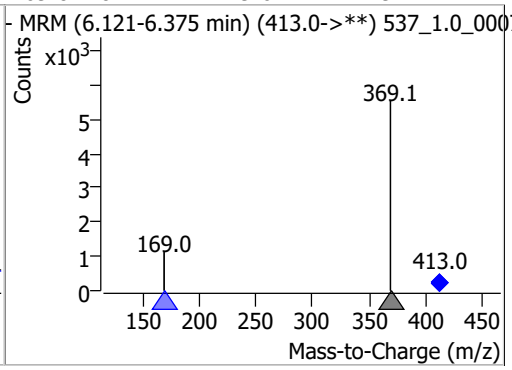




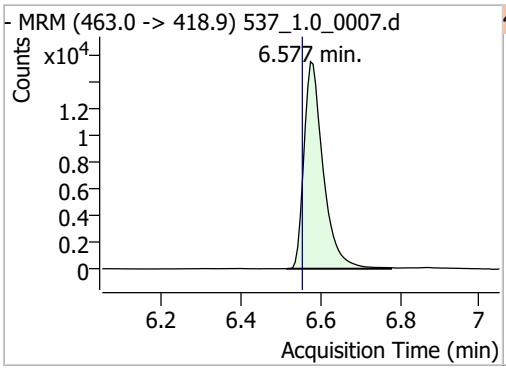
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.8489	6.18	0.01	81808	413.0 -> 169.0	20.2	19.6	29.4

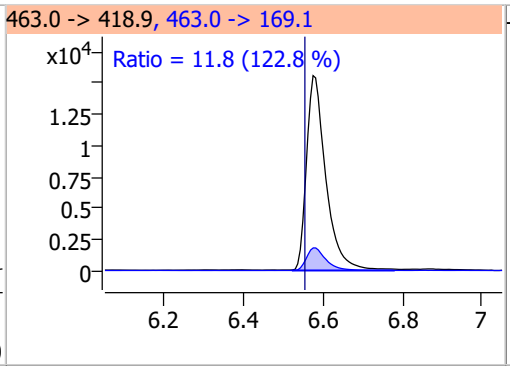


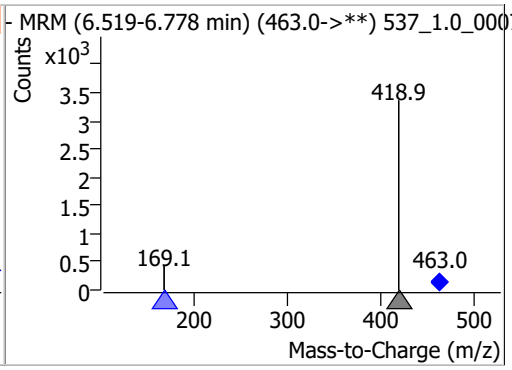




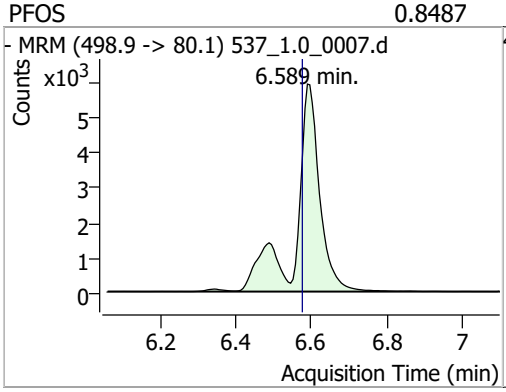
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.8610	6.58	0.02	51782	463.0 -> 169.1	11.8	7.7	11.5

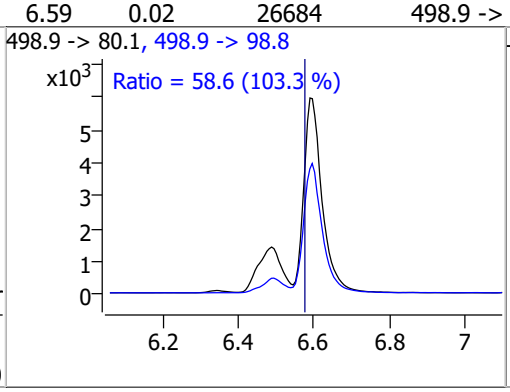


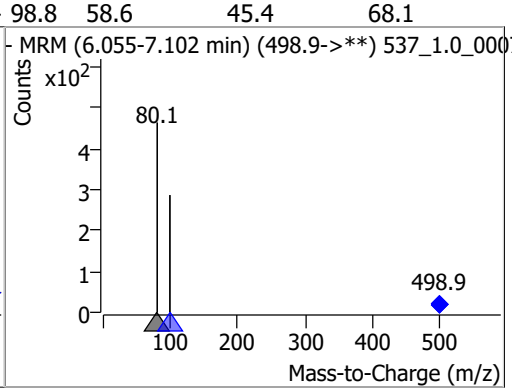




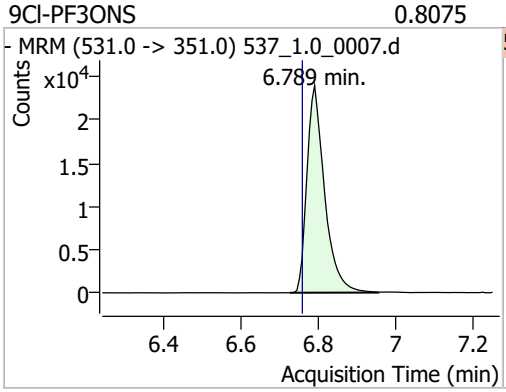
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.8487	6.59	0.02	26684	498.9 -> 98.8	58.6	45.4	68.1

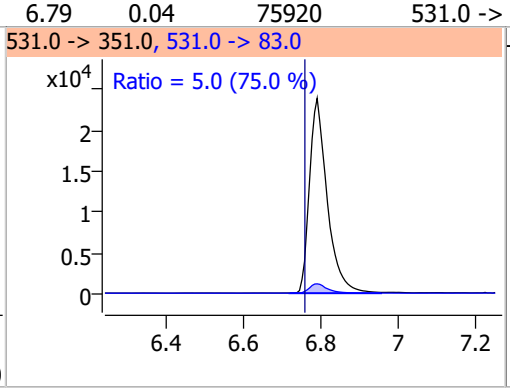


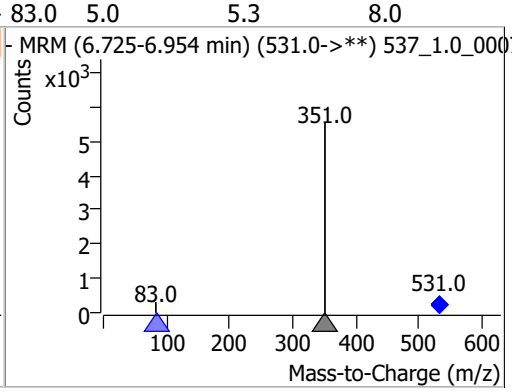




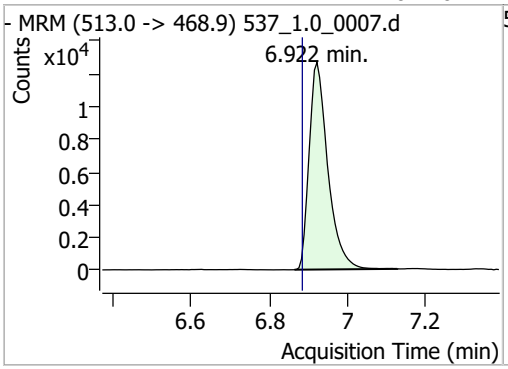
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.8075	6.79	0.04	75920	531.0 -> 83.0	5.0	5.3	8.0

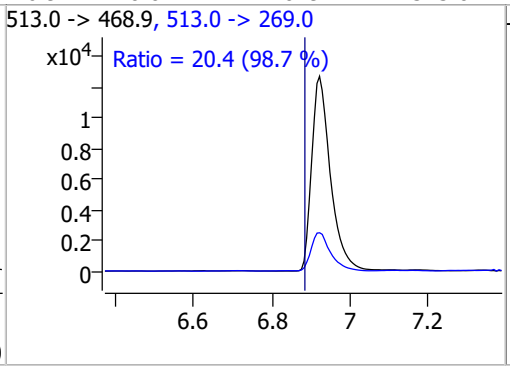


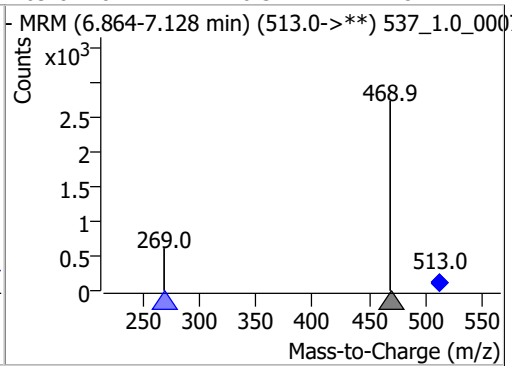




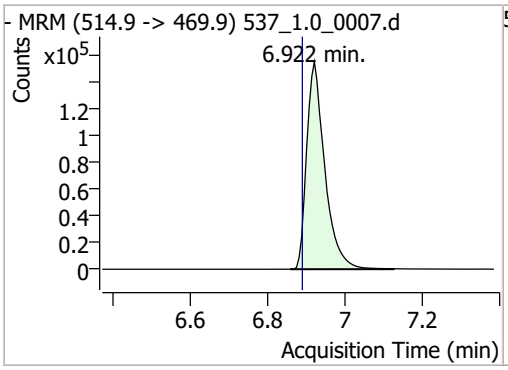
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.7701	6.92	0.04	42079	513.0 -> 269.0	20.4	16.5	24.8

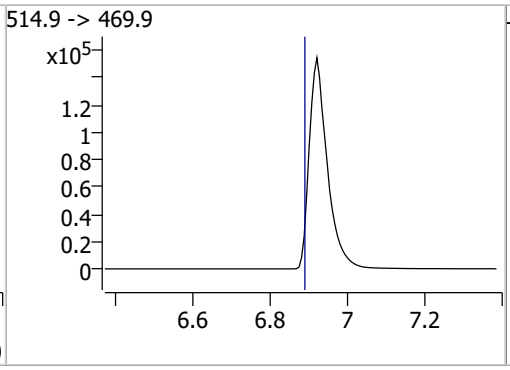


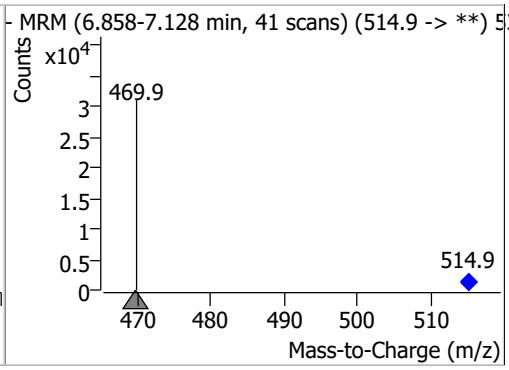




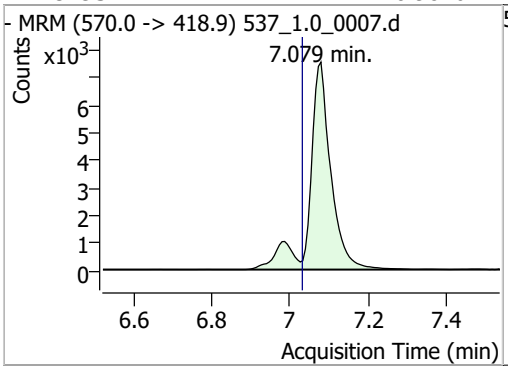
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	8.9354	6.92	0.03	505130				

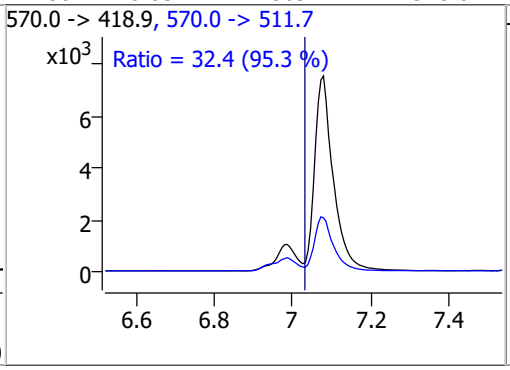


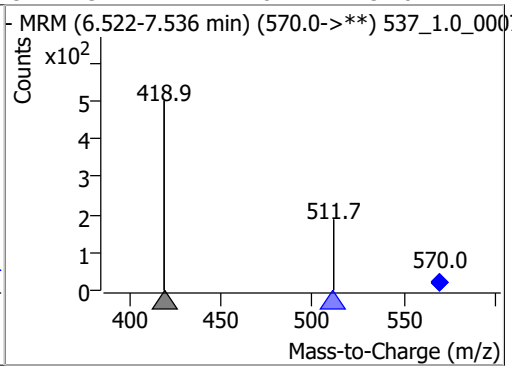




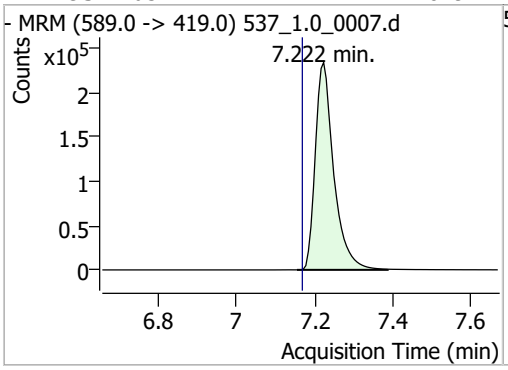
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.9816	7.08	0.05	28691	570.0 -> 511.7	32.4	17.0	51.0

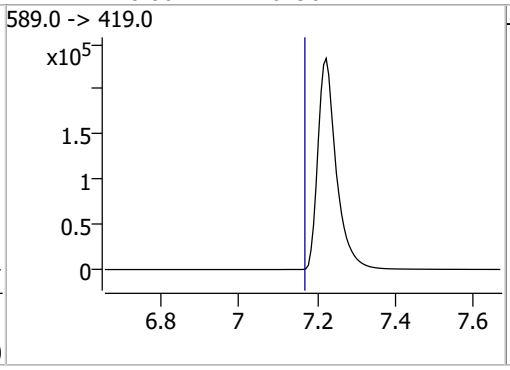


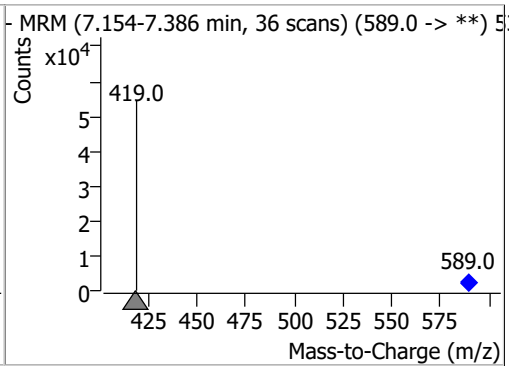




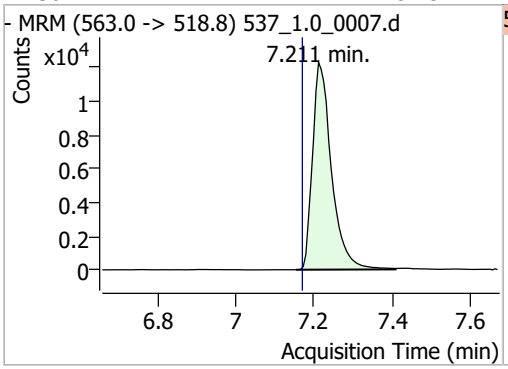
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	47.0497	7.22	0.06	764967				

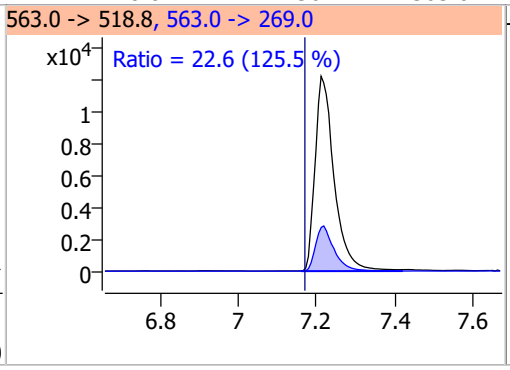


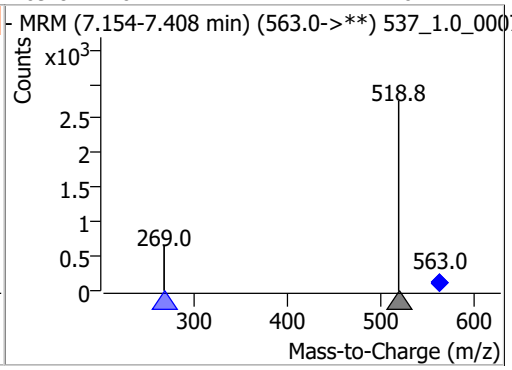




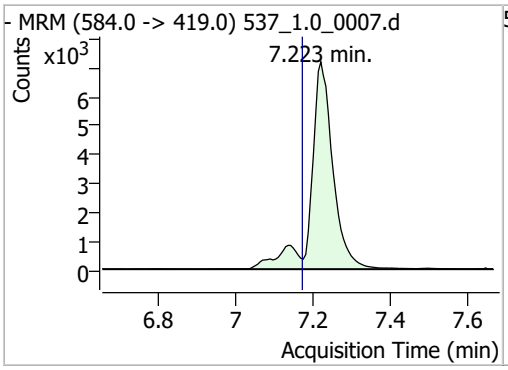
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.7541	7.21	0.04	41136	563.0 -> 269.0	22.6	14.4	21.6

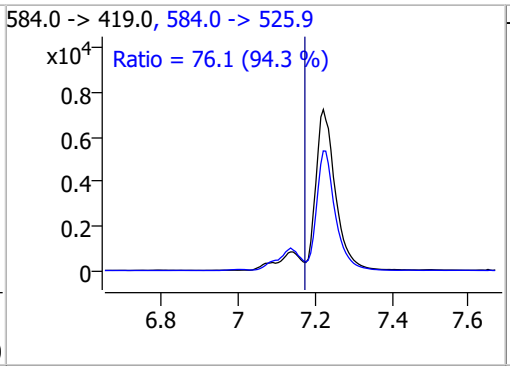


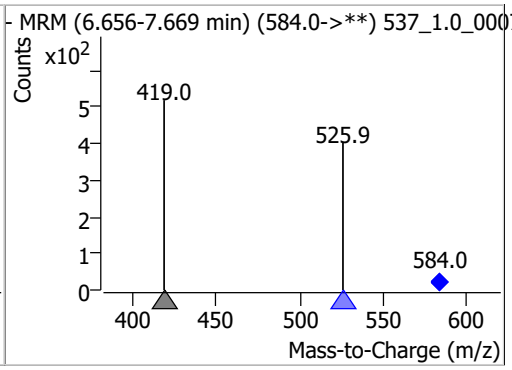




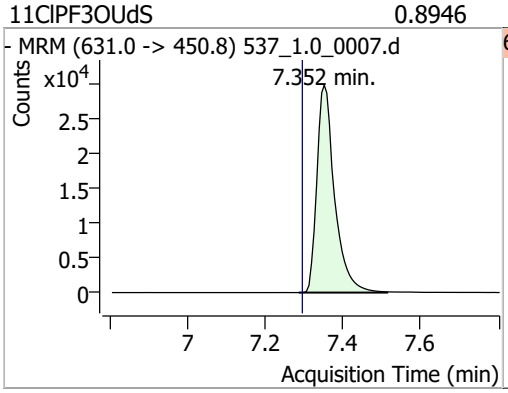
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	1.1216	7.22	0.05	29060	584.0 -> 525.9	76.1	40.4	121.1

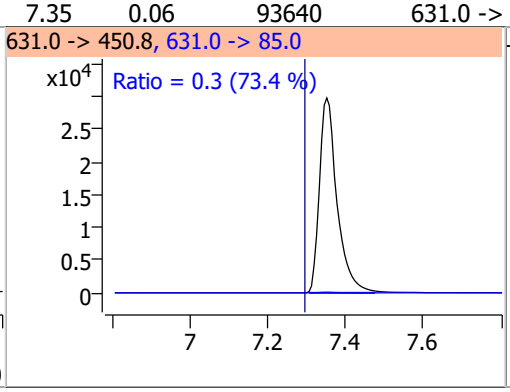


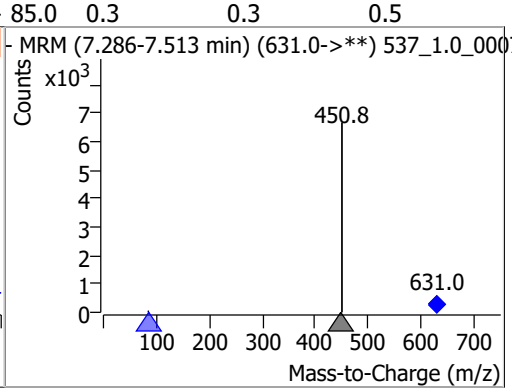




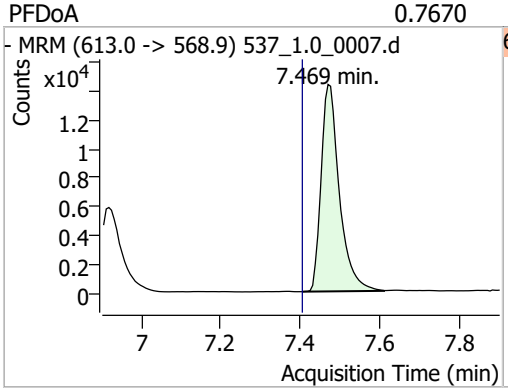
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.8946	7.35	0.06	93640	631.0 -> 85.0	0.3	0.3	0.5

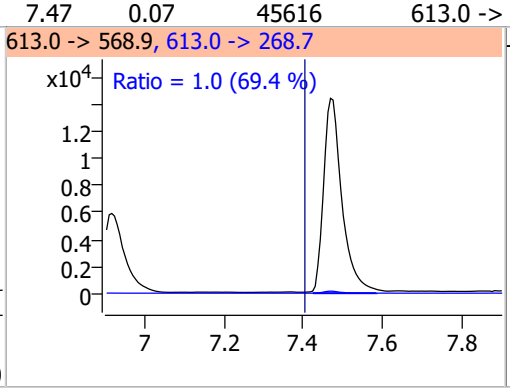


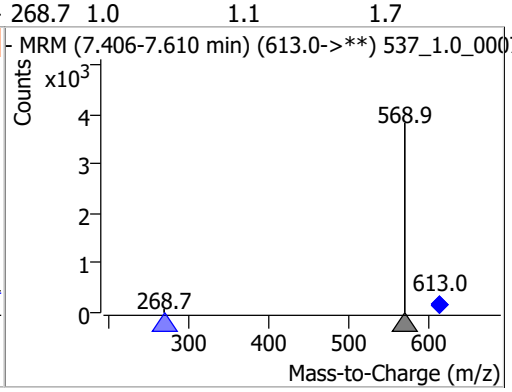




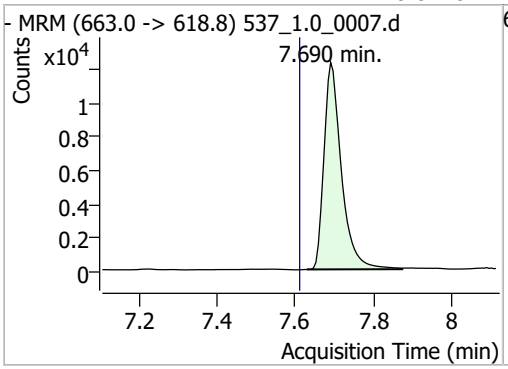
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.7670	7.47	0.07	45616	613.0 -> 268.7	1.0	1.1	1.7

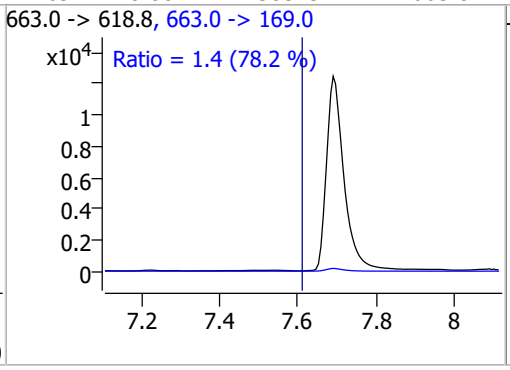


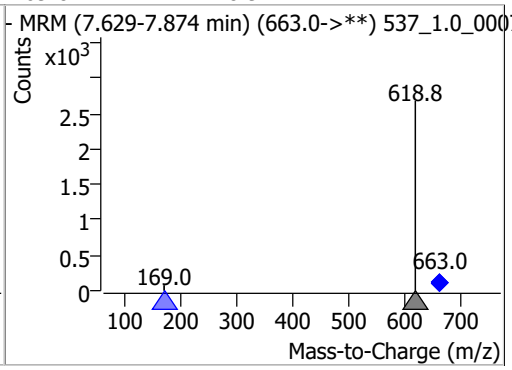




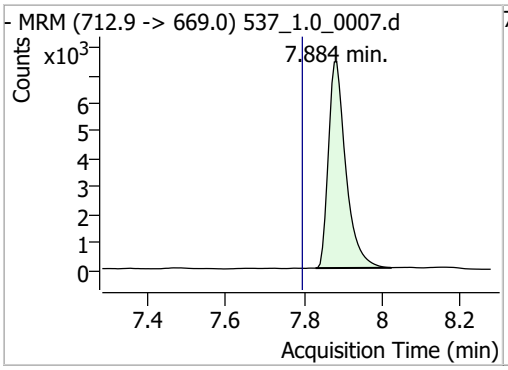
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.8178	7.69	0.08	38529	663.0 -> 169.0	1.4	0.9	2.7

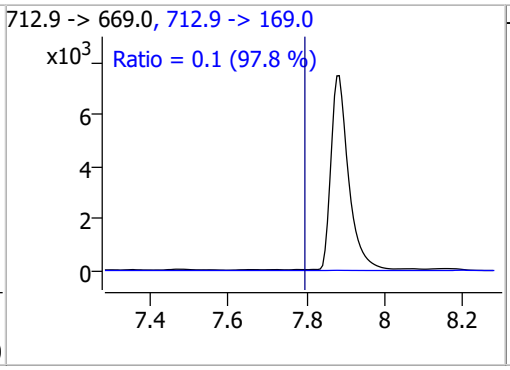


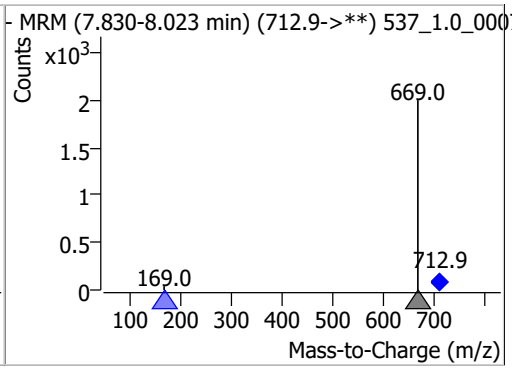




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.8031	7.88	0.09	22969	712.9 -> 169.0	0.1	0.0	0.1







Quantitation Results Report

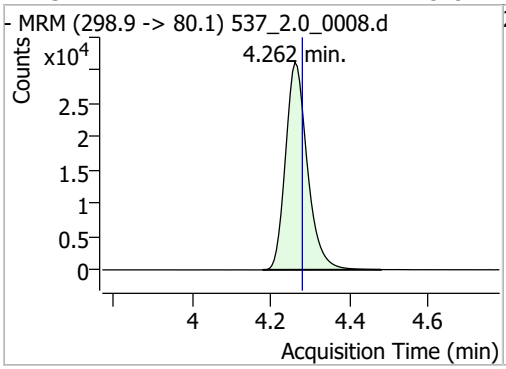
Agilent | Trusted Answers

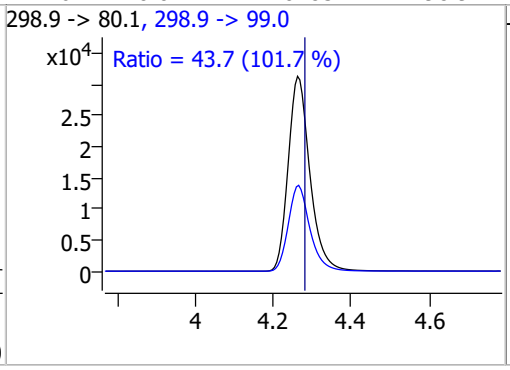
Data File	537_2.0_0008.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 7:31:59 AM
Sample Name	CAL3_537_2.0	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809_ICAL-537.batch.bin	Last Calib Update	8/10/2023 3:46:40 PM
Ref Library			

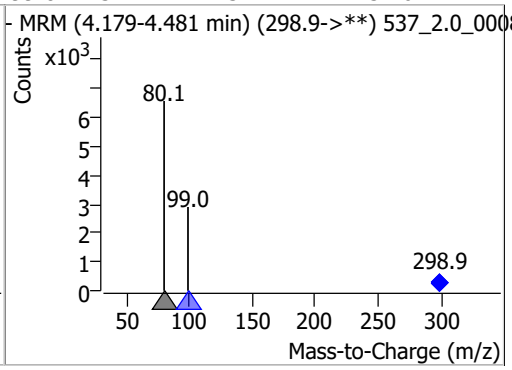
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	827829	3.0000	ng/ml		0.017
13C2-PFOA	6.177	415.0 -> 370.0	1057335	1.0000	ng/ml		0.014
NMeFOSAA-d3	7.072	573.0 -> 418.9	1747353	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.991	314.9 -> 269.7	1026605	9.2971	ng/ml		-0.008
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 92.97%			
13C3-HFPO-DA	5.213	287.0 -> 169.0	21490	9.3688	ng/ml		-0.010
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 93.69%			
13C2-PFDA	6.922	514.9 -> 469.9	586001	10.2141	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 102.14%			
NETFOSAA-d5	7.222	589.0 -> 419.0	823527	39.0958	ng/ml		0.058
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 97.74%			
Target Compounds							QValue
PFBS	4.262	298.9 -> 80.1	120185	1.7329	ng/ml		99
PFHxA	4.992	313.0 -> 269.0	230448	1.6360	ng/ml		100
HFPO-DA	5.214	285.0 -> 169.1	4189	1.6006	ng/ml	#	87
PFHpA	5.676	362.9 -> 318.9	210532	1.7495	ng/ml		99
PFHxS	5.737	398.9 -> 79.9	77103	1.8029	ng/ml		95
NaDONA	5.756	377.0 -> 250.9	607796	1.5691	ng/ml		97
PFOA	6.178	413.0 -> 369.1	164922	1.6863	ng/ml		93
PFNA	6.577	463.0 -> 418.9	107321	1.7562	ng/ml		96
PFOS	6.589	498.9 -> 80.1	57960	1.9132	ng/ml		94
9Cl-PF3ONS	6.789	531.0 -> 351.0	159135	1.7553	ng/ml		96
PFDA	6.922	513.0 -> 468.9	104163	1.8707	ng/ml		99
N-MeFOSAA	7.073	570.0 -> 418.9	74275	1.9500	ng/ml		90
PFUdA	7.217	563.0 -> 518.8	105489	1.9054	ng/ml		97
N-EtFOSAA	7.223	584.0 -> 419.0	56494	1.6790	ng/ml		97
11ClPF3OUdS	7.352	631.0 -> 450.8	197594	1.9474	ng/ml	#	100
PFDoA	7.469	613.0 -> 568.9	92119	1.5261	ng/ml	#	99
PFTrDA	7.690	663.0 -> 618.8	76101	1.5865	ng/ml		100
PFTA	7.878	712.9 -> 669.0	49638	1.7102	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

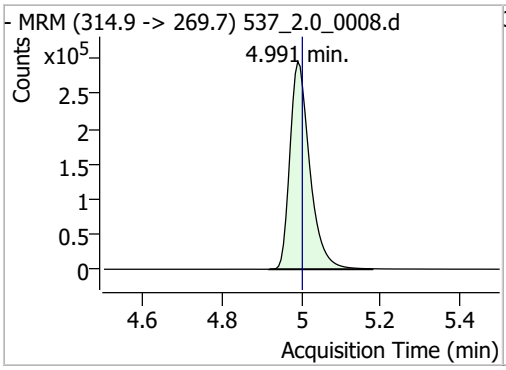
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	1.7329	4.26	-0.02	120185	298.9 -> 99.0	43.7	34.4	51.6

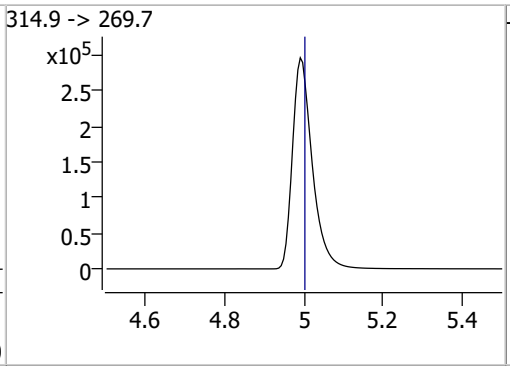


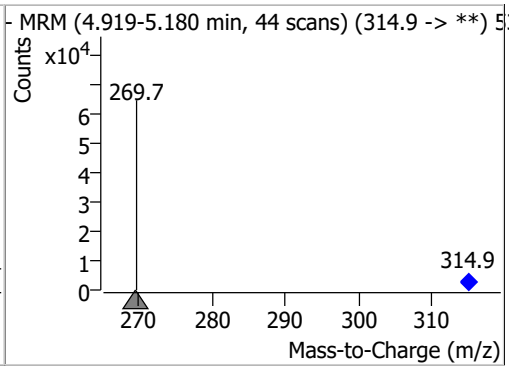




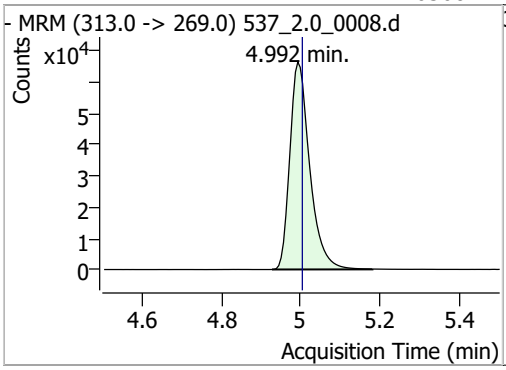
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	9.2971	4.99	-0.01	1026605				

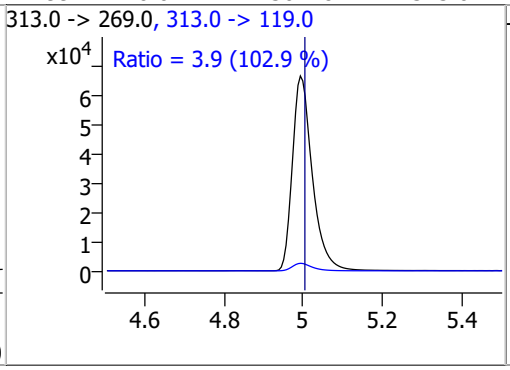


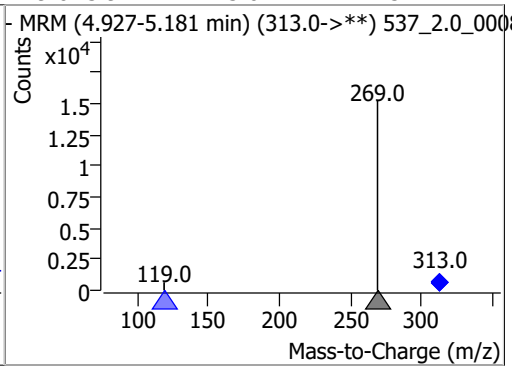




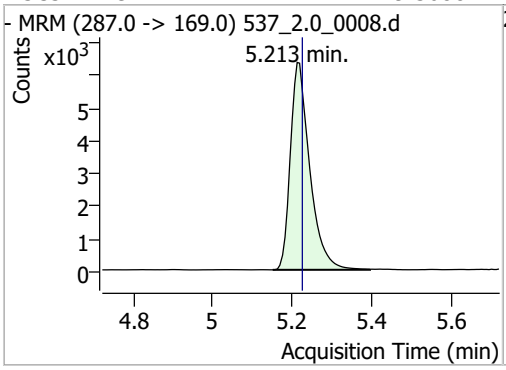
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	1.6360	4.99	-0.01	230448	313.0 -> 119.0	3.9	3.0	4.5

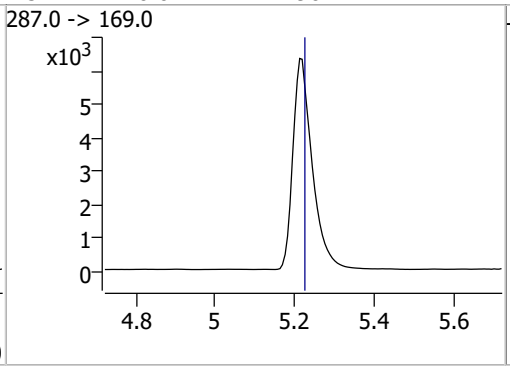


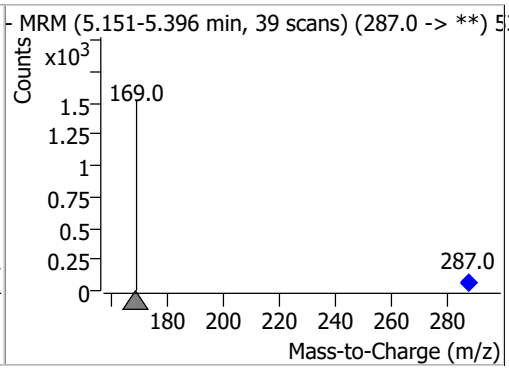




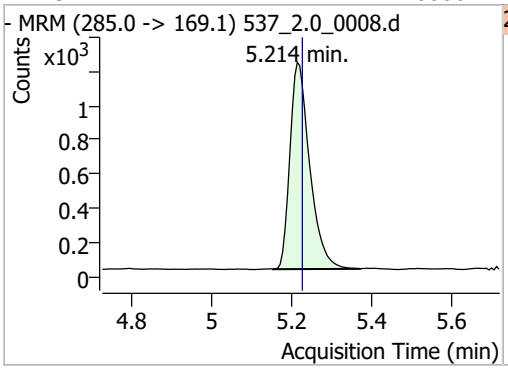
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	9.3688	5.21	-0.01	21490				

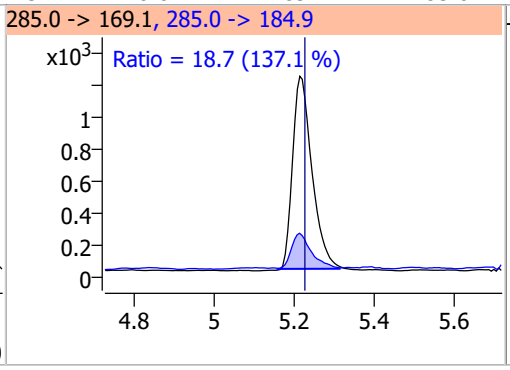


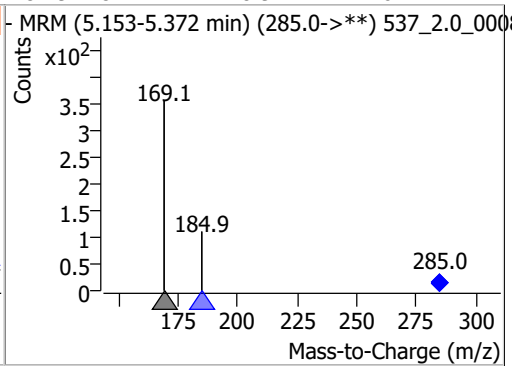




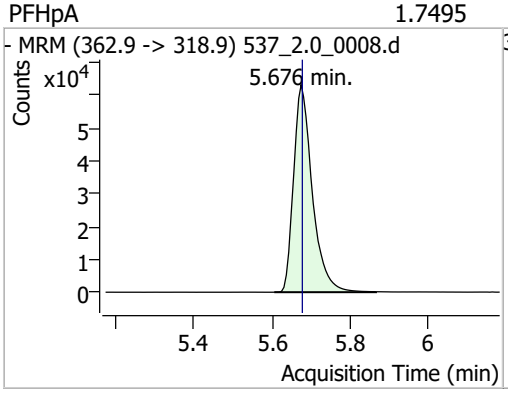
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	1.6006	5.21	-0.01	4189	285.0 -> 184.9	18.7	10.9	16.4

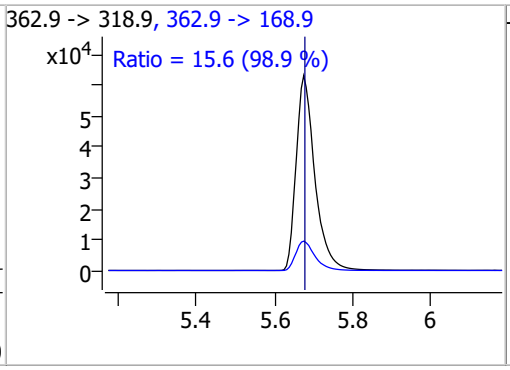


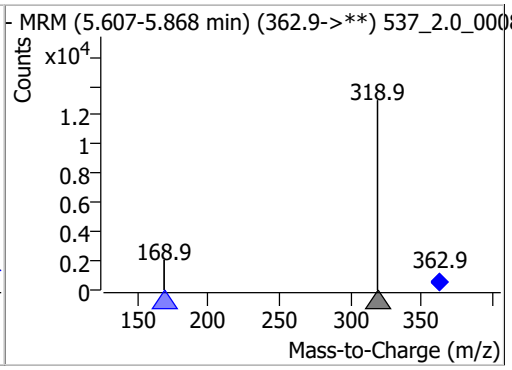




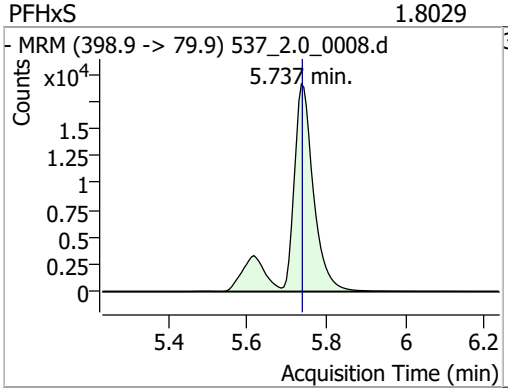
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	1.7495	5.68	0.00	210532	362.9 -> 168.9	15.6	12.6	18.9

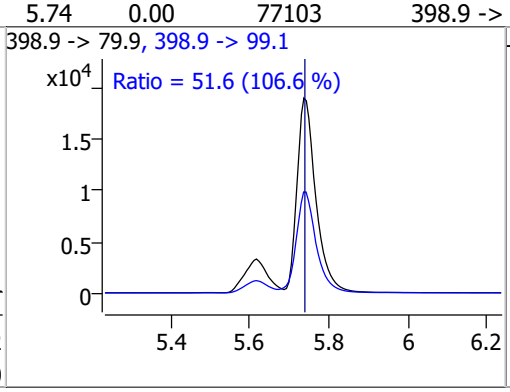


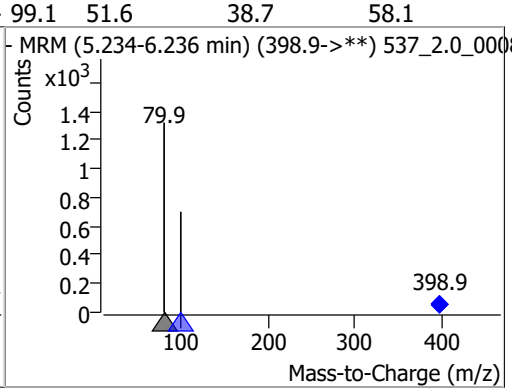




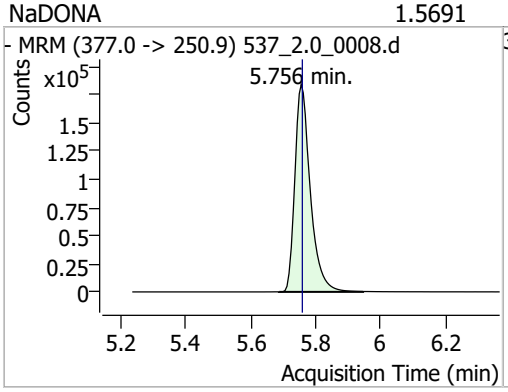
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	1.8029	5.74	0.00	77103	398.9 -> 99.1	51.6	38.7	58.1

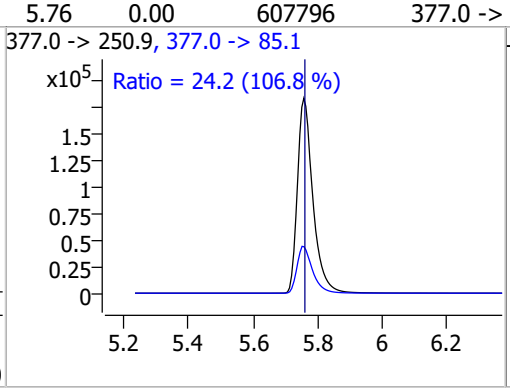


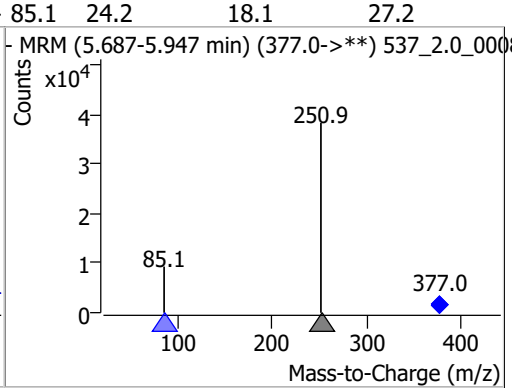




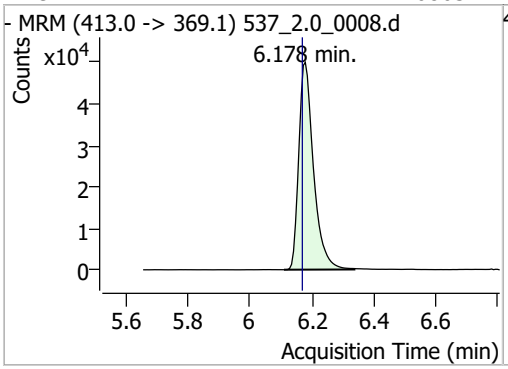
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	1.5691	5.76	0.00	607796	377.0 -> 85.1	24.2	18.1	27.2

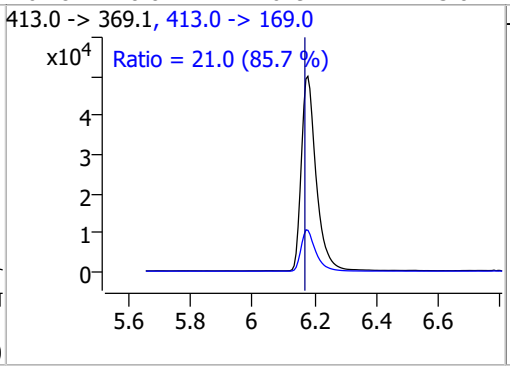


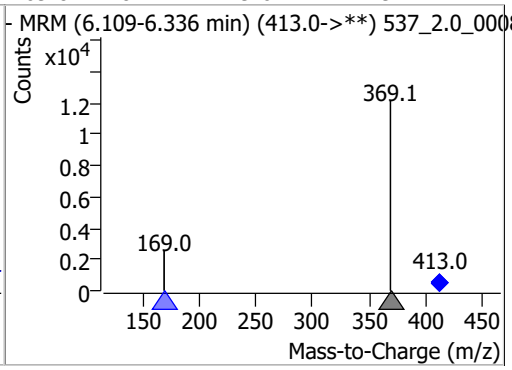




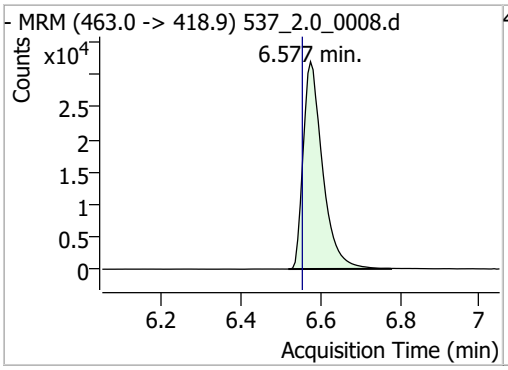
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	1.6863	6.18	0.01	164922	413.0 -> 169.0	21.0	19.6	29.4

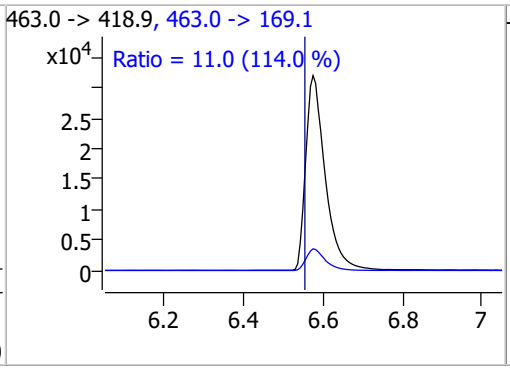


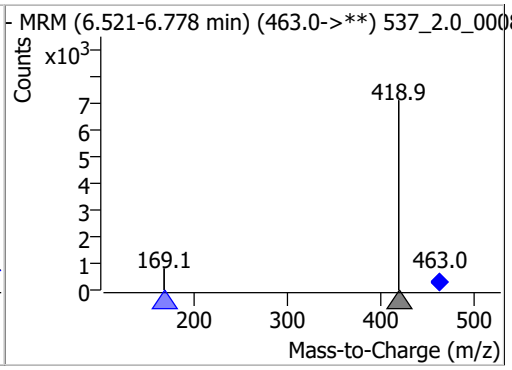




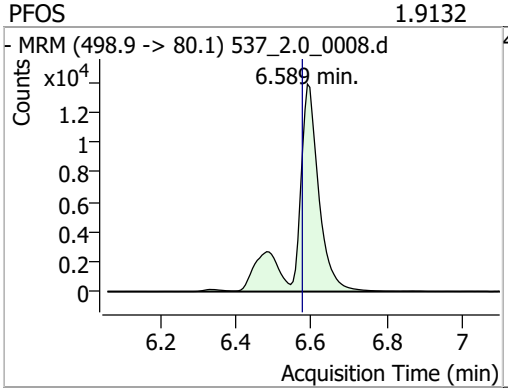
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	1.7562	6.58	0.02	107321	463.0 -> 169.1	11.0	7.7	11.5

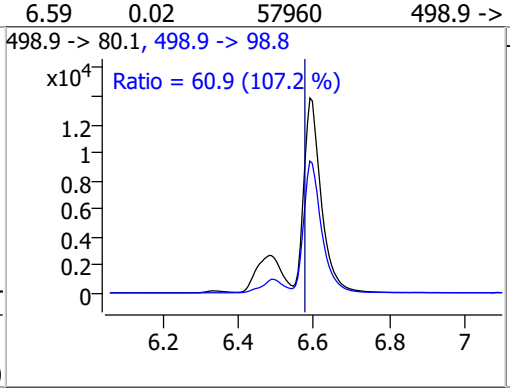


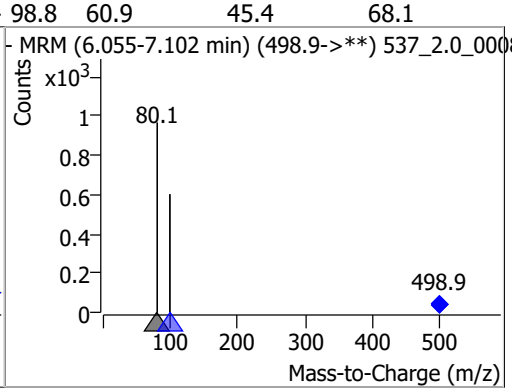




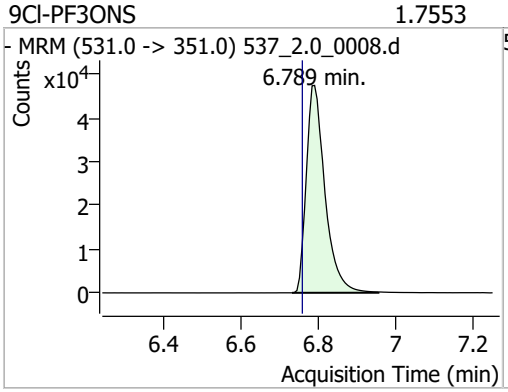
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	1.9132	6.59	0.02	57960	498.9 -> 98.8	60.9	45.4	68.1

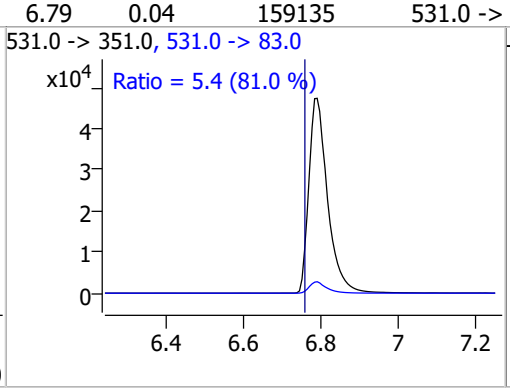


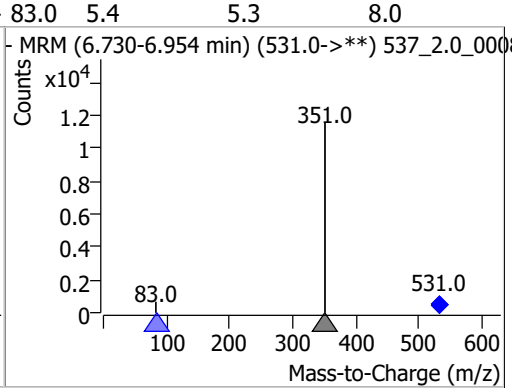




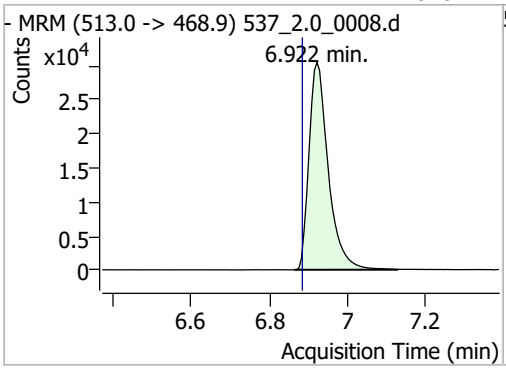
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	1.7553	6.79	0.04	159135	531.0 -> 83.0	5.4	5.3	8.0

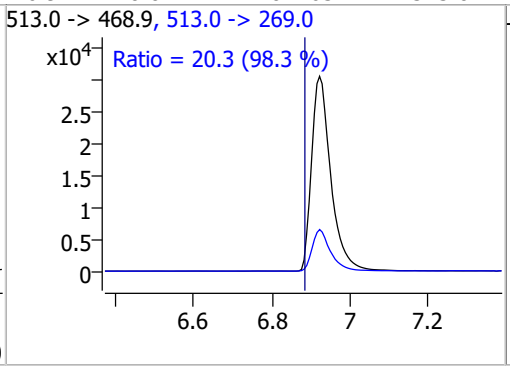


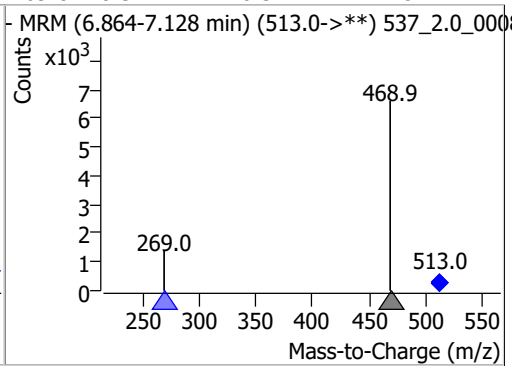




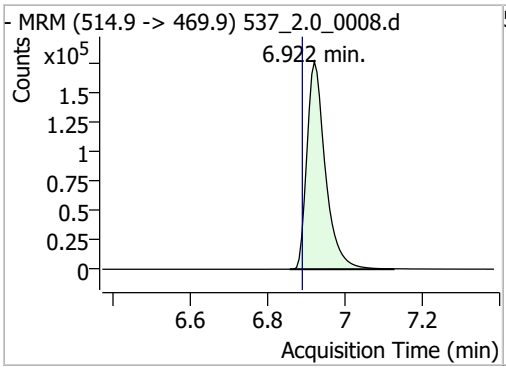
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	1.8707	6.92	0.04	104163	513.0 -> 269.0	20.3	16.5	24.8

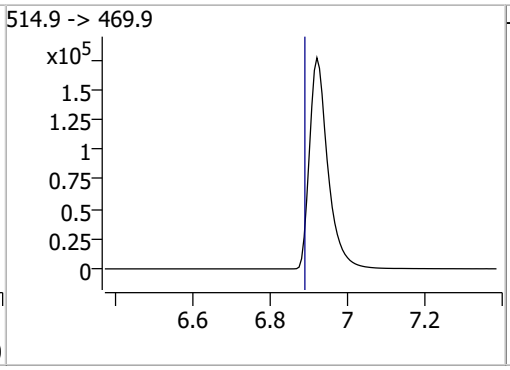


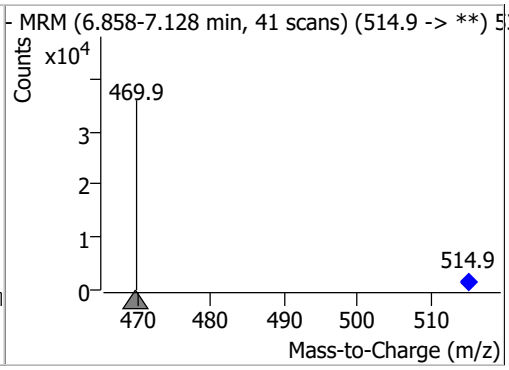




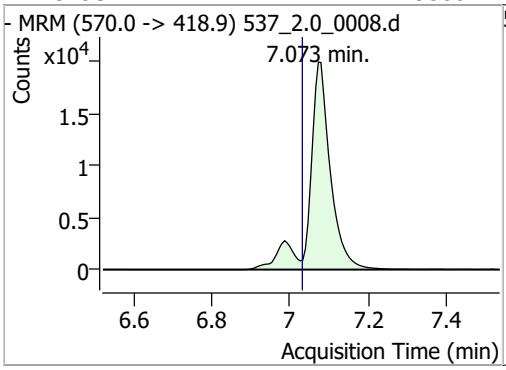
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	10.2141	6.92	0.03	586001				

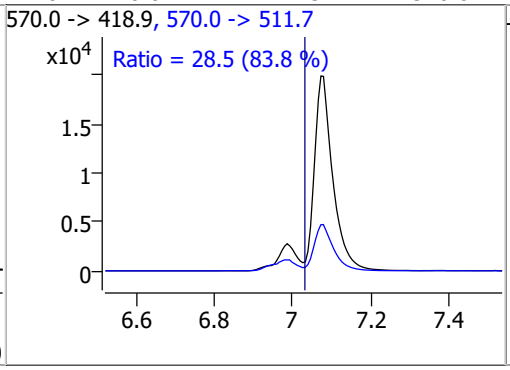


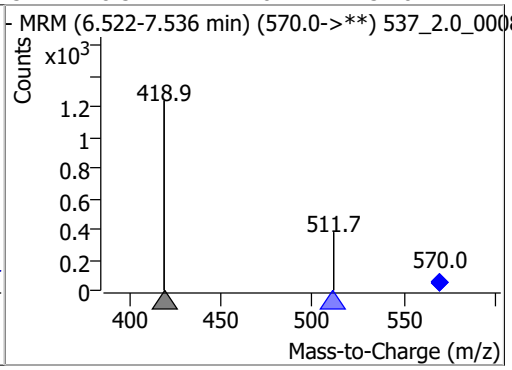




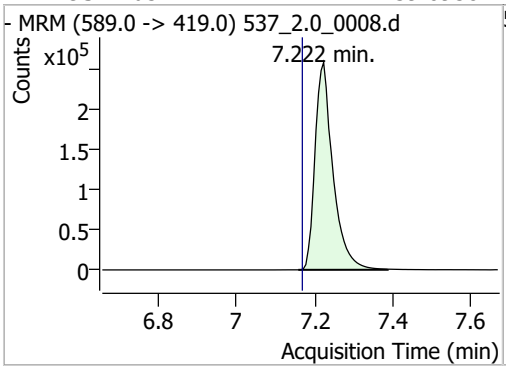
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	1.9500	7.07	0.04	74275	570.0 -> 511.7	28.5	17.0	51.0

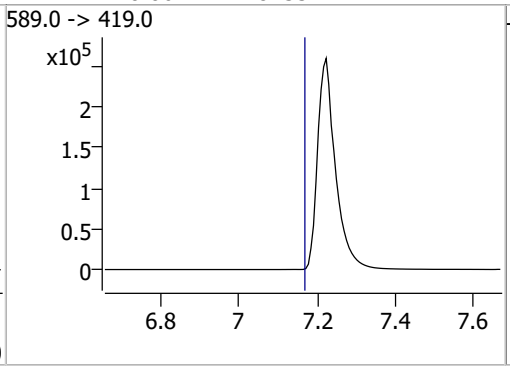


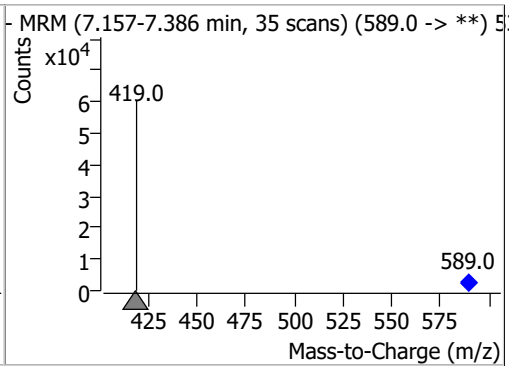




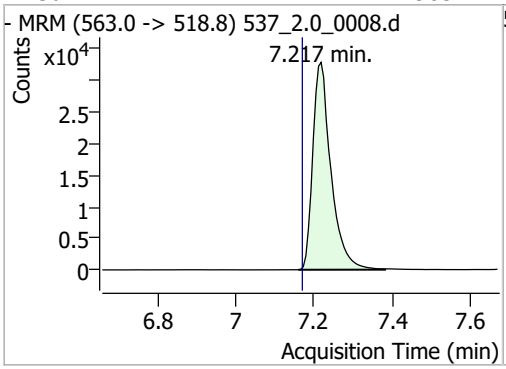
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	39.0958	7.22	0.06	823527				

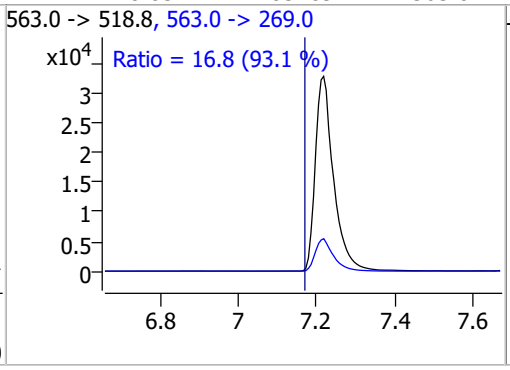


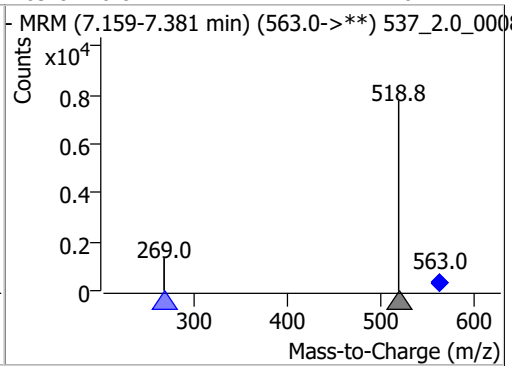




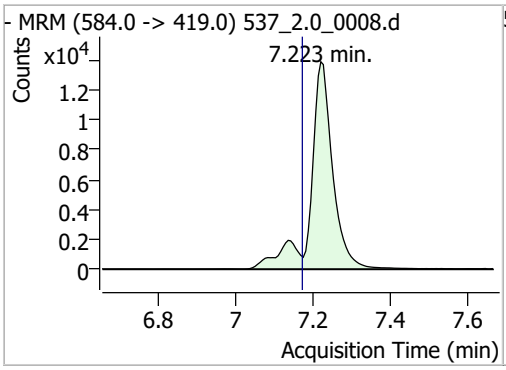
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	1.9054	7.22	0.05	105489	563.0 -> 269.0	16.8	14.4	21.6

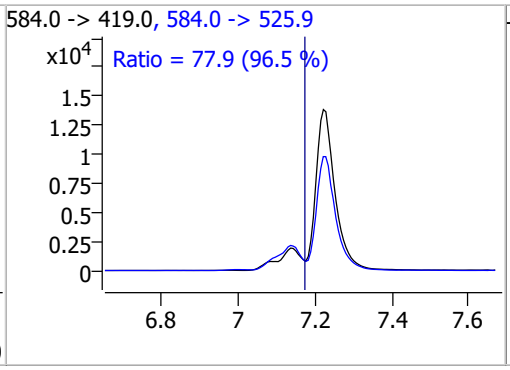


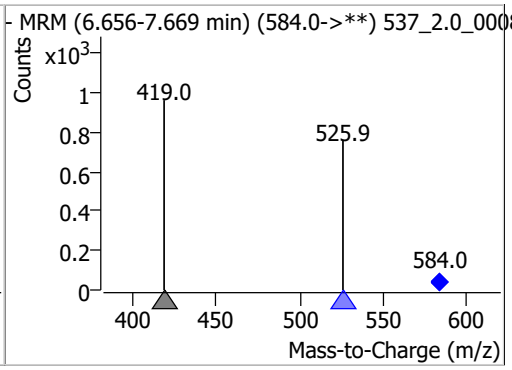




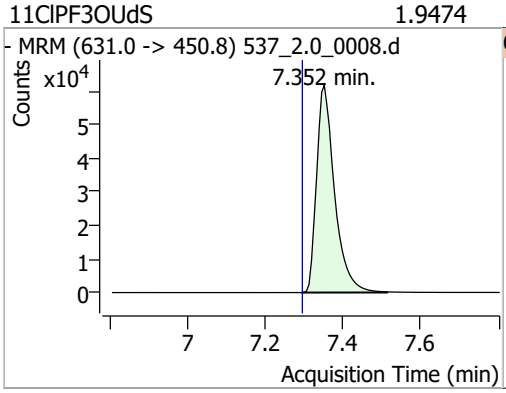
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	1.6790	7.22	0.05	56494	584.0 -> 525.9	77.9	40.4	121.1

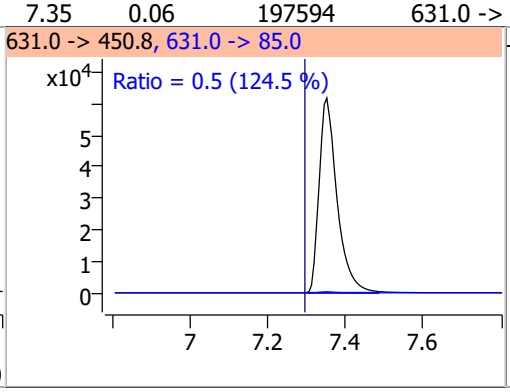


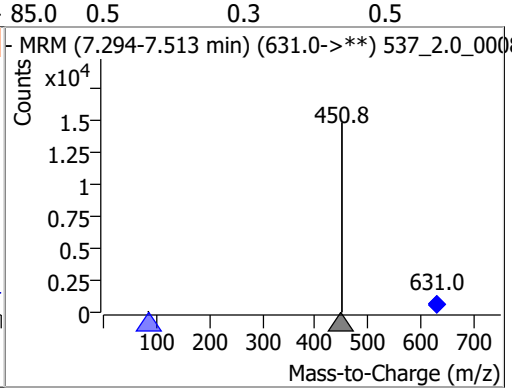




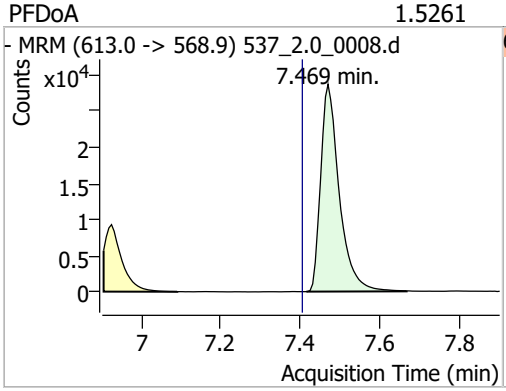
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	1.9474	7.35	0.06	197594	631.0 -> 85.0	0.5	0.3	0.5

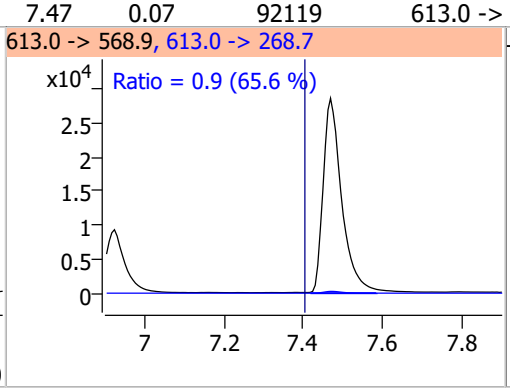


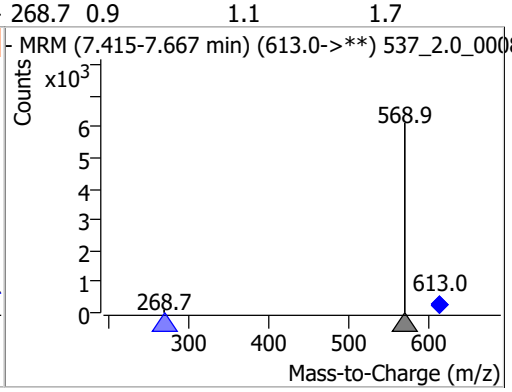




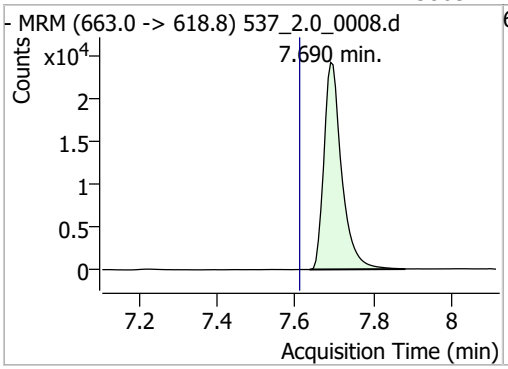
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	1.5261	7.47	0.07	92119	613.0 -> 268.7	0.9	1.1	1.7

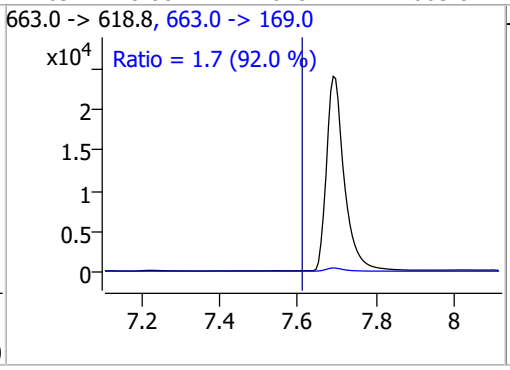


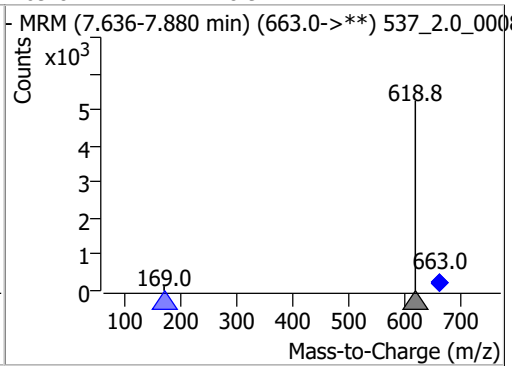




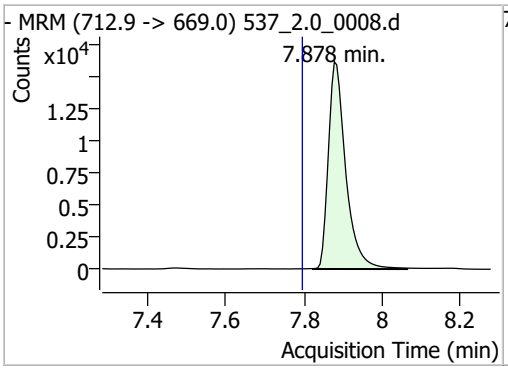
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	1.5865	7.69	0.08	76101	663.0 -> 169.0	1.7	0.9	2.7

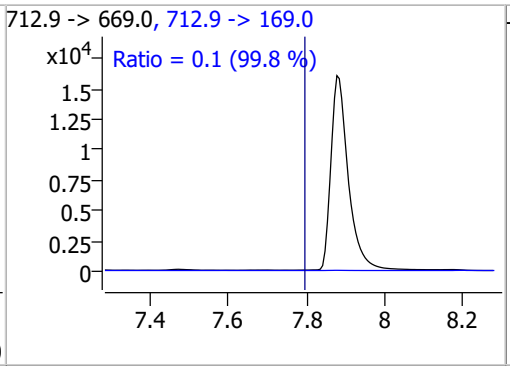


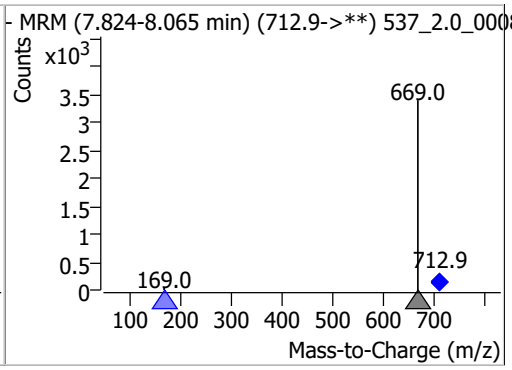




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	1.7102	7.88	0.09	49638	712.9 -> 169.0	0.1	0.0	0.1







Quantitation Results Report

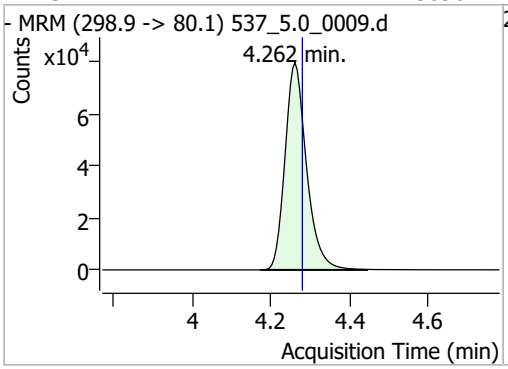
Agilent | Trusted Answers

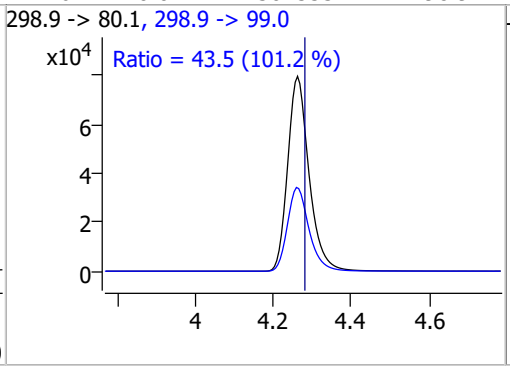
Data File	537_5.0_0009.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 7:44:42 AM
Sample Name	CAL4_537_5.0	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809_ICAL-537.batch.bin	Last Calib Update	8/10/2023 3:46:40 PM
Ref Library			

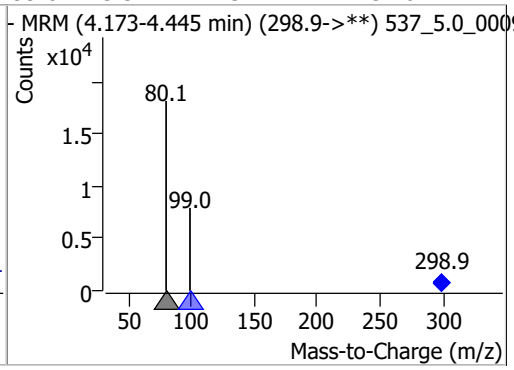
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	834280	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	994315	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1499764	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.991	314.9 -> 269.7	1055027	10.1601	ng/ml		-0.008
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 101.60%			
13C3-HFPO-DA	5.213	287.0 -> 169.0	22727	10.5363	ng/ml		-0.010
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 105.36%			
13C2-PFDA	6.915	514.9 -> 469.9	446513	8.2761	ng/ml		0.028
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 82.76%			
NETFOSAA-d5	7.215	589.0 -> 419.0	768158	42.4875	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 106.22%			
Target Compounds							QValue
PFBS	4.262	298.9 -> 80.1	301553	4.3090	ng/ml		99
PFHxA	4.992	313.0 -> 269.0	576468	4.3519	ng/ml		100
HFPO-DA	5.214	285.0 -> 169.1	11379	4.5882	ng/ml		97
PFHpA	5.676	362.9 -> 318.9	532772	4.7079	ng/ml		97
PFHxS	5.737	398.9 -> 79.9	189530	4.3558	ng/ml		92
NaDONA	5.756	377.0 -> 250.9	1588688	4.2904	ng/ml		100
PFOA	6.171	413.0 -> 369.1	447008	4.8602	ng/ml		95
PFNA	6.577	463.0 -> 418.9	252577	4.3801	ng/ml	#	95
PFOS	6.589	498.9 -> 80.1	137721	4.4785	ng/ml		97
9Cl-PF3ONS	6.782	531.0 -> 351.0	417958	4.5243	ng/ml		96
PFDA	6.916	513.0 -> 468.9	205614	3.8977	ng/ml		98
N-MeFOSAA	7.073	570.0 -> 418.9	143699	4.3332	ng/ml		98
PFUdA	7.211	563.0 -> 518.8	228824	4.3951	ng/ml		99
N-EtFOSAA	7.223	584.0 -> 419.0	157456	5.3662	ng/ml		90
11ClPF3OUdS	7.352	631.0 -> 450.8	448718	4.3008	ng/ml		100
PFDoA	7.469	613.0 -> 568.9	252843	4.4525	ng/ml	#	99
PFTrDA	7.690	663.0 -> 618.8	194942	4.2727	ng/ml		99
PFTA	7.878	712.9 -> 669.0	129987	4.7623	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

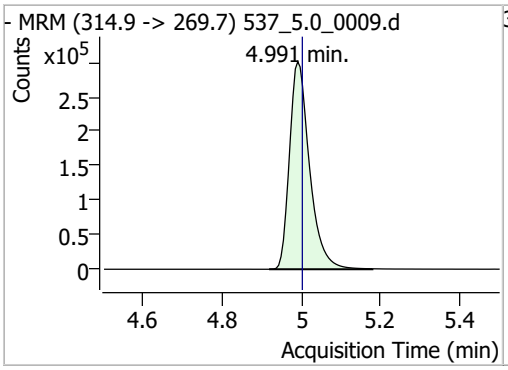
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	4.3090	4.26	-0.02	301553	298.9 -> 99.0	43.5	34.4	51.6

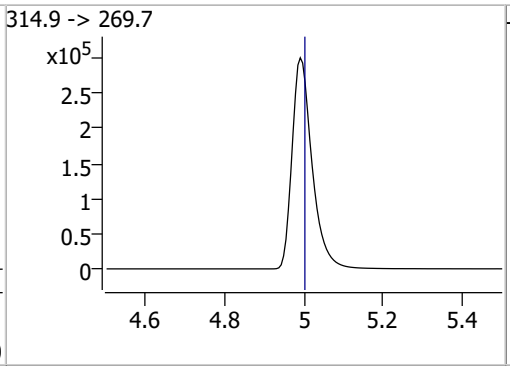


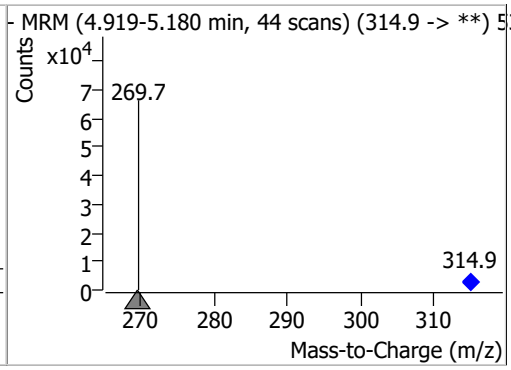




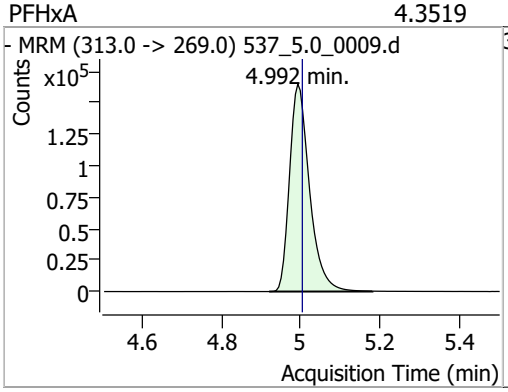
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	10.1601	4.99	-0.01	1055027				

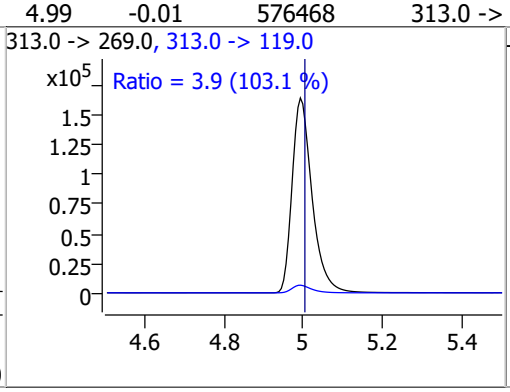


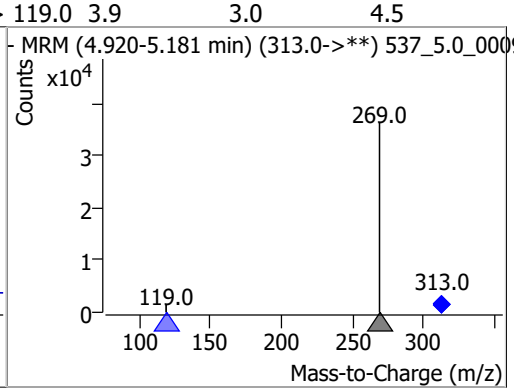




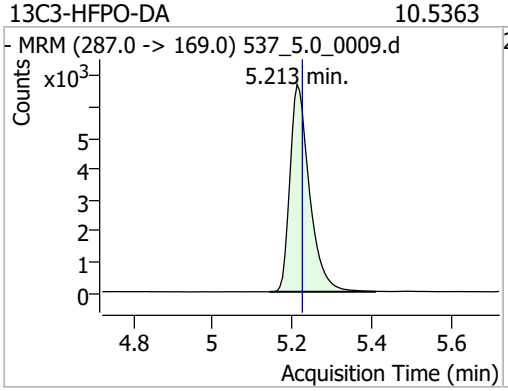
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	4.3519	4.99	-0.01	576468	313.0 -> 119.0	3.9	3.0	4.5

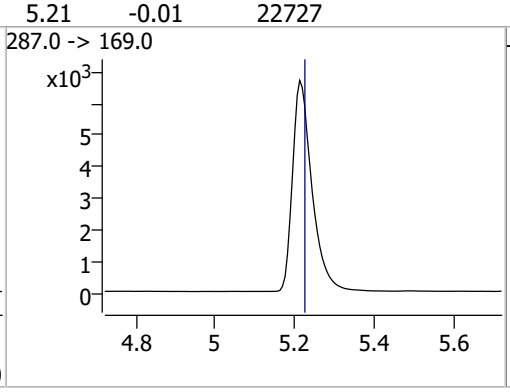


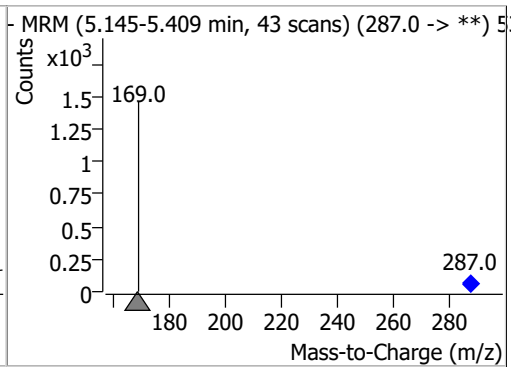




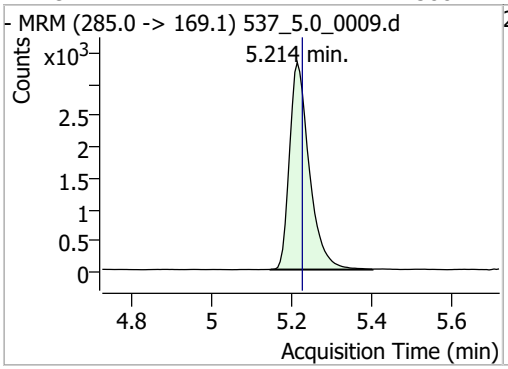
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	10.5363	5.21	-0.01	22727				

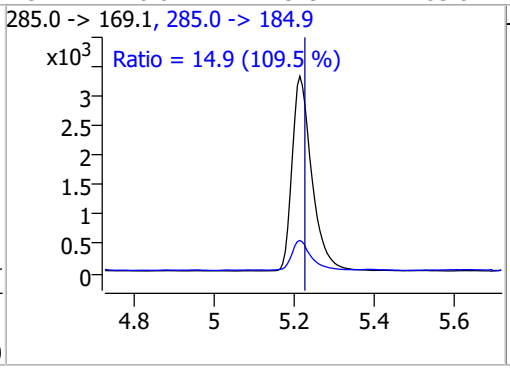


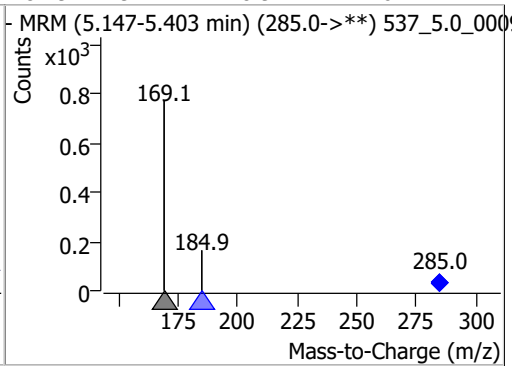




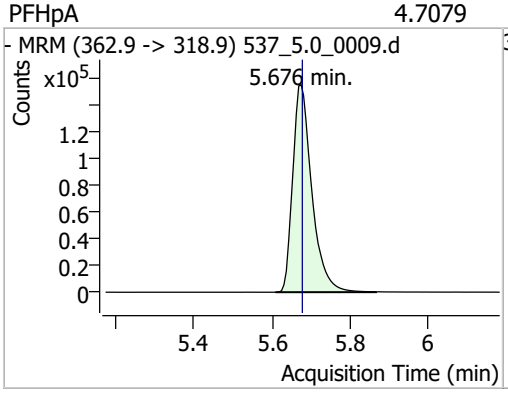
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	4.5882	5.21	-0.01	11379	285.0 -> 184.9	14.9	10.9	16.4

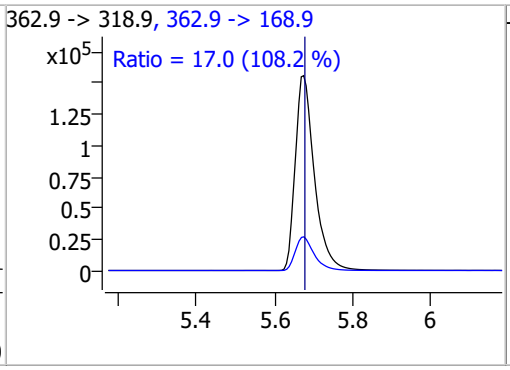


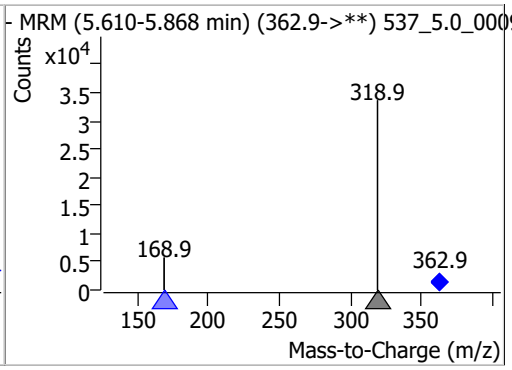




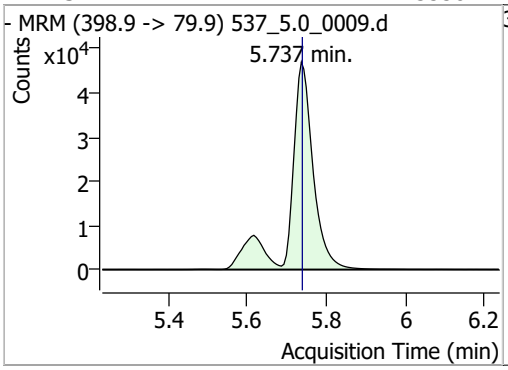
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	4.7079	5.68	0.00	532772	362.9 -> 168.9	17.0	12.6	18.9

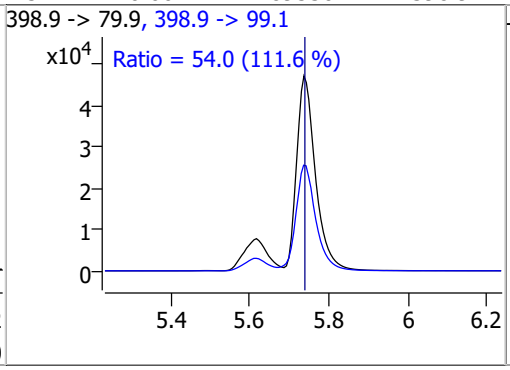


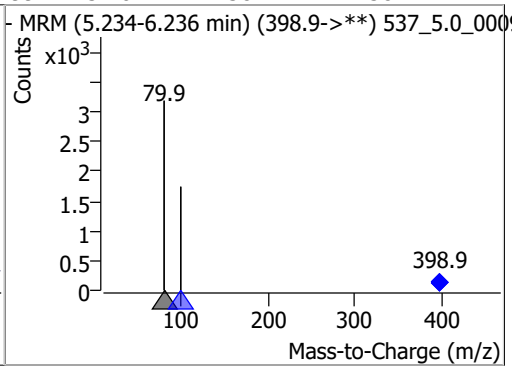




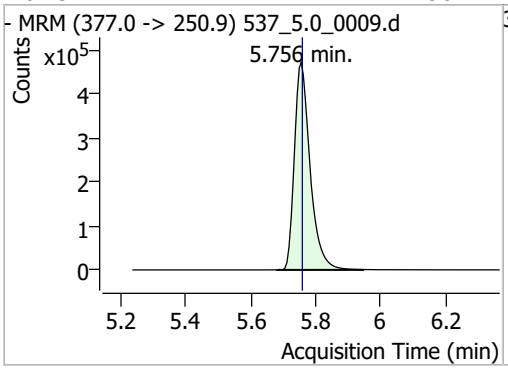
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	4.3558	5.74	0.00	189530	398.9 -> 99.1	54.0	38.7	58.1

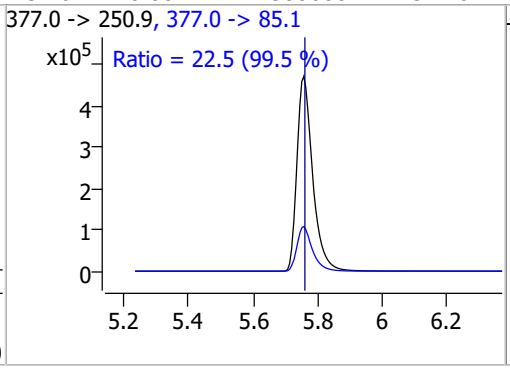


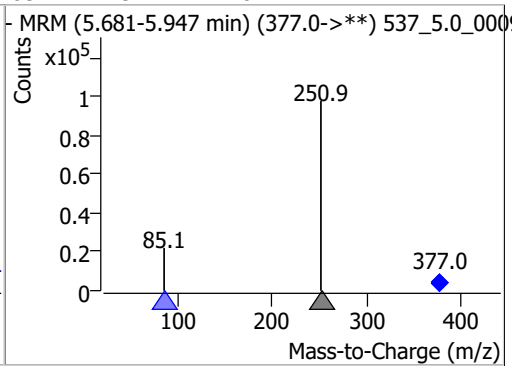




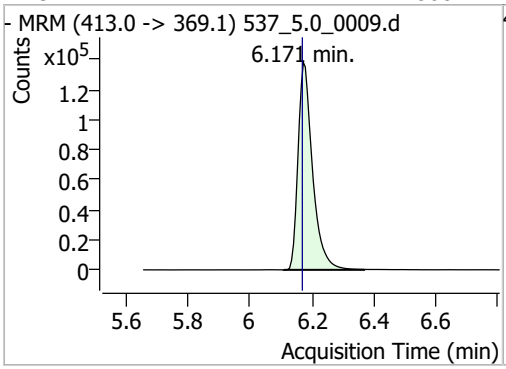
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	4.2904	5.76	0.00	1588688	377.0 -> 85.1	22.5	18.1	27.2

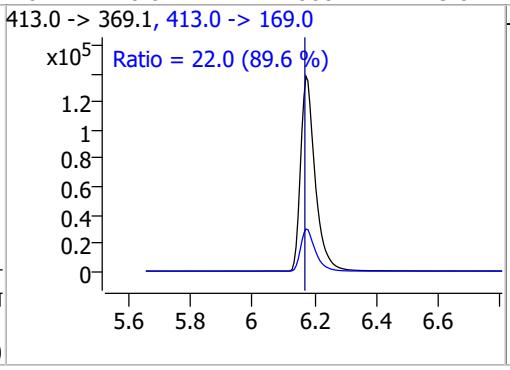


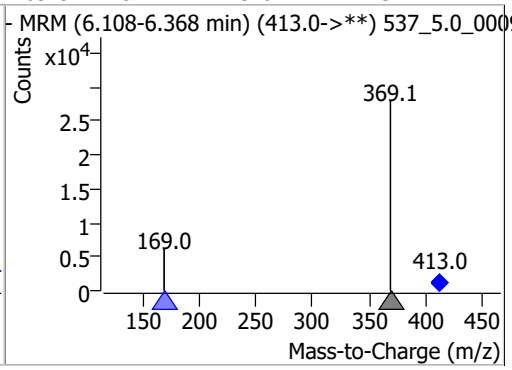




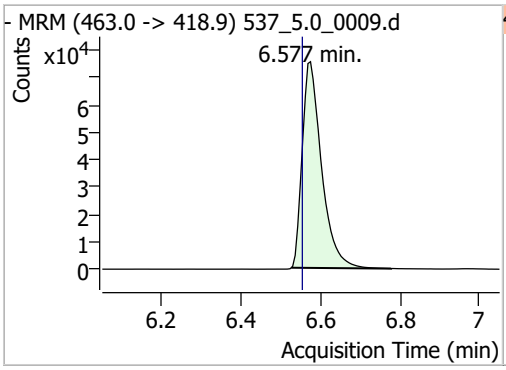
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	4.8602	6.17	0.01	447008	413.0 -> 169.0	22.0	19.6	29.4

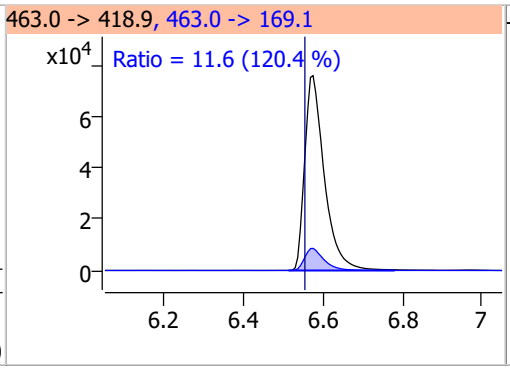


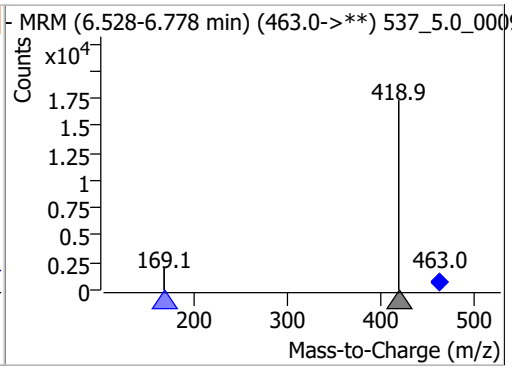




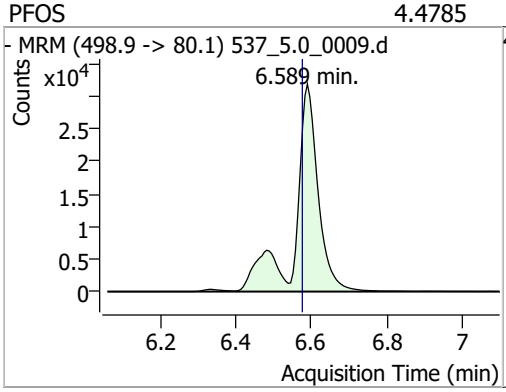
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	4.3801	6.58	0.02	252577	463.0 -> 169.1	11.6	7.7	11.5

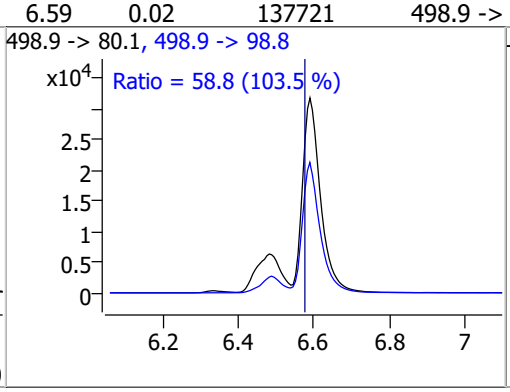


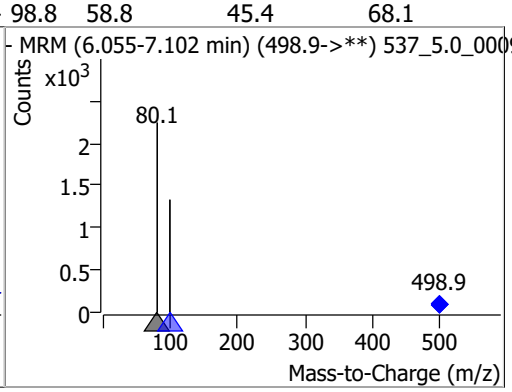




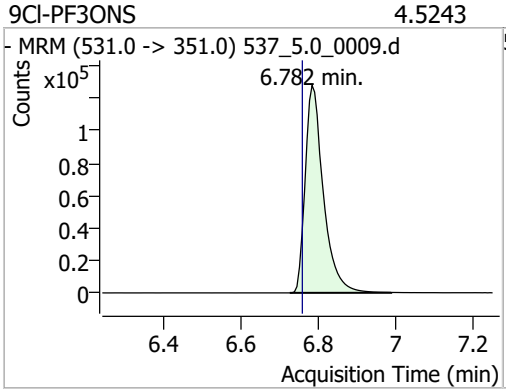
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	4.4785	6.59	0.02	137721	498.9 -> 98.8	58.8	45.4	68.1

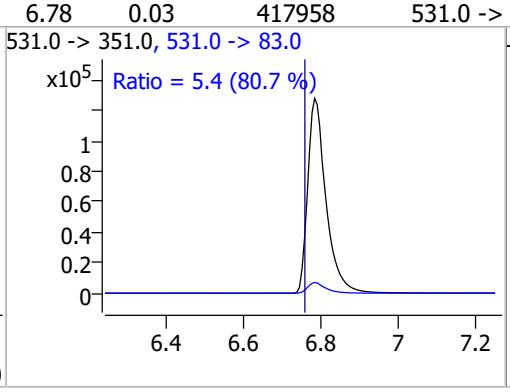


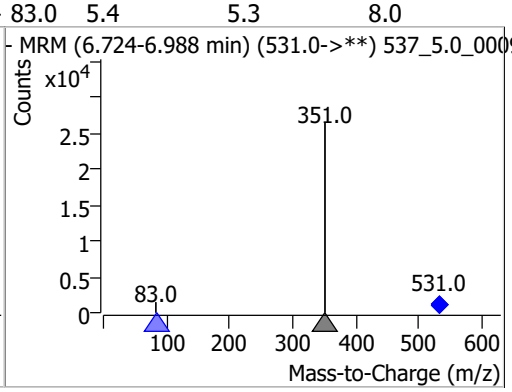




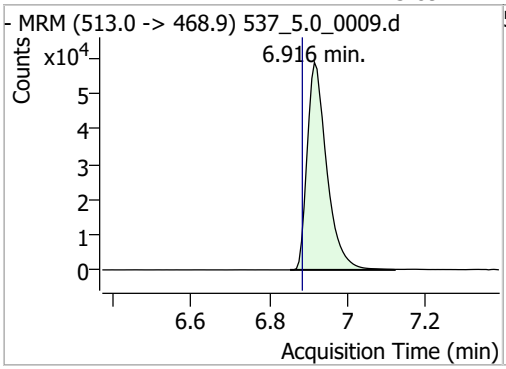
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	4.5243	6.78	0.03	417958	531.0 -> 83.0	5.4	5.3	8.0

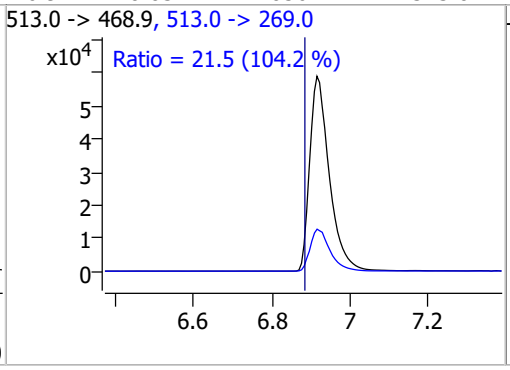


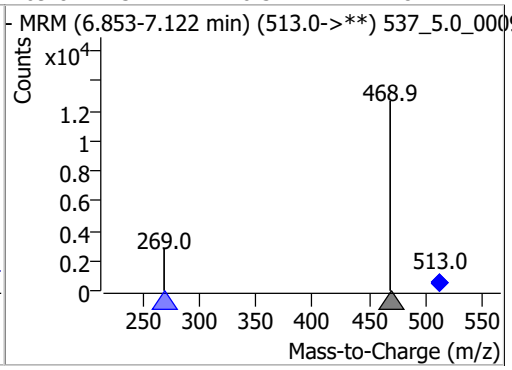




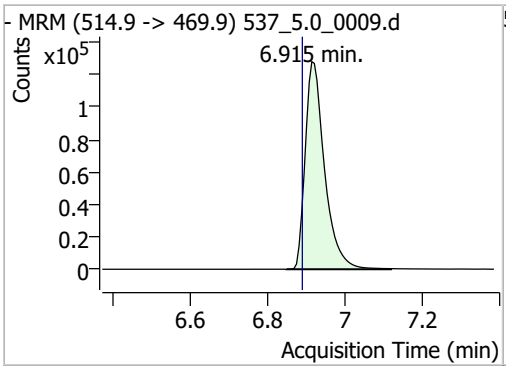
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	3.8977	6.92	0.03	205614	513.0 -> 269.0	21.5	16.5	24.8

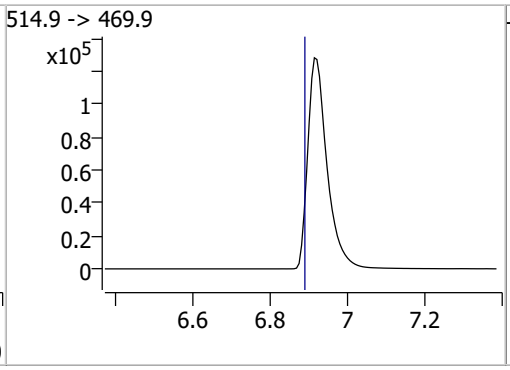


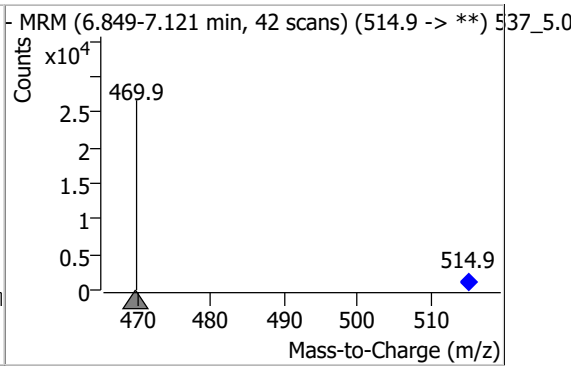




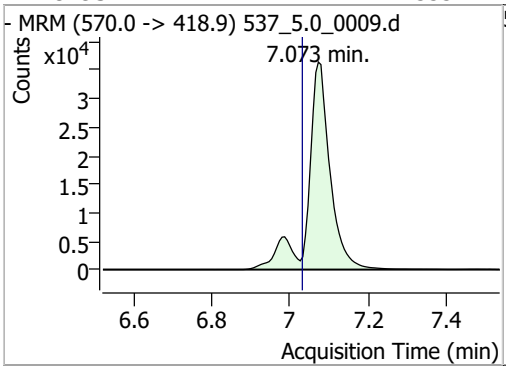
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	8.2761	6.92	0.03	446513				

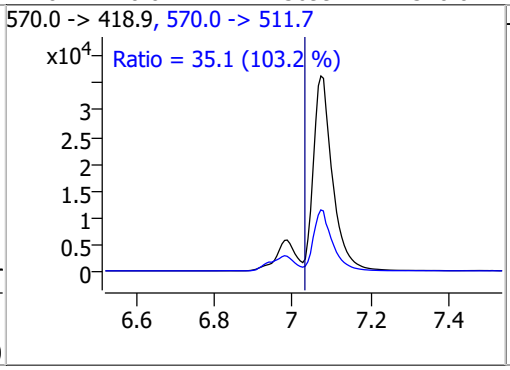


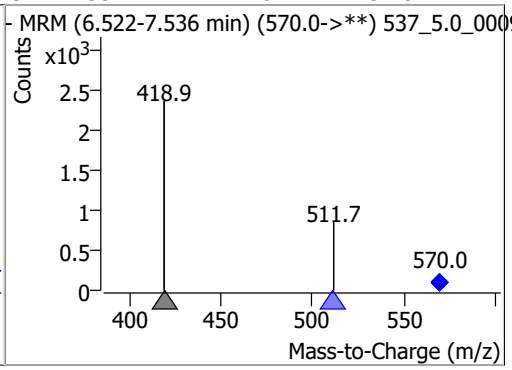




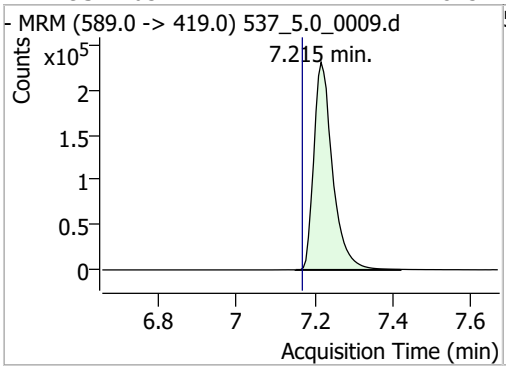
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	4.3332	7.07	0.04	143699	570.0 -> 511.7	35.1	17.0	51.0

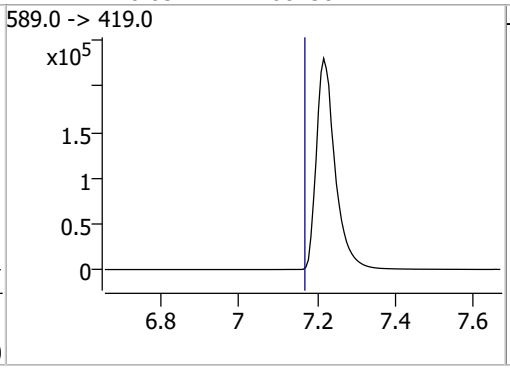


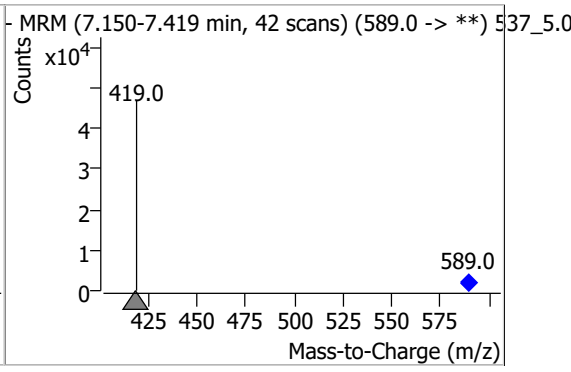




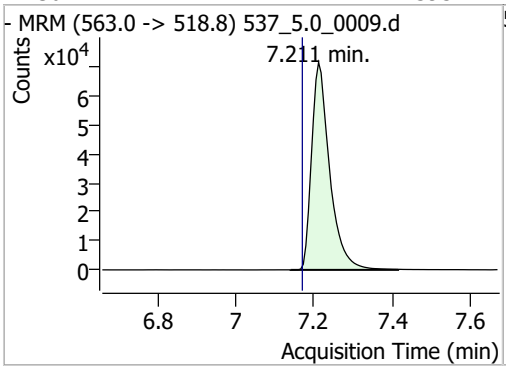
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	42.4875	7.22	0.05	768158				

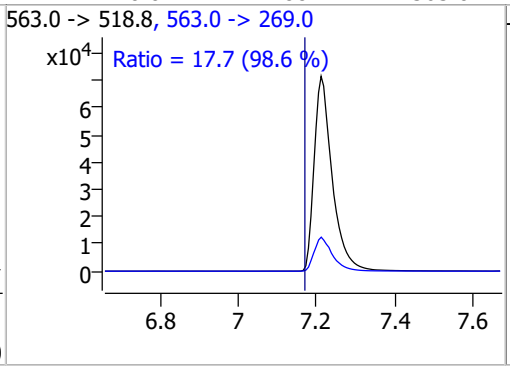


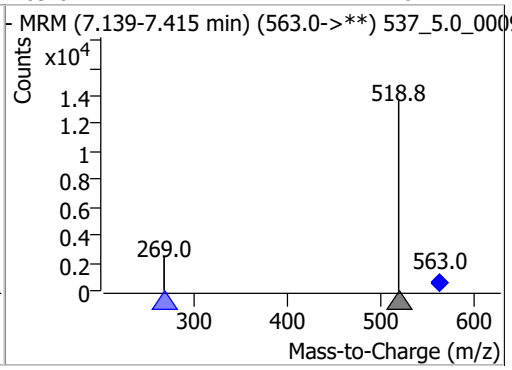




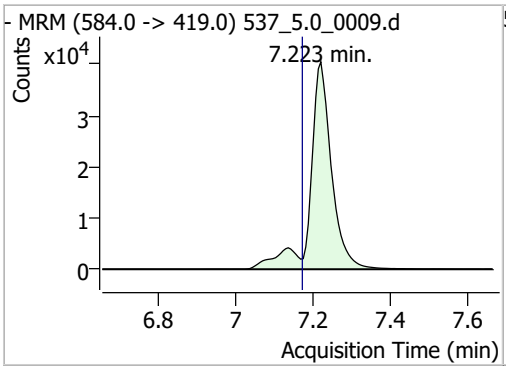
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	4.3951	7.21	0.04	228824	563.0 -> 269.0	17.7	14.4	21.6

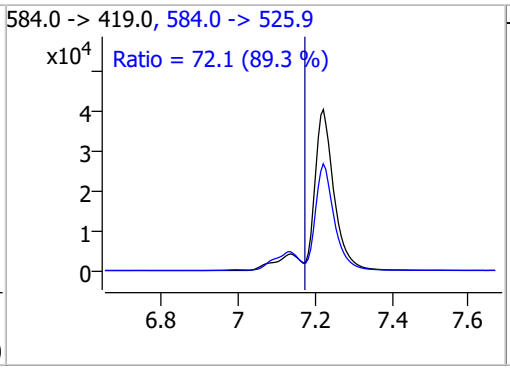


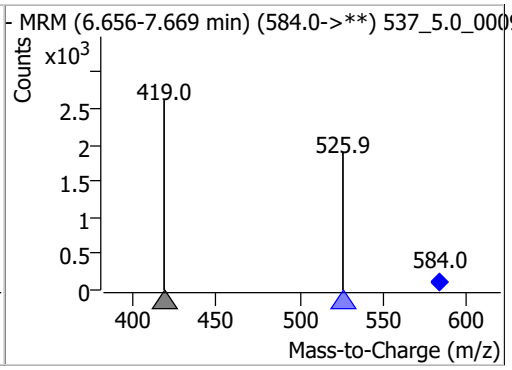




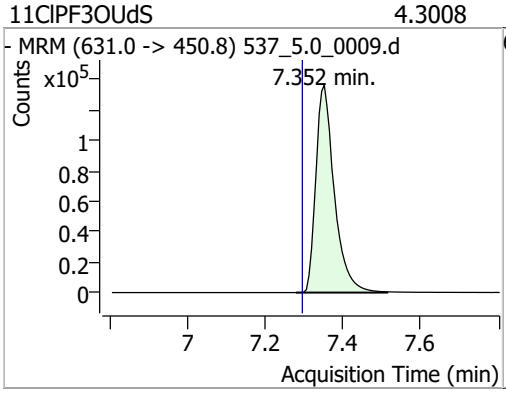
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	5.3662	7.22	0.05	157456	584.0 -> 525.9	72.1	40.4	121.1

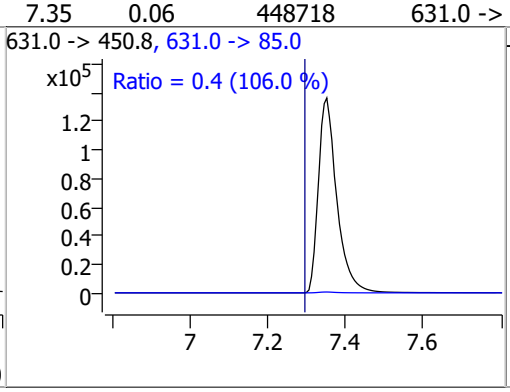


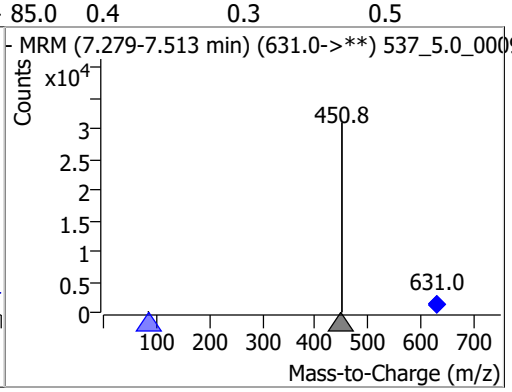




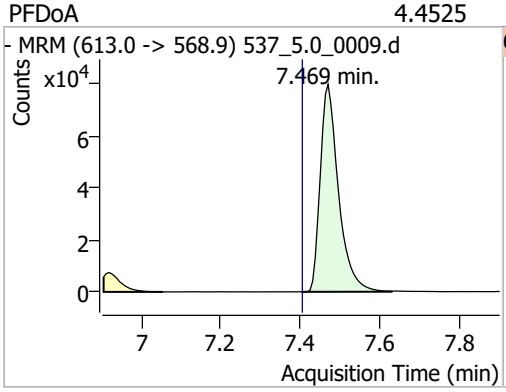
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	4.3008	7.35	0.06	448718	631.0 -> 85.0	0.4	0.3	0.5

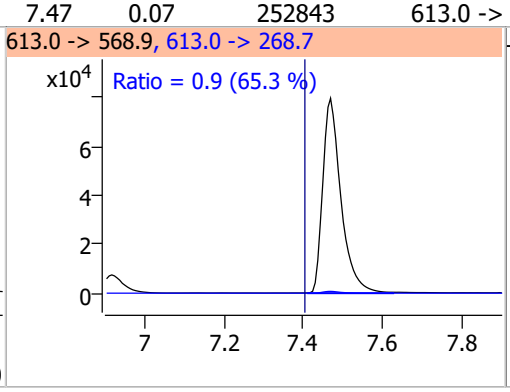


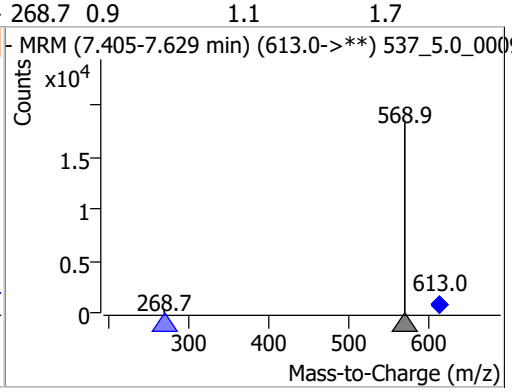




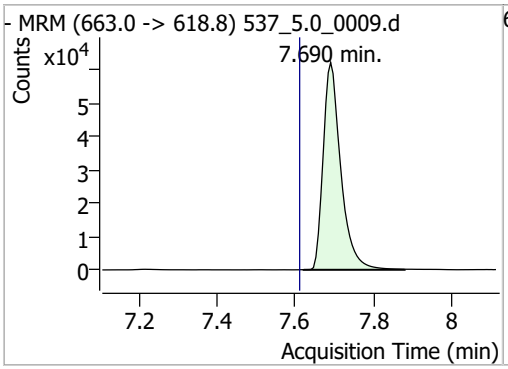
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	4.4525	7.47	0.07	252843	613.0 -> 268.7	0.9	1.1	1.7

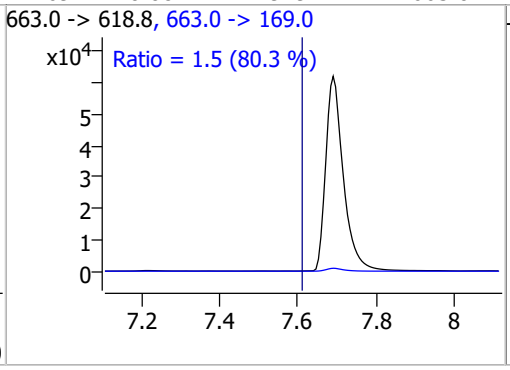


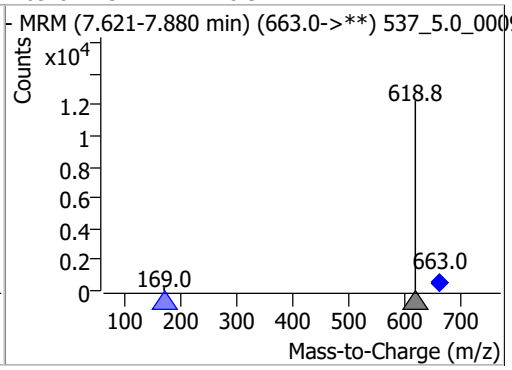




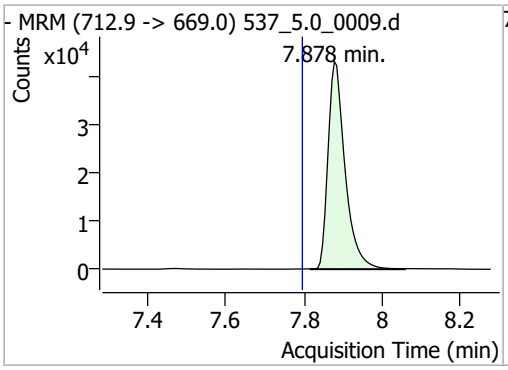
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	4.2727	7.69	0.08	194942	663.0 -> 169.0	1.5	0.9	2.7

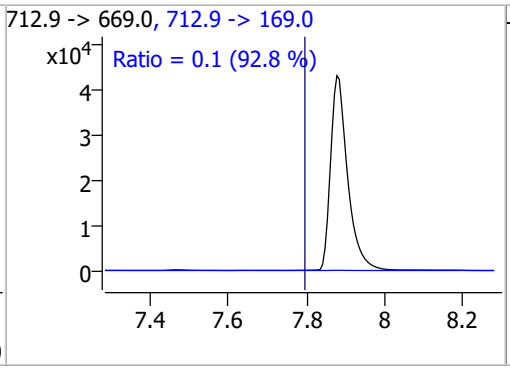


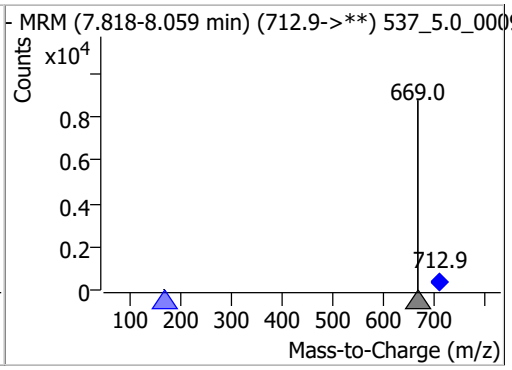




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	4.7623	7.88	0.09	129987	712.9 -> 169.0	0.1	0.0	0.1







Quantitation Results Report

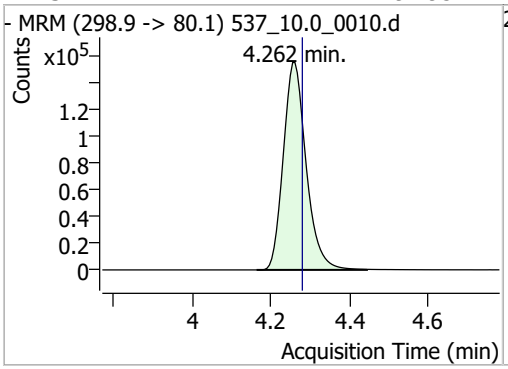
Agilent | Trusted Answers

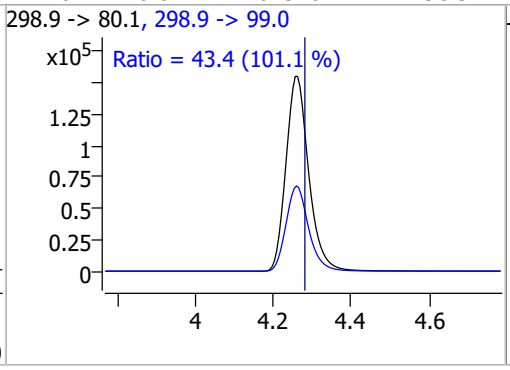
Data File	537_10.0_0010.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 7:57:26 AM
Sample Name	CAL5_537_10.0	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809_ICAL-537.batch.bin	Last Calib Update	8/10/2023 3:46:40 PM
Ref Library			

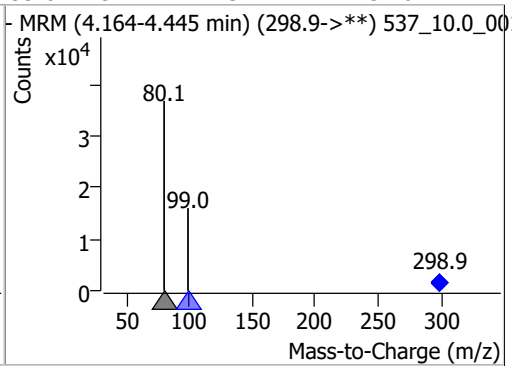
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	808980	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	939042	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.066	573.0 -> 418.9	1607549	4.0000	ng/ml		0.038
System Monitoring Compounds							
13C2-PFHxA	4.991	314.9 -> 269.7	960080	9.7900	ng/ml		-0.008
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 97.90%			
13C3-HFPO-DA	5.213	287.0 -> 169.0	20285	9.9573	ng/ml		-0.010
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 99.57%			
13C2-PFDA	6.915	514.9 -> 469.9	521575	10.2363	ng/ml		0.028
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 102.36%			
NETFOSAA-d5	7.215	589.0 -> 419.0	717794	37.0399	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 92.60%			
Target Compounds							QValue
PFBS	4.262	298.9 -> 80.1	625464	9.1957	ng/ml		99
PFHxA	4.992	313.0 -> 269.0	1218618	9.7411	ng/ml		100
HFPO-DA	5.214	285.0 -> 169.1	22862	9.6373	ng/ml		98
PFHpA	5.676	362.9 -> 318.9	1084907	10.1511	ng/ml		99
PFHxS	5.737	398.9 -> 79.9	410879	9.5540	ng/ml		93
NaDONA	5.756	377.0 -> 250.9	3537953	9.7942	ng/ml		98
PFOA	6.178	413.0 -> 369.1	825483	9.5035	ng/ml		94
PFNA	6.577	463.0 -> 418.9	526533	9.6027	ng/ml	#	93
PFOS	6.589	498.9 -> 80.1	305693	10.0927	ng/ml		99
9Cl-PF3ONS	6.782	531.0 -> 351.0	873428	9.5597	ng/ml	#	94
PFDA	6.922	513.0 -> 468.9	533228	10.4518	ng/ml		97
N-MeFOSAA	7.073	570.0 -> 418.9	382532	10.3875	ng/ml		95
PFUdA	7.211	563.0 -> 518.8	440491	8.9587	ng/ml		96
N-EtFOSAA	7.223	584.0 -> 419.0	325702	10.1487	ng/ml		94
11ClPF3OUdS	7.345	631.0 -> 450.8	1048952	9.9001	ng/ml		100
PFDoA	7.469	613.0 -> 568.9	561437	10.4599	ng/ml	#	98
PFTrDA	7.690	663.0 -> 618.8	419076	9.5159	ng/ml		99
PFTA	7.884	712.9 -> 669.0	256415	9.9472	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

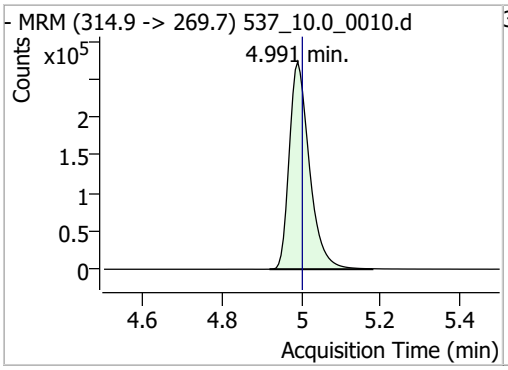
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	9.1957	4.26	-0.02	625464	298.9 -> 99.0	43.4	34.4	51.6

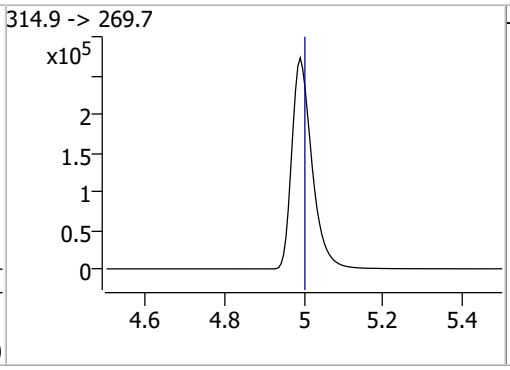


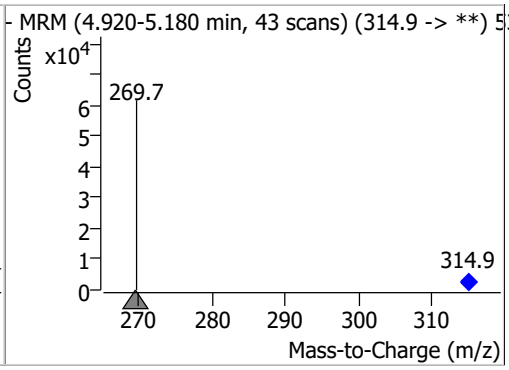




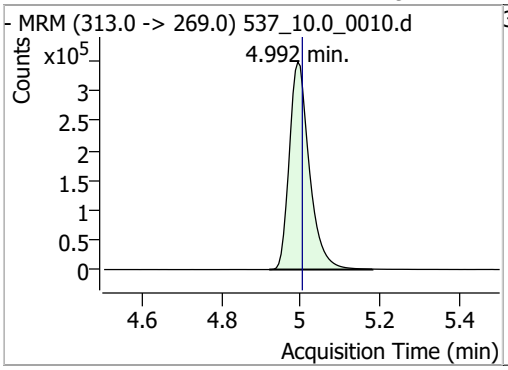
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	9.7900	4.99	-0.01	960080				

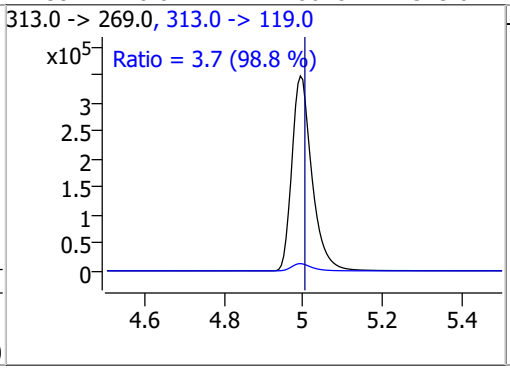


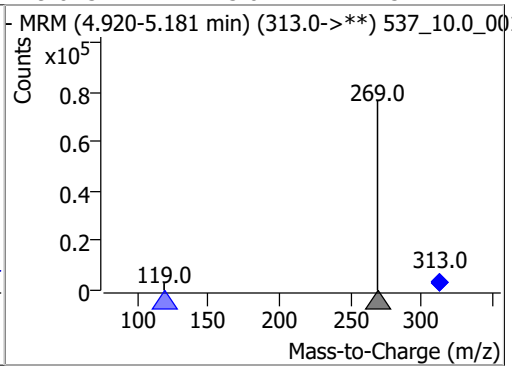




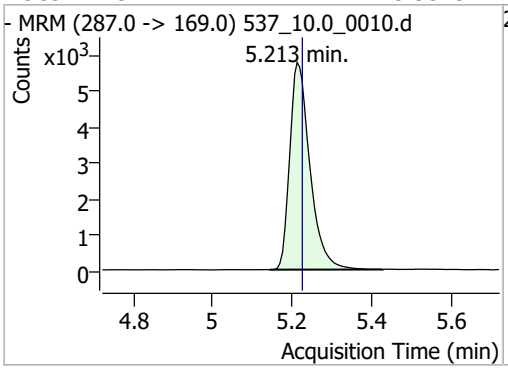
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	9.7411	4.99	-0.01	1218618	313.0 -> 119.0	3.7	3.0	4.5

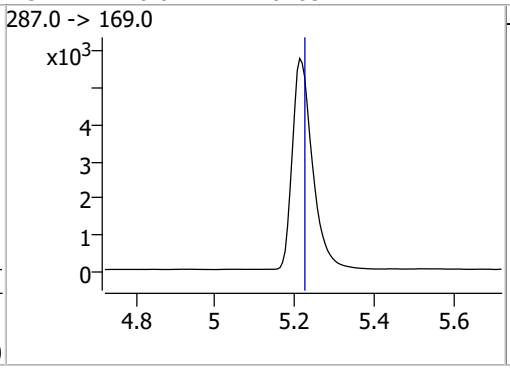


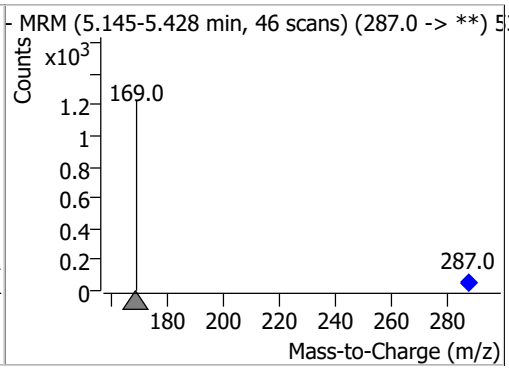




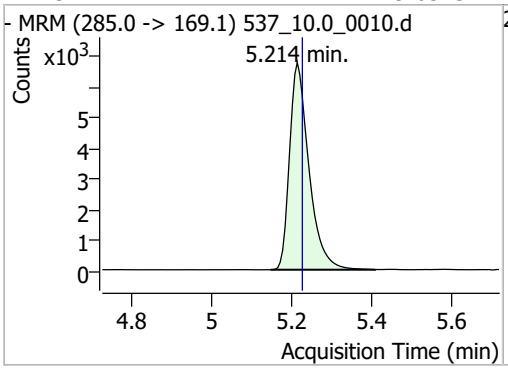
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	9.9573	5.21	-0.01	20285				

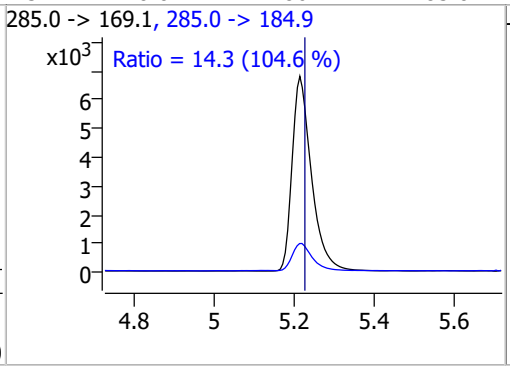


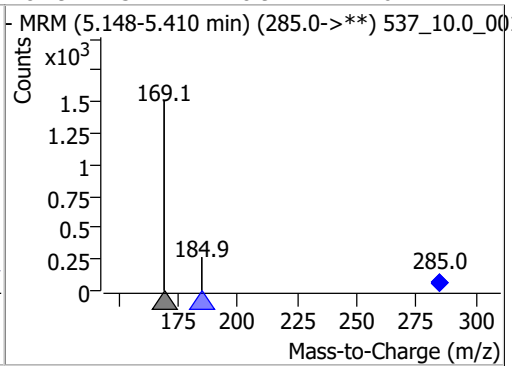




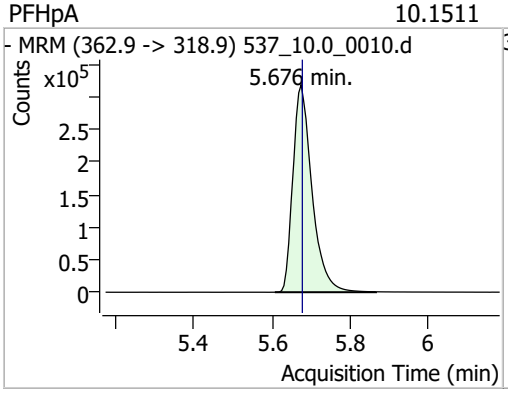
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	9.6373	5.21	-0.01	22862	285.0 -> 184.9	14.3	10.9	16.4

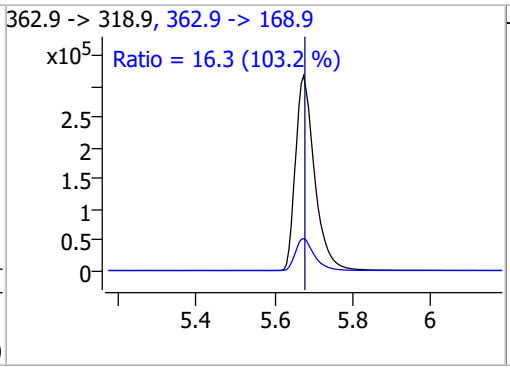


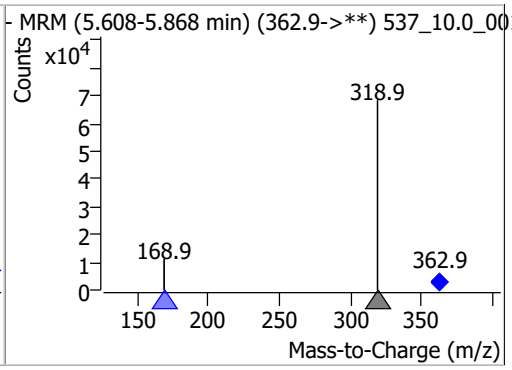




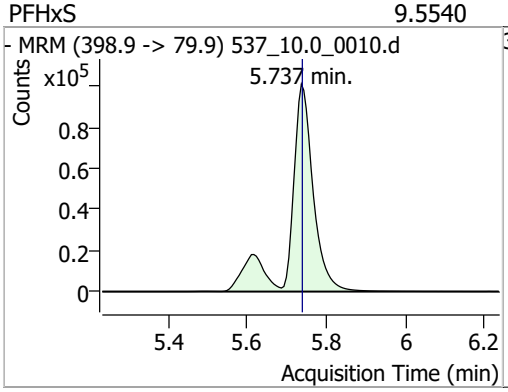
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	10.1511	5.68	0.00	1084907	362.9 -> 168.9	16.3	12.6	18.9

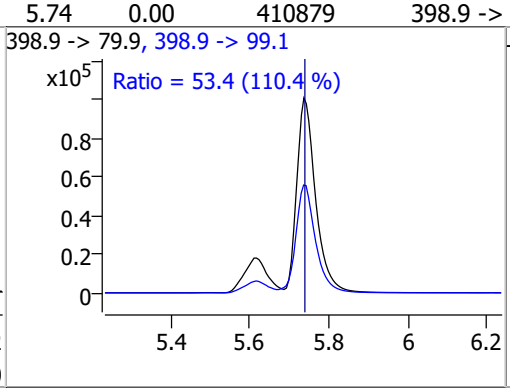


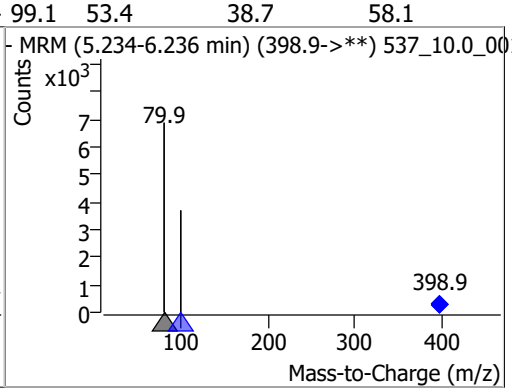




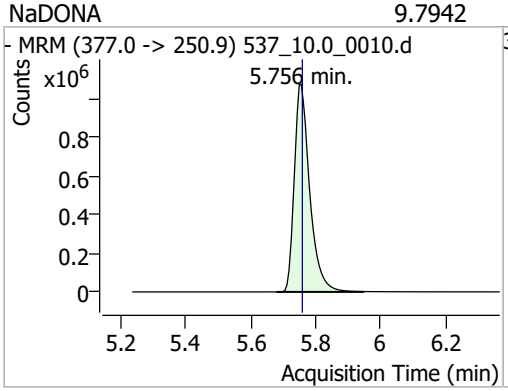
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	9.5540	5.74	0.00	410879	398.9 -> 99.1	53.4	38.7	58.1

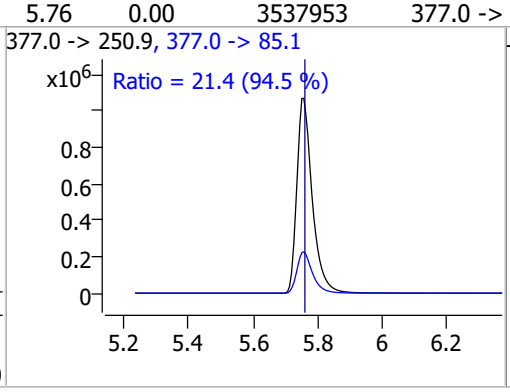


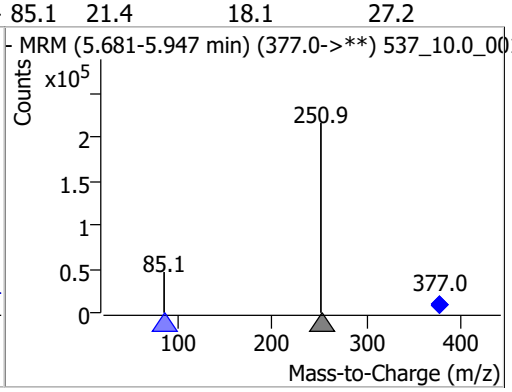




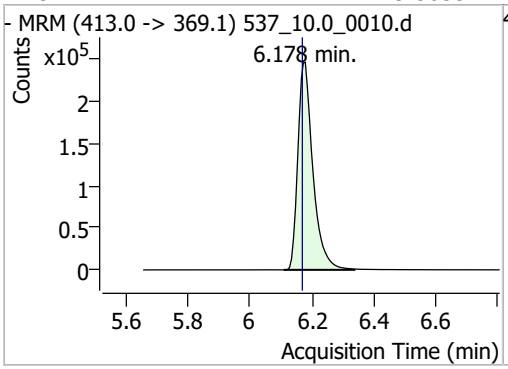
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	9.7942	5.76	0.00	3537953	377.0 -> 85.1	21.4	18.1	27.2

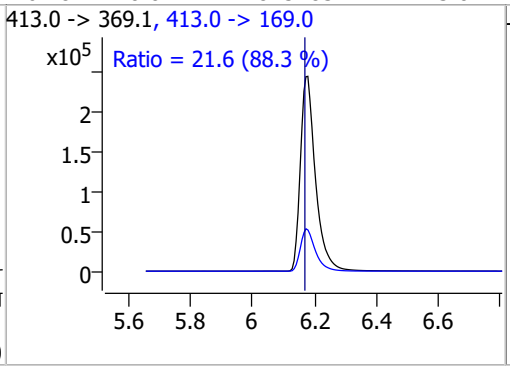


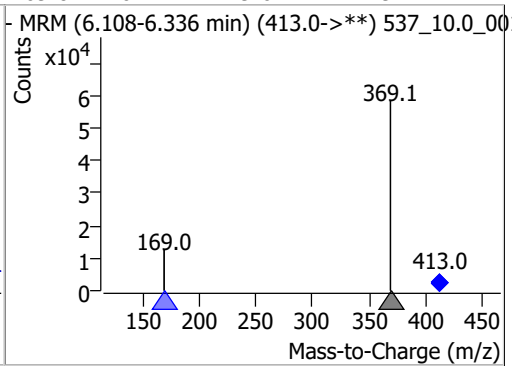




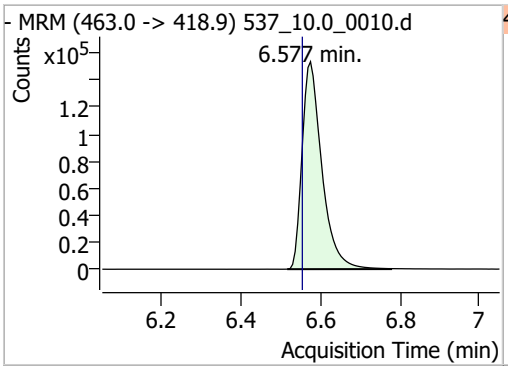
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	9.5035	6.18	0.01	825483	413.0 -> 169.0	21.6	19.6	29.4

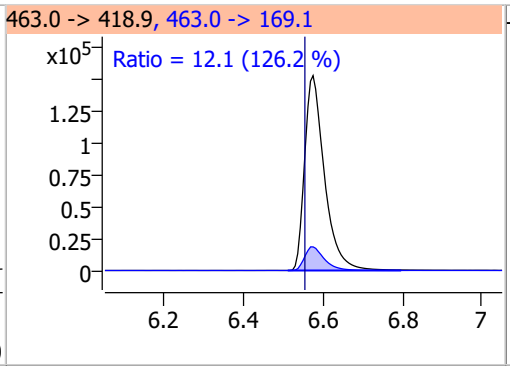


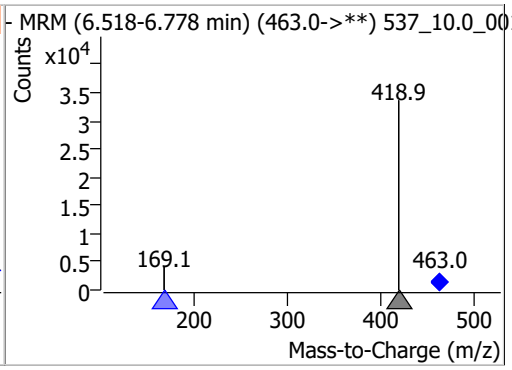




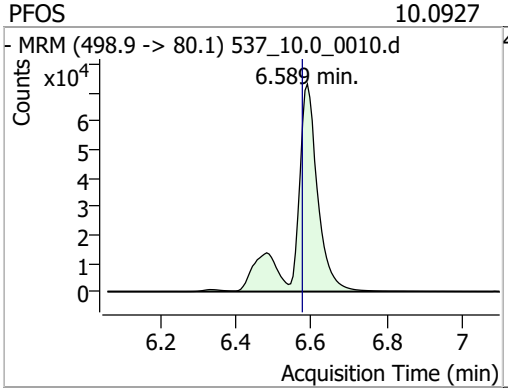
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	9.6027	6.58	0.02	526533	463.0 -> 169.1	12.1	7.7	11.5

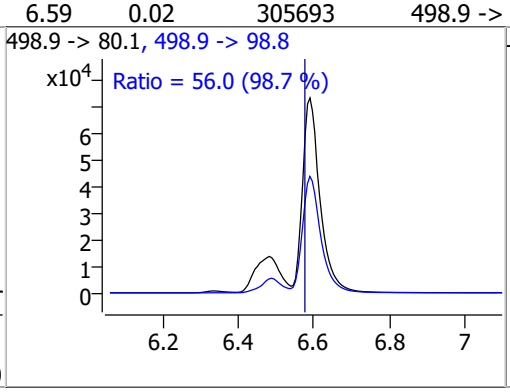


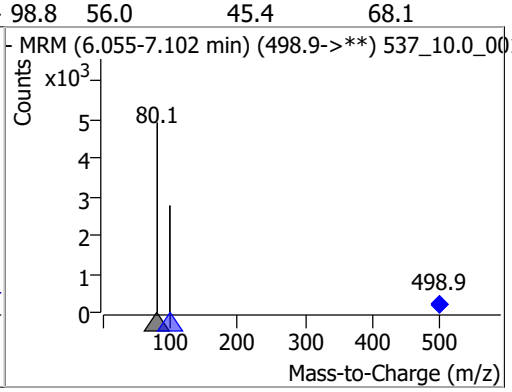




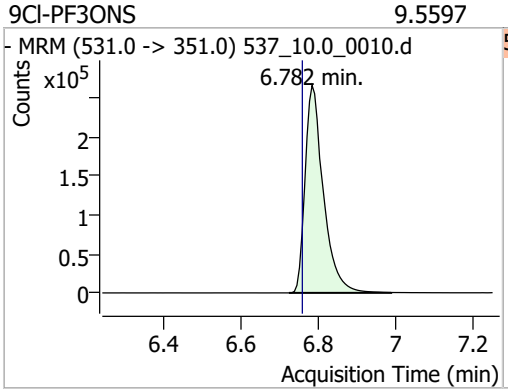
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	10.0927	6.59	0.02	305693	498.9 -> 98.8	56.0	45.4	68.1

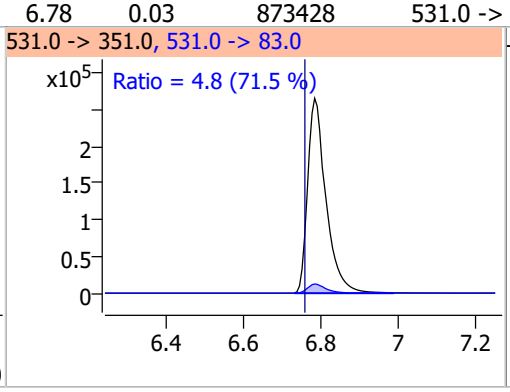


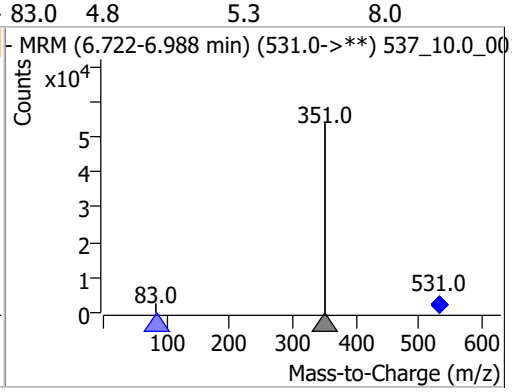




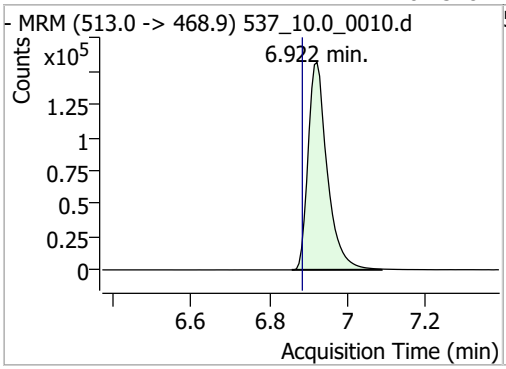
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	9.5597	6.78	0.03	873428	531.0 -> 83.0	4.8	5.3	8.0

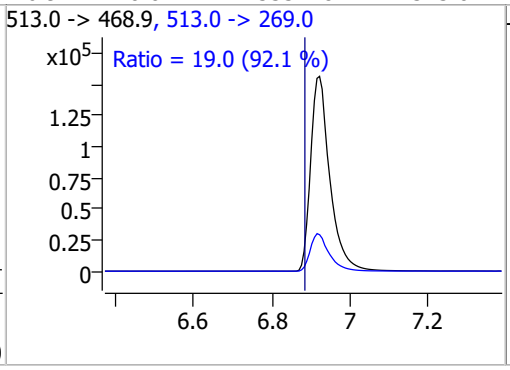


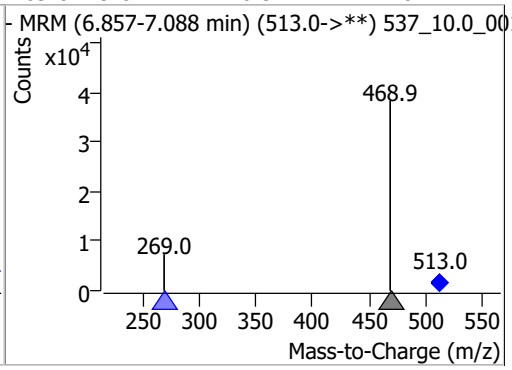




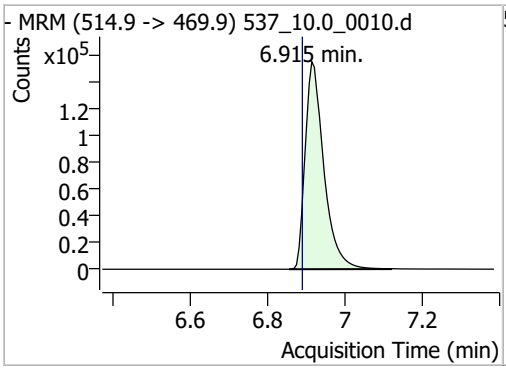
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	10.4518	6.92	0.04	533228	513.0 -> 269.0	19.0	16.5	24.8

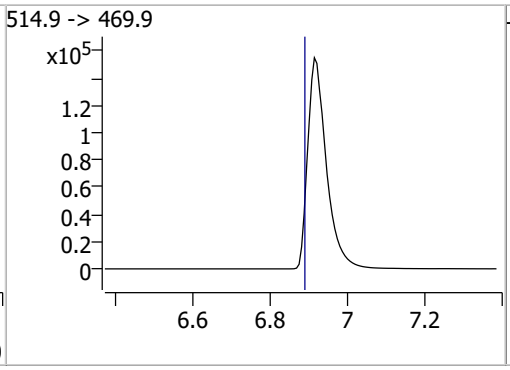


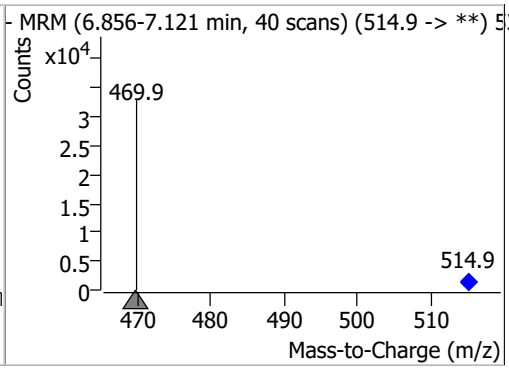




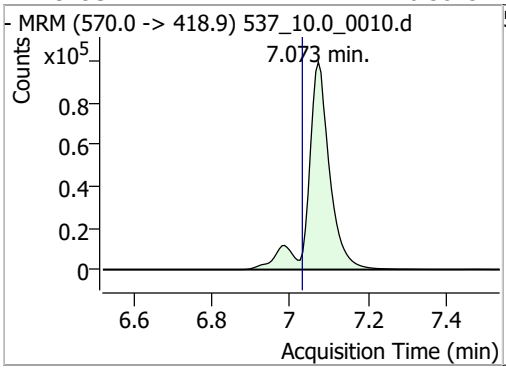
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	10.2363	6.92	0.03	521575				

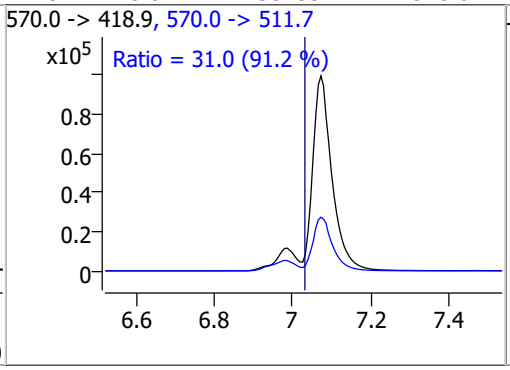


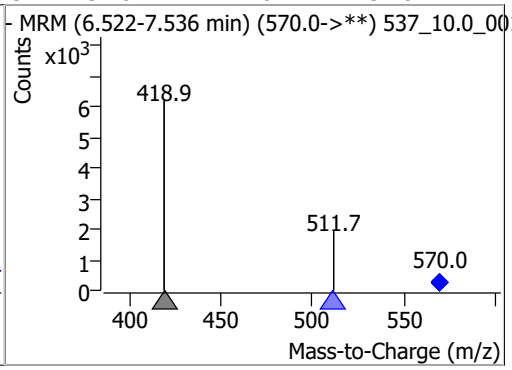




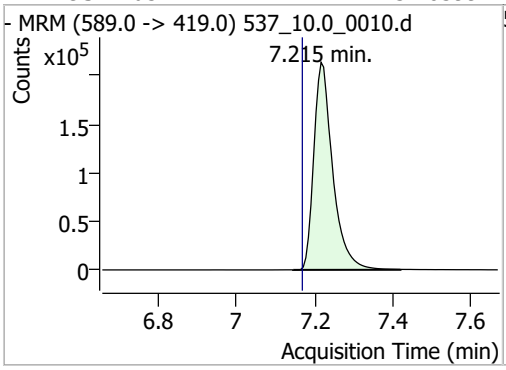
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	10.3875	7.07	0.04	382532	570.0 -> 511.7	31.0	17.0	51.0

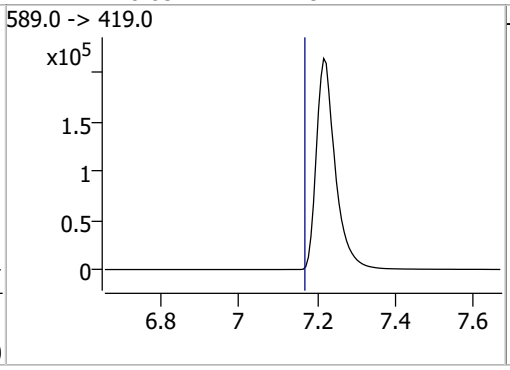


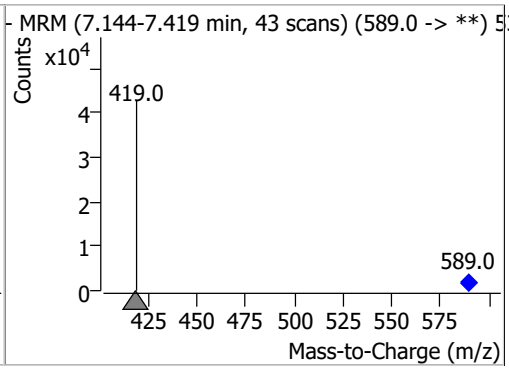




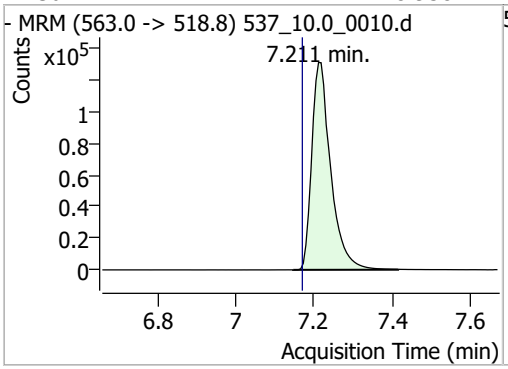
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	37.0399	7.22	0.05	717794				

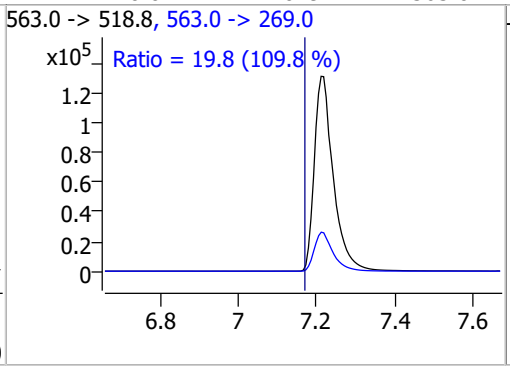


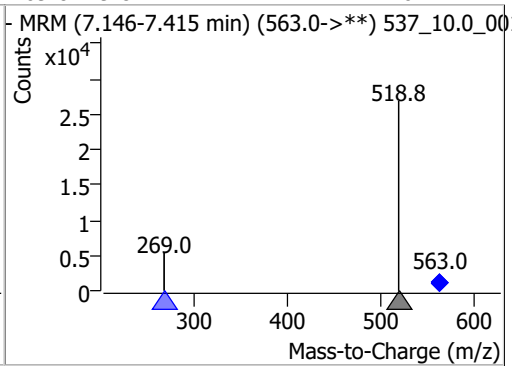




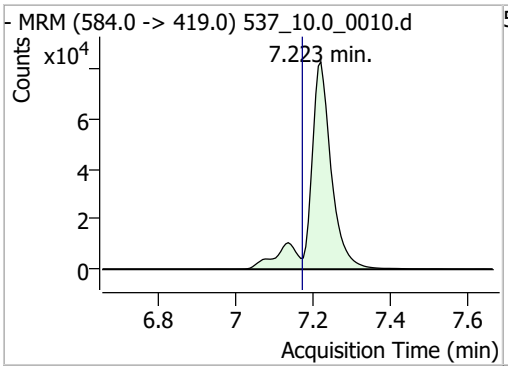
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	8.9587	7.21	0.04	440491	563.0 -> 269.0	19.8	14.4	21.6

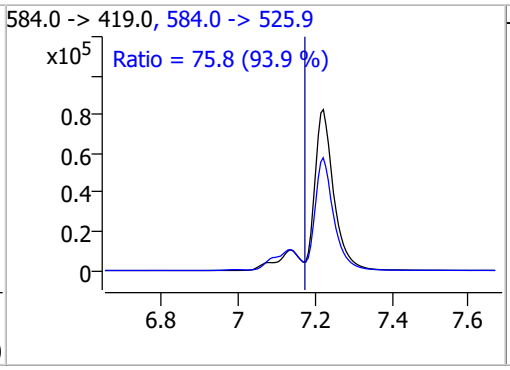


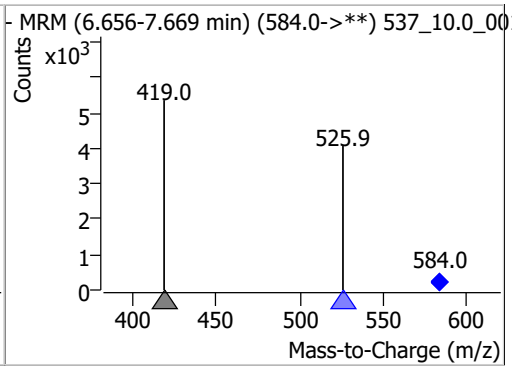




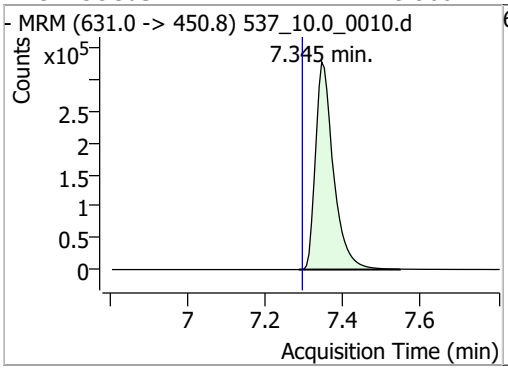
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	10.1487	7.22	0.05	325702	584.0 -> 525.9	75.8	40.4	121.1

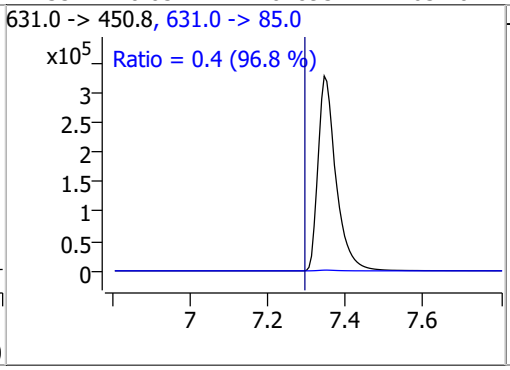


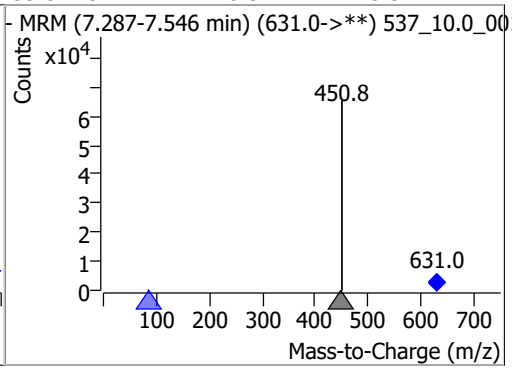




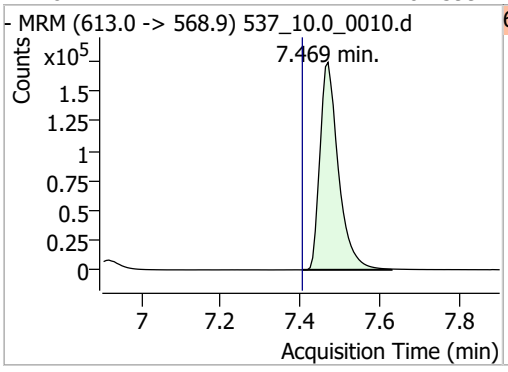
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	9.9001	7.35	0.05	1048952	631.0 -> 85.0	0.4	0.3	0.5

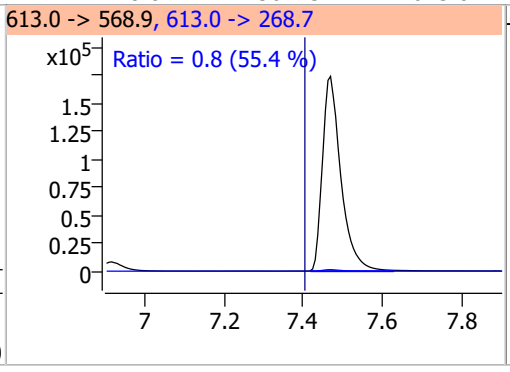


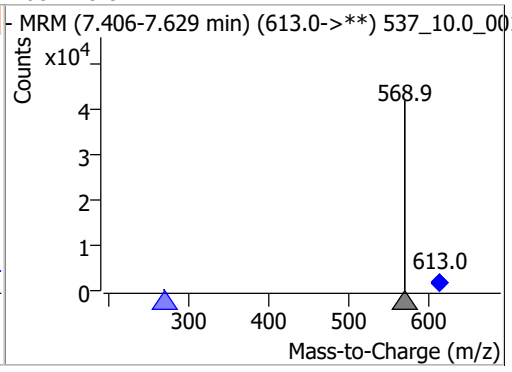




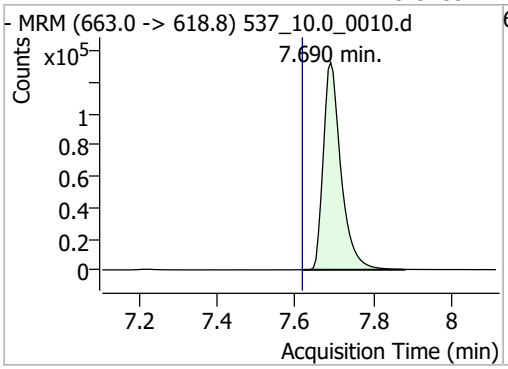
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	10.4599	7.47	0.07	561437	613.0 -> 268.7	0.8	1.1	1.7

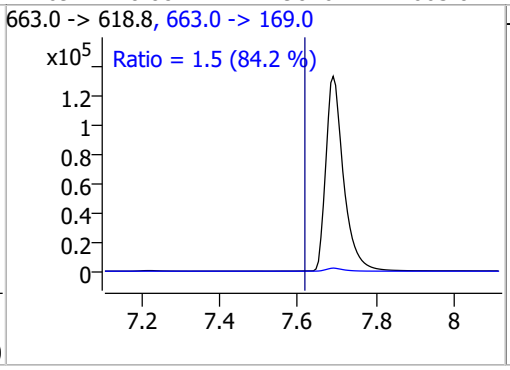


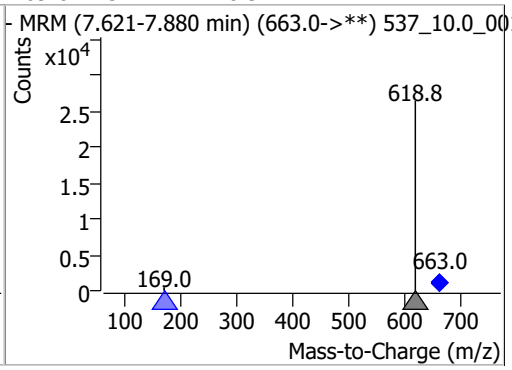




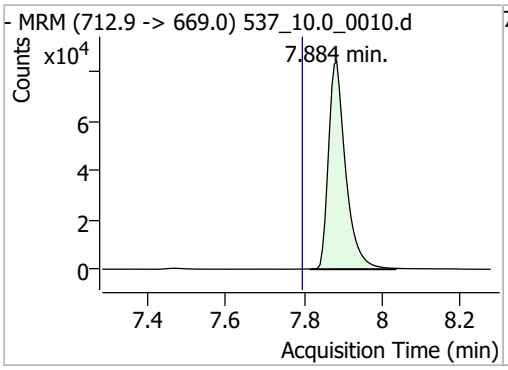
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	9.5159	7.69	0.08	419076	663.0 -> 169.0	1.5	0.9	2.7

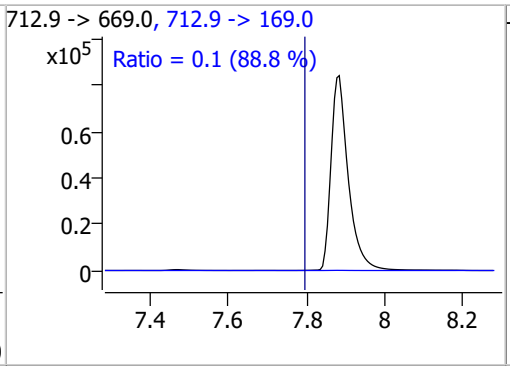


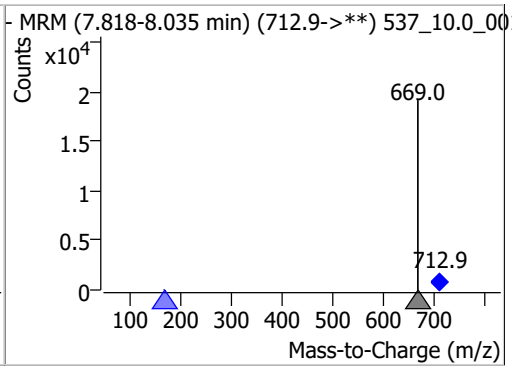




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	9.9472	7.88	0.09	256415	712.9 -> 169.0	0.1	0.0	0.1







Quantitation Results Report

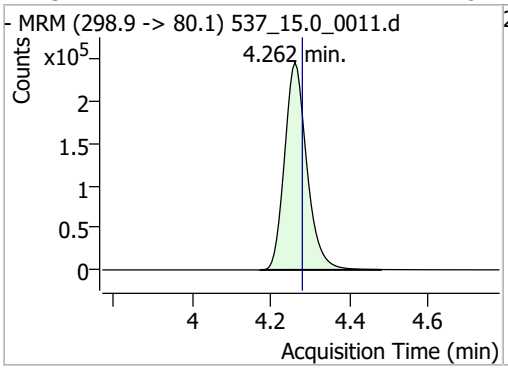
Agilent | Trusted Answers

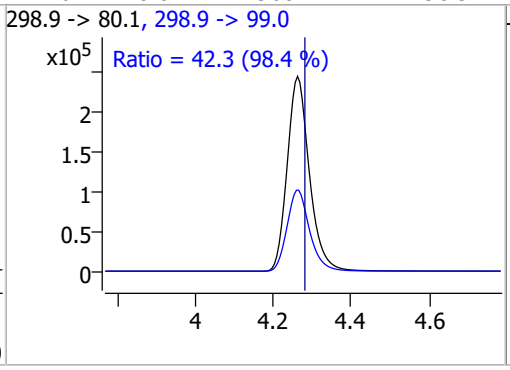
Data File	537_15.0_0011.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 8:10:09 AM
Sample Name	CAL6_537_15.0	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809_ICAL-537.batch.bin	Last Calib Update	8/10/2023 3:46:40 PM
Ref Library			

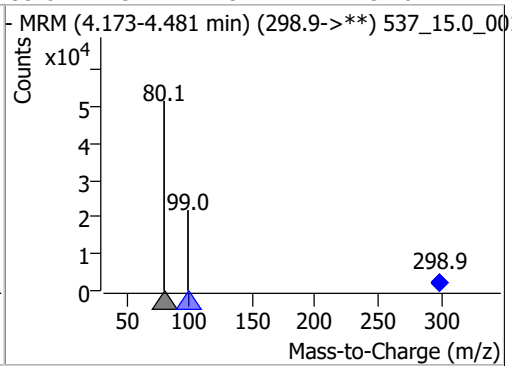
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	796311	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	922792	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1677676	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.991	314.9 -> 269.7	965446	10.0180	ng/ml		-0.008
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 100.18%			
13C3-HFPO-DA	5.213	287.0 -> 169.0	19922	9.9517	ng/ml		-0.010
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 99.52%			
13C2-PFDA	6.915	514.9 -> 469.9	574565	11.4749	ng/ml		0.028
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 114.75%			
NETFOSAA-d5	7.215	589.0 -> 419.0	805778	39.8420	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 99.61%			
Target Compounds							QValue
PFBS	4.262	298.9 -> 80.1	968177	14.4249	ng/ml		99
PFHxA	4.992	313.0 -> 269.0	1844103	15.0005	ng/ml		100
HFPO-DA	5.214	285.0 -> 169.1	34787	14.7338	ng/ml		97
PFHpA	5.676	362.9 -> 318.9	1652025	15.7297	ng/ml		99
PFHxS	5.743	398.9 -> 79.9	660934	15.2935	ng/ml		99
NaDONA	5.756	377.0 -> 250.9	5095244	14.0112	ng/ml		99
PFOA	6.171	413.0 -> 369.1	1386847	16.2475	ng/ml	#	88
PFNA	6.577	463.0 -> 418.9	903707	16.6199	ng/ml		98
PFOS	6.589	498.9 -> 80.1	419330	13.9179	ng/ml		98
9Cl-PF3ONS	6.782	531.0 -> 351.0	1422596	15.4634	ng/ml	#	94
PFDA	6.922	513.0 -> 468.9	744229	14.6260	ng/ml		95
N-MeFOSAA	7.073	570.0 -> 418.9	569310	14.4735	ng/ml		97
PFUdA	7.211	563.0 -> 518.8	799995	16.5568	ng/ml		98
N-EtFOSAA	7.223	584.0 -> 419.0	471091	13.8508	ng/ml		98
11ClPF3OUdS	7.345	631.0 -> 450.8	1745347	15.9555	ng/ml		100
PFDoA	7.469	613.0 -> 568.9	828917	15.7036	ng/ml	#	99
PFTrDA	7.690	663.0 -> 618.8	706739	15.9115	ng/ml		98
PFTA	7.884	712.9 -> 669.0	373630	14.7496	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

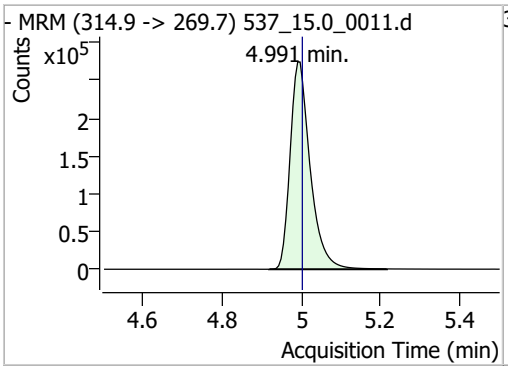
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	14.4249	4.26	-0.02	968177	298.9 -> 99.0	42.3	34.4	51.6

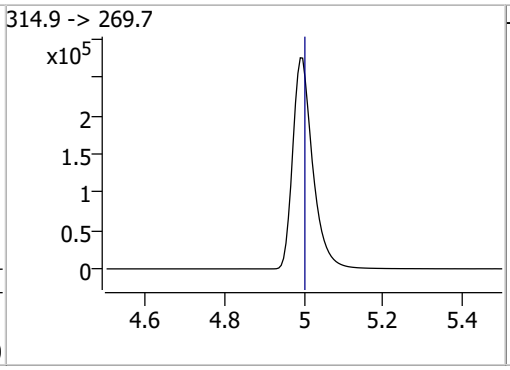


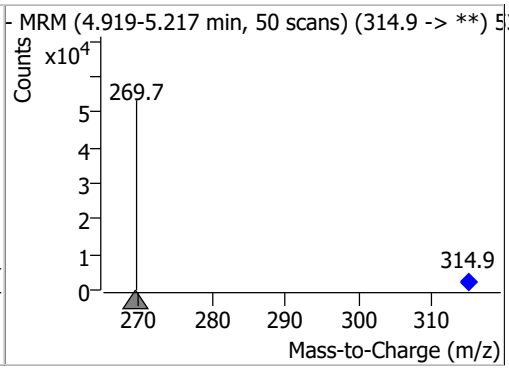




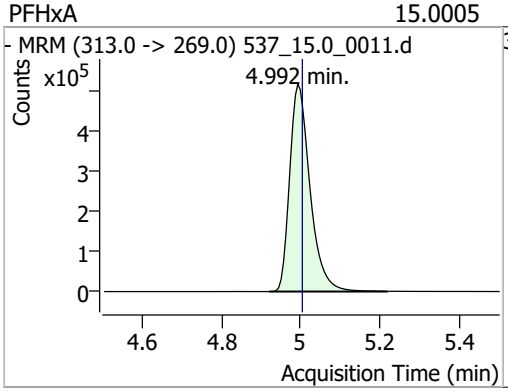
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	10.0180	4.99	-0.01	965446				

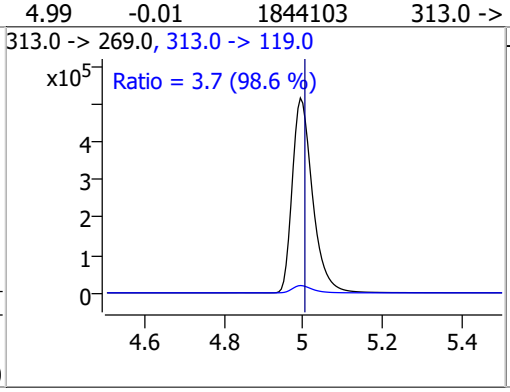


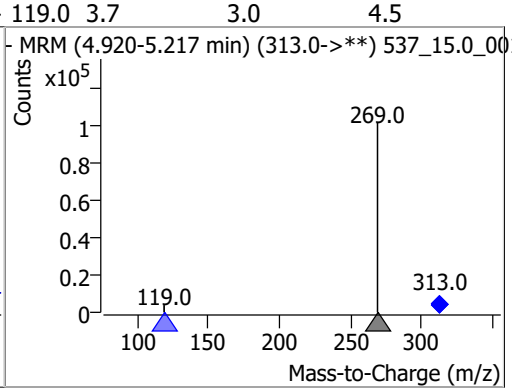




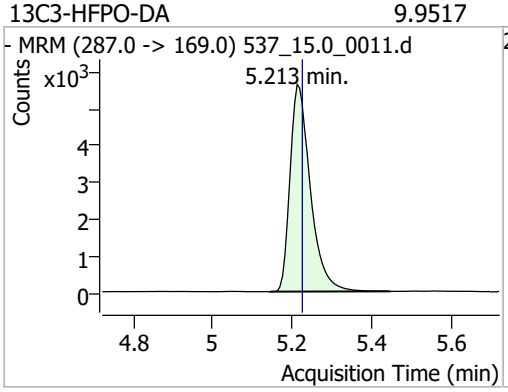
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	15.0005	4.99	-0.01	1844103	313.0 -> 119.0	3.7	3.0	4.5

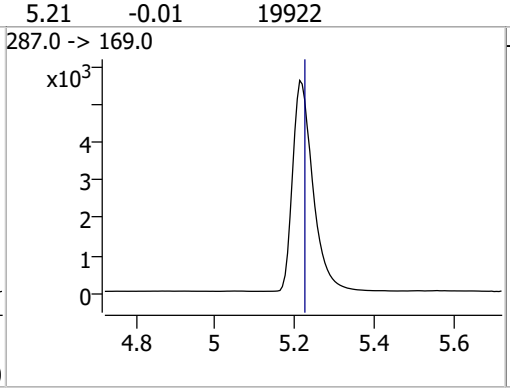


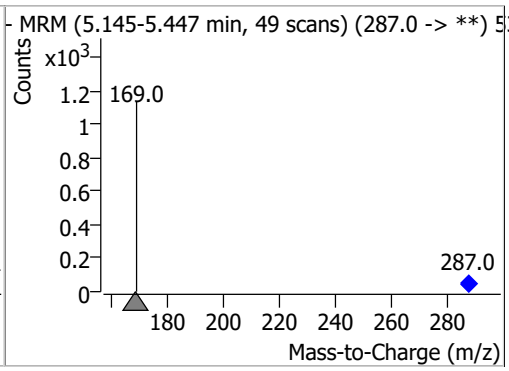




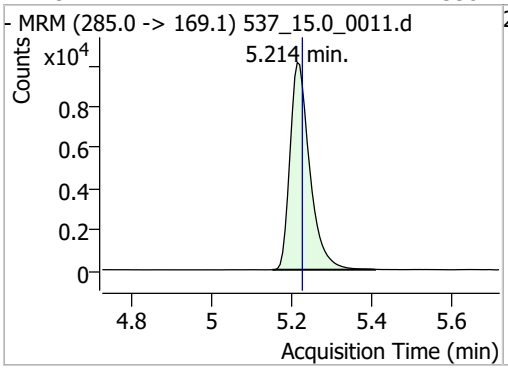
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	9.9517	5.21	-0.01	19922				

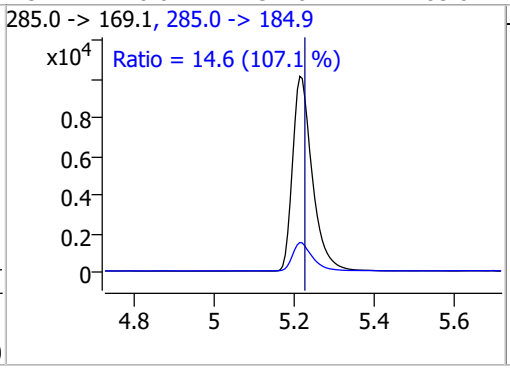


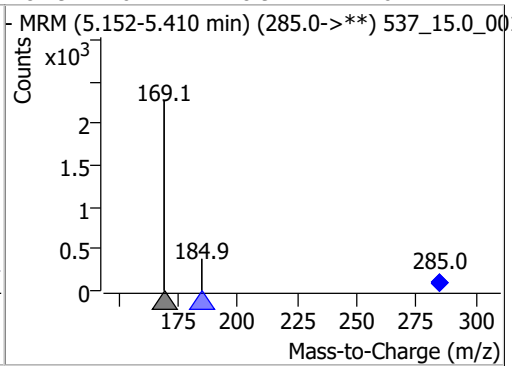




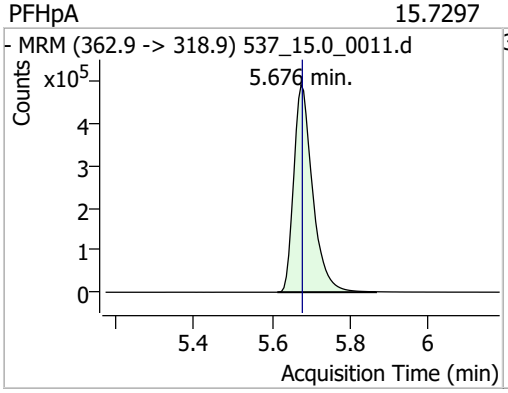
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	14.7338	5.21	-0.01	34787	285.0 -> 184.9	14.6	10.9	16.4

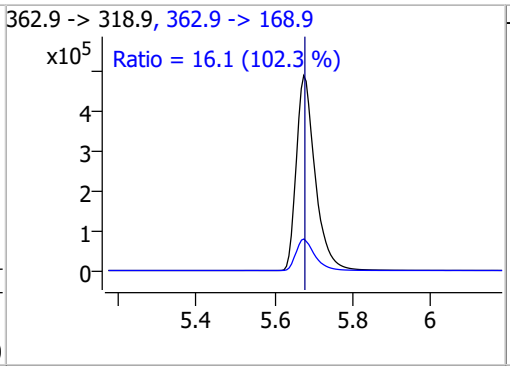


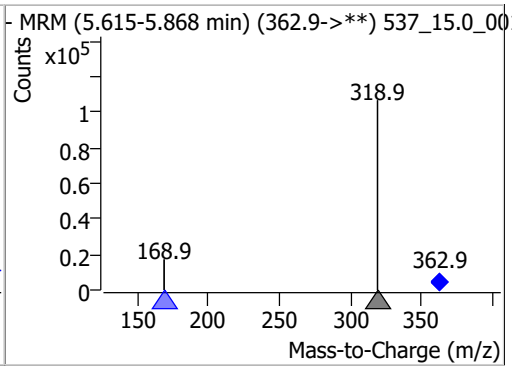




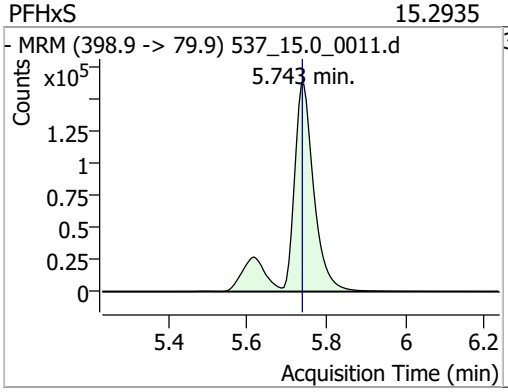
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	15.7297	5.68	0.00	1652025	362.9 -> 168.9	16.1	12.6	18.9

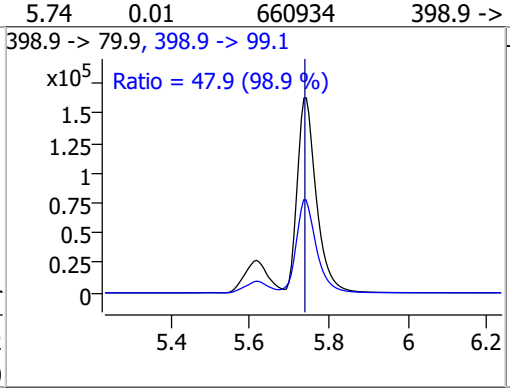


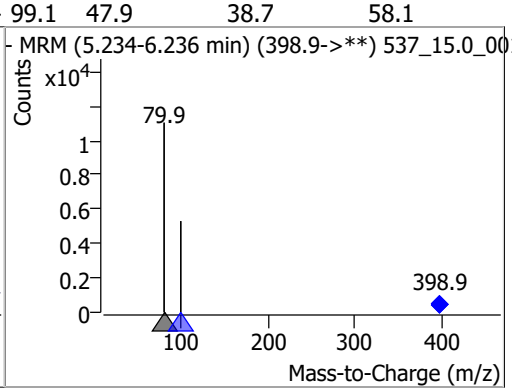




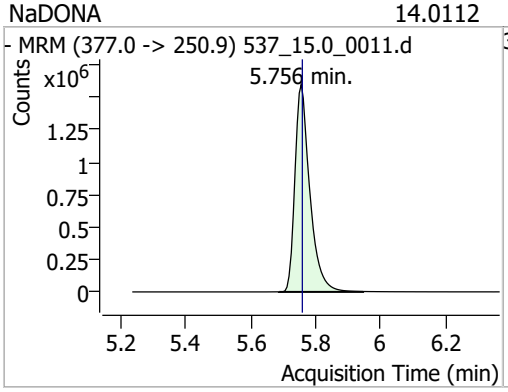
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	15.2935	5.74	0.01	660934	398.9 -> 99.1	47.9	38.7	58.1

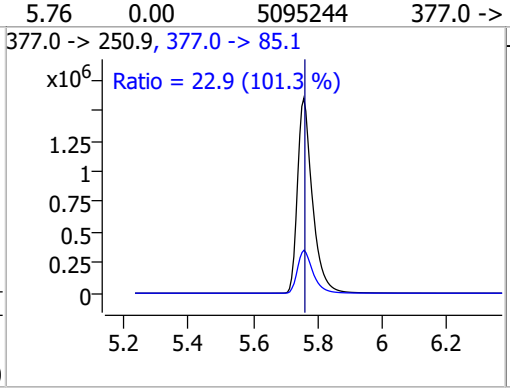


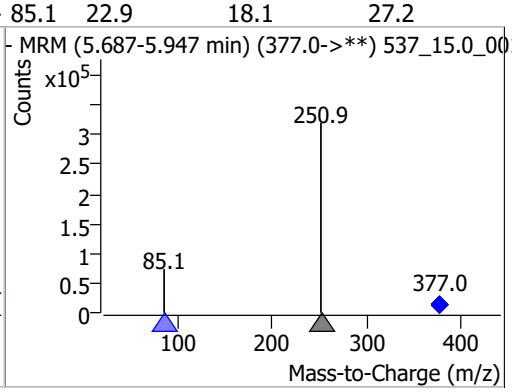




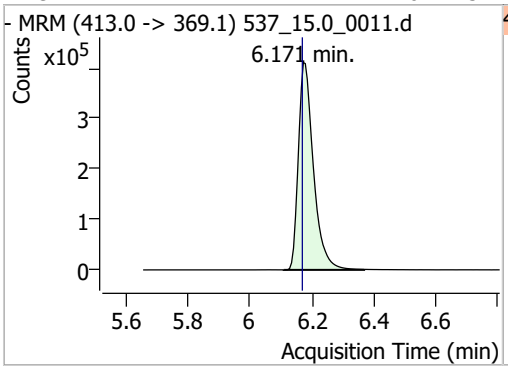
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	14.0112	5.76	0.00	5095244	377.0 -> 85.1	22.9	18.1	27.2

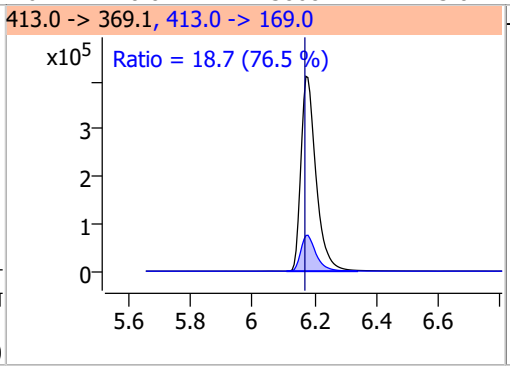


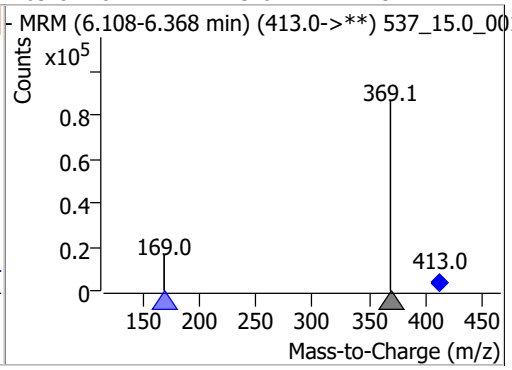




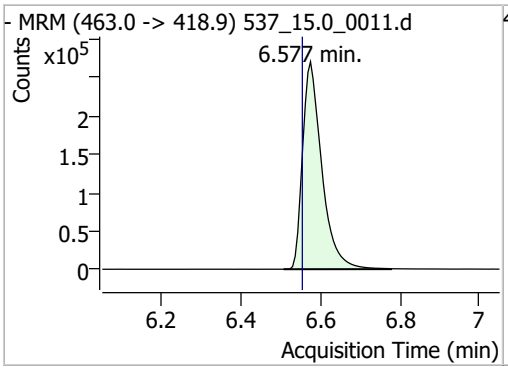
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	16.2475	6.17	0.01	1386847	413.0 -> 169.0	18.7	19.6	29.4

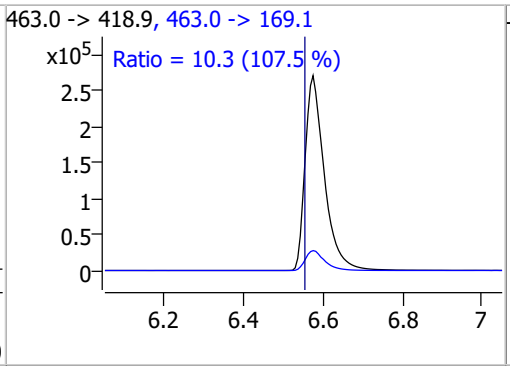


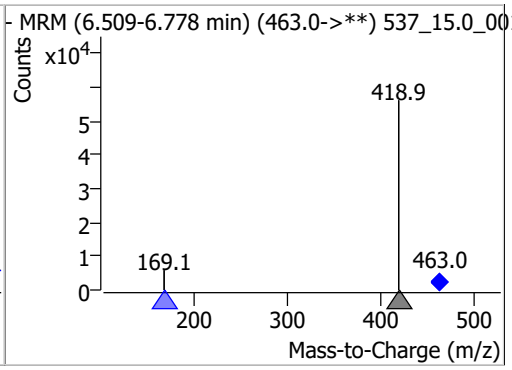




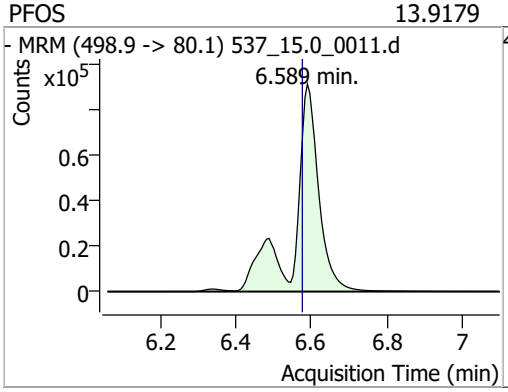
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	16.6199	6.58	0.02	903707	463.0 -> 169.1	10.3	7.7	11.5

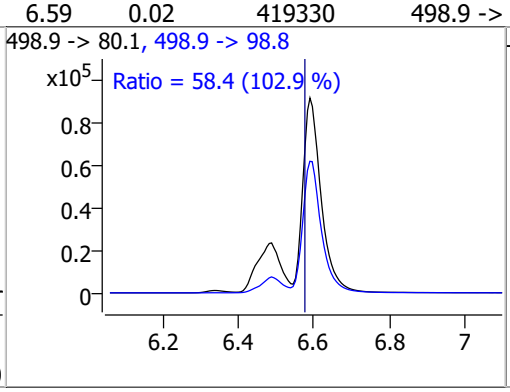


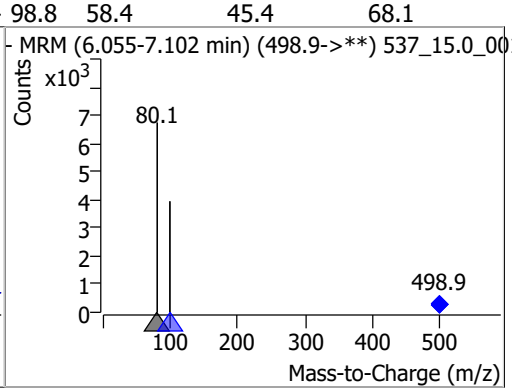




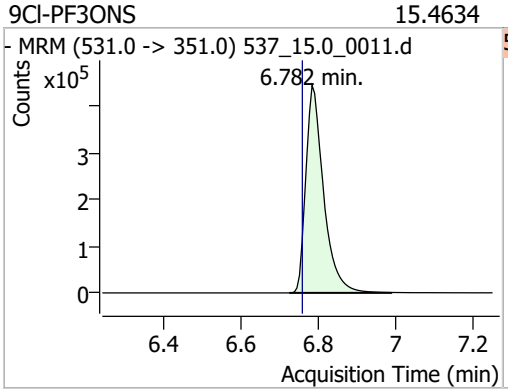
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	13.9179	6.59	0.02	419330	498.9 -> 98.8	58.4	45.4	68.1

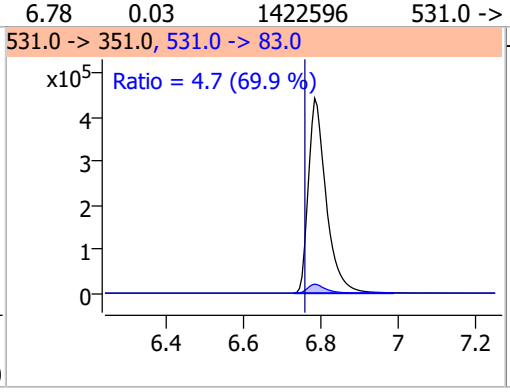


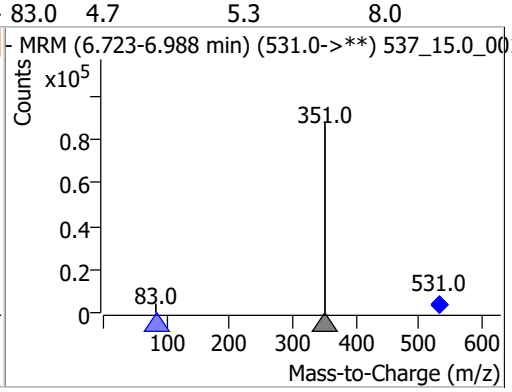




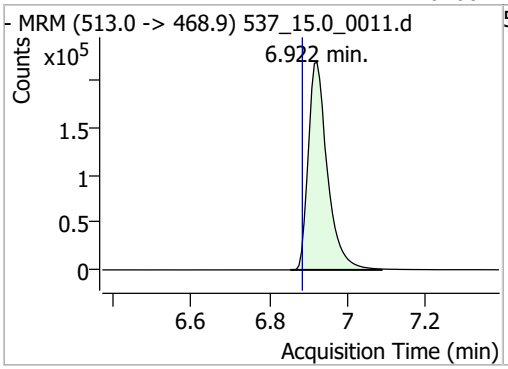
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	15.4634	6.78	0.03	1422596	531.0 -> 83.0	4.7	5.3	8.0

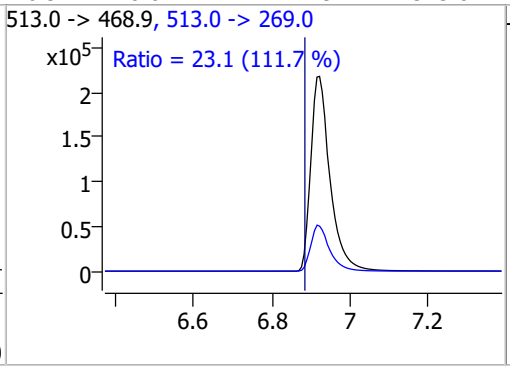


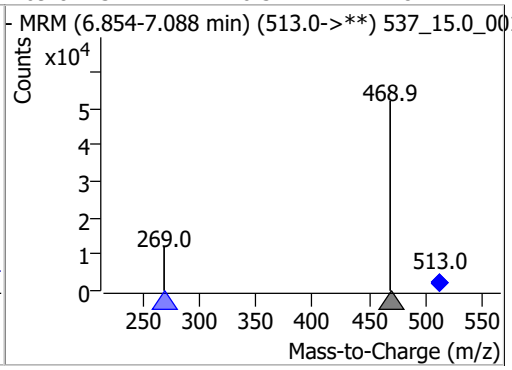




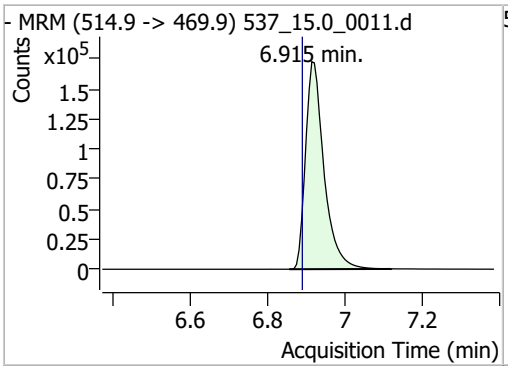
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	14.6260	6.92	0.04	744229	513.0 -> 269.0	23.1	16.5	24.8

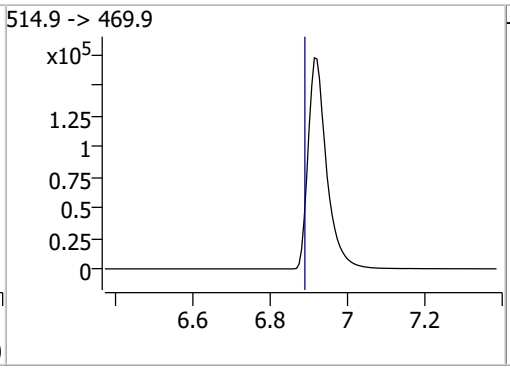


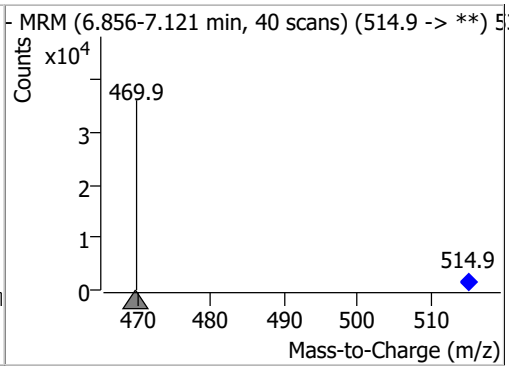




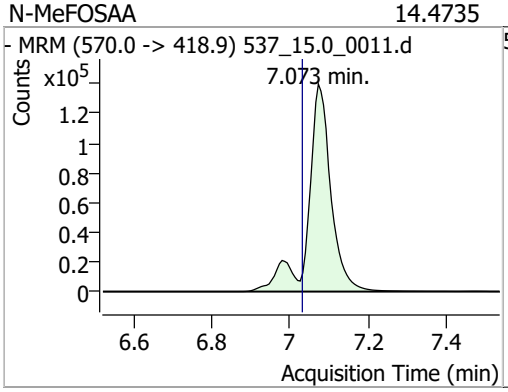
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	11.4749	6.92	0.03	574565				

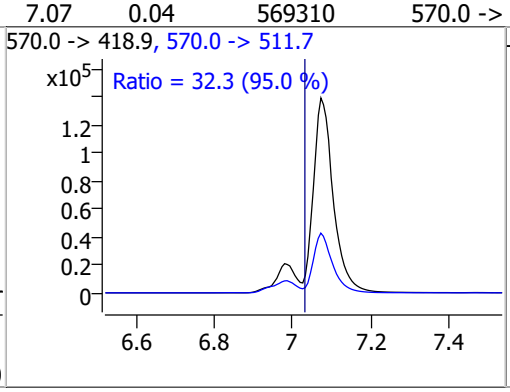


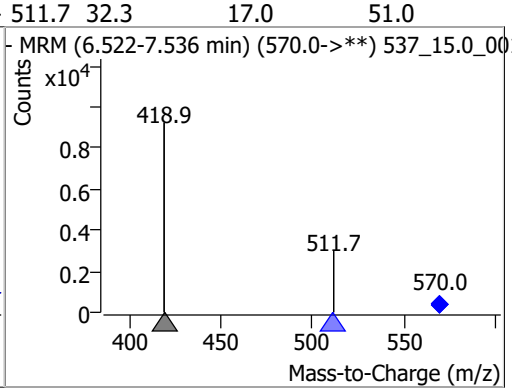




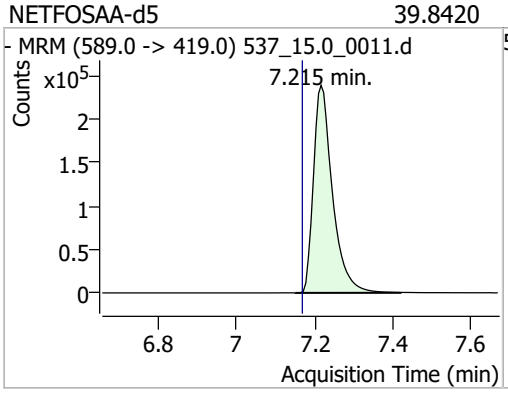
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	14.4735	7.07	0.04	569310	570.0 -> 511.7	32.3	17.0	51.0

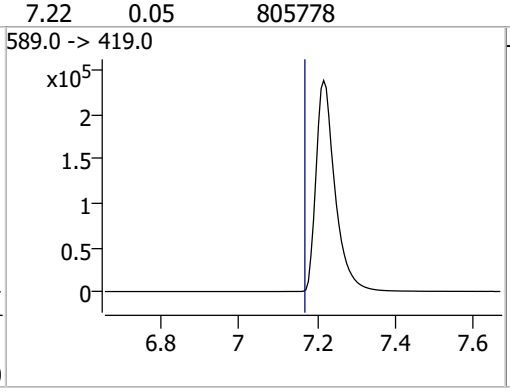


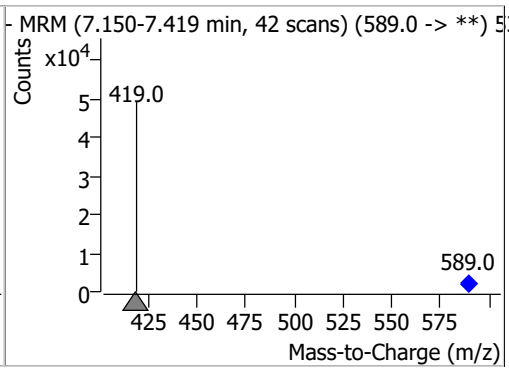




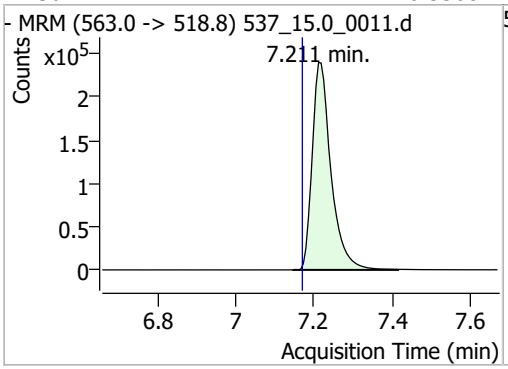
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	39.8420	7.22	0.05	805778				

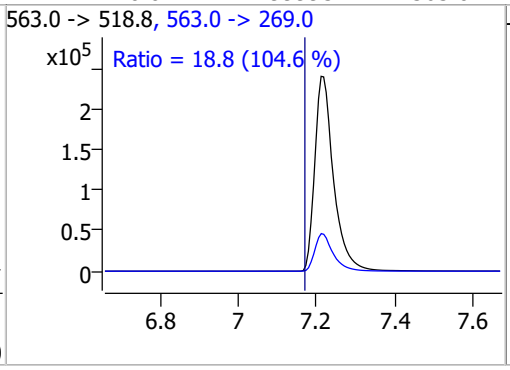


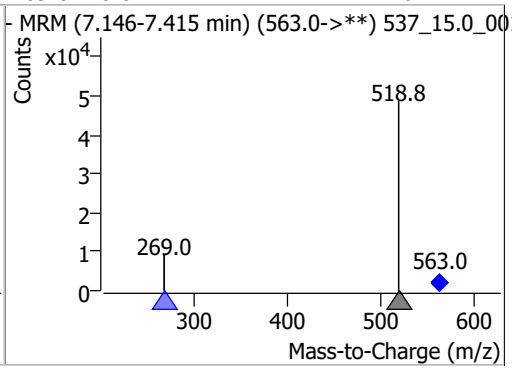




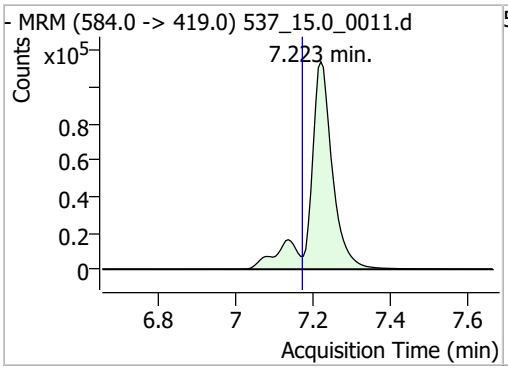
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	16.5568	7.21	0.04	799995	563.0 -> 269.0	18.8	14.4	21.6

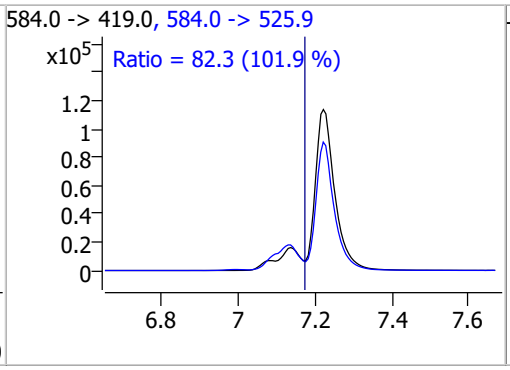


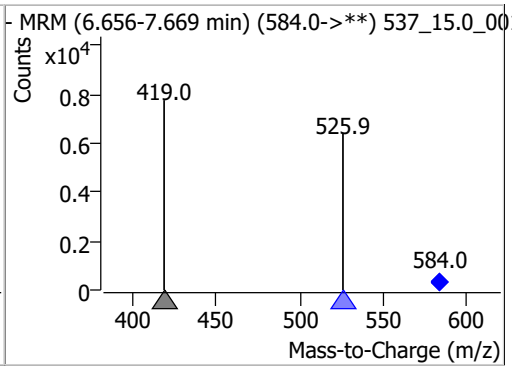




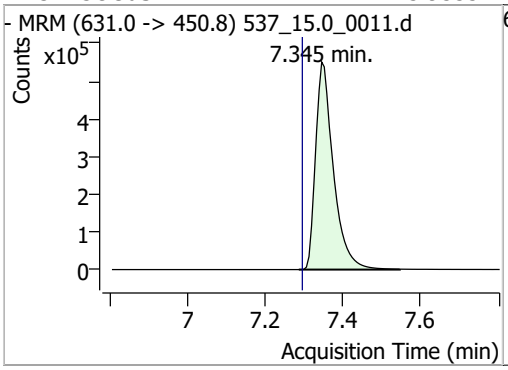
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	13.8508	7.22	0.05	471091	584.0 -> 525.9	82.3	40.4	121.1

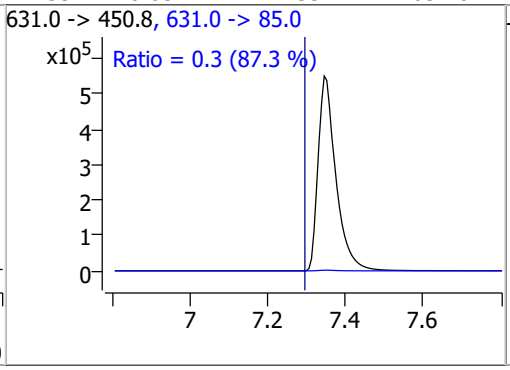


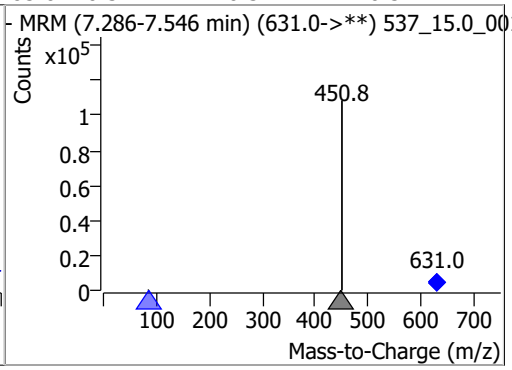




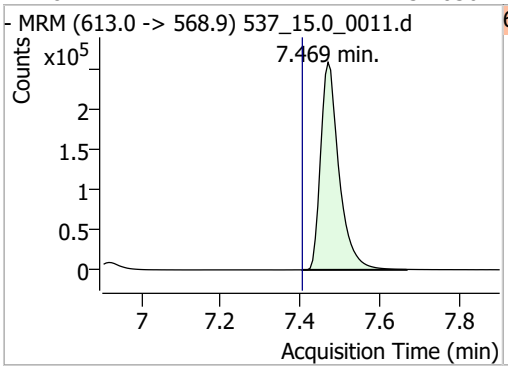
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	15.9555	7.35	0.05	1745347	631.0 -> 85.0	0.3	0.3	0.5

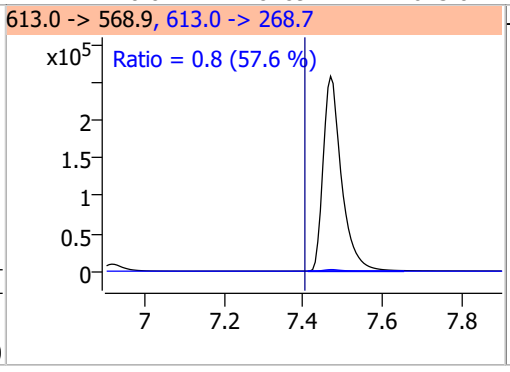


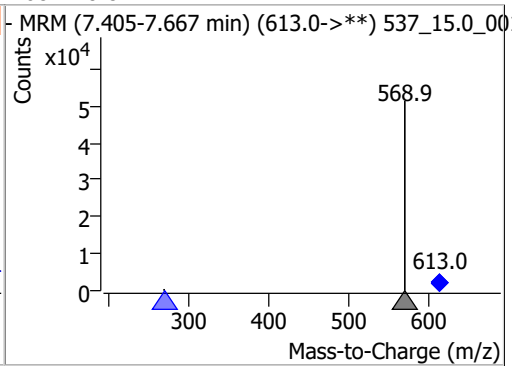




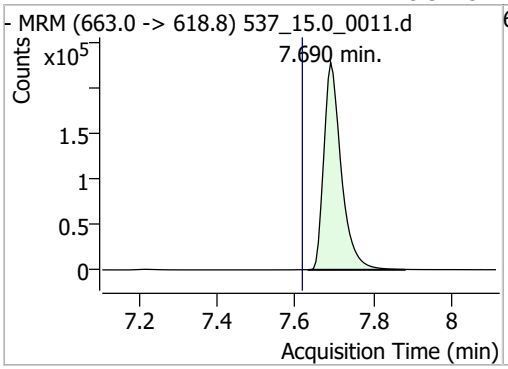
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	15.7036	7.47	0.07	828917	613.0 -> 268.7	0.8	1.1	1.7

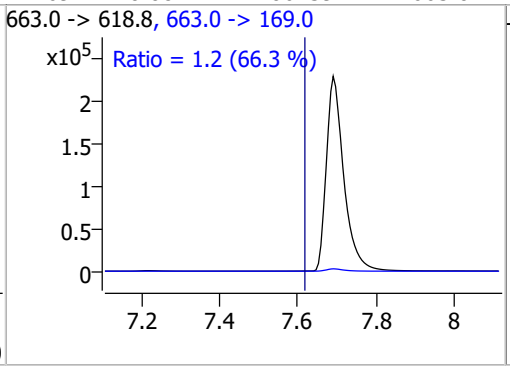


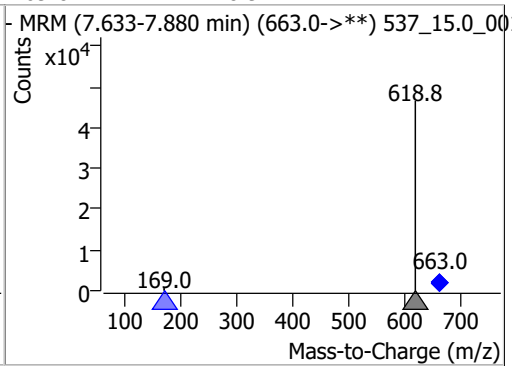




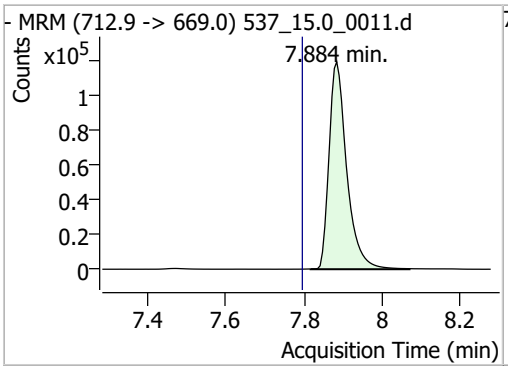
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	15.9115	7.69	0.08	706739	663.0 -> 169.0	1.2	0.9	2.7

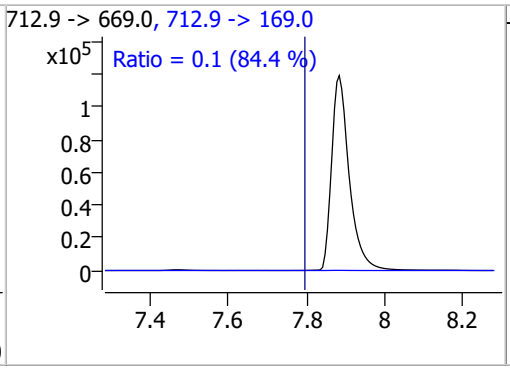


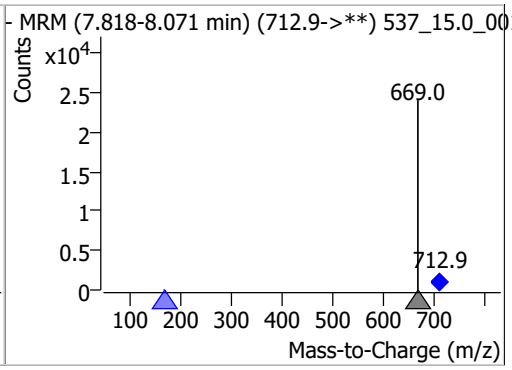




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	14.7496	7.88	0.09	373630	712.9 -> 169.0	0.1	0.0	0.1







Quantitation Results Report

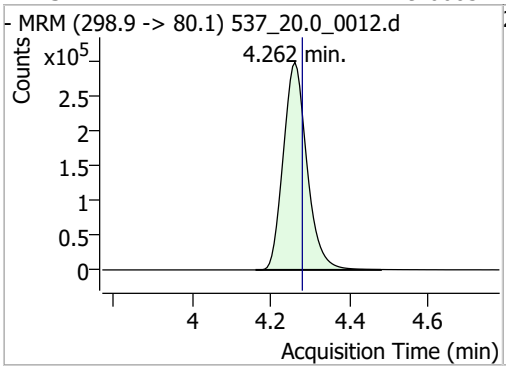
Agilent | Trusted Answers

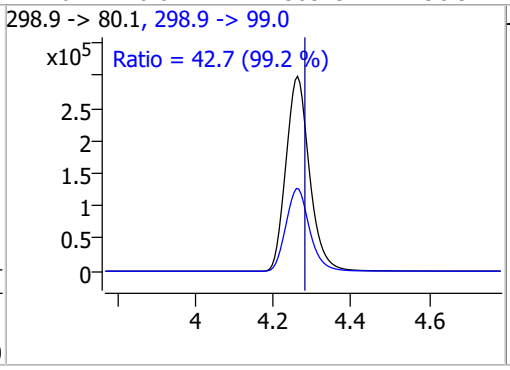
Data File	537_20.0_0012.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 8:22:52 AM
Sample Name	CAL7_537_20.0	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809_ICAL-537.batch.bin	Last Calib Update	8/10/2023 3:46:40 PM
Ref Library			

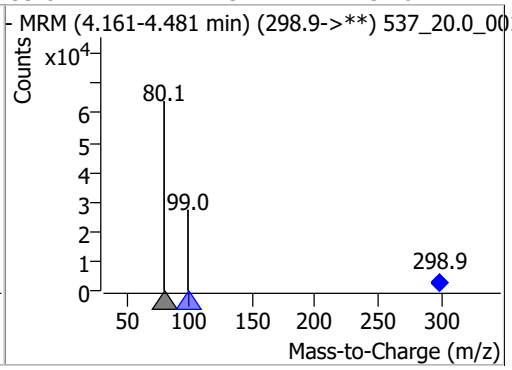
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	752815	3.0000	ng/ml		0.017
13C2-PFOA	6.177	415.0 -> 370.0	850056	1.0000	ng/ml		0.014
NMeFOSAA-d3	7.066	573.0 -> 418.9	1588985	4.0000	ng/ml		0.038
System Monitoring Compounds							
13C2-PFHxA	4.991	314.9 -> 269.7	921268	10.3776	ng/ml		-0.008
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 103.78%			
13C3-HFPO-DA	5.213	287.0 -> 169.0	18567	10.0680	ng/ml		-0.010
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 100.68%			
13C2-PFDA	6.922	514.9 -> 469.9	463502	10.0489	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 100.49%			
NETFOSAA-d5	7.215	589.0 -> 419.0	674827	35.2295	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 88.07%			
Target Compounds							QValue
PFBS	4.262	298.9 -> 80.1	1250579	19.6603	ng/ml		99
PFHxA	4.992	313.0 -> 269.0	2385802	21.0674	ng/ml		100
HFPO-DA	5.214	285.0 -> 169.1	45763	20.7331	ng/ml		98
PFHpA	5.676	362.9 -> 318.9	2299054	23.7634	ng/ml		97
PFHxS	5.743	398.9 -> 79.9	816896	19.6862	ng/ml		93
NaDONA	5.756	377.0 -> 250.9	6948472	20.0564	ng/ml		95
PFOA	6.171	413.0 -> 369.1	1765389	22.4519	ng/ml		91
PFNA	6.577	463.0 -> 418.9	1021610	20.2995	ng/ml	#	94
PFOS	6.589	498.9 -> 80.1	612685	21.0969	ng/ml		96
9Cl-PF3ONS	6.789	531.0 -> 351.0	1880332	21.1619	ng/ml	#	94
PFDA	6.922	513.0 -> 468.9	1020070	21.2643	ng/ml		100
N-MeFOSAA	7.073	570.0 -> 418.9	831730	21.4806	ng/ml		88
PFUdA	7.211	563.0 -> 518.8	935086	21.0086	ng/ml		99
N-EtFOSAA	7.229	584.0 -> 419.0	690310	20.8299	ng/ml		93
11ClPF3OUdS	7.352	631.0 -> 450.8	2208854	20.6199	ng/ml		100
PFDoA	7.469	613.0 -> 568.9	1033041	21.2289	ng/ml	#	99
PFTrDA	7.690	663.0 -> 618.8	903282	21.5853	ng/ml		99
PFTA	7.884	712.9 -> 669.0	498231	21.3514	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

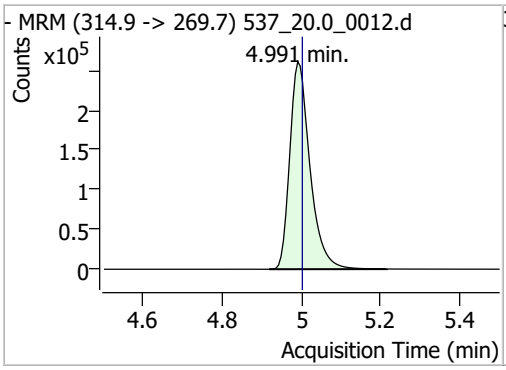
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	19.6603	4.26	-0.02	1250579	298.9 -> 99.0	42.7	34.4	51.6

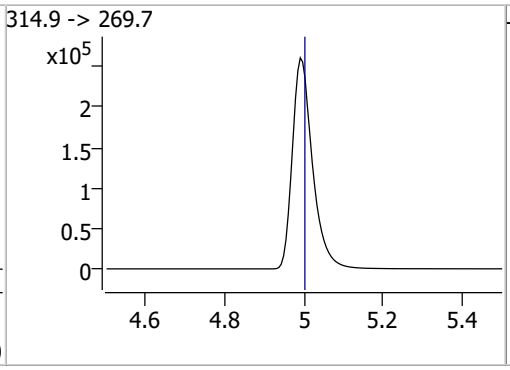


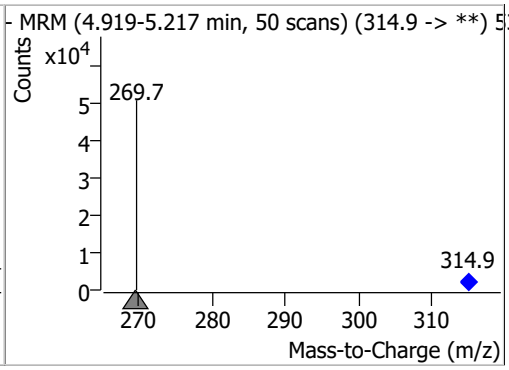




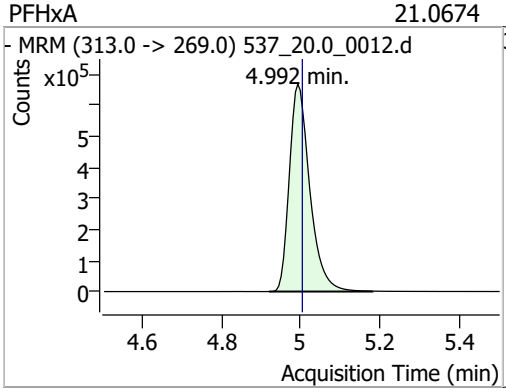
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	10.3776	4.99	-0.01	921268				

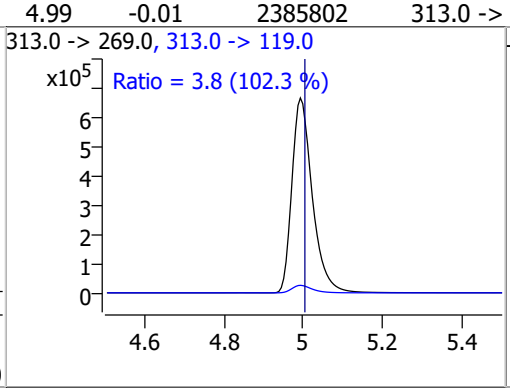


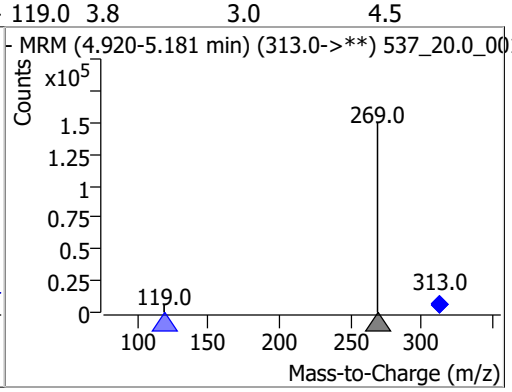




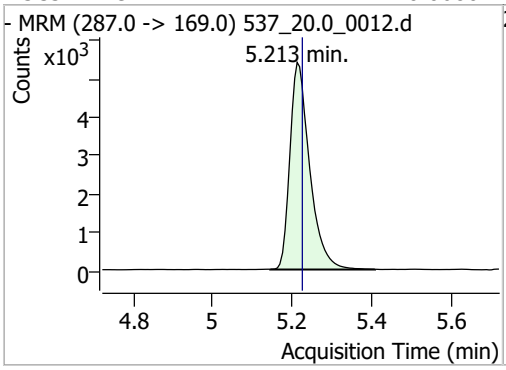
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	21.0674	4.99	-0.01	2385802	313.0 -> 119.0	3.8	3.0	4.5

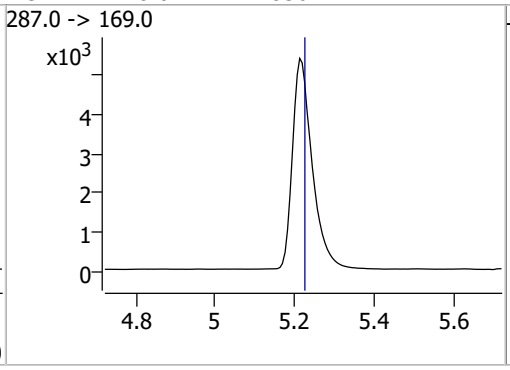


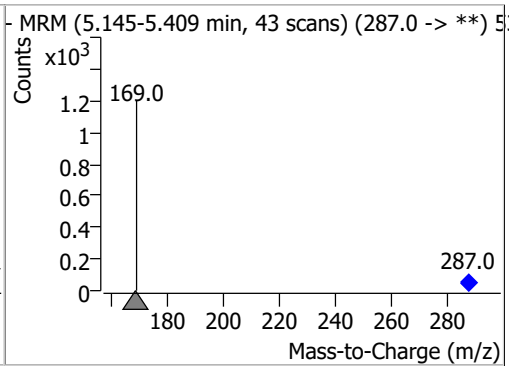




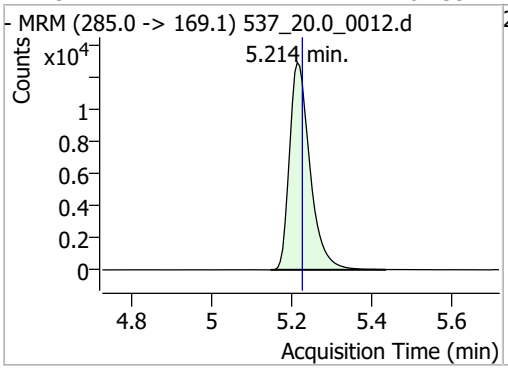
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	10.0680	5.21	-0.01	18567				

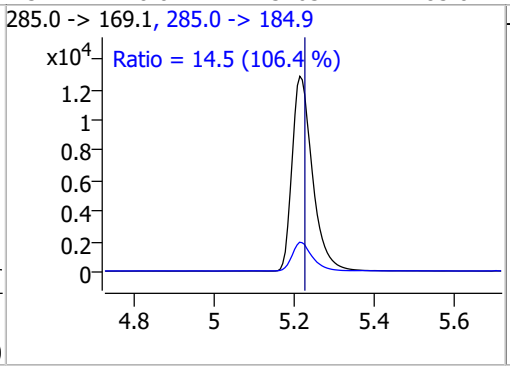


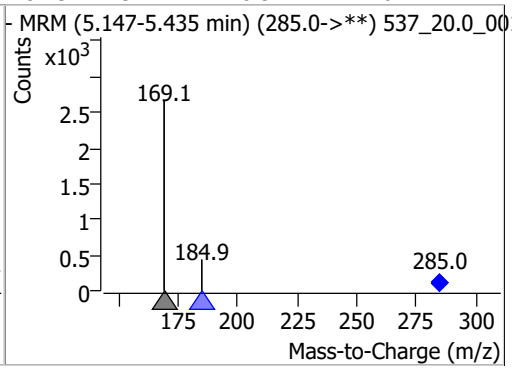




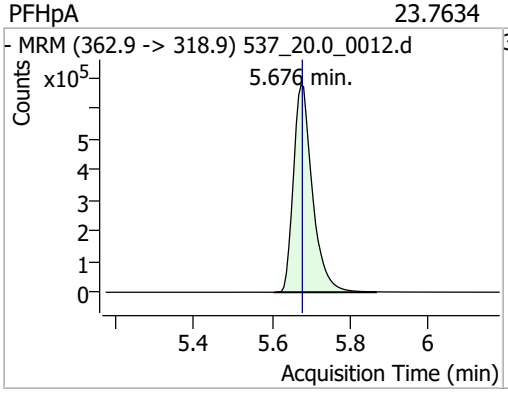
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	20.7331	5.21	-0.01	45763	285.0 -> 184.9	14.5	10.9	16.4

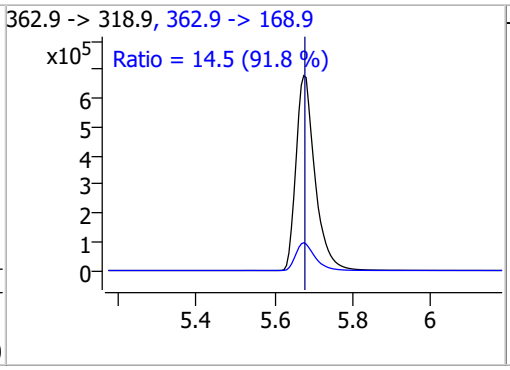


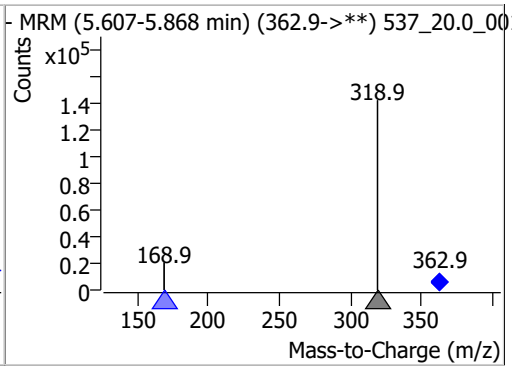




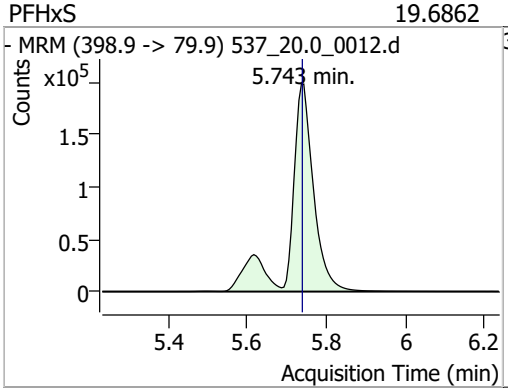
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	23.7634	5.68	0.00	2299054	362.9 -> 168.9	14.5	12.6	18.9

