RAMBOLL

ENVIRONMENT
& HEALTH

Mr. Tracy Smith
Division of Environmental Remediation
Remedial Bureau D
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7013

Re: Semet Residue Ponds
OU-2 Construction Completion Report – Addendum 1
Site No. 7-34-008
Order on Consent Index No. R7-20190104-1

December 28, 2021

Dear Mr. Smith:

Enclosed is the *Semet Residue Ponds Operable Unit-2 Construction Completion Report (CCR) – Addendum 1: Semet Southwest Corner Remedial Cover* associated with the Remedial Action of the Semet Residue Ponds Site located in the Town of Geddes, Onondaga County, New York. This Remedial Action was performed under Administrative Consent Order (ACO) R7-20190104-1 entered into by Honeywell International Inc. (Honeywell), and the New York State Department of Environmental Conservation dated April 17, 2019.

Please contact me at 315-956-6686 if you have any questions regarding this matter.

Yours sincerely

Paul Schultz, PE
PROJECT OFFICER

D 315-956-6686
M 315-708-4035
paul.schultz@ramboll.com

Ramboll
333 West Washington Street
Syracuse, NY 13202
USA

T 315-956-6100
F 315-463-7554
https://ramboll.com

1163\1940076313

cc:

Robert Nunes	USEPA (ec)
Tom Mongelli	USEPA (ec)
Gary Priscott	NYSDEC Region 7 (ec)
Mark Sergott	NYSDOH 1 (ec)
Scarlett McLaughlin	NYSDOH (ec)
Margaret. A. Sheen, Esq.	NYSDEC, Region 7 (ec)
Argie Cirillo, Esq.	USEPA (ec)
Brian D. Israel, Esq.	Arnold & Porter (ec)
Joseph Heath, Esq.	(ec)
Jeanne Shenandoah	Onondaga Nation (ec)
Hazel Powless	HETF (ec)
Alma Lowry	(ec)
Shane Blauvelt	Honeywell (ec)
Rebecca Serven	Parsons (ec)
Dan Kemp	Arcadis (ec)
Christopher Calkins	Ramboll (ec)
Brad Kubiak	Ramboll (ec)

I:\Honeywell.1163\73000.2019-Semet-Ou2\Docs\Reports\Final Report\CCR\5- SW Corner Addendum\Transmittal Ltr OU-2 CCR 12-23-21.docx

Addendum 1: Semet Southwest Corner Remedial Cover

1 Introduction

This document serves as an addendum to the Semet Residue Ponds Operable Unit-2 Construction Completion Report. This remedial work activity was completed in accordance with the OU-2 Remedial Design/Remedial Action Work Plan (OBG, Part of Ramboll 2019b) approved by the NYSDEC on August 8, 2019 (NYSDEC 2019b).

2 Summary of Site Remedy

The RAOs, Remedy Description, and Governing Documents for this remedial action are consistent with those stated in the OU-2 CCR.

The southwest corner area is approximately 12,000 sq. ft area between the southern/western berm and the site fence, as shown on Figure 1. This area was not included in the limits of work for the Semet OU-2 project as presented in the OU-2 RD/RA WP (OBG, Part of Ramboll 2019b). Subsequent conversations with the NYSDEC identified this area as requiring a minimum of the 1-ft cover.

3 Remedial Action

The cover system components vary in the southwest corner based on active or historical tar seep locations. In locations where historical tar seeps have been observed, a stone cover was installed. Other areas received vegetative cover. Cover areas and extents were documented using ESRI's Collector App.

Test pits were performed on November 12, 2020, that confirmed there was approximately 6-inches of visibly clean soil that had been placed as part of the Tributary 5A remedial action. As such, the remaining 6-inches of stone or soil was placed to meet the minimum 1-foot of cover requirement. The vegetative cover and the stone cover were placed using an excavator with a laborer in the field verifying cover thickness.

3.1 VEGETATIVE COVER

The vegetative cover area (**Figure 2A**, attached) consists of a minimum of 12-inches of topsoil and was seeded with an old successional field mix, consistent with other vegetative areas across the site.

Approximately 176 CY of topsoil was sourced from the Kinsella Jamesville Quarry/Gypsum Express and was stockpiled onsite. Analytical results for this material were submitted under the **Appendix 5, 7-22-19 Sampling Event**. Approximately 46 CY of topsoil was sourced from the Ricelli Hencle Boulevard site in Baldwinsville, New York. Analytical results for this material are attached to this addendum as **Appendix 5 Amendment**.

3.2 STONE COVER

Within the extents of the active or historical seep locations in the southwest corner, a minimum of 6-inches of stone material was placed on top of an existing 6-inches of topsoil as shown on **Figure 2A**, attached.

FIGURES

I:\Honeywell.1163\73000.2019-Semet-Ou2\Docs\DWG\MXD\Semet_SW_Corner_Remedial_Action_Rev2.mxd



PROJECT: 1163.1940075018 | DATED: 12/23/2021 | DESIGNER: MCCOMBSI

LEGEND

- EXISTING FENCELINE
- MINIMUM OF 1-FOOT VEGETATIVE SOIL COVER PLACED
- MINIMUM OF 1-FOOT SOIL/STONE COVER PLACED

0 25 50 100 Feet

NOTE
AERIAL IMAGE CAPTURED ON 11-12-2020

SEMET SOUTHWEST CORNER REMEDIAL ACTION

HONEYWELL INTERNATIONAL INC.
SEMET PONDS
GEDDES, NY

FIGURE 01
DECEMBER 2021

RAMBOLL AMERICAS
INTEGRATED SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

APPENDIX 5 AMENDMENT
IMPORT FILL ANALYTICAL AND GEOTECHNICAL DATA

The material characterization samples for the Remedial action at the Semet Residue Ponds southwest corner, were sampled under the Mathews Avenue project, and samples received the "MAE" moniker for management within the Honeywell EQuIS database. Subsequent analytical data associated with import fill have been uploaded to the LCP site for efficiency and to avoid misplacing pertinent analytical data for the imported fill used on the Honeywell Syracuse Portfolio. These imported fill data will continue to be maintained within the LCP Site portion of the EQuIS database for the Honeywell Syracuse Portfolio.

Not all analytical results attached in this amendment are required for the 46 CY of topsoil brought onsite as a part of the Semet Southwest Corner Remedial Action.

Syracuse Sand & Gravel, LLC

June 11, 2021

To Whom it May Concern,

Brickyard Mine and Hencle Boulevard Field both meet all applicable NYS DOT standard specifications for aggregate materials. The materials are guaranteed to come from an uncontaminated virgin source. The material /source is not from an industrial site or suspected to have been modified by the addition of manufactured chemicals and the material does not contain oil or hazardous material as supported by test data.

Thank you.

Richard J. Riccelli, President

6131 East Taft Rd • North Syracuse NY 13212 • 315-433-5115

Particle-Size Analysis w Hydrometer

ASTM D422

Report #: MF0193-000001

Syracuse
6085 Court Street Road
Suite A
Syracuse, NY 13206
Phone: 315.699.5281
Fax: 315.699.3374

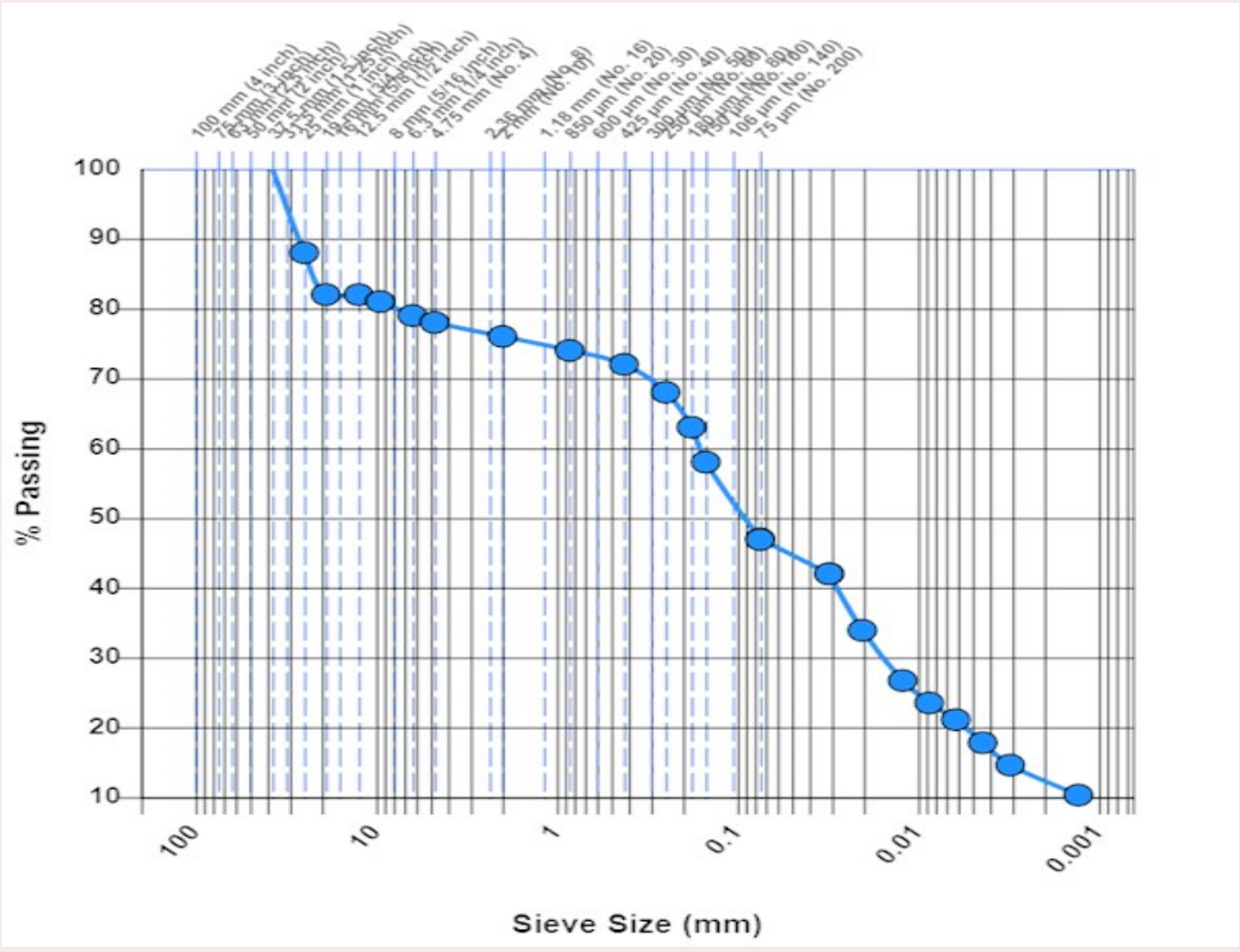
Client:

Parsons Engineering of NY
301 Plainfield Road
Suite 350
Syracuse, NY 13212

Project:

ST4212
Penn Can Paving Site
State Fair Boulevard
Syracuse, NY 13204

Sample Date:	04/05/2021	**Sample Number:**	4367
Material Type:	Topsoil	**Sample From:**	
Location Details:		PMC-HENCLETS-01	
Sampling Method:		**Sample By:**	Client



THE RESULTS RELATE ONLY TO THE ITEMS INSPECTED OR TESTED; THIS REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE PRIOR WRITTEN APPROVAL OF ATLANTIC TESTING LABORATORIES.

Particle-Size Analysis w Hydrometer

ASTM D422

Report #: MF0193-000001

Syracuse
6085 Court Street Road
Suite A
Syracuse, NY 13206
Phone: 315.699.5281
Fax: 315.699.3374

Client:

Parsons Engineering of NY
301 Plainfield Road
Suite 350
Syracuse, NY 13212

Project:

ST4212
Penn Can Paving Site
State Fair Boulevard
Syracuse, NY 13204

Specification:	ATL	**Variant:**	Common Sieves

Sieve Size	% Passing	Lower Limit	Upper Limit	Result
☑ 37.5 mm (1.5 inch)	100			Pass
☑ 25 mm (1 inch)	88			Pass
☑ 19 mm (3/4 inch)	82			Pass
☑ 12.5 mm (1/2 inch)	82			Pass
☑ 9.5 mm (3/8 inch)	81			Pass
☑ 6.3 mm (1/4 inch)	79			Pass
☑ 4.75 mm (No. 4)	78			Pass
☑ 2 mm (No. 10)	76			Pass
☑ 850 µm (No. 20)	74			Pass
☑ 425 µm (No. 40)	72			Pass
☑ 250 µm (No. 60)	68			Pass
☑ 180 µm (No. 80)	63			Pass
☑ 150 µm (No. 100)	58			Pass
☑ 75 µm (No. 200)	46.9			Pass

Percent Silt	28.5
Percent Clay	18.5
Percent Colloids	

% Loss By Washing:	43.27
Fineness Modulus:	1.01

Dispersion Device Used:
Apparatus A (mechanically operated stirring device)

Dispersion Time (min):	1
Specific Gravity:	2.65

Test Date:	04/07/2021	**Test Completed By:**	Wilburn, Jon

Nathan Carroll 04/29/2021

THE RESULTS RELATE ONLY TO THE ITEMS INSPECTED OR TESTED; THIS REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE PRIOR WRITTEN APPROVAL OF ATLANTIC TESTING LABORATORIES.

ATLANTIC TESTING LABORATORIES

WBE certified company

April 30, 2021

Parsons Engineering of NY
100 Broadway floor 18
New York, NY 10005

Attn: William Long*, CPM*

Re: Soil Laboratory Testing
Penn Can Paving Site
State Fair Boulevard, NY
ST4212SL-01

Dear Ladies/Gentlemen:

On April 5, 2021, one sample of Soil material ST4212-S4367 from PMC-HENCLETS-01 was delivered to our Syracuse, New York facility for testing. A pH of Soils in accordance with ASTM D 4972, and Moisture, Ash, and Organic Matter of Peat and Other Organic Soils in accordance with ASTM D 2974 were performed on this sample. The results follow:

pH of SOILS
ASTM D 4972

ATL Sample #	pH	Project Specification	Test Method	Sieved Fraction	Soaking Procedure
ST4212-S4367	7.1	---	A	#10	Distilled Water

PERCENT ORGANICS, ASH CONTENT, AND MOISTURE CONTENT
ASTM D 2974

ATL Sample #	Organics (%)	Project Specification	Oven Drying Temperature	Ash (%)	Project Specification	Moisture (%)	Test Method A	Furnace Temperature
ST4212-S4367	4.8	---	105 °C	95.2	---	---	Oven-Dried	440 °C

Please contact our office should you have any questions or if we may be of further service.

Sincerely,
ATLANTIC TESTING LABORATORIES, Limited

Nate Carroll
Engineering Assistant
ncarroll@atlantictesting.com

PREPARER: J.W. /REVIEWER: N.C.

Particle-Size Analysis w Hydrometer

ASTM D422

Report #: MF0193-000002

Syracuse
6085 Court Street Road
Suite A
Syracuse, NY 13206
Phone: 315.699.5281
Fax: 315.699.3374

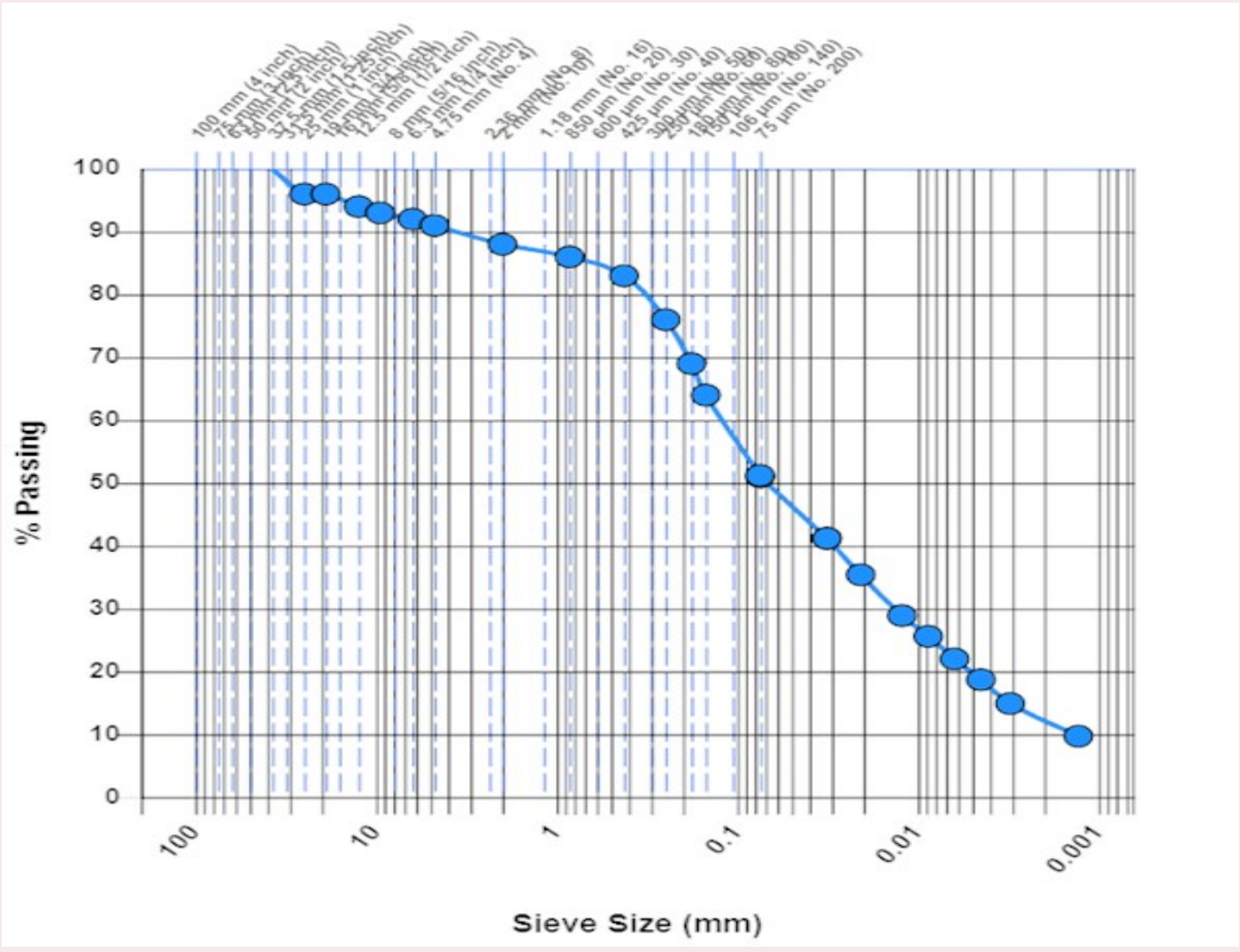
Client:

Parsons Engineering of NY
301 Plainfield Road
Suite 350
Syracuse, NY 13212

Project:

ST4212
Penn Can Paving Site
State Fair Boulevard
Syracuse, NY 13204

Sample Date:	04/05/2021	**Sample Number:**	4368
Material Type:	Topsoil	**Sample From:**	
Location Details:		PMC-HENCLETS-02	
Sampling Method:		**Sample By:**	Client



THE RESULTS RELATE ONLY TO THE ITEMS INSPECTED OR TESTED; THIS REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE PRIOR WRITTEN APPROVAL OF ATLANTIC TESTING LABORATORIES.

Particle-Size Analysis w Hydrometer

ASTM D422

Report #: MF0193-000002

Syracuse
6085 Court Street Road
Suite A
Syracuse, NY 13206
Phone: 315.699.5281
Fax: 315.699.3374

Client:

Parsons Engineering of NY
301 Plainfield Road
Suite 350
Syracuse, NY 13212

Project:

ST4212
Penn Can Paving Site
State Fair Boulevard
Syracuse, NY 13204

Specification:	ATL	**Variant:**	Common Sieves

Sieve Size	% Passing	Lower Limit	Upper Limit	Result
☑ 37.5 mm (1.5 inch)	100			Pass
☑ 25 mm (1 inch)	96			Pass
☑ 19 mm (3/4 inch)	96			Pass
☑ 12.5 mm (1/2 inch)	94			Pass
☑ 9.5 mm (3/8 inch)	93			Pass
☑ 6.3 mm (1/4 inch)	92			Pass
☑ 4.75 mm (No. 4)	91			Pass
☑ 2 mm (No. 10)	88			Pass
☑ 850 µm (No. 20)	86			Pass
☑ 425 µm (No. 40)	83			Pass
☑ 250 µm (No. 60)	76			Pass
☑ 180 µm (No. 80)	69			Pass
☑ 150 µm (No. 100)	64			Pass
☑ 75 µm (No. 200)	51.2			Pass

Percent Silt	31.5
Percent Clay	20.0
Percent Colloids	

% Loss By Washing:	47.12
Fineness Modulus:	0.56

Dispersion Device Used:
Apparatus A (mechanically operated stirring device)

Dispersion Time (min):	1
Specific Gravity:	2.65

Test Date:	04/07/2021	**Test Completed By:**	Wilburn, Jon

Nathan Carroll 04/29/2021

THE RESULTS RELATE ONLY TO THE ITEMS INSPECTED OR TESTED; THIS REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE PRIOR WRITTEN APPROVAL OF ATLANTIC TESTING LABORATORIES.

ATLANTIC TESTING LABORATORIES

WBE certified company

April 30, 2021

Parsons Engineering of NY
100 Broadway floor 18
New York, NY 10005

Attn: *William Long, CPM*

Re: Soil Laboratory Testing
Penn Can Paving Site
State Fair Boulevard, NY
ST4212SL-02

Dear Ladies/Gentlemen:

On April 5, 2021, one sample of Soil material ST4212-S4368 from PMC-HENCLETS-02 was delivered to our Syracuse, New York facility for testing. A pH of Soils in accordance with ASTM D 4972, and Moisture, Ash, and Organic Matter of Peat and Other Organic Soils in accordance with ASTM D 2974 were performed on this sample. The results follow:

pH of SOILS
ASTM D 4972

ATL Sample #	pH	Project Specification	Test Method	Sieved Fraction	Soaking Procedure
ST4212-S4368	6.4	---	A	#10	Distilled Water

PERCENT ORGANICS, ASH CONTENT, AND MOISTURE CONTENT
ASTM D 2974

ATL Sample #	Organics (%)	Project Specification	Oven Drying Temperature	Ash (%)	Project Specification	Moisture (%)	Test Method A	Furnace Temperature
ST4212-S4368	3.8	---	105 °C	96.2	---	---	Oven-Dried	440 °C

Please contact our office should you have any questions or if we may be of further service.

Sincerely,
ATLANTIC TESTING LABORATORIES, Limited

Nate Carroll
Engineering Assistant
ncarroll@atlantictesting.com

PREPARER: J.W. /REVIEWER: N.C.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Honeywell International Inc.

OBGNYS: Honeywell WB 1-8 ELT

SGS Job Number: JD22888

Sampling Date: 04/05/21



Report to:

O'Brien & Gere Engineers, Inc.
333 West Washington Street P.O. Box 4873
Syracuse, NY 13202
charles.sharpe@ramboll.com; michael.miller@ramboll.com;
Christopher.hoy@ramboll.com; veronica.held@ramboll.com;
ATTN: Charles Sharpe

Total number of pages in report: **1174**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Caitlin Brice, M.S.
General Manager

Client Service contact: Kristin Degraw 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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Test results relate only to samples analyzed.

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EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

Honeywell International Inc.

Job No: JD22888

OBGNYS: Honeywell WB 1-8 ELT

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
This report contains results reported as ND = Not detected. The following applies: Organics ND = Not detected above the MDL							
JD22888-1	04/05/21	10:47		04/06/21	AQ	Field Blank Soil	PMC-040521-01
JD22888-2	04/05/21	10:50		04/06/21	SO	Soil	PMC-040521-02
JD22888-2A	04/05/21	10:50		04/06/21	SO	Soil	PMC-040521-02
JD22888-2D	04/05/21	10:54		04/06/21	SO	Soil Dup/MSD	PMC-040521-05
JD22888-2DA	04/05/21	10:54		04/06/21	SO	Soil Dup/MSD	PMC-040521-05
JD22888-2S	04/05/21	10:52		04/06/21	SO	Soil Matrix Spike	PMC-040521-04
JD22888-2SA	04/05/21	10:52		04/06/21	SO	Soil Matrix Spike	PMC-040521-04
JD22888-3	04/05/21	00:00		04/06/21	SO	Soil	PMC-040521-03
JD22888-3A	04/05/21	00:00		04/06/21	SO	Soil	PMC-040521-03
JD22888-4	04/05/21	11:29		04/06/21	SO	Soil	PMC-040521-06
JD22888-4A	04/05/21	11:29		04/06/21	SO	Soil	PMC-040521-06
JD22888-5	04/05/21	11:52		04/06/21	SO	Soil	PMC-040521-07

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SGS North America Inc.

Sample Summary
(continued)

Honeywell International Inc.

Job No: JD22888

OBGNYS: Honeywell WB 1-8 ELT

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD22888-5A	04/05/21	11:52		04/06/21	SO	Soil	PMC-040521-07
JD22888-6	04/05/21	12:18		04/06/21	SO	Soil	PMC-040521-08
JD22888-6A	04/05/21	12:18		04/06/21	SO	Soil	PMC-040521-08
JD22888-7	04/05/21	12:30		04/06/21	AQ	Equipment Blank	PMC-040521-09
JD22888-7A	04/05/21	12:30		04/06/21	AQ	Equipment Blank	PMC-040521-09

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Honeywell International Inc.	**Job No**	JD22888
Site:	OBGNYS: Honeywell WB 1-8 ELT	**Report Date**	4/20/2021 3:02:24 PM

On 04/06/2021, 6 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 2.9 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD22888 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Semi-volatiles By Method EPA 537M BY ID

Matrix: AQ **Batch ID:** F:OP84900

- The data for EPA 537M BY ID meets quality control requirements.
- JD22888-1: Analysis performed at SGS Orlando, FL.
- JD22888-7A: Analysis performed at SGS Orlando, FL.

Matrix: SO **Batch ID:** F:OP84941

- The data for EPA 537M BY ID meets quality control requirements.
- JD22888-6A: Analysis performed at SGS Orlando, FL.
- JD22888-5A: Analysis performed at SGS Orlando, FL.
- JD22888-4A: Analysis performed at SGS Orlando, FL.
- JD22888-3A: Analysis performed at SGS Orlando, FL.
- JD22888-2A: Analysis performed at SGS Orlando, FL.

MS Semi-volatiles By Method SW846 8270E BY SIM

Matrix: AQ **Batch ID:** OP32684A

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Matrix: SO **Batch ID:** OP32741A

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD22888-2MS, JD22888-2MSD were used as the QC samples indicated.

General Chemistry By Method SM2540 G 18TH ED MOD

Matrix: SO **Batch ID:** GN17041

- Sample(s) JD22888-2DUP were used as the QC samples for Solids, Percent.
- RPD(s) for Duplicate for Solids, Percent are outside control limits for sample GN17041-D1. High RPD due to possible sample nonhomogeneity.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: SGS Dayton, NJ **Job No:** JD22888

Site: HWINJM: OBGNYS: Honeywell WB 1-8 ELT **Report Date:** 4/20/2021 12:46:03

6 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were collected on 04/05/2021 and were received at SGS North America Inc - Orlando on 04/06/2021 properly preserved, at 2.4 Deg. C and intact. These Samples received an SGS Orlando job number of JD22888. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Semi-volatiles By Method EPA 537M BY ID

Matrix AQ **Batch ID:** OP84900

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) JD22823-1AMS, JD22823-2ADUP were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix SO **Batch ID:** OP84941

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) JD22888-2AMS, JD22888-2AMSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data package are used.

Narrative prepared by:

_____

Zhongyun Ma, Client Services (signature on file)

Summary of Hits

Job Number: JD22888
Account: Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT
Collected: 04/05/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD22888-1	**PMC-040521-01**					
No hits reported in this sample.						
JD22888-2	**PMC-040521-02**					
No hits reported in this sample.						
JD22888-2A	**PMC-040521-02**					
Perfluorooctanesulfonic acid [a]		0.35 J	0.59	0.30	ug/kg	EPA 537M BY ID
JD22888-3	**PMC-040521-03**					
No hits reported in this sample.						
JD22888-3A	**PMC-040521-03**					
Perfluorooctanesulfonic acid [a]		0.57 J	0.73	0.36	ug/kg	EPA 537M BY ID
JD22888-4	**PMC-040521-06**					
No hits reported in this sample.						
JD22888-4A	**PMC-040521-06**					
No hits reported in this sample.						
JD22888-5	**PMC-040521-07**					
No hits reported in this sample.						
JD22888-5A	**PMC-040521-07**					
No hits reported in this sample.						
JD22888-6	**PMC-040521-08**					
No hits reported in this sample.						
JD22888-6A	**PMC-040521-08**					
Perfluorooctanesulfonic acid [a]		0.31 J	0.61	0.30	ug/kg	EPA 537M BY ID

Summary of Hits

Job Number: JD22888
Account: Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT
Collected: 04/05/21

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD22888-7	**PMC-040521-09**					
1,4-Dioxane		0.0627 J	0.095	0.048	ug/l	SW846 8270E BY SIM
JD22888-7A	**PMC-040521-09**					

No hits reported in this sample.

(a) Analysis performed at SGS Orlando, FL.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	PMC-040521-01		
Lab Sample ID:	JD22888-1	**Date Sampled:**	04/05/21
Matrix:	AQ - Field Blank Soil	**Date Received:**	04/06/21
Method:	EPA 537M BY ID EPA 537 MOD	**Percent Solids:**	n/a
Project:	OBGNYS: Honeywell WB 1-8 ELT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3Q36635.D	1	04/15/21 02:30	AFL	04/13/21 09:00	F:OP84900	F:S3Q538
Run #2							

	Initial Volume	Final Volume
Run #1	280 ml	1.0 ml
Run #2		

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	ND	3.6	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	ND	1.8	0.89	ng/l	
307-24-4	Perfluorohexanoic acid	ND	1.8	0.89	ng/l	
375-85-9	Perfluoroheptanoic acid	ND	1.8	0.89	ng/l	
335-67-1	Perfluorooctanoic acid	ND	1.8	0.89	ng/l	
375-95-1	Perfluorononanoic acid	ND	1.8	0.89	ng/l	
335-76-2	Perfluorodecanoic acid	ND	1.8	0.89	ng/l	
2058-94-8	Perfluoroundecanoic acid	ND	1.8	0.89	ng/l	
307-55-1	Perfluorododecanoic acid	ND	1.8	0.89	ng/l	
72629-94-8	Perfluorotridecanoic acid	ND	1.8	0.89	ng/l	
376-06-7	Perfluorotetradecanoic acid	ND	1.8	0.89	ng/l	
PERFLUOROALKYLSULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	ND	1.8	0.89	ng/l	
355-46-4	Perfluorohexanesulfonic acid	ND	1.8	0.89	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	1.8	0.89	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	1.8	0.89	ng/l	
335-77-3	Perfluorodecanesulfonic acid	ND	1.8	0.89	ng/l	
PERFLUOROOCTANESULFONAMIDES						
754-91-6	PFOSA	ND	3.6	1.8	ng/l	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	3.6	1.8	ng/l	
2991-50-6	EtFOSAA	ND	3.6	1.8	ng/l	
FLUOROTELOMER SULFONATES						
27619-97-2	6:2 Fluorotelomer sulfonate	ND	7.1	1.8	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	7.1	1.8	ng/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PMC-040521-01		
Lab Sample ID:	JD22888-1	**Date Sampled:**	04/05/21
Matrix:	AQ - Field Blank Soil	**Date Received:**	04/06/21
Method:	EPA 537M BY ID EPA 537 MOD	**Percent Solids:**	n/a
Project:	OBGNYS: Honeywell WB 1-8 ELT		

PFAS List

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	96%		35-135%
	13C5-PFPeA	95%		50-150%
	13C5-PFHxA	95%		50-150%
	13C4-PFHpA	90%		50-150%
	13C8-PFOA	91%		50-150%
	13C9-PFNA	86%		50-150%
	13C6-PFDA	80%		50-150%
	13C7-PFUnDA	78%		40-140%
	13C2-PFDoDA	68%		40-140%
	13C2-PFTeDA	72%		30-130%
	13C3-PFBS	95%		50-150%
	13C3-PFHxS	89%		50-150%
	13C8-PFOS	77%		50-150%
	13C8-FOSA	76%		30-130%
	d3-MeFOSAA	71%		40-140%
	d5-EtFOSAA	69%		40-140%
	13C2-6:2FTS	85%		50-150%
	13C2-8:2FTS	78%		50-150%

(a) Analysis performed at SGS Orlando, FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	PMC-040521-02		
Lab Sample ID:	JD22888-2	**Date Sampled:**	04/05/21
Matrix:	SO - Soil	**Date Received:**	04/06/21
Method:	SW846 8270E BY SIM SW846 3546	**Percent Solids:**	80.3
Project:	OBGNYS: Honeywell WB 1-8 ELT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M99506.D	1	04/10/21 06:30	CS	04/09/21 14:35	OP32741A	E4M4618
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	4.1	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	89%		39-90%
321-60-8	2-Fluorobiphenyl	60%		35-84%
1718-51-0	Terphenyl-d14	74%		42-95%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	PMC-040521-02		
Lab Sample ID:	JD22888-2A	**Date Sampled:**	04/05/21
Matrix:	SO - Soil	**Date Received:**	04/06/21
Method:	EPA 537M BY ID IN HOUSE	**Percent Solids:**	80.3
Project:	OBGNYS: Honeywell WB 1-8 ELT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	4Q13462.D	1	04/18/21 21:27	AFL	04/15/21 07:30	F:OP84941	F:S4Q189
Run #2							

	Initial Weight	Final Volume
Run #1	2.10 g	1.0 ml
Run #2		

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	ND	1.2	0.45	ug/kg	
2706-90-3	Perfluoropentanoic acid	ND	0.59	0.30	ug/kg	
307-24-4	Perfluorohexanoic acid	ND	0.59	0.30	ug/kg	
375-85-9	Perfluoroheptanoic acid	ND	0.59	0.30	ug/kg	
335-67-1	Perfluorooctanoic acid	ND	0.59	0.30	ug/kg	
375-95-1	Perfluorononanoic acid	ND	0.59	0.30	ug/kg	
335-76-2	Perfluorodecanoic acid	ND	0.59	0.30	ug/kg	
2058-94-8	Perfluoroundecanoic acid	ND	0.59	0.30	ug/kg	
307-55-1	Perfluorododecanoic acid	ND	0.59	0.30	ug/kg	
72629-94-8	Perfluorotridecanoic acid	ND	0.59	0.31	ug/kg	
376-06-7	Perfluorotetradecanoic acid	ND	0.59	0.30	ug/kg	
PERFLUOROALKYLSULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	ND	0.59	0.30	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	ND	0.59	0.30	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.59	0.30	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	0.35	0.59	0.30	ug/kg	J
335-77-3	Perfluorodecanesulfonic acid	ND	0.59	0.30	ug/kg	
PERFLUOROOCTANESULFONAMIDES						
754-91-6	PFOSA	ND	0.59	0.30	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	1.2	0.59	ug/kg	
2991-50-6	EtFOSAA	ND	1.2	0.59	ug/kg	
FLUOROTELOMER SULFONATES						
27619-97-2	6:2 Fluorotelomer sulfonate	ND	1.2	0.30	ug/kg	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	1.2	0.30	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PMC-040521-02		
Lab Sample ID:	JD22888-2A	**Date Sampled:**	04/05/21
Matrix:	SO - Soil	**Date Received:**	04/06/21
Method:	EPA 537M BY ID IN HOUSE	**Percent Solids:**	80.3
Project:	OBGNYS: Honeywell WB 1-8 ELT		

PFAS List

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	91%		40-140%
	13C5-PFPeA	92%		50-150%
	13C5-PFHxA	92%		50-150%
	13C4-PFHpA	92%		50-150%
	13C8-PFOA	93%		50-150%
	13C9-PFNA	93%		50-150%
	13C6-PFDA	95%		50-150%
	13C7-PFUnDA	96%		40-140%
	13C2-PFDoDA	93%		40-140%
	13C2-PFTeDA	85%		30-130%
	13C3-PFBS	91%		50-150%
	13C3-PFHxS	90%		50-150%
	13C8-PFOS	96%		50-150%
	13C8-FOSA	94%		30-130%
	d3-MeFOSAA	85%		40-140%
	d5-EtFOSAA	89%		40-140%
	13C2-6:2FTS	87%		50-150%
	13C2-8:2FTS	90%		50-150%

(a) Analysis performed at SGS Orlando, FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: PMC-040521-03
Lab Sample ID: JD22888-3
Matrix: SO - Soil
Method: SW846 8270E BY SIM SW846 3546
Project: OBGNYS: Honeywell WB 1-8 ELT

Date Sampled: 04/05/21
Date Received: 04/06/21
Percent Solids: 68.5

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M99501.D	1	04/10/21 04:46	CS	04/09/21 14:35	OP32741A	E4M4618
Run #2							

	Initial Weight	Final Volume
Run #1	31.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	4.7	2.4	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	83%		39-90%
321-60-8	2-Fluorobiphenyl	62%		35-84%
1718-51-0	Terphenyl-d14	76%		42-95%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	PMC-040521-03		
Lab Sample ID:	JD22888-3A	**Date Sampled:**	04/05/21
Matrix:	SO - Soil	**Date Received:**	04/06/21
Method:	EPA 537M BY ID IN HOUSE	**Percent Solids:**	68.5
Project:	OBGNYS: Honeywell WB 1-8 ELT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2Q66248.D	1	04/17/21 05:29	AFL	04/15/21 07:30	F:OP84941	F:S2Q963
Run #2							

	Initial Weight	Final Volume
Run #1	2.01 g	1.0 ml
Run #2		

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	ND	1.5	0.55	ug/kg	
2706-90-3	Perfluoropentanoic acid	ND	0.73	0.36	ug/kg	
307-24-4	Perfluorohexanoic acid	ND	0.73	0.36	ug/kg	
375-85-9	Perfluoroheptanoic acid	ND	0.73	0.36	ug/kg	
335-67-1	Perfluorooctanoic acid	ND	0.73	0.36	ug/kg	
375-95-1	Perfluorononanoic acid	ND	0.73	0.36	ug/kg	
335-76-2	Perfluorodecanoic acid	ND	0.73	0.36	ug/kg	
2058-94-8	Perfluoroundecanoic acid	ND	0.73	0.36	ug/kg	
307-55-1	Perfluorododecanoic acid	ND	0.73	0.36	ug/kg	
72629-94-8	Perfluorotridecanoic acid	ND	0.73	0.38	ug/kg	
376-06-7	Perfluorotetradecanoic acid	ND	0.73	0.36	ug/kg	
PERFLUOROALKYLSULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	ND	0.73	0.36	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	ND	0.73	0.36	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.73	0.36	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	0.57	0.73	0.36	ug/kg	J
335-77-3	Perfluorodecanesulfonic acid	ND	0.73	0.36	ug/kg	
PERFLUOROOCTANESULFONAMIDES						
754-91-6	PFOSA	ND	0.73	0.36	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	1.5	0.73	ug/kg	
2991-50-6	EtFOSAA	ND	1.5	0.73	ug/kg	
FLUOROTELOMER SULFONATES						
27619-97-2	6:2 Fluorotelomer sulfonate	ND	1.5	0.36	ug/kg	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	1.5	0.36	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PMC-040521-03		
Lab Sample ID:	JD22888-3A	**Date Sampled:**	04/05/21
Matrix:	SO - Soil	**Date Received:**	04/06/21
Method:	EPA 537M BY ID IN HOUSE	**Percent Solids:**	68.5
Project:	OBGNYS: Honeywell WB 1-8 ELT		

PFAS List

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	104%		40-140%
	13C5-PFPeA	101%		50-150%
	13C5-PFHxA	101%		50-150%
	13C4-PFHpA	100%		50-150%
	13C8-PFOA	99%		50-150%
	13C9-PFNA	100%		50-150%
	13C6-PFDA	103%		50-150%
	13C7-PFUnDA	97%		40-140%
	13C2-PFDoDA	92%		40-140%
	13C2-PFTeDA	93%		30-130%
	13C3-PFBS	101%		50-150%
	13C3-PFHxS	103%		50-150%
	13C8-PFOS	99%		50-150%
	13C8-FOSA	101%		30-130%
	d3-MeFOSAA	85%		40-140%
	d5-EtFOSAA	87%		40-140%
	13C2-6:2FTS	95%		50-150%
	13C2-8:2FTS	98%		50-150%

(a) Analysis performed at SGS Orlando, FL.

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: PMC-040521-06
Lab Sample ID: JD22888-4
Matrix: SO - Soil
Method: SW846 8270E BY SIM SW846 3546
Project: OBGNYS: Honeywell WB 1-8 ELT

Date Sampled: 04/05/21
Date Received: 04/06/21
Percent Solids: 74.6

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M99502.D	1	04/10/21 05:07	CS	04/09/21 14:35	OP32741A	E4M4618
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	4.4	2.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	86%		39-90%
321-60-8	2-Fluorobiphenyl	69%		35-84%
1718-51-0	Terphenyl-d14	81%		42-95%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	PMC-040521-06		
Lab Sample ID:	JD22888-4A	**Date Sampled:**	04/05/21
Matrix:	SO - Soil	**Date Received:**	04/06/21
Method:	EPA 537M BY ID IN HOUSE	**Percent Solids:**	74.6
Project:	OBGNYS: Honeywell WB 1-8 ELT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2Q66249.D	1	04/17/21 05:45	AFL	04/15/21 07:30	F:OP84941	F:S2Q963
Run #2							

	Initial Weight	Final Volume
Run #1	2.09 g	1.0 ml
Run #2		

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	ND	1.3	0.49	ug/kg	
2706-90-3	Perfluoropentanoic acid	ND	0.64	0.32	ug/kg	
307-24-4	Perfluorohexanoic acid	ND	0.64	0.32	ug/kg	
375-85-9	Perfluoroheptanoic acid	ND	0.64	0.32	ug/kg	
335-67-1	Perfluorooctanoic acid	ND	0.64	0.32	ug/kg	
375-95-1	Perfluorononanoic acid	ND	0.64	0.32	ug/kg	
335-76-2	Perfluorodecanoic acid	ND	0.64	0.32	ug/kg	
2058-94-8	Perfluoroundecanoic acid	ND	0.64	0.32	ug/kg	
307-55-1	Perfluorododecanoic acid	ND	0.64	0.32	ug/kg	
72629-94-8	Perfluorotridecanoic acid	ND	0.64	0.34	ug/kg	
376-06-7	Perfluorotetradecanoic acid	ND	0.64	0.32	ug/kg	
PERFLUOROALKYLSULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	ND	0.64	0.32	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	ND	0.64	0.32	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.64	0.32	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.64	0.32	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	ND	0.64	0.32	ug/kg	
PERFLUOROOCTANESULFONAMIDES						
754-91-6	PFOSA	ND	0.64	0.32	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	1.3	0.64	ug/kg	
2991-50-6	EtFOSAA	ND	1.3	0.64	ug/kg	
FLUOROTELOMER SULFONATES						
27619-97-2	6:2 Fluorotelomer sulfonate	ND	1.3	0.32	ug/kg	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	1.3	0.32	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PMC-040521-06		
Lab Sample ID:	JD22888-4A	**Date Sampled:**	04/05/21
Matrix:	SO - Soil	**Date Received:**	04/06/21
Method:	EPA 537M BY ID IN HOUSE	**Percent Solids:**	74.6
Project:	OBGNYS: Honeywell WB 1-8 ELT		

PFAS List

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	126%		40-140%
	13C5-PFPeA	123%		50-150%
	13C5-PFHxA	121%		50-150%
	13C4-PFHpA	120%		50-150%
	13C8-PFOA	118%		50-150%
	13C9-PFNA	118%		50-150%
	13C6-PFDA	121%		50-150%
	13C7-PFUnDA	115%		40-140%
	13C2-PFDoDA	101%		40-140%
	13C2-PFTeDA	116%		30-130%
	13C3-PFBS	122%		50-150%
	13C3-PFHxS	122%		50-150%
	13C8-PFOS	117%		50-150%
	13C8-FOSA	84%		30-130%
	d3-MeFOSAA	104%		40-140%
	d5-EtFOSAA	108%		40-140%
	13C2-6:2FTS	114%		50-150%
	13C2-8:2FTS	121%		50-150%

(a) Analysis performed at SGS Orlando, FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: PMC-040521-07
Lab Sample ID: JD22888-5
Matrix: SO - Soil
Method: SW846 8270E BY SIM SW846 3546
Project: OBGNYS: Honeywell WB 1-8 ELT

Date Sampled: 04/05/21
Date Received: 04/06/21
Percent Solids: 74.1

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M99500.D	1	04/10/21 04:26	CS	04/09/21 14:35	OP32741A	E4M4618
Run #2							

	Initial Weight	Final Volume
Run #1	30.8 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	4.4	2.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	78%		39-90%
321-60-8	2-Fluorobiphenyl	59%		35-84%
1718-51-0	Terphenyl-d14	73%		42-95%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	PMC-040521-07		
Lab Sample ID:	JD22888-5A	**Date Sampled:**	04/05/21
Matrix:	SO - Soil	**Date Received:**	04/06/21
Method:	EPA 537M BY ID IN HOUSE	**Percent Solids:**	74.1
Project:	OBGNYS: Honeywell WB 1-8 ELT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2Q66252.D	1	04/17/21 06:35	AFL	04/15/21 07:30	F:OP84941	F:S2Q963
Run #2							

	Initial Weight	Final Volume
Run #1	2.15 g	1.0 ml
Run #2		

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	ND	1.3	0.48	ug/kg	
2706-90-3	Perfluoropentanoic acid	ND	0.63	0.31	ug/kg	
307-24-4	Perfluorohexanoic acid	ND	0.63	0.31	ug/kg	
375-85-9	Perfluoroheptanoic acid	ND	0.63	0.31	ug/kg	
335-67-1	Perfluorooctanoic acid	ND	0.63	0.31	ug/kg	
375-95-1	Perfluorononanoic acid	ND	0.63	0.31	ug/kg	
335-76-2	Perfluorodecanoic acid	ND	0.63	0.31	ug/kg	
2058-94-8	Perfluoroundecanoic acid	ND	0.63	0.31	ug/kg	
307-55-1	Perfluorododecanoic acid	ND	0.63	0.31	ug/kg	
72629-94-8	Perfluorotridecanoic acid	ND	0.63	0.33	ug/kg	
376-06-7	Perfluorotetradecanoic acid	ND	0.63	0.31	ug/kg	
PERFLUOROALKYLSULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	ND	0.63	0.31	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	ND	0.63	0.31	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.63	0.31	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.63	0.31	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	ND	0.63	0.31	ug/kg	
PERFLUOROOCTANESULFONAMIDES						
754-91-6	PFOSA	ND	0.63	0.31	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	1.3	0.63	ug/kg	
2991-50-6	EtFOSAA	ND	1.3	0.63	ug/kg	
FLUOROTELOMER SULFONATES						
27619-97-2	6:2 Fluorotelomer sulfonate	ND	1.3	0.31	ug/kg	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	1.3	0.31	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PMC-040521-07		
Lab Sample ID:	JD22888-5A	**Date Sampled:**	04/05/21
Matrix:	SO - Soil	**Date Received:**	04/06/21
Method:	EPA 537M BY ID IN HOUSE	**Percent Solids:**	74.1
Project:	OBGNYS: Honeywell WB 1-8 ELT		

PFAS List

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	88%		40-140%
	13C5-PFPeA	86%		50-150%
	13C5-PFHxA	86%		50-150%
	13C4-PFHpA	86%		50-150%
	13C8-PFOA	86%		50-150%
	13C9-PFNA	87%		50-150%
	13C6-PFDA	92%		50-150%
	13C7-PFUnDA	85%		40-140%
	13C2-PFDoDA	78%		40-140%
	13C2-PFTeDA	80%		30-130%
	13C3-PFBS	86%		50-150%
	13C3-PFHxS	86%		50-150%
	13C8-PFOS	84%		50-150%
	13C8-FOSA	87%		30-130%
	d3-MeFOSAA	76%		40-140%
	d5-EtFOSAA	77%		40-140%
	13C2-6:2FTS	82%		50-150%
	13C2-8:2FTS	88%		50-150%

(a) Analysis performed at SGS Orlando, FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	PMC-040521-08		
Lab Sample ID:	JD22888-6	**Date Sampled:**	04/05/21
Matrix:	SO - Soil	**Date Received:**	04/06/21
Method:	SW846 8270E BY SIM SW846 3546	**Percent Solids:**	81.6
Project:	OBGNYS: Honeywell WB 1-8 ELT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M99503.D	1	04/10/21 05:28	CS	04/09/21 14:35	OP32741A	E4M4618
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	4.1	2.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	84%		39-90%
321-60-8	2-Fluorobiphenyl	59%		35-84%
1718-51-0	Terphenyl-d14	71%		42-95%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	PMC-040521-08		
Lab Sample ID:	JD22888-6A	**Date Sampled:**	04/05/21
Matrix:	SO - Soil	**Date Received:**	04/06/21
Method:	EPA 537M BY ID IN HOUSE	**Percent Solids:**	81.6
Project:	OBGNYS: Honeywell WB 1-8 ELT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2Q66253.D	1	04/17/21 06:51	AFL	04/15/21 07:30	F:OP84941	F:S2Q963
Run #2							

	Initial Weight	Final Volume
Run #1	2.02 g	1.0 ml
Run #2		

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	ND	1.2	0.46	ug/kg	
2706-90-3	Perfluoropentanoic acid	ND	0.61	0.30	ug/kg	
307-24-4	Perfluorohexanoic acid	ND	0.61	0.30	ug/kg	
375-85-9	Perfluoroheptanoic acid	ND	0.61	0.30	ug/kg	
335-67-1	Perfluorooctanoic acid	ND	0.61	0.30	ug/kg	
375-95-1	Perfluorononanoic acid	ND	0.61	0.30	ug/kg	
335-76-2	Perfluorodecanoic acid	ND	0.61	0.30	ug/kg	
2058-94-8	Perfluoroundecanoic acid	ND	0.61	0.30	ug/kg	
307-55-1	Perfluorododecanoic acid	ND	0.61	0.30	ug/kg	
72629-94-8	Perfluorotridecanoic acid	ND	0.61	0.32	ug/kg	
376-06-7	Perfluorotetradecanoic acid	ND	0.61	0.30	ug/kg	
PERFLUOROALKYLSULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	ND	0.61	0.30	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	ND	0.61	0.30	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.61	0.30	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	0.31	0.61	0.30	ug/kg	J
335-77-3	Perfluorodecanesulfonic acid	ND	0.61	0.30	ug/kg	
PERFLUOROOCTANESULFONAMIDES						
754-91-6	PFOSA	ND	0.61	0.30	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	1.2	0.61	ug/kg	
2991-50-6	EtFOSAA	ND	1.2	0.61	ug/kg	
FLUOROTELOMER SULFONATES						
27619-97-2	6:2 Fluorotelomer sulfonate	ND	1.2	0.30	ug/kg	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	1.2	0.30	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PMC-040521-08		
Lab Sample ID:	JD22888-6A	**Date Sampled:**	04/05/21
Matrix:	SO - Soil	**Date Received:**	04/06/21
Method:	EPA 537M BY ID IN HOUSE	**Percent Solids:**	81.6
Project:	OBGNYS: Honeywell WB 1-8 ELT		

PFAS List

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	90%		40-140%
	13C5-PFPeA	88%		50-150%
	13C5-PFHxA	87%		50-150%
	13C4-PFHpA	88%		50-150%
	13C8-PFOA	88%		50-150%
	13C9-PFNA	89%		50-150%
	13C6-PFDA	91%		50-150%
	13C7-PFUnDA	87%		40-140%
	13C2-PFDoDA	80%		40-140%
	13C2-PFTeDA	85%		30-130%
	13C3-PFBS	86%		50-150%
	13C3-PFHxS	89%		50-150%
	13C8-PFOS	90%		50-150%
	13C8-FOSA	88%		30-130%
	d3-MeFOSAA	78%		40-140%
	d5-EtFOSAA	81%		40-140%
	13C2-6:2FTS	83%		50-150%
	13C2-8:2FTS	85%		50-150%

(a) Analysis performed at SGS Orlando, FL.

ND = Not detected MDL = Method Detection Limit
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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	PMC-040521-09		
Lab Sample ID:	JD22888-7	**Date Sampled:**	04/05/21
Matrix:	AQ - Equipment Blank	**Date Received:**	04/06/21
Method:	SW846 8270E BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	OBGNYS: Honeywell WB 1-8 ELT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M99470.D	1	04/09/21 18:33	HSS	04/07/21 19:30	OP32684A	E4M4617
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.0627	0.095	0.048	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	90%		21-121%
321-60-8	2-Fluorobiphenyl	65%		27-107%
1718-51-0	Terphenyl-d14	57%		25-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	PMC-040521-09		
Lab Sample ID:	JD22888-7A	**Date Sampled:**	04/05/21
Matrix:	AQ - Equipment Blank	**Date Received:**	04/06/21
Method:	EPA 537M BY ID EPA 537 MOD	**Percent Solids:**	n/a
Project:	OBGNYS: Honeywell WB 1-8 ELT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3Q36638.D	1	04/15/21 03:20	AFL	04/13/21 09:00	F:OP84900	F:S3Q538
Run #2							

	Initial Volume	Final Volume
Run #1	260 ml	1.0 ml
Run #2		

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	ND	3.8	1.9	ng/l	
2706-90-3	Perfluoropentanoic acid	ND	1.9	0.96	ng/l	
307-24-4	Perfluorohexanoic acid	ND	1.9	0.96	ng/l	
375-85-9	Perfluoroheptanoic acid	ND	1.9	0.96	ng/l	
335-67-1	Perfluorooctanoic acid	ND	1.9	0.96	ng/l	
375-95-1	Perfluorononanoic acid	ND	1.9	0.96	ng/l	
335-76-2	Perfluorodecanoic acid	ND	1.9	0.96	ng/l	
2058-94-8	Perfluoroundecanoic acid	ND	1.9	0.96	ng/l	
307-55-1	Perfluorododecanoic acid	ND	1.9	0.96	ng/l	
72629-94-8	Perfluorotridecanoic acid	ND	1.9	0.96	ng/l	
376-06-7	Perfluorotetradecanoic acid	ND	1.9	0.96	ng/l	
PERFLUOROALKYLSULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	ND	1.9	0.96	ng/l	
355-46-4	Perfluorohexanesulfonic acid	ND	1.9	0.96	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	1.9	0.96	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	1.9	0.96	ng/l	
335-77-3	Perfluorodecanesulfonic acid	ND	1.9	0.96	ng/l	
PERFLUOROOCTANESULFONAMIDES						
754-91-6	PFOSA	ND	3.8	1.9	ng/l	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	3.8	1.9	ng/l	
2991-50-6	EtFOSAA	ND	3.8	1.9	ng/l	
FLUOROTELOMER SULFONATES						
27619-97-2	6:2 Fluorotelomer sulfonate	ND	7.7	1.9	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	7.7	1.9	ng/l	

ND = Not detected MDL = Method Detection Limit
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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PMC-040521-09		
Lab Sample ID:	JD22888-7A	**Date Sampled:**	04/05/21
Matrix:	AQ - Equipment Blank	**Date Received:**	04/06/21
Method:	EPA 537M BY ID EPA 537 MOD	**Percent Solids:**	n/a
Project:	OBGNYS: Honeywell WB 1-8 ELT		

PFAS List

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	99%		35-135%
	13C5-PFPeA	103%		50-150%
	13C5-PFHxA	100%		50-150%
	13C4-PFHpA	101%		50-150%
	13C8-PFOA	104%		50-150%
	13C9-PFNA	98%		50-150%
	13C6-PFDA	96%		50-150%
	13C7-PFUnDA	90%		40-140%
	13C2-PFDoDA	68%		40-140%
	13C2-PFTeDA	60%		30-130%
	13C3-PFBS	102%		50-150%
	13C3-PFHxS	101%		50-150%
	13C8-PFOS	94%		50-150%
	13C8-FOSA	84%		30-130%
	d3-MeFOSAA	81%		40-140%
	d5-EtFOSAA	74%		40-140%
	13C2-6:2FTS	94%		50-150%
	13C2-8:2FTS	91%		50-150%

(a) Analysis performed at SGS Orlando, FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
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N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

So

FB

7733 5642 3314 ~~SD~~ PreM-3W-12820-33

SGS
2235 US Highway 130
Dayton, NJ 08810
(P) (732) 329 0200

Chain Of Custody/Analysis Request

Project Name: Portfolio Material Characterization - Clean Soil Sampling
Lab Project Name: OBGNYS: Portfolio Material Characterization, Geddes, NY

AESI Ref: 38609.59845
COC # : PMC-040521
Lab Use Only
Lab Proj #
Lab ID

Privileged & Confidential
EDD To: Charles Sharpe, Chris Hoy, Ronnie Held
Sampler: AK, NP
Sampling Company: Ramboll
P O # A000335992

Facility Name: Syracuse - LCP-OU-1
Location of Site: Syracuse, NY
Site Code: R30925

Client Contact: (name, co., address)
Stephen.Miller@Honeywell.com
Honeywell International
301 Plainfield Road, Suite 330
Syracuse, New York 13212

Hardcopy Report To: Hardcopy only if requested
Invoice To: Steve Miller

Analysis Turnaround Time:
Standard - Y
Rush Charges Authorized for - N
Turn Around Time Required - 2-week

Job No JD22888

	Sys_Loc_Code	Top Depth (ft)	Bottom Depth (ft)	Sys_Sample_Code	Sample Date	Sample Time	Matrix Code	Medium Code	Sample Type	# of Cont.	Composite (Yes/No)	Filter Type (Yes=Filtered, No=Unfiltered)	Preservative: Modified Method 537	Preservative: SW8270SIM (1,4-Dioxane)	Preservative: SW1312 SPLP/Modified Method 537	Lab Sample Numbers
	Units															
1	PMC-HENCLETS-040521	---	---	PMC-040521-01	4/5/2021	10:47	WQ	Water	FB	1	No	No	X			D9 T1
2	PMC- HENCLETS-01	---	---	PMC-040521-02	4/5/2021	10:50	Soil	Soil	Reg	2	No	No	X	X	X	E9
3	PMC- HENCLETS-01	---	---	PMC-040521-03	4/5/2021		SQ	Soil	FD	2	No	No	X	X	X	5W3
1	PMC- HENCLETS-01	---	---	PMC-040521-04	4/5/2021	10:52	SQ	Soil	MS	2	No	No	X	X	X	
2	PMC- HENCLETS-01	---	---	PMC-040521-05	4/5/2021	10:54	SQ	Soil	MSD	2	No	No	X	X	X	
4	PMC- HENCLETS-02	---	---	PMC-040521-06	4/5/2021	11:29	Soil	Soil	Reg	2	No	No	X	X	X	
5	PMC- HENCLETS-03	---	---	PMC-040521-07	4/5/2021	11:52	Soil	Soil	Reg	2	No	No	X	X	X	
6	PMC- HENCLETS-04	---	---	PMC-040521-08	4/5/2021	12:18	Soil	Soil	Reg	2	No	No	X	X	X	
7	PMC-EB-040521	---	---	PMC-040521-09	4/5/2021	12:30	WQ	Water	EB	2	No	No	X	X		
	10															
	11															
	12															

INITIAL ASESSMENT 4/6/21
LABEL VERIFICATION

Special Instructions: Hold SPLP until directed by Project Team

FOR INTERNAL USE ONLY:
HENCLETS – Hencle Blvd Ricelli Top Soil

Relinquished by: Amanda Klaben	Company: Ramboll	Received by:	Company		Condition		Custody Seals Intact	
	Date/Time: 3:23		Date/Time		Cooler Temp.			
Relinquished by	Company	Received by	4.5.21 Company		Condition		Custody Seals Intact	
4/5/21 15:1	Date/Time		Date/Time 16:30		Cooler Temp.			

Preservatives: 0 = None; [1 = HCL]; [2 = HNO3]; [3 = H2SO4]; [4 = NaOH]; [5 = Zn. Acetate]; [6 = MeOH]; [7 = NaHSO4]; 8 = Other (specify):

fedex fedex 4/6/21 9:15 Rec James Zinn

42 COP

SGS Sample Receipt Summary

Job Number: JD22888 **Client:** O'BRIEN & GERE ENGINEERS, INC. **Project:** OBGNYS: HONEYWELL WB 1-8 ELT

Date / Time Received: 4/6/2021 9:15:00 AM **Delivery Method:** Fed Ex **Airbill #'s:** 7733 5642 8374

Cooler Temps (Raw Measured) °C: Cooler 1: (4.2);

Cooler Temps (Corrected) °C: Cooler 1: (2.9);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR Gun	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	1	

Quality Control Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☐	☐	☑
2. Trip Blank listed on COC:	☐	☐	☑
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Test Strip Lot #s: pH 1-12: 212820 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

JD22888: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Honeywell International Inc.

Job No: JD22888

OBGNYS: Honeywell WB 1-8 ELT

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD22888-1	Collected: 05-APR-21 10:47 By: PMC-040521-01		Received: 06-APR-21		By: JK	
JD22888-1	EPA 537M BY ID	15-APR-21 02:30	AFL	13-APR-21		LCID537NY21
JD22888-2	Collected: 05-APR-21 10:50 By: PMC-040521-02		Received: 06-APR-21		By: JK	
JD22888-2	SM2540 G 18TH ED MOD	07-APR-21 15:45	LM			SOL104
JD22888-2	SW846 8270E BY SIM	10-APR-21 06:30	CS	09-APR-21	TG	B8270SIM14DIOX
JD22888-3	Collected: 05-APR-21 00:00 By: PMC-040521-03		Received: 06-APR-21		By: JK	
JD22888-3	SM2540 G 18TH ED MOD	07-APR-21 15:45	LM			SOL104
JD22888-3	SW846 8270E BY SIM	10-APR-21 04:46	CS	09-APR-21	TG	B8270SIM14DIOX
JD22888-4	Collected: 05-APR-21 11:29 By: PMC-040521-06		Received: 06-APR-21		By: JK	
JD22888-4	SM2540 G 18TH ED MOD	07-APR-21 15:45	LM			SOL104
JD22888-4	SW846 8270E BY SIM	10-APR-21 05:07	CS	09-APR-21	TG	B8270SIM14DIOX
JD22888-5	Collected: 05-APR-21 11:52 By: PMC-040521-07		Received: 06-APR-21		By: JK	
JD22888-5	SM2540 G 18TH ED MOD	07-APR-21 15:45	LM			SOL104
JD22888-5	SW846 8270E BY SIM	10-APR-21 04:26	CS	09-APR-21	TG	B8270SIM14DIOX
JD22888-6	Collected: 05-APR-21 12:18 By: PMC-040521-08		Received: 06-APR-21		By: JK	
JD22888-6	SM2540 G 18TH ED MOD	07-APR-21 15:45	LM			SOL104
JD22888-6	SW846 8270E BY SIM	10-APR-21 05:28	CS	09-APR-21	TG	B8270SIM14DIOX
JD22888-7	Collected: 05-APR-21 12:30 By: PMC-040521-09		Received: 06-APR-21		By: JK	
JD22888-7	SW846 8270E BY SIM	09-APR-21 18:33	HSS	07-APR-21	NW	B8270SIM14DIOX

Internal Sample Tracking Chronicle

Honeywell International Inc.

Job No: JD22888

OBGNYS: Honeywell WB 1-8 ELT

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD22888-2ACollected: 05-APR-21 10:50 By: PMC-040521-02		Received: 06-APR-21 By: JK				
JD22888-2AEPA 537M BY ID		18-APR-21 21:27	AFL	15-APR-21		LCID537NY21
JD22888-3ACollected: 05-APR-21 00:00 By: PMC-040521-03		Received: 06-APR-21 By: JK				
JD22888-3AEPA 537M BY ID		17-APR-21 05:29	AFL	15-APR-21		LCID537NY21
JD22888-4ACollected: 05-APR-21 11:29 By: PMC-040521-06		Received: 06-APR-21 By: JK				
JD22888-4AEPA 537M BY ID		17-APR-21 05:45	AFL	15-APR-21		LCID537NY21
JD22888-5ACollected: 05-APR-21 11:52 By: PMC-040521-07		Received: 06-APR-21 By: JK				
JD22888-5AEPA 537M BY ID		17-APR-21 06:35	AFL	15-APR-21		LCID537NY21
JD22888-6ACollected: 05-APR-21 12:18 By: PMC-040521-08		Received: 06-APR-21 By: JK				
JD22888-6AEPA 537M BY ID		17-APR-21 06:51	AFL	15-APR-21		LCID537NY21
JD22888-7ACollected: 05-APR-21 12:30 By: PMC-040521-09		Received: 06-APR-21 By: JK				
JD22888-7AEPA 537M BY ID		15-APR-21 03:20	AFL	13-APR-21		LCID537NY21

SGS Internal Chain of Custody

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT
Received: 04/06/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD22888-1.1	Todd Shoemaker	Secured Storage	04/06/21 14:29	Return to Storage
JD22888-1.1 SUB	Tyler Strong		04/06/21 16:46	Subcontract
JD22888-2.1	Todd Shoemaker	Secured Storage	04/06/21 14:29	Return to Storage
JD22888-2.1	Secured Storage	Todd Shoemaker	04/07/21 09:23	Retrieve from Storage
JD22888-2.1	Todd Shoemaker	Secured Staging Area	04/07/21 09:23	Return to Storage
JD22888-2.1	Secured Staging Area	Lauren Matthews	04/07/21 09:36	Retrieve from Storage
JD22888-2.1	Lauren Matthews	Secured Storage	04/07/21 15:49	Return to Storage
JD22888-2.1	Secured Storage	William Cruser	04/09/21 07:48	Retrieve from Storage
JD22888-2.1	William Cruser	Taylor Gorman	04/09/21 07:57	Custody Transfer
JD22888-2.1	Taylor Gorman	Secured Storage	04/10/21 03:21	Return to Storage
JD22888-2.1.1	William Cruser	Organics Prep	04/09/21 07:48	Extract from JD22888-2.1
JD22888-2.1.1	Organics Prep	Taylor Gorman	04/10/21 01:13	Extract from JD22888-2.1
JD22888-2.1.1	Taylor Gorman	Extract Storage	04/10/21 01:13	Return to Storage
JD22888-2.1.1	Extract Storage	Christopher Sowa	04/10/21 03:43	Retrieve from Storage
JD22888-2.1.1	Christopher Sowa	GCMS4M	04/10/21 03:43	Load on Instrument
JD22888-2.1.1	GCMS4M	Henny Salim	04/12/21 11:14	Unload from Instrument
JD22888-2.1.1	Henny Salim	Extract Freezer	04/12/21 11:14	Return to Storage
JD22888-2.2	Todd Shoemaker	Secured Storage	04/06/21 14:29	Return to Storage
JD22888-2.3	Todd Shoemaker	Secured Storage	04/06/21 14:29	Return to Storage
JD22888-2.3	Secured Storage	Todd Shoemaker	04/07/21 09:23	Retrieve from Storage
JD22888-2.3	Todd Shoemaker	Secured Staging Area	04/07/21 09:23	Return to Storage
JD22888-2.3	Secured Staging Area	Lauren Matthews	04/07/21 09:36	Retrieve from Storage
JD22888-2.3	Lauren Matthews	Secured Storage	04/07/21 15:49	Return to Storage
JD22888-2.4	Todd Shoemaker	Secured Storage	04/06/21 14:29	Return to Storage
JD22888-2.4 SUB	Tyler Strong		04/06/21 16:46	Subcontract
JD22888-2.5	Todd Shoemaker	Secured Storage	04/06/21 14:29	Return to Storage
JD22888-2.5 SUB	Tyler Strong		04/06/21 16:46	Subcontract
JD22888-2.6	Todd Shoemaker	Secured Storage	04/06/21 14:29	Return to Storage
JD22888-2.6 SUB	Tyler Strong		04/06/21 16:46	Subcontract
JD22888-3.1	Todd Shoemaker	Secured Storage	04/06/21 14:29	Return to Storage
JD22888-3.1	Secured Storage	Todd Shoemaker	04/07/21 09:23	Retrieve from Storage
JD22888-3.1	Todd Shoemaker	Secured Staging Area	04/07/21 09:23	Return to Storage

SGS Internal Chain of Custody

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT
Received: 04/06/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD22888-3.1	Secured Staging Area	Lauren Matthews	04/07/21 09:36	Retrieve from Storage
JD22888-3.1	Lauren Matthews	Secured Storage	04/07/21 15:49	Return to Storage
JD22888-3.1	Secured Storage	William Cruser	04/09/21 07:48	Retrieve from Storage
JD22888-3.1	William Cruser	Taylor Gorman	04/09/21 07:57	Custody Transfer
JD22888-3.1	Taylor Gorman	Secured Storage	04/10/21 03:21	Return to Storage
JD22888-3.1.1	William Cruser	Organics Prep	04/09/21 07:48	Extract from JD22888-3.1
JD22888-3.1.1	Organics Prep	Taylor Gorman	04/10/21 01:13	Extract from JD22888-3.1
JD22888-3.1.1	Taylor Gorman	Extract Storage	04/10/21 01:13	Return to Storage
JD22888-3.1.1	Extract Storage	Christopher Sowa	04/10/21 03:43	Retrieve from Storage
JD22888-3.1.1	Christopher Sowa	GCMS4M	04/10/21 03:43	Load on Instrument
JD22888-3.1.1	GCMS4M	Henny Salim	04/12/21 11:14	Unload from Instrument
JD22888-3.1.1	Henny Salim	Extract Freezer	04/12/21 11:14	Return to Storage
JD22888-3.2	Todd Shoemaker	Secured Storage	04/06/21 14:29	Return to Storage
JD22888-3.2 SUB	Tyler Strong		04/06/21 16:46	Subcontract
JD22888-4.1	Todd Shoemaker	Secured Storage	04/06/21 14:29	Return to Storage
JD22888-4.1	Secured Storage	Todd Shoemaker	04/07/21 09:23	Retrieve from Storage
JD22888-4.1	Todd Shoemaker	Secured Staging Area	04/07/21 09:23	Return to Storage
JD22888-4.1	Secured Staging Area	Lauren Matthews	04/07/21 09:36	Retrieve from Storage
JD22888-4.1	Lauren Matthews	Secured Storage	04/07/21 15:49	Return to Storage
JD22888-4.1	Secured Storage	William Cruser	04/09/21 07:48	Retrieve from Storage
JD22888-4.1	William Cruser	Taylor Gorman	04/09/21 07:57	Custody Transfer
JD22888-4.1	Taylor Gorman	Secured Storage	04/10/21 03:21	Return to Storage
JD22888-4.1.1	William Cruser	Organics Prep	04/09/21 07:48	Extract from JD22888-4.1
JD22888-4.1.1	Organics Prep	Taylor Gorman	04/10/21 01:13	Extract from JD22888-4.1
JD22888-4.1.1	Taylor Gorman	Extract Storage	04/10/21 01:13	Return to Storage
JD22888-4.1.1	Extract Storage	Christopher Sowa	04/10/21 03:43	Retrieve from Storage
JD22888-4.1.1	Christopher Sowa	GCMS4M	04/10/21 03:43	Load on Instrument
JD22888-4.1.1	GCMS4M	Henny Salim	04/12/21 11:14	Unload from Instrument
JD22888-4.1.1	Henny Salim	Extract Freezer	04/12/21 11:14	Return to Storage
JD22888-4.2	Todd Shoemaker	Secured Storage	04/06/21 14:29	Return to Storage
JD22888-4.2 SUB	Tyler Strong		04/06/21 16:46	Subcontract
JD22888-5.1	Todd Shoemaker	Secured Storage	04/06/21 14:29	Return to Storage
JD22888-5.1	Secured Storage	Todd Shoemaker	04/07/21 09:23	Retrieve from Storage
JD22888-5.1	Todd Shoemaker	Secured Staging Area	04/07/21 09:23	Return to Storage
JD22888-5.1	Secured Staging Area	Lauren Matthews	04/07/21 09:36	Retrieve from Storage
JD22888-5.1	Lauren Matthews	Secured Storage	04/07/21 15:49	Return to Storage

SGS Internal Chain of Custody

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT
Received: 04/06/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD22888-5.1	Secured Storage	William Cruser	04/09/21 07:48	Retrieve from Storage
JD22888-5.1	William Cruser	Taylor Gorman	04/09/21 07:57	Custody Transfer
JD22888-5.1	Taylor Gorman	Secured Storage	04/10/21 03:21	Return to Storage
JD22888-5.1.1	William Cruser	Organics Prep	04/09/21 07:48	Extract from JD22888-5.1
JD22888-5.1.1	Organics Prep	Taylor Gorman	04/10/21 01:13	Extract from JD22888-5.1
JD22888-5.1.1	Taylor Gorman	Extract Storage	04/10/21 01:13	Return to Storage
JD22888-5.1.1	Extract Storage	Christopher Sowa	04/10/21 03:43	Retrieve from Storage
JD22888-5.1.1	Christopher Sowa	GCMS4M	04/10/21 03:43	Load on Instrument
JD22888-5.1.1	GCMS4M	Henny Salim	04/12/21 11:14	Unload from Instrument
JD22888-5.1.1	Henny Salim	Extract Freezer	04/12/21 11:14	Return to Storage
JD22888-5.2	Todd Shoemaker	Secured Storage	04/06/21 14:29	Return to Storage
JD22888-5.2 SUB	Tyler Strong		04/06/21 16:46	Subcontract
JD22888-6.1	Todd Shoemaker	Secured Storage	04/06/21 14:29	Return to Storage
JD22888-6.1	Secured Storage	Todd Shoemaker	04/07/21 09:23	Retrieve from Storage
JD22888-6.1	Todd Shoemaker	Secured Staging Area	04/07/21 09:23	Return to Storage
JD22888-6.1	Secured Staging Area	Lauren Matthews	04/07/21 09:36	Retrieve from Storage
JD22888-6.1	Lauren Matthews	Secured Storage	04/07/21 15:49	Return to Storage
JD22888-6.1	Secured Storage	William Cruser	04/09/21 07:48	Retrieve from Storage
JD22888-6.1	William Cruser	Taylor Gorman	04/09/21 07:57	Custody Transfer
JD22888-6.1	Taylor Gorman	Secured Storage	04/10/21 03:21	Return to Storage
JD22888-6.1.1	William Cruser	Organics Prep	04/09/21 07:48	Extract from JD22888-6.1
JD22888-6.1.1	Organics Prep	Taylor Gorman	04/10/21 01:13	Extract from JD22888-6.1
JD22888-6.1.1	Taylor Gorman	Extract Storage	04/10/21 01:13	Return to Storage
JD22888-6.1.1	Extract Storage	Christopher Sowa	04/10/21 03:43	Retrieve from Storage
JD22888-6.1.1	Christopher Sowa	GCMS4M	04/10/21 03:43	Load on Instrument
JD22888-6.1.1	GCMS4M	Henny Salim	04/12/21 11:14	Unload from Instrument
JD22888-6.1.1	Henny Salim	Extract Freezer	04/12/21 11:14	Return to Storage
JD22888-6.2	Todd Shoemaker	Secured Storage	04/06/21 14:29	Return to Storage
JD22888-6.2 SUB	Tyler Strong		04/06/21 16:46	Subcontract
JD22888-7.1	Todd Shoemaker	Secured Storage	04/06/21 14:29	Return to Storage
JD22888-7.1	Secured Storage	Manish Kewalramani	04/07/21 18:22	Retrieve from Storage
JD22888-7.1	Manish Kewalramani	Secured Staging Area	04/07/21 18:22	Return to Storage
JD22888-7.1	Secured Staging Area	Taylor Gorman	04/07/21 19:14	Retrieve from Storage
JD22888-7.1	Taylor Gorman	Secured Storage	04/10/21 03:21	Return to Storage
JD22888-7.1.1	Taylor Gorman	Organics Prep	04/07/21 19:32	Extract from JD22888-7.1

SGS Internal Chain of Custody

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT
Received: 04/06/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD22888-7.1.1	Organics Prep	Nicholas Weigand	04/08/21 19:09	Extract from JD22888-7.1
JD22888-7.1.1	Nicholas Weigand	Extract Storage	04/08/21 19:09	Return to Storage
JD22888-7.1.1	Extract Storage	Henny Salim	04/09/21 09:24	Retrieve from Storage
JD22888-7.1.1	Henny Salim	GCMS4M	04/09/21 09:24	Load on Instrument
JD22888-7.1.1	GCMS4M	Henny Salim	04/12/21 11:14	Unload from Instrument
JD22888-7.1.1	Henny Salim	Extract Freezer	04/12/21 11:14	Return to Storage
JD22888-7.2	Todd Shoemaker	Secured Storage	04/06/21 14:29	Return to Storage
JD22888-7.2 SUB	Tyler Strong		04/06/21 16:46	Subcontract

MS Semi-volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Injection/Internal Standard Area Summaries
- Isotope Dilution Standard/Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP32684A-MB1	4M99467.D	1	04/09/21	HSS	04/07/21	OP32684A	E4M4617

The QC reported here applies to the following samples: **Method:** SW846 8270E BY SIM

JD22888-7

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.050	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	87%	21-121%
321-60-8	2-Fluorobiphenyl	58%	27-107%
1718-51-0	Terphenyl-d14	69%	25-118%

Method Blank Summary

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP32741A-MB1	4M99498.D	1	04/10/21	CS	04/09/21	OP32741A	E4M4618

The QC reported here applies to the following samples: **Method:** SW846 8270E BY SIM

JD22888-2, JD22888-3, JD22888-4, JD22888-5, JD22888-6

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	3.3	1.7	ug/kg	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	84%	39-90%
321-60-8	2-Fluorobiphenyl	60%	35-84%
1718-51-0	Terphenyl-d14	75%	42-95%

Blank Spike Summary

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP32741A-BS12	4M99499.D	1	04/10/21	CS	04/09/21	OP32741A	E4M4618

The QC reported here applies to the following samples: **Method:** SW846 8270E BY SIM

JD22888-2, JD22888-3, JD22888-4, JD22888-5, JD22888-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
123-91-1	1,4-Dioxane	33.3	14.7	44	21-87

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	80%	39-90%
321-60-8	2-Fluorobiphenyl	59%	35-84%
1718-51-0	Terphenyl-d14	75%	42-95%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP32684A-BS12	4M99468.D	1	04/09/21	HSS	04/07/21	OP32684A	E4M4617
OP32684A-BSD12	4M99469.D	1	04/09/21	HSS	04/07/21	OP32684A	E4M4617

The QC reported here applies to the following samples: **Method:** SW846 8270E BY SIM

JD22888-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
123-91-1	1,4-Dioxane	1	0.425	43	0.398	40	7	10-112/44

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
4165-60-0	Nitrobenzene-d5	91%	92%	21-121%
321-60-8	2-Fluorobiphenyl	64%	63%	27-107%
1718-51-0	Terphenyl-d14	77%	74%	25-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP32741A-MSA	4M99504.D	1	04/10/21	CS	04/09/21	OP32741A	E4M4618
OP32741A-MSDA	4M99505.D	1	04/10/21	CS	04/09/21	OP32741A	E4M4618
JD22888-2	4M99506.D	1	04/10/21	CS	04/09/21	OP32741A	E4M4618

The QC reported here applies to the following samples: **Method:** SW846 8270E BY SIM

JD22888-2, JD22888-3, JD22888-4, JD22888-5, JD22888-6

CAS No.	Compound	JD22888-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
123-91-1	1,4-Dioxane	ND		40.2	17.8	44	40.7	20.6	51	15	14-57/28

CAS No.	Surrogate Recoveries	MS	MSD	JD22888-2	Limits
4165-60-0	Nitrobenzene-d5	80%	85%	89%	39-90%
321-60-8	2-Fluorobiphenyl	56%	59%	60%	35-84%
1718-51-0	Terphenyl-d14	67%	75%	74%	42-95%

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample: E4M4609-DFTPP
Lab File ID: 4M99293.D
Instrument ID: GCMS4M
Injection Date: 04/01/21
Injection Time: 17:59

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	41338	32.3		Pass
68	Less than 2.0% of mass 69	975	0.76	(1.73) [a]	Pass
69	Mass 69 relative abundance	56333	44.0		Pass
70	Less than 2.0% of mass 69	488	0.38	(0.87) [a]	Pass
127	40.0 - 60.0% of mass 198	62563	48.9		Pass
197	Less than 1.0% of mass 198	674	0.53		Pass
198	Base peak, 100% relative abundance	127968	100.0		Pass
199	5.0 - 9.0% of mass 198	8598	6.72		Pass
275	10.0 - 30.0% of mass 198	32608	25.5		Pass
365	1.0 - 100.0% of mass 198	4336	3.39		Pass
441	Present, but less than mass 443	10965	8.57	(78.7) [b]	Pass
442	40.0 - 100.0% of mass 198	71715	56.0		Pass
443	17.0 - 23.0% of mass 442	13939	10.9	(19.4) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E4M4609-IC4609	4M99294.D	04/01/21	18:14	00:15	Initial cal 5
E4M4609-IC4609	4M99295.D	04/01/21	18:34	00:35	Initial cal 2.5
E4M4609-ICC4609	4M99296.D	04/01/21	18:55	00:56	Initial cal 1
E4M4609-IC4609	4M99297.D	04/01/21	19:16	01:17	Initial cal 0.5
E4M4609-IC4609	4M99298.D	04/01/21	19:36	01:37	Initial cal 0.2
E4M4609-IC4609	4M99299.D	04/01/21	19:57	01:58	Initial cal 0.1
E4M4609-IC4609	4M99300.D	04/01/21	20:17	02:18	Initial cal 0.05
E4M4609-IC4609	4M99301.D	04/01/21	20:38	02:39	Initial cal 0.02
E4M4609-IC4609	4M99302.D	04/01/21	20:59	03:00	Initial cal 0.01
E4M4609-ICV4609	4M99303.D	04/01/21	21:19	03:20	Initial cal verification 1

Instrument Performance Check (DFTPP)

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample: E4M4617-DFTPP
Lab File ID: 4M99465.D
Instrument ID: GCMS4M
Injection Date: 04/09/21
Injection Time: 08:55

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	14384	30.1		Pass
68	Less than 2.0% of mass 69	305	0.64	(1.60) [a]	Pass
69	Mass 69 relative abundance	19031	39.8		Pass
70	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
127	40.0 - 60.0% of mass 198	24232	50.7		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	47813	100.0		Pass
199	5.0 - 9.0% of mass 198	3360	7.03		Pass
275	10.0 - 30.0% of mass 198	12455	26.0		Pass
365	1.0 - 100.0% of mass 198	1673	3.50		Pass
441	Present, but less than mass 443	5117	10.7	(78.6) [b]	Pass
442	40.0 - 100.0% of mass 198	34397	71.9		Pass
443	17.0 - 23.0% of mass 442	6513	13.6	(18.9) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E4M4617-CC4609	4M99466.D	04/09/21	09:06	00:11	Continuing cal 0.5
OP32684A-MB1	4M99467.D	04/09/21	09:29	00:34	Method Blank
OP32681A-MB1	4M99473.D	04/09/21	09:50	00:55	Method Blank
ZZZZZZ	4M99474.D	04/09/21	10:11	01:16	(unrelated sample)
ZZZZZZ	4M99475.D	04/09/21	10:31	01:36	(unrelated sample)
ZZZZZZ	4M99476.D	04/09/21	10:52	01:57	(unrelated sample)
ZZZZZZ	4M99477.D	04/09/21	11:13	02:18	(unrelated sample)
ZZZZZZ	4M99478.D	04/09/21	11:34	02:39	(unrelated sample)
OP32684A-BS12	4M99468.D	04/09/21	11:55	03:00	Blank Spike
OP32684A-BSD12	4M99469.D	04/09/21	12:19	03:24	Blank Spike Duplicate
OP32675A-MB1	4M99479.D	04/09/21	12:40	03:45	Method Blank
OP32675A-BS12	4M99480.D	04/09/21	13:01	04:06	Blank Spike
OP32675A-BSD12	4M99481.D	04/09/21	13:21	04:26	Blank Spike Duplicate
ZZZZZZ	4M99482.D	04/09/21	13:42	04:47	(unrelated sample)
ZZZZZZ	4M99483.D	04/09/21	14:03	05:08	(unrelated sample)
ZZZZZZ	4M99484.D	04/09/21	14:24	05:29	(unrelated sample)
ZZZZZZ	4M99485.D	04/09/21	14:44	05:49	(unrelated sample)
ZZZZZZ	4M99486.D	04/09/21	15:05	06:10	(unrelated sample)
ZZZZZZ	4M99487.D	04/09/21	15:26	06:31	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample:	E4M4617-DFTPP	**Injection Date:**	04/09/21
Lab File ID:	4M99465.D	**Injection Time:**	08:55
Instrument ID:	GCMS4M		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	4M99488.D	04/09/21	15:47	06:52	(unrelated sample)
ZZZZZZ	4M99489.D	04/09/21	16:08	07:13	(unrelated sample)
ZZZZZZ	4M99490.D	04/09/21	16:28	07:33	(unrelated sample)
ZZZZZZ	4M99491.D	04/09/21	16:49	07:54	(unrelated sample)
ZZZZZZ	4M99492.D	04/09/21	17:10	08:15	(unrelated sample)
ZZZZZZ	4M99493.D	04/09/21	17:31	08:36	(unrelated sample)
ZZZZZZ	4M99494.D	04/09/21	17:52	08:57	(unrelated sample)
ZZZZZZ	4M99495.D	04/09/21	18:12	09:17	(unrelated sample)
JD22888-7	4M99470.D	04/09/21	18:33	09:38	PMC-040521-09
ZZZZZZ	4M99471.D	04/09/21	18:54	09:59	(unrelated sample)
ZZZZZZ	4M99472.D	04/09/21	19:15	10:20	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample: E4M4618-DFTPP
Lab File ID: 4M99496.D
Instrument ID: GCMS4M
Injection Date: 04/10/21
Injection Time: 02:49

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	8853	31.5		Pass
68	Less than 2.0% of mass 69	93	0.33	(0.80) [a]	Pass
69	Mass 69 relative abundance	11663	41.5		Pass
70	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
127	40.0 - 60.0% of mass 198	14430	51.4		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	28080	100.0		Pass
199	5.0 - 9.0% of mass 198	1890	6.73		Pass
275	10.0 - 30.0% of mass 198	6993	24.9		Pass
365	1.0 - 100.0% of mass 198	970	3.45		Pass
441	Present, but less than mass 443	2543	9.06	(76.6) [b]	Pass
442	40.0 - 100.0% of mass 198	17947	63.9		Pass
443	17.0 - 23.0% of mass 442	3318	11.8	(18.5) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E4M4618-CC4609	4M99497.D	04/10/21	03:01	00:12	Continuing cal 1
OP32741A-MB1	4M99498.D	04/10/21	03:44	00:55	Method Blank
OP32741A-BS12	4M99499.D	04/10/21	04:05	01:16	Blank Spike
JD22888-5	4M99500.D	04/10/21	04:26	01:37	PMC-040521-07
JD22888-3	4M99501.D	04/10/21	04:46	01:57	PMC-040521-03
JD22888-4	4M99502.D	04/10/21	05:07	02:18	PMC-040521-06
JD22888-6	4M99503.D	04/10/21	05:28	02:39	PMC-040521-08
OP32741A-MSA	4M99504.D	04/10/21	05:48	02:59	Matrix Spike
OP32741A-MSDA	4M99505.D	04/10/21	06:09	03:20	Matrix Spike Duplicate
JD22888-2	4M99506.D	04/10/21	06:30	03:41	PMC-040521-02

Internal Standard Area Summary

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Check Std:	E4M4617-CC4609	**Injection Date:**	04/09/21
Lab File ID:	4M99466.D	**Injection Time:**	09:06
Instrument ID:	GCMS4M	**Method:**	SW846 8270E BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	25248	6.85	27345	8.30	44905	10.42	31583	13.09
Upper Limit [a]	50496	7.35	54690	8.80	89810	10.92	63166	13.59
Lower Limit [b]	12624	6.35	13673	7.80	22453	9.92	15792	12.59

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
OP32684A-MB1	21744	6.85	23194	8.31	37533	10.43	27925	13.10
OP32681A-MB1	21383	6.85	23810	8.31	38397	10.43	28527	13.10
ZZZZZZ	20536	6.85	22687	8.31	36964	10.43	27338	13.10
ZZZZZZ	22287	6.85	24303	8.31	39632	10.43	28831	13.10
ZZZZZZ	20039	6.85	21518	8.31	35529	10.43	26997	13.10
ZZZZZZ	20446	6.85	22965	8.31	38140	10.43	28446	13.10
ZZZZZZ	22331	6.85	24988	8.31	41497	10.43	32552	13.10
OP32684A-BS12	21472	6.85	23104	8.31	37146	10.43	28044	13.10
OP32684A-BSD12	21457	6.85	23511	8.31	38072	10.43	28861	13.10
OP32675A-MB1	22120	6.85	24014	8.31	38354	10.43	28535	13.10
OP32675A-BS12	22911	6.85	24908	8.31	38964	10.43	28902	13.10
OP32675A-BSD12	22156	6.85	24013	8.31	38050	10.43	27983	13.10
ZZZZZZ	21271	6.85	22970	8.31	36573	10.43	27006	13.10
ZZZZZZ	21348	6.85	32436	8.31	38844	10.43	29790	13.10
ZZZZZZ	21215	6.85	23297	8.31	38237	10.43	29053	13.10
ZZZZZZ	19290	6.85	21058	8.31	34513	10.43	26142	13.10
ZZZZZZ	23405	6.85	31085	8.31	42464	10.43	31899	13.10
ZZZZZZ	22117	6.85	33724	8.31	38179	10.43	28666	13.10
ZZZZZZ	27712	6.85	34771	8.31	38060	10.43	28234	13.10
ZZZZZZ	21366	6.85	36777	8.31	35728	10.43	25873	13.10
ZZZZZZ	22299	6.85	24425	8.31	39494	10.43	29185	13.10
ZZZZZZ	22242	6.85	24813	8.31	40835	10.43	30532	13.10
ZZZZZZ	21794	6.85	23916	8.31	39978	10.43	30453	13.10
ZZZZZZ	22213	6.85	23909	8.31	39105	10.43	28803	13.10
ZZZZZZ	23100	6.85	25248	8.31	40833	10.43	30226	13.10
ZZZZZZ	21134	6.85	22888	8.31	38973	10.42	28630	13.10
JD22888-7	20381	6.85	21725	8.31	36644	10.42	26229	13.09
ZZZZZZ	19012	6.85	20567	8.31	34270	10.42	25555	13.10
ZZZZZZ	19571	6.85	21016	8.31	34468	10.42	25605	13.10

IS 1 = 1-Methylnaphthalene-d10
IS 2 = Fluorene-d10
IS 3 = Fluoranthene-d10
IS 4 = Benzo(a)pyrene-d12

Internal Standard Area Summary

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Check Std:	E4M4617-CC4609	**Injection Date:**	04/09/21
Lab File ID:	4M99466.D	**Injection Time:**	09:06
Instrument ID:	GCMS4M	**Method:**	SW846 8270E BY SIM

Lab	IS 1		IS 2		IS 3		IS 4	
Sample ID	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Check Std:	E4M4618-CC4609	**Injection Date:**	04/10/21
Lab File ID:	4M99497.D	**Injection Time:**	03:01
Instrument ID:	GCMS4M	**Method:**	SW846 8270E BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	12813	6.83	14076	8.30	22866	10.41	17050	13.08
Upper Limit [a]	25626	7.33	28152	8.80	45732	10.91	34100	13.58
Lower Limit [b]	6407	6.33	7038	7.80	11433	9.91	8525	12.58

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
OP32741A-MB1	12570	6.83	13861	8.30	23404	10.41	16105	13.08
OP32741A-BS12	12424	6.83	13573	8.30	22651	10.41	16910	13.08
JD22888-5	11415	6.83	12452	8.30	21702	10.41	17827	13.08
JD22888-3	10115	6.83	11303	8.30	20212	10.41	16598	13.09
JD22888-4	8475	6.83	10240	8.30	22027	10.41	16984	13.09
JD22888-6	14305	6.83	15435	8.30	26042	10.41	20526	13.09
OP32741A-MSA	16898	6.83	17966	8.30	28535	10.41	22383	13.08
OP32741A-MSDA	16817	6.83	18004	8.30	27543	10.41	21145	13.09
JD22888-2	18867	6.83	19758	8.30	29622	10.41	21899	13.09

IS 1 = 1-Methylnaphthalene-d10
IS 2 = Fluorene-d10
IS 3 = Fluoranthene-d10
IS 4 = Benzo(a)pyrene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Surrogate Recovery Summary

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Method: SW846 8270E BY SIM **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
JD22888-7	4M99470.D	90	65	57
OP32684A-BS12	4M99468.D	91	64	77
OP32684A-BSD12	4M99469.D	92	63	74
OP32684A-MB1	4M99467.D	87	58	69

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	21-121%
S2 = 2-Fluorobiphenyl	27-107%
S3 = Terphenyl-d14	25-118%

Surrogate Recovery Summary

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Method: SW846 8270E BY SIM **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
JD22888-2	4M99506.D	89	60	74
JD22888-3	4M99501.D	83	62	76
JD22888-4	4M99502.D	86	69	81
JD22888-5	4M99500.D	78	59	73
JD22888-6	4M99503.D	84	59	71
OP32741A-BS12	4M99499.D	80	59	75
OP32741A-MB1	4M99498.D	84	60	75
OP32741A-MSA	4M99504.D	80	56	67
OP32741A-MSDA	4M99505.D	85	59	75

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	39-90%
S2 = 2-Fluorobiphenyl	35-84%
S3 = Terphenyl-d14	42-95%

Initial Calibration Summary

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample: E4M4609-ICC4609
Lab FileID: 4M99296.D

Response Factor Report GCMS4M

Method : C:\msdchem\1\METHODS\M4M4609SIM.M (RTE Integrator)
Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
Last Update : Fri Apr 02 09:34:12 2021
Response via : Initial Calibration

Calibration Files
0.05=4m99300.D .2 =4m99298.D 2.5 =4m99295.D .02 =4m99301.D
.1 =4m99299.D 1 =4m99296.D .01 =4m99302.D .5 =4m99297.D
5 =4m99294.D = = =

Compound	0.05	.2	2.5	.02	.1	1	.01	.5	5	Avg	%RSD
1) I 1-Methylnaphthalene-d	----------ISTD----------										
2) 2-Fluorophenol	0.561	0.549	0.492	0.574	0.569	0.565	0.594	0.587	0.448	0.549	8.76
3) Phenol-d5	0.733	0.708	0.636	0.735	0.733	0.732	0.735	0.752	0.569	0.704	8.63
4) Phenol	0.786	0.772	0.739	0.797	0.800	0.804	0.824	0.822	0.681	0.781	5.83
5) bis(2-Chloroethyl)ether	0.617	0.614	0.614	0.777	0.636	0.642	0.696	0.653	0.580	0.648	8.97
6) Nitrobenzene-d5	0.461	0.461	0.466	0.467	0.463	0.493	0.461	0.500	0.438	0.468	3.96
7) Naphthalene	2.013	1.957	1.900	2.121	2.012	2.029	2.728	2.043	1.819	2.069	12.67
8) Hexachlorobutadiene	0.500	0.432	0.417	0.617	0.446	0.432	0.473	0.454	0.407	0.464	13.73
9) 2-Methylnaphthalene	1.270	1.195	1.160	1.319	1.195	1.213	1.559	1.282	1.130	1.258	10.17
10) Hexachlorocyclopentadiene	0.335	0.355	0.390	0.364	0.342	0.381	0.306	0.391	0.405	0.363	8.73
11) 2-Fluorobiphenyl	1.514	1.361	1.119	1.570	1.461	1.302	1.630	1.373	1.007	1.371	14.96
12) I Fluorene-d10	----------ISTD----------										
13) Acenaphthylene	1.914	1.760	1.760	2.076	1.825	1.799	2.127	1.930	1.701	1.877	7.84
14) Acenaphthene	1.182	1.201	1.116	1.380	1.250	1.190	1.427	1.282	1.058	1.232	9.58
15) Dibenzofuran	1.677	1.599	1.515	1.817	1.642	1.614	1.946	1.741	1.399	1.661	9.73
16) Fluorene	1.395	1.329	1.294	1.470	1.323	1.305	1.660	1.402	1.234	1.379	9.16
17) 2,4,6-Tribromophenol	0.123	0.123	0.127	0.126	0.123	0.129	0.143	0.136	0.122	0.128	5.62
18) Hexachlorobenzene	0.524	0.499	0.472	0.561	0.523	0.489	0.623	0.519	0.451	0.518	9.81
19) Pentachlorophenol	0.101	0.126	0.140	0.110	0.099	0.134	0.119	0.128	0.147	0.123	13.80
20) Phenanthrene	2.000	1.897	1.867	2.300	1.972	1.956	2.620	2.073	1.809	2.055	12.41
21) Anthracene	1.939	1.883	1.901	2.008	1.932	1.953	2.413	2.066	1.838	1.993	8.60
22) I Fluoranthene-d10	----------ISTD----------										
23) Fluoranthene											

Initial Calibration Summary

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample: E4M4609-ICC4609
Lab FileID: 4M99296.D

```
           1.453 1.317 1.229 1.482 1.382 1.285 1.625 1.381 1.173        1.370   10.12
24)  Pyrene
           1.386 1.329 1.303 1.495 1.371 1.327 1.567 1.420 1.262        1.384    6.99
25)  Terphenyl-d14
           0.728 0.688 0.576 0.759 0.722 0.656 0.820 0.706 0.514        0.685   13.60
26)  Benzo[a]anthracene
           1.066 1.089 1.132 1.118 1.083 1.138 1.219 1.186 1.119        1.128    4.34
27)  Chrysene
           1.166 1.135 1.154 1.239 1.175 1.173 1.190 1.267 1.122        1.180    3.95

28) I   Benzo(a)pyrene-d12    ----------------ISTD---------------------
29)  Benzo[b]fluoranthene
           1.649 1.715 1.682 1.760 1.670 1.775 2.060 1.779 1.593        1.743    7.71
30)  Benzo[k]fluoranthene
           1.535 1.553 1.659 1.648 1.682 1.680 1.705 1.828 1.635        1.658    5.18
31)  Benzo[a]pyrene
           1.588 1.606 1.568 1.516 1.942 1.649 2.131 1.748 1.476        1.692   12.74
32)  Indeno[1,2,3-cd]pyrene
           1.363 1.492 1.652 1.424 1.476 1.659 1.421 1.663 1.670        1.536    8.10
33)  Dibenz[a,h]anthracene
           1.113 1.215 1.364 1.048 1.131 1.325 1.303 1.319 1.365        1.243    9.61
34)  Benzo[g,h,i]perylene
           1.331 1.330 1.371 1.302 1.257 1.403 1.421 1.428 1.380        1.358    4.23

35) I   1-Methylnaphthalene-d ----------------ISTD---------------------
36)  1,4-Dioxane
                0.284 0.268       0.221 0.278       0.277 0.263        0.265    8.68
37)  1-Methylnaphthalene
           1.436 1.379 1.320 1.529 1.425 1.393 1.837 1.472 1.293        1.454   11.07

38) I   Fluorene-d10a         ----------------ISTD---------------------
39)  4,6-dinitro-2-methylphenol
           0.080 0.082 0.098 0.088 0.078 0.091       0.099 0.102        0.090   10.33
--------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          M4M4609SIM.M        Fri Apr 02 09:37:01 2021
```

Initial Calibration Verification

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample: E4M4609-ICV4609
Lab FileID: 4M99303.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E4M4609\4m99303.D Vial: 11
Acq On : 1 Apr 2021 9:19 pm Operator: hennys
Sample : icv4609-1 Inst : GCMS4M
Misc : op30792a,e4m4609,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\M4M4609SIM.M (RTE Integrator)
Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
Last Update : Fri Apr 02 09:34:12 2021
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1-Methylnaphthalene-d10	1.000	1.000	0.0	157	0.01	6.89
4	t	Phenol	0.781	0.742	5.0	145	0.01	4.59
5	t	bis(2-Chloroethyl)ether	0.648	0.566	12.7	138	0.00	4.66
7	t	Naphthalene	2.069	1.862	10.0	144	0.00	6.15
8	t	Hexachlorobutadiene	0.464	0.436	6.0	159	0.01	6.30
9	t	2-Methylnaphthalene	1.258	1.239	1.5	160	0.01	6.83
10	t	Hexachlorocyclopentadiene	0.363	0.287	20.9	118	0.01	7.00
12	I	Fluorene-d10	1.000	1.000	0.0	158	0.01	8.35
13	t	Acenaphthylene	1.877	1.525	18.8	134	0.00	7.70
14	t	Acenaphthene	1.232	1.028	16.6	137	0.00	7.88
15	t	Dibenzofuran	1.661	1.586	4.5	156	0.00	8.05
16	t	Fluorene	1.379	1.202	12.8	146	0.01	8.38
18	t	Hexachlorobenzene	0.518	0.471	9.1	152	0.01	8.93
19	t	Pentachlorophenol	0.123	0.102	17.1	121	0.00	9.11
20	t	Phenanthrene	2.055	1.811	11.9	147	0.00	9.32
21	t	Anthracene	1.993	1.625	18.5	132	0.00	9.37
22	I	Fluoranthene-d10	1.000	1.000	0.0	157	0.01	10.47
23	t	Fluoranthene	1.370	1.182	13.7	145	0.01	10.49
24	t	Pyrene	1.384	1.167	15.7	138	0.01	10.71
26	t	Benzo[a]anthracene	1.128	0.933	17.3	129	0.01	11.89
27	t	Chrysene	1.180	1.057	10.4	142	0.01	11.93
28	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	139	0.02	13.15
29	t	Benzo[b]fluoranthene	1.743	1.580	9.4	124	0.01	12.89
30	t	Benzo[k]fluoranthene	1.658	1.633	1.5	135	0.01	12.92
31	t	Benzo[a]pyrene	1.692	1.464	13.5	123	0.02	13.17
32	t	Indeno[1,2,3-cd]pyrene	1.536	1.411	8.1	118	0.00	14.25
33	t	Dibenz[a,h]anthracene	1.243	1.103	11.3	116	0.02	14.27
34	t	Benzo[g,h,i]perylene	1.358	1.282	5.6	127	0.00	14.54
35	I	1-Methylnaphthalene-d10a	1.000	1.000	0.0	157	0.01	6.89
36	t	1,4-Dioxane	0.265	0.278	-4.9	157	-0.01	1.93
37	t	1-Methylnaphthalene	1.454	1.206	17.1	136	0.01	6.92
38	I	Fluorene-d10a	1.000	1.000	0.0	158	0.01	8.35

Initial Calibration Verification

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample: E4M4609-ICV4609
Lab FileID: 4M99303.D

39 t	4,6-dinitro-2-methylpheno	0.090	0.076	15.6	133	0.01	8.43

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4m99296.D M4M4609SIM.M Fri Apr 02 09:37:15 2021

Continuing Calibration Summary

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample: E4M4617-CC4609
Lab FileID: 4M99466.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E4M4617\4m99466.D Vial: 2
Acq On : 9 Apr 2021 9:06 am Operator: hennys
Sample : cc4609-0.5 Inst : GCMS4M
Misc : op30792a,e4m4617,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\M4M4609SIM.M (RTE Integrator)
Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
Last Update : Thu Apr 08 16:35:02 2021
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1-Methylnaphthalene-d10	1.000	1.000	0.0	134	0.00	6.85
2	S	2-Fluorophenol	0.549	0.609	-10.9	139	0.00	3.62
3	S	Phenol-d5	0.704	0.765	-8.7	136	0.00	4.55
4	t	Phenol	0.781	0.835	-6.9	136	0.00	4.56
5	t	bis(2-Chloroethyl)ether	0.648	0.671	-3.5	138	0.00	4.61
6	S	Nitrobenzene-d5	0.468	0.639	-36.5#	171	0.00	5.39
7	t	Naphthalene	2.069	2.150	-3.9	141	0.00	6.10
8	t	Hexachlorobutadiene	0.464	0.445	4.1	131	0.00	6.25
9	t	2-Methylnaphthalene	1.258	1.226	2.5	128	0.00	6.79
10	t	Hexachlorocyclopentadiene	0.363	0.393	-8.3	135	0.00	6.96
11	S	2-Fluorobiphenyl	1.371	1.283	6.4	125	0.00	7.15
12	I	Fluorene-d10	1.000	1.000	0.0	132	0.00	8.30
13	t	Acenaphthylene	1.877	1.874	0.2	128	0.00	7.65
14	t	Acenaphthene	1.232	1.272	-3.2	131	0.00	7.83
15	t	Dibenzofuran	1.661	1.747	-5.2	132	0.00	8.00
16	t	Fluorene	1.379	1.381	-0.1	130	0.00	8.33
17	S	2,4,6-Tribromophenol	0.128	0.195	-52.3#	189	0.00	8.57
18	t	Hexachlorobenzene	0.518	0.507	2.1	129	0.00	8.88
19	t	Pentachlorophenol	0.123	0.264	-114.6#	272#	0.00	9.07
20	t	Phenanthrene	2.055	2.057	-0.1	131	0.00	9.27
21	t	Anthracene	1.993	2.000	-0.4	128	0.00	9.32
22	I	Fluoranthene-d10	1.000	1.000	0.0	124	0.00	10.42
23	t	Fluoranthene	1.370	1.421	-3.7	127	0.00	10.44
24	t	Pyrene	1.384	1.455	-5.1	127	0.00	10.66
25	S	Terphenyl-d14	0.685	0.716	-4.5	126	0.00	10.84
26	t	Benzo[a]anthracene	1.128	1.238	-9.8	129	0.01	11.84
27	t	Chrysene	1.180	1.273	-7.9	124	0.00	11.88
28	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	127	0.00	13.09
29	t	Benzo[b]fluoranthene	1.743	1.822	-4.5	130	0.01	12.84
30	t	Benzo[k]fluoranthene	1.658	1.819	-9.7	126	0.01	12.86
31	t	Benzo[a]pyrene	1.692	1.696	-0.2	123	0.02	13.12
32	t	Indeno[1,2,3-cd]pyrene	1.536	1.812	-18.0	138	0.02	14.16
33	t	Dibenz[a,h]anthracene	1.243	1.430	-15.0	137	0.02	14.19
34	t	Benzo[g,h,i]perylene	1.358	1.507	-11.0	134	0.02	14.45
35	I	1-Methylnaphthalene-d10a	1.000	1.000	0.0	134	0.00	6.85
36	t	1,4-Dioxane	0.265	0.290	-9.4	141	0.01	1.88
37	t	1-Methylnaphthalene	1.454	1.456	-0.1	133	0.00	6.88

Continuing Calibration Summary

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample: E4M4617-CC4609
Lab FileID: 4M99466.D

38	I	Fluorene-d10a	1.000	1.000	0.0	132	0.00	8.30
39	t	4,6-dinitro-2-methylpheno	0.090	0.083	7.8	111	0.00	8.39

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4m99425.D M4M4609SIM.M Fri Apr 09 13:22:34 2021

Continuing Calibration Summary

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample: E4M4618-CC4609
Lab FileID: 4M99497.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E4M4618\4m99497.D Vial: 2
Acq On : 10 Apr 2021 3:01 am Operator: chriss2
Sample : cc4609-1 Inst : GCMS4M
Misc : op30792a,e4m4618,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\M4M4609SIM.M (RTE Integrator)
Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
Last Update : Thu Apr 08 16:35:02 2021
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1-Methylnaphthalene-d10	1.000	1.000	0.0	107	-0.01	6.83
2	S	2-Fluorophenol	0.549	0.556	-1.3	106	-0.01	3.61
3	S	Phenol-d5	0.704	0.705	-0.1	103	-0.01	4.54
4	t	Phenol	0.781	0.773	1.0	103	-0.01	4.55
5	t	bis(2-Chloroethyl)ether	0.648	0.605	6.6	101	-0.01	4.60
6	S	Nitrobenzene-d5	0.468	0.580	-23.9#	126	0.00	5.38
7	t	Naphthalene	2.069	2.001	3.3	106	-0.01	6.09
8	t	Hexachlorobutadiene	0.464	0.412	11.2	102	-0.01	6.24
9	t	2-Methylnaphthalene	1.258	1.157	8.0	102	0.00	6.77
10	t	Hexachlorocyclopentadiene	0.363	0.404	-11.3	114	-0.01	6.94
11	S	2-Fluorobiphenyl	1.371	1.241	9.5	102	0.00	7.14
12	I	Fluorene-d10	1.000	1.000	0.0	105	0.00	8.30
13	t	Acenaphthylene	1.877	1.699	9.5	99	0.00	7.64
14	t	Acenaphthene	1.232	1.159	5.9	102	0.00	7.82
15	t	Dibenzofuran	1.661	1.651	0.6	107	0.00	7.99
16	t	Fluorene	1.379	1.284	6.9	103	0.00	8.32
17	S	2,4,6-Tribromophenol	0.128	0.181	-41.4#	147	0.00	8.56
18	t	Hexachlorobenzene	0.518	0.474	8.5	102	0.00	8.87
19	t	Pentachlorophenol	0.123	0.139	-13.0	109	-0.01	9.06
20	t	Phenanthrene	2.055	1.875	8.8	101	0.00	9.26
21	t	Anthracene	1.993	1.805	9.4	97	0.00	9.31
22	I	Fluoranthene-d10	1.000	1.000	0.0	97	0.00	10.41
23	t	Fluoranthene	1.370	1.326	3.2	100	0.00	10.43
24	t	Pyrene	1.384	1.339	3.3	98	0.00	10.65
25	S	Terphenyl-d14	0.685	0.721	-5.3	106	0.00	10.82
26	t	Benzo[a]anthracene	1.128	1.133	-0.4	96	0.00	11.83
27	t	Chrysene	1.180	1.300	-10.2	107	0.00	11.86
28	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	107	0.00	13.08
29	t	Benzo[b]fluoranthene	1.743	1.665	4.5	100	0.00	12.82
30	t	Benzo[k]fluoranthene	1.658	1.697	-2.4	108	0.00	12.85
31	t	Benzo[a]pyrene	1.692	1.584	6.4	103	0.00	13.09
32	t	Indeno[1,2,3-cd]pyrene	1.536	1.541	-0.3	99	0.00	14.14
33	t	Dibenz[a,h]anthracene	1.243	1.266	-1.9	102	0.00	14.16
34	t	Benzo[g,h,i]perylene	1.358	1.330	2.1	101	0.00	14.42
35	I	1-Methylnaphthalene-d10a	1.000	1.000	0.0	107	-0.01	6.83
36	t	1,4-Dioxane	0.265	0.288	-8.7	111	-0.01	1.86
37	t	1-Methylnaphthalene	1.454	1.358	6.6	104	-0.01	6.87

Continuing Calibration Summary

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample: E4M4618-CC4609
Lab FileID: 4M99497.D

38	I	Fluorene-d10a	1.000	1.000	0.0	105	0.00	8.30
39	t	4,6-dinitro-2-methylpheno	0.090	0.131	-45.6#	151	-0.01	8.38

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4m99333.D M4M4609SIM.M Sat Apr 10 09:00:26 2021

Run Sequence Report

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Run ID: E4M4609 **Method:** SW846 8270E BY SIM **Instrument ID:** GCMS4M

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
E4M4609-DFTPP	4M99293.D	04/01/21 17:59	n/a	DFTPP Tune
E4M4609-IC4609	4M99294.D	04/01/21 18:14	n/a	Initial cal 5
E4M4609-IC4609	4M99295.D	04/01/21 18:34	n/a	Initial cal 2.5
E4M4609-ICC4609	4M99296.D	04/01/21 18:55	n/a	Initial cal 1
E4M4609-IC4609	4M99297.D	04/01/21 19:16	n/a	Initial cal 0.5
E4M4609-IC4609	4M99298.D	04/01/21 19:36	n/a	Initial cal 0.2
E4M4609-IC4609	4M99299.D	04/01/21 19:57	n/a	Initial cal 0.1
E4M4609-IC4609	4M99300.D	04/01/21 20:17	n/a	Initial cal 0.05
E4M4609-IC4609	4M99301.D	04/01/21 20:38	n/a	Initial cal 0.02
E4M4609-IC4609	4M99302.D	04/01/21 20:59	n/a	Initial cal 0.01
E4M4609-ICV4609	4M99303.D	04/01/21 21:19	n/a	Initial cal verification 1

Run Sequence Report

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Run ID: E4M4617 **Method:** SW846 8270E BY SIM **Instrument ID:** GCMS4M

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
E4M4617-DFTPP	4M99465.D	04/09/21 08:55	n/a	DFTPP Tune
E4M4617-CC4609	4M99466.D	04/09/21 09:06	n/a	Continuing cal 0.5
OP32684A-MB1	4M99467.D	04/09/21 09:29	OP32684A	Method Blank
OP32681A-MB1	4M99473.D	04/09/21 09:50	OP32681A	Method Blank
ZZZZZZ	4M99474.D	04/09/21 10:11	OP32681A	(unrelated sample)
ZZZZZZ	4M99475.D	04/09/21 10:31	OP32681A	(unrelated sample)
ZZZZZZ	4M99476.D	04/09/21 10:52	OP32681A	(unrelated sample)
ZZZZZZ	4M99477.D	04/09/21 11:13	OP32681A	(unrelated sample)
ZZZZZZ	4M99478.D	04/09/21 11:34	OP32681A	(unrelated sample)
OP32684A-BS12	4M99468.D	04/09/21 11:55	OP32684A	Blank Spike
OP32684A-BSD12	4M99469.D	04/09/21 12:19	OP32684A	Blank Spike Duplicate
OP32675A-MB1	4M99479.D	04/09/21 12:40	OP32675A	Method Blank
OP32675A-BS12	4M99480.D	04/09/21 13:01	OP32675A	Blank Spike
OP32675A-BSD12	4M99481.D	04/09/21 13:21	OP32675A	Blank Spike Duplicate
ZZZZZZ	4M99482.D	04/09/21 13:42	OP32675A	(unrelated sample)
ZZZZZZ	4M99483.D	04/09/21 14:03	OP32675A	(unrelated sample)
ZZZZZZ	4M99484.D	04/09/21 14:24	OP32675A	(unrelated sample)
ZZZZZZ	4M99485.D	04/09/21 14:44	OP32675A	(unrelated sample)
ZZZZZZ	4M99486.D	04/09/21 15:05	OP32675A	(unrelated sample)
ZZZZZZ	4M99487.D	04/09/21 15:26	OP32675A	(unrelated sample)
ZZZZZZ	4M99488.D	04/09/21 15:47	OP32675A	(unrelated sample)
ZZZZZZ	4M99489.D	04/09/21 16:08	OP32675A	(unrelated sample)
ZZZZZZ	4M99490.D	04/09/21 16:28	OP32675A	(unrelated sample)
ZZZZZZ	4M99491.D	04/09/21 16:49	OP32675A	(unrelated sample)
ZZZZZZ	4M99492.D	04/09/21 17:10	OP32675A	(unrelated sample)
ZZZZZZ	4M99493.D	04/09/21 17:31	OP32675A	(unrelated sample)
ZZZZZZ	4M99494.D	04/09/21 17:52	OP32675A	(unrelated sample)
ZZZZZZ	4M99495.D	04/09/21 18:12	OP32675A	(unrelated sample)
JD22888-7	4M99470.D	04/09/21 18:33	OP32684A	PMC-040521-09
ZZZZZZ	4M99471.D	04/09/21 18:54	OP32684A	(unrelated sample)
ZZZZZZ	4M99472.D	04/09/21 19:15	OP32684A	(unrelated sample)

Run Sequence Report

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Run ID: E4M4618 **Method:** SW846 8270E BY SIM **Instrument ID:** GCMS4M

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
E4M4618-DFTPP	4M99496.D	04/10/21 02:49	n/a	DFTPP Tune
E4M4618-CC4609	4M99497.D	04/10/21 03:01	n/a	Continuing cal 1
OP32741A-MB1	4M99498.D	04/10/21 03:44	OP32741A	Method Blank
OP32741A-BS12	4M99499.D	04/10/21 04:05	OP32741A	Blank Spike
JD22888-5	4M99500.D	04/10/21 04:26	OP32741A	PMC-040521-07
JD22888-3	4M99501.D	04/10/21 04:46	OP32741A	PMC-040521-03
JD22888-4	4M99502.D	04/10/21 05:07	OP32741A	PMC-040521-06
JD22888-6	4M99503.D	04/10/21 05:28	OP32741A	PMC-040521-08
OP32741A-MSA	4M99504.D	04/10/21 05:48	OP32741A	Matrix Spike
OP32741A-MSDA	4M99505.D	04/10/21 06:09	OP32741A	Matrix Spike Duplicate
JD22888-2	4M99506.D	04/10/21 06:30	OP32741A	PMC-040521-02

MS Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99506.D
Acq On : 10 Apr 2021 6:30 am
Operator : chriss2
Sample : jd22888-2
Misc : op32741a,e4m4618,30.2,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 10 09:10:18 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration

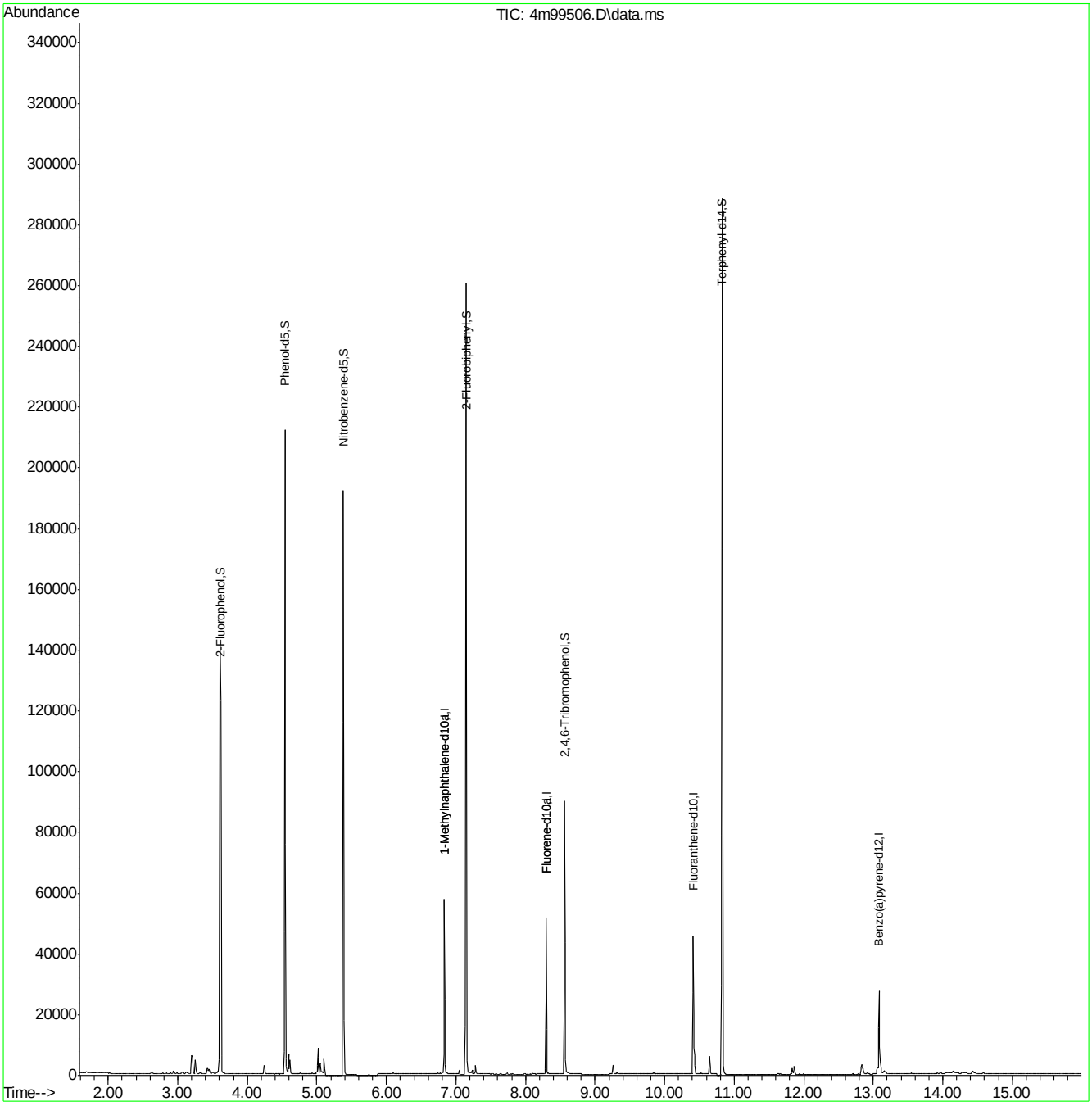
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	6.835	152	18867	4.00	ppm	0.00
12) Fluorene-d10	8.295	176	19758	4.00	ppm	0.00
22) Fluoranthene-d10	10.411	212	29622	4.00	ppm	0.00
28) Benzo(a)pyrene-d12	13.085	264	21899	4.00	ppm	0.00
35) 1-Methylnaphthalene-d10a	6.835	152	18867	4.00	ppm	0.00
38) Fluorene-d10a	8.295	176	19758	4.00	ppm	0.00
System Monitoring Compounds						
2) 2-Fluorophenol	3.617	112	83679	32.33	ppm	0.01
Spiked Amount 50.000	Range 11 - 58		Recovery =	64.66%#		
3) Phenol-d5	4.539	99	108237	32.61	ppm	0.00
Spiked Amount 50.000			Recovery =	65.22%		
6) Nitrobenzene-d5	5.383	82	98255	44.53	ppm	0.00
Spiked Amount 50.000			Recovery =	89.06%		
11) 2-Fluorobiphenyl	7.149	172	193666	29.95	ppm	0.00
Spiked Amount 50.000			Recovery =	59.90%		
17) 2,4,6-Tribromophenol	8.562	330	32556	51.54	ppm	0.00
Spiked Amount 50.000			Recovery =	103.08%		
25) Terphenyl-d14	10.827	244	188490	37.14	ppm	0.00
Spiked Amount 50.000			Recovery =	74.28%		
Target Compounds						Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99506.D
Acq On : 10 Apr 2021 6:30 am
Operator : chriss2
Sample : jd22888-2
Misc : op32741a,e4m4618,30.2,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 10 09:10:18 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99501.D
Acq On : 10 Apr 2021 4:46 am
Operator : chriss2
Sample : jd22888-3
Misc : op32741a,e4m4618,31.0,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 10 09:06:42 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration

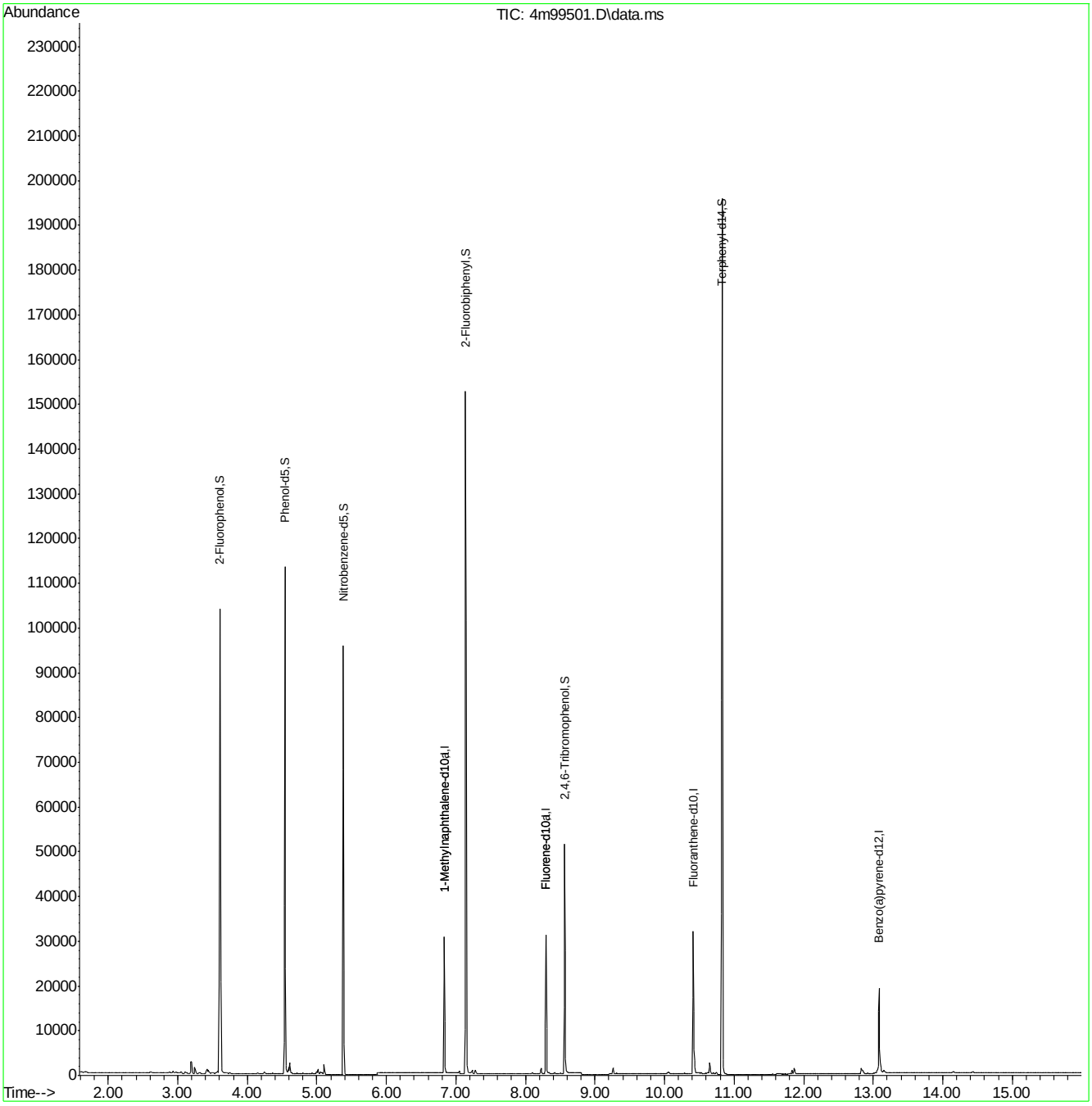
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	6.835	152	10115	4.00	ppm	0.00
12) Fluorene-d10	8.295	176	11303	4.00	ppm	0.00
22) Fluoranthene-d10	10.411	212	20212	4.00	ppm	0.00
28) Benzo(a)pyrene-d12	13.086	264	16598	4.00	ppm	0.00
35) 1-Methylnaphthalene-d10a	6.835	152	10115	4.00	ppm	0.00
38) Fluorene-d10a	8.295	176	11303	4.00	ppm	0.00
System Monitoring Compounds						
2) 2-Fluorophenol	3.607	112	46754	33.69	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery = 67.38%#			
3) Phenol-d5	4.539	99	56426	31.71	ppm	0.00
Spiked Amount 50.000			Recovery = 63.42%			
6) Nitrobenzene-d5	5.379	82	48861	41.30	ppm	0.00
Spiked Amount 50.000			Recovery = 82.60%			
11) 2-Fluorobiphenyl	7.140	172	106789	30.81	ppm	0.00
Spiked Amount 50.000			Recovery = 61.62%			
17) 2,4,6-Tribromophenol	8.561	330	19068	52.77	ppm	0.00
Spiked Amount 50.000			Recovery = 105.54%			
25) Terphenyl-d14	10.829	244	132220	38.18	ppm	0.00
Spiked Amount 50.000			Recovery = 76.36%			
Target Compounds						Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99501.D
Acq On : 10 Apr 2021 4:46 am
Operator : chriss2
Sample : jd22888-3
Misc : op32741a,e4m4618,31.0,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 10 09:06:42 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99502.D
Acq On : 10 Apr 2021 5:07 am
Operator : chriss2
Sample : jd22888-4
Misc : op32741a,e4m4618,30.2,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 10 09:07:28 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration

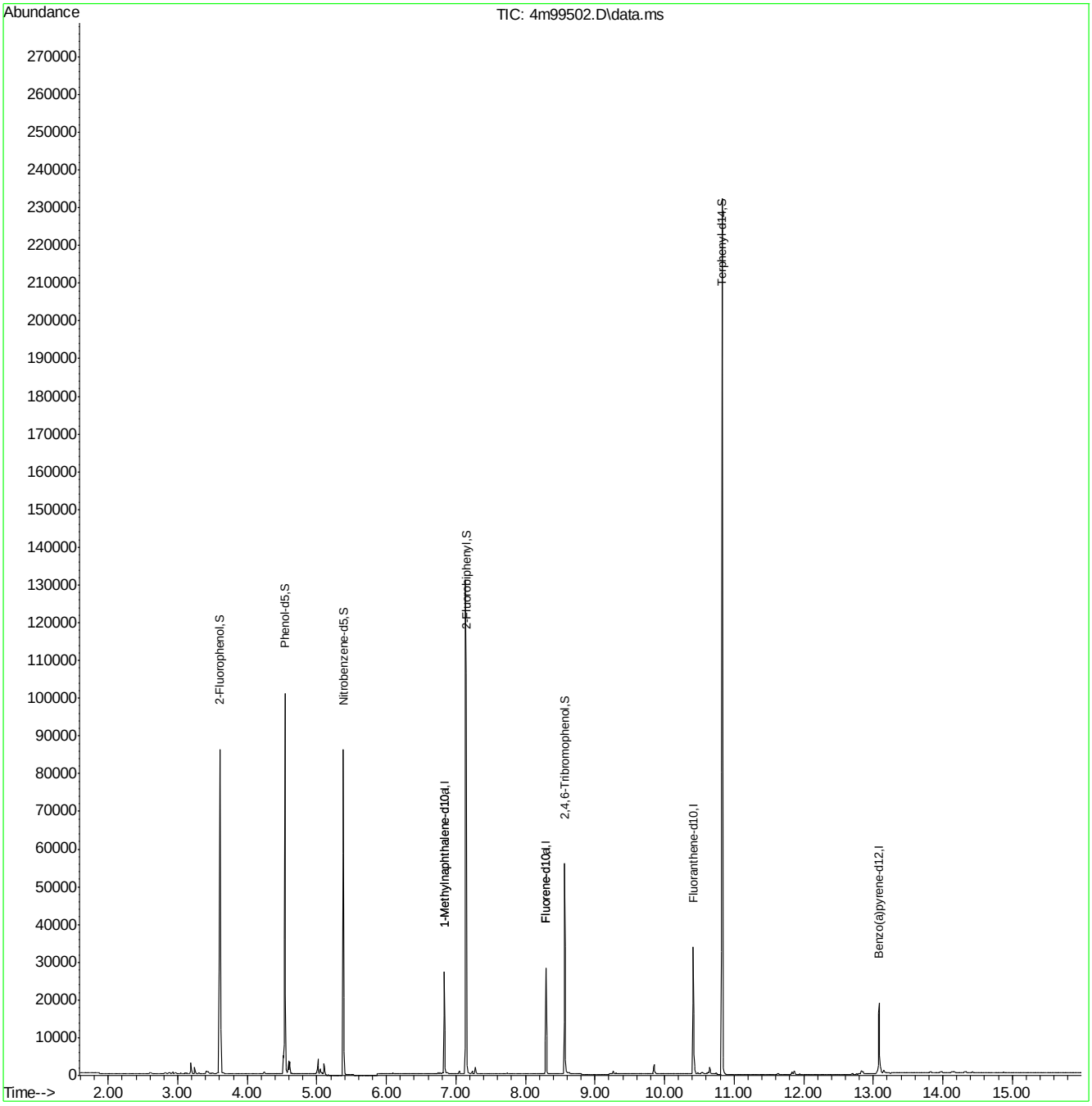
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	6.835	152	8475	4.00	ppm	0.00
12) Fluorene-d10	8.295	176	10240	4.00	ppm	0.00
22) Fluoranthene-d10	10.411	212	22027	4.00	ppm	0.00
28) Benzo(a)pyrene-d12	13.086	264	16984	4.00	ppm	0.00
35) 1-Methylnaphthalene-d10a	6.835	152	8475	4.00	ppm	0.00
38) Fluorene-d10a	8.295	176	10240	4.00	ppm	0.00
System Monitoring Compounds						
2) 2-Fluorophenol	3.607	112	40540	34.87	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery =	69.74%#		
3) Phenol-d5	4.539	99	51249	34.37	ppm	0.00
Spiked Amount 50.000			Recovery =	68.74%		
6) Nitrobenzene-d5	5.379	82	42799	43.18	ppm	0.00
Spiked Amount 50.000			Recovery =	86.36%		
11) 2-Fluorobiphenyl	7.149	172	99558	34.28	ppm	0.00
Spiked Amount 50.000			Recovery =	68.56%		
17) 2,4,6-Tribromophenol	8.561	330	20824	63.61	ppm	0.00
Spiked Amount 50.000			Recovery =	127.22%		
25) Terphenyl-d14	10.829	244	152363	40.37	ppm	0.00
Spiked Amount 50.000			Recovery =	80.74%		
Target Compounds						Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99502.D
Acq On : 10 Apr 2021 5:07 am
Operator : chriss2
Sample : jd22888-4
Misc : op32741a,e4m4618,30.2,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 10 09:07:28 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99500.D
Acq On : 10 Apr 2021 4:26 am
Operator : chriss2
Sample : jd22888-5
Misc : op32741a,e4m4618,30.8,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 10 09:06:02 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	6.835	152	11415	4.00	ppm	0.00
12) Fluorene-d10	8.295	176	12452	4.00	ppm	0.00
22) Fluoranthene-d10	10.411	212	21702	4.00	ppm	0.00
28) Benzo(a)pyrene-d12	13.077	264	17827	4.00	ppm	0.00
35) 1-Methylnaphthalene-d10a	6.835	152	11415	4.00	ppm	0.00
38) Fluorene-d10a	8.295	176	12452	4.00	ppm	0.00
System Monitoring Compounds						
2) 2-Fluorophenol	3.607	112	48976	31.28	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery = 62.56%#			
3) Phenol-d5	4.539	99	61171	30.46	ppm	0.00
Spiked Amount 50.000			Recovery = 60.92%			
6) Nitrobenzene-d5	5.380	82	52024	38.97	ppm	0.00
Spiked Amount 50.000			Recovery = 77.94%			
11) 2-Fluorobiphenyl	7.140	172	116235	29.71	ppm	0.00
Spiked Amount 50.000			Recovery = 59.42%			
17) 2,4,6-Tribromophenol	8.562	330	20313	51.02	ppm	0.00
Spiked Amount 50.000			Recovery = 102.04%			
25) Terphenyl-d14	10.824	244	135787	36.52	ppm	0.00
Spiked Amount 50.000			Recovery = 73.04%			

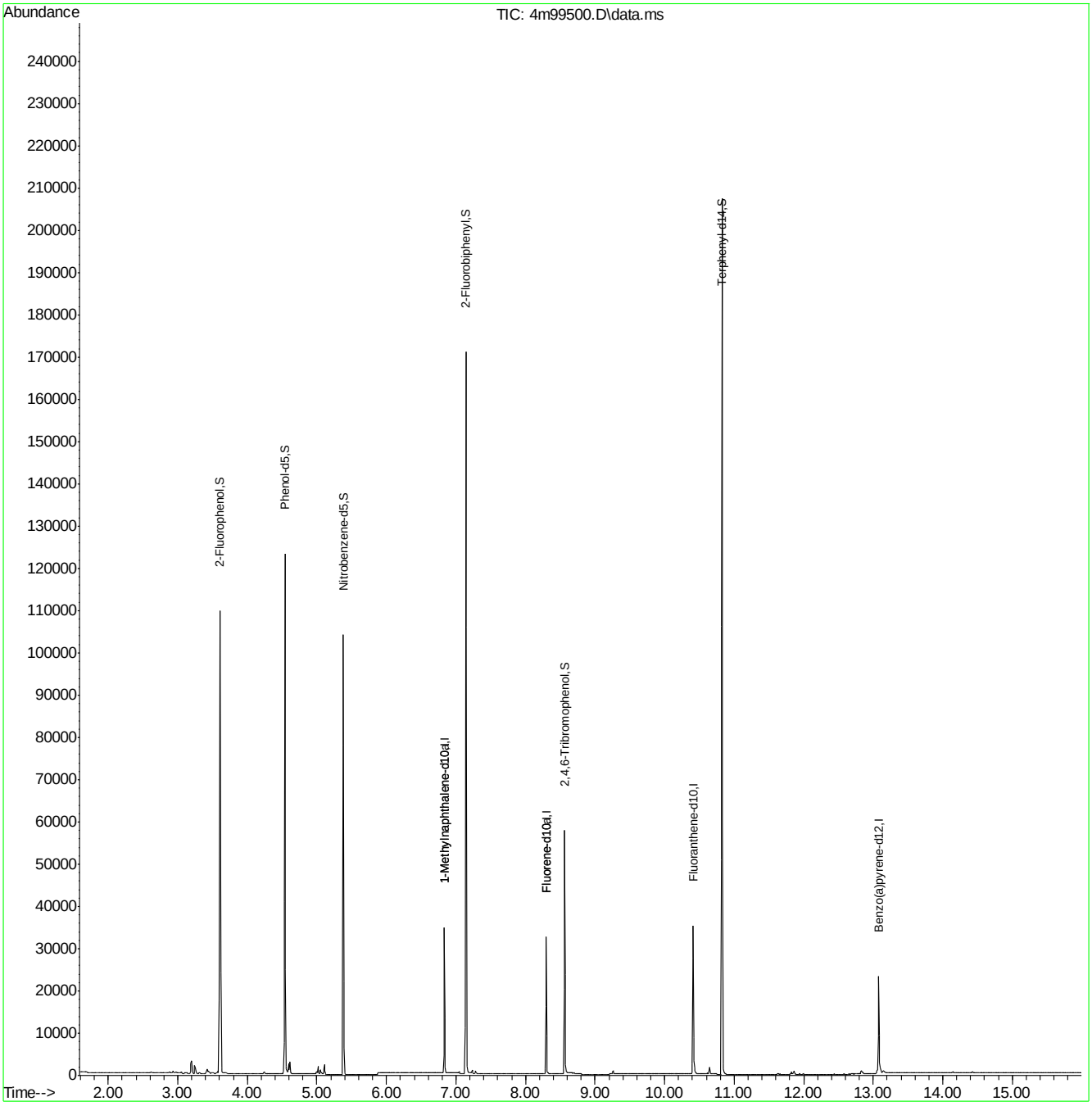
Target Compounds	Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99500.D
Acq On : 10 Apr 2021 4:26 am
Operator : chriss2
Sample : jd22888-5
Misc : op32741a,e4m4618,30.8,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 10 09:06:02 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99503.D
Acq On : 10 Apr 2021 5:28 am
Operator : chriss2
Sample : jd22888-6
Misc : op32741a,e4m4618,30.2,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 10 09:08:25 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration

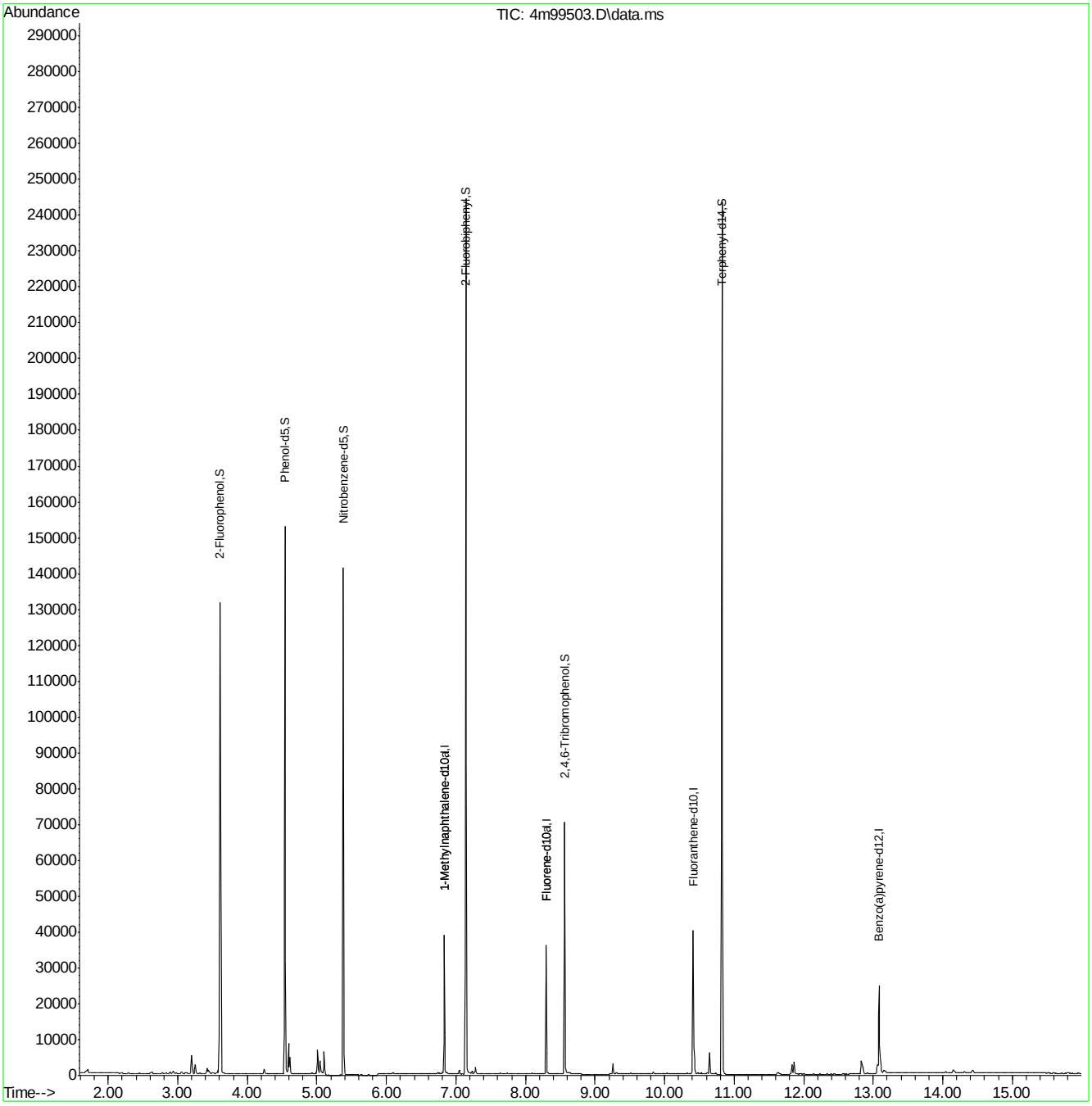
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	6.835	152	14305	4.00	ppm	0.00
12) Fluorene-d10	8.295	176	15435	4.00	ppm	0.00
22) Fluoranthene-d10	10.411	212	26042	4.00	ppm	0.00
28) Benzo(a)pyrene-d12	13.085	264	20526	4.00	ppm	0.00
35) 1-Methylnaphthalene-d10a	6.835	152	14305	4.00	ppm	0.00
38) Fluorene-d10a	8.295	176	15435	4.00	ppm	0.00
System Monitoring Compounds						
2) 2-Fluorophenol	3.607	112	60506	30.83	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery = 61.66%#			
3) Phenol-d5	4.540	99	78271	31.10	ppm	0.00
Spiked Amount 50.000			Recovery = 62.20%			
6) Nitrobenzene-d5	5.380	82	70438	42.10	ppm	0.00
Spiked Amount 50.000			Recovery = 84.20%			
11) 2-Fluorobiphenyl	7.140	172	144997	29.58	ppm	0.00
Spiked Amount 50.000			Recovery = 59.16%			
17) 2,4,6-Tribromophenol	8.562	330	26238	53.17	ppm	0.00
Spiked Amount 50.000			Recovery = 106.34%			
25) Terphenyl-d14	10.825	244	159364	35.71	ppm	0.00
Spiked Amount 50.000			Recovery = 71.42%			
Target Compounds						Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99503.D
Acq On : 10 Apr 2021 5:28 am
Operator : chriss2
Sample : jd22888-6
Misc : op32741a,e4m4618,30.2,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 10 09:08:25 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
04/10/21 22:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99470.D
Acq On : 9 Apr 2021 6:33 pm
Operator : hennys
Sample : jd22888-7
Misc : op32684a,e4m4617,1050,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 10 08:33:13 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration

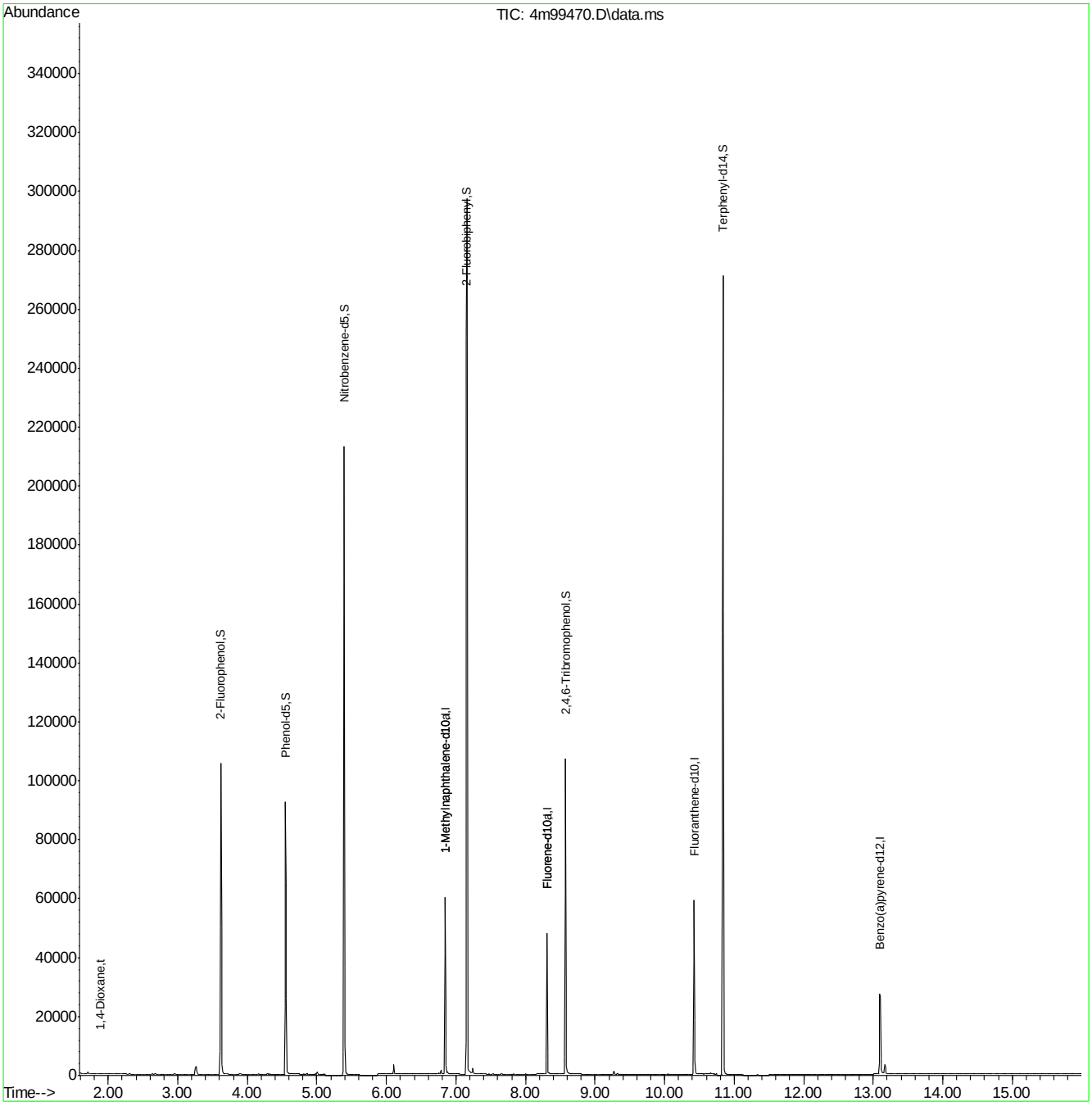
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	6.846	152	20381	4.00	ppm	0.00
12) Fluorene-d10	8.309	176	21725	4.00	ppm	0.00
22) Fluoranthene-d10	10.424	212	36644	4.00	ppm	0.00
28) Benzo(a)pyrene-d12	13.093	264	26229	4.00	ppm	0.00
35) 1-Methylnaphthalene-d10a	6.846	152	20381	4.00	ppm	0.00
38) Fluorene-d10a	8.309	176	21725	4.00	ppm	0.00
System Monitoring Compounds						
2) 2-Fluorophenol	3.617	112	51857	18.55	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery = 37.10%			
3) Phenol-d5	4.551	99	46540	12.98	ppm	0.00
Spiked Amount 50.000			Recovery = 25.96%			
6) Nitrobenzene-d5	5.392	82	107078	44.92	ppm	0.00
Spiked Amount 50.000			Recovery = 89.84%			
11) 2-Fluorobiphenyl	7.159	172	226807	32.47	ppm	0.00
Spiked Amount 50.000			Recovery = 64.94%			
17) 2,4,6-Tribromophenol	8.575	330	40062	57.68	ppm	0.00
Spiked Amount 50.000			Recovery = 115.36%			
25) Terphenyl-d14	10.839	244	177538	28.28	ppm	0.00
Spiked Amount 50.000			Recovery = 56.56%			
Target Compounds						Qvalue
36) 1,4-Dioxane	1.889	88	89m	0.07	ppm	

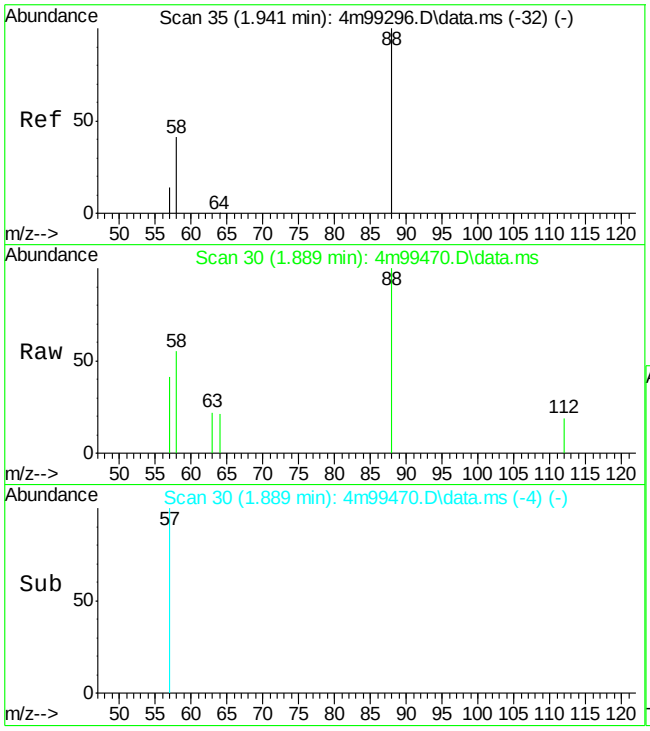
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99470.D
Acq On : 9 Apr 2021 6:33 pm
Operator : hennys
Sample : jd22888-7
Misc : op32684a,e4m4617,1050,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 10 08:33:13 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration

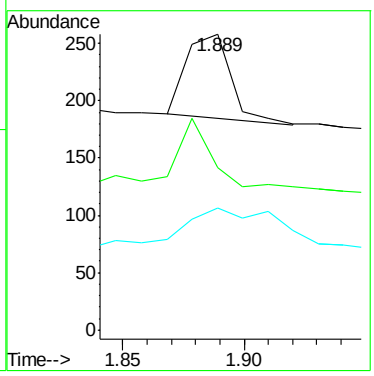




#36
1,4-Dioxane
Concen: 0.07 ppm m
RT: 1.889 min Scan# 30
Delta R.T. 0.021 min
Lab File: 4m99470.D
Acq: 9 Apr 2021 6:33 pm

Tgt Ion: 88 Resp: 89

Ion	Ratio	Lower	Upper
88	100		
58	55.0	0.0	37.8#
57	41.1	3.4	43.4



Manual Integration Approval Summary

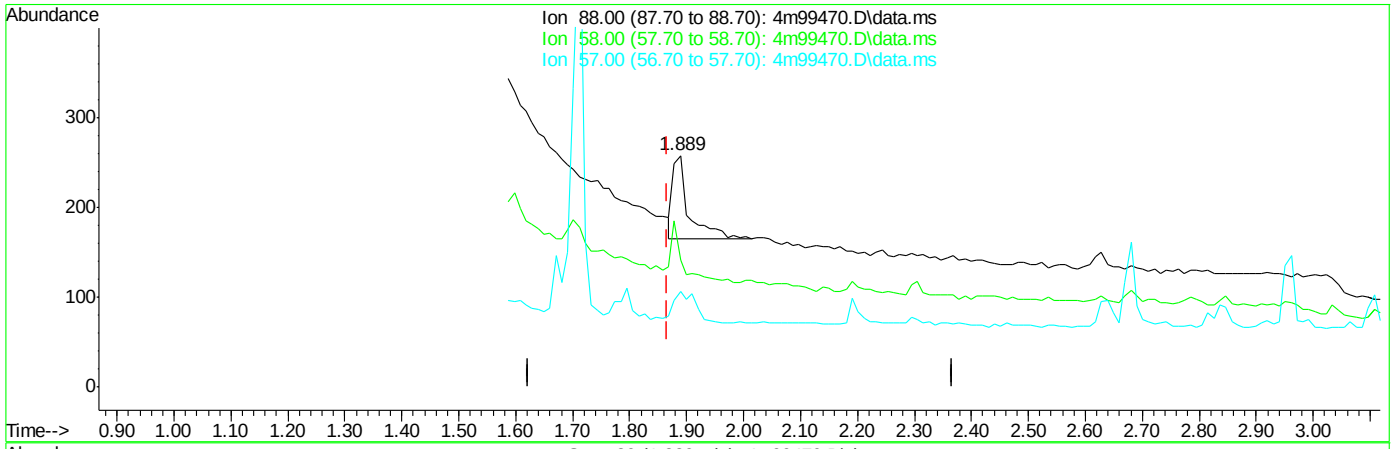
Sample Number: JD22888-7
Lab FileID: 4M99470.D
Injection Time: 04/09/21 18:33
Method: SW846 8270E BY SIM
Analyst approved: 04/10/21 08:37 Ying Li
Supervisor approved: 04/10/21 22:49 Nina Pandya

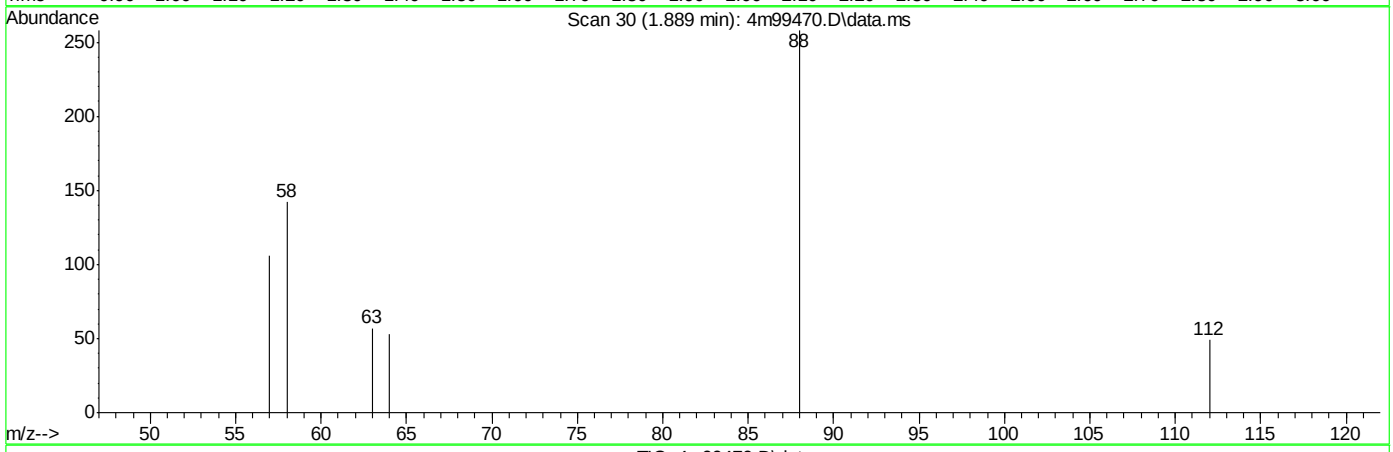
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,4-Dioxane	123-91-1		1.89	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99470.D
Acq On : 9 Apr 2021 6:33 pm
Operator : hennys
Sample : jd22888-7
Misc : op32684a,e4m4617,1050,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 10 08:30:01 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration





TIC: 4m99470.D\data.ms

(36) 1,4-Dioxane (t)

1.889min (+0.021) 0.14ppm

response 185

Ion	Exp%	Act%
88.00	100	100
58.00	17.80	19.14
57.00	23.40	38.27
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
04/12/21 11:50

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99467.D
Acq On : 9 Apr 2021 9:29 am
Operator : hennys
Sample : op32684a-mb1
Misc : op32684a,e4m4617,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 09 13:31:24 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration

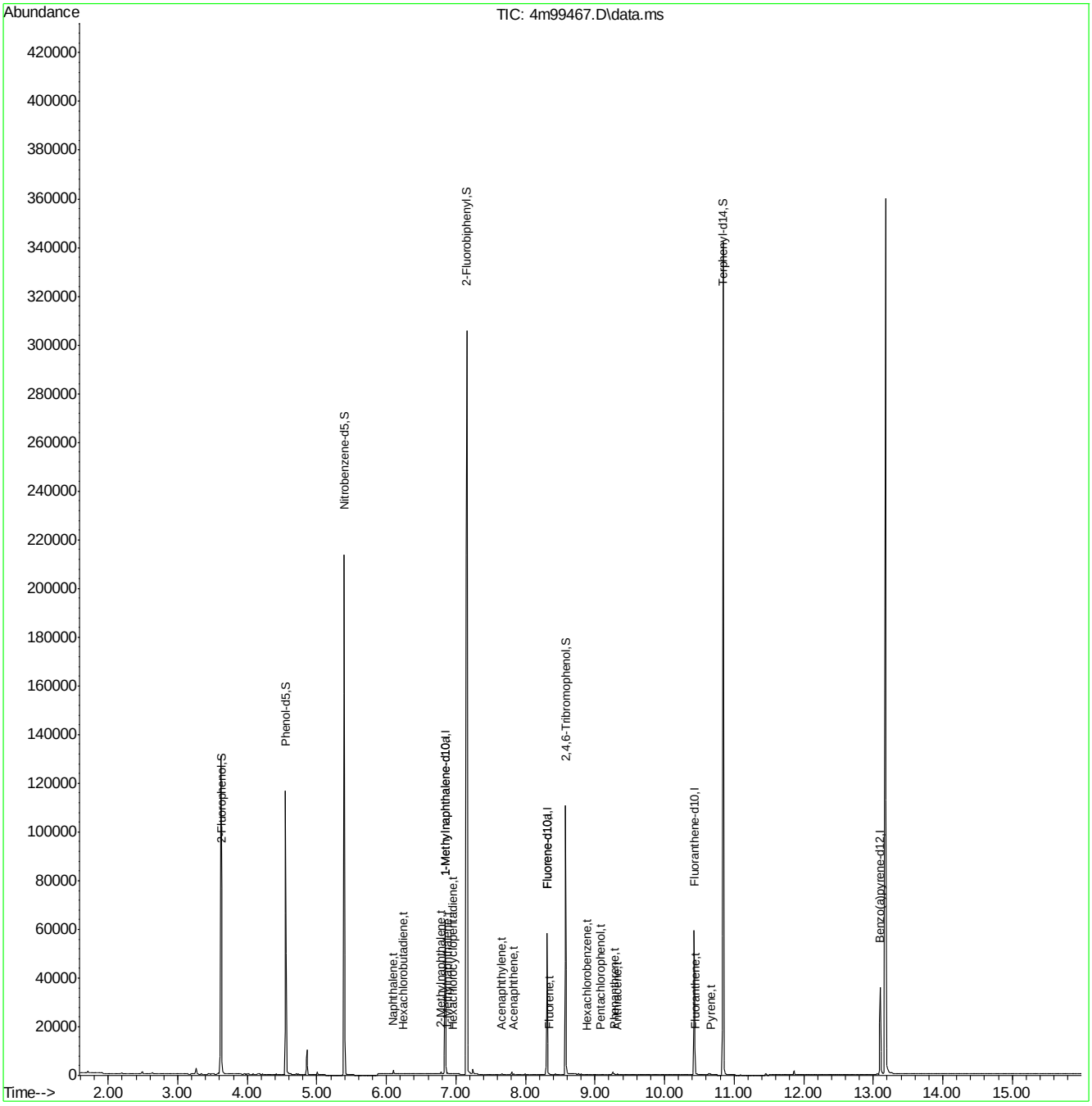
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1-Methylnaphthalene-d10	6.846	152	21744	4.00	ppm		0.00
12) Fluorene-d10	8.309	176	23194	4.00	ppm		0.00
22) Fluoranthene-d10	10.428	212	37533	4.00	ppm		0.01
28) Benzo(a)pyrene-d12	13.102	264	27925	4.00	ppm		0.02
35) 1-Methylnaphthalene-d10a	6.846	152	21744	4.00	ppm		0.00
38) Fluorene-d10a	8.309	176	23194	4.00	ppm		0.00
System Monitoring Compounds							
2) 2-Fluorophenol	3.627	112	67708	22.70	ppm		0.01
Spiked Amount 50.000	Range 11 - 58		Recovery = 45.40%				
3) Phenol-d5	4.551	99	60404	15.79	ppm		0.00
Spiked Amount 50.000			Recovery = 31.58%				
6) Nitrobenzene-d5	5.392	82	110070	43.28	ppm		0.00
Spiked Amount 50.000			Recovery = 86.56%				
11) 2-Fluorobiphenyl	7.159	172	215628	28.94	ppm		0.00
Spiked Amount 50.000			Recovery = 57.88%				
17) 2,4,6-Tribromophenol	8.575	330	40222	54.24	ppm		0.00
Spiked Amount 50.000			Recovery = 108.48%				
25) Terphenyl-d14	10.843	244	223165	34.70	ppm		0.01
Spiked Amount 50.000			Recovery = 69.40%				
Target Compounds							Qvalue
7) Naphthalene	6.103	128	975	0.09	ppm		98
8) Hexachlorobutadiene	6.246	225	14	0.01	ppm		82
9) 2-Methylnaphthalene	6.785	142	364	0.05	ppm		97
10) Hexachlorocyclopentadiene	6.956	237	39	0.02	ppm		91
13) Acenaphthylene	7.659	152	126	0.01	ppm		93
14) Acenaphthene	7.829	153	69	0.01	ppm	#	49
16) Fluorene	8.336	166	129	0.02	ppm		87
18) Hexachlorobenzene	8.881	284	31m	0.01	ppm		
19) Pentachlorophenol	9.081	266	123	0.17	ppm		83
20) Phenanthrene	9.274	178	274	0.02	ppm		86
21) Anthracene	9.325	178	109	0.01	ppm		95
23) Fluoranthene	10.445	202	98	0.01	ppm		72
24) Pyrene	10.664	202	83	0.01	ppm		97
37) 1-Methylnaphthalene	6.879	142	173	0.02	ppm		95

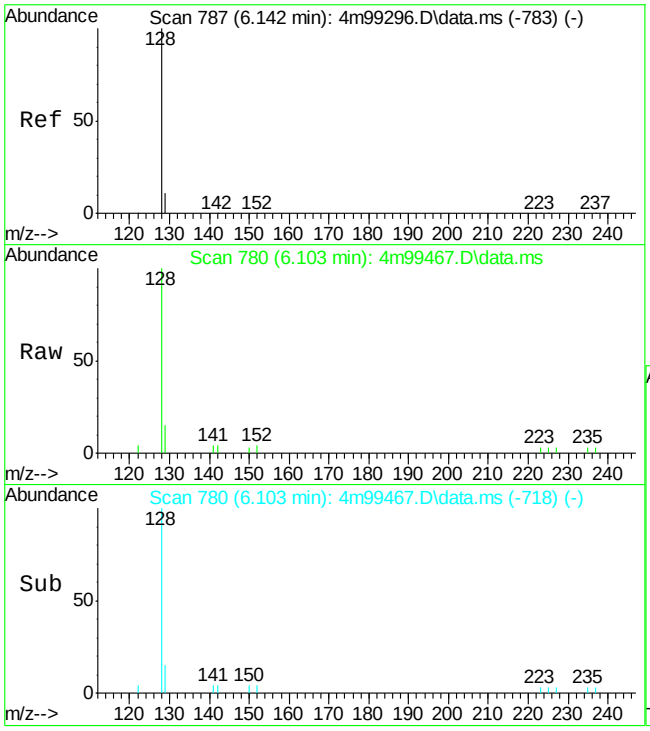
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99467.D
Acq On : 9 Apr 2021 9:29 am
Operator : hennys
Sample : op32684a-mb1
Misc : op32684a,e4m4617,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 09 13:31:24 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration

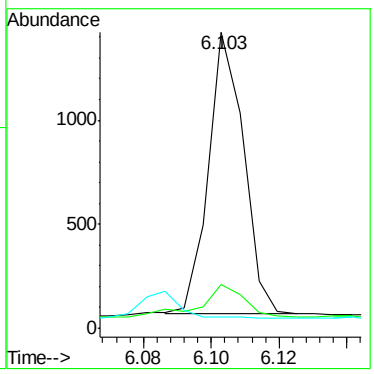


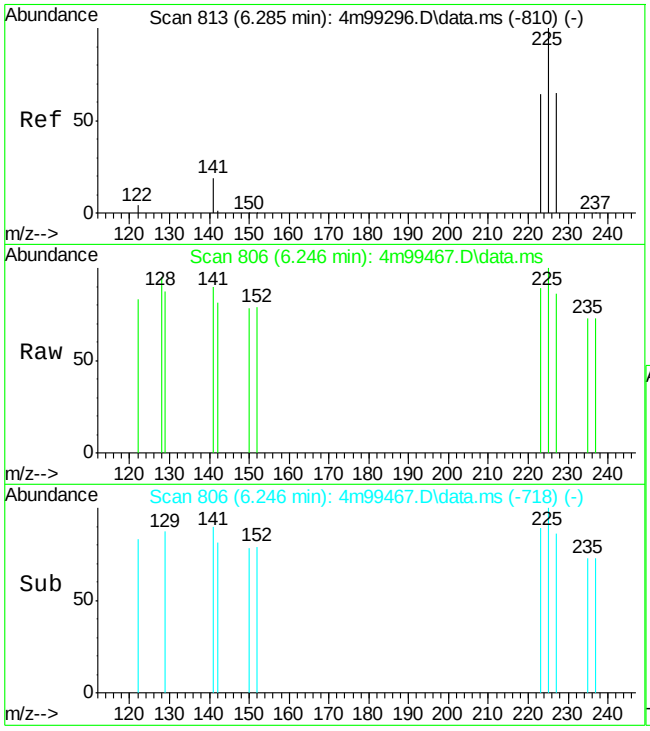


#7
Naphthalene
Concen: 0.09 ppm
RT: 6.103 min Scan# 780
Delta R.T. 0.000 min
Lab File: 4m99467.D
Acq: 9 Apr 2021 9:29 am

Tgt Ion:128 Resp: 975

Ion	Ratio	Lower	Upper
128	100		
129	10.0	0.0	40.9
122	0.0	0.0	30.3

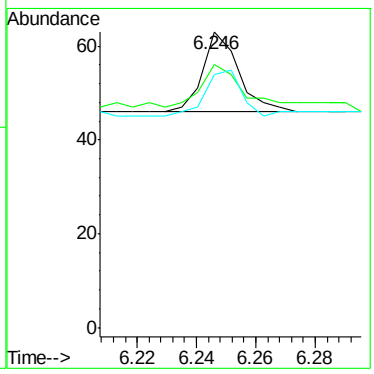


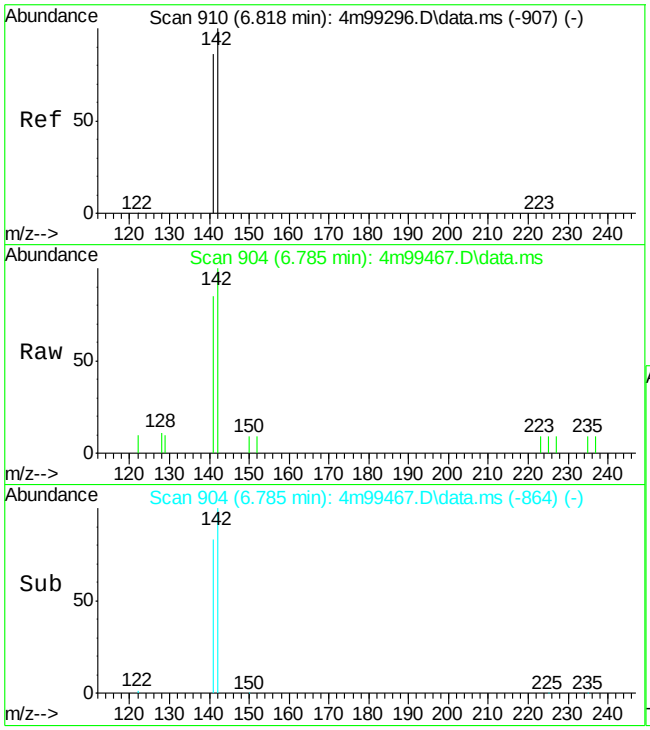


#8
Hexachlorobutadiene
Concen: 0.01 ppm
RT: 6.246 min Scan# 806
Delta R.T. 0.000 min
Lab File: 4m99467.D
Acq: 9 Apr 2021 9:29 am

Tgt Ion:225 Resp: 14

Ion	Ratio	Lower	Upper
225	100		
223	50.0	33.6	93.6
227	50.0	34.7	94.7

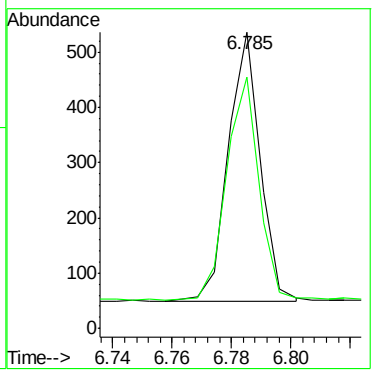


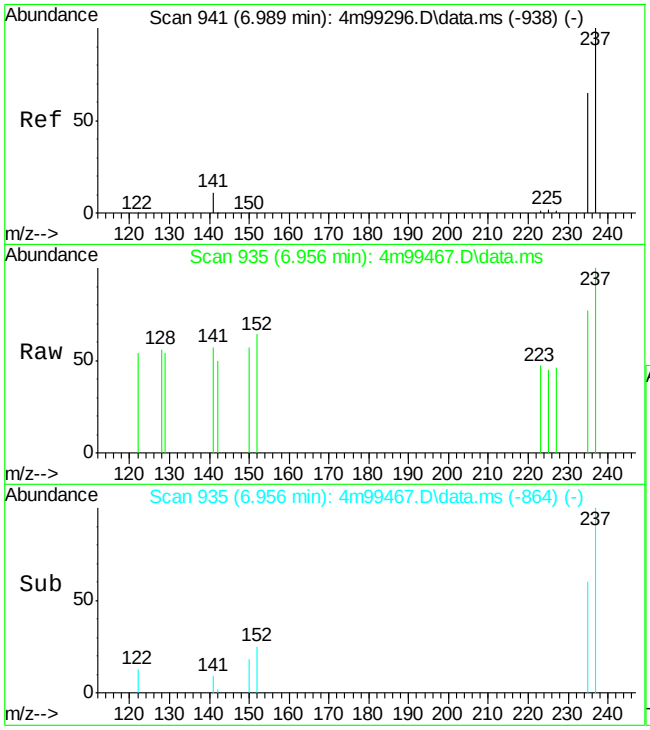


#9
2-Methylnaphthalene
Concen: 0.05 ppm
RT: 6.785 min Scan# 904
Delta R.T. 0.006 min
Lab File: 4m99467.D
Acq: 9 Apr 2021 9:29 am

Tgt Ion:142 Resp: 364

Ion	Ratio	Lower	Upper
142	100		
141	82.9	56.0	116.0

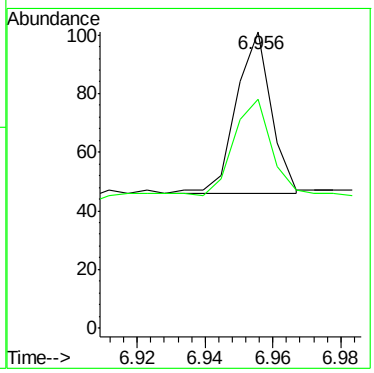


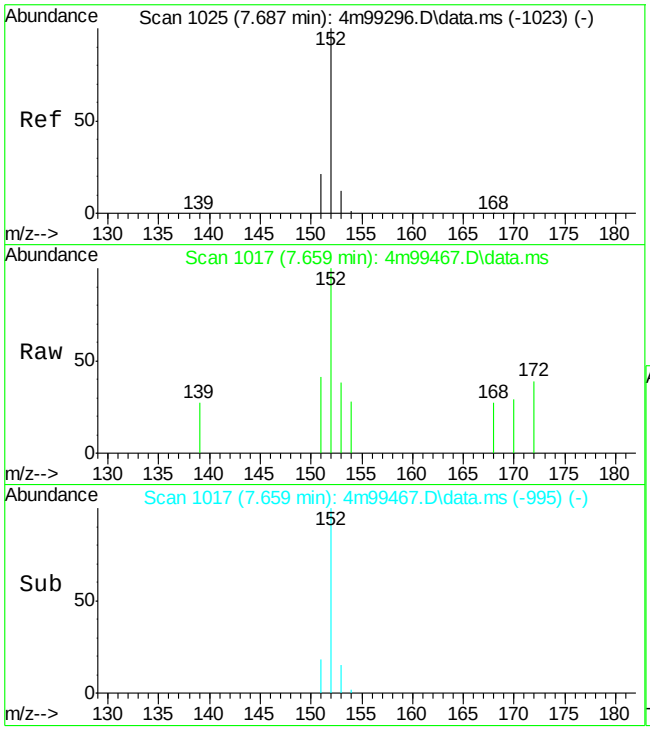


#10
Hexachlorocyclopentadiene
Concen: 0.02 ppm
RT: 6.956 min Scan# 935
Delta R.T. 0.006 min
Lab File: 4m99467.D
Acq: 9 Apr 2021 9:29 am

Tgt Ion:237 Resp: 39

Ion	Ratio	Lower	Upper
237	100		
235	57.8	35.2	95.2

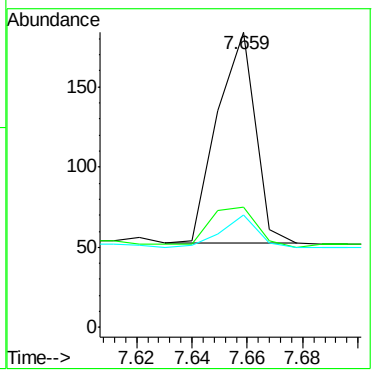


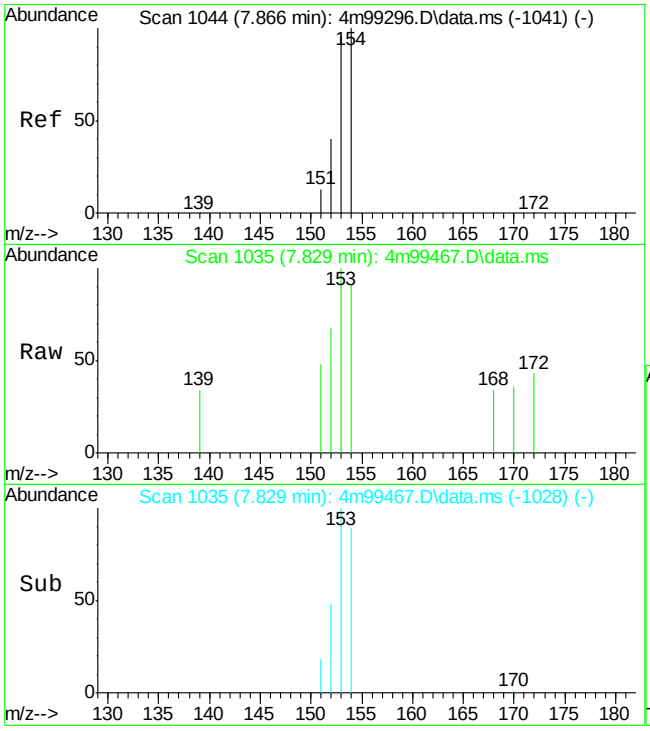


#13
Acenaphthylene
Concen: 0.01 ppm
RT: 7.659 min Scan# 1017
Delta R.T. 0.009 min
Lab File: 4m99467.D
Acq: 9 Apr 2021 9:29 am

Tgt Ion:152 Resp: 126

Ion	Ratio	Lower	Upper
152	100		
151	18.3	0.0	51.3
153	15.3	0.0	42.2

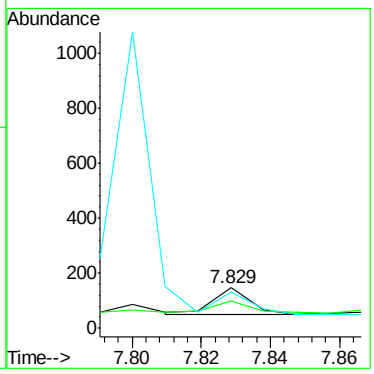


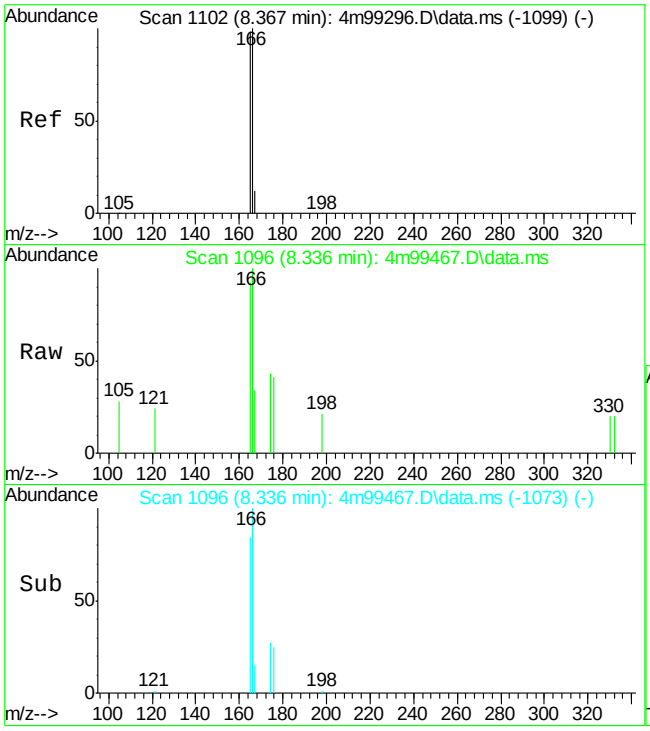


#14
Acenaphthene
Concen: 0.01 ppm
RT: 7.829 min Scan# 1035
Delta R.T. 0.000 min
Lab File: 4m99467.D
Acq: 9 Apr 2021 9:29 am

Tgt Ion:153 Resp: 69

Ion	Ratio	Lower	Upper
153	100		
152	45.1	12.2	72.2
154	33.7	74.9	134.9#

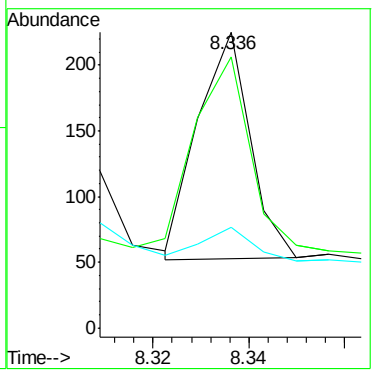


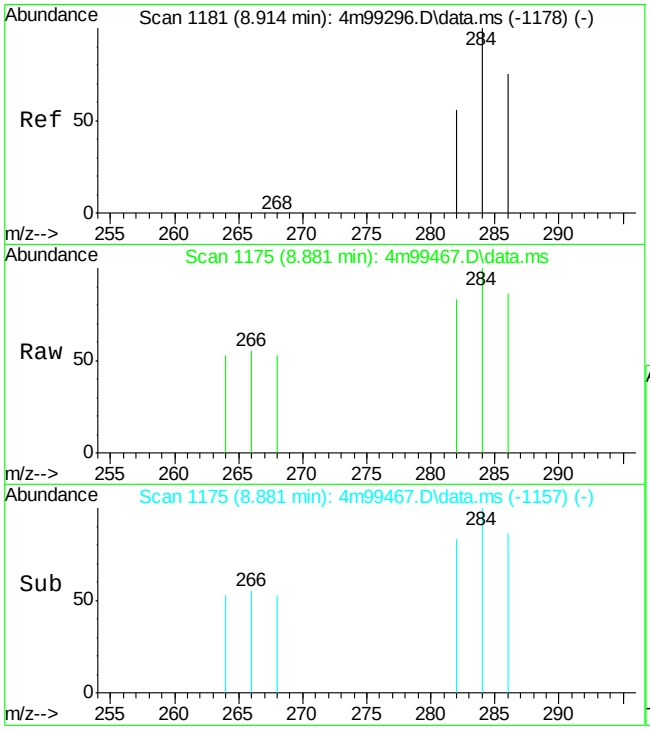


#16
Fluorene
Concen: 0.02 ppm
RT: 8.336 min Scan# 1096
Delta R.T. 0.007 min
Lab File: 4m99467.D
Acq: 9 Apr 2021 9:29 am

Tgt Ion:166 Resp: 129

Ion	Ratio	Lower	Upper
166	100		
165	83.4	67.5	127.5
167	14.2	0.0	42.5

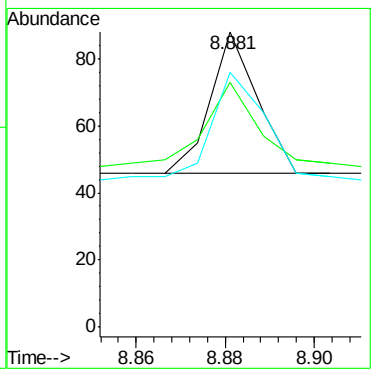


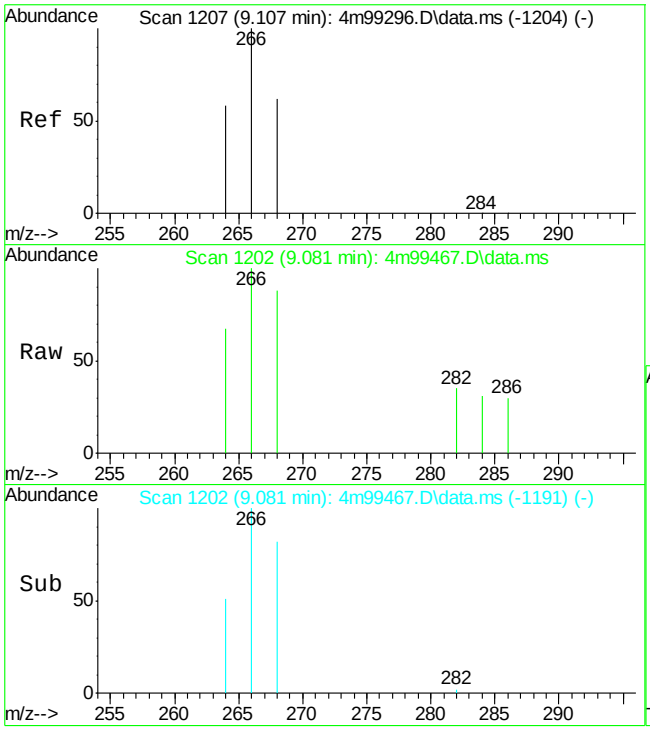


#18
Hexachlorobenzene
Concen: 0.01 ppm m
RT: 8.881 min Scan# 1175
Delta R.T. 0.007 min
Lab File: 4m99467.D
Acq: 9 Apr 2021 9:29 am

Tgt Ion:284 Resp: 31

Ion	Ratio	Lower	Upper
284	100		
282	83.0	25.9	85.9
286	86.4	44.9	104.9

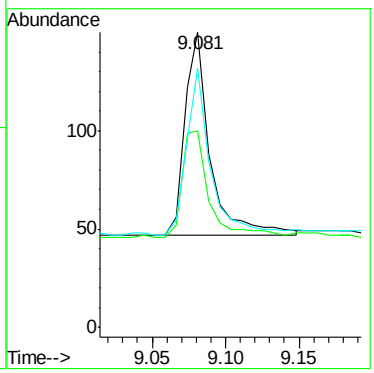


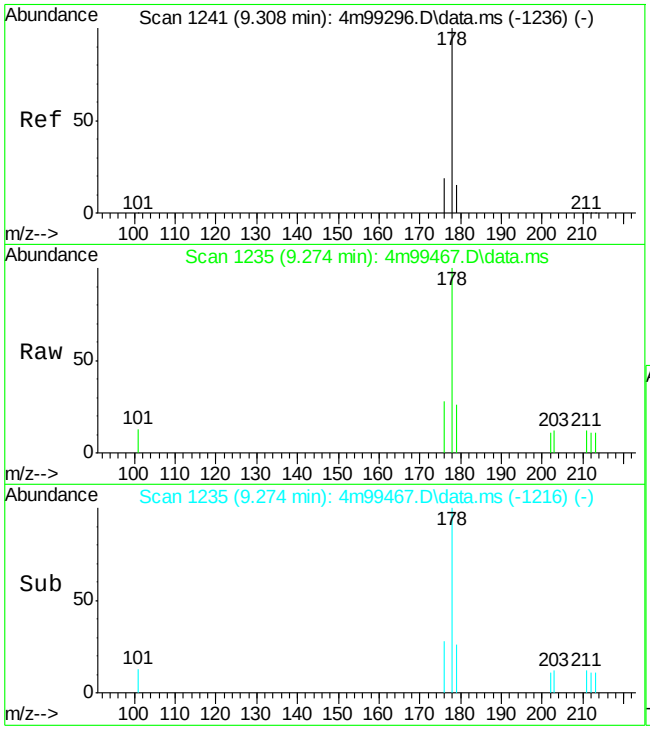


#19
Pentachlorophenol
Concen: 0.17 ppm
RT: 9.081 min Scan# 1202
Delta R.T. 0.007 min
Lab File: 4m99467.D
Acq: 9 Apr 2021 9:29 am

Tgt Ion:266 Resp: 123

Ion	Ratio	Lower	Upper
266	100		
264	52.0	27.6	87.6
268	81.9	31.6	91.6

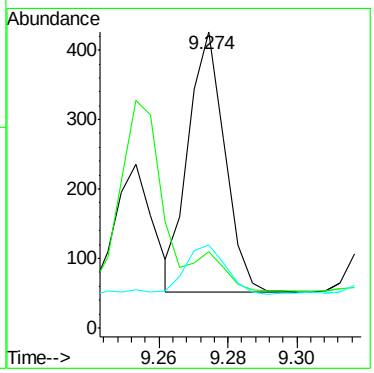


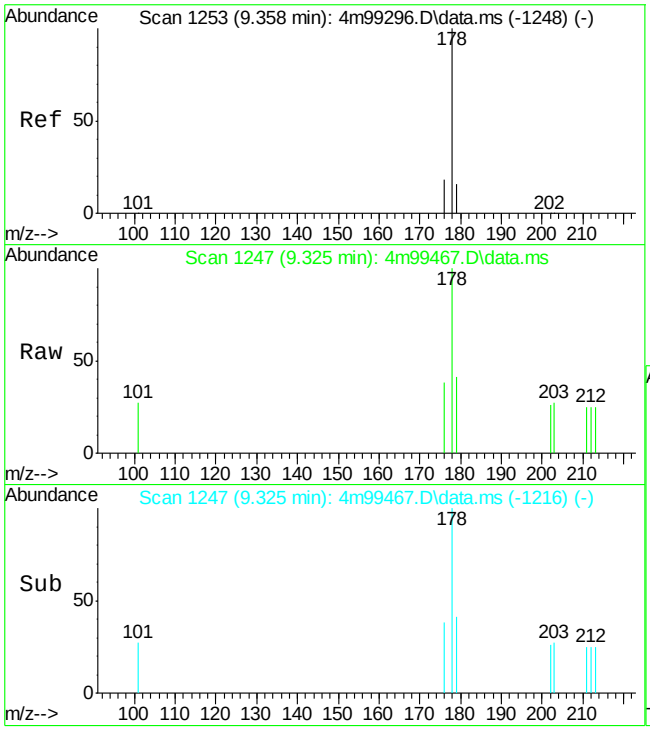


#20
Phenanthrene
Concen: 0.02 ppm
RT: 9.274 min Scan# 1235
Delta R.T. 0.008 min
Lab File: 4m99467.D
Acq: 9 Apr 2021 9:29 am

Tgt Ion:178 Resp: 274

Ion	Ratio	Lower	Upper
178	100		
179	1.8	0.0	45.0
176	19.1	0.0	49.2

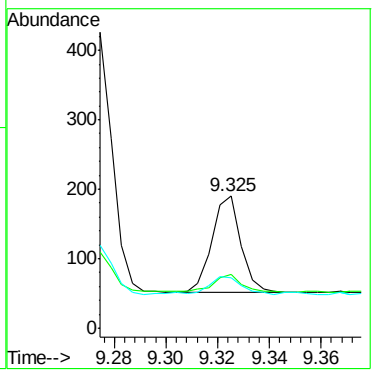


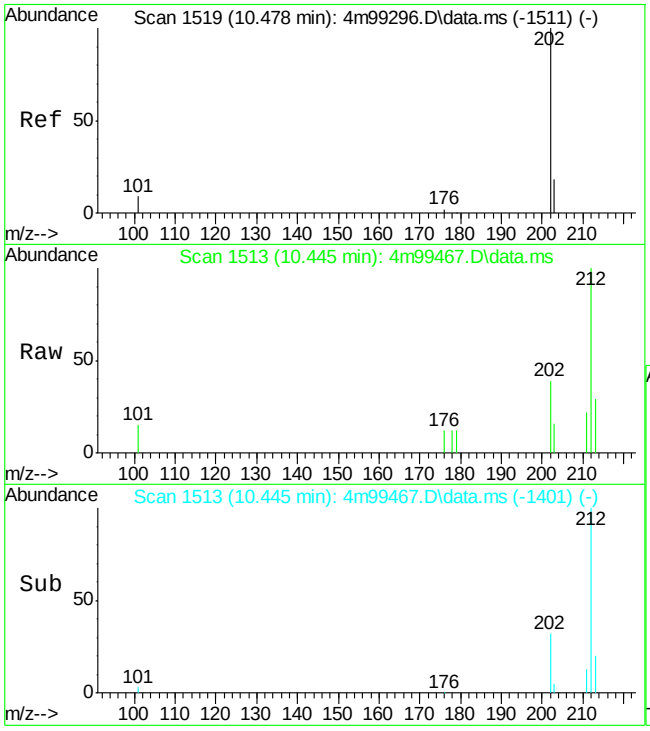


#21
Anthracene
Concen: 0.01 ppm
RT: 9.325 min Scan# 1247
Delta R.T. 0.008 min
Lab File: 4m99467.D
Acq: 9 Apr 2021 9:29 am

Tgt Ion:178 Resp: 109

Ion	Ratio	Lower	Upper
178	100		
179	18.0	0.0	46.2
176	15.8	0.0	48.3

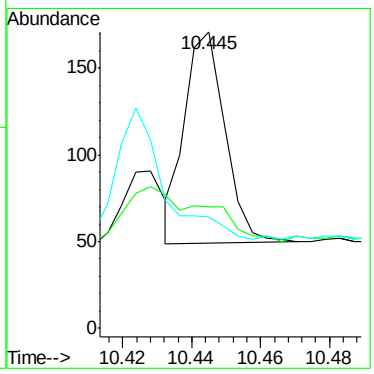


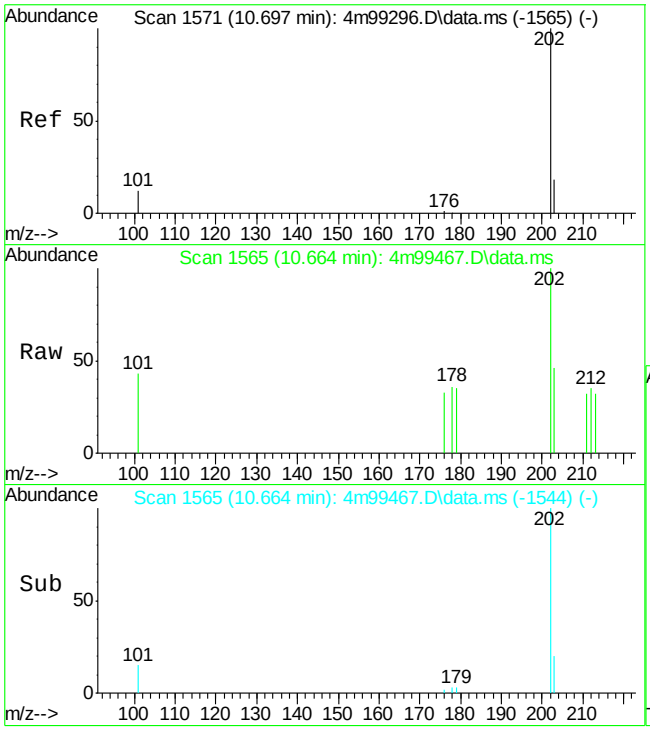


#23
Fluoranthene
Concen: 0.01 ppm
RT: 10.445 min Scan# 1513
Delta R.T. 0.013 min
Lab File: 4m99467.D
Acq: 9 Apr 2021 9:29 am

Tgt Ion:202 Resp: 98

Ion	Ratio	Lower	Upper
202	100		
203	4.6	0.0	47.6
101	0.5	0.0	39.2

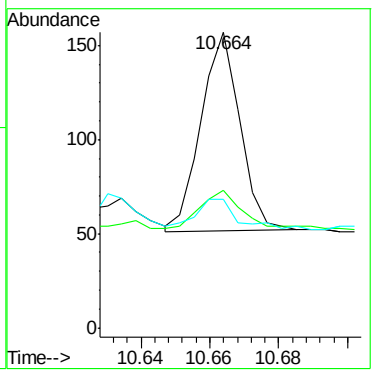


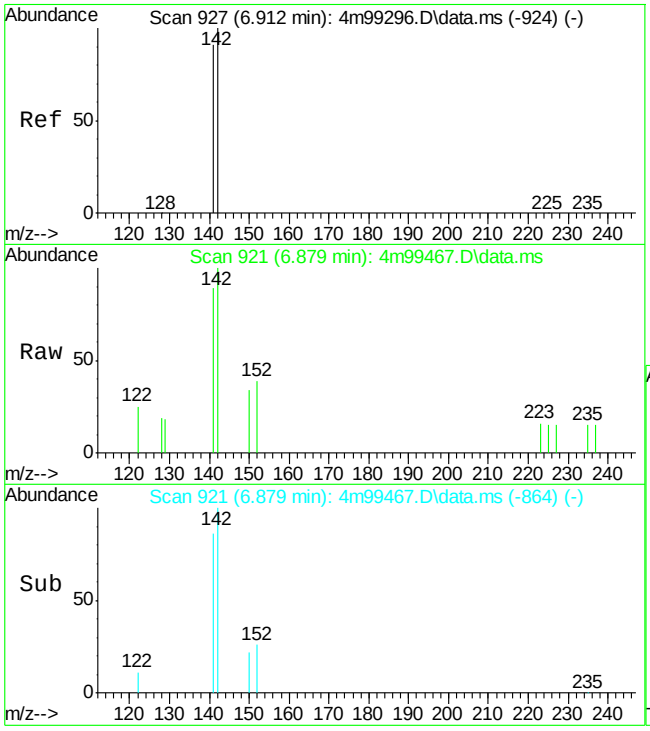


#24
Pyrene
Concen: 0.01 ppm
RT: 10.664 min Scan# 1565
Delta R.T. 0.013 min
Lab File: 4m99467.D
Acq: 9 Apr 2021 9:29 am

Tgt Ion:202 Resp: 83

Ion	Ratio	Lower	Upper
202	100		
203	18.8	0.0	48.1
101	13.5	0.0	41.5

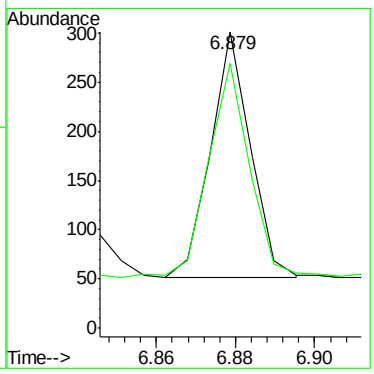




#37
1-Methylnaphthalene
Concen: 0.02 ppm
RT: 6.879 min Scan# 921
Delta R.T. 0.000 min
Lab File: 4m99467.D
Acq: 9 Apr 2021 9:29 am

Tgt Ion:142 Resp: 173

Ion	Ratio	Lower	Upper
142	100		
141	86.3	70.9	110.9



Manual Integration Approval Summary

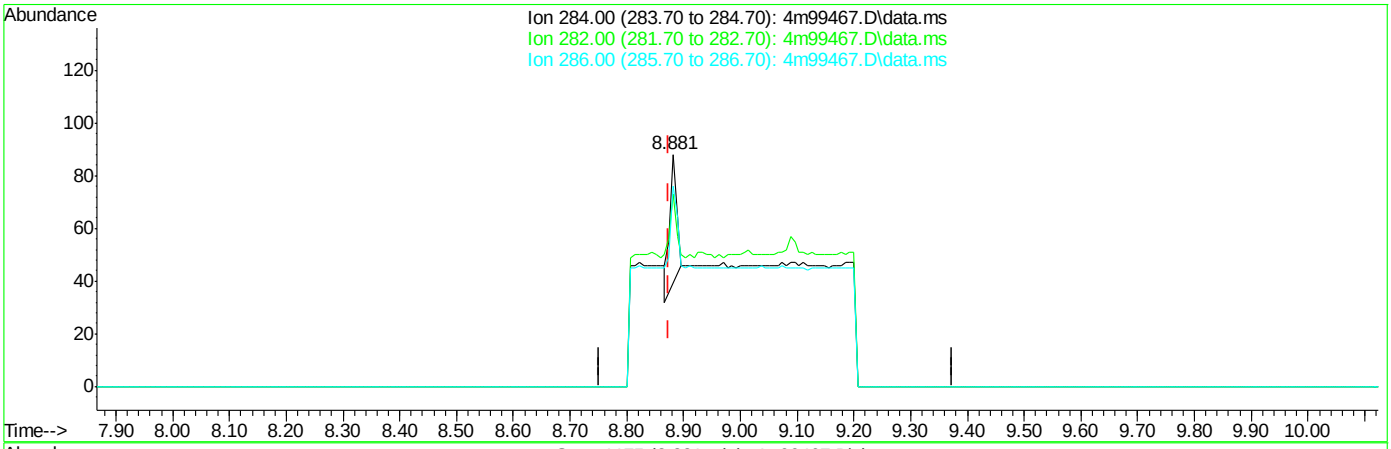
Sample Number: OP32684A-MB1
Lab FileID: 4M99467.D
Injection Time: 04/09/21 09:29
Method: SW846 8270E BY SIM
Analyst approved: 04/09/21 13:52 Ying Li
Supervisor approved: 04/12/21 11:50 Nina Pandya

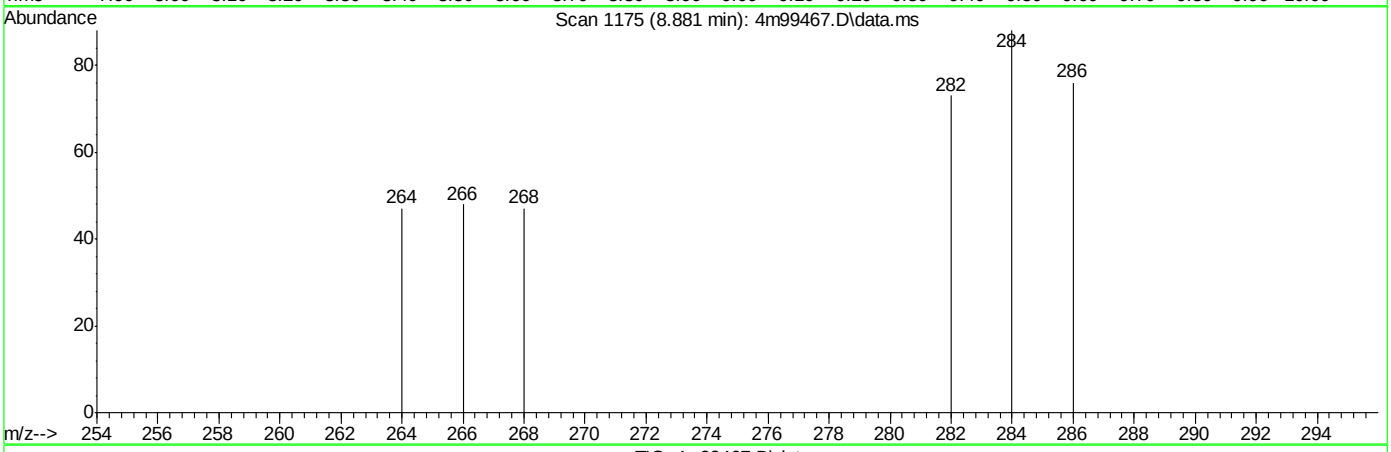
Parameter	CAS	Sig#	R.T. (min.)	Reason
Hexachlorobenzene	118-74-1		8.88	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99467.D
Acq On : 9 Apr 2021 9:29 am
Operator : hennys
Sample : op32684a-mb1
Misc : op32684a,e4m4617,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 09 13:25:49 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration





TIC: 4m99467.D\data.ms

(18) Hexachlorobenzene (t)

8.881min (+0.007) 0.01ppm

response 43

Ion	Exp%	Act%
284.00	100	100
282.00	55.90	54.76
286.00	74.90	72.62
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99498.D
Acq On : 10 Apr 2021 3:44 am
Operator : chriss2
Sample : op32741a-mb1
Misc : op32741a,e4m4618,30.0,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 10 09:04:06 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration

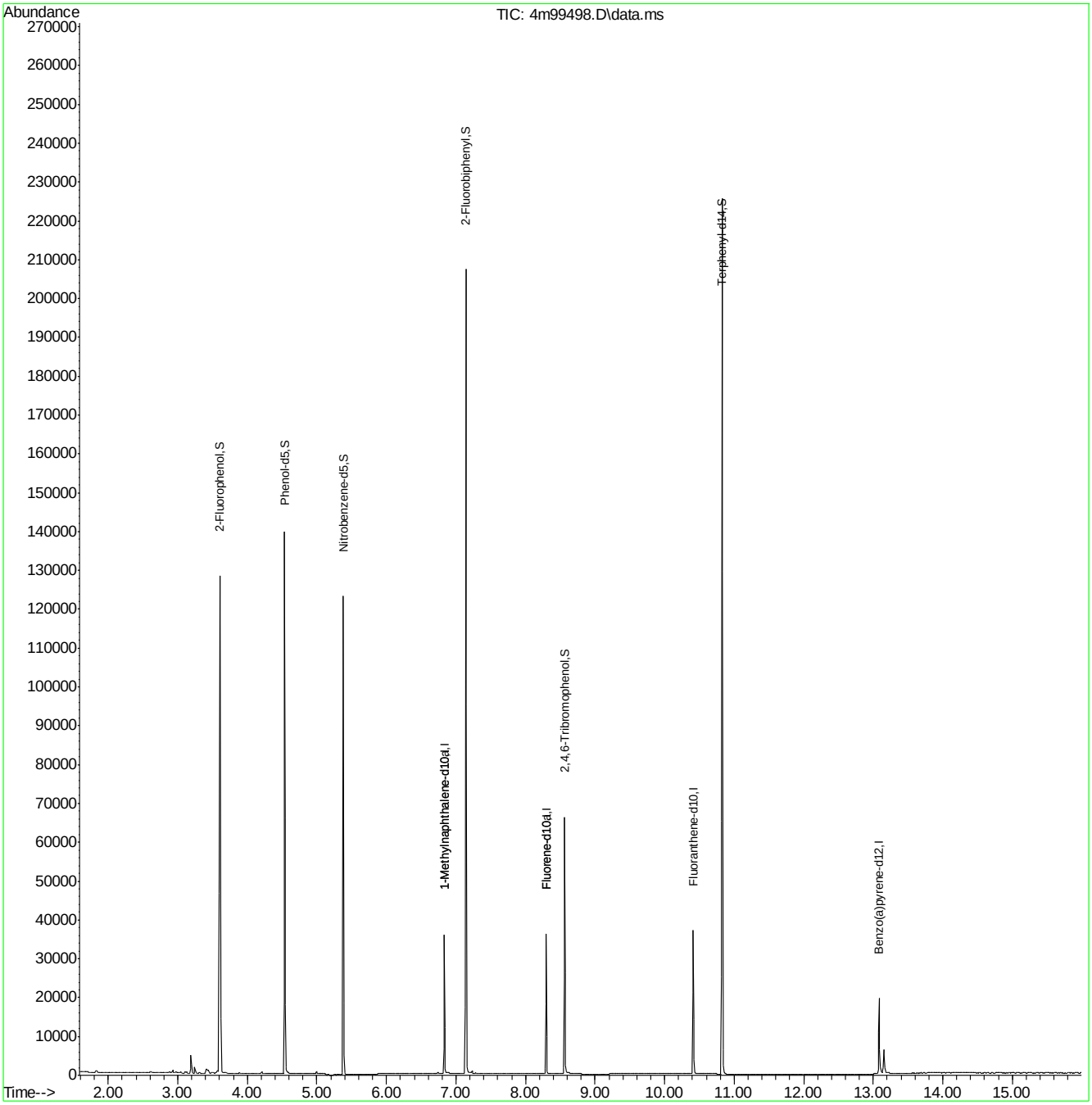
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	6.835	152	12570	4.00	ppm	0.00
12) Fluorene-d10	8.295	176	13861	4.00	ppm	0.00
22) Fluoranthene-d10	10.411	212	23404	4.00	ppm	0.00
28) Benzo(a)pyrene-d12	13.085	264	16105	4.00	ppm	0.00
35) 1-Methylnaphthalene-d10a	6.835	152	12570	4.00	ppm	0.00
38) Fluorene-d10a	8.295	176	13861	4.00	ppm	0.00
System Monitoring Compounds						
2) 2-Fluorophenol	3.607	112	60697	35.20	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery =	70.40%#		
3) Phenol-d5	4.539	99	73548	33.26	ppm	0.00
Spiked Amount 50.000			Recovery =	66.52%		
6) Nitrobenzene-d5	5.380	82	61488	41.83	ppm	0.00
Spiked Amount 50.000			Recovery =	83.66%		
11) 2-Fluorobiphenyl	7.140	172	128943	29.93	ppm	0.00
Spiked Amount 50.000			Recovery =	59.86%		
17) 2,4,6-Tribromophenol	8.562	330	23427	52.86	ppm	0.00
Spiked Amount 50.000			Recovery =	105.72%		
25) Terphenyl-d14	10.827	244	150390	37.50	ppm	0.00
Spiked Amount 50.000			Recovery =	75.00%		
Target Compounds						Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99498.D
Acq On : 10 Apr 2021 3:44 am
Operator : chriss2
Sample : op32741a-mb1
Misc : op32741a,e4m4618,30.0,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 10 09:04:06 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99468.D
Acq On : 9 Apr 2021 11:55 am
Operator : hennys
Sample : op32684a-bs12
Misc : op32684a,e4m4617,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 09 13:25:52 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	6.846	152	21472	4.00	ppm	0.00
12) Fluorene-d10	8.309	176	23104	4.00	ppm	0.00
22) Fluoranthene-d10	10.428	212	37146	4.00	ppm	0.01
28) Benzo(a)pyrene-d12	13.101	264	28044	4.00	ppm	0.01
35) 1-Methylnaphthalene-d10a	6.846	152	21472	4.00	ppm	0.00
38) Fluorene-d10a	8.309	176	23104	4.00	ppm	0.00
System Monitoring Compounds						
2) 2-Fluorophenol	3.627	112	73441	24.93	ppm	0.01
Spiked Amount 50.000	Range 11 - 58		Recovery = 49.86%			
3) Phenol-d5	4.551	99	63757	16.88	ppm	0.00
Spiked Amount 50.000			Recovery = 33.76%			
6) Nitrobenzene-d5	5.392	82	114683	45.67	ppm	0.00
Spiked Amount 50.000			Recovery = 91.34%			
11) 2-Fluorobiphenyl	7.159	172	237135	32.23	ppm	0.00
Spiked Amount 50.000			Recovery = 64.46%			
17) 2,4,6-Tribromophenol	8.575	330	44208	59.85	ppm	0.00
Spiked Amount 50.000			Recovery = 119.70%			
25) Terphenyl-d14	10.845	244	244848	38.47	ppm	0.01
Spiked Amount 50.000			Recovery = 76.94%			
Target Compounds						Qvalue
4) Phenol	4.562	94	7279	1.74	ppm	76
5) bis(2-Chloroethyl)ether	4.619	93	2439	0.70	ppm	82
7) Naphthalene	6.103	128	11935	1.07	ppm	99
8) Hexachlorobutadiene	6.252	225	1259	0.51	ppm	95
9) 2-Methylnaphthalene	6.785	142	6188	0.92	ppm	96
10) Hexachlorocyclopentadiene	6.956	237	2393	1.23	ppm	97
13) Acenaphthylene	7.659	152	7363	0.68	ppm	92
14) Acenaphthene	7.829	153	5452	0.77	ppm	88
15) Dibenzofuran	7.998	168	8058	0.84	ppm	53
16) Fluorene	8.336	166	5988	0.75	ppm	92
18) Hexachlorobenzene	8.881	284	1991	0.67	ppm	98
19) Pentachlorophenol	9.081	266	5261	7.42	ppm	82
20) Phenanthrene	9.275	178	8798	0.74	ppm	99
21) Anthracene	9.321	178	8092	0.70	ppm	98
23) Fluoranthene	10.445	202	9202	0.72	ppm	99
24) Pyrene	10.664	202	9149	0.71	ppm	98
26) Benzo[a]anthracene	11.850	228	7249	0.69	ppm	98
27) Chrysene	11.882	228	7538	0.69	ppm	99
29) Benzo[b]fluoranthene	12.847	252	6463	0.53	ppm	99
30) Benzo[k]fluoranthene	12.870	252	6480	0.56	ppm	99
31) Benzo[a]pyrene	13.117	252	5965	0.50	ppm	99
32) Indeno[1,2,3-cd]pyrene	14.179	276	4923	0.46	ppm	88
33) Dibenz[a,h]anthracene	14.203	278	4306	0.49	ppm	88
34) Benzo[g,h,i]perylene	14.462	276	4427	0.46	ppm	100
36) 1,4-Dioxane	1.889	88	605	0.43	ppm	73
37) 1-Methylnaphthalene	6.879	142	5225	0.67	ppm	97
39) 4,6-dinitro-2-methylph...	8.391	198	2552	4.92	ppm	88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99468.D
Acq On : 9 Apr 2021 11:55 am
Operator : hennys
Sample : op32684a-bs12
Misc : op32684a,e4m4617,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 09 13:25:52 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration

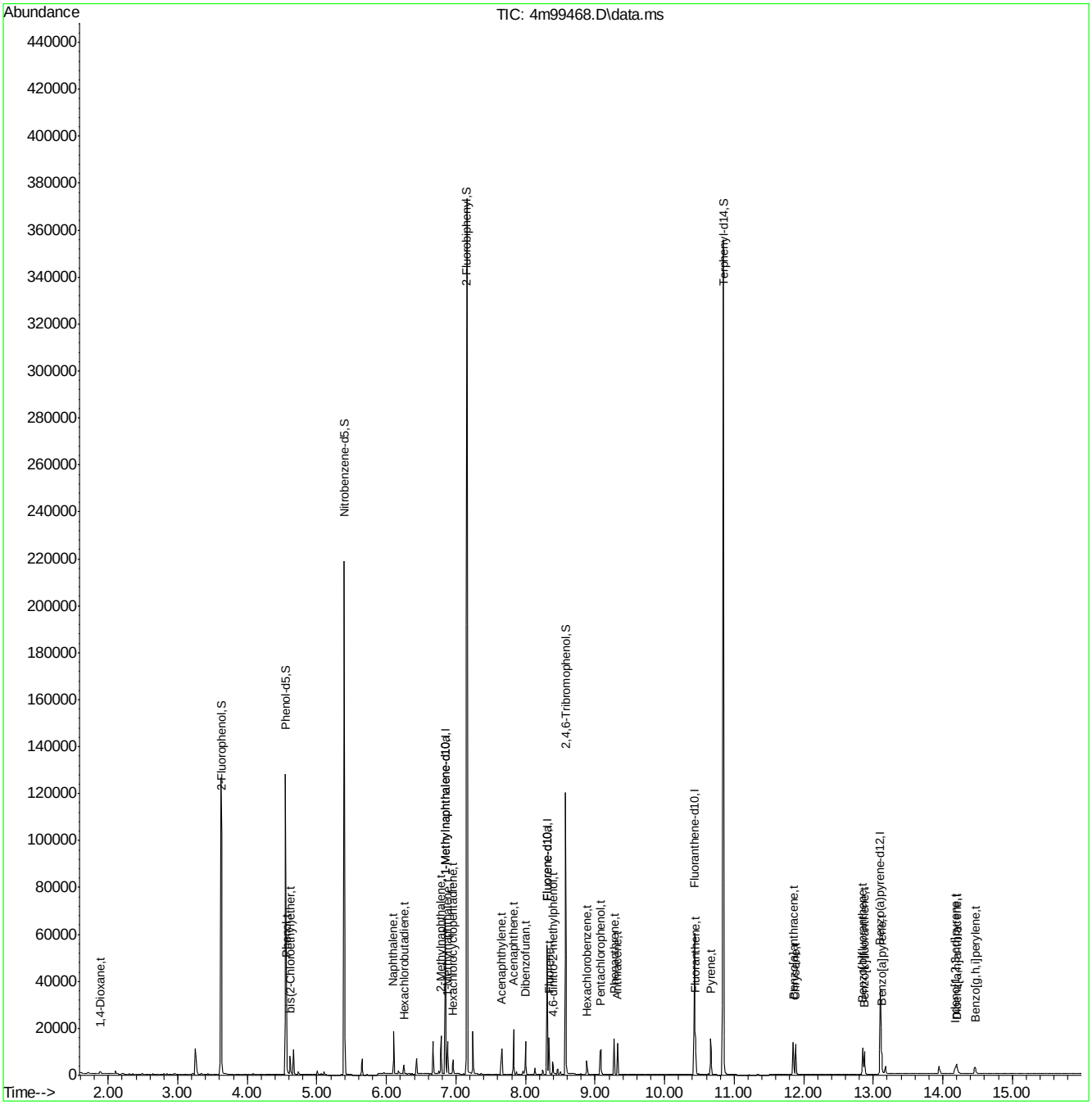
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99468.D
Acq On : 9 Apr 2021 11:55 am
Operator : hennys
Sample : op32684a-bs12
Misc : op32684a,e4m4617,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 09 13:25:52 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99469.D
Acq On : 9 Apr 2021 12:19 pm
Operator : hennys
Sample : op32684a-bsd12
Misc : op32684a,e4m4617,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 09 13:25:54 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	6.846	152	21457	4.00	ppm	0.00
12) Fluorene-d10	8.309	176	23511	4.00	ppm	0.00
22) Fluoranthene-d10	10.428	212	38072	4.00	ppm	0.01
28) Benzo(a)pyrene-d12	13.101	264	28861	4.00	ppm	0.01
35) 1-Methylnaphthalene-d10a	6.846	152	21457	4.00	ppm	0.00
38) Fluorene-d10a	8.309	176	23511	4.00	ppm	0.00
System Monitoring Compounds						
2) 2-Fluorophenol	3.627	112	67547	22.95	ppm	0.01
Spiked Amount 50.000	Range 11 - 58		Recovery = 45.90%			
3) Phenol-d5	4.551	99	58363	15.46	ppm	0.00
Spiked Amount 50.000			Recovery = 30.92%			
6) Nitrobenzene-d5	5.392	82	115755	46.13	ppm	0.00
Spiked Amount 50.000			Recovery = 92.26%			
11) 2-Fluorobiphenyl	7.159	172	232247	31.58	ppm	0.00
Spiked Amount 50.000			Recovery = 63.16%			
17) 2,4,6-Tribromophenol	8.575	330	43760	58.22	ppm	0.00
Spiked Amount 50.000			Recovery = 116.44%			
25) Terphenyl-d14	10.845	244	240533	36.87	ppm	0.01
Spiked Amount 50.000			Recovery = 73.74%			
Target Compounds						Qvalue
4) Phenol	4.562	94	6641	1.59	ppm	67
5) bis(2-Chloroethyl)ether	4.615	93	2481	0.71	ppm	97
7) Naphthalene	6.103	128	7418	0.67	ppm	100
8) Hexachlorobutadiene	6.252	225	1254	0.50	ppm	95
9) 2-Methylnaphthalene	6.785	142	4958	0.73	ppm	96
10) Hexachlorocyclopentadiene	6.956	237	2324	1.19	ppm	96
13) Acenaphthylene	7.659	152	7364	0.67	ppm	93
14) Acenaphthene	7.829	153	4856	0.67	ppm	88
15) Dibenzofuran	7.998	168	7454	0.76	ppm	40
16) Fluorene	8.336	166	5537	0.68	ppm	92
18) Hexachlorobenzene	8.881	284	1953	0.64	ppm	98
19) Pentachlorophenol	9.081	266	5066	7.03	ppm	87
20) Phenanthrene	9.275	178	8705	0.72	ppm	99
21) Anthracene	9.325	178	8037	0.69	ppm	99
23) Fluoranthene	10.445	202	9573	0.73	ppm	97
24) Pyrene	10.664	202	9687	0.74	ppm	97
26) Benzo[a]anthracene	11.850	228	7985	0.74	ppm	100
27) Chrysene	11.885	228	8524	0.76	ppm	99
29) Benzo[b]fluoranthene	12.850	252	8249	0.66	ppm	98
30) Benzo[k]fluoranthene	12.873	252	8225	0.69	ppm	99
31) Benzo[a]pyrene	13.125	252	7612	0.62	ppm	94
32) Indeno[1,2,3-cd]pyrene	14.179	276	7845	0.71	ppm	81
33) Dibenz[a,h]anthracene	14.203	278	6796	0.76	ppm	90
34) Benzo[g,h,i]perylene	14.462	276	7313	0.75	ppm	100
36) 1,4-Dioxane	1.889	88	566	0.40	ppm	77
37) 1-Methylnaphthalene	6.879	142	4639	0.59	ppm	98
39) 4,6-dinitro-2-methylph...	8.398	198	2391	4.53	ppm	75

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99469.D
Acq On : 9 Apr 2021 12:19 pm
Operator : hennys
Sample : op32684a-bsd12
Misc : op32684a,e4m4617,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 09 13:25:54 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration

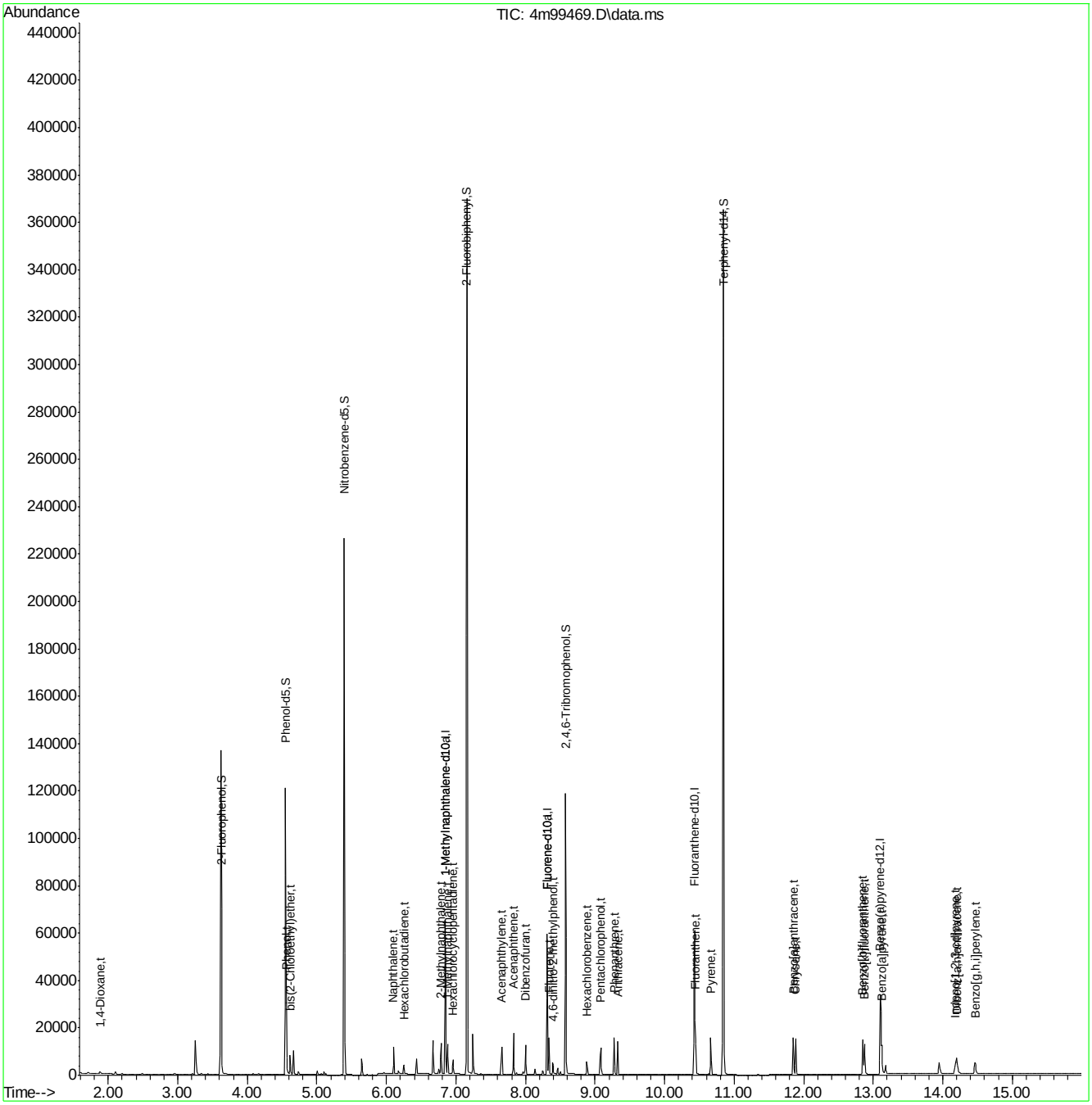
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99469.D
Acq On : 9 Apr 2021 12:19 pm
Operator : hennys
Sample : op32684a-bsd12
Misc : op32684a,e4m4617,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 09 13:25:54 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99499.D
Acq On : 10 Apr 2021 4:05 am
Operator : chriss2
Sample : op32741a-bs12
Misc : op32741a,e4m4618,30.0,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 10 09:02:05 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1-Methylnaphthalene-d10	6.835	152	12424	4.00	ppm		0.00
12) Fluorene-d10	8.295	176	13573	4.00	ppm		0.00
22) Fluoranthene-d10	10.411	212	22651	4.00	ppm		0.00
28) Benzo(a)pyrene-d12	13.078	264	16910	4.00	ppm		0.00
35) 1-Methylnaphthalene-d10a	6.835	152	12424	4.00	ppm		0.00
38) Fluorene-d10a	8.295	176	13573	4.00	ppm		0.00
System Monitoring Compounds							
2) 2-Fluorophenol	3.607	112	56904	33.39	ppm		0.00
Spiked Amount 50.000	Range 11 - 58		Recovery = 66.78%#				
3) Phenol-d5	4.539	99	69450	31.78	ppm		0.00
Spiked Amount 50.000			Recovery = 63.56%				
6) Nitrobenzene-d5	5.380	82	58336	40.15	ppm		0.00
Spiked Amount 50.000			Recovery = 80.30%				
11) 2-Fluorobiphenyl	7.140	172	126198	29.64	ppm		0.00
Spiked Amount 50.000			Recovery = 59.28%				
17) 2,4,6-Tribromophenol	8.561	330	23889	55.05	ppm		0.00
Spiked Amount 50.000			Recovery = 110.10%				
25) Terphenyl-d14	10.826	244	146438	37.73	ppm		0.00
Spiked Amount 50.000			Recovery = 75.46%				
Target Compounds							Qvalue
4) Phenol	4.551	94	7738	3.19	ppm		90
5) bis(2-Chloroethyl)ether	4.603	93	1181	0.59	ppm		98
7) Naphthalene	6.092	128	3832	0.60	ppm		100
8) Hexachlorobutadiene	6.235	225	854	0.59	ppm		96
9) 2-Methylnaphthalene	6.774	142	2709	0.69	ppm		96
10) Hexachlorocyclopentadiene	6.945	237	1674	1.48	ppm		92
13) Acenaphthylene	7.640	152	3596	0.56	ppm		99
14) Acenaphthene	7.819	153	2513	0.60	ppm		99
15) Dibenzofuran	7.989	168	4010	0.71	ppm		95
16) Fluorene	8.323	166	3022	0.65	ppm		92
18) Hexachlorobenzene	8.866	284	1184	0.67	ppm		97
19) Pentachlorophenol	9.066	266	2220	5.33	ppm		86
20) Phenanthrene	9.258	178	4748	0.68	ppm		100
21) Anthracene	9.308	178	4450	0.66	ppm		98
23) Fluoranthene	10.428	202	5307	0.68	ppm		99
24) Pyrene	10.647	202	5124	0.65	ppm		98
26) Benzo[a]anthracene	11.831	228	4106	0.64	ppm		99
27) Chrysene	11.863	228	4764	0.71	ppm		99
29) Benzo[b]fluoranthene	12.828	252	4461	0.61	ppm		99
30) Benzo[k]fluoranthene	12.851	252	4743	0.68	ppm		100
31) Benzo[a]pyrene	13.102	252	4268	0.60	ppm		95
32) Indeno[1,2,3-cd]pyrene	14.148	276	3737	0.58	ppm		82
33) Dibenz[a,h]anthracene	14.172	278	3137	0.60	ppm		95
34) Benzo[g,h,i]perylene	14.431	276	3709	0.65	ppm		100
36) 1,4-Dioxane	1.868	88	362	0.44	ppm	#	71
37) 1-Methylnaphthalene	6.868	142	2510	0.56	ppm		96
39) 4,6-dinitro-2-methylph...	8.384	198	1402	4.60	ppm		74

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99499.D
Acq On : 10 Apr 2021 4:05 am
Operator : chriss2
Sample : op32741a-bs12
Misc : op32741a,e4m4618,30.0,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 10 09:02:05 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

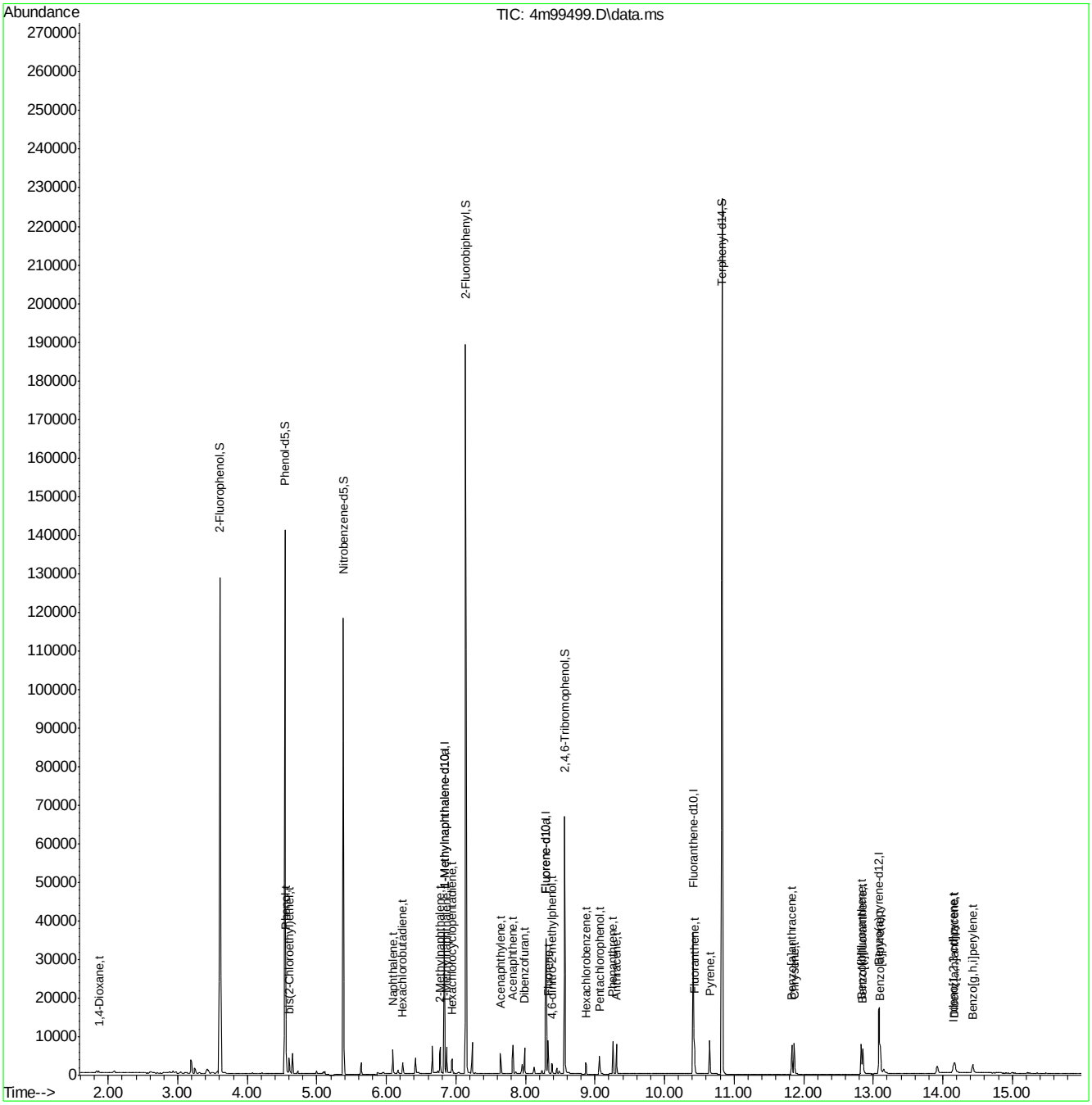
7.3.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99499.D
Acq On : 10 Apr 2021 4:05 am
Operator : chriss2
Sample : op32741a-bs12
Misc : op32741a,e4m4618,30.0,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 10 09:02:05 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99504.D
Acq On : 10 Apr 2021 5:48 am
Operator : chriss2
Sample : op32741a-msa
Misc : op32741a,e4m4618,31.0,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 10 09:02:15 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1-Methylnaphthalene-d10	6.835	152	16898	4.00	ppm		0.00
12) Fluorene-d10	8.295	176	17966	4.00	ppm		0.00
22) Fluoranthene-d10	10.411	212	28535	4.00	ppm		0.00
28) Benzo(a)pyrene-d12	13.078	264	22383	4.00	ppm		0.00
35) 1-Methylnaphthalene-d10a	6.835	152	16898	4.00	ppm		0.00
38) Fluorene-d10a	8.295	176	17966	4.00	ppm		0.00
System Monitoring Compounds							
2) 2-Fluorophenol	3.617	112	66704	28.77	ppm		0.01
Spiked Amount 50.000	Range 11 - 58		Recovery = 57.54%				
3) Phenol-d5	4.539	99	88865	29.89	ppm		0.00
Spiked Amount 50.000			Recovery = 59.78%				
6) Nitrobenzene-d5	5.379	82	78624	39.78	ppm		0.00
Spiked Amount 50.000			Recovery = 79.56%				
11) 2-Fluorobiphenyl	7.140	172	163045	28.16	ppm		0.00
Spiked Amount 50.000			Recovery = 56.32%				
17) 2,4,6-Tribromophenol	8.561	330	28325	49.31	ppm		0.00
Spiked Amount 50.000			Recovery = 98.62%				
25) Terphenyl-d14	10.826	244	163931	33.53	ppm		0.00
Spiked Amount 50.000			Recovery = 67.06%				
Target Compounds							Qvalue
4) Phenol	4.551	94	9720	2.95	ppm		97
5) bis(2-Chloroethyl)ether	4.607	93	1576	0.58	ppm		81
7) Naphthalene	6.092	128	5273	0.60	ppm		100
8) Hexachlorobutadiene	6.235	225	1114	0.57	ppm		96
9) 2-Methylnaphthalene	6.774	142	3613	0.68	ppm		96
10) Hexachlorocyclopentadiene	6.945	237	2135	1.39	ppm		94
13) Acenaphthylene	7.640	152	4903	0.58	ppm		98
14) Acenaphthene	7.819	153	3320	0.60	ppm		97
15) Dibenzofuran	7.989	168	5179	0.69	ppm		99
16) Fluorene	8.323	166	3765	0.61	ppm		95
18) Hexachlorobenzene	8.866	284	1463	0.63	ppm		97
19) Pentachlorophenol	9.066	266	2857	5.18	ppm		89
20) Phenanthrene	9.258	178	6756	0.73	ppm		100
21) Anthracene	9.308	178	5546	0.62	ppm		98
23) Fluoranthene	10.428	202	9022	0.92	ppm		99
24) Pyrene	10.647	202	8788	0.89	ppm		100
26) Benzo[a]anthracene	11.828	228	6425	0.80	ppm		99
27) Chrysene	11.863	228	7136	0.85	ppm		99
29) Benzo[b]fluoranthene	12.825	252	7237	0.74	ppm		97
30) Benzo[k]fluoranthene	12.848	252	6724	0.72	ppm		99
31) Benzo[a]pyrene	13.094	252	6790	0.72	ppm		99
32) Indeno[1,2,3-cd]pyrene	14.140	276	6757	0.79	ppm		76
33) Dibenz[a,h]anthracene	14.164	278	5190	0.75	ppm		99
34) Benzo[g,h,i]perylene	14.423	276	6411	0.84	ppm		100
36) 1,4-Dioxane	1.878	88	495	0.44	ppm	#	58
37) 1-Methylnaphthalene	6.868	142	3329	0.54	ppm		97
39) 4,6-dinitro-2-methylph...	8.384	198	1502	3.72	ppm		79

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99504.D
Acq On : 10 Apr 2021 5:48 am
Operator : chriss2
Sample : op32741a-msa
Misc : op32741a,e4m4618,31.0,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 10 09:02:15 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration

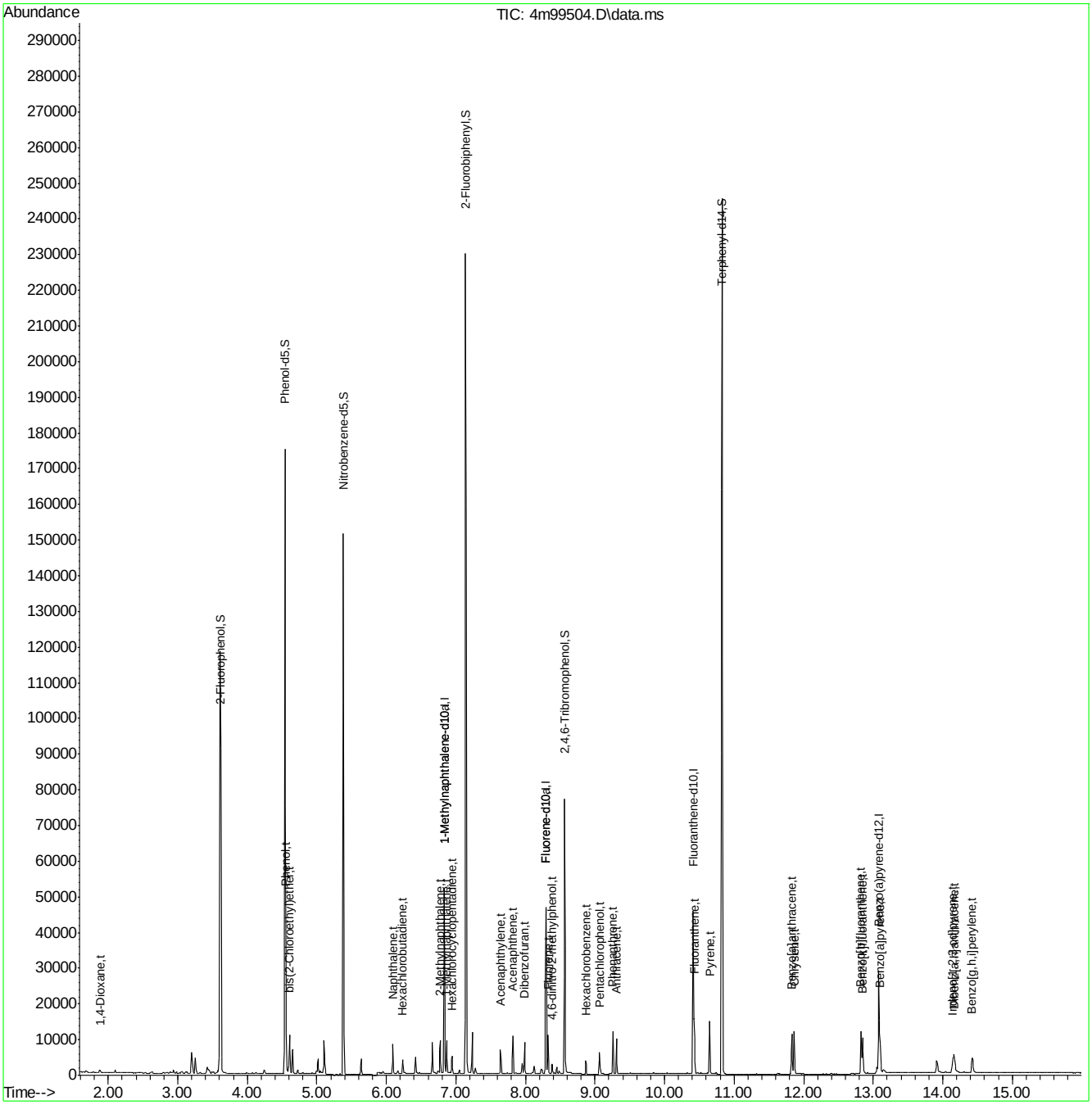
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99504.D
Acq On : 10 Apr 2021 5:48 am
Operator : chriss2
Sample : op32741a-msa
Misc : op32741a,e4m4618,31.0,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 10 09:02:15 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99505.D
Acq On : 10 Apr 2021 6:09 am
Operator : chriss2
Sample : op32741a-msda
Misc : op32741a,e4m4618,30.6,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 10 09:02:17 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1-Methylnaphthalene-d10	6.835	152	16817	4.00	ppm		0.00
12) Fluorene-d10	8.295	176	18004	4.00	ppm		0.00
22) Fluoranthene-d10	10.411	212	27543	4.00	ppm		0.00
28) Benzo(a)pyrene-d12	13.085	264	21145	4.00	ppm		0.00
35) 1-Methylnaphthalene-d10a	6.835	152	16817	4.00	ppm		0.00
38) Fluorene-d10a	8.295	176	18004	4.00	ppm		0.00
System Monitoring Compounds							
2) 2-Fluorophenol	3.617	112	70851	30.71	ppm		0.01
Spiked Amount 50.000	Range 11 - 58		Recovery = 61.42%#				
3) Phenol-d5	4.540	99	94096	31.81	ppm		0.00
Spiked Amount 50.000			Recovery = 63.62%				
6) Nitrobenzene-d5	5.380	82	83577	42.49	ppm		0.00
Spiked Amount 50.000			Recovery = 84.98%				
11) 2-Fluorobiphenyl	7.140	172	170771	29.63	ppm		0.00
Spiked Amount 50.000			Recovery = 59.26%				
17) 2,4,6-Tribromophenol	8.562	330	30333	52.70	ppm		0.00
Spiked Amount 50.000			Recovery = 105.40%				
25) Terphenyl-d14	10.827	244	176552	37.41	ppm		0.00
Spiked Amount 50.000			Recovery = 74.82%				
Target Compounds							Qvalue
4) Phenol	4.551	94	10163	3.10	ppm		72
5) bis(2-Chloroethyl)ether	4.607	93	1674	0.61	ppm		83
7) Naphthalene	6.092	128	5469	0.63	ppm		100
8) Hexachlorobutadiene	6.235	225	1153	0.59	ppm		96
9) 2-Methylnaphthalene	6.774	142	3775	0.71	ppm		95
10) Hexachlorocyclopentadiene	6.945	237	2231	1.46	ppm		94
13) Acenaphthylene	7.640	152	5371	0.64	ppm		99
14) Acenaphthene	7.819	153	3536	0.64	ppm		99
15) Dibenzofuran	7.989	168	5462	0.73	ppm		98
16) Fluorene	8.323	166	4057	0.65	ppm		94
18) Hexachlorobenzene	8.867	284	1551	0.67	ppm		95
19) Pentachlorophenol	9.067	266	3173	5.75	ppm		94
20) Phenanthrene	9.258	178	7008	0.76	ppm		99
21) Anthracene	9.308	178	5801	0.65	ppm		97
23) Fluoranthene	10.428	202	9352	0.99	ppm		96
24) Pyrene	10.647	202	9035	0.95	ppm		97
26) Benzo[a]anthracene	11.833	228	6492	0.84	ppm		99
27) Chrysene	11.868	228	7217	0.89	ppm		99
29) Benzo[b]fluoranthene	12.833	252	7679	0.83	ppm		96
30) Benzo[k]fluoranthene	12.856	252	6518	0.74	ppm		98
31) Benzo[a]pyrene	13.101	252	7010	0.78	ppm		99
32) Indeno[1,2,3-cd]pyrene	14.146	276	7034	0.87	ppm		75
33) Dibenz[a,h]anthracene	14.171	278	5380	0.82	ppm		98
34) Benzo[g,h,i]perylene	14.430	276	6522	0.91	ppm		100
36) 1,4-Dioxane	1.878	88	563	0.51	ppm	#	56
37) 1-Methylnaphthalene	6.868	142	3477	0.57	ppm		95
39) 4,6-dinitro-2-methylph...	8.384	198	1586	3.92	ppm		82

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99505.D
Acq On : 10 Apr 2021 6:09 am
Operator : chriss2
Sample : op32741a-msda
Misc : op32741a,e4m4618,30.6,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 10 09:02:17 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration

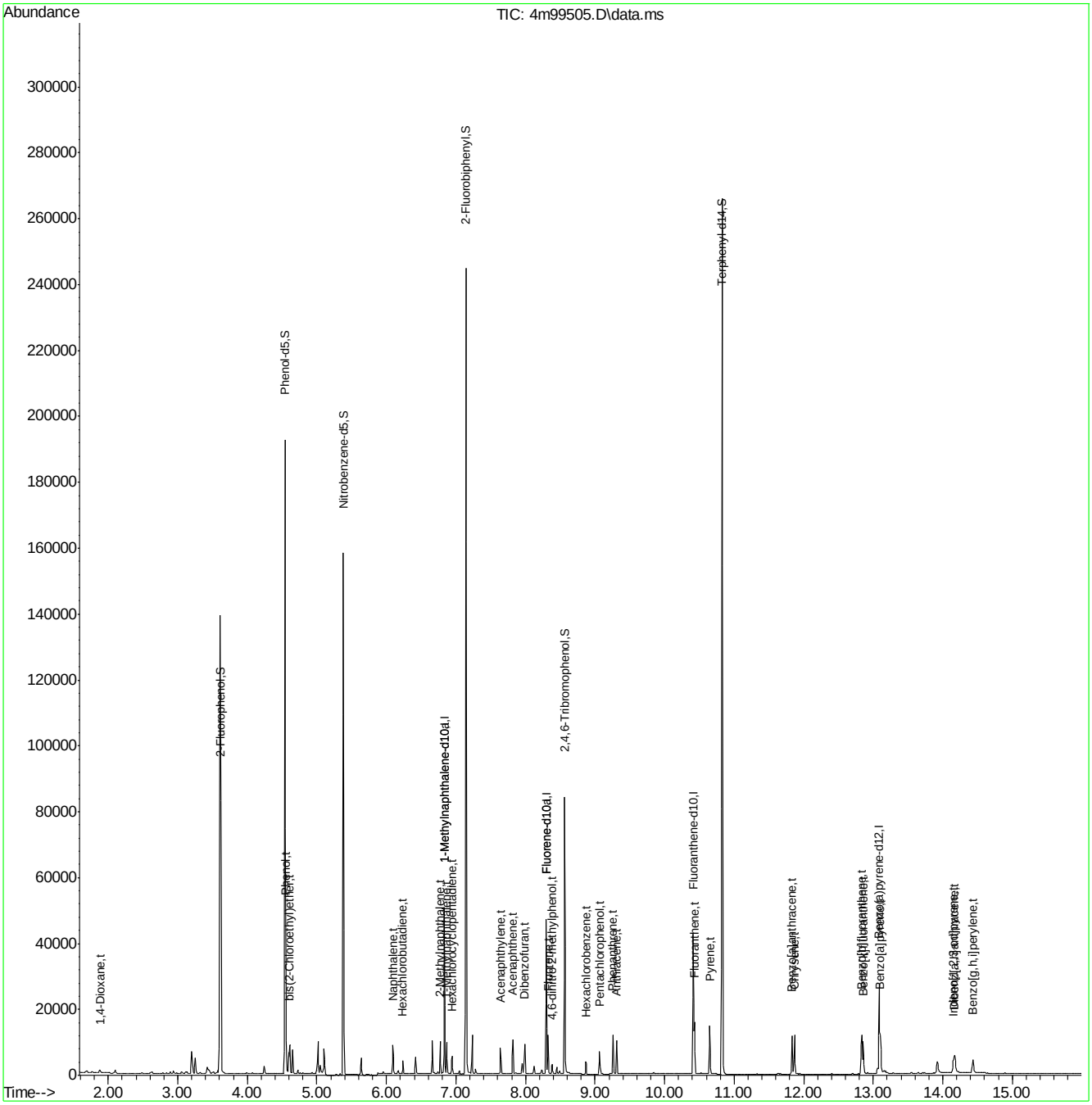
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99505.D
Acq On : 10 Apr 2021 6:09 am
Operator : chriss2
Sample : op32741a-msda
Misc : op32741a,e4m4618,30.6,,,1,1
ALS Vial : 10 Sample Multiplier: 1

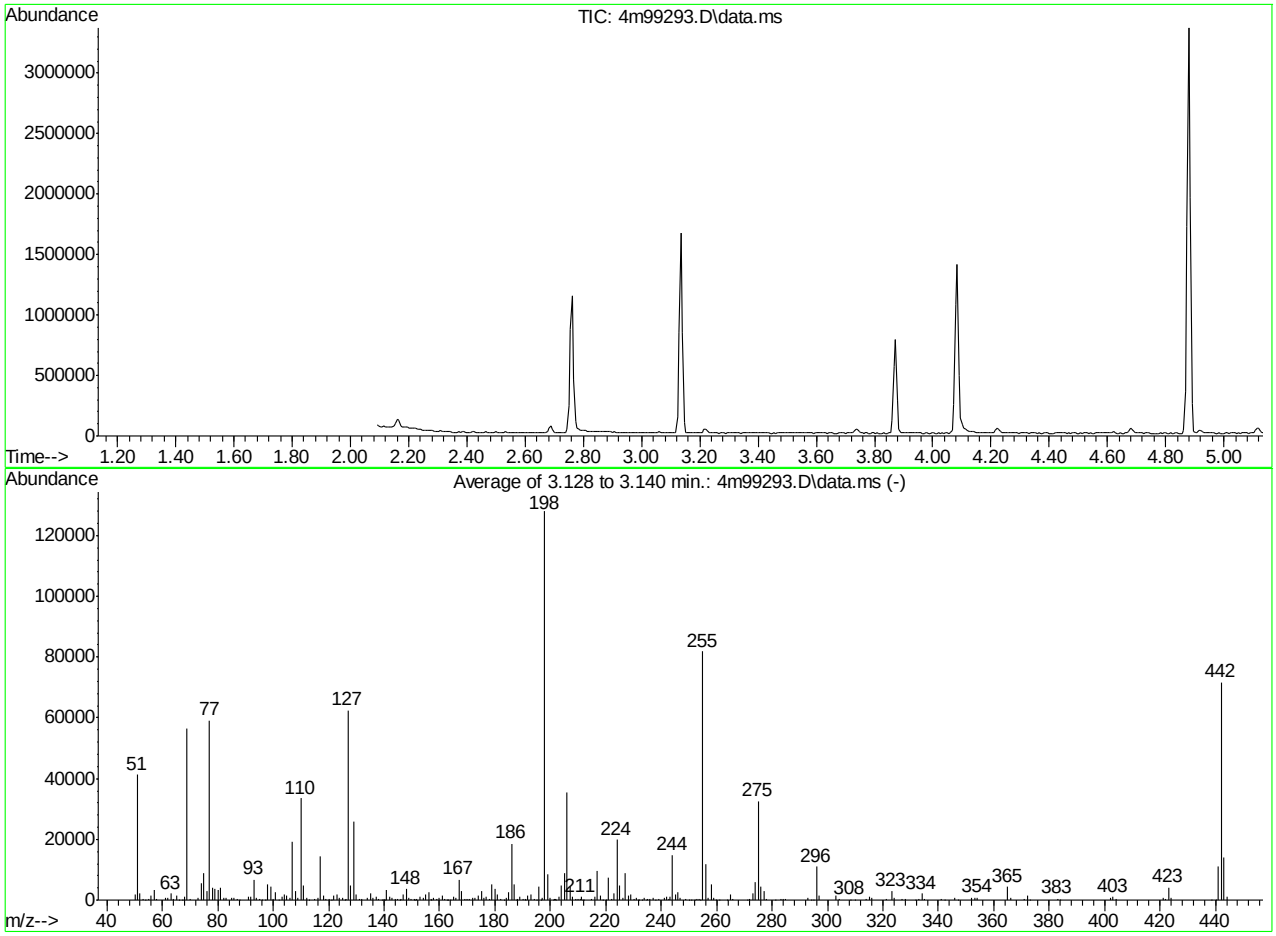
Quant Time: Apr 10 09:02:17 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Sat Apr 10 09:01:42 2021
Response via : Initial Calibration



DFTPP

Data File : C:\msdchem\1\DATA\E4M4609\4m99293.D Vial: 1
Acq On : 1 Apr 2021 5:59 pm Operator: hennys
Sample : dftpp Inst : GCMS4M
Misc : op30792a,e4m4609,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP4M.M (RTE Integrator)
Title : Semi Volatile GC/MS,zb-5 30m x .25mm x .50um



AutoFind: Scans 182, 183, 184; Background Corrected with Scan 177

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	32.3	41338	PASS
68	69	0.00	2	1.7	975	PASS
69	198	0.00	100	44.0	56333	PASS
70	69	0.00	2	0.9	488	PASS
127	198	40	60	48.9	62563	PASS
197	198	0.00	1	0.5	674	PASS
198	198	100	100	100.0	127968	PASS
199	198	5	9	6.7	8598	PASS
275	198	10	30	25.5	32608	PASS
365	198	1	100	3.4	4336	PASS
441	443	0.01	100	78.7	10965	PASS
442	198	40	100	56.0	71715	PASS
443	442	17	23	19.4	13939	PASS

4m99293.D DFTPP4M.M Fri Apr 02 09:15:30 2021

Average of 3.128 to 3.140 min.: 4m99293.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
50.00	1890	63.00	2060	76.00	2853	87.90	199
50.95	41338	63.95	397	77.00	59160	91.00	1088
52.00	2243	65.05	1370	78.00	4035	92.00	1204
52.95	310	66.10	91	79.00	3534	92.95	6733
53.90	39	67.00	149	80.00	3392	93.95	613
55.05	517	67.95	975	81.00	4190	95.00	472
56.00	1460	68.95	56333	82.00	899	96.00	41
57.00	3241	69.95	488	82.95	926	97.10	96
57.95	239	73.00	628	85.00	720	98.00	5138
61.00	599	74.00	5372	85.90	780	98.95	4352
62.00	738	75.00	8969	86.90	351	100.00	399

Average of 3.128 to 3.140 min.: 4m99293.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
100.95	2469	112.00	831	123.95	922	135.00	2114
101.85	158	113.00	180	124.90	873	135.90	736
103.00	1194	114.95	297	125.80	94	137.00	1055
104.00	1709	116.00	875	126.10	324	137.95	221
104.95	1520	117.00	14280	127.00	62563	139.10	68
105.95	589	117.95	1341	128.00	4707	140.00	213
107.00	19185	118.95	297	129.00	25797	140.20	91
108.00	2786	120.00	219	129.95	1942	141.00	3162
108.90	745	120.80	76	130.95	532	141.95	1193
110.00	33568	121.95	1384	131.95	267	142.95	879
111.00	4939	122.95	1911	133.95	729	143.95	257

Average of 3.128 to 3.140 min.: 4m99293.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
144.85	216	152.95	1187	162.80	68	172.95	764
145.80	102	154.00	806	163.00	126	173.95	1451
145.95	375	155.00	1852	164.00	171	175.00	2974
147.00	1775	156.00	2635	165.00	1186	176.05	710
147.95	3694	156.80	134	166.00	870	176.90	1161
149.00	853	157.05	438	167.00	6685	178.00	514
149.90	201	157.90	575	167.95	3006	179.00	5203
150.85	334	158.95	484	169.00	550	180.00	3646
151.00	93	159.95	931	169.85	337	181.00	1681
151.20	173	160.95	1510	170.85	402	182.00	403
151.80	267	161.85	390	171.95	591	183.10	79

Average of 3.128 to 3.140 min.: 4m99293.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
183.95	577	192.95	1771	201.70	200	211.05	1051
184.95	2450	194.05	394	202.00	125	211.60	186
186.00	18624	195.05	199	202.95	1068	212.00	93
187.00	5274	196.00	4314	203.95	4795	214.95	393
187.90	170	196.70	190	205.00	8722	215.95	959
188.10	410	197.10	674	206.00	35333	216.90	9652
189.00	1284	198.00	127968	206.95	4580	218.00	1364
190.00	244	199.00	8598	207.95	1101	219.00	83
190.90	452	199.90	702	209.00	502	220.00	82
191.10	190	201.20	146	210.10	565	221.00	7389
191.95	1602	201.40	451	210.80	392	222.00	384

Average of 3.128 to 3.140 min.: 4m99293.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
222.95	2210	233.00	98	243.10	1070	254.00	164
224.00	19869	233.95	571	244.00	14912	255.00	81949
225.00	4938	234.70	100	245.00	1921	256.00	11754
226.00	699	234.95	501	246.00	2739	257.05	874

DFTPP4M.M Fri Apr 02 09:15:12 2021 Page: 0

227.00	8953	235.95	449	246.95	579	258.00	5236
228.00	1332	236.95	765	248.95	396	258.95	729
229.00	1921	238.00	76	250.00	81	259.90	106
230.00	223	238.95	273	250.90	71	261.00	81
231.05	809	240.95	598	251.85	154	263.90	141
231.80	72	242.00	965	252.95	331	265.00	2026
232.00	95	242.90	277	253.75	340	265.95	306

Average of 3.128 to 3.140 min.: 4m99293.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
271.00	94	284.95	563	314.95	1114	341.00	341
271.90	238	293.00	830	316.00	720	342.10	95
273.00	2415	294.10	80	321.05	251	345.95	824
273.95	6035	295.00	116	323.05	2982	347.00	72
275.00	32608	296.00	10910	324.00	673	352.05	899
276.00	4546	297.05	1410	326.95	479	353.00	586
277.00	2929	303.05	1391	328.00	255	354.00	906
278.00	519	304.05	201	331.90	70	365.00	4336
281.20	95	308.10	110	332.95	321	366.00	593
283.00	394	310.00	73	334.05	2122	371.05	205
284.05	248	314.05	562	335.05	517	372.05	1554

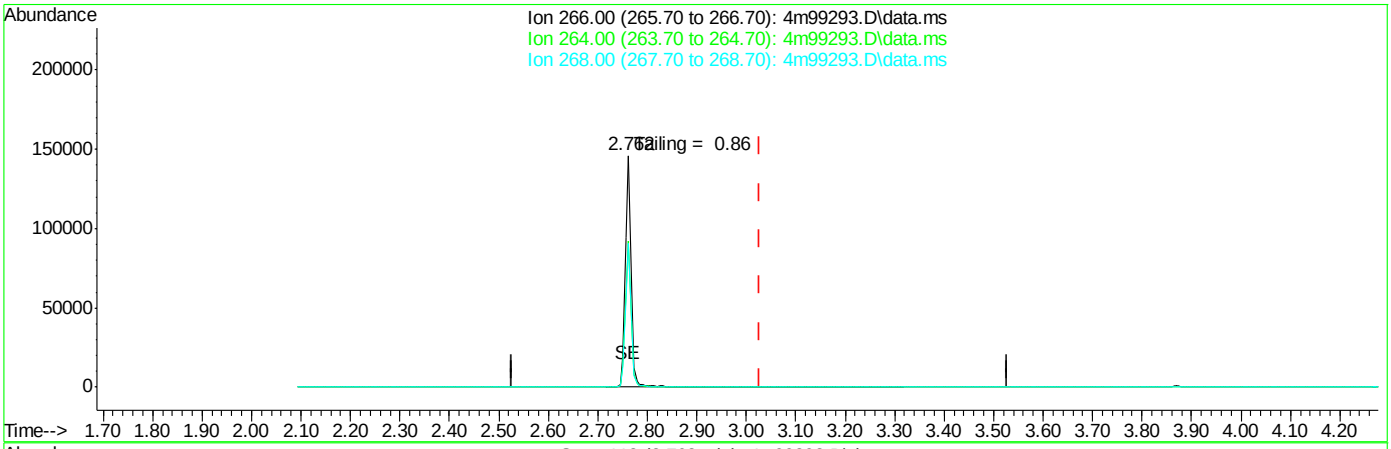
Average of 3.128 to 3.140 min.: 4m99293.D\data.ms
dftpp
Modified:subtracted

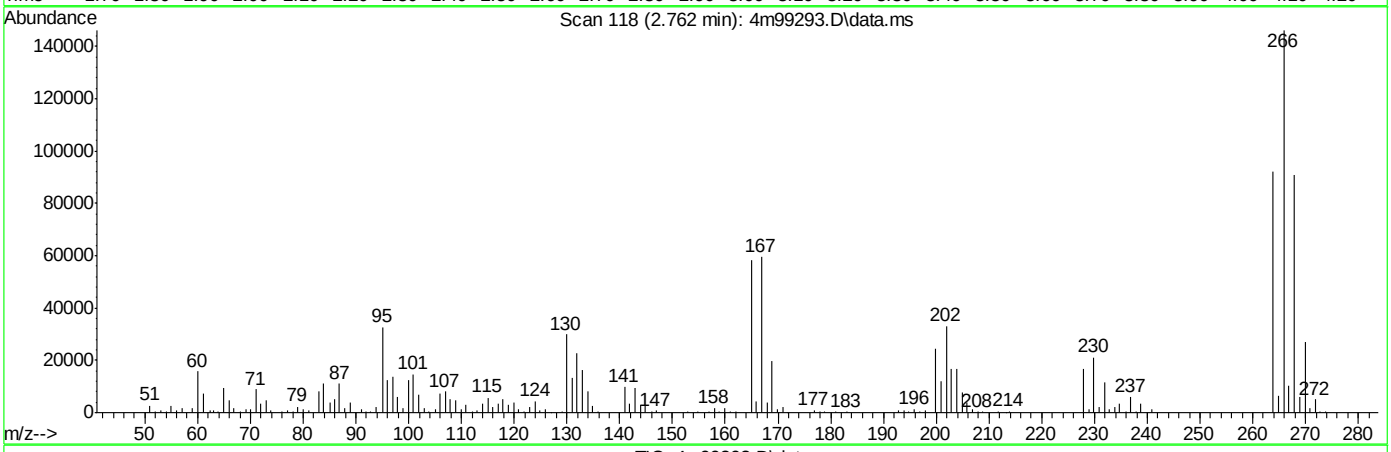
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
373.00	138	440.10	76				
382.95	503	441.10	10965				
383.90	168	442.10	71715				
402.05	744	443.10	13939				
403.05	941	444.00	1197				
403.95	203						
421.00	616						
422.00	491						
423.05	4225						
424.00	820						
438.40	79						

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99293.D
Acq On : 1 Apr 2021 5:59 pm
Operator : hennys
Sample : dftpp
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 01 18:07:03 2021
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP4M.M
Quant Title : Semi Volatile GC/MS,zb-5 30m x .25mm x .50um
QLast Update : Sun Apr 05 12:14:16 2020
Response via : Initial Calibration





TIC: 4m99293.D\data.ms

(1) pentachlorophenol (t)

2.762min (-0.265) 7.43ng m

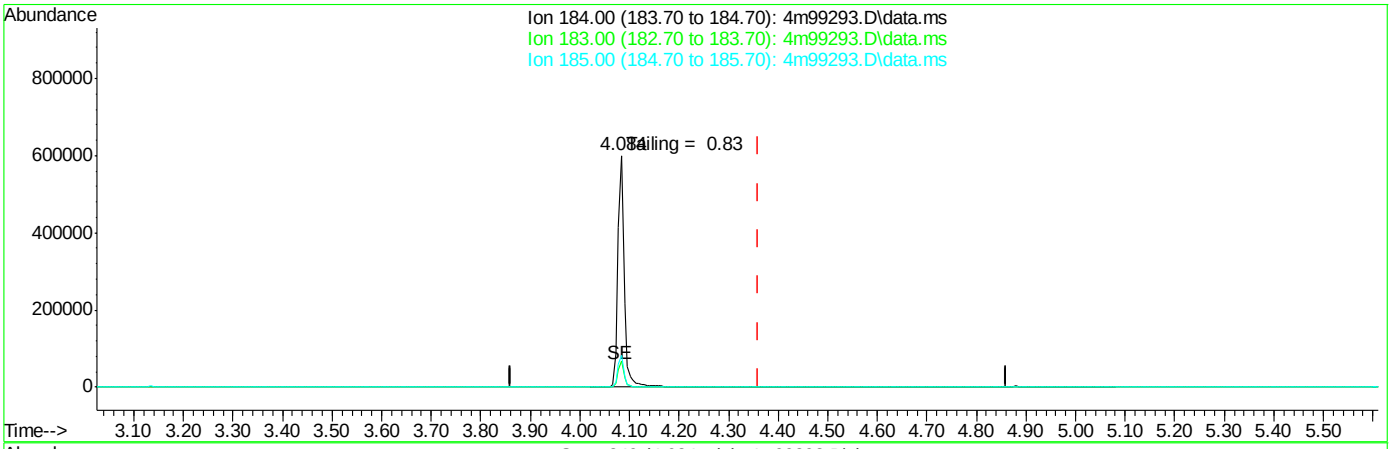
response 122677

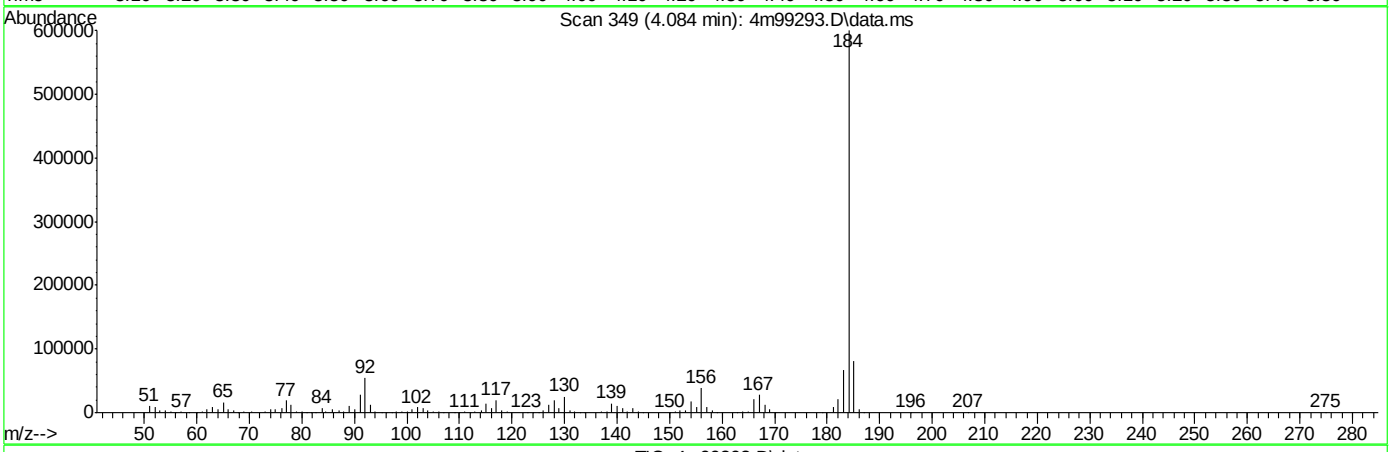
Ion	Exp%	Act%
266.00	100	100
264.00	66.80	0.00#
268.00	69.50	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99293.D
Acq On : 1 Apr 2021 5:59 pm
Operator : hennys
Sample : dftpp
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 01 18:07:03 2021
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP4M.M
Quant Title : Semi Volatile GC/MS,zb-5 30m x .25mm x .50um
QLast Update : Sun Apr 05 12:14:16 2020
Response via : Initial Calibration





TIC: 4m99293.D\data.ms

(2) benzidine (t)

4.084min (-0.277) 8.74ng m

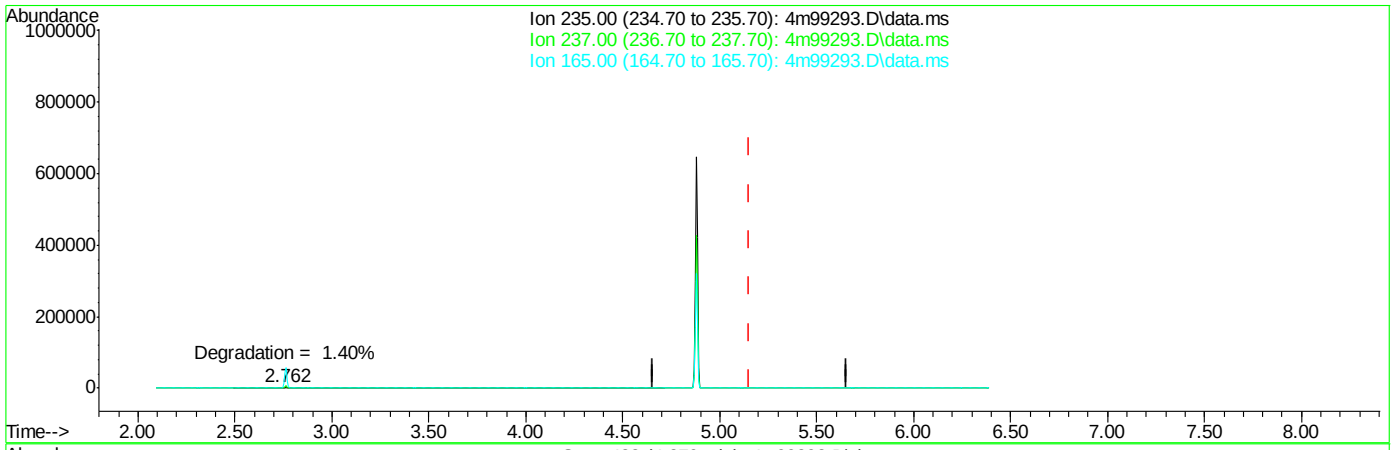
response 521491

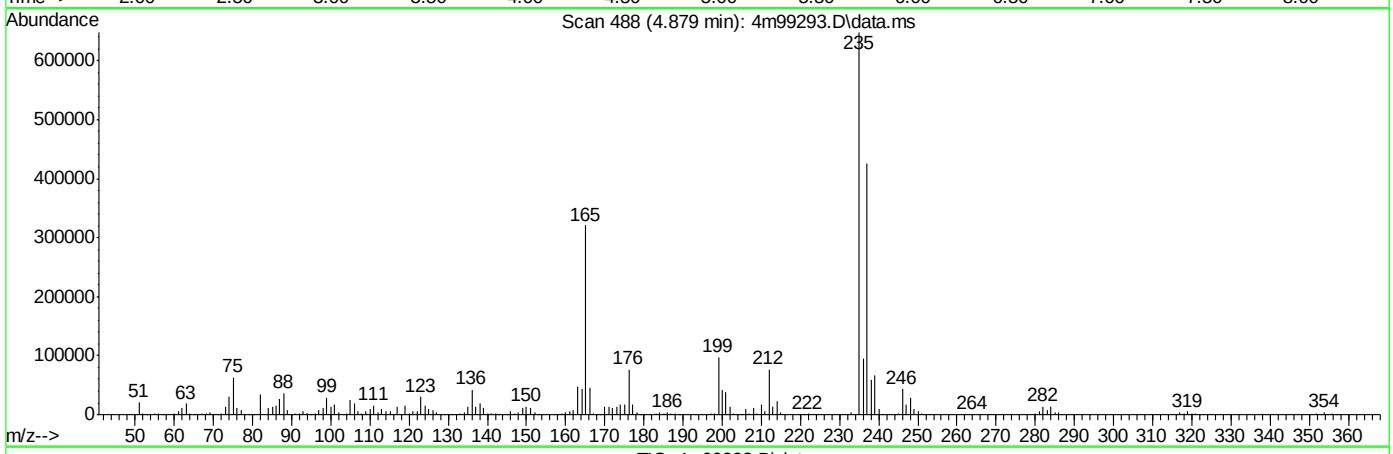
Ion	Exp%	Act%
184.00	100	100
183.00	11.80	0.00#
185.00	13.50	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99293.D
Acq On : 1 Apr 2021 5:59 pm
Operator : hennys
Sample : dftpp
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 01 18:07:03 2021
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP4M.M
Quant Title : Semi Volatile GC/MS,zb-5 30m x .25mm x .50um
QLast Update : Sun Apr 05 12:14:16 2020
Response via : Initial Calibration





TIC: 4m99293.D\data.ms

(3) ddt (t)

4.879min (-0.277) 18.45ng m

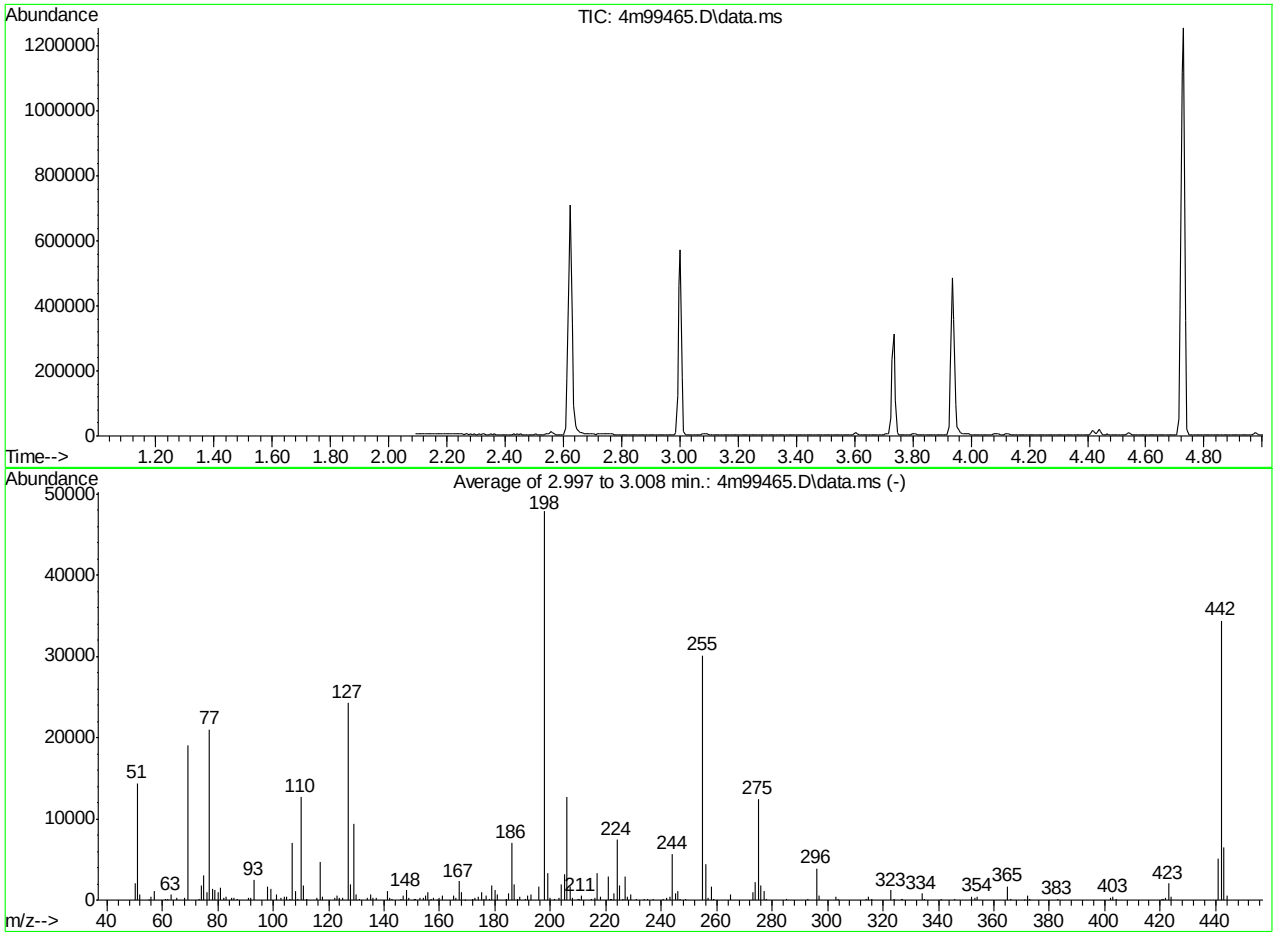
response 510603

Ion	Exp%	Act%
235.00	100	100
237.00	65.90	0.00#
165.00	44.70	0.00#
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\E4M4617\4m99465.D Vial: 1
Acq On : 9 Apr 2021 8:55 am Operator: hennys
Sample : dftpp Inst : GCMS4M
Misc : op30792a,e4m4617,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP4M.M (RTE Integrator)
Title : Semi Volatile GC/MS,zb-5 30m x .25mm x .50um



AutoFind: Scans 159, 160, 161; Background Corrected with Scan 154

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	30.1	14384	PASS
68	69	0.00	2	1.6	305	PASS
69	198	0.00	100	39.8	19031	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	50.7	24232	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	47813	PASS
199	198	5	9	7.0	3360	PASS
275	198	10	30	26.0	12455	PASS
365	198	1	100	3.5	1673	PASS
441	443	0.01	100	78.6	5117	PASS
442	198	40	100	71.9	34397	PASS
443	442	17	23	18.9	6513	PASS

4m99465.D DFTPP4M.M Fri Apr 09 13:20:13 2021

Average of 2.997 to 3.008 min.: 4m99465.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
50.00	2024	69.00	19031	82.95	375	103.90	469
50.95	14384	73.10	144	85.00	255	104.90	464
51.95	763	74.00	1851	85.90	274	105.90	89
54.90	69	75.00	2985	86.95	201	107.00	6971
55.95	405	76.00	962	90.95	293	107.95	1046
57.00	1087	77.00	20994	91.90	333	109.00	83
60.95	160	78.00	1385	93.00	2420	110.00	12674
61.95	181	78.95	1268	98.00	1717	111.00	1832
62.95	663	79.95	972	99.00	1406	111.90	181
65.05	312	81.00	1482	101.00	762	115.90	309
67.95	305	81.95	332	102.90	271	117.00	4760

Average of 2.997 to 3.008 min.: 4m99465.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
117.90	370	135.00	657	151.30	92	165.90	314
122.00	324	135.95	267	152.95	276	167.00	2291
122.90	525	136.95	322	154.00	213	167.95	1006
124.00	261	141.00	1081	155.00	562	168.90	69
124.90	238	141.95	301	155.95	939	171.90	180
127.00	24232	142.85	193	157.05	208	172.90	224
128.00	1893	145.95	177	157.95	212	174.00	446
129.00	9319	146.95	601	158.90	71	175.00	910
129.90	704	147.95	1185	159.95	301	176.05	186
130.95	168	148.95	220	160.95	565	176.90	524
133.90	235	151.00	80	164.95	496	177.90	78

Average of 2.997 to 3.008 min.: 4m99465.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
178.90	1830	192.95	676	207.00	1625	221.90	211
179.95	1218	195.95	1654	207.95	303	223.00	775
180.95	641	197.90	47813	210.10	99	224.00	7433
183.90	97	199.00	3360	210.40	138	225.00	1819
185.00	873	199.85	243	211.00	505	226.00	167
186.00	6997	201.30	92	214.95	142	227.00	2947
187.00	1932	201.50	134	215.90	229	227.90	456
187.95	186	202.90	306	216.95	3262	228.95	657
188.95	408	204.00	1946	217.90	441	231.00	183
190.90	203	205.00	3149	221.00	2838	233.95	187
191.90	565	206.00	12683	221.50	131	234.90	160

Average of 2.997 to 3.008 min.: 4m99465.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
236.95	167	256.90	317	292.90	208	327.00	77
240.80	84	258.00	1632	296.00	3890	333.95	772
241.95	290	258.90	209	297.00	520	335.00	84
243.00	457	264.95	659	303.00	477	341.00	106
244.00	5684	273.00	941	303.90	84	346.00	161
245.00	845	274.00	2166	313.90	88	352.00	362
246.00	1137	275.00	12455	314.90	401	352.95	286
246.90	195	276.00	1730	315.90	203	354.00	436
248.95	178	277.00	1054	323.00	1235	364.95	1673
255.00	30083	277.95	203	323.90	86	366.00	150
256.00	4375	285.00	126	326.80	135	370.90	67

Average of 2.997 to 3.008 min.: 4m99465.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
372.00	596	441.00	5117				
372.90	92	442.00	34397				
382.90	83	443.00	6513				
401.95	307	443.95	539				

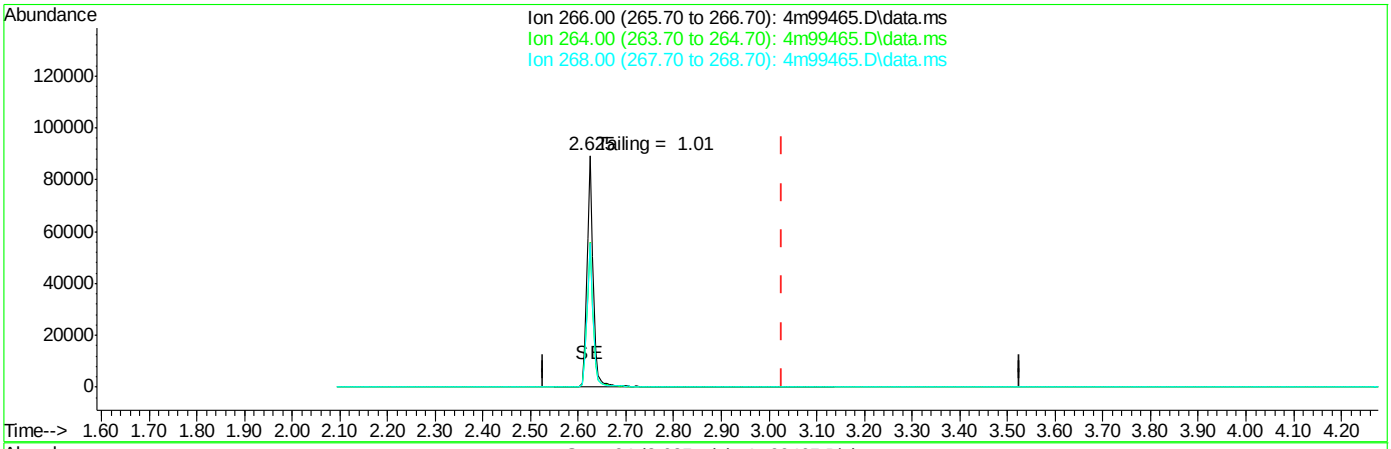
DFTPP4M.M Fri Apr 09 13:19:54 2021 Page: 0

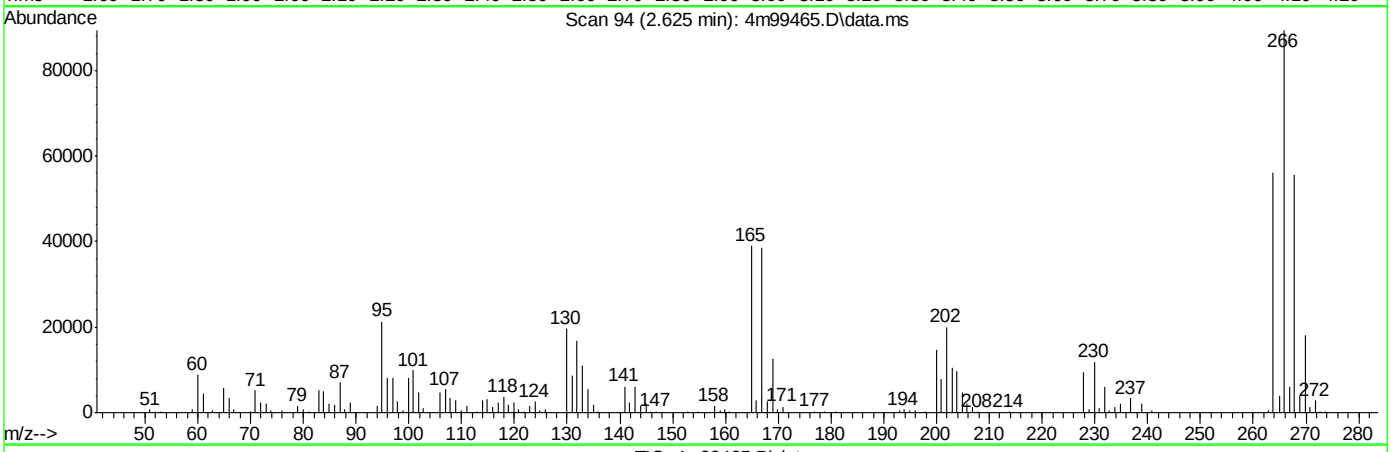
403.00	370
403.90	93
420.80	105
421.10	166
421.90	262
423.00	2063
424.00	399

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99465.D
Acq On : 9 Apr 2021 8:55 am
Operator : hennys
Sample : dftpp
Misc : op30792a,e4m4617,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 09 09:02:16 2021
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP4M.M
Quant Title : Semi Volatile GC/MS,zb-5 30m x .25mm x .50um
QLast Update : Sun Apr 05 12:14:16 2020
Response via : Initial Calibration





TIC: 4m99465.D\data.ms

(1) pentachlorophenol (t)

2.625min (-0.403) 5.15ng m

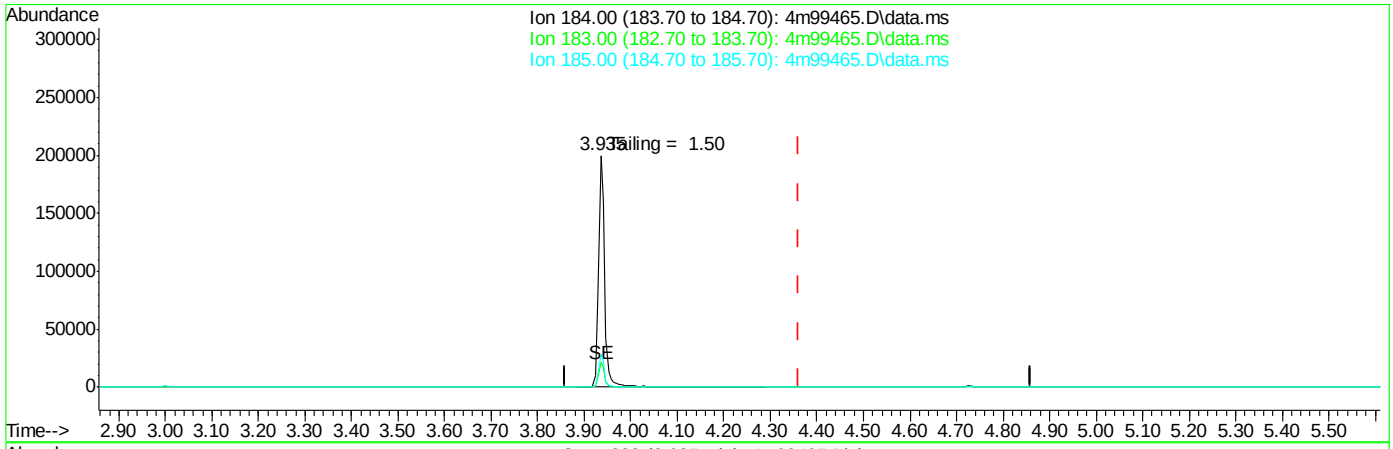
response 84964

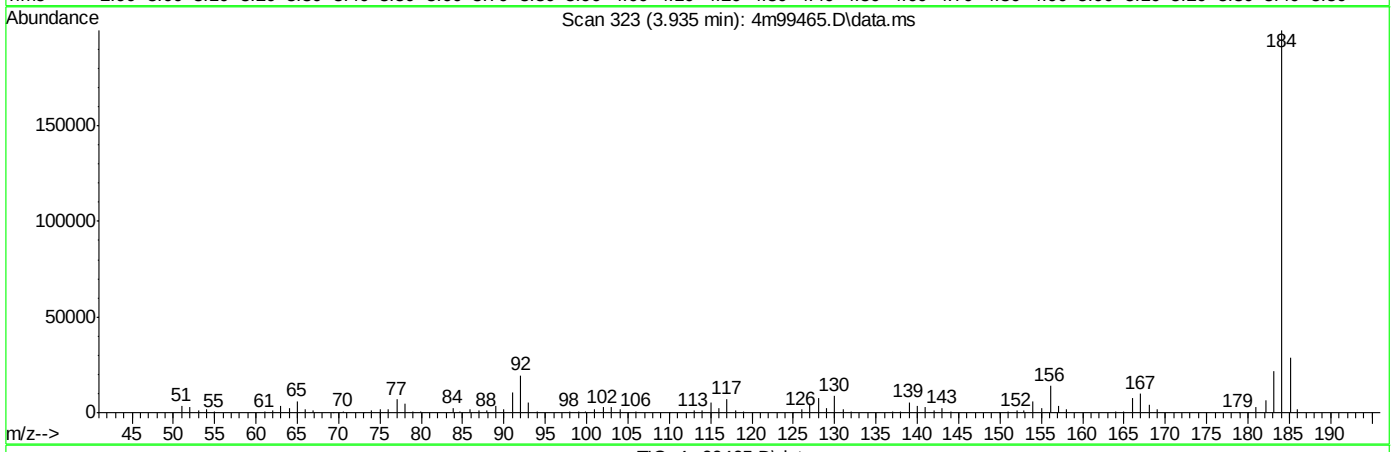
Ion	Exp%	Act%
266.00	100	100
264.00	66.80	0.00#
268.00	69.50	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99465.D
Acq On : 9 Apr 2021 8:55 am
Operator : hennys
Sample : dftpp
Misc : op30792a,e4m4617,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 09 09:02:16 2021
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP4M.M
Quant Title : Semi Volatile GC/MS,zb-5 30m x .25mm x .50um
QLast Update : Sun Apr 05 12:14:16 2020
Response via : Initial Calibration





TIC: 4m99465.D\data.ms

(2) benzidine (t)

3.935min (-0.426) 3.07ng m

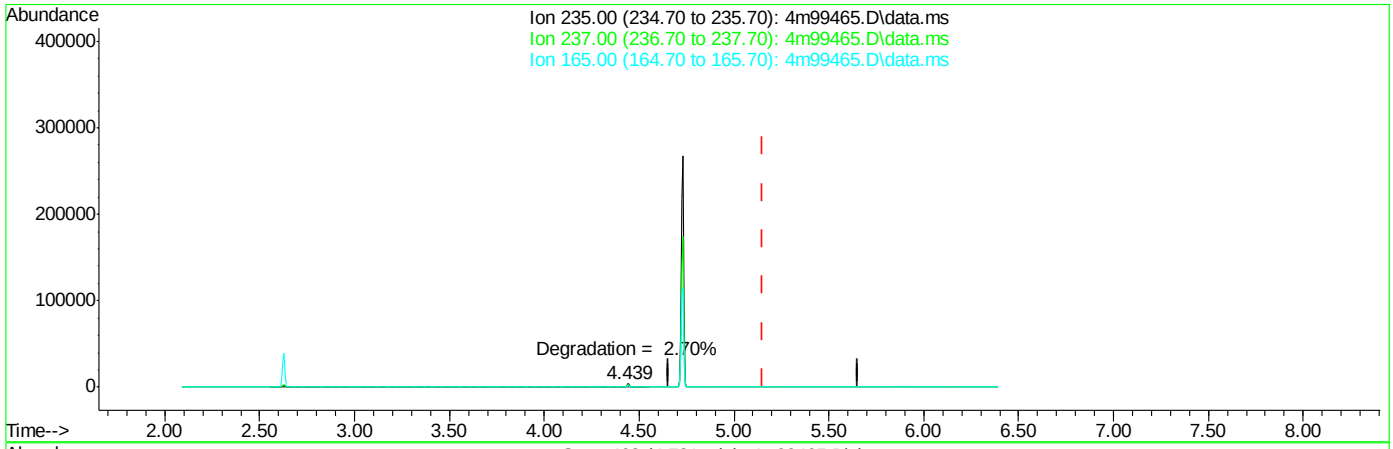
response 183524

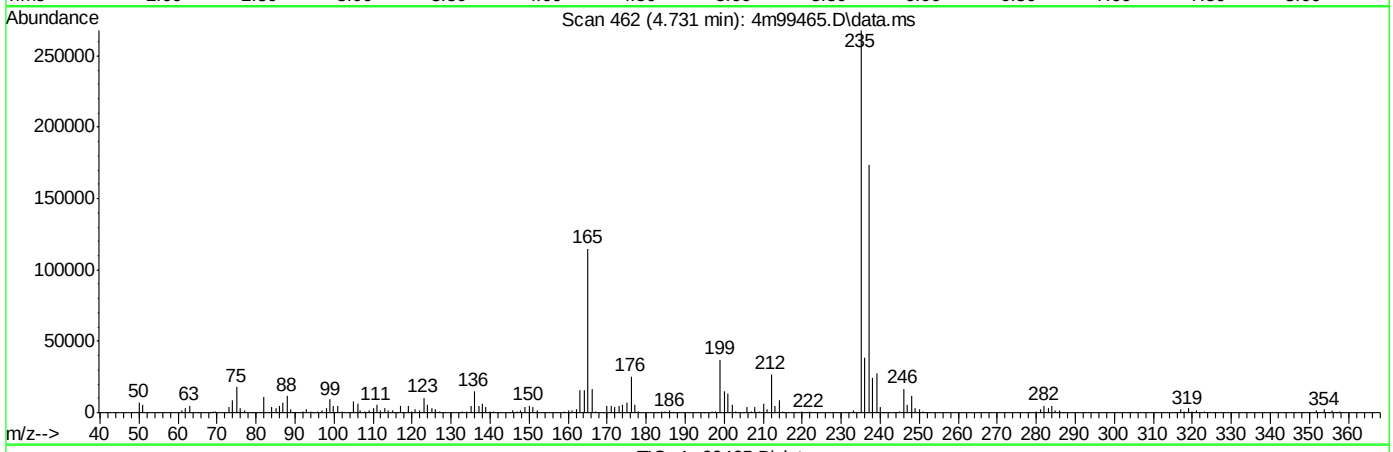
Ion	Exp%	Act%
184.00	100	100
183.00	11.80	0.00#
185.00	13.50	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99465.D
Acq On : 9 Apr 2021 8:55 am
Operator : hennys
Sample : dftpp
Misc : op30792a,e4m4617,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 09 09:02:16 2021
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP4M.M
Quant Title : Semi Volatile GC/MS,zb-5 30m x .25mm x .50um
QLast Update : Sun Apr 05 12:14:16 2020
Response via : Initial Calibration





TIC: 4m99465.D\data.ms

(3) ddt (t)

4.731min (-0.426) 8.05ng m

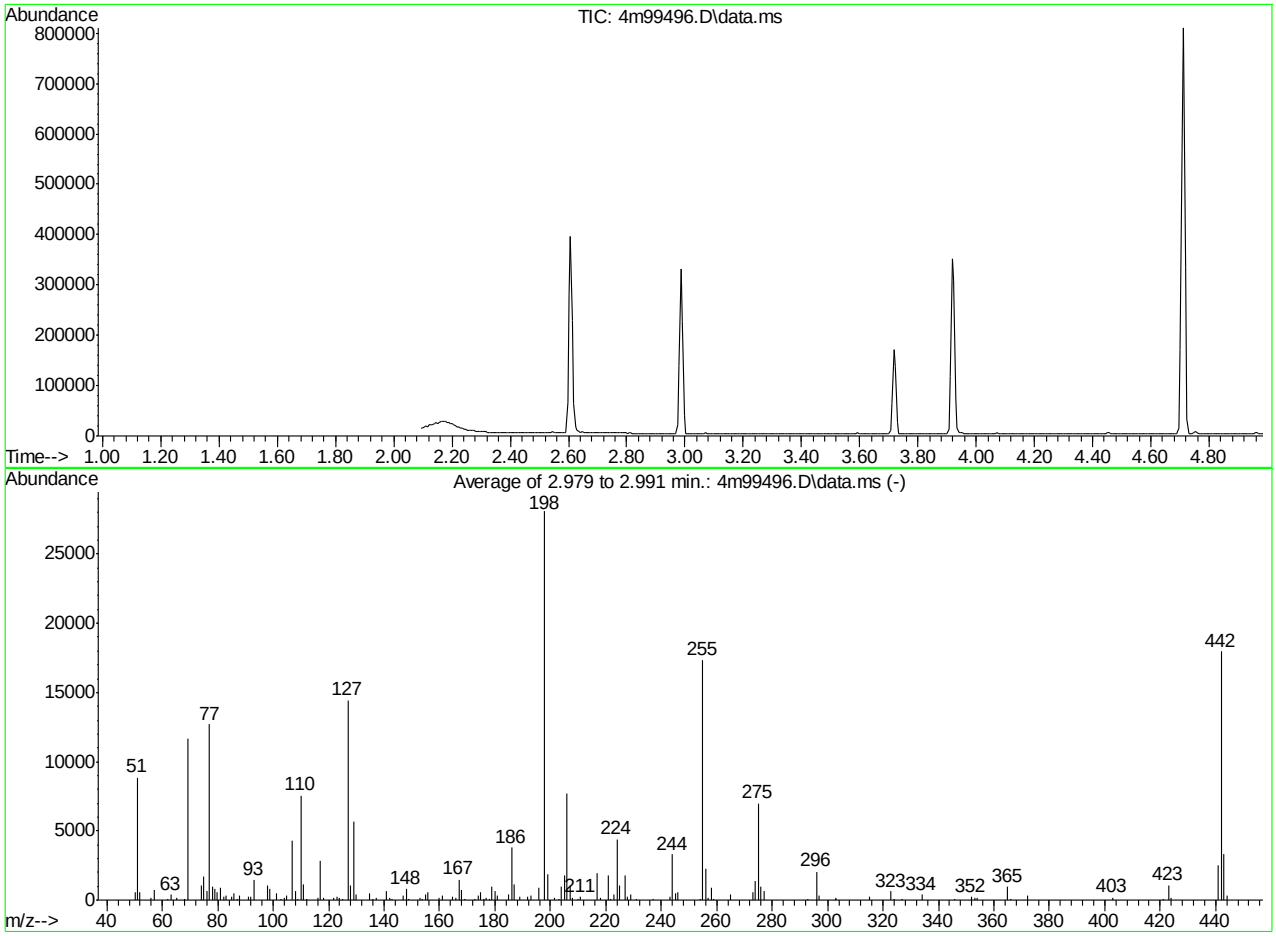
response 222923

Ion	Exp%	Act%
235.00	100	100
237.00	65.90	0.00#
165.00	44.70	0.00#
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\E4M4618\4m99496.D Vial: 1
Acq On : 10 Apr 2021 2:49 am Operator: chriss2
Sample : dftpp Inst : GCMS4M
Misc : op30792a,e4m4618,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP4M.M (RTE Integrator)
Title : Semi Volatile GC/MS,zb-5 30m x .25mm x .50um



AutoFind: Scans 156, 157, 158; Background Corrected with Scan 152

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.5	8853	PASS
68	69	0.00	2	0.8	93	PASS
69	198	0.00	100	41.5	11663	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	51.4	14430	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	28080	PASS
199	198	5	9	6.7	1890	PASS
275	198	10	30	24.9	6993	PASS
365	198	1	100	3.5	970	PASS
441	443	0.01	100	76.6	2543	PASS
442	198	40	100	63.9	17947	PASS
443	442	17	23	18.5	3318	PASS

4m99496.D DFTPP4M.M Sat Apr 10 08:59:05 2021

Average of 2.979 to 2.991 min.: 4m99496.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
50.00	568	75.00	1685	86.90	80	107.00	4303
50.95	8853	75.95	614	87.90	299	107.90	638
52.00	541	77.00	12692	90.95	245	108.90	83
55.90	199	78.00	941	91.95	279	109.95	7574
56.95	727	78.95	775	93.00	1438	110.95	1126
62.00	87	79.90	571	97.90	1049	111.90	69
62.95	378	80.90	895	98.90	783	116.00	182
65.00	195	81.95	229	100.95	511	116.90	2859
67.90	93	82.90	306	102.90	106	117.95	160
69.00	11663	84.95	265	103.90	155	121.85	186
74.00	1050	85.90	507	104.95	316	122.95	279

Average of 2.979 to 2.991 min.: 4m99496.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
123.90	181	142.90	100	166.00	165	179.95	691
125.00	87	146.95	345	167.00	1490	180.95	317
127.00	14430	147.95	794	168.00	709	184.95	440
128.00	1094	148.90	72	169.00	67	186.00	3794
128.95	5687	152.90	164	172.90	68	186.95	1124
129.95	416	153.90	97	173.95	344	188.95	210
134.90	467	154.95	376	174.95	563	191.90	269
135.90	87	155.95	582	175.90	90	192.95	363
136.95	152	159.90	152	176.80	187	195.95	868
140.95	655	160.90	324	177.90	70	197.90	28080
142.00	127	164.80	210	178.90	976	198.90	1890

Average of 2.979 to 2.991 min.: 4m99496.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
201.40	141	220.95	1749	244.00	3310	273.95	1367
203.00	81	221.60	91	245.00	502	275.00	6993
203.90	955	222.95	435	245.90	607	276.00	988
205.00	1813	224.00	4382	254.00	78	276.90	651
206.00	7716	225.00	1041	255.00	17359	293.00	100
207.00	1083	226.95	1766	255.95	2305	295.95	2036
207.95	194	227.85	212	256.95	173	296.95	358
210.00	68	228.90	372	257.95	860	302.80	72
210.90	239	231.00	92	258.90	73	303.00	130
216.90	1985	236.90	73	264.95	398	314.95	242
217.95	194	243.05	245	272.90	541	323.00	631

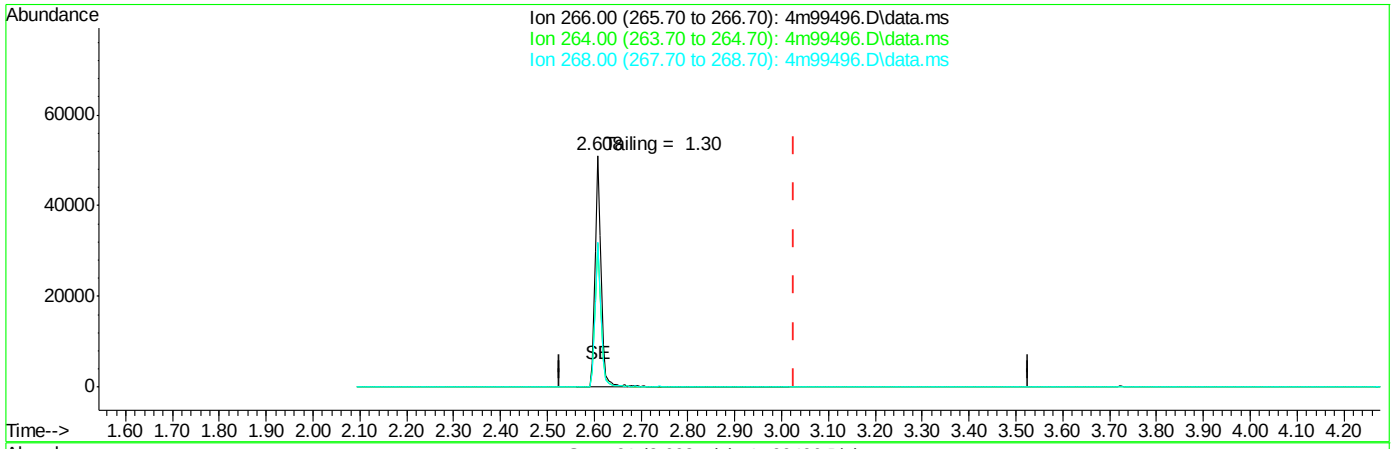
Average of 2.979 to 2.991 min.: 4m99496.D\data.ms
dftpp
Modified:subtracted

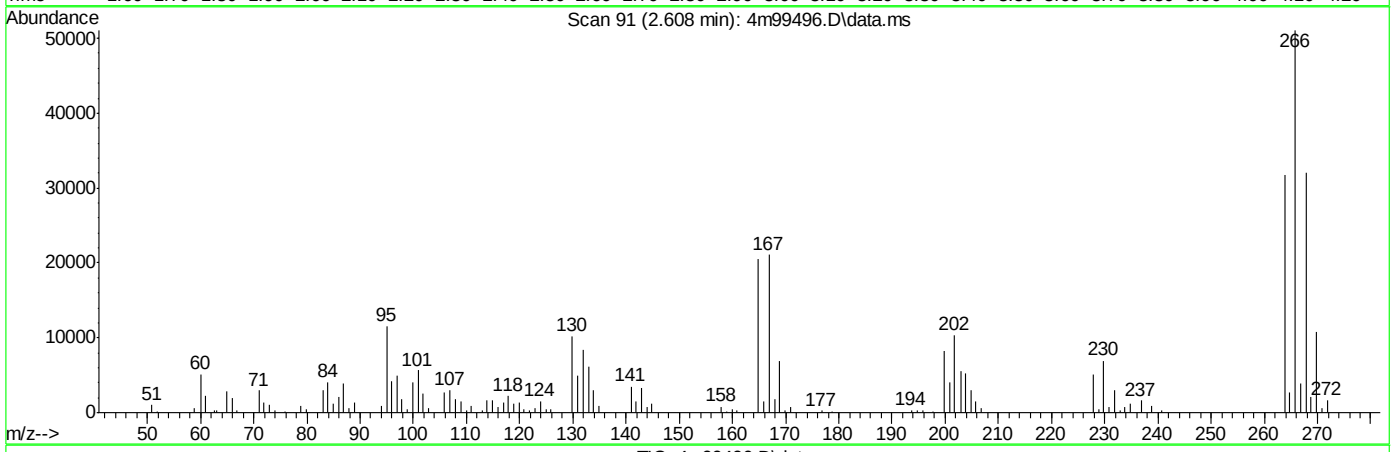
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
324.00	71	421.00	83				
326.90	72	423.00	1055				
334.00	380	424.00	192				
345.80	72	441.00	2543				
351.90	213	442.00	17947				
352.95	139	443.00	3318				
354.00	170	443.95	287				
365.00	970						
365.90	82						
371.95	314						
402.90	175						

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99496.D
Acq On : 10 Apr 2021 2:49 am
Operator : chriss2
Sample : dftpp
Misc : op30792a,e4m4618,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 10 02:56:09 2021
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP4M.M
Quant Title : Semi Volatile GC/MS,zb-5 30m x .25mm x .50um
QLast Update : Sun Apr 05 12:14:16 2020
Response via : Initial Calibration





TIC: 4m99496.D\data.ms

(1) pentachlorophenol (t)

2.608min (-0.420) 2.86ng m

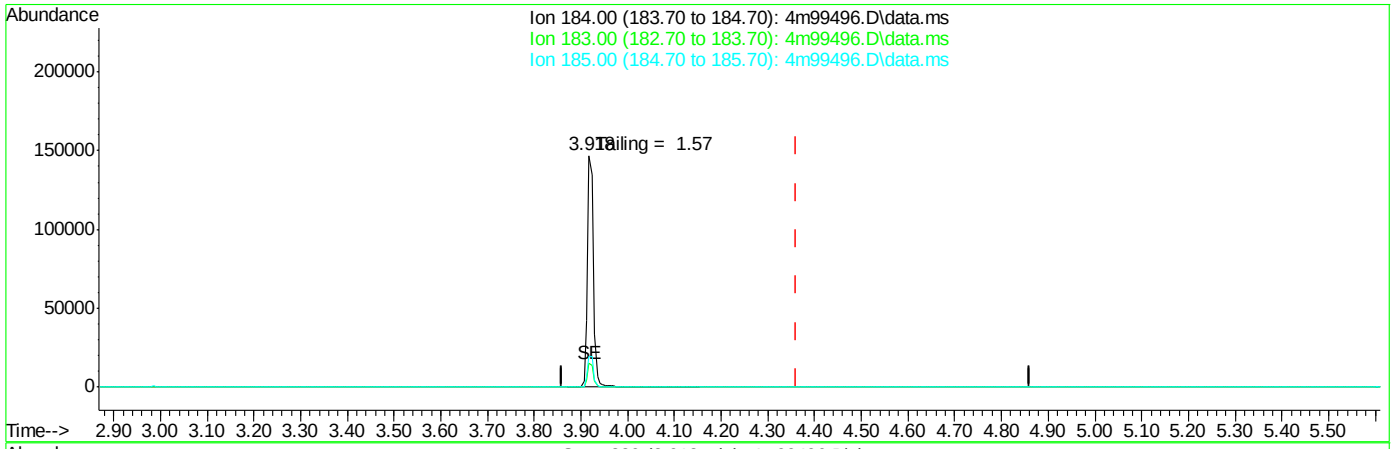
response 47271

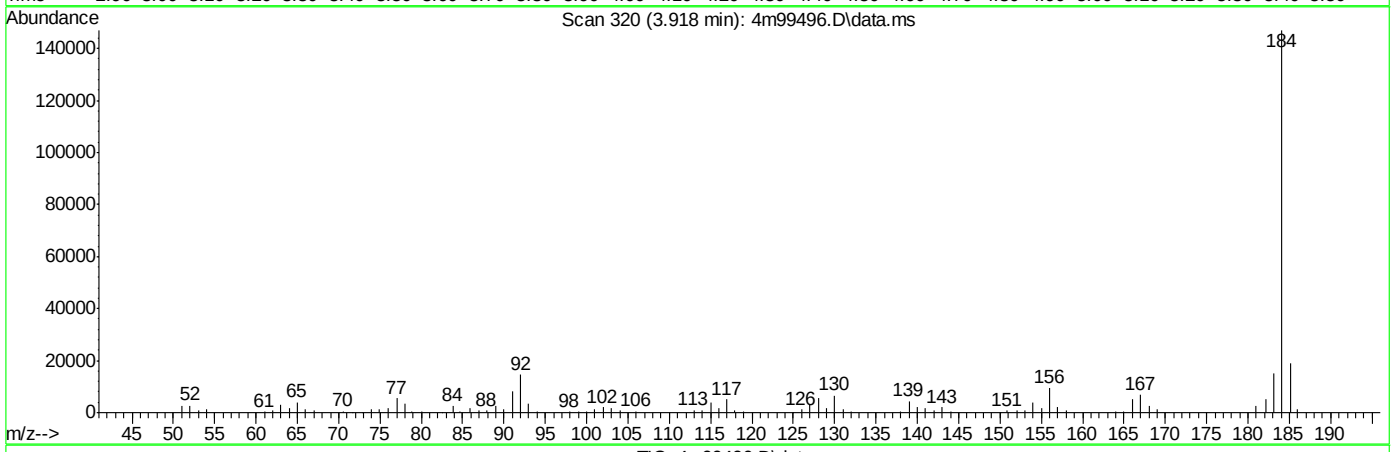
Ion	Exp%	Act%
266.00	100	100
264.00	66.80	0.00#
268.00	69.50	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99496.D
Acq On : 10 Apr 2021 2:49 am
Operator : chriss2
Sample : dftpp
Misc : op30792a,e4m4618,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 10 02:56:09 2021
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP4M.M
Quant Title : Semi Volatile GC/MS,zb-5 30m x .25mm x .50um
QLast Update : Sun Apr 05 12:14:16 2020
Response via : Initial Calibration





TIC: 4m99496.D\data.ms

(2) benzidine (t)

3.918min (-0.443) 2.19ng m

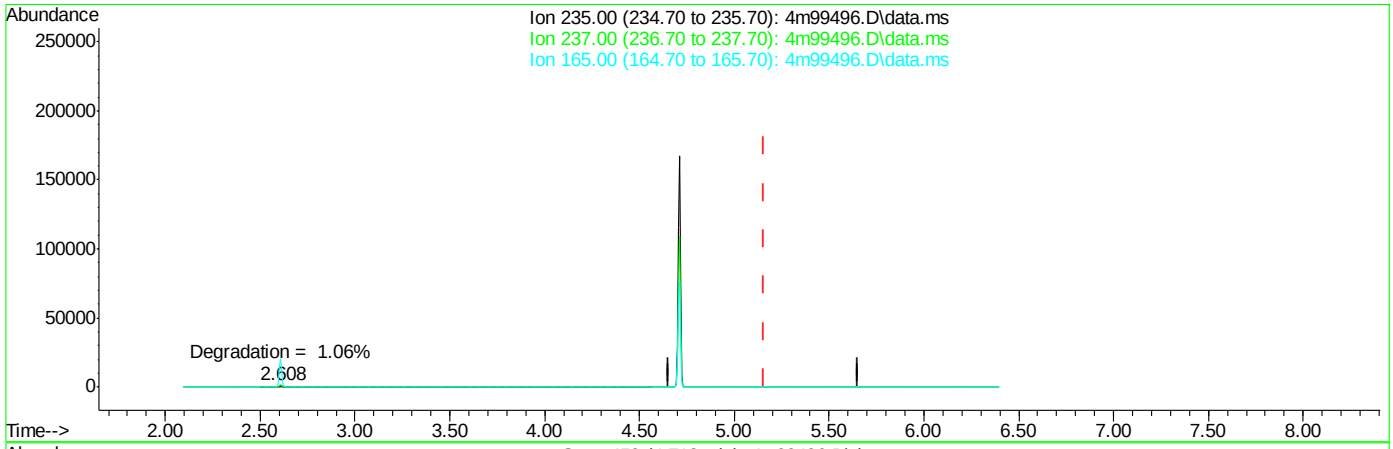
response 130701

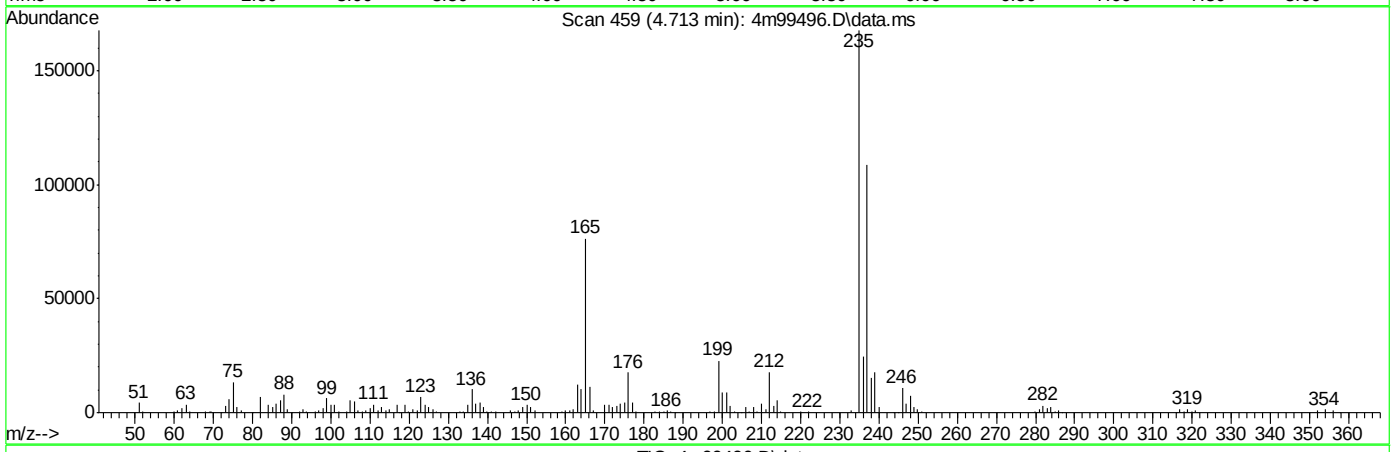
Ion	Exp%	Act%
184.00	100	100
183.00	11.80	0.00#
185.00	13.50	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99496.D
Acq On : 10 Apr 2021 2:49 am
Operator : chriss2
Sample : dftpp
Misc : op30792a,e4m4618,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 10 02:56:09 2021
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP4M.M
Quant Title : Semi Volatile GC/MS,zb-5 30m x .25mm x .50um
QLast Update : Sun Apr 05 12:14:16 2020
Response via : Initial Calibration





TIC: 4m99496.D\data.ms

(3) ddt (t)

4.713min (-0.443) 4.93ng m

response 136480

Ion	Exp%	Act%
235.00	100	100
237.00	65.90	0.00#
165.00	44.70	0.00#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99294.D
Acq On : 1 Apr 2021 6:14 pm
Operator : hennys
Sample : ic4609-5
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 02 09:20:33 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1-Methylnaphthalene-d10	6.879	152	22116	4.00	ppm		0.00
12) Fluorene-d10	8.339	176	25432	4.00	ppm		0.00
22) Fluoranthene-d10	10.457	212	44523	4.00	ppm		0.00
28) Benzo(a)pyrene-d12	13.136	264	31933	4.00	ppm		0.00
35) 1-Methylnaphthalene-d10a	6.879	152	22116	4.00	ppm		0.00
38) Fluorene-d10a	8.339	176	25432	4.00	ppm		0.00
System Monitoring Compounds							
2) 2-Fluorophenol	3.638	112	247529	79.27	ppm		-0.01
Spiked Amount 50.000	Range 11 - 58		Recovery = 158.54%#				
3) Phenol-d5	4.562	99	314694	77.74	ppm		0.00
Spiked Amount 50.000			Recovery = 155.48%				
6) Nitrobenzene-d5	5.425	82	242035	88.78	ppm		0.00
Spiked Amount 50.000			Recovery = 177.56%				
11) 2-Fluorobiphenyl	7.187	172	556609	77.30	ppm		0.00
Spiked Amount 50.000			Recovery = 154.60%				
17) 2,4,6-Tribromophenol	8.605	330	77475	94.35	ppm		0.00
Spiked Amount 50.000			Recovery = 188.70%				
25) Terphenyl-d14	10.872	244	571652	78.28	ppm		0.00
Spiked Amount 50.000			Recovery = 156.56%				
Target Compounds							Qvalue
4) Phenol	4.573	94	94150	21.18	ppm		99
5) bis(2-Chloroethyl)ether	4.649	93	16037	4.52	ppm		93
7) Naphthalene	6.136	128	50287	4.48	ppm		99
8) Hexachlorobutadiene	6.279	225	11265	4.72	ppm		95
9) 2-Methylnaphthalene	6.818	142	31229	4.66	ppm		92
10) Hexachlorocyclopentadiene	6.989	237	22374	10.62	ppm		91
13) Acenaphthylene	7.687	152	54090	4.73	ppm		94
14) Acenaphthene	7.857	153	33647	4.45	ppm		81
15) Dibenzofuran	8.027	168	44460	4.33	ppm	#	1
16) Fluorene	8.367	166	39222	4.73	ppm		91
18) Hexachlorobenzene	8.914	284	14339	4.61	ppm		91
19) Pentachlorophenol	9.100	266	23334	27.41	ppm		79
20) Phenanthrene	9.303	178	57496	4.62	ppm		99
21) Anthracene	9.354	178	58423	4.71	ppm		99
23) Fluoranthene	10.474	202	65257	4.56	ppm		97
24) Pyrene	10.693	202	70245	4.76	ppm		97
26) Benzo[a]anthracene	11.881	228	62262	4.92	ppm		97
27) Chrysene	11.913	228	62453	4.78	ppm		99
29) Benzo[b]fluoranthene	12.878	252	63595	4.49	ppm		99
30) Benzo[k]fluoranthene	12.901	252	65266	4.87	ppm		99
31) Benzo[a]pyrene	13.152	252	58926	4.48	ppm		96
32) Indeno[1,2,3-cd]pyrene	14.230	276	66654	5.03	ppm		78
33) Dibenz[a,h]anthracene	14.254	278	54497	5.15	ppm		89
34) Benzo[g,h,i]perylene	14.529	276	55098	4.92	ppm		100
36) 1,4-Dioxane	1.930	88	7277	4.58	ppm	#	64
37) 1-Methylnaphthalene	6.912	142	35749	4.64	ppm		91
39) 4,6-dinitro-2-methylph...	8.421	198	16222	28.02	ppm		80

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99294.D
Acq On : 1 Apr 2021 6:14 pm
Operator : hennys
Sample : ic4609-5
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 02 09:20:33 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

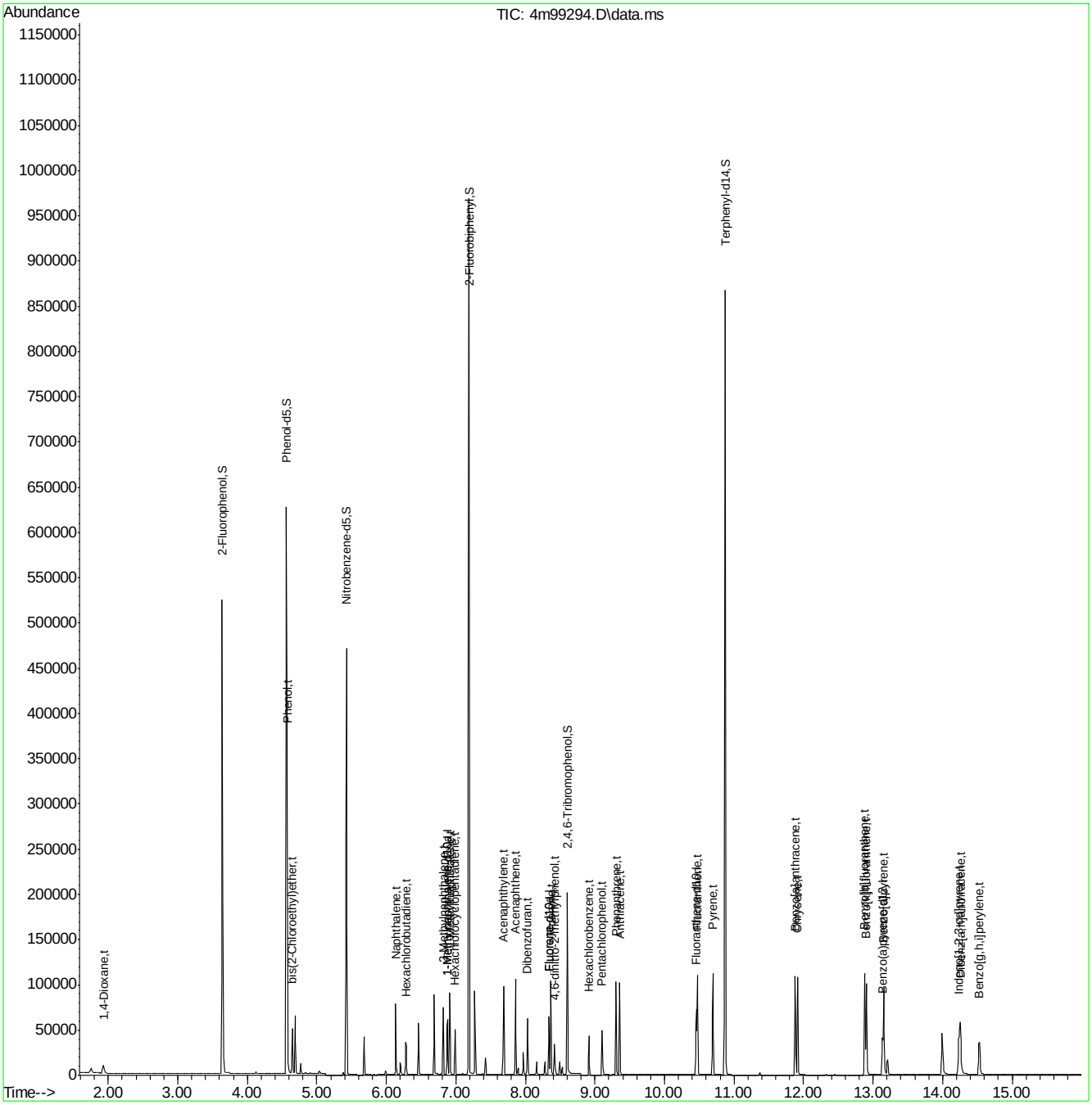
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99294.D
Acq On : 1 Apr 2021 6:14 pm
Operator : hennys
Sample : ic4609-5
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 02 09:20:33 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
04/02/21 11:12

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99295.D
Acq On : 1 Apr 2021 6:34 pm
Operator : hennys
Sample : ic4609-2.5
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 02 09:22:05 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	6.879	152	17699	4.00	ppm	0.00
12) Fluorene-d10	8.339	176	19792	4.00	ppm	0.00
22) Fluoranthene-d10	10.457	212	34582	4.00	ppm	0.00
28) Benzo(a)pyrene-d12	13.136	264	24503	4.00	ppm	0.00
35) 1-Methylnaphthalene-d10a	6.879	152	17699	4.00	ppm	0.00
38) Fluorene-d10a	8.339	176	19792	4.00	ppm	0.00
System Monitoring Compounds						
2) 2-Fluorophenol	3.648	112	108749	43.52	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery =	87.04%#		
3) Phenol-d5	4.566	99	140701	43.43	ppm	0.00
Spiked Amount 50.000			Recovery =	86.86%		
6) Nitrobenzene-d5	5.425	82	103186	47.30	ppm	0.00
Spiked Amount 50.000			Recovery =	94.60%		
11) 2-Fluorobiphenyl	7.187	172	247481	42.95	ppm	0.00
Spiked Amount 50.000			Recovery =	85.90%		
17) 2,4,6-Tribromophenol	8.606	330	31429	49.18	ppm	0.00
Spiked Amount 50.000			Recovery =	98.36%		
25) Terphenyl-d14	10.873	244	248897	43.88	ppm	0.00
Spiked Amount 50.000			Recovery =	87.76%		
Target Compounds						Qvalue
4) Phenol	4.577	94	40866	11.49	ppm	94
5) bis(2-Chloroethyl)ether	4.653	93	6789	2.39	ppm	88
7) Naphthalene	6.136	128	21016	2.34	ppm	100
8) Hexachlorobutadiene	6.285	225	4613	2.41	ppm	97
9) 2-Methylnaphthalene	6.818	142	12836	2.39	ppm	96
10) Hexachlorocyclopentadiene	6.989	237	8631	5.12	ppm	95
13) Acenaphthylene	7.687	152	21767	2.45	ppm	98
14) Acenaphthene	7.857	153	13807	2.34	ppm	75
15) Dibenzofuran	8.036	168	18743	2.35	ppm	88
16) Fluorene	8.367	166	16007	2.48	ppm	95
18) Hexachlorobenzene	8.915	284	5842	2.41	ppm	95
19) Pentachlorophenol	9.107	266	8665	13.08	ppm	89
20) Phenanthrene	9.304	178	23096	2.39	ppm	100
21) Anthracene	9.354	178	23520	2.43	ppm	99
23) Fluoranthene	10.474	202	26561	2.39	ppm	97
24) Pyrene	10.693	202	28161	2.46	ppm	98
26) Benzo[a]anthracene	11.878	228	24462	2.49	ppm	98
27) Chrysene	11.913	228	24952	2.46	ppm	99
29) Benzo[b]fluoranthene	12.878	252	25757	2.37	ppm	98
30) Benzo[k]fluoranthene	12.901	252	25406	2.47	ppm	100
31) Benzo[a]pyrene	13.152	252	24016	2.38	ppm	96
32) Indeno[1,2,3-cd]pyrene	14.230	276	25298	2.49	ppm	80
33) Dibenz[a,h]anthracene	14.254	278	20896	2.57	ppm	90
34) Benzo[g,h,i]perylene	14.530	276	20993	2.44	ppm	100
36) 1,4-Dioxane	1.930	88	2963m	2.33	ppm	
37) 1-Methylnaphthalene	6.912	142	14600	2.37	ppm	97
39) 4,6-dinitro-2-methylph...	8.421	198	6082	13.50	ppm	88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99295.D
Acq On : 1 Apr 2021 6:34 pm
Operator : hennys
Sample : ic4609-2.5
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 02 09:22:05 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

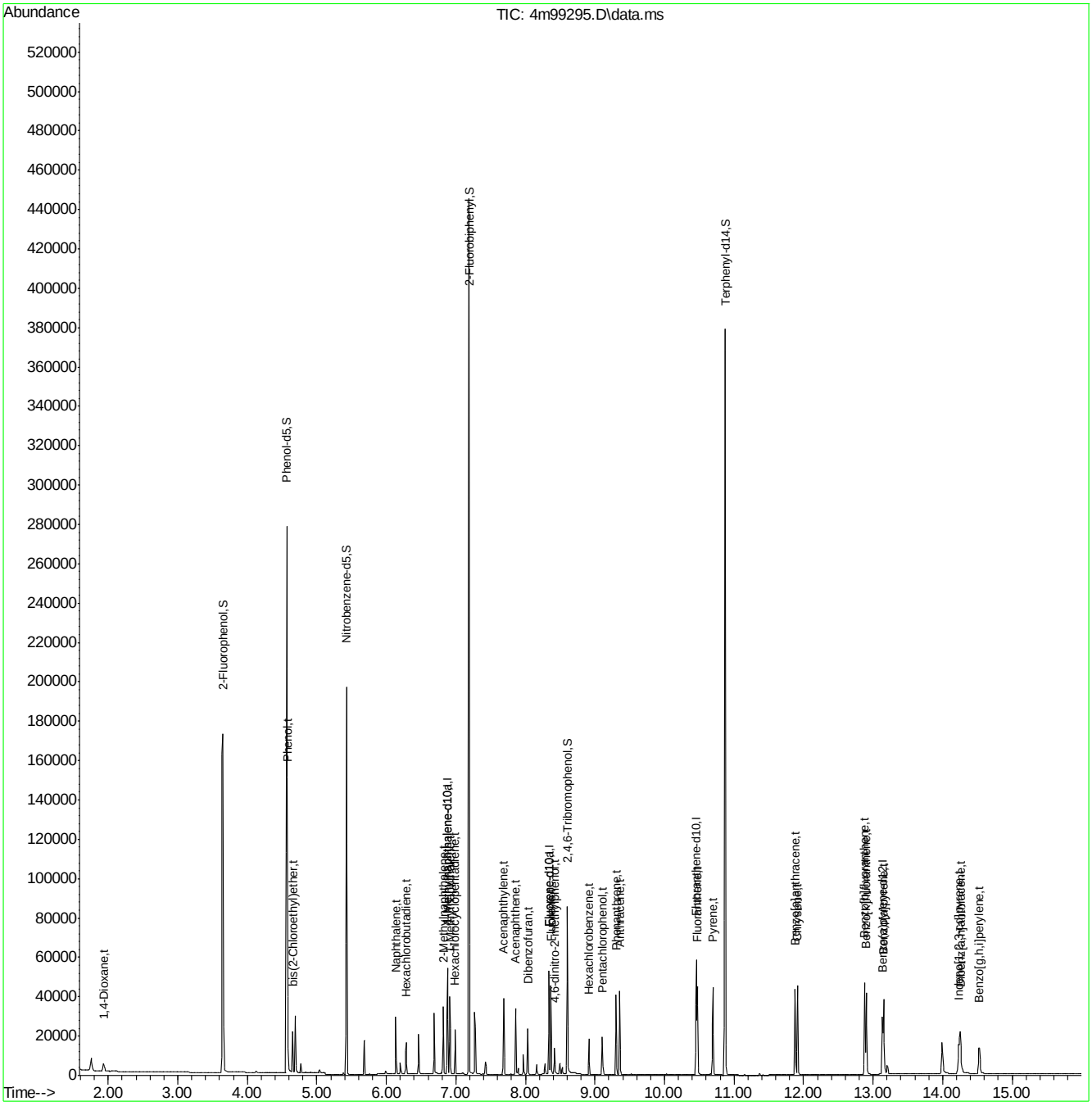
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99295.D
Acq On : 1 Apr 2021 6:34 pm
Operator : hennys
Sample : ic4609-2.5
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 02 09:22:05 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration



Manual Integration Approval Summary

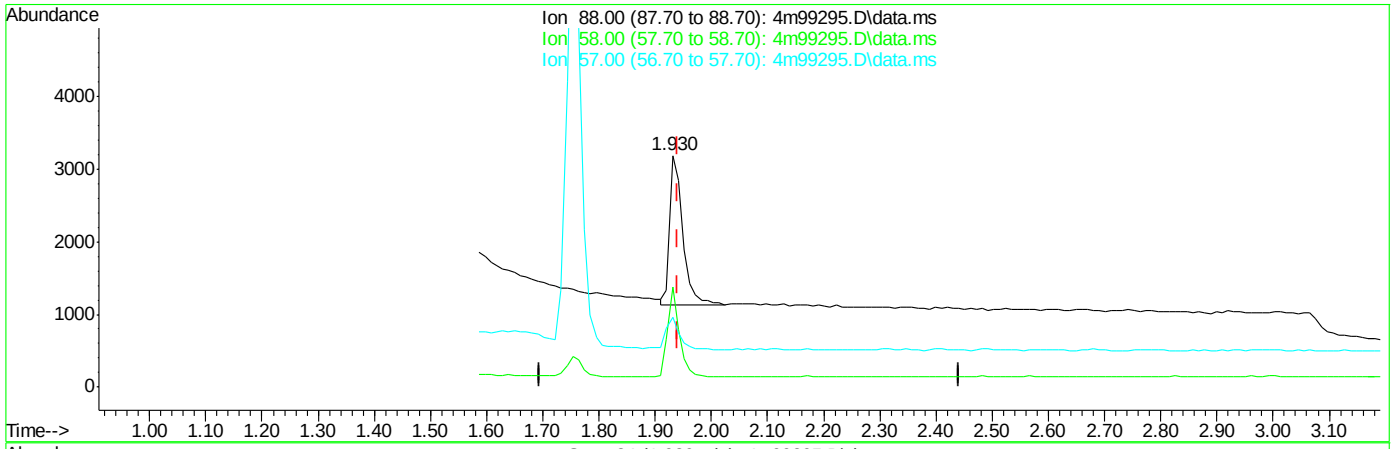
Sample Number: E4M4609-IC4609
Lab FileID: 4M99295.D
Injection Time: 04/01/21 18:34
Method: SW846 8270E BY SIM
Analyst approved: 04/02/21 09:42 Ying Li
Supervisor approved: 04/02/21 11:12 Nina Pandya

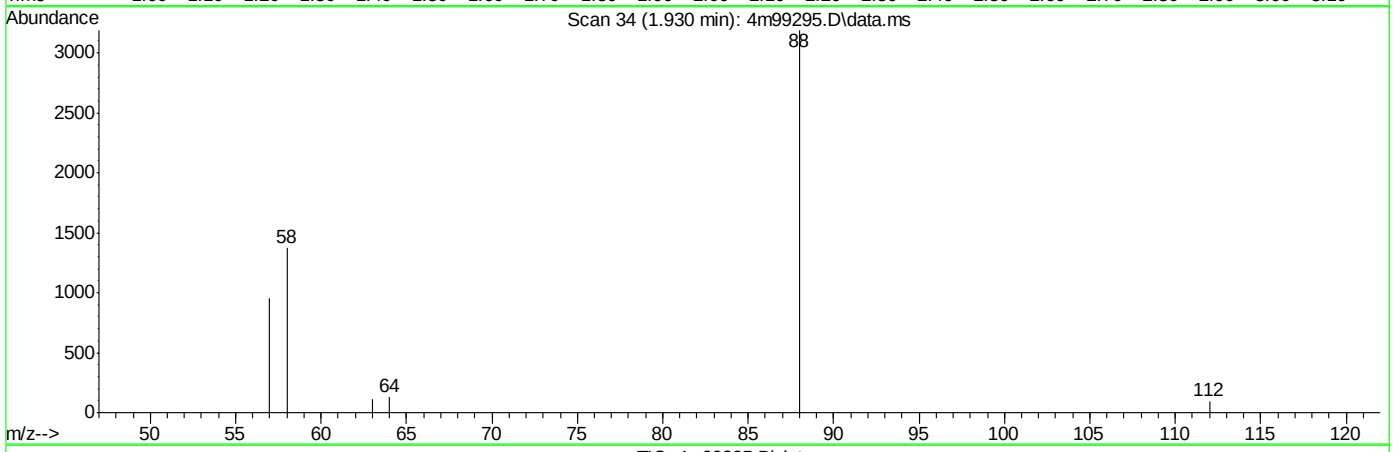
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,4-Dioxane	123-91-1		1.93	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99295.D
Acq On : 1 Apr 2021 6:34 pm
Operator : hennys
Sample : ic4609-2.5
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 02 09:21:23 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration





TIC: 4m99295.D\data.ms

(36) 1,4-Dioxane (t)

1.930min (-0.010) 2.61ppm

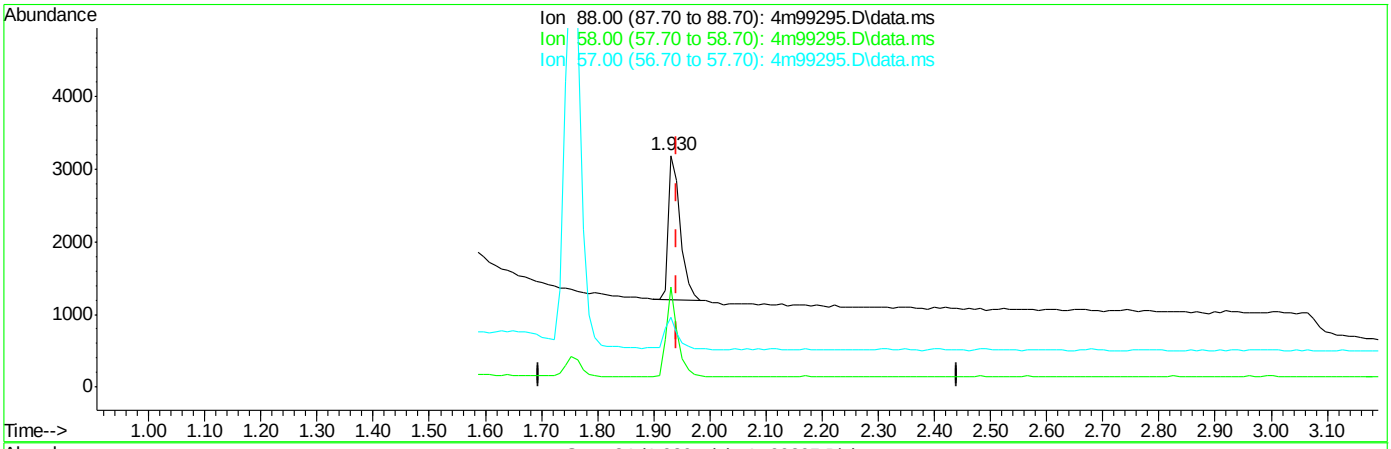
response 3315

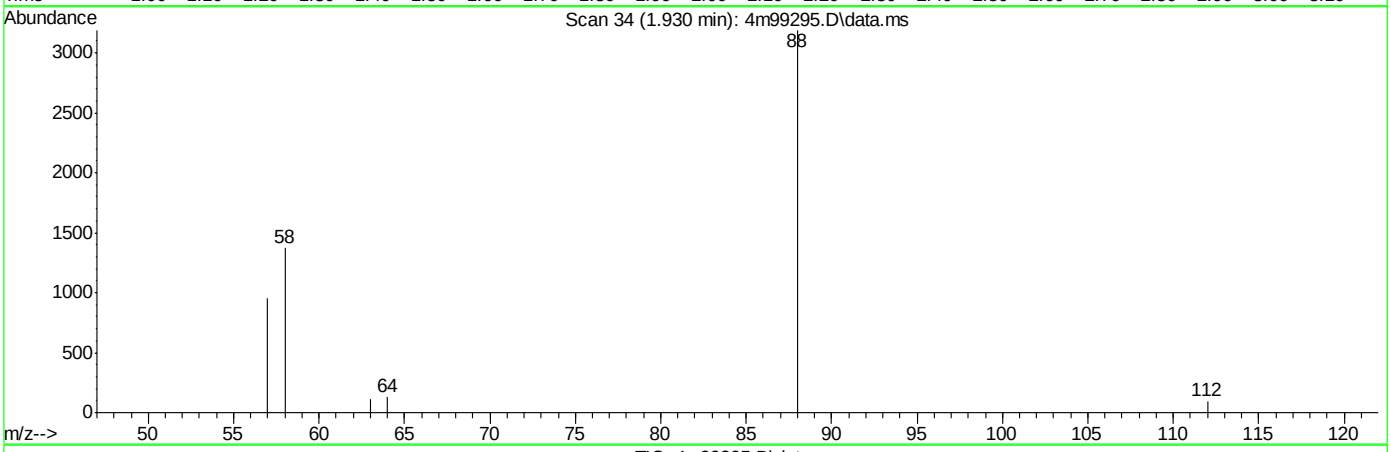
Ion	Exp%	Act%
88.00	100	100
58.00	17.80	60.67#
57.00	23.40	21.09
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99295.D
Acq On : 1 Apr 2021 6:34 pm
Operator : hennys
Sample : ic4609-2.5
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 02 09:21:23 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration





TIC: 4m99295.D\data.ms

(36) 1,4-Dioxane (t)

1.930min (-0.010) 2.33ppm m

response 2963

Ion	Exp%	Act%
88.00	100	100
58.00	17.80	43.07#
57.00	23.40	30.02
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
04/02/21 11:12

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99296.D
Acq On : 1 Apr 2021 6:55 pm
Operator : hennys
Sample : icc4609-1
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 02 09:19:52 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	6.879	152	11960	4.00	ppm	0.00
12) Fluorene-d10	8.339	176	13424	4.00	ppm	0.00
22) Fluoranthene-d10	10.457	212	23613	4.00	ppm	0.00
28) Benzo(a)pyrene-d12	13.136	264	15927	4.00	ppm	0.00
35) 1-Methylnaphthalene-d10a	6.879	152	11960	4.00	ppm	0.00
38) Fluorene-d10a	8.339	176	13424	4.00	ppm	0.00
System Monitoring Compounds						
2) 2-Fluorophenol	3.648	112	33774	20.00	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery = 40.00%			
3) Phenol-d5	4.566	99	43780	20.00	ppm	0.00
Spiked Amount 50.000			Recovery = 40.00%			
6) Nitrobenzene-d5	5.428	82	29486	20.00	ppm	0.00
Spiked Amount 50.000			Recovery = 40.00%			
11) 2-Fluorobiphenyl	7.187	172	77875	20.00	ppm	0.00
Spiked Amount 50.000			Recovery = 40.00%			
17) 2,4,6-Tribromophenol	8.605	330	8669	20.00	ppm	0.00
Spiked Amount 50.000			Recovery = 40.00%			
25) Terphenyl-d14	10.872	244	77458	20.00	ppm	0.00
Spiked Amount 50.000			Recovery = 40.00%			
Target Compounds						Qvalue
4) Phenol	4.577	94	12018	5.00	ppm	100
5) bis(2-Chloroethyl)ether	4.652	93	1920	1.00	ppm	100
7) Naphthalene	6.142	128	6066	1.00	ppm	100
8) Hexachlorobutadiene	6.285	225	1291	1.00	ppm	100
9) 2-Methylnaphthalene	6.818	142	3627	1.00	ppm	100
10) Hexachlorocyclopentadiene	6.989	237	2279	2.00	ppm	100
13) Acenaphthylene	7.687	152	6036	1.00	ppm	100
14) Acenaphthene	7.866	153	3994	1.00	ppm	100
15) Dibenzofuran	8.036	168	5417	1.00	ppm	100
16) Fluorene	8.367	166	4380	1.00	ppm	100
18) Hexachlorobenzene	8.914	284	1642	1.00	ppm	100
19) Pentachlorophenol	9.107	266	2247	5.00	ppm	100
20) Phenanthrene	9.308	178	6564	1.00	ppm	100
21) Anthracene	9.358	178	6553	1.00	ppm	100
23) Fluoranthene	10.478	202	7584	1.00	ppm	100
24) Pyrene	10.697	202	7832	1.00	ppm	100
26) Benzo[a]anthracene	11.881	228	6718	1.00	ppm	100
27) Chrysene	11.916	228	6924	1.00	ppm	100
29) Benzo[b]fluoranthene	12.881	252	7066	1.00	ppm	100
30) Benzo[k]fluoranthene	12.904	252	6689	1.00	ppm	100
31) Benzo[a]pyrene	13.152	252	6565	1.00	ppm	100
32) Indeno[1,2,3-cd]pyrene	14.238	276	6607	1.00	ppm	100
33) Dibenz[a,h]anthracene	14.254	278	5277	1.00	ppm	100
34) Benzo[g,h,i]perylene	14.529	276	5587	1.00	ppm	100
36) 1,4-Dioxane	1.941	88	832m	0.97	ppm	
37) 1-Methylnaphthalene	6.912	142	4166	1.00	ppm	100
39) 4,6-dinitro-2-methylph...	8.421	198	1528	5.00	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99296.D
Acq On : 1 Apr 2021 6:55 pm
Operator : hennys
Sample : icc4609-1
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 02 09:19:52 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

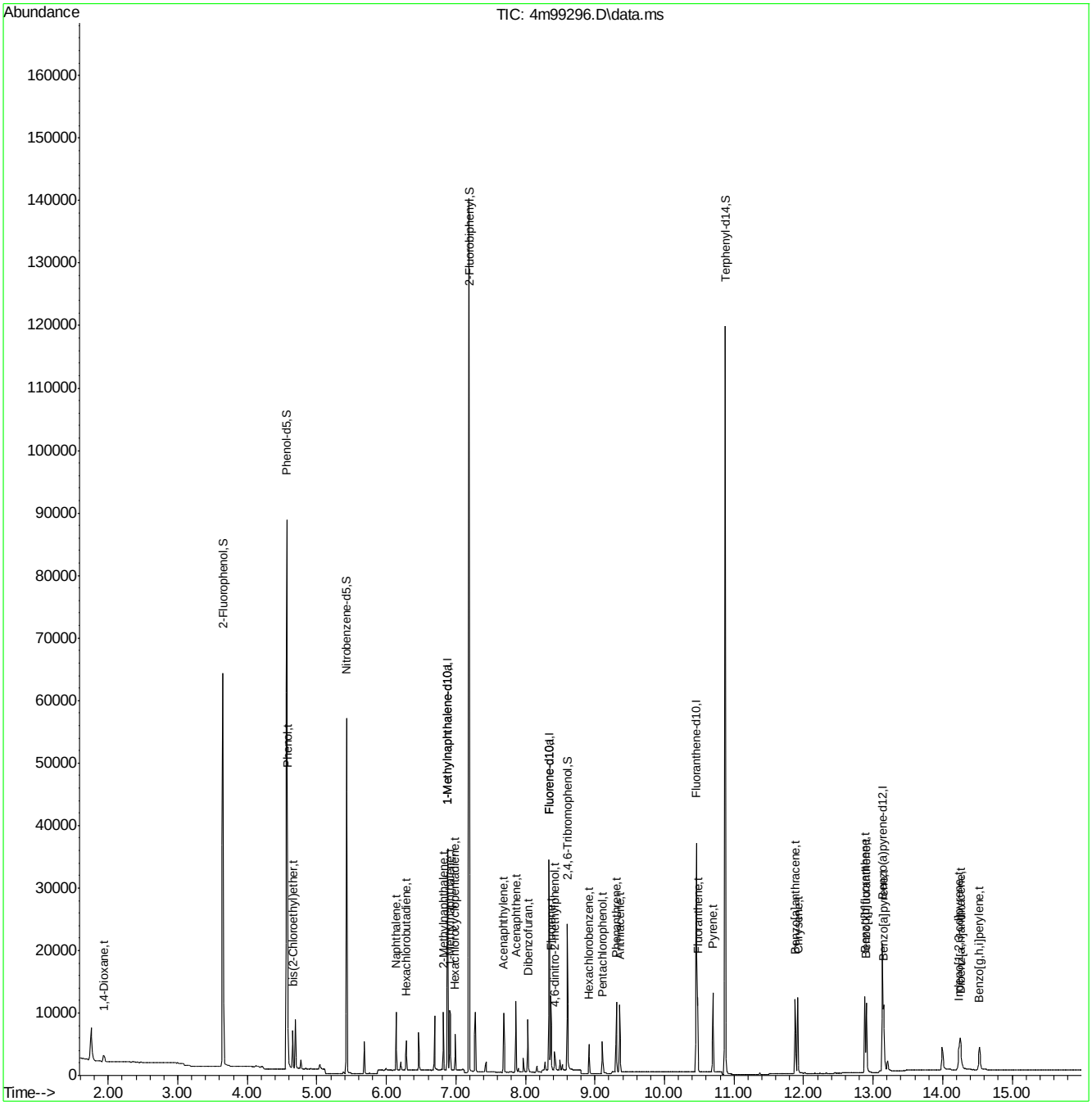
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99296.D
Acq On : 1 Apr 2021 6:55 pm
Operator : hennys
Sample : icc4609-1
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 02 09:19:52 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration



Manual Integration Approval Summary

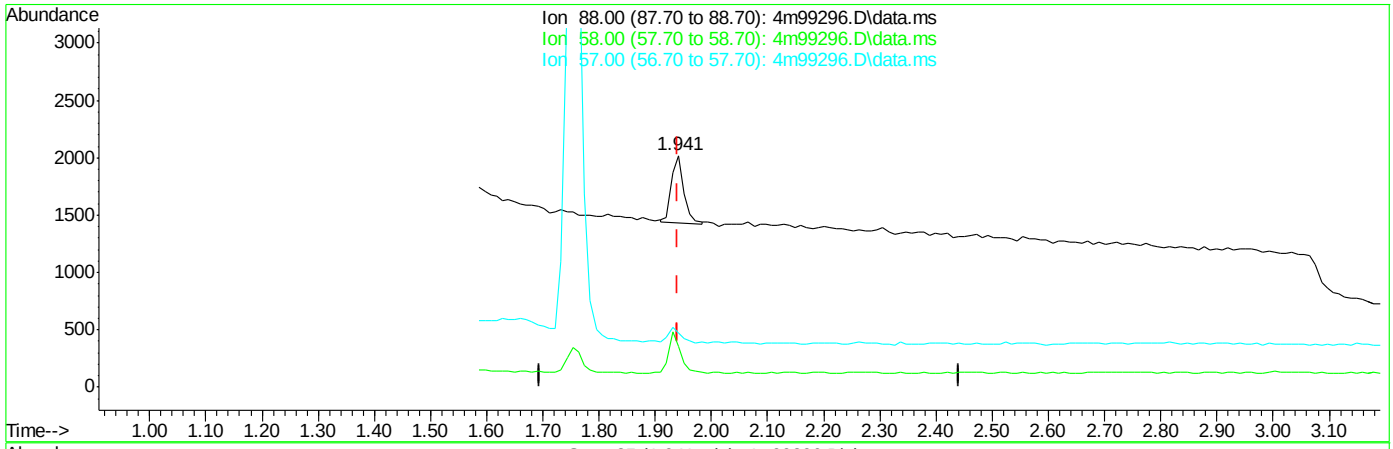
Sample Number: E4M4609-ICC4609
Lab FileID: 4M99296.D
Injection Time: 04/01/21 18:55
Method: SW846 8270E BY SIM
Analyst approved: 04/02/21 09:43 Ying Li
Supervisor approved: 04/02/21 11:12 Nina Pandya

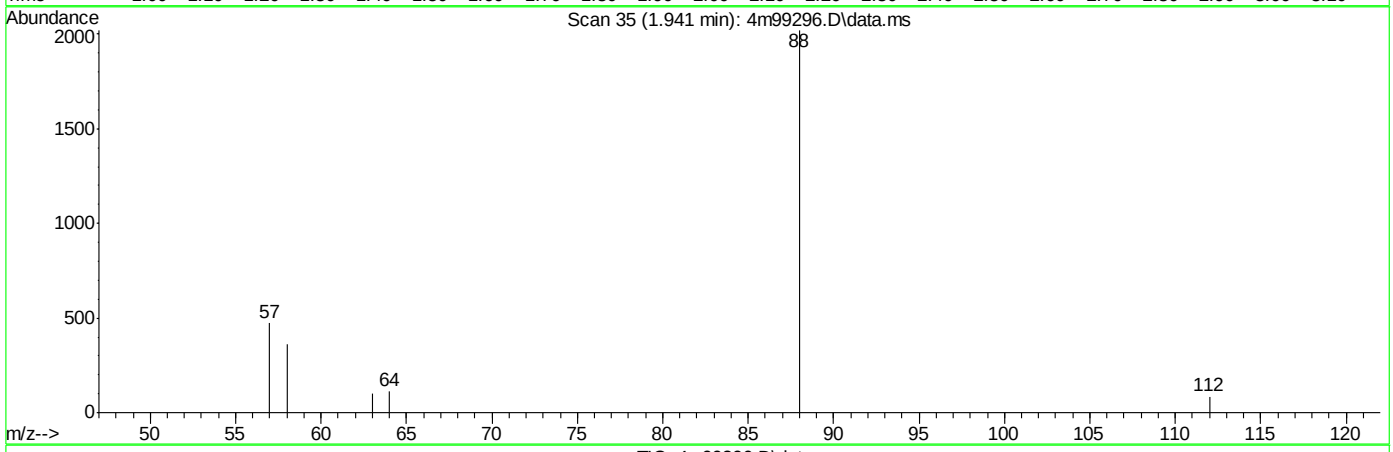
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,4-Dioxane	123-91-1		1.94	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99296.D
Acq On : 1 Apr 2021 6:55 pm
Operator : hennys
Sample : ic4609-1
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 02 09:16:48 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 01 10:58:55 2021
Response via : Initial Calibration





TIC: 4m99296.D\data.ms

(36) 1,4-Dioxane (t)

1.941min (-0.000) 1.23ppm

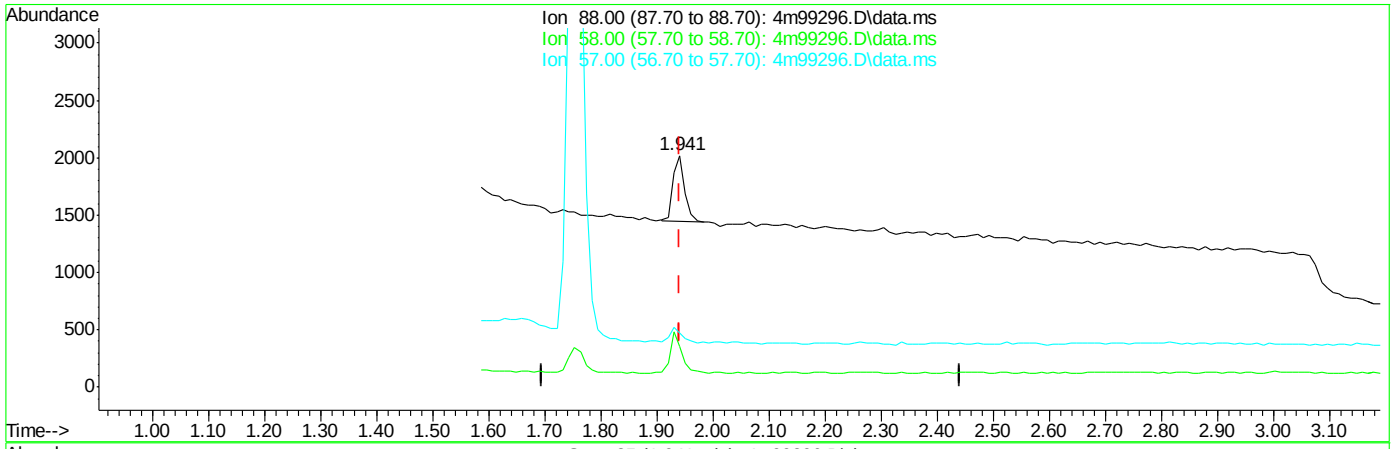
response 896

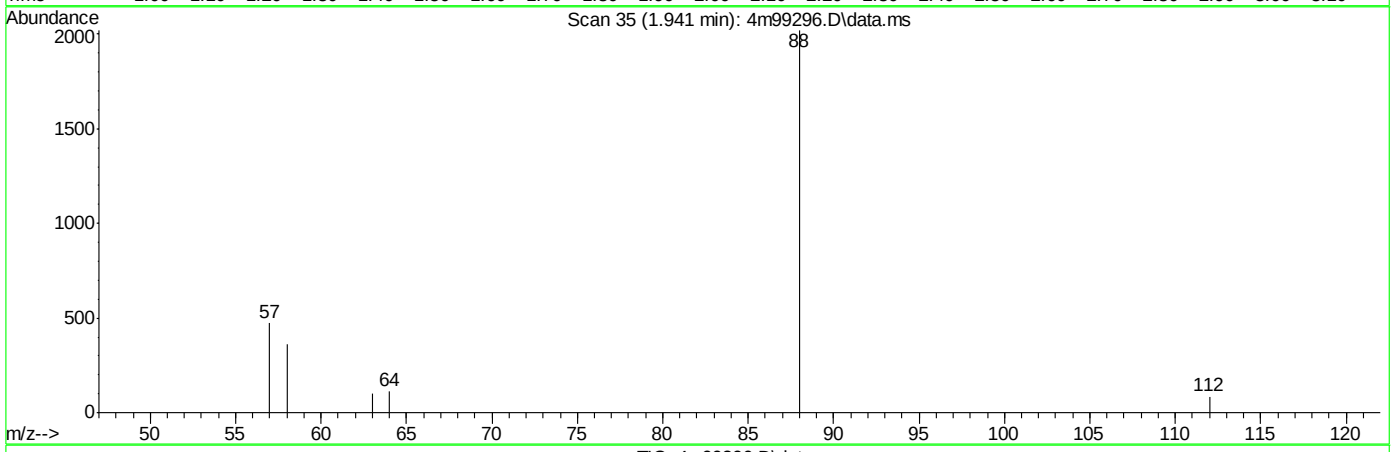
Ion	Exp%	Act%
88.00	100	100
58.00	62.90	40.32#
57.00	23.60	14.11
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99296.D
Acq On : 1 Apr 2021 6:55 pm
Operator : hennys
Sample : ic4609-1
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 02 09:19:24 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration





TIC: 4m99296.D\data.ms

(36) 1,4-Dioxane (t)

1.941min (0.000) 0.97ppm m

response 832

Ion	Exp%	Act%
88.00	100	100
58.00	17.80	17.77
57.00	23.40	23.42
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
04/02/21 11:12

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99297.D
Acq On : 1 Apr 2021 7:16 pm
Operator : hennys
Sample : ic4609-0.5
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 02 09:23:21 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	6.884	152	18835	4.00	ppm	0.00
12) Fluorene-d10	8.346	176	20718	4.00	ppm	0.00
22) Fluoranthene-d10	10.461	212	36293	4.00	ppm	0.00
28) Benzo(a)pyrene-d12	13.136	264	24903	4.00	ppm	0.00
35) 1-Methylnaphthalene-d10a	6.884	152	18835	4.00	ppm	0.00
38) Fluorene-d10a	8.346	176	20718	4.00	ppm	0.00
System Monitoring Compounds						
2) 2-Fluorophenol	3.648	112	27624	10.39	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery =	20.78%		
3) Phenol-d5	4.570	99	35418	10.27	ppm	0.00
Spiked Amount 50.000			Recovery =	20.54%		
6) Nitrobenzene-d5	5.428	82	23550	10.14	ppm	0.00
Spiked Amount 50.000			Recovery =	20.28%		
11) 2-Fluorobiphenyl	7.187	172	64671	10.55	ppm	0.00
Spiked Amount 50.000			Recovery =	21.10%		
17) 2,4,6-Tribromophenol	8.606	330	7054	10.54	ppm	0.00
Spiked Amount 50.000			Recovery =	21.08%		
25) Terphenyl-d14	10.875	244	64035	10.76	ppm	0.00
Spiked Amount 50.000			Recovery =	21.52%		
Target Compounds						Qvalue
4) Phenol	4.581	94	9682	2.56	ppm	91
5) bis(2-Chloroethyl)ether	4.656	93	1538	0.51	ppm	86
7) Naphthalene	6.142	128	4810	0.50	ppm	99
8) Hexachlorobutadiene	6.285	225	1069	0.53	ppm	97
9) 2-Methylnaphthalene	6.824	142	3019	0.53	ppm	96
10) Hexachlorocyclopentadiene	6.994	237	1839	1.02	ppm	91
13) Acenaphthylene	7.697	152	4998	0.54	ppm	90
14) Acenaphthene	7.866	153	3320	0.54	ppm	93
15) Dibenzofuran	8.036	168	4510	0.54	ppm	80
16) Fluorene	8.367	166	3630	0.54	ppm	98
18) Hexachlorobenzene	8.922	284	1345	0.53	ppm	86
19) Pentachlorophenol	9.107	266	1661	2.39	ppm	89
20) Phenanthrene	9.308	178	5369	0.53	ppm	99
21) Anthracene	9.358	178	5351	0.53	ppm	99
23) Fluoranthene	10.478	202	6265	0.54	ppm	98
24) Pyrene	10.697	202	6443	0.54	ppm	97
26) Benzo[a]anthracene	11.881	228	5380	0.52	ppm	99
27) Chrysene	11.916	228	5747	0.54	ppm	99
29) Benzo[b]fluoranthene	12.881	252	5539	0.50	ppm	99
30) Benzo[k]fluoranthene	12.904	252	5690	0.54	ppm	99
31) Benzo[a]pyrene	13.160	252	5442	0.53	ppm	93
32) Indeno[1,2,3-cd]pyrene	14.238	276	5176	0.50	ppm	92
33) Dibenz[a,h]anthracene	14.254	278	4107	0.50	ppm	94
34) Benzo[g,h,i]perylene	14.530	276	4446	0.51	ppm	100
36) 1,4-Dioxane	1.941	88	651m	0.48	ppm	
37) 1-Methylnaphthalene	6.917	142	3466	0.53	ppm	94
39) 4,6-dinitro-2-methylph...	8.428	198	1284	2.72	ppm	74

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99297.D
Acq On : 1 Apr 2021 7:16 pm
Operator : hennys
Sample : ic4609-0.5
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 02 09:23:21 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

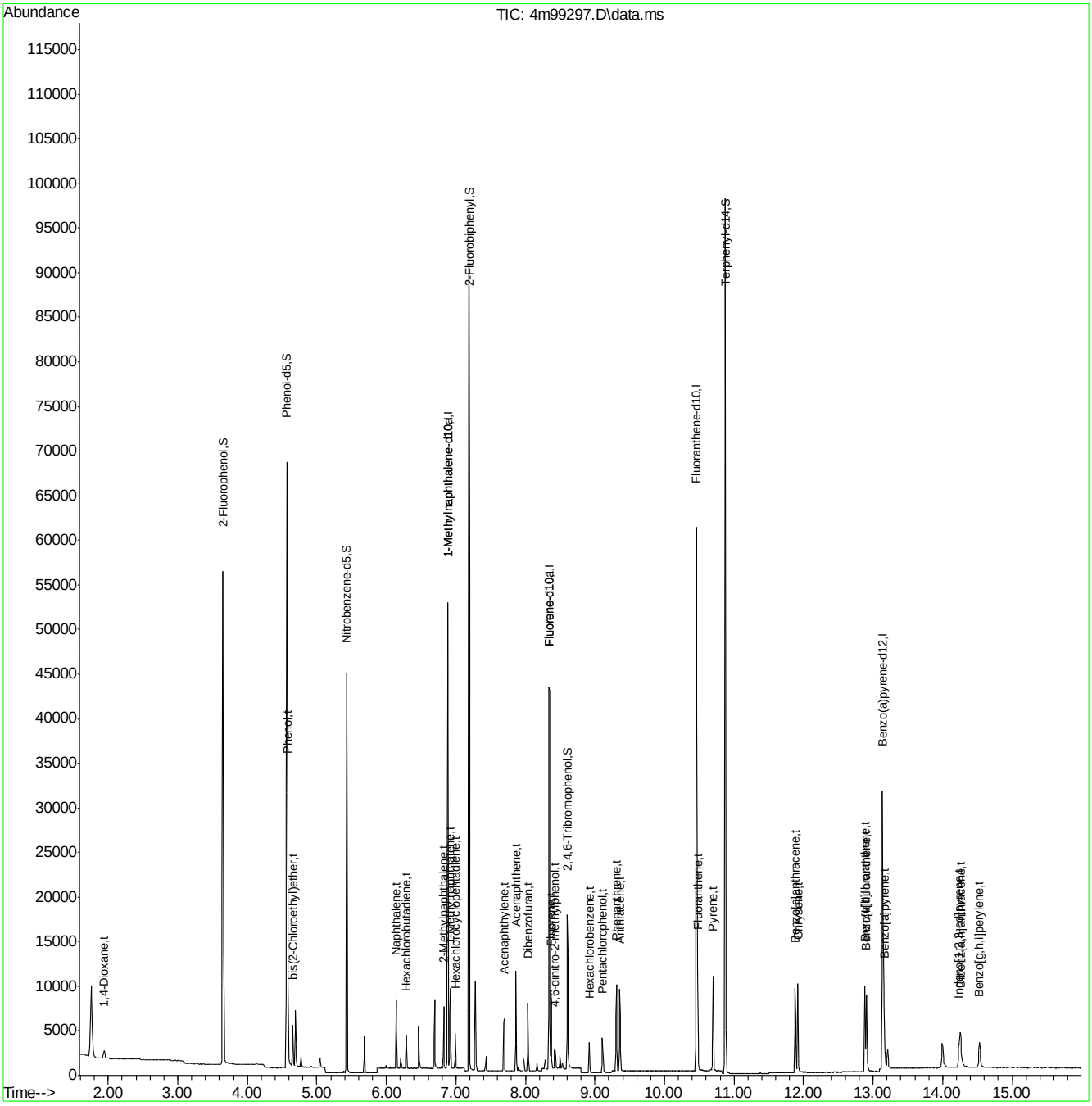
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99297.D
Acq On : 1 Apr 2021 7:16 pm
Operator : hennys
Sample : ic4609-0.5
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 02 09:23:21 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration



Manual Integration Approval Summary

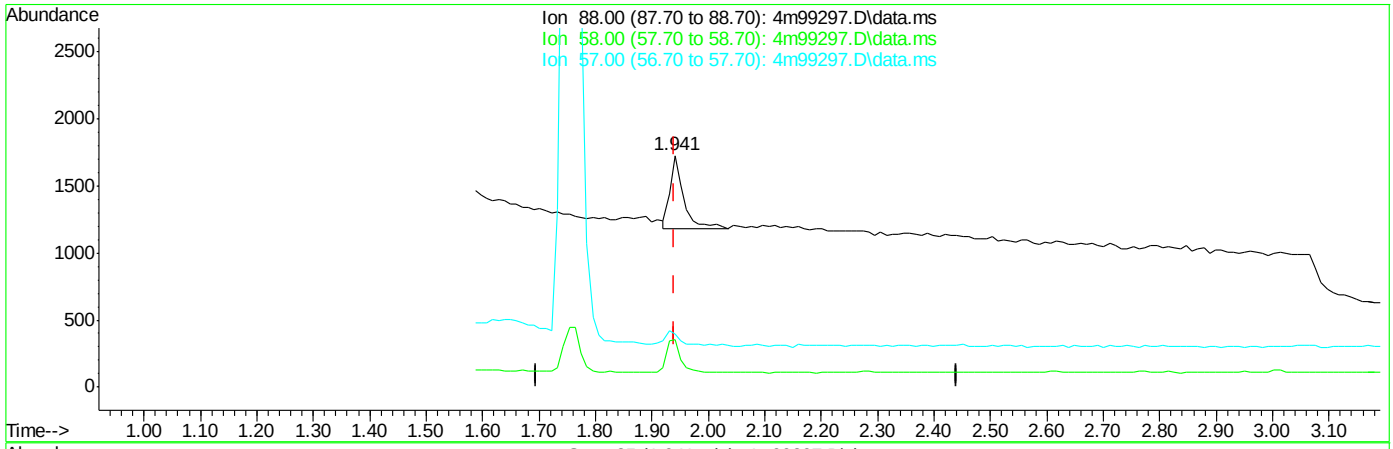
Sample Number: E4M4609-IC4609
Lab FileID: 4M99297.D
Injection Time: 04/01/21 19:16
Method: SW846 8270E BY SIM
Analyst approved: 04/02/21 09:42 Ying Li
Supervisor approved: 04/02/21 11:12 Nina Pandya

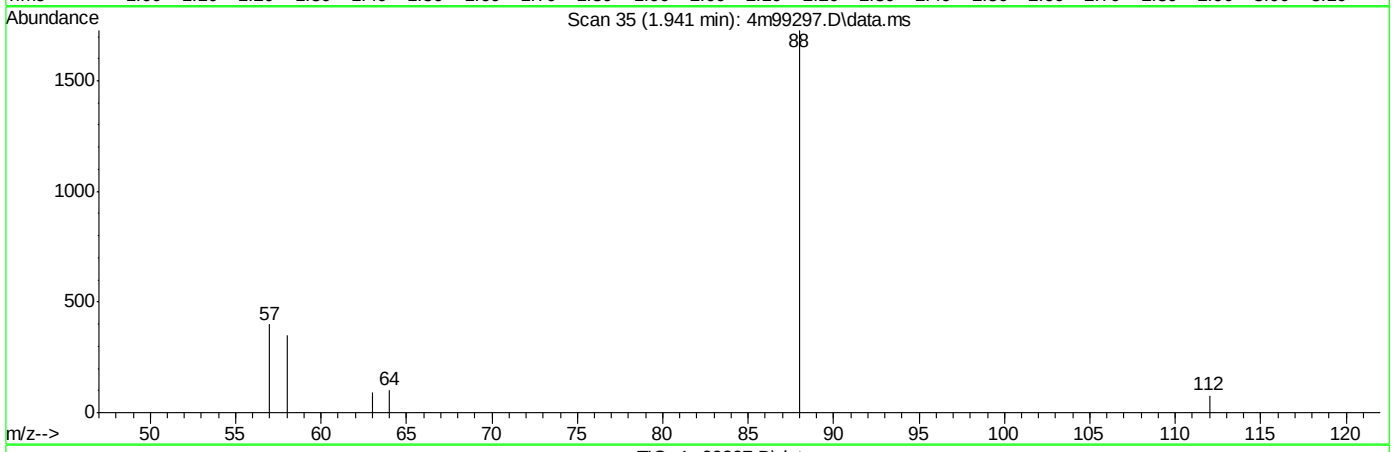
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,4-Dioxane	123-91-1		1.94	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99297.D
Acq On : 1 Apr 2021 7:16 pm
Operator : hennys
Sample : ic4609-0.5
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 02 09:22:26 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration





TIC: 4m99297.D\data.ms

(36) 1,4-Dioxane (t)

1.941min (+0.000) 0.67ppm

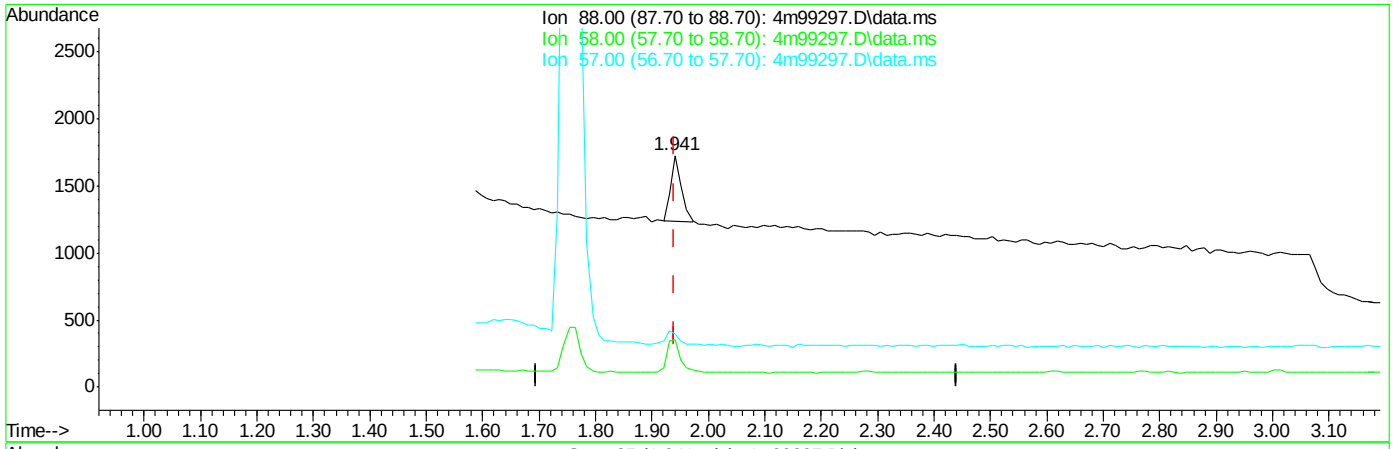
response 910

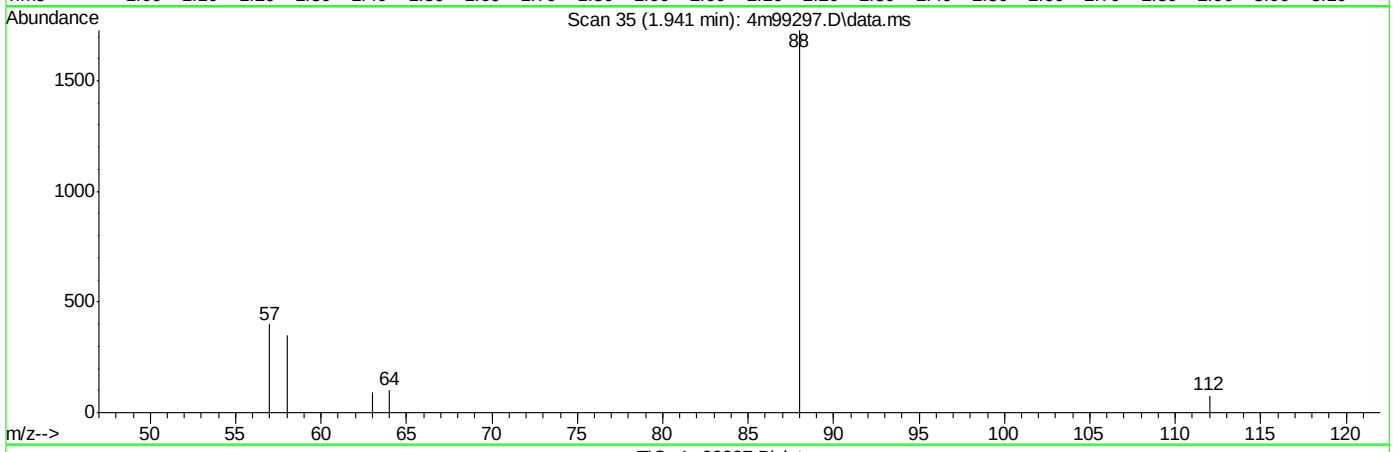
Ion	Exp%	Act%
88.00	100	100
58.00	17.80	43.30#
57.00	23.40	13.50
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99297.D
Acq On : 1 Apr 2021 7:16 pm
Operator : hennys
Sample : ic4609-0.5
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 02 09:22:26 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration





TIC: 4m99297.D\data.ms

(36) 1,4-Dioxane (t)

1.941min (+0.000) 0.48ppm m

response 651

Ion	Exp%	Act%
88.00	100	100
58.00	17.80	20.31
57.00	23.40	23.09
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
04/02/21 11:12

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99298.D
Acq On : 1 Apr 2021 7:36 pm
Operator : hennys
Sample : ic4609-0.2
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 02 09:24:27 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	6.884	152	19346	4.00	ppm	0.00
12) Fluorene-d10	8.346	176	21540	4.00	ppm	0.00
22) Fluoranthene-d10	10.466	212	37724	4.00	ppm	0.00
28) Benzo(a)pyrene-d12	13.136	264	25673	4.00	ppm	0.00
35) 1-Methylnaphthalene-d10a	6.884	152	19346	4.00	ppm	0.00
38) Fluorene-d10a	8.346	176	21540	4.00	ppm	0.00
System Monitoring Compounds						
2) 2-Fluorophenol	3.648	112	10626	3.89	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery =	7.78%#		
3) Phenol-d5	4.570	99	13702	3.87	ppm	0.00
Spiked Amount 50.000			Recovery =	7.74%		
6) Nitrobenzene-d5	5.431	82	8926	3.74	ppm	0.00
Spiked Amount 50.000			Recovery =	7.48%		
11) 2-Fluorobiphenyl	7.197	172	26335	4.18	ppm	0.00
Spiked Amount 50.000			Recovery =	8.36%		
17) 2,4,6-Tribromophenol	8.606	330	2644	3.80	ppm	0.00
Spiked Amount 50.000			Recovery =	7.60%		
25) Terphenyl-d14	10.875	244	25970	4.20	ppm	0.00
Spiked Amount 50.000			Recovery =	8.40%		
Target Compounds						Qvalue
4) Phenol	4.581	94	3734	0.96	ppm	95
5) bis(2-Chloroethyl)ether	4.656	93	594	0.19	ppm	95
7) Naphthalene	6.142	128	1893	0.19	ppm	99
8) Hexachlorobutadiene	6.290	225	418	0.20	ppm	98
9) 2-Methylnaphthalene	6.824	142	1156	0.20	ppm	99
10) Hexachlorocyclopentadiene	6.994	237	686	0.37	ppm	93
13) Acenaphthylene	7.697	152	1896	0.20	ppm	93
14) Acenaphthene	7.866	153	1293	0.20	ppm	87
15) Dibenzofuran	8.036	168	1722	0.20	ppm	55
16) Fluorene	8.373	166	1431	0.20	ppm	92
18) Hexachlorobenzene	8.922	284	537	0.20	ppm	90
19) Pentachlorophenol	9.107	266	681	0.94	ppm	81
20) Phenanthrene	9.308	178	2043	0.19	ppm	98
21) Anthracene	9.358	178	2028	0.19	ppm	98
23) Fluoranthene	10.483	202	2484	0.21	ppm	99
24) Pyrene	10.702	202	2507	0.20	ppm	99
26) Benzo[a]anthracene	11.884	228	2055	0.19	ppm	99
27) Chrysene	11.919	228	2141	0.19	ppm	99
29) Benzo[b]fluoranthene	12.884	252	2202	0.19	ppm	98
30) Benzo[k]fluoranthene	12.910	252	1994	0.18	ppm	98
31) Benzo[a]pyrene	13.160	252	2062	0.19	ppm	96
32) Indeno[1,2,3-cd]pyrene	14.238	276	1915	0.18	ppm	78
33) Dibenz[a,h]anthracene	14.262	278	1559	0.18	ppm	96
34) Benzo[g,h,i]perylene	14.538	276	1707	0.19	ppm	99
36) 1,4-Dioxane	1.941	88	275m	0.20	ppm	
37) 1-Methylnaphthalene	6.917	142	1334	0.20	ppm	95
39) 4,6-dinitro-2-methylph...	8.428	198	441	0.90	ppm	86