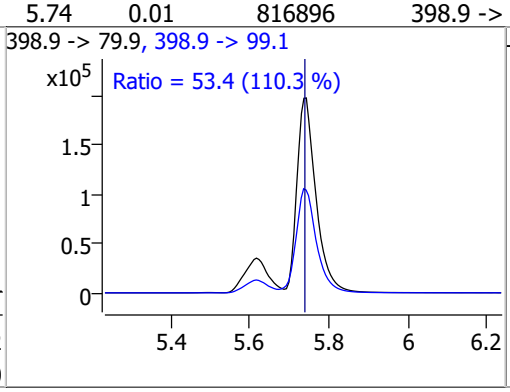


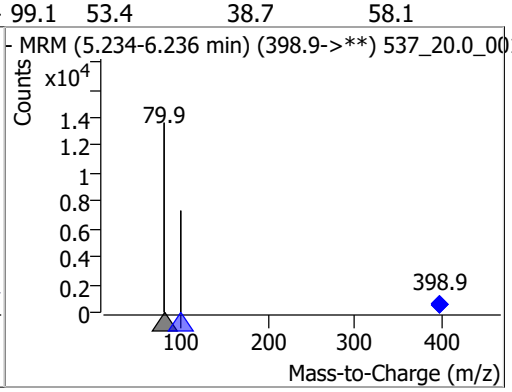




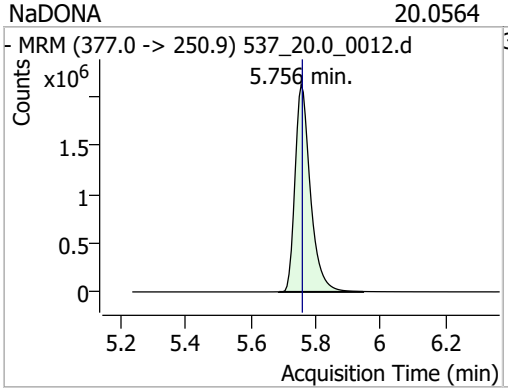
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	19.6862	5.74	0.01	816896	398.9 -> 99.1	53.4	38.7	58.1

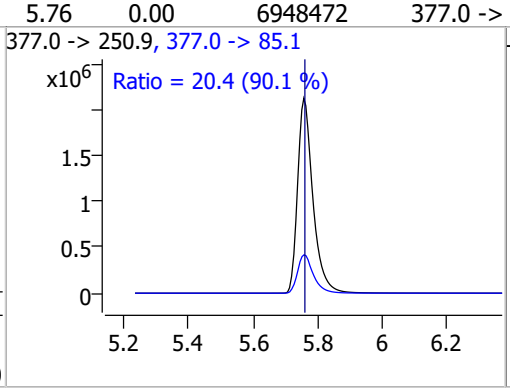


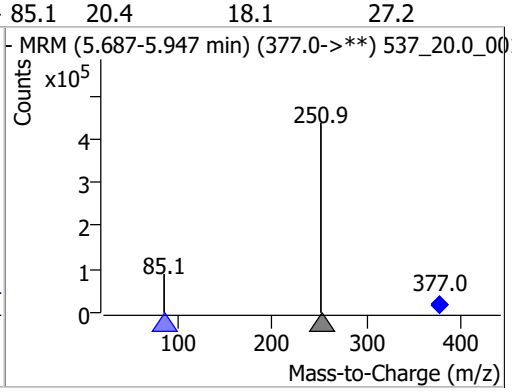




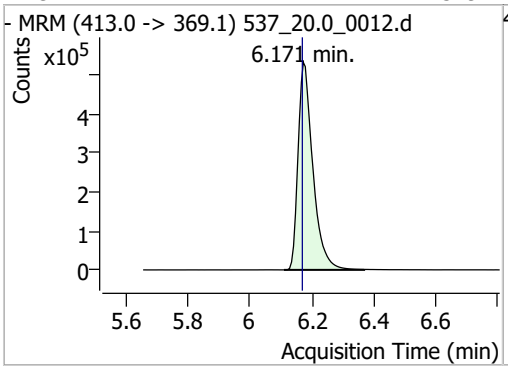
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	20.0564	5.76	0.00	6948472	377.0 -> 85.1	20.4	18.1	27.2

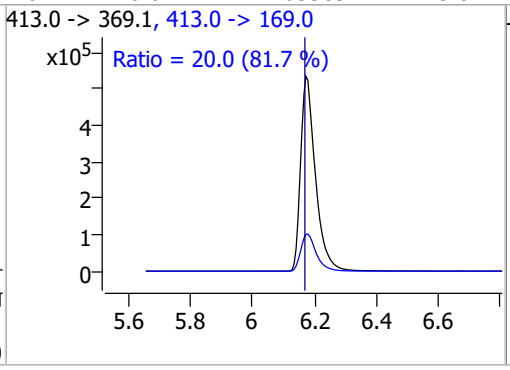


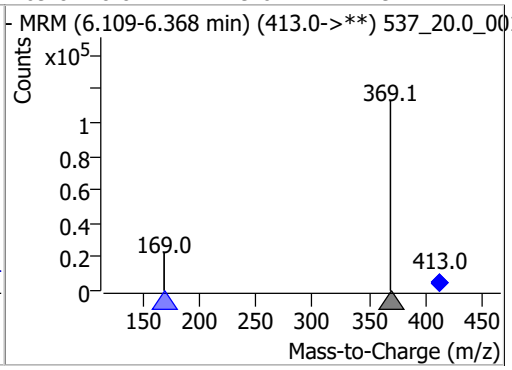




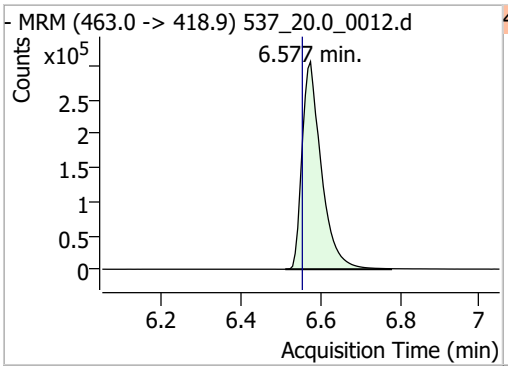
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	22.4519	6.17	0.01	1765389	413.0 -> 169.0	20.0	19.6	29.4

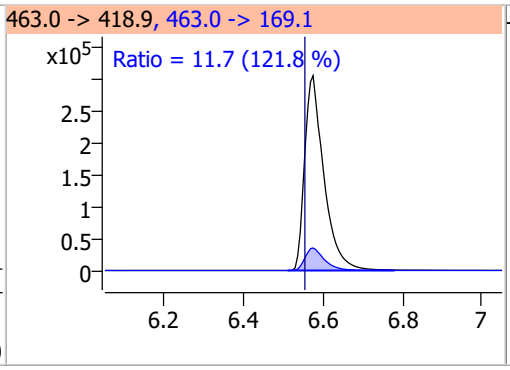


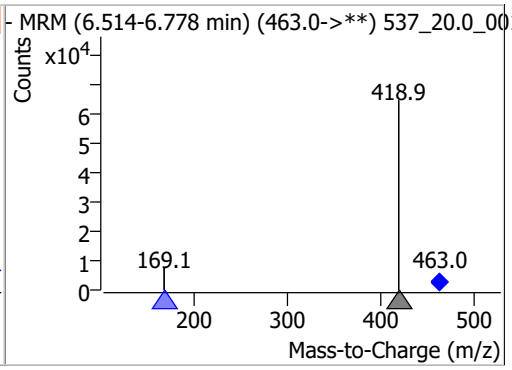




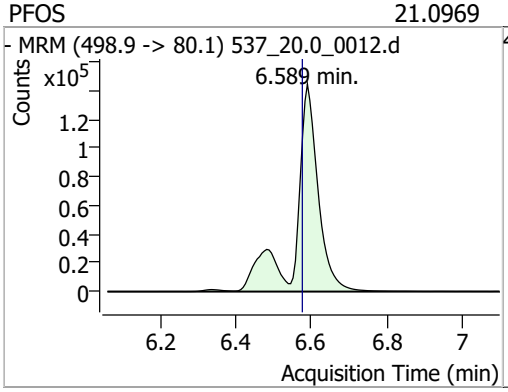
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	20.2995	6.58	0.02	1021610	463.0 -> 169.1	11.7	7.7	11.5

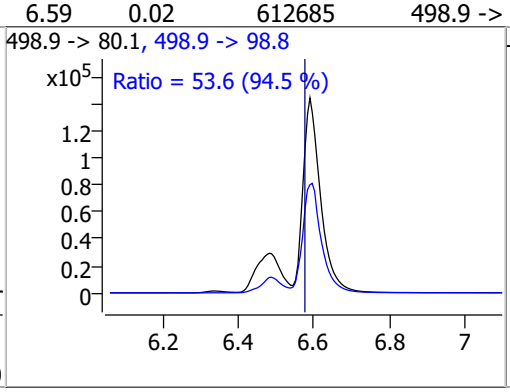


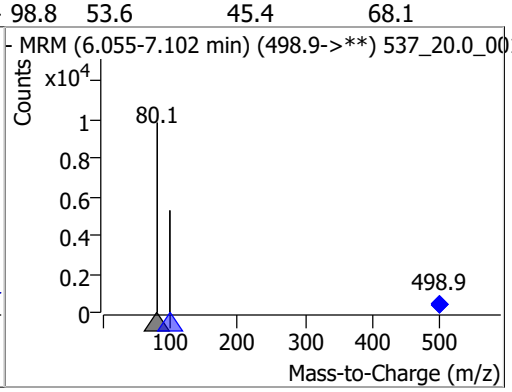




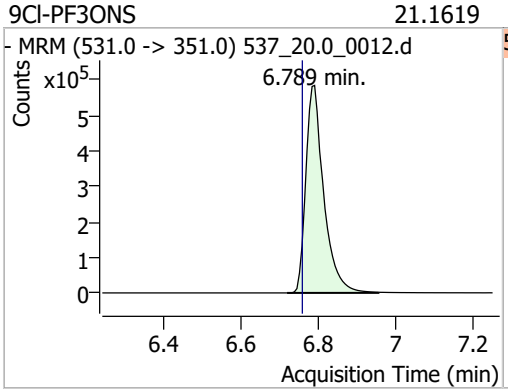
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	21.0969	6.59	0.02	612685	498.9 -> 98.8	53.6	45.4	68.1

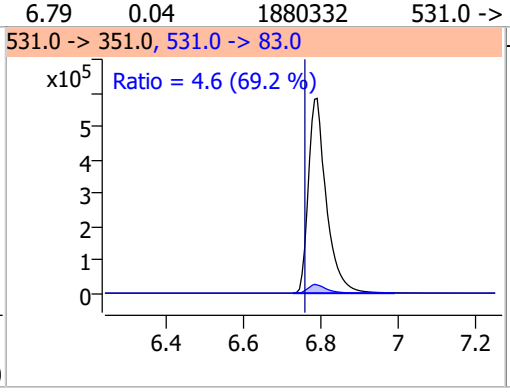


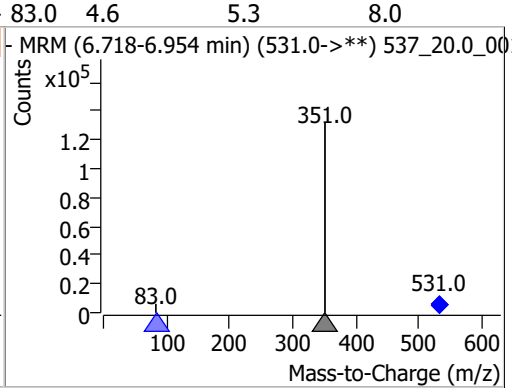




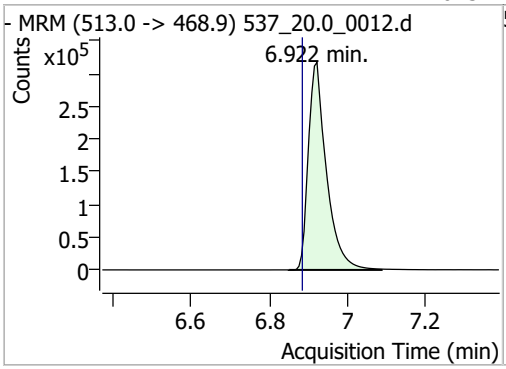
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	21.1619	6.79	0.04	1880332	531.0 -> 83.0	4.6	5.3	8.0

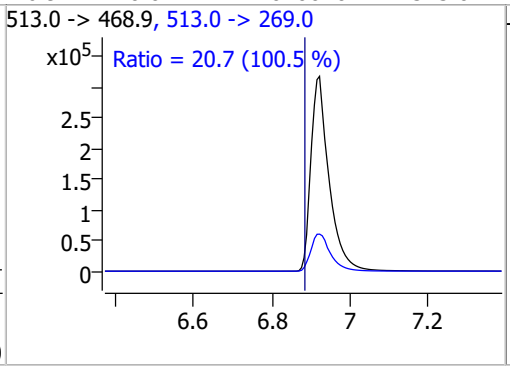


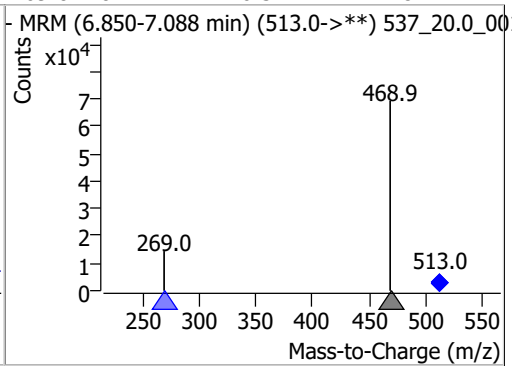




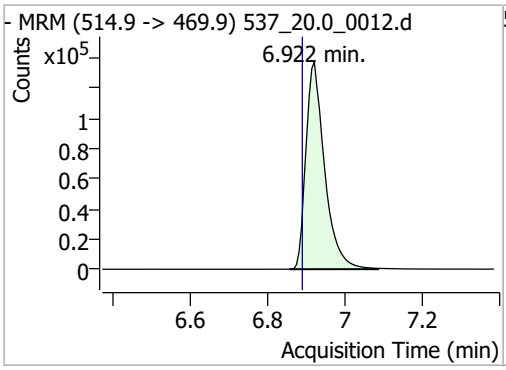
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	21.2643	6.92	0.04	1020070	513.0 -> 269.0	20.7	16.5	24.8

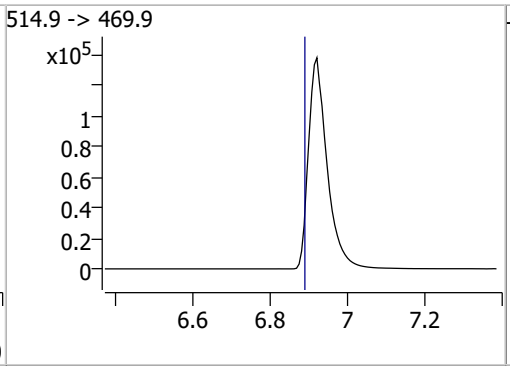


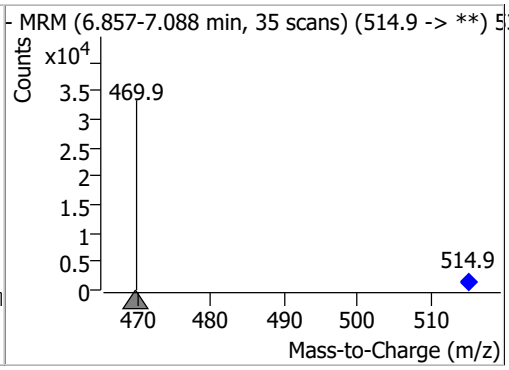




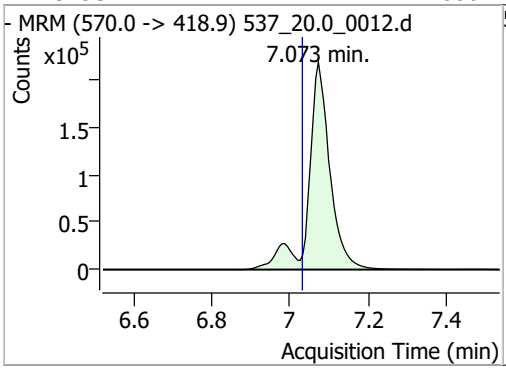
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	10.0489	6.92	0.03	463502				

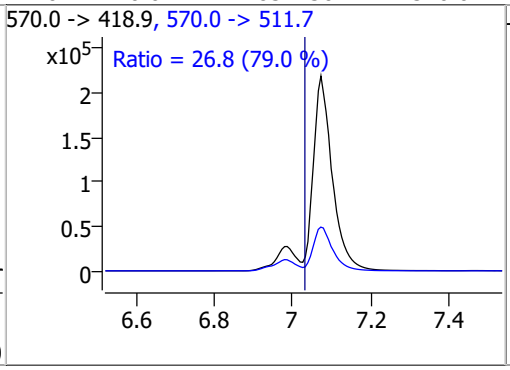


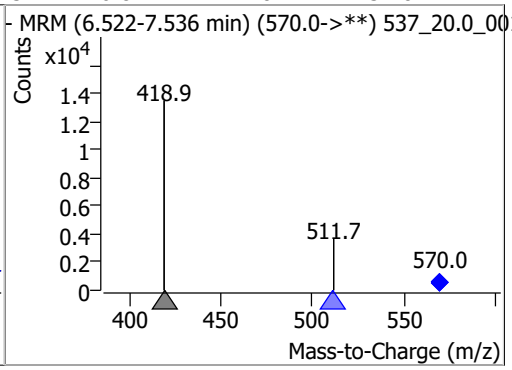




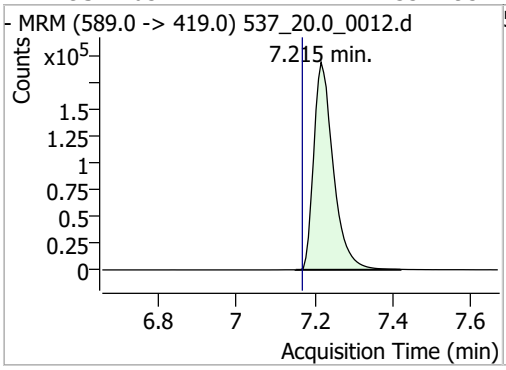
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	21.4806	7.07	0.04	831730	570.0 -> 511.7	26.8	17.0	51.0

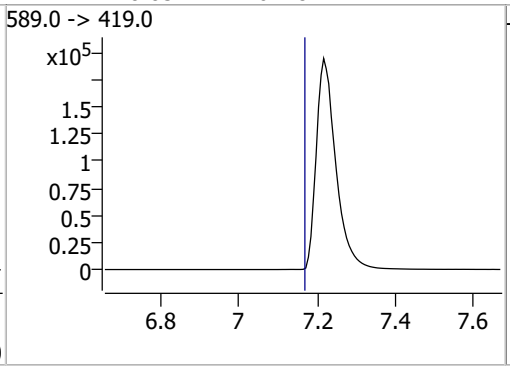


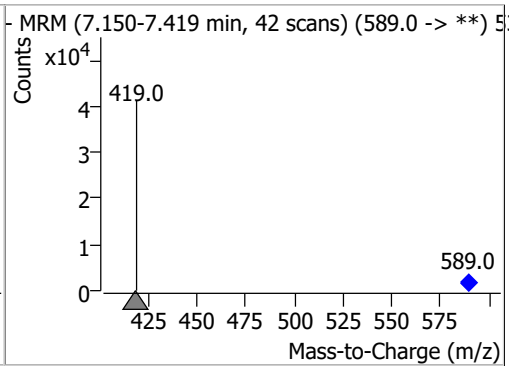




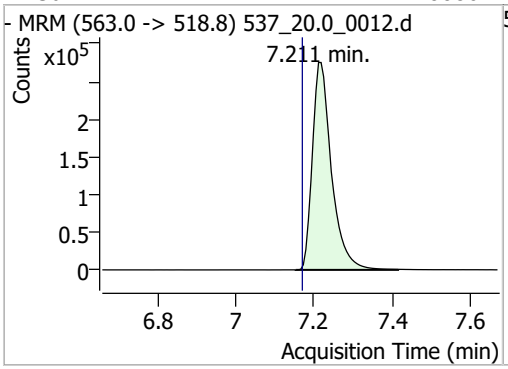
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	35.2295	7.22	0.05	674827				

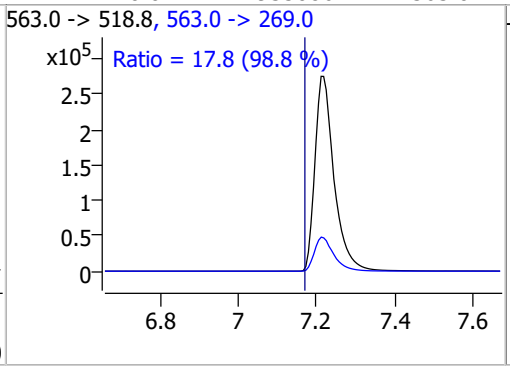


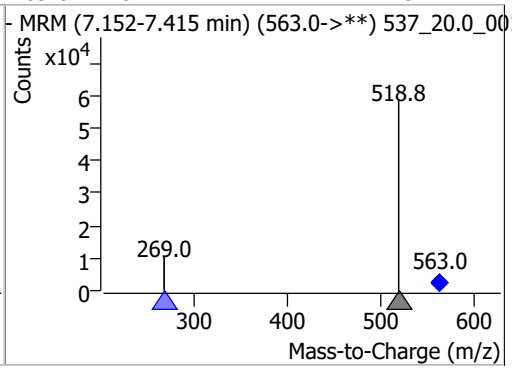




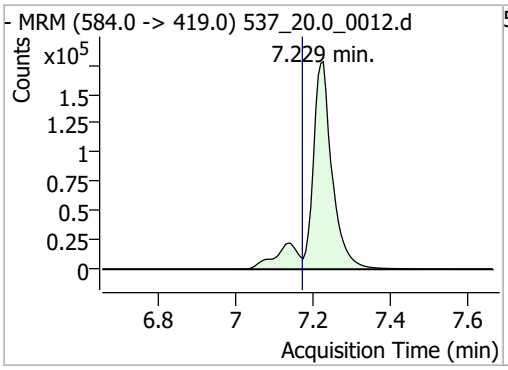
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	21.0086	7.21	0.04	935086	563.0 -> 269.0	17.8	14.4	21.6

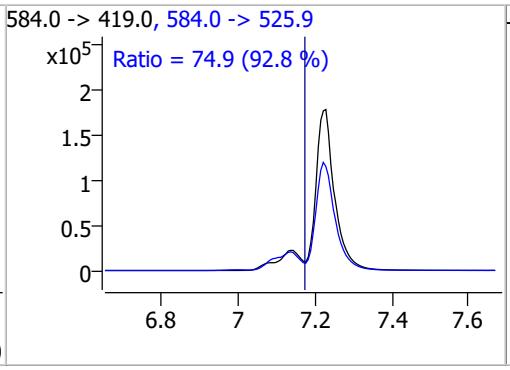


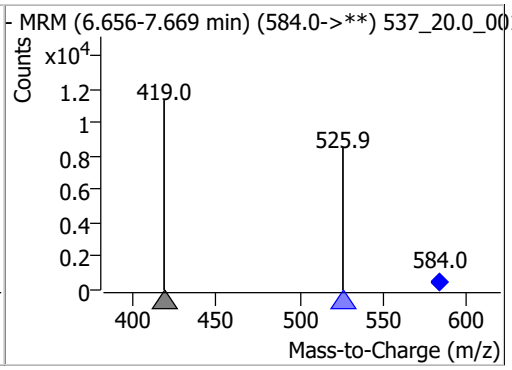




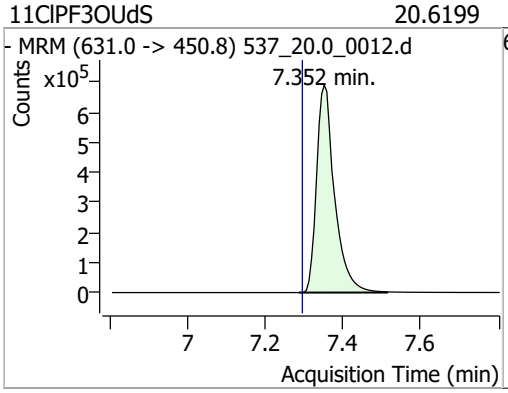
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	20.8299	7.23	0.06	690310	584.0 -> 525.9	74.9	40.4	121.1

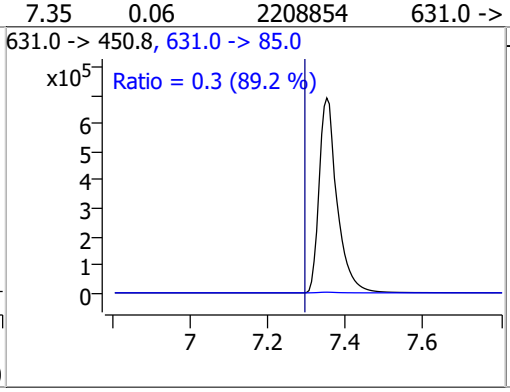


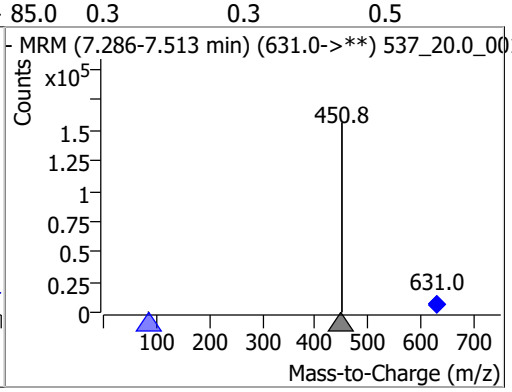




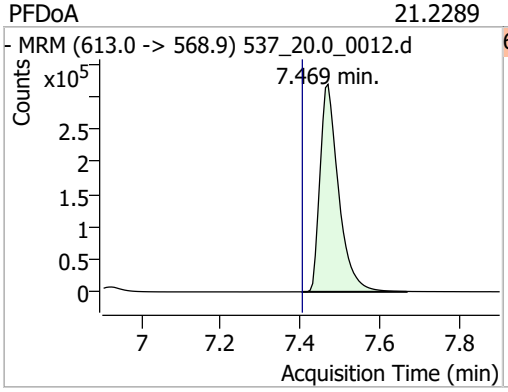
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	20.6199	7.35	0.06	2208854	631.0 -> 85.0	0.3	0.3	0.5

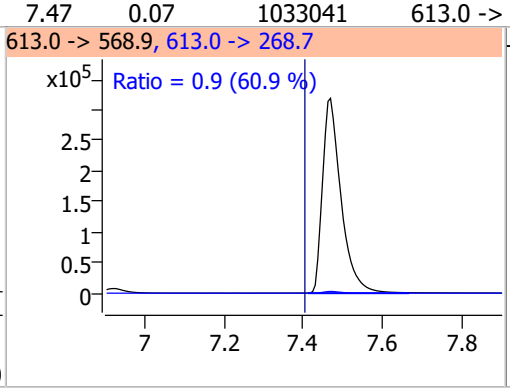


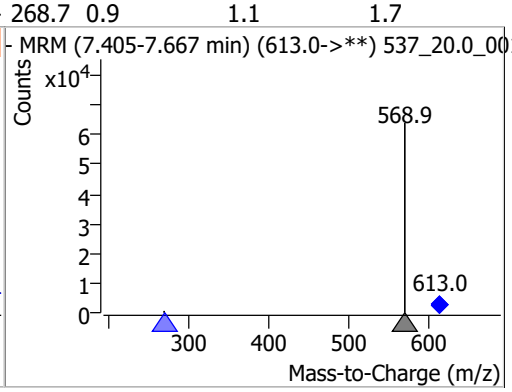




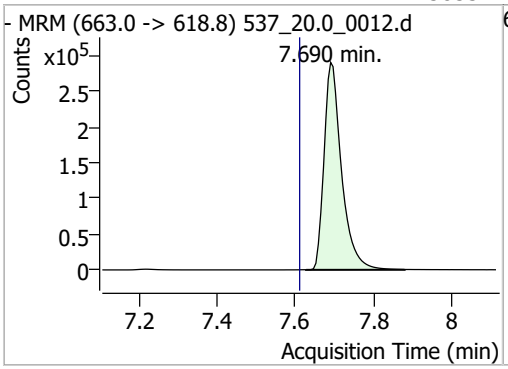
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	21.2289	7.47	0.07	1033041	613.0 -> 268.7	0.9	1.1	1.7

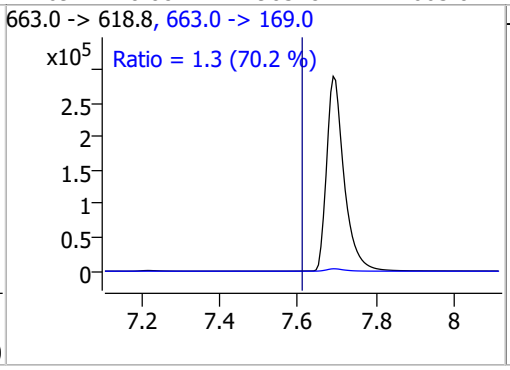


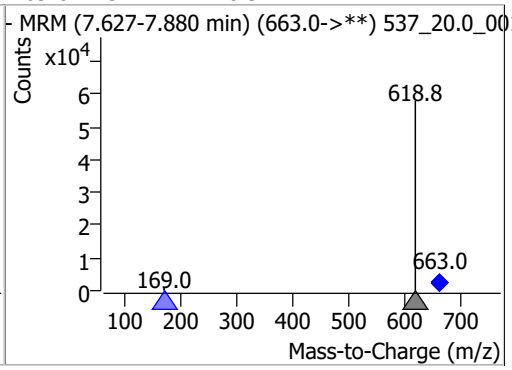




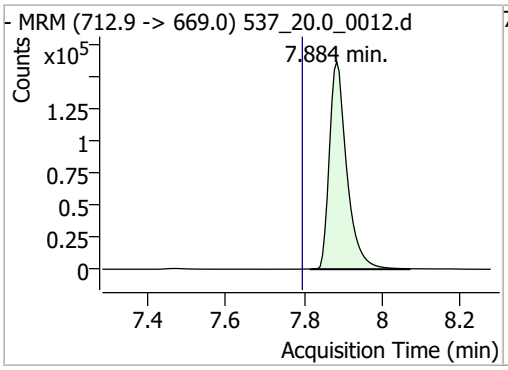
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	21.5853	7.69	0.08	903282	663.0 -> 169.0	1.3	0.9	2.7

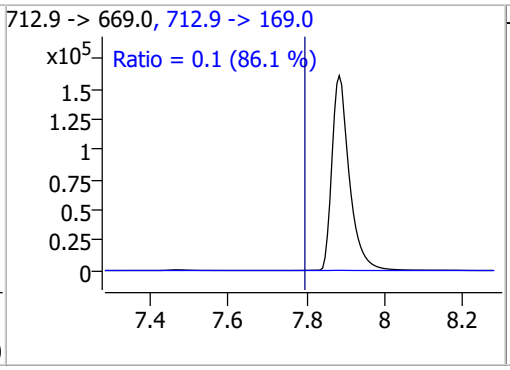


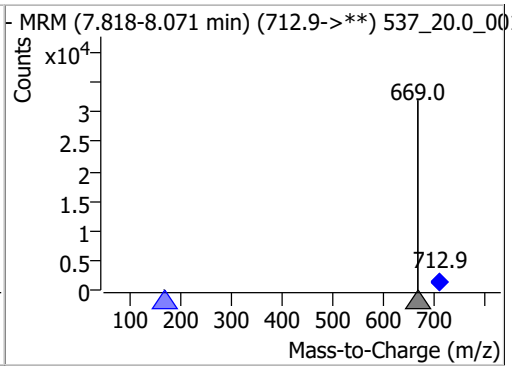




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	21.3514	7.88	0.09	498231	712.9 -> 169.0	0.1	0.0	0.1







Quantitation Results Report

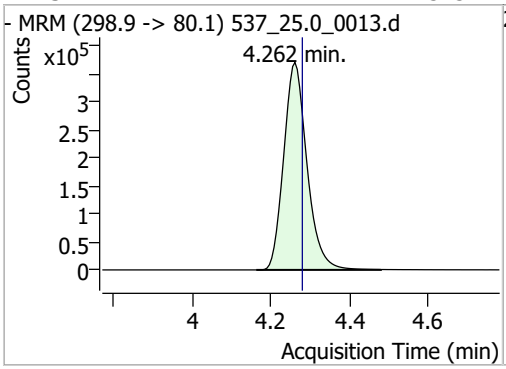
Agilent | Trusted Answers

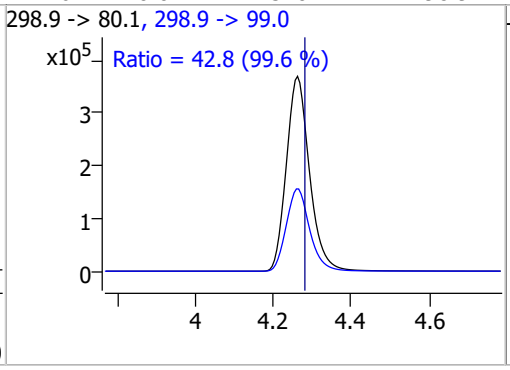
Data File	537_25.0_0013.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 8:35:35 AM
Sample Name	CAL8_537_25.0	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809_ICAL-537.batch.bin	Last Calib Update	8/10/2023 3:46:40 PM
Ref Library			

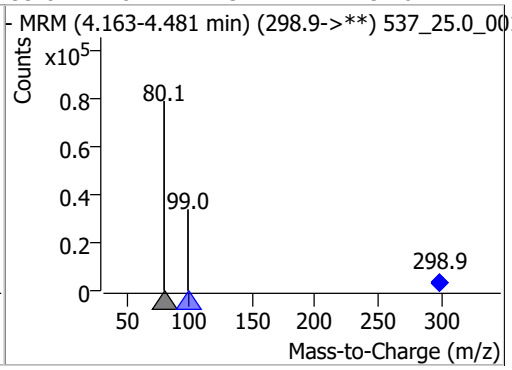
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	805204	3.0000	ng/ml		0.017
13C2-PFOA	6.177	415.0 -> 370.0	823192	1.0000	ng/ml		0.014
NMeFOSAA-d3	7.066	573.0 -> 418.9	1539246	4.0000	ng/ml		0.038
System Monitoring Compounds							
13C2-PFHxA	4.991	314.9 -> 269.7	877248	10.2042	ng/ml		-0.008
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 102.04%			
13C3-HFPO-DA	5.219	287.0 -> 169.0	18642	10.4388	ng/ml		-0.004
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 104.39%			
13C2-PFDA	6.915	514.9 -> 469.9	481798	10.7864	ng/ml		0.028
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 107.86%			
NETFOSAA-d5	7.215	589.0 -> 419.0	722368	38.9300	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 97.32%			
Target Compounds							QValue
PFBS	4.262	298.9 -> 80.1	1520727	22.3237	ng/ml		100
PFHxA	4.992	313.0 -> 269.0	2900097	26.4445	ng/ml		99
HFPO-DA	5.214	285.0 -> 169.1	54946	25.4156	ng/ml		97
PFHpA	5.676	362.9 -> 318.9	2552928	27.2486	ng/ml		97
PFHxS	5.743	398.9 -> 79.9	1017406	22.6843	ng/ml		92
NaDONA	5.756	377.0 -> 250.9	8425935	24.5166	ng/ml		99
PFOA	6.171	413.0 -> 369.1	1992171	26.1629	ng/ml		99
PFNA	6.577	463.0 -> 418.9	1285324	26.1756	ng/ml		97
PFOS	6.589	498.9 -> 80.1	728785	23.3229	ng/ml		93
9Cl-PF3ONS	6.782	531.0 -> 351.0	2216148	23.1476	ng/ml	#	95
PFDA	6.916	513.0 -> 468.9	1355183	28.4655	ng/ml		97
N-MeFOSAA	7.073	570.0 -> 418.9	966371	25.2504	ng/ml		96
PFUdA	7.211	563.0 -> 518.8	1126325	26.1310	ng/ml		95
N-EtFOSAA	7.223	584.0 -> 419.0	830101	25.3933	ng/ml		91
11ClPF3OUdS	7.352	631.0 -> 450.8	2661227	22.8485	ng/ml		100
PFDoA	7.469	613.0 -> 568.9	1193310	25.3081	ng/ml	#	99
PFTrDA	7.690	663.0 -> 618.8	1118072	27.0147	ng/ml		98
PFTA	7.884	712.9 -> 669.0	609419	26.9685	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

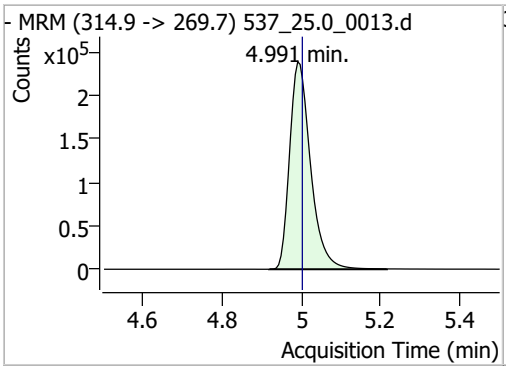
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	22.3237	4.26	-0.02	1520727	298.9 -> 99.0	42.8	34.4	51.6

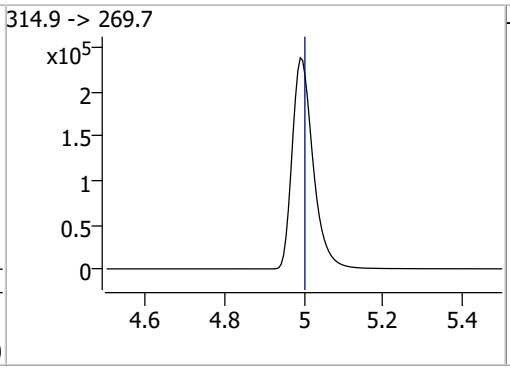


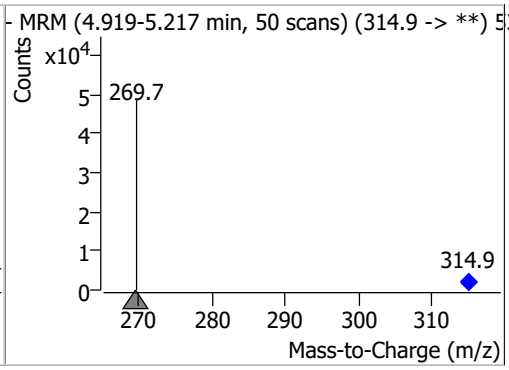




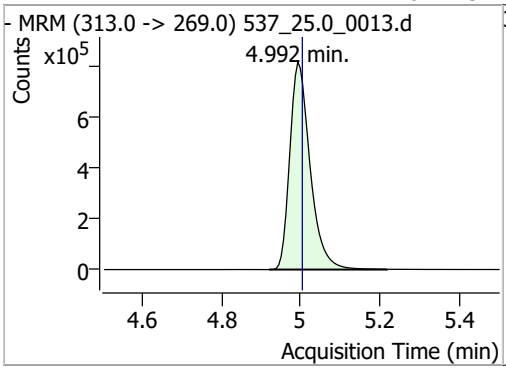
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	10.2042	4.99	-0.01	877248				

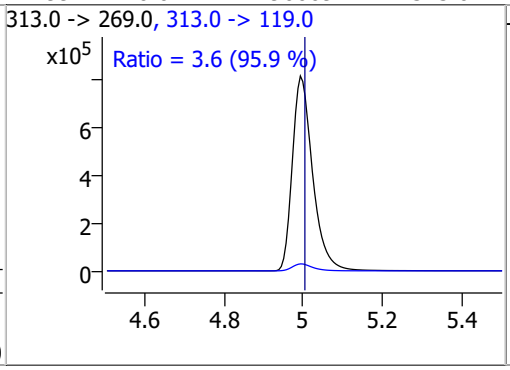


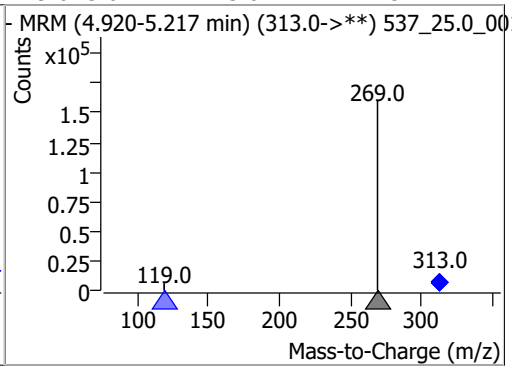




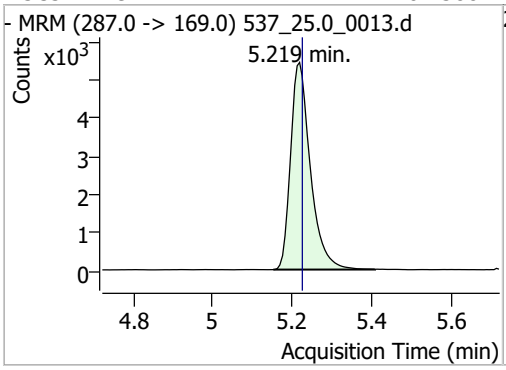
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	26.4445	4.99	-0.01	2900097	313.0 -> 119.0	3.6	3.0	4.5

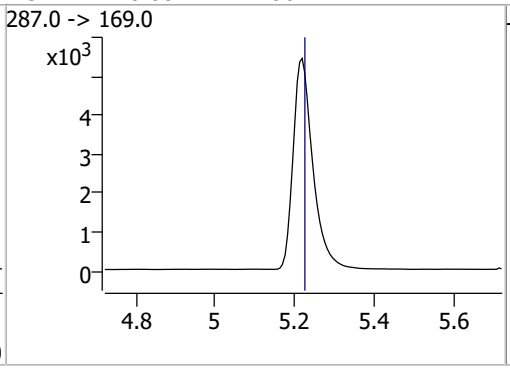


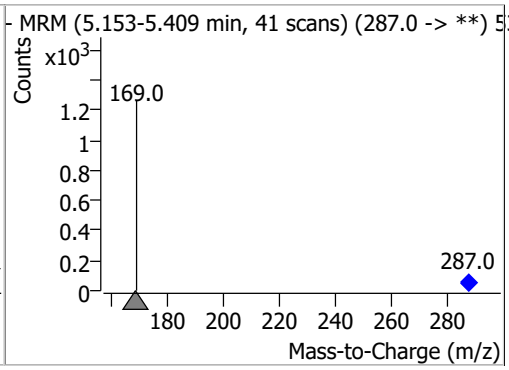




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	10.4388	5.22	0.00	18642				

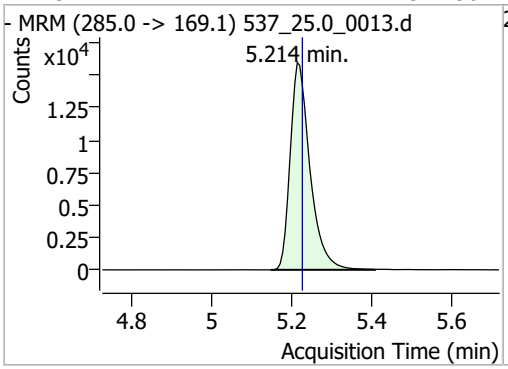


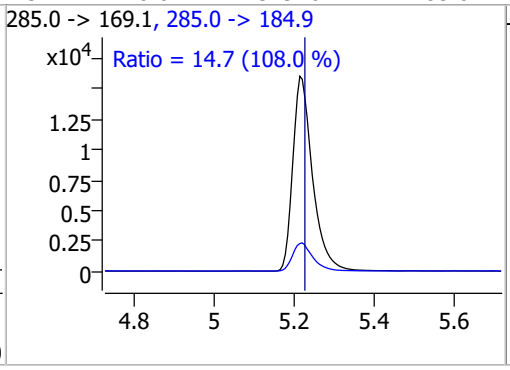


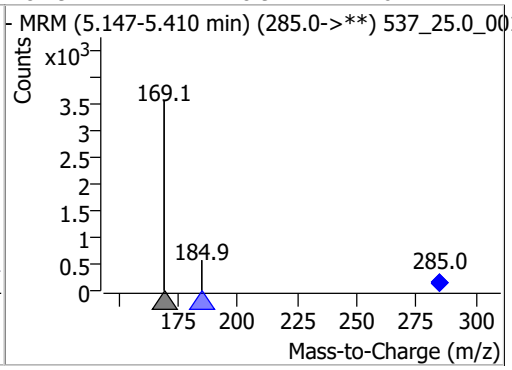


Quantitation Results Report

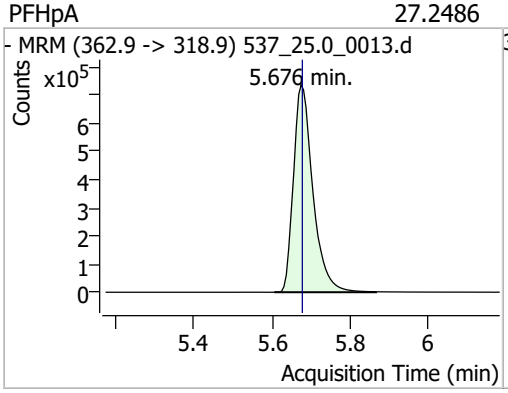
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	25.4156	5.21	-0.01	54946	285.0 -> 184.9	14.7	10.9	16.4

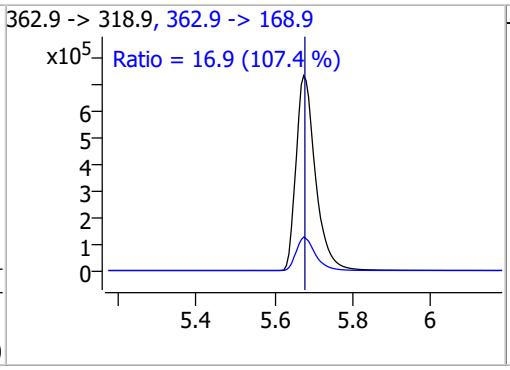


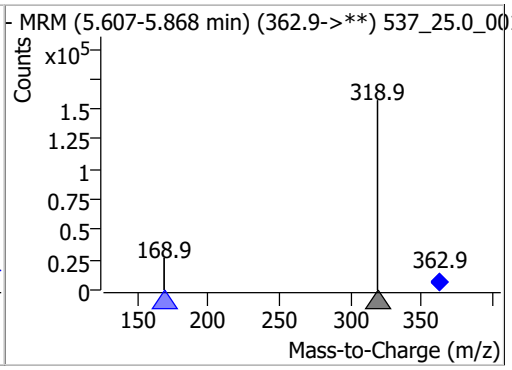




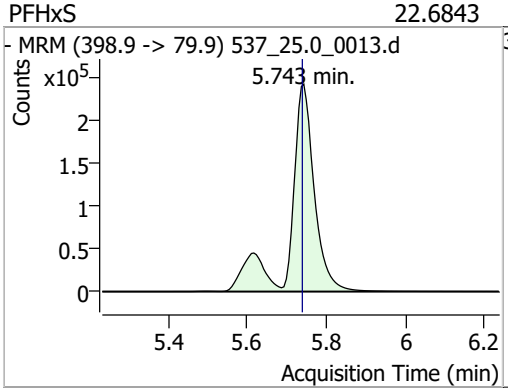
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	27.2486	5.68	0.00	2552928	362.9 -> 168.9	16.9	12.6	18.9

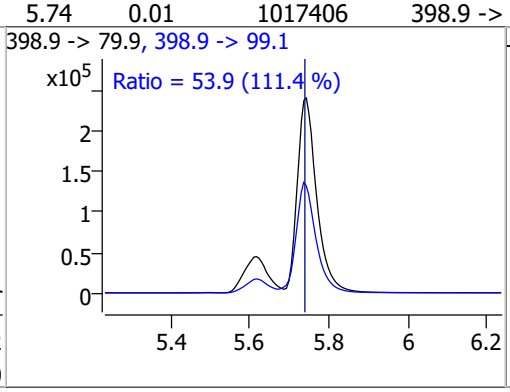


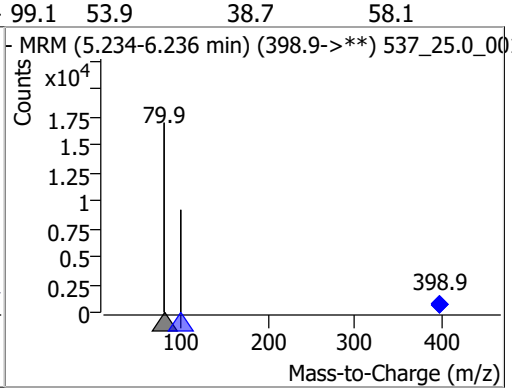




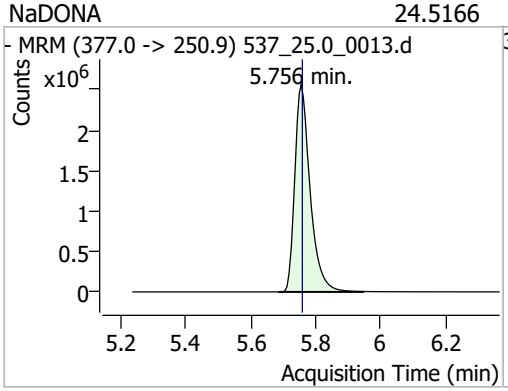
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	22.6843	5.74	0.01	1017406	398.9 -> 99.1	53.9	38.7	58.1

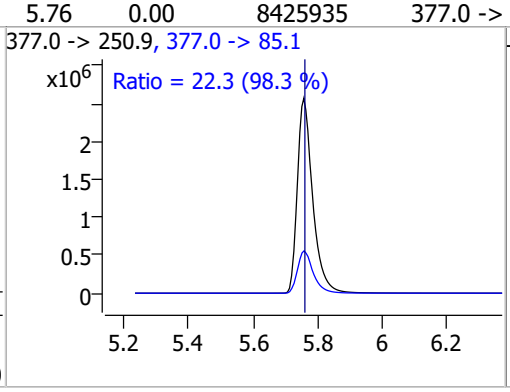


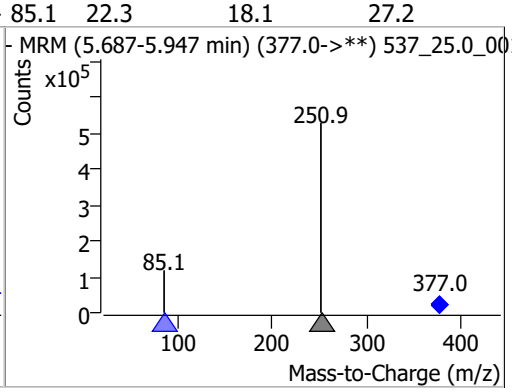




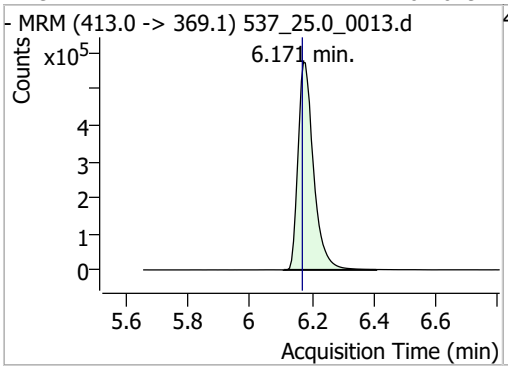
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	24.5166	5.76	0.00	8425935	377.0 -> 85.1	22.3	18.1	27.2

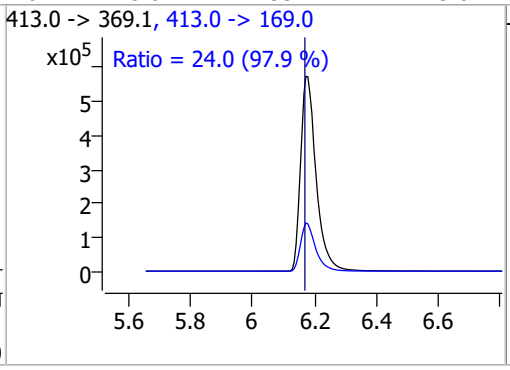


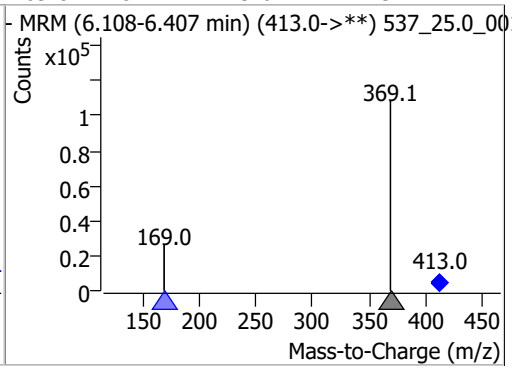




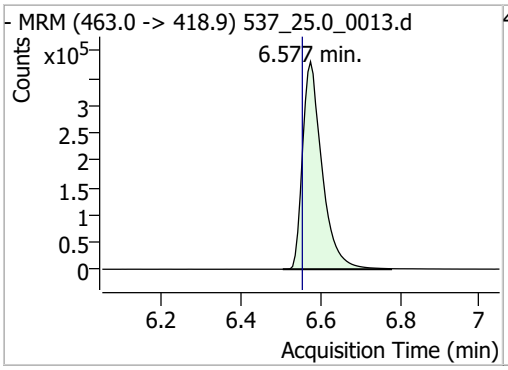
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	26.1629	6.17	0.01	1992171	413.0 -> 169.0	24.0	19.6	29.4

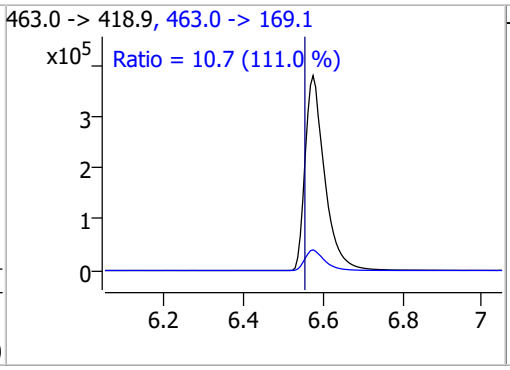


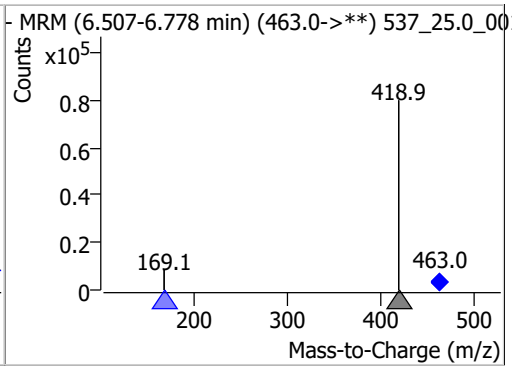




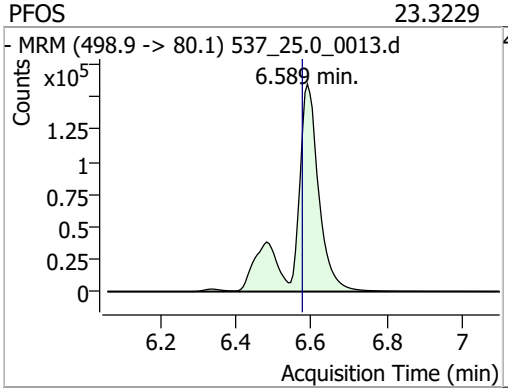
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	26.1756	6.58	0.02	1285324	463.0 -> 169.1	10.7	7.7	11.5

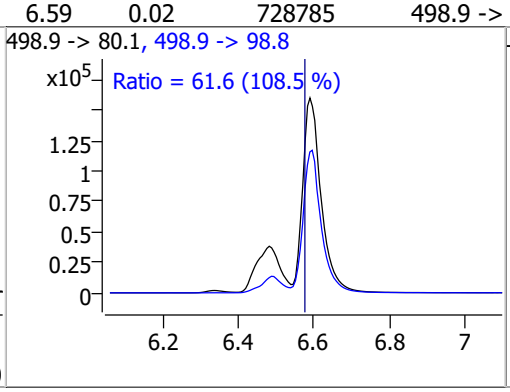


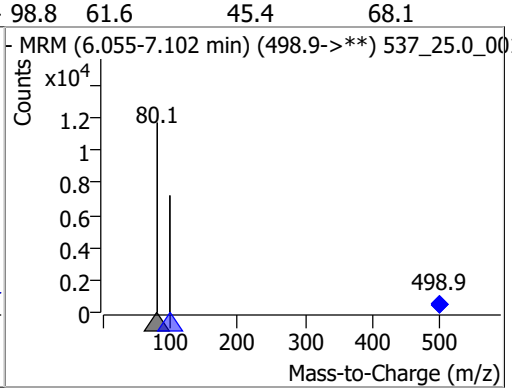




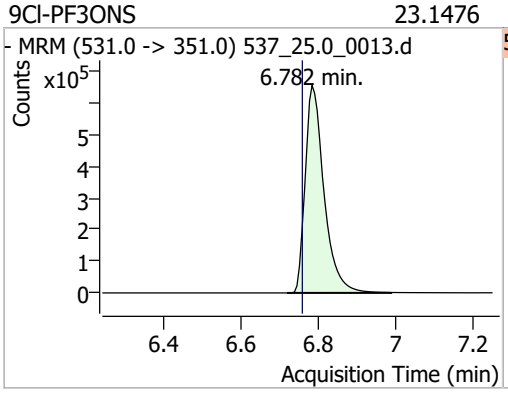
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	23.3229	6.59	0.02	728785	498.9 -> 98.8	61.6	45.4	68.1

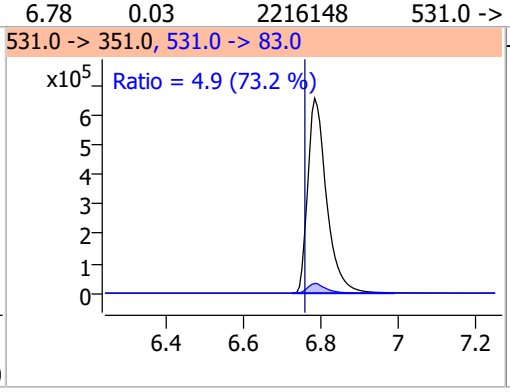


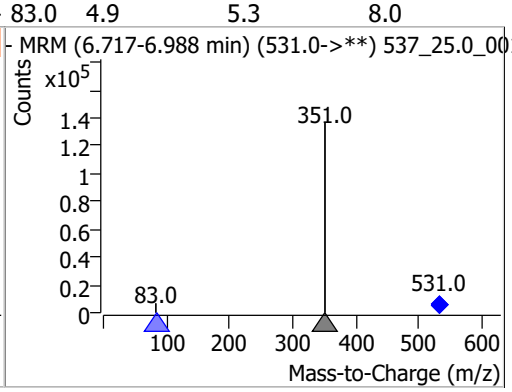




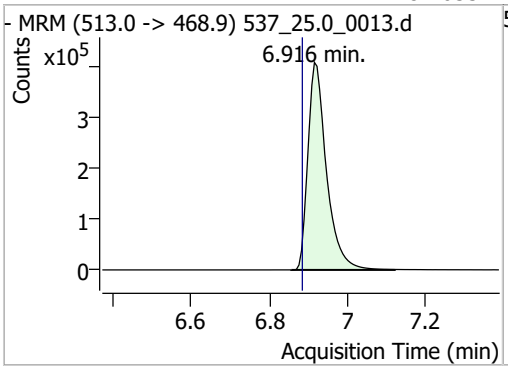
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	23.1476	6.78	0.03	2216148	531.0 -> 83.0	4.9	5.3	8.0

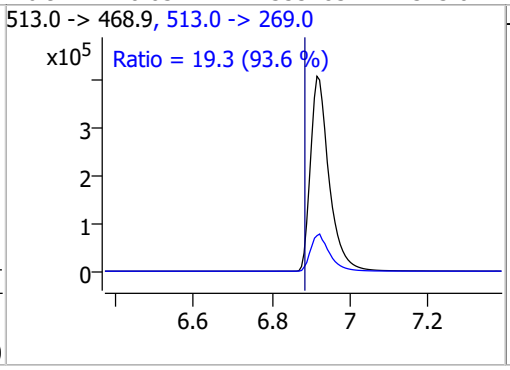


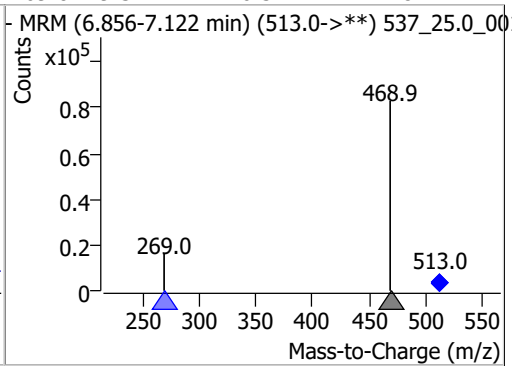




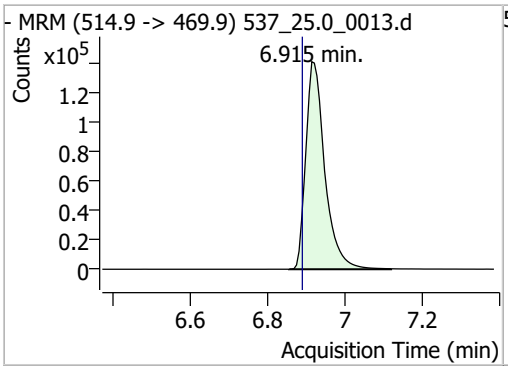
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	28.4655	6.92	0.03	1355183	513.0 -> 269.0	19.3	16.5	24.8

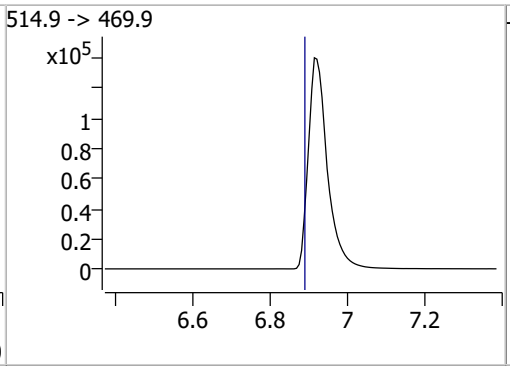


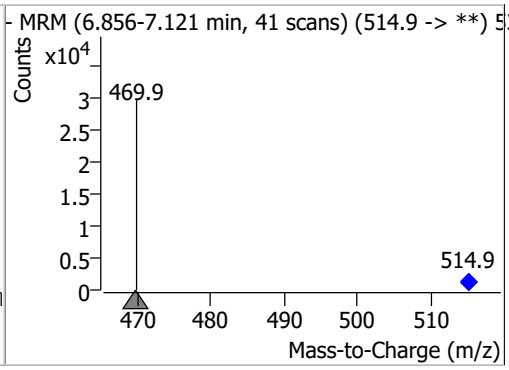




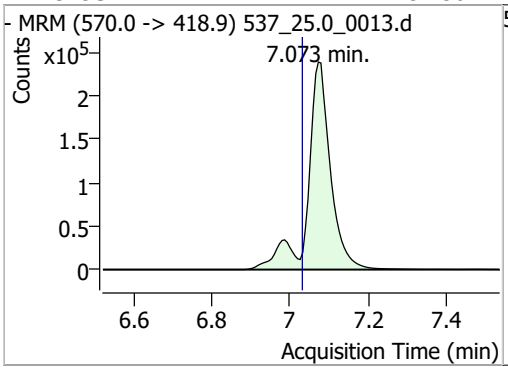
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	10.7864	6.92	0.03	481798				

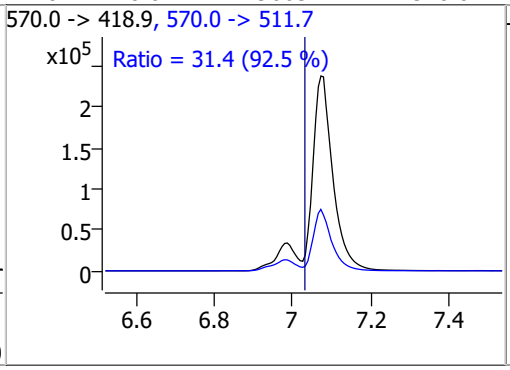


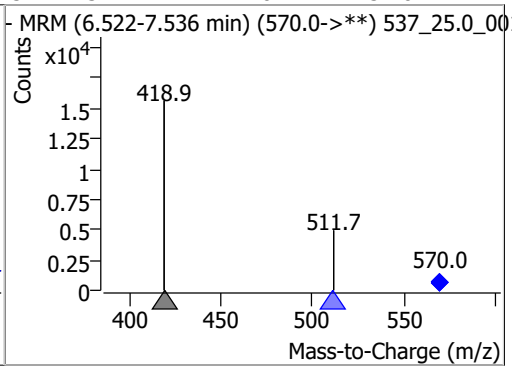




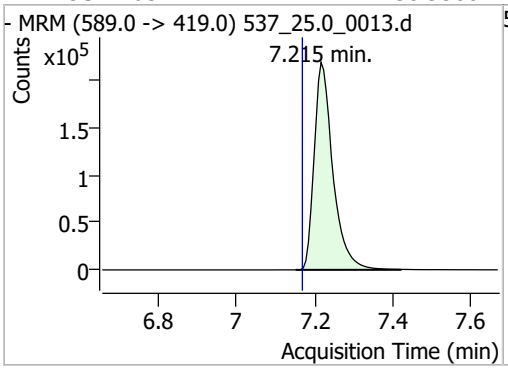
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	25.2504	7.07	0.04	966371	570.0 -> 511.7	31.4	17.0	51.0

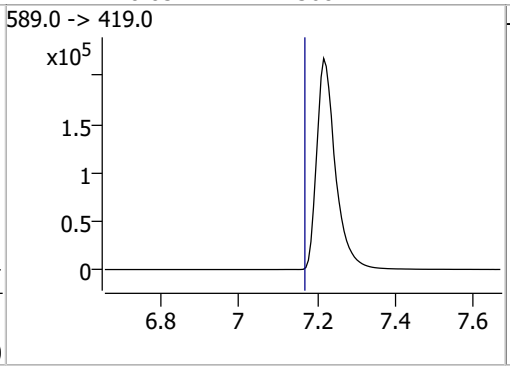


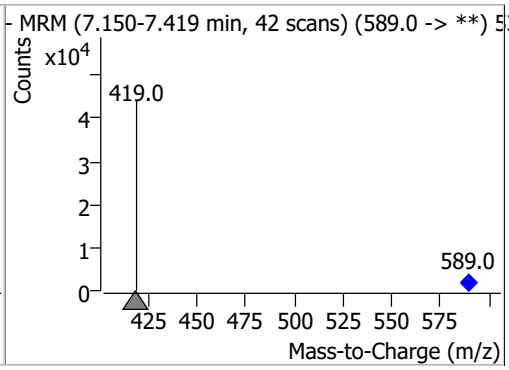




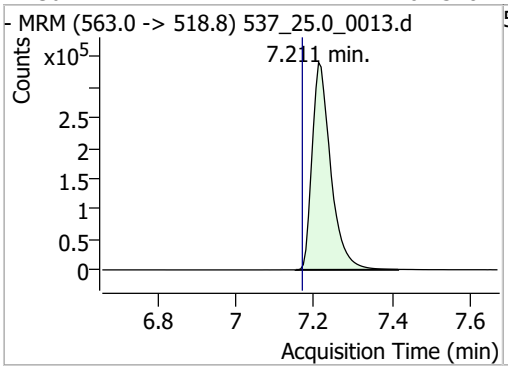
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	38.9300	7.22	0.05	722368				

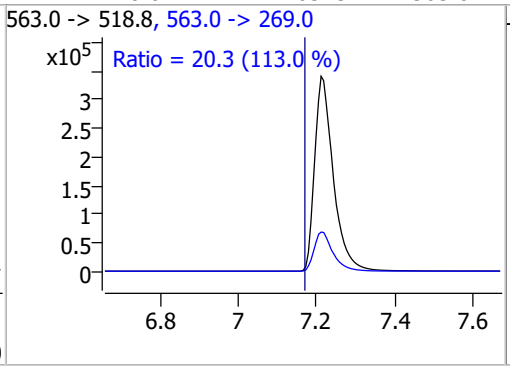


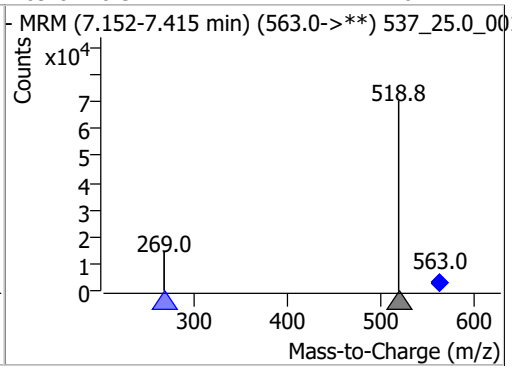




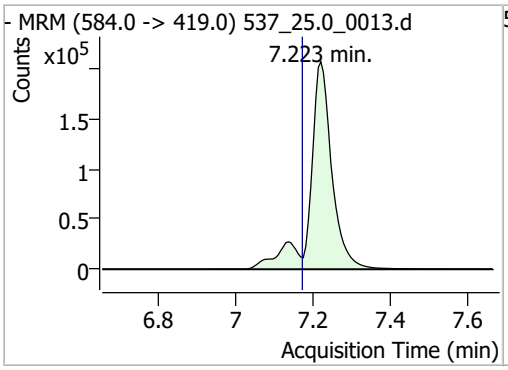
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	26.1310	7.21	0.04	1126325	563.0 -> 269.0	20.3	14.4	21.6

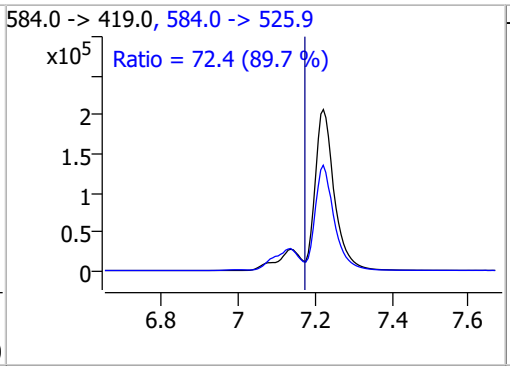


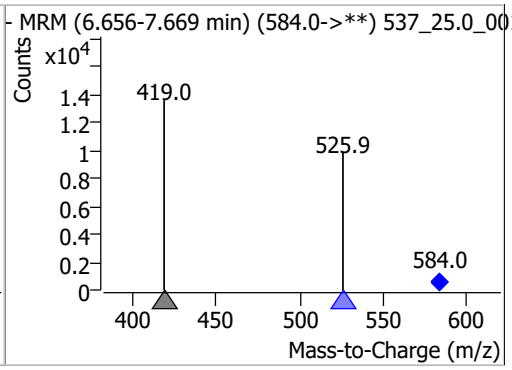




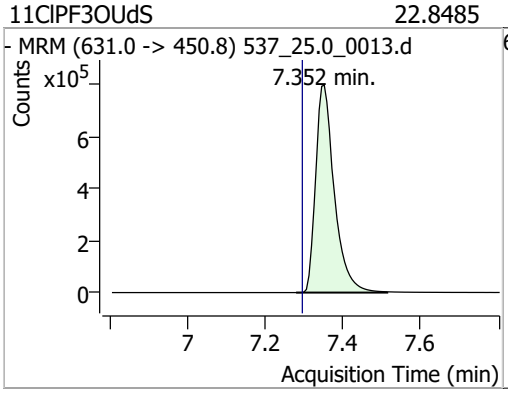
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	25.3933	7.22	0.05	830101	584.0 -> 525.9	72.4	40.4	121.1

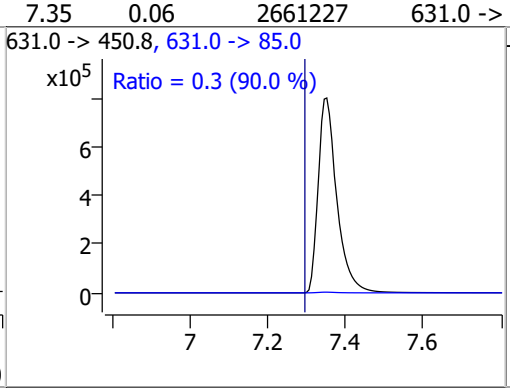


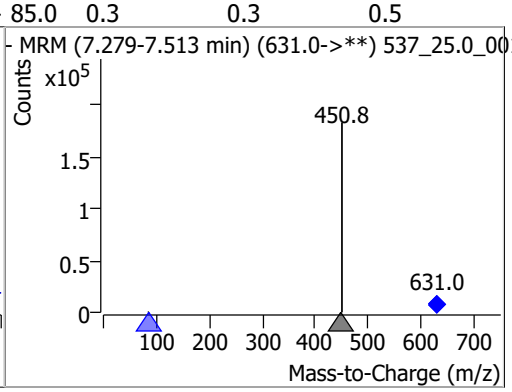




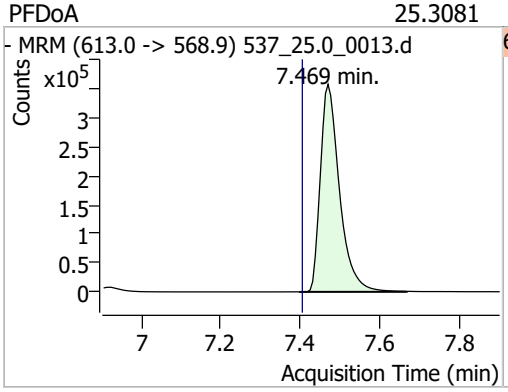
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	22.8485	7.35	0.06	2661227	631.0 -> 85.0	0.3	0.3	0.5

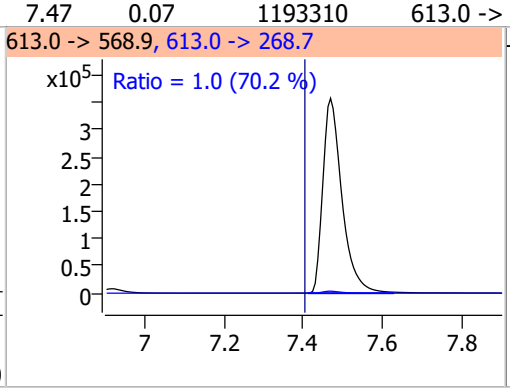


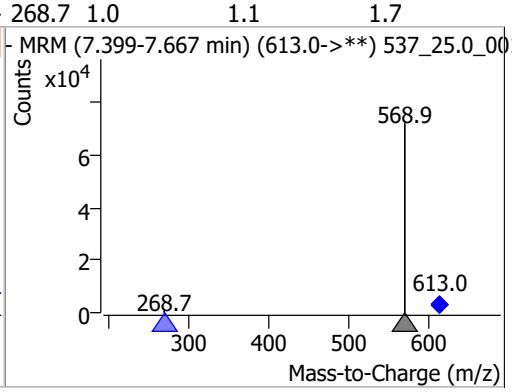




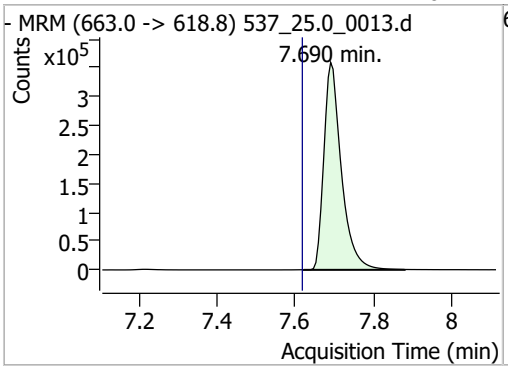
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	25.3081	7.47	0.07	1193310	613.0 -> 268.7	1.0	1.1	1.7

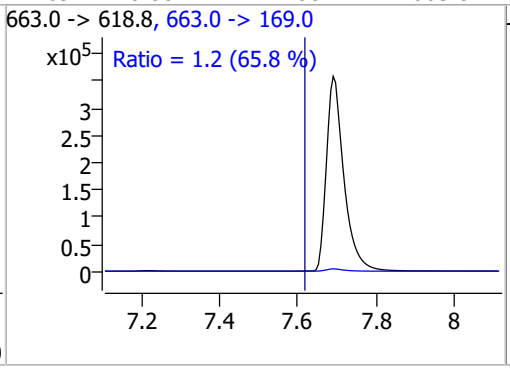


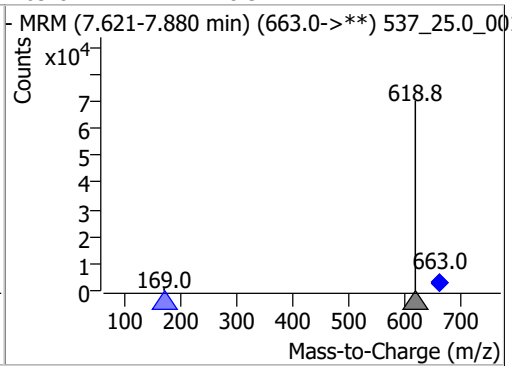




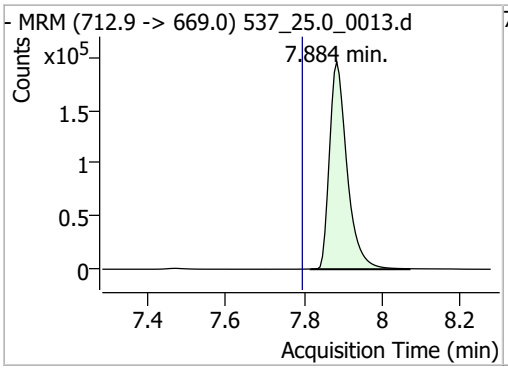
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	27.0147	7.69	0.08	1118072	663.0 -> 169.0	1.2	0.9	2.7

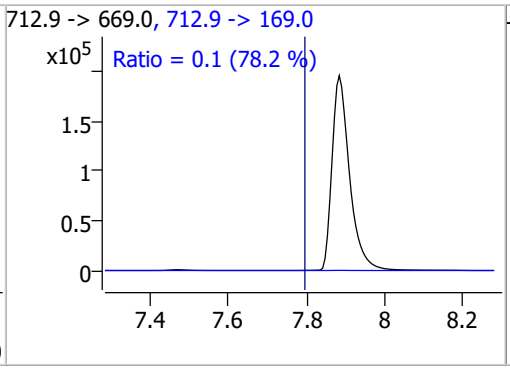


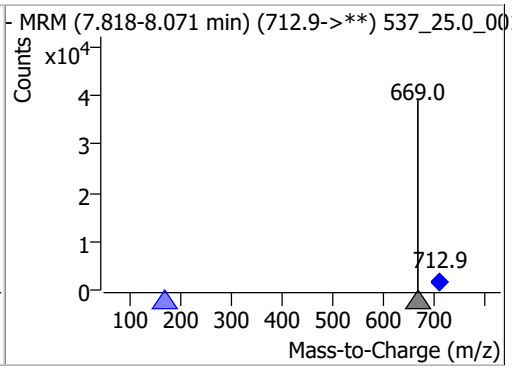




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	26.9685	7.88	0.09	609419	712.9 -> 169.0	0.1	0.0	0.1







Quantitation Results Report

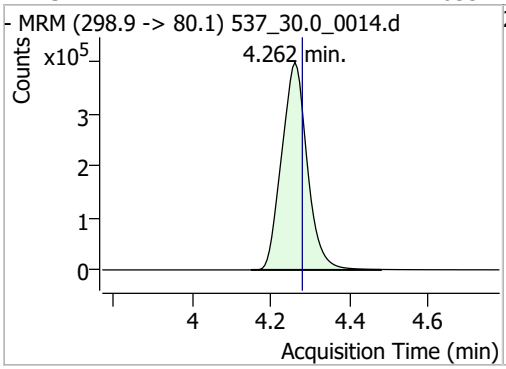
Agilent | Trusted Answers

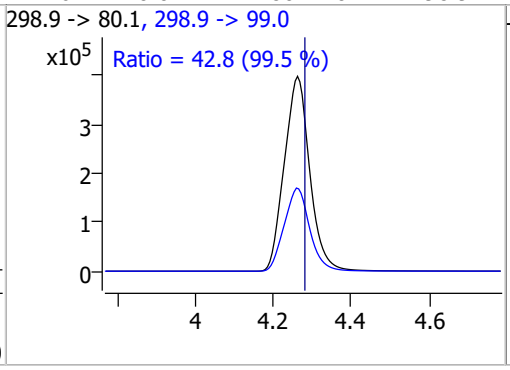
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Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 8:48:18 AM
Sample Name	CAL9_537_30.0	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809_ICAL-537.batch.bin	Last Calib Update	8/10/2023 3:46:40 PM
Ref Library			

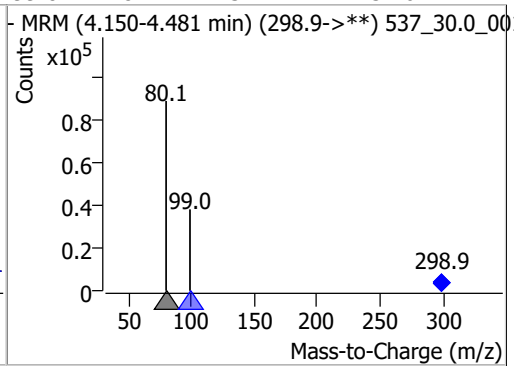
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	774597	3.0000	ng/ml		0.017
13C2-PFOA	6.177	415.0 -> 370.0	886474	1.0000	ng/ml		0.014
NMeFOSAA-d3	7.072	573.0 -> 418.9	1464175	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.991	314.9 -> 269.7	969433	10.4715	ng/ml		-0.008
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 104.72%			
13C3-HFPO-DA	5.213	287.0 -> 169.0	19401	10.0883	ng/ml		-0.010
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 100.88%			
13C2-PFDA	6.922	514.9 -> 469.9	482354	10.0280	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 100.28%			
NETFOSAA-d5	7.222	589.0 -> 419.0	711770	40.3256	ng/ml		0.058
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 100.81%			
Target Compounds							QValue
PFBS	4.262	298.9 -> 80.1	1804110	27.4635	ng/ml		100
PFHxA	4.992	313.0 -> 269.0	3419441	28.9543	ng/ml		100
HFPO-DA	5.214	285.0 -> 169.1	69396	29.5158	ng/ml		100
PFHpA	5.676	362.9 -> 318.9	3106833	30.7935	ng/ml		100
PFHxS	5.737	398.9 -> 79.9	1268015	28.7798	ng/ml		98
NaDONA	5.756	377.0 -> 250.9	10113048	26.9714	ng/ml		94
PFOA	6.178	413.0 -> 369.1	2151536	26.2388	ng/ml		98
PFNA	6.577	463.0 -> 418.9	1500127	28.2929	ng/ml		97
PFOS	6.589	498.9 -> 80.1	880059	28.8522	ng/ml		99
9Cl-PF3ONS	6.782	531.0 -> 351.0	2739422	29.1042	ng/ml	#	94
PFDA	6.922	513.0 -> 468.9	1352066	26.5442	ng/ml		100
N-MeFOSAA	7.073	570.0 -> 418.9	1081021	29.1013	ng/ml		97
PFUdA	7.217	563.0 -> 518.8	1313134	28.2902	ng/ml		98
N-EtFOSAA	7.223	584.0 -> 419.0	935639	29.5995	ng/ml		98
11ClPF3OUdS	7.354	631.0 -> 450.8	3558590	30.1520	ng/ml	#	100
PFDoA	7.469	613.0 -> 568.9	1450463	28.5530	ng/ml	#	99
PFTrDA	7.690	663.0 -> 618.8	1213417	27.2056	ng/ml		99
PFTA	7.884	712.9 -> 669.0	674254	27.7077	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

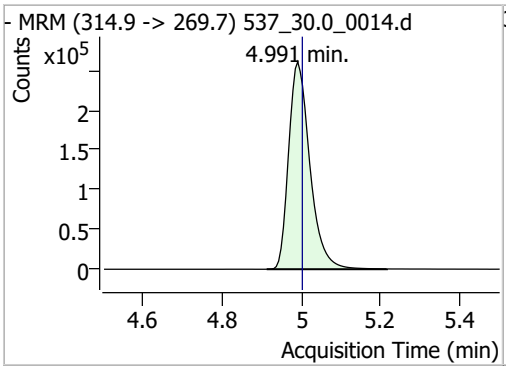
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	27.4635	4.26	-0.02	1804110	298.9 -> 99.0	42.8	34.4	51.6

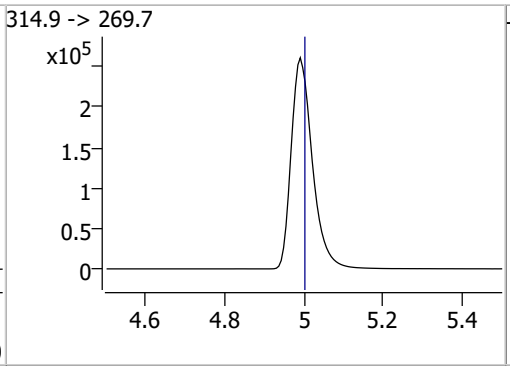


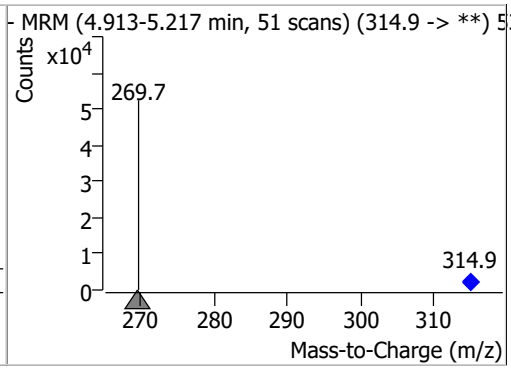




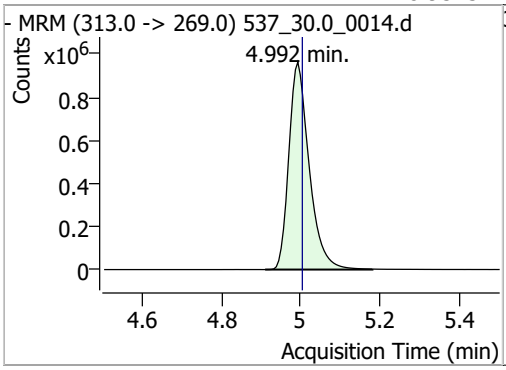
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	10.4715	4.99	-0.01	969433				

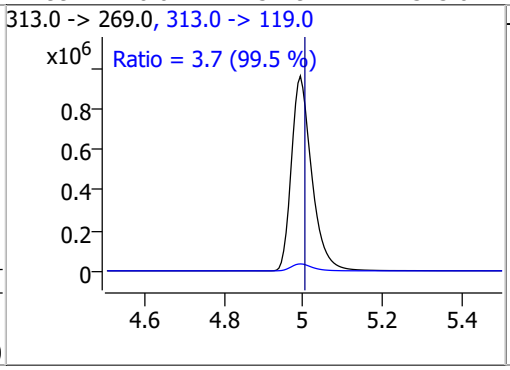


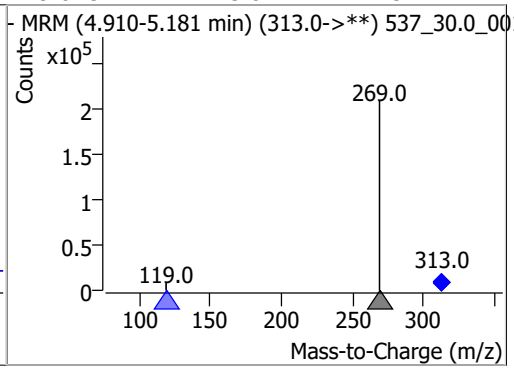




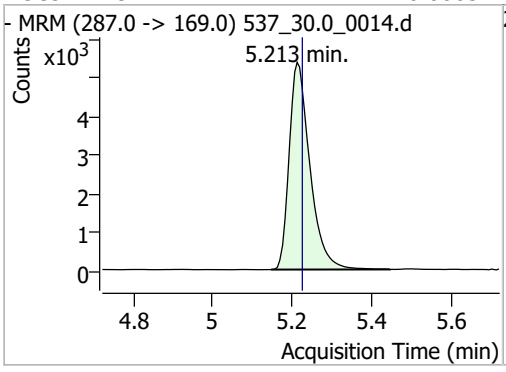
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	28.9543	4.99	-0.01	3419441	313.0 -> 119.0	3.7	3.0	4.5

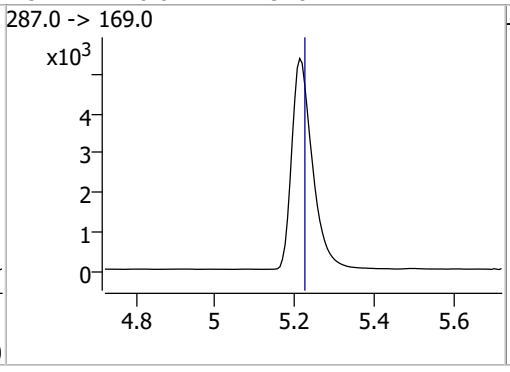


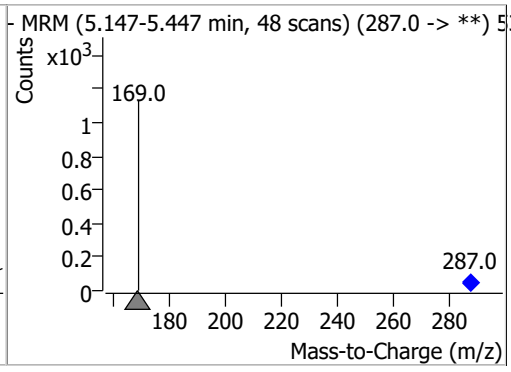




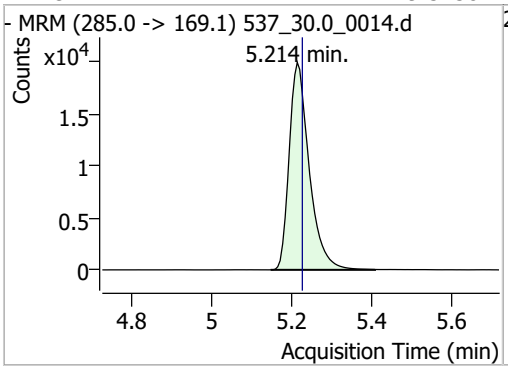
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	10.0883	5.21	-0.01	19401				

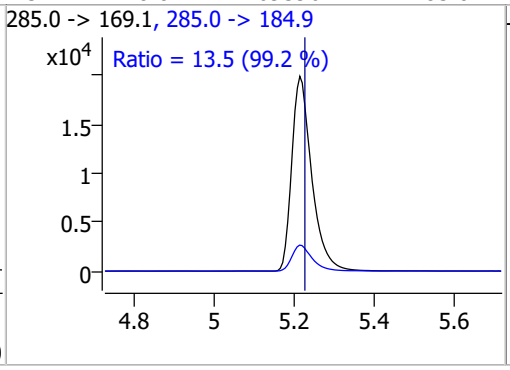


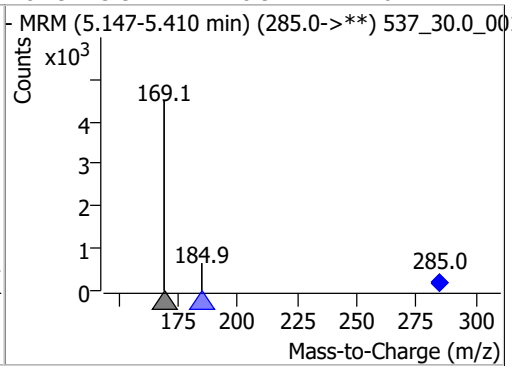




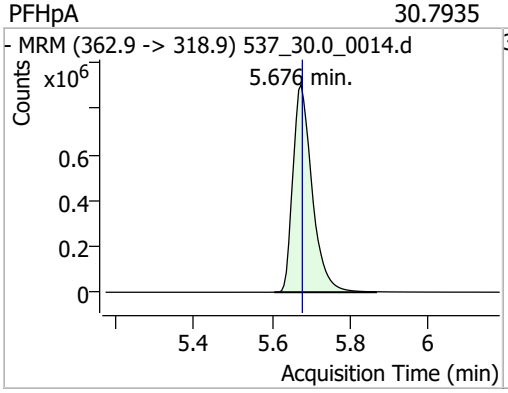
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	29.5158	5.21	-0.01	69396	285.0 -> 184.9	13.5	10.9	16.4

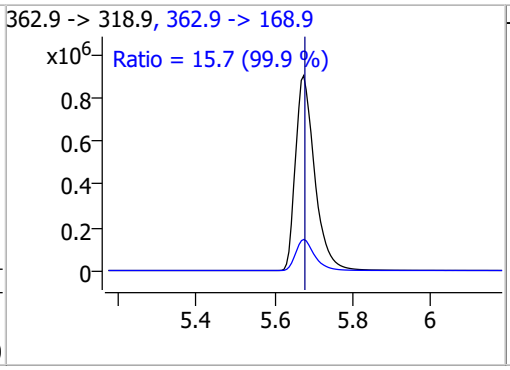


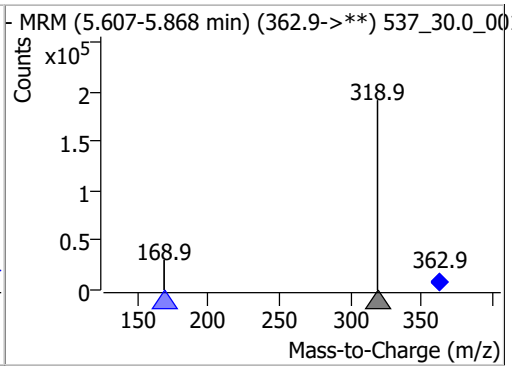




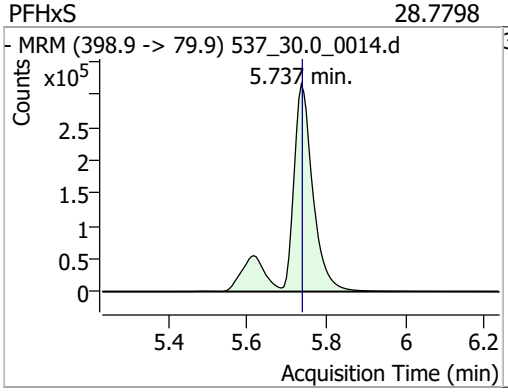
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	30.7935	5.68	0.00	3106833	362.9 -> 168.9	15.7	12.6	18.9

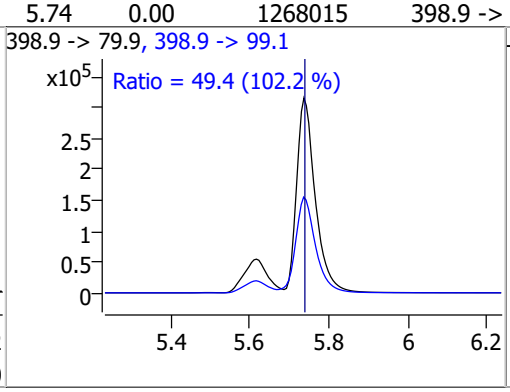


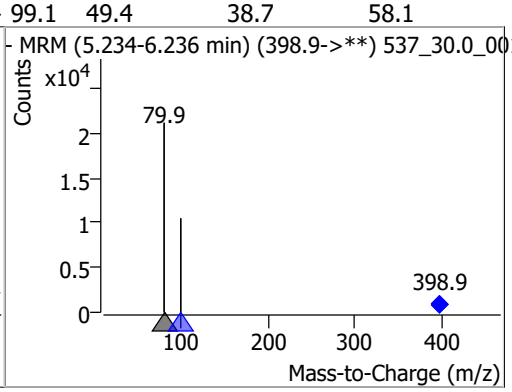




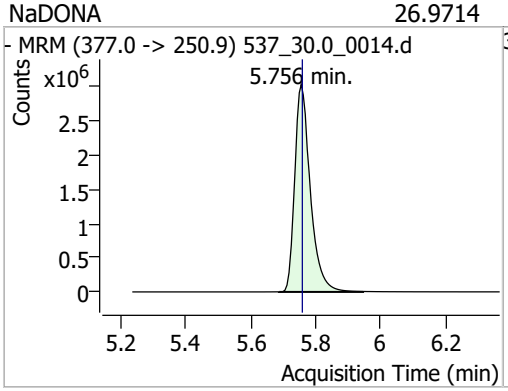
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	28.7798	5.74	0.00	1268015	398.9 -> 99.1	49.4	38.7	58.1

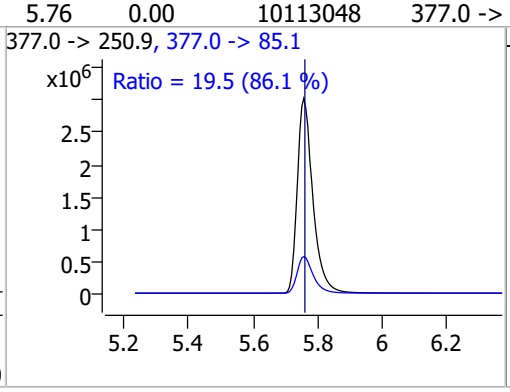


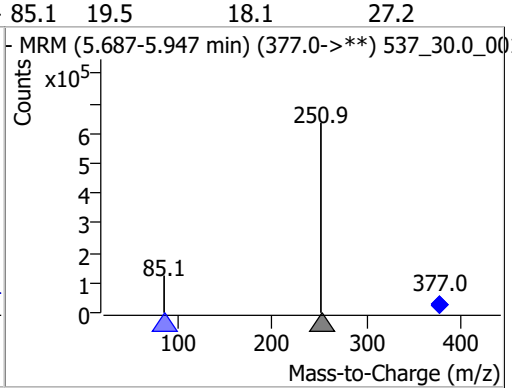




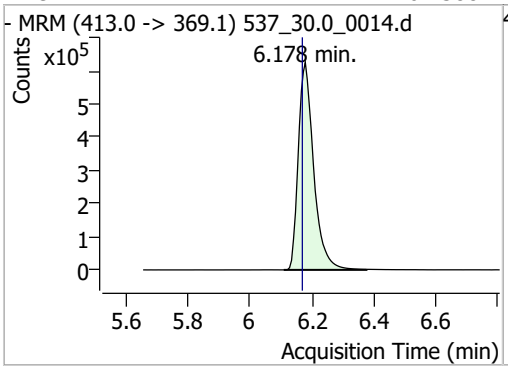
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	26.9714	5.76	0.00	10113048	377.0 -> 85.1	19.5	18.1	27.2

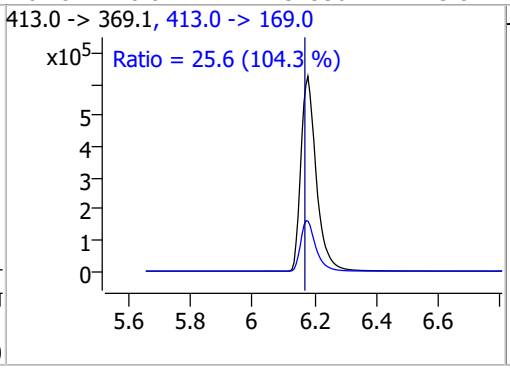


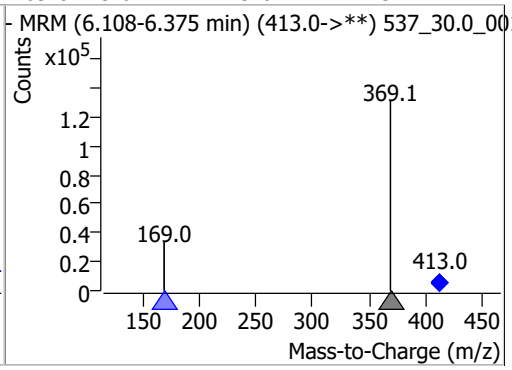




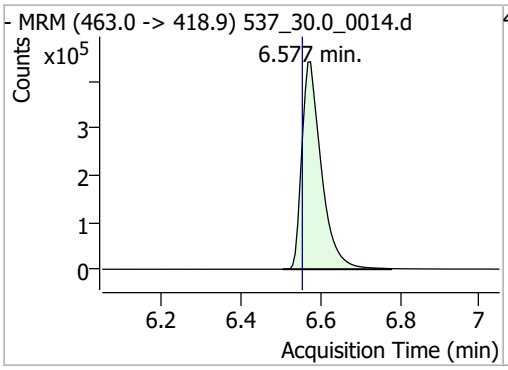
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	26.2388	6.18	0.01	2151536	413.0 -> 169.0	25.6	19.6	29.4

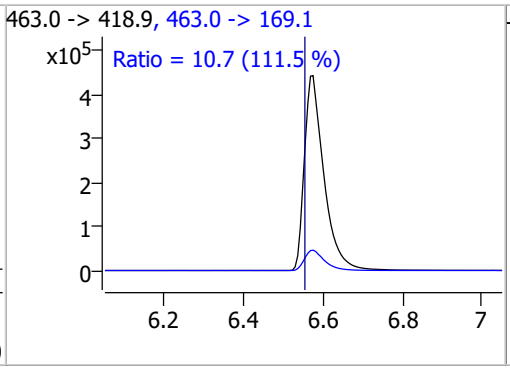


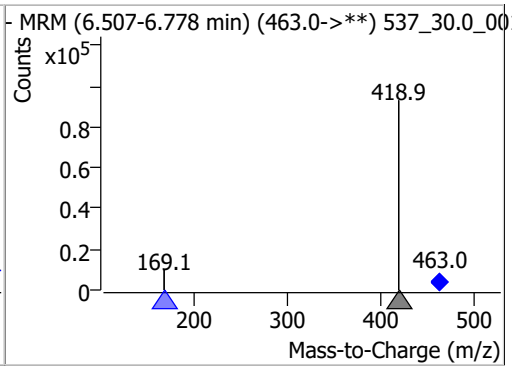




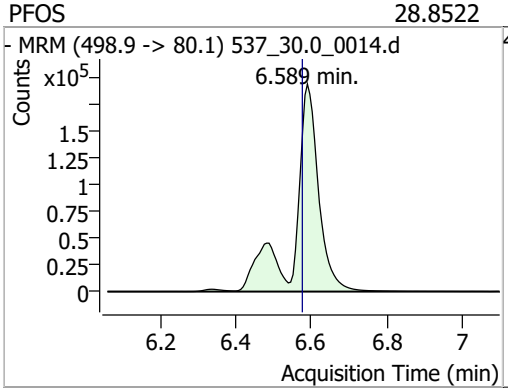
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	28.2929	6.58	0.02	1500127	463.0 -> 169.1	10.7	7.7	11.5

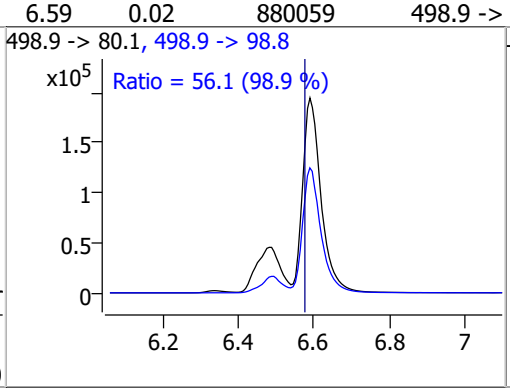


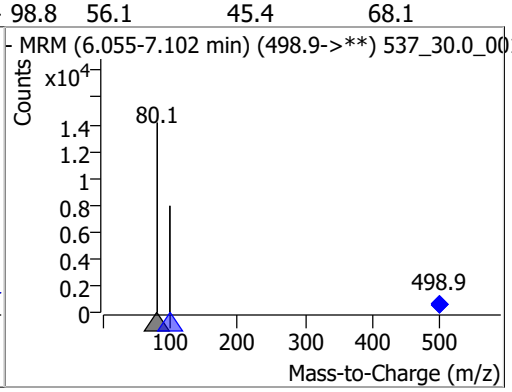




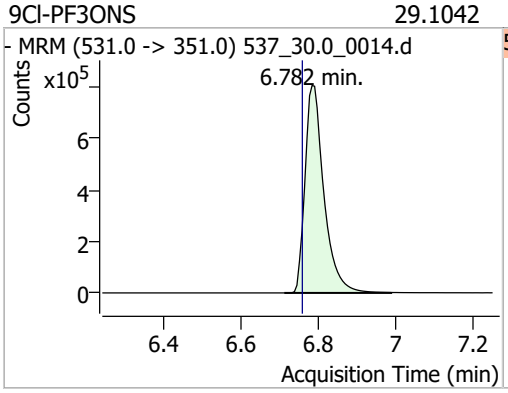
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	28.8522	6.59	0.02	880059	498.9 -> 98.8	56.1	45.4	68.1

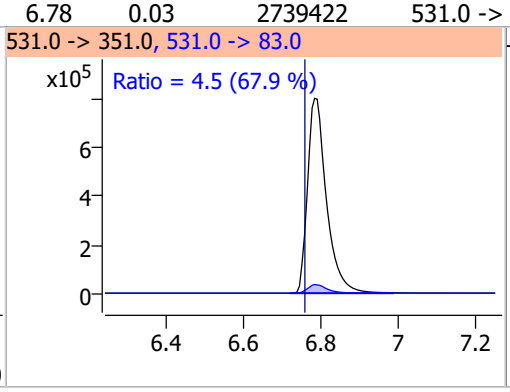


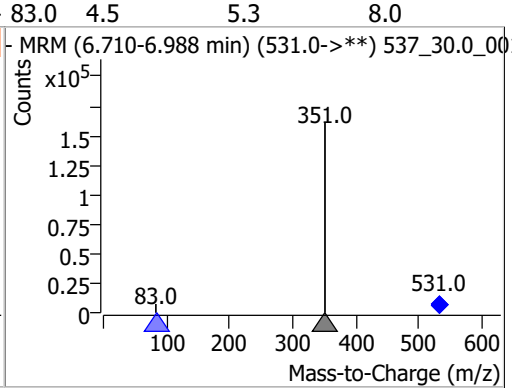




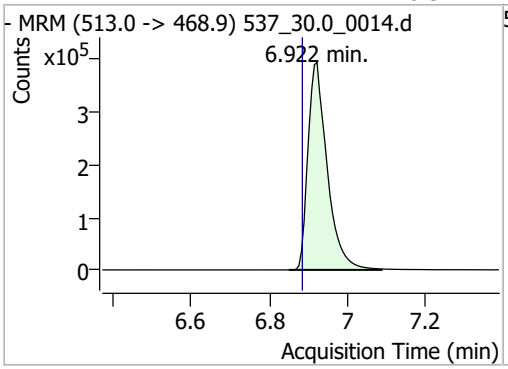
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	29.1042	6.78	0.03	2739422	531.0 -> 83.0	4.5	5.3	8.0

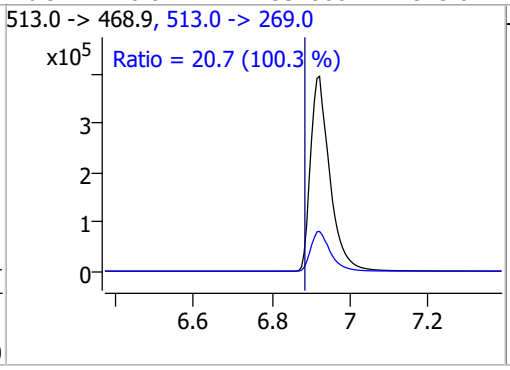


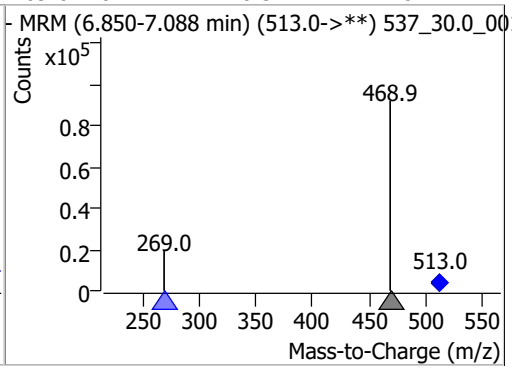




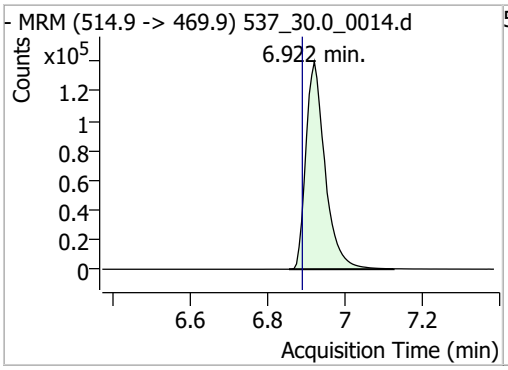
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	26.5442	6.92	0.04	1352066	513.0 -> 269.0	20.7	16.5	24.8

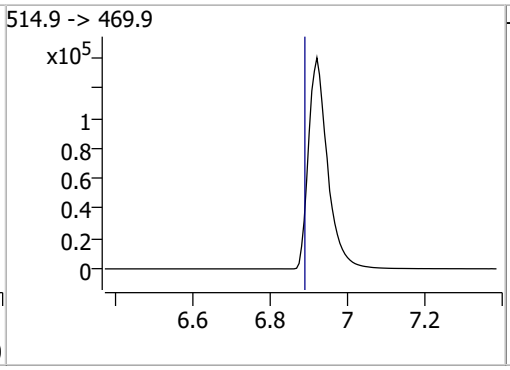


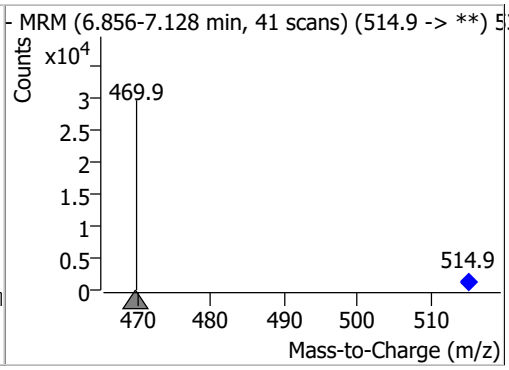




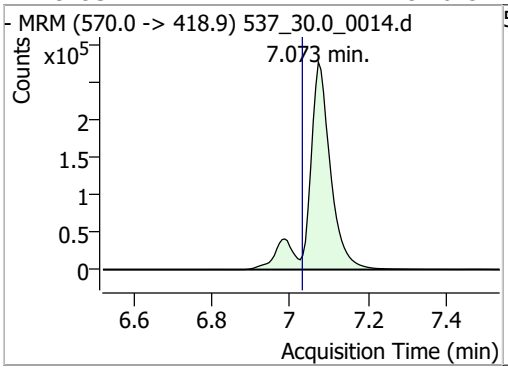
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	10.0280	6.92	0.03	482354				

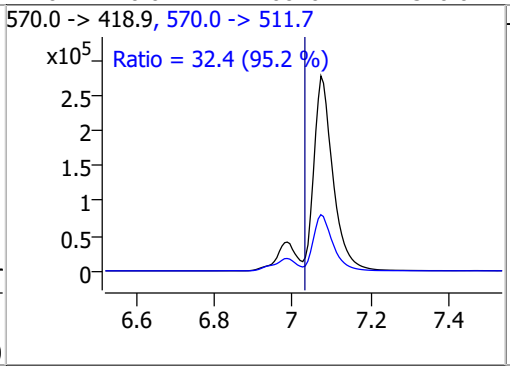


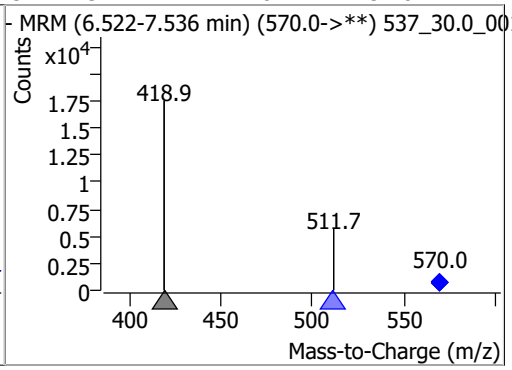




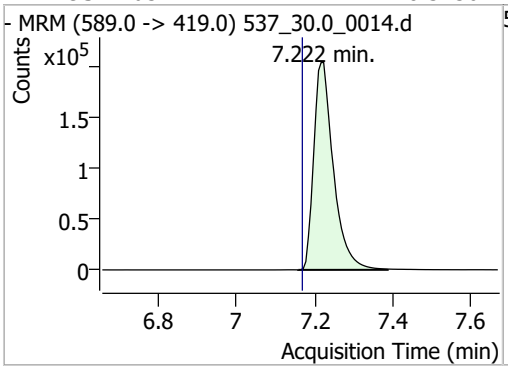
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	29.1013	7.07	0.04	1081021	570.0 -> 511.7	32.4	17.0	51.0

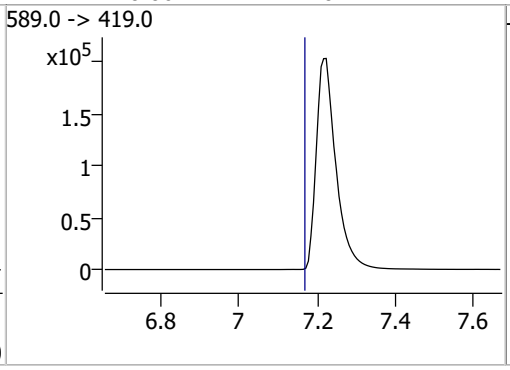


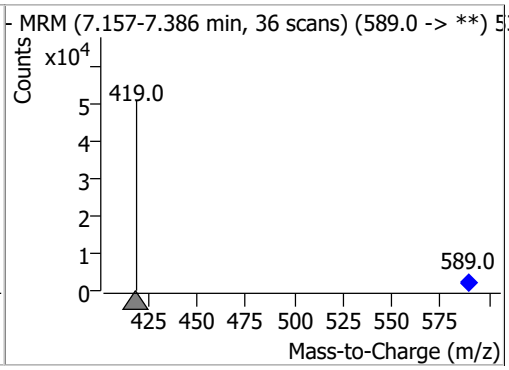




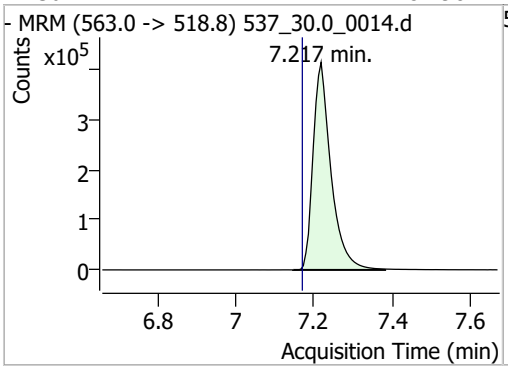
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	40.3256	7.22	0.06	711770				

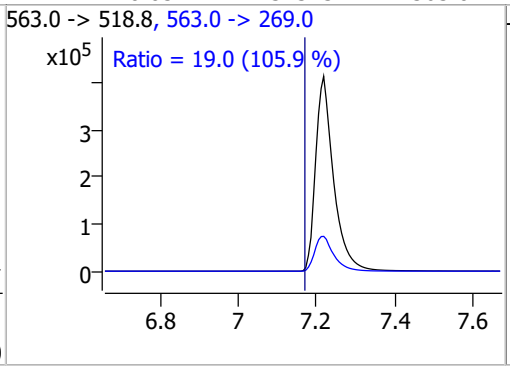


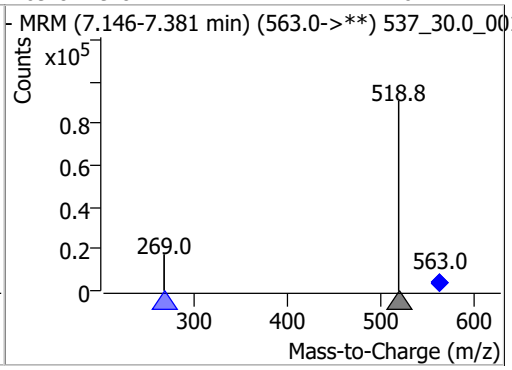




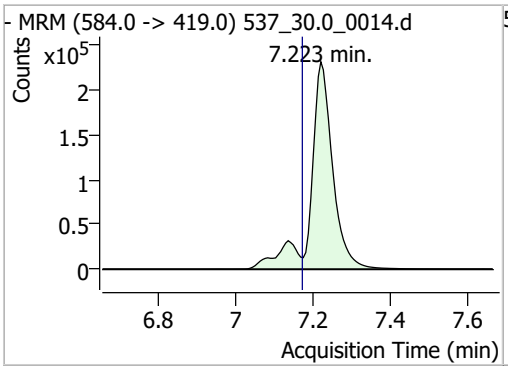
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	28.2902	7.22	0.05	1313134	563.0 -> 269.0	19.0	14.4	21.6

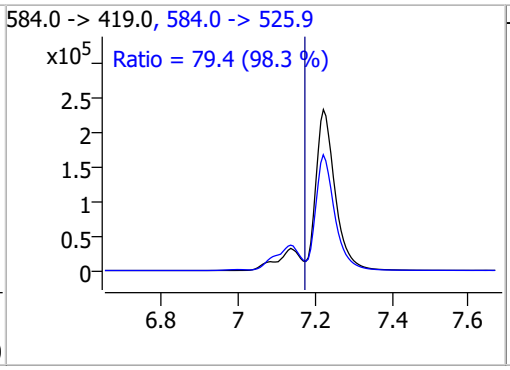


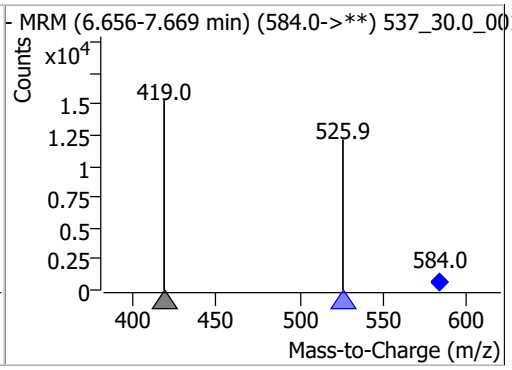




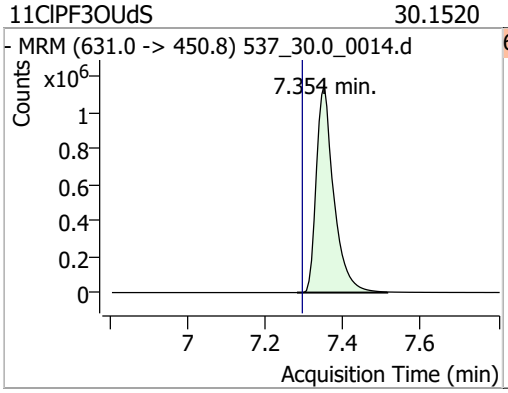
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	29.5995	7.22	0.05	935639	584.0 -> 525.9	79.4	40.4	121.1

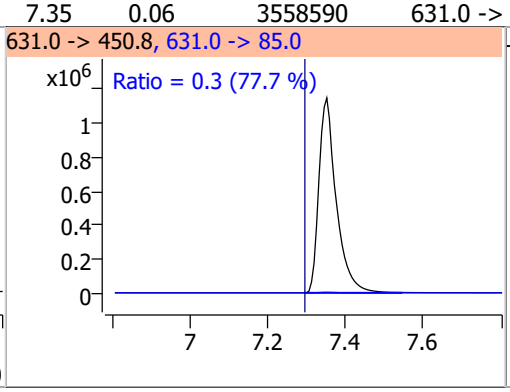


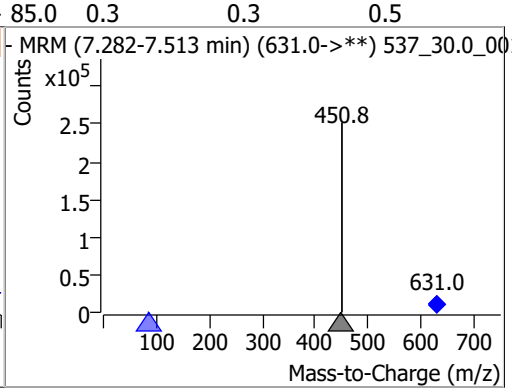




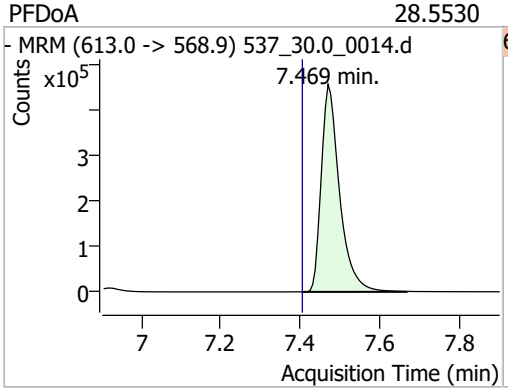
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	30.1520	7.35	0.06	3558590	631.0 -> 85.0	0.3	0.3	0.5

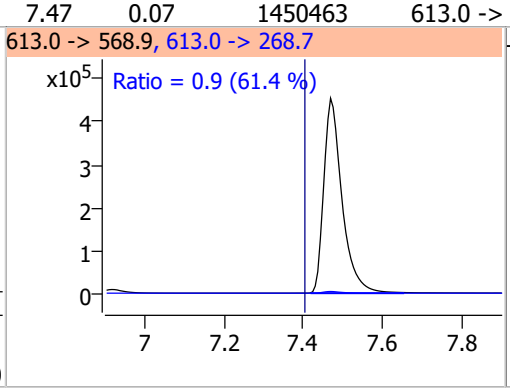


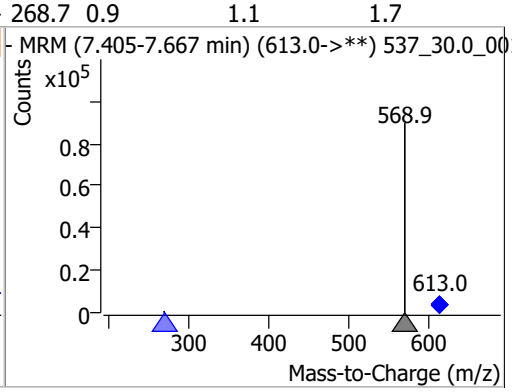




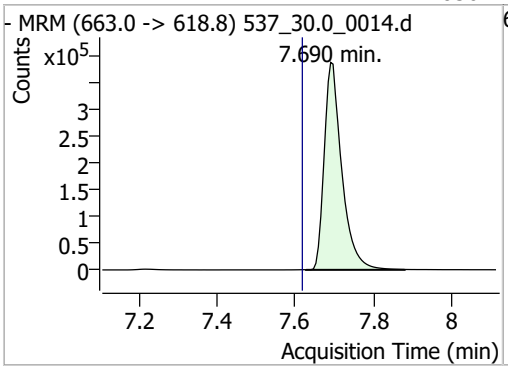
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	28.5530	7.47	0.07	1450463	613.0 -> 268.7	0.9	1.1	1.7

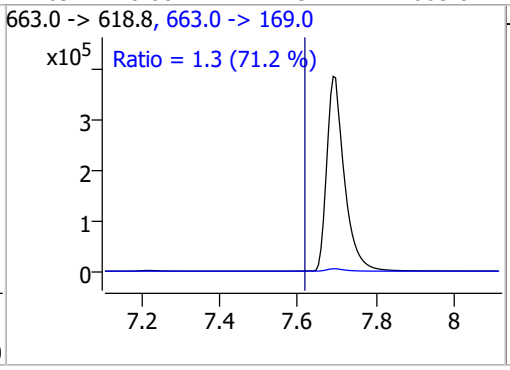


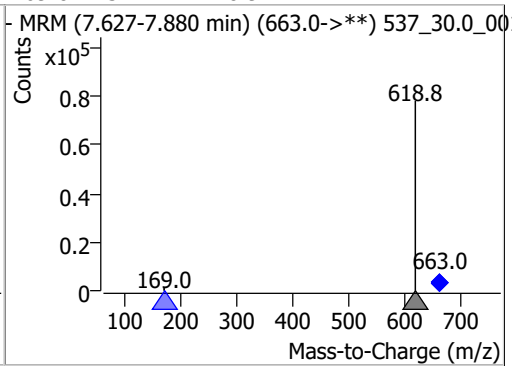




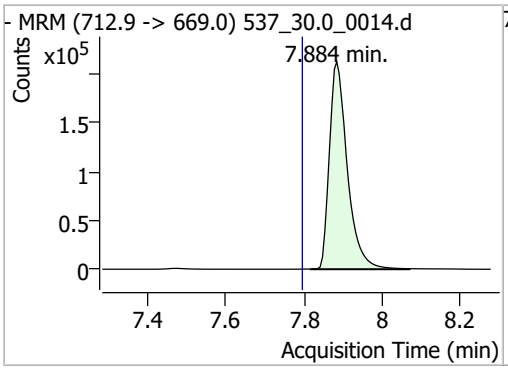
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	27.2056	7.69	0.08	1213417	663.0 -> 169.0	1.3	0.9	2.7

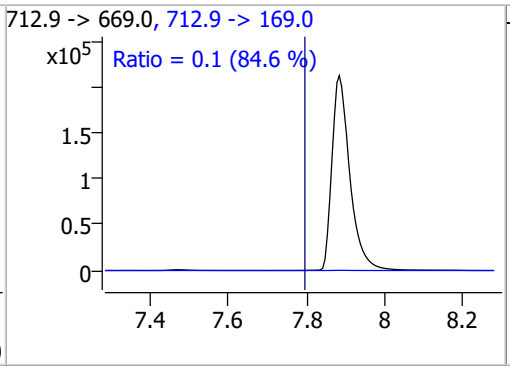


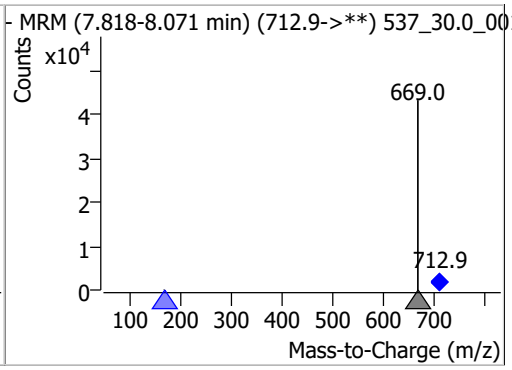




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	27.7077	7.88	0.09	674254	712.9 -> 169.0	0.1	0.0	0.1







Quantitation Results Report

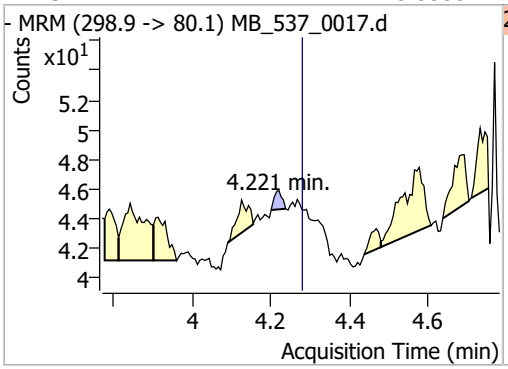
Agilent | Trusted Answers

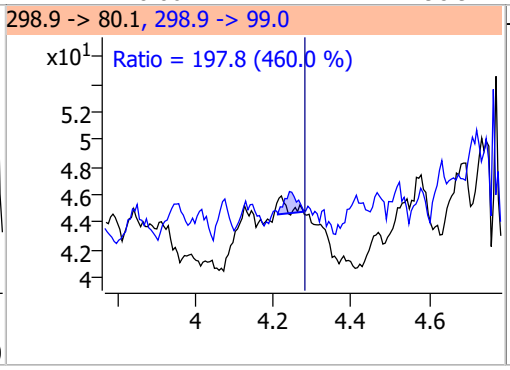
Data File	MB_537_0017.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 9:01:01 AM
Sample Name	MB_537	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809_ICAL-537.batch.bin	Last Calib Update	8/10/2023 3:46:40 PM
Ref Library			

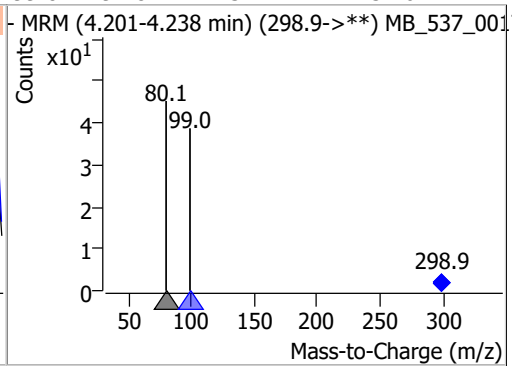
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	793468	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	967046	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.066	573.0 -> 418.9	1476799	4.0000	ng/ml		0.038
System Monitoring Compounds							
13C2-PFHxA	4.991	314.9 -> 269.7	1126339	11.1527	ng/ml		-0.008
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 111.53%			
13C3-HFPO-DA	5.213	287.0 -> 169.0	23403	11.1555	ng/ml		-0.010
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 111.56%			
13C2-PFDA	6.915	514.9 -> 469.9	607190	11.5715	ng/ml		0.028
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 115.72%			
NETFOSAA-d5	7.215	589.0 -> 419.0	806423	45.2976	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 113.24%			
Target Compounds							**QValue**
PFBS	4.221	298.9 -> 80.1	2	0.0000	ng/ml	#	1
PFHxA	4.992	313.0 -> 269.0	1140	0.0088	ng/ml		99
HFPO-DA	5.221	285.0 -> 169.1	56	0.0237	ng/ml	#	67
PFHpA	5.676	362.9 -> 318.9	242	0.0022	ng/ml	#	89
PFHxS	5.743	398.9 -> 79.9	183	0.0045	ng/ml		29
NaDONA	5.762	377.0 -> 250.9	533	0.0015	ng/ml	#	87
PFOA	6.171	413.0 -> 369.1	698	0.0078	ng/ml		94
PFNA	6.577	463.0 -> 418.9	249	0.0045	ng/ml	#	84
PFOS	6.589	498.9 -> 80.1	532	0.0184	ng/ml	#	51
9Cl-PF3ONS	6.782	531.0 -> 351.0	271	0.0031	ng/ml	#	95
PFDA	6.929	513.0 -> 468.9	159	0.0031	ng/ml		98
N-MeFOSAA	7.073	570.0 -> 418.9	705	0.0222	ng/ml		97
PFUdA	7.211	563.0 -> 518.8	140	0.0028	ng/ml	#	72
N-EtFOSAA	7.229	584.0 -> 419.0	1365	0.0483	ng/ml	#	54
11ClPF3OUdS	7.358	631.0 -> 450.8	325	0.0034	ng/ml		99
PFDoA	7.339	613.0 -> 568.9	46	0.0008	ng/ml	#	85
PFTrDA	7.690	663.0 -> 618.8	92	0.0021	ng/ml	#	97
PFTA	7.891	712.9 -> 669.0	127	0.0048	ng/ml	#	99

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

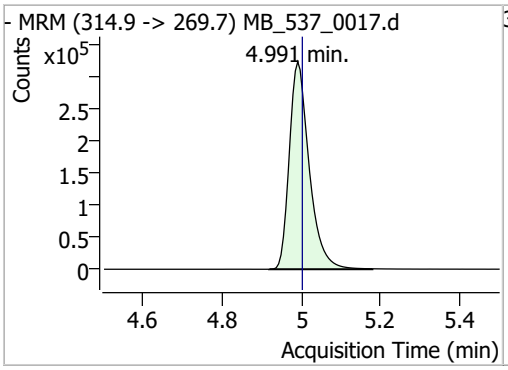
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.0000	4.22	-0.06	2	298.9 -> 99.0	197.8	34.4	51.6

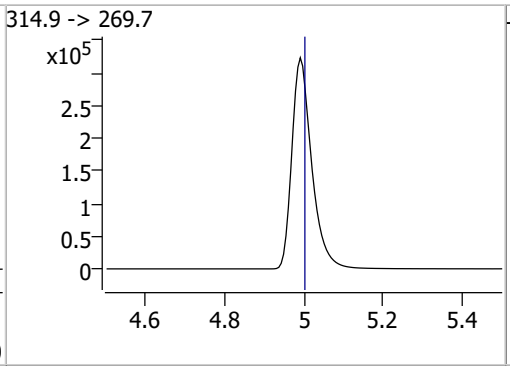


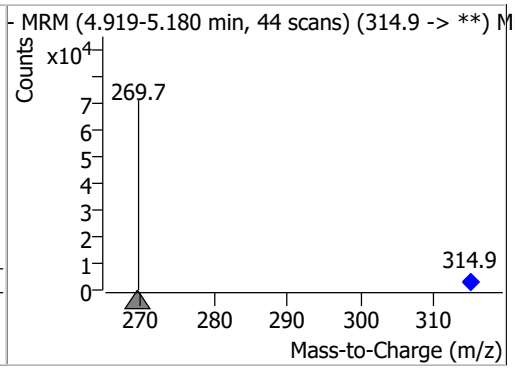




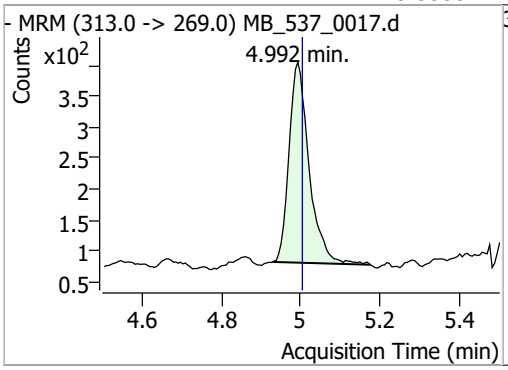
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	11.1527	4.99	-0.01	1126339				

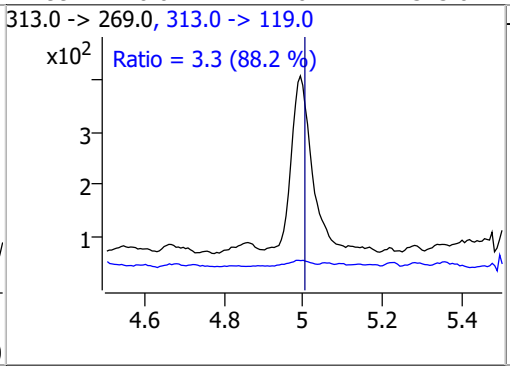


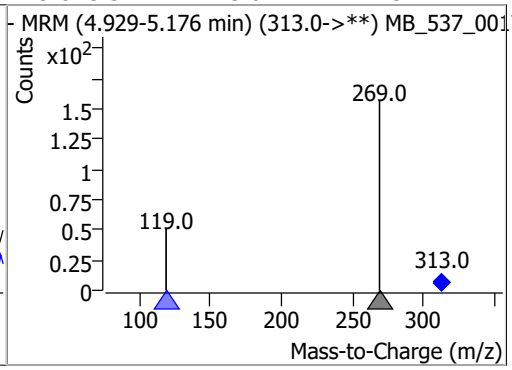




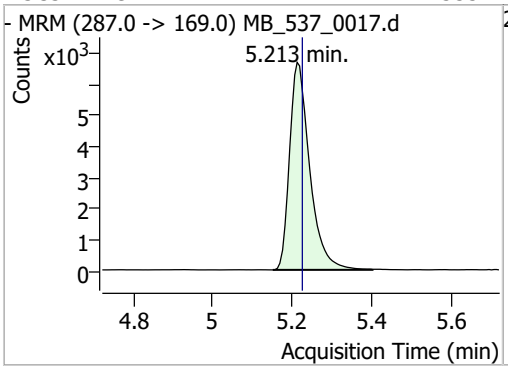
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.0088	4.99	-0.01	1140	313.0 -> 119.0	3.3	3.0	4.5

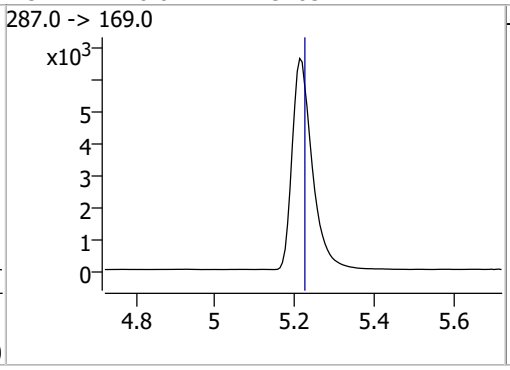


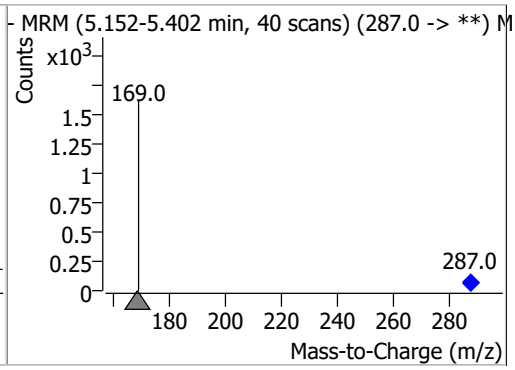




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	11.1555	5.21	-0.01	23403				

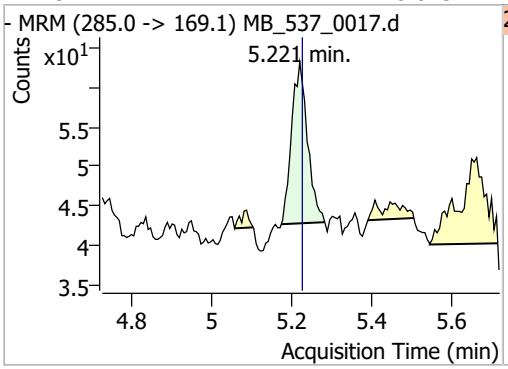


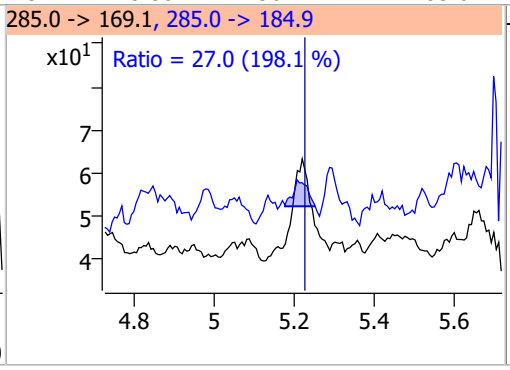


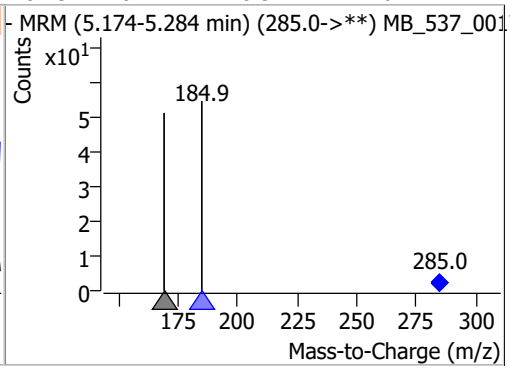


Quantitation Results Report

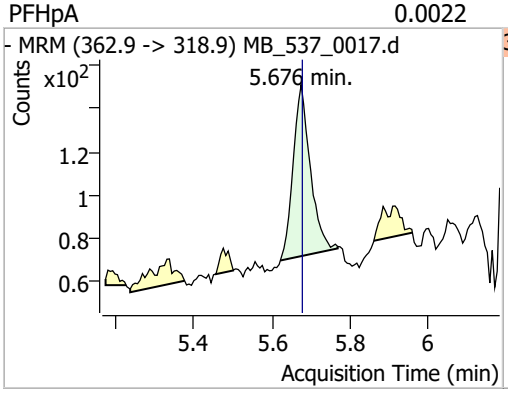
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0237	5.22	0.00	56	285.0 -> 184.9	27.0	10.9	16.4

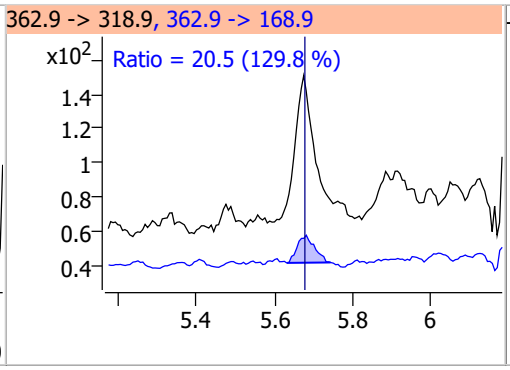


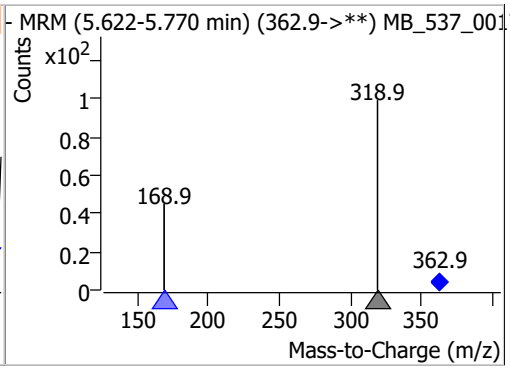




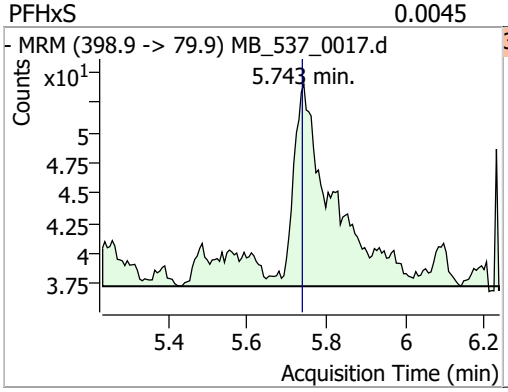
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.0022	5.68	0.00	242	362.9 -> 168.9	20.5	12.6	18.9

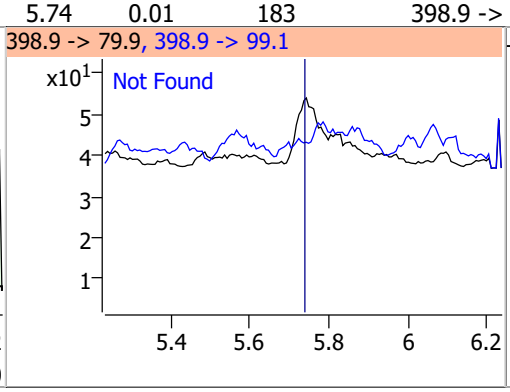


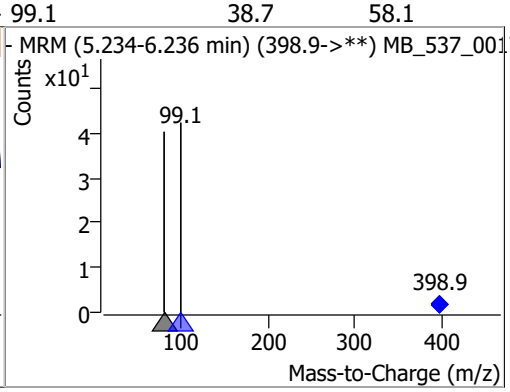




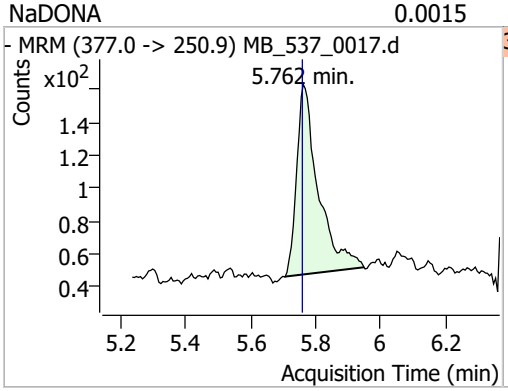
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.0045	5.74	0.01	183	398.9 -> 99.1		38.7	58.1

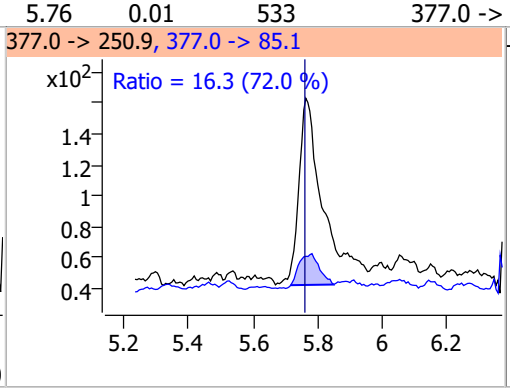


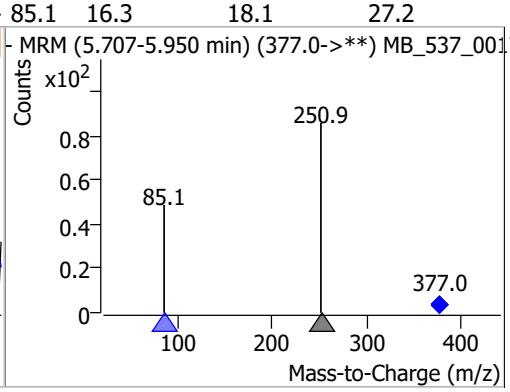




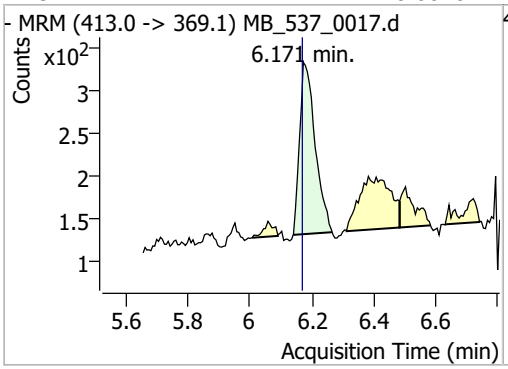
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0015	5.76	0.01	533	377.0 -> 85.1	16.3	18.1	27.2

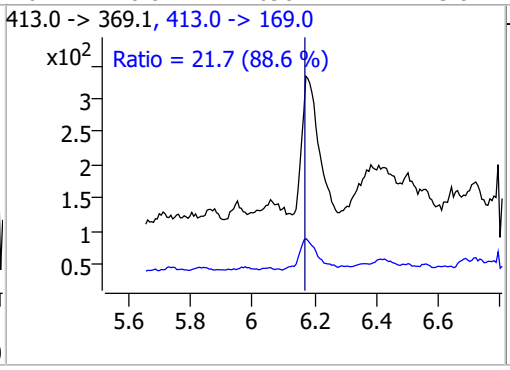


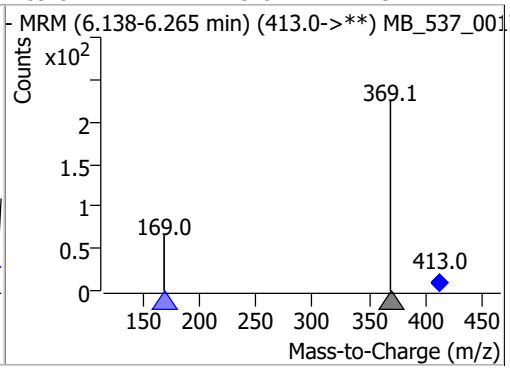




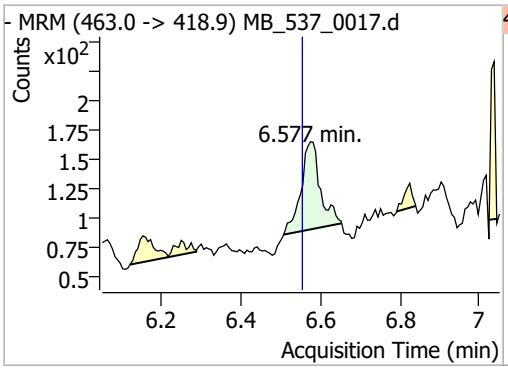
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.0078	6.17	0.01	698	413.0 -> 169.0	21.7	19.6	29.4

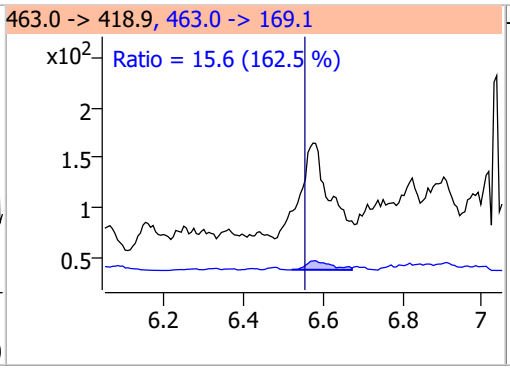


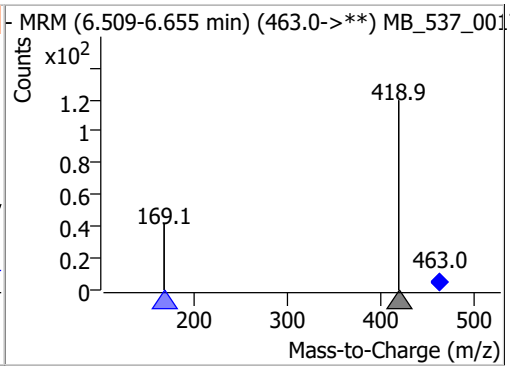




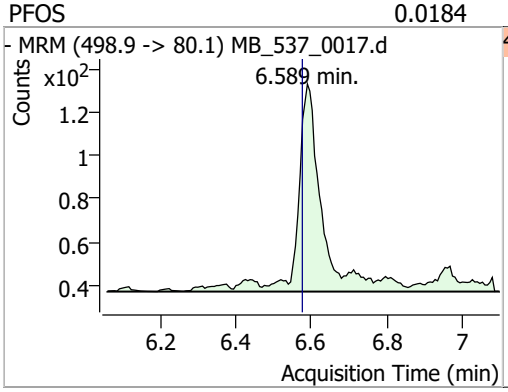
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.0045	6.58	0.02	249	463.0 -> 169.1	15.6	7.7	11.5

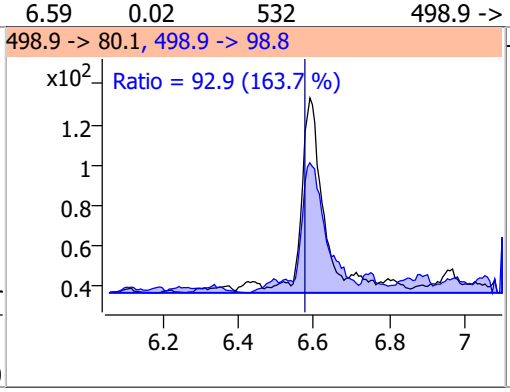


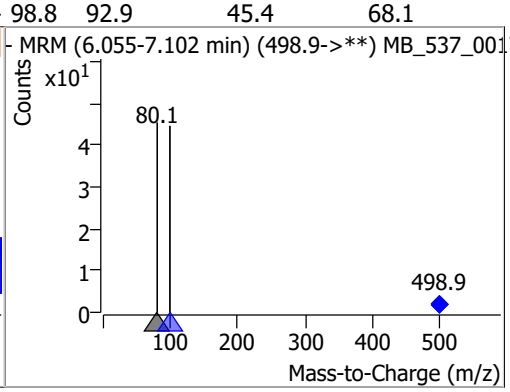




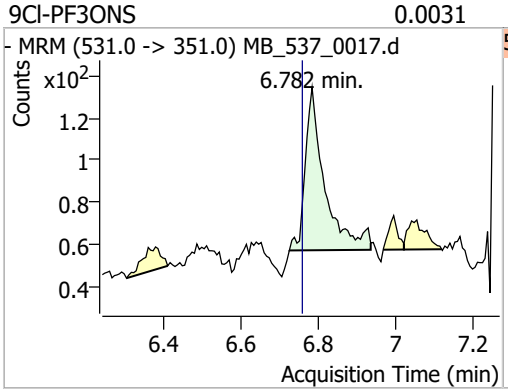
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.0184	6.59	0.02	532	498.9 -> 98.8	92.9	45.4	68.1

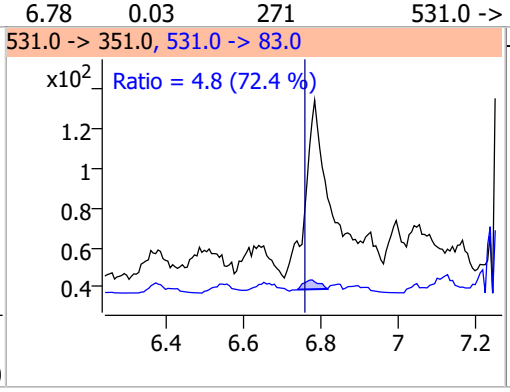


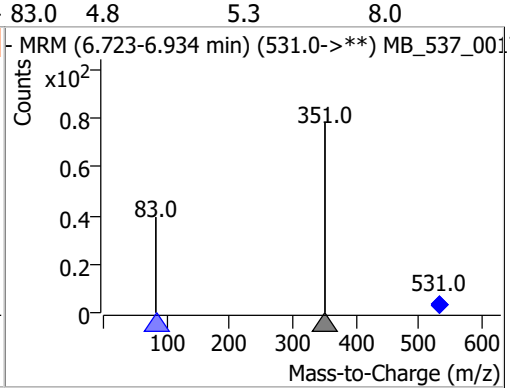




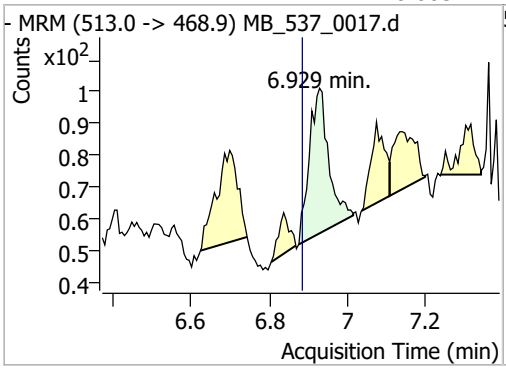
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0031	6.78	0.03	271	531.0 -> 83.0	4.8	5.3	8.0

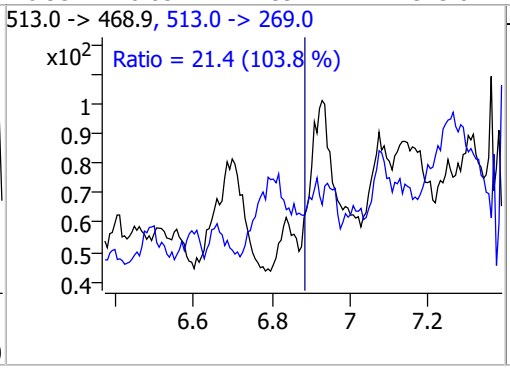


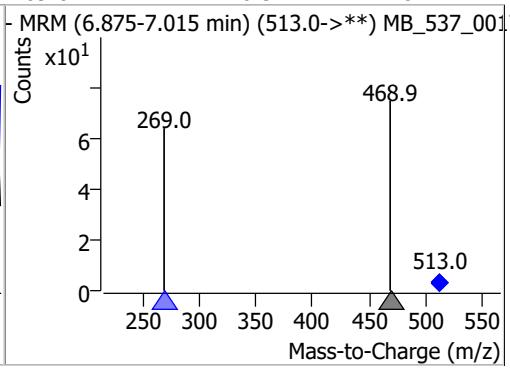




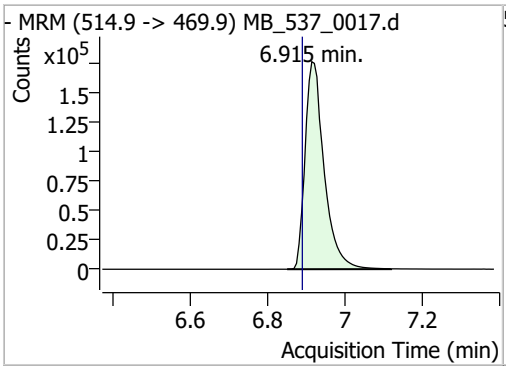
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0031	6.93	0.05	159	513.0 -> 269.0	21.4	16.5	24.8

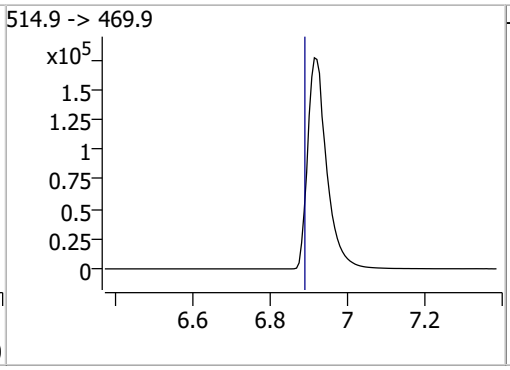


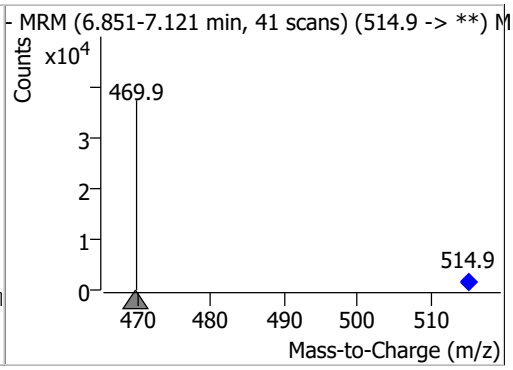




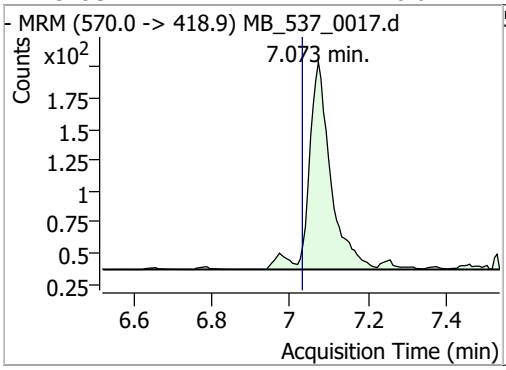
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	11.5715	6.92	0.03	607190				

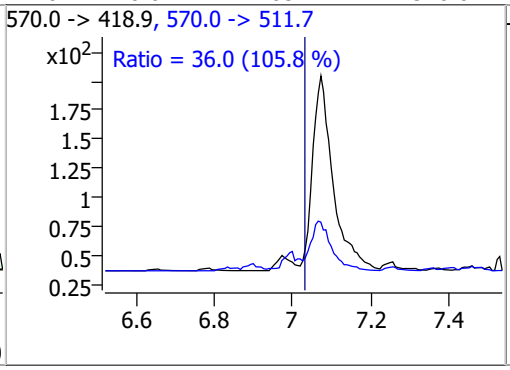


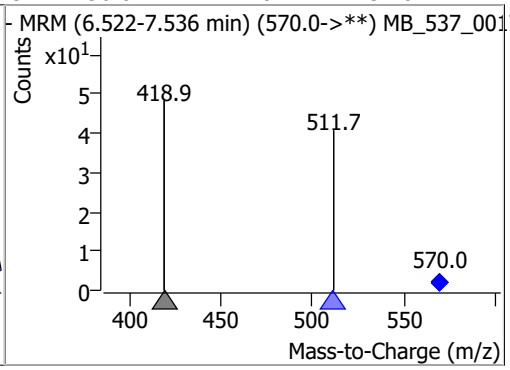




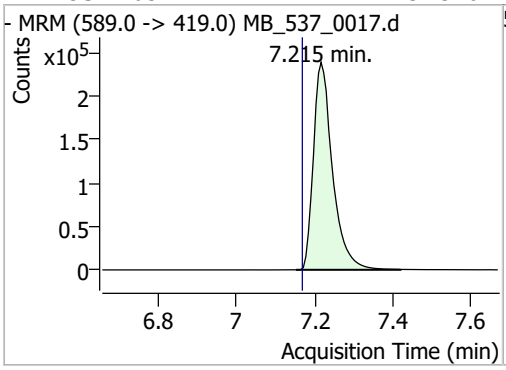
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0222	7.07	0.04	705	570.0 -> 511.7	36.0	17.0	51.0

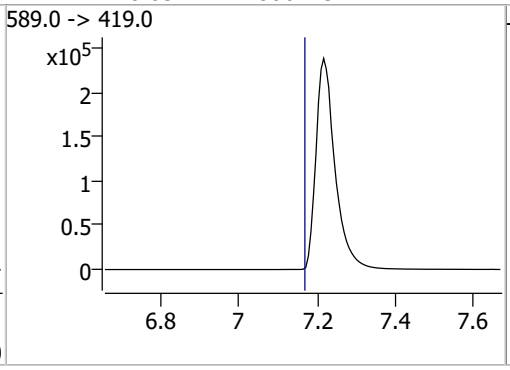


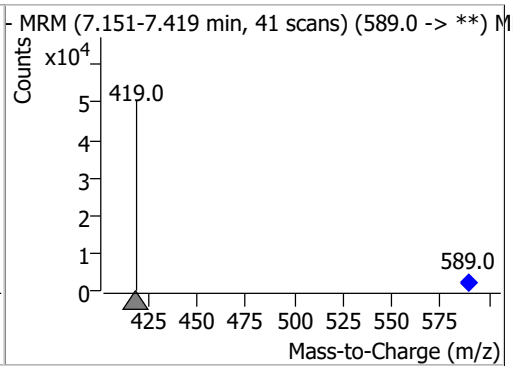




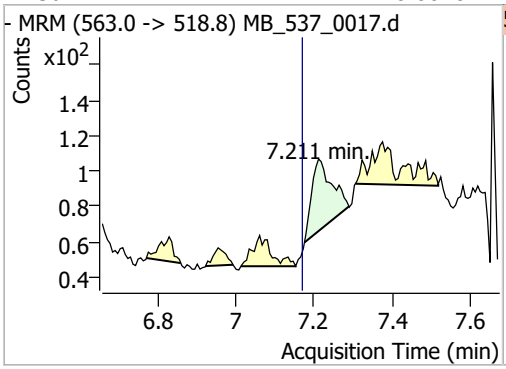
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	45.2976	7.22	0.05	806423				

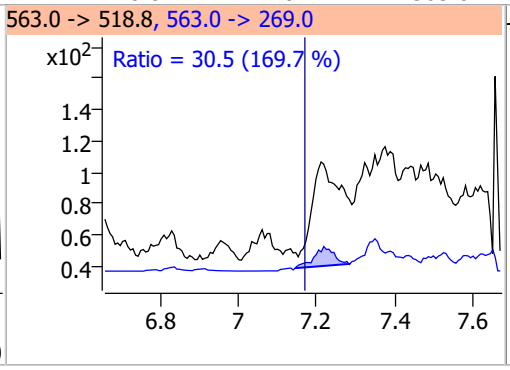


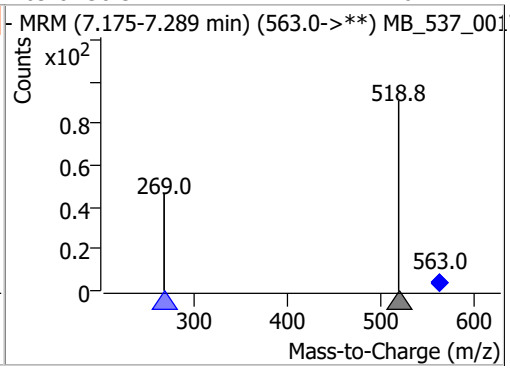




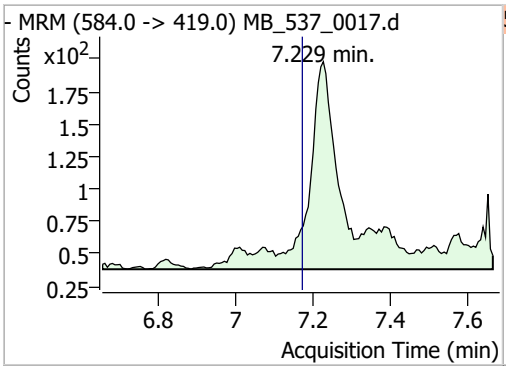
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0028	7.21	0.04	140	563.0 -> 269.0	30.5	14.4	21.6

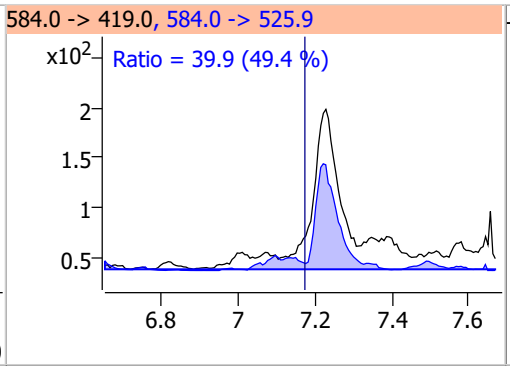


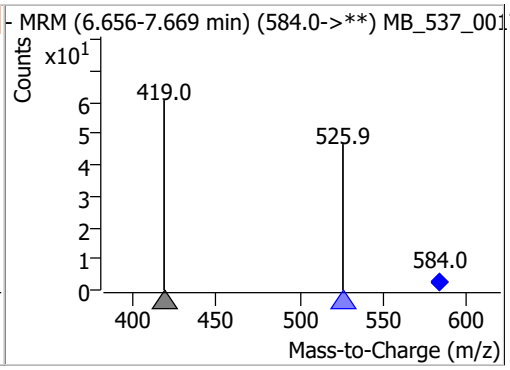




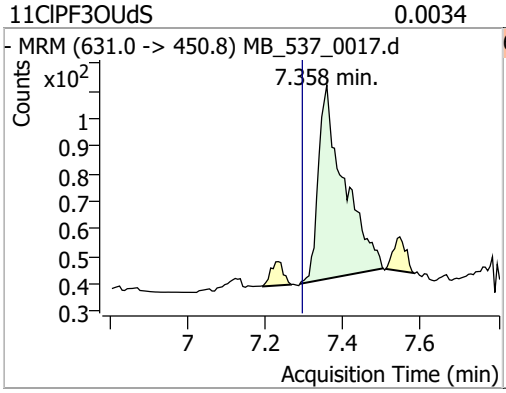
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0483	7.23	0.06	1365	584.0 -> 525.9	39.9	40.4	121.1

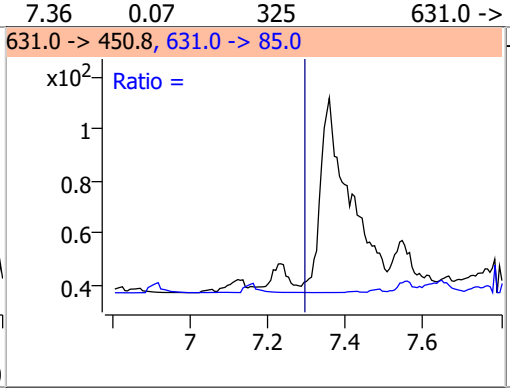


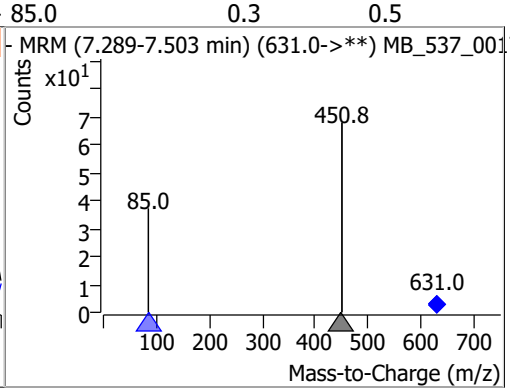




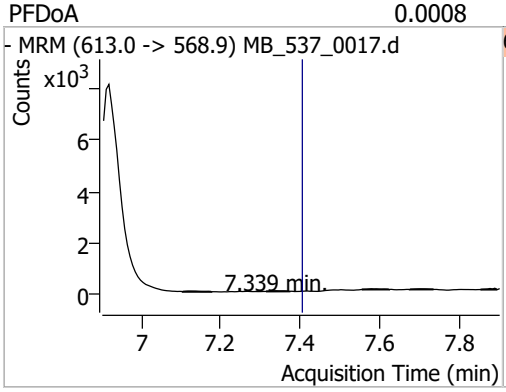
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0034	7.36	0.07	325	631.0 -> 85.0		0.3	0.5

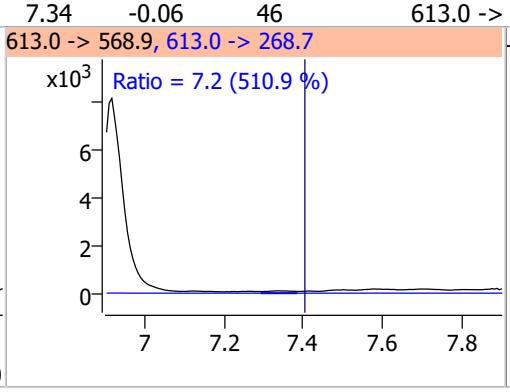


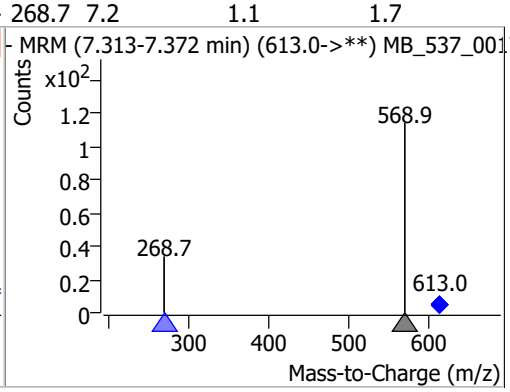




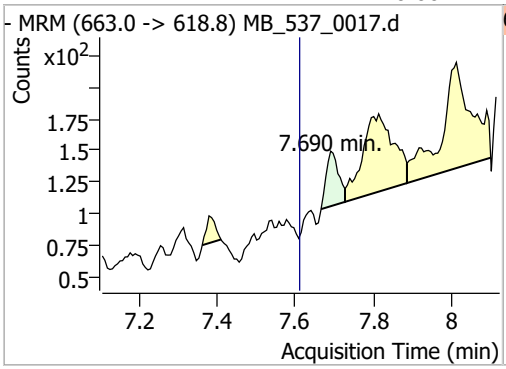
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.0008	7.34	-0.06	46	613.0 -> 268.7	7.2	1.1	1.7

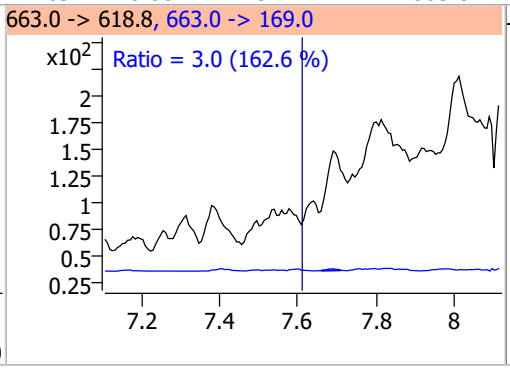


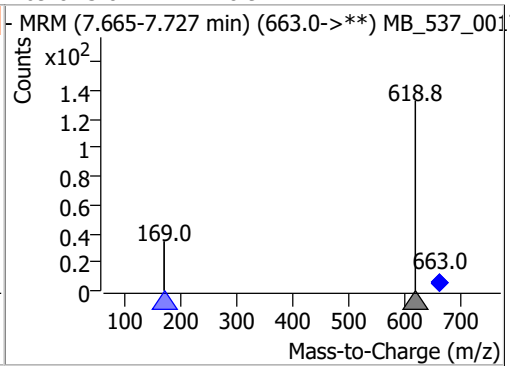




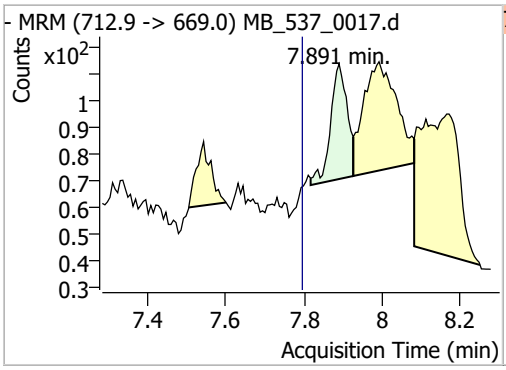
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0021	7.69	0.08	92	663.0 -> 169.0	3.0	0.9	2.7

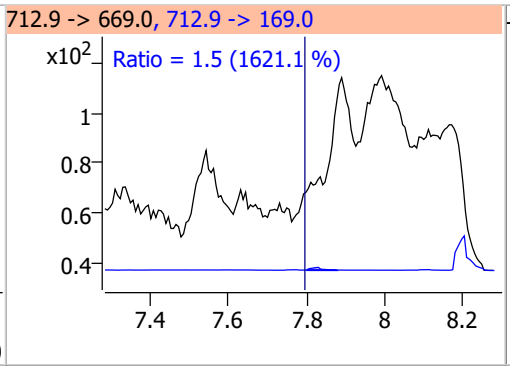


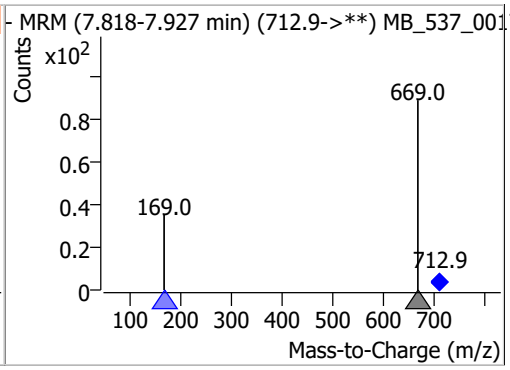




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0048	7.89	0.10	127	712.9 -> 169.0	1.5	0.0	0.1







Quantitation Results Report

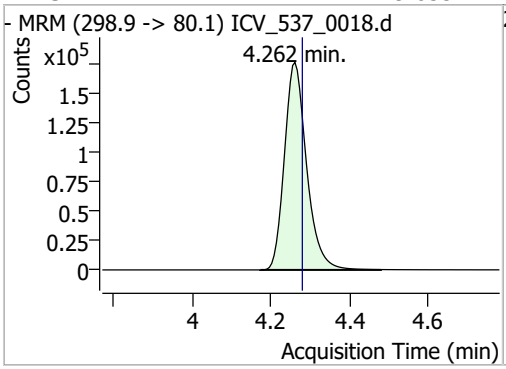
Agilent | Trusted Answers

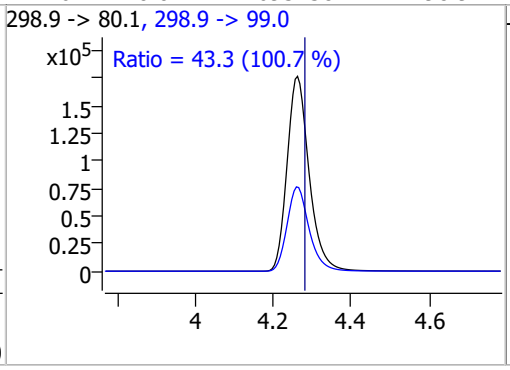
Data File	ICV_537_0018.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 9:13:44 AM
Sample Name	ICV_537_10.0	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809_ICAL-537.batch.bin	Last Calib Update	8/10/2023 3:46:40 PM
Ref Library			

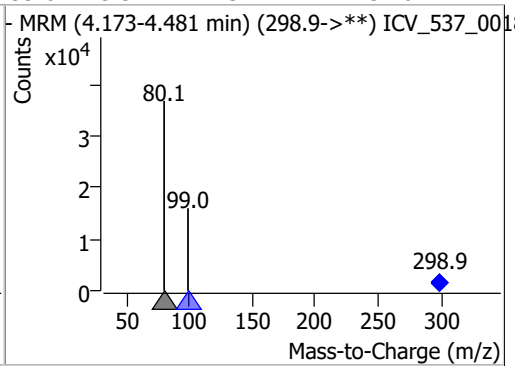
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	837916	3.0000	ng/ml		0.017
13C2-PFOA	6.177	415.0 -> 370.0	952254	1.0000	ng/ml		0.014
NMeFOSAA-d3	7.072	573.0 -> 418.9	1653736	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.991	314.9 -> 269.7	960752	9.6609	ng/ml		-0.008
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 96.61%			
13C3-HFPO-DA	5.213	287.0 -> 169.0	21313	10.3170	ng/ml		-0.010
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 103.17%			
13C2-PFDA	6.922	514.9 -> 469.9	502809	9.7311	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 97.31%			
NETFOSAA-d5	7.215	589.0 -> 419.0	789231	39.5887	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 98.97%			
Target Compounds							QValue
PFBS	4.262	298.9 -> 80.1	693138	9.8357	ng/ml		100
PFHxA	4.992	313.0 -> 269.0	1113845	8.7800	ng/ml		100
HFPO-DA	5.214	285.0 -> 169.1	17883	7.4742	ng/ml		100
PFHpA	5.676	362.9 -> 318.9	985347	9.0917	ng/ml		98
PFHxS	5.743	398.9 -> 79.9	469380	10.5012	ng/ml		99
NaDONA	5.756	377.0 -> 250.9	3431467	9.3896	ng/ml		98
PFOA	6.171	413.0 -> 369.1	774109	8.7884	ng/ml		95
PFNA	6.577	463.0 -> 418.9	574868	10.3290	ng/ml	#	95
PFOS	6.589	498.9 -> 80.1	266535	8.5327	ng/ml		93
9Cl-PF3ONS	6.782	531.0 -> 351.0	850682	9.0085	ng/ml		96
PFDA	6.916	513.0 -> 468.9	495717	9.6107	ng/ml		97
N-MeFOSAA	7.073	570.0 -> 418.9	362539	9.6125	ng/ml		97
PFUdA	7.211	563.0 -> 518.8	480292	9.6327	ng/ml		94
N-EtFOSAA	7.223	584.0 -> 419.0	332447	10.0727	ng/ml		98
11ClPF3OUdS	7.345	631.0 -> 450.8	1043708	9.5382	ng/ml		100
PFDoA	7.469	613.0 -> 568.9	475337	8.7351	ng/ml	#	99
PFTrDA	7.690	663.0 -> 618.8	393830	8.8430	ng/ml		99
PFTA	7.884	712.9 -> 669.0	234968	8.9887	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

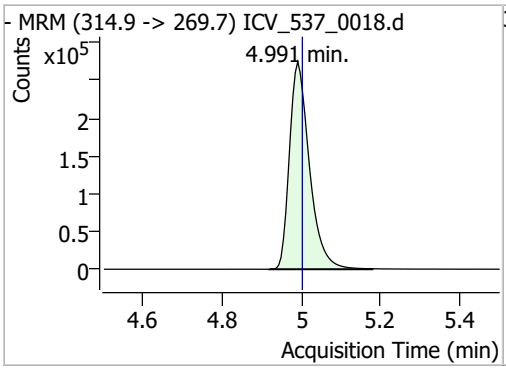
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	9.8357	4.26	-0.02	693138	298.9 -> 99.0	43.3	34.4	51.6

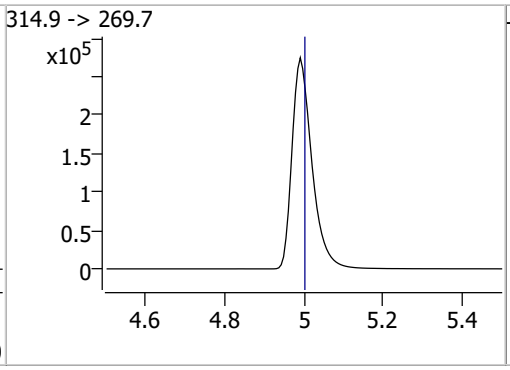


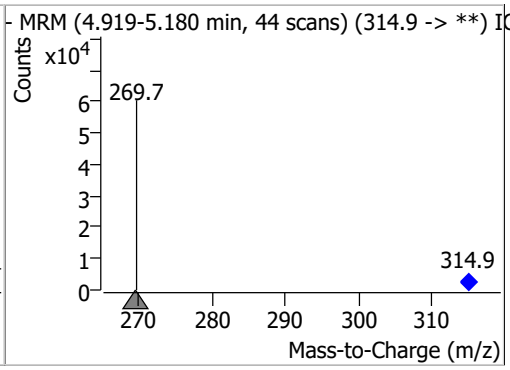




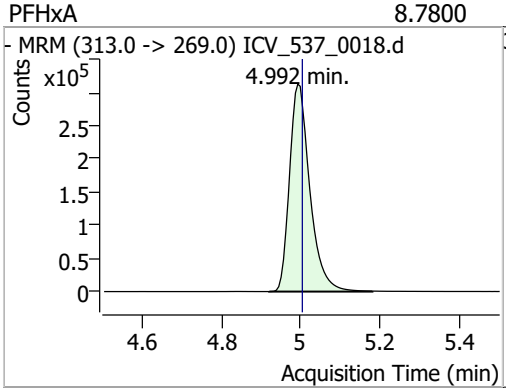
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	9.6609	4.99	-0.01	960752				

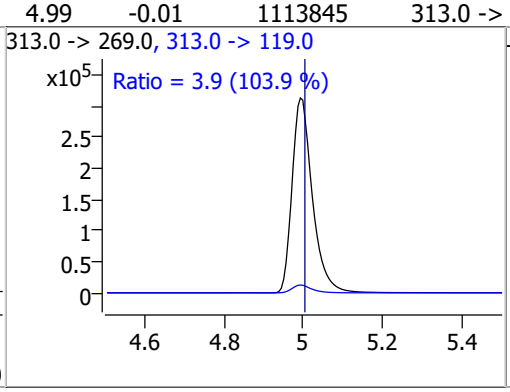


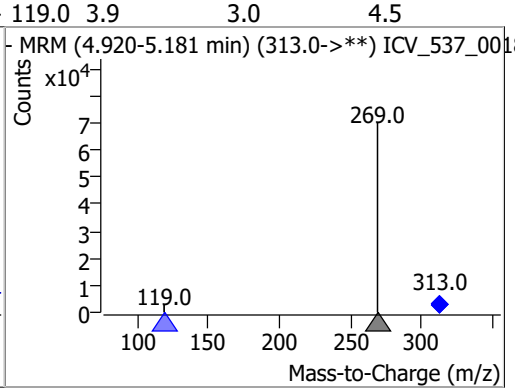




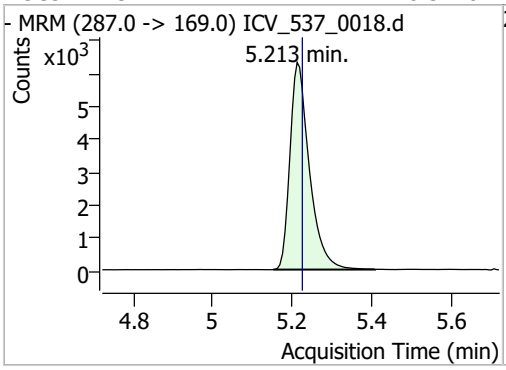
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	8.7800	4.99	-0.01	1113845	313.0 -> 119.0	3.9	3.0	4.5

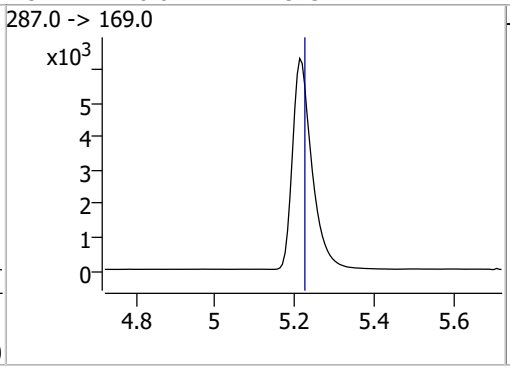


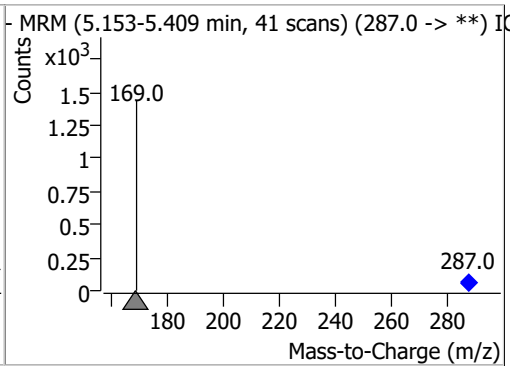




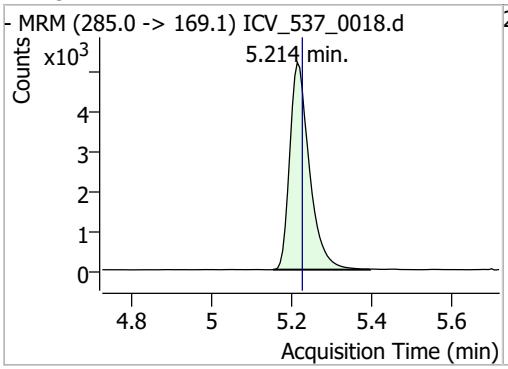
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	10.3170	5.21	-0.01	21313				

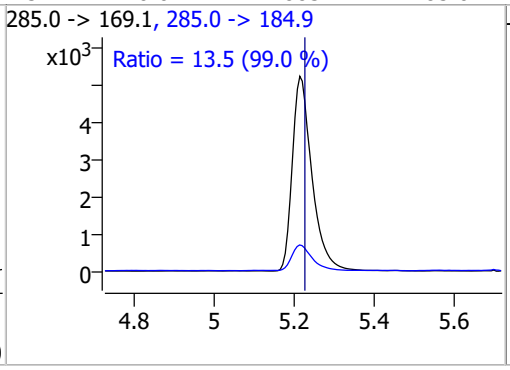


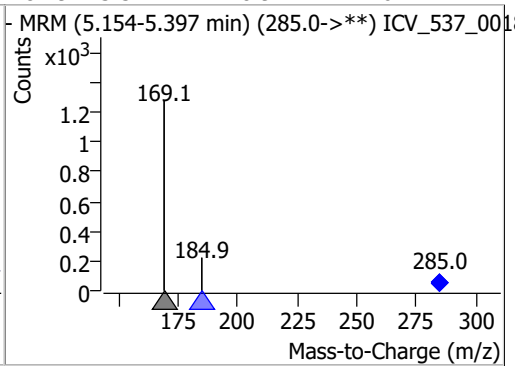




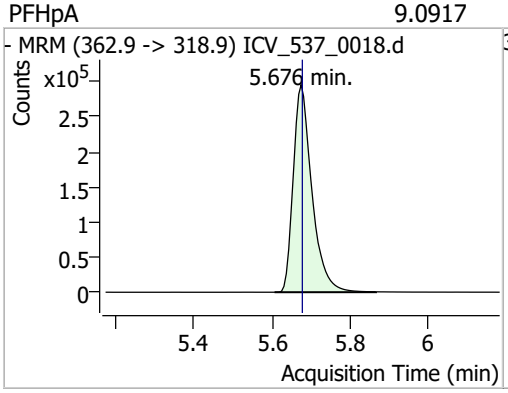
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	7.4742	5.21	-0.01	17883	285.0 -> 184.9	13.5	10.9	16.4

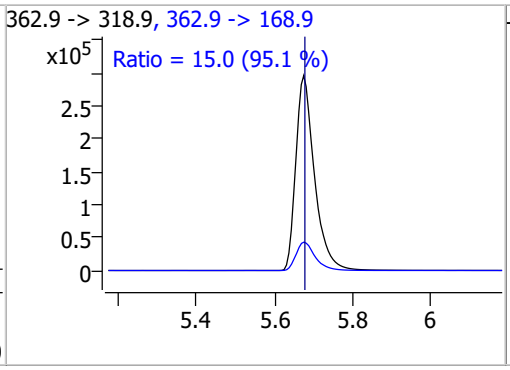


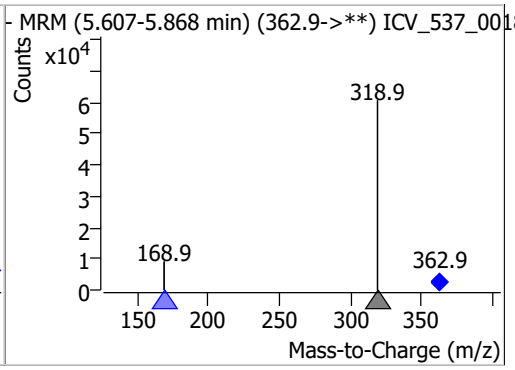




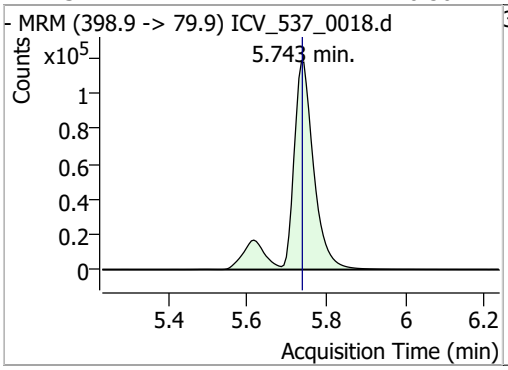
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	9.0917	5.68	0.00	985347	362.9 -> 168.9	15.0	12.6	18.9

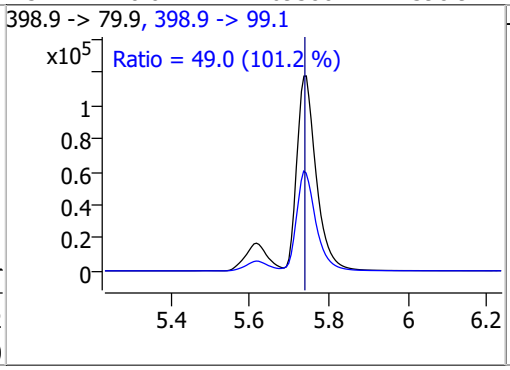


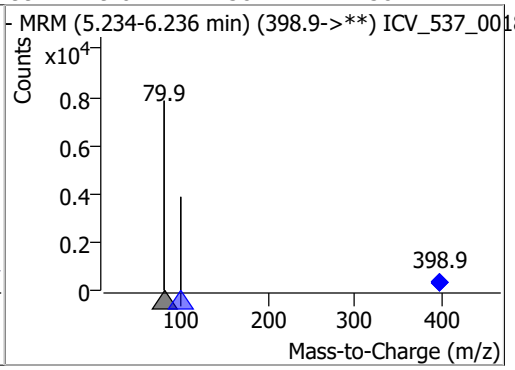




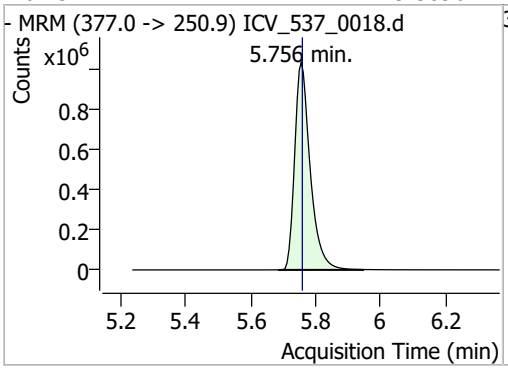
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	10.5012	5.74	0.01	469380	398.9 -> 99.1	49.0	38.7	58.1

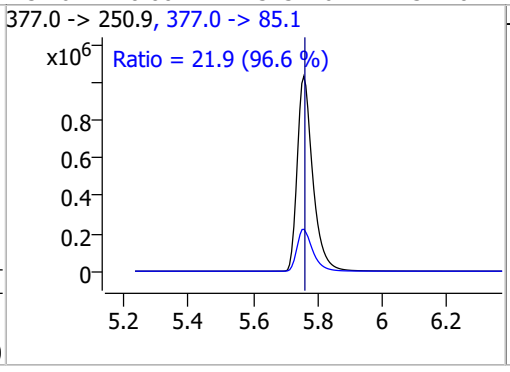


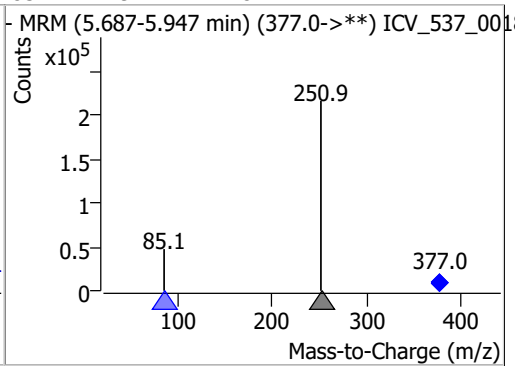




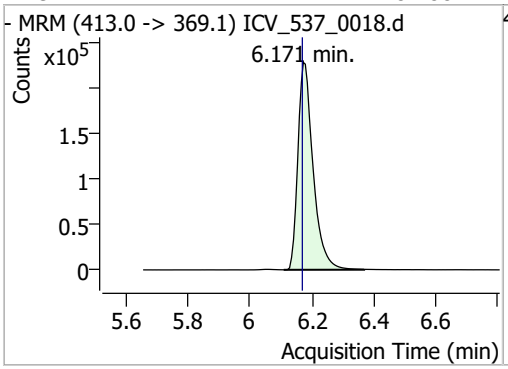
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	9.3896	5.76	0.00	3431467	377.0 -> 85.1	21.9	18.1	27.2

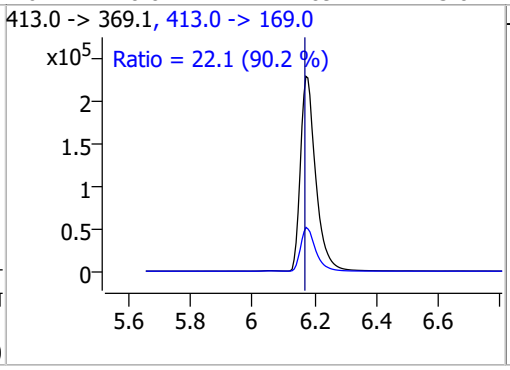


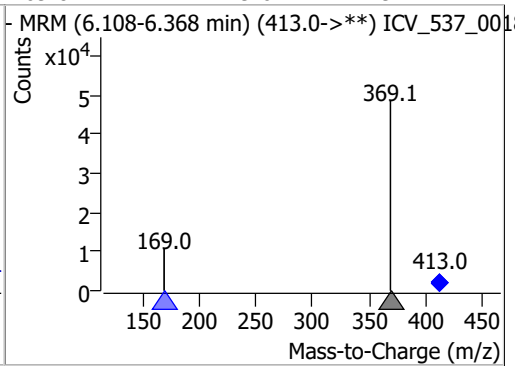




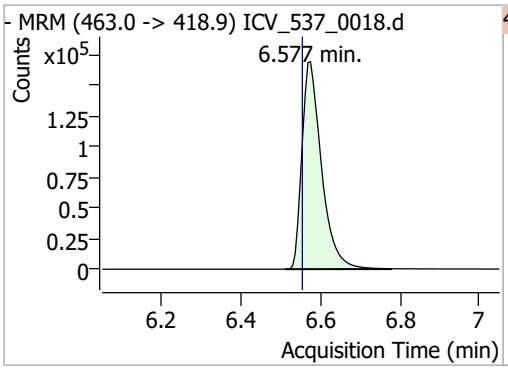
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	8.7884	6.17	0.01	774109	413.0 -> 169.0	22.1	19.6	29.4

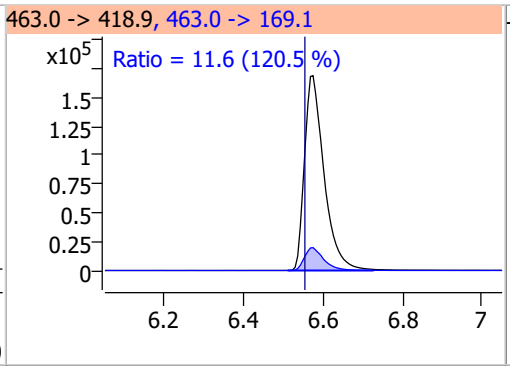


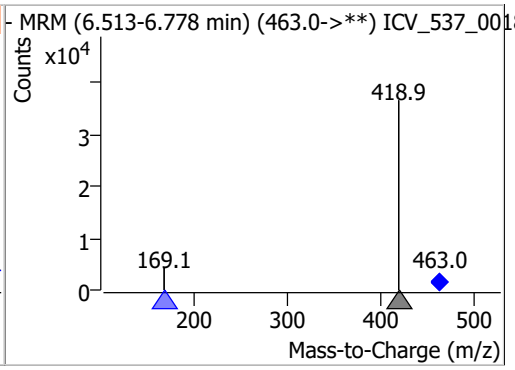




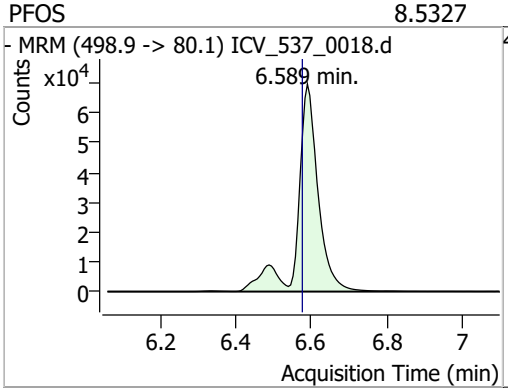
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	10.3290	6.58	0.02	574868	463.0 -> 169.1	11.6	7.7	11.5

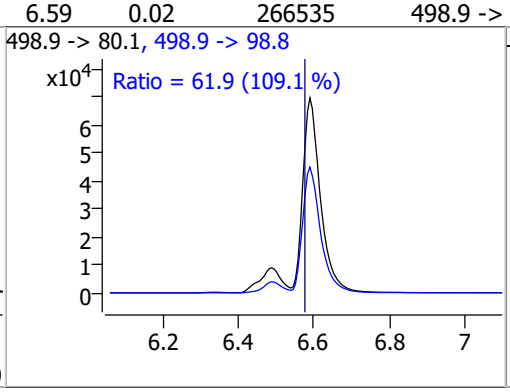


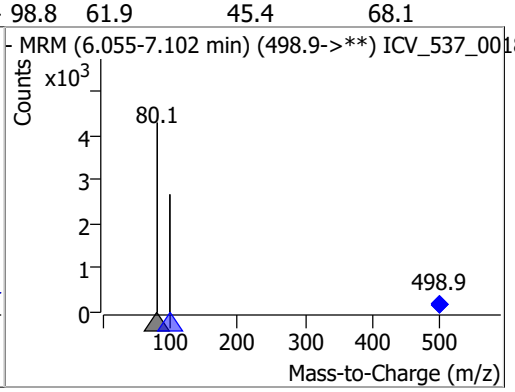




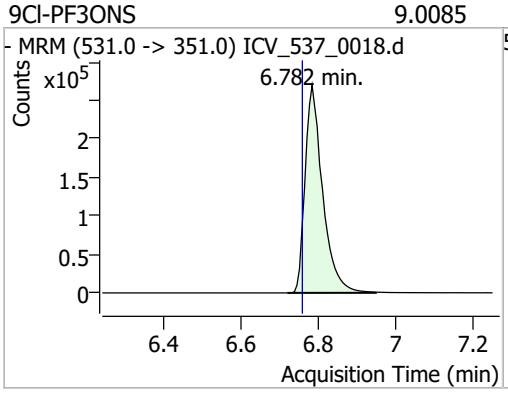
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	8.5327	6.59	0.02	266535	498.9 -> 98.8	61.9	45.4	68.1

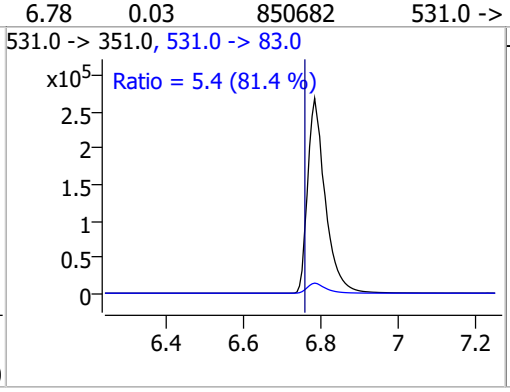


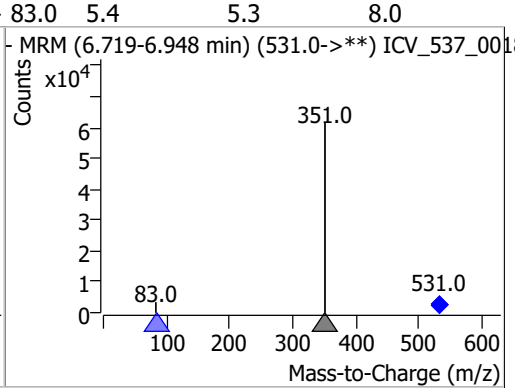




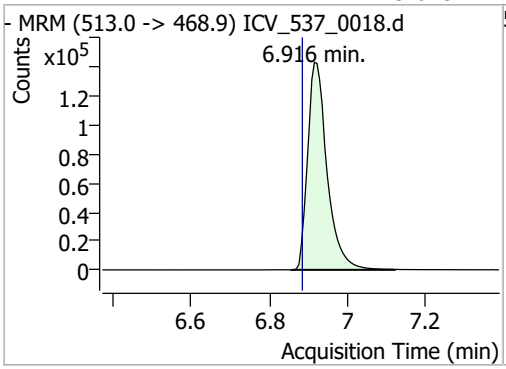
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	9.0085	6.78	0.03	850682	531.0 -> 83.0	5.4	5.3	8.0

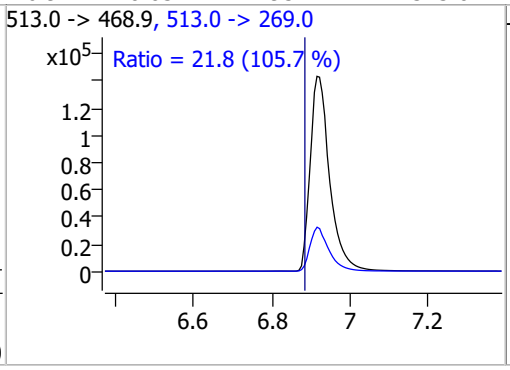


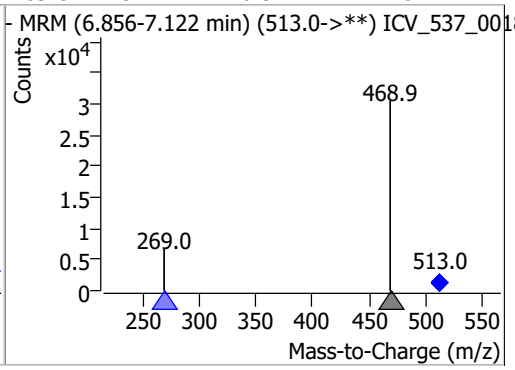




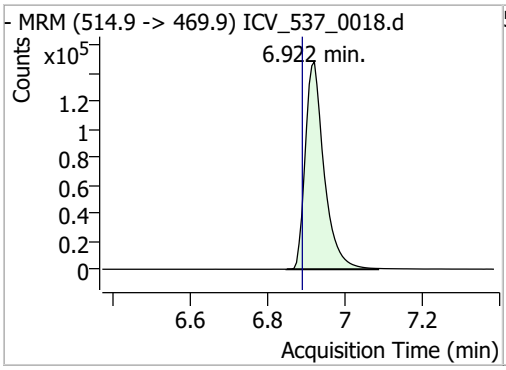
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	9.6107	6.92	0.03	495717	513.0 -> 269.0	21.8	16.5	24.8

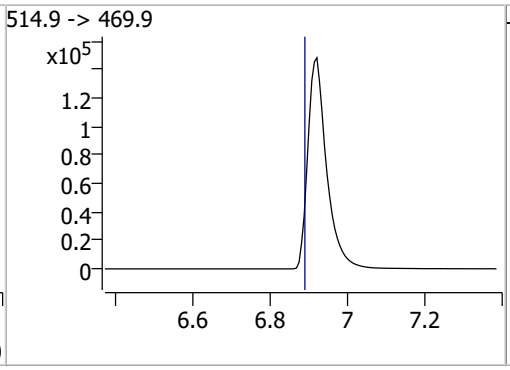


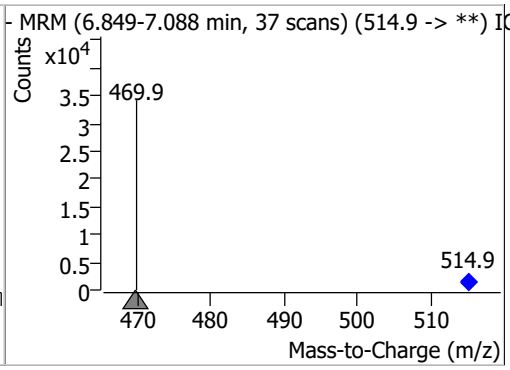




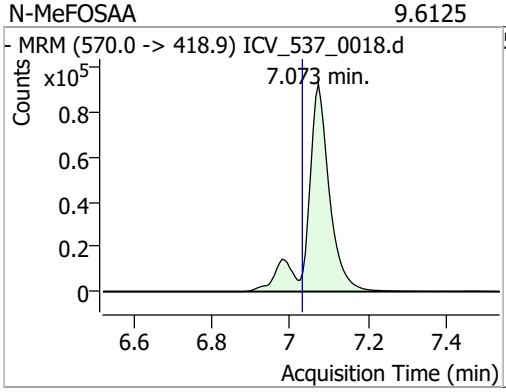
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	9.7311	6.92	0.03	502809				

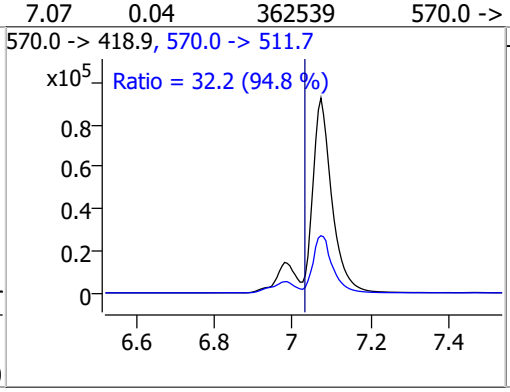


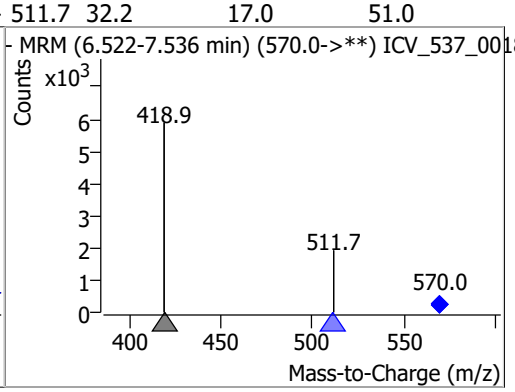




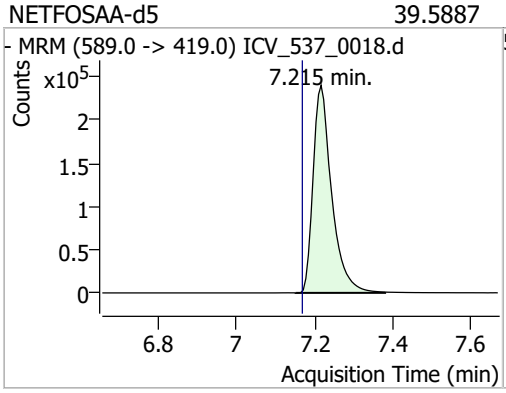
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	9.6125	7.07	0.04	362539	570.0 -> 511.7	32.2	17.0	51.0

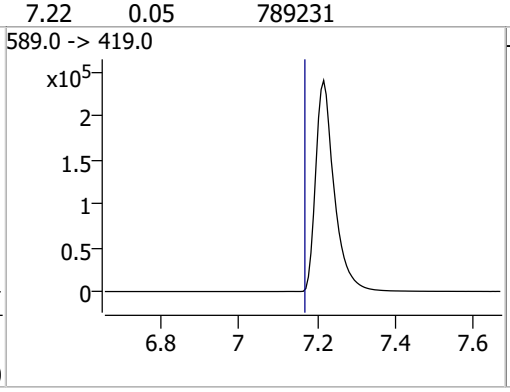


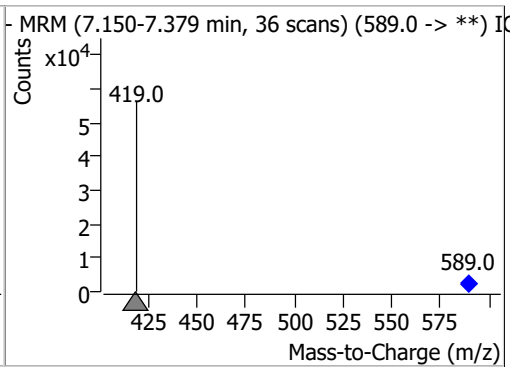




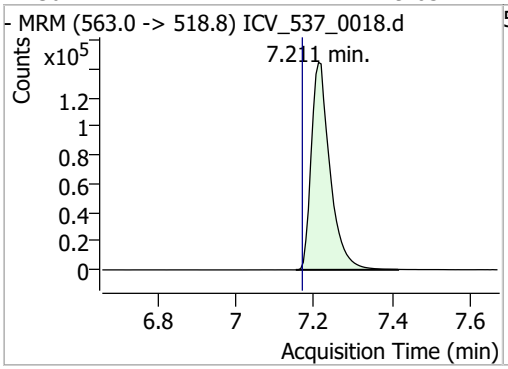
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	39.5887	7.22	0.05	789231				

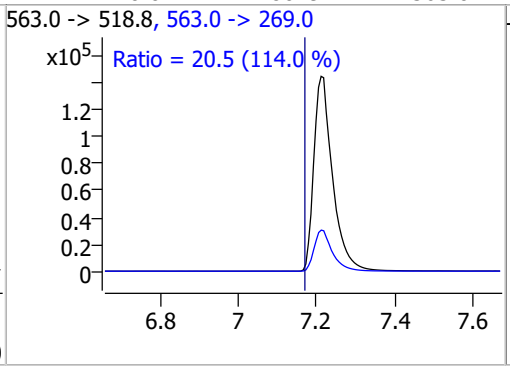


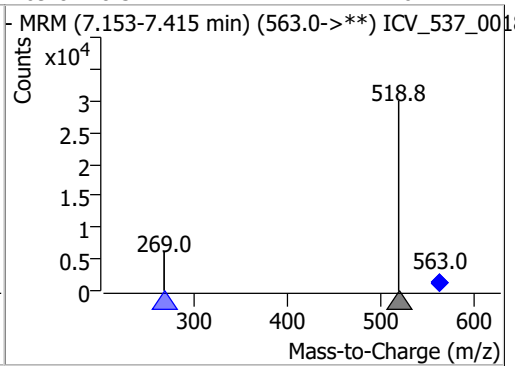




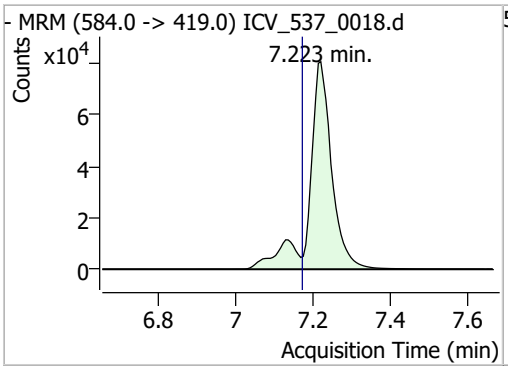
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	9.6327	7.21	0.04	480292	563.0 -> 269.0	20.5	14.4	21.6

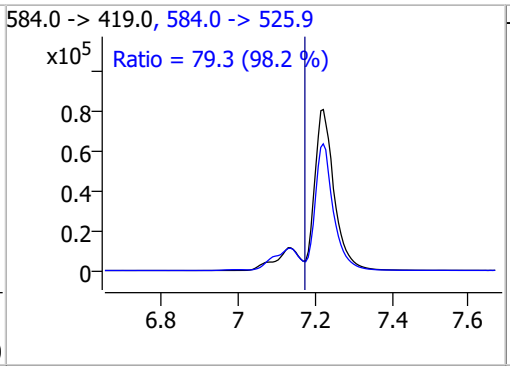


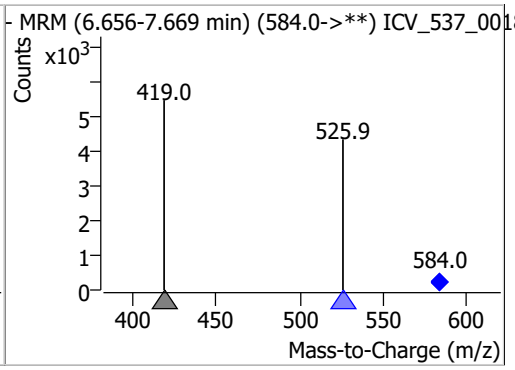




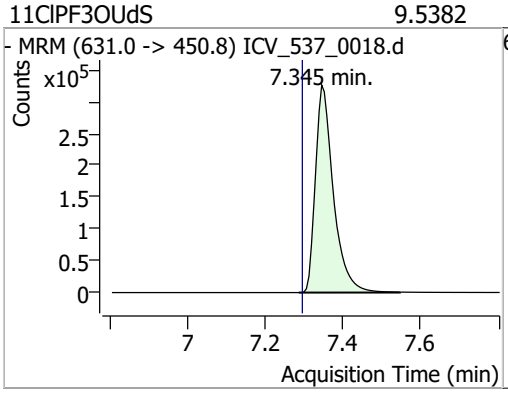
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	10.0727	7.22	0.05	332447	584.0 -> 525.9	79.3	40.4	121.1

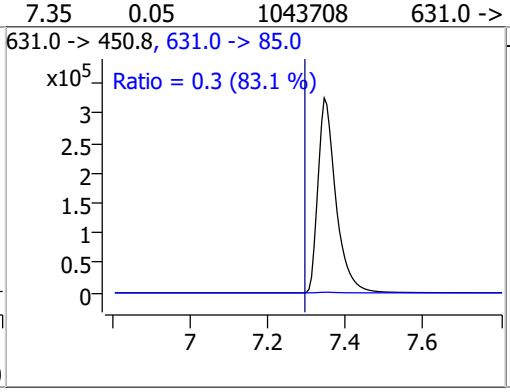


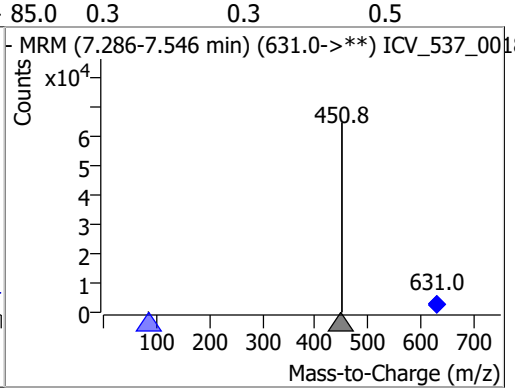




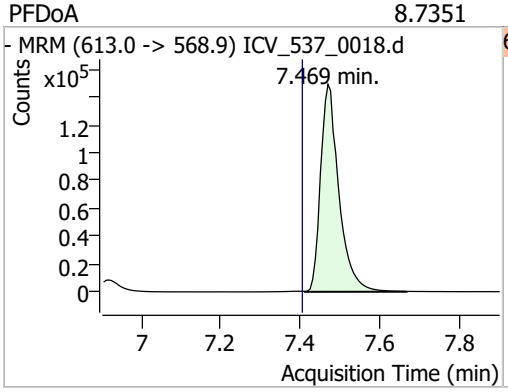
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	9.5382	7.35	0.05	1043708	631.0 -> 85.0	0.3	0.3	0.5

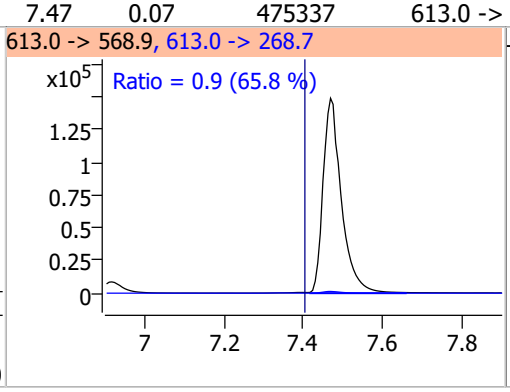


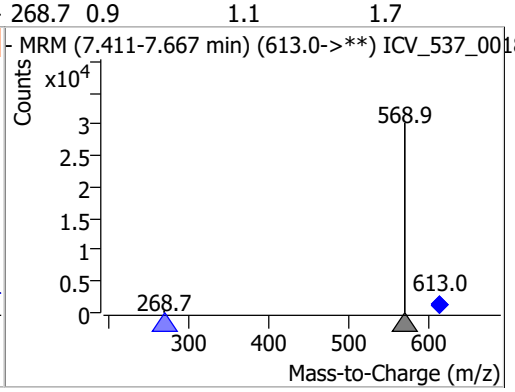




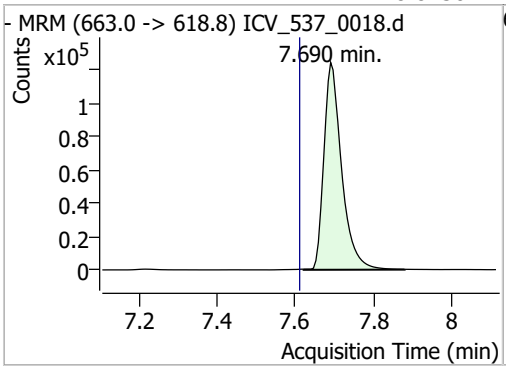
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	8.7351	7.47	0.07	475337	613.0 -> 268.7	0.9	1.1	1.7

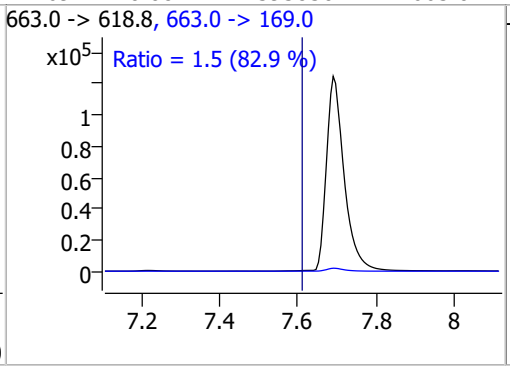


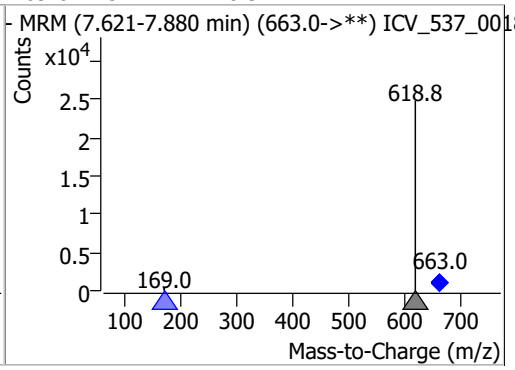




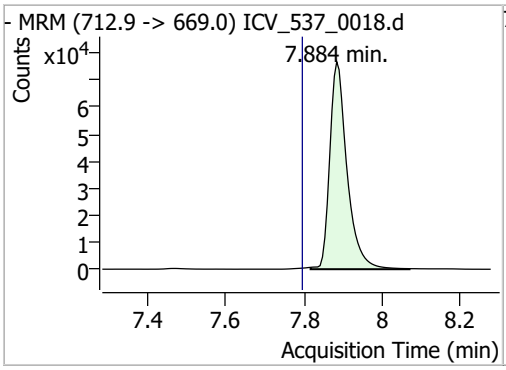
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	8.8430	7.69	0.08	393830	663.0 -> 169.0	1.5	0.9	2.7

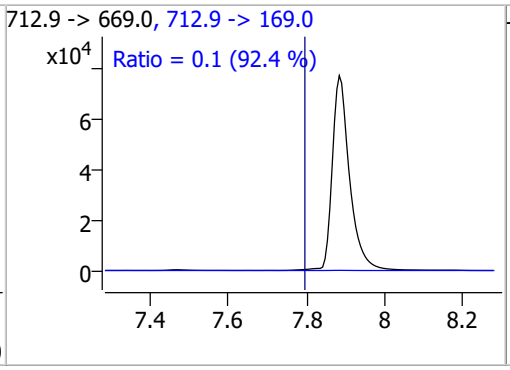


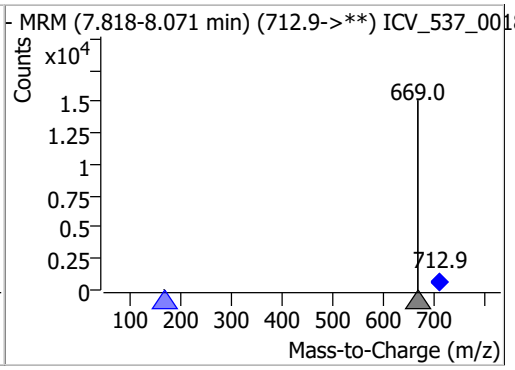




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	8.9887	7.88	0.09	234968	712.9 -> 169.0	0.1	0.0	0.1







Quantitation Results Report

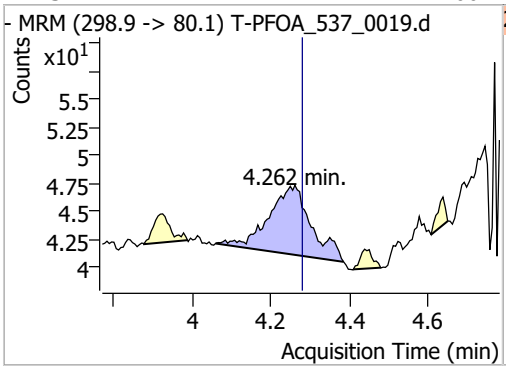
Agilent | Trusted Answers

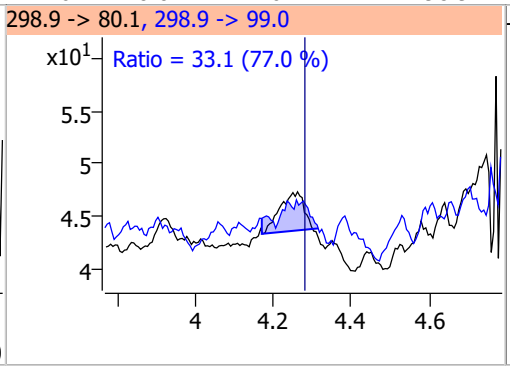
Data File	T-PFOA_537_0019.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 9:26:29 AM
Sample Name	T-PFOA_537_25.0	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809_ICAL-537.batch.bin	Last Calib Update	8/10/2023 3:46:40 PM
Ref Library			

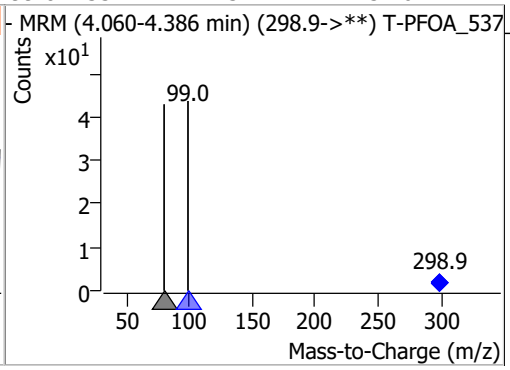
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	46	3.0000	ng/ml		0.017
13C2-PFOA	6.177	415.0 -> 370.0	6509	1.0000	ng/ml		0.014
NMeFOSAA-d3	7.066	573.0 -> 418.9	1128	4.0000	ng/ml		0.038
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	91	0.1336	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 1.34%		*	
13C3-HFPO-DA	5.055	287.0 -> 169.0	8	0.6001	ng/ml		-0.168
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 6.00%		*	
13C2-PFDA	6.862	514.9 -> 469.9	6	0.0165	ng/ml		-0.025
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 0.16%		*	
NETFOSAA-d5	7.215	589.0 -> 419.0	495	36.3653	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 90.91%			
Target Compounds							QValue
PFBS	4.262	298.9 -> 80.1	46	11.7266	ng/ml	#	85
PFHxA	4.992	313.0 -> 269.0	55062	63.5010	ng/ml		100
HFPO-DA	5.220	285.0 -> 169.1	56	3.4648	ng/ml	#	34
PFHpA	5.676	362.9 -> 318.9	198353	267.7622	ng/ml		100
PFHxS	5.743	398.9 -> 79.9	129	46.0881	ng/ml		29
NaDONA	5.756	377.0 -> 250.9	461	0.1950	ng/ml	#	80
PFOA	6.171	413.0 -> 369.1	10410985	17292.4960	ng/ml	#m	88
PFNA	6.577	463.0 -> 418.9	4648	12.1889	ng/ml	#	87
PFOS	6.608	498.9 -> 80.1	189	89.3867	ng/ml		23
9Cl-PF3ONS	6.802	531.0 -> 351.0	124	22.4771	ng/ml		100
PFDA	6.922	513.0 -> 468.9	150	0.4406	ng/ml	#	1
N-MeFOSAA	7.073	570.0 -> 418.9	261	10.1325	ng/ml		76
PFUdA	7.198	563.0 -> 518.8	78	0.2294	ng/ml	#	67
N-EtFOSAA	7.216	584.0 -> 419.0	813	32.9371	ng/ml	#	37
11ClPF3OUdS	7.227	631.0 -> 450.8	9	1.6076	ng/ml		99
PFDoA	7.463	613.0 -> 568.9	485	1.3048	ng/ml		99
PFTrDA	7.702	663.0 -> 618.8	67	0.2296	ng/ml		98
PFTA	7.806	712.9 -> 669.0	16	0.0921	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

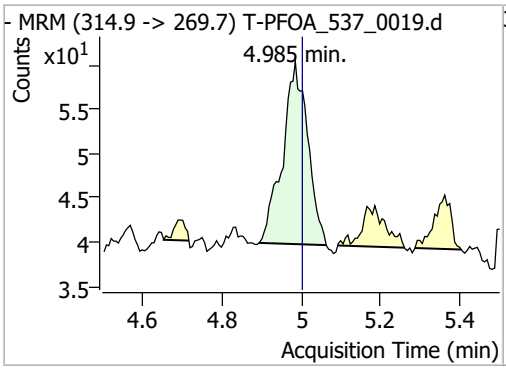
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	11.7266	4.26	-0.02	46	298.9 -> 99.0	33.1	34.4	51.6

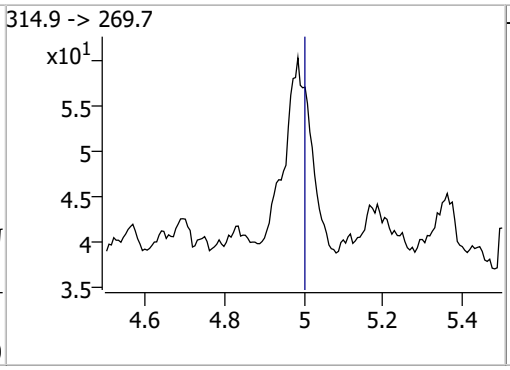


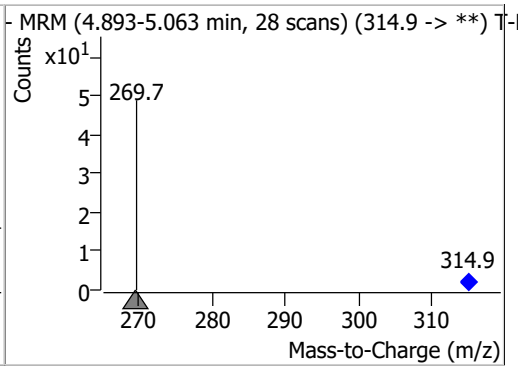




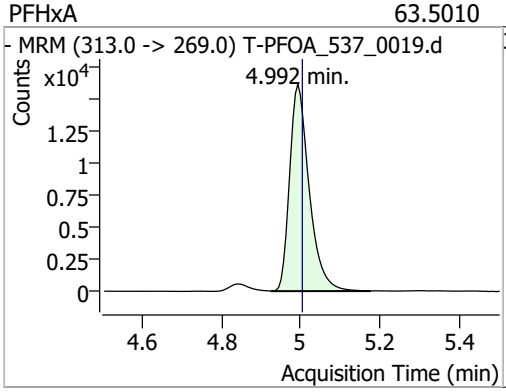
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	0.1336	4.99	-0.01	91				

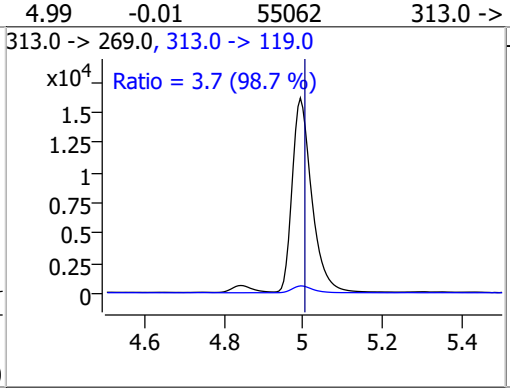


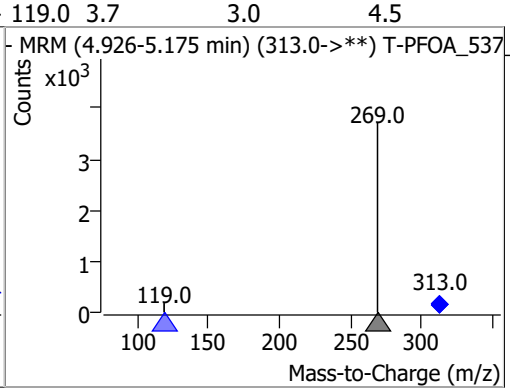




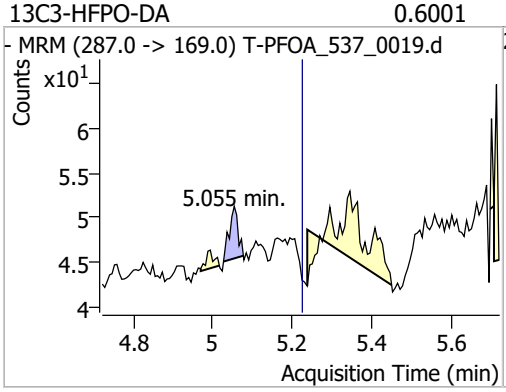
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	63.5010	4.99	-0.01	55062	313.0 -> 119.0	3.7	3.0	4.5

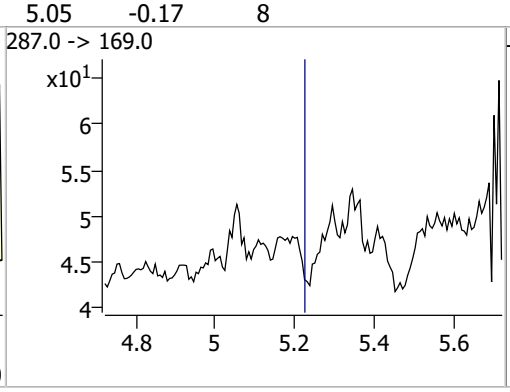


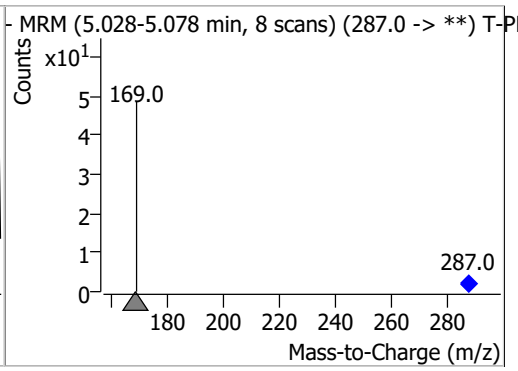




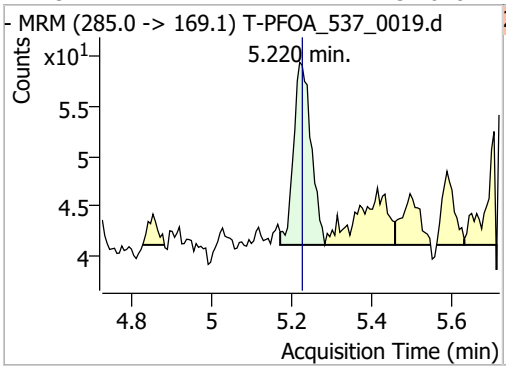
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	0.6001	5.05	-0.17	8				