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99298.D
Acq On : 1 Apr 2021 7:36 pm
Operator : hennys
Sample : ic4609-0.2
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 02 09:24:27 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

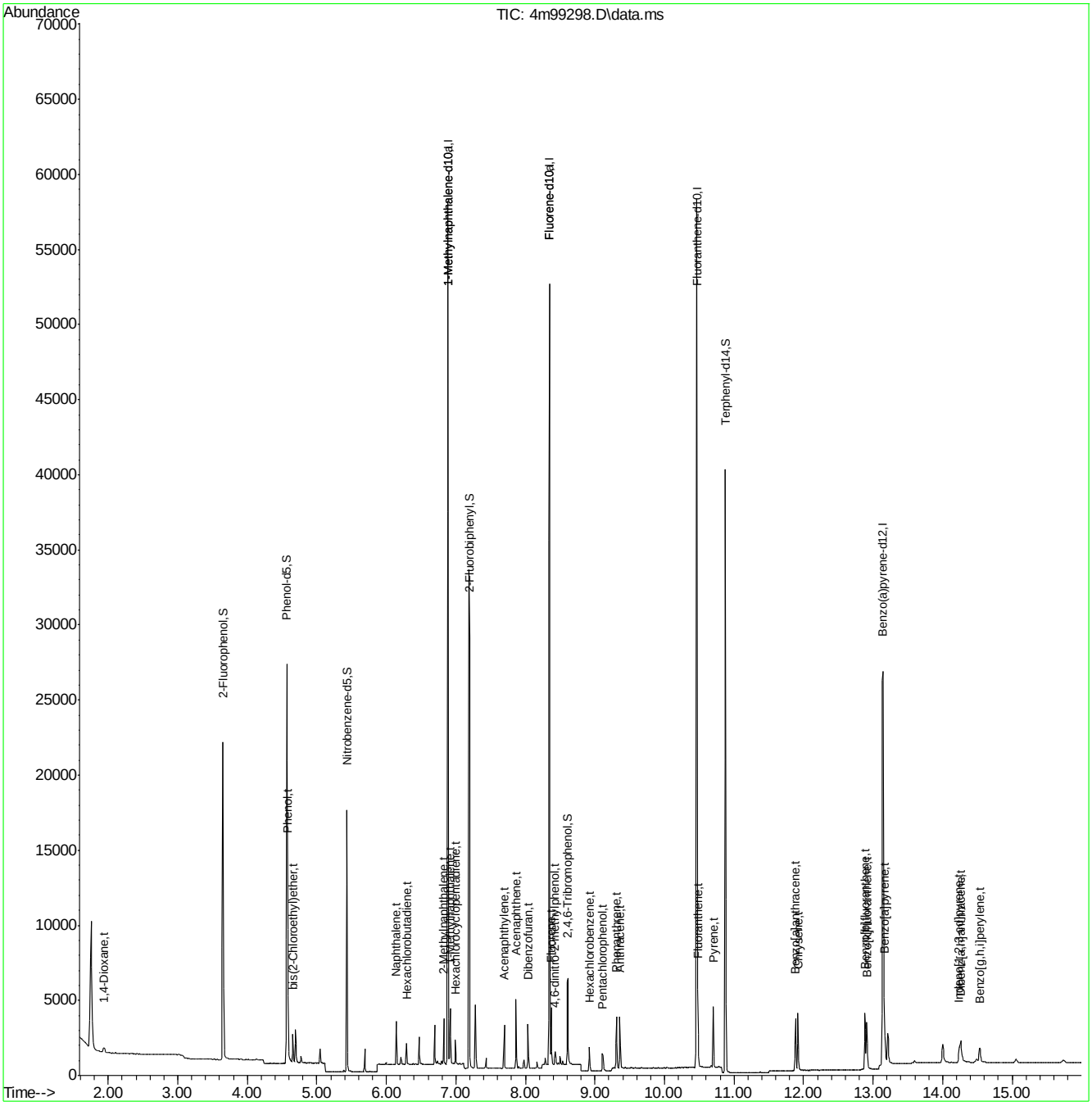
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99298.D
Acq On : 1 Apr 2021 7:36 pm
Operator : hennys
Sample : ic4609-0.2
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 02 09:24:27 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration



Manual Integration Approval Summary

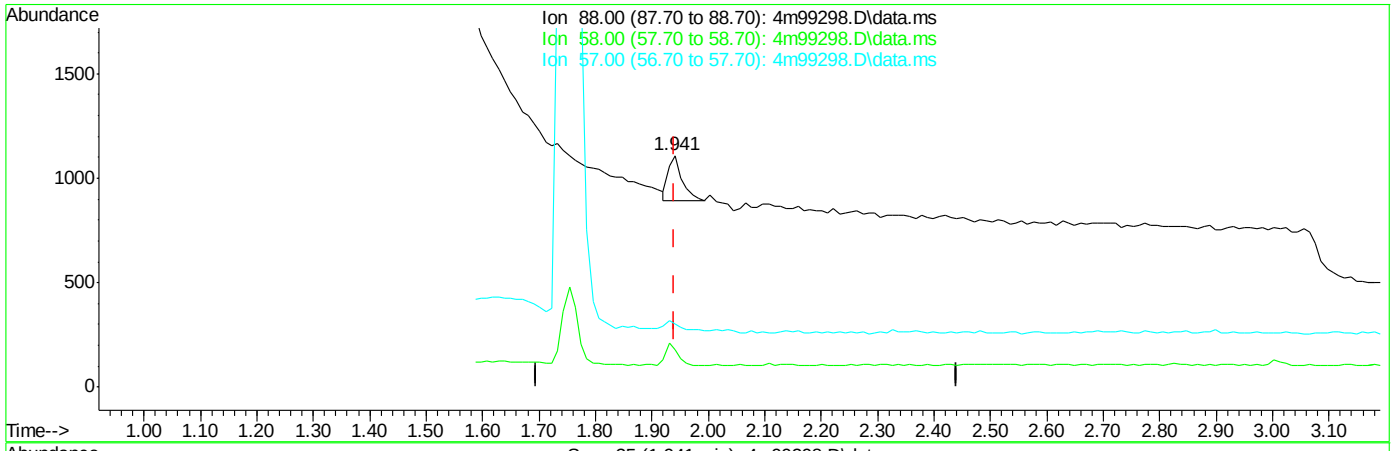
Sample Number:	E4M4609-IC4609	**Method:**	SW846 8270E BY SIM
Lab FileID:	4M99298.D	**Analyst approved:**	04/02/21 09:42 Ying Li
Injection Time:	04/01/21 19:36	**Supervisor approved:**	04/02/21 11:12 Nina Pandya

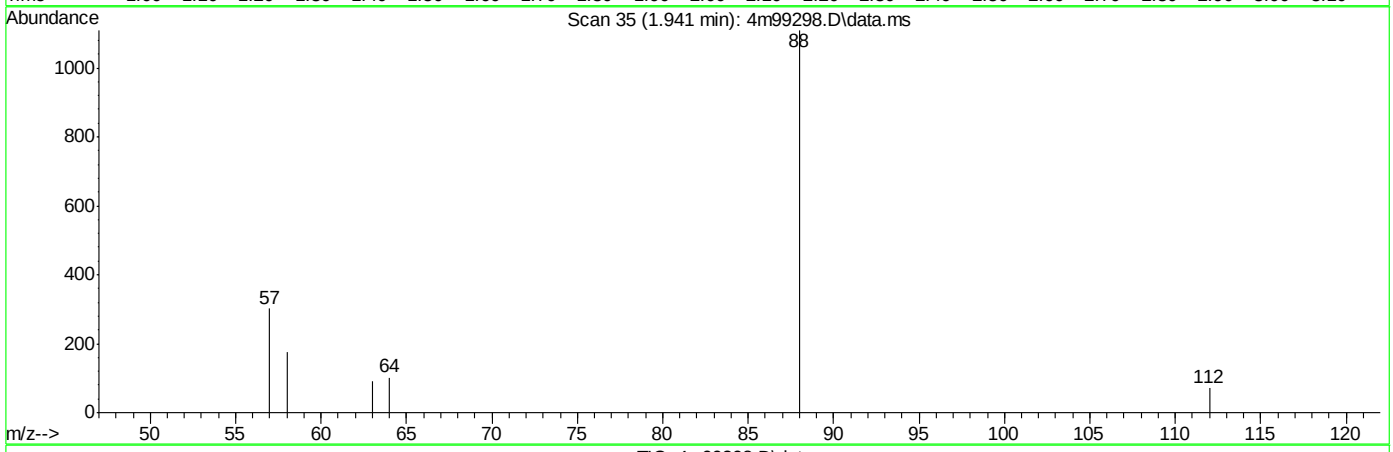
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,4-Dioxane	123-91-1		1.94	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99298.D
Acq On : 1 Apr 2021 7:36 pm
Operator : hennys
Sample : ic4609-0.2
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 02 09:23:43 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration





TIC: 4m99298.D\data.ms

(36) 1,4-Dioxane (t)

1.941min (+0.000) 0.26ppm

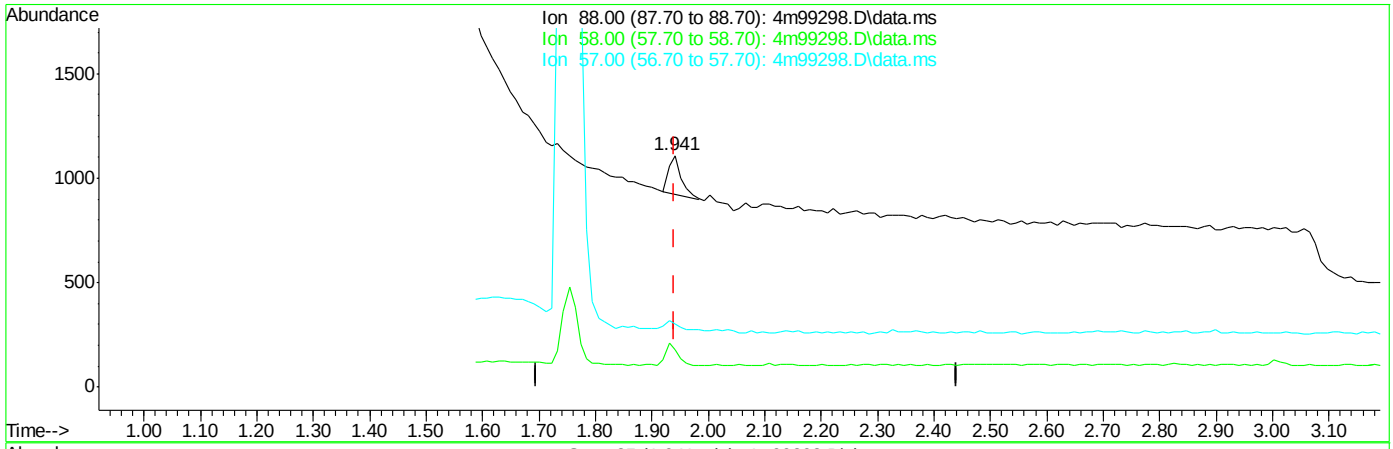
response 361

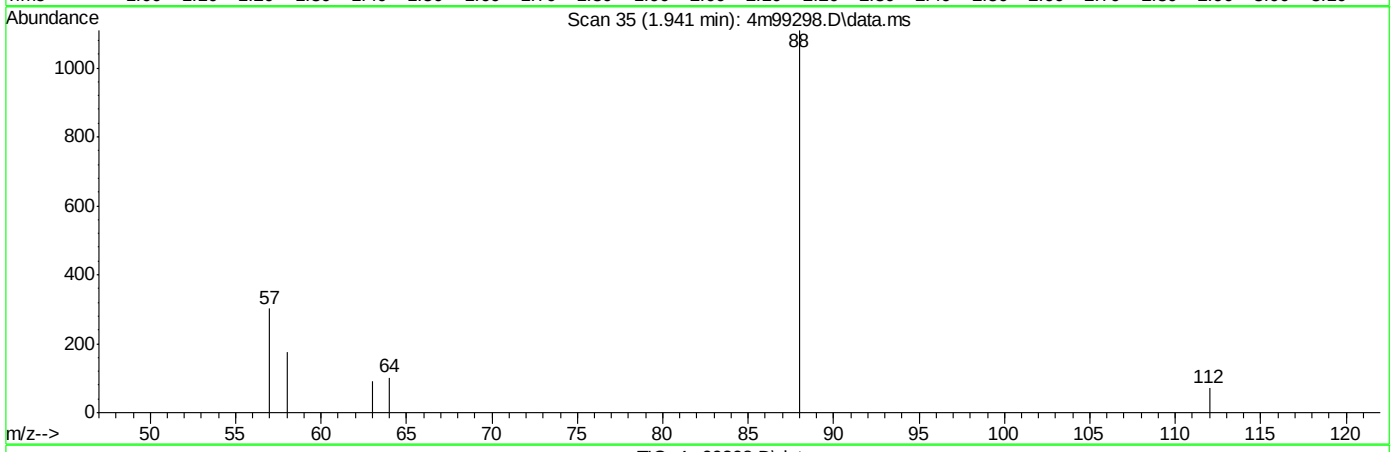
Ion	Exp%	Act%
88.00	100	100
58.00	17.80	30.83
57.00	23.40	11.92
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99298.D
Acq On : 1 Apr 2021 7:36 pm
Operator : hennys
Sample : ic4609-0.2
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 02 09:23:43 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration





TIC: 4m99298.D\data.ms

(36) 1,4-Dioxane (t)

1.941min (+0.000) 0.20ppm m

response 275

Ion	Exp%	Act%
88.00	100	100
58.00	17.80	15.96
57.00	23.40	27.23
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
04/02/21 11:12

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99299.D
Acq On : 1 Apr 2021 7:57 pm
Operator : hennys
Sample : ic4609-0.1
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 02 09:25:49 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1-Methylnaphthalene-d10	6.884	152	17935	4.00	ppm		0.00
12) Fluorene-d10	8.346	176	20103	4.00	ppm		0.00
22) Fluoranthene-d10	10.466	212	34887	4.00	ppm		0.00
28) Benzo(a)pyrene-d12	13.144	264	22848	4.00	ppm		0.00
35) 1-Methylnaphthalene-d10a	6.884	152	17935	4.00	ppm		0.00
38) Fluorene-d10a	8.346	176	20103	4.00	ppm		0.00
System Monitoring Compounds							
2) 2-Fluorophenol	3.648	112	5104	2.02	ppm		0.00
Spiked Amount 50.000	Range 11 - 58		Recovery =	4.04%#			
3) Phenol-d5	4.573	99	6575	2.00	ppm		0.00
Spiked Amount 50.000			Recovery =	4.00%			
6) Nitrobenzene-d5	5.434	82	4152	1.88	ppm		0.00
Spiked Amount 50.000			Recovery =	3.76%			
11) 2-Fluorobiphenyl	7.196	172	13106	2.24	ppm		0.00
Spiked Amount 50.000			Recovery =	4.48%			
17) 2,4,6-Tribromophenol	8.612	330	1232	1.90	ppm		0.00
Spiked Amount 50.000			Recovery =	3.80%			
25) Terphenyl-d14	10.878	244	12598	2.20	ppm		0.00
Spiked Amount 50.000			Recovery =	4.40%			
Target Compounds							Qvalue
4) Phenol	4.585	94	1793	0.50	ppm		93
5) bis(2-Chloroethyl)ether	4.660	93	285	0.10	ppm		95
7) Naphthalene	6.147	128	902	0.10	ppm		97
8) Hexachlorobutadiene	6.290	225	200	0.10	ppm		94
9) 2-Methylnaphthalene	6.824	142	536	0.10	ppm		98
10) Hexachlorocyclopentadiene	6.994	237	307	0.18	ppm		98
13) Acenaphthylene	7.697	152	917	0.10	ppm		94
14) Acenaphthene	7.866	153	628	0.10	ppm		82
15) Dibenzofuran	8.036	168	825	0.10	ppm	#	10
16) Fluorene	8.373	166	665	0.10	ppm		95
18) Hexachlorobenzene	8.922	284	263	0.11	ppm		98
19) Pentachlorophenol	9.115	266	248	0.37	ppm		94
20) Phenanthrene	9.312	178	991	0.10	ppm		99
21) Anthracene	9.363	178	971	0.10	ppm		98
23) Fluoranthene	10.483	202	1205	0.11	ppm		98
24) Pyrene	10.701	202	1196	0.10	ppm		96
26) Benzo[a]anthracene	11.887	228	945	0.10	ppm		98
27) Chrysene	11.922	228	1025	0.10	ppm		99
29) Benzo[b]fluoranthene	12.887	252	954	0.09	ppm		96
30) Benzo[k]fluoranthene	12.910	252	961	0.10	ppm		96
31) Benzo[a]pyrene	13.160	252	1109	0.12	ppm		97
32) Indeno[1,2,3-cd]pyrene	14.246	276	843	0.09	ppm		98
33) Dibenz[a,h]anthracene	14.262	278	646	0.09	ppm		95
34) Benzo[g,h,i]perylene	14.538	276	718	0.09	ppm		100
36) 1,4-Dioxane	1.941	88	99m	0.08	ppm		
37) 1-Methylnaphthalene	6.917	142	639	0.10	ppm		93
39) 4,6-dinitro-2-methylph...	8.435	198	197	0.43	ppm		76

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99299.D
Acq On : 1 Apr 2021 7:57 pm
Operator : hennys
Sample : ic4609-0.1
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 02 09:25:49 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

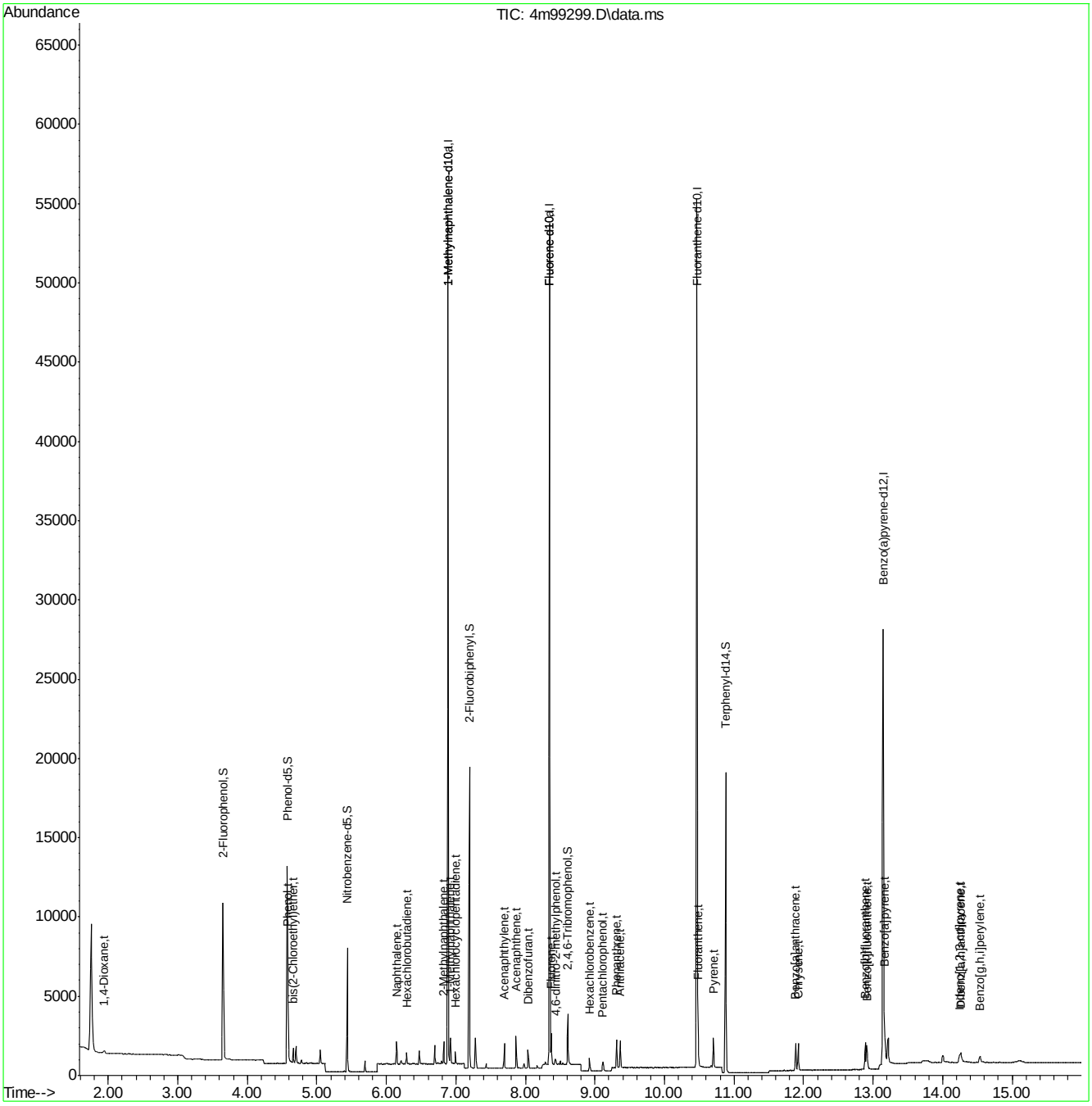
7.6.6

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99299.D
Acq On : 1 Apr 2021 7:57 pm
Operator : hennys
Sample : ic4609-0.1
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 02 09:25:49 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration



Manual Integration Approval Summary

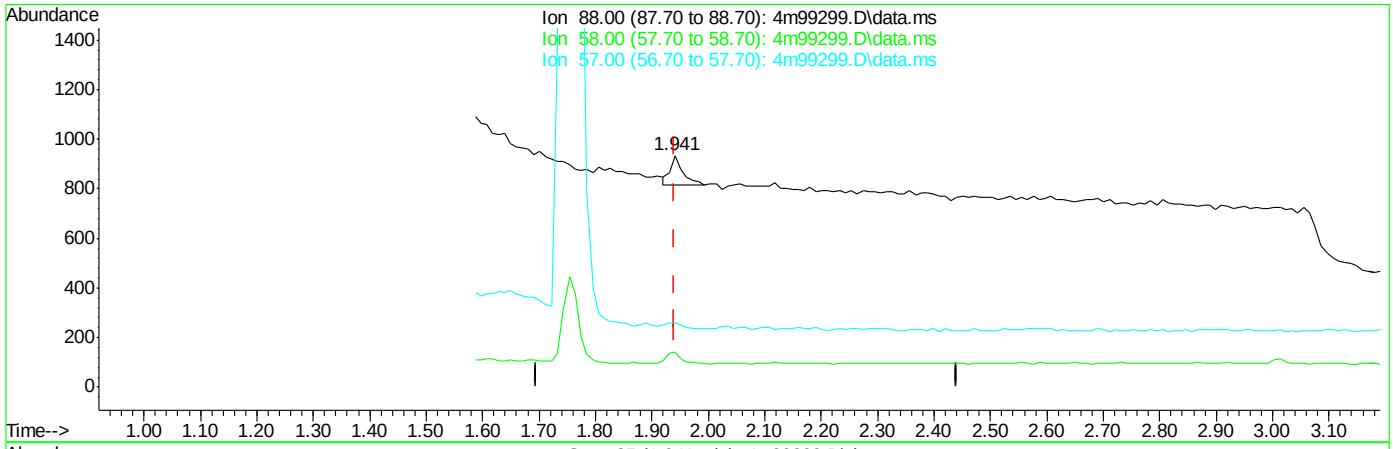
Sample Number:	E4M4609-IC4609	**Method:**	SW846 8270E BY SIM
Lab FileID:	4M99299.D	**Analyst approved:**	04/02/21 09:42 Ying Li
Injection Time:	04/01/21 19:57	**Supervisor approved:**	04/02/21 11:12 Nina Pandya

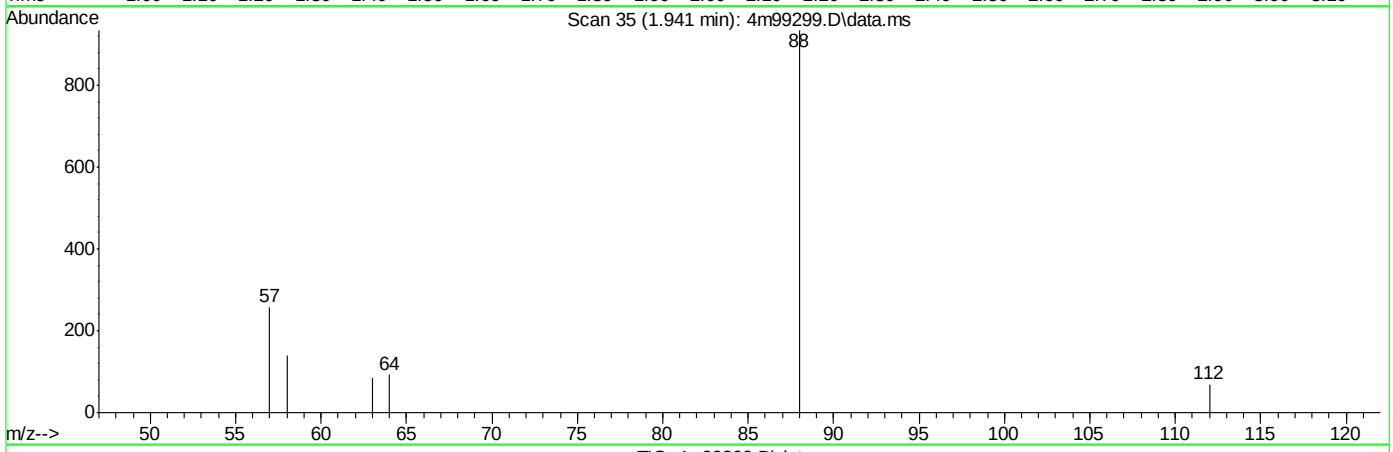
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,4-Dioxane	123-91-1		1.94	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99299.D
Acq On : 1 Apr 2021 7:57 pm
Operator : hennys
Sample : ic4609-0.1
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 02 09:25:07 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration





TIC: 4m99299.D\data.ms

(36) 1,4-Dioxane (t)

1.941min (+0.000) 0.15ppm

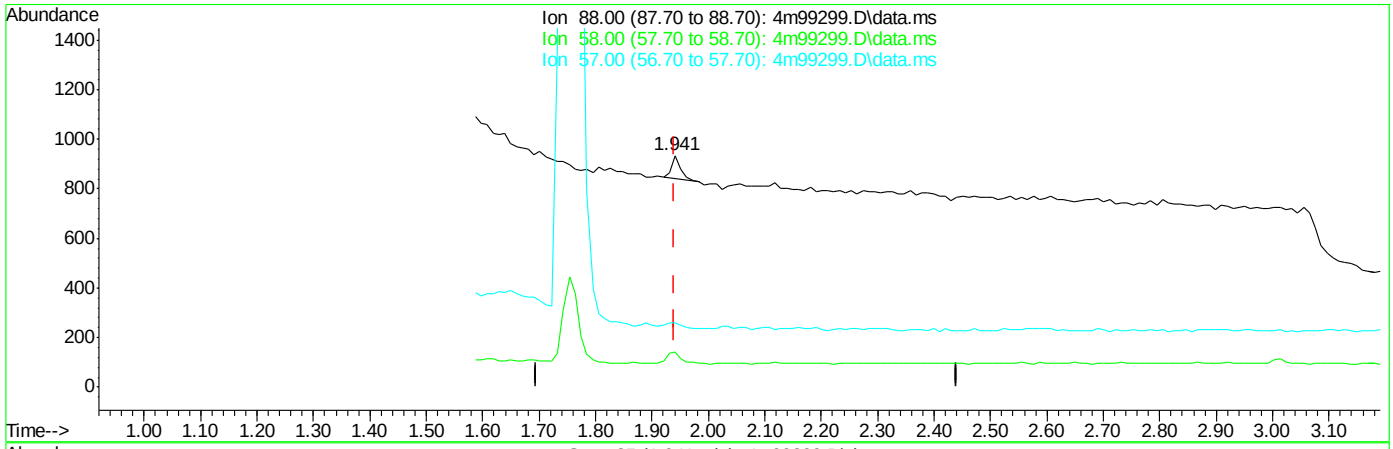
response 187

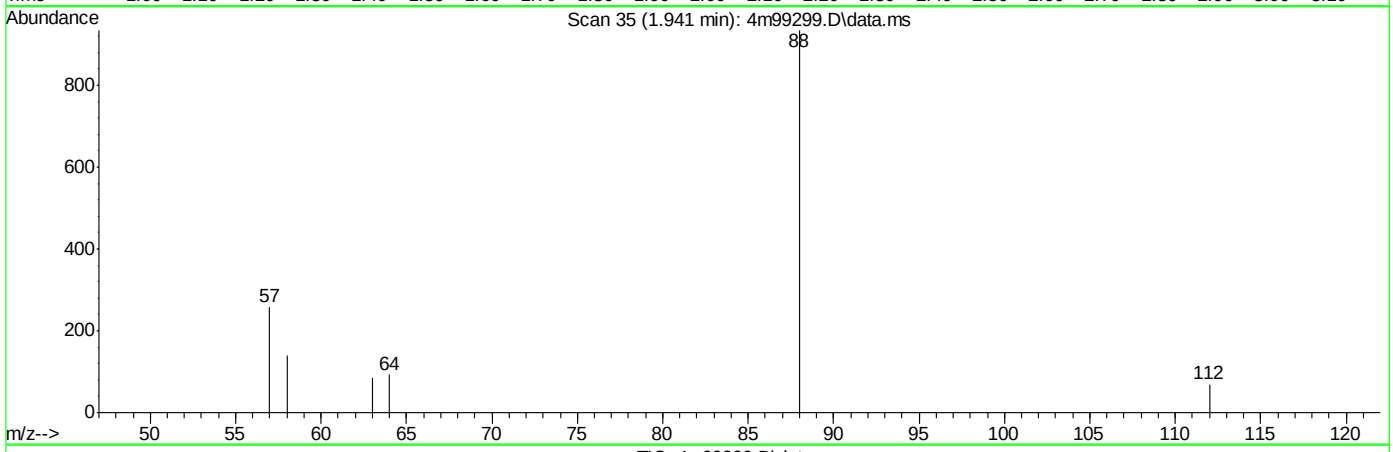
Ion	Exp%	Act%
88.00	100	100
58.00	17.80	40.29#
57.00	23.40	14.08
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99299.D
Acq On : 1 Apr 2021 7:57 pm
Operator : hennys
Sample : ic4609-0.1
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 02 09:25:07 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration





TIC: 4m99299.D\data.ms

(36) 1,4-Dioxane (t)

1.941min (+0.000) 0.08ppm m

response 99

Ion	Exp%	Act%
88.00	100	100
58.00	17.80	15.10
57.00	23.40	27.62
0.00	0.00	0.00

4M99300.D

Manual Integrations APPROVED (compounds with "m" flag)

Nina Pandya
04/02/21 11:12

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99300.D
Acq On : 1 Apr 2021 8:17 pm
Operator : hennys
Sample : ic4609-0.05
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 02 09:28:06 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	6.890	152	17768	4.00	ppm	0.01
12) Fluorene-d10	8.346	176	19558	4.00	ppm	0.00
22) Fluoranthene-d10	10.466	212	34296	4.00	ppm	0.00
28) Benzo(a)pyrene-d12	13.144	264	22417	4.00	ppm	0.00
35) 1-Methylnaphthalene-d10a	6.890	152	17768	4.00	ppm	0.01
38) Fluorene-d10a	8.346	176	19558	4.00	ppm	0.00
System Monitoring Compounds						
2) 2-Fluorophenol	3.659	112	2493	0.99	ppm	0.01
Spiked Amount 50.000	Range 11 - 58		Recovery =	1.98%#		
3) Phenol-d5	4.573	99	3254	1.00	ppm	0.00
Spiked Amount 50.000			Recovery =	2.00%		
6) Nitrobenzene-d5	5.437	82	2048	0.94	ppm	0.00
Spiked Amount 50.000			Recovery =	1.88%		
11) 2-Fluorobiphenyl	7.196	172	6724	1.16	ppm	0.00
Spiked Amount 50.000			Recovery =	2.32%		
17) 2,4,6-Tribromophenol	8.612	330	599	0.95	ppm	0.00
Spiked Amount 50.000			Recovery =	1.90%		
25) Terphenyl-d14	10.881	244	6240	1.11	ppm	0.00
Spiked Amount 50.000			Recovery =	2.22%		
Target Compounds						Qvalue
4) Phenol	4.585	94	873	0.24	ppm	98
5) bis(2-Chloroethyl)ether	4.660	93	137	0.05	ppm	97
7) Naphthalene	6.147	128	447	0.05	ppm	98
8) Hexachlorobutadiene	6.290	225	111	0.06	ppm	96
9) 2-Methylnaphthalene	6.829	142	282	0.05	ppm	89
10) Hexachlorocyclopentadiene	6.994	237	149	0.09	ppm	98
13) Acenaphthylene	7.696	152	468	0.05	ppm	96
14) Acenaphthene	7.866	153	289	0.05	ppm	77
15) Dibenzofuran	8.046	168	410	0.05	ppm	88
16) Fluorene	8.373	166	341	0.05	ppm	97
18) Hexachlorobenzene	8.922	284	128	0.05	ppm	98
19) Pentachlorophenol	9.114	266	123	0.19	ppm	95
20) Phenanthrene	9.316	178	489	0.05	ppm	97
21) Anthracene	9.362	178	474	0.05	ppm	99
23) Fluoranthene	10.487	202	623	0.06	ppm	96
24) Pyrene	10.706	202	594	0.05	ppm	98
26) Benzo[a]anthracene	11.890	228	457	0.05	ppm	98
27) Chrysene	11.925	228	500	0.05	ppm	96
29) Benzo[b]fluoranthene	12.890	252	462	0.05	ppm	96
30) Benzo[k]fluoranthene	12.913	252	430	0.05	ppm	98
31) Benzo[a]pyrene	13.168	252	445m	0.05	ppm	
32) Indeno[1,2,3-cd]pyrene	14.246	276	382	0.04	ppm	86
33) Dibenz[a,h]anthracene	14.270	278	312	0.04	ppm	94
34) Benzo[g,h,i]perylene	14.538	276	373	0.05	ppm	100
37) 1-Methylnaphthalene	6.923	142	319	0.05	ppm	93
39) 4,6-dinitro-2-methylph...	8.435	198	98	0.22	ppm	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99300.D
Acq On : 1 Apr 2021 8:17 pm
Operator : hennys
Sample : ic4609-0.05
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 02 09:28:06 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

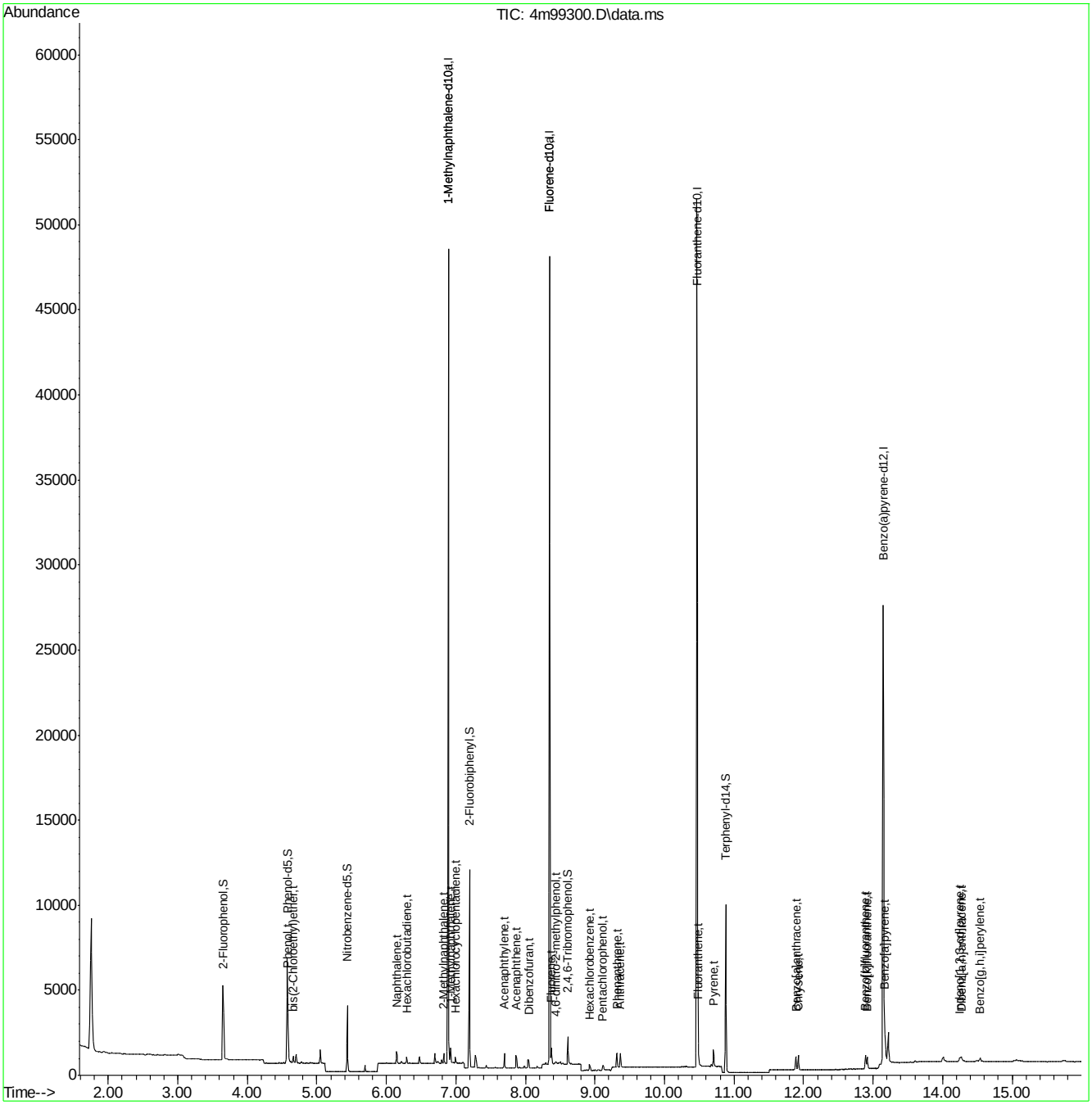
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99300.D
Acq On : 1 Apr 2021 8:17 pm
Operator : hennys
Sample : ic4609-0.05
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 02 09:28:06 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration



Manual Integration Approval Summary

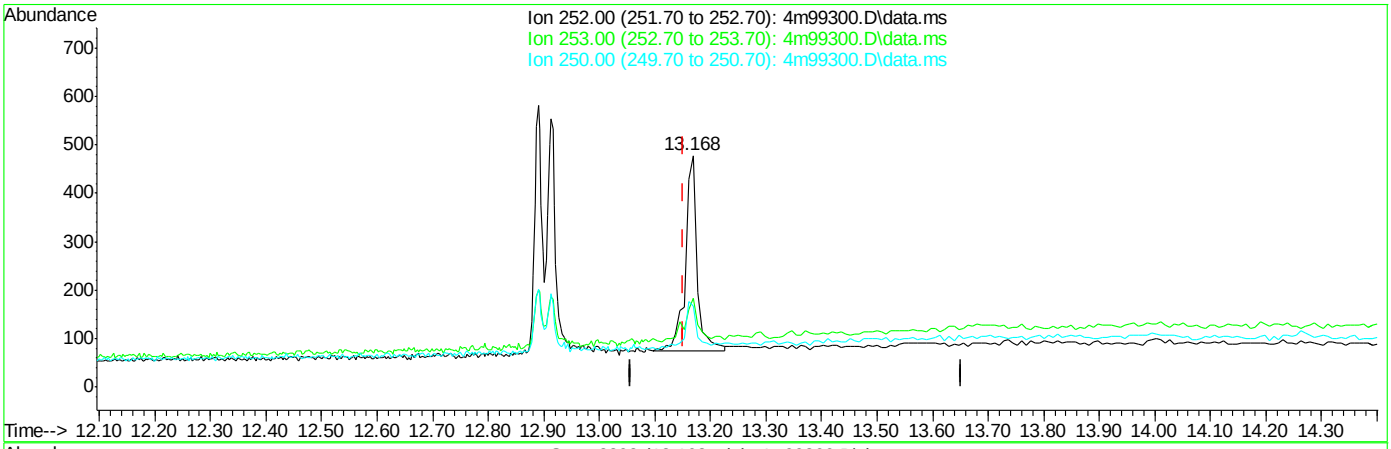
Sample Number:	E4M4609-IC4609	**Method:**	SW846 8270E BY SIM
Lab FileID:	4M99300.D	**Analyst approved:**	04/02/21 09:42 Ying Li
Injection Time:	04/01/21 20:17	**Supervisor approved:**	04/02/21 11:12 Nina Pandya

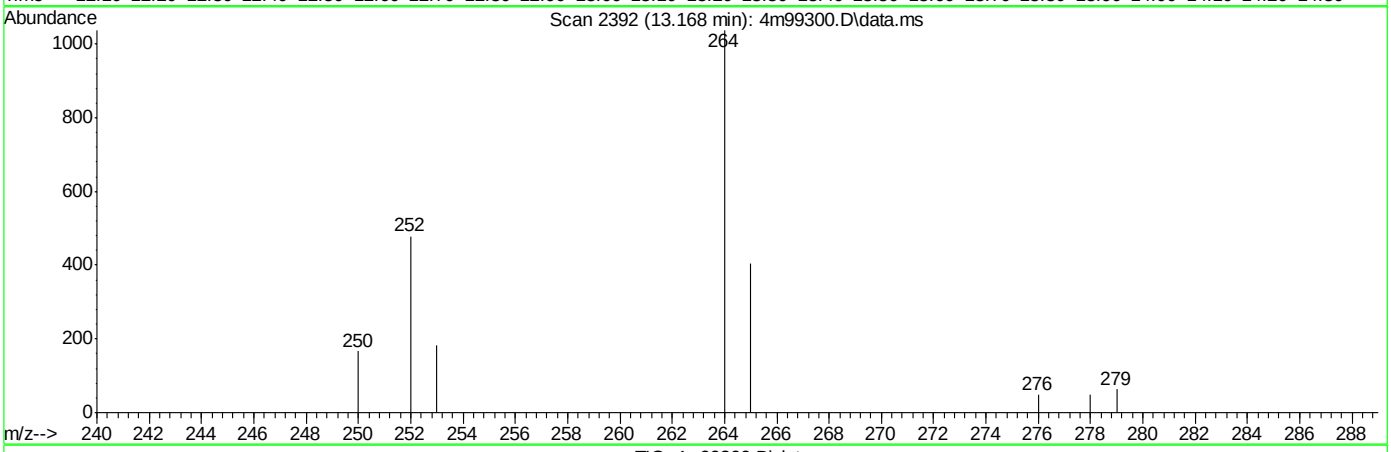
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzo(a)pyrene	50-32-8		13.17	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99300.D
Acq On : 1 Apr 2021 8:17 pm
Operator : hennys
Sample : ic4609-0.05
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 02 09:26:15 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration





TIC: 4m99300.D\data.ms

(31) Benzo[a]pyrene (t)

13.168min (+0.016) 0.07ppm

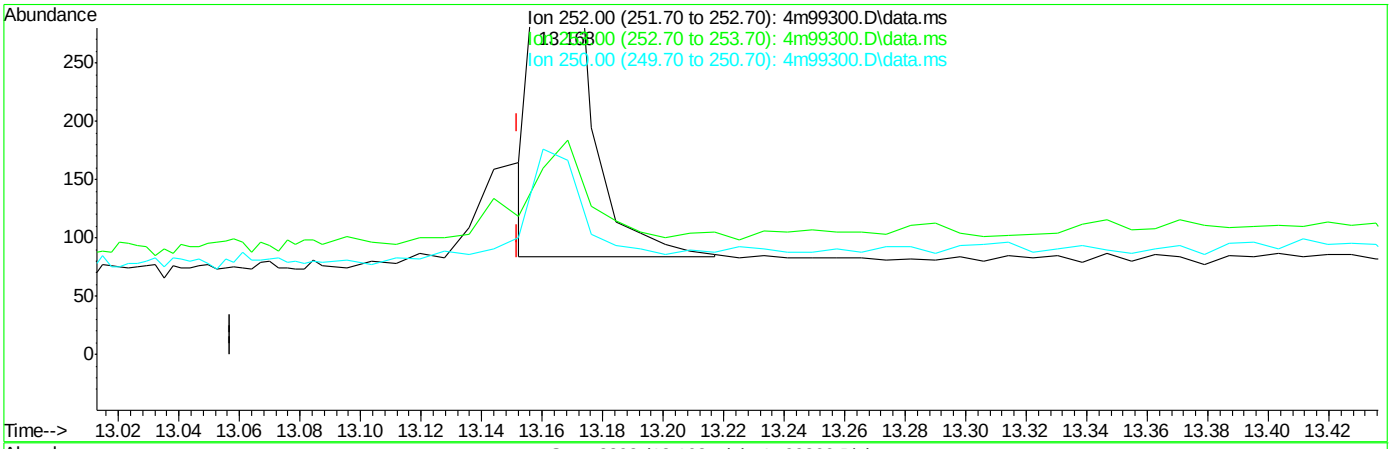
response 606

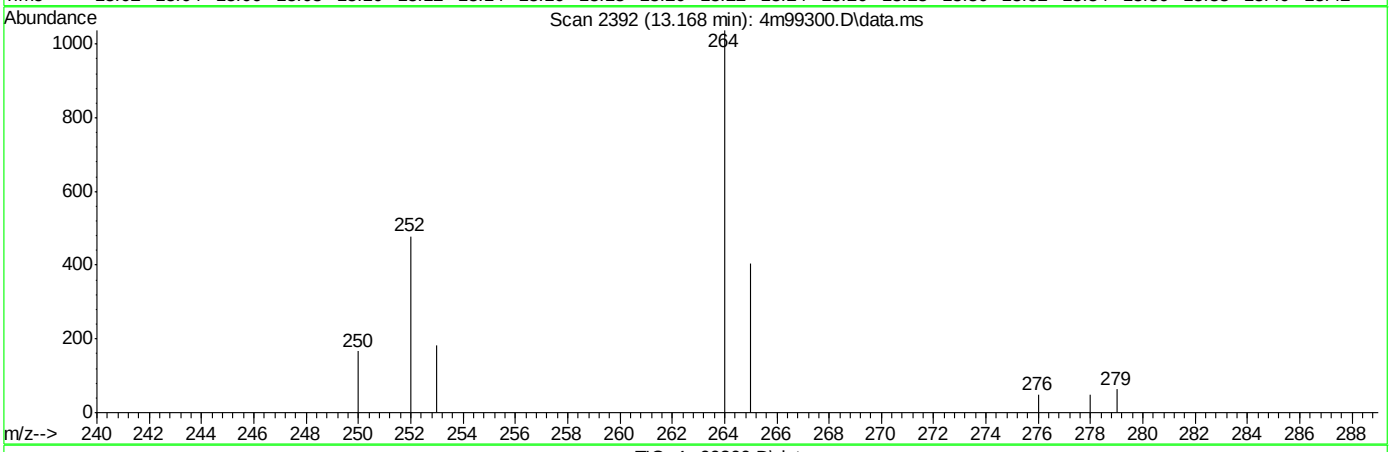
Ion	Exp%	Act%
252.00	100	100
253.00	19.80	21.15
250.00	25.00	20.15
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99300.D
Acq On : 1 Apr 2021 8:17 pm
Operator : hennys
Sample : ic4609-0.05
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 02 09:26:15 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration





TIC: 4m99300.D\data.ms

(31) Benzo[a]pyrene (t)

13.168min (+0.016) 0.05ppm m

response 445

Ion	Exp%	Act%
252.00	100	100
253.00	19.80	38.49
250.00	25.00	34.94
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
04/02/21 11:12

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99301.D
Acq On : 1 Apr 2021 8:38 pm
Operator : hennys
Sample : ic4609-0.02
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 02 09:29:37 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	6.890	152	16220	4.00	ppm	0.01
12) Fluorene-d10	8.353	176	17827	4.00	ppm	0.01
22) Fluoranthene-d10	10.470	212	31308	4.00	ppm	0.01
28) Benzo(a)pyrene-d12	13.144	264	19663	4.00	ppm	0.00
35) 1-Methylnaphthalene-d10a	6.890	152	16220	4.00	ppm	0.01
38) Fluorene-d10a	8.353	176	17827	4.00	ppm	0.01
System Monitoring Compounds						
2) 2-Fluorophenol	3.659	112	931	0.41	ppm	0.01
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.82%#		
3) Phenol-d5	4.577	99	1192	0.40	ppm	0.01
Spiked Amount 50.000			Recovery =	0.80%		
6) Nitrobenzene-d5	5.440	82	757	0.38	ppm	0.01
Spiked Amount 50.000			Recovery =	0.76%		
11) 2-Fluorobiphenyl	7.196	172	2546	0.48	ppm	0.00
Spiked Amount 50.000			Recovery =	0.96%		
17) 2,4,6-Tribromophenol	8.612	330	225	0.39	ppm	0.00
Spiked Amount 50.000			Recovery =	0.78%		
25) Terphenyl-d14	10.884	244	2375	0.46	ppm	0.01
Spiked Amount 50.000			Recovery =	0.92%		
Target Compounds						Qvalue
4) Phenol	4.588	94	323	0.10	ppm	86
5) bis(2-Chloroethyl)ether	4.664	93	63	0.02	ppm	84
7) Naphthalene	6.152	128	172	0.02	ppm	98
8) Hexachlorobutadiene	6.296	225	50	0.03	ppm	89
9) 2-Methylnaphthalene	6.829	142	107	0.02	ppm	99
10) Hexachlorocyclopentadiene	7.000	237	59	0.04	ppm	83
13) Acenaphthylene	7.696	152	185	0.02	ppm	96
14) Acenaphthene	7.876	153	123	0.02	ppm	98
15) Dibenzofuran	8.045	168	162	0.02	ppm	99
16) Fluorene	8.380	166	131	0.02	ppm	96
18) Hexachlorobenzene	8.929	284	50	0.02	ppm	89
19) Pentachlorophenol	9.122	266	49	0.08	ppm	90
20) Phenanthrene	9.316	178	205	0.02	ppm	94
21) Anthracene	9.367	178	179	0.02	ppm	94
23) Fluoranthene	10.487	202	232	0.02	ppm	89
24) Pyrene	10.706	202	234	0.02	ppm	94
26) Benzo[a]anthracene	11.893	228	175	0.02	ppm	94
27) Chrysene	11.928	228	194	0.02	ppm	96
29) Benzo[b]fluoranthene	12.893	252	173	0.02	ppm	96
30) Benzo[k]fluoranthene	12.913	252	162	0.02	ppm	98
31) Benzo[a]pyrene	13.168	252	149m	0.02	ppm	
32) Indeno[1,2,3-cd]pyrene	14.246	276	140	0.02	ppm	81
33) Dibenz[a,h]anthracene	14.270	278	103	0.02	ppm	89
34) Benzo[g,h,i]perylene	14.538	276	128	0.02	ppm	98
37) 1-Methylnaphthalene	6.923	142	124	0.02	ppm	92
39) 4,6-dinitro-2-methylph...	8.442	198	39	0.10	ppm #	56

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99301.D
Acq On : 1 Apr 2021 8:38 pm
Operator : hennys
Sample : ic4609-0.02
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 02 09:29:37 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

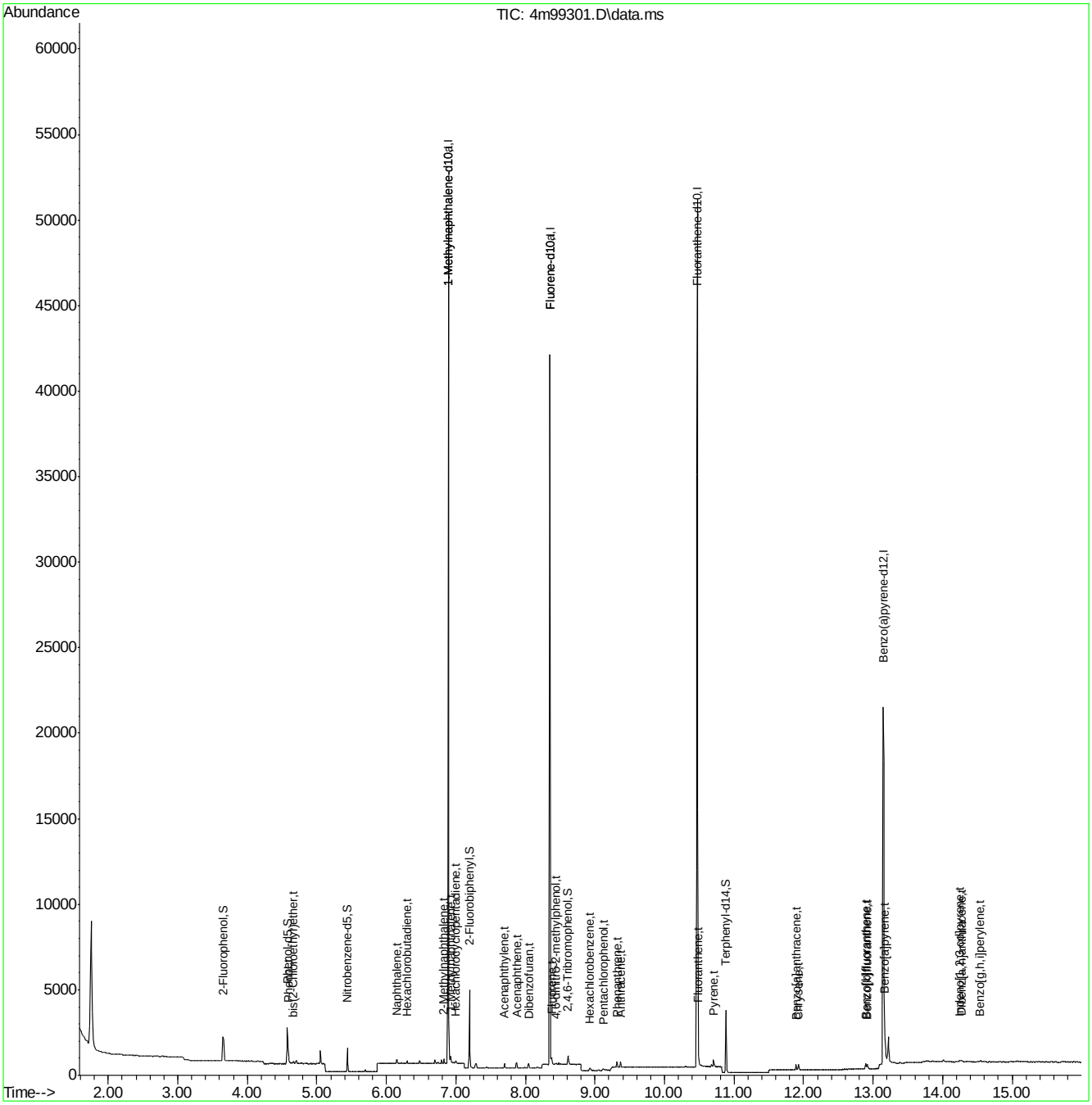
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99301.D
Acq On : 1 Apr 2021 8:38 pm
Operator : hennys
Sample : ic4609-0.02
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 02 09:29:37 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration



Manual Integration Approval Summary

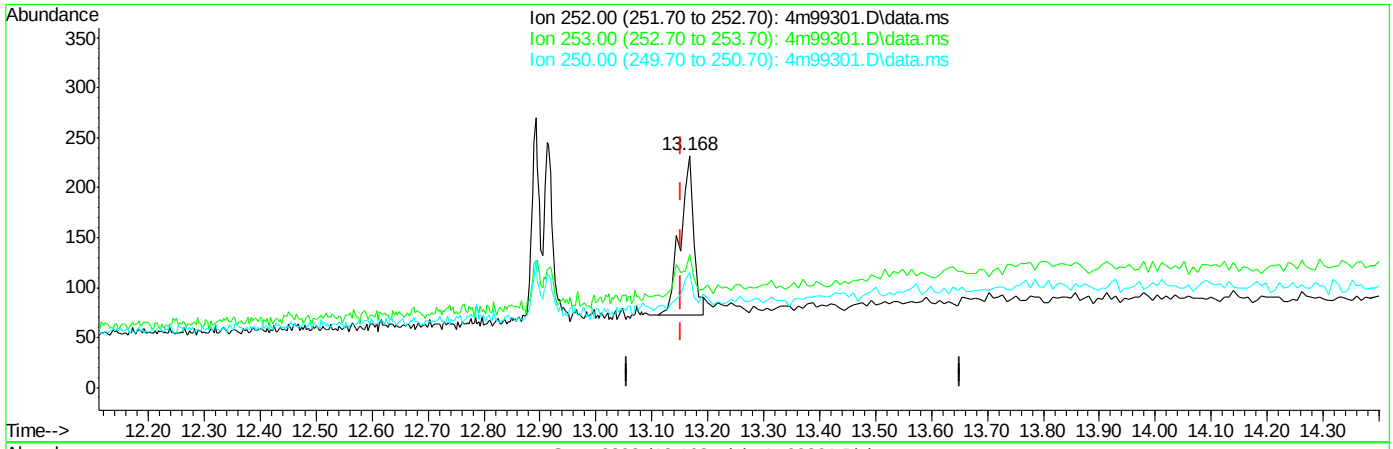
Sample Number:	E4M4609-IC4609	**Method:**	SW846 8270E BY SIM
Lab FileID:	4M99301.D	**Analyst approved:**	04/02/21 09:42 Ying Li
Injection Time:	04/01/21 20:38	**Supervisor approved:**	04/02/21 11:12 Nina Pandya

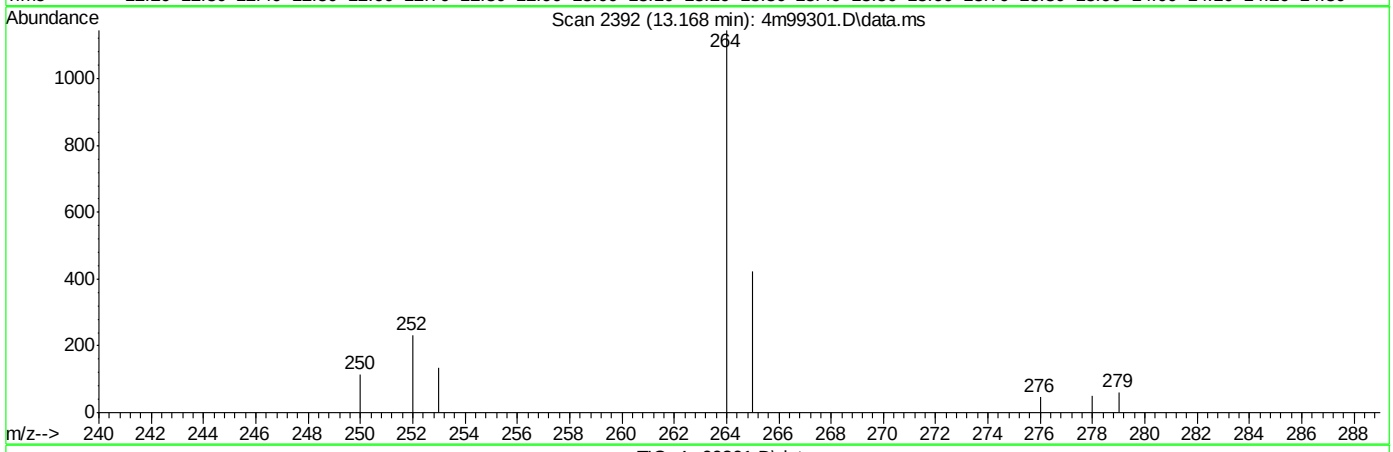
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzo(a)pyrene	50-32-8		13.17	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99301.D
Acq On : 1 Apr 2021 8:38 pm
Operator : hennys
Sample : ic4609-0.02
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 02 09:28:19 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration





TIC: 4m99301.D\data.ms

(31) Benzo[a]pyrene (t)

13.168min (+0.016) 0.03ppm

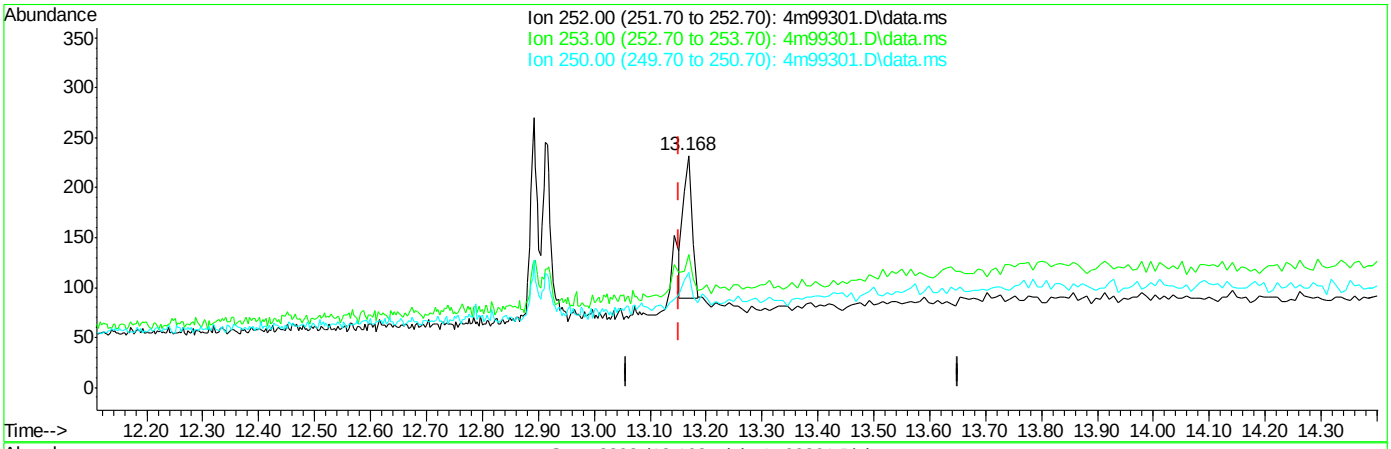
response 278

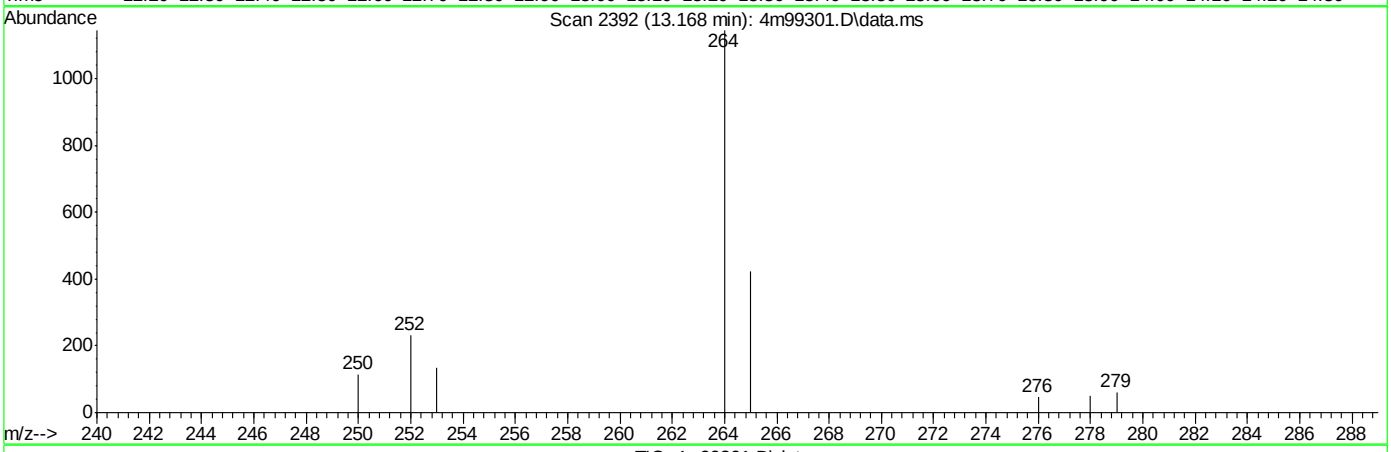
Ion	Exp%	Act%
252.00	100	100
253.00	19.80	24.83
250.00	25.00	17.88
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99301.D
Acq On : 1 Apr 2021 8:38 pm
Operator : hennys
Sample : ic4609-0.02
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 02 09:28:19 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration





TIC: 4m99301.D\data.ms

(31) Benzo[a]pyrene (t)

13.168min (+0.016) 0.02ppm m

response 149

Ion	Exp%	Act%
252.00	100	100
253.00	19.80	57.33#
250.00	25.00	49.57
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99302.D
Acq On : 1 Apr 2021 8:59 pm
Operator : hennys
Sample : ic4609-0.01
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 02 09:30:44 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	6.890	152	14369	4.00	ppm	0.01
12) Fluorene-d10	8.353	176	15418	4.00	ppm	0.01
22) Fluoranthene-d10	10.470	212	27572	4.00	ppm	0.01
28) Benzo(a)pyrene-d12	13.144	264	16890	4.00	ppm	0.00
35) 1-Methylnaphthalene-d10a	6.890	152	14369	4.00	ppm	0.01
38) Fluorene-d10a	8.353	176	15418	4.00	ppm	0.01
System Monitoring Compounds						
2) 2-Fluorophenol	3.659	112	427	0.21	ppm	0.01
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.42%#		
3) Phenol-d5	4.577	99	528	0.20	ppm	0.01
Spiked Amount 50.000			Recovery =	0.40%		
6) Nitrobenzene-d5	5.440	82	331	0.19	ppm	0.01
Spiked Amount 50.000			Recovery =	0.38%		
11) 2-Fluorobiphenyl	7.196	172	1171	0.25	ppm	0.00
Spiked Amount 50.000			Recovery =	0.50%		
17) 2,4,6-Tribromophenol	8.619	330	110	0.22	ppm	0.01
Spiked Amount 50.000			Recovery =	0.44%		
25) Terphenyl-d14	10.884	244	1131	0.25	ppm	0.01
Spiked Amount 50.000			Recovery =	0.50%		
Target Compounds						Qvalue
4) Phenol	4.588	94	148	0.05	ppm	98
5) bis(2-Chloroethyl)ether	4.664	93	25	0.01	ppm	87
7) Naphthalene	6.153	128	98	0.01	ppm	93
8) Hexachlorobutadiene	6.296	225	17	0.01	ppm	95
9) 2-Methylnaphthalene	6.829	142	56	0.01	ppm	71
10) Hexachlorocyclopentadiene	7.000	237	22	0.02	ppm	89
13) Acenaphthylene	7.697	152	82	0.01	ppm	97
14) Acenaphthene	7.876	153	55	0.01	ppm	96
15) Dibenzofuran	8.046	168	75	0.01	ppm	82
16) Fluorene	8.380	166	64	0.01	ppm	95
18) Hexachlorobenzene	8.929	284	24	0.01	ppm	76
19) Pentachlorophenol	9.122	266	23	0.04	ppm	97
20) Phenanthrene	9.316	178	101	0.01	ppm	95
21) Anthracene	9.367	178	93	0.01	ppm	95
23) Fluoranthene	10.487	202	112	0.01	ppm	77
24) Pyrene	10.706	202	108	0.01	ppm	94
26) Benzo[a]anthracene	11.893	228	84	0.01	ppm	98
27) Chrysene	11.928	228	82	0.01	ppm	85
29) Benzo[b]fluoranthene	12.893	252	87	0.01	ppm	100
30) Benzo[k]fluoranthene	12.916	252	72	0.01	ppm	92
31) Benzo[a]pyrene	13.168	252	90	0.01	ppm	88
32) Indeno[1,2,3-cd]pyrene	14.246	276	60	0.01	ppm	89
33) Dibenz[a,h]anthracene	14.270	278	55	0.01	ppm	80
34) Benzo[g,h,i]perylene	14.538	276	60	0.01	ppm	96
37) 1-Methylnaphthalene	6.923	142	66	0.01	ppm	87

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99302.D
Acq On : 1 Apr 2021 8:59 pm
Operator : hennys
Sample : ic4609-0.01
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 02 09:30:44 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration

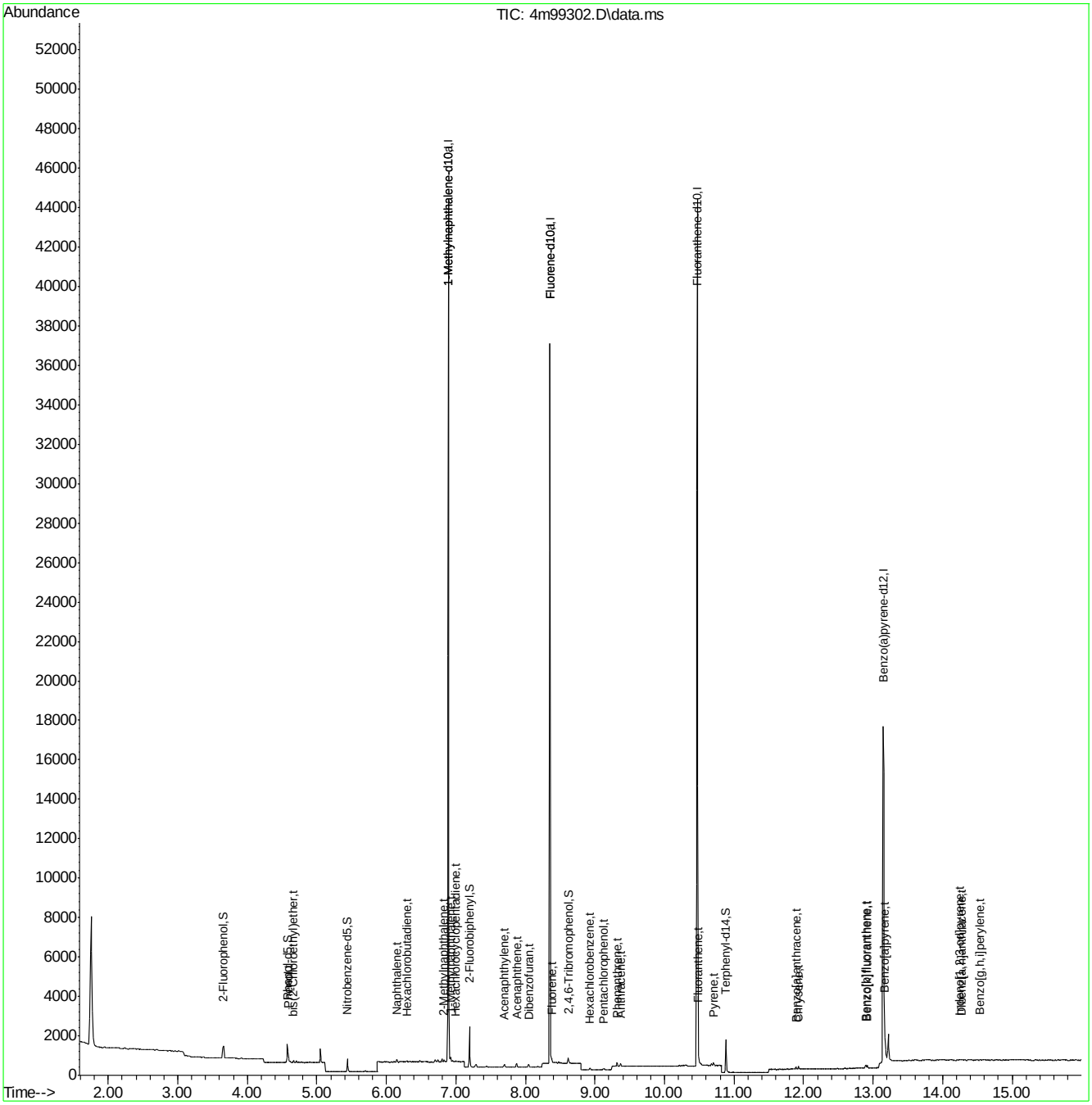
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99302.D
Acq On : 1 Apr 2021 8:59 pm
Operator : hennys
Sample : ic4609-0.01
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 02 09:30:44 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:19:06 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99303.D
Acq On : 1 Apr 2021 9:19 pm
Operator : hennys
Sample : icv4609-1
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 02 09:35:47 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:34:12 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1-Methylnaphthalene-d10	6.890	152	18773	4.00	ppm		0.01
12) Fluorene-d10	8.353	176	21266	4.00	ppm		0.01
22) Fluoranthene-d10	10.470	212	37118	4.00	ppm		0.01
28) Benzo(a)pyrene-d12	13.152	264	22146	4.00	ppm		0.02
35) 1-Methylnaphthalene-d10a	6.890	152	18773	4.00	ppm		0.01
38) Fluorene-d10a	8.353	176	21266	4.00	ppm		0.01
System Monitoring Compounds							
2) 2-Fluorophenol	0.000	112	0	0.00	ppm		
Spiked Amount 50.000	Range 11 - 58		Recovery =	0.00%#			
3) Phenol-d5	0.000	99	0d	0.00	ppm		
Spiked Amount 50.000			Recovery =	0.00%			
6) Nitrobenzene-d5	0.000	82	0d	0.00	ppm		
Spiked Amount 50.000			Recovery =	0.00%			
11) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm		
Spiked Amount 50.000			Recovery =	0.00%			
17) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm		
Spiked Amount 50.000			Recovery =	0.00%			
25) Terphenyl-d14	0.000	244	0d	0.00	ppm		
Spiked Amount 50.000			Recovery =	0.00%			
Target Compounds							Qvalue
4) Phenol	4.588	94	17414	4.75	ppm		89
5) bis(2-Chloroethyl)ether	4.660	93	2657	0.87	ppm		98
7) Naphthalene	6.147	128	8739	0.90	ppm		100
8) Hexachlorobutadiene	6.296	225	2048	0.94	ppm		97
9) 2-Methylnaphthalene	6.829	142	5814	0.98	ppm		97
10) Hexachlorocyclopentadiene	7.000	237	2694	1.58	ppm		95
13) Acenaphthylene	7.696	152	8106	0.81	ppm		99
14) Acenaphthene	7.876	153	5466	0.83	ppm		98
15) Dibenzofuran	8.046	168	8430	0.95	ppm		92
16) Fluorene	8.380	166	6389	0.87	ppm		93
18) Hexachlorobenzene	8.929	284	2504	0.91	ppm		89
19) Pentachlorophenol	9.114	266	2719	4.17	ppm		84
20) Phenanthrene	9.316	178	9628	0.88	ppm		100
21) Anthracene	9.367	178	8640	0.82	ppm		98
23) Fluoranthene	10.491	202	10964	0.86	ppm		100
24) Pyrene	10.710	202	10828	0.84	ppm		99
26) Benzo[a]anthracene	11.893	228	8657	0.83	ppm		98
27) Chrysene	11.928	228	9808	0.90	ppm		99
29) Benzo[b]fluoranthene	12.893	252	8746	0.91	ppm		97
30) Benzo[k]fluoranthene	12.919	252	9041	0.98	ppm		99
31) Benzo[a]pyrene	13.168	252	8105	0.87	ppm		97
32) Indeno[1,2,3-cd]pyrene	14.246	276	7814	0.92	ppm		81
33) Dibenz[a,h]anthracene	14.270	278	6104	0.89	ppm		99
34) Benzo[g,h,i]perylene	14.538	276	7100	0.94	ppm		100
36) 1,4-Dioxane	1.930	88	1304	1.05	ppm	#	58
37) 1-Methylnaphthalene	6.923	142	5660	0.83	ppm		98
39) 4,6-dinitro-2-methylph...	8.435	198	2025	4.24	ppm		77

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99303.D
Acq On : 1 Apr 2021 9:19 pm
Operator : hennys
Sample : icv4609-1
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 02 09:35:47 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:34:12 2021
Response via : Initial Calibration

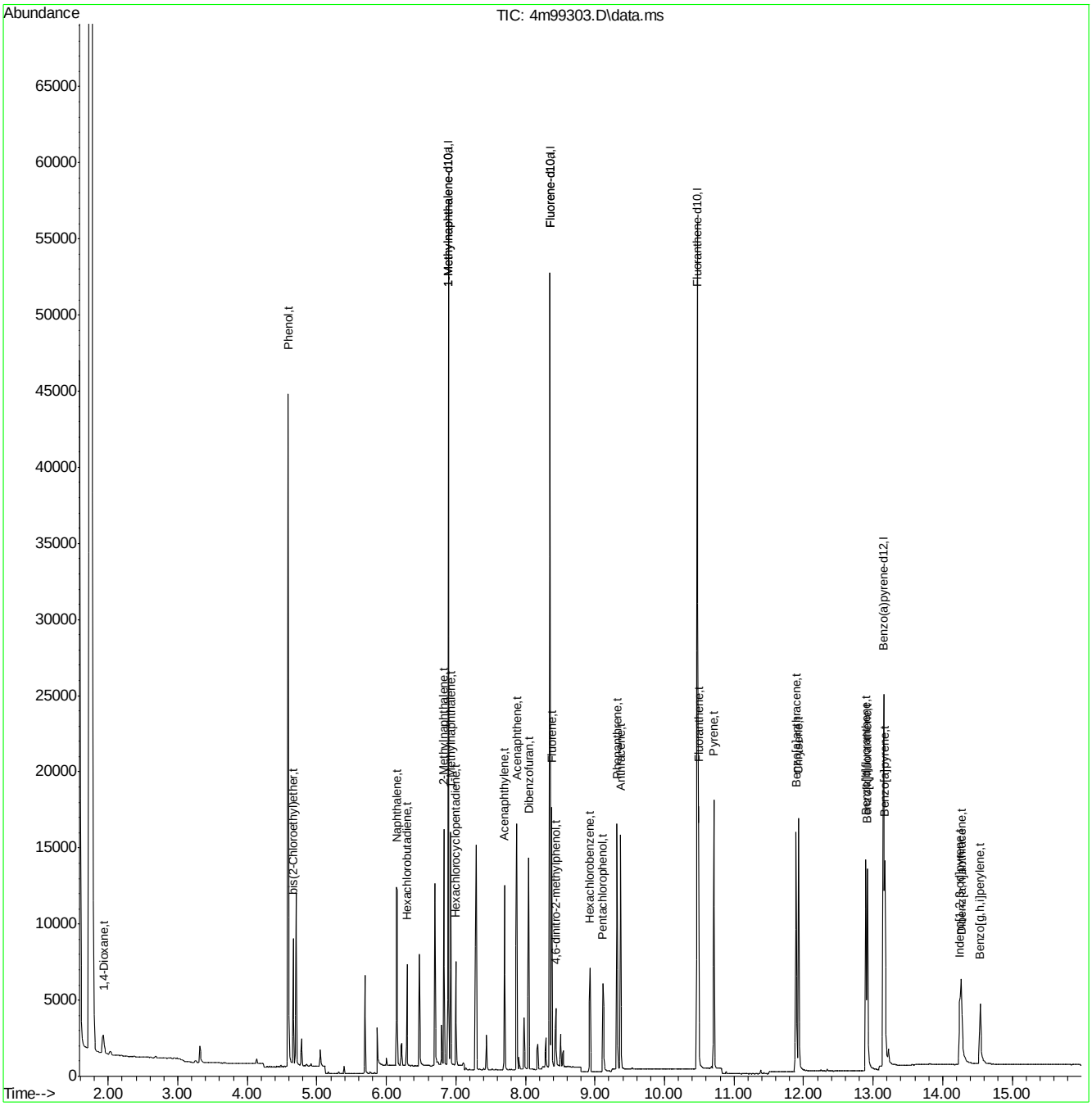
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4609\
Data File : 4m99303.D
Acq On : 1 Apr 2021 9:19 pm
Operator : hennys
Sample : icv4609-1
Misc : op30792a,e4m4609,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 02 09:35:47 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Fri Apr 02 09:34:12 2021
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
04/09/21 15:28

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99466.D
Acq On : 9 Apr 2021 9:06 am
Operator : hennys
Sample : cc4609-0.5
Misc : op30792a,e4m4617,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 09 13:21:11 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1-Methylnaphthalene-d10	6.846	152	25248	4.00	ppm		0.00
12) Fluorene-d10	8.302	176	27345	4.00	ppm		0.00
22) Fluoranthene-d10	10.424	212	44905	4.00	ppm		0.00
28) Benzo(a)pyrene-d12	13.093	264	31583	4.00	ppm		0.00
35) 1-Methylnaphthalene-d10a	6.846	152	25248	4.00	ppm		0.00
38) Fluorene-d10a	8.302	176	27345	4.00	ppm		0.00
System Monitoring Compounds							
2) 2-Fluorophenol	3.617	112	38445	11.10	ppm		0.00
Spiked Amount 50.000	Range 11 - 58		Recovery = 22.20%				
3) Phenol-d5	4.551	99	48269	10.87	ppm		0.00
Spiked Amount 50.000			Recovery = 21.74%				
6) Nitrobenzene-d5	5.392	82	40324	13.66	ppm		0.00
Spiked Amount 50.000			Recovery = 27.32%				
11) 2-Fluorobiphenyl	7.149	172	80999	9.36	ppm		0.00
Spiked Amount 50.000			Recovery = 18.72%				
17) 2,4,6-Tribromophenol	8.569	330	13355	15.28	ppm		0.00
Spiked Amount 50.000			Recovery = 30.56%				
25) Terphenyl-d14	10.836	244	80411	10.45	ppm		0.00
Spiked Amount 50.000			Recovery = 20.90%				
Target Compounds							Qvalue
4) Phenol	4.562	94	13172	2.67	ppm		92
5) bis(2-Chloroethyl)ether	4.615	93	2117	0.52	ppm		95
7) Naphthalene	6.103	128	6784	0.52	ppm		100
8) Hexachlorobutadiene	6.246	225	1404	0.48	ppm		98
9) 2-Methylnaphthalene	6.785	142	3868	0.49	ppm		92
10) Hexachlorocyclopentadiene	6.956	237	2479	1.08	ppm		92
13) Acenaphthylene	7.649	152	6405	0.50	ppm		97
14) Acenaphthene	7.829	153	4349	0.52	ppm		95
15) Dibenzofuran	7.999	168	5973	0.53	ppm		82
16) Fluorene	8.330	166	4722	0.50	ppm		99
18) Hexachlorobenzene	8.881	284	1732	0.49	ppm		89
19) Pentachlorophenol	9.074	266	4517	5.39	ppm		96
20) Phenanthrene	9.271	178	7032	0.50	ppm		100
21) Anthracene	9.321	178	6837	0.50	ppm		99
23) Fluoranthene	10.441	202	7974	0.52	ppm		98
24) Pyrene	10.660	202	8168	0.53	ppm		99
26) Benzo[a]anthracene	11.844	228	6948	0.55	ppm		98
27) Chrysene	11.876	228	7143	0.54	ppm		99
29) Benzo[b]fluoranthene	12.841	252	7192	0.52	ppm		98
30) Benzo[k]fluoranthene	12.865	252	7182	0.55	ppm		100
31) Benzo[a]pyrene	13.118	252	6694	0.50	ppm		93
32) Indeno[1,2,3-cd]pyrene	14.163	276	7154	0.59	ppm		78
33) Dibenz[a,h]anthracene	14.187	278	5647	0.58	ppm		94
34) Benzo[g,h,i]perylene	14.446	276	5951	0.55	ppm		100
36) 1,4-Dioxane	1.879	88	1138	0.68	ppm	#	66
37) 1-Methylnaphthalene	6.879	142	4594	0.50	ppm		94
39) 4,6-dinitro-2-methylph...	8.391	198	1421	2.31	ppm		93

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99466.D
Acq On : 9 Apr 2021 9:06 am
Operator : hennys
Sample : cc4609-0.5
Misc : op30792a,e4m4617,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 09 13:21:11 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration

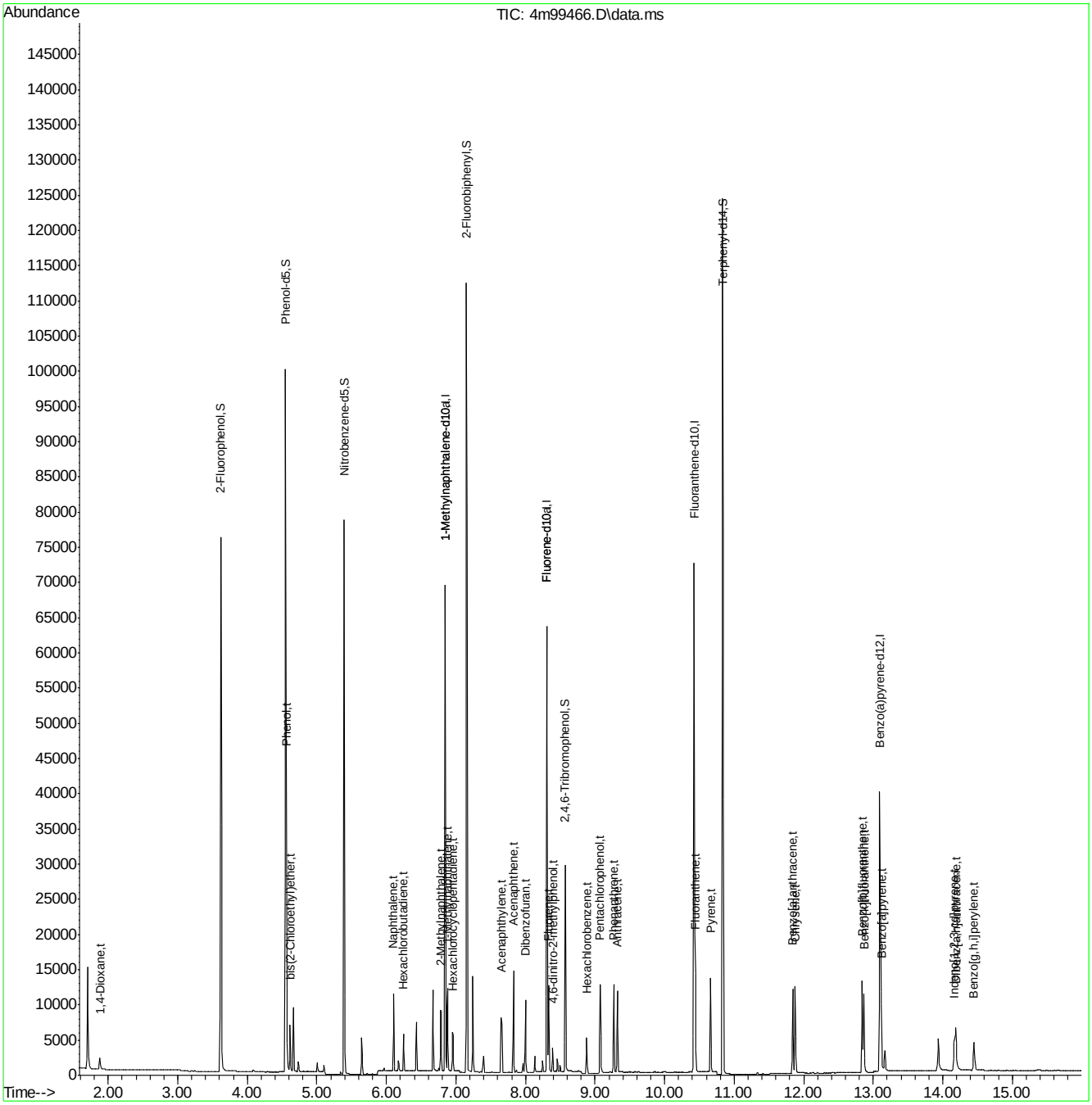
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99466.D
Acq On : 9 Apr 2021 9:06 am
Operator : hennys
Sample : cc4609-0.5
Misc : op30792a,e4m4617,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 09 13:21:11 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration



Manual Integration Approval Summary

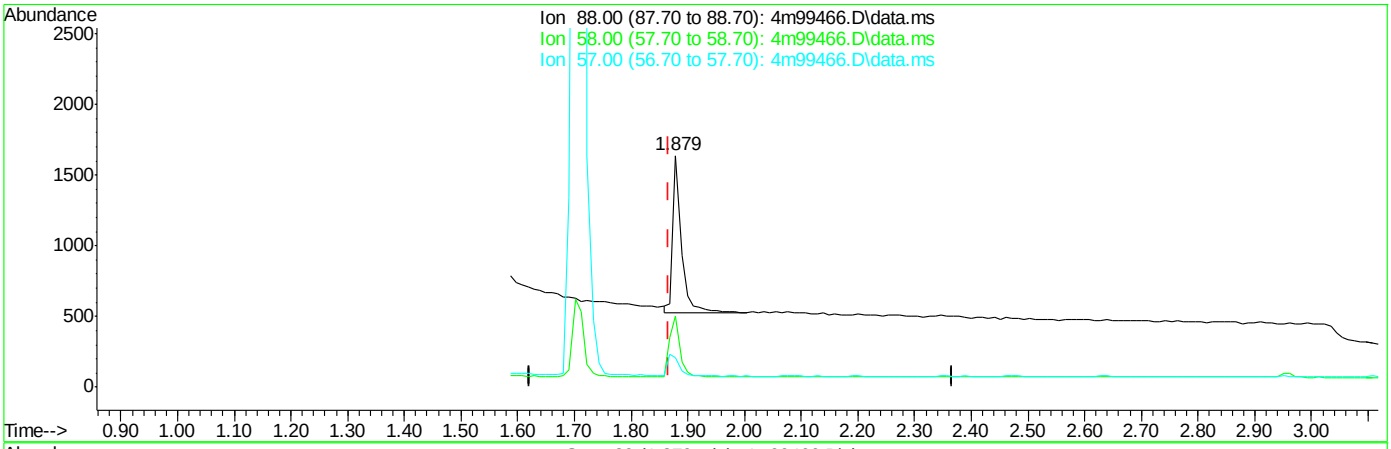
Sample Number: E4M4617-CC4609
Lab FileID: 4M99466.D
Injection Time: 04/09/21 09:06
Method: SW846 8270E BY SIM
Analyst approved: 04/09/21 13:24 Ying Li
Supervisor approved: 04/09/21 15:28 Nina Pandya

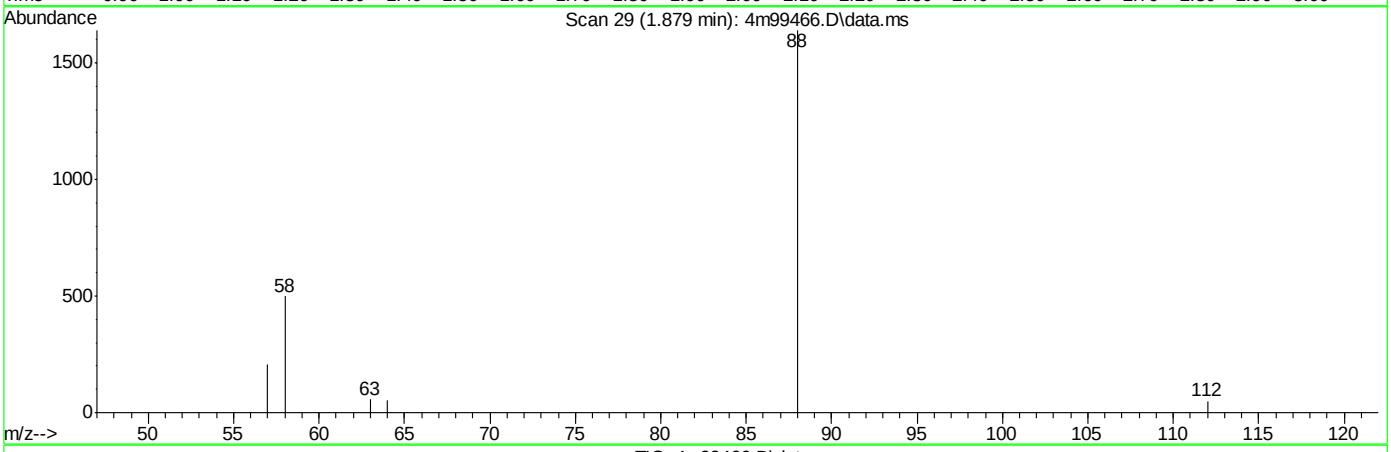
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,4-Dioxane	123-91-1		1.88	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99466.D
Acq On : 9 Apr 2021 9:06 am
Operator : hennys
Sample : cc4609-0.5
Misc : op30792a,e4m4617,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 09 13:21:11 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration





TIC: 4m99466.D\data.ms

(36) 1,4-Dioxane (t)

1.879min (+0.011) 0.68ppm

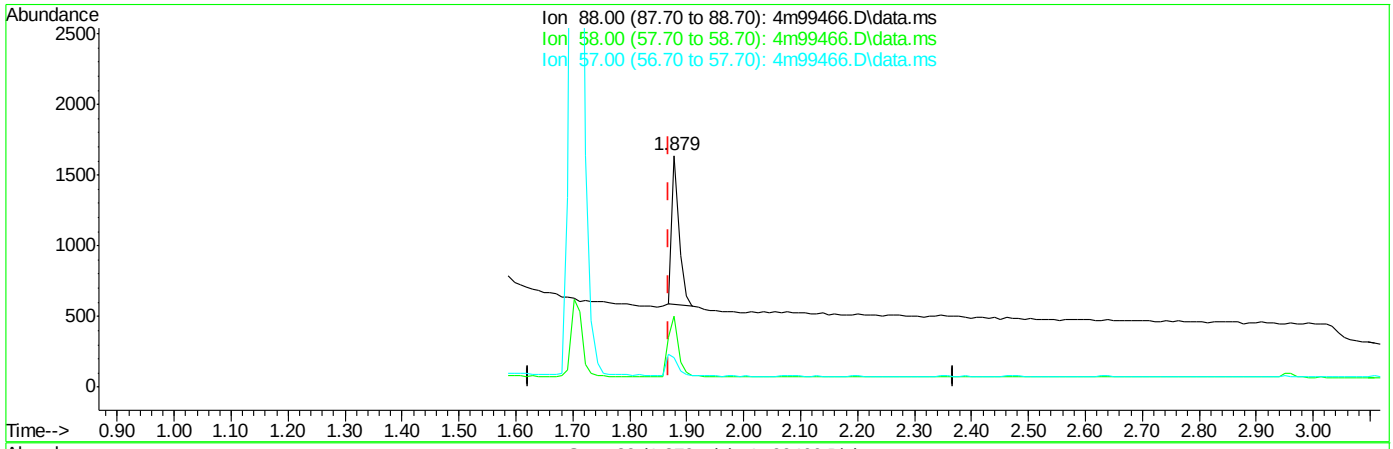
response 1138

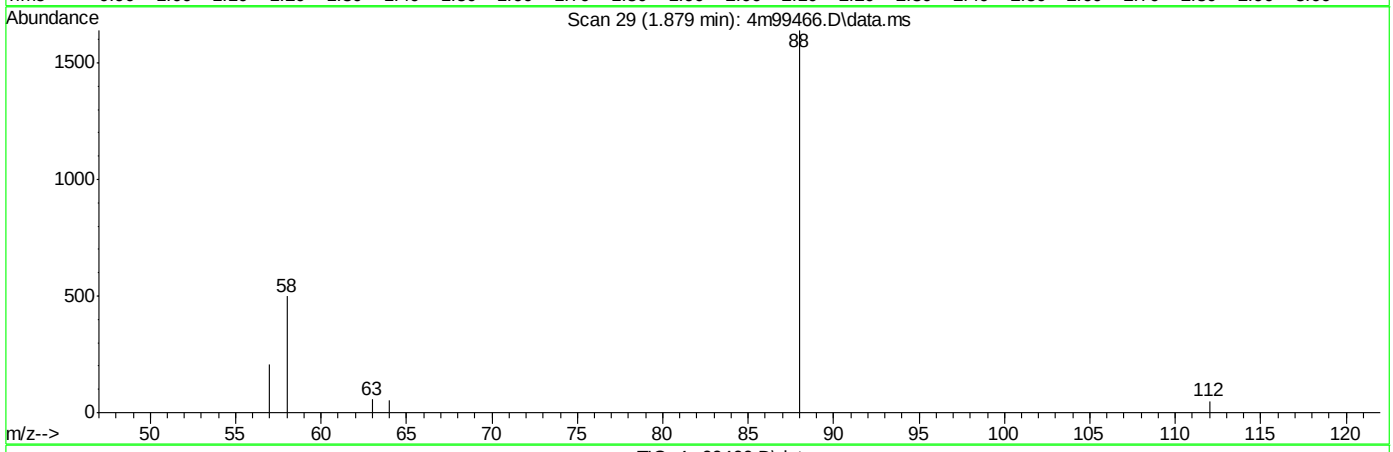
Ion	Exp%	Act%
88.00	100	100
58.00	17.80	38.85#
57.00	23.40	11.59
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4617\
Data File : 4m99466.D
Acq On : 9 Apr 2021 9:06 am
Operator : hennys
Sample : cc4609-0.5
Misc : op30792a,e4m4617,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 09 13:21:11 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration





TIC: 4m99466.D\data.ms

(36) 1,4-Dioxane (t)

1.879min (+0.011) 0.55ppm m

response 916

Ion	Exp%	Act%
88.00	100	100
58.00	17.80	30.45
57.00	23.40	12.63
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
04/10/21 21:33

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99497.D
Acq On : 10 Apr 2021 3:01 am
Operator : chriss2
Sample : cc4609-1
Misc : op30792a,e4m4618,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 10 08:59:51 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	6.835	152	12813	4.00	ppm	-0.01
12) Fluorene-d10	8.295	176	14076	4.00	ppm	0.00
22) Fluoranthene-d10	10.411	212	22866	4.00	ppm	0.00
28) Benzo(a)pyrene-d12	13.077	264	17050	4.00	ppm	0.00
35) 1-Methylnaphthalene-d10a	6.835	152	12813	4.00	ppm	-0.01
38) Fluorene-d10a	8.295	176	14076	4.00	ppm	0.00
System Monitoring Compounds						
2) 2-Fluorophenol	3.607	112	35638	20.27	ppm	-0.01
Spiked Amount 50.000	Range 11 - 58		Recovery = 40.54%			
3) Phenol-d5	4.536	99	45135	20.02	ppm	-0.01
Spiked Amount 50.000			Recovery = 40.04%			
6) Nitrobenzene-d5	5.380	82	37183	24.81	ppm	0.00
Spiked Amount 50.000			Recovery = 49.62%			
11) 2-Fluorobiphenyl	7.140	172	79505	18.11	ppm	0.00
Spiked Amount 50.000			Recovery = 36.22%			
17) 2,4,6-Tribromophenol	8.562	330	12749	28.33	ppm	0.00
Spiked Amount 50.000			Recovery = 56.66%			
25) Terphenyl-d14	10.824	244	82393	21.03	ppm	0.00
Spiked Amount 50.000			Recovery = 42.06%			
Target Compounds						Qvalue
4) Phenol	4.551	94	12376	4.95	ppm	82
5) bis(2-Chloroethyl)ether	4.604	93	1939	0.93	ppm	94
7) Naphthalene	6.092	128	6409	0.97	ppm	99
8) Hexachlorobutadiene	6.235	225	1319	0.89	ppm	98
9) 2-Methylnaphthalene	6.774	142	3705	0.92	ppm	92
10) Hexachlorocyclopentadiene	6.939	237	2591	2.23	ppm	98
13) Acenaphthylene	7.640	152	5980	0.91	ppm	99
14) Acenaphthene	7.819	153	4077	0.94	ppm	98
15) Dibenzofuran	7.989	168	5811	0.99	ppm	92
16) Fluorene	8.323	166	4518	0.93	ppm	93
18) Hexachlorobenzene	8.867	284	1668	0.92	ppm	98
19) Pentachlorophenol	9.059	266	2442	5.66	ppm	79
20) Phenanthrene	9.258	178	6598	0.91	ppm	100
21) Anthracene	9.308	178	6351	0.91	ppm	99
23) Fluoranthene	10.428	202	7581	0.97	ppm	99
24) Pyrene	10.647	202	7652	0.97	ppm	99
26) Benzo[a]anthracene	11.827	228	6474	1.00	ppm	99
27) Chrysene	11.862	228	7433	1.10	ppm	99
29) Benzo[b]fluoranthene	12.824	252	7095	0.96	ppm	98
30) Benzo[k]fluoranthene	12.847	252	7234	1.02	ppm	99
31) Benzo[a]pyrene	13.093	252	6751	0.94	ppm	97
32) Indeno[1,2,3-cd]pyrene	14.138	276	6570	1.00	ppm	84
33) Dibenz[a,h]anthracene	14.163	278	5396	1.02	ppm	98
34) Benzo[g,h,i]perylene	14.422	276	5667	0.98	ppm	99
36) 1,4-Dioxane	1.858	88	922m	1.09	ppm	
37) 1-Methylnaphthalene	6.868	142	4350	0.93	ppm	93
39) 4,6-dinitro-2-methylph...	8.377	198	2313	7.32	ppm	87

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99497.D
Acq On : 10 Apr 2021 3:01 am
Operator : chriss2
Sample : cc4609-1
Misc : op30792a,e4m4618,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 10 08:59:51 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration

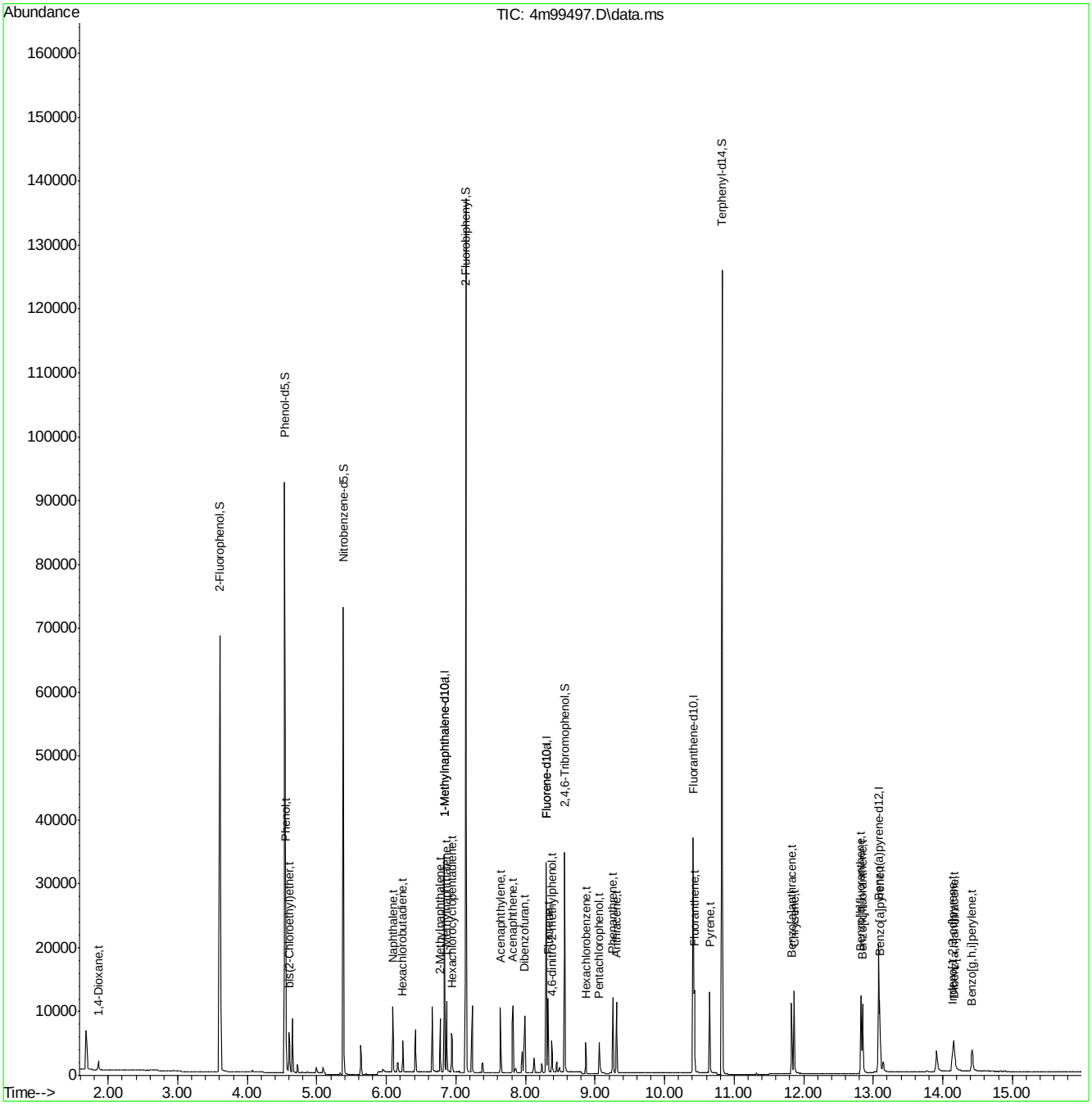
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99497.D
Acq On : 10 Apr 2021 3:01 am
Operator : chriss2
Sample : cc4609-1
Misc : op30792a,e4m4618,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 10 08:59:51 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration



Manual Integration Approval Summary

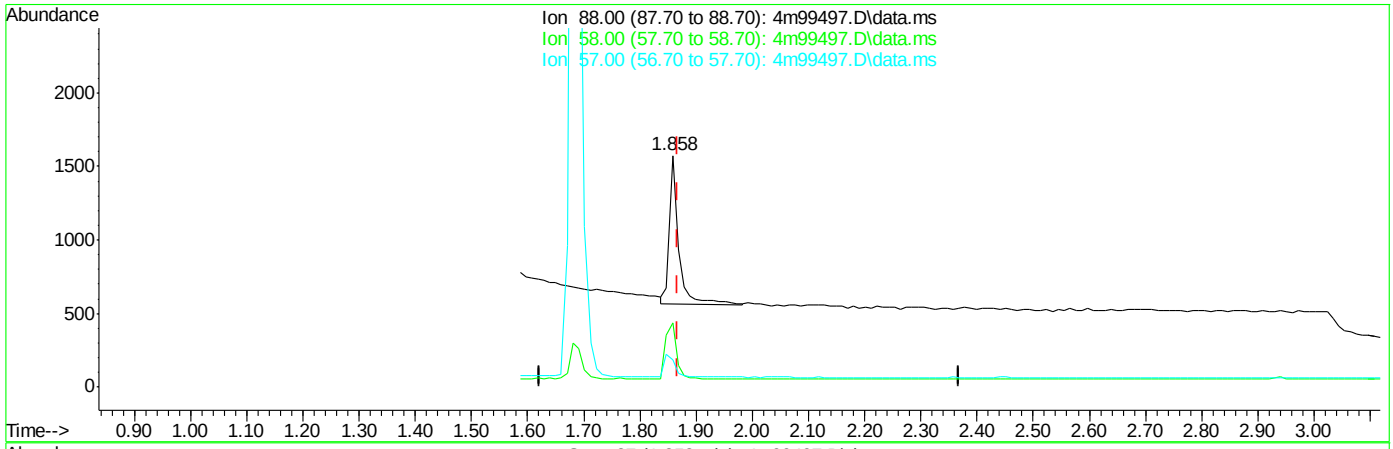
Sample Number: E4M4618-CC4609
Lab FileID: 4M99497.D
Injection Time: 04/10/21 03:01
Method: SW846 8270E BY SIM
Analyst approved: 04/10/21 09:11 Ying Li
Supervisor approved: 04/10/21 21:33 Nina Pandya

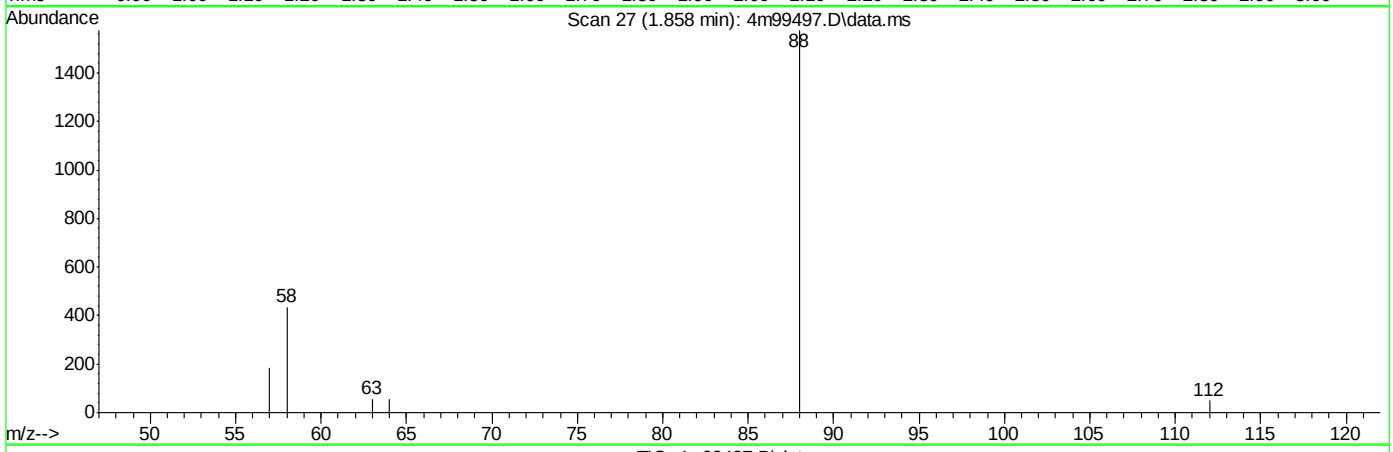
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,4-Dioxane	123-91-1		1.86	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99497.D
Acq On : 10 Apr 2021 3:01 am
Operator : chriss2
Sample : cc4609-1
Misc : op30792a,e4m4618,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 10 03:29:46 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration





TIC: 4m99497.D\data.ms

(36) 1,4-Dioxane (t)

1.858min (-0.010) 1.34ppm

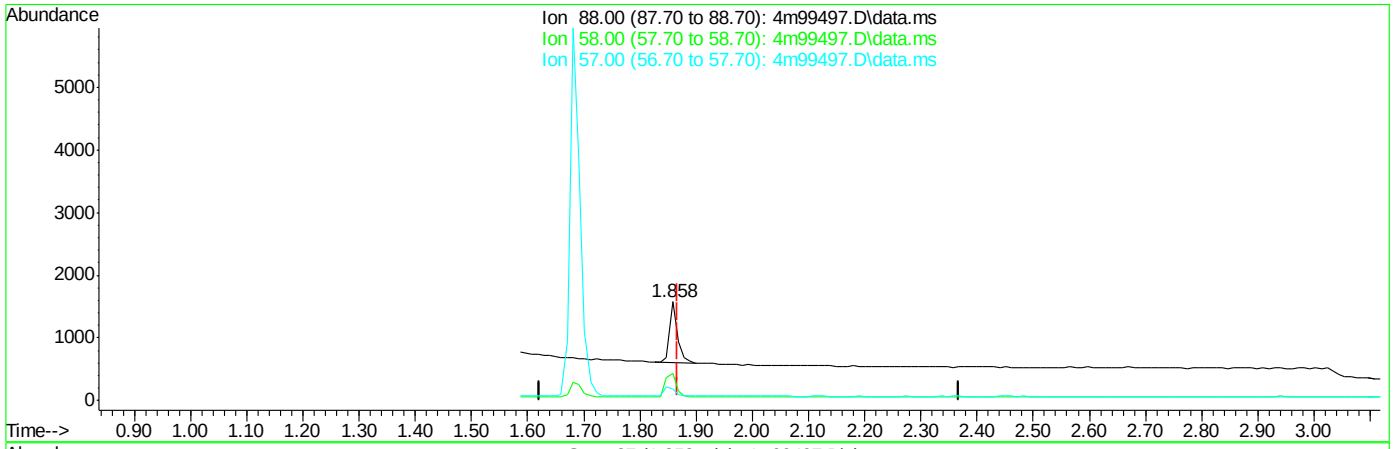
response 1134

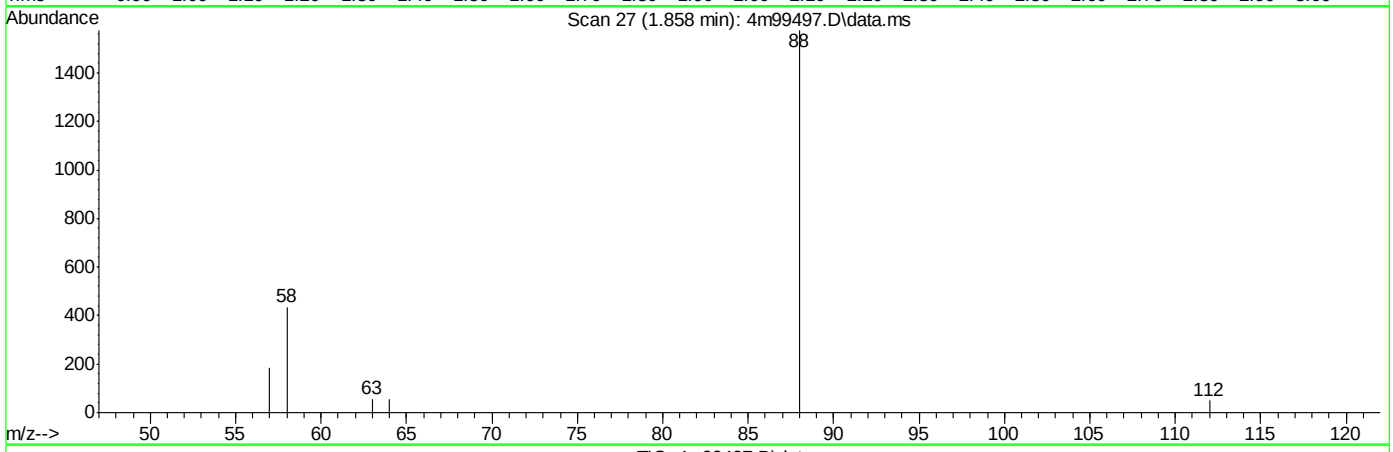
Ion	Exp%	Act%
88.00	100	100
58.00	17.80	38.20#
57.00	23.40	11.72
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E4M4618\
Data File : 4m99497.D
Acq On : 10 Apr 2021 3:01 am
Operator : chriss2
Sample : cc4609-1
Misc : op30792a,e4m4618,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 10 03:29:46 2021
Quant Method : C:\msdchem\1\METHODS\M4M4609SIM.M
Quant Title : Semi Volatile GC/MS,zb-5 15m x .25mm x .50um
QLast Update : Thu Apr 08 16:35:02 2021
Response via : Initial Calibration





TIC: 4m99497.D\data.ms

(36) 1,4-Dioxane (t)

1.858min (-0.010) 1.09ppm m

response 922

Ion	Exp%	Act%
88.00	100	100
58.00	17.80	27.62
57.00	23.40	11.75
0.00	0.00	0.00

GCMS Semi Volatile Run Log SGS - Dayton Instrument ID: GCMS4M

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv20-2751-21	50ppm	SIM ISTD	sv20-2751-68	400ppm
SIM	sv20-2751-40a	5ppm	dcm\fisher	206999	---
SIM	sv20-2751-40b	2.5ppm	SIM	sv20-2751-40h	0.02ppm
SIM	sv20-2751-40c	1ppm	SIM	sv20-2751-40i	0.01
SIM	sv20-2751-40o	0.5ppm	SIM 2nd	op20-2567-124	1ppm/5ppm
SIM	sv20-2751-40e	0.2ppm			
SIM	sv20-2751-40f	0.1ppm			
SIM	sv20-2751-40g	0.05ppm			

Run Batch:	E4M4609	**ACQ. Method:**	M4M4609SIM	**Sequence Loaded By:**	hennys
Date:	4/1/2021	**Reference Method:**	8270d/8270e/625	**Data Processed By:**	ying li
Column:	rxi-5sil ms 30m x 0.25mm x 0.25um	**Quant Methods:**	M4M4609SIM	**Approved By:**	ninap
Injection Volume:	1.0ul	**Initial Calib Date:**	4/1/2021	**Approved Date**	04/02/21

MP Missed Peak, **OP** Overlapping Peak **SP** Split Peak, **PDB** Poorly Defined Baselin **BR** Baseline Ripple **PII** Poor Instrument Integration

Data File		ALS	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	L+	Surr OK?	IS OK?	Run OK?	Comment
4M	99293	1	DFTPP									ok	5:59 pm
4M	99294	2	IC4609-5									ok	
4M	99295	3	IC4609-2.5					pII				ok	
4M	99296	4	ICC4609-1					pII				ok	
4M	99297	5	IC4609-0.5					pII				ok	
4M	99298	6	IC4609-0.2					pII				ok	
4M	99299	7	IC4609-0.1					pII				ok	
4M	99300	8	IC4609-0.05					pII				ok	

GCMS Semi Volatile Run Log

Data File		ALS	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	L+	Surr OK?	IS OK?	Run OK?	Comment
4M	99301	9	IC4609-0.02					pll				ok	
4M	99302	10	IC4609-0.01									ok	
4M	99303	11	ICV4609-1									ok	9:19pm

GCMS Semi Volatile Run Log — SGS - Dayton — Instrument ID: GCMS4M

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv20-2751-21	50ppm	SIM ISTD	sv20-2751-101	400ppm
SIM	sv20-2751-40p	0.5ppm	dcm\fisher	211461	---

Run Batch:	E4M4617	**ACQ. Method:**	M4M4609SIM	**Sequence Loaded By:**	hennys
Date:	4/9/2021	**Reference Method:**	8270d/8270e/625	**Data Processed By:**	ying li
Column:	rxi-5sil ms 30m x 0.25mm x 0.25um	**Quant Methods:**	M4M4609SIM	**Approved By:**	
Injection Volume:	1.0ul	**Initial Calib Date:**	4/1/2021	**Approved Date**	4/07/21

MP Missed Peak, **OP** Overlapping Peak **SP** Split Peak, **PDB** Poorly Defined Baselin **BR** Baseline Ripple **PII** Poor Instrument Integration

Data File	ALS	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	L+	Surr OK?	IS OK?	Run OK?	Comment
4M 99464	1	DFTPP									rr	degradation failed, reinstall
4M 99465	1	DFTPP									ok	8:55 am
4M 99466	2	CC4609-0.5					pII				ok	
4M 99467	3	OP32684A-MB1	OP32684A	B8270SIM14DIOX	AQ		pII		y	y	ok	
4M 99468	4	OP32684A-BS12	OP32684A	B8270SIM14DIOX	AQ				y	y	ok	
4M 99469	5	OP32684A-BSD12	OP32684A	B8270SIM14DIOX	AQ				y	y	ok	
4M 99470	6	JD22888-7	OP32684A	B8270SIM14DIOX	AQ							run after 4m99495
4M 99471	7	JD22891-1	OP32684A	B8270SIM14DIOX	AQ							run after 4m99495

GCMS Semi Volatile Run Log

Data File		ALS	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	L+	Surr OK?	IS OK?	Run OK?	Comment
4M	99472	8	JD22891-2	OP32684A	B8270SIM14DIOX	AQ							run after 4m99495
4M	99473	9	OP32681A-MB1	OP32681A	B8270SIM14DIOX	AQ		pll		y	y	ok	run after 4m99467
4M	99474	10	JD22699-1	OP32681A	B8270SIM14DIOX	DW				y	y	ok	run after 4m99467
4M	99475	11	JD22723-1	OP32681A	B8270SIM14DIOX	AQ				y	y	ok	run after 4m99467
4M	99476	12	JD22723-2	OP32681A	B8270SIM14DIOX	AQ				y	y	ok	run after 4m99467
4M	99477	13	JD22768-1	OP32681A	B8270SIMPAH	AQ		pll		y	y	ok	run after 4m99467/rx mb hit
4M	99478	14	JD22768-1	OP32681A	B8270SIMPAH	AQ	10	pll		y	y	ok	run after 4m99467/rx mb hit
4M	99479	15	OP32675A-MB1	OP32675A	AB8270SIMNJ	AQ		pll		y	y	ok	
4M	99480	16	OP32675A-BS12	OP32675A	AB8270SIMNJ	AQ				y	y	ok	
4M	99481	17	OP32675A-BSD12	OP32675A	AB8270SIMNJ	AQ		pll		y	y	ok	
4M	99482	18	JD22685-10	OP32675A	B8270SIMNJ	AQ				y	y	ok	
4M	99483	19	JD22685-2	OP32675A	B8270SIMNJ	AQ		pll		y	y	ok	
4M	99484	20	JD22685-5	OP32675A	B8270SIMNJ	AQ		pll		y	y	ok	
4M	99485	21	JD22685-7	OP32675A	B8270SIMNJ	AQ		pll		y	y	ok	
4M	99486	22	JD22685-8	OP32675A	B8270SIMNJ	AQ		pll		y	y	ok	
4M	99487	23	JD22685-6	OP32675A	B8270SIMNJ	AQ		pll		y	y	ok	
4M	99488	24	JD22685-3	OP32675A	B8270SIMNJ	AQ							
4M	99489	25	JD22685-4	OP32675A	B8270SIMNJ	AQ	2						diln due to visc
4M	99490	26	JD22789-9	OP32675A	AB8270SIMNJ	AQ							

GCMS Semi Volatile Run Log

Data File		ALS	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	L+	Surr OK?	IS OK?	Run OK?	Comment
4M	99491	27	JD22789-10	OP32675A	AB8270SIMNJ	AQ							
4M	99492	28	JD22789-11	OP32675A	AB8270SIMNJ	AQ							
4M	99493	29	JD22789-12	OP32675A	AB8270SIMNJ	AQ							
4M	99494	30	JD22789-13	OP32675A	AB8270SIMNJ	AQ							
4M	99495	31	JD22789-14	OP32675A	AB8270SIMNJ	AQ							

GCMS Semi Volatile Run Log SGS - Dayton Instrument ID: GCMS4M

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv20-2751-21	50ppm	SIM ISTD	sv20-2751-101	400ppm
SIM	sv20-2751-40c	1ppm	dcm\fisher	211461	---

Run Batch:	E4M4618	**ACQ. Method:**	M4M4609SIM	**Sequence Loaded By:**	chriss2
Date:	4/10/2021	**Reference Method:**	8270E/625	**Data Processed By:**	ying li
Column:	rxi-5sil ms 30m x 0.25mm x 0.25um	**Quant Methods:**	M4M4609SIM	**Approved By:**	
Injection Volume:	1.0ul	**Initial Calib Date:**	4/1/2021	**Approved Date**	

MP Missed Peak, **OP** Overlapping Peak **SP** Split Peak, **PDB** Poorly Defined Baselin **BR** Baseline Ripple **PII** Poor Instrument Integration

Data File		ALS	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	L+	Surr OK?	IS OK?	Run OK?	Comment
4M	99496	1	DFTPP									ok	2:49am
4M	99497	2	CC4609-1					pII				ok	
4M	99498	3	OP32741A-MB1	OP32741A	B8270SIM14DIOX	SO				y	y	ok	
4M	99499	4	OP32741A-BS12	OP32741A	B8270SIM14DIOX	SO				y	y	ok	
4M	99500	5	JD22888-5	OP32741A	B8270SIM14DIOX	SO				y	y	ok	
4M	99501	6	JD22888-3	OP32741A	B8270SIM14DIOX	SO				y	y	ok	
4M	99502	7	JD22888-4	OP32741A	B8270SIM14DIOX	SO				y	y	ok	
4M	99503	8	JD22888-6	OP32741A	B8270SIM14DIOX	SO				y	y	ok	

GCMS Semi Volatile Run Log

Data File		ALS	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	L+	Surr OK?	IS OK?	Run OK?	Comment
4M	99504	9	OP32741A-MSA	OP32741A	B8270SIM14DIOX	SO				y	y	ok	
4M	99505	10	OP32741A-MSDA	OP32741A	B8270SIM14DIOX	SO				y	y	ok	
4M	99506	11	JD22888-2	OP32741A	B8270SIM14DIOX	SO				y	y	ok	6:30am

LOGBOOK ID:

ABN Aqueous Extraction Logbook

Date Started: 4/7/21 Time Started: 19:30
Date Finished: 4/8/21 Time Finished: 14:60

Extract Method (CHECK ONE - DO NOT CIRCLE):
Separatory Funnel: SW846 3510C/L1/Other ✓ 3510C SM ✓
Continuous Liquid Liquid: SW846 3520C/CL1/Other

BATCH # MSOD 32684	RACK # R-46
Set up by	WA, NW, CL, PAB
Extracted by	LT, EVC, NW, BB
Concentrated by	BB, LT
Final Vol. Top-up	
Vialed by	EVC, LT
Supervisor Review	NW 4/8/21

Equipment/ Range	ID	Observed Temp (°C)	Correction Factor (°C)	Corrected Temp (°C)	Pressure/ Flowrate
Buchi (65-70°C)					
Buchi Chiller					
Waterbath (70-80°C)	S, 6	76.0, 70	–	–	ok
Waterbath Chiller (1/PM)	F2	9	–	–	2.0
SPEVAP 112 (8°C / PM)	116	35.1	–	–	10.0

SURROGATE	LOT#	CONC (ppm)	AMT (mL)
ABN	212630-24	50	1.0
ABN DOD SIM			
WITNESS SIGN DG		SPIKE SIGN TG	

MATRIX SPIKE	LOT #	CONC (ppm)	AMT (mL)
Acid			Acid SIM
Acid (for SIM)			
[illegible] Mix1	212630-20	50	1.0
[illegible] Mix2	212630-21	50	1.0
Anilines			
BSIM	212630-12	1/2	1.0
WITNESS SIGN DG		SPIKE SIGN TG	

SOLVENT	LOT #	BRAND	AMT (mL)
METH CHLOR	211461	Fisher	6x60

REAGENT	LOT #	BATCH #	BRAND
NaOH	286344		Fisher
H2SO4	2002885		Ricca
Sodium Sulfate	201575	3-3-21	Fisher
Glass Wool	A0418317		Acros
Filter Paper			
pH strips	231019		Hydrion

Special Client Spike Instructions

QC ID# for Special Spike	Amt to Spike	Spike ID	Lot #	Conc	Amt Spiked

WITNESS SIGN: SPIKE SIGN:
Manager/Supervisor/Team Lead Approval

SPECIAL PROCESSING INSTRUCTIONS
Rx Reason:
Spiking:
Weights/Volumes:
Required MS/MSD:
Final Volume:
Other:

Sample #	Analysis Type	# of Bottles	Sample Description	Sample Volume (mL)	Final pH: Acid	Final pH: Base/Neut	Final Extract: Color	Final Extract: Volume (mL)	Misc: QC Check	Misc: Comments
MB1	ABN		DI H2O	1000	<2	>11	clear	1.0		
BS1			DI H2O	1000	<2	>11	yellow	1.0		
~~BSD MS~~			DI H2O	1000	<2	>11	yellow	1.0		
MSD										
~~BS2~~			DI H2O	1000	<2	>11	yellow	1.0		
~~BSD2 MS~~			DI H2O	1000	<2	>11	yellow	1.0		
MSD										
BS										
MS										
MSD										
JD22685-2		2	yellow	1050	<2	>11	yellow	1.0	c	
-3		2	yellow	1050	<2	>11	brown	1.0	c	
-4		2	yellow	1050	<2	>11	brown	1.0	c	
-5		2	yellow	1050	<2	>11	yellow	1.0	c	
-6		2	yellow	1050	<2	>11	yellow	1.0	c	
-7		2	yellow	1050	<2	>11	yellow	1.0	c	
-8		2	yellow	1050	<2	>11	yellow	1.0	c	
-10		1	clear	1050	<2	>11	clear	1.0		
JD22930-1		6	yellow	1050	<2	>11	yellow	1.0		
-2		6	clear	1050	<2	>11	yellow	1.0		
-3		6	yellow	950	<2	>11	yellow	1.0		
-4		6	yellow	950	<2	>11	yellow	1.0		
-5		6	yellow	1050	<2	>11	yellow	1.0	c	
-6		6	yellow	1050	<2	>11	yellow	1.0	c	
-7		6	yellow	1050	<2	>11	yellow	1.0	c	
-8		6	yellow	1000	<2	>11	yellow	1.0	c	
-9		6	yellow	1050	<2	>11	yellow	1.0	c	
JD22888-7		1	clear	1050	<2	>11	clear	1.0		
JD22891-1		1	clear	1050	<2	>11	clear	1.0		
-2		1	clear	1050	<2	>11	clear	1.0		

Comments: OC Samples (MS, MSD, LINK and/or DUP, Link) Confirmed by
c Heavy emulsion

SGS
Form: OP022A-13
Rev Date: 8/23/19

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Update "n" Batch

ABN Extraction Log - Solids

LOGBOOK ID:

Date started: 4/9/21 Time started: 14:35
Date finished: 4/9/21 Time finished: 23:55

Extract Method (CHECK OFF "√" /DO NOT CIRCLE):
Microwave SW3546 √ Sonication SW3550C ____
Waste Dil. SW3580A ____ Soxhlet SW3540C ____

BATCH # MS OP32741	RACK# R46
Weighed by:	TG
Extracted by:	KM, BS
Concentrated by:	TG
Final Vol. Top-up:	
Vialed by:	TG
Supervisor Review:	TG 4/9/21

Equipment/ Range	ID	Observed Temp (°C)	Correction Factor (°C)	Corrected Temp (°C)	Pressure/ Flowrate
Buchi (65-71°C)					
Buchi Chiller					
Waterbath (70-80°C)	10	75.7	-1	74.7	OK
Waterbath Chiller (GPM)	V3	6.5	–	–	0.8
NEVAP (32-38°C, LPM)	2	35.1	–	–	10
Balance	B48	N/A	N/A	N/A	N/A

SURROGATE	LOT #	CONC (ppm)	AMT (mL)
ABN	212630-24	50	1.0
ABN DOD SIM			
WITNESS SIGN: BS		SPIKE SIGN: KM	

MATRIX SPIKE	LOT #	CONC (ppm)	AMT (mL)
Acid			Acid:
Acid (for SIM)			A(SIM):
~~Base #1~~ M1X1	212630-20	50	1.0
~~Base #2~~ M1X2	212630-21	50	1.0
Aniline			
BSIM	212630.12	1/2/5	1.0
WITNESS SIGN: BS		SPIKE SIGN: KM	

SOLVENT	LOT #	BRAND	AMT (mL)
1:1 METH CHLOR/ ACETONE	206899 / 204462	~~Fisher~~	30.0
METH CHLOR			

REAGENT	LOT #	BAKE BATCH #	BRAND
HYDROMATRIX	148743	2/17/21	Applied
SODIUM SULFATE	201575	3/3/21	Fisher
FILTER PAPER	7160663	-	Fisher

MATRIX	LOT #	BAKE BATCH #	BRAND
SAND	96/1407207A	-	Fisher

Special Client Spike Instructions

QC ID# for Special Spike	Amt to Spike	Spike ID	Lot #	Conc.	Amt. Spiked

WITNESS SIGN: SPIKE SIGN:
Manager/Supervisor/Team Lead Approval:

SPECIAL PROCESSING INSTRUCTIONS

Rx Reason:

Spiking:

Weights/Volumes:

Required MS/MSD:

Final Volume:

Other:

	Special Client Sample #	ABN Analysis Type	Sample Bottle #	Sample Description	Sample Wet Wt. (g) Oil (g) Liq (mL)	Decant Y	Decant N	Sonicator ID	Microwave ID	Final Extract Color	Final Extract Vol(mL)	GPC Cleanup	Comments
	MB1			Sand	30.0				15	clear	1.0		
	BS1			Sand	30.0				15	yellow	1.0		
	JD22895-1 MS		1	Sand	30.1		–		15	Dark brown	1.0		
	1 MSD		1	Sand	30.6		–		15	dark brown	1.0		
	BSD			Sand	30.0				15	yellow	1.0		
	JD22888-2 MSA		1	Soil	31.0		–		15	brown	1.0		
	1 MSDA		1	Soil	30.6		–		15	brown	1.0		
	BS12			Sand	30.0				15	L-brown Yellow	1.0		
	~~BSD2 MS~~			Sand	30.0				15	L-brown Yellow	1.0		
	MSD												
1	JD22484-5		1	Soil/Roots	15.1		–	15		black	1.0		*
2	JD22483-6		1	Damp Soil	30.5		–	15		black	1.0		°
3	JD22888-2		1	Soil	30.2		–	15		brown	1.0		
4	-3		1	Wet Soil	31.0		–	15		brown	1.0		
5	-4		1	Soil	30.2		–	15		brown	1.0		
6	-5		1	Soil	30.8		–	15		L-brown	1.0		
7	-6		1	Soil	30.2		–	15		brown	1.0		
8	JD22895-1		1	Sand	30.7		–	15		K-brown	1.0		
9	-2		1	Sand	30.7		–	15		L-brown	1.0		
10	-3		1	Sand	30.8		–	15		clear	1.0		
11	-4		1	Sand	30.6		–	15		brown	1.0		
12	-5		1	Sand	30.2		–	15		L brown	1.0		
13	-6		1	Sand	30.1		–	15		brown	1.0		
14	JD22948-2		1	Rock/Soil	30.3		–	15		black	1.0		°
15	-3		1	Rocks/Soil	30.1		–	15		black	1.0		°
16	JD22981-1		1	Re Sand	30.2		–	15		L brown	1.0		
17	-2		1	Sand	30.0		–	15		L-brown	1.0		
18	JD23006-1		1	Soil	30.2		–	15		black	1.0		°
19	JD22970-1		2	Rocks	30.6		–	15		clear	1.0		
20	JD22923-1		1	Soil	30.1		–	15		brown	1.0		

Comments: QC Samples (MS, MSD, LINK and/or DUP, Link) Confirmed by:

* Reduced sample weight due to low density
° Samples took longer to concentrate than usual; very dark, thick samples.

SGS
Form: OP019A-10
Rev Date: 8/2/17

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General Chemistry

QC Data Summaries

Includes the following where applicable:

- Percent Solids Raw Data Summary

Percent Solids Raw Data Summary

Job Number: JD22888
Account: HWINJM Honeywell International Inc.
Project: OBGNYS: Honeywell WB 1-8 ELT

Sample: JD22888-2 **Analyzed:** 07-APR-21 by LM **Method:** SM2540 G 18TH ED MOD
ClientID: PMC-040521-02

Wet Weight (Total)	33.86	g
Tare Weight	25.8	g
Dry Weight (Total)	32.27	g
Solids, Percent	80.3	%

Sample: JD22888-3 **Analyzed:** 07-APR-21 by LM **Method:** SM2540 G 18TH ED MOD
ClientID: PMC-040521-03

Wet Weight (Total)	35.22	g
Tare Weight	27.58	g
Dry Weight (Total)	32.81	g
Solids, Percent	68.5	%

Sample: JD22888-4 **Analyzed:** 07-APR-21 by LM **Method:** SM2540 G 18TH ED MOD
ClientID: PMC-040521-06

Wet Weight (Total)	23.91	g
Tare Weight	17.53	g
Dry Weight (Total)	22.29	g
Solids, Percent	74.6	%

Sample: JD22888-5 **Analyzed:** 07-APR-21 by LM **Method:** SM2540 G 18TH ED MOD
ClientID: PMC-040521-07

Wet Weight (Total)	31.12	g
Tare Weight	23.13	g
Dry Weight (Total)	29.05	g
Solids, Percent	74.1	%

Sample: JD22888-6 **Analyzed:** 07-APR-21 by LM **Method:** SM2540 G 18TH ED MOD
ClientID: PMC-040521-08

Wet Weight (Total)	26.63	g
Tare Weight	20.15	g
Dry Weight (Total)	25.44	g
Solids, Percent	81.6	%

Misc. Forms

Custody Documents and Other Forms

(SGS Orlando, FL)

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

Page 1 of 1

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: JD22888

Client / Reporting Information

Company Name:
Street Address:
City / State / Zip:
Project Contact: Kristin.Degraw@sgs.com | E-mail:
Phone #:
Sampler(s) Name(s): | Phone #:

Project Information

Project Name: OBGNYS: Honeywell WB 1-8 ELT
Street:
City / State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	LCID537NY21 -	LAB USE ONLY
1	PMC-040521-01		4/5/21	10:47:00 AM		AQ										X	
2SA	PMC-040521-04		4/5/21	10:52:00 AM		SO										X	
2DA	PMC-040521-05		4/5/21	10:54:00 AM		SO										X	
2A	PMC-040521-02		4/5/21	10:50:00 AM		SO										X	
3A	PMC-040521-03		4/5/21	12:00:00 AM		SO										X	
4A	PMC-040521-06		4/5/21	11:29:00 AM		SO										X	
5A	PMC-040521-07		4/5/21	11:52:00 AM		SO										X	
6A	PMC-040521-08		4/5/21	12:18:00 PM		SO										X	
7A	PMC-040521-09		4/5/21	12:30:00 PM		AQ										X	

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB-Equipment Blank; RB - Rinse Blank; TB - Trip Blank

Turnaround Time (Business days)

Approved By (SGS PM): / Date:

- [ ] Standard 10 Business Days
- [ ] 5 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [X] Other 14

Emergency & Rush T/A data available via Lablink. Approval needed for RUSH/Emergency TAT.

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [X] Other FULT1

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

INITIAL ASSESSMENT
LABEL VERIFICATION

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by: 1	Date / Time: 4/6/21 12:00	Received By: 1	FedEx	Relinquished By: 2	FX	Date / Time: 4/7/21 945	Received By: 2
Relinquished by: 3	Date / Time:	Received By: 3		Relinquished By: 4		Date / Time:	Received By: 4
Relinquished by: 5	Date / Time:	Received By: 5		Custody Seal # 28164	☐ Intact ☐ Not Intact	Preserved where applicable ☐ Absent	☐ On Ice Therm. ID:	Cooler Temp. °C: 2.4 IR-4	

jd22888.xls
Rev. Date: 4/10/18

JD22888: Chain of Custody
Page 1 of 2
SGS Orlando, FL

SGS Sample Receipt Summary

Job Number: JD22888 **Client:** SGS NJ **Project:** OBGNYS

Date / Time Received: 4/7/2021 9:45:00 AM **Delivery Method:** FX **Airbill #'s:** 9251 0901 6615

Therm ID: IR 1; **Therm CF:** -1.8; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (4.2);

Cooler Temps (Corrected) °C: Cooler 1: (2.4);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑
	W	**or**	**S**	**N/A**
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: PETERH Date: 4/7/2021 9:45:00 AM Reviewer: _____ Date: _____

9.1

9

JD22888: Chain of Custody
Page 2 of 2

SGS North America Inc.

Internal Sample Tracking Chronicle

SGS Dayton, NJ

Job No: JD22888

HWINJM: OBGNYS: Honeywell WB 1-8 ELT
Project No: HWINJM85611

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD22888-1	Collected: 05-APR-21 10:47 By: PMC-040521-01			Received: 06-APR-21	By: PH	
JD22888-1	EPA 537M BY ID	15-APR-21 02:30	MV	13-APR-21	GH	LCID537NY21
JD22888-2A	Collected: 05-APR-21 10:50 By: PMC-040521-02			Received: 06-APR-21	By: PH	
JD22888-2A	EPA 537M BY ID	18-APR-21 21:27	NG	15-APR-21	GT	LCID537NY21
JD22888-3A	Collected: 05-APR-21 00:00 By: PMC-040521-03			Received: 06-APR-21	By: PH	
JD22888-3A	EPA 537M BY ID	17-APR-21 05:29	NAF	15-APR-21	GT	LCID537NY21
JD22888-4A	Collected: 05-APR-21 11:29 By: PMC-040521-06			Received: 06-APR-21	By: PH	
JD22888-4A	EPA 537M BY ID	17-APR-21 05:45	NAF	15-APR-21	GT	LCID537NY21
JD22888-5A	Collected: 05-APR-21 11:52 By: PMC-040521-07			Received: 06-APR-21	By: PH	
JD22888-5A	EPA 537M BY ID	17-APR-21 06:35	NAF	15-APR-21	GT	LCID537NY21
JD22888-6A	Collected: 05-APR-21 12:18 By: PMC-040521-08			Received: 06-APR-21	By: PH	
JD22888-6A	EPA 537M BY ID	17-APR-21 06:51	NAF	15-APR-21	GT	LCID537NY21
JD22888-7A	Collected: 05-APR-21 12:30 By: PMC-040521-09			Received: 06-APR-21	By: PH	
JD22888-7A	EPA 537M BY ID	15-APR-21 03:20	MV	13-APR-21	GH	LCID537NY21

MS Semi-volatiles

QC Data Summaries

(SGS Orlando, FL)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Isotope Dilution Standard Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84900-MB	3Q36618.D	1	04/14/21	MV	04/13/21	OP84900	S3Q538

The QC reported here applies to the following samples: **Method:** EPA 537M BY ID

JD22888-1, JD22888-7A

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.0040	0.0020	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0020	0.0010	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0020	0.0010	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0020	0.0010	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0020	0.0010	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0020	0.0010	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0020	0.0010	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0020	0.0010	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0020	0.0010	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0020	0.0010	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0020	0.0010	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0020	0.0010	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0020	0.0010	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0020	0.0010	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0020	0.0010	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0020	0.0010	ug/l	
754-91-6	PFOSA	ND	0.0040	0.0020	ug/l	
2355-31-9	MeFOSAA	ND	0.0040	0.0020	ug/l	
2991-50-6	EtFOSAA	ND	0.0040	0.0020	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.0080	0.0020	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.0080	0.0020	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	110%	35-135%
	13C5-PFPeA	104%	50-150%
	13C5-PFHxA	103%	50-150%
	13C4-PFHpA	100%	50-150%
	13C8-PFOA	95%	50-150%
	13C9-PFNA	89%	50-150%
	13C6-PFDA	85%	50-150%
	13C7-PFUnDA	80%	40-140%
	13C2-PFDoDA	69%	40-140%
	13C2-PFTeDA	70%	30-130%
	13C3-PFBS	101%	50-150%

Method Blank Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84900-MB	3Q36618.D	1	04/14/21	MV	04/13/21	OP84900	S3Q538

The QC reported here applies to the following samples: **Method:** EPA 537M BY ID

JD22888-1, JD22888-7A

CAS No.	ID Standard Recoveries		Limits
	13C3-PFHxS	96%	50-150%
	13C8-PFOS	82%	50-150%
	13C8-FOSA	79%	30-130%
	d3-MeFOSAA	77%	40-140%
	d5-EtFOSAA	78%	40-140%
	13C2-6:2FTS	81%	50-150%
	13C2-8:2FTS	80%	50-150%

Method Blank Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84941-MB	2Q66241.D	1	04/17/21	NAF	04/15/21	OP84941	S2Q963

The QC reported here applies to the following samples: **Method:** EPA 537M BY ID

JD22888-2A, JD22888-3A, JD22888-4A, JD22888-5A, JD22888-6A

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	0.40	1.0	0.38	ug/kg	J
2706-90-3	Perfluoropentanoic acid	ND	0.50	0.25	ug/kg	
307-24-4	Perfluorohexanoic acid	ND	0.50	0.25	ug/kg	
375-85-9	Perfluoroheptanoic acid	ND	0.50	0.25	ug/kg	
335-67-1	Perfluorooctanoic acid	ND	0.50	0.25	ug/kg	
375-95-1	Perfluorononanoic acid	ND	0.50	0.25	ug/kg	
335-76-2	Perfluorodecanoic acid	ND	0.50	0.25	ug/kg	
2058-94-8	Perfluoroundecanoic acid	ND	0.50	0.25	ug/kg	
307-55-1	Perfluorododecanoic acid	ND	0.50	0.25	ug/kg	
72629-94-8	Perfluorotridecanoic acid	ND	0.50	0.27	ug/kg	
376-06-7	Perfluorotetradecanoic acid	ND	0.50	0.25	ug/kg	
375-73-5	Perfluorobutanesulfonic acid	ND	0.50	0.25	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	ND	0.50	0.25	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.50	0.25	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.50	0.25	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	ND	0.50	0.25	ug/kg	
754-91-6	PFOSA	ND	0.50	0.25	ug/kg	
2355-31-9	MeFOSAA	ND	1.0	0.50	ug/kg	
2991-50-6	EtFOSAA	ND	1.0	0.50	ug/kg	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	1.0	0.25	ug/kg	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	1.0	0.25	ug/kg	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	96%	40-140%
	13C5-PFPeA	92%	50-150%
	13C5-PFHxA	92%	50-150%
	13C4-PFHpA	92%	50-150%
	13C8-PFOA	91%	50-150%
	13C9-PFNA	92%	50-150%
	13C6-PFDA	92%	50-150%
	13C7-PFUnDA	90%	40-140%
	13C2-PFDoDA	81%	40-140%
	13C2-PFTeDA	81%	30-130%
	13C3-PFBS	91%	50-150%

Method Blank Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84941-MB	2Q66241.D	1	04/17/21	NAF	04/15/21	OP84941	S2Q963

The QC reported here applies to the following samples: **Method:** EPA 537M BY ID

JD22888-2A, JD22888-3A, JD22888-4A, JD22888-5A, JD22888-6A

CAS No.	ID Standard Recoveries		Limits
	13C3-PFHxS	93%	50-150%
	13C8-PFOS	92%	50-150%
	13C8-FOSA	95%	30-130%
	d3-MeFOSAA	85%	40-140%
	d5-EtFOSAA	85%	40-140%
	13C2-6:2FTS	89%	50-150%
	13C2-8:2FTS	88%	50-150%

Instrument Blank

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S3Q538-IBLK	3Q36586.D	1	04/14/21	MV	n/a	n/a	S3Q538

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.3 B-15

JD22888-1, JD22888-7A

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.0080	0.0020	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0040	0.0010	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.0010	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.0010	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.0010	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.0010	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.0010	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.0010	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.0010	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.0010	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.0010	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.0010	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.0010	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.0010	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.0010	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.0010	ug/l	
754-91-6	PFOSA	ND	0.0040	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0080	0.0020	ug/l	
2991-50-6	EtFOSAA	ND	0.0080	0.0020	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.0080	0.0020	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.0080	0.0020	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	106%	50-150%
	13C5-PFPeA	100%	50-150%
	13C5-PFHxA	106%	50-150%
	13C4-PFHpA	102%	50-150%
	13C8-PFOA	103%	50-150%
	13C9-PFNA	101%	50-150%
	13C6-PFDA	102%	50-150%
	13C7-PFUnDA	100%	50-150%
	13C2-PFDoDA	99%	50-150%
	13C2-PFTeDA	99%	50-150%
	13C3-PFBS	100%	50-150%

Instrument Blank

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S3Q538-IBLK	3Q36586.D	1	04/14/21	MV	n/a	n/a	S3Q538

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.3 B-15

JD22888-1, JD22888-7A

CAS No.	ID Standard Recoveries		Limits
	13C3-PFHxS	103%	50-150%
	13C8-PFOS	100%	50-150%
	13C8-FOSA	105%	50-150%
	d3-MeFOSAA	96%	50-150%
	d5-EtFOSAA	99%	50-150%
	13C2-4:2FTS	96%	50-150%
	13C2-6:2FTS	96%	50-150%
	13C2-8:2FTS	92%	50-150%
	13C3-HFPO-DA	112%	50-150%

Instrument Blank

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S2Q963-IBLK	2Q66177.D	1	04/16/21	NAF	n/a	n/a	S2Q963

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.3 B-15

JD22888-3A, JD22888-4A, JD22888-5A, JD22888-6A

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	1.0	0.38	ug/kg	
2706-90-3	Perfluoropentanoic acid	ND	1.0	0.25	ug/kg	
307-24-4	Perfluorohexanoic acid	ND	1.0	0.25	ug/kg	
375-85-9	Perfluoroheptanoic acid	ND	1.0	0.25	ug/kg	
335-67-1	Perfluorooctanoic acid	ND	1.0	0.25	ug/kg	
375-95-1	Perfluorononanoic acid	ND	1.0	0.25	ug/kg	
335-76-2	Perfluorodecanoic acid	ND	1.0	0.25	ug/kg	
2058-94-8	Perfluoroundecanoic acid	ND	1.0	0.25	ug/kg	
307-55-1	Perfluorododecanoic acid	ND	1.0	0.25	ug/kg	
72629-94-8	Perfluorotridecanoic acid	ND	1.0	0.27	ug/kg	
376-06-7	Perfluorotetradecanoic acid	ND	1.0	0.25	ug/kg	
375-73-5	Perfluorobutanesulfonic acid	ND	1.0	0.25	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	ND	1.0	0.25	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	ND	1.0	0.25	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	ND	1.0	0.25	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	ND	1.0	0.25	ug/kg	
754-91-6	PFOSA	ND	1.0	0.25	ug/kg	
2355-31-9	MeFOSAA	ND	1.0	0.25	ug/kg	
2991-50-6	EtFOSAA	ND	1.0	0.25	ug/kg	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	1.0	0.25	ug/kg	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	1.0	0.25	ug/kg	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	108%	50-150%
	13C5-PFPeA	105%	50-150%
	13C5-PFHxA	104%	50-150%
	13C4-PFHpA	106%	50-150%
	13C8-PFOA	106%	50-150%
	13C9-PFNA	107%	50-150%
	13C6-PFDA	108%	50-150%
	13C7-PFUnDA	106%	50-150%
	13C2-PFDoDA	101%	50-150%
	13C2-PFTeDA	95%	50-150%
	13C3-PFBS	105%	50-150%

Instrument Blank

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S2Q963-IBLK	2Q66177.D	1	04/16/21	NAF	n/a	n/a	S2Q963

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.3 B-15

JD22888-3A, JD22888-4A, JD22888-5A, JD22888-6A

CAS No.	ID Standard Recoveries		Limits
	13C3-PFHxS	108%	50-150%
	13C8-PFOS	110%	50-150%
	13C8-FOSA	109%	50-150%
	d3-MeFOSAA	97%	50-150%
	d5-EtFOSAA	99%	50-150%
	13C2-4:2FTS	99%	50-150%
	13C2-6:2FTS	101%	50-150%
	13C2-8:2FTS	102%	50-150%

Instrument Blank

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q189-IBLK	4Q13443.D	1	04/18/21	NG	n/a	n/a	S4Q189

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.3 B-15

JD22888-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	1.0	0.38	ug/kg	
2706-90-3	Perfluoropentanoic acid	ND	1.0	0.25	ug/kg	
307-24-4	Perfluorohexanoic acid	ND	1.0	0.25	ug/kg	
375-85-9	Perfluoroheptanoic acid	ND	1.0	0.25	ug/kg	
335-67-1	Perfluorooctanoic acid	ND	1.0	0.25	ug/kg	
375-95-1	Perfluorononanoic acid	ND	1.0	0.25	ug/kg	
335-76-2	Perfluorodecanoic acid	ND	1.0	0.25	ug/kg	
2058-94-8	Perfluoroundecanoic acid	ND	1.0	0.25	ug/kg	
307-55-1	Perfluorododecanoic acid	ND	1.0	0.25	ug/kg	
72629-94-8	Perfluorotridecanoic acid	ND	1.0	0.27	ug/kg	
376-06-7	Perfluorotetradecanoic acid	ND	1.0	0.25	ug/kg	
375-73-5	Perfluorobutanesulfonic acid	ND	1.0	0.25	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	ND	1.0	0.25	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	ND	1.0	0.25	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	ND	1.0	0.25	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	ND	1.0	0.25	ug/kg	
754-91-6	PFOSA	ND	1.0	0.25	ug/kg	
2355-31-9	MeFOSAA	0.38	1.0	0.25	ug/kg	J
2991-50-6	EtFOSAA	0.40	1.0	0.25	ug/kg	J
27619-97-2	6:2 Fluorotelomer sulfonate	ND	1.0	0.25	ug/kg	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	1.0	0.25	ug/kg	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	108%	50-150%
	13C5-PFPeA	107%	50-150%
	13C5-PFHxA	107%	50-150%
	13C4-PFHpA	108%	50-150%
	13C8-PFOA	108%	50-150%
	13C9-PFNA	108%	50-150%
	13C6-PFDA	110%	50-150%
	13C7-PFUnDA	110%	50-150%
	13C2-PFDoDA	107%	50-150%
	13C2-PFTeDA	107%	50-150%
	13C3-PFBS	107%	50-150%

Instrument Blank

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q189-IBLK	4Q13443.D	1	04/18/21	NG	n/a	n/a	S4Q189

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.3 B-15

JD22888-2A

CAS No.	ID Standard Recoveries		Limits
	13C3-PFHxS	106%	50-150%
	13C8-PFOS	105%	50-150%
	13C8-FOSA	111%	50-150%
	d3-MeFOSAA	107%	50-150%
	d5-EtFOSAA	106%	50-150%
	13C2-4:2FTS	100%	50-150%
	13C2-6:2FTS	102%	50-150%
	13C2-8:2FTS	104%	50-150%

Blank Spike Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84900-BS	3Q36617.D	1	04/14/21	MV	04/13/21	OP84900	S3Q538

The QC reported here applies to the following samples: **Method:** EPA 537M BY ID

JD22888-1, JD22888-7A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.08	0.0834	104	70-130
2706-90-3	Perfluoropentanoic acid	0.08	0.0842	105	70-130
307-24-4	Perfluorohexanoic acid	0.08	0.0829	104	70-130
375-85-9	Perfluoroheptanoic acid	0.08	0.0833	104	70-130
335-67-1	Perfluorooctanoic acid	0.08	0.0833	104	70-130
375-95-1	Perfluorononanoic acid	0.08	0.0840	105	70-130
335-76-2	Perfluorodecanoic acid	0.08	0.0817	102	70-130
2058-94-8	Perfluoroundecanoic acid	0.08	0.0833	104	70-130
307-55-1	Perfluorododecanoic acid	0.08	0.0860	108	70-130
72629-94-8	Perfluorotridecanoic acid	0.08	0.0946	118	60-140
376-06-7	Perfluorotetradecanoic acid	0.08	0.0883	110	70-130
375-73-5	Perfluorobutanesulfonic acid	0.08	0.0838	105	70-130
355-46-4	Perfluorohexanesulfonic acid	0.08	0.0843	105	70-130
375-92-8	Perfluoroheptanesulfonic acid	0.08	0.0919	115	70-130
1763-23-1	Perfluorooctanesulfonic acid	0.08	0.0839	105	70-130
335-77-3	Perfluorodecanesulfonic acid	0.08	0.0785	98	60-130
754-91-6	PFOSA	0.08	0.0850	106	70-130
2355-31-9	MeFOSAA	0.08	0.0854	107	70-130
2991-50-6	EtFOSAA	0.08	0.0839	105	70-130
27619-97-2	6:2 Fluorotelomer sulfonate	0.08	0.0852	107	70-130
39108-34-4	8:2 Fluorotelomer sulfonate	0.08	0.0856	107	70-130

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	98%	35-135%
	13C5-PFPeA	96%	50-150%
	13C5-PFHxA	91%	50-150%
	13C4-PFHpA	89%	50-150%
	13C8-PFOA	87%	50-150%
	13C9-PFNA	84%	50-150%
	13C6-PFDA	80%	50-150%
	13C7-PFUnDA	74%	40-140%
	13C2-PFDoDA	64%	40-140%
	13C2-PFTeDA	57%	30-130%
	13C3-PFBS	96%	50-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84900-BS	3Q36617.D	1	04/14/21	MV	04/13/21	OP84900	S3Q538

The QC reported here applies to the following samples: **Method:** EPA 537M BY ID

JD22888-1, JD22888-7A

CAS No.	ID Standard Recoveries	BSP	Limits
	13C3-PFHxS	88%	50-150%
	13C8-PFOS	74%	50-150%
	13C8-FOSA	73%	30-130%
	d3-MeFOSAA	67%	40-140%
	d5-EtFOSAA	69%	40-140%
	13C2-6:2FTS	85%	50-150%
	13C2-8:2FTS	82%	50-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84941-BS	2Q66240.D	1	04/17/21	NAF	04/15/21	OP84941	S2Q963

The QC reported here applies to the following samples: **Method:** EPA 537M BY ID

JD22888-2A, JD22888-3A, JD22888-4A, JD22888-5A, JD22888-6A

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
375-22-4	Perfluorobutanoic acid	10	10.0	100	70-130
2706-90-3	Perfluoropentanoic acid	10	10.2	102	70-130
307-24-4	Perfluorohexanoic acid	10	10	100	70-130
375-85-9	Perfluoroheptanoic acid	10	10.1	101	70-130
335-67-1	Perfluorooctanoic acid	10	10.0	100	70-130
375-95-1	Perfluorononanoic acid	10	10	100	70-130
335-76-2	Perfluorodecanoic acid	10	9.9	99	70-130
2058-94-8	Perfluoroundecanoic acid	10	9.9	99	70-130
307-55-1	Perfluorododecanoic acid	10	9.9	99	70-130
72629-94-8	Perfluorotridecanoic acid	10	9.5	95	70-130
376-06-7	Perfluorotetradecanoic acid	10	9.9	99	70-130
375-73-5	Perfluorobutanesulfonic acid	10	10.0	100	70-130
355-46-4	Perfluorohexanesulfonic acid	10	10.0	100	70-130
375-92-8	Perfluoroheptanesulfonic acid	10	10.3	103	70-130
1763-23-1	Perfluorooctanesulfonic acid	10	10.3	103	70-130
335-77-3	Perfluorodecanesulfonic acid	10	10.2	102	65-135
754-91-6	PFOSA	10	10.4	104	70-130
2355-31-9	MeFOSAA	10	10.1	101	70-130
2991-50-6	EtFOSAA	10	10	100	70-130
27619-97-2	6:2 Fluorotelomer sulfonate	10	9.8	98	70-130
39108-34-4	8:2 Fluorotelomer sulfonate	10	9.7	97	70-130

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	96%	40-140%
	13C5-PFPeA	93%	50-150%
	13C5-PFHxA	92%	50-150%
	13C4-PFHpA	92%	50-150%
	13C8-PFOA	91%	50-150%
	13C9-PFNA	93%	50-150%
	13C6-PFDA	92%	50-150%
	13C7-PFUnDA	90%	40-140%
	13C2-PFDoDA	82%	40-140%
	13C2-PFTeDA	83%	30-130%
	13C3-PFBS	93%	50-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84941-BS	2Q66240.D	1	04/17/21	NAF	04/15/21	OP84941	S2Q963

The QC reported here applies to the following samples: **Method:** EPA 537M BY ID

JD22888-2A, JD22888-3A, JD22888-4A, JD22888-5A, JD22888-6A

CAS No.	ID Standard Recoveries	BSP	Limits
	13C3-PFHxS	91%	50-150%
	13C8-PFOS	92%	50-150%
	13C8-FOSA	93%	30-130%
	d3-MeFOSAA	86%	40-140%
	d5-EtFOSAA	81%	40-140%
	13C2-6:2FTS	92%	50-150%
	13C2-8:2FTS	93%	50-150%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84900-MS	3Q36620.D	1.1	04/14/21	MV	04/13/21	OP84900	S3Q538
JD22823-1A	3Q36619.D	1.1	04/14/21	MV	04/13/21	OP84900	S3Q538

The QC reported here applies to the following samples: **Method:** EPA 537M BY ID

JD22888-1, JD22888-7A

CAS No.	Compound	JD22823-1A ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
375-22-4	Perfluorobutanoic acid	0.0021	J	0.0714	0.0743	101	70-130
2706-90-3	Perfluoropentanoic acid	ND		0.0714	0.0745	104	70-130
307-24-4	Perfluorohexanoic acid	0.0012	J	0.0714	0.0730	101	70-130
375-85-9	Perfluoroheptanoic acid	0.0013	J	0.0714	0.0733	101	70-130
335-67-1	Perfluorooctanoic acid	0.0046		0.0714	0.0772	102	70-130
375-95-1	Perfluorononanoic acid	ND		0.0714	0.0730	102	70-130
335-76-2	Perfluorodecanoic acid	ND		0.0714	0.0710	99	70-130
2058-94-8	Perfluoroundecanoic acid	ND		0.0714	0.0725	102	70-130
307-55-1	Perfluorododecanoic acid	ND		0.0714	0.0728	102	70-130
72629-94-8	Perfluorotridecanoic acid	ND		0.0714	0.0734	103	60-140
376-06-7	Perfluorotetradecanoic acid	ND		0.0714	0.0724	101	70-130
375-73-5	Perfluorobutanesulfonic acid	ND		0.0714	0.0723	101	70-130
355-46-4	Perfluorohexanesulfonic acid	ND		0.0714	0.0723	101	70-130
375-92-8	Perfluoroheptanesulfonic acid	ND		0.0714	0.0824	115	70-130
1763-23-1	Perfluorooctanesulfonic acid	0.0020		0.0714	0.0747	102	70-130
335-77-3	Perfluorodecanesulfonic acid	ND		0.0714	0.0696	97	60-130
754-91-6	PFOSA	ND		0.0714	0.0737	103	70-130
2355-31-9	MeFOSAA	ND		0.0714	0.0748	105	70-130
2991-50-6	EtFOSAA	ND		0.0714	0.0707	99	70-130
27619-97-2	6:2 Fluorotelomer sulfonate	ND		0.0714	0.0734	103	70-130
39108-34-4	8:2 Fluorotelomer sulfonate	ND		0.0714	0.0745	104	70-130

CAS No.	ID Standard Recoveries	MS	JD22823-1A	Limits
	13C4-PFBA	100%		35-135%
	13C5-PFPeA	96%		50-150%
	13C5-PFHxA	94%		50-150%
	13C4-PFHpA	93%		50-150%
	13C8-PFOA	94%	96%	50-150%
	13C9-PFNA	90%	92%	50-150%
	13C6-PFDA	82%		50-150%
	13C7-PFUnDA	73%		40-140%
	13C2-PFDoDA	63%		40-140%
	13C2-PFTeDA	68%		30-130%
	13C3-PFBS	96%		50-150%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84900-MS	3Q36620.D	1.1	04/14/21	MV	04/13/21	OP84900	S3Q538
JD22823-1A	3Q36619.D	1.1	04/14/21	MV	04/13/21	OP84900	S3Q538

The QC reported here applies to the following samples: **Method:** EPA 537M BY ID

JD22888-1, JD22888-7A

CAS No.	ID Standard Recoveries	MS	JD22823-1A	Limits
	13C3-PFHxS	94%		50-150%
	13C8-PFOS	84%	82%	50-150%
	13C8-FOSA	73%		30-130%
	d3-MeFOSAA	63%		40-140%
	d5-EtFOSAA	62%		40-140%
	13C2-6:2FTS	95%		50-150%
	13C2-8:2FTS	84%		50-150%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84941-MS	2Q66246.D	1	04/17/21	NAF	04/15/21	OP84941	S2Q963
OP84941-MSD	2Q66247.D	1	04/17/21	NAF	04/15/21	OP84941	S2Q963
JD22888-2A	4Q13462.D	1	04/18/21	NG	04/15/21	OP84941	S4Q189

The QC reported here applies to the following samples: **Method:** EPA 537M BY ID

JD22888-2A, JD22888-3A, JD22888-4A, JD22888-5A, JD22888-6A

CAS No.	Compound	JD22888-2A ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
375-22-4	Perfluorobutanoic acid	ND		12.5	12.0	96	12.4	11.3	91	6	70-130/30
2706-90-3	Perfluoropentanoic acid	ND		12.5	12.5	100	12.4	11.8	95	6	70-130/30
307-24-4	Perfluorohexanoic acid	ND		12.5	12.1	97	12.4	11.3	91	7	70-130/30
375-85-9	Perfluoroheptanoic acid	ND		12.5	12.5	100	12.4	11.7	94	7	70-130/30
335-67-1	Perfluorooctanoic acid	ND		12.5	12.6	101	12.4	11.8	95	7	70-130/30
375-95-1	Perfluorononanoic acid	ND		12.5	12.6	101	12.4	12.0	97	5	70-130/30
335-76-2	Perfluorodecanoic acid	ND		12.5	12.0	96	12.4	11.3	91	6	70-130/30
2058-94-8	Perfluoroundecanoic acid	ND		12.5	12.5	100	12.4	11.7	94	7	70-130/30
307-55-1	Perfluorododecanoic acid	ND		12.5	12.2	98	12.4	11.6	94	5	70-130/30
72629-94-8	Perfluorotridecanoic acid	ND		12.5	11.1	89	12.4	10.5	85	6	70-130/30
376-06-7	Perfluorotetradecanoic acid	ND		12.5	12.2	98	12.4	11.6	94	5	70-130/30
375-73-5	Perfluorobutanesulfonic acid	ND		12.5	12.3	99	12.4	11.6	94	6	70-130/30
355-46-4	Perfluorohexanesulfonic acid	ND		12.5	12.1	97	12.4	11.6	94	4	70-130/30
375-92-8	Perfluoroheptanesulfonic acid	ND		12.5	12.2	98	12.4	11.8	95	3	70-130/30
1763-23-1	Perfluorooctanesulfonic acid	0.35	J	12.5	12.7	99	12.4	11.8	92	7	70-130/30
335-77-3	Perfluorodecanesulfonic acid	ND		12.5	12.2	98	12.4	11.8	95	3	65-135/30
754-91-6	PFOSA	ND		12.5	11.8	95	12.4	11.6	94	2	70-130/30
2355-31-9	MeFOSAA	ND		12.5	12.3	99	12.4	11.6	94	6	70-130/30
2991-50-6	EtFOSAA	ND		12.5	12.1	97	12.4	11.3	91	7	70-130/30
27619-97-2	6:2 Fluorotelomer sulfonate	ND		12.5	12.3	99	12.4	11.8	95	4	70-130/30
39108-34-4	8:2 Fluorotelomer sulfonate	ND		12.5	12.3	99	12.4	11.5	93	7	70-130/30

CAS No.	ID Standard Recoveries	MS	MSD	JD22888-2A	Limits
	13C4-PFBA	86%	94%	91%	40-140%
	13C5-PFPeA	83%	90%	92%	50-150%
	13C5-PFHxA	83%	91%	92%	50-150%
	13C4-PFHpA	83%	90%	92%	50-150%
	13C8-PFOA	82%	89%	93%	50-150%
	13C9-PFNA	82%	90%	93%	50-150%
	13C6-PFDA	85%	91%	95%	50-150%
	13C7-PFUnDA	81%	87%	96%	40-140%
	13C2-PFDoDA	77%	84%	93%	40-140%
	13C2-PFTeDA	77%	88%	85%	30-130%
	13C3-PFBS	83%	91%	91%	50-150%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84941-MS	2Q66246.D	1	04/17/21	NAF	04/15/21	OP84941	S2Q963
OP84941-MSD	2Q66247.D	1	04/17/21	NAF	04/15/21	OP84941	S2Q963
JD22888-2A	4Q13462.D	1	04/18/21	NG	04/15/21	OP84941	S4Q189

The QC reported here applies to the following samples: **Method:** EPA 537M BY ID

JD22888-2A, JD22888-3A, JD22888-4A, JD22888-5A, JD22888-6A

CAS No.	ID Standard Recoveries	MS	MSD	JD22888-2A	Limits
	13C3-PFHxS	84%	91%	90%	50-150%
	13C8-PFOS	83%	90%	96%	50-150%
	13C8-FOSA	84%	75%	94%	30-130%
	d3-MeFOSAA	72%	78%	85%	40-140%
	d5-EtFOSAA	71%	79%	89%	40-140%
	13C2-6:2FTS	82%	87%	87%	50-150%
	13C2-8:2FTS	84%	91%	90%	50-150%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84900-DUP	3Q36622.D	1.1	04/14/21	MV	04/13/21	OP84900	S3Q538
JD22823-2A	3Q36621.D	1.1	04/14/21	MV	04/13/21	OP84900	S3Q538

The QC reported here applies to the following samples: **Method:** EPA 537M BY ID

JD22888-1, JD22888-7A

CAS No.	Compound	JD22823-2A ug/l	Q	DUP ug/l	Q	RPD	Limits
375-22-4	Perfluorobutanoic acid	0.0044		0.0045		2	30
2706-90-3	Perfluoropentanoic acid	0.0083		0.0084		1	30
307-24-4	Perfluorohexanoic acid	0.0074		0.0076		3	30
375-85-9	Perfluoroheptanoic acid	0.0065		0.0066		2	30
335-67-1	Perfluorooctanoic acid	0.0201		0.0213		6	30
375-95-1	Perfluorononanoic acid	0.0013	J	0.0014	J	7	30
335-76-2	Perfluorodecanoic acid	ND		ND		nc	30
2058-94-8	Perfluoroundecanoic acid	ND		ND		nc	30
307-55-1	Perfluorododecanoic acid	ND		ND		nc	30
72629-94-8	Perfluorotridecanoic acid	ND		ND		nc	30
376-06-7	Perfluorotetradecanoic acid	ND		ND		nc	30
375-73-5	Perfluorobutanesulfonic acid	ND		ND		nc	30
355-46-4	Perfluorohexanesulfonic acid	0.0032		0.0034		6	30
375-92-8	Perfluoroheptanesulfonic acid	ND		ND		nc	30
1763-23-1	Perfluorooctanesulfonic acid	0.0040		0.0045		12	30
335-77-3	Perfluorodecanesulfonic acid	ND		ND		nc	30
754-91-6	PFOSA	ND		ND		nc	30
2355-31-9	MeFOSAA	ND		ND		nc	30
2991-50-6	EtFOSAA	ND		ND		nc	30
27619-97-2	6:2 Fluorotelomer sulfonate	ND		ND		nc	30
39108-34-4	8:2 Fluorotelomer sulfonate	ND		ND		nc	30

CAS No.	ID Standard Recoveries	DUP	JD22823-2A	Limits
	13C4-PFBA	101%		35-135%
	13C5-PFPeA	100%		50-150%
	13C5-PFHxA	96%		50-150%
	13C4-PFHpA	96%		50-150%
	13C8-PFOA	97%	95%	50-150%
	13C9-PFNA	91%	90%	50-150%
	13C6-PFDA	78%		50-150%
	13C7-PFUnDA	71%		40-140%
	13C2-PFDoDA	63%		40-140%
	13C2-PFTeDA	70%		30-130%
	13C3-PFBS	97%		50-150%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP84900-DUP	3Q36622.D	1.1	04/14/21	MV	04/13/21	OP84900	S3Q538
JD22823-2A	3Q36621.D	1.1	04/14/21	MV	04/13/21	OP84900	S3Q538

The QC reported here applies to the following samples: **Method:** EPA 537M BY ID

JD22888-1, JD22888-7A

CAS No.	ID Standard Recoveries	DUP	JD22823-2A	Limits
	13C3-PFHxS	94%		50-150%
	13C8-PFOS	76%	84%	50-150%
	13C8-FOSA	77%		30-130%
	d3-MeFOSAA	61%		40-140%
	d5-EtFOSAA	60%		40-140%
	13C2-6:2FTS	94%		50-150%
	13C2-8:2FTS	77%		50-150%

* = Outside of Control Limits.

Isotope Dilution Standard Recovery Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Method: EPA 537M BY ID **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6	S7	S8
JD22888-1	3Q36635.D	96	95	95	90	91	86	80	78
JD22888-7A	3Q36638.D	99	103	100	101	104	98	96	90
OP84900-BS	3Q36617.D	98	96	91	89	87	84	80	74
OP84900-DUP	3Q36622.D	101	100	96	96	97	91	78	71
OP84900-MB	3Q36618.D	110	104	103	100	95	89	85	80
OP84900-MS	3Q36620.D	100	96	94	93	94	90	82	73

Isotope Dilution Standards	Recovery Limits
S1 = 13C4-PFBA	35-135%
S2 = 13C5-PFPeA	50-150%
S3 = 13C5-PFHxA	50-150%
S4 = 13C4-PFHpA	50-150%
S5 = 13C8-PFOA	50-150%
S6 = 13C9-PFNA	50-150%
S7 = 13C6-PFDA	50-150%
S8 = 13C7-PFUnDA	40-140%

Isotope Dilution Standard Recovery Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Method: EPA 537M BY ID **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S9	S10	S11	S12	S13	S14	S15	S16
JD22888-1	3Q36635.D	68	72	95	89	77	76	71	69
JD22888-7A	3Q36638.D	68	60	102	101	94	84	81	74
OP84900-BS	3Q36617.D	64	57	96	88	74	73	67	69
OP84900-DUP	3Q36622.D	63	70	97	94	76	77	61	60
OP84900-MB	3Q36618.D	69	70	101	96	82	79	77	78
OP84900-MS	3Q36620.D	63	68	96	94	84	73	63	62

Isotope Dilution Standards	Recovery Limits
S9 = 13C2-PFDoDA	40-140%
S10 = 13C2-PFTeDA	30-130%
S11 = 13C3-PFBS	50-150%
S12 = 13C3-PFHxS	50-150%
S13 = 13C8-PFOS	50-150%
S14 = 13C8-FOSA	30-130%
S15 = d3-MeFOSAA	40-140%
S16 = d5-EtFOSAA	40-140%

Isotope Dilution Standard Recovery Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Method: EPA 537M BY ID **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S17	S18
JD22888-1	3Q36635.D	85	78
JD22888-7A	3Q36638.D	94	91
OP84900-BS	3Q36617.D	85	82
OP84900-DUP	3Q36622.D	94	77
OP84900-MB	3Q36618.D	81	80
OP84900-MS	3Q36620.D	95	84

Isotope Dilution Standards	Recovery Limits
S17 = 13C2-6:2FTS	50-150%
S18 = 13C2-8:2FTS	50-150%

Isotope Dilution Standard Recovery Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Method: EPA 537M BY ID **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6	S7	S8
JD22888-2A	4Q13462.D	91	92	92	92	93	93	95	96
JD22888-3A	2Q66248.D	104	101	101	100	99	100	103	97
JD22888-4A	2Q66249.D	126	123	121	120	118	118	121	115
JD22888-5A	2Q66252.D	88	86	86	86	86	87	92	85
JD22888-6A	2Q66253.D	90	88	87	88	88	89	91	87
OP84941-BS	2Q66240.D	96	93	92	92	91	93	92	90
OP84941-MB	2Q66241.D	96	92	92	92	91	92	92	90
OP84941-MS	2Q66246.D	86	83	83	83	82	82	85	81
OP84941-MSD	2Q66247.D	94	90	91	90	89	90	91	87

Isotope Dilution Standards	Recovery Limits
S1 = 13C4-PFBA	40-140%
S2 = 13C5-PFPeA	50-150%
S3 = 13C5-PFHxA	50-150%
S4 = 13C4-PFHpA	50-150%
S5 = 13C8-PFOA	50-150%
S6 = 13C9-PFNA	50-150%
S7 = 13C6-PFDA	50-150%
S8 = 13C7-PFUnDA	40-140%

Isotope Dilution Standard Recovery Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Method: EPA 537M BY ID **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S9	S10	S11	S12	S13	S14	S15	S16
JD22888-2A	4Q13462.D	93	85	91	90	96	94	85	89
JD22888-3A	2Q66248.D	92	93	101	103	99	101	85	87
JD22888-4A	2Q66249.D	101	116	122	122	117	84	104	108
JD22888-5A	2Q66252.D	78	80	86	86	84	87	76	77
JD22888-6A	2Q66253.D	80	85	86	89	90	88	78	81
OP84941-BS	2Q66240.D	82	83	93	91	92	93	86	81
OP84941-MB	2Q66241.D	81	81	91	93	92	95	85	85
OP84941-MS	2Q66246.D	77	77	83	84	83	84	72	71
OP84941-MSD	2Q66247.D	84	88	91	91	90	75	78	79

Isotope Dilution Standards	Recovery Limits
S9 = 13C2-PFDoDA	40-140%
S10 = 13C2-PFTeDA	30-130%
S11 = 13C3-PFBS	50-150%
S12 = 13C3-PFHxS	50-150%
S13 = 13C8-PFOS	50-150%
S14 = 13C8-FOSA	30-130%
S15 = d3-MeFOSAA	40-140%
S16 = d5-EtFOSAA	40-140%

Isotope Dilution Standard Recovery Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Method: EPA 537M BY ID **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S17	S18
JD22888-2A	4Q13462.D	87	90
JD22888-3A	2Q66248.D	95	98
JD22888-4A	2Q66249.D	114	121
JD22888-5A	2Q66252.D	82	88
JD22888-6A	2Q66253.D	83	85
OP84941-BS	2Q66240.D	92	93
OP84941-MB	2Q66241.D	89	88
OP84941-MS	2Q66246.D	82	84
OP84941-MSD	2Q66247.D	87	91

Isotope Dilution Standards	Recovery Limits
S17 = 13C2-6:2FTS	50-150%
S18 = 13C2-8:2FTS	50-150%

Initial Calibration Report

Method Path	D:\MassHunter\damethods
Method File	ID_040821_S2Q956.quantmethod.xml
Batch Name	D:\MassHunter\Data\ID_040821_S2Q956\QuantResults\s2q956.batch.bin
Last Calib Update	4/9/2021 7:43:04 AM

Level Name	Calibration Files	Acq. Date-Time	Level Last Update Time
1	D:\MassHunter\Data\ID_040821_S2Q956\2q65759.d	4/8/2021 1:33:51 PM	4/9/2021 7:43:04 AM
2	D:\MassHunter\Data\ID_040821_S2Q956\2q65760.d	4/8/2021 1:56:22 PM	4/9/2021 7:43:04 AM
3	D:\MassHunter\Data\ID_040821_S2Q956\2q65761.d	4/8/2021 2:12:56 PM	4/9/2021 7:43:04 AM
4	D:\MassHunter\Data\ID_040821_S2Q956\2q65762.d	4/8/2021 2:28:38 PM	4/9/2021 7:43:04 AM
5	D:\MassHunter\Data\ID_040821_S2Q956\2q65763.d	4/8/2021 2:45:11 PM	4/9/2021 7:43:04 AM
6	D:\MassHunter\Data\ID_040821_S2Q956\2q65764.d	4/8/2021 3:01:44 PM	4/9/2021 7:43:04 AM
7	D:\MassHunter\Data\ID_040821_S2Q956\2q65765.d	4/8/2021 3:18:18 PM	4/9/2021 7:43:04 AM
8	D:\MassHunter\Data\ID_040821_S2Q956\2q65766.d	4/8/2021 3:34:52 PM	4/9/2021 7:43:04 AM

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
S 13C4-PFBA	Linear	3258	3358	3396	3294	3419	3320	3405	3413	3358	1.807
S 13C5-PFPeA	Linear	2638	2773	2785	2705	2812	2732	2810	2818	2759	2.295
S 13C3-PFBS	Linear	325.1	341.0	342.4	327.3	343.3	335.5	343.5	344.7	337.9	2.289
S 13C2-4:2FTS	Linear	2639	2755	2776	2703	2847	2837	3172	3557	2911	10.510
S 13C5-PFHxA	Linear	4016	4208	4171	4074	4249	4148	4219	4249	4167	2.018
S 13C3-HFPO-DA	Linear	314.0	324.1	335.3	316.9	328.4	311.2	328.6	335.8	324.3	2.905
S 13C4-PFHpA	Linear	5963	6132	6194	5919	6172	6024	6179	6105	6086	1.725
S 13C3-PFHxS	Linear	364.5	384.0	374.7	368.9	382.0	372.6	377.0	379.6	375.4	1.765
S 13C2-6:2FTS	Linear	3803	3954	3908	3817	3987	4042	4350	4696	4069	7.501
S 13C8-PFOA	Linear	6844	7053	7017	6852	7122	6995	7054	6860	6975	1.545
S 13C8-FOSA	Linear	1924	1949	1958	1919	1987	1902	1918	1815	1921	2.639
S 13C8-PFOS	Linear	522.8	522.5	534.0	524.5	534.4	533.8	531.0	546.4	531.2	1.506
S 13C9-PFNA	Linear	6872	7131	7168	7032	7303	7043	7239	7114	7113	1.876
S d3-MeFOSAA	Linear	2222	2355	2377	2312	2429	2395	2411	2475	2372	3.278
S d5-EtFOSAA	Linear	1918	2091	2082	2003	2144	2056	2039	1930	2033	3.878
S 13C6-PFDA	Linear	9052	9255	9410	9163	9595	9232	9378	9020	9263	2.080
S 13C2-8:2FTS	Linear	3250	3311	3435	3337	3561	3520	3896	4230	3567	9.397
S 13C7-PFUnDA	Linear	12676	13127	13394	13119	13525	13218	13288	13092	13180	1.915
S 13C2-PFDoDA	Linear	15248	16057	16167	15797	16412	15966	16469	16567	16085	2.671
S 13C2-PFTeDA	Linear	11980	12910	12929	12466	13135	12932	13333	13529	12902	3.791
I M5-EtFOSAA					---------- ISTD ----------						
T EtFOSAA	Linear	0.9248	0.7838	0.8445	0.9051	0.9217	0.9100	0.9034	0.9085	0.8877	5.497
I M4-PFBA					---------- ISTD ----------						
T PFBA	Linear	0.3248	0.3456	0.3456	0.3446	0.3483	0.3422	0.3364	0.3375	0.3406	2.233
I M5-PFPeA					---------- ISTD ----------						
T PFPeA	Linear	1.6568	1.6543	1.6705	1.6461	1.6653	1.6464	1.6231	1.6367	1.6499	0.930
I M5-PFHxA					---------- ISTD ----------						

Initial Calibration Summary
Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT
Sample: S2Q956-ICC956
Lab FileID: 2Q65764.D
Page 1 of 5

Initial Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S2Q956-ICC956
Lab FileID: 2Q65764.D

Initial Calibration Report

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
T PFHxA	Linear	0.6806	0.6954	0.6939	0.6951	0.7051	0.7013	0.6990	0.6996	0.6963	1.054
I M4-PFHpA					ISTD						
T PFHpA	Linear	1.7346	1.6876	1.6800	1.7088	1.7493	1.6972	1.6681	1.6962	1.7027	1.607
I M8-PFOA					ISTD						
T ADONA	Linear	1.6393	1.7415	1.7595	1.7468	1.7865	1.7462	1.7298	1.8119	1.7452	2.893
T PFOA	Linear	1.1284	1.1906	1.2349	1.2188	1.2194	1.1914	1.1793	1.1924	1.1944	2.735
I M9-PFNA					ISTD						
T PFNA	Linear	1.0837	1.1664	1.1574	1.1363	1.1531	1.1558	1.1164	1.1393	1.1385	2.379
I M6-PFDA					ISTD						
T 9Cl-PF3ONS	Linear	0.1038	0.1105	0.1012	0.1117	0.1069	0.1097	0.1099	0.1159	0.1087	4.265
T PFDA	Linear	0.9038	1.0007	0.9799	0.9600	0.9763	0.9857	0.9391	0.9617	0.9634	3.157
I M7-PFUnDA					ISTD						
T PFDS	Linear	0.0335	0.0312	0.0389	0.0353	0.0350	0.0357	0.0351	0.0351	0.0350	6.139
T PFUnDA	Linear	0.8229	0.8335	0.8030	0.8131	0.8351	0.8181	0.8045	0.8191	0.8187	1.449
I M2-PFDoDA					ISTD						
T 11Cl-PF3OUdS	Linear	0.3074	0.3129	0.3233	0.3104	0.3212	0.3189	0.3186	0.3142	0.3159	1.743
T PFDoDA	Linear	0.9247	0.9484	0.9707	0.9581	0.9787	0.9765	0.9528	0.9621	0.9590	1.836
T PFTrDA	Linear	1.1015	1.1270	1.1357	1.1411	1.1662	1.1628	1.1463	1.1635	1.1430	1.926
I M2-PFTeDA					ISTD						
T PFTeDA	Linear	1.4688	1.4265	1.4470	1.4621	1.4923	1.4709	1.4379	1.4400	1.4557	1.485
I M8-FOSA					ISTD						
T FOSA	Linear	0.9081	1.0627	0.9998	1.0016	1.0189	1.0167	0.9709	0.9997	0.9973	4.453
I M3-PFBS					ISTD						
T PFBS	Linear	3.1257	3.2300	3.2201	3.1818	3.1907	3.1281	3.0801	3.1201	3.1596	1.695
T PFPeS	Linear	2.1803	2.4914	2.4624	2.3962	2.4579	2.3859	2.3585	2.3606	2.3866	4.067
I M3-PFHxS					ISTD						
T PFHxS	Linear	2.6395	2.7720	2.7843	2.9209	2.8236	2.7288	2.7345	2.7364	2.7675	2.959
T PFHpS	Linear	2.3208	2.6390	2.6774	2.5797	2.6062	2.5334	2.4859	2.4732	2.5394	4.468
I M8-PFOS					ISTD						
T PFOS	Linear	2.0171	2.1780	1.9758	1.9987	1.9763	1.9077	1.9370	1.9053	1.9870	4.387
T PFNS	Linear	1.6884	1.6354	1.4751	1.4694	1.5258	1.4713	1.4873	1.4415	1.5243	5.855
I M2-4:2FTS					ISTD						
T 4:2FTS	Avg RF	1.0808	1.1078	1.1040	1.1171	1.1051	1.0716	0.9710	0.8699	1.0534	8.321
I M2-6:2FTS					ISTD						
T 6:2FTS	Avg RF	1.0641	1.0974	1.1383	1.1165	1.1435	1.0561	0.9693	0.8654	1.0563	9.031

Generated at 7:43 AM on 4/9/2021

Initial Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S2Q956-ICC956
Lab FileID: 2Q65764.D

Initial Calibration Report

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
I M2-8:2FTS						ISTD					
T 8:2FTS	Avg RF	1.1193	1.1281	1.0825	1.0829	1.0997	1.0603	0.9569	0.8578	1.0484	8.918
I M3-MeFOSAA						ISTD					
T MeFOSAA	Linear	0.8185	0.9381	0.8723	0.8691	0.8862	0.8821	0.8863	0.8646	0.8772	3.754
I M3-HFPO-DA						ISTD					
T HFPO-DA	Linear	3.8192	3.7795	3.7524	3.8839	3.8851	3.9538	3.8341	3.6996	3.8260	2.138

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S2Q956-ICC956
Lab FileID: 2Q65764.D

Initial Calibration Report

Compounds with Curve fitting not using Avg Response Factor:

Compound	Curve Fit	Curve Fit Formula	Curve Fit R2
S 13C4-PFBA	Linear	y = 335?.872771 * x	0.000000
T PFBA	Linear	y = 0.337523 * x	0.999975
S 13C5-PFPeA	Linear	y = 2759.107029 * x	0.000000
T PFPeA	Linear	y = 1.634632 * x	0.999977
S 13C3-PFBS	Linear	y = 337.860065 * x	0.000000
T PFBS	Linear	y = 3.113369 * x	0.999951
S 13C2-4:2FTS	Linear	y = 2910.805463 * x	0.000000
S 13C5-PFHxA	Linear	y = 4166.825019 * x	0.000000
T PFHxA	Linear	y = 0.699549 * x	0.999999
T PFPeS	Linear	y = 2.361823 * x	0.999973
T HFPO-DA	Linear	y = 3.735034 * x	0.999501
S 13C3-HFPO-DA	Linear	y = 324.311023 * x	0.000000
S 13C4-PFHpA	Linear	y = 6086.038244 * x	0.000000
T PFHpA	Linear	y = 1.691302 * x	0.999921
S 13C3-PFHxS	Linear	y = 375.434152 * x	0.000000
T PFHxS	Linear	y = 2.736818 * x	0.999974
T ADONA	Linear	y = 1.793822 * x	0.999480
S 13C2-6:2FTS	Linear	y = 4069.455141 * x	0.000000
T PFHpS	Linear	y = 2.478804 * x	0.999929
S 13C8-PFOA	Linear	y = 6974.661325 * x	0.000000
T PFOA	Linear	y = 1.190159 * x	0.999962
S 13C8-FOSA	Linear	y = 1921.429811 * x	0.000000
T FOSA	Linear	y = 0.994829 * x	0.999773
S 13C8-PFOS	Linear	y = 531.184223 * x	0.000000
T PFOS	Linear	y = 1.912247 * x	0.999913
S 13C9-PFNA	Linear	y = 7112.641792 * x	0.000000
T PFNA	Linear	y = 1.135528 * x	0.999887
T 9Cl-PF3ONS	Linear	y = 0.114492 * x	0.999225
S d3-MeFOSAA	Linear	y = 2372.070564 * x	0.000000
T MeFOSAA	Linear	y = 0.869502 * x	0.999839
S d5-EtFOSAA	Linear	y = 2032.910764 * x	0.000000
T EtFOSAA	Linear	y = 0.907620 * x	0.999985
T PFNS	Linear	y = 1.451917 * x	0.999723
S 13C6-PFDA	Linear	y = 9262.956914 * x	0.000000
T PFDA	Linear	y = 0.958245 * x	0.999826
S 13C2-8:2FTS	Linear	y = 3567.324026 * x	0.000000
T PFDS	Linear	y = 0.035132 * x	0.999979
S 13C7-PFUnDA	Linear	y = 13179.967125 * x	0.000000
T PFUnDA	Linear	y = 0.816342 * x	0.999920
T 11Cl-PF3OUdS	Linear	y = 0.315253 * x	0.999944
S 13C2-PFDoDA	Linear	y = 16085.478343 * x	0.000000
T PFDoDA	Linear	y = 0.960869 * x	0.999961
T PFTrDA	Linear	y = 1.160166 * x	0.999947

Initial Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S2Q956-ICC956
Lab FileID: 2Q65764.D

Initial Calibration Report

S 13C2-PFTeDA	Linear	y = 12901.972951 * x	0.000000
T PFTeDA	Linear	y = 1.440987 * x	0.999963

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Page 5 of 5

Generated at 7:43 AM on 4/9/2021

Initial Calibration Verification

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S2Q956-ICV956
Lab FileID: 2Q65768.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\ID_040821_S2Q956\s2q956.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\ID_040821_S2Q956\2q65759.d
2:D:\MassHunter\Data\ID_040821_S2Q956\2q65760.d
3:D:\MassHunter\Data\ID_040821_S2Q956\2q65761.d
4:D:\MassHunter\Data\ID_040821_S2Q956\2q65762.d
5:D:\MassHunter\Data\ID_040821_S2Q956\2q65763.d
6:D:\MassHunter\Data\ID_040821_S2Q956\2q65764.d
7:D:\MassHunter\Data\ID_040821_S2Q956\2q65765.d
8:D:\MassHunter\Data\ID_040821_S2Q956\2q65766.d

Data File: 2q65768
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	20.990	4.9	104.9
13C2-6:2FTS	20.000	21.486	7.4	107.4
13C2-8:2FTS	20.000	21.642	8.2	108.2
13C2-PFDoDA	20.000	21.614	8.1	108.1
M5-EtFOSAA	---	--ISTD--		
13C2-PFTeDA	20.000	22.143	10.7	110.7
13C3-PFBS	20.000	21.387	6.9	106.9
13C3-PFHxS	20.000	21.885	9.4	109.4
13C4-PFBA	20.000	21.193	6.0	106.0
13C4-PFHpA	20.000	21.750	8.8	108.8
d5-EtFOSAA	20.000	21.824	9.1	109.1
13C5-PFHxA	20.000	21.643	8.2	108.2
13C5-PFPeA	20.000	21.412	7.1	107.1
13C6-PFDA	20.000	22.039	10.2	110.2
13C7-PFUnDA	20.000	21.984	9.9	109.9
13C8-FOSA	20.000	21.813	9.1	109.1
13C8-PFOA	20.000	21.812	9.1	109.1
13C8-PFOS	20.000	21.678	8.4	108.4
13C9-PFNA	20.000	21.905	9.5	109.5
4:2FTS	20.000	17.760	-11.2	88.8
6:2FTS	20.000	16.740	-16.3	83.7
8:2FTS	20.000	17.006	-15.0	85.0
d3-MeFOSAA	20.000	21.468	7.3	107.3
EtFOSAA	20.000	18.628	-6.9	93.1
FOSA	20.000	18.192	-9.0	91.0
MeFOSAA	20.000	19.063	-4.7	95.3
PFBA	20.000	17.980	-10.1	89.9
PFBS	20.000	15.557	-22.2	77.8
PFDA	20.000	16.397	-18.0	82.0
PFDoDA	20.000	18.349	-8.3	91.7
PFDS	20.000	16.772	-16.1	83.9
PFHpA	20.000	17.909	-10.5	89.5
PFHpS	20.000	17.058	-14.7	85.3
PFHxA	20.000	17.725	-11.4	88.6
PFHxS	20.000	15.839	-20.8	79.2
PFNA	20.000	16.778	-16.1	83.9
PFNS	20.000	17.358	-13.2	86.8

Initial Calibration Verification

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S2Q956-ICV956
Lab FileID: 2Q65768.D

PFOA	20.000	18.109	-9.5	90.5
PFOS	20.000	18.152	-9.2	90.8
PFPeA	20.000	17.651	-11.7	88.3
PFPeS	20.000	16.247	-18.8	81.2
PFTeDA	20.000	16.090	-19.5	80.5
PFTrDA	20.000	19.956	-0.2	99.8
PFUnDA	20.000	18.044	-9.8	90.2
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	16.845	-15.8	84.2
13C3-HFPO-DA	20.000	21.575	7.9	107.9
9Cl-PF3ONS	20.000	16.108	-19.5	80.5
ADONA	20.000	16.438	-17.8	82.2
HFPO-DA	20.000	17.868	-10.7	89.3
M3-HFPO-DA	---	--ISTD--		

CC Criteria: +/- 30%

10.7.2 10

Initial Calibration Verification

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S2Q956-ICV956
Lab FileID: 2Q65769.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\ID_040821_S2Q956\s2q956.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\ID_040821_S2Q956\2q65759.d
2:D:\MassHunter\Data\ID_040821_S2Q956\2q65760.d
3:D:\MassHunter\Data\ID_040821_S2Q956\2q65761.d
4:D:\MassHunter\Data\ID_040821_S2Q956\2q65762.d
5:D:\MassHunter\Data\ID_040821_S2Q956\2q65763.d
6:D:\MassHunter\Data\ID_040821_S2Q956\2q65764.d
7:D:\MassHunter\Data\ID_040821_S2Q956\2q65765.d
8:D:\MassHunter\Data\ID_040821_S2Q956\2q65766.d

Data File: 2q65769
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	18.918	-5.4	94.6
13C2-6:2FTS	20.000	19.407	-3.0	97.0
13C2-8:2FTS	20.000	19.398	-3.0	97.0
13C2-PFDoDA	20.000	20.211	1.1	101.1
M5-EtFOSAA	---	--ISTD--		
13C2-PFTeDA	20.000	20.173	0.9	100.9
13C3-PFBS	20.000	19.997	0.0	100.0
13C3-PFHxS	20.000	19.989	-0.1	99.9
13C4-PFBA	20.000	19.845	-0.8	99.2
13C4-PFHpA	20.000	20.370	1.9	101.9
d5-EtFOSAA	20.000	21.138	5.7	105.7
13C5-PFHxA	20.000	20.163	0.8	100.8
13C5-PFPeA	20.000	19.930	-0.3	99.7
13C6-PFDA	20.000	20.908	4.5	104.5
13C7-PFUnDA	20.000	20.492	2.5	102.5
13C8-FOSA	20.000	20.907	4.5	104.5
13C8-PFOA	20.000	20.436	2.2	102.2
13C8-PFOS	20.000	20.786	3.9	103.9
13C9-PFNA	20.000	20.812	4.1	104.1
4:2FTS	20.000	0.000	# -100.0	0.0
6:2FTS	20.000	0.000	# -100.0	0.0
8:2FTS	20.000	0.000	# -100.0	0.0
d3-MeFOSAA	20.000	20.831	4.2	104.2
EtFOSAA	20.000	0.000	# -100.0	0.0
FOSA	20.000	0.000	# -100.0	0.0
MeFOSAA	20.000	0.000	# -100.0	0.0
PFBA	20.000	0.000	# -100.0	0.0
PFBS	20.000	0.000	# -100.0	0.0
PFDA	20.000	0.000	# -100.0	0.0
PFDoDA	20.000	0.000	# -100.0	0.0
PFDS	20.000	0.000	# -100.0	0.0
PFHpA	20.000	0.000	# -100.0	0.0
PFHpS	20.000	0.000	# -100.0	0.0
PFHxA	20.000	0.000	# -100.0	0.0
PFHxS	20.000	0.000	# -100.0	0.0
PFNA	20.000	0.000	# -100.0	0.0
PFNS	20.000	0.000	# -100.0	0.0

Initial Calibration Verification

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S2Q956-ICV956
Lab FileID: 2Q65769.D

PFOA	20.000	17.060	-14.7	85.3
PFOS	20.000	0.000	# -100.0	0.0
PFPeA	20.000	0.000	# -100.0	0.0
PFPeS	20.000	0.000	# -100.0	0.0
PFTeDA	20.000	0.000	# -100.0	0.0
PFTrDA	20.000	0.000	# -100.0	0.0
PFUnDA	20.000	0.000	# -100.0	0.0
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	0.000	# -100.0	0.0
13C3-HFPO-DA	20.000	19.576	-2.1	97.9
9Cl-PF3ONS	20.000	0.000	# -100.0	0.0
ADONA	20.000	0.000	# -100.0	0.0
HFPO-DA	20.000	0.000	# -100.0	0.0
M3-HFPO-DA	---	--ISTD--		

CC Criteria: +/- 30%

10.7.3 10

Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S2Q963-CC956
Lab FileID: 2Q66238.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\ID_041621_S2Q963\s2q963.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\ID_040821_S2Q956\2q65759.d
2:D:\MassHunter\Data\ID_040821_S2Q956\2q65760.d
3:D:\MassHunter\Data\ID_040821_S2Q956\2q65761.d
4:D:\MassHunter\Data\ID_040821_S2Q956\2q65762.d
5:D:\MassHunter\Data\ID_040821_S2Q956\2q65763.d
6:D:\MassHunter\Data\ID_040821_S2Q956\2q65764.d
7:D:\MassHunter\Data\ID_040821_S2Q956\2q65765.d
8:D:\MassHunter\Data\ID_040821_S2Q956\2q65766.d

Data File: 2q66238
Type : QC
Level : 2

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	20.746	3.7	103.7
13C2-6:2FTS	20.000	20.901	4.5	104.5
13C2-8:2FTS	20.000	20.609	3.0	103.0
13C2-PFDoDA	20.000	20.324	1.6	101.6
M5-EtFOSAA	---	--ISTD--		
13C2-PFTeDA	20.000	19.136	-4.3	95.7
13C3-PFBS	20.000	21.789	8.9	108.9
13C3-PFHxS	20.000	21.736	8.7	108.7
13C4-PFBA	20.000	22.581	12.9	112.9
13C4-PFHpA	20.000	21.908	9.5	109.5
d5-EtFOSAA	20.000	19.220	-3.9	96.1
13C5-PFHxA	20.000	21.733	8.7	108.7
13C5-PFPeA	20.000	21.779	8.9	108.9
13C6-PFDA	20.000	21.494	7.5	107.5
13C7-PFUnDA	20.000	21.518	7.6	107.6
13C8-FOSA	20.000	21.851	9.3	109.3
13C8-PFOA	20.000	21.690	8.4	108.4
13C8-PFOS	20.000	21.675	8.4	108.4
13C9-PFNA	20.000	21.655	8.3	108.3
4:2FTS	1.000	1.056	5.6	105.6
6:2FTS	1.000	1.054	5.4	105.4
8:2FTS	1.000	1.051	5.1	105.1
d3-MeFOSAA	20.000	19.375	-3.1	96.9
EtFOSAA	1.000	1.110	11.0	111.0
FOSA	1.000	1.005	0.5	100.5
MeFOSAA	1.000	1.061	6.1	106.1
PFBA	1.000	0.986	-1.4	98.6
PFBS	1.000	1.025	2.5	102.5
PFDA	1.000	0.993	-0.7	99.3
PFDoDA	1.000	0.980	-2.0	98.0
PFDS	1.000	0.967	-3.3	96.7
PFHpA	1.000	1.015	1.5	101.5
PFHpS	1.000	1.086	8.6	108.6
PFHxA	1.000	0.987	-1.3	98.7
PFHxS	1.000	0.982	-1.8	98.2
PFNA	1.000	1.006	0.6	100.6
PFNS	1.000	1.018	1.8	101.8

Continuing Calibration Summary

Job Number: JD22888 **Sample:** S2Q963-CC956
Account: ALNJ SGS Dayton, NJ **Lab FileID:** 2Q66238.D
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

PFOA	1.000	1.024	2.4	102.4
PFOS	1.000	1.041	4.1	104.1
PFPeA	1.000	1.048	4.8	104.8
PFPeS	1.000	1.042	4.2	104.2
PFTeDA	1.000	0.994	-0.6	99.4
PFTrDA	1.000	0.886	-11.4	88.6
PFUnDA	1.000	0.992	-0.8	99.2
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	1.000	1.063	6.3	106.3
13C3-HFPO-DA	20.000	18.928	-5.4	94.6
9Cl-PF3ONS	1.000	1.004	0.4	100.4
ADONA	1.000	0.987	-1.3	98.7
HFPO-DA	1.000	1.276	27.6	127.6
M3-HFPO-DA	---	--ISTD--		

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S2Q963-CC956
Lab FileID: 2Q66250.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\ID_041621_S2Q963\s2q963.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\ID_040821_S2Q956\2q65759.d
2:D:\MassHunter\Data\ID_040821_S2Q956\2q65760.d
3:D:\MassHunter\Data\ID_040821_S2Q956\2q65761.d
4:D:\MassHunter\Data\ID_040821_S2Q956\2q65762.d
5:D:\MassHunter\Data\ID_040821_S2Q956\2q65763.d
6:D:\MassHunter\Data\ID_040821_S2Q956\2q65764.d
7:D:\MassHunter\Data\ID_040821_S2Q956\2q65765.d
8:D:\MassHunter\Data\ID_040821_S2Q956\2q65766.d

Data File: 2q66250
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	19.322	-3.4	96.6
13C2-6:2FTS	20.000	19.101	-4.5	95.5
13C2-8:2FTS	20.000	19.434	-2.8	97.2
13C2-PFDoDA	20.000	17.927	-10.4	89.6
M5-EtFOSAA	---	--ISTD--		
13C2-PFTeDA	20.000	17.287	-13.6	86.4
13C3-PFBS	20.000	18.967	-5.2	94.8
13C3-PFHxS	20.000	18.626	-6.9	93.1
13C4-PFBA	20.000	19.810	-1.0	99.0
13C4-PFHpA	20.000	19.137	-4.3	95.7
d5-EtFOSAA	20.000	16.928	-15.4	84.6
13C5-PFHxA	20.000	19.260	-3.7	96.3
13C5-PFPeA	20.000	19.245	-3.8	96.2
13C6-PFDA	20.000	18.938	-5.3	94.7
13C7-PFUnDA	20.000	18.769	-6.2	93.8
13C8-FOSA	20.000	19.376	-3.1	96.9
13C8-PFOA	20.000	18.706	-6.5	93.5
13C8-PFOS	20.000	19.344	-3.3	96.7
13C9-PFNA	20.000	19.107	-4.5	95.5
4:2FTS	20.000	21.233	6.2	106.2
6:2FTS	20.000	21.379	6.9	106.9
8:2FTS	20.000	20.812	4.1	104.1
d3-MeFOSAA	20.000	17.516	-12.4	87.6
EtFOSAA	20.000	21.321	6.6	106.6
FOSA	20.000	21.801	9.0	109.0
MeFOSAA	20.000	22.567	12.8	112.8
PFBA	20.000	20.739	3.7	103.7
PFBS	20.000	21.255	6.3	106.3
PFDA	20.000	21.660	8.3	108.3
PFDoDA	20.000	21.391	7.0	107.0
PFDS	20.000	20.904	4.5	104.5
PFHpA	20.000	21.479	7.4	107.4
PFHpS	20.000	22.238	11.2	111.2
PFHxA	20.000	20.677	3.4	103.4
PFHxS	20.000	21.542	7.7	107.7
PFNA	20.000	21.695	8.5	108.5
PFNS	20.000	21.864	9.3	109.3

Continuing Calibration Summary

Job Number: JD22888 **Sample:** S2Q963-CC956
Account: ALNJ SGS Dayton, NJ **Lab FileID:** 2Q66250.D
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

PFOA	20.000	21.540	7.7	107.7
PFOS	20.000	21.137	5.7	105.7
PFPeA	20.000	21.729	8.6	108.6
PFPeS	20.000	21.654	8.3	108.3
PFTeDA	20.000	21.568	7.8	107.8
PFTrDA	20.000	19.465	-2.7	97.3
PFUnDA	20.000	21.077	5.4	105.4
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	22.353	11.8	111.8
13C3-HFPO-DA	20.000	16.619	-16.9	83.1
9Cl-PF3ONS	20.000	21.117	5.6	105.6
ADONA	20.000	21.262	6.3	106.3
HFPO-DA	20.000	24.249	21.2	121.2
M3-HFPO-DA	---	--ISTD--		

CC Criteria: +/- 30%

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Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S2Q963-ECC956
Lab FileID: 2Q66258.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\ID_041621_S2Q963\s2q963.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\ID_040821_S2Q956\2q65759.d
2:D:\MassHunter\Data\ID_040821_S2Q956\2q65760.d
3:D:\MassHunter\Data\ID_040821_S2Q956\2q65761.d
4:D:\MassHunter\Data\ID_040821_S2Q956\2q65762.d
5:D:\MassHunter\Data\ID_040821_S2Q956\2q65763.d
6:D:\MassHunter\Data\ID_040821_S2Q956\2q65764.d
7:D:\MassHunter\Data\ID_040821_S2Q956\2q65765.d
8:D:\MassHunter\Data\ID_040821_S2Q956\2q65766.d

Data File: 2q66258
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	19.407	-3.0	97.0
13C2-6:2FTS	20.000	19.152	-4.2	95.8
13C2-8:2FTS	20.000	19.572	-2.1	97.9
13C2-PFDoDA	20.000	18.163	-9.2	90.8
M5-EtFOSAA	---	--ISTD--		
13C2-PFTeDA	20.000	17.377	-13.1	86.9
13C3-PFBS	20.000	19.199	-4.0	96.0
13C3-PFHxS	20.000	19.305	-3.5	96.5
13C4-PFBA	20.000	19.668	-1.7	98.3
13C4-PFHpA	20.000	19.214	-3.9	96.1
d5-EtFOSAA	20.000	17.038	-14.8	85.2
13C5-PFHxA	20.000	19.174	-4.1	95.9
13C5-PFPeA	20.000	19.329	-3.4	96.6
13C6-PFDA	20.000	19.266	-3.7	96.3
13C7-PFUnDA	20.000	18.984	-5.1	94.9
13C8-FOSA	20.000	19.599	-2.0	98.0
13C8-PFOA	20.000	19.050	-4.8	95.2
13C8-PFOS	20.000	19.710	-1.5	98.5
13C9-PFNA	20.000	19.077	-4.6	95.4
4:2FTS	20.000	21.362	6.8	106.8
6:2FTS	20.000	21.377	6.9	106.9
8:2FTS	20.000	21.150	5.8	105.8
d3-MeFOSAA	20.000	17.774	-11.1	88.9
EtFOSAA	20.000	21.926	9.6	109.6
FOSA	20.000	21.616	8.1	108.1
MeFOSAA	20.000	21.352	6.8	106.8
PFBA	20.000	20.792	4.0	104.0
PFBS	20.000	21.133	5.7	105.7
PFDA	20.000	21.322	6.6	106.6
PFDoDA	20.000	21.031	5.2	105.2
PFDS	20.000	21.320	6.6	106.6
PFHpA	20.000	21.392	7.0	107.0
PFHpS	20.000	21.639	8.2	108.2
PFHxA	20.000	20.898	4.5	104.5
PFHxS	20.000	21.095	5.5	105.5
PFNA	20.000	21.890	9.4	109.4
PFNS	20.000	21.560	7.8	107.8

Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S2Q963-ECC956
Lab FileID: 2Q66258.D

PFOA	20.000	21.404	7.0	107.0
PFOS	20.000	20.898	4.5	104.5
PFPeA	20.000	21.451	7.3	107.3
PFPeS	20.000	21.263	6.3	106.3
PFTeDA	20.000	21.339	6.7	106.7
PFTrDA	20.000	19.373	-3.1	96.9
PFUnDA	20.000	21.286	6.4	106.4
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	22.861	14.3	114.3
13C3-HFPO-DA	20.000	16.749	-16.3	83.7
9Cl-PF3ONS	20.000	20.611	3.1	103.1
ADONA	20.000	20.991	5.0	105.0
HFPO-DA	20.000	23.990	20.0	120.0
M3-HFPO-DA	---	--ISTD--		

CC Criteria: +/- 30%

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Initial Calibration Report

Method Path	D:\MassHunter\Methods
Method File	BR_LN_041321_S3Q537.quantmethod.xml
Batch Name	D:\MassHunter\Data\0413_ID_S3Q537\QuantResults\s3q537.batch.bin
Last Calib Update	4/14/2021 9:40:22 AM

Level Name	Calibration Files	Acq. Date-Time	Level Last Update Time
1	D:\MassHunter\Data\0413_ID_S3Q537\3q36533.d	4/13/2021 2:19:04 PM	4/14/2021 9:40:22 AM
2	D:\MassHunter\Data\0413_ID_S3Q537\3q36534.d	4/13/2021 2:35:37 PM	4/14/2021 9:40:22 AM
3	D:\MassHunter\Data\0413_ID_S3Q537\3q36535.d	4/13/2021 2:52:09 PM	4/14/2021 9:40:22 AM
4	D:\MassHunter\Data\0413_ID_S3Q537\3q36536.d	4/13/2021 3:08:41 PM	4/14/2021 9:40:22 AM
5	D:\MassHunter\Data\0413_ID_S3Q537\3q36537.d	4/13/2021 3:25:41 PM	4/14/2021 9:40:22 AM
6	D:\MassHunter\Data\0413_ID_S3Q537\3q36538.d	4/13/2021 3:42:13 PM	4/14/2021 9:40:22 AM
7	D:\MassHunter\Data\0413_ID_S3Q537\3q36539.d	4/13/2021 4:03:36 PM	4/14/2021 9:40:22 AM
8	D:\MassHunter\Data\0413_ID_S3Q537\3q36540.d	4/13/2021 4:20:09 PM	4/14/2021 9:40:22 AM

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
S 13C4-PFBA	Linear	7885	7915	7835	7381	7820	7741	8205	7913	7837	2.924
S 13C5-PFPeA	Linear	5710	5997	5831	5651	6047	5834	6069	5828	5871	2.614
S 13C3-PFBS	Linear	780.4	828.6	799.8	771.7	838.9	805.8	828.1	797.5	806.3	2.973
S 13C2-4:2FTS	Linear	5249	5547	5288	5193	5722	5583	6438	6768	5724	10.120
S 13C5-PFHxA	Linear	9029	9296	9050	8767	9612	9009	9472	8984	9152	3.081
S 13C3-HFPO-DA	Linear	1213	1280	1197	1170	1266	1181	1208	1188	1213	3.285
S 13C4-PFHpA	Linear	12647	13270	13024	12715	13782	12884	12744	12637	12963	3.045
S 13C3-PFHxS	Linear	1121	1160	1153	1100	1201	1134	1114	1127	1139	2.790
S 13C2-6:2FTS	Linear	8008	8399	8074	7941	8754	8165	8978	9321	8455	6.014
S 13C8-PFOA	Linear	14958	16180	15314	15023	16290	14996	15114	13912	15223	4.939
S 13C8-FOSA	Linear	5270	5941	5505	5361	5815	5168	5205	4214	5310	9.886
S 13C8-PFOS	Linear	1712	1941	1708	1712	1864	1698	1837	1657	1766	5.705
S 13C9-PFNA	Linear	16879	19073	17685	17179	18994	17211	18102	16133	17657	5.802
S d3-MeFOSAA	Linear	4526	5064	4787	4553	4946	4753	4948	4619	4774	4.178
S 13C6-PFDA	Linear	21626	25943	23052	22018	24010	22484	24141	20554	22978	7.371
S 13C2-8:2FTS	Linear	8523	9728	8631	8607	9340	8747	10428	10056	9258	8.013
S d5-EtFOSAA	Linear	4116	4603	4084	3847	4312	3916	4417	3616	4114	7.848
S 13C7-PFUnDA	Linear	30230	36068	31231	29819	32491	30364	33508	29188	31612	7.266
S 13C2-PFDoDA	Linear	37848	42569	39435	35805	40004	38029	37878	36977	38568	5.392
S 13C2-PFTeDA	Linear	27632	28089	28603	26720	27781	28201	28326	28309	27958	2.104
I M4-PFBA				---------- ISTD ----------							
T PFBA	Linear	0.3602	0.3819	0.3871	0.3867	0.3779	0.3811	0.3858	0.3826	0.3804	2.301
I M5-PFPeA				---------- ISTD ----------							
T PFPeA	Linear	1.8613	1.9045	1.9128	1.9276	1.8886	1.8825	1.9124	1.8870	1.8971	1.116
I M5-PFHxA				---------- ISTD ----------							
T PFHxA	Linear	0.6974	0.6954	0.7251	0.6986	0.6960	0.6961	0.7073	0.6984	0.7018	1.448
I M4-PFHpA				---------- ISTD ----------							

Initial Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q537-ICC537
Lab FileID: 3Q36538.D

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Raw Data:
3Q36532.D
3Q36533.D
3Q36534.D
3Q36535.D
3Q36536.D
3Q36537.D
3Q36538.D
3Q36539.D
3Q36540.D

SGS
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JD22888

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Initial Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q537-ICC537
Lab FileID: 3Q36538.D

Initial Calibration Report

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
T PFHpA	Linear	1.7384	1.8116	1.8372	1.8470	1.7633	1.7897	1.8169	1.8154	1.8024	2.039
I M8-PFOA						ISTD					
T br-PFOA	Linear	1.0639	1.1009	1.1137	1.0847	1.0677	1.0591	1.0967	1.0781	1.0831	1.795
T PFOA	Linear	1.0639	1.1009	1.1137	1.0847	1.0677	1.0591	1.0967	1.0781	1.0831	1.795
T LN-PFOA	Linear	1.0639	1.1009	1.1137	1.0847	1.0677	1.0591	1.0967	1.0781	1.0831	1.795
I M9-PFNA						ISTD					
T br-PFNA	Linear	1.1001	1.1620	1.1777	1.1999	1.1676	1.1586	1.1877	1.1998	1.1692	2.749
T PFNA	Linear	1.1001	1.1620	1.1777	1.1999	1.1676	1.1586	1.1877	1.1998	1.1692	2.749
T LN-PFNA	Linear	1.1001	1.1620	1.1777	1.1999	1.1676	1.1586	1.1877	1.1998	1.1692	2.749
I M6-PFDA						ISTD					
T 9Cl-PF3ONS	Linear	0.1078	0.1101	0.1059	0.1127	0.1138	0.1125	0.1168	0.1227	0.1128	4.701
T PFDA	Linear	0.9457	0.9895	1.0059	1.0041	1.0002	0.9908	1.0341	1.0374	1.0010	2.864
I M7-PFUnDA						ISTD					
T PFDS	Linear	0.0386	0.0412	0.0450	0.0431	0.0437	0.0434	0.0463	0.0441	0.0432	5.460
T PFUnDA	Linear	0.9108	0.9231	0.9735	0.9692	0.9536	0.9615	0.9946	0.9738	0.9575	2.910
I M2-PFDoDA						ISTD					
T 11Cl-PF3OUdS	Linear	0.2644	0.2917	0.2990	0.3148	0.2920	0.3038	0.3499	0.3060	0.3027	7.994
T PFDoDA	Linear	0.9369	0.9694	1.0022	1.0073	0.9830	0.9810	1.0020	0.9923	0.9843	2.338
I M2-PFTeDA						ISTD					
T PFTrDA	Linear	1.3816	1.4641	1.4462	1.4728	1.4498	1.4360	1.4346	1.4024	1.4360	2.127
T PFTeDA	Linear	1.5488	1.5014	1.5247	1.5019	1.4580	1.4660	1.4784	1.4701	1.4937	2.111
I M8-FOSA						ISTD					
T FOSA	Linear	0.8903	1.0386	1.0255	1.0576	1.0310	1.0102	1.0437	1.0198	1.0146	5.155
I M3-PFBS						ISTD					
T PFBS	Linear	2.9215	3.0202	3.2014	3.1378	2.9818	3.0138	3.1265	3.0451	3.0560	3.019
T PFPeS	Linear	2.2516	2.3884	2.4677	2.4836	2.3962	2.3322	2.3639	2.3722	2.3820	3.087
I M3-PFHxS						ISTD					
T br-PFHxS	Linear	2.2782	2.4754	2.6575	2.6000	2.5744	2.6357	2.7086	2.6406	2.5713	5.324
T PFHxS	Linear	2.1427	2.2602	2.3532	2.2949	2.2630	2.2718	2.3257	2.2771	2.2736	2.729
T LN-PFHxS	Linear	2.1105	2.2308	2.3117	2.2533	2.2206	2.2221	2.2734	2.2275	2.2312	2.599
T ADONA	Linear	24.19	25.96	26.28	26.99	25.53	26.09	26.31	26.20	25.94	3.148
I M8-PFOS						ISTD					
T PFHpS	Linear	1.3389	1.4456	1.5796	1.4824	1.4993	1.4864	1.4471	1.4784	1.4697	4.576
T br-PFOS	Linear	1.8612	2.7247	2.5502	2.7060	2.4654	2.5470	2.6362	2.6415	2.5165	11.071
T PFOS	Linear	1.6617	1.9684	1.9282	1.9047	1.8145	1.8575	1.8808	1.8647	1.8601	4.987
T LN-PFOS	Linear	1.5930	1.7295	1.7318	1.6516	1.6089	1.6397	1.6422	1.6194	1.6520	3.156
T PFNS	Linear	1.2967	1.5218	1.4802	1.4237	1.4077	1.4377	1.4695	1.4178	1.4319	4.648

Generated at 9:41 AM on 4/14/2021

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Initial Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q537-ICC537
Lab FileID: 3Q36538.D

Initial Calibration Report

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
I M2-4:2FTS						ISTD					
T 4:2FTS	Avg RF	1.0776	1.1484	1.1773	1.1478	1.1180	1.0811	1.0100	0.8868	1.0809	8.737
I M2-6:2FTS						ISTD					
T 6:2FTS	Avg RF	1.0743	1.1511	1.1670	1.1299	1.1147	1.0922	1.0073	0.8785	1.0769	8.761
I M2-8:2FTS						ISTD					
T 8:2FTS	Avg RF	1.0618	1.1146	1.0938	1.0991	1.0932	1.0468	0.9879	0.8635	1.0451	8.001
I M3-MeFOSAA						ISTD					
T MeFOSAA	Linear	0.9238	0.8827	0.9115	0.9260	0.9104	0.9042	0.9375	0.9063	0.9128	1.821
I M3-HFPO-DA						ISTD					
T HFPO-DA	Linear	3.4537	3.7165	3.6239	3.6522	3.6128	3.6490	3.6774	3.6099	3.6244	2.141
I M5-EtFOSAA						ISTD					
T EtFOSAA	Linear	0.8376	0.9011	0.9327	0.9453	0.9001	0.9207	0.9087	0.9406	0.9109	3.763

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q537-ICC537
Lab FileID: 3Q36538.D

Initial Calibration Report

Compounds with Curve fitting not using Avg Response Factor:

Compound	Curve Fit	Curve Fit Formula	Curve Fit R2
T PFBA	Linear	y = 0.383110 * x	0.999979
S 13C4-PFBA	Linear	y = 7837.008472 * x	0.000000
S 13C5-PFPeA	Linear	y = 5870.942144 * x	0.000000
T PFPeA	Linear	y = 1.891813 * x	0.999955
S 13C3-PFBS	Linear	y = 806.340062 * x	0.000000
T PFBS	Linear	y = 3.059533 * x	0.999813
S 13C2-4:2FTS	Linear	y = 5723.513796 * x	0.000000
S 13C5-PFHxA	Linear	y = 9152.250147 * x	0.000000
T PFHxA	Linear	y = 0.700017 * x	0.999959
T PFPeS	Linear	y = 2.369786 * x	0.999976
T HFPO-DA	Linear	y = 3.624169 * x	0.999916
S 13C3-HFPO-DA	Linear	y = 1212.932149 * x	0.000000
T br-PFHxS	Linear	y = 2.652868 * x	0.999832
S 13C4-PFHpA	Linear	y = 12962.996527 * x	0.000000
T PFHpA	Linear	y = 1.814561 * x	0.999980
T PFHxS	Linear	y = 2.286163 * x	0.999891
T LN-PFHxS	Linear	y = 2.236157 * x	0.999898
S 13C3-PFHxS	Linear	y = 1138.723174 * x	0.000000
T ADONA	Linear	y = 26.213731 * x	0.999984
T br-PFOA	Linear	y = 1.081059 * x	0.999909
S 13C2-6:2FTS	Linear	y = 8455.076557 * x	0.000000
S 13C8-PFOA	Linear	y = 15223.331624 * x	0.000000
T PFHpS	Linear	y = 1.472835 * x	0.999884
T PFOA	Linear	y = 1.081059 * x	0.999909
T LN-PFOA	Linear	y = 1.081059 * x	0.999909
T br-PFOS	Linear	y = 2.636346 * x	0.999889
T br-PFNA	Linear	y = 1.195928 * x	0.999922
S 13C8-FOSA	Linear	y = 5309.873432 * x	0.000000
T FOSA	Linear	y = 1.024232 * x	0.999859
S 13C8-PFOS	Linear	y = 1766.053158 * x	0.000000
T PFOS	Linear	y = 1.867282 * x	0.999970
T LN-PFOS	Linear	y = 1.624420 * x	0.999945
S 13C9-PFNA	Linear	y = 17656.743689 * x	0.000000
T PFNA	Linear	y = 1.195928 * x	0.999922
T LN-PFNA	Linear	y = 1.195928 * x	0.999922
T 9Cl-PF3ONS	Linear	y = 0.121196 * x	0.999133
S d3-MeFOSAA	Linear	y = 4774.432936 * x	0.000000
T MeFOSAA	Linear	y = 0.912275 * x	0.999722
T PFNS	Linear	y = 1.428288 * x	0.999687
S 13C6-PFDA	Linear	y = 22978.468272 * x	0.000000
T PFDA	Linear	y = 1.034966 * x	0.999893
S 13C2-8:2FTS	Linear	y = 9257.517592 * x	0.000000
S d5-EtFOSAA	Linear	y = 4113.856595 * x	0.000000

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Initial Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q537-ICC537
Lab FileID: 3Q36538.D

Initial Calibration Report

T EtFOSAA	Linear	y = 0.933568 * x	0.999704
T PFDS	Linear	y = 0.044458 * x	0.999399
S 13C7-PFUnDA	Linear	y = 31612.304192 * x	0.000000
T PFUnDA	Linear	y = 0.977229 * x	0.999874
T 11Cl-PF3OUdS	Linear	y = 0.314235 * x	0.995322
S 13C2-PFDoDA	Linear	y = 38568.183034 * x	0.000000
T PFDoDA	Linear	y = 0.993759 * x	0.999968
T PFTrDA	Linear	y = 1.410149 * x	0.999846
S 13C2-PFTeDA	Linear	y = 27957.620796 * x	0.000000
T PFTeDA	Linear	y = 1.471517 * x	0.999989

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Verification

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q537-ICV537
Lab FileID: 3Q36542.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0413_ID_S3Q537\s3q537.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0413_ID_S3Q537\3q36533.d
2:D:\MassHunter\Data\0413_ID_S3Q537\3q36534.d
3:D:\MassHunter\Data\0413_ID_S3Q537\3q36535.d
4:D:\MassHunter\Data\0413_ID_S3Q537\3q36536.d
5:D:\MassHunter\Data\0413_ID_S3Q537\3q36537.d
6:D:\MassHunter\Data\0413_ID_S3Q537\3q36538.d
7:D:\MassHunter\Data\0413_ID_S3Q537\3q36539.d
8:D:\MassHunter\Data\0413_ID_S3Q537\3q36540.d

Data File: 3q36542
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	18.590	-7.0	93.0
13C2-6:2FTS	20.000	19.227	-3.9	96.1
13C2-8:2FTS	20.000	19.184	-4.1	95.9
13C2-PFDoDA	20.000	20.355	1.8	101.8
13C2-PFTeDA	20.000	20.351	1.8	101.8
13C3-PFBS	20.000	20.519	2.6	102.6
13C3-PFHxS	20.000	19.977	-0.1	99.9
13C4-PFBA	20.000	20.816	4.1	104.1
13C4-PFHpA	20.000	20.063	0.3	100.3
13C5-PFHxA	20.000	19.856	-0.7	99.3
13C5-PFPeA	20.000	20.256	1.3	101.3
13C6-PFDA	20.000	20.881	4.4	104.4
13C7-PFUnDA	20.000	22.816	14.1	114.1
13C8-FOSA	20.000	21.494	7.5	107.5
13C8-PFOA	20.000	20.331	1.7	101.7
13C8-PFOS	20.000	20.161	0.8	100.8
13C9-PFNA	20.000	20.534	2.7	102.7
4:2FTS	20.000	0.000	# -100.0	0.0
6:2FTS	20.000	0.000	# -100.0	0.0
8:2FTS	20.000	0.000	# -100.0	0.0
d3-MeFOSAA	20.000	20.370	1.8	101.8
EtFOSAA	20.000	0.000	# -100.0	0.0
FOSA	20.000	0.000	# -100.0	0.0
MeFOSAA	20.000	0.000	# -100.0	0.0
PFBA	20.000	0.000	# -100.0	0.0
PFBS	20.000	0.000	# -100.0	0.0
PFDA	20.000	0.000	# -100.0	0.0
PFDoDA	20.000	0.000	# -100.0	0.0
PFDS	20.000	0.000	# -100.0	0.0
PFHpA	20.000	0.000	# -100.0	0.0
PFHpS	20.000	0.000	# -100.0	0.0
PFHxA	20.000	0.000	# -100.0	0.0
PFHxS	20.000	0.000	# -100.0	0.0
PFNA	20.000	0.000	# -100.0	0.0
PFNS	20.000	0.000	# -100.0	0.0
PFOA	20.000	17.959	-10.2	89.8
PFOS	20.000	0.000	# -100.0	0.0

Initial Calibration Verification

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q537-ICV537
Lab FileID: 3Q36542.D

PFPeA	20.000	0.000	# -100.0	0.0
PFPeS	20.000	0.000	# -100.0	0.0
PFTeDA	20.000	0.000	# -100.0	0.0
PFTrDA	20.000	0.000	# -100.0	0.0
PFUnDA	20.000	0.000	# -100.0	0.0
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	0.000	# -100.0	0.0
13C3-HFPO-DA	20.000	19.847	-0.8	99.2
9Cl-PF3ONS	20.000	0.000	# -100.0	0.0
ADONA	20.000	0.000	# -100.0	0.0
HFPO-DA	20.000	0.000	# -100.0	0.0
M3-HFPO-DA	---	--ISTD--		
br-PFOS	4.800	0.000	# -100.0	0.0
LN-PFOS	15.200	0.000	# -100.0	0.0
br-PFHxS	2.400	0.000	# -100.0	0.0
LN-PFHxS	17.600	0.000	# -100.0	0.0
br-PFOA	20.000	2.352	# -88.2	11.8
LN-PFOA	20.000	15.608	-22.0	78.0
br-PFNA	20.000	0.000	# -100.0	0.0
LN-PFNA	20.000	0.000	# -100.0	0.0
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	21.063	5.3	105.3

CC Criteria: +/- 30%

Initial Calibration Verification

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q537-ICV537
Lab FileID: 3Q36543.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0413_ID_S3Q537\s3q537.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0413_ID_S3Q537\3q36533.d
2:D:\MassHunter\Data\0413_ID_S3Q537\3q36534.d
3:D:\MassHunter\Data\0413_ID_S3Q537\3q36535.d
4:D:\MassHunter\Data\0413_ID_S3Q537\3q36536.d
5:D:\MassHunter\Data\0413_ID_S3Q537\3q36537.d
6:D:\MassHunter\Data\0413_ID_S3Q537\3q36538.d
7:D:\MassHunter\Data\0413_ID_S3Q537\3q36539.d
8:D:\MassHunter\Data\0413_ID_S3Q537\3q36540.d

Data File: 3q36543
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	20.864	4.3	104.3
13C2-6:2FTS	20.000	20.882	4.4	104.4
13C2-8:2FTS	20.000	20.139	0.7	100.7
13C2-PFDoDA	20.000	21.359	6.8	106.8
13C2-PFTeDA	20.000	21.771	8.9	108.9
13C3-PFBS	20.000	21.453	7.3	107.3
13C3-PFHxS	20.000	21.218	6.1	106.1
13C4-PFBA	20.000	21.324	6.6	106.6
13C4-PFHpA	20.000	21.472	7.4	107.4
13C5-PFHxA	20.000	21.054	5.3	105.3
13C5-PFPeA	20.000	21.148	5.7	105.7
13C6-PFDA	20.000	21.162	5.8	105.8
13C7-PFUnDA	20.000	20.858	4.3	104.3
13C8-FOSA	20.000	20.987	4.9	104.9
13C8-PFOA	20.000	21.285	6.4	106.4
13C8-PFOS	20.000	20.850	4.2	104.2
13C9-PFNA	20.000	21.069	5.3	105.3
4:2FTS	20.000	17.435	-12.8	87.2
6:2FTS	20.000	16.278	-18.6	81.4
8:2FTS	20.000	16.978	-15.1	84.9
d3-MeFOSAA	20.000	21.394	7.0	107.0
EtFOSAA	20.000	17.655	-11.7	88.3
FOSA	20.000	17.638	-11.8	88.2
MeFOSAA	20.000	17.746	-11.3	88.7
PFBA	20.000	17.137	-14.3	85.7
PFBS	20.000	15.027	-24.9	75.1
PFDA	20.000	15.488	-22.6	77.4
PFDoDA	20.000	17.564	-12.2	87.8
PFDS	20.000	16.529	-17.4	82.6
PFHpA	20.000	17.383	-13.1	86.9
PFHpS	20.000	16.850	-15.8	84.2
PFHxA	20.000	17.611	-11.9	88.1
PFHxS	20.000	16.032	-19.8	80.2
PFNA	20.000	15.928	-20.4	79.6
PFNS	20.000	16.785	-16.1	83.9
PFOA	20.000	17.620	-11.9	88.1
PFOS	20.000	17.165	-14.2	85.8

Initial Calibration Verification

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q537-ICV537
Lab FileID: 3Q36543.D

PFPeA	20.000	17.282	-13.6	86.4
PFPeS	20.000	15.609	-22.0	78.0
PFTeDA	20.000	15.582	-22.1	77.9
PFTrDA	20.000	19.970	-0.2	99.8
PFUnDA	20.000	17.585	-12.1	87.9
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	15.659	-21.7	78.3
13C3-HFPO-DA	20.000	20.923	4.6	104.6
9Cl-PF3ONS	20.000	15.432	-22.8	77.2
ADONA	20.000	16.824	-15.9	84.1
HFPO-DA	20.000	17.386	-13.1	86.9
M3-HFPO-DA	---	--ISTD--		
br-PFOS	4.800	3.233	# -32.6	67.4
LN-PFOS	15.200	14.484	-4.7	95.3
br-PFHxS	2.400	2.184	-9.0	91.0
LN-PFHxS	17.600	13.799	-21.6	78.4
br-PFOA	20.000	0.000	# -100.0	0.0
LN-PFOA	20.000	17.620	-11.9	88.1
br-PFNA	20.000	0.000	# -100.0	0.0
LN-PFNA	20.000	15.928	-20.4	79.6
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	20.636	3.2	103.2

CC Criteria: +/- 30%

10.7.9 10

Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q538-CC537
Lab FileID: 3Q36611.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0414_ID_S3Q538\s3q538.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0413_ID_S3Q537\3q36533.d
2:D:\MassHunter\Data\0413_ID_S3Q537\3q36534.d
3:D:\MassHunter\Data\0413_ID_S3Q537\3q36535.d
4:D:\MassHunter\Data\0413_ID_S3Q537\3q36536.d
5:D:\MassHunter\Data\0413_ID_S3Q537\3q36537.d
6:D:\MassHunter\Data\0413_ID_S3Q537\3q36538.d
7:D:\MassHunter\Data\0413_ID_S3Q537\3q36539.d
8:D:\MassHunter\Data\0413_ID_S3Q537\3q36540.d

Data File: 3q36611
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	20.268	1.3	101.3
13C2-6:2FTS	20.000	20.449	2.2	102.2
13C2-8:2FTS	20.000	19.472	-2.6	97.4
13C2-PFDoDA	20.000	20.242	1.2	101.2
13C2-PFTeDA	20.000	19.994	0.0	100.0
13C3-PFBS	20.000	21.108	5.5	105.5
13C3-PFHxS	20.000	20.997	5.0	105.0
13C4-PFBA	20.000	20.837	4.2	104.2
13C4-PFHpA	20.000	20.750	3.8	103.8
13C5-PFHxA	20.000	20.878	4.4	104.4
13C5-PFPeA	20.000	21.020	5.1	105.1
13C6-PFDA	20.000	20.240	1.2	101.2
13C7-PFUnDA	20.000	19.924	-0.4	99.6
13C8-FOSA	20.000	20.712	3.6	103.6
13C8-PFOA	20.000	20.575	2.9	102.9
13C8-PFOS	20.000	20.122	0.6	100.6
13C9-PFNA	20.000	20.272	1.4	101.4
4:2FTS	20.000	20.181	0.9	100.9
6:2FTS	20.000	20.071	0.4	100.4
8:2FTS	20.000	20.393	2.0	102.0
d3-MeFOSAA	20.000	19.904	-0.5	99.5
EtFOSAA	20.000	19.909	-0.5	99.5
FOSA	20.000	20.075	0.4	100.4
MeFOSAA	20.000	20.404	2.0	102.0
PFBA	20.000	19.718	-1.4	98.6
PFBS	20.000	19.659	-1.7	98.3
PFDA	20.000	19.098	-4.5	95.5
PFDoDA	20.000	19.860	-0.7	99.3
PFDS	20.000	20.002	0.0	100.0
PFHpA	20.000	19.770	-1.2	98.8
PFHpS	20.000	20.666	3.3	103.3
PFHxA	20.000	19.584	-2.1	97.9
PFHxS	20.000	19.614	-1.9	98.1
PFNA	20.000	19.479	-2.6	97.4
PFNS	20.000	20.098	0.5	100.5
PFOA	20.000	19.780	-1.1	98.9
PFOS	20.000	19.421	-2.9	97.1

Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q538-CC537
Lab FileID: 3Q36611.D

PFPeA	20.000	19.872	-0.6	99.4
PFPeS	20.000	19.610	-2.0	98.0
PFTeDA	20.000	19.703	-1.5	98.5
PFTrDA	20.000	20.623	3.1	103.1
PFUnDA	20.000	19.317	-3.4	96.6
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	19.641	-1.8	98.2
13C3-HFPO-DA	20.000	19.899	-0.5	99.5
9Cl-PF3ONS	20.000	18.545	-7.3	92.7
ADONA	20.000	19.702	-1.5	98.5
HFPO-DA	20.000	19.987	-0.1	99.9
M3-HFPO-DA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	19.529	-2.4	97.6

CC Criteria: +/- 30%

10.7.10 10

Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q538-CC537
Lab FileID: 3Q36613.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0414_ID_S3Q538\s3q538.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0413_ID_S3Q537\3q36533.d
2:D:\MassHunter\Data\0413_ID_S3Q537\3q36534.d
3:D:\MassHunter\Data\0413_ID_S3Q537\3q36535.d
4:D:\MassHunter\Data\0413_ID_S3Q537\3q36536.d
5:D:\MassHunter\Data\0413_ID_S3Q537\3q36537.d
6:D:\MassHunter\Data\0413_ID_S3Q537\3q36538.d
7:D:\MassHunter\Data\0413_ID_S3Q537\3q36539.d
8:D:\MassHunter\Data\0413_ID_S3Q537\3q36540.d

Data File: 3q36613
Type : QC
Level : 2

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	19.699	-1.5	98.5
13C2-6:2FTS	20.000	20.083	0.4	100.4
13C2-8:2FTS	20.000	19.328	-3.4	96.6
13C2-PFDoDA	20.000	20.723	3.6	103.6
13C2-PFTeDA	20.000	20.254	1.3	101.3
13C3-PFBS	20.000	21.500	7.5	107.5
13C3-PFHxS	20.000	21.321	6.6	106.6
13C4-PFBA	20.000	21.196	6.0	106.0
13C4-PFHpA	20.000	21.323	6.6	106.6
13C5-PFHxA	20.000	21.081	5.4	105.4
13C5-PFPeA	20.000	21.327	6.6	106.6
13C6-PFDA	20.000	21.196	6.0	106.0
13C7-PFUnDA	20.000	20.870	4.4	104.4
13C8-FOSA	20.000	22.504	12.5	112.5
13C8-PFOA	20.000	21.458	7.3	107.3
13C8-PFOS	20.000	21.033	5.2	105.2
13C9-PFNA	20.000	20.806	4.0	104.0
4:2FTS	1.000	1.035	3.5	103.5
6:2FTS	1.000	1.037	3.7	103.7
8:2FTS	1.000	1.071	7.1	107.1
d3-MeFOSAA	20.000	20.958	4.8	104.8
EtFOSAA	1.000	1.018	1.8	101.8
FOSA	1.000	0.956	-4.4	95.6
MeFOSAA	1.000	1.020	2.0	102.0
PFBA	1.000	0.990	-1.0	99.0
PFBS	1.000	1.000	0.0	100.0
PFDA	1.000	0.932	-6.8	93.2
PFDoDA	1.000	0.981	-1.9	98.1
PFDS	1.000	1.001	0.1	100.1
PFHpA	1.000	0.976	-2.4	97.6
PFHpS	1.000	1.047	4.7	104.7
PFHxA	1.000	0.991	-0.9	99.1
PFHxS	1.000	0.945	-5.5	94.5
PFNA	1.000	0.981	-1.9	98.1
PFNS	1.000	0.971	-2.9	97.1
PFOA	1.000	0.985	-1.5	98.5
PFOS	1.000	0.967	-3.3	96.7

Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q538-CC537
Lab FileID: 3Q36613.D

PFPeA	1.000	1.004	0.4	100.4
PFPeS	1.000	1.022	2.2	102.2
PFTeDA	1.000	1.010	1.0	101.0
PFTrDA	1.000	1.039	3.9	103.9
PFUnDA	1.000	0.970	-3.0	97.0
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	1.000	0.952	-4.8	95.2
13C3-HFPO-DA	20.000	20.461	2.3	102.3
9Cl-PF3ONS	1.000	0.846	-15.4	84.6
ADONA	1.000	0.961	-3.9	96.1
HFPO-DA	1.000	0.964	-3.6	96.4
M3-HFPO-DA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	20.485	2.4	102.4

CC Criteria: +/- 30%

10.7.11
10

Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q538-CC537
Lab FileID: 3Q36624.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0414_ID_S3Q538\s3q538.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0413_ID_S3Q537\3q36533.d
2:D:\MassHunter\Data\0413_ID_S3Q537\3q36534.d
3:D:\MassHunter\Data\0413_ID_S3Q537\3q36535.d
4:D:\MassHunter\Data\0413_ID_S3Q537\3q36536.d
5:D:\MassHunter\Data\0413_ID_S3Q537\3q36537.d
6:D:\MassHunter\Data\0413_ID_S3Q537\3q36538.d
7:D:\MassHunter\Data\0413_ID_S3Q537\3q36539.d
8:D:\MassHunter\Data\0413_ID_S3Q537\3q36540.d

Data File: 3q36624
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	20.285	1.4	101.4
13C2-6:2FTS	20.000	20.445	2.2	102.2
13C2-8:2FTS	20.000	19.834	-0.8	99.2
13C2-PFDoDA	20.000	19.800	-1.0	99.0
13C2-PFTeDA	20.000	19.707	-1.5	98.5
13C3-PFBS	20.000	20.866	4.3	104.3
13C3-PFHxS	20.000	20.771	3.9	103.9
13C4-PFBA	20.000	21.405	7.0	107.0
13C4-PFHpA	20.000	20.546	2.7	102.7
13C5-PFHxA	20.000	20.732	3.7	103.7
13C5-PFPeA	20.000	21.203	6.0	106.0
13C6-PFDA	20.000	20.254	1.3	101.3
13C7-PFUnDA	20.000	20.110	0.5	100.5
13C8-FOSA	20.000	20.906	4.5	104.5
13C8-PFOA	20.000	20.436	2.2	102.2
13C8-PFOS	20.000	20.175	0.9	100.9
13C9-PFNA	20.000	19.911	-0.4	99.6
4:2FTS	20.000	20.061	0.3	100.3
6:2FTS	20.000	19.974	-0.1	99.9
8:2FTS	20.000	20.182	0.9	100.9
d3-MeFOSAA	20.000	19.865	-0.7	99.3
EtFOSAA	20.000	19.836	-0.8	99.2
FOSA	20.000	19.459	-2.7	97.3
MeFOSAA	20.000	20.239	1.2	101.2
PFBA	20.000	19.547	-2.3	97.7
PFBS	20.000	19.897	-0.5	99.5
PFDA	20.000	19.124	-4.4	95.6
PFDoDA	20.000	19.832	-0.8	99.2
PFDS	20.000	19.642	-1.8	98.2
PFHpA	20.000	19.840	-0.8	99.2
PFHpS	20.000	20.623	3.1	103.1
PFHxA	20.000	19.429	-2.9	97.1
PFHxS	20.000	20.021	0.1	100.1
PFNA	20.000	19.784	-1.1	98.9
PFNS	20.000	20.015	0.1	100.1
PFOA	20.000	19.615	-1.9	98.1
PFOS	20.000	19.425	-2.9	97.1

Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q538-CC537
Lab FileID: 3Q36624.D

PFPeA	20.000	19.917	-0.4	99.6
PFPeS	20.000	19.658	-1.7	98.3
PFTeDA	20.000	19.703	-1.5	98.5
PFTrDA	20.000	20.694	3.5	103.5
PFUnDA	20.000	19.307	-3.5	96.5
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	19.995	0.0	100.0
13C3-HFPO-DA	20.000	20.457	2.3	102.3
9Cl-PF3ONS	20.000	18.627	-6.9	93.1
ADONA	20.000	19.791	-1.0	99.0
HFPO-DA	20.000	19.529	-2.4	97.6
M3-HFPO-DA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	19.852	-0.7	99.3

CC Criteria: +/- 30%

10.7.12
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Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q538-CC537
Lab FileID: 3Q36636.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0414_ID_S3Q538\s3q538.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0413_ID_S3Q537\3q36533.d
2:D:\MassHunter\Data\0413_ID_S3Q537\3q36534.d
3:D:\MassHunter\Data\0413_ID_S3Q537\3q36535.d
4:D:\MassHunter\Data\0413_ID_S3Q537\3q36536.d
5:D:\MassHunter\Data\0413_ID_S3Q537\3q36537.d
6:D:\MassHunter\Data\0413_ID_S3Q537\3q36538.d
7:D:\MassHunter\Data\0413_ID_S3Q537\3q36539.d
8:D:\MassHunter\Data\0413_ID_S3Q537\3q36540.d

Data File: 3q36636
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	21.147	5.7	105.7
13C2-6:2FTS	20.000	21.248	6.2	106.2
13C2-8:2FTS	20.000	21.480	7.4	107.4
13C2-PFDoDA	20.000	19.389	-3.1	96.9
13C2-PFTeDA	20.000	18.914	-5.4	94.6
13C3-PFBS	20.000	21.492	7.5	107.5
13C3-PFHxS	20.000	21.783	8.9	108.9
13C4-PFBA	20.000	21.097	5.5	105.5
13C4-PFHpA	20.000	21.403	7.0	107.0
13C5-PFHxA	20.000	21.435	7.2	107.2
13C5-PFPeA	20.000	21.495	7.5	107.5
13C6-PFDA	20.000	21.533	7.7	107.7
13C7-PFUnDA	20.000	20.406	2.0	102.0
13C8-FOSA	20.000	23.290	16.5	116.5
13C8-PFOA	20.000	21.399	7.0	107.0
13C8-PFOS	20.000	22.411	12.1	112.1
13C9-PFNA	20.000	21.868	9.3	109.3
4:2FTS	20.000	20.443	2.2	102.2
6:2FTS	20.000	20.103	0.5	100.5
8:2FTS	20.000	20.222	1.1	101.1
d3-MeFOSAA	20.000	21.116	5.6	105.6
EtFOSAA	20.000	20.044	0.2	100.2
FOSA	20.000	19.878	-0.6	99.4
MeFOSAA	20.000	20.541	2.7	102.7
PFBA	20.000	19.581	-2.1	97.9
PFBS	20.000	19.930	-0.4	99.6
PFDA	20.000	18.848	-5.8	94.2
PFDoDA	20.000	19.709	-1.5	98.5
PFDS	20.000	20.042	0.2	100.2
PFHpA	20.000	19.720	-1.4	98.6
PFHpS	20.000	19.651	-1.7	98.3
PFHxA	20.000	19.676	-1.6	98.4
PFHxS	20.000	19.657	-1.7	98.3
PFNA	20.000	19.719	-1.4	98.6
PFNS	20.000	19.002	-5.0	95.0
PFOA	20.000	19.829	-0.9	99.1
PFOS	20.000	19.476	-2.6	97.4

Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q538-CC537
Lab FileID: 3Q36636.D

PFPeA	20.000	20.023	0.1	100.1
PFPeS	20.000	20.302	1.5	101.5
PFTeDA	20.000	19.638	-1.8	98.2
PFTrDA	20.000	21.059	5.3	105.3
PFUnDA	20.000	19.653	-1.7	98.3
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	21.019	5.1	105.1
13C3-HFPO-DA	20.000	20.802	4.0	104.0
9Cl-PF3ONS	20.000	19.051	-4.7	95.3
ADONA	20.000	19.711	-1.4	98.6
HFPO-DA	20.000	19.978	-0.1	99.9
M3-HFPO-DA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	21.454	7.3	107.3

CC Criteria: +/- 30%

10.7.13 10

Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q538-ECC537
Lab FileID: 3Q36639.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0414_ID_S3Q538\s3q538.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0413_ID_S3Q537\3q36533.d
2:D:\MassHunter\Data\0413_ID_S3Q537\3q36534.d
3:D:\MassHunter\Data\0413_ID_S3Q537\3q36535.d
4:D:\MassHunter\Data\0413_ID_S3Q537\3q36536.d
5:D:\MassHunter\Data\0413_ID_S3Q537\3q36537.d
6:D:\MassHunter\Data\0413_ID_S3Q537\3q36538.d
7:D:\MassHunter\Data\0413_ID_S3Q537\3q36539.d
8:D:\MassHunter\Data\0413_ID_S3Q537\3q36540.d

Data File: 3q36639
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	20.496	2.5	102.5
13C2-6:2FTS	20.000	20.124	0.6	100.6
13C2-8:2FTS	20.000	19.674	-1.6	98.4
13C2-PFDoDA	20.000	19.873	-0.6	99.4
13C2-PFTeDA	20.000	19.708	-1.5	98.5
13C3-PFBS	20.000	20.883	4.4	104.4
13C3-PFHxS	20.000	20.984	4.9	104.9
13C4-PFBA	20.000	20.913	4.6	104.6
13C4-PFHpA	20.000	20.687	3.4	103.4
13C5-PFHxA	20.000	20.695	3.5	103.5
13C5-PFPeA	20.000	20.854	4.3	104.3
13C6-PFDA	20.000	20.165	0.8	100.8
13C7-PFUnDA	20.000	20.008	0.0	100.0
13C8-FOSA	20.000	21.264	6.3	106.3
13C8-PFOA	20.000	20.378	1.9	101.9
13C8-PFOS	20.000	20.522	2.6	102.6
13C9-PFNA	20.000	20.168	0.8	100.8
4:2FTS	20.000	20.086	0.4	100.4
6:2FTS	20.000	20.533	2.7	102.7
8:2FTS	20.000	20.204	1.0	101.0
d3-MeFOSAA	20.000	20.598	3.0	103.0
EtFOSAA	20.000	19.883	-0.6	99.4
FOSA	20.000	19.755	-1.2	98.8
MeFOSAA	20.000	20.154	0.8	100.8
PFBA	20.000	19.626	-1.9	98.1
PFBS	20.000	19.657	-1.7	98.3
PFDA	20.000	19.262	-3.7	96.3
PFDoDA	20.000	19.944	-0.3	99.7
PFDS	20.000	19.463	-2.7	97.3
PFHpA	20.000	19.990	0.0	100.0
PFHpS	20.000	20.281	1.4	101.4
PFHxA	20.000	19.684	-1.6	98.4
PFHxS	20.000	19.619	-1.9	98.1
PFNA	20.000	19.677	-1.6	98.4
PFNS	20.000	19.927	-0.4	99.6
PFOA	20.000	19.872	-0.6	99.4
PFOS	20.000	19.499	-2.5	97.5

Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S3Q538-ECC537
Lab FileID: 3Q36639.D

PFPeA	20.000	19.879	-0.6	99.4
PFPeS	20.000	19.684	-1.6	98.4
PFTeDA	20.000	19.728	-1.4	98.6
PFTrDA	20.000	20.837	4.2	104.2
PFUnDA	20.000	19.460	-2.7	97.3
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	19.878	-0.6	99.4
13C3-HFPO-DA	20.000	19.721	-1.4	98.6
9Cl-PF3ONS	20.000	18.865	-5.7	94.3
ADONA	20.000	19.808	-1.0	99.0
HFPO-DA	20.000	20.251	1.3	101.3
M3-HFPO-DA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	19.638	-1.8	98.2

CC Criteria: +/- 30%

10.7.14
10

Initial Calibration Report

Method Path	D:\MassHunter\methods
Method File	BR_LN_041821_S4Q189.quantmethod.xml
Batch Name	D:\MassHunter\Data\041821_ID_S4Q189\QuantResults\s4q189.batch.bin
Last Calib Update	4/19/2021 7:16:05 AM

Level Name	Calibration Files	Acq. Date-Time	Level Last Update Time
1	D:\MassHunter\Data\041821_ID_S4Q189\4Q13435.d	4/18/2021 2:43:48 PM	4/19/2021 7:16:05 AM
2	D:\MassHunter\Data\041821_ID_S4Q189\4Q13436.d	4/18/2021 2:58:43 PM	4/19/2021 7:16:05 AM
3	D:\MassHunter\Data\041821_ID_S4Q189\4Q13437.d	4/18/2021 3:13:39 PM	4/19/2021 7:16:05 AM
4	D:\MassHunter\Data\041821_ID_S4Q189\4Q13438.d	4/18/2021 3:28:34 PM	4/19/2021 7:16:05 AM
5	D:\MassHunter\Data\041821_ID_S4Q189\4Q13439.d	4/18/2021 3:43:29 PM	4/19/2021 7:16:05 AM
6	D:\MassHunter\Data\041821_ID_S4Q189\4Q13440.d	4/18/2021 3:58:27 PM	4/19/2021 7:16:05 AM
7	D:\MassHunter\Data\041821_ID_S4Q189\4Q13441.d	4/18/2021 4:13:23 PM	4/19/2021 7:16:05 AM
8	D:\MassHunter\Data\041821_ID_S4Q189\4Q13442.d	4/18/2021 4:28:19 PM	4/19/2021 7:16:05 AM

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
S 13C4-PFBA	Linear	2408	2588	2429	2422	2516	2541	2430	2424	2470	2.764
S 13C5-PFPeA	Linear	4307	4657	4352	4334	4468	4596	4417	4413	4443	2.822
S 13C3-PFBS	Linear	333.1	361.4	330.8	327.4	342.7	358.0	337.5	336.8	341.0	3.661
S 13C2-4:2FTS	Linear	2085	2243	2116	2089	2193	2321	2388	2740	2272	9.617
S 13C5-PFHxA	Linear	5968	6438	5974	5897	6160	6290	6028	6028	6098	3.026
S 13C3-HFPO-DA	Linear	344.0	364.0	345.3	334.9	361.0	354.5	343.5	343.8	348.9	2.847
S 13C4-PFHpA	Linear	5170	5638	5214	5246	5389	5509	5287	5196	5331	3.140
S 13C3-PFHxS	Linear	307.6	336.5	321.7	311.9	320.7	336.2	317.6	325.4	322.2	3.218
S 13C2-6:2FTS	Linear	2817	2980	2802	2813	2955	3042	3138	3380	2991	6.626
S 13C8-PFOA	Linear	7153	7664	7266	7201	7423	7673	7263	7114	7344	2.999
S 13C8-PFOS	Linear	405.2	447.5	418.4	422.5	416.6	450.3	428.6	417.0	425.7	3.695
S 13C9-PFNA	Linear	7607	8264	7660	7678	7881	8163	7739	7423	7802	3.661
S 13C8-FOSA	Linear	1911	1981	1927	1878	1920	1917	1716	1600	1856	6.970
S 13C6-PFDA	Linear	4743	5112	4777	4782	4985	5045	4559	4290	4787	5.655
S 13C2-8:2FTS	Linear	2190	2319	2191	2252	2299	2436	2393	2566	2331	5.542
S d3-MeFOSAA	Linear	1821	1938	1826	1795	1894	1928	1857	1809	1859	2.968
S 13C7-PFUnDA	Linear	6489	7061	6553	6581	6754	6687	6324	5967	6552	4.887
S d5-EtFOSAA	Linear	1542	1636	1549	1531	1606	1613	1524	1500	1563	3.141
S 13C2-PFDoDA	Linear	6826	7398	6881	6856	7068	7235	6901	6759	6991	3.200
S 13C2-PFTeDA	Linear	7675	8144	7708	7725	8024	8148	7725	7622	7847	2.807
I M4-PFBA				---------- ISTD ----------							
T PFBA	Linear	0.4367	0.4200	0.4544	0.4528	0.4385	0.4022	0.4406	0.4368	0.4353	3.927
I M5-PFPeA				---------- ISTD ----------							
T PFPeA	Linear	0.8901	0.8451	0.8964	0.8823	0.8634	0.7906	0.8768	0.8633	0.8635	3.911
I M5-PFHxA				---------- ISTD ----------							
T PFHxA	Linear	0.8907	0.8801	0.9415	0.9583	0.9191	0.8462	0.9130	0.9161	0.9081	3.898
I M4-PFHpA				---------- ISTD ----------							

Initial Calibration Summary
Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT
Sample: S4Q189-ICC189
Lab FileID: 4Q13440.D
Page 1 of 5

Initial Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S4Q189-ICC189
Lab FileID: 4Q13440.D

Initial Calibration Report

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
T PFHpA	Linear	1.2787	1.2336	1.3234	1.3197	1.2864	1.1898	1.2900	1.3155	1.2796	3.636
I M8-PFOA				----------	----------	ISTD	----------	----------			
T PFOA	Linear	1.1819	1.1251	1.1959	1.2137	1.1881	1.0782	1.1920	1.1729	1.1685	3.824
T br-PFOA	Linear	1.1819	1.1251	1.1959	1.2137	1.1881	1.0782	1.1920	1.1729	1.1685	3.824
T LN-PFOA	Linear	1.1819	1.1251	1.1959	1.2137	1.1881	1.0782	1.1920	1.1729	1.1685	3.824
I M9-PFNA				----------	----------	ISTD	----------	----------			
T PFNA	Linear	0.7828	0.8060	0.8438	0.8387	0.8140	0.7482	0.8111	0.8320	0.8096	3.919
T br-PFNA	Linear	0.7828	0.8060	0.8438	0.8387	0.8140	0.7482	0.8111	0.8320	0.8096	3.919
T LN-PFNA	Linear	0.7828	0.8060	0.8438	0.8387	0.8140	0.7482	0.8111	0.8320	0.8096	3.919
I M6-PFDA				----------	----------	ISTD	----------	----------			
T 9Cl-PF3ONS	Quadratic	0.8124	0.7771	0.7990	0.8069	0.7887	0.7292	0.8438	0.8541	0.8014	4.877
T PFDA	Linear	1.5408	1.4763	1.5834	1.6103	1.5364	1.4194	1.5528	1.5574	1.5346	3.946
I M7-PFUnDA				----------	----------	ISTD	----------	----------			
T PFDS	Linear	0.1102	0.1095	0.1221	0.1203	0.1180	0.1098	0.1232	0.1248	0.1172	5.494
T PFUnDA	Linear	0.9796	0.9920	1.0519	1.0075	1.0034	0.9508	1.0000	1.0147	1.0000	2.897
I M2-PFDoDA				----------	----------	ISTD	----------	----------			
T 11Cl-PF3OUdS	Linear	0.5351	0.5244	0.5782	0.5936	0.5749	0.5291	0.5701	0.5667	0.5590	4.616
T PFDoDA	Linear	0.9298	0.8983	1.0050	0.9819	0.9655	0.8938	0.9691	0.9757	0.9524	4.257
I M2-PFTeDA				----------	----------	ISTD	----------	----------			
T PFTrDA	Linear	0.7190	0.7288	0.8098	0.8076	0.7928	0.7356	0.8054	0.8026	0.7752	5.138
T PFTeDA	Linear	0.9415	0.9306	0.9989	0.9916	0.9722	0.9030	0.9858	0.9661	0.9612	3.475
I M8-FOSA				----------	----------	ISTD	----------	----------			
T FOSA	Linear	0.9012	0.8956	0.9199	0.9530	0.9323	0.8556	0.9536	0.9357	0.9184	3.610
I M3-PFBS				----------	----------	ISTD	----------	----------			
T PFBS	Linear	3.3255	3.0403	3.4263	3.4880	3.2542	2.9899	3.3061	3.2673	3.2622	5.276
T PFPeS	Linear	2.3107	2.2706	2.5548	2.4180	2.3920	2.1121	2.4110	2.3764	2.3557	5.486
I M3-PFHxS				----------	----------	ISTD	----------	----------			
T br-PFHxS	Linear	3.9175	3.4848	2.9920	3.1486	3.2030	2.7857	3.0731	3.0007	3.2007	11.010
T PFHxS	Linear	2.7217	2.6785	2.5780	2.6154	2.6938	2.3615	2.6395	2.5176	2.6008	4.497
T LN-PFHxS	Linear	2.6078	2.5686	2.5216	2.5427	2.6244	2.3036	2.5804	2.4517	2.5251	4.137
T ADONA	Linear	25.53	24.15	25.91	26.81	26.24	23.75	26.61	25.40	25.55	4.328
I M8-PFOS				----------	----------	ISTD	----------	----------			
T PFHpS	Linear	2.0548	1.7502	1.8988	1.8993	1.9589	1.6868	1.8353	1.8424	1.8658	6.194
T br-PFOS	Quadratic	2.8771	2.5732	2.9481	2.9383	3.0217	2.5889	2.9097	2.9320	2.8486	5.974
T PFOS	Linear	2.4765	2.0868	2.3383	2.1684	2.2125	1.9091	2.1093	2.1470	2.1810	7.795
T LN-PFOS	Linear	2.3500	1.9332	2.1457	1.9253	1.9569	1.6944	1.8565	1.8991	1.9702	10.018
T PFNS	Linear	1.9909	1.8160	1.8330	1.8358	1.8659	1.6328	1.7306	1.7121	1.8021	6.074

Generated at 7:16 AM on 4/19/2021

10.7.15 10

Initial Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S4Q189-ICC189
Lab FileID: 4Q13440.D

Initial Calibration Report

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
I M2-4:2FTS						ISTD					
T 4:2FTS	Avg RF	1.1151	1.0943	1.1613	1.1735	1.1131	0.9950	1.0181	0.8836	1.0692	9.124
I M2-6:2FTS						ISTD					
T 6:2FTS	Avg RF	1.0981	1.0776	1.1470	1.1504	1.0909	1.0010	0.9958	0.8617	1.0528	9.150
I M2-8:2FTS						ISTD					
T 8:2FTS	Avg RF	1.0125	1.1000	1.1403	1.1299	1.0688	0.9702	0.9939	0.8581	1.0342	9.185
I M3-MeFOSAA						ISTD					
T MeFOSAA	Linear	0.8732	0.8719	0.9965	0.9544	0.9042	0.8219	0.9240	0.9289	0.9094	5.965
I M3-HFPO-DA						ISTD					
T HFPO-DA	Linear	3.3795	3.2356	3.4292	3.2686	3.1267	2.8819	3.2379	3.2157	3.2219	5.182
I M5-EtFOSAA						ISTD					
T EtFOSAA	Linear	0.8837	0.9244	1.0153	0.9684	0.9140	0.8529	0.9595	0.9512	0.9337	5.481

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Generated at 7:16 AM on 4/19/2021

Initial Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S4Q189-ICC189
Lab FileID: 4Q13440.D

Initial Calibration Report

Compounds with Curve fitting not using Avg Response Factor:

Compound	Curve Fit	Curve Fit Formula	Curve Fit R2
S 13C4-PFBA	Linear	y = 2469.794439 * x	0.000000
T PFBA	Linear	y = 0.436528 * x	0.999683
S 13C5-PFPeA	Linear	y = 4442.834491 * x	0.000000
T PFPeA	Linear	y = 0.863673 * x	0.999599
S 13C3-PFBS	Linear	y = 340.958026 * x	0.000000
T PFBS	Linear	y = 3.266604 * x	0.999610
S 13C2-4:2FTS	Linear	y = 2271.916568 * x	0.000000
S 13C5-PFHxA	Linear	y = 6097.834898 * x	0.000000
T PFHxA	Linear	y = 0.913494 * x	0.999731
T PFPeS	Linear	y = 2.375167 * x	0.999362
T HFPO-DA	Linear	y = 3.209239 * x	0.999481
S 13C3-HFPO-DA	Linear	y = 348.870544 * x	0.000000
T br-PFHxS	Linear	y = 3.009892 * x	0.999542
S 13C4-PFHpA	Linear	y = 5331.035748 * x	0.000000
T PFHpA	Linear	y = 1.306536 * x	0.999528
S 13C3-PFHxS	Linear	y = 322.201293 * x	0.000000
T PFHxS	Linear	y = 2.537784 * x	0.999184
T LN-PFHxS	Linear	y = 2.473407 * x	0.999097
T ADONA	Linear	y = 25.586453 * x	0.999215
S 13C2-6:2FTS	Linear	y = 2990.758338 * x	0.000000
S 13C8-PFOA	Linear	y = 7344.457503 * x	0.000000
T PFOA	Linear	y = 1.173883 * x	0.999616
T br-PFOA	Linear	y = 1.173883 * x	0.999616
T LN-PFOA	Linear	y = 1.173883 * x	0.999616
T PFHpS	Linear	y = 1.837272 * x	0.999624
T br-PFOS	Quadratic	y = 0.114485 * x ^ 2 + 2.798321 * x	0.999565
S 13C8-PFOS	Linear	y = 425.742008 * x	0.000000
T PFOS	Linear	y = 2.133082 * x	0.999383
T LN-PFOS	Linear	y = 1.885246 * x	0.999367
S 13C9-PFNA	Linear	y = 7802.013443 * x	0.000000
T PFNA	Linear	y = 0.825312 * x	0.999433
T br-PFNA	Linear	y = 0.825312 * x	0.999433
T LN-PFNA	Linear	y = 0.825312 * x	0.999433
T 9Cl-PF3ONS	Quadratic	y = 0.012810 * x ^ 2 + 0.791950 * x	0.999474
S 13C8-FOSA	Linear	y = 1856.169383 * x	0.000000
T FOSA	Linear	y = 0.936697 * x	0.999556
T PFNS	Linear	y = 1.714678 * x	0.999757
S 13C6-PFDA	Linear	y = 4786.729477 * x	0.000000
T PFDA	Linear	y = 1.552257 * x	0.999643
S 13C2-8:2FTS	Linear	y = 2330.709525 * x	0.000000
S d3-MeFOSAA	Linear	y = 1858.577301 * x	0.000000
T MeFOSAA	Linear	y = 0.924525 * x	0.999395
T PFDS	Linear	y = 0.123991 * x	0.999306

Generated at 7:16 AM on 4/19/2021

Initial Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S4Q189-ICC189
Lab FileID: 4Q13440.D

Initial Calibration Report

S 13C7-PFUnDA	Linear	y = 6551.963943 * x	0.000000
T PFUnDA	Linear	y = 1.009822 * x	0.999787
S d5-EtFOSAA	Linear	y = 1562.552144 * x	0.000000
T EtFOSAA	Linear	y = 0.949553 * x	0.999467
T 11Cl-PF3OUdS	Linear	y = 0.566314 * x	0.999775
S 13C2-PFDoDA	Linear	y = 6990.624247 * x	0.000000
T PFDoDA	Linear	y = 0.971815 * x	0.999680
T PFTrDA	Linear	y = 0.801033 * x	0.999676
S 13C2-PFTeDA	Linear	y = 7846.587838 * x	0.000000
T PFTeDA	Linear	y = 0.968052 * x	0.999685

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Verification

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S4Q189-ICV189
Lab FileID: 4Q13444.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\041821_ID_S4Q189\s4q189.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\041821_ID_S4Q189\4Q13435.d
2:D:\MassHunter\Data\041821_ID_S4Q189\4Q13436.d
3:D:\MassHunter\Data\041821_ID_S4Q189\4Q13437.d
4:D:\MassHunter\Data\041821_ID_S4Q189\4Q13438.d
5:D:\MassHunter\Data\041821_ID_S4Q189\4Q13439.d
6:D:\MassHunter\Data\041821_ID_S4Q189\4Q13440.d
7:D:\MassHunter\Data\041821_ID_S4Q189\4Q13441.d
8:D:\MassHunter\Data\041821_ID_S4Q189\4Q13442.d

Data File: 4Q13444
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	21.546	7.7	107.7
13C2-6:2FTS	20.000	21.652	8.3	108.3
13C2-8:2FTS	20.000	22.158	10.8	110.8
13C2-PFDoDA	20.000	21.967	9.8	109.8
13C2-PFTeDA	20.000	21.756	8.8	108.8
13C3-PFBS	20.000	22.201	11.0	111.0
13C3-PFHxS	20.000	21.808	9.0	109.0
13C4-PFBA	20.000	22.042	10.2	110.2
13C4-PFHpA	20.000	21.918	9.6	109.6
13C5-PFHxA	20.000	21.923	9.6	109.6
13C5-PFPeA	20.000	22.112	10.6	110.6
13C6-PFDA	20.000	21.831	9.2	109.2
13C7-PFUnDA	20.000	21.856	9.3	109.3
13C8-FOSA	20.000	22.143	10.7	110.7
13C8-PFOA	20.000	22.045	10.2	110.2
13C8-PFOS	20.000	21.634	8.2	108.2
13C9-PFNA	20.000	22.143	10.7	110.7
4:2FTS	20.000	17.497	-12.5	87.5
6:2FTS	20.000	16.718	-16.4	83.6
8:2FTS	20.000	17.244	-13.8	86.2
d3-MeFOSAA	20.000	22.511	12.6	112.6
EtFOSAA	20.000	17.533	-12.3	87.7
FOSA	20.000	17.721	-11.4	88.6
MeFOSAA	20.000	16.971	-15.1	84.9
PFBA	20.000	17.277	-13.6	86.4
PFBS	20.000	15.226	-23.9	76.1
PFDA	20.000	16.495	-17.5	82.5
PFDoDA	20.000	18.064	-9.7	90.3
PFDS	20.000	16.080	-19.6	80.4
PFHpA	20.000	17.559	-12.2	87.8
PFHpS	20.000	17.061	-14.7	85.3
PFHxA	20.000	17.698	-11.5	88.5
PFHxS	20.000	16.159	-19.2	80.8
PFNA	20.000	16.299	-18.5	81.5
PFNS	20.000	17.738	-11.3	88.7
PFOA	20.000	17.885	-10.6	89.4
PFOS	20.000	17.583	-12.1	87.9

Initial Calibration Verification

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S4Q189-ICV189
Lab FileID: 4Q13444.D

PFPeA	20.000	17.400	-13.0	87.0
PFPeS	20.000	15.416	-22.9	77.1
PFTeDA	20.000	16.121	-19.4	80.6
PFTrDA	20.000	19.702	-1.5	98.5
PFUnDA	20.000	18.129	-9.4	90.6
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	16.444	-17.8	82.2
13C3-HFPO-DA	20.000	21.489	7.4	107.4
9Cl-PF3ONS	20.000	16.645	-16.8	83.2
ADONA	20.000	16.947	-15.3	84.7
HFPO-DA	20.000	17.327	-13.4	86.6
M3-HFPO-DA	---	--ISTD--		
br-PFOS	4.800	3.488	-27.3	72.7
LN-PFOS	15.200	14.680	-3.4	96.6
br-PFHxS	2.400	2.334	-2.8	97.2
LN-PFHxS	17.600	13.740	-21.9	78.1
br-PFOA	20.000	0.000	# -100.0	0.0
LN-PFOA	20.000	17.885	-10.6	89.4
br-PFNA	20.000	0.000	# -100.0	0.0
LN-PFNA	20.000	16.299	-18.5	81.5
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	22.440	12.2	112.2

CC Criteria: +/- 30%

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Initial Calibration Verification

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S4Q189-ICV189
Lab FileID: 4Q13445.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\041821_ID_S4Q189\s4q189.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\041821_ID_S4Q189\4Q13435.d
2:D:\MassHunter\Data\041821_ID_S4Q189\4Q13436.d
3:D:\MassHunter\Data\041821_ID_S4Q189\4Q13437.d
4:D:\MassHunter\Data\041821_ID_S4Q189\4Q13438.d
5:D:\MassHunter\Data\041821_ID_S4Q189\4Q13439.d
6:D:\MassHunter\Data\041821_ID_S4Q189\4Q13440.d
7:D:\MassHunter\Data\041821_ID_S4Q189\4Q13441.d
8:D:\MassHunter\Data\041821_ID_S4Q189\4Q13442.d

Data File: 4Q13445
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	19.511	-2.4	97.6
13C2-6:2FTS	20.000	19.646	-1.8	98.2
13C2-8:2FTS	20.000	19.775	-1.1	98.9
13C2-PFDoDA	20.000	20.890	4.5	104.5
13C2-PFTeDA	20.000	20.814	4.1	104.1
13C3-PFBS	20.000	20.775	3.9	103.9
13C3-PFHxS	20.000	20.747	3.7	103.7
13C4-PFBA	20.000	20.857	4.3	104.3
13C4-PFHpA	20.000	20.934	4.7	104.7
13C5-PFHxA	20.000	20.800	4.0	104.0
13C5-PFPeA	20.000	20.742	3.7	103.7
13C6-PFDA	20.000	21.650	8.3	108.3
13C7-PFUnDA	20.000	21.408	7.0	107.0
13C8-FOSA	20.000	22.079	10.4	110.4
13C8-PFOA	20.000	20.648	3.2	103.2
13C8-PFOS	20.000	20.848	4.2	104.2
13C9-PFNA	20.000	21.204	6.0	106.0
4:2FTS	20.000	0.000	# -100.0	0.0
6:2FTS	20.000	0.000	# -100.0	0.0
8:2FTS	20.000	0.000	# -100.0	0.0
d3-MeFOSAA	20.000	21.040	5.2	105.2
EtFOSAA	20.000	0.000	# -100.0	0.0
FOSA	20.000	0.000	# -100.0	0.0
MeFOSAA	20.000	0.000	# -100.0	0.0
PFBA	20.000	0.000	# -100.0	0.0
PFBS	20.000	0.000	# -100.0	0.0
PFDA	20.000	0.000	# -100.0	0.0
PFDoDA	20.000	0.000	# -100.0	0.0
PFDS	20.000	0.000	# -100.0	0.0
PFHpA	20.000	0.000	# -100.0	0.0
PFHpS	20.000	0.000	# -100.0	0.0
PFHxA	20.000	0.000	# -100.0	0.0
PFHxS	20.000	0.000	# -100.0	0.0
PFNA	20.000	0.000	# -100.0	0.0
PFNS	20.000	0.000	# -100.0	0.0
PFOA	20.000	18.035	-9.8	90.2
PFOS	20.000	0.000	# -100.0	0.0

Initial Calibration Verification

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S4Q189-ICV189
Lab FileID: 4Q13445.D

PFPeA	20.000	0.000	# -100.0	0.0
PFPeS	20.000	0.000	# -100.0	0.0
PFTeDA	20.000	0.000	# -100.0	0.0
PFTrDA	20.000	0.000	# -100.0	0.0
PFUnDA	20.000	0.000	# -100.0	0.0
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	0.000	# -100.0	0.0
13C3-HFPO-DA	20.000	20.413	2.1	102.1
9Cl-PF3ONS	20.000	0.000	# -100.0	0.0
ADONA	20.000	0.000	# -100.0	0.0
HFPO-DA	20.000	0.000	# -100.0	0.0
M3-HFPO-DA	---	--ISTD--		
br-PFOS	4.800	0.000	# -100.0	0.0
LN-PFOS	15.200	0.000	# -100.0	0.0
br-PFHxS	2.400	0.000	# -100.0	0.0
LN-PFHxS	17.600	0.000	# -100.0	0.0
br-PFOA	20.000	2.263	# -88.7	11.3
LN-PFOA	20.000	15.772	-21.1	78.9
br-PFNA	20.000	0.000	# -100.0	0.0
LN-PFNA	20.000	0.000	# -100.0	0.0
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	21.080	5.4	105.4

CC Criteria: +/- 30%

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Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S4Q189-CC189
Lab FileID: 4Q13456.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\041821_ID_S4Q189\s4q189a.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\041821_ID_S4Q189\4Q13435.d
2:D:\MassHunter\Data\041821_ID_S4Q189\4Q13436.d
3:D:\MassHunter\Data\041821_ID_S4Q189\4Q13437.d
4:D:\MassHunter\Data\041821_ID_S4Q189\4Q13438.d
5:D:\MassHunter\Data\041821_ID_S4Q189\4Q13439.d
6:D:\MassHunter\Data\041821_ID_S4Q189\4Q13440.d
7:D:\MassHunter\Data\041821_ID_S4Q189\4Q13441.d
8:D:\MassHunter\Data\041821_ID_S4Q189\4Q13442.d

Data File: 4Q13456
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	20.652	3.3	103.3
13C2-6:2FTS	20.000	20.872	4.4	104.4
13C2-8:2FTS	20.000	21.336	6.7	106.7
13C2-PFDoDA	20.000	20.922	4.6	104.6
13C2-PFTeDA	20.000	20.644	3.2	103.2
13C3-PFBS	20.000	21.104	5.5	105.5
13C3-PFHxS	20.000	20.896	4.5	104.5
13C4-PFBA	20.000	21.353	6.8	106.8
13C4-PFHpA	20.000	21.205	6.0	106.0
13C5-PFHxA	20.000	21.286	6.4	106.4
13C5-PFPeA	20.000	21.291	6.5	106.5
13C6-PFDA	20.000	21.419	7.1	107.1
13C7-PFUnDA	20.000	21.581	7.9	107.9
13C8-FOSA	20.000	21.587	7.9	107.9
13C8-PFOA	20.000	21.341	6.7	106.7
13C8-PFOS	20.000	21.498	7.5	107.5
13C9-PFNA	20.000	21.087	5.4	105.4
4:2FTS	20.000	18.907	-5.5	94.5
6:2FTS	20.000	18.599	-7.0	93.0
8:2FTS	20.000	18.514	-7.4	92.6
d3-MeFOSAA	20.000	20.964	4.8	104.8
EtFOSAA	20.000	18.070	-9.6	90.4
FOSA	20.000	18.278	-8.6	91.4
MeFOSAA	20.000	18.233	-8.8	91.2
PFBA	20.000	18.011	-9.9	90.1
PFBS	20.000	18.280	-8.6	91.4
PFDA	20.000	18.447	-7.8	92.2
PFDoDA	20.000	18.420	-7.9	92.1
PFDS	20.000	17.117	-14.4	85.6
PFHpA	20.000	18.239	-8.8	91.2
PFHpS	20.000	18.585	-7.1	92.9
PFHxA	20.000	18.246	-8.8	91.2
PFHxS	20.000	18.517	-7.4	92.6
PFNA	20.000	18.295	-8.5	91.5
PFNS	20.000	18.701	-6.5	93.5
PFOA	20.000	18.362	-8.2	91.8
PFOS	20.000	18.083	-9.6	90.4

Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S4Q189-CC189
Lab FileID: 4Q13456.D

PFPeA	20.000	18.355	-8.2	91.8
PFPeS	20.000	17.837	-10.8	89.2
PFTeDA	20.000	18.569	-7.2	92.8
PFTrDA	20.000	18.551	-7.2	92.8
PFUnDA	20.000	18.301	-8.5	91.5
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	18.283	-8.6	91.4
13C3-HFPO-DA	20.000	21.172	5.9	105.9
9Cl-PF3ONS	20.000	18.230	-8.8	91.2
ADONA	20.000	18.780	-6.1	93.9
HFPO-DA	20.000	18.229	-8.9	91.1
M3-HFPO-DA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	21.042	5.2	105.2

CC Criteria: +/- 30%

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Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S4Q189-CC189
Lab FileID: 4Q13466.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\041821_ID_S4Q189\s4q189a.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\041821_ID_S4Q189\4Q13435.d
2:D:\MassHunter\Data\041821_ID_S4Q189\4Q13436.d
3:D:\MassHunter\Data\041821_ID_S4Q189\4Q13437.d
4:D:\MassHunter\Data\041821_ID_S4Q189\4Q13438.d
5:D:\MassHunter\Data\041821_ID_S4Q189\4Q13439.d
6:D:\MassHunter\Data\041821_ID_S4Q189\4Q13440.d
7:D:\MassHunter\Data\041821_ID_S4Q189\4Q13441.d
8:D:\MassHunter\Data\041821_ID_S4Q189\4Q13442.d

Data File: 4Q13466
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	21.136	5.7	105.7
13C2-6:2FTS	20.000	21.198	6.0	106.0
13C2-8:2FTS	20.000	21.200	6.0	106.0
13C2-PFDoDA	20.000	21.219	6.1	106.1
13C2-PFTeDA	20.000	21.284	6.4	106.4
13C3-PFBS	20.000	21.382	6.9	106.9
13C3-PFHxS	20.000	21.456	7.3	107.3
13C4-PFBA	20.000	21.533	7.7	107.7
13C4-PFHpA	20.000	21.206	6.0	106.0
13C5-PFHxA	20.000	21.548	7.7	107.7
13C5-PFPeA	20.000	21.490	7.4	107.4
13C6-PFDA	20.000	21.768	8.8	108.8
13C7-PFUnDA	20.000	21.619	8.1	108.1
13C8-FOSA	20.000	21.613	8.1	108.1
13C8-PFOA	20.000	21.527	7.6	107.6
13C8-PFOS	20.000	21.982	9.9	109.9
13C9-PFNA	20.000	21.476	7.4	107.4
4:2FTS	20.000	18.560	-7.2	92.8
6:2FTS	20.000	18.786	-6.1	93.9
8:2FTS	20.000	18.925	-5.4	94.6
d3-MeFOSAA	20.000	21.411	7.1	107.1
EtFOSAA	20.000	18.038	-9.8	90.2
FOSA	20.000	18.249	-8.8	91.2
MeFOSAA	20.000	18.048	-9.8	90.2
PFBA	20.000	18.127	-9.4	90.6
PFBS	20.000	18.461	-7.7	92.3
PFDA	20.000	18.318	-8.4	91.6
PFDoDA	20.000	18.602	-7.0	93.0
PFDS	20.000	16.946	-15.3	84.7
PFHpA	20.000	18.218	-8.9	91.1
PFHpS	20.000	18.275	-8.6	91.4
PFHxA	20.000	18.149	-9.3	90.7
PFHxS	20.000	18.337	-8.3	91.7
PFNA	20.000	18.258	-8.7	91.3
PFNS	20.000	18.356	-8.2	91.8
PFOA	20.000	18.406	-8.0	92.0
PFOS	20.000	18.208	-9.0	91.0

Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S4Q189-CC189
Lab FileID: 4Q13466.D

PFPeA	20.000	18.293	-8.5	91.5
PFPeS	20.000	18.316	-8.4	91.6
PFTeDA	20.000	18.602	-7.0	93.0
PFTrDA	20.000	18.439	-7.8	92.2
PFUnDA	20.000	18.696	-6.5	93.5
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	20.000	18.516	-7.4	92.6
13C3-HFPO-DA	20.000	22.206	11.0	111.0
9Cl-PF3ONS	20.000	18.020	-9.9	90.1
ADONA	20.000	18.518	-7.4	92.6
HFPO-DA	20.000	17.259	-13.7	86.3
M3-HFPO-DA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	21.808	9.0	109.0

CC Criteria: +/- 30%

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Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S4Q189-CC189
Lab FileID: 4Q13468.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\041821_ID_S4Q189\s4q189a.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\041821_ID_S4Q189\4Q13435.d
2:D:\MassHunter\Data\041821_ID_S4Q189\4Q13436.d
3:D:\MassHunter\Data\041821_ID_S4Q189\4Q13437.d
4:D:\MassHunter\Data\041821_ID_S4Q189\4Q13438.d
5:D:\MassHunter\Data\041821_ID_S4Q189\4Q13439.d
6:D:\MassHunter\Data\041821_ID_S4Q189\4Q13440.d
7:D:\MassHunter\Data\041821_ID_S4Q189\4Q13441.d
8:D:\MassHunter\Data\041821_ID_S4Q189\4Q13442.d

Data File: 4Q13468
Type : QC
Level : 2

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	20.304	1.5	101.5
13C2-6:2FTS	20.000	20.603	3.0	103.0
13C2-8:2FTS	20.000	21.116	5.6	105.6
13C2-PFDoDA	20.000	21.958	9.8	109.8
13C2-PFTeDA	20.000	21.685	8.4	108.4
13C3-PFBS	20.000	21.646	8.2	108.2
13C3-PFHxS	20.000	21.857	9.3	109.3
13C4-PFBA	20.000	22.073	10.4	110.4
13C4-PFHpA	20.000	21.881	9.4	109.4
13C5-PFHxA	20.000	21.890	9.5	109.5
13C5-PFPeA	20.000	21.843	9.2	109.2
13C6-PFDA	20.000	22.825	14.1	114.1
13C7-PFUnDA	20.000	22.479	12.4	112.4
13C8-FOSA	20.000	23.254	16.3	116.3
13C8-PFOA	20.000	21.844	9.2	109.2
13C8-PFOS	20.000	22.331	11.7	111.7
13C9-PFNA	20.000	21.837	9.2	109.2
4:2FTS	1.000	1.019	1.9	101.9
6:2FTS	1.000	1.080	8.0	108.0
8:2FTS	1.000	0.999	-0.1	99.9
d3-MeFOSAA	20.000	21.600	8.0	108.0
EtFOSAA	1.000	0.908	-9.2	90.8
FOSA	1.000	0.956	-4.4	95.6
MeFOSAA	1.000	0.966	-3.4	96.6
PFBA	1.000	0.943	-5.7	94.3
PFBS	1.000	0.966	-3.4	96.6
PFDA	1.000	0.922	-7.8	92.2
PFDoDA	1.000	0.951	-4.9	95.1
PFDS	1.000	0.886	-11.4	88.6
PFHpA	1.000	0.939	-6.1	93.9
PFHpS	1.000	1.023	2.3	102.3
PFHxA	1.000	0.940	-6.0	94.0
PFHxS	1.000	0.979	-2.1	97.9
PFNA	1.000	0.946	-5.4	94.6
PFNS	1.000	1.081	8.1	108.1
PFOA	1.000	0.975	-2.5	97.5
PFOS	1.000	1.028	2.8	102.8

Continuing Calibration Summary

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Sample: S4Q189-CC189
Lab FileID: 4Q13468.D

PFPeA	1.000	0.976	-2.4	97.6
PFPeS	1.000	0.915	-8.5	91.5
PFTeDA	1.000	0.973	-2.7	97.3
PFTrDA	1.000	0.930	-7.0	93.0
PFUnDA	1.000	0.945	-5.5	94.5
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		
11Cl-PF3OUdS	1.000	0.962	-3.8	96.2
13C3-HFPO-DA	20.000	22.046	10.2	110.2
9Cl-PF3ONS	1.000	0.937	-6.3	93.7
ADONA	1.000	0.949	-5.1	94.9
HFPO-DA	1.000	0.953	-4.7	95.3
M3-HFPO-DA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	22.261	11.3	111.3

CC Criteria: +/- 30%

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Run Sequence Report

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Run ID: S2Q956 **Method:** EPA 537M QSM5.3 B-1 **Instrument ID:** GCMS2Q

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S2Q956-IC956	2Q65758.D	04/08/21 13:17	n/a	Mass Calibration Verification
S2Q956-IC956	2Q65759.D	04/08/21 13:33	n/a	Initial cal 0.5
S2Q956-IC956	2Q65760.D	04/08/21 13:56	n/a	Initial cal 1.0
S2Q956-IC956	2Q65761.D	04/08/21 14:12	n/a	Initial cal 2.0
S2Q956-IC956	2Q65762.D	04/08/21 14:28	n/a	Initial cal 5.0
S2Q956-IC956	2Q65763.D	04/08/21 14:45	n/a	Initial cal 10
S2Q956-ICC956	2Q65764.D	04/08/21 15:01	n/a	Initial cal 20
S2Q956-IC956	2Q65765.D	04/08/21 15:18	n/a	Initial cal 50
S2Q956-IC956	2Q65766.D	04/08/21 15:34	n/a	Initial cal 100
S2Q956-IBLK	2Q65767.D	04/08/21 15:51	n/a	Method Blank
S2Q956-IBLK	2Q65767.D	04/08/21 15:51	n/a	Method Blank
S2Q956-ICV956	2Q65768.D	04/08/21 16:07	n/a	Initial cal verification 20
S2Q956-ICV956	2Q65769.D	04/08/21 16:24	n/a	Initial cal verification 20
OP84820-BS	2Q65770.D	04/08/21 16:41	OP84820	Blank Spike
OP84820-MB	2Q65771.D	04/08/21 16:57	OP84820	Method Blank
ZZZZZZ	2Q65772.D	04/08/21 17:14	OP84820	(unrelated sample)
ZZZZZZ	2Q65773.D	04/08/21 17:30	OP84820	(unrelated sample)
ZZZZZZ	2Q65774.D	04/08/21 17:47	OP84820	(unrelated sample)
S2Q956-CC956	2Q65775.D	04/08/21 18:03	n/a	Continuing cal 20
S2Q956-CC956	2Q65777.D	04/08/21 18:36	n/a	Continuing cal 1.0LL
OP84825-BS	2Q65778.D	04/08/21 18:53	OP84825	Blank Spike
OP84825-MB	2Q65779.D	04/08/21 19:09	OP84825	Method Blank
ZZZZZZ	2Q65781.D	04/08/21 19:43	OP84825	(unrelated sample)
ZZZZZZ	2Q65782.D	04/08/21 19:59	OP84825	(unrelated sample)
ZZZZZZ	2Q65783.D	04/08/21 20:16	OP84825	(unrelated sample)
ZZZZZZ	2Q65784.D	04/08/21 20:32	OP84825	(unrelated sample)
ZZZZZZ	2Q65785.D	04/08/21 20:49	OP84825	(unrelated sample)
ZZZZZZ	2Q65786.D	04/08/21 21:05	OP84825	(unrelated sample)
ZZZZZZ	2Q65787.D	04/08/21 21:22	OP84825	(unrelated sample)
S2Q956-CC956	2Q65788.D	04/08/21 21:38	n/a	Continuing cal 20
ZZZZZZ	2Q65790.D	04/08/21 22:12	OP84825	(unrelated sample)
ZZZZZZ	2Q65791.D	04/08/21 22:28	OP84825	(unrelated sample)
ZZZZZZ	2Q65792.D	04/08/21 22:45	OP84825	(unrelated sample)
ZZZZZZ	2Q65793.D	04/08/21 23:01	OP84825	(unrelated sample)
ZZZZZZ	2Q65794.D	04/08/21 23:18	OP84825	(unrelated sample)
ZZZZZZ	2Q65795.D	04/08/21 23:34	OP84825	(unrelated sample)
FA84332-5	2Q65796.D	04/08/21 23:51	OP84825	(used for QC only; not part of job JD22888)
OP84825-MS	2Q65797.D	04/09/21 00:07	OP84825	Matrix Spike
OP84825-MSD	2Q65798.D	04/09/21 00:24	OP84825	Matrix Spike Duplicate
ZZZZZZ	2Q65799.D	04/09/21 00:40	OP84825	(unrelated sample)
S2Q956-ECC956	2Q65800.D	04/09/21 00:57	n/a	Ending cal 20

Run Sequence Report

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Run ID: S2Q963 **Method:** EPA 537M QSM5.3 B-1 **Instrument ID:** GCMS2Q

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S2Q963-IBLK	2Q66177.D	04/16/21 09:51	n/a	Method Blank
S2Q963-IBLK	2Q66177.D	04/16/21 09:51	n/a	Method Blank
S2Q963-CC956	2Q66178.D	04/16/21 10:07	n/a	Continuing cal 1.0LL
S2Q963-CC956	2Q66179.D	04/16/21 10:24	n/a	Continuing cal 20
OP84918-BS	2Q66180.D	04/16/21 10:40	OP84918	Blank Spike
OP84918-MB	2Q66181.D	04/16/21 10:57	OP84918	Method Blank
ZZZZZZ	2Q66182.D	04/16/21 11:14	OP84918	(unrelated sample)
ZZZZZZ	2Q66183.D	04/16/21 11:30	OP84918	(unrelated sample)
ZZZZZZ	2Q66184.D	04/16/21 11:47	OP84918	(unrelated sample)
ZZZZZZ	2Q66185.D	04/16/21 12:03	OP84918	(unrelated sample)
ZZZZZZ	2Q66186.D	04/16/21 12:20	OP84918	(unrelated sample)
ZZZZZZ	2Q66187.D	04/16/21 12:36	OP84918	(unrelated sample)
ZZZZZZ	2Q66188.D	04/16/21 12:53	OP84918	(unrelated sample)
ZZZZZZ	2Q66189.D	04/16/21 13:09	OP84918	(unrelated sample)
S2Q963-CC956	2Q66190.D	04/16/21 13:26	n/a	Continuing cal 20
FA84479-9	2Q66192.D	04/16/21 14:02	OP84918	(used for QC only; not part of job JD22888)
ZZZZZZ	2Q66196.D	04/16/21 15:08	OP84918	(unrelated sample)
ZZZZZZ	2Q66197.D	04/16/21 15:25	OP84918	(unrelated sample)
ZZZZZZ	2Q66198.D	04/16/21 15:41	OP84918	(unrelated sample)
ZZZZZZ	2Q66199.D	04/16/21 15:58	OP84918	(unrelated sample)
ZZZZZZ	2Q66200.D	04/16/21 16:14	OP84918	(unrelated sample)
ZZZZZZ	2Q66201.D	04/16/21 16:31	OP84918	(unrelated sample)
S2Q963-CC956	2Q66202.D	04/16/21 16:48	n/a	Continuing cal 20
ZZZZZZ	2Q66204.D	04/16/21 17:21	OP84918	(unrelated sample)
ZZZZZZ	2Q66205.D	04/16/21 17:37	OP84918	(unrelated sample)
ZZZZZZ	2Q66207.D	04/16/21 18:10	OP84918	(unrelated sample)
S2Q963-CC956	2Q66208.D	04/16/21 18:27	n/a	Continuing cal 1.0LL
ZZZZZZ	2Q66211.D	04/16/21 19:16	OP84920	(unrelated sample)
ZZZZZZ	2Q66213.D	04/16/21 19:50	OP84920	(unrelated sample)
ZZZZZZ	2Q66214.D	04/16/21 20:06	OP84920	(unrelated sample)
S2Q963-CC956	2Q66215.D	04/16/21 20:23	n/a	Continuing cal 20
OP84942-BS	2Q66217.D	04/16/21 20:56	OP84942	Blank Spike
OP84942-MB	2Q66218.D	04/16/21 21:12	OP84942	Method Blank
ZZZZZZ	2Q66219.D	04/16/21 21:29	OP84942	(unrelated sample)
ZZZZZZ	2Q66220.D	04/16/21 21:45	OP84942	(unrelated sample)
FA84377-3	2Q66221.D	04/16/21 22:02	OP84942	(used for QC only; not part of job JD22888)
OP84942-MS	2Q66222.D	04/16/21 22:18	OP84942	Matrix Spike
OP84942-MSD	2Q66223.D	04/16/21 22:35	OP84942	Matrix Spike Duplicate
ZZZZZZ	2Q66224.D	04/16/21 22:52	OP84942	(unrelated sample)
ZZZZZZ	2Q66225.D	04/16/21 23:08	OP84942	(unrelated sample)
ZZZZZZ	2Q66226.D	04/16/21 23:25	OP84942	(unrelated sample)
S2Q963-CC956	2Q66227.D	04/16/21 23:41	n/a	Continuing cal 20
ZZZZZZ	2Q66229.D	04/17/21 00:14	OP84942	(unrelated sample)
ZZZZZZ	2Q66230.D	04/17/21 00:31	OP84942	(unrelated sample)
ZZZZZZ	2Q66231.D	04/17/21 00:47	OP84942	(unrelated sample)
ZZZZZZ	2Q66232.D	04/17/21 01:04	OP84942	(unrelated sample)

Run Sequence Report

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Run ID: S2Q963 **Method:** EPA 537M QSM5.3 B-1 **Instrument ID:** GCMS2Q

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
ZZZZZZ	2Q66233.D	04/17/21 01:21	OP84942	(unrelated sample)
ZZZZZZ	2Q66234.D	04/17/21 01:37	OP84942	(unrelated sample)
ZZZZZZ	2Q66235.D	04/17/21 01:54	OP84942	(unrelated sample)
ZZZZZZ	2Q66236.D	04/17/21 02:10	OP84942	(unrelated sample)
ZZZZZZ	2Q66237.D	04/17/21 02:27	OP84942	(unrelated sample)
S2Q963-CC956	2Q66238.D	04/17/21 02:43	n/a	Continuing cal 1.0LL
OP84941-BS	2Q66240.D	04/17/21 03:16	OP84941	Blank Spike
OP84941-MB	2Q66241.D	04/17/21 03:33	OP84941	Method Blank
OP84941-MS	2Q66246.D	04/17/21 04:56	OP84941	Matrix Spike
OP84941-MSD	2Q66247.D	04/17/21 05:12	OP84941	Matrix Spike Duplicate
JD22888-3A	2Q66248.D	04/17/21 05:29	OP84941	PMC-040521-03
JD22888-4A	2Q66249.D	04/17/21 05:45	OP84941	PMC-040521-06
S2Q963-CC956	2Q66250.D	04/17/21 06:02	n/a	Continuing cal 20
JD22888-5A	2Q66252.D	04/17/21 06:35	OP84941	PMC-040521-07
JD22888-6A	2Q66253.D	04/17/21 06:51	OP84941	PMC-040521-08
ZZZZZZ	2Q66254.D	04/17/21 07:08	OP84941	(unrelated sample)
ZZZZZZ	2Q66255.D	04/17/21 07:25	OP84941	(unrelated sample)
ZZZZZZ	2Q66256.D	04/17/21 07:41	OP84941	(unrelated sample)
ZZZZZZ	2Q66257.D	04/17/21 07:58	OP84941	(unrelated sample)
S2Q963-ECC956	2Q66258.D	04/17/21 08:14	n/a	Ending cal 20

Run Sequence Report

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Run ID: S3Q537 **Method:** EPA 537M QSM5.3 B-1 **Instrument ID:** GCMS3Q

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S3Q537-IC537	3Q36532.D	04/13/21 14:02	n/a	Mass Calibration Verification
S3Q537-IC537	3Q36533.D	04/13/21 14:19	n/a	Initial cal 0.5
S3Q537-IC537	3Q36534.D	04/13/21 14:35	n/a	Initial cal 1
S3Q537-IC537	3Q36535.D	04/13/21 14:52	n/a	Initial cal 2
S3Q537-IC537	3Q36536.D	04/13/21 15:08	n/a	Initial cal 5
S3Q537-IC537	3Q36537.D	04/13/21 15:25	n/a	Initial cal 10
S3Q537-ICC537	3Q36538.D	04/13/21 15:42	n/a	Initial cal 20
S3Q537-IC537	3Q36539.D	04/13/21 16:03	n/a	Initial cal 50
S3Q537-IC537	3Q36540.D	04/13/21 16:20	n/a	Initial cal 100
S3Q537-IBLK	3Q36541.D	04/13/21 16:36	n/a	Method Blank
S3Q537-IBLK	3Q36541.D	04/13/21 16:36	n/a	Method Blank
S3Q537-ICV537	3Q36542.D	04/13/21 16:53	n/a	Initial cal verification 20
S3Q537-ICV537	3Q36543.D	04/13/21 17:09	n/a	Initial cal verification 20
ZZZZZZ	3Q36544.D	04/13/21 17:26	OP84826	(unrelated sample)
ZZZZZZ	3Q36546.D	04/13/21 17:59	OP84870	(unrelated sample)
ZZZZZZ	3Q36547.D	04/13/21 18:15	OP84870	(unrelated sample)
ZZZZZZ	3Q36548.D	04/13/21 18:32	OP84870	(unrelated sample)
ZZZZZZ	3Q36549.D	04/13/21 18:49	OP84870	(unrelated sample)
S3Q537-CC537	3Q36550.D	04/13/21 19:05	n/a	Continuing cal 1.0LL
OP84892-BS	3Q36552.D	04/13/21 19:38	OP84892	Blank Spike
OP84892-MB	3Q36553.D	04/13/21 19:55	OP84892	Method Blank
ZZZZZZ	3Q36554.D	04/13/21 20:11	OP84892	(unrelated sample)
ZZZZZZ	3Q36555.D	04/13/21 20:28	OP84892	(unrelated sample)
ZZZZZZ	3Q36556.D	04/13/21 20:44	OP84892	(unrelated sample)
ZZZZZZ	3Q36557.D	04/13/21 21:01	OP84892	(unrelated sample)
ZZZZZZ	3Q36558.D	04/13/21 21:17	OP84892	(unrelated sample)
FA84398-39	3Q36559.D	04/13/21 21:34	OP84892	(used for QC only; not part of job JD22888)
OP84892-MS	3Q36560.D	04/13/21 21:51	OP84892	Matrix Spike
OP84892-MSD	3Q36561.D	04/13/21 22:07	OP84892	Matrix Spike Duplicate
S3Q537-CC537	3Q36562.D	04/13/21 22:24	n/a	Continuing cal 20
ZZZZZZ	3Q36564.D	04/13/21 22:57	OP84892	(unrelated sample)
ZZZZZZ	3Q36565.D	04/13/21 23:13	OP84892	(unrelated sample)
ZZZZZZ	3Q36566.D	04/13/21 23:30	OP84892	(unrelated sample)
ZZZZZZ	3Q36567.D	04/13/21 23:46	OP84892	(unrelated sample)
ZZZZZZ	3Q36568.D	04/14/21 00:03	OP84892	(unrelated sample)
ZZZZZZ	3Q36569.D	04/14/21 00:20	OP84892	(unrelated sample)
ZZZZZZ	3Q36570.D	04/14/21 00:36	OP84892	(unrelated sample)
ZZZZZZ	3Q36571.D	04/14/21 00:53	OP84892	(unrelated sample)
ZZZZZZ	3Q36572.D	04/14/21 01:09	OP84892	(unrelated sample)
ZZZZZZ	3Q36573.D	04/14/21 01:26	OP84892	(unrelated sample)
S3Q537-CC537	3Q36574.D	04/14/21 01:43	n/a	Continuing cal 20
S3Q537-ECC537	3Q36579.D	04/14/21 03:05	n/a	Ending cal 20

Run Sequence Report

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Run ID: S3Q538 **Method:** EPA 537M QSM5.3 B-1 **Instrument ID:** GCMS3Q

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S3Q538-IBLK	3Q36586.D	04/14/21 12:55	n/a	Method Blank
S3Q538-IBLK	3Q36586.D	04/14/21 12:55	n/a	Method Blank
S3Q538-CC537	3Q36587.D	04/14/21 13:13	n/a	Continuing cal 1.0LL
S3Q538-CC537	3Q36588.D	04/14/21 13:31	n/a	Continuing cal 20
ZZZZZZ	3Q36590.D	04/14/21 14:05	OP84892	(unrelated sample)
ZZZZZZ	3Q36591.D	04/14/21 14:21	OP84892	(unrelated sample)
ZZZZZZ	3Q36592.D	04/14/21 14:38	OP84892	(unrelated sample)
ZZZZZZ	3Q36593.D	04/14/21 14:54	OP84892	(unrelated sample)
OP84898-BS	3Q36594.D	04/14/21 15:11	OP84898	Blank Spike
OP84898-MB	3Q36595.D	04/14/21 15:27	OP84898	Method Blank
ZZZZZZ	3Q36596.D	04/14/21 15:44	OP84898	(unrelated sample)
ZZZZZZ	3Q36597.D	04/14/21 16:00	OP84898	(unrelated sample)
ZZZZZZ	3Q36598.D	04/14/21 16:17	OP84898	(unrelated sample)
ZZZZZZ	3Q36599.D	04/14/21 16:33	OP84898	(unrelated sample)
S3Q538-CC537	3Q36600.D	04/14/21 16:50	n/a	Continuing cal 20
FA84401-2	3Q36602.D	04/14/21 17:23	OP84898	(used for QC only; not part of job JD22888)
FA84401-2	3Q36603.D	04/14/21 17:40	OP84898	(used for QC only; not part of job JD22888)
OP84898-MS	3Q36605.D	04/14/21 18:13	OP84898	Matrix Spike
ZZZZZZ	3Q36606.D	04/14/21 18:29	OP84898	(unrelated sample)
ZZZZZZ	3Q36607.D	04/14/21 18:46	OP84898	(unrelated sample)
ZZZZZZ	3Q36608.D	04/14/21 19:02	OP84898	(unrelated sample)
ZZZZZZ	3Q36609.D	04/14/21 19:19	OP84898	(unrelated sample)
ZZZZZZ	3Q36610.D	04/14/21 19:36	OP84898	(unrelated sample)
S3Q538-CC537	3Q36611.D	04/14/21 19:52	n/a	Continuing cal 20
S3Q538-CC537	3Q36613.D	04/14/21 20:25	n/a	Continuing cal 1.0LL
FA84401-6	3Q36614.D	04/14/21 20:42	OP84898	(used for QC only; not part of job JD22888)
OP84898-DUP	3Q36615.D	04/14/21 20:59	OP84898	Duplicate
ZZZZZZ	3Q36616.D	04/14/21 21:15	OP84898	(unrelated sample)
OP84900-BS	3Q36617.D	04/14/21 21:32	OP84900	Blank Spike
OP84900-MB	3Q36618.D	04/14/21 21:48	OP84900	Method Blank
JD22823-1A	3Q36619.D	04/14/21 22:05	OP84900	(used for QC only; not part of job JD22888)
OP84900-MS	3Q36620.D	04/14/21 22:22	OP84900	Matrix Spike
JD22823-2A	3Q36621.D	04/14/21 22:38	OP84900	(used for QC only; not part of job JD22888)
OP84900-DUP	3Q36622.D	04/14/21 22:55	OP84900	Duplicate
ZZZZZZ	3Q36623.D	04/14/21 23:11	OP84900	(unrelated sample)
S3Q538-CC537	3Q36624.D	04/14/21 23:28	n/a	Continuing cal 20
ZZZZZZ	3Q36626.D	04/15/21 00:01	OP84900	(unrelated sample)
ZZZZZZ	3Q36627.D	04/15/21 00:17	OP84900	(unrelated sample)
ZZZZZZ	3Q36628.D	04/15/21 00:34	OP84900	(unrelated sample)
ZZZZZZ	3Q36629.D	04/15/21 00:51	OP84900	(unrelated sample)
ZZZZZZ	3Q36630.D	04/15/21 01:07	OP84900	(unrelated sample)
ZZZZZZ	3Q36631.D	04/15/21 01:24	OP84900	(unrelated sample)
ZZZZZZ	3Q36632.D	04/15/21 01:40	OP84900	(unrelated sample)
ZZZZZZ	3Q36633.D	04/15/21 01:57	OP84900	(unrelated sample)
ZZZZZZ	3Q36634.D	04/15/21 02:13	OP84900	(unrelated sample)
JD22888-1	3Q36635.D	04/15/21 02:30	OP84900	PMC-040521-01

Run Sequence Report

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Run ID: S3Q538	**Method:** EPA 537M QSM5.3 B-1	**Instrument ID:** GCMS3Q

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S3Q538-CC537	3Q36636.D	04/15/21 02:47	n/a	Continuing cal 20
JD22888-7A	3Q36638.D	04/15/21 03:20	OP84900	PMC-040521-09
S3Q538-ECC537	3Q36639.D	04/15/21 03:36	n/a	Ending cal 20

Run Sequence Report

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Run ID: S4Q189 **Method:** EPA 537M QSM5.3 B-1 **Instrument ID:** GCMS4Q

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S4Q189-IC189	4Q13434.D	04/18/21 14:28	n/a	Mass Calibration Verification
S4Q189-IC189	4Q13435.D	04/18/21 14:43	n/a	Initial cal 0.5
S4Q189-IC189	4Q13436.D	04/18/21 14:58	n/a	Initial cal 1.0
S4Q189-IC189	4Q13437.D	04/18/21 15:13	n/a	Initial cal 2.0
S4Q189-IC189	4Q13438.D	04/18/21 15:28	n/a	Initial cal 5.0
S4Q189-IC189	4Q13439.D	04/18/21 15:43	n/a	Initial cal 10
S4Q189-ICC189	4Q13440.D	04/18/21 15:58	n/a	Initial cal 20
S4Q189-IC189	4Q13441.D	04/18/21 16:13	n/a	Initial cal 50
S4Q189-IC189	4Q13442.D	04/18/21 16:28	n/a	Initial cal 100
S4Q189-IBLK	4Q13443.D	04/18/21 16:43	n/a	Method Blank
S4Q189-IBLK	4Q13443.D	04/18/21 16:43	n/a	Method Blank
S4Q189-ICV189	4Q13444.D	04/18/21 16:58	n/a	Initial cal verification 20
S4Q189-ICV189	4Q13445.D	04/18/21 17:13	n/a	Initial cal verification 20
FA84479-9	4Q13446.D	04/18/21 17:28	OP84918	(used for QC only; not part of job JD22888)
OP84918-MS	4Q13447.D	04/18/21 17:42	OP84918	Matrix Spike
OP84918-MSD	4Q13448.D	04/18/21 17:57	OP84918	Matrix Spike Duplicate
ZZZZZZ	4Q13449.D	04/18/21 18:12	OP84918	(unrelated sample)
ZZZZZZ	4Q13450.D	04/18/21 18:27	OP84918	(unrelated sample)
ZZZZZZ	4Q13451.D	04/18/21 18:42	OP84918	(unrelated sample)
ZZZZZZ	4Q13452.D	04/18/21 18:57	OP84918	(unrelated sample)
ZZZZZZ	4Q13453.D	04/18/21 19:12	OP84901	(unrelated sample)
ZZZZZZ	4Q13454.D	04/18/21 19:27	OP84920	(unrelated sample)
ZZZZZZ	4Q13455.D	04/18/21 19:42	OP84920	(unrelated sample)
S4Q189-CC189	4Q13456.D	04/18/21 19:57	n/a	Continuing cal 20
ZZZZZZ	4Q13458.D	04/18/21 20:27	OP84942	(unrelated sample)
ZZZZZZ	4Q13459.D	04/18/21 20:42	OP84942	(unrelated sample)
ZZZZZZ	4Q13460.D	04/18/21 20:57	OP84942	(unrelated sample)
ZZZZZZ	4Q13461.D	04/18/21 21:12	OP84942	(unrelated sample)
JD22888-2A	4Q13462.D	04/18/21 21:27	OP84941	PMC-040521-02
ZZZZZZ	4Q13463.D	04/18/21 21:41	OP84941	(unrelated sample)
ZZZZZZ	4Q13464.D	04/18/21 21:56	OP84941	(unrelated sample)
ZZZZZZ	4Q13465.D	04/18/21 22:11	OP84941	(unrelated sample)
S4Q189-CC189	4Q13466.D	04/18/21 22:26	n/a	Continuing cal 20
S4Q189-CC189	4Q13468.D	04/18/21 22:56	n/a	Continuing cal 1.0LL
OP84958-BS	4Q13469.D	04/18/21 23:11	OP84958	Blank Spike
OP84958-MB	4Q13470.D	04/18/21 23:26	OP84958	Method Blank
ZZZZZZ	4Q13471.D	04/18/21 23:41	OP84958	(unrelated sample)
ZZZZZZ	4Q13473.D	04/19/21 00:11	OP84958	(unrelated sample)
FA84429-3	4Q13475.D	04/19/21 00:41	OP84958	(used for QC only; not part of job JD22888)
OP84958-MS	4Q13477.D	04/19/21 01:11	OP84958	Matrix Spike
S4Q189-CC189	4Q13479.D	04/19/21 01:40	n/a	Continuing cal 20
OP84958-MSD	4Q13481.D	04/19/21 02:10	OP84958	Matrix Spike Duplicate
ZZZZZZ	4Q13483.D	04/19/21 02:40	OP84958	(unrelated sample)
ZZZZZZ	4Q13485.D	04/19/21 03:10	OP84958	(unrelated sample)
ZZZZZZ	4Q13486.D	04/19/21 03:25	OP84958	(unrelated sample)
ZZZZZZ	4Q13487.D	04/19/21 03:40	OP84958	(unrelated sample)

Run Sequence Report

Job Number: JD22888
Account: ALNJ SGS Dayton, NJ
Project: HWINJM: OBGNYS: Honeywell WB 1-8 ELT

Run ID: S4Q189 **Method:** EPA 537M QSM5.3 B-1 **Instrument ID:** GCMS4Q

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S4Q189-CC189	4Q13489.D	04/19/21 04:10	n/a	Continuing cal 20
OP84953-LBS	4Q13491.D	04/19/21 04:40	OP84953	Blank Spike
OP84953-LB	4Q13492.D	04/19/21 04:55	OP84953	Leachate Blank
FA84466-1	4Q13493.D	04/19/21 05:09	OP84953	(used for QC only; not part of job JD22888)
OP84953-MS	4Q13494.D	04/19/21 05:24	OP84953	Matrix Spike
S4Q189-CC189	4Q13495.D	04/19/21 05:39	n/a	Continuing cal 20
OP84946-BS	4Q13497.D	04/19/21 06:09	OP84946	Blank Spike
OP84946-MB	4Q13498.D	04/19/21 06:24	OP84946	Method Blank
ZZZZZZ	4Q13499.D	04/19/21 06:39	OP84946	(unrelated sample)
ZZZZZZ	4Q13500.D	04/19/21 06:54	OP84946	(unrelated sample)
ZZZZZZ	4Q13501.D	04/19/21 07:09	OP84946	(unrelated sample)
ZZZZZZ	4Q13502.D	04/19/21 07:24	OP84946	(unrelated sample)
ZZZZZZ	4Q13503.D	04/19/21 07:39	OP84946	(unrelated sample)
ZZZZZZ	4Q13504.D	04/19/21 07:54	OP84946	(unrelated sample)
S4Q189-CC189	4Q13506.D	04/19/21 08:23	n/a	Continuing cal 20
FA84541-1	4Q13508.D	04/19/21 08:53	OP84946	(used for QC only; not part of job JD22888)
OP84946-MS	4Q13509.D	04/19/21 09:10	OP84946	Matrix Spike
OP84946-MSD	4Q13510.D	04/19/21 09:25	OP84946	Matrix Spike Duplicate
ZZZZZZ	4Q13511.D	04/19/21 09:40	OP84946	(unrelated sample)
ZZZZZZ	4Q13512.D	04/19/21 09:55	OP84946	(unrelated sample)
ZZZZZZ	4Q13513.D	04/19/21 10:10	OP84946	(unrelated sample)
ZZZZZZ	4Q13514.D	04/19/21 10:24	OP84946	(unrelated sample)
ZZZZZZ	4Q13515.D	04/19/21 10:39	OP84946	(unrelated sample)
S4Q189-ECC189	4Q13516.D	04/19/21 10:54	n/a	Ending cal 20

MS Semi-volatiles

Raw Data

(SGS Orlando, FL)

Perfluorinated Compounds by LC/MS/MS

Data File	:	3q36635.d
Operator	:	marthav
Acq. Method	:	537_ID.m
Acq. Date-Time	:	4/15/2021 2:30:28 AM
Sample Name	:	JD22888-1
Vial	:	P2-E3
DA Method File	:	ID_041321_S3Q537.quantmethod.xml
Batch Name	:	s3q538.batch.bin
Sample Information	:	op84900,S3Q538,280,,,1,1,water

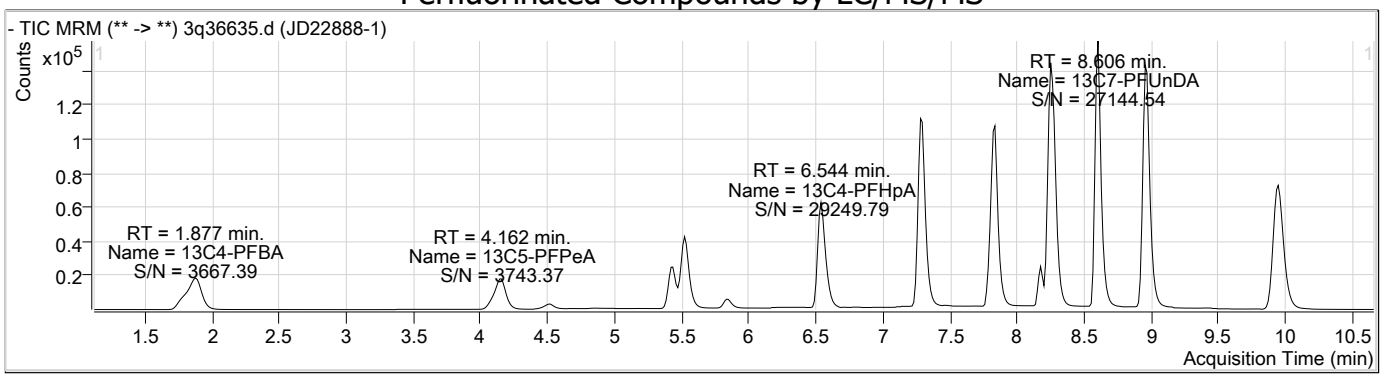
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.877	217.0 -> 172.0	150445	20.00	µg/L	0.038
M5-PFPeA	4.162	268.0 -> 223.0	111779	20.00	µg/L	0.088
M5-PFHxA	5.529	318.0 -> 273.0	174014	20.00	µg/L	-0.101
M4-PFHpA	6.544	367.0 -> 322.0	233799	20.00	µg/L	-0.063
M8-PFOA	7.301	421.0 -> 376.0	276124	20.00	µg/L	-0.025
M9-PFNA	7.842	472.0 -> 427.0	303407	20.00	µg/L	-0.013
M6-PFDA	8.257	519.0 -> 474.0	365995	20.00	µg/L	0.000
M7-PFUnDA	8.606	570.0 -> 525.0	495433	20.00	µg/L	0.000
M2-PFDoDA	8.957	615.0 -> 570.0	523865	20.00	µg/L	0.000
M2-PFTeDA	9.944	715.0 -> 670.0	400114	20.00	µg/L	0.000
M8-FOSA	7.803	506.0 -> 78.0	80232	20.00	µg/L	-0.013
M3-PFBS	4.509	302.0 -> 99.0	15303	20.00	µg/L	0.063
M3-PFHxS	6.579	402.0 -> 99.0	20212	20.00	µg/L	-0.075
M8-PFOS	7.828	507.0 -> 99.0	27208	20.00	µg/L	-0.013
M2-4:2FTS	5.434	329.0 -> 309.0	103997	20.00	µg/L	-0.078
M2-6:2FTS	7.287	429.0 -> 409.0	144310	20.00	µg/L	-0.025
M2-8:2FTS	8.282	529.0 -> 509.0	143580	20.00	µg/L	0.000
M3-MeFOSAA	8.177	573.0 -> 419.0	68230	20.00	µg/L	0.000
M3-HFPO-DA	5.845	287.0 -> 169.0	21966	20.00	µg/L	-0.100
M5-EtFOSAA	8.277	589.0 -> 419.0	56989	20.00	µg/L	-0.013
System Monitoring Compounds						
13C2-4:2FTS	5.434	329.0 -> 309.0	103997	18.17	µg/L	-0.078
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.9%		
13C2-6:2FTS	7.287	429.0 -> 409.0	144310	17.07	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.3%		
13C2-8:2FTS	8.282	529.0 -> 509.0	143580	15.51	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 77.5%		
13C2-PFDoDA	8.957	615.0 -> 570.0	523865	13.58	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 67.9%		
13C2-PFTeDA	9.944	715.0 -> 670.0	400114	14.31	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 71.6%		
13C3-PFBS	4.509	302.0 -> 99.0	15303	18.98	µg/L	0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.9%		
13C3-PFHxS	6.579	402.0 -> 99.0	20212	17.75	µg/L	-0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.7%		
13C4-PFBA	1.877	217.0 -> 172.0	150445	19.20	µg/L	0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.0%		
13C4-PFHpA	6.544	367.0 -> 322.0	233799	18.04	µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.2%		
13C5-PFHxA	5.529	318.0 -> 273.0	174014	19.01	µg/L	-0.101
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.1%		
13C5-PFPeA	4.162	268.0 -> 223.0	111779	19.04	µg/L	0.088
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.2%		
13C6-PFDA	8.257	519.0 -> 474.0	365995	15.93	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 79.6%		

Perfluorinated Compounds by LC/MS/MS

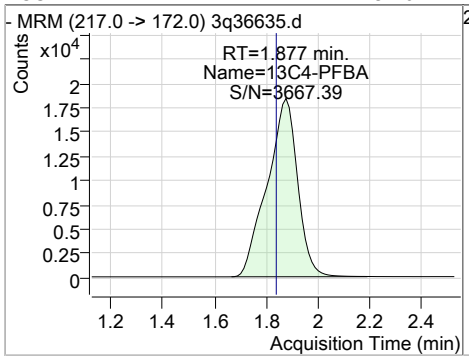
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.606	570.0 -> 525.0	495433	15.67	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 78.4%			
13C8-FOSA	7.803	506.0 -> 78.0	80232	15.11	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 75.5%			
13C8-PFOA	7.301	421.0 -> 376.0	276124	18.14	µg/L		-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.7%			
13C8-PFOS	7.828	507.0 -> 99.0	27208	15.41	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 77.0%			
13C9-PFNA	7.842	472.0 -> 427.0	303407	17.18	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.9%			
d3-MeFOSAA	8.177	573.0 -> 419.0	68230	14.29	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 71.5%			
13C3-HFPO-DA	5.845	287.0 -> 169.0	21965	18.11	µg/L		-0.100
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.5%			
d5-EtFOSAA	8.277	589.0 -> 419.0	56986	13.85	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 69.3%			
Target Compounds							**QValue**
4:2FTS	-	327.0 -> 307.0	-	N.D.			
6:2FTS	-	427.0 -> 407.0	-	N.D.			
8:2FTS	-	527.0 -> 507.0	-	N.D.			
EtFOSAA	-	584.0 -> 419.0	-	N.D.			
FOSA	-	498.0 -> 78.0	-	N.D.			
MeFOSAA	-	570.0 -> 419.0	-	N.D.			
PFBA	-	213.0 -> 169.0	-	N.D.			
PFBS	4.863	299.0 -> 80.0	0	0.00	µg/L	m	1
PFDA	-	513.0 -> 469.0	-	N.D.			
PFDoDA	-	613.0 -> 569.0	-	N.D.			
PFDS	-	599.0 -> 80.0	-	N.D.			
PFHpA	-	363.0 -> 319.0	-	N.D.			
PFHpS	-	449.0 -> 80.0	-	N.D.			
PFHxA	-	313.0 -> 269.0	-	N.D.			
PFHxS	-	399.0 -> 80.0	-	N.D.			
PFNA	-	463.0 -> 419.0	-	N.D.			
PFNS	-	549.0 -> 80.0	-	N.D.			
PFOA	-	413.0 -> 369.0	-	N.D.			
PFOS	-	499.0 -> 80.0	-	N.D.			
PFPeA	-	263.0 -> 219.0	-	N.D.			
PFPeS	-	349.0 -> 80.0	-	N.D.			
PFTeDA	-	713.0 -> 669.0	-	N.D.			
PFTrDA	-	663.0 -> 619.0	-	N.D.			
PFUnDA	-	563.0 -> 519.0	-	N.D.			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.			
ADONA	-	377.0 -> 251.0	-	N.D.			
HFPO-DA	-	329.0 -> 169.0	-	N.D.			

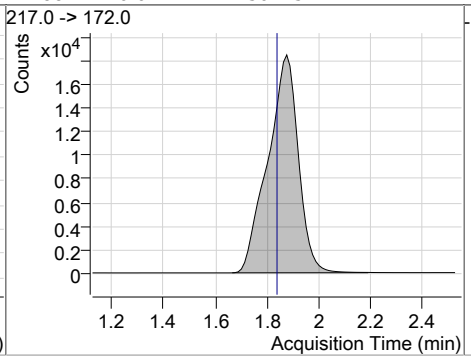
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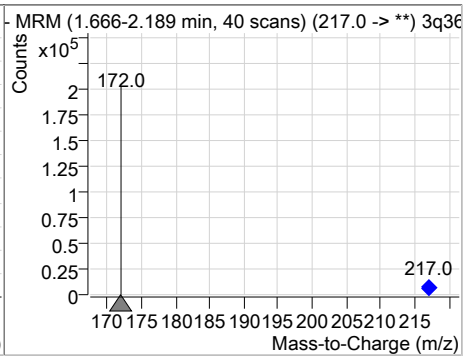
Perfluorinated Compounds by LC/MS/MS



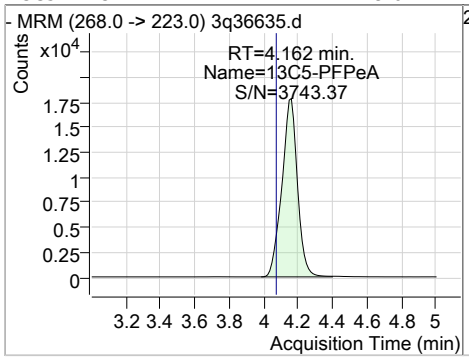
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.20	1.88	0.04	150445				

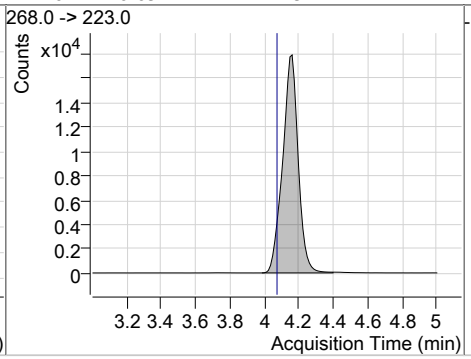


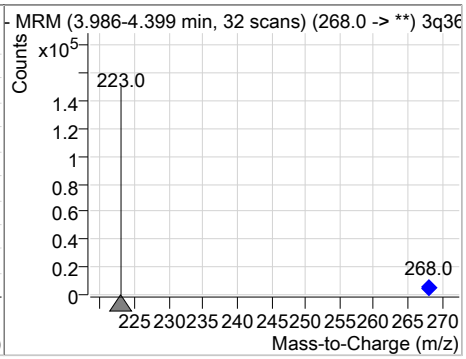




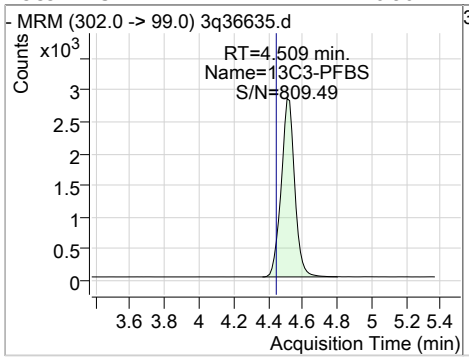
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.04	4.16	0.09	111779				

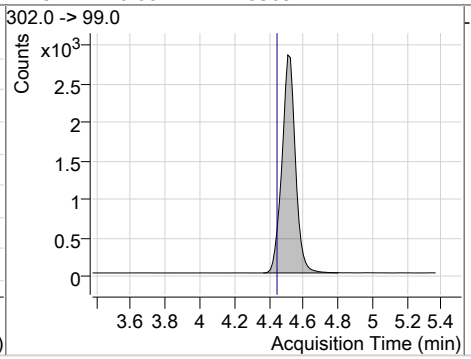


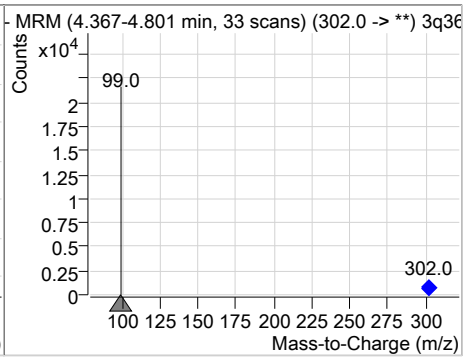




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	18.98	4.51	0.06	15303				

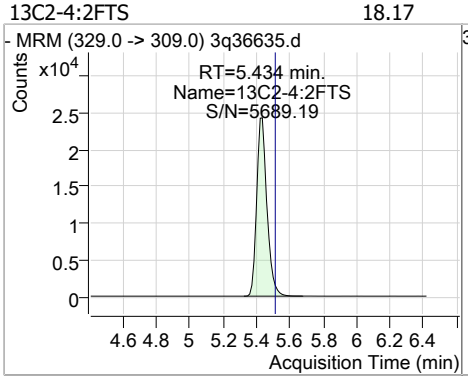


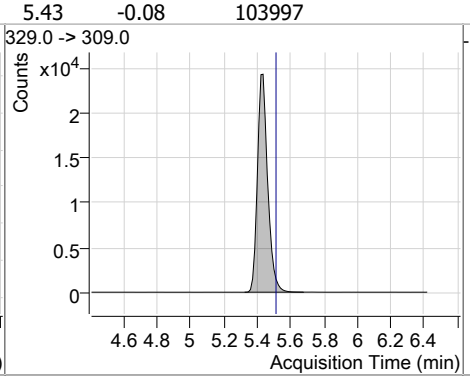


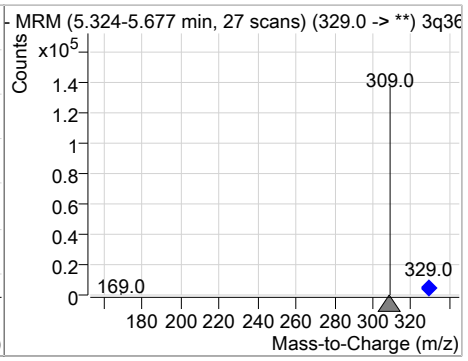


Perfluorinated Compounds by LC/MS/MS

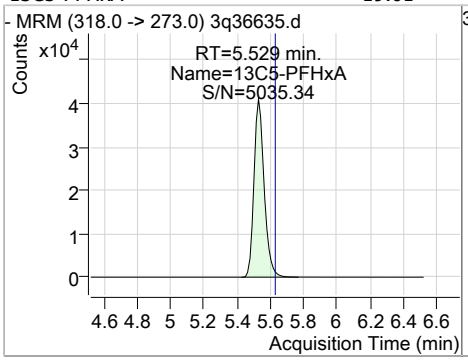
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.17	5.43	-0.08	103997				

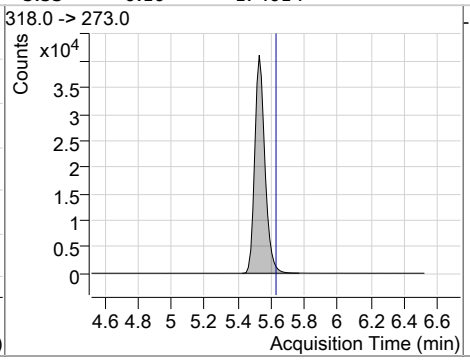


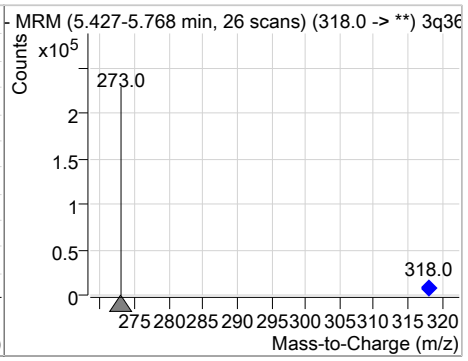




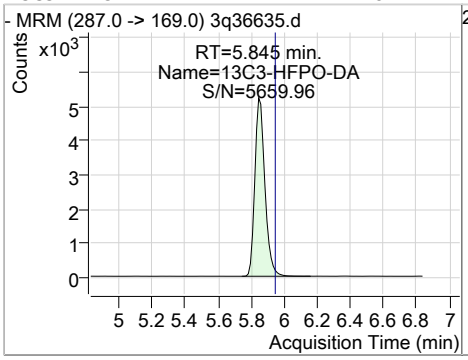
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.01	5.53	-0.10	174014				

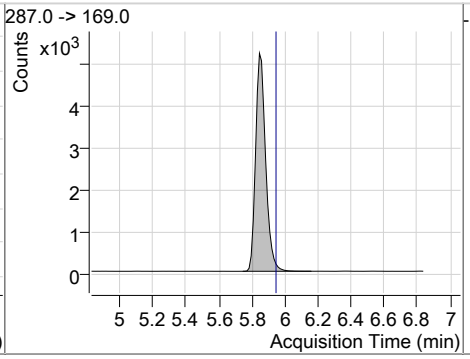


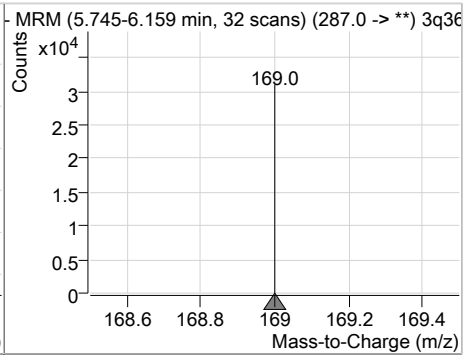




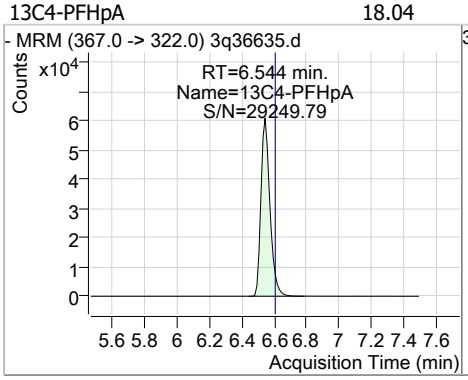
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	18.11	5.85	-0.10	21965				

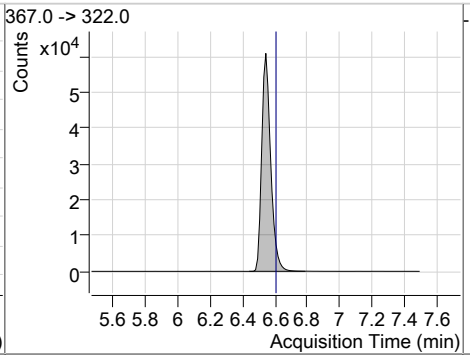


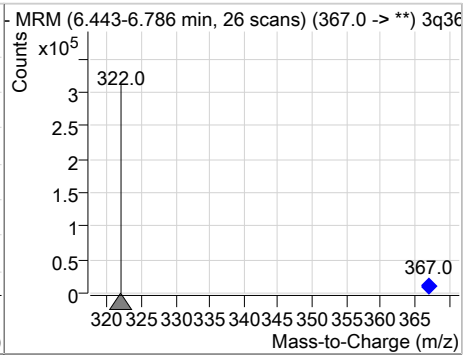




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	18.04	6.54	-0.06	233799				

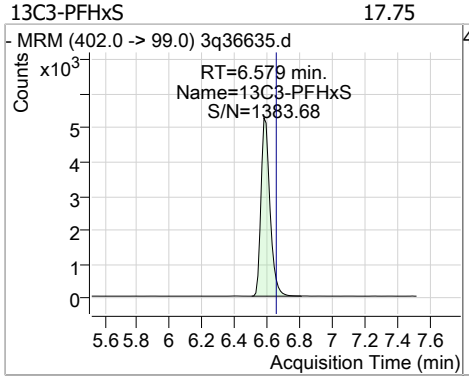


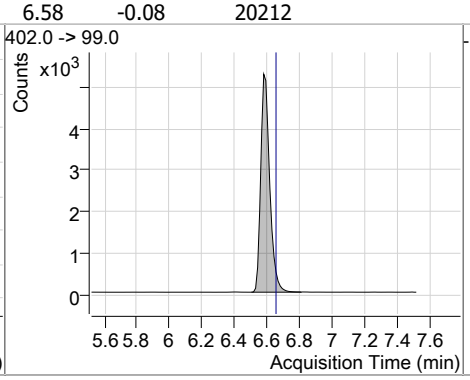


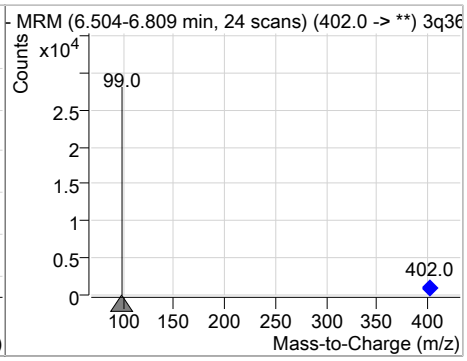


Perfluorinated Compounds by LC/MS/MS

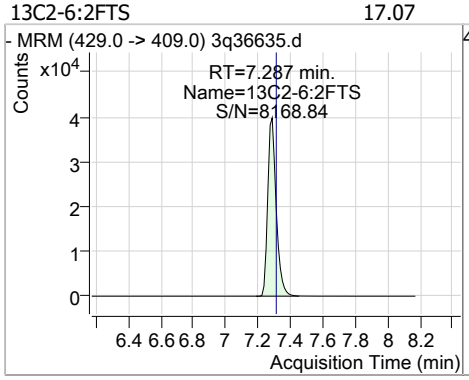
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	17.75	6.58	-0.08	20212				

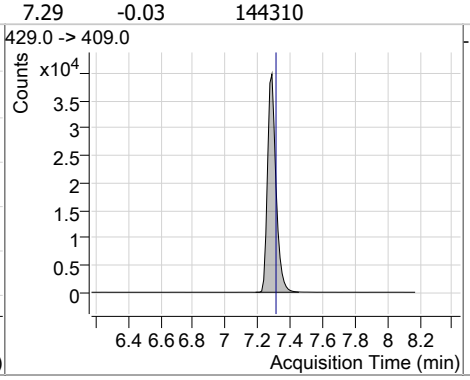


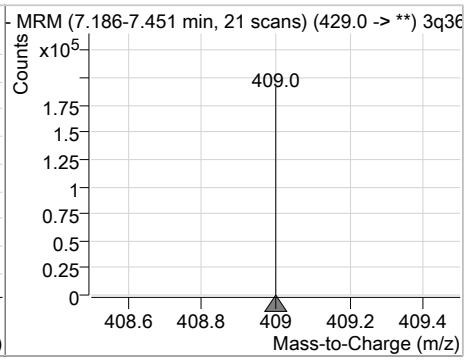




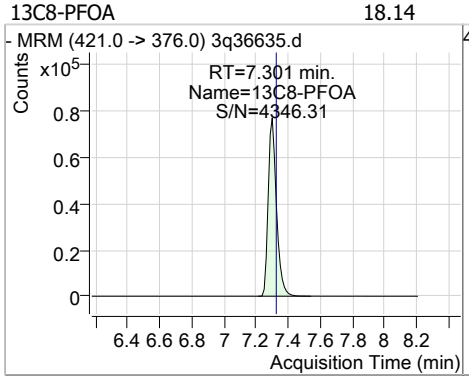
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	17.07	7.29	-0.03	144310				

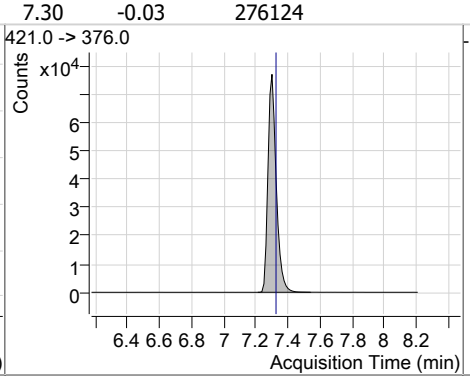


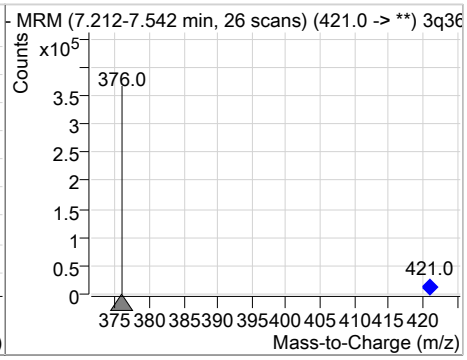




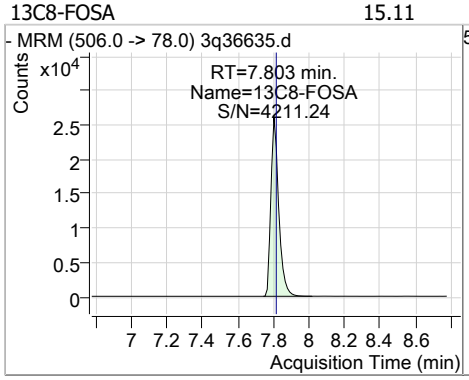
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	18.14	7.30	-0.03	276124				

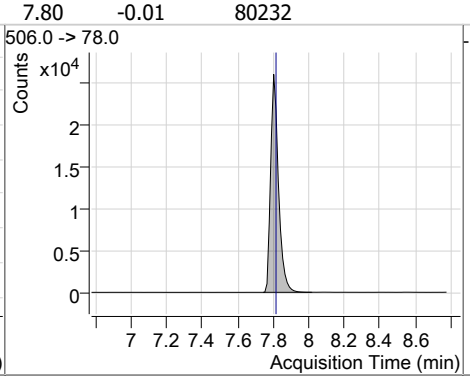


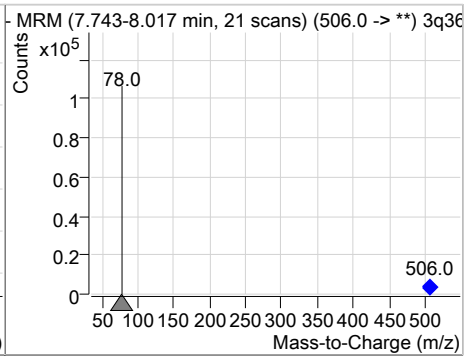




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	15.11	7.80	-0.01	80232				

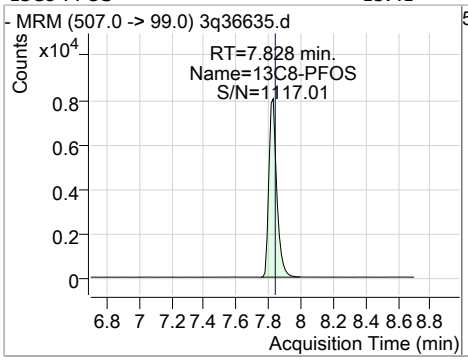


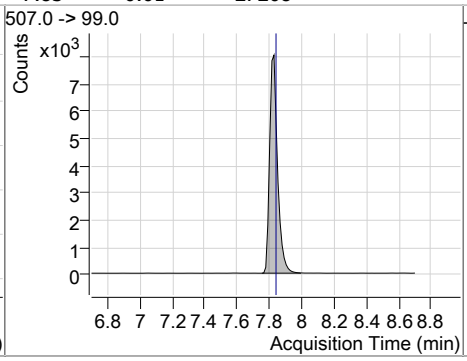


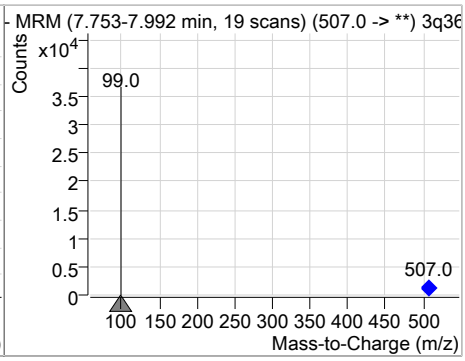


Perfluorinated Compounds by LC/MS/MS

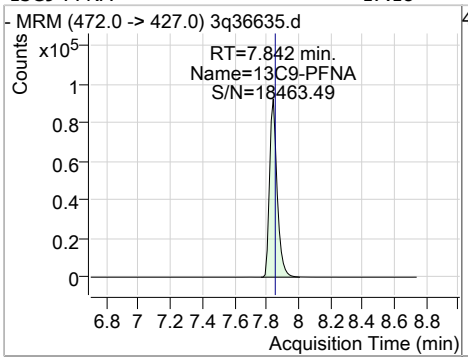
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	15.41	7.83	-0.01	27208				

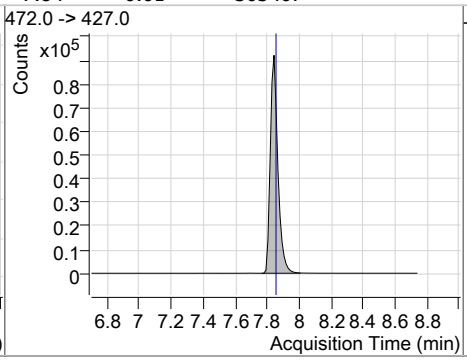


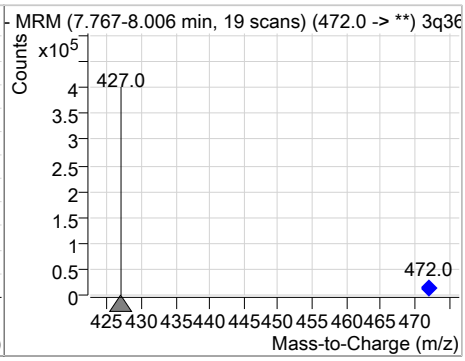




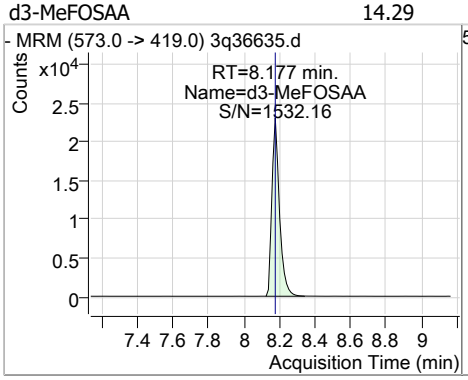
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	17.18	7.84	-0.01	303407				

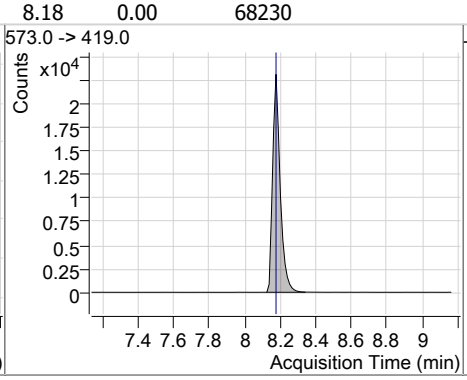


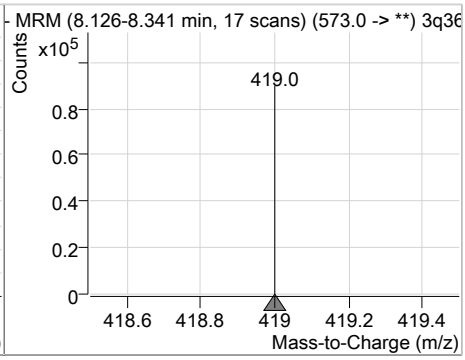




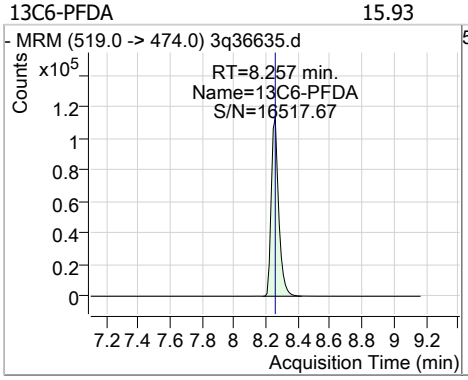
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	14.29	8.18	0.00	68230				

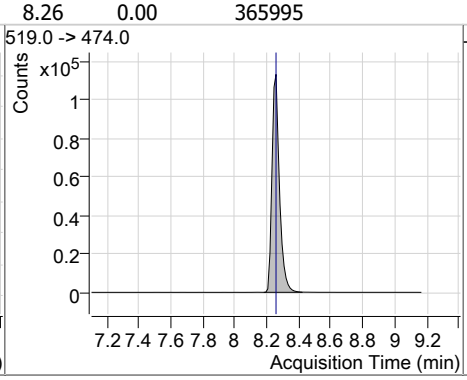


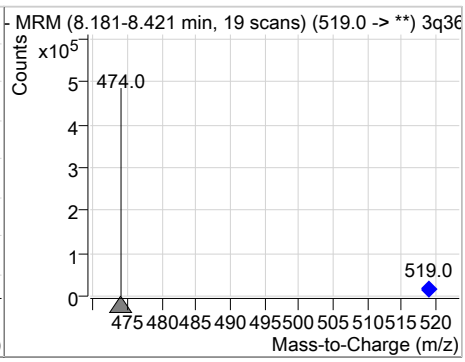




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	15.93	8.26	0.00	365995				

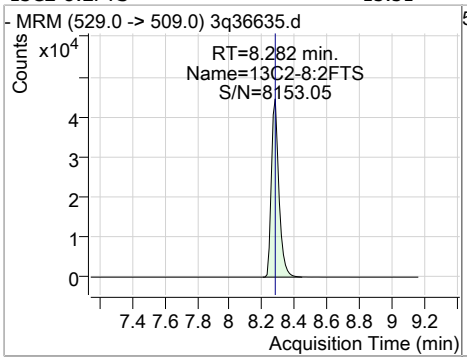


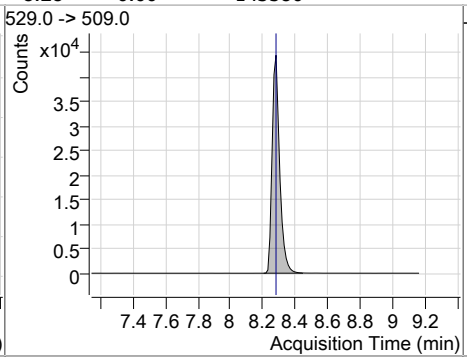


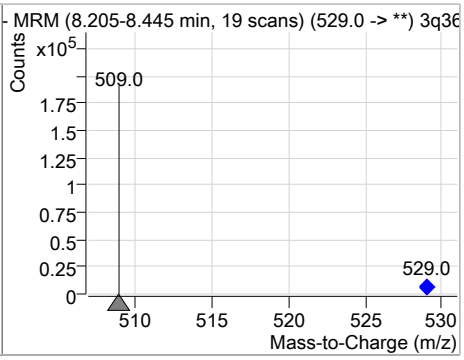


Perfluorinated Compounds by LC/MS/MS

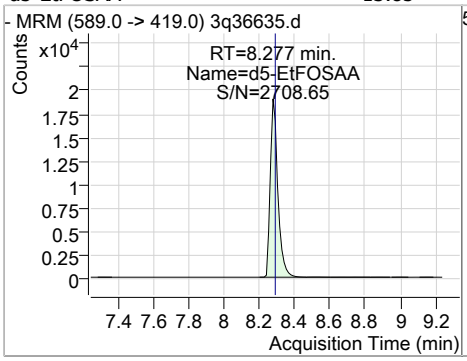
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	15.51	8.28	0.00	143580				

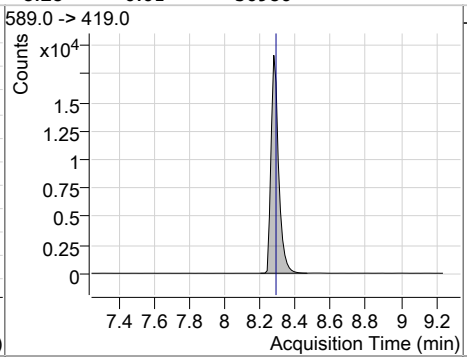


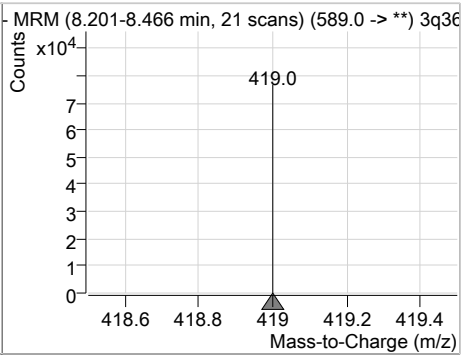




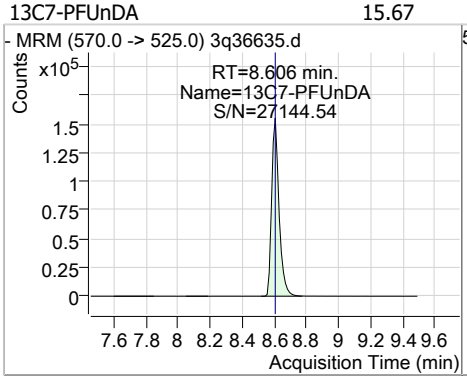
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	13.85	8.28	-0.01	56986				

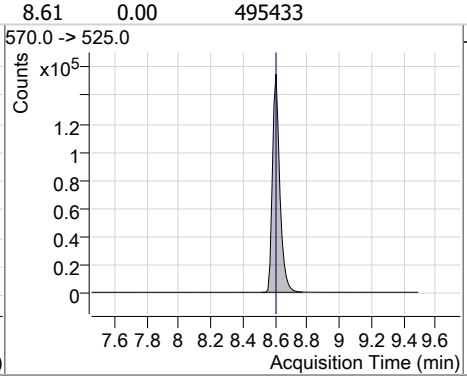


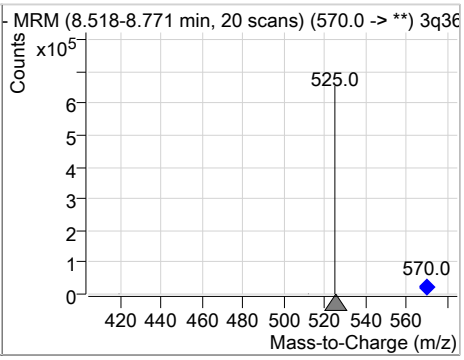




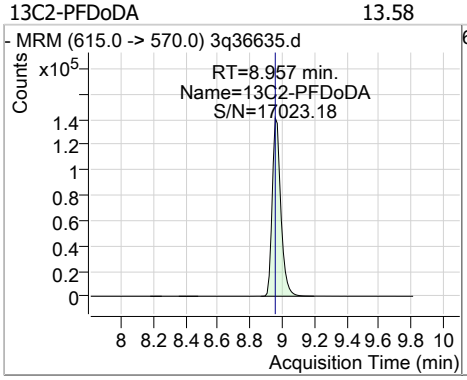
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	15.67	8.61	0.00	495433				

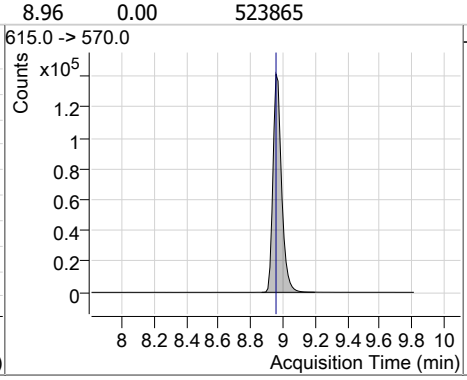


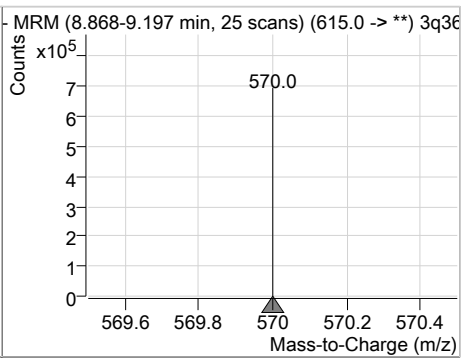




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	13.58	8.96	0.00	523865				

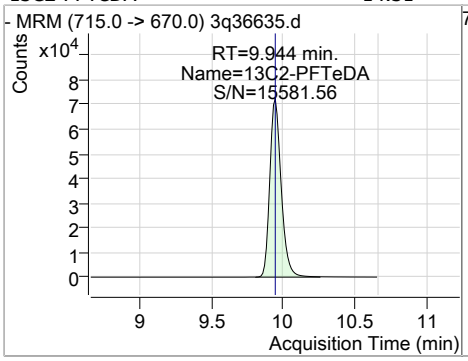


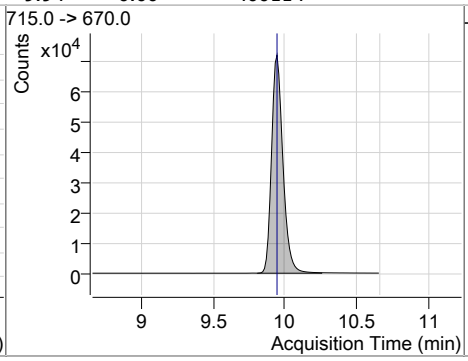


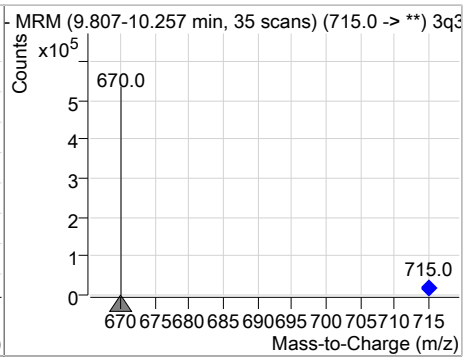


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	14.31	9.94	0.00	400114				







Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:40

Perfluorinated Compounds by LC/MS/MS

Data File : 4Q13462.d
Operator : natashag
Acq. Method : 537_ID.m
Acq. Date-Time : 4/18/2021 9:27:02 PM
Sample Name : jd22888-2a
Vial : P1-C8
DA Method File : ID_041821_S4Q189.quantmethod.xml
Batch Name : s4q189a.batch.bin
Sample Information : op84941,S4Q189,2.10,,,1,1,soil

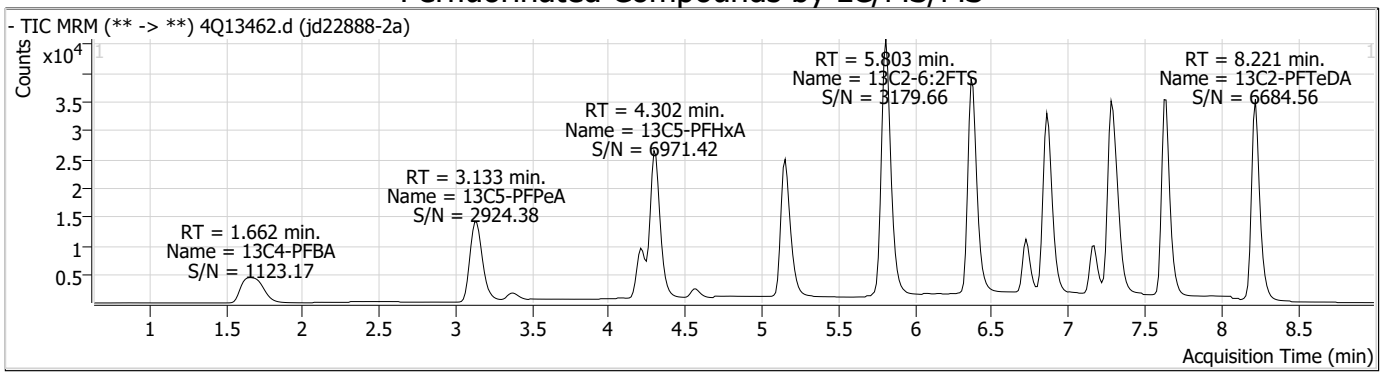
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.662	217.0 -> 172.0	44804	20.00	µg/L	-0.025
M5-PFPeA	3.133	268.0 -> 223.0	81577	20.00	µg/L	-0.012
M5-PFHxA	4.302	318.0 -> 273.0	112229	20.00	µg/L	-0.013
M4-PFHpA	5.157	367.0 -> 322.0	98334	20.00	µg/L	0.000
M8-PFOA	5.816	421.0 -> 376.0	136089	20.00	µg/L	-0.012
M9-PFNA	6.373	472.0 -> 427.0	144348	20.00	µg/L	-0.012
M6-PFDA	6.867	519.0 -> 474.0	91164	20.00	µg/L	0.000
M7-PFUnDA	7.284	570.0 -> 525.0	125221	20.00	µg/L	-0.012
M2-PFDoDA	7.628	615.0 -> 570.0	129710	20.00	µg/L	-0.012
M2-PFTeDA	8.221	715.0 -> 670.0	132845	20.00	µg/L	-0.013
M8-FOSA	6.732	506.0 -> 78.0	35057	20.00	µg/L	0.000
M3-PFBS	3.381	302.0 -> 99.0	6192	20.00	µg/L	0.000
M3-PFHxS	5.192	402.0 -> 99.0	5808	20.00	µg/L	-0.012
M8-PFOS	6.372	507.0 -> 99.0	8140	20.00	µg/L	0.000
M2-4:2FTS	4.212	329.0 -> 309.0	38207	20.00	µg/L	0.000
M2-6:2FTS	5.803	429.0 -> 409.0	52062	20.00	µg/L	0.000
M2-8:2FTS	6.878	529.0 -> 509.0	41935	20.00	µg/L	-0.012
M3-MeFOSAA	7.172	573.0 -> 419.0	31489	20.00	µg/L	0.000
M3-HFPO-DA	4.578	287.0 -> 169.0	6820	20.00	µg/L	0.000
M5-EtFOSAA	7.320	589.0 -> 419.0	27877	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.212	329.0 -> 309.0	38207	16.82	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.1%		
13C2-6:2FTS	5.803	429.0 -> 409.0	52062	17.41	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.0%		
13C2-8:2FTS	6.878	529.0 -> 509.0	41935	17.99	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.0%		
13C2-PFDoDA	7.628	615.0 -> 570.0	129710	18.55	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%		
13C2-PFTeDA	8.221	715.0 -> 670.0	132845	16.93	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.7%		
13C3-PFBS	3.381	302.0 -> 99.0	6192	18.16	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.8%		
13C3-PFHxS	5.192	402.0 -> 99.0	5808	18.03	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.1%		
13C4-PFBA	1.662	217.0 -> 172.0	44804	18.14	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.7%		
13C4-PFHpA	5.157	367.0 -> 322.0	98334	18.45	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.2%		
13C5-PFHxA	4.302	318.0 -> 273.0	112229	18.40	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.0%		
13C5-PFPeA	3.133	268.0 -> 223.0	81577	18.36	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.8%		
13C6-PFDA	6.867	519.0 -> 474.0	91164	19.05	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.2%		

Perfluorinated Compounds by LC/MS/MS

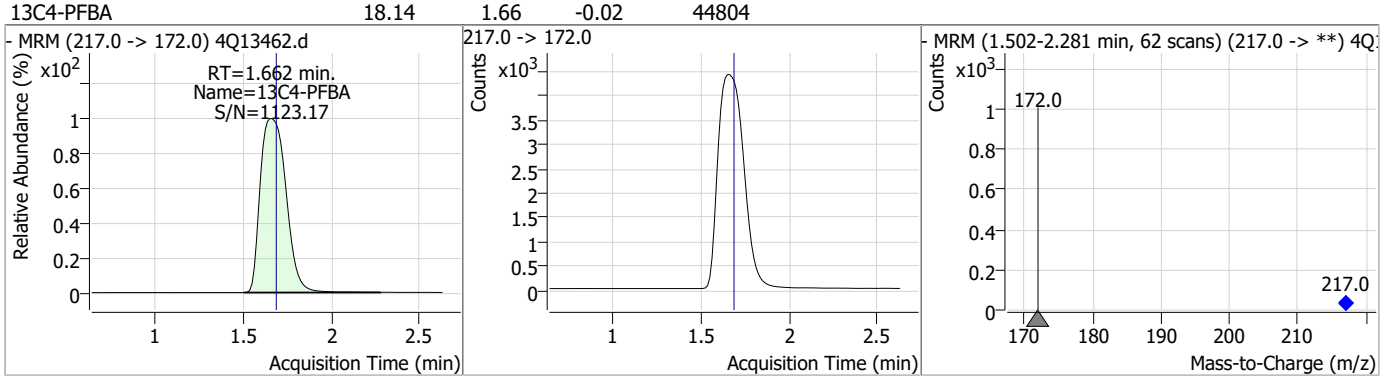
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	7.284	570.0 -> 525.0	125221	19.11	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.6%			
13C8-FOSA	6.732	506.0 -> 78.0	35057	18.89	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.4%			
13C8-PFOA	5.816	421.0 -> 376.0	136089	18.53	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.6%			
13C8-PFOS	6.372	507.0 -> 99.0	8140	19.12	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.6%			
13C9-PFNA	6.373	472.0 -> 427.0	144348	18.50	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.5%			
d3-MeFOSAA	7.172	573.0 -> 419.0	31489	16.94	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.7%			
13C3-HFPO-DA	4.578	287.0 -> 169.0	6821	19.55	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.8%			
d5-EtFOSAA	7.320	589.0 -> 419.0	27863	17.83	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.2%			
Target Compounds							QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.			
6:2FTS	-	427.0 -> 407.0	-	N.D.			
8:2FTS	-	527.0 -> 507.0	-	N.D.			
EtFOSAA	-	584.0 -> 419.0	-	N.D.			
FOSA	-	498.0 -> 78.0	-	N.D.			
MeFOSAA	-	570.0 -> 419.0	-	N.D.			
PFBA	1.644	213.0 -> 169.0	164	0.17	µg/L		100
PFBS	-	299.0 -> 80.0	-	N.D.			
PFDA	-	513.0 -> 469.0	-	N.D.			
PFDoDA	-	613.0 -> 569.0	-	N.D.			
PFDS	-	599.0 -> 80.0	-	N.D.			
PFHpA	-	363.0 -> 319.0	-	N.D.			
PFHpS	-	449.0 -> 80.0	-	N.D.			
PFHxA	-	313.0 -> 269.0	-	N.D.			
PFHxS	-	399.0 -> 80.0	-	N.D.			
PFNA	6.386	463.0 -> 419.0	813	0.14	µg/L		96
PFNS	-	549.0 -> 80.0	-	N.D.			
PFOA	5.817	413.0 -> 369.0	1840	0.23	µg/L	m	97
PFOS	6.360	499.0 -> 80.0	509	0.59	µg/L	m	95
PFPeA	-	263.0 -> 219.0	-	N.D.			
PFPeS	-	349.0 -> 80.0	-	N.D.			
PFTeDA	-	713.0 -> 669.0	-	N.D.			
PFTrDA	-	663.0 -> 619.0	-	N.D.			
PFUnDA	-	563.0 -> 519.0	-	N.D.			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.			
ADONA	-	377.0 -> 251.0	-	N.D.			
HFPO-DA	-	329.0 -> 169.0	-	N.D.			