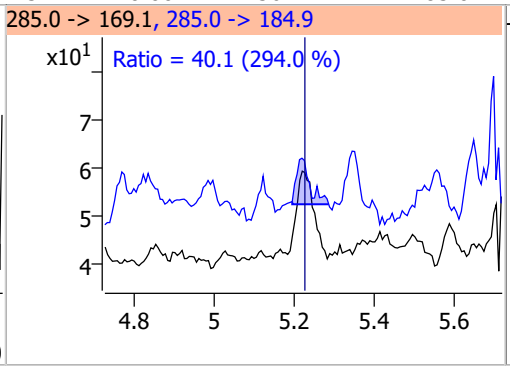


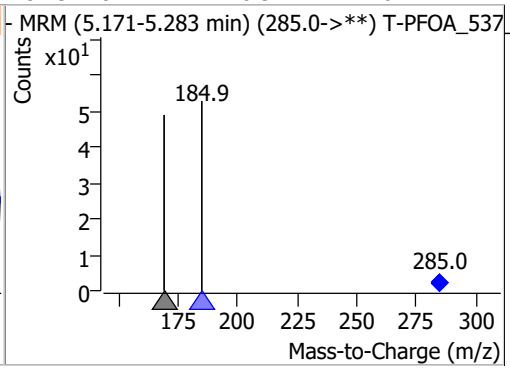




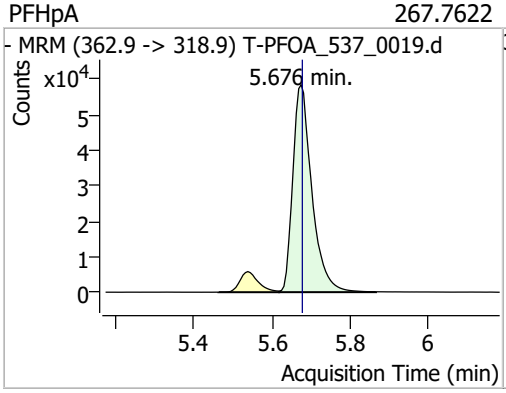
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	3.4648	5.22	0.00	56	285.0 -> 184.9	40.1	10.9	16.4

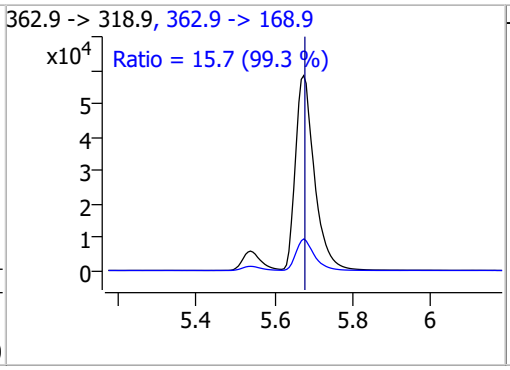


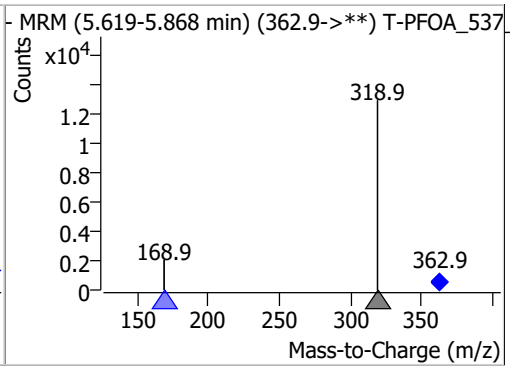




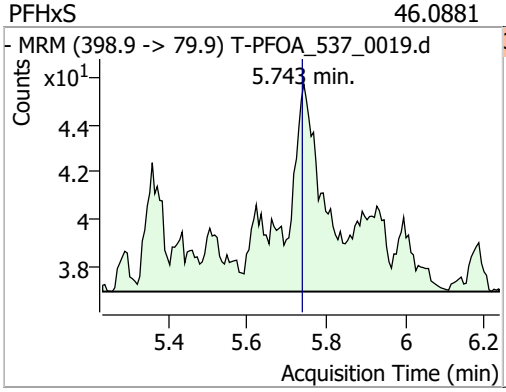
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	267.7622	5.68	0.00	198353	362.9 -> 168.9	15.7	12.6	18.9

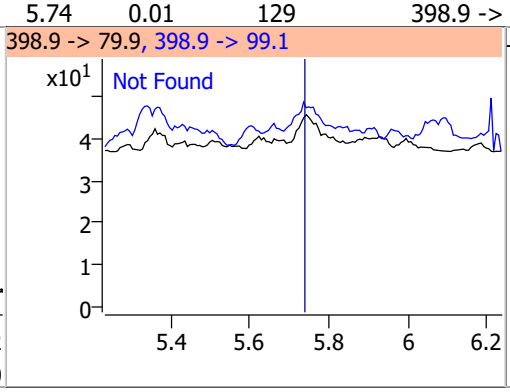


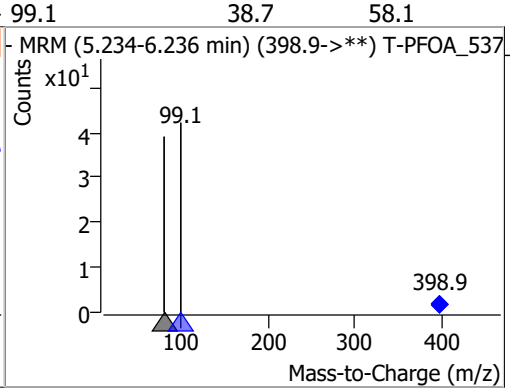




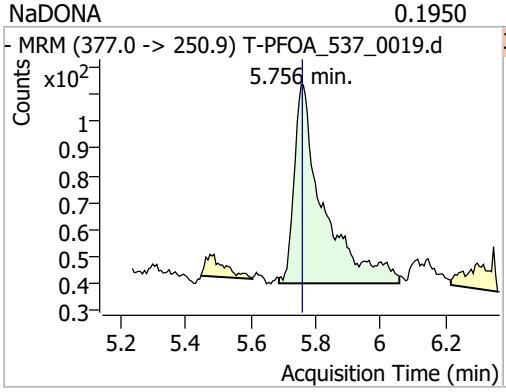
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	46.0881	5.74	0.01	129	398.9 -> 99.1		38.7	58.1

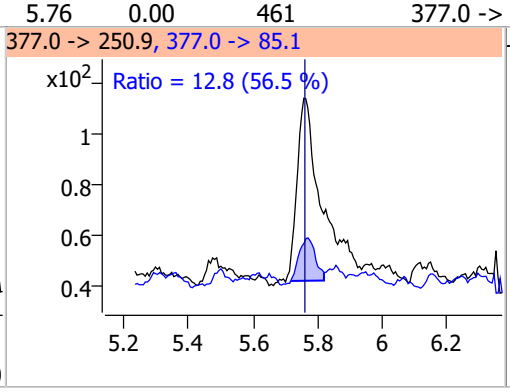


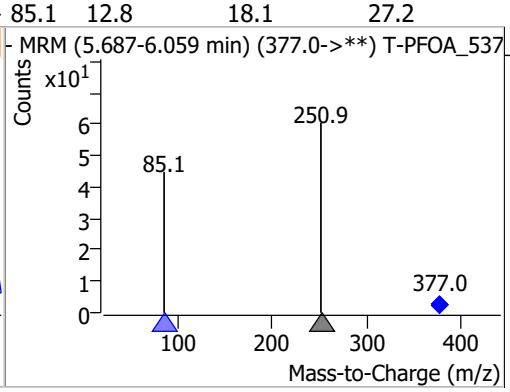




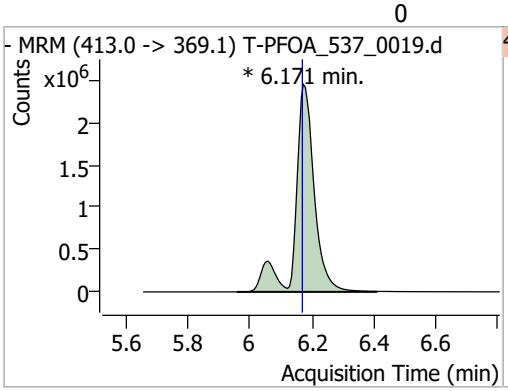
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.1950	5.76	0.00	461	377.0 -> 85.1	12.8	18.1	27.2

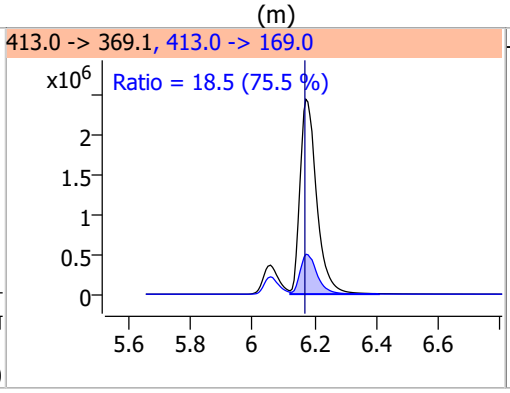


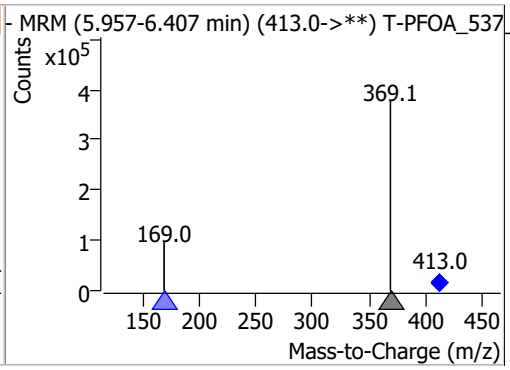




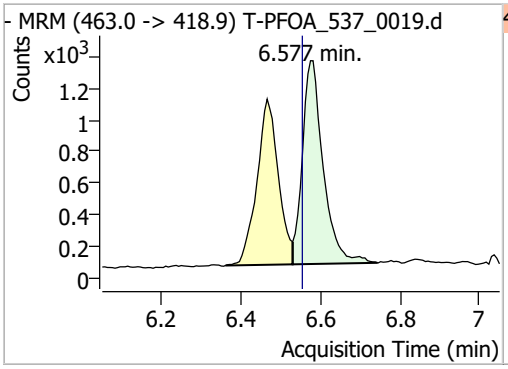
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	17292.4960	6.17	0.01	10410985 (m)	413.0 -> 169.0	18.5	19.6	29.4

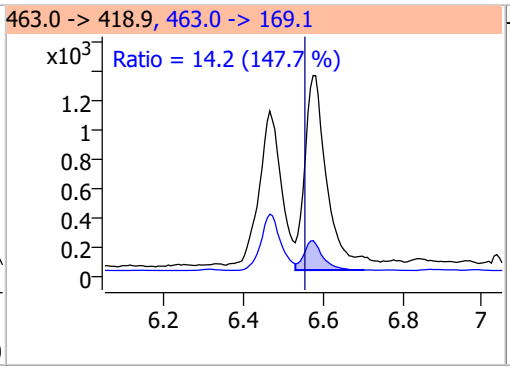


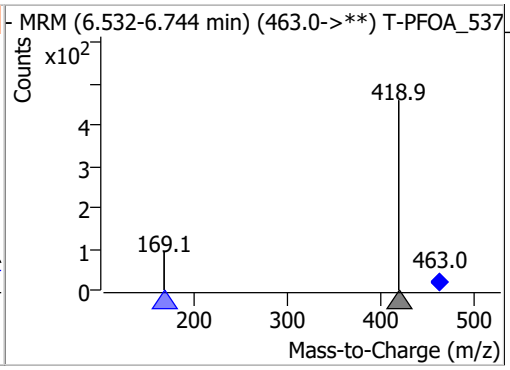




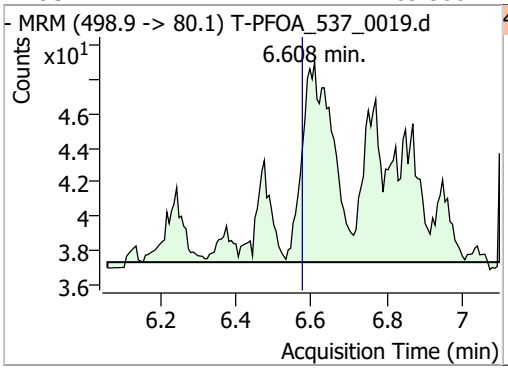
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	12.1889	6.58	0.02	4648	463.0 -> 169.1	14.2	7.7	11.5

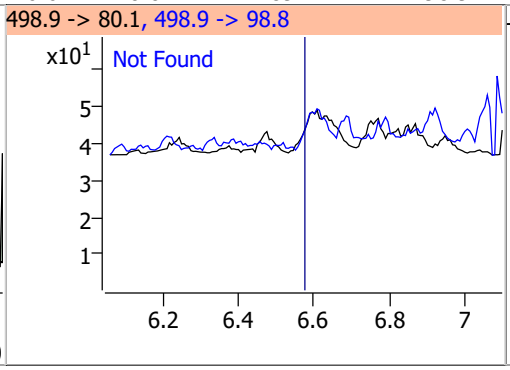


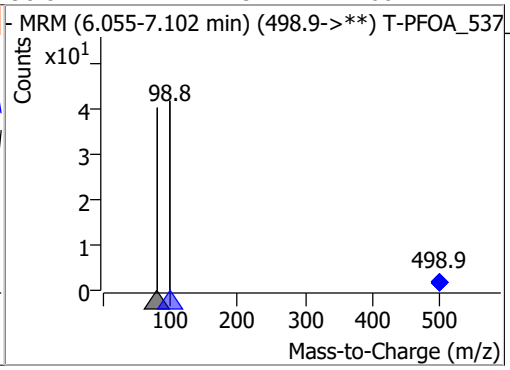




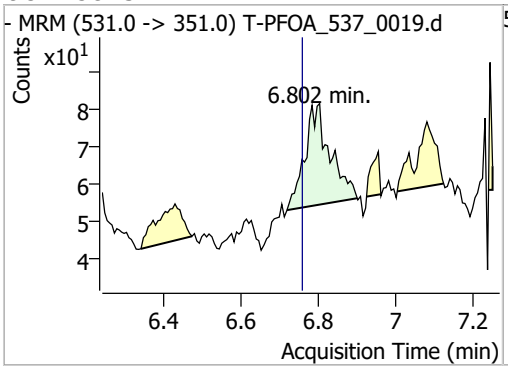
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	89.3867	6.61	0.04	189	498.9 -> 98.8		45.4	68.1

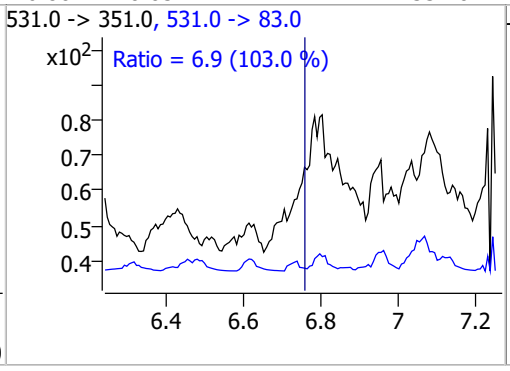


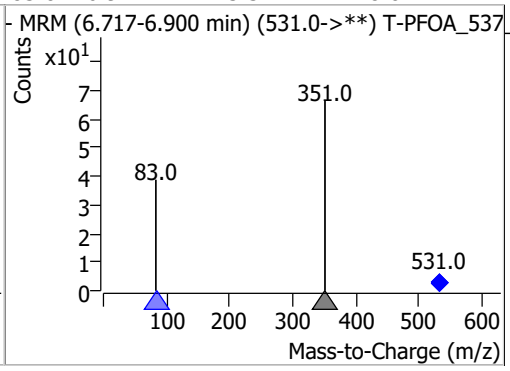




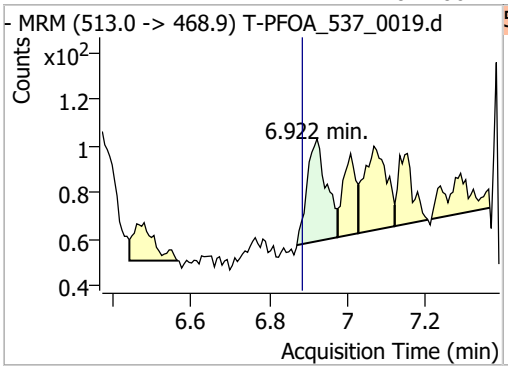
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	22.4771	6.80	0.05	124	531.0 -> 83.0	6.9	5.3	8.0

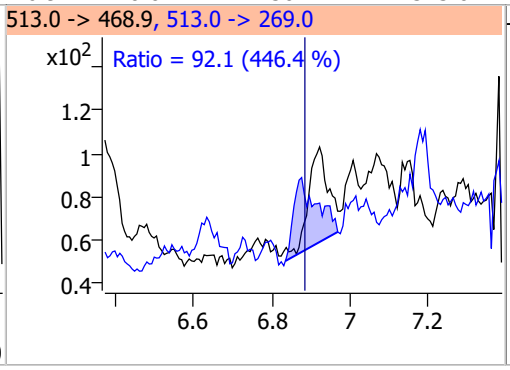


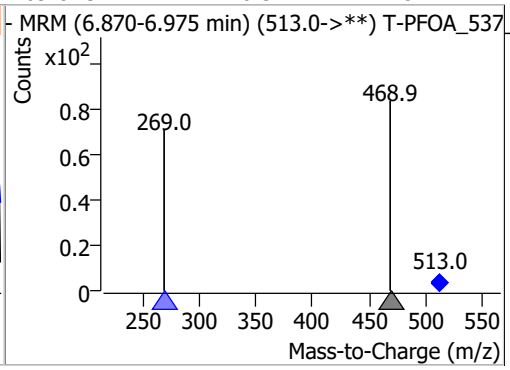




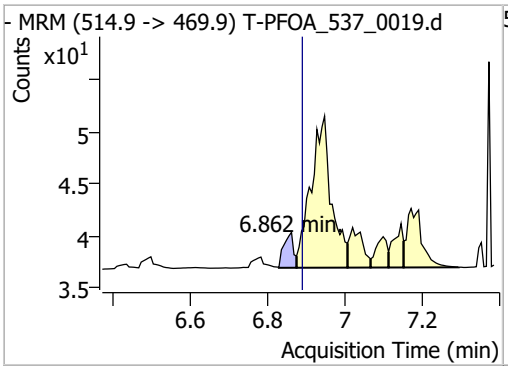
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.4406	6.92	0.04	150	513.0 -> 269.0	92.1	16.5	24.8

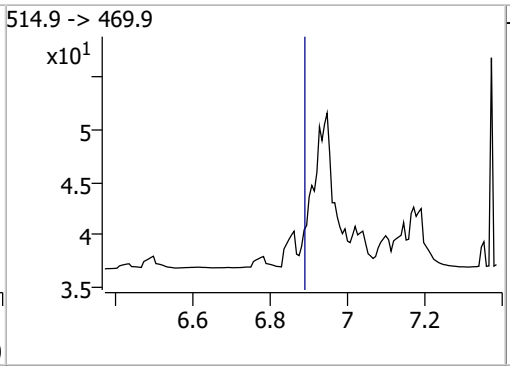


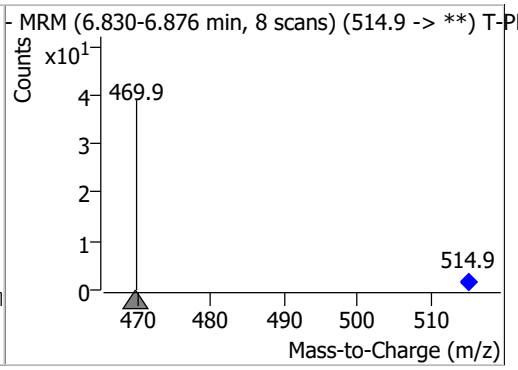




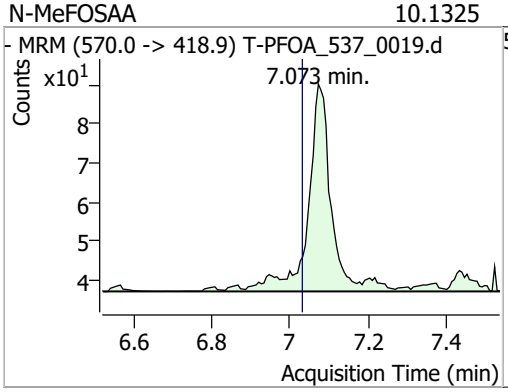
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	0.0165	6.86	-0.02	6				

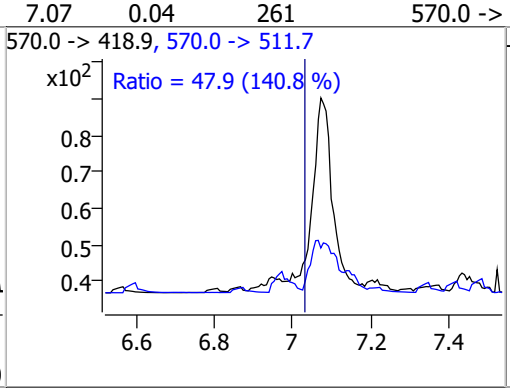


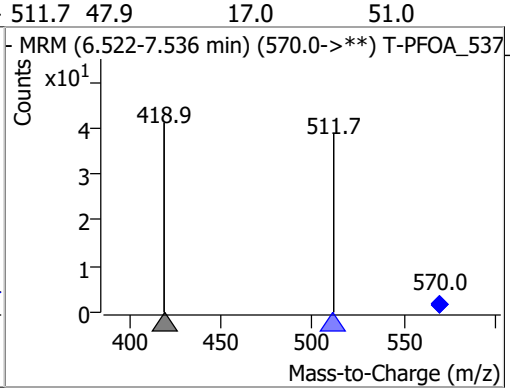




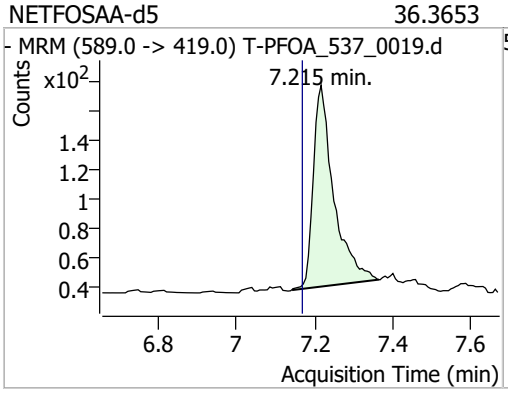
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	10.1325	7.07	0.04	261	570.0 -> 511.7	47.9	17.0	51.0

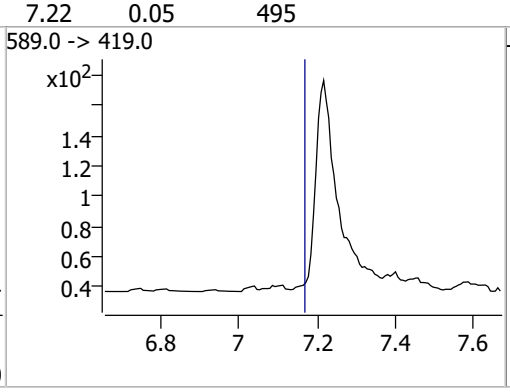


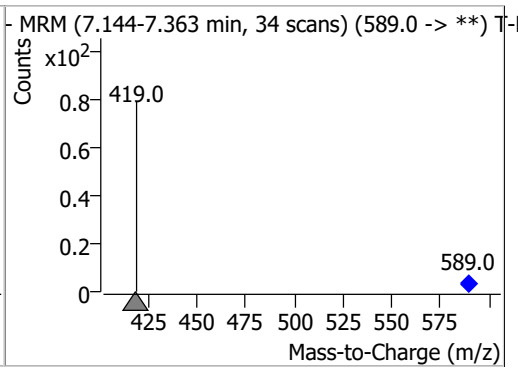




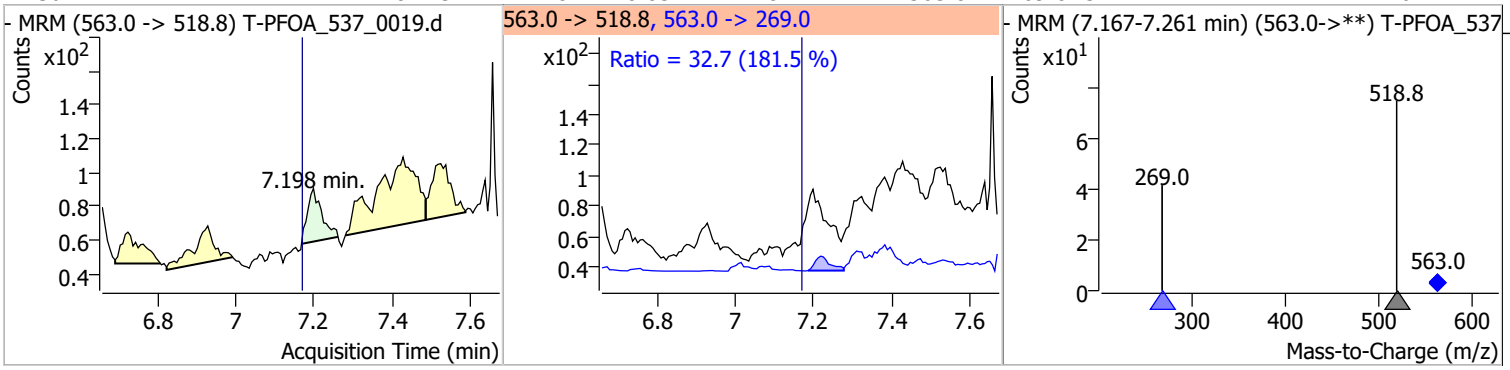
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	36.3653	7.22	0.05	495				



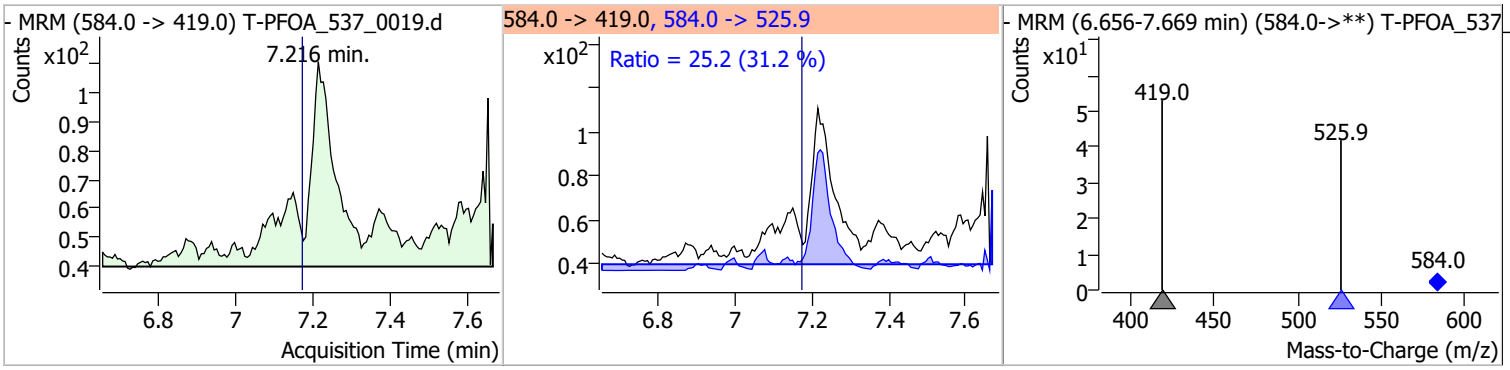




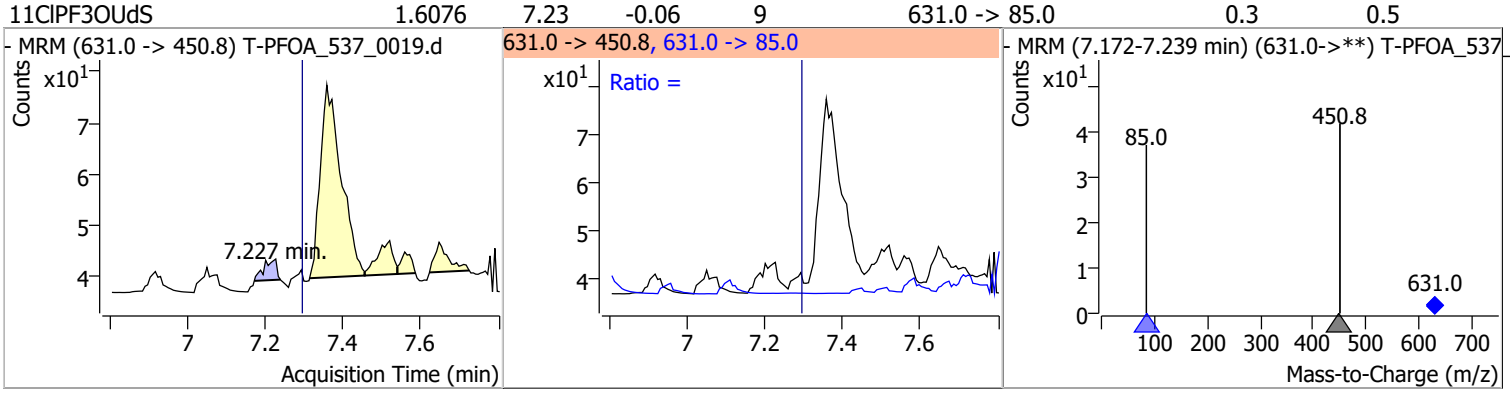
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.2294	7.20	0.03	78	563.0 -> 269.0	32.7	14.4	21.6



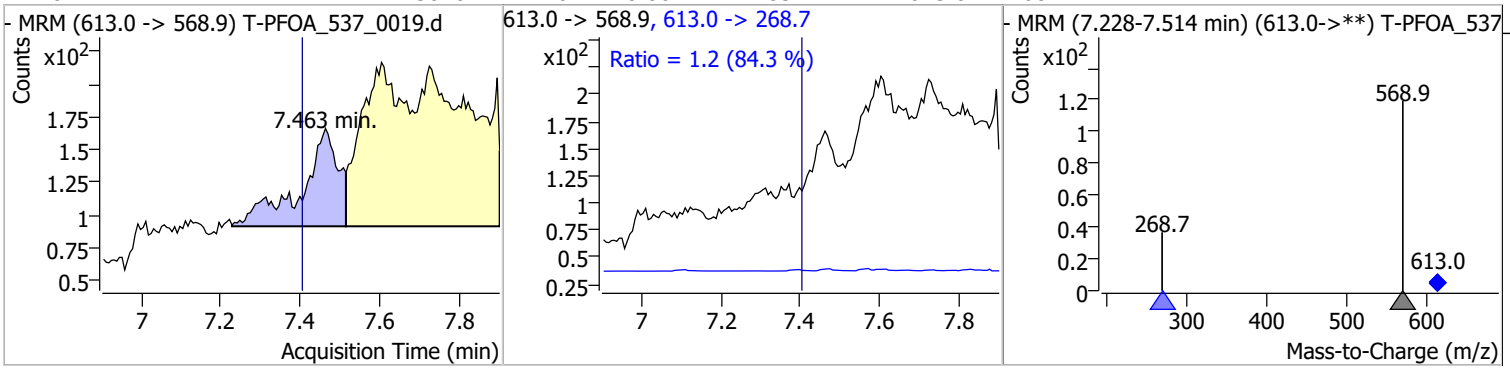
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	32.9371	7.22	0.04	813	584.0 -> 525.9	25.2	40.4	121.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	1.6076	7.23	-0.06	9	631.0 -> 85.0		0.3	0.5

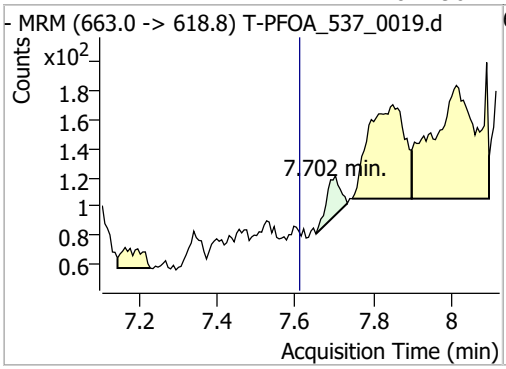


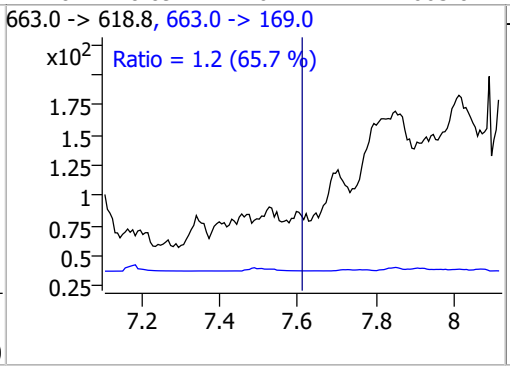
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	1.3048	7.46	0.06	485	613.0 -> 268.7	1.2	1.1	1.7

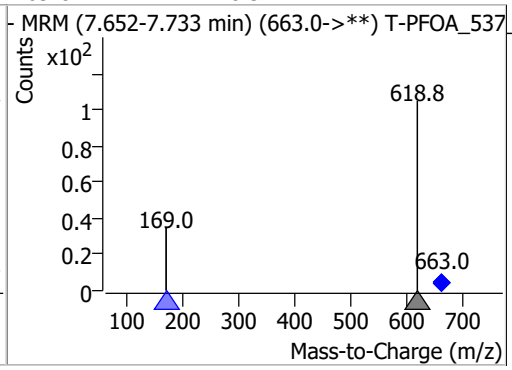


Quantitation Results Report

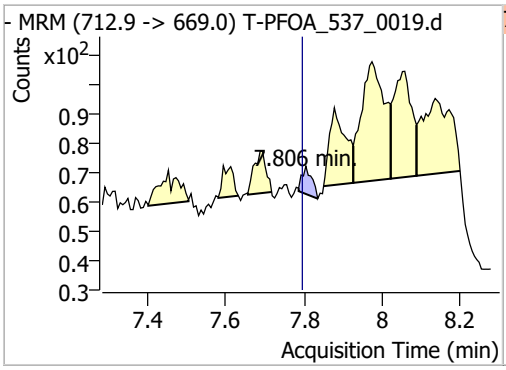
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.2296	7.70	0.09	67	663.0 -> 169.0	1.2	0.9	2.7

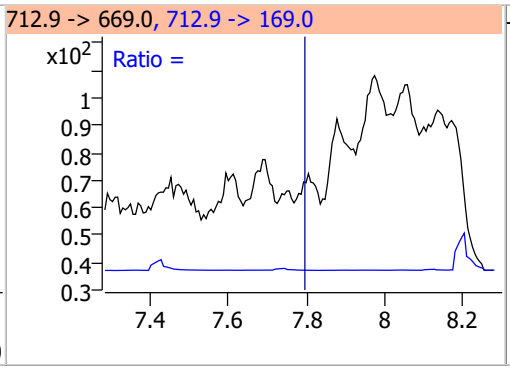


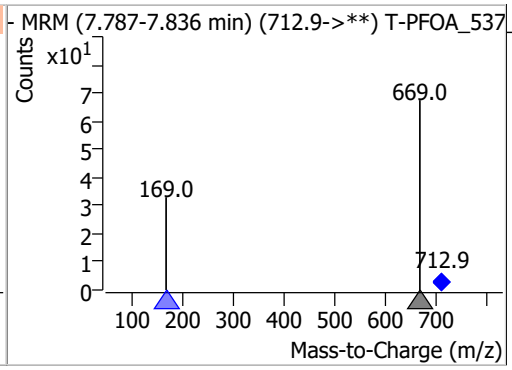




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0921	7.81	0.01	16	712.9 -> 169.0		0.0	0.1







Quantitative Analysis Sample Based Report

Agilent | Trusted Answers

Name	MB_537	**Acq. Date-Time**	8/10/2023 6:53:48 AM
Data File	MB_537_0004.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:41:31 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:46:40 PM
Batch Name	20230809_ICAL-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	765915	-5.2	
13C2-PFHxA	13C2-PFOA	1035495	10.2	
PFHxA	13C2-PFOA	1035495	10.2	
13C3-HFPO-DA	13C2-PFOA	1035495	10.2	
HFPO-DA	13C2-PFOA	1035495	10.2	
PFHpA	13C2-PFOA	1035495	10.2	
PFHxS	13C4-PFOS	765915	-5.2	
NaDONA	13C2-PFOA	1035495	10.2	
PFOA	13C2-PFOA	1035495	10.2	
PFNA	13C2-PFOA	1035495	10.2	
PFOS	13C4-PFOS	765915	-5.2	
9Cl-PF3ONS	13C4-PFOS	765915	-5.2	
PFDA	13C2-PFOA	1035495	10.2	
13C2-PFDA	13C2-PFOA	1035495	10.2	
N-MeFOSAA	NMeFOSAA-d3	1525291	-2.2	
NETFOSAA-d5	NMeFOSAA-d3	1525291	-2.2	
PFUdA	13C2-PFOA	1035495	10.2	
N-EtFOSAA	NMeFOSAA-d3	1525291	-2.2	
11ClPF3OUdS	13C4-PFOS	765915	-5.2	
PFDoA	13C2-PFOA	1035495	10.2	
PFTrDA	13C2-PFOA	1035495	10.2	
PFTA	13C2-PFOA	1035495	10.2	

Name	CAL2_537_1.0	**Acq. Date-Time**	8/10/2023 7:19:17 AM
Data File	537_1.0_0007.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:41:31 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:46:40 PM
Batch Name	20230809_ICAL-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	861777	6.7	
13C2-PFHxA	13C2-PFOA	1041838	10.9	
PFHxA	13C2-PFOA	1041838	10.9	
13C3-HFPO-DA	13C2-PFOA	1041838	10.9	
HFPO-DA	13C2-PFOA	1041838	10.9	
PFHpA	13C2-PFOA	1041838	10.9	
PFHxS	13C4-PFOS	861777	6.7	
NaDONA	13C2-PFOA	1041838	10.9	
PFOA	13C2-PFOA	1041838	10.9	
PFNA	13C2-PFOA	1041838	10.9	
PFOS	13C4-PFOS	861777	6.7	
9Cl-PF3ONS	13C4-PFOS	861777	6.7	
PFDA	13C2-PFOA	1041838	10.9	
13C2-PFDA	13C2-PFOA	1041838	10.9	
N-MeFOSAA	NMeFOSAA-d3	1348712	-13.5	
NETFOSAA-d5	NMeFOSAA-d3	1348712	-13.5	
PFUdA	13C2-PFOA	1041838	10.9	
N-EtFOSAA	NMeFOSAA-d3	1348712	-13.5	
11ClPF3OUdS	13C4-PFOS	861777	6.7	
PFDoA	13C2-PFOA	1041838	10.9	
PFTrDA	13C2-PFOA	1041838	10.9	
PFTA	13C2-PFOA	1041838	10.9	

Name	CAL3_537_2.0	**Acq. Date-Time**	8/10/2023 7:31:59 AM
Data File	537_2.0_0008.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:41:31 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:46:40 PM
Batch Name	20230809_ICAL-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	827829	2.5	
13C2-PFHxA	13C2-PFOA	1057335	12.6	
PFHxA	13C2-PFOA	1057335	12.6	
13C3-HFPO-DA	13C2-PFOA	1057335	12.6	
HFPO-DA	13C2-PFOA	1057335	12.6	
PFHpA	13C2-PFOA	1057335	12.6	
PFHxS	13C4-PFOS	827829	2.5	
NaDONA	13C2-PFOA	1057335	12.6	
PFOA	13C2-PFOA	1057335	12.6	
PFNA	13C2-PFOA	1057335	12.6	
PFOS	13C4-PFOS	827829	2.5	
9Cl-PF3ONS	13C4-PFOS	827829	2.5	
PFDA	13C2-PFOA	1057335	12.6	
13C2-PFDA	13C2-PFOA	1057335	12.6	
N-MeFOSAA	NMeFOSAA-d3	1747353	12.1	
NETFOSAA-d5	NMeFOSAA-d3	1747353	12.1	
PFUdA	13C2-PFOA	1057335	12.6	
N-EtFOSAA	NMeFOSAA-d3	1747353	12.1	
11ClPF3OUdS	13C4-PFOS	827829	2.5	
PFDoA	13C2-PFOA	1057335	12.6	
PFTrDA	13C2-PFOA	1057335	12.6	
PFTA	13C2-PFOA	1057335	12.6	

Name	CAL4_537_5.0	**Acq. Date-Time**	8/10/2023 7:44:42 AM
Data File	537_5.0_0009.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:41:31 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:46:40 PM
Batch Name	20230809_ICAL-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	834280	3.3	
13C2-PFHxA	13C2-PFOA	994315	5.8	
PFHxA	13C2-PFOA	994315	5.8	
13C3-HFPO-DA	13C2-PFOA	994315	5.8	
HFPO-DA	13C2-PFOA	994315	5.8	
PFHpA	13C2-PFOA	994315	5.8	
PFHxS	13C4-PFOS	834280	3.3	
NaDONA	13C2-PFOA	994315	5.8	
PFOA	13C2-PFOA	994315	5.8	
PFNA	13C2-PFOA	994315	5.8	
PFOS	13C4-PFOS	834280	3.3	
9Cl-PF3ONS	13C4-PFOS	834280	3.3	
PFDA	13C2-PFOA	994315	5.8	
13C2-PFDA	13C2-PFOA	994315	5.8	
N-MeFOSAA	NMeFOSAA-d3	1499764	-3.8	
NETFOSAA-d5	NMeFOSAA-d3	1499764	-3.8	
PFUdA	13C2-PFOA	994315	5.8	
N-EtFOSAA	NMeFOSAA-d3	1499764	-3.8	
11ClPF3OUdS	13C4-PFOS	834280	3.3	
PFDoA	13C2-PFOA	994315	5.8	
PFTrDA	13C2-PFOA	994315	5.8	
PFTA	13C2-PFOA	994315	5.8	

Quantitative Analysis Sample Based Report

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Name	CAL5_537_10.0	**Acq. Date-Time**	8/10/2023 7:57:26 AM
Data File	537_10.0_0010.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:41:31 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:46:40 PM
Batch Name	20230809_ICAL-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	808980	0.2	
13C2-PFHxA	13C2-PFOA	939042	0.0	
PFHxA	13C2-PFOA	939042	0.0	
13C3-HFPO-DA	13C2-PFOA	939042	0.0	
HFPO-DA	13C2-PFOA	939042	0.0	
PFHpA	13C2-PFOA	939042	0.0	
PFHxS	13C4-PFOS	808980	0.2	
NaDONA	13C2-PFOA	939042	0.0	
PFOA	13C2-PFOA	939042	0.0	
PFNA	13C2-PFOA	939042	0.0	
PFOS	13C4-PFOS	808980	0.2	
9Cl-PF3ONS	13C4-PFOS	808980	0.2	
PFDA	13C2-PFOA	939042	0.0	
13C2-PFDA	13C2-PFOA	939042	0.0	
N-MeFOSAA	NMeFOSAA-d3	1607549	3.1	
NETFOSAA-d5	NMeFOSAA-d3	1607549	3.1	
PFUdA	13C2-PFOA	939042	0.0	
N-EtFOSAA	NMeFOSAA-d3	1607549	3.1	
11ClPF3OUdS	13C4-PFOS	808980	0.2	
PFDoA	13C2-PFOA	939042	0.0	
PFTrDA	13C2-PFOA	939042	0.0	
PFTA	13C2-PFOA	939042	0.0	

Quantitative Analysis Sample Based Report

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Name	CAL6_537_15.0	**Acq. Date-Time**	8/10/2023 8:10:09 AM
Data File	537_15.0_0011.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:41:31 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:46:40 PM
Batch Name	20230809_ICAL-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	796311	-1.4	
13C2-PFHxA	13C2-PFOA	922792	-1.8	
PFHxA	13C2-PFOA	922792	-1.8	
13C3-HFPO-DA	13C2-PFOA	922792	-1.8	
HFPO-DA	13C2-PFOA	922792	-1.8	
PFHpA	13C2-PFOA	922792	-1.8	
PFHxS	13C4-PFOS	796311	-1.4	
NaDONA	13C2-PFOA	922792	-1.8	
PFOA	13C2-PFOA	922792	-1.8	
PFNA	13C2-PFOA	922792	-1.8	
PFOS	13C4-PFOS	796311	-1.4	
9Cl-PF3ONS	13C4-PFOS	796311	-1.4	
PFDA	13C2-PFOA	922792	-1.8	
13C2-PFDA	13C2-PFOA	922792	-1.8	
N-MeFOSAA	NMeFOSAA-d3	1677676	7.6	
NETFOSAA-d5	NMeFOSAA-d3	1677676	7.6	
PFUdA	13C2-PFOA	922792	-1.8	
N-EtFOSAA	NMeFOSAA-d3	1677676	7.6	
11ClPF3OUdS	13C4-PFOS	796311	-1.4	
PFDoA	13C2-PFOA	922792	-1.8	
PFTrDA	13C2-PFOA	922792	-1.8	
PFTA	13C2-PFOA	922792	-1.8	

Name	CAL7_537_20.0	**Acq. Date-Time**	8/10/2023 8:22:52 AM
Data File	537_20.0_0012.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:41:31 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:46:40 PM
Batch Name	20230809_ICAL-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	752815	-6.8	
13C2-PFHxA	13C2-PFOA	850056	-9.5	
PFHxA	13C2-PFOA	850056	-9.5	
13C3-HFPO-DA	13C2-PFOA	850056	-9.5	
HFPO-DA	13C2-PFOA	850056	-9.5	
PFHpA	13C2-PFOA	850056	-9.5	
PFHxS	13C4-PFOS	752815	-6.8	
NaDONA	13C2-PFOA	850056	-9.5	
PFOA	13C2-PFOA	850056	-9.5	
PFNA	13C2-PFOA	850056	-9.5	
PFOS	13C4-PFOS	752815	-6.8	
9Cl-PF3ONS	13C4-PFOS	752815	-6.8	
PFDA	13C2-PFOA	850056	-9.5	
13C2-PFDA	13C2-PFOA	850056	-9.5	
N-MeFOSAA	NMeFOSAA-d3	1588985	1.9	
NETFOSAA-d5	NMeFOSAA-d3	1588985	1.9	
PFUdA	13C2-PFOA	850056	-9.5	
N-EtFOSAA	NMeFOSAA-d3	1588985	1.9	
11ClPF3OUdS	13C4-PFOS	752815	-6.8	
PFDoA	13C2-PFOA	850056	-9.5	
PFTrDA	13C2-PFOA	850056	-9.5	
PFTA	13C2-PFOA	850056	-9.5	

Name	CAL8_537_25.0	**Acq. Date-Time**	8/10/2023 8:35:35 AM
Data File	537_25.0_0013.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:41:31 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:46:40 PM
Batch Name	20230809_ICAL-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	805204	-0.3	
13C2-PFHxA	13C2-PFOA	823192	-12.4	
PFHxA	13C2-PFOA	823192	-12.4	
13C3-HFPO-DA	13C2-PFOA	823192	-12.4	
HFPO-DA	13C2-PFOA	823192	-12.4	
PFHpA	13C2-PFOA	823192	-12.4	
PFHxS	13C4-PFOS	805204	-0.3	
NaDONA	13C2-PFOA	823192	-12.4	
PFOA	13C2-PFOA	823192	-12.4	
PFNA	13C2-PFOA	823192	-12.4	
PFOS	13C4-PFOS	805204	-0.3	
9Cl-PF3ONS	13C4-PFOS	805204	-0.3	
PFDA	13C2-PFOA	823192	-12.4	
13C2-PFDA	13C2-PFOA	823192	-12.4	
N-MeFOSAA	NMeFOSAA-d3	1539246	-1.3	
NETFOSAA-d5	NMeFOSAA-d3	1539246	-1.3	
PFUdA	13C2-PFOA	823192	-12.4	
N-EtFOSAA	NMeFOSAA-d3	1539246	-1.3	
11ClPF3OUdS	13C4-PFOS	805204	-0.3	
PFDoA	13C2-PFOA	823192	-12.4	
PFTrDA	13C2-PFOA	823192	-12.4	
PFTA	13C2-PFOA	823192	-12.4	

Quantitative Analysis Sample Based Report

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Name	CAL9_537_30.0	**Acq. Date-Time**	8/10/2023 8:48:18 AM
Data File	537_30.0_0014.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:41:31 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:46:40 PM
Batch Name	20230809_ICAL-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	774597	-4.1	
13C2-PFHxA	13C2-PFOA	886474	-5.6	
PFHxA	13C2-PFOA	886474	-5.6	
13C3-HFPO-DA	13C2-PFOA	886474	-5.6	
HFPO-DA	13C2-PFOA	886474	-5.6	
PFHpA	13C2-PFOA	886474	-5.6	
PFHxS	13C4-PFOS	774597	-4.1	
NaDONA	13C2-PFOA	886474	-5.6	
PFOA	13C2-PFOA	886474	-5.6	
PFNA	13C2-PFOA	886474	-5.6	
PFOS	13C4-PFOS	774597	-4.1	
9Cl-PF3ONS	13C4-PFOS	774597	-4.1	
PFDA	13C2-PFOA	886474	-5.6	
13C2-PFDA	13C2-PFOA	886474	-5.6	
N-MeFOSAA	NMeFOSAA-d3	1464175	-6.1	
NETFOSAA-d5	NMeFOSAA-d3	1464175	-6.1	
PFUdA	13C2-PFOA	886474	-5.6	
N-EtFOSAA	NMeFOSAA-d3	1464175	-6.1	
11ClPF3OUdS	13C4-PFOS	774597	-4.1	
PFDoA	13C2-PFOA	886474	-5.6	
PFTrDA	13C2-PFOA	886474	-5.6	
PFTA	13C2-PFOA	886474	-5.6	

Name	MB_537	**Acq. Date-Time**	8/10/2023 9:01:01 AM
Data File	MB_537_0017.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:41:31 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:46:40 PM
Batch Name	20230809_ICAL-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	793468	-1.8	102.4
13C2-PFHxA	13C2-PFOA	967046	2.9	109.1
PFHxA	13C2-PFOA	967046	2.9	109.1
13C3-HFPO-DA	13C2-PFOA	967046	2.9	109.1
HFPO-DA	13C2-PFOA	967046	2.9	109.1
PFHpA	13C2-PFOA	967046	2.9	109.1
PFHxS	13C4-PFOS	793468	-1.8	102.4
NaDONA	13C2-PFOA	967046	2.9	109.1
PFOA	13C2-PFOA	967046	2.9	109.1
PFNA	13C2-PFOA	967046	2.9	109.1
PFOS	13C4-PFOS	793468	-1.8	102.4
9Cl-PF3ONS	13C4-PFOS	793468	-1.8	102.4
PFDA	13C2-PFOA	967046	2.9	109.1
13C2-PFDA	13C2-PFOA	967046	2.9	109.1
N-MeFOSAA	NMeFOSAA-d3	1476799	-5.3	100.9
NETFOSAA-d5	NMeFOSAA-d3	1476799	-5.3	100.9
PFUdA	13C2-PFOA	967046	2.9	109.1
N-EtFOSAA	NMeFOSAA-d3	1476799	-5.3	100.9
11ClPF3OUdS	13C4-PFOS	793468	-1.8	102.4
PFDoA	13C2-PFOA	967046	2.9	109.1
PFTrDA	13C2-PFOA	967046	2.9	109.1
PFTA	13C2-PFOA	967046	2.9	109.1

Quantitative Analysis Sample Based Report

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Name	ICV_537_10.0	**Acq. Date-Time**	8/10/2023 9:13:44 AM
Data File	ICV_537_0018.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:41:31 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:46:40 PM
Batch Name	20230809_ICAL-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	837916	3.7	108.2
13C2-PFHxA	13C2-PFOA	952254	1.4	107.4
PFHxA	13C2-PFOA	952254	1.4	107.4
13C3-HFPO-DA	13C2-PFOA	952254	1.4	107.4
HFPO-DA	13C2-PFOA	952254	1.4	107.4
PFHpA	13C2-PFOA	952254	1.4	107.4
PFHxS	13C4-PFOS	837916	3.7	108.2
NaDONA	13C2-PFOA	952254	1.4	107.4
PFOA	13C2-PFOA	952254	1.4	107.4
PFNA	13C2-PFOA	952254	1.4	107.4
PFOS	13C4-PFOS	837916	3.7	108.2
9Cl-PF3ONS	13C4-PFOS	837916	3.7	108.2
PFDA	13C2-PFOA	952254	1.4	107.4
13C2-PFDA	13C2-PFOA	952254	1.4	107.4
N-MeFOSAA	NMeFOSAA-d3	1653736	6.1	112.9
NETFOSAA-d5	NMeFOSAA-d3	1653736	6.1	112.9
PFUdA	13C2-PFOA	952254	1.4	107.4
N-EtFOSAA	NMeFOSAA-d3	1653736	6.1	112.9
11ClPF3OUdS	13C4-PFOS	837916	3.7	108.2
PFDoA	13C2-PFOA	952254	1.4	107.4
PFTrDA	13C2-PFOA	952254	1.4	107.4
PFTA	13C2-PFOA	952254	1.4	107.4

Quantitative Analysis Sample Based Report

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Name	T-PFOA_537_25.0	**Acq. Date-Time**	8/10/2023 9:26:29 AM
Data File	T-PFOA_537_0019.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:41:31 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:46:40 PM
Batch Name	20230809_ICAL-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	46	-100.0	0.0
13C2-PFHxA	13C2-PFOA	6509	-99.3	0.7
PFHxA	13C2-PFOA	6509	-99.3	0.7
13C3-HFPO-DA	13C2-PFOA	6509	-99.3	0.7
HFPO-DA	13C2-PFOA	6509	-99.3	0.7
PFHpA	13C2-PFOA	6509	-99.3	0.7
PFHxS	13C4-PFOS	46	-100.0	0.0
NaDONA	13C2-PFOA	6509	-99.3	0.7
PFOA	13C2-PFOA	6509	-99.3	0.7
PFNA	13C2-PFOA	6509	-99.3	0.7
PFOS	13C4-PFOS	46	-100.0	0.0
9Cl-PF3ONS	13C4-PFOS	46	-100.0	0.0
PFDA	13C2-PFOA	6509	-99.3	0.7
13C2-PFDA	13C2-PFOA	6509	-99.3	0.7
N-MeFOSAA	NMeFOSAA-d3	1128	-99.9	0.1
NETFOSAA-d5	NMeFOSAA-d3	1128	-99.9	0.1
PFUdA	13C2-PFOA	6509	-99.3	0.7
N-EtFOSAA	NMeFOSAA-d3	1128	-99.9	0.1
11ClPF3OUdS	13C4-PFOS	46	-100.0	0.0
PFDoA	13C2-PFOA	6509	-99.3	0.7
PFTrDA	13C2-PFOA	6509	-99.3	0.7
PFTA	13C2-PFOA	6509	-99.3	0.7

Quantitation Results Report

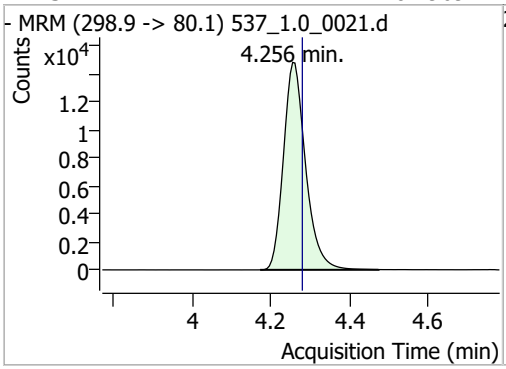
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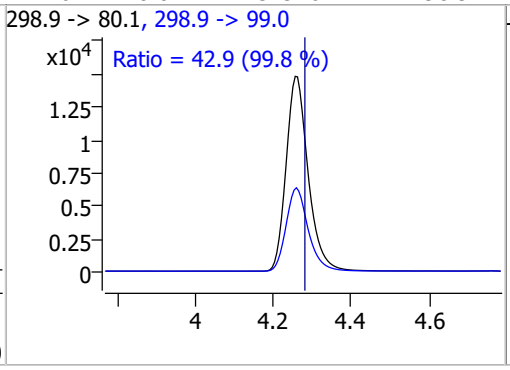
Data File	537_1.0_0021.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 9:51:57 AM
Sample Name	CAL1_537_1.0	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
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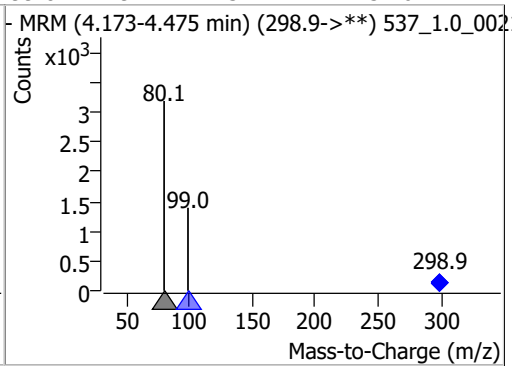
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	868017	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	1084587	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1459130	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.991	314.9 -> 269.7	1008921	8.9074	ng/ml		-0.008
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 89.07%			
13C3-HFPO-DA	5.213	287.0 -> 169.0	19516	8.2945	ng/ml		-0.010
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 82.95%			
13C2-PFDA	6.915	514.9 -> 469.9	461258	7.8378	ng/ml		0.028
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 78.38%			
NETFOSAA-d5	7.215	589.0 -> 419.0	784818	44.6179	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 111.54%			
Target Compounds							QValue
PFBS	4.256	298.9 -> 80.1	57926	0.7969	ng/ml		100
PFHxA	4.992	313.0 -> 269.0	105660	0.7313	ng/ml		100
HFPO-DA	5.214	285.0 -> 169.1	2004	0.7482	ng/ml		96
PFHpA	5.676	362.9 -> 318.9	98482	0.7978	ng/ml		99
PFHxS	5.737	398.9 -> 79.9	37565	0.8407	ng/ml		92
NaDONA	5.756	377.0 -> 250.9	290991	0.7361	ng/ml		99
PFOA	6.171	413.0 -> 369.1	75809	0.7556	ng/ml		92
PFNA	6.577	463.0 -> 418.9	48100	0.7683	ng/ml	#	90
PFOS	6.589	498.9 -> 80.1	24068	0.7601	ng/ml		87
9Cl-PF3ONS	6.782	531.0 -> 351.0	70555	0.7452	ng/ml		96
PFDA	6.916	513.0 -> 468.9	38801	0.6823	ng/ml		100
N-MeFOSAA	7.073	570.0 -> 418.9	26592	0.8417	ng/ml		100
PFUdA	7.211	563.0 -> 518.8	42338	0.7455	ng/ml		97
N-EtFOSAA	7.223	584.0 -> 419.0	25867	0.9237	ng/ml		99
11ClPF3OUdS	7.352	631.0 -> 450.8	81118	0.7702	ng/ml		100
PFDoA	7.469	613.0 -> 568.9	39569	0.6392	ng/ml	#	99
PFTrDA	7.696	663.0 -> 618.8	37336	0.7615	ng/ml		99
PFTA	7.884	712.9 -> 669.0	21076	0.7079	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

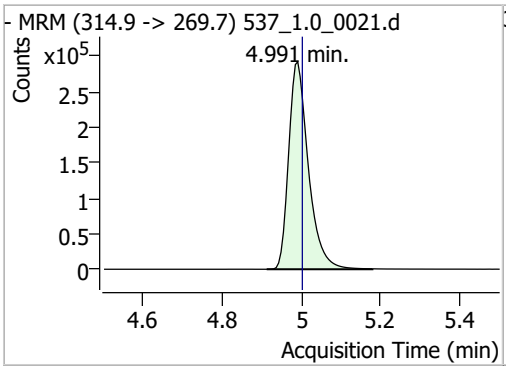
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.7969	4.26	-0.02	57926	298.9 -> 99.0	42.9	34.4	51.6

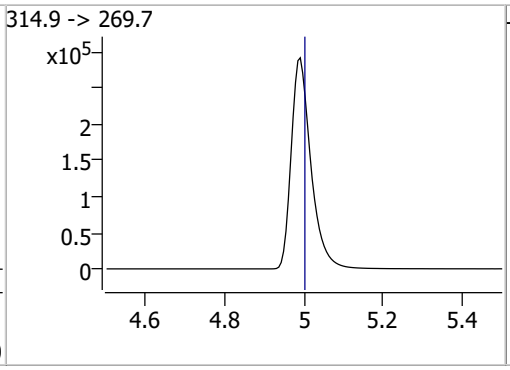


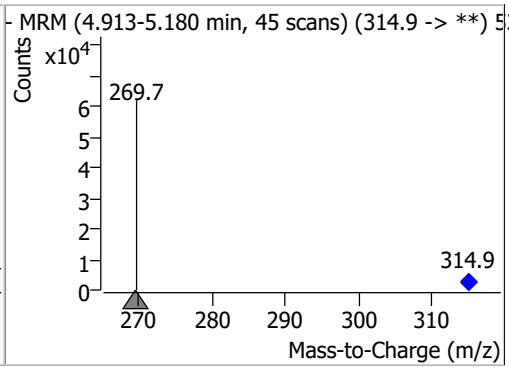




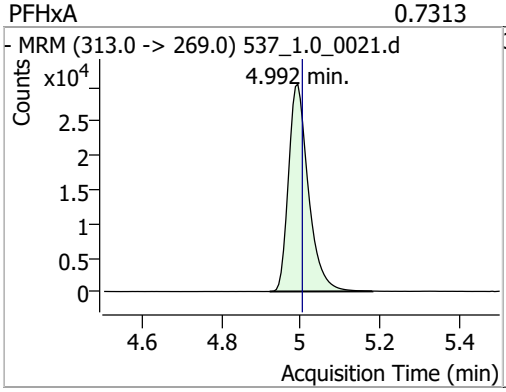
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	8.9074	4.99	-0.01	1008921				

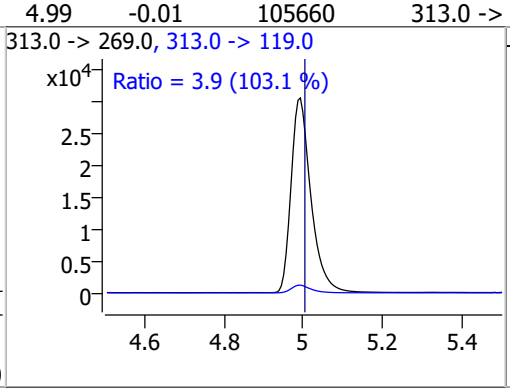


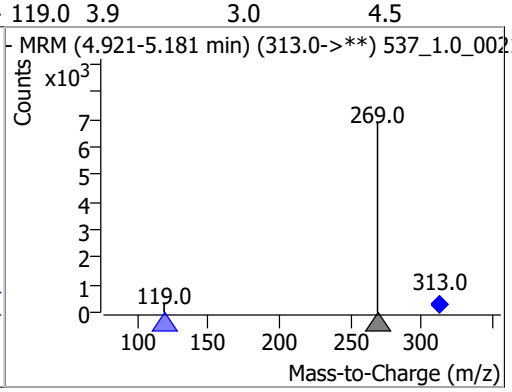




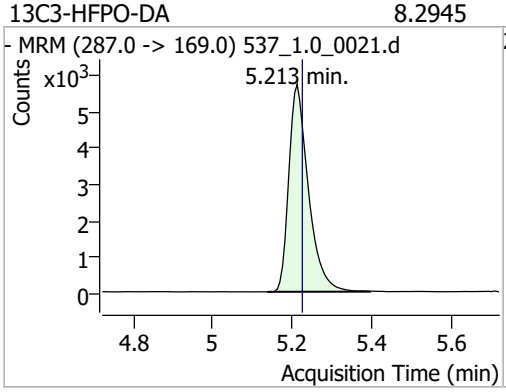
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.7313	4.99	-0.01	105660	313.0 -> 119.0	3.9	3.0	4.5

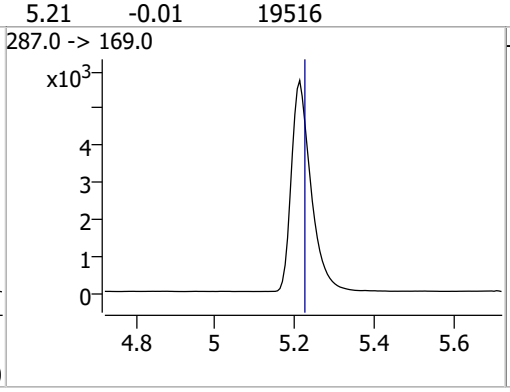


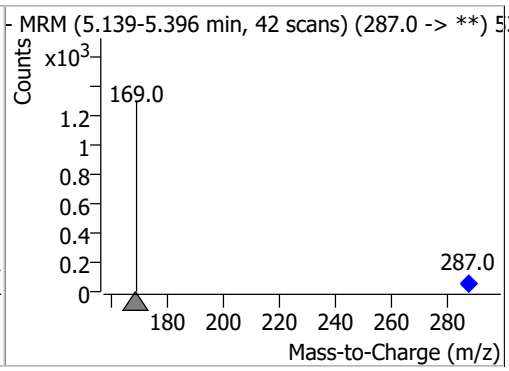




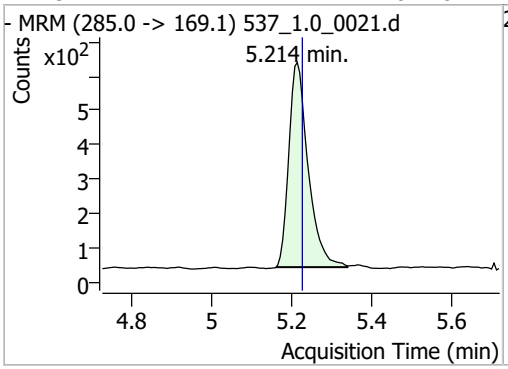
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	8.2945	5.21	-0.01	19516				

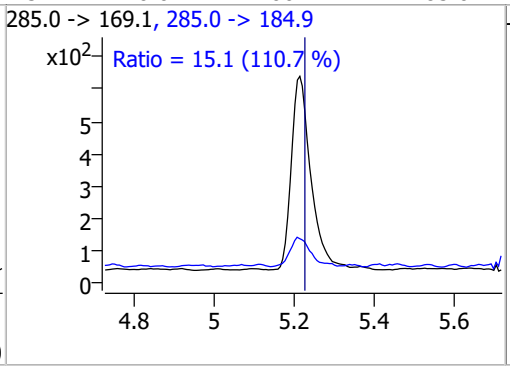


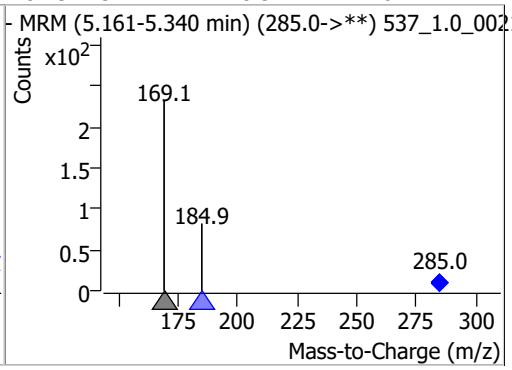




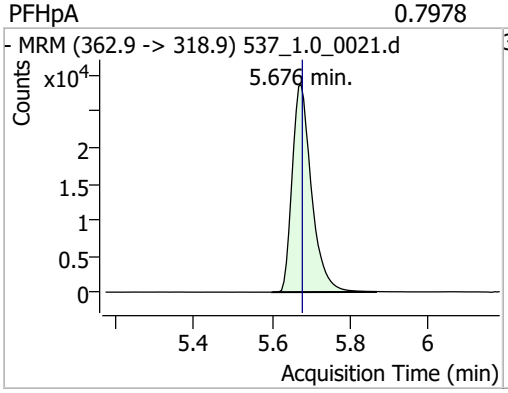
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.7482	5.21	-0.01	2004	285.0 -> 184.9	15.1	10.9	16.4

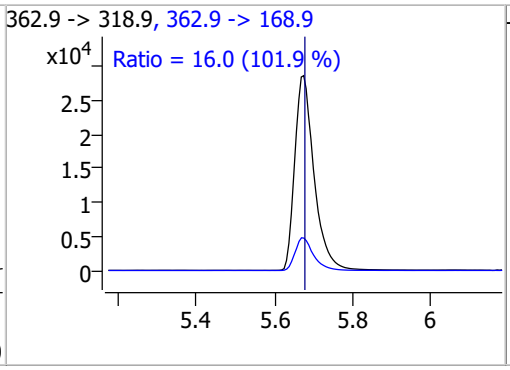


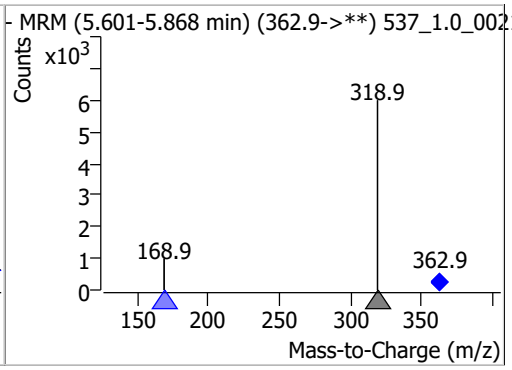




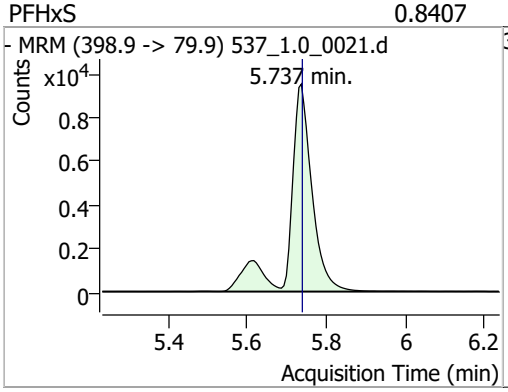
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.7978	5.68	0.00	98482	362.9 -> 168.9	16.0	12.6	18.9

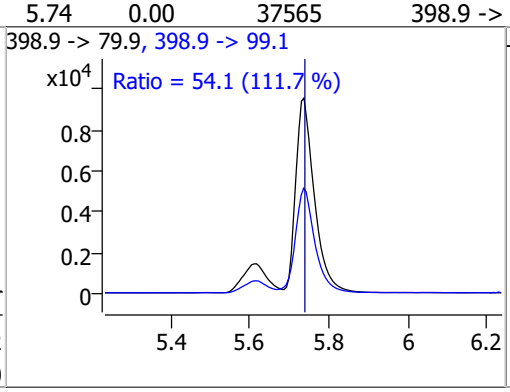


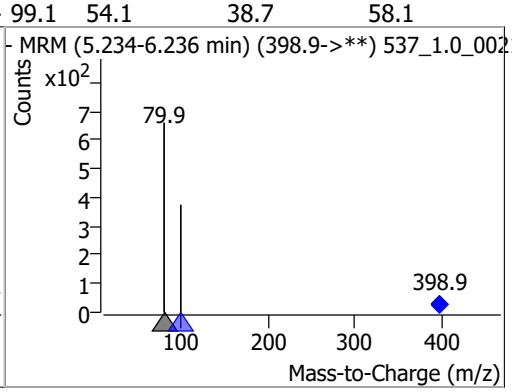




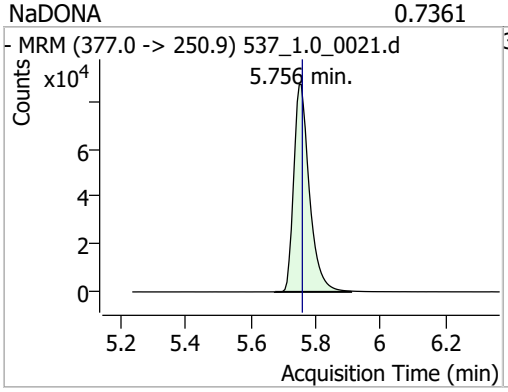
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.8407	5.74	0.00	37565	398.9 -> 99.1	54.1	38.7	58.1

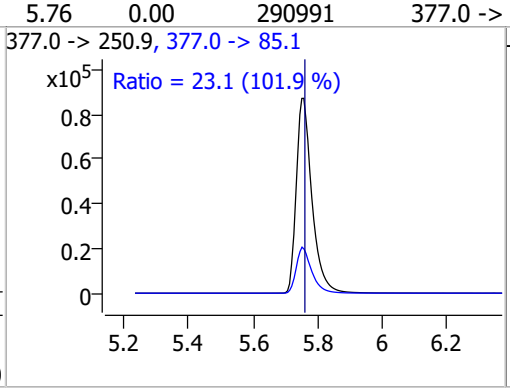


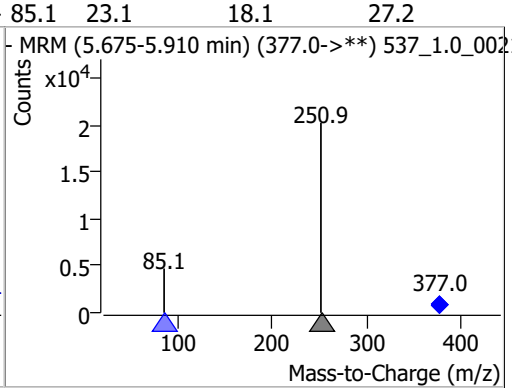




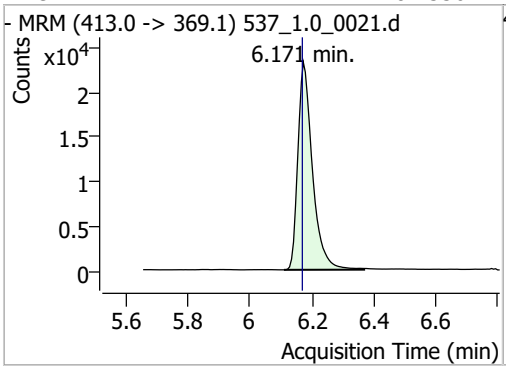
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.7361	5.76	0.00	290991	377.0 -> 85.1	23.1	18.1	27.2

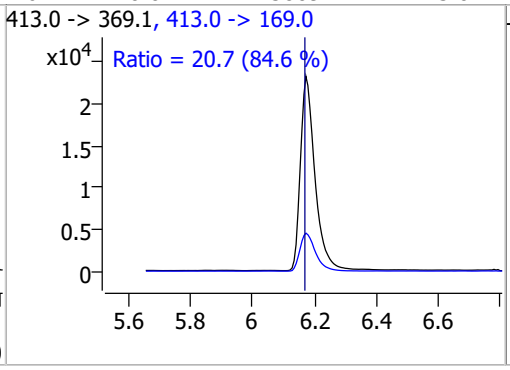


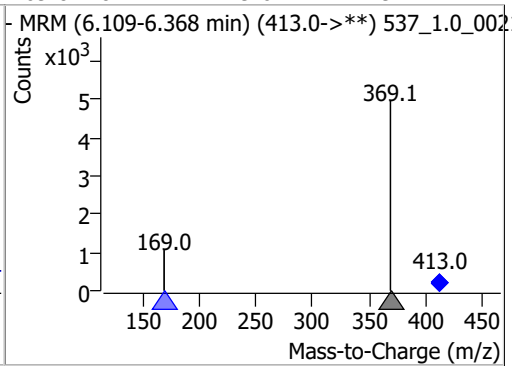




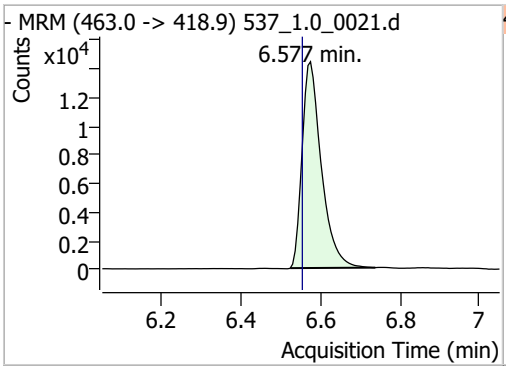
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.7556	6.17	0.01	75809	413.0 -> 169.0	20.7	19.6	29.4

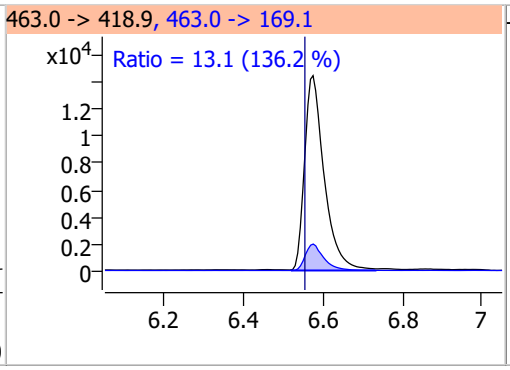


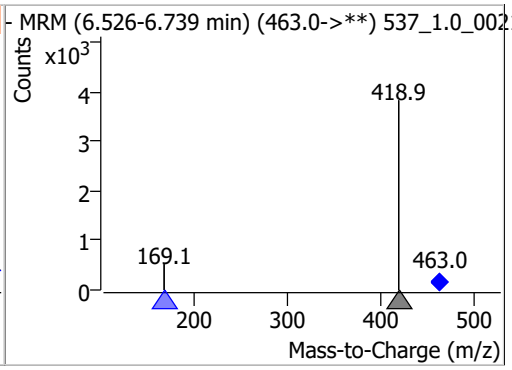




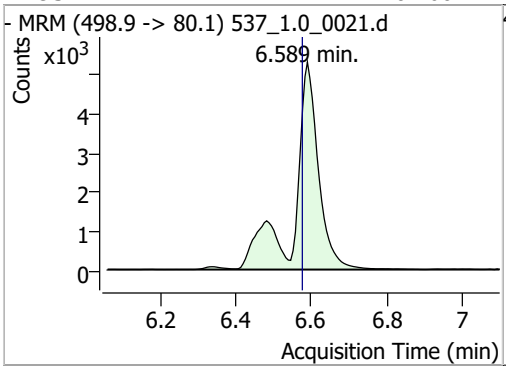
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.7683	6.58	0.02	48100	463.0 -> 169.1	13.1	7.7	11.5

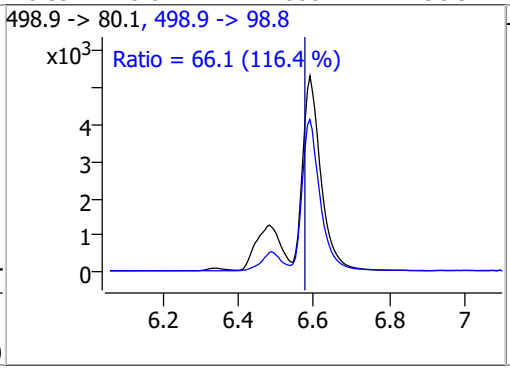


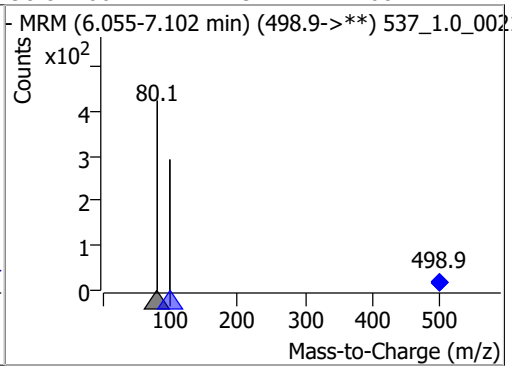




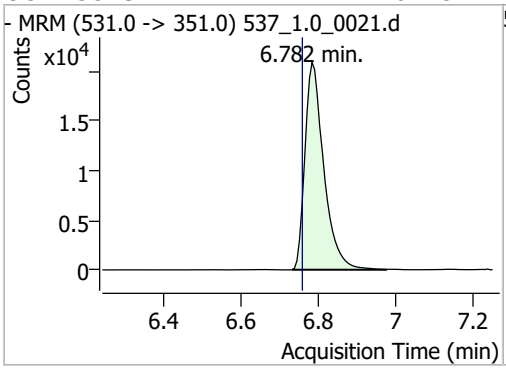
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.7601	6.59	0.02	24068	498.9 -> 98.8	66.1	45.4	68.1

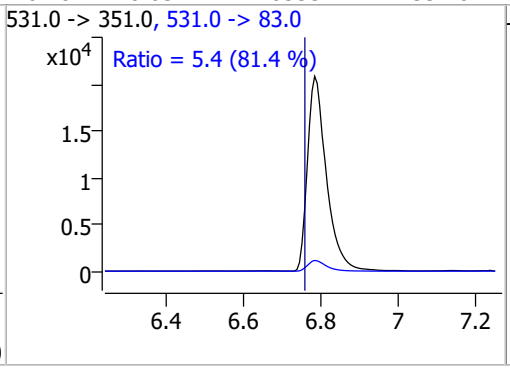


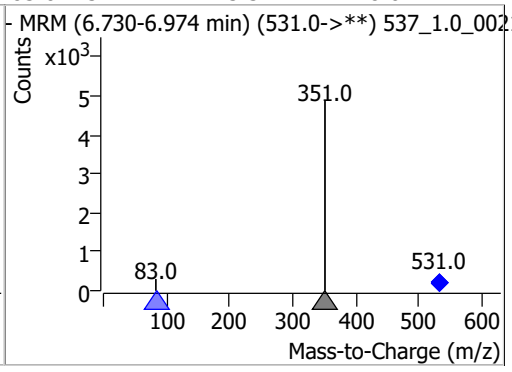




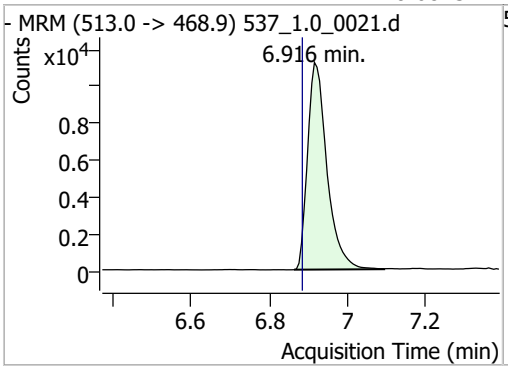
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.7452	6.78	0.03	70555	531.0 -> 83.0	5.4	5.3	8.0

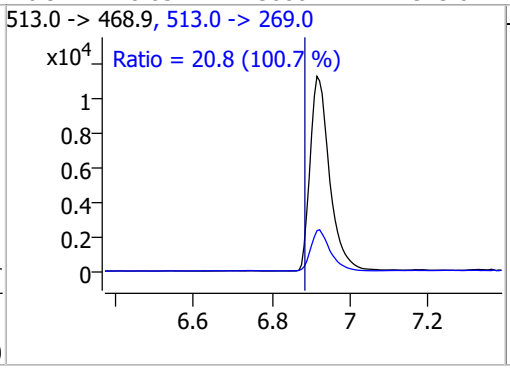


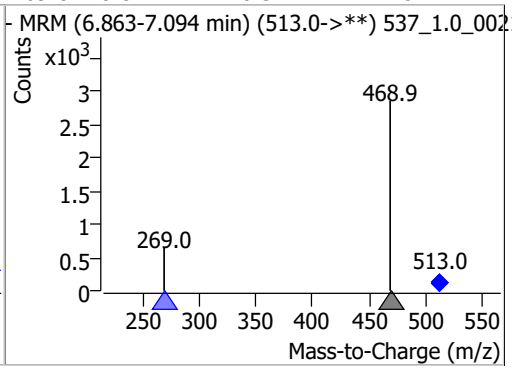




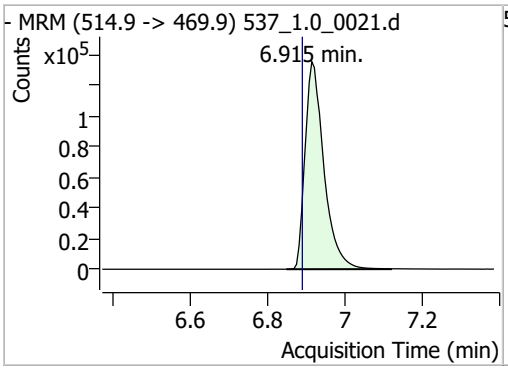
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.6823	6.92	0.03	38801	513.0 -> 269.0	20.8	16.5	24.8

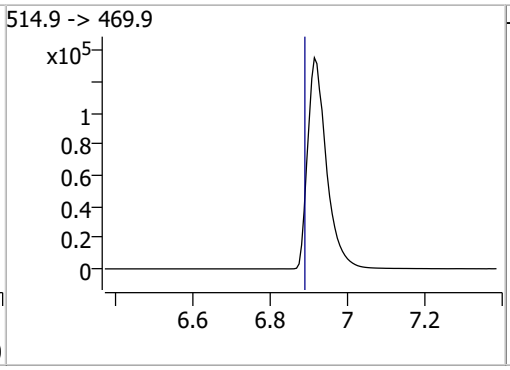


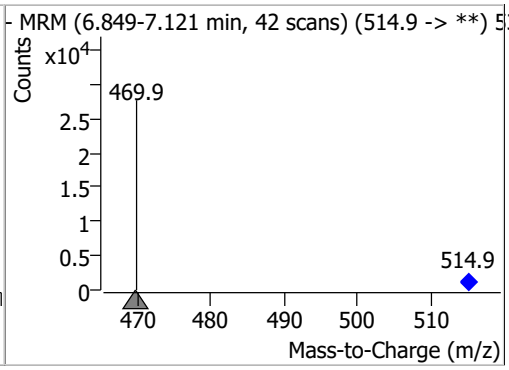




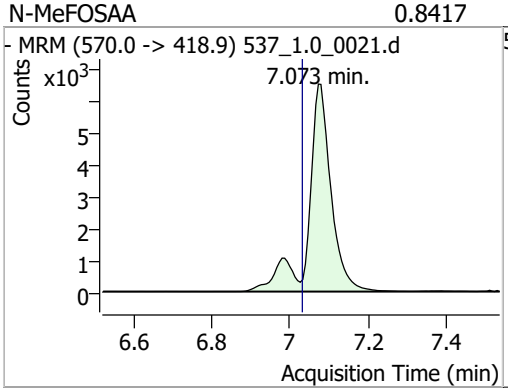
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	7.8378	6.92	0.03	461258				

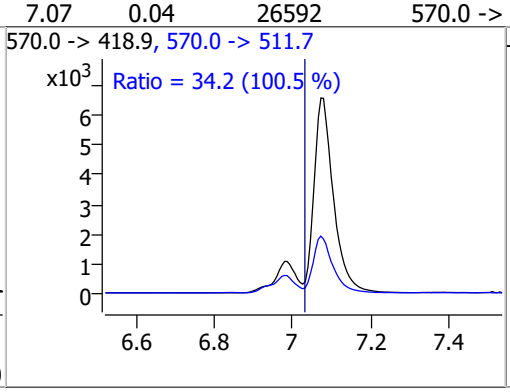


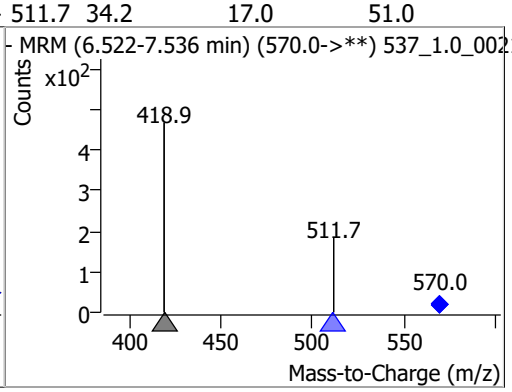




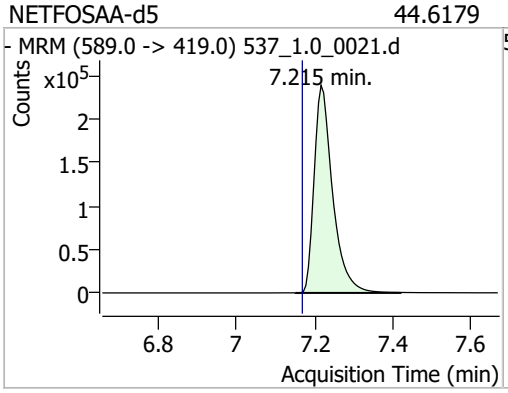
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.8417	7.07	0.04	26592	570.0 -> 511.7	34.2	17.0	51.0

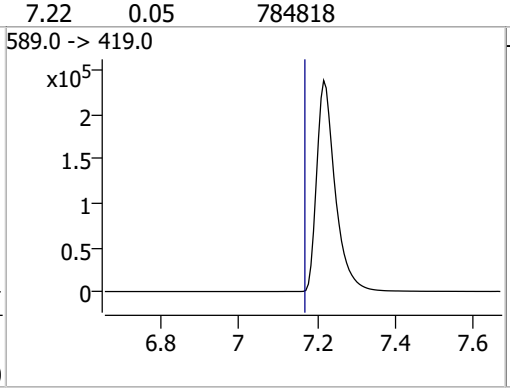


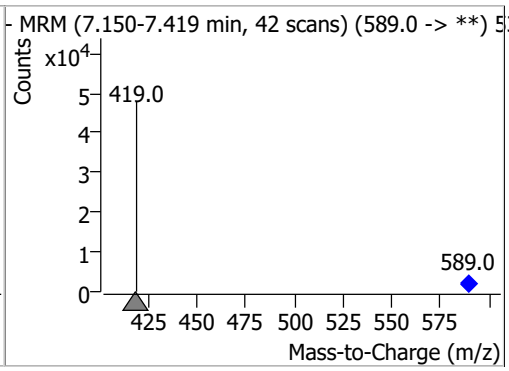




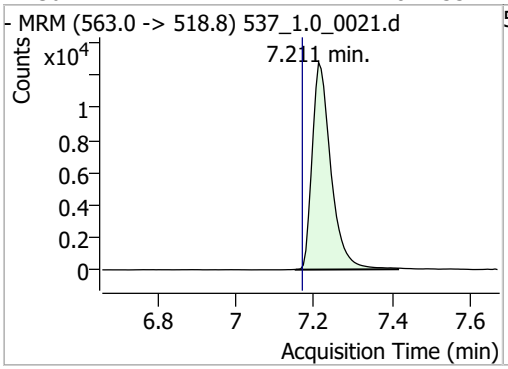
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	44.6179	7.22	0.05	784818				

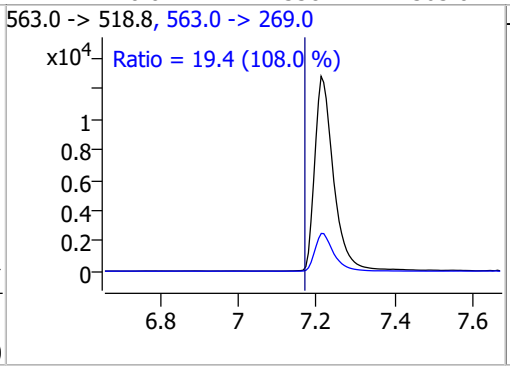


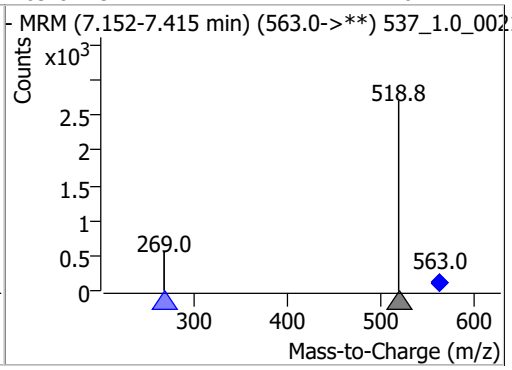




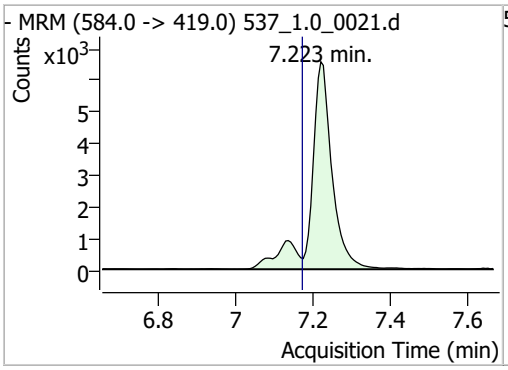
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.7455	7.21	0.04	42338	563.0 -> 269.0	19.4	14.4	21.6

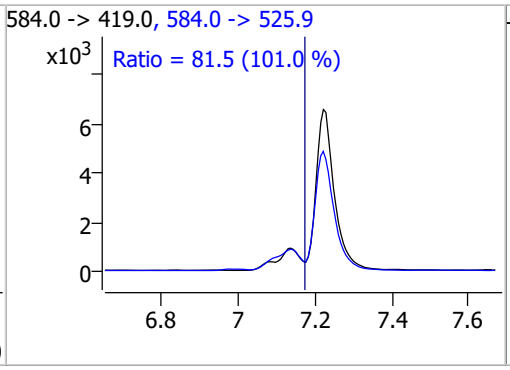


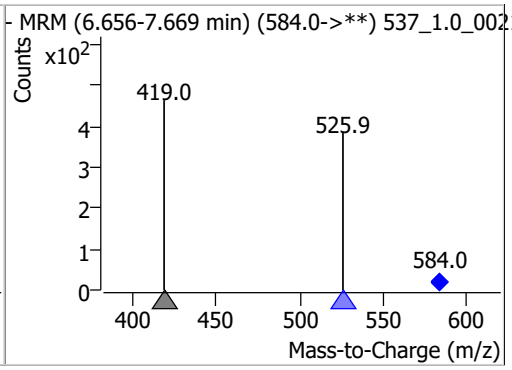




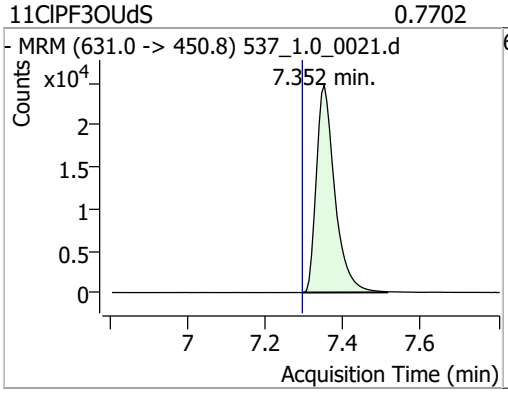
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.9237	7.22	0.05	25867	584.0 -> 525.9	81.5	40.4	121.1

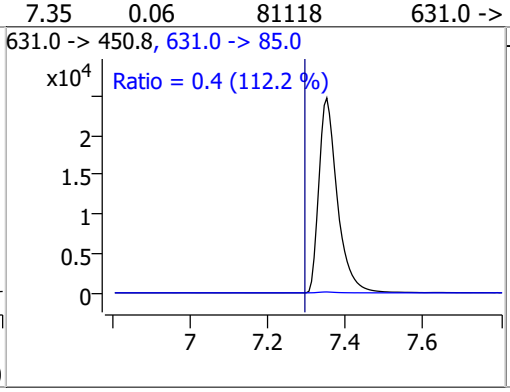


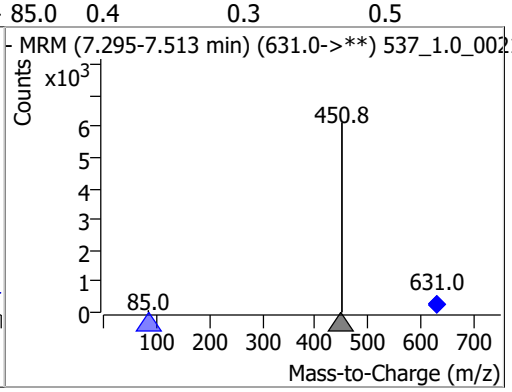




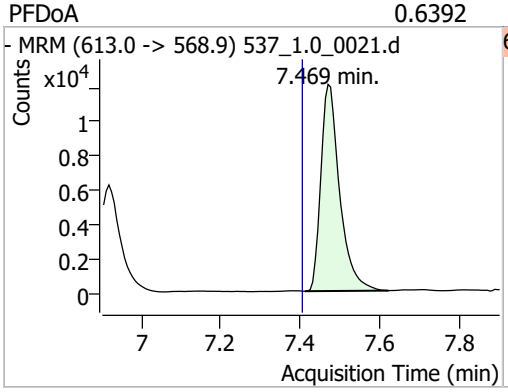
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.7702	7.35	0.06	81118	631.0 -> 85.0	0.4	0.3	0.5

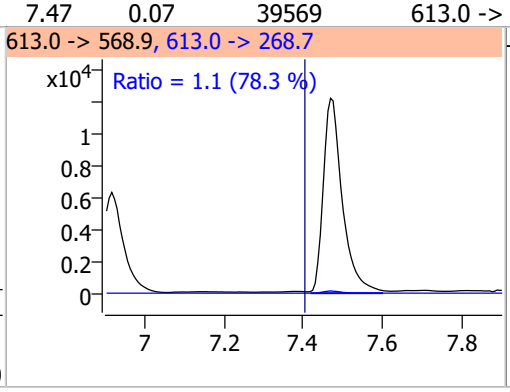


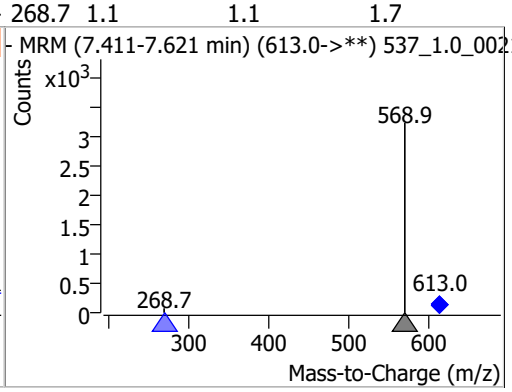




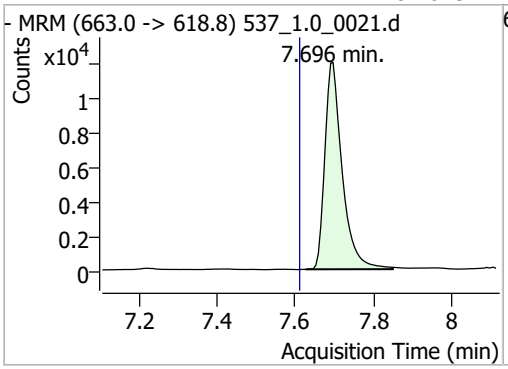
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.6392	7.47	0.07	39569	613.0 -> 268.7	1.1	1.1	1.7

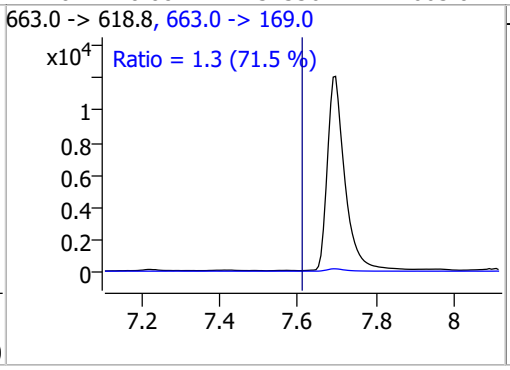


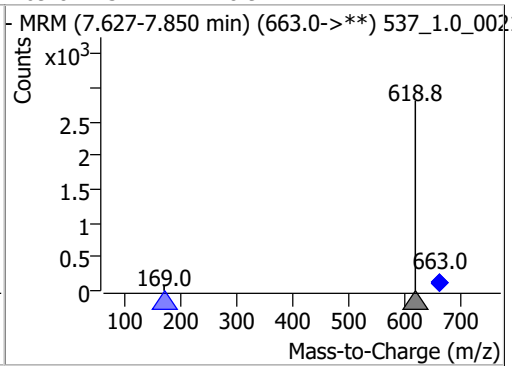




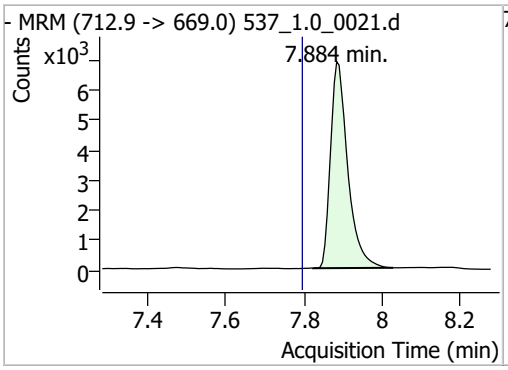
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.7615	7.70	0.08	37336	663.0 -> 169.0	1.3	0.9	2.7

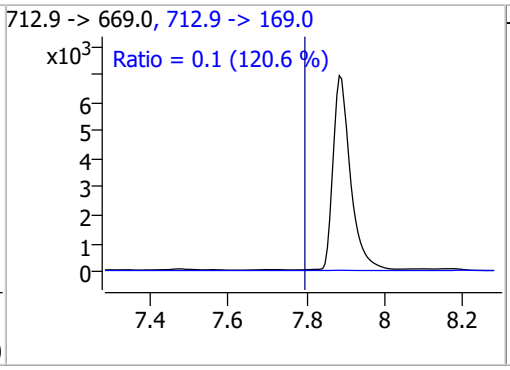


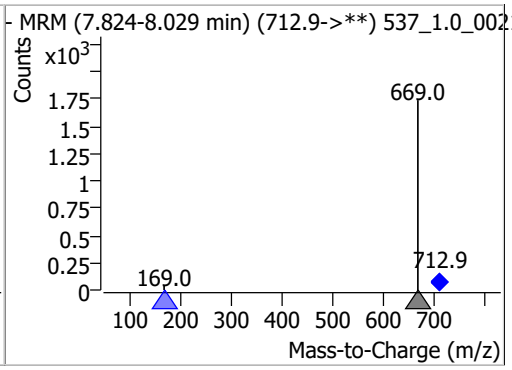




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.7079	7.88	0.09	21076	712.9 -> 169.0	0.1	0.0	0.1







Quantitation Results Report

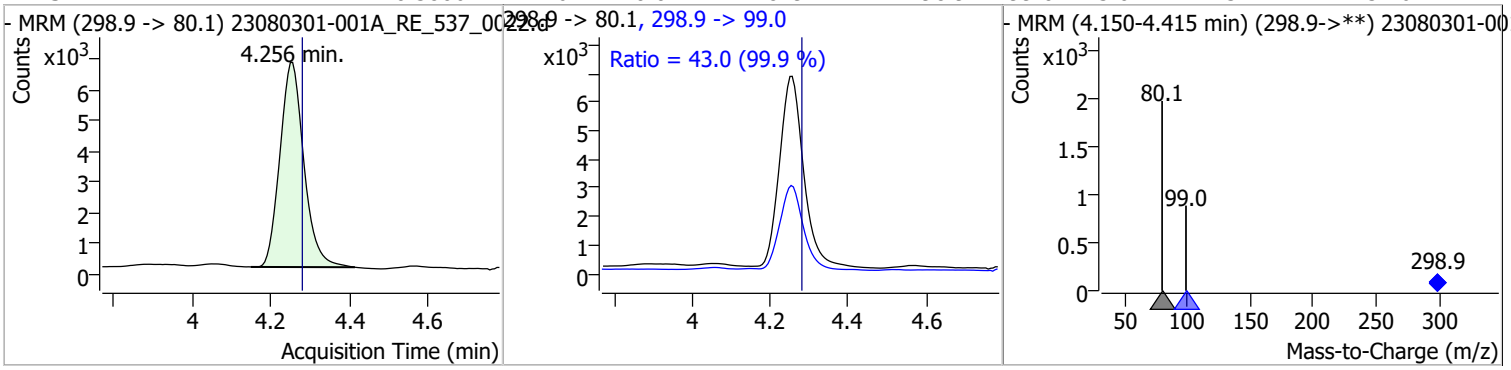
Agilent | Trusted Answers

Data File	23080301-001A_RE_537_0022.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 10:04:40 AM
Sample Name	23080301-001A	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

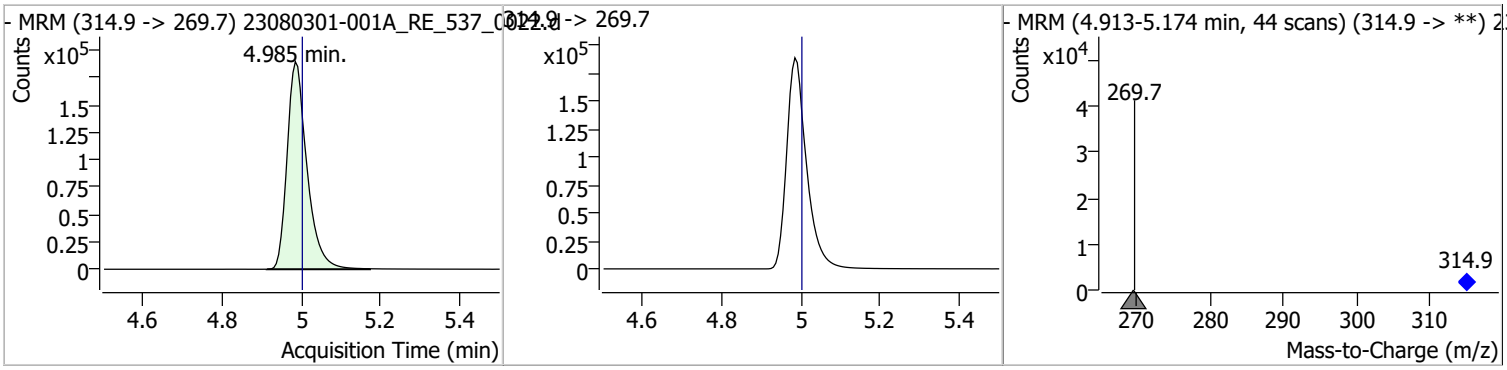
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	887809	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	978539	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1933123	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	657507	6.4340	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 64.34%		*	
13C3-HFPO-DA	5.207	287.0 -> 169.0	14222	6.6995	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 66.99%		*	
13C2-PFDA	6.922	514.9 -> 469.9	573934	10.8093	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 108.09%			
NETFOSAA-d5	7.215	589.0 -> 419.0	764881	32.8222	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 82.06%			
Target Compounds							**QValue**
PFBS	4.256	298.9 -> 80.1	28292	0.3806	ng/ml		100
PFHxA	4.986	313.0 -> 269.0	51795	0.3973	ng/ml		99
HFPO-DA	5.208	285.0 -> 169.1	200	0.0827	ng/ml	#	91
PFHpA	5.670	362.9 -> 318.9	29563	0.2654	ng/ml		97
PFHxS	5.737	398.9 -> 79.9	98033	2.1348	ng/ml		98
NaDONA	5.744	377.0 -> 250.9	172	0.0005	ng/ml	#	68
PFOA	6.171	413.0 -> 369.1	61068	0.6747	ng/ml	m	90
PFNA	6.577	463.0 -> 418.9	11457	0.2030	ng/ml	#	92
PFOS	6.589	498.9 -> 80.1	183236	5.5820	ng/ml		95
9Cl-PF3ONS	6.789	531.0 -> 351.0	161	0.0017	ng/ml		98
PFDA	6.922	513.0 -> 468.9	3117	0.0609	ng/ml	#	91
N-MeFOSAA	7.079	570.0 -> 418.9	519	0.0125	ng/ml	#	68
PFUdA	7.217	563.0 -> 518.8	974	0.0190	ng/ml	#	77
N-EtFOSAA	7.229	584.0 -> 419.0	811	0.0220	ng/ml	#	36
11ClPF3OUdS	7.352	631.0 -> 450.8	61	0.0006	ng/ml		99
PFDoA	6.918	613.0 -> 568.9	19091	0.3418	ng/ml	#	97
PFTrDA	7.608	663.0 -> 618.8	186	0.0042	ng/ml		98
PFTA	7.769	712.9 -> 669.0	360	0.0134	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

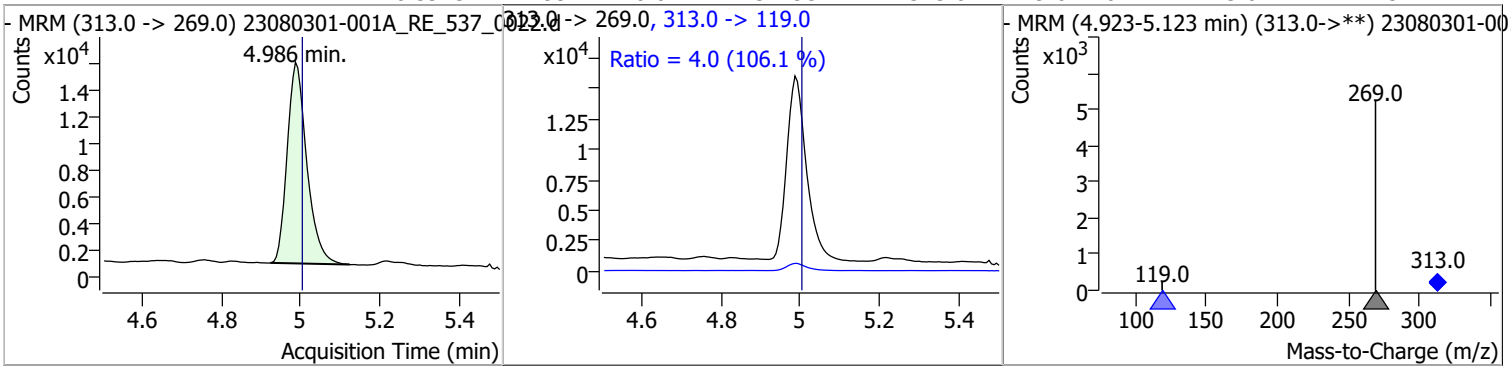
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.3806	4.26	-0.02	28292	298.9 -> 99.0	43.0	34.4	51.6



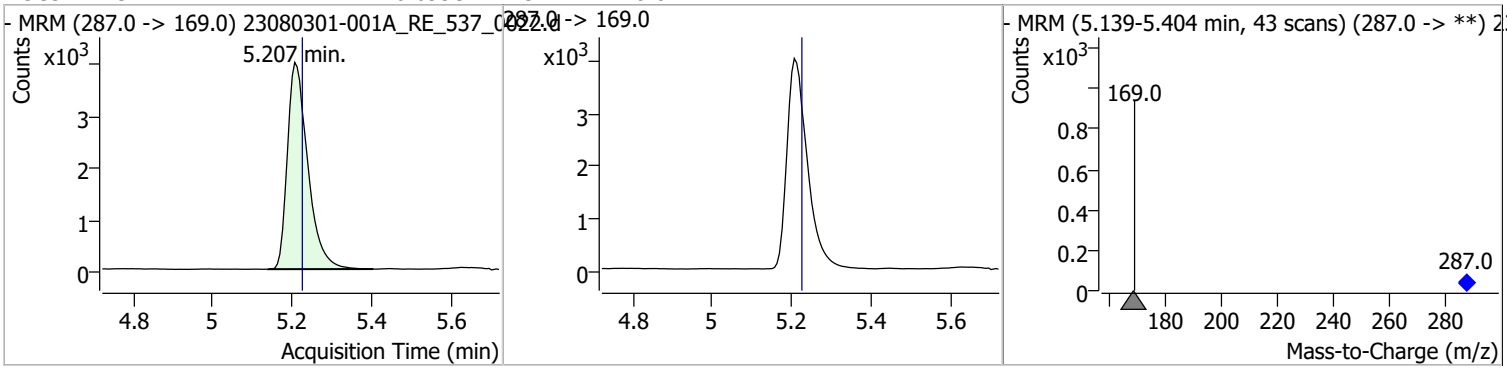
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	6.4340	4.99	-0.01	657507				



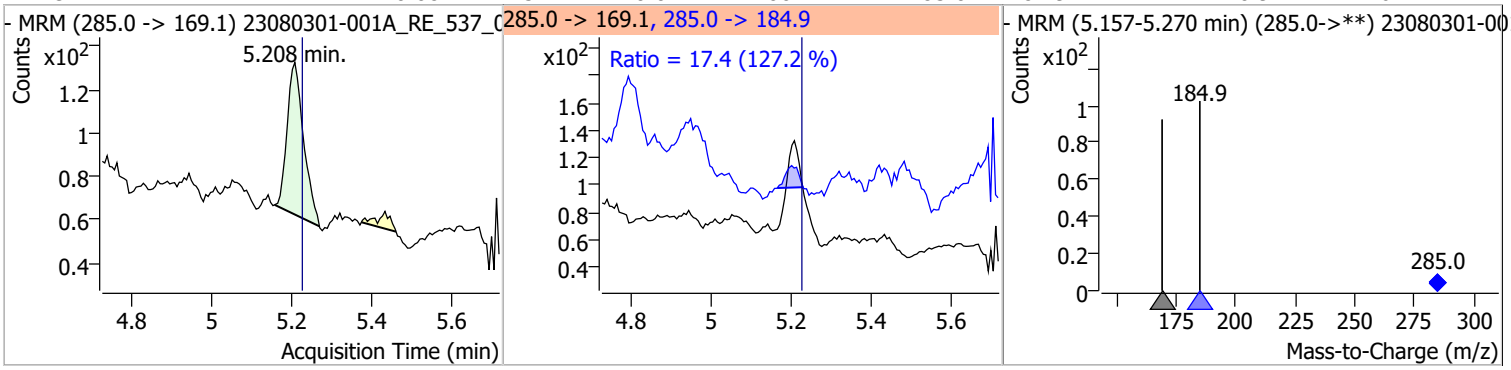
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.3973	4.99	-0.01	51795	313.0 -> 119.0	4.0	3.0	4.5



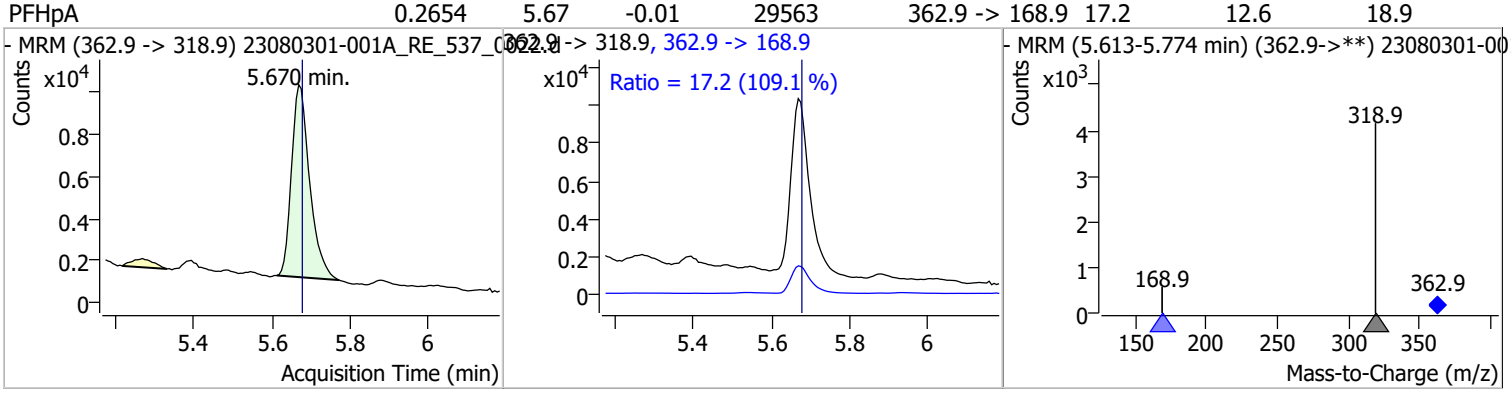
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	6.6995	5.21	-0.02	14222				



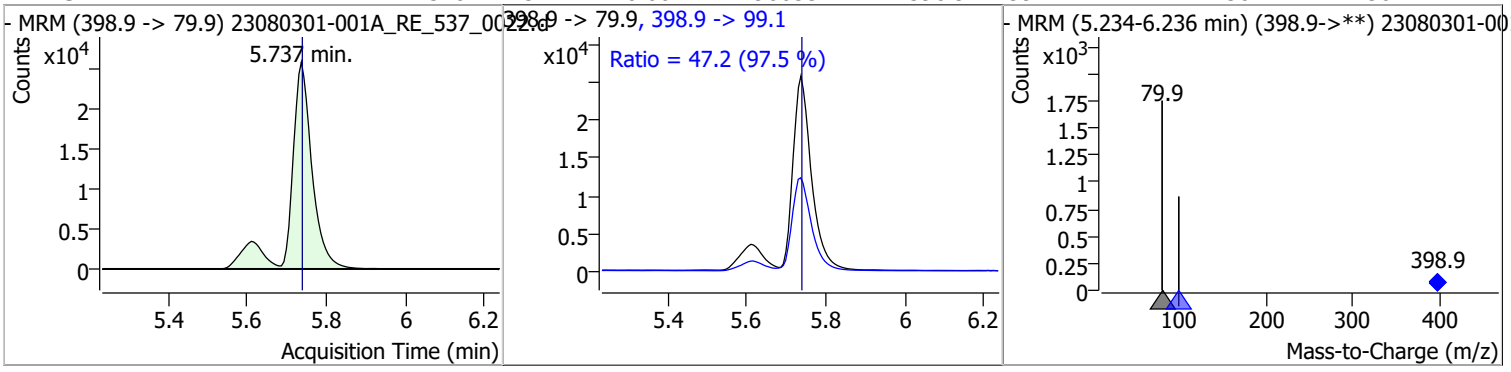
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0827	5.21	-0.02	200	285.0 -> 184.9	17.4	10.9	16.4



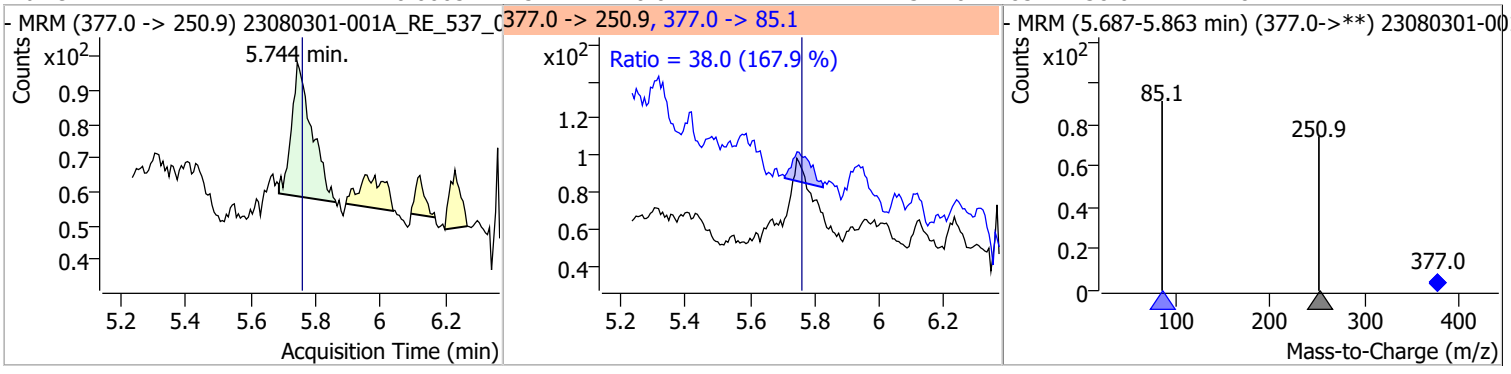
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.2654	5.67	-0.01	29563	362.9 -> 168.9	17.2	12.6	18.9



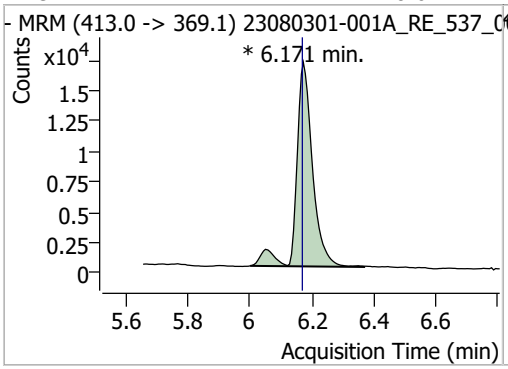
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	2.1348	5.74	0.00	98033	398.9 -> 99.1	47.2	38.7	58.1

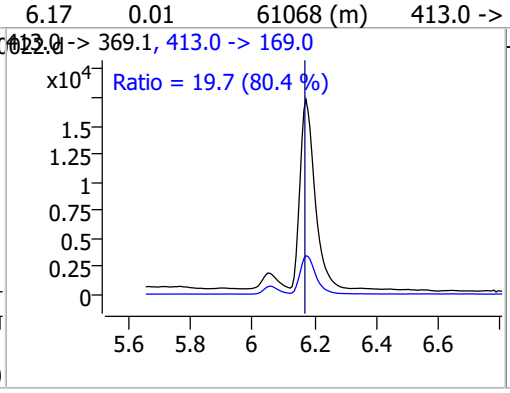


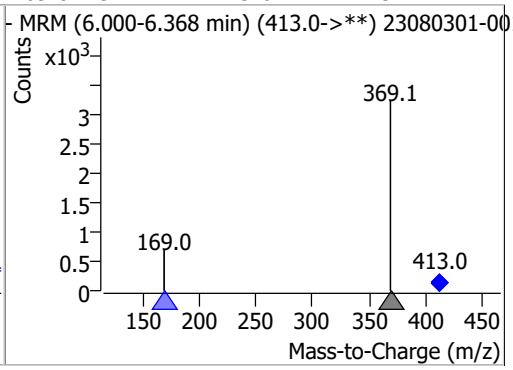
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0005	5.74	-0.01	172	377.0 -> 85.1	38.0	18.1	27.2



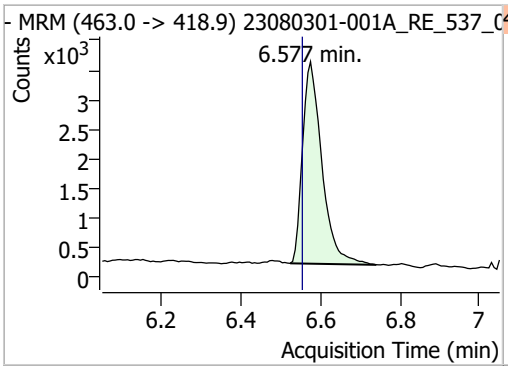
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.6747	6.17	0.01	61068 (m)	413.0 -> 169.0	19.7	19.6	29.4

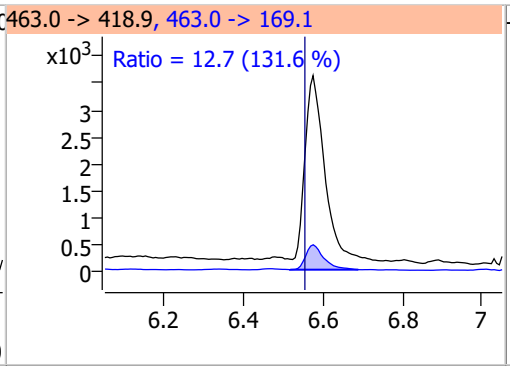


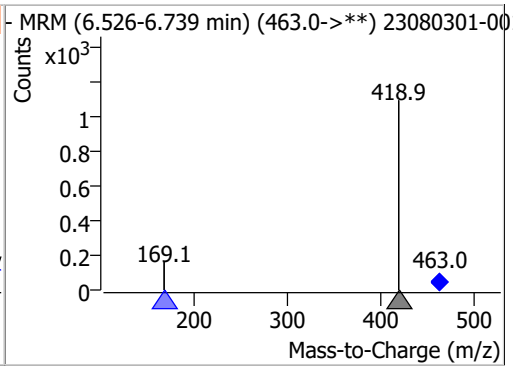




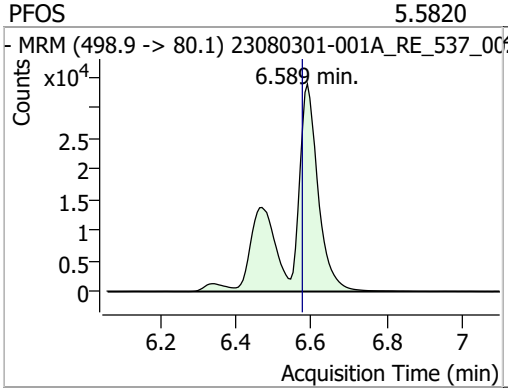
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.2030	6.58	0.02	11457	463.0 -> 169.1	12.7	7.7	11.5

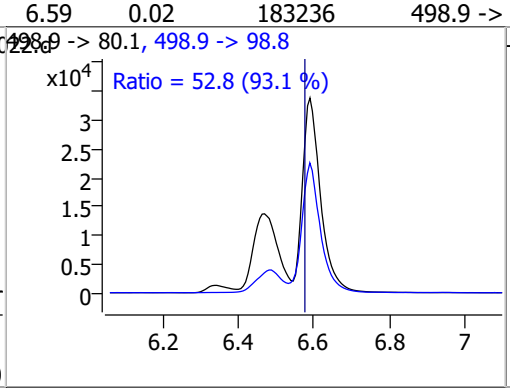


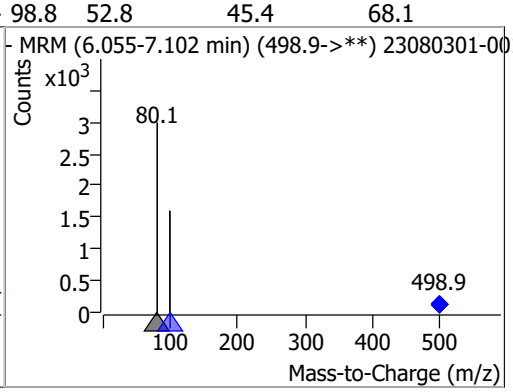




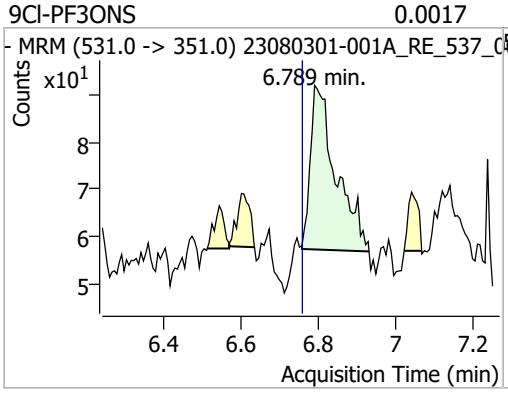
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	5.5820	6.59	0.02	183236	498.9 -> 98.8	52.8	45.4	68.1

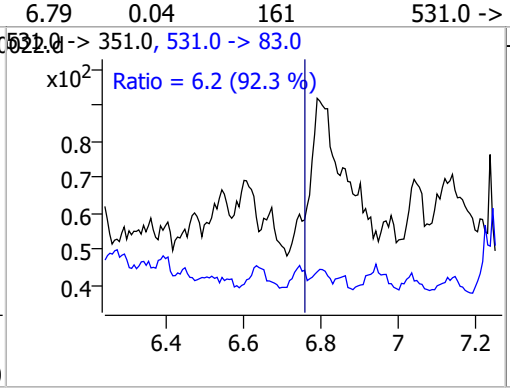


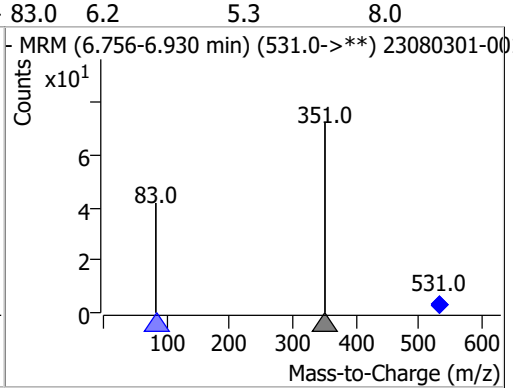




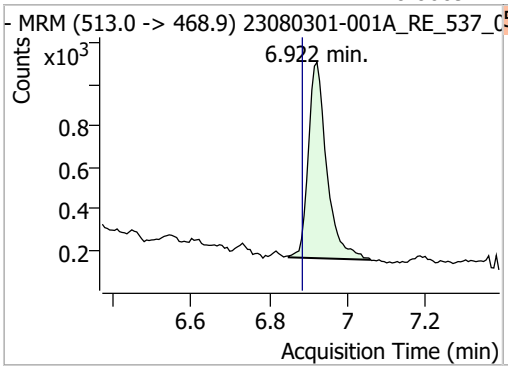
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0017	6.79	0.04	161	531.0 -> 83.0	6.2	5.3	8.0

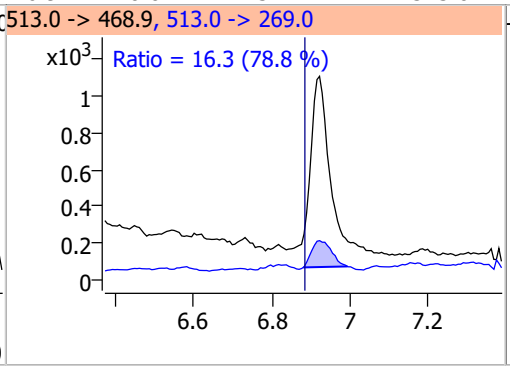


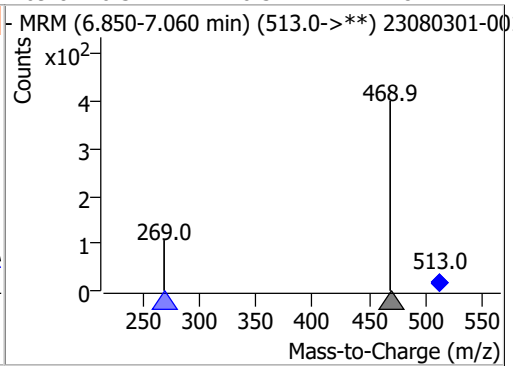




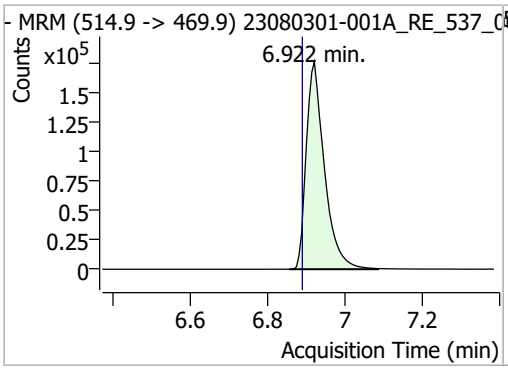
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0609	6.92	0.04	3117	513.0 -> 269.0	16.3	16.5	24.8

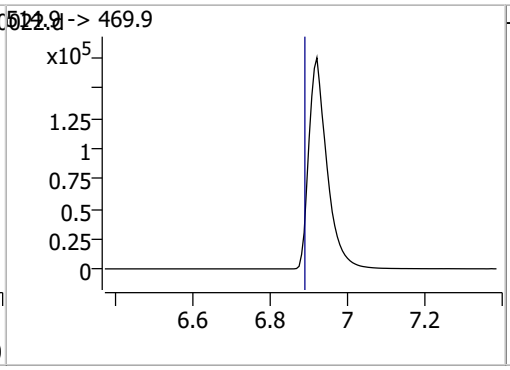


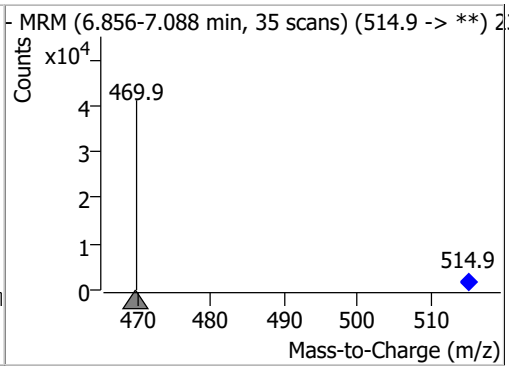




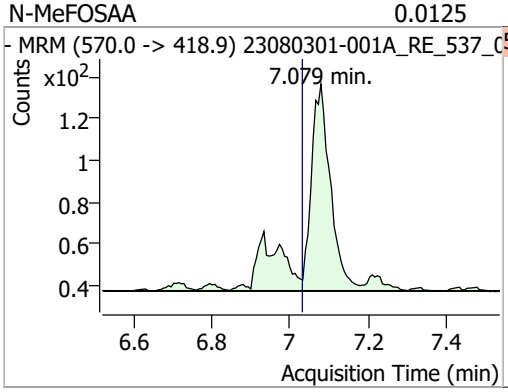
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	10.8093	6.92	0.03	573934				

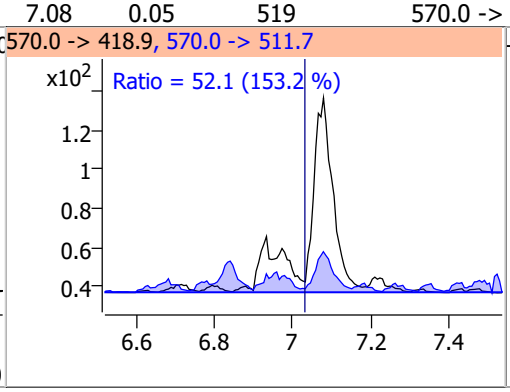


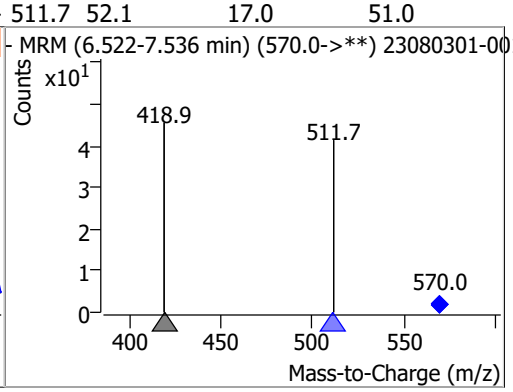




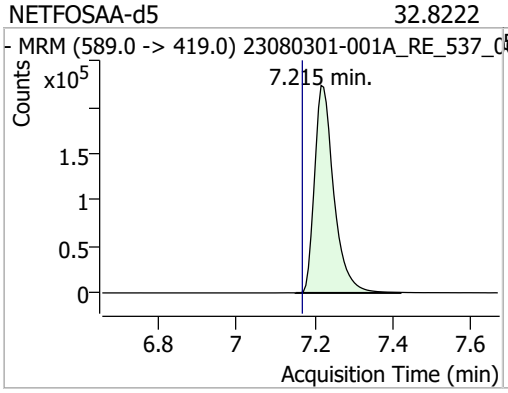
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0125	7.08	0.05	519	570.0 -> 511.7	52.1	17.0	51.0

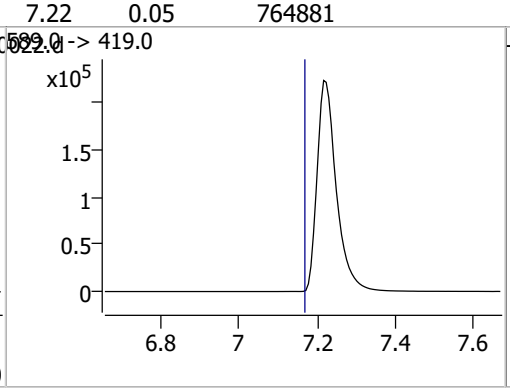


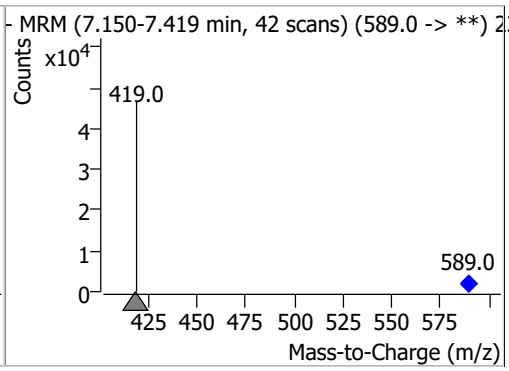




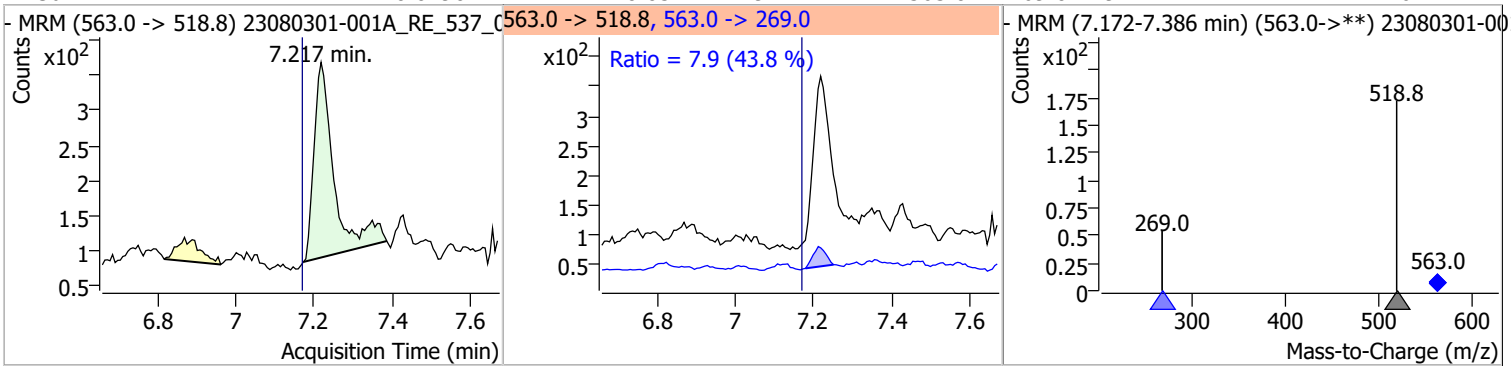
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	32.8222	7.22	0.05	764881				



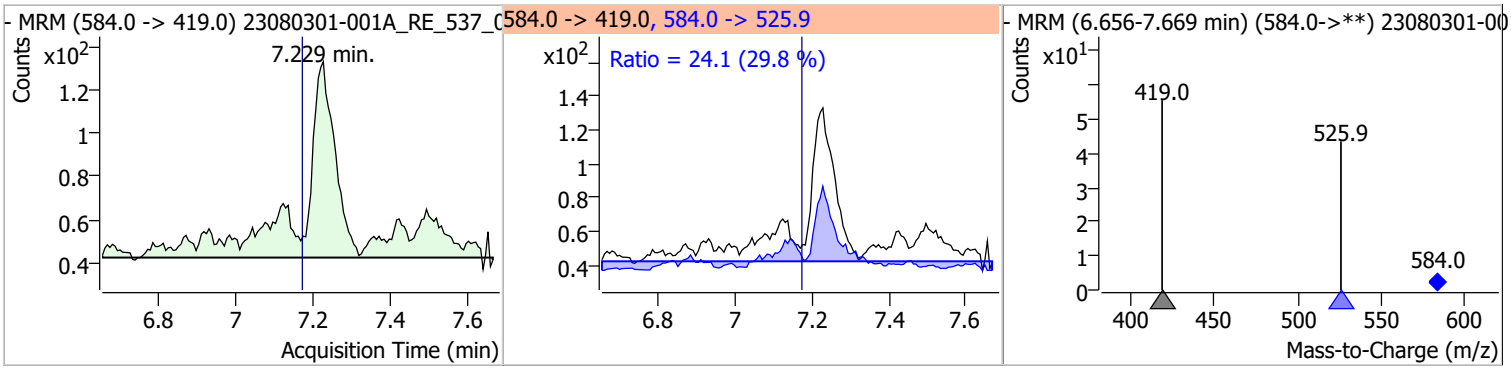




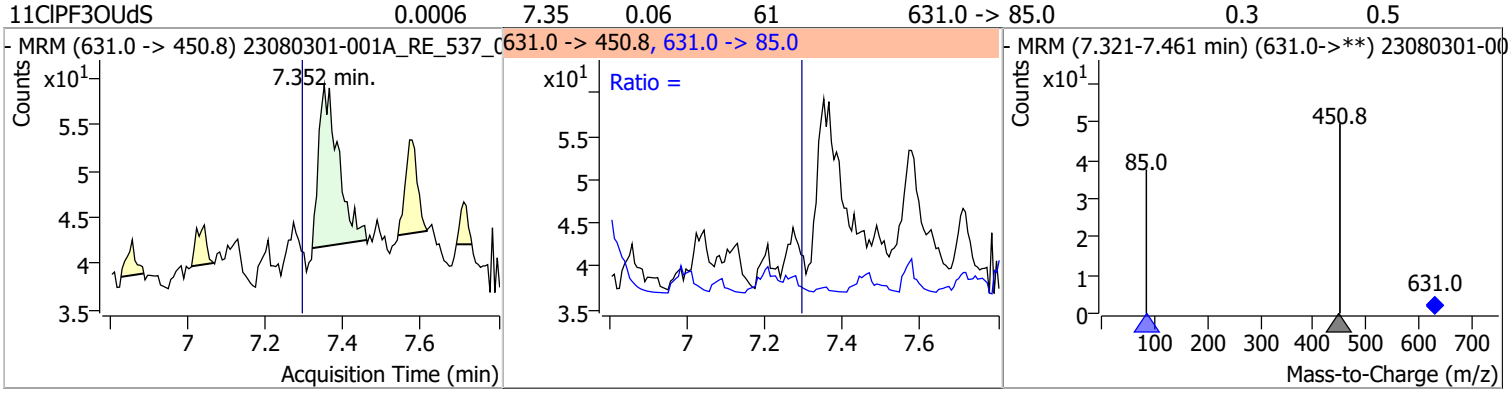
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0190	7.22	0.05	974	563.0 -> 269.0	7.9	14.4	21.6



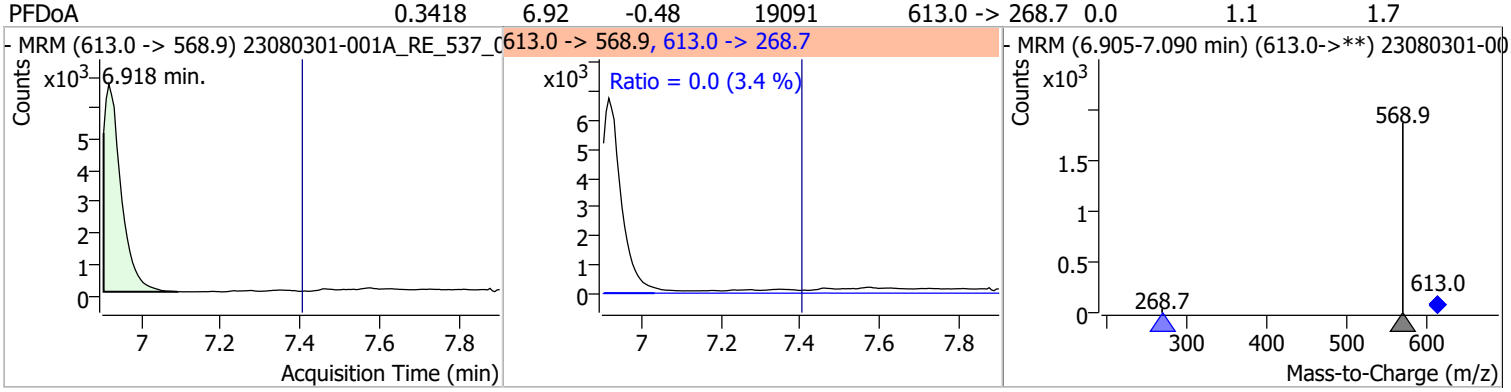
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0220	7.23	0.06	811	584.0 -> 525.9	24.1	40.4	121.1



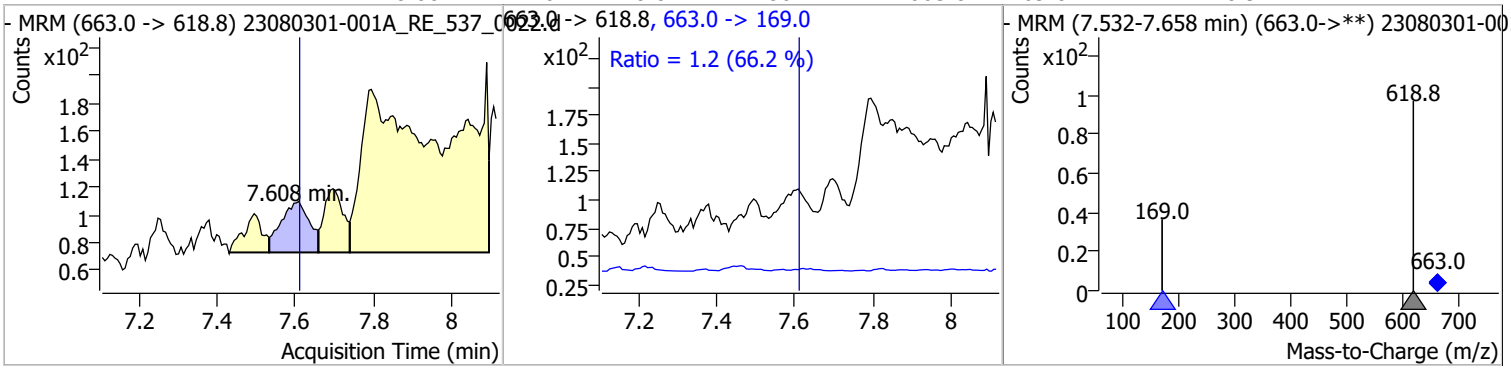
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0006	7.35	0.06	61	631.0 -> 85.0		0.3	0.5



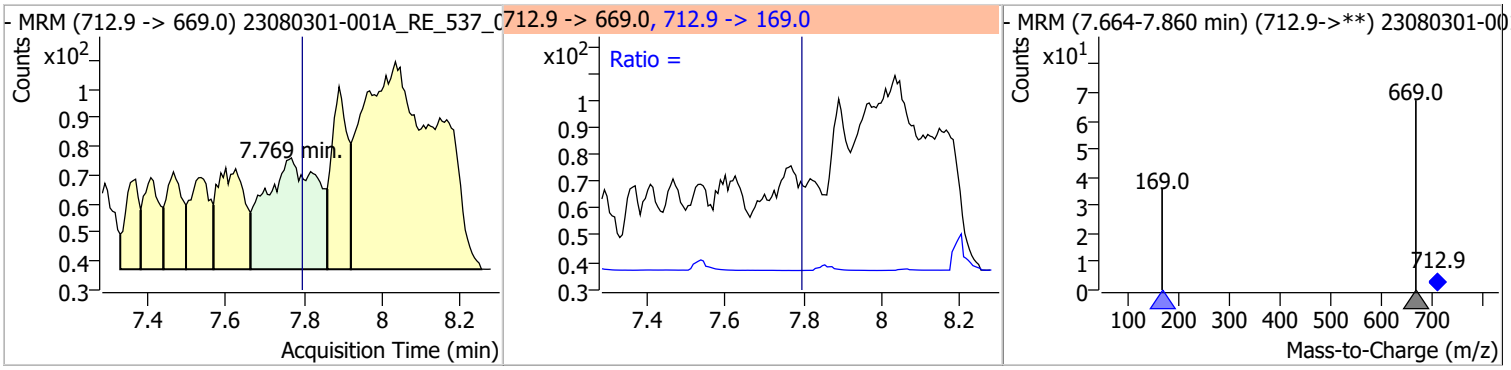
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.3418	6.92	-0.48	19091	613.0 -> 268.7	0.0	1.1	1.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0042	7.61	-0.01	186	663.0 -> 169.0	1.2	0.9	2.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0134	7.77	-0.02	360	712.9 -> 169.0		0.0	0.1



Quantitation Results Report

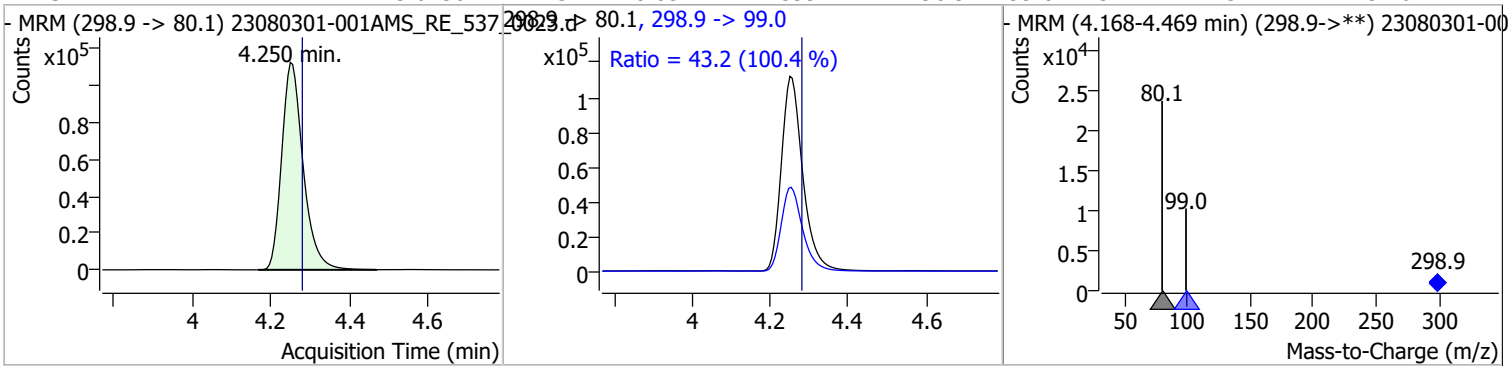
Agilent | Trusted Answers

Data File	23080301-001AMS_RE_537_0023.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 10:17:40 AM
Sample Name	23080301-001AMS	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

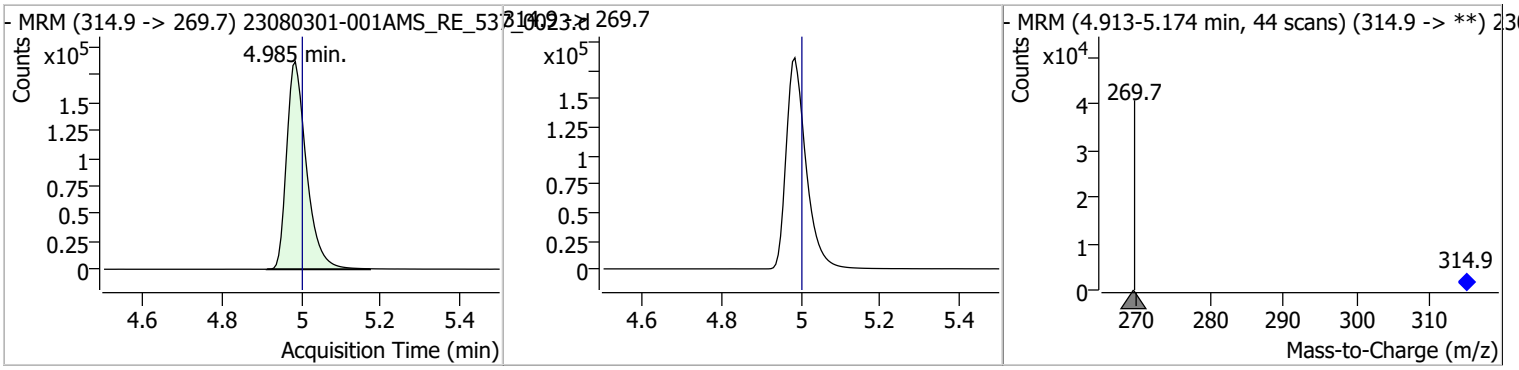
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.595	502.9 -> 80.1	1001946	3.0000	ng/ml		0.023
13C2-PFOA	6.171	415.0 -> 370.0	1042335	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1935654	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	648719	5.9595	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 59.59%		*	
13C3-HFPO-DA	5.207	287.0 -> 169.0	14622	6.4665	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 64.67%		*	
13C2-PFDA	6.922	514.9 -> 469.9	580946	10.2717	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 102.72%			
NETFOSAA-d5	7.222	589.0 -> 419.0	702342	30.0992	ng/ml		0.058
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 75.25%			
Target Compounds							**QValue**
PFBS	4.250	298.9 -> 80.1	423992	5.0430	ng/ml		100
PFHxA	4.986	313.0 -> 269.0	744701	5.3629	ng/ml		99
HFPO-DA	5.208	285.0 -> 169.1	13623	5.2315	ng/ml		96
PFHpA	5.670	362.9 -> 318.9	870250	7.3357	ng/ml		99
PFHxS	5.737	398.9 -> 79.9	495876	9.3177	ng/ml		99
NaDONA	5.750	377.0 -> 250.9	2783343	7.0537	ng/ml		97
PFOA	6.171	413.0 -> 369.1	908363	9.4213	ng/ml		92
PFNA	6.577	463.0 -> 418.9	557206	9.1603	ng/ml		98
PFOS	6.589	498.9 -> 80.1	442376	11.7392	ng/ml		99
9Cl-PF3ONS	6.782	531.0 -> 351.0	897491	7.9802	ng/ml	#	92
PFDA	6.922	513.0 -> 468.9	543044	9.6181	ng/ml		94
N-MeFOSAA	7.079	570.0 -> 418.9	325740	7.4712	ng/ml		87
PFUdA	7.217	563.0 -> 518.8	398926	7.3094	ng/ml		96
N-EtFOSAA	7.229	584.0 -> 419.0	267493	7.0141	ng/ml		96
11ClPF3OUdS	7.352	631.0 -> 450.8	828023	6.4884	ng/ml		100
PFDoA	7.469	613.0 -> 568.9	432743	7.2666	ng/ml	#	99
PFTrDA	7.696	663.0 -> 618.8	345875	7.1452	ng/ml		99
PFTA	7.891	712.9 -> 669.0	209869	7.3347	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

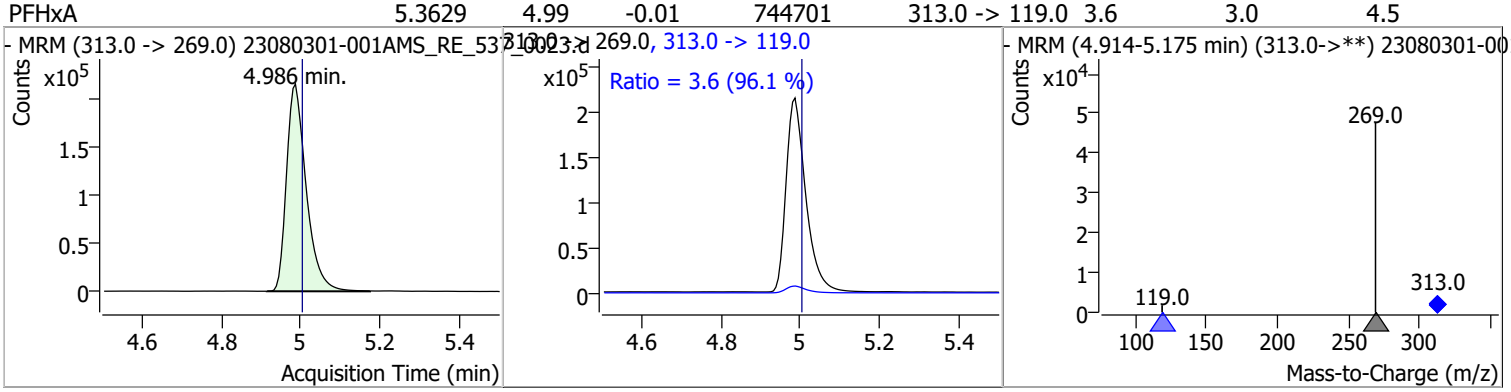
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	5.0430	4.25	-0.03	423992	298.9 -> 99.0	43.2	34.4	51.6



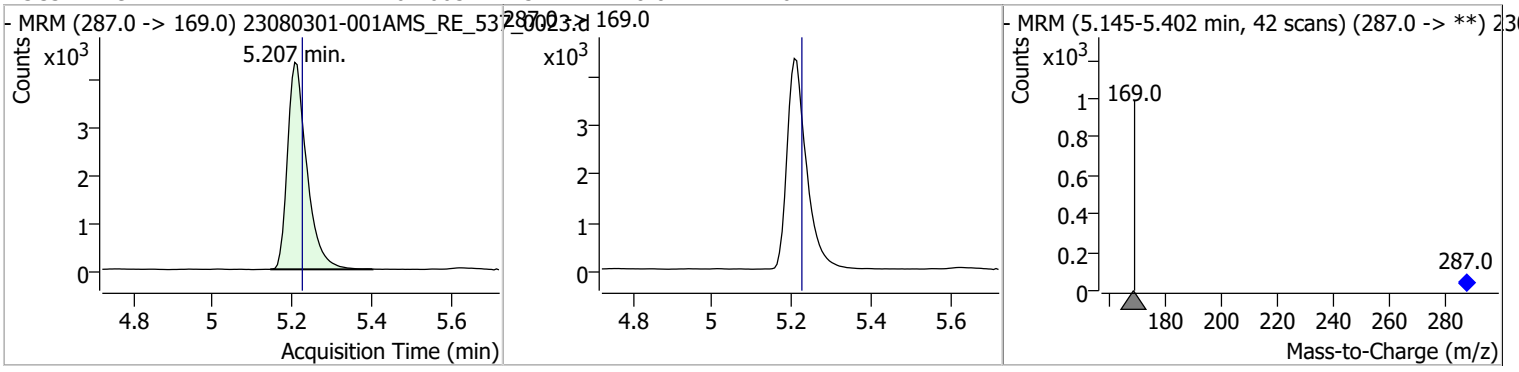
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	5.9595	4.99	-0.01	648719				



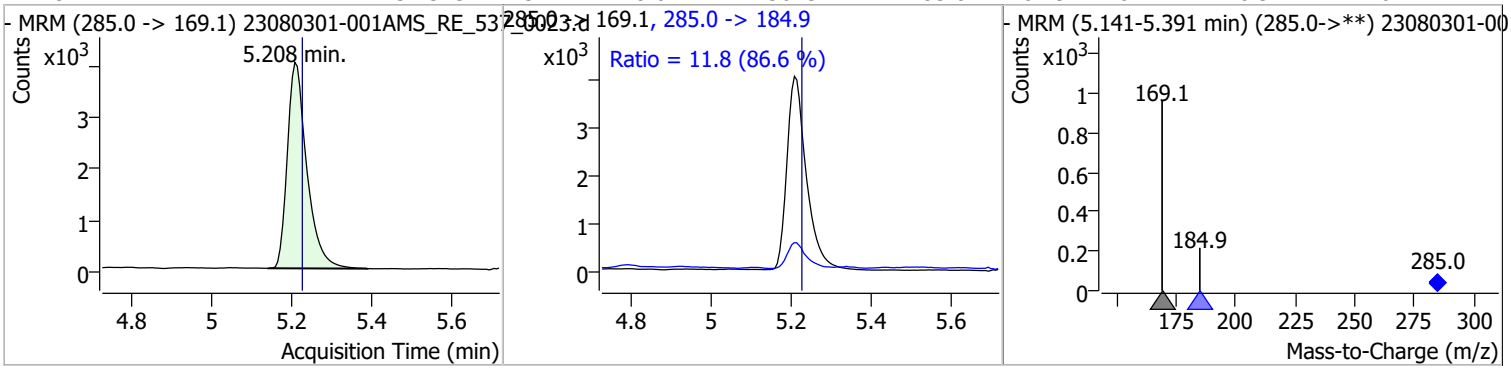
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	5.3629	4.99	-0.01	744701	313.0 -> 119.0	3.6	3.0	4.5



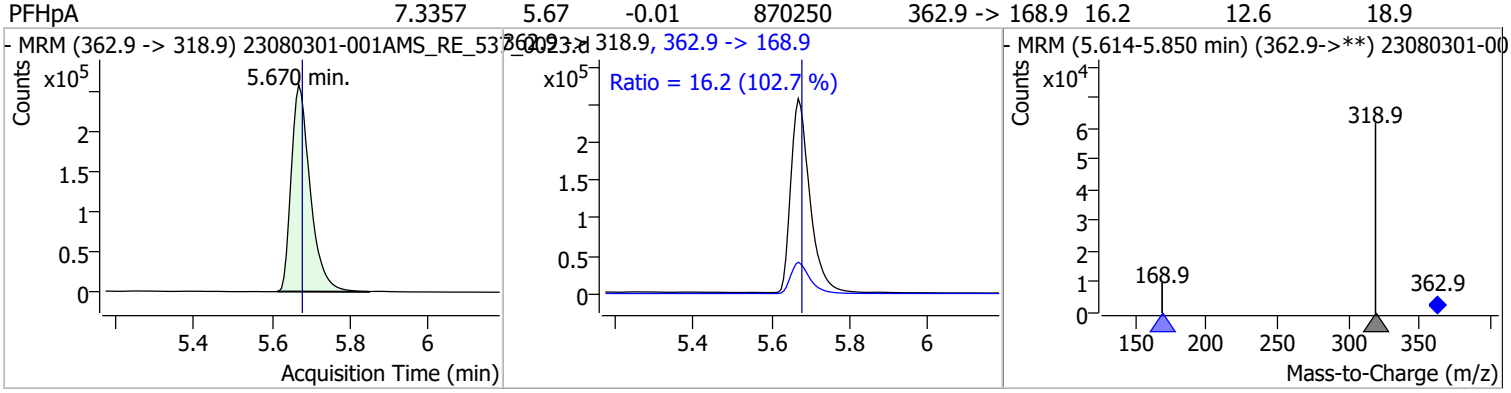
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	6.4665	5.21	-0.02	14622				



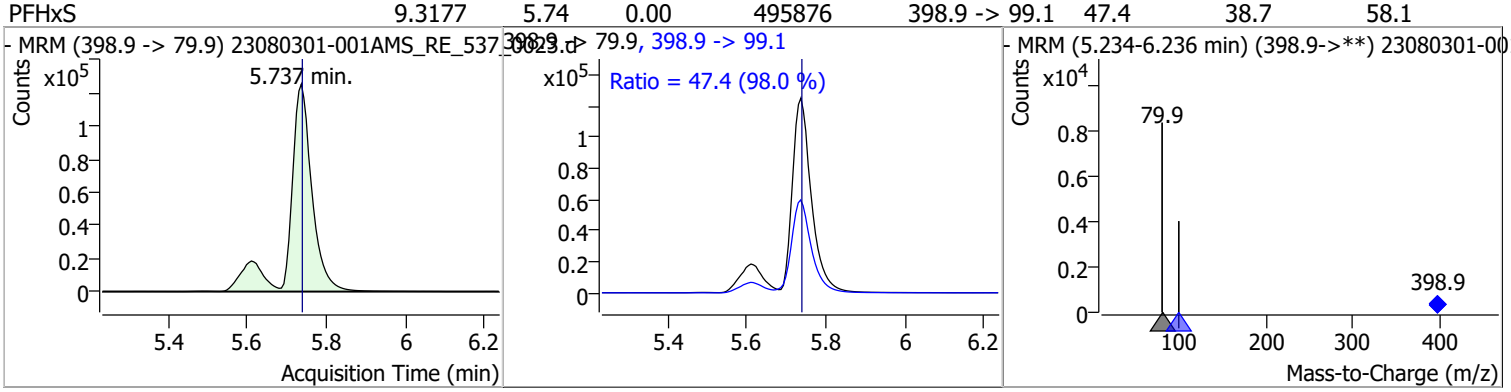
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	5.2315	5.21	-0.02	13623	285.0 -> 184.9	11.8	10.9	16.4



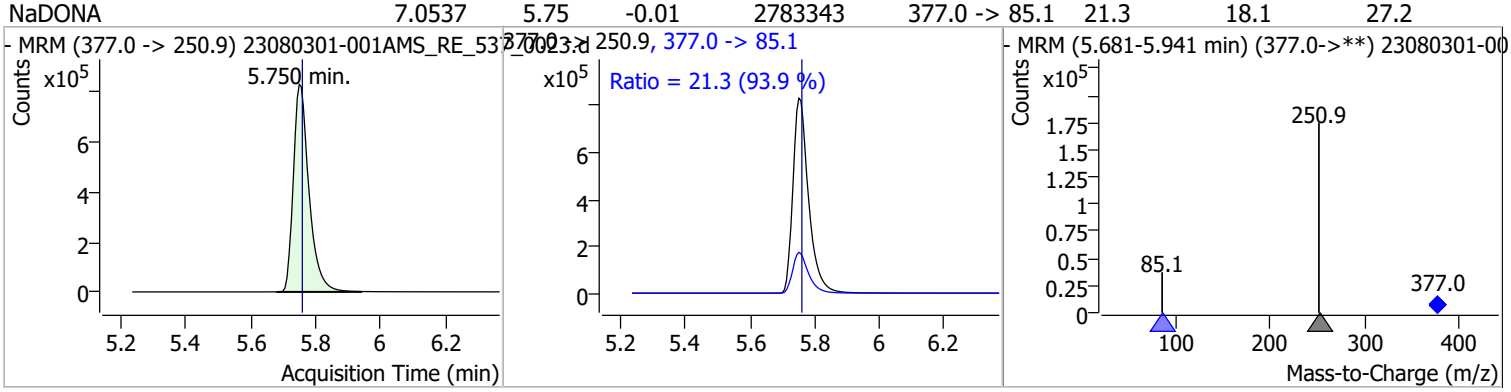
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	7.3357	5.67	-0.01	870250	362.9 -> 168.9	16.2	12.6	18.9



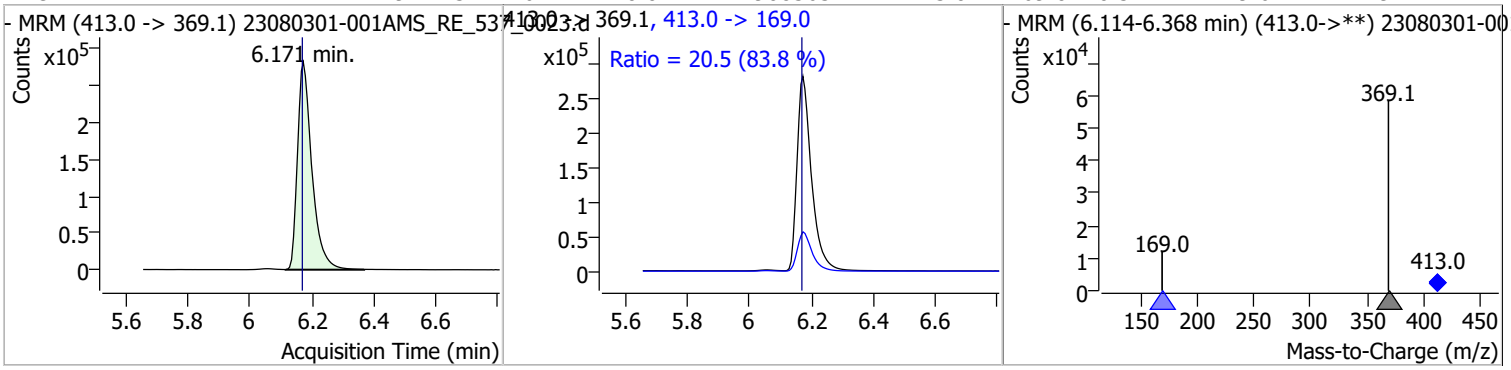
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	9.3177	5.74	0.00	495876	398.9 -> 99.1	47.4	38.7	58.1



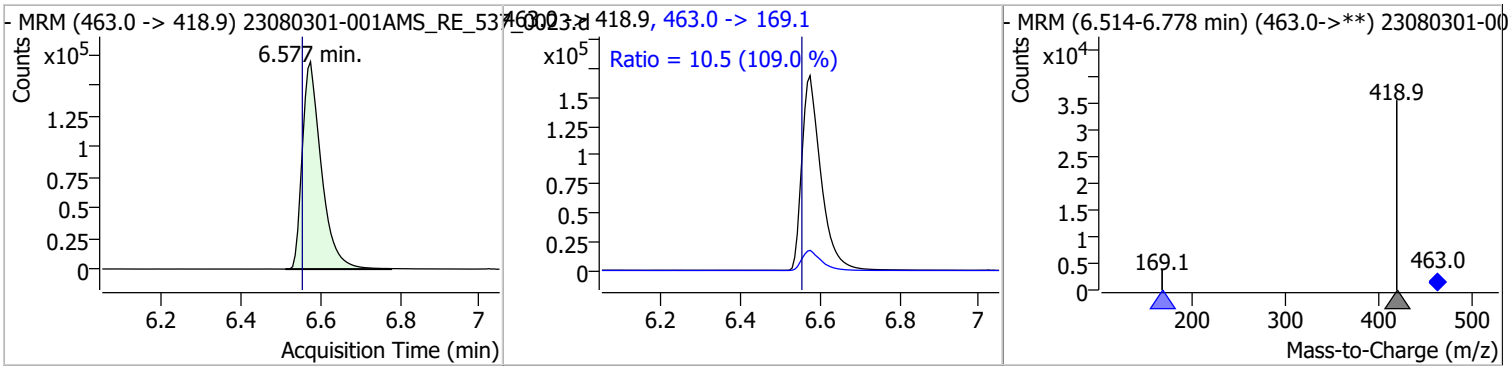
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	7.0537	5.75	-0.01	2783343	377.0 -> 85.1	21.3	18.1	27.2



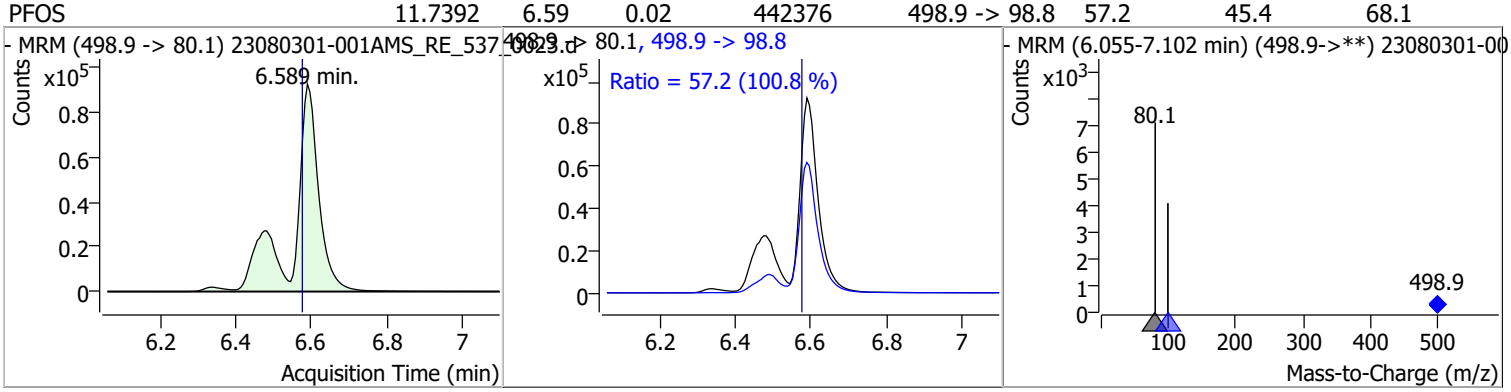
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	9.4213	6.17	0.01	908363	413.0 -> 169.0	20.5	19.6	29.4



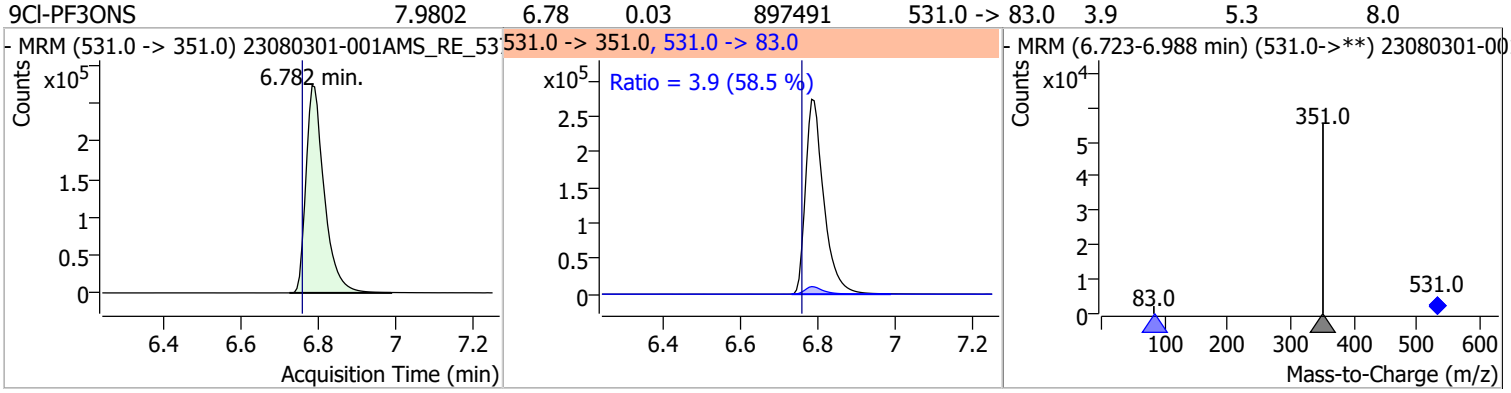
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	9.1603	6.58	0.02	557206	463.0 -> 169.1	10.5	7.7	11.5



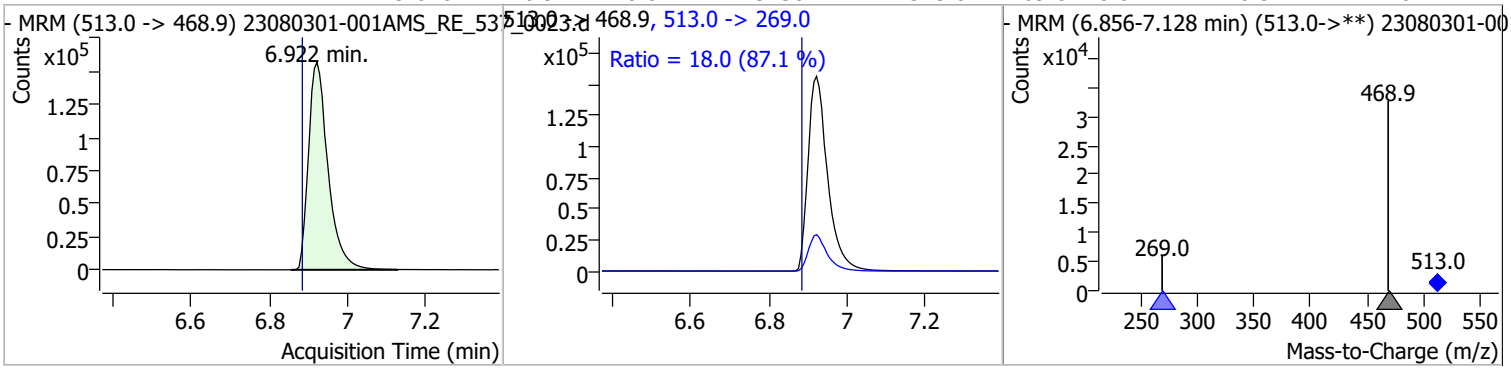
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	11.7392	6.59	0.02	442376	498.9 -> 98.8	57.2	45.4	68.1



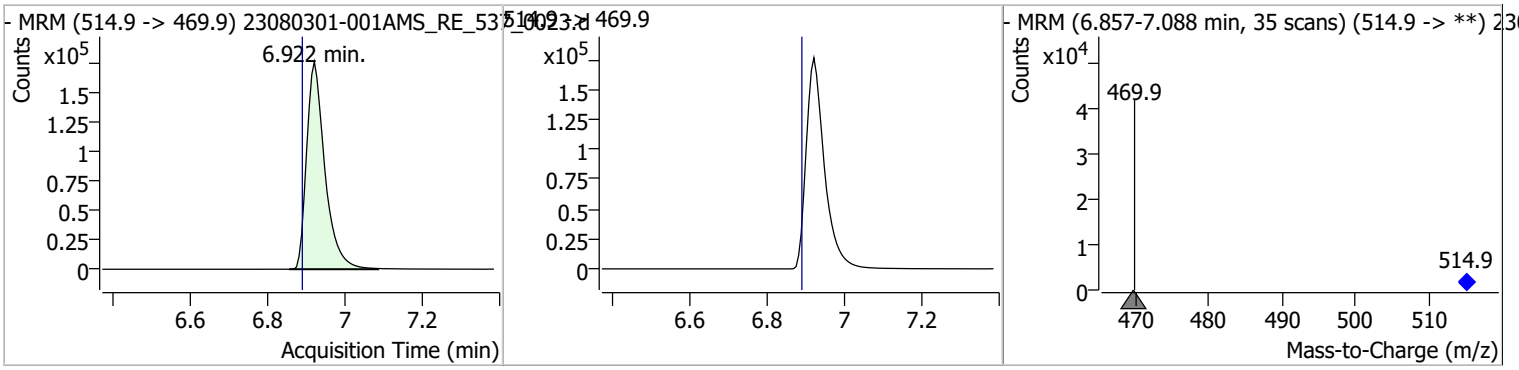
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	7.9802	6.78	0.03	897491	531.0 -> 83.0	3.9	5.3	8.0



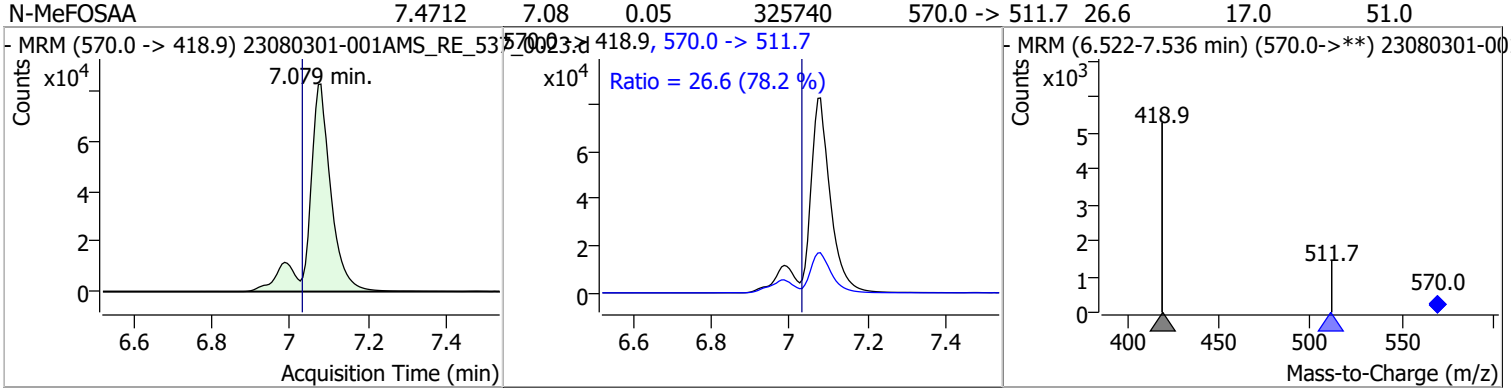
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	9.6181	6.92	0.04	543044	513.0 -> 269.0	18.0	16.5	24.8



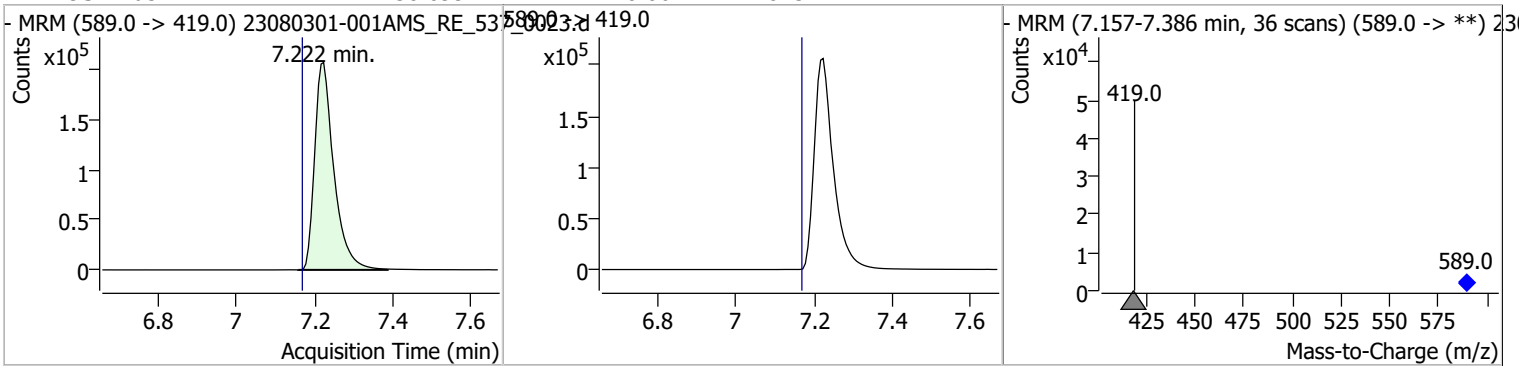
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	10.2717	6.92	0.03	580946				



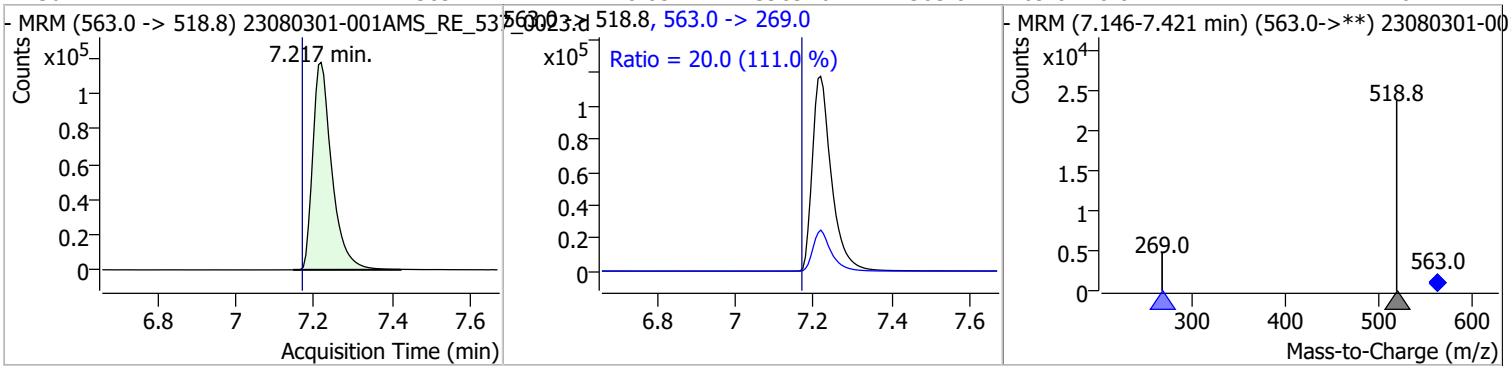
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	7.4712	7.08	0.05	325740	570.0 -> 511.7	26.6	17.0	51.0



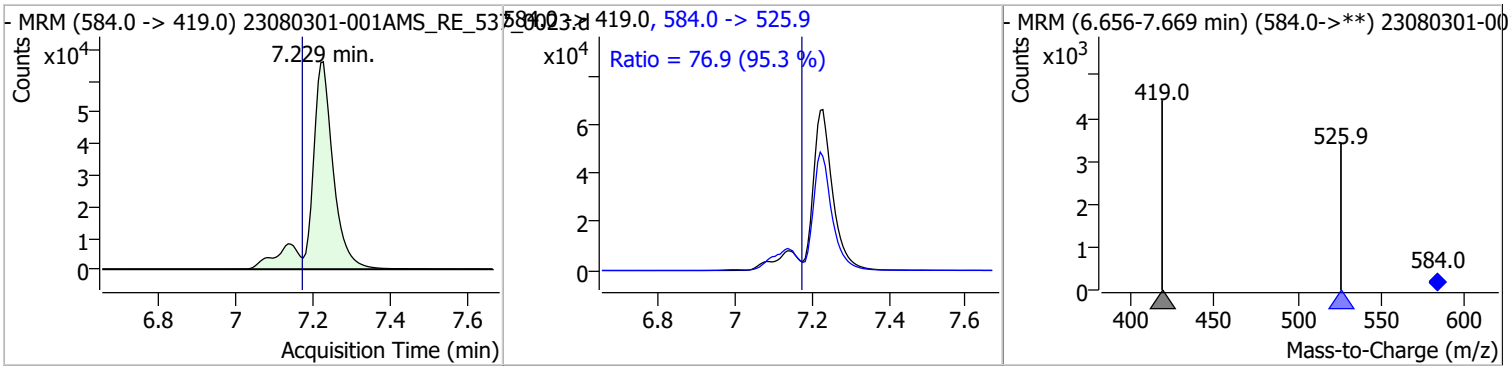
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	30.0992	7.22	0.06	702342				



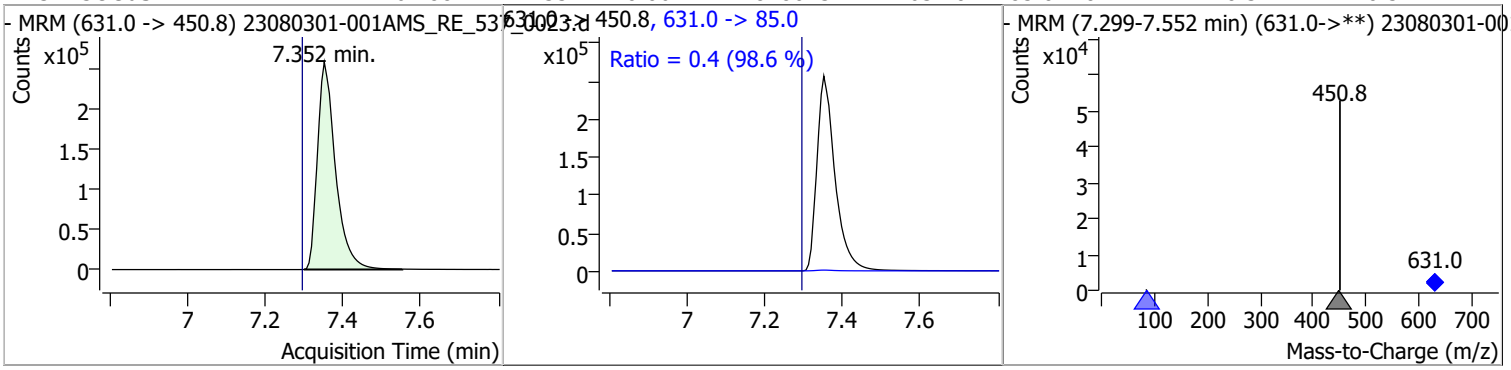
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	7.3094	7.22	0.05	398926	563.0 -> 269.0	20.0	14.4	21.6



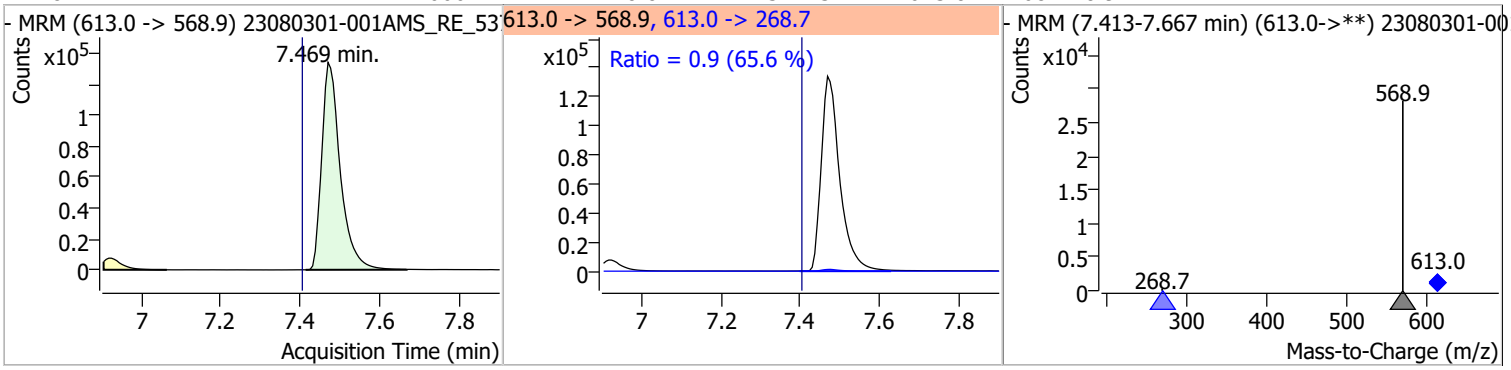
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	7.0141	7.23	0.06	267493	584.0 -> 525.9	76.9	40.4	121.1



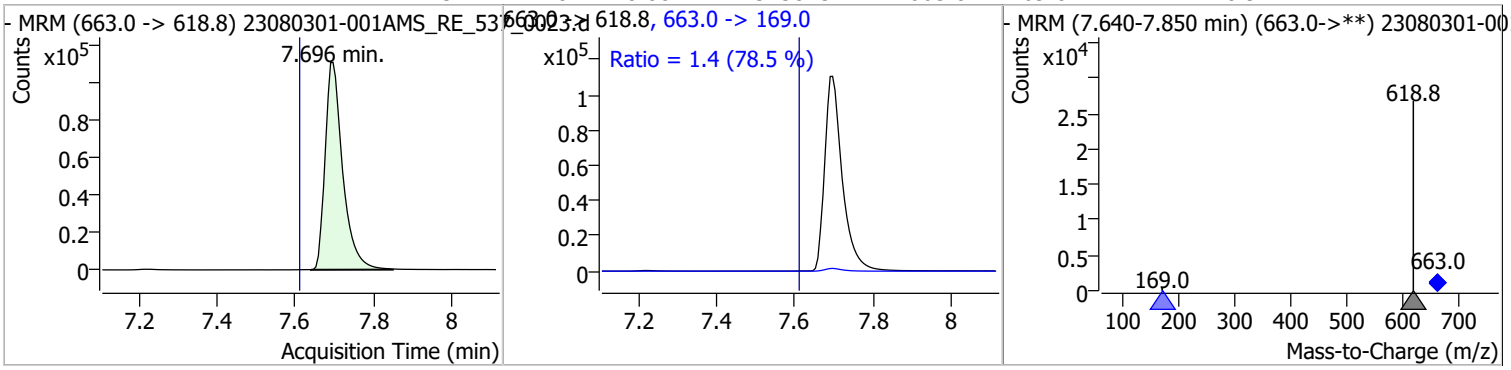
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	6.4884	7.35	0.06	828023	631.0 -> 85.0	0.4	0.3	0.5



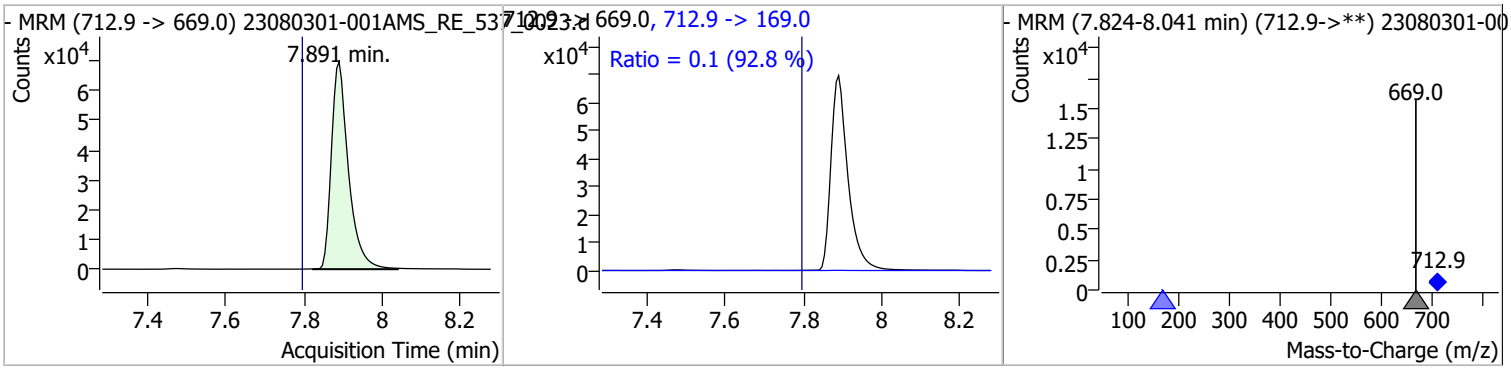
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	7.2666	7.47	0.07	432743	613.0 -> 268.7	0.9	1.1	1.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	7.1452	7.70	0.08	345875	663.0 -> 169.0	1.4	0.9	2.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	7.3347	7.89	0.10	209869	712.9 -> 169.0	0.1	0.0	0.1



Quantitation Results Report

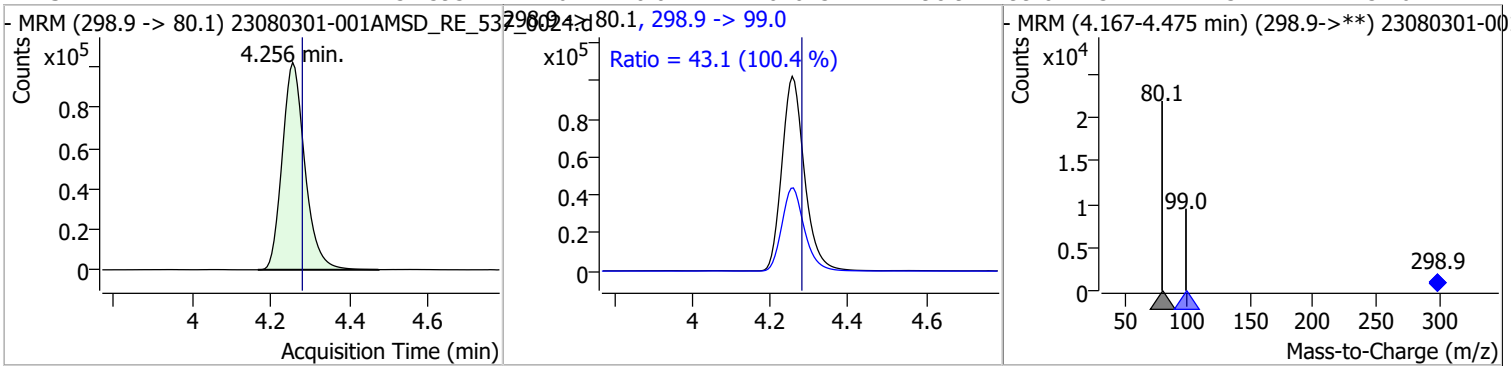
Agilent | Trusted Answers

Data File	23080301-001AMSD_RE_537_0024.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 10:30:24 AM
Sample Name	23080301-001AMSD	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

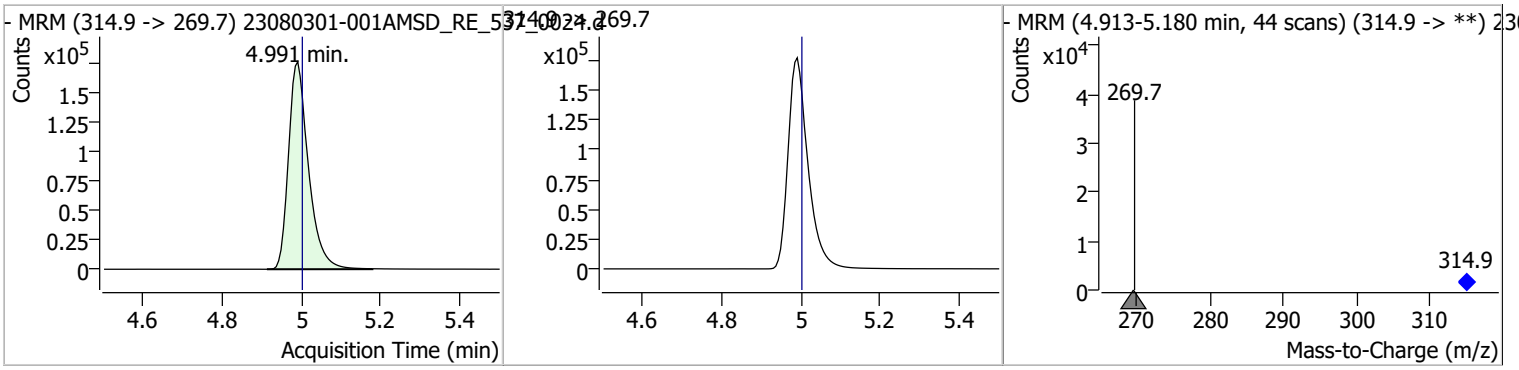
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.595	502.9 -> 80.1	888327	3.0000	ng/ml		0.023
13C2-PFOA	6.177	415.0 -> 370.0	964898	1.0000	ng/ml		0.014
NMeFOSAA-d3	7.072	573.0 -> 418.9	1809896	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.991	314.9 -> 269.7	617233	6.1253	ng/ml		-0.008
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 61.25%		*	
13C3-HFPO-DA	5.213	287.0 -> 169.0	13951	6.6648	ng/ml		-0.010
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 66.65%		*	
13C2-PFDA	6.922	514.9 -> 469.9	588080	11.2323	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 112.32%			
NETFOSAA-d5	7.222	589.0 -> 419.0	742544	34.0332	ng/ml		0.058
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 85.08%			
Target Compounds							**QValue**
PFBS	4.256	298.9 -> 80.1	407023	5.4593	ng/ml		100
PFHxA	4.992	313.0 -> 269.0	703649	5.4739	ng/ml		100
HFPO-DA	5.214	285.0 -> 169.1	12586	5.2212	ng/ml		100
PFHpA	5.676	362.9 -> 318.9	866304	7.8885	ng/ml		98
PFHxS	5.737	398.9 -> 79.9	452123	9.5733	ng/ml		92
NaDONA	5.750	377.0 -> 250.9	2800598	7.6406	ng/ml		98
PFOA	6.178	413.0 -> 369.1	850927	9.5339	ng/ml		93
PFNA	6.577	463.0 -> 418.9	581378	10.3093	ng/ml		98
PFOS	6.596	498.9 -> 80.1	441282	13.1567	ng/ml		97
9Cl-PF3ONS	6.789	531.0 -> 351.0	741275	7.4496	ng/ml		96
PFDA	6.922	513.0 -> 468.9	464383	8.9077	ng/ml		100
N-MeFOSAA	7.079	570.0 -> 418.9	298012	7.3167	ng/ml		99
PFUdA	7.217	563.0 -> 518.8	390441	7.7280	ng/ml	#	91
N-EtFOSAA	7.223	584.0 -> 419.0	267671	7.4913	ng/ml		99
11ClPF3OUdS	7.352	631.0 -> 450.8	806493	7.0924	ng/ml		100
PFDoA	7.476	613.0 -> 568.9	396878	7.1993	ng/ml	#	99
PFTrDA	7.696	663.0 -> 618.8	327601	7.3059	ng/ml		99
PFTA	7.891	712.9 -> 669.0	195143	7.3674	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

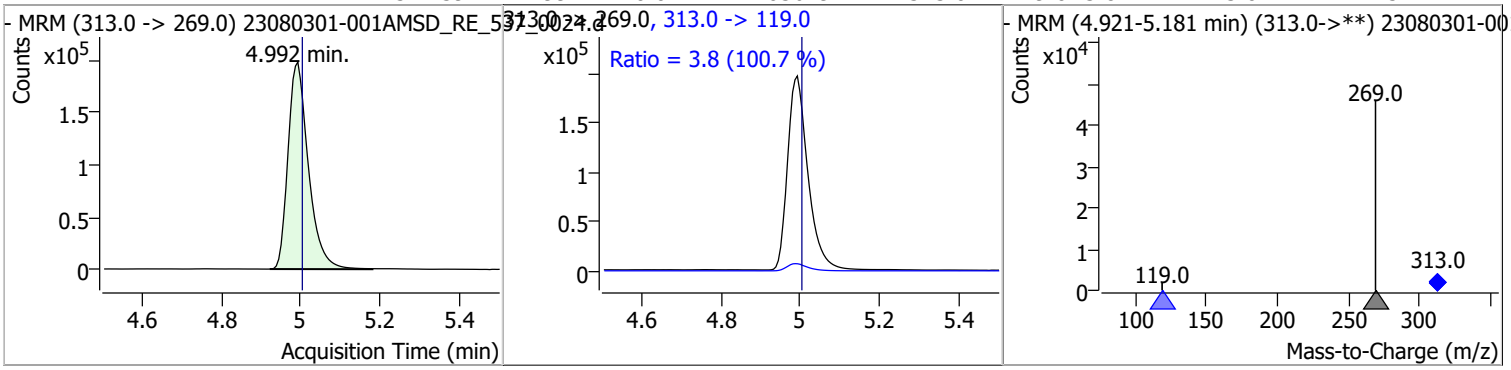
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	5.4593	4.26	-0.02	407023	298.9 -> 99.0	43.1	34.4	51.6



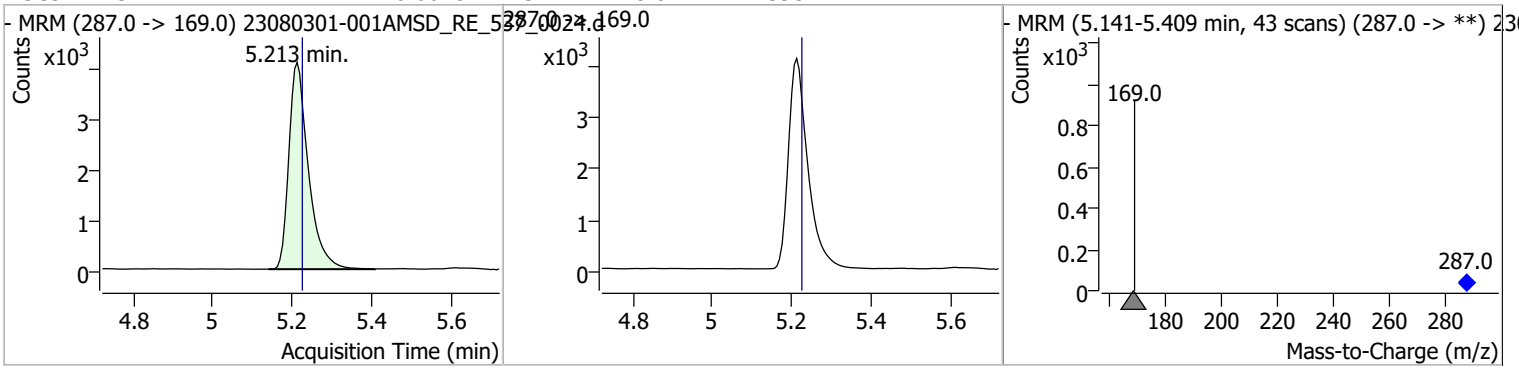
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	6.1253	4.99	-0.01	617233				



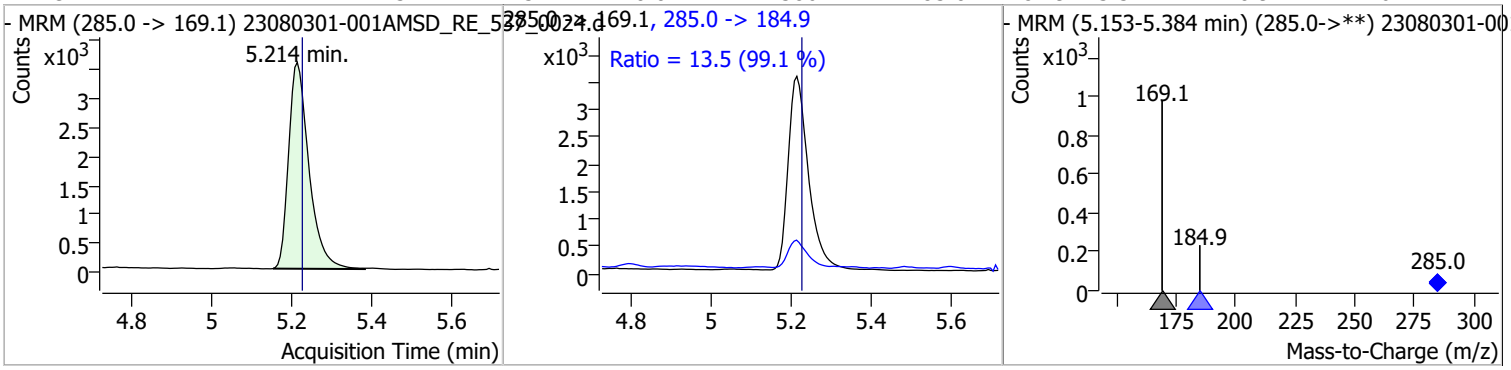
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	5.4739	4.99	-0.01	703649	313.0 -> 119.0	3.8	3.0	4.5



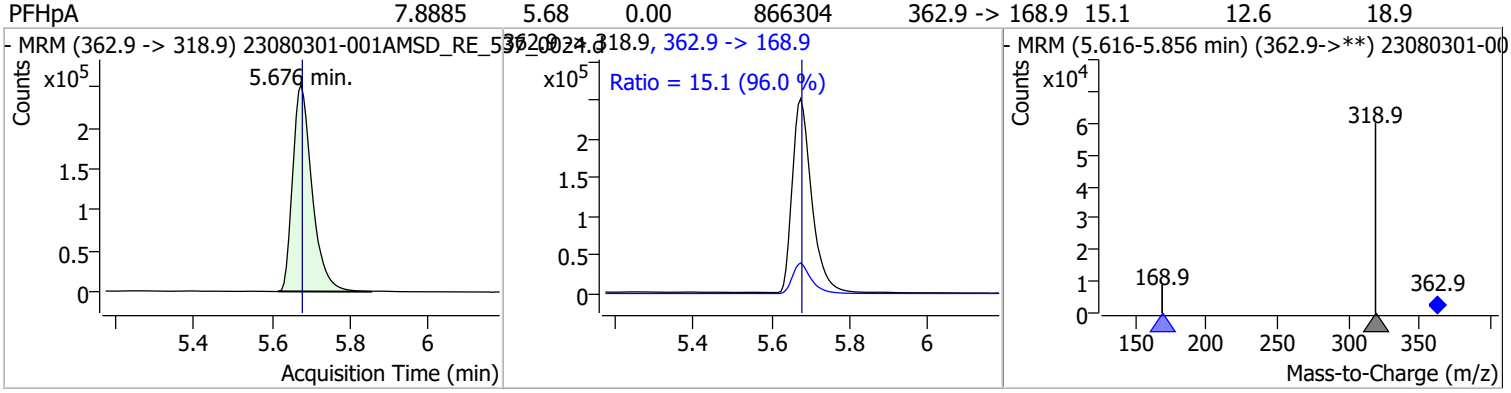
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	6.6648	5.21	-0.01	13951				



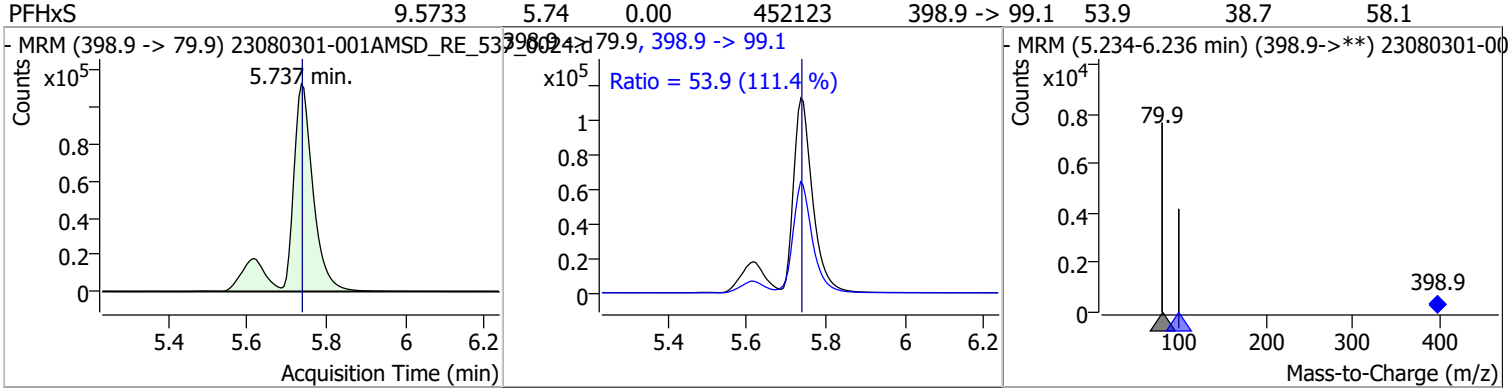
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	5.2212	5.21	-0.01	12586	285.0 -> 184.9	13.5	10.9	16.4



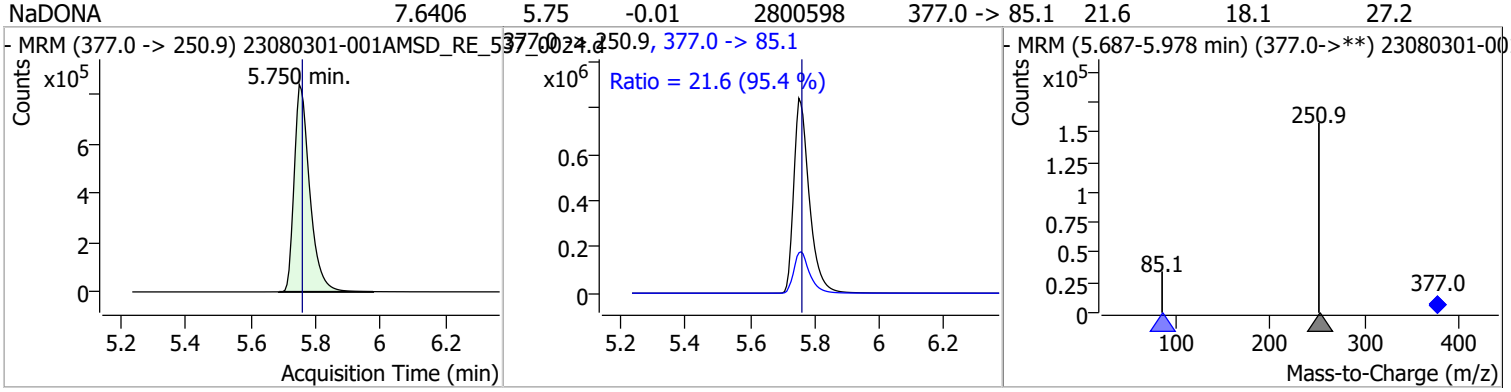
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	7.8885	5.68	0.00	866304	362.9 -> 168.9	15.1	12.6	18.9



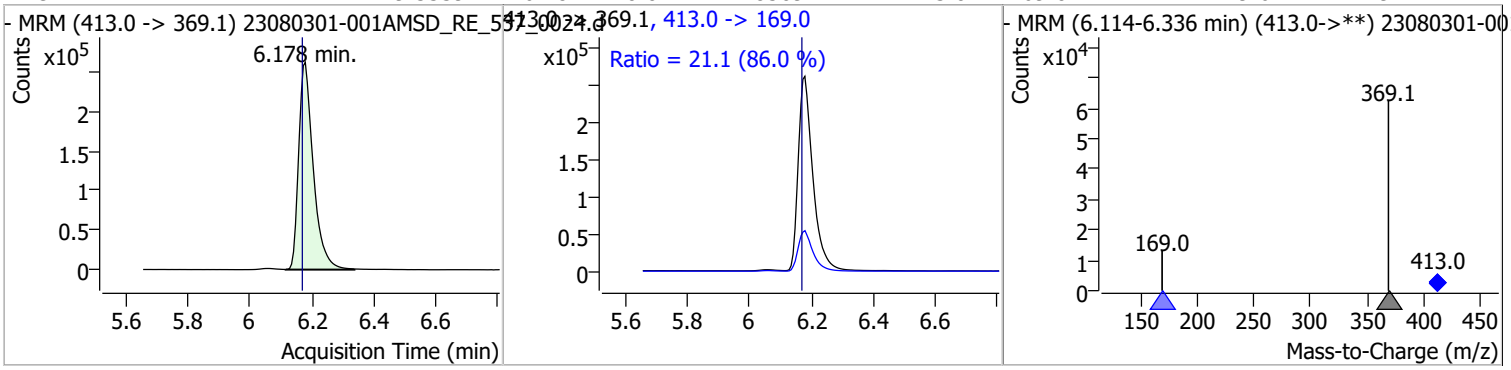
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	9.5733	5.74	0.00	452123	398.9 -> 99.1	53.9	38.7	58.1



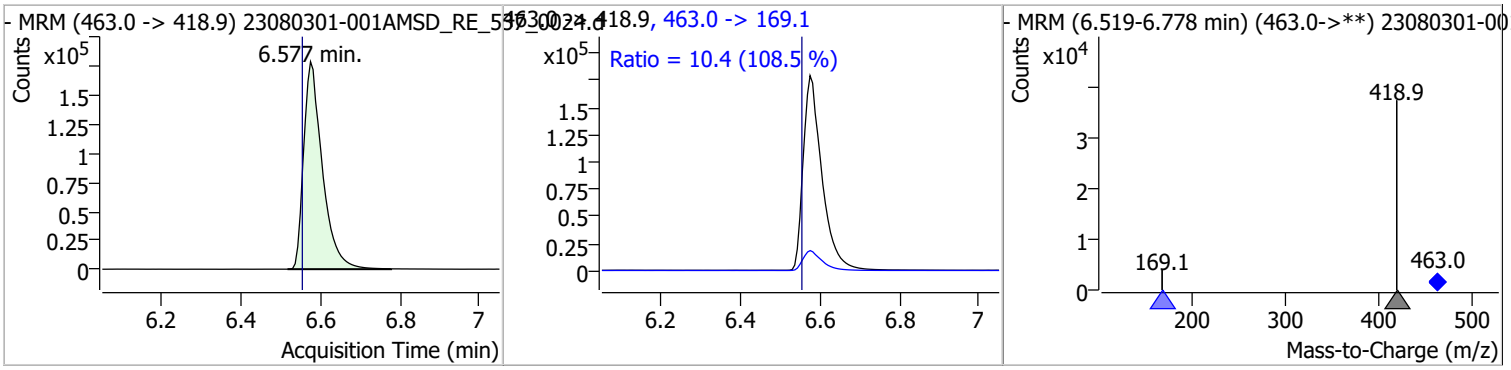
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	7.6406	5.75	-0.01	2800598	377.0 -> 85.1	21.6	18.1	27.2



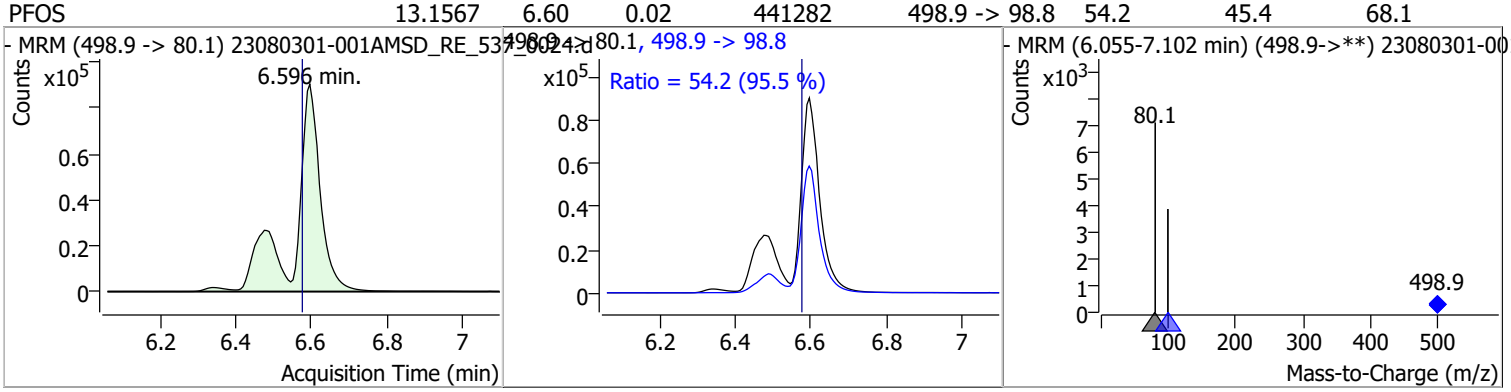
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	9.5339	6.18	0.01	850927	413.0 -> 169.0	21.1	19.6	29.4



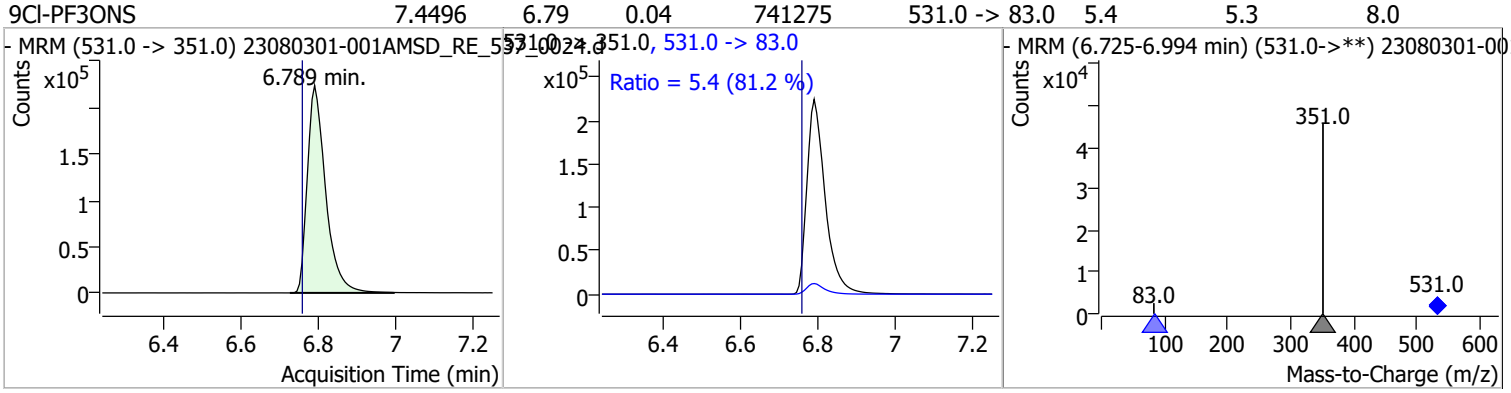
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	10.3093	6.58	0.02	581378	463.0 -> 169.1	10.4	7.7	11.5



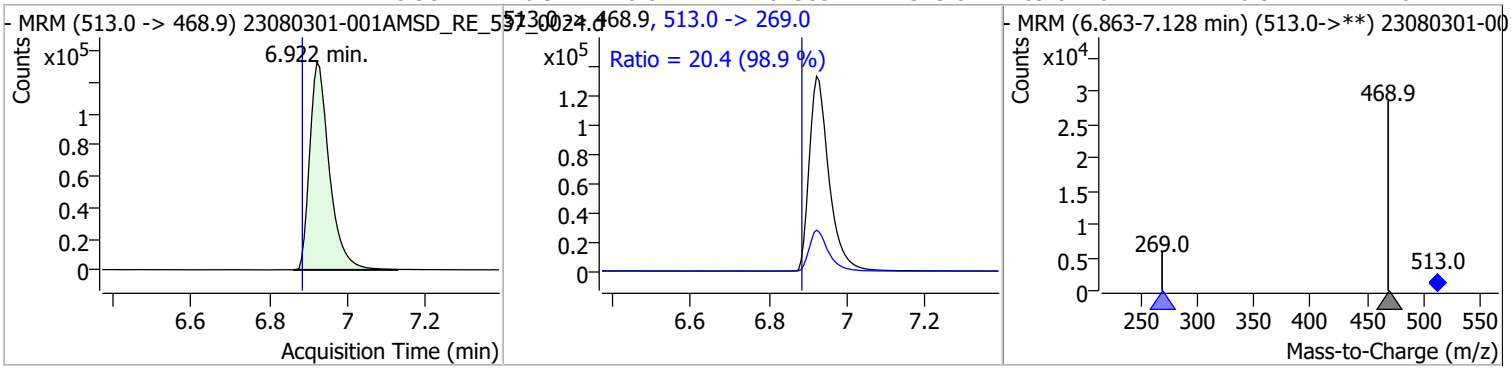
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	13.1567	6.60	0.02	441282	498.9 -> 98.8	54.2	45.4	68.1



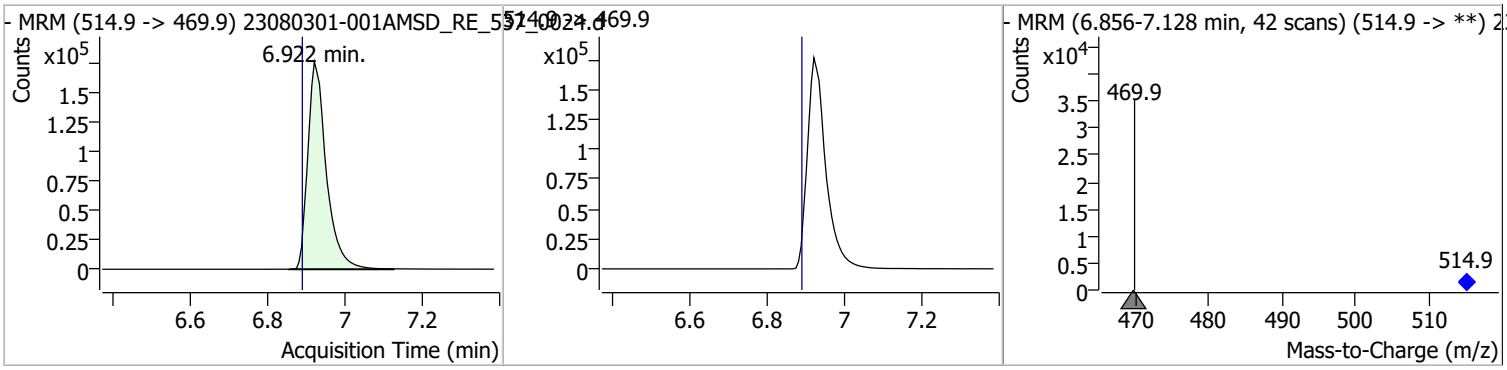
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	7.4496	6.79	0.04	741275	531.0 -> 83.0	5.4	5.3	8.0



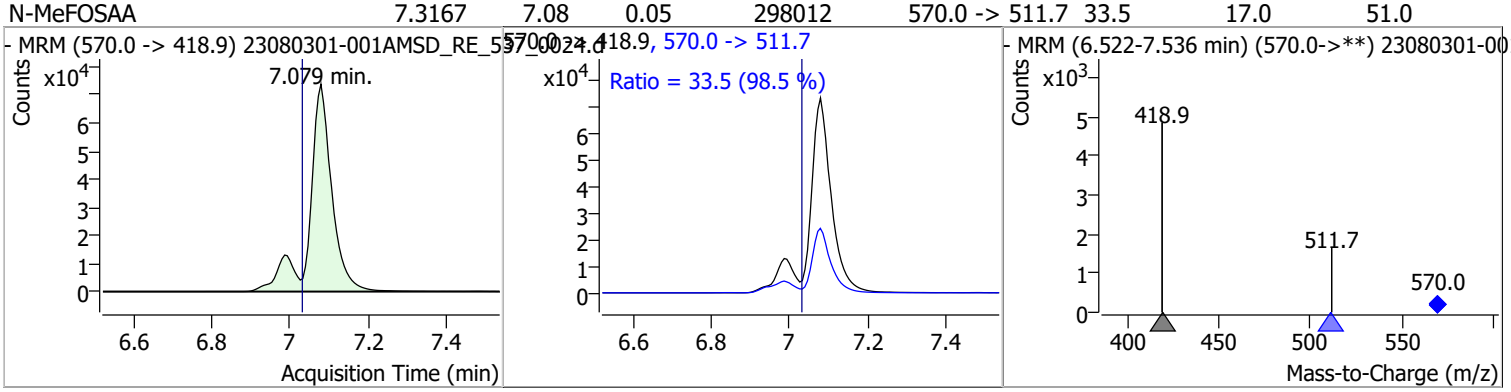
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	8.9077	6.92	0.04	464383	513.0 -> 269.0	20.4	16.5	24.8



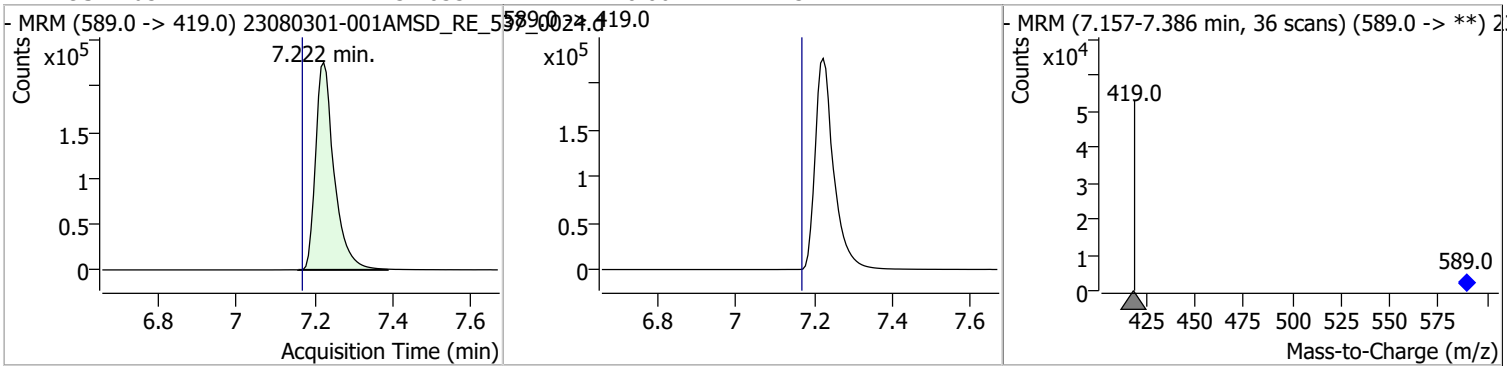
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	11.2323	6.92	0.03	588080				



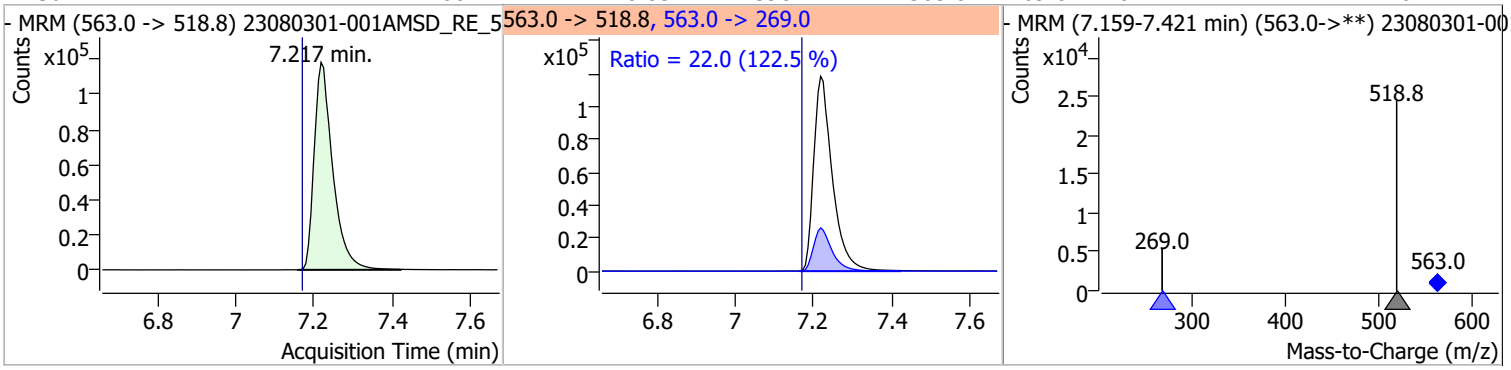
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	7.3167	7.08	0.05	298012	570.0 -> 511.7	33.5	17.0	51.0



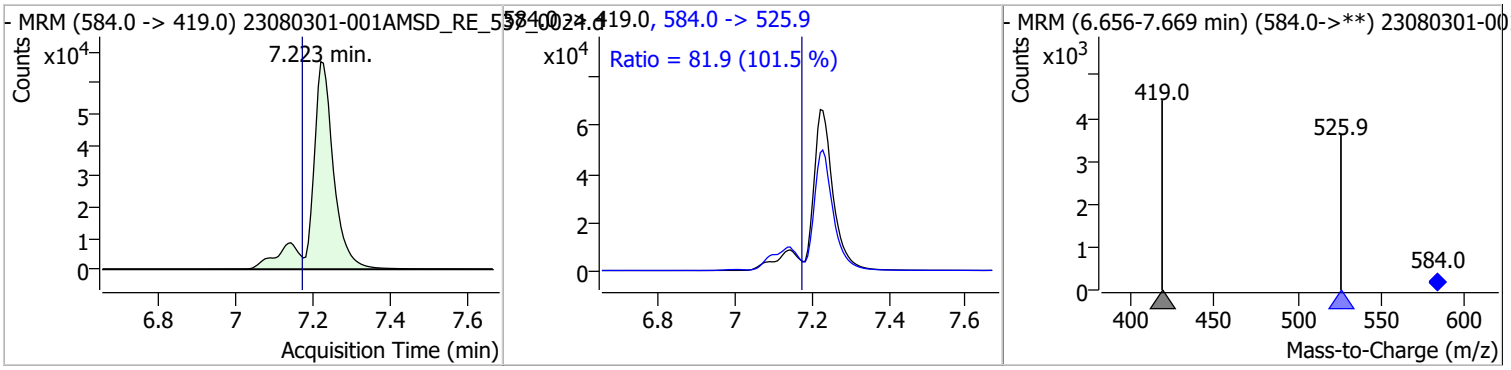
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	34.0332	7.22	0.06	742544				



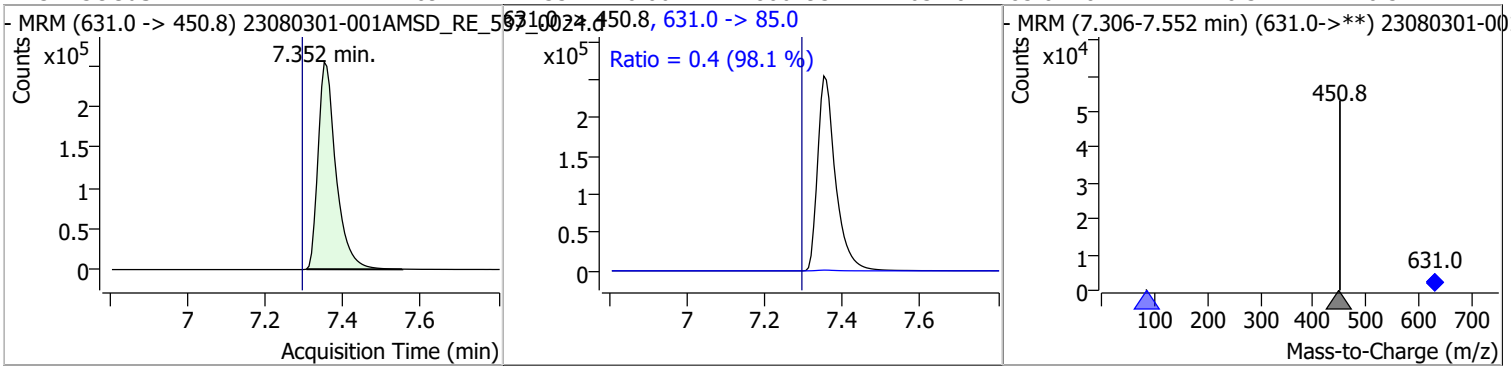
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	7.7280	7.22	0.05	390441	563.0 -> 269.0	22.0	14.4	21.6



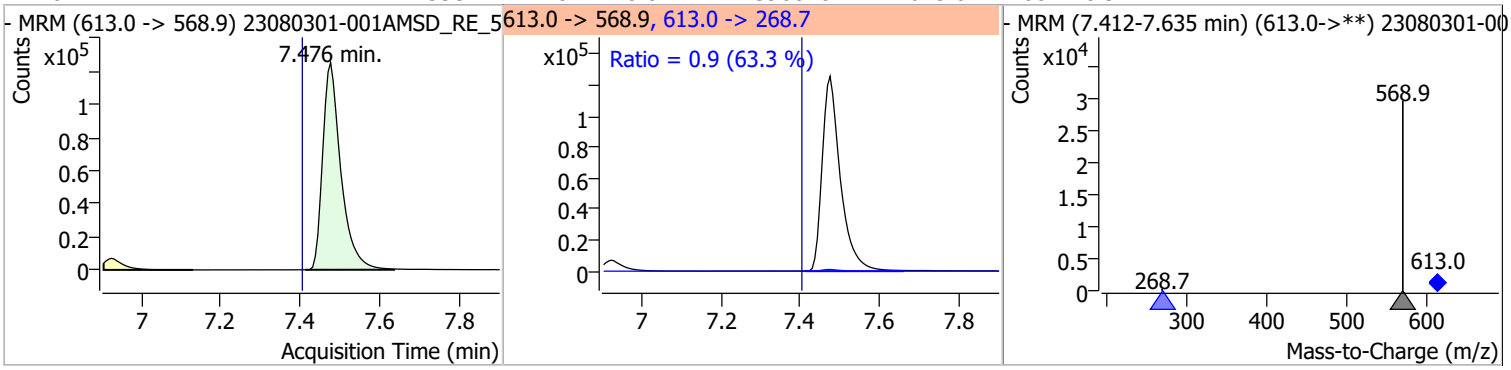
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	7.4913	7.22	0.05	267671	584.0 -> 525.9	81.9	40.4	121.1