 # = Qualifier out of range, m = manually integrated, + = Area summed

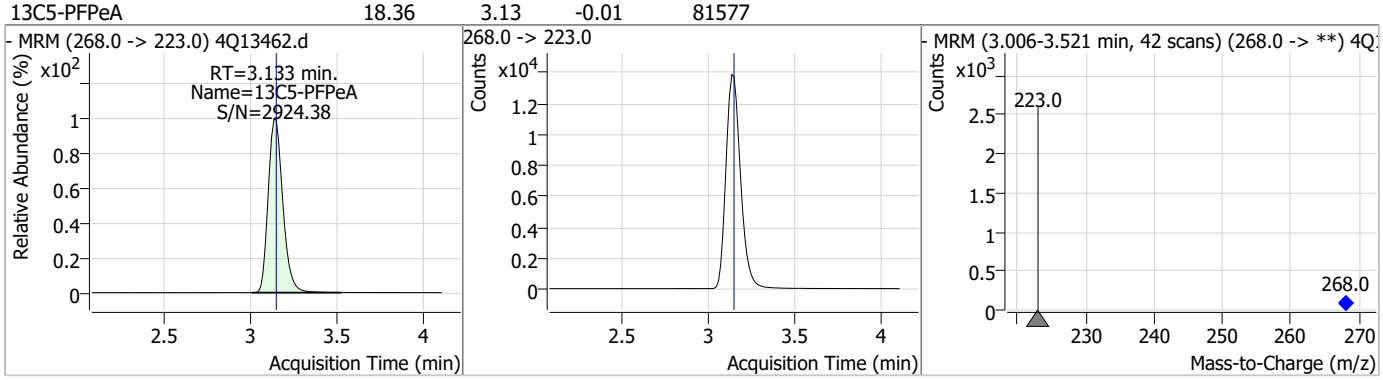
Perfluorinated Compounds by LC/MS/MS



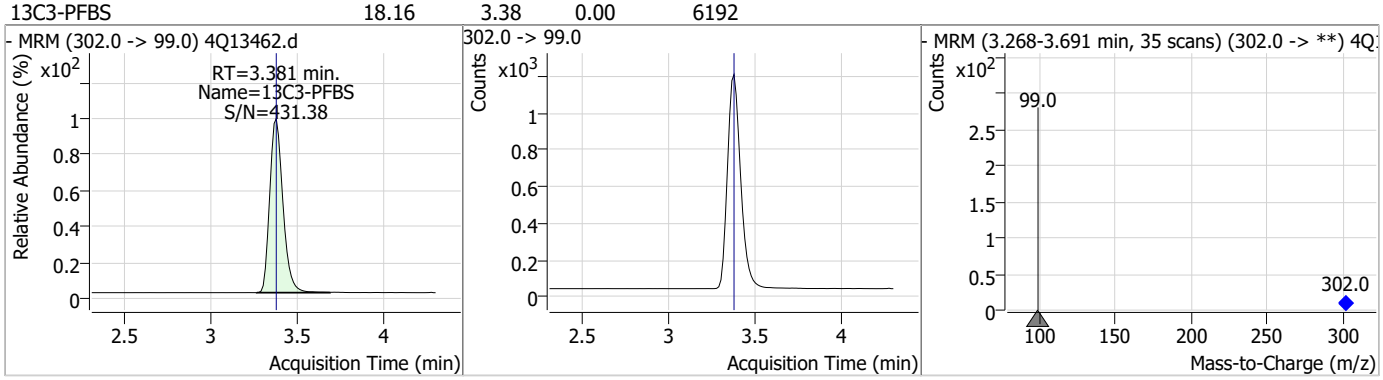
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.14	1.66	-0.02	44804				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	18.36	3.13	-0.01	81577				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	18.16	3.38	0.00	6192				

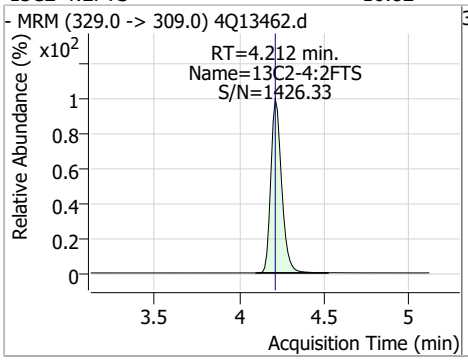


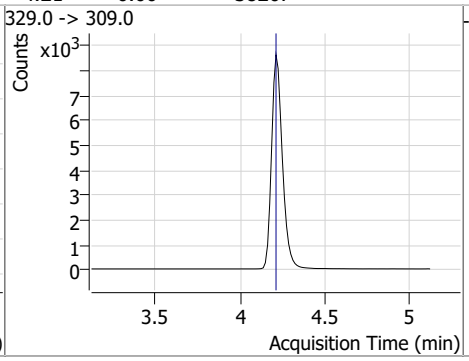
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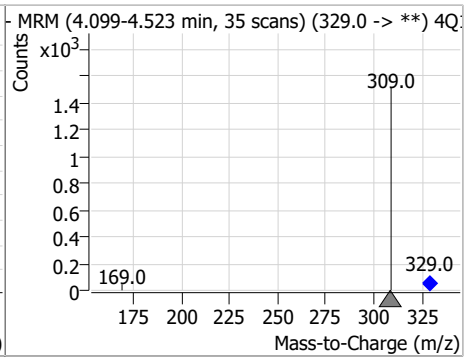
11

Perfluorinated Compounds by LC/MS/MS

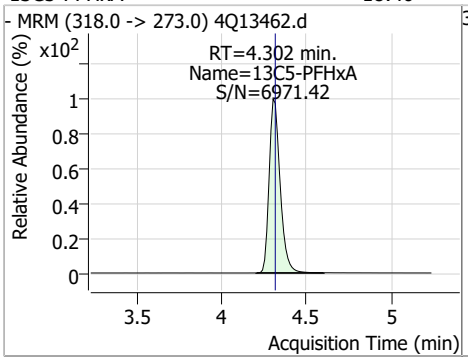
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13C2-4:2FTS	16.82	4.21	0.00	38207				

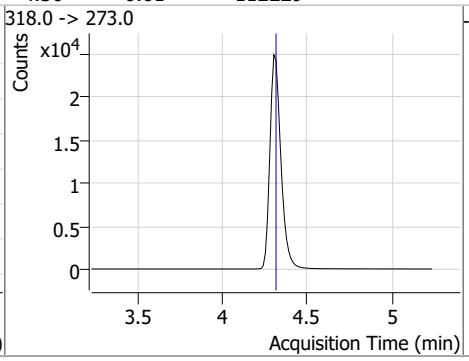


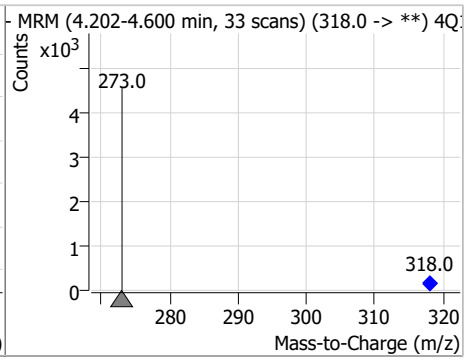




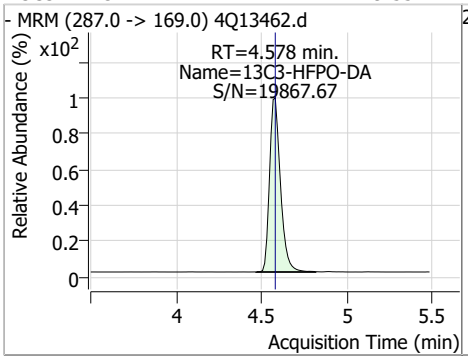
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13C5-PFHxA	18.40	4.30	-0.01	112229				

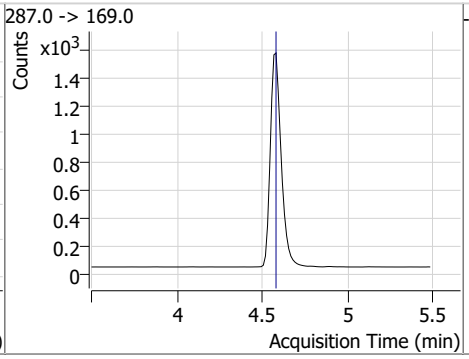


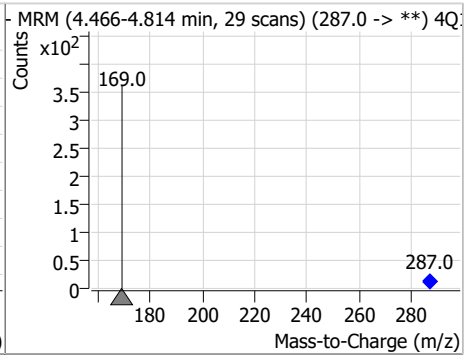




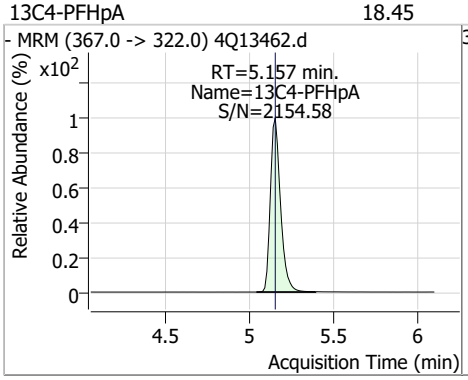
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13C3-HFPO-DA	19.55	4.58	0.00	6821				

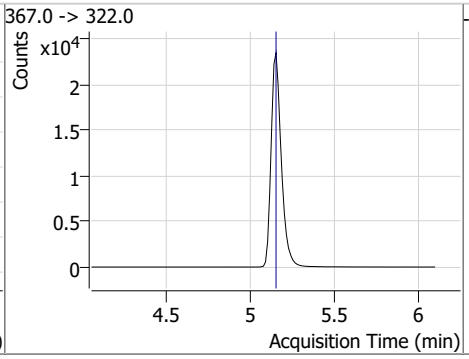


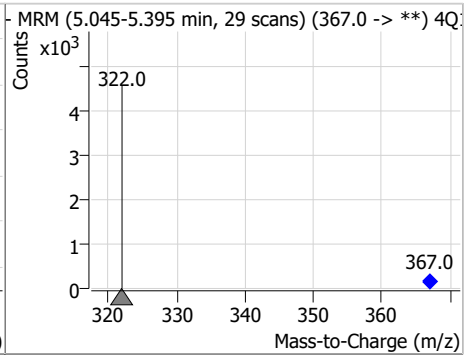




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	18.45	5.16	0.00	98334				

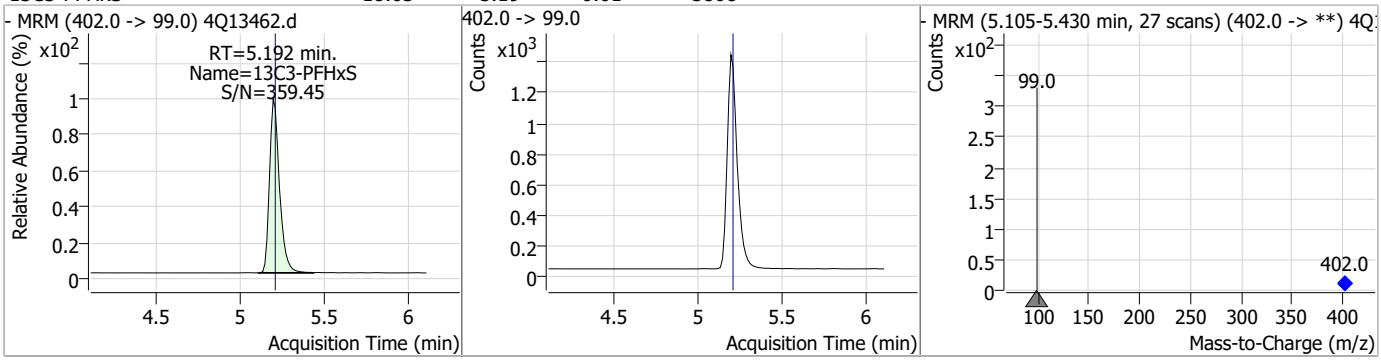




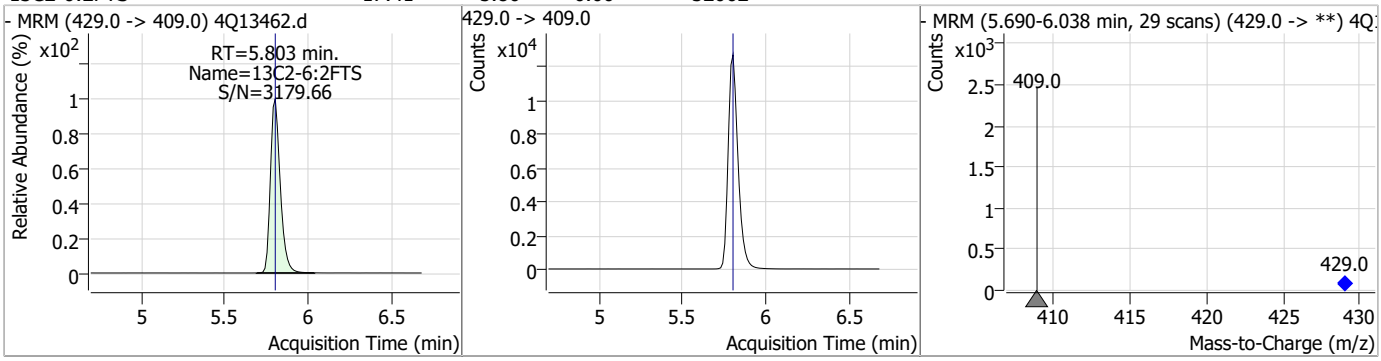


Perfluorinated Compounds by LC/MS/MS

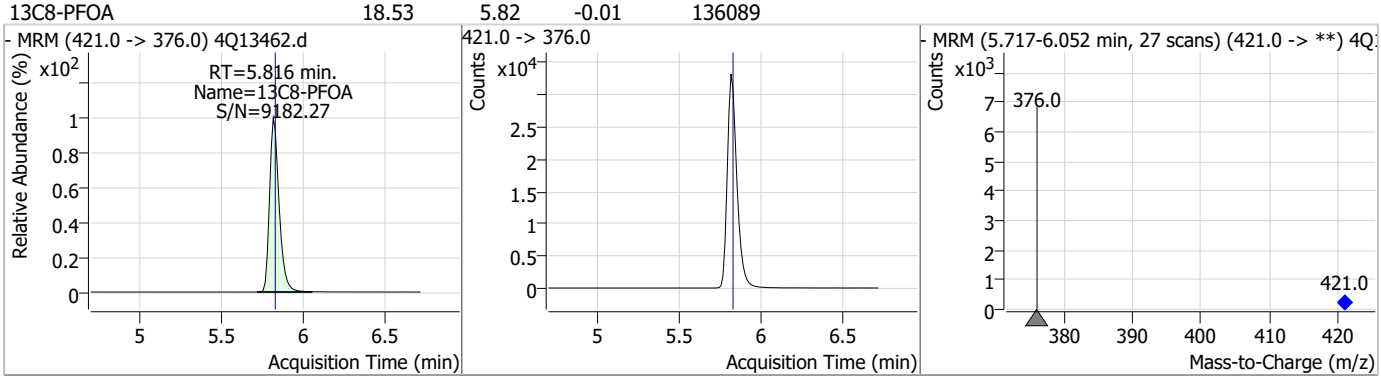
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13C3-PFHxS	18.03	5.19	-0.01	5808				



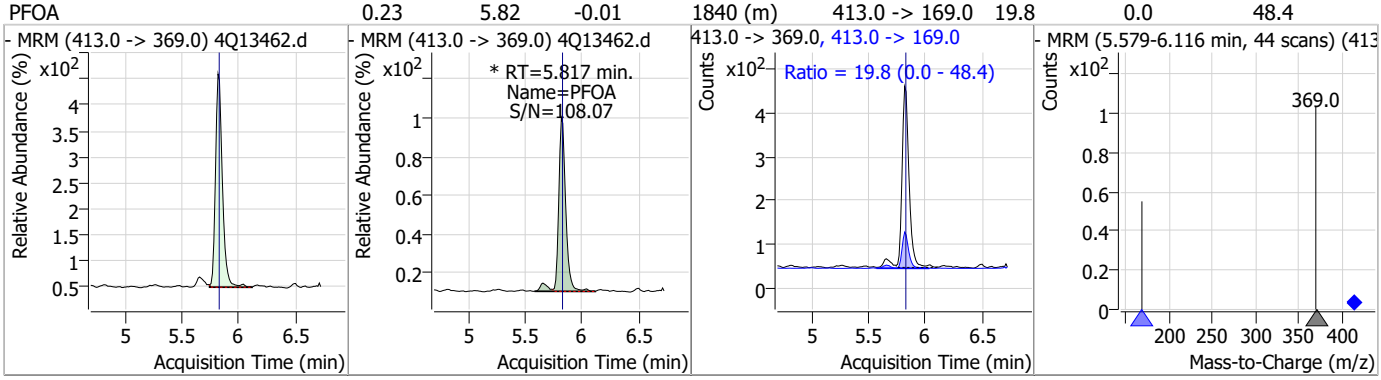
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	17.41	5.80	0.00	52062				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	18.53	5.82	-0.01	136089				

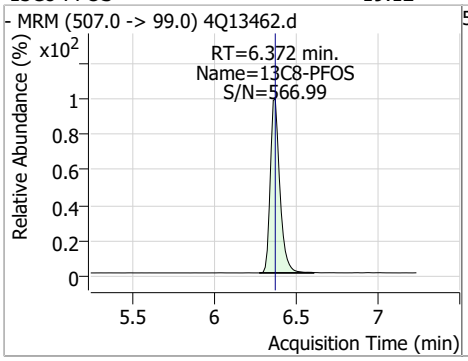


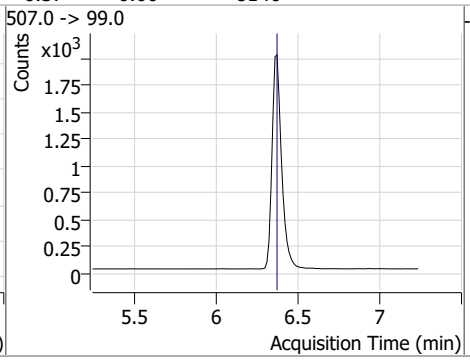
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.23	5.82	-0.01	1840 (m)	413.0 -> 169.0	19.8	0.0	48.4

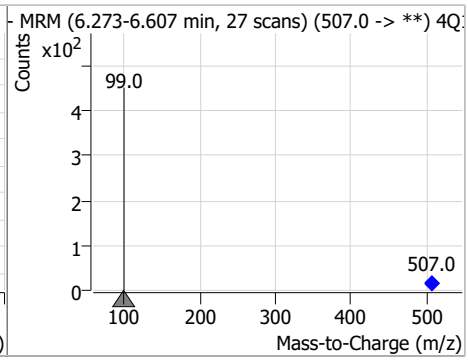


Perfluorinated Compounds by LC/MS/MS

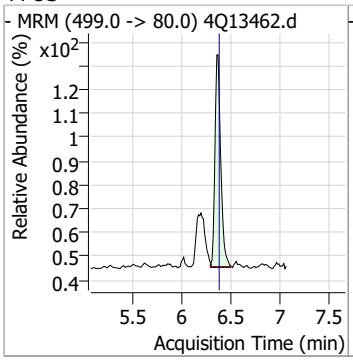
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.12	6.37	0.00	8140				

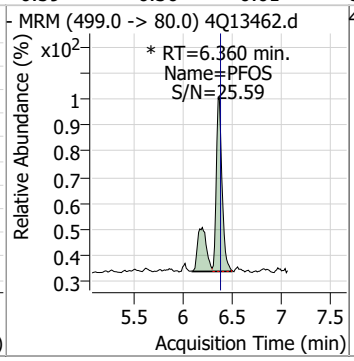


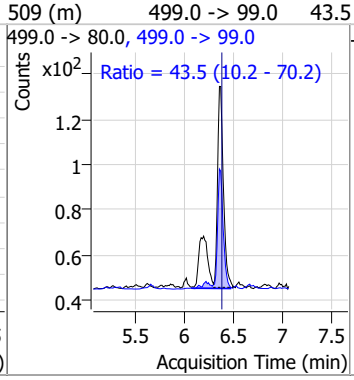


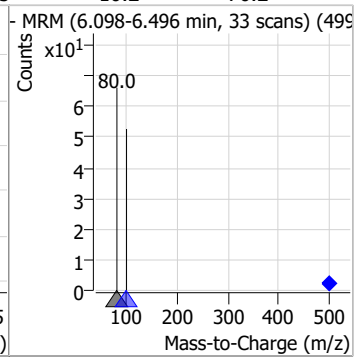


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.59	6.36	-0.01	509 (m)	499.0 -> 99.0	43.5	10.2	70.2

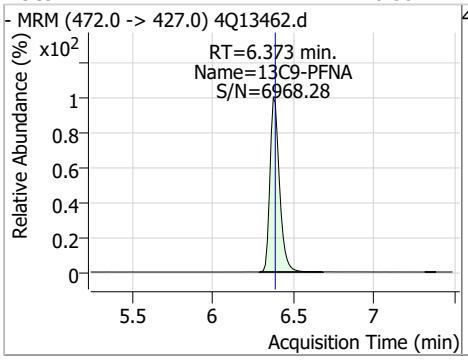


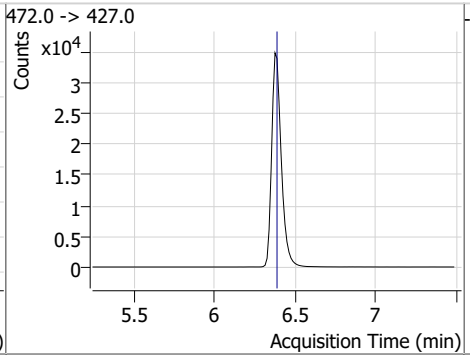


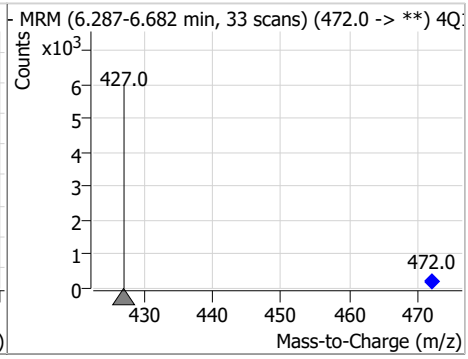




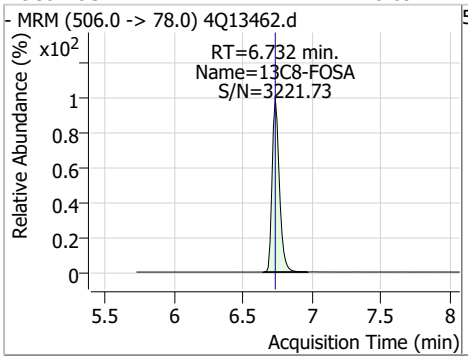
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13C9-PFNA	18.50	6.37	-0.01	144348				

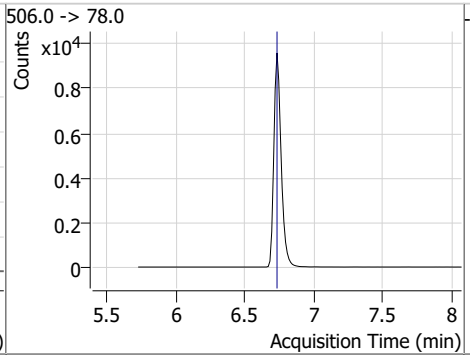


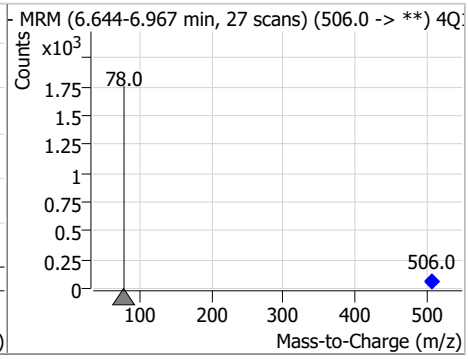




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	18.89	6.73	0.00	35057				

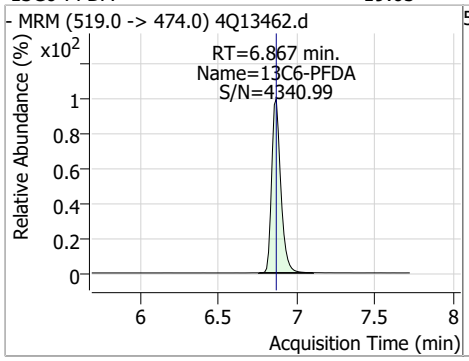


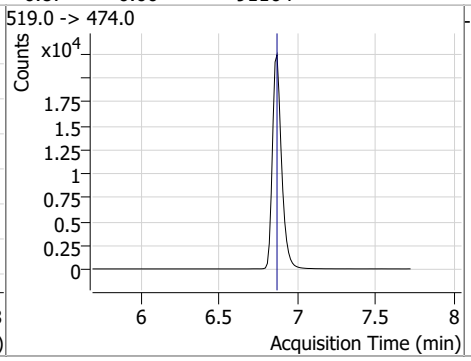


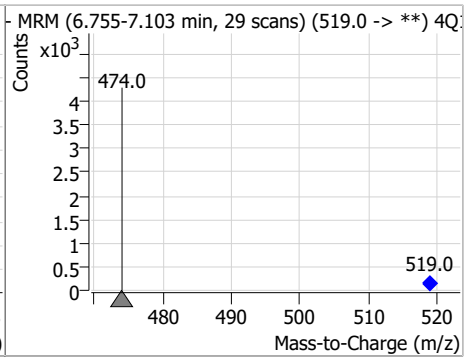


Perfluorinated Compounds by LC/MS/MS

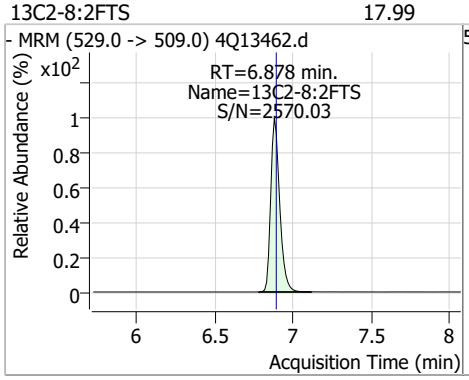
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13C6-PFDA	19.05	6.87	0.00	91164				

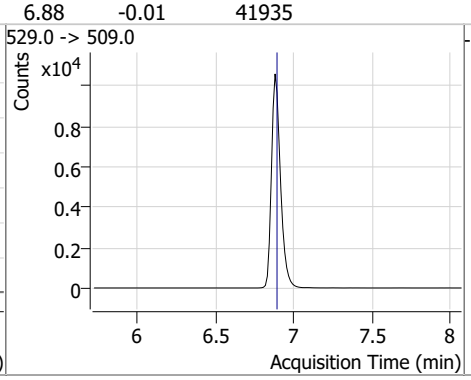


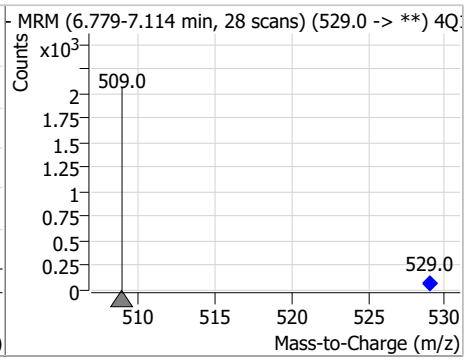




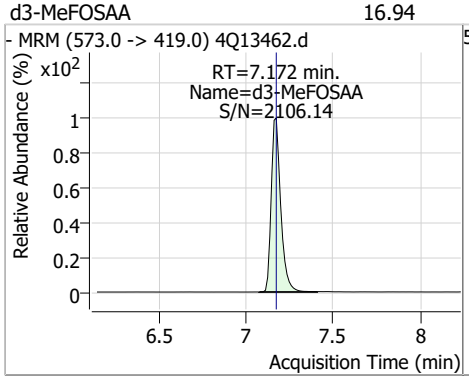
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	17.99	6.88	-0.01	41935				

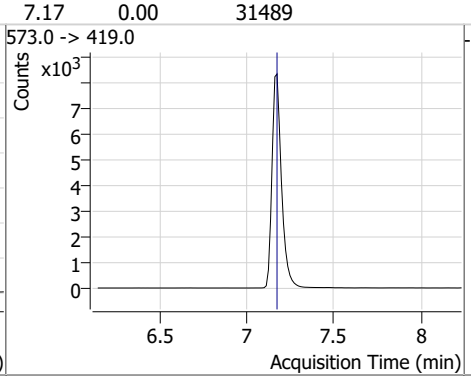


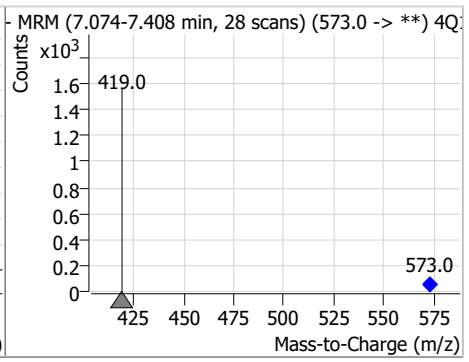




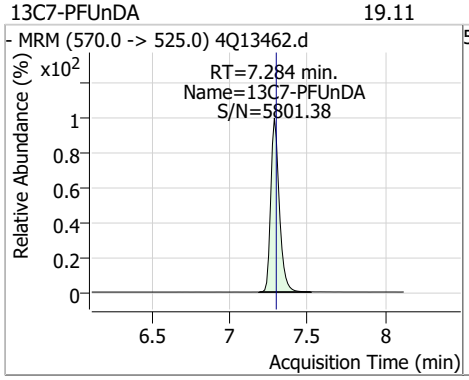
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d3-MeFOSAA	16.94	7.17	0.00	31489				

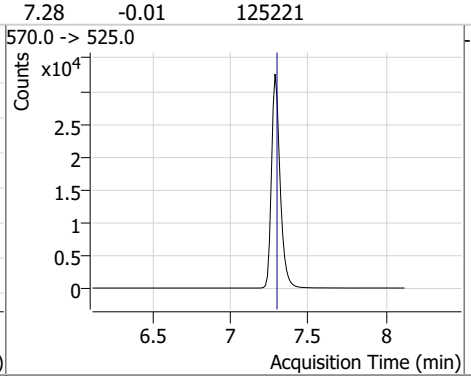


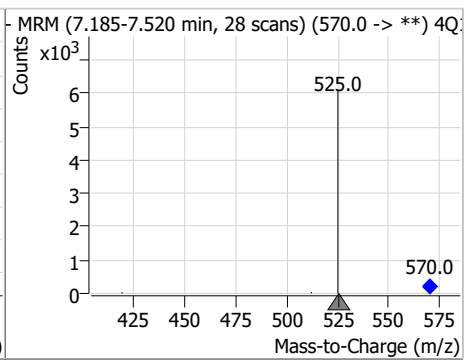




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.11	7.28	-0.01	125221				

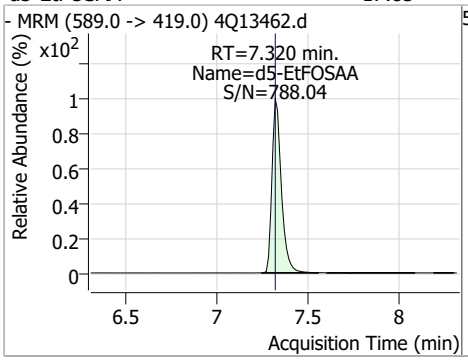


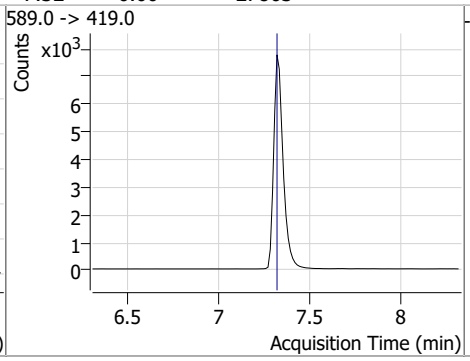


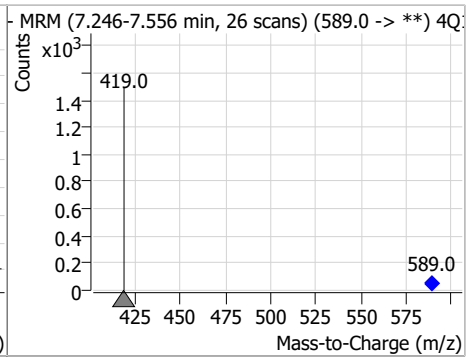


Perfluorinated Compounds by LC/MS/MS

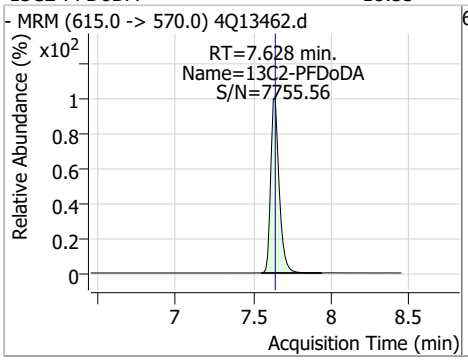
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	17.83	7.32	0.00	27863				

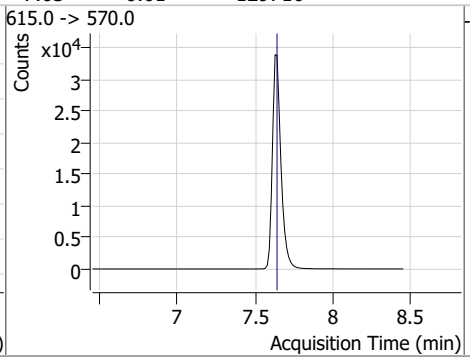


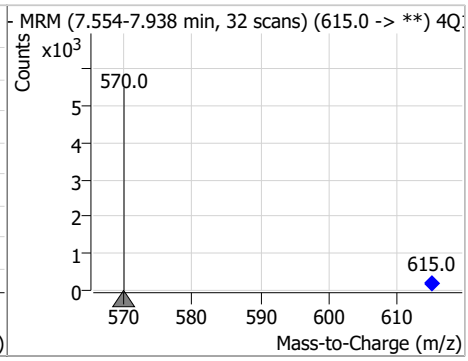




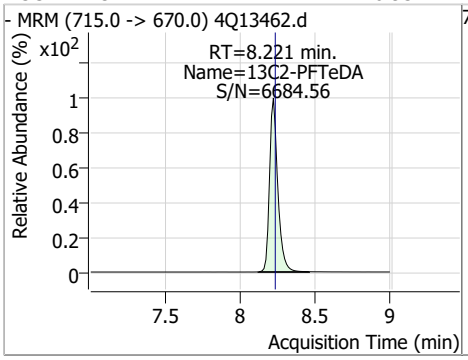
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	18.55	7.63	-0.01	129710				

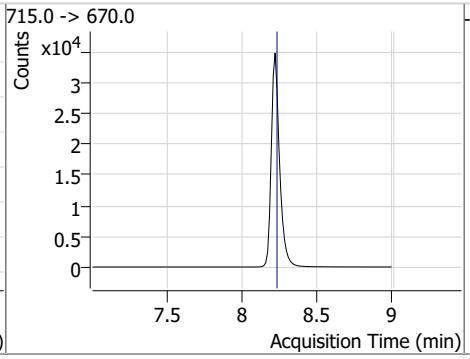


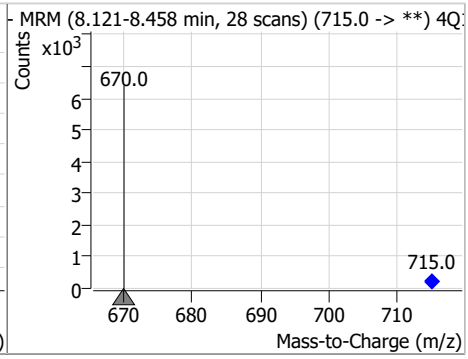




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	16.93	8.22	-0.01	132845				







Manual Integration Approval Summary

Sample Number: JD22888-2A
Lab FileID: 4Q13462.D
Injection Time: 04/18/21 21:27
Method: EPA 537M BY ID
Analyst approved: 04/19/21 10:11 Nancy Saunders
Supervisor approved: 04/19/21 15:40 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanoic acid	335-67-1		5.82	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.36	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:44

Perfluorinated Compounds by LC/MS/MS

Data File : 2q66248.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/17/2021 5:29:13 AM
Sample Name : jd22888-3A
Vial : P4-A3
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q963.batch.bin
Sample Information : op84941,S2Q963,2.01,,,1.0,1,soil

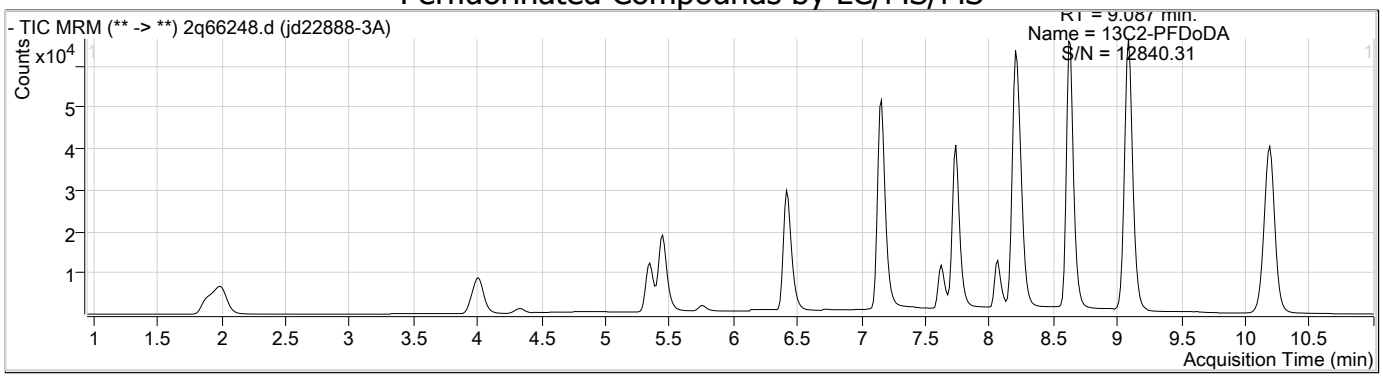
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.180	589.0 -> 419.0	35508	20.00	µg/L	0.025
M4-PFBA	1.989	217.0 -> 172.0	69888	20.00	µg/L	0.000
M5-PFPeA	4.012	268.0 -> 223.0	55997	20.00	µg/L	0.000
M5-PFHxA	5.454	318.0 -> 273.0	84083	20.00	µg/L	0.013
M4-PFHpA	6.421	367.0 -> 322.0	122253	20.00	µg/L	0.000
M8-PFOA	7.165	421.0 -> 376.0	138358	20.00	µg/L	0.013
M9-PFNA	7.745	472.0 -> 427.0	141695	20.00	µg/L	0.013
M6-PFDA	8.210	519.0 -> 474.0	190891	20.00	µg/L	0.000
M7-PFUnDA	8.624	570.0 -> 525.0	256213	20.00	µg/L	-0.012
M2-PFDoDA	9.087	615.0 -> 570.0	296419	20.00	µg/L	-0.012
M2-PFTeDA	10.189	715.0 -> 670.0	239577	20.00	µg/L	-0.050
M8-FOSA	7.630	506.0 -> 78.0	38917	20.00	µg/L	0.026
M3-PFBS	4.330	302.0 -> 99.0	6846	20.00	µg/L	0.000
M3-PFHxS	6.456	402.0 -> 99.0	7706	20.00	µg/L	0.000
M8-PFOS	7.718	507.0 -> 99.0	10529	20.00	µg/L	0.000
M2-4:2FTS	5.348	329.0 -> 309.0	55566	20.00	µg/L	0.013
M2-6:2FTS	7.150	429.0 -> 409.0	76960	20.00	µg/L	0.013
M2-8:2FTS	8.247	529.0 -> 509.0	69709	20.00	µg/L	0.000
M3-MeFOSAA	8.066	573.0 -> 419.0	40370	20.00	µg/L	0.025
M3-HFPO-DA	5.771	287.0 -> 169.0	5881	20.00	µg/L	0.013
System Monitoring Compounds						
13C2-4:2FTS	5.348	329.0 -> 309.0	55566	19.09	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.4%		
13C2-6:2FTS	7.150	429.0 -> 409.0	76960	18.91	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.6%		
13C2-8:2FTS	8.247	529.0 -> 509.0	69709	19.54	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.7%		
13C2-PFDoDA	9.087	615.0 -> 570.0	296419	18.43	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.1%		
13C2-PFTeDA	10.189	715.0 -> 670.0	239577	18.57	µg/L	-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%		
13C3-PFBS	4.330	302.0 -> 99.0	6846	20.26	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%		
13C3-PFHxS	6.456	402.0 -> 99.0	7706	20.52	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.6%		
13C4-PFBA	1.989	217.0 -> 172.0	69888	20.81	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.1%		
13C4-PFHpA	6.421	367.0 -> 322.0	122253	20.09	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.4%		
d5-EtFOSAA	8.180	589.0 -> 419.0	35508	17.47	ng/ml	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.3%		
13C5-PFHxA	5.454	318.0 -> 273.0	84083	20.18	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.9%		
13C5-PFPeA	4.012	268.0 -> 223.0	55997	20.30	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.5%		

Perfluorinated Compounds by LC/MS/MS

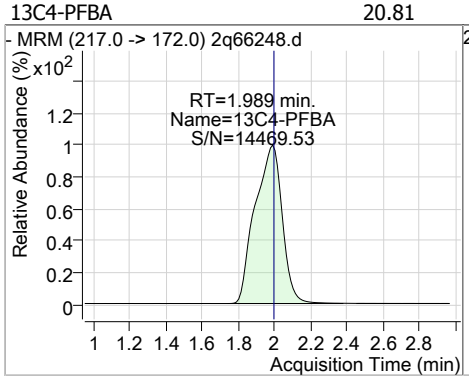
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	190891	20.61	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.0%			
13C7-PFUnDA	8.624	570.0 -> 525.0	256213	19.44	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.2%			
13C8-FOSA	7.630	506.0 -> 78.0	38917	20.25	µg/L		0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%			
13C8-PFOA	7.165	421.0 -> 376.0	138358	19.84	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%			
13C8-PFOS	7.718	507.0 -> 99.0	10529	19.82	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.1%			
13C9-PFNA	7.745	472.0 -> 427.0	141695	19.92	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.6%			
d3-MeFOSAA	8.066	573.0 -> 419.0	40370	17.02	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.1%			
13C3-HFPO-DA	5.771	287.0 -> 169.0	5881	18.13	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.7%			
Target Compounds							QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.			
6:2FTS	-	427.0 -> 407.0	-	N.D.			
8:2FTS	-	527.0 -> 507.0	-	N.D.			
EtFOSAA	-	584.0 -> 419.0	-	N.D.			
FOSA	-	498.0 -> 78.0	-	N.D.			
MeFOSAA	-	570.0 -> 419.0	-	N.D.			
PFBA	1.983	213.0 -> 169.0	262	0.22	µg/L		100
PFBS	-	299.0 -> 80.0	-	N.D.			
PFDA	-	513.0 -> 469.0	-	N.D.			
PFDoDA	-	613.0 -> 569.0	-	N.D.			
PFDS	-	599.0 -> 80.0	-	N.D.			
PFHpA	-	363.0 -> 319.0	-	N.D.			
PFHpS	-	449.0 -> 80.0	-	N.D.			
PFHxA	-	313.0 -> 269.0	-	N.D.			
PFHxS	-	399.0 -> 80.0	-	N.D.			
PFNA	7.745	463.0 -> 419.0	1326	0.16	µg/L		98
PFNS	-	549.0 -> 80.0	-	N.D.			
PFOA	7.165	413.0 -> 369.0	2304	0.28	µg/L	m	92
PFOS	7.719	499.0 -> 80.0	785	0.78	µg/L	m	88
PFPeA	-	263.0 -> 219.0	-	N.D.			
PFPeS	-	349.0 -> 80.0	-	N.D.			
PFTeDA	-	713.0 -> 669.0	-	N.D.			
PFTrDA	-	663.0 -> 619.0	-	N.D.			
PFUnDA	-	563.0 -> 519.0	-	N.D.			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.			
ADONA	-	377.0 -> 251.0	-	N.D.			
HFPO-DA	-	329.0 -> 169.0	-	N.D.			

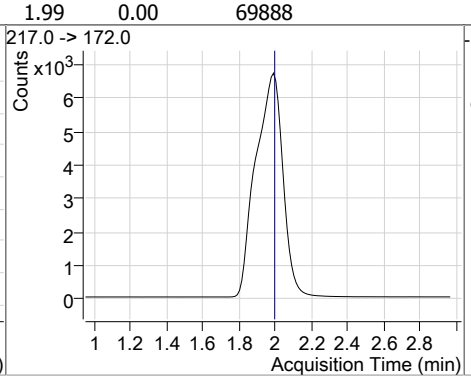
 # = Qualifier out of range, m = manually integrated, + = Area summed

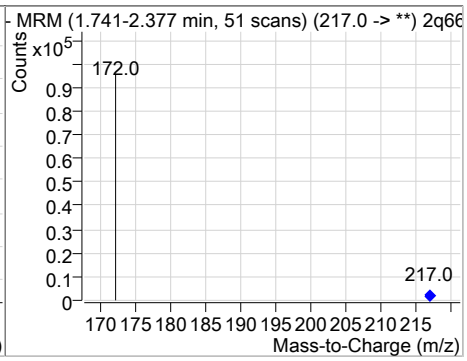
Perfluorinated Compounds by LC/MS/MS



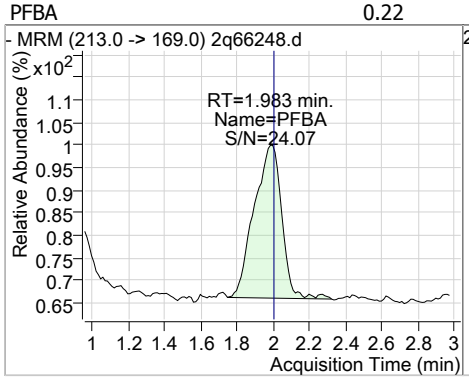
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.81	1.99	0.00	69888				

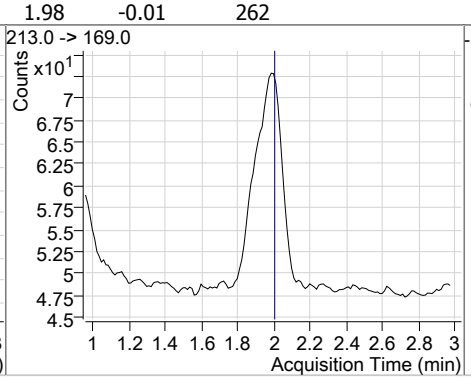


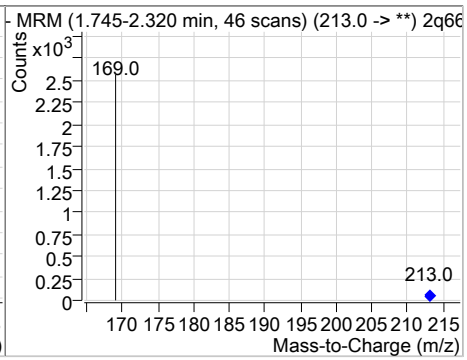




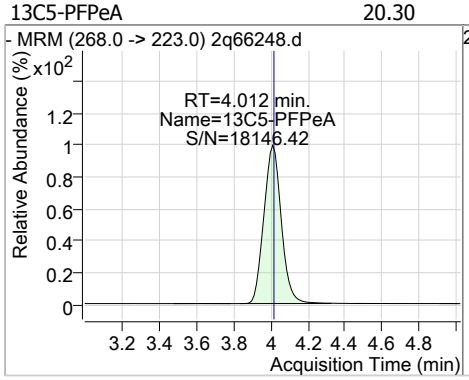
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.22	1.98	-0.01	262				

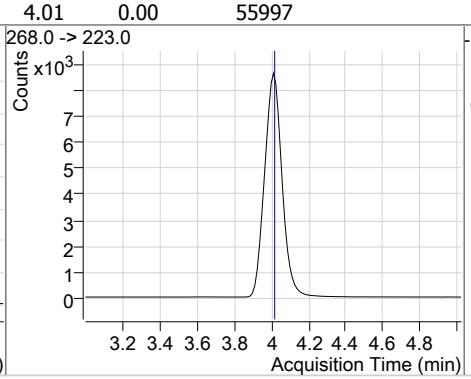


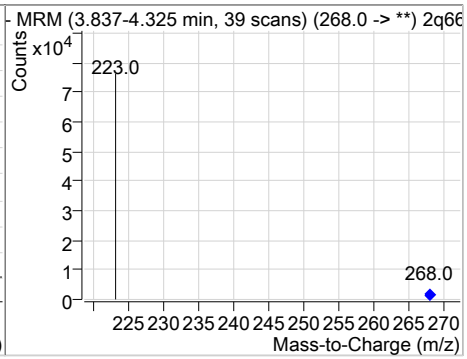




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.30	4.01	0.00	55997				

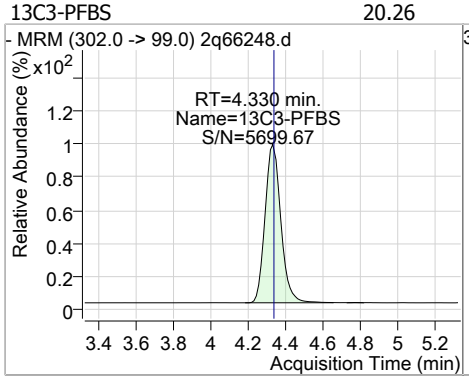


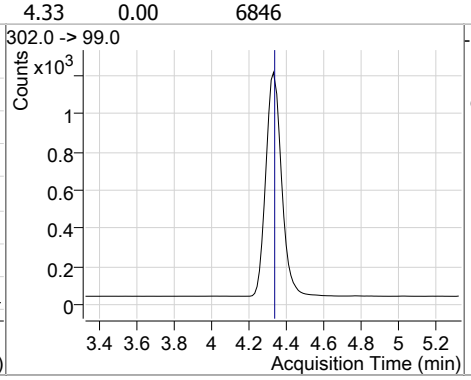


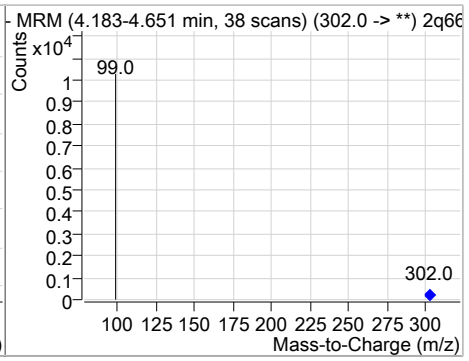


Perfluorinated Compounds by LC/MS/MS

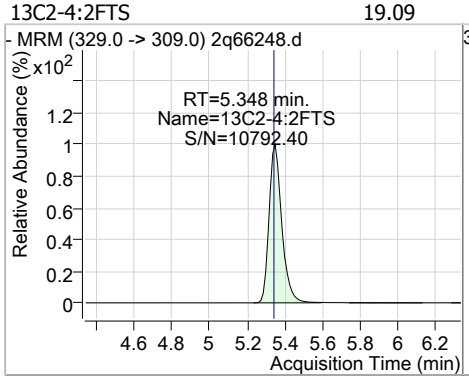
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.26	4.33	0.00	6846				

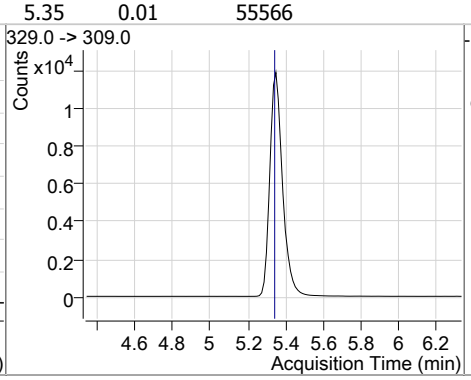


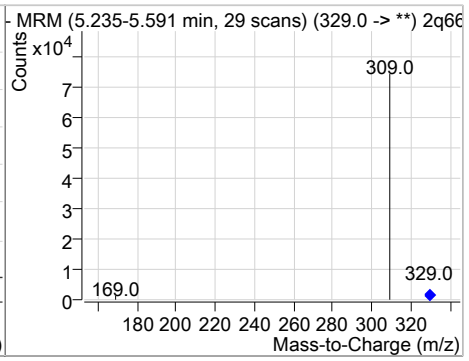




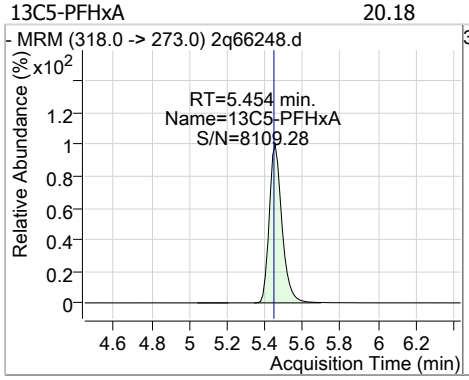
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13C2-4:2FTS	19.09	5.35	0.01	55566				

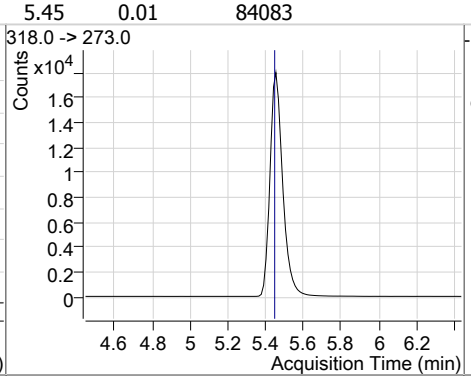


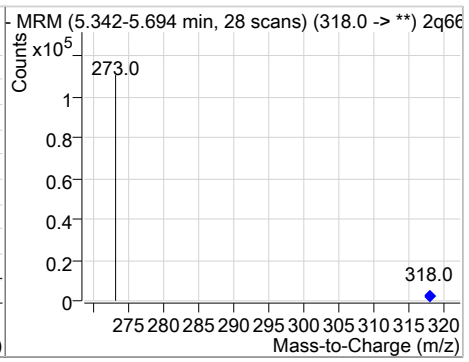




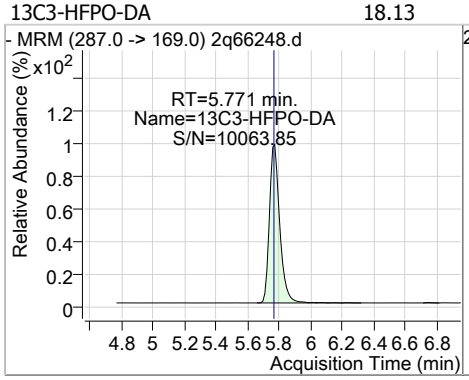
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.18	5.45	0.01	84083				

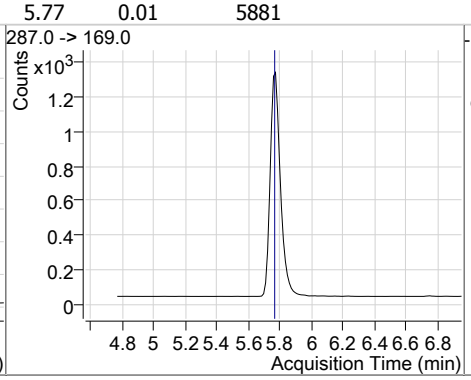


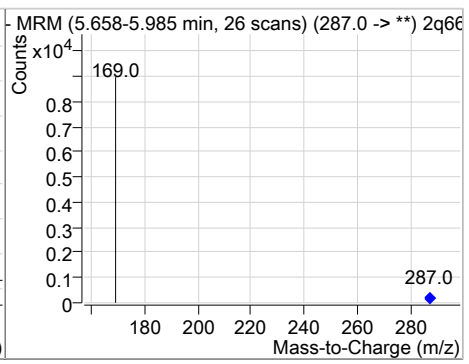




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	18.13	5.77	0.01	5881				

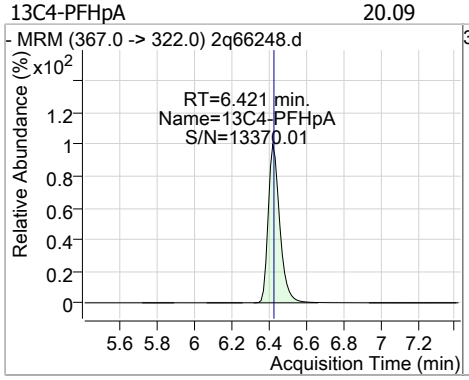


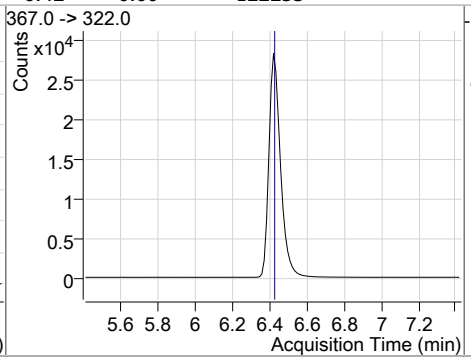


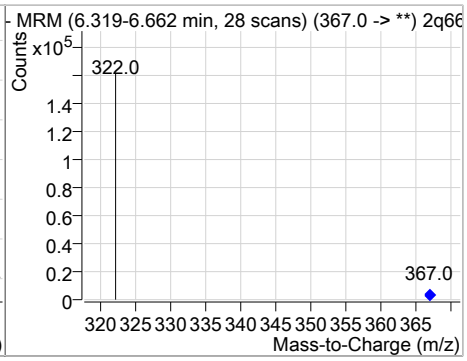


Perfluorinated Compounds by LC/MS/MS

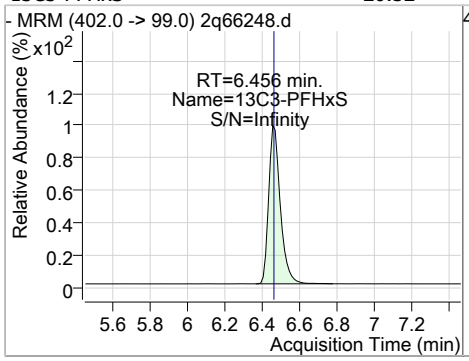
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13C4-PFHpA	20.09	6.42	0.00	122253				

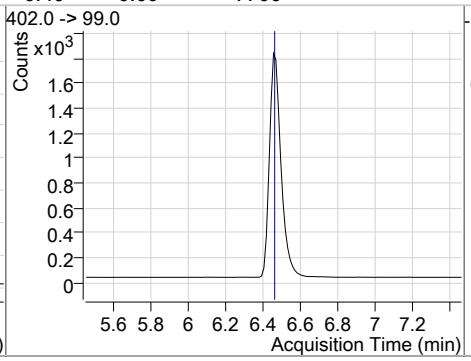


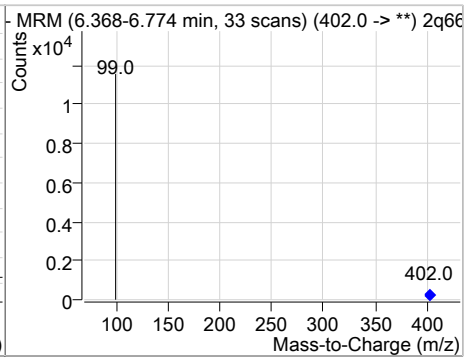




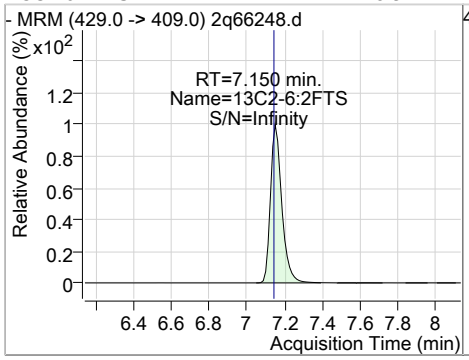
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.52	6.46	0.00	7706				

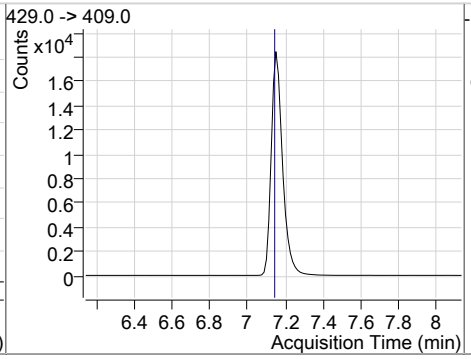


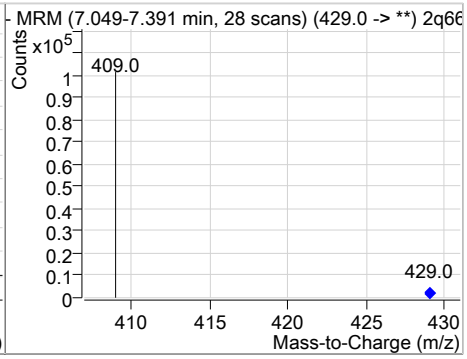




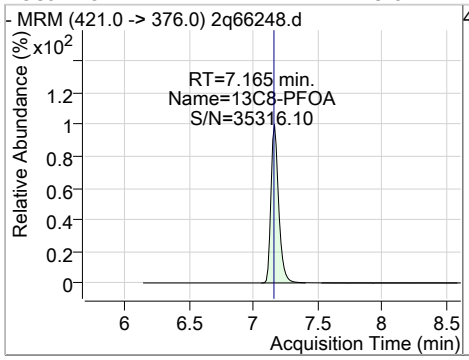
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.91	7.15	0.01	76960				

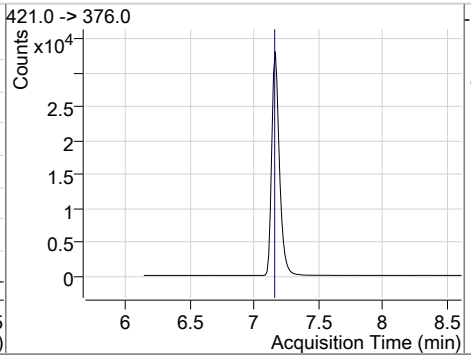


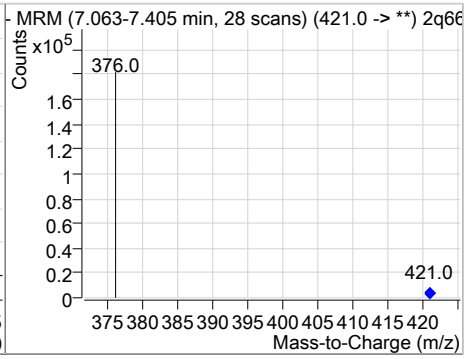




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.84	7.16	0.01	138358				

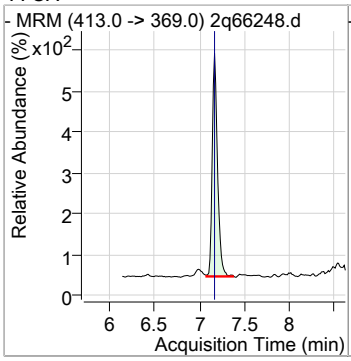


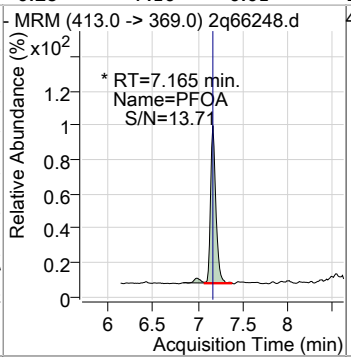


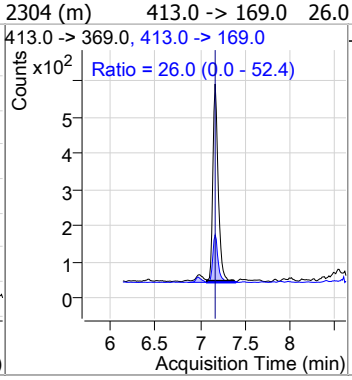


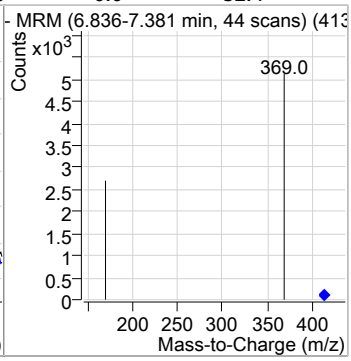
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.28	7.16	0.01	2304 (m)	413.0 -> 169.0	26.0	0.0	52.4

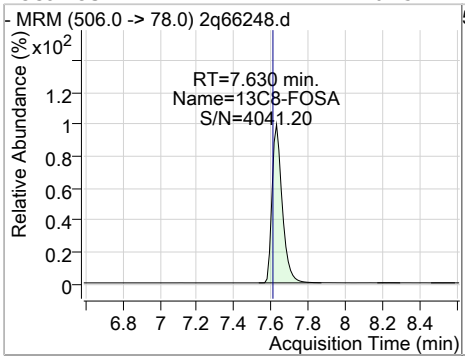


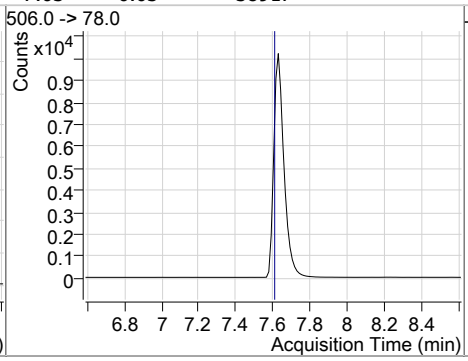


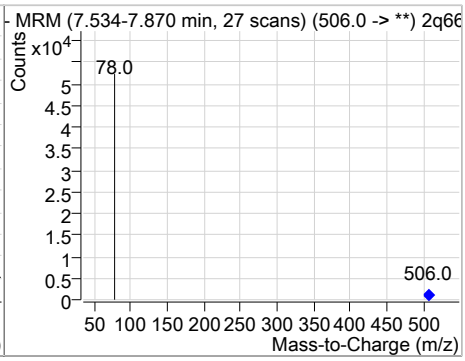




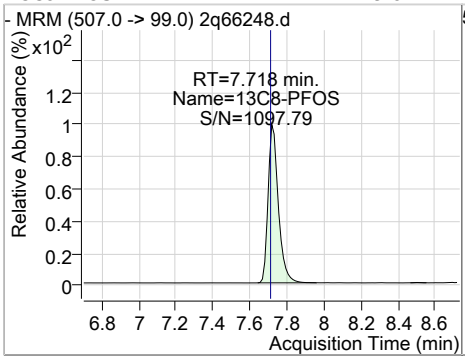
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.25	7.63	0.03	38917				

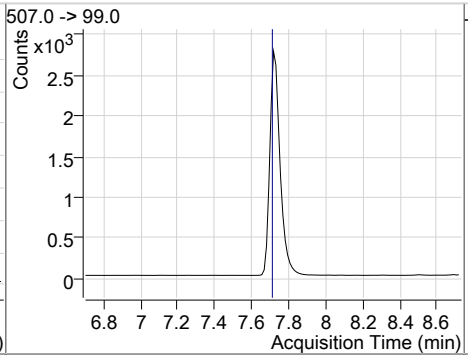


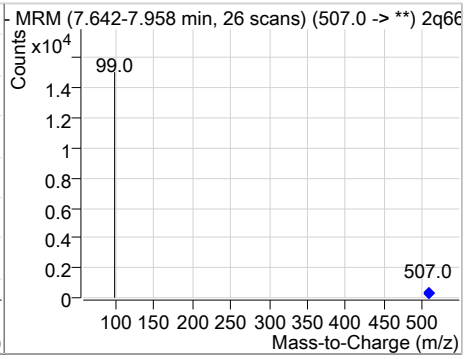




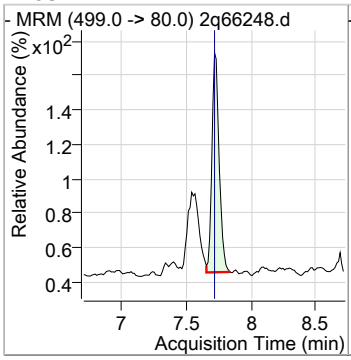
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.82	7.72	0.00	10529				

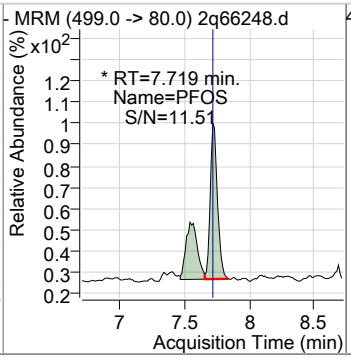


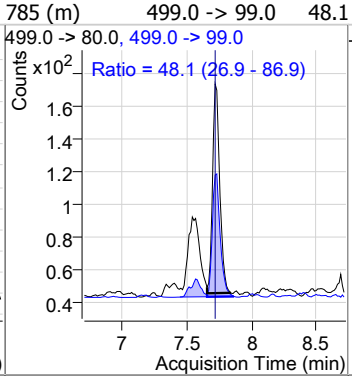


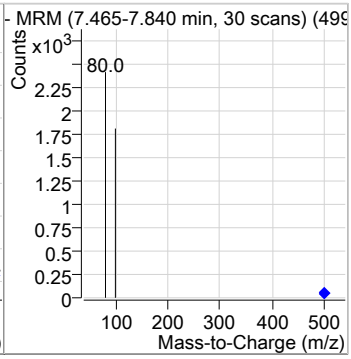


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.78	7.72	0.00	785 (m)	499.0 -> 99.0	48.1	26.9	86.9



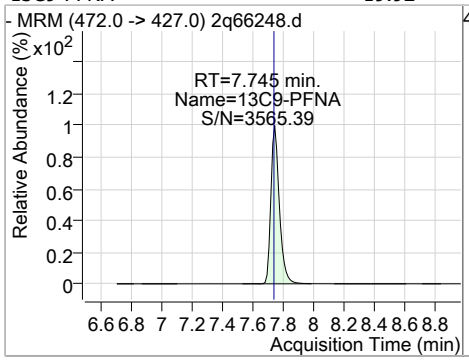


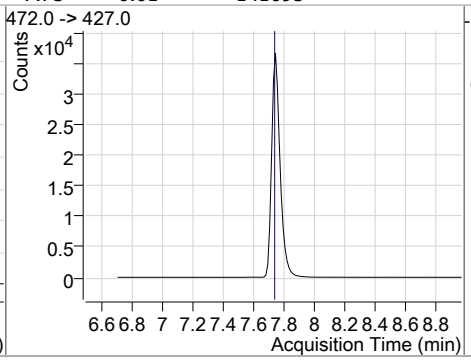


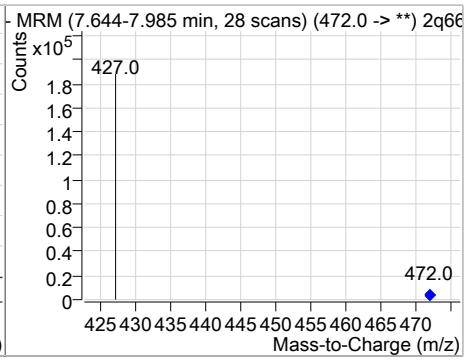


Perfluorinated Compounds by LC/MS/MS

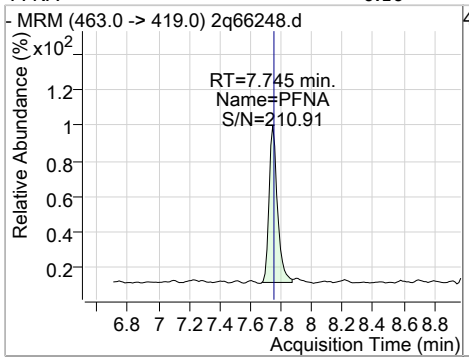
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.92	7.75	0.01	141695				

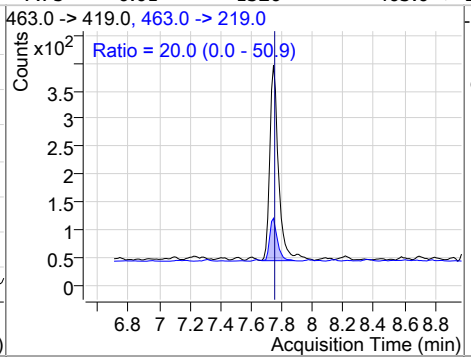


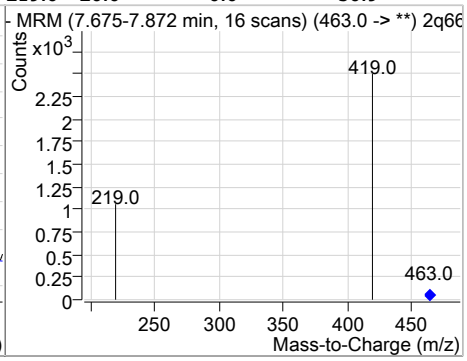




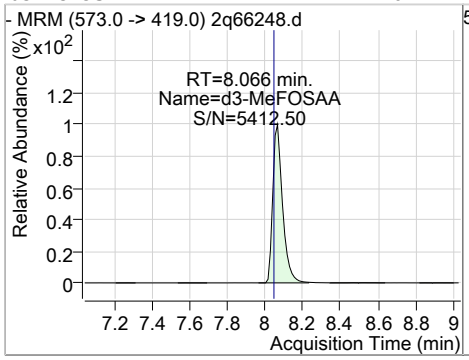
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.16	7.75	0.01	1326	463.0 -> 219.0	20.0	0.0	50.9

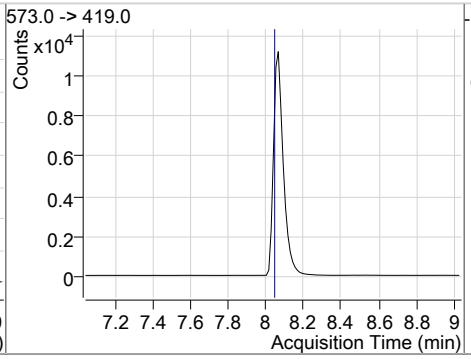


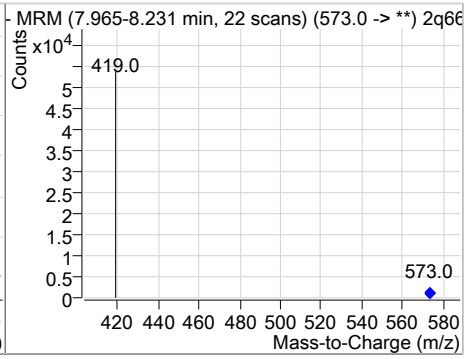




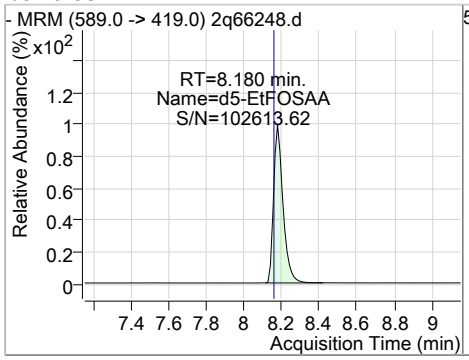
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	17.02	8.07	0.03	40370				

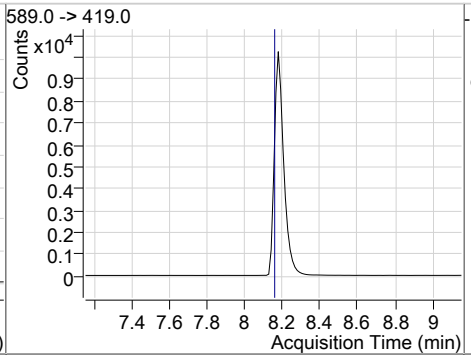


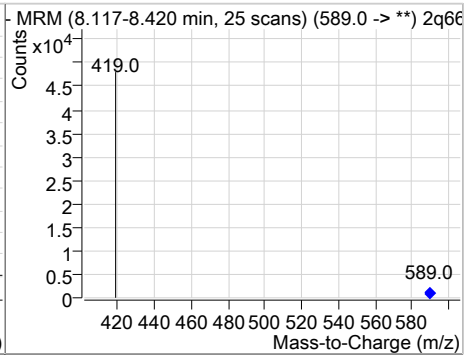




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	17.47	8.18	0.03	35508				

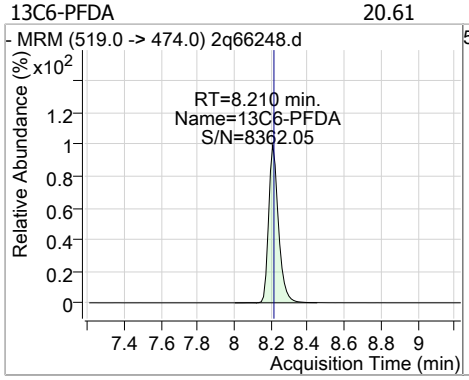


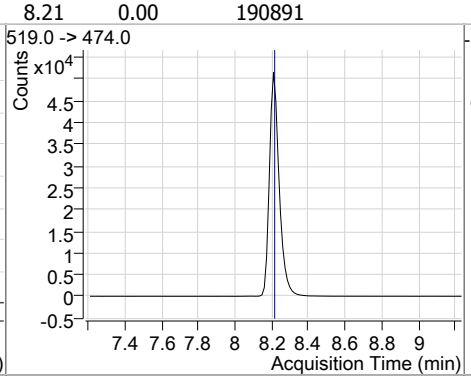


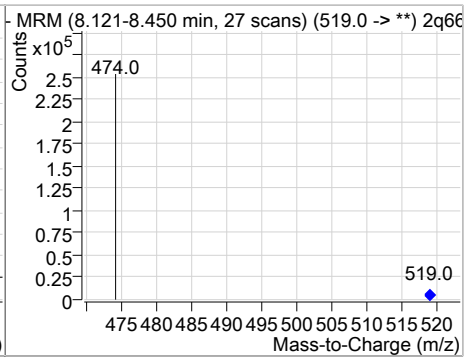


Perfluorinated Compounds by LC/MS/MS

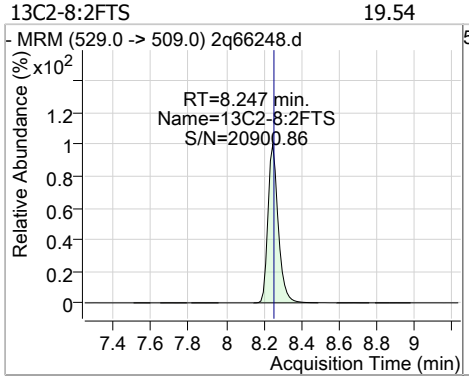
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.61	8.21	0.00	190891				

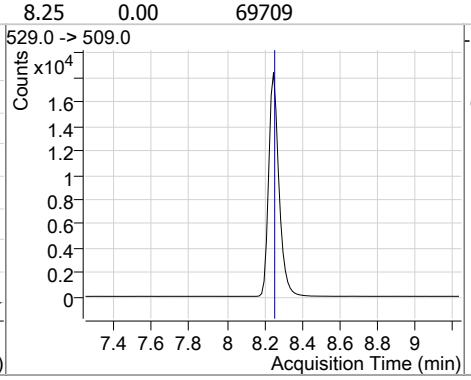


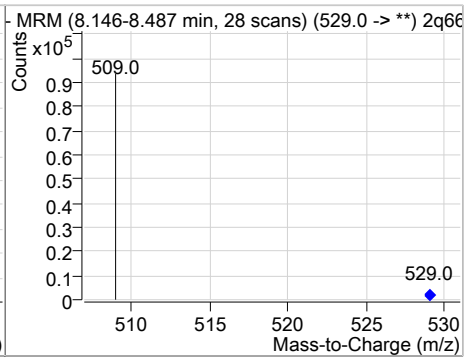




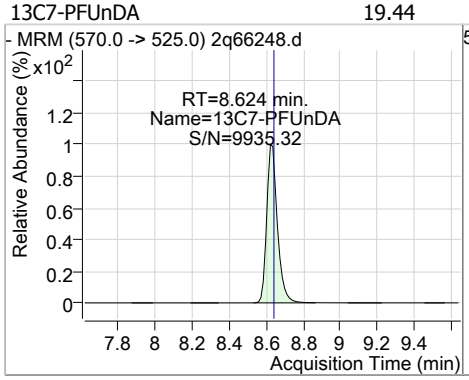
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.54	8.25	0.00	69709				

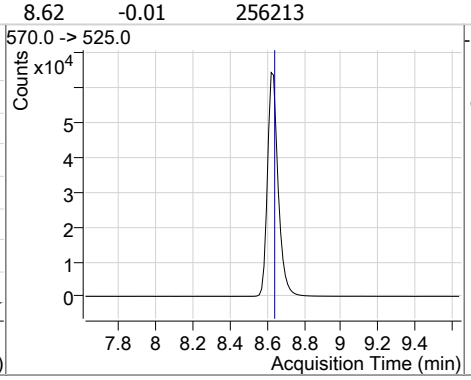


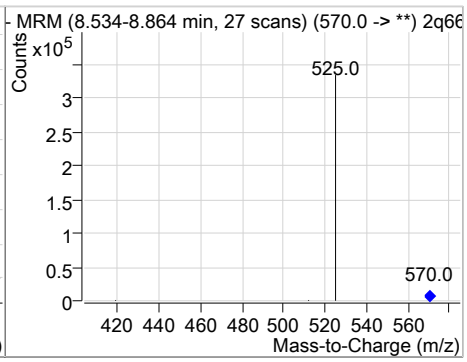




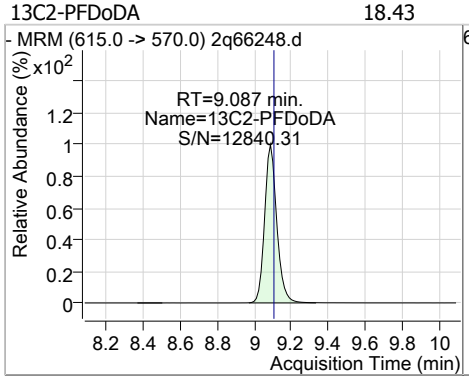
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.44	8.62	-0.01	256213				

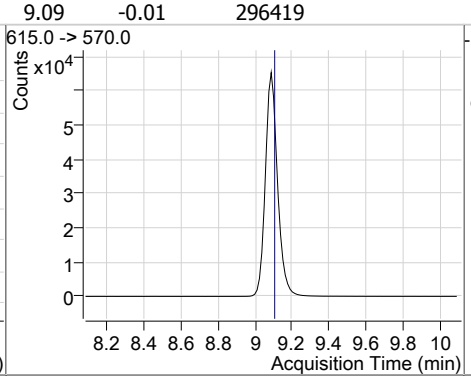


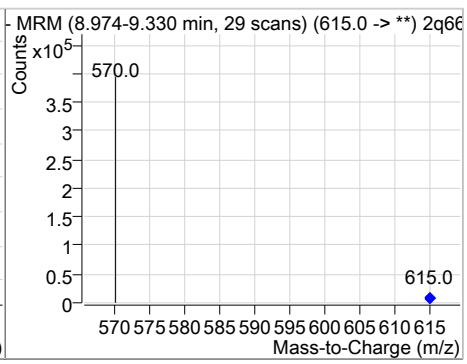




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	18.43	9.09	-0.01	296419				

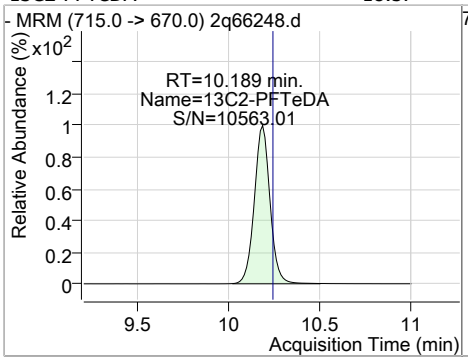


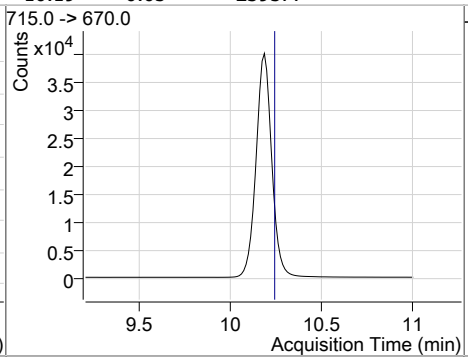


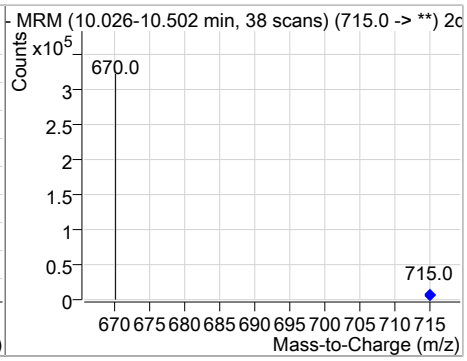


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	18.57	10.19	-0.05	239577				







Manual Integration Approval Summary

Sample Number: JD22888-3A
Lab FileID: 2Q66248.D
Injection Time: 04/17/21 05:29
Method: EPA 537M BY ID
Analyst approved: 04/18/21 11:57 Nancy Saunders
Supervisor approved: 04/19/21 15:44 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanoic acid	335-67-1		7.17	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak

Perfluorinated Compounds by LC/MS/MS

Data File	:	2q66249.d
Operator	:	nancyf
Acq. Method	:	537_ID.m
Acq. Date-Time	:	4/17/2021 5:45:46 AM
Sample Name	:	jd22888-4A
Vial	:	P4-A4
DA Method File	:	ID_040821_S2Q956.quantmethod.xml
Batch Name	:	s2q963.batch.bin
Sample Information	:	op84941,S2Q963,2.09,,,1.0,1,soil

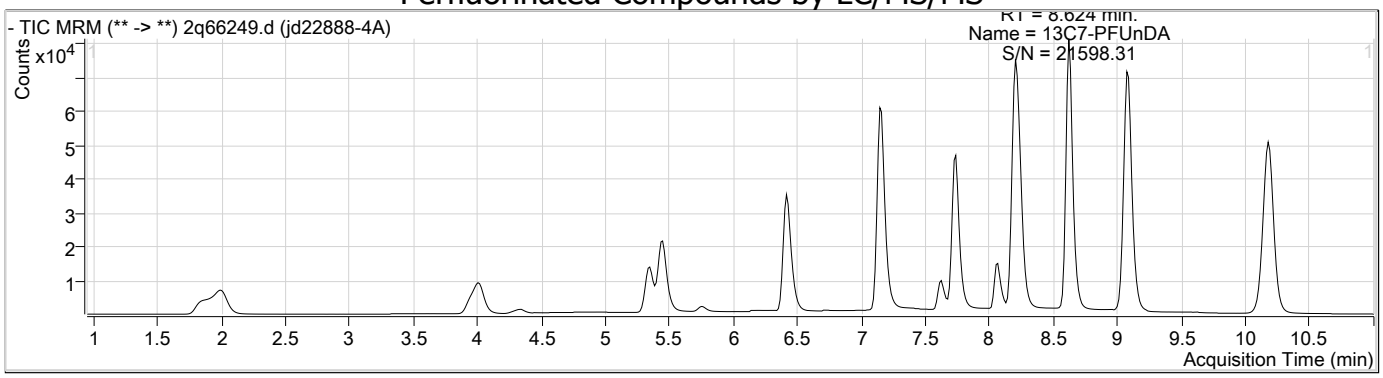
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.180	589.0 -> 419.0	43711	20.00	µg/L	0.025
M4-PFBA	1.989	217.0 -> 172.0	84792	20.00	µg/L	0.000
M5-PFPeA	4.012	268.0 -> 223.0	67599	20.00	µg/L	0.000
M5-PFHxA	5.454	318.0 -> 273.0	100541	20.00	µg/L	0.013
M4-PFHpA	6.421	367.0 -> 322.0	145818	20.00	µg/L	0.000
M8-PFOA	7.165	421.0 -> 376.0	164608	20.00	µg/L	0.013
M9-PFNA	7.745	472.0 -> 427.0	167894	20.00	µg/L	0.013
M6-PFDA	8.210	519.0 -> 474.0	223656	20.00	µg/L	0.000
M7-PFUnDA	8.624	570.0 -> 525.0	303960	20.00	µg/L	-0.012
M2-PFDoDA	9.075	615.0 -> 570.0	325479	20.00	µg/L	-0.025
M2-PFTeDA	10.176	715.0 -> 670.0	299689	20.00	µg/L	-0.062
M8-FOSA	7.630	506.0 -> 78.0	32108	20.00	µg/L	0.026
M3-PFBS	4.330	302.0 -> 99.0	8230	20.00	µg/L	0.000
M3-PFHxS	6.456	402.0 -> 99.0	9164	20.00	µg/L	0.000
M8-PFOS	7.718	507.0 -> 99.0	12412	20.00	µg/L	0.000
M2-4:2FTS	5.348	329.0 -> 309.0	66272	20.00	µg/L	0.013
M2-6:2FTS	7.150	429.0 -> 409.0	93060	20.00	µg/L	0.013
M2-8:2FTS	8.247	529.0 -> 509.0	86023	20.00	µg/L	0.000
M3-MeFOSAA	8.066	573.0 -> 419.0	49111	20.00	µg/L	0.025
M3-HFPO-DA	5.759	287.0 -> 169.0	6909	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.348	329.0 -> 309.0	66272	22.77	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 113.8%		
13C2-6:2FTS	7.150	429.0 -> 409.0	93060	22.87	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 114.3%		
13C2-8:2FTS	8.247	529.0 -> 509.0	86023	24.11	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 120.6%		
13C2-PFDoDA	9.075	615.0 -> 570.0	325479	20.23	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.2%		
13C2-PFTeDA	10.176	715.0 -> 670.0	299689	23.23	µg/L	-0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 116.1%		
13C3-PFBS	4.330	302.0 -> 99.0	8230	24.36	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 121.8%		
13C3-PFHxS	6.456	402.0 -> 99.0	9164	24.41	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 122.0%		
13C4-PFBA	1.989	217.0 -> 172.0	84792	25.25	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 126.3%		
13C4-PFHpA	6.421	367.0 -> 322.0	145818	23.96	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 119.8%		
d5-EtFOSAA	8.180	589.0 -> 419.0	43711	21.50	ng/ml	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.5%		
13C5-PFHxA	5.454	318.0 -> 273.0	100541	24.13	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 120.6%		
13C5-PFPeA	4.012	268.0 -> 223.0	67599	24.50	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 122.5%		

Perfluorinated Compounds by LC/MS/MS

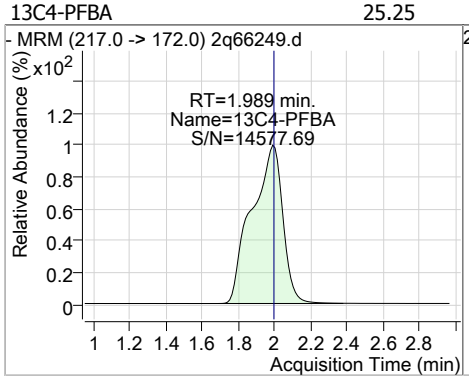
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	223656	24.15 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 120.7%	
13C7-PFUnDA	8.624	570.0 -> 525.0	303960	23.06 µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 115.3%	
13C8-FOSA	7.630	506.0 -> 78.0	32108	16.71 µg/L	0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.6%	
13C8-PFOA	7.165	421.0 -> 376.0	164608	23.60 µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 118.0%	
13C8-PFOS	7.718	507.0 -> 99.0	12412	23.37 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 116.8%	
13C9-PFNA	7.745	472.0 -> 427.0	167894	23.60 µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 118.0%	
d3-MeFOSAA	8.066	573.0 -> 419.0	49111	20.70 µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.5%	
13C3-HFPO-DA	5.759	287.0 -> 169.0	6909	21.30 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.5%	
Target Compounds					QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.	
6:2FTS	-	427.0 -> 407.0	-	N.D.	
8:2FTS	-	527.0 -> 507.0	-	N.D.	
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
FOSA	-	498.0 -> 78.0	-	N.D.	
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0	-	N.D.	
PFDA	-	513.0 -> 469.0	-	N.D.	
PFDoDA	-	613.0 -> 569.0	-	N.D.	
PFDS	-	599.0 -> 80.0	-	N.D.	
PFHpA	-	363.0 -> 319.0	-	N.D.	
PFHpS	-	449.0 -> 80.0	-	N.D.	
PFHxA	-	313.0 -> 269.0	-	N.D.	
PFHxS	-	399.0 -> 80.0	-	N.D.	
PFNA	7.745	463.0 -> 419.0	1258	0.13 µg/L	85
PFNS	-	549.0 -> 80.0	-	N.D.	
PFOA	7.165	413.0 -> 369.0	1643	0.17 µg/L	98
PFOS	7.719	499.0 -> 80.0	325	0.27 µg/L	99
PFPeA	-	263.0 -> 219.0	-	N.D.	
PFPeS	-	349.0 -> 80.0	-	N.D.	
PFTeDA	-	713.0 -> 669.0	-	N.D.	
PFTrDA	-	663.0 -> 619.0	-	N.D.	
PFUnDA	-	563.0 -> 519.0	-	N.D.	
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
ADONA	-	377.0 -> 251.0	-	N.D.	
HFPO-DA	-	329.0 -> 169.0	-	N.D.	

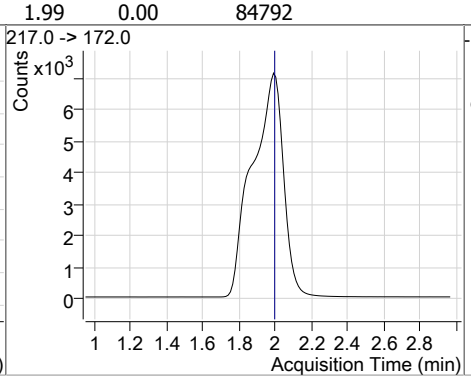
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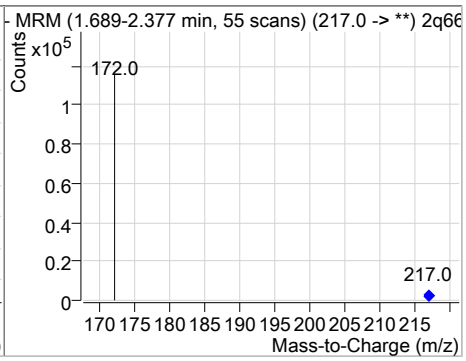
Perfluorinated Compounds by LC/MS/MS



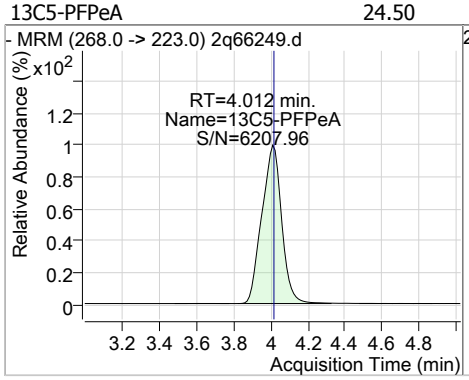
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	25.25	1.99	0.00	84792				

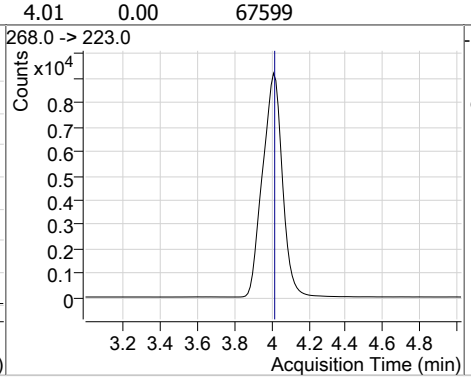


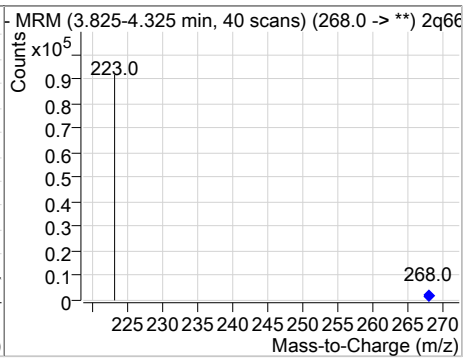




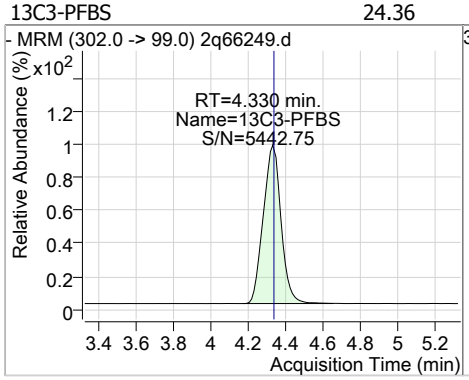
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	24.50	4.01	0.00	67599				

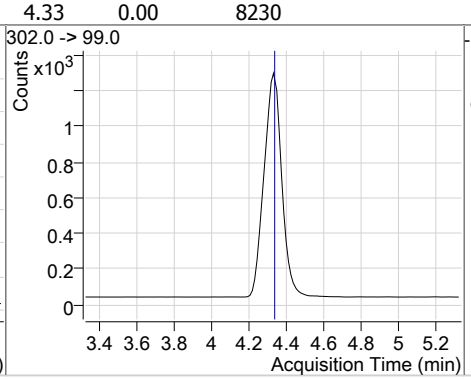


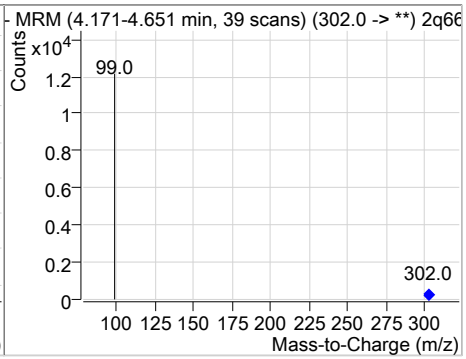




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	24.36	4.33	0.00	8230				

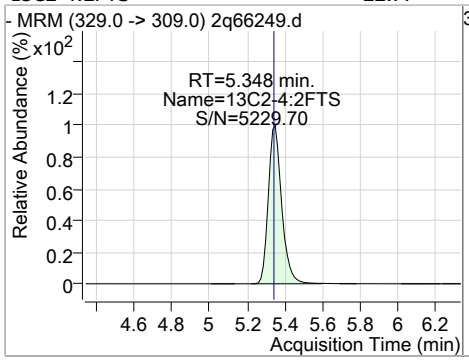


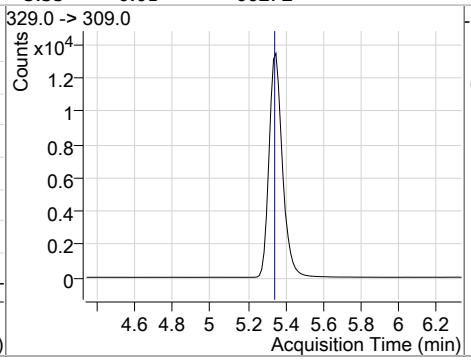


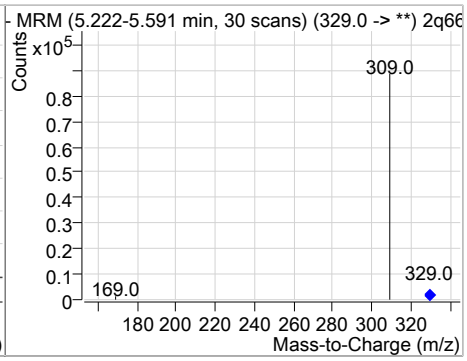


Perfluorinated Compounds by LC/MS/MS

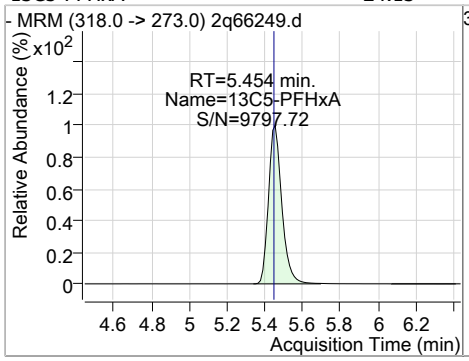
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	22.77	5.35	0.01	66272				

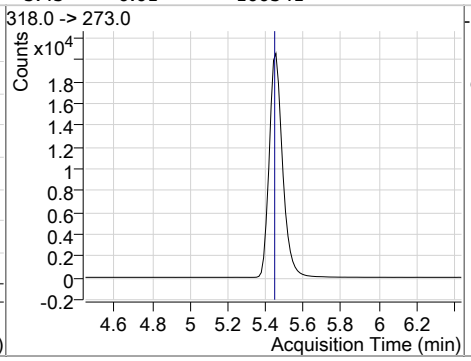


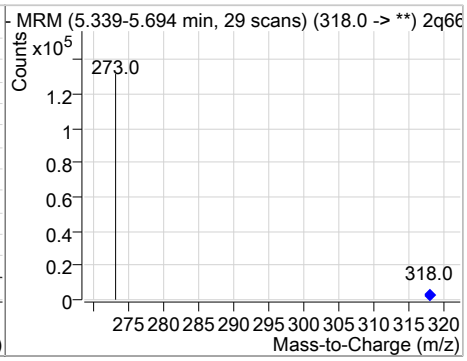




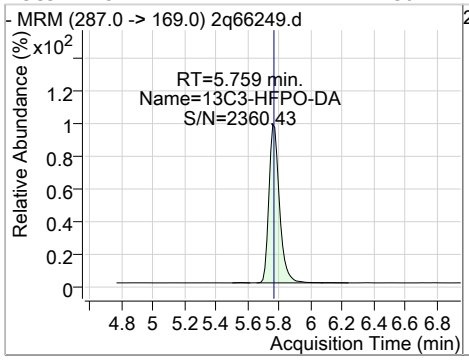
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	24.13	5.45	0.01	100541				

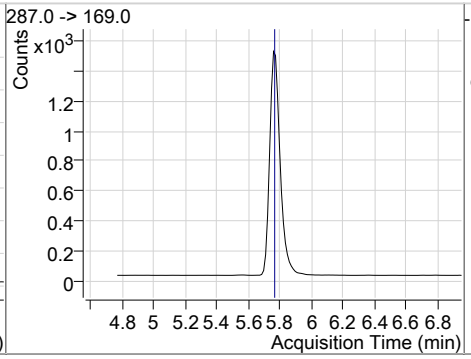


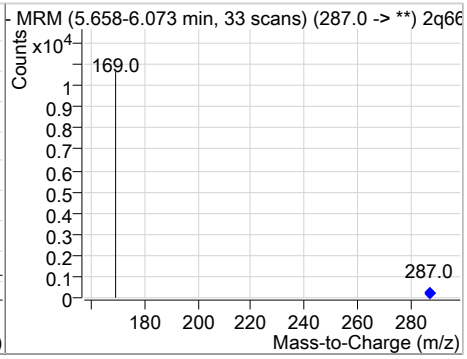




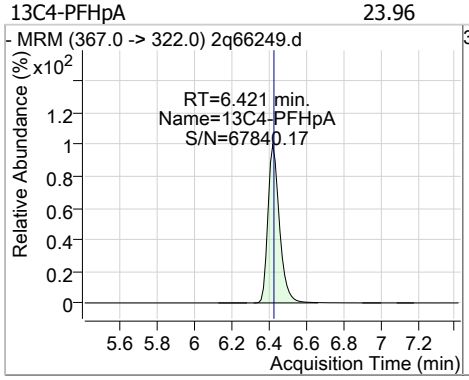
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	21.30	5.76	0.00	6909				

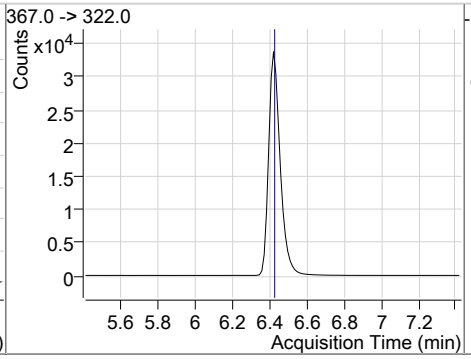


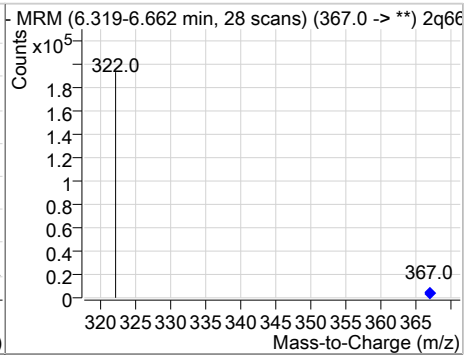




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	23.96	6.42	0.00	145818				

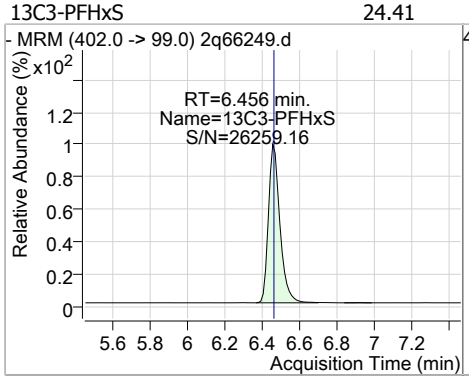


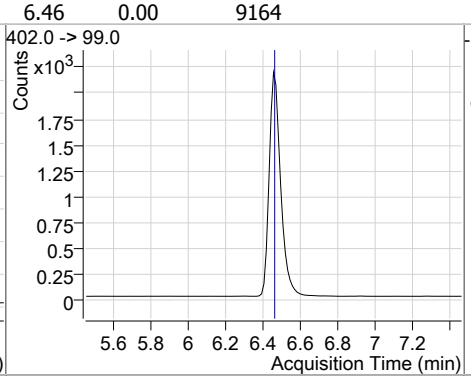


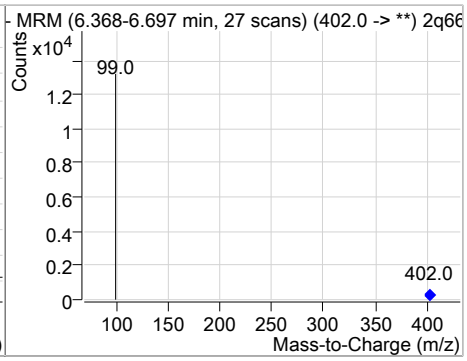


Perfluorinated Compounds by LC/MS/MS

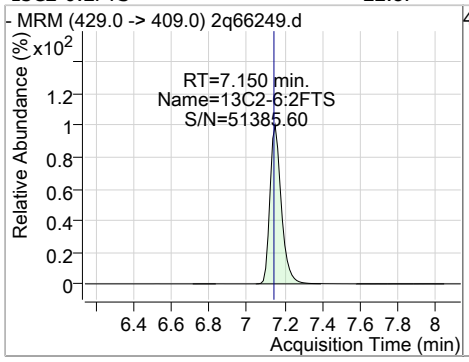
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	24.41	6.46	0.00	9164				

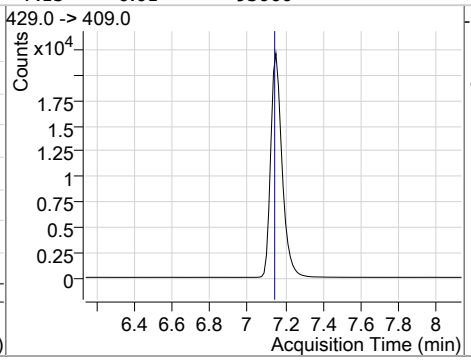


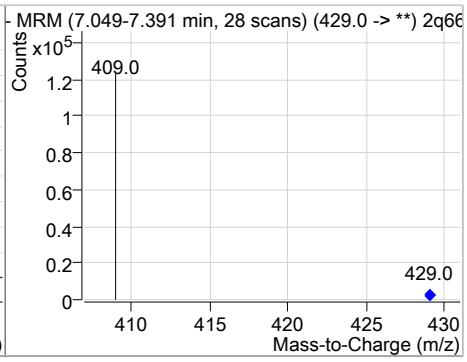




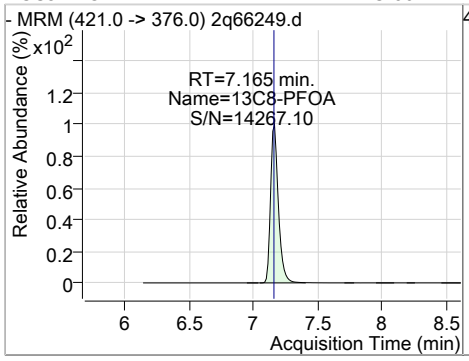
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	22.87	7.15	0.01	93060				

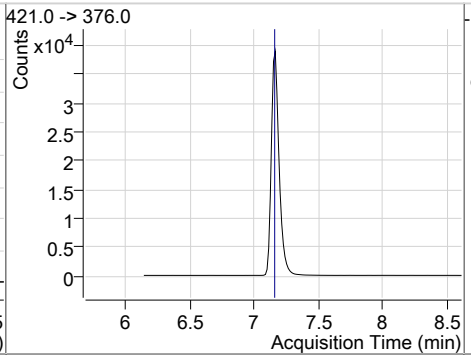


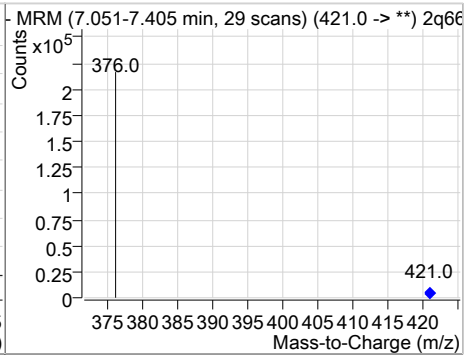




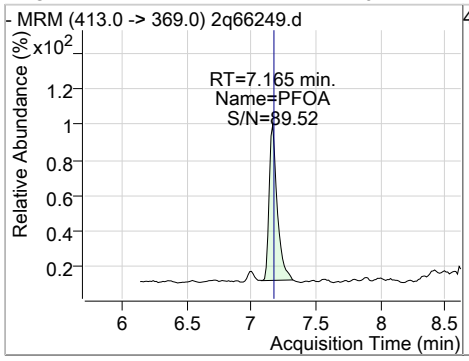
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	23.60	7.16	0.01	164608				

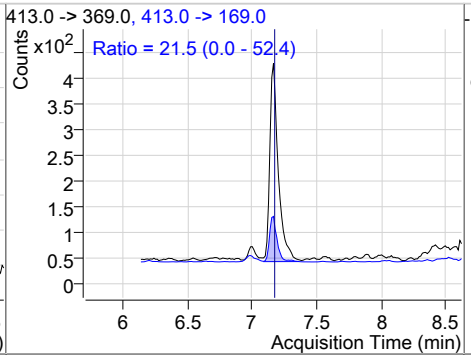


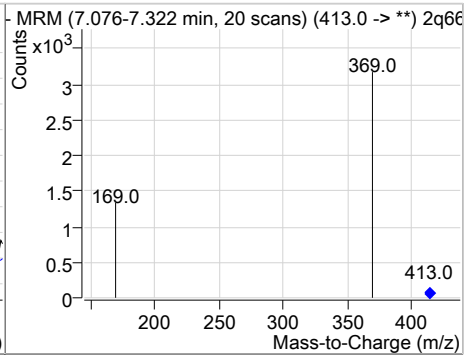




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.17	7.16	0.01	1643	413.0 -> 169.0	21.5	0.0	52.4

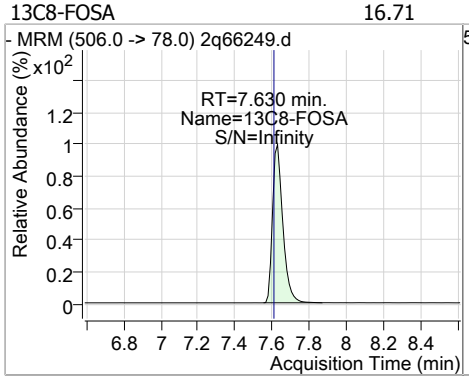


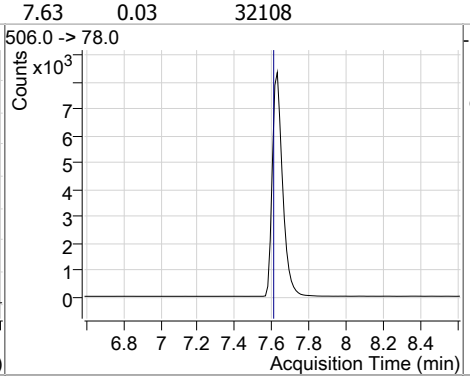


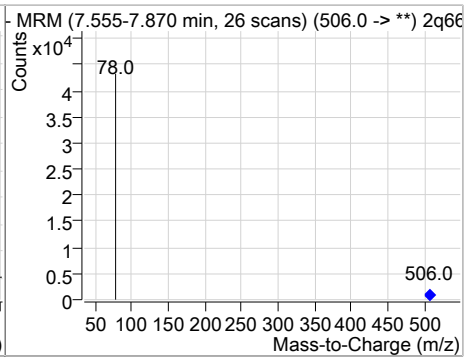


Perfluorinated Compounds by LC/MS/MS

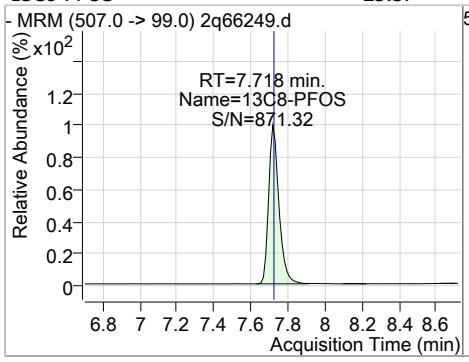
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	16.71	7.63	0.03	32108				

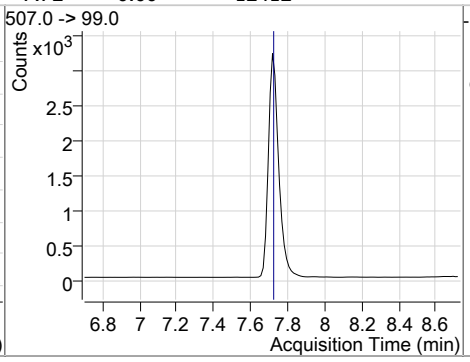


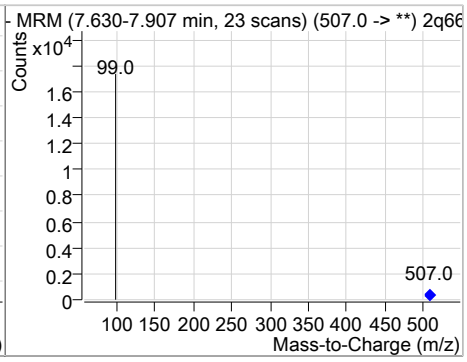




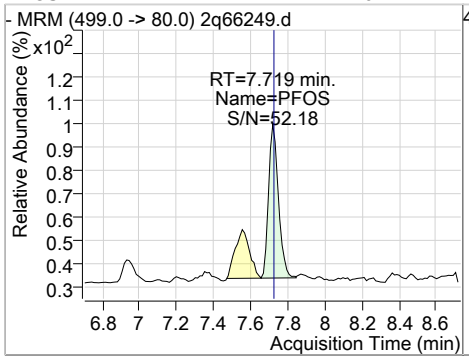
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13C8-PFOS	23.37	7.72	0.00	12412				

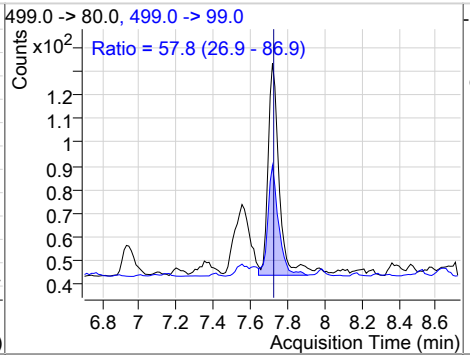


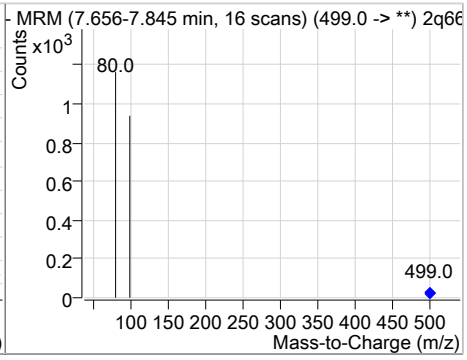




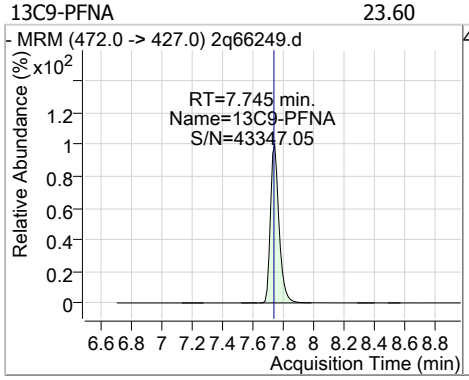
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.27	7.72	0.00	325	499.0 -> 99.0	57.8	26.9	86.9

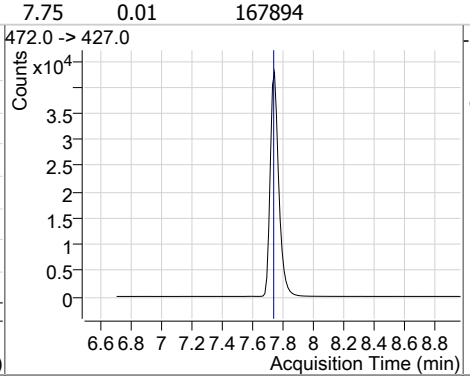


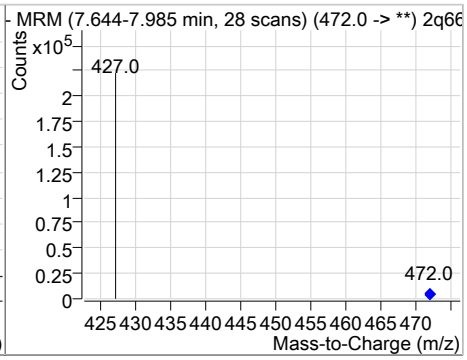




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	23.60	7.75	0.01	167894				

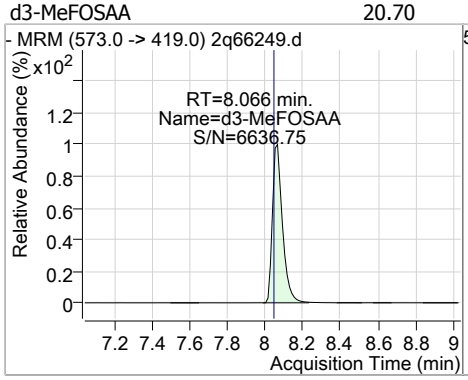


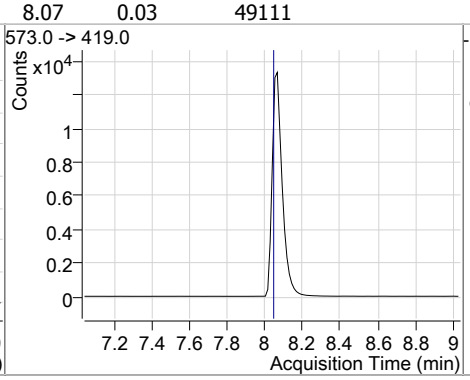


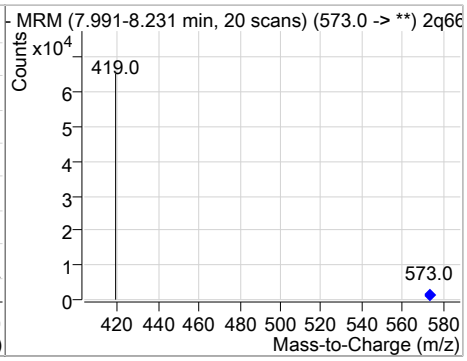


Perfluorinated Compounds by LC/MS/MS

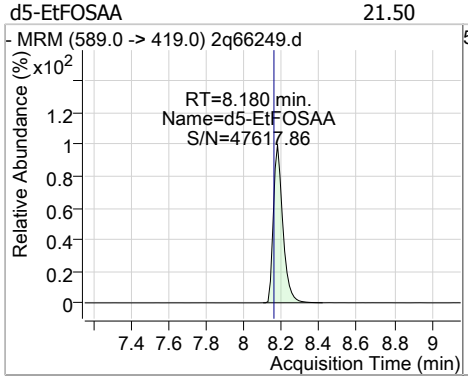
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.70	8.07	0.03	49111				

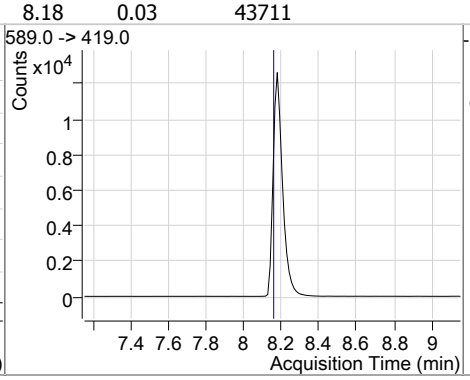


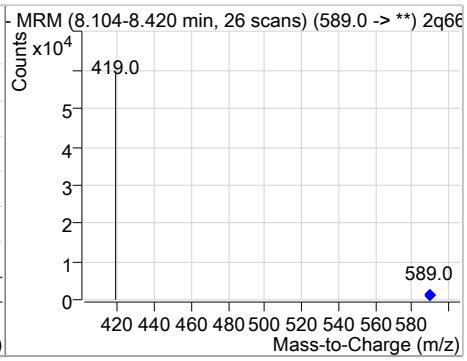




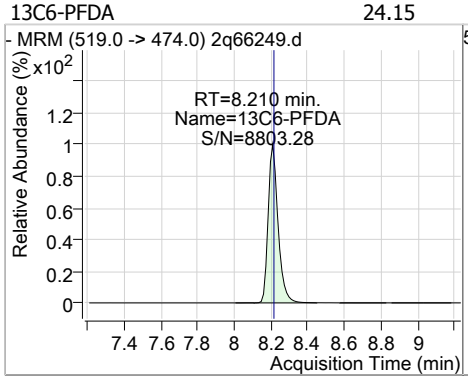
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	21.50	8.18	0.03	43711				

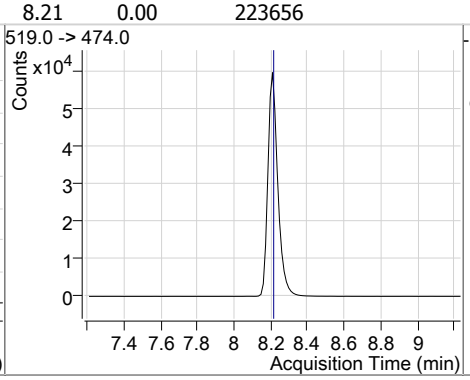


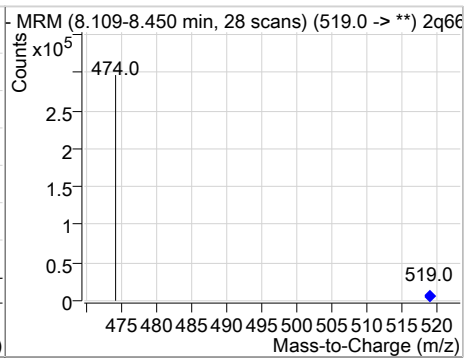




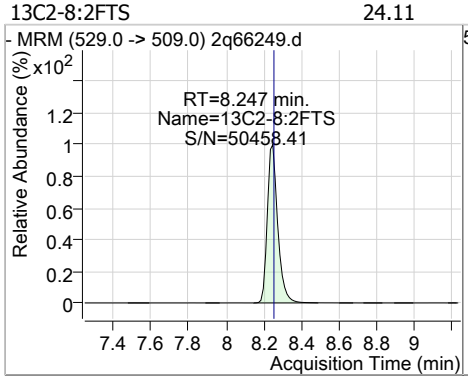
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	24.15	8.21	0.00	223656				

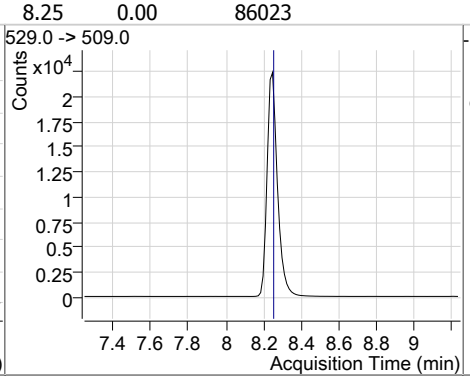


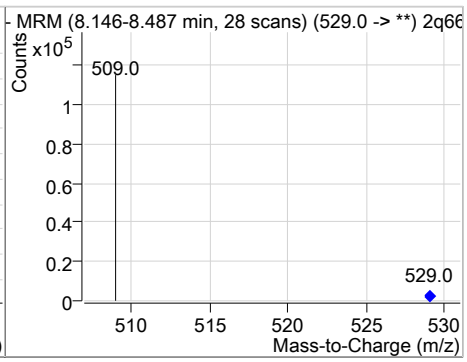




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	24.11	8.25	0.00	86023				

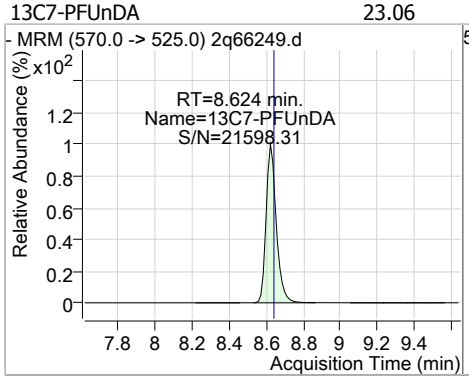


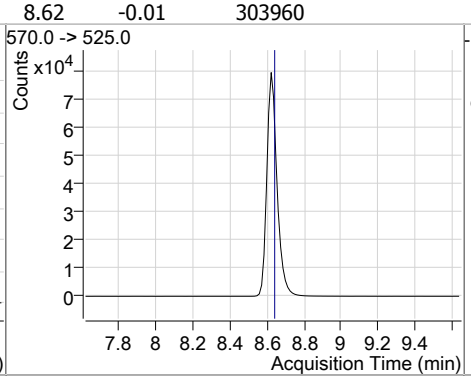


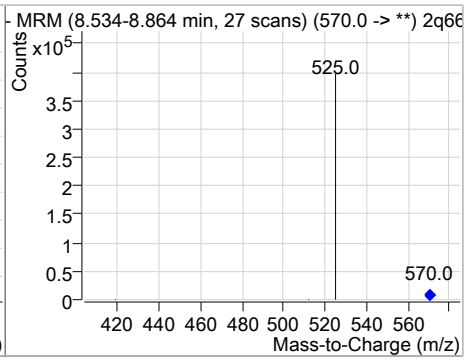


Perfluorinated Compounds by LC/MS/MS

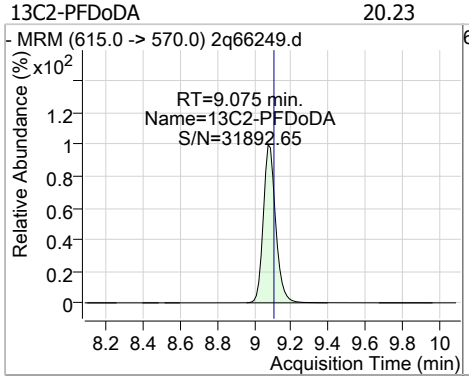
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	23.06	8.62	-0.01	303960				

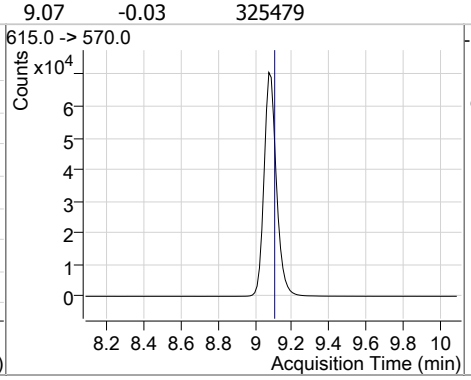


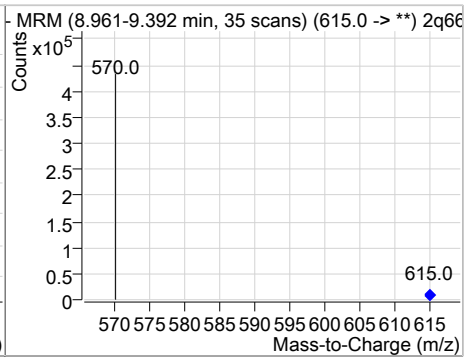




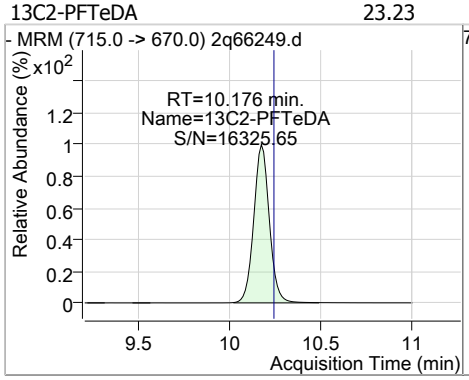
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.23	9.07	-0.03	325479				

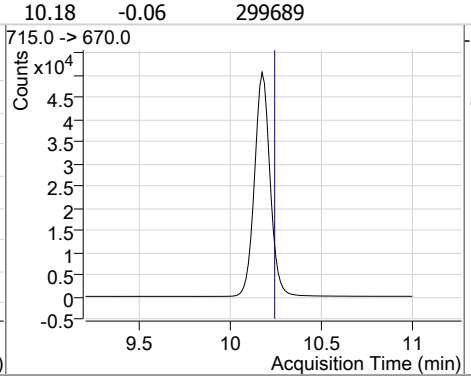


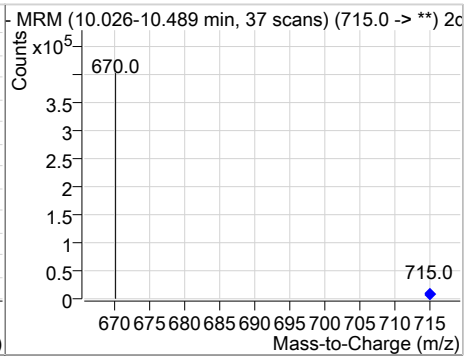




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	23.23	10.18	-0.06	299689				







Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:44

Perfluorinated Compounds by LC/MS/MS

Data File : 2q66252.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/17/2021 6:35:24 AM
Sample Name : jd22888-5A
Vial : P4-A5
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q963.batch.bin
Sample Information : op84941,S2Q963,2.15,,,1.0,1,soil

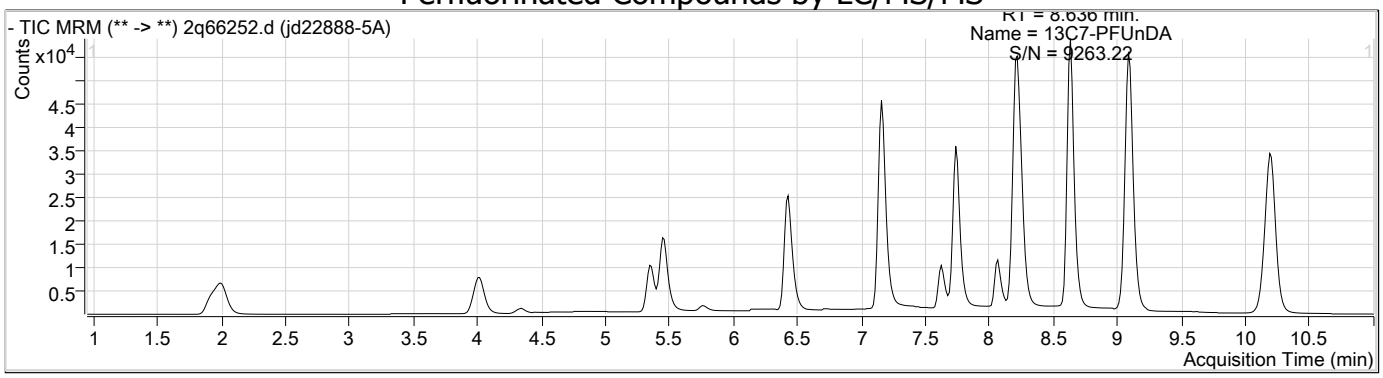
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.180	589.0 -> 419.0	31341	20.00	µg/L	0.025
M4-PFBA	1.989	217.0 -> 172.0	59336	20.00	µg/L	0.000
M5-PFPeA	4.012	268.0 -> 223.0	47373	20.00	µg/L	0.000
M5-PFHxA	5.454	318.0 -> 273.0	71652	20.00	µg/L	0.013
M4-PFHpA	6.433	367.0 -> 322.0	104121	20.00	µg/L	0.013
M8-PFOA	7.165	421.0 -> 376.0	120472	20.00	µg/L	0.013
M9-PFNA	7.745	472.0 -> 427.0	124458	20.00	µg/L	0.013
M6-PFDA	8.210	519.0 -> 474.0	170066	20.00	µg/L	0.000
M7-PFUnDA	8.636	570.0 -> 525.0	224598	20.00	µg/L	0.000
M2-PFDoDA	9.087	615.0 -> 570.0	252407	20.00	µg/L	-0.012
M2-PFTeDA	10.189	715.0 -> 670.0	206627	20.00	µg/L	-0.050
M8-FOSA	7.630	506.0 -> 78.0	33422	20.00	µg/L	0.026
M3-PFBS	4.330	302.0 -> 99.0	5794	20.00	µg/L	0.000
M3-PFHxS	6.469	402.0 -> 99.0	6428	20.00	µg/L	0.013
M8-PFOS	7.731	507.0 -> 99.0	8927	20.00	µg/L	0.013
M2-4:2FTS	5.348	329.0 -> 309.0	46702	20.00	µg/L	0.013
M2-6:2FTS	7.150	429.0 -> 409.0	66737	20.00	µg/L	0.013
M2-8:2FTS	8.247	529.0 -> 509.0	63047	20.00	µg/L	0.000
M3-MeFOSAA	8.066	573.0 -> 419.0	35847	20.00	µg/L	0.025
M3-HFPO-DA	5.771	287.0 -> 169.0	4948	20.00	µg/L	0.013
System Monitoring Compounds						
13C2-4:2FTS	5.348	329.0 -> 309.0	46702	16.04	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 80.2%		
13C2-6:2FTS	7.150	429.0 -> 409.0	66737	16.40	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 82.0%		
13C2-8:2FTS	8.247	529.0 -> 509.0	63047	17.67	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.4%		
13C2-PFDoDA	9.087	615.0 -> 570.0	252407	15.69	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 78.5%		
13C2-PFTeDA	10.189	715.0 -> 670.0	206627	16.02	µg/L	-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 80.1%		
13C3-PFBS	4.330	302.0 -> 99.0	5794	17.15	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.7%		
13C3-PFHxS	6.469	402.0 -> 99.0	6428	17.12	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.6%		
13C4-PFBA	1.989	217.0 -> 172.0	59336	17.67	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.4%		
13C4-PFHpA	6.433	367.0 -> 322.0	104121	17.11	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.5%		
d5-EtFOSAA	8.180	589.0 -> 419.0	31341	15.42	ng/ml	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 77.1%		
13C5-PFHxA	5.454	318.0 -> 273.0	71652	17.20	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.0%		
13C5-PFPeA	4.012	268.0 -> 223.0	47373	17.17	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.8%		

Perfluorinated Compounds by LC/MS/MS

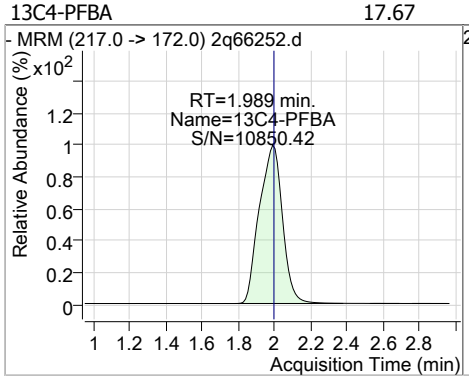
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	170066	18.36	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.8%			
13C7-PFUnDA	8.636	570.0 -> 525.0	224598	17.04	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.2%			
13C8-FOSA	7.630	506.0 -> 78.0	33422	17.39	µg/L		0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.0%			
13C8-PFOA	7.165	421.0 -> 376.0	120472	17.27	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.4%			
13C8-PFOS	7.731	507.0 -> 99.0	8927	16.81	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.0%			
13C9-PFNA	7.745	472.0 -> 427.0	124458	17.50	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.5%			
d3-MeFOSAA	8.066	573.0 -> 419.0	35847	15.11	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 75.6%			
13C3-HFPO-DA	5.771	287.0 -> 169.0	4948	15.26	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 76.3%			
Target Compounds							QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.			
6:2FTS	-	427.0 -> 407.0	-	N.D.			
8:2FTS	-	527.0 -> 507.0	-	N.D.			
EtFOSAA	-	584.0 -> 419.0	-	N.D.			
FOSA	-	498.0 -> 78.0	-	N.D.			
MeFOSAA	-	570.0 -> 419.0	-	N.D.			
PFBA	-	213.0 -> 169.0	-	N.D.			
PFBS	-	299.0 -> 80.0	-	N.D.			
PFDA	-	513.0 -> 469.0	-	N.D.			
PFDoDA	-	613.0 -> 569.0	-	N.D.			
PFDS	-	599.0 -> 80.0	-	N.D.			
PFHpA	-	363.0 -> 319.0	-	N.D.			
PFHpS	-	449.0 -> 80.0	-	N.D.			
PFHxA	-	313.0 -> 269.0	-	N.D.			
PFHxS	-	399.0 -> 80.0	-	N.D.			
PFNA	-	463.0 -> 419.0	-	N.D.			
PFNS	-	549.0 -> 80.0	-	N.D.			
PFOA	-	413.0 -> 369.0	-	N.D.			
PFOS	7.731	499.0 -> 80.0	362	0.42	µg/L	m	87
PFPeA	-	263.0 -> 219.0	-	N.D.			
PFPeS	-	349.0 -> 80.0	-	N.D.			
PFTeDA	-	713.0 -> 669.0	-	N.D.			
PFTrDA	-	663.0 -> 619.0	-	N.D.			
PFUnDA	-	563.0 -> 519.0	-	N.D.			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.			
ADONA	-	377.0 -> 251.0	-	N.D.			
HFPO-DA	-	329.0 -> 169.0	-	N.D.			

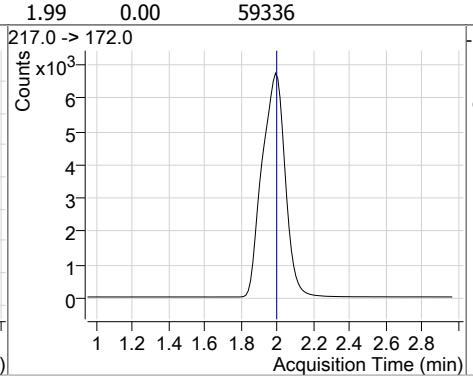
 # = Qualifier out of range, m = manually integrated, + = Area summed

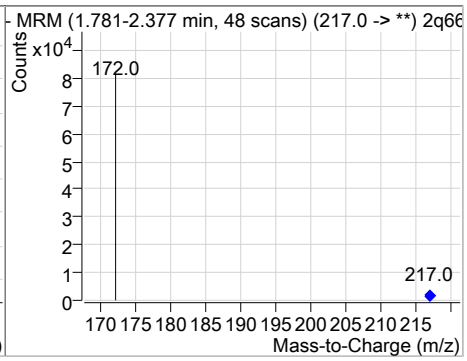
Perfluorinated Compounds by LC/MS/MS



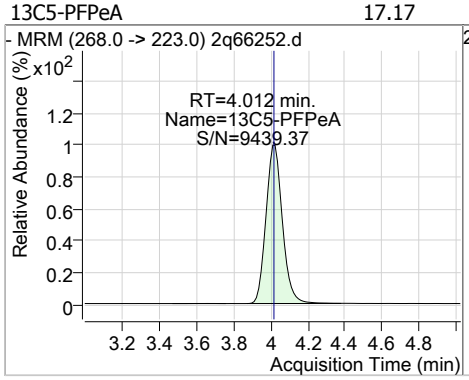
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	17.67	1.99	0.00	59336				

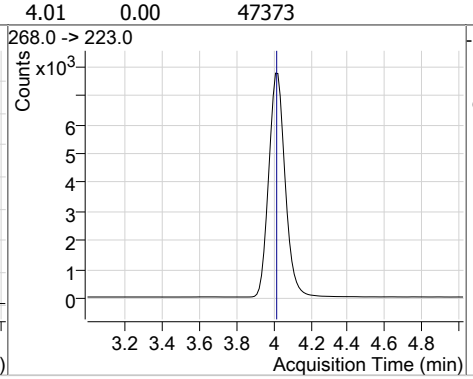


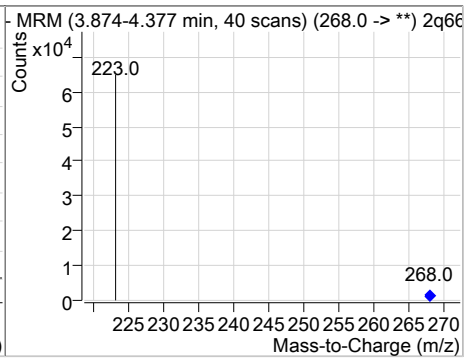




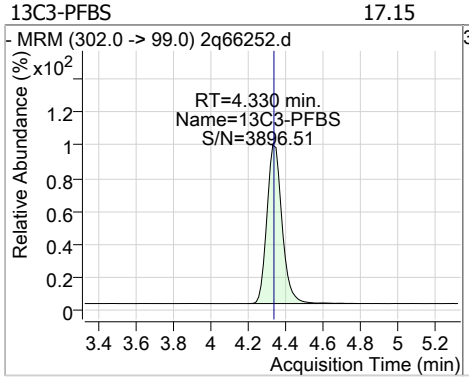
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13C5-PFPeA	17.17	4.01	0.00	47373				

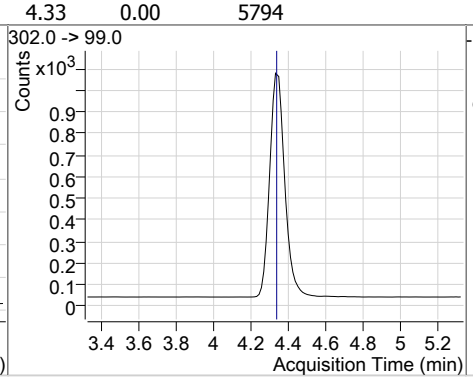


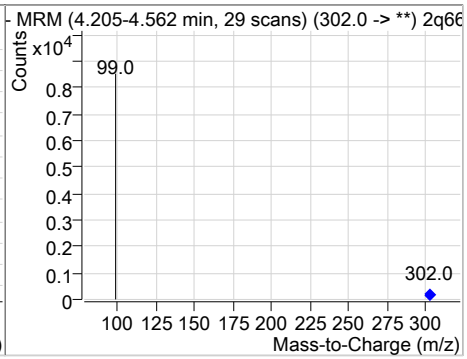




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	17.15	4.33	0.00	5794				

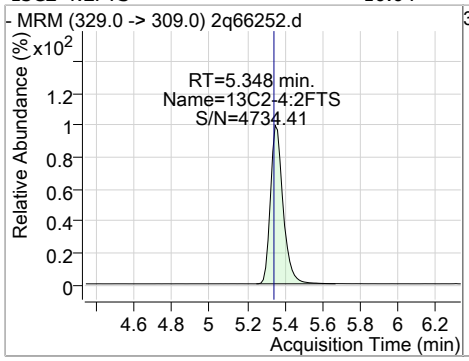


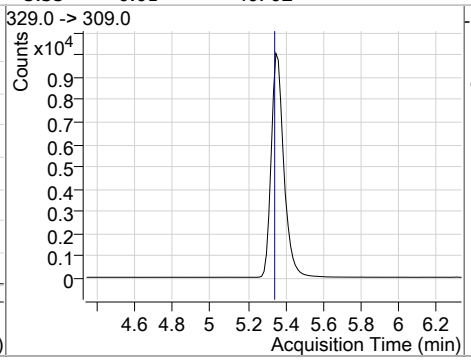


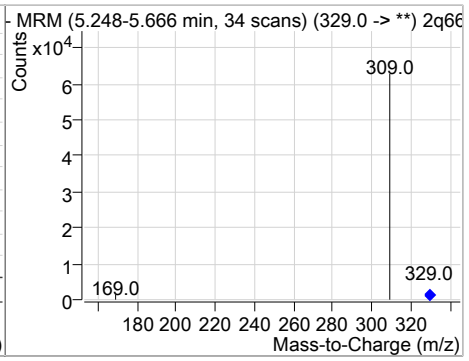


Perfluorinated Compounds by LC/MS/MS

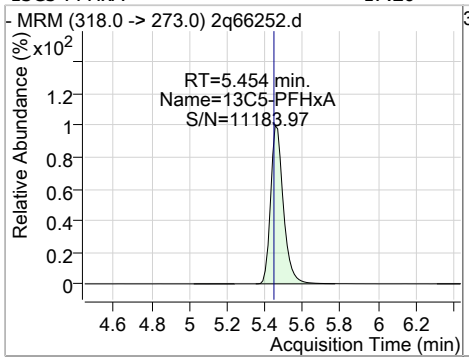
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	16.04	5.35	0.01	46702				

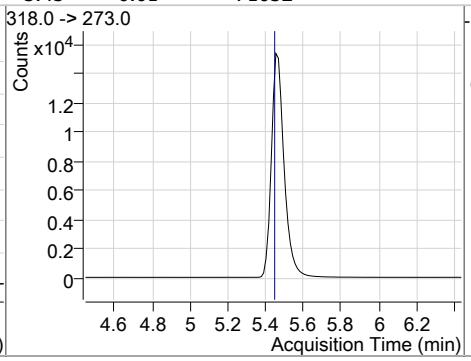


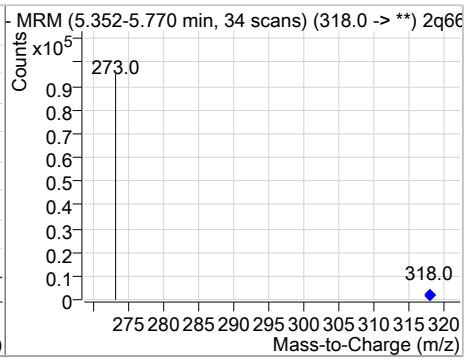




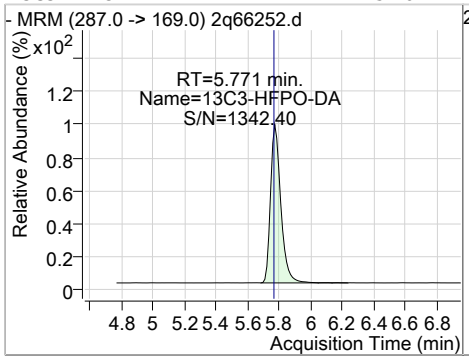
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13C5-PFHxA	17.20	5.45	0.01	71652				

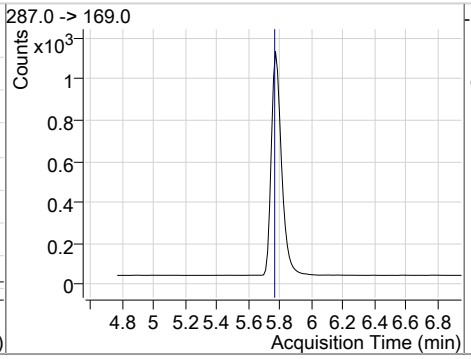


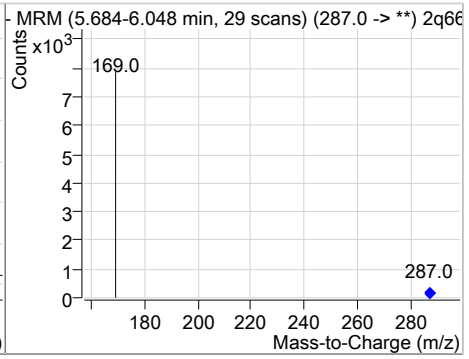




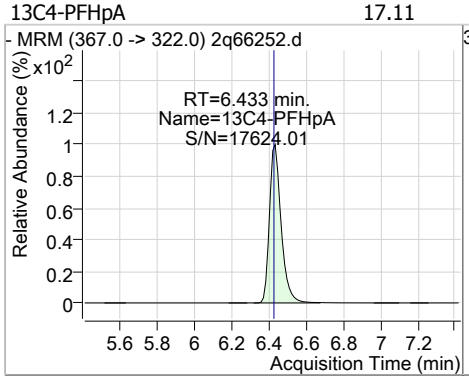
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	15.26	5.77	0.01	4948				

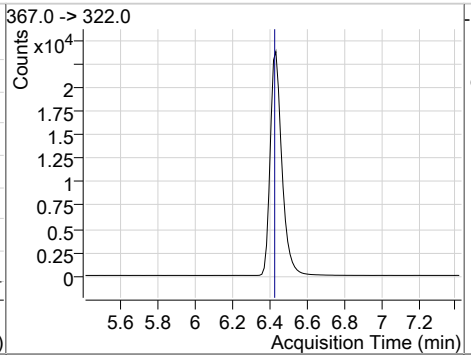


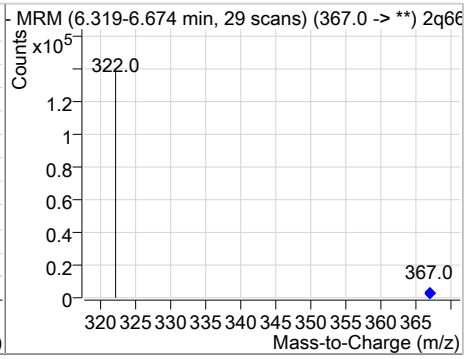




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	17.11	6.43	0.01	104121				

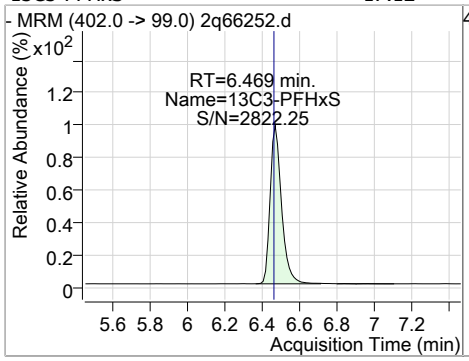


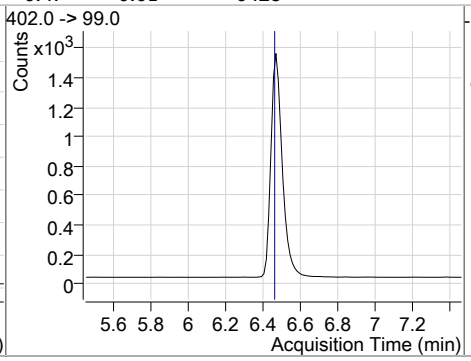


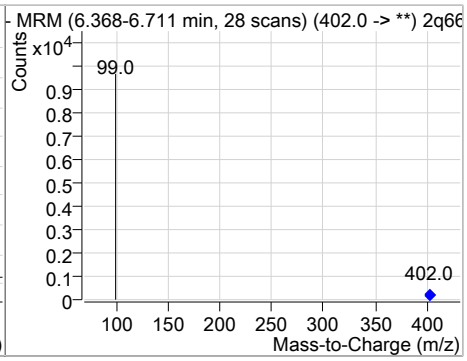


Perfluorinated Compounds by LC/MS/MS

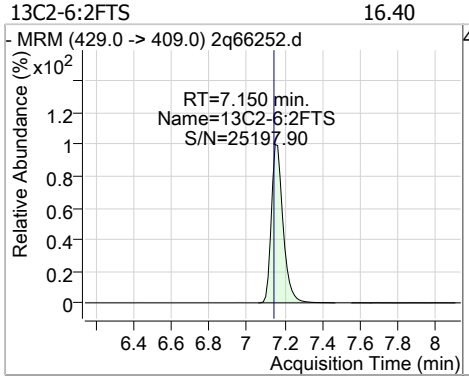
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13C3-PFHxS	17.12	6.47	0.01	6428				

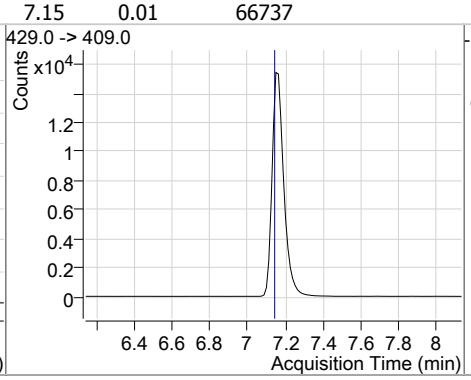


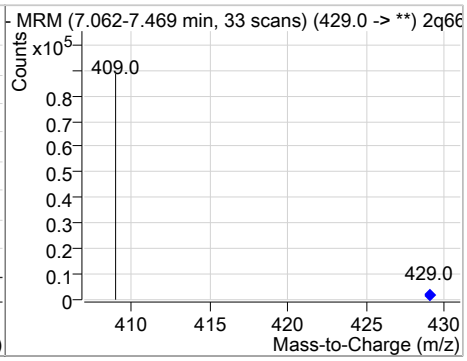




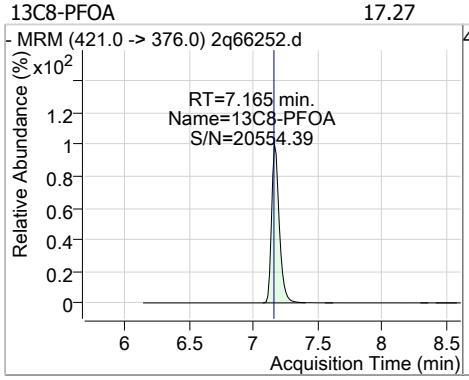
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	16.40	7.15	0.01	66737				

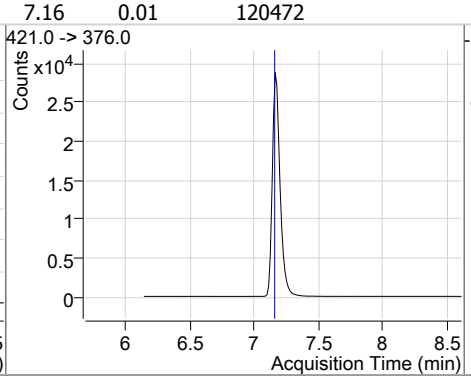


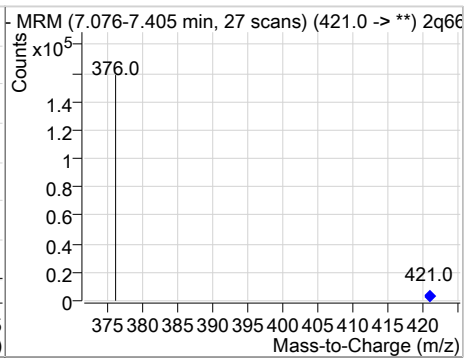




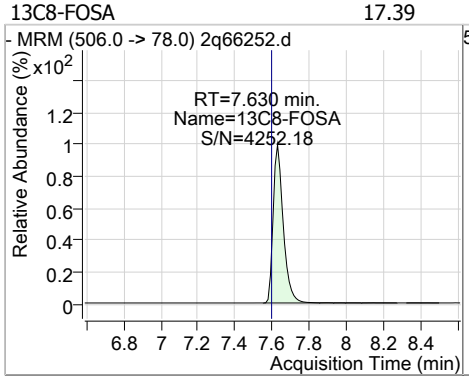
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	17.27	7.16	0.01	120472				

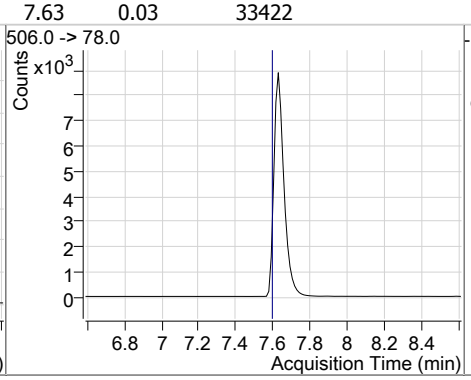


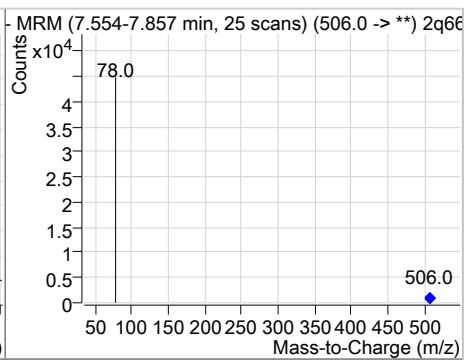




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	17.39	7.63	0.03	33422				

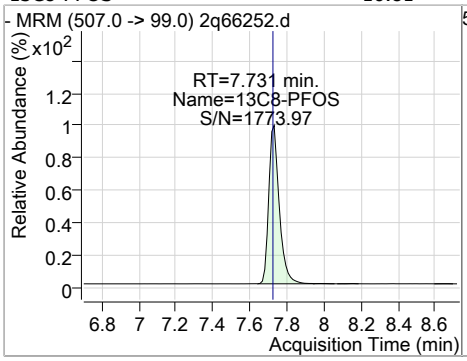


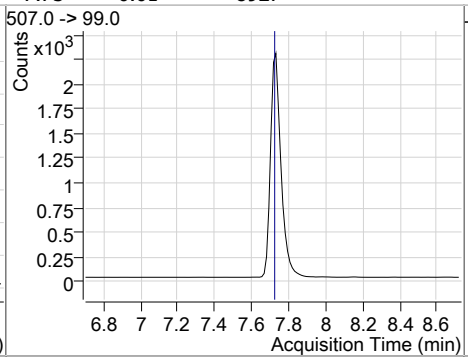


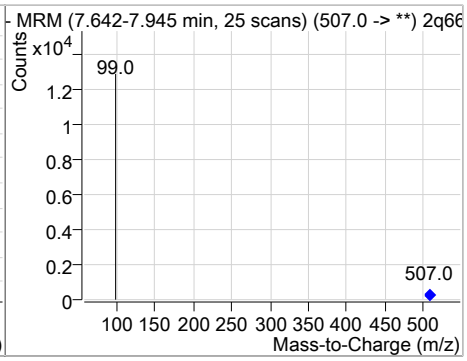


Perfluorinated Compounds by LC/MS/MS

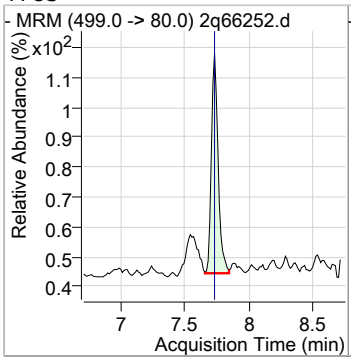
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	16.81	7.73	0.01	8927				

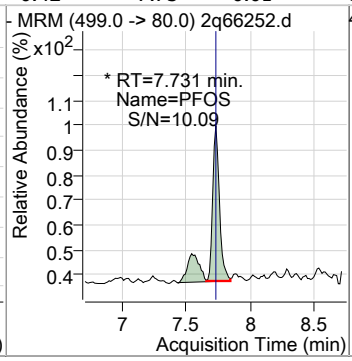


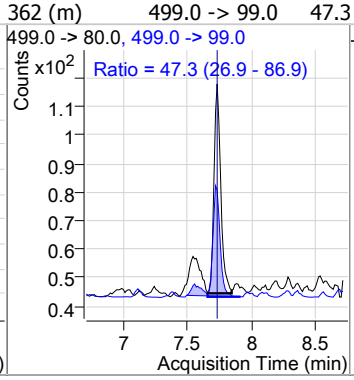


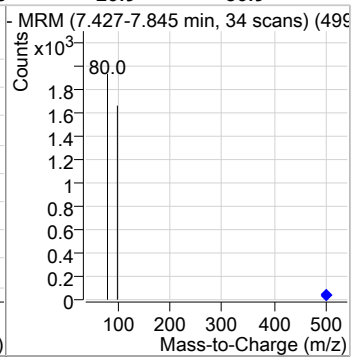


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.42	7.73	0.01	362 (m)	499.0 -> 99.0	47.3	26.9	86.9

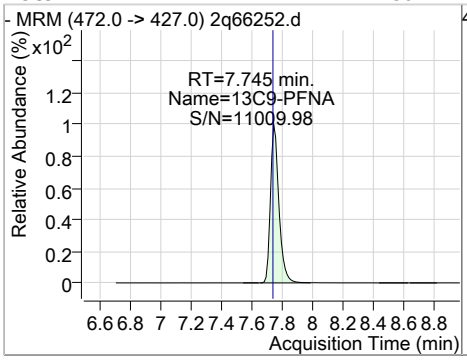


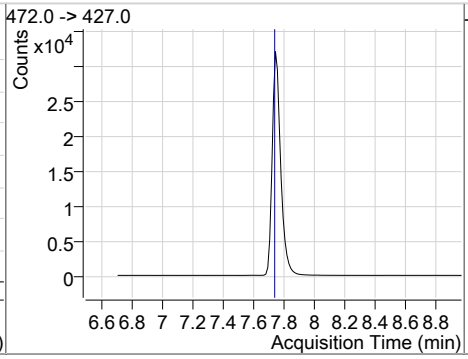


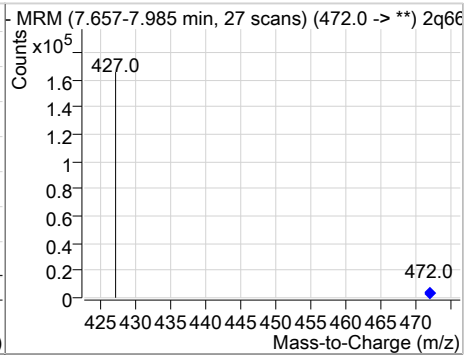




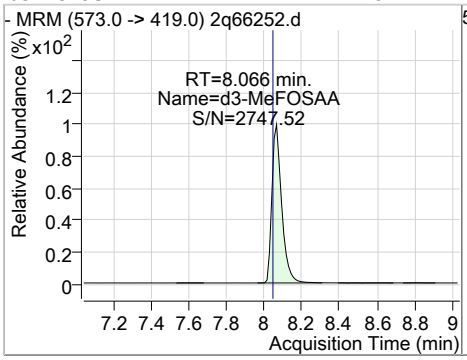
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	17.50	7.75	0.01	124458				

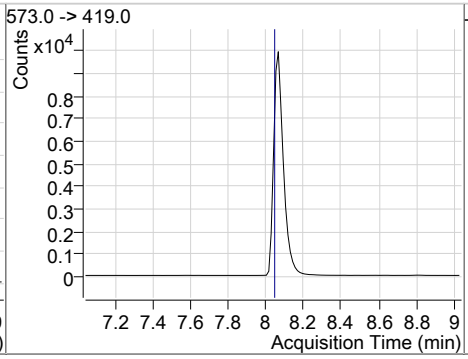


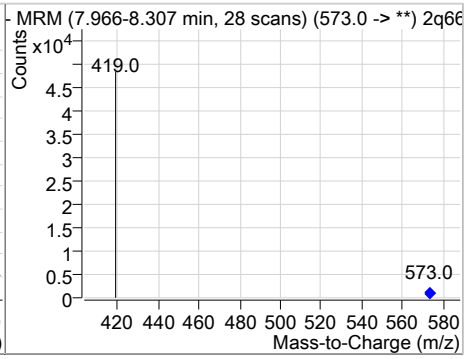




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	15.11	8.07	0.03	35847				

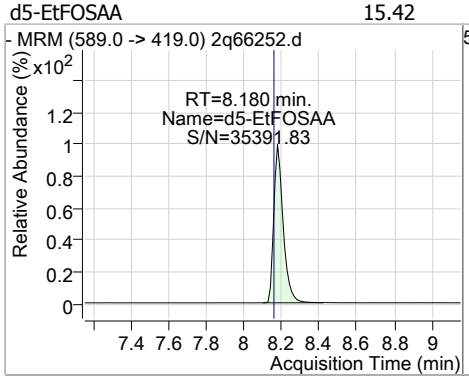


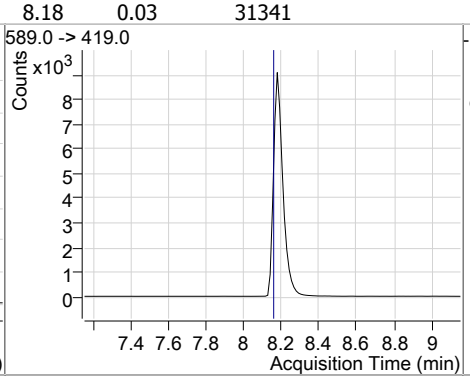


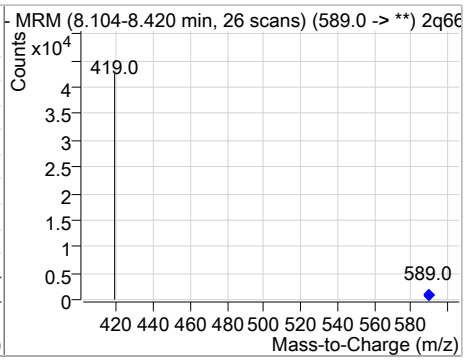


Perfluorinated Compounds by LC/MS/MS

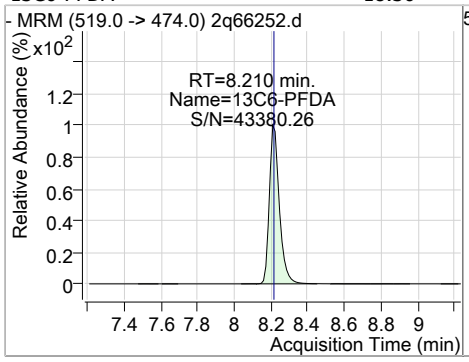
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	15.42	8.18	0.03	31341				

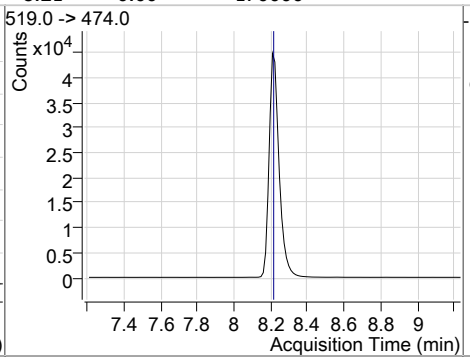


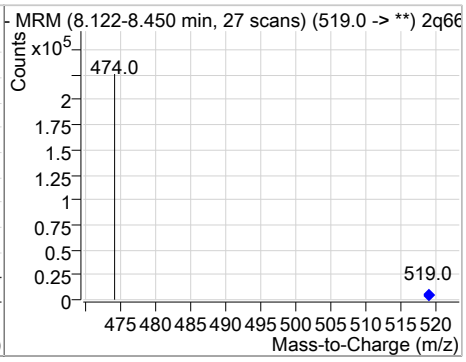




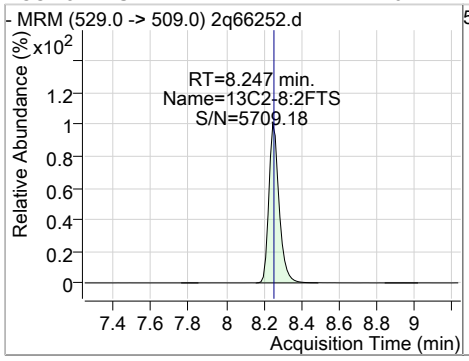
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.36	8.21	0.00	170066				

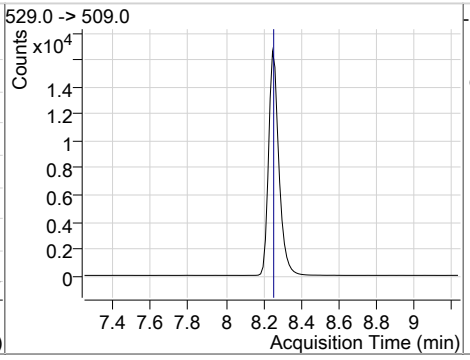


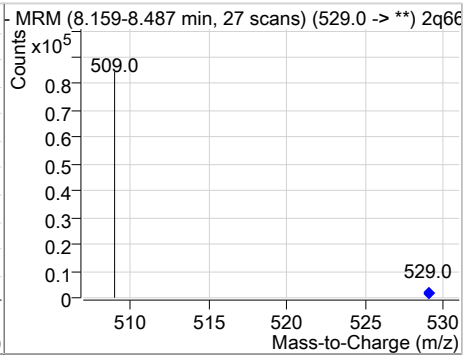




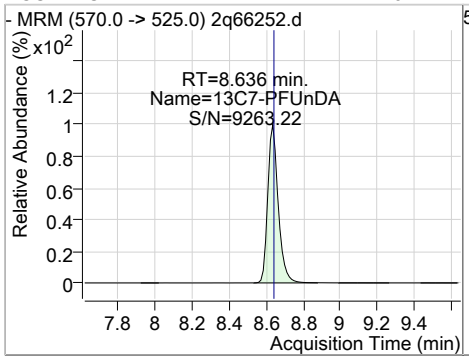
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	17.67	8.25	0.00	63047				

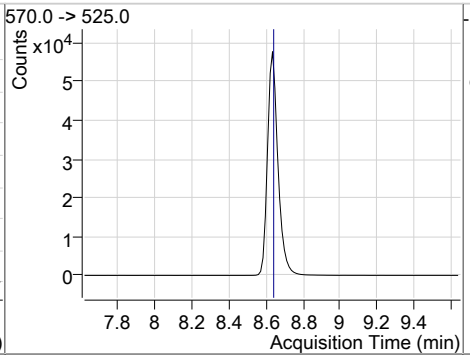


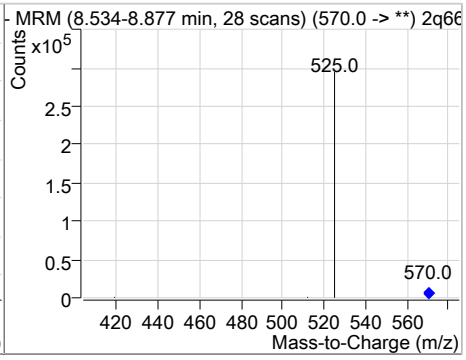




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	17.04	8.64	0.00	224598				

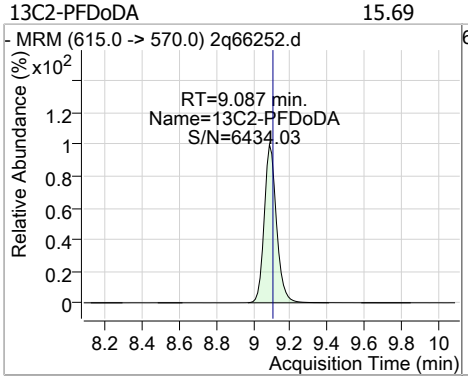


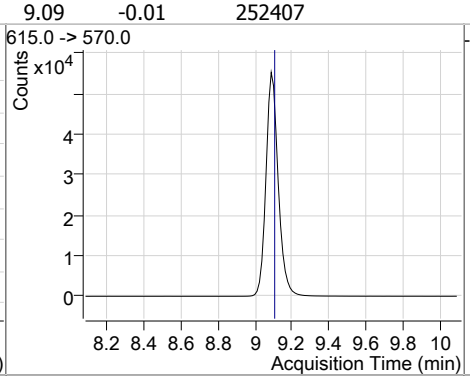


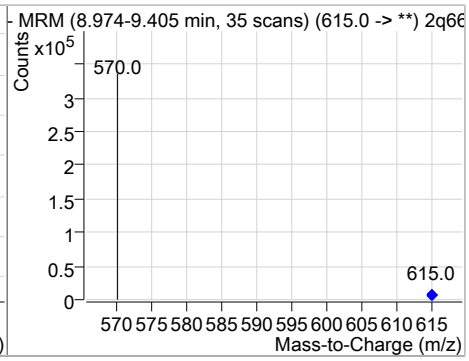


Perfluorinated Compounds by LC/MS/MS

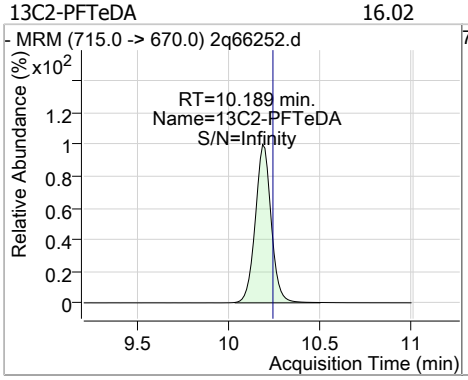
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	15.69	9.09	-0.01	252407				

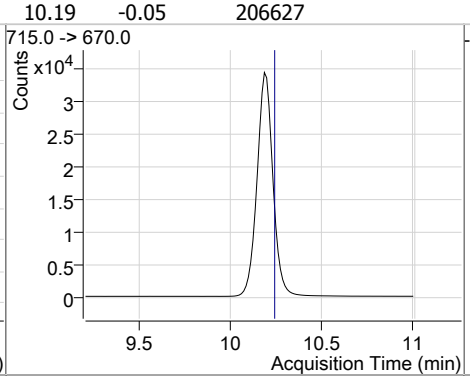


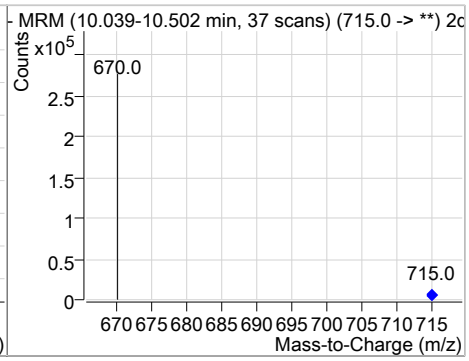




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	16.02	10.19	-0.05	206627				







Manual Integration Approval Summary

Sample Number: JD22888-5A
Lab FileID: 2Q66252.D
Injection Time: 04/17/21 06:35
Method: EPA 537M BY ID
Analyst approved: 04/18/21 11:57 Nancy Saunders
Supervisor approved: 04/19/21 15:44 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanesulfonic acid	1763-23-1		7.73	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:44

Perfluorinated Compounds by LC/MS/MS

Data File : 2q66253.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/17/2021 6:51:57 AM
Sample Name : jd22888-6A
Vial : P4-A6
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q963.batch.bin
Sample Information : op84941,S2Q963,2.02,,,1.0,1,soil

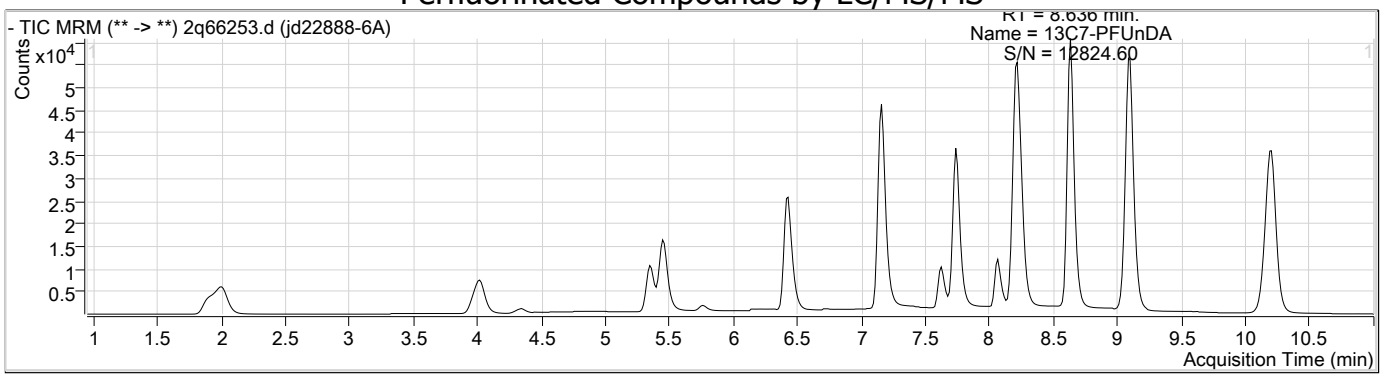
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.180	589.0 -> 419.0	32941	20.00	µg/L	0.025
M4-PFBA	2.002	217.0 -> 172.0	60679	20.00	µg/L	0.013
M5-PFPeA	4.024	268.0 -> 223.0	48552	20.00	µg/L	0.013
M5-PFHxA	5.454	318.0 -> 273.0	72799	20.00	µg/L	0.013
M4-PFHpA	6.421	367.0 -> 322.0	107111	20.00	µg/L	0.000
M8-PFOA	7.165	421.0 -> 376.0	122972	20.00	µg/L	0.013
M9-PFNA	7.745	472.0 -> 427.0	126388	20.00	µg/L	0.013
M6-PFDA	8.210	519.0 -> 474.0	169478	20.00	µg/L	0.000
M7-PFUnDA	8.636	570.0 -> 525.0	229924	20.00	µg/L	0.000
M2-PFDoDA	9.087	615.0 -> 570.0	257773	20.00	µg/L	-0.012
M2-PFTeDA	10.201	715.0 -> 670.0	219385	20.00	µg/L	-0.037
M8-FOSA	7.630	506.0 -> 78.0	33751	20.00	µg/L	0.026
M3-PFBS	4.330	302.0 -> 99.0	5838	20.00	µg/L	0.000
M3-PFHxS	6.469	402.0 -> 99.0	6719	20.00	µg/L	0.013
M8-PFOS	7.731	507.0 -> 99.0	9574	20.00	µg/L	0.013
M2-4:2FTS	5.348	329.0 -> 309.0	48323	20.00	µg/L	0.013
M2-6:2FTS	7.150	429.0 -> 409.0	67762	20.00	µg/L	0.013
M2-8:2FTS	8.247	529.0 -> 509.0	60746	20.00	µg/L	0.000
M3-MeFOSAA	8.066	573.0 -> 419.0	37018	20.00	µg/L	0.025
M3-HFPO-DA	5.771	287.0 -> 169.0	5053	20.00	µg/L	0.013
System Monitoring Compounds						
13C2-4:2FTS	5.348	329.0 -> 309.0	48323	16.60	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.0%		
13C2-6:2FTS	7.150	429.0 -> 409.0	67762	16.65	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.3%		
13C2-8:2FTS	8.247	529.0 -> 509.0	60746	17.03	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.1%		
13C2-PFDoDA	9.087	615.0 -> 570.0	257773	16.03	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 80.1%		
13C2-PFTeDA	10.201	715.0 -> 670.0	219385	17.00	µg/L	-0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.0%		
13C3-PFBS	4.330	302.0 -> 99.0	5838	17.28	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.4%		
13C3-PFHxS	6.469	402.0 -> 99.0	6719	17.90	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.5%		
13C4-PFBA	2.002	217.0 -> 172.0	60679	18.07	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.4%		
13C4-PFHpA	6.421	367.0 -> 322.0	107111	17.60	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.0%		
d5-EtFOSAA	8.180	589.0 -> 419.0	32941	16.20	ng/ml	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.0%		
13C5-PFHxA	5.454	318.0 -> 273.0	72799	17.47	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.4%		
13C5-PFPeA	4.024	268.0 -> 223.0	48552	17.60	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.0%		

Perfluorinated Compounds by LC/MS/MS

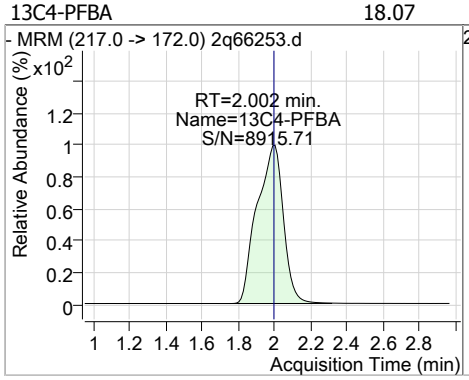
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	169478	18.30	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.5%			
13C7-PFUnDA	8.636	570.0 -> 525.0	229924	17.44	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.2%			
13C8-FOSA	7.630	506.0 -> 78.0	33751	17.57	µg/L		0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.8%			
13C8-PFOA	7.165	421.0 -> 376.0	122972	17.63	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.2%			
13C8-PFOS	7.731	507.0 -> 99.0	9574	18.02	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.1%			
13C9-PFNA	7.745	472.0 -> 427.0	126388	17.77	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.8%			
d3-MeFOSAA	8.066	573.0 -> 419.0	37018	15.61	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 78.0%			
13C3-HFPO-DA	5.771	287.0 -> 169.0	5053	15.58	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 77.9%			
Target Compounds							QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.			
6:2FTS	-	427.0 -> 407.0	-	N.D.			
8:2FTS	-	527.0 -> 507.0	-	N.D.			
EtFOSAA	-	584.0 -> 419.0	-	N.D.			
FOSA	-	498.0 -> 78.0	-	N.D.			
MeFOSAA	-	570.0 -> 419.0	-	N.D.			
PFBA	-	213.0 -> 169.0	-	N.D.			
PFBS	-	299.0 -> 80.0	-	N.D.			
PFDA	-	513.0 -> 469.0	-	N.D.			
PFDoDA	-	613.0 -> 569.0	-	N.D.			
PFDS	-	599.0 -> 80.0	-	N.D.			
PFHpA	-	363.0 -> 319.0	-	N.D.			
PFHpS	-	449.0 -> 80.0	-	N.D.			
PFHxA	-	313.0 -> 269.0	-	N.D.			
PFHxS	-	399.0 -> 80.0	-	N.D.			
PFNA	-	463.0 -> 419.0	-	N.D.			
PFNS	-	549.0 -> 80.0	-	N.D.			
PFOA	7.165	413.0 -> 369.0	1234	0.17	µg/L	m	99
PFOS	7.719	499.0 -> 80.0	473	0.52	µg/L	m	92
PFPeA	-	263.0 -> 219.0	-	N.D.			
PFPeS	-	349.0 -> 80.0	-	N.D.			
PFTeDA	-	713.0 -> 669.0	-	N.D.			
PFTrDA	-	663.0 -> 619.0	-	N.D.			
PFUnDA	-	563.0 -> 519.0	-	N.D.			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.			
ADONA	-	377.0 -> 251.0	-	N.D.			
HFPO-DA	-	329.0 -> 169.0	-	N.D.			

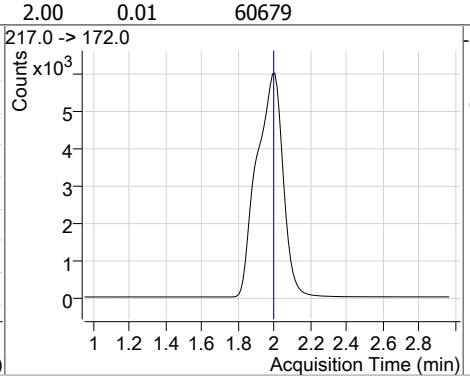
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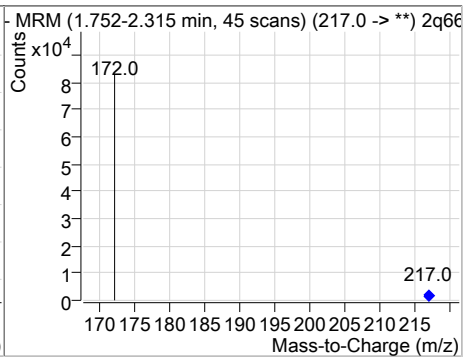
Perfluorinated Compounds by LC/MS/MS



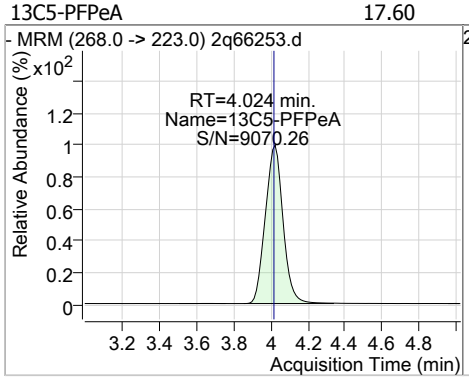
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.07	2.00	0.01	60679				

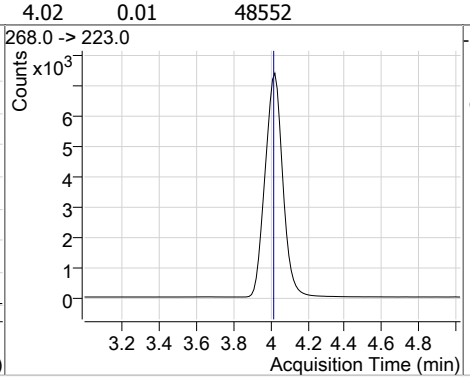


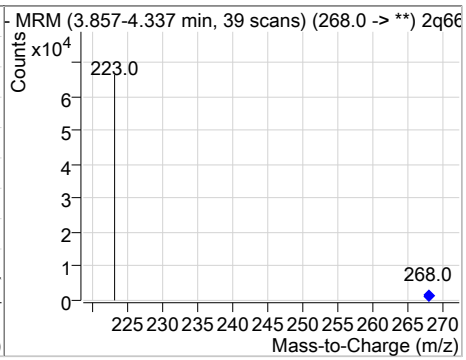




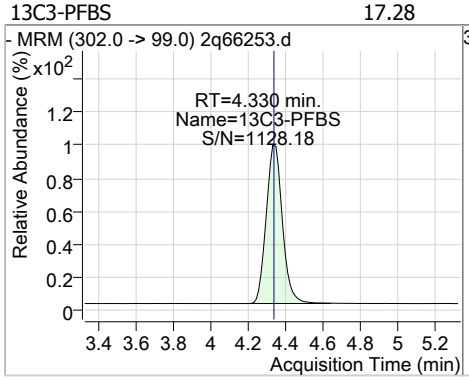
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	17.60	4.02	0.01	48552				

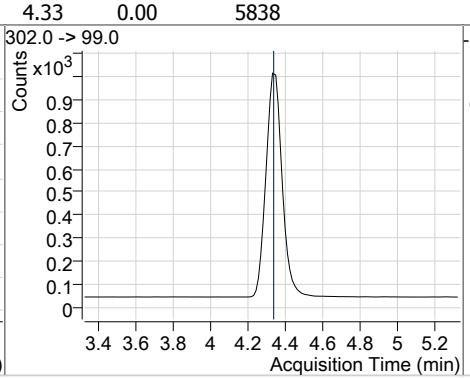


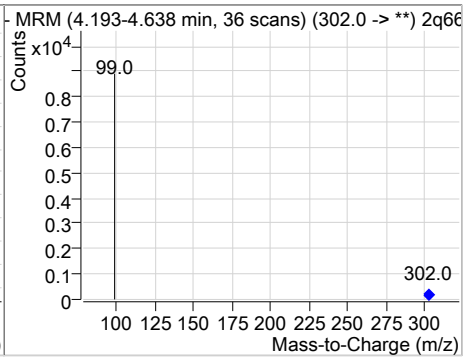




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	17.28	4.33	0.00	5838				

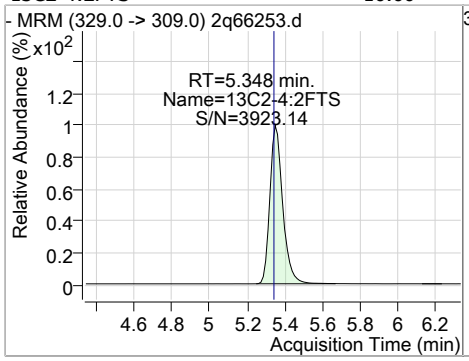


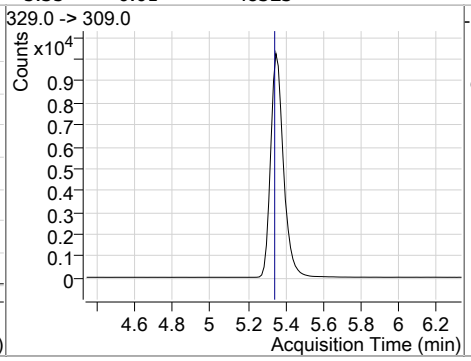


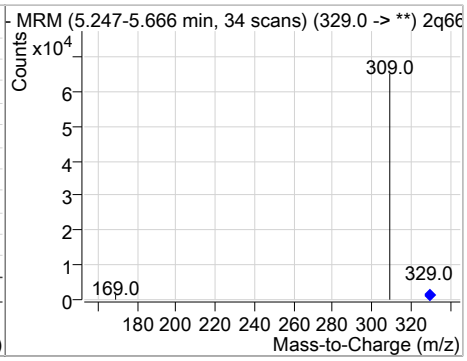


Perfluorinated Compounds by LC/MS/MS

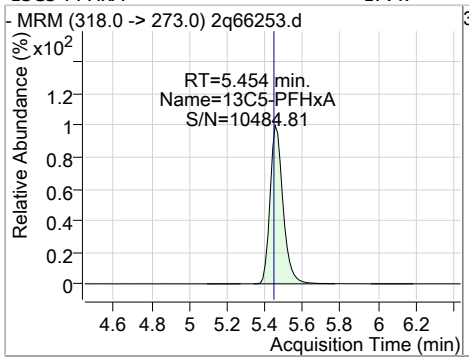
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	16.60	5.35	0.01	48323				

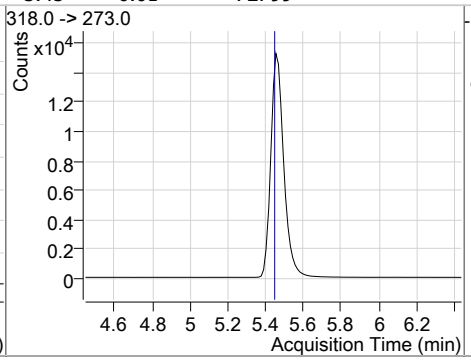


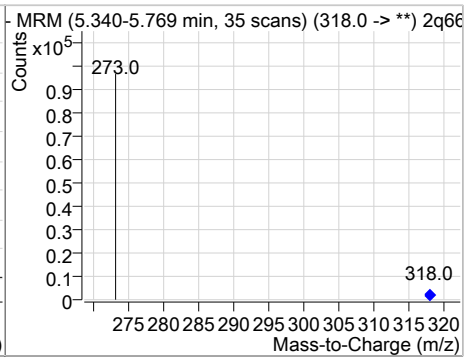




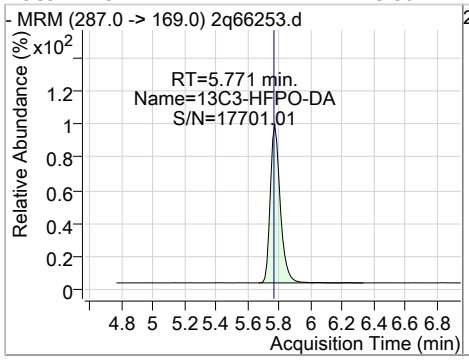
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	17.47	5.45	0.01	72799				

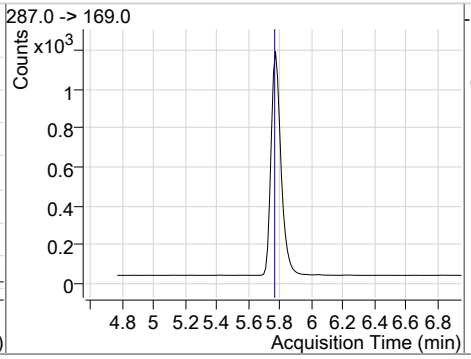


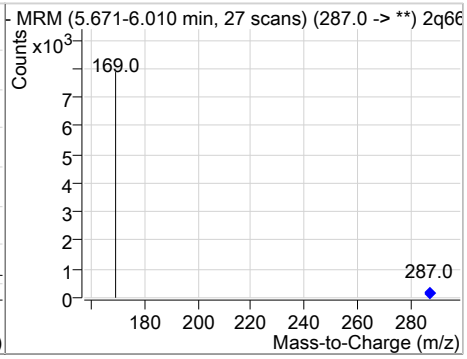




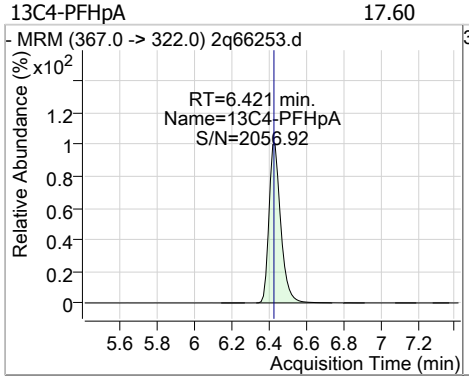
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	15.58	5.77	0.01	5053				

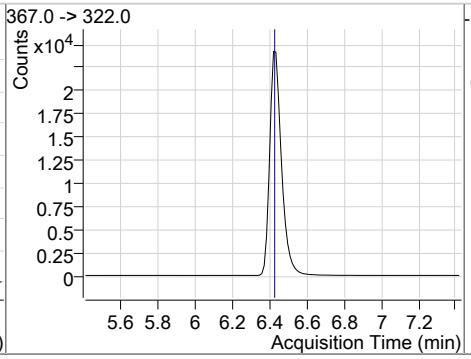


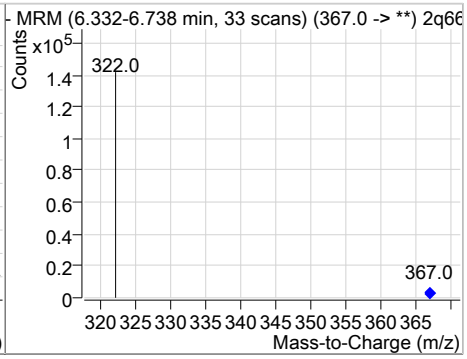




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	17.60	6.42	0.00	107111				

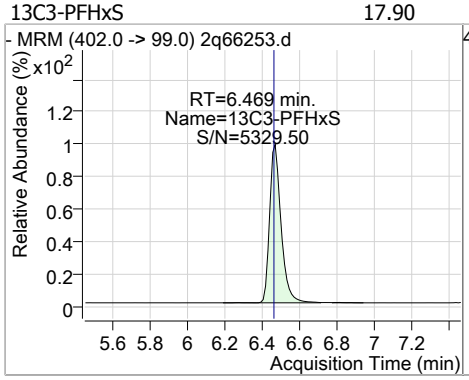


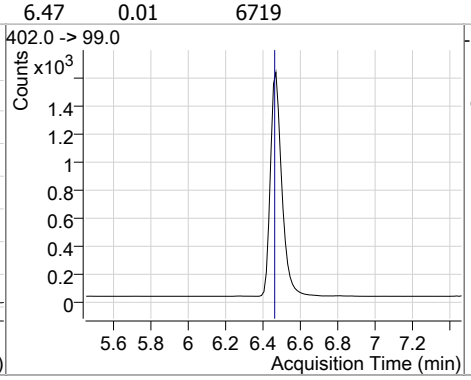


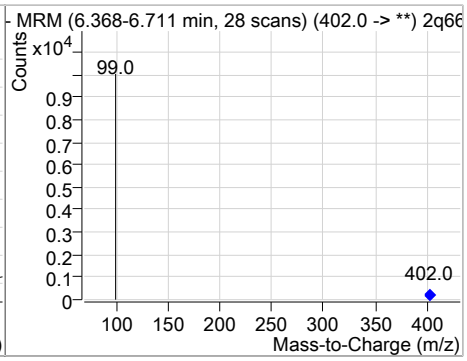


Perfluorinated Compounds by LC/MS/MS

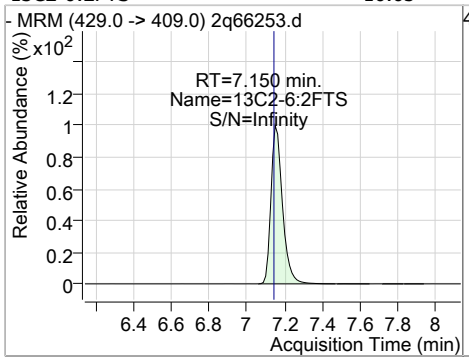
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	17.90	6.47	0.01	6719				

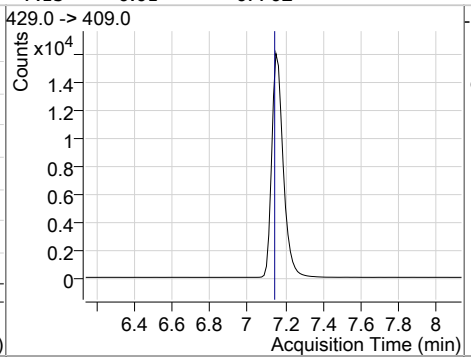


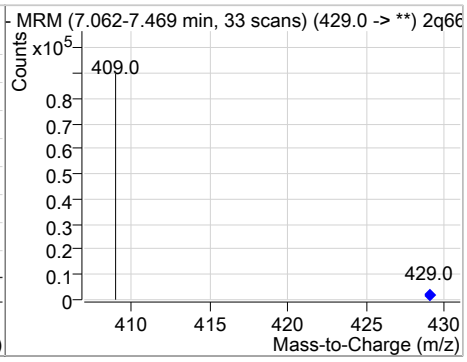




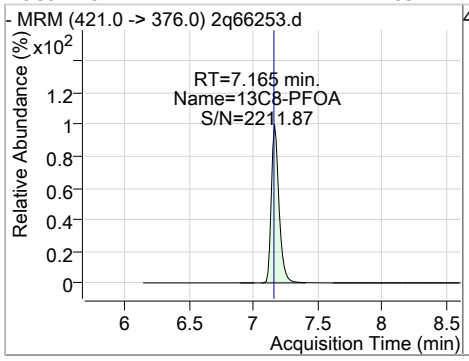
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	16.65	7.15	0.01	67762				

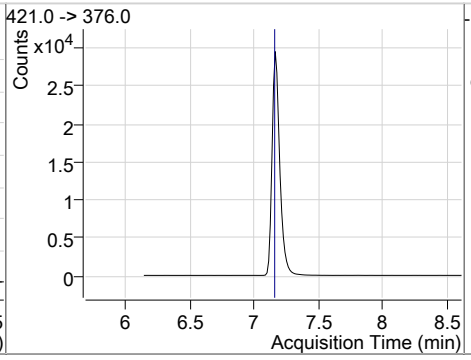


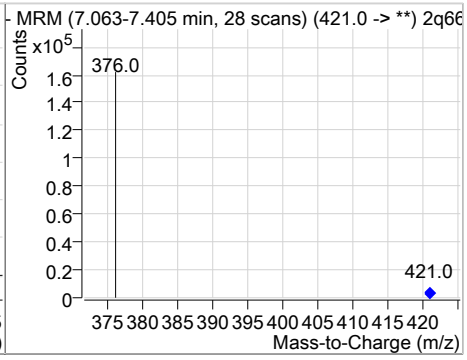




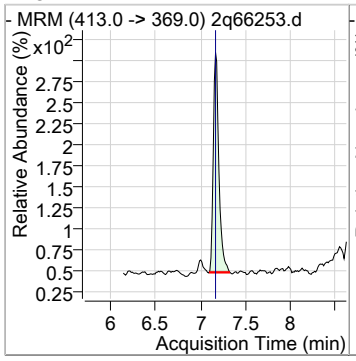
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	17.63	7.16	0.01	122972				

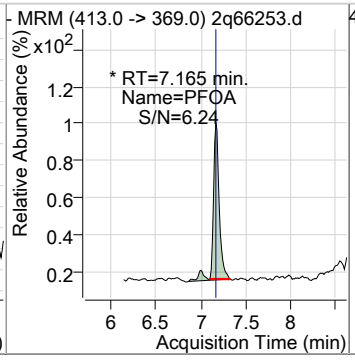


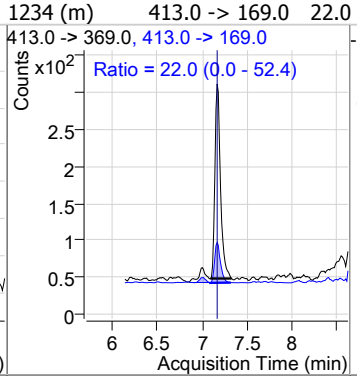


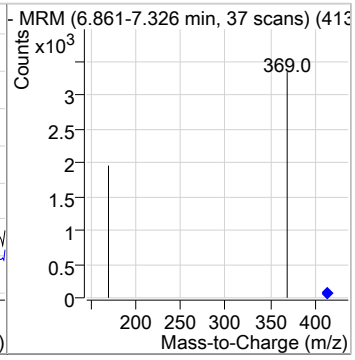


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.17	7.16	0.01	1234 (m)	413.0 -> 169.0	22.0	0.0	52.4



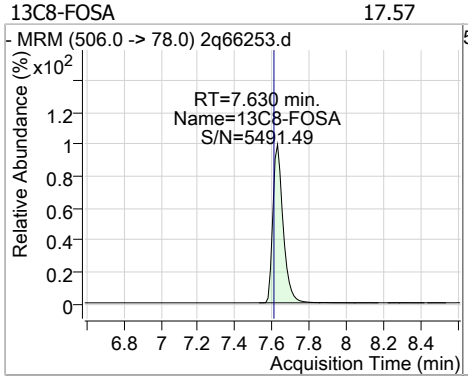


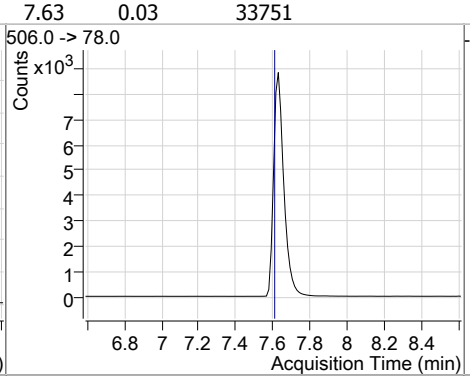


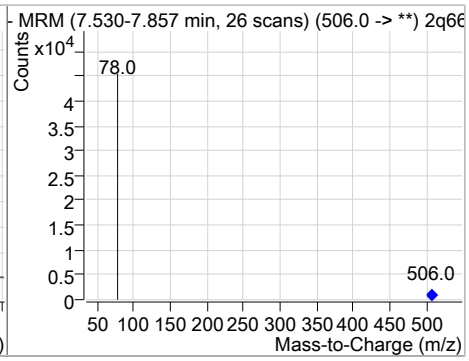


Perfluorinated Compounds by LC/MS/MS

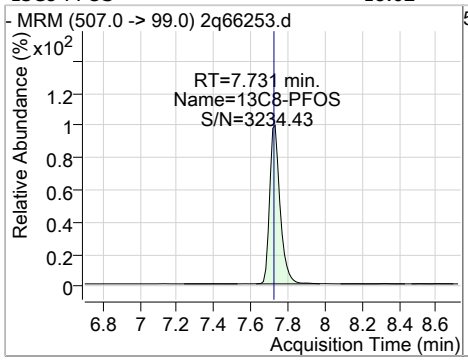
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	17.57	7.63	0.03	33751				

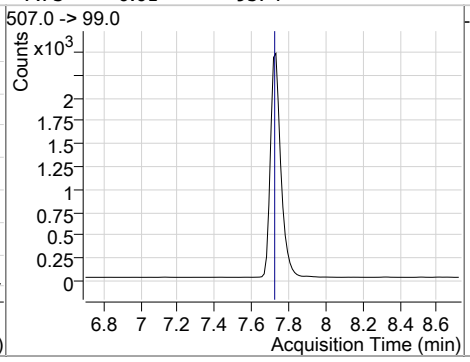


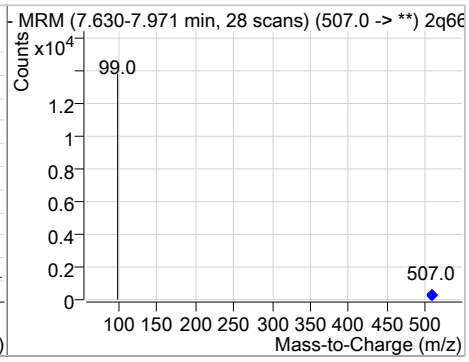




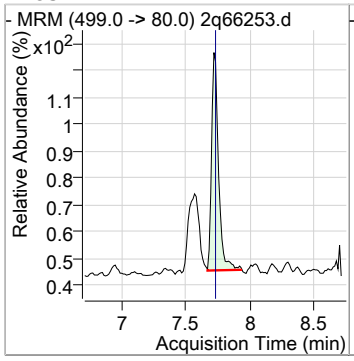
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	18.02	7.73	0.01	9574				

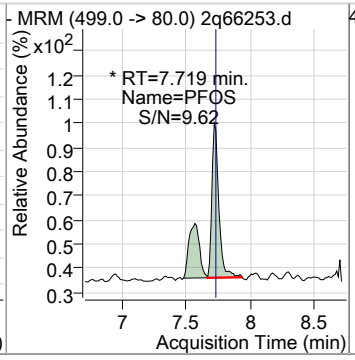


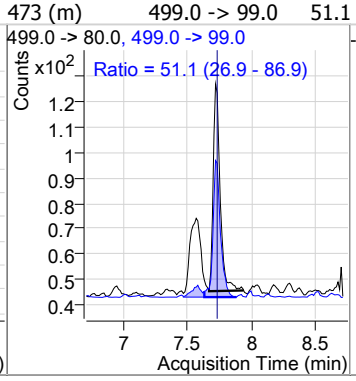


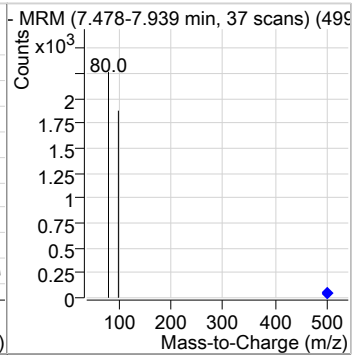


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.52	7.72	0.00	473 (m)	499.0 -> 99.0	51.1	26.9	86.9

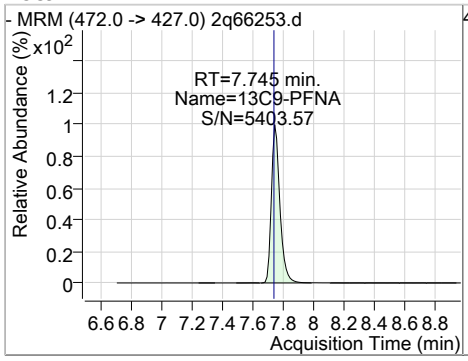


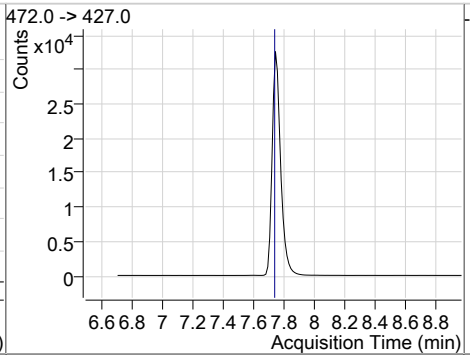


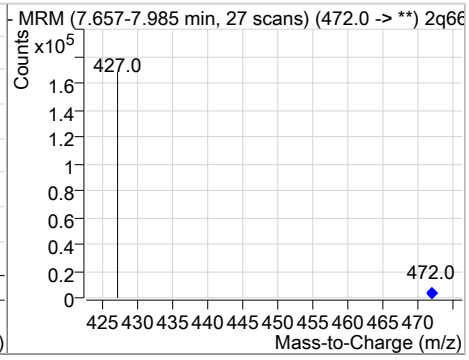




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	17.77	7.75	0.01	126388				

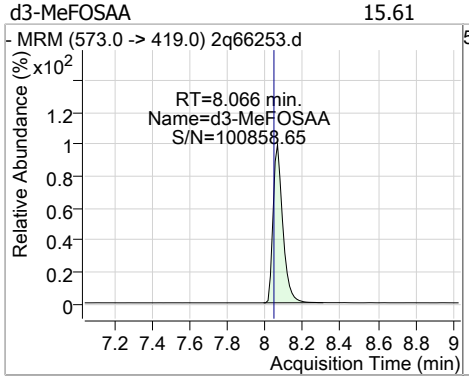


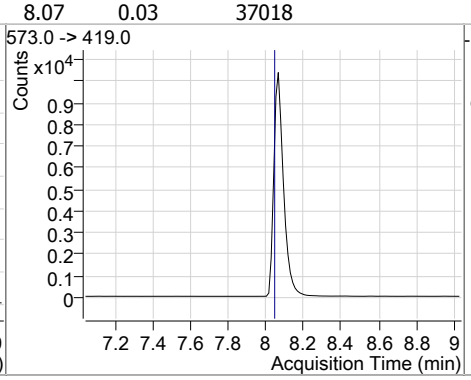


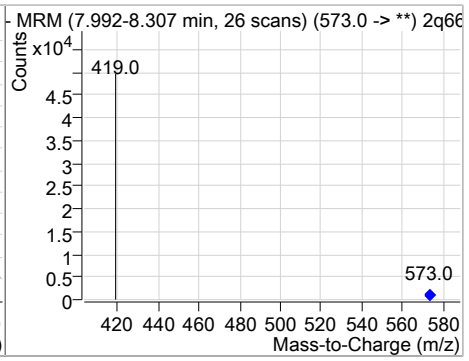


Perfluorinated Compounds by LC/MS/MS

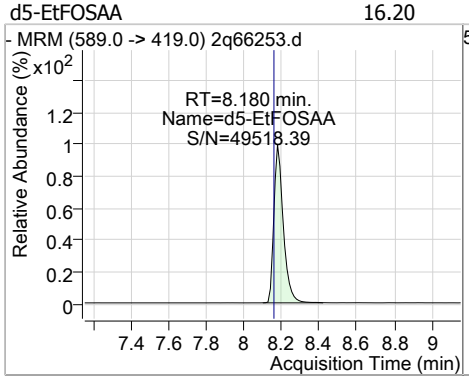
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	15.61	8.07	0.03	37018				

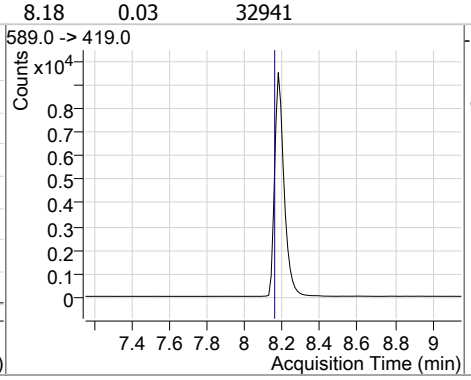


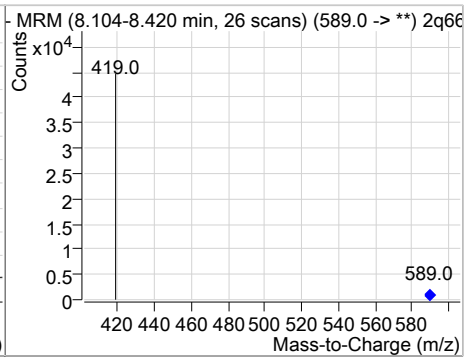




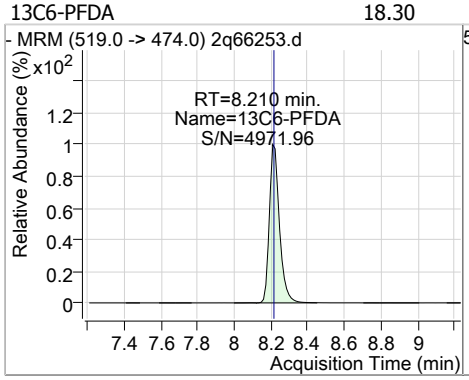
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	16.20	8.18	0.03	32941				

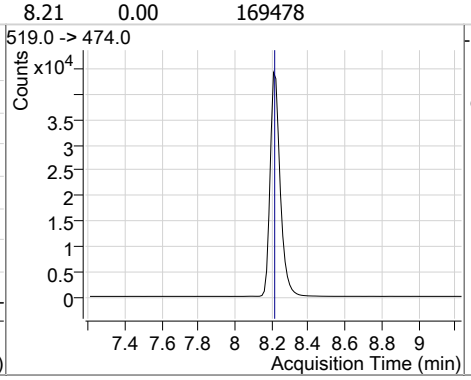


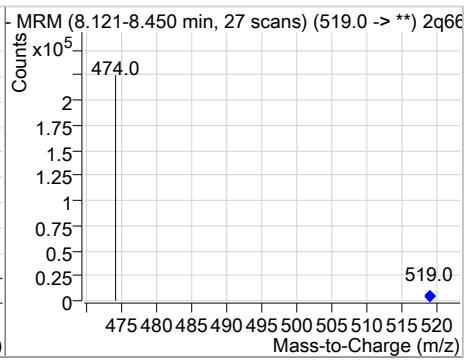




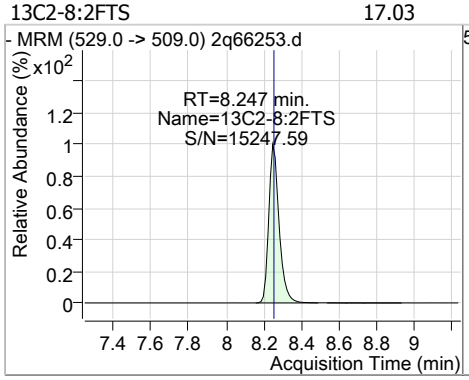
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.30	8.21	0.00	169478				

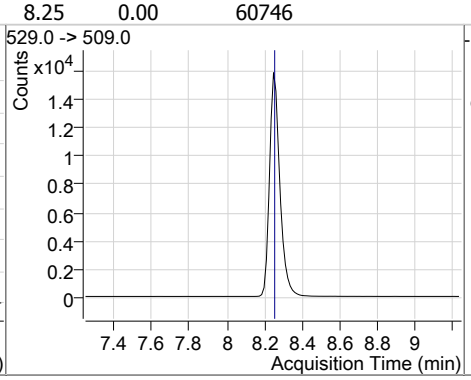


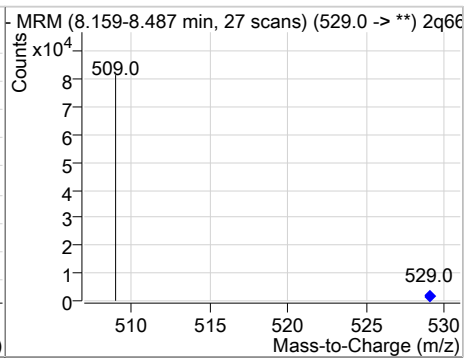




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	17.03	8.25	0.00	60746				

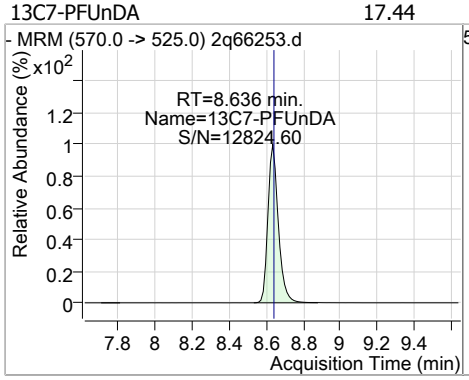


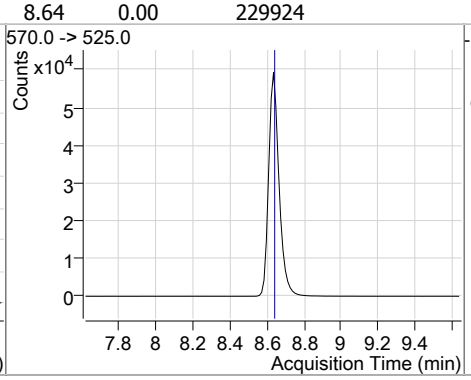


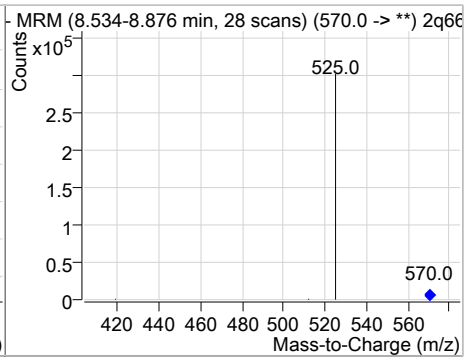


Perfluorinated Compounds by LC/MS/MS

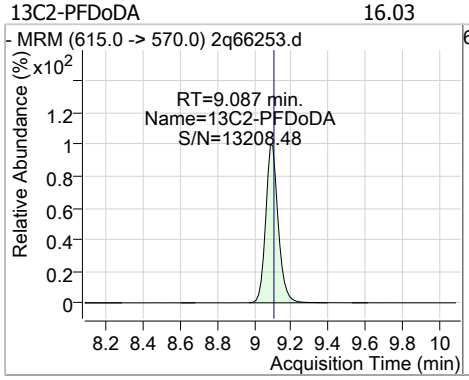
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	17.44	8.64	0.00	229924				

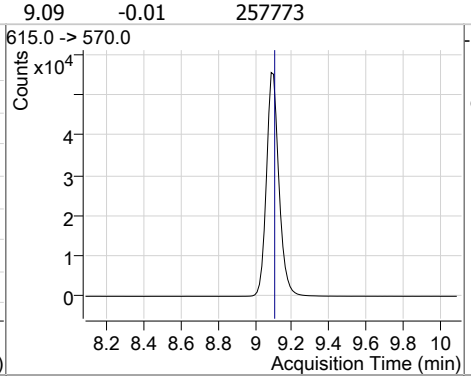


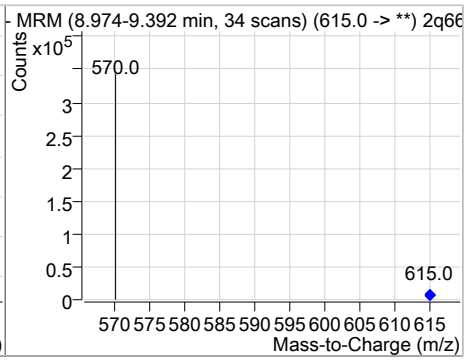




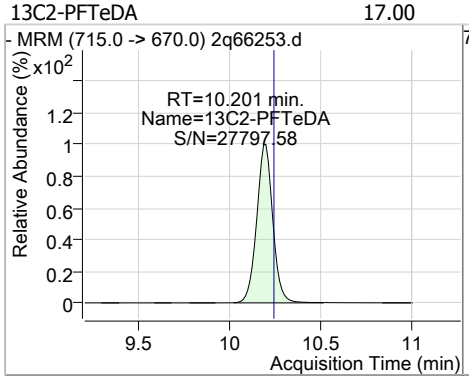
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	16.03	9.09	-0.01	257773				

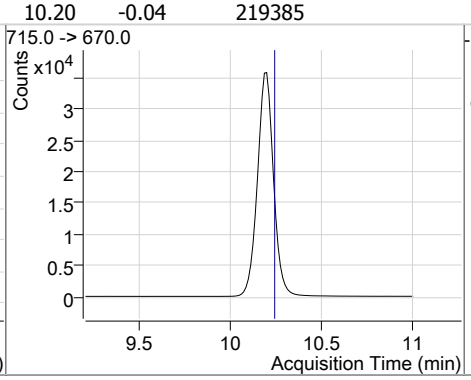


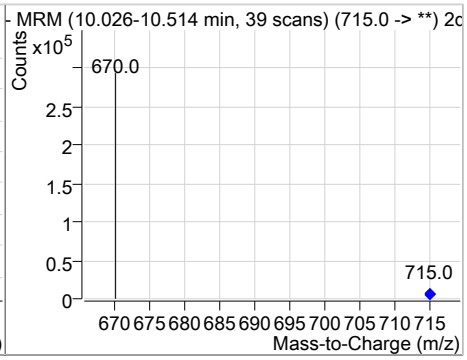




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	17.00	10.20	-0.04	219385				







Manual Integration Approval Summary

Sample Number:	JD22888-6A	**Method:**	EPA 537M BY ID
Lab FileID:	2Q66253.D	**Analyst approved:**	04/18/21 11:57 Nancy Saunders
Injection Time:	04/17/21 06:51	**Supervisor approved:**	04/19/21 15:44 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanoic acid	335-67-1		7.17	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 04/15/21 10:01

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36638.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/15/2021 3:20:06 AM
Sample Name : JD22888-7A
Vial : P2-E4
DA Method File : ID_041321_S3Q537.quantmethod.xml
Batch Name : s3q538.batch.bin
Sample Information : op84900,S3Q538,260,,,1,1,water

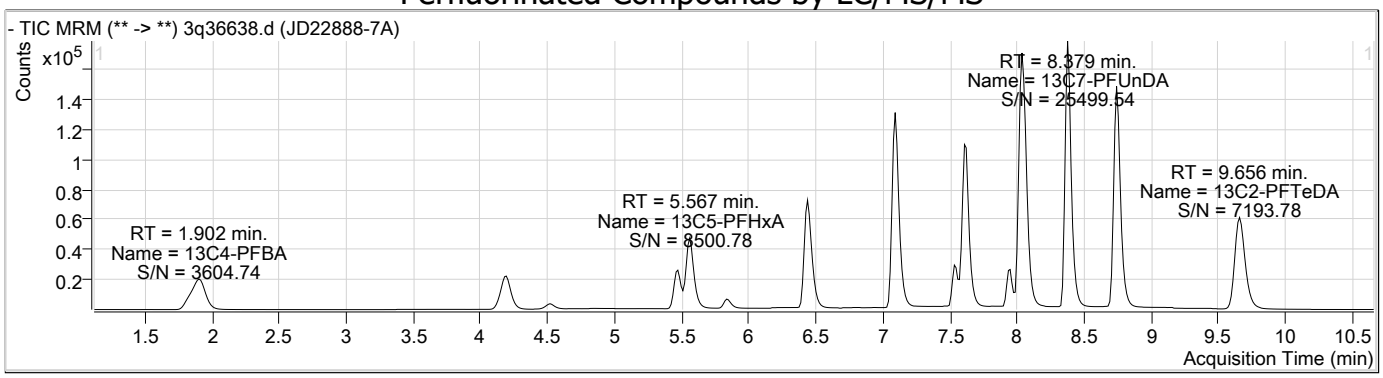
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.902	217.0 -> 172.0	155561	20.00	µg/L	0.063
M5-PFPeA	4.199	268.0 -> 223.0	120662	20.00	µg/L	0.125
M5-PFHxA	5.567	318.0 -> 273.0	183894	20.00	µg/L	-0.063
M4-PFHpA	6.443	367.0 -> 322.0	262225	20.00	µg/L	-0.164
M8-PFOA	7.097	421.0 -> 376.0	315705	20.00	µg/L	-0.228
M9-PFNA	7.628	472.0 -> 427.0	346378	20.00	µg/L	-0.227
M6-PFDA	8.029	519.0 -> 474.0	441260	20.00	µg/L	-0.229
M7-PFUnDA	8.379	570.0 -> 525.0	568649	20.00	µg/L	-0.227
M2-PFDoDA	8.742	615.0 -> 570.0	521054	20.00	µg/L	-0.214
M2-PFTeDA	9.656	715.0 -> 670.0	332918	20.00	µg/L	-0.288
M8-FOSA	7.538	506.0 -> 78.0	89638	20.00	µg/L	-0.278
M3-PFBS	4.524	302.0 -> 99.0	16498	20.00	µg/L	0.077
M3-PFHxS	6.466	402.0 -> 99.0	22954	20.00	µg/L	-0.189
M8-PFOS	7.601	507.0 -> 99.0	33103	20.00	µg/L	-0.240
M2-4:2FTS	5.474	329.0 -> 309.0	106755	20.00	µg/L	-0.038
M2-6:2FTS	7.083	429.0 -> 409.0	158699	20.00	µg/L	-0.229
M2-8:2FTS	8.066	529.0 -> 509.0	168263	20.00	µg/L	-0.216
M3-MeFOSAA	7.949	573.0 -> 419.0	77784	20.00	µg/L	-0.228
M3-HFPO-DA	5.845	287.0 -> 169.0	23384	20.00	µg/L	-0.100
M5-EtFOSAA	8.049	589.0 -> 419.0	61044	20.00	µg/L	-0.240
System Monitoring Compounds						
13C2-4:2FTS	5.474	329.0 -> 309.0	106755	18.65	µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.3%		
13C2-6:2FTS	7.083	429.0 -> 409.0	158699	18.77	µg/L	-0.229
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.8%		
13C2-8:2FTS	8.066	529.0 -> 509.0	168263	18.18	µg/L	-0.216
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.9%		
13C2-PFDoDA	8.742	615.0 -> 570.0	521054	13.51	µg/L	-0.214
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 67.5%		
13C2-PFTeDA	9.656	715.0 -> 670.0	332918	11.91	µg/L	-0.288
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 59.5%		
13C3-PFBS	4.524	302.0 -> 99.0	16498	20.46	µg/L	0.077
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.3%		
13C3-PFHxS	6.466	402.0 -> 99.0	22954	20.16	µg/L	-0.189
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.8%		
13C4-PFBA	1.902	217.0 -> 172.0	155561	19.85	µg/L	0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%		
13C4-PFHpA	6.443	367.0 -> 322.0	262225	20.23	µg/L	-0.164
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.1%		
13C5-PFHxA	5.567	318.0 -> 273.0	183894	20.09	µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.5%		
13C5-PFPeA	4.199	268.0 -> 223.0	120662	20.55	µg/L	0.125
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.8%		
13C6-PFDA	8.029	519.0 -> 474.0	441260	19.20	µg/L	-0.229
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.0%		

Perfluorinated Compounds by LC/MS/MS

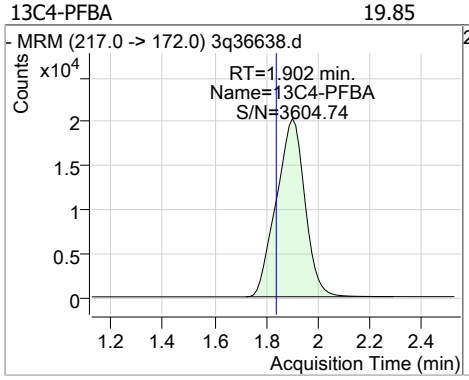
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.379	570.0 -> 525.0	568649	17.99	µg/L		-0.227
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.9%			
13C8-FOSA	7.538	506.0 -> 78.0	89638	16.88	µg/L		-0.278
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.4%			
13C8-PFOA	7.097	421.0 -> 376.0	315705	20.74	µg/L		-0.228
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.7%			
13C8-PFOS	7.601	507.0 -> 99.0	33103	18.74	µg/L		-0.240
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.7%			
13C9-PFNA	7.628	472.0 -> 427.0	346378	19.62	µg/L		-0.227
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.1%			
d3-MeFOSAA	7.949	573.0 -> 419.0	77784	16.29	µg/L		-0.228
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.5%			
13C3-HFPO-DA	5.845	287.0 -> 169.0	23374	19.27	µg/L		-0.100
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.4%			
d5-EtFOSAA	8.049	589.0 -> 419.0	61048	14.84	µg/L	m	-0.240
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 74.2%			
Target Compounds							**QValue**
4:2FTS	-	327.0 -> 307.0	-	N.D.			
6:2FTS	-	427.0 -> 407.0	-	N.D.			
8:2FTS	-	527.0 -> 507.0	-	N.D.			
EtFOSAA	-	584.0 -> 419.0	-	N.D.			
FOSA	-	498.0 -> 78.0	-	N.D.			
MeFOSAA	-	570.0 -> 419.0	-	N.D.			
PFBA	-	213.0 -> 169.0	-	N.D.			
PFBS	4.851	299.0 -> 80.0	0	0.00	µg/L	m	1
PFDA	-	513.0 -> 469.0	-	N.D.			
PFDoDA	-	613.0 -> 569.0	-	N.D.			
PFDS	-	599.0 -> 80.0	-	N.D.			
PFHpA	-	363.0 -> 319.0	-	N.D.			
PFHpS	-	449.0 -> 80.0	-	N.D.			
PFHxA	-	313.0 -> 269.0	-	N.D.			
PFHxS	-	399.0 -> 80.0	-	N.D.			
PFNA	-	463.0 -> 419.0	-	N.D.			
PFNS	-	549.0 -> 80.0	-	N.D.			
PFOA	-	413.0 -> 369.0	-	N.D.			
PFOS	-	499.0 -> 80.0	-	N.D.			
PFPeA	-	263.0 -> 219.0	-	N.D.			
PFPeS	-	349.0 -> 80.0	-	N.D.			
PFTeDA	-	713.0 -> 669.0	-	N.D.			
PFTrDA	-	663.0 -> 619.0	-	N.D.			
PFUnDA	-	563.0 -> 519.0	-	N.D.			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.			
ADONA	-	377.0 -> 251.0	-	N.D.			
HFPO-DA	-	329.0 -> 169.0	-	N.D.			

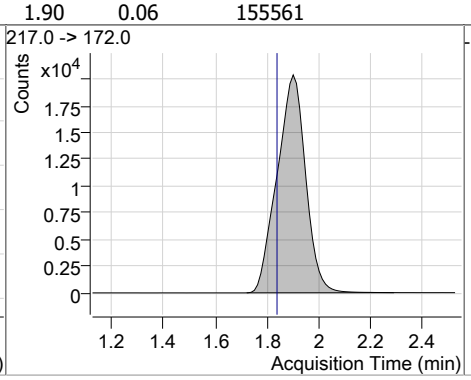
 # = Qualifier out of range, m = manually integrated, + = Area summed

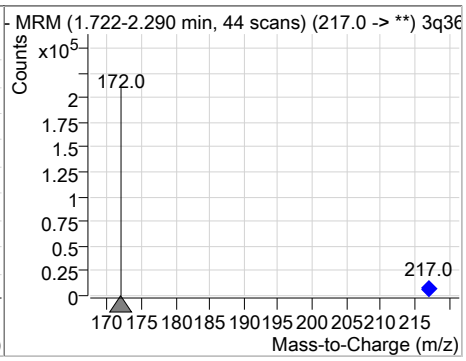
Perfluorinated Compounds by LC/MS/MS



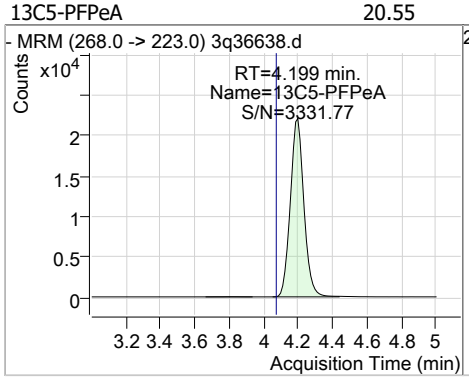
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.85	1.90	0.06	155561				

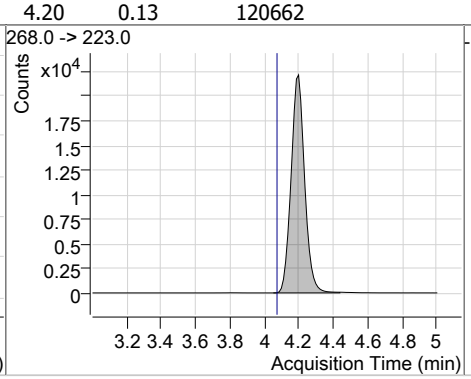


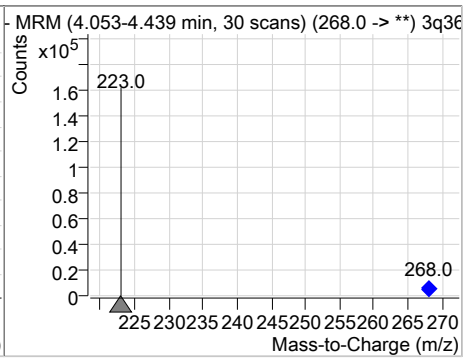




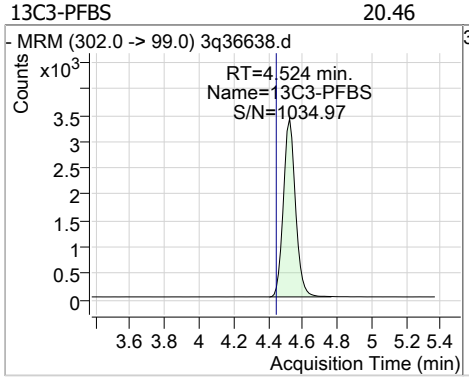
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.55	4.20	0.13	120662				

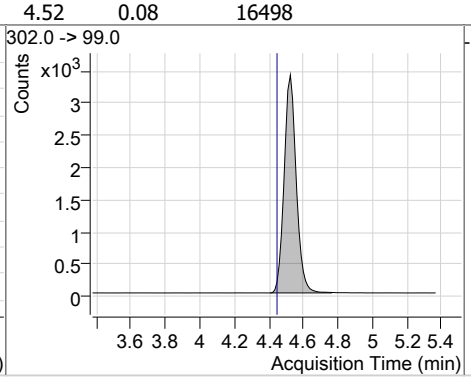


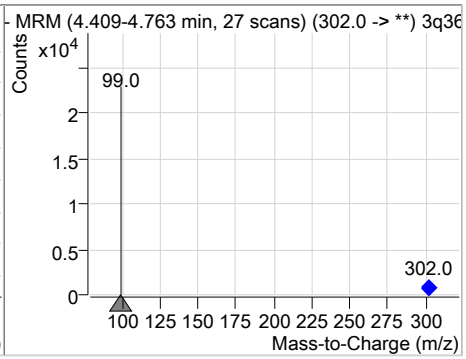




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.46	4.52	0.08	16498				

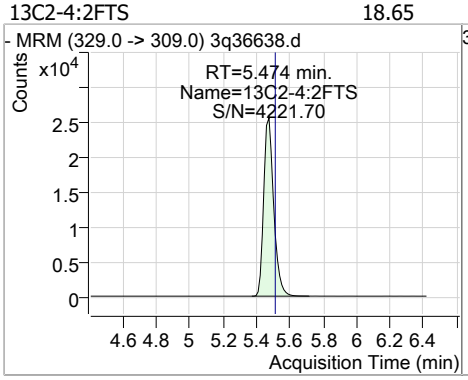


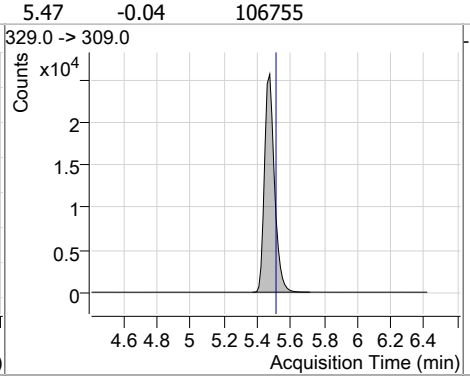


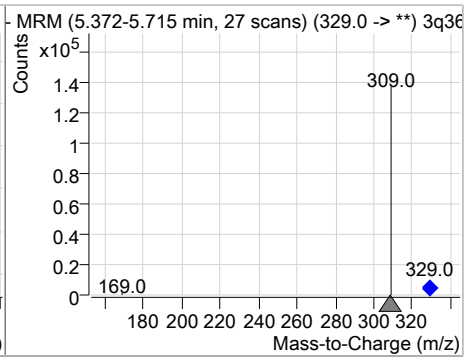


Perfluorinated Compounds by LC/MS/MS

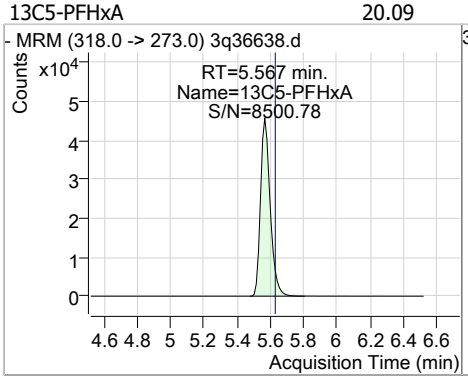
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.65	5.47	-0.04	106755				

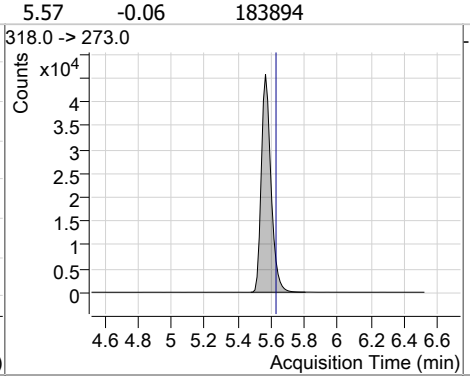


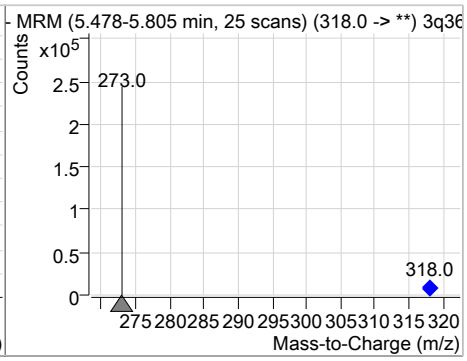




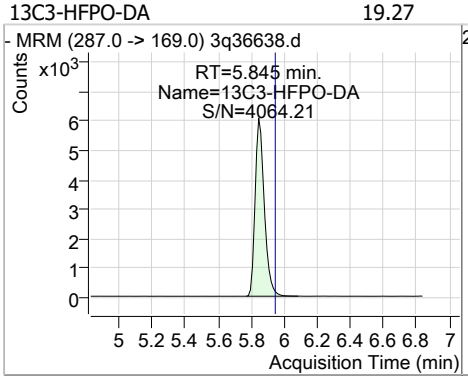
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.09	5.57	-0.06	183894				

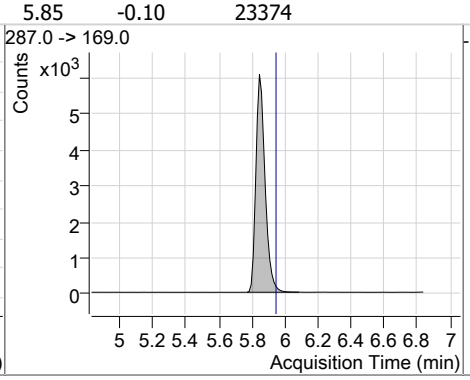


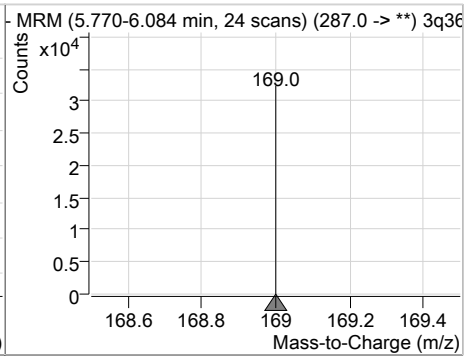




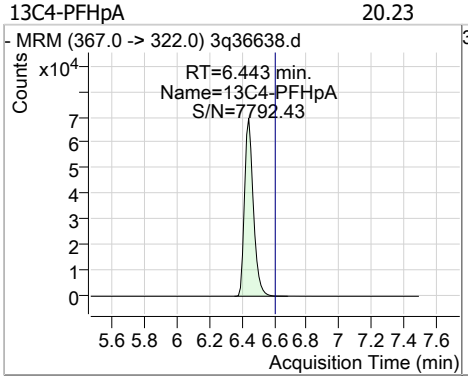
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.27	5.85	-0.10	23374				

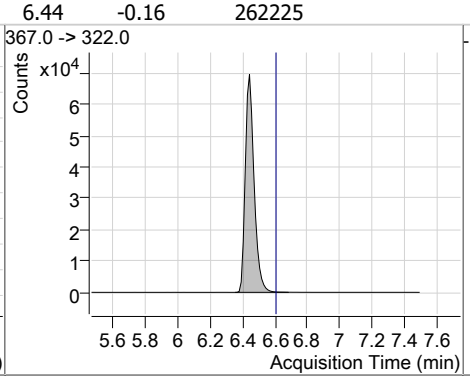


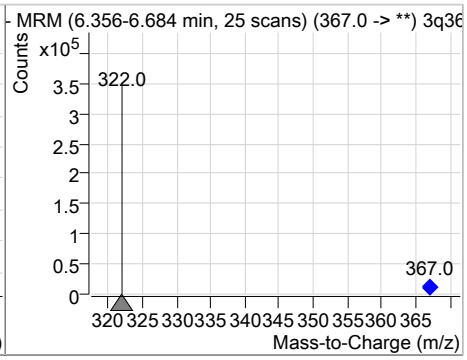




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.23	6.44	-0.16	262225				

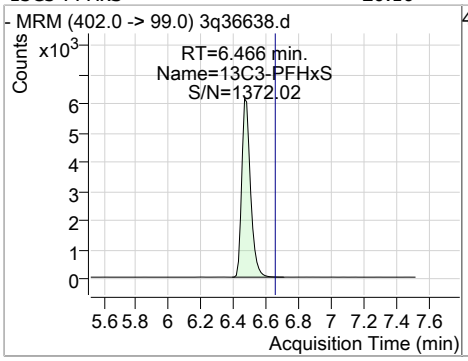


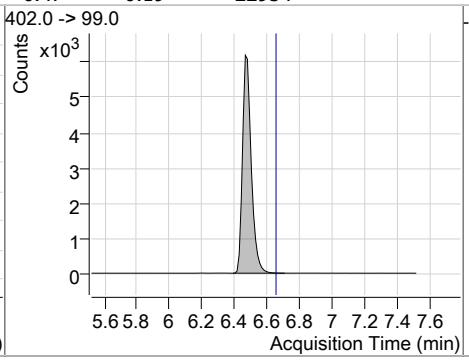


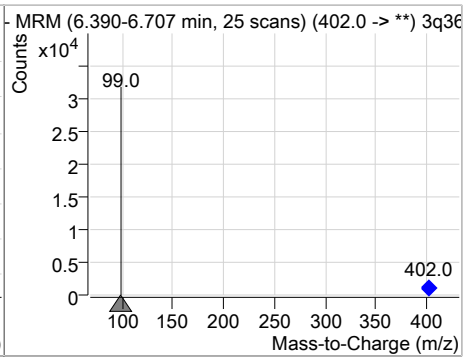


Perfluorinated Compounds by LC/MS/MS

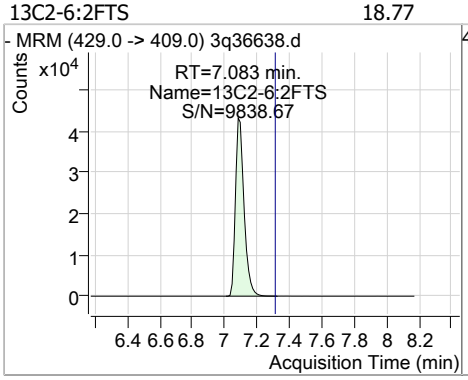
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.16	6.47	-0.19	22954				

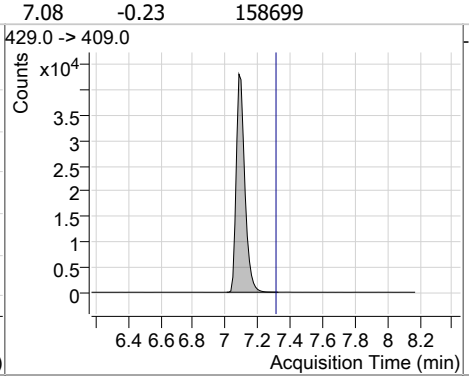


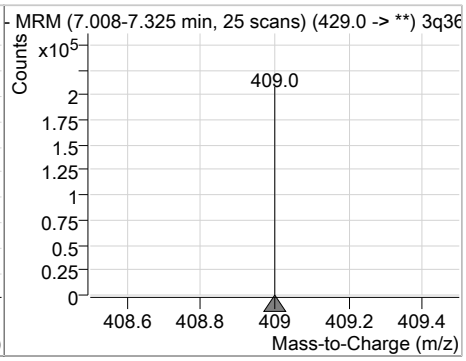




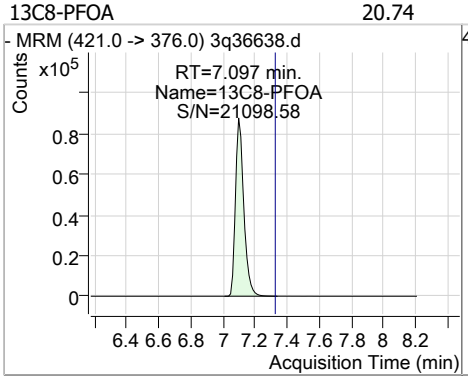
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.77	7.08	-0.23	158699				

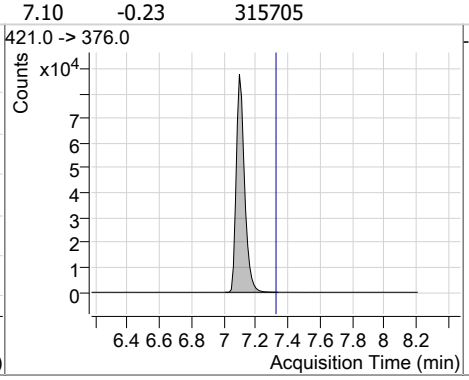


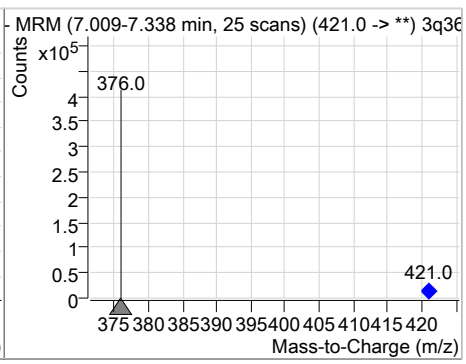




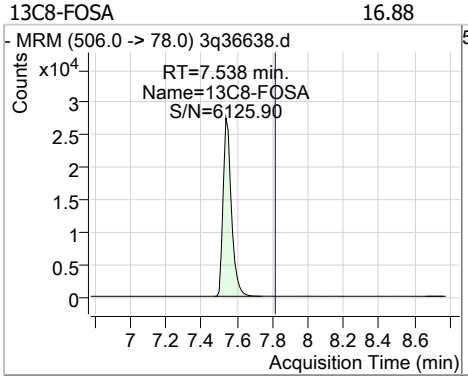
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.74	7.10	-0.23	315705				

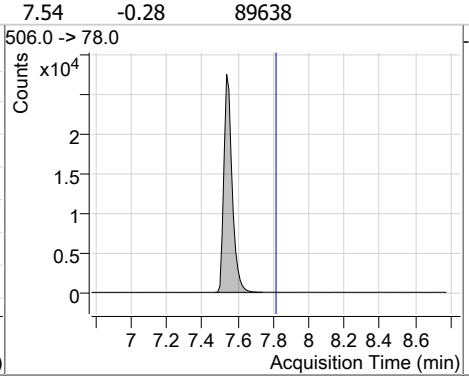


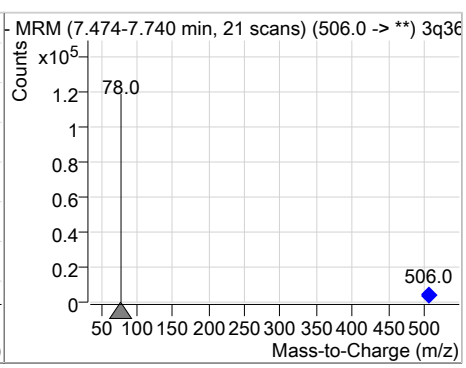




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	16.88	7.54	-0.28	89638				

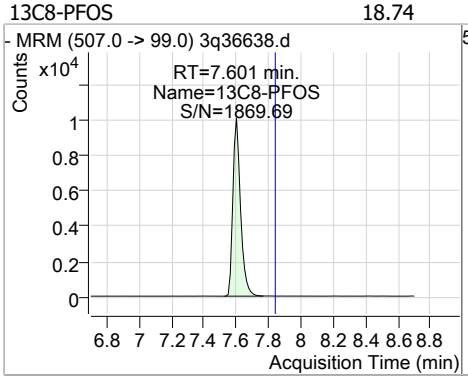


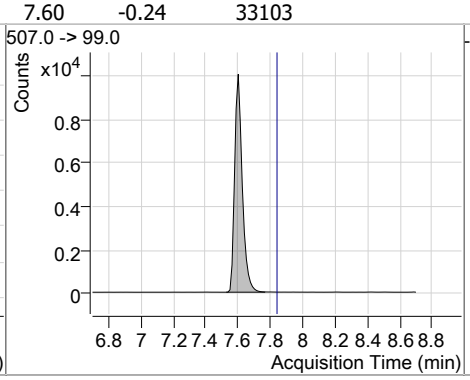


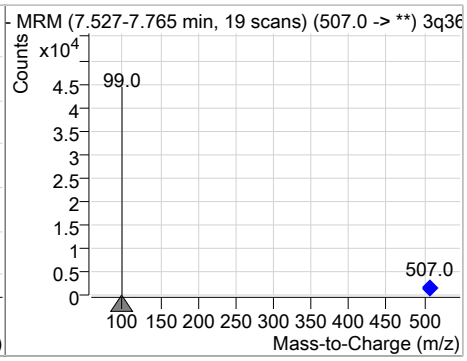


Perfluorinated Compounds by LC/MS/MS

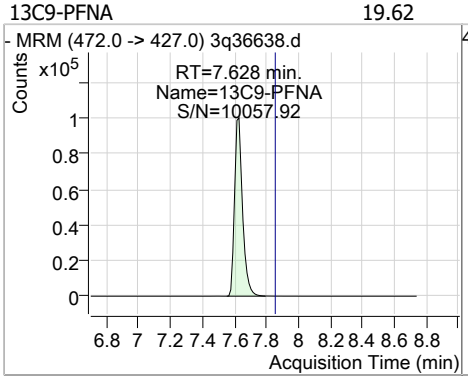
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	18.74	7.60	-0.24	33103				

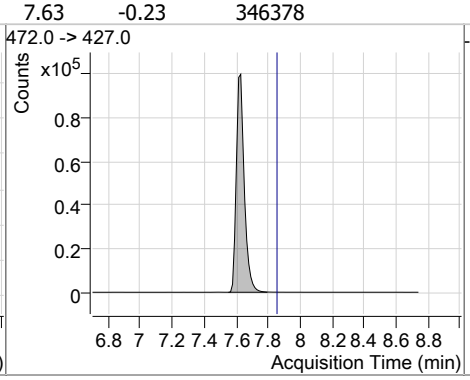


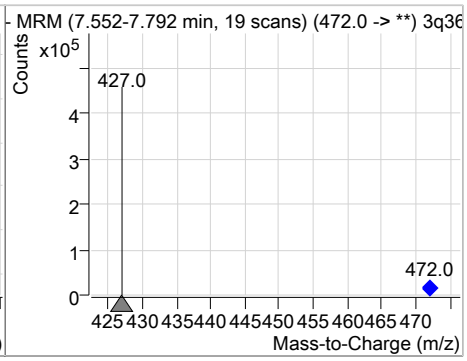




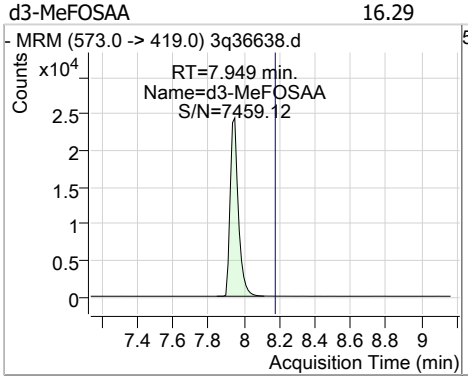
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.62	7.63	-0.23	346378				

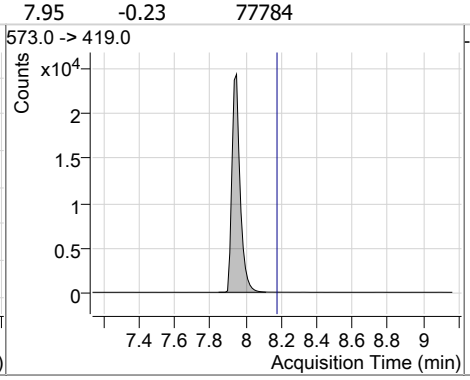


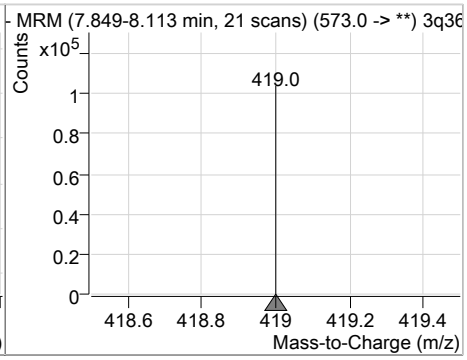




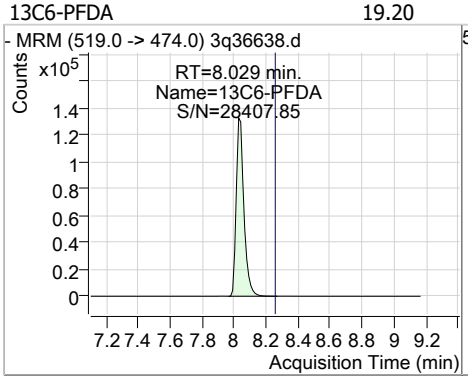
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	16.29	7.95	-0.23	77784				

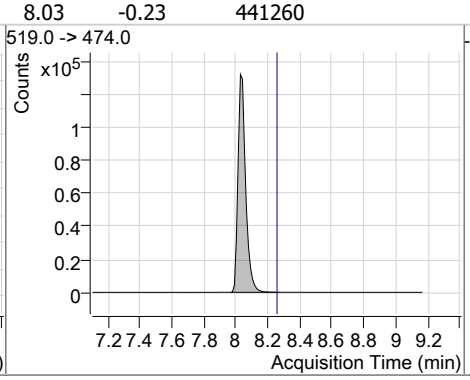


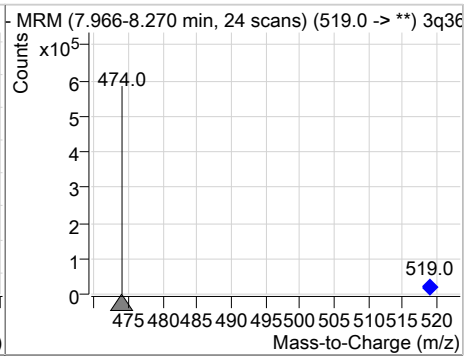




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.20	8.03	-0.23	441260				

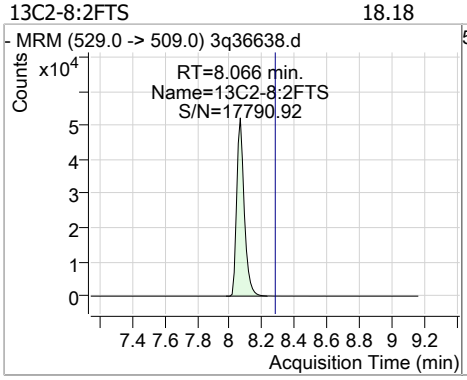


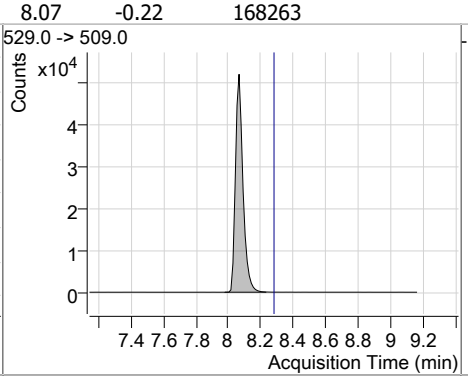


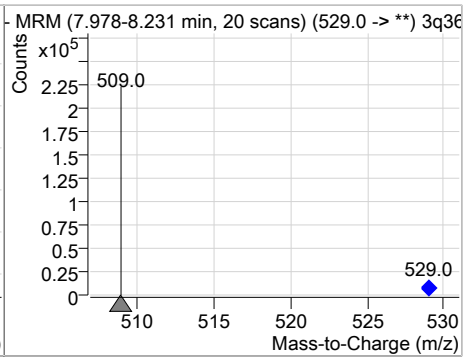


Perfluorinated Compounds by LC/MS/MS

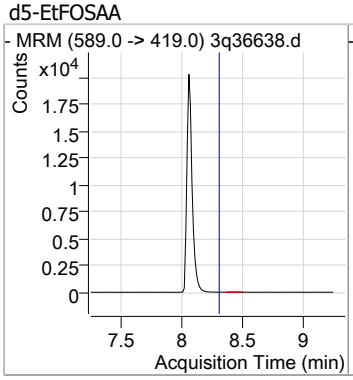
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.18	8.07	-0.22	168263				

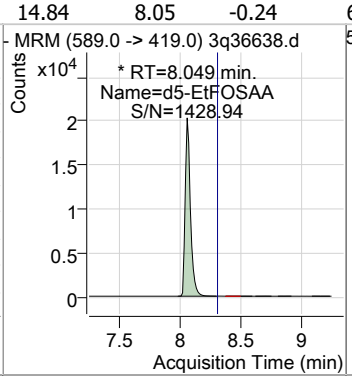


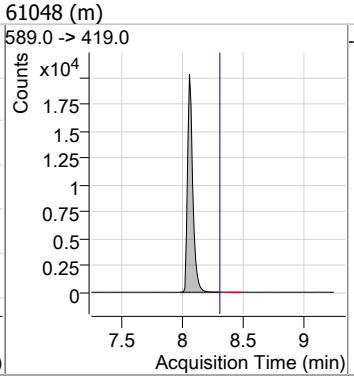


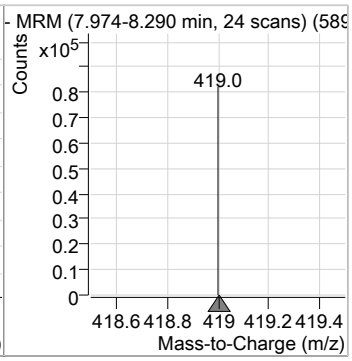


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	14.84	8.05	-0.24	61048 (m)				

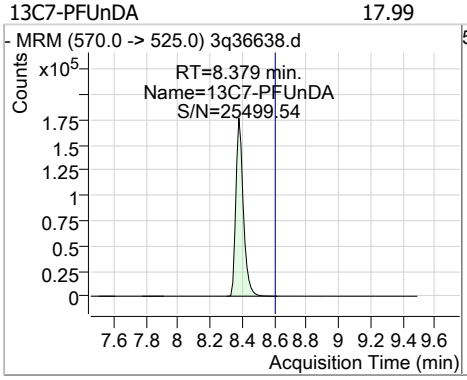


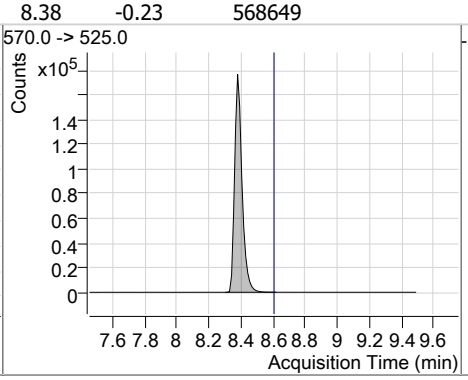


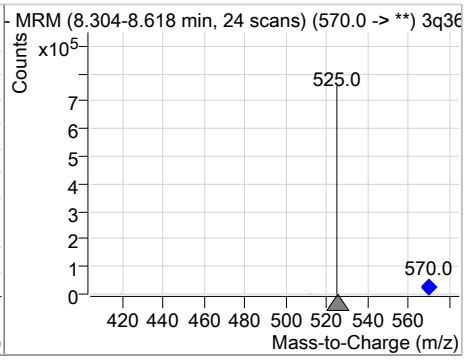




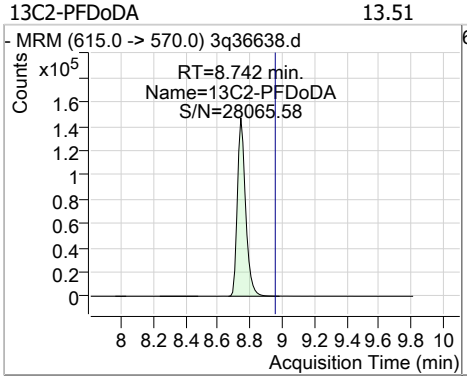
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	17.99	8.38	-0.23	568649				

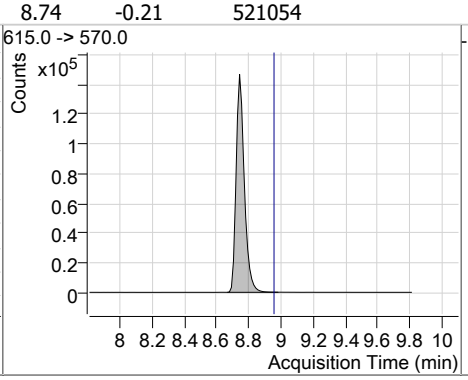


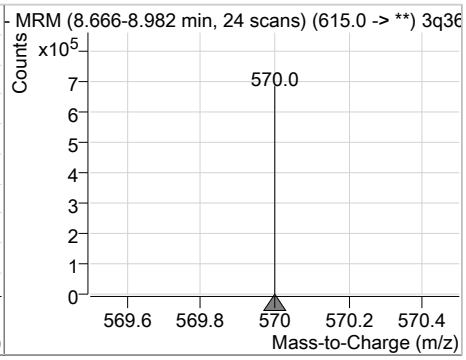




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	13.51	8.74	-0.21	521054				

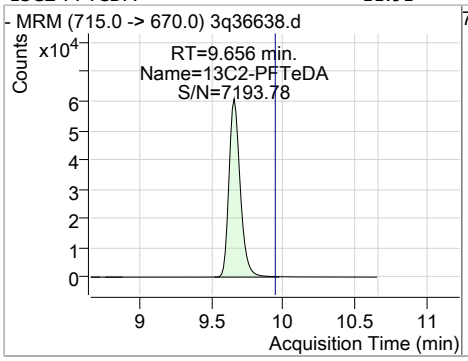


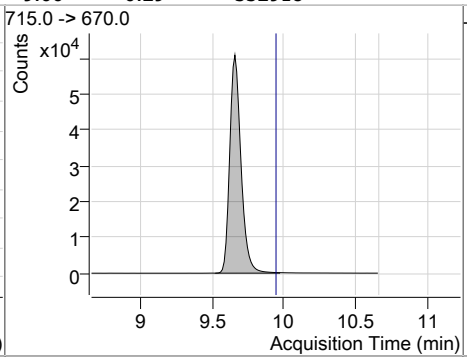


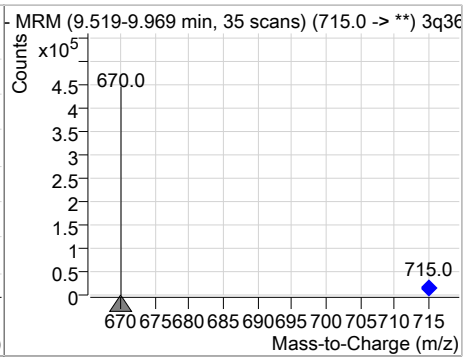


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	11.91	9.66	-0.29	332918				







Manual Integration Approval Summary

Sample Number:	JD22888-7A	**Method:**	EPA 537M BY ID
Lab FileID:	3Q36638.D	**Analyst approved:**	04/15/21 09:33 Martha Valls
Injection Time:	04/15/21 03:20	**Supervisor approved:**	04/15/21 10:01 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
d5-EtFOSAA			8.05	Split peak

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36618.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/14/2021 9:48:59 PM
Sample Name : op84900-mb
Vial : P2-C6
DA Method File : ID_041321_S3Q537.quantmethod.xml
Batch Name : s3q538.batch.bin
Sample Information : op84900,S3Q538,250,,,1,1,water

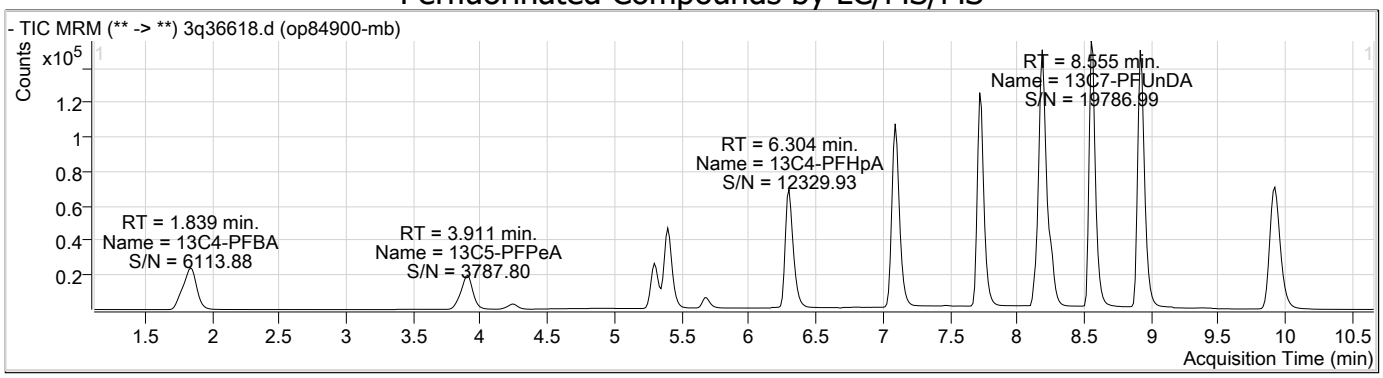
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
M4-PFBA	1.839	217.0 -> 172.0	173107	20.00 µg/L	0.000
M5-PFPeA	3.911	268.0 -> 223.0	122111	20.00 µg/L	-0.163
M5-PFHxA	5.401	318.0 -> 273.0	188015	20.00 µg/L	-0.229
M4-PFHpA	6.304	367.0 -> 322.0	259258	20.00 µg/L	-0.303
M8-PFOA	7.097	421.0 -> 376.0	289624	20.00 µg/L	-0.228
M9-PFNA	7.729	472.0 -> 427.0	315110	20.00 µg/L	-0.126
M6-PFDA	8.193	519.0 -> 474.0	391378	20.00 µg/L	-0.064
M7-PFUnDA	8.555	570.0 -> 525.0	506892	20.00 µg/L	-0.050
M2-PFDoDA	8.919	615.0 -> 570.0	535609	20.00 µg/L	-0.038
M2-PFTeDA	9.919	715.0 -> 670.0	392795	20.00 µg/L	-0.025
M8-FOSA	7.740	506.0 -> 78.0	83442	20.00 µg/L	-0.076
M3-PFBS	4.242	302.0 -> 99.0	16307	20.00 µg/L	-0.205
M3-PFHxS	6.340	402.0 -> 99.0	21880	20.00 µg/L	-0.315
M8-PFOS	7.714	507.0 -> 99.0	28897	20.00 µg/L	-0.126
M2-4:2FTS	5.296	329.0 -> 309.0	108599	20.00 µg/L	-0.216
M2-6:2FTS	7.083	429.0 -> 409.0	137433	20.00 µg/L	-0.229
M2-8:2FTS	8.219	529.0 -> 509.0	147870	20.00 µg/L	-0.063
M3-MeFOSAA	8.151	573.0 -> 419.0	73297	20.00 µg/L	-0.026
M3-HFPO-DA	5.695	287.0 -> 169.0	24200	20.00 µg/L	-0.251
M5-EtFOSAA	8.252	589.0 -> 419.0	63947	20.00 µg/L	-0.038
System Monitoring Compounds					
13C2-4:2FTS	5.296	329.0 -> 309.0	108599	18.97 µg/L	-0.216
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.9%	
13C2-6:2FTS	7.083	429.0 -> 409.0	137433	16.25 µg/L	-0.229
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.3%	
13C2-8:2FTS	8.219	529.0 -> 509.0	147870	15.97 µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 79.9%	
13C2-PFDoDA	8.919	615.0 -> 570.0	535609	13.89 µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 69.4%	
13C2-PFTeDA	9.919	715.0 -> 670.0	392795	14.05 µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 70.2%	
13C3-PFBS	4.242	302.0 -> 99.0	16307	20.22 µg/L	-0.205
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.1%	
13C3-PFHxS	6.340	402.0 -> 99.0	21880	19.21 µg/L	-0.315
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.1%	
13C4-PFBA	1.839	217.0 -> 172.0	173107	22.09 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.4%	
13C4-PFHpA	6.304	367.0 -> 322.0	259258	20.00 µg/L	-0.303
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.0%	
13C5-PFHxA	5.401	318.0 -> 273.0	188015	20.54 µg/L	-0.229
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.7%	
13C5-PFPeA	3.911	268.0 -> 223.0	122111	20.80 µg/L	-0.163
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.0%	
13C6-PFDA	8.193	519.0 -> 474.0	391378	17.03 µg/L	-0.064
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.2%	

Perfluorinated Compounds by LC/MS/MS

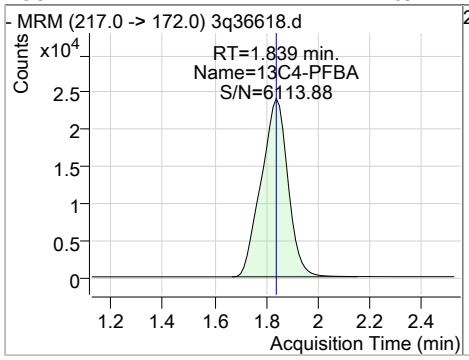
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
13C7-PFUnDA	8.555	570.0 -> 525.0	506892	16.03	µg/L	-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 80.2%		
13C8-FOSA	7.740	506.0 -> 78.0	83442	15.71	µg/L	-0.076
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 78.6%		
13C8-PFOA	7.097	421.0 -> 376.0	289624	19.02	µg/L	-0.228
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.1%		
13C8-PFOS	7.714	507.0 -> 99.0	28897	16.36	µg/L	-0.126
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.8%		
13C9-PFNA	7.729	472.0 -> 427.0	315110	17.85	µg/L	-0.126
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.2%		
d3-MeFOSAA	8.151	573.0 -> 419.0	73297	15.35	µg/L	-0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 76.8%		
13C3-HFPO-DA	5.695	287.0 -> 169.0	24202	19.95	µg/L	-0.251
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.8%		
d5-EtFOSAA	8.252	589.0 -> 419.0	63945	15.54	µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 77.7%		
Target Compounds						**QValue**
4:2FTS	-	327.0 -> 307.0	-	N.D.		
6:2FTS	-	427.0 -> 407.0	-	N.D.		
8:2FTS	-	527.0 -> 507.0	-	N.D.		
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
FOSA	-	498.0 -> 78.0	-	N.D.		
MeFOSAA	-	570.0 -> 419.0	-	N.D.		
PFBA	-	213.0 -> 169.0	-	N.D.		
PFBS	-	299.0 -> 80.0	-	N.D.		
PFDA	-	513.0 -> 469.0	-	N.D.		
PFDoDA	-	613.0 -> 569.0	-	N.D.		
PFDS	-	599.0 -> 80.0	-	N.D.		
PFHpA	-	363.0 -> 319.0	-	N.D.		
PFHpS	-	449.0 -> 80.0	-	N.D.		
PFHxA	5.402	313.0 -> 269.0	1589	0.24	µg/L	99
PFHxS	-	399.0 -> 80.0	-	N.D.		
PFNA	-	463.0 -> 419.0	-	N.D.		
PFNS	-	549.0 -> 80.0	-	N.D.		
PFOA	-	413.0 -> 369.0	-	N.D.		
PFOS	-	499.0 -> 80.0	-	N.D.		
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFPeS	-	349.0 -> 80.0	-	N.D.		
PFTeDA	-	713.0 -> 669.0	-	N.D.		
PFTrDA	-	663.0 -> 619.0	-	N.D.		
PFUnDA	-	563.0 -> 519.0	-	N.D.		
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
ADONA	-	377.0 -> 251.0	-	N.D.		
HFPO-DA	-	329.0 -> 169.0	-	N.D.		

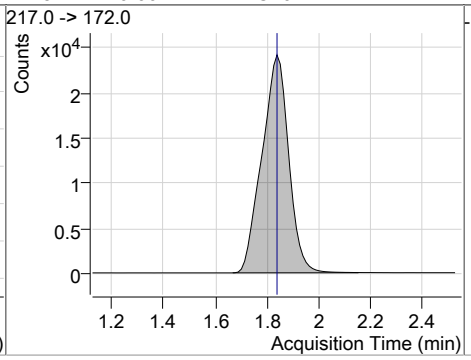
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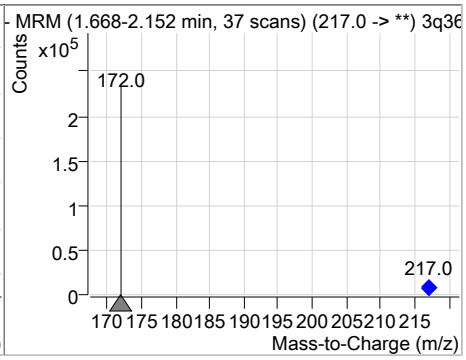
Perfluorinated Compounds by LC/MS/MS



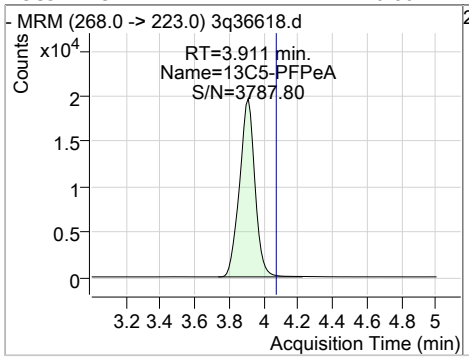
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13C4-PFBA	22.09	1.84	0.00	173107				

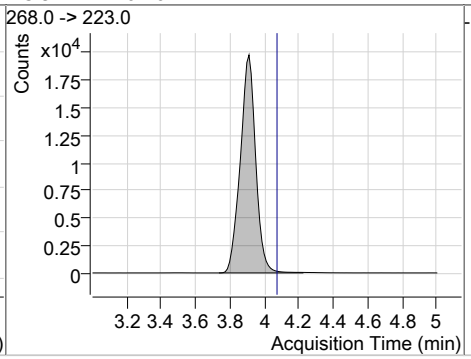


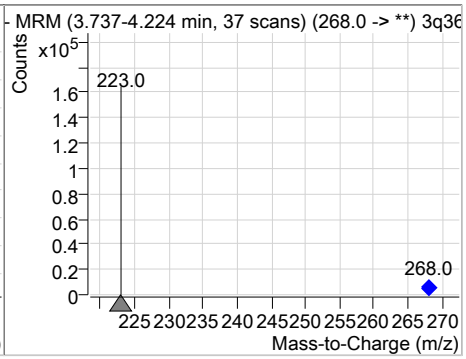




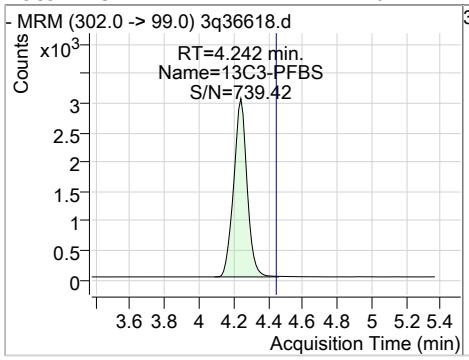
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13C5-PFPeA	20.80	3.91	-0.16	122111				

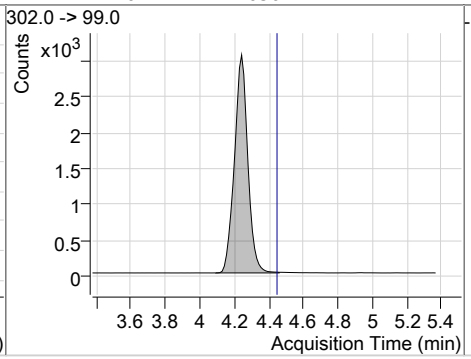


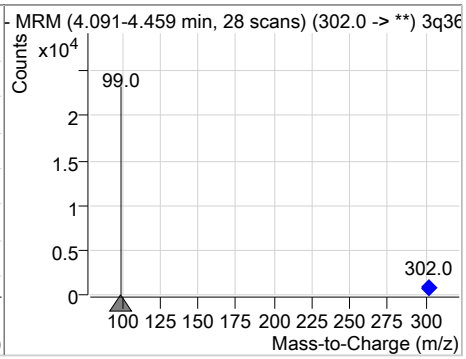




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.22	4.24	-0.21	16307				

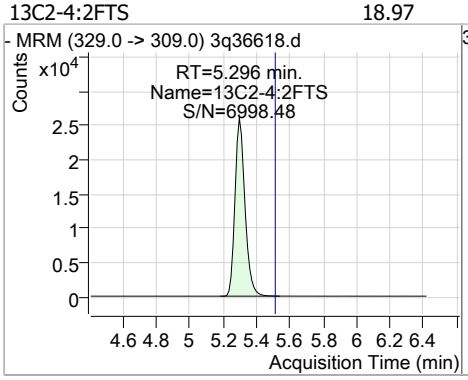


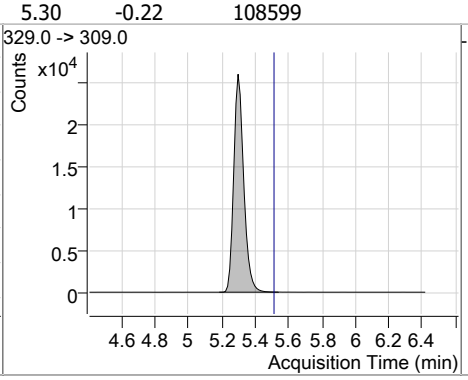


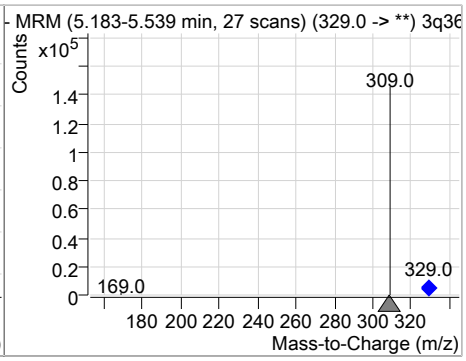


Perfluorinated Compounds by LC/MS/MS

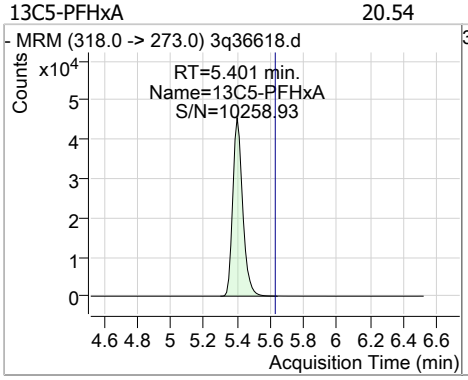
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13C2-4:2FTS	18.97	5.30	-0.22	108599				

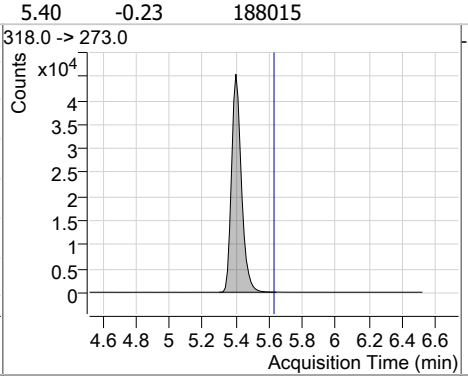


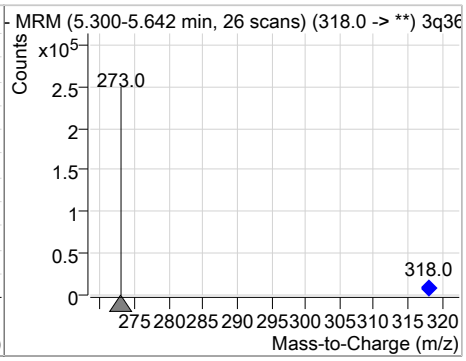




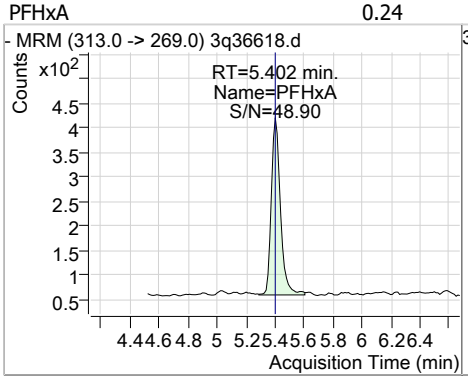
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.54	5.40	-0.23	188015				

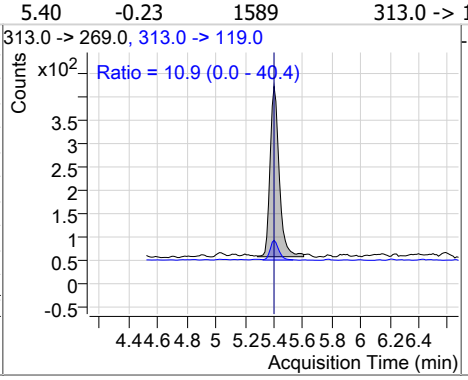


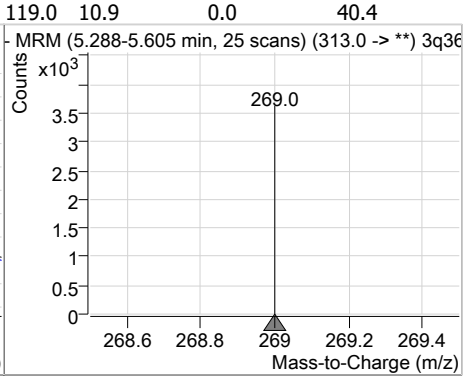




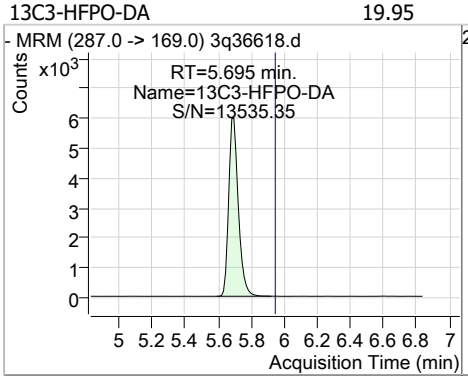
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.24	5.40	-0.23	1589	313.0 -> 119.0	10.9	0.0	40.4

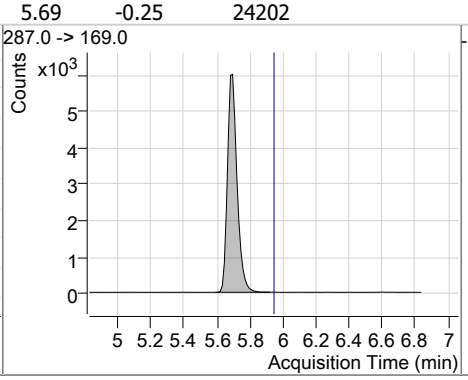


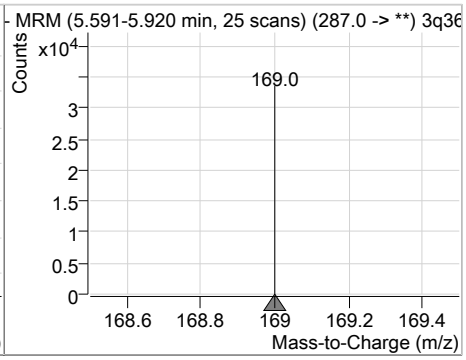




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.95	5.69	-0.25	24202				

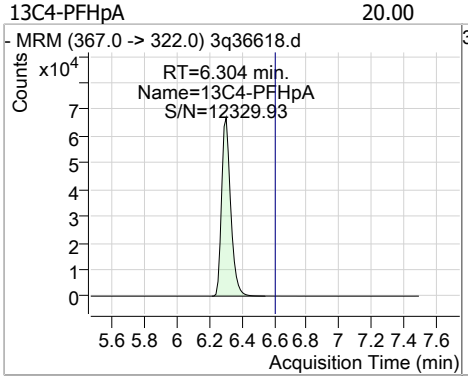


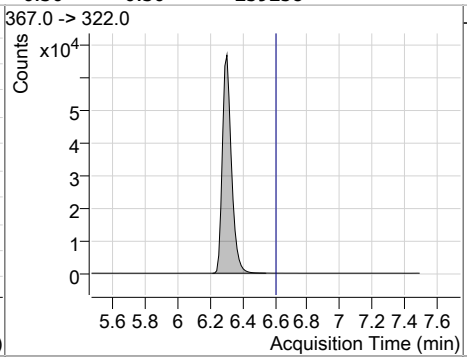


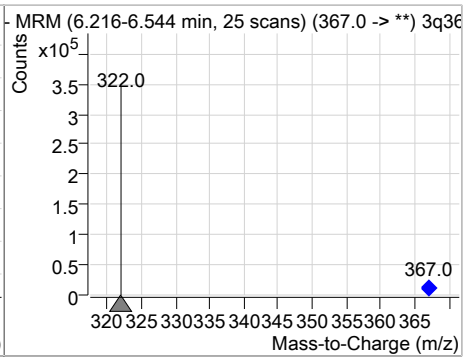


Perfluorinated Compounds by LC/MS/MS

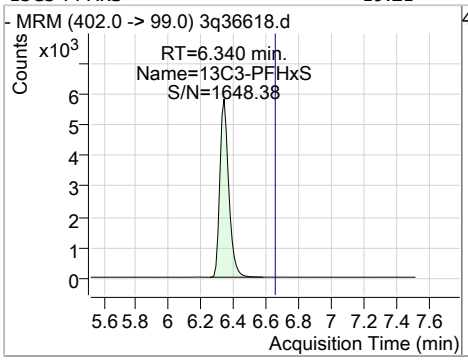
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.00	6.30	-0.30	259258				

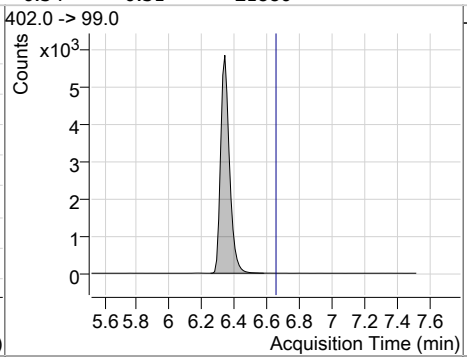


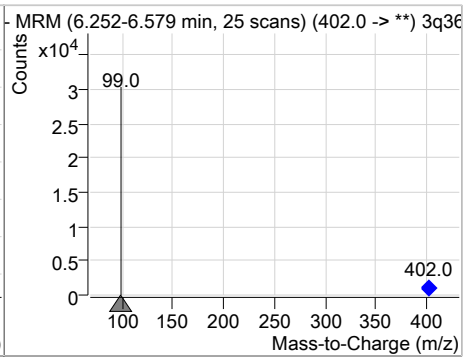




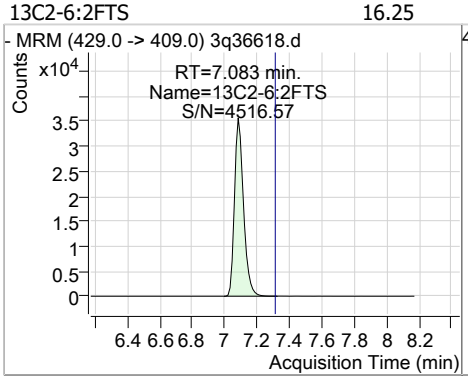
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13C3-PFHxS	19.21	6.34	-0.31	21880				

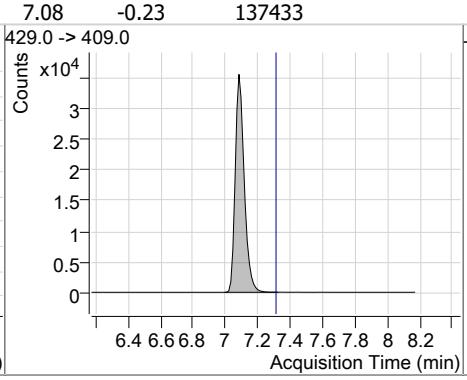


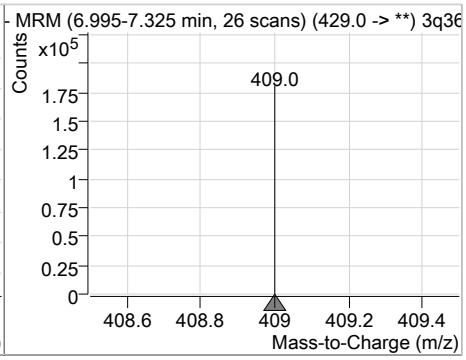




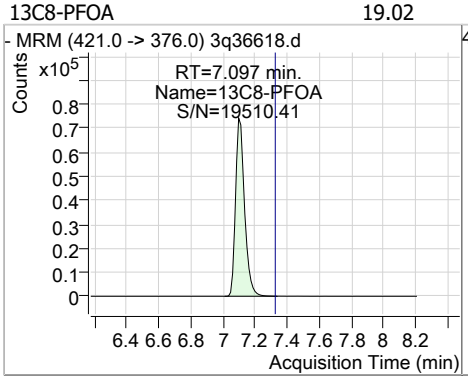
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	16.25	7.08	-0.23	137433				

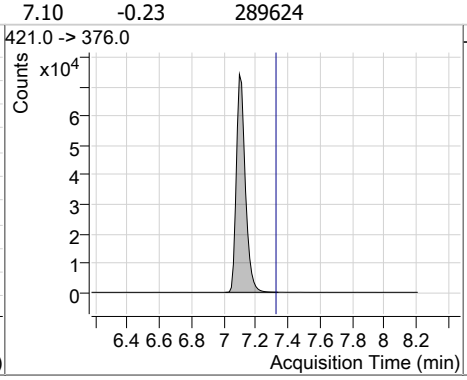


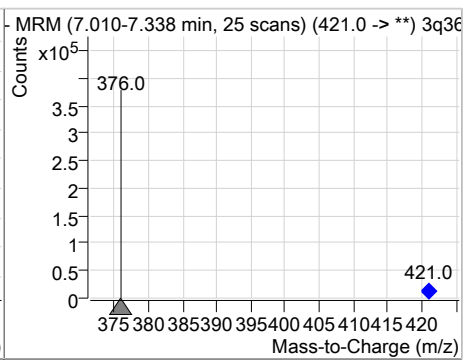




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.02	7.10	-0.23	289624				

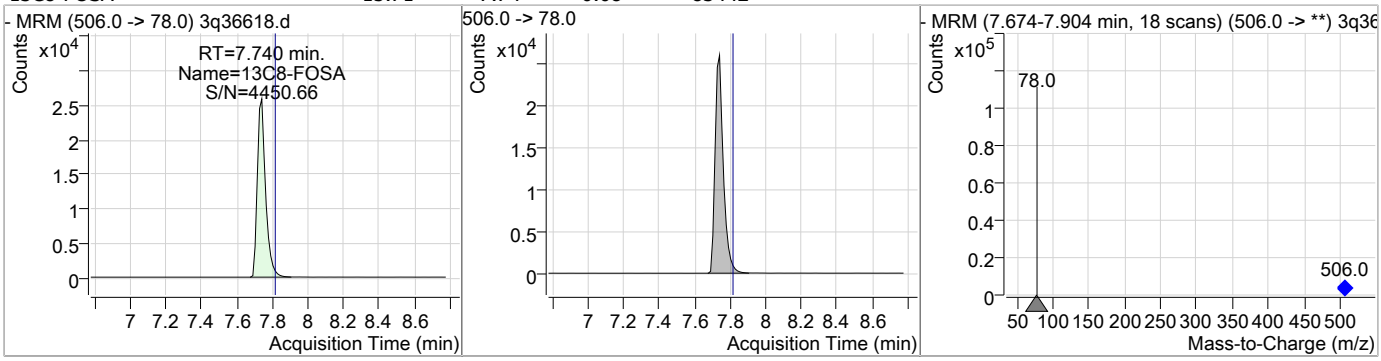




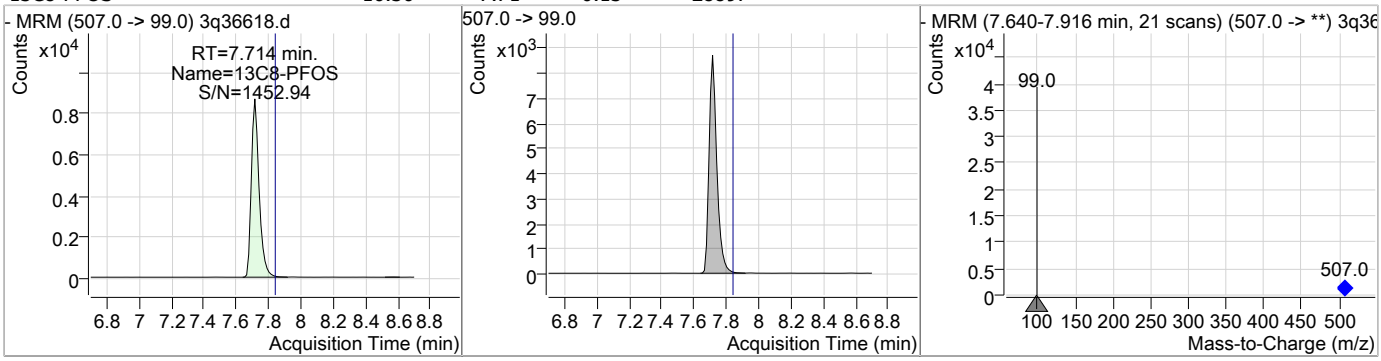


Perfluorinated Compounds by LC/MS/MS

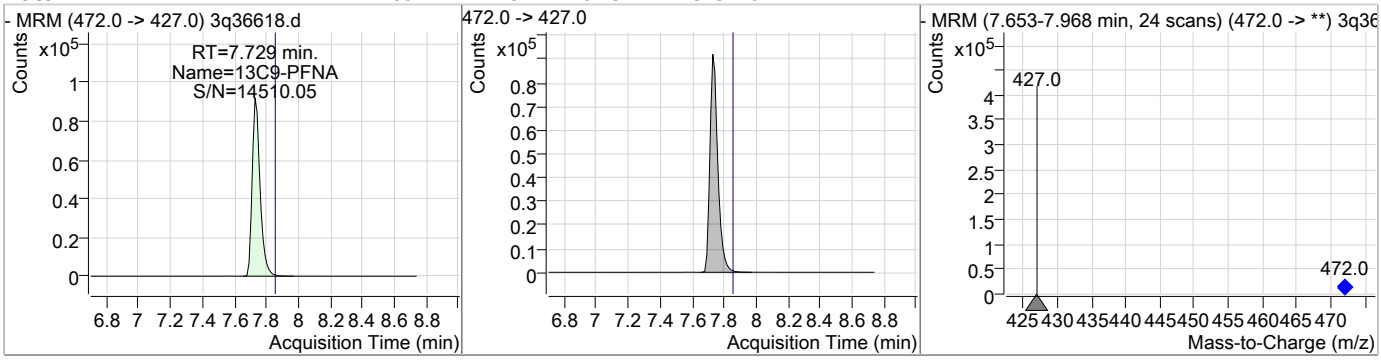
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13C8-FOSA	15.71	7.74	-0.08	83442				



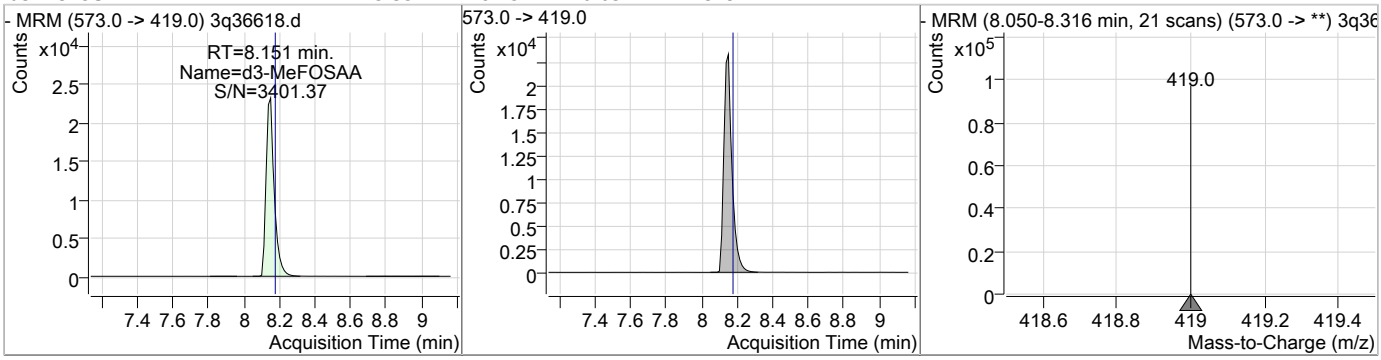
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	16.36	7.71	-0.13	28897				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	17.85	7.73	-0.13	315110				

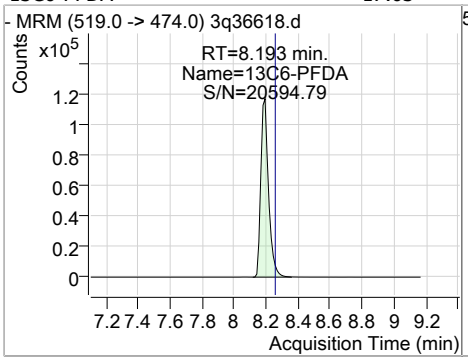


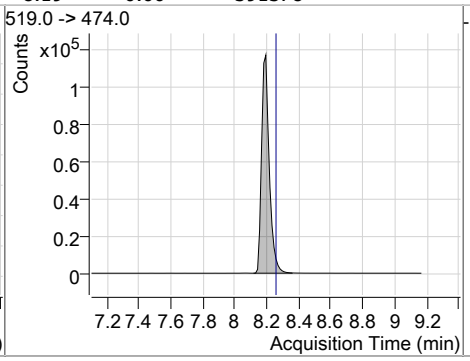
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d3-MeFOSAA	15.35	8.15	-0.03	73297				

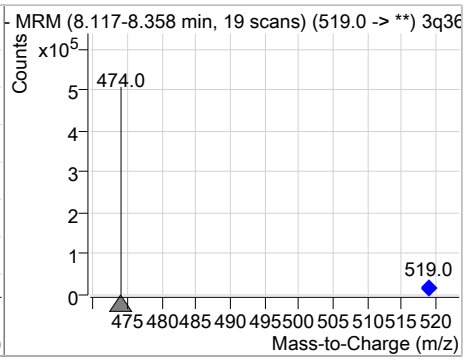


Perfluorinated Compounds by LC/MS/MS

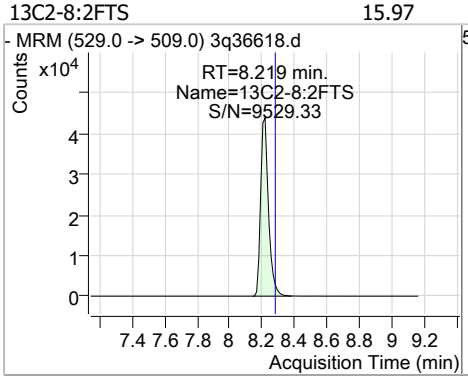
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13C6-PFDA	17.03	8.19	-0.06	391378				

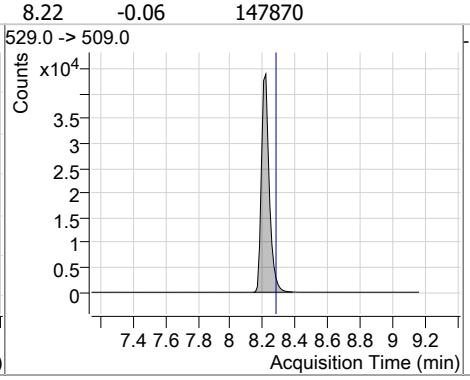


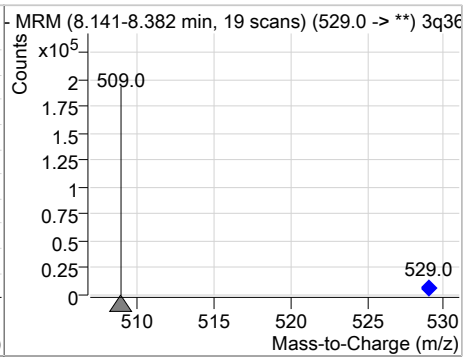




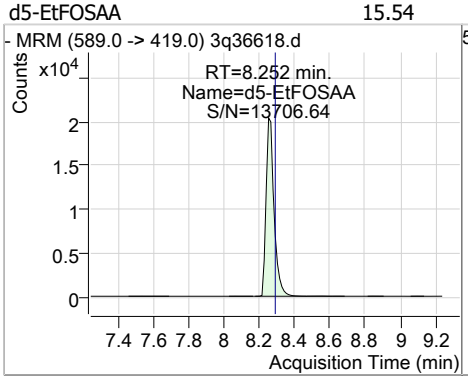
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13C2-8:2FTS	15.97	8.22	-0.06	147870				

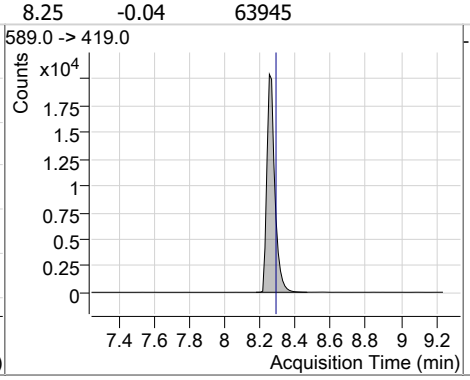


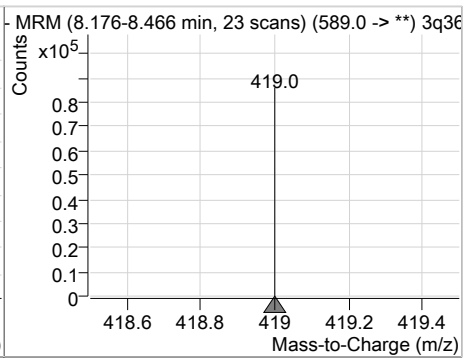




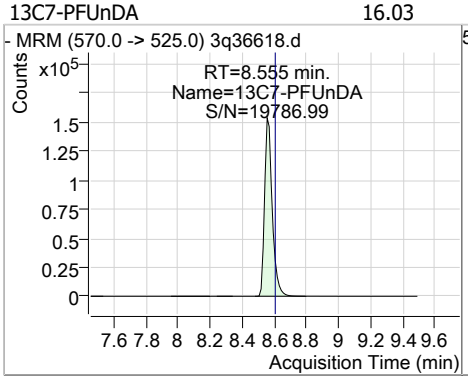
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	15.54	8.25	-0.04	63945				

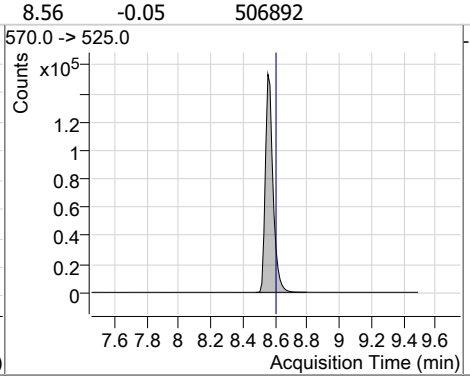


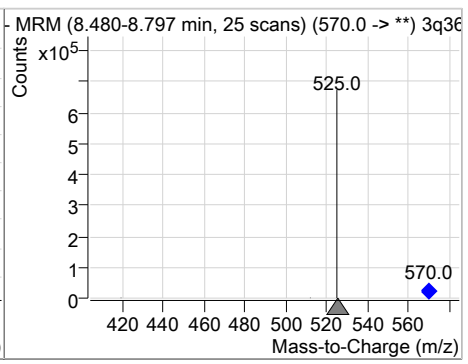




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	16.03	8.56	-0.05	506892				

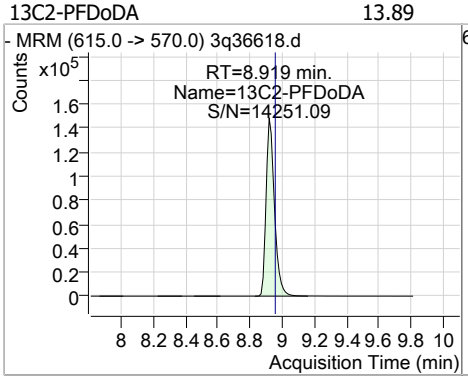


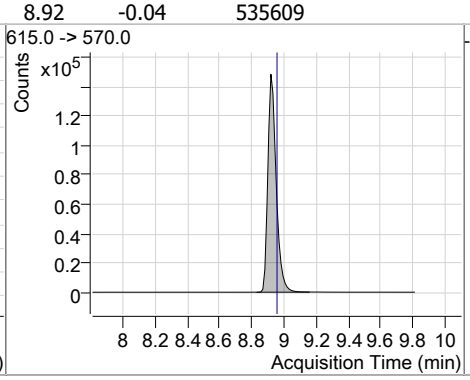


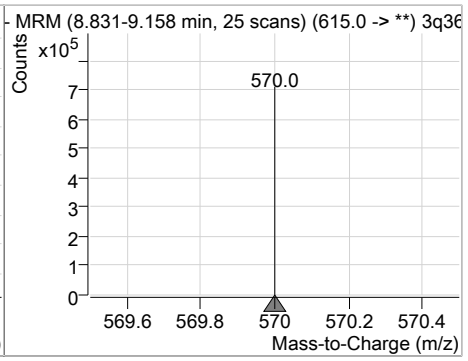


Perfluorinated Compounds by LC/MS/MS

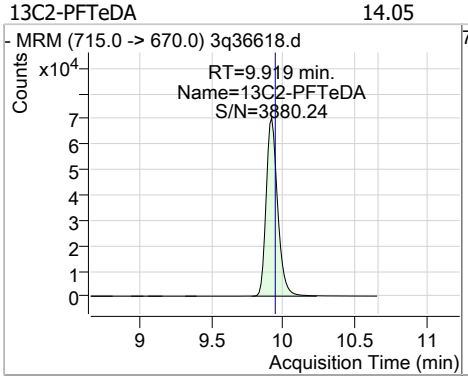
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	13.89	8.92	-0.04	535609				

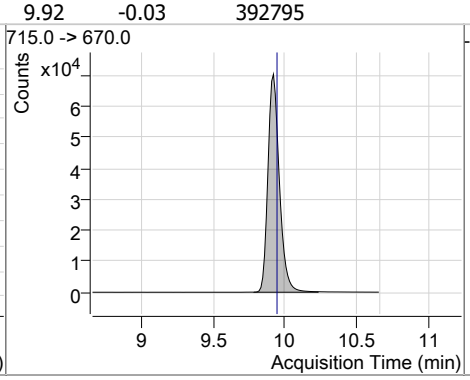


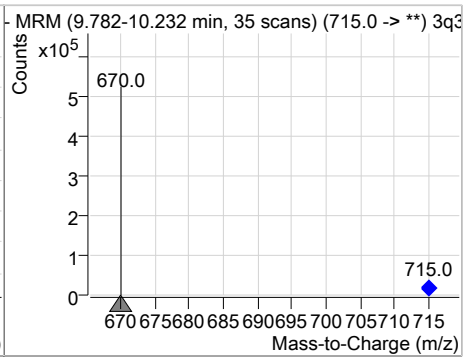




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	14.05	9.92	-0.03	392795				







Perfluorinated Compounds by LC/MS/MS

Data File : 2q66241.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/17/2021 3:33:23 AM
Sample Name : op84941-mb
Vial : P3-F5
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q963.batch.bin
Sample Information : op84941,S2Q963,2.00,,,1.0,1,soil

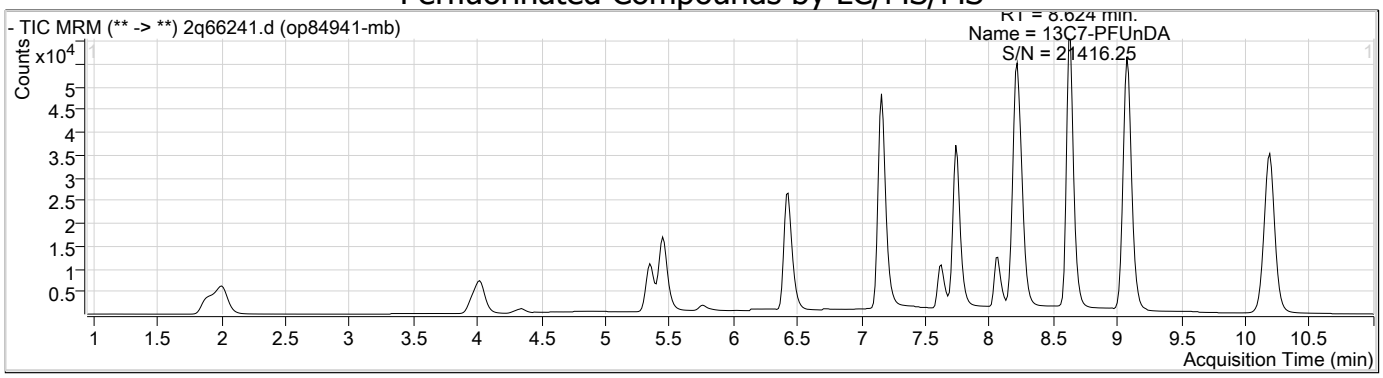
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.180	589.0 -> 419.0	34760	20.00	µg/L	0.025
M4-PFBA	2.002	217.0 -> 172.0	64207	20.00	µg/L	0.013
M5-PFPeA	4.024	268.0 -> 223.0	50810	20.00	µg/L	0.013
M5-PFHxA	5.454	318.0 -> 273.0	76762	20.00	µg/L	0.013
M4-PFHpA	6.421	367.0 -> 322.0	112170	20.00	µg/L	0.000
M8-PFOA	7.165	421.0 -> 376.0	127136	20.00	µg/L	0.013
M9-PFNA	7.745	472.0 -> 427.0	130816	20.00	µg/L	0.013
M6-PFDA	8.210	519.0 -> 474.0	169859	20.00	µg/L	0.000
M7-PFUnDA	8.624	570.0 -> 525.0	236878	20.00	µg/L	-0.012
M2-PFDoDA	9.075	615.0 -> 570.0	260812	20.00	µg/L	-0.025
M2-PFTeDA	10.189	715.0 -> 670.0	207849	20.00	µg/L	-0.050
M8-FOSA	7.630	506.0 -> 78.0	36534	20.00	µg/L	0.026
M3-PFBS	4.330	302.0 -> 99.0	6170	20.00	µg/L	0.000
M3-PFHxS	6.469	402.0 -> 99.0	7011	20.00	µg/L	0.013
M8-PFOS	7.731	507.0 -> 99.0	9765	20.00	µg/L	0.013
M2-4:2FTS	5.348	329.0 -> 309.0	51329	20.00	µg/L	0.013
M2-6:2FTS	7.150	429.0 -> 409.0	72667	20.00	µg/L	0.013
M2-8:2FTS	8.247	529.0 -> 509.0	62823	20.00	µg/L	0.000
M3-MeFOSAA	8.066	573.0 -> 419.0	40299	20.00	µg/L	0.025
M3-HFPO-DA	5.771	287.0 -> 169.0	5343	20.00	µg/L	0.013
System Monitoring Compounds						
13C2-4:2FTS	5.348	329.0 -> 309.0	51329	17.63	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.2%		
13C2-6:2FTS	7.150	429.0 -> 409.0	72667	17.86	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.3%		
13C2-8:2FTS	8.247	529.0 -> 509.0	62823	17.61	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.1%		
13C2-PFDoDA	9.075	615.0 -> 570.0	260812	16.21	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.1%		
13C2-PFTeDA	10.189	715.0 -> 670.0	207849	16.11	µg/L	-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 80.5%		
13C3-PFBS	4.330	302.0 -> 99.0	6170	18.26	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.3%		
13C3-PFHxS	6.469	402.0 -> 99.0	7011	18.67	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.4%		
13C4-PFBA	2.002	217.0 -> 172.0	64207	19.12	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.6%		
13C4-PFHpA	6.421	367.0 -> 322.0	112170	18.43	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.2%		
d5-EtFOSAA	8.180	589.0 -> 419.0	34760	17.10	ng/ml	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.5%		
13C5-PFHxA	5.454	318.0 -> 273.0	76762	18.42	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.1%		
13C5-PFPeA	4.024	268.0 -> 223.0	50810	18.42	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.1%		

Perfluorinated Compounds by LC/MS/MS

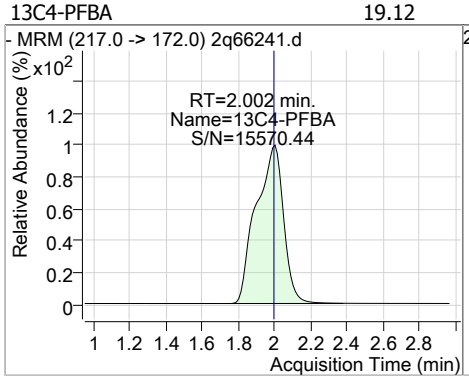
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	169859	18.34	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.7%			
13C7-PFUnDA	8.624	570.0 -> 525.0	236878	17.97	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.9%			
13C8-FOSA	7.630	506.0 -> 78.0	36534	19.01	µg/L		0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.1%			
13C8-PFOA	7.165	421.0 -> 376.0	127136	18.23	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.1%			
13C8-PFOS	7.731	507.0 -> 99.0	9765	18.38	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.9%			
13C9-PFNA	7.745	472.0 -> 427.0	130816	18.39	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.0%			
d3-MeFOSAA	8.066	573.0 -> 419.0	40299	16.99	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.9%			
13C3-HFPO-DA	5.771	287.0 -> 169.0	5343	16.47	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 82.4%			
Target Compounds							QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.			
6:2FTS	-	427.0 -> 407.0	-	N.D.			
8:2FTS	-	527.0 -> 507.0	-	N.D.			
EtFOSAA	-	584.0 -> 419.0	-	N.D.			
FOSA	-	498.0 -> 78.0	-	N.D.			
MeFOSAA	-	570.0 -> 419.0	-	N.D.			
PFBA	2.021	213.0 -> 169.0	866	0.80	µg/L		100
PFBS	-	299.0 -> 80.0	-	N.D.			
PFDA	-	513.0 -> 469.0	-	N.D.			
PFDoDA	-	613.0 -> 569.0	-	N.D.			
PFDS	9.102	599.0 -> 80.0	0	0.00	µg/L	m	1
PFHpA	-	363.0 -> 319.0	-	N.D.			
PFHpS	-	449.0 -> 80.0	-	N.D.			
PFHxA	5.846	313.0 -> 269.0	0	0.00	µg/L	m	1
PFHxS	-	399.0 -> 80.0	-	N.D.			
PFNA	-	463.0 -> 419.0	-	N.D.			
PFNS	-	549.0 -> 80.0	-	N.D.			
PFOA	-	413.0 -> 369.0	-	N.D.			
PFOS	-	499.0 -> 80.0	-	N.D.			
PFPeA	-	263.0 -> 219.0	-	N.D.			
PFPeS	-	349.0 -> 80.0	-	N.D.			
PFTeDA	-	713.0 -> 669.0	-	N.D.			
PFTrDA	-	663.0 -> 619.0	-	N.D.			
PFUnDA	-	563.0 -> 519.0	-	N.D.			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.			
ADONA	-	377.0 -> 251.0	-	N.D.			
HFPO-DA	-	329.0 -> 169.0	-	N.D.			

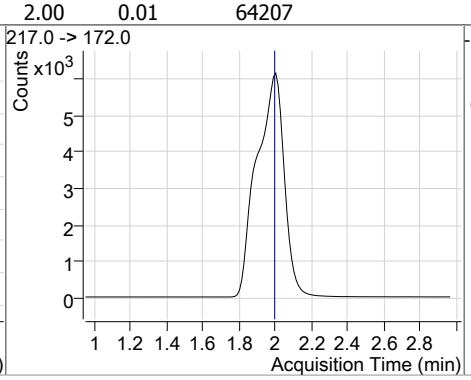
 # = Qualifier out of range, m = manually integrated, + = Area summed

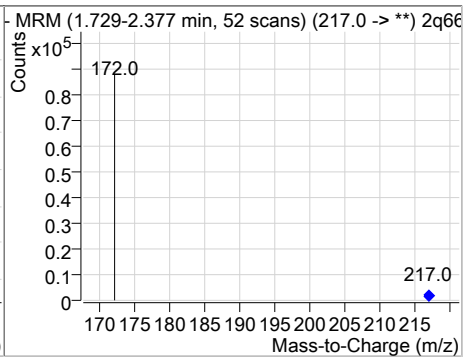
Perfluorinated Compounds by LC/MS/MS



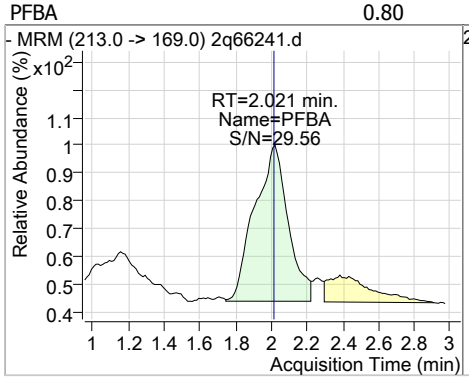
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.12	2.00	0.01	64207				

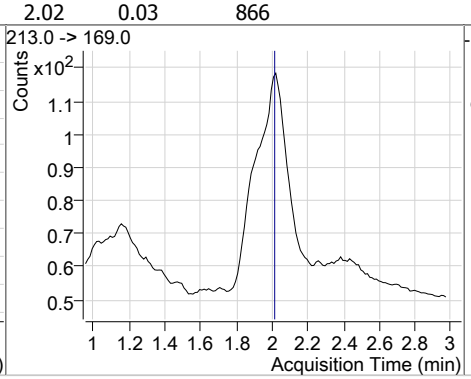


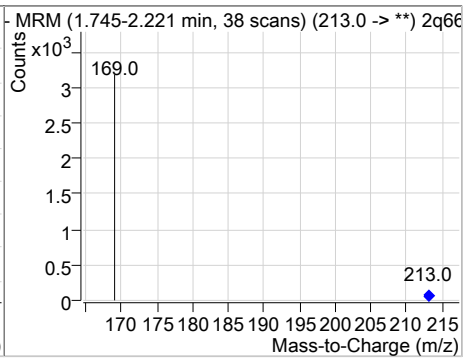




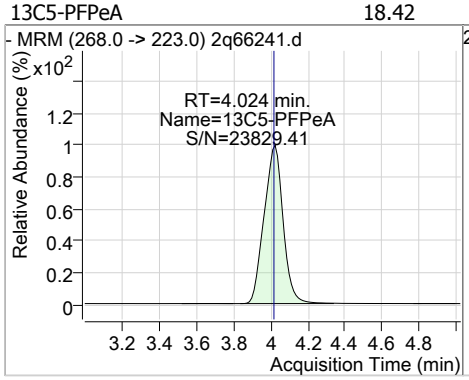
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.80	2.02	0.03	866				

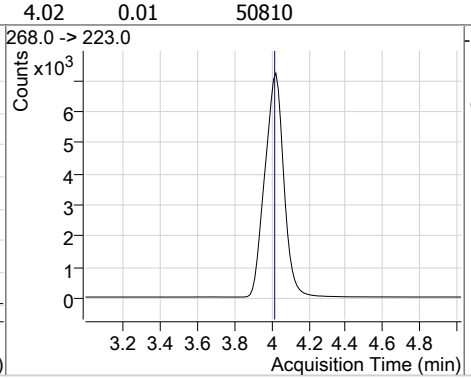


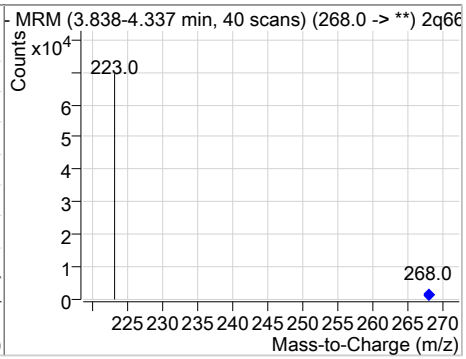




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	18.42	4.02	0.01	50810				

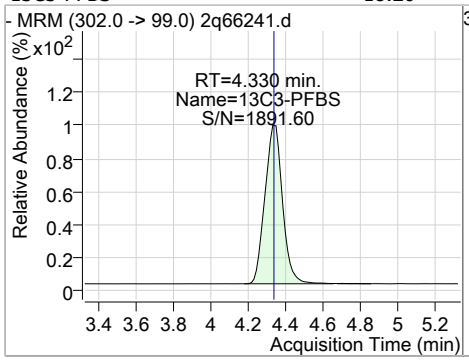


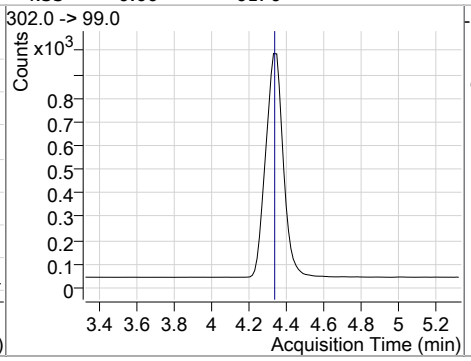


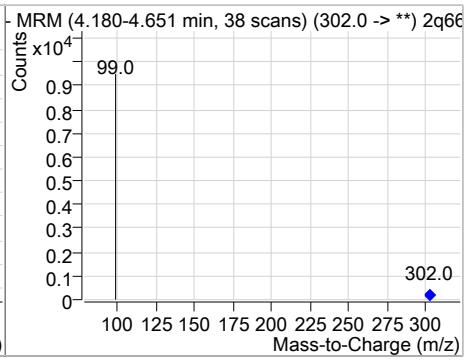


Perfluorinated Compounds by LC/MS/MS

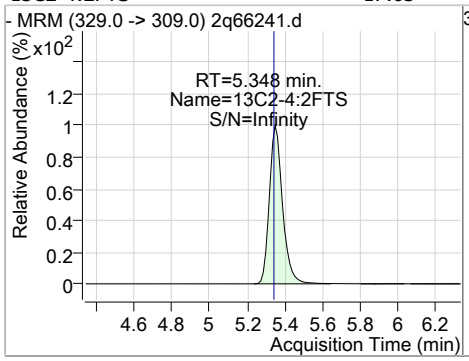
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	18.26	4.33	0.00	6170				

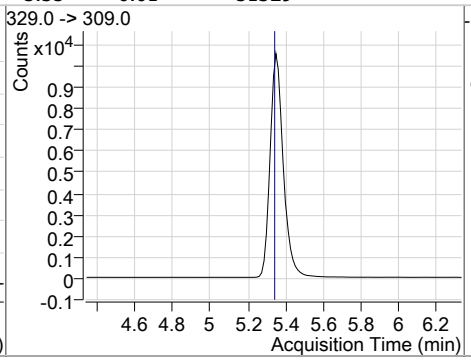


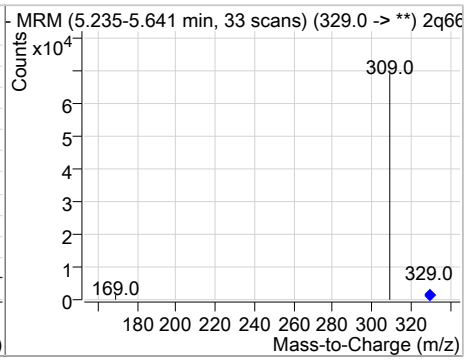




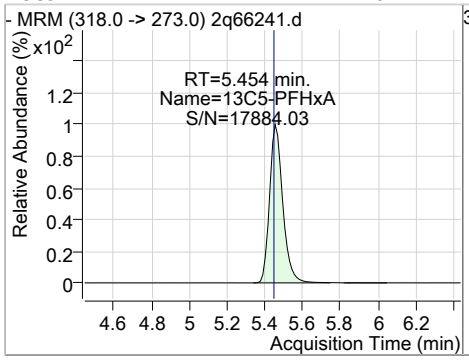
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	17.63	5.35	0.01	51329				

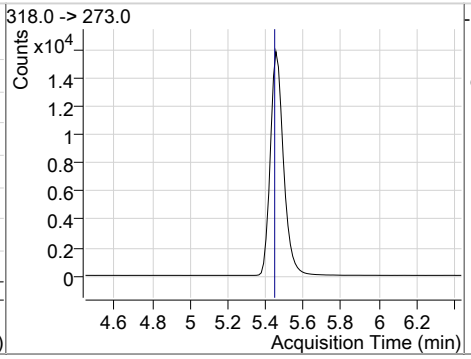


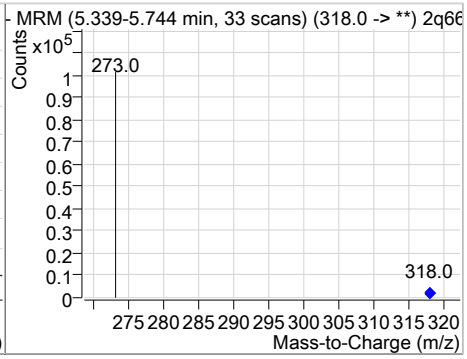




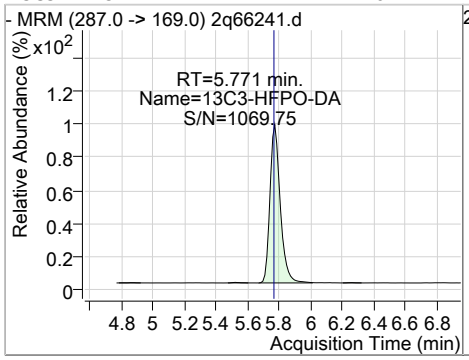
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	18.42	5.45	0.01	76762				

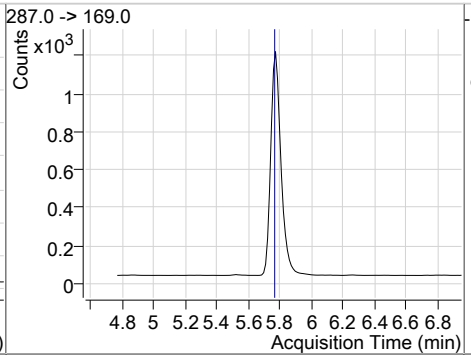


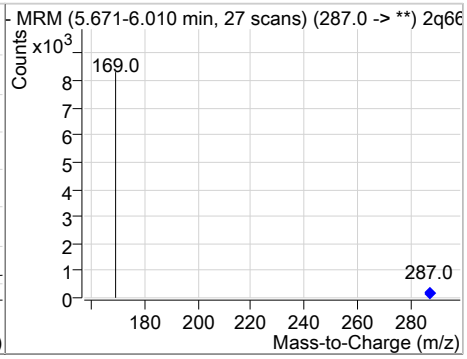




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	16.47	5.77	0.01	5343				

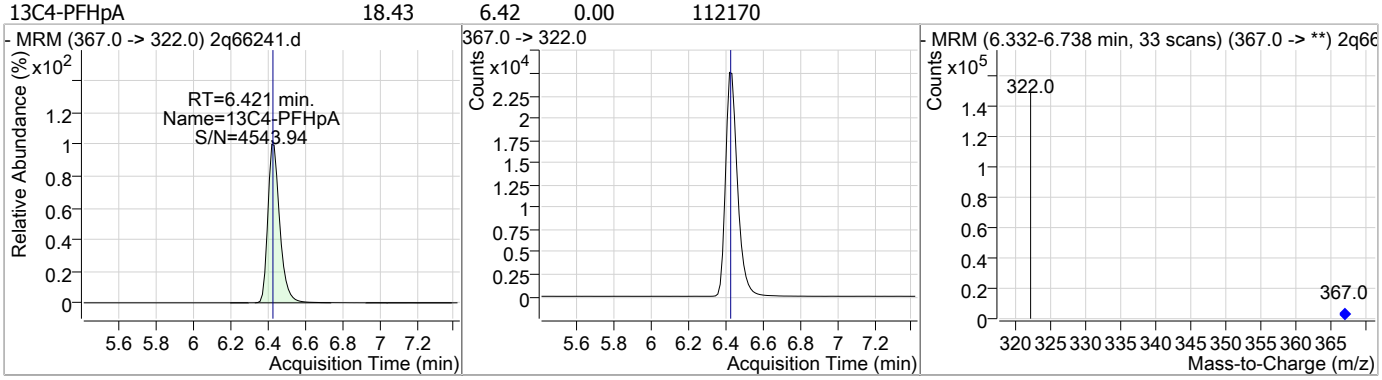




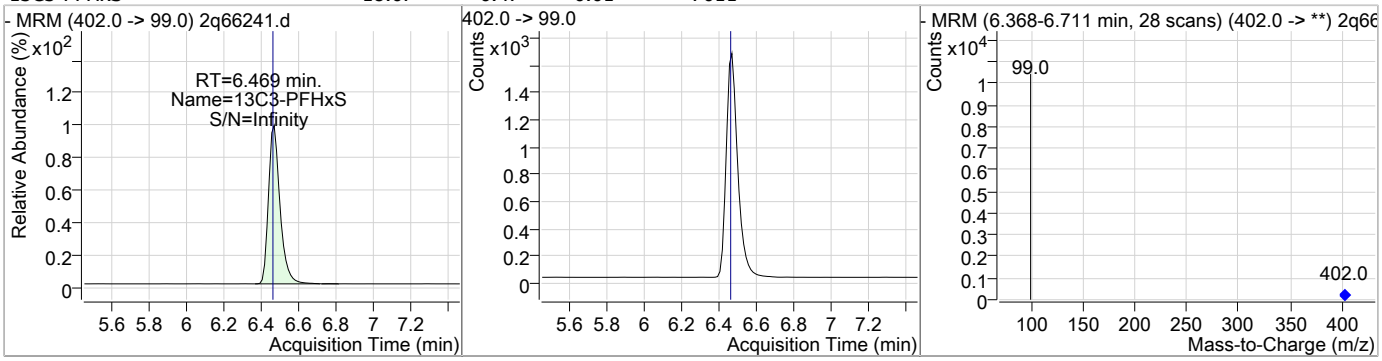


Perfluorinated Compounds by LC/MS/MS

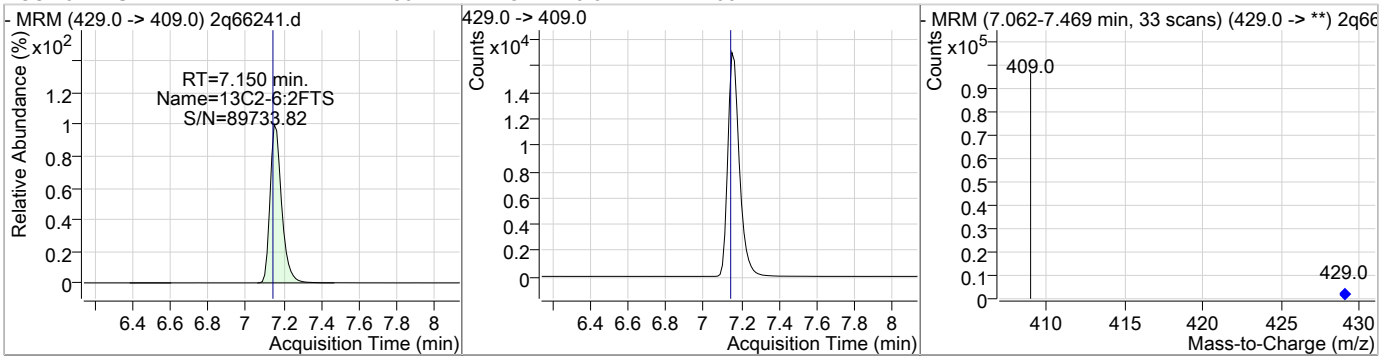
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	18.43	6.42	0.00	112170				



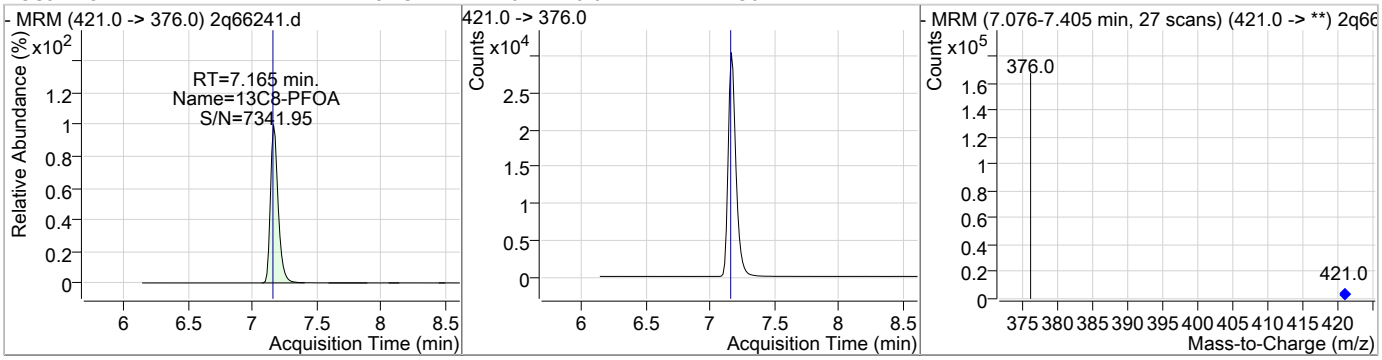
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	18.67	6.47	0.01	7011				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	17.86	7.15	0.01	72667				

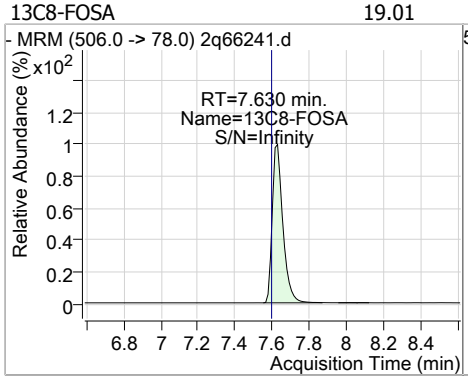


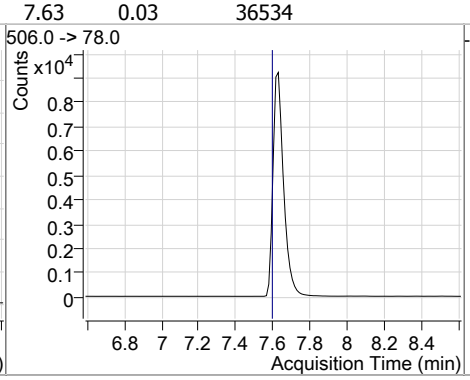
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	18.23	7.16	0.01	127136				

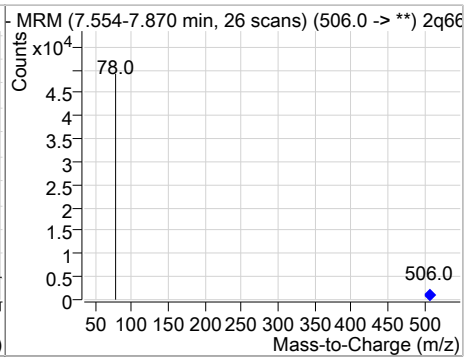


Perfluorinated Compounds by LC/MS/MS

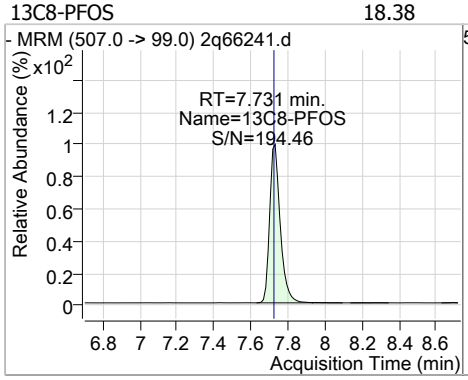
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	19.01	7.63	0.03	36534				

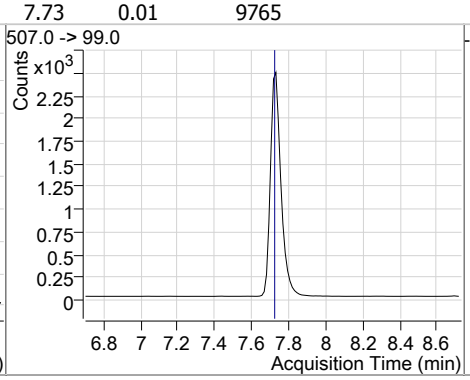


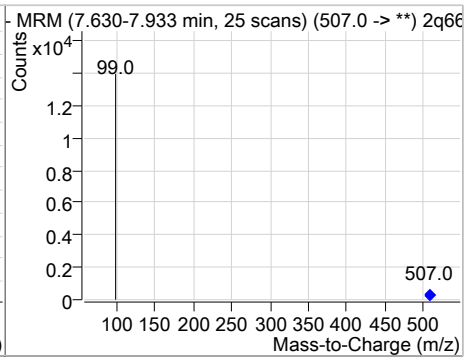




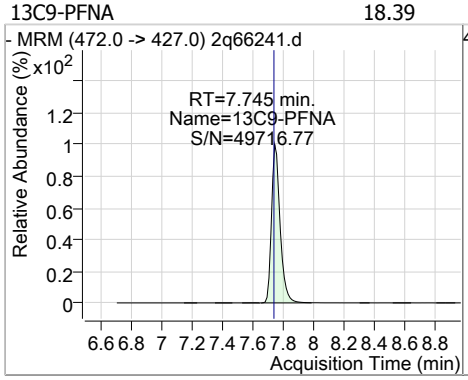
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13C8-PFOS	18.38	7.73	0.01	9765				

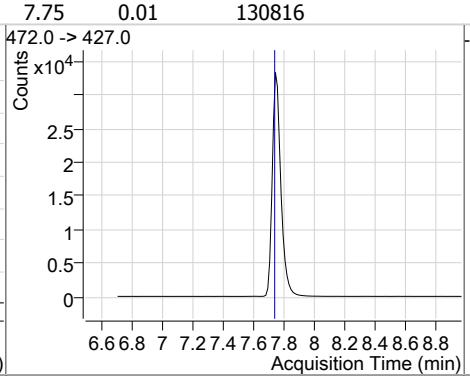


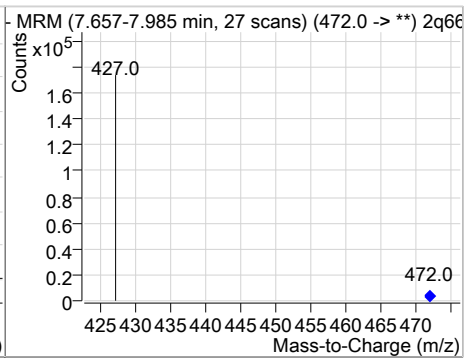




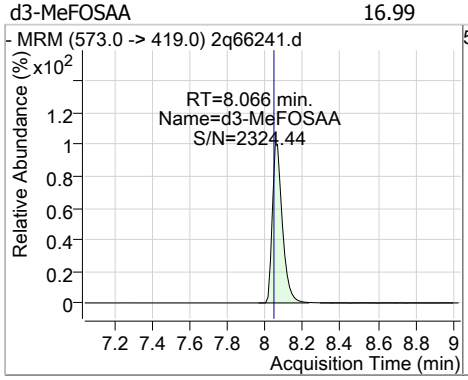
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.39	7.75	0.01	130816				

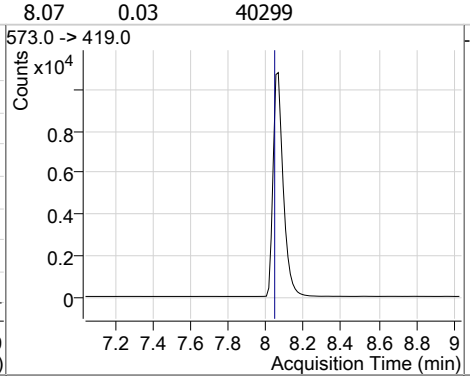


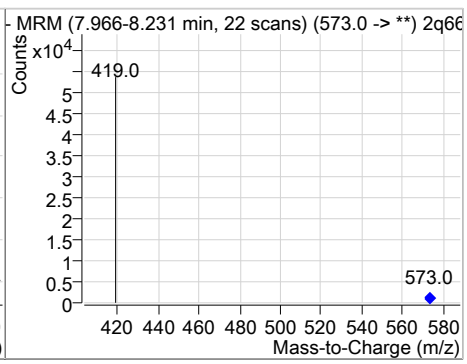




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	16.99	8.07	0.03	40299				

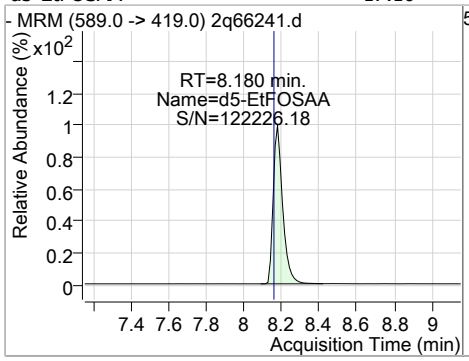


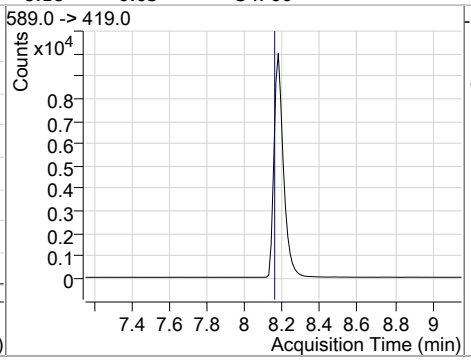


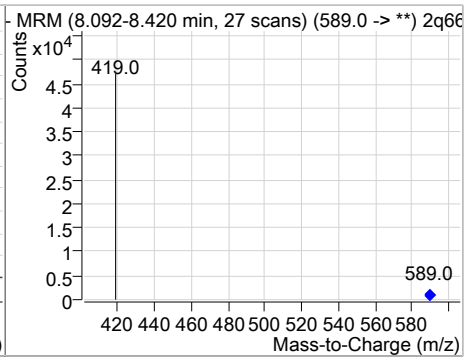


Perfluorinated Compounds by LC/MS/MS

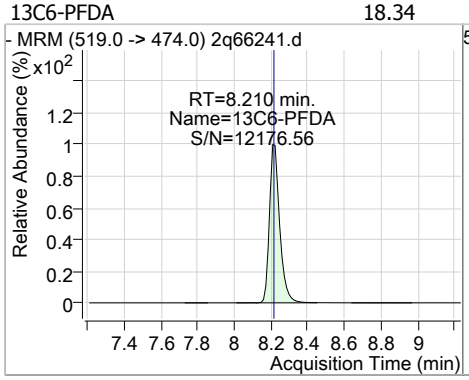
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d5-EtFOSAA	17.10	8.18	0.03	34760				

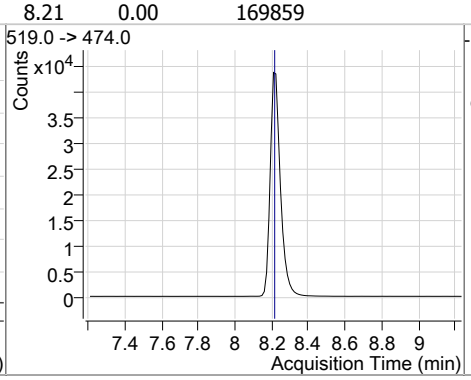


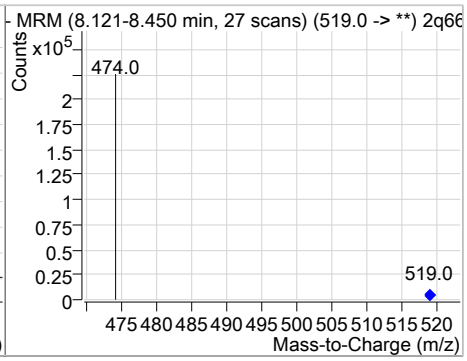




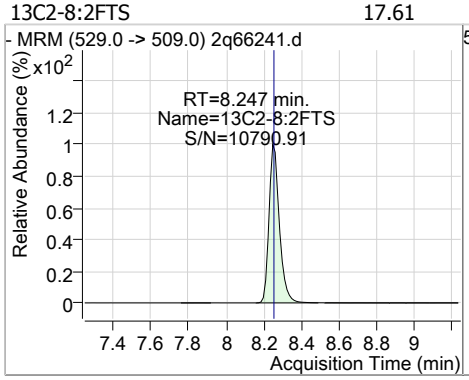
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.34	8.21	0.00	169859				

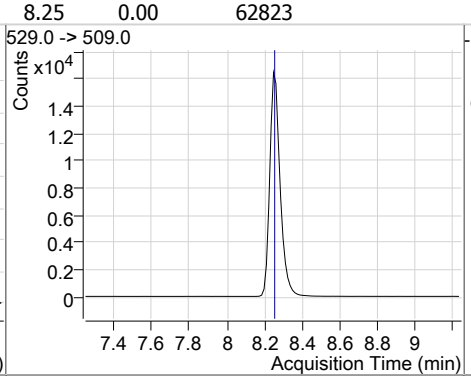


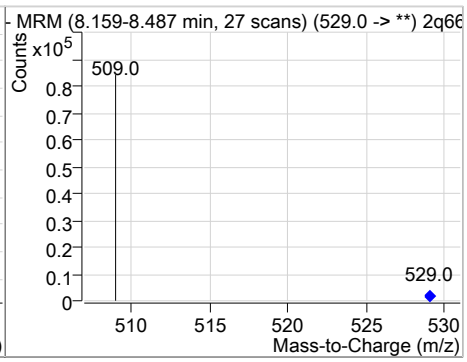




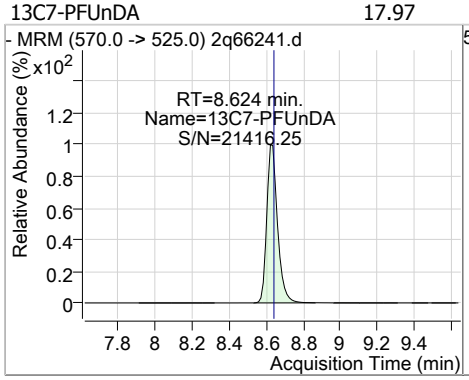
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	17.61	8.25	0.00	62823				

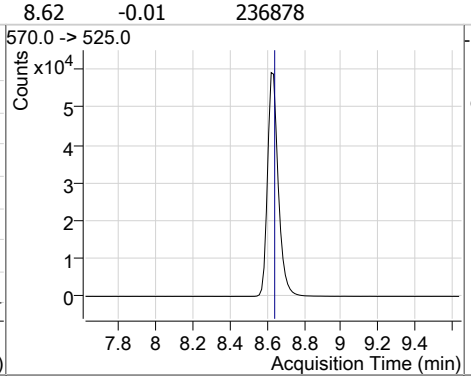


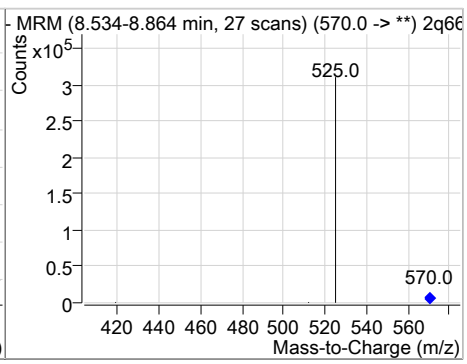




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	17.97	8.62	-0.01	236878				

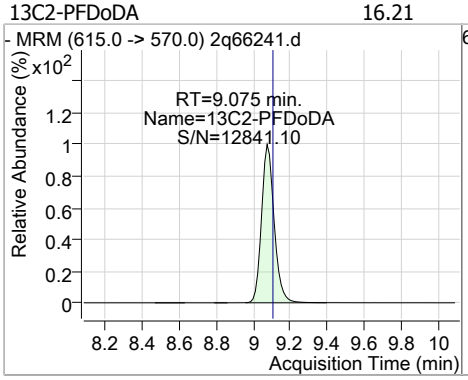


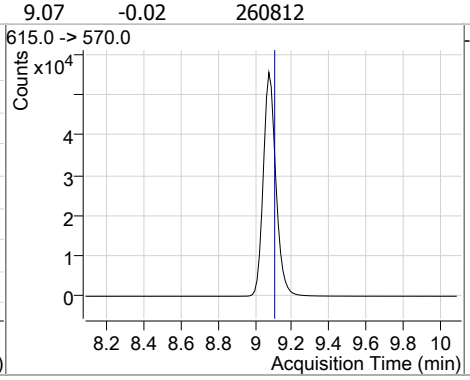


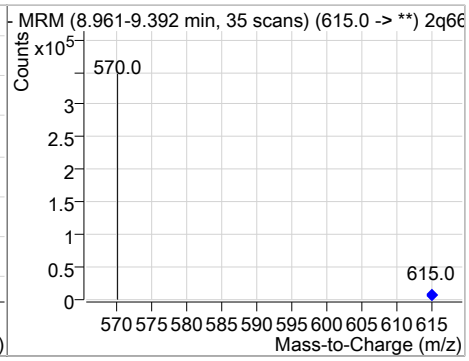


Perfluorinated Compounds by LC/MS/MS

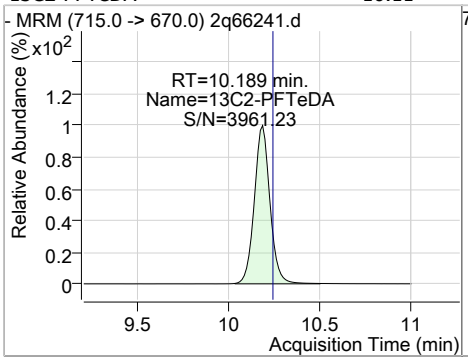
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	16.21	9.07	-0.02	260812				

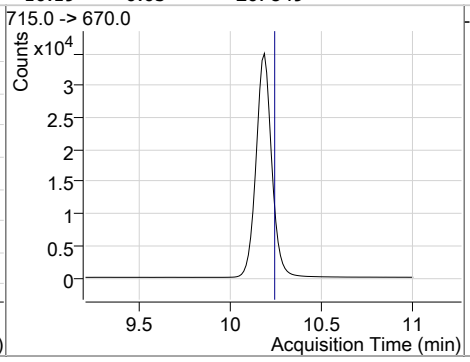


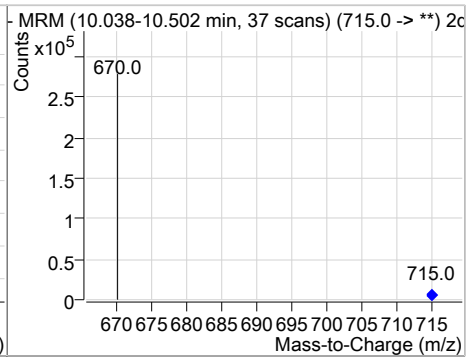




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	16.11	10.19	-0.05	207849				







Perfluorinated Compounds by LC/MS/MS

Data File : 3q36586.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/14/2021 12:55:27 PM
Sample Name : IBLK
Vial : P1-A1
DA Method File : ID_041321_S3Q537.quantmethod.xml
Batch Name : s3q538.batch.bin
Sample Information : op84892,S3Q538,250,,,1,1,water

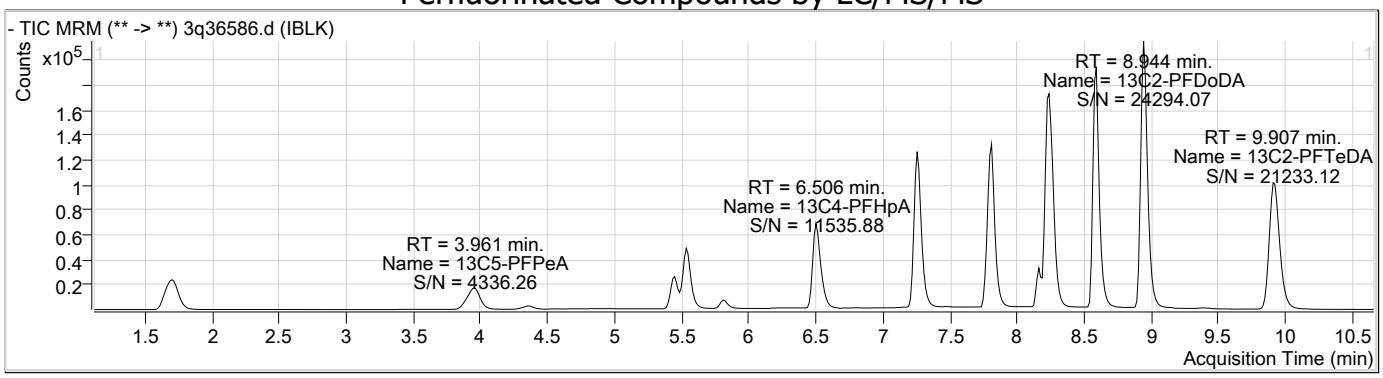
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
M4-PFBA	1.702	217.0 -> 172.0	166629	20.00 µg/L	-0.138
M5-PFPeA	3.961	268.0 -> 223.0	117377	20.00 µg/L	-0.113
M5-PFHxA	5.542	318.0 -> 273.0	194452	20.00 µg/L	-0.088
M4-PFHpA	6.506	367.0 -> 322.0	263315	20.00 µg/L	-0.101
M8-PFOA	7.263	421.0 -> 376.0	312873	20.00 µg/L	-0.063
M9-PFNA	7.817	472.0 -> 427.0	356123	20.00 µg/L	-0.038
M6-PFDA	8.232	519.0 -> 474.0	470362	20.00 µg/L	-0.025
M7-PFUnDA	8.593	570.0 -> 525.0	633163	20.00 µg/L	-0.013
M2-PFDoDA	8.944	615.0 -> 570.0	760961	20.00 µg/L	-0.013
M2-PFTeDA	9.907	715.0 -> 670.0	552153	20.00 µg/L	-0.038
M8-FOSA	7.790	506.0 -> 78.0	111125	20.00 µg/L	-0.026
M3-PFBS	4.354	302.0 -> 99.0	16178	20.00 µg/L	-0.092
M3-PFHxS	6.554	402.0 -> 99.0	23414	20.00 µg/L	-0.100
M8-PFOS	7.803	507.0 -> 99.0	35426	20.00 µg/L	-0.038
M2-4:2FTS	5.447	329.0 -> 309.0	109533	20.00 µg/L	-0.065
M2-6:2FTS	7.249	429.0 -> 409.0	161971	20.00 µg/L	-0.063
M2-8:2FTS	8.256	529.0 -> 509.0	169607	20.00 µg/L	-0.025
M3-MeFOSAA	8.164	573.0 -> 419.0	91745	20.00 µg/L	-0.013
M3-HFPO-DA	5.820	287.0 -> 169.0	27156	20.00 µg/L	-0.125
M5-EtFOSAA	8.265	589.0 -> 419.0	81767	20.00 µg/L	-0.025
System Monitoring Compounds					
13C2-4:2FTS	5.447	329.0 -> 309.0	109533	19.14 µg/L	-0.065
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.7%	
13C2-6:2FTS	7.249	429.0 -> 409.0	161971	19.16 µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.8%	
13C2-8:2FTS	8.256	529.0 -> 509.0	169607	18.32 µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.6%	
13C2-PFDoDA	8.944	615.0 -> 570.0	760961	19.73 µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%	
13C2-PFTeDA	9.907	715.0 -> 670.0	552153	19.75 µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%	
13C3-PFBS	4.354	302.0 -> 99.0	16178	20.06 µg/L	-0.092
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.3%	
13C3-PFHxS	6.554	402.0 -> 99.0	23414	20.56 µg/L	-0.100
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.8%	
13C4-PFBA	1.702	217.0 -> 172.0	166629	21.26 µg/L	-0.138
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.3%	
13C4-PFHpA	6.506	367.0 -> 322.0	263315	20.31 µg/L	-0.101
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.6%	
13C5-PFHxA	5.542	318.0 -> 273.0	194452	21.25 µg/L	-0.088
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.2%	
13C5-PFPeA	3.961	268.0 -> 223.0	117377	19.99 µg/L	-0.113
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.0%	
13C6-PFDA	8.232	519.0 -> 474.0	470362	20.47 µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.3%	

Perfluorinated Compounds by LC/MS/MS

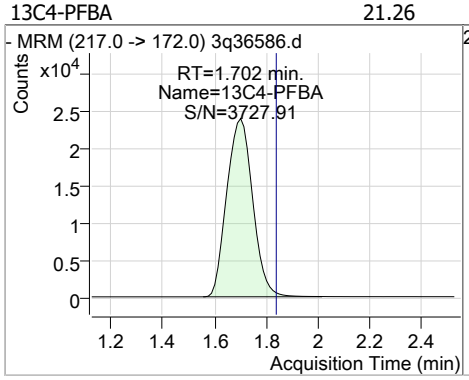
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
13C7-PFUnDA	8.593	570.0 -> 525.0	633163	20.03 µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.1%	
13C8-FOSA	7.790	506.0 -> 78.0	111125	20.93 µg/L	-0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.6%	
13C8-PFOA	7.263	421.0 -> 376.0	312873	20.55 µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.8%	
13C8-PFOS	7.803	507.0 -> 99.0	35426	20.06 µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.3%	
13C9-PFNA	7.817	472.0 -> 427.0	356123	20.17 µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.8%	
d3-MeFOSAA	8.164	573.0 -> 419.0	91745	19.22 µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.1%	
13C3-HFPO-DA	5.820	287.0 -> 169.0	27156	22.39 µg/L	-0.125
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 111.9%	
d5-EtFOSAA	8.265	589.0 -> 419.0	81746	19.87 µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.4%	
Target Compounds					QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.	
6:2FTS	-	427.0 -> 407.0	-	N.D.	
8:2FTS	-	527.0 -> 507.0	-	N.D.	
EtFOSAA	8.277	584.0 -> 419.0	584	0.15 µg/L	88
FOSA	-	498.0 -> 78.0	-	N.D.	
MeFOSAA	8.164	570.0 -> 419.0	637	0.15 µg/L	98
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0	-	N.D.	
PFDA	-	513.0 -> 469.0	-	N.D.	
PFDoDA	-	613.0 -> 569.0	-	N.D.	
PFDS	-	599.0 -> 80.0	-	N.D.	
PFHpA	-	363.0 -> 319.0	-	N.D.	
PFHpS	-	449.0 -> 80.0	-	N.D.	
PFHxA	-	313.0 -> 269.0	-	N.D.	
PFHxS	-	399.0 -> 80.0	-	N.D.	
PFNA	-	463.0 -> 419.0	-	N.D.	
PFNS	-	549.0 -> 80.0	-	N.D.	
PFOA	-	413.0 -> 369.0	-	N.D.	
PFOS	-	499.0 -> 80.0	-	N.D.	
PFPeA	-	263.0 -> 219.0	-	N.D.	
PFPeS	-	349.0 -> 80.0	-	N.D.	
PFTeDA	-	713.0 -> 669.0	-	N.D.	
PFTrDA	-	663.0 -> 619.0	-	N.D.	
PFUnDA	-	563.0 -> 519.0	-	N.D.	
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
ADONA	-	377.0 -> 251.0	-	N.D.	
HFPO-DA	-	329.0 -> 169.0	-	N.D.	

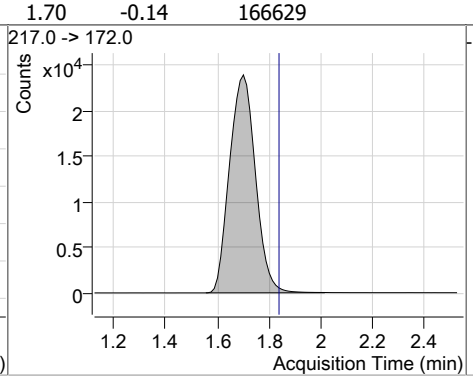
 # = Qualifier out of range, m = manually integrated, + = Area summed

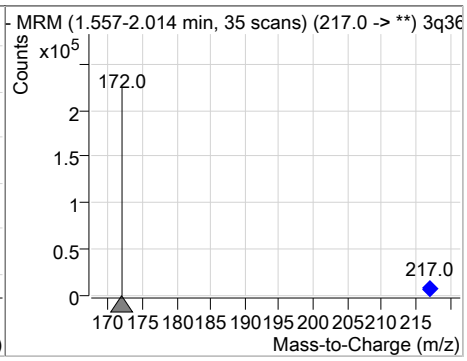
Perfluorinated Compounds by LC/MS/MS



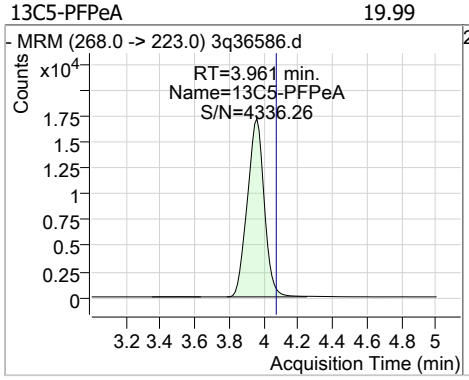
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	21.26	1.70	-0.14	166629				

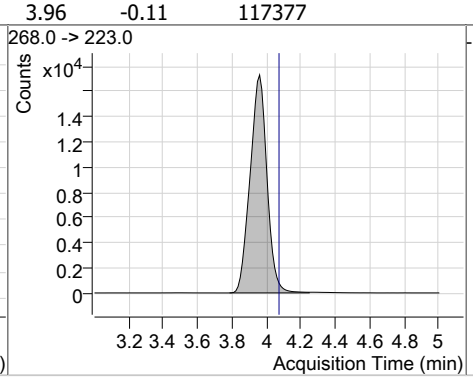


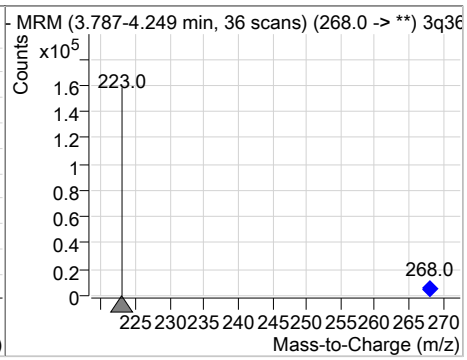




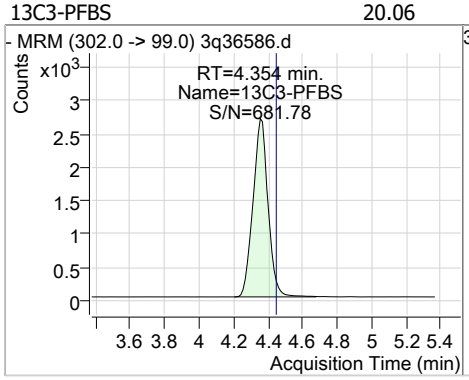
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13C5-PFPeA	19.99	3.96	-0.11	117377				

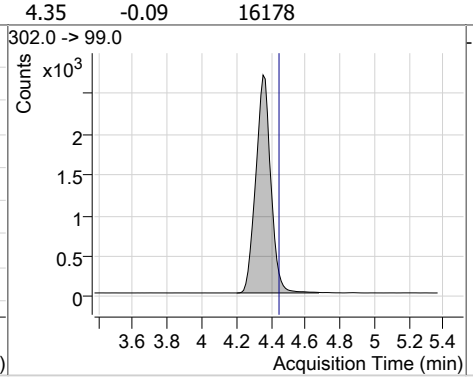


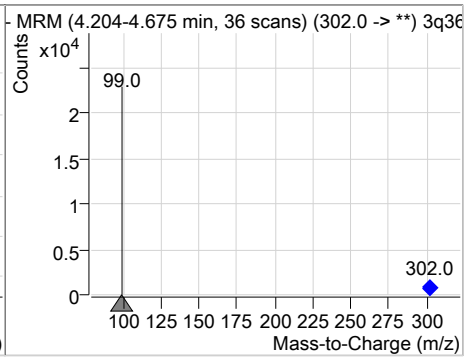




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.06	4.35	-0.09	16178				

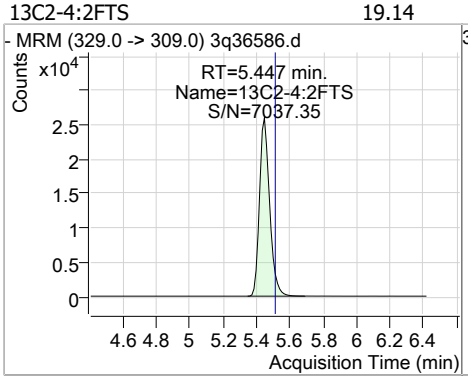


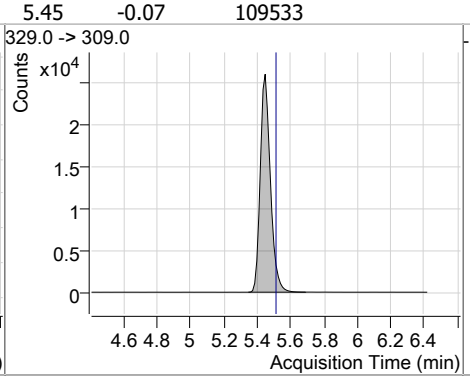


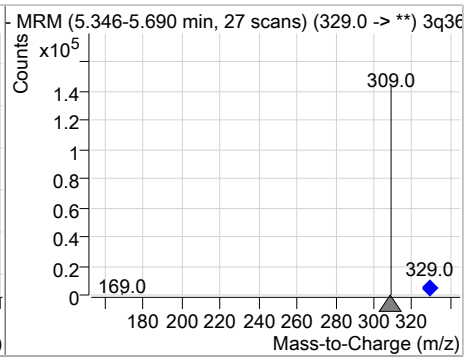


Perfluorinated Compounds by LC/MS/MS

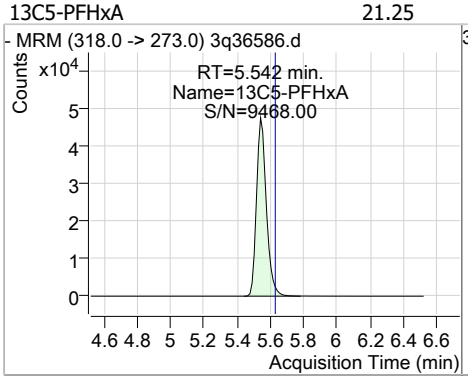
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13C2-4:2FTS	19.14	5.45	-0.07	109533				

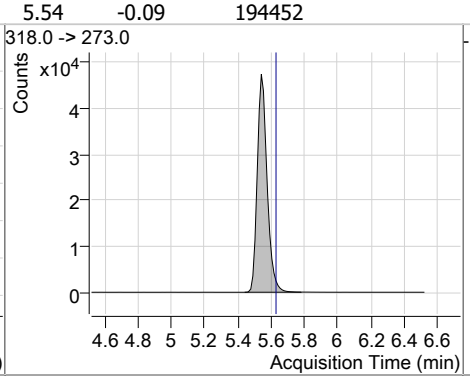


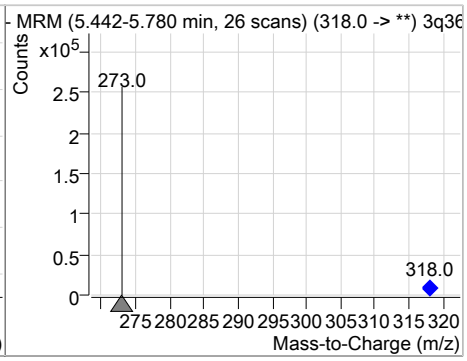




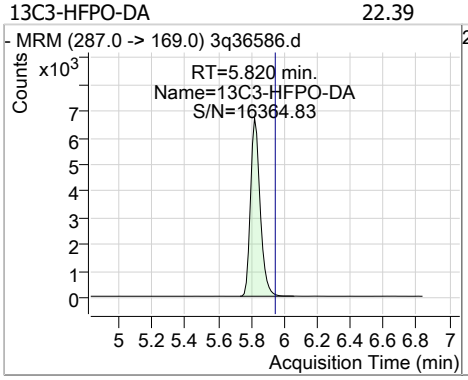
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	21.25	5.54	-0.09	194452				

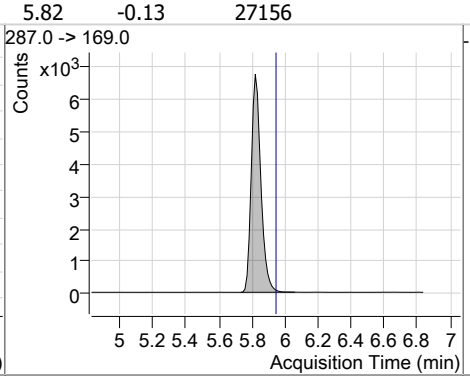


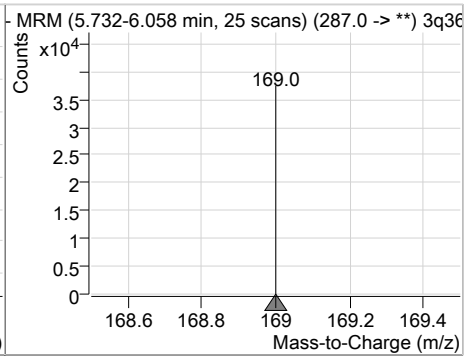




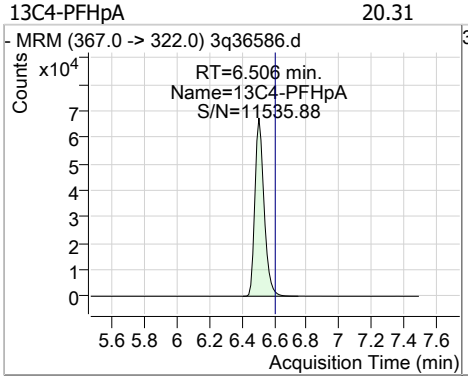
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	22.39	5.82	-0.13	27156				

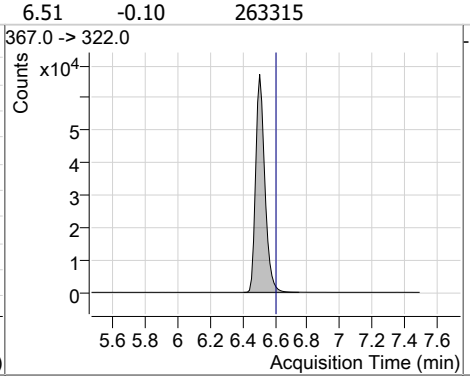


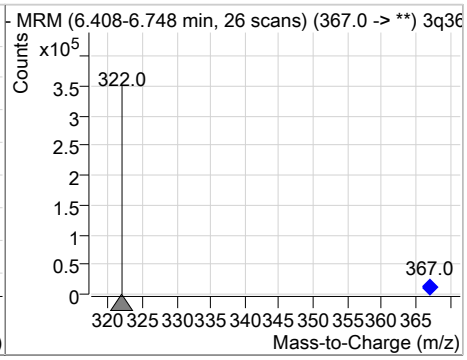




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.31	6.51	-0.10	263315				

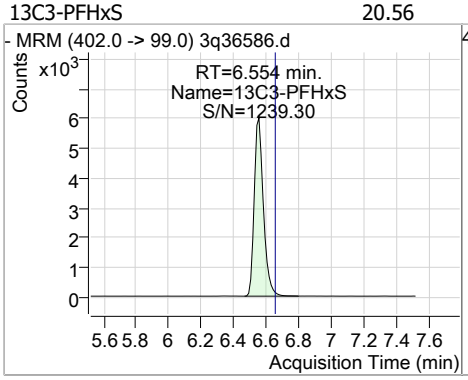


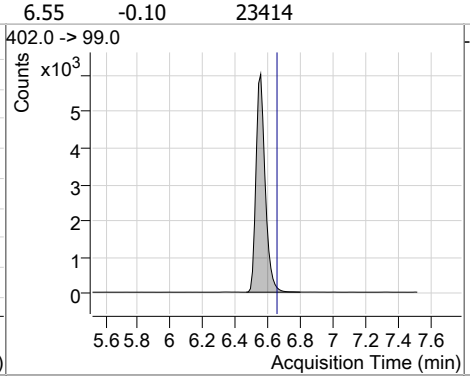


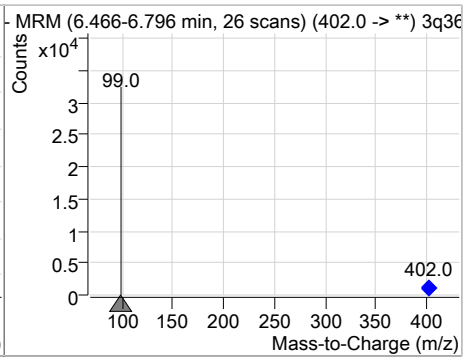


Perfluorinated Compounds by LC/MS/MS

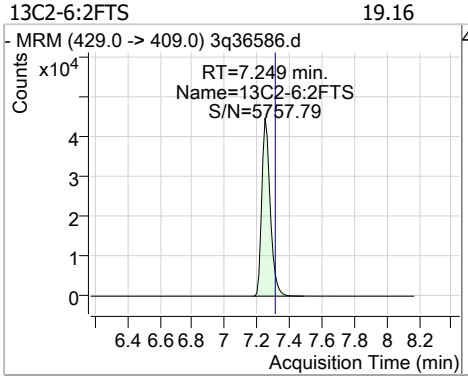
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13C3-PFHxS	20.56	6.55	-0.10	23414				

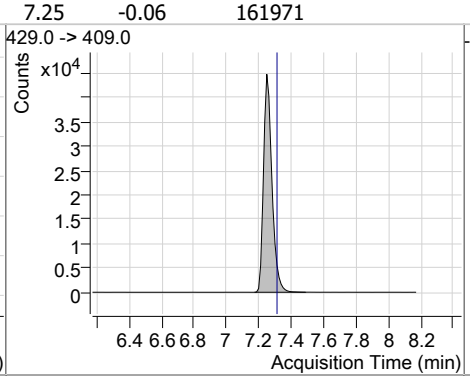


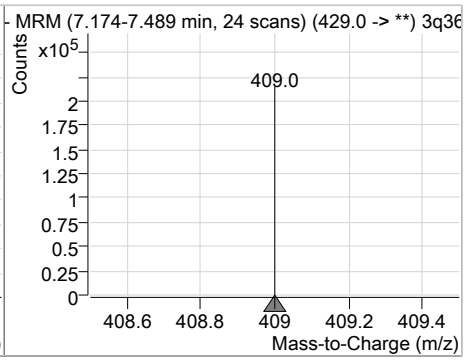




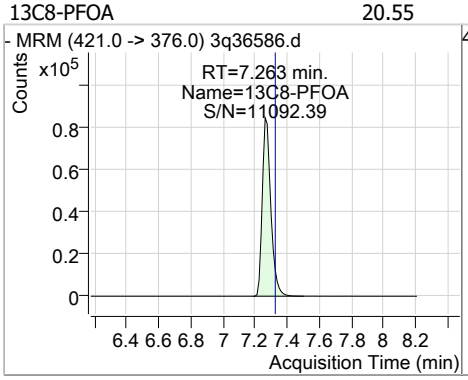
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.16	7.25	-0.06	161971				

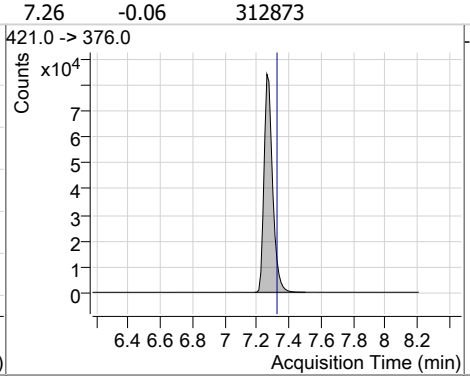


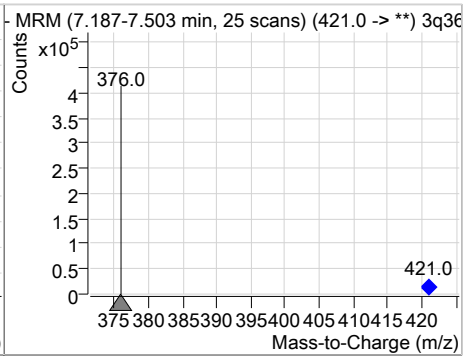




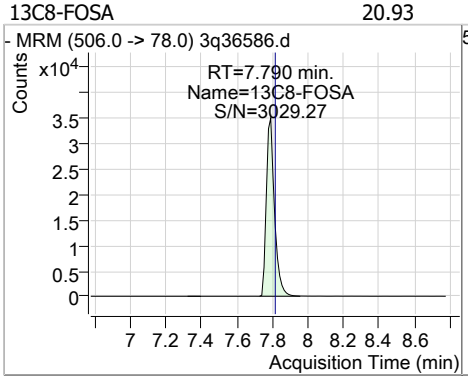
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.55	7.26	-0.06	312873				

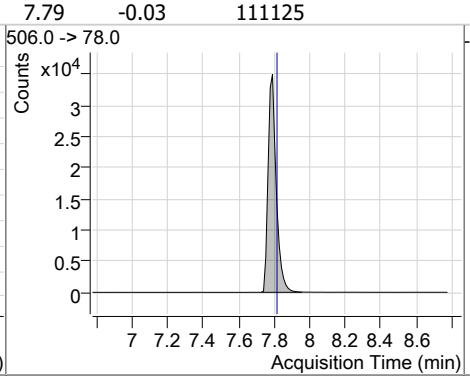


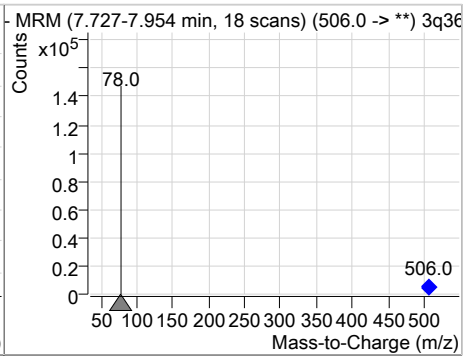




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.93	7.79	-0.03	111125				

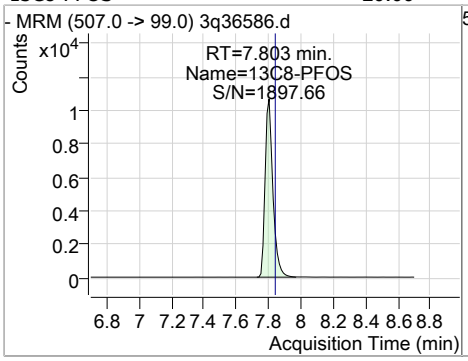


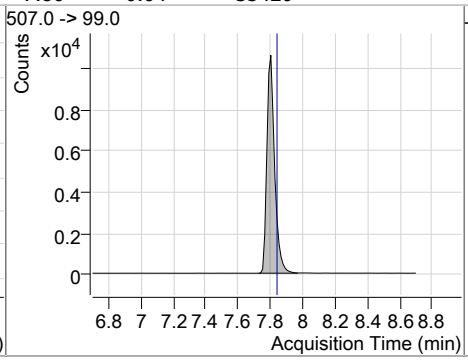


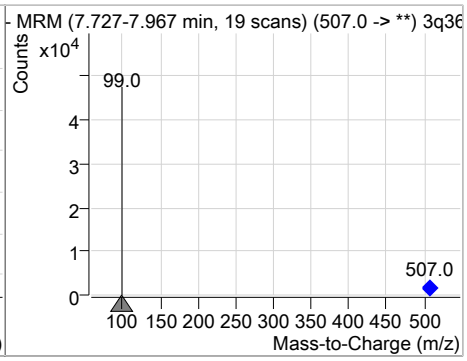


Perfluorinated Compounds by LC/MS/MS

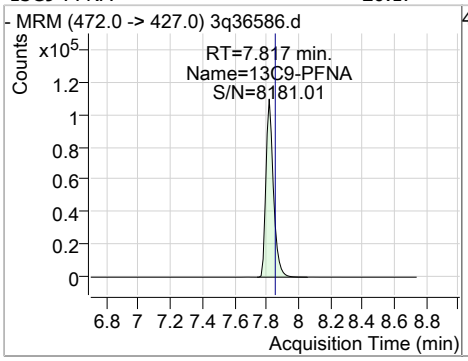
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13C8-PFOS	20.06	7.80	-0.04	35426				

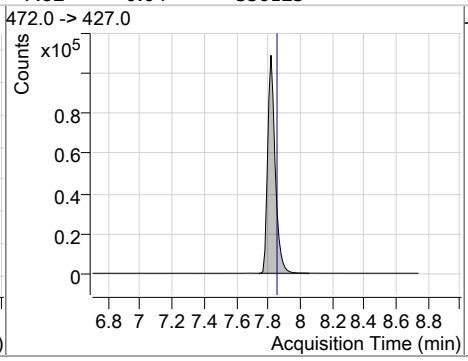


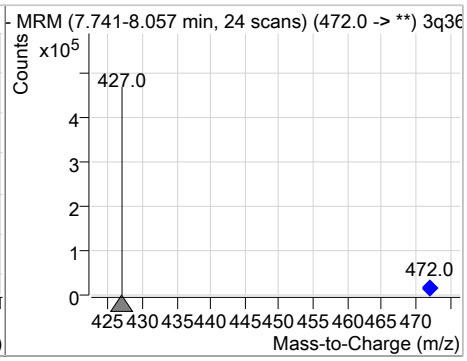




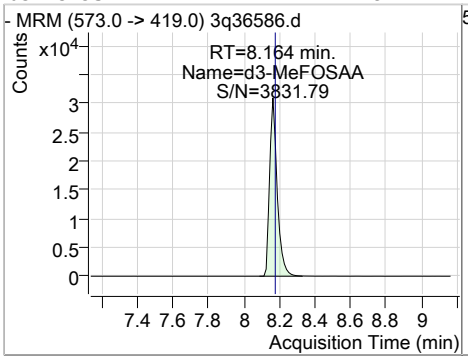
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13C9-PFNA	20.17	7.82	-0.04	356123				

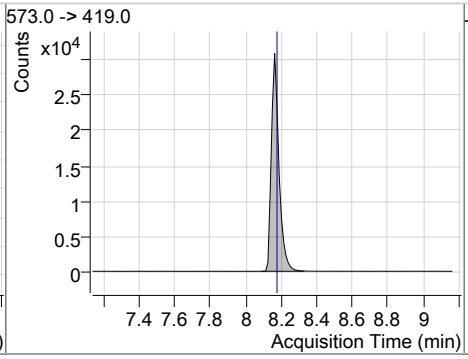


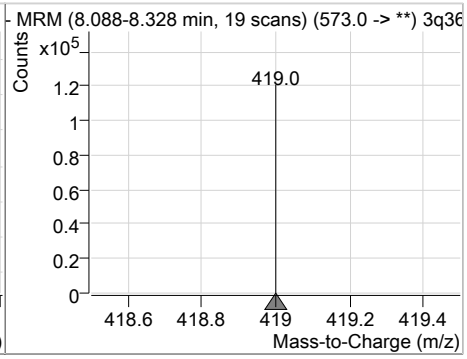




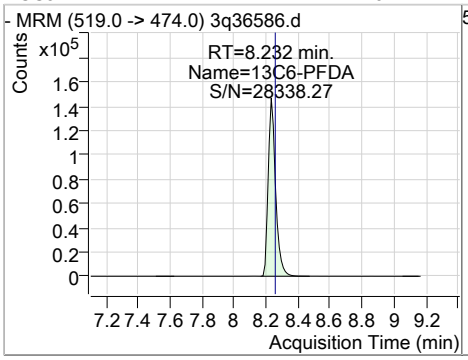
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.22	8.16	-0.01	91745				

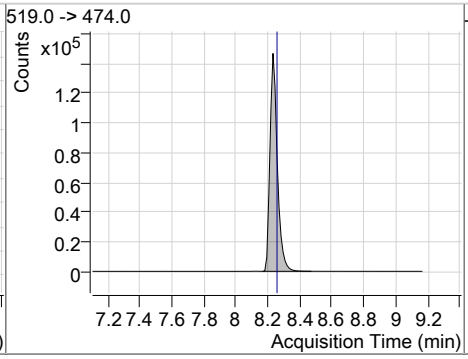


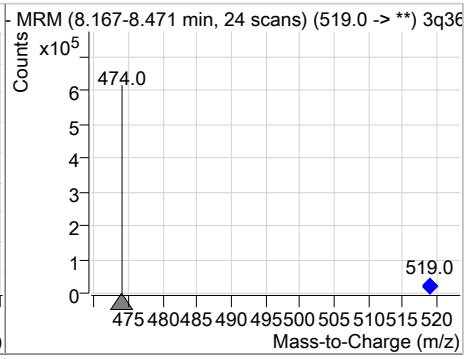




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.47	8.23	-0.03	470362				

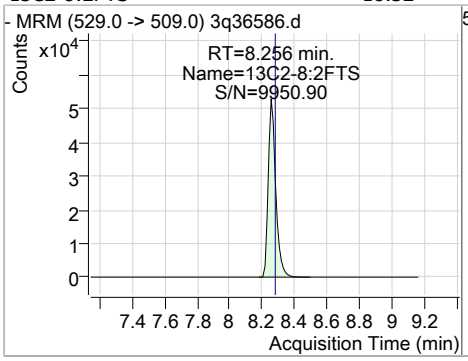


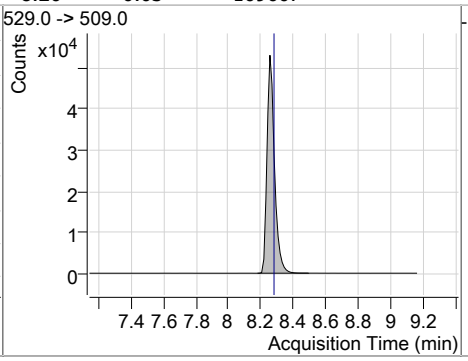


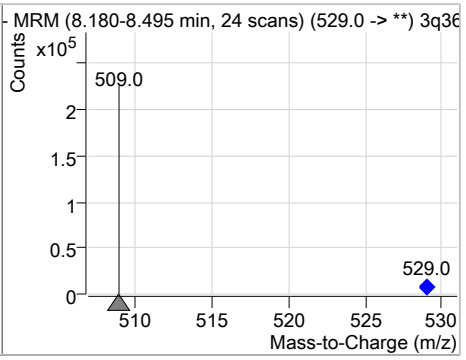


Perfluorinated Compounds by LC/MS/MS

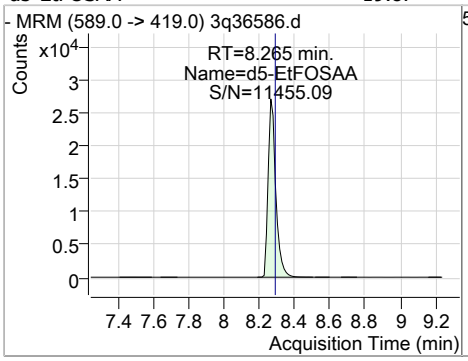
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.32	8.26	-0.03	169607				

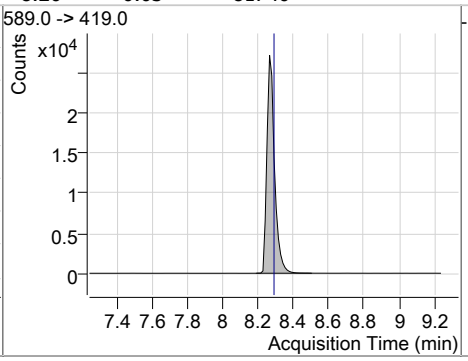


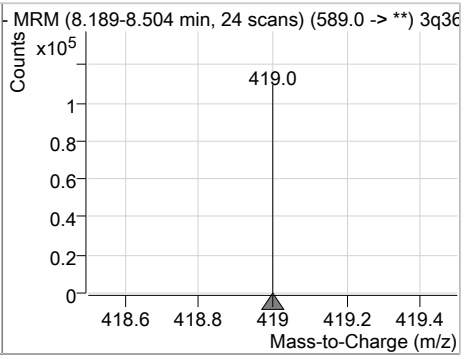




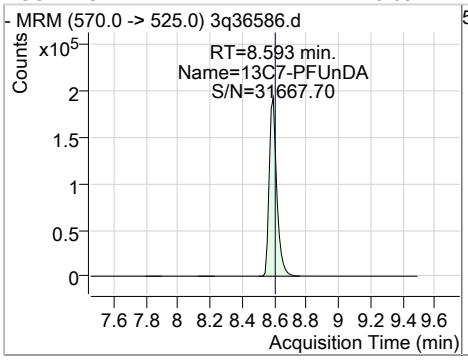
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.87	8.26	-0.03	81746				

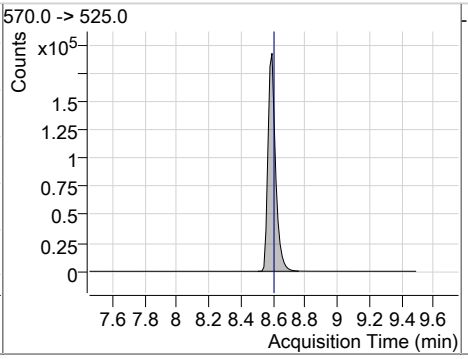


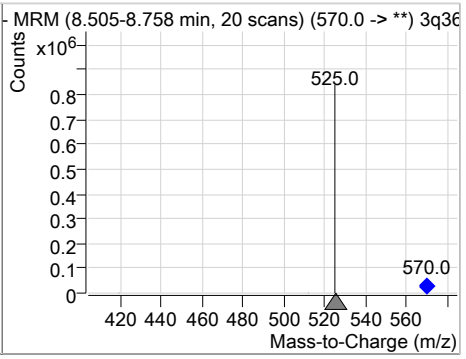




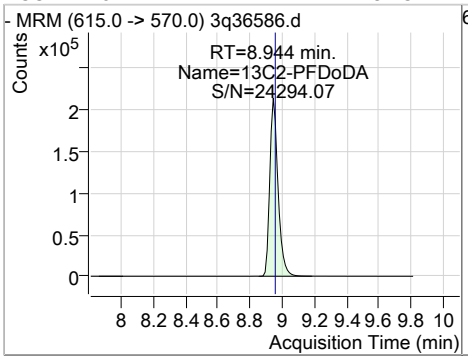
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.03	8.59	-0.01	633163				

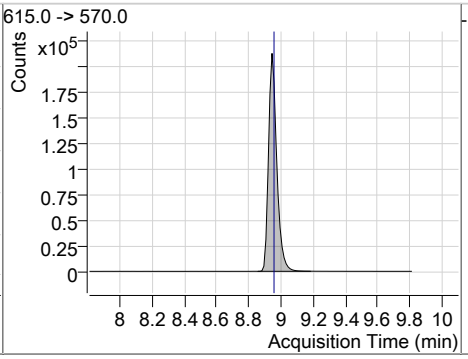


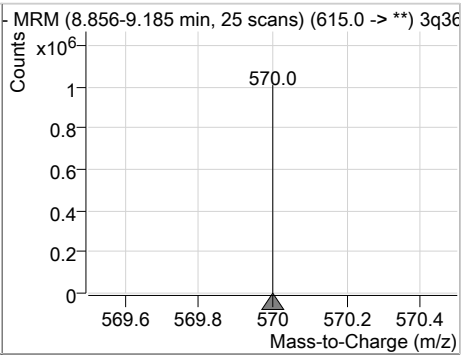




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.73	8.94	-0.01	760961				

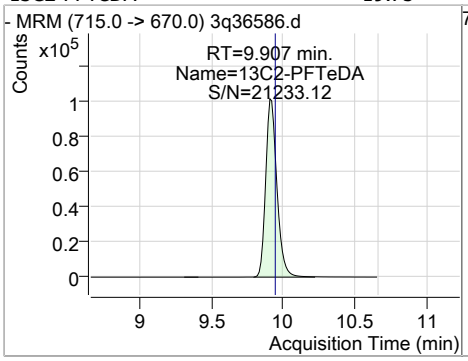


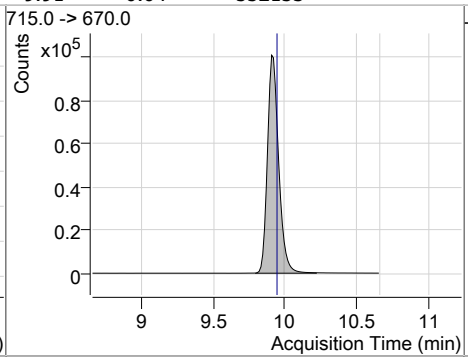


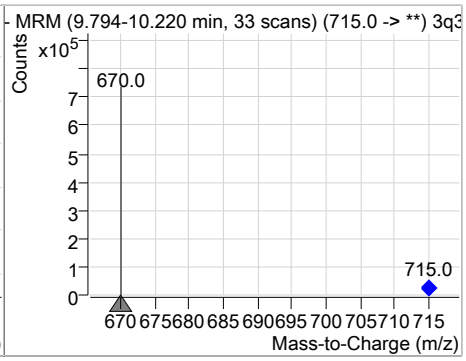


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.75	9.91	-0.04	552153				







Perfluorinated Compounds by LC/MS/MS

Data File	:	2q66177.d
Operator	:	nancyf
Acq. Method	:	537_ID.m
Acq. Date-Time	:	4/16/2021 9:51:17 AM
Sample Name	:	iblk
Vial	:	P1-A1
DA Method File	:	ID_040821_S2Q956.quantmethod.xml
Batch Name	:	s2q963.batch.bin
Sample Information	:	op84308,S2Q963,250,,,1.0,1,water

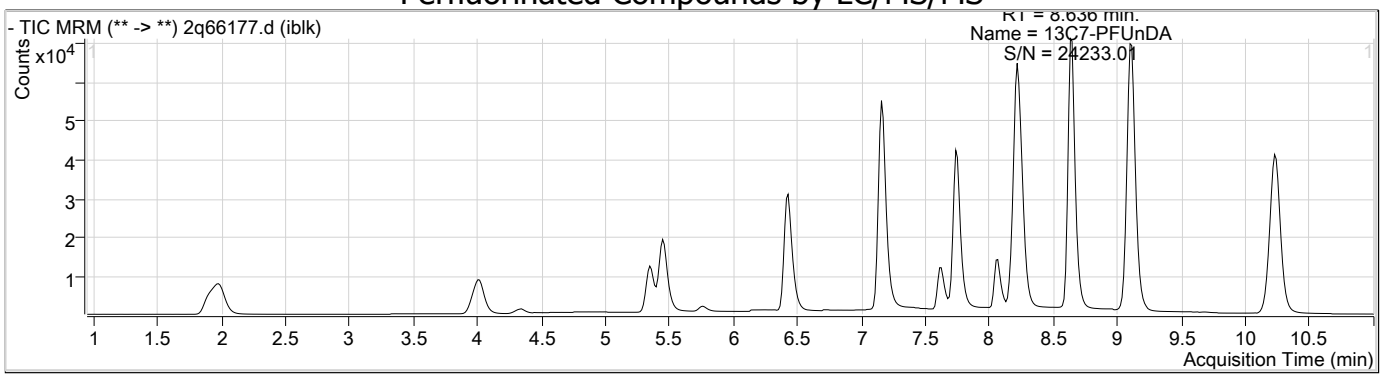
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.180	589.0 -> 419.0	40153	20.00	µg/L	0.025
M4-PFBA	1.977	217.0 -> 172.0	72332	20.00	µg/L	-0.013
M5-PFPeA	4.012	268.0 -> 223.0	57853	20.00	µg/L	0.000
M5-PFHxA	5.454	318.0 -> 273.0	87072	20.00	µg/L	0.013
M4-PFHpA	6.433	367.0 -> 322.0	129007	20.00	µg/L	0.013
M8-PFOA	7.165	421.0 -> 376.0	148178	20.00	µg/L	0.013
M9-PFNA	7.745	472.0 -> 427.0	151606	20.00	µg/L	0.013
M6-PFDA	8.223	519.0 -> 474.0	200750	20.00	µg/L	0.013
M7-PFUnDA	8.636	570.0 -> 525.0	278274	20.00	µg/L	0.000
M2-PFDoDA	9.100	615.0 -> 570.0	326043	20.00	µg/L	0.000
M2-PFTeDA	10.226	715.0 -> 670.0	244322	20.00	µg/L	-0.013
M8-FOSA	7.617	506.0 -> 78.0	42054	20.00	µg/L	0.013
M3-PFBS	4.330	302.0 -> 99.0	7069	20.00	µg/L	0.000
M3-PFHxS	6.469	402.0 -> 99.0	8133	20.00	µg/L	0.013
M8-PFOS	7.730	507.0 -> 99.0	11643	20.00	µg/L	0.013
M2-4:2FTS	5.348	329.0 -> 309.0	57499	20.00	µg/L	0.013
M2-6:2FTS	7.163	429.0 -> 409.0	82476	20.00	µg/L	0.026
M2-8:2FTS	8.260	529.0 -> 509.0	72842	20.00	µg/L	0.013
M3-MeFOSAA	8.066	573.0 -> 419.0	45798	20.00	µg/L	0.025
M3-HFPO-DA	5.771	287.0 -> 169.0	6020	20.00	µg/L	0.013
System Monitoring Compounds						
13C2-4:2FTS	5.348	329.0 -> 309.0	57499	19.75	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.8%		
13C2-6:2FTS	7.163	429.0 -> 409.0	82476	20.27	µg/L	0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%		
13C2-8:2FTS	8.260	529.0 -> 509.0	72842	20.42	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.1%		
13C2-PFDoDA	9.100	615.0 -> 570.0	326043	20.27	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%		
13C2-PFTeDA	10.226	715.0 -> 670.0	244322	18.94	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.7%		
13C3-PFBS	4.330	302.0 -> 99.0	7069	20.92	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.6%		
13C3-PFHxS	6.469	402.0 -> 99.0	8133	21.66	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.3%		
13C4-PFBA	1.977	217.0 -> 172.0	72332	21.54	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.7%		
13C4-PFHpA	6.433	367.0 -> 322.0	129007	21.20	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.0%		
d5-EtFOSAA	8.180	589.0 -> 419.0	40153	19.75	ng/ml	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.8%		
13C5-PFHxA	5.454	318.0 -> 273.0	87072	20.90	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.5%		
13C5-PFPeA	4.012	268.0 -> 223.0	57853	20.97	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.8%		

Perfluorinated Compounds by LC/MS/MS

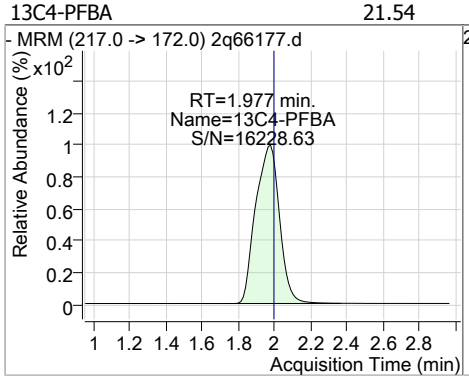
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
13C6-PFDA	8.223	519.0 -> 474.0	200750	21.67 µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.4%	
13C7-PFUnDA	8.636	570.0 -> 525.0	278274	21.11 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.6%	
13C8-FOSA	7.617	506.0 -> 78.0	42054	21.89 µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.4%	
13C8-PFOA	7.165	421.0 -> 376.0	148178	21.25 µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.2%	
13C8-PFOS	7.730	507.0 -> 99.0	11643	21.92 µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.6%	
13C9-PFNA	7.745	472.0 -> 427.0	151606	21.31 µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.6%	
d3-MeFOSAA	8.066	573.0 -> 419.0	45798	19.31 µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.5%	
13C3-HFPO-DA	5.771	287.0 -> 169.0	6020	18.56 µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%	
Target Compounds					QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.	
6:2FTS	-	427.0 -> 407.0	-	N.D.	
8:2FTS	-	527.0 -> 507.0	-	N.D.	
EtFOSAA	8.180	584.0 -> 419.0	349	0.19 µg/L	88
FOSA	-	498.0 -> 78.0	-	N.D.	
MeFOSAA	8.054	570.0 -> 419.0	353	0.18 µg/L	95
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0	-	N.D.	
PFDA	-	513.0 -> 469.0	-	N.D.	
PFDoDA	-	613.0 -> 569.0	-	N.D.	
PFDS	-	599.0 -> 80.0	-	N.D.	
PFHpA	-	363.0 -> 319.0	-	N.D.	
PFHpS	-	449.0 -> 80.0	-	N.D.	
PFHxA	-	313.0 -> 269.0	-	N.D.	
PFHxS	-	399.0 -> 80.0	-	N.D.	
PFNA	-	463.0 -> 419.0	-	N.D.	
PFNS	-	549.0 -> 80.0	-	N.D.	
PFOA	-	413.0 -> 369.0	-	N.D.	
PFOS	-	499.0 -> 80.0	-	N.D.	
PFPeA	-	263.0 -> 219.0	-	N.D.	
PFPeS	-	349.0 -> 80.0	-	N.D.	
PFTeDA	-	713.0 -> 669.0	-	N.D.	
PFTrDA	-	663.0 -> 619.0	-	N.D.	
PFUnDA	-	563.0 -> 519.0	-	N.D.	
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
ADONA	-	377.0 -> 251.0	-	N.D.	
HFPO-DA	-	329.0 -> 169.0	-	N.D.	