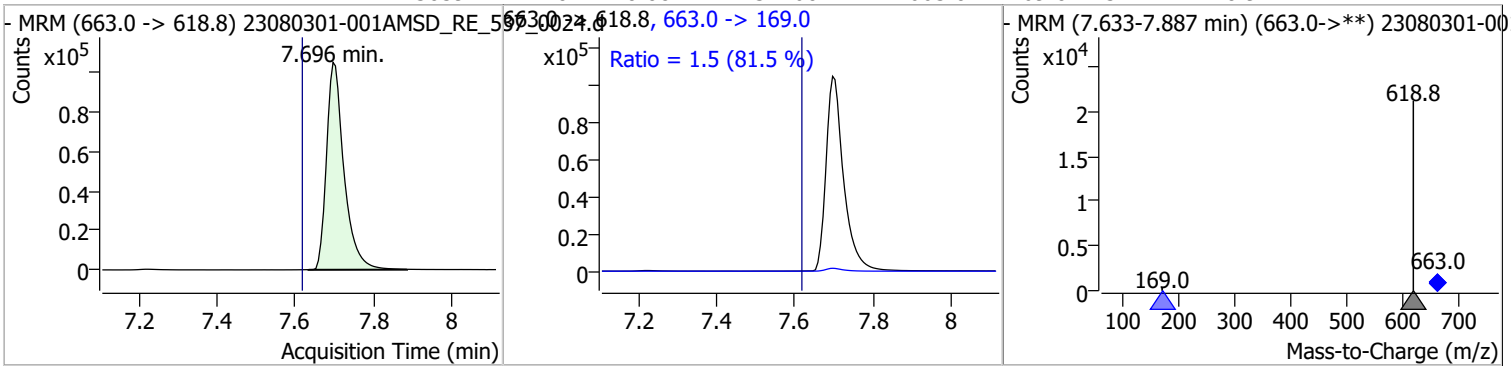
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	7.0924	7.35	0.06	806493	631.0 -> 85.0	0.4	0.3	0.5



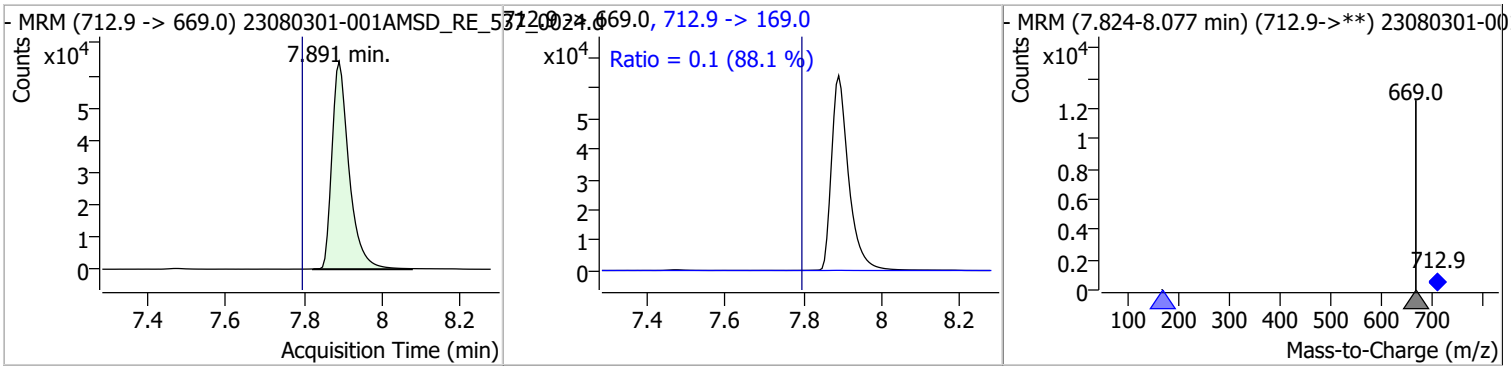
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	7.1993	7.48	0.07	396878	613.0 -> 268.7	0.9	1.1	1.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	7.3059	7.70	0.08	327601	663.0 -> 169.0	1.5	0.9	2.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	7.3674	7.89	0.10	195143	712.9 -> 169.0	0.1	0.0	0.1



Quantitation Results Report

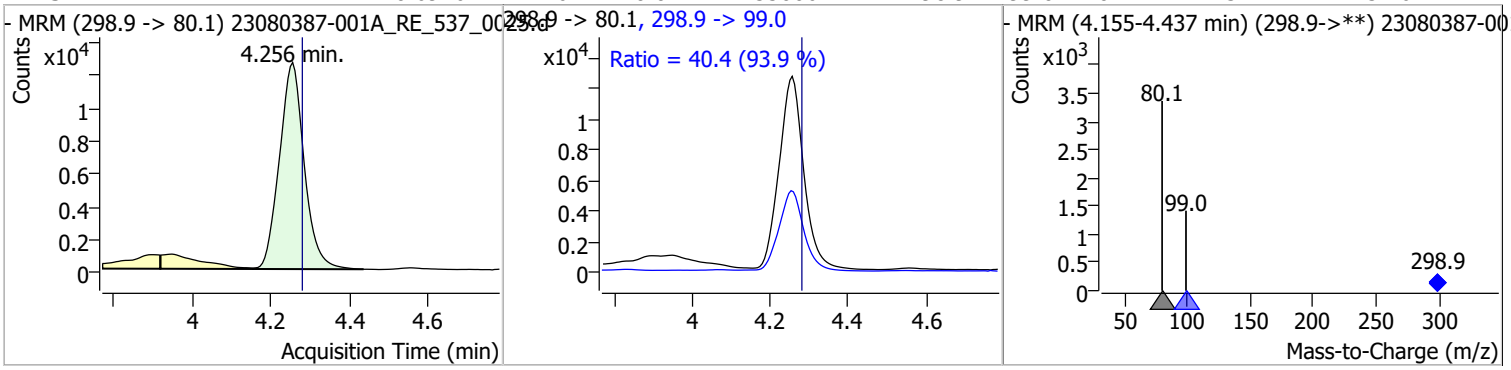
Agilent | Trusted Answers

Data File	23080387-001A_RE_537_0025.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 10:43:07 AM
Sample Name	23080387-001A	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

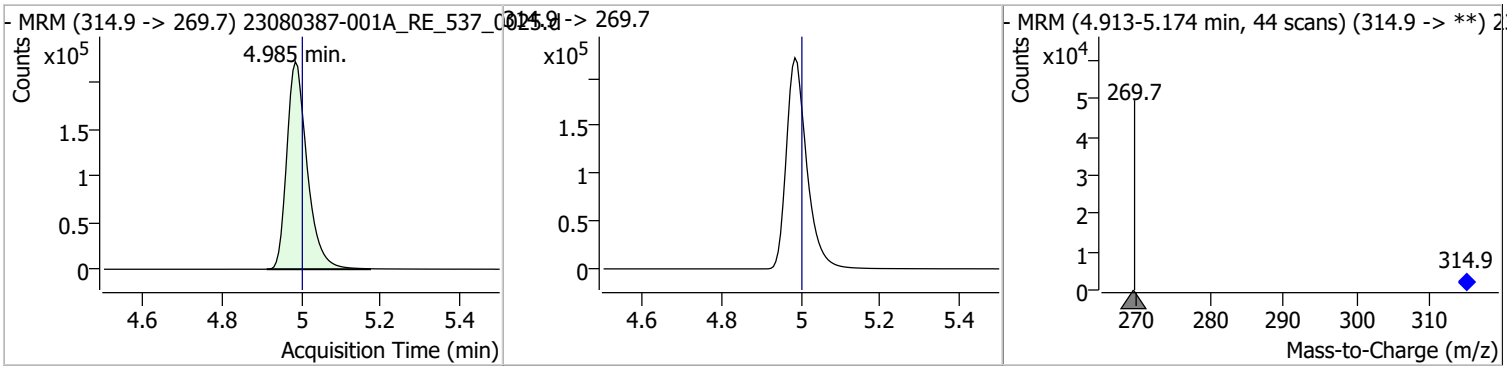
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.595	502.9 -> 80.1	948443	3.0000	ng/ml		0.023
13C2-PFOA	6.177	415.0 -> 370.0	1136505	1.0000	ng/ml		0.014
NMeFOSAA-d3	7.079	573.0 -> 418.9	1782892	4.0000	ng/ml		0.051
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	790448	6.6598	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 66.60%		*	
13C3-HFPO-DA	5.207	287.0 -> 169.0	16472	6.6808	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 66.81%		*	
13C2-PFDA	6.922	514.9 -> 469.9	538087	8.7256	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 87.26%			
NETFOSAA-d5	7.222	589.0 -> 419.0	682007	31.7320	ng/ml		0.058
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 79.33%			
Target Compounds							QValue
PFBS	4.256	298.9 -> 80.1	55006	0.6926	ng/ml		96
PFHxA	4.986	313.0 -> 269.0	118257	0.7810	ng/ml		100
HFPO-DA	5.220	285.0 -> 169.1	120	0.0429	ng/ml		66
PFHpA	5.670	362.9 -> 318.9	43021	0.3326	ng/ml		100
PFHxS	5.737	398.9 -> 79.9	21205	0.4350	ng/ml		100
NaDONA	5.756	377.0 -> 250.9	915	0.0022	ng/ml	#	80
PFOA	6.171	413.0 -> 369.1	78290	0.7447	ng/ml	m	92
PFNA	6.577	463.0 -> 418.9	6253	0.0954	ng/ml	#	82
PFOS	6.596	498.9 -> 80.1	29636	0.8564	ng/ml		98
9Cl-PF3ONS	6.704	531.0 -> 351.0	92	0.0009	ng/ml	#	91
PFDA	6.922	513.0 -> 468.9	5082	0.0855	ng/ml		99
N-MeFOSAA	7.079	570.0 -> 418.9	668	0.0174	ng/ml		74
PFUdA	7.217	563.0 -> 518.8	1048	0.0176	ng/ml		96
N-EtFOSAA	7.223	584.0 -> 419.0	945	0.0277	ng/ml		70
11ClPF3OUdS	7.352	631.0 -> 450.8	129	0.0011	ng/ml	#	90
PFDoA	6.918	613.0 -> 568.9	21690	0.3344	ng/ml	#	97
PFTrDA	7.474	663.0 -> 618.8	226	0.0044	ng/ml		98
PFTA	7.806	712.9 -> 669.0	84	0.0027	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

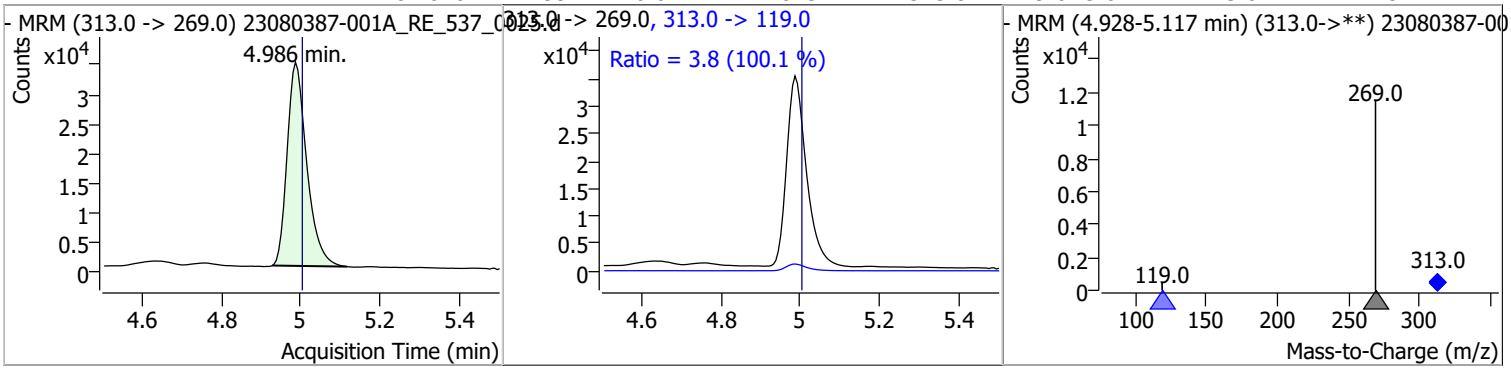
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.6926	4.26	-0.02	55006	298.9 -> 99.0	40.4	34.4	51.6



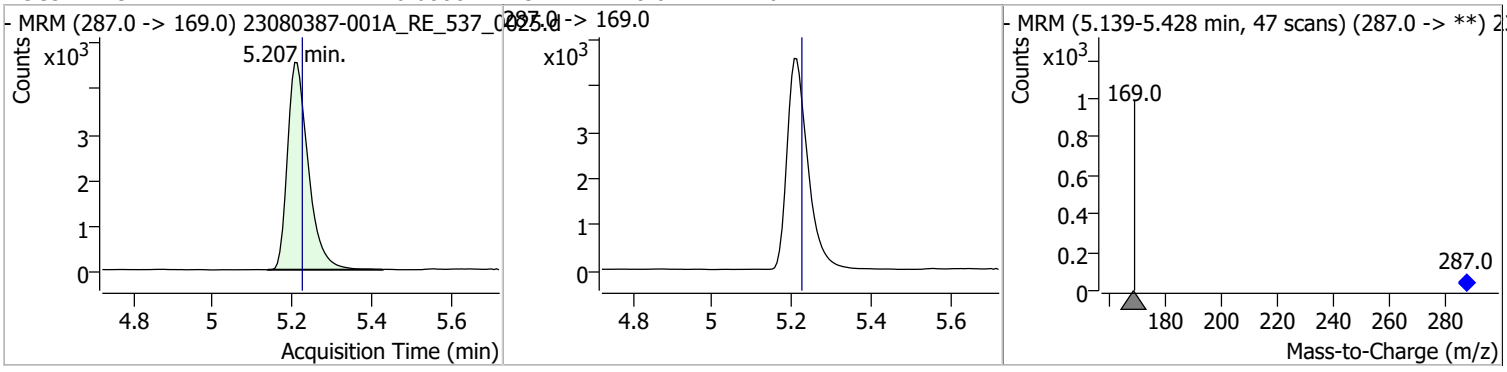
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	6.6598	4.99	-0.01	790448				



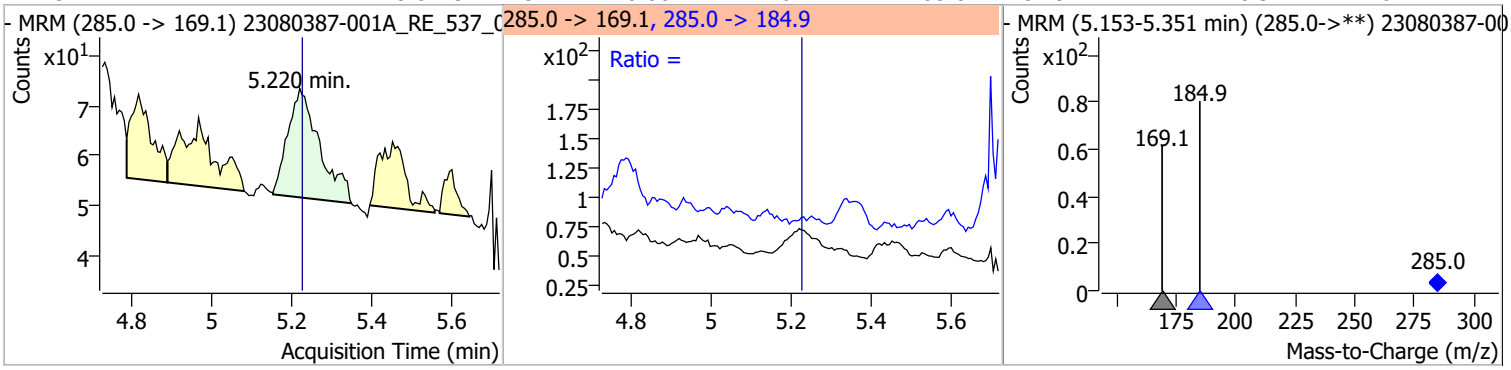
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.7810	4.99	-0.01	118257	313.0 -> 119.0	3.8	3.0	4.5



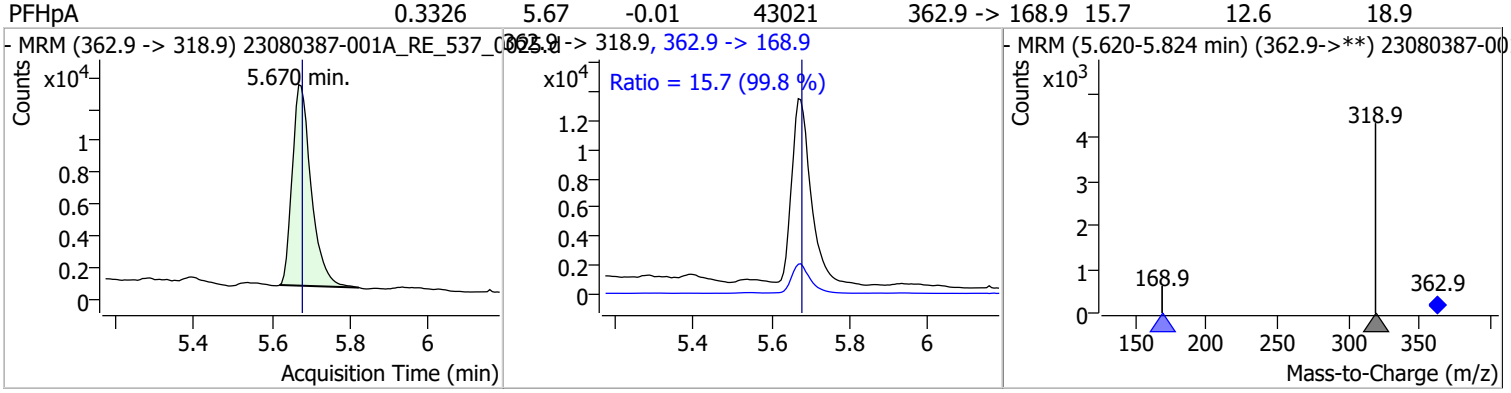
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	6.6808	5.21	-0.02	16472				



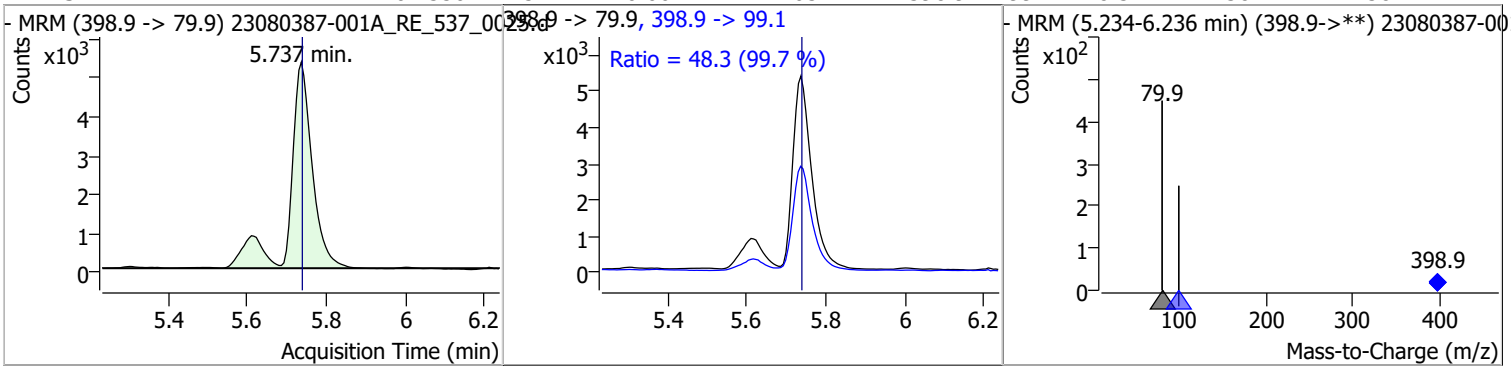
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0429	5.22	0.00	120	285.0 -> 184.9		10.9	16.4



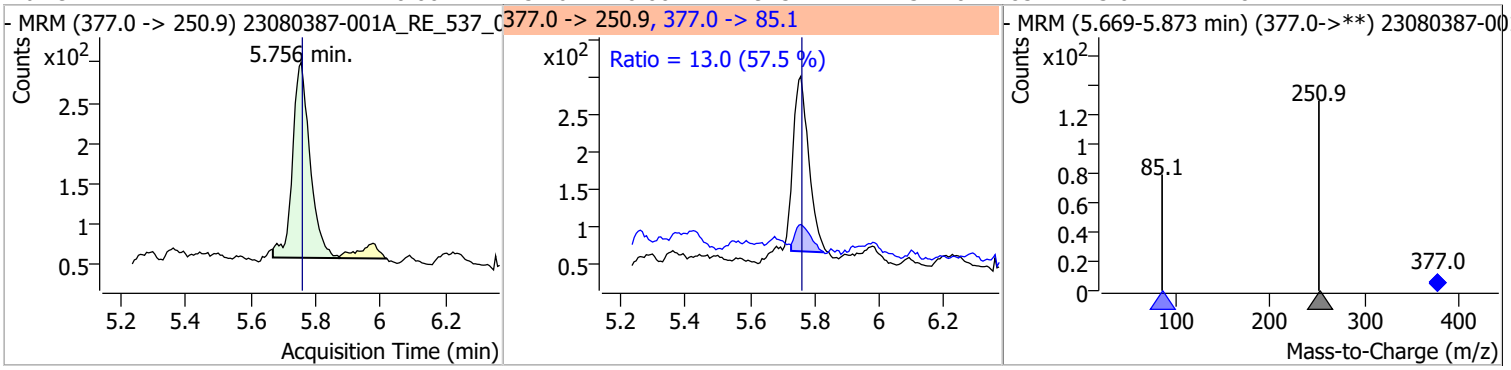
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.3326	5.67	-0.01	43021	362.9 -> 168.9	15.7	12.6	18.9



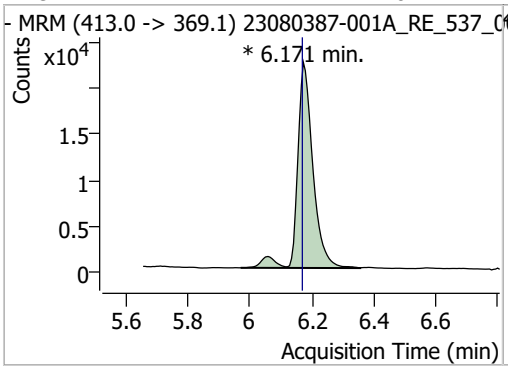
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.4350	5.74	0.00	21205	398.9 -> 99.1	48.3	38.7	58.1

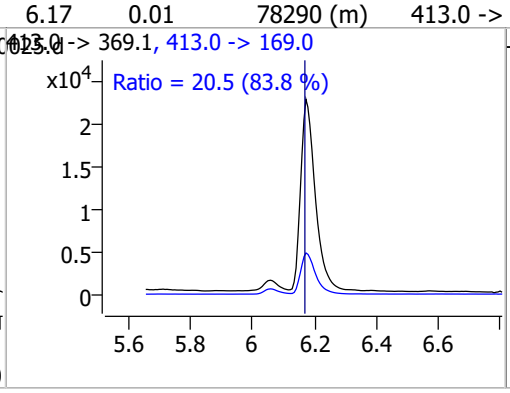


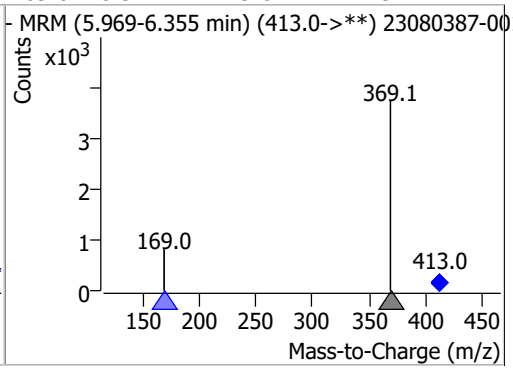
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0022	5.76	0.00	915	377.0 -> 85.1	13.0	18.1	27.2



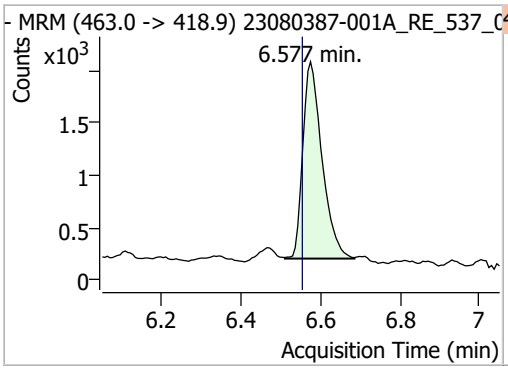
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.7447	6.17	0.01	78290 (m)	413.0 -> 169.0	20.5	19.6	29.4

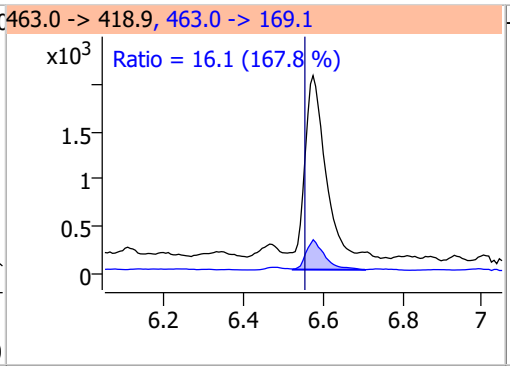


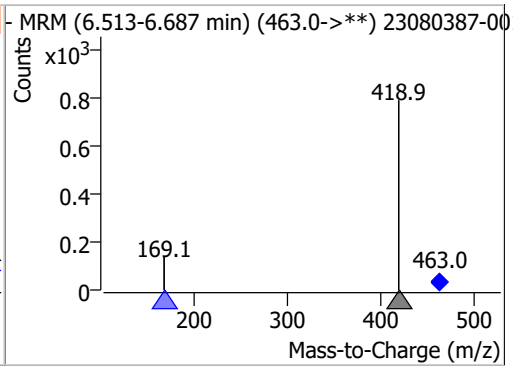




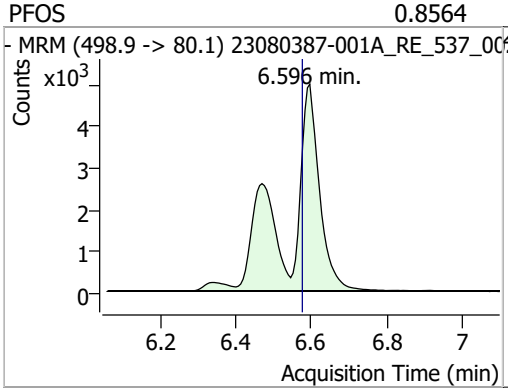
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.0954	6.58	0.02	6253	463.0 -> 169.1	16.1	7.7	11.5

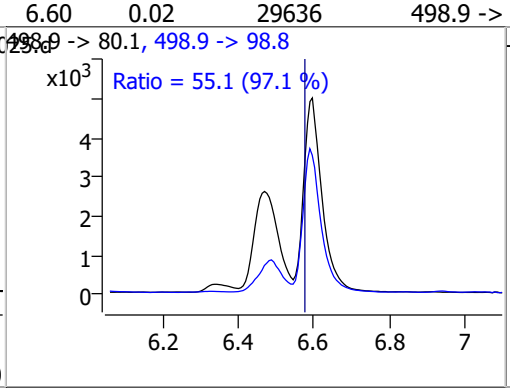


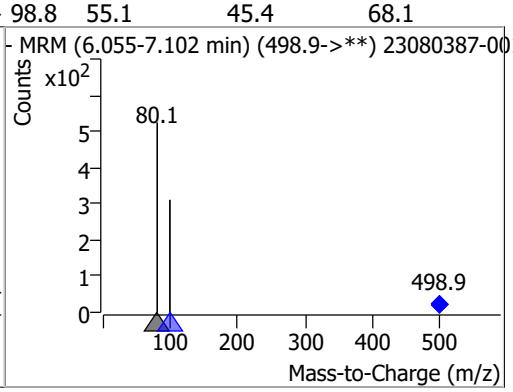




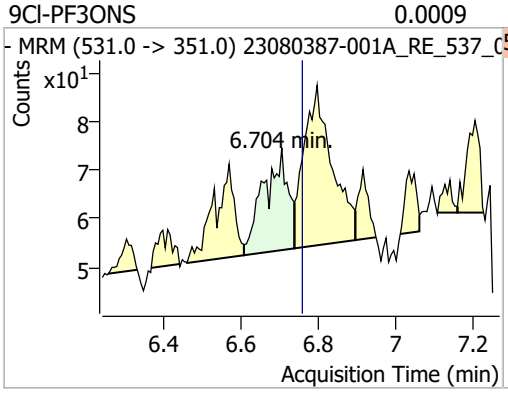
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.8564	6.60	0.02	29636	498.9 -> 98.8	55.1	45.4	68.1

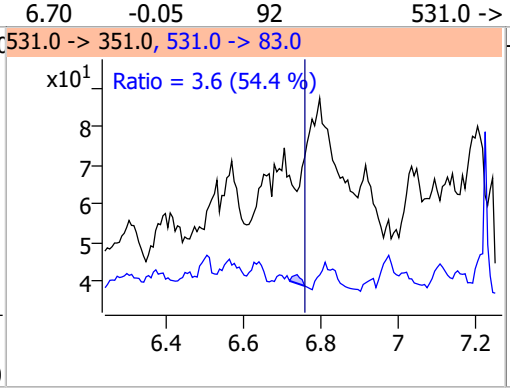


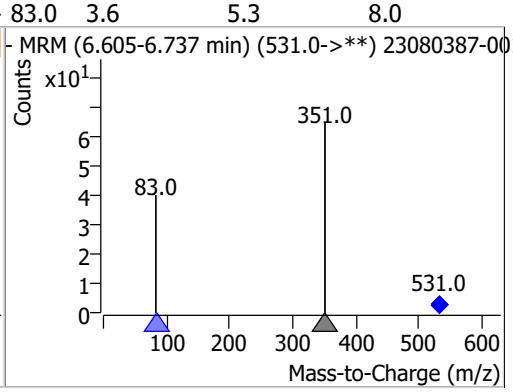




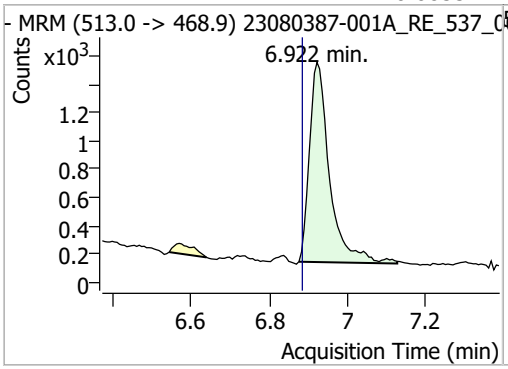
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0009	6.70	-0.05	92	531.0 -> 83.0	3.6	5.3	8.0

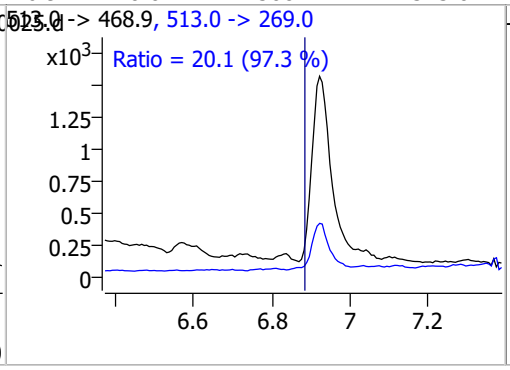


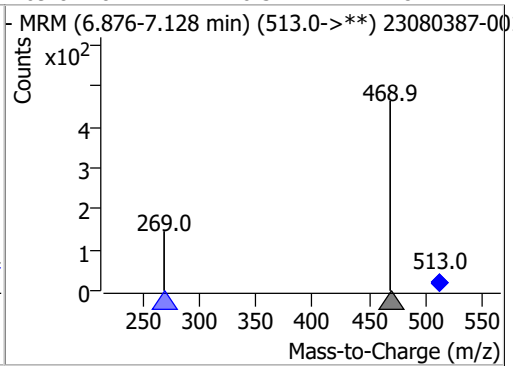




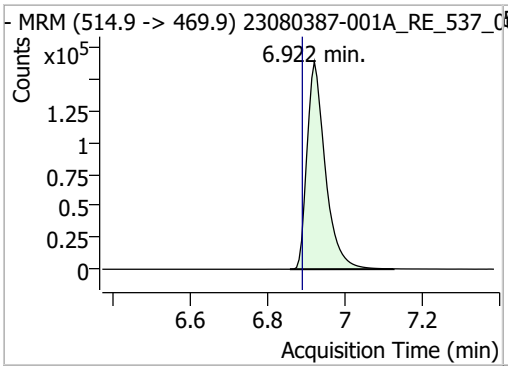
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0855	6.92	0.04	5082	513.0 -> 269.0	20.1	16.5	24.8

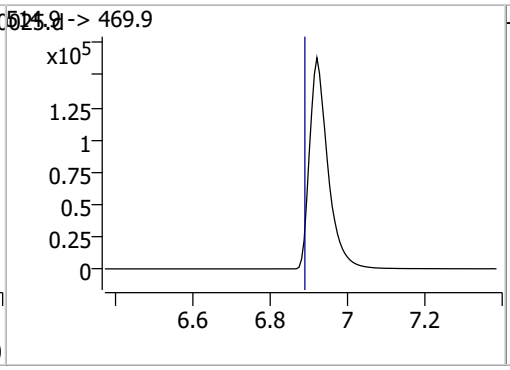


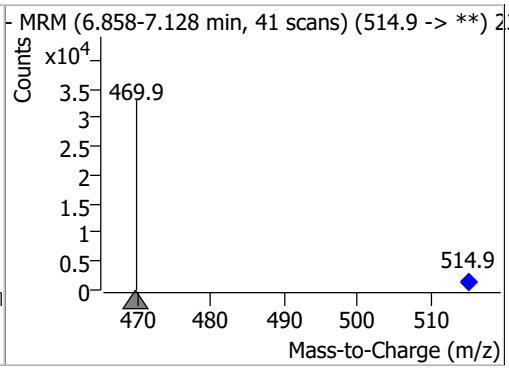




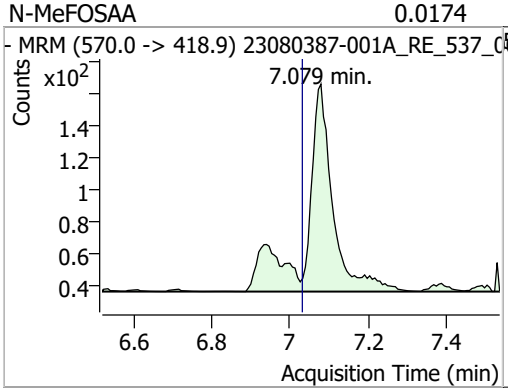
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	8.7256	6.92	0.03	538087				

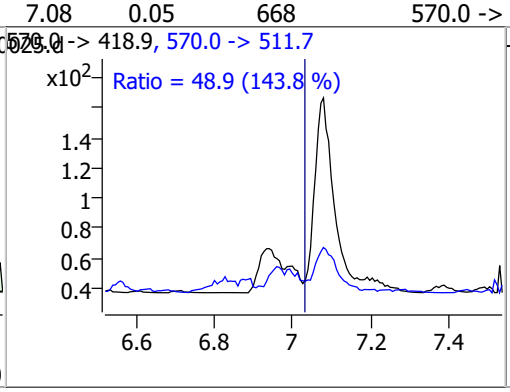


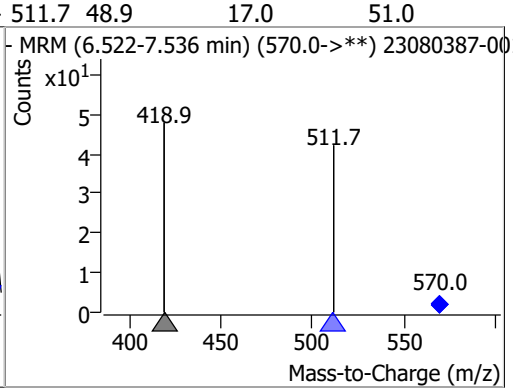




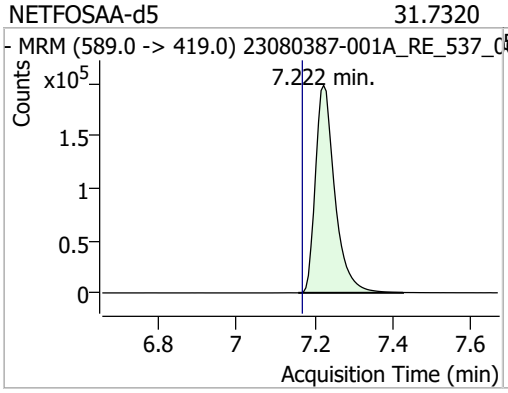
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0174	7.08	0.05	668	570.0 -> 511.7	48.9	17.0	51.0

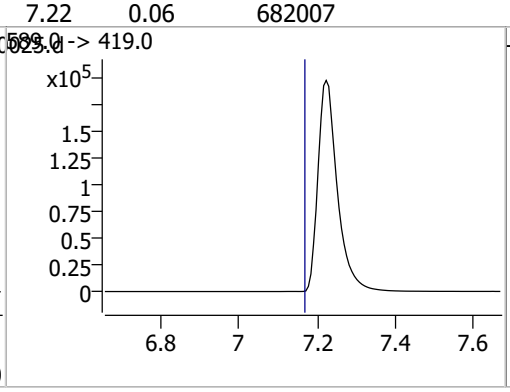


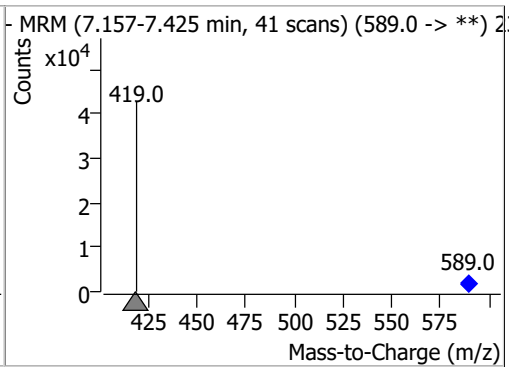




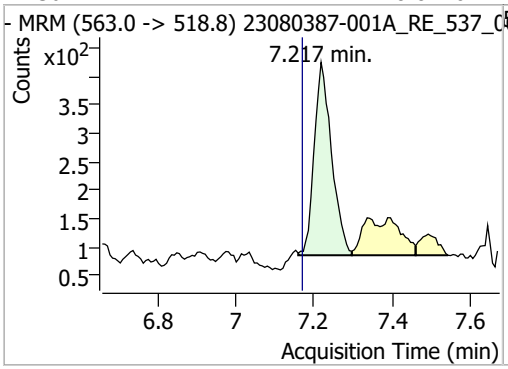
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	31.7320	7.22	0.06	682007				

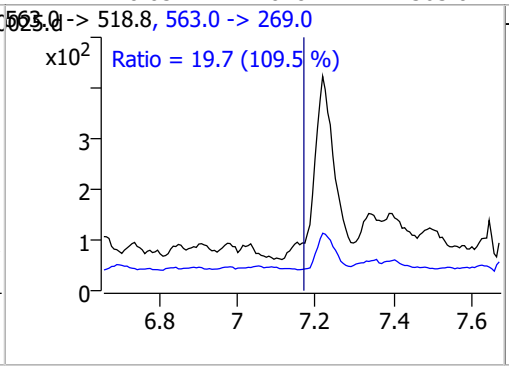


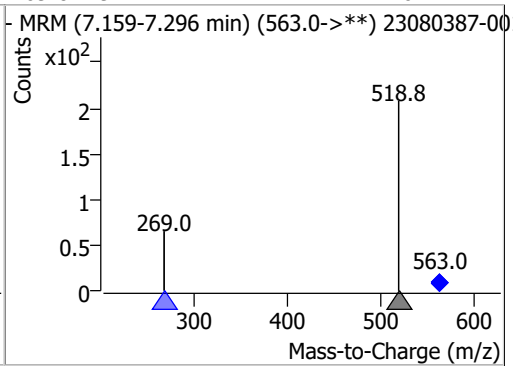




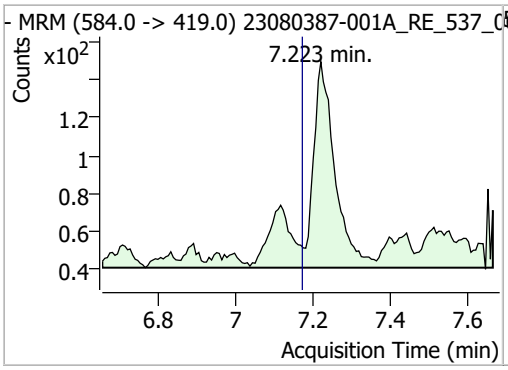
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0176	7.22	0.05	1048	563.0 -> 269.0	19.7	14.4	21.6

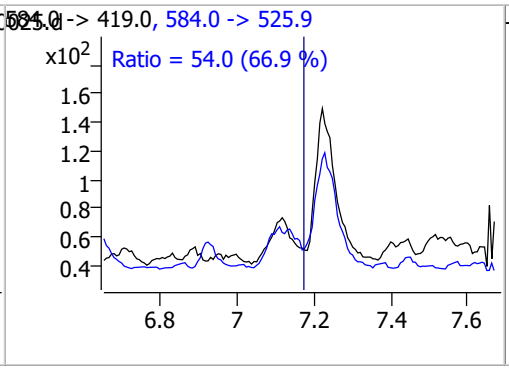


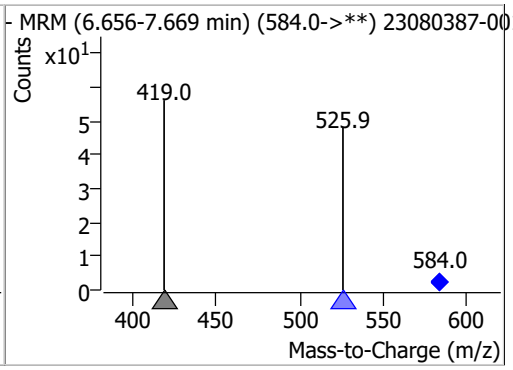




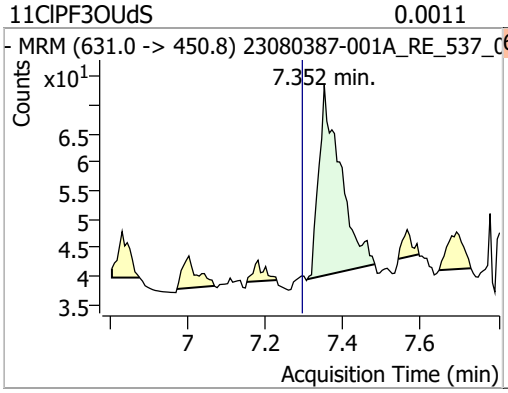
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0277	7.22	0.05	945	584.0 -> 525.9	54.0	40.4	121.1

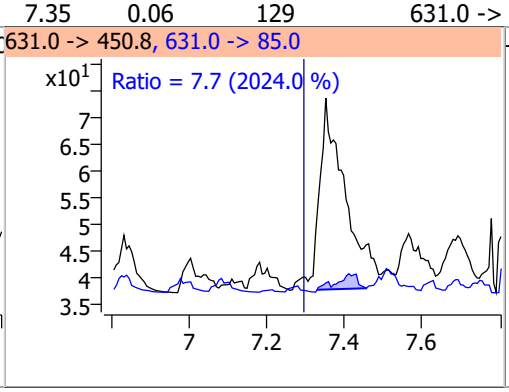


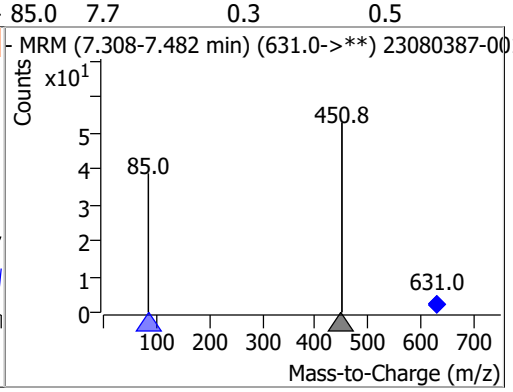




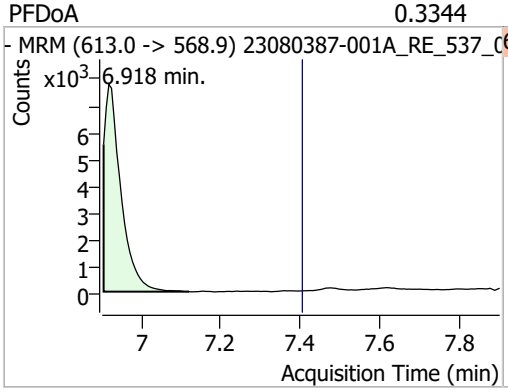
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0011	7.35	0.06	129	631.0 -> 85.0	7.7	0.3	0.5

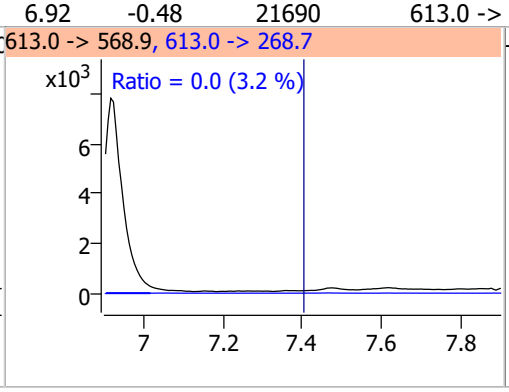


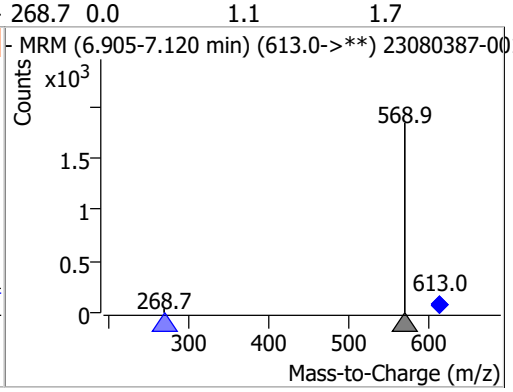




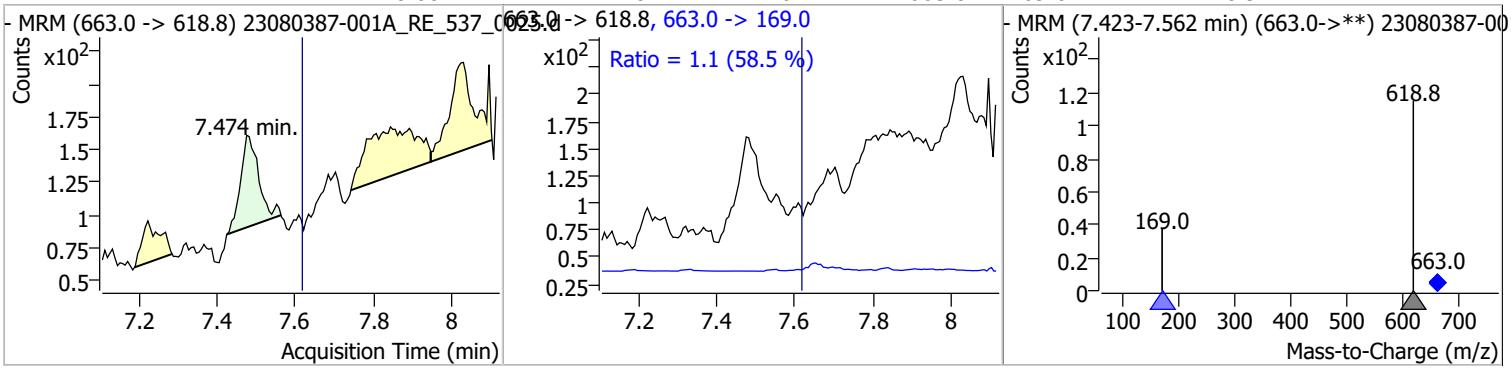
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.3344	6.92	-0.48	21690	613.0 -> 268.7	0.0	1.1	1.7



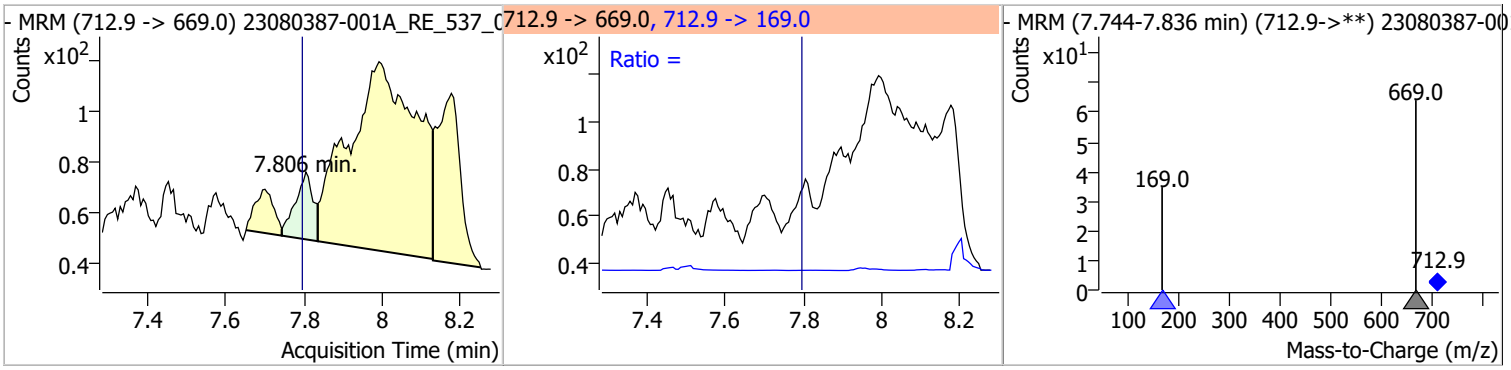




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0044	7.47	-0.14	226	663.0 -> 169.0	1.1	0.9	2.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0027	7.81	0.01	84	712.9 -> 169.0		0.0	0.1



Quantitation Results Report

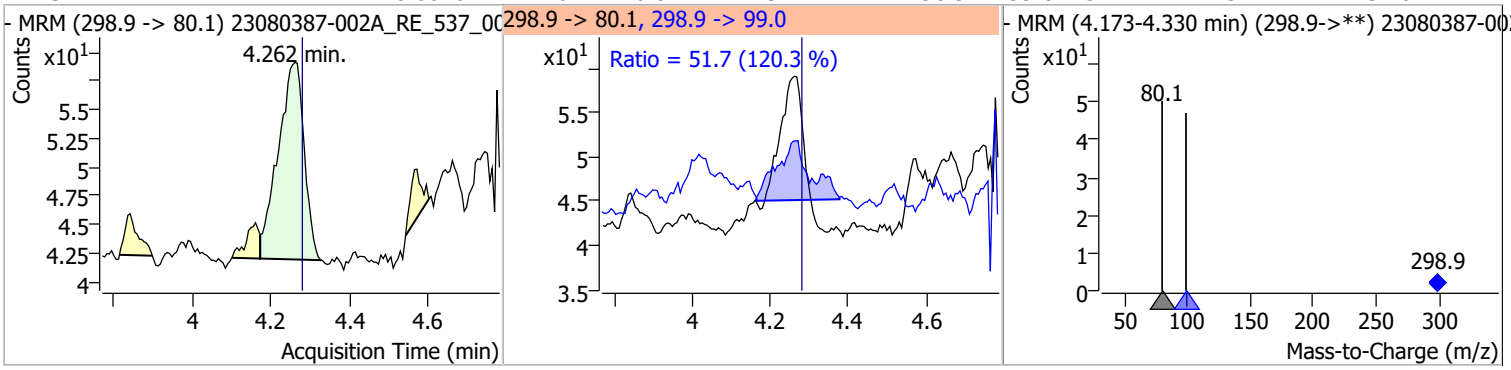
Agilent | Trusted Answers

Data File	23080387-002A_RE_537_0026.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 10:55:51 AM
Sample Name	23080387-002A	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

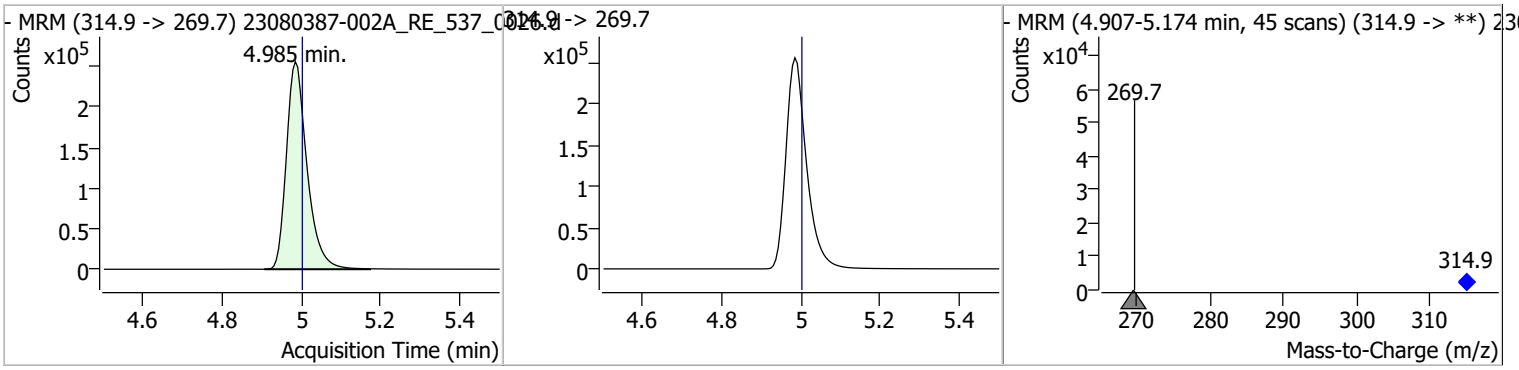
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	931540	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	1176943	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1829376	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	921688	7.4987	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 74.99%			
13C3-HFPO-DA	5.207	287.0 -> 169.0	16911	6.6231	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 66.23%		*	
13C2-PFDA	6.928	514.9 -> 469.9	522341	8.1792	ng/ml		0.041
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 81.79%			
NETFOSAA-d5	7.222	589.0 -> 419.0	644324	29.2170	ng/ml		0.058
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 73.04%			
Target Compounds							QValue
PFBS	4.262	298.9 -> 80.1	79	0.0010	ng/ml	#	86
PFHxA	4.986	313.0 -> 269.0	1271	0.0081	ng/ml	#	96
HFPO-DA	5.220	285.0 -> 169.1	76	0.0261	ng/ml	#	91
PFHpA	5.670	362.9 -> 318.9	436	0.0033	ng/ml	#	88
PFHxS	6.230	398.9 -> 79.9	154	0.0032	ng/ml	#	1
NaDONA	5.750	377.0 -> 250.9	500	0.0012	ng/ml	#	90
PFOA	6.171	413.0 -> 369.1	734	0.0067	ng/ml		96
PFNA	6.590	463.0 -> 418.9	249	0.0037	ng/ml	#	87
PFOS	6.596	498.9 -> 80.1	574	0.0169	ng/ml	#	71
9Cl-PF3ONS	6.836	531.0 -> 351.0	44	0.0004	ng/ml	#	46
PFDA	6.850	513.0 -> 468.9	20	0.0003	ng/ml		56
N-MeFOSAA	7.073	570.0 -> 418.9	306	0.0078	ng/ml	#	61
PFUdA	7.211	563.0 -> 518.8	176	0.0029	ng/ml	#	73
N-EtFOSAA	7.242	584.0 -> 419.0	776	0.0222	ng/ml	#	36
11ClPF3OUdS	7.352	631.0 -> 450.8	67	0.0006	ng/ml		99
PFDoA	6.925	613.0 -> 568.9	24803	0.3692	ng/ml	#	96
PFTrDA	7.696	663.0 -> 618.8	129	0.0024	ng/ml	#	94
PFTA	7.781	712.9 -> 669.0	115	0.0036	ng/ml	#	99

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

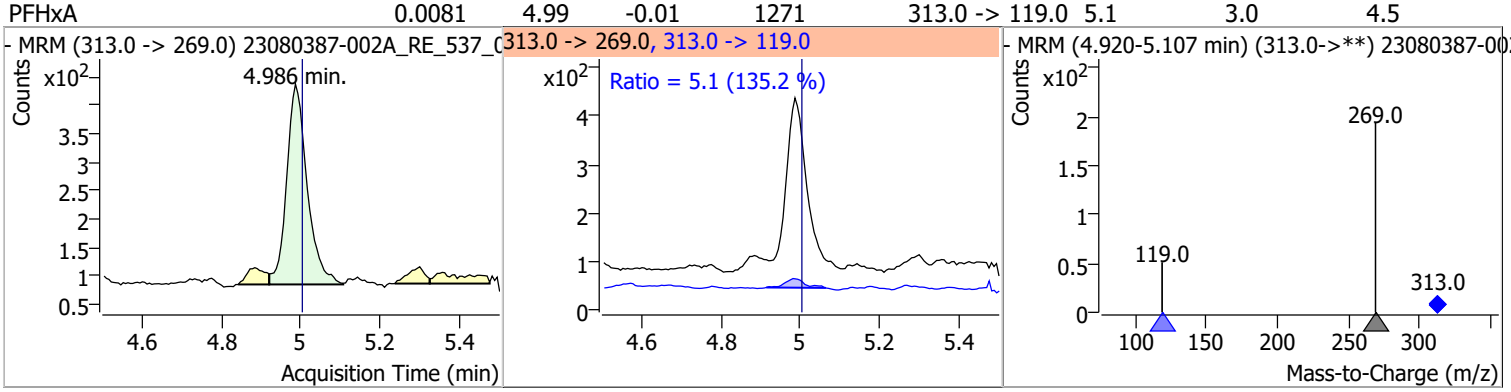
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.0010	4.26	-0.02	79	298.9 -> 99.0	51.7	34.4	51.6



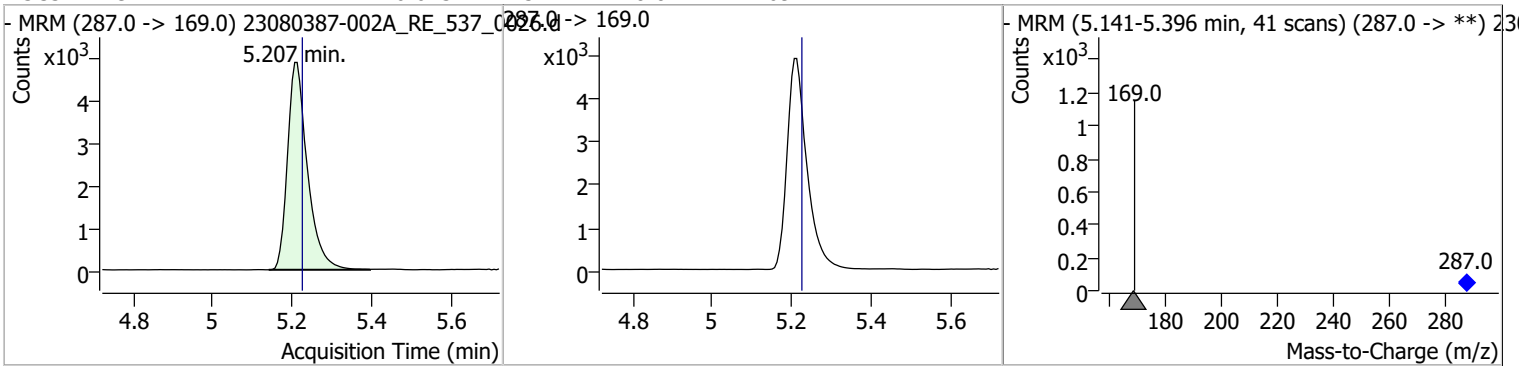
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	7.4987	4.99	-0.01	921688				



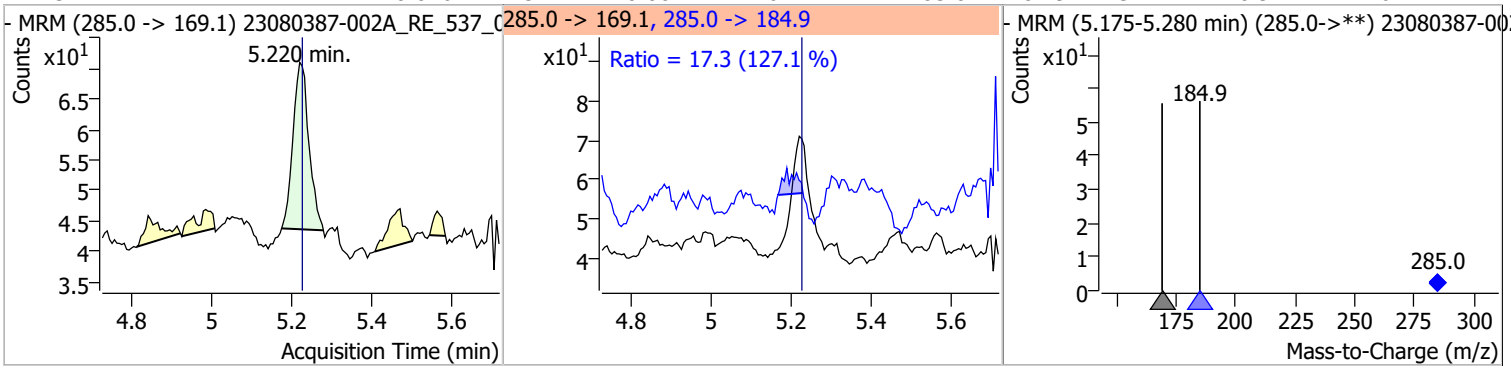
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.0081	4.99	-0.01	1271	313.0 -> 119.0	5.1	3.0	4.5



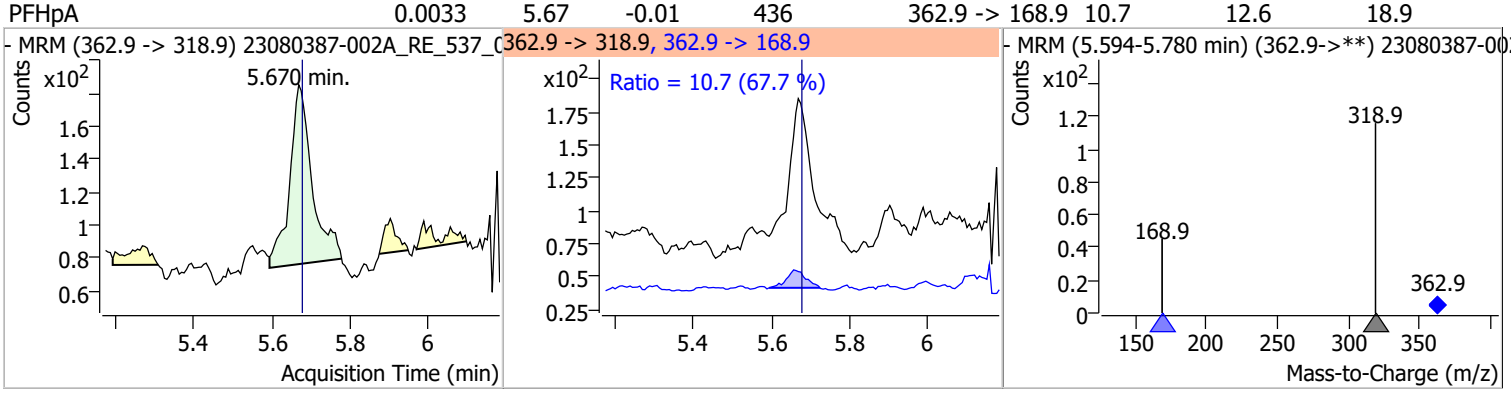
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	6.6231	5.21	-0.02	16911				



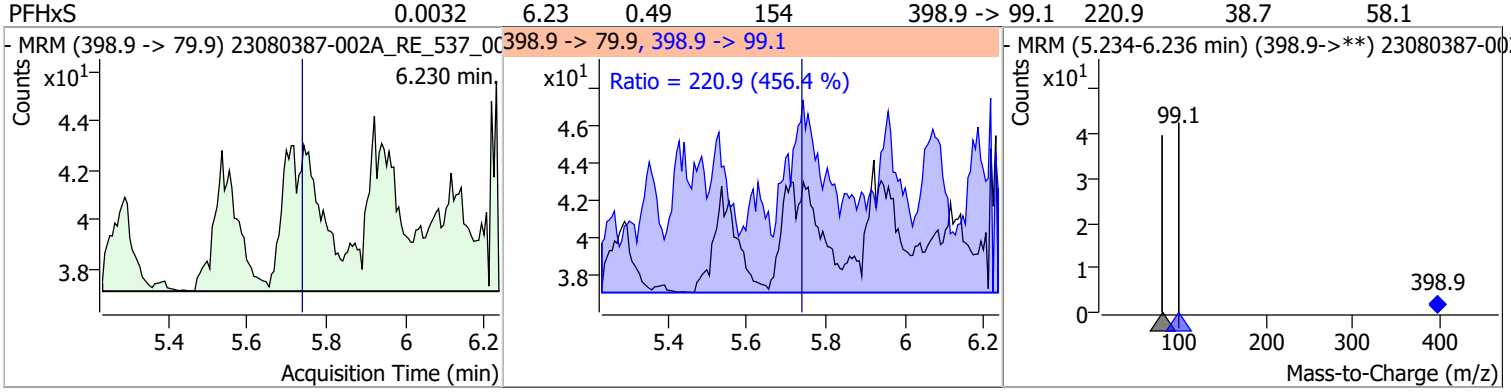
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0261	5.22	0.00	76	285.0 -> 184.9	17.3	10.9	16.4



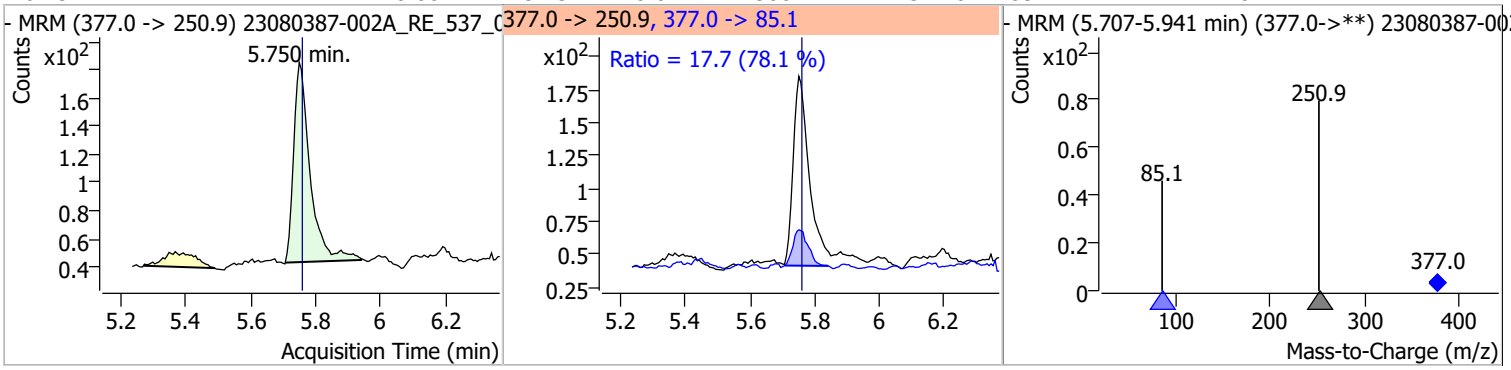
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.0033	5.67	-0.01	436	362.9 -> 168.9	10.7	12.6	18.9



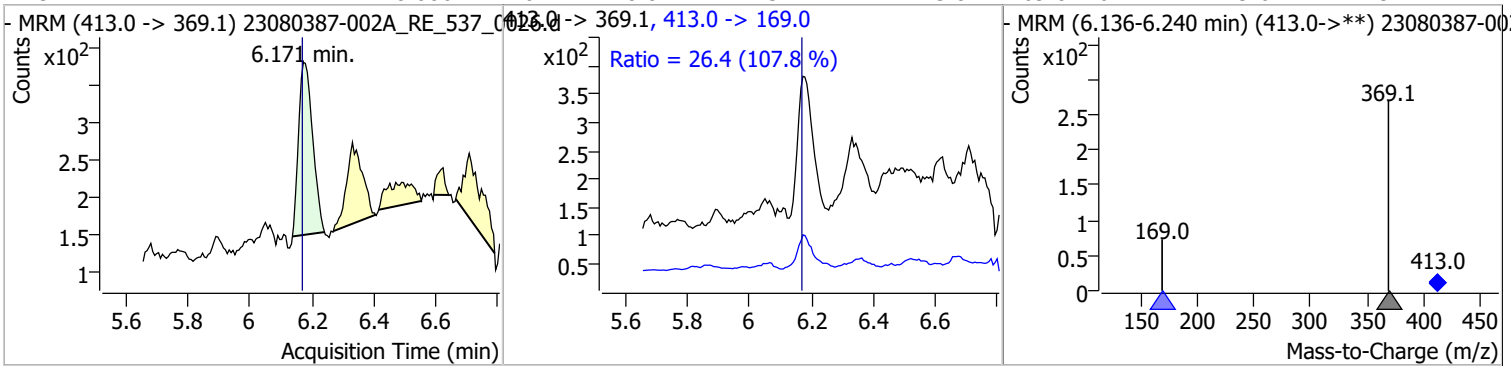
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.0032	6.23	0.49	154	398.9 -> 99.1	220.9	38.7	58.1



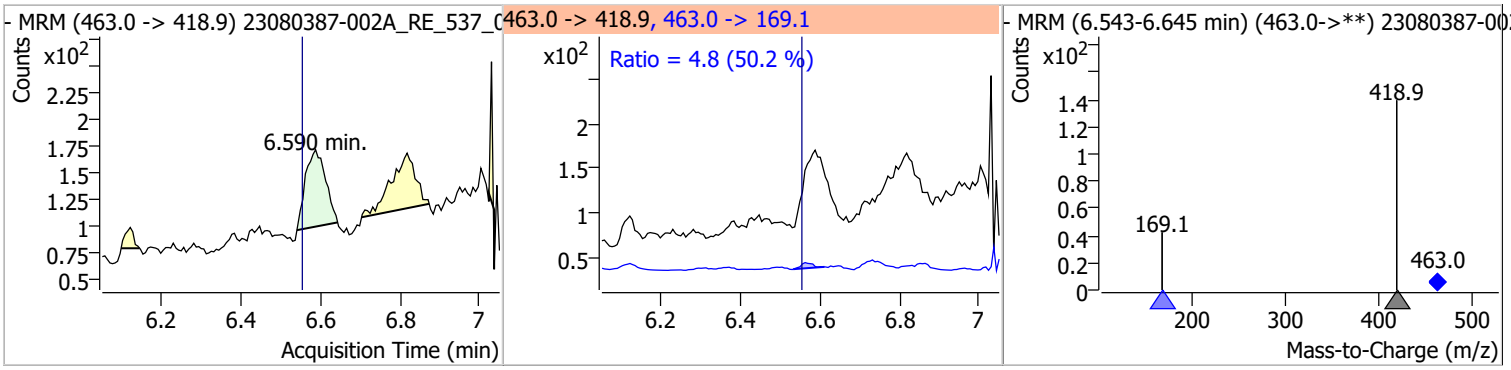
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0012	5.75	-0.01	500	377.0 -> 85.1	17.7	18.1	27.2



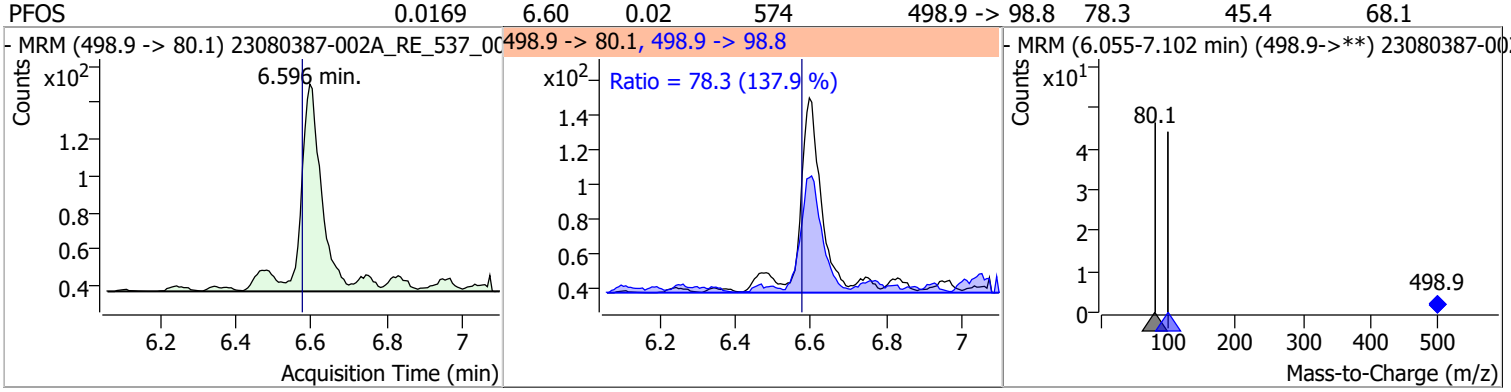
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.0067	6.17	0.01	734	413.0 -> 169.0	26.4	19.6	29.4



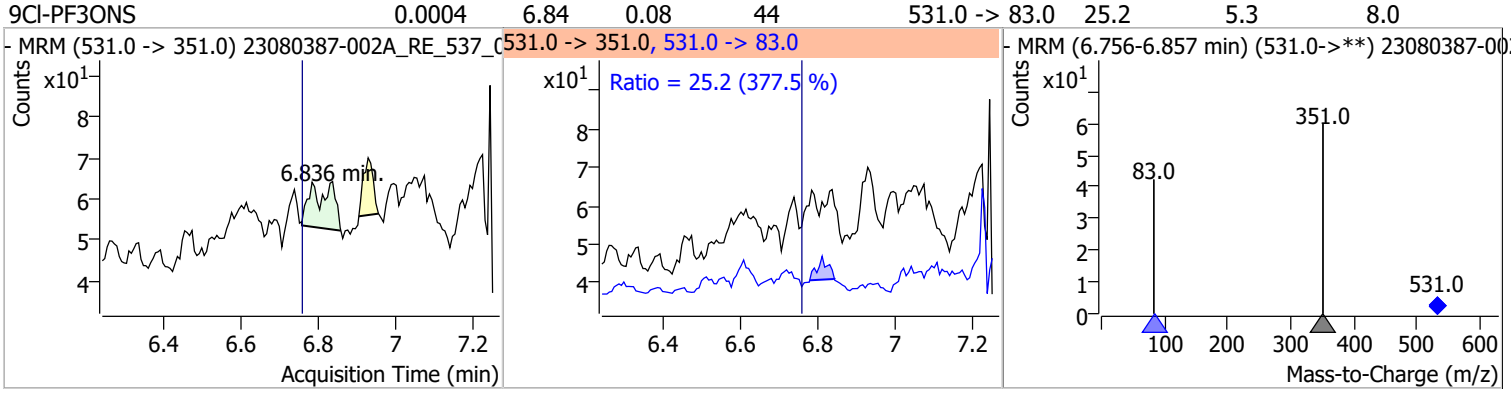
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.0037	6.59	0.04	249	463.0 -> 169.1	4.8	7.7	11.5



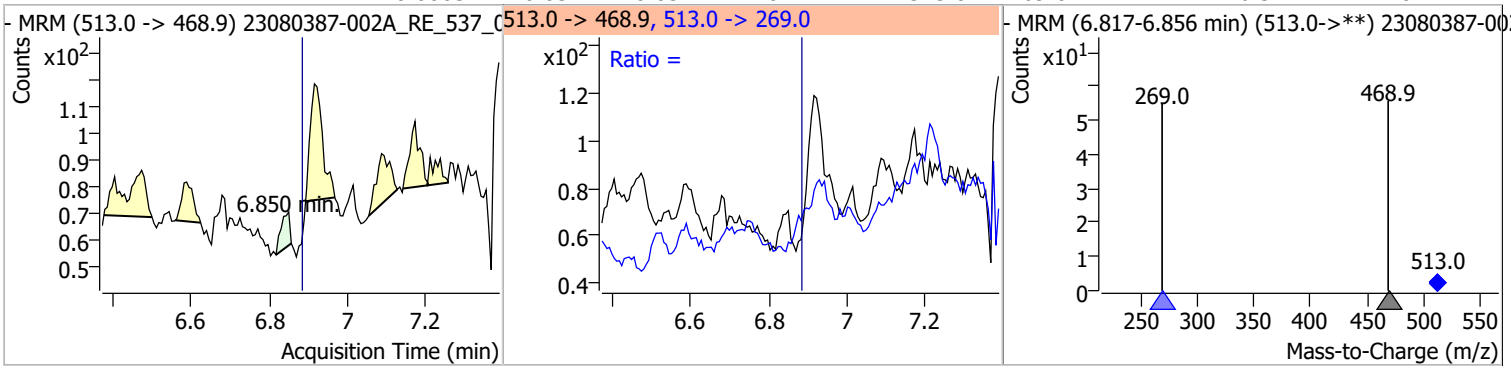
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.0169	6.60	0.02	574	498.9 -> 98.8	78.3	45.4	68.1



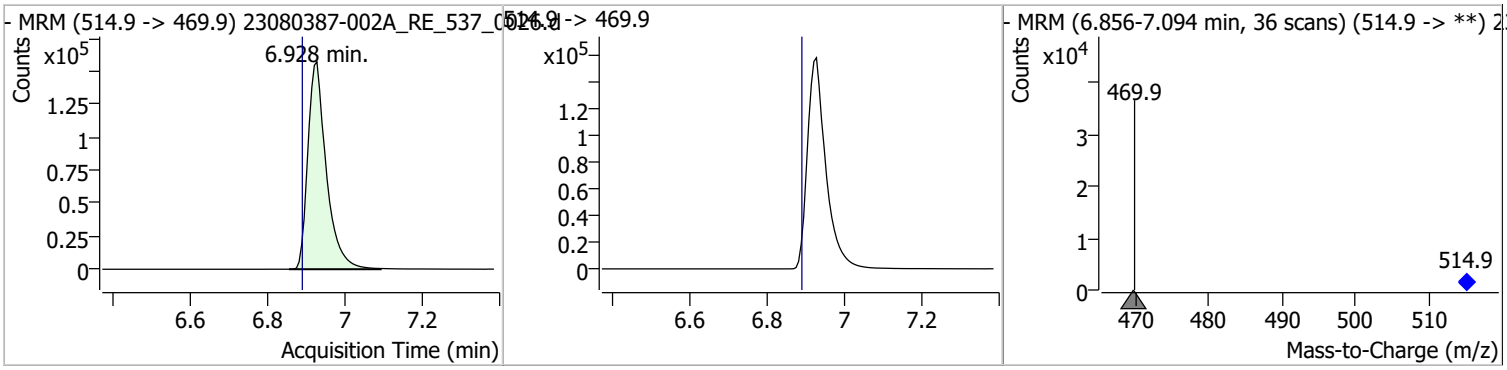
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0004	6.84	0.08	44	531.0 -> 83.0	25.2	5.3	8.0



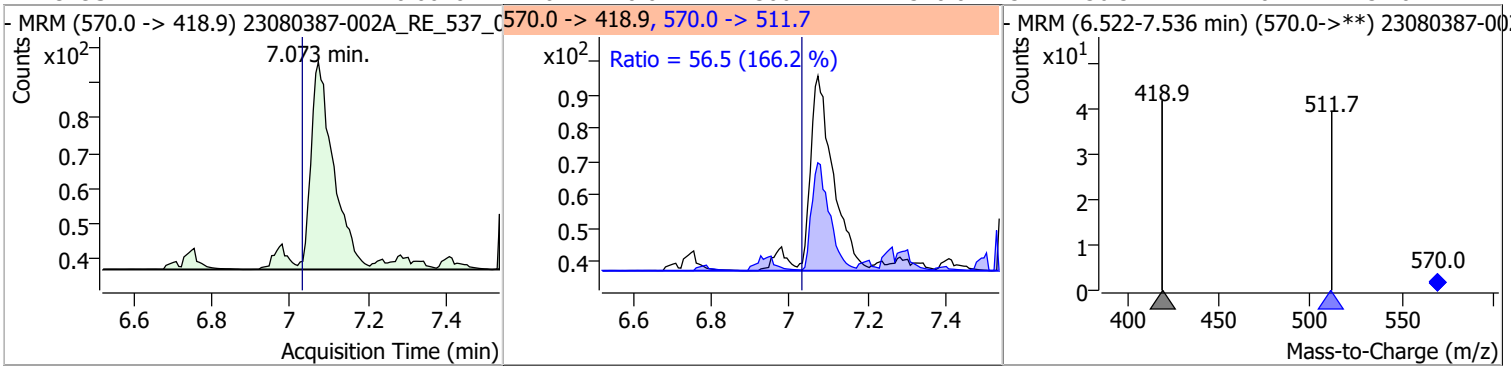
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0003	6.85	-0.03	20	513.0 -> 269.0		16.5	24.8



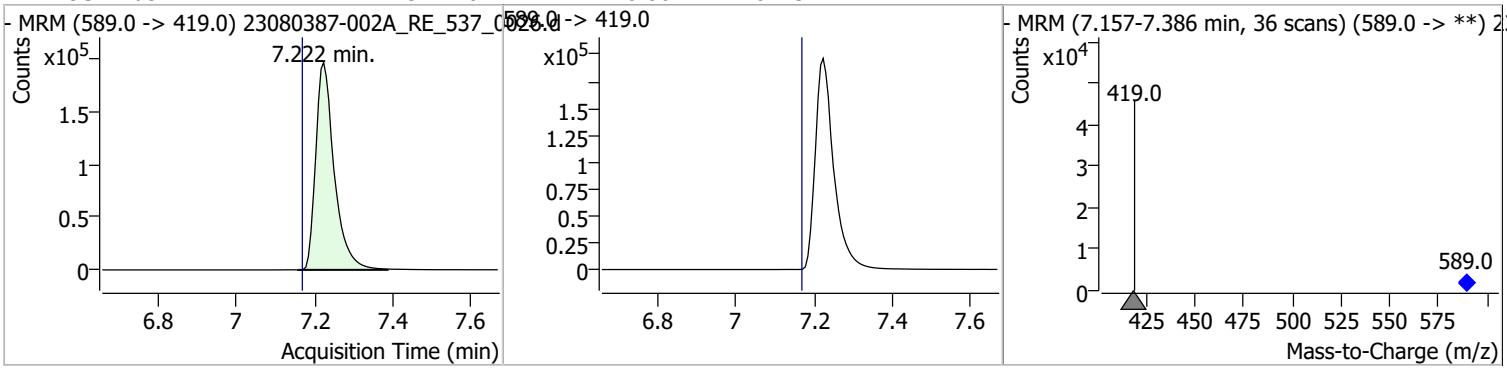
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	8.1792	6.93	0.04	522341				



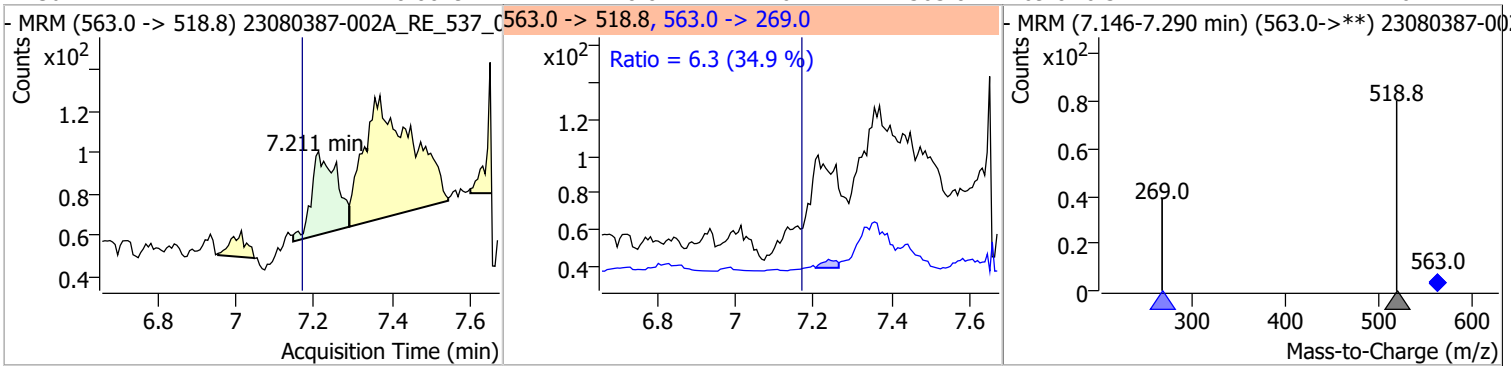
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0078	7.07	0.04	306	570.0 -> 511.7	56.5	17.0	51.0



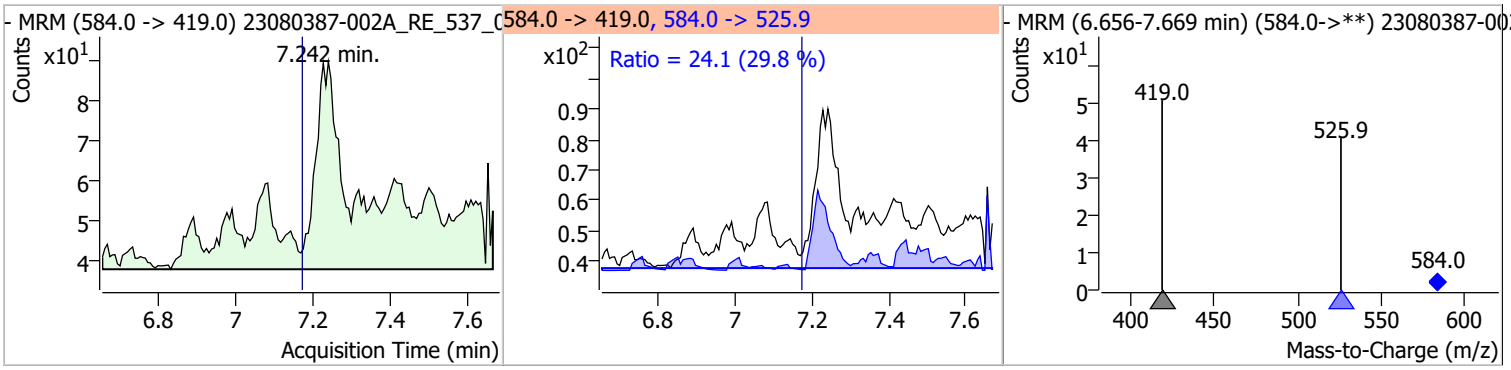
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	29.2170	7.22	0.06	644324				



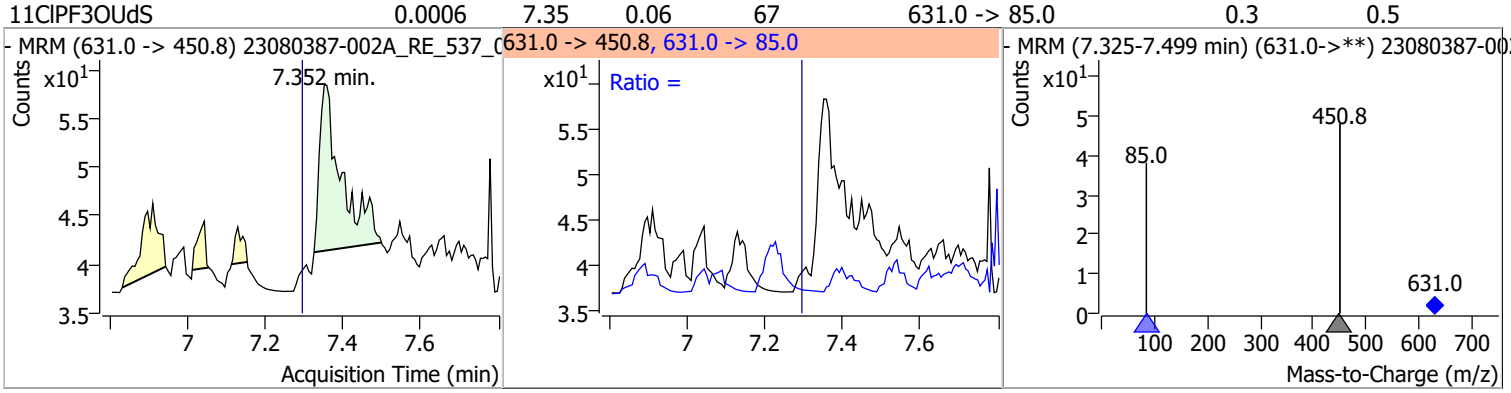
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0029	7.21	0.04	176	563.0 -> 269.0	6.3	14.4	21.6



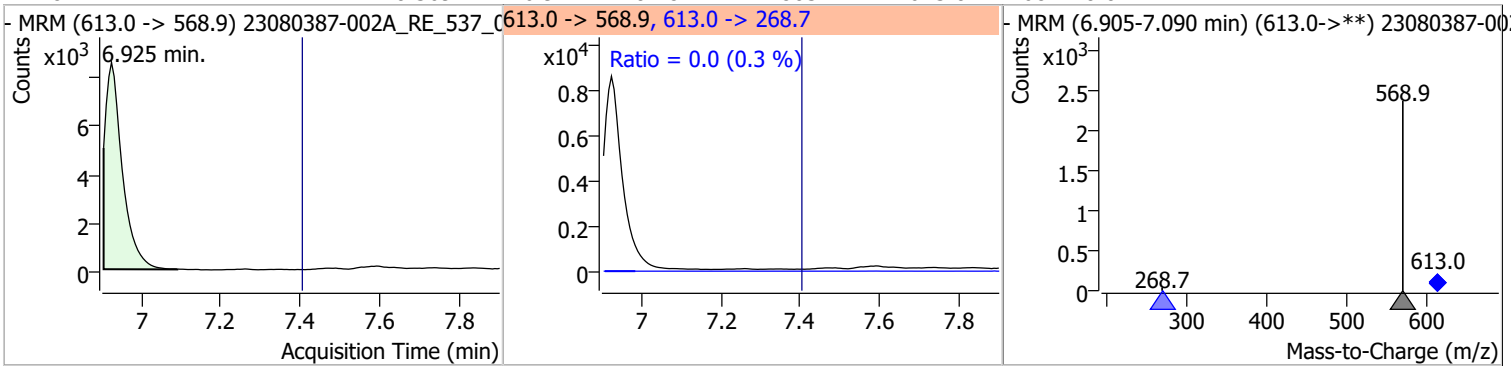
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0222	7.24	0.07	776	584.0 -> 525.9	24.1	40.4	121.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0006	7.35	0.06	67	631.0 -> 85.0		0.3	0.5

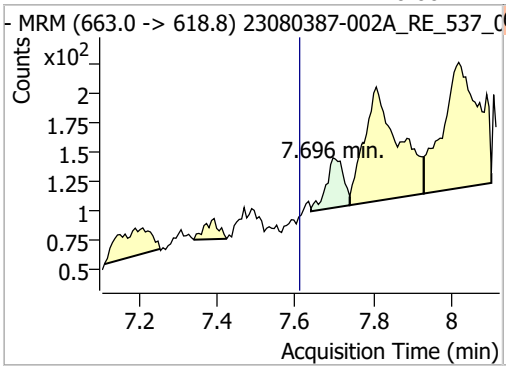


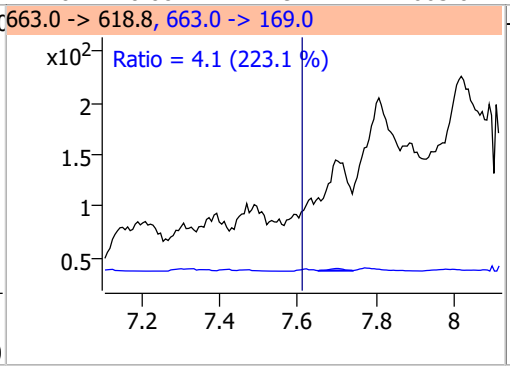
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.3692	6.92	-0.48	24803	613.0 -> 268.7	0.0	1.1	1.7

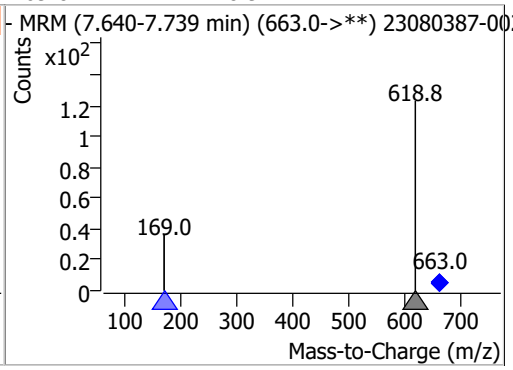


Quantitation Results Report

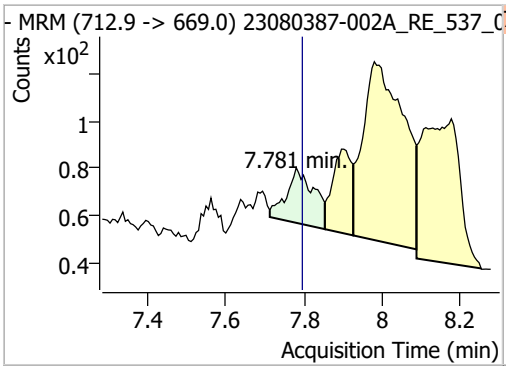
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0024	7.70	0.08	129	663.0 -> 169.0	4.1	0.9	2.7

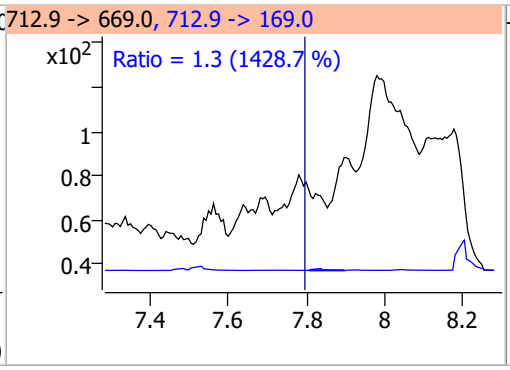


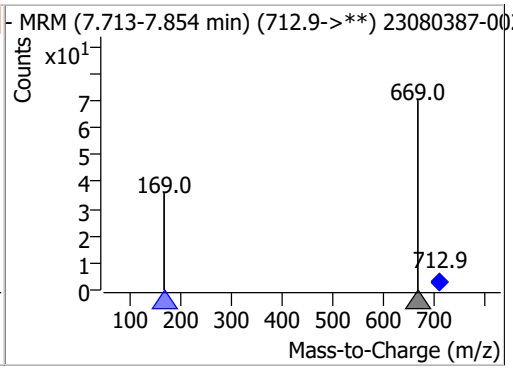




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0036	7.78	-0.01	115	712.9 -> 169.0	1.3	0.0	0.1







Quantitation Results Report

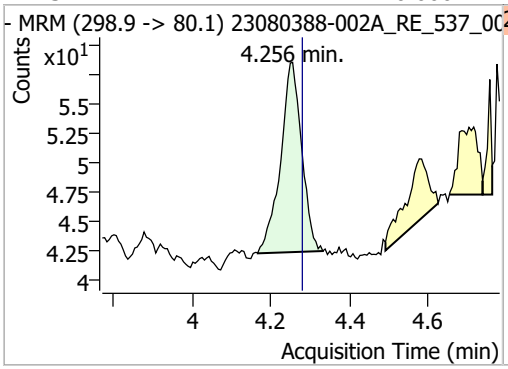
Agilent | Trusted Answers

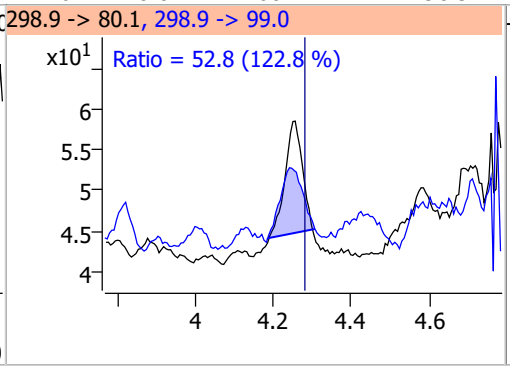
Data File	23080388-002A_RE_537_0027.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 11:08:34 AM
Sample Name	23080388-002A	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
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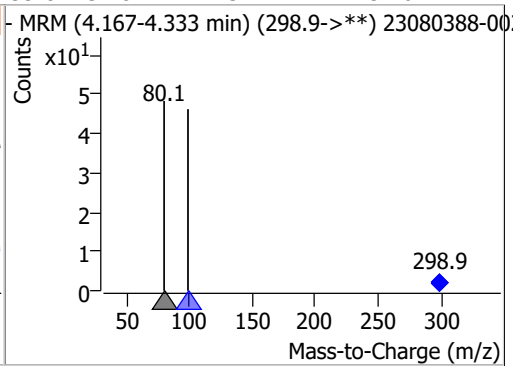
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.595	502.9 -> 80.1	982921	3.0000	ng/ml		0.023
13C2-PFOA	6.171	415.0 -> 370.0	1174492	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1890875	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	190208	1.5507	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 15.51%		*	
13C3-HFPO-DA	5.207	287.0 -> 169.0	1985	0.7792	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 7.79%		*	
13C2-PFDA	6.922	514.9 -> 469.9	439528	6.8968	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 68.97%		*	
NETFOSAA-d5	7.222	589.0 -> 419.0	44857	1.9679	ng/ml		0.058
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 4.92%		*	
Target Compounds							**QValue**
PFBS	4.256	298.9 -> 80.1	60	0.0007	ng/ml	#	85
PFHxA	4.986	313.0 -> 269.0	1686	0.0108	ng/ml		98
HFPO-DA	5.214	285.0 -> 169.1	57	0.0195	ng/ml		66
PFHpA	5.670	362.9 -> 318.9	1741	0.0130	ng/ml		96
PFHxS	6.236	398.9 -> 79.9	161	0.0032	ng/ml		29
NaDONA	5.750	377.0 -> 250.9	4670	0.0110	ng/ml		97
PFOA	6.171	413.0 -> 369.1	1664	0.0153	ng/ml		94
PFNA	6.577	463.0 -> 418.9	502	0.0074	ng/ml	#	85
PFOS	6.596	498.9 -> 80.1	527	0.0147	ng/ml	#	40
9Cl-PF3ONS	6.836	531.0 -> 351.0	68	0.0006	ng/ml	#	79
PFDA	6.922	513.0 -> 468.9	243	0.0040	ng/ml	#	51
N-MeFOSAA	7.079	570.0 -> 418.9	237	0.0058	ng/ml		41
PFUdA	7.217	563.0 -> 518.8	175	0.0028	ng/ml	#	71
N-EtFOSAA	7.223	584.0 -> 419.0	664	0.0184	ng/ml	#	28
11ClPF3OUdS	7.201	631.0 -> 450.8	5	0.0000	ng/ml	#	1
PFDoA	6.925	613.0 -> 568.9	15812	0.2359	ng/ml	#	97
PFTrDA	7.696	663.0 -> 618.8	138	0.0026	ng/ml	#	89
PFTA	7.897	712.9 -> 669.0	61	0.0019	ng/ml	#	100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

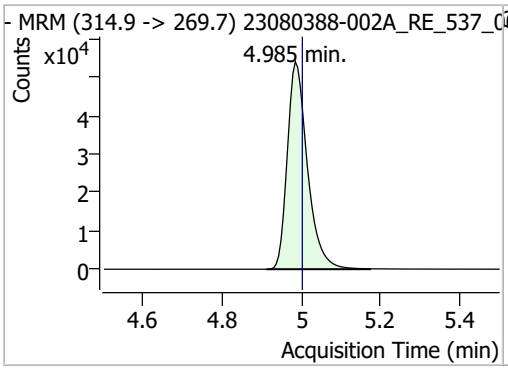
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.0007	4.26	-0.02	60	298.9 -> 99.0	52.8	34.4	51.6

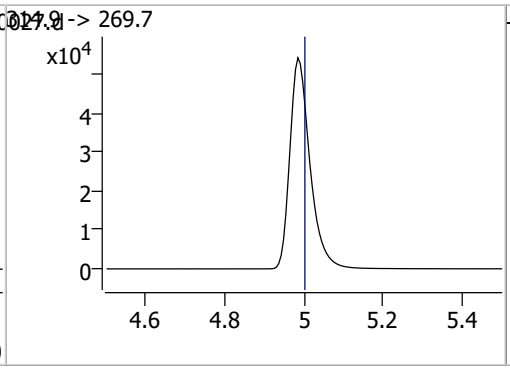


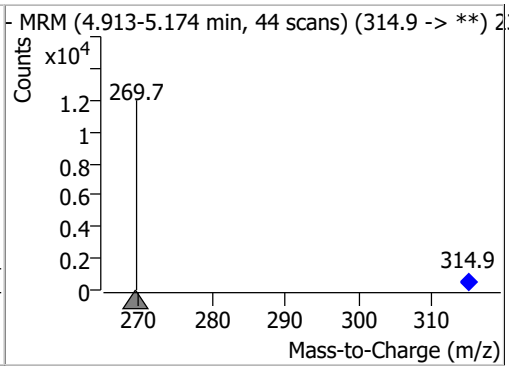




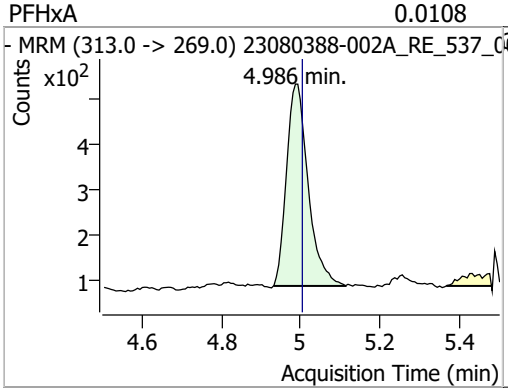
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	1.5507	4.99	-0.01	190208				

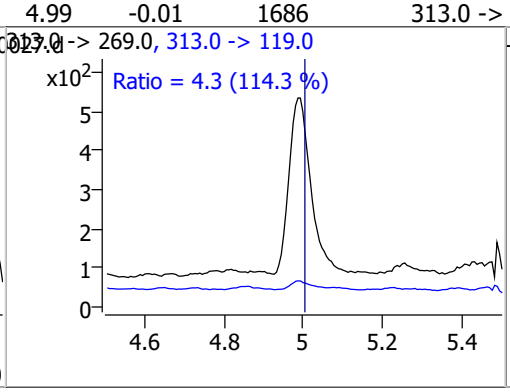


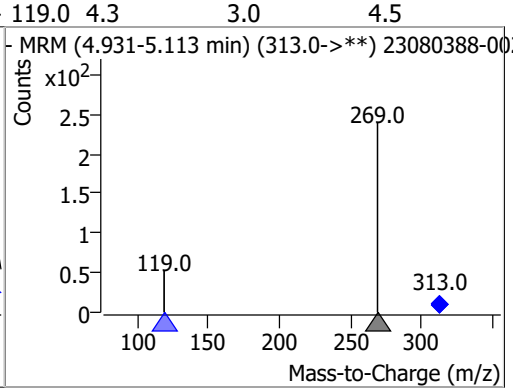




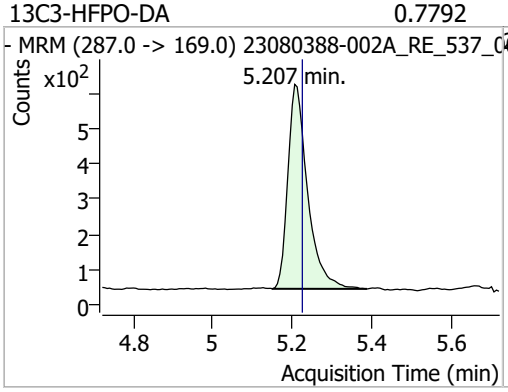
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.0108	4.99	-0.01	1686	313.0 -> 119.0	4.3	3.0	4.5

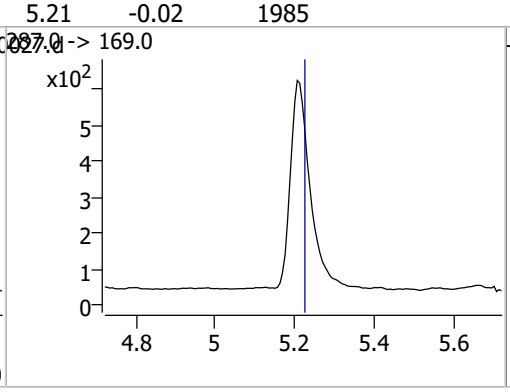


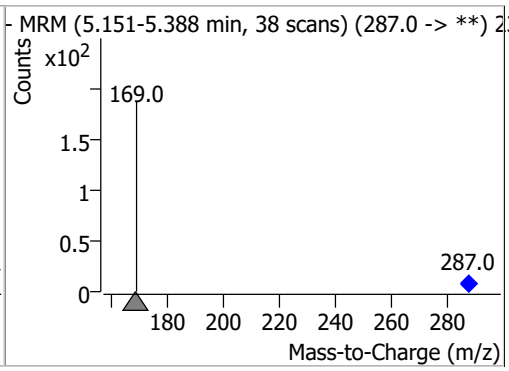




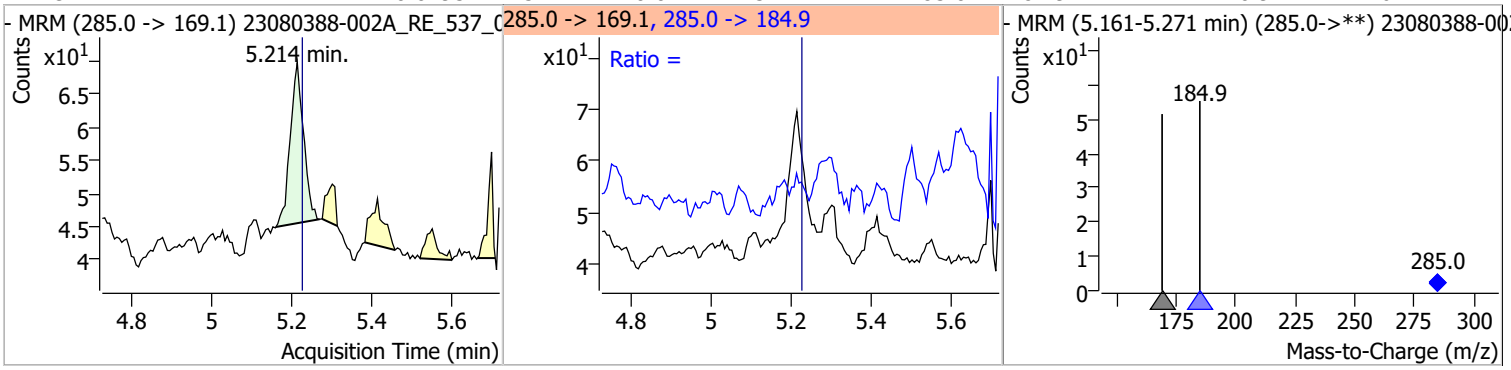
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	0.7792	5.21	-0.02	1985				



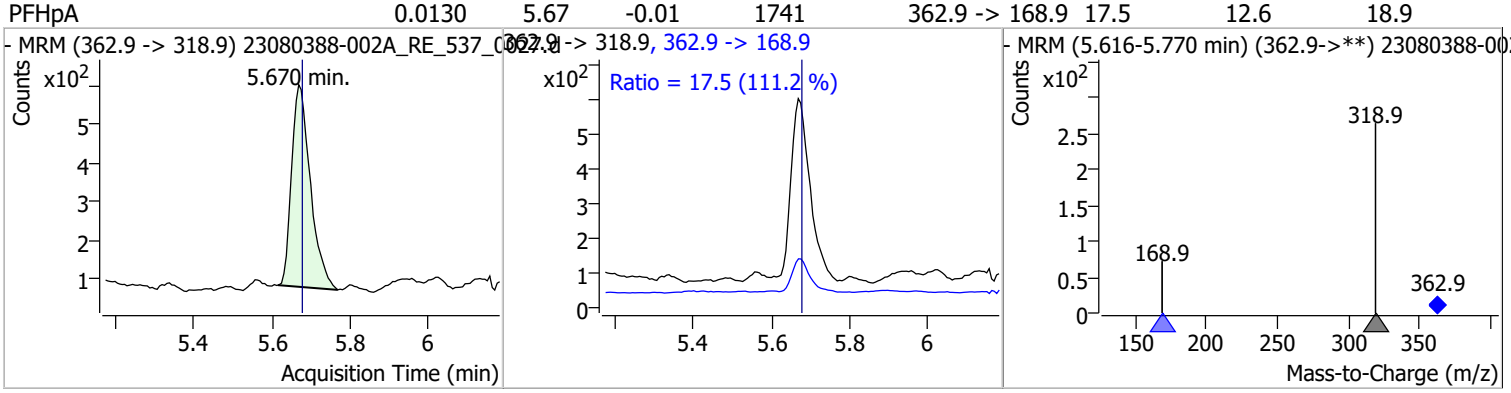




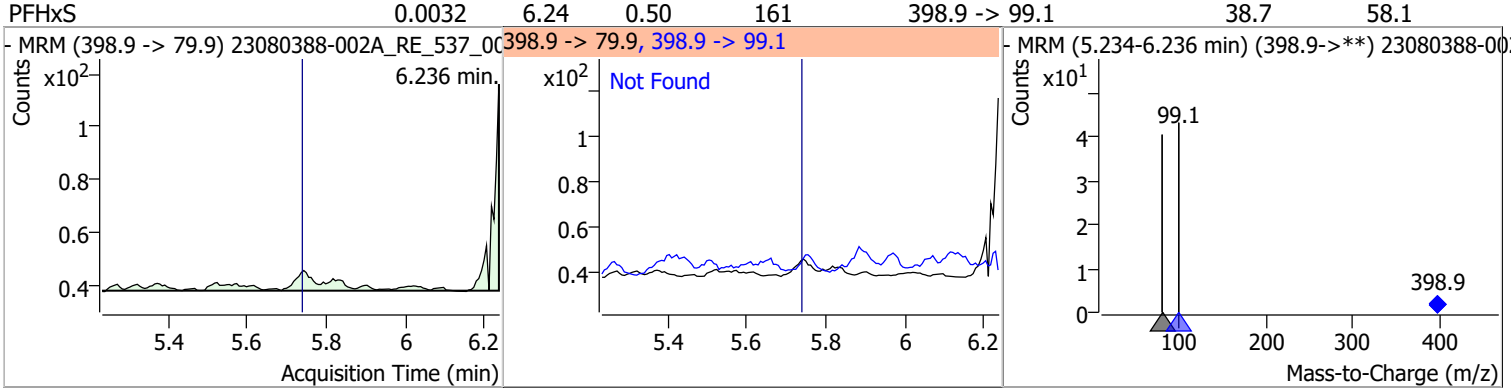
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0195	5.21	-0.01	57	285.0 -> 184.9		10.9	16.4



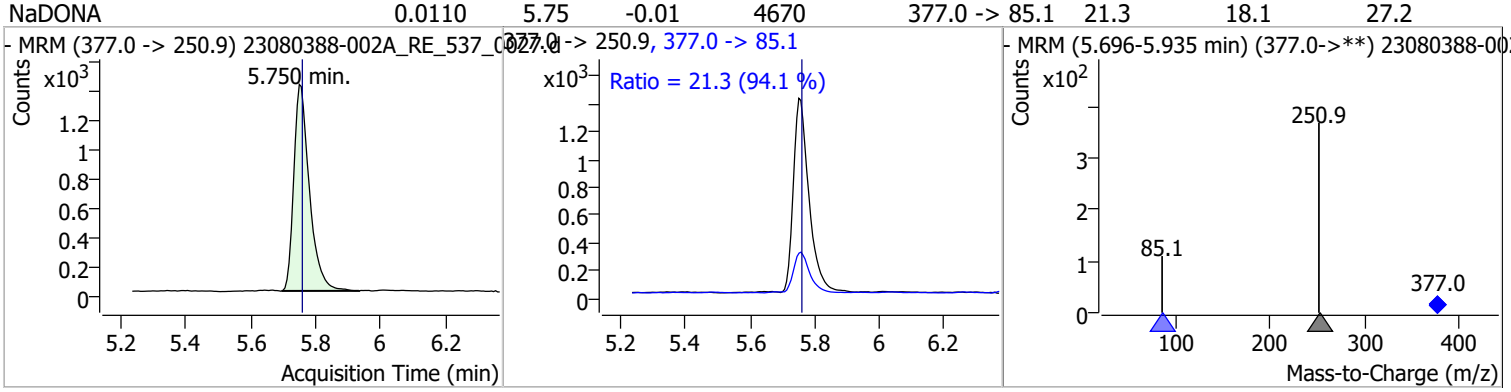
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.0130	5.67	-0.01	1741	362.9 -> 168.9	17.5	12.6	18.9



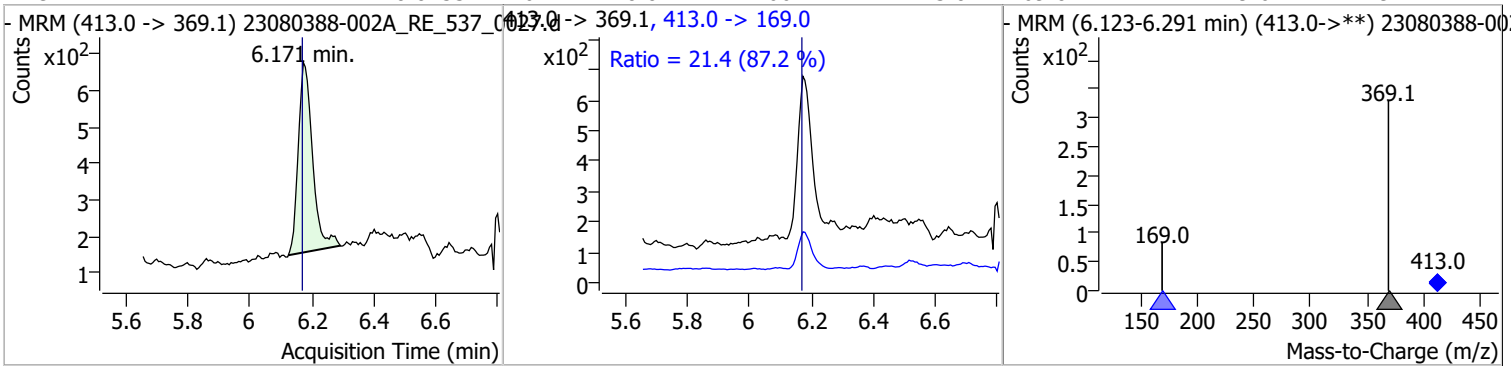
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.0032	6.24	0.50	161	398.9 -> 99.1		38.7	58.1



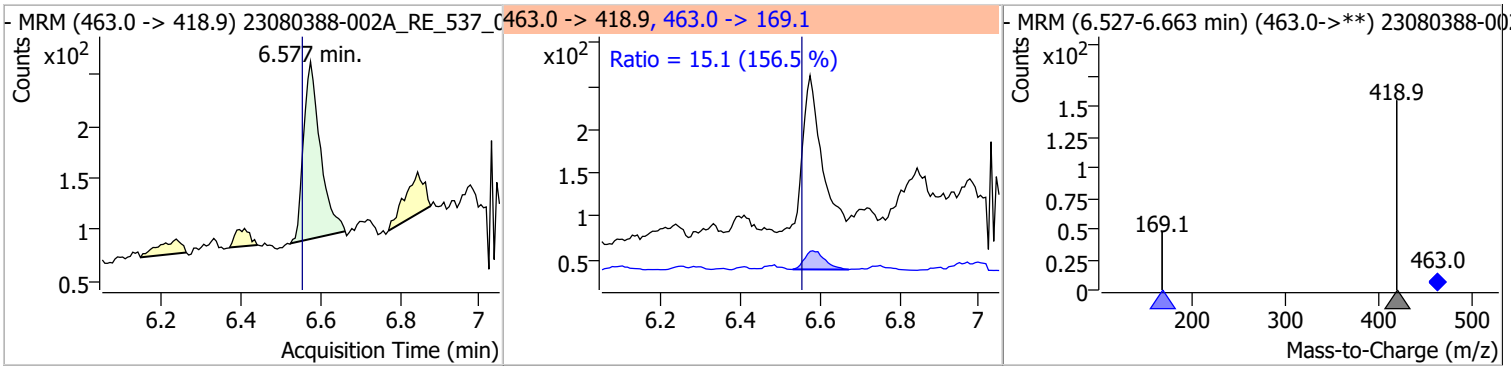
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0110	5.75	-0.01	4670	377.0 -> 85.1	21.3	18.1	27.2



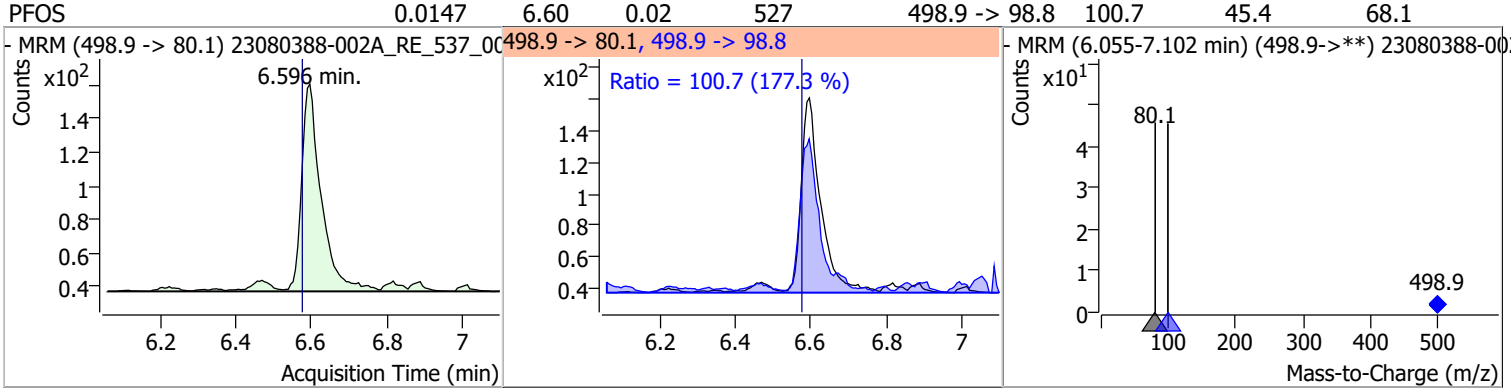
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.0153	6.17	0.01	1664	413.0 -> 169.0	21.4	19.6	29.4



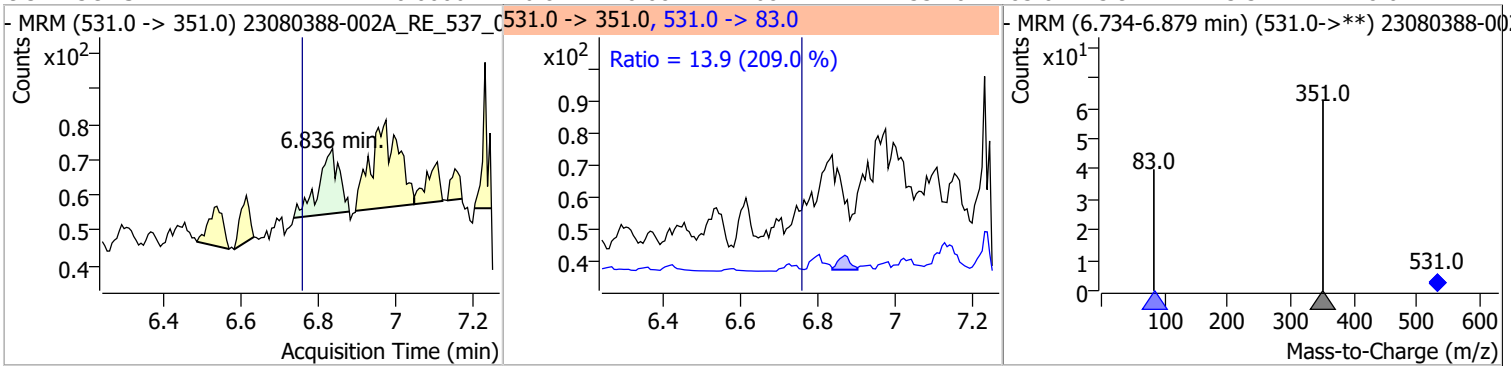
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.0074	6.58	0.02	502	463.0 -> 169.1	15.1	7.7	11.5



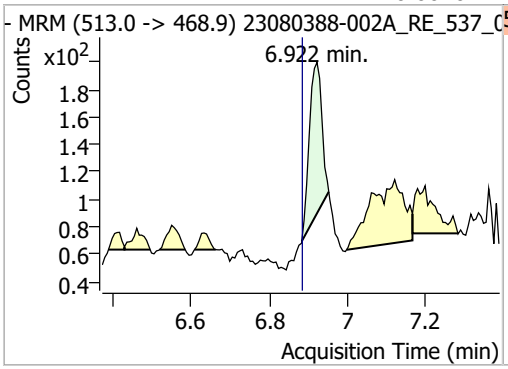
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.0147	6.60	0.02	527	498.9 -> 98.8	100.7	45.4	68.1

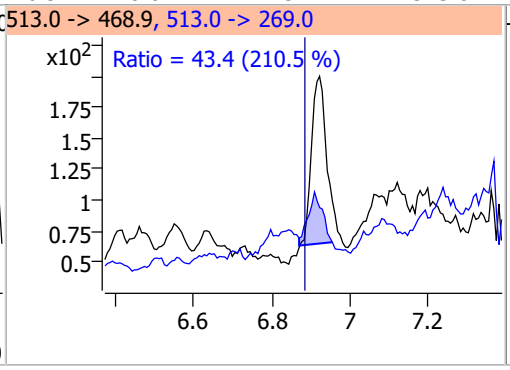


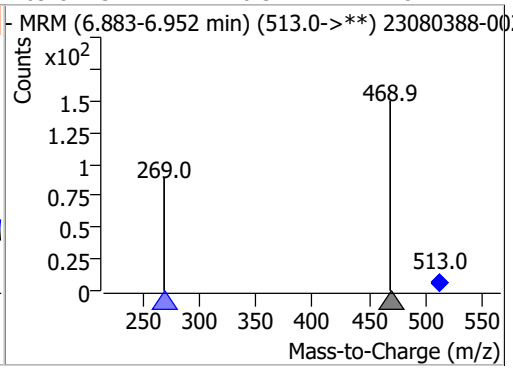
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0006	6.84	0.08	68	531.0 -> 83.0	13.9	5.3	8.0



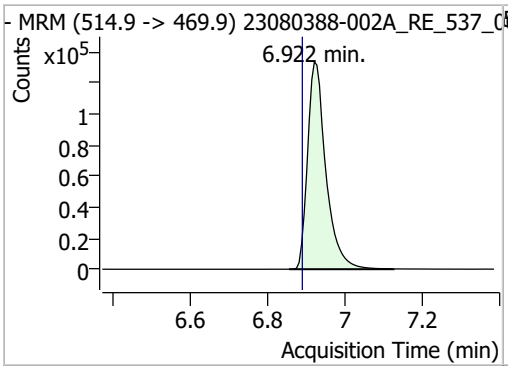
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0040	6.92	0.04	243	513.0 -> 269.0	43.4	16.5	24.8

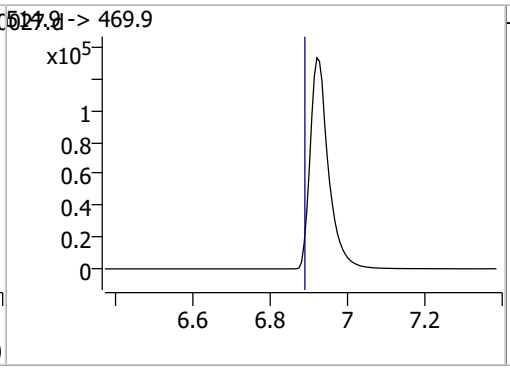


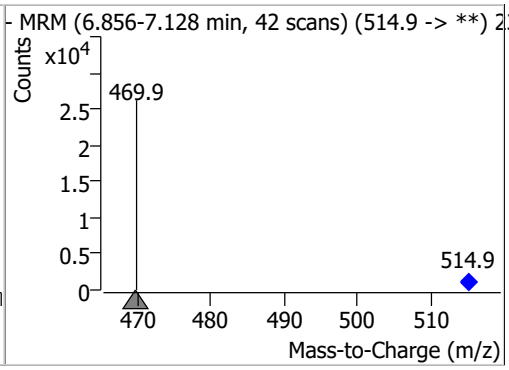




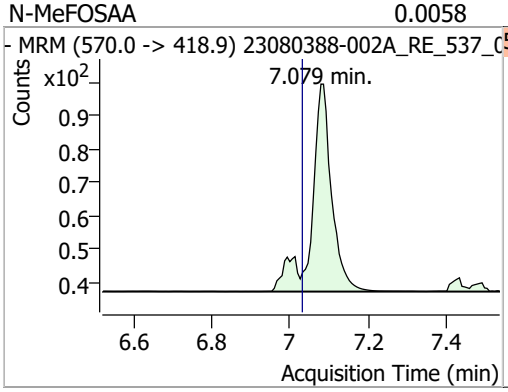
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	6.8968	6.92	0.03	439528				

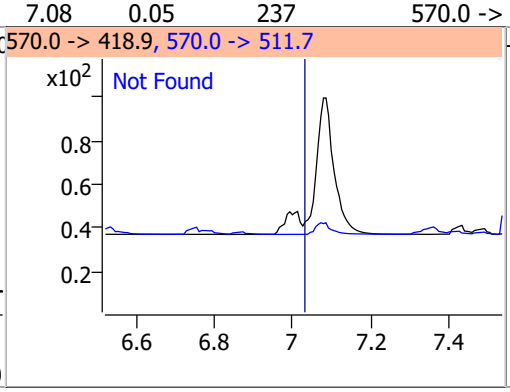


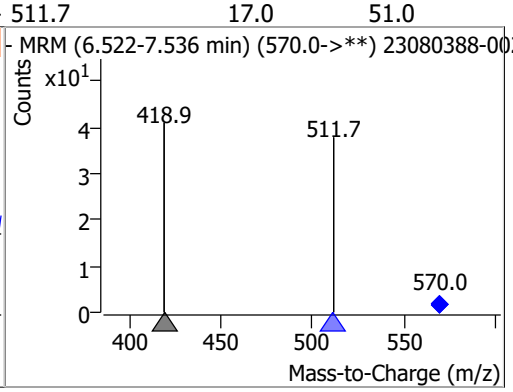




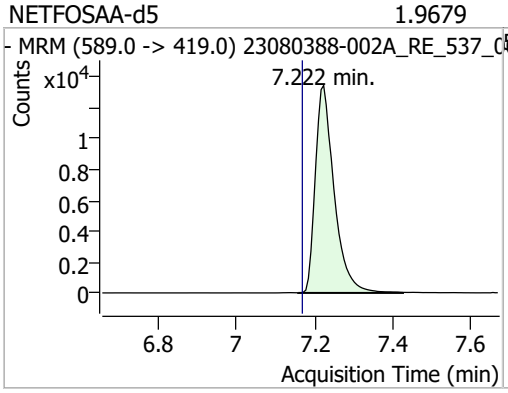
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0058	7.08	0.05	237	570.0 -> 511.7		17.0	51.0

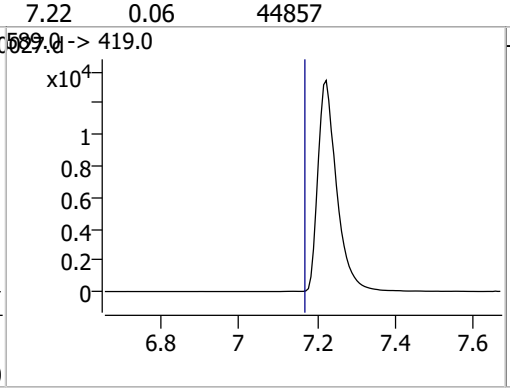


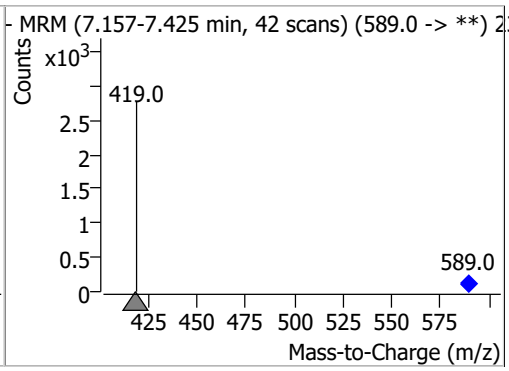




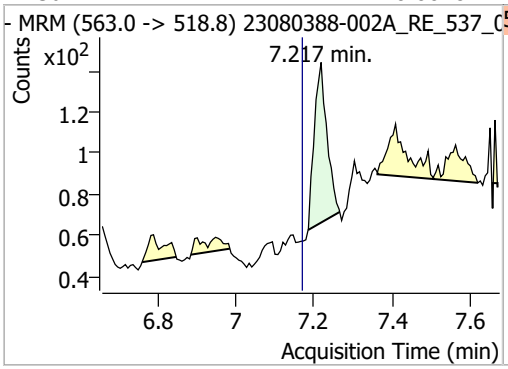
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	1.9679	7.22	0.06	44857				

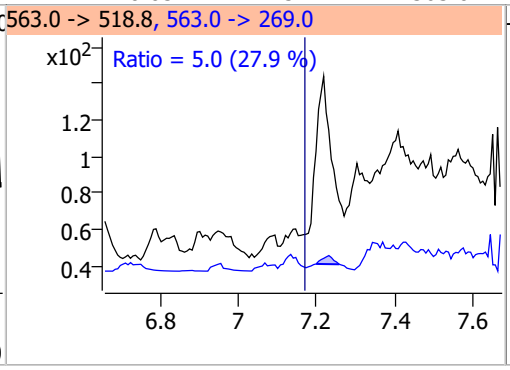


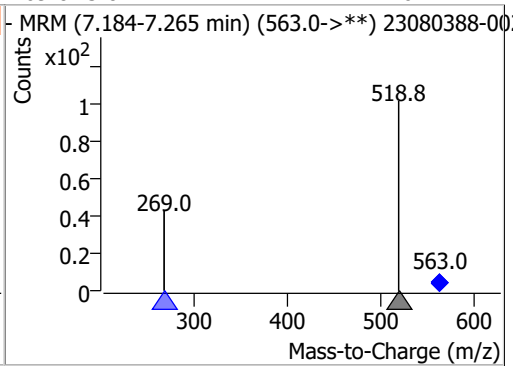




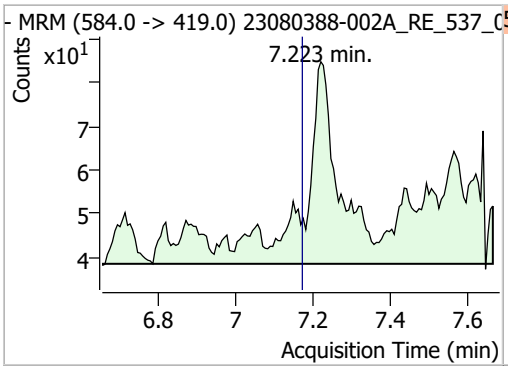
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0028	7.22	0.05	175	563.0 -> 269.0	5.0	14.4	21.6

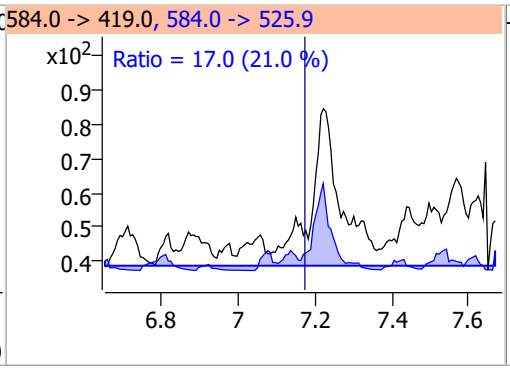


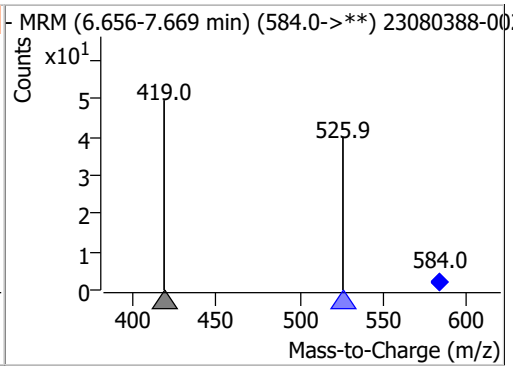




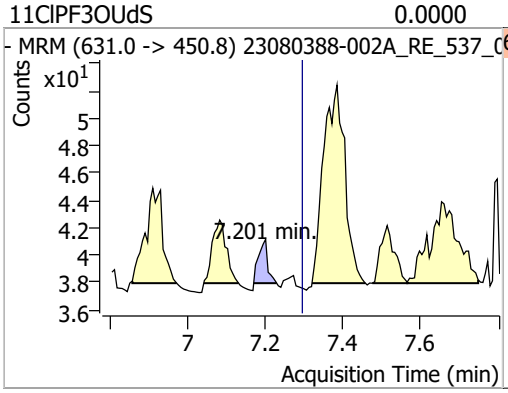
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0184	7.22	0.05	664	584.0 -> 525.9	17.0	40.4	121.1

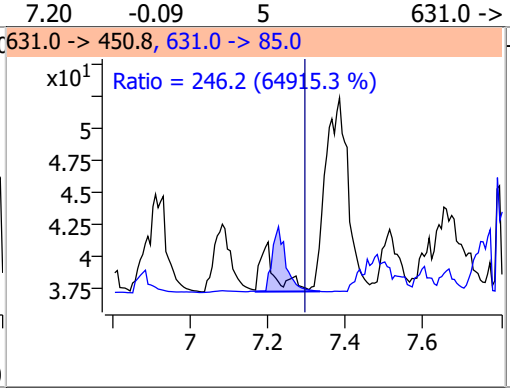


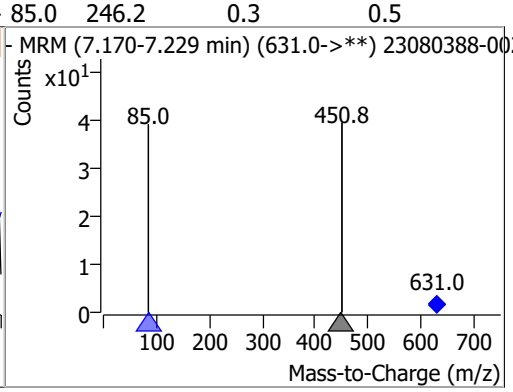




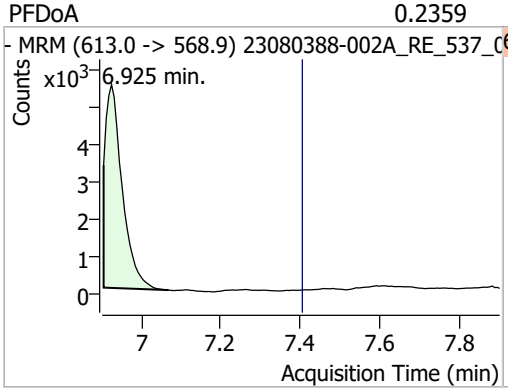
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0000	7.20	-0.09	5	631.0 -> 85.0	246.2	0.3	0.5

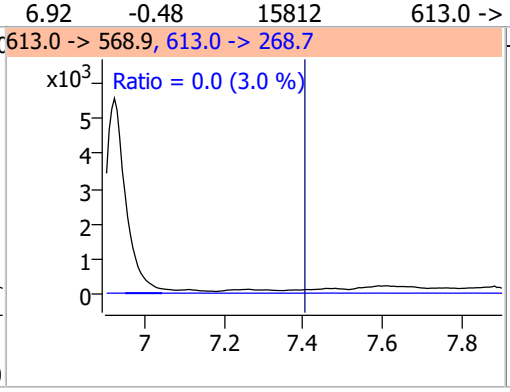


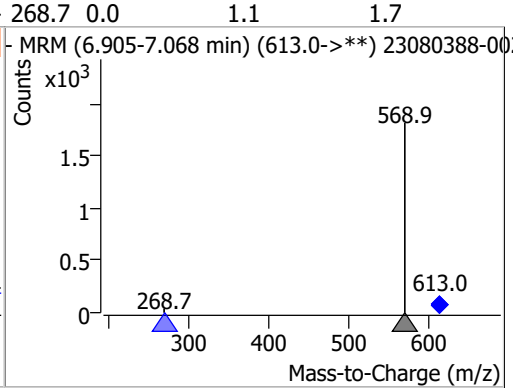




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.2359	6.92	-0.48	15812	613.0 -> 268.7	0.0	1.1	1.7

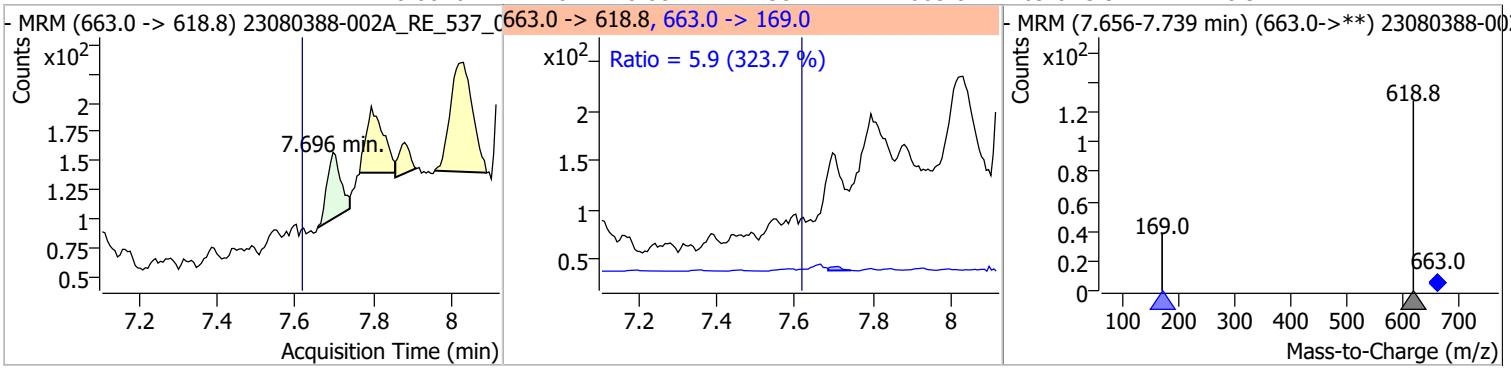




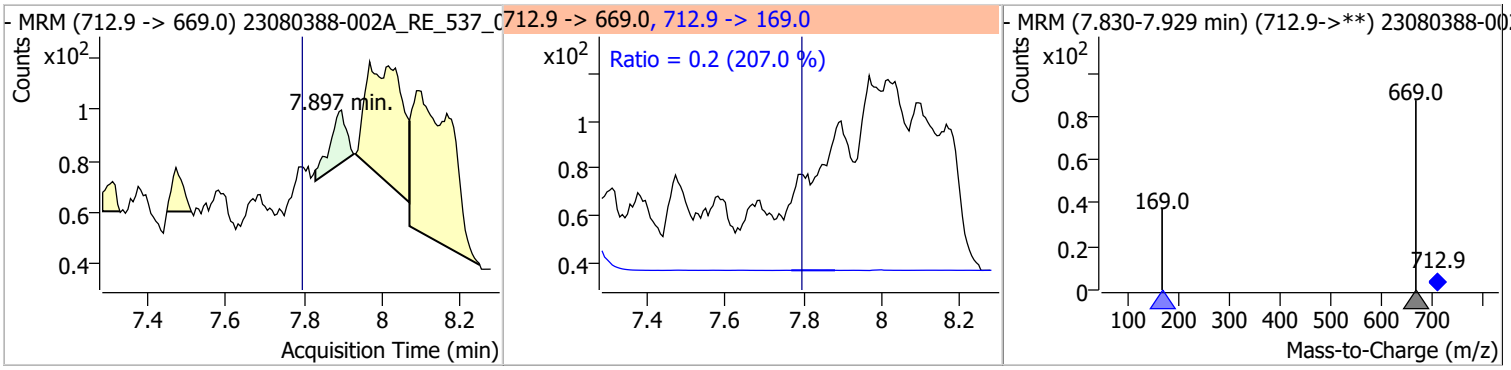


Quantitation Results Report

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0026	7.70	0.08	138	663.0 -> 169.0	5.9	0.9	2.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0019	7.90	0.10	61	712.9 -> 169.0	0.2	0.0	0.1



Quantitation Results Report

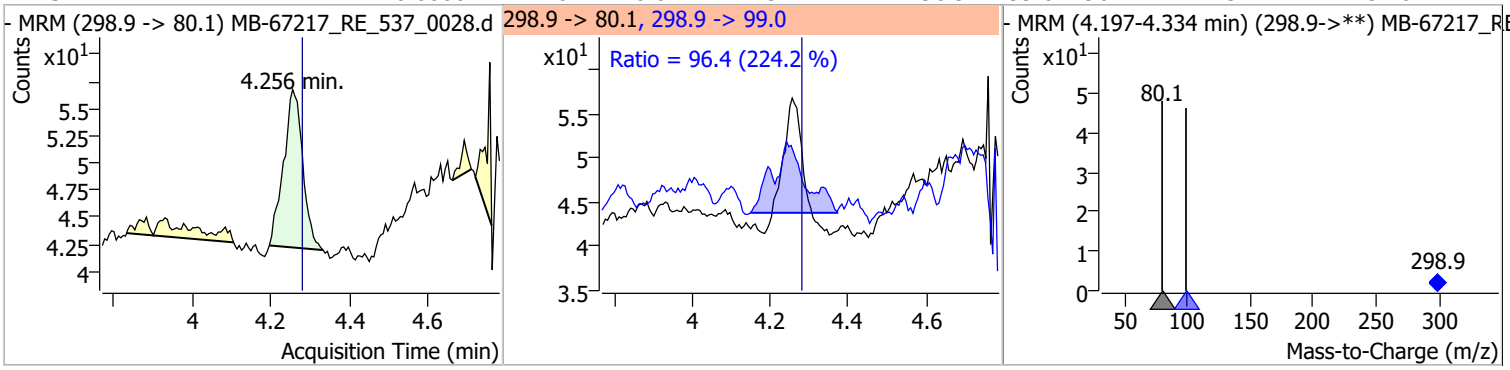
Agilent | Trusted Answers

Data File	MB-67217_RE_537_0028.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 11:21:17 AM
Sample Name	MB-67217	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

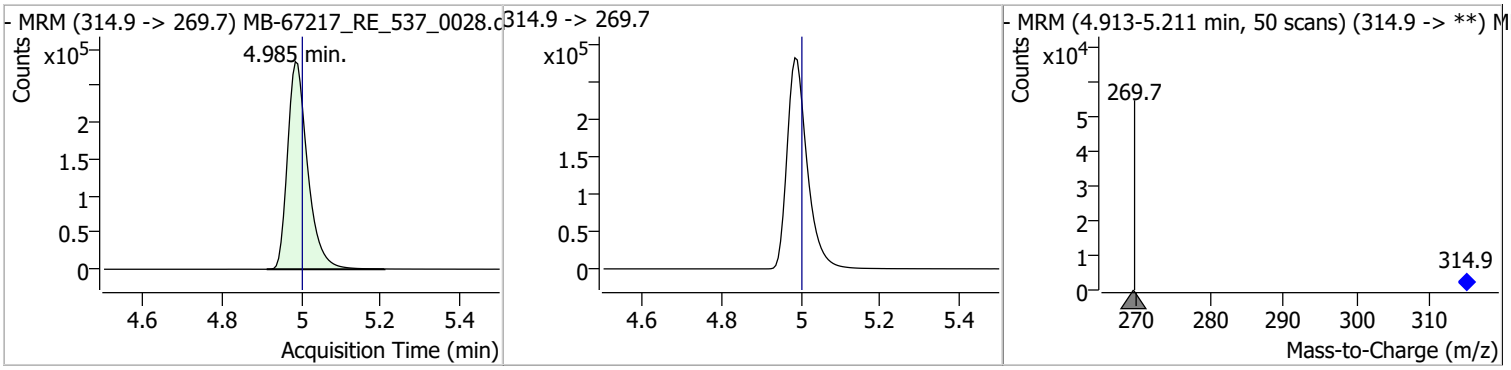
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	908018	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	1034196	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.079	573.0 -> 418.9	1674733	4.0000	ng/ml		0.051
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	994361	9.2066	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 92.07%			
13C3-HFPO-DA	5.213	287.0 -> 169.0	20198	9.0025	ng/ml		-0.010
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 90.03%			
13C2-PFDA	6.928	514.9 -> 469.9	470781	8.3894	ng/ml		0.041
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 83.89%			
NETFOSAA-d5	7.222	589.0 -> 419.0	566415	28.0558	ng/ml		0.058
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 70.14%			
Target Compounds							**QValue**
PFBS	4.256	298.9 -> 80.1	49	0.0006	ng/ml	#	17
PFHxA	4.986	313.0 -> 269.0	1486	0.0108	ng/ml		99
HFPO-DA	5.214	285.0 -> 169.1	78	0.0304	ng/ml	#	79
PFHpA	5.670	362.9 -> 318.9	320	0.0027	ng/ml	#	84
PFHxS	5.737	398.9 -> 79.9	186	0.0040	ng/ml		29
NaDONA	5.750	377.0 -> 250.9	199	0.0005	ng/ml	#	87
PFOA	6.178	413.0 -> 369.1	1104	0.0115	ng/ml		94
PFNA	6.583	463.0 -> 418.9	184	0.0031	ng/ml		74
PFOS	6.596	498.9 -> 80.1	789	0.0239	ng/ml	#	66
9Cl-PF3ONS	6.789	531.0 -> 351.0	68	0.0007	ng/ml		80
PFDA	6.916	513.0 -> 468.9	125	0.0023	ng/ml	#	72
N-MeFOSAA	7.079	570.0 -> 418.9	287	0.0080	ng/ml		83
PFUdA	7.224	563.0 -> 518.8	95	0.0018	ng/ml	#	54
N-EtFOSAA	7.236	584.0 -> 419.0	709	0.0222	ng/ml	#	26
11ClPF3OUdS	7.358	631.0 -> 450.8	116	0.0011	ng/ml	#	94
PFDoA	6.925	613.0 -> 568.9	22047	0.3735	ng/ml		96
PFTrDA	7.539	663.0 -> 618.8	101	0.0022	ng/ml	#	93
PFTA	7.903	712.9 -> 669.0	44	0.0016	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

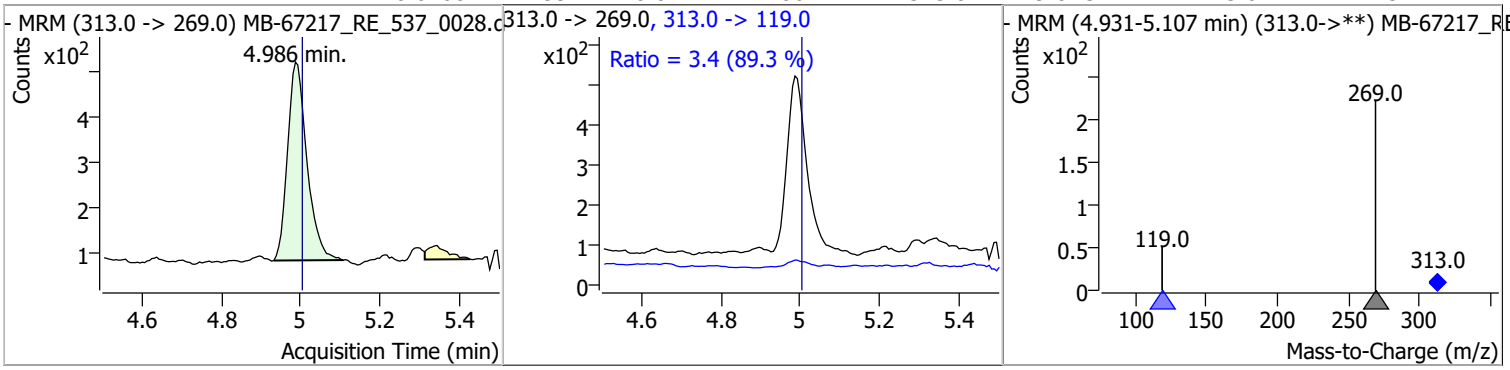
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.0006	4.26	-0.02	49	298.9 -> 99.0	96.4	34.4	51.6



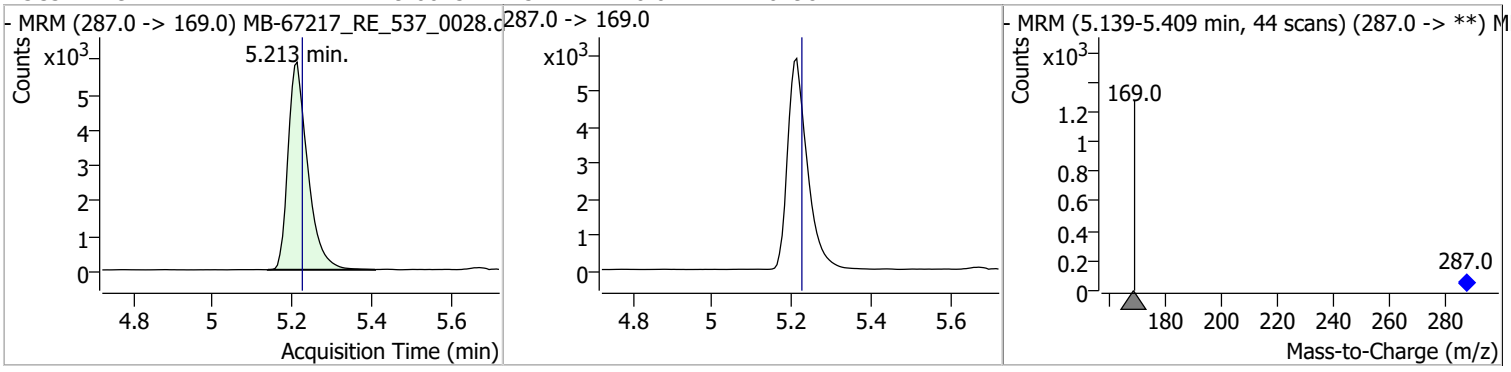
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	9.2066	4.99	-0.01	994361				



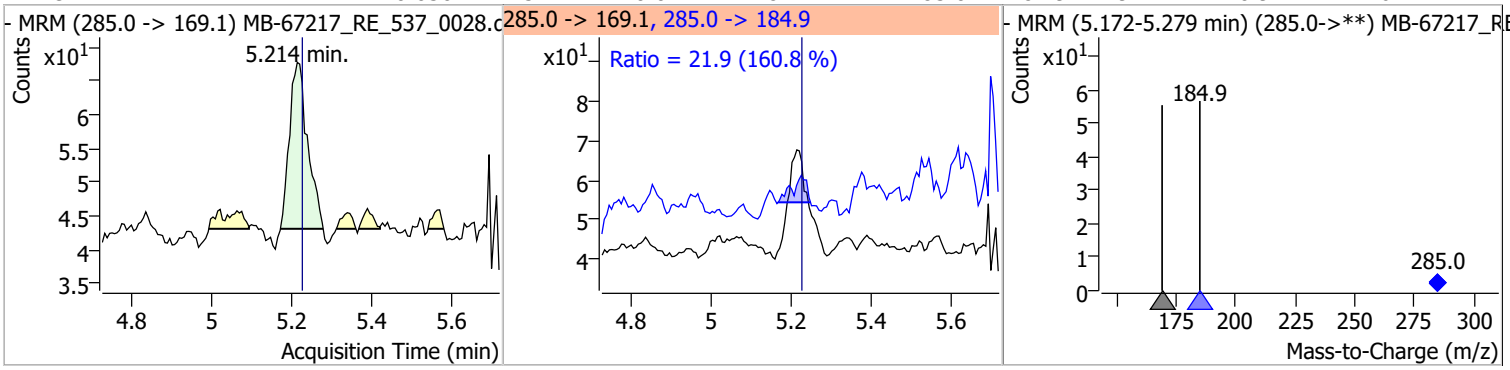
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.0108	4.99	-0.01	1486	313.0 -> 119.0	3.4	3.0	4.5



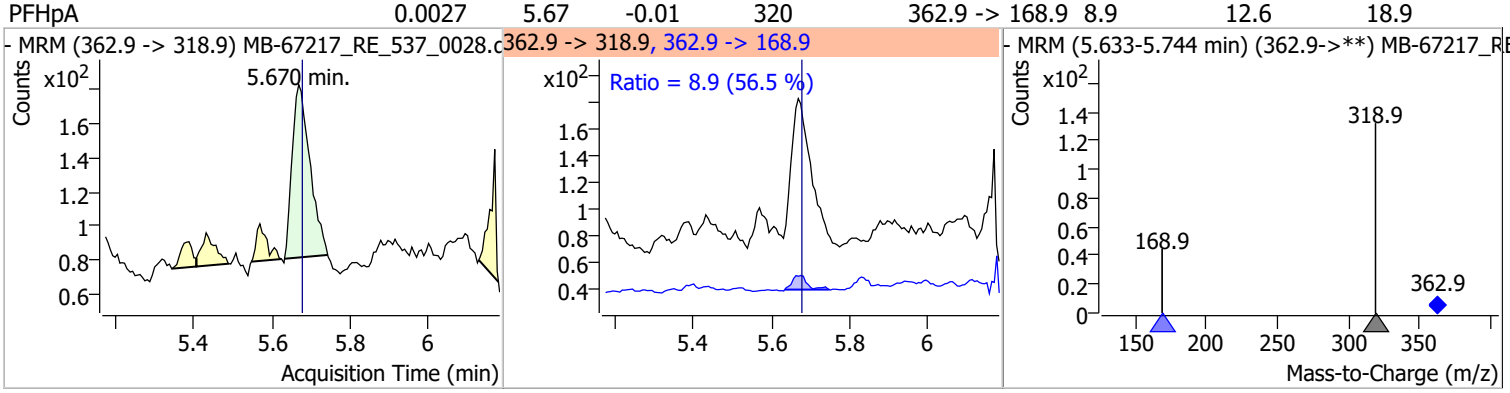
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	9.0025	5.21	-0.01	20198				



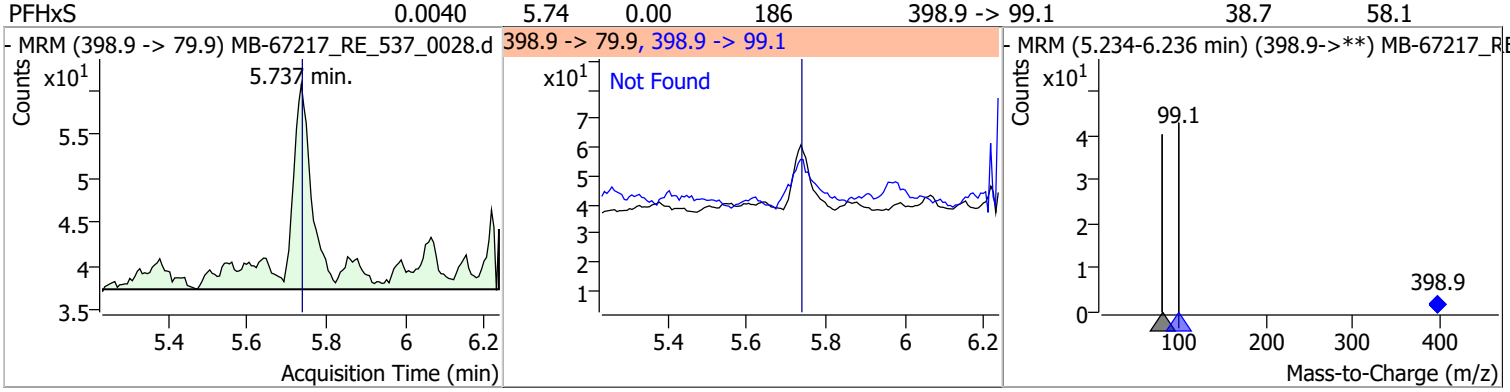
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0304	5.21	-0.01	78	285.0 -> 184.9	21.9	10.9	16.4



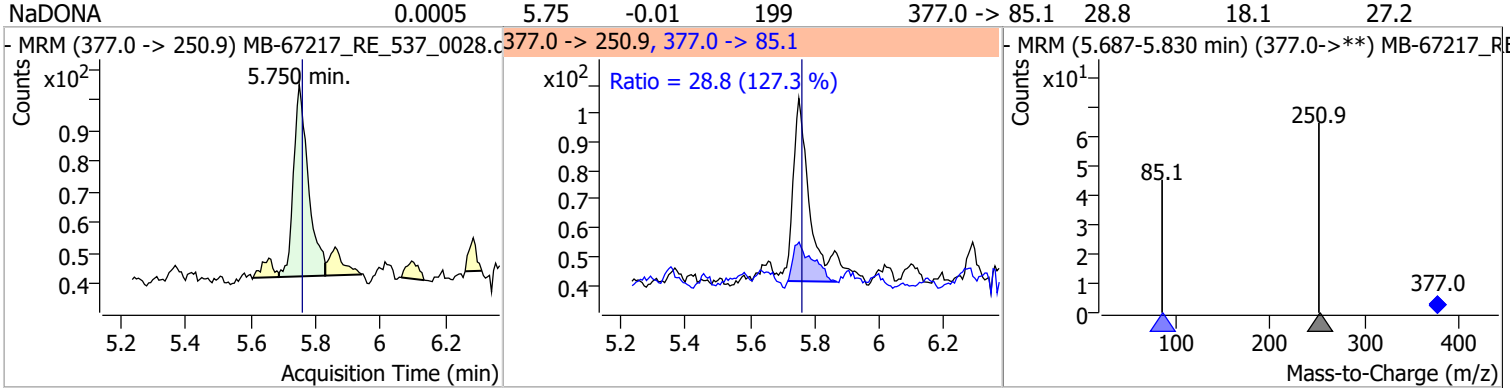
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.0027	5.67	-0.01	320	362.9 -> 168.9	8.9	12.6	18.9



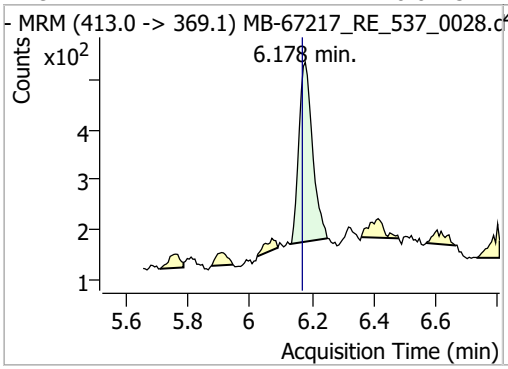
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.0040	5.74	0.00	186	398.9 -> 99.1		38.7	58.1

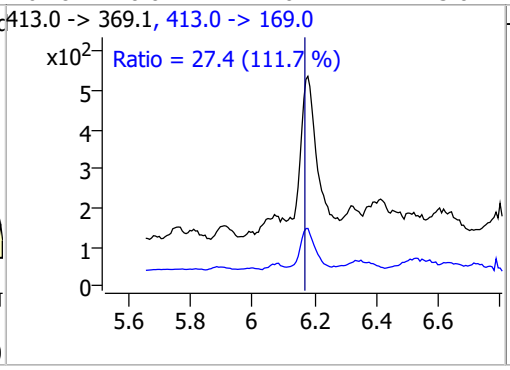


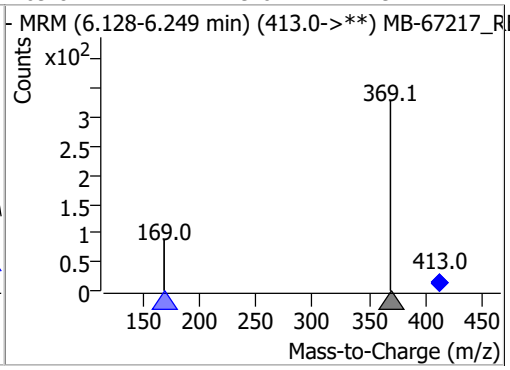
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0005	5.75	-0.01	199	377.0 -> 85.1	28.8	18.1	27.2



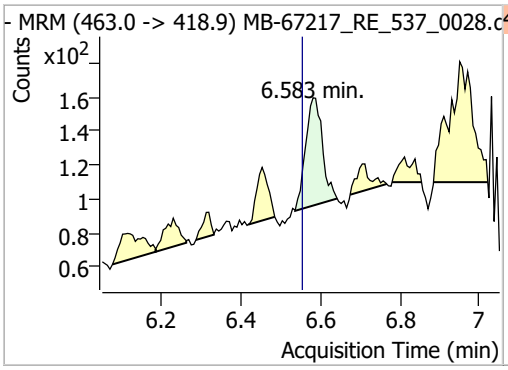
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.0115	6.18	0.01	1104	413.0 -> 169.0	27.4	19.6	29.4

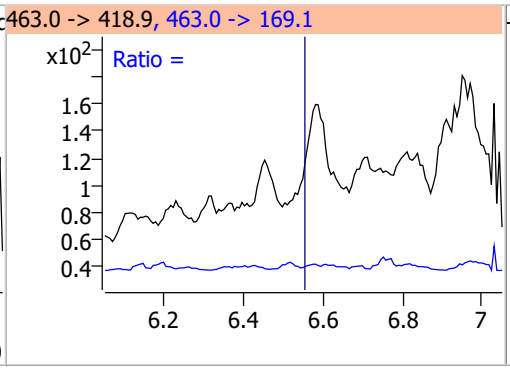


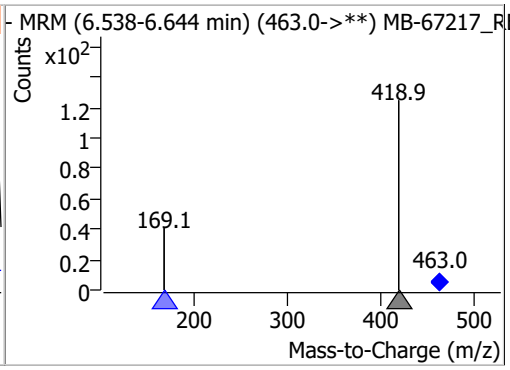




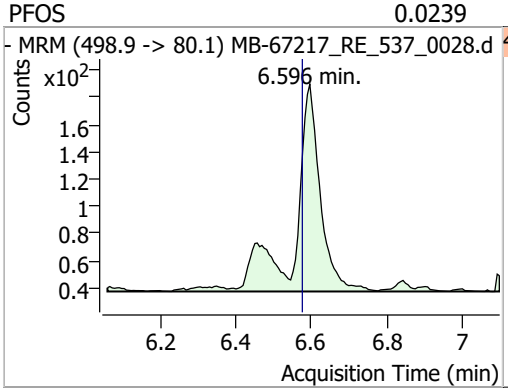
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.0031	6.58	0.03	184	463.0 -> 169.1		7.7	11.5

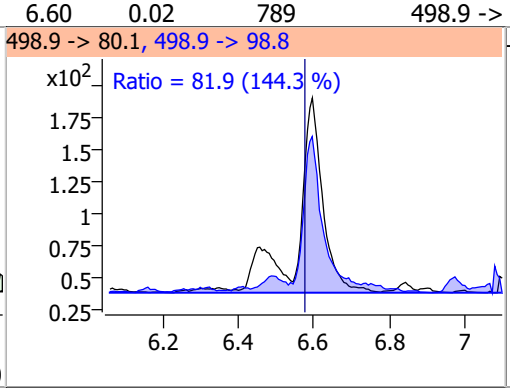


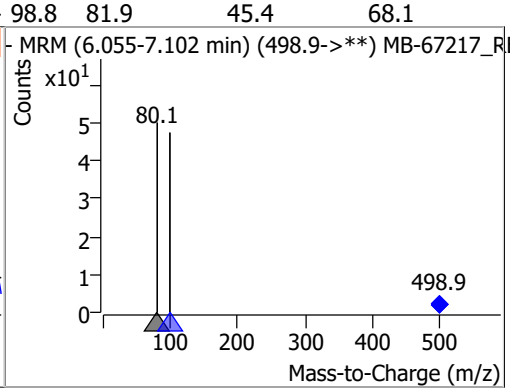




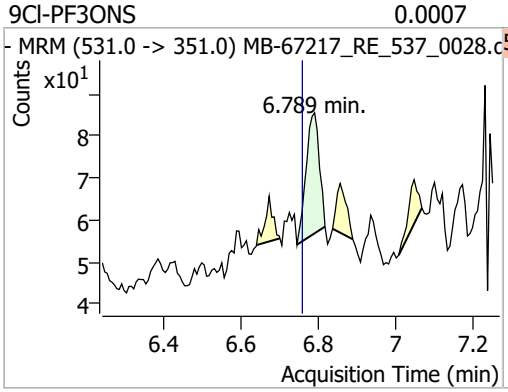
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.0239	6.60	0.02	789	498.9 -> 98.8	81.9	45.4	68.1

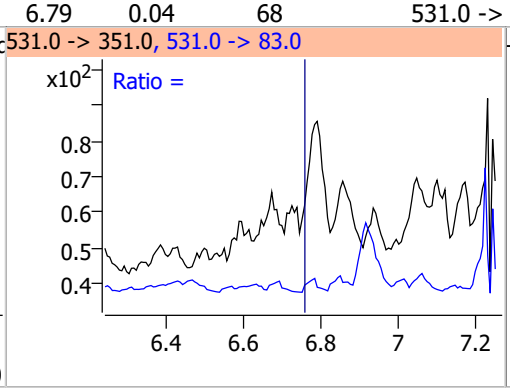


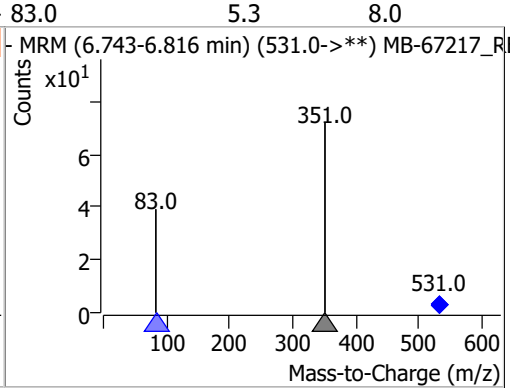




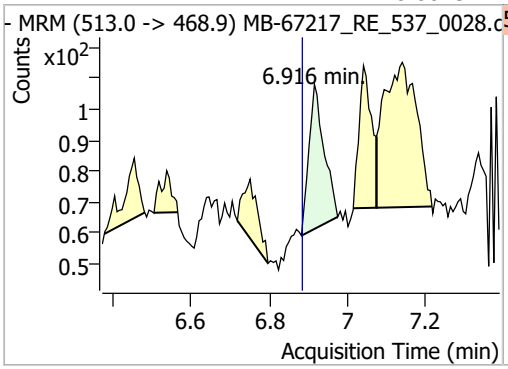
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0007	6.79	0.04	68	531.0 -> 83.0		5.3	8.0

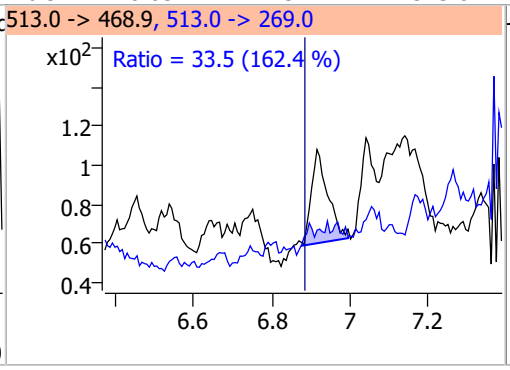


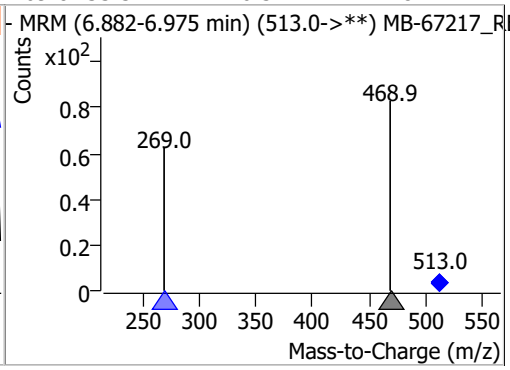




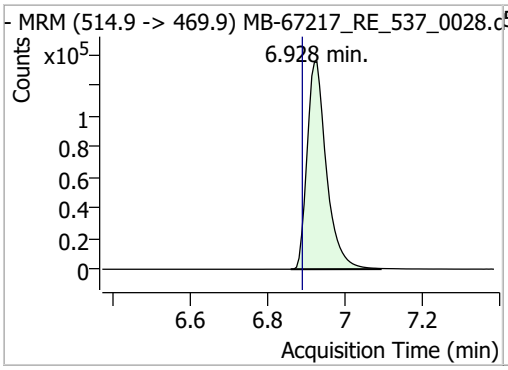
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0023	6.92	0.03	125	513.0 -> 269.0	33.5	16.5	24.8

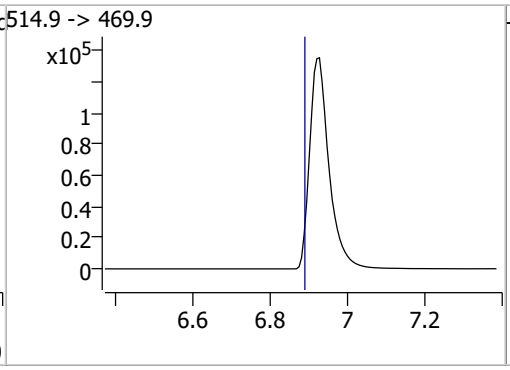


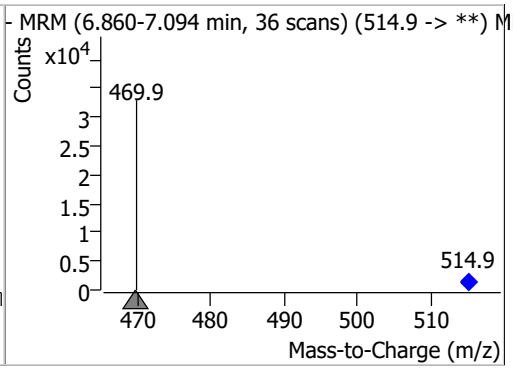




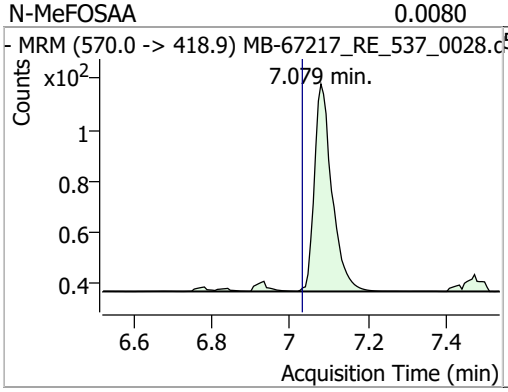
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	8.3894	6.93	0.04	470781				

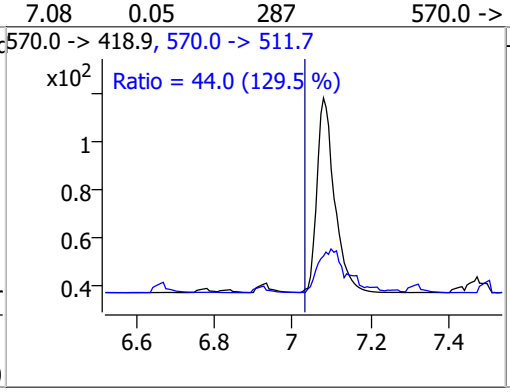


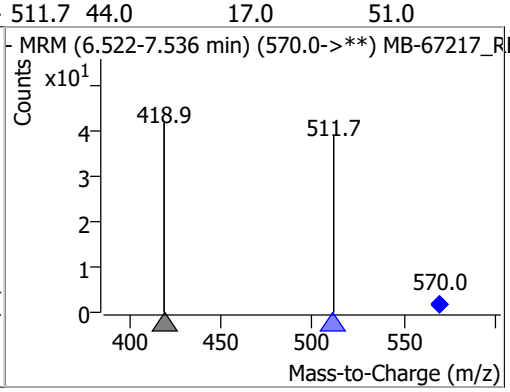




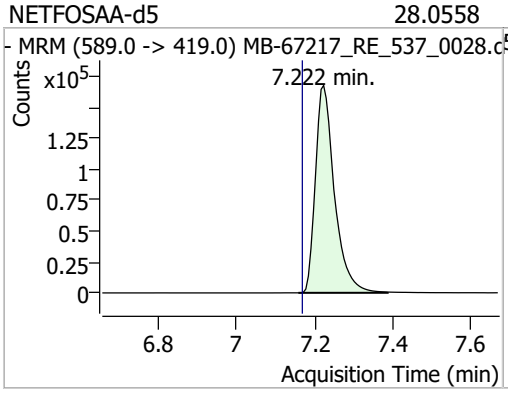
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0080	7.08	0.05	287	570.0 -> 511.7	44.0	17.0	51.0

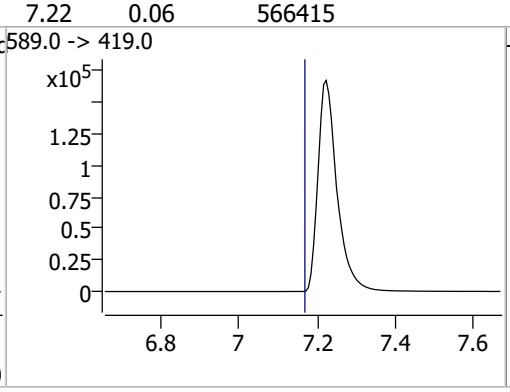


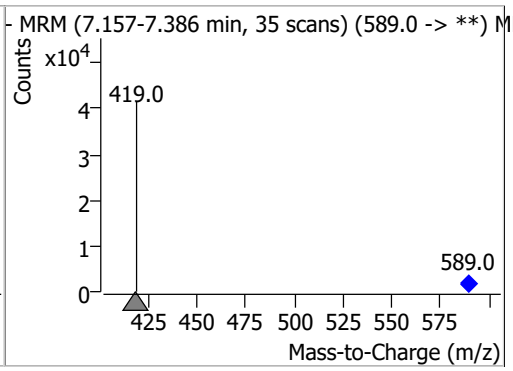




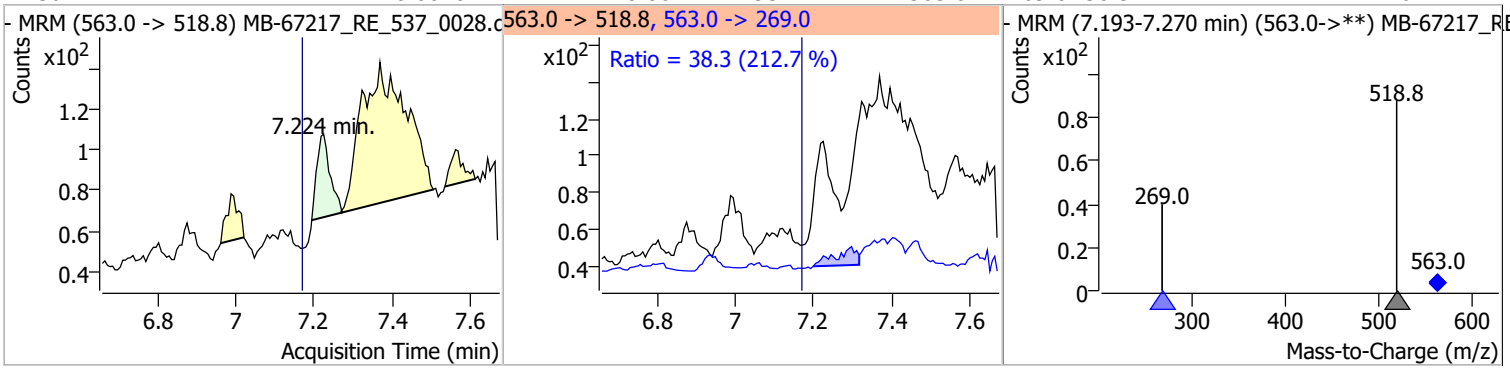
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	28.0558	7.22	0.06	566415				



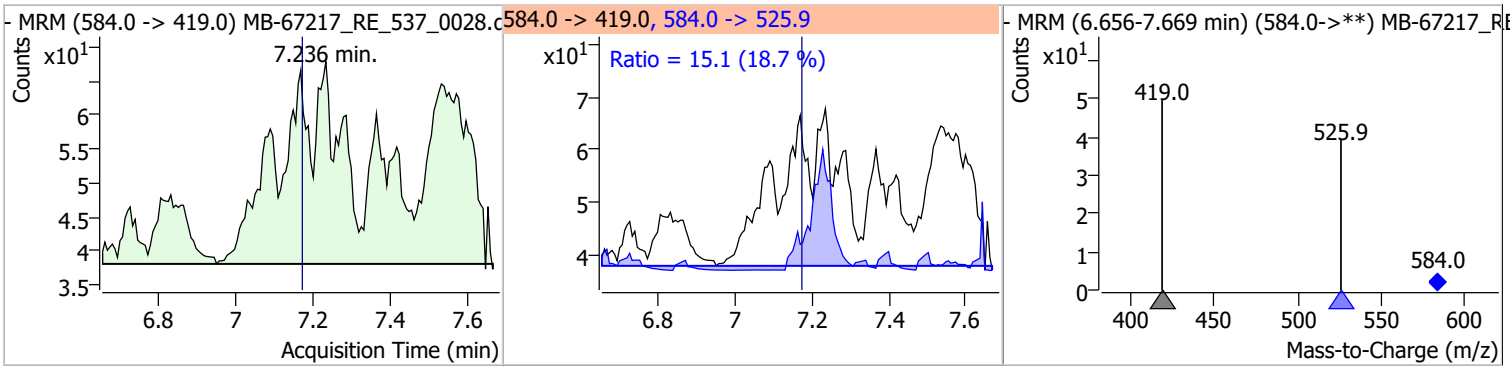




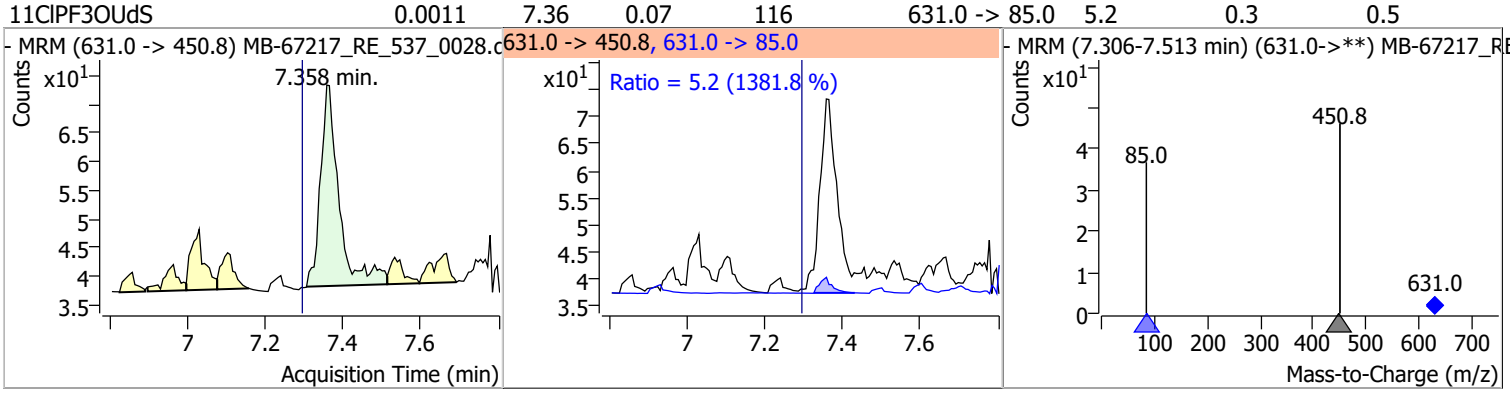
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0018	7.22	0.06	95	563.0 -> 269.0	38.3	14.4	21.6



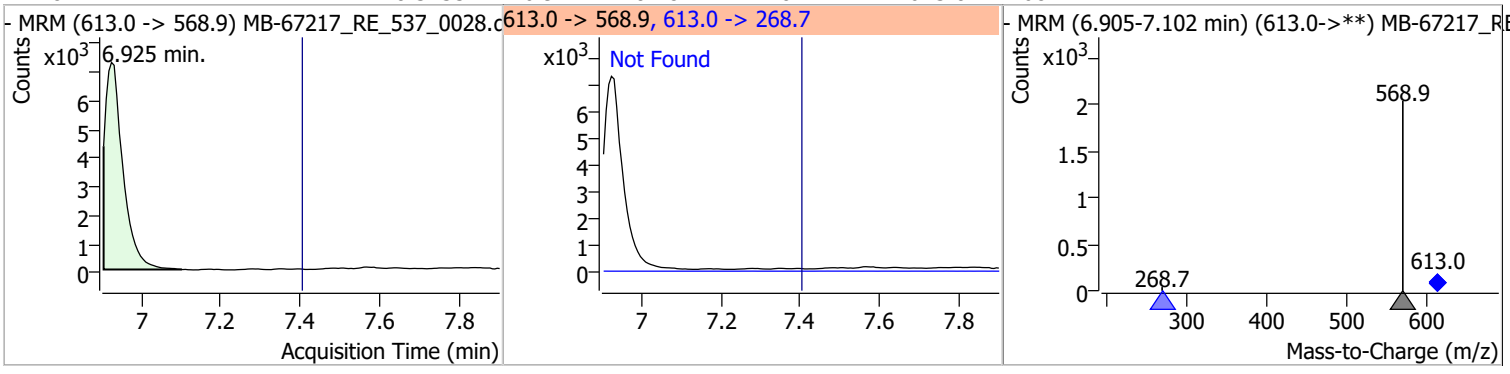
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0222	7.24	0.06	709	584.0 -> 525.9	15.1	40.4	121.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0011	7.36	0.07	116	631.0 -> 85.0	5.2	0.3	0.5

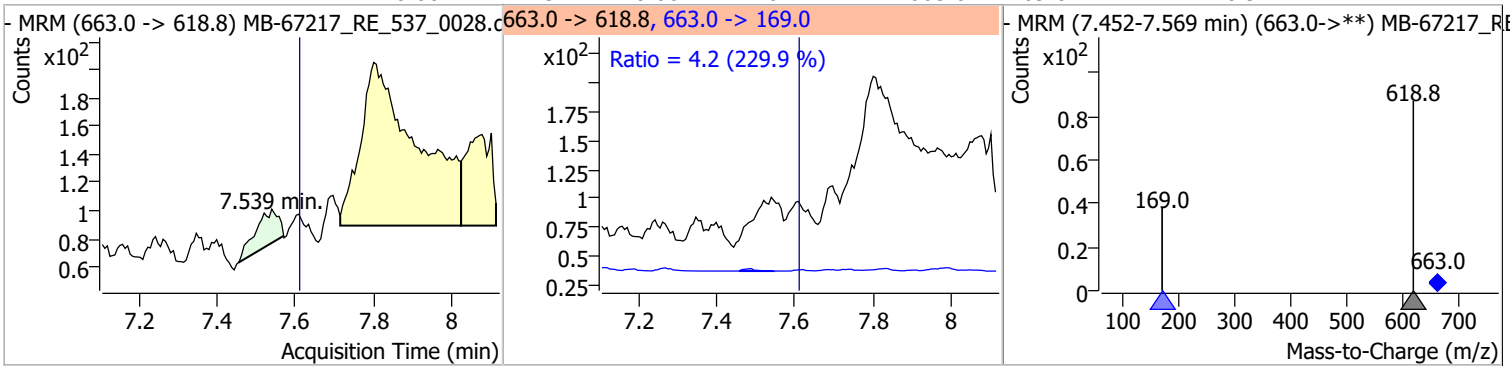


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.3735	6.92	-0.48	22047	613.0 -> 268.7		1.1	1.7

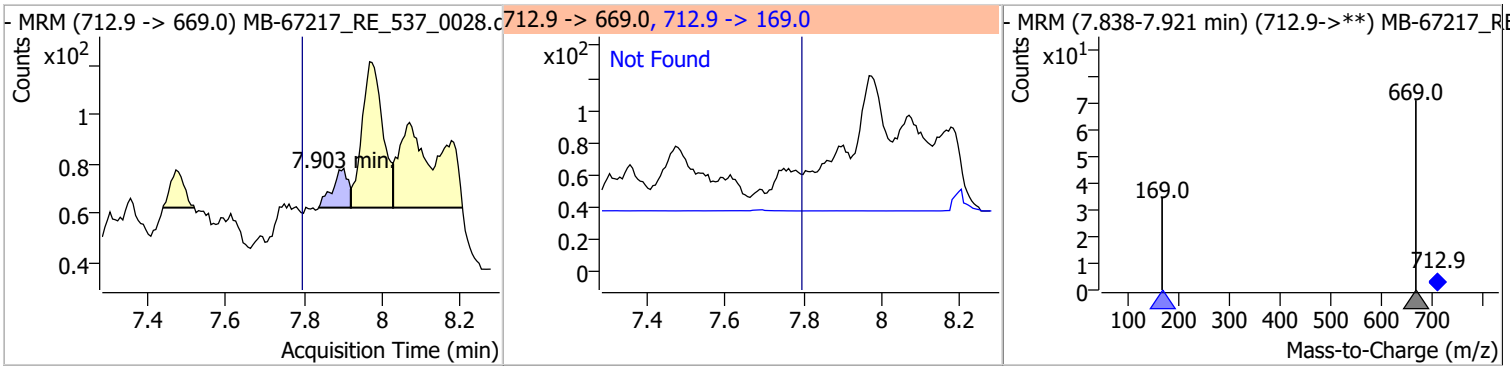


Quantitation Results Report

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0022	7.54	-0.08	101	663.0 -> 169.0	4.2	0.9	2.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0016	7.90	0.11	44	712.9 -> 169.0		0.0	0.1



Quantitation Results Report

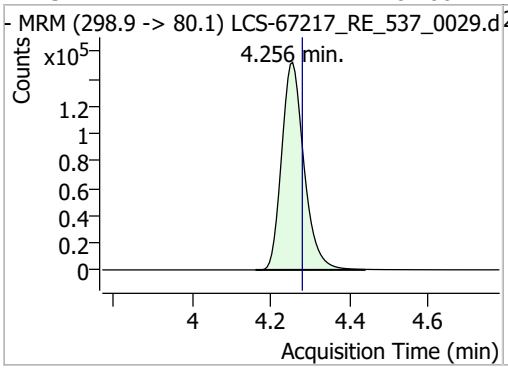
Agilent | Trusted Answers

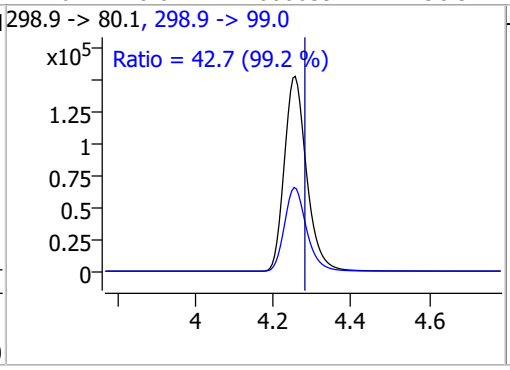
Data File	LCS-67217_RE_537_0029.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 11:34:03 AM
Sample Name	LCS-67217	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

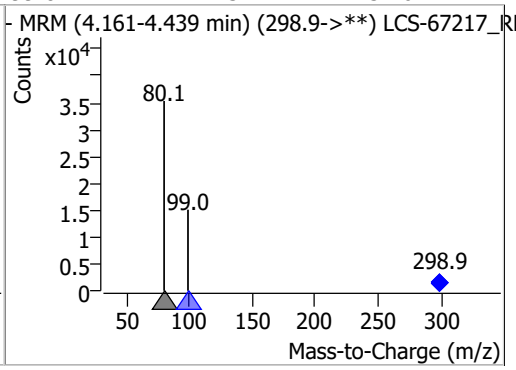
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	821308	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	941979	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1756430	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	1039545	10.5672	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 105.67%			
13C3-HFPO-DA	5.207	287.0 -> 169.0	18145	8.8793	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 88.79%			
13C2-PFDA	6.922	514.9 -> 469.9	529366	10.3569	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 103.57%			
NETFOSAA-d5	7.215	589.0 -> 419.0	454423	21.4616	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 53.65%		*	
Target Compounds							QValue
PFBS	4.256	298.9 -> 80.1	600639	8.7002	ng/ml		99
PFHxA	4.986	313.0 -> 269.0	1070295	8.5288	ng/ml		100
HFPO-DA	5.208	285.0 -> 169.1	17875	7.5511	ng/ml		98
PFHpA	5.670	362.9 -> 318.9	984680	9.1846	ng/ml		99
PFHxS	5.737	398.9 -> 79.9	382049	8.7751	ng/ml		93
NaDONA	5.750	377.0 -> 250.9	3086683	8.5787	ng/ml		96
PFOA	6.171	413.0 -> 369.1	782136	8.9764	ng/ml		93
PFNA	6.577	463.0 -> 418.9	517958	9.4191	ng/ml		96
PFOS	6.589	498.9 -> 80.1	268708	8.7705	ng/ml		97
9Cl-PF3ONS	6.782	531.0 -> 351.0	767828	8.3178	ng/ml		96
PFDA	6.922	513.0 -> 468.9	514096	10.0595	ng/ml		96
N-MeFOSAA	7.079	570.0 -> 418.9	224842	5.7412	ng/ml		98
PFUdA	7.217	563.0 -> 518.8	349436	7.0847	ng/ml		96
N-EtFOSAA	7.223	584.0 -> 419.0	180309	5.2497	ng/ml		98
11ClPF3OUdS	7.352	631.0 -> 450.8	659497	6.3136	ng/ml		100
PFDoA	7.469	613.0 -> 568.9	389856	7.2439	ng/ml	#	99
PFTrDA	7.696	663.0 -> 618.8	319944	7.3087	ng/ml		99
PFTA	7.891	712.9 -> 669.0	198550	7.6784	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

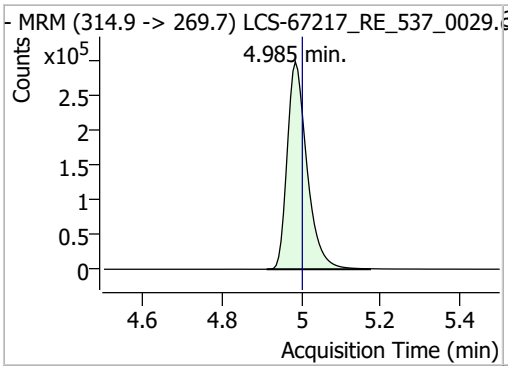
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	8.7002	4.26	-0.02	600639	298.9 -> 99.0	42.7	34.4	51.6

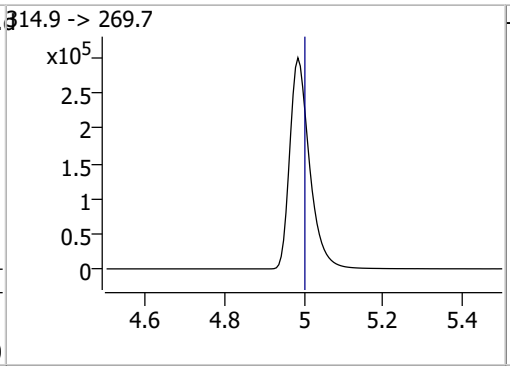


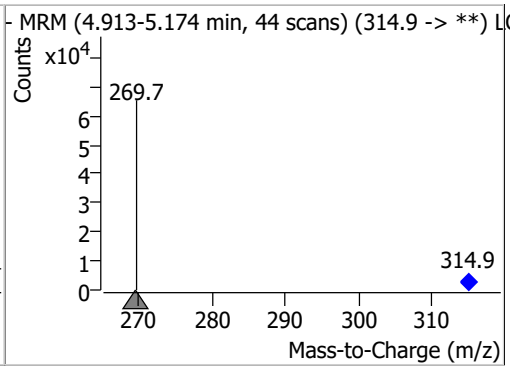




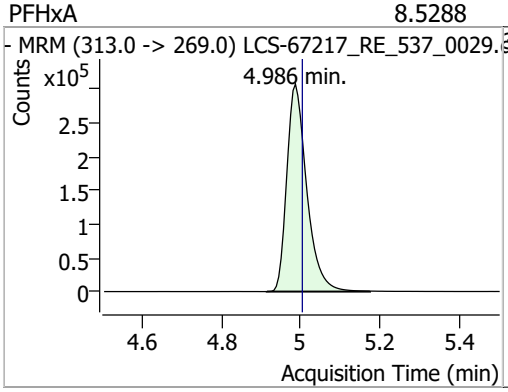
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	10.5672	4.99	-0.01	1039545				

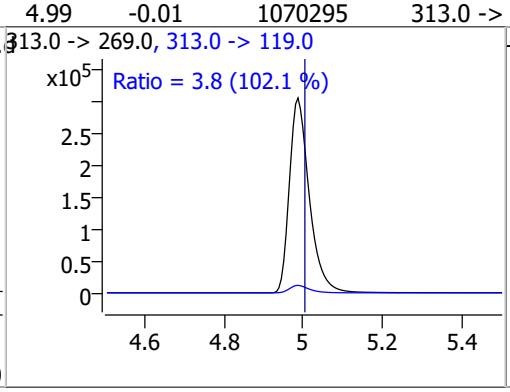


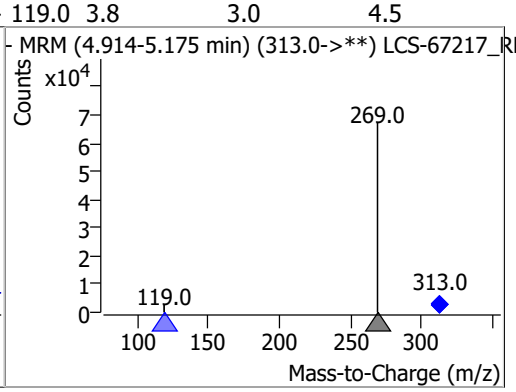




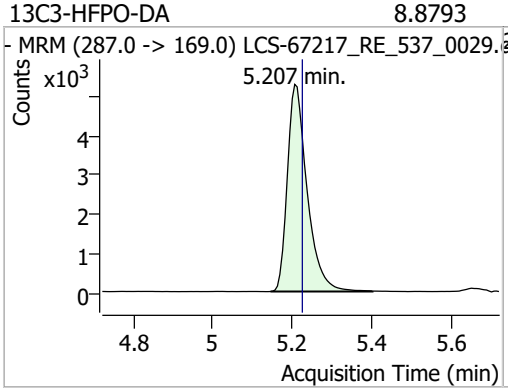
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	8.5288	4.99	-0.01	1070295	313.0 -> 119.0	3.8	3.0	4.5

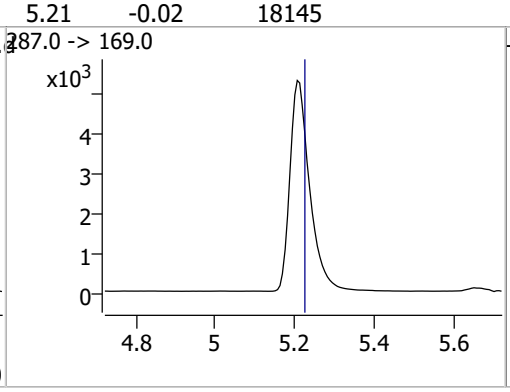


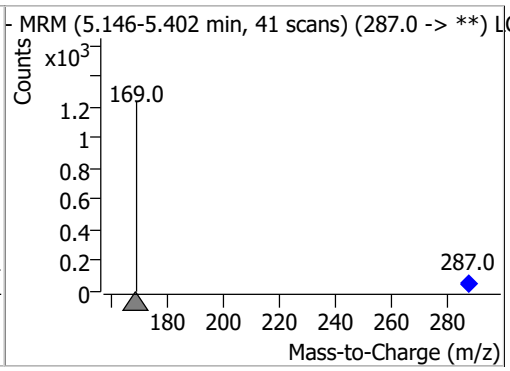




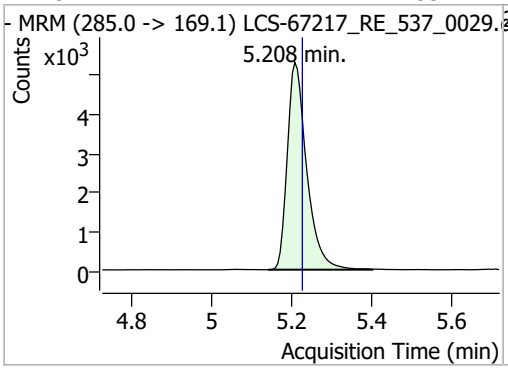
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	8.8793	5.21	-0.02	18145				

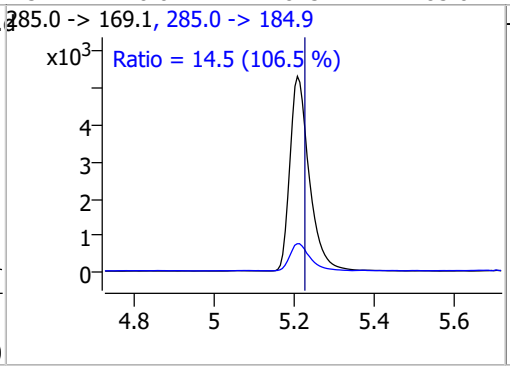


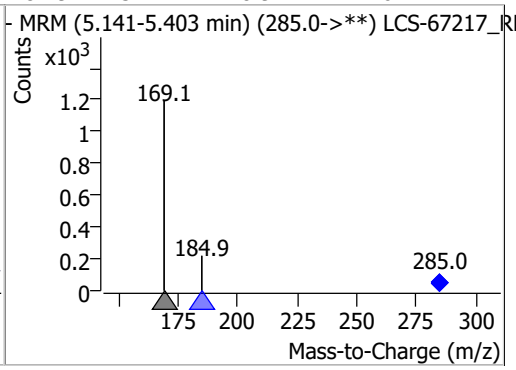




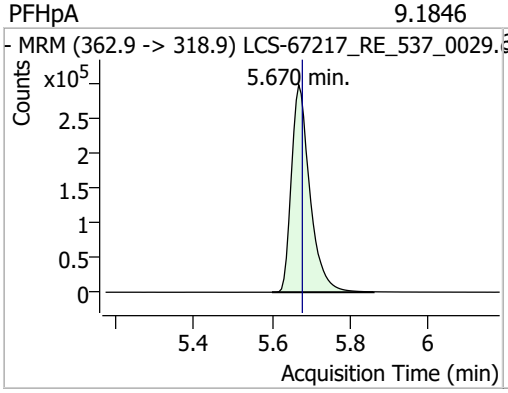
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	7.5511	5.21	-0.02	17875	285.0 -> 184.9	14.5	10.9	16.4

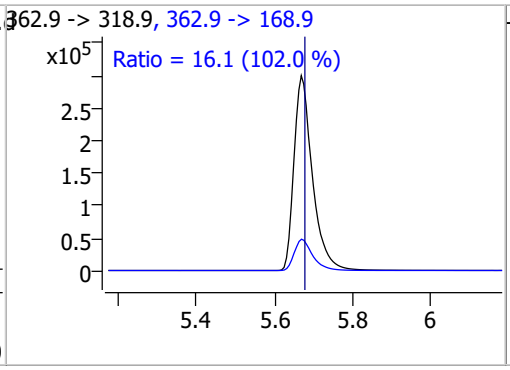


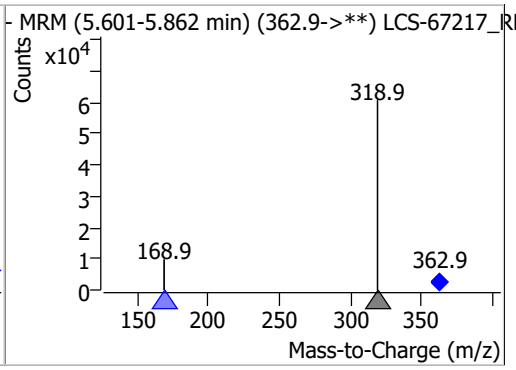




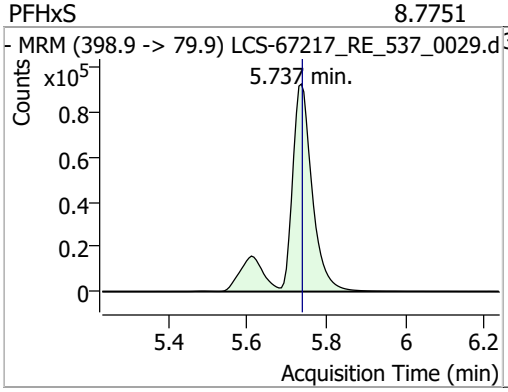
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	9.1846	5.67	-0.01	984680	362.9 -> 168.9	16.1	12.6	18.9

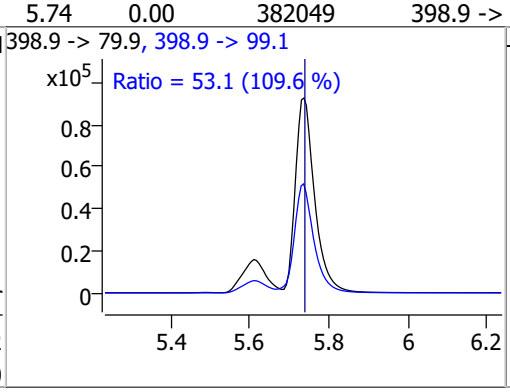


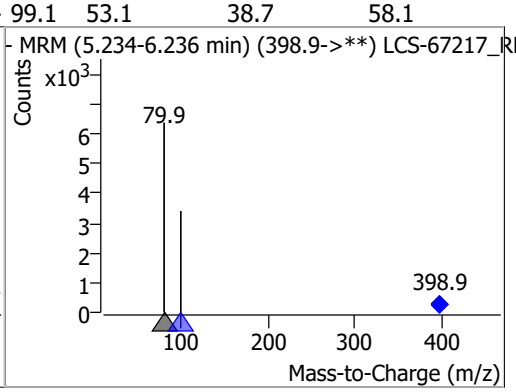




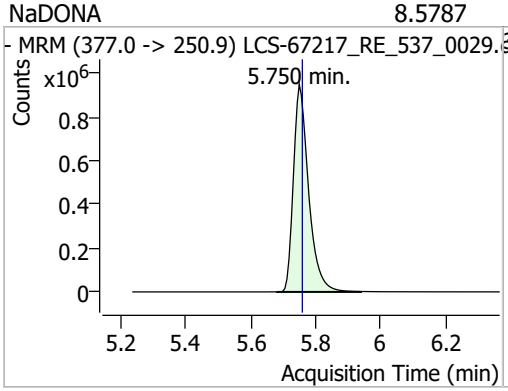
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	8.7751	5.74	0.00	382049	398.9 -> 99.1	53.1	38.7	58.1

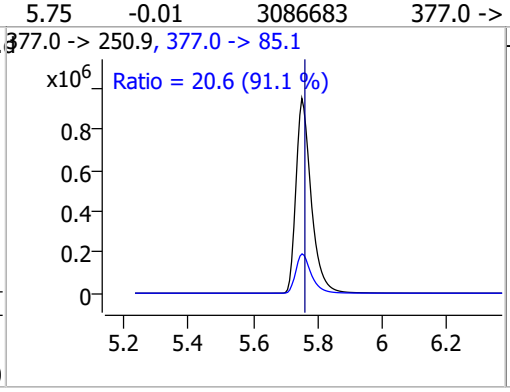


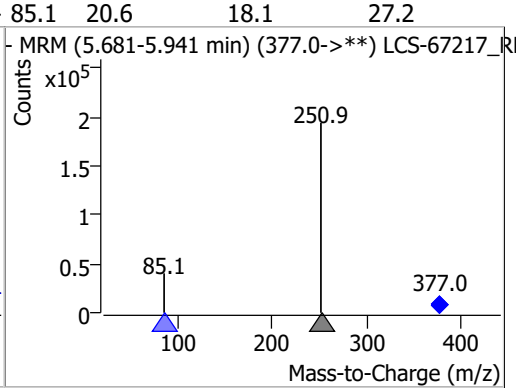




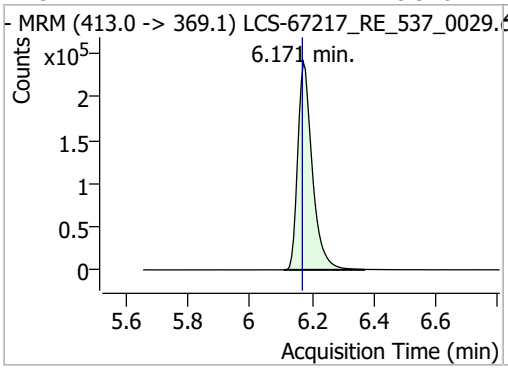
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	8.5787	5.75	-0.01	3086683	377.0 -> 85.1	20.6	18.1	27.2

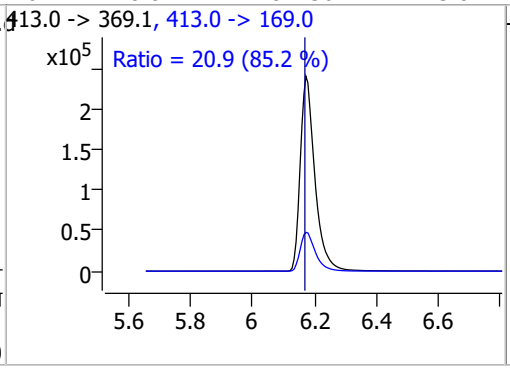


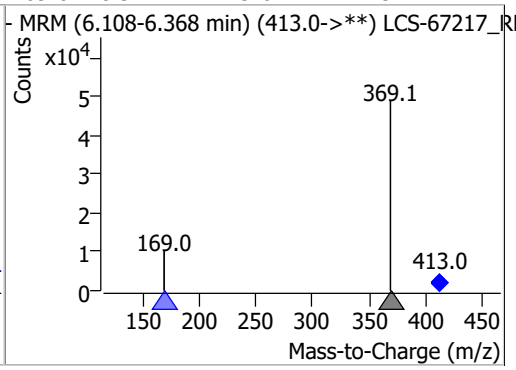




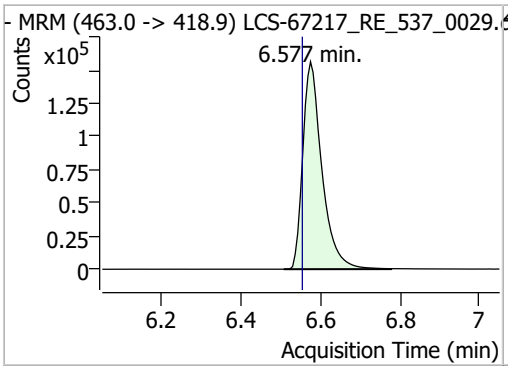
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	8.9764	6.17	0.01	782136	413.0 -> 169.0	20.9	19.6	29.4

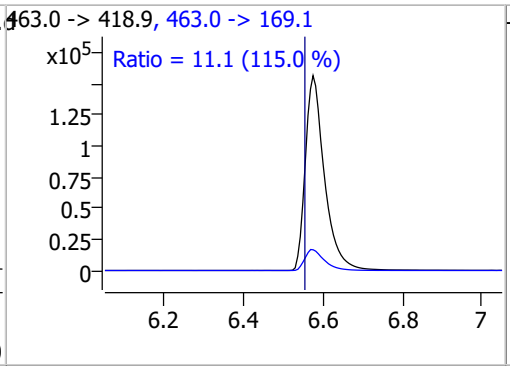


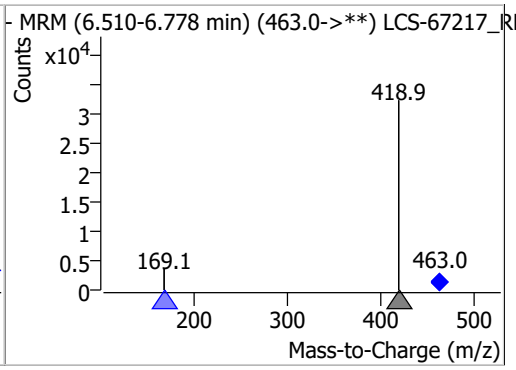




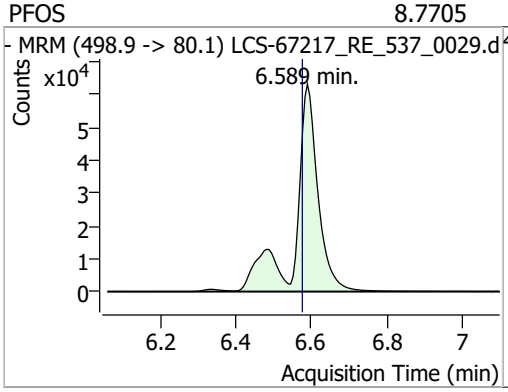
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	9.4191	6.58	0.02	517958	463.0 -> 169.1	11.1	7.7	11.5

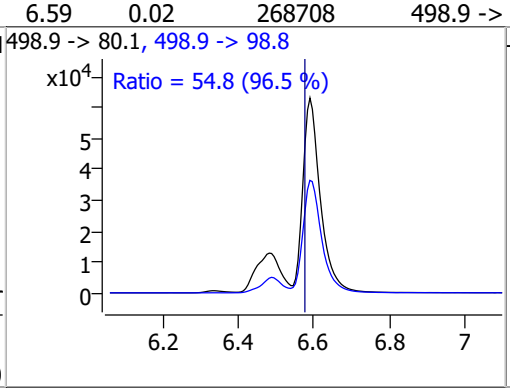


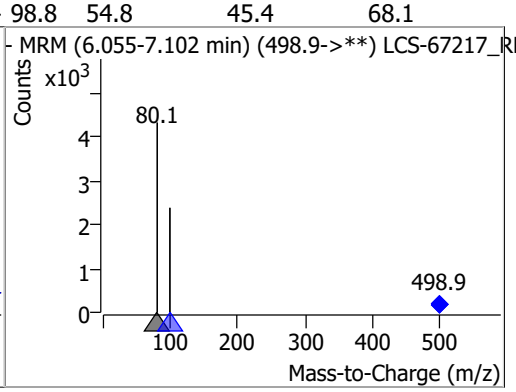




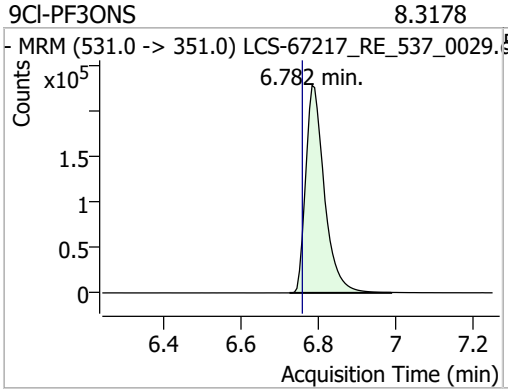
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	8.7705	6.59	0.02	268708	498.9 -> 98.8	54.8	45.4	68.1

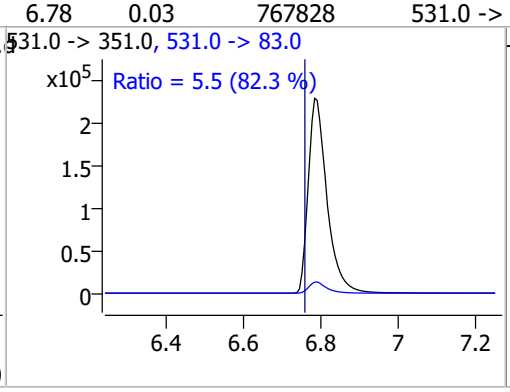


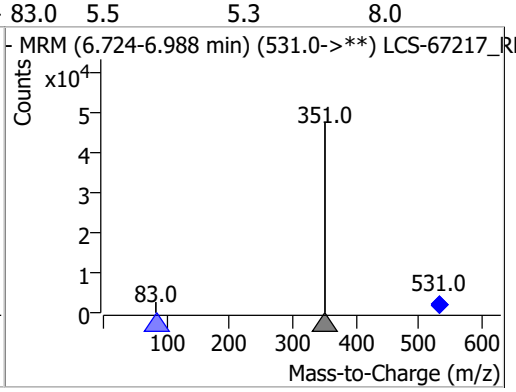




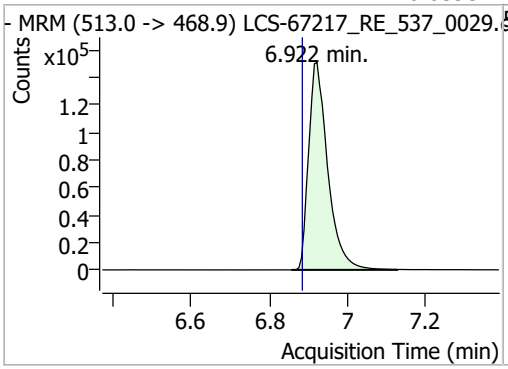
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	8.3178	6.78	0.03	767828	531.0 -> 83.0	5.5	5.3	8.0

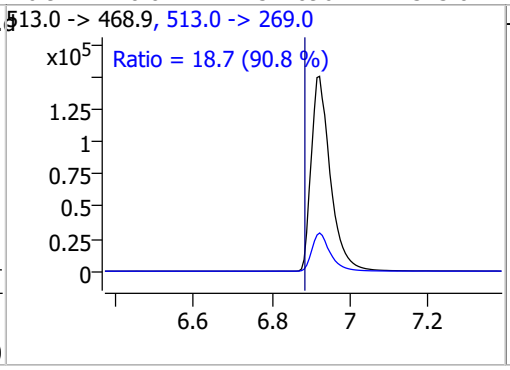


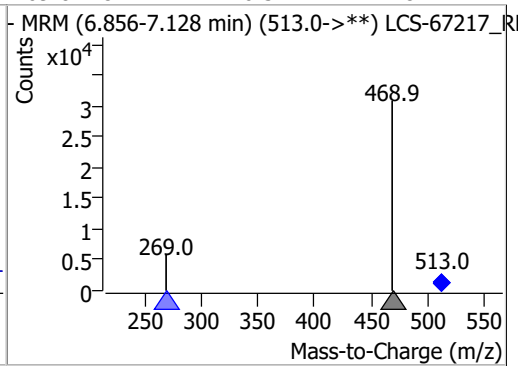




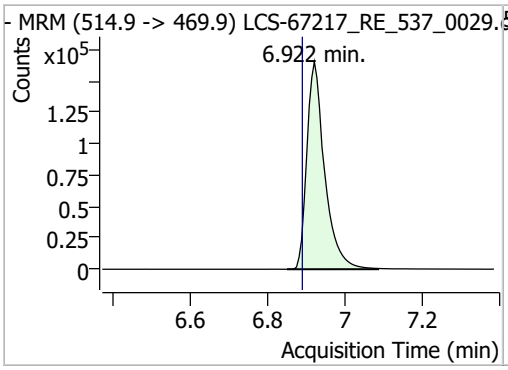
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	10.0595	6.92	0.04	514096	513.0 -> 269.0	18.7	16.5	24.8

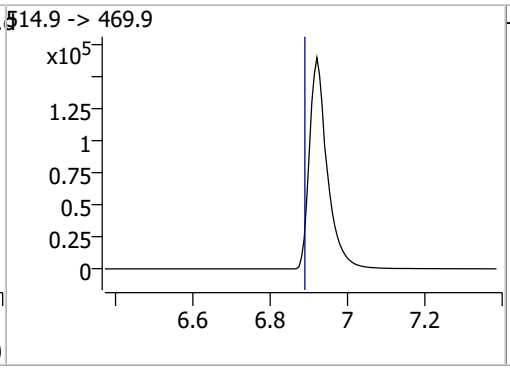


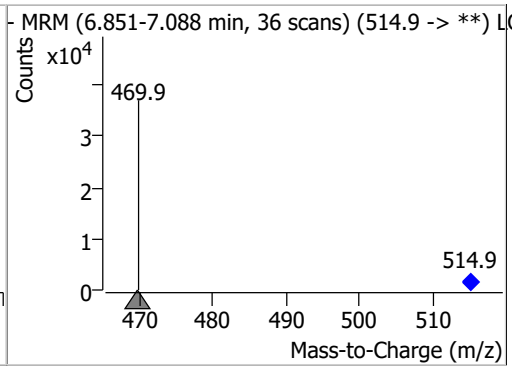




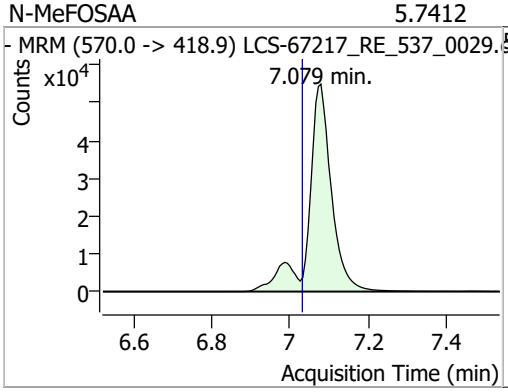
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	10.3569	6.92	0.03	529366				

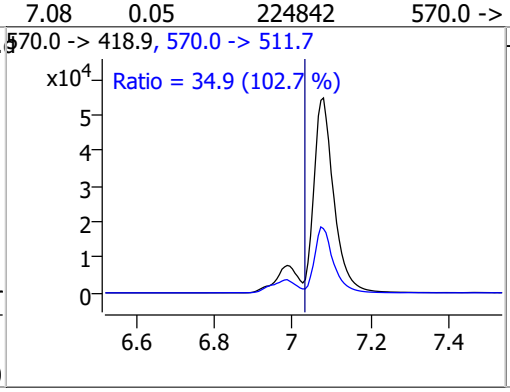


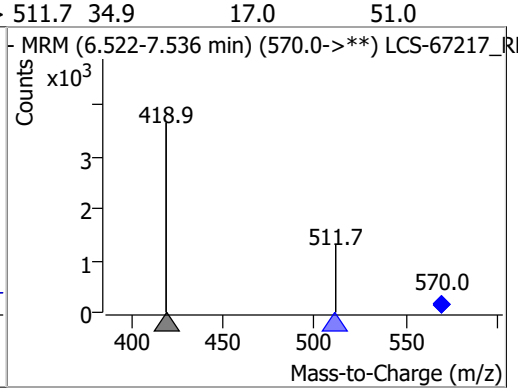




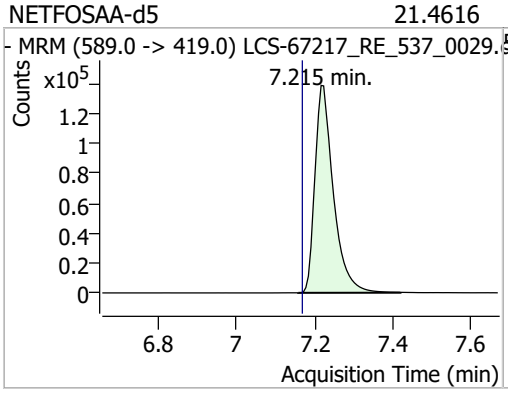
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	5.7412	7.08	0.05	224842	570.0 -> 511.7	34.9	17.0	51.0

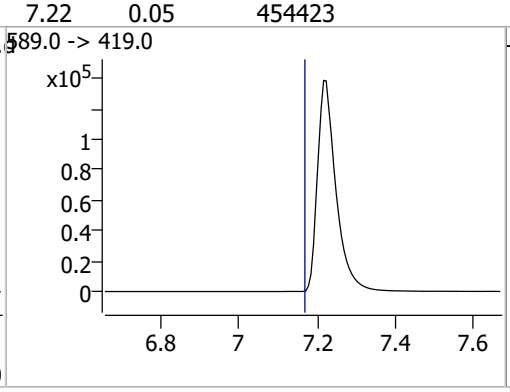


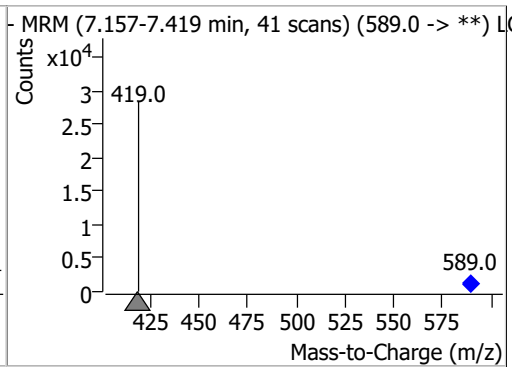




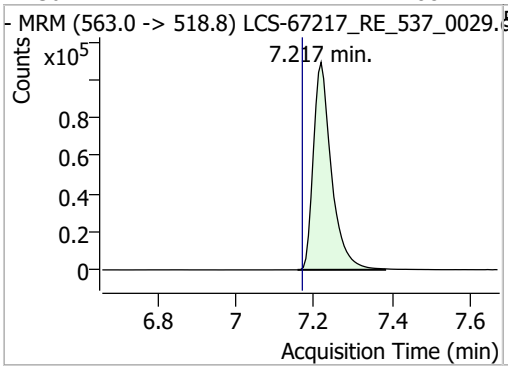
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	21.4616	7.22	0.05	454423				

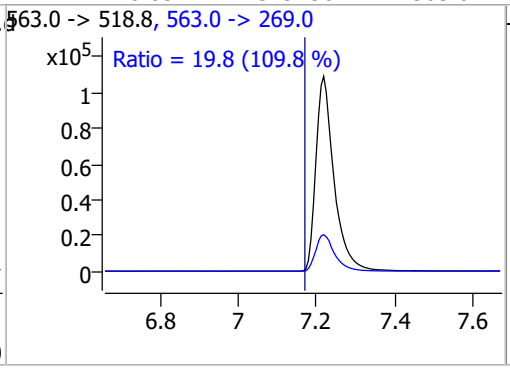


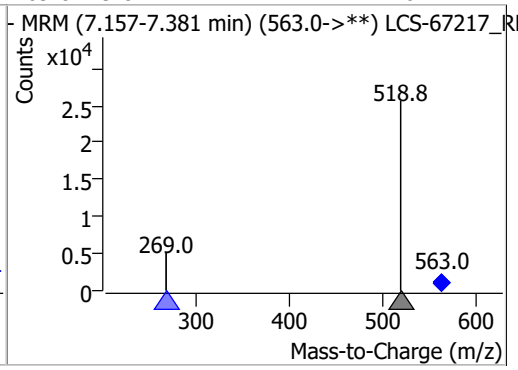




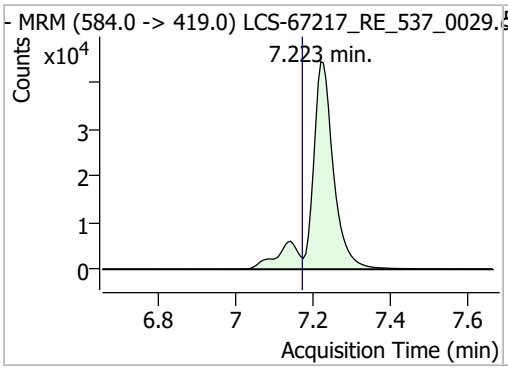
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	7.0847	7.22	0.05	349436	563.0 -> 269.0	19.8	14.4	21.6

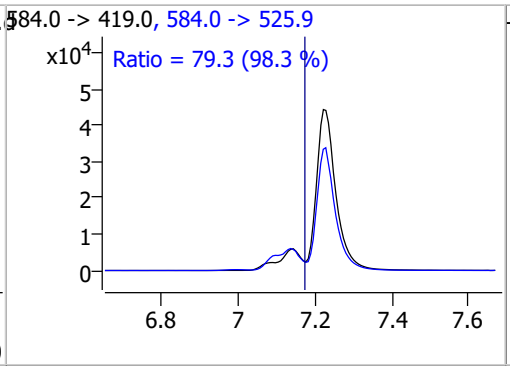


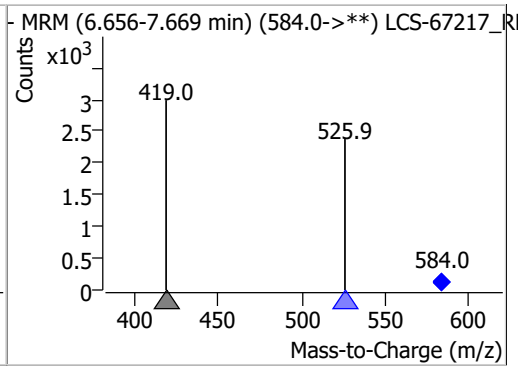




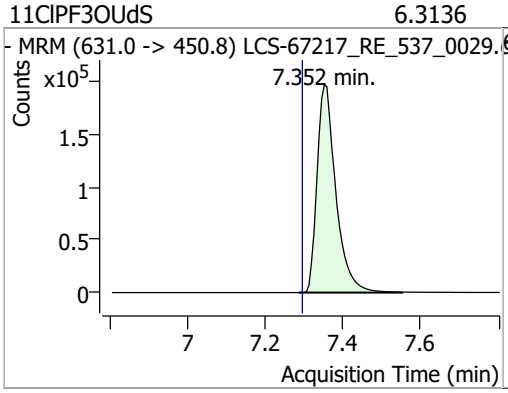
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	5.2497	7.22	0.05	180309	584.0 -> 525.9	79.3	40.4	121.1

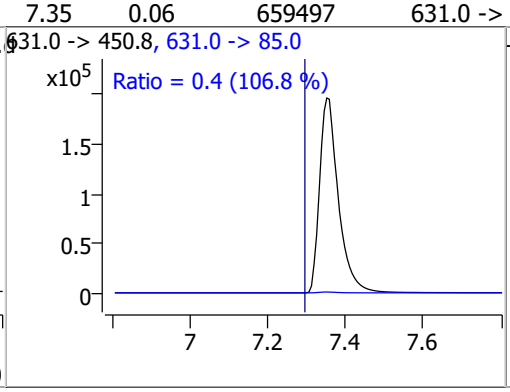


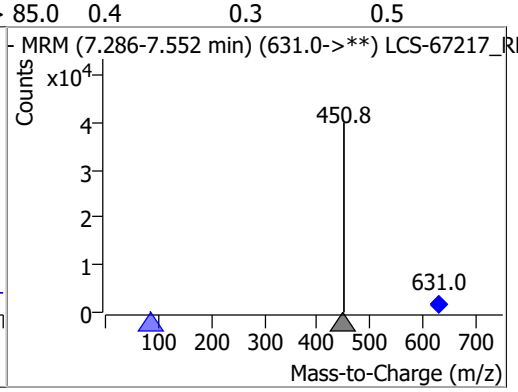




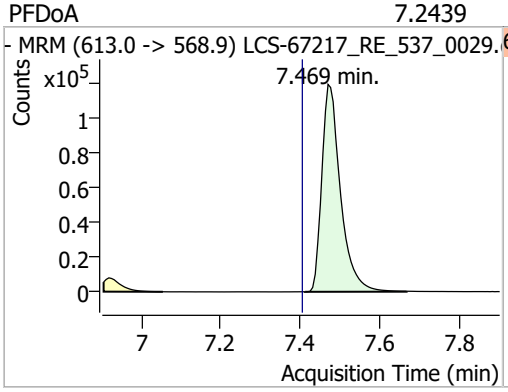
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	6.3136	7.35	0.06	659497	631.0 -> 85.0	0.4	0.3	0.5

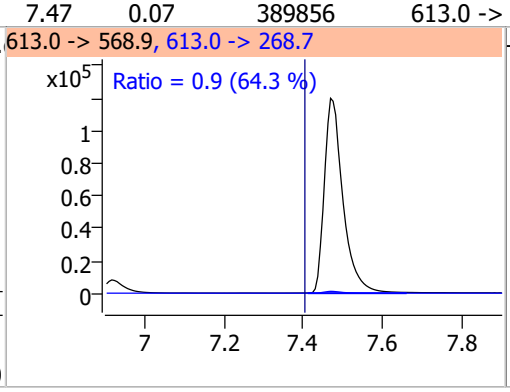


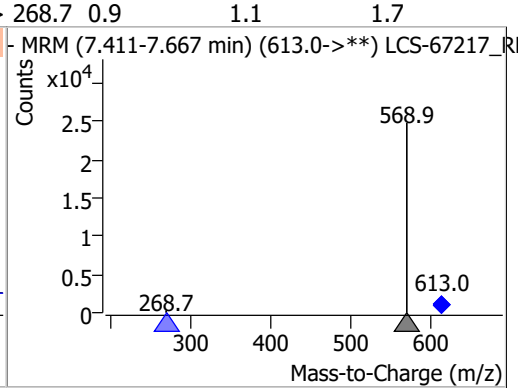




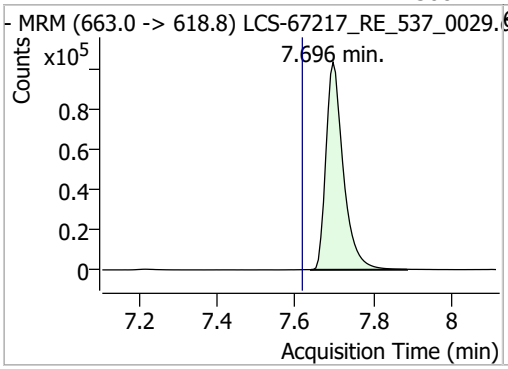
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	7.2439	7.47	0.07	389856	613.0 -> 268.7	0.9	1.1	1.7

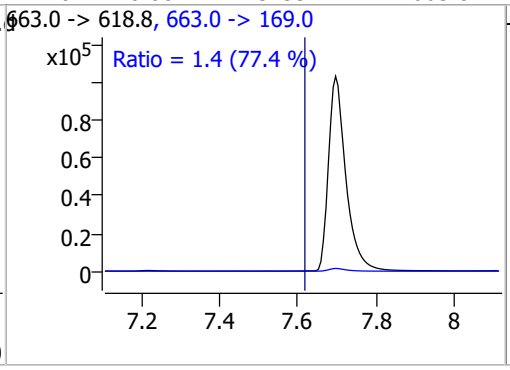


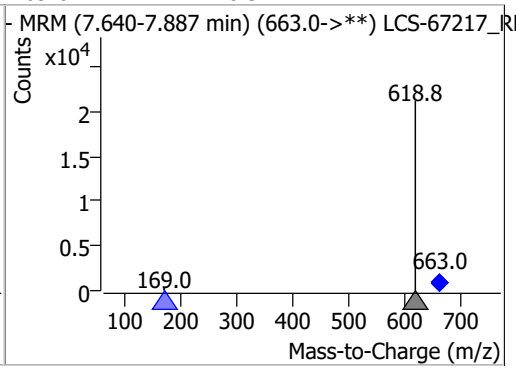




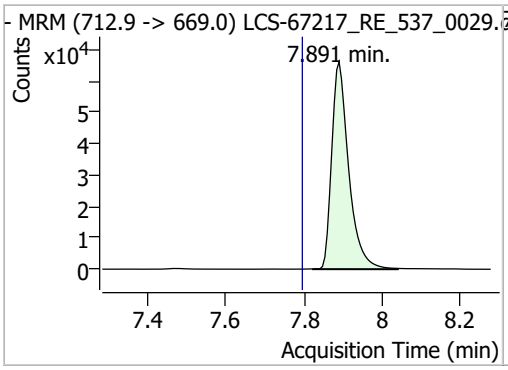
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	7.3087	7.70	0.08	319944	663.0 -> 169.0	1.4	0.9	2.7