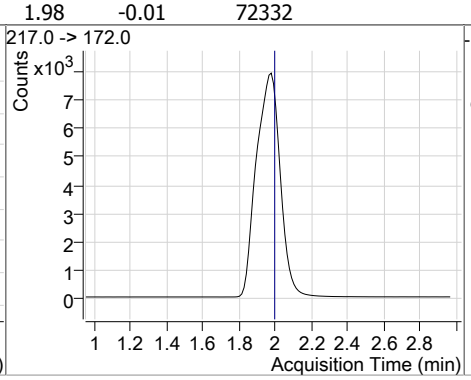
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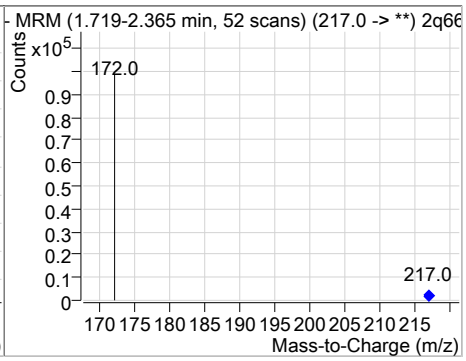
Perfluorinated Compounds by LC/MS/MS



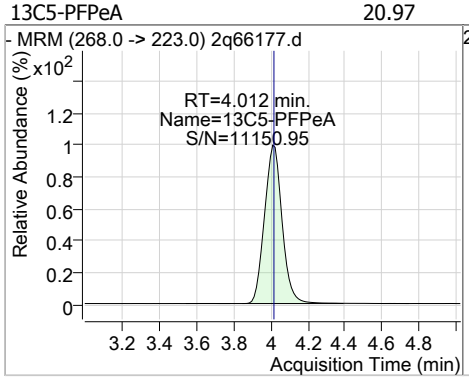
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	21.54	1.98	-0.01	72332				

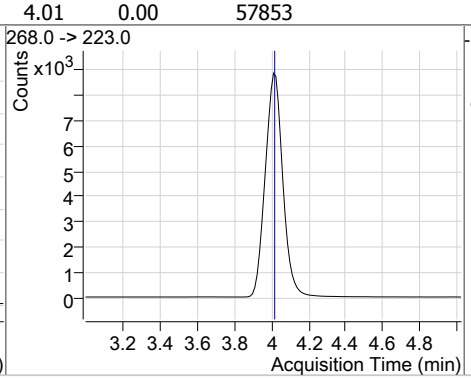


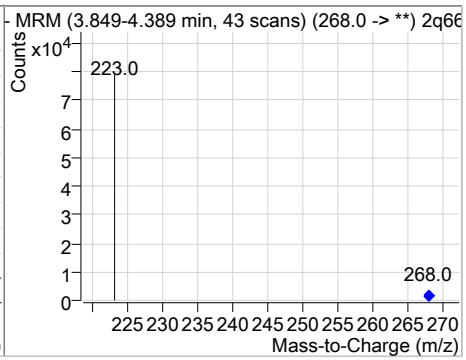




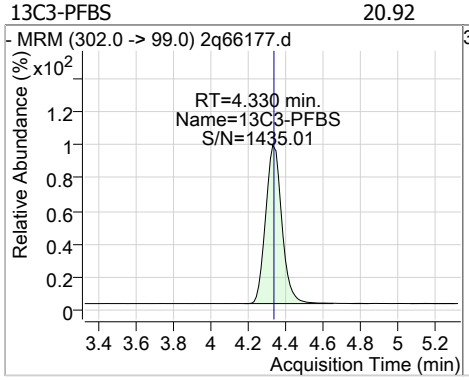
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.97	4.01	0.00	57853				

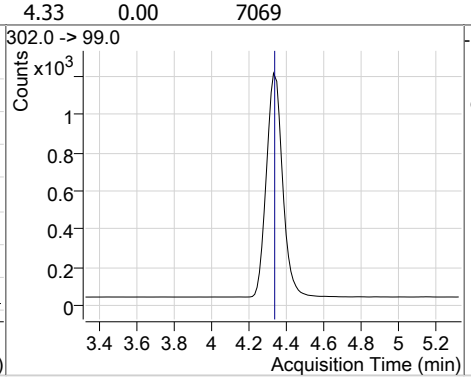


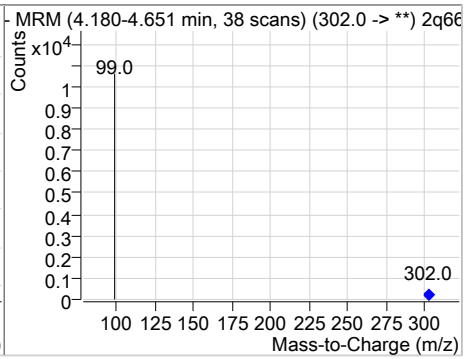




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.92	4.33	0.00	7069				

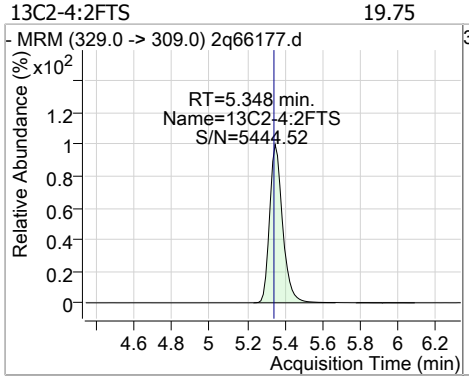


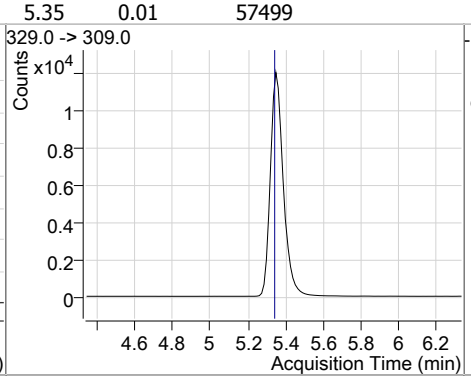


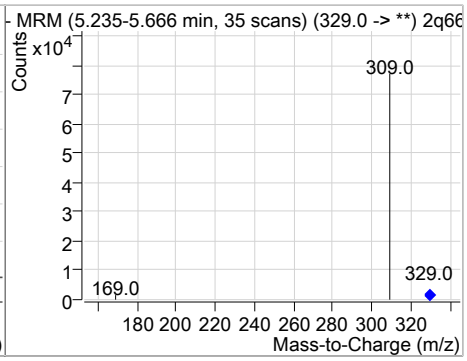


Perfluorinated Compounds by LC/MS/MS

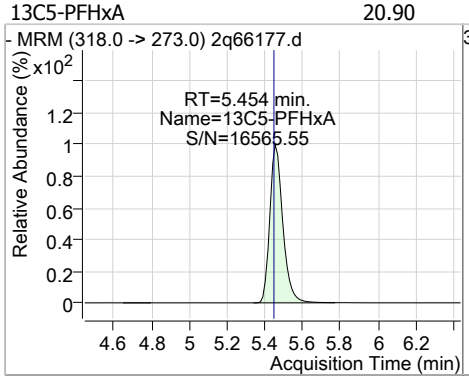
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.75	5.35	0.01	57499				

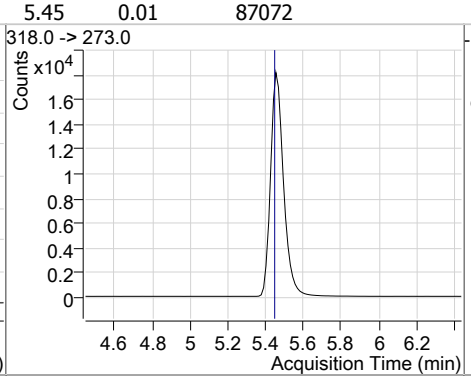


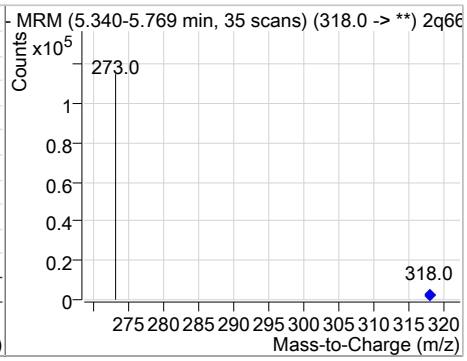




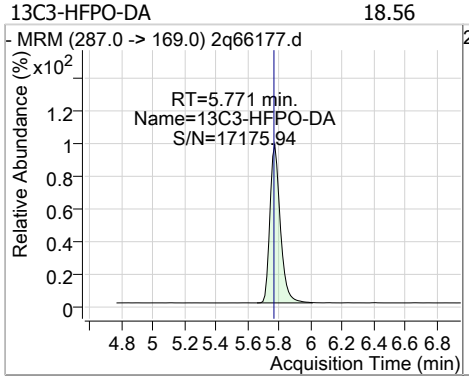
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.90	5.45	0.01	87072				

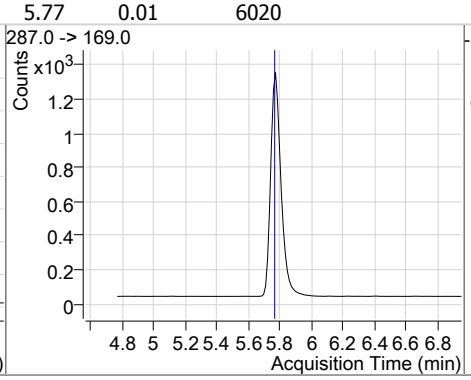


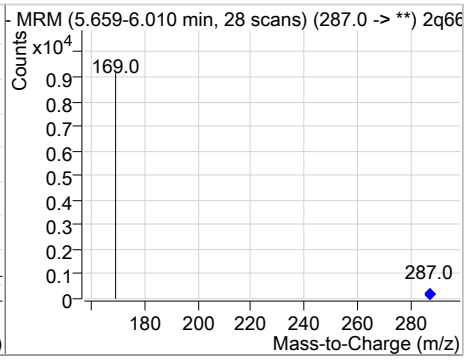




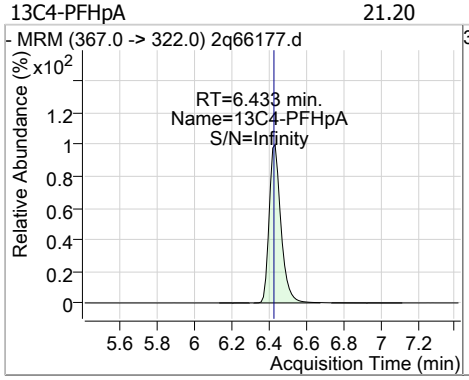
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	18.56	5.77	0.01	6020				

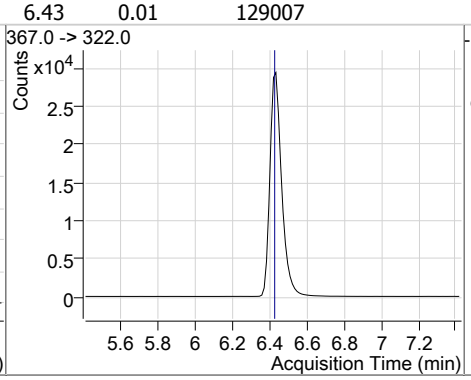


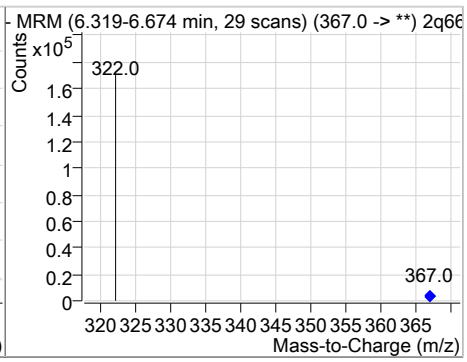




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	21.20	6.43	0.01	129007				

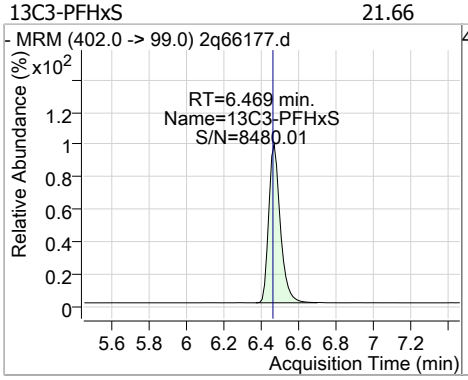


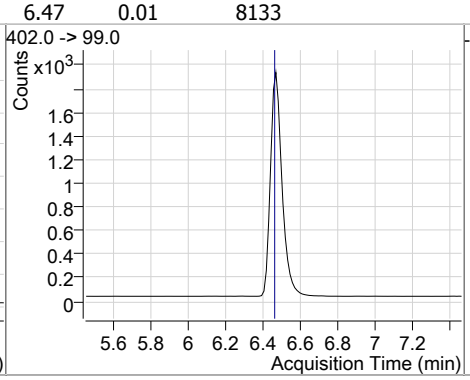


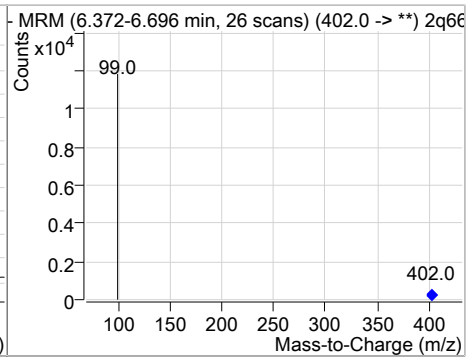


Perfluorinated Compounds by LC/MS/MS

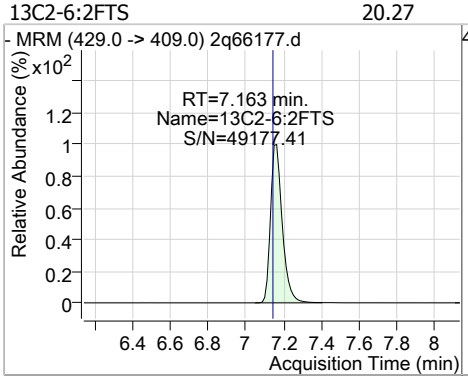
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	21.66	6.47	0.01	8133				

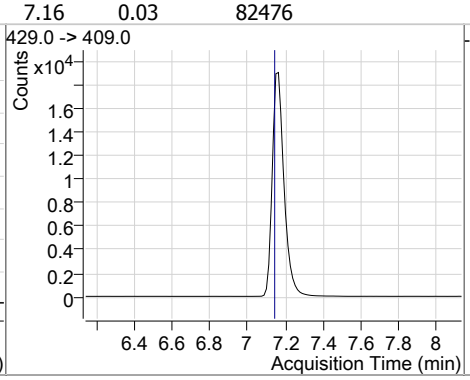


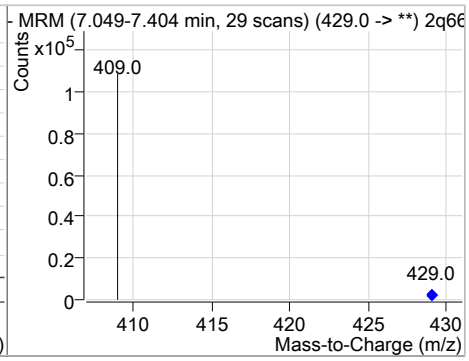




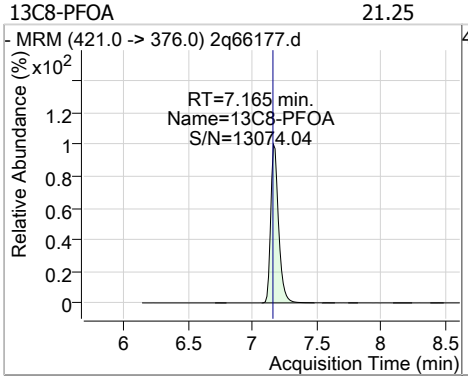
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.27	7.16	0.03	82476				

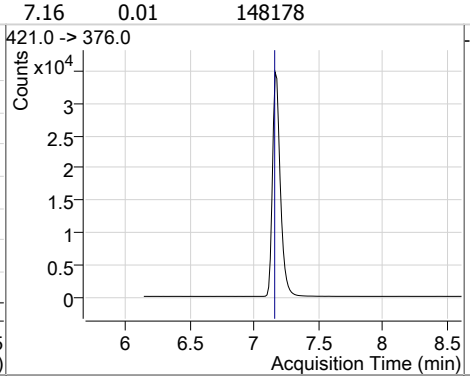


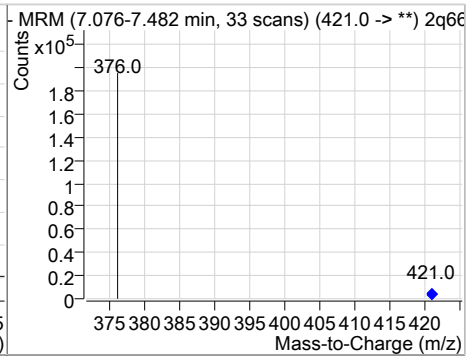




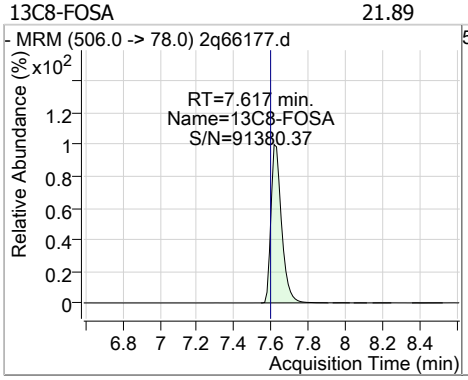
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	21.25	7.16	0.01	148178				

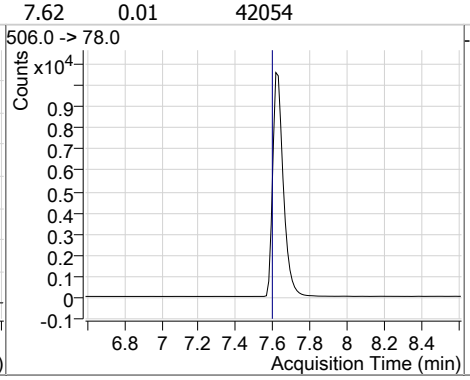


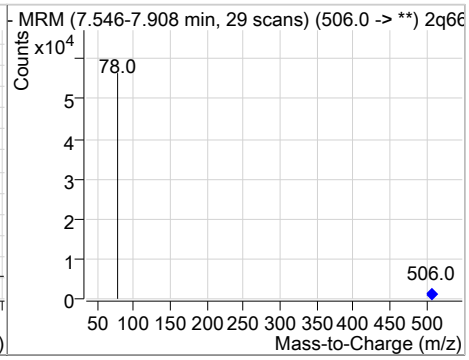




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	21.89	7.62	0.01	42054				

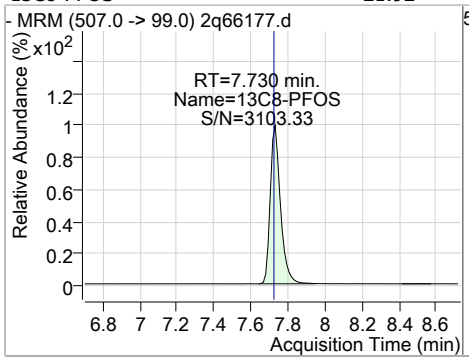


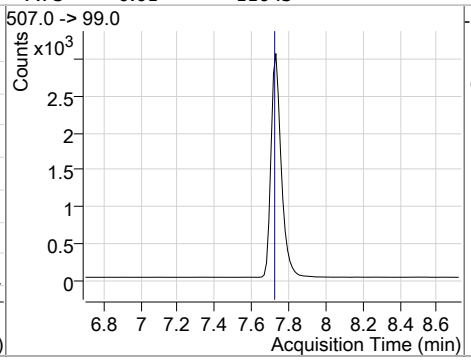


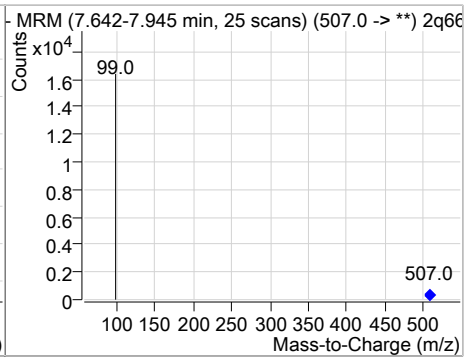


Perfluorinated Compounds by LC/MS/MS

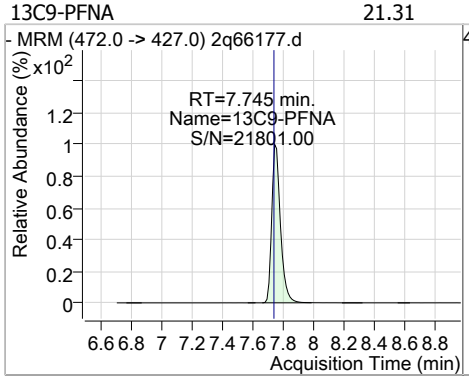
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	21.92	7.73	0.01	11643				

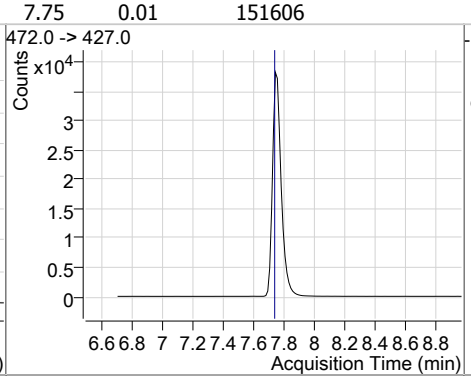


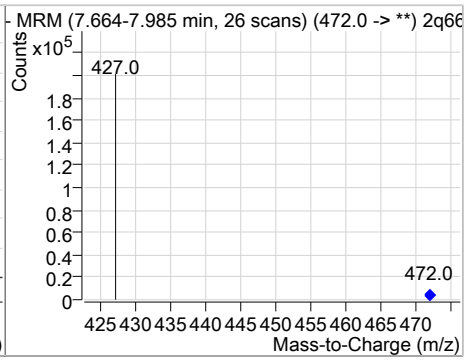




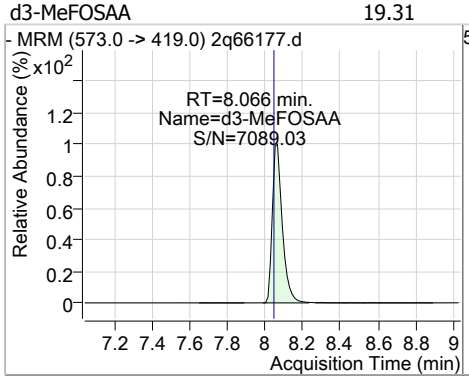
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	21.31	7.75	0.01	151606				

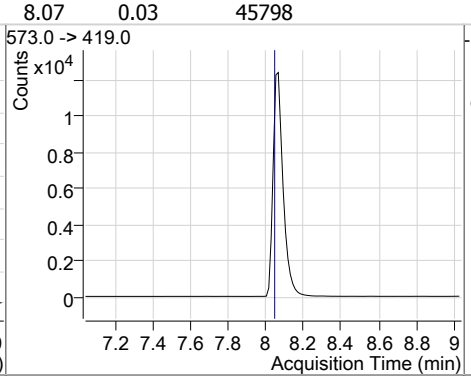


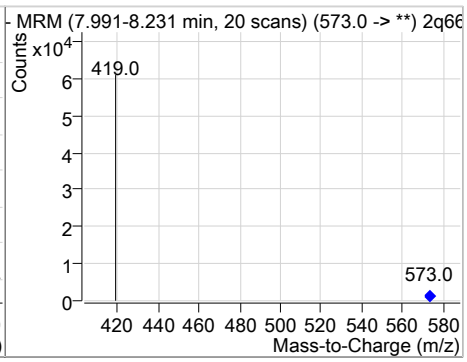




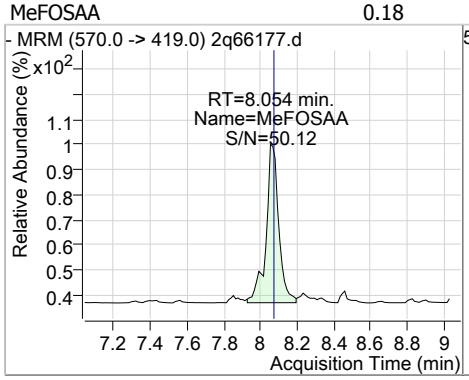
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.31	8.07	0.03	45798				

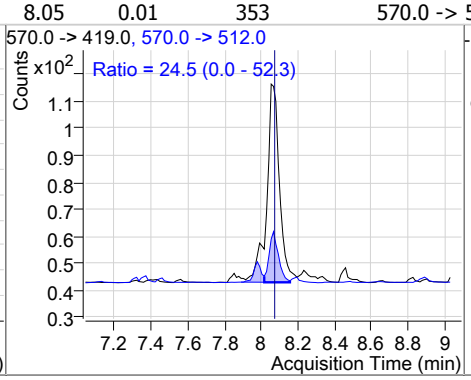


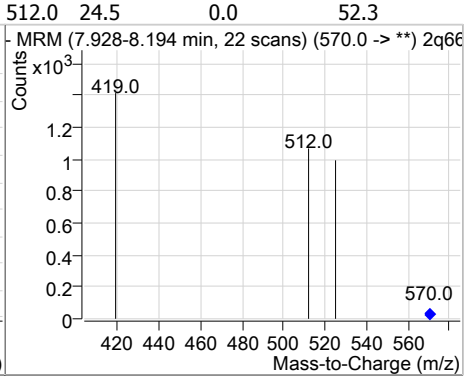




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.18	8.05	0.01	353	570.0 -> 512.0	24.5	0.0	52.3

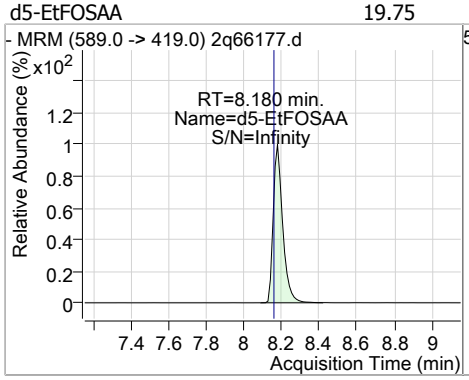


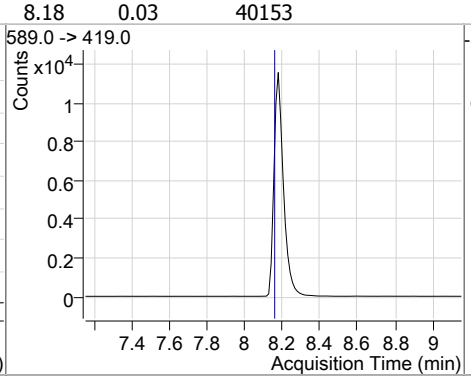


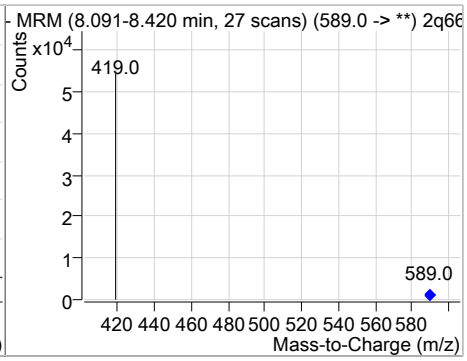


Perfluorinated Compounds by LC/MS/MS

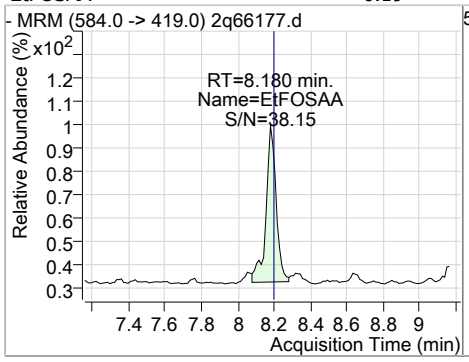
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.75	8.18	0.03	40153				

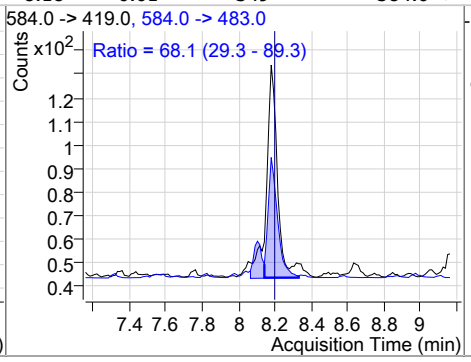


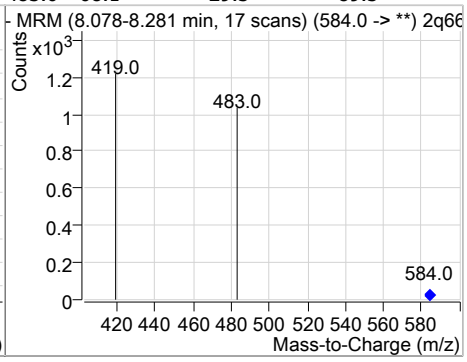




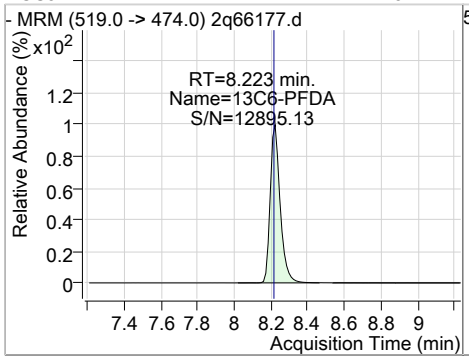
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	0.19	8.18	0.01	349	584.0 -> 483.0	68.1	29.3	89.3

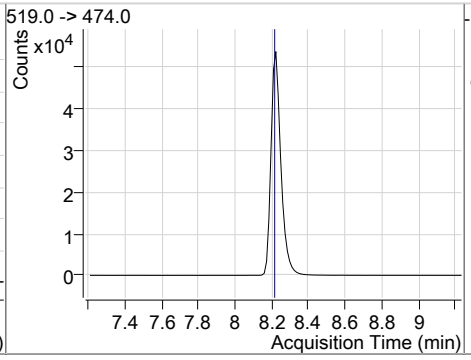


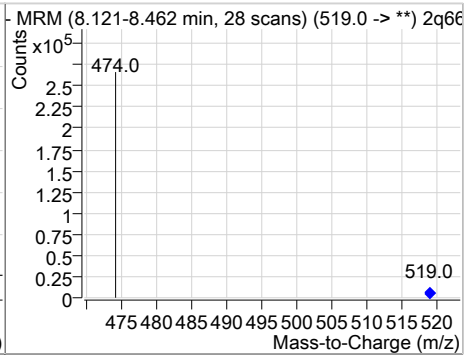




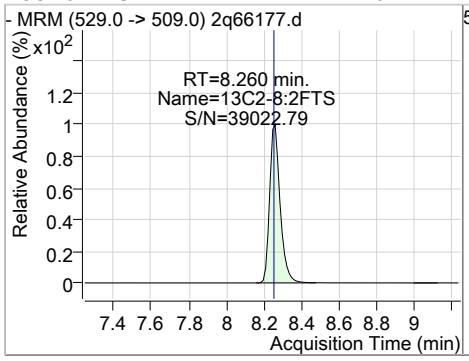
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	21.67	8.22	0.01	200750				

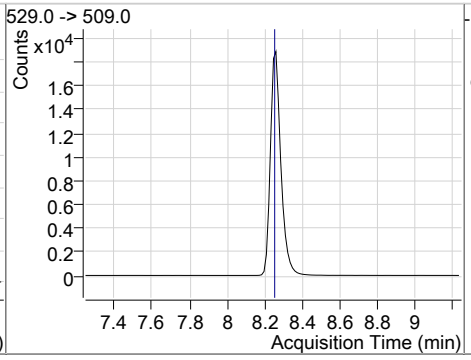


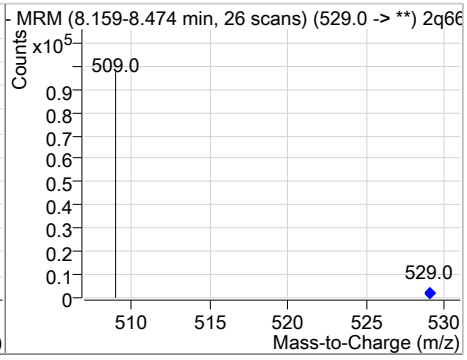




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	20.42	8.26	0.01	72842				

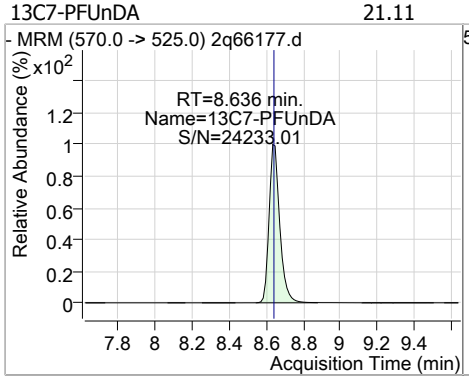


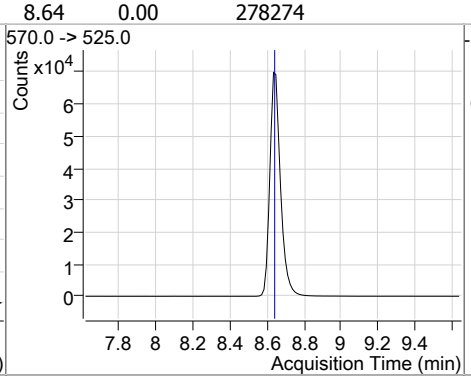


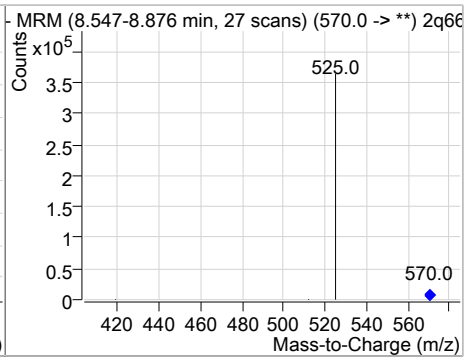


Perfluorinated Compounds by LC/MS/MS

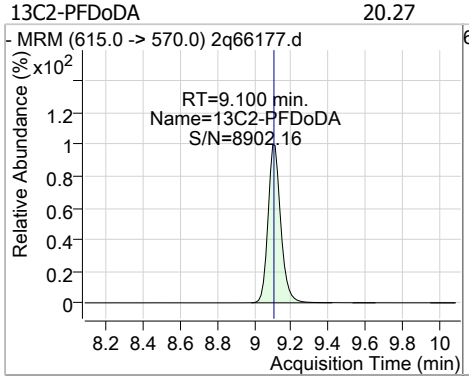
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	21.11	8.64	0.00	278274				

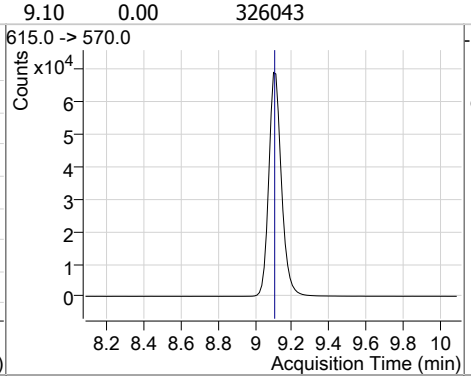


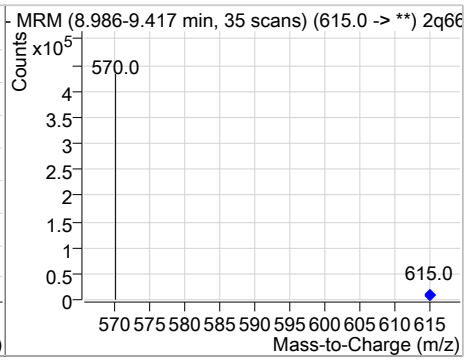




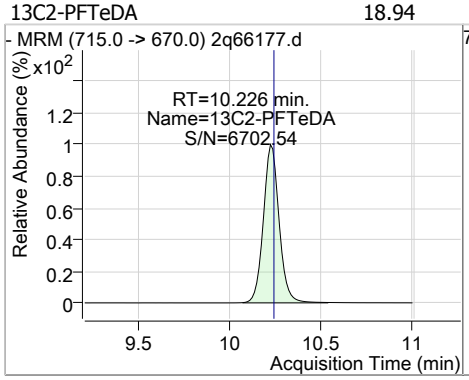
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.27	9.10	0.00	326043				

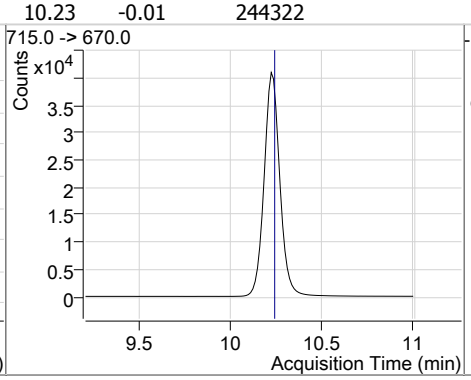


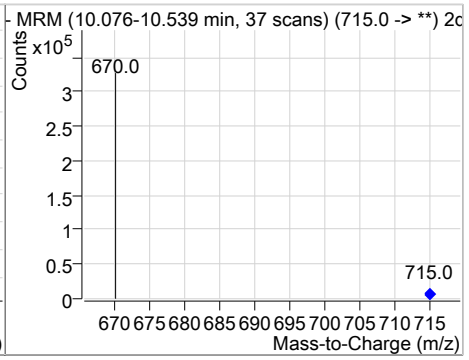




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	18.94	10.23	-0.01	244322				







Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:40

Perfluorinated Compounds by LC/MS/MS

Data File : 4Q13443.d
Operator : natashag
Acq. Method : 537_ID.m
Acq. Date-Time : 4/18/2021 4:43:15 PM
Sample Name : iblk
Vial : P1-A1
DA Method File : BR_LN_041821_S4Q189.quantmethod.xml
Batch Name : s4q189.batch.bin
Sample Information : op84918,S4Q189,250,,,1,1,water

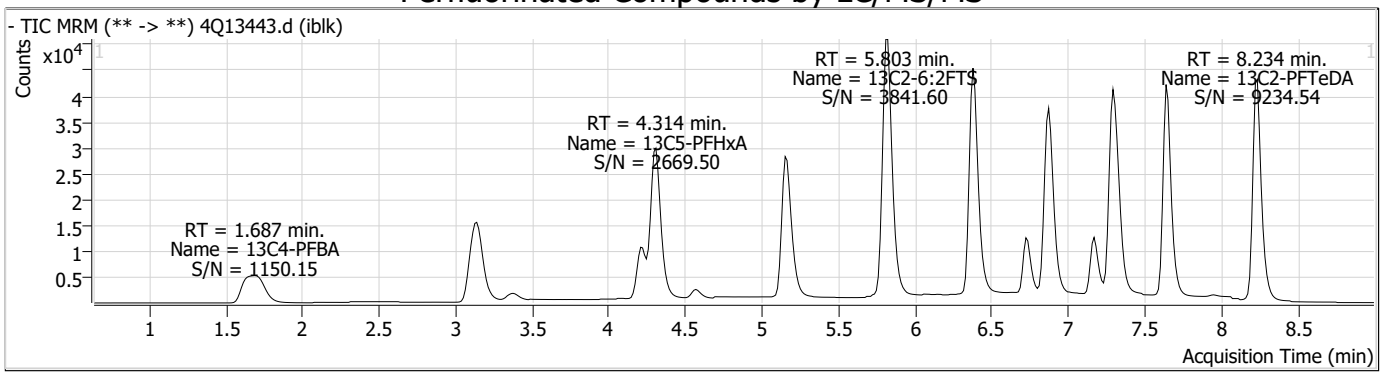
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.687	217.0 -> 172.0	53166	20.00	µg/L	0.000
M5-PFPeA	3.145	268.0 -> 223.0	95304	20.00	µg/L	0.000
M5-PFHxA	4.314	318.0 -> 273.0	130765	20.00	µg/L	0.000
M4-PFHpA	5.157	367.0 -> 322.0	115055	20.00	µg/L	0.000
M8-PFOA	5.829	421.0 -> 376.0	158241	20.00	µg/L	0.000
M9-PFNA	6.386	472.0 -> 427.0	168605	20.00	µg/L	0.000
M6-PFDA	6.867	519.0 -> 474.0	105377	20.00	µg/L	0.000
M7-PFUnDA	7.297	570.0 -> 525.0	144024	20.00	µg/L	0.000
M2-PFDoDA	7.640	615.0 -> 570.0	149859	20.00	µg/L	0.000
M2-PFTeDA	8.234	715.0 -> 670.0	167610	20.00	µg/L	0.000
M8-FOSA	6.732	506.0 -> 78.0	41044	20.00	µg/L	0.000
M3-PFBS	3.381	302.0 -> 99.0	7264	20.00	µg/L	0.000
M3-PFHxS	5.204	402.0 -> 99.0	6852	20.00	µg/L	0.000
M8-PFOS	6.372	507.0 -> 99.0	8962	20.00	µg/L	0.000
M2-4:2FTS	4.212	329.0 -> 309.0	45422	20.00	µg/L	0.000
M2-6:2FTS	5.803	429.0 -> 409.0	60952	20.00	µg/L	0.000
M2-8:2FTS	6.891	529.0 -> 509.0	48385	20.00	µg/L	0.000
M3-MeFOSAA	7.173	573.0 -> 419.0	39756	20.00	µg/L	0.000
M3-HFPO-DA	4.578	287.0 -> 169.0	7257	20.00	µg/L	0.000
M5-EtFOSAA	7.332	589.0 -> 419.0	33112	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.212	329.0 -> 309.0	45422	19.99	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.0%		
13C2-6:2FTS	5.803	429.0 -> 409.0	60952	20.38	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.9%		
13C2-8:2FTS	6.891	529.0 -> 509.0	48385	20.76	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.8%		
13C2-PFDoDA	7.640	615.0 -> 570.0	149859	21.44	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.2%		
13C2-PFTeDA	8.234	715.0 -> 670.0	167610	21.36	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.8%		
13C3-PFBS	3.381	302.0 -> 99.0	7264	21.30	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.5%		
13C3-PFHxS	5.204	402.0 -> 99.0	6852	21.27	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.3%		
13C4-PFBA	1.687	217.0 -> 172.0	53166	21.53	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.6%		
13C4-PFHpA	5.157	367.0 -> 322.0	115055	21.58	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.9%		
13C5-PFHxA	4.314	318.0 -> 273.0	130765	21.44	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.2%		
13C5-PFPeA	3.145	268.0 -> 223.0	95304	21.45	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.3%		
13C6-PFDA	6.867	519.0 -> 474.0	105377	22.01	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.1%		

Perfluorinated Compounds by LC/MS/MS

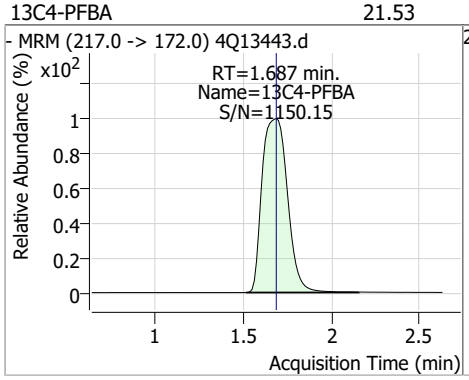
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	7.297	570.0 -> 525.0	144024	21.98	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.9%			
13C8-FOSA	6.732	506.0 -> 78.0	41044	22.11	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.6%			
13C8-PFOA	5.829	421.0 -> 376.0	158241	21.55	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.7%			
13C8-PFOS	6.372	507.0 -> 99.0	8962	21.05	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.2%			
13C9-PFNA	6.386	472.0 -> 427.0	168605	21.61	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.1%			
d3-MeFOSAA	7.173	573.0 -> 419.0	39756	21.39	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.0%			
13C3-HFPO-DA	4.578	287.0 -> 169.0	7249	20.78	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.9%			
d5-EtFOSAA	7.332	589.0 -> 419.0	33071	21.16	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.8%			
Target Compounds							QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.			
6:2FTS	-	427.0 -> 407.0	-	N.D.			
8:2FTS	-	527.0 -> 507.0	-	N.D.			
EtFOSAA	7.333	584.0 -> 419.0	1242	0.79	µg/L		89
FOSA	-	498.0 -> 78.0	-	N.D.			
MeFOSAA	7.186	570.0 -> 419.0	1412	0.77	µg/L	m	95
PFBA	-	213.0 -> 169.0	-	N.D.			
PFBS	-	299.0 -> 80.0	-	N.D.			
PFDA	-	513.0 -> 469.0	-	N.D.			
PFDoDA	7.653	613.0 -> 569.0	1144	0.16	µg/L		97
PFDS	-	599.0 -> 80.0	-	N.D.			
PFHpA	-	363.0 -> 319.0	-	N.D.			
PFHpS	-	449.0 -> 80.0	-	N.D.			
PFHxA	-	313.0 -> 269.0	-	N.D.			
PFHxS	-	399.0 -> 80.0	-	N.D.			
PFNA	-	463.0 -> 419.0	-	N.D.			
PFNS	-	549.0 -> 80.0	-	N.D.			
PFOA	-	413.0 -> 369.0	-	N.D.			
PFOS	-	499.0 -> 80.0	-	N.D.			
PFPeA	-	263.0 -> 219.0	-	N.D.			
PFPeS	-	349.0 -> 80.0	-	N.D.			
PFTeDA	8.235	713.0 -> 669.0	1776	0.22	µg/L		99
PFTrDA	7.949	663.0 -> 619.0	1215	0.18	µg/L		94
PFUnDA	-	563.0 -> 519.0	-	N.D.			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.			
ADONA	-	377.0 -> 251.0	-	N.D.			
HFPO-DA	-	329.0 -> 169.0	-	N.D.			
br-PFOS	6.385	499.0 -> 80.0	0		µg/L	m	1
LN-PFOS	-	499.0 -> 80.0	-	N.D.			
br-PFHxS	5.205	399.0 -> 80.0	0		µg/L	m	1
LN-PFHxS	-	399.0 -> 80.0	-	N.D.			
br-PFOA	-	413.0 -> 369.0	-	N.D.			
LN-PFOA	-	413.0 -> 369.0	-	N.D.			
br-PFNA	-	463.0 -> 419.0	-	N.D.			
LN-PFNA	-	463.0 -> 419.0	-	N.D.			

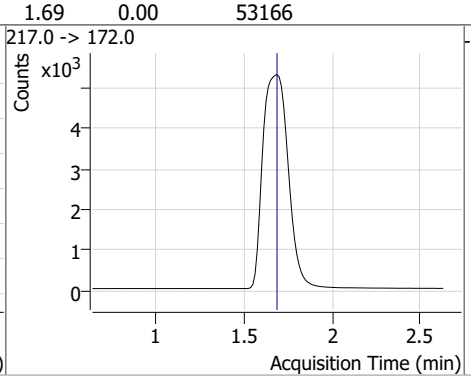
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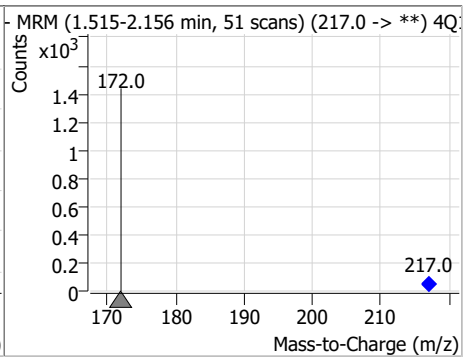
Perfluorinated Compounds by LC/MS/MS



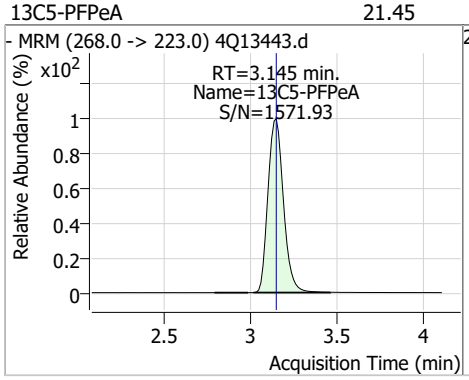
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	21.53	1.69	0.00	53166				

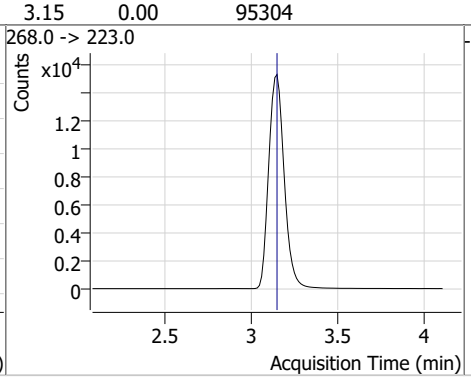


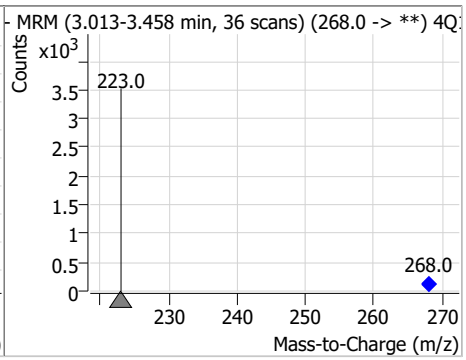




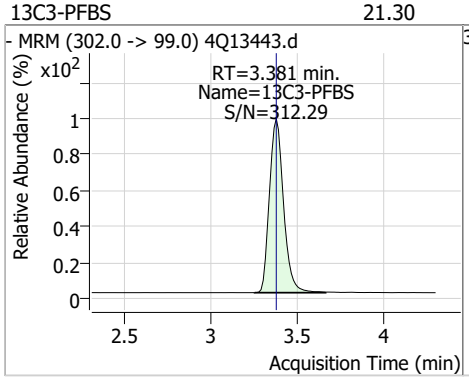
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	21.45	3.15	0.00	95304				

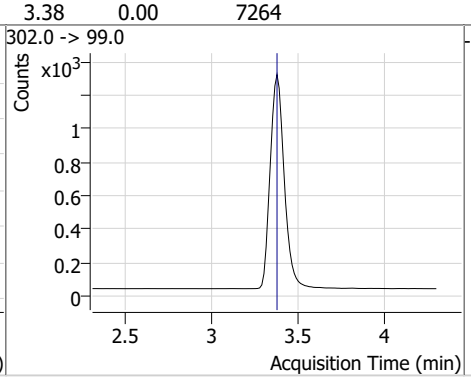


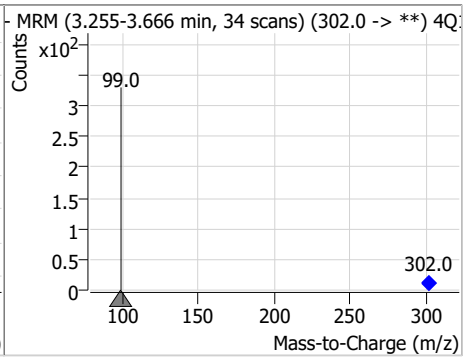




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	21.30	3.38	0.00	7264				

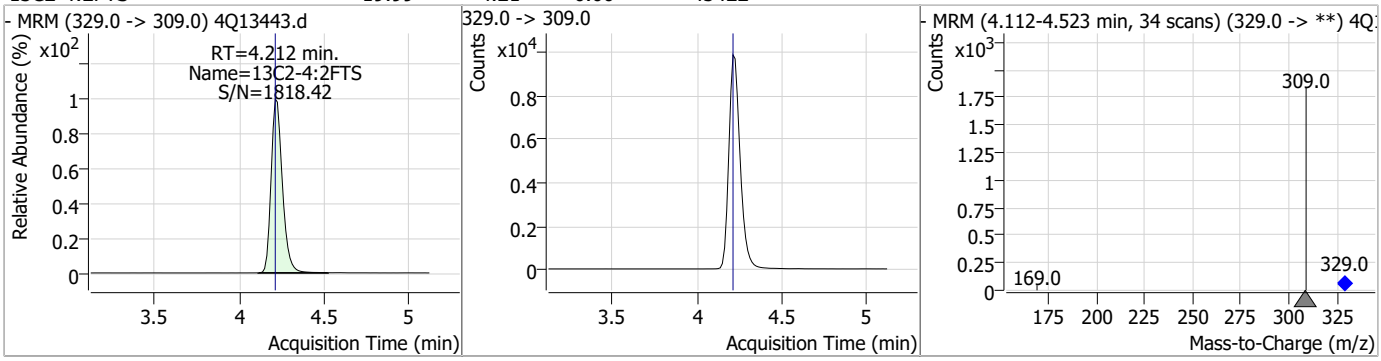




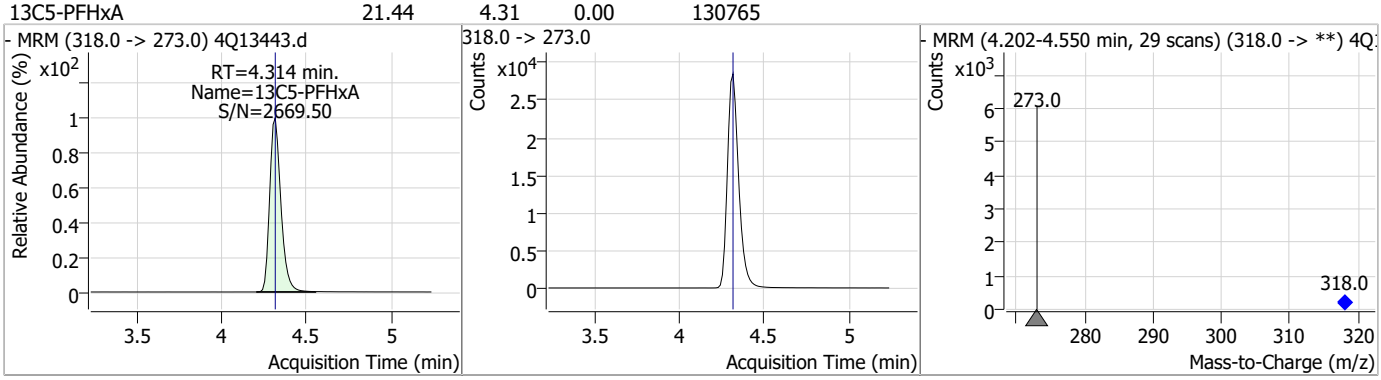


Perfluorinated Compounds by LC/MS/MS

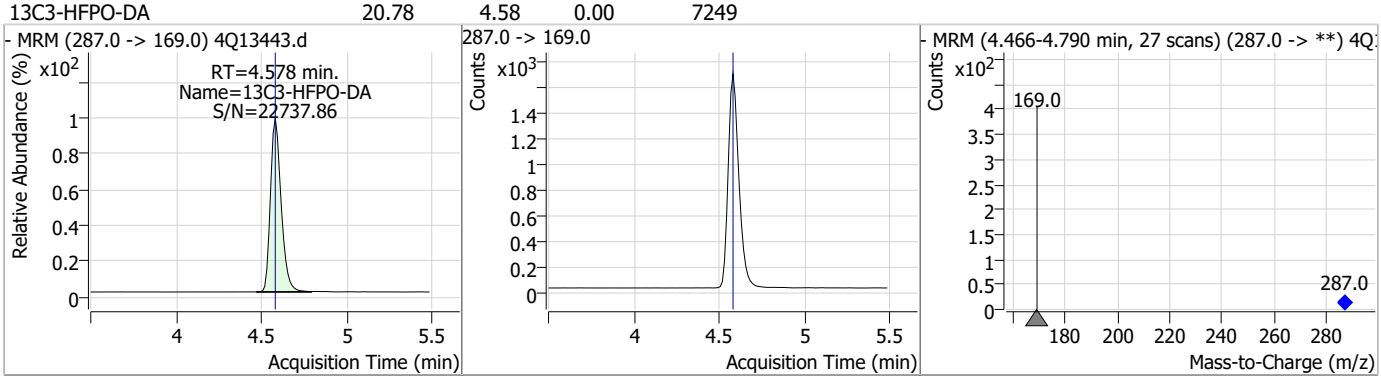
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.99	4.21	0.00	45422				



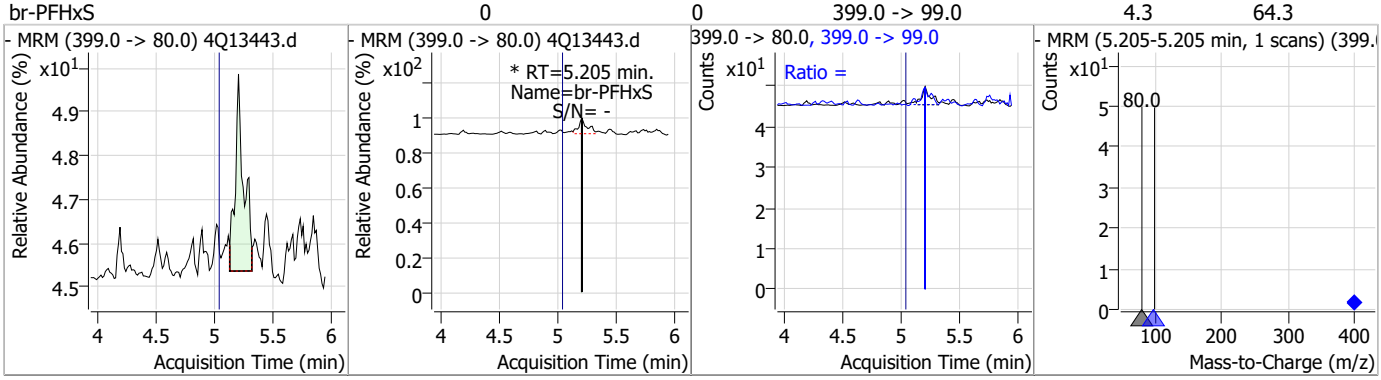
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	21.44	4.31	0.00	130765				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.78	4.58	0.00	7249				

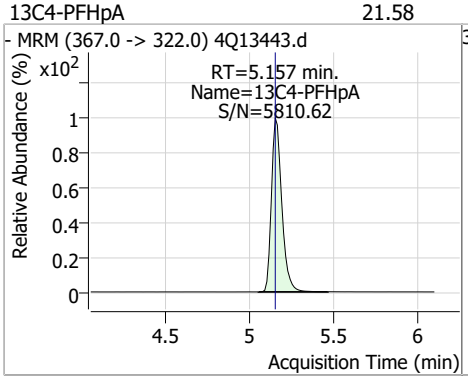


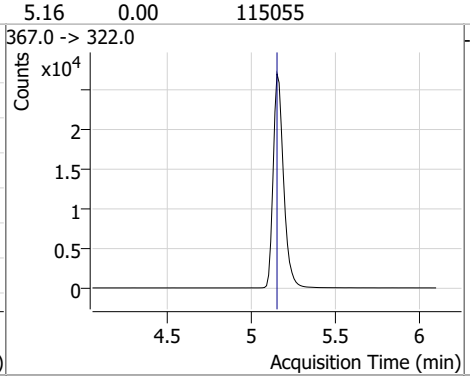
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS		0		0	399.0 -> 99.0		4.3	64.3

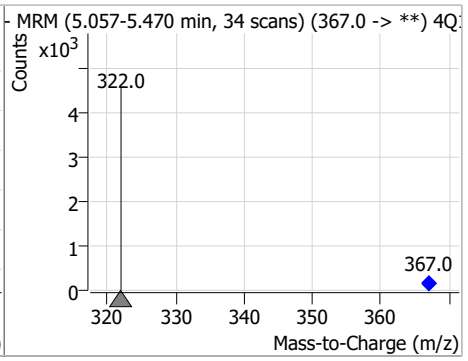


Perfluorinated Compounds by LC/MS/MS

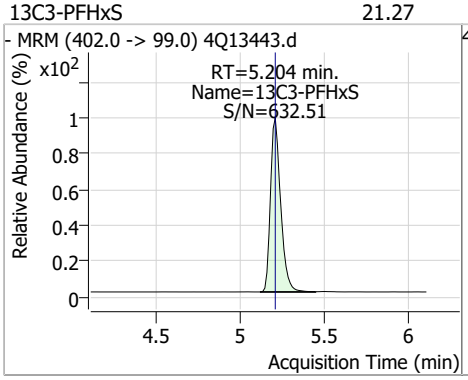
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	21.58	5.16	0.00	115055				

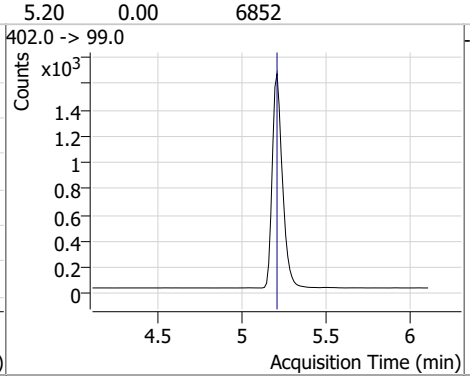


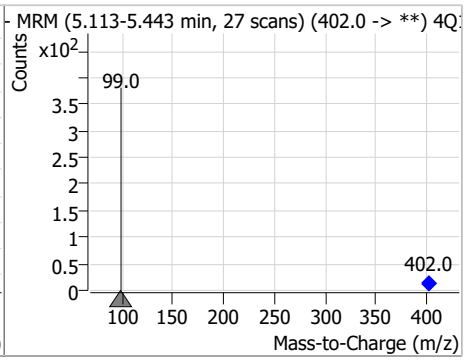




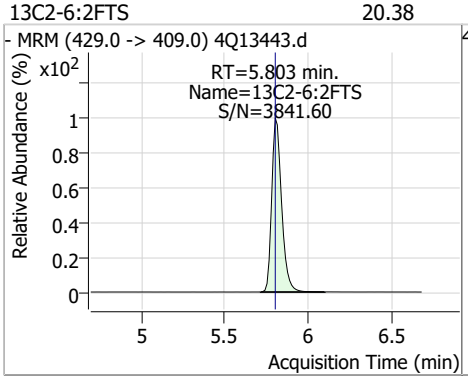
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	21.27	5.20	0.00	6852				

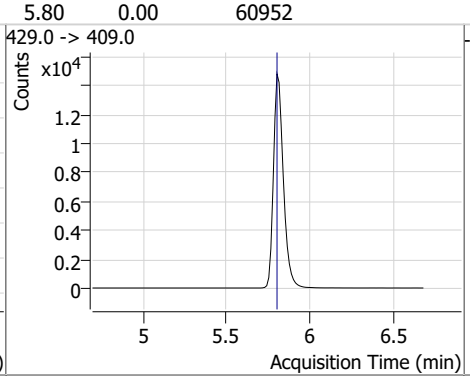


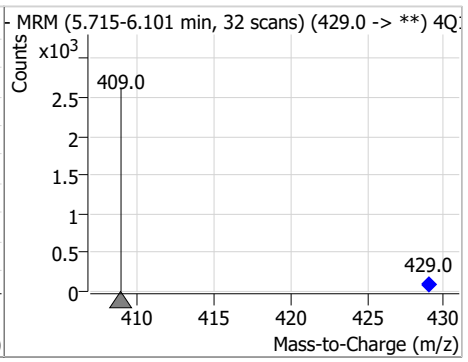




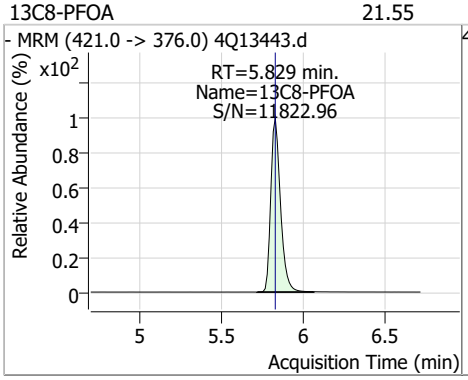
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.38	5.80	0.00	60952				

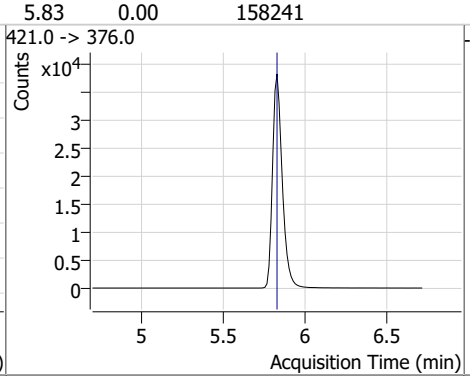


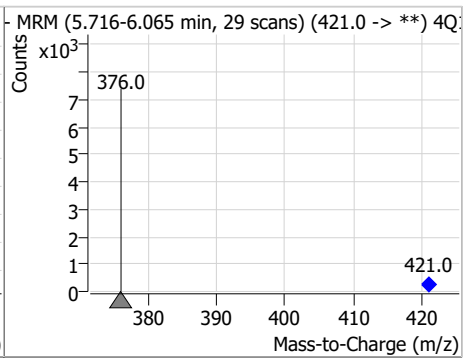




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	21.55	5.83	0.00	158241				

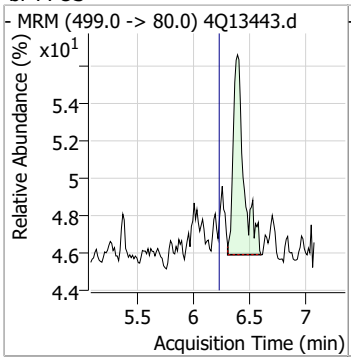


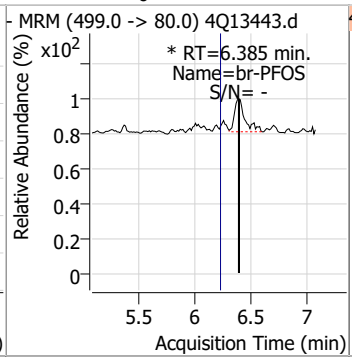


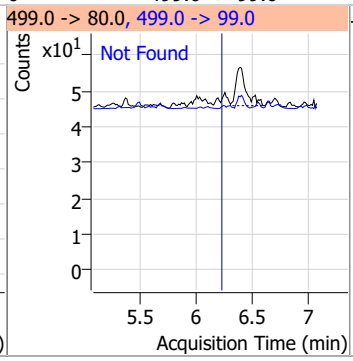


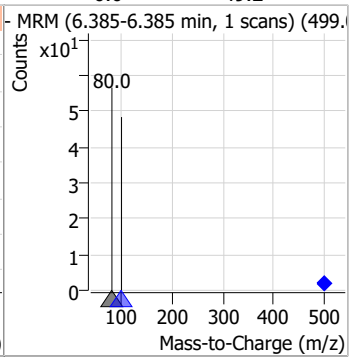
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS		0		0	499.0 -> 99.0		0.0	49.2

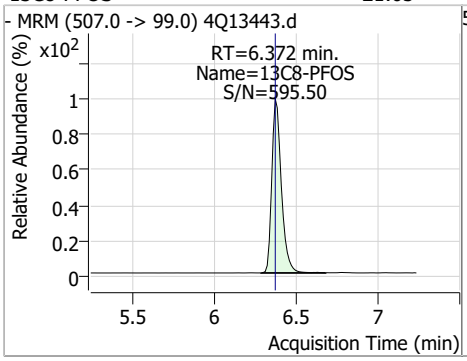


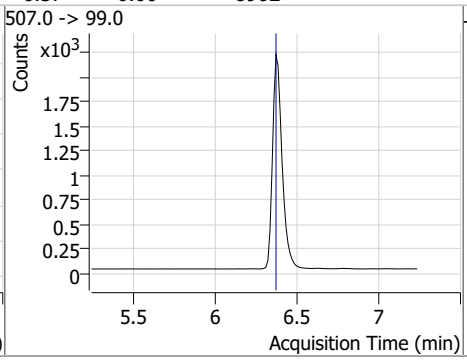


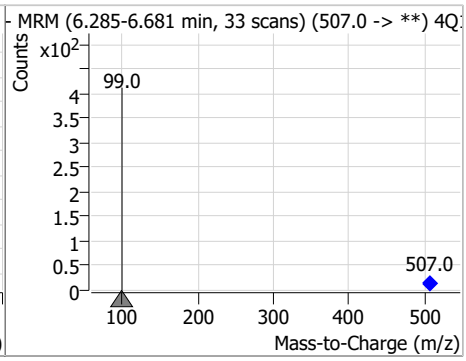




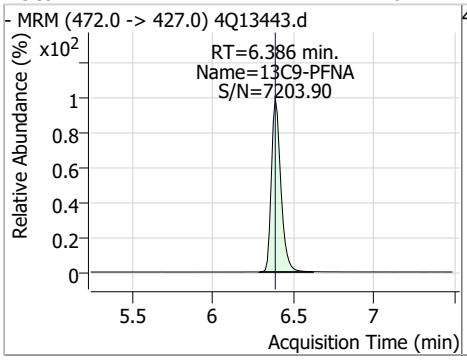
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	21.05	6.37	0.00	8962				

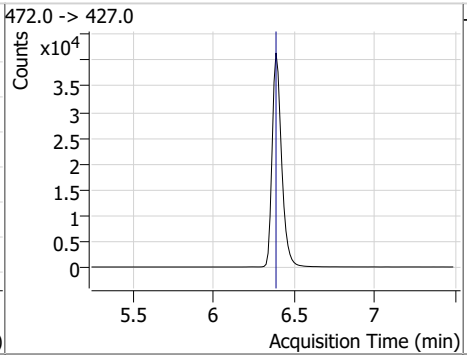


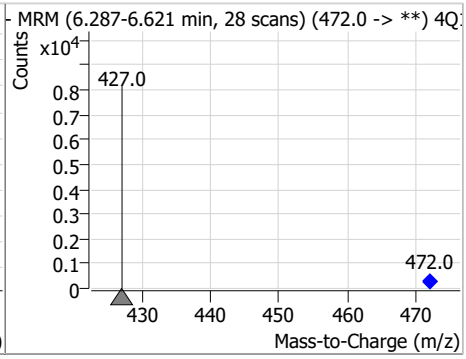




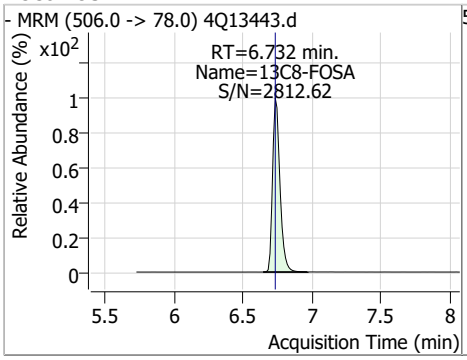
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	21.61	6.39	0.00	168605				

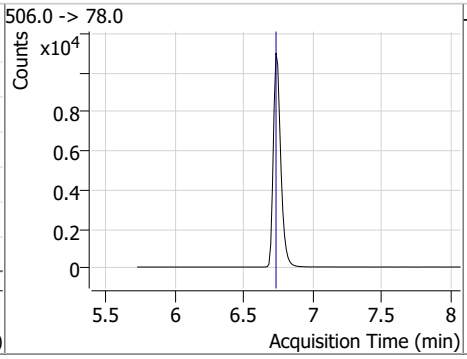


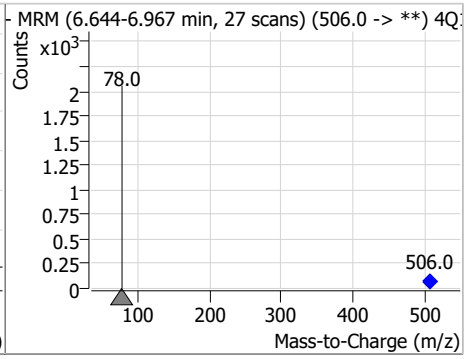




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	22.11	6.73	0.00	41044				

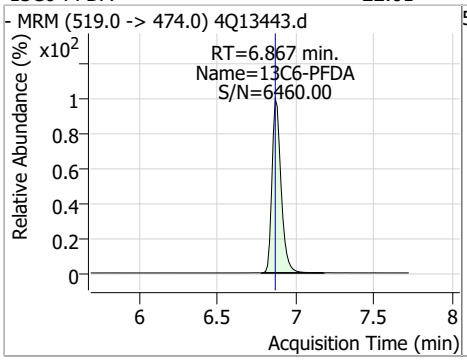


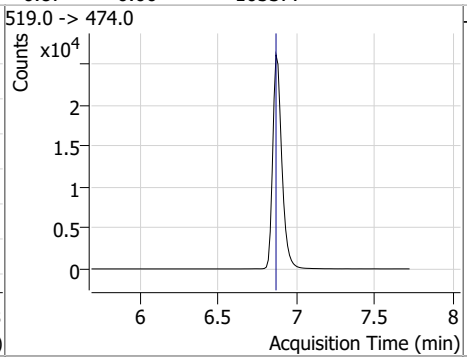


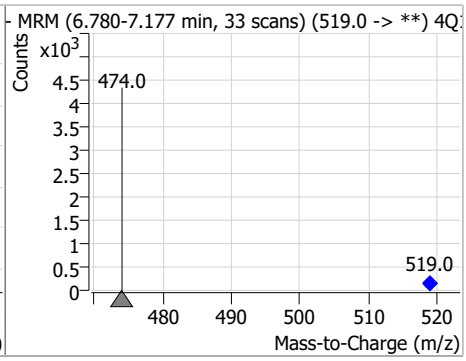


Perfluorinated Compounds by LC/MS/MS

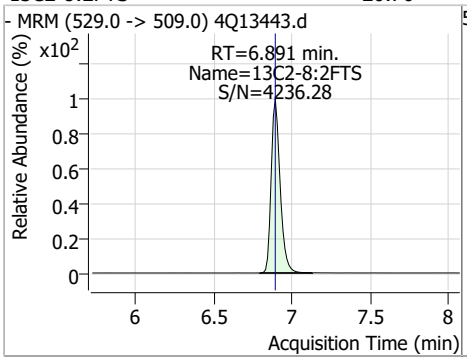
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	22.01	6.87	0.00	105377				

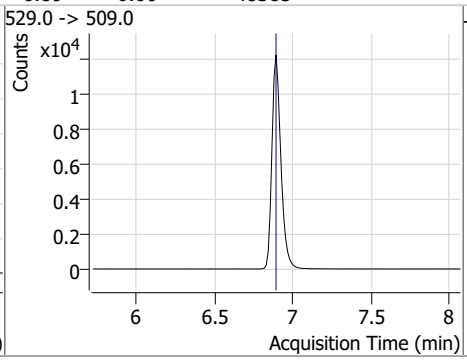


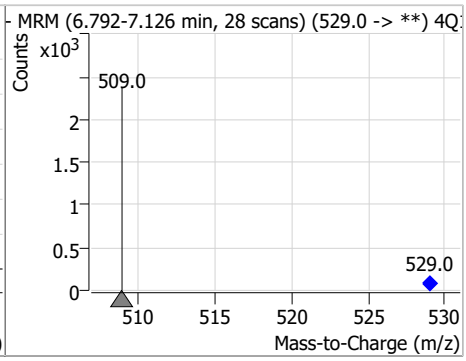




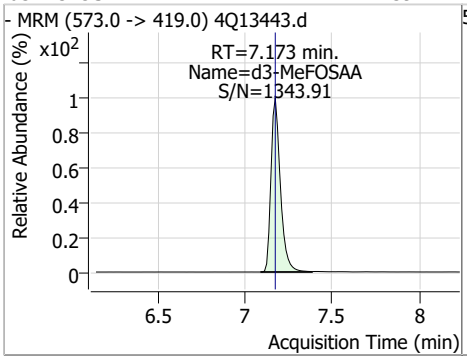
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	20.76	6.89	0.00	48385				

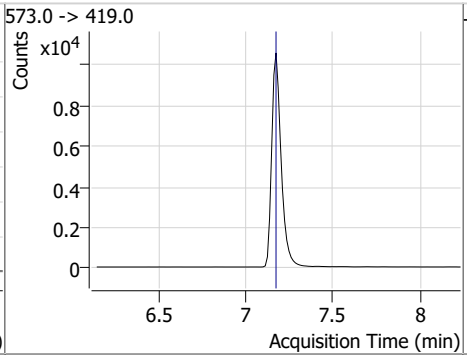


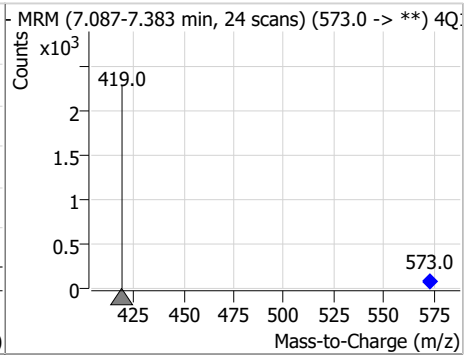




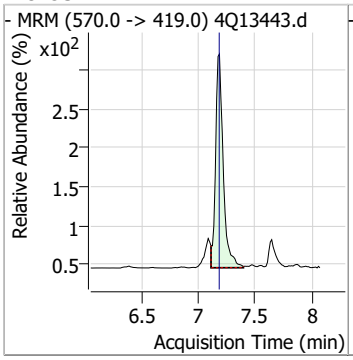
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	21.39	7.17	0.00	39756				

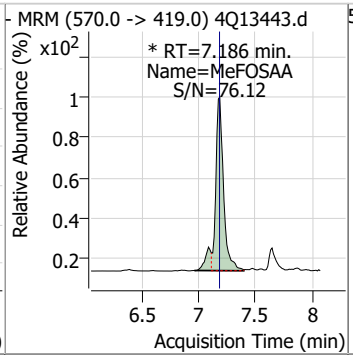


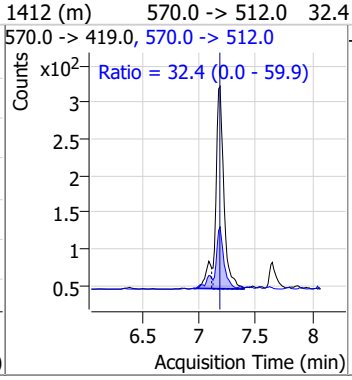


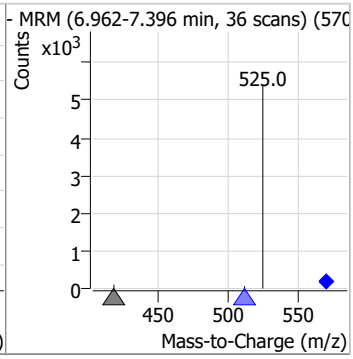


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.77	7.19	0.01	1412 (m)	570.0 -> 512.0	32.4	0.0	59.9



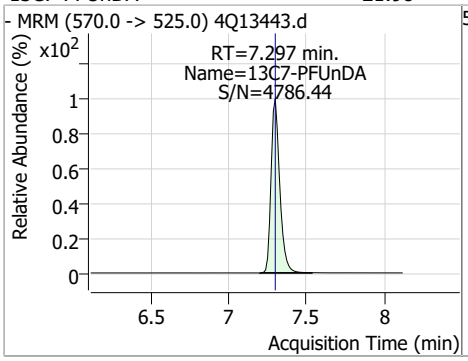


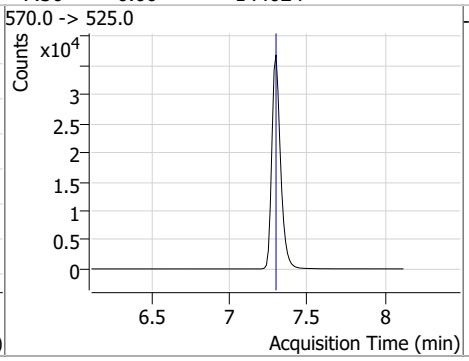


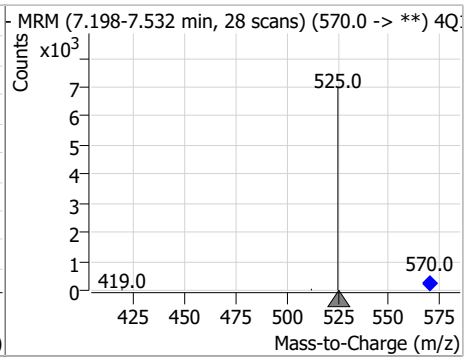


Perfluorinated Compounds by LC/MS/MS

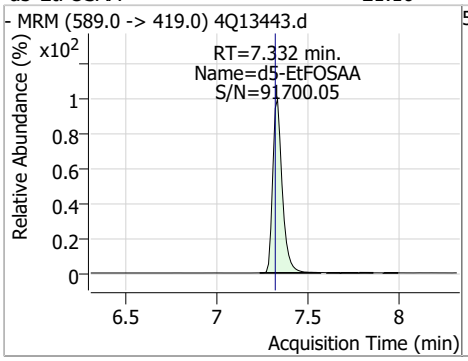
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	21.98	7.30	0.00	144024				

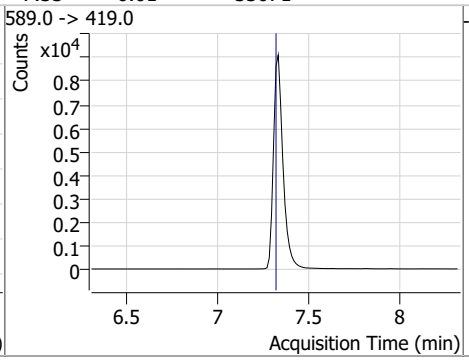


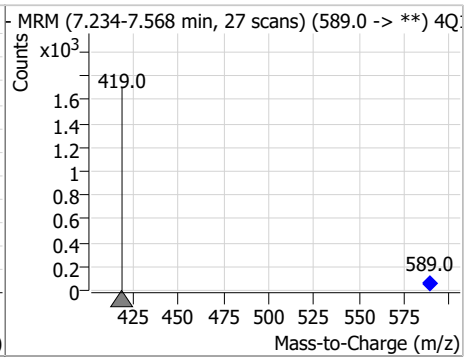




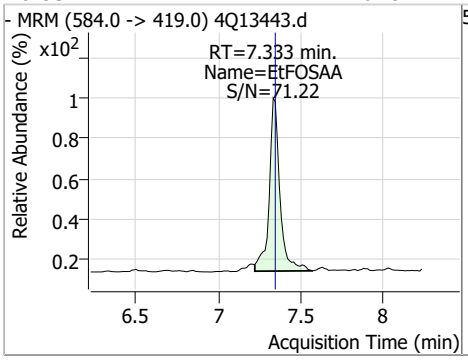
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	21.16	7.33	0.01	33071				

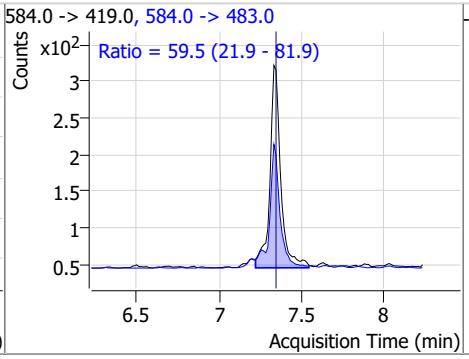


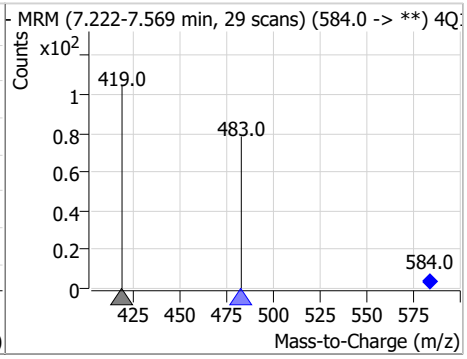




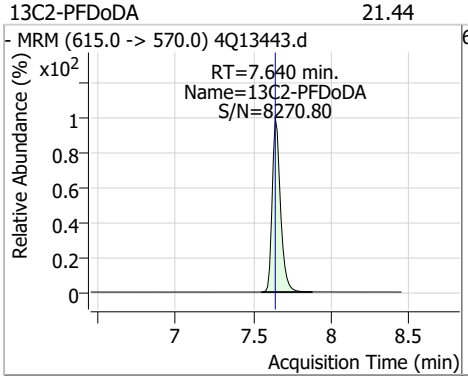
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	0.79	7.33	0.00	1242	584.0 -> 483.0	59.5	21.9	81.9

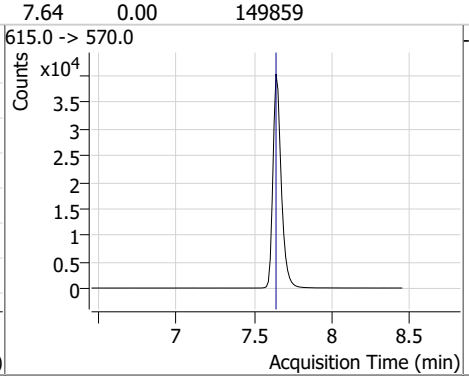


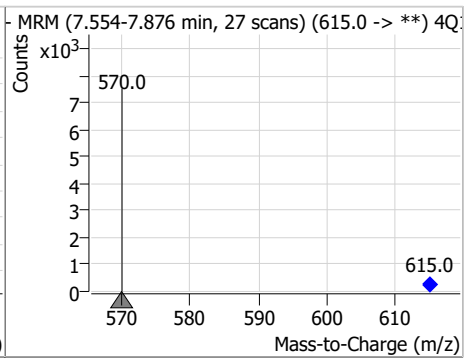




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	21.44	7.64	0.00	149859				

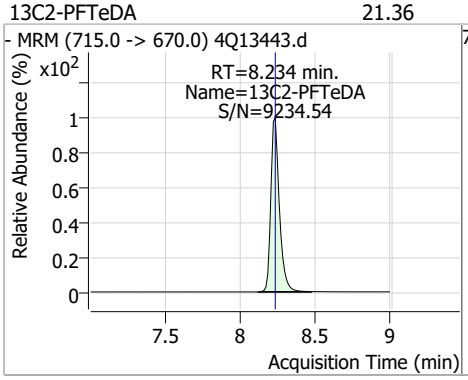


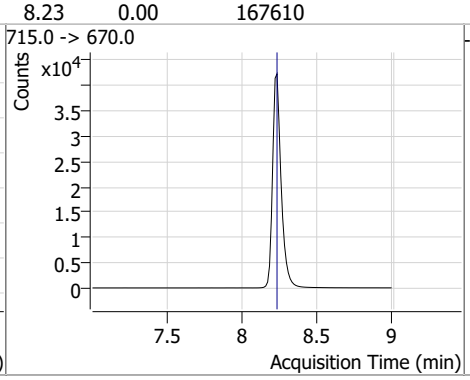


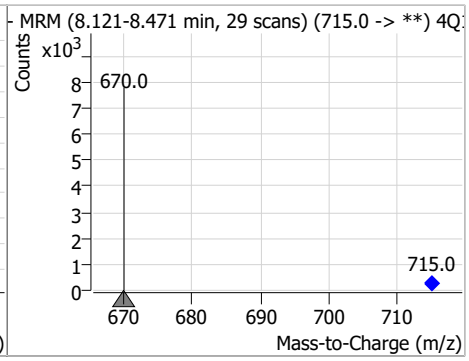


Perfluorinated Compounds by LC/MS/MS

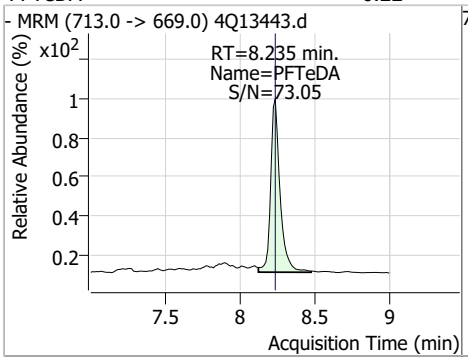
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	21.36	8.23	0.00	167610				

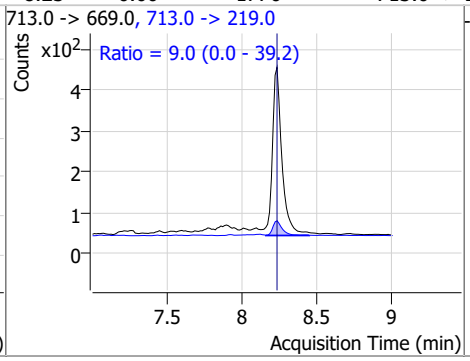


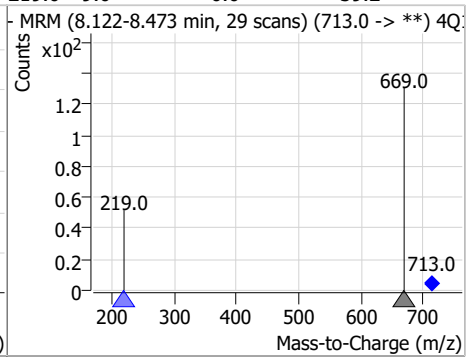




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.22	8.23	0.00	1776	713.0 -> 219.0	9.0	0.0	39.2







Manual Integration Approval Summary

Sample Number: S4Q189-IBLK
Lab FileID: 4Q13443.D
Injection Time: 04/18/21 16:43
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/19/21 07:57 Nancy Saunders
Supervisor approved: 04/19/21 15:40 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
MeFOSAA	2355-31-9		7.19	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/15/21 10:01

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36617.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/14/2021 9:32:27 PM
Sample Name : op84900-bs
Vial : P2-C5
DA Method File : ID_041321_S3Q537.quantmethod.xml
Batch Name : s3q538.batch.bin
Sample Information : op84900,S3Q538,250,,,1,1,water

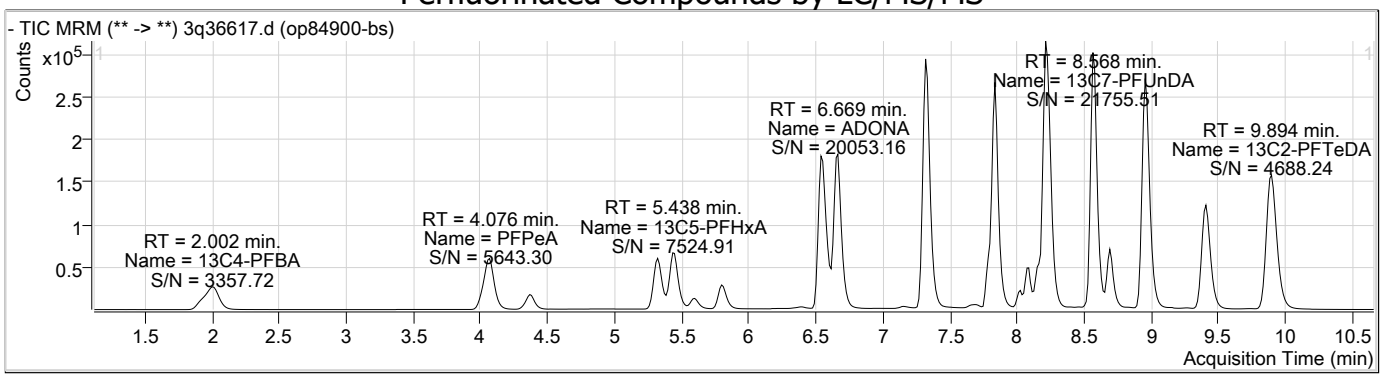
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.002	217.0 -> 172.0	153345	20.00	µg/L	0.163
M5-PFPeA	4.074	268.0 -> 223.0	112527	20.00	µg/L	0.000
M5-PFHxA	5.438	318.0 -> 273.0	166959	20.00	µg/L	-0.192
M4-PFHpA	6.544	367.0 -> 322.0	231578	20.00	µg/L	-0.063
M8-PFOA	7.338	421.0 -> 376.0	265893	20.00	µg/L	0.013
M9-PFNA	7.842	472.0 -> 427.0	296506	20.00	µg/L	-0.013
M6-PFDA	8.220	519.0 -> 474.0	365613	20.00	µg/L	-0.038
M7-PFUnDA	8.568	570.0 -> 525.0	466343	20.00	µg/L	-0.038
M2-PFDoDA	8.957	615.0 -> 570.0	490667	20.00	µg/L	0.000
M2-PFTeDA	9.894	715.0 -> 670.0	319233	20.00	µg/L	-0.050
M8-FOSA	7.790	506.0 -> 78.0	77608	20.00	µg/L	-0.026
M3-PFBS	4.367	302.0 -> 99.0	15408	20.00	µg/L	-0.080
M3-PFHxS	6.592	402.0 -> 99.0	20078	20.00	µg/L	-0.063
M8-PFOS	7.828	507.0 -> 99.0	26119	20.00	µg/L	-0.013
M2-4:2FTS	5.321	329.0 -> 309.0	104227	20.00	µg/L	-0.191
M2-6:2FTS	7.312	429.0 -> 409.0	142976	20.00	µg/L	0.000
M2-8:2FTS	8.244	529.0 -> 509.0	150957	20.00	µg/L	-0.038
M3-MeFOSAA	8.075	573.0 -> 419.0	64440	20.00	µg/L	-0.102
M3-HFPO-DA	5.807	287.0 -> 169.0	21965	20.00	µg/L	-0.138
M5-EtFOSAA	8.150	589.0 -> 419.0	56495	20.00	µg/L	-0.140
System Monitoring Compounds						
13C2-4:2FTS	5.321	329.0 -> 309.0	104227	18.21	µg/L	-0.191
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.1%		
13C2-6:2FTS	7.312	429.0 -> 409.0	142976	16.91	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.6%		
13C2-8:2FTS	8.244	529.0 -> 509.0	150957	16.31	µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.5%		
13C2-PFDoDA	8.957	615.0 -> 570.0	490667	12.72	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 63.6%		
13C2-PFTeDA	9.894	715.0 -> 670.0	319233	11.42	µg/L	-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 57.1%		
13C3-PFBS	4.367	302.0 -> 99.0	15408	19.11	µg/L	-0.080
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.5%		
13C3-PFHxS	6.592	402.0 -> 99.0	20078	17.63	µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.2%		
13C4-PFBA	2.002	217.0 -> 172.0	153345	19.57	µg/L	0.163
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.8%		
13C4-PFHpA	6.544	367.0 -> 322.0	231578	17.86	µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.3%		
13C5-PFHxA	5.438	318.0 -> 273.0	166959	18.24	µg/L	-0.192
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.2%		
13C5-PFPeA	4.074	268.0 -> 223.0	112527	19.17	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.8%		
13C6-PFDA	8.220	519.0 -> 474.0	365613	15.91	µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 79.6%		

Perfluorinated Compounds by LC/MS/MS

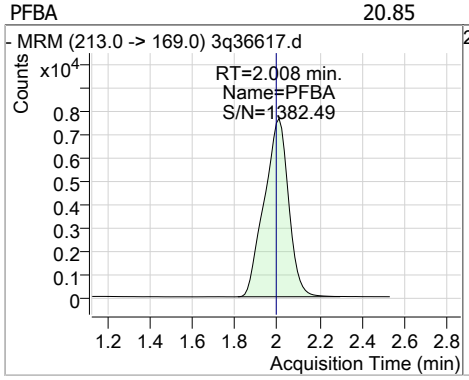
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.568	570.0 -> 525.0	466343	14.75	µg/L		-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 73.8%			
13C8-FOSA	7.790	506.0 -> 78.0	77608	14.62	µg/L		-0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 73.1%			
13C8-PFOA	7.338	421.0 -> 376.0	265893	17.47	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.3%			
13C8-PFOS	7.828	507.0 -> 99.0	26119	14.79	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 73.9%			
13C9-PFNA	7.842	472.0 -> 427.0	296506	16.79	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.0%			
d3-MeFOSAA	8.075	573.0 -> 419.0	64440	13.50	µg/L		-0.102
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 67.5%			
13C3-HFPO-DA	5.807	287.0 -> 169.0	21955	18.10	µg/L		-0.138
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.5%			
d5-EtFOSAA	8.150	589.0 -> 419.0	56490	13.73	µg/L		-0.140
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 68.7%			
Target Compounds							**QValue**
4:2FTS	5.323	327.0 -> 307.0	117089	20.79	µg/L		100
6:2FTS	7.313	427.0 -> 407.0	163903	21.29	µg/L		100
8:2FTS	8.244	527.0 -> 507.0	168765	21.39	µg/L		99
EtFOSAA	8.163	584.0 -> 419.0	55311	20.97	µg/L		90
FOSA	7.791	498.0 -> 78.0	84495	21.26	µg/L		100
MeFOSAA	8.088	570.0 -> 419.0	62783	21.36	µg/L		100
PFBA	2.008	213.0 -> 169.0	61253	20.85	µg/L		100
PFBS	4.369	299.0 -> 80.0	49394	20.96	µg/L		99
PFDA	8.220	513.0 -> 469.0	386249	20.41	µg/L		99
PFDoDA	8.957	613.0 -> 569.0	524281	21.50	µg/L		99
PFDS	8.528	599.0 -> 80.0	20334	19.62	µg/L		99
PFHpA	6.545	363.0 -> 319.0	437576	20.83	µg/L		100
PFHpS	7.337	449.0 -> 80.0	44183	22.97	µg/L		99
PFHxA	5.439	313.0 -> 269.0	121151	20.73	µg/L		99
PFHxS	6.592	399.0 -> 80.0	48347	21.07	µg/L	m	95
PFNA	7.843	463.0 -> 419.0	372228	20.99	µg/L		98
PFNS	8.191	549.0 -> 80.0	38380	20.58	µg/L		99
PFOA	7.339	413.0 -> 369.0	299280	20.82	µg/L		100
PFOS	7.829	499.0 -> 80.0	51139	20.97	µg/L	m	83
PFPeA	4.076	263.0 -> 219.0	224140	21.06	µg/L		100
PFPeS	5.601	349.0 -> 80.0	36576	20.03	µg/L		100
PFTeDA	9.897	713.0 -> 669.0	518519	22.08	µg/L		100
PFTrDA	9.408	663.0 -> 619.0	532135	23.64	µg/L		100
PFUnDA	8.569	563.0 -> 519.0	474762	20.84	µg/L		100
11Cl-PF3OUdS	8.691	631.0 -> 451.0	169636	22.00	µg/L		99
9Cl-PF3ONS	8.028	531.0 -> 351.0	41128	18.56	µg/L		99
ADONA	6.669	377.0 -> 251.0	560247	21.29	µg/L		100
HFPO-DA	5.803	329.0 -> 169.0	83057	20.87	µg/L		98

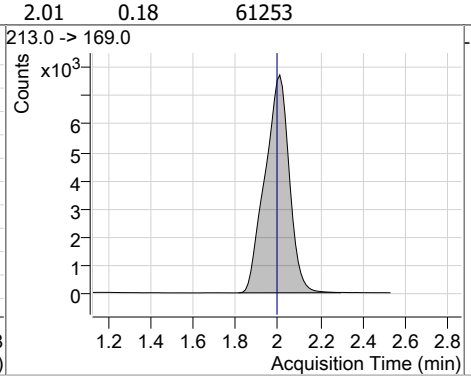
 # = Qualifier out of range, m = manually integrated, + = Area summed

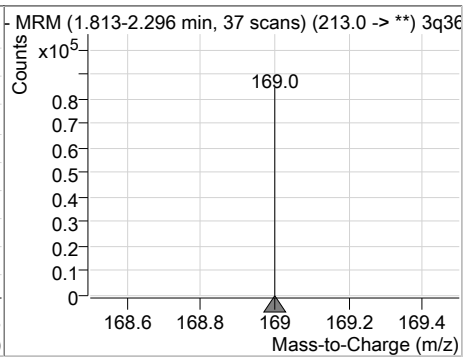
Perfluorinated Compounds by LC/MS/MS



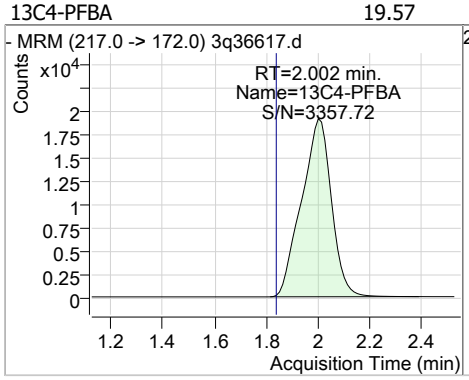
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	20.85	2.01	0.18	61253				

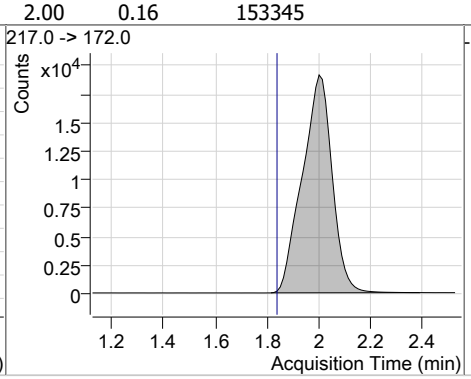


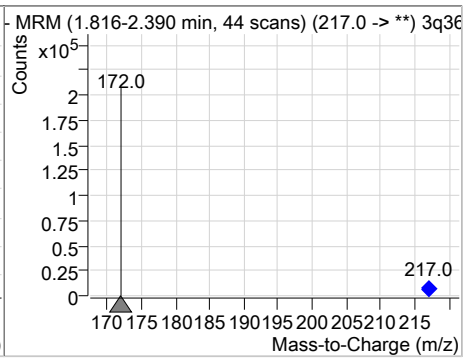




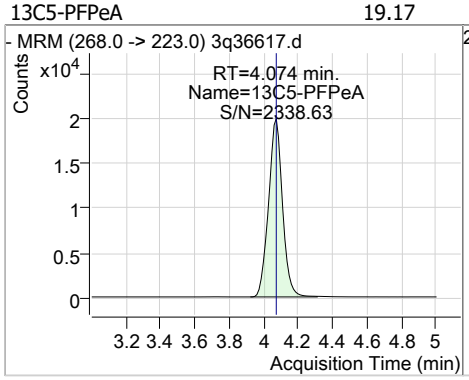
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.57	2.00	0.16	153345				

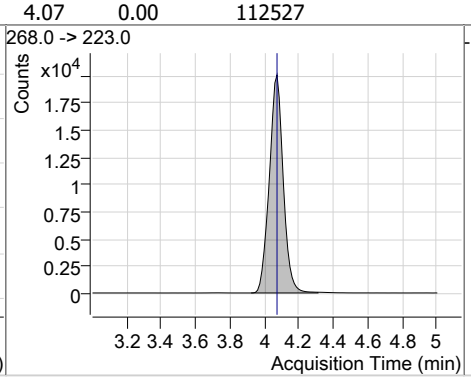


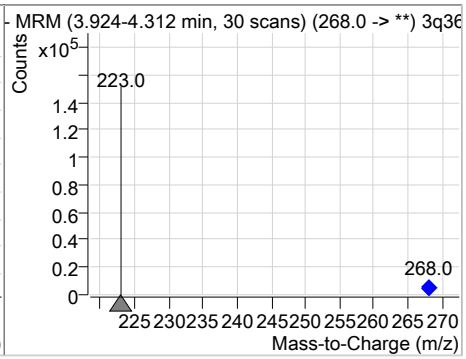




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.17	4.07	0.00	112527				

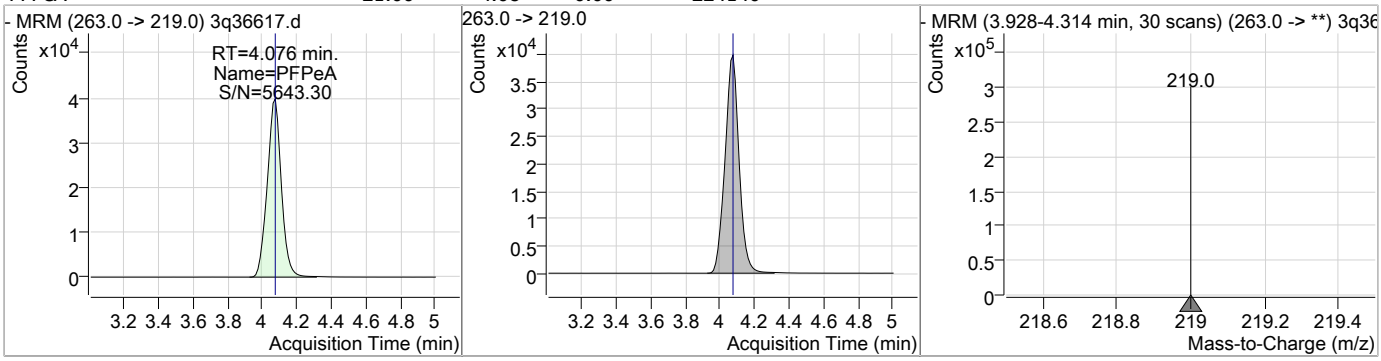




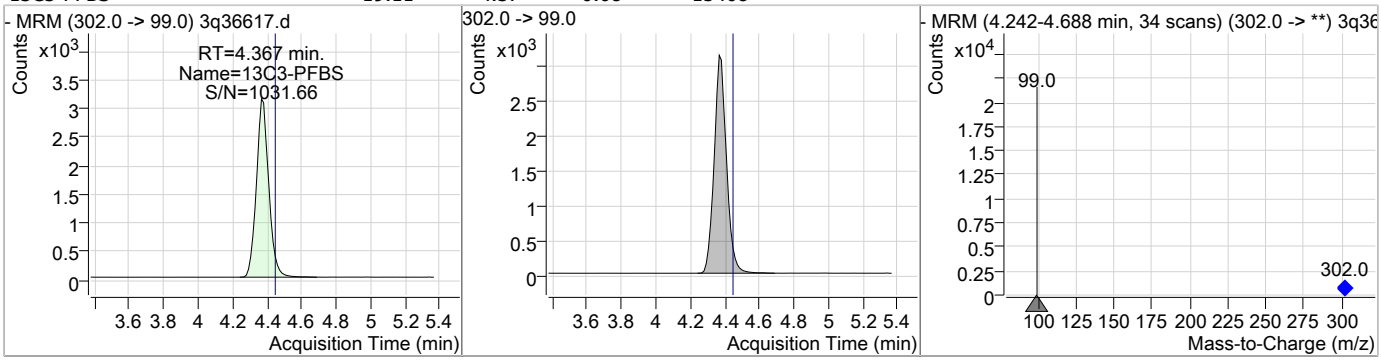


Perfluorinated Compounds by LC/MS/MS

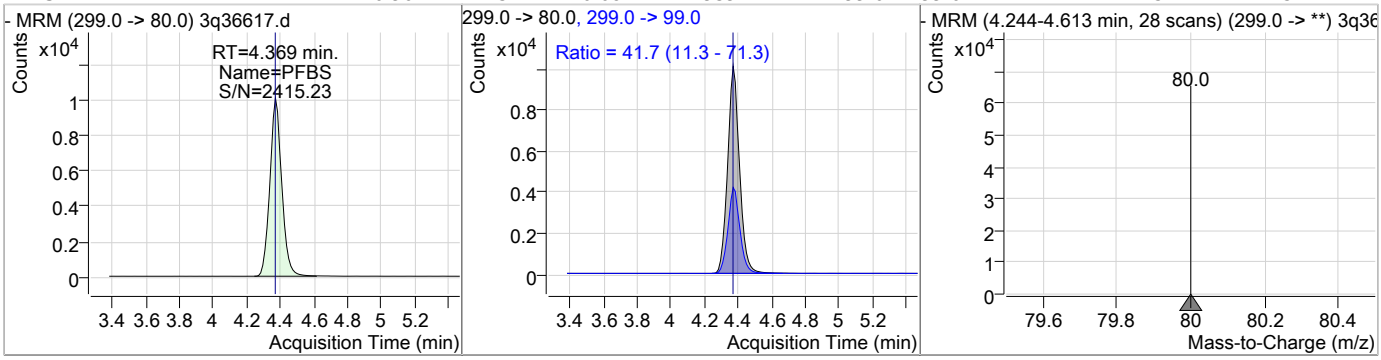
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	21.06	4.08	0.00	224140				



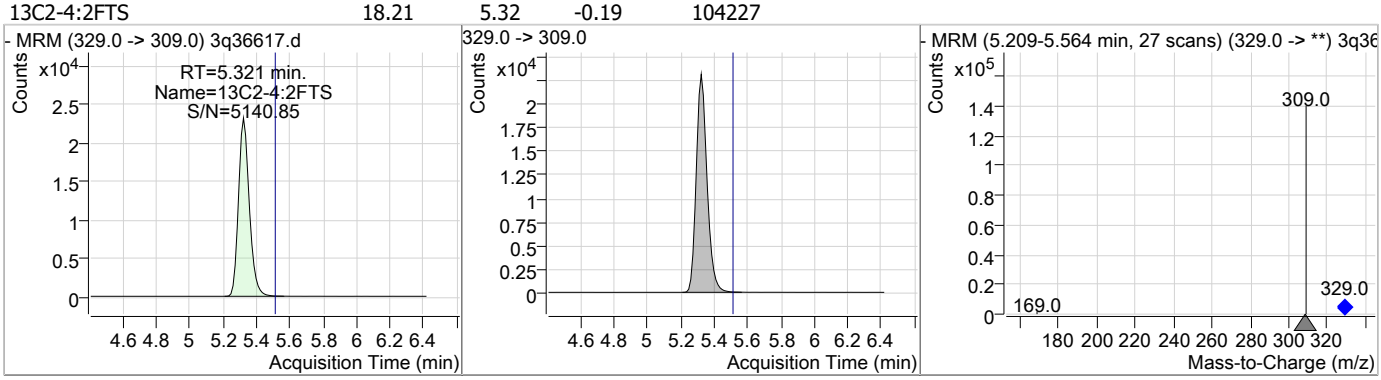
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.11	4.37	-0.08	15408				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	20.96	4.37	-0.08	49394	299.0 -> 99.0	41.7	11.3	71.3

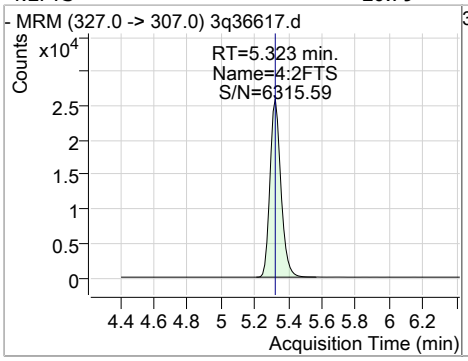


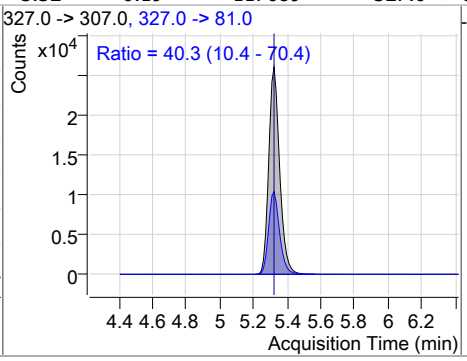
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.21	5.32	-0.19	104227				

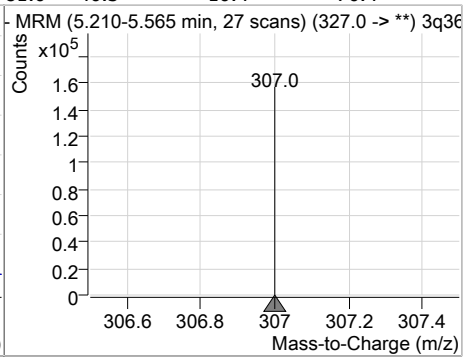


Perfluorinated Compounds by LC/MS/MS

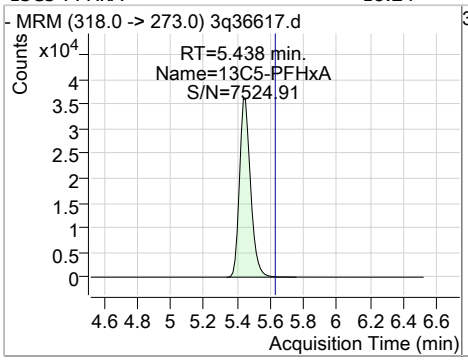
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.79	5.32	-0.19	117089	327.0 -> 81.0	40.3	10.4	70.4

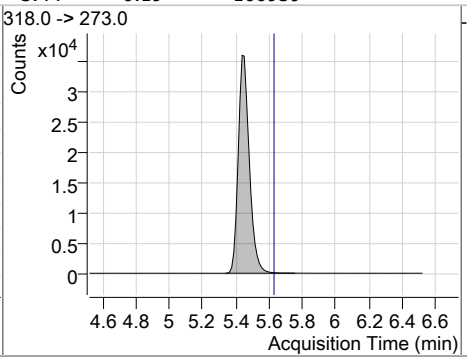


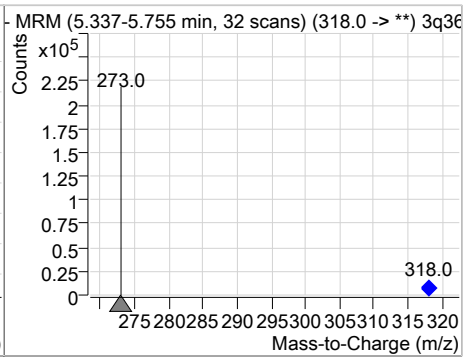




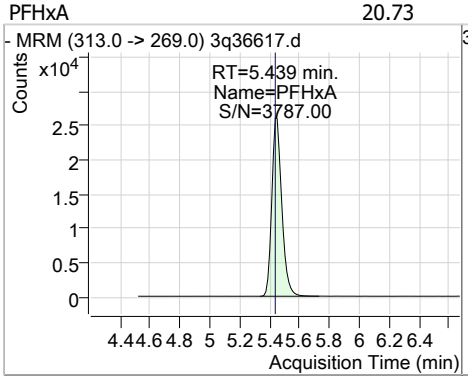
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	18.24	5.44	-0.19	166959				

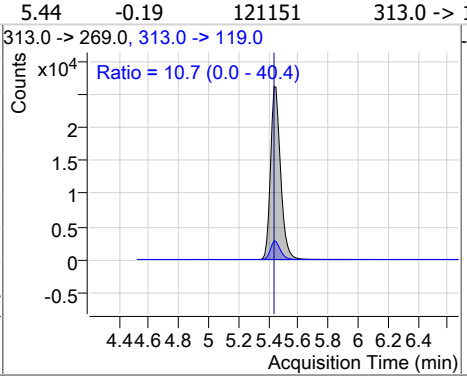


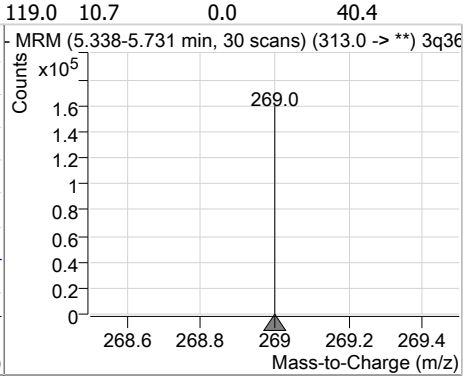




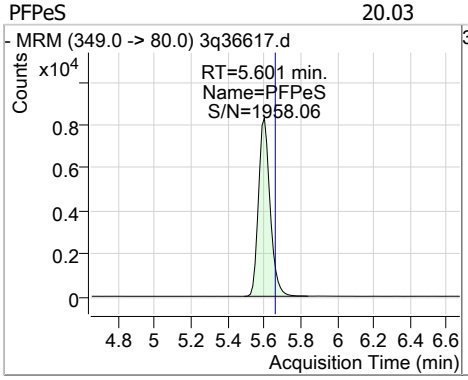
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	20.73	5.44	-0.19	121151	313.0 -> 119.0	10.7	0.0	40.4

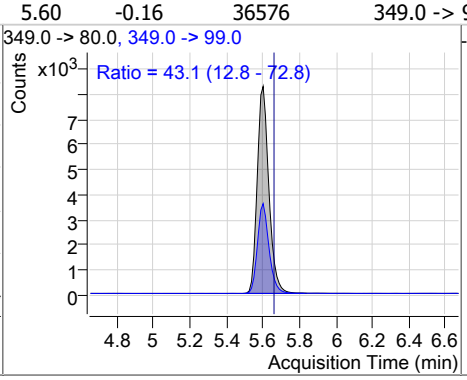


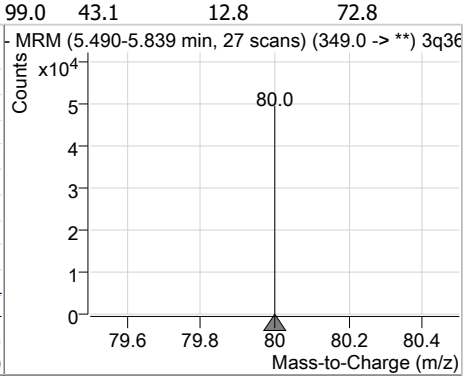




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	20.03	5.60	-0.16	36576	349.0 -> 99.0	43.1	12.8	72.8

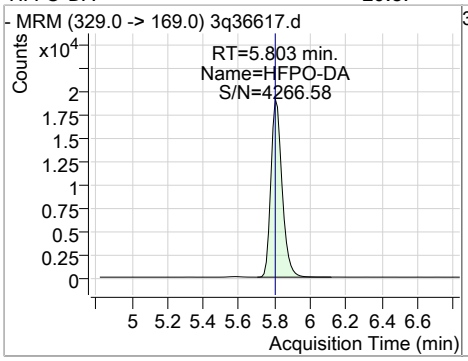


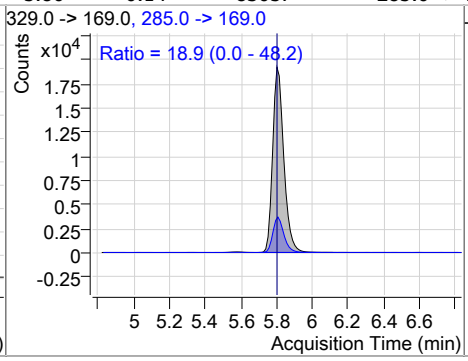


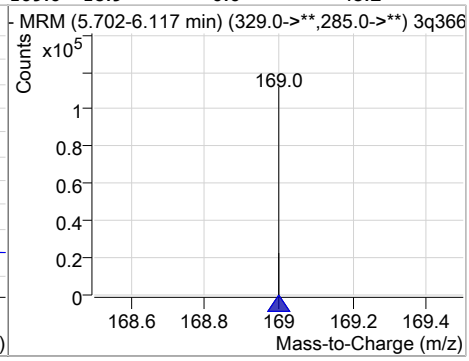


Perfluorinated Compounds by LC/MS/MS

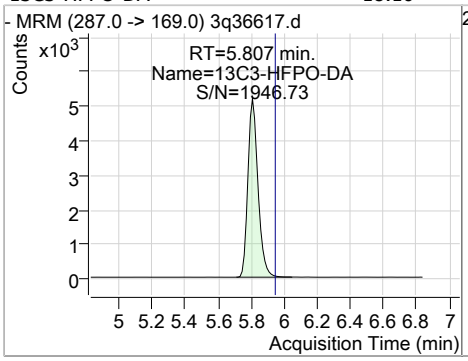
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	20.87	5.80	-0.14	83057	285.0 -> 169.0	18.9	0.0	48.2

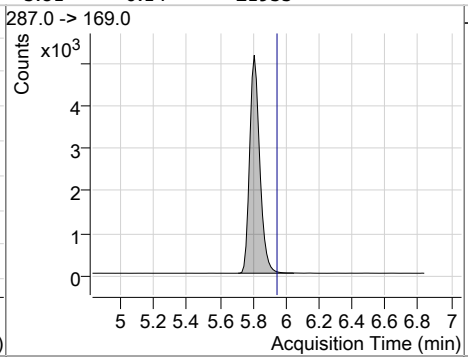


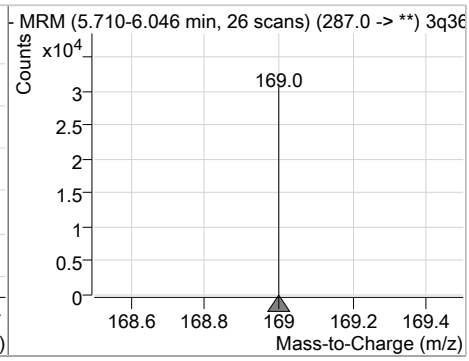




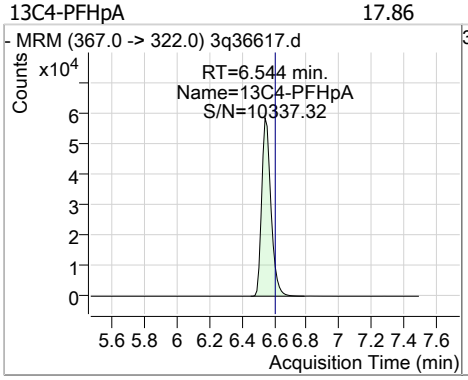
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	18.10	5.81	-0.14	21955				

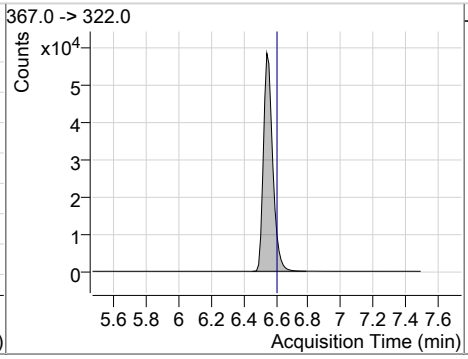


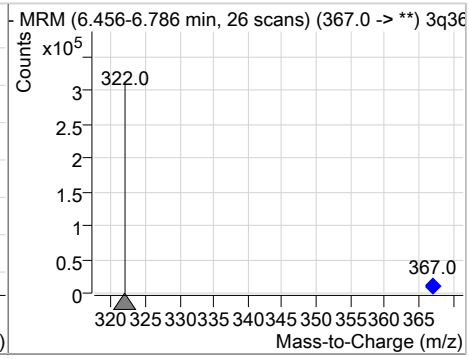




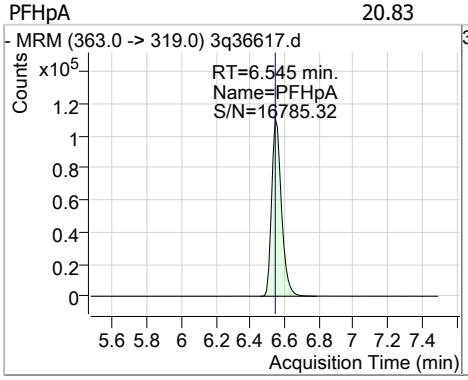
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	17.86	6.54	-0.06	231578				

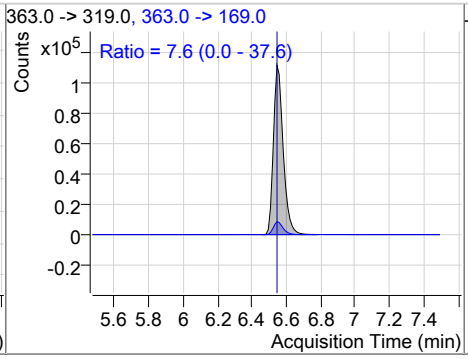


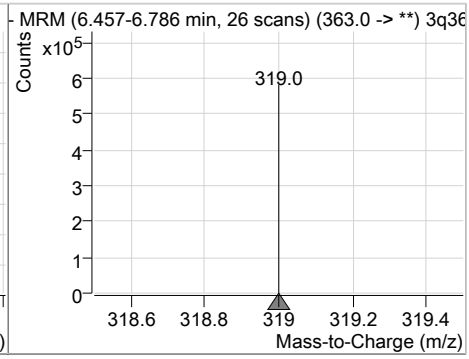




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	20.83	6.54	-0.06	437576	363.0 -> 169.0	7.6	0.0	37.6

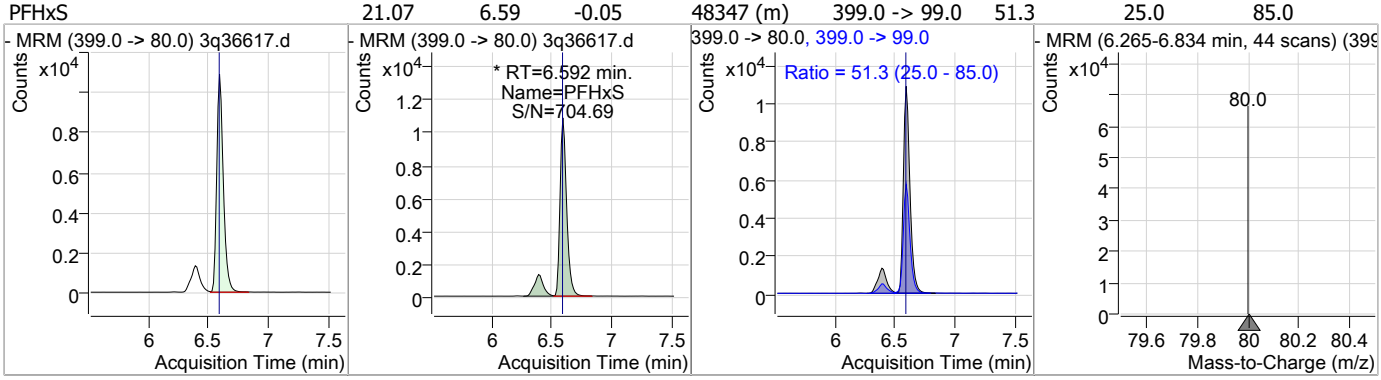




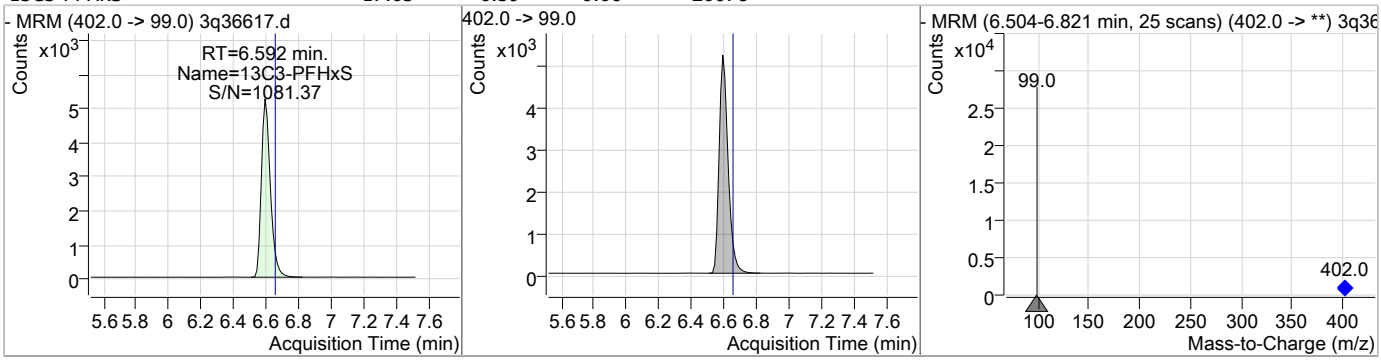


Perfluorinated Compounds by LC/MS/MS

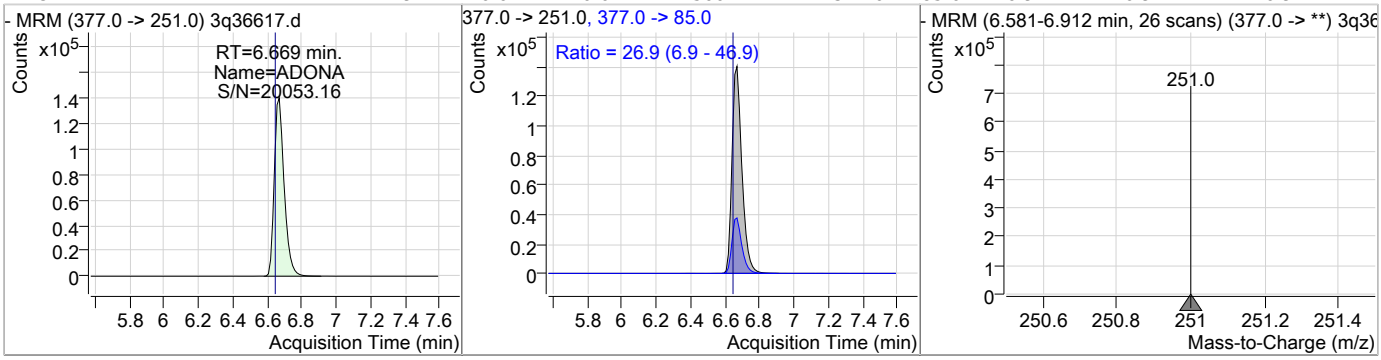
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	21.07	6.59	-0.05	48347 (m)	399.0 -> 99.0	51.3	25.0	85.0



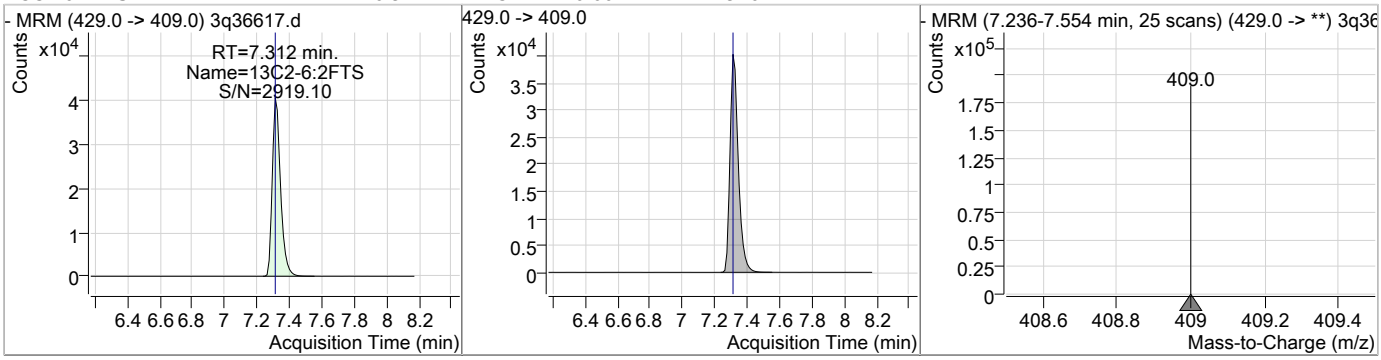
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	17.63	6.59	-0.06	20078				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	21.29	6.67	-0.04	560247	377.0 -> 85.0	26.9	6.9	46.9

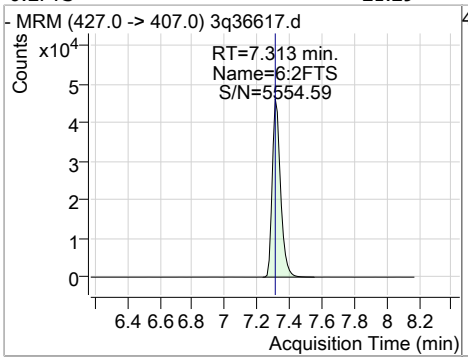


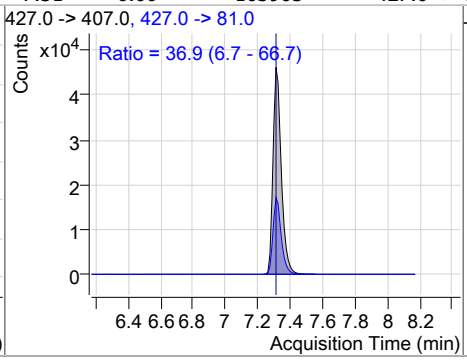
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	16.91	7.31	0.00	142976				

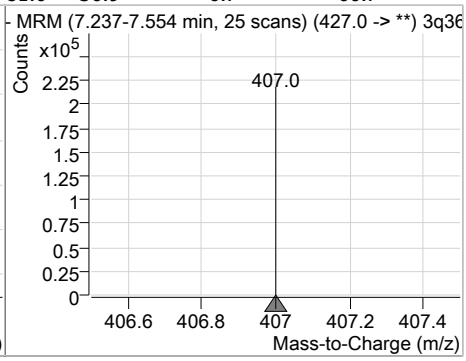


Perfluorinated Compounds by LC/MS/MS

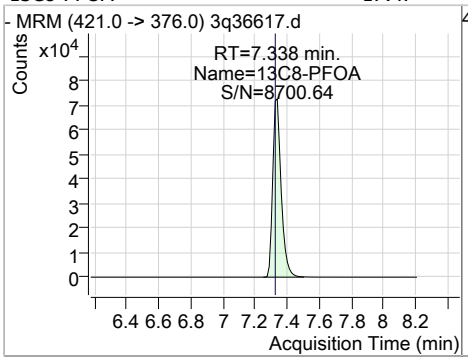
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	21.29	7.31	0.00	163903	427.0 -> 81.0	36.9	6.7	66.7

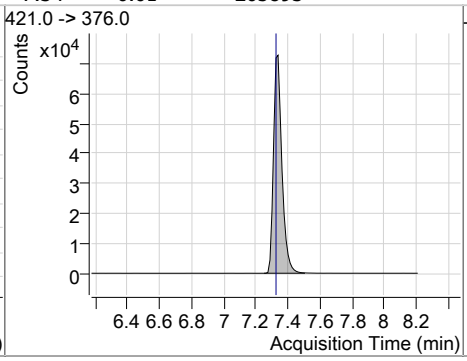


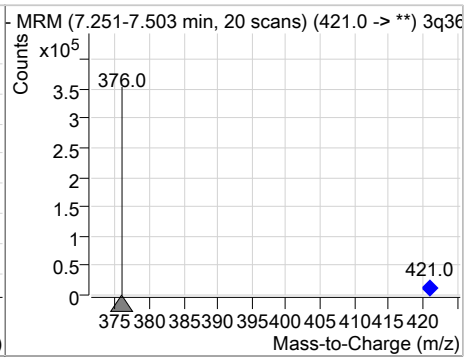




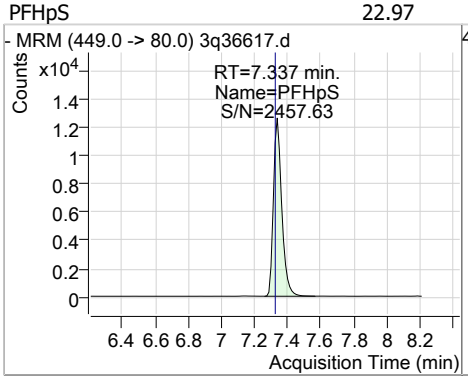
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	17.47	7.34	0.01	265893				

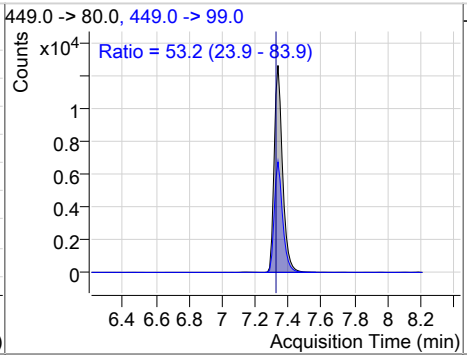


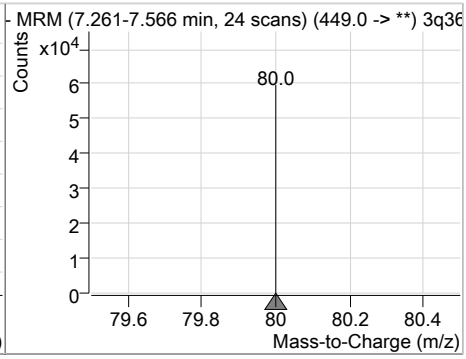




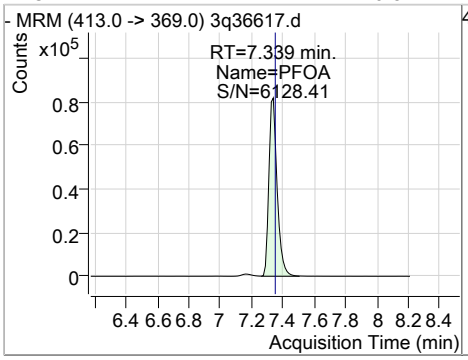
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	22.97	7.34	0.00	44183	449.0 -> 99.0	53.2	23.9	83.9

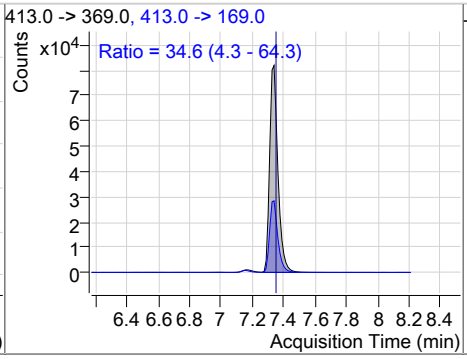


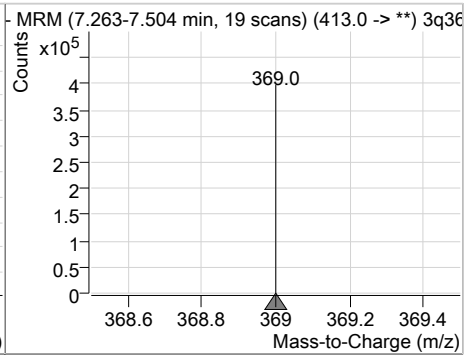




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	20.82	7.34	0.00	299280	413.0 -> 169.0	34.6	4.3	64.3

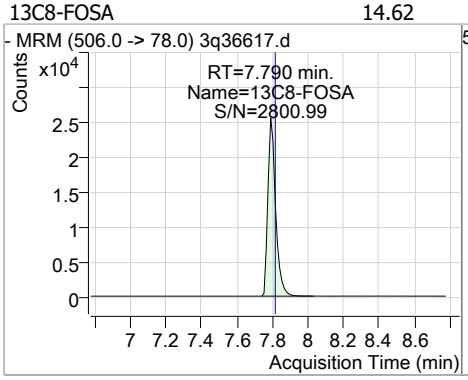


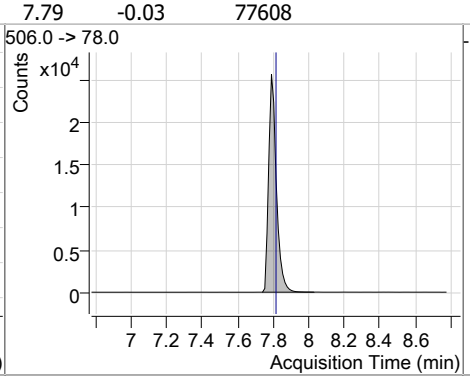


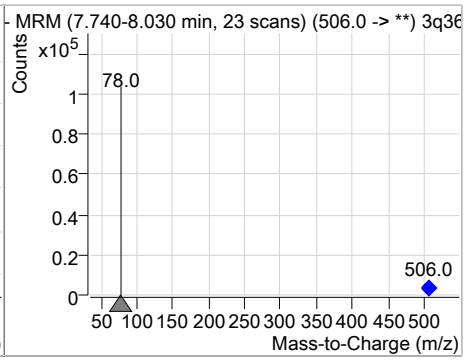


Perfluorinated Compounds by LC/MS/MS

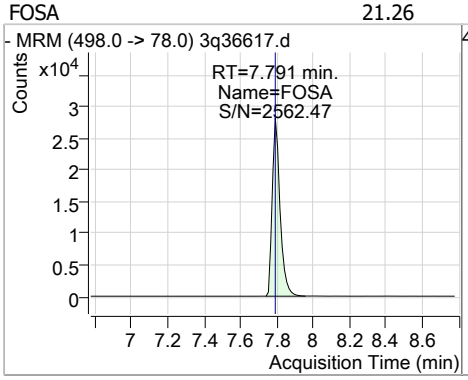
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	14.62	7.79	-0.03	77608				

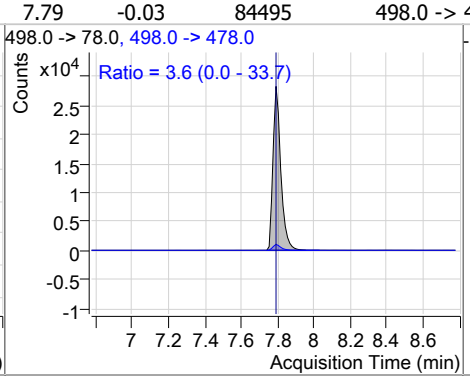


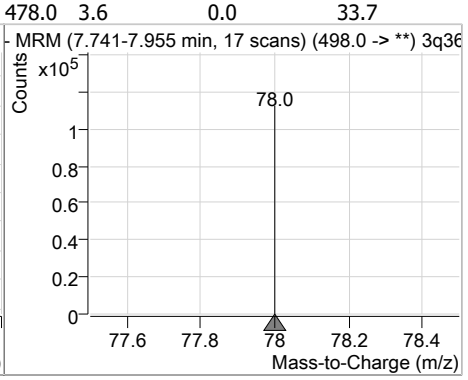




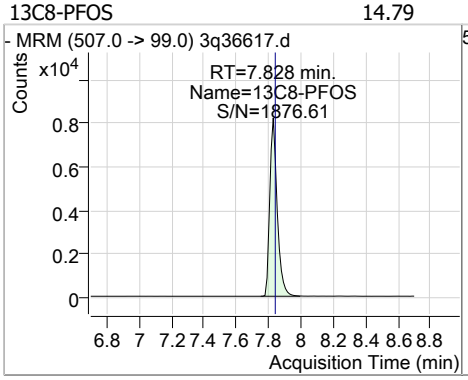
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	21.26	7.79	-0.03	84495	498.0 -> 478.0	3.6	0.0	33.7

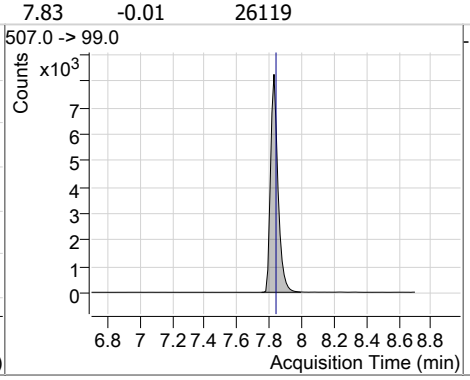


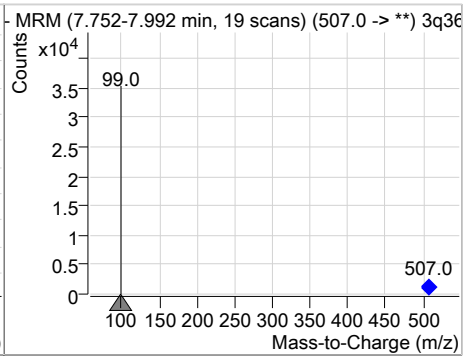




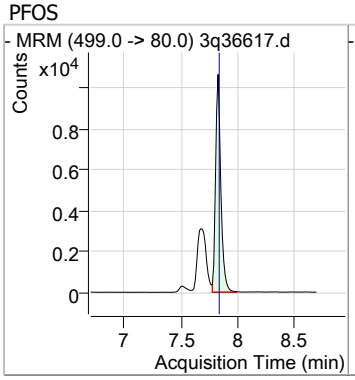
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	14.79	7.83	-0.01	26119				

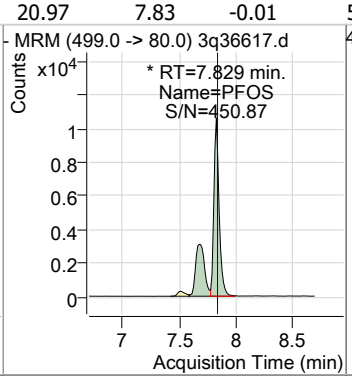


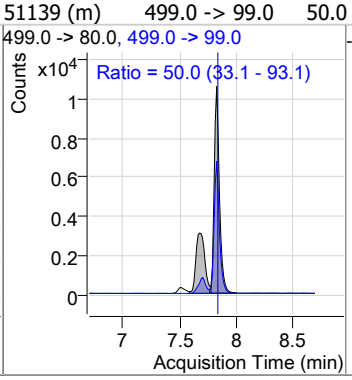


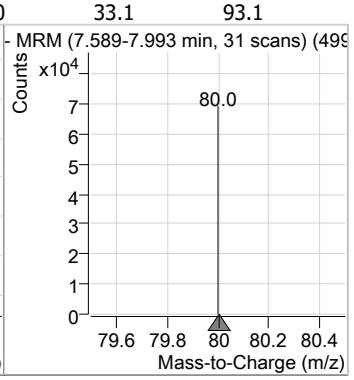


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	20.97	7.83	-0.01	51139 (m)	499.0 -> 99.0	50.0	33.1	93.1



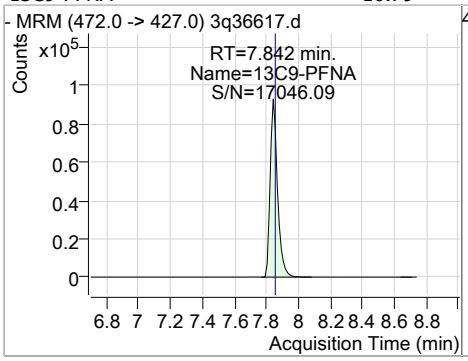


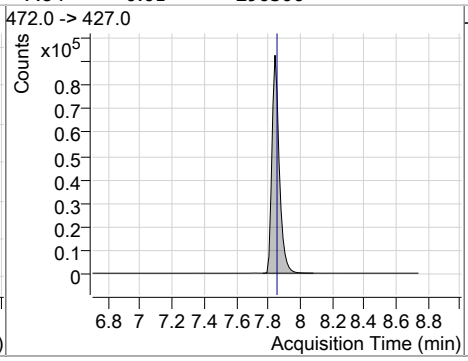


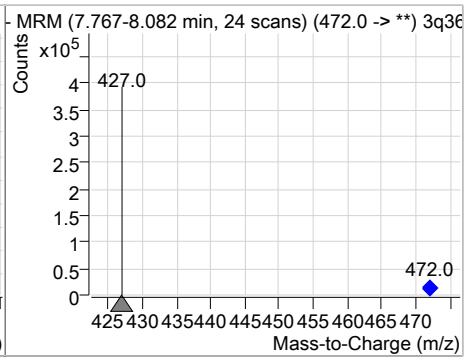


Perfluorinated Compounds by LC/MS/MS

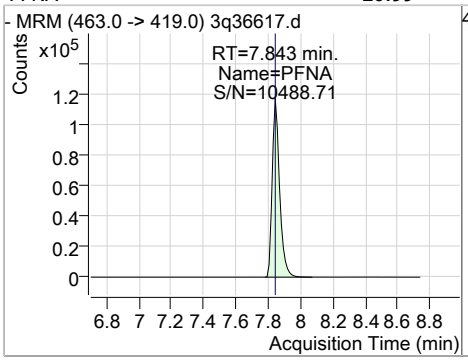
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	16.79	7.84	-0.01	296506				

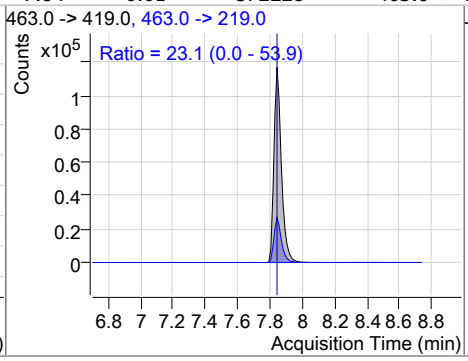


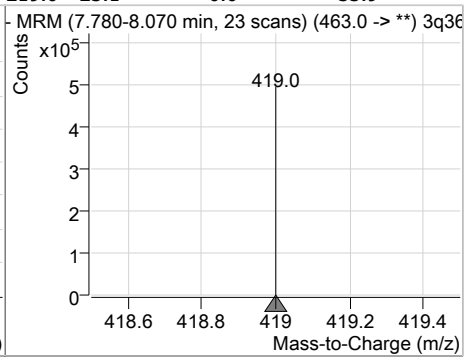




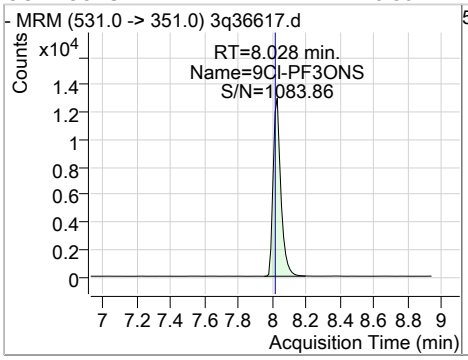
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	20.99	7.84	-0.01	372228	463.0 -> 219.0	23.1	0.0	53.9

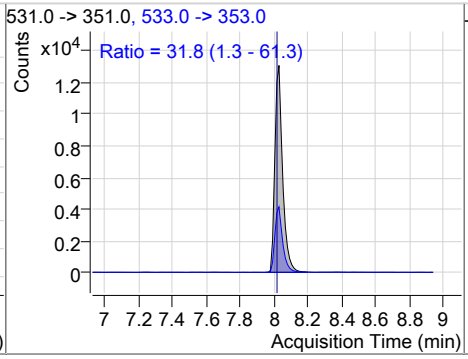


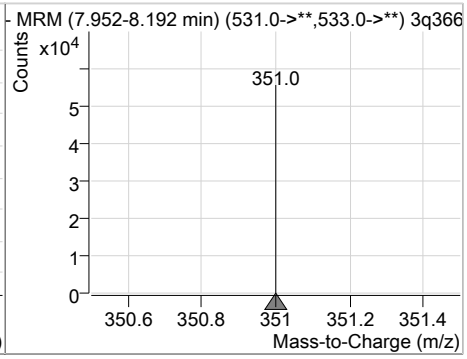




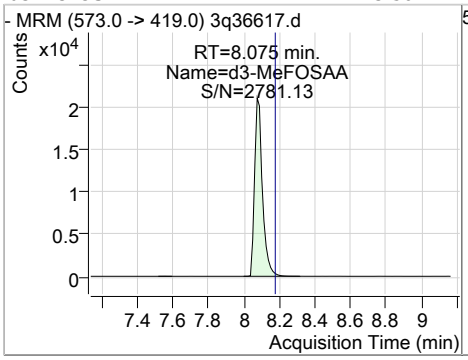
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	18.56	8.03	-0.03	41128	533.0 -> 353.0	31.8	1.3	61.3

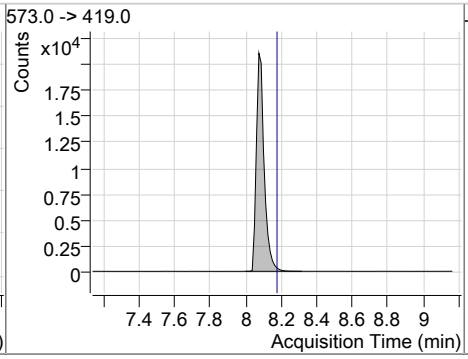


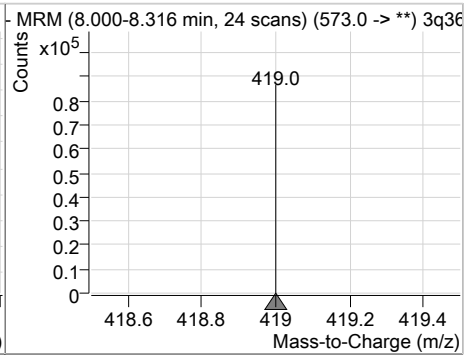




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	13.50	8.08	-0.10	64440				

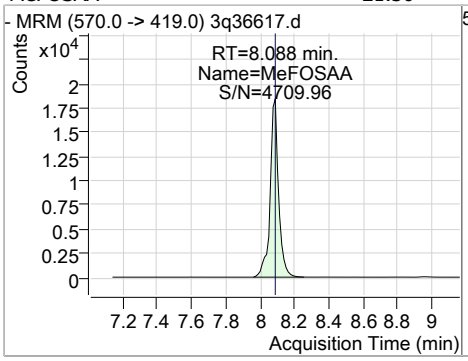


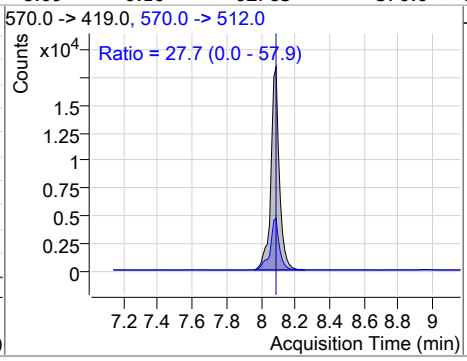


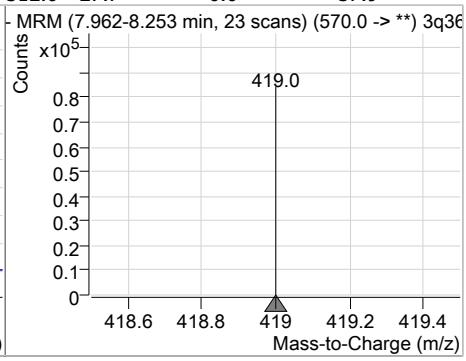


Perfluorinated Compounds by LC/MS/MS

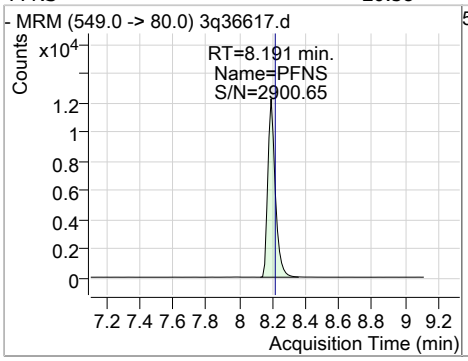
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	21.36	8.09	-0.10	62783	570.0 -> 512.0	27.7	0.0	57.9

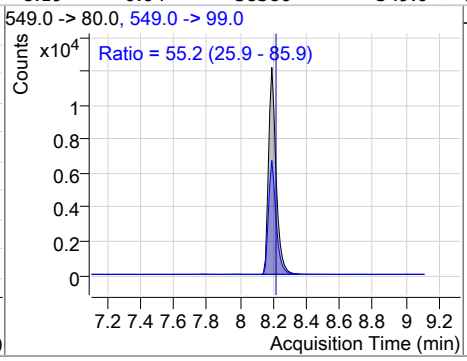


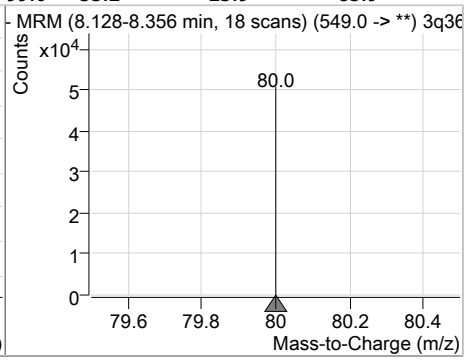




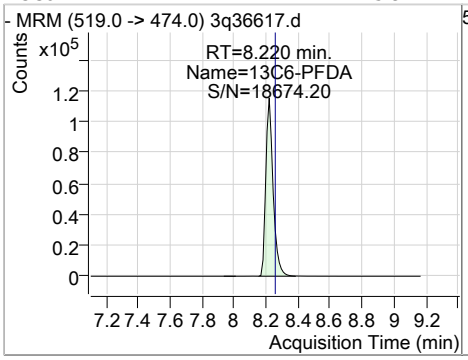
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	20.58	8.19	-0.04	38380	549.0 -> 99.0	55.2	25.9	85.9

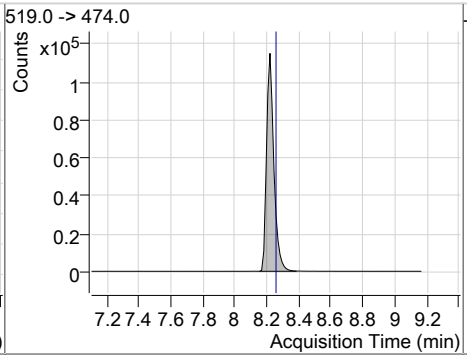


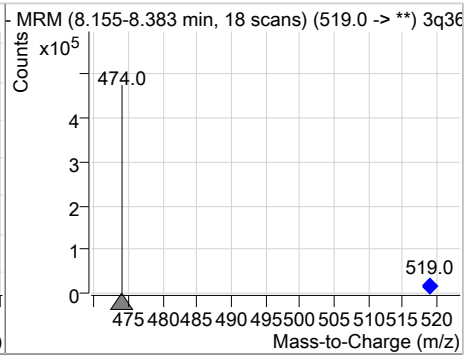




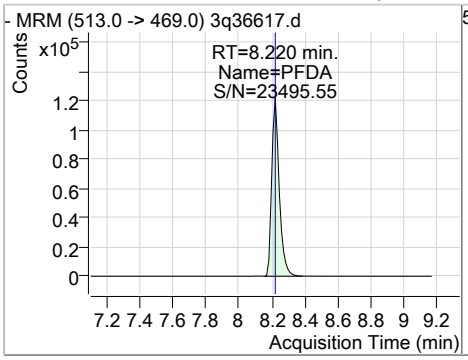
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	15.91	8.22	-0.04	365613				

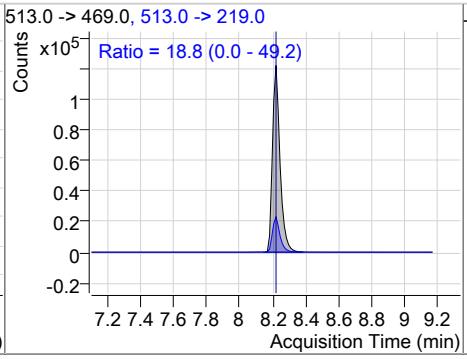


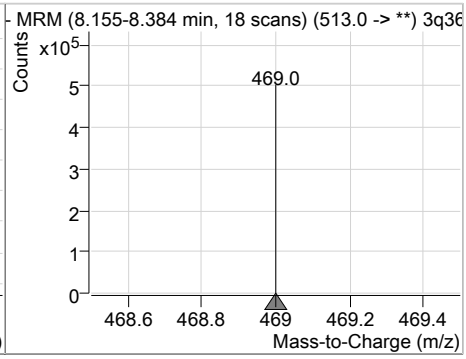




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	20.41	8.22	-0.04	386249	513.0 -> 219.0	18.8	0.0	49.2

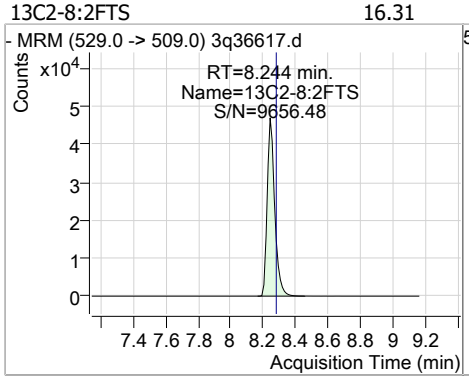


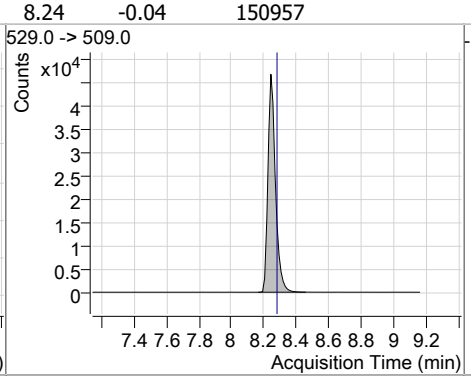


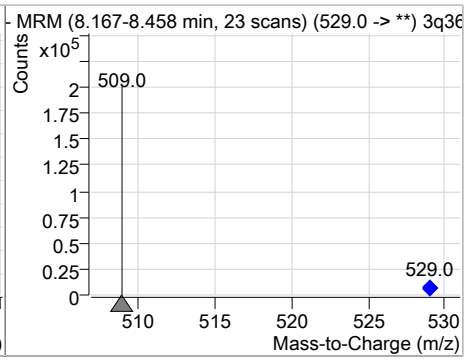


Perfluorinated Compounds by LC/MS/MS

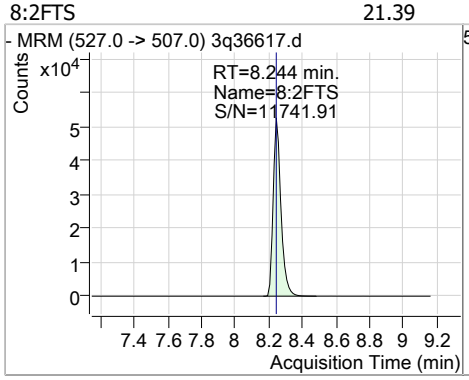
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	16.31	8.24	-0.04	150957				

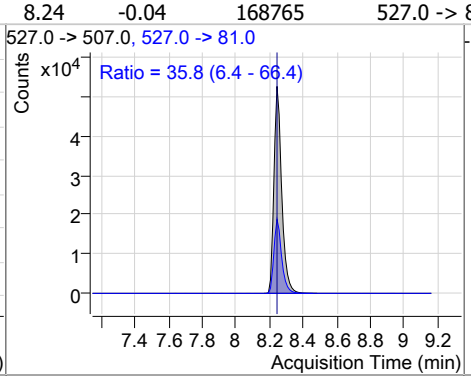


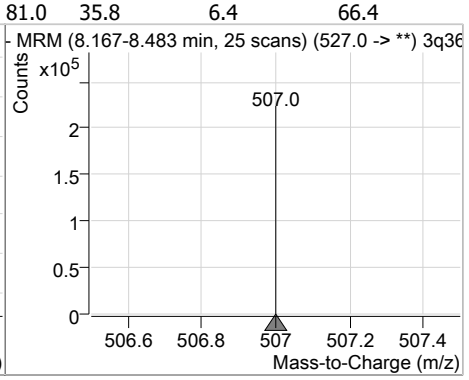




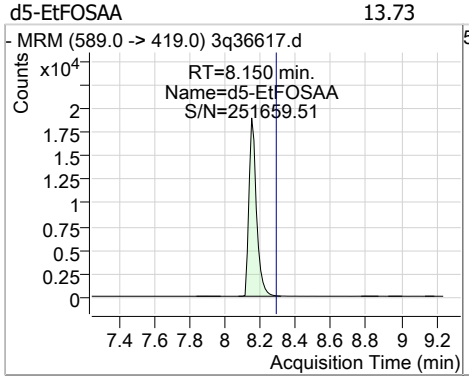
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	21.39	8.24	-0.04	168765	527.0 -> 81.0	35.8	6.4	66.4

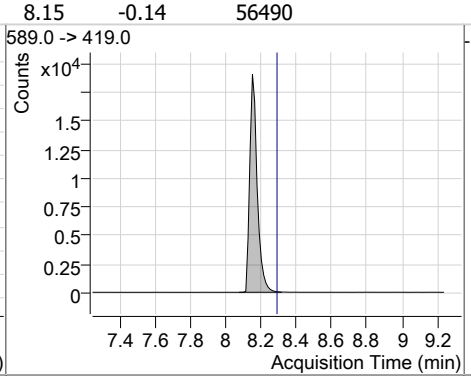


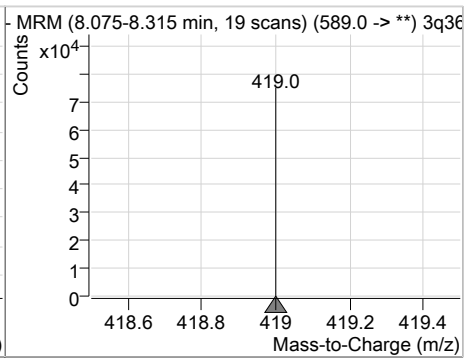




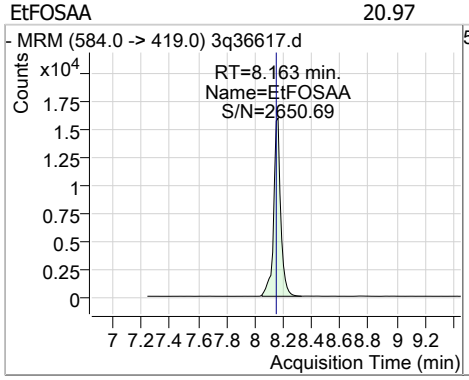
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	13.73	8.15	-0.14	56490				

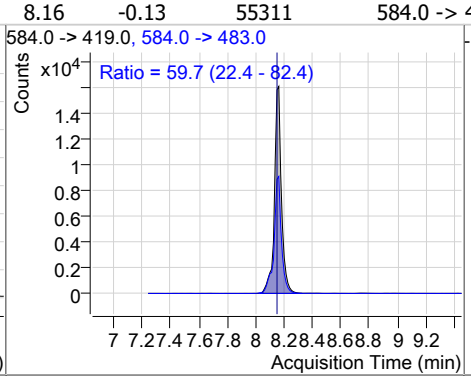


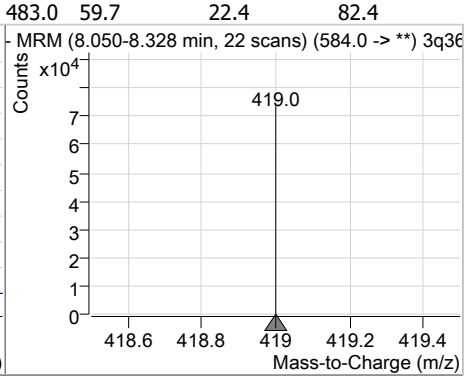




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	20.97	8.16	-0.13	55311	584.0 -> 483.0	59.7	22.4	82.4

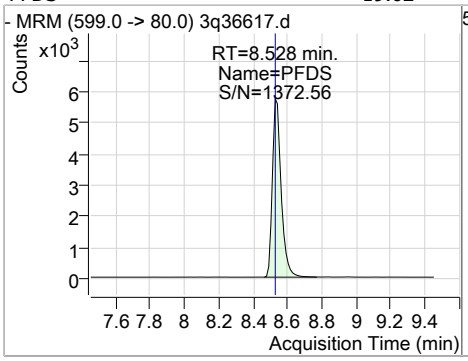


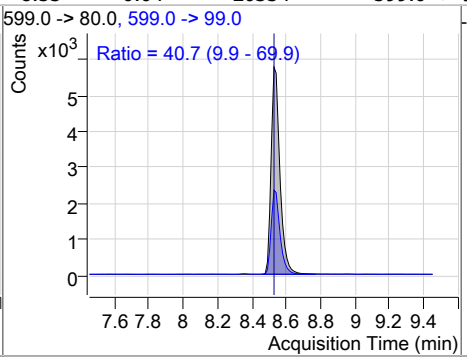


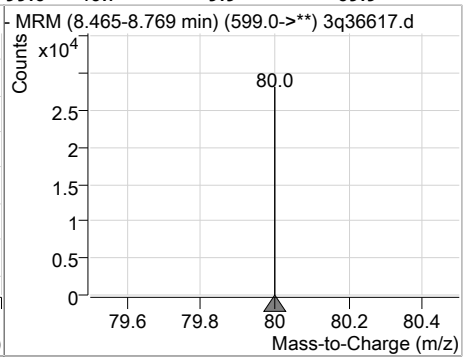


Perfluorinated Compounds by LC/MS/MS

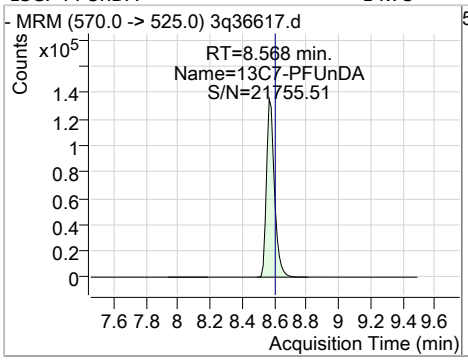
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	19.62	8.53	-0.04	20334	599.0 -> 99.0	40.7	9.9	69.9

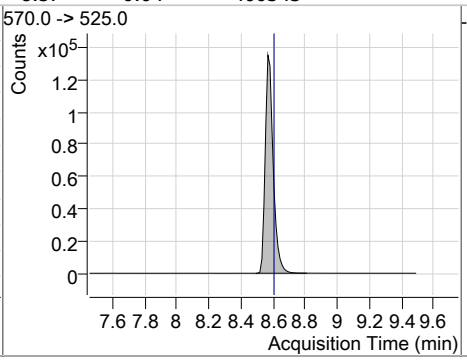


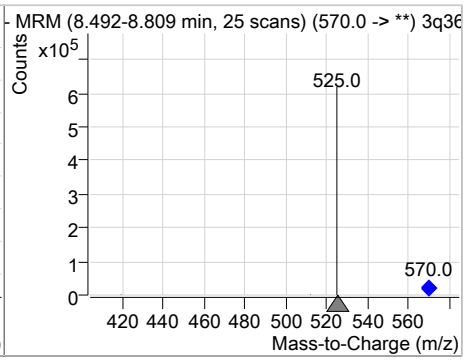




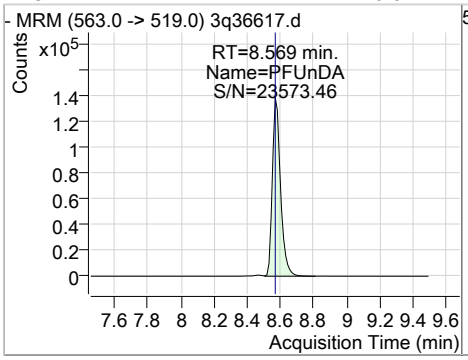
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	14.75	8.57	-0.04	466343				

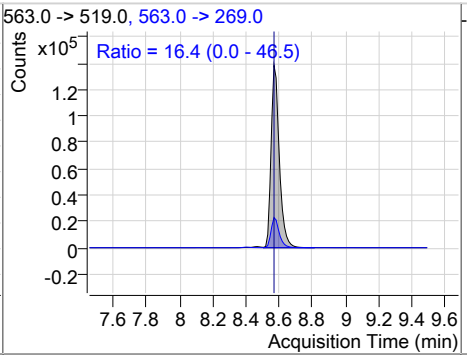


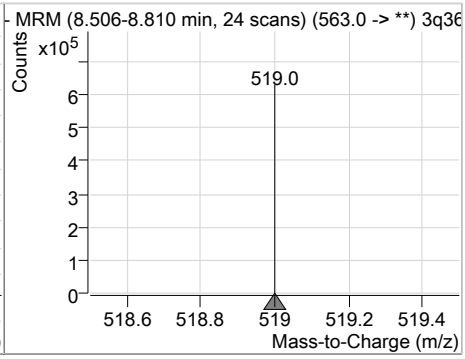




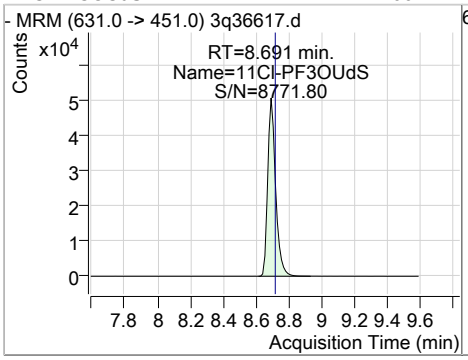
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	20.84	8.57	-0.04	474762	563.0 -> 269.0	16.4	0.0	46.5