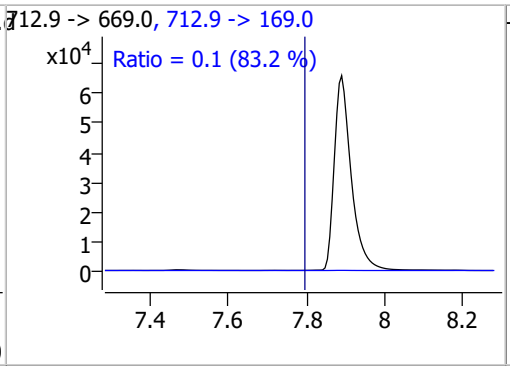


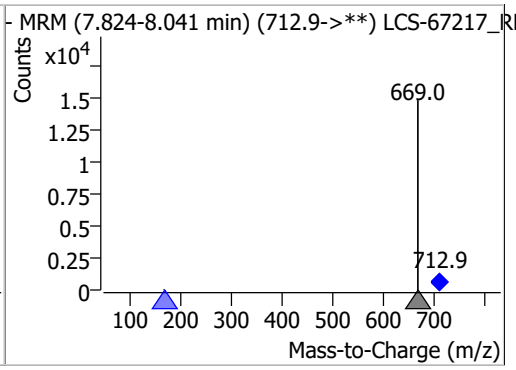




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	7.6784	7.89	0.10	198550	712.9 -> 169.0	0.1	0.0	0.1







Quantitation Results Report

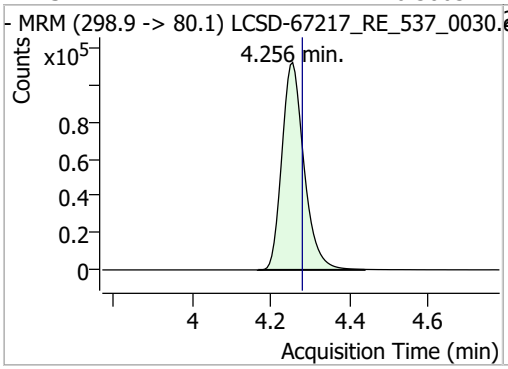
Agilent | Trusted Answers

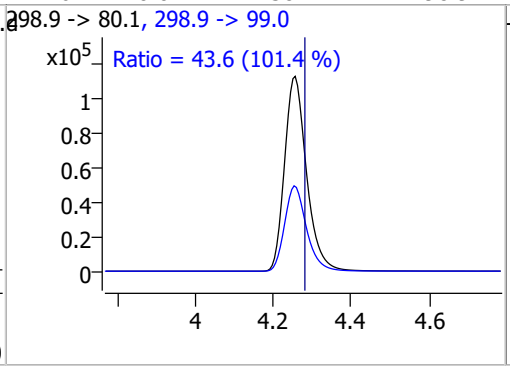
Data File	LCSD-67217_RE_537_0030.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 11:46:46 AM
Sample Name	LCSD-67217	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

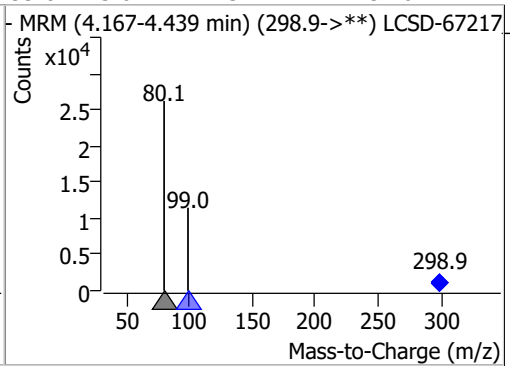
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.595	502.9 -> 80.1	827618	3.0000	ng/ml		0.023
13C2-PFOA	6.171	415.0 -> 370.0	1013049	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1858988	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	775781	7.3328	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 73.33%			
13C3-HFPO-DA	5.213	287.0 -> 169.0	13807	6.2826	ng/ml		-0.010
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 62.83%		*	
13C2-PFDA	6.928	514.9 -> 469.9	483107	8.7887	ng/ml		0.041
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 87.89%			
NETFOSAA-d5	7.222	589.0 -> 419.0	434225	19.3763	ng/ml		0.058
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 48.44%		*	
Target Compounds							**QValue**
PFBS	4.256	298.9 -> 80.1	438214	6.3063	ng/ml		99
PFHxA	4.986	313.0 -> 269.0	745683	5.5252	ng/ml		100
HFPO-DA	5.214	285.0 -> 169.1	12078	4.7778	ng/ml		98
PFHpA	5.676	362.9 -> 318.9	741324	6.4296	ng/ml		100
PFHxS	5.737	398.9 -> 79.9	308723	7.0807	ng/ml		92
NaDONA	5.756	377.0 -> 250.9	2191465	5.7582	ng/ml		98
PFOA	6.178	413.0 -> 369.1	613460	6.5466	ng/ml		95
PFNA	6.577	463.0 -> 418.9	441723	7.4881	ng/ml		98
PFOS	6.596	498.9 -> 80.1	224259	7.2937	ng/ml		94
9Cl-PF3ONS	6.789	531.0 -> 351.0	638730	6.9047	ng/ml	#	94
PFDA	6.922	513.0 -> 468.9	385120	7.0827	ng/ml		97
N-MeFOSAA	7.079	570.0 -> 418.9	214043	5.1810	ng/ml		89
PFUdA	7.217	563.0 -> 518.8	338294	6.3776	ng/ml		95
N-EtFOSAA	7.223	584.0 -> 419.0	163159	4.5027	ng/ml		98
11ClPF3OUdS	7.352	631.0 -> 450.8	690666	6.5488	ng/ml		100
PFDoA	7.469	613.0 -> 568.9	365801	6.3209	ng/ml	#	99
PFTrDA	7.696	663.0 -> 618.8	294924	6.2911	ng/ml		99
PFTA	7.891	712.9 -> 669.0	176144	6.3340	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

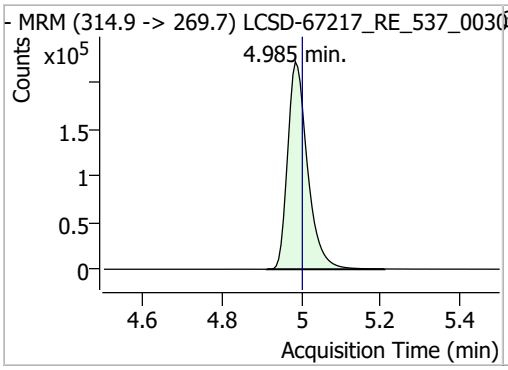
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	6.3063	4.26	-0.02	438214	298.9 -> 99.0	43.6	34.4	51.6

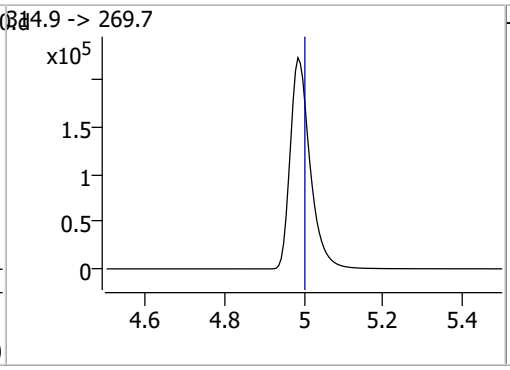


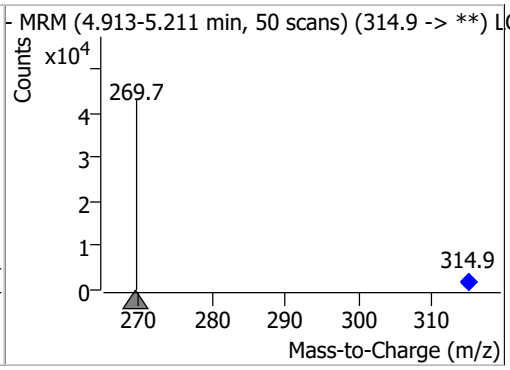




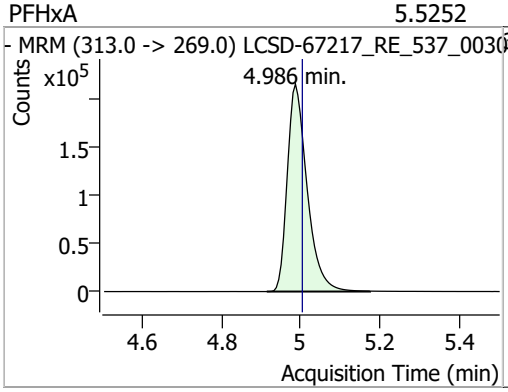
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	7.3328	4.99	-0.01	775781				

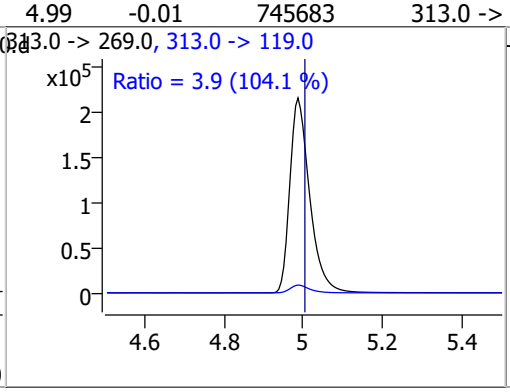


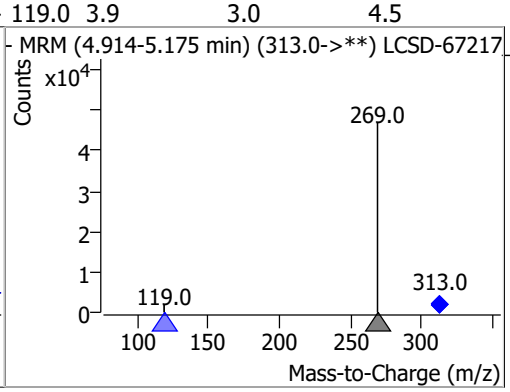




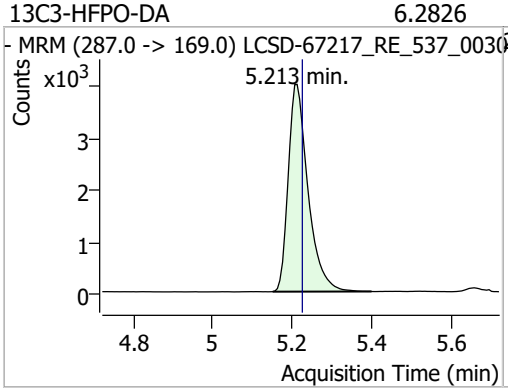
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	5.5252	4.99	-0.01	745683	313.0 -> 119.0	3.9	3.0	4.5

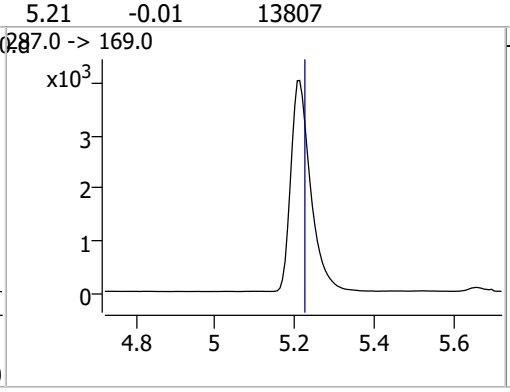


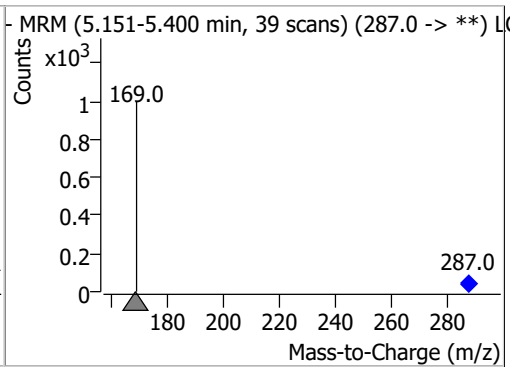




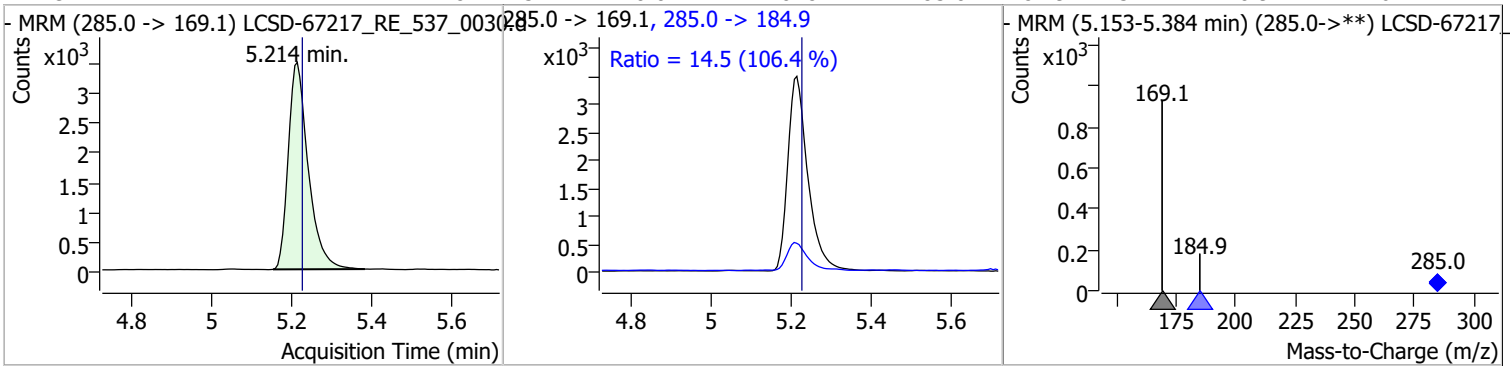
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	6.2826	5.21	-0.01	13807				



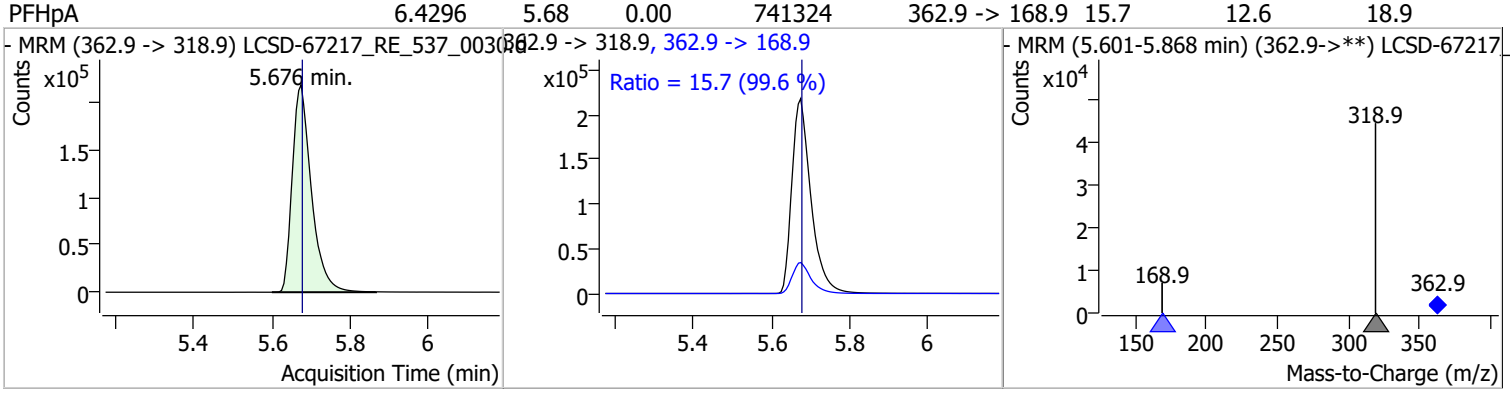




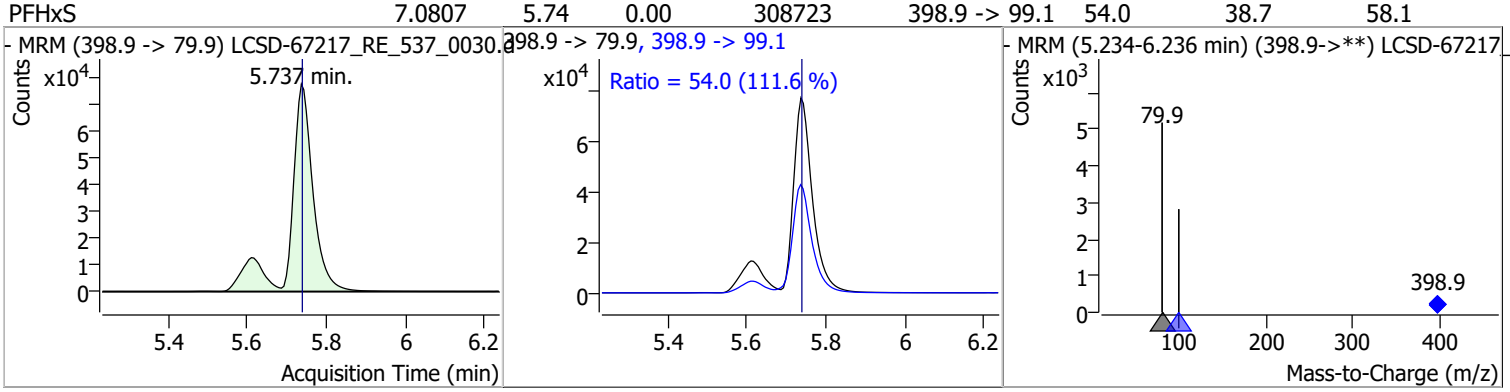
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	4.7778	5.21	-0.01	12078	285.0 -> 184.9	14.5	10.9	16.4



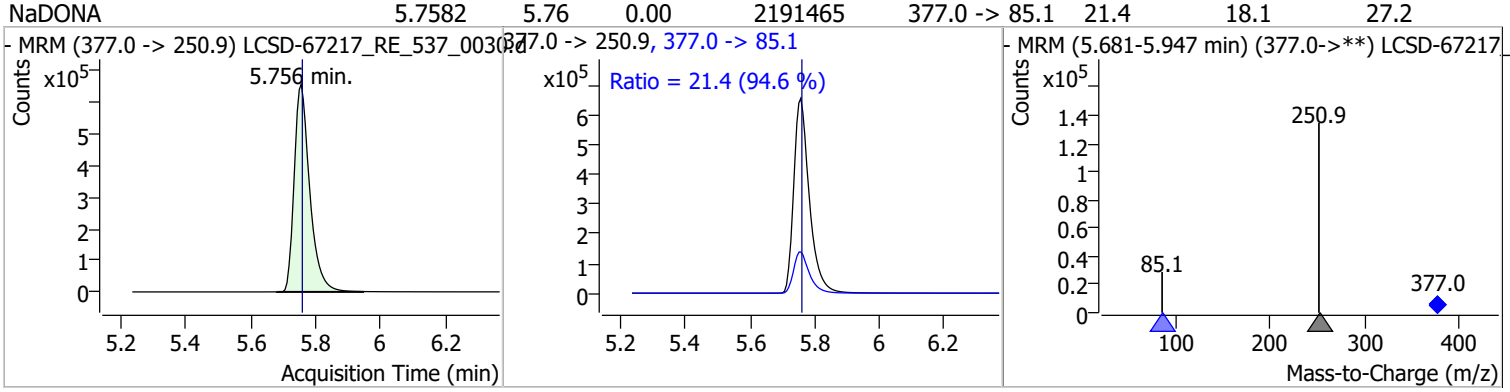
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	6.4296	5.68	0.00	741324	362.9 -> 168.9	15.7	12.6	18.9



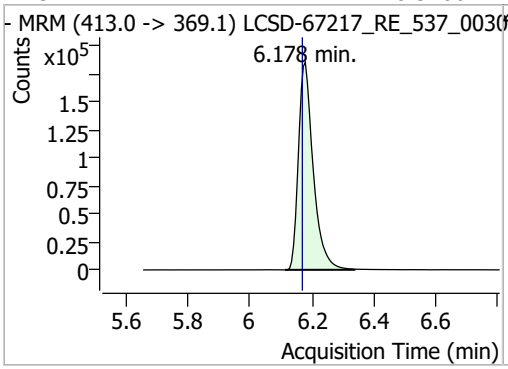
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	7.0807	5.74	0.00	308723	398.9 -> 99.1	54.0	38.7	58.1

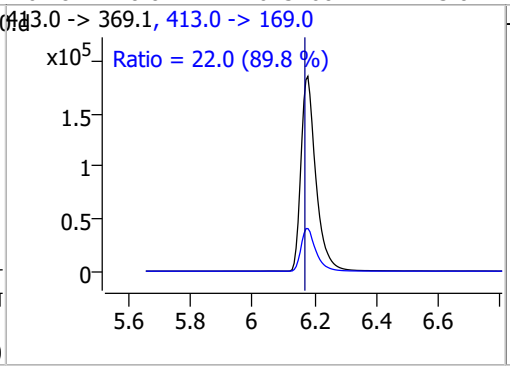


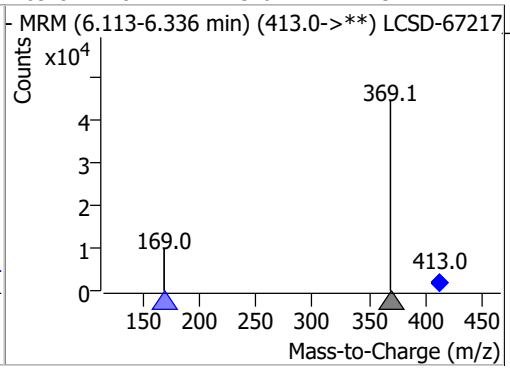
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	5.7582	5.76	0.00	2191465	377.0 -> 85.1	21.4	18.1	27.2



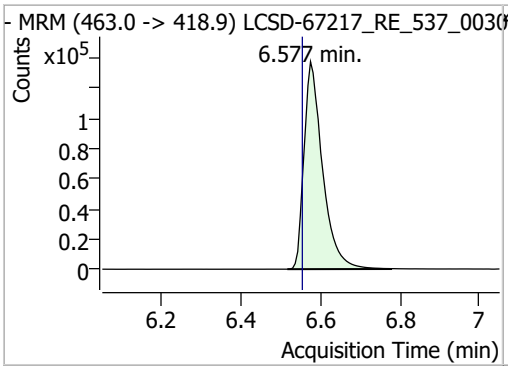
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	6.5466	6.18	0.01	613460	413.0 -> 169.0	22.0	19.6	29.4

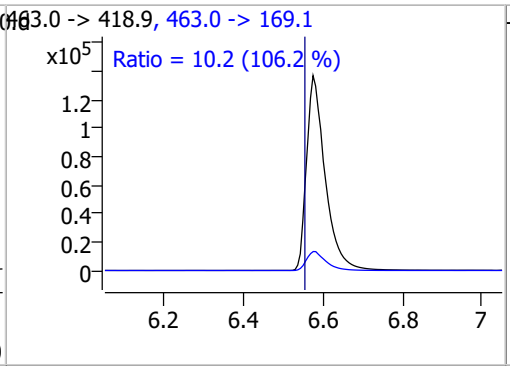


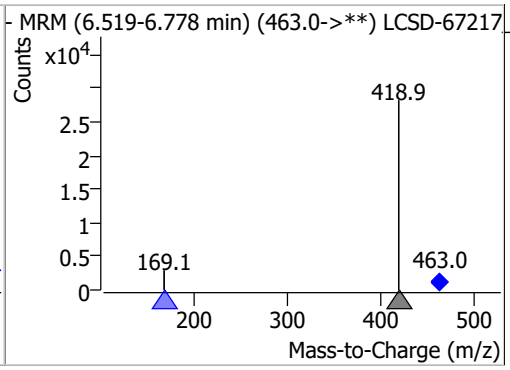




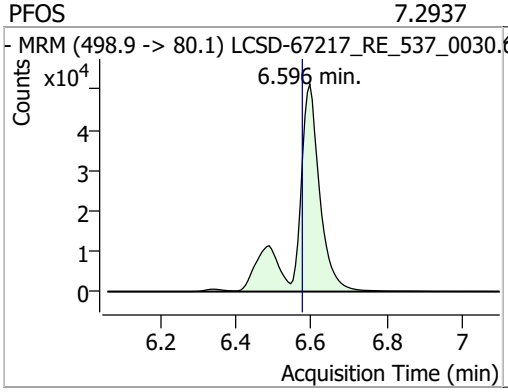
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	7.4881	6.58	0.02	441723	463.0 -> 169.1	10.2	7.7	11.5

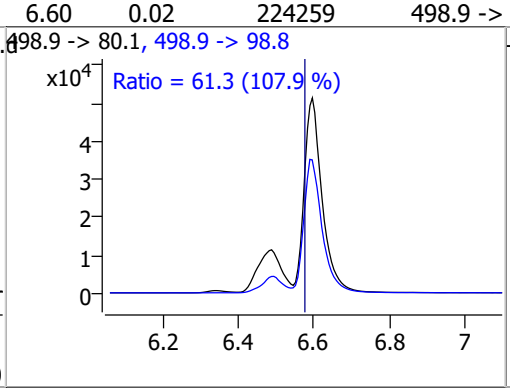


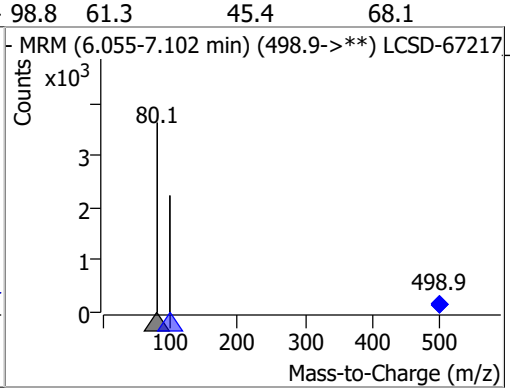




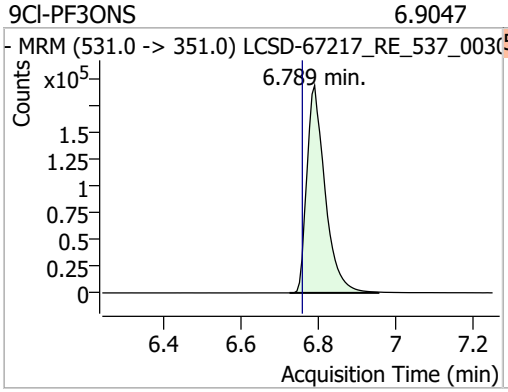
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	7.2937	6.60	0.02	224259	498.9 -> 98.8	61.3	45.4	68.1

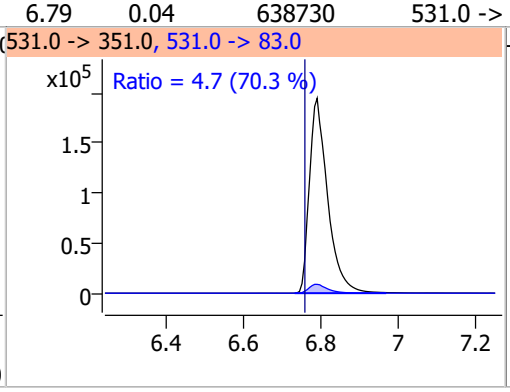


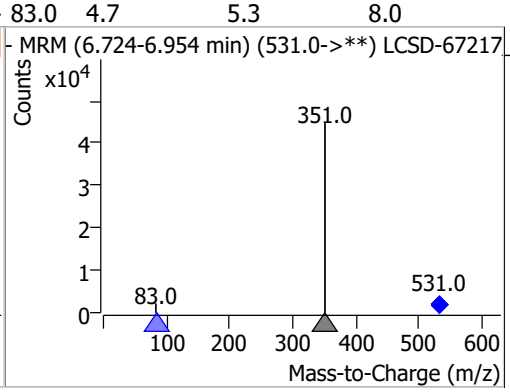




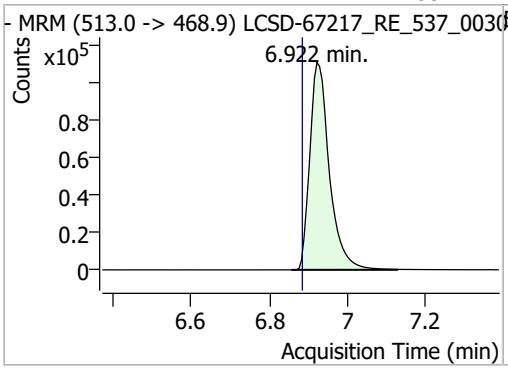
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	6.9047	6.79	0.04	638730	531.0 -> 83.0	4.7	5.3	8.0

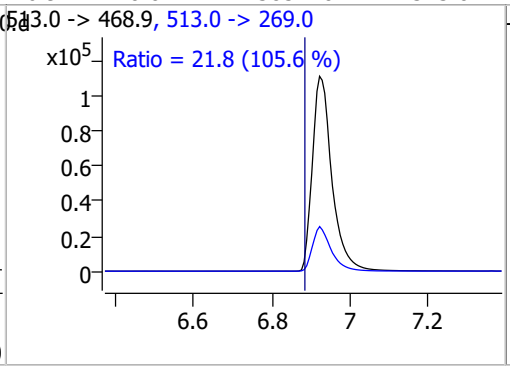


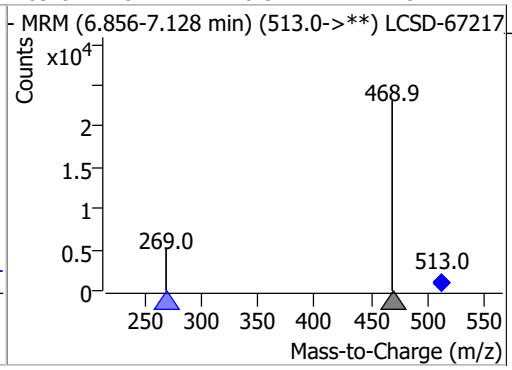




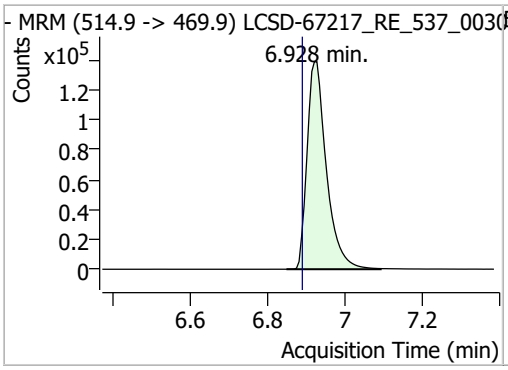
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	7.0827	6.92	0.04	385120	513.0 -> 269.0	21.8	16.5	24.8

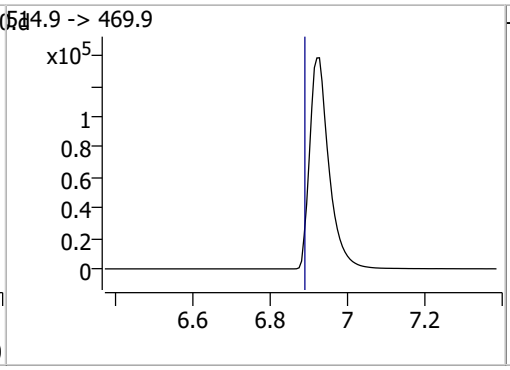


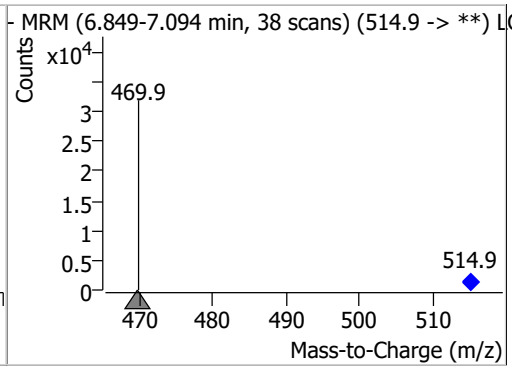




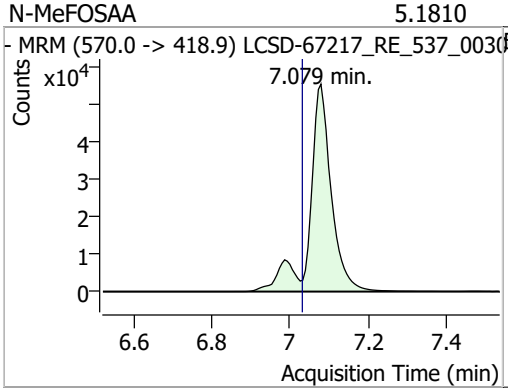
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	8.7887	6.93	0.04	483107				

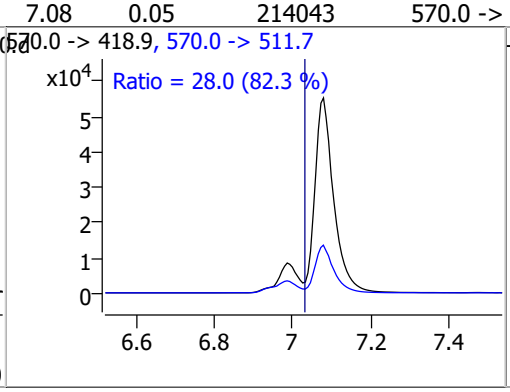


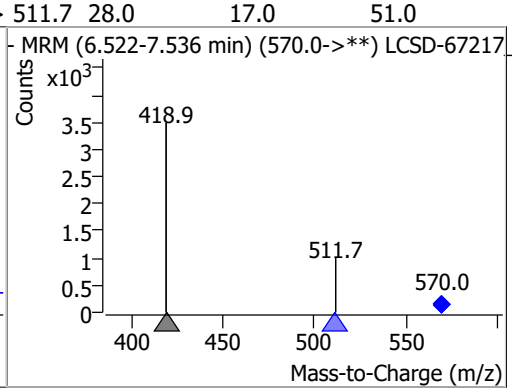




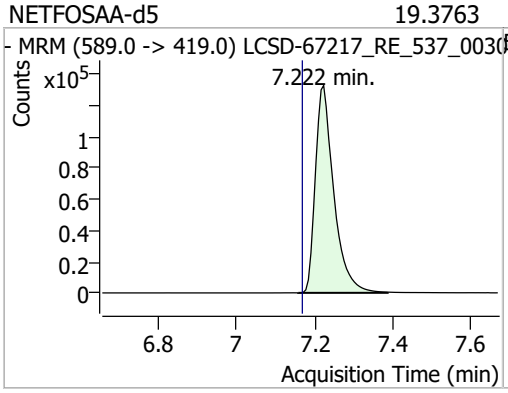
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	5.1810	7.08	0.05	214043	570.0 -> 511.7	28.0	17.0	51.0

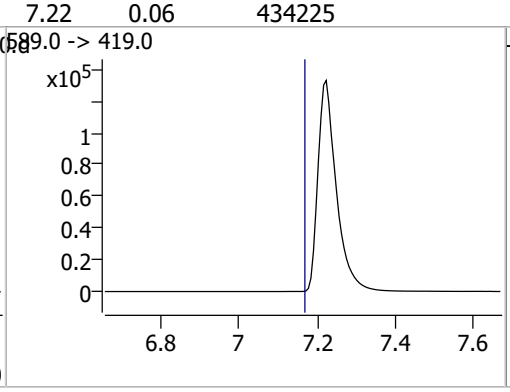


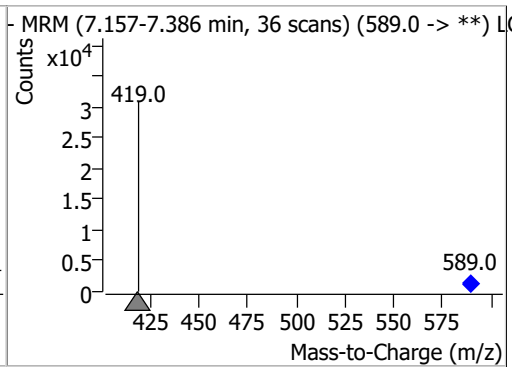




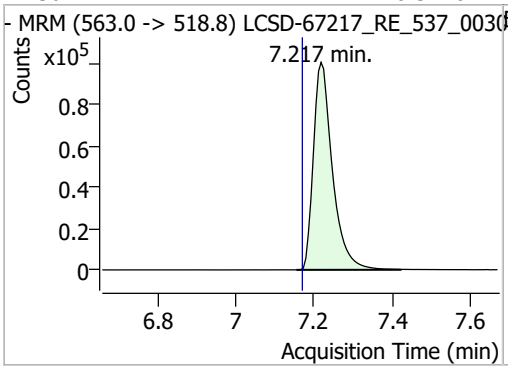
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	19.3763	7.22	0.06	434225				

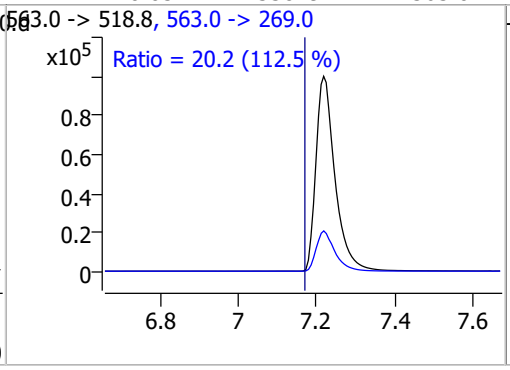


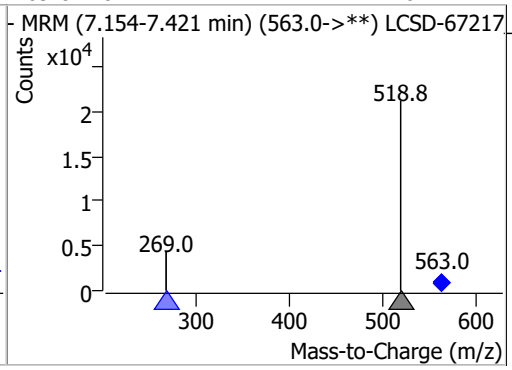




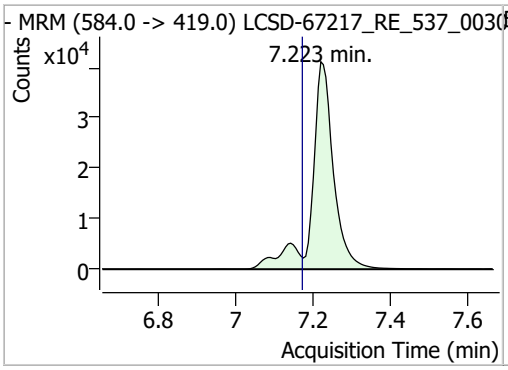
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	6.3776	7.22	0.05	338294	563.0 -> 269.0	20.2	14.4	21.6

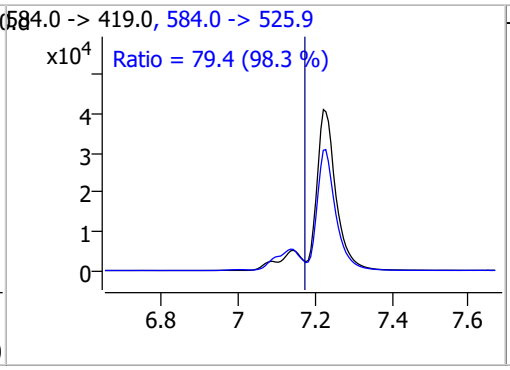


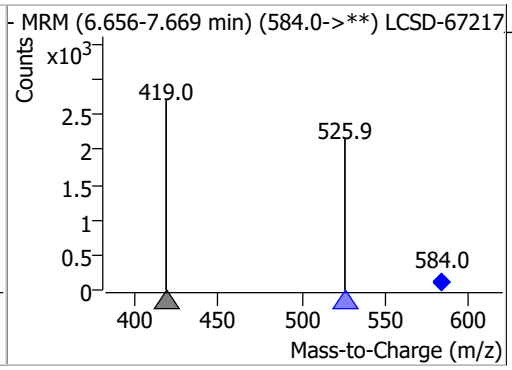




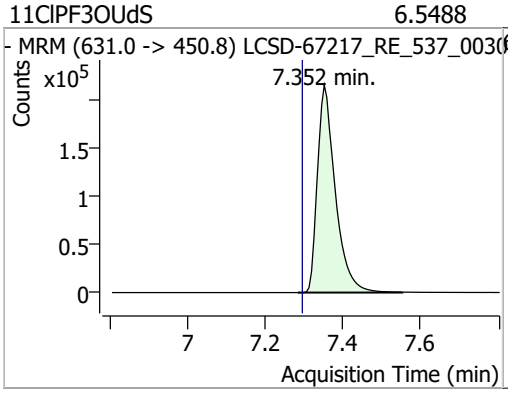
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	4.5027	7.22	0.05	163159	584.0 -> 525.9	79.4	40.4	121.1

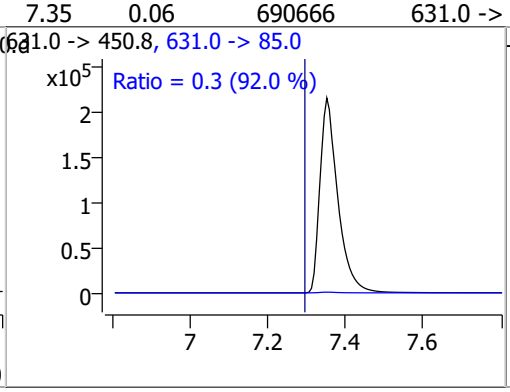


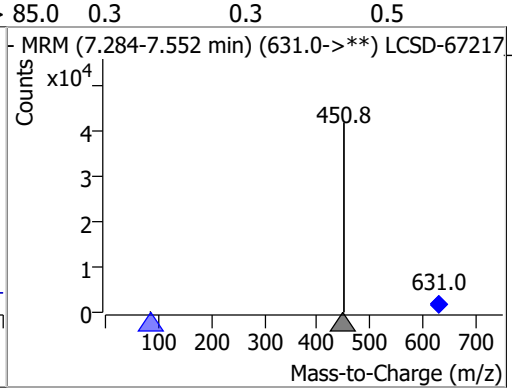




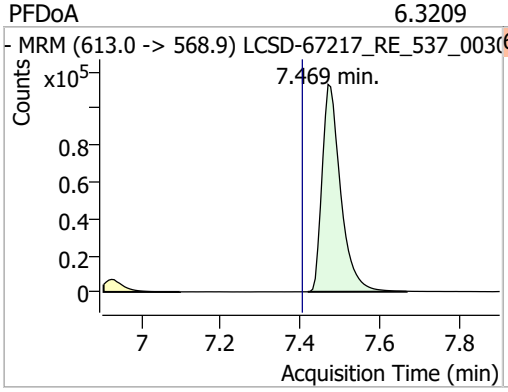
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	6.5488	7.35	0.06	690666	631.0 -> 85.0	0.3	0.3	0.5

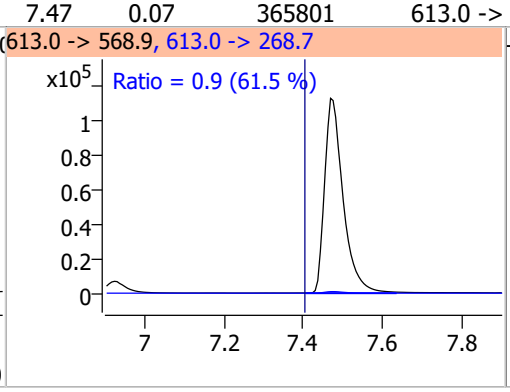


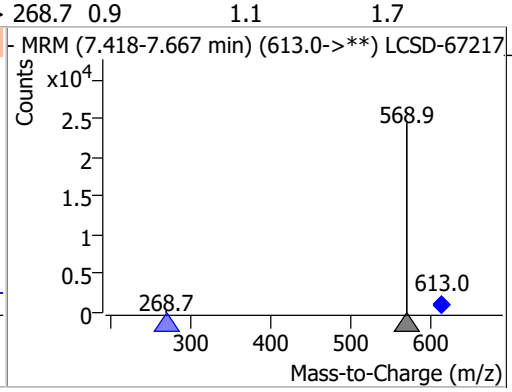




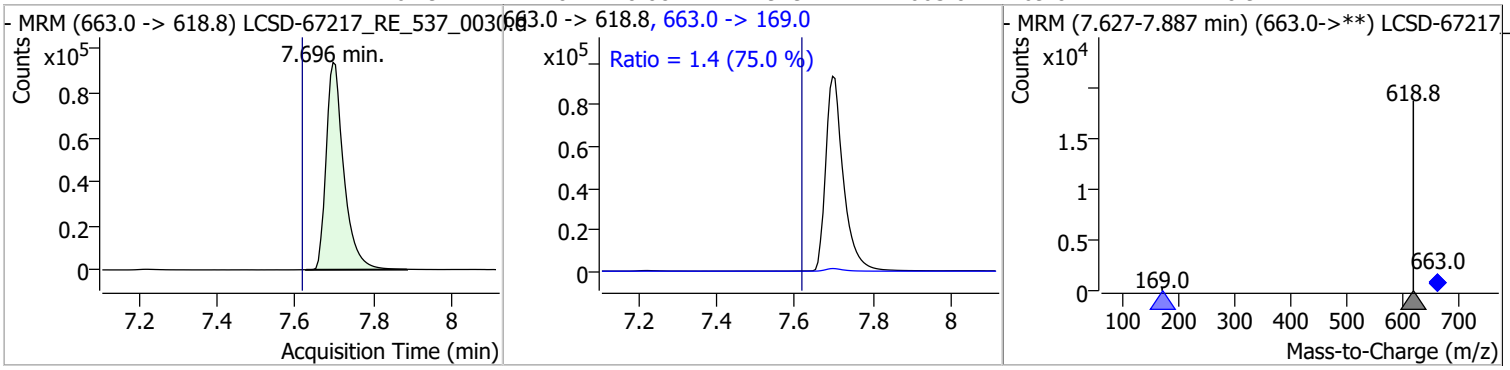
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	6.3209	7.47	0.07	365801	613.0 -> 268.7	0.9	1.1	1.7



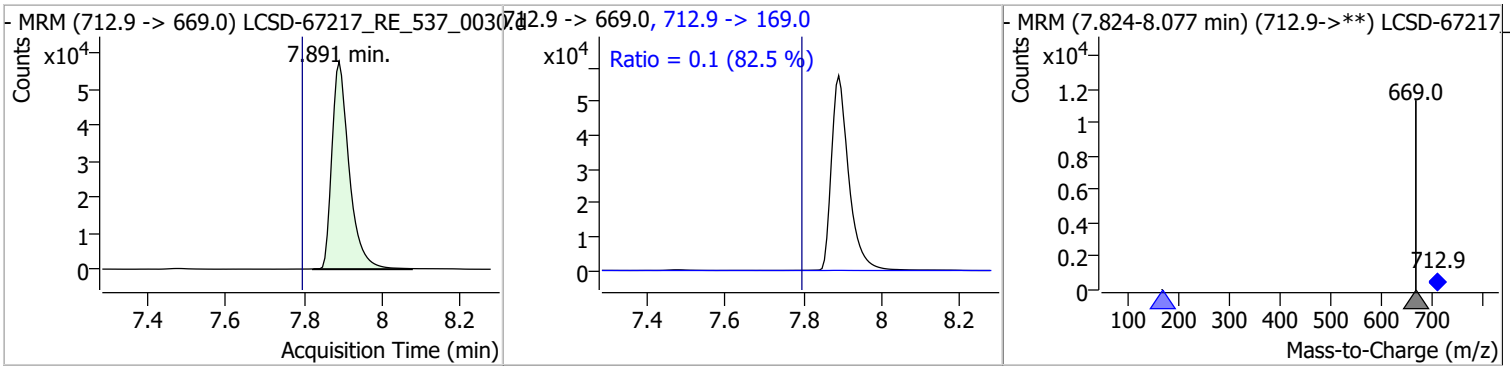




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	6.2911	7.70	0.08	294924	663.0 -> 169.0	1.4	0.9	2.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	6.3340	7.89	0.10	176144	712.9 -> 169.0	0.1	0.0	0.1



Quantitation Results Report

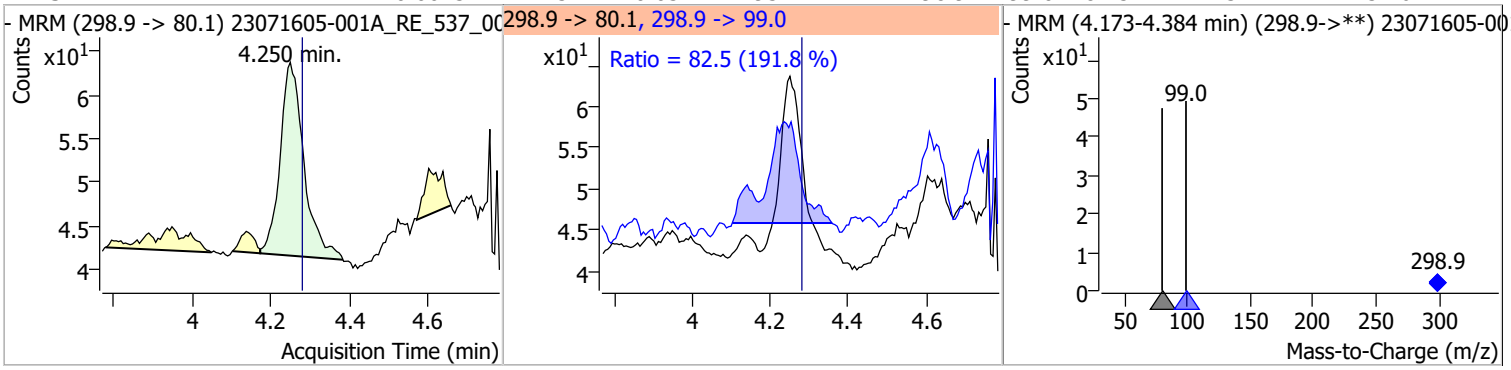
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Data File	23071605-001A_RE_537_0031.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 11:59:30 AM
Sample Name	23071605-001A	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

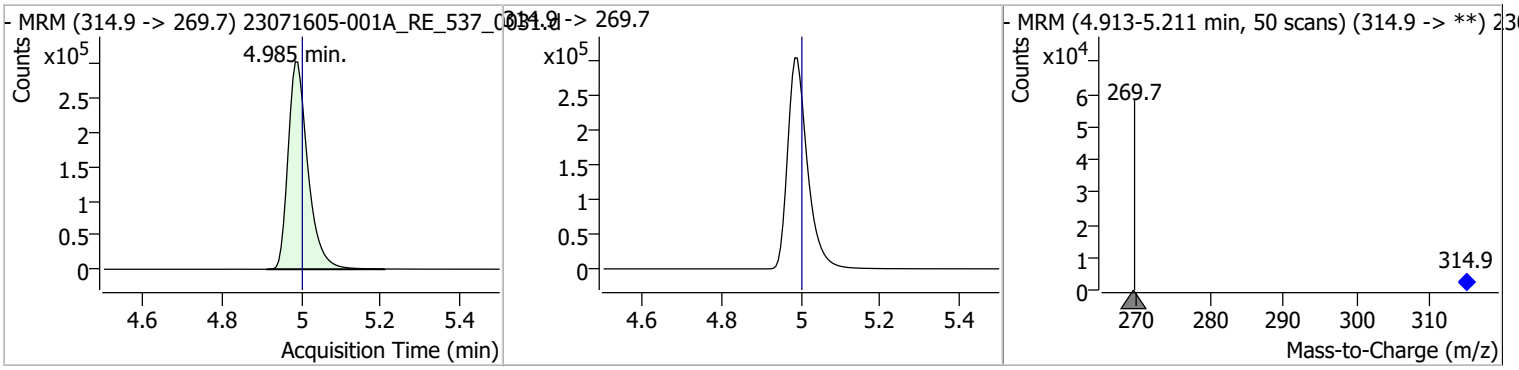
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	853630	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	1094961	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1553198	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	1050786	9.1891	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 91.89%			
13C3-HFPO-DA	5.213	287.0 -> 169.0	21087	8.8772	ng/ml		-0.010
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 88.77%			
13C2-PFDA	6.922	514.9 -> 469.9	552406	9.2977	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 92.98%			
NETFOSAA-d5	7.222	589.0 -> 419.0	775844	41.4363	ng/ml		0.058
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 103.59%			
Target Compounds							**QValue**
PFBS	4.250	298.9 -> 80.1	93	0.0013	ng/ml	#	38
PFHxA	4.992	313.0 -> 269.0	1516	0.0104	ng/ml		99
HFPO-DA	5.220	285.0 -> 169.1	107	0.0396	ng/ml		66
PFHpA	5.676	362.9 -> 318.9	343	0.0028	ng/ml	#	84
PFHxS	6.230	398.9 -> 79.9	194	0.0044	ng/ml		29
NaDONA	5.750	377.0 -> 250.9	267	0.0007	ng/ml		99
PFOA	6.178	413.0 -> 369.1	926	0.0091	ng/ml	#	89
PFNA	6.577	463.0 -> 418.9	271	0.0043	ng/ml	#	80
PFOS	6.596	498.9 -> 80.1	532	0.0171	ng/ml	#	38
9Cl-PF3ONS	6.782	531.0 -> 351.0	107	0.0012	ng/ml		96
PFDA	6.935	513.0 -> 468.9	199	0.0035	ng/ml	#	1
N-MeFOSAA	7.073	570.0 -> 418.9	300	0.0090	ng/ml		92
PFUdA	7.204	563.0 -> 518.8	300	0.0052	ng/ml		93
N-EtFOSAA	7.229	584.0 -> 419.0	585	0.0197	ng/ml	#	27
11ClPF3OUdS	7.365	631.0 -> 450.8	36	0.0003	ng/ml	#	95
PFDoA	6.925	613.0 -> 568.9	21663	0.3466	ng/ml	#	97
PFTrDA	7.696	663.0 -> 618.8	236	0.0048	ng/ml		99
PFTA	7.891	712.9 -> 669.0	98	0.0033	ng/ml	#	99

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

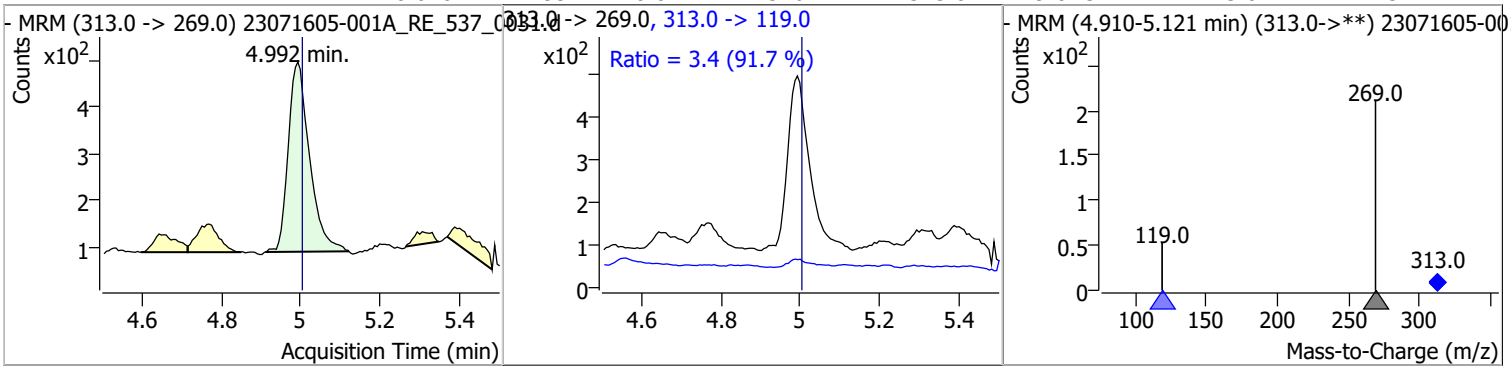
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.0013	4.25	-0.03	93	298.9 -> 99.0	82.5	34.4	51.6



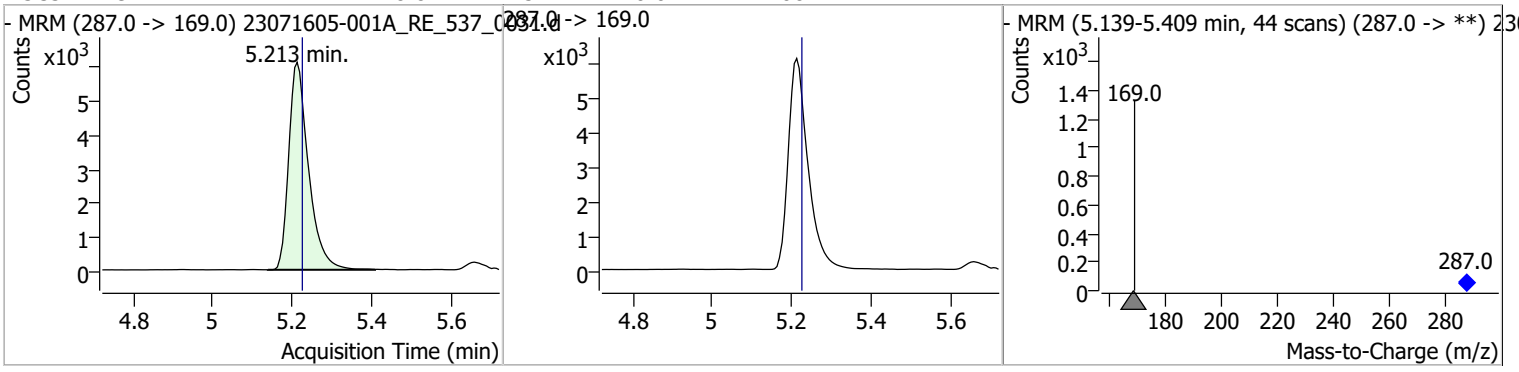
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	9.1891	4.99	-0.01	1050786				



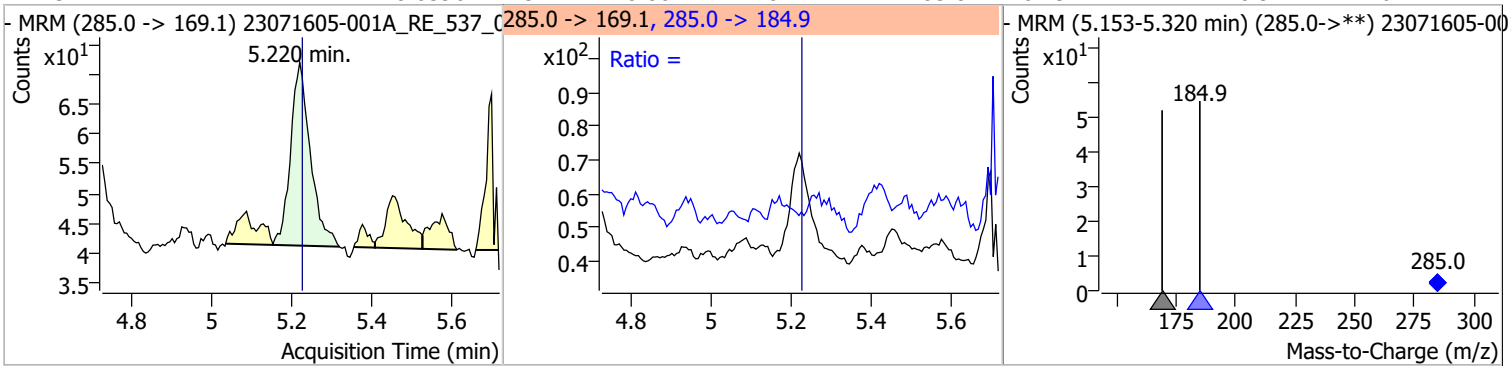
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.0104	4.99	-0.01	1516	313.0 -> 119.0	3.4	3.0	4.5



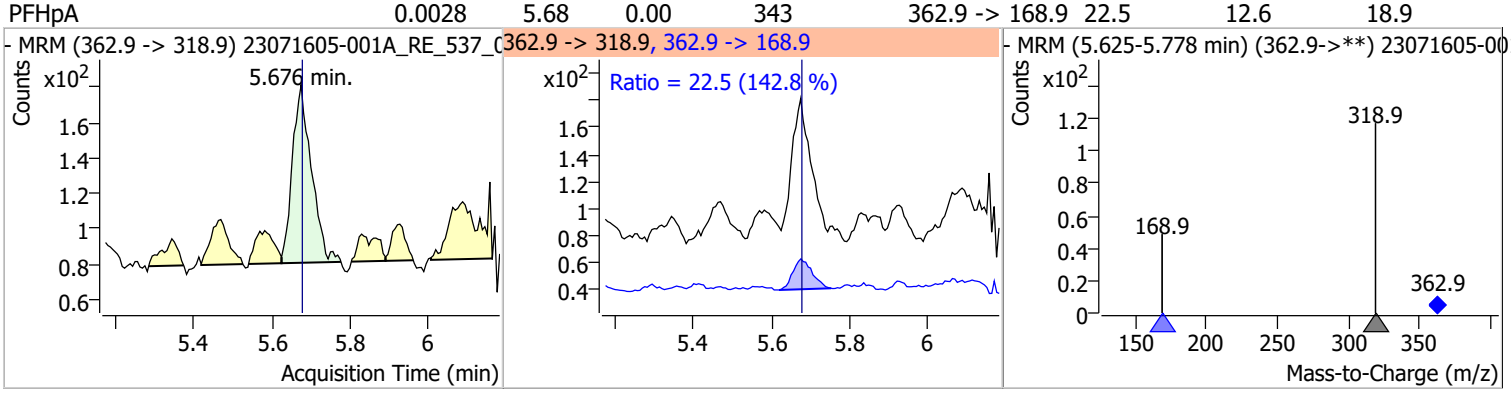
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	8.8772	5.21	-0.01	21087				



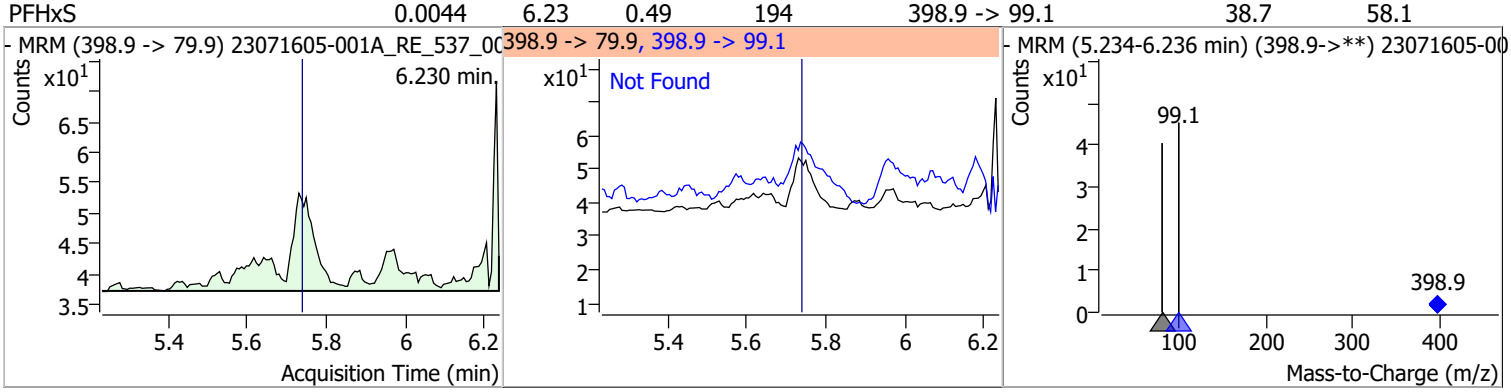
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0396	5.22	0.00	107	285.0 -> 184.9		10.9	16.4



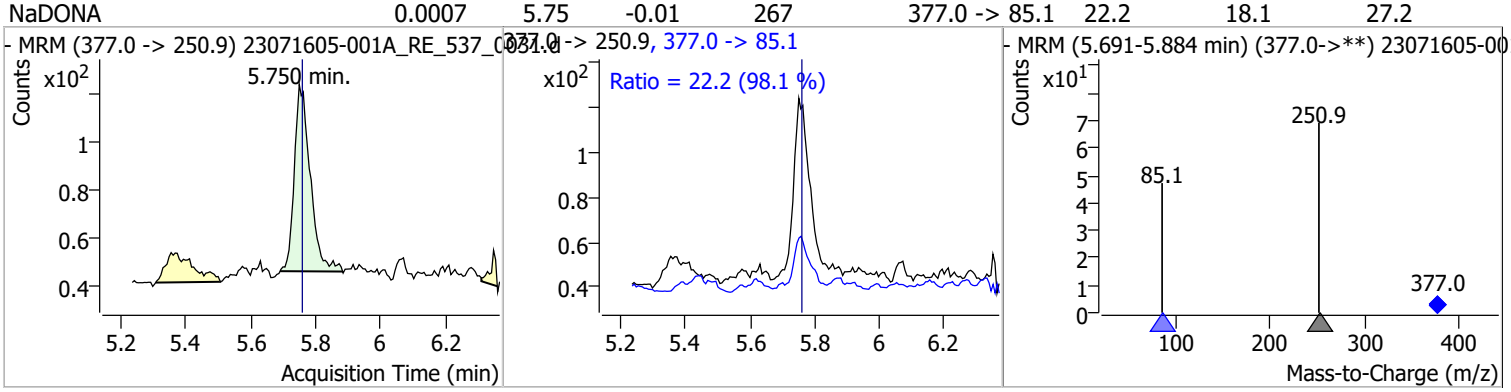
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.0028	5.68	0.00	343	362.9 -> 168.9	22.5	12.6	18.9



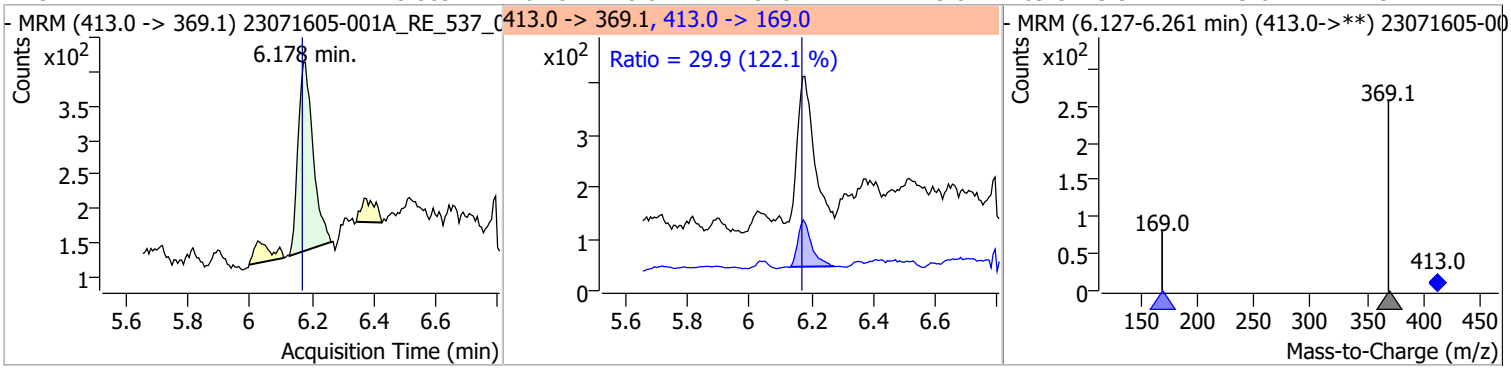
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.0044	6.23	0.49	194	398.9 -> 99.1		38.7	58.1



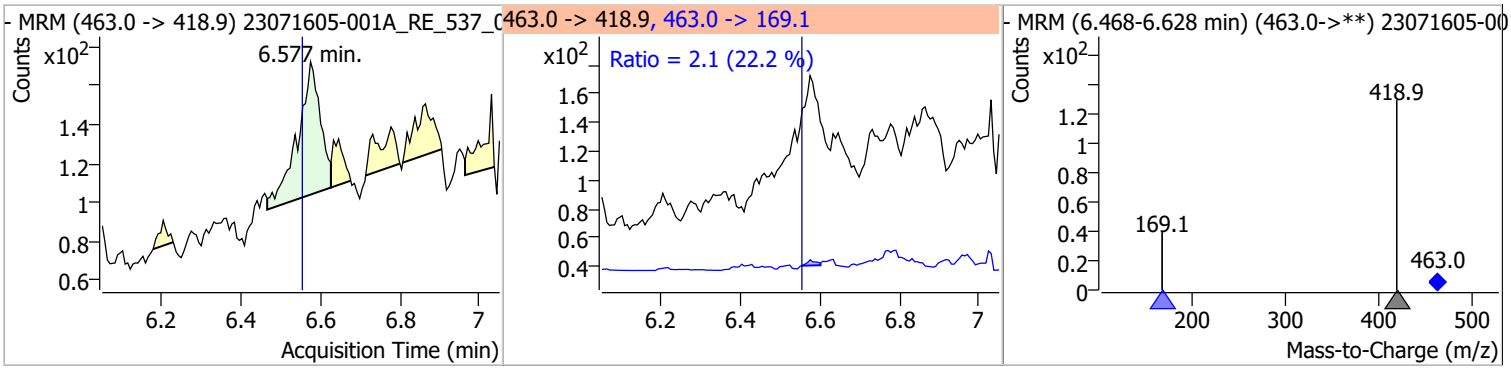
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0007	5.75	-0.01	267	377.0 -> 85.1	22.2	18.1	27.2



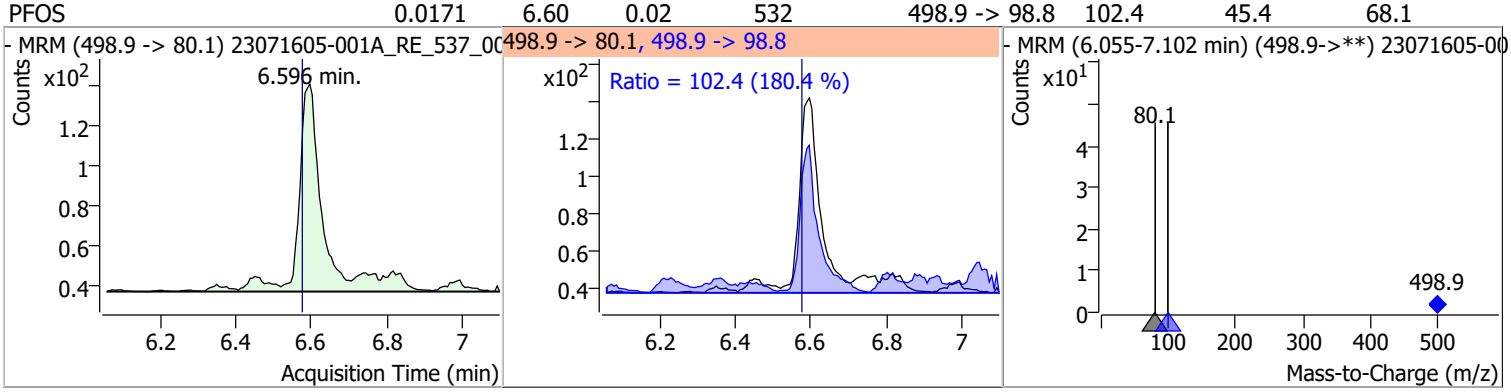
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.0091	6.18	0.01	926	413.0 -> 169.0	29.9	19.6	29.4



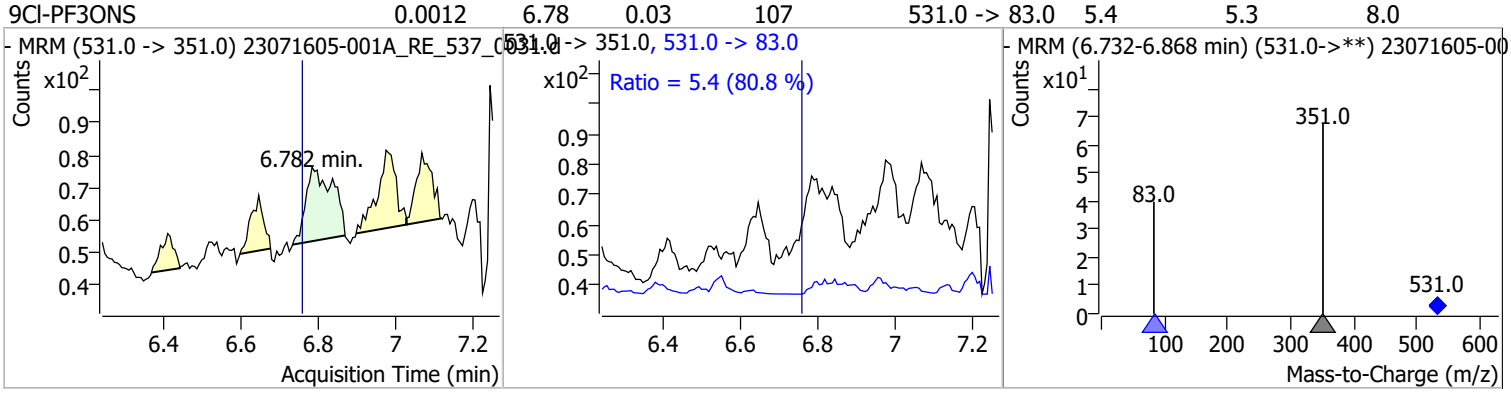
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.0043	6.58	0.02	271	463.0 -> 169.1	2.1	7.7	11.5



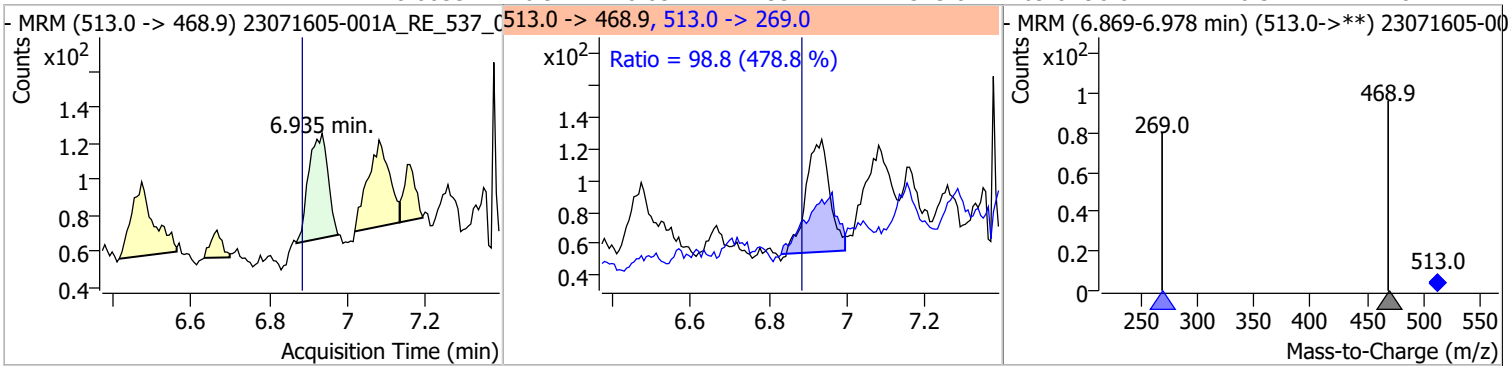
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.0171	6.60	0.02	532	498.9 -> 98.8	102.4	45.4	68.1



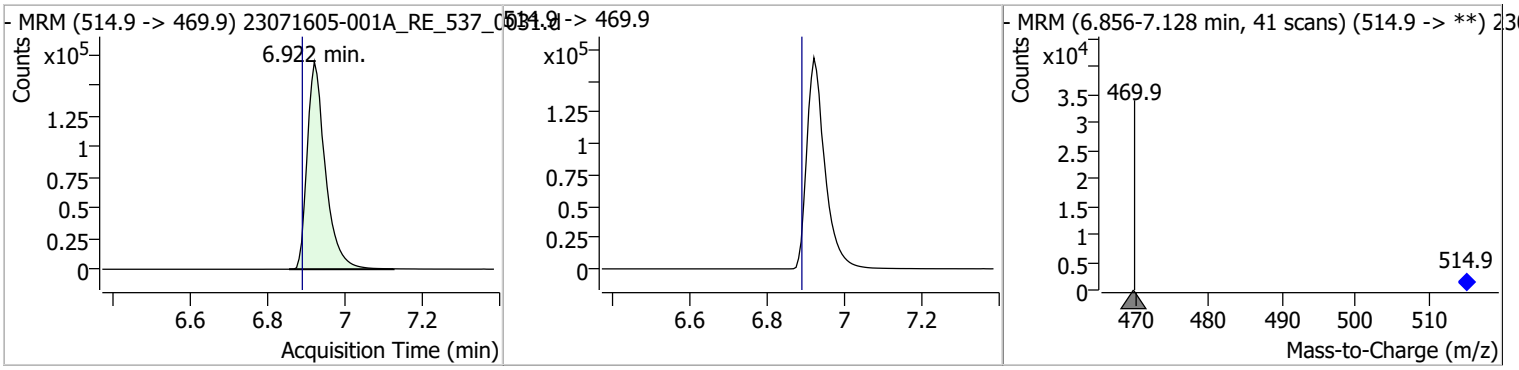
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0012	6.78	0.03	107	531.0 -> 83.0	5.4	5.3	8.0



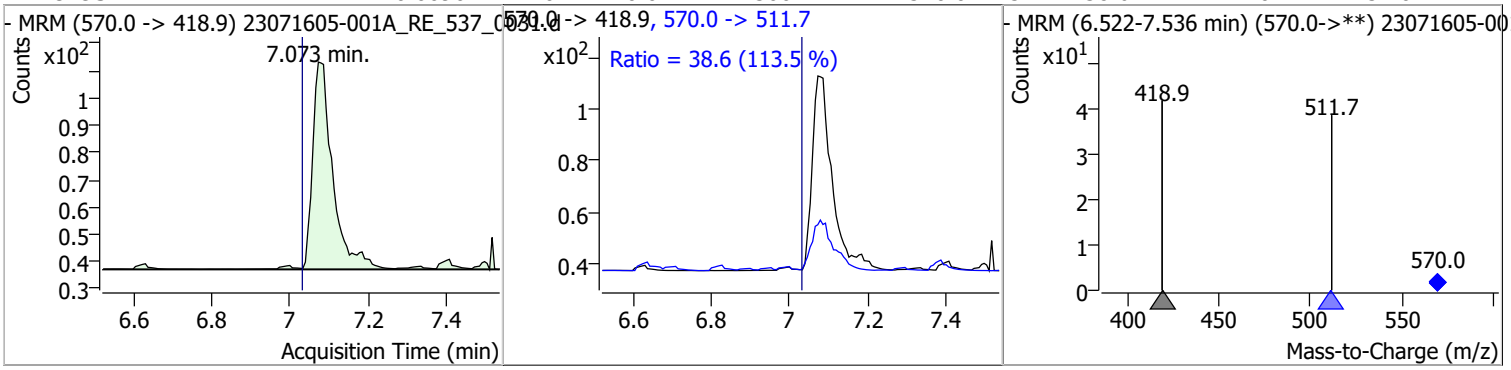
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0035	6.94	0.05	199	513.0 -> 269.0	98.8	16.5	24.8



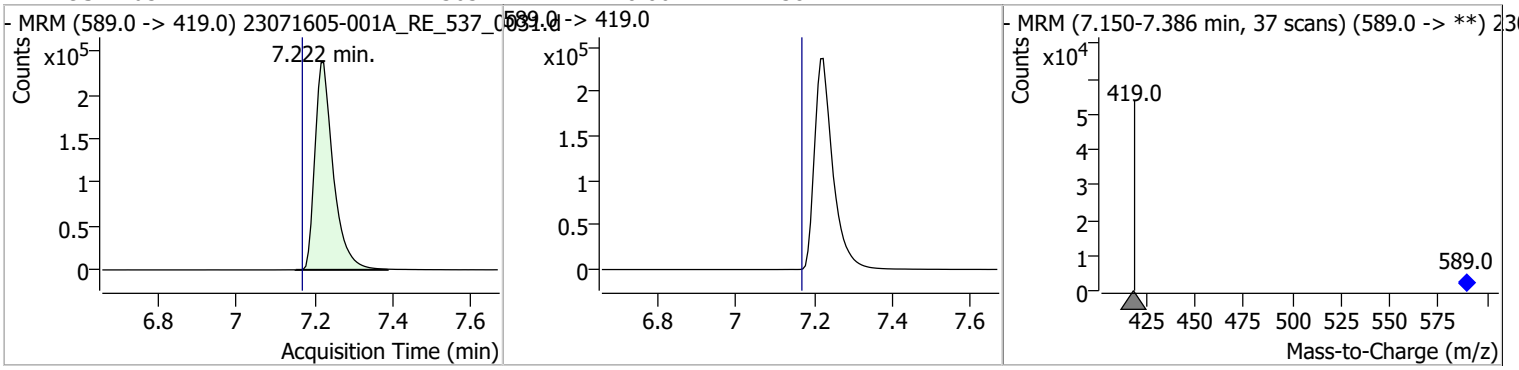
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	9.2977	6.92	0.03	552406				



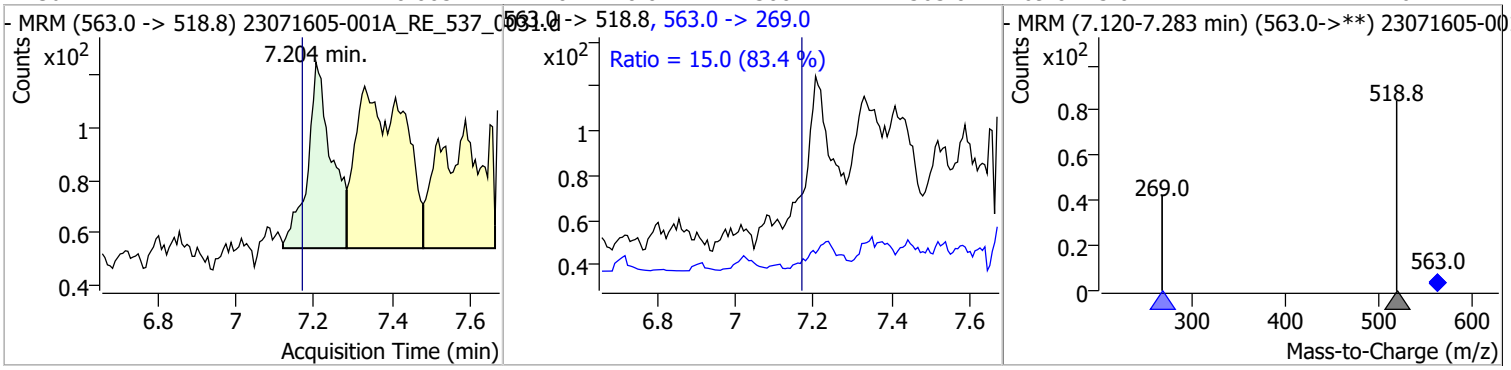
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0090	7.07	0.04	300	570.0 -> 511.7	38.6	17.0	51.0



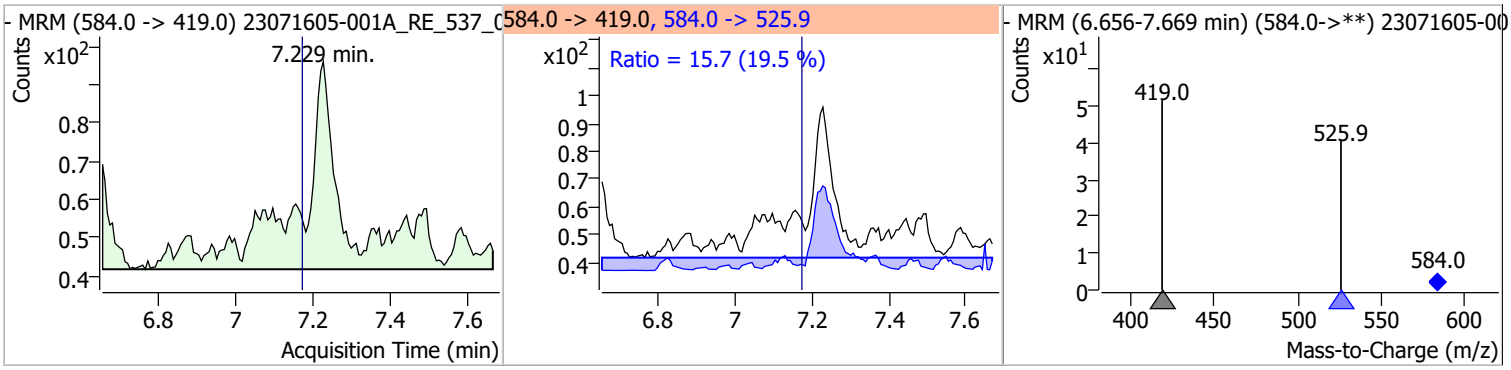
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	41.4363	7.22	0.06	775844				



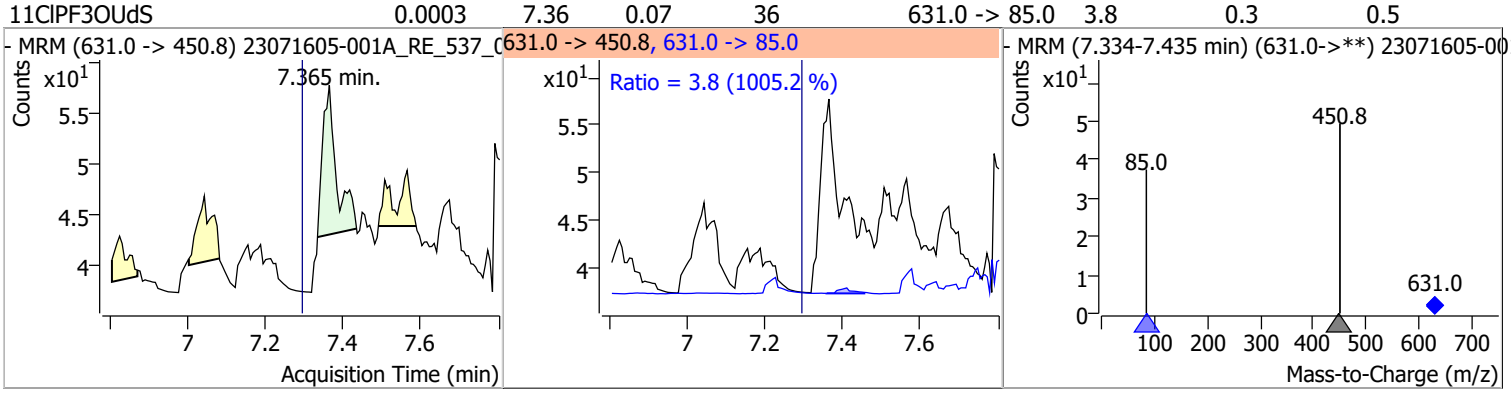
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0052	7.20	0.04	300	563.0 -> 269.0	15.0	14.4	21.6



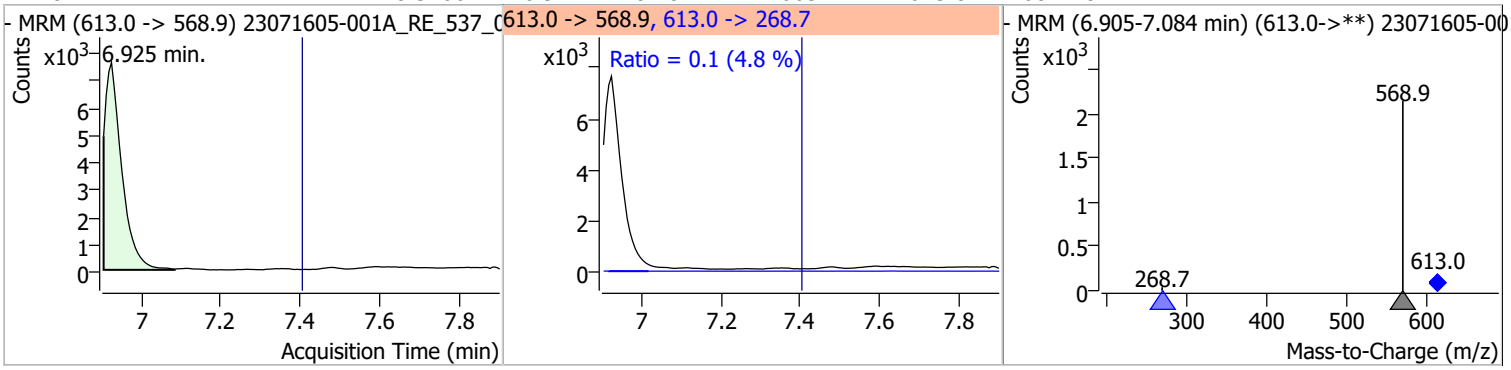
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0197	7.23	0.06	585	584.0 -> 525.9	15.7	40.4	121.1



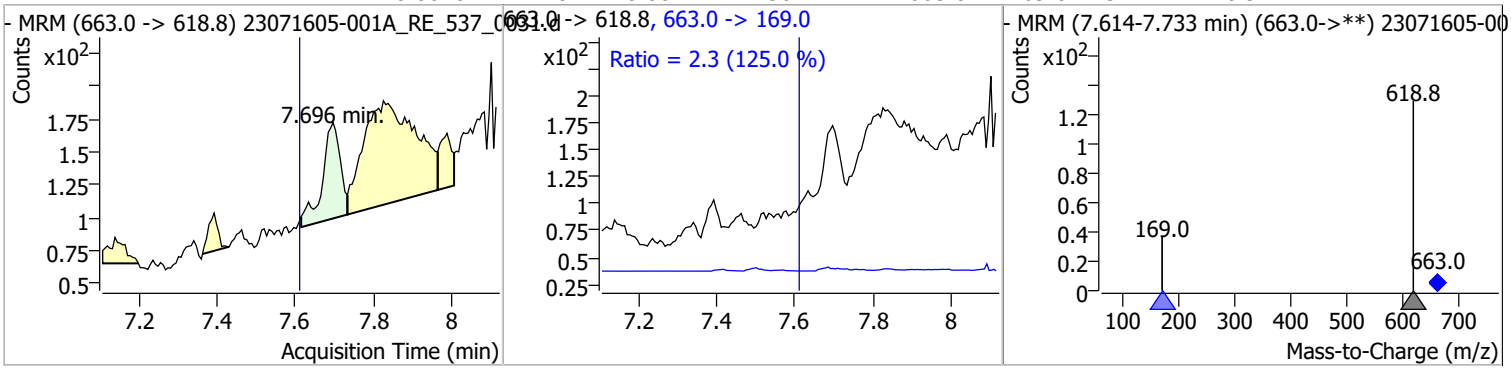
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0003	7.36	0.07	36	631.0 -> 85.0	3.8	0.3	0.5



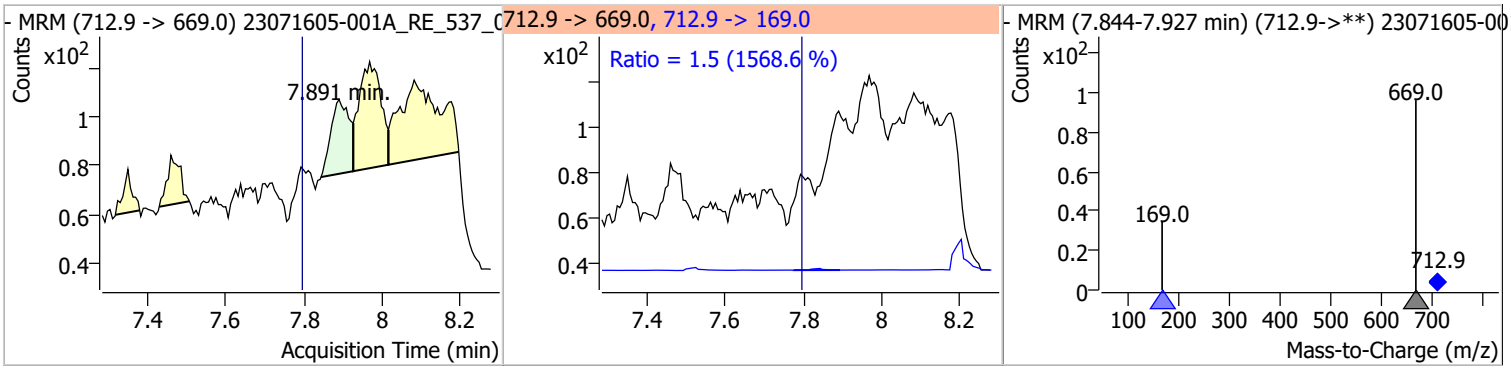
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.3466	6.92	-0.48	21663	613.0 -> 268.7	0.1	1.1	1.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0048	7.70	0.08	236	663.0 -> 169.0	2.3	0.9	2.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0033	7.89	0.10	98	712.9 -> 169.0	1.5	0.0	0.1



Quantitation Results Report

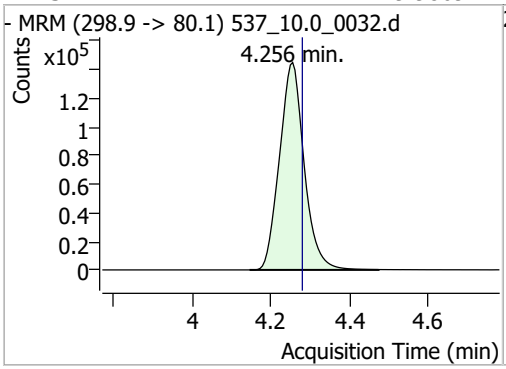
Agilent | Trusted Answers

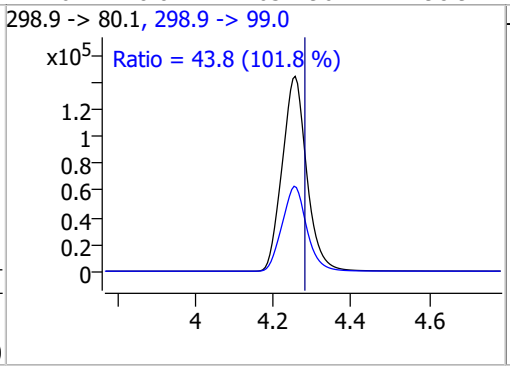
Data File	537_10.0_0032.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 12:12:14 PM
Sample Name	CAL4_537_10.0	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

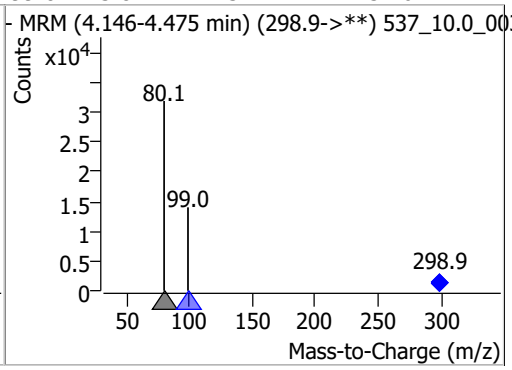
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.595	502.9 -> 80.1	752983	3.0000	ng/ml		0.023
13C2-PFOA	6.177	415.0 -> 370.0	964146	1.0000	ng/ml		0.014
NMeFOSAA-d3	7.072	573.0 -> 418.9	1632916	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	950758	9.4425	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 94.42%			
13C3-HFPO-DA	5.213	287.0 -> 169.0	19569	9.3560	ng/ml		-0.010
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 93.56%			
13C2-PFDA	6.922	514.9 -> 469.9	494128	9.4452	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 94.45%			
NETFOSAA-d5	7.215	589.0 -> 419.0	722758	36.7166	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 91.79%			
Target Compounds							QValue
PFBS	4.256	298.9 -> 80.1	632496	9.9869	ng/ml		99
PFHxA	4.986	313.0 -> 269.0	1169801	9.1074	ng/ml		100
HFPO-DA	5.208	285.0 -> 169.1	21176	8.7144	ng/ml		98
PFHpA	5.676	362.9 -> 318.9	1133474	10.3294	ng/ml		100
PFHxS	5.737	398.9 -> 79.9	424142	10.5573	ng/ml		96
NaDONA	5.750	377.0 -> 250.9	3418838	9.2473	ng/ml		100
PFOA	6.171	413.0 -> 369.1	836407	9.3786	ng/ml		95
PFNA	6.577	463.0 -> 418.9	592578	10.5134	ng/ml		97
PFOS	6.596	498.9 -> 80.1	273790	9.7216	ng/ml		90
9Cl-PF3ONS	6.789	531.0 -> 351.0	776976	9.1509	ng/ml		98
PFDA	6.922	513.0 -> 468.9	527420	10.0822	ng/ml		99
N-MeFOSAA	7.073	570.0 -> 418.9	378478	10.1326	ng/ml		94
PFUdA	7.217	563.0 -> 518.8	471196	9.3337	ng/ml		95
N-EtFOSAA	7.223	584.0 -> 419.0	363349	11.1016	ng/ml		89
11ClPF3OUdS	7.352	631.0 -> 450.8	1118080	11.2180	ng/ml		100
PFDoA	7.469	613.0 -> 568.9	509747	9.2512	ng/ml	#	99
PFTrDA	7.696	663.0 -> 618.8	435061	9.6176	ng/ml		99
PFTA	7.891	712.9 -> 669.0	257172	9.7168	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

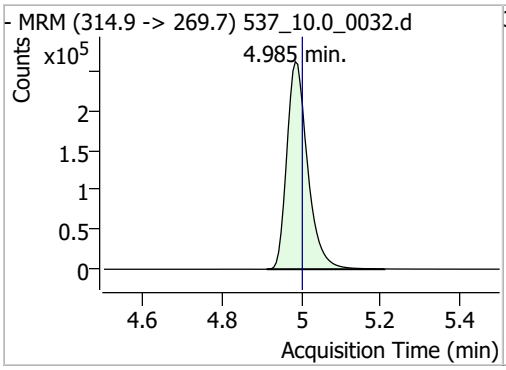
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	9.9869	4.26	-0.02	632496	298.9 -> 99.0	43.8	34.4	51.6

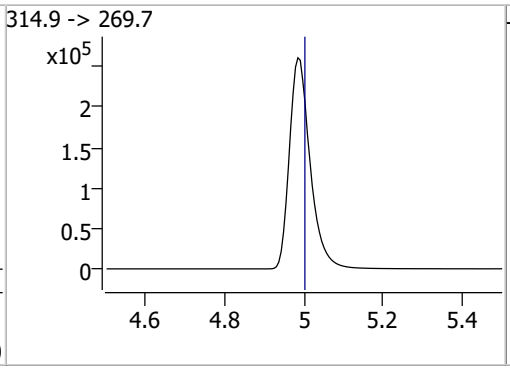


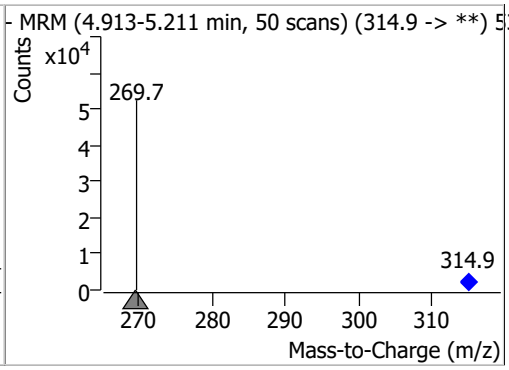




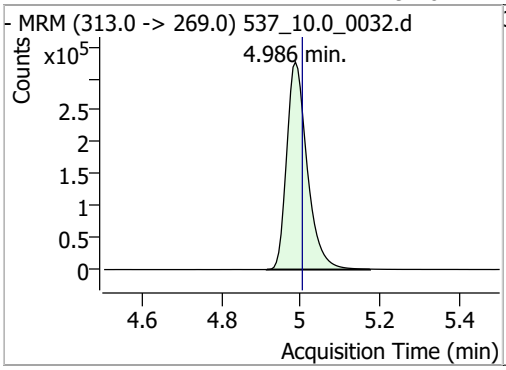
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	9.4425	4.99	-0.01	950758				

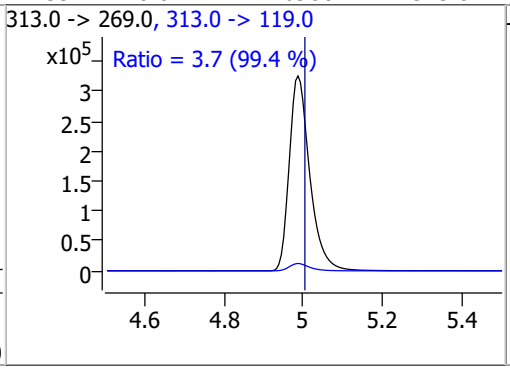


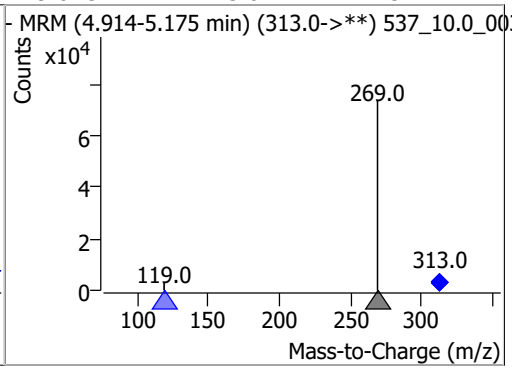




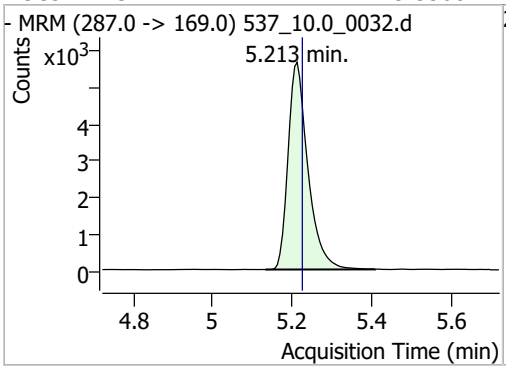
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	9.1074	4.99	-0.01	1169801	313.0 -> 119.0	3.7	3.0	4.5

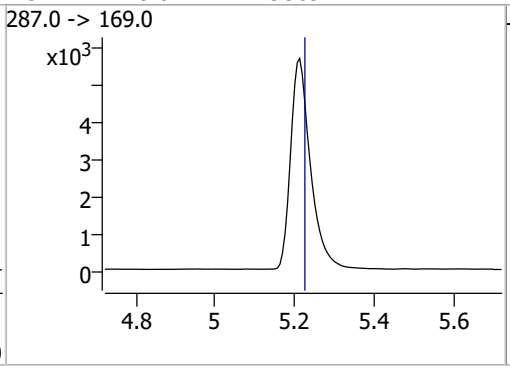


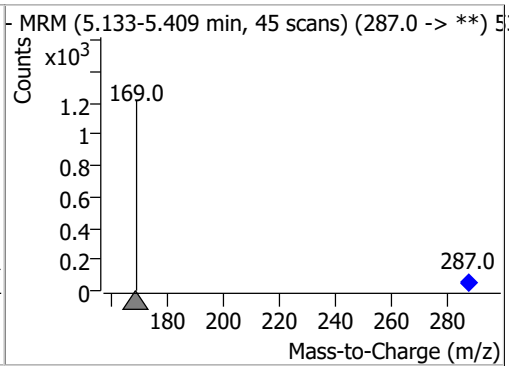




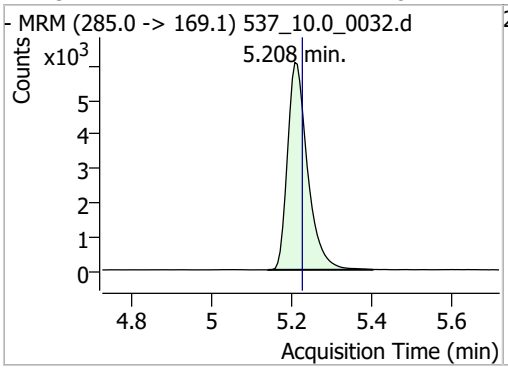
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	9.3560	5.21	-0.01	19569				

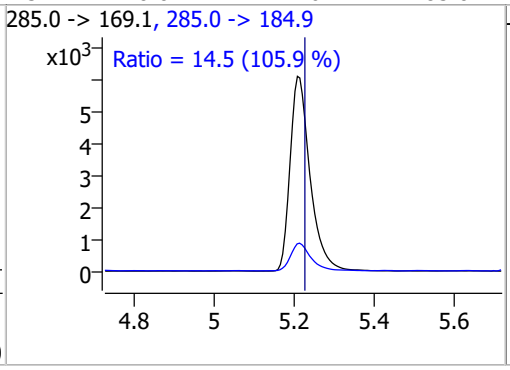


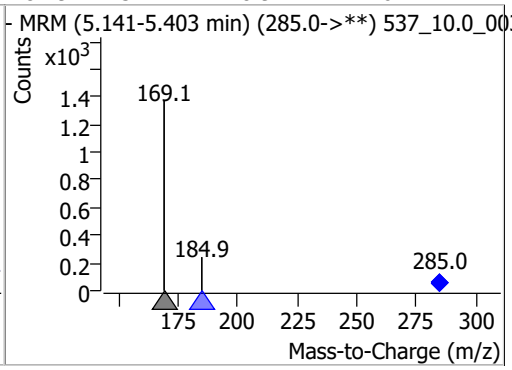




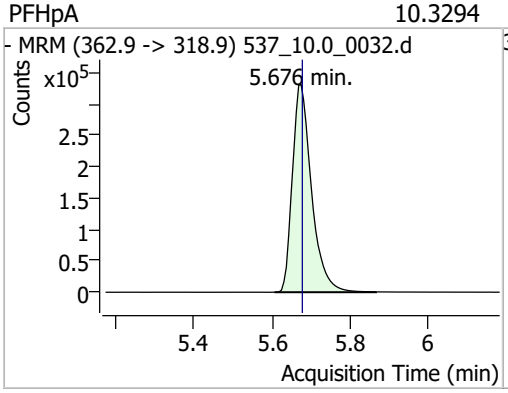
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	8.7144	5.21	-0.02	21176	285.0 -> 184.9	14.5	10.9	16.4

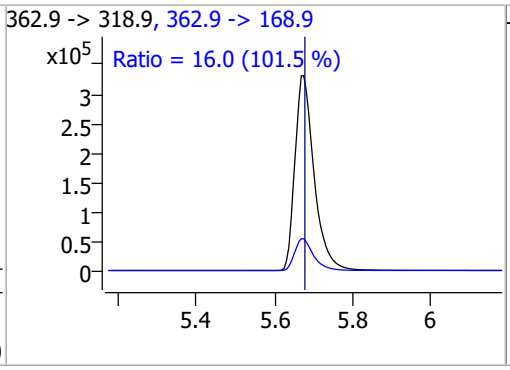


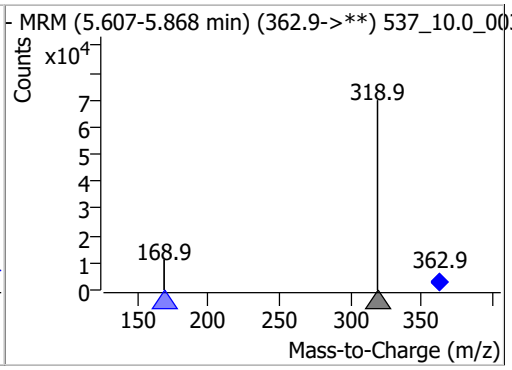




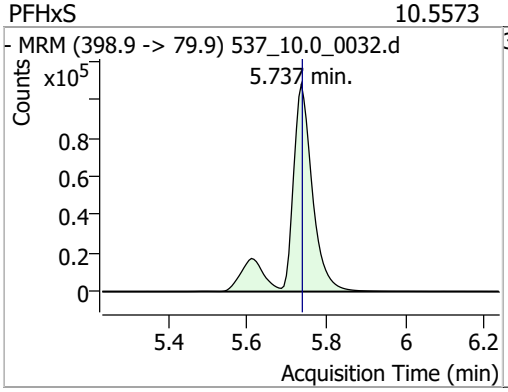
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	10.3294	5.68	0.00	1133474	362.9 -> 168.9	16.0	12.6	18.9

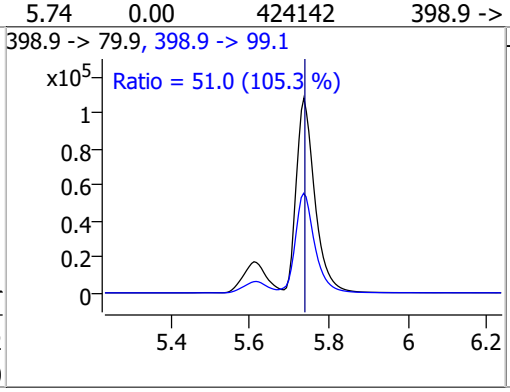


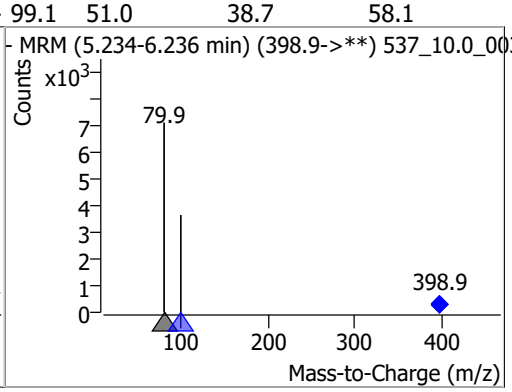




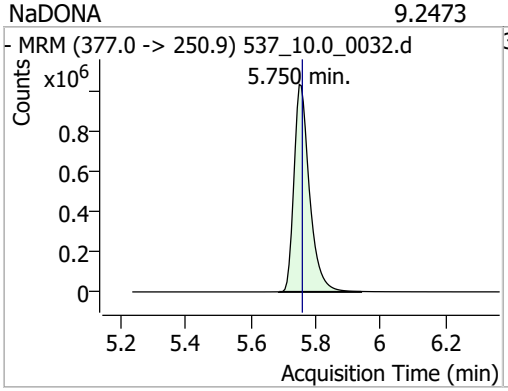
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	10.5573	5.74	0.00	424142	398.9 -> 99.1	51.0	38.7	58.1

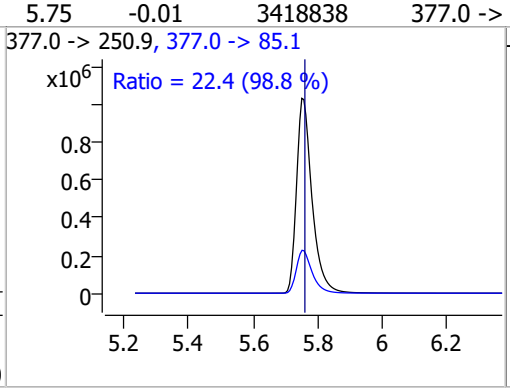


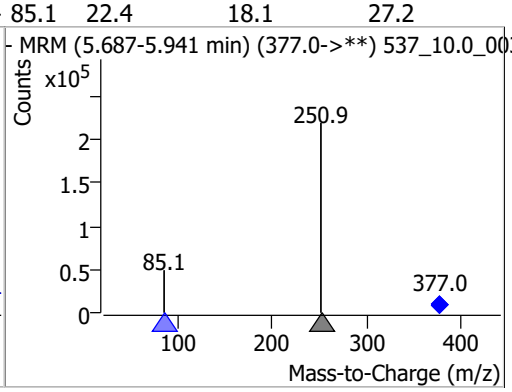




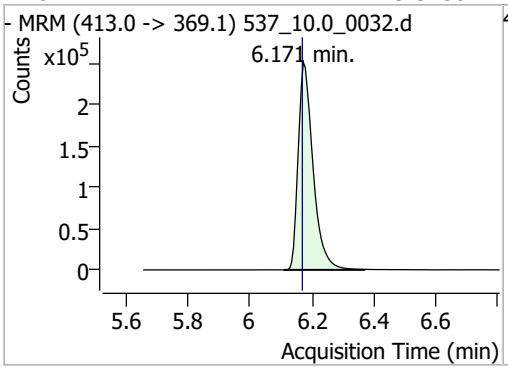
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	9.2473	5.75	-0.01	3418838	377.0 -> 85.1	22.4	18.1	27.2

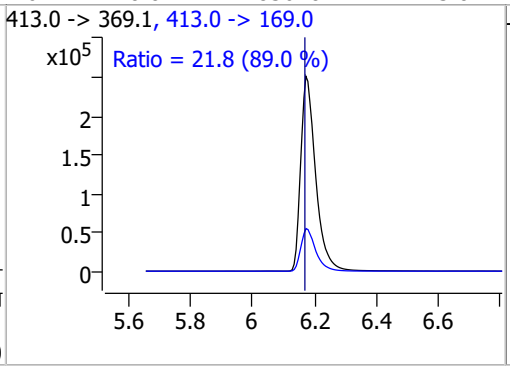


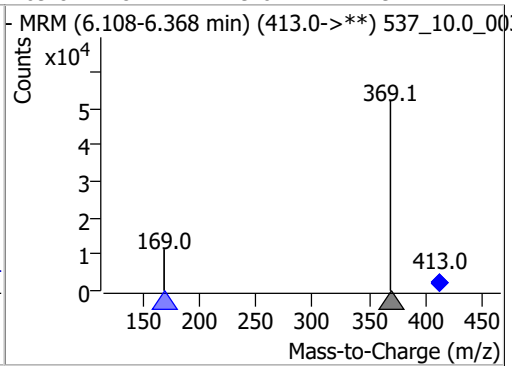




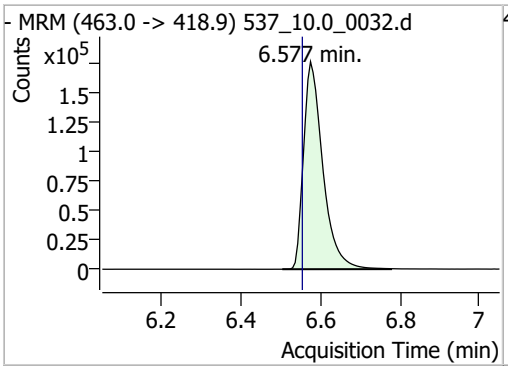
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	9.3786	6.17	0.01	836407	413.0 -> 169.0	21.8	19.6	29.4

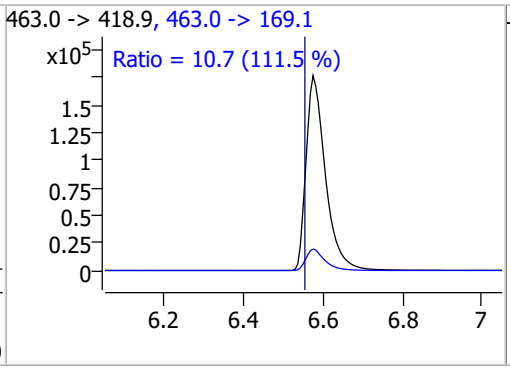


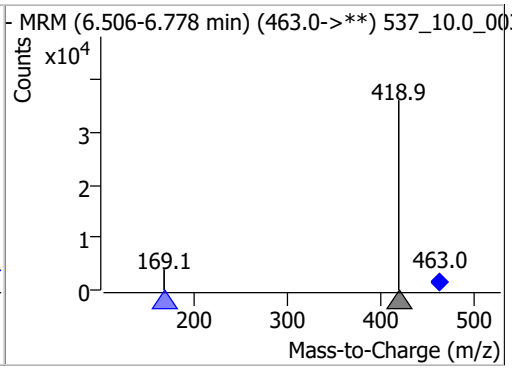




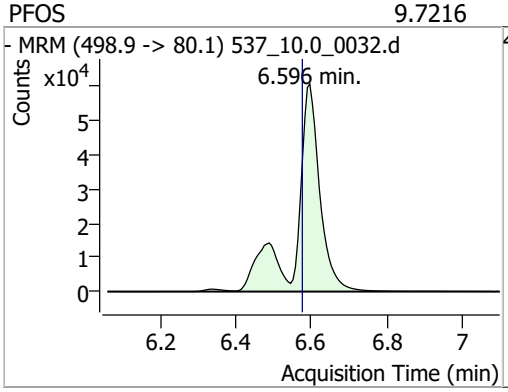
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	10.5134	6.58	0.02	592578	463.0 -> 169.1	10.7	7.7	11.5

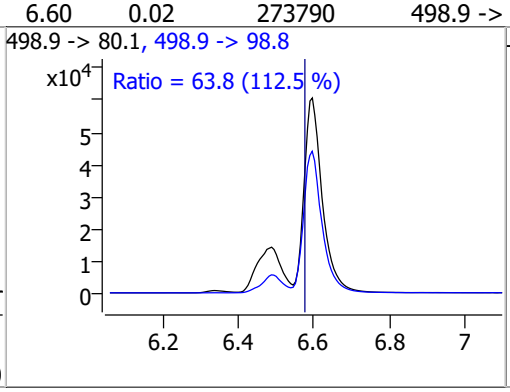


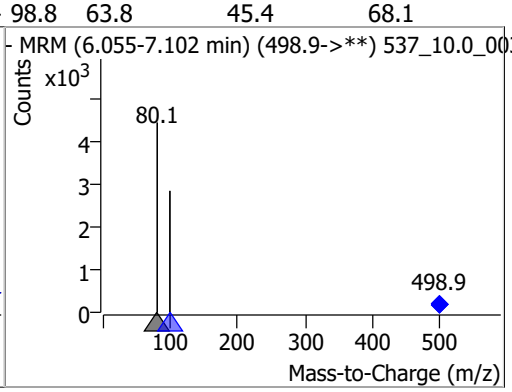




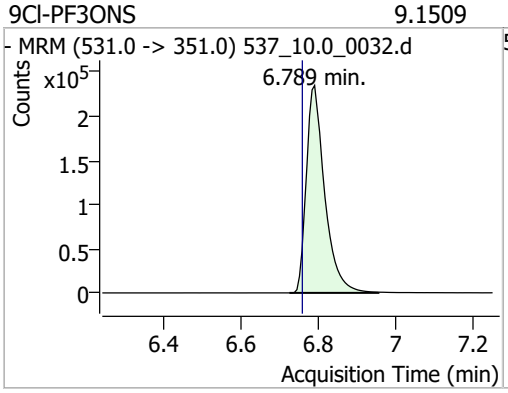
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	9.7216	6.60	0.02	273790	498.9 -> 98.8	63.8	45.4	68.1

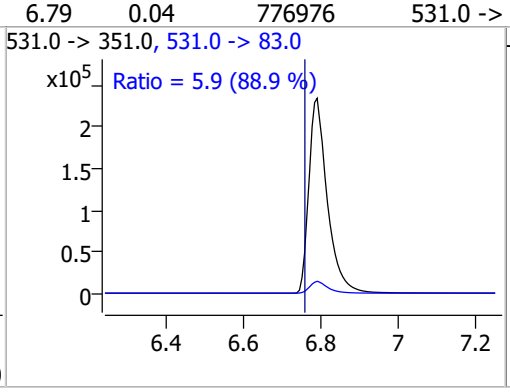


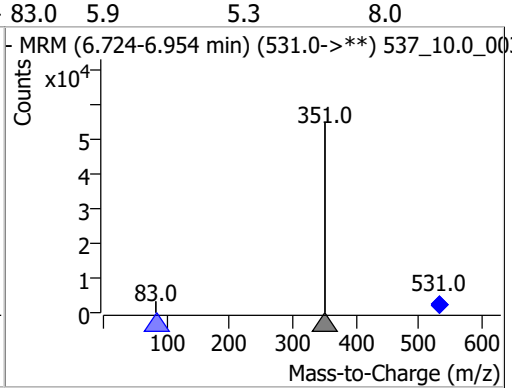




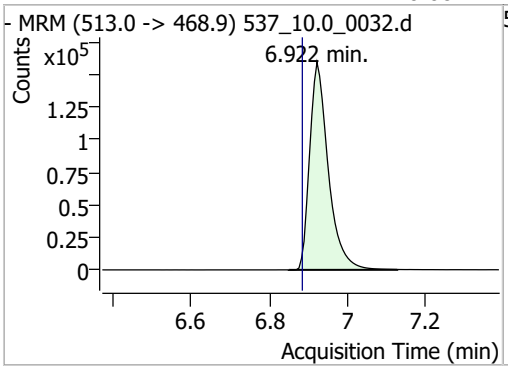
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	9.1509	6.79	0.04	776976	531.0 -> 83.0	5.9	5.3	8.0

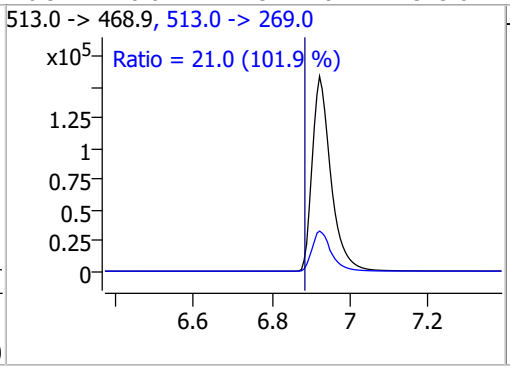


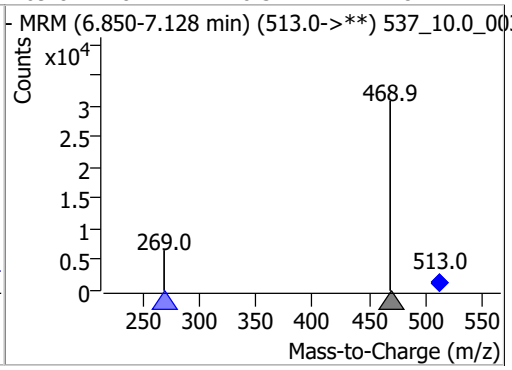




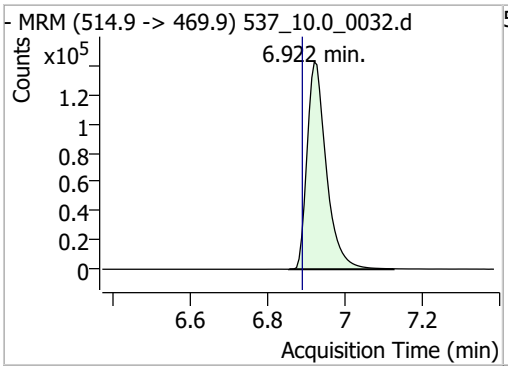
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	10.0822	6.92	0.04	527420	513.0 -> 269.0	21.0	16.5	24.8

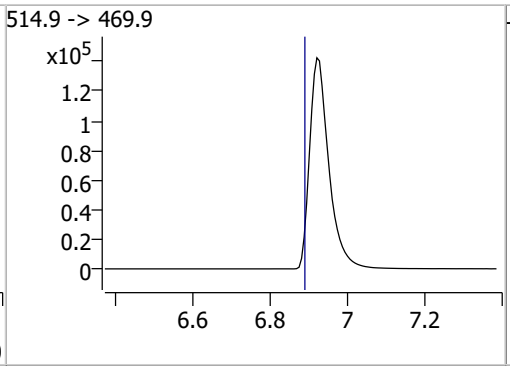


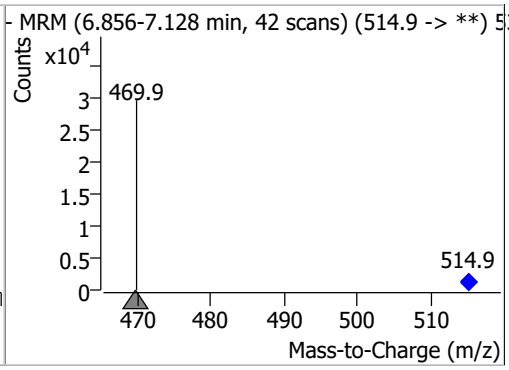




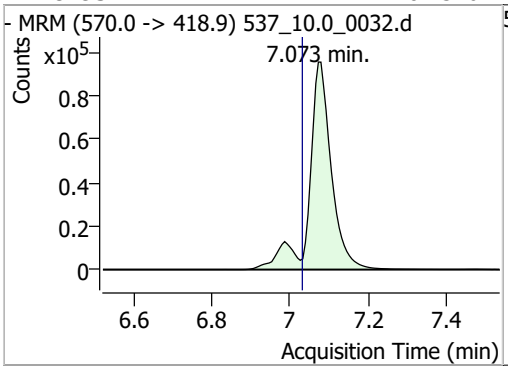
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	9.4452	6.92	0.03	494128				

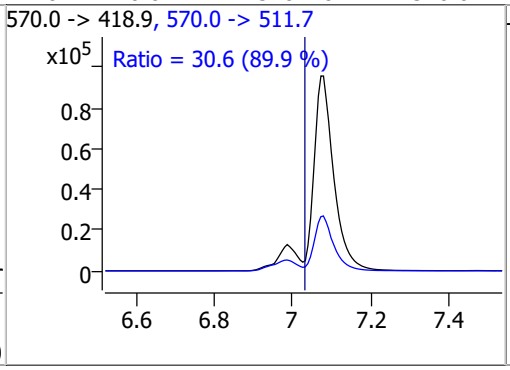


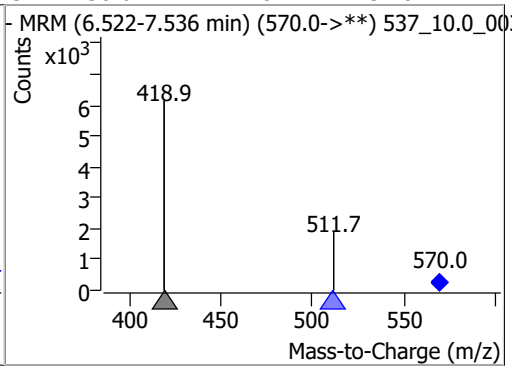




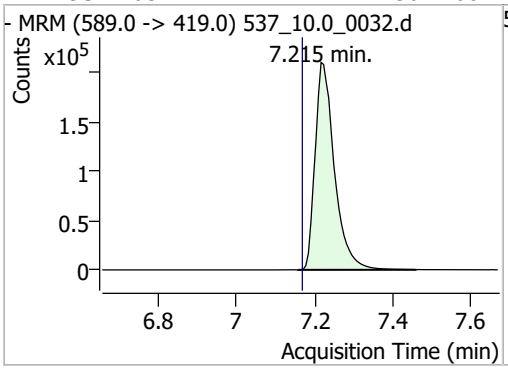
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	10.1326	7.07	0.04	378478	570.0 -> 511.7	30.6	17.0	51.0

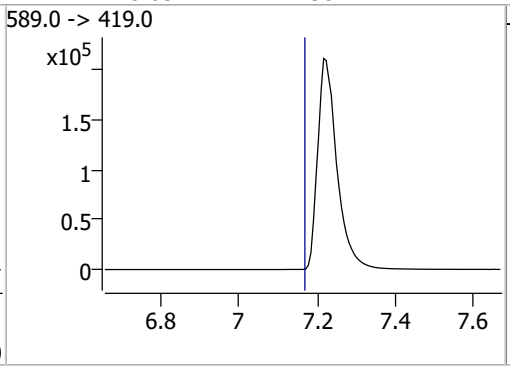


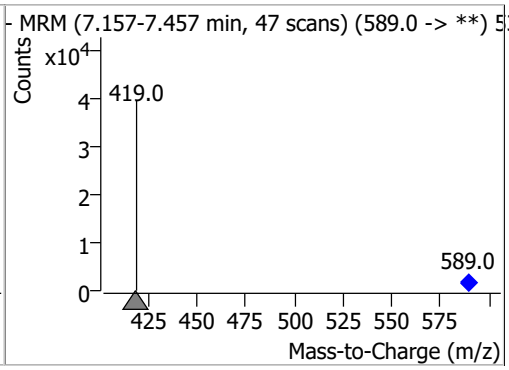




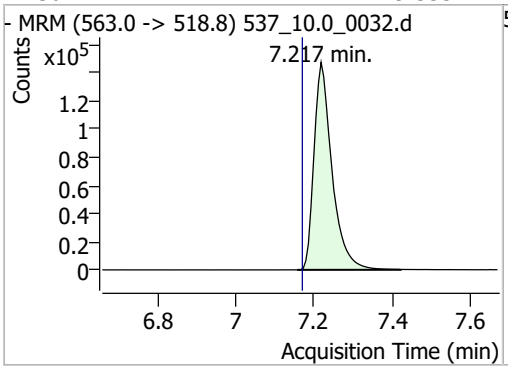
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	36.7166	7.22	0.05	722758				

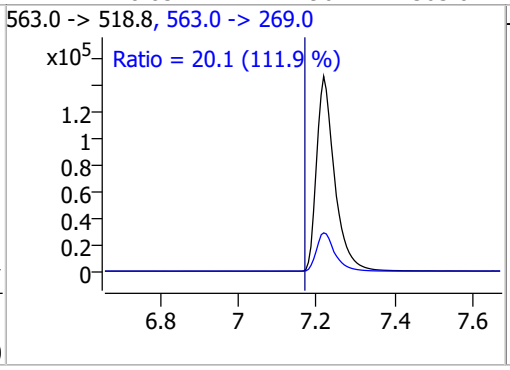


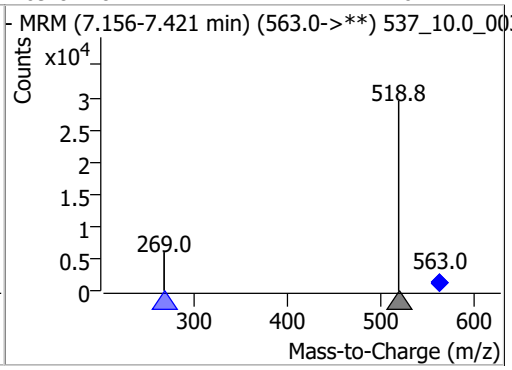




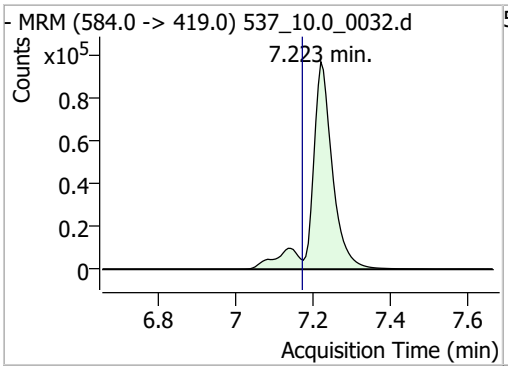
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	9.3337	7.22	0.05	471196	563.0 -> 269.0	20.1	14.4	21.6

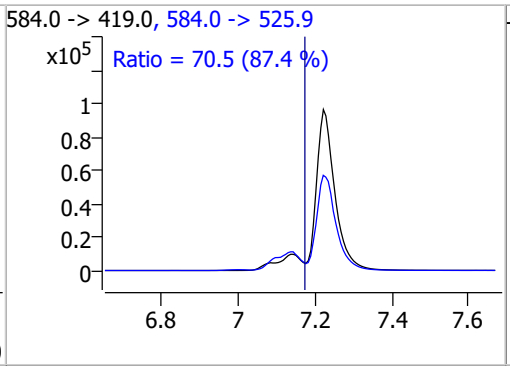


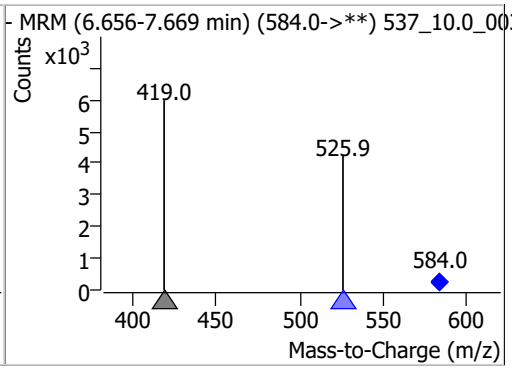




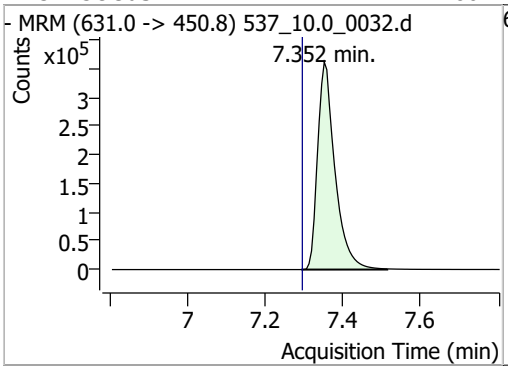
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	11.1016	7.22	0.05	363349	584.0 -> 525.9	70.5	40.4	121.1

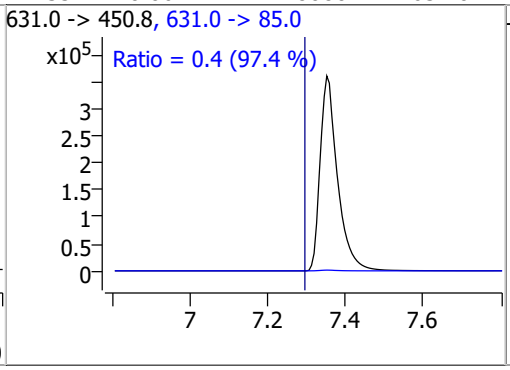


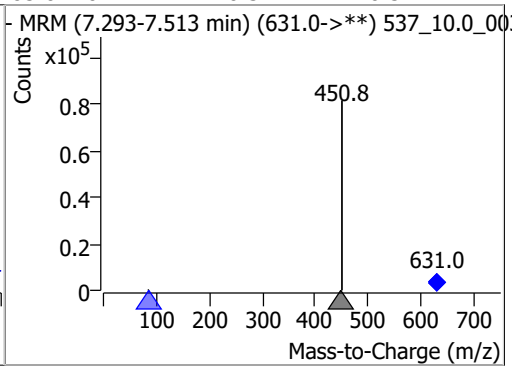




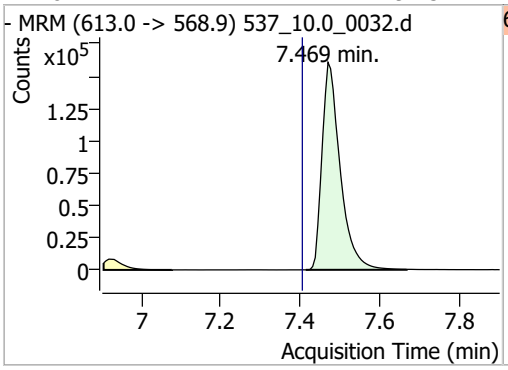
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	11.2180	7.35	0.06	1118080	631.0 -> 85.0	0.4	0.3	0.5

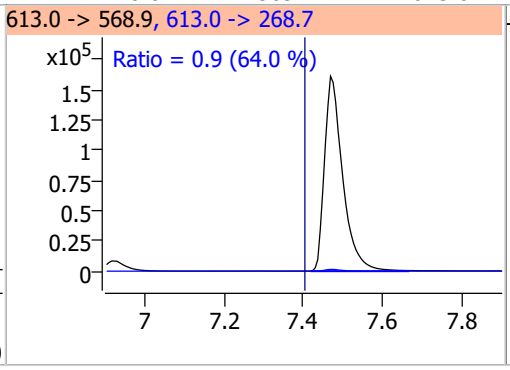


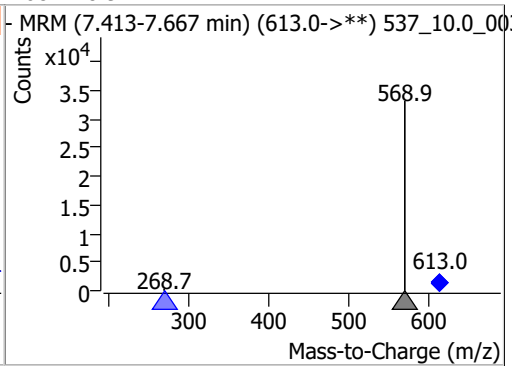




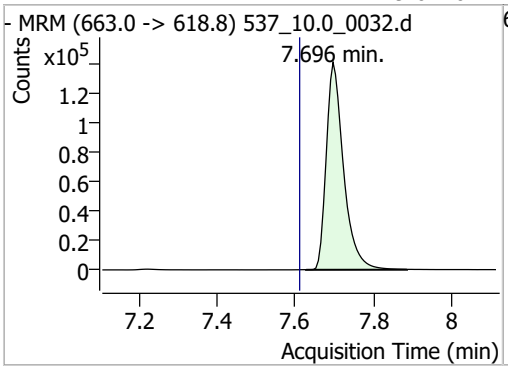
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	9.2512	7.47	0.07	509747	613.0 -> 268.7	0.9	1.1	1.7

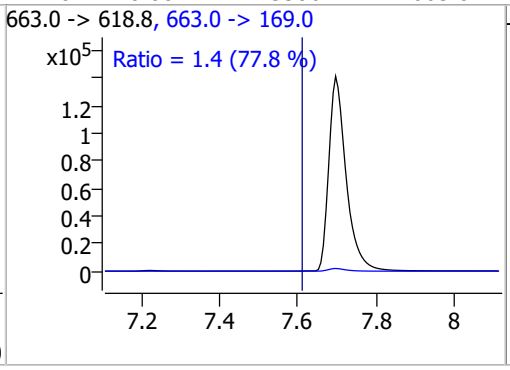


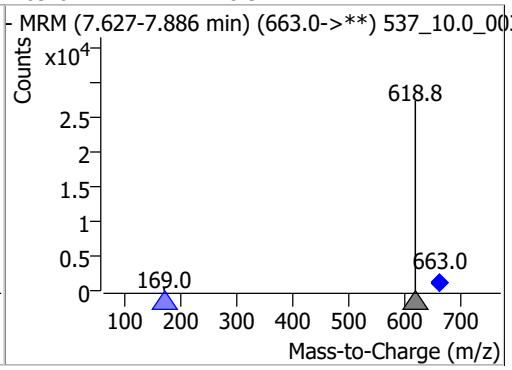




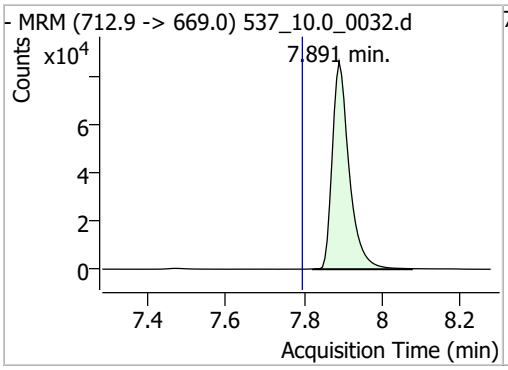
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	9.6176	7.70	0.08	435061	663.0 -> 169.0	1.4	0.9	2.7

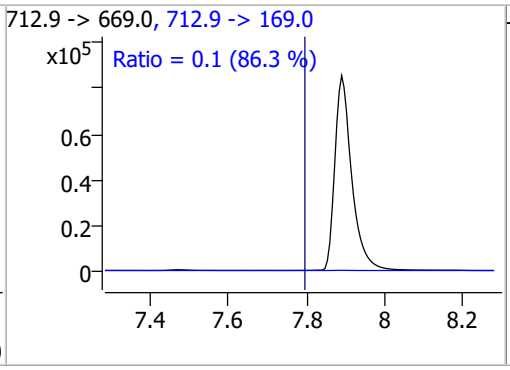


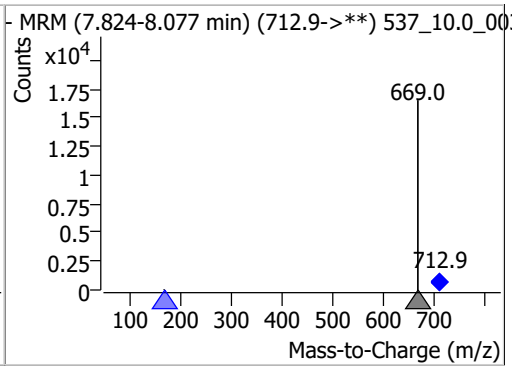




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	9.7168	7.89	0.10	257172	712.9 -> 169.0	0.1	0.0	0.1







Quantitation Results Report

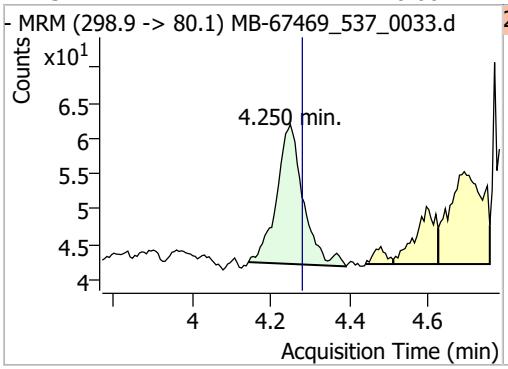
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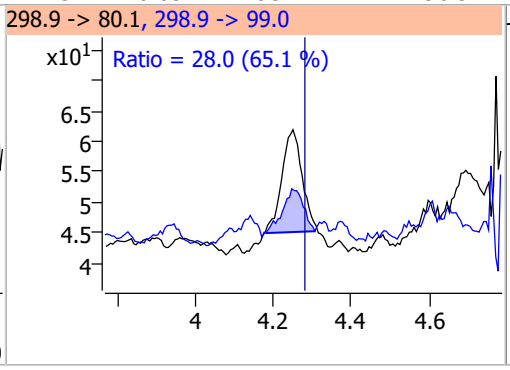
Data File	MB-67469_537_0033.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 12:25:14 PM
Sample Name	MB-67469	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
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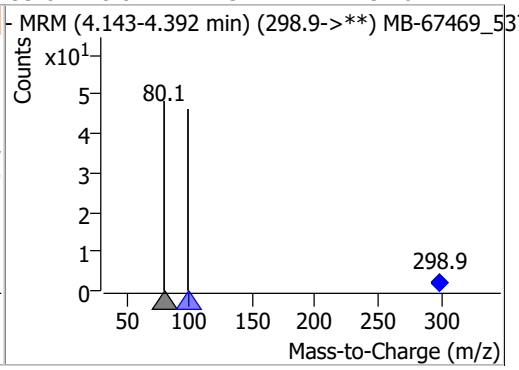
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.595	502.9 -> 80.1	914840	3.0000	ng/ml		0.023
13C2-PFOA	6.171	415.0 -> 370.0	1043790	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1719944	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	900515	8.2611	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 82.61%			
13C3-HFPO-DA	5.213	287.0 -> 169.0	14405	6.3615	ng/ml		-0.010
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 63.61%		*	
13C2-PFDA	6.922	514.9 -> 469.9	447471	7.9007	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 79.01%			
NETFOSAA-d5	7.215	589.0 -> 419.0	520060	25.0826	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 62.71%		*	
Target Compounds							**QValue**
PFBS	4.250	298.9 -> 80.1	93	0.0012	ng/ml	#	77
PFHxA	4.986	313.0 -> 269.0	1414	0.0102	ng/ml	#	95
HFPO-DA	5.220	285.0 -> 169.1	68	0.0265	ng/ml		99
PFHpA	5.676	362.9 -> 318.9	217	0.0018	ng/ml	#	82
PFHxS	5.743	398.9 -> 79.9	117	0.0025	ng/ml		29
NaDONA	5.756	377.0 -> 250.9	259	0.0007	ng/ml		93
PFOA	6.171	413.0 -> 369.1	635	0.0066	ng/ml		98
PFNA	6.564	463.0 -> 418.9	101	0.0017	ng/ml	#	33
PFOS	6.596	498.9 -> 80.1	547	0.0164	ng/ml		85
9Cl-PF3ONS	6.789	531.0 -> 351.0	205	0.0021	ng/ml	#	86
PFDA	6.922	513.0 -> 468.9	209	0.0038	ng/ml		56
N-MeFOSAA	7.073	570.0 -> 418.9	524	0.0141	ng/ml		99
PFUdA	7.204	563.0 -> 518.8	154	0.0028	ng/ml		93
N-EtFOSAA	7.229	584.0 -> 419.0	712	0.0217	ng/ml	#	27
11ClPF3OUdS	7.352	631.0 -> 450.8	121	0.0011	ng/ml	#	93
PFDoA	6.925	613.0 -> 568.9	21891	0.3674	ng/ml	#	96
PFTrDA	7.525	663.0 -> 618.8	77	0.0016	ng/ml	#	94
PFTA	7.769	712.9 -> 669.0	44	0.0015	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

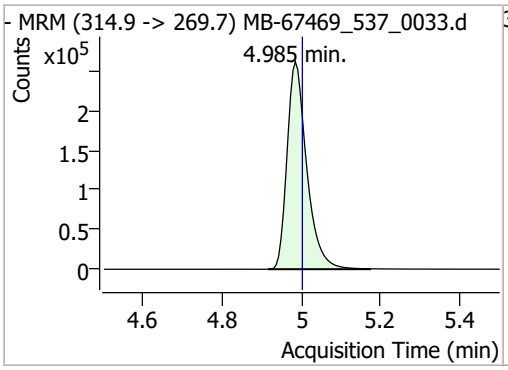
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.0012	4.25	-0.03	93	298.9 -> 99.0	28.0	34.4	51.6

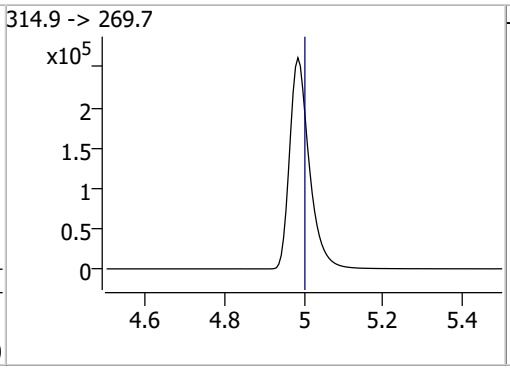


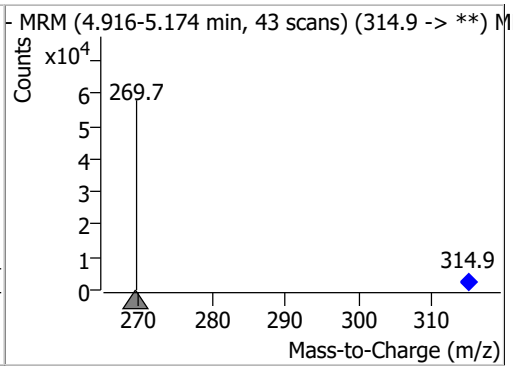




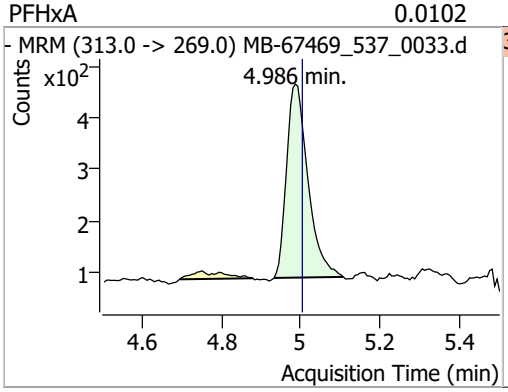
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	8.2611	4.99	-0.01	900515				

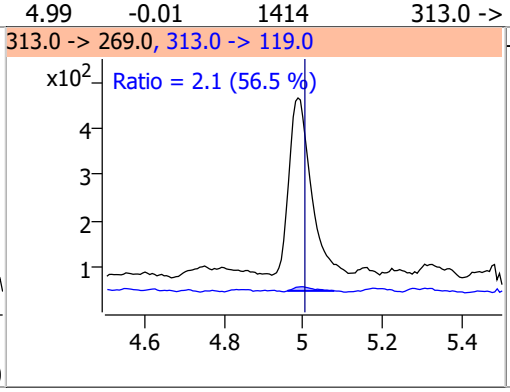


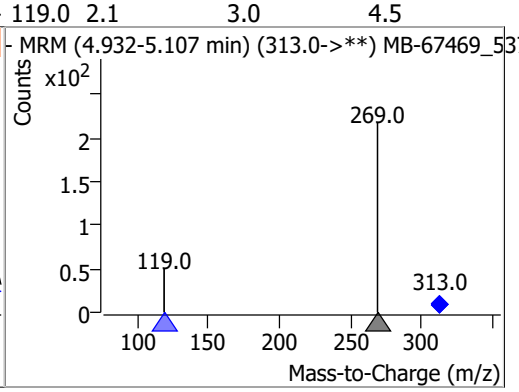




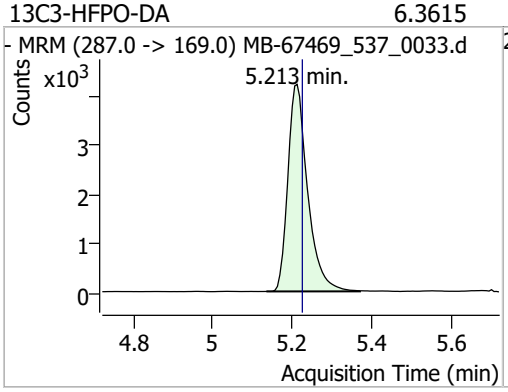
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.0102	4.99	-0.01	1414	313.0 -> 119.0	2.1	3.0	4.5

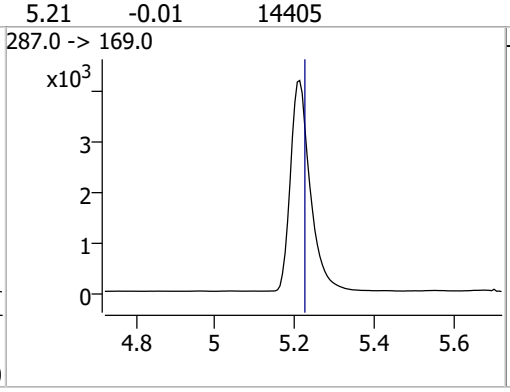


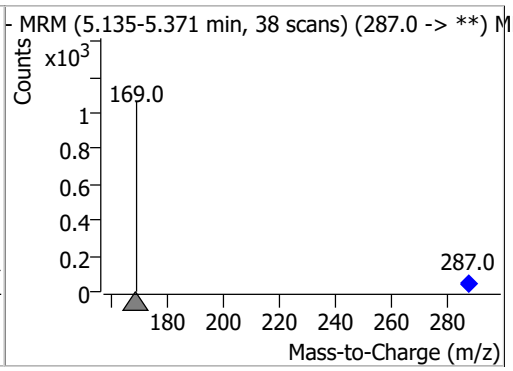




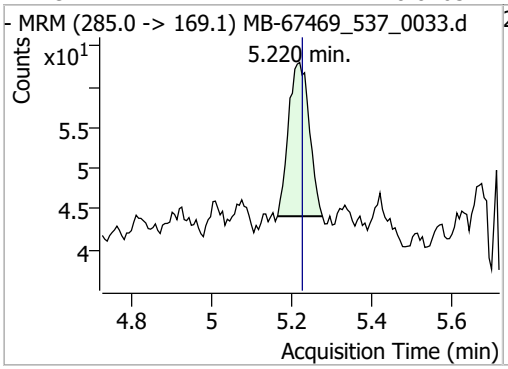
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	6.3615	5.21	-0.01	14405				

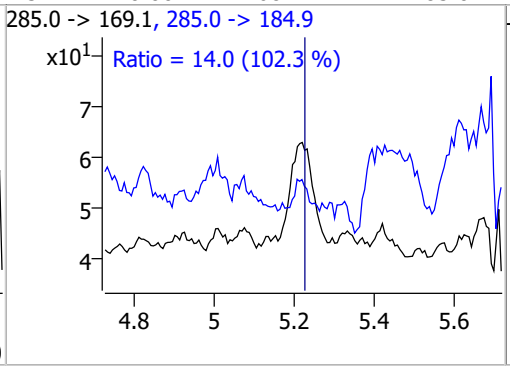


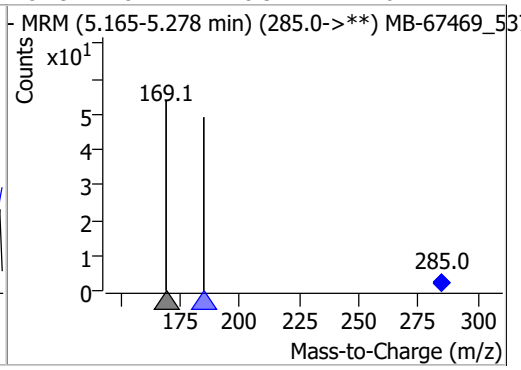




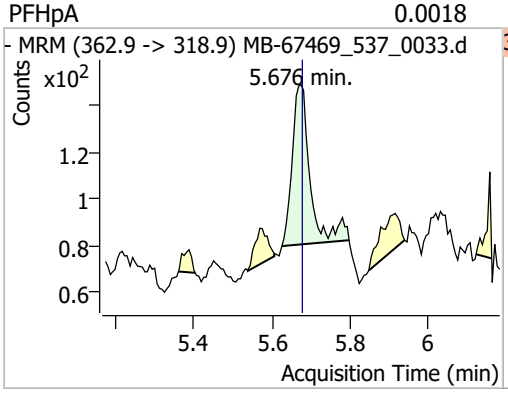
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0265	5.22	0.00	68	285.0 -> 184.9	14.0	10.9	16.4

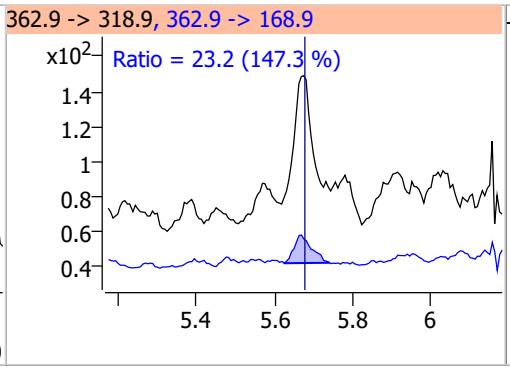


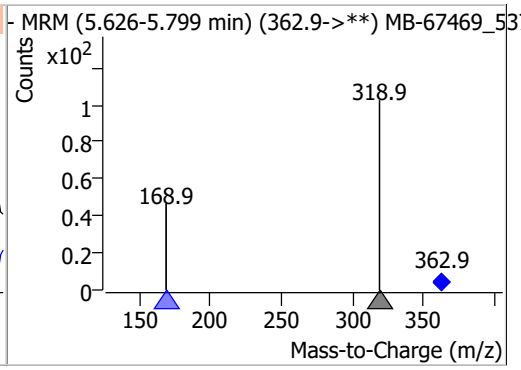




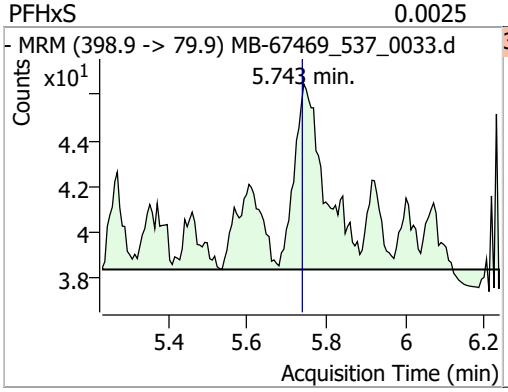
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.0018	5.68	0.00	217	362.9 -> 168.9	23.2	12.6	18.9

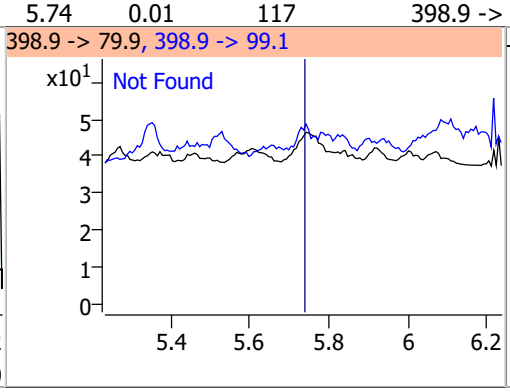


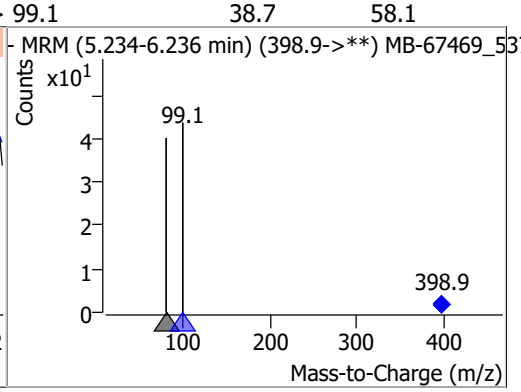




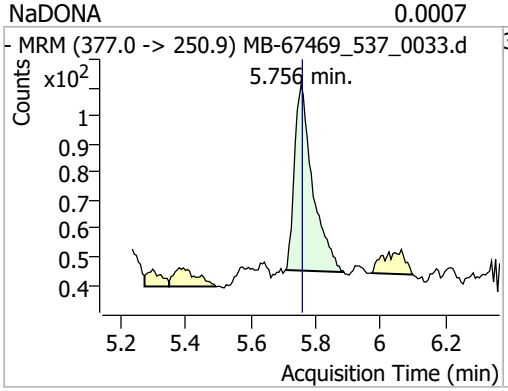
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.0025	5.74	0.01	117	398.9 -> 99.1		38.7	58.1

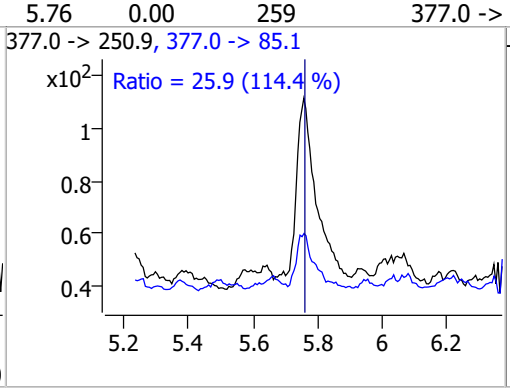


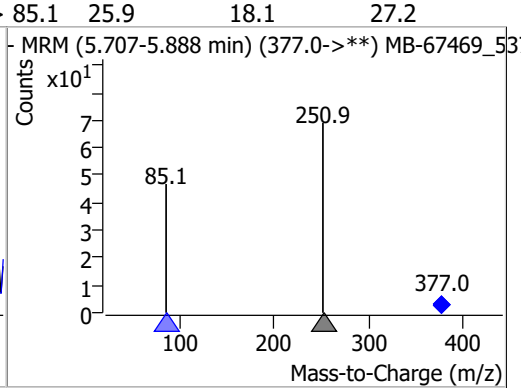




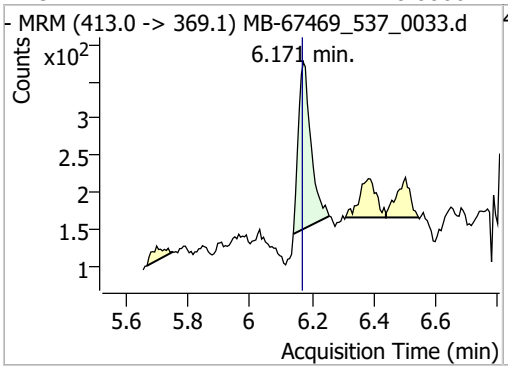
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0007	5.76	0.00	259	377.0 -> 85.1	25.9	18.1	27.2

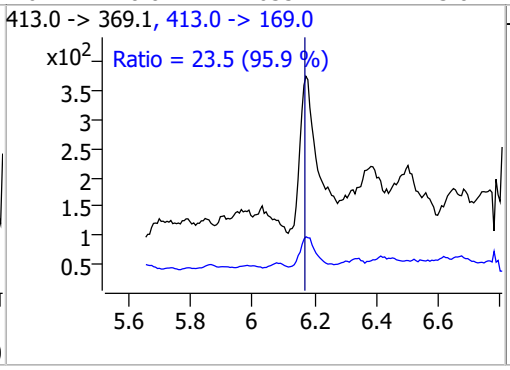


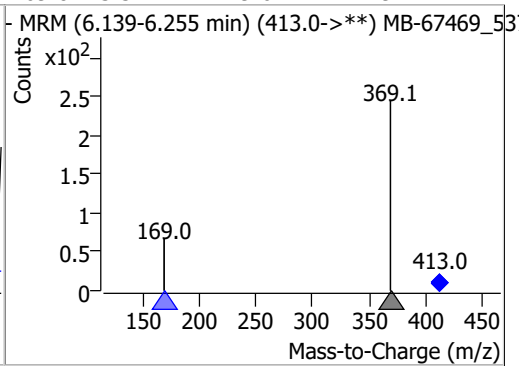




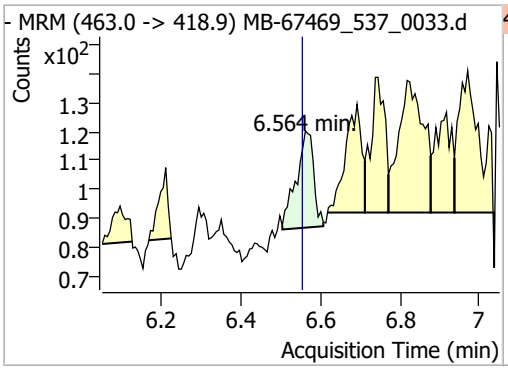
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.0066	6.17	0.01	635	413.0 -> 169.0	23.5	19.6	29.4

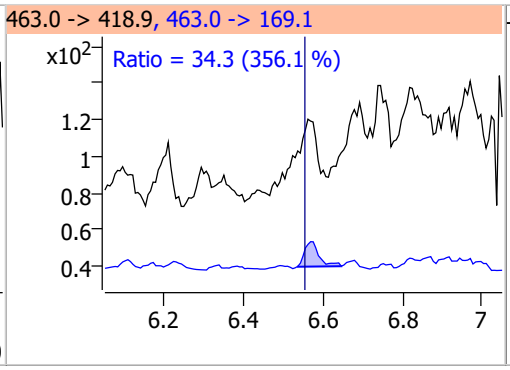


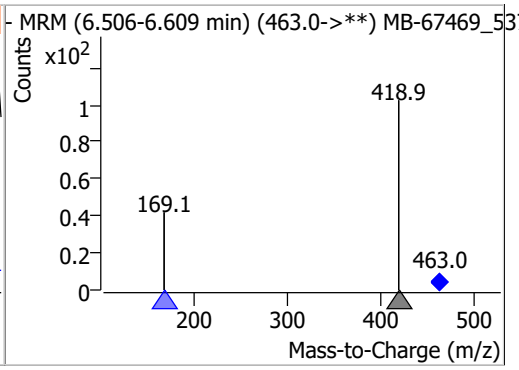




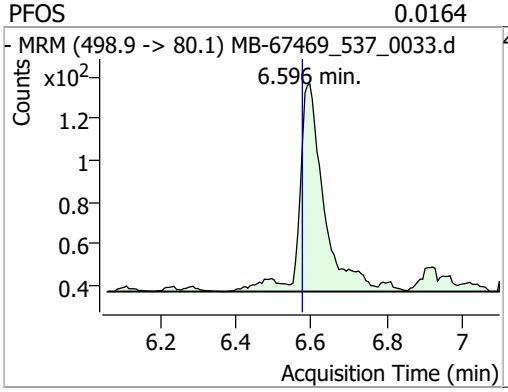
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.0017	6.56	0.01	101	463.0 -> 169.1	34.3	7.7	11.5

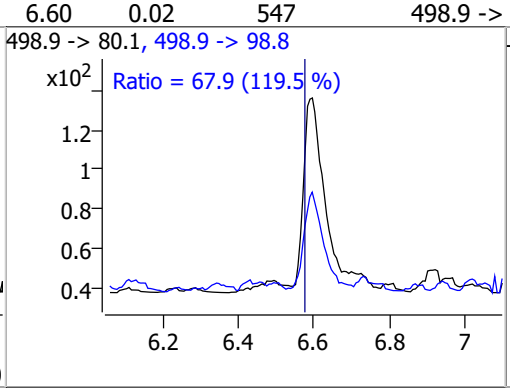


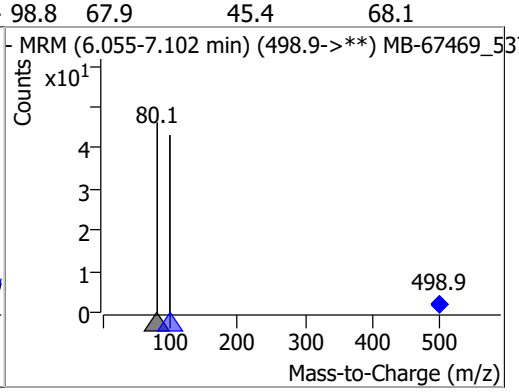




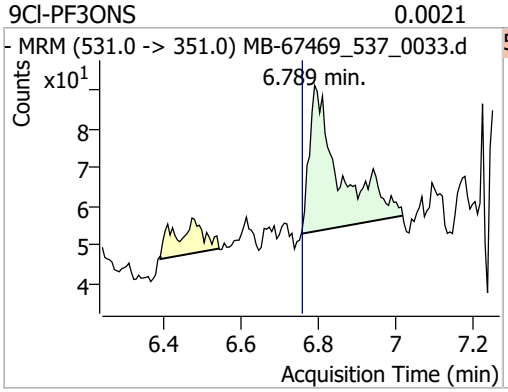
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.0164	6.60	0.02	547	498.9 -> 98.8	67.9	45.4	68.1

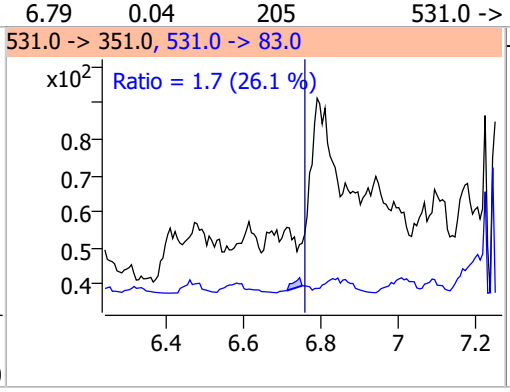


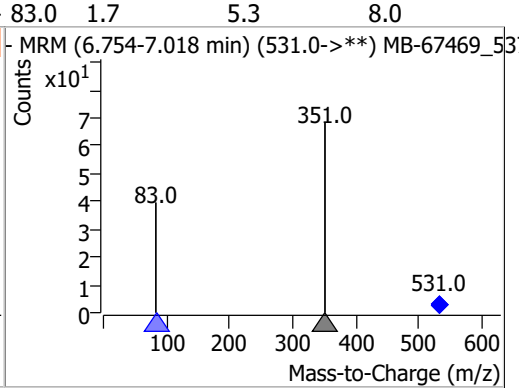




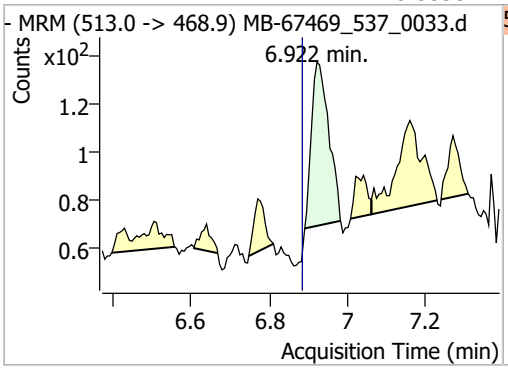
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0021	6.79	0.04	205	531.0 -> 83.0	1.7	5.3	8.0

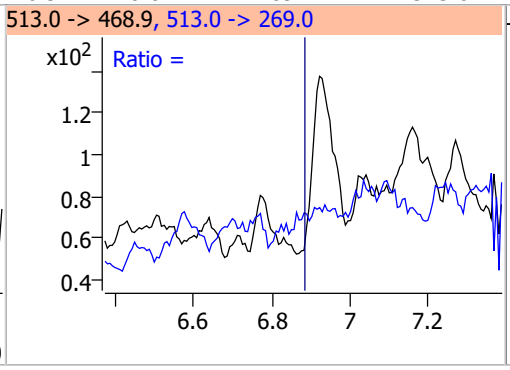


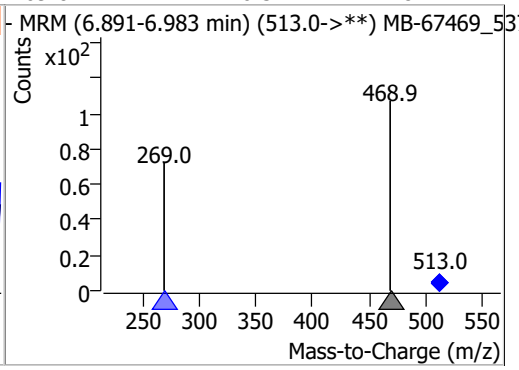




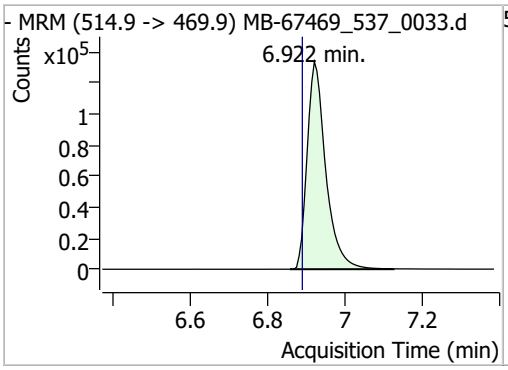
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0038	6.92	0.04	209	513.0 -> 269.0		16.5	24.8

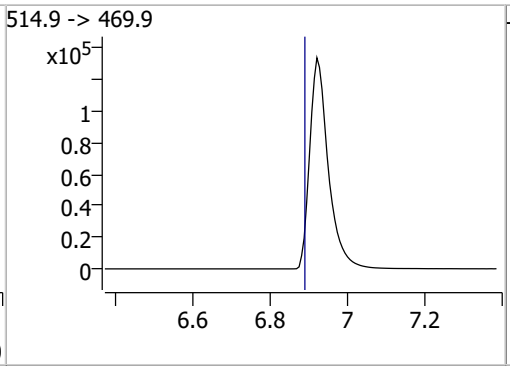


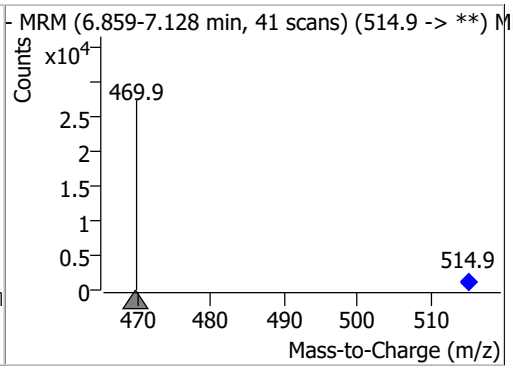




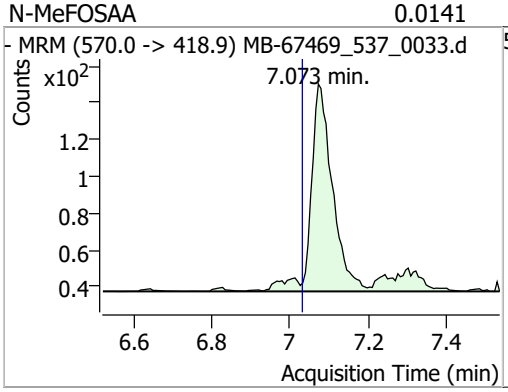
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	7.9007	6.92	0.03	447471				

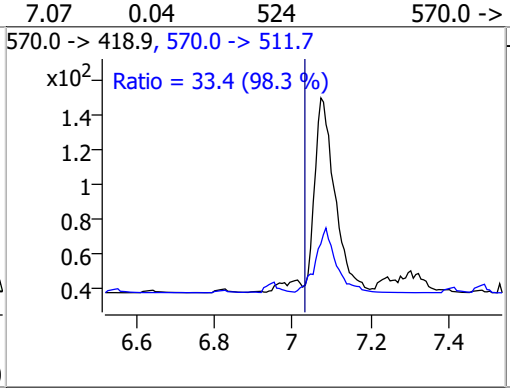


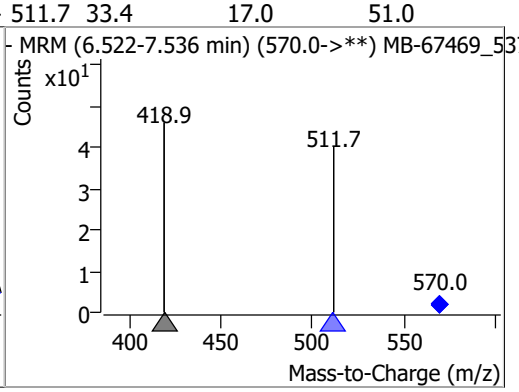




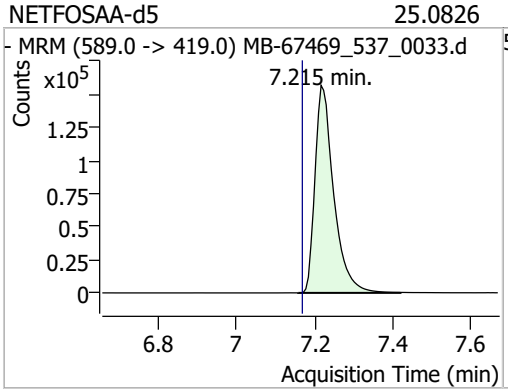
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0141	7.07	0.04	524	570.0 -> 511.7	33.4	17.0	51.0

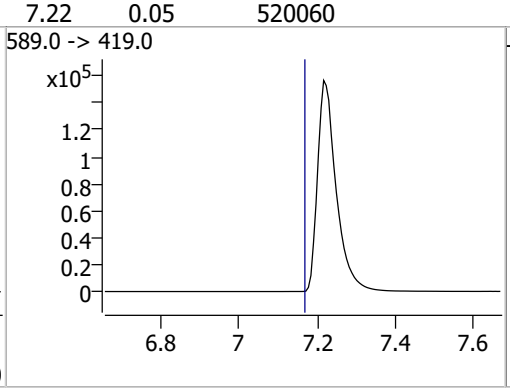


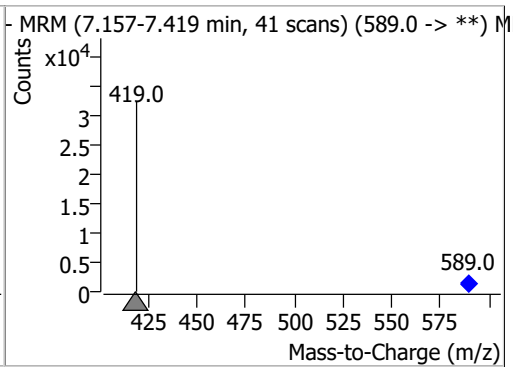




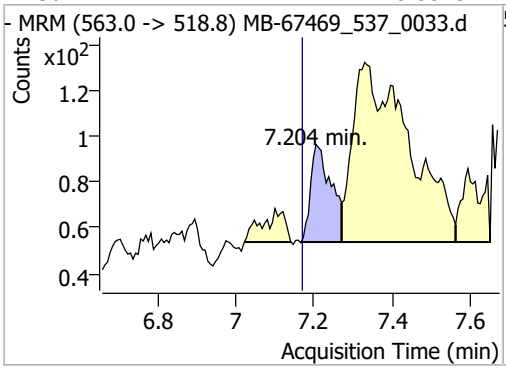
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	25.0826	7.22	0.05	520060				

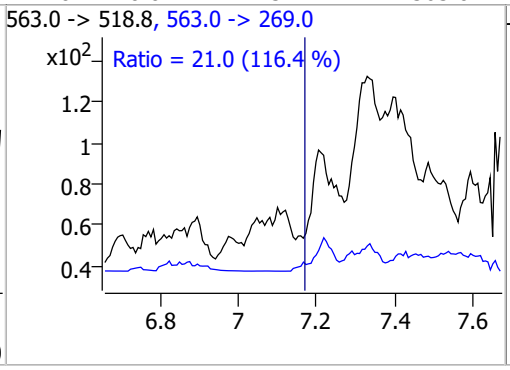


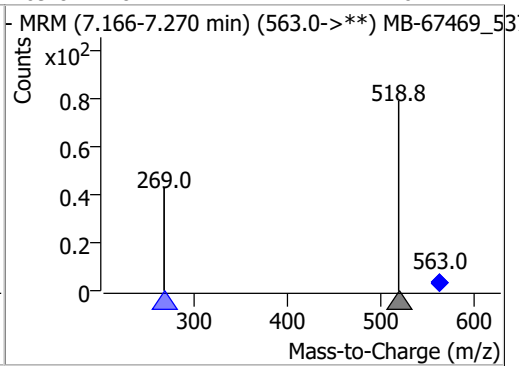




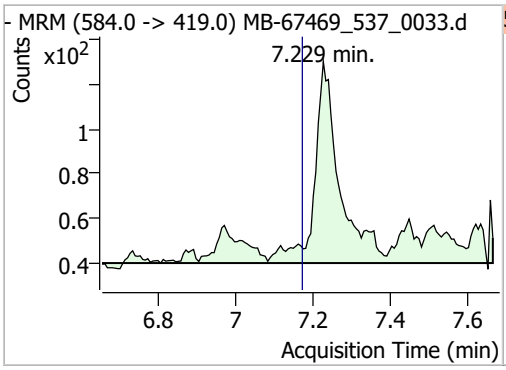
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0028	7.20	0.04	154	563.0 -> 269.0	21.0	14.4	21.6

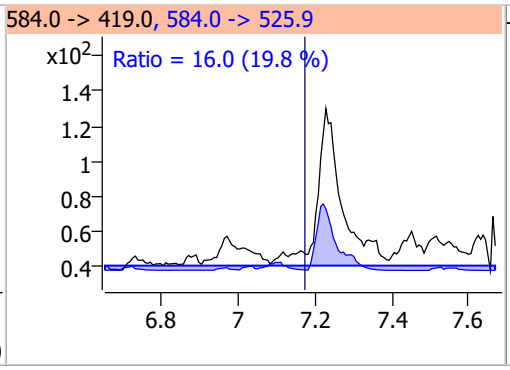


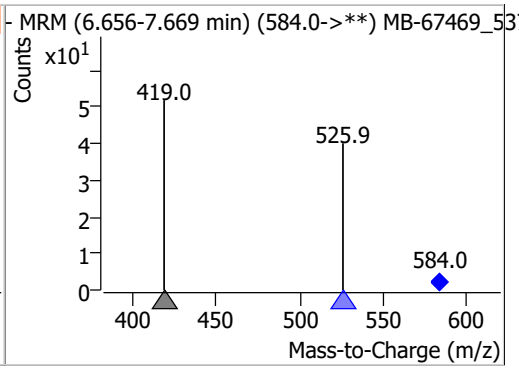




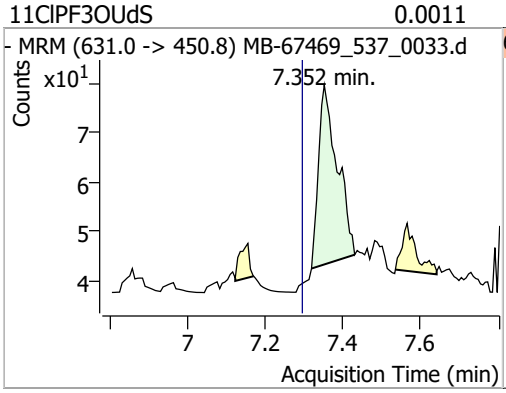
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0217	7.23	0.06	712	584.0 -> 525.9	16.0	40.4	121.1

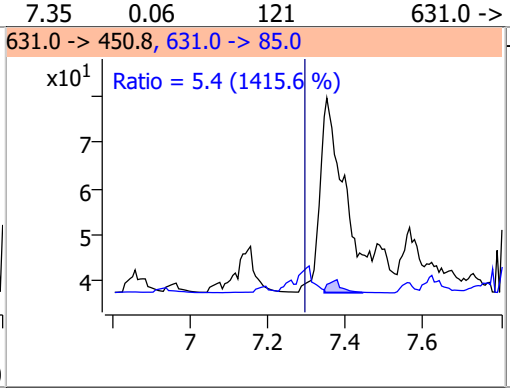


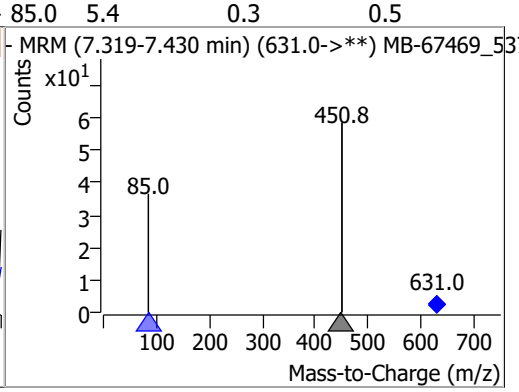




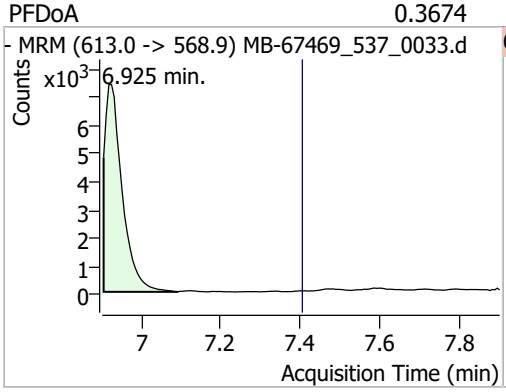
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0011	7.35	0.06	121	631.0 -> 85.0	5.4	0.3	0.5

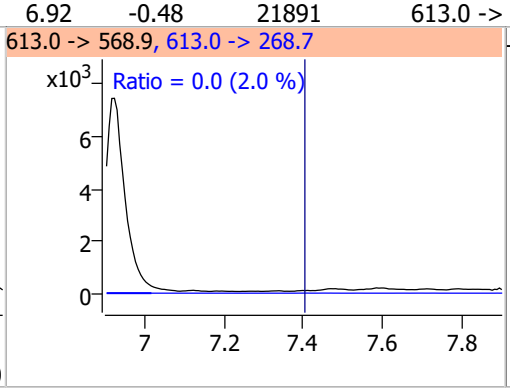


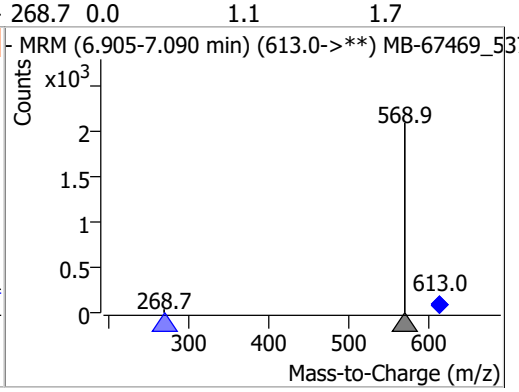




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.3674	6.92	-0.48	21891	613.0 -> 268.7	0.0	1.1	1.7

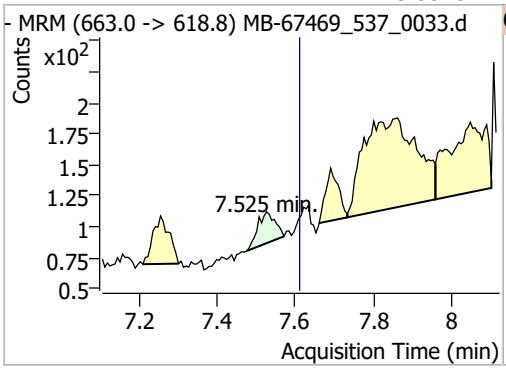


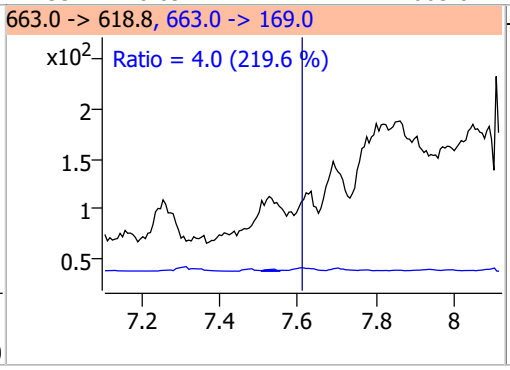


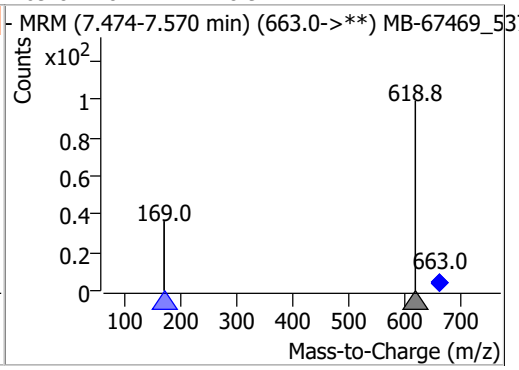


Quantitation Results Report

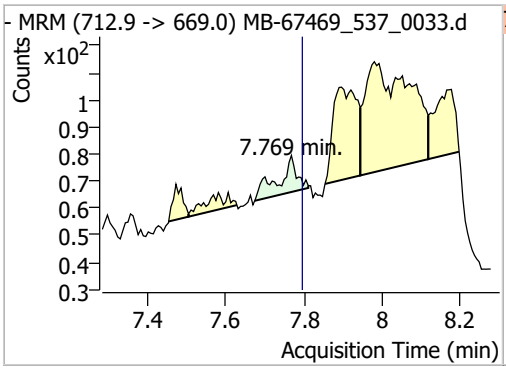
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0016	7.53	-0.09	77	663.0 -> 169.0	4.0	0.9	2.7

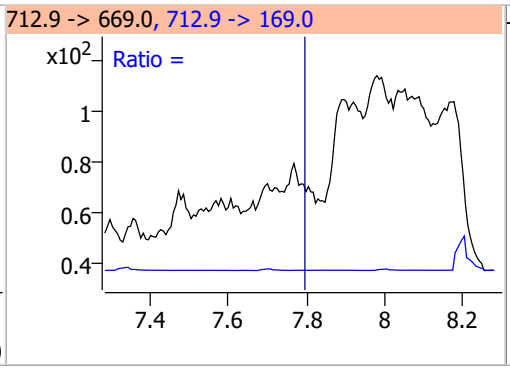


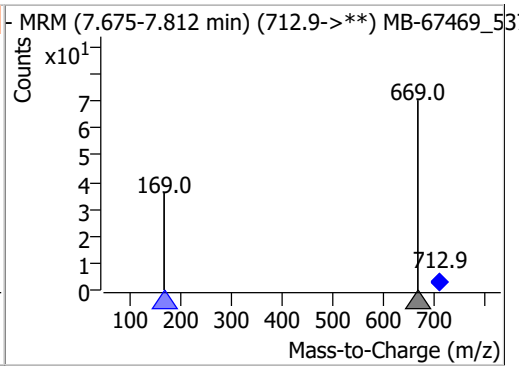




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0015	7.77	-0.02	44	712.9 -> 169.0		0.0	0.1







Quantitation Results Report

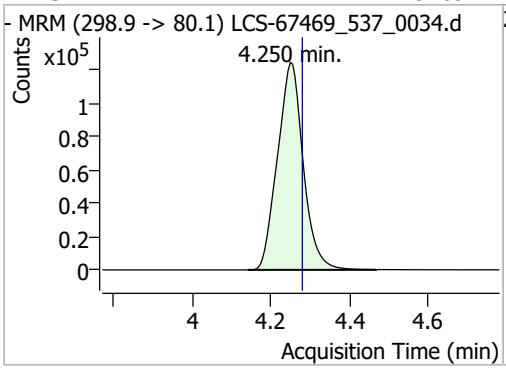
Agilent | Trusted Answers

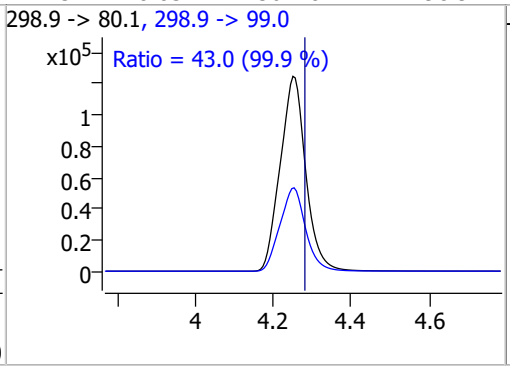
Data File	LCS-67469_537_0034.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 12:38:14 PM
Sample Name	LCS-67469	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

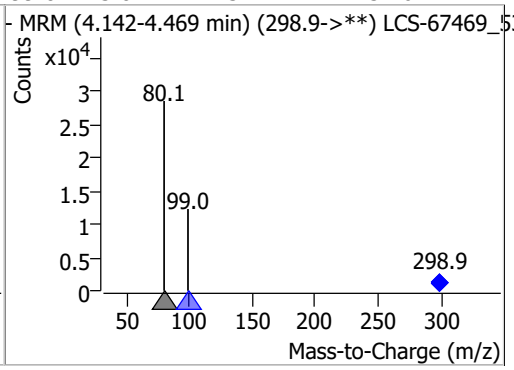
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	847134	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	1087560	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1731332	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	1098360	9.6705	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 96.71%			
13C3-HFPO-DA	5.207	287.0 -> 169.0	17533	7.4312	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 74.31%			
13C2-PFDA	6.922	514.9 -> 469.9	549118	9.3052	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 93.05%			
NETFOSAA-d5	7.222	589.0 -> 419.0	753831	36.1183	ng/ml		0.058
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 90.30%			
Target Compounds							QValue
PFBS	4.250	298.9 -> 80.1	567401	7.9709	ng/ml		100
PFHxA	4.986	313.0 -> 269.0	984720	6.7965	ng/ml		100
HFPO-DA	5.208	285.0 -> 169.1	14979	5.5090	ng/ml		98
PFHpA	5.670	362.9 -> 318.9	941792	7.6087	ng/ml		98
PFHxS	5.737	398.9 -> 79.9	361619	8.0733	ng/ml		93
NaDONA	5.750	377.0 -> 250.9	2729061	6.6445	ng/ml		98
PFOA	6.171	413.0 -> 369.1	687807	6.8371	ng/ml		98
PFNA	6.577	463.0 -> 418.9	487304	7.6927	ng/ml		96
PFOS	6.589	498.9 -> 80.1	256717	8.1379	ng/ml		100
9Cl-PF3ONS	6.789	531.0 -> 351.0	652634	6.8928	ng/ml	#	96
PFDA	6.922	513.0 -> 468.9	441323	7.5476	ng/ml	#	91
N-MeFOSAA	7.073	570.0 -> 418.9	281753	7.2349	ng/ml		97
PFUdA	7.217	563.0 -> 518.8	425399	7.4703	ng/ml		99
N-EtFOSAA	7.223	584.0 -> 419.0	265284	7.7528	ng/ml		91
11ClPF3OUdS	7.352	631.0 -> 450.8	865413	7.9261	ng/ml		100
PFDoA	7.476	613.0 -> 568.9	479737	7.7202	ng/ml	#	99
PFTrDA	7.696	663.0 -> 618.8	382180	7.5540	ng/ml		99
PFTA	7.891	712.9 -> 669.0	216094	7.2382	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

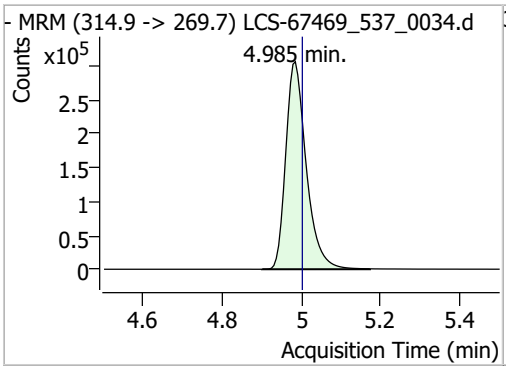
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	7.9709	4.25	-0.03	567401	298.9 -> 99.0	43.0	34.4	51.6

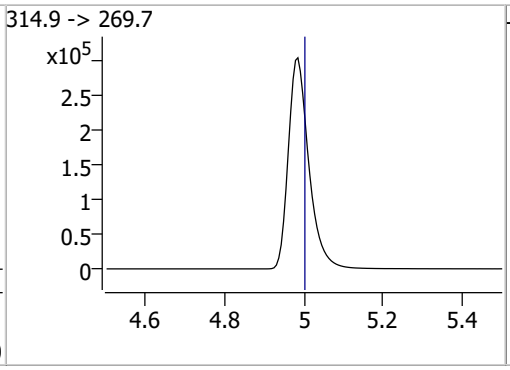


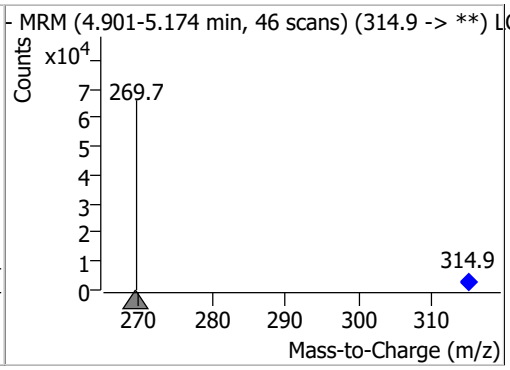




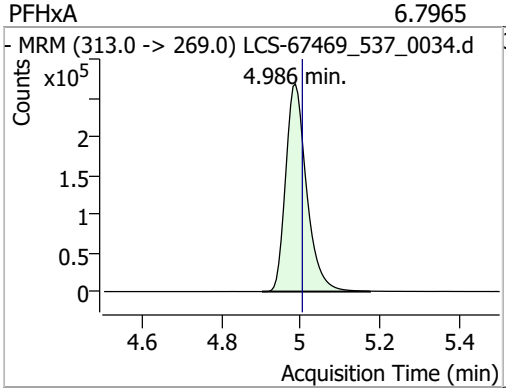
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	9.6705	4.99	-0.01	1098360				

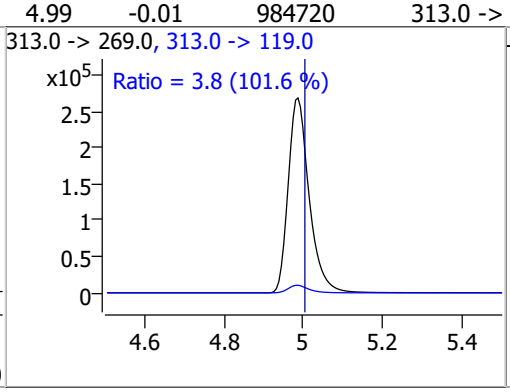


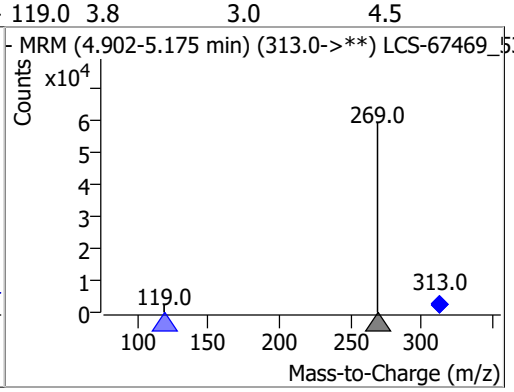




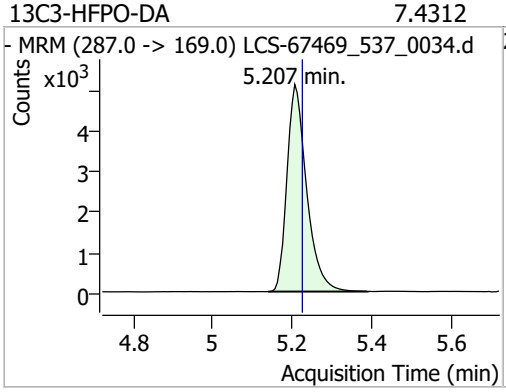
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	6.7965	4.99	-0.01	984720	313.0 -> 119.0	3.8	3.0	4.5

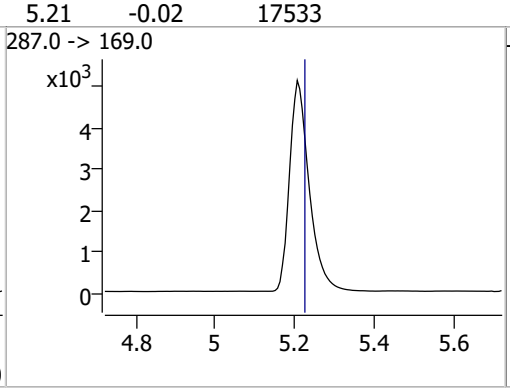


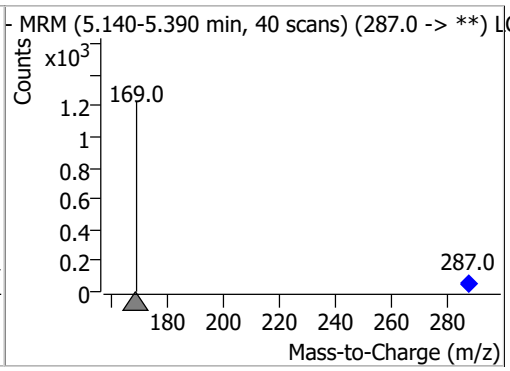




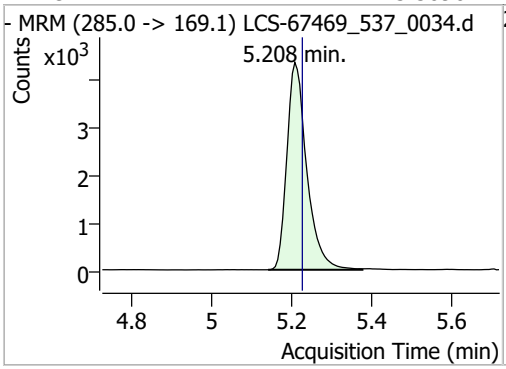
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	7.4312	5.21	-0.02	17533				

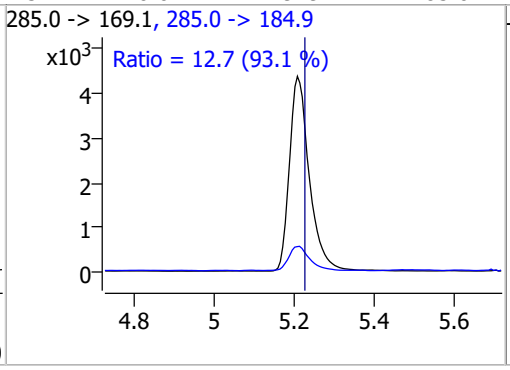


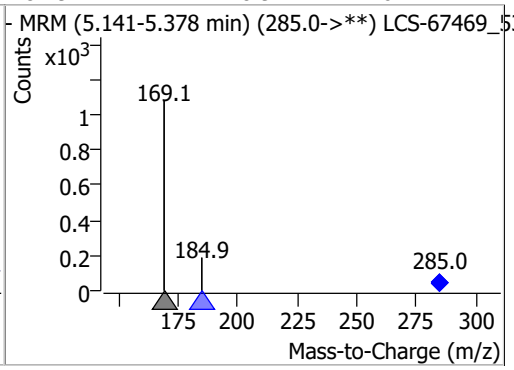




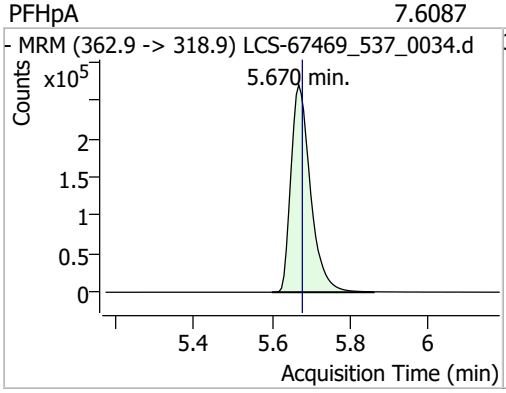
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	5.5090	5.21	-0.02	14979	285.0 -> 184.9	12.7	10.9	16.4

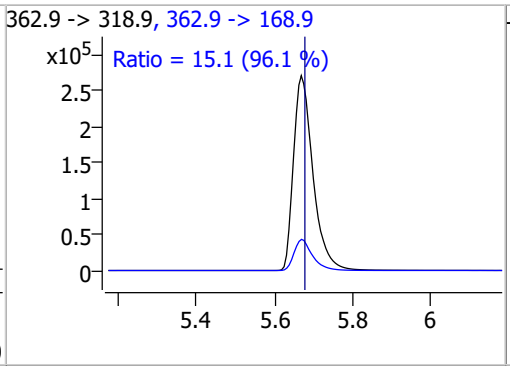


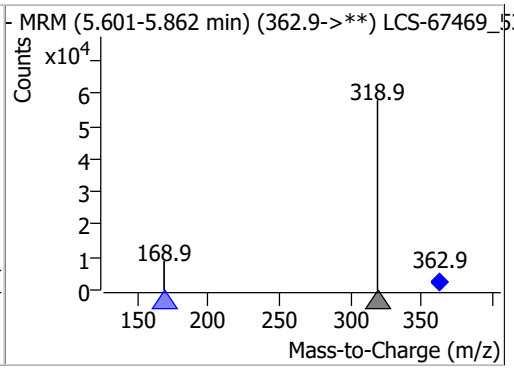




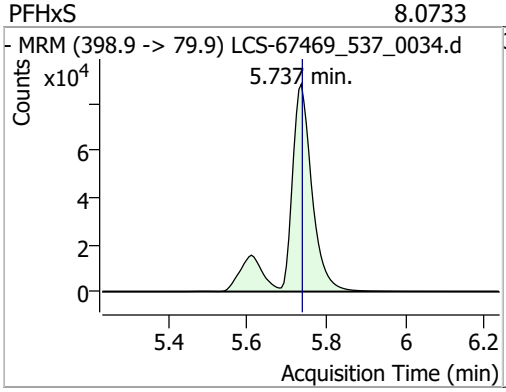
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	7.6087	5.67	-0.01	941792	362.9 -> 168.9	15.1	12.6	18.9

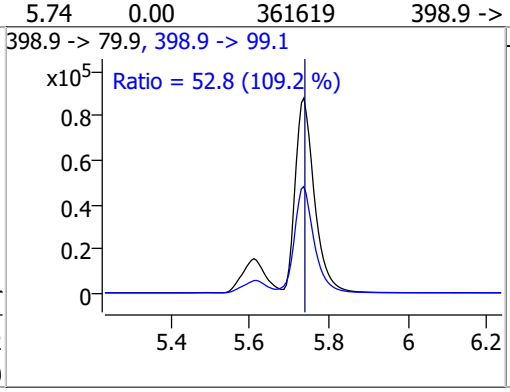


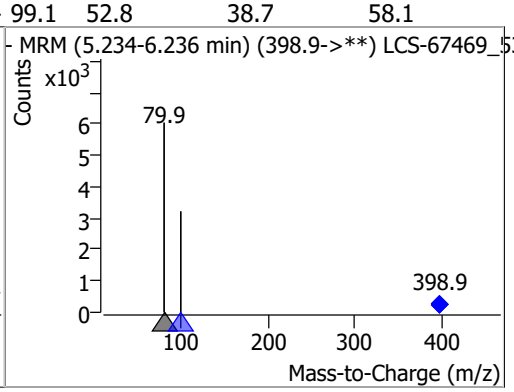




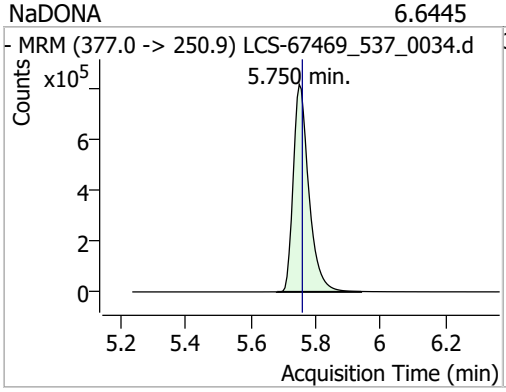
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	8.0733	5.74	0.00	361619	398.9 -> 99.1	52.8	38.7	58.1

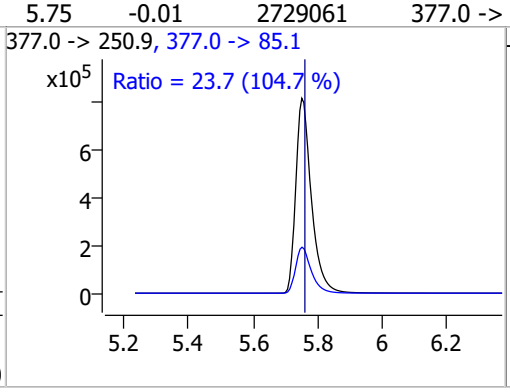


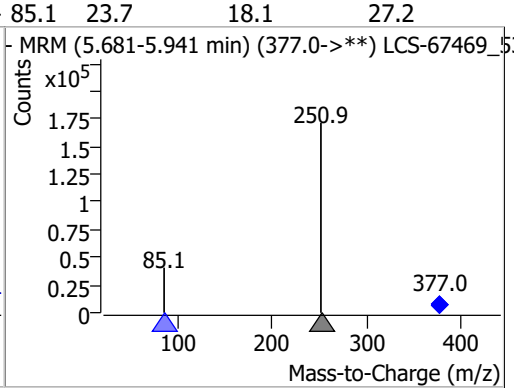




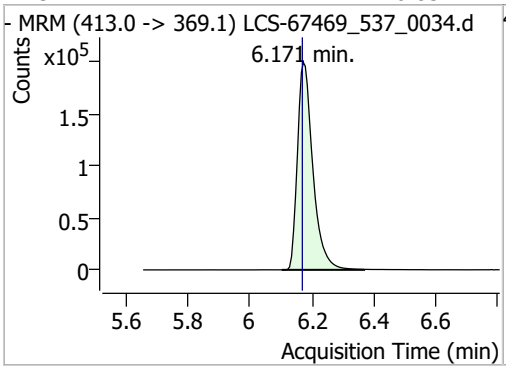
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	6.6445	5.75	-0.01	2729061	377.0 -> 85.1	23.7	18.1	27.2

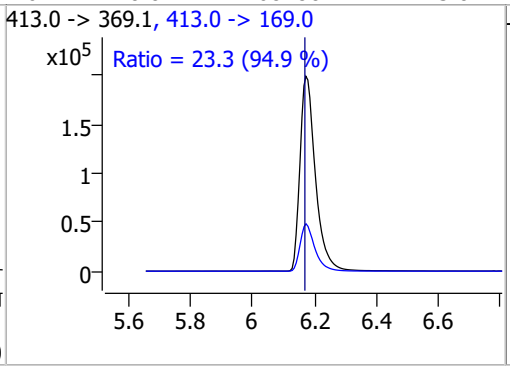


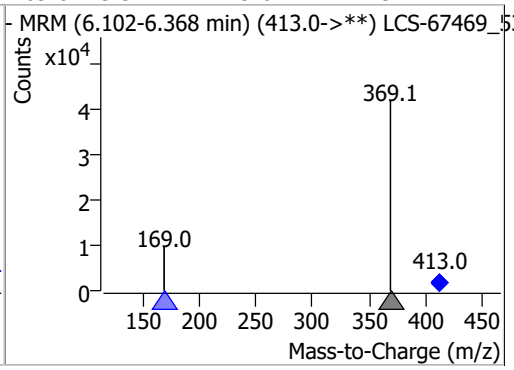




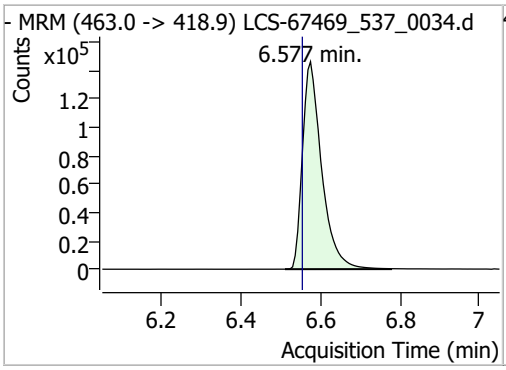
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	6.8371	6.17	0.01	687807	413.0 -> 169.0	23.3	19.6	29.4

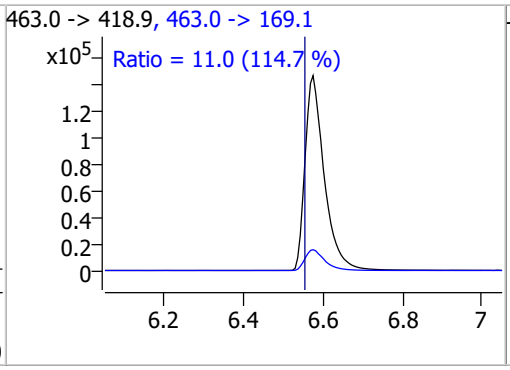


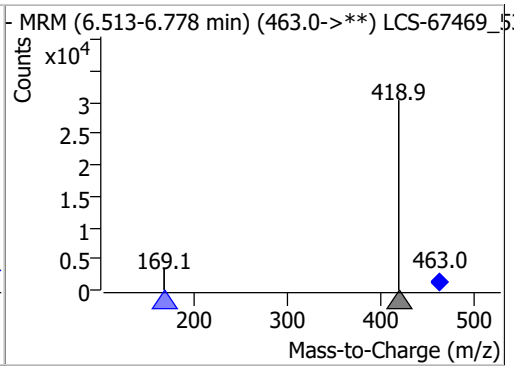




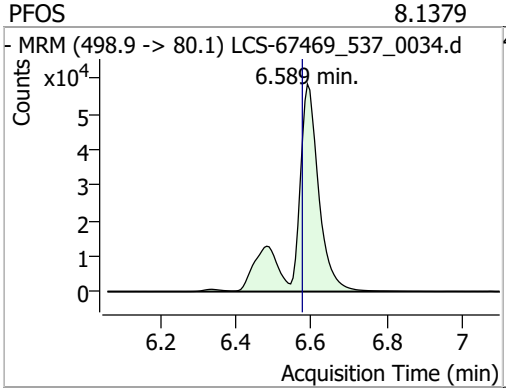
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	7.6927	6.58	0.02	487304	463.0 -> 169.1	11.0	7.7	11.5

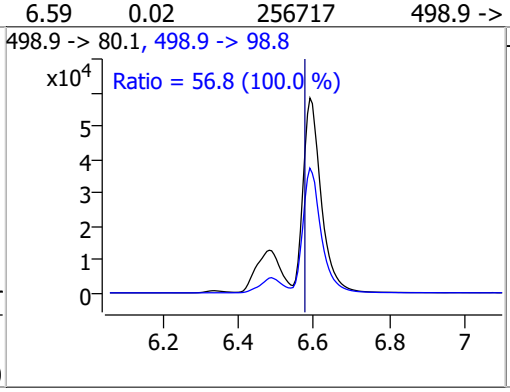


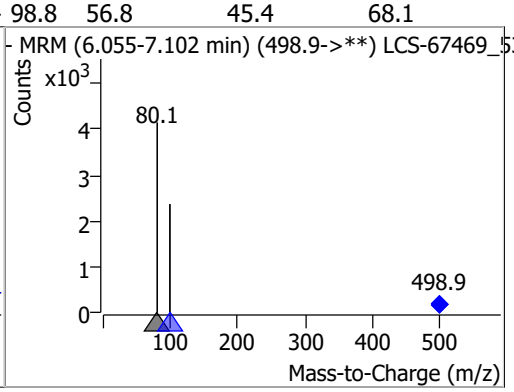




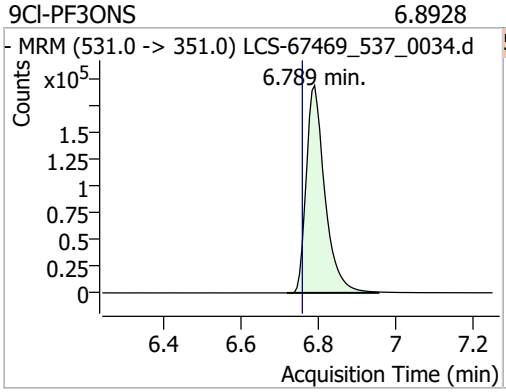
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	8.1379	6.59	0.02	256717	498.9 -> 98.8	56.8	45.4	68.1

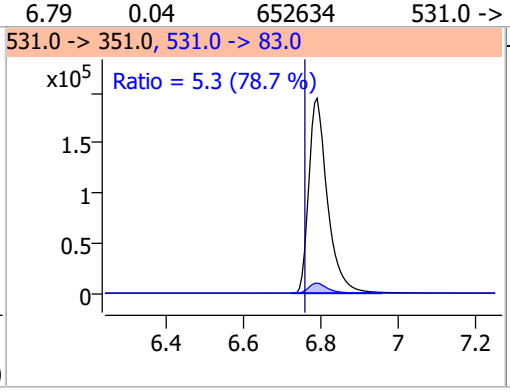


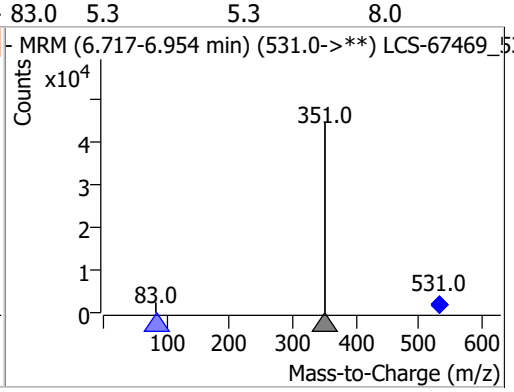




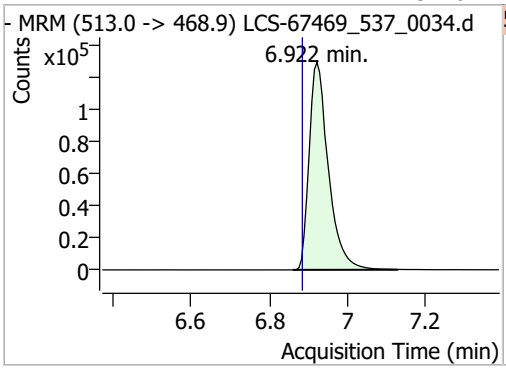
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	6.8928	6.79	0.04	652634	531.0 -> 83.0	5.3	5.3	8.0

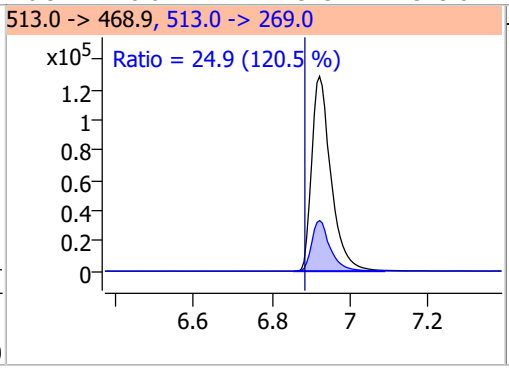


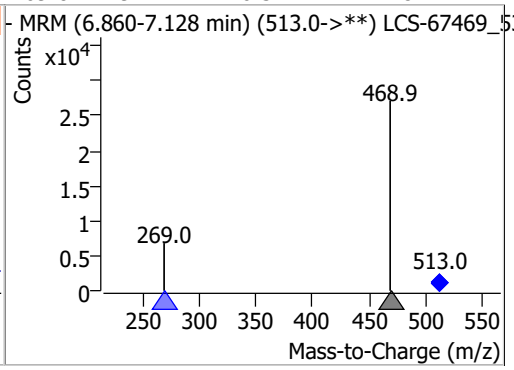




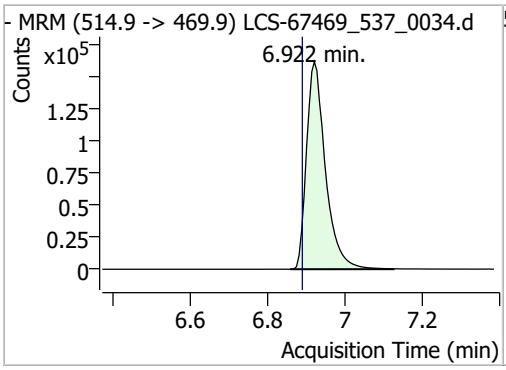
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	7.5476	6.92	0.04	441323	513.0 -> 269.0	24.9	16.5	24.8

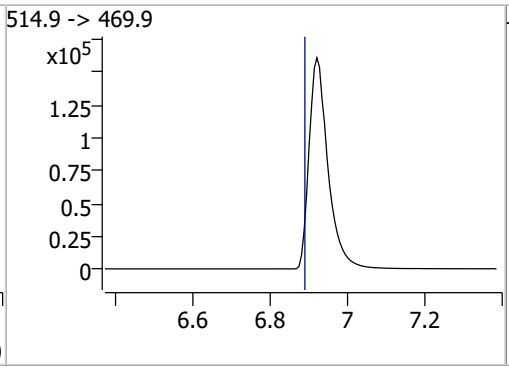


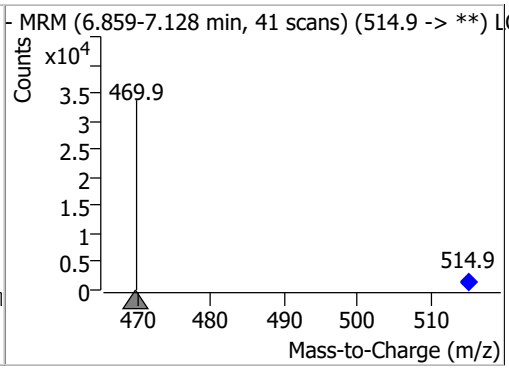




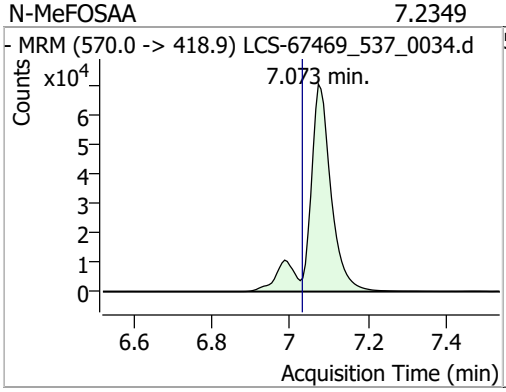
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	9.3052	6.92	0.03	549118				

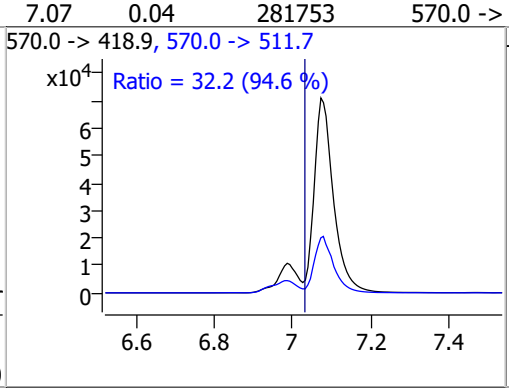


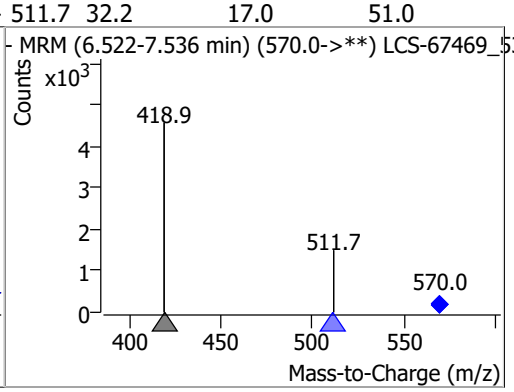




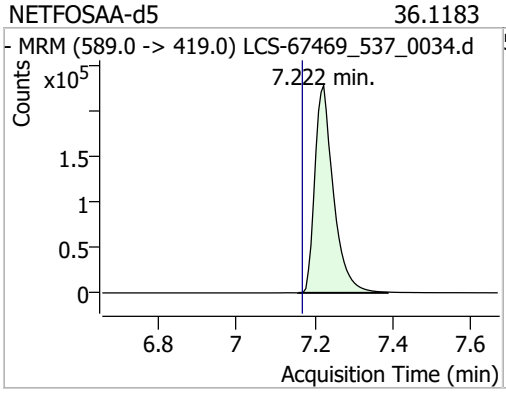
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	7.2349	7.07	0.04	281753	570.0 -> 511.7	32.2	17.0	51.0

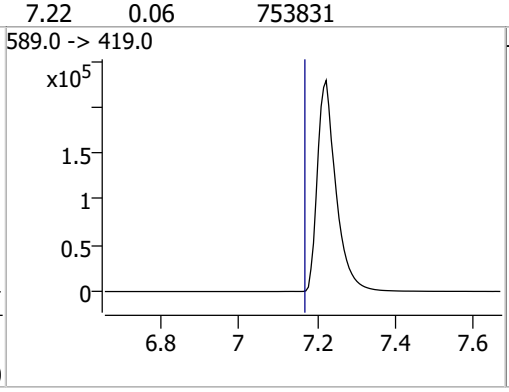


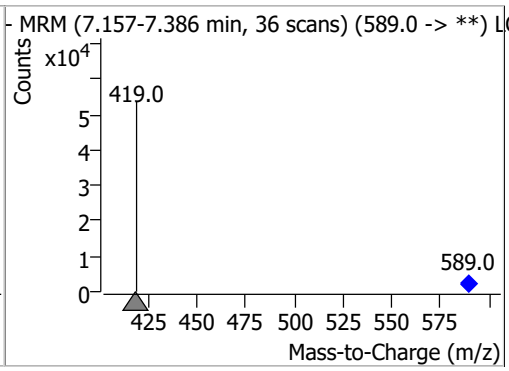




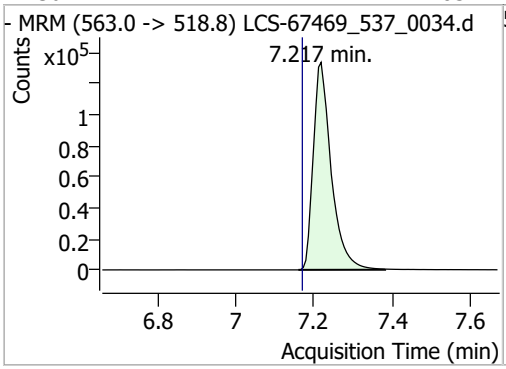
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	36.1183	7.22	0.06	753831				

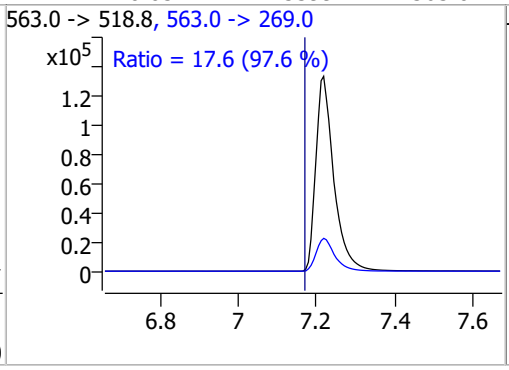


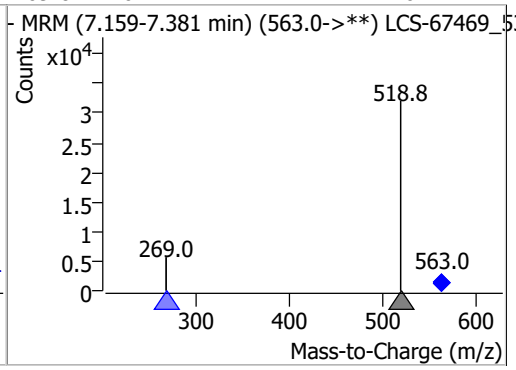




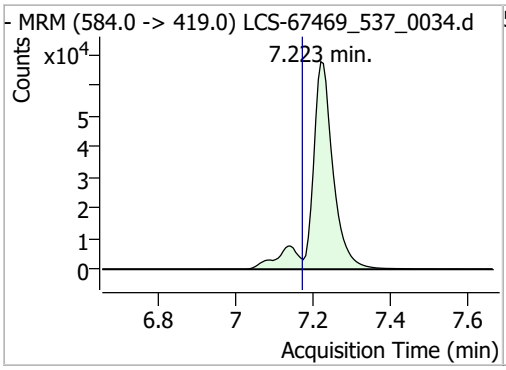
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	7.4703	7.22	0.05	425399	563.0 -> 269.0	17.6	14.4	21.6

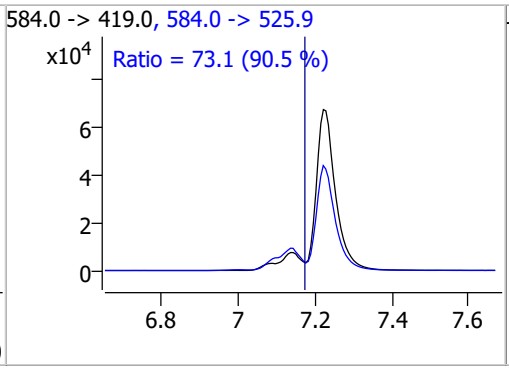


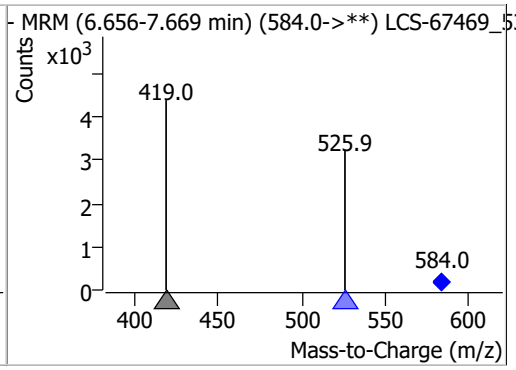




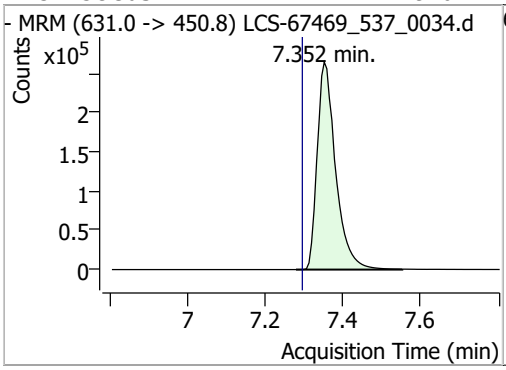
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	7.7528	7.22	0.05	265284	584.0 -> 525.9	73.1	40.4	121.1

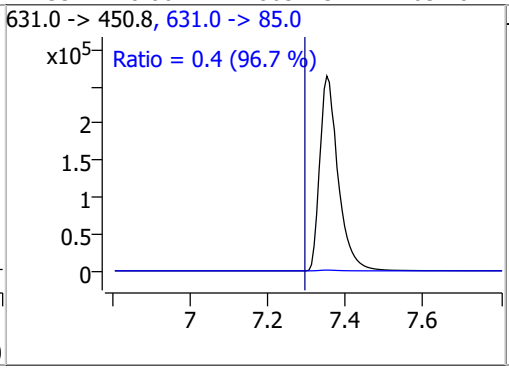


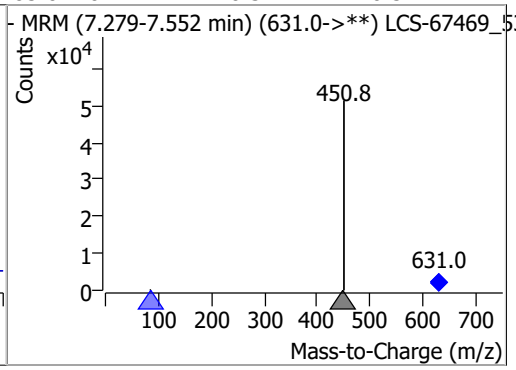




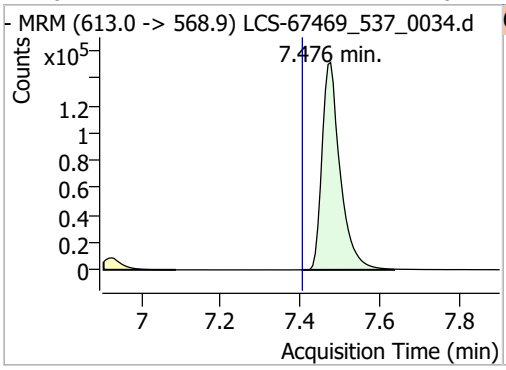
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	7.9261	7.35	0.06	865413	631.0 -> 85.0	0.4	0.3	0.5

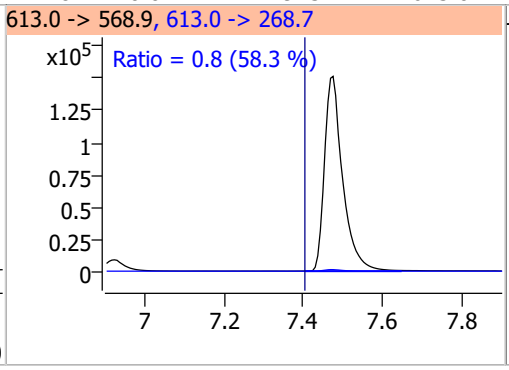


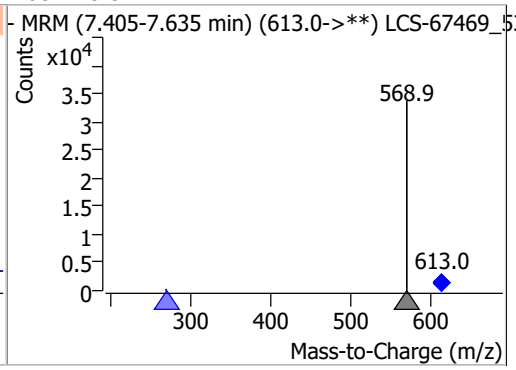




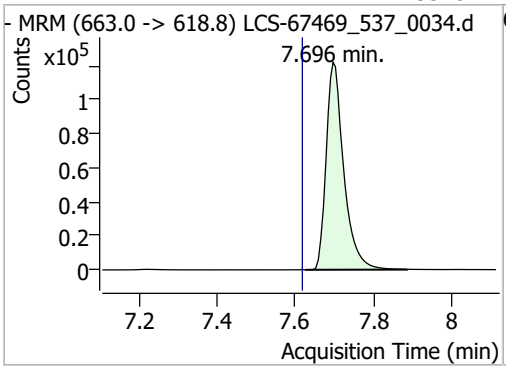
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	7.7202	7.48	0.07	479737	613.0 -> 268.7	0.8	1.1	1.7

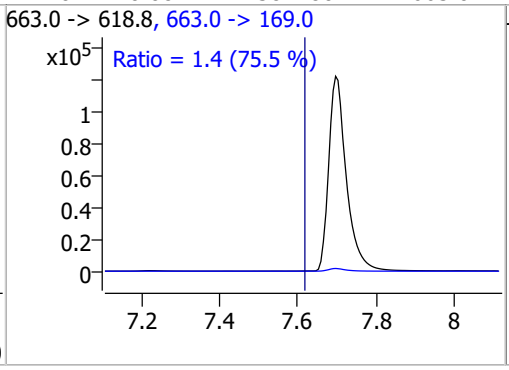


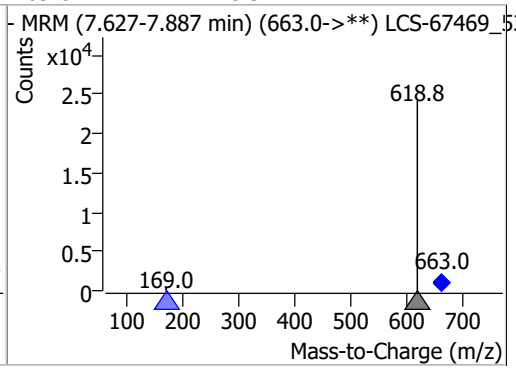




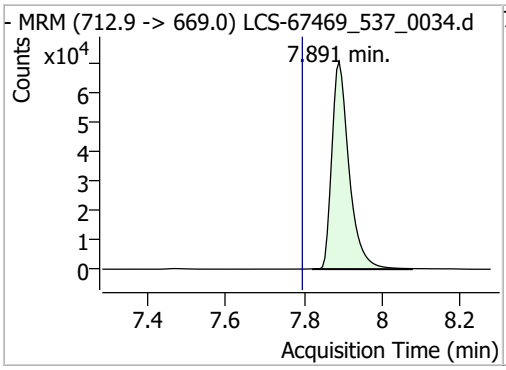
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	7.5540	7.70	0.08	382180	663.0 -> 169.0	1.4	0.9	2.7

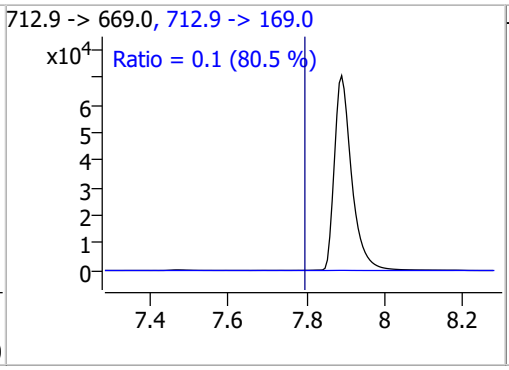


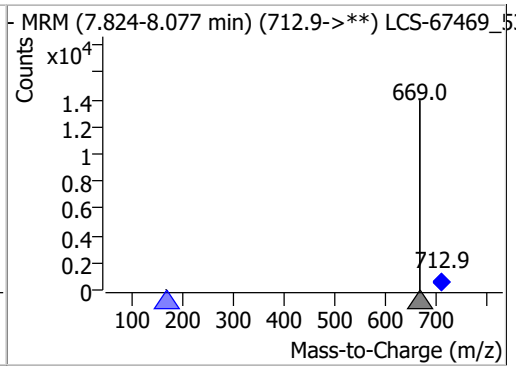




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	7.2382	7.89	0.10	216094	712.9 -> 169.0	0.1	0.0	0.1







Quantitation Results Report

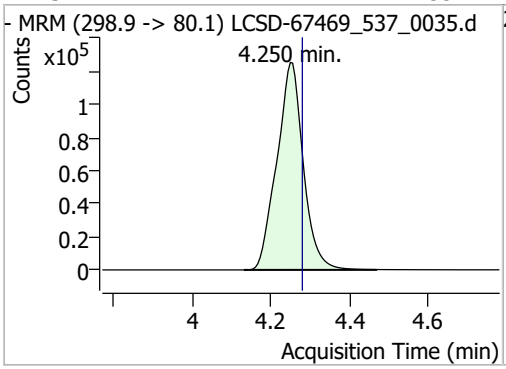
Agilent | Trusted Answers

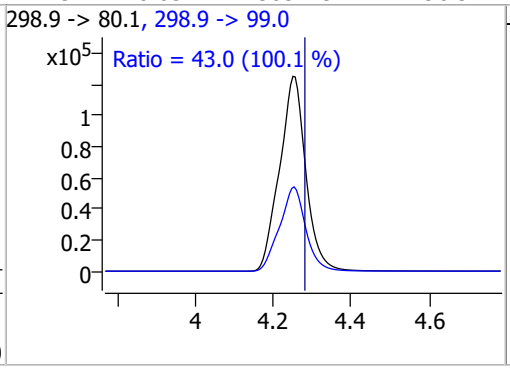
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Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 12:50:58 PM
Sample Name	LCSD-67469	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
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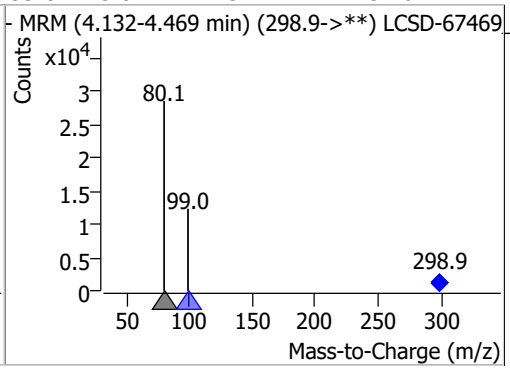
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	899132	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	1058336	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1737006	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	1122804	10.1587	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 101.59%			
13C3-HFPO-DA	5.207	287.0 -> 169.0	23171	10.0920	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 100.92%			
13C2-PFDA	6.922	514.9 -> 469.9	638240	11.1141	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 111.14%			
NETFOSAA-d5	7.215	589.0 -> 419.0	842418	40.2310	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 100.58%			
Target Compounds							QValue
PFBS	4.250	298.9 -> 80.1	585719	7.7532	ng/ml		100
PFHxA	4.980	313.0 -> 269.0	1052999	7.4684	ng/ml		100
HFPO-DA	5.208	285.0 -> 169.1	18899	7.1138	ng/ml		97
PFHpA	5.670	362.9 -> 318.9	1029526	8.5471	ng/ml		99
PFHxS	5.731	398.9 -> 79.9	386318	8.1245	ng/ml		94
NaDONA	5.750	377.0 -> 250.9	3209930	7.9688	ng/ml		96
PFOA	6.171	413.0 -> 369.1	768585	7.8511	ng/ml		97
PFNA	6.577	463.0 -> 418.9	492072	7.9795	ng/ml		96
PFOS	6.589	498.9 -> 80.1	275464	8.2252	ng/ml		99
9Cl-PF3ONS	6.782	531.0 -> 351.0	743437	7.3835	ng/ml	#	96
PFDA	6.922	513.0 -> 468.9	461686	8.0977	ng/ml		100
N-MeFOSAA	7.079	570.0 -> 418.9	374321	9.4575	ng/ml		89
PFUdA	7.217	563.0 -> 518.8	370684	6.6892	ng/ml	#	90
N-EtFOSAA	7.223	584.0 -> 419.0	309396	8.9664	ng/ml		88
11ClPF3OUdS	7.352	631.0 -> 450.8	898293	7.7619	ng/ml		100
PFDoA	7.469	613.0 -> 568.9	472328	7.8108	ng/ml	#	99
PFTrDA	7.696	663.0 -> 618.8	377003	7.6543	ng/ml		99
PFTA	7.891	712.9 -> 669.0	236377	8.1362	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

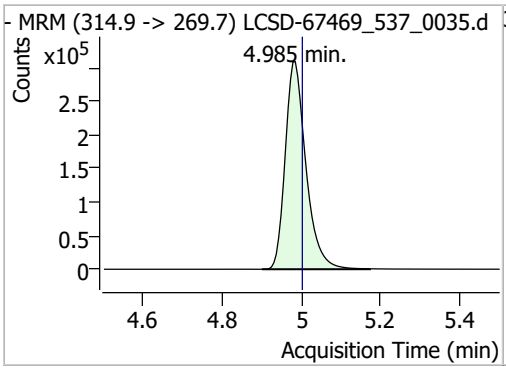
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	7.7532	4.25	-0.03	585719	298.9 -> 99.0	43.0	34.4	51.6

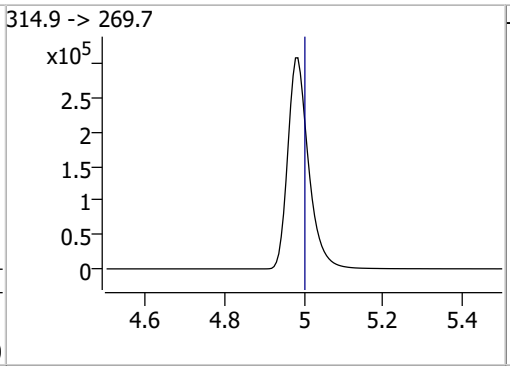


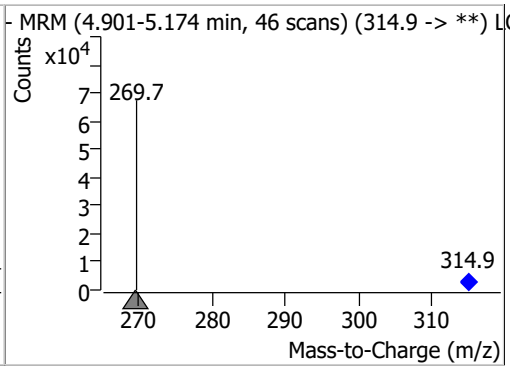




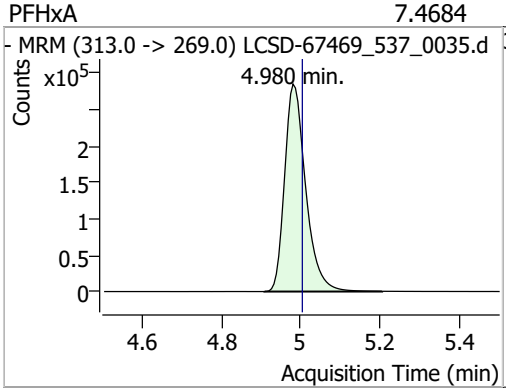
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	10.1587	4.99	-0.01	1122804				

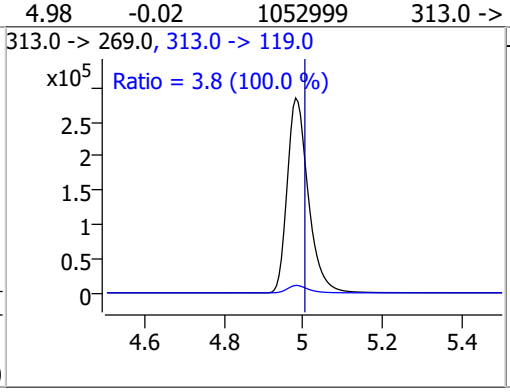


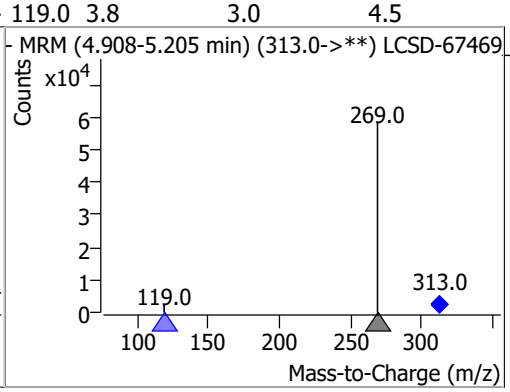




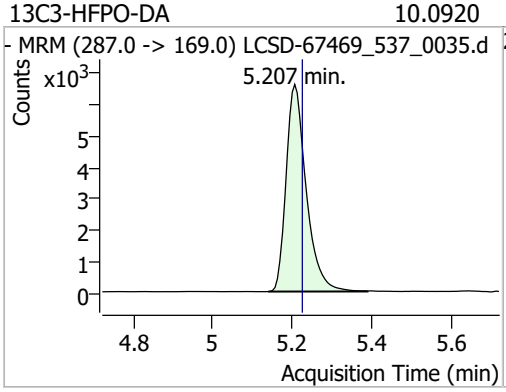
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	7.4684	4.98	-0.02	1052999	313.0 -> 119.0	3.8	3.0	4.5

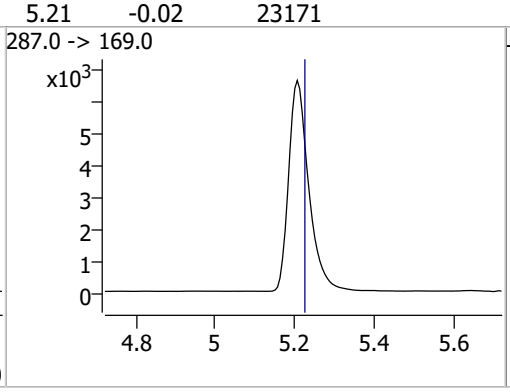


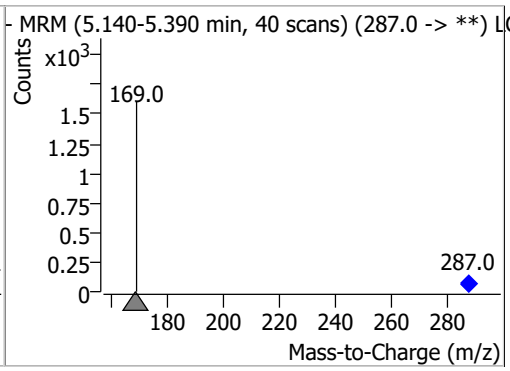




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	10.0920	5.21	-0.02	23171				

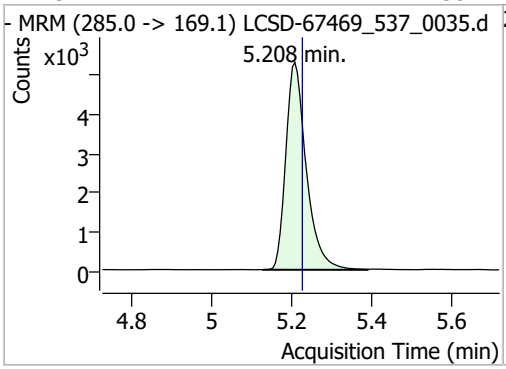


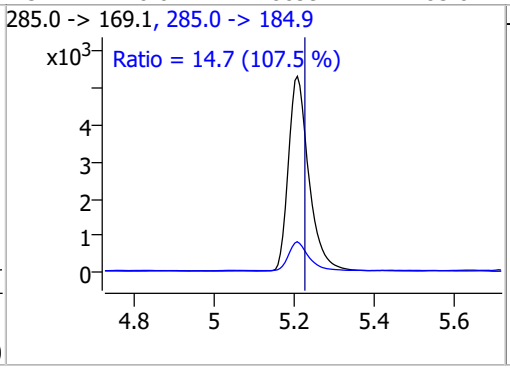


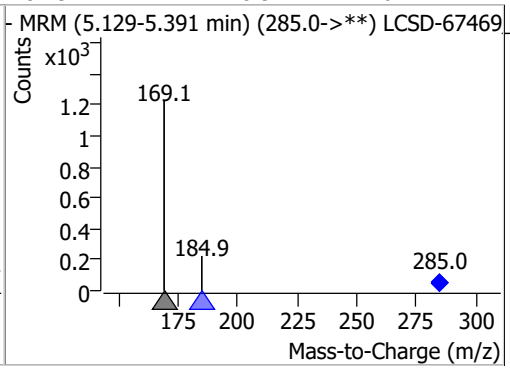


Quantitation Results Report

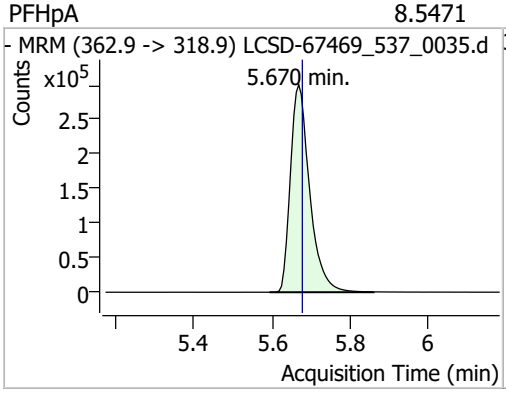
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	7.1138	5.21	-0.02	18899	285.0 -> 184.9	14.7	10.9	16.4

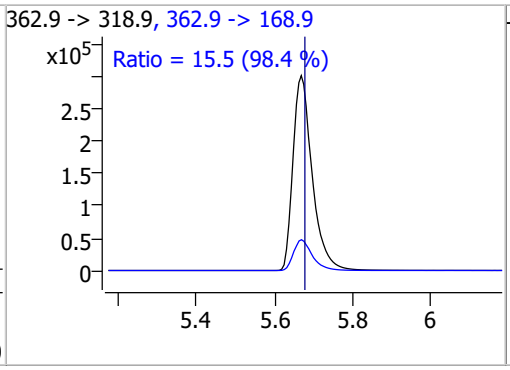


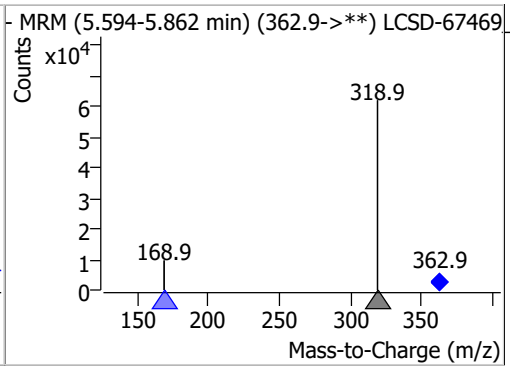




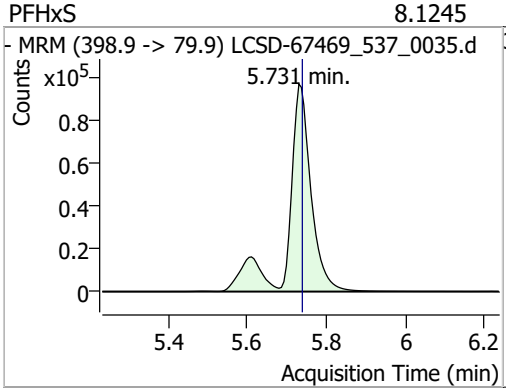
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	8.5471	5.67	-0.01	1029526	362.9 -> 168.9	15.5	12.6	18.9

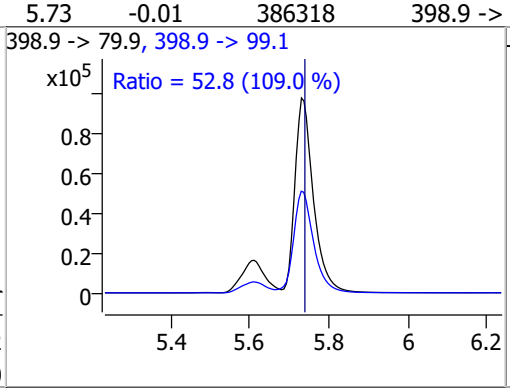


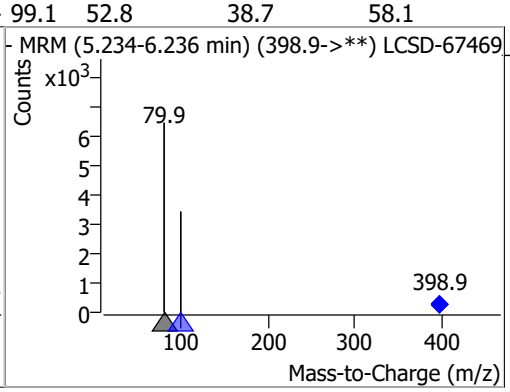




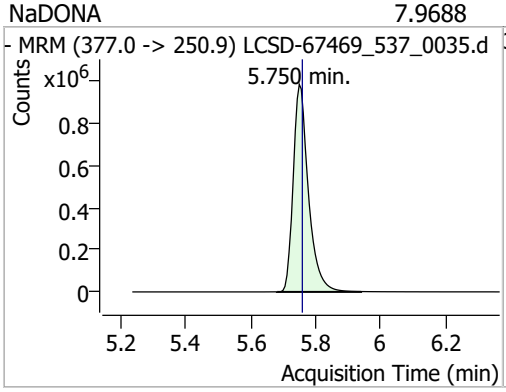
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	8.1245	5.73	-0.01	386318	398.9 -> 99.1	52.8	38.7	58.1

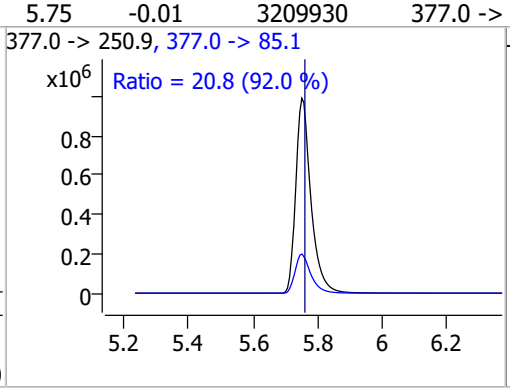


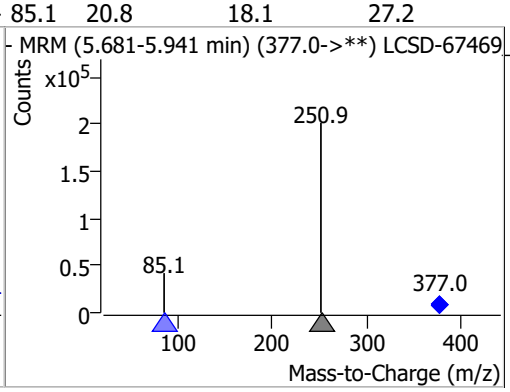




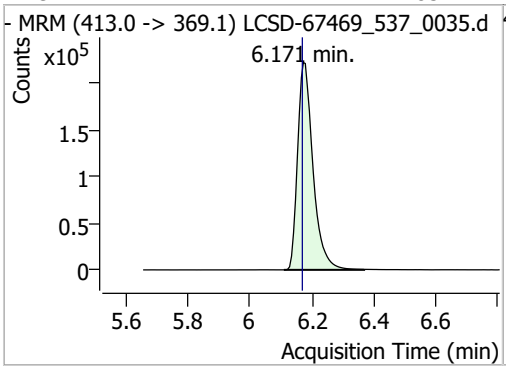
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	7.9688	5.75	-0.01	3209930	377.0 -> 85.1	20.8	18.1	27.2

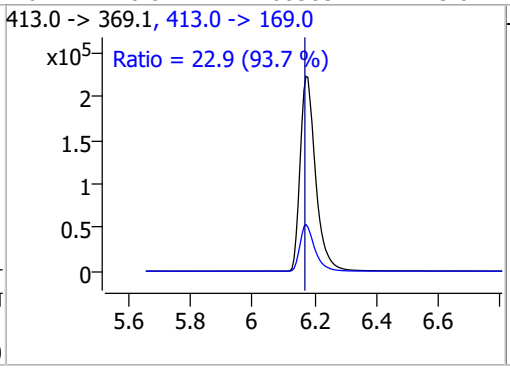


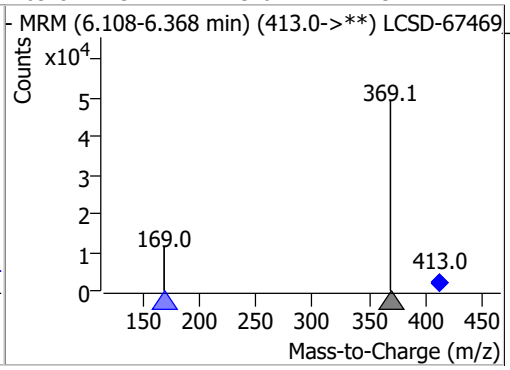




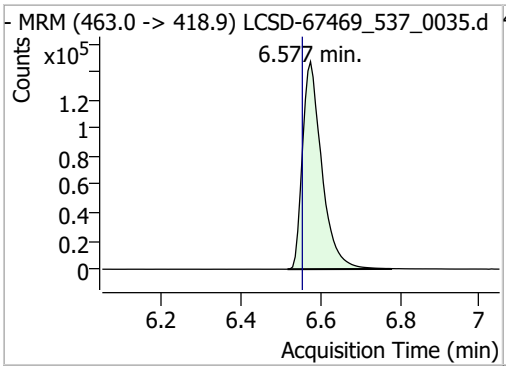
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	7.8511	6.17	0.01	768585	413.0 -> 169.0	22.9	19.6	29.4

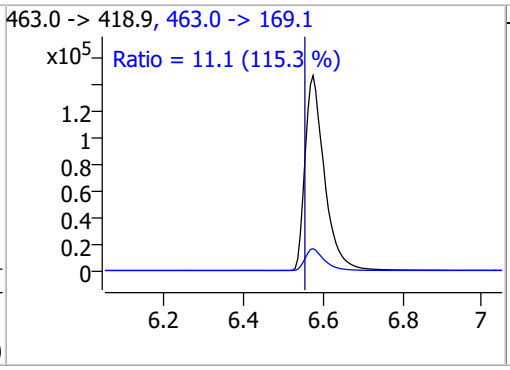


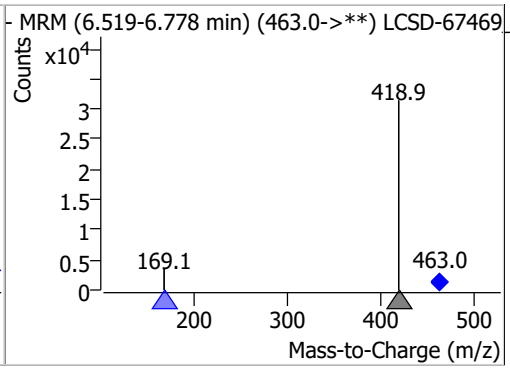




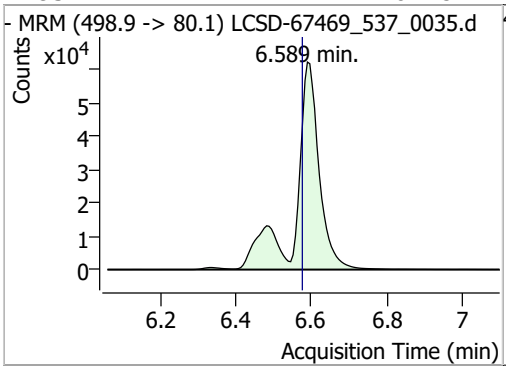
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	7.9795	6.58	0.02	492072	463.0 -> 169.1	11.1	7.7	11.5

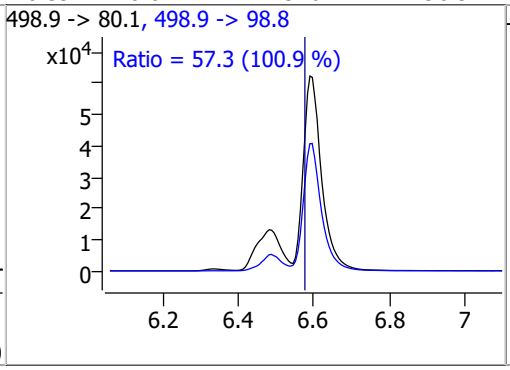


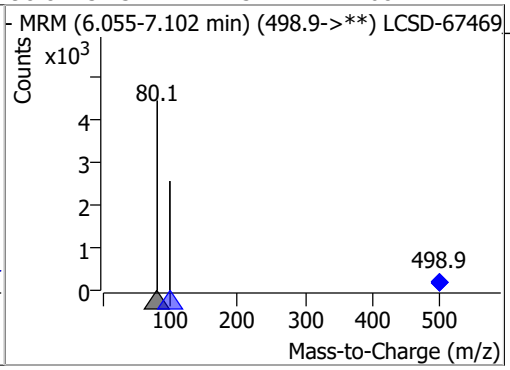




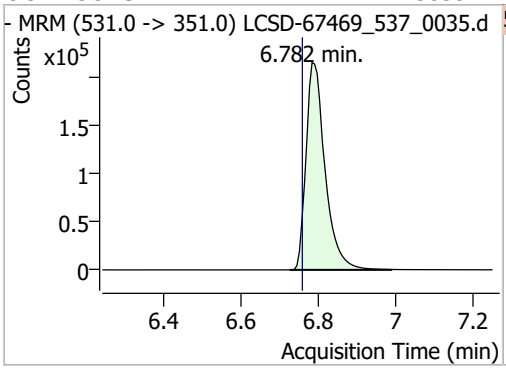
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	8.2252	6.59	0.02	275464	498.9 -> 98.8	57.3	45.4	68.1

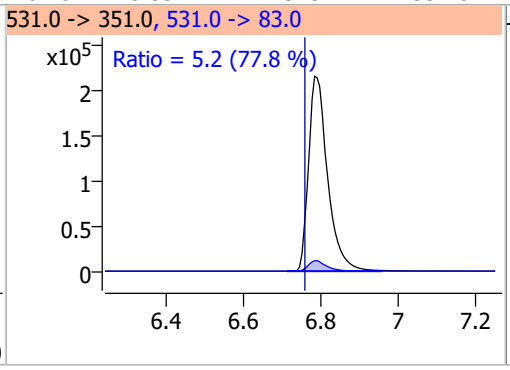


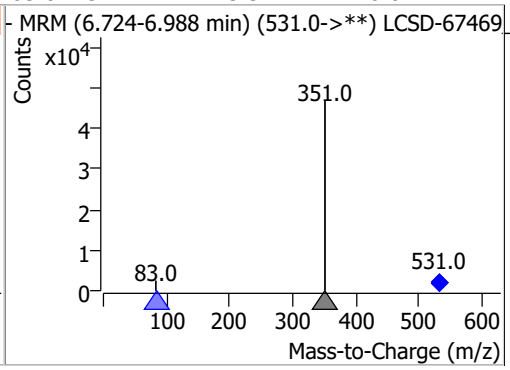




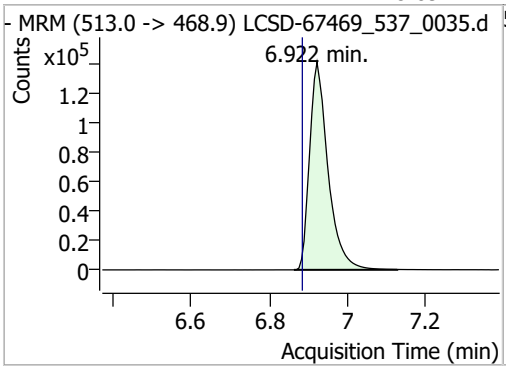
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	7.3835	6.78	0.03	743437	531.0 -> 83.0	5.2	5.3	8.0

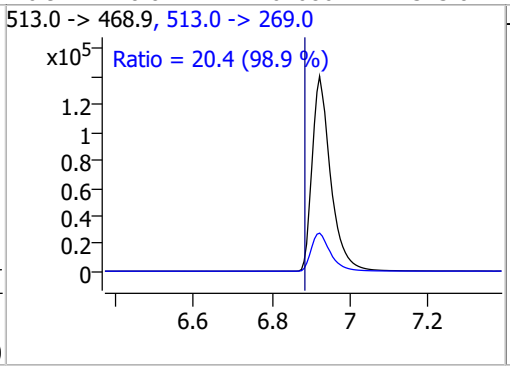


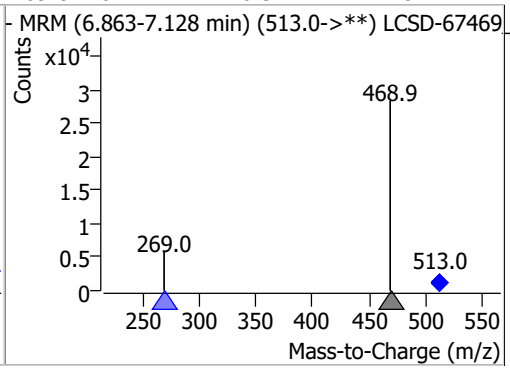




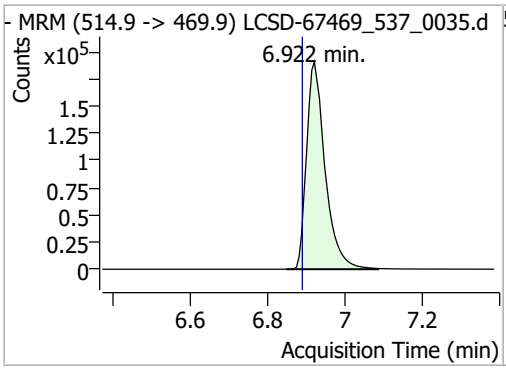
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	8.0977	6.92	0.04	461686	513.0 -> 269.0	20.4	16.5	24.8

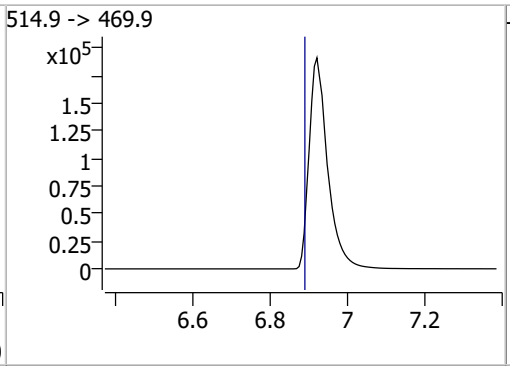


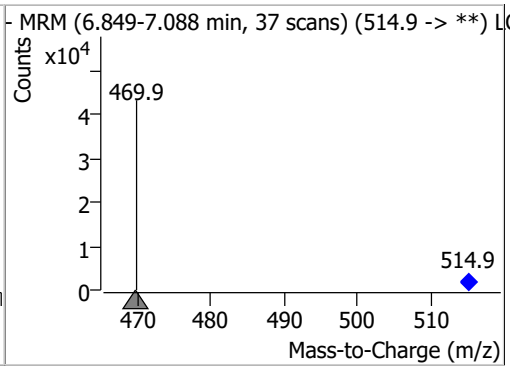




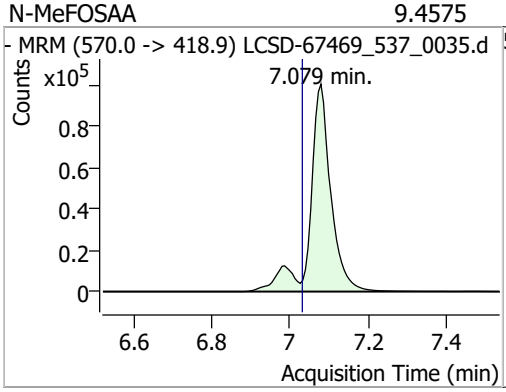
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	11.1141	6.92	0.03	638240				

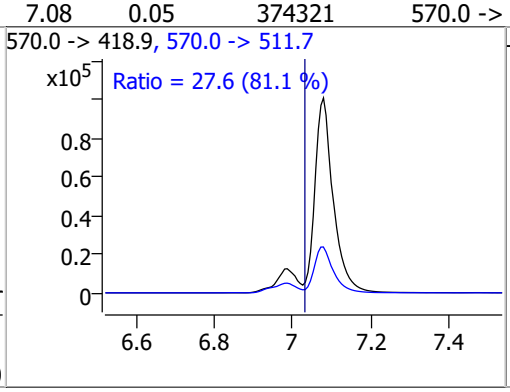


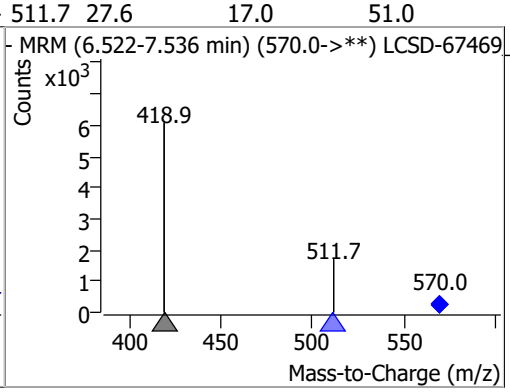




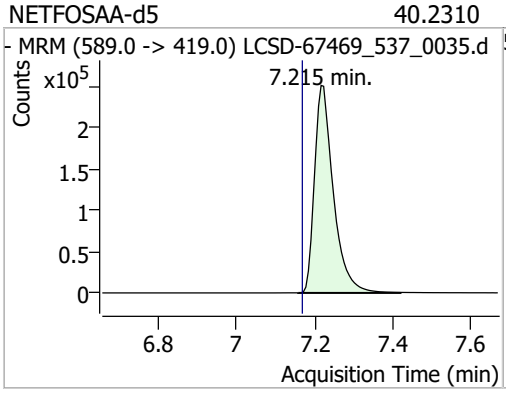
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	9.4575	7.08	0.05	374321	570.0 -> 511.7	27.6	17.0	51.0

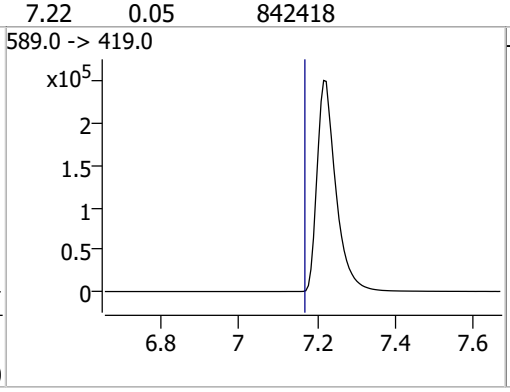


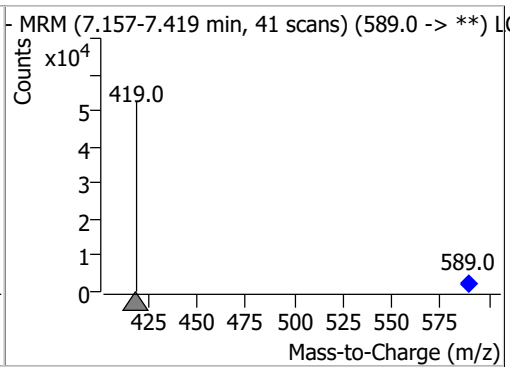




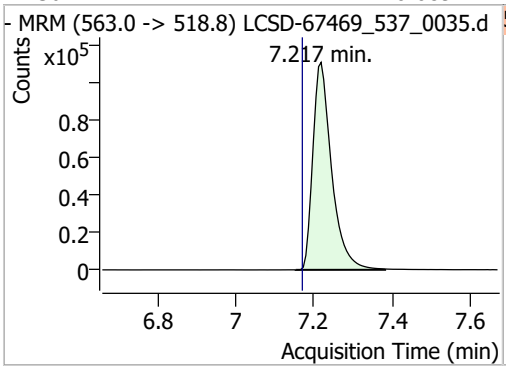
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	40.2310	7.22	0.05	842418				

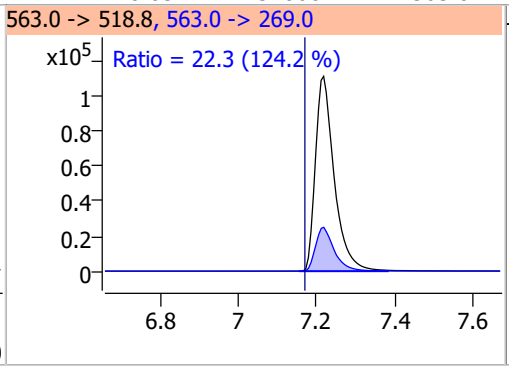


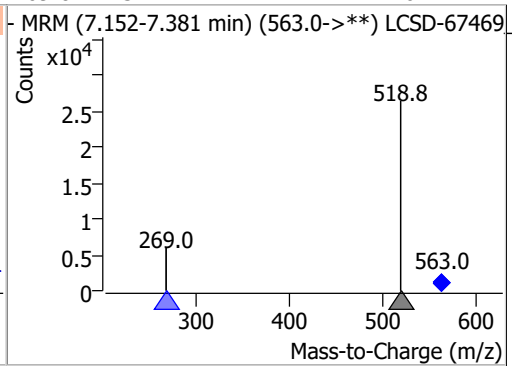




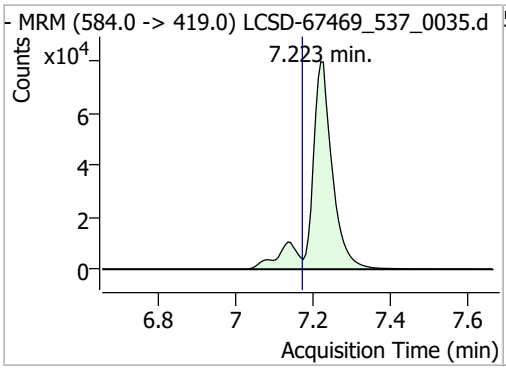
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	6.6892	7.22	0.05	370684	563.0 -> 269.0	22.3	14.4	21.6

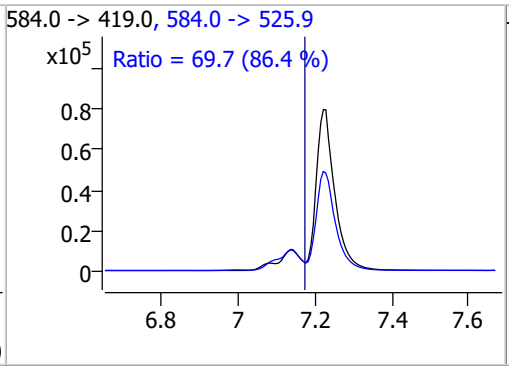


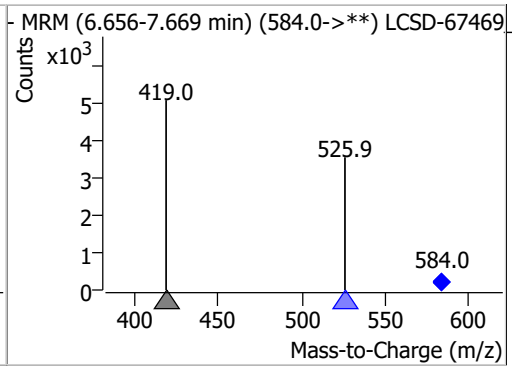




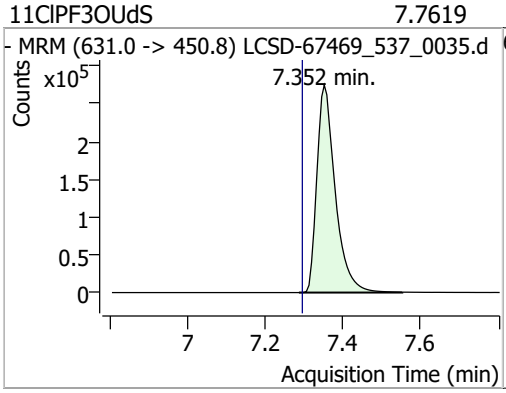
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	8.9664	7.22	0.05	309396	584.0 -> 525.9	69.7	40.4	121.1

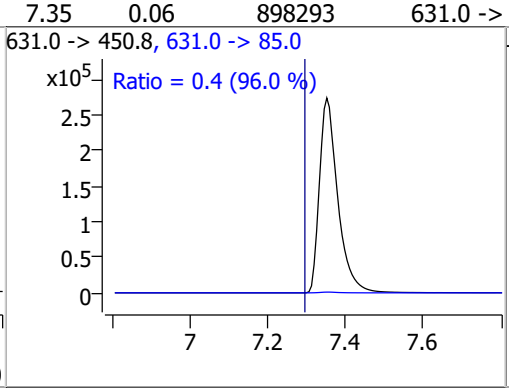


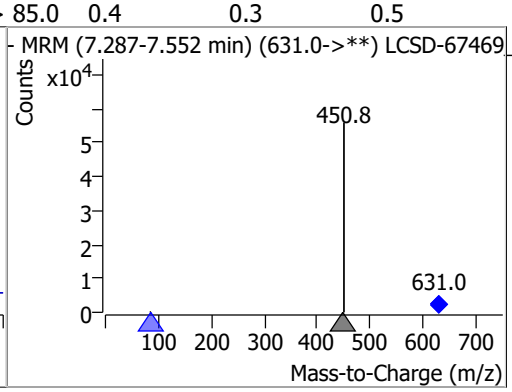




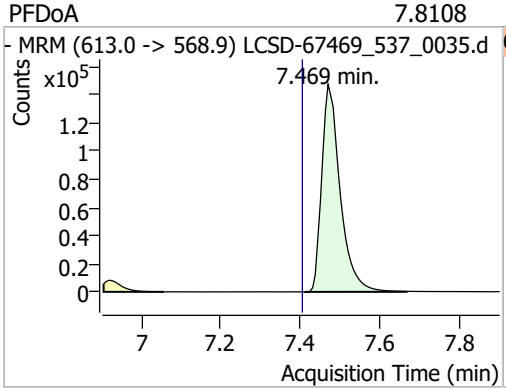
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	7.7619	7.35	0.06	898293	631.0 -> 85.0	0.4	0.3	0.5

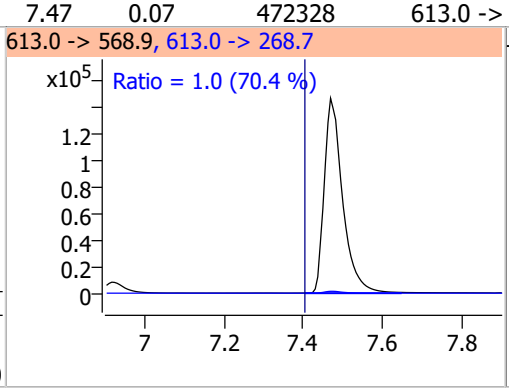


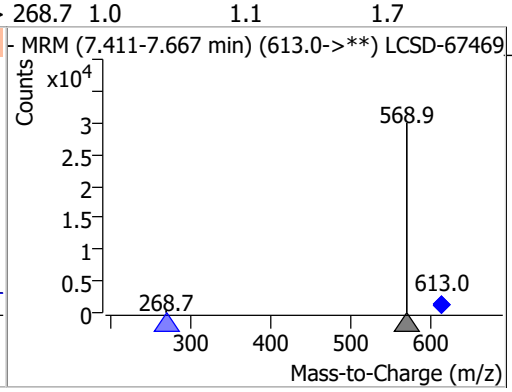




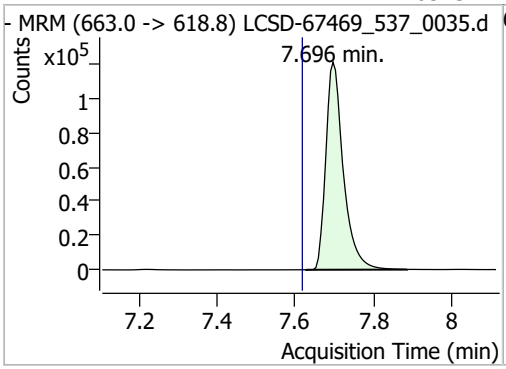
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	7.8108	7.47	0.07	472328	613.0 -> 268.7	1.0	1.1	1.7

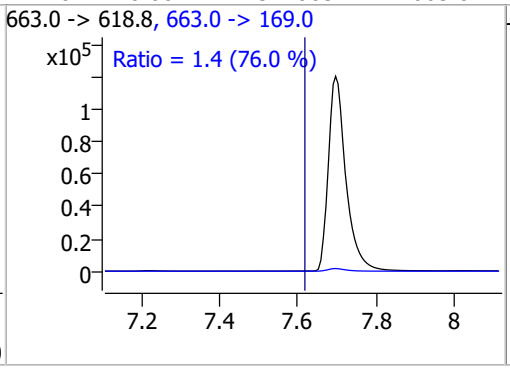


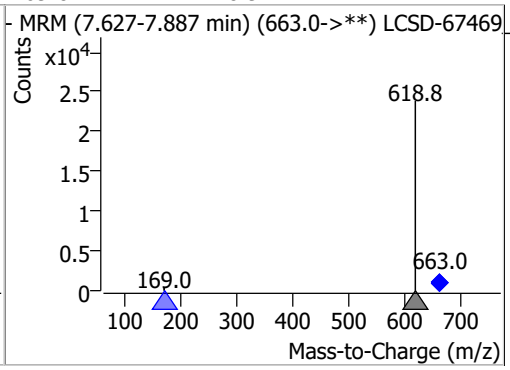




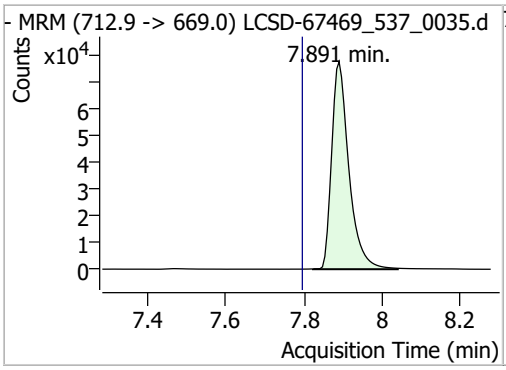
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	7.6543	7.70	0.08	377003	663.0 -> 169.0	1.4	0.9	2.7

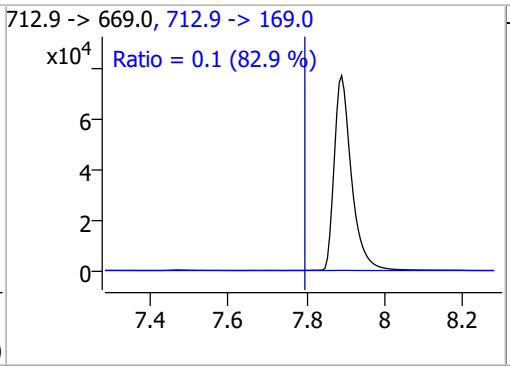


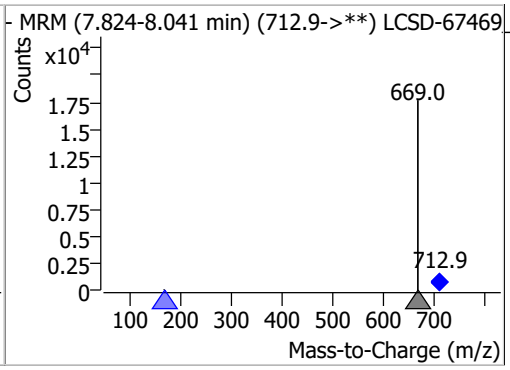




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	8.1362	7.89	0.10	236377	712.9 -> 169.0	0.1	0.0	0.1







Quantitation Results Report

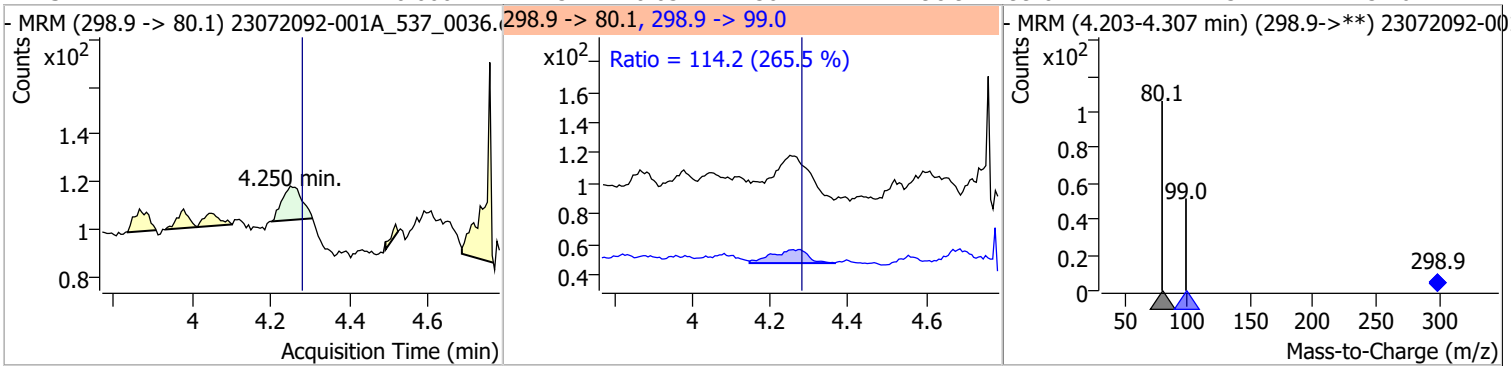
Agilent | Trusted Answers

Data File	23072092-001A_537_0036.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 1:03:41 PM
Sample Name	23072092-001A	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

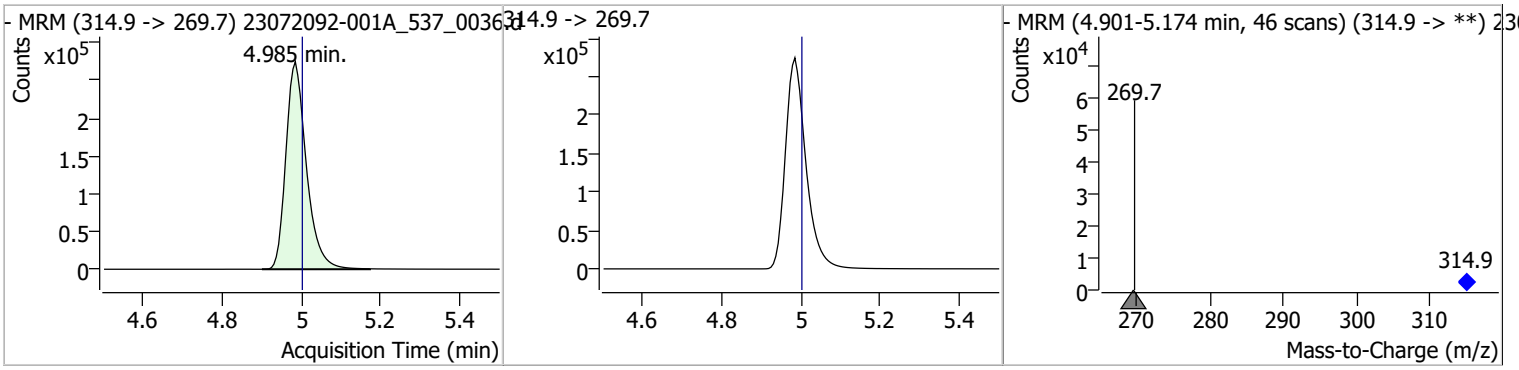
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	899686	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	1053562	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1731342	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	986853	8.9691	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 89.69%			
13C3-HFPO-DA	5.207	287.0 -> 169.0	19453	8.5112	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 85.11%			
13C2-PFDA	6.922	514.9 -> 469.9	530018	9.2714	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 92.71%			
NETFOSAA-d5	7.215	589.0 -> 419.0	781671	37.4520	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 93.63%			
Target Compounds							**QValue**
PFBS	4.250	298.9 -> 80.1	50	0.0007	ng/ml	#	1
PFHxA	4.986	313.0 -> 269.0	1142	0.0081	ng/ml	#	83
HFPO-DA	5.220	285.0 -> 169.1	80	0.0307	ng/ml	#	53
PFHpA	5.657	362.9 -> 318.9	719	0.0060	ng/ml	#	77
PFHxS	5.474	398.9 -> 79.9	342	0.0074	ng/ml		29
NaDONA	5.756	377.0 -> 250.9	204	0.0005	ng/ml		93
PFOA	6.171	413.0 -> 369.1	702	0.0072	ng/ml		96
PFNA	6.570	463.0 -> 418.9	203	0.0033	ng/ml	#	85
PFOS	6.589	498.9 -> 80.1	595	0.0182	ng/ml	#	38
9Cl-PF3ONS	6.789	531.0 -> 351.0	26	0.0003	ng/ml		80
PFDA	6.916	513.0 -> 468.9	107	0.0019	ng/ml	#	1
N-MeFOSAA	7.079	570.0 -> 418.9	412	0.0110	ng/ml	#	70
PFUdA	7.224	563.0 -> 518.8	122	0.0022	ng/ml	#	85
N-EtFOSAA	7.229	584.0 -> 419.0	712	0.0215	ng/ml	#	20
11ClPF3OUdS	7.384	631.0 -> 450.8	12	0.0001	ng/ml	#	1
PFDoA	6.918	613.0 -> 568.9	21482	0.3572	ng/ml	#	96
PFTrDA	7.820	663.0 -> 618.8	229	0.0048	ng/ml		98
PFTA	7.884	712.9 -> 669.0	135	0.0047	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

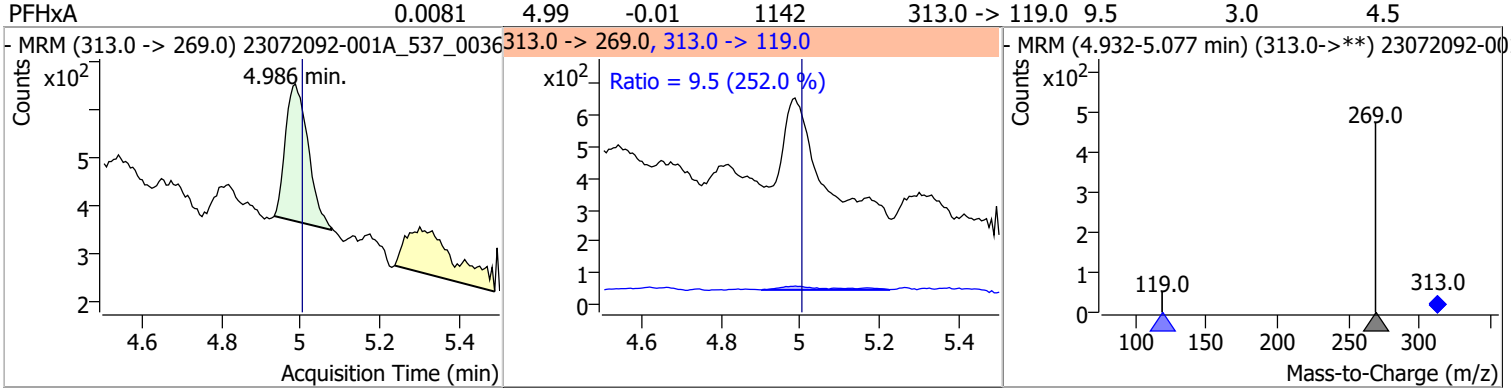
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.0007	4.25	-0.03	50	298.9 -> 99.0	114.2	34.4	51.6



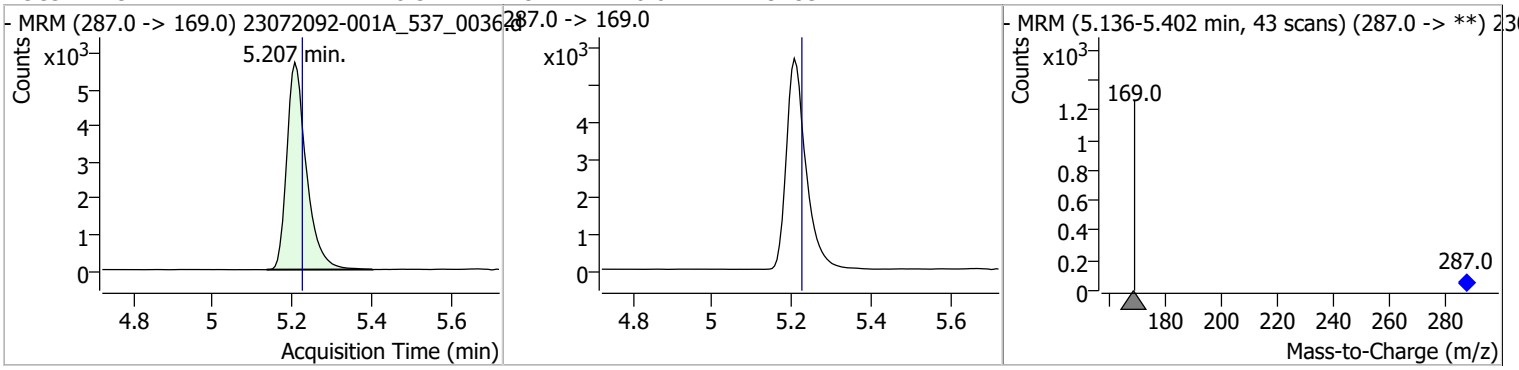
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	8.9691	4.99	-0.01	986853				



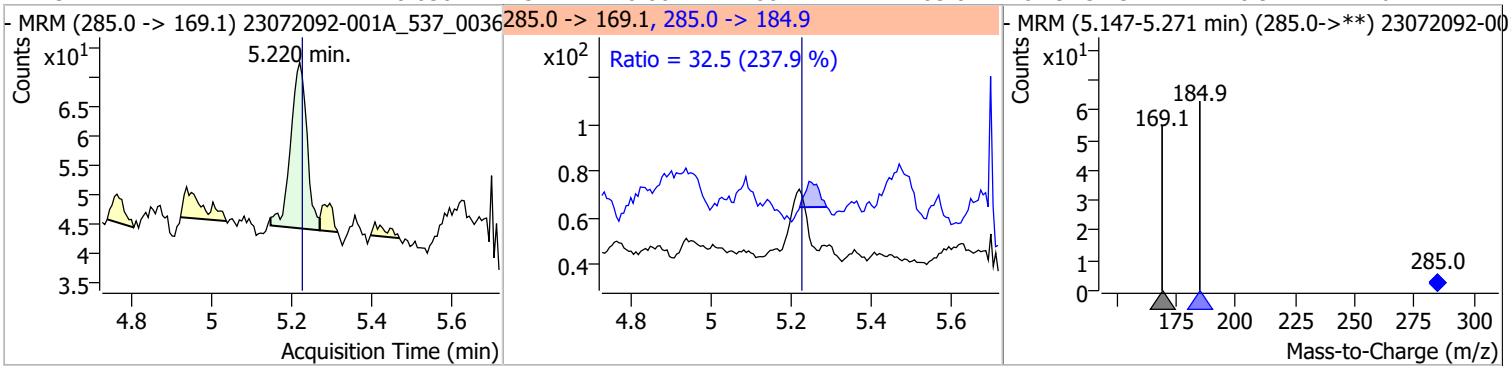
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.0081	4.99	-0.01	1142	313.0 -> 119.0	9.5	3.0	4.5



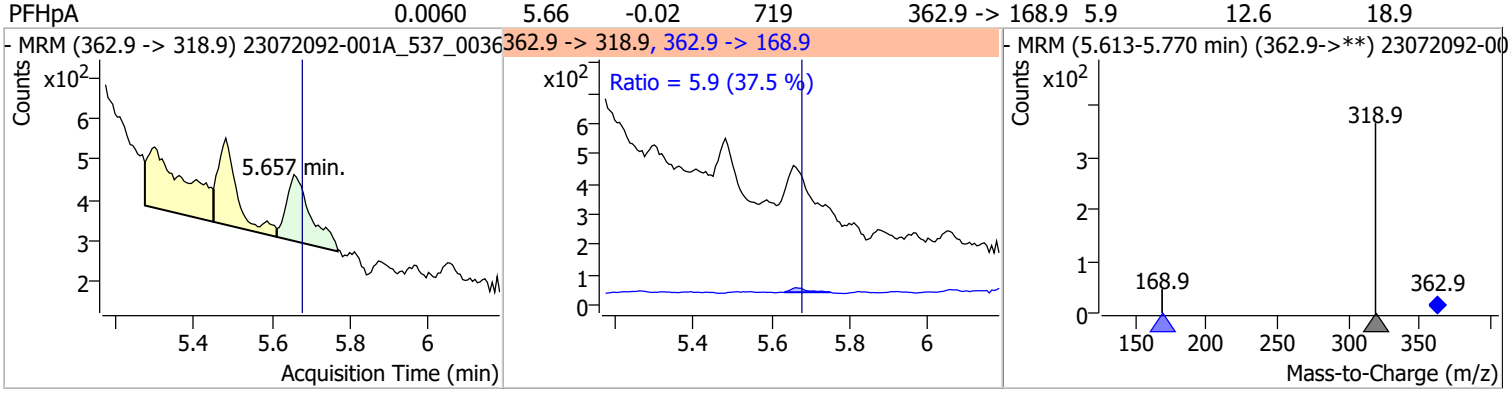
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	8.5112	5.21	-0.02	19453				



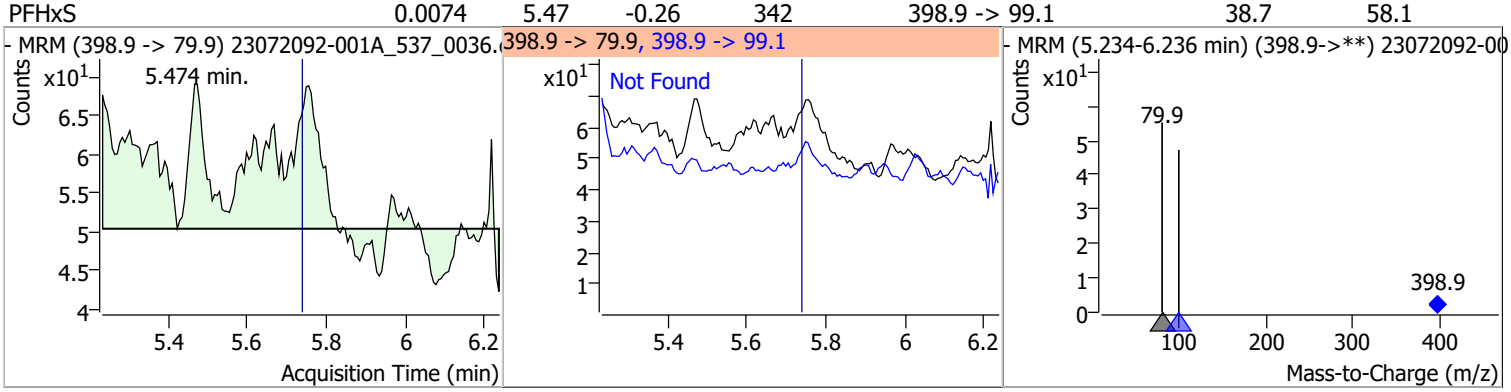
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0307	5.22	0.00	80	285.0 -> 184.9	32.5	10.9	16.4



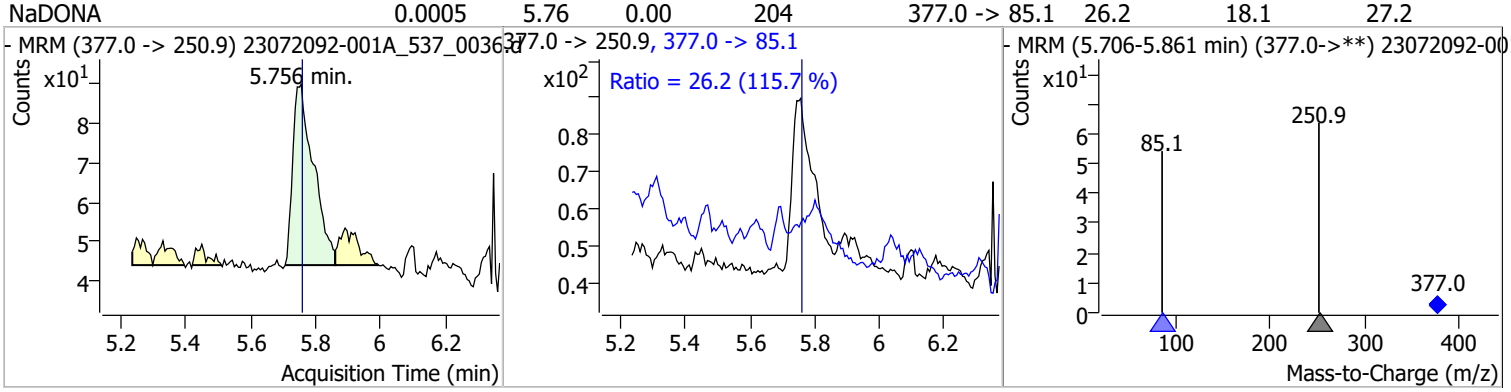
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.0060	5.66	-0.02	719	362.9 -> 168.9	5.9	12.6	18.9



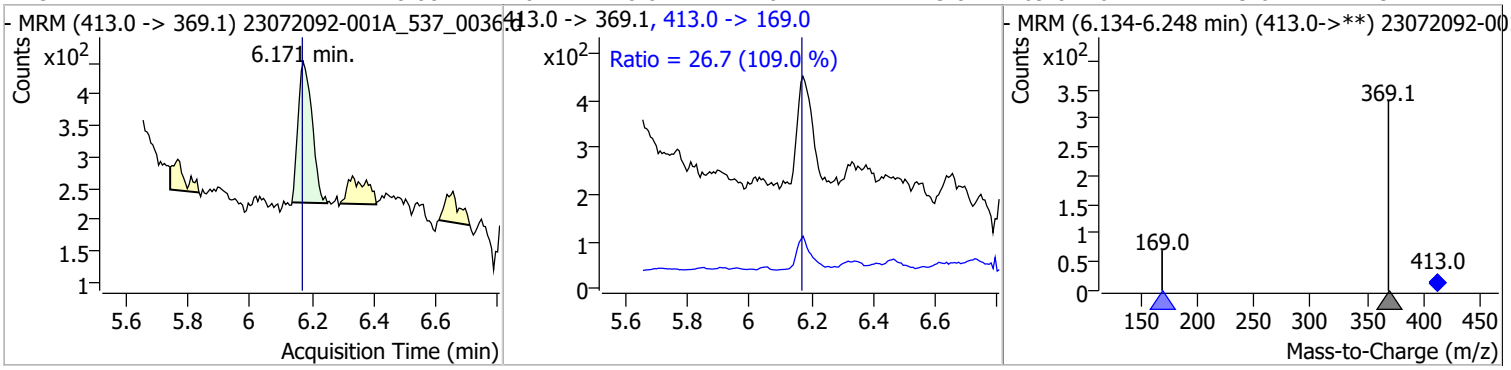
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.0074	5.47	-0.26	342	398.9 -> 99.1		38.7	58.1



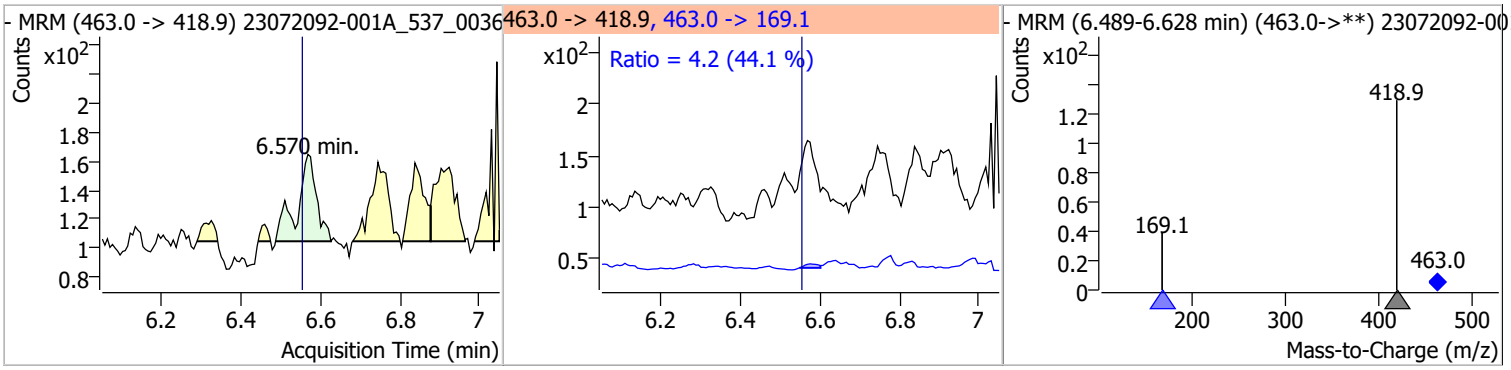
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0005	5.76	0.00	204	377.0 -> 85.1	26.2	18.1	27.2



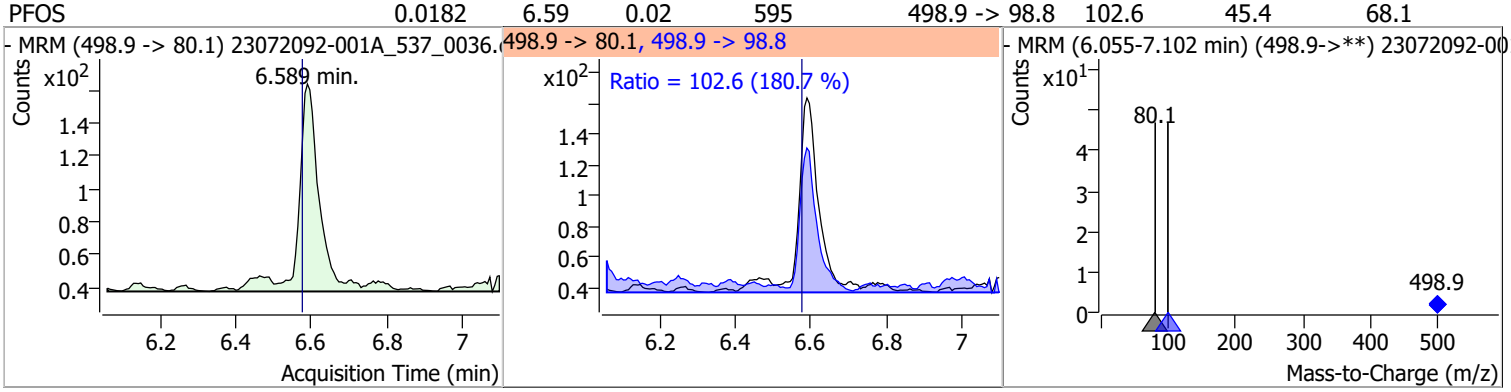
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.0072	6.17	0.01	702	413.0 -> 169.0	26.7	19.6	29.4



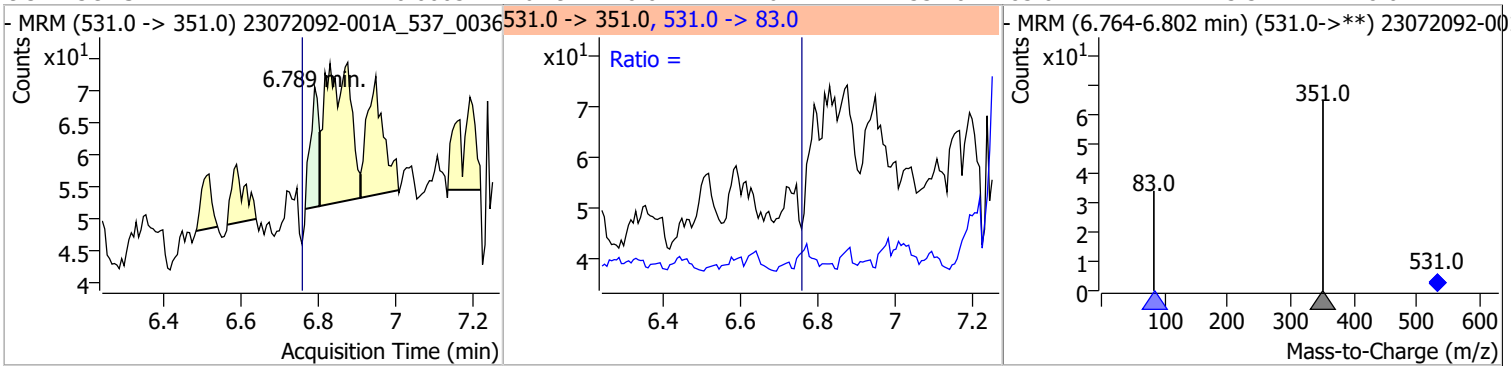
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.0033	6.57	0.02	203	463.0 -> 169.1	4.2	7.7	11.5



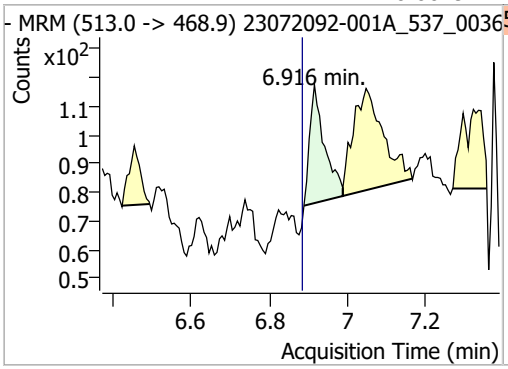
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.0182	6.59	0.02	595	498.9 -> 98.8	102.6	45.4	68.1

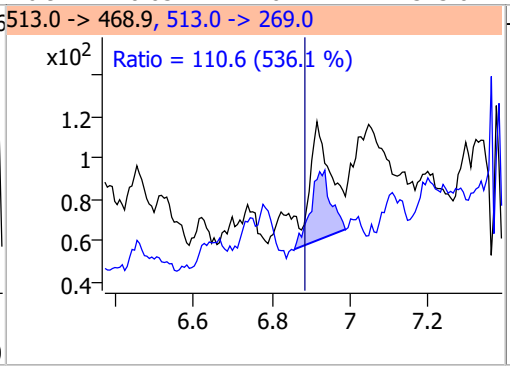


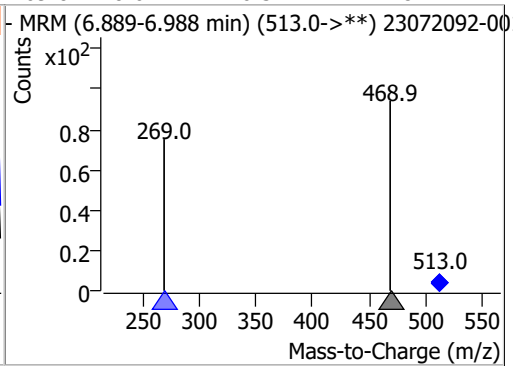
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0003	6.79	0.04	26	531.0 -> 83.0		5.3	8.0



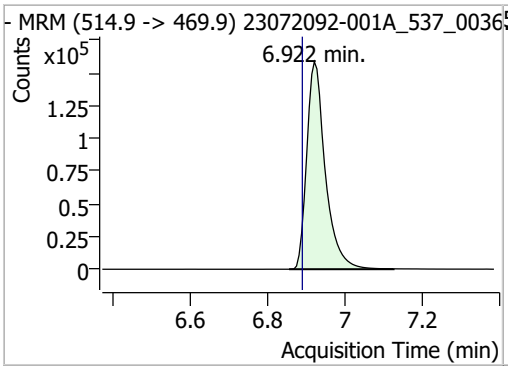
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0019	6.92	0.03	107	513.0 -> 269.0	110.6	16.5	24.8

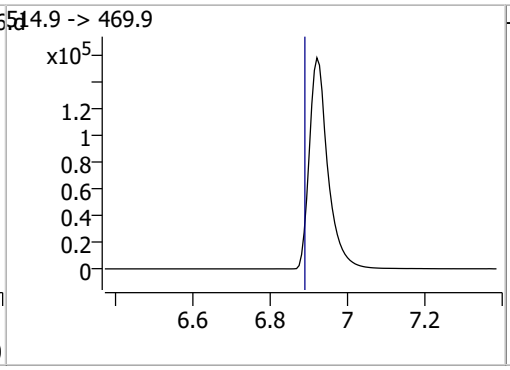


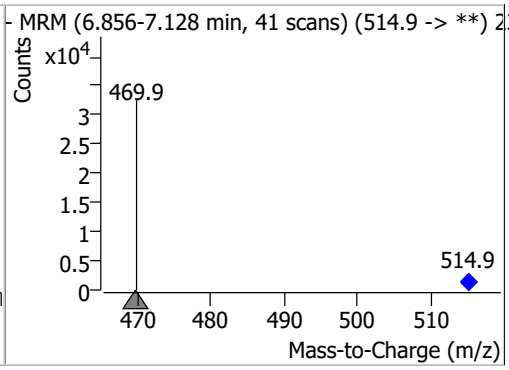




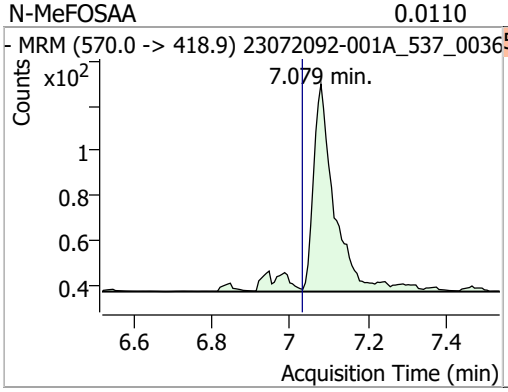
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	9.2714	6.92	0.03	530018				

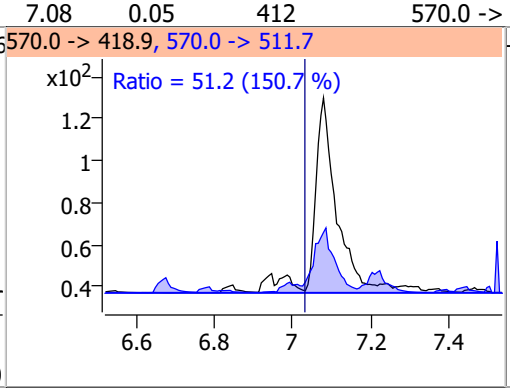


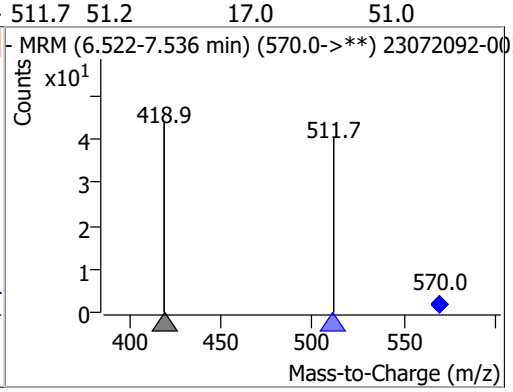




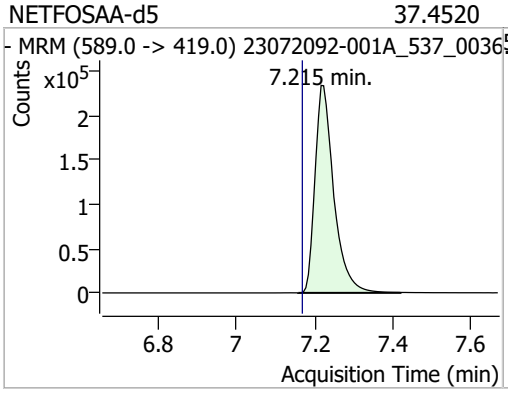
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0110	7.08	0.05	412	570.0 -> 511.7	51.2	17.0	51.0

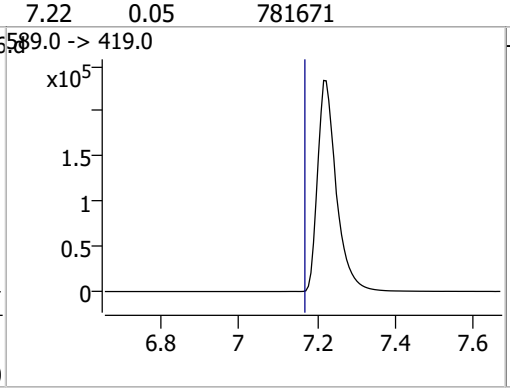


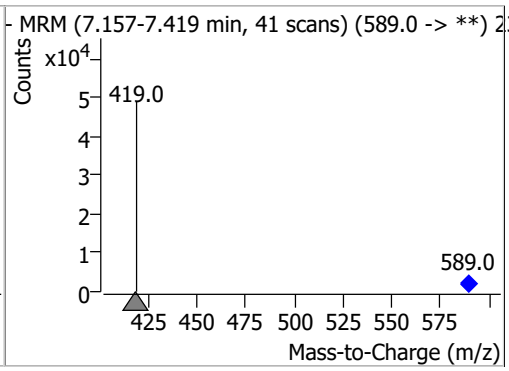




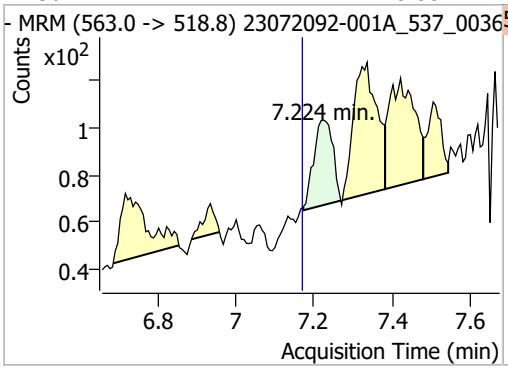
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	37.4520	7.22	0.05	781671				

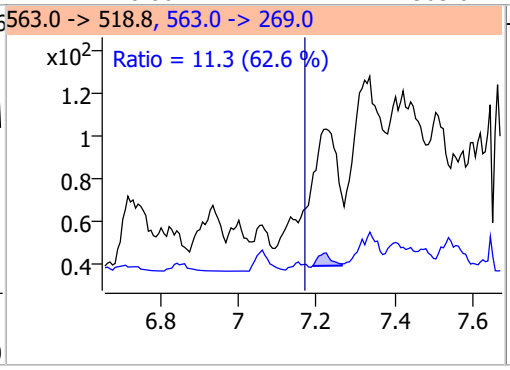


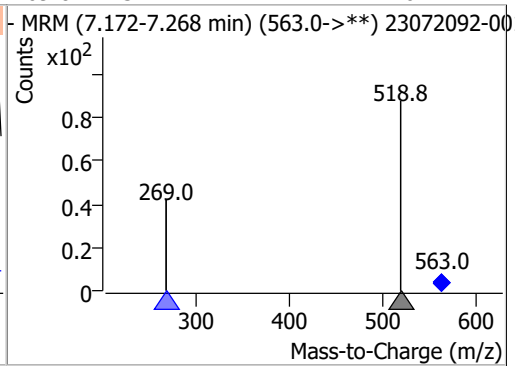




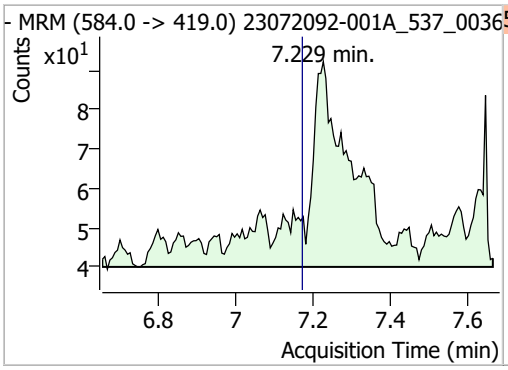
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0022	7.22	0.06	122	563.0 -> 269.0	11.3	14.4	21.6

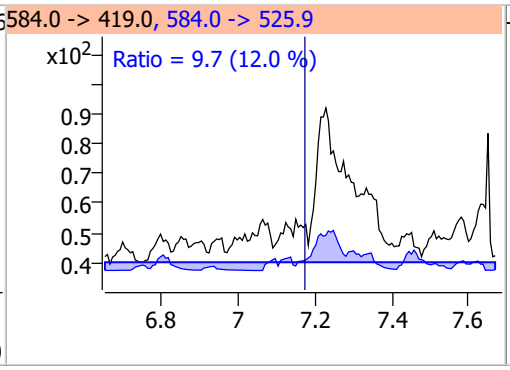


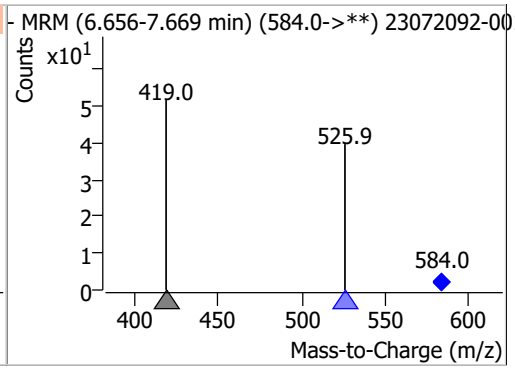




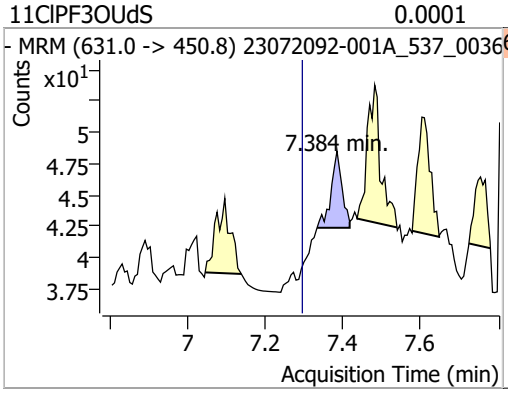
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0215	7.23	0.06	712	584.0 -> 525.9	9.7	40.4	121.1

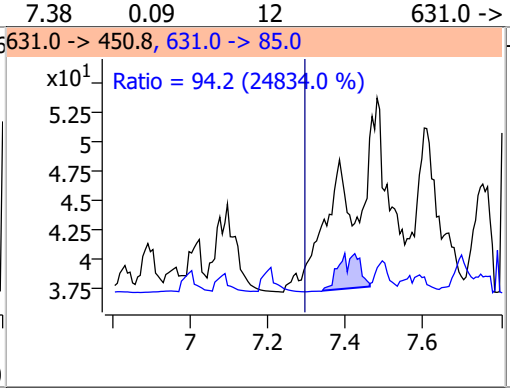


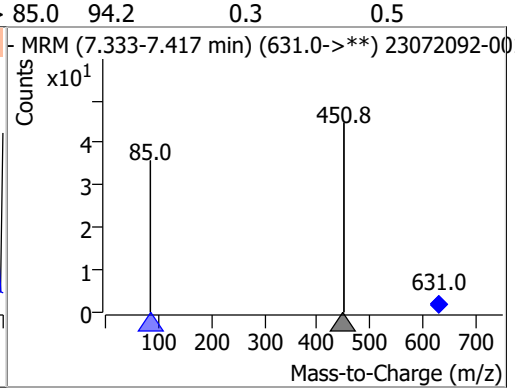




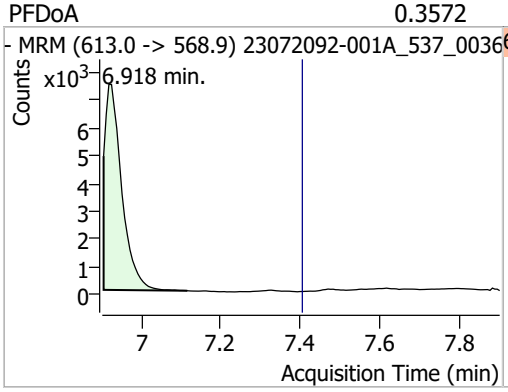
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0001	7.38	0.09	12	631.0 -> 85.0	94.2	0.3	0.5

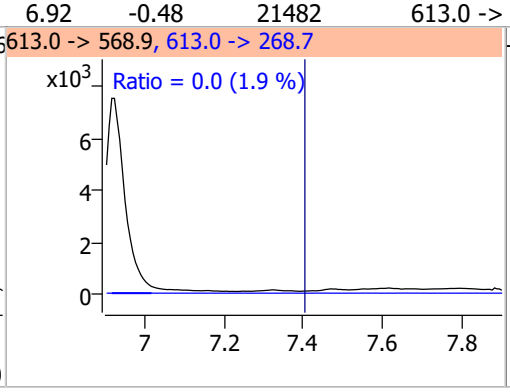


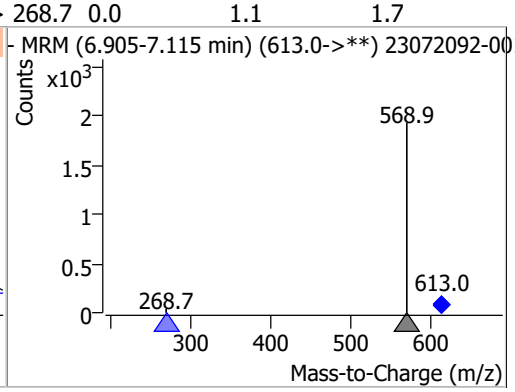




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.3572	6.92	-0.48	21482	613.0 -> 268.7	0.0	1.1	1.7

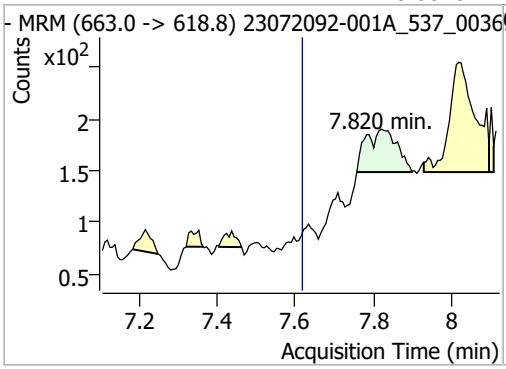


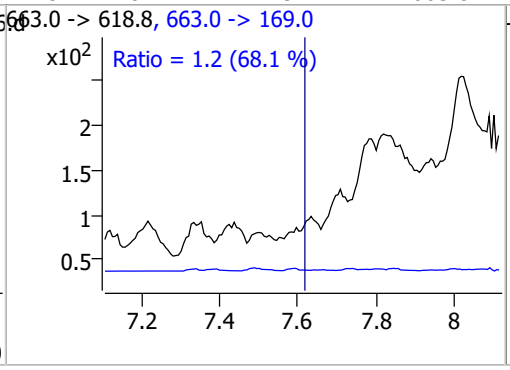


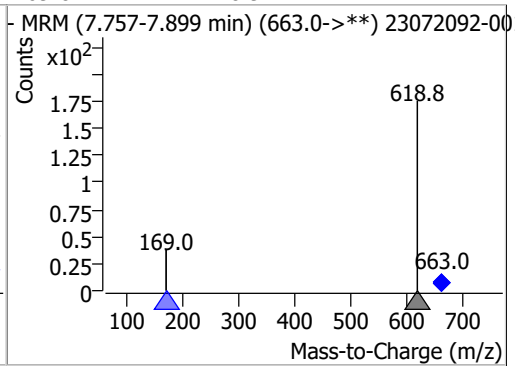


Quantitation Results Report

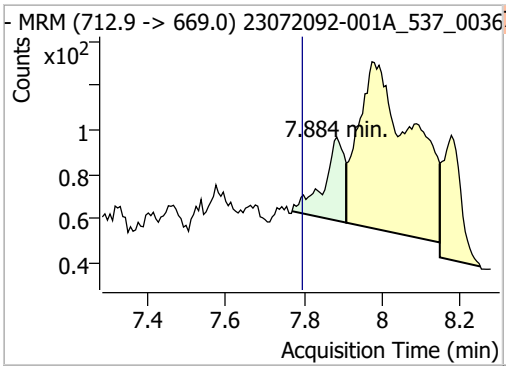
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0048	7.82	0.21	229	663.0 -> 169.0	1.2	0.9	2.7

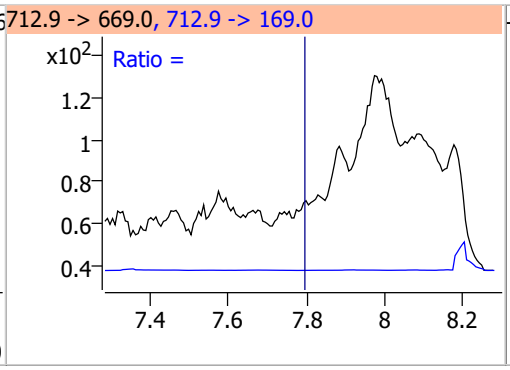


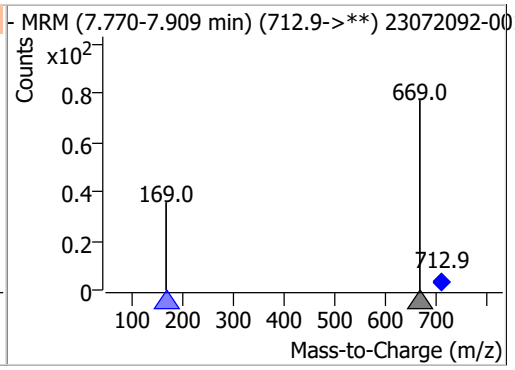




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0047	7.88	0.09	135	712.9 -> 169.0		0.0	0.1







Quantitation Results Report

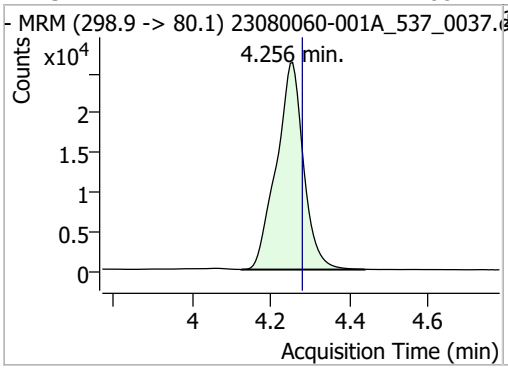
Agilent | Trusted Answers

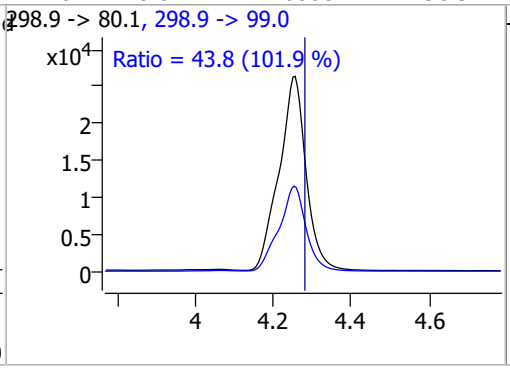
Data File	23080060-001A_537_0037.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 1:16:25 PM
Sample Name	23080060-001A	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

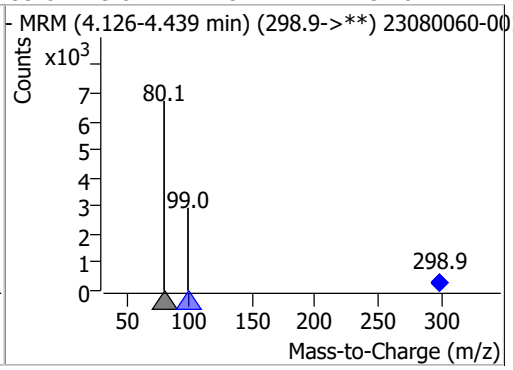
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	880950	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	1138752	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1862753	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	951896	8.0042	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 80.04%			
13C3-HFPO-DA	5.207	287.0 -> 169.0	18648	7.5485	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 75.49%			
13C2-PFDA	6.922	514.9 -> 469.9	585299	9.4724	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 94.72%			
NETFOSAA-d5	7.222	589.0 -> 419.0	798911	35.5776	ng/ml		0.058
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 88.94%			
Target Compounds							QValue
PFBS	4.256	298.9 -> 80.1	126088	1.7084	ng/ml		99
PFHxA	4.980	313.0 -> 269.0	193842	1.2777	ng/ml		100
HFPO-DA	5.214	285.0 -> 169.1	118	0.0421	ng/ml	#	7
PFHpA	5.670	362.9 -> 318.9	78364	0.6046	ng/ml		99
PFHxS	5.737	398.9 -> 79.9	13263	0.2931	ng/ml		96
NaDONA	5.762	377.0 -> 250.9	164	0.0004	ng/ml	#	48
PFOA	6.171	413.0 -> 369.1	230919	2.1923	ng/ml	m	91
PFNA	6.577	463.0 -> 418.9	1930	0.0294	ng/ml	#	87
PFOS	6.589	498.9 -> 80.1	27999	0.8710	ng/ml	#	72
9Cl-PF3ONS	6.816	531.0 -> 351.0	82	0.0009	ng/ml	#	48
PFDA	6.909	513.0 -> 468.9	151	0.0025	ng/ml		56
N-MeFOSAA	7.086	570.0 -> 418.9	262	0.0065	ng/ml		91
PFUdA	7.224	563.0 -> 518.8	53	0.0009	ng/ml	#	77
N-EtFOSAA	7.643	584.0 -> 419.0	617	0.0173	ng/ml		9
11ClPF3OUdS	7.247	631.0 -> 450.8	10	0.0001	ng/ml		99
PFDoA	6.918	613.0 -> 568.9	21915	0.3372	ng/ml		96
PFTrDA	7.627	663.0 -> 618.8	40	0.0008	ng/ml	#	94
PFTA	7.762	712.9 -> 669.0	67	0.0021	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

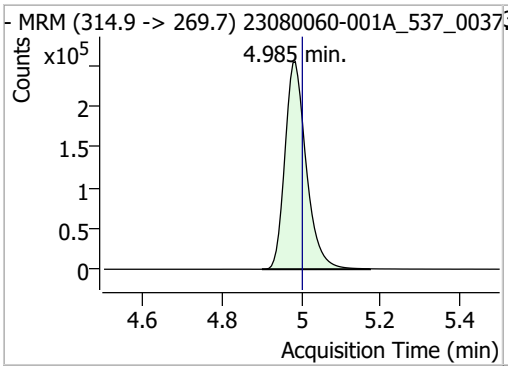
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	1.7084	4.26	-0.02	126088	298.9 -> 99.0	43.8	34.4	51.6

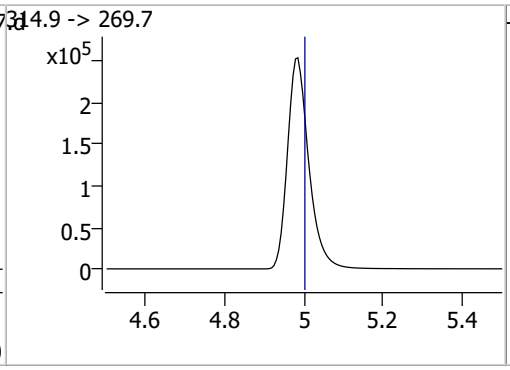


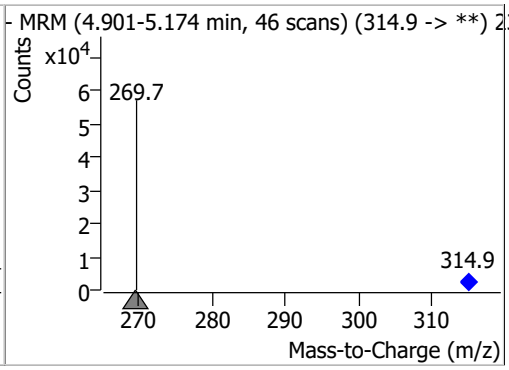




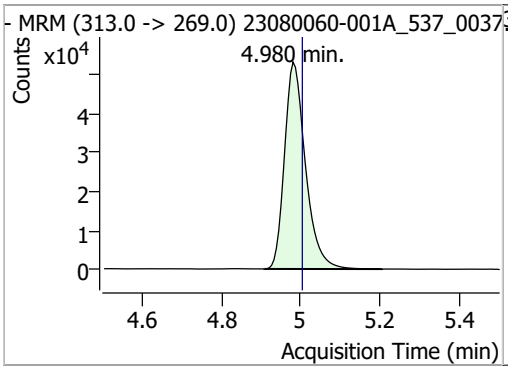
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	8.0042	4.99	-0.01	951896				

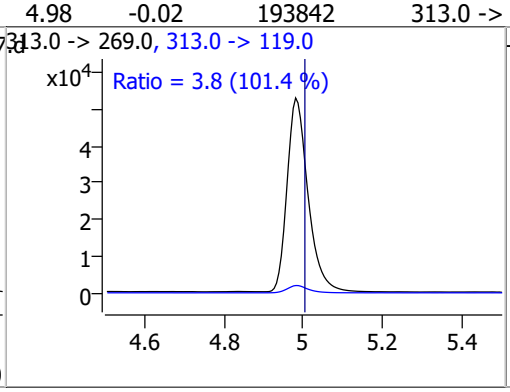


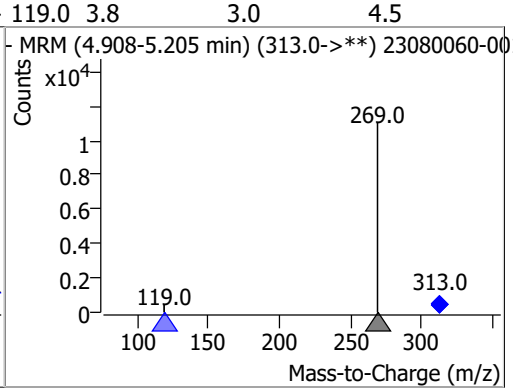




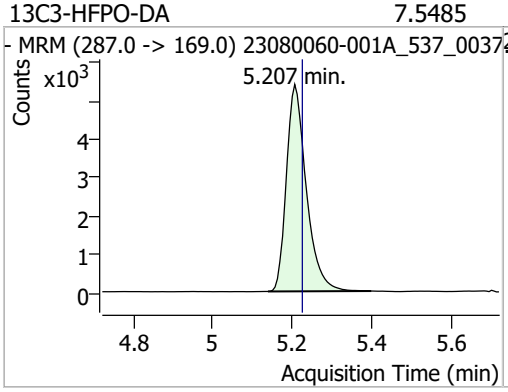
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	1.2777	4.98	-0.02	193842	313.0 -> 119.0	3.8	3.0	4.5

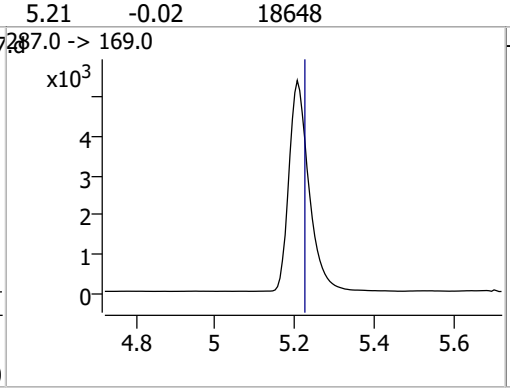


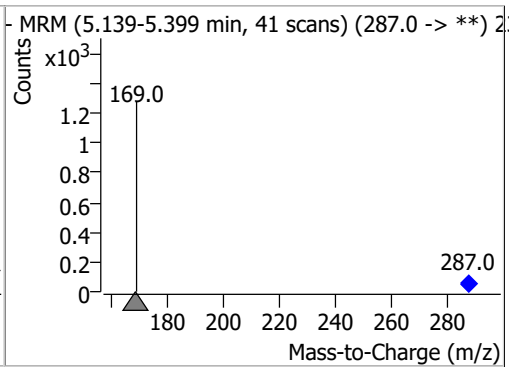




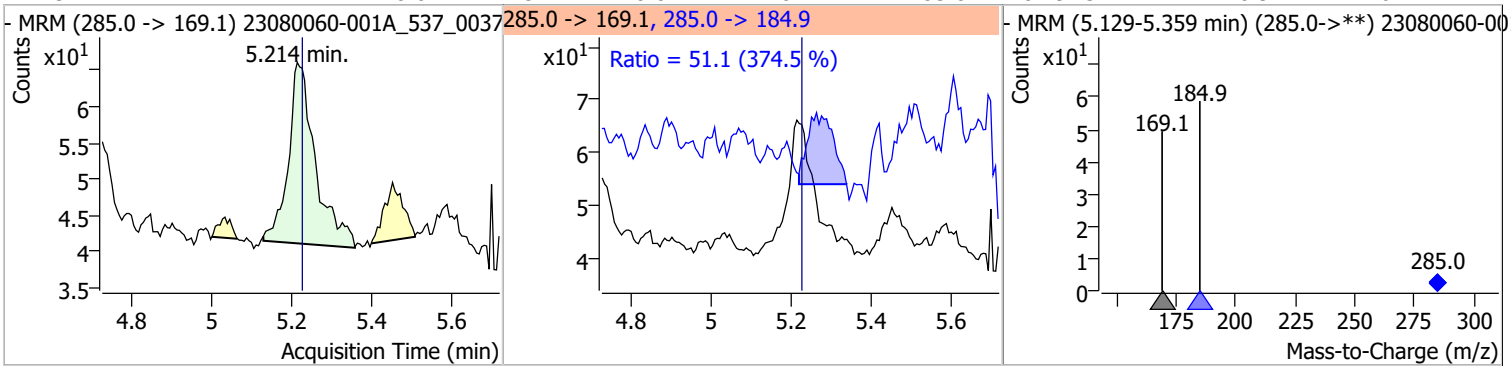
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	7.5485	5.21	-0.02	18648				



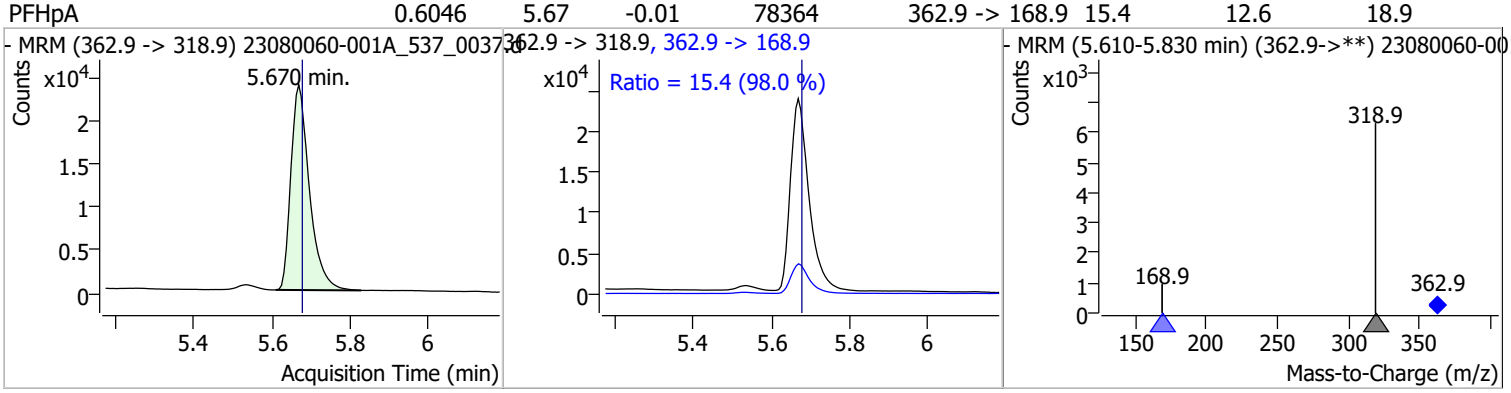




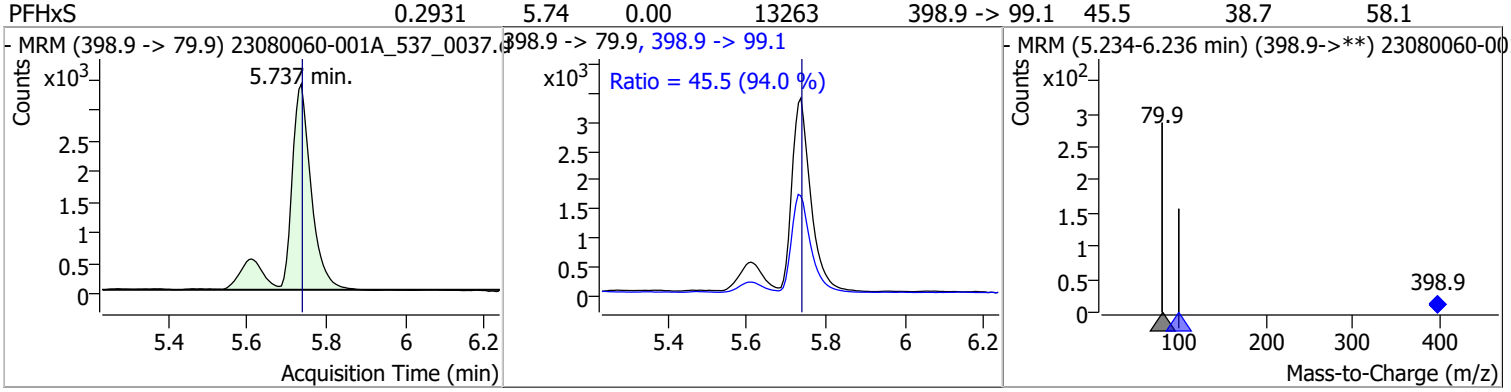
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0421	5.21	-0.01	118	285.0 -> 184.9	51.1	10.9	16.4



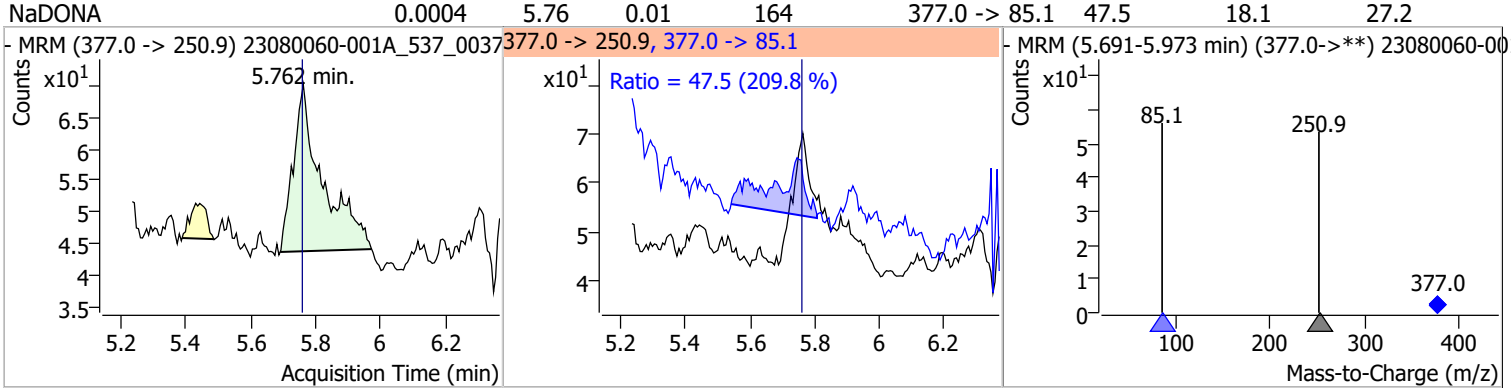
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.6046	5.67	-0.01	78364	362.9 -> 168.9	15.4	12.6	18.9



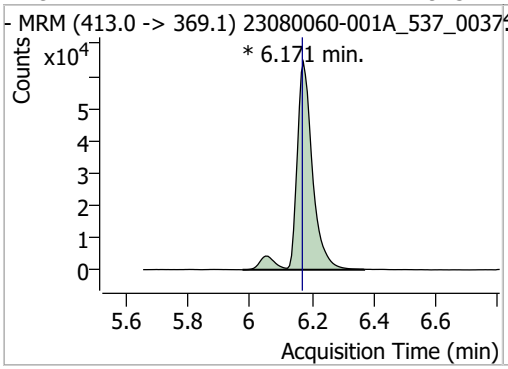
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.2931	5.74	0.00	13263	398.9 -> 99.1	45.5	38.7	58.1

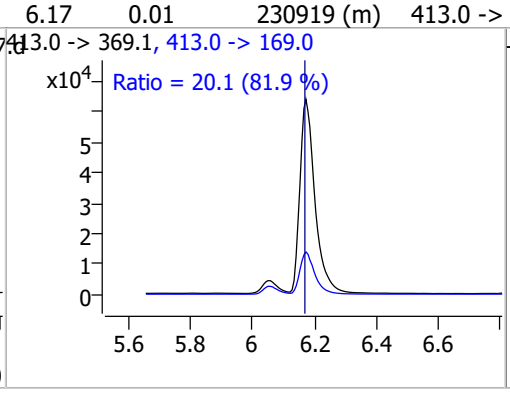


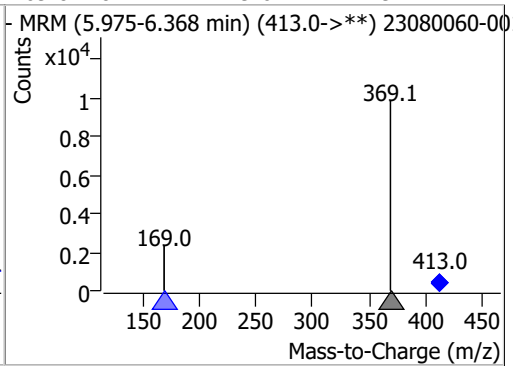
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0004	5.76	0.01	164	377.0 -> 85.1	47.5	18.1	27.2



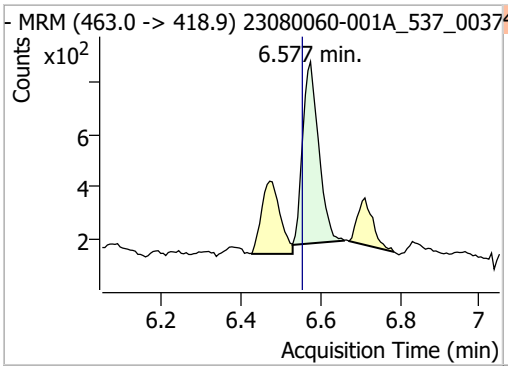
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	2.1923	6.17	0.01	230919 (m)	413.0 -> 169.0	20.1	19.6	29.4

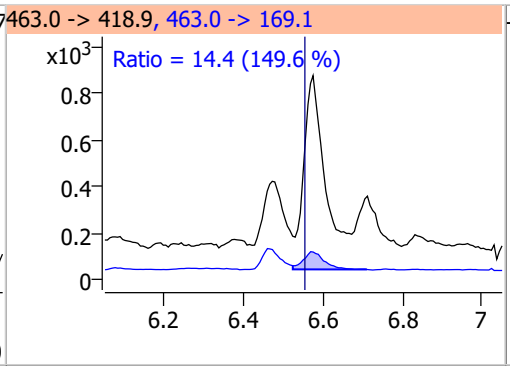


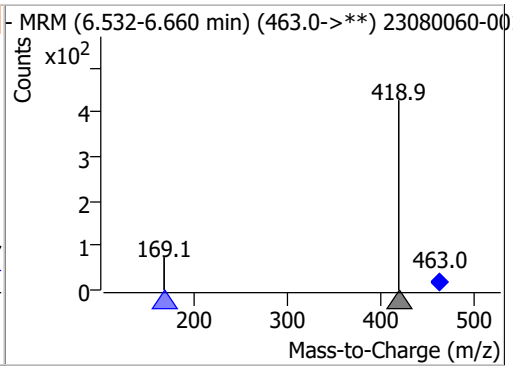




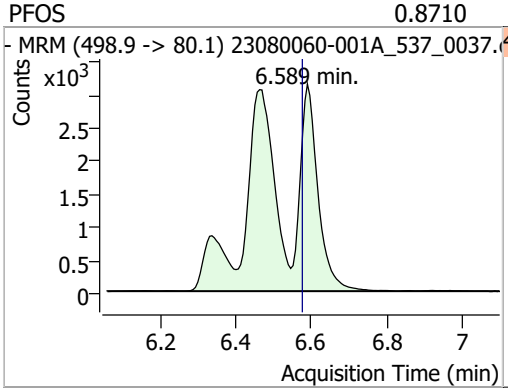
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.0294	6.58	0.02	1930	463.0 -> 169.1	14.4	7.7	11.5

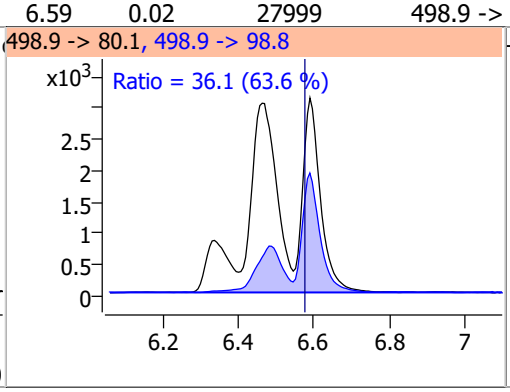


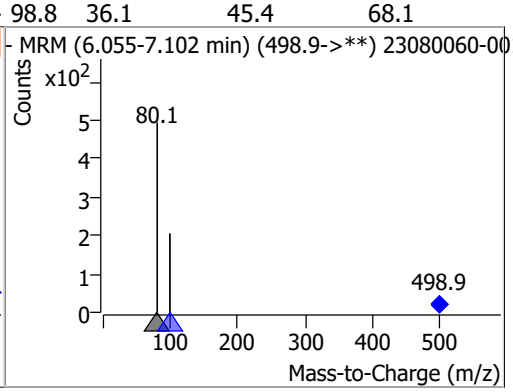




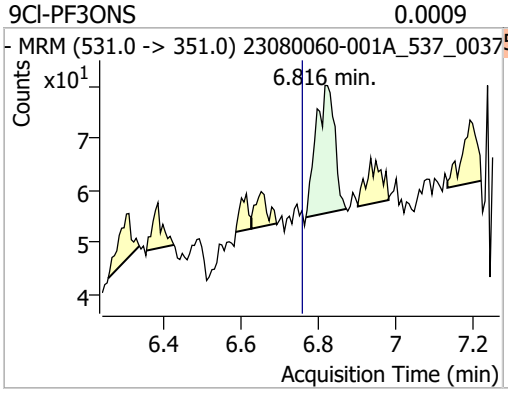
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.8710	6.59	0.02	27999	498.9 -> 98.8	36.1	45.4	68.1

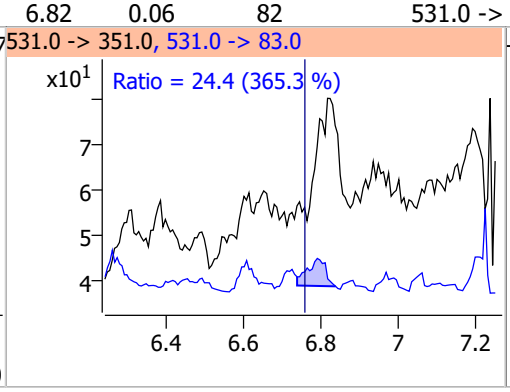


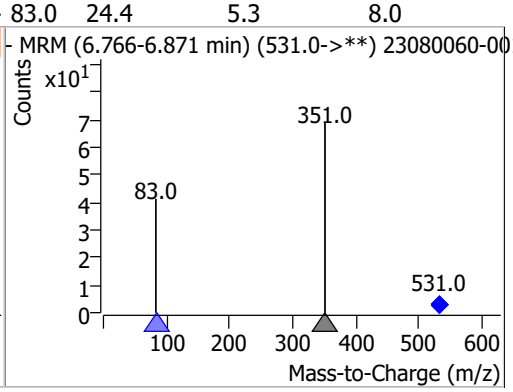




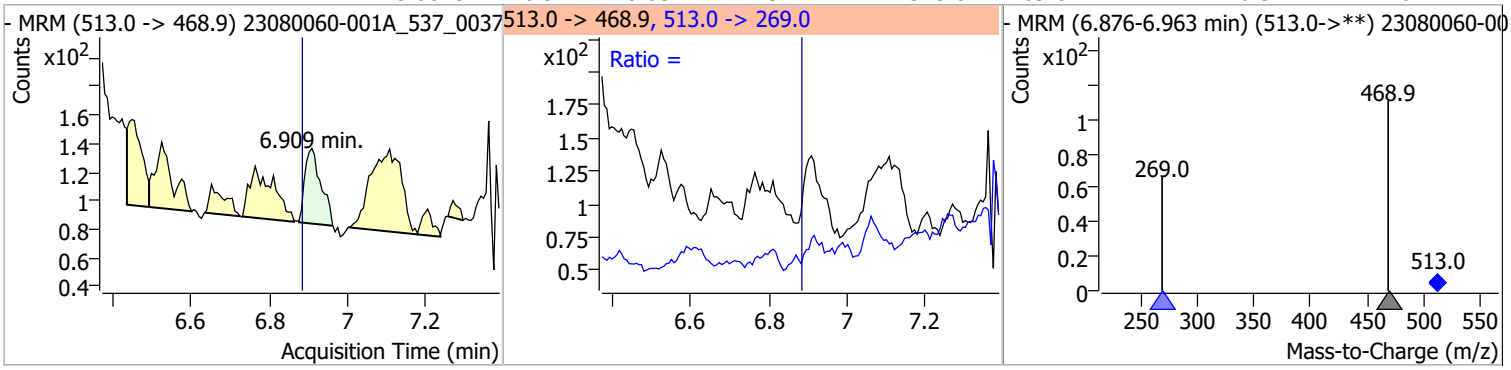
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0009	6.82	0.06	82	531.0 -> 83.0	24.4	5.3	8.0



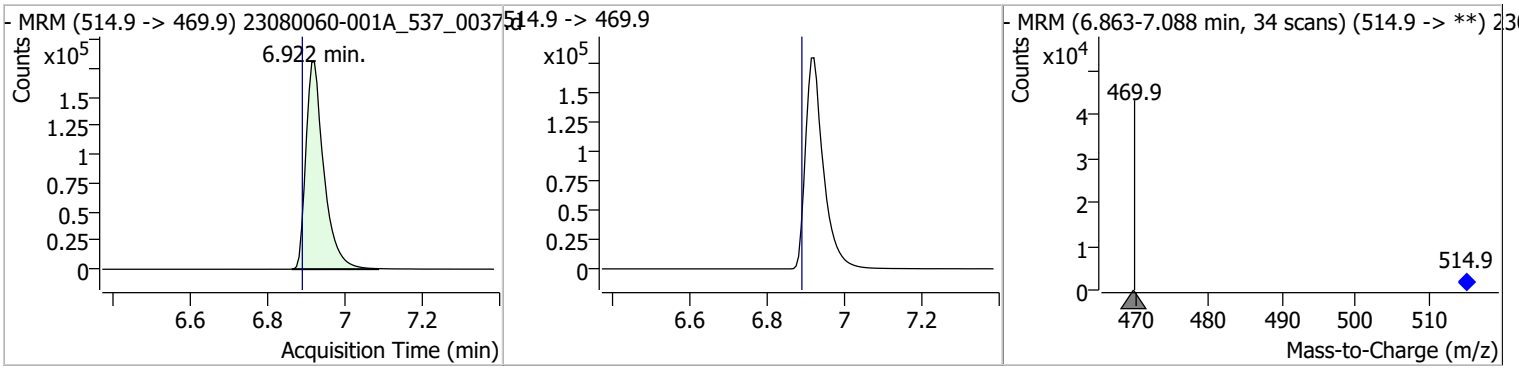




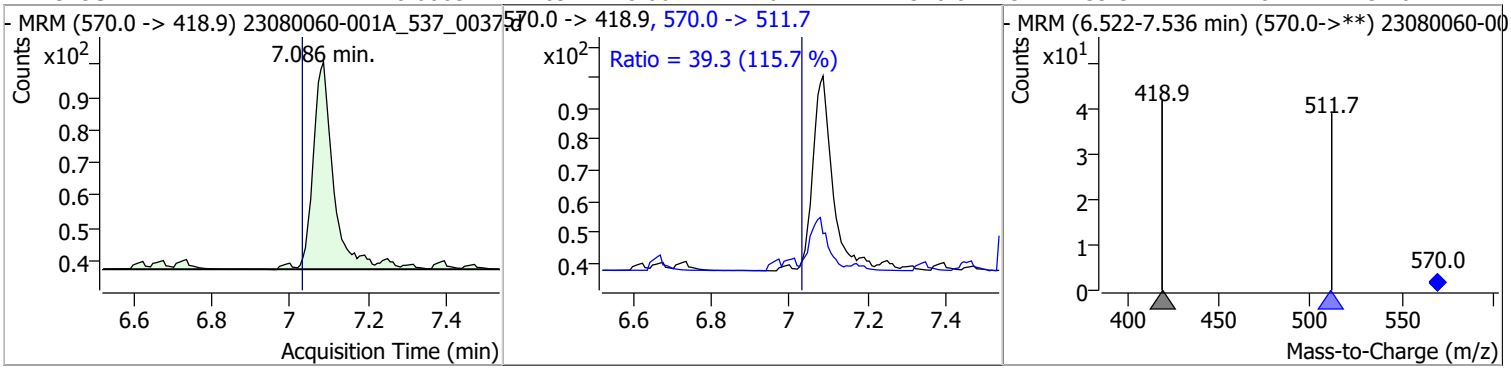
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0025	6.91	0.03	151	513.0 -> 269.0		16.5	24.8



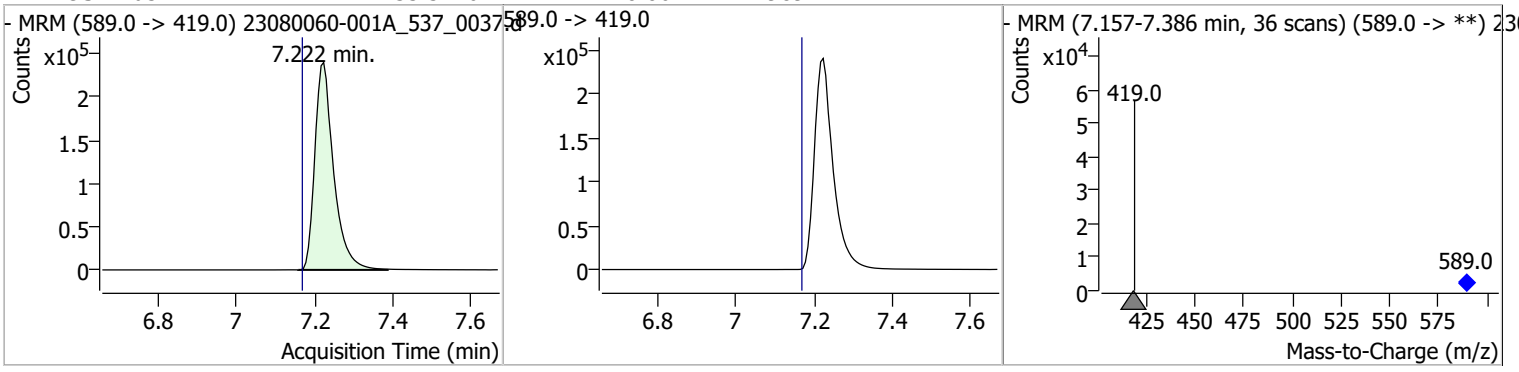
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	9.4724	6.92	0.03	585299				



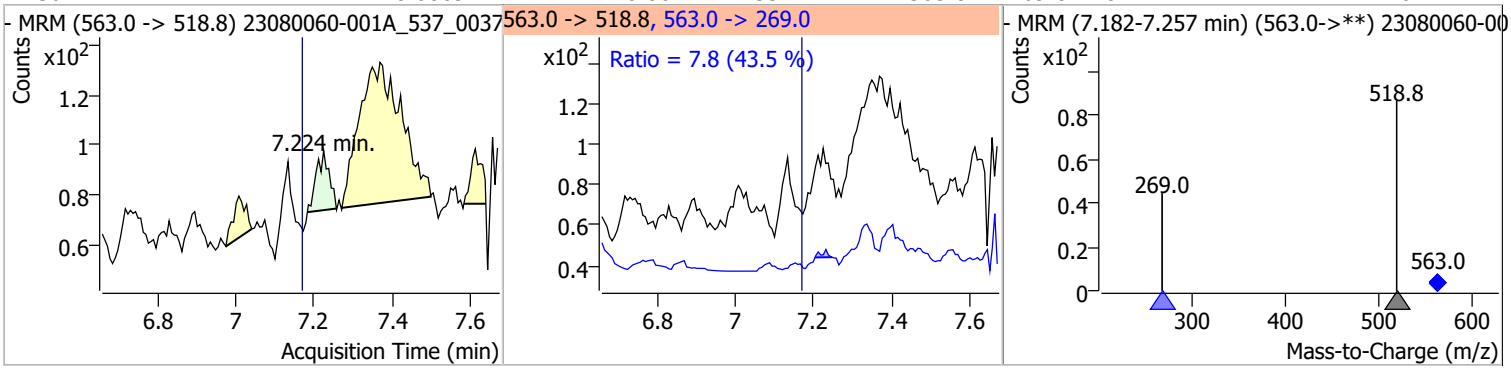
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0065	7.09	0.06	262	570.0 -> 511.7	39.3	17.0	51.0



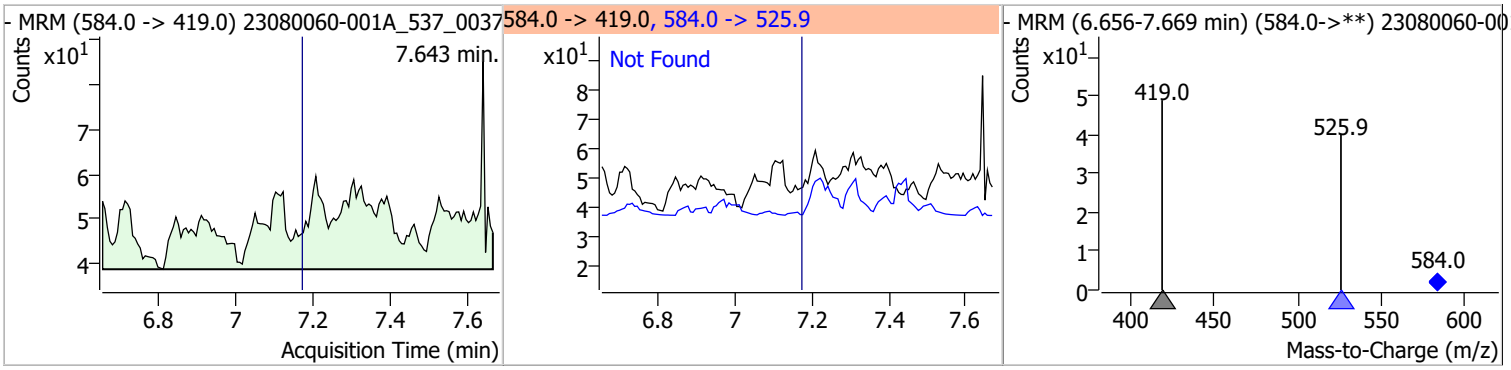
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	35.5776	7.22	0.06	798911				



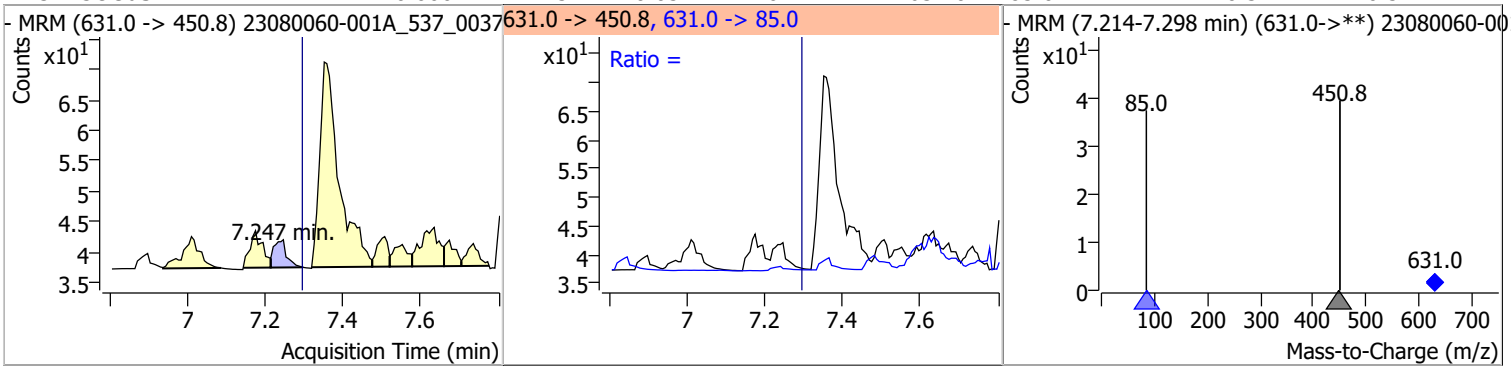
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0009	7.22	0.06	53	563.0 -> 269.0	7.8	14.4	21.6



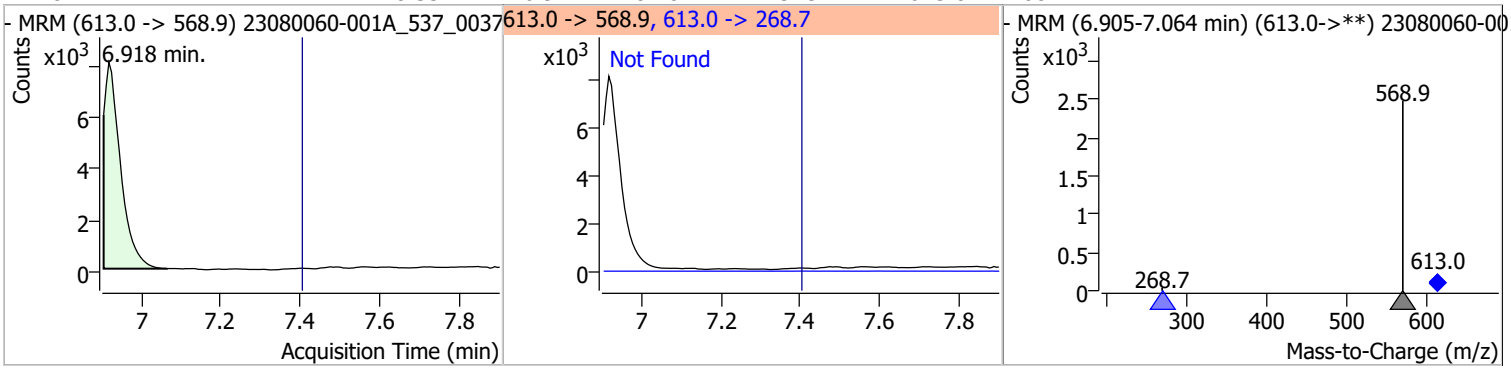
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0173	7.64	0.47	617	584.0 -> 525.9		40.4	121.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0001	7.25	-0.05	10	631.0 -> 85.0		0.3	0.5

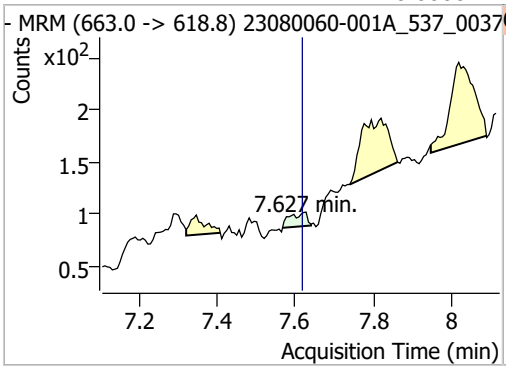


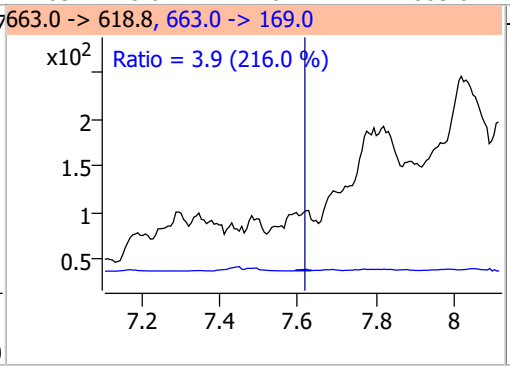
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.3372	6.92	-0.48	21915	613.0 -> 268.7		1.1	1.7

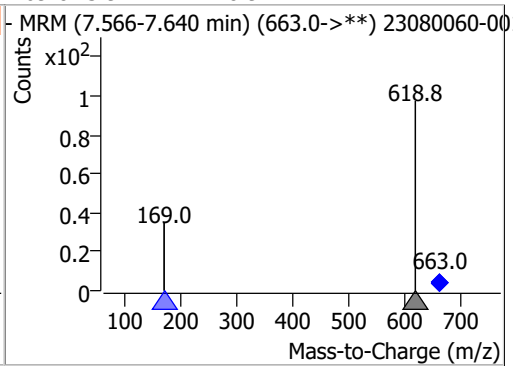


Quantitation Results Report

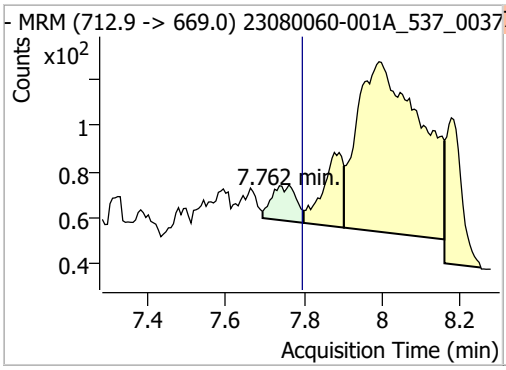
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0008	7.63	0.01	40	663.0 -> 169.0	3.9	0.9	2.7

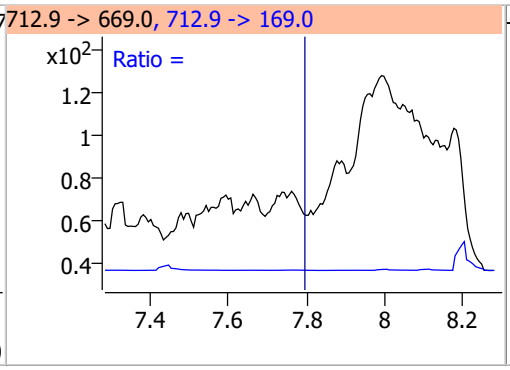


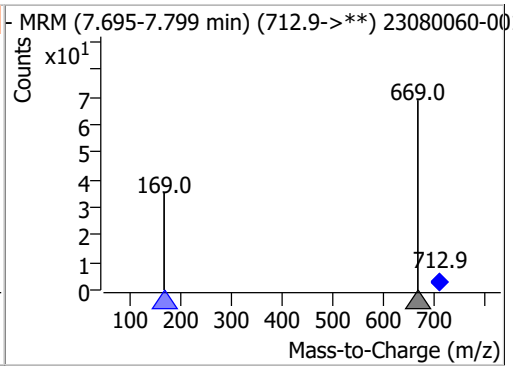




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0021	7.76	-0.03	67	712.9 -> 169.0		0.0	0.1







Quantitation Results Report

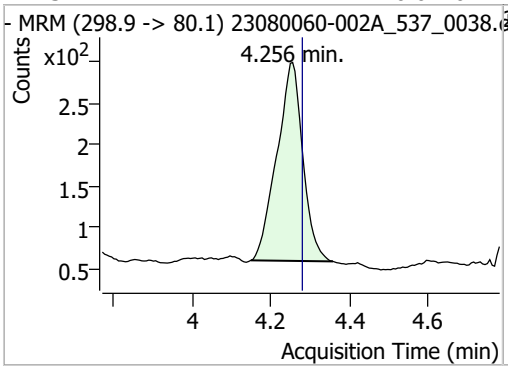
Agilent | Trusted Answers

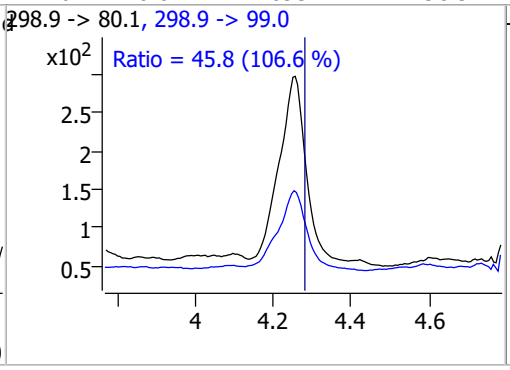
Data File	23080060-002A_537_0038.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 1:29:08 PM
Sample Name	23080060-002A	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

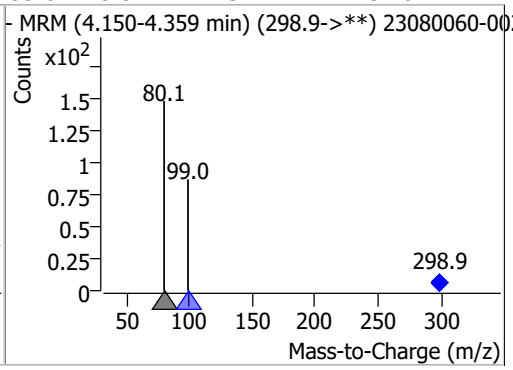
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	931729	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	1048797	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1736722	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.979	314.9 -> 269.7	714941	6.5274	ng/ml		-0.020
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 65.27%		*	
13C3-HFPO-DA	5.207	287.0 -> 169.0	15200	6.6805	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 66.80%		*	
13C2-PFDA	6.922	514.9 -> 469.9	438185	7.6998	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 77.00%			
NETFOSAA-d5	7.215	589.0 -> 419.0	395842	18.9071	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 47.27%		*	
Target Compounds							**QValue**
PFBS	4.256	298.9 -> 80.1	1093	0.0140	ng/ml		96
PFHxA	4.980	313.0 -> 269.0	1958	0.0140	ng/ml	#	94
HFPO-DA	5.221	285.0 -> 169.1	64	0.0247	ng/ml	#	1
PFHpA	5.670	362.9 -> 318.9	1229	0.0103	ng/ml		93
PFHxS	5.731	398.9 -> 79.9	840	0.0176	ng/ml	#	64
NaDONA	5.744	377.0 -> 250.9	85	0.0002	ng/ml		53
PFOA	6.165	413.0 -> 369.1	4294	0.0443	ng/ml		100
PFNA	6.570	463.0 -> 418.9	399	0.0066	ng/ml	#	90
PFOS	6.589	498.9 -> 80.1	2109	0.0622	ng/ml		93
9Cl-PF3ONS	6.855	531.0 -> 351.0	177	0.0018	ng/ml	#	90
PFDA	6.922	513.0 -> 468.9	150	0.0027	ng/ml	#	73
N-MeFOSAA	7.073	570.0 -> 418.9	217	0.0058	ng/ml	#	64
PFUdA	7.211	563.0 -> 518.8	98	0.0018	ng/ml		59
N-EtFOSAA	7.650	584.0 -> 419.0	615	0.0185	ng/ml		9
11ClPF3OUdS	7.352	631.0 -> 450.8	39	0.0003	ng/ml		99
PFDoA	6.918	613.0 -> 568.9	17784	0.2971	ng/ml		96
PFTrDA	7.602	663.0 -> 618.8	78	0.0017	ng/ml	#	72
PFTA	8.017	712.9 -> 669.0	681	0.0237	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

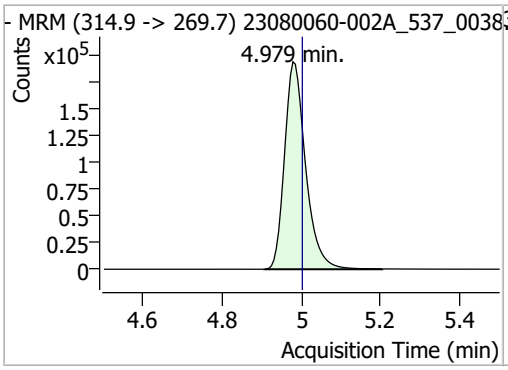
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.0140	4.26	-0.02	1093	298.9 -> 99.0	45.8	34.4	51.6

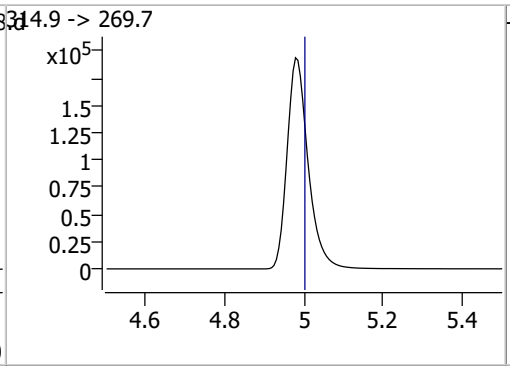


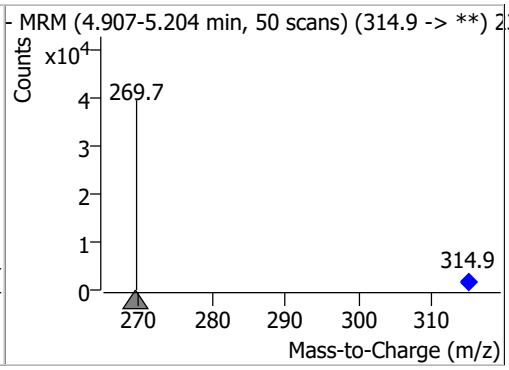




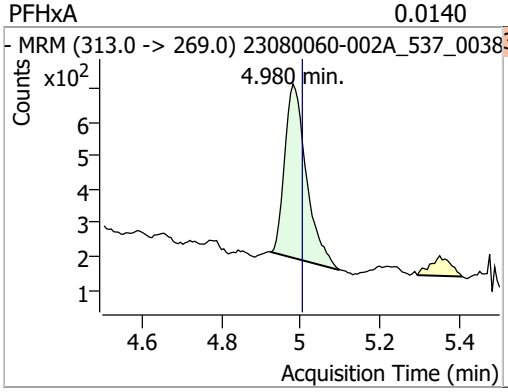
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	6.5274	4.98	-0.02	714941				

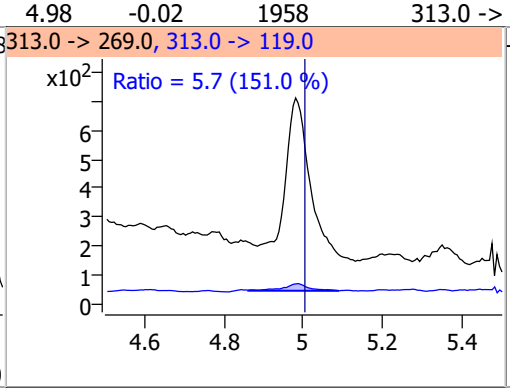


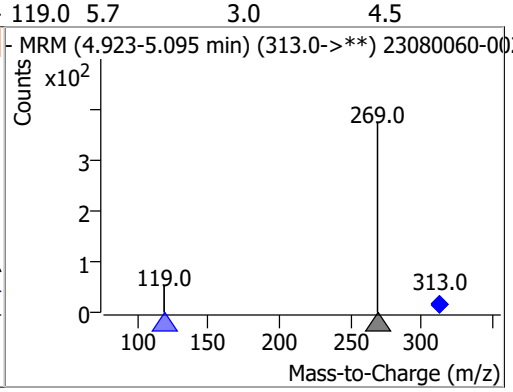




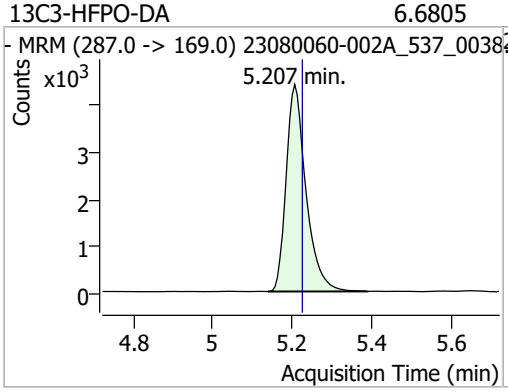
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.0140	4.98	-0.02	1958	313.0 -> 119.0	5.7	3.0	4.5

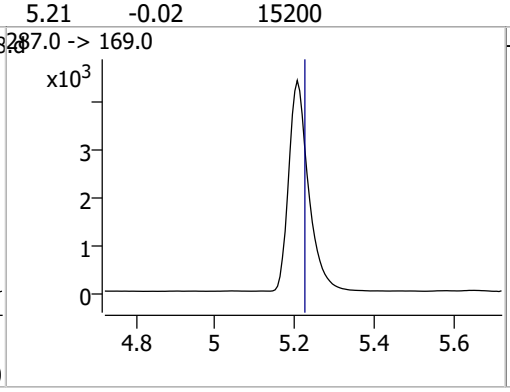


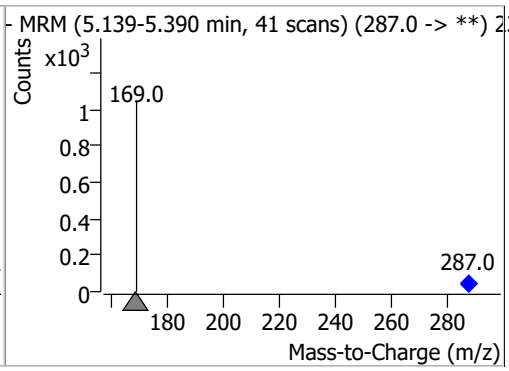




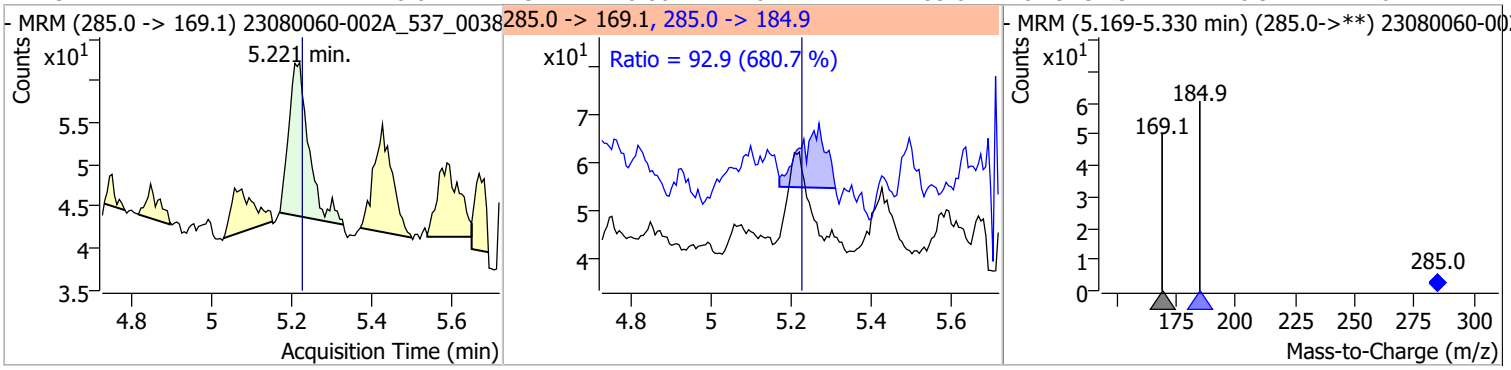
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	6.6805	5.21	-0.02	15200				



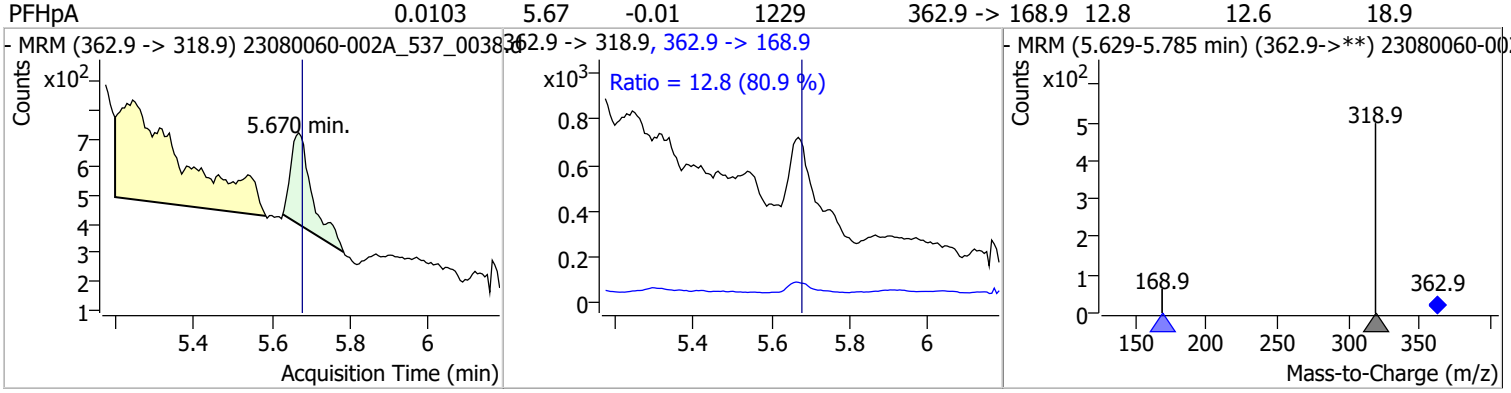




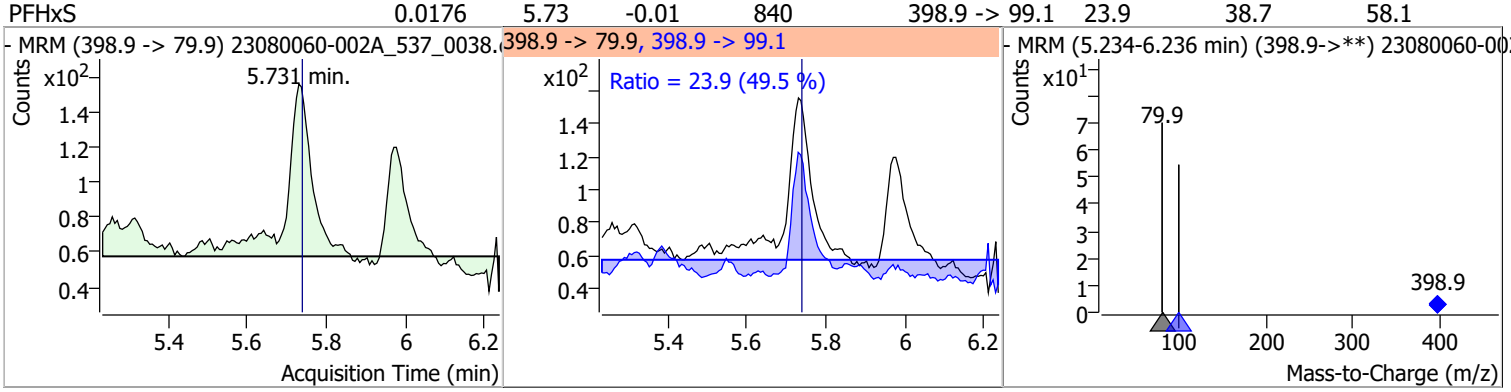
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0247	5.22	0.00	64	285.0 -> 184.9	92.9	10.9	16.4



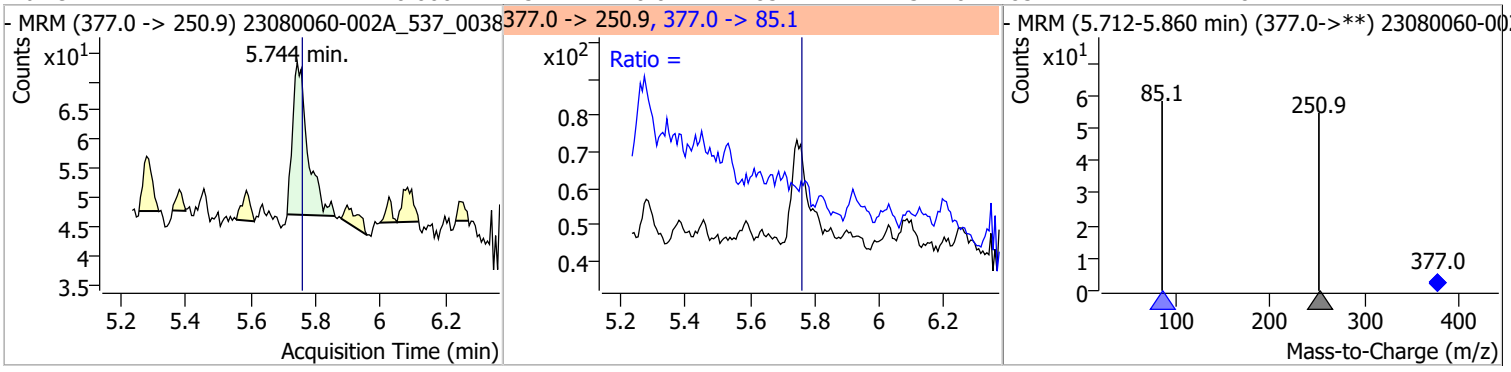
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.0103	5.67	-0.01	1229	362.9 -> 168.9	12.8	12.6	18.9



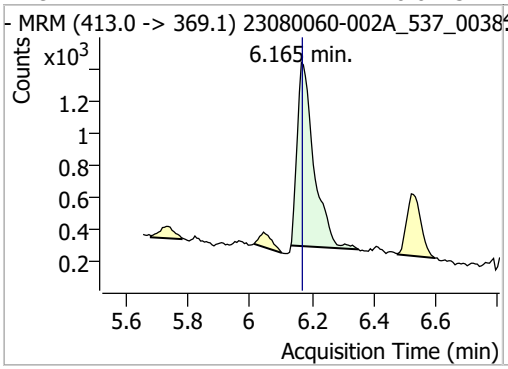
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.0176	5.73	-0.01	840	398.9 -> 99.1	23.9	38.7	58.1

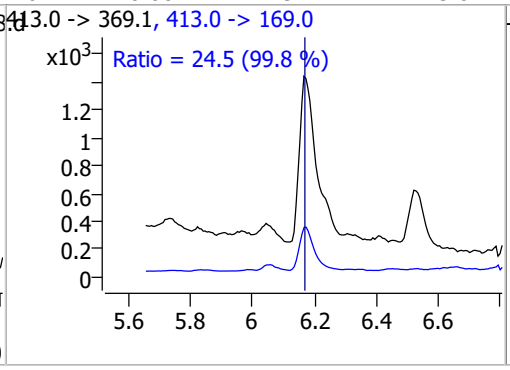


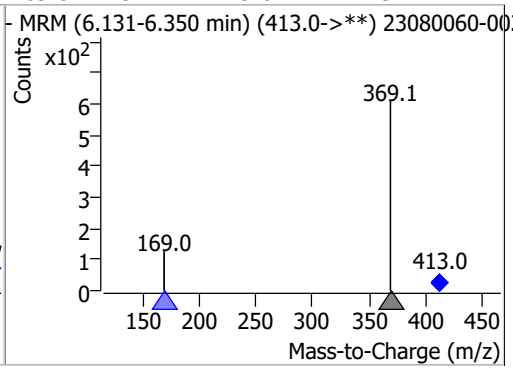
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0002	5.74	-0.01	85	377.0 -> 85.1		18.1	27.2



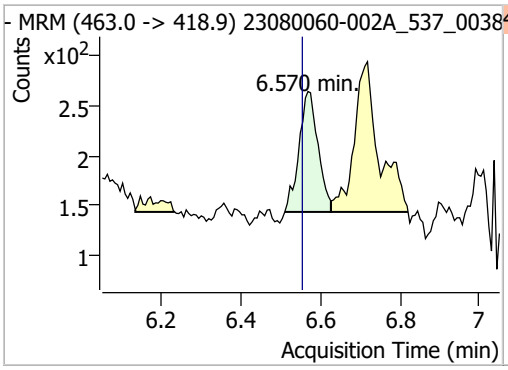
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.0443	6.17	0.00	4294	413.0 -> 169.0	24.5	19.6	29.4

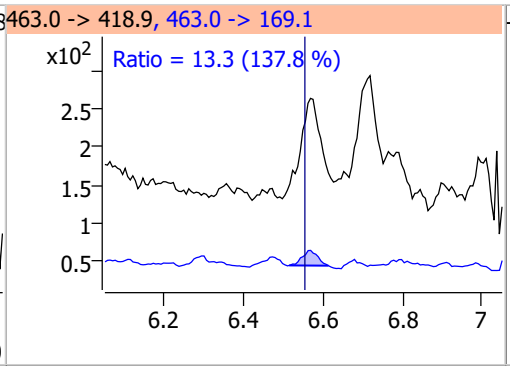


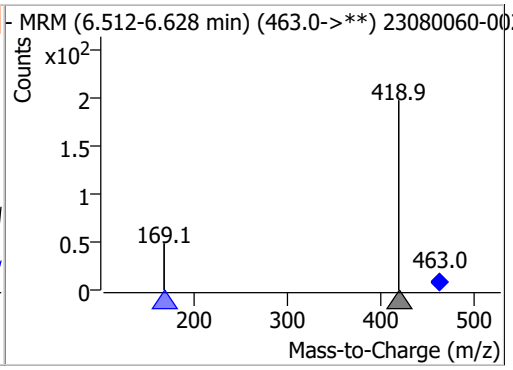




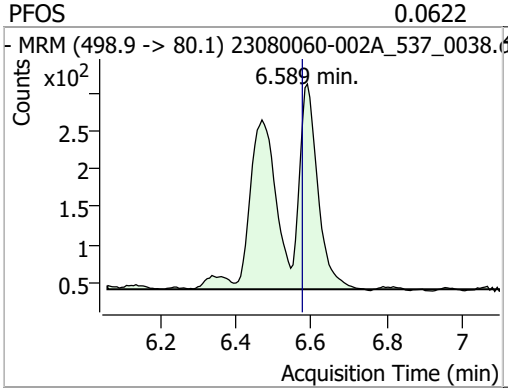
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.0066	6.57	0.02	399	463.0 -> 169.1	13.3	7.7	11.5

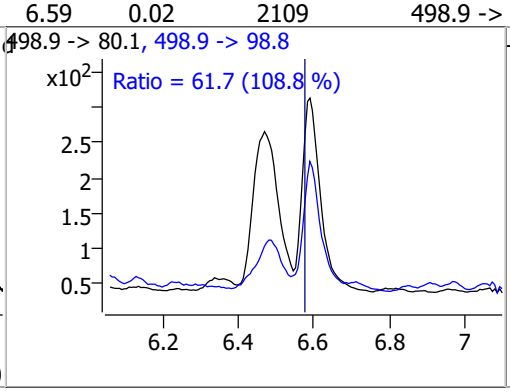


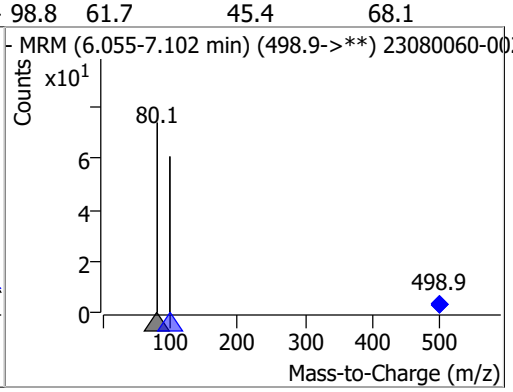




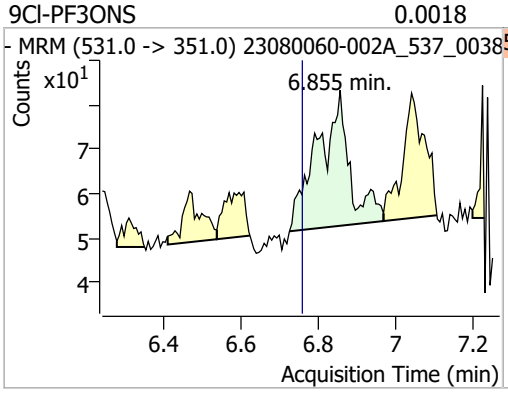
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.0622	6.59	0.02	2109	498.9 -> 98.8	61.7	45.4	68.1

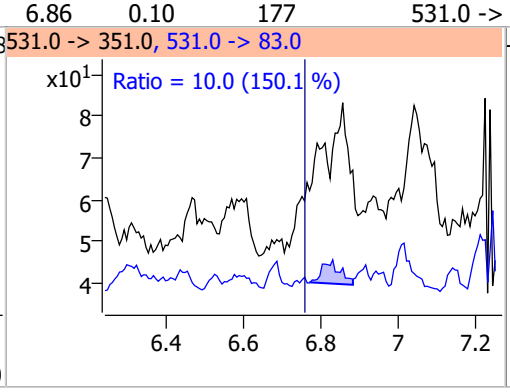


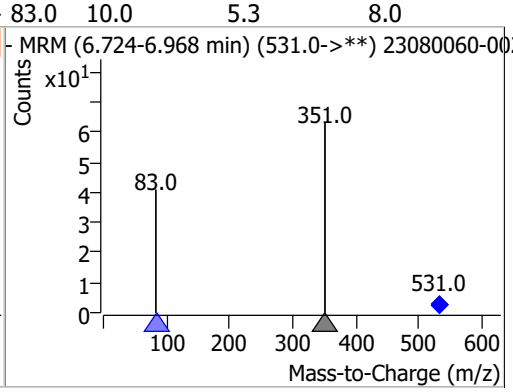




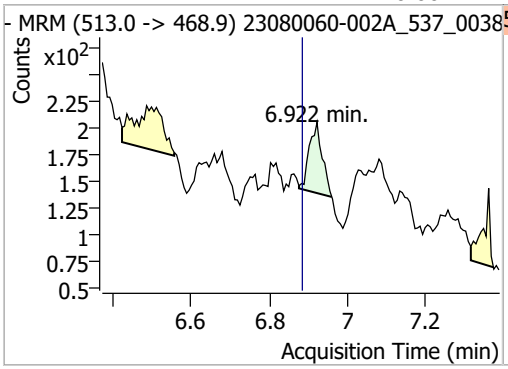
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0018	6.86	0.10	177	531.0 -> 83.0	10.0	5.3	8.0

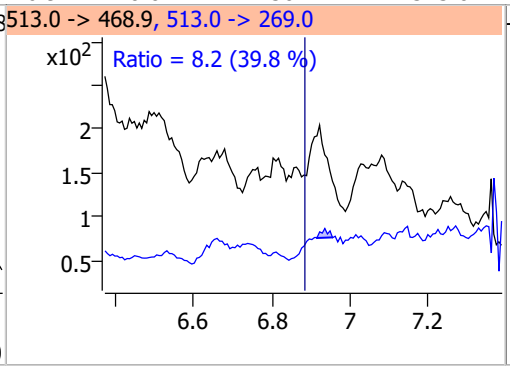


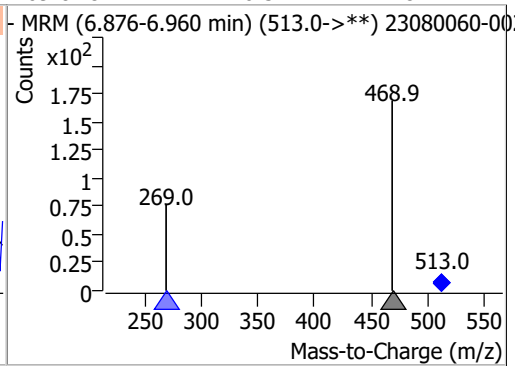




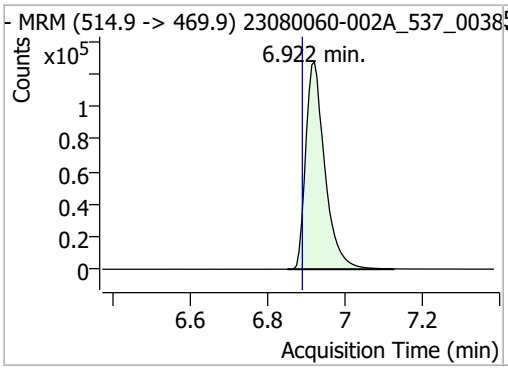
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0027	6.92	0.04	150	513.0 -> 269.0	8.2	16.5	24.8

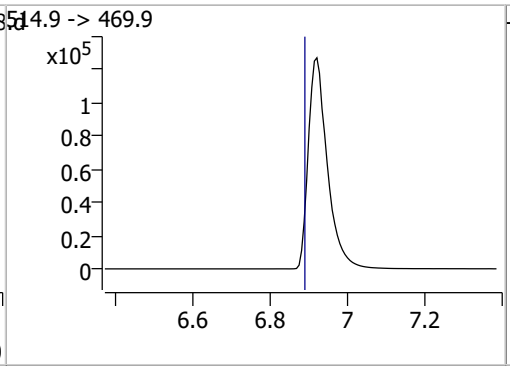


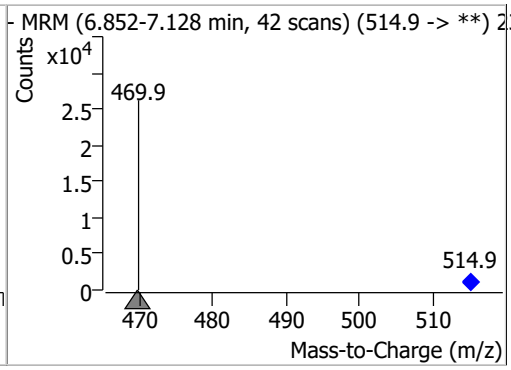




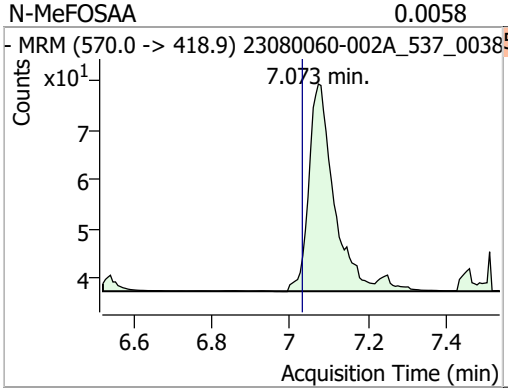
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	7.6998	6.92	0.03	438185				

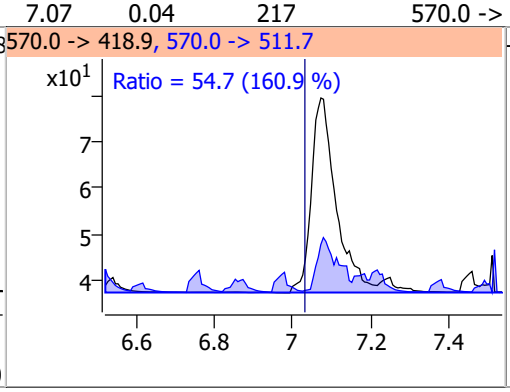


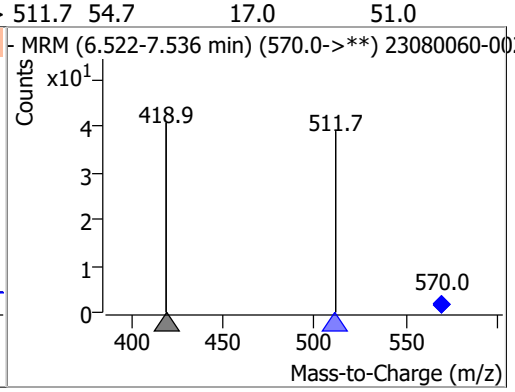




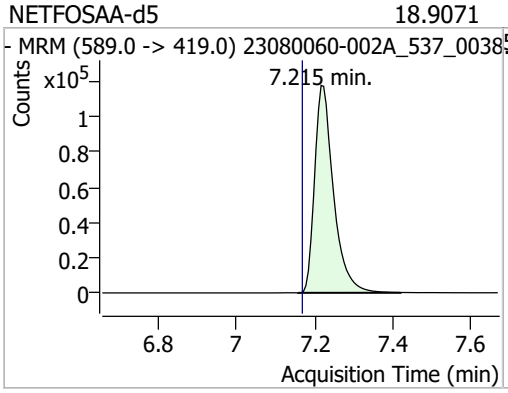
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0058	7.07	0.04	217	570.0 -> 511.7	54.7	17.0	51.0

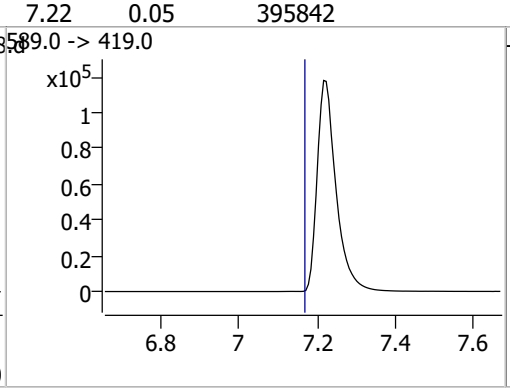


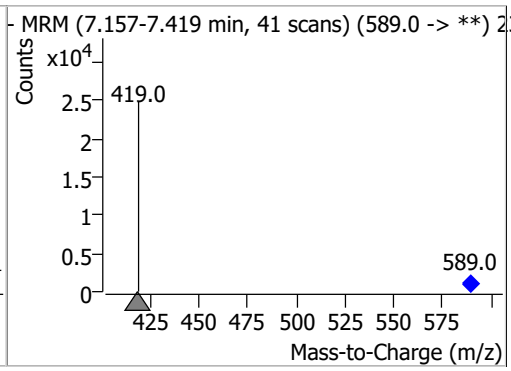




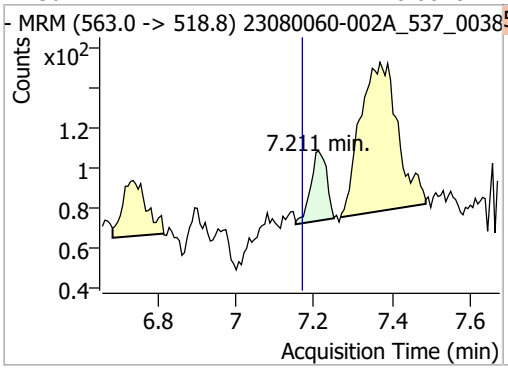
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	18.9071	7.22	0.05	395842				

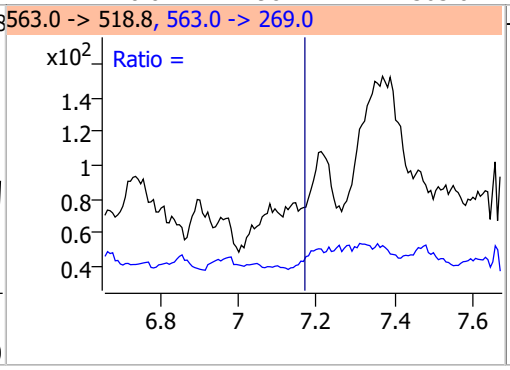


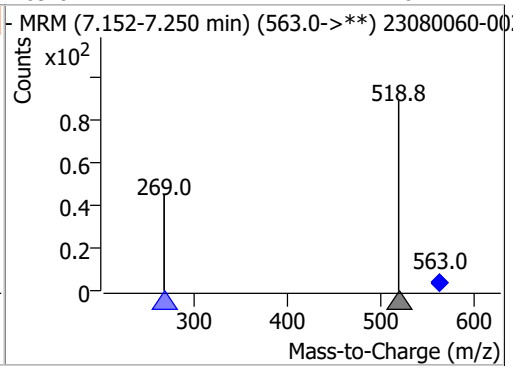




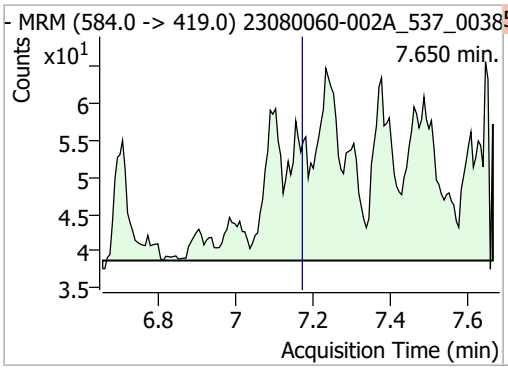
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0018	7.21	0.04	98	563.0 -> 269.0		14.4	21.6

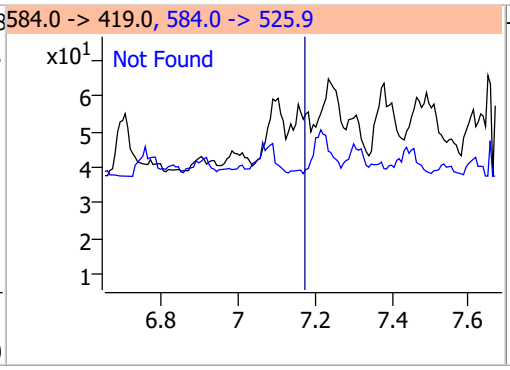


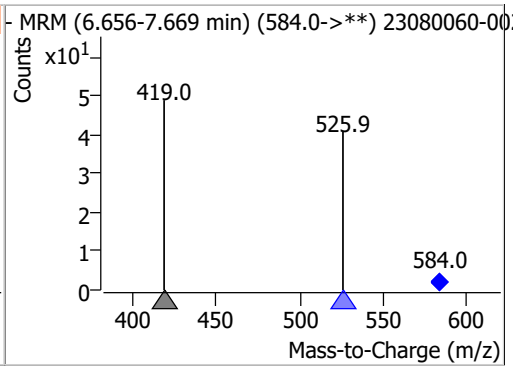




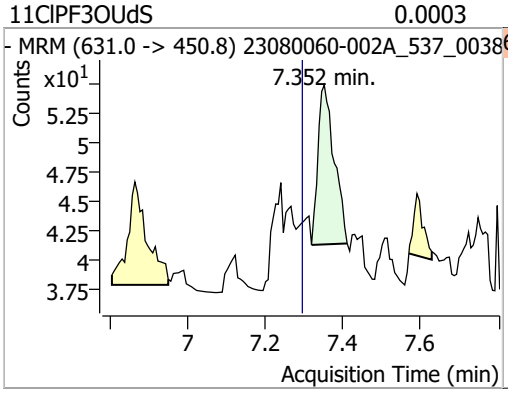
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0185	7.65	0.48	615	584.0 -> 525.9		40.4	121.1

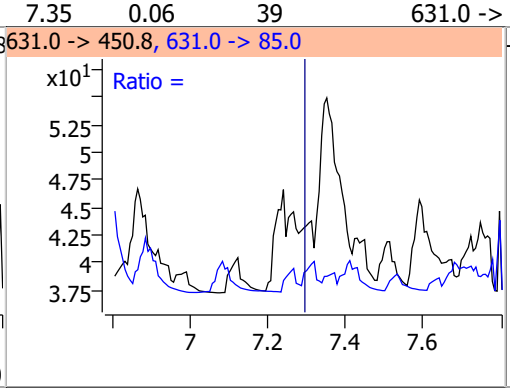


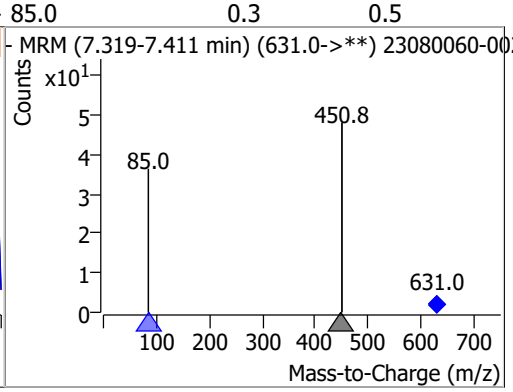




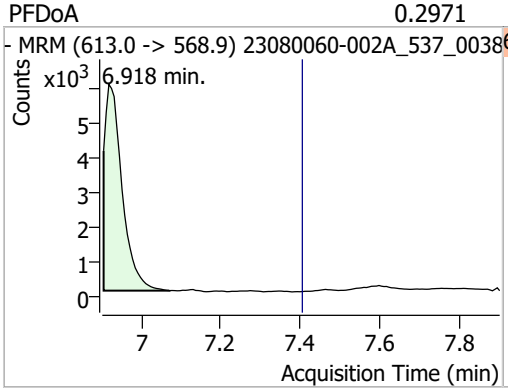
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0003	7.35	0.06	39	631.0 -> 85.0		0.3	0.5

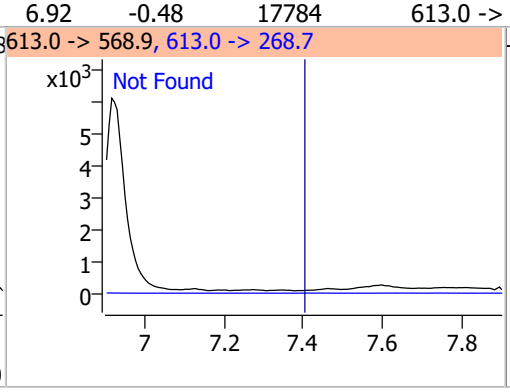


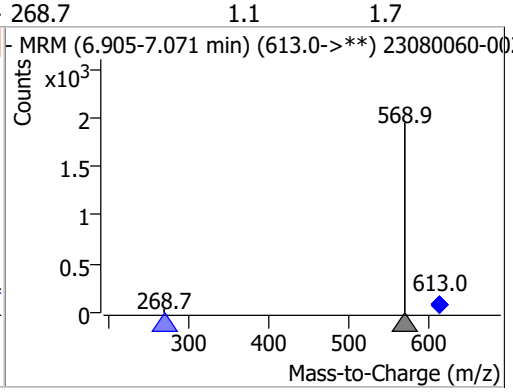




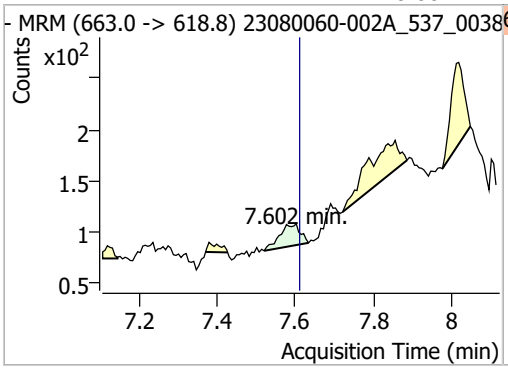
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.2971	6.92	-0.48	17784	613.0 -> 268.7		1.1	1.7

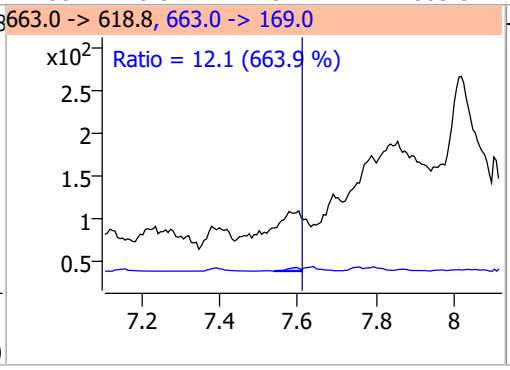


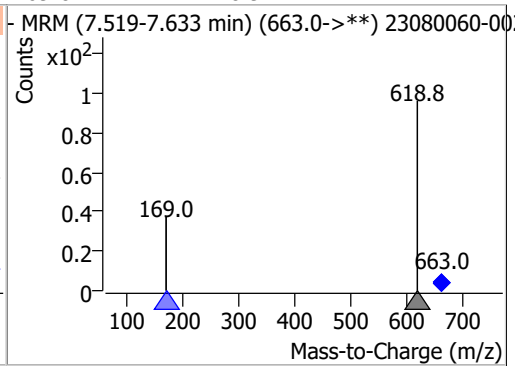




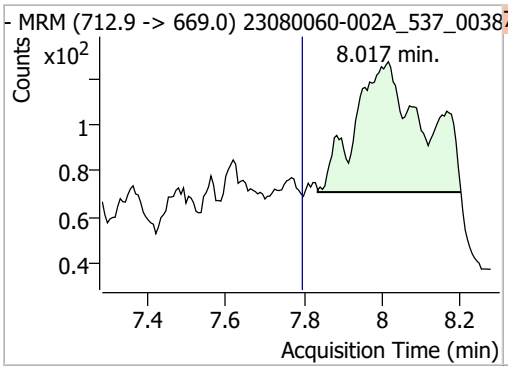
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0017	7.60	-0.01	78	663.0 -> 169.0	12.1	0.9	2.7

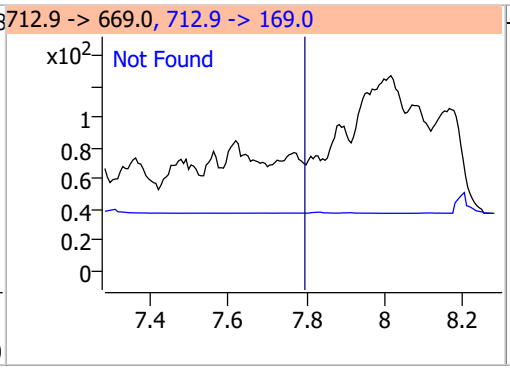


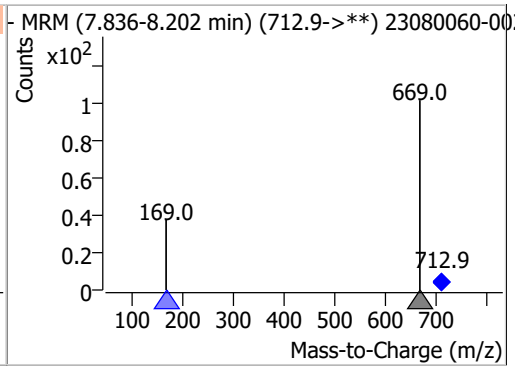




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0237	8.02	0.22	681	712.9 -> 169.0		0.0	0.1







Quantitation Results Report

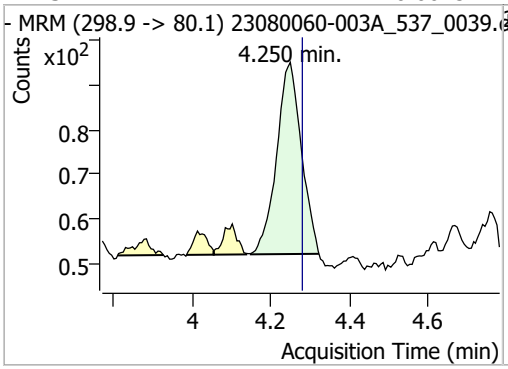
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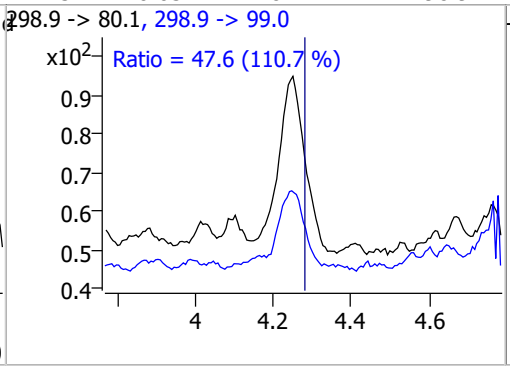
Data File	23080060-003A_537_0039.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 1:41:55 PM
Sample Name	23080060-003A	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
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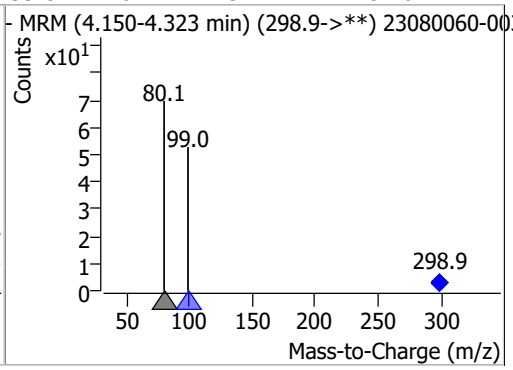
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	903465	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	1070628	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.066	573.0 -> 418.9	1868918	4.0000	ng/ml		0.038
System Monitoring Compounds							
13C2-PFHxA	4.979	314.9 -> 269.7	937926	8.3886	ng/ml		-0.020
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 83.89%			
13C3-HFPO-DA	5.207	287.0 -> 169.0	18688	8.0463	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 80.46%			
13C2-PFDA	6.922	514.9 -> 469.9	597102	10.2783	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 102.78%			
NETFOSAA-d5	7.215	589.0 -> 419.0	836913	37.1470	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 92.87%			
Target Compounds							QValue
PFBS	4.250	298.9 -> 80.1	187	0.0025	ng/ml		93
PFHxA	4.986	313.0 -> 269.0	1206	0.0085	ng/ml		98
HFPO-DA	5.220	285.0 -> 169.1	129	0.0489	ng/ml	#	66
PFHpA	5.670	362.9 -> 318.9	422	0.0035	ng/ml	#	83
PFHxS	5.731	398.9 -> 79.9	233	0.0050	ng/ml		29
NaDONA	5.756	377.0 -> 250.9	81	0.0002	ng/ml	#	86
PFOA	6.171	413.0 -> 369.1	821	0.0083	ng/ml	#	73
PFNA	6.570	463.0 -> 418.9	227	0.0037	ng/ml	#	90
PFOS	6.589	498.9 -> 80.1	733	0.0223	ng/ml	#	33
9Cl-PF3ONS	6.802	531.0 -> 351.0	57	0.0006	ng/ml	#	48
PFDA	6.929	513.0 -> 468.9	130	0.0023	ng/ml	#	59
N-MeFOSAA	7.079	570.0 -> 418.9	259	0.0064	ng/ml	#	70
PFUdA	7.146	563.0 -> 518.8	67	0.0012	ng/ml		59
N-EtFOSAA	7.662	584.0 -> 419.0	614	0.0172	ng/ml		9
11ClPF3OUdS	7.260	631.0 -> 450.8	13	0.0001	ng/ml	#	94
PFDoA	6.925	613.0 -> 568.9	24328	0.3981	ng/ml		96
PFTrDA	7.795	663.0 -> 618.8	149	0.0031	ng/ml	#	94
PFTA	7.812	712.9 -> 669.0	86	0.0029	ng/ml	#	99

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

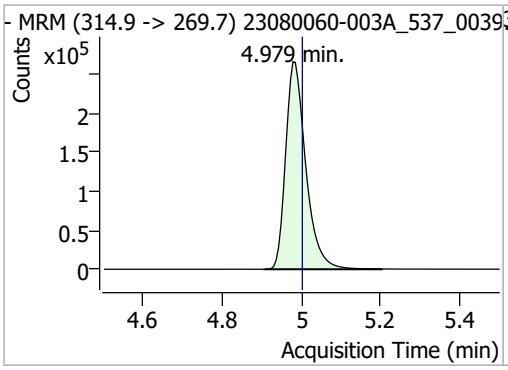
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.0025	4.25	-0.03	187	298.9 -> 99.0	47.6	34.4	51.6

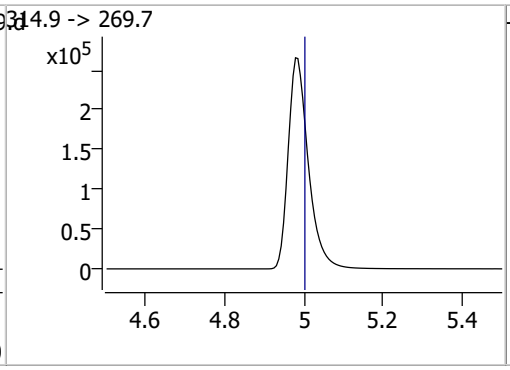


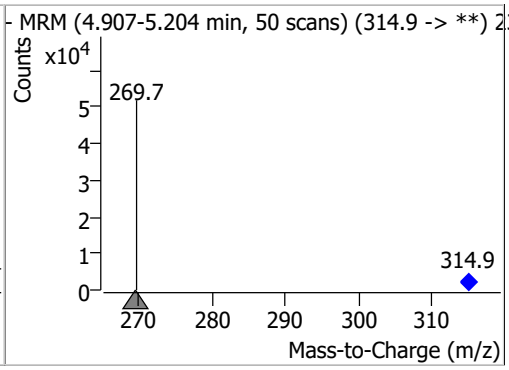




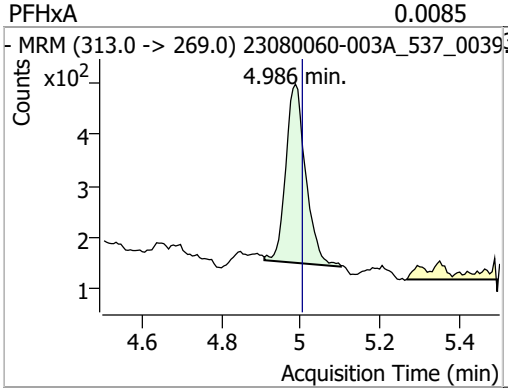
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	8.3886	4.98	-0.02	937926				

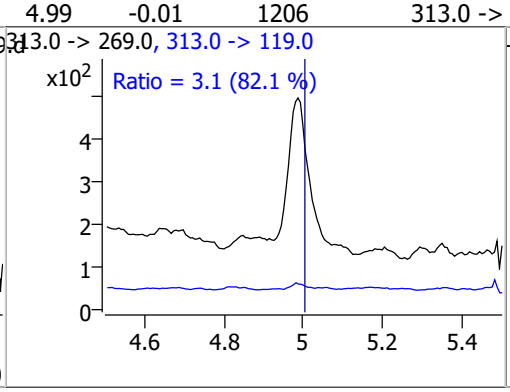


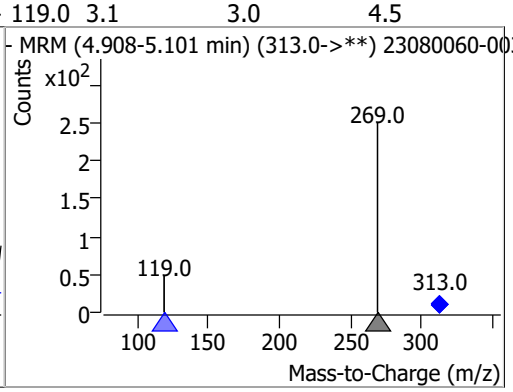




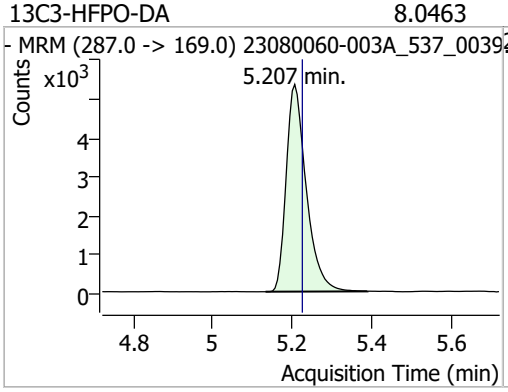
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.0085	4.99	-0.01	1206	313.0 -> 119.0	3.1	3.0	4.5

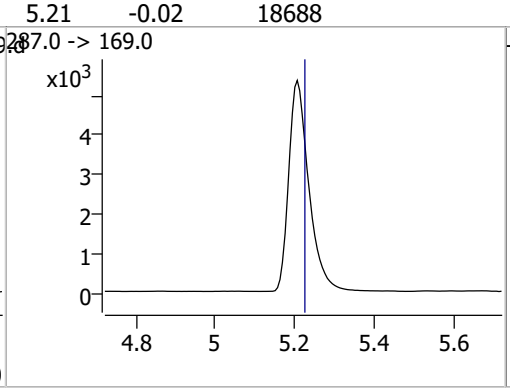


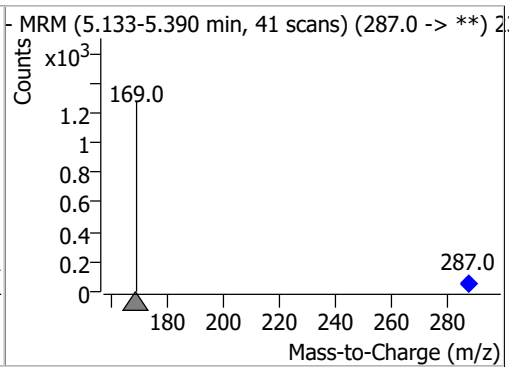




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	8.0463	5.21	-0.02	18688				

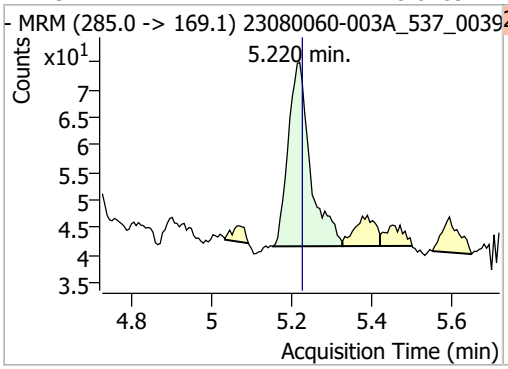


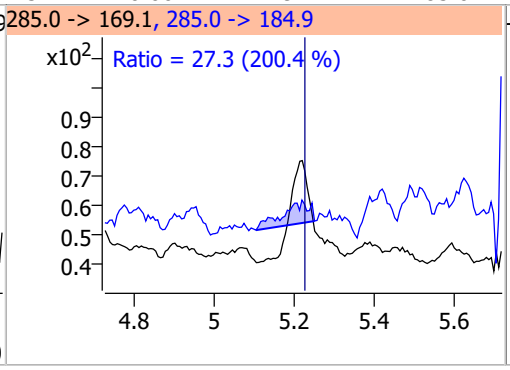


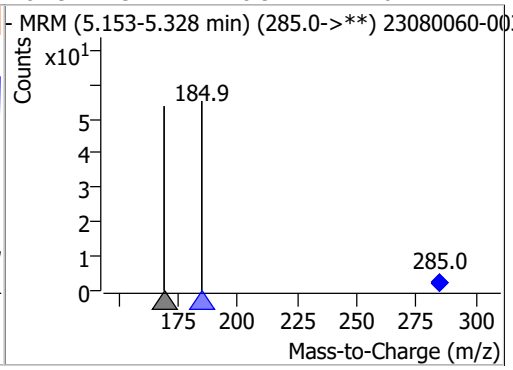


Quantitation Results Report

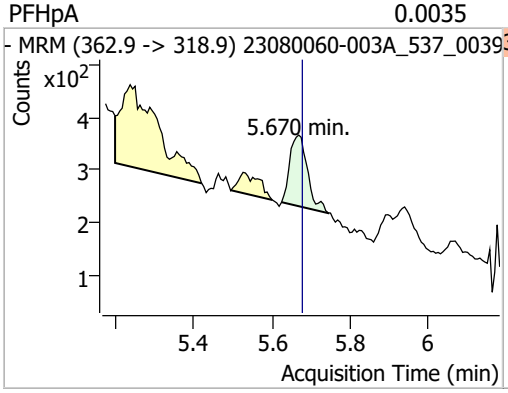
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0489	5.22	0.00	129	285.0 -> 184.9	27.3	10.9	16.4

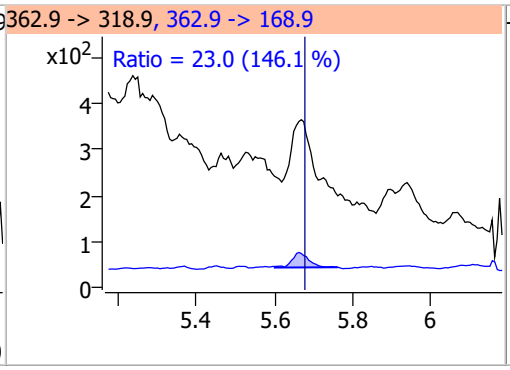


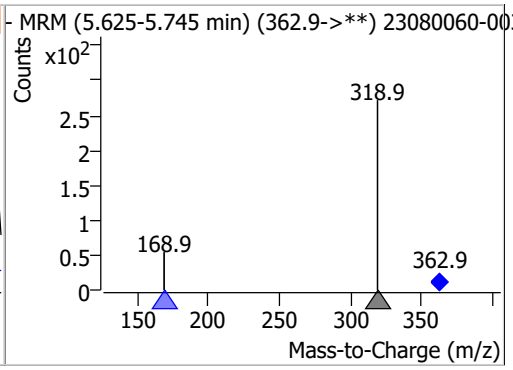




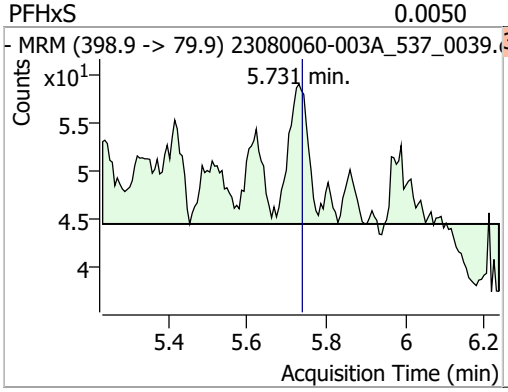
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.0035	5.67	-0.01	422	362.9 -> 168.9	23.0	12.6	18.9

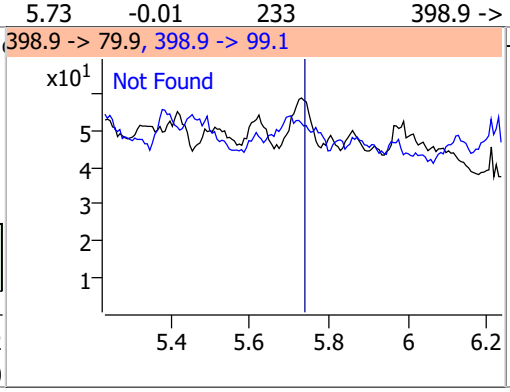


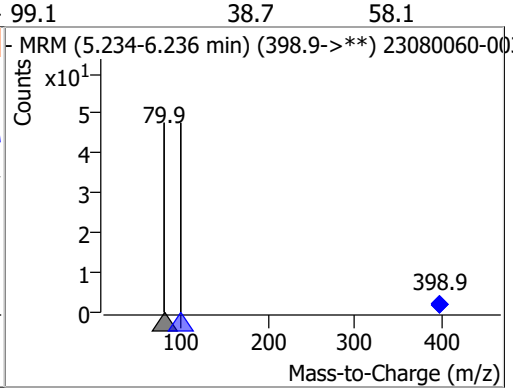




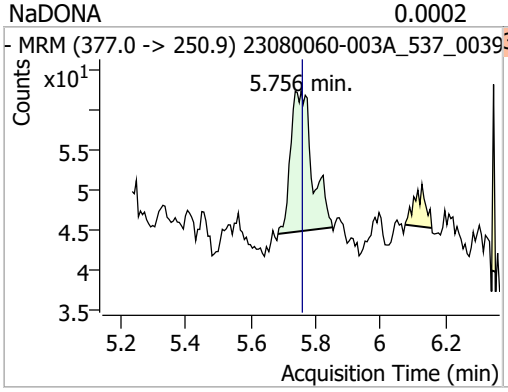
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.0050	5.73	-0.01	233	398.9 -> 99.1		38.7	58.1

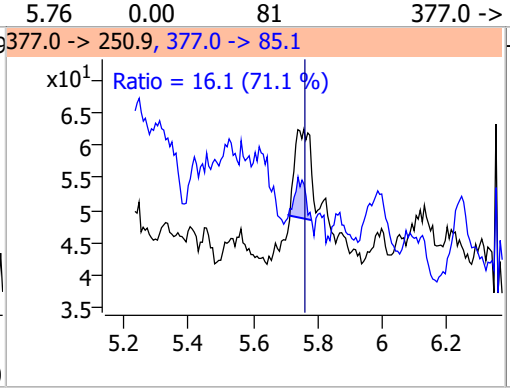


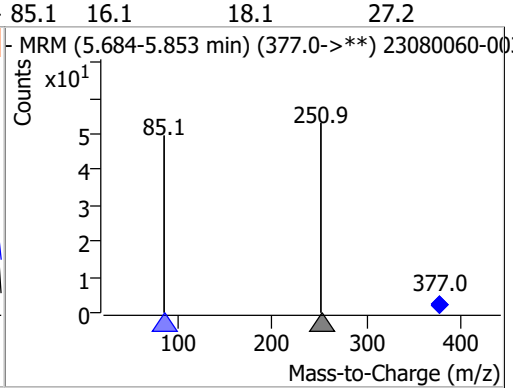




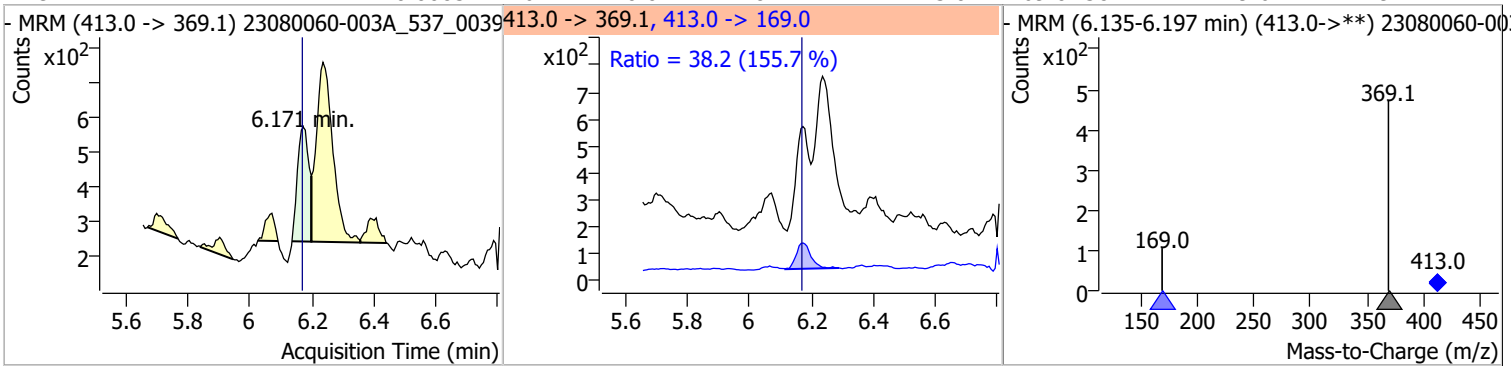
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0002	5.76	0.00	81	377.0 -> 85.1	16.1	18.1	27.2



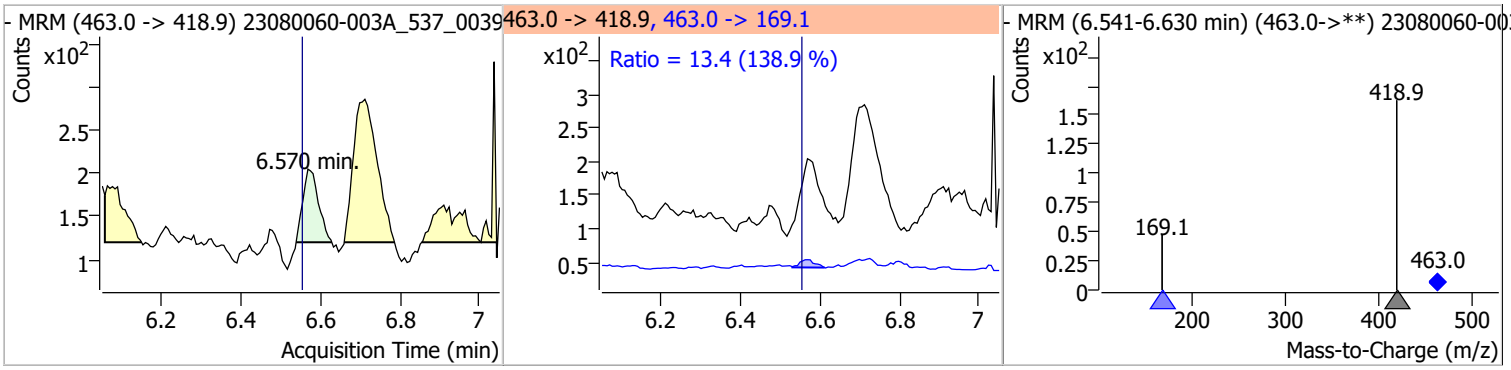




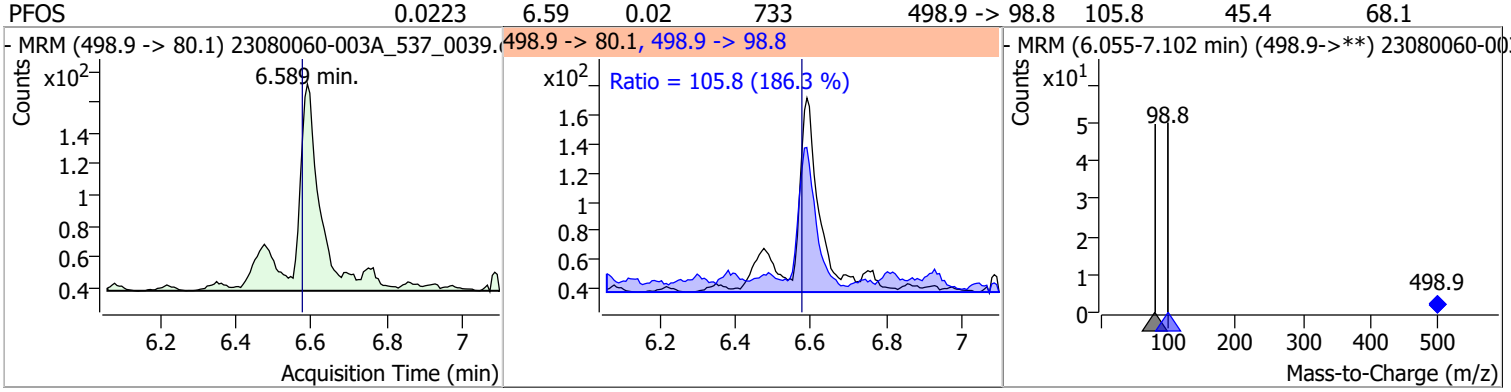
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.0083	6.17	0.01	821	413.0 -> 169.0	38.2	19.6	29.4



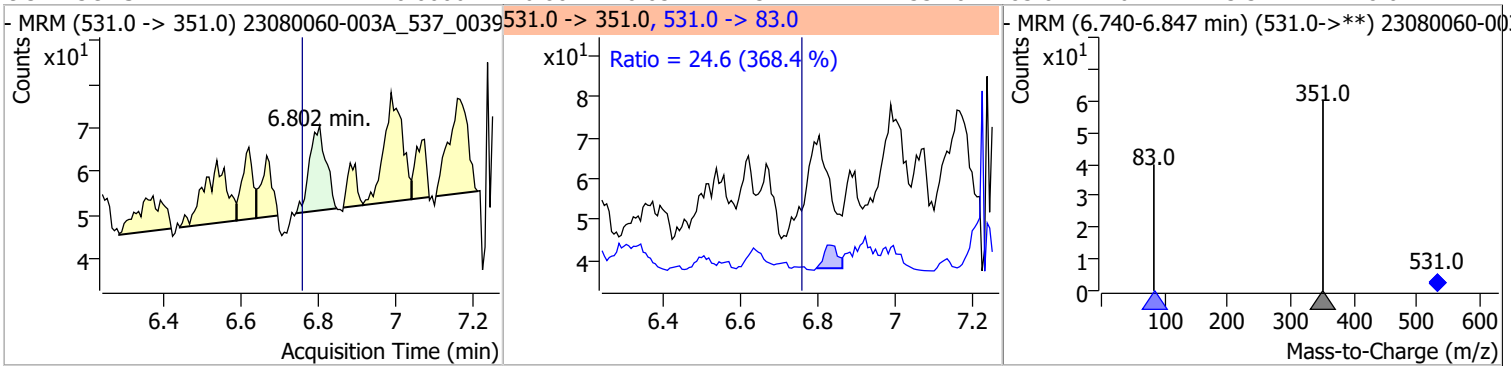
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.0037	6.57	0.02	227	463.0 -> 169.1	13.4	7.7	11.5



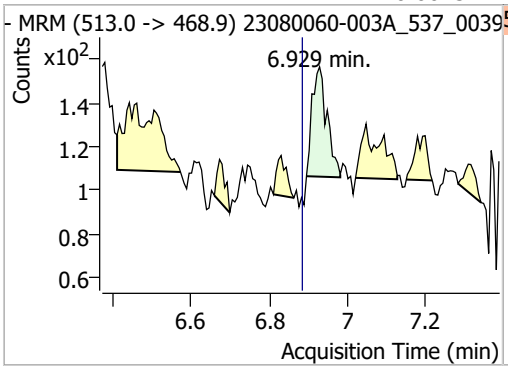
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.0223	6.59	0.02	733	498.9 -> 98.8	105.8	45.4	68.1

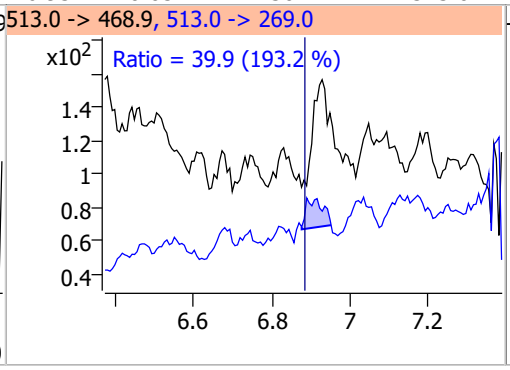


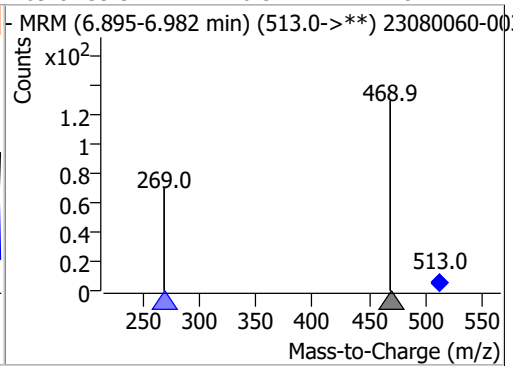
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0006	6.80	0.05	57	531.0 -> 83.0	24.6	5.3	8.0



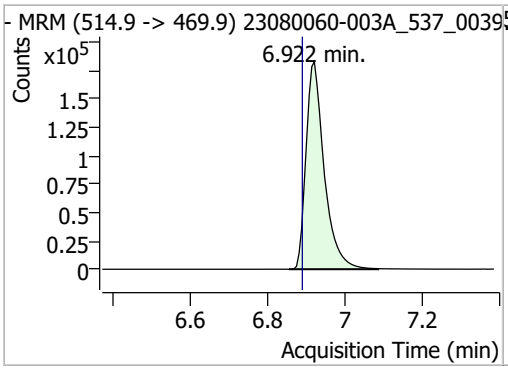
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0023	6.93	0.05	130	513.0 -> 269.0	39.9	16.5	24.8

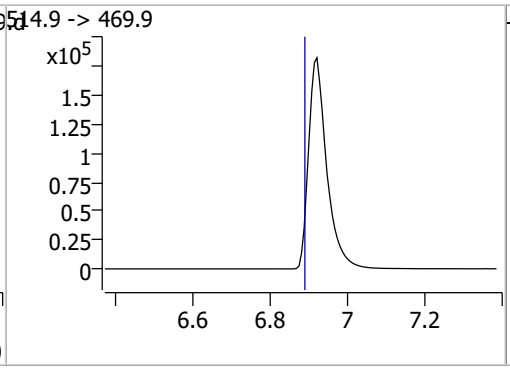


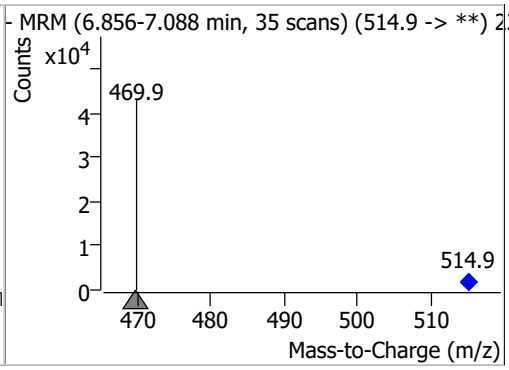




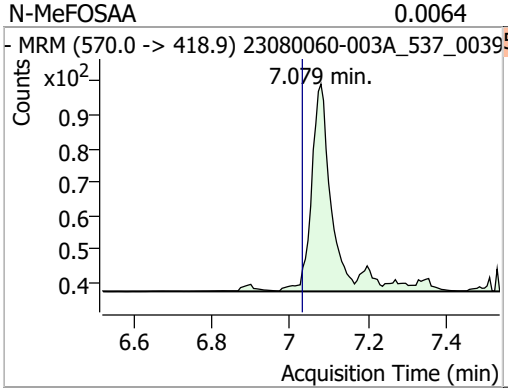
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	10.2783	6.92	0.03	597102				

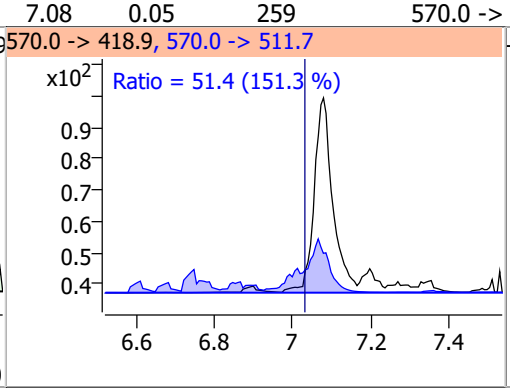


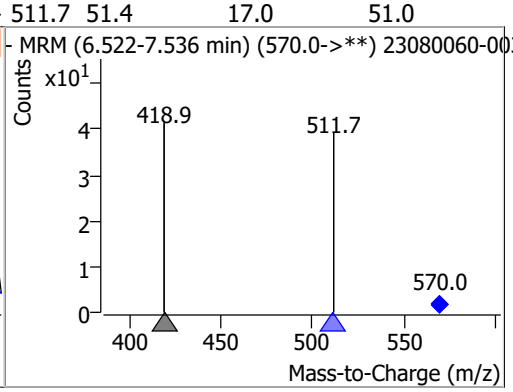




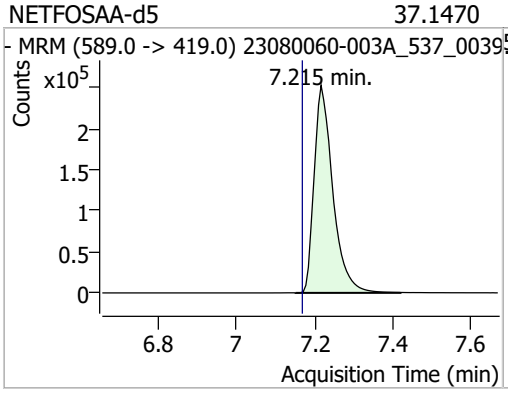
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0064	7.08	0.05	259	570.0 -> 511.7	51.4	17.0	51.0

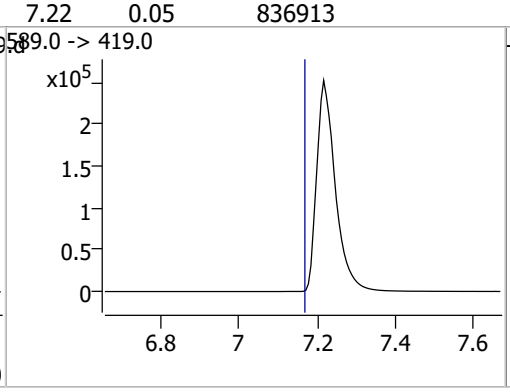


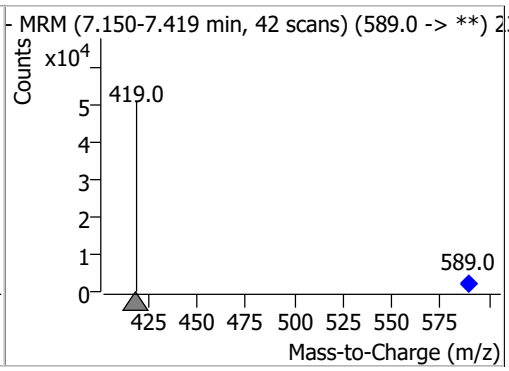




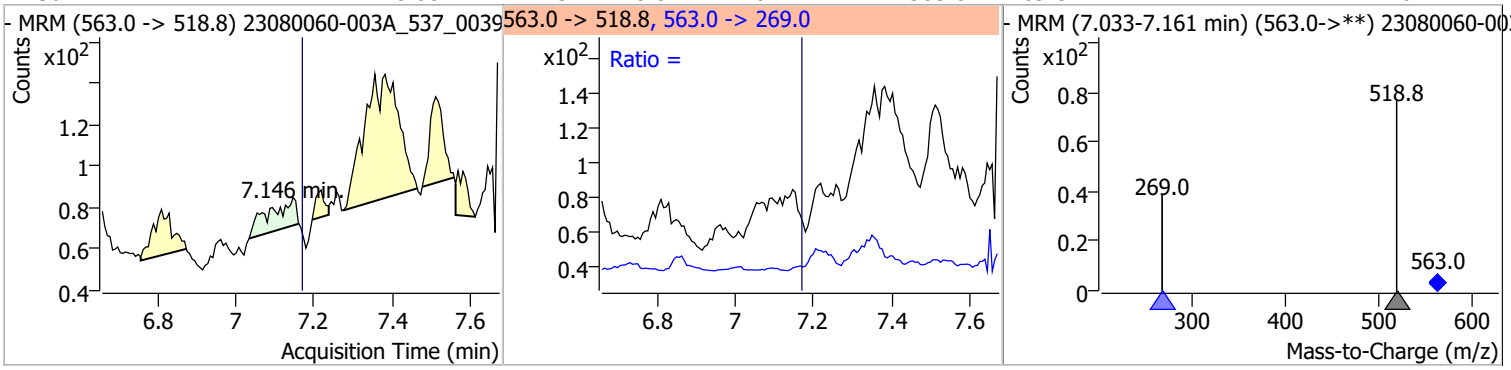
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	37.1470	7.22	0.05	836913				



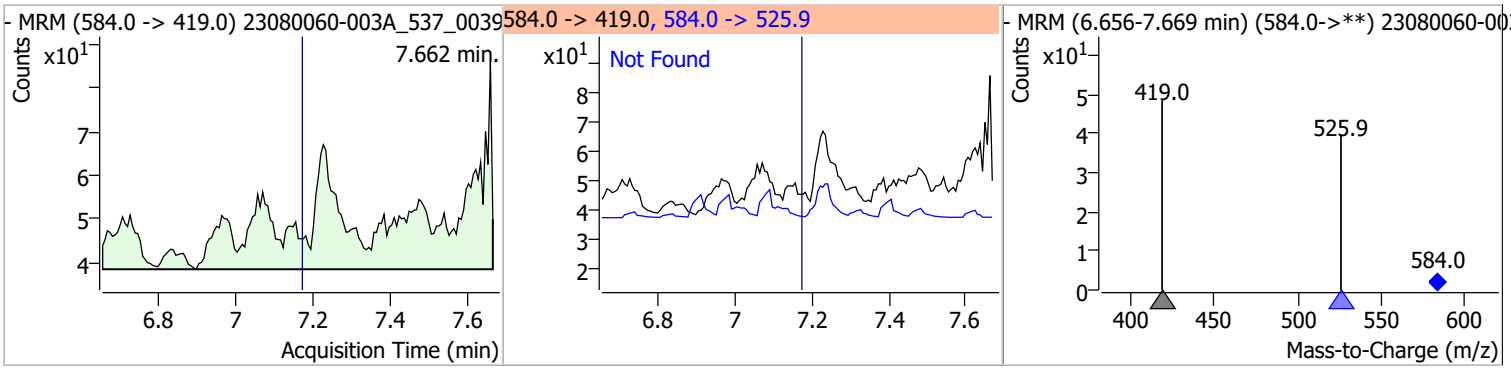




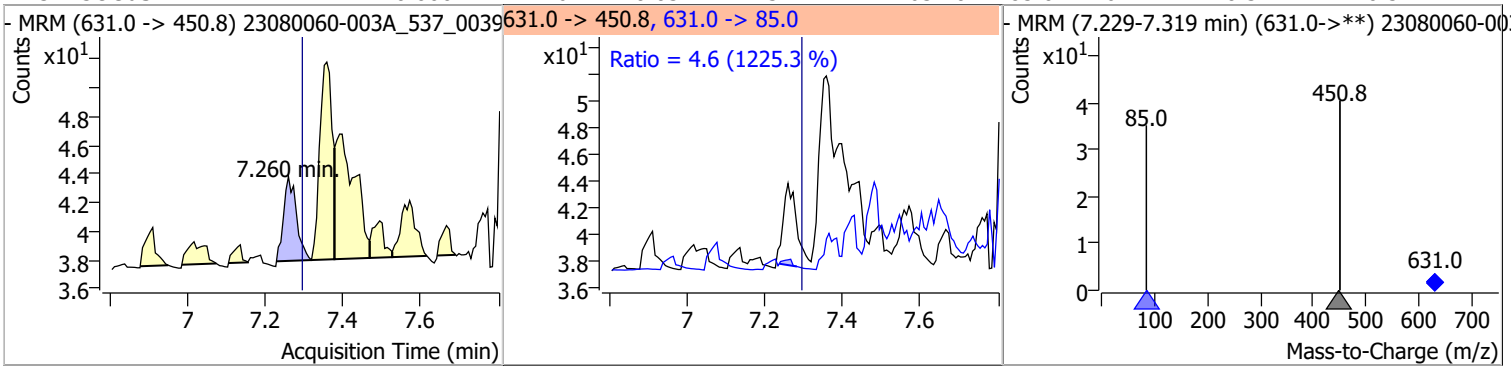
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0012	7.15	-0.02	67	563.0 -> 269.0		14.4	21.6



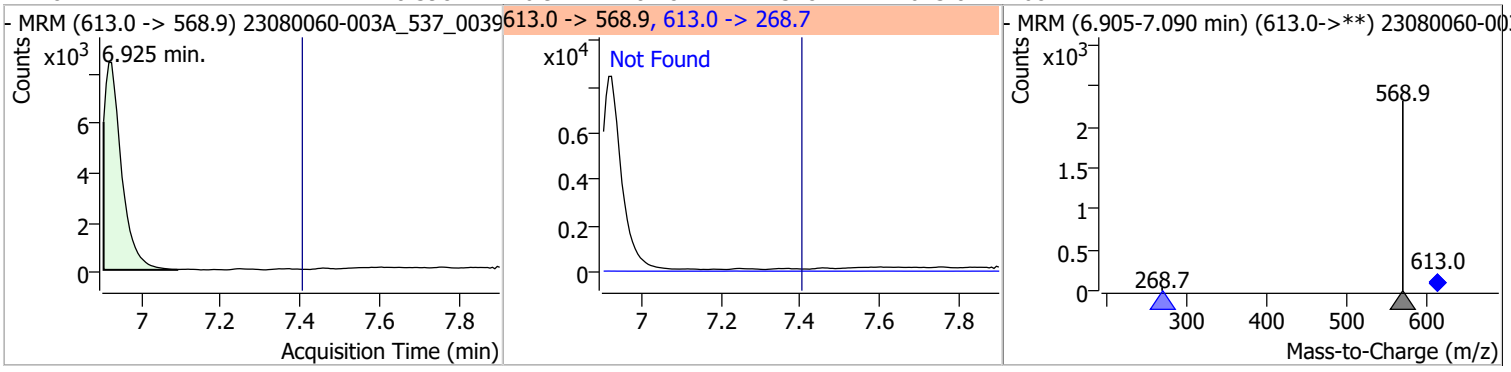
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0172	7.66	0.49	614	584.0 -> 525.9		40.4	121.1



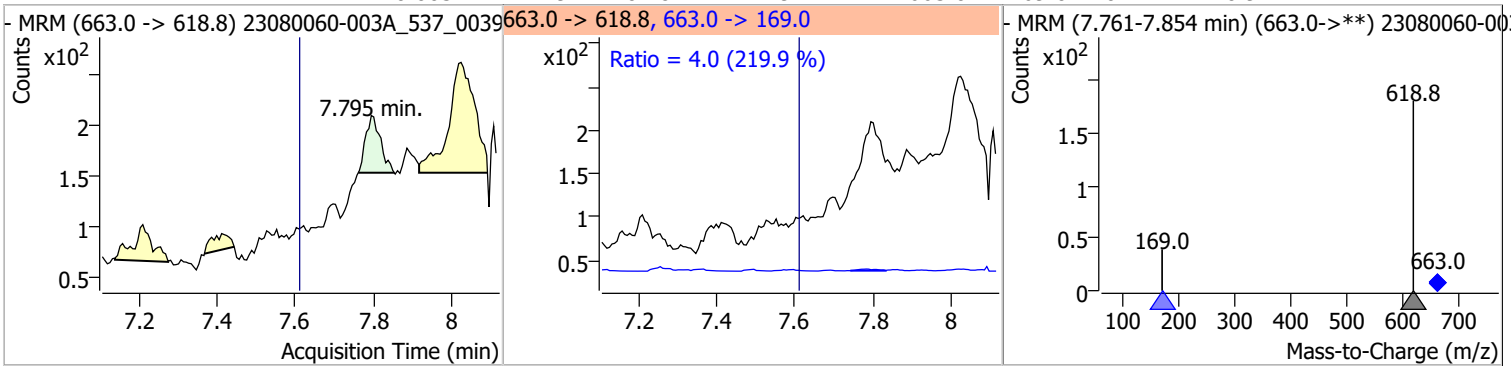
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0001	7.26	-0.03	13	631.0 -> 85.0	4.6	0.3	0.5



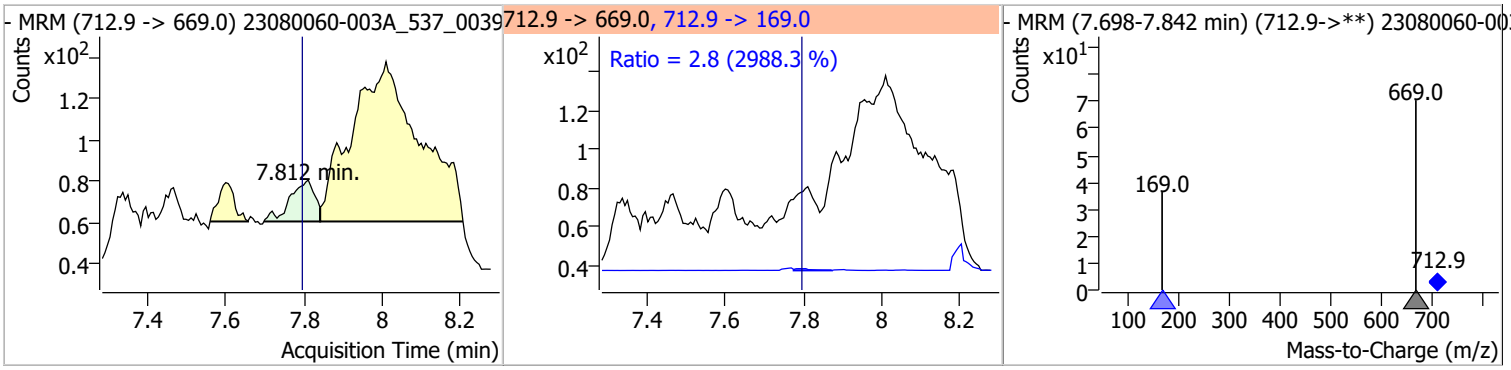
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.3981	6.92	-0.48	24328	613.0 -> 268.7		1.1	1.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0031	7.79	0.18	149	663.0 -> 169.0	4.0	0.9	2.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0029	7.81	0.02	86	712.9 -> 169.0	2.8	0.0	0.1



Quantitation Results Report

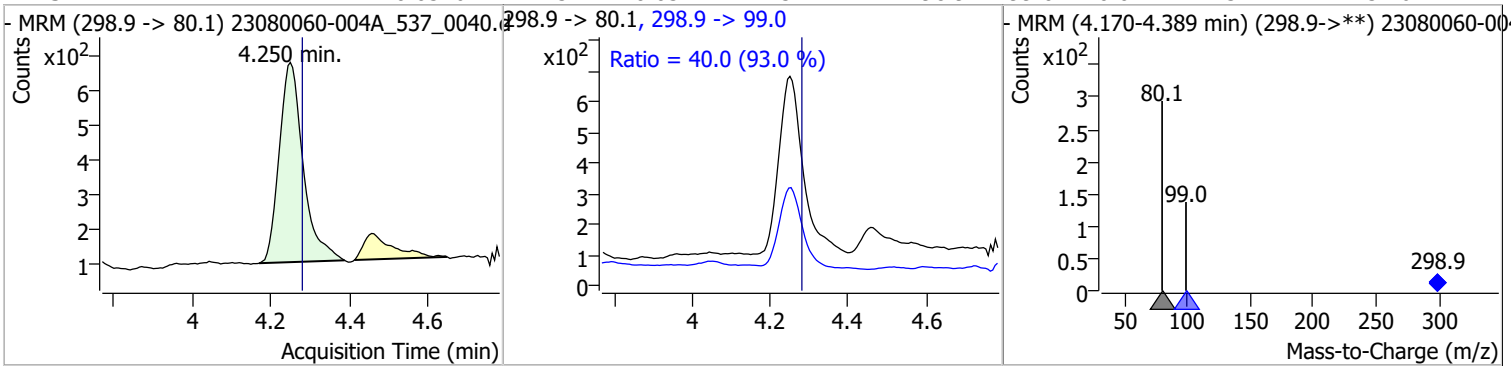
Agilent | Trusted Answers

Data File	23080060-004A_537_0040.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 1:54:38 PM
Sample Name	23080060-004A	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

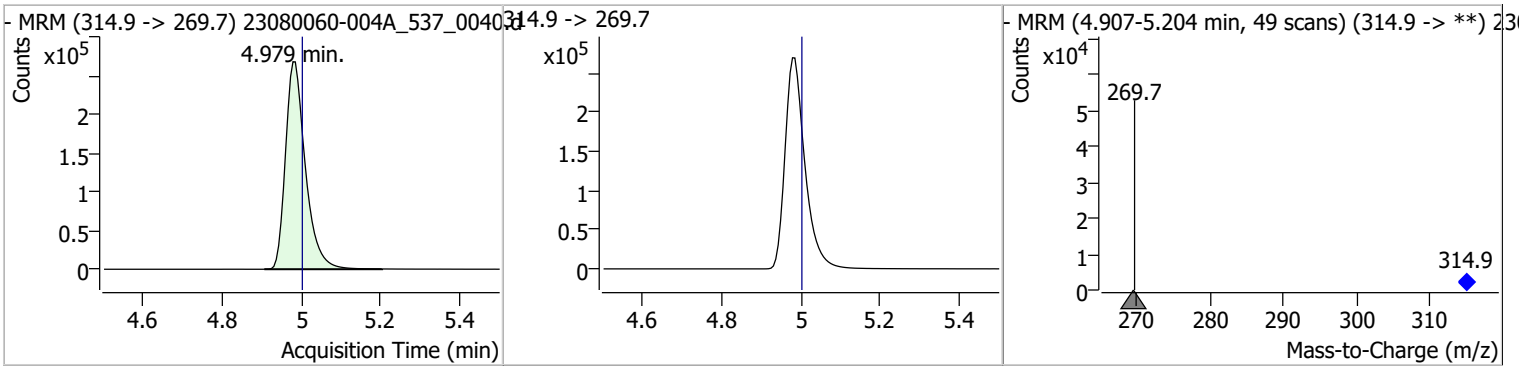
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	897843	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	1165115	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1737035	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.979	314.9 -> 269.7	937894	7.7080	ng/ml		-0.020
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 77.08%			
13C3-HFPO-DA	5.207	287.0 -> 169.0	18317	7.2469	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 72.47%			
13C2-PFDA	6.915	514.9 -> 469.9	533539	8.4394	ng/ml		0.028
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 84.39%			
NETFOSAA-d5	7.215	589.0 -> 419.0	744432	35.5509	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 88.88%			
Target Compounds							QValue
PFBS	4.250	298.9 -> 80.1	2452	0.0326	ng/ml		95
PFHxA	4.980	313.0 -> 269.0	6439	0.0415	ng/ml	#	96
HFPO-DA	5.208	285.0 -> 169.1	53	0.0186	ng/ml		66
PFHpA	5.670	362.9 -> 318.9	6226	0.0470	ng/ml		93
PFHxS	5.737	398.9 -> 79.9	977	0.0212	ng/ml		90
NaDONA	5.750	377.0 -> 250.9	53	0.0001	ng/ml	#	38
PFOA	6.171	413.0 -> 369.1	16251	0.1508	ng/ml	#m	89
PFNA	6.577	463.0 -> 418.9	1938	0.0288	ng/ml		97
PFOS	6.589	498.9 -> 80.1	3486	0.1066	ng/ml		93
9Cl-PF3ONS	6.769	531.0 -> 351.0	31	0.0003	ng/ml	#	91
PFDA	6.922	513.0 -> 468.9	271	0.0045	ng/ml	#	8
N-MeFOSAA	7.073	570.0 -> 418.9	262	0.0070	ng/ml		95
PFUdA	7.159	563.0 -> 518.8	24	0.0004	ng/ml		59
N-EtFOSAA	7.216	584.0 -> 419.0	738	0.0222	ng/ml	#	30
11ClPF3OUdS	7.358	631.0 -> 450.8	74	0.0007	ng/ml		99
PFDoA	7.476	613.0 -> 568.9	105	0.0016	ng/ml		96
PFTrDA	7.801	663.0 -> 618.8	1502	0.0286	ng/ml	#	95
PFTA	7.726	712.9 -> 669.0	34	0.0011	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

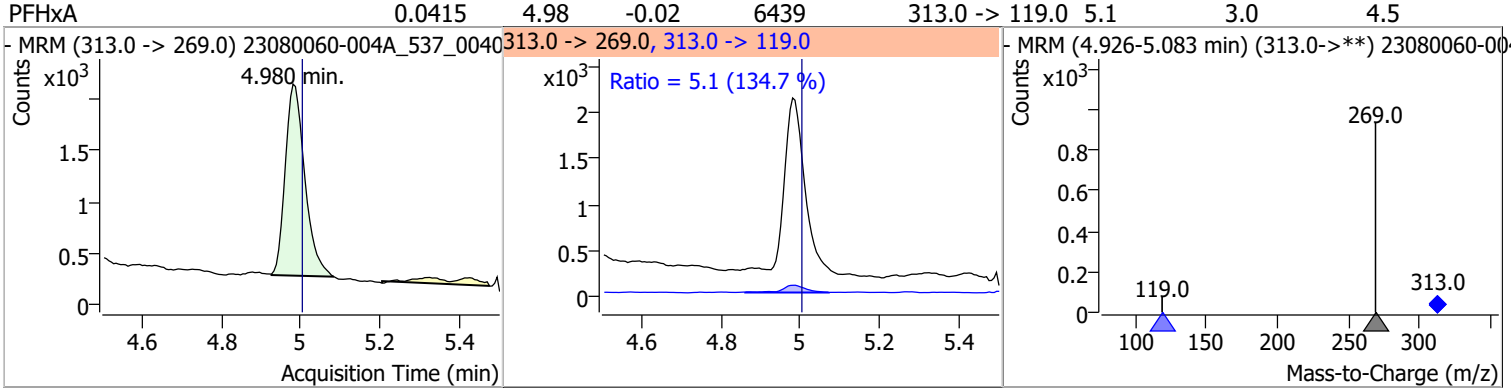
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.0326	4.25	-0.03	2452	298.9 -> 99.0	40.0	34.4	51.6



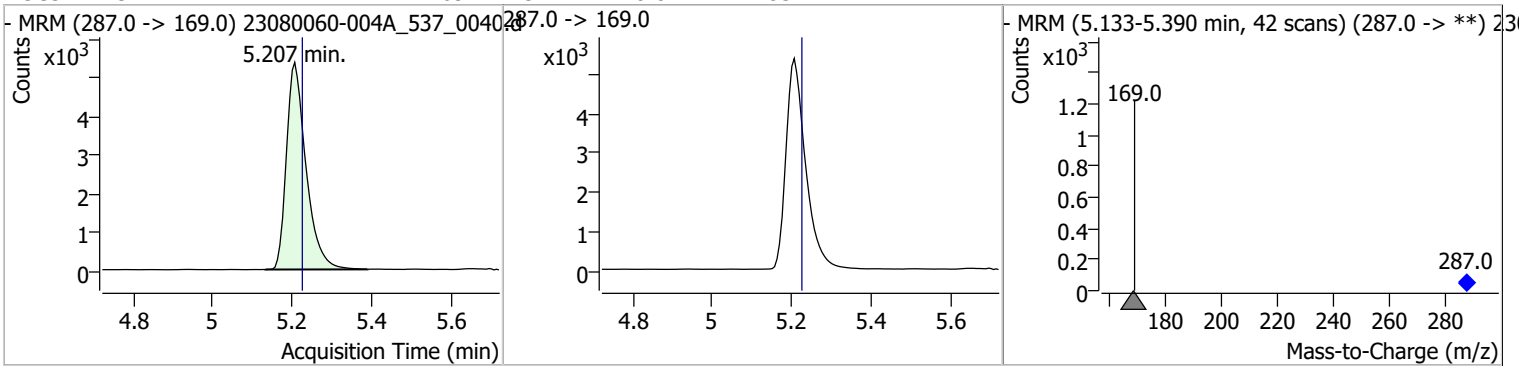
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	7.7080	4.98	-0.02	937894				



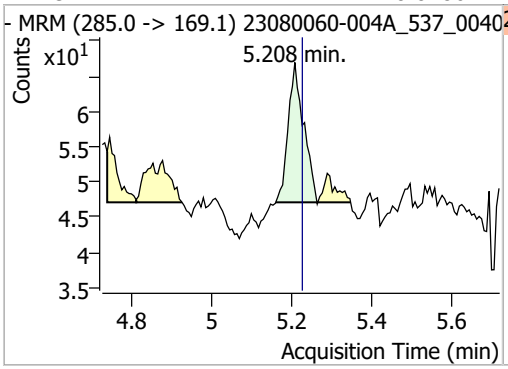
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.0415	4.98	-0.02	6439	313.0 -> 119.0	5.1	3.0	4.5

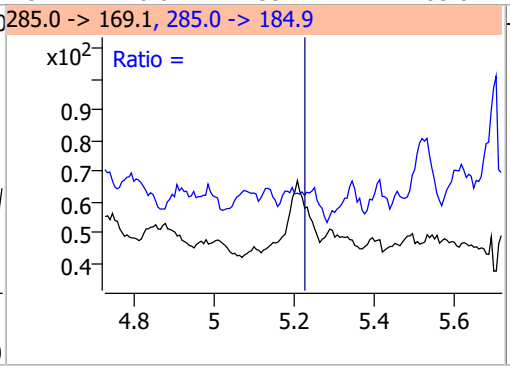


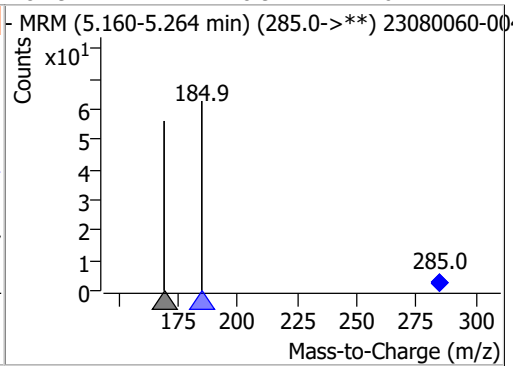
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	7.2469	5.21	-0.02	18317				



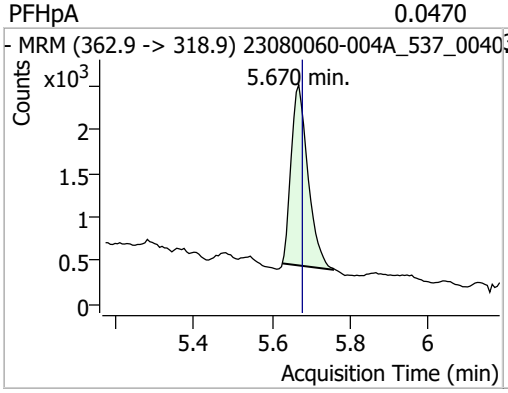
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0186	5.21	-0.02	53	285.0 -> 184.9		10.9	16.4

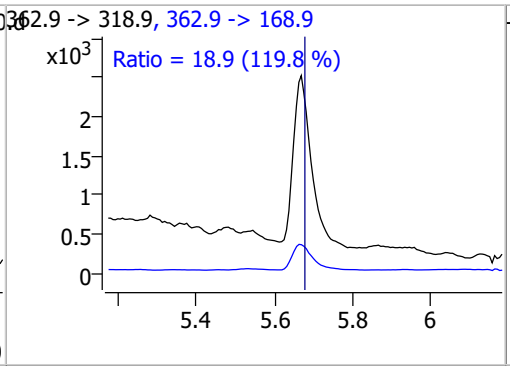


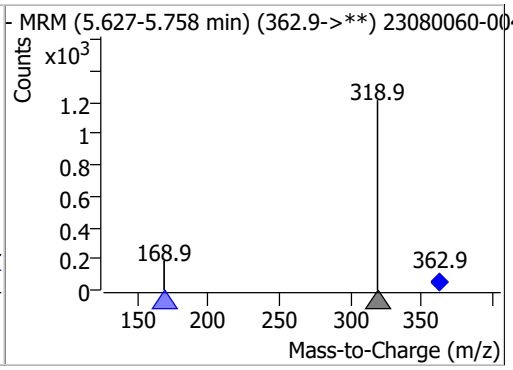




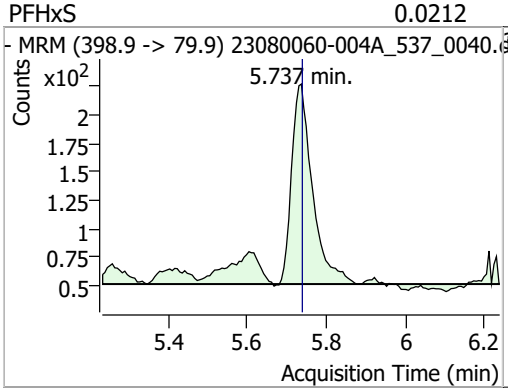
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.0470	5.67	-0.01	6226	362.9 -> 168.9	18.9	12.6	18.9

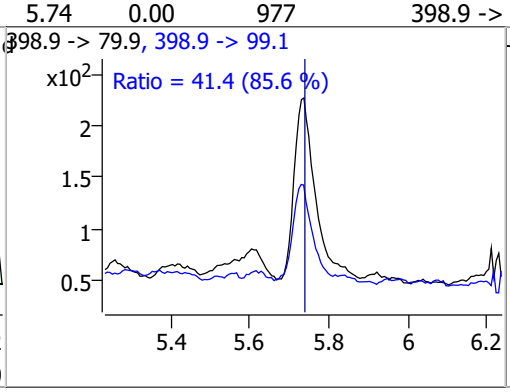


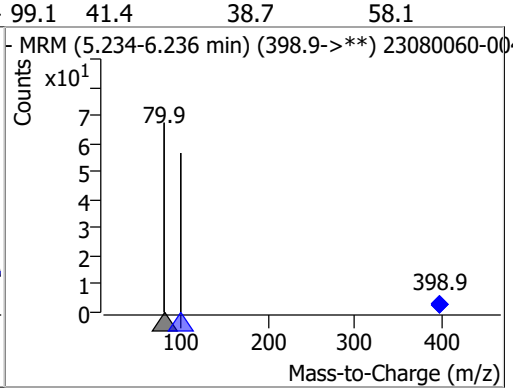




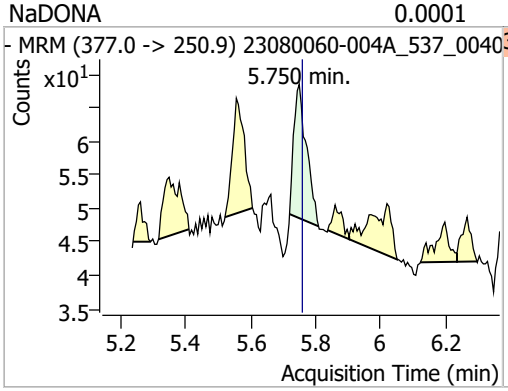
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.0212	5.74	0.00	977	398.9 -> 99.1	41.4	38.7	58.1

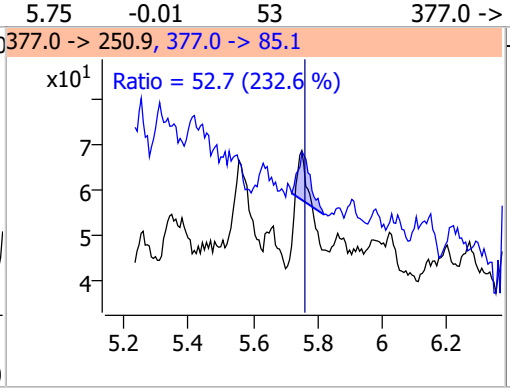


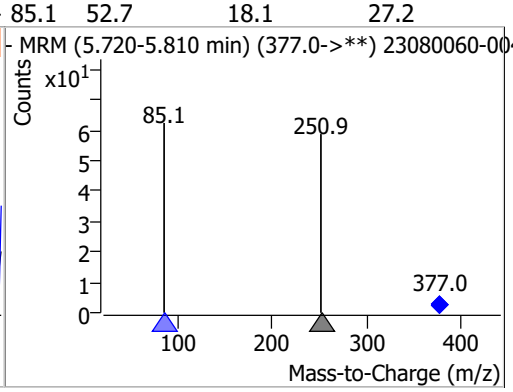




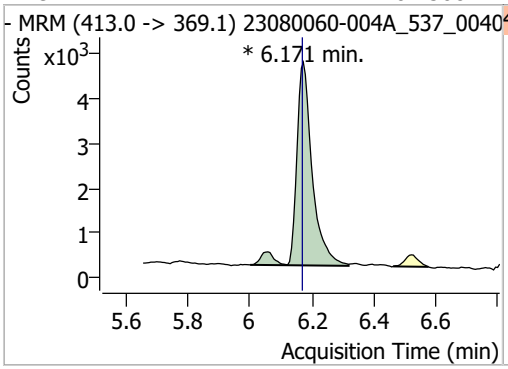
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0001	5.75	-0.01	53	377.0 -> 85.1	52.7	18.1	27.2

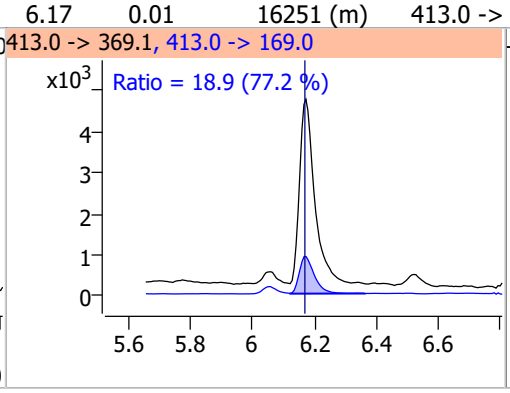


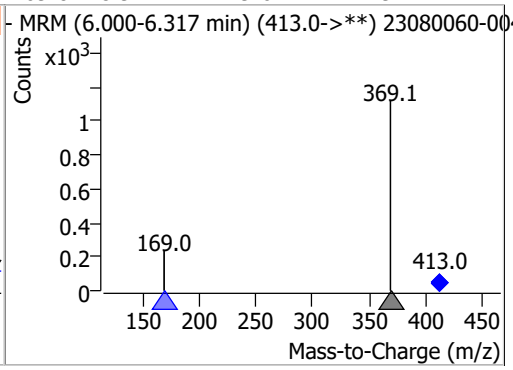




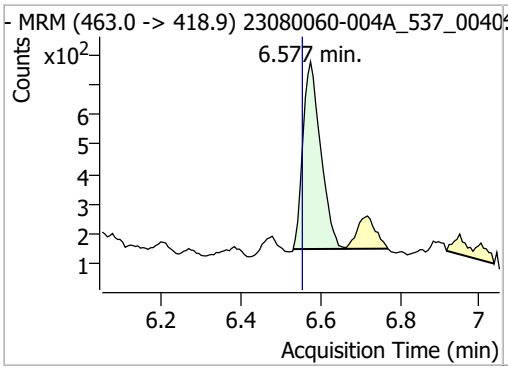
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.1508	6.17	0.01	16251 (m)	413.0 -> 169.0	18.9	19.6	29.4

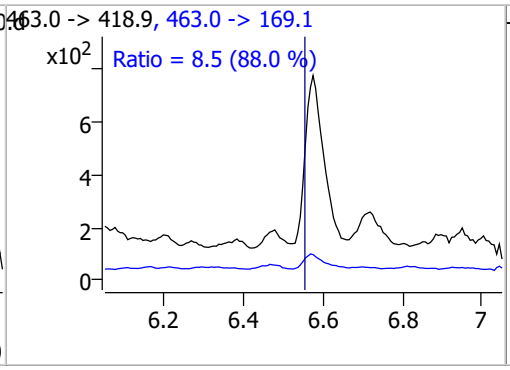


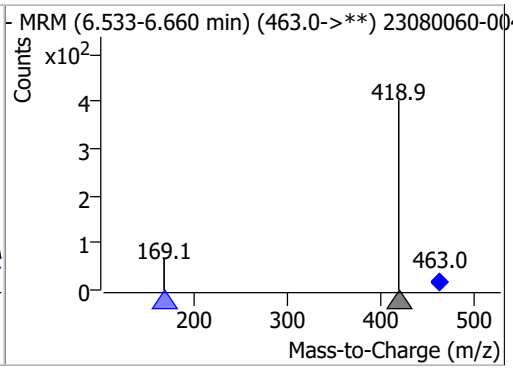




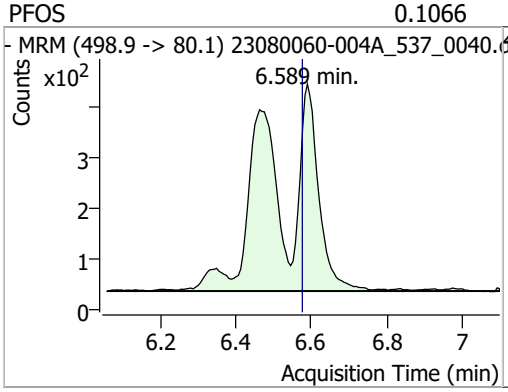
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.0288	6.58	0.02	1938	463.0 -> 169.1	8.5	7.7	11.5

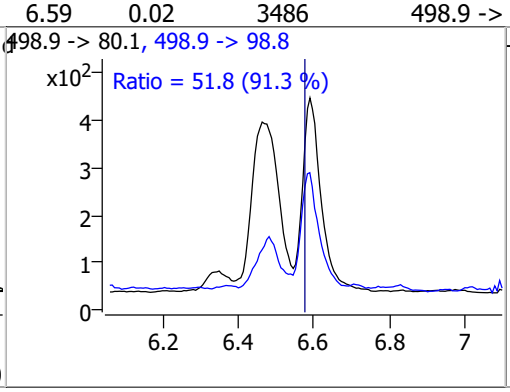


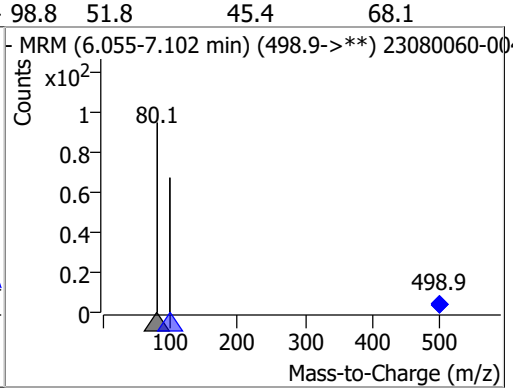




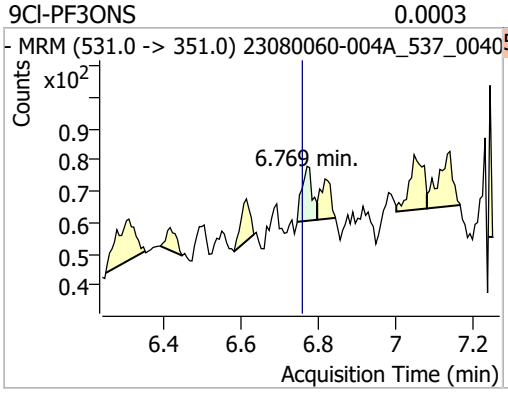
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.1066	6.59	0.02	3486	498.9 -> 98.8	51.8	45.4	68.1

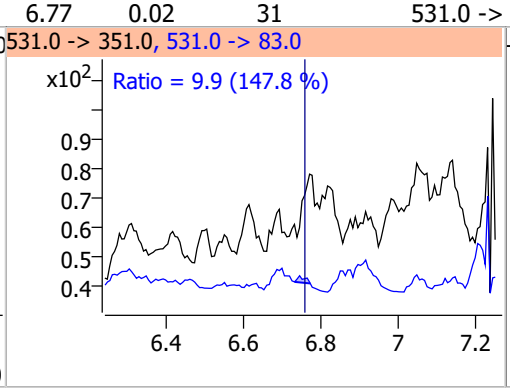


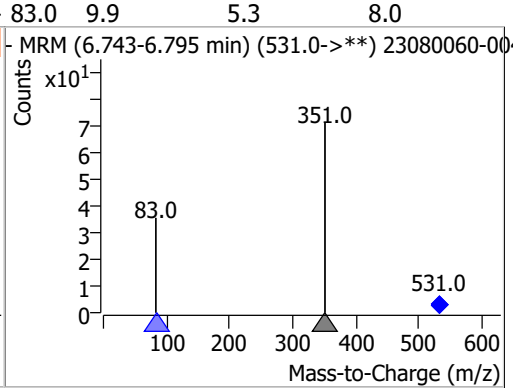




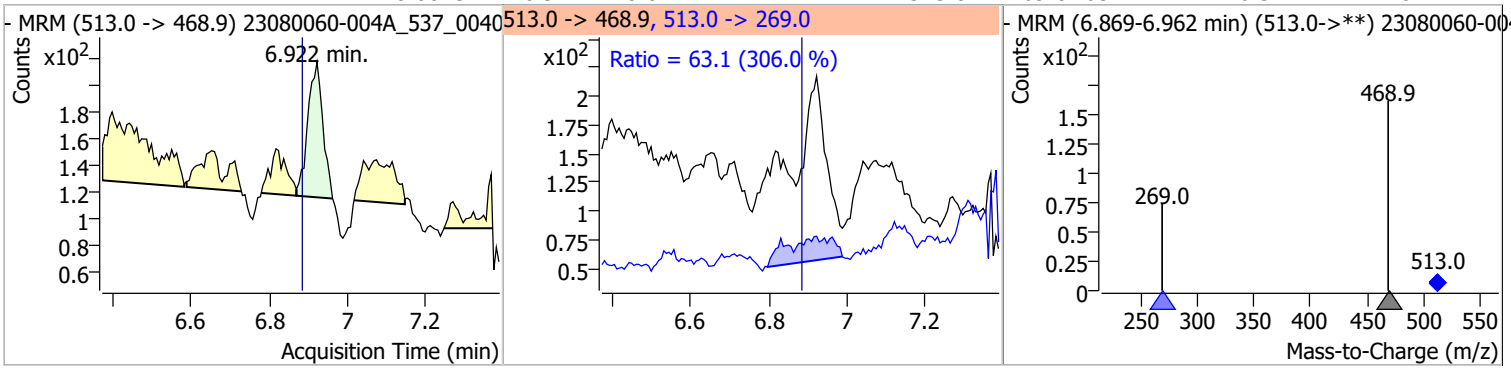
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0003	6.77	0.02	31	531.0 -> 83.0	9.9	5.3	8.0



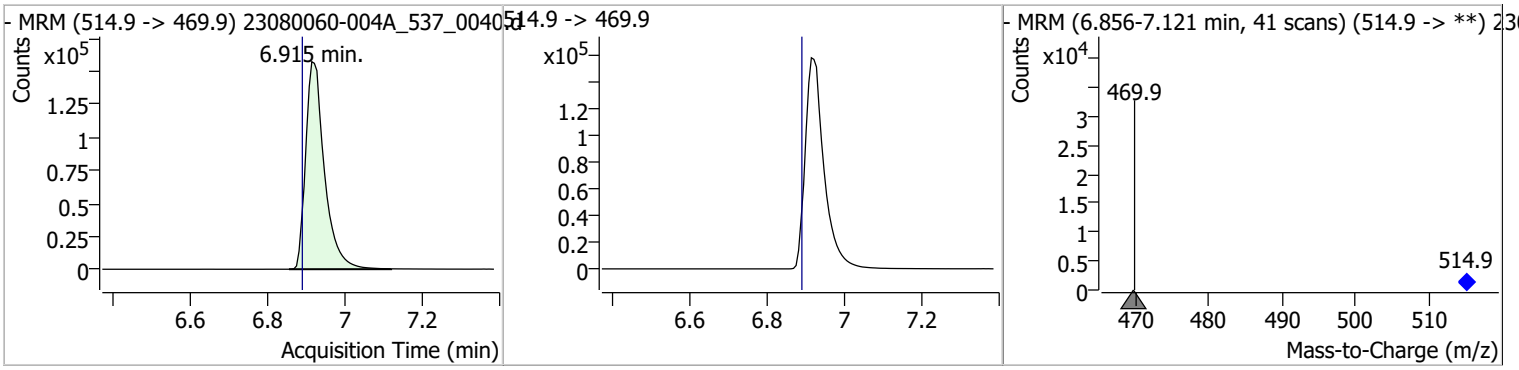




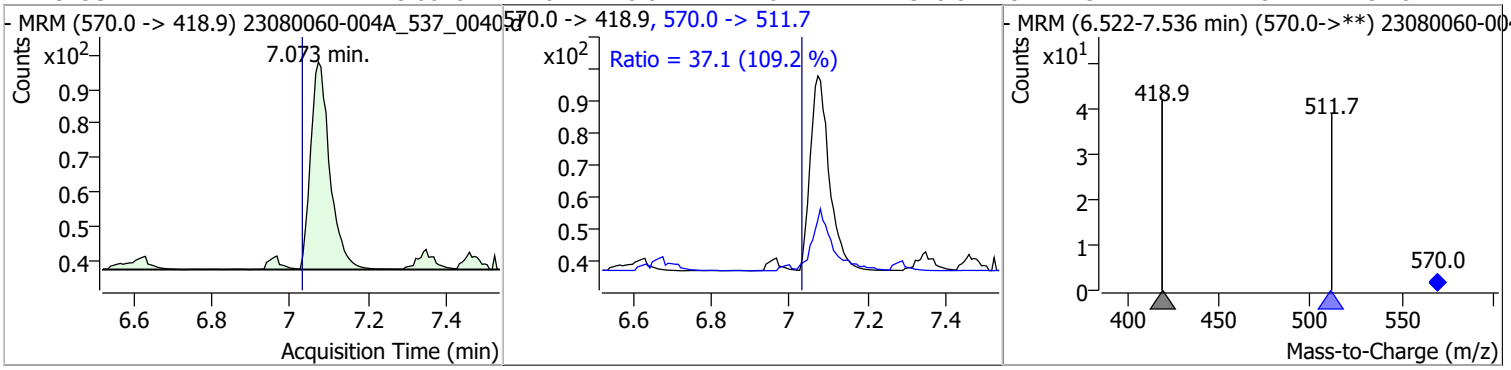
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0045	6.92	0.04	271	513.0 -> 269.0	63.1	16.5	24.8



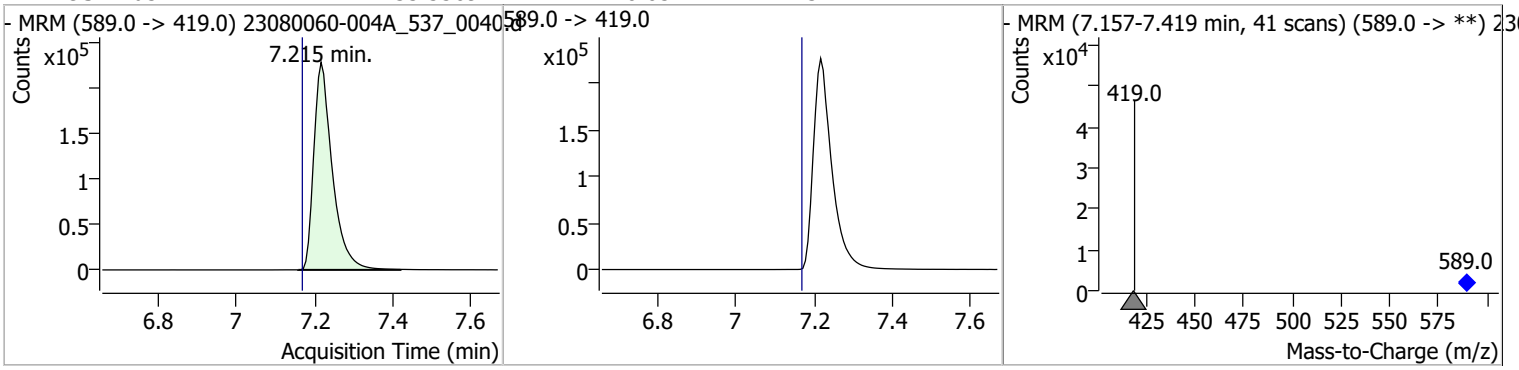
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	8.4394	6.92	0.03	533539				



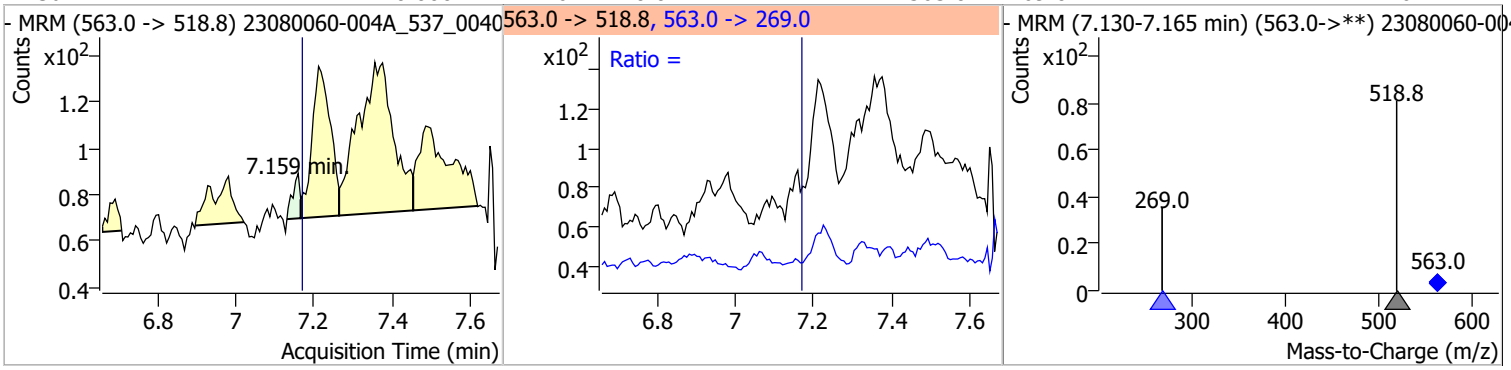
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0070	7.07	0.04	262	570.0 -> 511.7	37.1	17.0	51.0



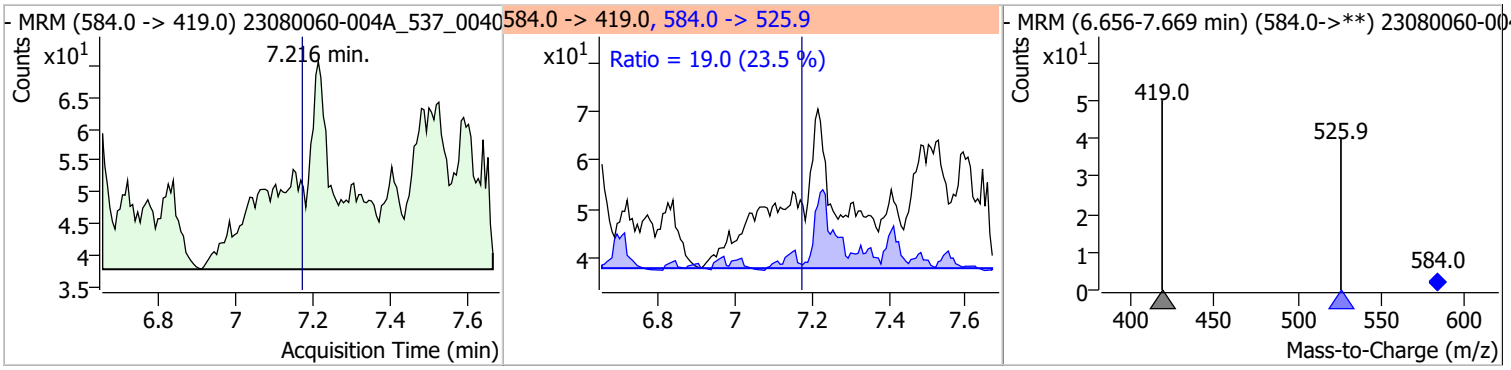
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	35.5509	7.22	0.05	744432				



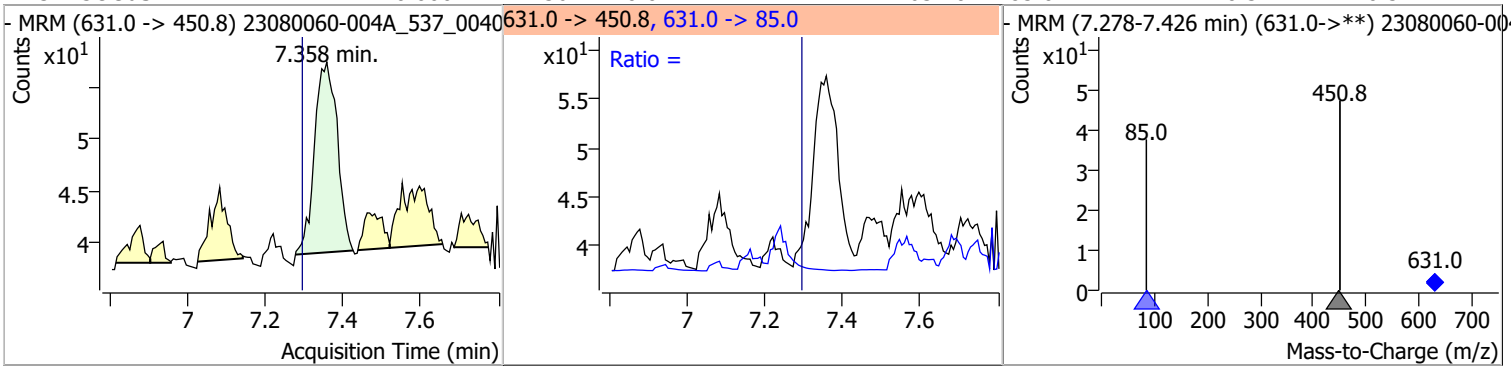
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0004	7.16	-0.01	24	563.0 -> 269.0		14.4	21.6



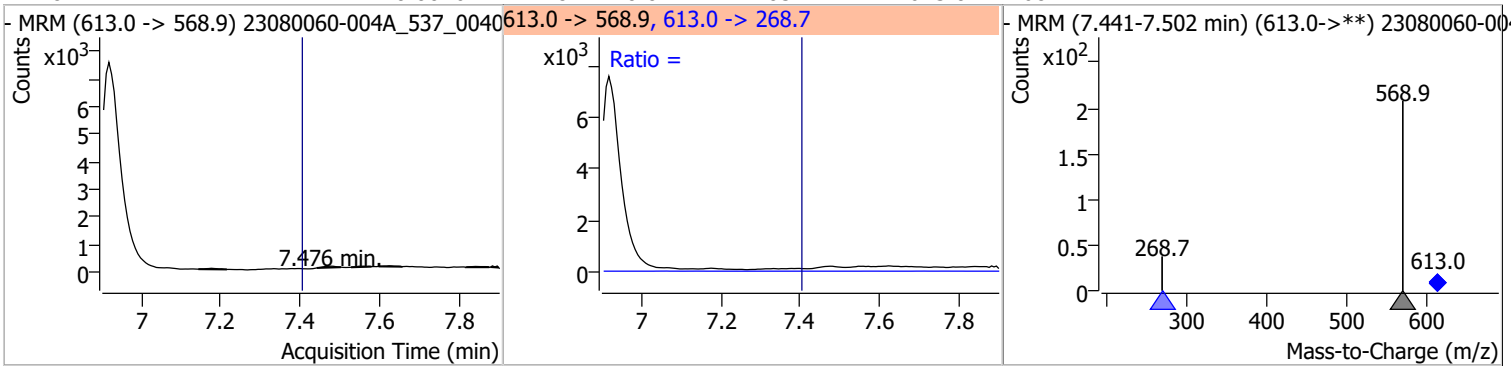
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0222	7.22	0.04	738	584.0 -> 525.9	19.0	40.4	121.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0007	7.36	0.07	74	631.0 -> 85.0		0.3	0.5

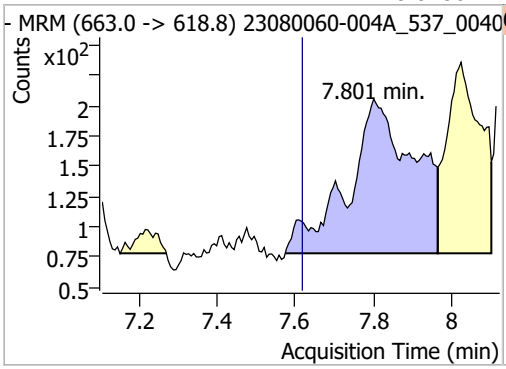


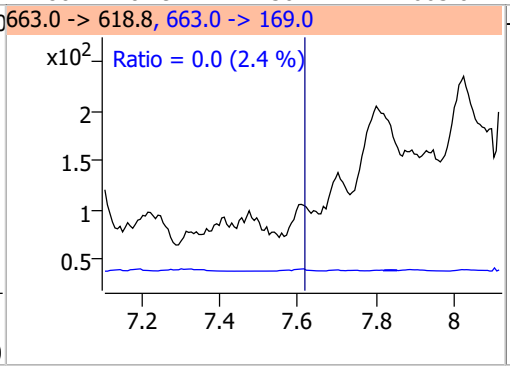
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.0016	7.48	0.07	105	613.0 -> 268.7		1.1	1.7

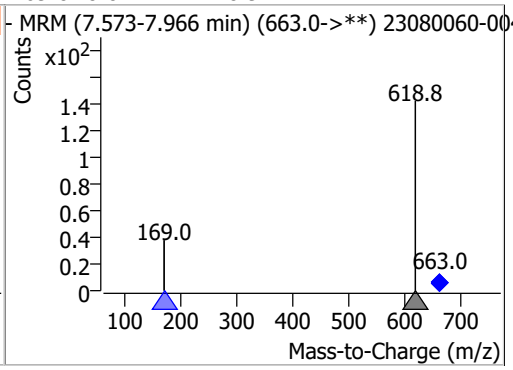


Quantitation Results Report

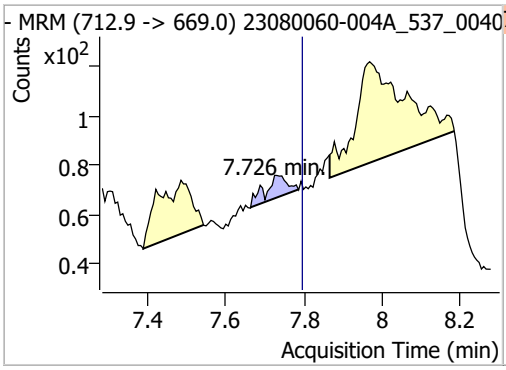
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0286	7.80	0.19	1502	663.0 -> 169.0	0.0	0.9	2.7

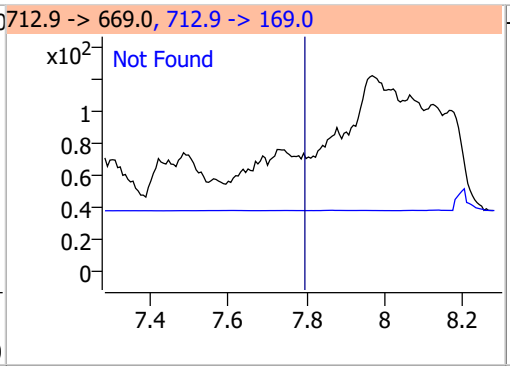


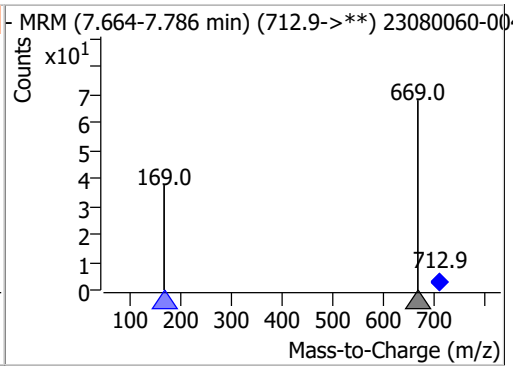




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0011	7.73	-0.07	34	712.9 -> 169.0		0.0	0.1







Quantitation Results Report

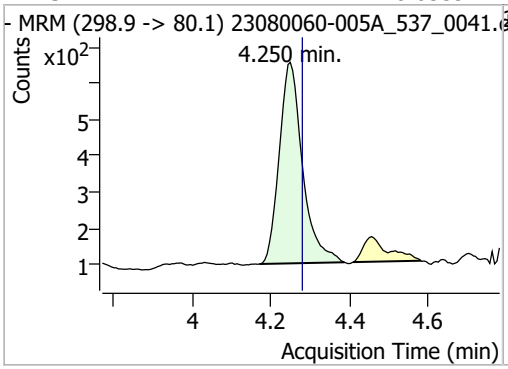
Agilent | Trusted Answers

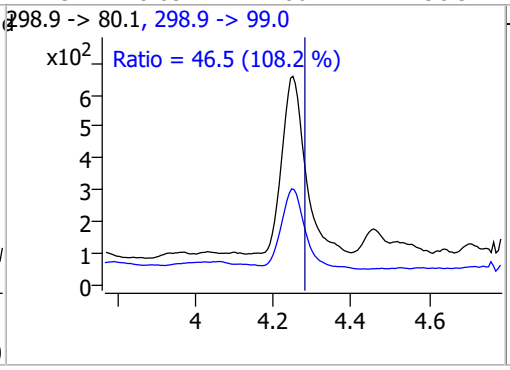
Data File	23080060-005A_537_0041.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 2:07:22 PM
Sample Name	23080060-005A	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

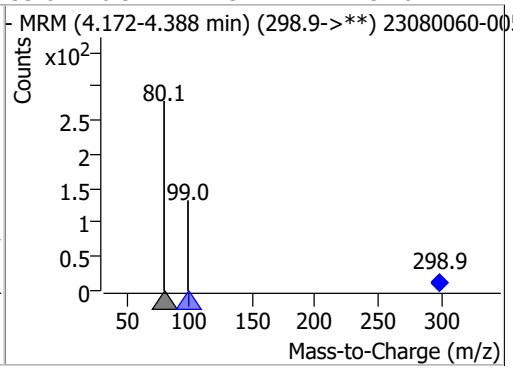
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	806116	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	1070887	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.066	573.0 -> 418.9	1834758	4.0000	ng/ml		0.038
System Monitoring Compounds							
13C2-PFHxA	4.979	314.9 -> 269.7	1025363	9.1684	ng/ml		-0.020
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 91.68%			
13C3-HFPO-DA	5.207	287.0 -> 169.0	20494	8.8216	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 88.22%			
13C2-PFDA	6.915	514.9 -> 469.9	570111	9.8114	ng/ml		0.028
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 98.11%			
NETFOSAA-d5	7.215	589.0 -> 419.0	895694	40.4962	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 101.24%			
Target Compounds							QValue
PFBS	4.250	298.9 -> 80.1	2286	0.0339	ng/ml		95
PFHxA	4.980	313.0 -> 269.0	6096	0.0427	ng/ml		100
HFPO-DA	5.208	285.0 -> 169.1	52	0.0196	ng/ml	#	32
PFHpA	5.670	362.9 -> 318.9	5785	0.0475	ng/ml		100
PFHxS	5.731	398.9 -> 79.9	783	0.0189	ng/ml		87
NaDONA	5.756	377.0 -> 250.9	51	0.0001	ng/ml	#	43
PFOA	6.171	413.0 -> 369.1	12676	0.1280	ng/ml	m	97
PFNA	6.577	463.0 -> 418.9	1745	0.0283	ng/ml		99
PFOS	6.462	498.9 -> 80.1	2984	0.1017	ng/ml		23
9Cl-PF3ONS	6.710	531.0 -> 351.0	12	0.0001	ng/ml	#	1
PFDA	6.916	513.0 -> 468.9	453	0.0081	ng/ml	#	84
N-MeFOSAA	7.079	570.0 -> 418.9	229	0.0058	ng/ml		72
PFUdA	7.217	563.0 -> 518.8	229	0.0041	ng/ml	#	79
N-EtFOSAA	7.618	584.0 -> 419.0	318	0.0091	ng/ml		9
11ClPF3OUdS	7.266	631.0 -> 450.8	10	0.0001	ng/ml		99
PFDoA	7.616	613.0 -> 568.9	356	0.0058	ng/ml		100
PFTrDA	7.690	663.0 -> 618.8	60	0.0012	ng/ml	#	84
PFTA	7.975	712.9 -> 669.0	155	0.0053	ng/ml	#	100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

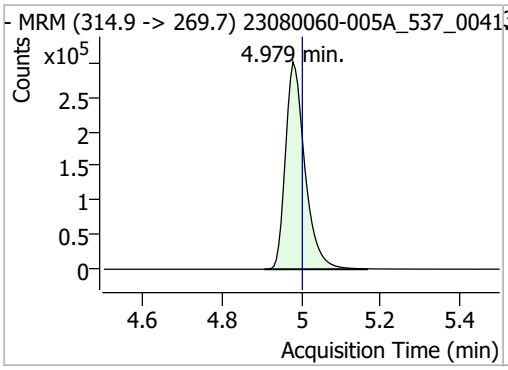
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.0339	4.25	-0.03	2286	298.9 -> 99.0	46.5	34.4	51.6

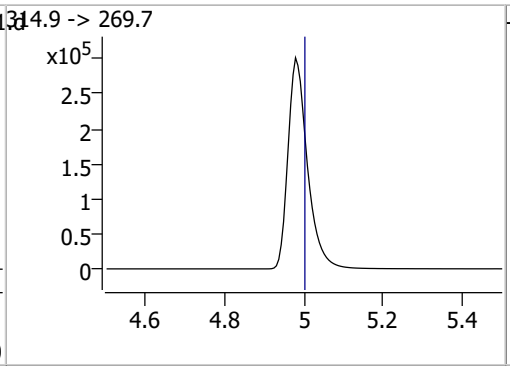


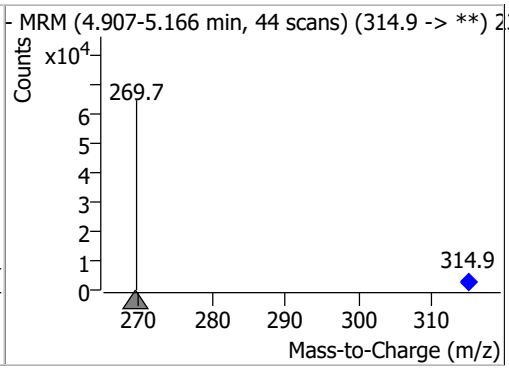




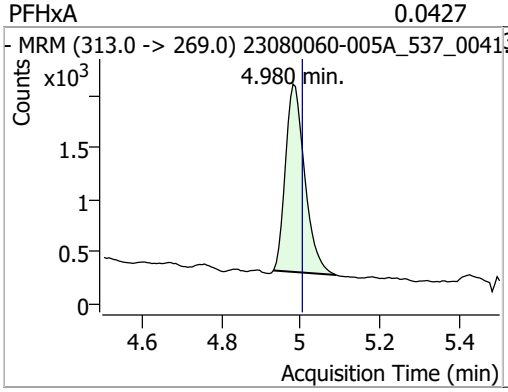
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	9.1684	4.98	-0.02	1025363				

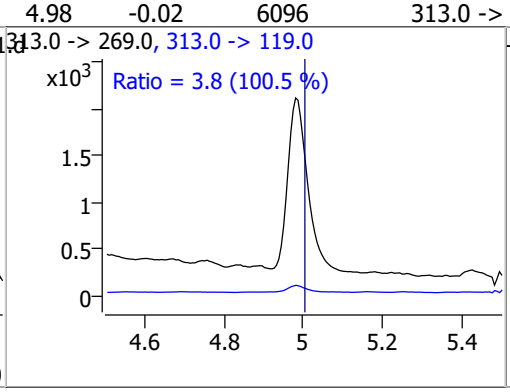


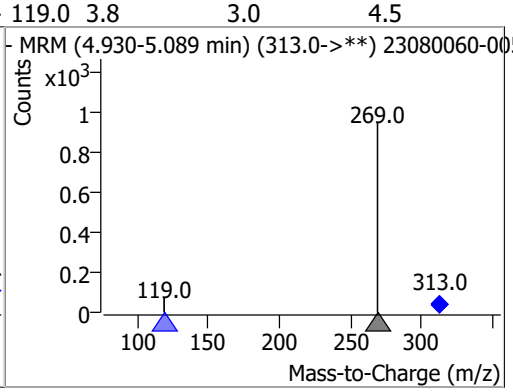




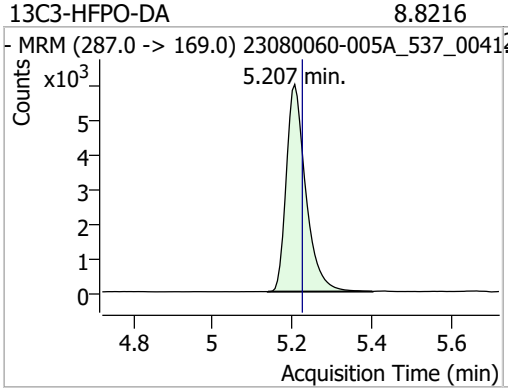
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.0427	4.98	-0.02	6096	313.0 -> 119.0	3.8	3.0	4.5

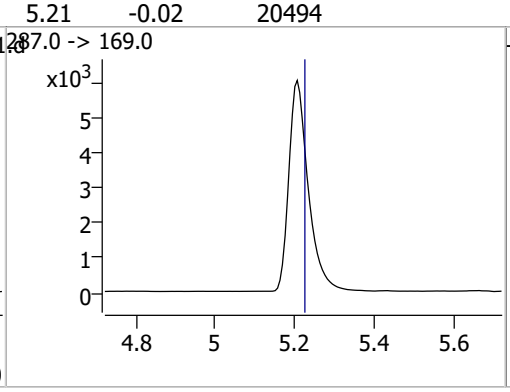


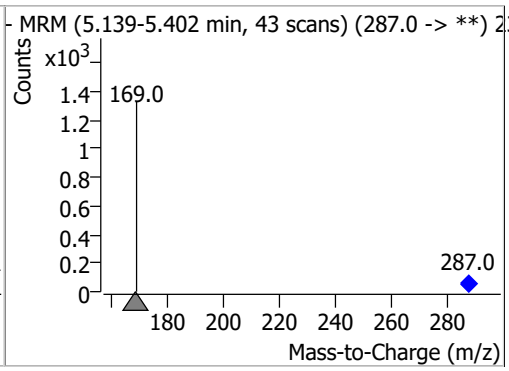




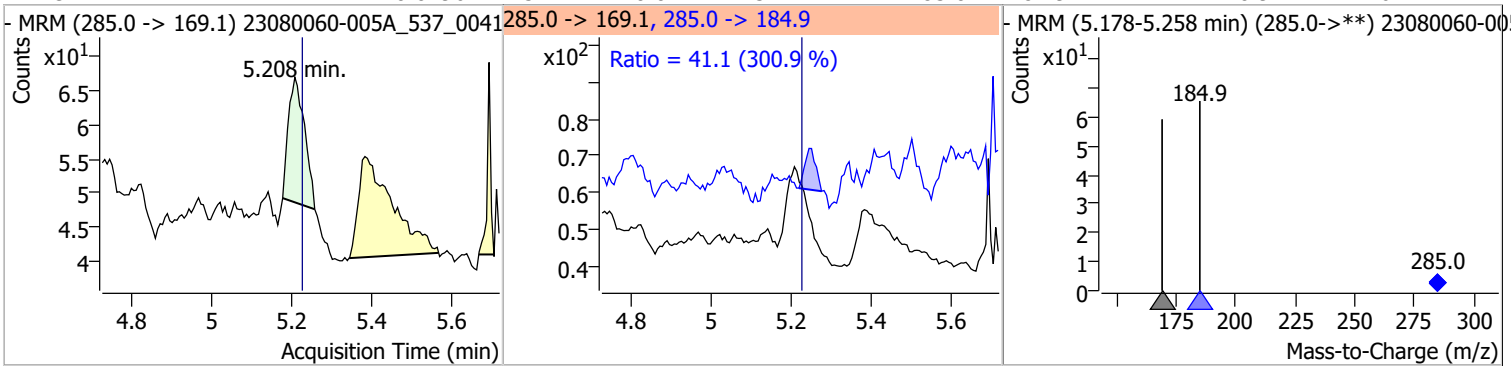
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	8.8216	5.21	-0.02	20494				



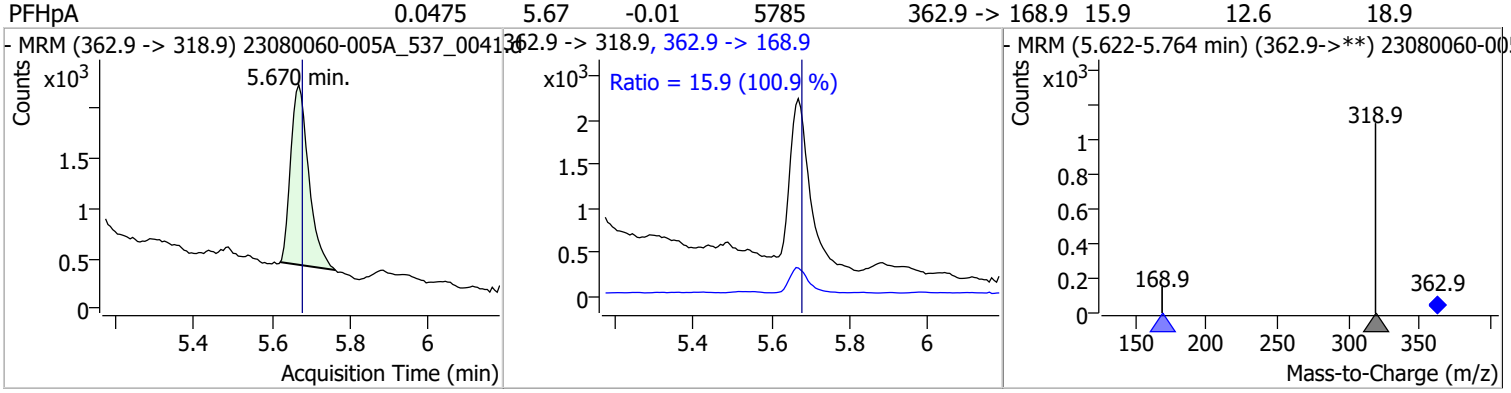




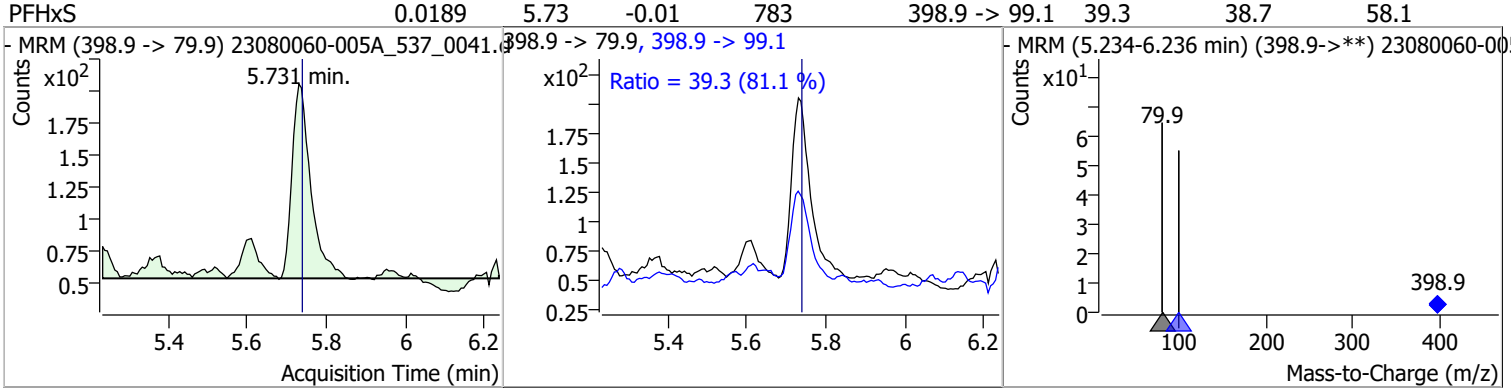
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0196	5.21	-0.02	52	285.0 -> 184.9	41.1	10.9	16.4



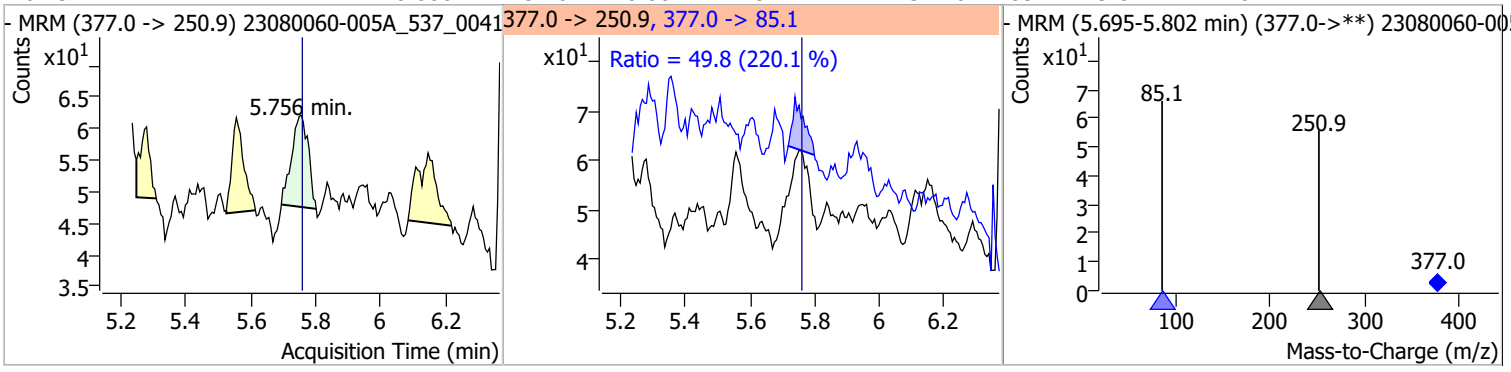
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.0475	5.67	-0.01	5785	362.9 -> 168.9	15.9	12.6	18.9



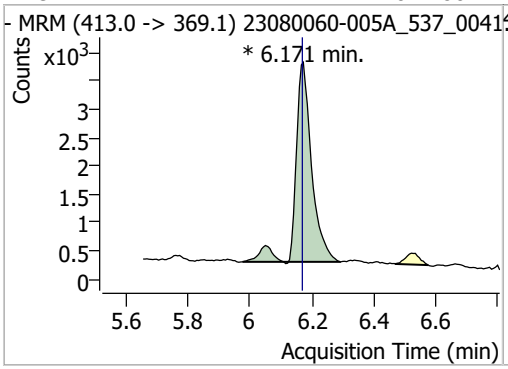
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.0189	5.73	-0.01	783	398.9 -> 99.1	39.3	38.7	58.1

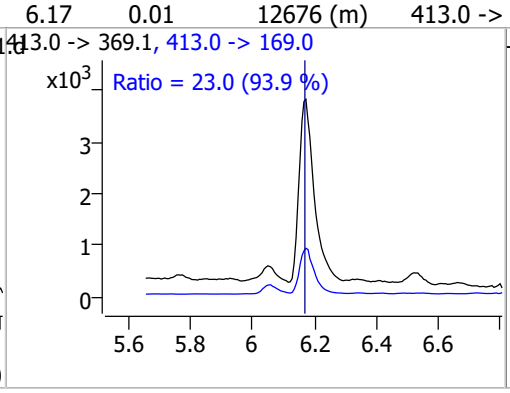


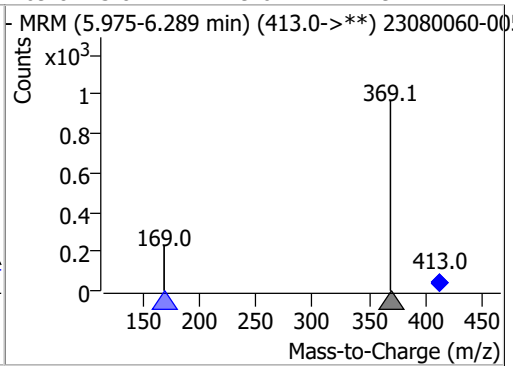
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0001	5.76	0.00	51	377.0 -> 85.1	49.8	18.1	27.2



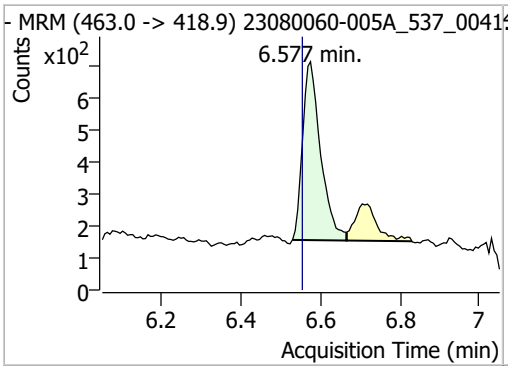
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.1280	6.17	0.01	12676 (m)	413.0 -> 169.0	23.0	19.6	29.4

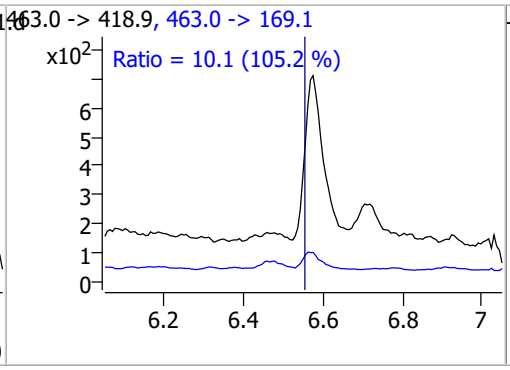


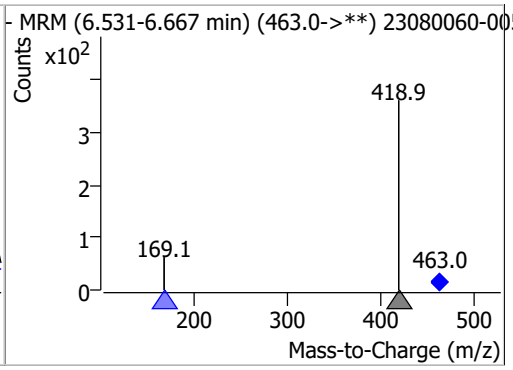




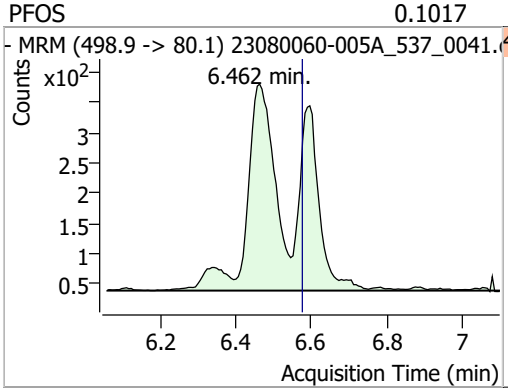
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.0283	6.58	0.02	1745	463.0 -> 169.1	10.1	7.7	11.5

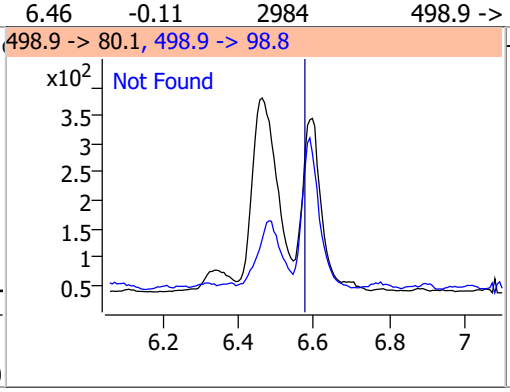


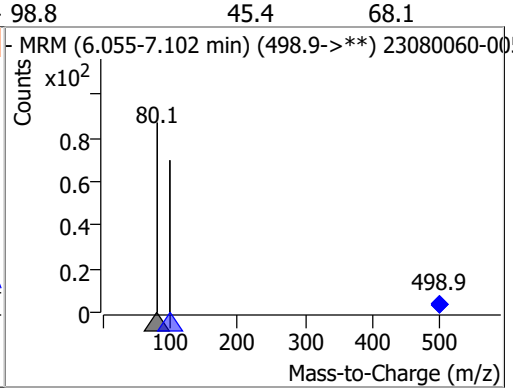




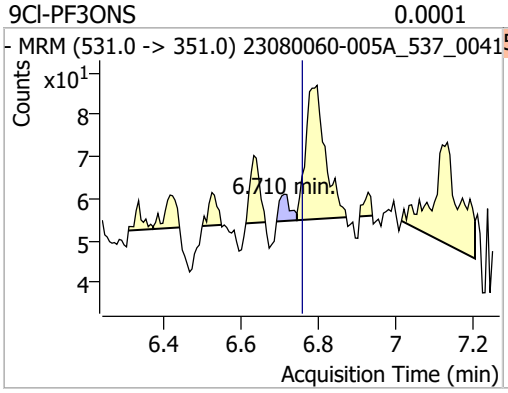
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.1017	6.46	-0.11	2984	498.9 -> 98.8		45.4	68.1

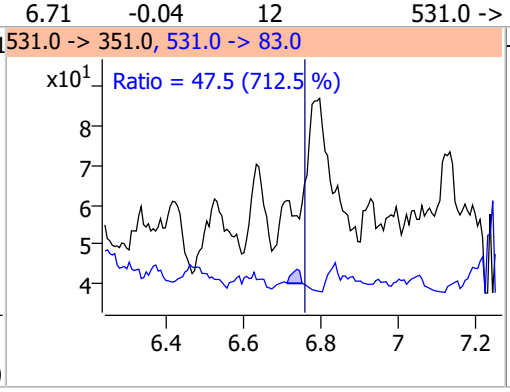


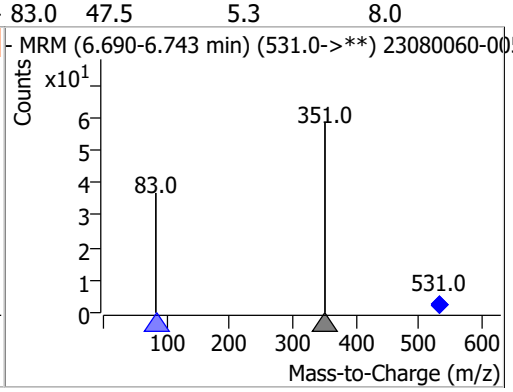




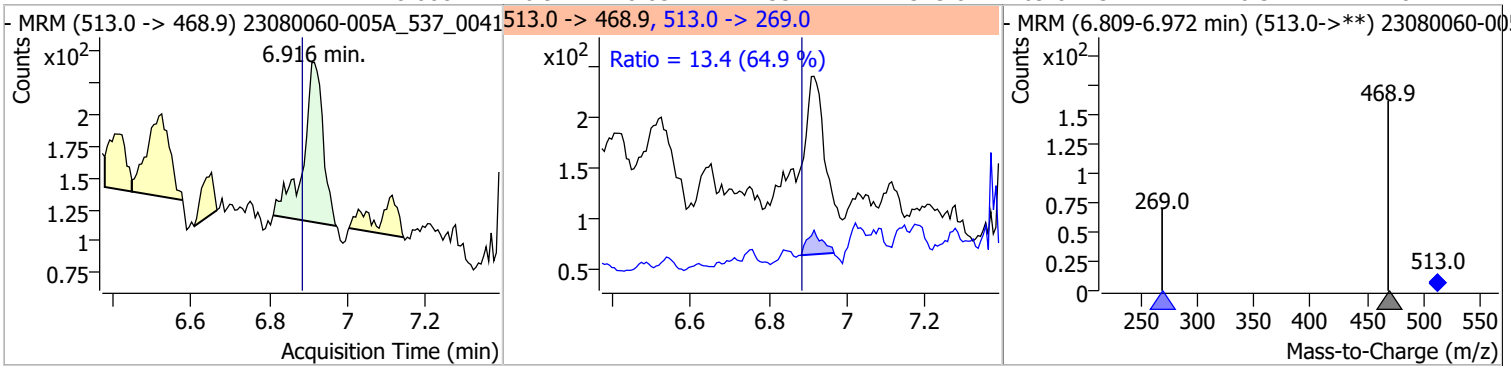
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0001	6.71	-0.04	12	531.0 -> 83.0	47.5	5.3	8.0



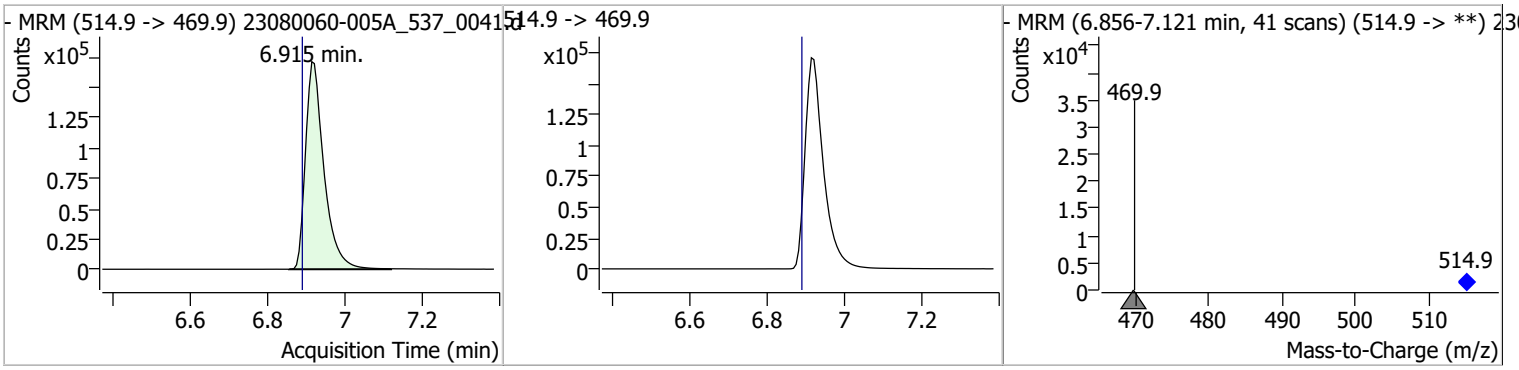




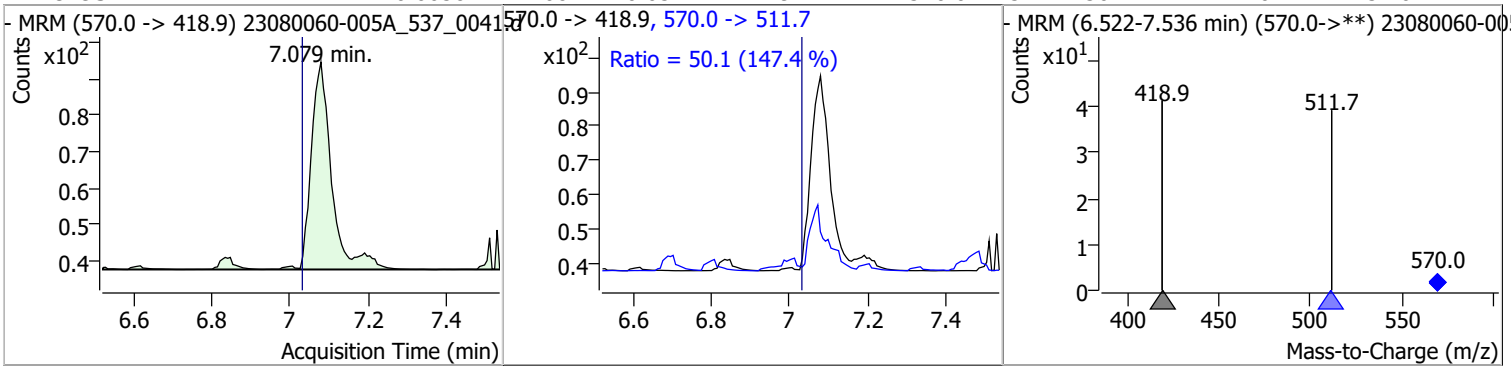
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0081	6.92	0.03	453	513.0 -> 269.0	13.4	16.5	24.8



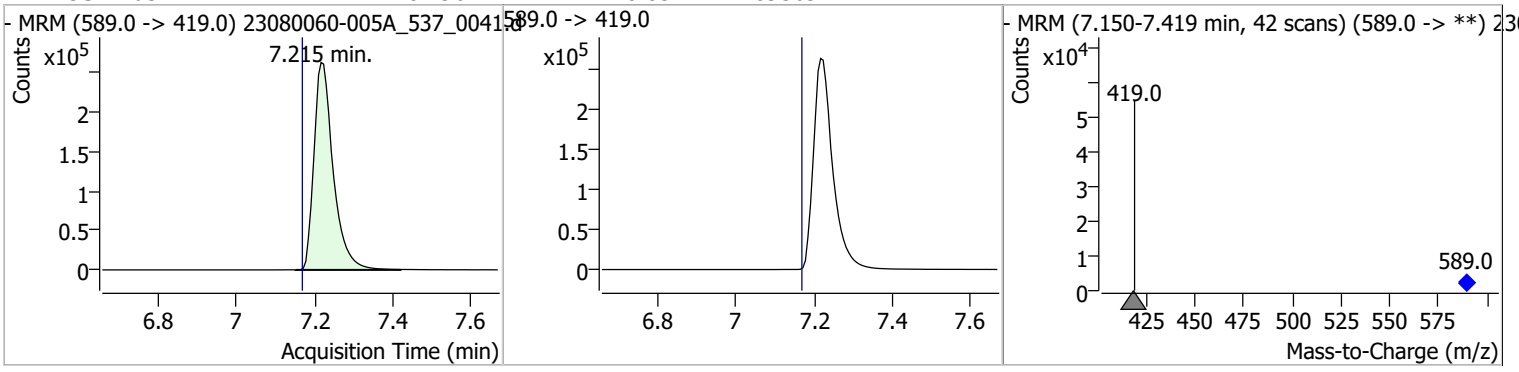
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	9.8114	6.92	0.03	570111				



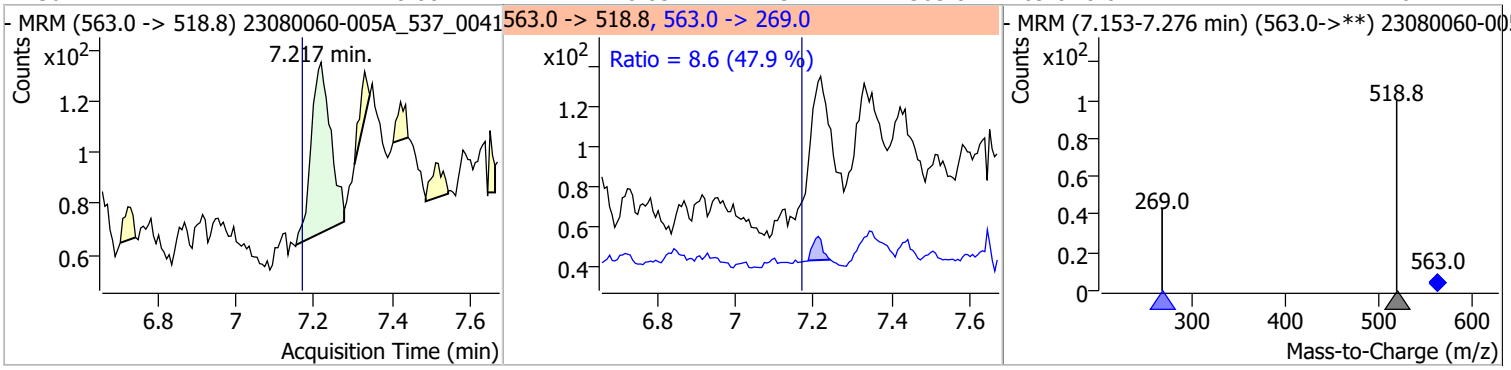
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0058	7.08	0.05	229	570.0 -> 511.7	50.1	17.0	51.0



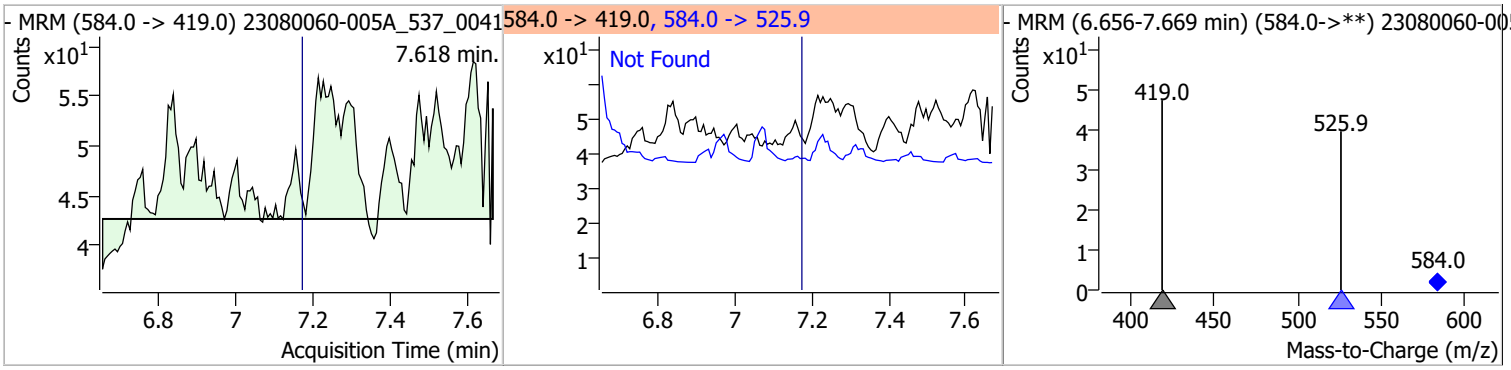
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	40.4962	7.22	0.05	895694				



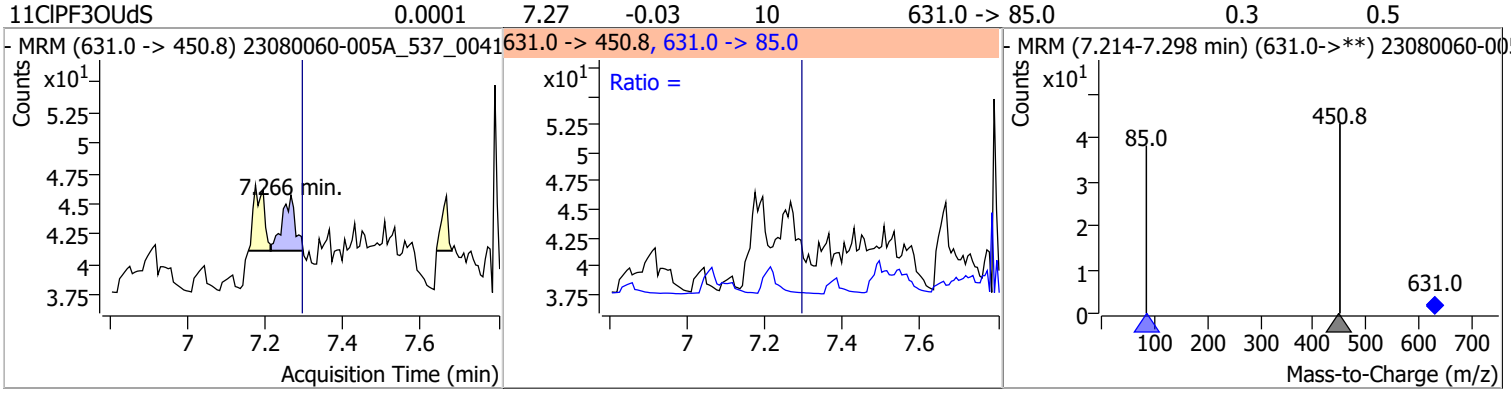
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0041	7.22	0.05	229	563.0 -> 269.0	8.6	14.4	21.6



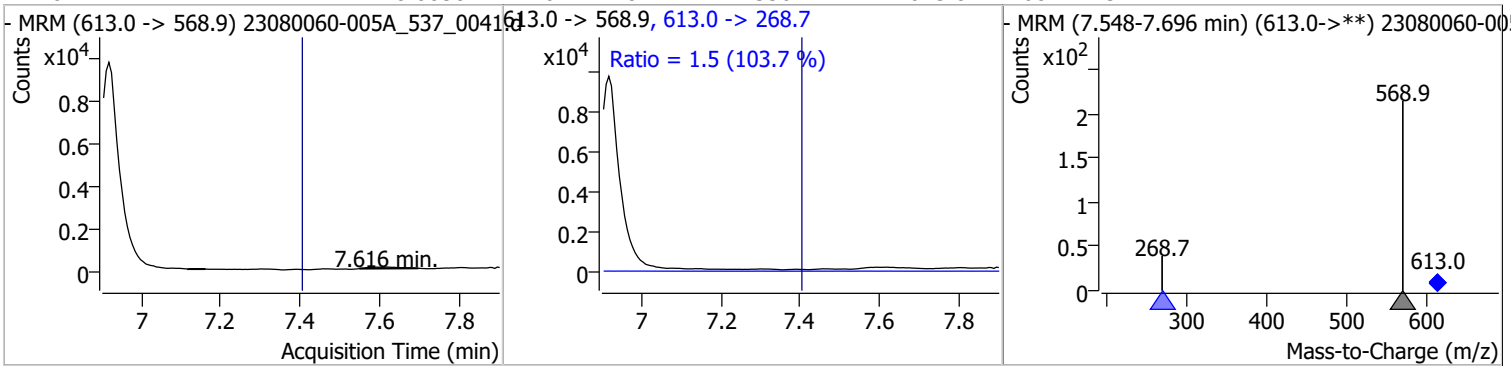
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0091	7.62	0.45	318	584.0 -> 525.9		40.4	121.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0001	7.27	-0.03	10	631.0 -> 85.0		0.3	0.5

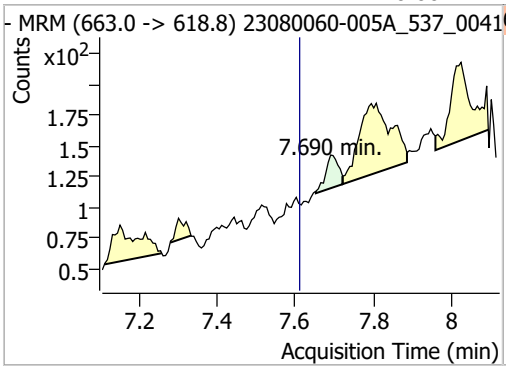


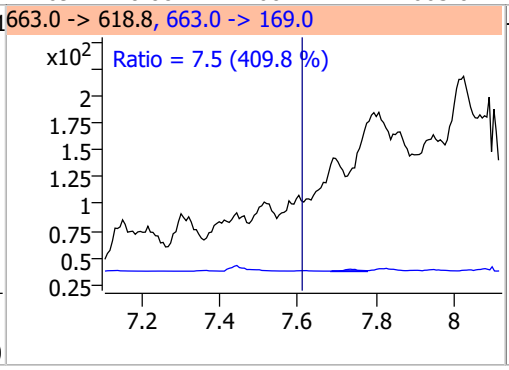
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.0058	7.62	0.22	356	613.0 -> 268.7	1.5	1.1	1.7

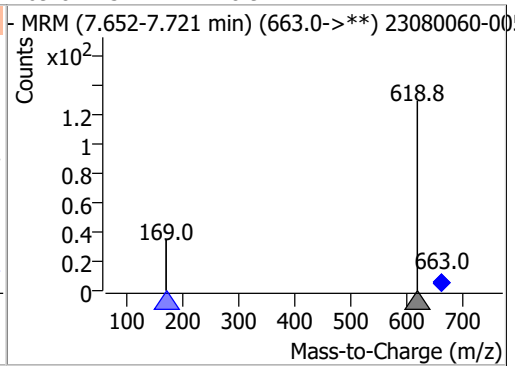


Quantitation Results Report

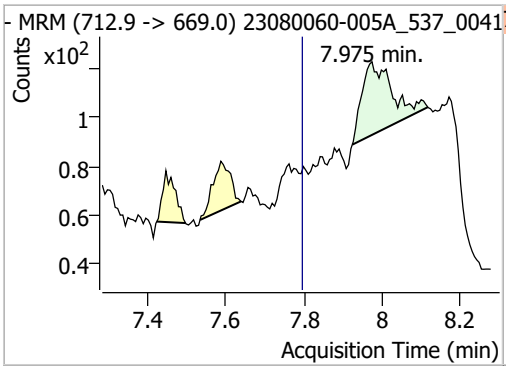
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0012	7.69	0.08	60	663.0 -> 169.0	7.5	0.9	2.7

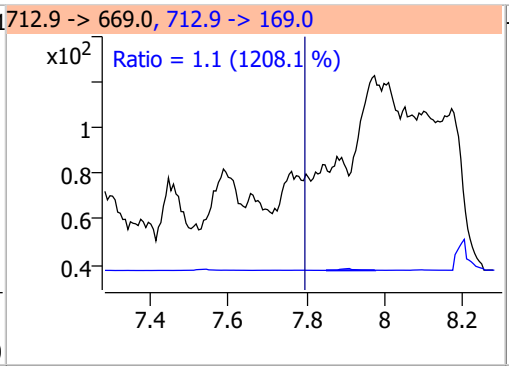


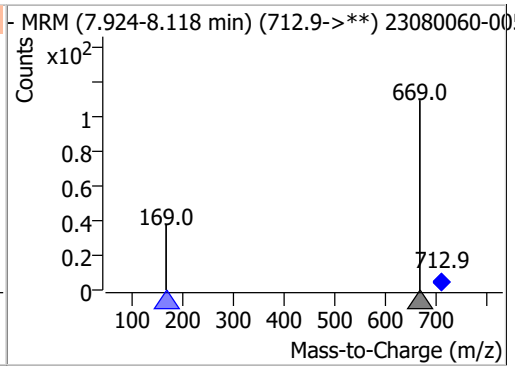




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0053	7.97	0.18	155	712.9 -> 169.0	1.1	0.0	0.1







Quantitation Results Report

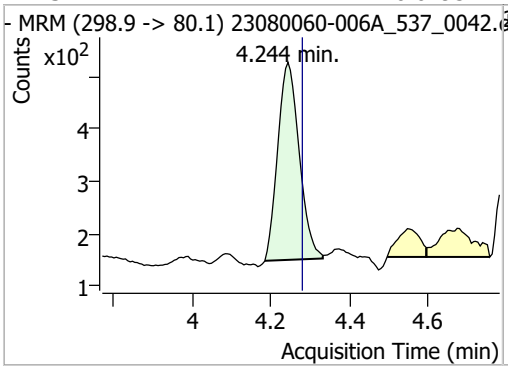
Agilent | Trusted Answers

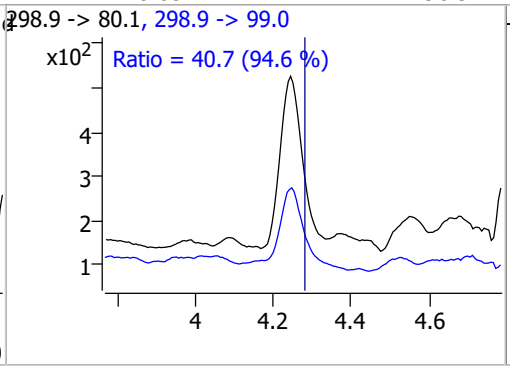
Data File	23080060-006A_537_0042.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 2:20:06 PM
Sample Name	23080060-006A	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

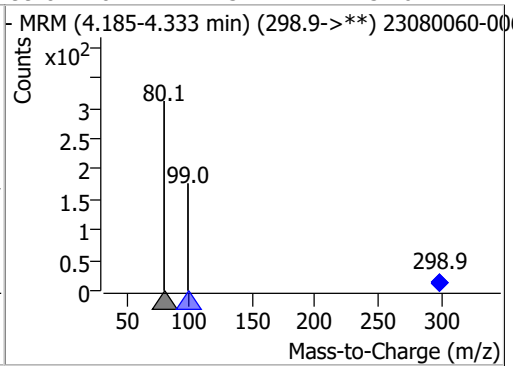
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	882242	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	945228	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1806553	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.979	314.9 -> 269.7	511292	5.1795	ng/ml		-0.020
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 51.80%		*	
13C3-HFPO-DA	5.207	287.0 -> 169.0	11492	5.6045	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 56.04%		*	
13C2-PFDA	6.915	514.9 -> 469.9	501121	9.7706	ng/ml		0.028
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 97.71%			
NETFOSAA-d5	7.215	589.0 -> 419.0	852636	39.1513	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 97.88%			
Target Compounds							QValue
PFBS	4.244	298.9 -> 80.1	1422	0.0193	ng/ml		96
PFHxA	4.974	313.0 -> 269.0	11486	0.0912	ng/ml	#	98
HFPO-DA	5.202	285.0 -> 169.1	88	0.0376	ng/ml		66
PFHpA	5.670	362.9 -> 318.9	6980	0.0649	ng/ml		94
PFHxS	5.725	398.9 -> 79.9	919	0.0203	ng/ml	#	38
NaDONA	5.756	377.0 -> 250.9	131	0.0004	ng/ml		53
PFOA	6.171	413.0 -> 369.1	10059	0.1150	ng/ml		95
PFNA	6.570	463.0 -> 418.9	1935	0.0355	ng/ml	#	89
PFOS	6.589	498.9 -> 80.1	3095	0.0964	ng/ml	#	50
9Cl-PF3ONS	6.763	531.0 -> 351.0	52	0.0005	ng/ml	#	20
PFDA	6.916	513.0 -> 468.9	1369	0.0277	ng/ml	#	73
N-MeFOSAA	7.066	570.0 -> 418.9	403	0.0103	ng/ml		98
PFUdA	7.211	563.0 -> 518.8	467	0.0094	ng/ml	#	90
N-EtFOSAA	7.223	584.0 -> 419.0	511	0.0148	ng/ml		9
11ClPF3OUdS	7.345	631.0 -> 450.8	11	0.0001	ng/ml	#	1
PFDoA	6.925	613.0 -> 568.9	19413	0.3598	ng/ml	#	96
PFTrDA	7.633	663.0 -> 618.8	55	0.0013	ng/ml	#	74
PFTA	7.987	712.9 -> 669.0	1452	0.0560	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

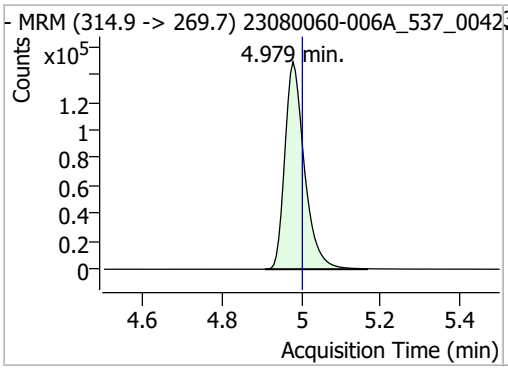
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.0193	4.24	-0.03	1422	298.9 -> 99.0	40.7	34.4	51.6

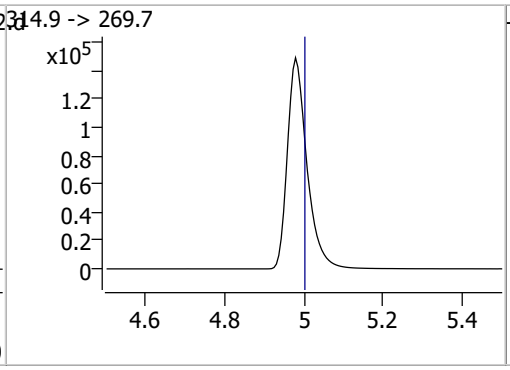


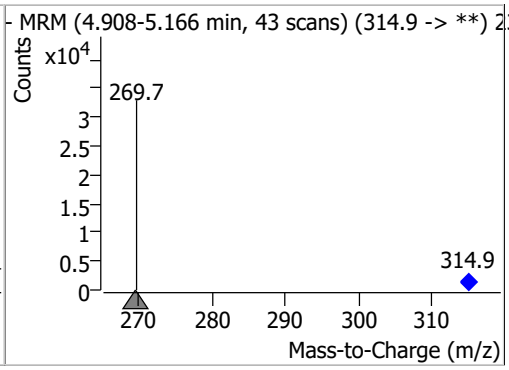




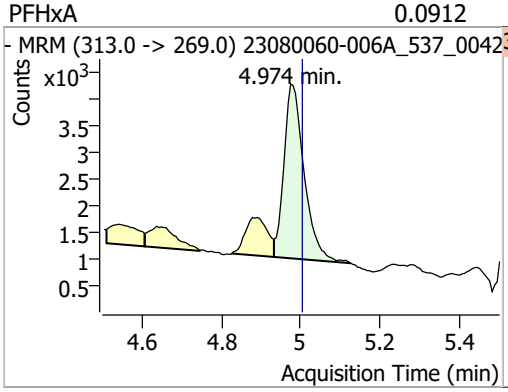
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	5.1795	4.98	-0.02	511292				

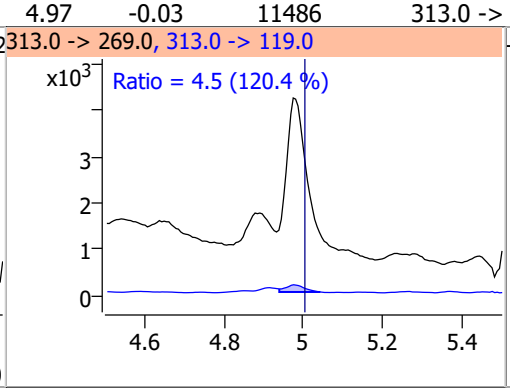


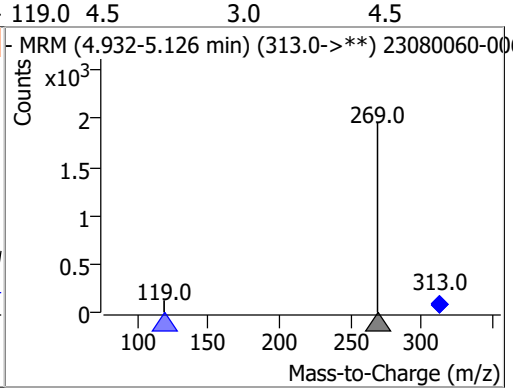




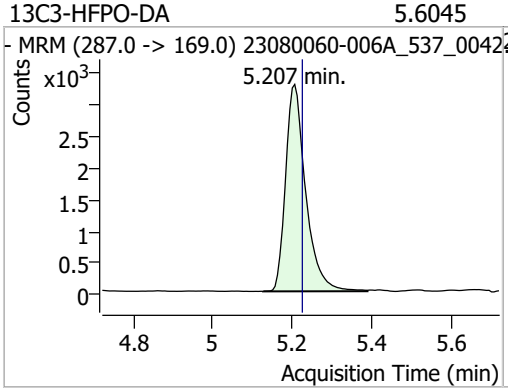
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.0912	4.97	-0.03	11486	313.0 -> 119.0	4.5	3.0	4.5

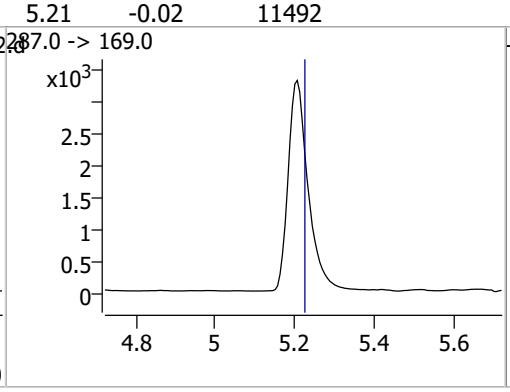


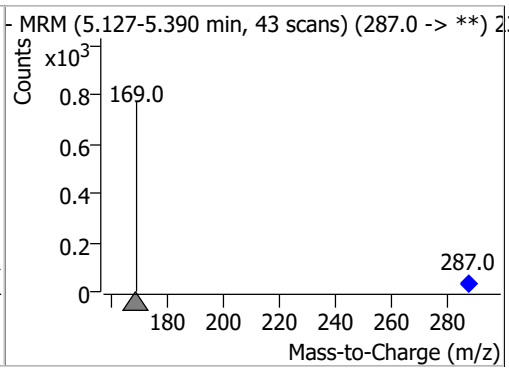




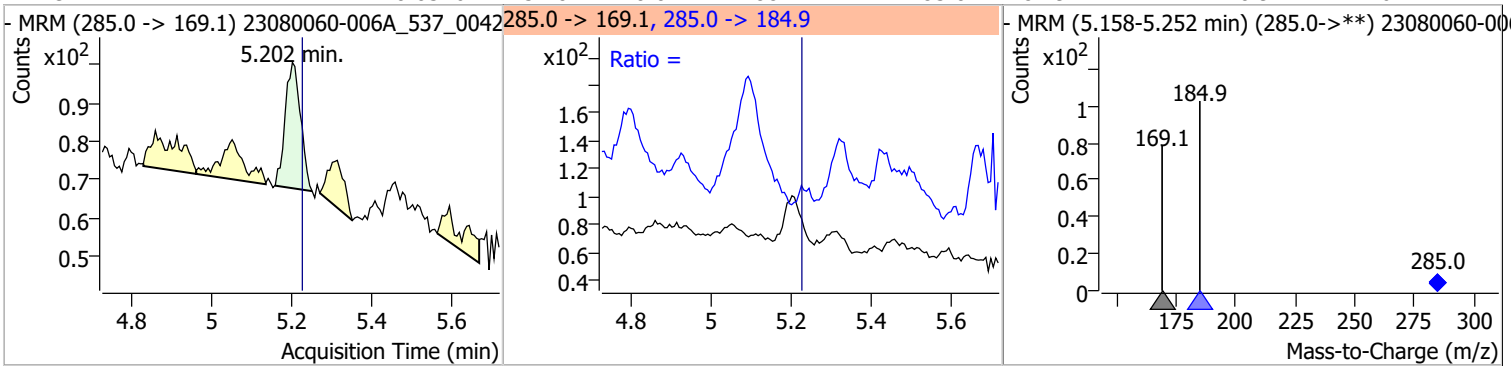
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	5.6045	5.21	-0.02	11492				



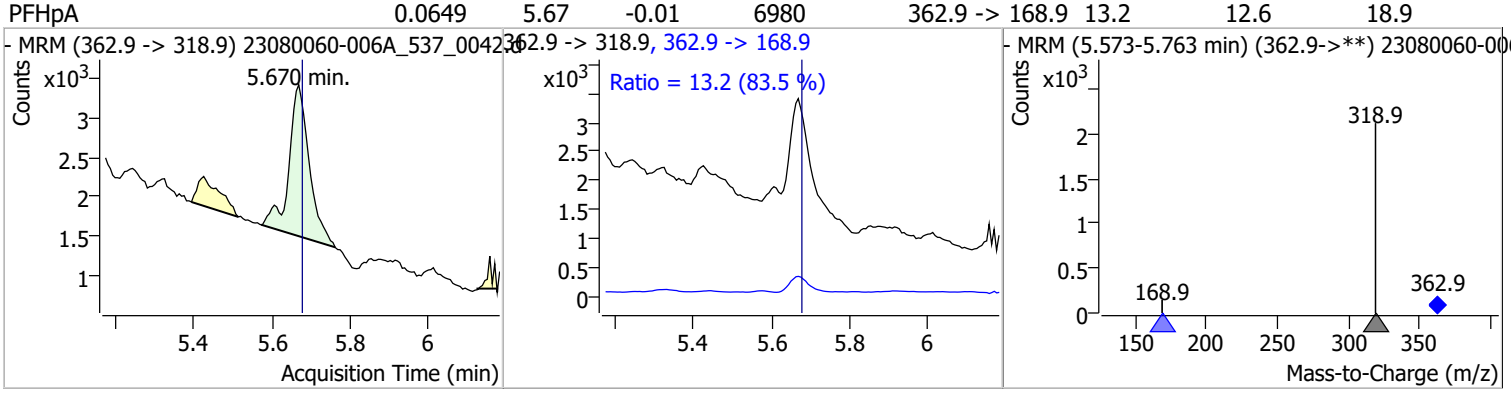




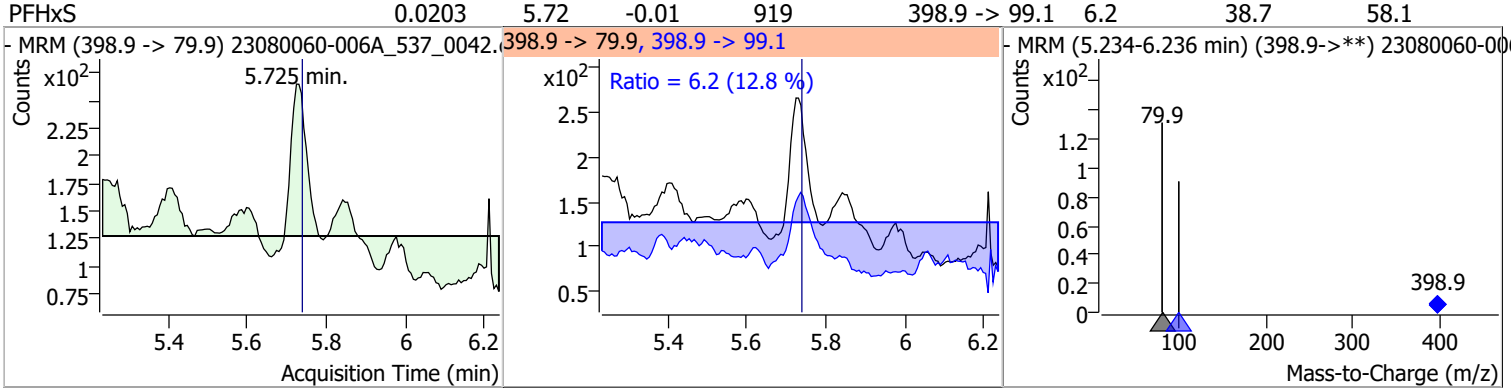
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0376	5.20	-0.02	88	285.0 -> 184.9		10.9	16.4



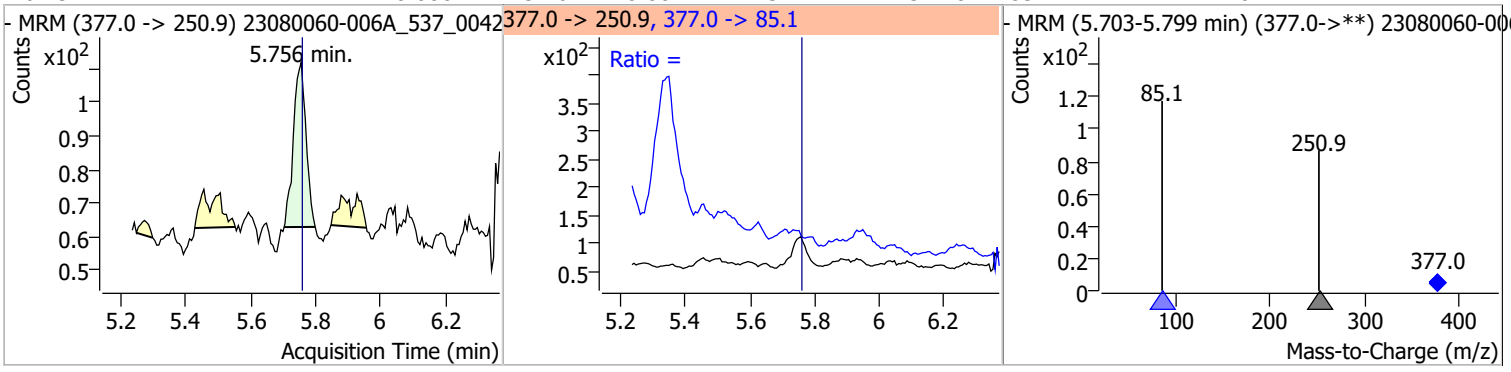
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.0649	5.67	-0.01	6980	362.9 -> 168.9	13.2	12.6	18.9



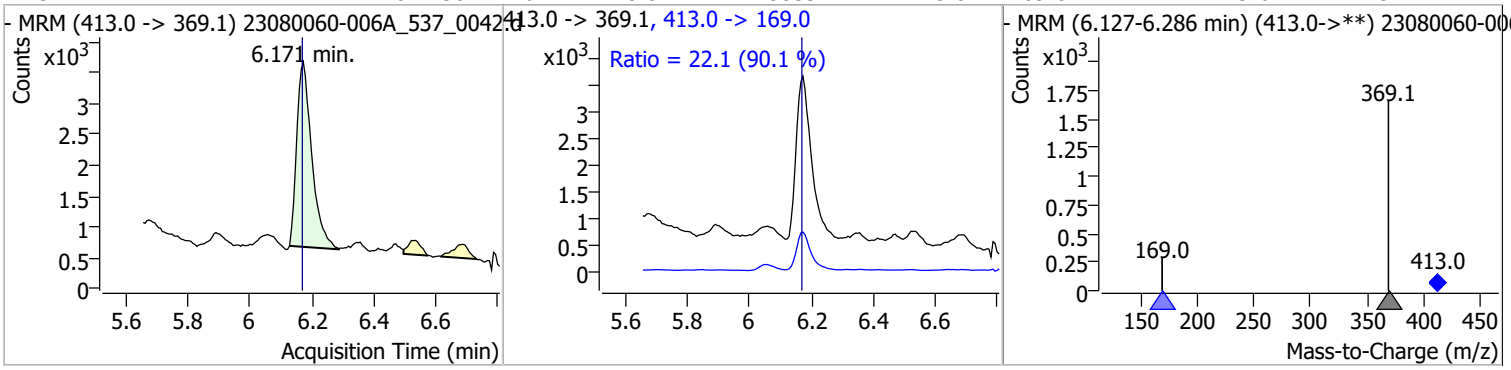
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.0203	5.72	-0.01	919	398.9 -> 99.1	6.2	38.7	58.1



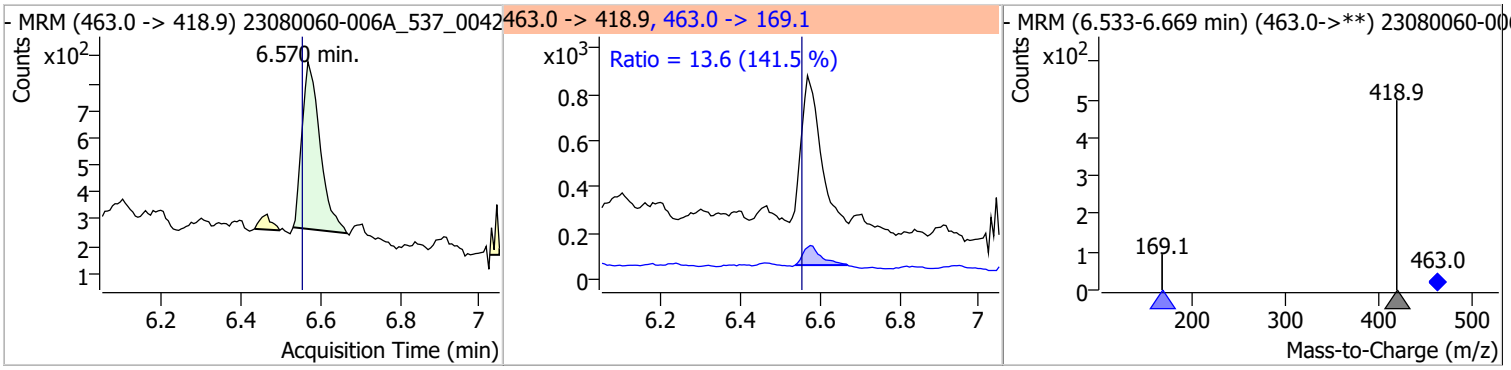
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0004	5.76	0.00	131	377.0 -> 85.1		18.1	27.2



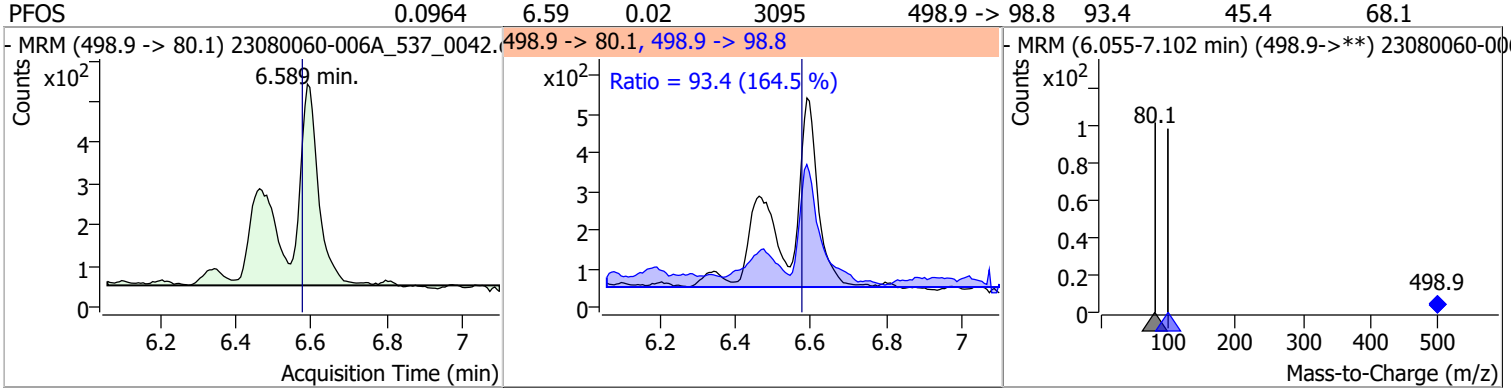
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.1150	6.17	0.01	10059	413.0 -> 169.0	22.1	19.6	29.4



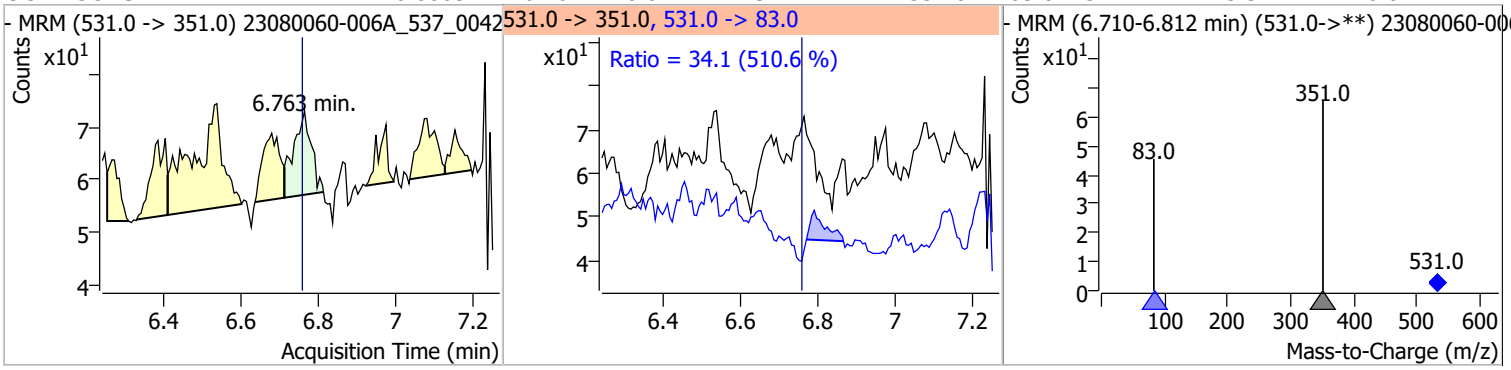
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.0355	6.57	0.02	1935	463.0 -> 169.1	13.6	7.7	11.5



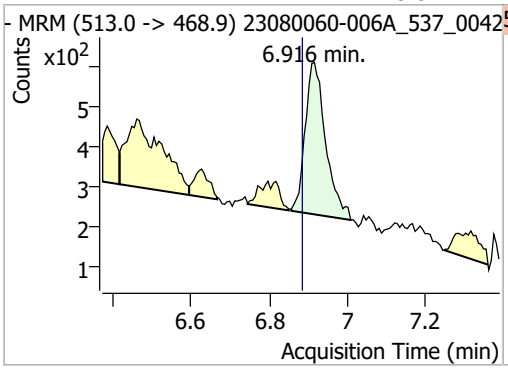
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.0964	6.59	0.02	3095	498.9 -> 98.8	93.4	45.4	68.1

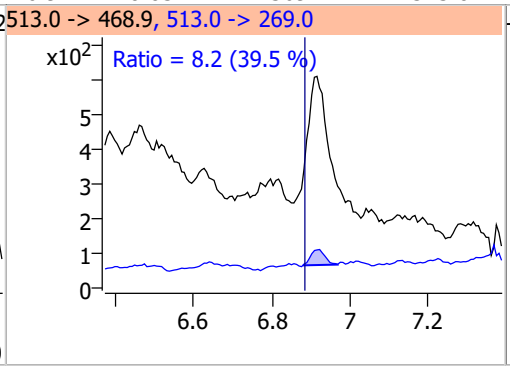


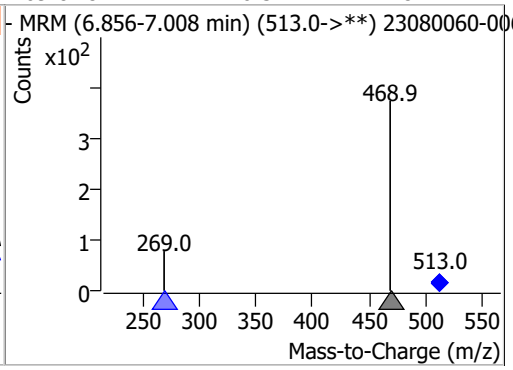
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0005	6.76	0.01	52	531.0 -> 83.0	34.1	5.3	8.0



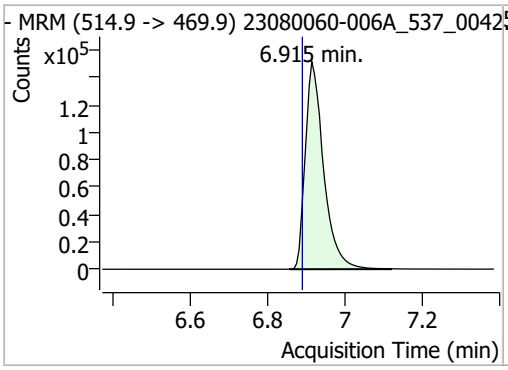
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0277	6.92	0.03	1369	513.0 -> 269.0	8.2	16.5	24.8

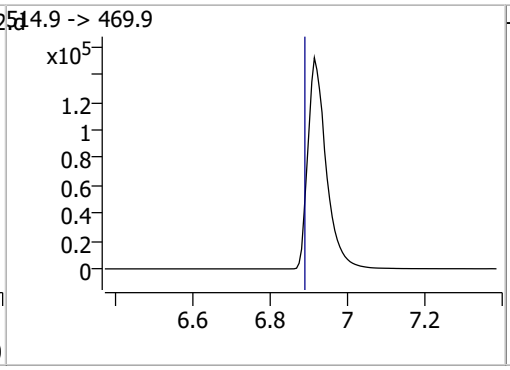


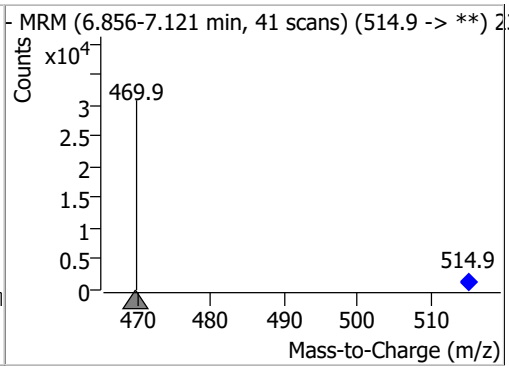




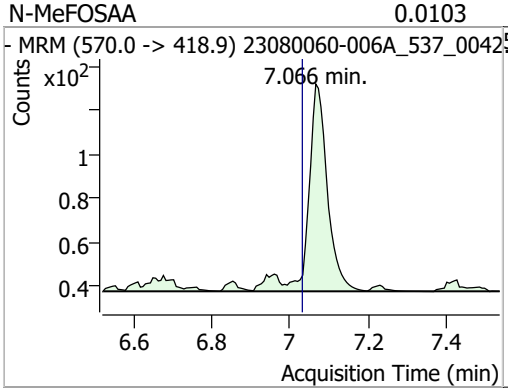
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	9.7706	6.92	0.03	501121				

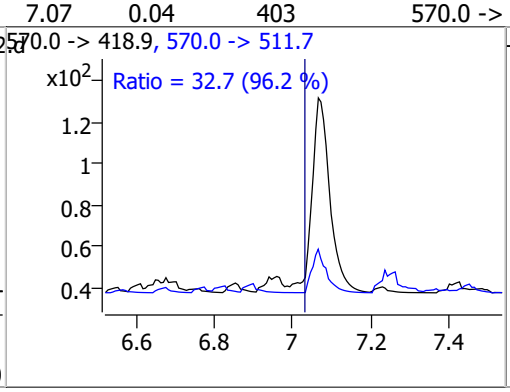


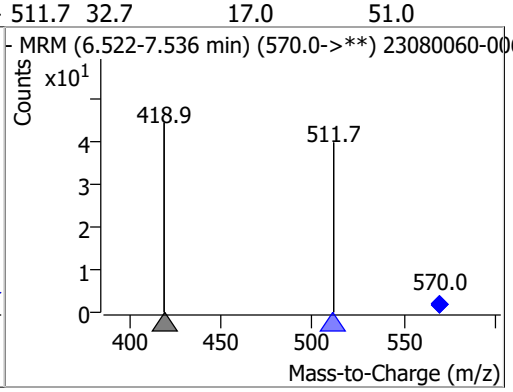




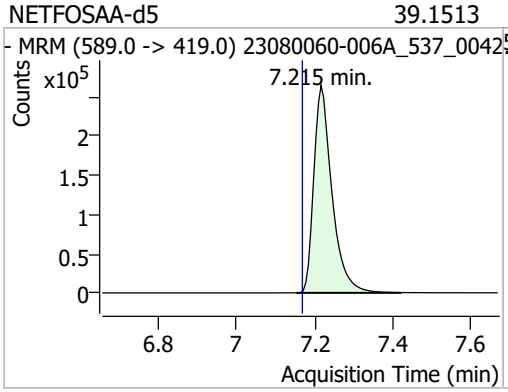
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0103	7.07	0.04	403	570.0 -> 511.7	32.7	17.0	51.0

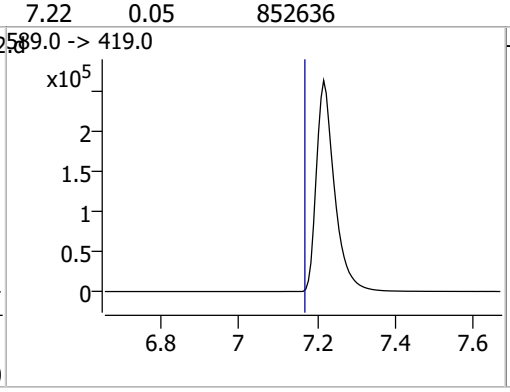


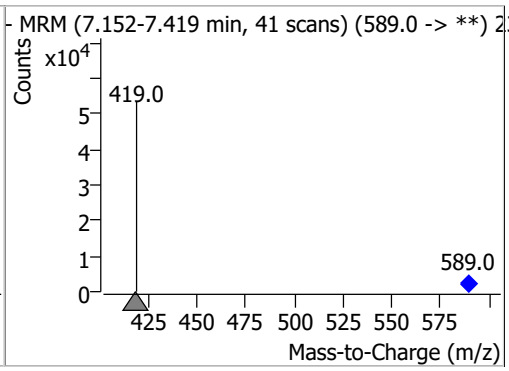




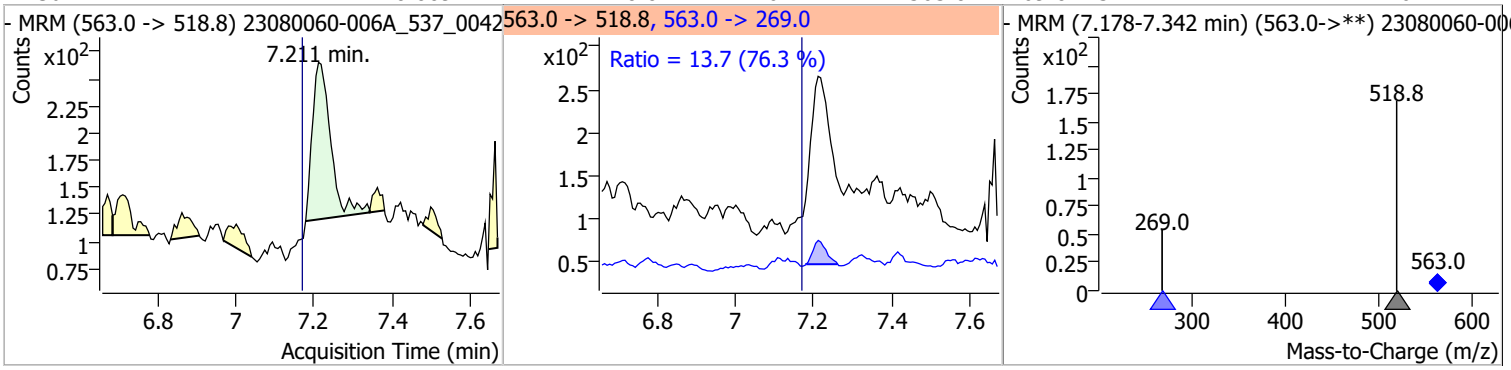
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	39.1513	7.22	0.05	852636				



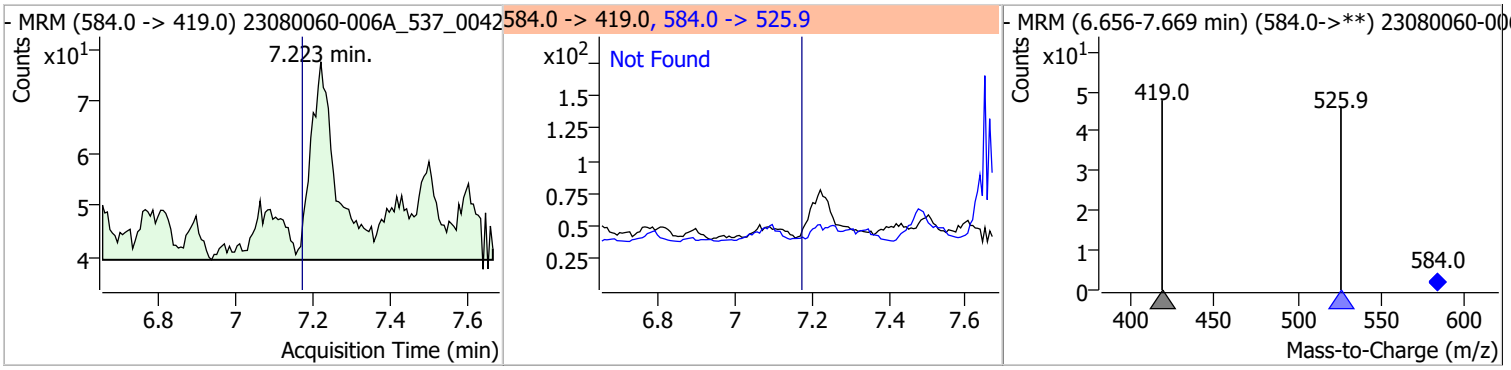




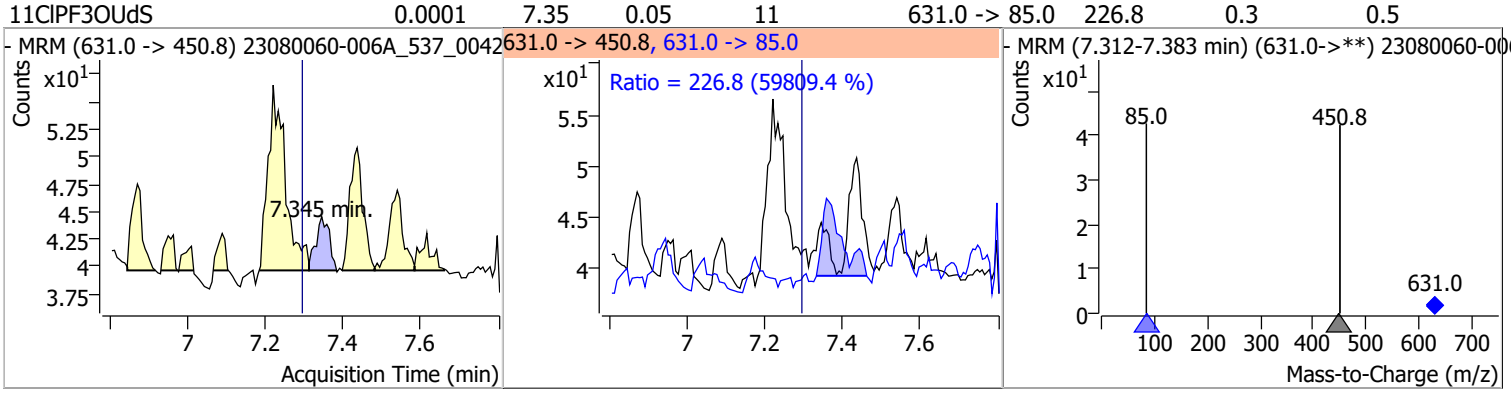
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0094	7.21	0.04	467	563.0 -> 269.0	13.7	14.4	21.6



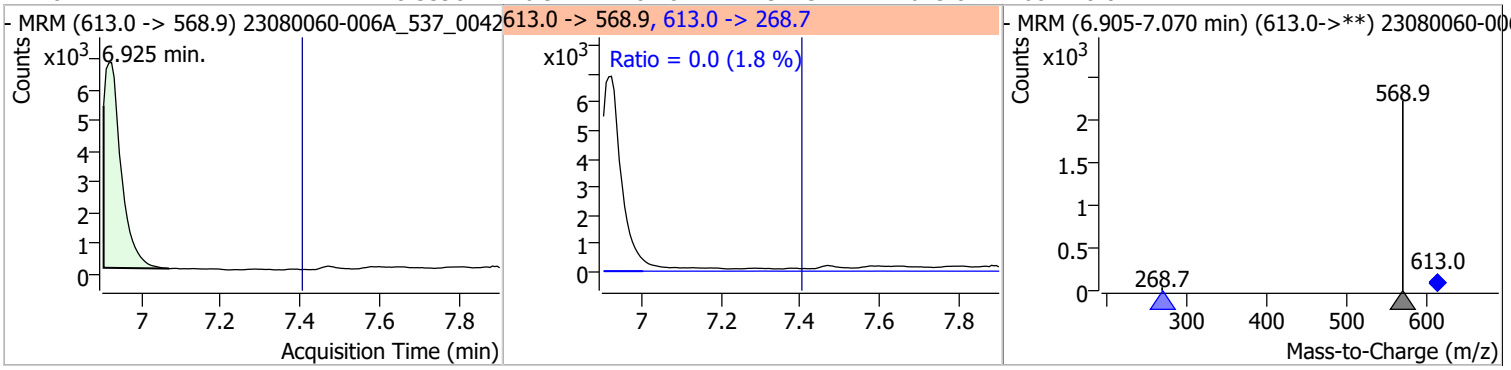
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0148	7.22	0.05	511	584.0 -> 525.9	40.4	121.1	



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0001	7.35	0.05	11	631.0 -> 85.0	226.8	0.3	0.5

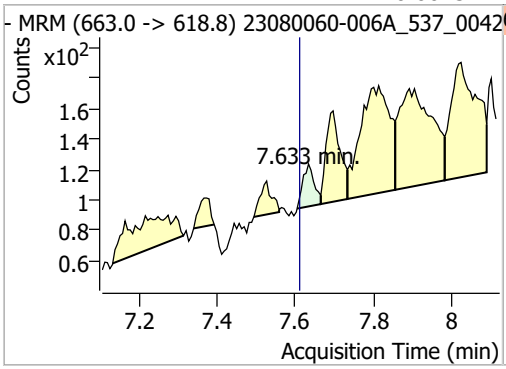


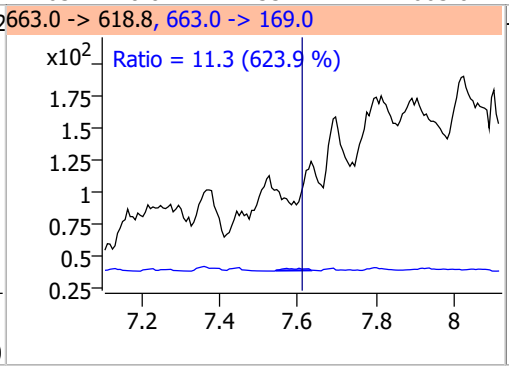
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.3598	6.92	-0.48	19413	613.0 -> 268.7	0.0	1.1	1.7

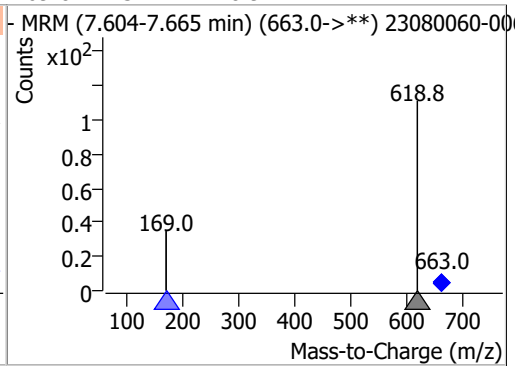


Quantitation Results Report

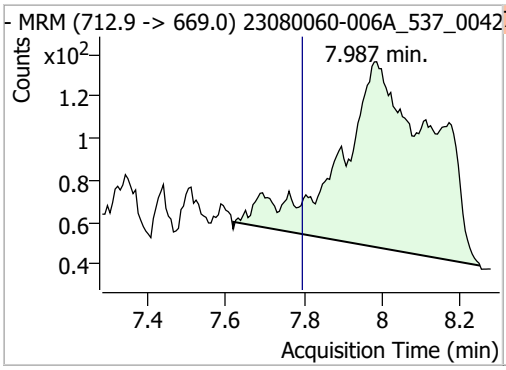
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0013	7.63	0.02	55	663.0 -> 169.0	11.3	0.9	2.7

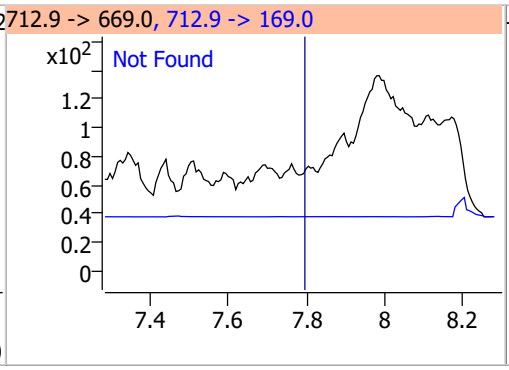


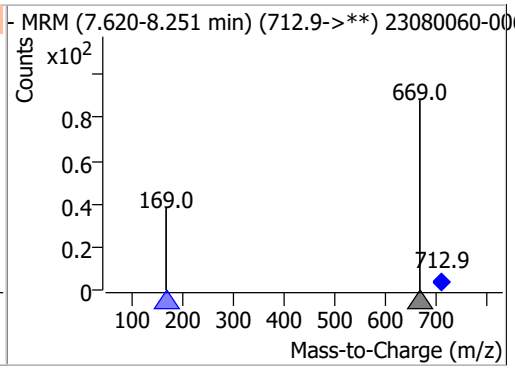




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0560	7.99	0.19	1452	712.9 -> 169.0		0.0	0.1







Quantitation Results Report

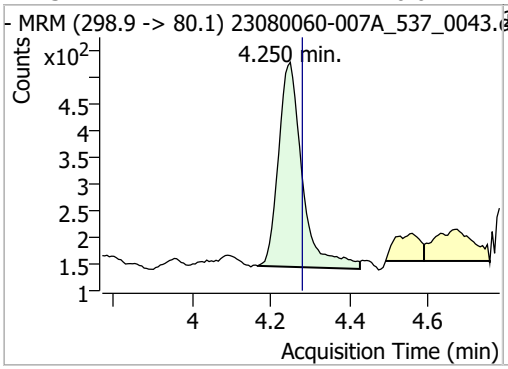
Agilent | Trusted Answers

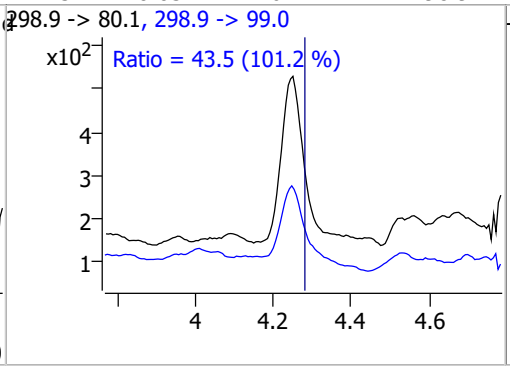
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Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 2:32:49 PM
Sample Name	23080060-007A	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

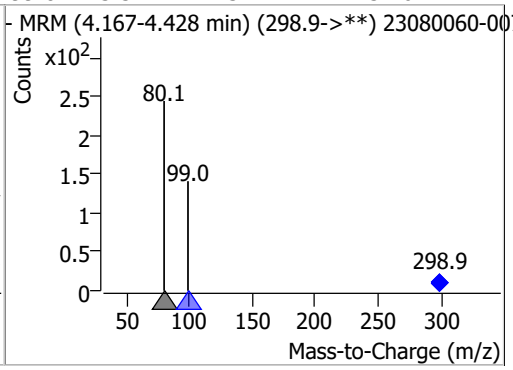
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	904973	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	910900	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.066	573.0 -> 418.9	1798285	4.0000	ng/ml		0.038
System Monitoring Compounds							
13C2-PFHxA	4.979	314.9 -> 269.7	536768	5.6425	ng/ml		-0.020
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 56.43%		*	
13C3-HFPO-DA	5.207	287.0 -> 169.0	11659	5.9000	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 59.00%		*	
13C2-PFDA	6.922	514.9 -> 469.9	590494	11.9470	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 119.47%			
NETFOSAA-d5	7.215	589.0 -> 419.0	854086	39.3982	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 98.50%			
Target Compounds							QValue
PFBS	4.250	298.9 -> 80.1	1622	0.0214	ng/ml		99
PFHxA	4.980	313.0 -> 269.0	10859	0.0895	ng/ml	#	97
HFPO-DA	5.202	285.0 -> 169.1	72	0.0320	ng/ml		66
PFHpA	5.670	362.9 -> 318.9	6857	0.0661	ng/ml		95
PFHxS	5.731	398.9 -> 79.9	1068	0.0230	ng/ml	#	35
NaDONA	5.744	377.0 -> 250.9	247	0.0007	ng/ml		53
PFOA	6.171	413.0 -> 369.1	9707	0.1152	ng/ml		99
PFNA	6.577	463.0 -> 418.9	2195	0.0418	ng/ml	#	92
PFOS	6.583	498.9 -> 80.1	2856	0.0867	ng/ml	#	65
9Cl-PF3ONS	6.782	531.0 -> 351.0	26	0.0003	ng/ml		80
PFDA	6.922	513.0 -> 468.9	1010	0.0212	ng/ml		99
N-MeFOSAA	7.073	570.0 -> 418.9	347	0.0089	ng/ml	#	62
PFUdA	7.211	563.0 -> 518.8	663	0.0139	ng/ml		96
N-EtFOSAA	7.643	584.0 -> 419.0	576	0.0167	ng/ml		92
11ClPF3OUdS	7.286	631.0 -> 450.8	28	0.0003	ng/ml		99
PFDoA	7.463	613.0 -> 568.9	363	0.0070	ng/ml	#	97
PFTrDA	7.608	663.0 -> 618.8	57	0.0014	ng/ml	#	95
PFTA	7.695	712.9 -> 669.0	88	0.0035	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

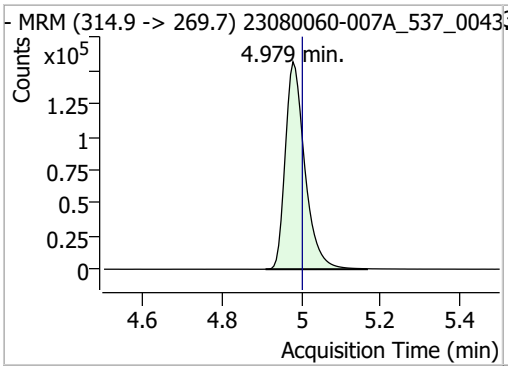
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.0214	4.25	-0.03	1622	298.9 -> 99.0	43.5	34.4	51.6

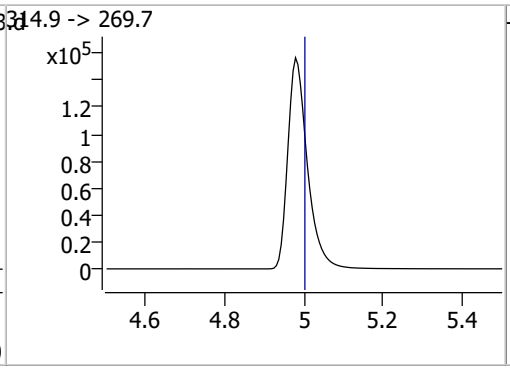


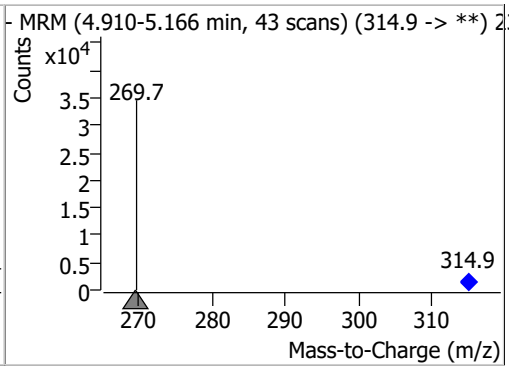




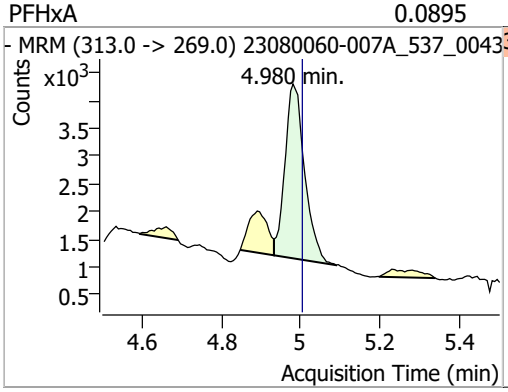
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	5.6425	4.98	-0.02	536768				

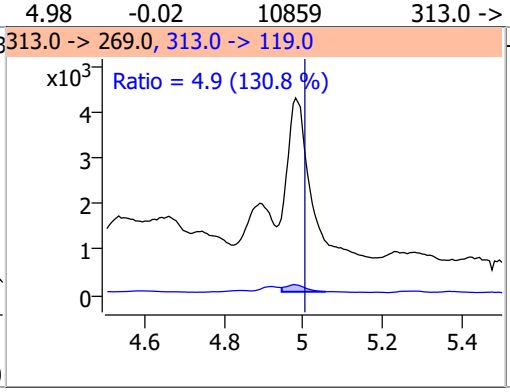


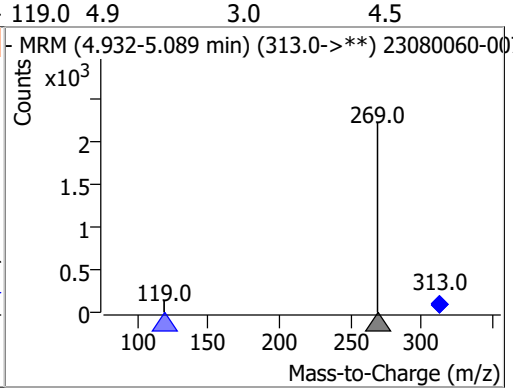




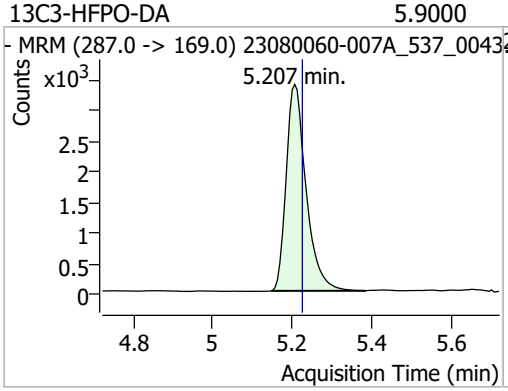
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.0895	4.98	-0.02	10859	313.0 -> 119.0	4.9	3.0	4.5

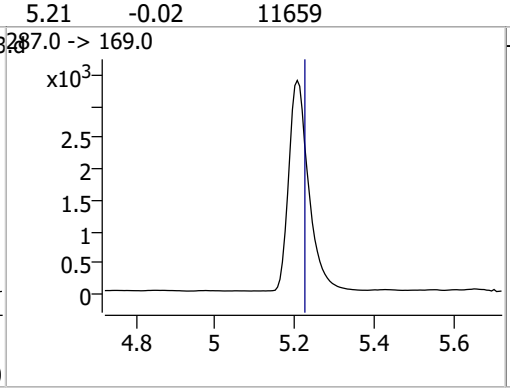


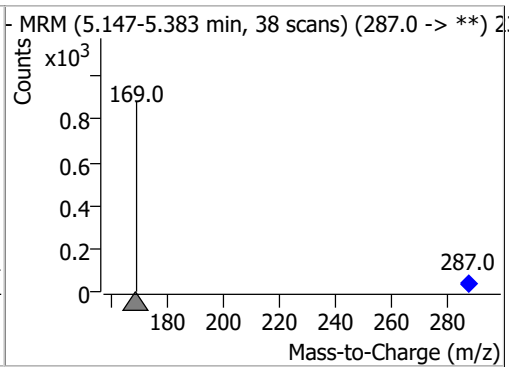




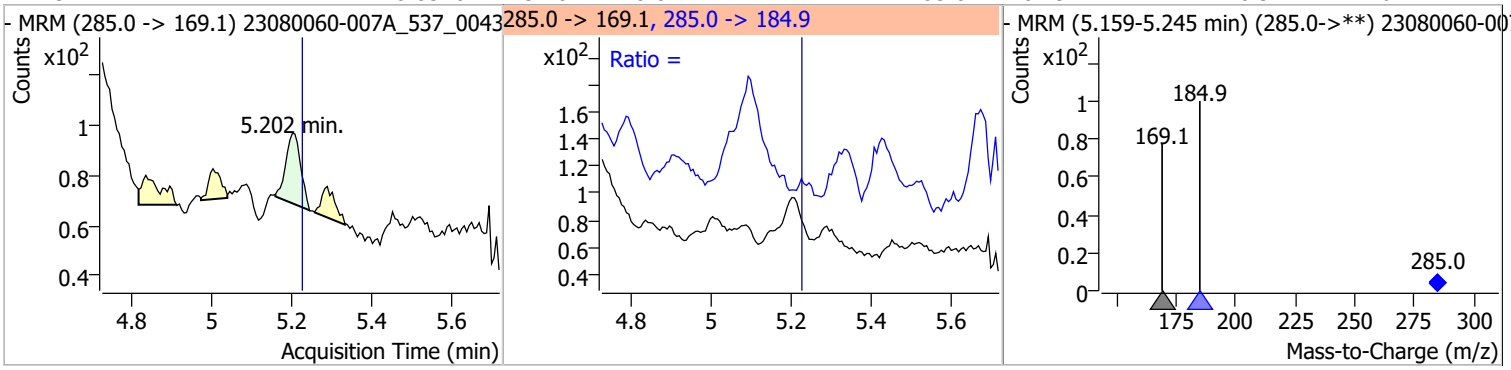
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	5.9000	5.21	-0.02	11659				



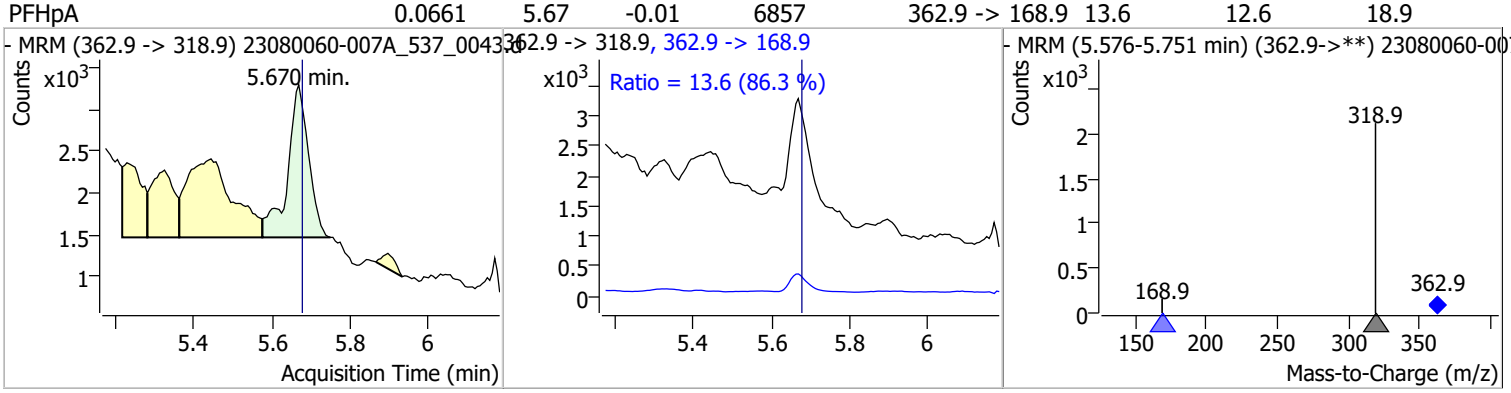




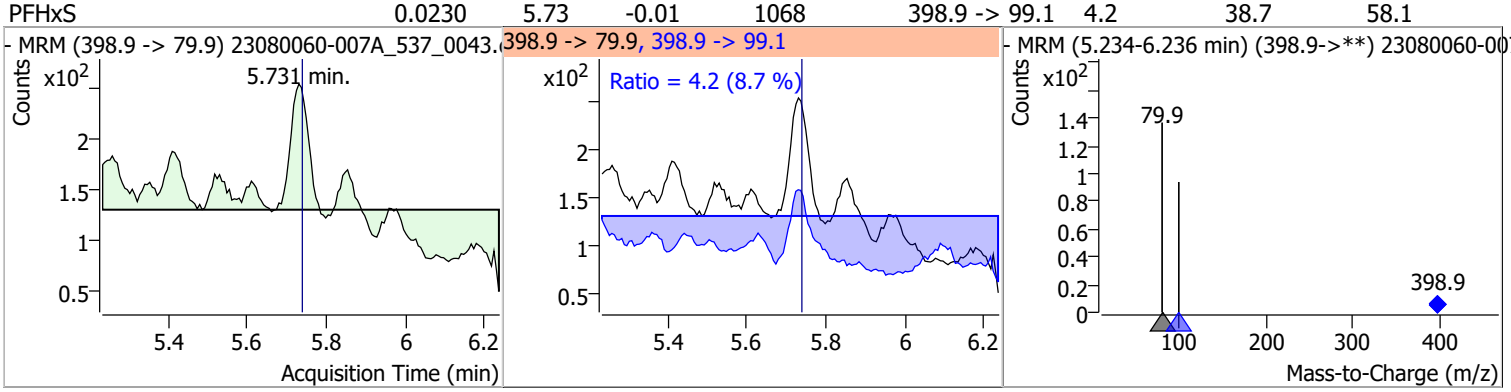
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0320	5.20	-0.02	72	285.0 -> 184.9		10.9	16.4



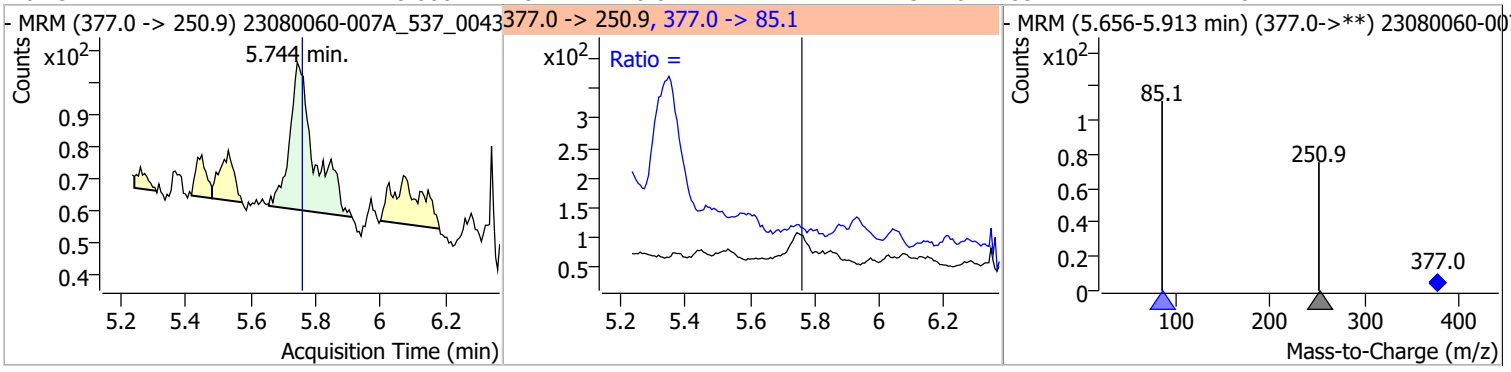
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.0661	5.67	-0.01	6857	362.9 -> 168.9	13.6	12.6	18.9



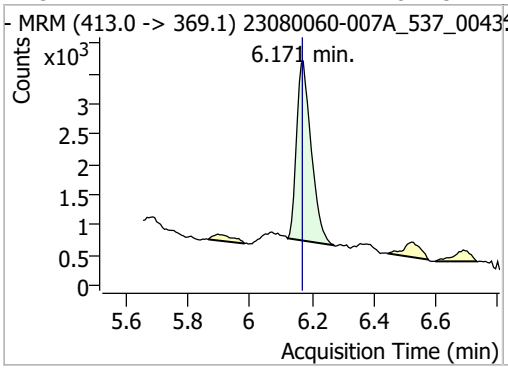
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.0230	5.73	-0.01	1068	398.9 -> 99.1	4.2	38.7	58.1

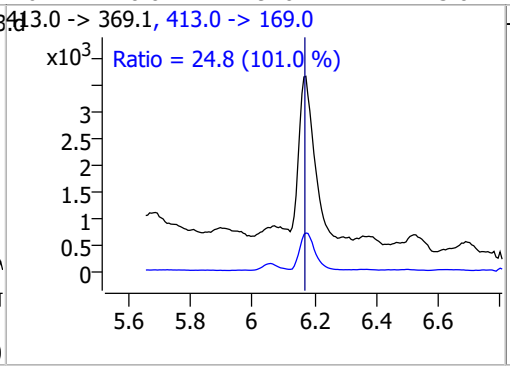


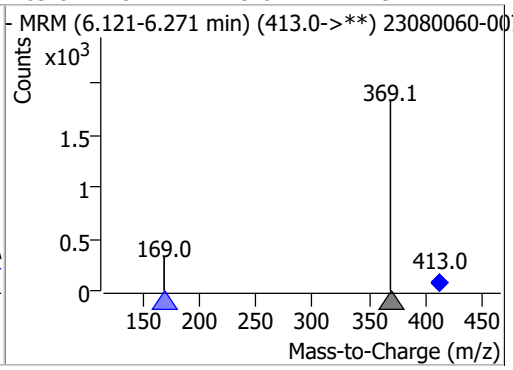
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0007	5.74	-0.01	247	377.0 -> 85.1		18.1	27.2



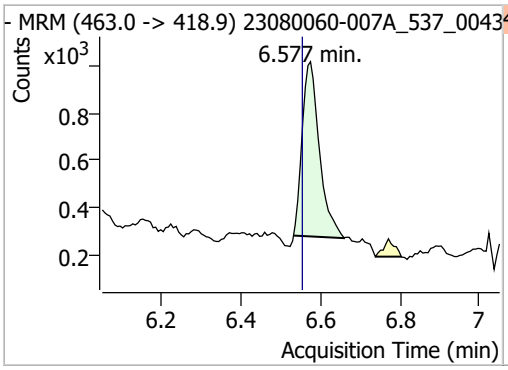
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.1152	6.17	0.01	9707	413.0 -> 169.0	24.8	19.6	29.4

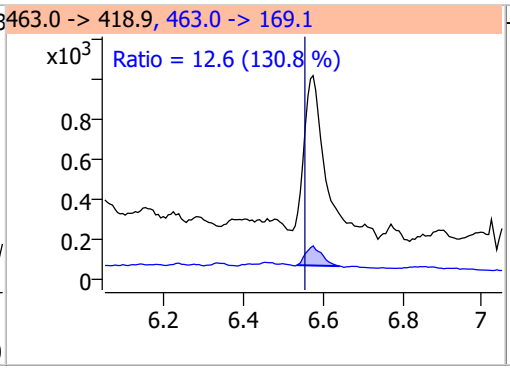


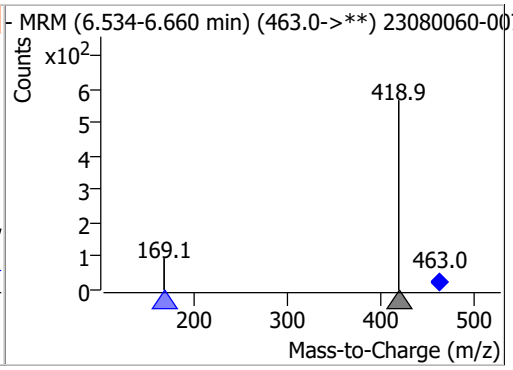




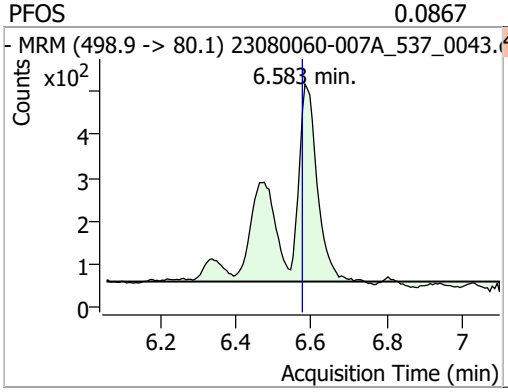
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.0418	6.58	0.02	2195	463.0 -> 169.1	12.6	7.7	11.5

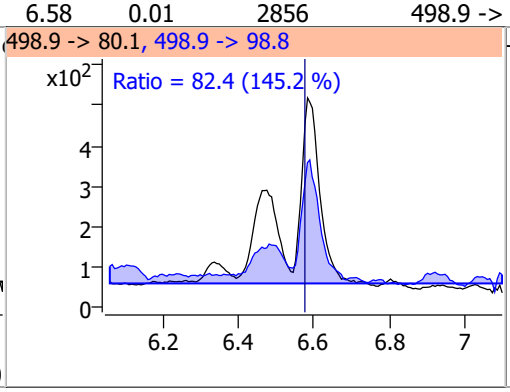


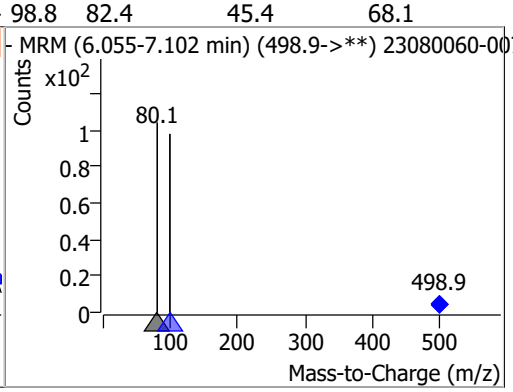




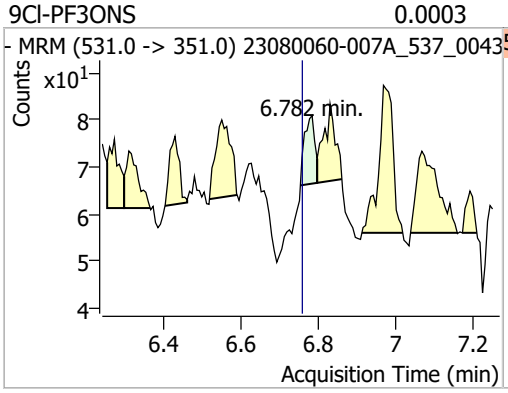
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.0867	6.58	0.01	2856	498.9 -> 98.8	82.4	45.4	68.1

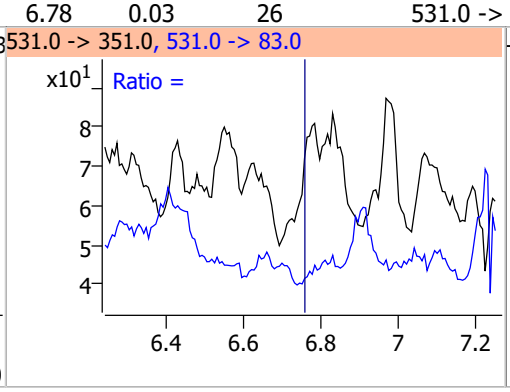


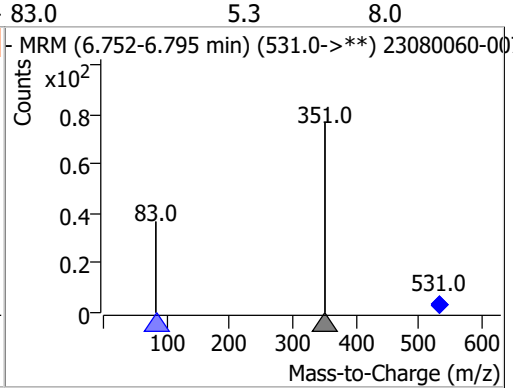




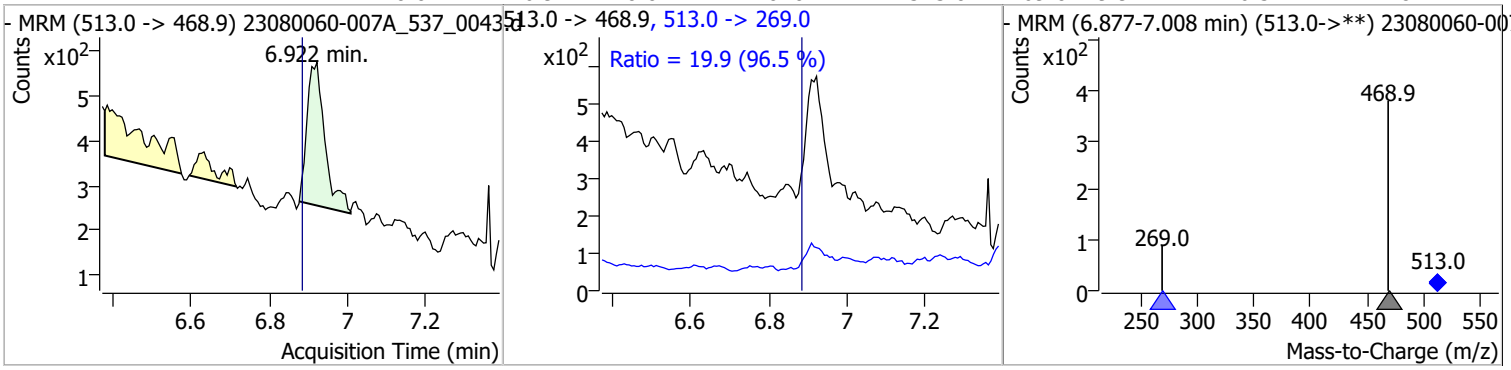
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0003	6.78	0.03	26	531.0 -> 83.0		5.3	8.0



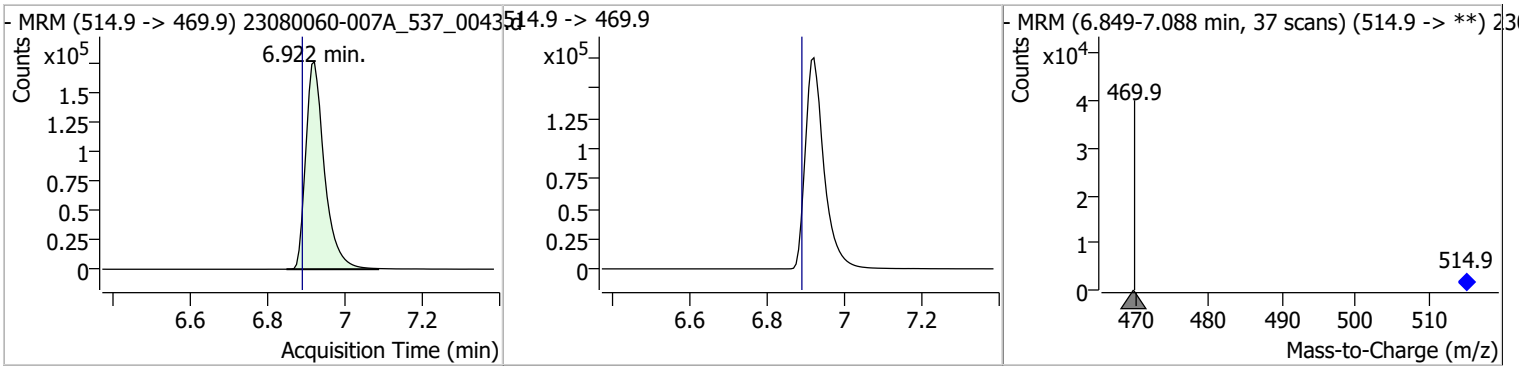




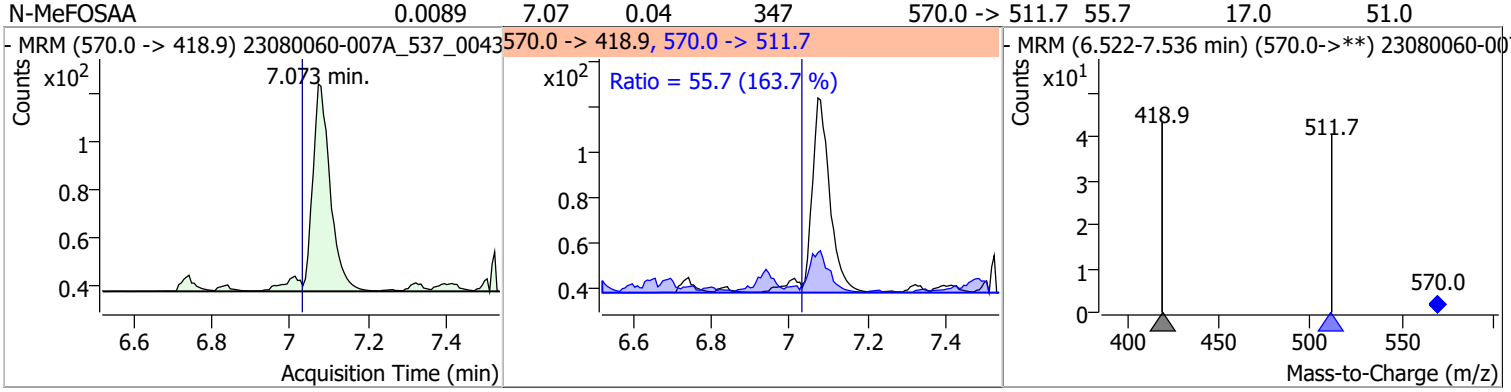
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0212	6.92	0.04	1010	513.0 -> 269.0	19.9	16.5	24.8



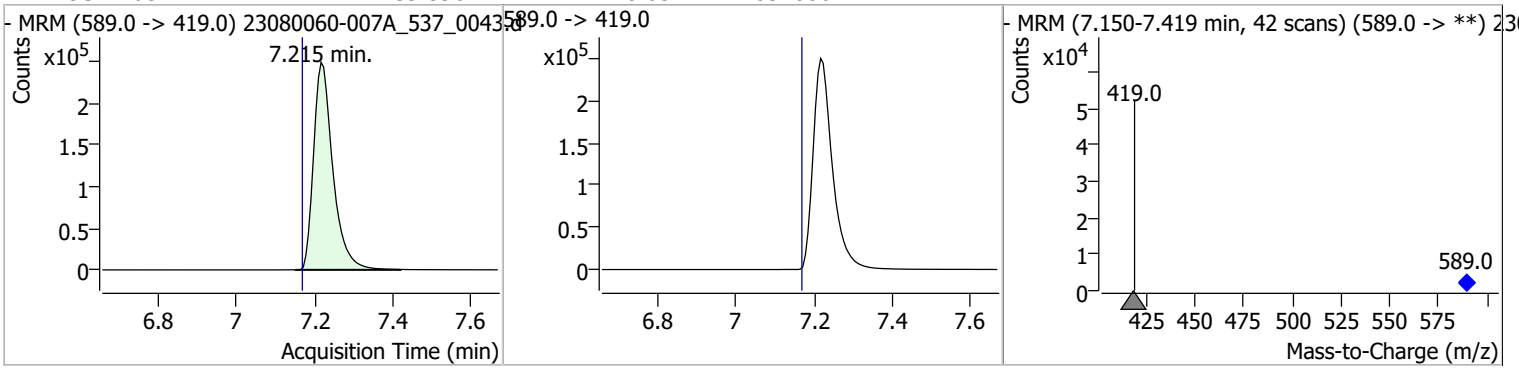
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	11.9470	6.92	0.03	590494				



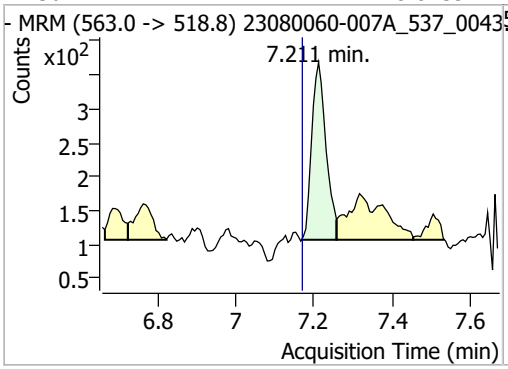
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0089	7.07	0.04	347	570.0 -> 511.7	55.7	17.0	51.0

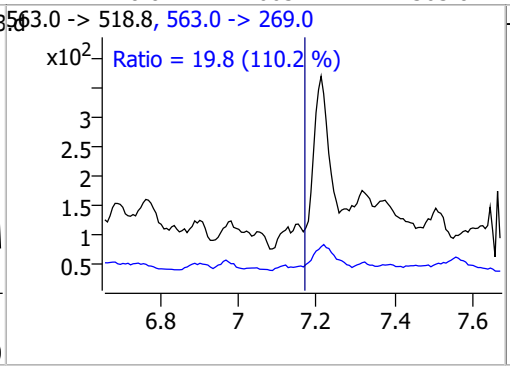


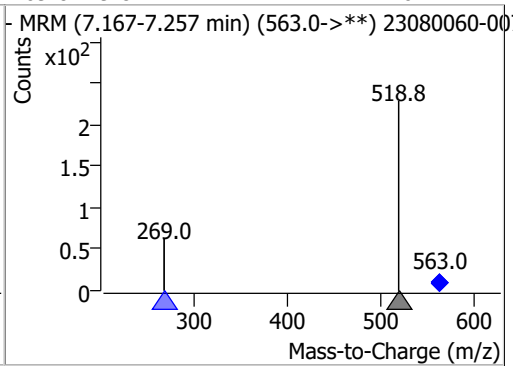
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	39.3982	7.22	0.05	854086				



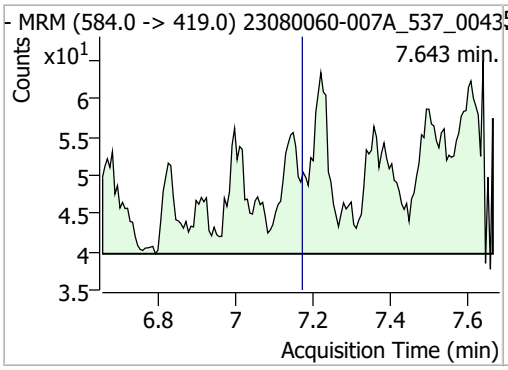
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0139	7.21	0.04	663	563.0 -> 269.0	19.8	14.4	21.6

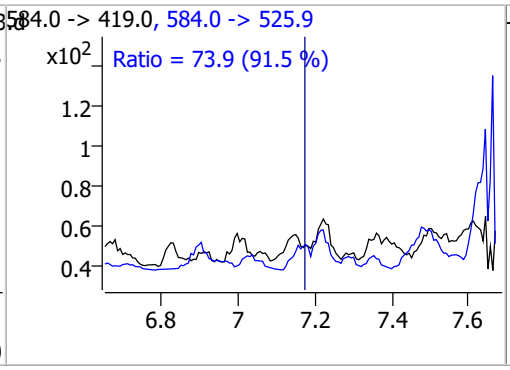


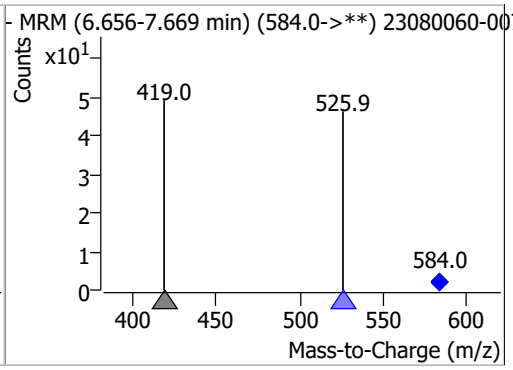




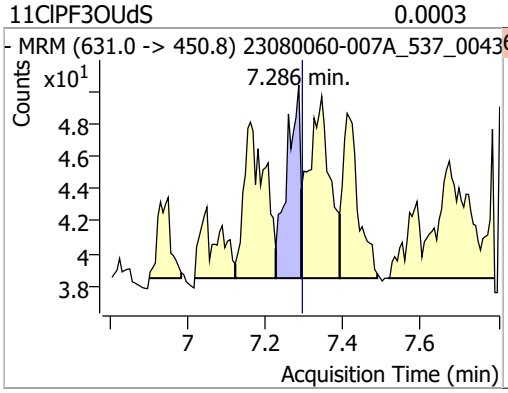
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0167	7.64	0.47	576	584.0 -> 525.9	73.9	40.4	121.1

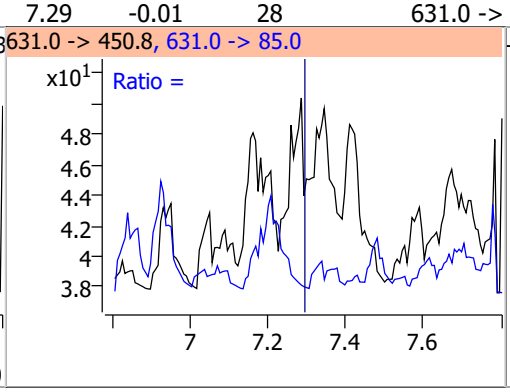


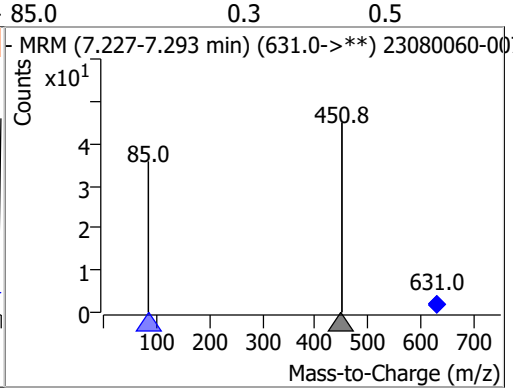




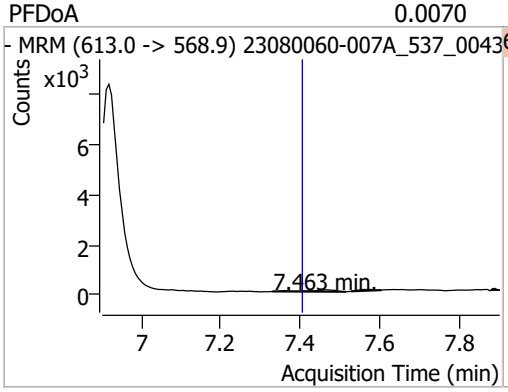
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0003	7.29	-0.01	28	631.0 -> 85.0		0.3	0.5

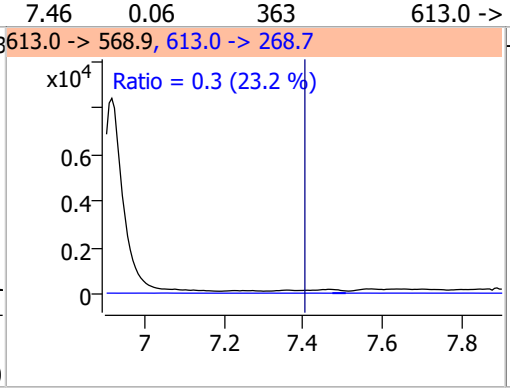


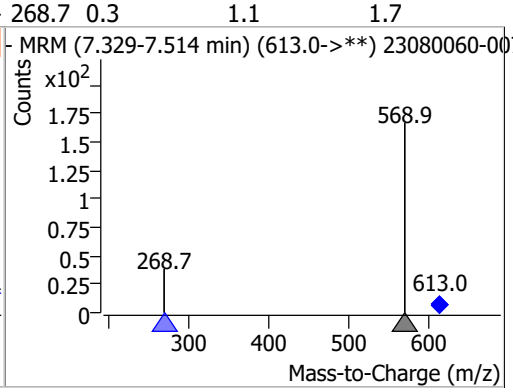




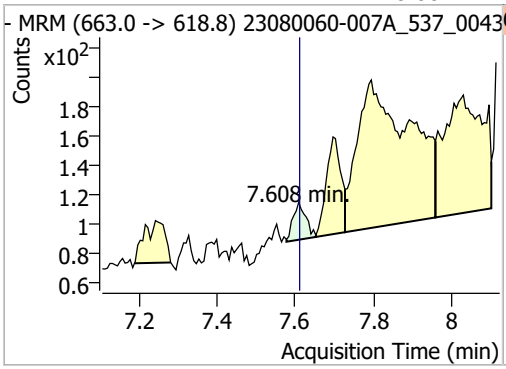
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.0070	7.46	0.06	363	613.0 -> 268.7	0.3	1.1	1.7

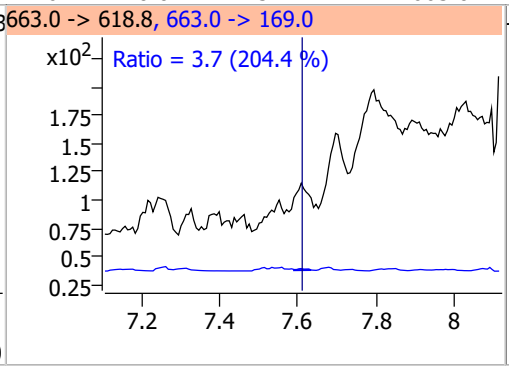


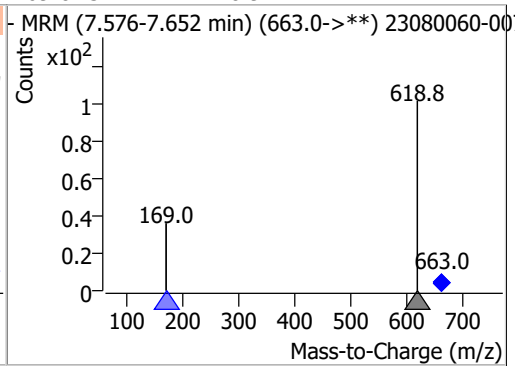




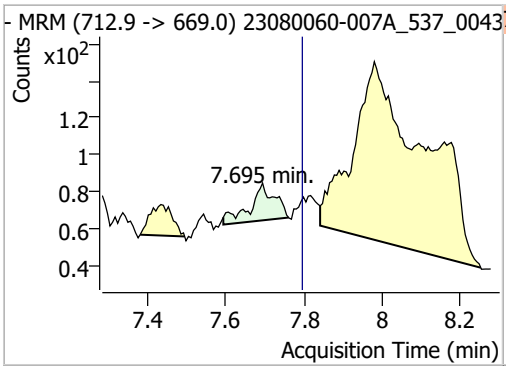
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0014	7.61	-0.01	57	663.0 -> 169.0	3.7	0.9	2.7

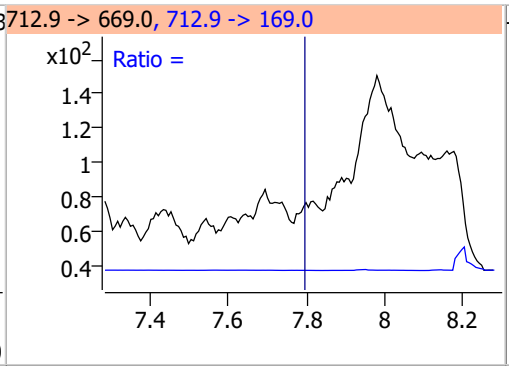


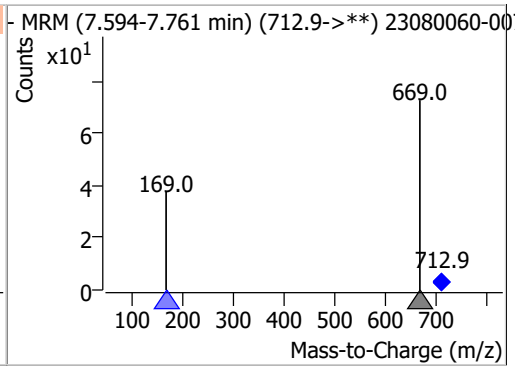




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0035	7.69	-0.10	88	712.9 -> 169.0		0.0	0.1







Quantitation Results Report

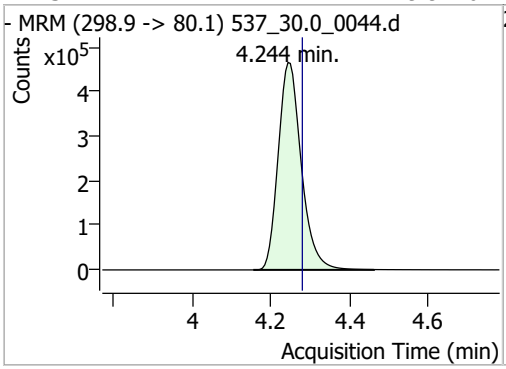
Agilent | Trusted Answers

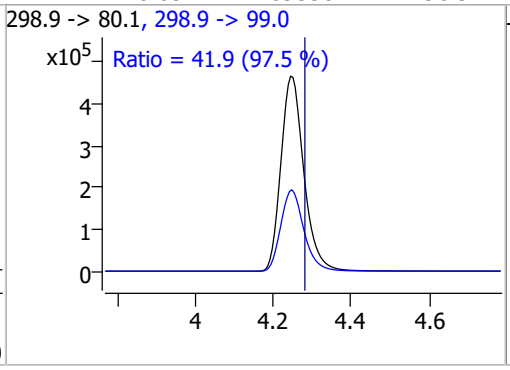
Data File	537_30.0_0044.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 2:45:35 PM
Sample Name	CAL8_537_30.0	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

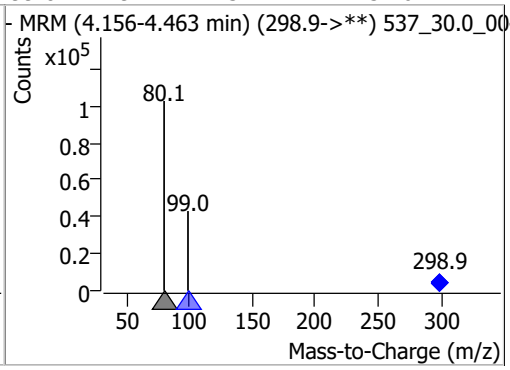
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	744775	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	881454	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.072	573.0 -> 418.9	1647379	4.0000	ng/ml		0.044
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	946307	10.2799	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 102.80%			
13C3-HFPO-DA	5.207	287.0 -> 169.0	20658	10.8032	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 108.03%			
13C2-PFDA	6.922	514.9 -> 469.9	448928	9.3862	ng/ml		0.035
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 93.86%			
NETFOSAA-d5	7.215	589.0 -> 419.0	715290	36.0182	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 90.05%			
Target Compounds							QValue
PFBS	4.244	298.9 -> 80.1	1895307	29.9716	ng/ml		98
PFHxA	4.980	313.0 -> 269.0	3510261	29.8926	ng/ml		99
HFPO-DA	5.208	285.0 -> 169.1	64686	27.7842	ng/ml		99
PFHpA	5.670	362.9 -> 318.9	3304610	32.9403	ng/ml		98
PFHxS	5.731	398.9 -> 79.9	1253868	29.5236	ng/ml		94
NaDONA	5.750	377.0 -> 250.9	10204781	27.3207	ng/ml		98
PFOA	6.171	413.0 -> 369.1	2305681	28.2788	ng/ml		97
PFNA	6.577	463.0 -> 418.9	1470939	27.9138	ng/ml		95
PFOS	6.589	498.9 -> 80.1	874055	29.7339	ng/ml		97
9Cl-PF3ONS	6.782	531.0 -> 351.0	2870677	31.4531	ng/ml	#	95
PFDA	6.916	513.0 -> 468.9	1549930	30.2253	ng/ml		99
N-MeFOSAA	7.073	570.0 -> 418.9	1366005	32.1714	ng/ml		92
PFUdA	7.217	563.0 -> 518.8	1406100	30.4656	ng/ml		98
N-EtFOSAA	7.223	584.0 -> 419.0	1055451	29.6686	ng/ml		91
11ClPF3OUdS	7.352	631.0 -> 450.8	2969269	26.7904	ng/ml		100
PFDoA	7.469	613.0 -> 568.9	1447458	28.6557	ng/ml	#	99
PFTrDA	7.690	663.0 -> 618.8	1303644	29.1746	ng/ml		99
PFTA	7.884	712.9 -> 669.0	734266	30.3456	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

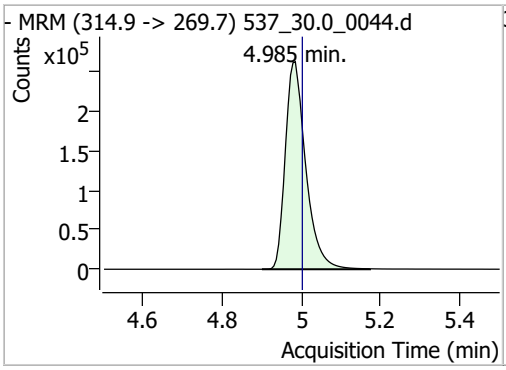
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	29.9716	4.24	-0.03	1895307	298.9 -> 99.0	41.9	34.4	51.6

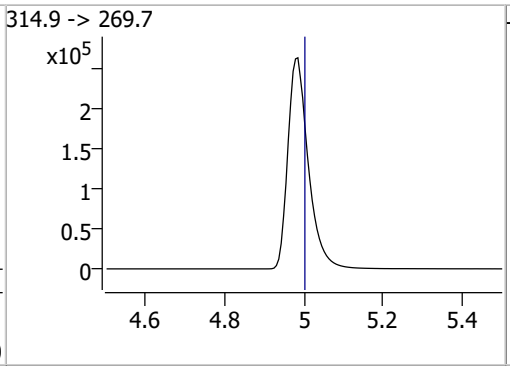


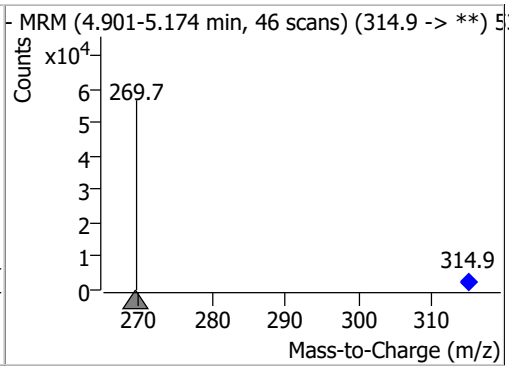




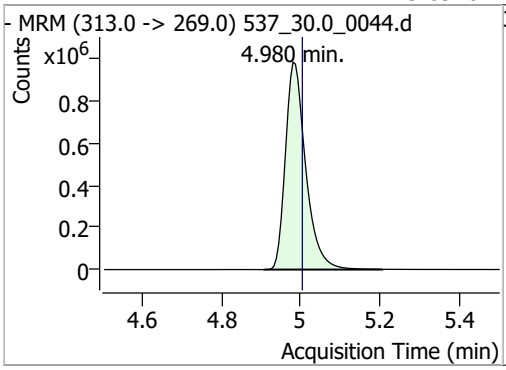
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	10.2799	4.99	-0.01	946307				

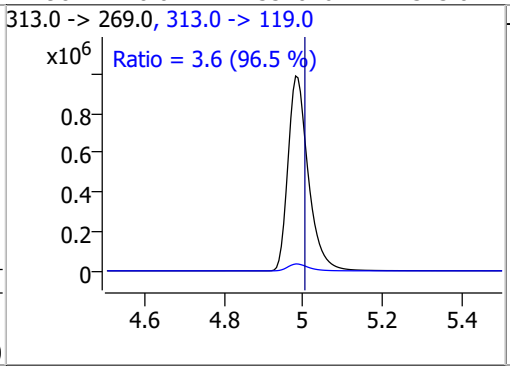


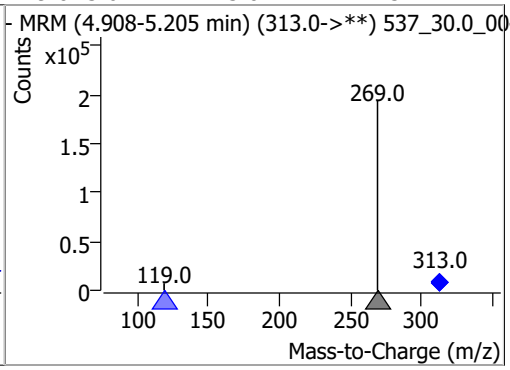




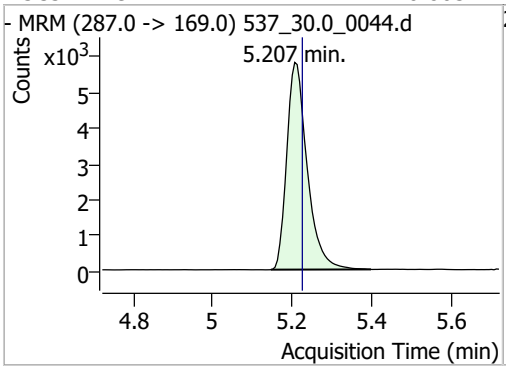
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	29.8926	4.98	-0.02	3510261	313.0 -> 119.0	3.6	3.0	4.5

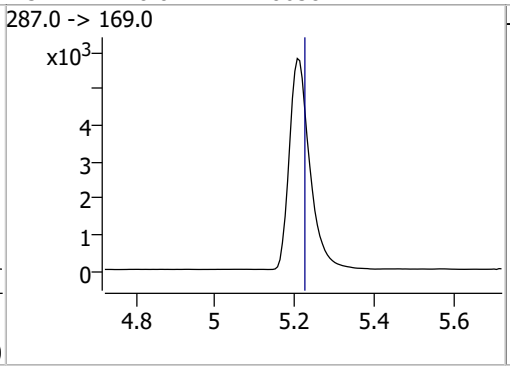


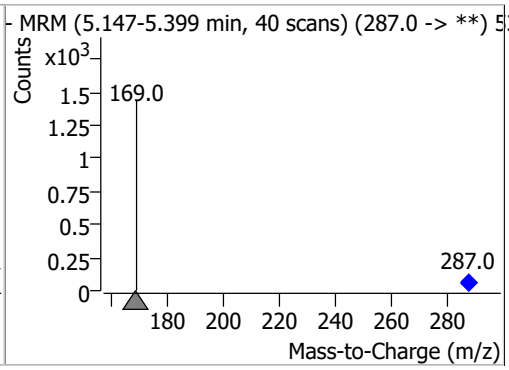




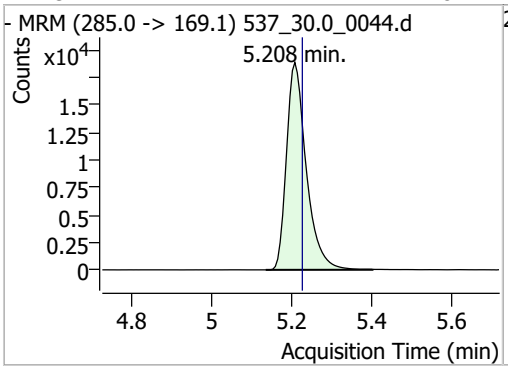
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	10.8032	5.21	-0.02	20658				

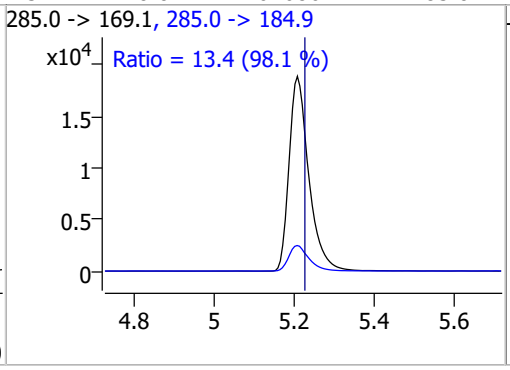


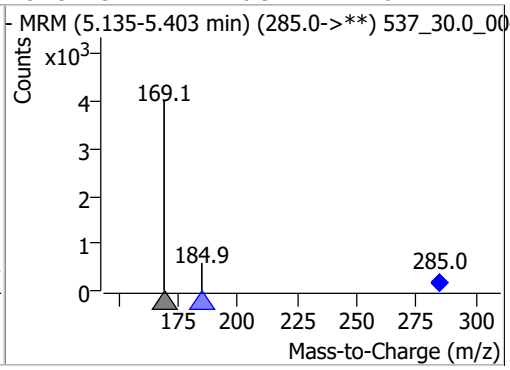




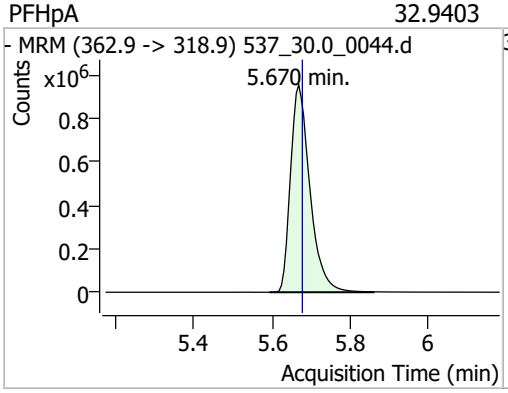
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	27.7842	5.21	-0.02	64686	285.0 -> 184.9	13.4	10.9	16.4

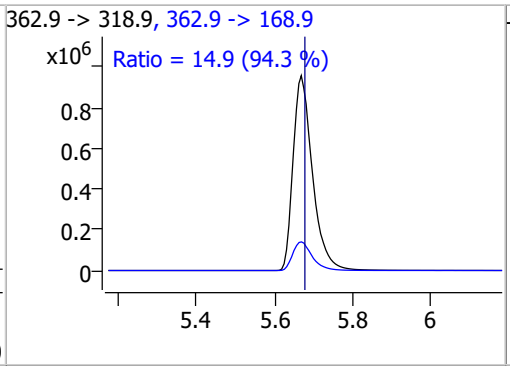


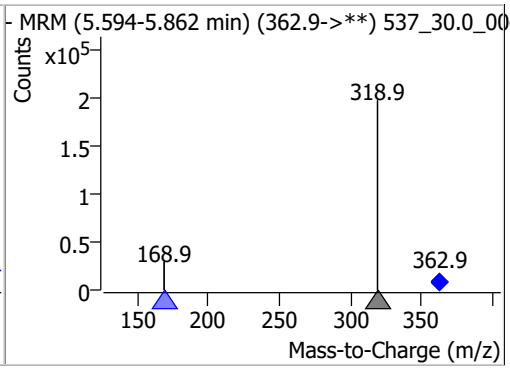




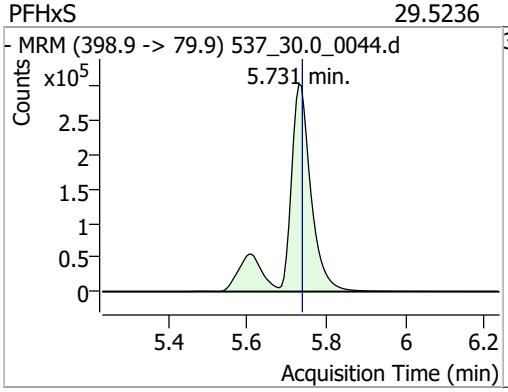
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	32.9403	5.67	-0.01	3304610	362.9 -> 168.9	14.9	12.6	18.9

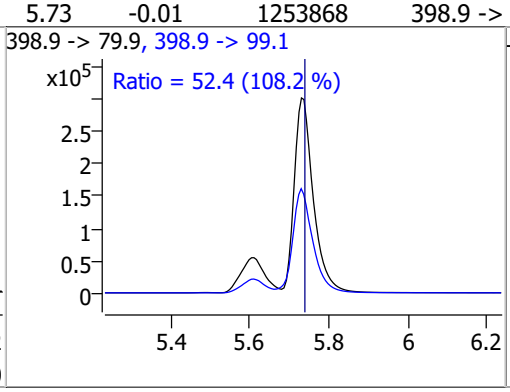


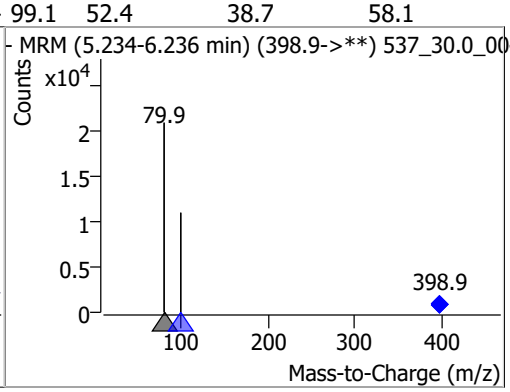




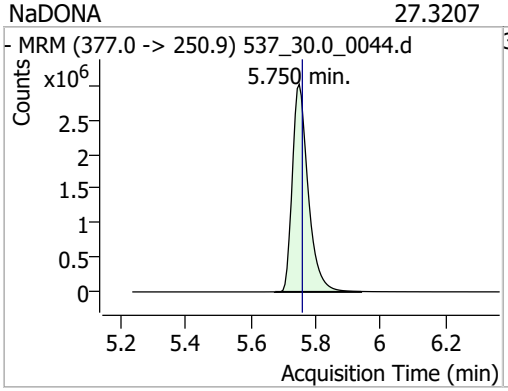
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	29.5236	5.73	-0.01	1253868	398.9 -> 99.1	52.4	38.7	58.1

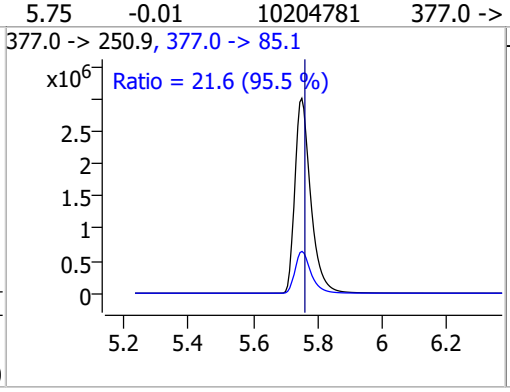


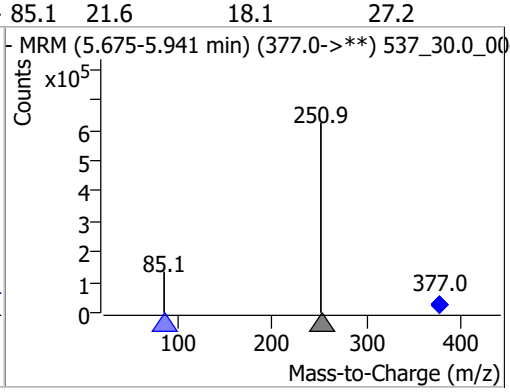




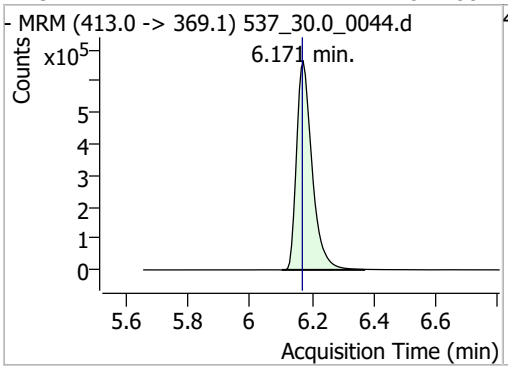
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	27.3207	5.75	-0.01	10204781	377.0 -> 85.1	21.6	18.1	27.2

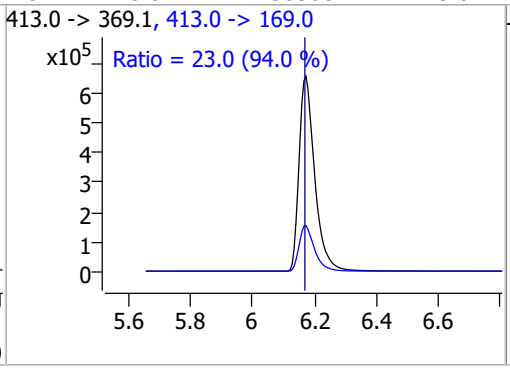


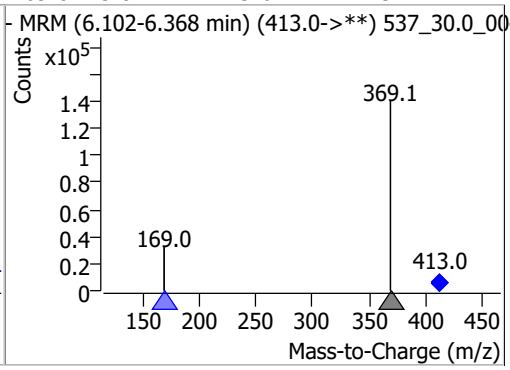




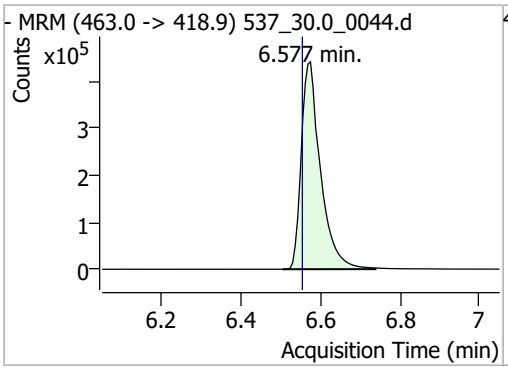
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	28.2788	6.17	0.01	2305681	413.0 -> 169.0	23.0	19.6	29.4

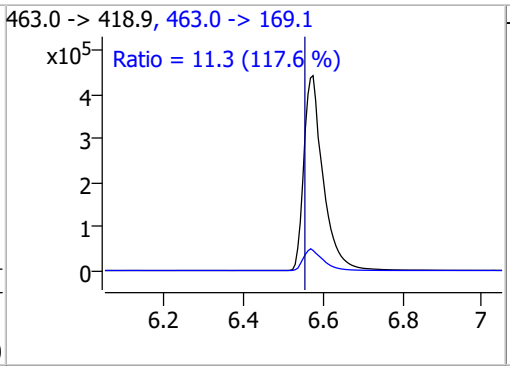


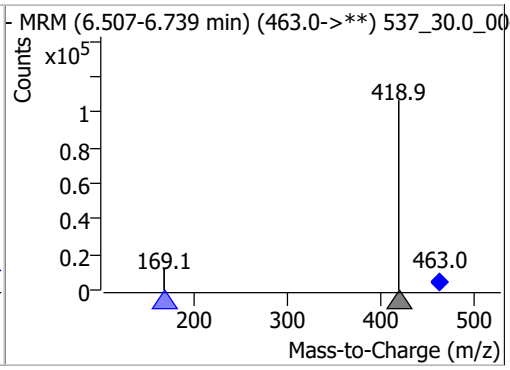




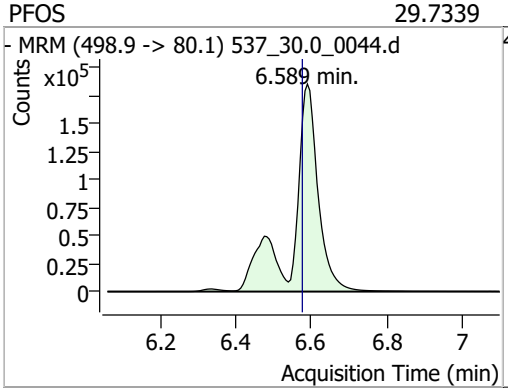
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	27.9138	6.58	0.02	1470939	463.0 -> 169.1	11.3	7.7	11.5

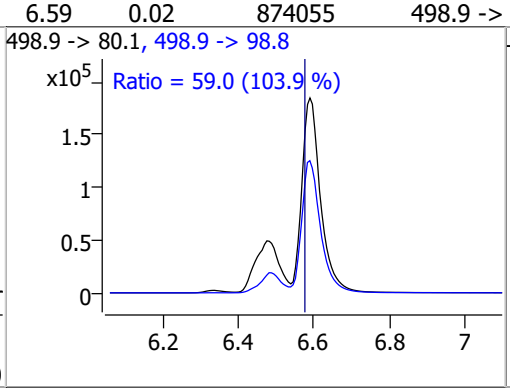


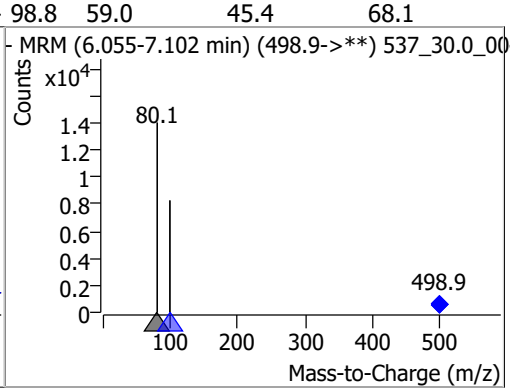




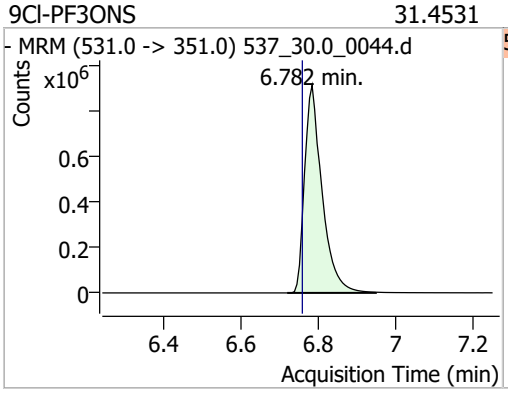
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	29.7339	6.59	0.02	874055	498.9 -> 98.8	59.0	45.4	68.1

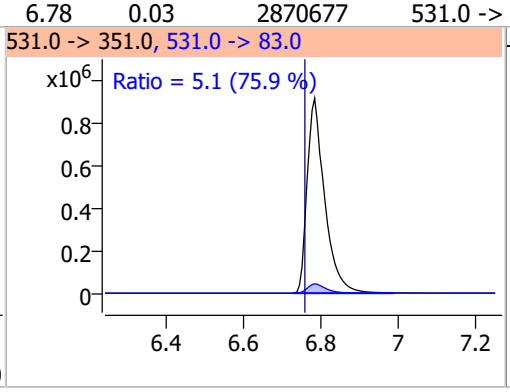


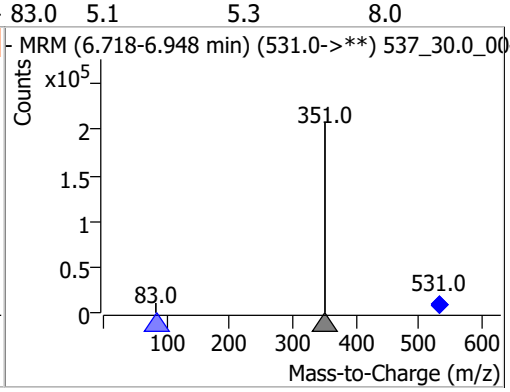




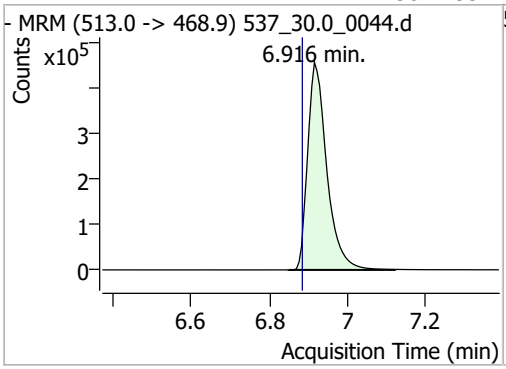
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	31.4531	6.78	0.03	2870677	531.0 -> 83.0	5.1	5.3	8.0

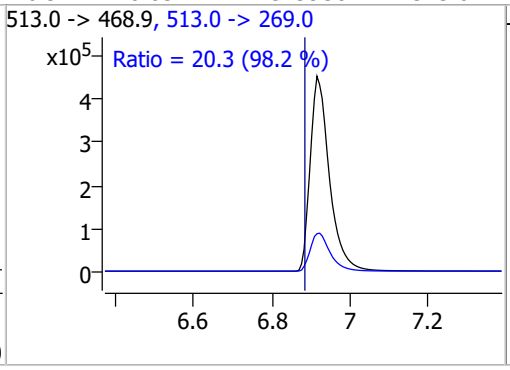


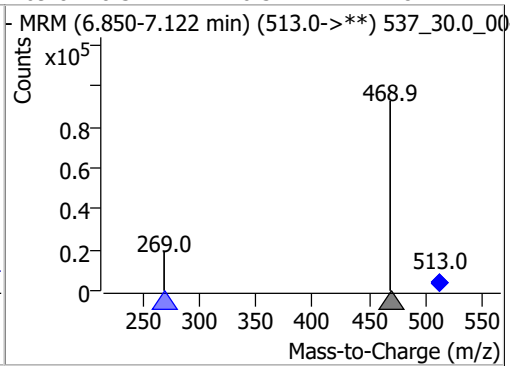




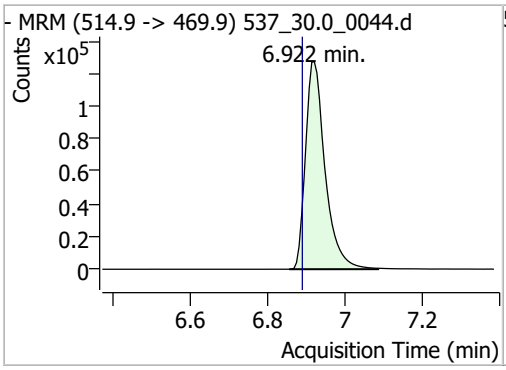
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	30.2253	6.92	0.03	1549930	513.0 -> 269.0	20.3	16.5	24.8

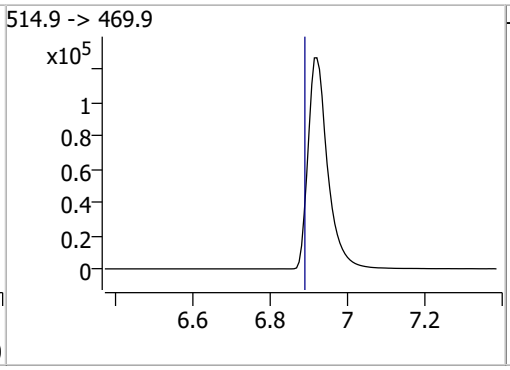


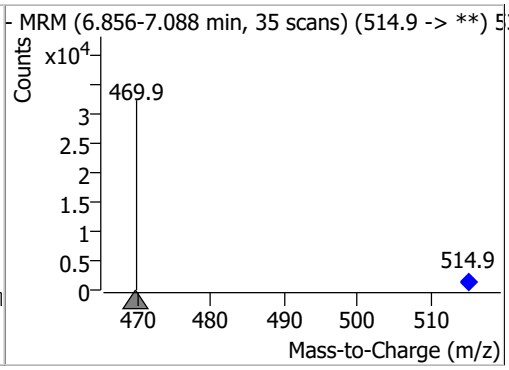




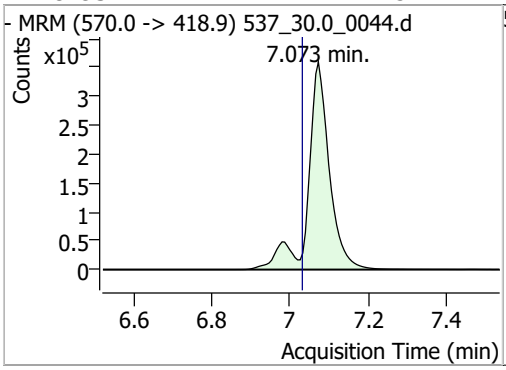
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	9.3862	6.92	0.03	448928				

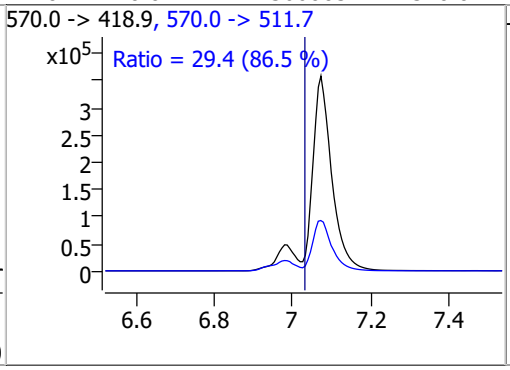


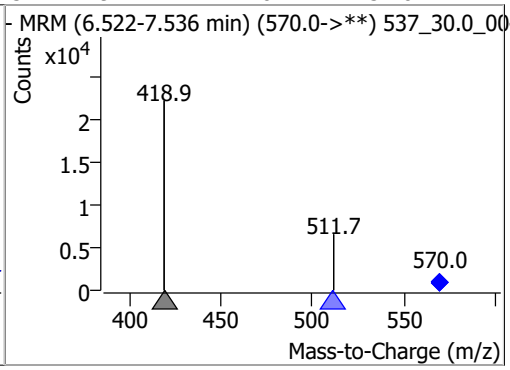




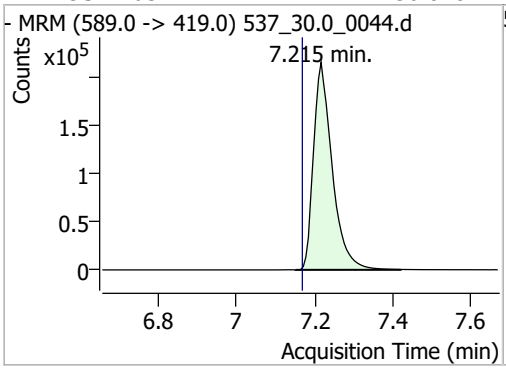
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	32.1714	7.07	0.04	1366005	570.0 -> 511.7	29.4	17.0	51.0

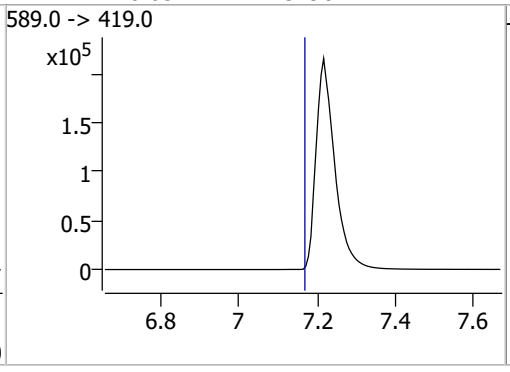


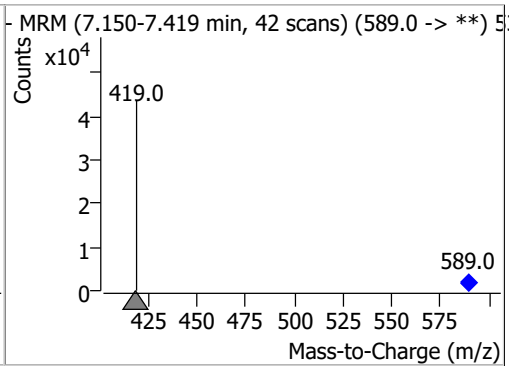




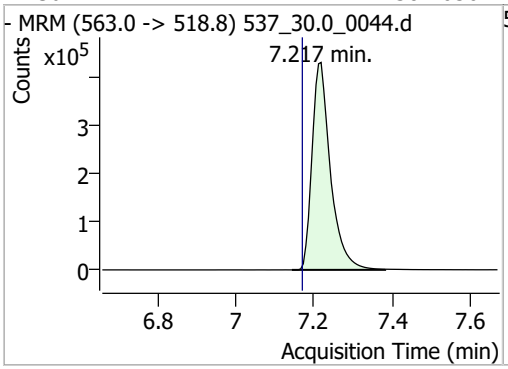
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	36.0182	7.22	0.05	715290				

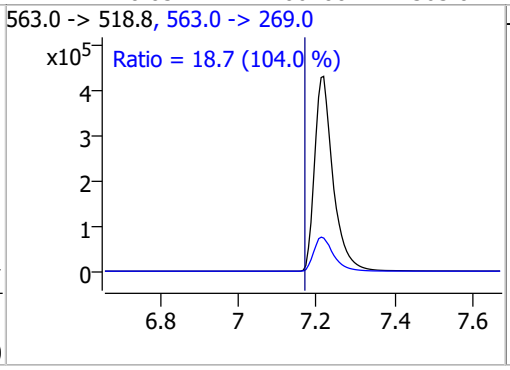


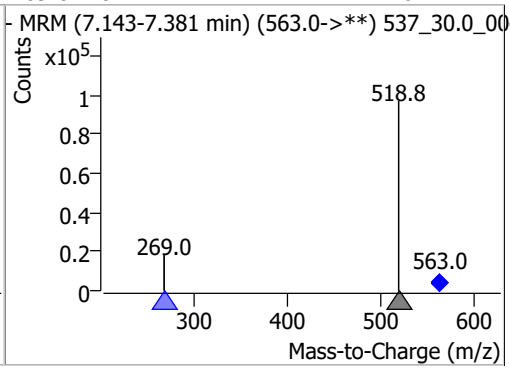




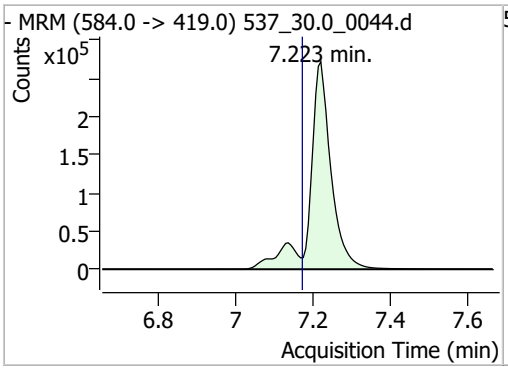
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	30.4656	7.22	0.05	1406100	563.0 -> 269.0	18.7	14.4	21.6

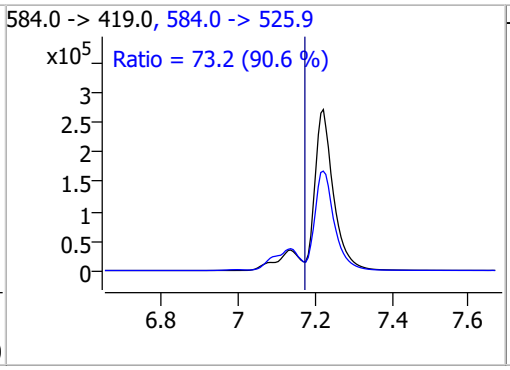


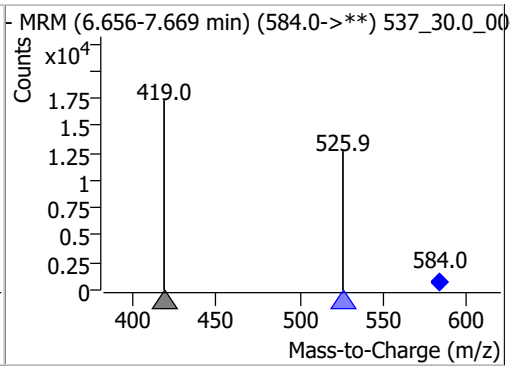




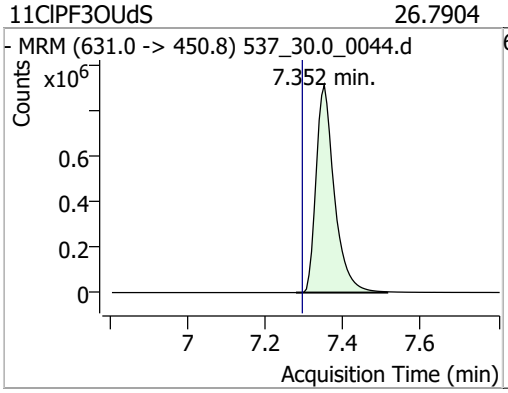
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	29.6686	7.22	0.05	1055451	584.0 -> 525.9	73.2	40.4	121.1

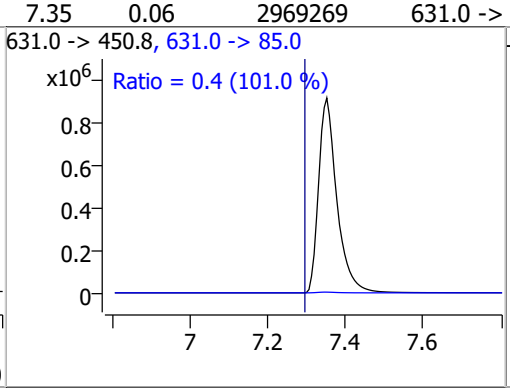


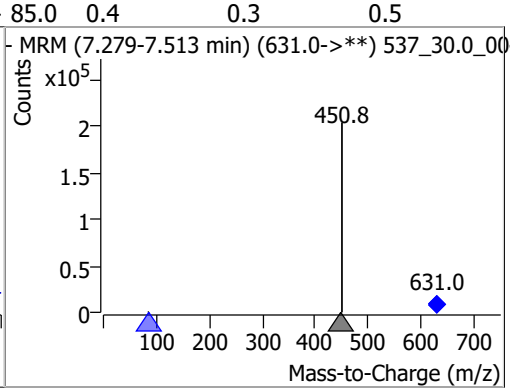




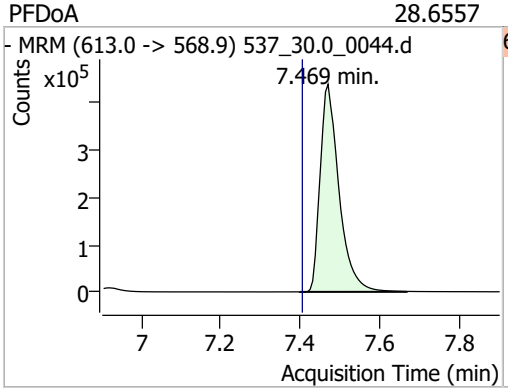
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	26.7904	7.35	0.06	2969269	631.0 -> 85.0	0.4	0.3	0.5

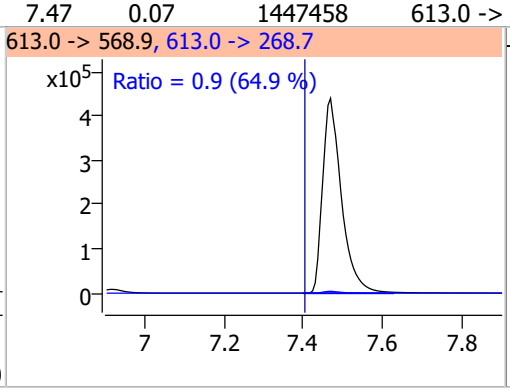


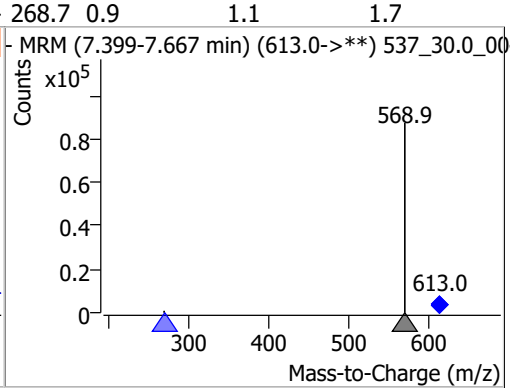




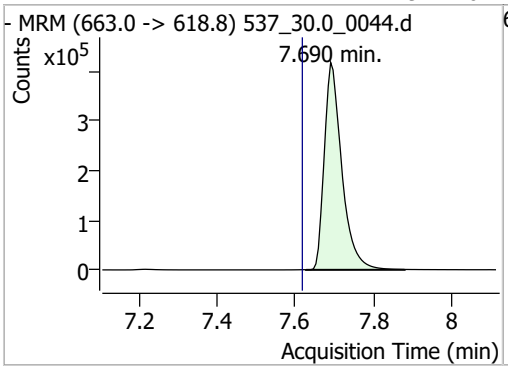
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	28.6557	7.47	0.07	1447458	613.0 -> 268.7	0.9	1.1	1.7

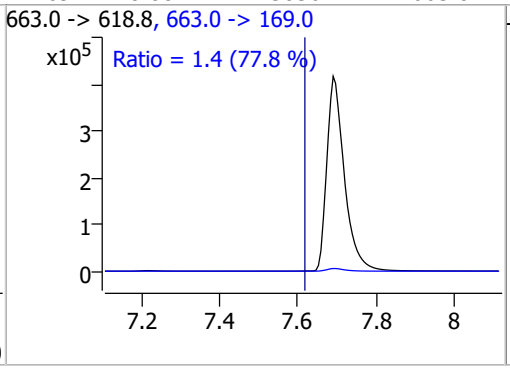


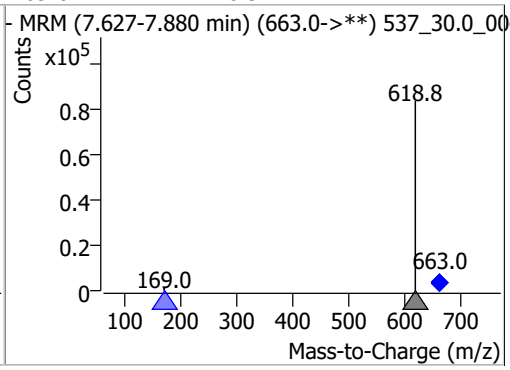




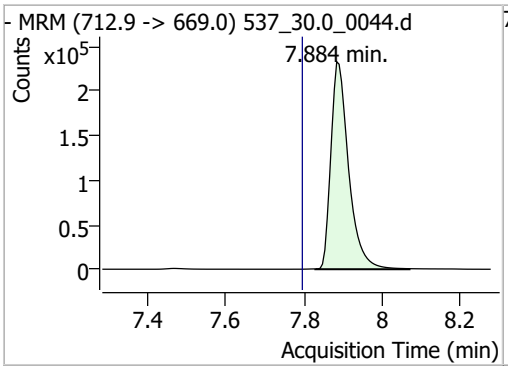
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	29.1746	7.69	0.08	1303644	663.0 -> 169.0	1.4	0.9	2.7

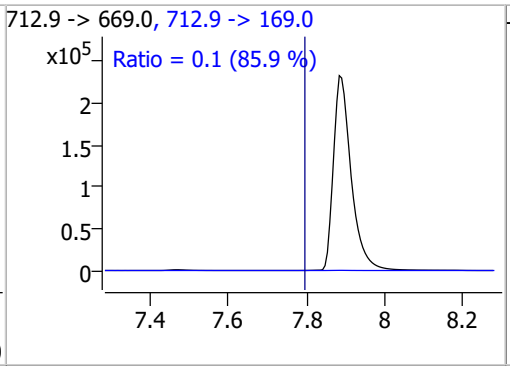


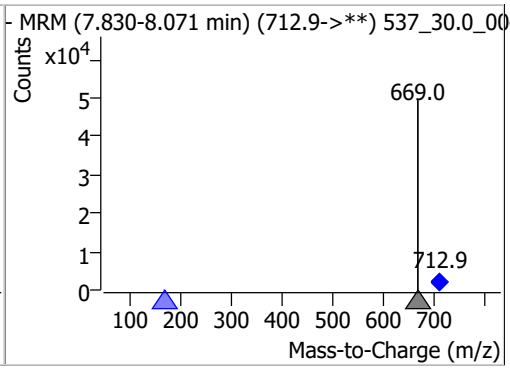




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	30.3456	7.88	0.09	734266	712.9 -> 169.0	0.1	0.0	0.1







Quantitation Results Report

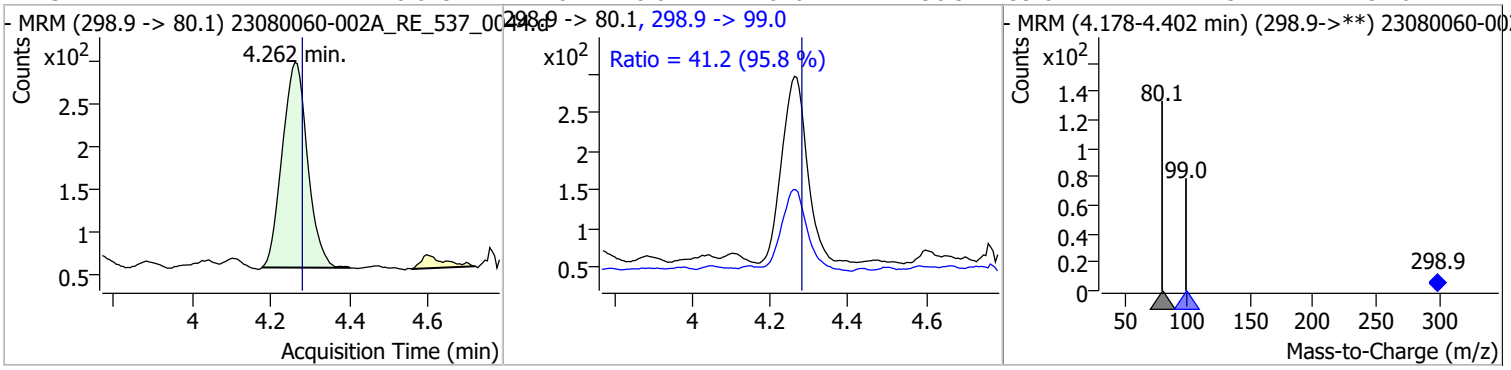
Agilent | Trusted Answers

Data File	23080060-002A_RE_537_0044.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 4:10:32 PM
Sample Name	23080060-002A	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
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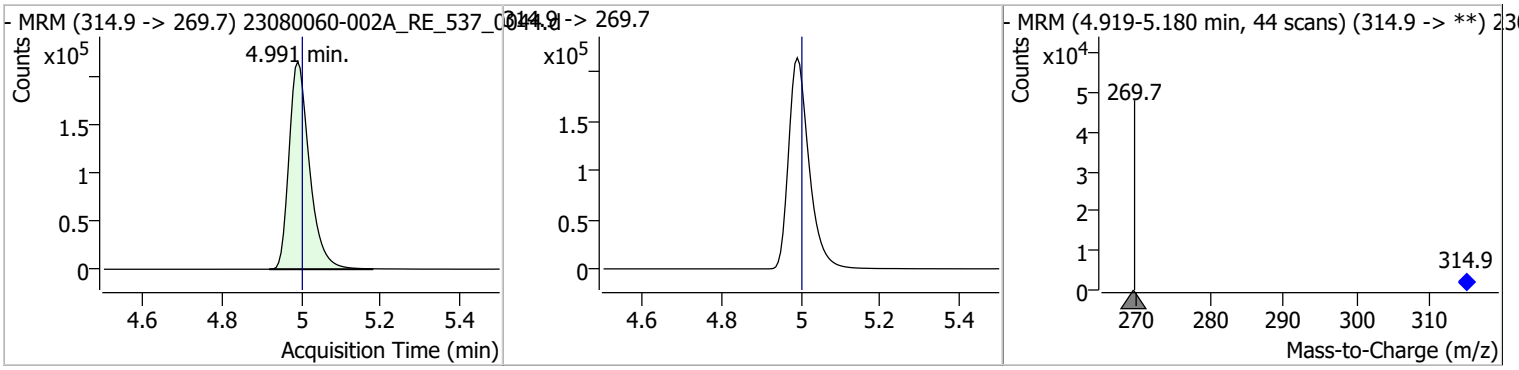
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.588	502.9 -> 80.1	835160	3.0000	ng/ml		0.017
13C2-PFOA	6.171	415.0 -> 370.0	1100597	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.066	573.0 -> 418.9	1883190	4.0000	ng/ml		0.038
System Monitoring Compounds							
13C2-PFHxA	4.991	314.9 -> 269.7	764271	6.6493	ng/ml		-0.008
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 66.49%		*	
13C3-HFPO-DA	5.213	287.0 -> 169.0	14868	6.2270	ng/ml		-0.010
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 62.27%		*	
13C2-PFDA	6.915	514.9 -> 469.9	509443	8.5306	ng/ml		0.028
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 85.31%			
NETFOSAA-d5	7.215	589.0 -> 419.0	403142	17.7581	ng/ml		0.051
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 44.40%		*	
Target Compounds							**QValue**
PFBS	4.262	298.9 -> 80.1	1076	0.0154	ng/ml		97
PFHxA	4.992	313.0 -> 269.0	2184	0.0149	ng/ml	#	97
HFPO-DA	5.214	285.0 -> 169.1	63	0.0233	ng/ml	#	68
PFHpA	5.682	362.9 -> 318.9	1314	0.0105	ng/ml		97
PFHxS	5.737	398.9 -> 79.9	834	0.0195	ng/ml	#	55
NaDONA	5.750	377.0 -> 250.9	193	0.0005	ng/ml		53
PFOA	6.171	413.0 -> 369.1	5324	0.0523	ng/ml		93
PFNA	6.570	463.0 -> 418.9	442	0.0070	ng/ml	#	91
PFOS	6.589	498.9 -> 80.1	2045	0.0673	ng/ml	#	83
9Cl-PF3ONS	6.782	531.0 -> 351.0	96	0.0011	ng/ml	#	41
PFDA	6.922	513.0 -> 468.9	269	0.0047	ng/ml	#	66
N-MeFOSAA	7.092	570.0 -> 418.9	159	0.0039	ng/ml	#	29
PFUdA	7.198	563.0 -> 518.8	135	0.0023	ng/ml	#	85
N-EtFOSAA	7.223	584.0 -> 419.0	568	0.0158	ng/ml		9
11ClPF3OUdS	7.221	631.0 -> 450.8	4	0.0000	ng/ml	#	40
PFDoA	7.578	613.0 -> 568.9	894	0.0142	ng/ml	#	98
PFTrDA	7.684	663.0 -> 618.8	52	0.0011	ng/ml	#	93
PFTA	7.787	712.9 -> 669.0	50	0.0017	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

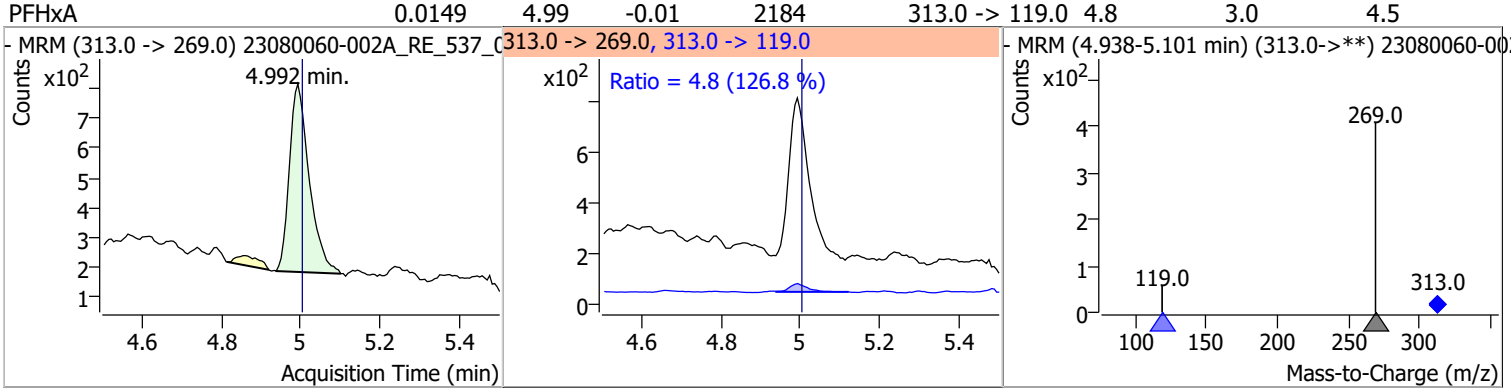
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	0.0154	4.26	-0.02	1076	298.9 -> 99.0	41.2	34.4	51.6



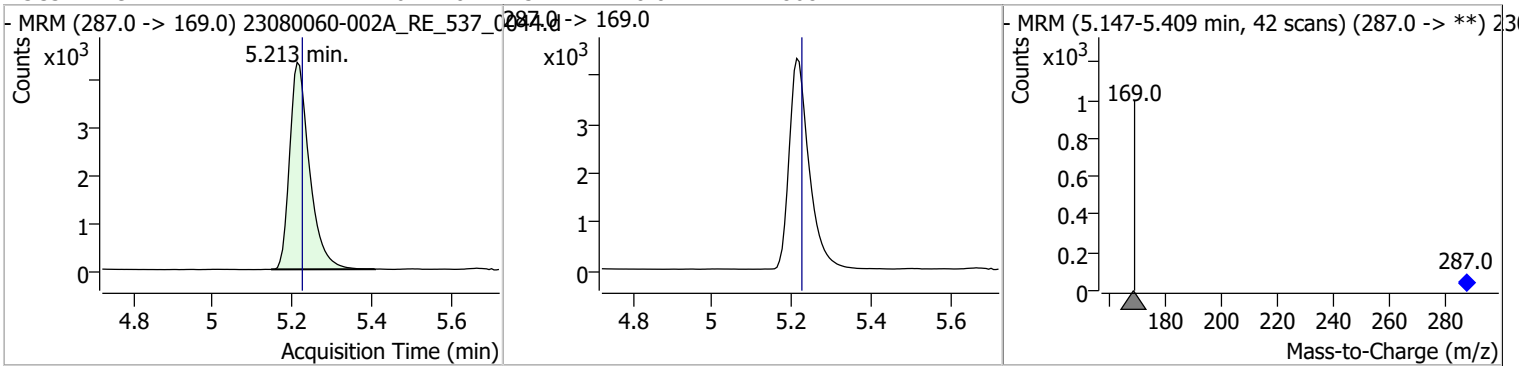
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	6.6493	4.99	-0.01	764271				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	0.0149	4.99	-0.01	2184	313.0 -> 119.0	4.8	3.0	4.5

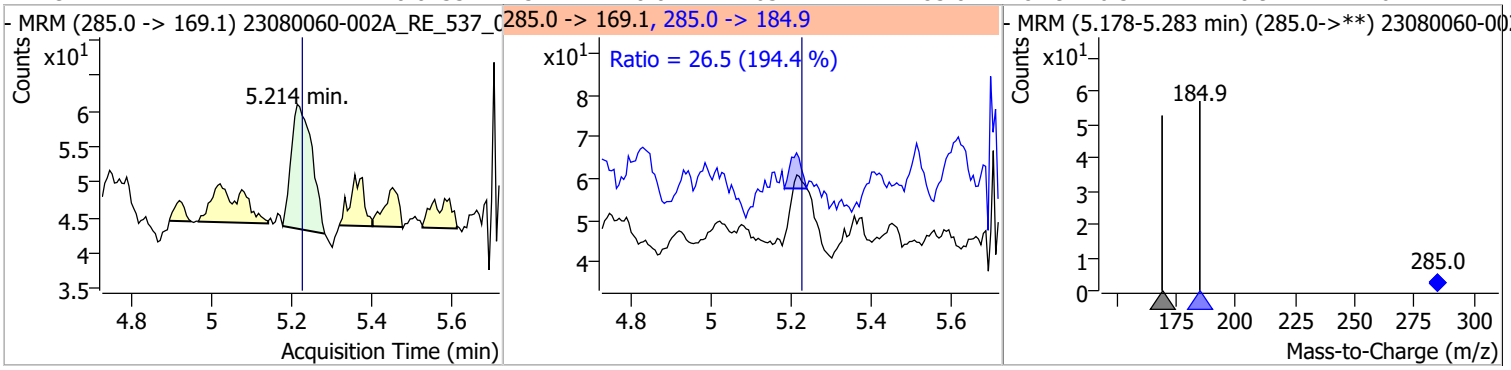


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	6.2270	5.21	-0.01	14868				

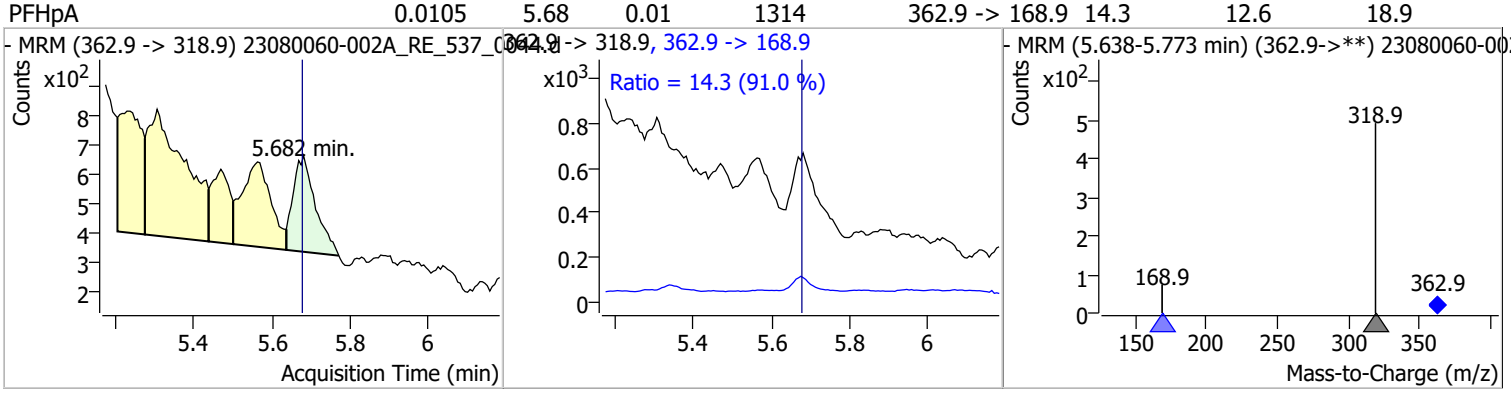


Quantitation Results Report

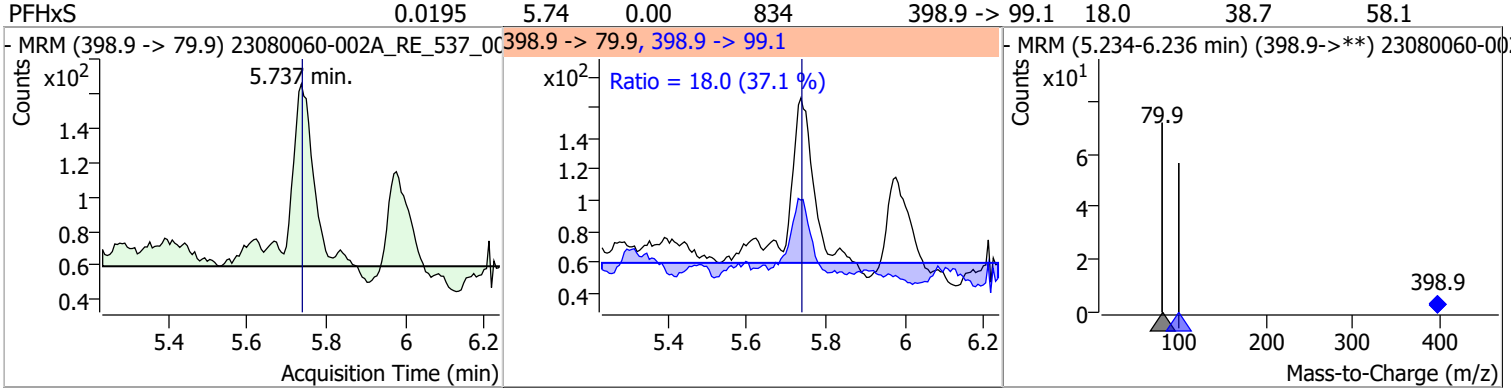
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	0.0233	5.21	-0.01	63	285.0 -> 184.9	26.5	10.9	16.4



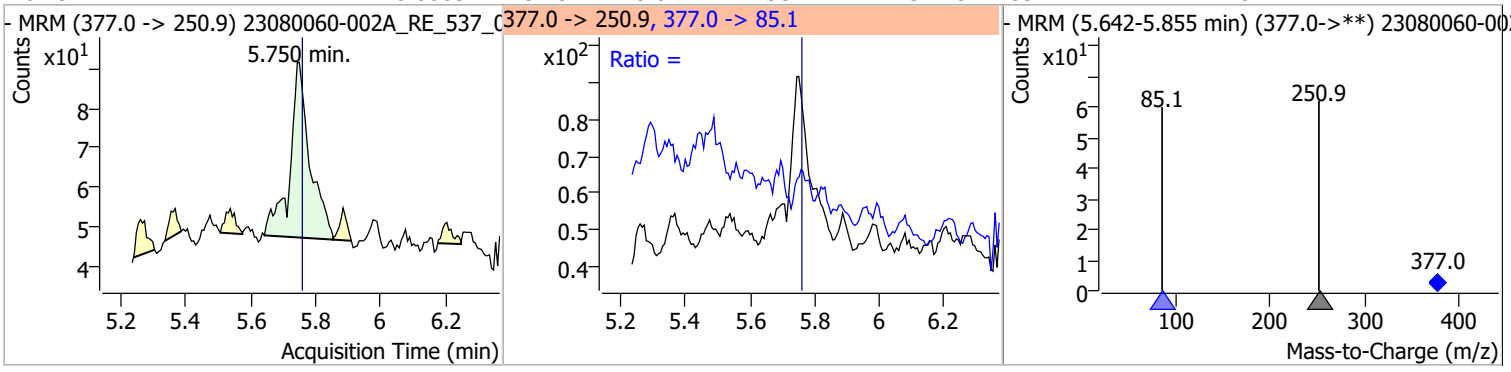
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	0.0105	5.68	0.01	1314	362.9 -> 168.9	14.3	12.6	18.9



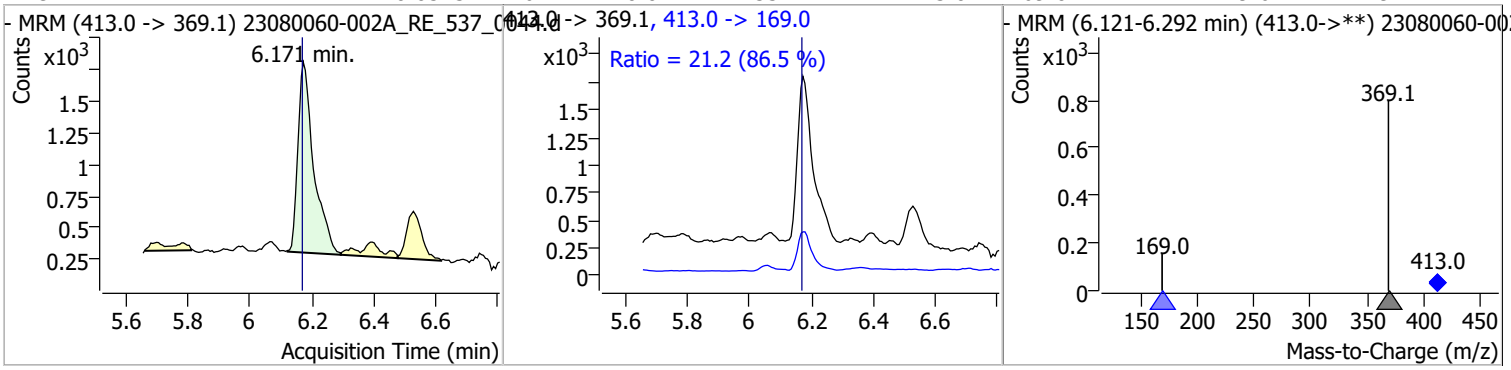
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	0.0195	5.74	0.00	834	398.9 -> 99.1	18.0	38.7	58.1



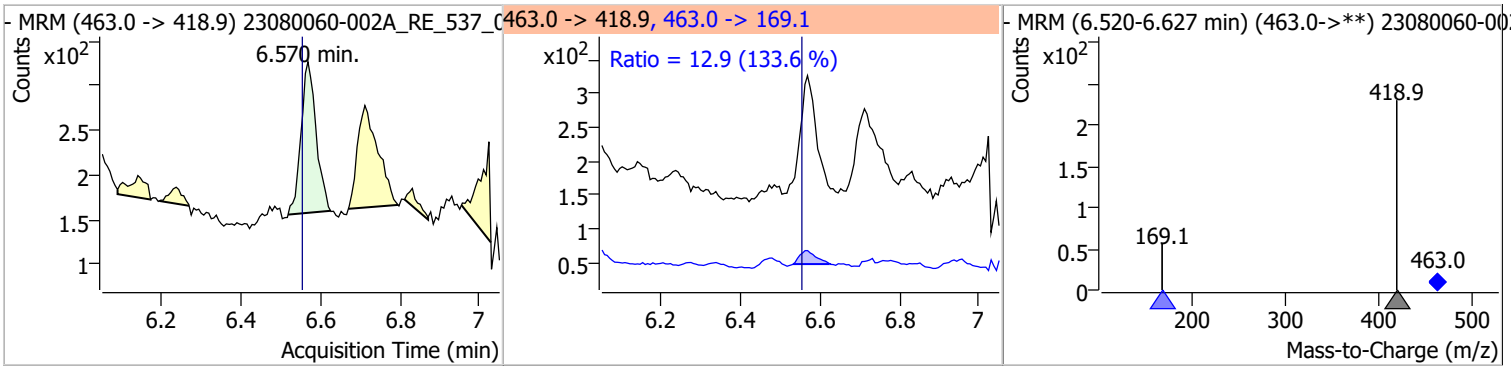
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	0.0005	5.75	-0.01	193	377.0 -> 85.1		18.1	27.2



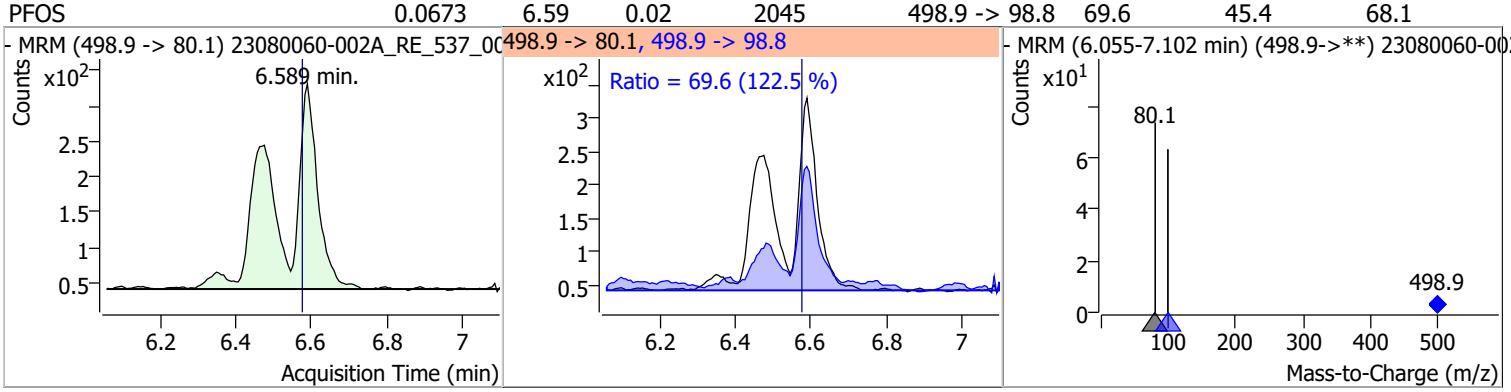
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	0.0523	6.17	0.01	5324	413.0 -> 169.0	21.2	19.6	29.4



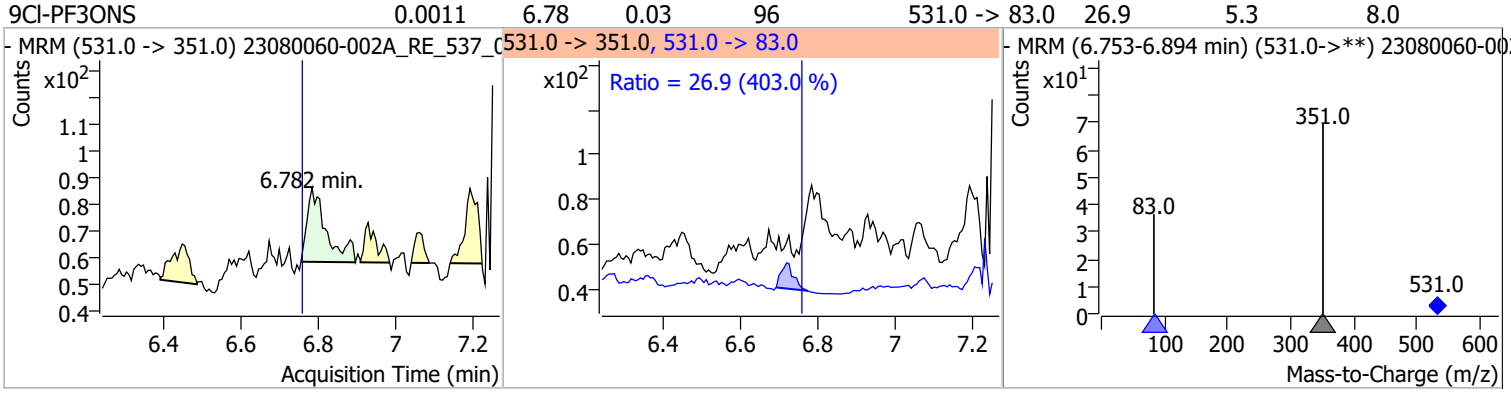
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	0.0070	6.57	0.02	442	463.0 -> 169.1	12.9	7.7	11.5



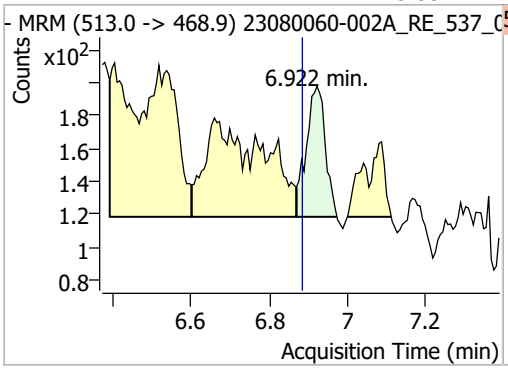
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	0.0673	6.59	0.02	2045	498.9 -> 98.8	69.6	45.4	68.1

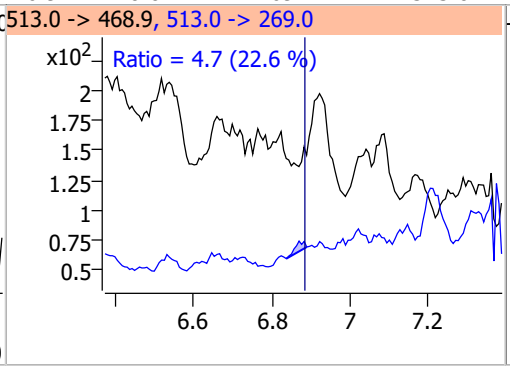


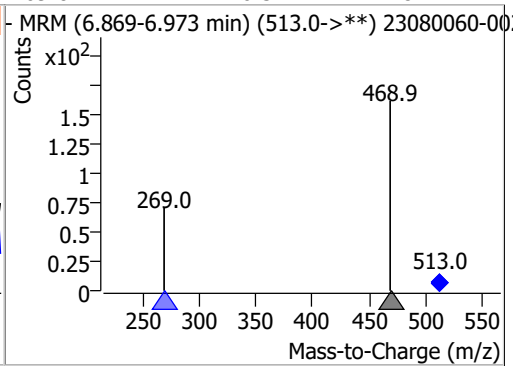
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	0.0011	6.78	0.03	96	531.0 -> 83.0	26.9	5.3	8.0



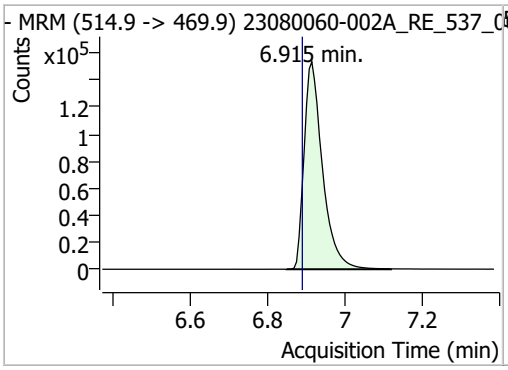
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	0.0047	6.92	0.04	269	513.0 -> 269.0	4.7	16.5	24.8

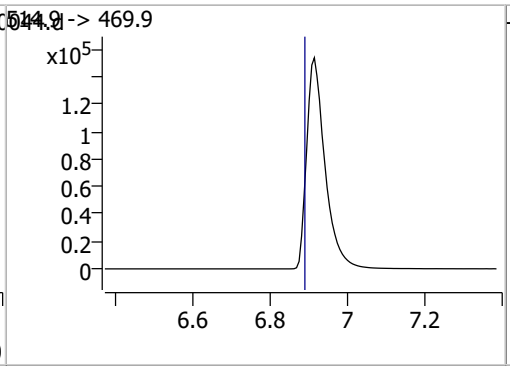


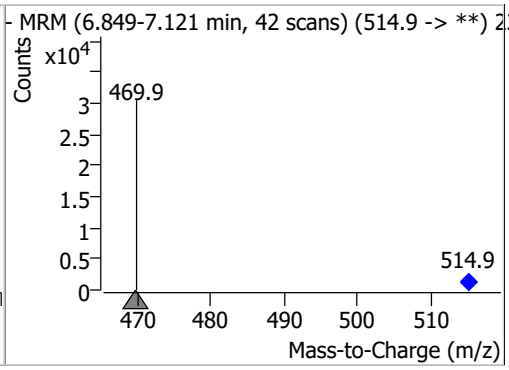




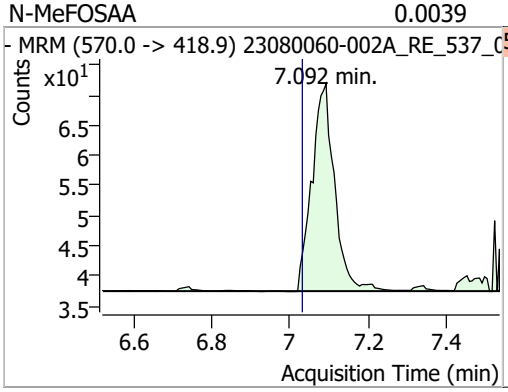
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	8.5306	6.92	0.03	509443				

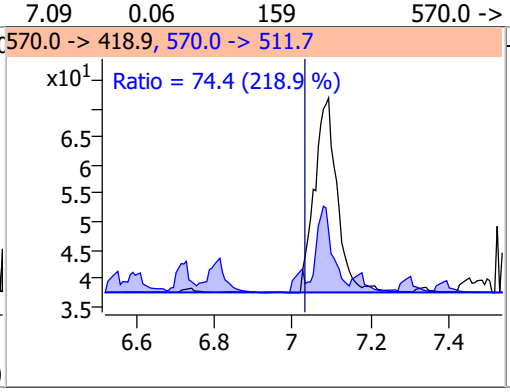


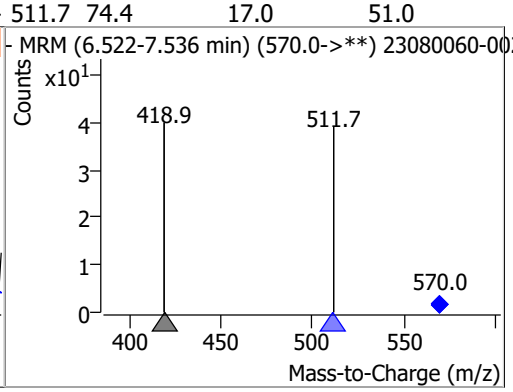




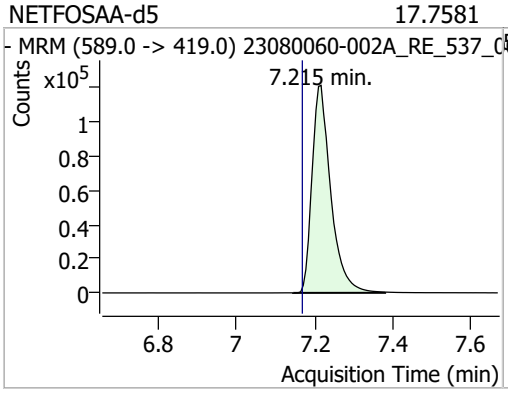
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	0.0039	7.09	0.06	159	570.0 -> 511.7	74.4	17.0	51.0

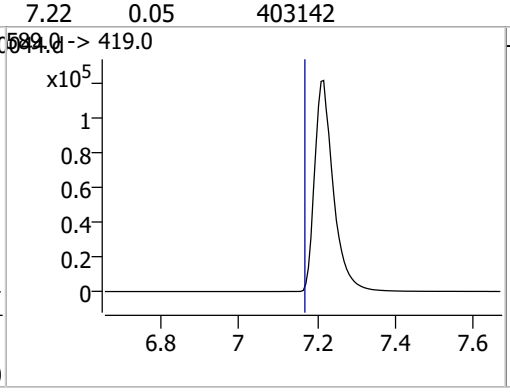


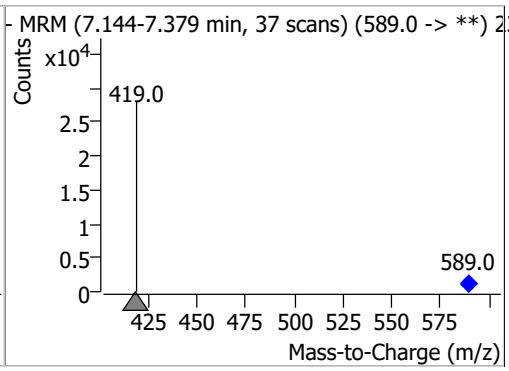




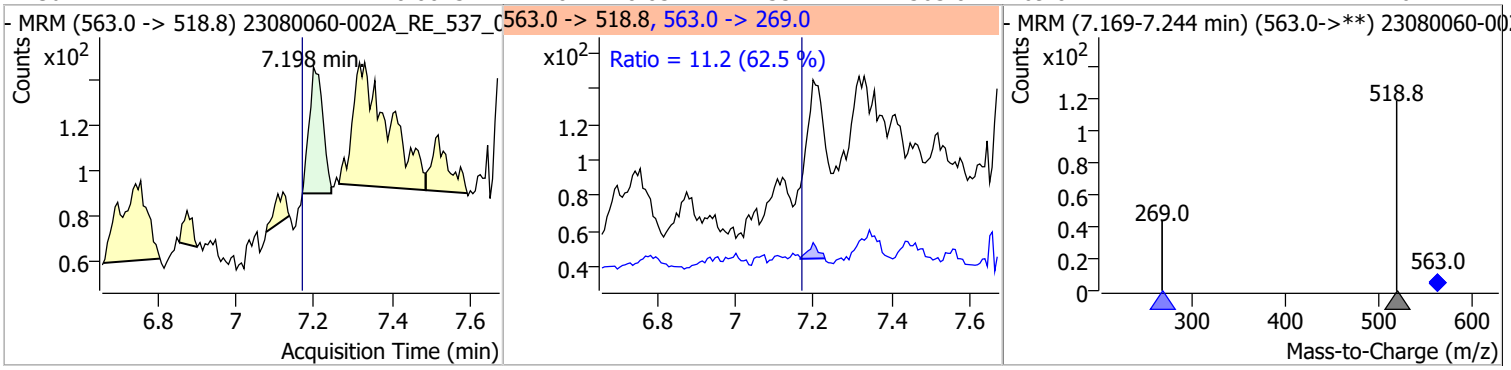
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	17.7581	7.22	0.05	403142				



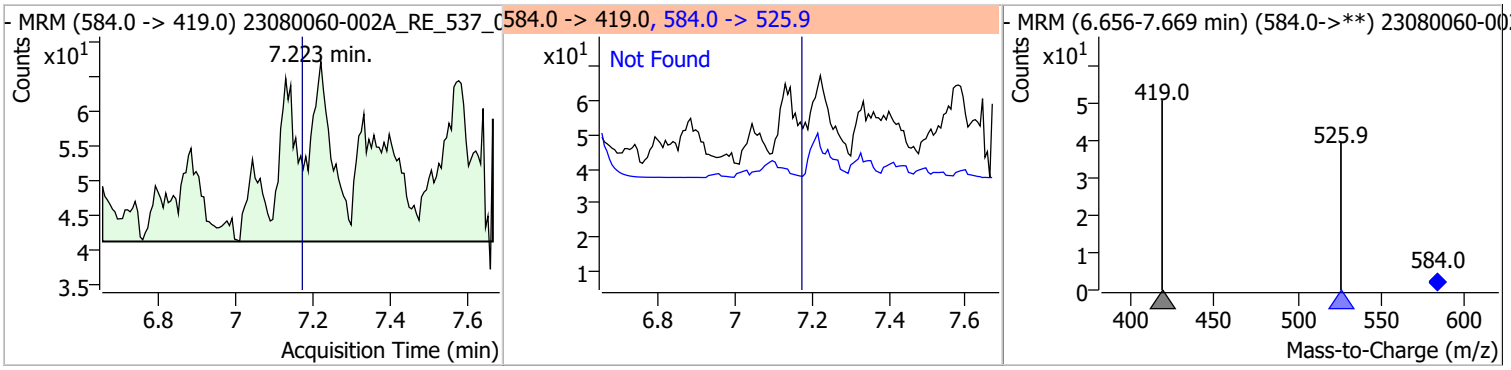




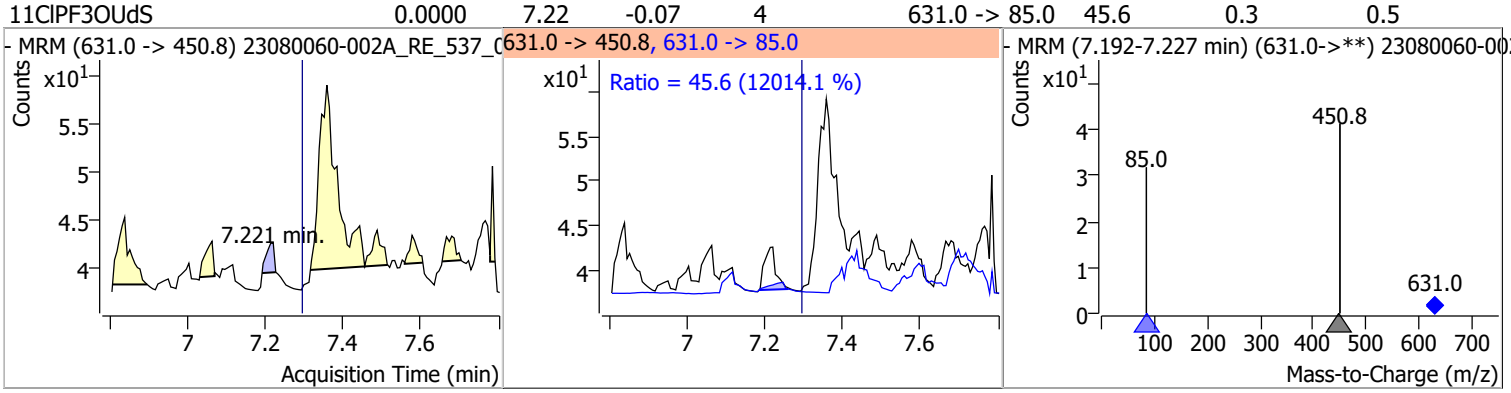
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	0.0023	7.20	0.03	135	563.0 -> 269.0	11.2	14.4	21.6



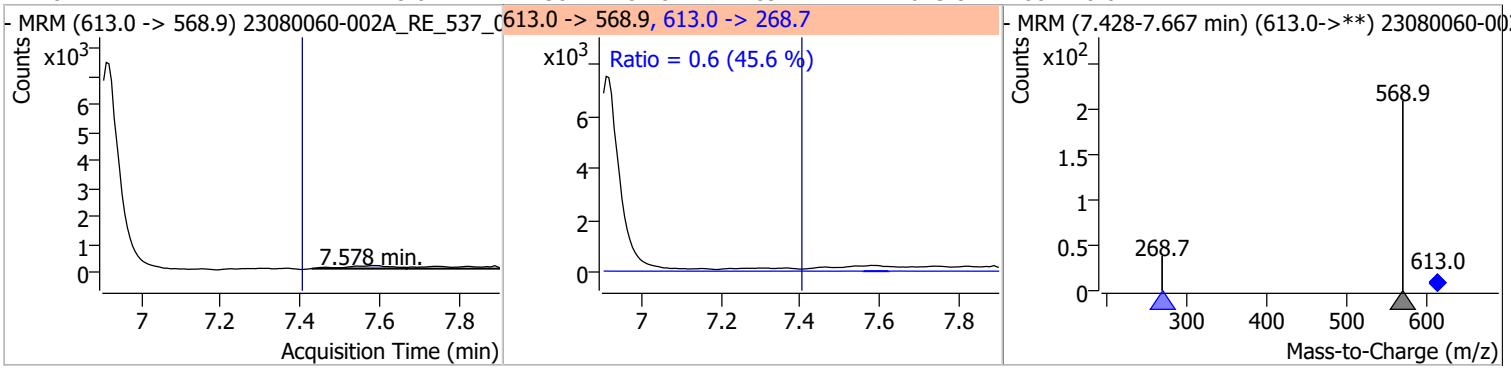
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	0.0158	7.22	0.05	568	584.0 -> 525.9		40.4	121.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	0.0000	7.22	-0.07	4	631.0 -> 85.0	45.6	0.3	0.5

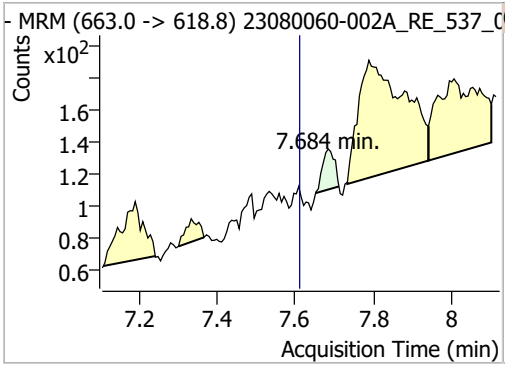


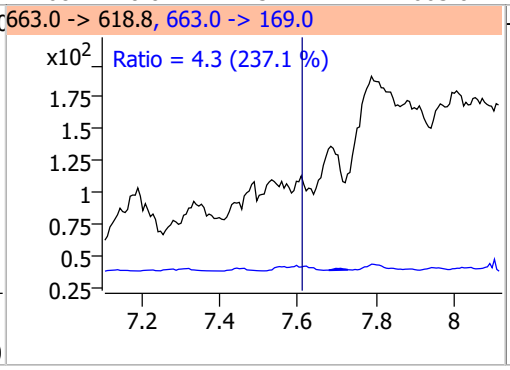
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	0.0142	7.58	0.18	894	613.0 -> 268.7	0.6	1.1	1.7

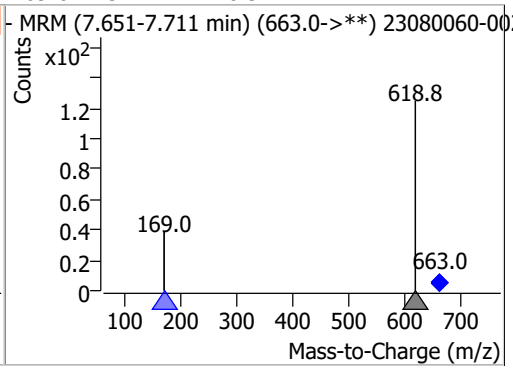


Quantitation Results Report

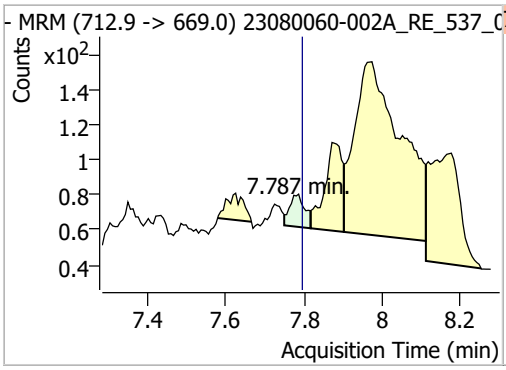
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	0.0011	7.68	0.07	52	663.0 -> 169.0	4.3	0.9	2.7

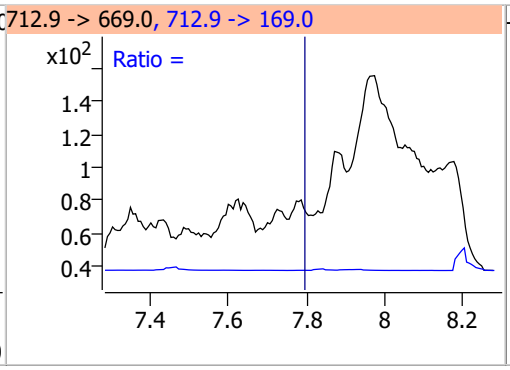


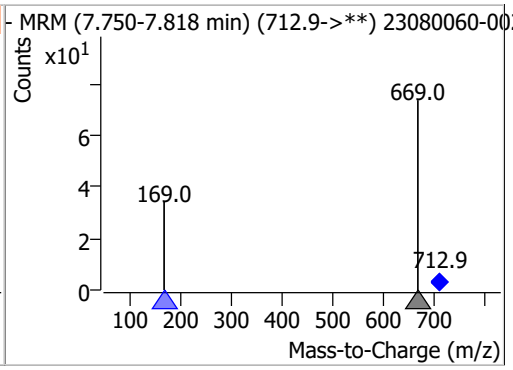




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	0.0017	7.79	-0.01	50	712.9 -> 169.0		0.0	0.1







Quantitation Results Report

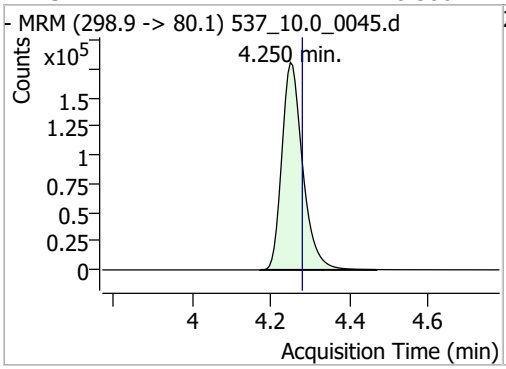
Agilent | Trusted Answers

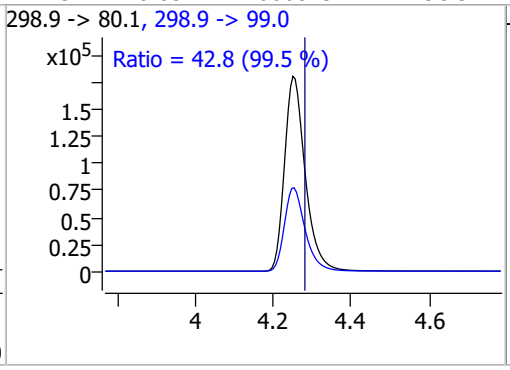
Data File	537_10.0_0045.d	Operator	AEH
Acq. Method	EPA 537.1 dMRM20230615.m	Acq. Date-Time	8/10/2023 4:23:24 PM
Sample Name	CAL4_537_10.0	Instrument	Instrument 1
Vial		Multiplier	1.00
DA Method File	EPA 537 Quant Method 20230809.m	Comment	
Tune File		Tune Date	
Batch Name	20230809-537.batch.bin	Last Calib Update	8/10/2023 3:45:32 PM
Ref Library			

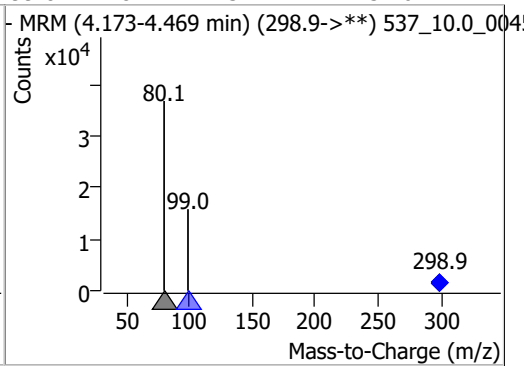
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C4-PFOS	6.582	502.9 -> 80.1	922835	3.0000	ng/ml		0.011
13C2-PFOA	6.171	415.0 -> 370.0	968816	1.0000	ng/ml		0.008
NMeFOSAA-d3	7.066	573.0 -> 418.9	1891255	4.0000	ng/ml		0.038
System Monitoring Compounds							
13C2-PFHxA	4.985	314.9 -> 269.7	1002247	9.9058	ng/ml		-0.014
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 99.06%			
13C3-HFPO-DA	5.207	287.0 -> 169.0	21205	10.0891	ng/ml		-0.016
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 100.89%			
13C2-PFDA	6.915	514.9 -> 469.9	569905	10.8411	ng/ml		0.028
Spiked Amount: 10.000	Range: 70.0 - 130.0%			Recovery = 108.41%			
NETFOSAA-d5	7.209	589.0 -> 419.0	884126	38.7791	ng/ml		0.045
Spiked Amount: 40.000	Range: 70.0 - 130.0%			Recovery = 96.95%			
Target Compounds							**QValue**
PFBS	4.250	298.9 -> 80.1	666029	8.5864	ng/ml		100
PFHxA	4.980	313.0 -> 269.0	1223005	9.4757	ng/ml		100
HFPO-DA	5.208	285.0 -> 169.1	23589	9.6380	ng/ml		100
PFHpA	5.663	362.9 -> 318.9	1192589	10.8157	ng/ml		99
PFHxS	5.731	398.9 -> 79.9	431813	8.8254	ng/ml		97
NaDONA	5.750	377.0 -> 250.9	3472026	9.3408	ng/ml		99
PFOA	6.165	413.0 -> 369.1	936675	10.4522	ng/ml		93
PFNA	6.570	463.0 -> 418.9	624847	11.0251	ng/ml		98
PFOS	6.583	498.9 -> 80.1	306601	8.9030	ng/ml		99
9Cl-PF3ONS	6.776	531.0 -> 351.0	960174	9.2245	ng/ml	#	94
PFDA	6.916	513.0 -> 468.9	591848	11.2137	ng/ml		95
N-MeFOSAA	7.066	570.0 -> 418.9	411455	9.5432	ng/ml		94
PFUdA	7.211	563.0 -> 518.8	508276	10.0196	ng/ml		97
N-EtFOSAA	7.216	584.0 -> 419.0	373267	9.8965	ng/ml		86
11ClPF3OUdS	7.345	631.0 -> 450.8	1064563	8.8808	ng/ml		100
PFDoA	7.463	613.0 -> 568.9	569388	10.2823	ng/ml	#	98
PFTrDA	7.690	663.0 -> 618.8	450840	9.9066	ng/ml		99
PFTA	7.878	712.9 -> 669.0	285168	10.7226	ng/ml		100

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

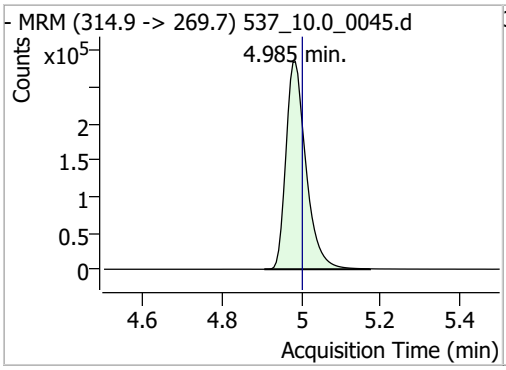
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFBS	8.5864	4.25	-0.03	666029	298.9 -> 99.0	42.8	34.4	51.6

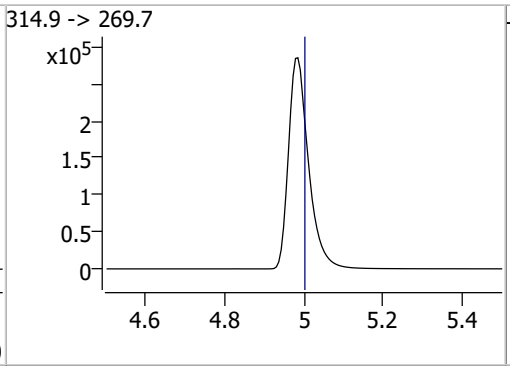


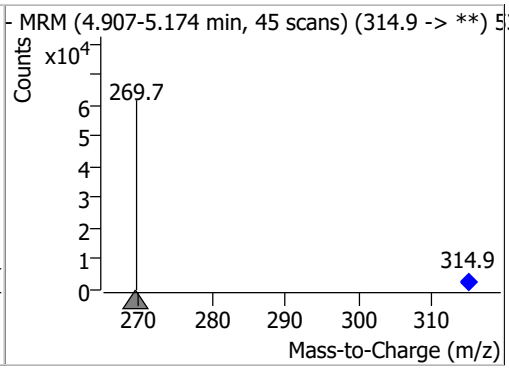




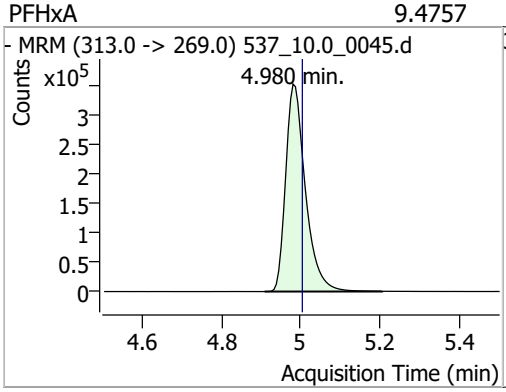
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFHxA	9.9058	4.99	-0.01	1002247				

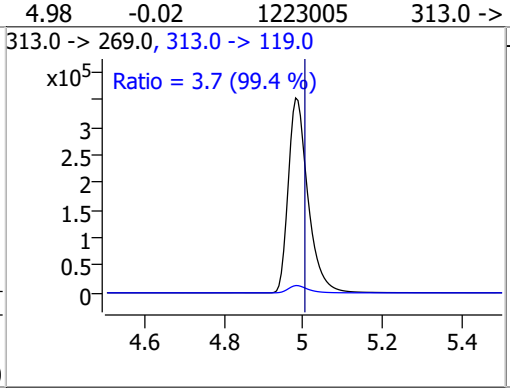


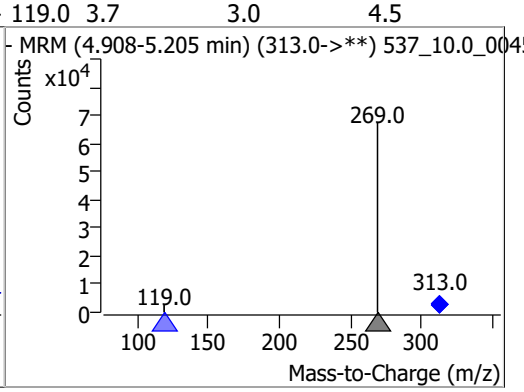




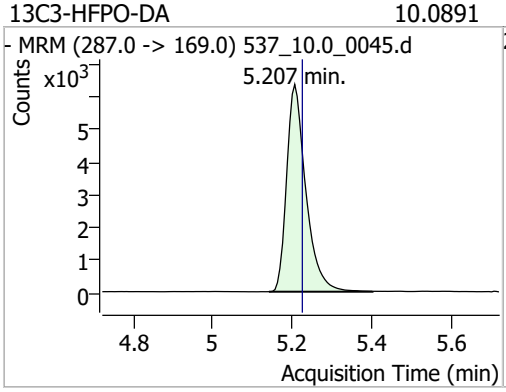
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxA	9.4757	4.98	-0.02	1223005	313.0 -> 119.0	3.7	3.0	4.5

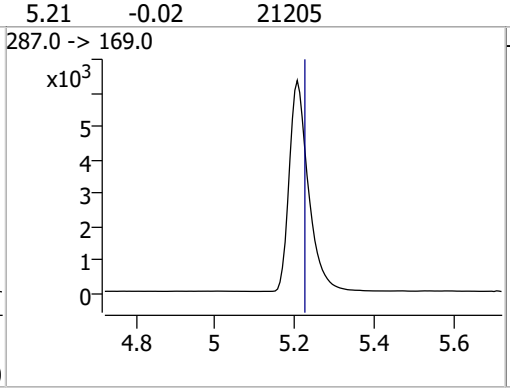


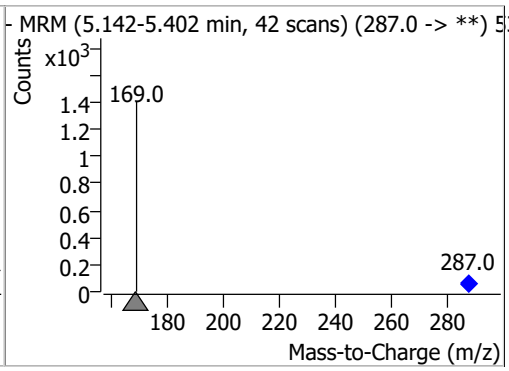




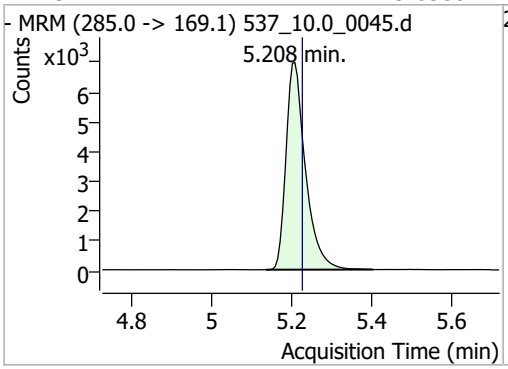
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C3-HFPO-DA	10.0891	5.21	-0.02	21205				

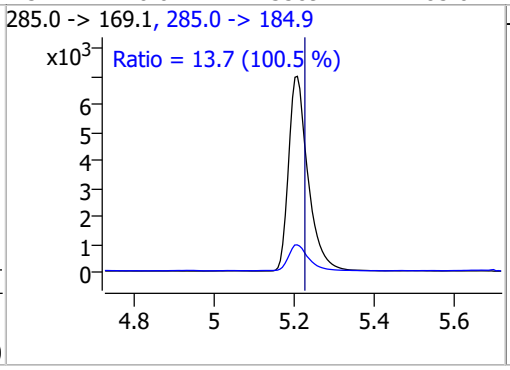


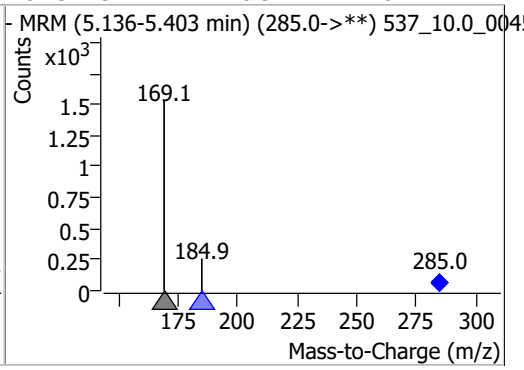




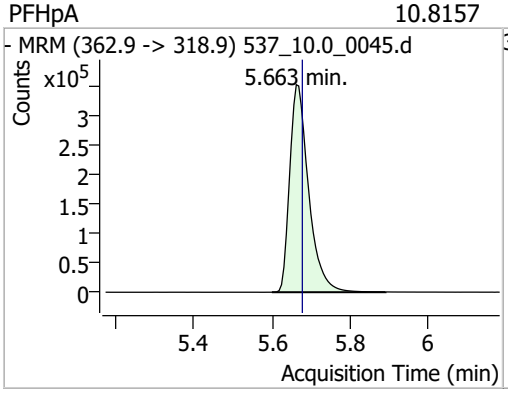
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
HFPO-DA	9.6380	5.21	-0.02	23589	285.0 -> 184.9	13.7	10.9	16.4

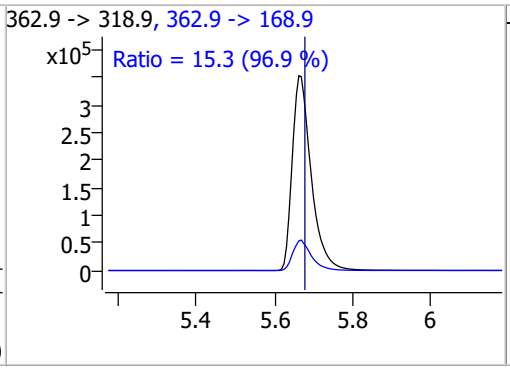


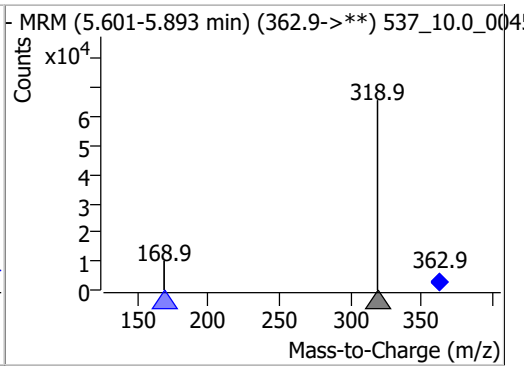




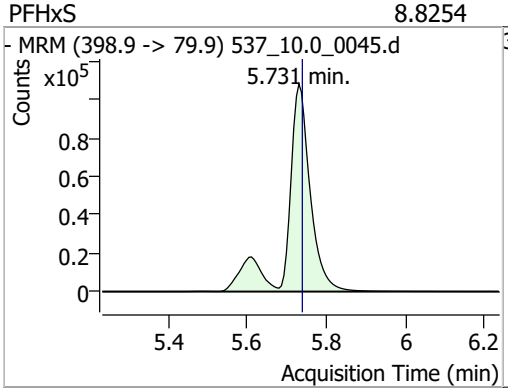
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHpA	10.8157	5.66	-0.01	1192589	362.9 -> 168.9	15.3	12.6	18.9

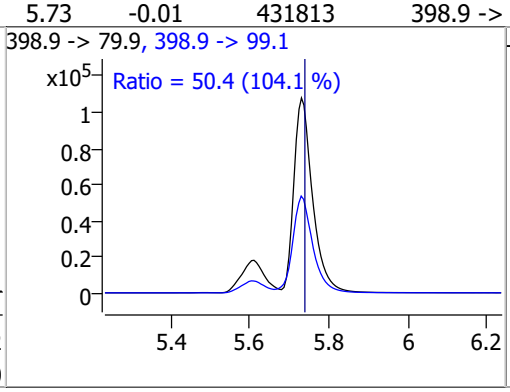


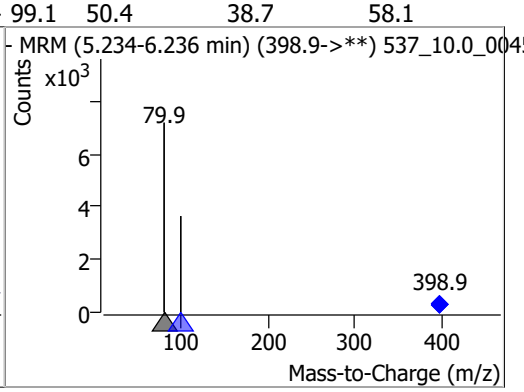




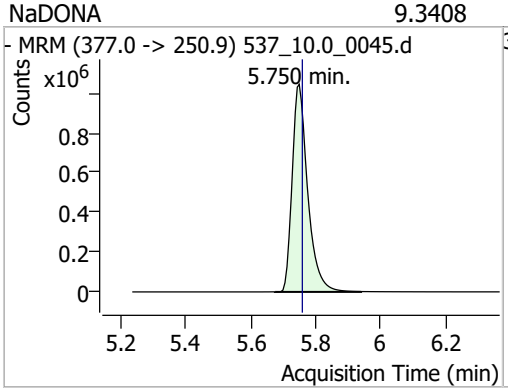
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFHxS	8.8254	5.73	-0.01	431813	398.9 -> 99.1	50.4	38.7	58.1

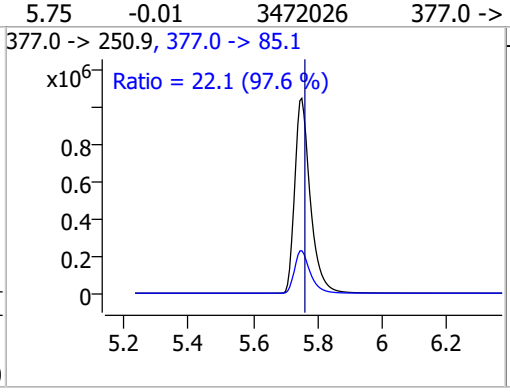


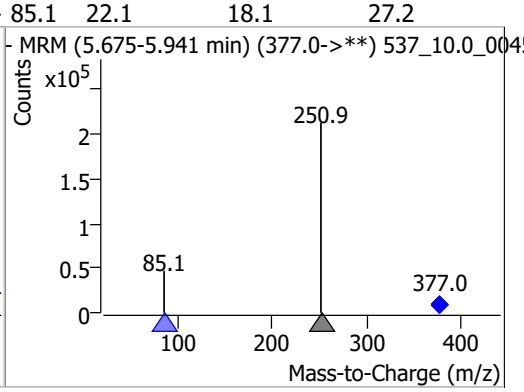




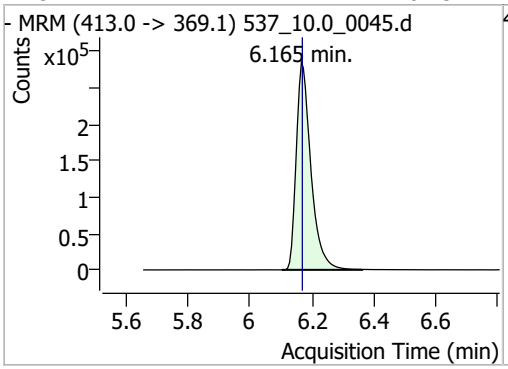
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NaDONA	9.3408	5.75	-0.01	3472026	377.0 -> 85.1	22.1	18.1	27.2

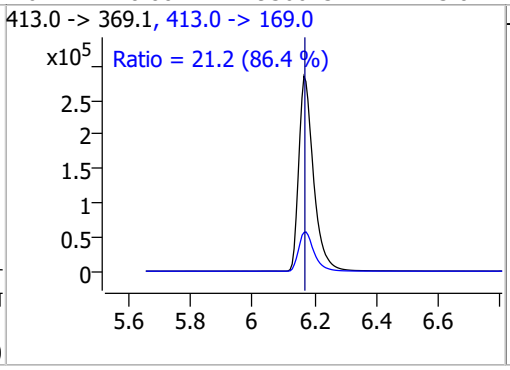


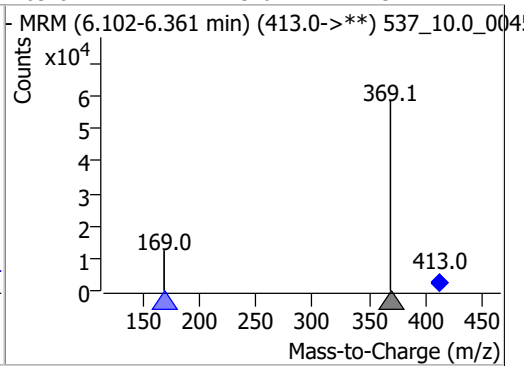




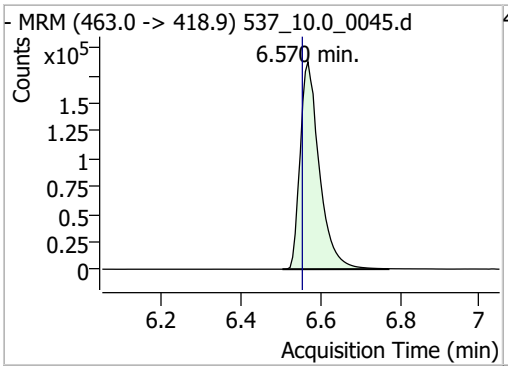
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOA	10.4522	6.17	0.00	936675	413.0 -> 169.0	21.2	19.6	29.4

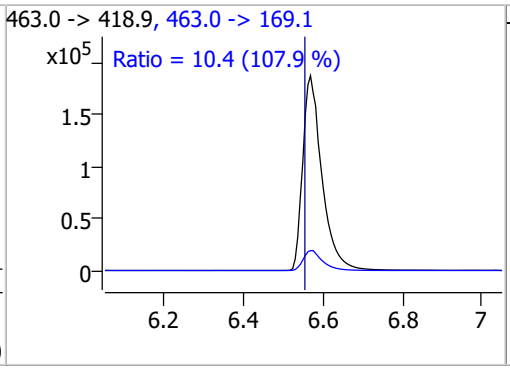


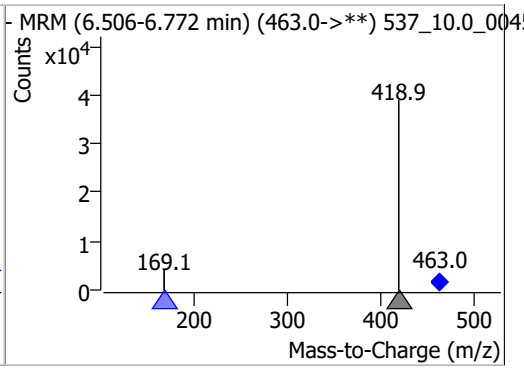




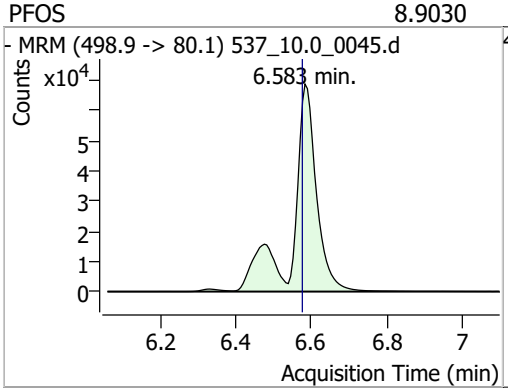
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFNA	11.0251	6.57	0.02	624847	463.0 -> 169.1	10.4	7.7	11.5

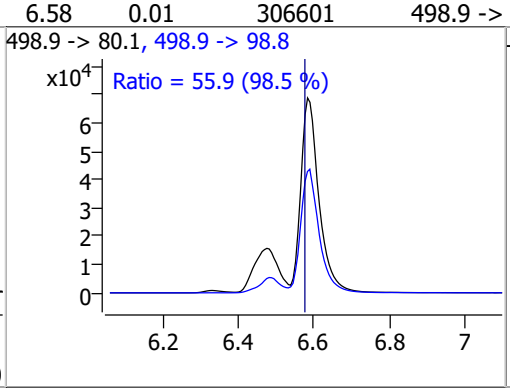


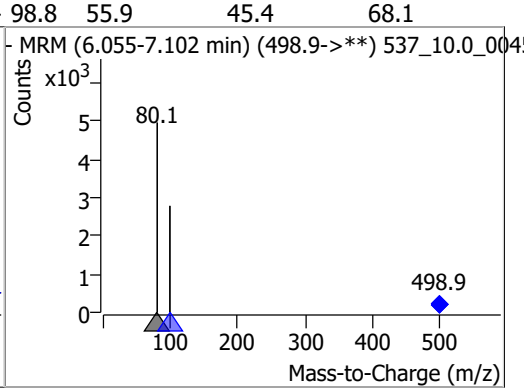




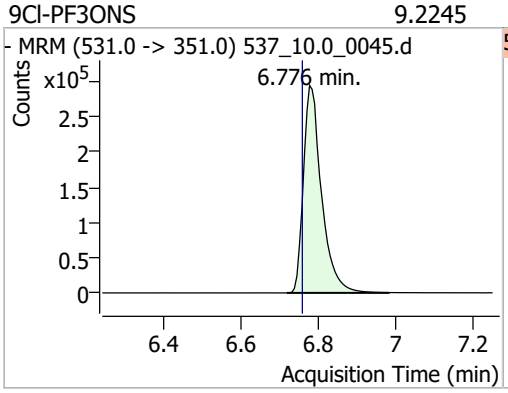
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFOS	8.9030	6.58	0.01	306601	498.9 -> 98.8	55.9	45.4	68.1

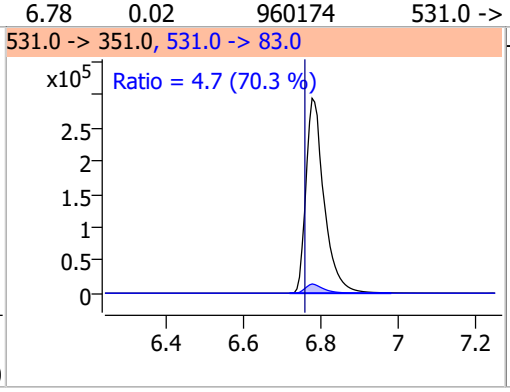


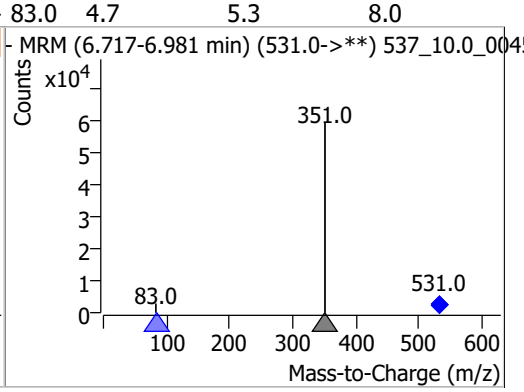




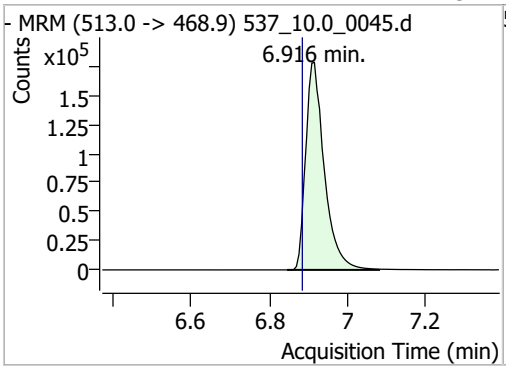
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
9Cl-PF3ONS	9.2245	6.78	0.02	960174	531.0 -> 83.0	4.7	5.3	8.0

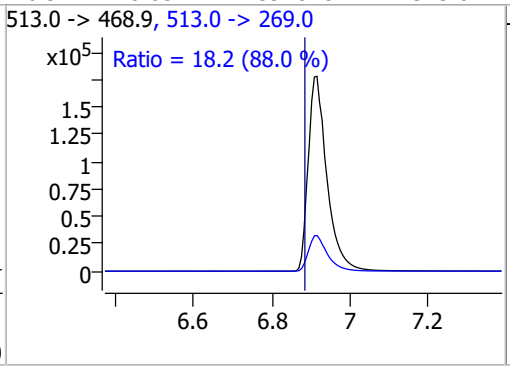


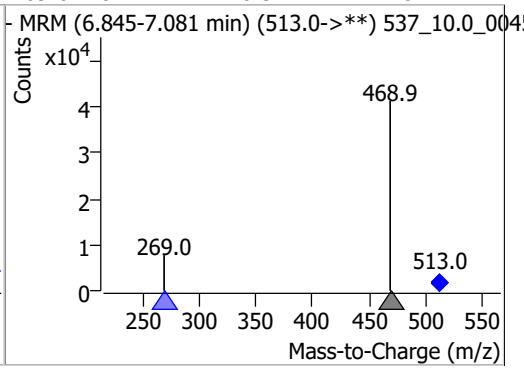




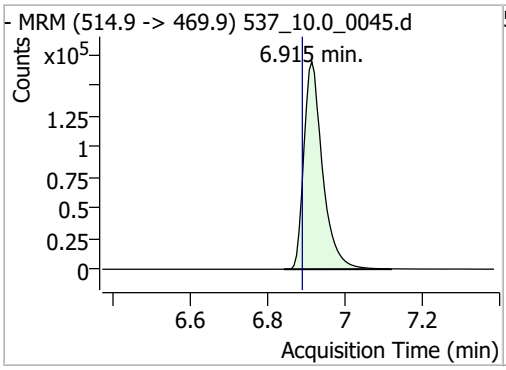
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDA	11.2137	6.92	0.03	591848	513.0 -> 269.0	18.2	16.5	24.8

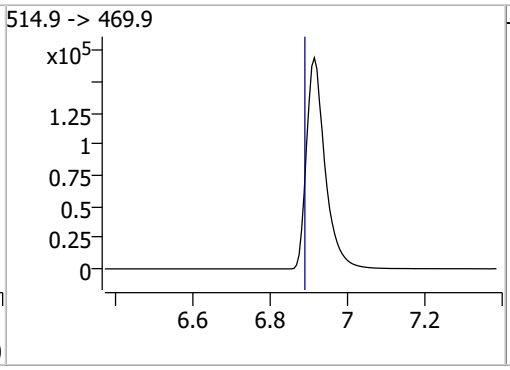


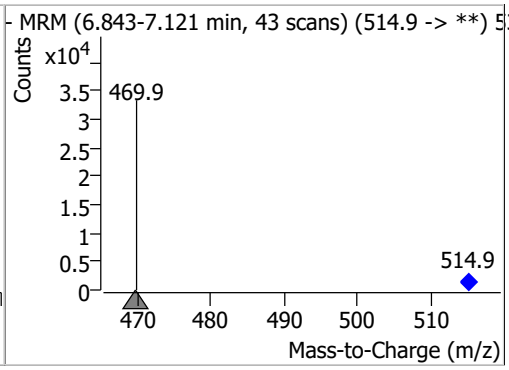




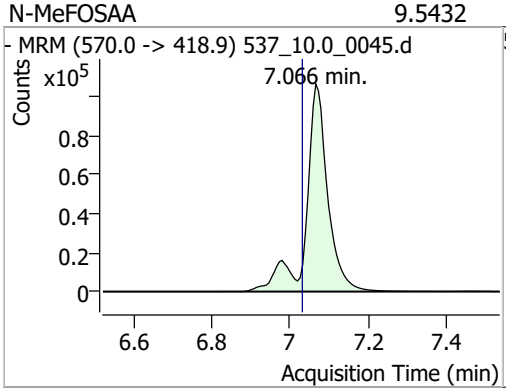
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
13C2-PFDA	10.8411	6.92	0.03	569905				

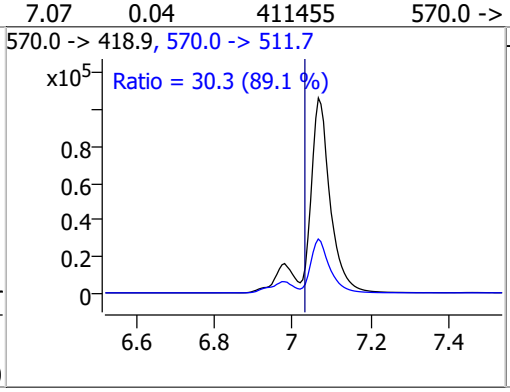


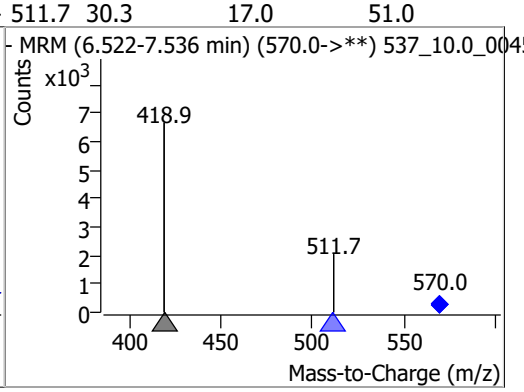




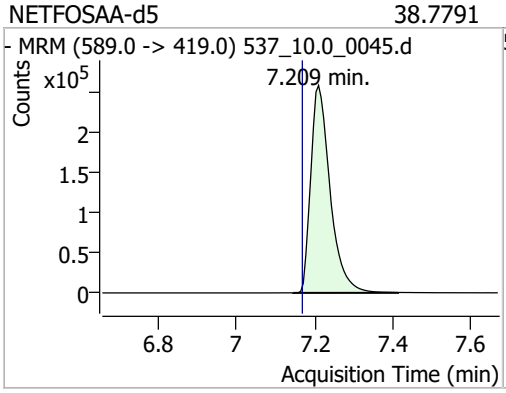
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-MeFOSAA	9.5432	7.07	0.04	411455	570.0 -> 511.7	30.3	17.0	51.0

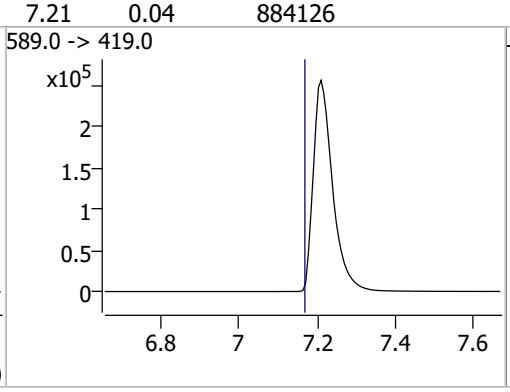


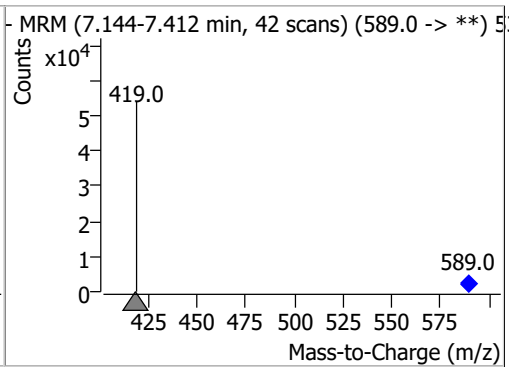




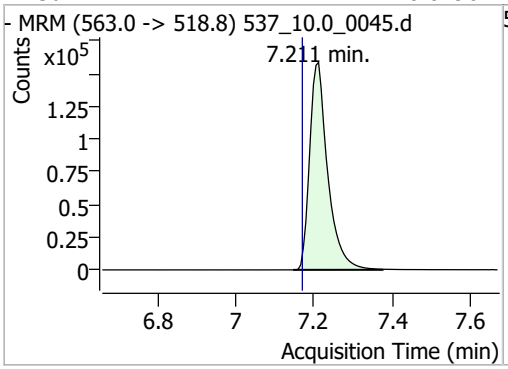
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
NETFOSAA-d5	38.7791	7.21	0.04	884126				

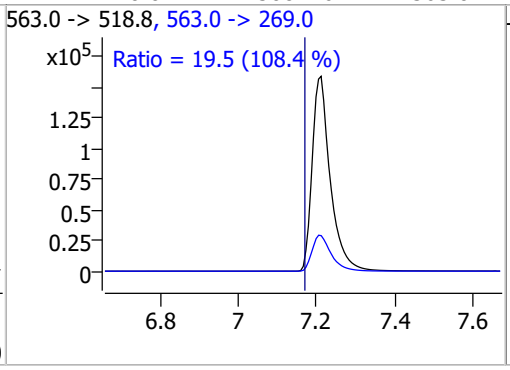


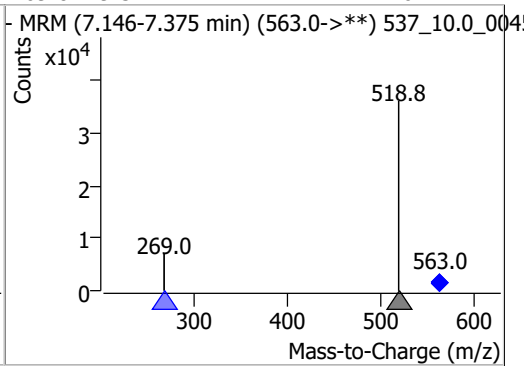




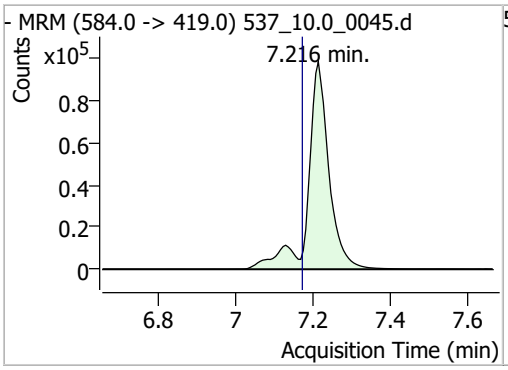
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFUdA	10.0196	7.21	0.04	508276	563.0 -> 269.0	19.5	14.4	21.6

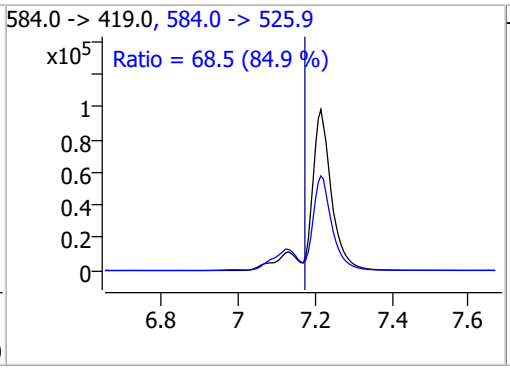


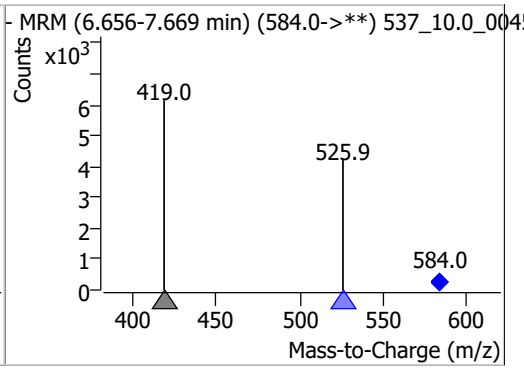




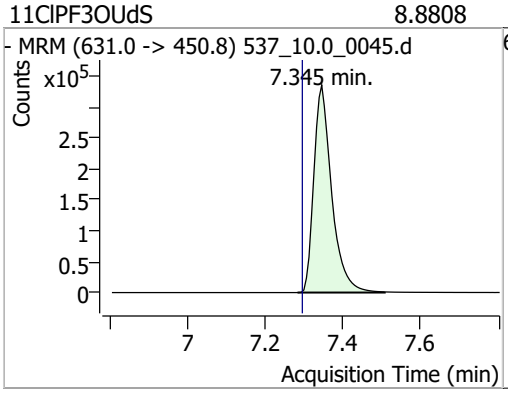
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
N-EtFOSAA	9.8965	7.22	0.04	373267	584.0 -> 525.9	68.5	40.4	121.1

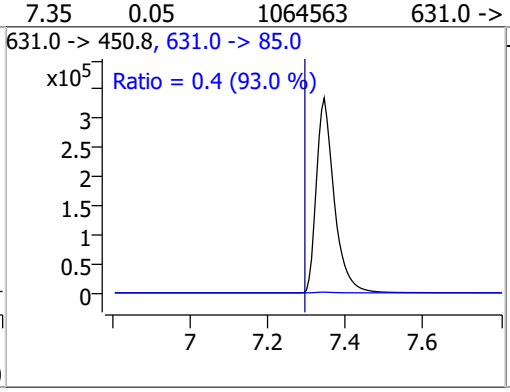


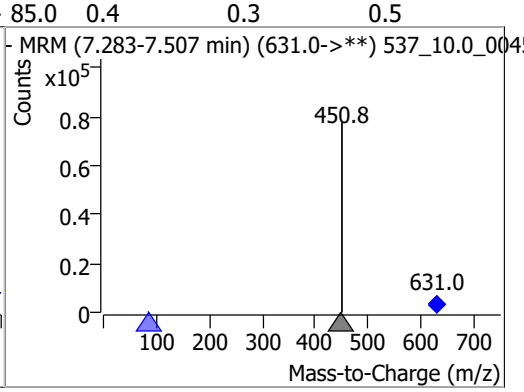




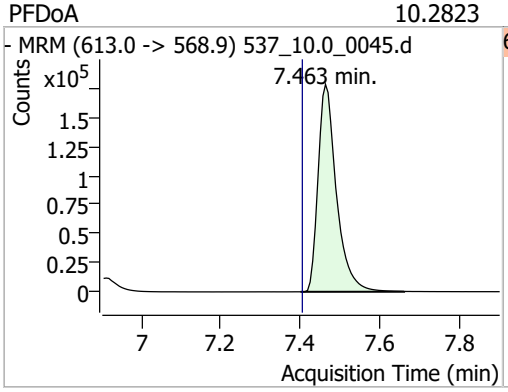
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
11ClPF3OUdS	8.8808	7.35	0.05	1064563	631.0 -> 85.0	0.4	0.3	0.5

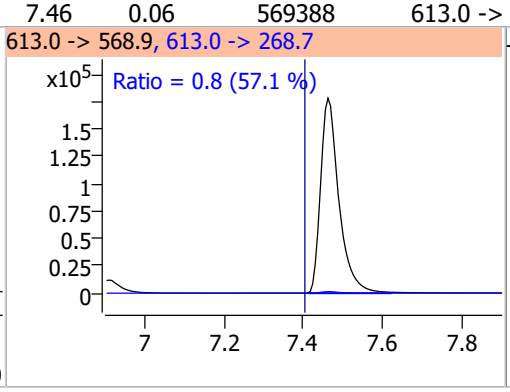


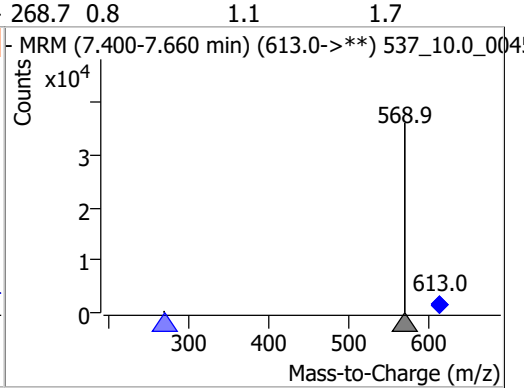




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFDoA	10.2823	7.46	0.06	569388	613.0 -> 268.7	0.8	1.1	1.7

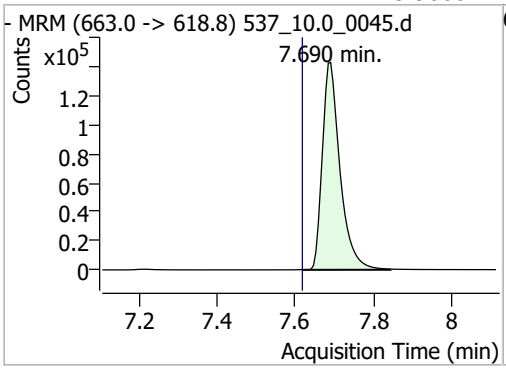


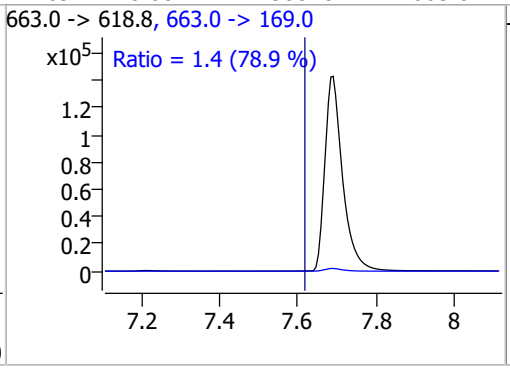


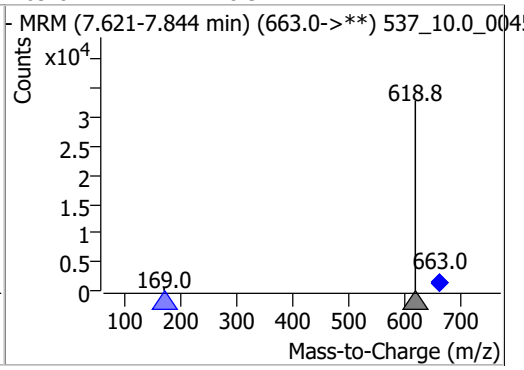


Quantitation Results Report

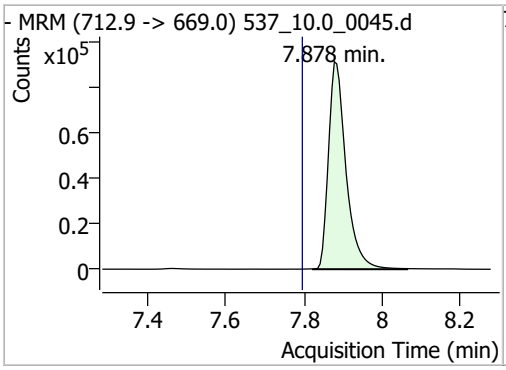
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTrDA	9.9066	7.69	0.08	450840	663.0 -> 169.0	1.4	0.9	2.7

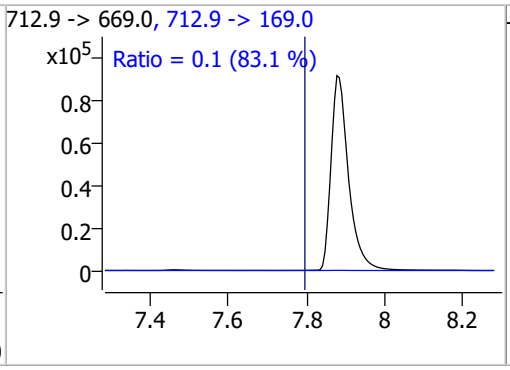


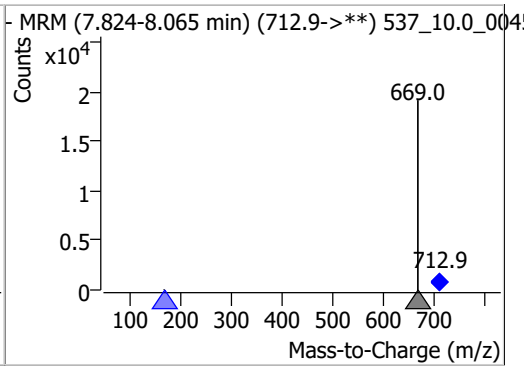




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
PFTA	10.7226	7.88	0.09	285168	712.9 -> 169.0	0.1	0.0	0.1







Quantitative Analysis Sample Based Report

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Name	CAL1_537_1.0	**Acq. Date-Time**	8/10/2023 9:51:57 AM
Data File	537_1.0_0021.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	868017	7.5	
13C2-PFHxA	13C2-PFOA	1084587	15.5	
PFHxA	13C2-PFOA	1084587	15.5	
13C3-HFPO-DA	13C2-PFOA	1084587	15.5	
HFPO-DA	13C2-PFOA	1084587	15.5	
PFHpA	13C2-PFOA	1084587	15.5	
PFHxS	13C4-PFOS	868017	7.5	
NaDONA	13C2-PFOA	1084587	15.5	
PFOA	13C2-PFOA	1084587	15.5	
PFNA	13C2-PFOA	1084587	15.5	
PFOS	13C4-PFOS	868017	7.5	
9Cl-PF3ONS	13C4-PFOS	868017	7.5	
PFDA	13C2-PFOA	1084587	15.5	
13C2-PFDA	13C2-PFOA	1084587	15.5	
N-MeFOSAA	NMeFOSAA-d3	1459130	-6.4	
NETFOSAA-d5	NMeFOSAA-d3	1459130	-6.4	
PFUdA	13C2-PFOA	1084587	15.5	
N-EtFOSAA	NMeFOSAA-d3	1459130	-6.4	
11ClPF3OUdS	13C4-PFOS	868017	7.5	
PFDoA	13C2-PFOA	1084587	15.5	
PFTrDA	13C2-PFOA	1084587	15.5	
PFTA	13C2-PFOA	1084587	15.5	

Name	23080301-001A	**Acq. Date-Time**	8/10/2023 10:04:40 AM
Data File	23080301-001A_RE_537_0022.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	887809	9.9	102.3
13C2-PFHxA	13C2-PFOA	978539	4.2	90.2
PFHxA	13C2-PFOA	978539	4.2	90.2
13C3-HFPO-DA	13C2-PFOA	978539	4.2	90.2
HFPO-DA	13C2-PFOA	978539	4.2	90.2
PFHpA	13C2-PFOA	978539	4.2	90.2
PFHxS	13C4-PFOS	887809	9.9	102.3
NaDONA	13C2-PFOA	978539	4.2	90.2
PFOA	13C2-PFOA	978539	4.2	90.2
PFNA	13C2-PFOA	978539	4.2	90.2
PFOS	13C4-PFOS	887809	9.9	102.3
9Cl-PF3ONS	13C4-PFOS	887809	9.9	102.3
PFDA	13C2-PFOA	978539	4.2	90.2
13C2-PFDA	13C2-PFOA	978539	4.2	90.2
N-MeFOSAA	NMeFOSAA-d3	1933123	24.0	132.5
NETFOSAA-d5	NMeFOSAA-d3	1933123	24.0	132.5
PFUdA	13C2-PFOA	978539	4.2	90.2
N-EtFOSAA	NMeFOSAA-d3	1933123	24.0	132.5
11ClPF3OUdS	13C4-PFOS	887809	9.9	102.3
PFDoA	13C2-PFOA	978539	4.2	90.2
PFTrDA	13C2-PFOA	978539	4.2	90.2
PFTA	13C2-PFOA	978539	4.2	90.2

Quantitative Analysis Sample Based Report

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Name	23080301-001AMS	**Acq. Date-Time**	8/10/2023 10:17:40 AM
Data File	23080301-001AMS_RE_537_0023.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	1001946	24.0	115.4
13C2-PFHxA	13C2-PFOA	1042335	11.0	96.1
PFHxA	13C2-PFOA	1042335	11.0	96.1
13C3-HFPO-DA	13C2-PFOA	1042335	11.0	96.1
HFPO-DA	13C2-PFOA	1042335	11.0	96.1
PFHpA	13C2-PFOA	1042335	11.0	96.1
PFHxS	13C4-PFOS	1001946	24.0	115.4
NaDONA	13C2-PFOA	1042335	11.0	96.1
PFOA	13C2-PFOA	1042335	11.0	96.1
PFNA	13C2-PFOA	1042335	11.0	96.1
PFOS	13C4-PFOS	1001946	24.0	115.4
9Cl-PF3ONS	13C4-PFOS	1001946	24.0	115.4
PFDA	13C2-PFOA	1042335	11.0	96.1
13C2-PFDA	13C2-PFOA	1042335	11.0	96.1
N-MeFOSAA	NMeFOSAA-d3	1935654	24.1	132.7
NETFOSAA-d5	NMeFOSAA-d3	1935654	24.1	132.7
PFUdA	13C2-PFOA	1042335	11.0	96.1
N-EtFOSAA	NMeFOSAA-d3	1935654	24.1	132.7
11ClPF3OUdS	13C4-PFOS	1001946	24.0	115.4
PFDoA	13C2-PFOA	1042335	11.0	96.1
PFTrDA	13C2-PFOA	1042335	11.0	96.1
PFTA	13C2-PFOA	1042335	11.0	96.1

Name	23080301-001AMSD	**Acq. Date-Time**	8/10/2023 10:30:24 AM
Data File	23080301-001AMSD_RE_537_0024.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	888327	10.0	102.3
13C2-PFHxA	13C2-PFOA	964898	2.7	89.0
PFHxA	13C2-PFOA	964898	2.7	89.0
13C3-HFPO-DA	13C2-PFOA	964898	2.7	89.0
HFPO-DA	13C2-PFOA	964898	2.7	89.0
PFHpA	13C2-PFOA	964898	2.7	89.0
PFHxS	13C4-PFOS	888327	10.0	102.3
NaDONA	13C2-PFOA	964898	2.7	89.0
PFOA	13C2-PFOA	964898	2.7	89.0
PFNA	13C2-PFOA	964898	2.7	89.0
PFOS	13C4-PFOS	888327	10.0	102.3
9Cl-PF3ONS	13C4-PFOS	888327	10.0	102.3
PFDA	13C2-PFOA	964898	2.7	89.0
13C2-PFDA	13C2-PFOA	964898	2.7	89.0
N-MeFOSAA	NMeFOSAA-d3	1809896	16.1	124.0
NETFOSAA-d5	NMeFOSAA-d3	1809896	16.1	124.0
PFUdA	13C2-PFOA	964898	2.7	89.0
N-EtFOSAA	NMeFOSAA-d3	1809896	16.1	124.0
11ClPF3OUdS	13C4-PFOS	888327	10.0	102.3
PFDoA	13C2-PFOA	964898	2.7	89.0
PFTrDA	13C2-PFOA	964898	2.7	89.0
PFTA	13C2-PFOA	964898	2.7	89.0

Name	23080387-001A	**Acq. Date-Time**	8/10/2023 10:43:07 AM
Data File	23080387-001A_RE_537_0025.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	948443	17.4	109.3
13C2-PFHxA	13C2-PFOA	1136505	21.0	104.8
PFHxA	13C2-PFOA	1136505	21.0	104.8
13C3-HFPO-DA	13C2-PFOA	1136505	21.0	104.8
HFPO-DA	13C2-PFOA	1136505	21.0	104.8
PFHpA	13C2-PFOA	1136505	21.0	104.8
PFHxS	13C4-PFOS	948443	17.4	109.3
NaDONA	13C2-PFOA	1136505	21.0	104.8
PFOA	13C2-PFOA	1136505	21.0	104.8
PFNA	13C2-PFOA	1136505	21.0	104.8
PFOS	13C4-PFOS	948443	17.4	109.3
9Cl-PF3ONS	13C4-PFOS	948443	17.4	109.3
PFDA	13C2-PFOA	1136505	21.0	104.8
13C2-PFDA	13C2-PFOA	1136505	21.0	104.8
N-MeFOSAA	NMeFOSAA-d3	1782892	14.3	122.2
NETFOSAA-d5	NMeFOSAA-d3	1782892	14.3	122.2
PFUdA	13C2-PFOA	1136505	21.0	104.8
N-EtFOSAA	NMeFOSAA-d3	1782892	14.3	122.2
11ClPF3OUdS	13C4-PFOS	948443	17.4	109.3
PFDoA	13C2-PFOA	1136505	21.0	104.8
PFTrDA	13C2-PFOA	1136505	21.0	104.8
PFTA	13C2-PFOA	1136505	21.0	104.8

Name	23080387-002A	**Acq. Date-Time**	8/10/2023 10:55:51 AM
Data File	23080387-002A_RE_537_0026.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	931540	15.3	107.3
13C2-PFHxA	13C2-PFOA	1176943	25.3	108.5
PFHxA	13C2-PFOA	1176943	25.3	108.5
13C3-HFPO-DA	13C2-PFOA	1176943	25.3	108.5
HFPO-DA	13C2-PFOA	1176943	25.3	108.5
PFHpA	13C2-PFOA	1176943	25.3	108.5
PFHxS	13C4-PFOS	931540	15.3	107.3
NaDONA	13C2-PFOA	1176943	25.3	108.5
PFOA	13C2-PFOA	1176943	25.3	108.5
PFNA	13C2-PFOA	1176943	25.3	108.5
PFOS	13C4-PFOS	931540	15.3	107.3
9Cl-PF3ONS	13C4-PFOS	931540	15.3	107.3
PFDA	13C2-PFOA	1176943	25.3	108.5
13C2-PFDA	13C2-PFOA	1176943	25.3	108.5
N-MeFOSAA	NMeFOSAA-d3	1829376	17.3	125.4
NETFOSAA-d5	NMeFOSAA-d3	1829376	17.3	125.4
PFUdA	13C2-PFOA	1176943	25.3	108.5
N-EtFOSAA	NMeFOSAA-d3	1829376	17.3	125.4
11ClPF3OUdS	13C4-PFOS	931540	15.3	107.3
PFDoA	13C2-PFOA	1176943	25.3	108.5
PFTrDA	13C2-PFOA	1176943	25.3	108.5
PFTA	13C2-PFOA	1176943	25.3	108.5

Name	23080388-002A	**Acq. Date-Time**	8/10/2023 11:08:34 AM
Data File	23080388-002A_RE_537_0027.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	982921	21.7	113.2
13C2-PFHxA	13C2-PFOA	1174492	25.0	108.3
PFHxA	13C2-PFOA	1174492	25.0	108.3
13C3-HFPO-DA	13C2-PFOA	1174492	25.0	108.3
HFPO-DA	13C2-PFOA	1174492	25.0	108.3
PFHpA	13C2-PFOA	1174492	25.0	108.3
PFHxS	13C4-PFOS	982921	21.7	113.2
NaDONA	13C2-PFOA	1174492	25.0	108.3
PFOA	13C2-PFOA	1174492	25.0	108.3
PFNA	13C2-PFOA	1174492	25.0	108.3
PFOS	13C4-PFOS	982921	21.7	113.2
9Cl-PF3ONS	13C4-PFOS	982921	21.7	113.2
PFDA	13C2-PFOA	1174492	25.0	108.3
13C2-PFDA	13C2-PFOA	1174492	25.0	108.3
N-MeFOSAA	NMeFOSAA-d3	1890875	21.3	129.6
NETFOSAA-d5	NMeFOSAA-d3	1890875	21.3	129.6
PFUdA	13C2-PFOA	1174492	25.0	108.3
N-EtFOSAA	NMeFOSAA-d3	1890875	21.3	129.6
11ClPF3OUdS	13C4-PFOS	982921	21.7	113.2
PFDoA	13C2-PFOA	1174492	25.0	108.3
PFTrDA	13C2-PFOA	1174492	25.0	108.3
PFTA	13C2-PFOA	1174492	25.0	108.3

Quantitative Analysis Sample Based Report

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Name	MB-67217	**Acq. Date-Time**	8/10/2023 11:21:17 AM
Data File	MB-67217_RE_537_0028.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	908018	12.4	104.6
13C2-PFHxA	13C2-PFOA	1034196	10.1	95.4
PFHxA	13C2-PFOA	1034196	10.1	95.4
13C3-HFPO-DA	13C2-PFOA	1034196	10.1	95.4
HFPO-DA	13C2-PFOA	1034196	10.1	95.4
PFHpA	13C2-PFOA	1034196	10.1	95.4
PFHxS	13C4-PFOS	908018	12.4	104.6
NaDONA	13C2-PFOA	1034196	10.1	95.4
PFOA	13C2-PFOA	1034196	10.1	95.4
PFNA	13C2-PFOA	1034196	10.1	95.4
PFOS	13C4-PFOS	908018	12.4	104.6
9Cl-PF3ONS	13C4-PFOS	908018	12.4	104.6
PFDA	13C2-PFOA	1034196	10.1	95.4
13C2-PFDA	13C2-PFOA	1034196	10.1	95.4
N-MeFOSAA	NMeFOSAA-d3	1674733	7.4	114.8
NETFOSAA-d5	NMeFOSAA-d3	1674733	7.4	114.8
PFUdA	13C2-PFOA	1034196	10.1	95.4
N-EtFOSAA	NMeFOSAA-d3	1674733	7.4	114.8
11ClPF3OUdS	13C4-PFOS	908018	12.4	104.6
PFDoA	13C2-PFOA	1034196	10.1	95.4
PFTrDA	13C2-PFOA	1034196	10.1	95.4
PFTA	13C2-PFOA	1034196	10.1	95.4

Quantitative Analysis Sample Based Report

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Name	LCS-67217	**Acq. Date-Time**	8/10/2023 11:34:03 AM
Data File	LCS-67217_RE_537_0029.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	821308	1.7	94.6
13C2-PFHxA	13C2-PFOA	941979	0.3	86.9
PFHxA	13C2-PFOA	941979	0.3	86.9
13C3-HFPO-DA	13C2-PFOA	941979	0.3	86.9
HFPO-DA	13C2-PFOA	941979	0.3	86.9
PFHpA	13C2-PFOA	941979	0.3	86.9
PFHxS	13C4-PFOS	821308	1.7	94.6
NaDONA	13C2-PFOA	941979	0.3	86.9
PFOA	13C2-PFOA	941979	0.3	86.9
PFNA	13C2-PFOA	941979	0.3	86.9
PFOS	13C4-PFOS	821308	1.7	94.6
9Cl-PF3ONS	13C4-PFOS	821308	1.7	94.6
PFDA	13C2-PFOA	941979	0.3	86.9
13C2-PFDA	13C2-PFOA	941979	0.3	86.9
N-MeFOSAA	NMeFOSAA-d3	1756430	12.7	120.4
NETFOSAA-d5	NMeFOSAA-d3	1756430	12.7	120.4
PFUdA	13C2-PFOA	941979	0.3	86.9
N-EtFOSAA	NMeFOSAA-d3	1756430	12.7	120.4
11ClPF3OUdS	13C4-PFOS	821308	1.7	94.6
PFDoA	13C2-PFOA	941979	0.3	86.9
PFTrDA	13C2-PFOA	941979	0.3	86.9
PFTA	13C2-PFOA	941979	0.3	86.9

Quantitative Analysis Sample Based Report

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Name	LCSD-67217	**Acq. Date-Time**	8/10/2023 11:46:46 AM
Data File	LCSD-67217_RE_537_0030.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	827618	2.5	95.3
13C2-PFHxA	13C2-PFOA	1013049	7.8	93.4
PFHxA	13C2-PFOA	1013049	7.8	93.4
13C3-HFPO-DA	13C2-PFOA	1013049	7.8	93.4
HFPO-DA	13C2-PFOA	1013049	7.8	93.4
PFHpA	13C2-PFOA	1013049	7.8	93.4
PFHxS	13C4-PFOS	827618	2.5	95.3
NaDONA	13C2-PFOA	1013049	7.8	93.4
PFOA	13C2-PFOA	1013049	7.8	93.4
PFNA	13C2-PFOA	1013049	7.8	93.4
PFOS	13C4-PFOS	827618	2.5	95.3
9Cl-PF3ONS	13C4-PFOS	827618	2.5	95.3
PFDA	13C2-PFOA	1013049	7.8	93.4
13C2-PFDA	13C2-PFOA	1013049	7.8	93.4
N-MeFOSAA	NMeFOSAA-d3	1858988	19.2	127.4
NETFOSAA-d5	NMeFOSAA-d3	1858988	19.2	127.4
PFUdA	13C2-PFOA	1013049	7.8	93.4
N-EtFOSAA	NMeFOSAA-d3	1858988	19.2	127.4
11ClPF3OUdS	13C4-PFOS	827618	2.5	95.3
PFDoA	13C2-PFOA	1013049	7.8	93.4
PFTrDA	13C2-PFOA	1013049	7.8	93.4
PFTA	13C2-PFOA	1013049	7.8	93.4

Quantitative Analysis Sample Based Report

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Name	23071605-001A	**Acq. Date-Time**	8/10/2023 11:59:30 AM
Data File	23071605-001A_RE_537_0031.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	853630	5.7	98.3
13C2-PFHxA	13C2-PFOA	1094961	16.6	101.0
PFHxA	13C2-PFOA	1094961	16.6	101.0
13C3-HFPO-DA	13C2-PFOA	1094961	16.6	101.0
HFPO-DA	13C2-PFOA	1094961	16.6	101.0
PFHpA	13C2-PFOA	1094961	16.6	101.0
PFHxS	13C4-PFOS	853630	5.7	98.3
NaDONA	13C2-PFOA	1094961	16.6	101.0
PFOA	13C2-PFOA	1094961	16.6	101.0
PFNA	13C2-PFOA	1094961	16.6	101.0
PFOS	13C4-PFOS	853630	5.7	98.3
9Cl-PF3ONS	13C4-PFOS	853630	5.7	98.3
PFDA	13C2-PFOA	1094961	16.6	101.0
13C2-PFDA	13C2-PFOA	1094961	16.6	101.0
N-MeFOSAA	NMeFOSAA-d3	1553198	-0.4	106.4
NETFOSAA-d5	NMeFOSAA-d3	1553198	-0.4	106.4
PFUdA	13C2-PFOA	1094961	16.6	101.0
N-EtFOSAA	NMeFOSAA-d3	1553198	-0.4	106.4
11ClPF3OUdS	13C4-PFOS	853630	5.7	98.3
PFDoA	13C2-PFOA	1094961	16.6	101.0
PFTrDA	13C2-PFOA	1094961	16.6	101.0
PFTA	13C2-PFOA	1094961	16.6	101.0

Quantitative Analysis Sample Based Report

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Name	CAL4_537_10.0	**Acq. Date-Time**	8/10/2023 12:12:14 PM
Data File	537_10.0_0032.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	752983	-6.8	86.7
13C2-PFHxA	13C2-PFOA	964146	2.6	88.9
PFHxA	13C2-PFOA	964146	2.6	88.9
13C3-HFPO-DA	13C2-PFOA	964146	2.6	88.9
HFPO-DA	13C2-PFOA	964146	2.6	88.9
PFHpA	13C2-PFOA	964146	2.6	88.9
PFHxS	13C4-PFOS	752983	-6.8	86.7
NaDONA	13C2-PFOA	964146	2.6	88.9
PFOA	13C2-PFOA	964146	2.6	88.9
PFNA	13C2-PFOA	964146	2.6	88.9
PFOS	13C4-PFOS	752983	-6.8	86.7
9Cl-PF3ONS	13C4-PFOS	752983	-6.8	86.7
PFDA	13C2-PFOA	964146	2.6	88.9
13C2-PFDA	13C2-PFOA	964146	2.6	88.9
N-MeFOSAA	NMeFOSAA-d3	1632916	4.7	111.9
NETFOSAA-d5	NMeFOSAA-d3	1632916	4.7	111.9
PFUdA	13C2-PFOA	964146	2.6	88.9
N-EtFOSAA	NMeFOSAA-d3	1632916	4.7	111.9
11ClPF3OUdS	13C4-PFOS	752983	-6.8	86.7
PFDoA	13C2-PFOA	964146	2.6	88.9
PFTrDA	13C2-PFOA	964146	2.6	88.9
PFTA	13C2-PFOA	964146	2.6	88.9

Quantitative Analysis Sample Based Report

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Name	MB-67469	**Acq. Date-Time**	8/10/2023 12:25:14 PM
Data File	MB-67469_537_0033.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	914840	13.3	121.5
13C2-PFHxA	13C2-PFOA	1043790	11.1	108.3
PFHxA	13C2-PFOA	1043790	11.1	108.3
13C3-HFPO-DA	13C2-PFOA	1043790	11.1	108.3
HFPO-DA	13C2-PFOA	1043790	11.1	108.3
PFHpA	13C2-PFOA	1043790	11.1	108.3
PFHxS	13C4-PFOS	914840	13.3	121.5
NaDONA	13C2-PFOA	1043790	11.1	108.3
PFOA	13C2-PFOA	1043790	11.1	108.3
PFNA	13C2-PFOA	1043790	11.1	108.3
PFOS	13C4-PFOS	914840	13.3	121.5
9Cl-PF3ONS	13C4-PFOS	914840	13.3	121.5
PFDA	13C2-PFOA	1043790	11.1	108.3
13C2-PFDA	13C2-PFOA	1043790	11.1	108.3
N-MeFOSAA	NMeFOSAA-d3	1719944	10.3	105.3
NETFOSAA-d5	NMeFOSAA-d3	1719944	10.3	105.3
PFUdA	13C2-PFOA	1043790	11.1	108.3
N-EtFOSAA	NMeFOSAA-d3	1719944	10.3	105.3
11ClPF3OUdS	13C4-PFOS	914840	13.3	121.5
PFDoA	13C2-PFOA	1043790	11.1	108.3
PFTrDA	13C2-PFOA	1043790	11.1	108.3
PFTA	13C2-PFOA	1043790	11.1	108.3

Name	LCS-67469	**Acq. Date-Time**	8/10/2023 12:38:14 PM
Data File	LCS-67469_537_0034.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	847134	4.9	112.5
13C2-PFHxA	13C2-PFOA	1087560	15.8	112.8
PFHxA	13C2-PFOA	1087560	15.8	112.8
13C3-HFPO-DA	13C2-PFOA	1087560	15.8	112.8
HFPO-DA	13C2-PFOA	1087560	15.8	112.8
PFHpA	13C2-PFOA	1087560	15.8	112.8
PFHxS	13C4-PFOS	847134	4.9	112.5
NaDONA	13C2-PFOA	1087560	15.8	112.8
PFOA	13C2-PFOA	1087560	15.8	112.8
PFNA	13C2-PFOA	1087560	15.8	112.8
PFOS	13C4-PFOS	847134	4.9	112.5
9Cl-PF3ONS	13C4-PFOS	847134	4.9	112.5
PFDA	13C2-PFOA	1087560	15.8	112.8
13C2-PFDA	13C2-PFOA	1087560	15.8	112.8
N-MeFOSAA	NMeFOSAA-d3	1731332	11.0	106.0
NETFOSAA-d5	NMeFOSAA-d3	1731332	11.0	106.0
PFUdA	13C2-PFOA	1087560	15.8	112.8
N-EtFOSAA	NMeFOSAA-d3	1731332	11.0	106.0
11ClPF3OUdS	13C4-PFOS	847134	4.9	112.5
PFDoA	13C2-PFOA	1087560	15.8	112.8
PFTrDA	13C2-PFOA	1087560	15.8	112.8
PFTA	13C2-PFOA	1087560	15.8	112.8

Quantitative Analysis Sample Based Report

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Name	LCSD-67469	**Acq. Date-Time**	8/10/2023 12:50:58 PM
Data File	LCSD-67469_537_0035.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	899132	11.3	119.4
13C2-PFHxA	13C2-PFOA	1058336	12.7	109.8
PFHxA	13C2-PFOA	1058336	12.7	109.8
13C3-HFPO-DA	13C2-PFOA	1058336	12.7	109.8
HFPO-DA	13C2-PFOA	1058336	12.7	109.8
PFHpA	13C2-PFOA	1058336	12.7	109.8
PFHxS	13C4-PFOS	899132	11.3	119.4
NaDONA	13C2-PFOA	1058336	12.7	109.8
PFOA	13C2-PFOA	1058336	12.7	109.8
PFNA	13C2-PFOA	1058336	12.7	109.8
PFOS	13C4-PFOS	899132	11.3	119.4
9Cl-PF3ONS	13C4-PFOS	899132	11.3	119.4
PFDA	13C2-PFOA	1058336	12.7	109.8
13C2-PFDA	13C2-PFOA	1058336	12.7	109.8
N-MeFOSAA	NMeFOSAA-d3	1737006	11.4	106.4
NETFOSAA-d5	NMeFOSAA-d3	1737006	11.4	106.4
PFUdA	13C2-PFOA	1058336	12.7	109.8
N-EtFOSAA	NMeFOSAA-d3	1737006	11.4	106.4
11ClPF3OUdS	13C4-PFOS	899132	11.3	119.4
PFDoA	13C2-PFOA	1058336	12.7	109.8
PFTrDA	13C2-PFOA	1058336	12.7	109.8
PFTA	13C2-PFOA	1058336	12.7	109.8

Name	23072092-001A	**Acq. Date-Time**	8/10/2023 1:03:41 PM
Data File	23072092-001A_537_0036.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	899686	11.4	119.5
13C2-PFHxA	13C2-PFOA	1053562	12.2	109.3
PFHxA	13C2-PFOA	1053562	12.2	109.3
13C3-HFPO-DA	13C2-PFOA	1053562	12.2	109.3
HFPO-DA	13C2-PFOA	1053562	12.2	109.3
PFHpA	13C2-PFOA	1053562	12.2	109.3
PFHxS	13C4-PFOS	899686	11.4	119.5
NaDONA	13C2-PFOA	1053562	12.2	109.3
PFOA	13C2-PFOA	1053562	12.2	109.3
PFNA	13C2-PFOA	1053562	12.2	109.3
PFOS	13C4-PFOS	899686	11.4	119.5
9Cl-PF3ONS	13C4-PFOS	899686	11.4	119.5
PFDA	13C2-PFOA	1053562	12.2	109.3
13C2-PFDA	13C2-PFOA	1053562	12.2	109.3
N-MeFOSAA	NMeFOSAA-d3	1731342	11.0	106.0
NETFOSAA-d5	NMeFOSAA-d3	1731342	11.0	106.0
PFUdA	13C2-PFOA	1053562	12.2	109.3
N-EtFOSAA	NMeFOSAA-d3	1731342	11.0	106.0
11ClPF3OUdS	13C4-PFOS	899686	11.4	119.5
PFDoA	13C2-PFOA	1053562	12.2	109.3
PFTrDA	13C2-PFOA	1053562	12.2	109.3
PFTA	13C2-PFOA	1053562	12.2	109.3

Name	23080060-001A	**Acq. Date-Time**	8/10/2023 1:16:25 PM
Data File	23080060-001A_537_0037.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	880950	9.1	117.0
13C2-PFHxA	13C2-PFOA	1138752	21.2	118.1
PFHxA	13C2-PFOA	1138752	21.2	118.1
13C3-HFPO-DA	13C2-PFOA	1138752	21.2	118.1
HFPO-DA	13C2-PFOA	1138752	21.2	118.1
PFHpA	13C2-PFOA	1138752	21.2	118.1
PFHxS	13C4-PFOS	880950	9.1	117.0
NaDONA	13C2-PFOA	1138752	21.2	118.1
PFOA	13C2-PFOA	1138752	21.2	118.1
PFNA	13C2-PFOA	1138752	21.2	118.1
PFOS	13C4-PFOS	880950	9.1	117.0
9Cl-PF3ONS	13C4-PFOS	880950	9.1	117.0
PFDA	13C2-PFOA	1138752	21.2	118.1
13C2-PFDA	13C2-PFOA	1138752	21.2	118.1
N-MeFOSAA	NMeFOSAA-d3	1862753	19.5	114.1
NETFOSAA-d5	NMeFOSAA-d3	1862753	19.5	114.1
PFUdA	13C2-PFOA	1138752	21.2	118.1
N-EtFOSAA	NMeFOSAA-d3	1862753	19.5	114.1
11ClPF3OUdS	13C4-PFOS	880950	9.1	117.0
PFDoA	13C2-PFOA	1138752	21.2	118.1
PFTrDA	13C2-PFOA	1138752	21.2	118.1
PFTA	13C2-PFOA	1138752	21.2	118.1

Name	23080060-002A	**Acq. Date-Time**	8/10/2023 1:29:08 PM
Data File	23080060-002A_537_0038.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	931729	15.4	123.7
13C2-PFHxA	13C2-PFOA	1048797	11.6	108.8
PFHxA	13C2-PFOA	1048797	11.6	108.8
13C3-HFPO-DA	13C2-PFOA	1048797	11.6	108.8
HFPO-DA	13C2-PFOA	1048797	11.6	108.8
PFHpA	13C2-PFOA	1048797	11.6	108.8
PFHxS	13C4-PFOS	931729	15.4	123.7
NaDONA	13C2-PFOA	1048797	11.6	108.8
PFOA	13C2-PFOA	1048797	11.6	108.8
PFNA	13C2-PFOA	1048797	11.6	108.8
PFOS	13C4-PFOS	931729	15.4	123.7
9Cl-PF3ONS	13C4-PFOS	931729	15.4	123.7
PFDA	13C2-PFOA	1048797	11.6	108.8
13C2-PFDA	13C2-PFOA	1048797	11.6	108.8
N-MeFOSAA	NMeFOSAA-d3	1736722	11.4	106.4
NETFOSAA-d5	NMeFOSAA-d3	1736722	11.4	106.4
PFUdA	13C2-PFOA	1048797	11.6	108.8
N-EtFOSAA	NMeFOSAA-d3	1736722	11.4	106.4
11ClPF3OUdS	13C4-PFOS	931729	15.4	123.7
PFDoA	13C2-PFOA	1048797	11.6	108.8
PFTrDA	13C2-PFOA	1048797	11.6	108.8
PFTA	13C2-PFOA	1048797	11.6	108.8

Name	23080060-003A	**Acq. Date-Time**	8/10/2023 1:41:55 PM
Data File	23080060-003A_537_0039.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	903465	11.9	120.0
13C2-PFHxA	13C2-PFOA	1070628	14.0	111.0
PFHxA	13C2-PFOA	1070628	14.0	111.0
13C3-HFPO-DA	13C2-PFOA	1070628	14.0	111.0
HFPO-DA	13C2-PFOA	1070628	14.0	111.0
PFHpA	13C2-PFOA	1070628	14.0	111.0
PFHxS	13C4-PFOS	903465	11.9	120.0
NaDONA	13C2-PFOA	1070628	14.0	111.0
PFOA	13C2-PFOA	1070628	14.0	111.0
PFNA	13C2-PFOA	1070628	14.0	111.0
PFOS	13C4-PFOS	903465	11.9	120.0
9Cl-PF3ONS	13C4-PFOS	903465	11.9	120.0
PFDA	13C2-PFOA	1070628	14.0	111.0
13C2-PFDA	13C2-PFOA	1070628	14.0	111.0
N-MeFOSAA	NMeFOSAA-d3	1868918	19.9	114.5
NETFOSAA-d5	NMeFOSAA-d3	1868918	19.9	114.5
PFUdA	13C2-PFOA	1070628	14.0	111.0
N-EtFOSAA	NMeFOSAA-d3	1868918	19.9	114.5
11ClPF3OUdS	13C4-PFOS	903465	11.9	120.0
PFDoA	13C2-PFOA	1070628	14.0	111.0
PFTrDA	13C2-PFOA	1070628	14.0	111.0
PFTA	13C2-PFOA	1070628	14.0	111.0

Quantitative Analysis Sample Based Report

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Name	23080060-004A	**Acq. Date-Time**	8/10/2023 1:54:38 PM
Data File	23080060-004A_537_0040.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	897843	11.2	119.2
13C2-PFHxA	13C2-PFOA	1165115	24.0	120.8
PFHxA	13C2-PFOA	1165115	24.0	120.8
13C3-HFPO-DA	13C2-PFOA	1165115	24.0	120.8
HFPO-DA	13C2-PFOA	1165115	24.0	120.8
PFHpA	13C2-PFOA	1165115	24.0	120.8
PFHxS	13C4-PFOS	897843	11.2	119.2
NaDONA	13C2-PFOA	1165115	24.0	120.8
PFOA	13C2-PFOA	1165115	24.0	120.8
PFNA	13C2-PFOA	1165115	24.0	120.8
PFOS	13C4-PFOS	897843	11.2	119.2
9Cl-PF3ONS	13C4-PFOS	897843	11.2	119.2
PFDA	13C2-PFOA	1165115	24.0	120.8
13C2-PFDA	13C2-PFOA	1165115	24.0	120.8
N-MeFOSAA	NMeFOSAA-d3	1737035	11.4	106.4
NETFOSAA-d5	NMeFOSAA-d3	1737035	11.4	106.4
PFUdA	13C2-PFOA	1165115	24.0	120.8
N-EtFOSAA	NMeFOSAA-d3	1737035	11.4	106.4
11ClPF3OUdS	13C4-PFOS	897843	11.2	119.2
PFDoA	13C2-PFOA	1165115	24.0	120.8
PFTrDA	13C2-PFOA	1165115	24.0	120.8
PFTA	13C2-PFOA	1165115	24.0	120.8

Quantitative Analysis Sample Based Report

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Name	23080060-005A	**Acq. Date-Time**	8/10/2023 2:07:22 PM
Data File	23080060-005A_537_0041.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	806116	-0.2	107.1
13C2-PFHxA	13C2-PFOA	1070887	14.0	111.1
PFHxA	13C2-PFOA	1070887	14.0	111.1
13C3-HFPO-DA	13C2-PFOA	1070887	14.0	111.1
HFPO-DA	13C2-PFOA	1070887	14.0	111.1
PFHpA	13C2-PFOA	1070887	14.0	111.1
PFHxS	13C4-PFOS	806116	-0.2	107.1
NaDONA	13C2-PFOA	1070887	14.0	111.1
PFOA	13C2-PFOA	1070887	14.0	111.1
PFNA	13C2-PFOA	1070887	14.0	111.1
PFOS	13C4-PFOS	806116	-0.2	107.1
9Cl-PF3ONS	13C4-PFOS	806116	-0.2	107.1
PFDA	13C2-PFOA	1070887	14.0	111.1
13C2-PFDA	13C2-PFOA	1070887	14.0	111.1
N-MeFOSAA	NMeFOSAA-d3	1834758	17.7	112.4
NETFOSAA-d5	NMeFOSAA-d3	1834758	17.7	112.4
PFUdA	13C2-PFOA	1070887	14.0	111.1
N-EtFOSAA	NMeFOSAA-d3	1834758	17.7	112.4
11ClPF3OUdS	13C4-PFOS	806116	-0.2	107.1
PFDoA	13C2-PFOA	1070887	14.0	111.1
PFTrDA	13C2-PFOA	1070887	14.0	111.1
PFTA	13C2-PFOA	1070887	14.0	111.1

Quantitative Analysis Sample Based Report

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Name	23080060-006A	**Acq. Date-Time**	8/10/2023 2:20:06 PM
Data File	23080060-006A_537_0042.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	882242	9.2	117.2
13C2-PFHxA	13C2-PFOA	945228	0.6	98.0
PFHxA	13C2-PFOA	945228	0.6	98.0
13C3-HFPO-DA	13C2-PFOA	945228	0.6	98.0
HFPO-DA	13C2-PFOA	945228	0.6	98.0
PFHpA	13C2-PFOA	945228	0.6	98.0
PFHxS	13C4-PFOS	882242	9.2	117.2
NaDONA	13C2-PFOA	945228	0.6	98.0
PFOA	13C2-PFOA	945228	0.6	98.0
PFNA	13C2-PFOA	945228	0.6	98.0
PFOS	13C4-PFOS	882242	9.2	117.2
9Cl-PF3ONS	13C4-PFOS	882242	9.2	117.2
PFDA	13C2-PFOA	945228	0.6	98.0
13C2-PFDA	13C2-PFOA	945228	0.6	98.0
N-MeFOSAA	NMeFOSAA-d3	1806553	15.9	110.6
NETFOSAA-d5	NMeFOSAA-d3	1806553	15.9	110.6
PFUdA	13C2-PFOA	945228	0.6	98.0
N-EtFOSAA	NMeFOSAA-d3	1806553	15.9	110.6
11ClPF3OUdS	13C4-PFOS	882242	9.2	117.2
PFDoA	13C2-PFOA	945228	0.6	98.0
PFTrDA	13C2-PFOA	945228	0.6	98.0
PFTA	13C2-PFOA	945228	0.6	98.0

Name	23080060-007A	**Acq. Date-Time**	8/10/2023 2:32:49 PM
Data File	23080060-007A_537_0043.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	904973	12.0	120.2
13C2-PFHxA	13C2-PFOA	910900	-3.0	94.5
PFHxA	13C2-PFOA	910900	-3.0	94.5
13C3-HFPO-DA	13C2-PFOA	910900	-3.0	94.5
HFPO-DA	13C2-PFOA	910900	-3.0	94.5
PFHpA	13C2-PFOA	910900	-3.0	94.5
PFHxS	13C4-PFOS	904973	12.0	120.2
NaDONA	13C2-PFOA	910900	-3.0	94.5
PFOA	13C2-PFOA	910900	-3.0	94.5
PFNA	13C2-PFOA	910900	-3.0	94.5
PFOS	13C4-PFOS	904973	12.0	120.2
9Cl-PF3ONS	13C4-PFOS	904973	12.0	120.2
PFDA	13C2-PFOA	910900	-3.0	94.5
13C2-PFDA	13C2-PFOA	910900	-3.0	94.5
N-MeFOSAA	NMeFOSAA-d3	1798285	15.3	110.1
NETFOSAA-d5	NMeFOSAA-d3	1798285	15.3	110.1
PFUdA	13C2-PFOA	910900	-3.0	94.5
N-EtFOSAA	NMeFOSAA-d3	1798285	15.3	110.1
11ClPF3OUdS	13C4-PFOS	904973	12.0	120.2
PFDoA	13C2-PFOA	910900	-3.0	94.5
PFTrDA	13C2-PFOA	910900	-3.0	94.5
PFTA	13C2-PFOA	910900	-3.0	94.5

Name	CAL8_537_30.0	**Acq. Date-Time**	8/10/2023 2:45:35 PM
Data File	537_30.0_0044.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	744775	-7.8	98.9
13C2-PFHxA	13C2-PFOA	881454	-6.2	91.4
PFHxA	13C2-PFOA	881454	-6.2	91.4
13C3-HFPO-DA	13C2-PFOA	881454	-6.2	91.4
HFPO-DA	13C2-PFOA	881454	-6.2	91.4
PFHpA	13C2-PFOA	881454	-6.2	91.4
PFHxS	13C4-PFOS	744775	-7.8	98.9
NaDONA	13C2-PFOA	881454	-6.2	91.4
PFOA	13C2-PFOA	881454	-6.2	91.4
PFNA	13C2-PFOA	881454	-6.2	91.4
PFOS	13C4-PFOS	744775	-7.8	98.9
9Cl-PF3ONS	13C4-PFOS	744775	-7.8	98.9
PFDA	13C2-PFOA	881454	-6.2	91.4
13C2-PFDA	13C2-PFOA	881454	-6.2	91.4
N-MeFOSAA	NMeFOSAA-d3	1647379	5.7	100.9
NETFOSAA-d5	NMeFOSAA-d3	1647379	5.7	100.9
PFUdA	13C2-PFOA	881454	-6.2	91.4
N-EtFOSAA	NMeFOSAA-d3	1647379	5.7	100.9
11ClPF3OUdS	13C4-PFOS	744775	-7.8	98.9
PFDoA	13C2-PFOA	881454	-6.2	91.4
PFTrDA	13C2-PFOA	881454	-6.2	91.4
PFTA	13C2-PFOA	881454	-6.2	91.4

Quantitative Analysis Sample Based Report

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Name	23080060-002A	**Acq. Date-Time**	8/10/2023 4:10:32 PM
Data File	23080060-002A_RE_537_0044.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	835160	3.4	112.1
13C2-PFHxA	13C2-PFOA	1100597	17.2	124.9
PFHxA	13C2-PFOA	1100597	17.2	124.9
13C3-HFPO-DA	13C2-PFOA	1100597	17.2	124.9
HFPO-DA	13C2-PFOA	1100597	17.2	124.9
PFHpA	13C2-PFOA	1100597	17.2	124.9
PFHxS	13C4-PFOS	835160	3.4	112.1
NaDONA	13C2-PFOA	1100597	17.2	124.9
PFOA	13C2-PFOA	1100597	17.2	124.9
PFNA	13C2-PFOA	1100597	17.2	124.9
PFOS	13C4-PFOS	835160	3.4	112.1
9Cl-PF3ONS	13C4-PFOS	835160	3.4	112.1
PFDA	13C2-PFOA	1100597	17.2	124.9
13C2-PFDA	13C2-PFOA	1100597	17.2	124.9
N-MeFOSAA	NMeFOSAA-d3	1883190	20.8	114.3
NETFOSAA-d5	NMeFOSAA-d3	1883190	20.8	114.3
PFUdA	13C2-PFOA	1100597	17.2	124.9
N-EtFOSAA	NMeFOSAA-d3	1883190	20.8	114.3
11ClPF3OUdS	13C4-PFOS	835160	3.4	112.1
PFDoA	13C2-PFOA	1100597	17.2	124.9
PFTrDA	13C2-PFOA	1100597	17.2	124.9
PFTA	13C2-PFOA	1100597	17.2	124.9

Quantitative Analysis Sample Based Report

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Name	CAL4_537_10.0	**Acq. Date-Time**	8/10/2023 4:23:24 PM
Data File	537_10.0_0045.d	**Acq. Method File**	EPA 537.1 dMRM20230615.m
Report Generation Time	8/11/2023 10:46:42 AM	**Calibration Last Updated Time Stamp**	8/10/2023 3:45:32 PM
Batch Name	20230809-537.batch.bin	**DA Method File**	EPA 537 Quant Method 20230809.m

Name	ISTD	ISTD Resp.	ISTD Resp. % Dev.	CC ISTD Resp. Ratio
PFBS	13C4-PFOS	922835	14.3	123.9
13C2-PFHxA	13C2-PFOA	968816	3.1	109.9
PFHxA	13C2-PFOA	968816	3.1	109.9
13C3-HFPO-DA	13C2-PFOA	968816	3.1	109.9
HFPO-DA	13C2-PFOA	968816	3.1	109.9
PFHpA	13C2-PFOA	968816	3.1	109.9
PFHxS	13C4-PFOS	922835	14.3	123.9
NaDONA	13C2-PFOA	968816	3.1	109.9
PFOA	13C2-PFOA	968816	3.1	109.9
PFNA	13C2-PFOA	968816	3.1	109.9
PFOS	13C4-PFOS	922835	14.3	123.9
9Cl-PF3ONS	13C4-PFOS	922835	14.3	123.9
PFDA	13C2-PFOA	968816	3.1	109.9
13C2-PFDA	13C2-PFOA	968816	3.1	109.9
N-MeFOSAA	NMeFOSAA-d3	1891255	21.3	114.8
NETFOSAA-d5	NMeFOSAA-d3	1891255	21.3	114.8
PFUdA	13C2-PFOA	968816	3.1	109.9
N-EtFOSAA	NMeFOSAA-d3	1891255	21.3	114.8
11ClPF3OUdS	13C4-PFOS	922835	14.3	123.9
PFDoA	13C2-PFOA	968816	3.1	109.9
PFTrDA	13C2-PFOA	968816	3.1	109.9
PFTA	13C2-PFOA	968816	3.1	109.9

Adirondack Environmental Services Inc.
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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

APPENDIX C

New York Works
Former Hettling Farm Site
NYSDEC Site Number E411015
Cover Inspection Form

Time: 12:00 pm

Date: 9/12/2023

Weather Conditions: 60's Partly Cloudy

Were Photographs Taken ?: NO

Inspection Checklist:

A. Soil Cover:

The soil surface of the Site shall be inspected by traversing the area and examining it for the following:

		Yes	No
1.	Is there bare ground, or dead or damaged vegetation?	___	X
2.	Are there cracks, subsidence, or holes in the ground surface?	___	X
3.	Is there evidence of burrowing by animals?	___	X
4.	Is there disturbance of the surface material?	___	X
5.	Is there any erosion damage to vegetated or cleared areas?	___	X
6.	Is there discoloration or evidence of spills on the surface?	___	X
7.	Is there other evidence of disturbance to the area?	___	X
8.	Is there debris or trash present?	___	X

Comments *(Explanation required for each Yes answer in Section A):*

B. Asphalt and Gravel Cover:

The asphalt and gravel portions of the cover shall be inspected by traversing them and examining them for the following:

		Yes	No
1.	Are there cracks or holes in, or subsidence of the surface?	___	X
2.	Is there evidence of burrowing by animals?	___	X
3.	Is there any erosion or other damage to the surface?	___	X
4.	Is there discoloration or evidence of spills on the surface?	___	X
5.	Is there debris or trash present?	___	X
6.	Is there other evidence of disturbance to the area?	___	X

Comments (*Explanation required for each Yes answer in Section B):*

C. Site Drainage

The perimeter of the Site near adjacent properties and in the intermittent ditch shall be inspected by traversing the area and examining it for the following:

		Yes	No
1.	Is there any erosion damage?	___	X
2.	Is there debris blocking drainage pathways?	___	X
3.	Is there evidence of ponding or puddling of water?	X	___

Comments *(Explanation required for each Yes answer in Section C):*

Drainage Ditch has standing/very slow moving water as is the design intent

General Comments, Site Notes and Observations of Activities on Adjacent Parcels Which Could Interact With the Work:

Constructed cap is operating as designed at the surface and is being properly maintained by the town of clermont.

Signature:

Bryce Recer, IE NYSESCCP	9/12/2023	CPL
Inspector	Date	Organization

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Hettling Park | PROJECT NUMBER: R22.00245.00

DATE OF INSPECTION: 9-12-2023 | INSPECTOR: Bryce Recer, IE

WELL DESIGNATION: MW-1

WELL LOCATION: N1186375.18 / E675495.77

Outward Appearance

Flushmount Diameter	6 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [X]	
Integrity of Protective Casing	Describe: GOOD		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	6 inches		
Weep Hole in Protective Casing	Yes [ ]	No [ ]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: GOOD		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [ ]	No [X]	Describe: No physical Lock, two nut bolts present
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: _____		
Integrity of Cap Seal	Describe: _____		
Surface Water in Casing?	Yes [ ]	No [ ]	Describe: _____
Well Casing Diameter	_____ inches		
Well Casing Material	PVC [ ]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [ ] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [ ]	Describe: _____

Downhole

Odor	Yes [ ]	No [ ]	Describe: _____
PID Reading	_____ ppm		
Depth to Water (to top of casing)	_____ feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	_____ feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: _____		

Additional Comments:

Field observation of Well: Good Condition

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Hettling Park PROJECT NUMBER: 15763

DATE OF INSPECTION: 9-12-2023 INSPECTOR: Bryce Recer, IE

WELL DESIGNATION: MW-2

WELL LOCATION: N1186618.63 / E674883.05

Outward Appearance

Flushmount Diameter	6 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [X]	
Integrity of Protective Casing	Describe: _____		
Protective Casing Material	Steel [ ]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	_____ inches		
Weep Hole in Protective Casing	Yes [ ]	No [ ]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: GOOD		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [ ]	No [X]	Describe: No physical Lock, two nut bolts present
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: _____		
Integrity of Cap Seal	Describe: _____		
Surface Water in Casing?	Yes [ ]	No [ ]	Describe: _____
Well Casing Diameter	_____ inches		
Well Casing Material	PVC [ ]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [ ] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [ ]	Describe: _____

Downhole

Odor	Yes [ ]	No [ ]	Describe: _____
PID Reading	_____ ppm		
Depth to Water (to top of casing)	_____ feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	_____ feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: _____		

Additional Comments:

Well went dry. inadequate recovery

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Hettling Park | PROJECT NUMBER: 15763

DATE OF INSPECTION: 9-12-2023 | INSPECTOR: Bryce Recer

WELL DESIGNATION: MW-4

WELL LOCATION: N1186771.03 / E674454.33

Outward Appearance

Flushmount Diameter	6 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [X]	
Integrity of Protective Casing	Describe: _____		
Protective Casing Material	Steel [ ]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	_____ inches		
Weep Hole in Protective Casing	Yes [ ]	No [ ]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: GOOD		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [ ]	No [X]	Describe: No physical Lock, two nut bolts present
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: _____		
Integrity of Cap Seal	Describe: _____		
Surface Water in Casing?	Yes [ ]	No [ ]	Describe: _____
Well Casing Diameter	_____ inches		
Well Casing Material	PVC [ ]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [ ] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [ ]	Describe: _____

Downhole

Odor	Yes [ ]	No [ ]	Describe: _____
PID Reading	_____ ppm		
Depth to Water (to top of casing)	_____ feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	_____ feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: _____		

Additional Comments:

Field observation of Well: Good Condition

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Hettling Park
PROJECT NUMBER: 15763
DATE OF INSPECTION: 9-12-2023
INSPECTOR: Bryce Recer, IE
WELL DESIGNATION: MW-5
WELL LOCATION: N186525.83 / E674213.52

Outward Appearance

Flushmount Diameter	_____ inches	N/A [ ]	
Approximate Stickup Height	3 feet	N/A [ ]	
Integrity of Protective Casing	Describe: GOOD, PAINT CHIPPING		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	6 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: GOOD		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [ ]	No [X]	Describe: No physical lock on Well Cap
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: _____		
Integrity of Cap Seal	Describe: _____		
Surface Water in Casing?	Yes [ ]	No [ ]	Describe: _____
Well Casing Diameter	_____ inches		
Well Casing Material	PVC [ ]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [ ] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [ ]	Describe: _____

Downhole

Odor	Yes [ ]	No [ ]	Describe: _____
PID Reading	_____ ppm		
Depth to Water (to top of casing)	_____ feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	_____ feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: _____		

Additional Comments:

Field observation of Well: Good Condition

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Hettling Park | PROJECT NUMBER: 15763

DATE OF INSPECTION: 9-12-2023 | INSPECTOR: Bryce Recer, IE

WELL DESIGNATION: MW-7A

WELL LOCATION: N1186458.55 / E673805.15

Outward Appearance

Flushmount Diameter	_____ inches	N/A [X]	
Approximate Stickup Height	2 feet	N/A [ ]	
Integrity of Protective Casing	Describe: GOOD		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	6 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: GOOD CONDITION		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [ ]	No [X]	Describe: _____
Photograph Taken? Photo # 1	Yes [X]	No [ ]	Describe: New well, picture at install.

Inner Appearance

Integrity of Well Casing	Describe: _____		
Integrity of Cap Seal	Describe: _____		
Surface Water in Casing?	Yes [ ]	No [ ]	Describe: _____
Well Casing Diameter	_____ inches		
Well Casing Material	PVC [ ]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [ ] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [ ]	Describe: _____

Downhole

Odor	Yes [ ]	No [ ]	Describe: _____
PID Reading	_____ ppm		
Depth to Water (to top of casing)	_____ feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	_____ feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: _____		

Additional Comments:

Field observation of Well: Good Condition



Photo #1: New Well Head MW-7A

APPENDIX D

March 23, 2022

Mr. Bryce Reecer
Clark Patterson Lee (CPL)
30 Century Hill Drive, Suite 104
Latham, NY 12110

Re: Groundwater Monitoring Well Project
Former Hettling Farm Site
US Route 9
Clermont, NY
Terracon Project No. JB225227

Mr. Reecer,

This report presents the results of a subsurface investigation and ground water monitoring well installation completed by Terracon Consultants – NY, Inc. at the referenced site. The investigation and installation was completed in general accordance with our proposal, which was authorized by CPL on or around December 5th, 2022. Our base scope included the completion of a test boring, installation of a monitoring well to be monitored by others, and preparation of a test boring log and monitoring well installation report. Supplemental environmental services were added on in a change order, and these services and results of testing completed as part of that scope will be addressed in a separate report.

The test boring location was selected in the field approximately five feet adjacent to the original MW-7 monitoring well. The approximate coordinates indicated on the attached boring log were taken from the drawing titled “Monitoring Wells Location & Depth,” Figure 1, dated April 2021 that we received from CPL. The coordinates were converted from the NYS Plane Coordinate System to latitude and longitude.

We appreciate the opportunity to be of service on this project. Please contact us at your convenience if you have any questions or if anything further is needed.

Sincerely,
Terracon Consultants – NY, Inc.

Asa Barnhill, E.I.T.
Staff Geotechnical Engineer

Joseph Robichaud, Jr., P.E.
Principal / Office Manager

Attachments: Boring Log (MW-7)
Piezometer Completion Record (MW-7)
General Notes

BORING LOG NO. W-7

PROJECT: Groundwater Monitoring Well Project

CLIENT: Clark Patterson Lee
Latham, NY

SITE: US Route 9
Clermont, NY

LOCATION See Exploration Plan

Latitude: 42.0884° Longitude: -73.8306°

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS
	SILTY GRAVEL WITH SAND (GM), highly weathered shale fragments noted, dark brown, loose to very dense				17	4-6-5-6 N=11
	Poor recovery noted				1	6-5-4-3 N=9
	Similar, grades brown	5			19	3-2-2-4 N=4
	6.2				2	50/2"
	Sampler Refusal at 6.2 Feet					

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

Logged by AEB
See Piezometer Completion Diagram for well installation information.
Augered to 7' depth and well installed adjacent to borehole.

WATER LEVEL OBSERVATIONS

No free water observed

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 03-09-2023 | Boring Completed: 03-09-2023

Drill Rig: Diedrich D-50 | Driller: J. Lamm

Project No.: JB225227

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL JB225227 GROUNDWATER MONIT.GPJ TERRACON_DATATEMPLATE.GDT 3/23/23

PIEZOMETER COMPLETION RECORD

Well Number: W-7

Project: Groundwater Monitoring Well

Location: US Route 9

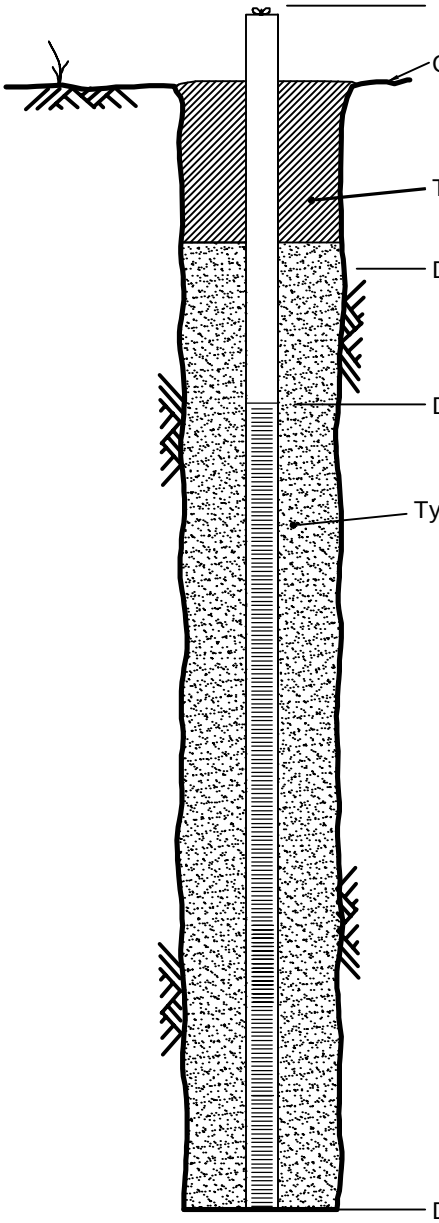
Project Number: JB225227

Installation Date(s): 3/9/2023

Drilling Method: 4-1/4" HSA

Driller: S. Morey

Top of Riser Pipe (ft above Ground Surface): 2.0



Ground Surface

Type of Seal: Bentonite Chips

Depth, Top of Sandpack: 1.0'

Depth, Top of Screen: 2.0'

Type of Backfill: Sandpack

Depth, Bottom of Screen: 7.0'

Depth, Bottom of Sandpack: 7.0'

Total Depth of Hole: 7.0'

Not to Scale

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS
Groundwater Monitoring Well Project ■ Clermont, NY
Terracon Project No. JB225227

SAMPLING	WATER LEVEL	FIELD TESTS
Split Spoon	**Water Initially Encountered** **Water Level After a Specified Period of Time** **Water Level After a Specified Period of Time** **Cave In Encountered** Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.	**N** Standard Penetration Test Resistance (Blows/Ft.) **(HP)** Hand Penetrometer **(T)** Torvane **(DCP)** Dynamic Cone Penetrometer **UC** Unconfined Compressive Strength **(PID)** Photo-Ionization Detector **(OVA)** Organic Vapor Analyzer

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification as noted on the soil boring logs is based Unified Soil Classification System. Where sufficient laboratory data exist to classify the soils consistent with ASTM D2487 "Classification of Soils for Engineering Purposes" this procedure is used. ASTM D2488 "Description and Identification of Soils (Visual-Manual Procedure)" is also used to classify the soils, particularly where insufficient laboratory data exist to classify the soils in accordance with ASTM D2487. In addition to USCS classification, coarse grained soils are classified on the basis of their in-place relative density, and fine-grained soils are classified on the basis of their consistency. See "Strength Terms" table below for details. The ASTM standards noted above are for reference to methodology in general. In some cases, variations to methods are applied as a result of local practice or professional judgment.

LOCATION AND ELEVATION NOTES

Exploration point locations as shown on the Exploration Plan and as noted on the soil boring logs in the form of Latitude and Longitude are approximate. See Exploration and Testing Procedures in the report for the methods used to locate the exploration points for this project. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Descriptive Term (Density)	**Standard Penetration or N-Value Blows/Ft.**	**Descriptive Term (Consistency)**	**Unconfined Compressive Strength Qu, (tsf)**	**Standard Penetration or N-Value Blows/Ft.**
Very Loose	0 - 3	Very Soft	less than 0.25	0 - 1
Loose	4 - 9	Soft	0.25 to 0.50	2 - 4
Medium Dense	10 - 29	Medium Stiff	0.50 to 1.00	4 - 8
Dense	30 - 50	Stiff	1.00 to 2.00	8 - 15
Very Dense	> 50	Very Stiff	2.00 to 4.00	15 - 30
		Hard	> 4.00	> 30

RELEVANCE OF SOIL BORING LOG

The soil boring logs contained within this document are intended for application to the project as described in this document. Use of these soil boring logs for any other purpose may not be appropriate.

30 Corporate Circle, Suite 201
Albany, NY 12203-5169
P 518-266-0310
F 518-266-9238
Terracon.com

April 10, 2023

Clark Patterson Lee
30 Century Hill Drive
Suite 104
Latham, New York 12110

Attn: Mr. Bryce Recer
P: (518) 751-2180
E: brecer@cplteam.com

Re: Limited Site Investigation
Groundwater Monitoring Well Project
Former Hettling Farm Site
US Route 9
Clermont, New York
Terracon Project No. JB225227

Dear Mr. Recer:

Terracon Consultants-NY, Inc. (Terracon) is pleased to submit this letter report for the above-referenced site to Clark Patterson Lee (CPL) (client). The purpose of this report is to present the results of a Limited Site Investigation, performed at the site on March 9, 2023. The LSI was completed in order to comply with procedure outlined in a Site Management Plan (SMP), completed by Arcadis in January, 2019. This LSI was conducted in general accordance with Terracon Proposal PJB225227 dated October 28, 2022 and Supplemental Change Order dated February 15, 2023.

Reliance

This LSI letter report is prepared for the exclusive use and reliance of Clark Patterson Lee. Use or reliance by any other party is prohibited without the written authorization of Clark Patterson Lee and Terracon Consultants, Inc. (Terracon).

Reliance on the LSI letter report by the client and all authorized parties will be subject to the terms, conditions and limitations stated in the proposal, LSI letter report, and Terracon's Agreement for Services. The limitation of liability defined in Agreement for Services is the aggregate limit of Terracon's liability to the client and all relying parties.

1.0 SITE DESCRIPTION

The site is identified in the 2019 Arcadis SMP as the Former Hettling Farm Site, located along US Route 9 in Clermont, Columbia County, New York. Currently it is composed of 2 separate parcels, identified by section, block, and lot numbers 181.-1-26.111 and 181.-1-26.112 for a combined approximately 20 acres. The site was acquired by the town of Clermont in 2003 and is now occupied by the Hettling Park at Clermont and Clermont Field, and composed of recreational playing fields, maintained walking trails through undeveloped land, and associated parking areas. Remnant orchards are still present on the site as well. The specific work area within the Former Hettling Farm Site is located on the west side of the property adjacent to monitoring well MW-7. Site plans are shown as Exhibits 1 and 2 in Appendix A.

2.0 BACKGROUND

According to the 2019 Arcadis report, the site was historically used as agriculture land, specifically for orchards on the west side of the site and row crops, orchards, and vineyards on the east side of the site. Over time the use of pesticides and fertilizers caused the subsurface of the site to become impacted. Additionally, a large pile of railroad ties and poles, which may have been treated with creosote and/or chromated copper arsenate, was stored in the north central area of the site. Contaminants from the pile may have also leached into the subsurface, contributing to the impaction of site soils and groundwater.

Investigations by others between 2006 and 2007, including the installation of several groundwater monitoring wells, identified the presence of semi-volatile organic compounds, metals, and pesticides within the soil and groundwater at the site. The railroad ties and poles were subsequently removed from the site. Between 2016 and 2017 an asphalt and soil cover/cap system were installed on portions of the site in order to prevent human contact from the impacted site soils. It should be noted that the area of monitoring well MW-7 is located in an area outside of the cover system.

In addition to the remedial measures and Engineering Controls (cover/cap system), Institutional Controls were implemented. These Institutional Controls included compliance with the SMP, limiting the use and development of the site to commercial activities (including recreational use and industrial activities), and routine certification of the controls by the site owner.

The Arcadis SMP completed for the site in 2019 outlines the purpose of the cover system, and requirements for the management of the site soils, maintenance of the cover system, and site preparation and excavation below the cover system during future site activities or development.

3.0 SCOPE OF SERVICES

3.1 Field Investigation

The objective of the LSI was to provide environmental monitoring and soil sampling, per the SMP, at the time a replacement well was installed on the site. The replacement well was to be located adjacent to monitoring well MW-7, which had recently become blocked and unusable. The installation was completed by Terracon in accordance with Terracon Proposal number PJB225227, dated October 28, 2022.

In addition to the replacement of the well, and according to Terracon's Supplemental Agreement for Services dated February 15, 2023, Terracon also completed the following scope of work:

- Prior to the field work Terracon completed a site-specific health and safety plan (HASP)
- At the time the replacement well was advanced, a Terracon environmental representative was on site. Soil samples collected during drilling were scanned using a Photo Ionization Detector (PID), which detects volatile organic compounds (VOCs) within the air around the soil samples.
- Soils collected during drilling (approximately 2 gallons of material) were transferred to a plastic poly sheet, situated on an asphalt-covered area of the site to prevent unintentional leaching into the subsurface.
- From this stockpile Terracon collected a five-point composite sample (S-1) and duplicate five-point composite sample (D-1) from the stockpile. The soil from the 5 points was mixed within a Pyrex glass bowl until becoming homogenized. The composite soil sample was then transferred to pre-cleaned, laboratory-provided jars to be analytically tested for pH, Target Compound List (TCL) semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), Target Analyte List (TAL) metals, and cyanide.
- An additional grab sample (S-2) was collected from 1 of the 5 composite areas. The grab sample was chosen at random as PID readings of the 5 composite areas did not indicate the presence of VOCs. The collected grab sample was analytically tested for VOCs.
- After sampling was complete the soil stockpile was secured by being covered in plastic and left on site.

Terracon performed the LSI fieldwork on March 9, 2023. Photographs of the site area are included in Appendix E. Work was performed using USEPA Level D work attire consisting of hard hats, safety glasses, protective gloves, hearing protection, and

protective boots. Powder-free nitrile gloves were utilized to prevent cross contamination.

Soil samples to be analyzed were collected within pre-cleaned jars and stored on ice in preparation for their shipment to a New York State Environmental Laboratory Approval Program (ELAP)-approved analytical laboratory (Phoenix Environmental Laboratory). All samples were submitted to the laboratory under proper chain of custody.

4.0 DATA EVALUATION

The LSI findings indicate that the subsurface of the replacement monitoring well area is primarily composed of silty gravel with sand. Highly weathered shale fragments were also noted. Petroleum odors or elevated PID readings were not encountered in the soil samples. The boring log is included in Appendix C.

4.1 Soil Sample Results

The analytical results for the soil samples were compared to the applicable Site-Specific Action Levels (SSALs) within 6 NYCRR Part 375 Table 375-6.8(b) for commercial use, per the SMP. No VOCs, SVOCs, PCB's or cyanide was detected in any of the soil samples above laboratory detection limits. Two pesticides (4,4'-DDE and 4,4'-DDT) were detected in samples S-1 and D-1 above laboratory detection limits, but we found in concentrations below the SSALs for those compounds.

All of the TAL metals were found above laboratory detection methods, with the exceptions of antimony and thallium in sample S-1 and silver, antimony, selenium, and thallium in sample D-1. Arsenic was found in concentrations above the SSALs in both samples S-1 and D-1. It should be noted that SSALs for a number of the tested metals, including aluminum, calcium, cobalt, iron, potassium, magnesium, sodium, antimony, thallium, vanadium, and zinc are not present in Table 375-6.8(b).

The pH levels for samples S-1 and D-1 were identified as 7.29 and 7.27, respectively.

A summary of the laboratory results is shown in Table 1 in Appendix B, and the full soil analytical laboratory report is located in Appendix D.

5.0 SUMMARY OF ANALYTICAL TESTING

Based on the scope of services described in this document and subject to the limitations described herein, Terracon concludes the following:

- At the time of a groundwater monitoring well replacement Terracon was present on site to monitor and sample for analytical testing the excess soil excavated during the drilling process, per the requirements of the SMP.
- Terracon scanned recovered soil samples with a PID, though no indications of VOCs were observed during drilling.
- Terracon collected 2 composite soil samples (S-1 and D-1), and 1 grab sample (S-2) from the stockpiled recovered soil. The composite samples were analytically tested for SVOCs, pesticides, PCBs, TAL metals, cyanide, and pH. The grab sample was analytically tested for VOCs.
- No SVOCs, PCBs, cyanide or VOCs were detected in any of the collected soil samples. For S-1 and D-1 pH levels were determined to be 7.29 and 7.27, respectively.
- Two pesticides (4,4'-DDE and 4,4'-DDT) were detected in samples S-1 and D-1 above laboratory detection limits, but we found in concentrations below the SSALs for those compounds.
- Most TAL metals were found to be present above laboratory detection limits, however, only arsenic was found above SSALs in both S-1 and D-1.

6.0 CONCLUSIONS AND RECOMMENDATIONS

In conjunction with recommendations made through conversations with the NYSDEC, while arsenic levels within the collected soil samples were found to be present above SSALs, due to the de minimis amount (less than 5 gallons) of remnant soil recovered from drilling operations for the new monitoring well, it is recommended the remaining stockpile of soil stored on site be disposed of on site in the area of original generation (monitoring well MW-7). No further work is warranted at this time.

The LSI was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions, and recommendations expressed in this report is relevant to the date on which the LSI was performed, and should be relied upon to represent conditions at a later date. This report has been prepared on behalf of and exclusively of use by Clack Patterson Lee for specific application to their project as discussed. This report is not a bidding document. Contractors of consultants reviewing this report must draw their own conclusion regarding further investigation or remediation deemed necessary. Terracon does not warrant the work of regulatory agencies, laboratories, or third parties supplying information which may have been used in the preparation of this report. No warranty, expressed or implied, is made.

Terracon appreciates the opportunity to provide this service. If you have any questions regarding this report, please contact the undersigned at (518) 266-0310.

Sincerely,

Terracon Consultants-NY, Inc.

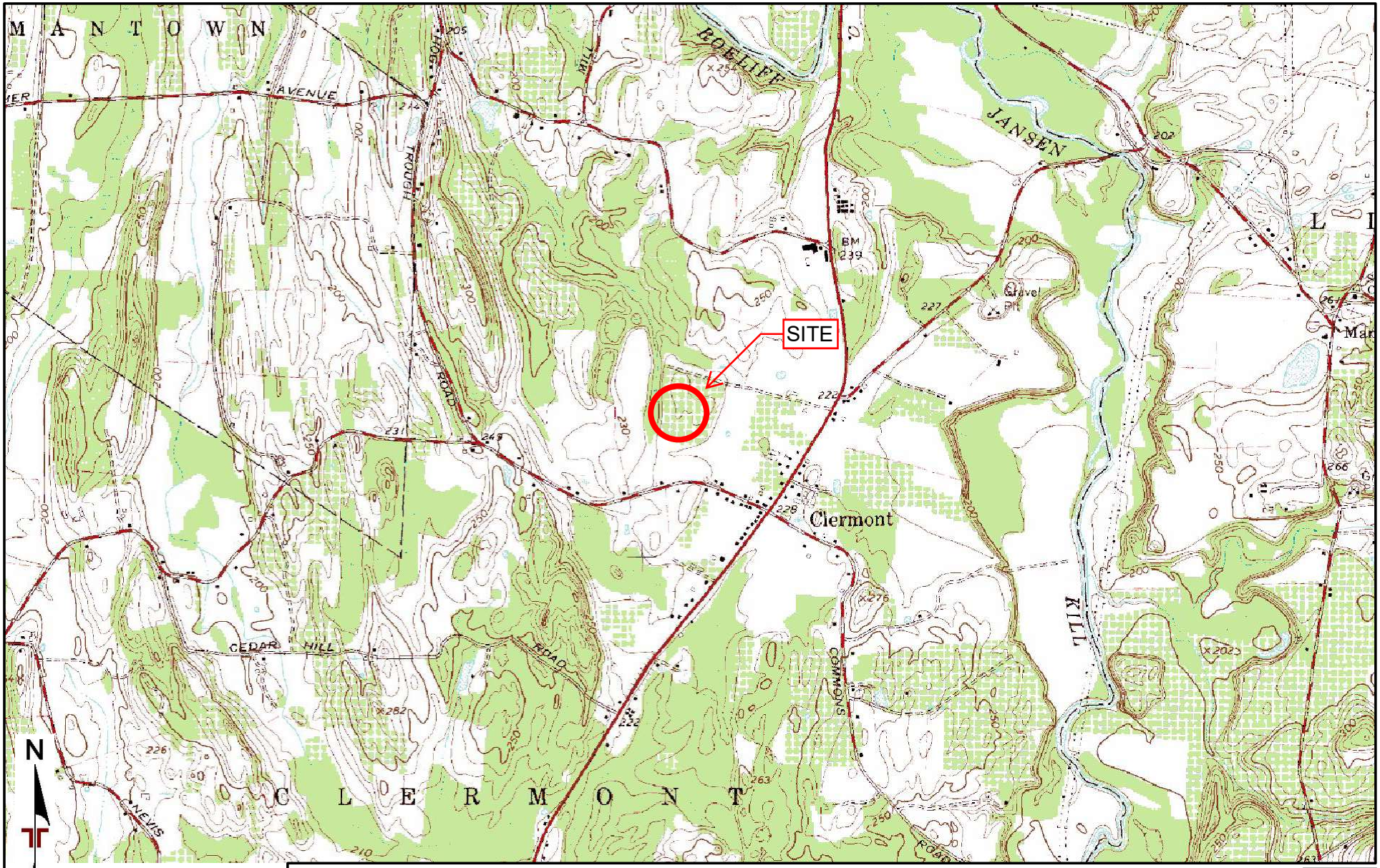
Olivia R. Burns
Project Manager
Staff Scientist

Amanda G. Lofink
Senior Scientist
Authorized Project Reviewer

APPENDIX A

EXHIBIT 1: TOPOGRAPHIC MAP

EXHIBIT 2: SITE DIAGRAM



TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY QUADRANGLES INCLUDE: CATSKILL, NY (1/1/1934) and CLERMONT, NY (1/1/1978).

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager:	ORB
Drawn by:	ORB
Checked by:	AGL
Approved by:	AGL

Project No.	JB225227
Scale:	1"=2,000'
File Name:	JB225227
Date:	4/4/23

Terracon
30 Corporate Cir Ste 201
Albany, NY 12203-5169

TOPOGRAPHIC MAP

Groundwater Monitoring Well Project
US Route 9
Clermont, NY

Exhibit

1



AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager:	ORB
Drawn by:	ORB
Checked by:	AGL
Approved by:	AGL

Project No.	JB225227
Scale:	AS SHOWN
File Name:	JB225227
Date:	4/4/23

Terracon
30 Corporate Cir Ste 201
Albany, NY 12203-5169

SITE DIAGRAM

Groundwater Monitoring Well Project

US Route 9
Clermont, NY

Exhibit

2

APPENDIX B

SUMMARY OF LABORATORY RESULTS

Table 1 - Summary of Soil Sample Analytical Results
Groundwater Monitoring Well Project
US Route 9
Clermont, New York
Terracon Project #: JB225227

Sample ID			S-1	D-1	S-2
Sample Date			3/9/2023	3/9/2023	3/9/2023
Chemical Name	**Table 375-6.8(b) Site Specific Action Levels (SSALs)**	**Units**			
Metals					
Silver	1,500	mg/kg	0.79	ND(0.39)	--
Aluminum	NS	mg/kg	14,900	19,300	--
Arsenic	16	mg/kg	**36.3**	**16.5**	--
Barium	400	mg/kg	121	148	--
Beryllium	590	mg/kg	0.63	0.81	--
Calcium	NS	mg/kg	1,800	2,530	--
Cadmium	9.3	mg/kg	5.72	1.81	--
Cobalt	NS	mg/kg	43.2	18.6	--
Chromium (total)	400	mg/kg	30.2	38.4	--
Copper	270	mg/kg	75	59.4	--
Iron	NS	mg/kg	194,000	38,100	--
Mercury	2.8	mg/kg	0.05	0.05	--
Potassium	NS	mg/kg	2,080	2,300	--
Magnesium	NS	mg/kg	9,680	12,000	--
Manganese	10,000	mg/kg	2,200	3,590	--
Sodium	NS	mg/kg	76.8	88.7	--
Nickel	310	mg/kg	83.8	42.8	--
Lead	1,000	mg/kg	36.4	20.2	--
Antimony	NS	mg/kg	ND(4.3)	ND(3.9)	--
Selenium	1,500	mg/kg	7.2	ND(1.6)	--
Thallium	NS	mg/kg	ND(3.9)	ND(3.5)	--
Vanadium	NS	mg/kg	26.8	36.4	--
Zinc	10,000	mg/kg	85.1	81	--
Miscellaneous/Inorganics					
Corrosivity	Pos/Neg		Negative	Negative	--
pH at 25C	pH Units		7.29	7.27	--
Total Cyanide	27	mg/kg	ND(0.51)	ND(0.52)	--
Polychlorinated Biphenyls (PCBs)					
PCB-1016	1	mg/kg	ND(0.4)	ND(0.4)	--
PCB-1221	1	mg/kg	ND(0.4)	ND(0.4)	--
PCB-1232	1	mg/kg	ND(0.4)	ND(0.4)	--
PCB-1242	1	mg/kg	ND(0.4)	ND(0.4)	--
PCB-1248	1	mg/kg	ND(0.4)	ND(0.4)	--
PCB-1254	1	mg/kg	ND(0.4)	ND(0.4)	--
PCB-1260	1	mg/kg	ND(0.4)	ND(0.4)	--
PCB-1262	1	mg/kg	ND(0.4)	ND(0.4)	--
PCB-1268	1	mg/kg	ND(0.4)	ND(0.4)	--
Pesticides					
4,4' -DDD	62	mg/kg	ND(0.0024)	ND(0.0024)	--
4,4' -DDE	47	mg/kg	0.041	0.045	--
4,4' -DDT	92	mg/kg	0.012	0.012	--
a-BHC	3.4	mg/kg	ND(0.008)	ND(0.0081)	--
a-Chlordane	24	mg/kg	ND(0.004)	ND(0.004)	--
Aldrin	0.68	mg/kg	ND(0.004)	ND(0.004)	--
b-BHC	3	mg/kg	ND(0.008)	ND(0.0081)	--
Chlordane	NS	mg/kg	ND(0.04)	ND(0.04)	--
d-BHC	500	mg/kg	ND(0.008)	ND(0.0081)	--
Dieldrin	1.4	mg/kg	ND(0.004)	ND(0.004)	--
Endosulfan I	200	mg/kg	ND(0.008)	ND(0.0081)	--
Endosulfan II	200	mg/kg	ND(0.008)	ND(0.0081)	--
Endosulfan sulfate	200	mg/kg	ND(0.008)	ND(0.0081)	--
Endrin	89	mg/kg	ND(0.008)	ND(0.0081)	--
Endrin aldehyde	NS	mg/kg	ND(0.008)	ND(0.0081)	--
Endrin ketone	NS	mg/kg	ND(0.008)	ND(0.0081)	--
g-BHC	NS	mg/kg	ND(0.0016)	ND(0.0016)	--
g-Chlordane	NS	mg/kg	ND(0.004)	ND(0.004)	--
Heptachlor	15	mg/kg	ND(0.008)	ND(0.0081)	--
Heptachlor epoxide	NS	mg/kg	ND(0.008)	ND(0.0081)	--
Methoxychlor	NS	mg/kg	ND(0.04)	ND(0.04)	--
Toxaphene	NS	mg/kg	ND(0.16)	ND(0.16)	--
Semi-Volatile Organic Compounds (SVOs)					
1,1-Biphenyl	NS	mg/kg	ND(0.29)	ND(0.29)	--
1,2,4,5-Tetrachlorobenzene	NS	mg/kg	ND(0.29)	ND(0.29)	--
2,2'-Oxybis(1-Chloropropane)	NS	mg/kg	ND(0.29)	ND(0.29)	--
2,3,4,6-tetrachlorophenol	NS	mg/kg	ND(0.29)	ND(0.29)	--
2,4,5-Trichlorophenol	NS	mg/kg	ND(0.29)	ND(0.29)	--
2,4,6-Trichlorophenol	NS	mg/kg	ND(0.29)	ND(0.29)	--
2,4-Dichlorophenol	NS	mg/kg	ND(0.29)	ND(0.29)	--
2,4-Dimethylphenol	NS	mg/kg	ND(0.29)	ND(0.29)	--
2,4-Dinitrophenol	NS	mg/kg	ND(0.65)	ND(0.67)	--
2,4-Dinitrotoluene	NS	mg/kg	ND(0.29)	ND(0.29)	--
2,6-Dinitrotoluene	NS	mg/kg	ND(0.29)	ND(0.29)	--
2-Chloronaphthalene	NS	mg/kg	ND(0.29)	ND(0.29)	--
2-Chlorophenol	NS	mg/kg	ND(0.29)	ND(0.29)	--
2-Methylnaphthalene	NS	mg/kg	ND(0.29)	ND(0.29)	--
2-Methylphenol (o-cresol)	NS	mg/kg	ND(0.29)	ND(0.29)	--
2-Nitroaniline	NS	mg/kg	ND(0.65)	ND(0.67)	--
2-Nitrophenol	NS	mg/kg	ND(0.29)	ND(0.29)	--
3&4-Methylphenol (m&p-cresol)	NS	mg/kg	ND(0.41)	ND(0.42)	--
3,3'-Dichlorobenzidine	NS	mg/kg	ND(0.49)	ND(0.5)	--
3-Nitroaniline	NS	mg/kg	ND(0.65)	ND(0.67)	--
4,6-Dinitro-2-methylphenol	NS	mg/kg	ND(1.2)	ND(1.2)	--
4-Bromophenyl phenyl ether	NS	mg/kg	ND(0.41)	ND(0.42)	--
4-Chloro-3-methylphenol	NS	mg/kg	ND(0.29)	ND(0.29)	--
4-Chloroaniline	NS	mg/kg	ND(0.29)	ND(0.29)	--
4-Chlorophenyl phenyl ether	NS	mg/kg	ND(0.29)	ND(0.29)	--
4-Nitroaniline	NS	mg/kg	ND(0.65)	ND(0.67)	--
4-Nitrophenol	NS	mg/kg	ND(1.2)	ND(1.2)	--
Acenaphthene	500	mg/kg	ND(0.29)	ND(0.29)	--
Acenaphthylene	500	mg/kg	ND(0.29)	ND(0.29)	--
Acetophenone	NS	mg/kg	ND(0.29)	ND(0.29)	--
Anthracene	500	mg/kg	ND(0.29)	ND(0.29)	--
Atrazine	NS	mg/kg	ND(0.29)	ND(0.29)	--
Benz(a)anthracene	5.6	mg/kg	ND(0.29)	ND(0.29)	--
Benzaldehyde	NS	mg/kg	ND(0.29)	ND(0.29)	--
Benzo(a)pyrene	1	mg/kg	ND(0.29)	ND(0.29)	--
Benzo(b)fluoranthene	5.6	mg/kg	ND(0.29)	ND(0.29)	--
Benzo(ghi)perylene	500	mg/kg	ND(0.29)	ND(0.29)	--
Benzo(k)fluoranthene	56	mg/kg	ND(0.29)	ND(0.29)	--
Benzyl butyl phthalate	NS	mg/kg	ND(0.29)	ND(0.29)	--
Bis(2-chloroethoxy)methane	NS	mg/kg	ND(0.29)	ND(0.29)	--
Bis(2-chloroethyl)ether	NS	mg/kg	ND(0.41)	ND(0.42)	--
Bis(2-ethylhexyl)phthalate	NS	mg/kg	ND(0.29)	ND(0.29)	--
Caprolactam	NS	mg/kg	ND(0.29)	ND(0.29)	--
Carbazole	NS	mg/kg	ND(0.41)	ND(0.42)	--
Chrysene	56	mg/kg	ND(0.29)	ND(0.29)	--
Dibenz(a,h)anthracene	0.56	mg/kg	ND(0.2)	ND(0.21)	--
Dibenzofuran	NS	mg/kg	ND(0.29)	ND(0.29)	--
Diethyl phthalate	NS	mg/kg	ND(0.29)	ND(0.29)	--
Dimethylphthalate	NS	mg/kg	ND(0.29)	ND(0.29)	--
Di-n-butylphthalate	NS	mg/kg	ND(0.82)	ND(0.83)	--
Di-n-octylphthalate	NS	mg/kg	ND(0.29)	ND(0.29)	--
Fluoranthene	500	mg/kg	ND(0.29)	ND(0.29)	--
Fluorene	500	mg/kg	ND(0.29)	ND(0.29)	--
Hexachlorobenzene	NS	mg/kg	ND(0.29)	ND(0.29)	--
Hexachlorobutadiene	NS	mg/kg	ND(0.29)	ND(0.29)	--
Hexachlorocyclopentadiene	NS	mg/kg	ND(0.29)	ND(0.29)	--
Hexachloroethane	NS	mg/kg	ND(0.29)	ND(0.29)	--
Indeno(1,2,3-cd)pyrene	5.6	mg/kg	ND(0.29)	ND(0.29)	--
Isophorone	NS	mg/kg	ND(0.29)	ND(0.29)	--
Naphthalene	NS	mg/kg	ND(0.29)	ND(0.29)	--
Nitrobenzene	500	mg/kg	ND(0.29)	ND(0.29)	--
N-Nitrosodimethylamine	NS	mg/kg	ND(0.41)	ND(0.42)	--
N-Nitrosodi-n-propylamine	NS	mg/kg	ND(0.2)	ND(0.21)	--
N-Nitrosodiphenylamine	NS	mg/kg	ND(0.41)	ND(0.42)	--
Pentachlorophenol	6.7	mg/kg	ND(0.41)	ND(0.42)	--
Phenanthrene	500	mg/kg	ND(0.29)	ND(0.29)	--
Phenol	500	mg/kg	ND(0.29)	ND(0.29)	--
Pyrene	500	mg/kg	ND(0.29)	ND(0.29)	--
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	500	mg/kg	--	--	ND(0.0047)
1,1,2,2-Tetrachloroethane	NS	mg/kg	--	--	ND(0.14)
1,1,2-Trichloroethane	NS	mg/kg	--	--	ND(0.0047)
1,1-Dichloroethane	240	mg/kg	--	--	ND(0.0047)
1,1-Dichloroethene	500	mg/kg	--	--	ND(0.0047)
1,2,3-Trichlorobenzene	NS	mg/kg	--	--	ND(0.14)
1,2,4-Trichlorobenzene	NS	mg/kg	--	--	ND(0.14)
1,2-Dibromo-3-chloropropane	NS	mg/kg	--	--	ND(0.14)
1,2-Dibromoethane	NS	mg/kg	--	--	ND(0.0047)
1,2-Dichlorobenzene	500	mg/kg	--	--	ND(0.14)
1,2-Dichloroethane	30	mg/kg	--	--	ND(0.0047)
1,2-Dichloropropane	NS	mg/kg	--	--	ND(0.0047)
1,3-Dichlorobenzene	280	mg/kg	--	--	ND(0.14)
1,4-Dichlorobenzene	130	mg/kg	--	--	ND(0.14)
2-Hexanone	NS	mg/kg	--	--	ND(0.023)
4-Methyl-2-pentanone	NS	mg/kg	--	--	ND(0.023)
Acetone	500	mg/kg	--	--	ND(0.047)
Benzene	44	mg/kg	--	--	ND(0.0047)
Bromochloromethane	NS	mg/kg	--	--	ND(0.0047)
Bromodichloromethane	NS	mg/kg	--	--	ND(0.0047)
Bromoform	NS	mg/kg	--	--	ND(0.0047)
Bromomethane	NS	mg/kg	--	--	ND(0.0047)
Carbon Disulfide	NS	mg/kg	--	--	ND(0.0047)
Carbon tetrachloride	22	mg/kg	--	--	ND(0.0047)
Chlorobenzene	500	mg/kg	--	--	ND(0.0047)
Chloroethane	NS	mg/kg	--	--	ND(0.0047)
Chloroform	350	mg/kg	--	--	ND(0.0047)
Chloromethane	NS	mg/kg	--	--	ND(0.0047)
cis-1,2-Dichloroethene	NS	mg/kg	--	--	ND(0.0047)
cis-1,3-Dichloropropene	NS	mg/kg	--	--	ND(0.0047)
Cyclohexane	NS	mg/kg	--	--	ND(0.0047)
Dibromochloromethane	NS	mg/kg	--	--	ND(0.0047)
Dichlorodifluoromethane	NS	mg/kg	--	--	ND(0.0047)
Ethylbenzene	390	mg/kg	--	--	ND(0.0047)
Isopropylbenzene	500	mg/kg	--	--	ND(0.14)
m&p-Xylene	NS	mg/kg	--	--	ND(0.0047)
Methyl ethyl ketone	500	mg/kg	--	--	ND(0.028)
Methyl t-butyl ether (MTBE)	500	mg/kg	--	--	ND(0.0093)
Methylacetate	NS	mg/kg	--	--	ND(0.0037)
Methylcyclohexane	NS	mg/kg	--	--	ND(0.0047)
Methylene chloride	500	mg/kg	--	--	ND(0.023)
o-Xylene	500	mg/kg	--	--	ND(0.0047)
Styrene	NS	mg/kg	--	--	ND(0.0047)
Tetrachloroethene	150	mg/kg	--	--	ND(0.0047)
Toluene	500	mg/kg	--	--	ND(0.0047)
Total Xylenes	500	mg/kg	--	--	ND(0.0047)
trans-1,2-Dichloroethene	NS	mg/kg	--	--	ND(0.0047)
trans-1,3-Dichloropropene	NS	mg/kg	--	--	ND(0.0047)
Trichloroethene	200	mg/kg	--	--	ND(0.0047)
Trichlorofluoromethane	NS	mg/kg	--	--	ND(0.0047)
Trichlorotrifluoroethane	NS	mg/kg	--	--	ND(0.0047)
Vinyl chloride	13	mg/kg	--	--	ND(0.0047)
1,4-dioxane					
1,4-dioxane	130	mg/kg	--	--	ND(0.07)

Notes:
SSALs taken from the 6 NYCRR Part 375 Table 375-6.8(b) for commercial use
Bold/shaded concentrations exceed or are equal to regulatory criteria
- = Sample not analyzed for this compound
ND = Not Detected above laboratory reporting limits shown in parenthesis
NS = No standard exists for this compound

APPENDIX C

SOIL BORING LOG

BORING LOG NO. W-7

PROJECT: Groundwater Monitoring Well Project

CLIENT: Clark Patterson Lee
Latham, NY

SITE: US Route 9
Clermont, NY

LOCATION See Exploration Plan

Latitude: 42.0884° Longitude: -73.8306°

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS
	SILTY GRAVEL WITH SAND (GM), highly weathered shale fragments noted, dark brown, loose to very dense				17	4-6-5-6 N=11
	Poor recovery noted				1	6-5-4-3 N=9
	Similar, grades brown	5			19	3-2-2-4 N=4
	6.2				2	50/2"
	Sampler Refusal at 6.2 Feet					

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

Logged by AEB
See Piezometer Completion Diagram for well installation information.
Augered to 7' depth and well installed adjacent to borehole.

WATER LEVEL OBSERVATIONS

No free water observed

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 03-09-2023 | Boring Completed: 03-09-2023

Drill Rig: Diedrich D-50 | Driller: J. Lamm

Project No.: JB225227

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL JB225227 GROUNDWATER MONIT.GPJ TERRACON_DATATEMPLATE.GDT 3/23/23

APPENDIX D

LABORATORY ANALYTICAL REPORT

PHOENIX
Environmental Laboratories, Inc.

Tuesday, March 21, 2023

Attn: Olivia Burns
TerraCon Consultants
30 Corporate Circle Ste 201
Albany NY 12203-5169

Project ID: JB225227
SDG ID: GCN57836
Sample ID#s: CN57836 - CN57838

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Sample Id Cross Reference

March 21, 2023

SDG I.D.: GCN57836

Project ID: JB225227

Client Id	Lab Id	Matrix
S-1 (COMPOSITE)	CN57836	SOIL
D-1 (COMPOSITE)	CN57837	SOIL
S-2	CN57838	SOIL

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

March 21, 2023

FOR: Attn: Olivia Burns
TerraCon Consultants
30 Corporate Circle Ste 201
Albany NY 12203-5169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		03/09/23	10:30
Location Code:	TERRACON-NY	Received by:	SR1	03/10/23	17:22
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCN57836
Phoenix ID: CN57836

Project ID: JB225227
Client ID: S-1 (COMPOSITE)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Silver	0.79	0.43	mg/Kg	1	03/14/23	TH	SW6010D	
Aluminum	14900	64	mg/Kg	10	03/14/23	CPP	SW6010D	
Arsenic	36.3	0.86	mg/Kg	1	03/14/23	CPP	SW6010D	
Barium	121	0.43	mg/Kg	1	03/14/23	CPP	SW6010D	
Beryllium	0.63	0.34	mg/Kg	1	03/14/23	CPP	SW6010D	
Calcium	1800	6.4	mg/Kg	1	03/14/23	CPP	SW6010D	
Cadmium	5.72	0.43	mg/Kg	1	03/14/23	CPP	SW6010D	
Cobalt	43.2	0.43	mg/Kg	1	03/14/23	CPP	SW6010D	
Chromium	30.2	0.43	mg/Kg	1	03/14/23	CPP	SW6010D	
Copper	75.0	0.9	mg/kg	1	03/14/23	CPP	SW6010D	
Iron	194000	640	mg/Kg	100	03/15/23	TH	SW6010D	
Mercury	0.05	0.03	mg/Kg	2	03/13/23	AL1	SW7471B	
Potassium	2080	64	mg/Kg	10	03/14/23	CPP	SW6010D	
Magnesium	9680	64	mg/Kg	10	03/14/23	CPP	SW6010D	
Manganese	2200	43	mg/Kg	100	03/15/23	TH	SW6010D	
Sodium	76.8	6.4	mg/Kg	1	03/14/23	CPP	SW6010D	
Nickel	83.8	0.43	mg/Kg	1	03/14/23	CPP	SW6010D	
Lead	36.4	0.43	mg/Kg	1	03/14/23	CPP	SW6010D	
Antimony	< 4.3	4.3	mg/Kg	1	03/14/23	CPP	SW6010D	
Selenium	7.2	1.7	mg/Kg	1	03/14/23	TH	SW6010D	
Thallium	< 3.9	3.9	mg/Kg	1	03/14/23	CPP	SW6010D	
Vanadium	26.8	0.43	mg/Kg	1	03/14/23	CPP	SW6010D	
Zinc	85.1	0.9	mg/Kg	1	03/14/23	CPP	SW6010D	
Percent Solid	81		%		03/10/23	AL	SW846-%Solid	
Corrosivity	Negative		Pos/Neg	1	03/10/23	ER	SW846-Corr	1
pH at 25C - Soil	7.29	1.00	pH Units	1	03/10/23 21:07	ER	SW846 9045D	1
Total Cyanide (SW9010C Distill.)	< 0.51	0.51	mg/Kg	1	03/15/23	CL/GD	SW9012B	

Ver 1

Project ID: JB225227
Client ID: S-1 (COMPOSITE)

Phoenix I.D.: CN57836

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Soil Extraction for PCB	Completed				03/10/23	C/Y	SW3545A
Soil Extraction for Pesticide	Completed				03/10/23	C/Y	SW3545A
Mercury Digestion	Completed				03/13/23	AL/AL	SW7471B
Soil Extraction for SVOA	Completed				03/10/23	S/MO/M	SW3546
Total Metals Digest	Completed				03/13/23	J/AG	SW3050B
Polychlorinated Biphenyls							
PCB-1016	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
PCB-1221	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
PCB-1232	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
PCB-1242	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
PCB-1248	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
PCB-1254	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
PCB-1260	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
PCB-1262	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
PCB-1268	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
QA/QC Surrogates							
% DCBP	100		%	10	03/13/23	SC	30 - 150 %
% DCBP (Confirmation)	84		%	10	03/13/23	SC	30 - 150 %
% TCMX	78		%	10	03/13/23	SC	30 - 150 %
% TCMX (Confirmation)	71		%	10	03/13/23	SC	30 - 150 %
Pesticides - Soil							
4,4' -DDD	ND	2.4	ug/Kg	2	03/13/23	AW	SW8081B
4,4' -DDE	41	2.4	ug/Kg	2	03/13/23	AW	SW8081B
4,4' -DDT	12	2.4	ug/Kg	2	03/13/23	AW	SW8081B
a-BHC	ND	8.0	ug/Kg	2	03/13/23	AW	SW8081B
a-Chlordane	ND	4.0	ug/Kg	2	03/13/23	AW	SW8081B
Aldrin	ND	4.0	ug/Kg	2	03/13/23	AW	SW8081B
b-BHC	ND	8.0	ug/Kg	2	03/13/23	AW	SW8081B
Chlordane	ND	40	ug/Kg	2	03/13/23	AW	SW8081B
d-BHC	ND	8.0	ug/Kg	2	03/13/23	AW	SW8081B
Dieldrin	ND	4.0	ug/Kg	2	03/13/23	AW	SW8081B
Endosulfan I	ND	8.0	ug/Kg	2	03/13/23	AW	SW8081B
Endosulfan II	ND	8.0	ug/Kg	2	03/13/23	AW	SW8081B
Endosulfan sulfate	ND	8.0	ug/Kg	2	03/13/23	AW	SW8081B
Endrin	ND	8.0	ug/Kg	2	03/13/23	AW	SW8081B
Endrin aldehyde	ND	8.0	ug/Kg	2	03/13/23	AW	SW8081B
Endrin ketone	ND	8.0	ug/Kg	2	03/13/23	AW	SW8081B
g-BHC	ND	1.6	ug/Kg	2	03/13/23	AW	SW8081B
g-Chlordane	ND	4.0	ug/Kg	2	03/13/23	AW	SW8081B
Heptachlor	ND	8.0	ug/Kg	2	03/13/23	AW	SW8081B
Heptachlor epoxide	ND	8.0	ug/Kg	2	03/13/23	AW	SW8081B
Methoxychlor	ND	40	ug/Kg	2	03/13/23	AW	SW8081B
Toxaphene	ND	160	ug/Kg	2	03/13/23	AW	SW8081B
QA/QC Surrogates							
% DCBP	66		%	2	03/13/23	AW	30 - 150 %
% DCBP (Confirmation)	65		%	2	03/13/23	AW	30 - 150 %
% TCMX	54		%	2	03/13/23	AW	30 - 150 %
% TCMX (Confirmation)	59		%	2	03/13/23	AW	30 - 150 %

Project ID: JB225227
Client ID: S-1 (COMPOSITE)

Phoenix I.D.: CN57836

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Semivolatiles								
1,1-Biphenyl	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
1,2,4,5-Tetrachlorobenzene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2,2'-Oxybis(1-Chloropropane)	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	1
2,3,4,6-tetrachlorophenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2,4,5-Trichlorophenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2,4,6-Trichlorophenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2,4-Dichlorophenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2,4-Dimethylphenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2,4-Dinitrophenol	ND	650	ug/Kg	1	03/11/23	KCA	SW8270D	
2,4-Dinitrotoluene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2,6-Dinitrotoluene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2-Chloronaphthalene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2-Chlorophenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2-Methylnaphthalene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2-Methylphenol (o-cresol)	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2-Nitroaniline	ND	650	ug/Kg	1	03/11/23	KCA	SW8270D	
2-Nitrophenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
3&4-Methylphenol (m&p-cresol)	ND	410	ug/Kg	1	03/11/23	KCA	SW8270D	1
3,3'-Dichlorobenzidine	ND	490	ug/Kg	1	03/11/23	KCA	SW8270D	
3-Nitroaniline	ND	650	ug/Kg	1	03/11/23	KCA	SW8270D	
4,6-Dinitro-2-methylphenol	ND	1200	ug/Kg	1	03/11/23	KCA	SW8270D	
4-Bromophenyl phenyl ether	ND	410	ug/Kg	1	03/11/23	KCA	SW8270D	
4-Chloro-3-methylphenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
4-Chloroaniline	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
4-Chlorophenyl phenyl ether	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
4-Nitroaniline	ND	650	ug/Kg	1	03/11/23	KCA	SW8270D	
4-Nitrophenol	ND	1200	ug/Kg	1	03/11/23	KCA	SW8270D	
Acenaphthene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Acenaphthylene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Acetophenone	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Anthracene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Atrazine	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Benz(a)anthracene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Benzaldehyde	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Benzo(a)pyrene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Benzo(b)fluoranthene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Benzo(ghi)perylene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Benzo(k)fluoranthene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Benzyl butyl phthalate	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Bis(2-chloroethoxy)methane	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Bis(2-chloroethyl)ether	ND	410	ug/Kg	1	03/11/23	KCA	SW8270D	
Bis(2-ethylhexyl)phthalate	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Caprolactam	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Carbazole	ND	410	ug/Kg	1	03/11/23	KCA	SW8270D	
Chrysene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Dibenz(a,h)anthracene	ND	200	ug/Kg	1	03/11/23	KCA	SW8270D	
Dibenzofuran	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Diethyl phthalate	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	

Project ID: JB225227
Client ID: S-1 (COMPOSITE)

Phoenix I.D.: CN57836

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Dimethylphthalate	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Di-n-butylphthalate	ND	820	ug/Kg	1	03/11/23	KCA	SW8270D
Di-n-octylphthalate	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Fluoranthene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Fluorene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Hexachlorobenzene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Hexachlorobutadiene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Hexachlorocyclopentadiene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Hexachloroethane	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Isophorone	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Naphthalene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Nitrobenzene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
N-Nitrosodimethylamine	ND	410	ug/Kg	1	03/11/23	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	200	ug/Kg	1	03/11/23	KCA	SW8270D
N-Nitrosodiphenylamine	ND	410	ug/Kg	1	03/11/23	KCA	SW8270D
Pentachlorophenol	ND	410	ug/Kg	1	03/11/23	KCA	SW8270D
Phenanthrene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Phenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Pyrene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	95		%	1	03/11/23	KCA	30 - 130 %
% 2-Fluorobiphenyl	69		%	1	03/11/23	KCA	30 - 130 %
% 2-Fluorophenol	55		%	1	03/11/23	KCA	30 - 130 %
% Nitrobenzene-d5	73		%	1	03/11/23	KCA	30 - 130 %
% Phenol-d5	67		%	1	03/11/23	KCA	30 - 130 %
% Terphenyl-d14	60		%	1	03/11/23	KCA	30 - 130 %
SVOA Library Search Top 15	Completed				03/13/23	KCA	

Project ID: JB225227 Phoenix I.D.: CN57836

Client ID: S-1 (COMPOSITE)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

March 21, 2023

Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

March 21, 2023

FOR: Attn: Olivia Burns
TerraCon Consultants
30 Corporate Circle Ste 201
Albany NY 12203-5169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		03/09/23	10:45
Location Code:	TERRACON-NY	Received by:	SR1	03/10/23	17:22
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCN57836
Phoenix ID: CN57837

Project ID: JB225227
Client ID: D-1 (COMPOSITE)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Silver	< 0.39	0.39	mg/Kg	1	03/14/23	CPP	SW6010D	
Aluminum	19300	59	mg/Kg	10	03/14/23	CPP	SW6010D	
Arsenic	16.5	0.78	mg/Kg	1	03/14/23	CPP	SW6010D	
Barium	148	0.39	mg/Kg	1	03/14/23	CPP	SW6010D	
Beryllium	0.81	0.31	mg/Kg	1	03/14/23	CPP	SW6010D	
Calcium	2530	5.9	mg/Kg	1	03/14/23	CPP	SW6010D	
Cadmium	1.81	0.39	mg/Kg	1	03/14/23	CPP	SW6010D	
Cobalt	18.6	0.39	mg/Kg	1	03/14/23	CPP	SW6010D	
Chromium	38.4	0.39	mg/Kg	1	03/14/23	CPP	SW6010D	
Copper	59.4	0.8	mg/kg	1	03/14/23	CPP	SW6010D	
Iron	38100	59	mg/Kg	10	03/14/23	CPP	SW6010D	
Mercury	0.05	0.03	mg/Kg	2	03/13/23	AL1	SW7471B	
Potassium	2300	59	mg/Kg	10	03/14/23	CPP	SW6010D	
Magnesium	12000	59	mg/Kg	10	03/14/23	CPP	SW6010D	
Manganese	3590	39	mg/Kg	100	03/15/23	TH	SW6010D	
Sodium	88.7	5.9	mg/Kg	1	03/14/23	CPP	SW6010D	
Nickel	42.8	0.39	mg/Kg	1	03/14/23	CPP	SW6010D	
Lead	20.2	0.39	mg/Kg	1	03/14/23	CPP	SW6010D	
Antimony	< 3.9	3.9	mg/Kg	1	03/14/23	CPP	SW6010D	
Selenium	< 1.6	1.6	mg/Kg	1	03/14/23	CPP	SW6010D	
Thallium	< 3.5	3.5	mg/Kg	1	03/14/23	CPP	SW6010D	
Vanadium	36.4	0.39	mg/Kg	1	03/14/23	CPP	SW6010D	
Zinc	81.0	0.8	mg/Kg	1	03/14/23	CPP	SW6010D	
Percent Solid	80		%		03/10/23	AL	SW846-%Solid	
Corrosivity	Negative		Pos/Neg	1	03/10/23	ER	SW846-Corr	1
pH at 25C - Soil	7.27	1.00	pH Units	1	03/10/23 21:07	ER	SW846 9045D	1
Total Cyanide (SW9010C Distill.)	< 0.52	0.52	mg/Kg	1	03/15/23	CL/GD	SW9012B	

Ver 1

Project ID: JB225227
Client ID: D-1 (COMPOSITE)

Phoenix I.D.: CN57837

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Soil Extraction for PCB	Completed				03/10/23	C/Y	SW3545A
Soil Extraction for Pesticide	Completed				03/10/23	C/Y	SW3545A
Mercury Digestion	Completed				03/13/23	AL/AL	SW7471B
Soil Extraction for SVOA	Completed				03/10/23	S/MO/M	SW3546
Total Metals Digest	Completed				03/13/23	J/AG	SW3050B
Polychlorinated Biphenyls							
PCB-1016	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
PCB-1221	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
PCB-1232	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
PCB-1242	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
PCB-1248	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
PCB-1254	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
PCB-1260	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
PCB-1262	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
PCB-1268	ND	400	ug/Kg	10	03/13/23	SC	SW8082A
QA/QC Surrogates							
% DCBP	80		%	10	03/13/23	SC	30 - 150 %
% DCBP (Confirmation)	76		%	10	03/13/23	SC	30 - 150 %
% TCMX	79		%	10	03/13/23	SC	30 - 150 %
% TCMX (Confirmation)	73		%	10	03/13/23	SC	30 - 150 %
Pesticides - Soil							
4,4' -DDD	ND	2.4	ug/Kg	2	03/13/23	AW	SW8081B
4,4' -DDE	45	2.4	ug/Kg	2	03/13/23	AW	SW8081B
4,4' -DDT	12	2.4	ug/Kg	2	03/13/23	AW	SW8081B
a-BHC	ND	8.1	ug/Kg	2	03/13/23	AW	SW8081B
a-Chlordane	ND	4.0	ug/Kg	2	03/13/23	AW	SW8081B
Aldrin	ND	4.0	ug/Kg	2	03/13/23	AW	SW8081B
b-BHC	ND	8.1	ug/Kg	2	03/13/23	AW	SW8081B
Chlordane	ND	40	ug/Kg	2	03/13/23	AW	SW8081B
d-BHC	ND	8.1	ug/Kg	2	03/13/23	AW	SW8081B
Dieldrin	ND	4.0	ug/Kg	2	03/13/23	AW	SW8081B
Endosulfan I	ND	8.1	ug/Kg	2	03/13/23	AW	SW8081B
Endosulfan II	ND	8.1	ug/Kg	2	03/13/23	AW	SW8081B
Endosulfan sulfate	ND	8.1	ug/Kg	2	03/13/23	AW	SW8081B
Endrin	ND	8.1	ug/Kg	2	03/13/23	AW	SW8081B
Endrin aldehyde	ND	8.1	ug/Kg	2	03/13/23	AW	SW8081B
Endrin ketone	ND	8.1	ug/Kg	2	03/13/23	AW	SW8081B
g-BHC	ND	1.6	ug/Kg	2	03/13/23	AW	SW8081B
g-Chlordane	ND	4.0	ug/Kg	2	03/13/23	AW	SW8081B
Heptachlor	ND	8.1	ug/Kg	2	03/13/23	AW	SW8081B
Heptachlor epoxide	ND	8.1	ug/Kg	2	03/13/23	AW	SW8081B
Methoxychlor	ND	40	ug/Kg	2	03/13/23	AW	SW8081B
Toxaphene	ND	160	ug/Kg	2	03/13/23	AW	SW8081B
QA/QC Surrogates							
% DCBP	70		%	2	03/13/23	AW	30 - 150 %
% DCBP (Confirmation)	77		%	2	03/13/23	AW	30 - 150 %
% TCMX	55		%	2	03/13/23	AW	30 - 150 %
% TCMX (Confirmation)	58		%	2	03/13/23	AW	30 - 150 %

Project ID: JB225227
Client ID: D-1 (COMPOSITE)

Phoenix I.D.: CN57837

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Semivolatiles								
1,1-Biphenyl	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
1,2,4,5-Tetrachlorobenzene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2,2'-Oxybis(1-Chloropropane)	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	1
2,3,4,6-tetrachlorophenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2,4,5-Trichlorophenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2,4,6-Trichlorophenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2,4-Dichlorophenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2,4-Dimethylphenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2,4-Dinitrophenol	ND	670	ug/Kg	1	03/11/23	KCA	SW8270D	
2,4-Dinitrotoluene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2,6-Dinitrotoluene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2-Chloronaphthalene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2-Chlorophenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2-Methylnaphthalene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2-Methylphenol (o-cresol)	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
2-Nitroaniline	ND	670	ug/Kg	1	03/11/23	KCA	SW8270D	
2-Nitrophenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
3&4-Methylphenol (m&p-cresol)	ND	420	ug/Kg	1	03/11/23	KCA	SW8270D	1
3,3'-Dichlorobenzidine	ND	500	ug/Kg	1	03/11/23	KCA	SW8270D	
3-Nitroaniline	ND	670	ug/Kg	1	03/11/23	KCA	SW8270D	
4,6-Dinitro-2-methylphenol	ND	1200	ug/Kg	1	03/11/23	KCA	SW8270D	
4-Bromophenyl phenyl ether	ND	420	ug/Kg	1	03/11/23	KCA	SW8270D	
4-Chloro-3-methylphenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
4-Chloroaniline	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
4-Chlorophenyl phenyl ether	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
4-Nitroaniline	ND	670	ug/Kg	1	03/11/23	KCA	SW8270D	
4-Nitrophenol	ND	1200	ug/Kg	1	03/11/23	KCA	SW8270D	
Acenaphthene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Acenaphthylene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Acetophenone	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Anthracene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Atrazine	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Benz(a)anthracene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Benzaldehyde	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Benzo(a)pyrene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Benzo(b)fluoranthene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Benzo(ghi)perylene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Benzo(k)fluoranthene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Benzyl butyl phthalate	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Bis(2-chloroethoxy)methane	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Bis(2-chloroethyl)ether	ND	420	ug/Kg	1	03/11/23	KCA	SW8270D	
Bis(2-ethylhexyl)phthalate	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Caprolactam	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Carbazole	ND	420	ug/Kg	1	03/11/23	KCA	SW8270D	
Chrysene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Dibenz(a,h)anthracene	ND	210	ug/Kg	1	03/11/23	KCA	SW8270D	
Dibenzofuran	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	
Diethyl phthalate	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D	

Project ID: JB225227
Client ID: D-1 (COMPOSITE)

Phoenix I.D.: CN57837

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Dimethylphthalate	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Di-n-butylphthalate	ND	830	ug/Kg	1	03/11/23	KCA	SW8270D
Di-n-octylphthalate	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Fluoranthene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Fluorene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Hexachlorobenzene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Hexachlorobutadiene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Hexachlorocyclopentadiene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Hexachloroethane	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Isophorone	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Naphthalene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Nitrobenzene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
N-Nitrosodimethylamine	ND	420	ug/Kg	1	03/11/23	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	210	ug/Kg	1	03/11/23	KCA	SW8270D
N-Nitrosodiphenylamine	ND	420	ug/Kg	1	03/11/23	KCA	SW8270D
Pentachlorophenol	ND	420	ug/Kg	1	03/11/23	KCA	SW8270D
Phenanthrene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Phenol	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
Pyrene	ND	290	ug/Kg	1	03/11/23	KCA	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	100		%	1	03/11/23	KCA	30 - 130 %
% 2-Fluorobiphenyl	67		%	1	03/11/23	KCA	30 - 130 %
% 2-Fluorophenol	55		%	1	03/11/23	KCA	30 - 130 %
% Nitrobenzene-d5	72		%	1	03/11/23	KCA	30 - 130 %
% Phenol-d5	67		%	1	03/11/23	KCA	30 - 130 %
% Terphenyl-d14	60		%	1	03/11/23	KCA	30 - 130 %
SVOA Library Search Top 15	Completed				03/13/23	KCA	

Project ID: JB225227 Phoenix I.D.: CN57837

Client ID: D-1 (COMPOSITE)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

March 21, 2023

Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Analysis Report

March 21, 2023

FOR: Attn: Olivia Burns
TerraCon Consultants
30 Corporate Circle Ste 201
Albany NY 12203-5169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		03/09/23	11:00
Location Code:	TERRACON-NY	Received by:	SR1	03/10/23	17:22
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCN57836
Phoenix ID: CN57838

Project ID: JB225227
Client ID: S-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1,1-Trichloroethane	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	140	ug/kg	50	03/11/23	JLI	SW8260C
1,1,2-Trichloroethane	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
1,1-Dichloroethane	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
1,1-Dichloroethene	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	140	ug/kg	50	03/11/23	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	140	ug/kg	50	03/11/23	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	140	ug/kg	50	03/11/23	JLI	SW8260C
1,2-Dibromoethane	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
1,2-Dichlorobenzene	ND	140	ug/kg	50	03/11/23	JLI	SW8260C
1,2-Dichloroethane	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
1,2-Dichloropropane	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
1,3-Dichlorobenzene	ND	140	ug/kg	50	03/11/23	JLI	SW8260C
1,4-Dichlorobenzene	ND	140	ug/kg	50	03/11/23	JLI	SW8260C
2-Hexanone	ND	23	ug/kg	1	03/12/23	JLI	SW8260C
4-Methyl-2-pentanone	ND	23	ug/kg	1	03/12/23	JLI	SW8260C
Acetone	ND	47	ug/kg	1	03/12/23	JLI	SW8260C
Benzene	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Bromochloromethane	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Bromodichloromethane	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Bromoform	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Bromomethane	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Carbon Disulfide	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Carbon tetrachloride	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Chlorobenzene	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Chloroethane	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C

Project ID: JB225227
Client ID: S-2

Phoenix I.D.: CN57838

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Chloroform	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Chloromethane	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
cis-1,2-Dichloroethene	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
cis-1,3-Dichloropropene	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Cyclohexane	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Dibromochloromethane	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Dichlorodifluoromethane	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Ethylbenzene	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Isopropylbenzene	ND	140	ug/kg	50	03/11/23	JLI	SW8260C
m&p-Xylene	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Methyl ethyl ketone	ND	28	ug/kg	1	03/12/23	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	9.3	ug/kg	1	03/12/23	JLI	SW8260C
Methylacetate	ND	3.7	ug/kg	1	03/12/23	JLI	SW8260C
Methylcyclohexane	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Methylene chloride	ND	23	ug/kg	1	03/12/23	JLI	SW8260C
o-Xylene	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Styrene	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Tetrachloroethene	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Toluene	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Total Xylenes	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
trans-1,2-Dichloroethene	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
trans-1,3-Dichloropropene	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Trichloroethene	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Trichlorofluoromethane	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Trichlorotrifluoroethane	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
Vinyl chloride	ND	4.7	ug/kg	1	03/12/23	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	106		%	1	03/12/23	JLI	70 - 130 %
% Bromofluorobenzene	88		%	1	03/12/23	JLI	70 - 130 %
% Dibromofluoromethane	101		%	1	03/12/23	JLI	70 - 130 %
% Toluene-d8	103		%	1	03/12/23	JLI	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	98		%	50	03/11/23	JLI	70 - 130 %
% Bromofluorobenzene (50x)	100		%	50	03/11/23	JLI	70 - 130 %
% Dibromofluoromethane (50x)	96		%	50	03/11/23	JLI	70 - 130 %
% Toluene-d8 (50x)	103		%	50	03/11/23	JLI	70 - 130 %

1,4-dioxane

1,4-dioxane	ND	70	ug/kg	1	03/12/23	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

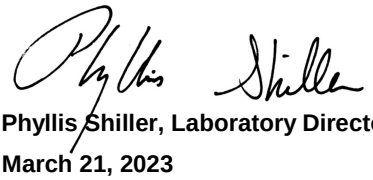
Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

Volatile Comment:
There was a suppression of the last internal standard in the low level analysis, all affected compounds are reported from the methanol preserved high level analysis which did not exhibit this interference.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
March 21, 2023
Reviewed and Released by: Rashmi Makol, Project Manager

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: S-1 (COMPOSITE)

Lab Name: Phoenix Environmental Labs Client: TERRACON-NY

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GCN5783(

Matrix:(soil/water): SOIL Lab Sample ID: CN57836

Sample wt/vol: 15.13 (g/mL) g Lab File ID: 0310_30.D

Level: (low/med): Low Date Received: 03/10/23

% Moisture: not dec. 19 decanted:(Y/N) NA Date Extracted: 03/11/23

GPC Cleanup (Y/N): N pH: NA Date Analyzed: 3/11/2023

Conc. Extract Volume: 1000 (uL) Dilution Factor 1

Injection Volume: 1 (uL)

Number TICs found: 5 CONCENTRATION UNITS: (ug/L or ug/KG) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000141-79-7	3-Penten-2-one, 4-methyl-	1.810	370	JNA
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	2.051	540	JNA
074685-29-3	9-Eicosene, (E)-	6.816	750	JN
000638-53-9	Tridecanoic acid	7.433	420	JN
018435-45-5	1-Nonadecene	8.232	860	JN

FORM I SEMIVOA-TIC

A - Indicates that the tentatively identified compound is a suspected aldol condensation product. Aldol condensation products are produced during the extraction process.

C - Indicates that the tentatively identified compound is a suspected prep artifact produced during extraction process.

Q - For TICS, this compound was quantitated using a calibration curve. This compound is part of the instrument method, but not part of the client target list.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: D-1 (COMPOSITE)

Lab Name: Phoenix Environmental Labs Client: TERRACON-NY

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GCN5783(

Matrix:(soil/water): SOIL Lab Sample ID: CN57837

Sample wt/vol: 15 (g/mL) g Lab File ID: 0310_31.D

Level: (low/med): Low Date Received: 03/10/23

% Moisture: not dec. 20 decanted:(Y/N) NA Date Extracted: 03/11/23

GPC Cleanup (Y/N): N pH: NA Date Analyzed: 3/11/2023

Conc. Extract Volume: 1000 (uL) Dilution Factor 1

Injection Volume: 1 (uL)

Number TICs found: 5 CONCENTRATION UNITS: (ug/L or ug/KG) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	2.045	500	JNA
023676-09-7	Benzoic acid, 4-ethoxy-, ethyl est	5.729	1400	JNC
007206-19-1	3-Octadecene, (E)-	6.816	680	JN
	unknown hydrocarbon	7.433	380	J
1000130-97-9	E-15-Heptadecenal	8.232	720	JN

FORM I SEMIVOA-TIC

A - Indicates that the tentatively identified compound is a suspected aldol condensation product. Aldol condensation products are produced during the extraction process.
C - Indicates that the tentatively identified compound is a suspected prep artifact produced during extraction process.
Q - For TICS, this compound was quantitated using a calibration curve. This compound is part of the instrument method, but not part of the client target list.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

March 21, 2023

QA/QC Data

SDG I.D.: GCN57836

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 667733 (mg/kg), QC Sample No: CN57755 2X (CN57836, CN57837)														
Mercury - Soil	BRL	0.03	<0.03	<0.03	NC	89.5	98.5	9.6	99.8	105	5.1	70 - 130	30	
Comment:														
Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 70-130%. MS acceptance range is 75-125%.														
QA/QC Batch 667844 (mg/kg), QC Sample No: CN57480 (CN57836, CN57837)														
ICP Metals - Soil														
Aluminum	BRL	5.0	7150	5910	19.0	97.2	99.4	2.2	NC			75 - 125	35	
Antimony	BRL	3.3	<3.0	<3.3	NC	104	103	1.0	89.8			75 - 125	35	
Arsenic	BRL	0.67	0.74	0.69	NC	104	103	1.0	91.9			75 - 125	35	
Barium	BRL	0.33	47.5	39.4	18.6	104	105	1.0	90.9			75 - 125	35	
Beryllium	BRL	0.27	0.34	0.30	NC	104	104	0.0	91.6			75 - 125	35	
Cadmium	BRL	0.33	0.58	0.51	NC	104	104	0.0	96.1			75 - 125	35	
Calcium	BRL	5.0	1470	1130	26.2	98.6	98.1	0.5	NC			75 - 125	35	
Chromium	BRL	0.33	11.1	9.30	17.6	108	107	0.9	94.8			75 - 125	35	
Cobalt	BRL	0.33	6.17	4.97	21.5	103	103	0.0	94.4			75 - 125	35	
Copper	BRL	0.67	10.4	7.65	30.5	102	103	1.0	95.4			75 - 125	35	
Iron	BRL	5.0	13900	11300	20.6	91.3	92.3	1.1	NC			75 - 125	35	
Lead	BRL	0.33	5.75	4.43	25.9	104	105	1.0	98.3			75 - 125	35	
Magnesium	BRL	5.0	3130	2450	24.4	104	103	1.0	NC			75 - 125	35	
Manganese	BRL	0.33	237	207	13.5	101	102	1.0	61.2			75 - 125	35	m
Nickel	BRL	0.33	11.3	8.98	22.9	101	101	0.0	89.2			75 - 125	35	
Potassium	BRL	5.0	1600	1370	15.5	102	102	0.0	>130			75 - 125	35	m
Selenium	BRL	1.3	<1.2	<1.3	NC	106	109	2.8	93.8			75 - 125	35	
Silver	BRL	0.33	<0.30	<0.33	NC	108	107	0.9	96.3			75 - 125	35	
Sodium	BRL	5.0	168	128	27.0	95.0	120	23.3	93.7			75 - 125	35	
Thallium	BRL	3.0	<2.7	<3.0	NC	106	107	0.9	92.3			75 - 125	35	
Vanadium	BRL	0.33	22.2	16.8	27.7	107	106	0.9	93.8			75 - 125	35	
Zinc	BRL	0.67	25.9	21.6	18.1	105	104	1.0	92.6			75 - 125	35	
Comment:														
Additional Criteria: LCS acceptance range is 80-120% MS acceptance range 75-125%.														

m = This parameter is outside laboratory MS/MSD specified recovery limits.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

NY # 11301

QA/QC Report

March 21, 2023

QA/QC Data

SDG I.D.: GCN57836

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 668038 (mg/Kg), QC Sample No: CN57668 50X (CN57836, CN57837)													
Total Cyanide (SW9010C Distill.)	BRL	0.50	<0.57	<0.57	NC	99.0			97.5			80 - 120	30
Comment:													
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils													
QA/QC Batch 667660 (PH), QC Sample No: CN57459 (CN57836, CN57837)													
pH			3.65	3.76	NC	101						85 - 115	20

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

NY # 11301

QA/QC Report

March 21, 2023

QA/QC Data

SDG I.D.: GCN57836

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 667609 (ug/Kg), QC Sample No: CN57320 2X (CN57836, CN57837)										
Polychlorinated Biphenyls - Soil										
PCB-1016	ND	33	76	81	6.4	57	59	3.4	40 - 140	30
PCB-1221	ND	33							40 - 140	30
PCB-1232	ND	33							40 - 140	30
PCB-1242	ND	33							40 - 140	30
PCB-1248	ND	33							40 - 140	30
PCB-1254	ND	33							40 - 140	30
PCB-1260	ND	33	72	76	5.4	51	55	7.5	40 - 140	30
PCB-1262	ND	33							40 - 140	30
PCB-1268	ND	33							40 - 140	30
% DCBP (Surrogate Rec)	64	%	75	77	2.6	52	55	5.6	30 - 150	30
% DCBP (Surrogate Rec) (Confirm	68	%	78	80	2.5	53	58	9.0	30 - 150	30
% TCMX (Surrogate Rec)	65	%	79	82	3.7	56	60	6.9	30 - 150	30
% TCMX (Surrogate Rec) (Confirm	69	%	79	83	4.9	55	59	7.0	30 - 150	30
QA/QC Batch 667610 (ug/Kg), QC Sample No: CN57320 2X (CN57836, CN57837)										
Pesticides - Soil										
4,4' -DDD	ND	1.7	74	73	1.4	53	49	7.8	40 - 140	30
4,4' -DDE	ND	1.7	76	73	4.0	54	50	7.7	40 - 140	30
4,4' -DDT	ND	1.7	74	68	8.5	52	48	8.0	40 - 140	30
a-BHC	ND	1.0	76	73	4.0	54	49	9.7	40 - 140	30
a-Chlordane	ND	3.3	70	67	4.4	52	47	10.1	40 - 140	30
Aldrin	ND	1.0	74	71	4.1	52	49	5.9	40 - 140	30
b-BHC	ND	1.0	70	75	6.9	55	52	5.6	40 - 140	30
Chlordane	ND	33	70	67	4.4	47	44	6.6	40 - 140	30
d-BHC	ND	3.3	81	71	13.2	53	48	9.9	40 - 140	30
Dieldrin	ND	1.0	75	72	4.1	53	49	7.8	40 - 140	30
Endosulfan I	ND	3.3	74	74	0.0	53	51	3.8	40 - 140	30
Endosulfan II	ND	3.3	78	71	9.4	55	51	7.5	40 - 140	30
Endosulfan sulfate	ND	3.3	77	72	6.7	54	51	5.7	40 - 140	30
Endrin	ND	3.3	75	65	14.3	54	47	13.9	40 - 140	30
Endrin aldehyde	ND	3.3	70	64	9.0	48	46	4.3	40 - 140	30
Endrin ketone	ND	3.3	75	71	5.5	53	49	7.8	40 - 140	30
g-BHC	ND	1.0	82	79	3.7	60	55	8.7	40 - 140	30
g-Chlordane	ND	3.3	70	67	4.4	47	44	6.6	40 - 140	30
Heptachlor	ND	3.3	72	70	2.8	52	49	5.9	40 - 140	30
Heptachlor epoxide	ND	3.3	67	65	3.0	49	45	8.5	40 - 140	30
Methoxychlor	ND	3.3	75	67	11.3	54	50	7.7	40 - 140	30
Toxaphene	ND	130	NA	NA	NC	NA	NA	NC	40 - 140	30
% DCBP	81	%	80	80	0.0	63	57	10.0	30 - 150	30
% DCBP (Confirmation)	85	%	81	74	9.0	58	57	1.7	30 - 150	30
% TCMX	69	%	69	66	4.4	51	48	6.1	30 - 150	30
% TCMX (Confirmation)	69	%	67	65	3.0	48	46	4.3	30 - 150	30

QA/QC Data

SDG I.D.: GCN57836

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 667633 (ug/kg), QC Sample No: CN57666 (CN57836, CN57837)											
Semivolatiles - Soil											
1,1-Biphenyl	ND	230	51	53	3.8	66			40 - 140	30	
1,2,4,5-Tetrachlorobenzene	ND	230	47	52	10.1	55			40 - 140	30	
2,2'-Oxybis(1-Chloropropane)	ND	230	53	55	3.7	60			40 - 140	30	
2,3,4,6-tetrachlorophenol	ND	230	57	60	5.1	51			30 - 130	30	
2,4,5-Trichlorophenol	ND	230	67	71	5.8	70			40 - 140	30	
2,4,6-Trichlorophenol	ND	130	57	57	0.0	62			30 - 130	30	
2,4-Dichlorophenol	ND	130	53	58	9.0	60			30 - 130	30	
2,4-Dimethylphenol	ND	230	50	59	16.5	69			30 - 130	30	
2,4-Dinitrophenol	ND	230	51	66	25.6	42			30 - 130	30	
2,4-Dinitrotoluene	ND	130	57	63	10.0	70			30 - 130	30	
2,6-Dinitrotoluene	ND	130	59	61	3.3	68			40 - 140	30	
2-Chloronaphthalene	ND	230	56	58	3.5	70			40 - 140	30	
2-Chlorophenol	ND	230	51	56	9.3	57			30 - 130	30	
2-Methylnaphthalene	ND	230	50	55	9.5	59			40 - 140	30	
2-Methylphenol (o-cresol)	ND	230	50	61	19.8	65			40 - 140	30	
2-Nitroaniline	ND	330	65	73	11.6	93			40 - 140	30	
2-Nitrophenol	ND	230	56	60	6.9	75			40 - 140	30	
3&4-Methylphenol (m&p-cresol)	ND	230	42	43	2.4	54			30 - 130	30	
3,3'-Dichlorobenzidine	ND	130	12	15	22.2	65			40 - 140	30	I
3-Nitroaniline	ND	330	33	39	16.7	63			40 - 140	30	I
4,6-Dinitro-2-methylphenol	ND	230	56	68	19.4	47			30 - 130	30	
4-Bromophenyl phenyl ether	ND	230	54	59	8.8	65			40 - 140	30	
4-Chloro-3-methylphenol	ND	230	57	64	11.6	66			30 - 130	30	
4-Chloroaniline	ND	230	28	32	13.3	44			40 - 140	30	I
4-Chlorophenyl phenyl ether	ND	230	53	57	7.3	67			40 - 140	30	
4-Nitroaniline	ND	230	60	62	3.3	69			40 - 140	30	
4-Nitrophenol	ND	230	58	63	8.3	59			30 - 130	30	
Acenaphthene	ND	230	50	52	3.9	62			30 - 130	30	
Acenaphthylene	ND	130	47	50	6.2	57			40 - 140	30	
Acetophenone	ND	230	48	53	9.9	61			40 - 140	30	
Anthracene	ND	230	52	55	5.6	65			40 - 140	30	
Atrazine	ND	130	48	37	25.9	61			40 - 140	30	I
Benz(a)anthracene	ND	230	51	55	7.5	62			40 - 140	30	
Benzaldehyde	ND	230	83	89	7.0	99			40 - 140	30	
Benzo(a)pyrene	ND	130	58	63	8.3	64			40 - 140	30	
Benzo(b)fluoranthene	ND	160	54	57	5.4	57			40 - 140	30	
Benzo(ghi)perylene	ND	230	62	63	1.6	74			40 - 140	30	
Benzo(k)fluoranthene	ND	230	54	55	1.8	61			40 - 140	30	
Benzyl butyl phthalate	ND	230	56	59	5.2	67			40 - 140	30	
Bis(2-chloroethoxy)methane	ND	230	50	53	5.8	62			40 - 140	30	
Bis(2-chloroethyl)ether	ND	130	50	52	3.9	54			40 - 140	30	
Bis(2-ethylhexyl)phthalate	ND	230	58	62	6.7	77			40 - 140	30	
Caprolactam	ND	230	52	62	17.5	62			40 - 140	30	
Carbazole	ND	230	53	54	1.9	60			40 - 140	30	
Chrysene	ND	230	55	60	8.7	67			40 - 140	30	
Dibenz(a,h)anthracene	ND	130	60	61	1.7	75			40 - 140	30	
Dibenzofuran	ND	230	53	57	7.3	66			40 - 140	30	
Diethyl phthalate	ND	230	57	62	8.4	62			40 - 140	30	
Dimethylphthalate	ND	230	57	62	8.4	70			40 - 140	30	
Di-n-butylphthalate	ND	670	53	53	0.0	61			40 - 140	30	

QA/QC Data

SDG I.D.: GCN57836

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Di-n-octylphthalate	ND	230	63	69	9.1	55			40 - 140	30	
Fluoranthene	ND	230	49	49	0.0	52			40 - 140	30	
Fluorene	ND	230	52	55	5.6	62			40 - 140	30	
Hexachlorobenzene	ND	130	59	58	1.7	68			40 - 140	30	
Hexachlorobutadiene	ND	230	53	54	1.9	62			40 - 140	30	
Hexachlorocyclopentadiene	ND	230	47	54	13.9	<10			40 - 140	30	m
Hexachloroethane	ND	130	52	56	7.4	59			40 - 140	30	
Indeno(1,2,3-cd)pyrene	ND	230	66	67	1.5	77			40 - 140	30	
Isophorone	ND	130	46	49	6.3	56			40 - 140	30	
Naphthalene	ND	230	48	51	6.1	58			40 - 140	30	
Nitrobenzene	ND	130	51	56	9.3	63			40 - 140	30	
N-Nitrosodimethylamine	ND	230	28	29	3.5	21			40 - 140	30	l,m
N-Nitrosodi-n-propylamine	ND	130	48	52	8.0	62			40 - 140	30	
N-Nitrosodiphenylamine	ND	130	51	50	2.0	63			40 - 140	30	
Pentachlorophenol	ND	230	58	64	9.8	55			30 - 130	30	
Phenanthrene	ND	130	50	54	7.7	65			40 - 140	30	
Phenol	ND	230	52	55	5.6	64			30 - 130	30	
Pyrene	ND	230	46	45	2.2	51			30 - 130	30	
% 2,4,6-Tribromophenol	87	%	62	63	1.6	63			30 - 130	30	
% 2-Fluorobiphenyl	64	%	53	53	0.0	67			30 - 130	30	
% 2-Fluorophenol	59	%	44	48	8.7	44			30 - 130	30	
% Nitrobenzene-d5	64	%	49	54	9.7	60			30 - 130	30	
% Phenol-d5	62	%	48	52	8.0	60			30 - 130	30	
% Terphenyl-d14	61	%	44	45	2.2	52			30 - 130	30	

Comment:

This batch consists of a Blank, LCS, LCSD and MS.

Additional 8270 criteria: 20% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

QA/QC Batch 667737 (ug/kg), QC Sample No: CN57089 (CN57838)

Volatiles - Soil (Low Level)

1,1,1-Trichloroethane	ND	5.0	106	99	6.8				70 - 130	30	
1,1,2-Trichloroethane	ND	5.0	103	98	5.0				70 - 130	30	
1,1-Dichloroethane	ND	5.0	109	106	2.8				70 - 130	30	
1,1-Dichloroethene	ND	5.0	106	100	5.8				70 - 130	30	
1,2-Dibromoethane	ND	5.0	100	95	5.1				70 - 130	30	
1,2-Dichloroethane	ND	5.0	107	103	3.8				70 - 130	30	
1,2-Dichloropropane	ND	5.0	104	99	4.9				70 - 130	30	
1,4-dioxane	ND	100	95	94	1.1				70 - 130	30	
2-Hexanone	ND	25	105	97	7.9				70 - 130	30	
4-Methyl-2-pentanone	ND	25	104	96	8.0				70 - 130	30	
Acetone	ND	10	108	100	7.7				70 - 130	30	
Benzene	ND	1.0	101	96	5.1				70 - 130	30	
Bromochloromethane	ND	5.0	105	97	7.9				70 - 130	30	
Bromodichloromethane	ND	5.0	112	105	6.5				70 - 130	30	
Bromoform	ND	5.0	114	107	6.3				70 - 130	30	
Bromomethane	ND	5.0	112	108	3.6				70 - 130	30	
Carbon Disulfide	ND	5.0	105	101	3.9				70 - 130	30	
Carbon tetrachloride	ND	5.0	104	98	5.9				70 - 130	30	
Chlorobenzene	ND	5.0	101	96	5.1				70 - 130	30	
Chloroethane	ND	5.0	108	107	0.9				70 - 130	30	
Chloroform	ND	5.0	108	102	5.7				70 - 130	30	
Chloromethane	ND	5.0	85	82	3.6				70 - 130	30	

QA/QC Data

SDG I.D.: GCN57836

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
cis-1,2-Dichloroethene	ND	5.0	102	104	1.9				70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	99	95	4.1				70 - 130	30
Cyclohexane	ND	5.0	99	95	4.1				70 - 130	30
Dibromochloromethane	ND	3.0	107	102	4.8				70 - 130	30
Dichlorodifluoromethane	ND	5.0	65	68	4.5				70 - 130	30
Ethylbenzene	ND	1.0	100	96	4.1				70 - 130	30
m&p-Xylene	ND	2.0	99	95	4.1				70 - 130	30
Methyl ethyl ketone	ND	5.0	102	97	5.0				70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	101	94	7.2				70 - 130	30
Methylacetate	ND	5.0	109	100	8.6				70 - 130	30
Methylcyclohexane	ND	5.0	102	99	3.0				70 - 130	30
Methylene chloride	ND	5.0	100	96	4.1				70 - 130	30
o-Xylene	ND	2.0	103	98	5.0				70 - 130	30
Styrene	ND	5.0	100	97	3.0				70 - 130	30
Tetrachloroethene	ND	5.0	102	95	7.1				70 - 130	30
Toluene	ND	1.0	99	94	5.2				70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	104	99	4.9				70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	96	92	4.3				70 - 130	30
Trichloroethene	ND	5.0	99	95	4.1				70 - 130	30
Trichlorofluoromethane	ND	5.0	121	118	2.5				70 - 130	30
Trichlorotrifluoroethane	ND	5.0	108	103	4.7				70 - 130	30
Vinyl chloride	ND	5.0	92	90	2.2				70 - 130	30
% 1,2-dichlorobenzene-d4	97	%	101	100	1.0				70 - 130	30
% Bromofluorobenzene	101	%	100	102	2.0				70 - 130	30
% Dibromofluoromethane	101	%	106	100	5.8				70 - 130	30
% Toluene-d8	105	%	101	100	1.0				70 - 130	30

Comment:

The Low Level MS/MSD are not reported for this batch.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%, 25-160% for Chloroethane-HL and Trichlorofluoromethane-HL.

QA/QC Batch 667776H (ug/kg), QC Sample No: CN57235 50X (CN57838 (50X))

Volatiles - Soil (High Level)

1,1,2,2-Tetrachloroethane	ND	250	107	107	0.0	107	107	0.0	70 - 130	30
1,2,3-Trichlorobenzene	ND	250	112	112	0.0	108	107	0.9	70 - 130	30
1,2,4-Trichlorobenzene	ND	250	116	112	3.5	107	106	0.9	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	250	99	98	1.0	90	92	2.2	70 - 130	30
1,2-Dichlorobenzene	ND	250	109	109	0.0	107	107	0.0	70 - 130	30
1,3-Dichlorobenzene	ND	250	111	111	0.0	108	106	1.9	70 - 130	30
1,4-Dichlorobenzene	ND	250	110	108	1.8	105	104	1.0	70 - 130	30
Isopropylbenzene	ND	250	108	107	0.9	107	108	0.9	70 - 130	30
% 1,2-dichlorobenzene-d4	98	%	101	100	1.0	99	99	0.0	70 - 130	30
% Bromofluorobenzene	101	%	99	101	2.0	100	98	2.0	70 - 130	30
% Dibromofluoromethane	92	%	98	94	4.2	97	99	2.0	70 - 130	30
% Toluene-d8	103	%	100	100	0.0	102	99	3.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%, 25-160% for Chloroethane-HL and Trichlorofluoromethane-HL.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.

QA/QC Data

SDG I.D.: GCN57836

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
March 21, 2023

Tuesday, March 21, 2023

Criteria: None

State: NY

Sample Criteria Exceedances Report

GCN57836 - TERRACON-NY

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Comments

March 21, 2023 SDG I.D.: GCN57836

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

PEST Narration

AU-ECD33 03/13/23-1: CN57837

The following Continuing Calibration compounds did not meet % deviation criteria:
Samples: CN57837
Preceding CC 313A026 - % DCBP 21%H (20%), Methoxychlor 21%H (20%)
Succeeding CC 313A040 - % DCBP 22%H (20%), Methoxychlor 24%H (20%)

AU-ECD35 03/13/23-1: CN57836

The following Continuing Calibration compounds did not meet % deviation criteria:
Samples: CN57836
Preceding CC 313B033 - g-BHC 22%H (20%)
Succeeding CC 313B041 - g-BHC 22%H (20%)

SVOA Narration

CHEM29 03/10/23-1: CN57836, CN57837

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.
For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

The following Initial Calibration compounds did not meet recommended response factors: Hexachlorobenzene 0.078 (0.1)
The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet % deviation criteria: N-Nitrosodimethylamine 37%L (30%)
The following Continuing Calibration compounds did not meet Maximum % deviation criteria: None.
The following Continuing Calibration compounds did not meet recommended response factors: Hexachlorobenzene 0.076 (0.1)
The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

VOA Narration

CHEM31 03/11/23-1: CN57838

The following Initial Calibration compounds did not meet RSD% criteria: Bromoform 23% (20%), Chloroethane 24% (20%)
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.
The following Initial Calibration compounds did not meet recommended response factors: Bromodichloromethane 0.190 (0.2), Bromoform 0.080 (0.1), Tetrachloroethene 0.151 (0.2)
The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet % deviation criteria: cis-1,2-Dichloroethene 31%H (30%)
The following Continuing Calibration compounds did not meet Maximum % deviation criteria: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

NY Temperature Narration

March 21, 2023

SDG I.D.: GCN57836

The samples in this delivery group were received at 2.2°C.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

CHAIN OF CUSTODY RECORD

Temp 2.2 °C Pg of

PHOENIX *Environmental Laboratories, Inc.*

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email Makrina Nolan: makrina@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-3219

Data Delivery/Contact Options:
☐ Fax:
☐ Phone:
☒ Email: Olivia.Burns@Terracon.com

Customer: Terracon Consultants-NY, Inc
Address: 30 Corporate Circle, Suite 201
Albany, NY 12203

Project: JB225227
Report to: Olivia Burns
Invoice to: Tina.Zielinski@Terracon.com
QUOTE #

Project P.O:

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature _____ Date: _____

Matrix Code:
DW=Drinking Water **GW**=Ground Water **SW**=Surface Water **WW**=Waste Water
RW=Raw Water **SE**=Sediment **SL**=Sludge **S**=Soil **SD**=Solid **W**=Wipe **OIL**=Oil
B=Bulk **L**=Liquid **X** = _____(Other)

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	PH (method 9045C)	TCL SVOC's	Pesticides	PCB's	TAL Metals	Cyanide	TCL VOC's	MS/MSD*	GL Amber 8 oz. w/H3PO4	Soil VOA Vials (X) methanol [ ] H2O	GL Soil container (8) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCL	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
57836	S-1 (composite)	S	3/9	10:30a	X	X	X	X	X	X						(2)								
57837	D-1 (composite)	S	3/9	10:45a	X	X	X	X	X	X						(2)								
57838	S-2	S	3/9	11a							X				(3)									

Relinquished by:	Accepted by:	Date:	Time:
		3/9	4:45pm
			5C
		3/10	1722

Comments, Special Requirements or Regulations:

*MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.

Turnaround Time:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☒ Standard
☐ Other
* SURCHARGE APPLIES

RI
☐ (Residential) Direct Exposure
☐ (Comm/Industrial) Direct Exposure
☐ GA Leachability
☐ GB Leachability
☐ GA-GW Objectives
☐ GB-GW Objectives

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
☐ MCP Certification
☐ GW-1 ☐ MWRA eSMART
☐ GW-2 ☐ S-1 10% CALC
☐ GW-3
☐ S-1 GW-1 ☐ S-1 GW-2 ☐ S-1 GW-3
☐ S-2 GW-1 ☐ S-2 GW-2 ☐ S-2 GW-3
☐ S-3 GW-1 ☐ S-3 GW-2 ☐ S-3 GW-3
☐ SW Protection

State where samples were collected: NY

Data Format
☐ Excel
☒ PDF
☐ GIS/Key
☐ EQuIS
☐ Other

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other
* SURCHARGE APPLIES

APPENDIX E

SITE PHOTOGRAPHS



Photo #1 View north along a mowed pedestrian path in the area of the site



Photo #2 View east toward monitoring well MW-7



Photo #3 Original well casing of monitoring well MW-7



Photo #4 Drilling activities at the new monitoring well location



Photo #5 Remnant stockpiled soil stored on plastic during sampling procedures



Photo #6 Remaining recovered soil stored on and covered with plastic upon completion of sampling