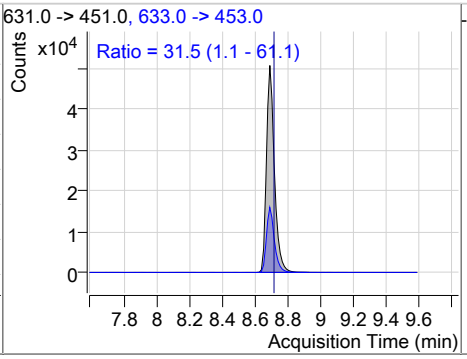


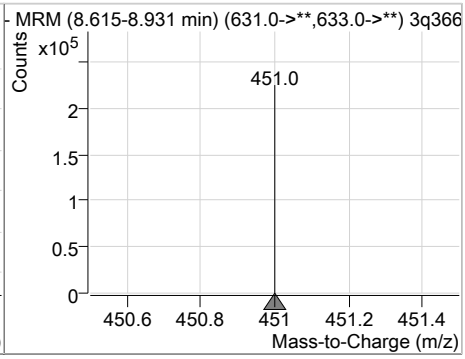




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	22.00	8.69	-0.03	169636	633.0 -> 453.0	31.5	1.1	61.1

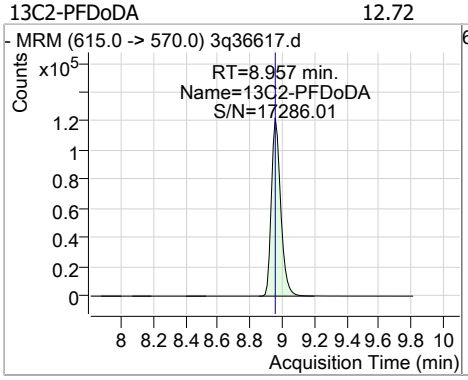


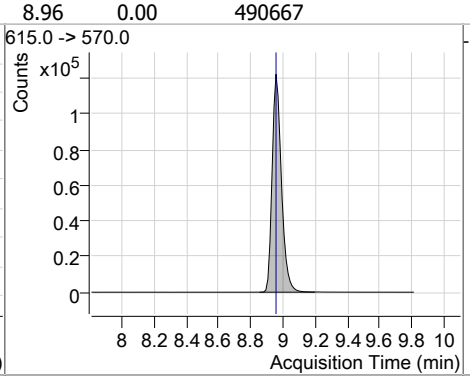


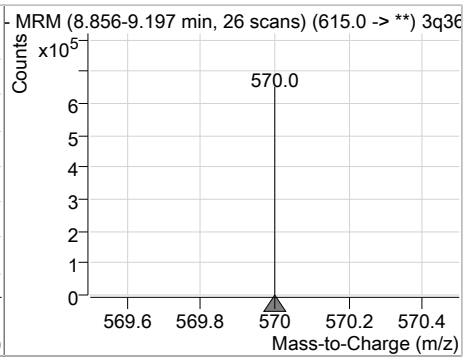


Perfluorinated Compounds by LC/MS/MS

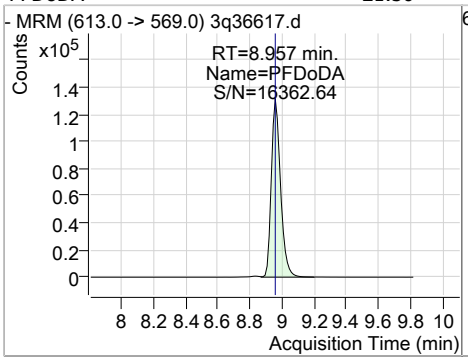
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	12.72	8.96	0.00	490667				

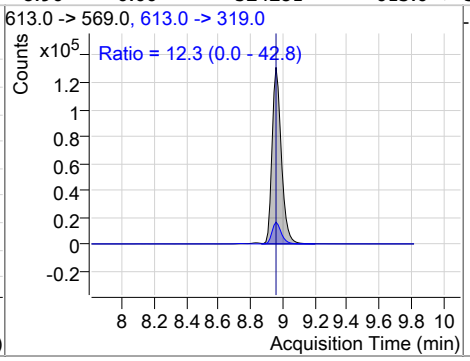


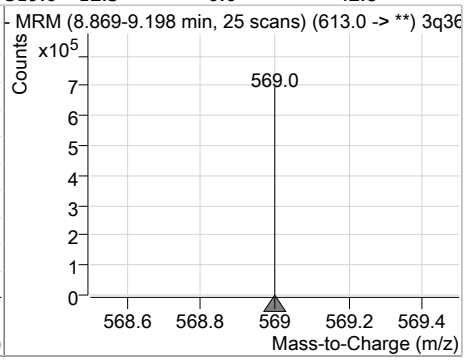




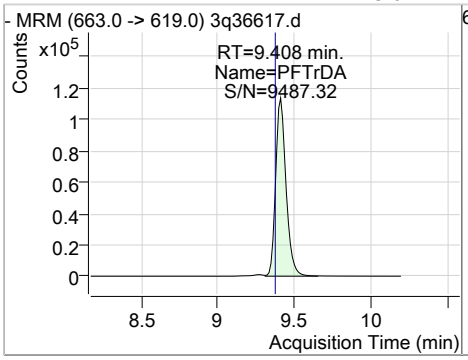
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	21.50	8.96	0.00	524281	613.0 -> 319.0	12.3	0.0	42.8

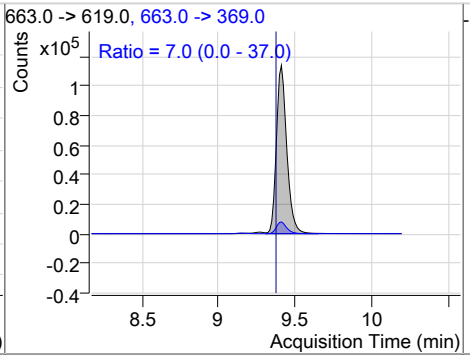


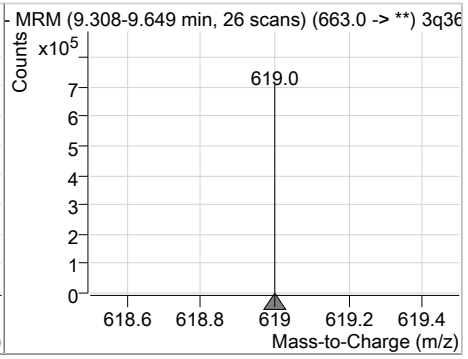




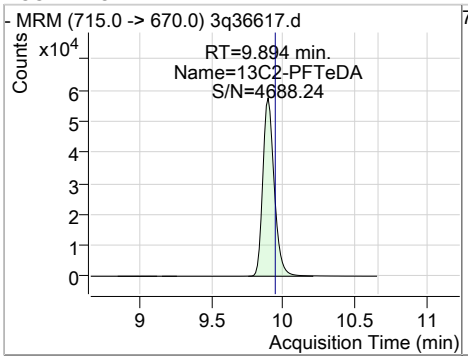
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	23.64	9.41	-0.01	532135	663.0 -> 369.0	7.0	0.0	37.0

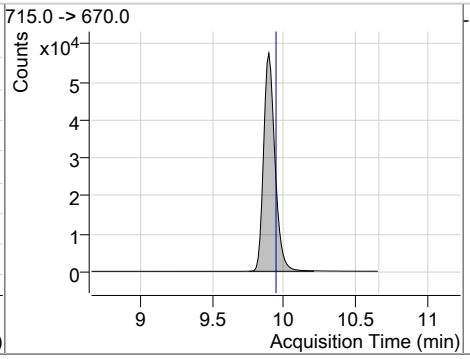


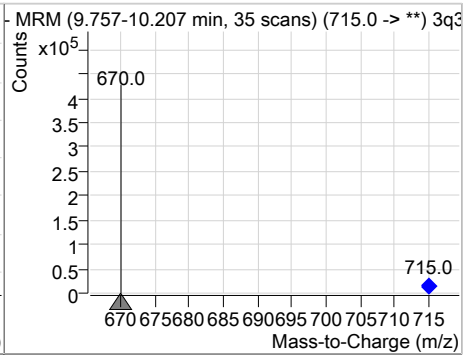




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	11.42	9.89	-0.05	319233				

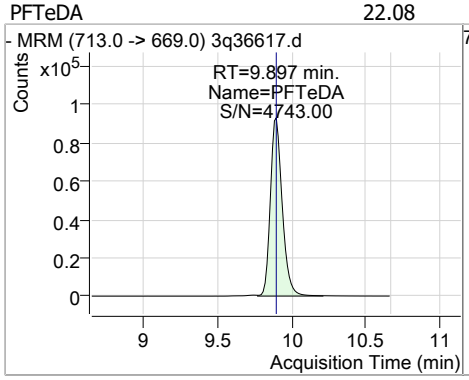


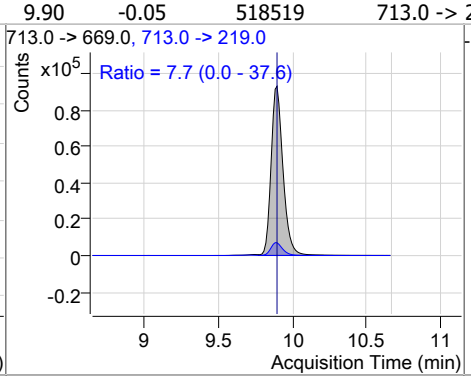


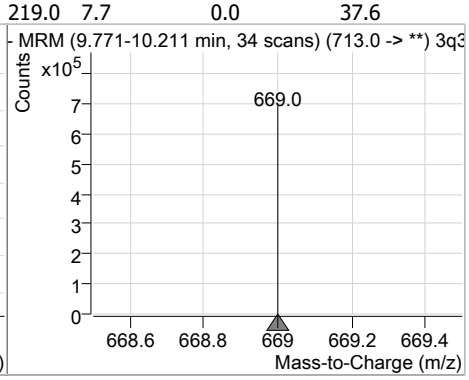


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	22.08	9.90	-0.05	518519	713.0 -> 219.0	7.7	0.0	37.6







Manual Integration Approval Summary

Sample Number: OP84900-BS
Lab FileID: 3Q36617.D
Injection Time: 04/14/21 21:32
Method: EPA 537M BY ID
Analyst approved: 04/15/21 09:10 Martha Valls
Supervisor approved: 04/15/21 10:01 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.83	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:44

Perfluorinated Compounds by LC/MS/MS

Data File : 2q66240.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/17/2021 3:16:50 AM
Sample Name : op84941-bs
Vial : P3-F4
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q963.batch.bin
Sample Information : op84941,S2Q963,2.00,,,1.0,1,soil

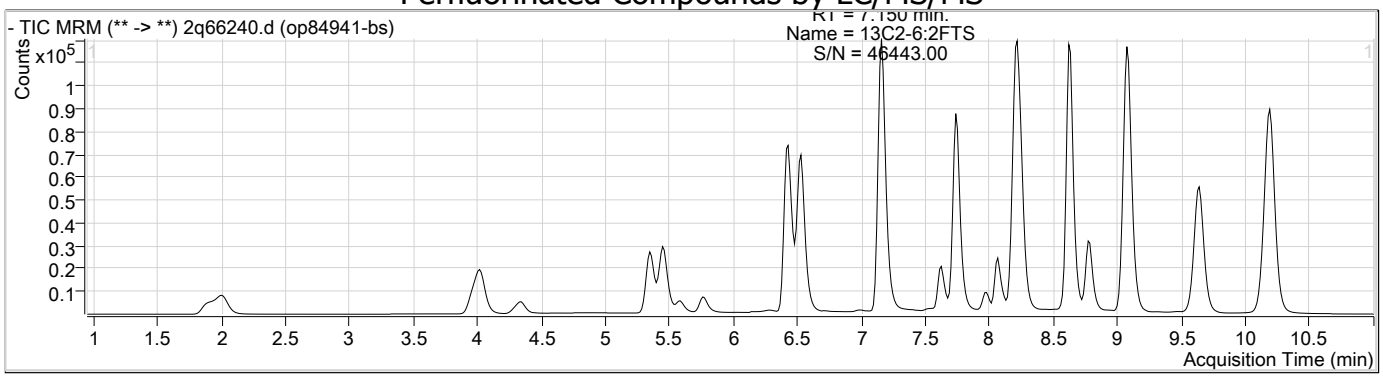
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.180	589.0 -> 419.0	33076	20.00	µg/L	0.025
M4-PFBA	2.002	217.0 -> 172.0	64539	20.00	µg/L	0.013
M5-PFPeA	4.024	268.0 -> 223.0	51291	20.00	µg/L	0.013
M5-PFHxA	5.454	318.0 -> 273.0	76742	20.00	µg/L	0.013
M4-PFHpA	6.433	367.0 -> 322.0	112151	20.00	µg/L	0.013
M8-PFOA	7.165	421.0 -> 376.0	126372	20.00	µg/L	0.013
M9-PFNA	7.745	472.0 -> 427.0	132875	20.00	µg/L	0.013
M6-PFDA	8.210	519.0 -> 474.0	170130	20.00	µg/L	0.000
M7-PFUnDA	8.624	570.0 -> 525.0	236663	20.00	µg/L	-0.012
M2-PFDoDA	9.075	615.0 -> 570.0	263655	20.00	µg/L	-0.025
M2-PFTeDA	10.189	715.0 -> 670.0	213621	20.00	µg/L	-0.050
M8-FOSA	7.630	506.0 -> 78.0	35706	20.00	µg/L	0.026
M3-PFBS	4.347	302.0 -> 99.0	6280	20.00	µg/L	0.017
M3-PFHxS	6.469	402.0 -> 99.0	6828	20.00	µg/L	0.013
M8-PFOS	7.731	507.0 -> 99.0	9723	20.00	µg/L	0.013
M2-4:2FTS	5.348	329.0 -> 309.0	54083	20.00	µg/L	0.013
M2-6:2FTS	7.150	429.0 -> 409.0	74869	20.00	µg/L	0.013
M2-8:2FTS	8.247	529.0 -> 509.0	66081	20.00	µg/L	0.000
M3-MeFOSAA	8.066	573.0 -> 419.0	40692	20.00	µg/L	0.025
M3-HFPO-DA	5.771	287.0 -> 169.0	5469	20.00	µg/L	0.013
System Monitoring Compounds						
13C2-4:2FTS	5.348	329.0 -> 309.0	54083	18.58	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.9%		
13C2-6:2FTS	7.150	429.0 -> 409.0	74869	18.40	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.0%		
13C2-8:2FTS	8.247	529.0 -> 509.0	66081	18.52	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.6%		
13C2-PFDoDA	9.075	615.0 -> 570.0	263655	16.39	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 82.0%		
13C2-PFTeDA	10.189	715.0 -> 670.0	213621	16.56	µg/L	-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 82.8%		
13C3-PFBS	4.347	302.0 -> 99.0	6280	18.59	µg/L	0.017
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.9%		
13C3-PFHxS	6.469	402.0 -> 99.0	6828	18.19	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.9%		
13C4-PFBA	2.002	217.0 -> 172.0	64539	19.22	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.1%		
13C4-PFHpA	6.433	367.0 -> 322.0	112151	18.43	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.1%		
d5-EtFOSAA	8.180	589.0 -> 419.0	33076	16.27	ng/ml	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.4%		
13C5-PFHxA	5.454	318.0 -> 273.0	76742	18.42	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.1%		
13C5-PFPeA	4.024	268.0 -> 223.0	51291	18.59	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.9%		

Perfluorinated Compounds by LC/MS/MS

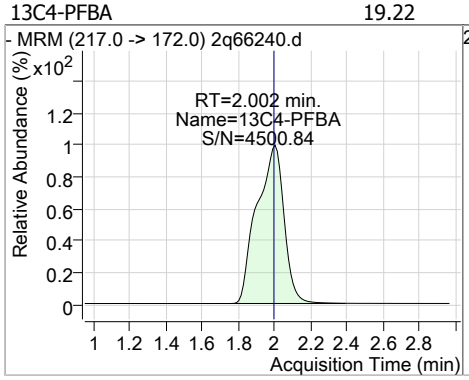
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	170130	18.37	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.8%			
13C7-PFUnDA	8.624	570.0 -> 525.0	236663	17.96	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.8%			
13C8-FOSA	7.630	506.0 -> 78.0	35706	18.58	µg/L		0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.9%			
13C8-PFOA	7.165	421.0 -> 376.0	126372	18.12	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.6%			
13C8-PFOS	7.731	507.0 -> 99.0	9723	18.30	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.5%			
13C9-PFNA	7.745	472.0 -> 427.0	132875	18.68	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.4%			
d3-MeFOSAA	8.066	573.0 -> 419.0	40692	17.15	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.8%			
13C3-HFPO-DA	5.771	287.0 -> 169.0	5469	16.86	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.3%			
Target Compounds							QValue
4:2FTS	5.350	327.0 -> 307.0	57407	20.15	µg/L		97
6:2FTS	7.150	427.0 -> 407.0	77686	19.65	µg/L		100
8:2FTS	8.248	527.0 -> 507.0	67329	19.44	µg/L		100
EtFOSAA	8.180	584.0 -> 419.0	29955	19.96	µg/L	m	99
FOSA	7.631	498.0 -> 78.0	36824	20.73	µg/L		99
MeFOSAA	8.067	570.0 -> 419.0	35680	20.17	µg/L	m	94
PFBA	2.008	213.0 -> 169.0	21888	20.10	µg/L		100
PFBS	4.332	299.0 -> 80.0	19552	20.00	µg/L		100
PFDA	8.211	513.0 -> 469.0	161022	19.75	µg/L		100
PFDoDA	9.075	613.0 -> 569.0	249669	19.71	µg/L		100
PFDS	8.583	599.0 -> 80.0	8459	20.35	µg/L		100
PFHpA	6.421	363.0 -> 319.0	191010	20.14	µg/L		100
PFHpS	7.163	449.0 -> 80.0	17492	20.67	µg/L		100
PFHxA	5.455	313.0 -> 269.0	53435	19.91	µg/L		100
PFHxS	6.469	399.0 -> 80.0	18718	20.03	µg/L	m	98
PFNA	7.745	463.0 -> 419.0	150575	19.96	µg/L		99
PFNS	8.183	549.0 -> 80.0	14173	20.08	µg/L		95
PFOA	7.165	413.0 -> 369.0	150626	20.03	µg/L		99
PFOS	7.731	499.0 -> 80.0	19096	20.54	µg/L	m	84
PFPeA	4.027	263.0 -> 219.0	85279	20.34	µg/L		100
PFPeS	5.590	349.0 -> 80.0	14906	20.10	µg/L		100
PFTeDA	10.191	713.0 -> 669.0	305507	19.85	µg/L		100
PFTrDA	9.641	663.0 -> 619.0	290261	18.98	µg/L		100
PFUnDA	8.625	563.0 -> 519.0	191982	19.87	µg/L		99
11Cl-PF3OUdS	8.772	631.0 -> 451.0	91326	21.98	µg/L		97
9Cl-PF3ONS	7.968	531.0 -> 351.0	19647	20.17	µg/L		98
ADONA	6.533	377.0 -> 251.0	225352	19.88	µg/L		99
HFPO-DA	5.767	329.0 -> 169.0	22235	21.77	µg/L		98

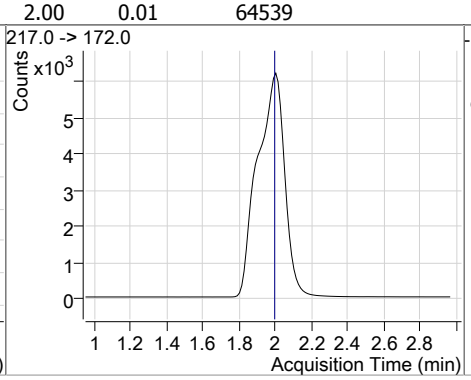
 # = Qualifier out of range, m = manually integrated, + = Area summed

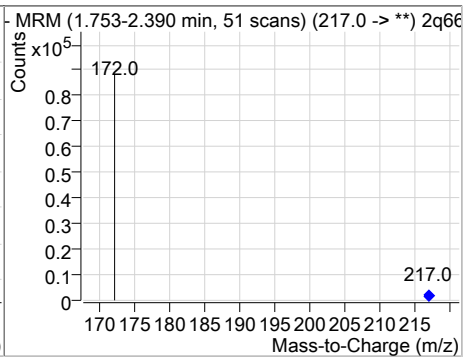
Perfluorinated Compounds by LC/MS/MS



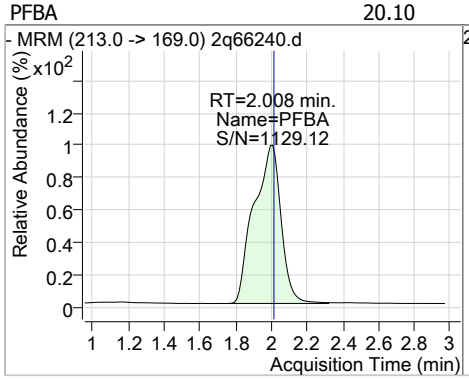
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.22	2.00	0.01	64539				

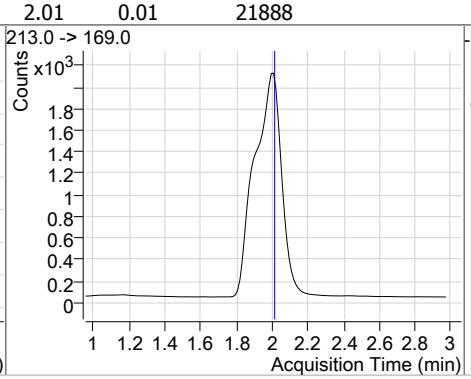


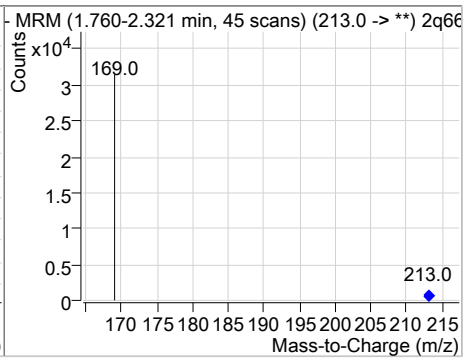




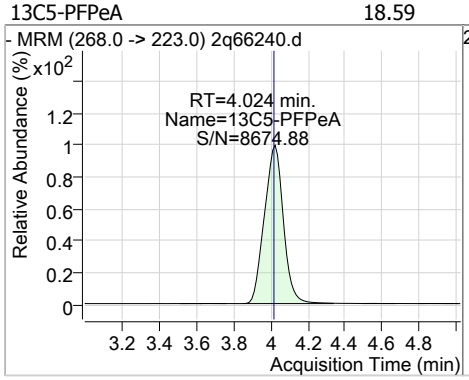
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	20.10	2.01	0.01	21888				

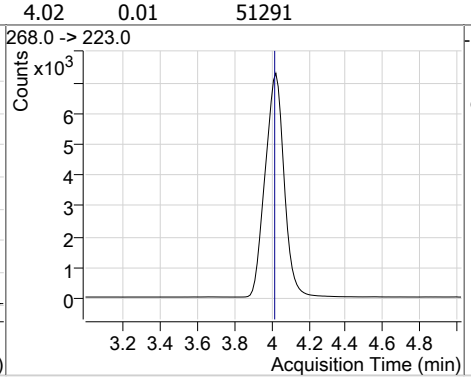


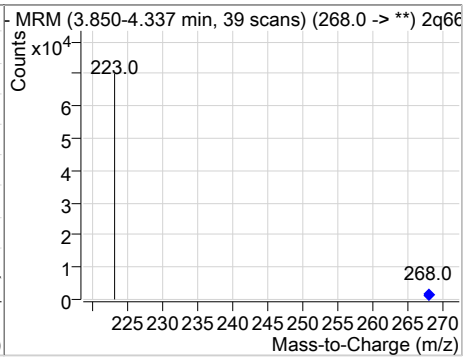




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	18.59	4.02	0.01	51291				

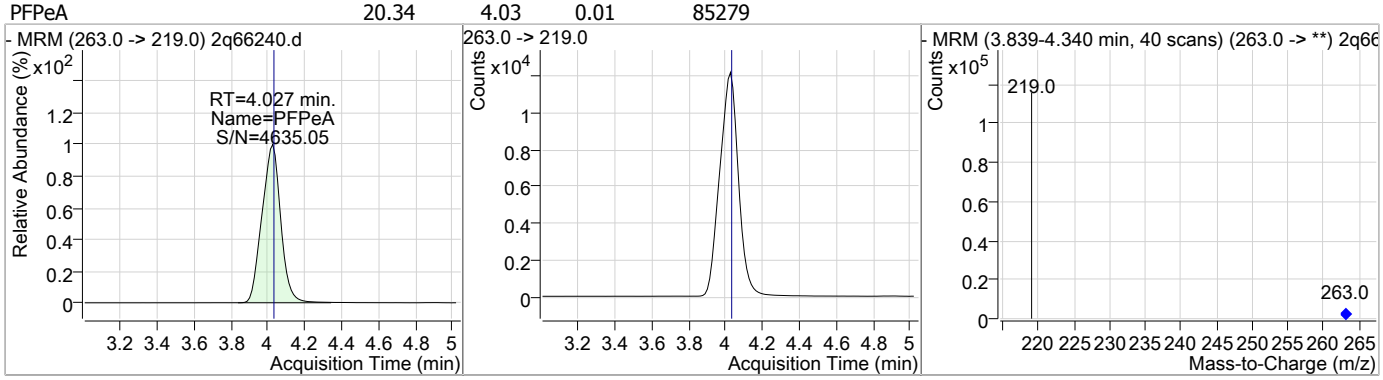




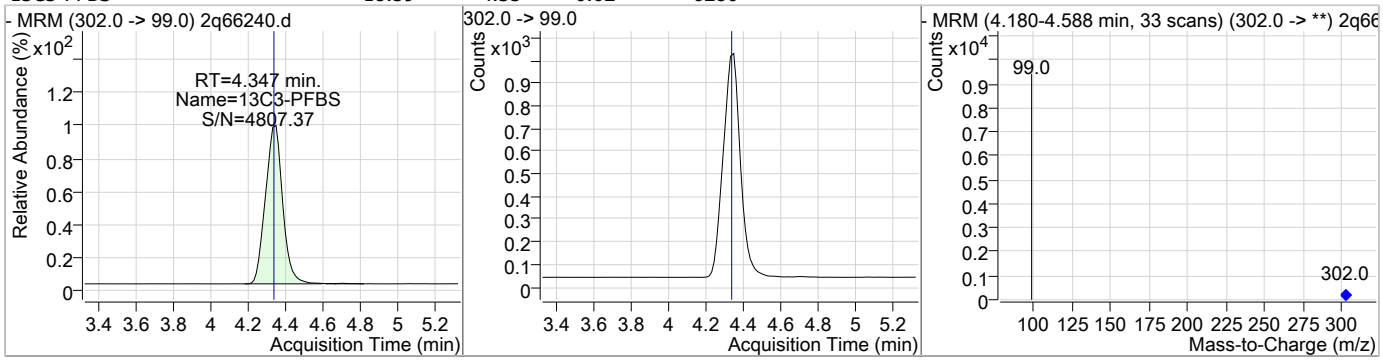


Perfluorinated Compounds by LC/MS/MS

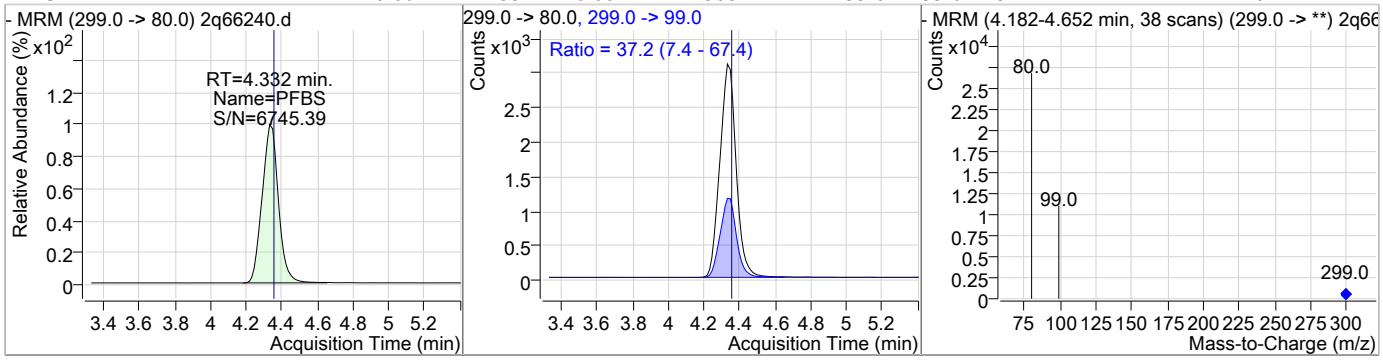
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	20.34	4.03	0.01	85279				



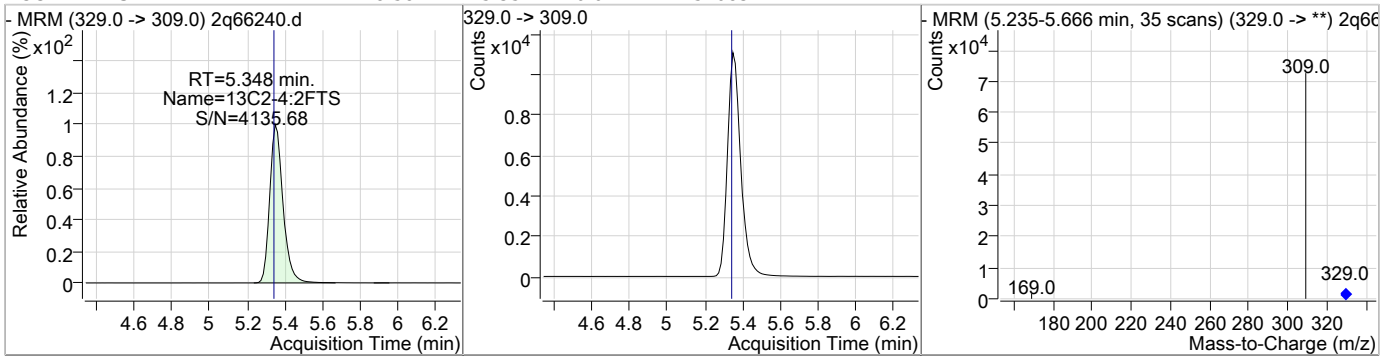
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	18.59	4.35	0.02	6280				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	20.00	4.33	0.00	19552	299.0 -> 99.0	37.2	7.4	67.4

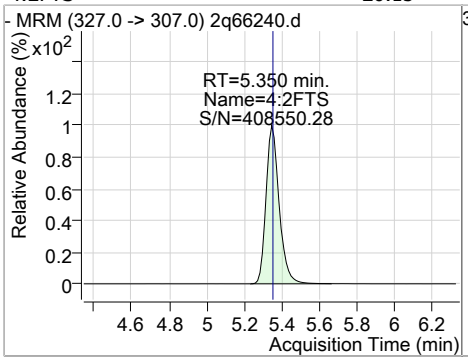


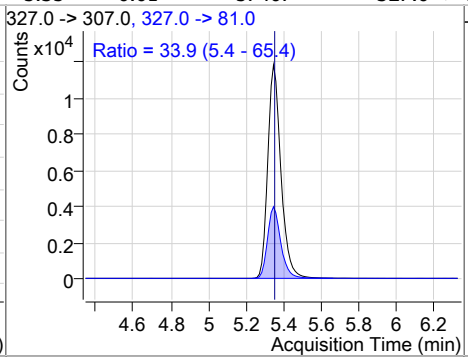
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.58	5.35	0.01	54083				

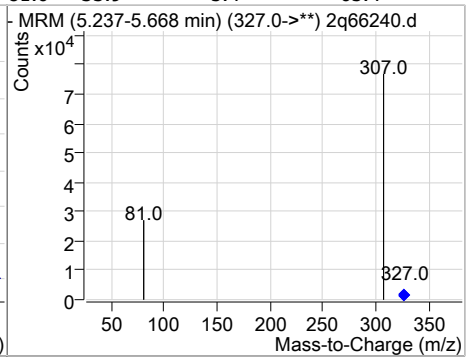


Perfluorinated Compounds by LC/MS/MS

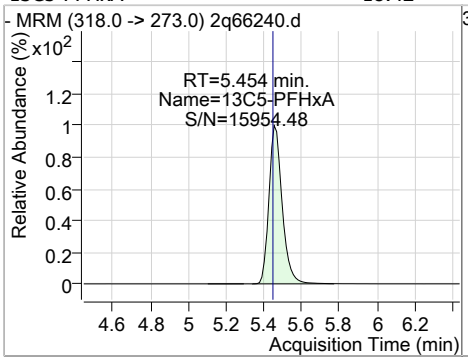
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.15	5.35	0.01	57407	327.0 -> 81.0	33.9	5.4	65.4

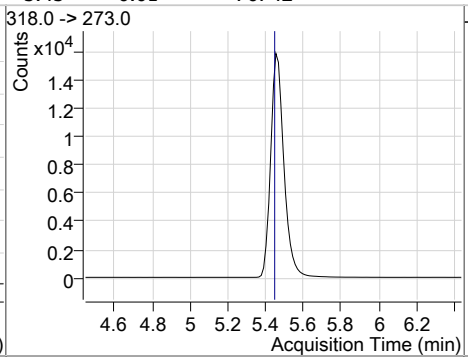


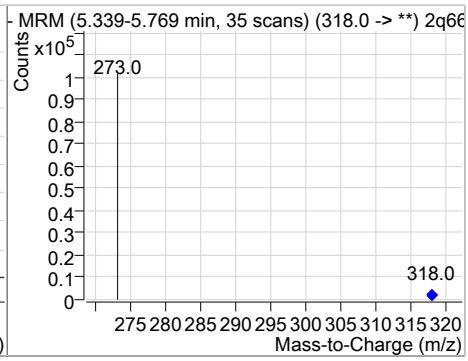




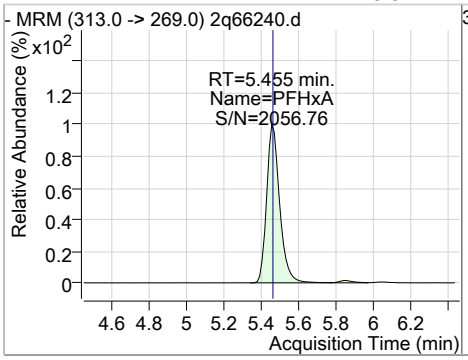
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	18.42	5.45	0.01	76742				

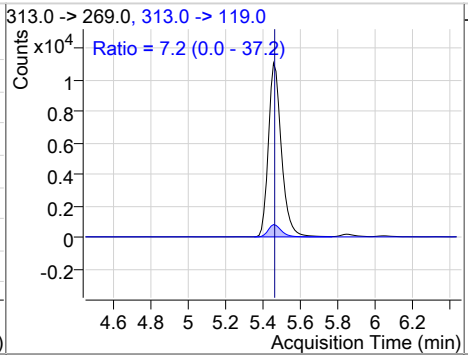


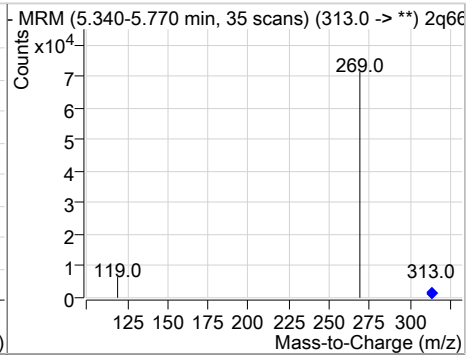




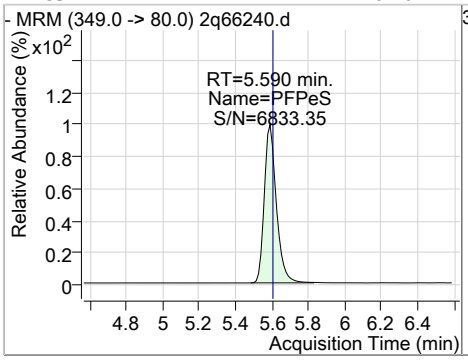
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.91	5.46	0.01	53435	313.0 -> 119.0	7.2	0.0	37.2

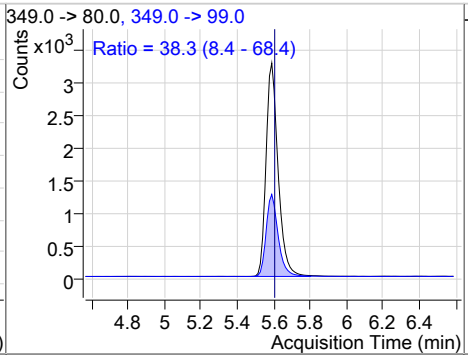


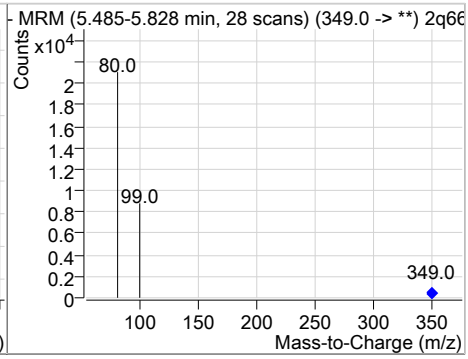




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	20.10	5.59	0.01	14906	349.0 -> 99.0	38.3	8.4	68.4

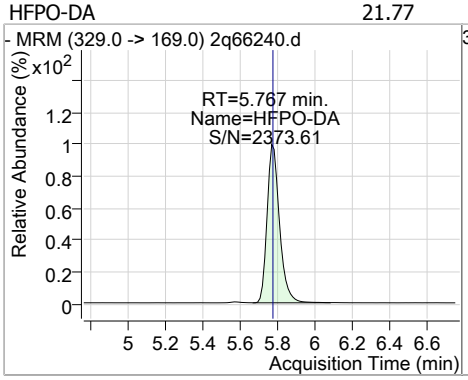


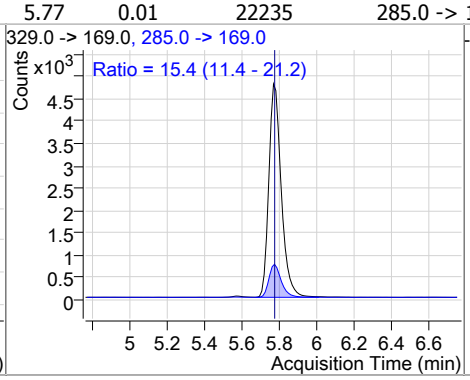


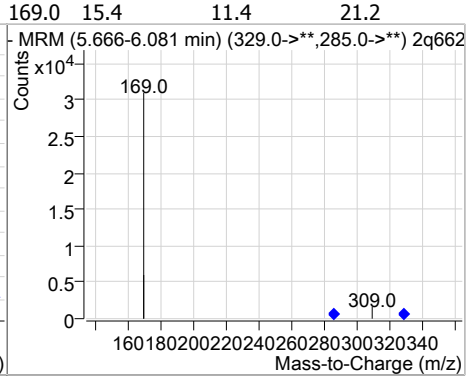


Perfluorinated Compounds by LC/MS/MS

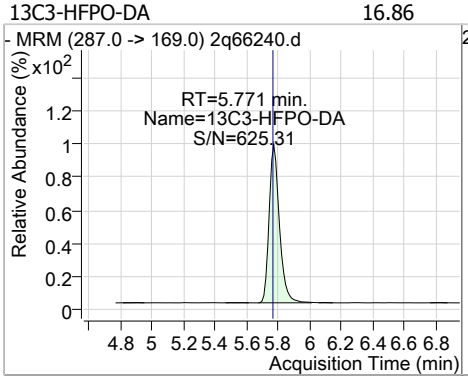
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	21.77	5.77	0.01	22235	285.0 -> 169.0	15.4	11.4	21.2

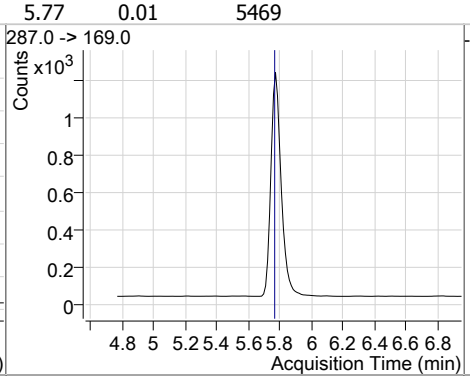


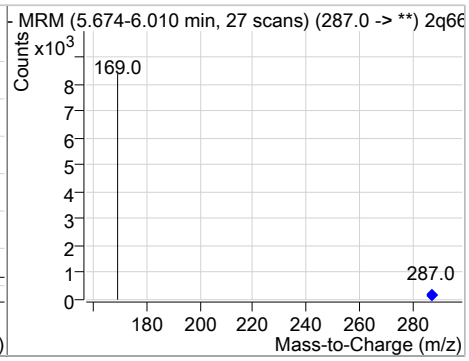




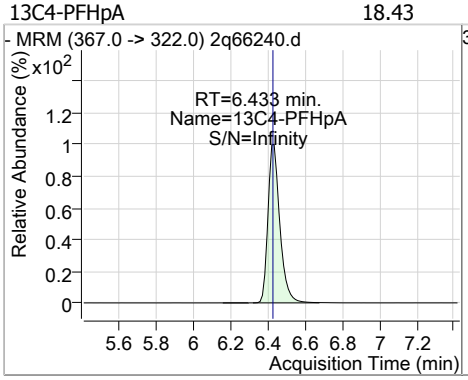
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	16.86	5.77	0.01	5469				

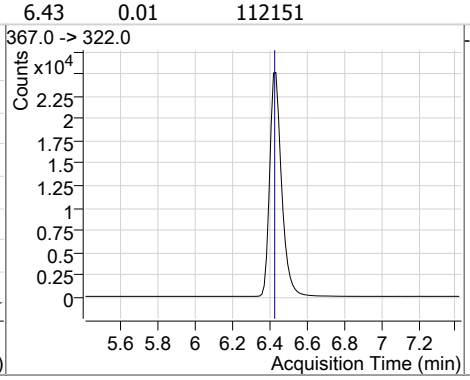


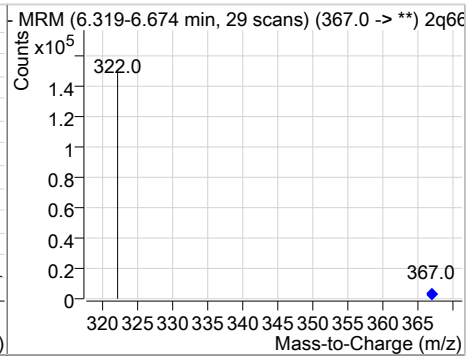




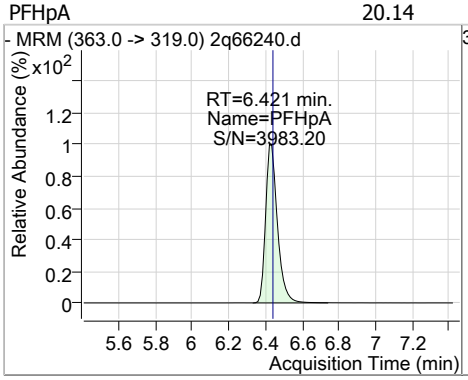
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	18.43	6.43	0.01	112151				

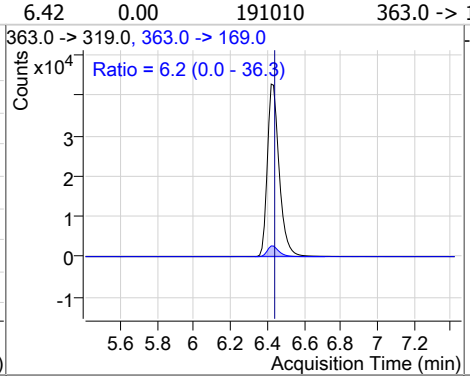


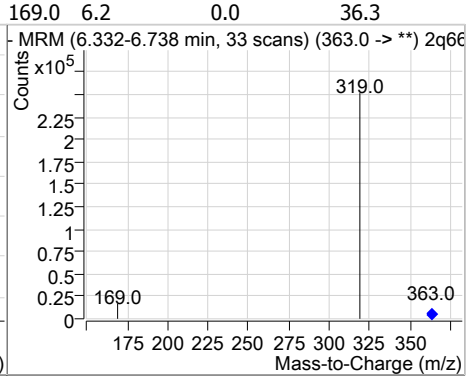




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	20.14	6.42	0.00	191010	363.0 -> 169.0	6.2	0.0	36.3

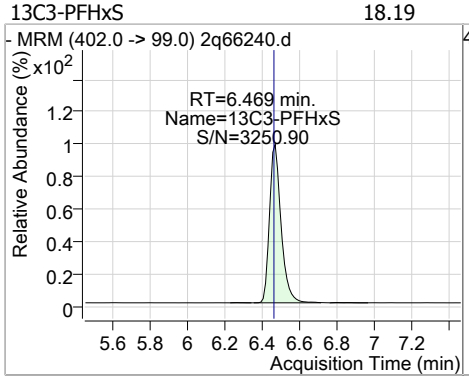


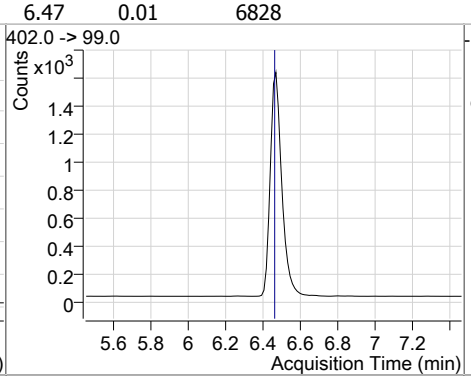


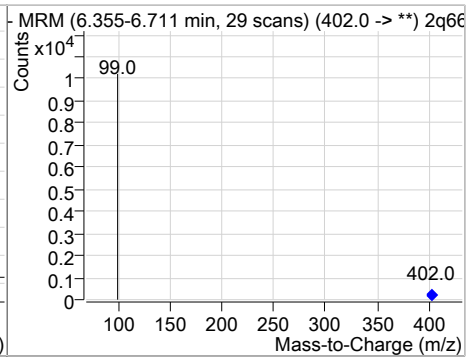


Perfluorinated Compounds by LC/MS/MS

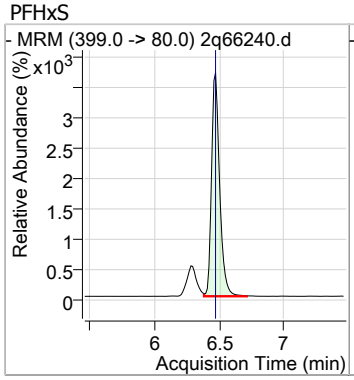
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	18.19	6.47	0.01	6828				

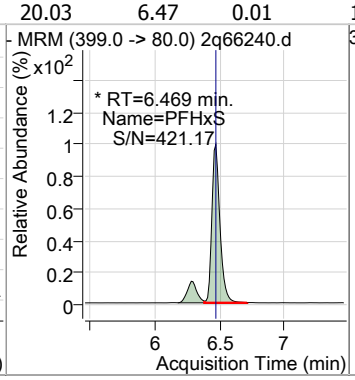


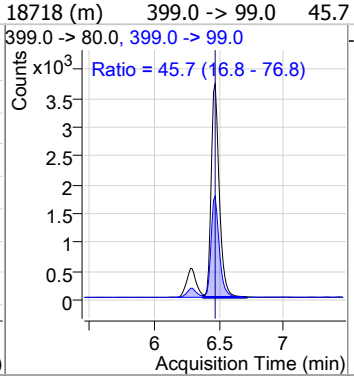


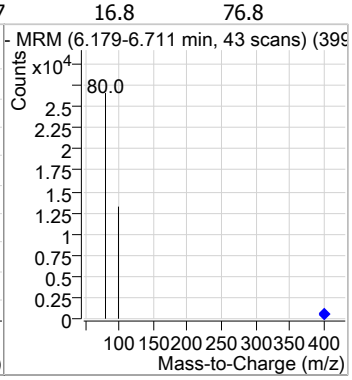


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	20.03	6.47	0.01	18718 (m)	399.0 -> 99.0	45.7	16.8	76.8

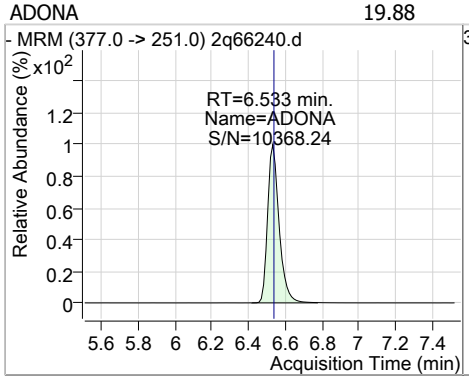


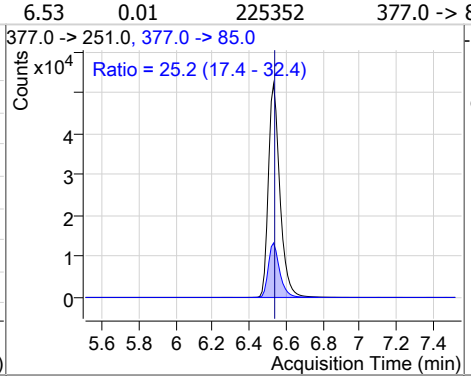


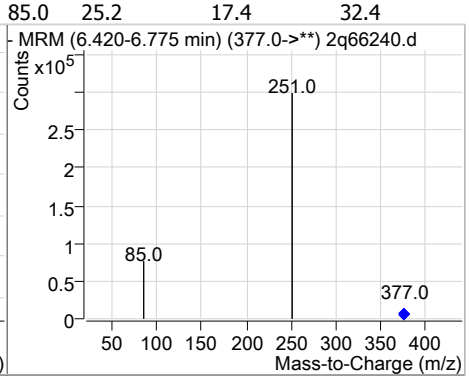




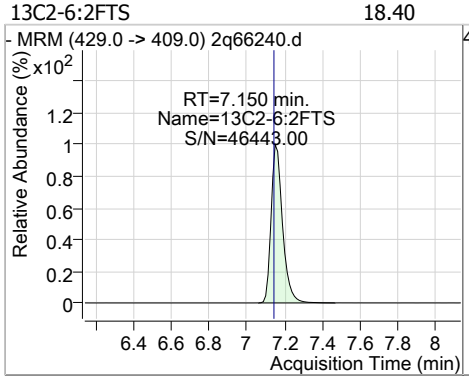
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	19.88	6.53	0.01	225352	377.0 -> 85.0	25.2	17.4	32.4

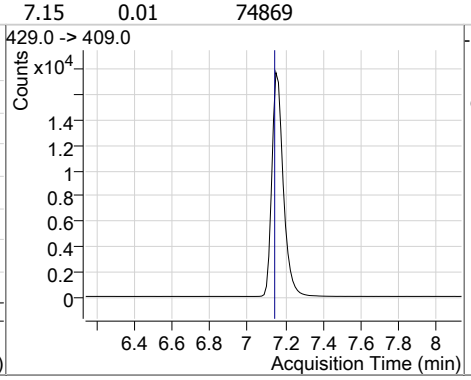


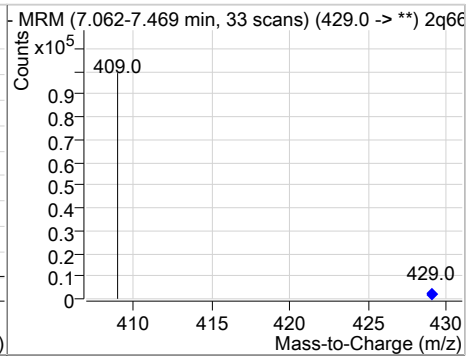




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.40	7.15	0.01	74869				

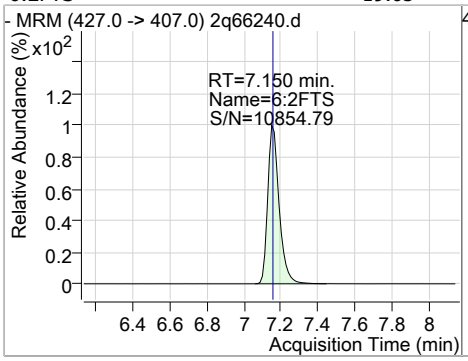


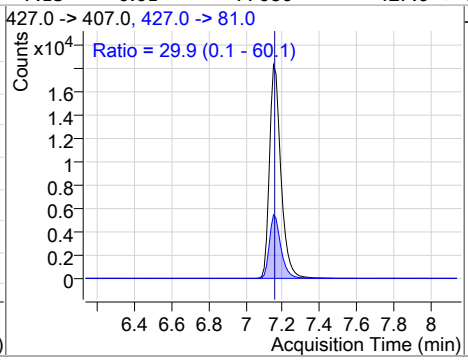


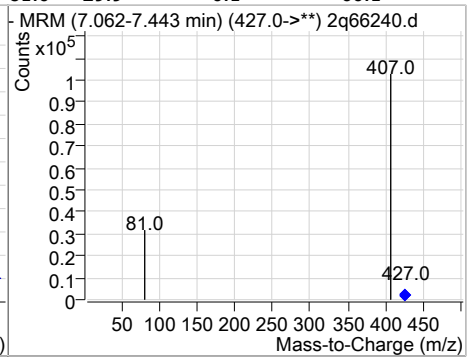


Perfluorinated Compounds by LC/MS/MS

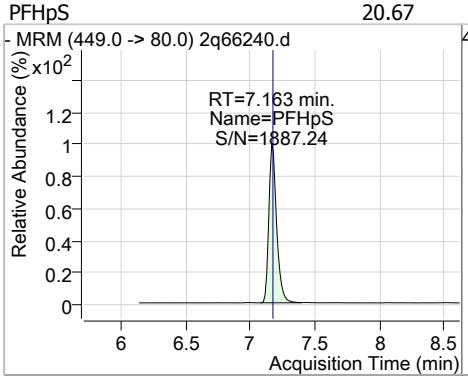
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	19.65	7.15	0.01	77686	427.0 -> 81.0	29.9	0.1	60.1

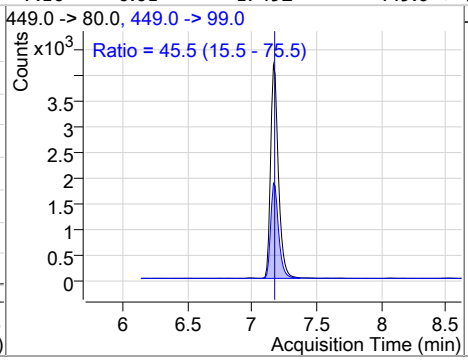


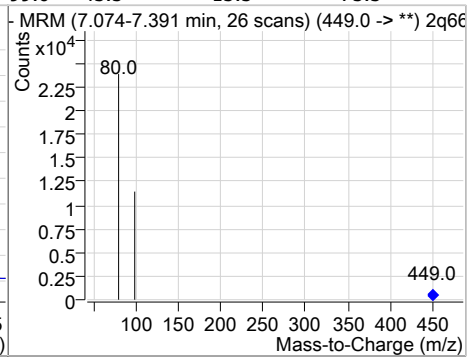




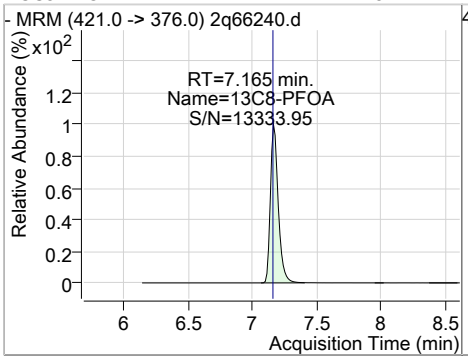
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	20.67	7.16	0.01	17492	449.0 -> 99.0	45.5	15.5	75.5

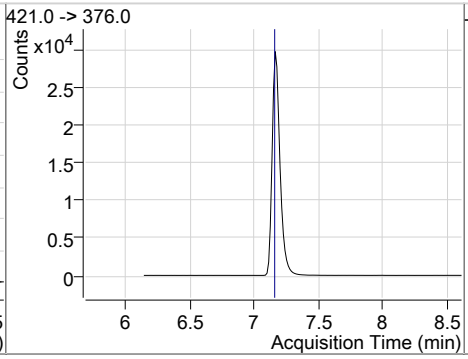


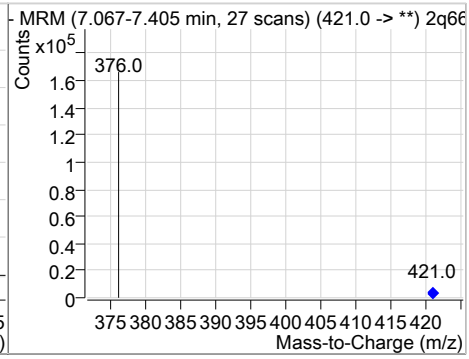




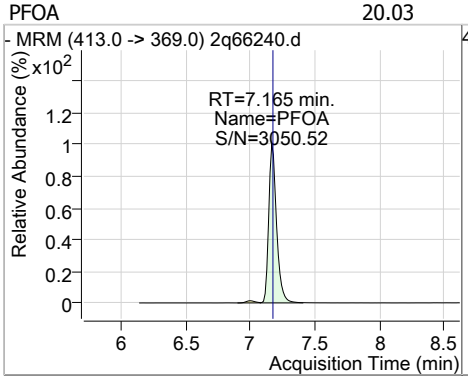
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	18.12	7.16	0.01	126372				

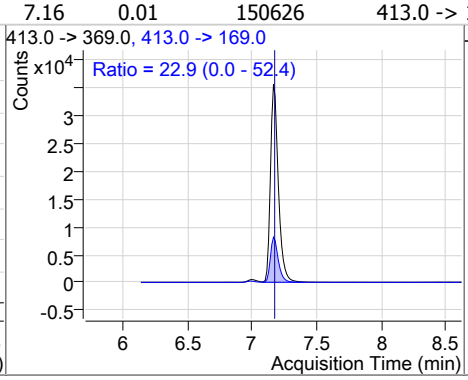


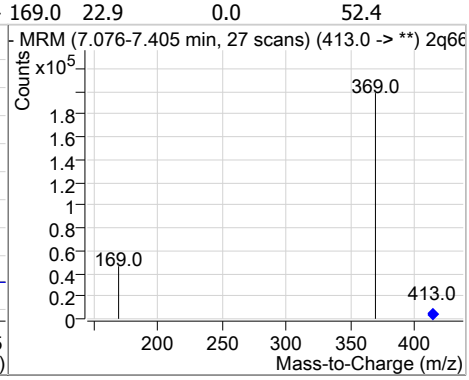




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	20.03	7.16	0.01	150626	413.0 -> 169.0	22.9	0.0	52.4

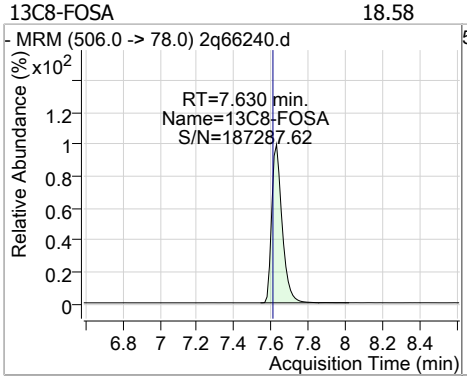


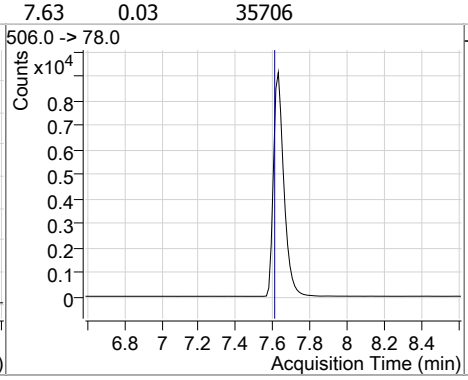


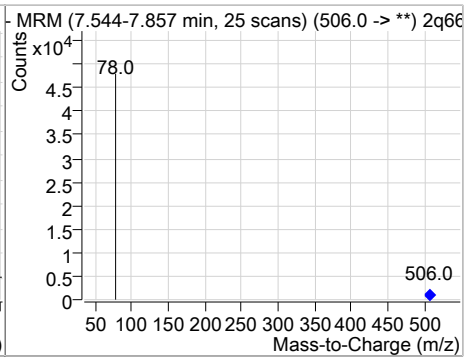


Perfluorinated Compounds by LC/MS/MS

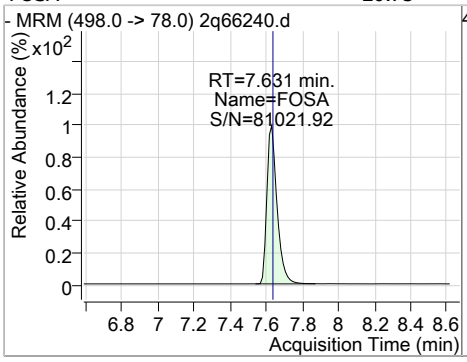
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	18.58	7.63	0.03	35706				

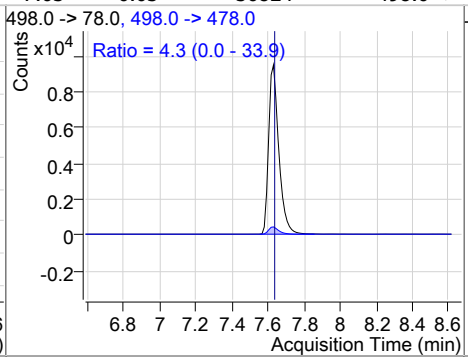


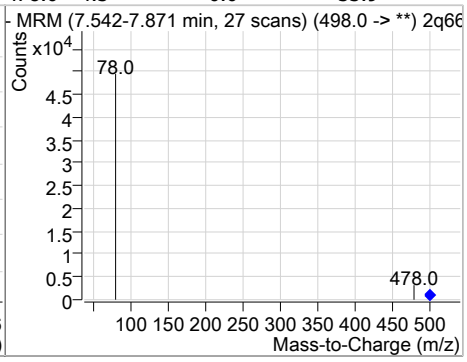




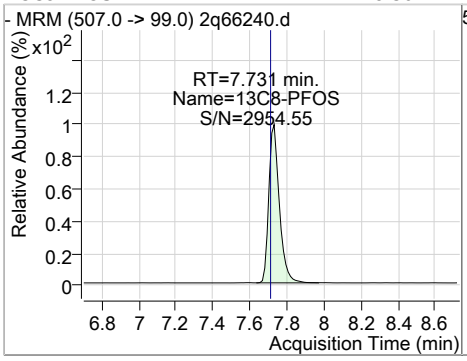
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	20.73	7.63	0.03	36824	498.0 -> 478.0	4.3	0.0	33.9

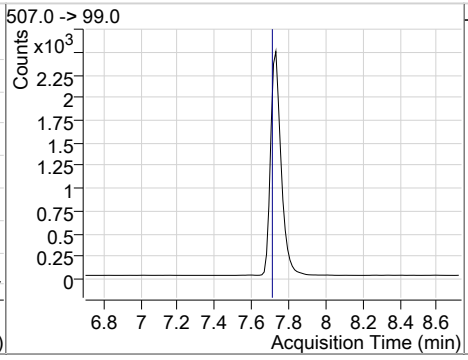


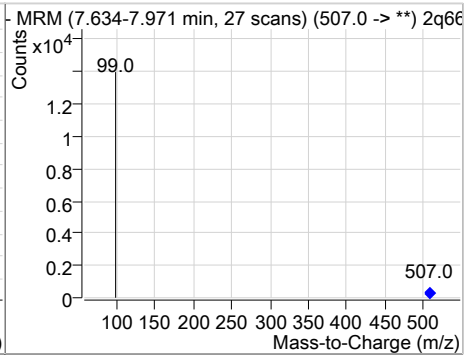




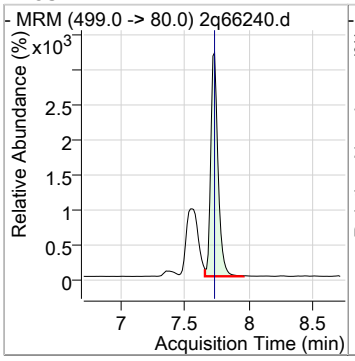
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	18.30	7.73	0.01	9723				

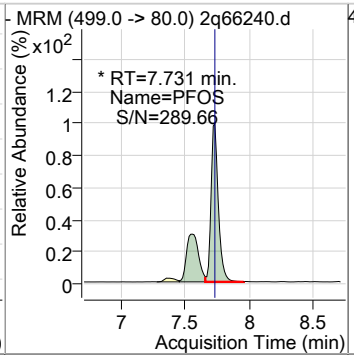


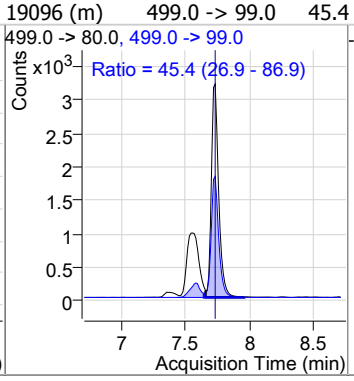


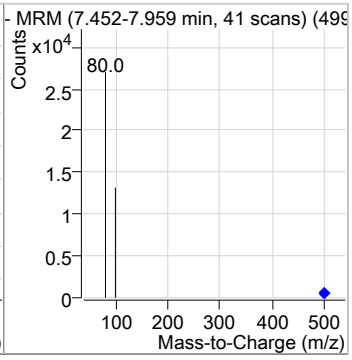


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	20.54	7.73	0.01	19096 (m)	499.0 -> 99.0	45.4	26.9	86.9



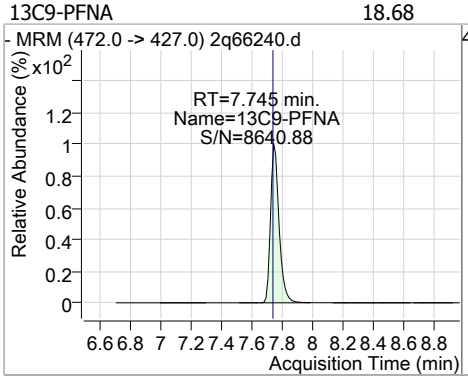


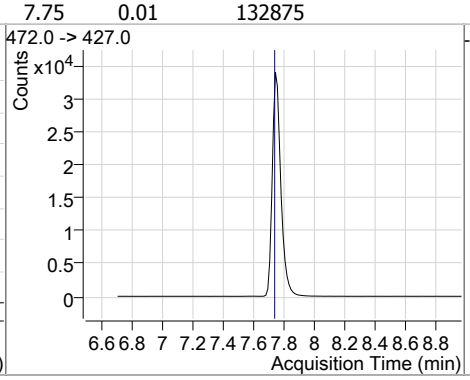


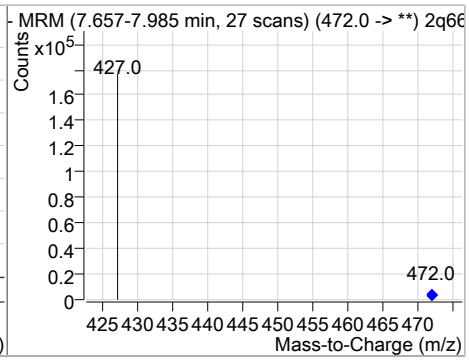


Perfluorinated Compounds by LC/MS/MS

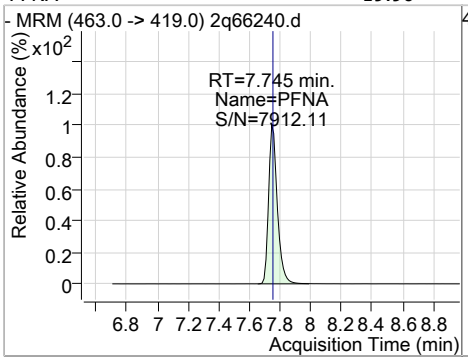
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.68	7.75	0.01	132875				

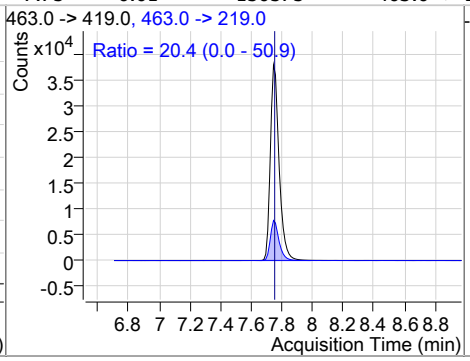


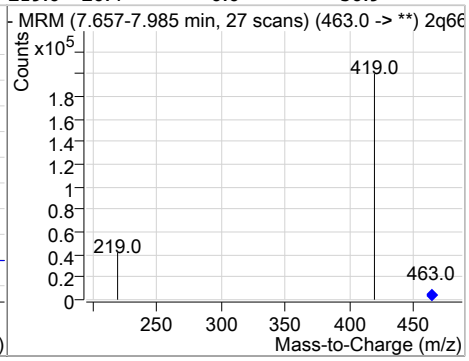




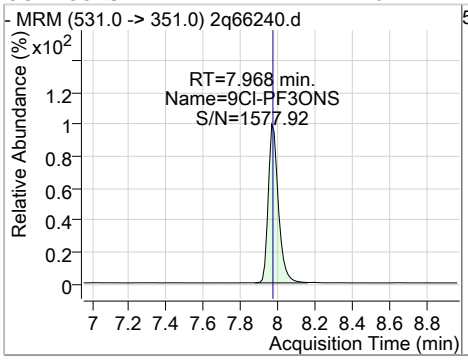
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.96	7.75	0.01	150575	463.0 -> 219.0	20.4	0.0	50.9

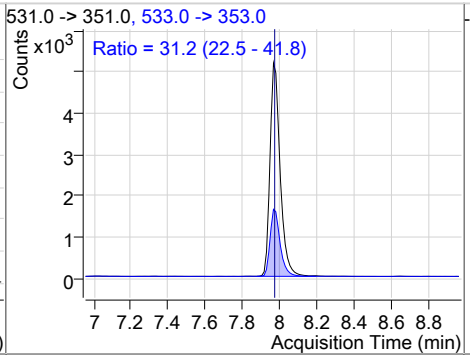


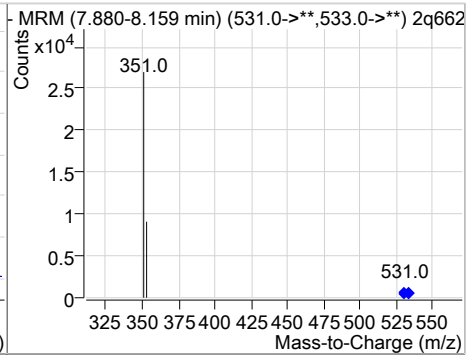




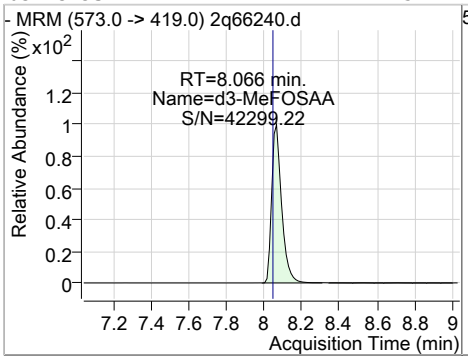
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	20.17	7.97	0.00	19647	533.0 -> 353.0	31.2	22.5	41.8

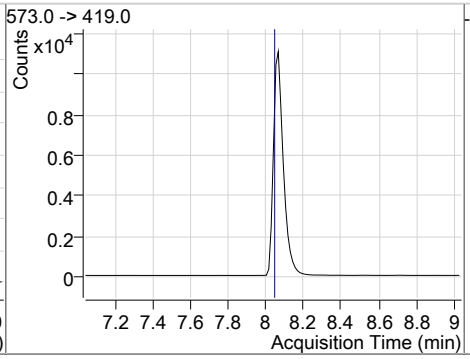


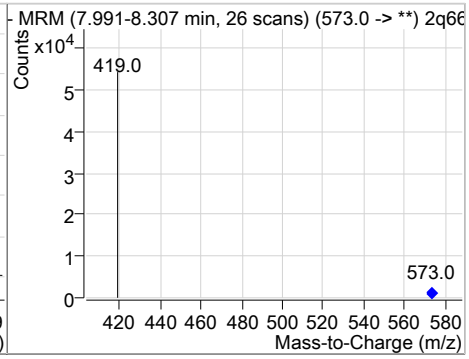




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	17.15	8.07	0.03	40692				

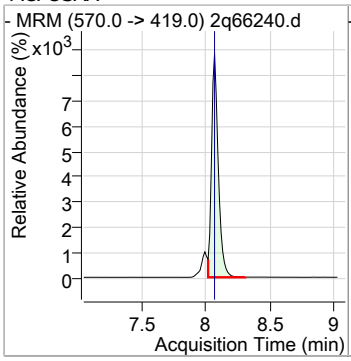


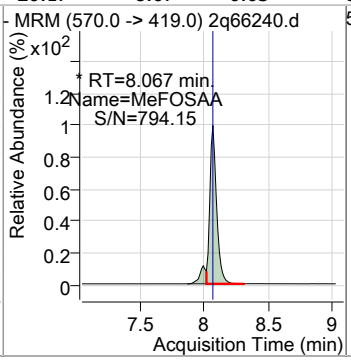


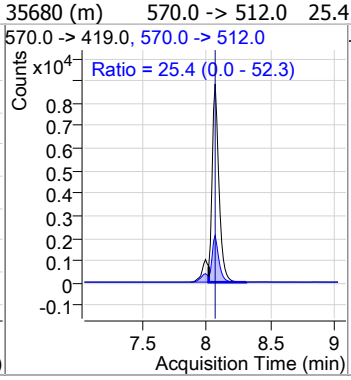


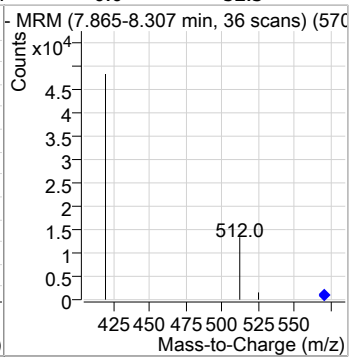
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	20.17	8.07	0.03	35680 (m)	570.0 -> 512.0	25.4	0.0	52.3

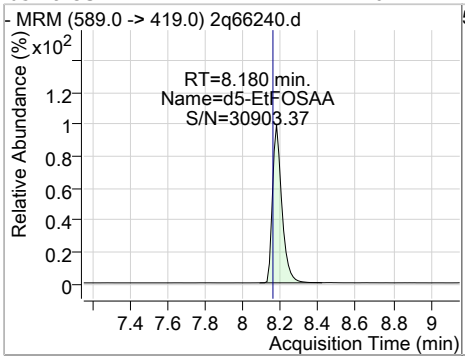


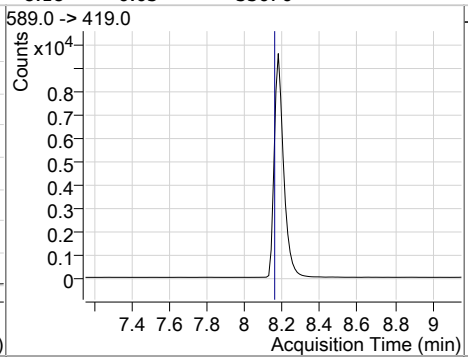


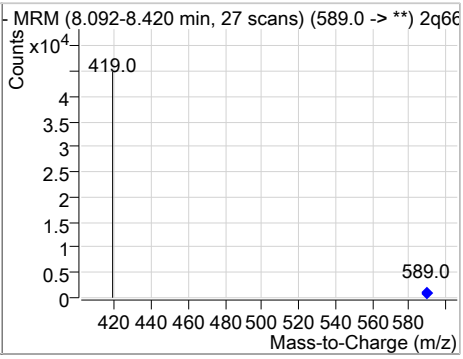




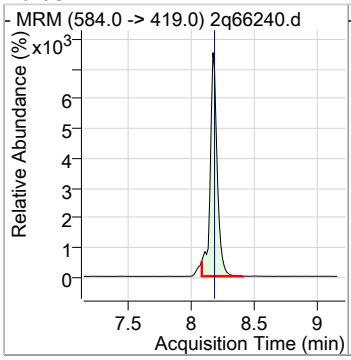
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	16.27	8.18	0.03	33076				

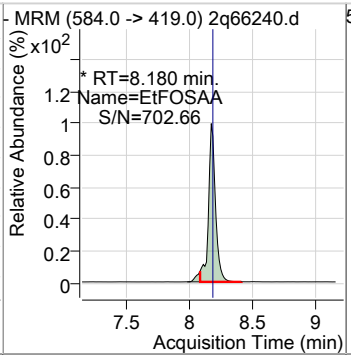


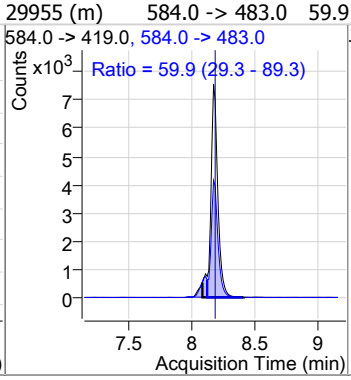


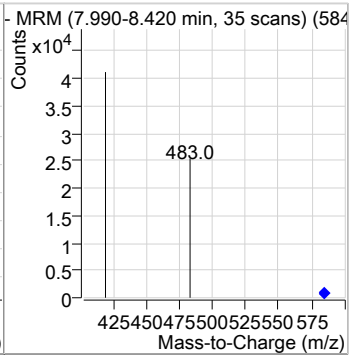


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	19.96	8.18	0.01	29955 (m)	584.0 -> 483.0	59.9	29.3	89.3

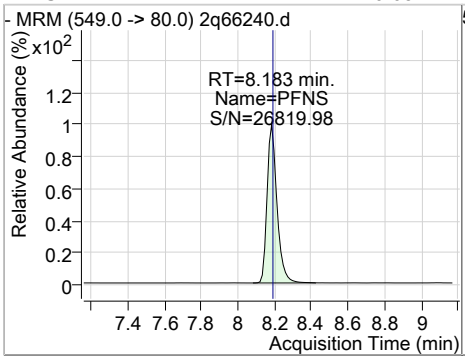


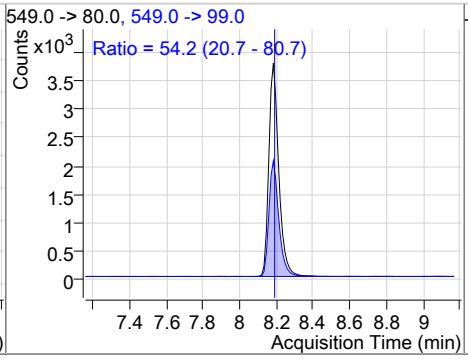


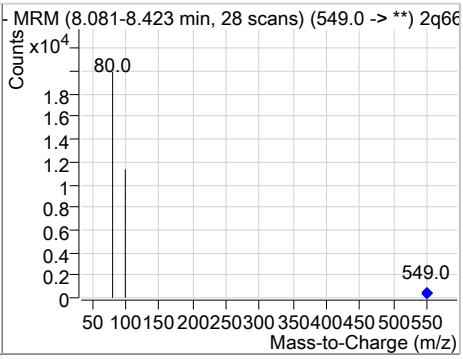




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	20.08	8.18	0.01	14173	549.0 -> 99.0	54.2	20.7	80.7

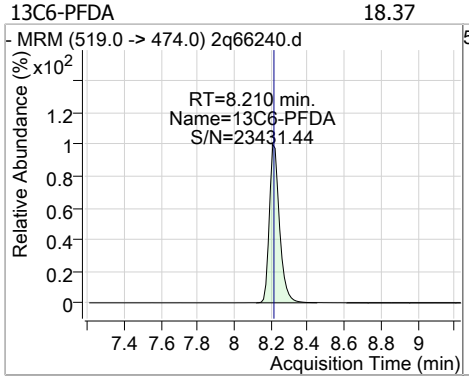


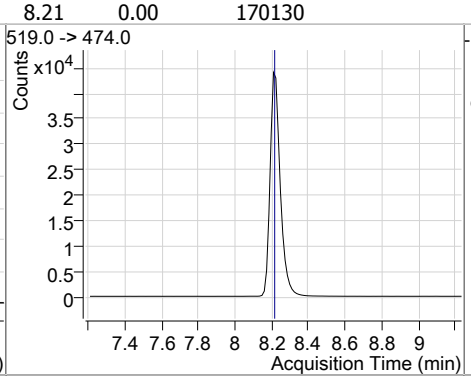


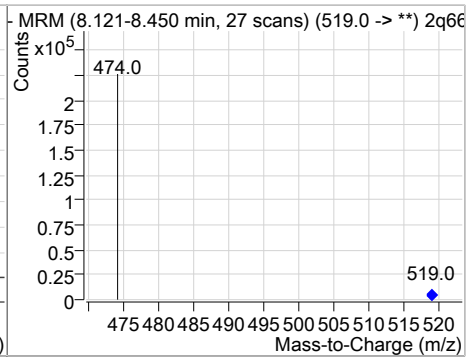


Perfluorinated Compounds by LC/MS/MS

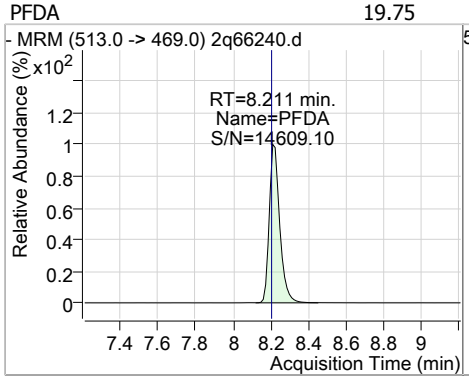
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.37	8.21	0.00	170130				

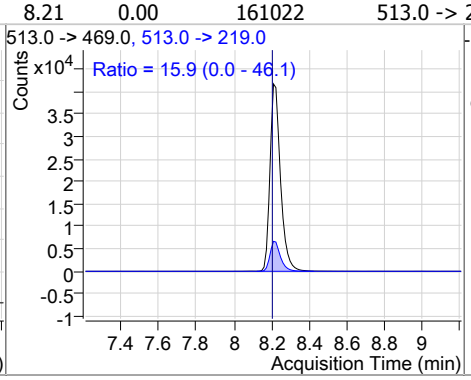


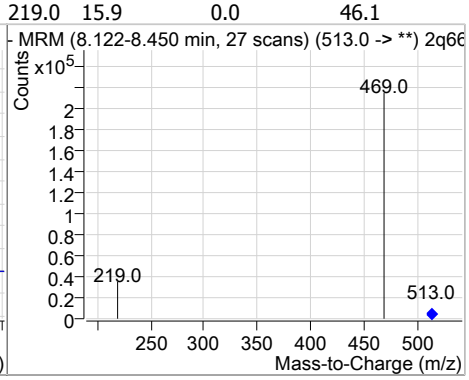




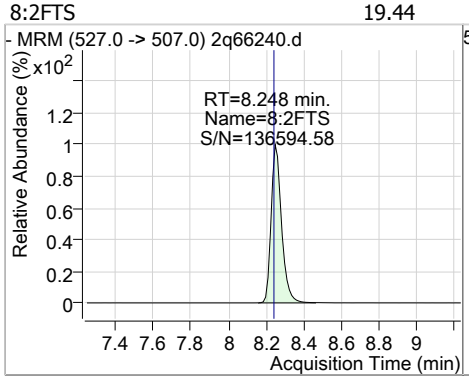
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.75	8.21	0.00	161022	513.0 -> 219.0	15.9	0.0	46.1

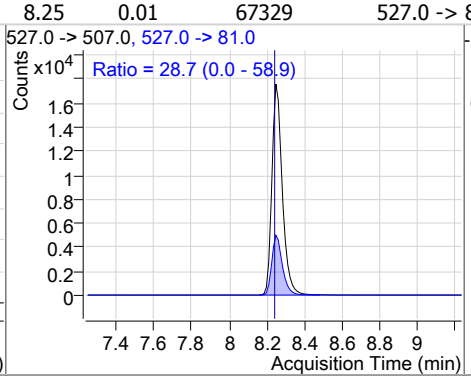


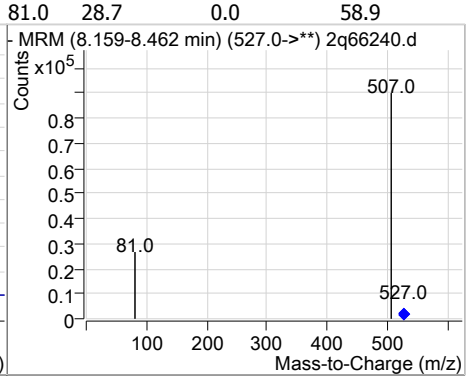




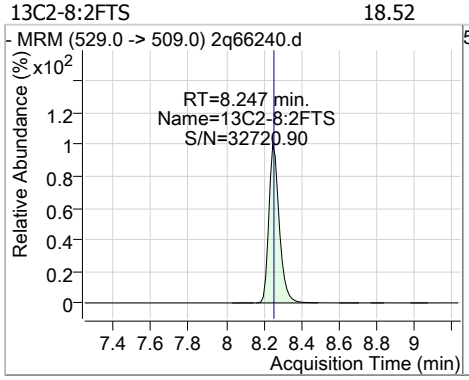
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	19.44	8.25	0.01	67329	527.0 -> 81.0	28.7	0.0	58.9

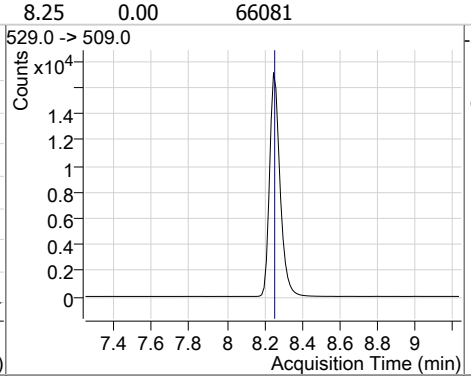


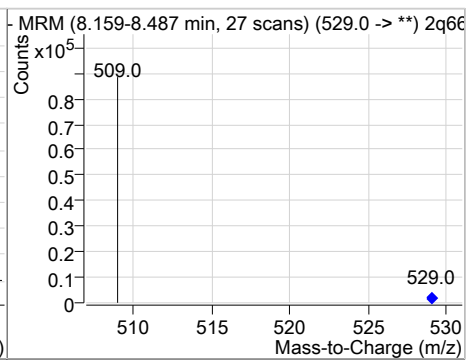




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.52	8.25	0.00	66081				

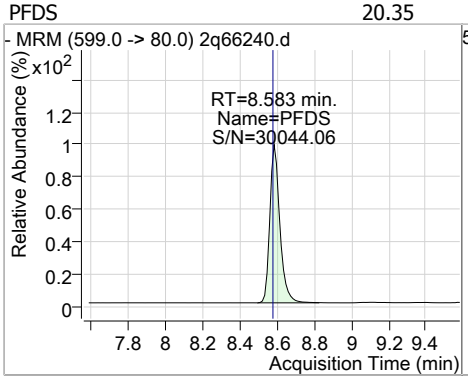


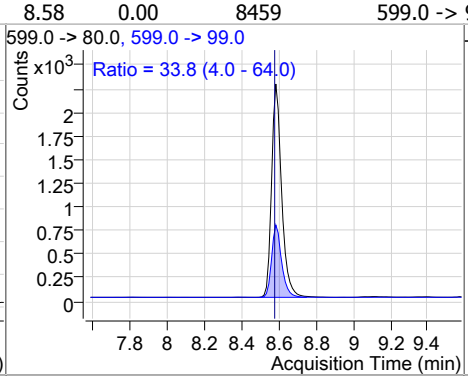


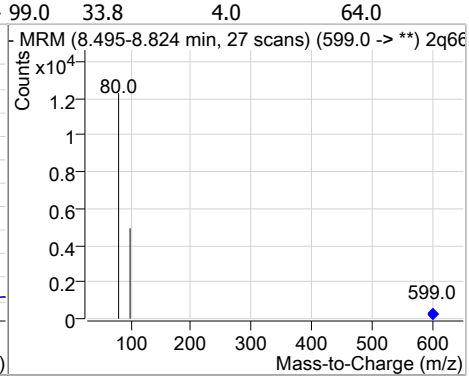


Perfluorinated Compounds by LC/MS/MS

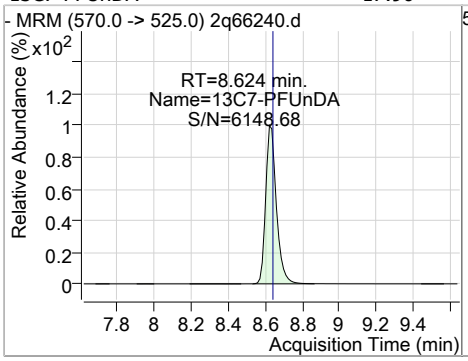
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	20.35	8.58	0.00	8459	599.0 -> 99.0	33.8	4.0	64.0

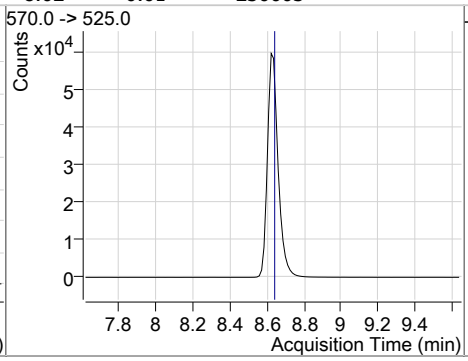


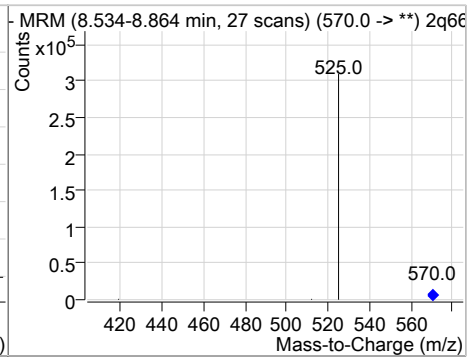




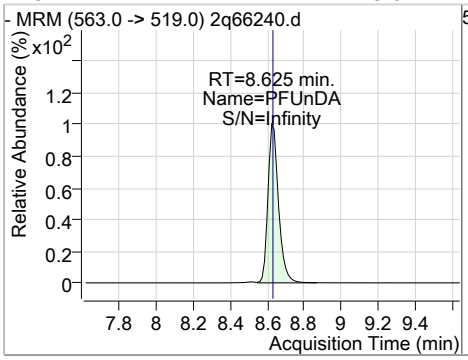
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	17.96	8.62	-0.01	236663				

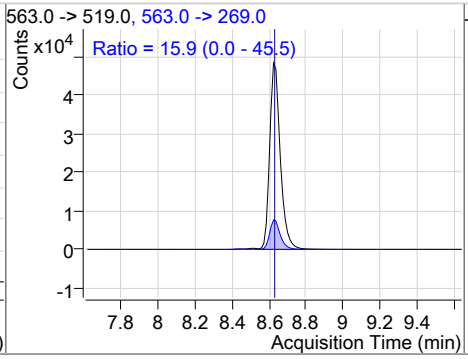


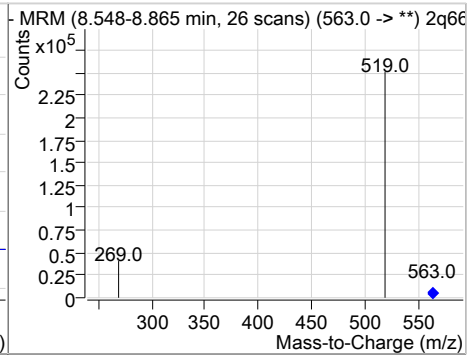




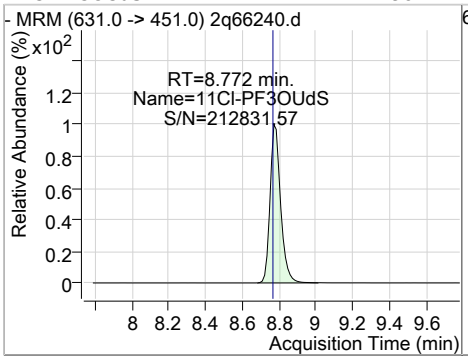
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	19.87	8.62	-0.01	191982	563.0 -> 269.0	15.9	0.0	45.5

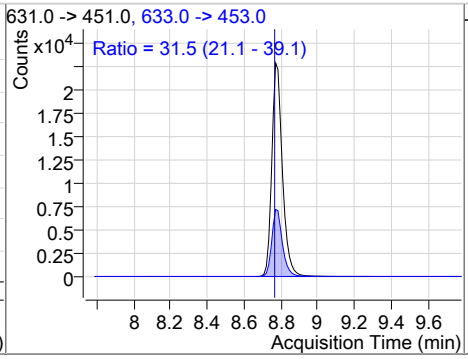


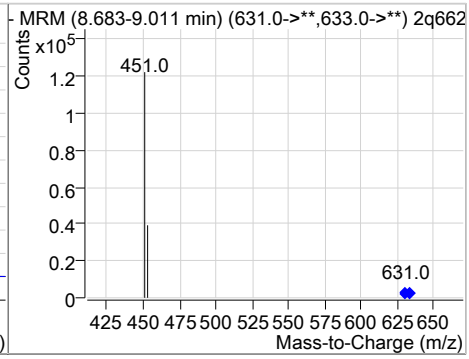




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	21.98	8.77	-0.01	91326	633.0 -> 453.0	31.5	21.1	39.1

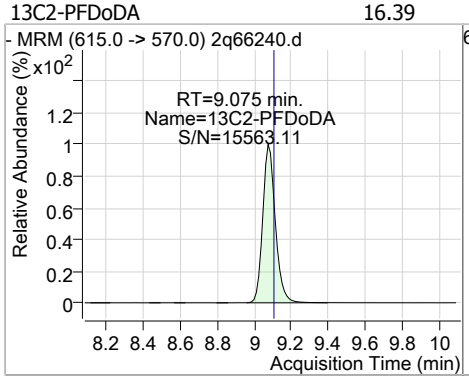


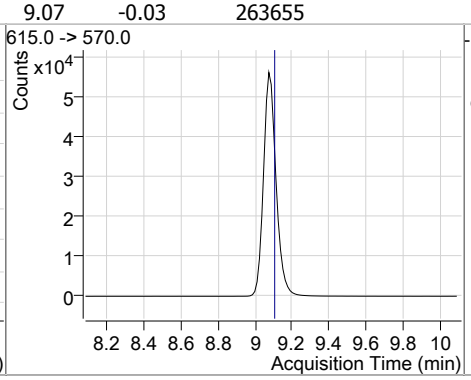


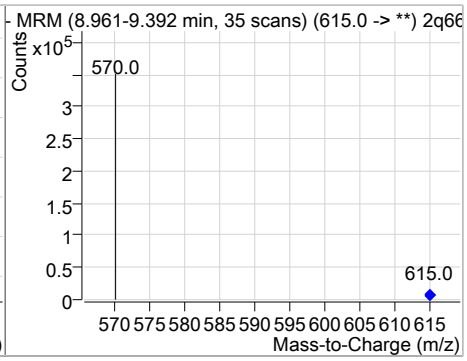


Perfluorinated Compounds by LC/MS/MS

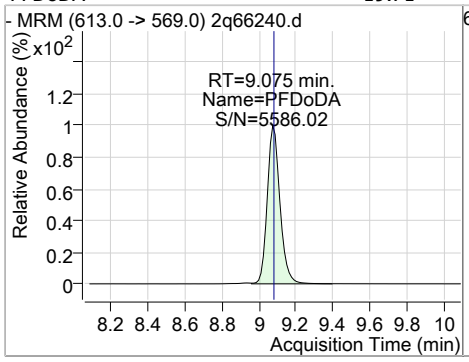
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	16.39	9.07	-0.03	263655				

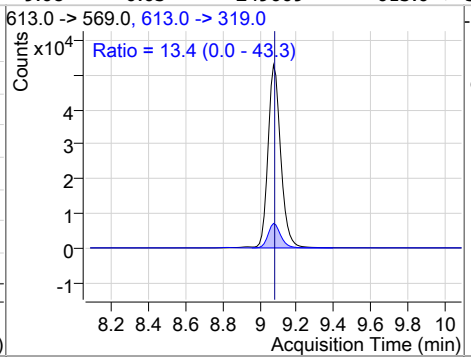


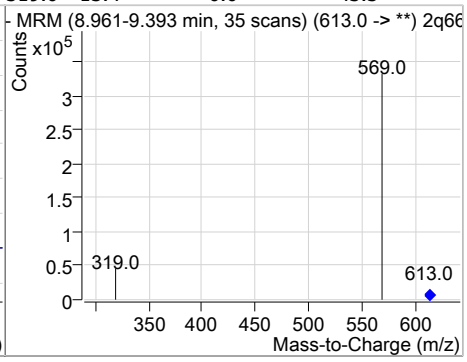




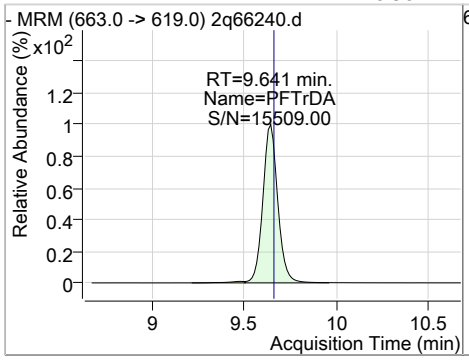
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	19.71	9.08	-0.03	249669	613.0 -> 319.0	13.4	0.0	43.3

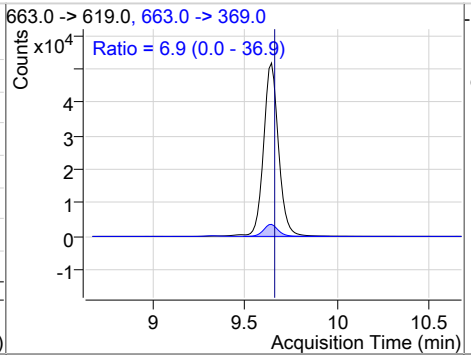


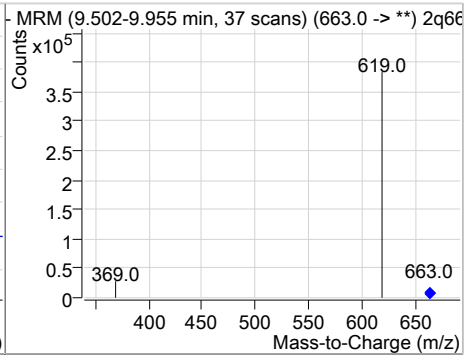




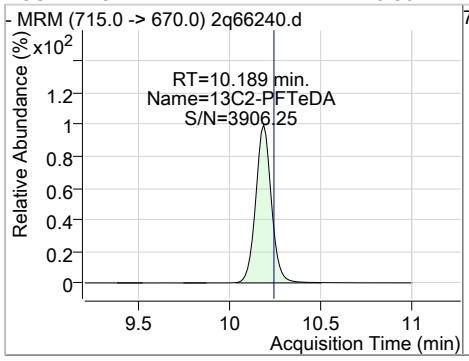
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	18.98	9.64	-0.04	290261	663.0 -> 369.0	6.9	0.0	36.9

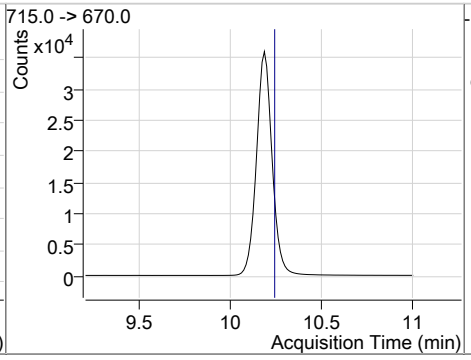


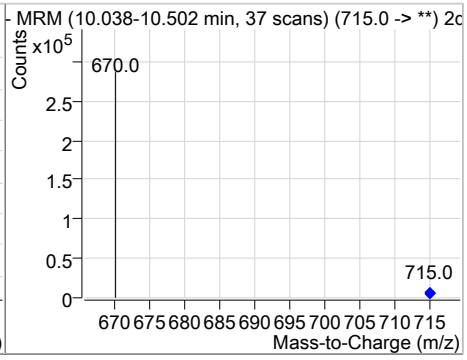




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	16.56	10.19	-0.05	213621				

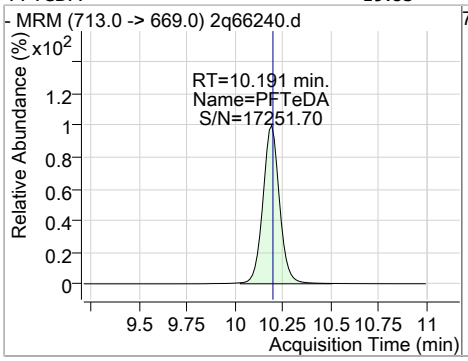


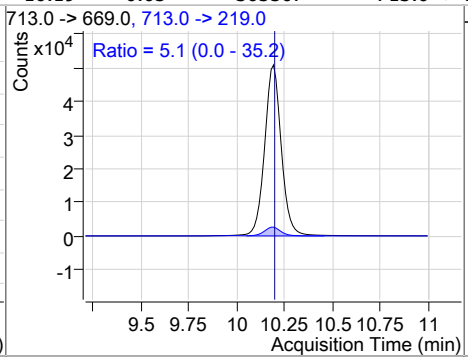


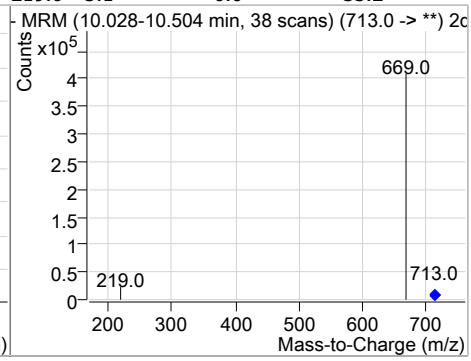


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	19.85	10.19	-0.05	305507	713.0 -> 219.0	5.1	0.0	35.2







Manual Integration Approval Summary

Sample Number: OP84941-BS
Lab FileID: 2Q66240.D
Injection Time: 04/17/21 03:16
Method: EPA 537M BY ID
Analyst approved: 04/18/21 11:54 Nancy Saunders
Supervisor approved: 04/19/21 15:44 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.47	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.73	Split peak
MeFOSAA	2355-31-9		8.07	Split peak
EtFOSAA	2991-50-6		8.18	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/15/21 10:01

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36620.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/14/2021 10:22:04 PM
Sample Name : op84900-ms
Vial : P2-C8
DA Method File : ID_041321_S3Q537.quantmethod.xml
Batch Name : s3q538.batch.bin
Sample Information : op84900,S3Q538,280,,,1,1.1,water

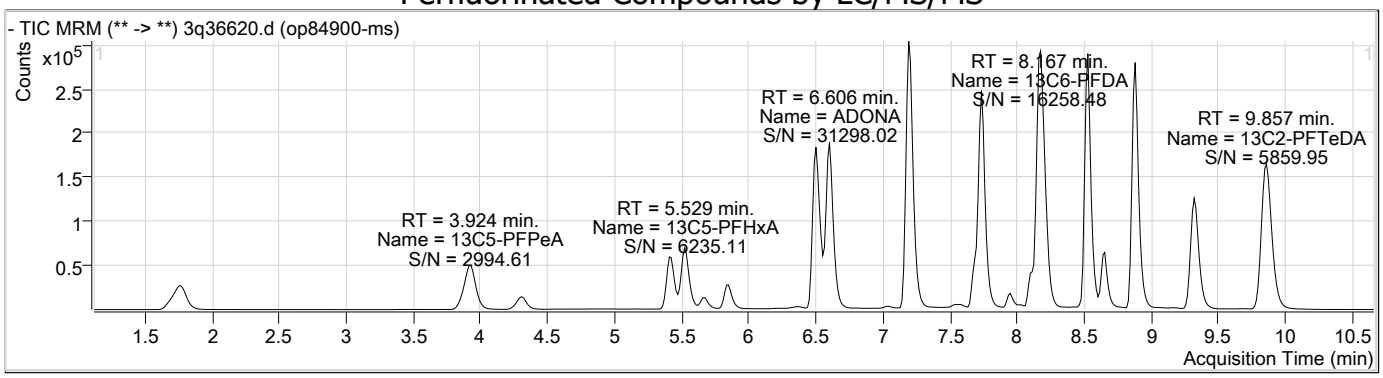
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.764	217.0 -> 172.0	142217	20.00	µg/L	-0.075
M5-PFPeA	3.924	268.0 -> 223.0	102734	20.00	µg/L	-0.150
M5-PFHxA	5.529	318.0 -> 273.0	156020	20.00	µg/L	-0.101
M4-PFHpA	6.506	367.0 -> 322.0	219652	20.00	µg/L	-0.101
M8-PFOA	7.212	421.0 -> 376.0	260582	20.00	µg/L	-0.114
M9-PFNA	7.741	472.0 -> 427.0	289150	20.00	µg/L	-0.114
M6-PFDA	8.167	519.0 -> 474.0	341357	20.00	µg/L	-0.090
M7-PFUnDA	8.530	570.0 -> 525.0	419545	20.00	µg/L	-0.076
M2-PFDoDA	8.881	615.0 -> 570.0	443821	20.00	µg/L	-0.076
M2-PFTeDA	9.857	715.0 -> 670.0	344412	20.00	µg/L	-0.088
M8-FOSA	7.690	506.0 -> 78.0	70787	20.00	µg/L	-0.126
M3-PFBS	4.304	302.0 -> 99.0	14050	20.00	µg/L	-0.142
M3-PFHxS	6.542	402.0 -> 99.0	19458	20.00	µg/L	-0.113
M8-PFOS	7.727	507.0 -> 99.0	26968	20.00	µg/L	-0.114
M2-4:2FTS	5.422	329.0 -> 309.0	97815	20.00	µg/L	-0.090
M2-6:2FTS	7.199	429.0 -> 409.0	146708	20.00	µg/L	-0.114
M2-8:2FTS	8.193	529.0 -> 509.0	141628	20.00	µg/L	-0.089
M3-MeFOSAA	8.101	573.0 -> 419.0	54670	20.00	µg/L	-0.076
M3-HFPO-DA	5.845	287.0 -> 169.0	20292	20.00	µg/L	-0.100
M5-EtFOSAA	8.214	589.0 -> 419.0	46464	20.00	µg/L	-0.075
System Monitoring Compounds						
13C2-4:2FTS	5.422	329.0 -> 309.0	97815	17.09	µg/L	-0.090
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.4%		
13C2-6:2FTS	7.199	429.0 -> 409.0	146708	17.35	µg/L	-0.114
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.8%		
13C2-8:2FTS	8.193	529.0 -> 509.0	141628	15.30	µg/L	-0.089
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 76.5%		
13C2-PFDoDA	8.881	615.0 -> 570.0	443821	11.51	µg/L	-0.076
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 57.5%		
13C2-PFTeDA	9.857	715.0 -> 670.0	344412	12.32	µg/L	-0.088
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 61.6%		
13C3-PFBS	4.304	302.0 -> 99.0	14050	17.42	µg/L	-0.142
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.1%		
13C3-PFHxS	6.542	402.0 -> 99.0	19458	17.09	µg/L	-0.113
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.4%		
13C4-PFBA	1.764	217.0 -> 172.0	142217	18.15	µg/L	-0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.7%		
13C4-PFHpA	6.506	367.0 -> 322.0	219652	16.94	µg/L	-0.101
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.7%		
13C5-PFHxA	5.529	318.0 -> 273.0	156020	17.05	µg/L	-0.101
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.2%		
13C5-PFPeA	3.924	268.0 -> 223.0	102734	17.50	µg/L	-0.150
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.5%		
13C6-PFDA	8.167	519.0 -> 474.0	341357	14.86	µg/L	-0.090
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 74.3%		

Perfluorinated Compounds by LC/MS/MS

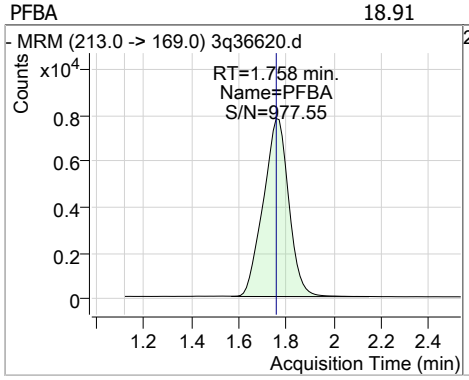
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.530	570.0 -> 525.0	419545	13.27	µg/L		-0.076
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 66.4%			
13C8-FOSA	7.690	506.0 -> 78.0	70787	13.33	µg/L		-0.126
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 66.7%			
13C8-PFOA	7.212	421.0 -> 376.0	260582	17.12	µg/L		-0.114
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.6%			
13C8-PFOS	7.727	507.0 -> 99.0	26968	15.27	µg/L		-0.114
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 76.4%			
13C9-PFNA	7.741	472.0 -> 427.0	289150	16.38	µg/L		-0.114
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.9%			
d3-MeFOSAA	8.101	573.0 -> 419.0	54670	11.45	µg/L		-0.076
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 57.3%			
13C3-HFPO-DA	5.845	287.0 -> 169.0	20302	16.74	µg/L		-0.100
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.7%			
d5-EtFOSAA	8.214	589.0 -> 419.0	46461	11.29	µg/L		-0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 56.5%			
Target Compounds							**QValue**
4:2FTS	5.411	327.0 -> 307.0	110925	18.68	µg/L		100
6:2FTS	7.199	427.0 -> 407.0	165898	18.69	µg/L		99
8:2FTS	8.193	527.0 -> 507.0	157748	18.97	µg/L		98
EtFOSAA	8.227	584.0 -> 419.0	43868	18.00	µg/L	m	89
FOSA	7.690	498.0 -> 78.0	76379	18.75	µg/L		100
MeFOSAA	8.101	570.0 -> 419.0	53336	19.04	µg/L	m	100
PFBA	1.758	213.0 -> 169.0	57869	18.91	µg/L		100
PFBS	4.307	299.0 -> 80.0	44432	18.40	µg/L		99
PFDA	8.168	513.0 -> 469.0	358882	18.08	µg/L		100
PFDoDA	8.881	613.0 -> 569.0	459158	18.53	µg/L		100
PFDS	8.490	599.0 -> 80.0	18554	17.71	µg/L		96
PFHpA	6.507	363.0 -> 319.0	418023	18.67	µg/L		100
PFHpS	7.211	449.0 -> 80.0	46789	20.97	µg/L		98
PFHxA	5.530	313.0 -> 269.0	113960	18.57	µg/L		99
PFHxS	6.542	399.0 -> 80.0	46000	18.41	µg/L	m	97
PFNA	7.742	463.0 -> 419.0	361023	18.58	µg/L		99
PFNS	8.140	549.0 -> 80.0	35620	16.46	µg/L		98
PFOA	7.213	413.0 -> 369.0	311056	19.65	µg/L		100
PFOS	7.728	499.0 -> 80.0	53767	19.00	µg/L	m	83
PFPeA	3.926	263.0 -> 219.0	207035	18.96	µg/L		100
PFPeS	5.676	349.0 -> 80.0	33798	18.07	µg/L		100
PFTeDA	9.859	713.0 -> 669.0	524667	18.43	µg/L		100
PFTrDA	9.320	663.0 -> 619.0	510016	18.69	µg/L		100
PFUnDA	8.531	563.0 -> 519.0	425259	18.46	µg/L		99
11Cl-PF3OUdS	8.654	631.0 -> 451.0	154723	19.75	µg/L		100
9Cl-PF3ONS	7.952	531.0 -> 351.0	38840	16.71	µg/L		99
ADONA	6.606	377.0 -> 251.0	529045	18.46	µg/L		99
HFPO-DA	5.853	329.0 -> 169.0	75595	18.30	µg/L		99

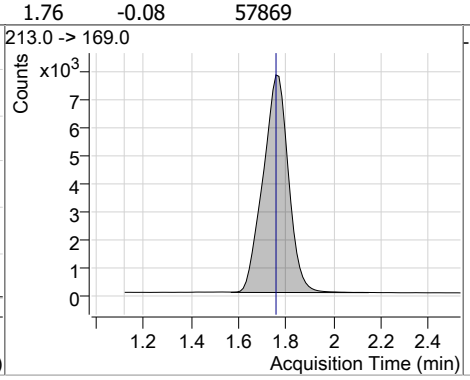
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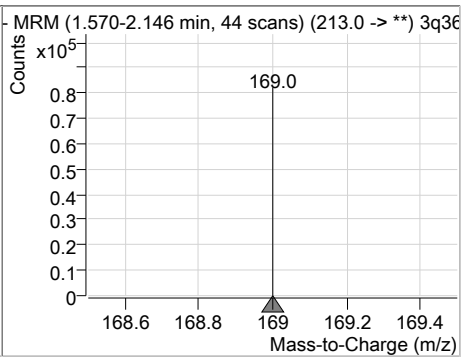
Perfluorinated Compounds by LC/MS/MS



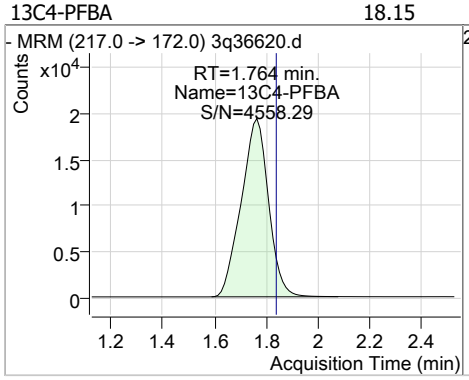
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	18.91	1.76	-0.08	57869				

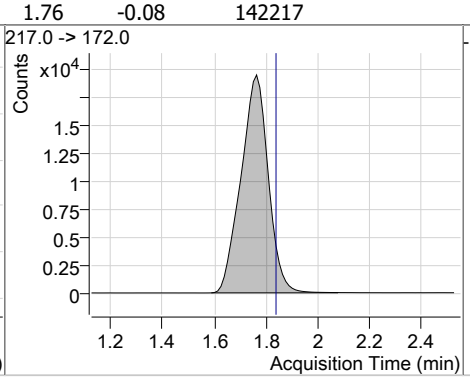


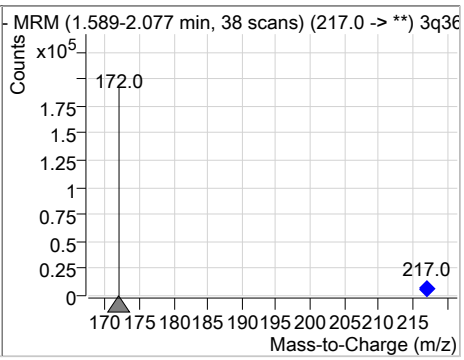




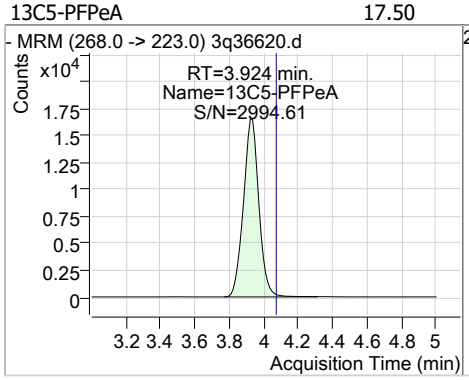
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.15	1.76	-0.08	142217				

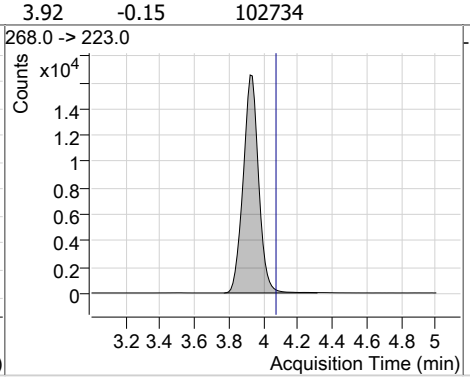


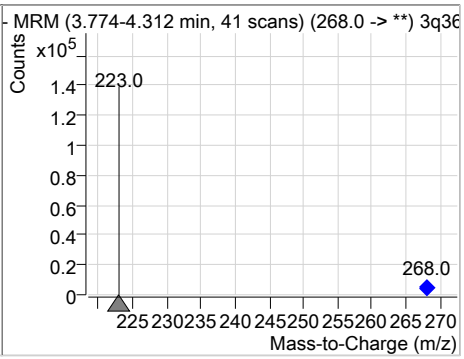




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	17.50	3.92	-0.15	102734				

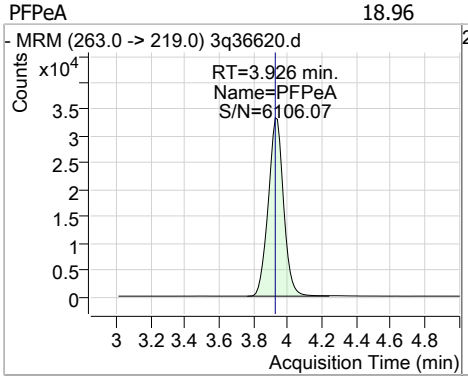


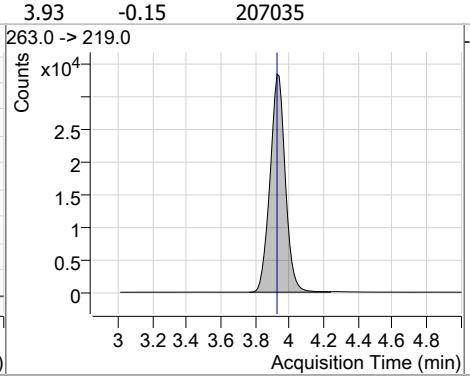


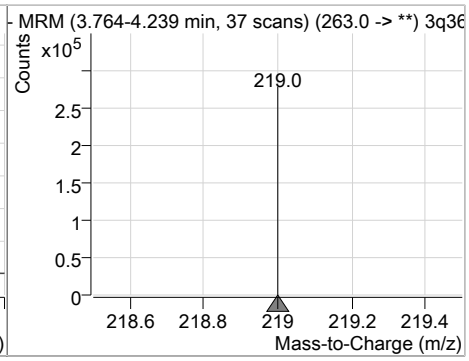


Perfluorinated Compounds by LC/MS/MS

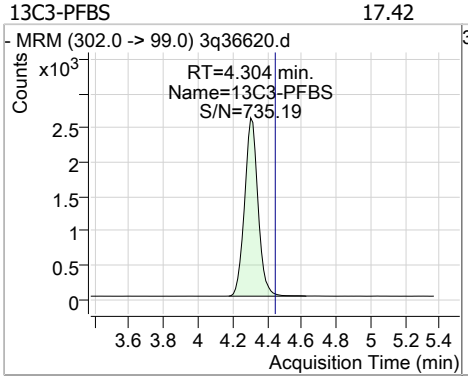
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	18.96	3.93	-0.15	207035				

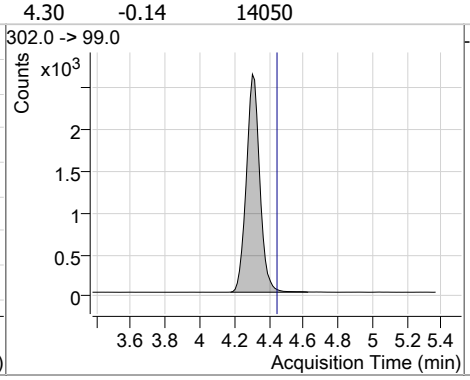


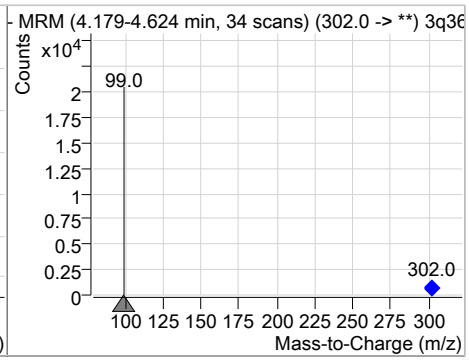




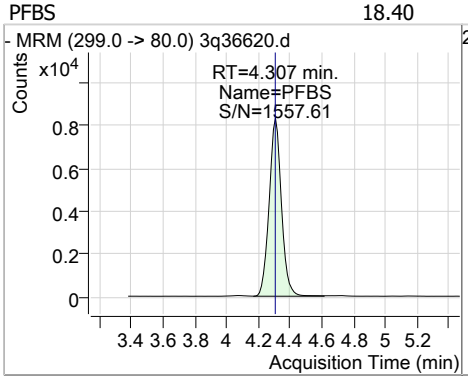
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	17.42	4.30	-0.14	14050				

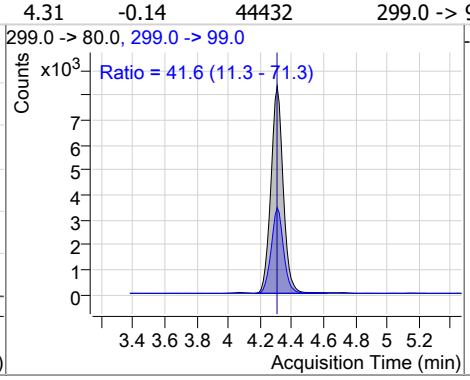


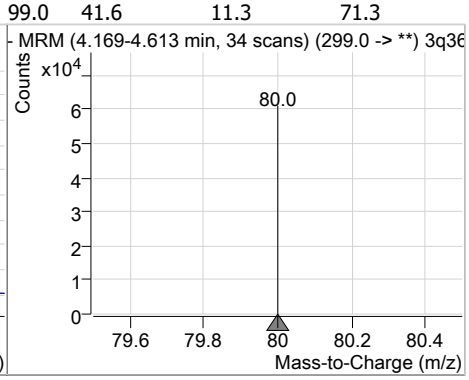




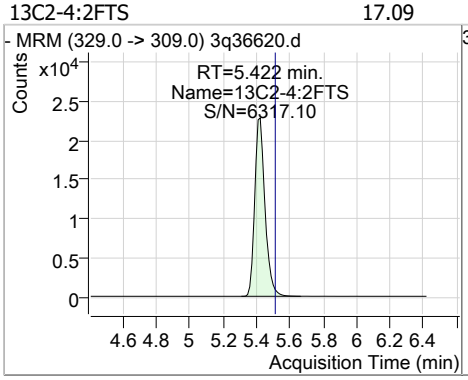
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	18.40	4.31	-0.14	44432	299.0 -> 99.0	41.6	11.3	71.3

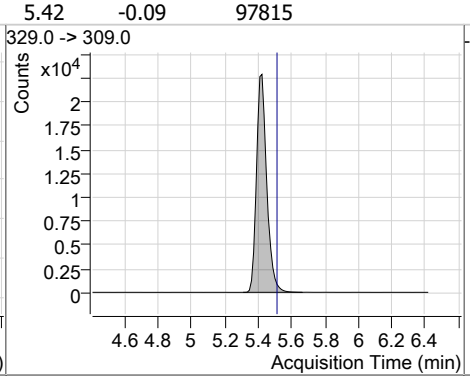


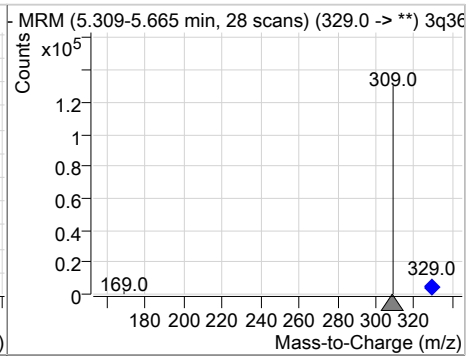




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	17.09	5.42	-0.09	97815				

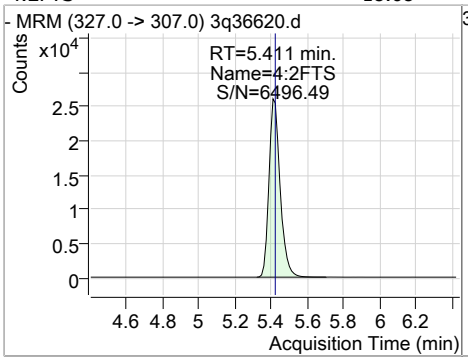


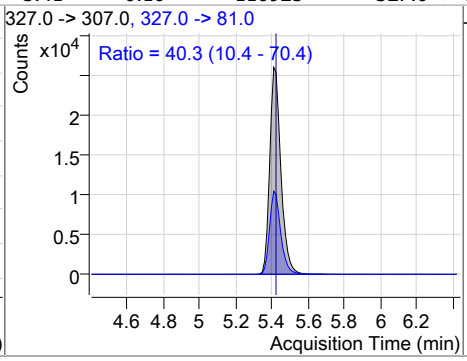


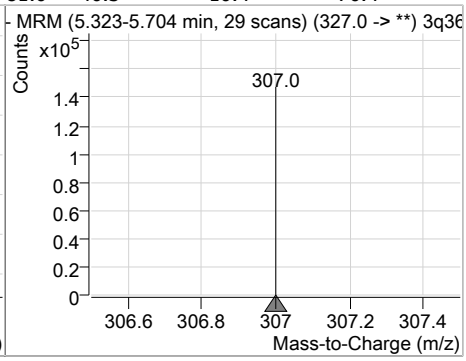


Perfluorinated Compounds by LC/MS/MS

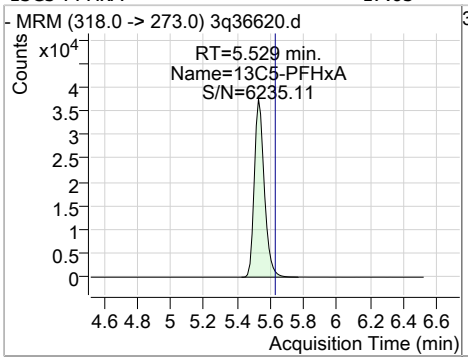
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	18.68	5.41	-0.10	110925	327.0 -> 81.0	40.3	10.4	70.4

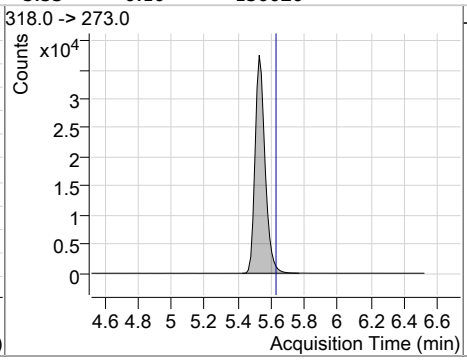


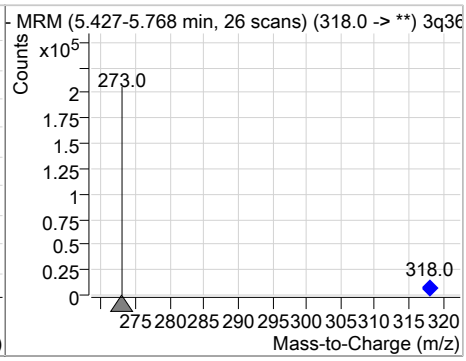




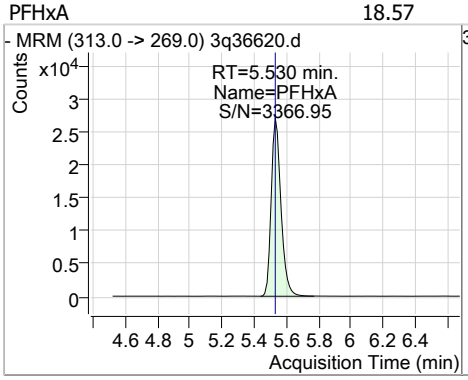
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	17.05	5.53	-0.10	156020				

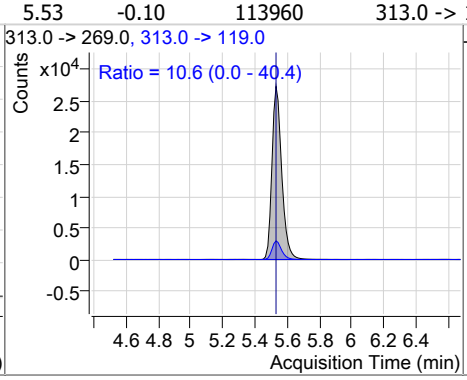


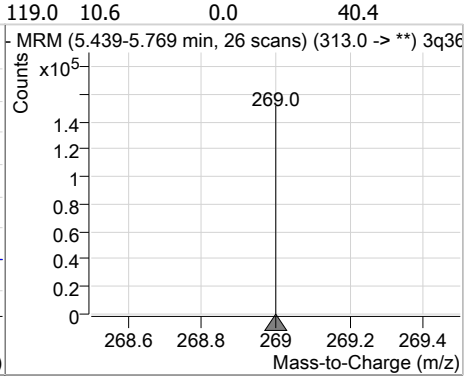




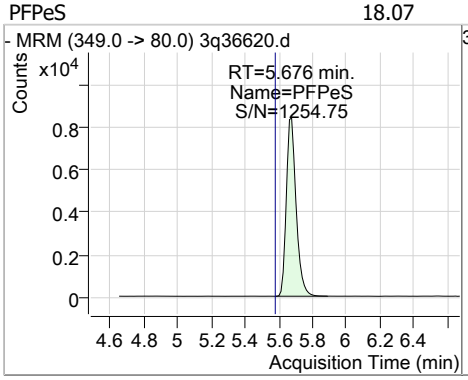
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	18.57	5.53	-0.10	113960	313.0 -> 119.0	10.6	0.0	40.4

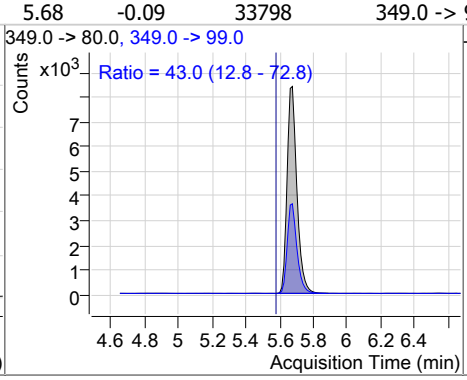


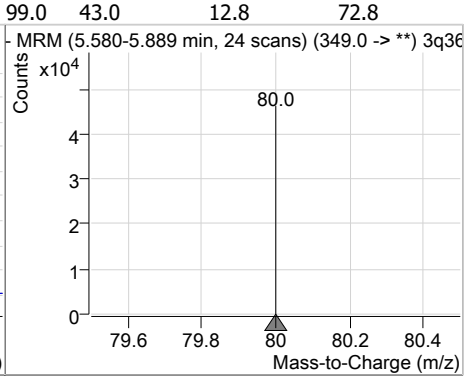




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	18.07	5.68	-0.09	33798	349.0 -> 99.0	43.0	12.8	72.8

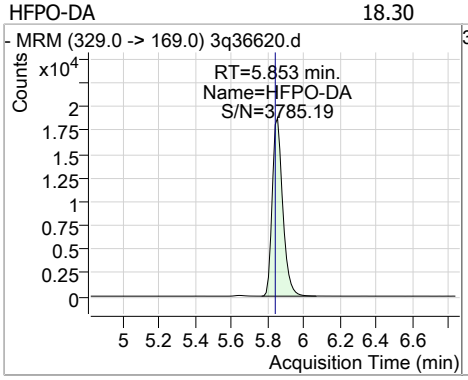


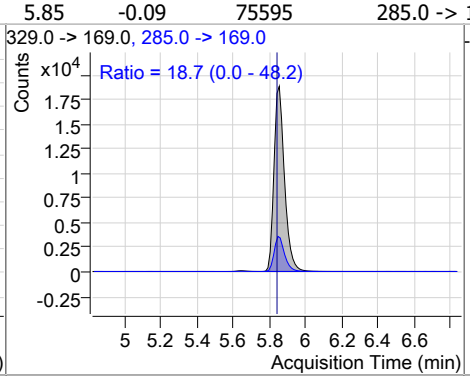


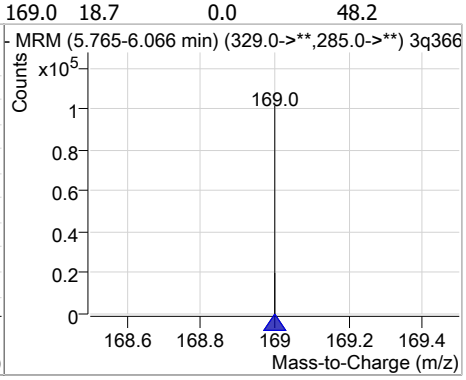


Perfluorinated Compounds by LC/MS/MS

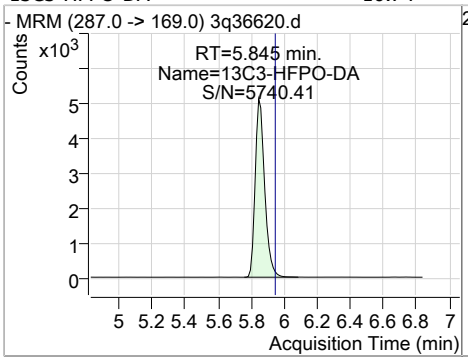
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	18.30	5.85	-0.09	75595	285.0 -> 169.0	18.7	0.0	48.2

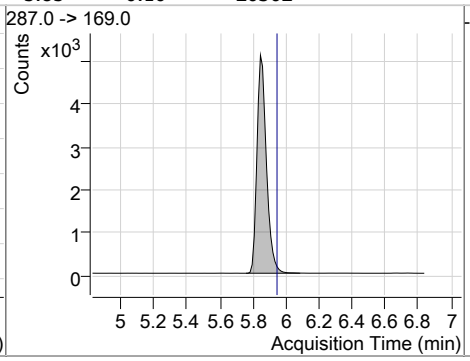


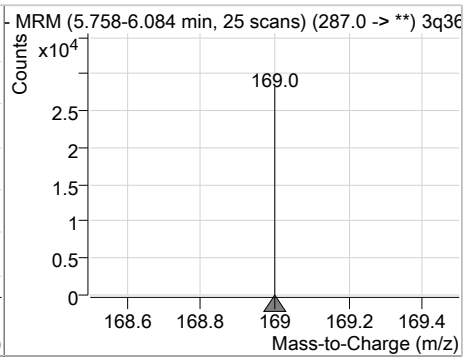




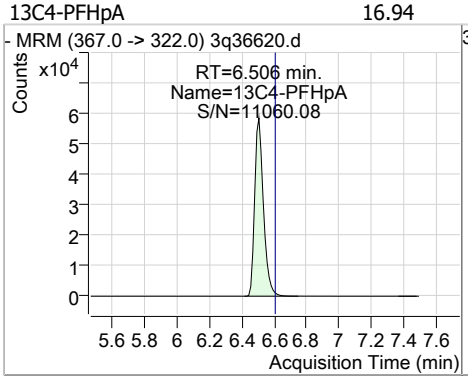
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	16.74	5.85	-0.10	20302				

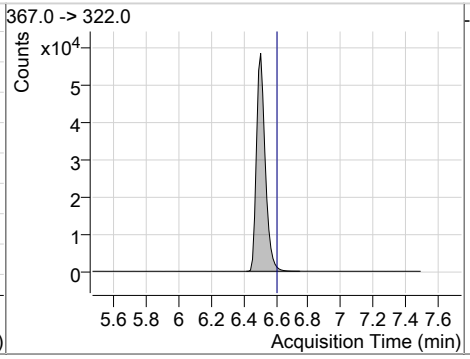


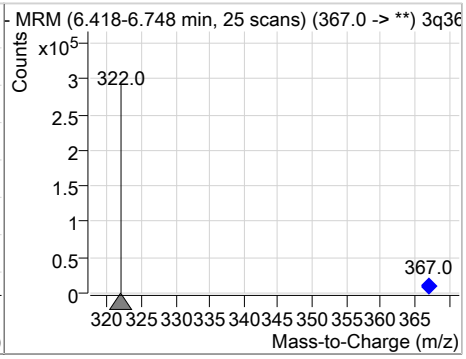




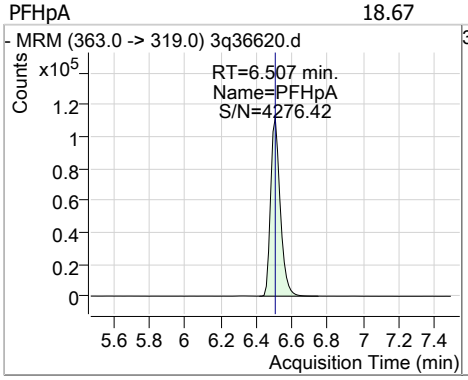
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	16.94	6.51	-0.10	219652				

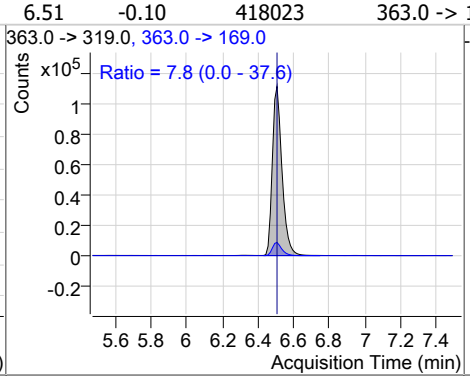


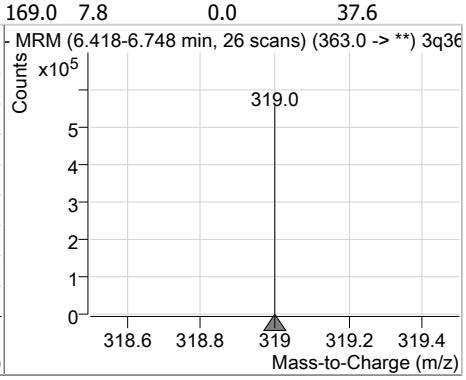




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	18.67	6.51	-0.10	418023	363.0 -> 169.0	7.8	0.0	37.6

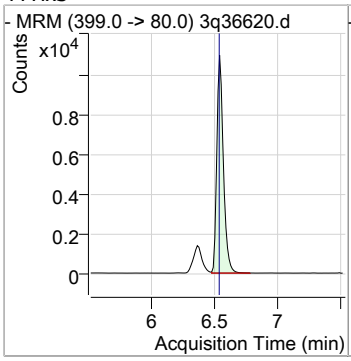


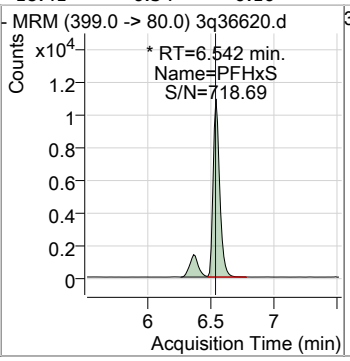


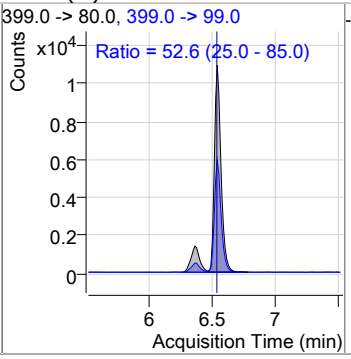


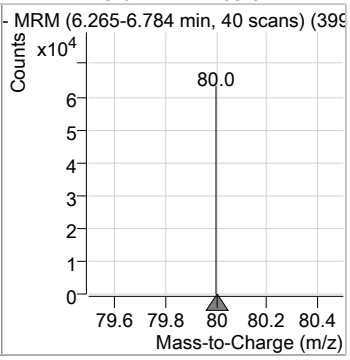
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	18.41	6.54	-0.10	46000 (m)	399.0 -> 99.0	52.6	25.0	85.0

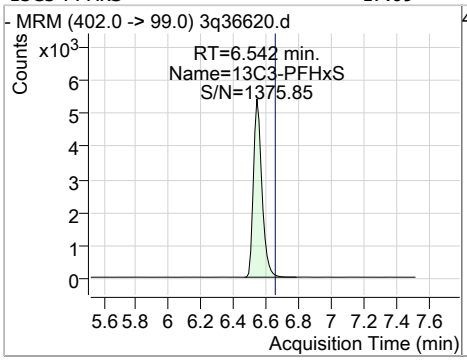


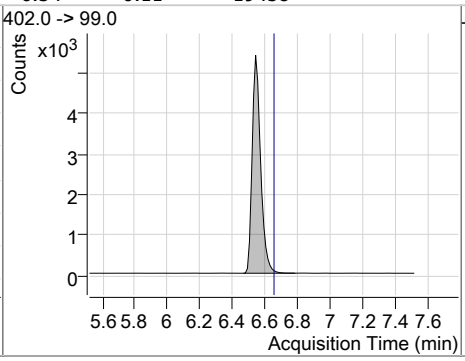


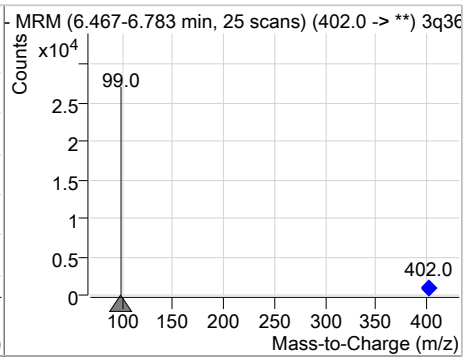




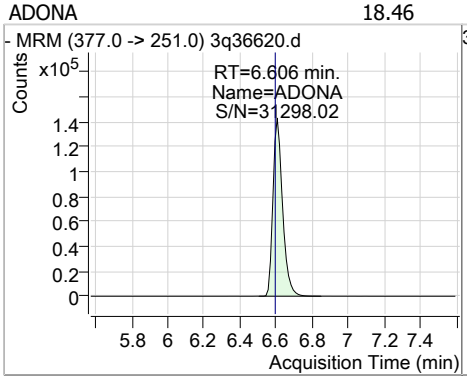
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	17.09	6.54	-0.11	19458				

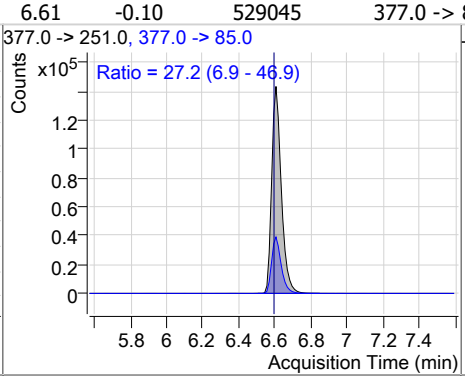


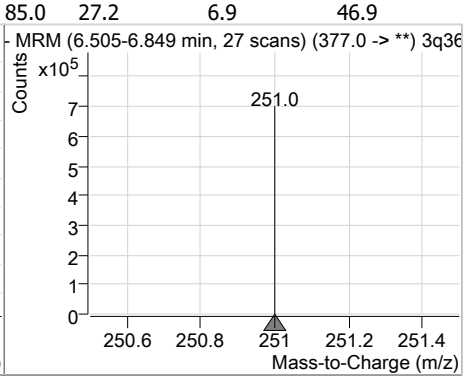




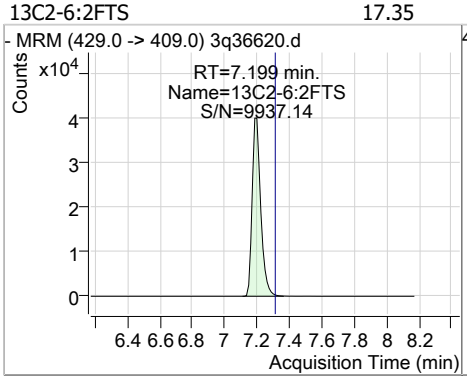
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	18.46	6.61	-0.10	529045	377.0 -> 85.0	27.2	6.9	46.9

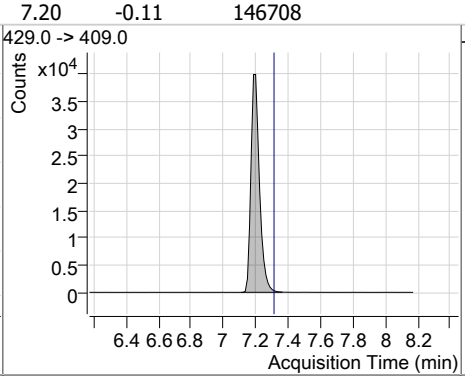


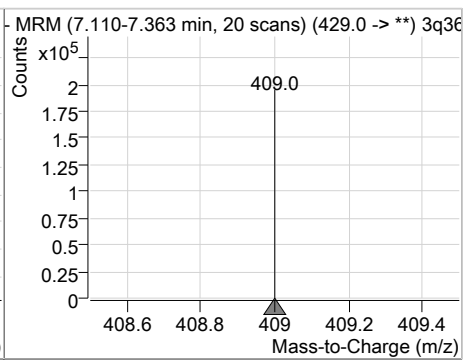




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	17.35	7.20	-0.11	146708				

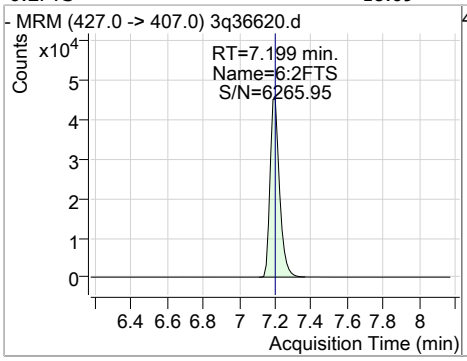


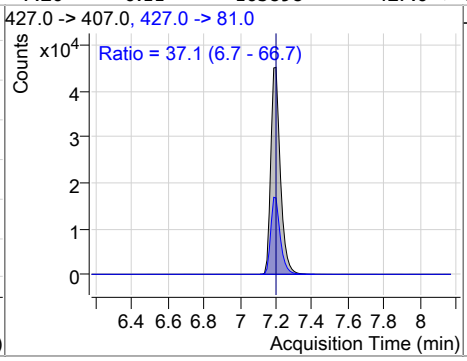


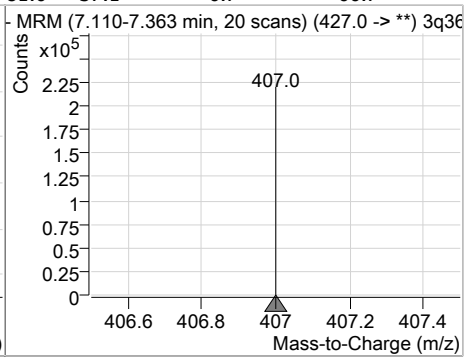


Perfluorinated Compounds by LC/MS/MS

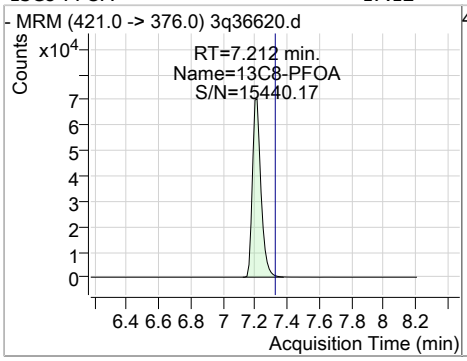
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	18.69	7.20	-0.11	165898	427.0 -> 81.0	37.1	6.7	66.7

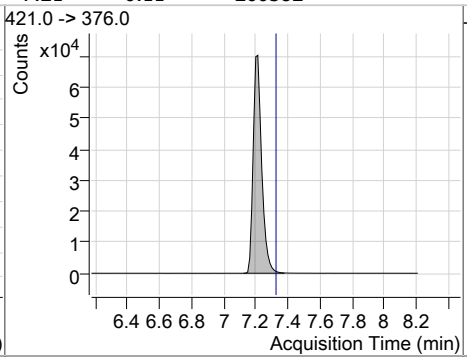


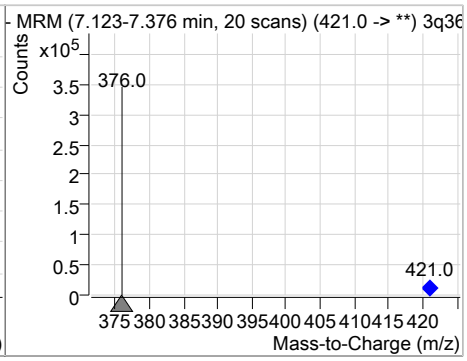




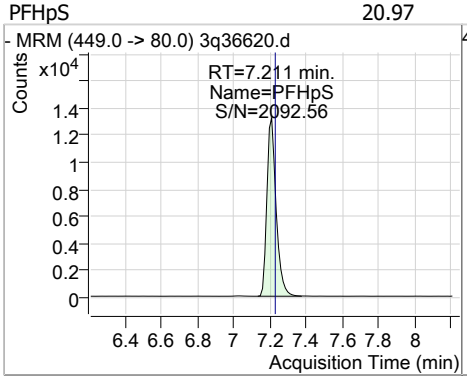
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	17.12	7.21	-0.11	260582				

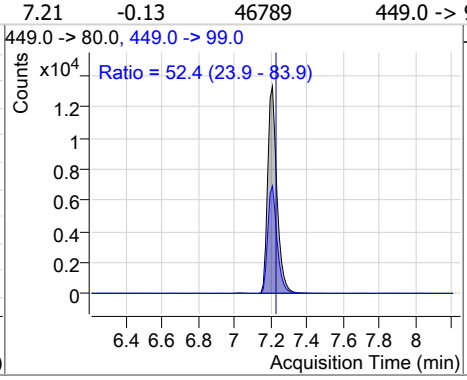


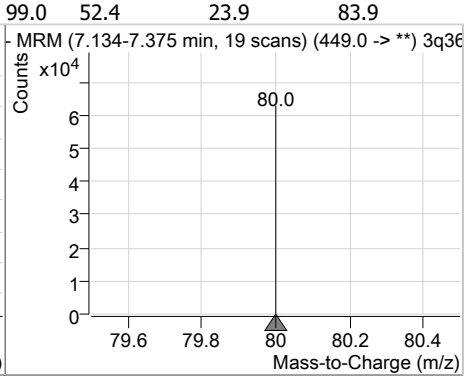




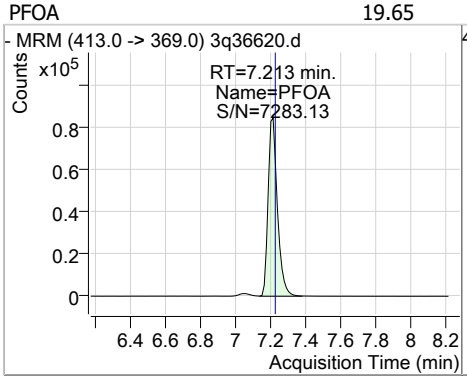
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	20.97	7.21	-0.13	46789	449.0 -> 99.0	52.4	23.9	83.9

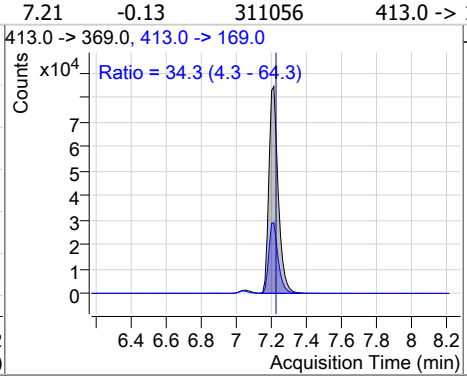


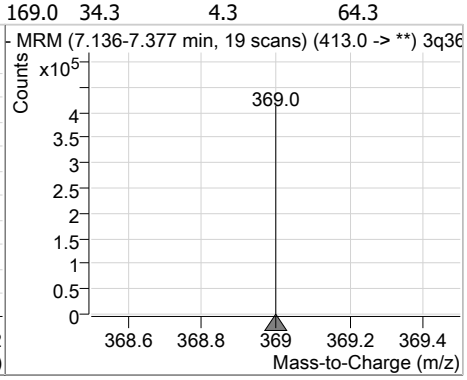




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.65	7.21	-0.13	311056	413.0 -> 169.0	34.3	4.3	64.3

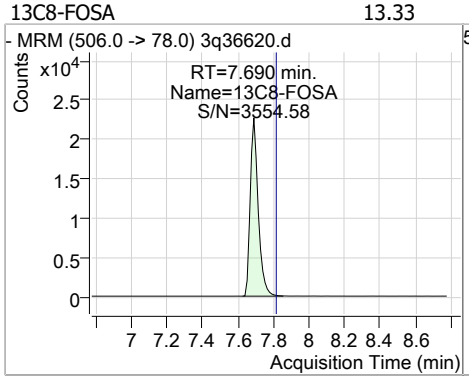


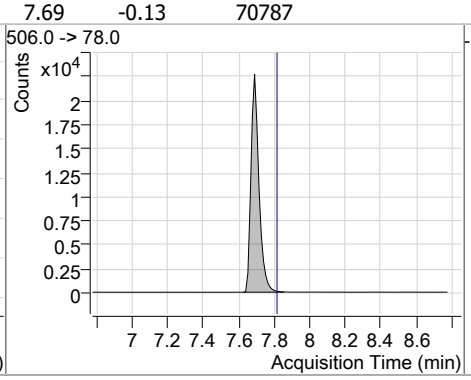


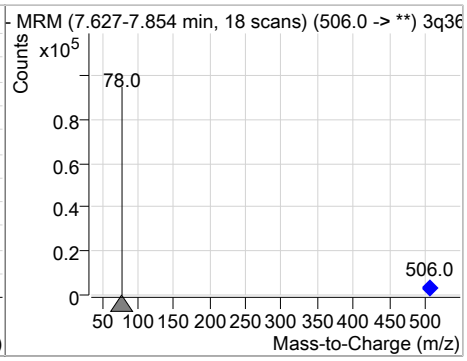


Perfluorinated Compounds by LC/MS/MS

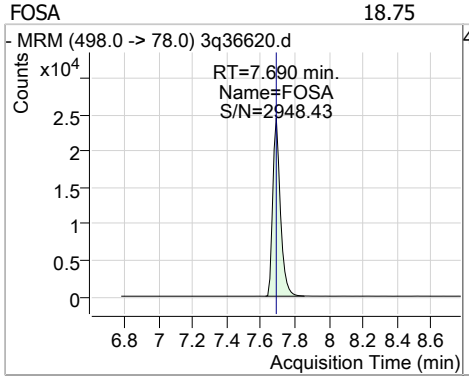
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	13.33	7.69	-0.13	70787				

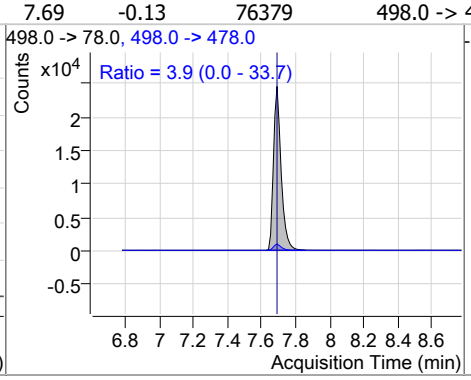


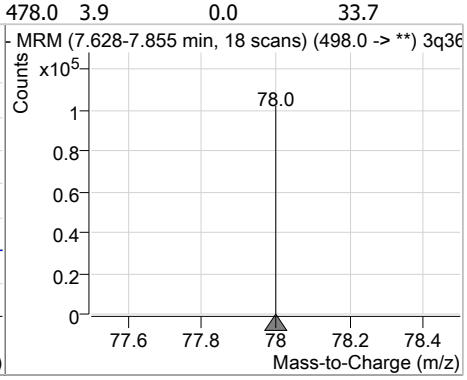




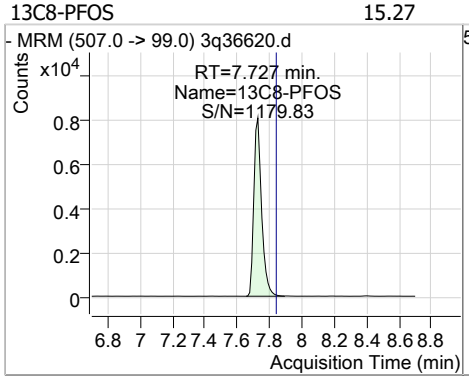
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	18.75	7.69	-0.13	76379	498.0 -> 478.0	3.9	0.0	33.7

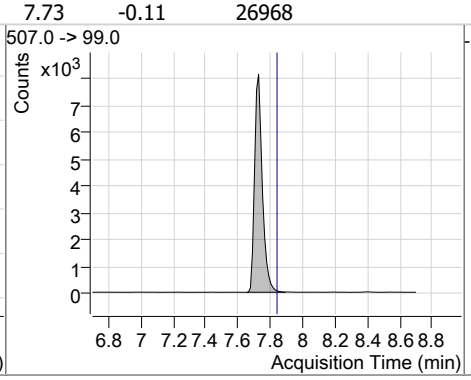


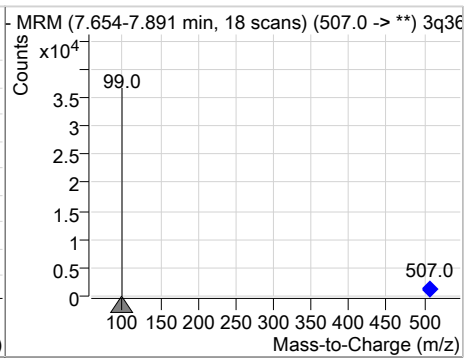




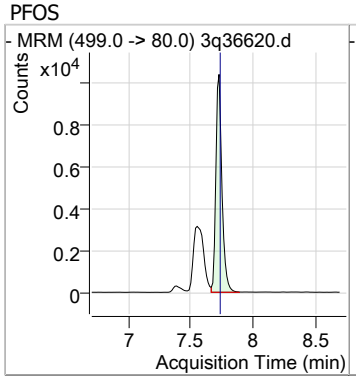
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	15.27	7.73	-0.11	26968				

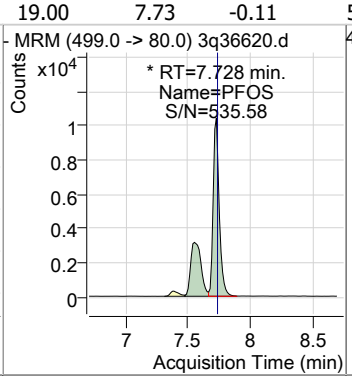


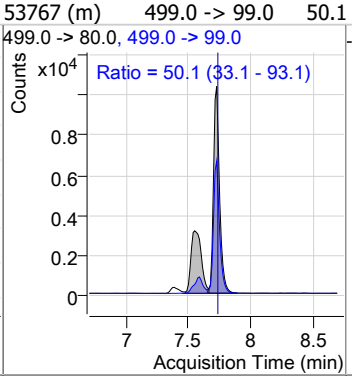


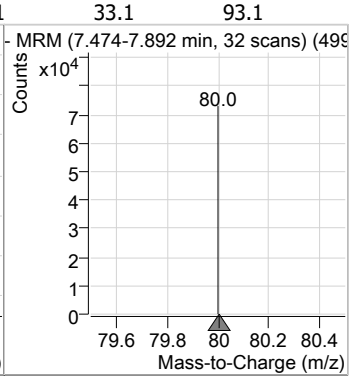


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.00	7.73	-0.11	53767 (m)	499.0 -> 99.0	50.1	33.1	93.1



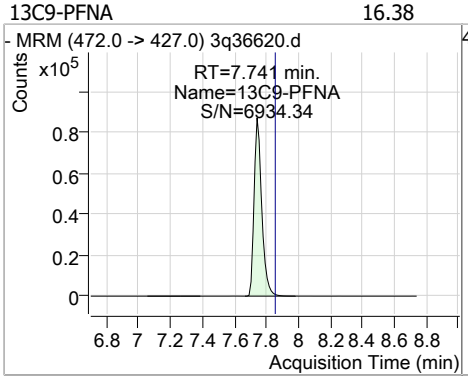


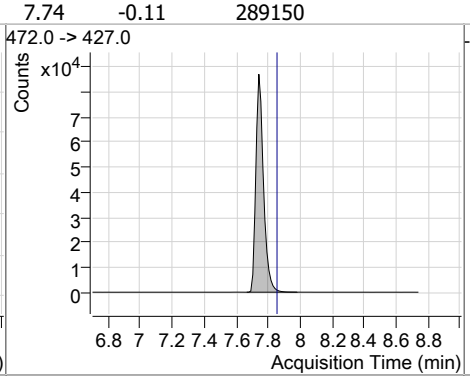


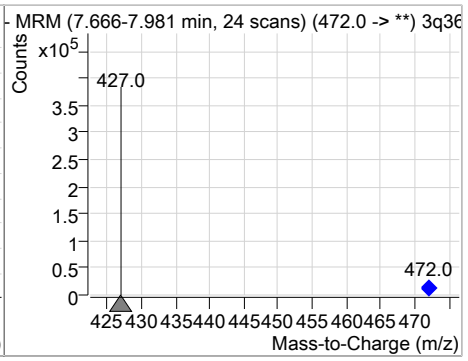


Perfluorinated Compounds by LC/MS/MS

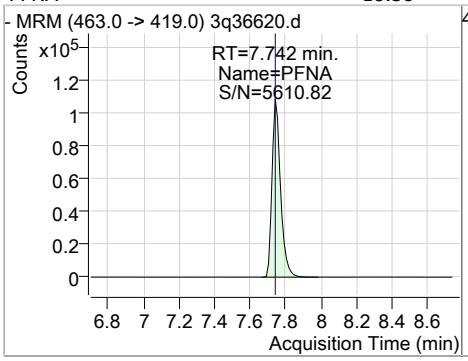
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	16.38	7.74	-0.11	289150				

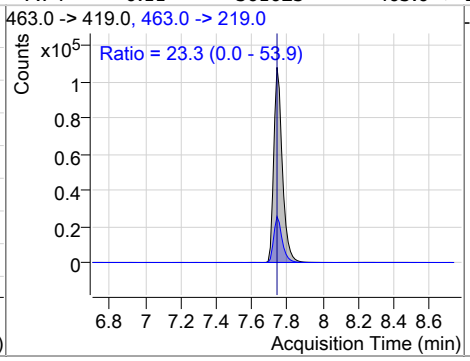


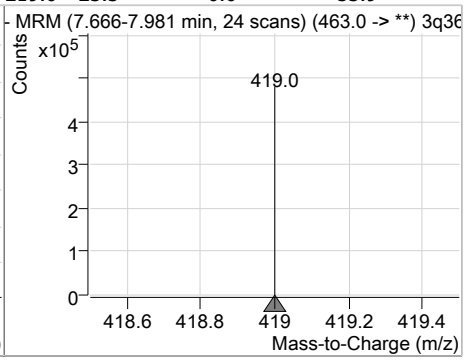




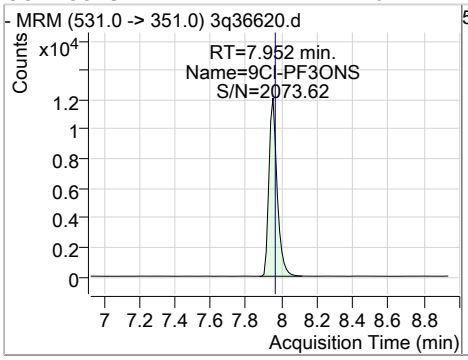
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	18.58	7.74	-0.11	361023	463.0 -> 219.0	23.3	0.0	53.9

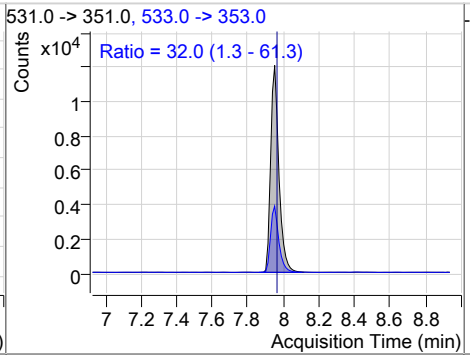


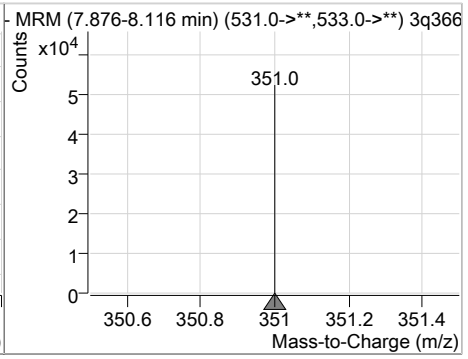




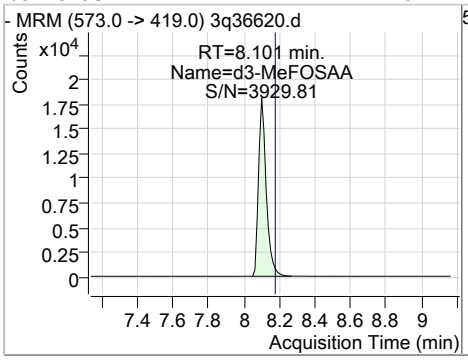
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	16.71	7.95	-0.10	38840	533.0 -> 353.0	32.0	1.3	61.3

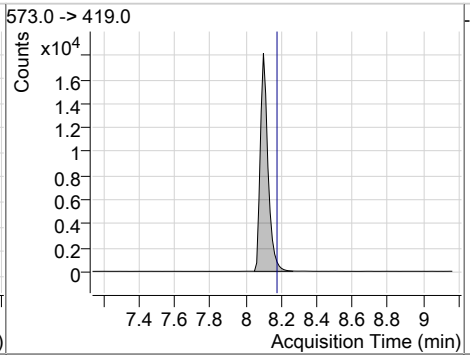


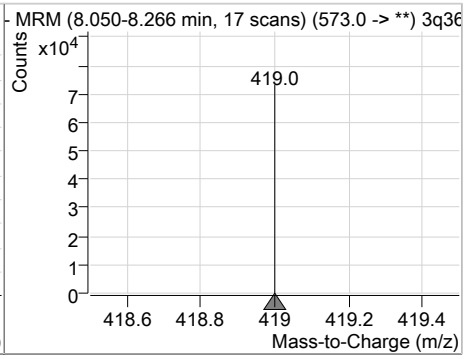




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	11.45	8.10	-0.08	54670				

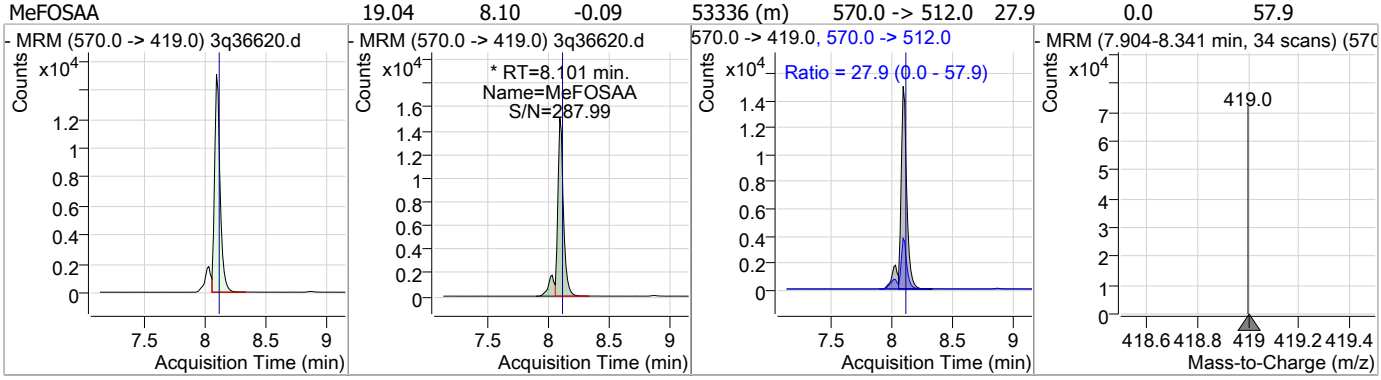




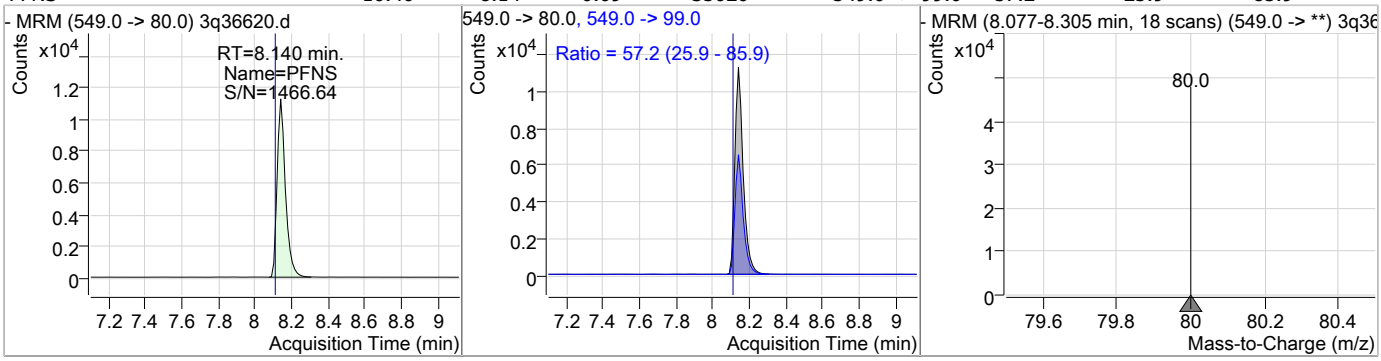


Perfluorinated Compounds by LC/MS/MS

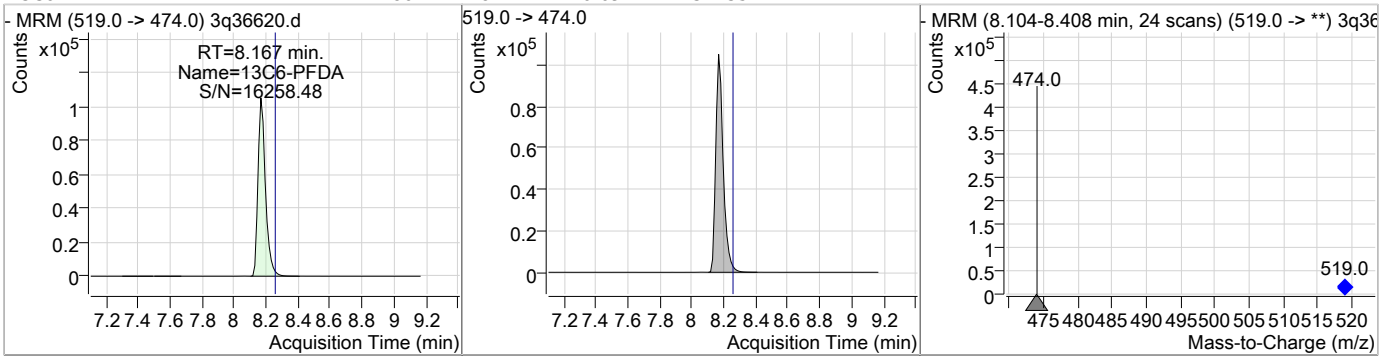
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	19.04	8.10	-0.09	53336 (m)	570.0 -> 512.0	27.9	0.0	57.9



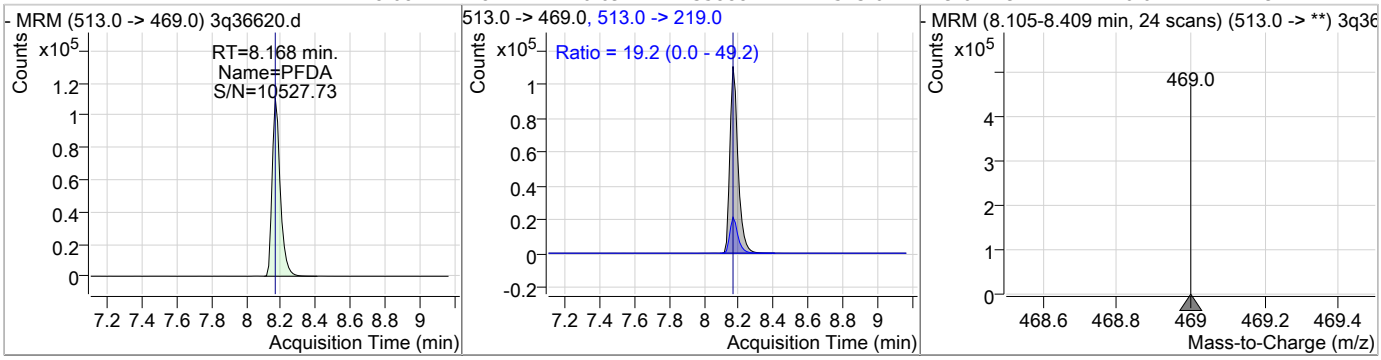
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	16.46	8.14	-0.09	35620	549.0 -> 99.0	57.2	25.9	85.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	14.86	8.17	-0.09	341357				

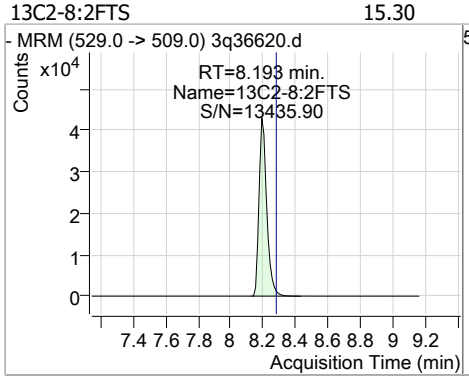


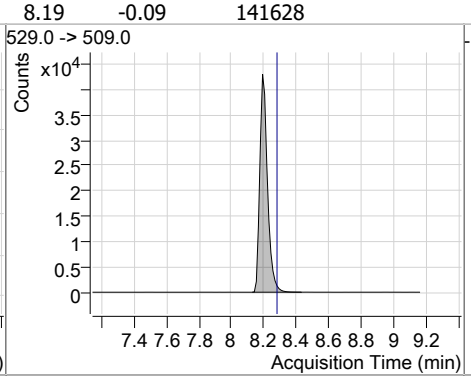
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	18.08	8.17	-0.09	358882	513.0 -> 219.0	19.2	0.0	49.2

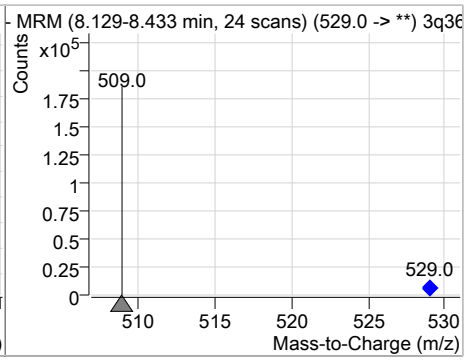


Perfluorinated Compounds by LC/MS/MS

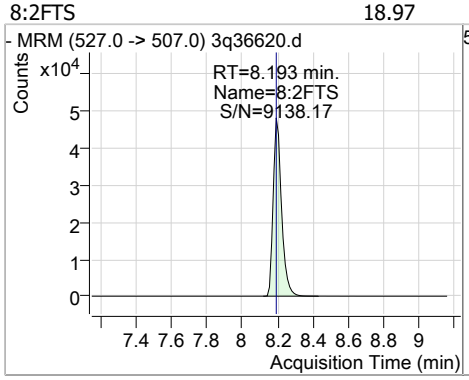
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	15.30	8.19	-0.09	141628				

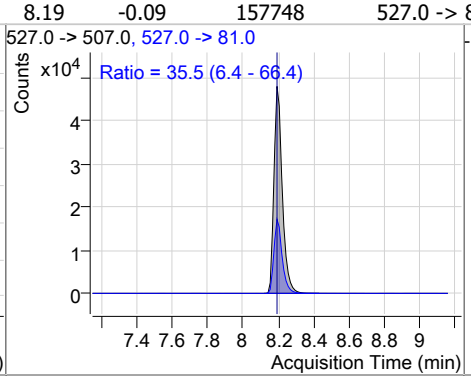


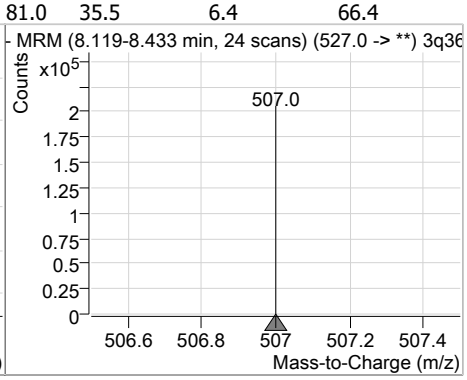




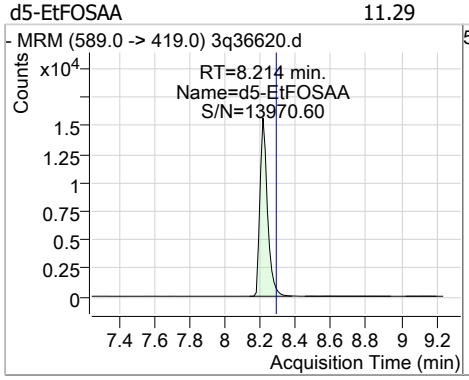
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	18.97	8.19	-0.09	157748	527.0 -> 81.0	35.5	6.4	66.4

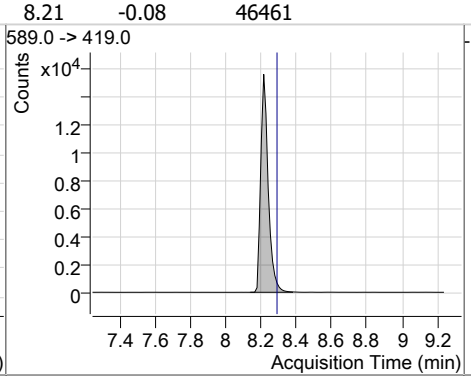


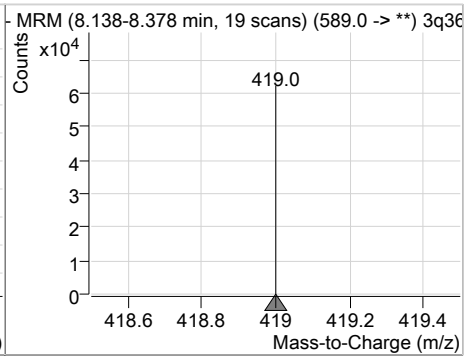




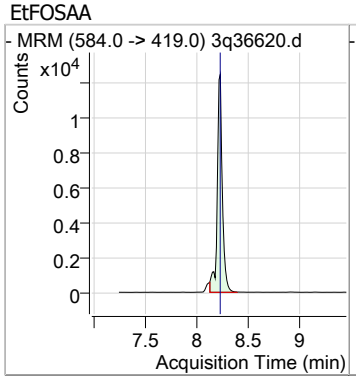
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	11.29	8.21	-0.08	46461				

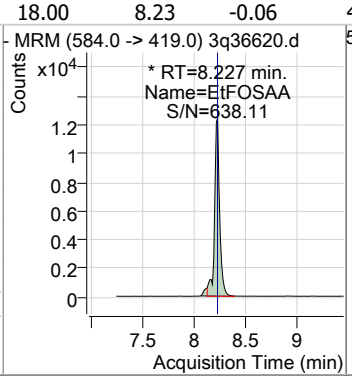


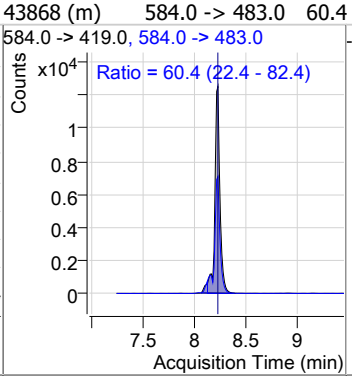


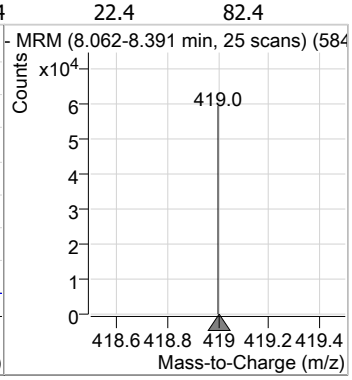


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	18.00	8.23	-0.06	43868 (m)	584.0 -> 483.0	60.4	22.4	82.4



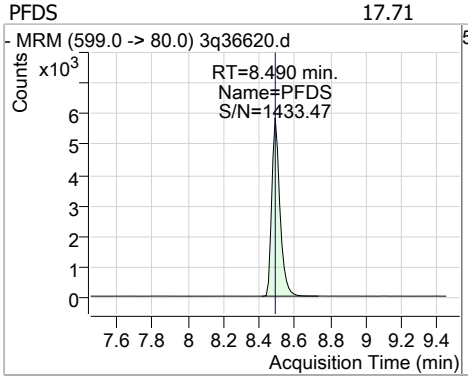


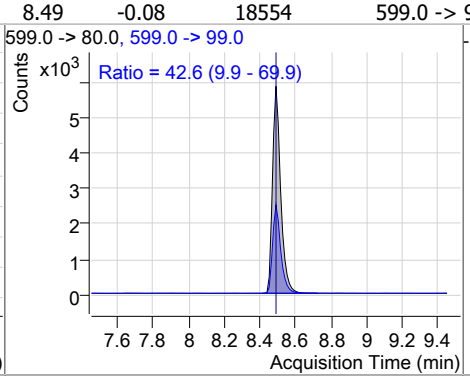


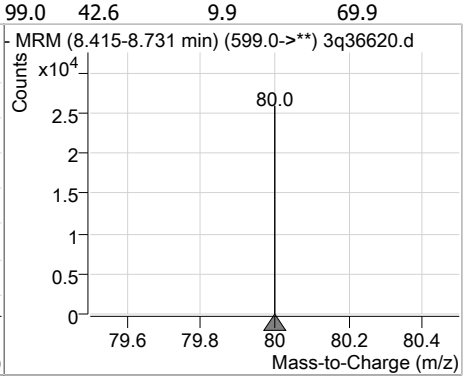


Perfluorinated Compounds by LC/MS/MS

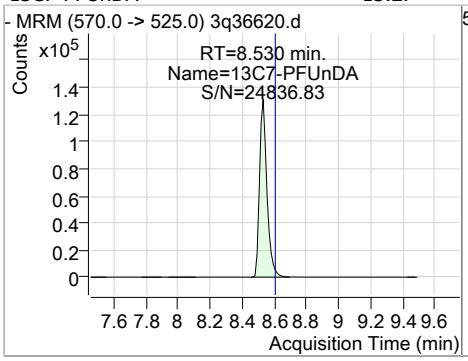
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	17.71	8.49	-0.08	18554	599.0 -> 99.0	42.6	9.9	69.9

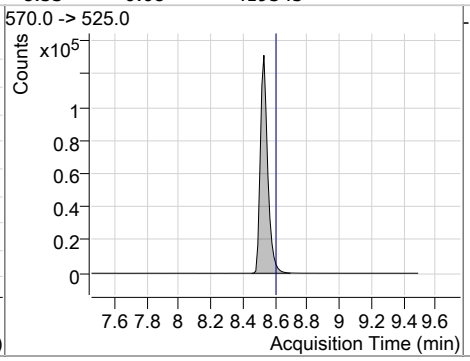


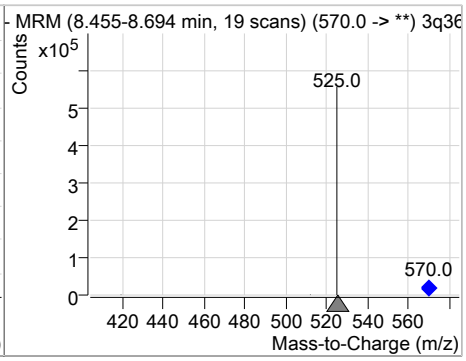




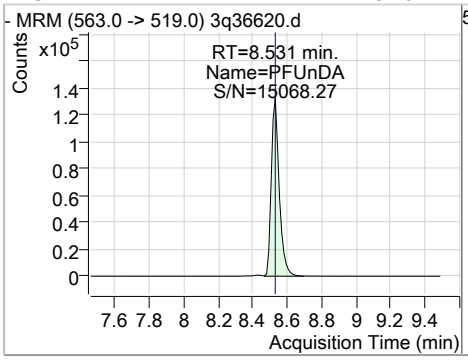
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	13.27	8.53	-0.08	419545				

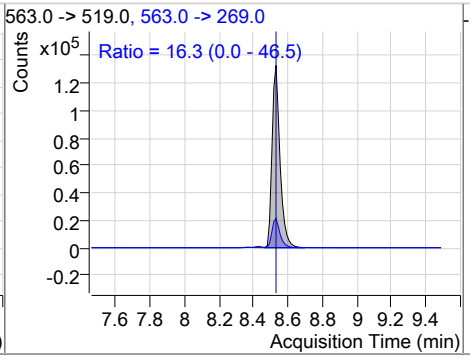


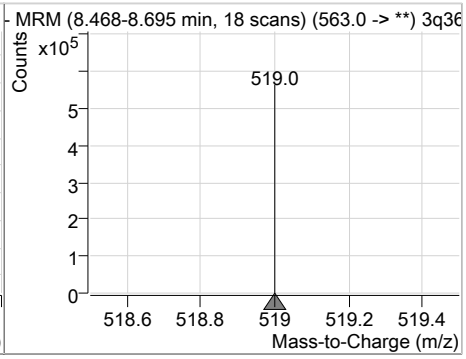




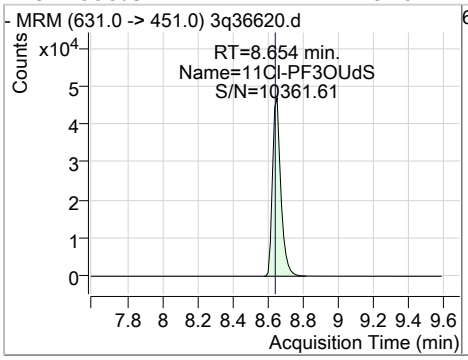
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	18.46	8.53	-0.08	425259	563.0 -> 269.0	16.3	0.0	46.5

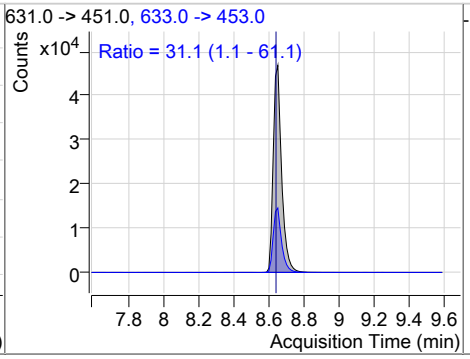


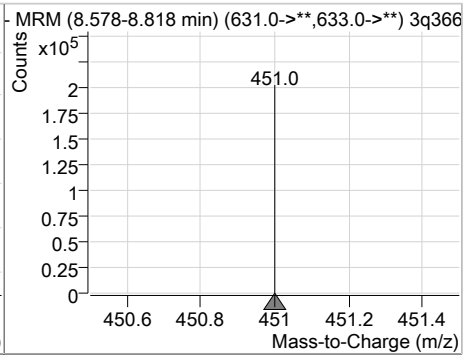




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	19.75	8.65	-0.06	154723	633.0 -> 453.0	31.1	1.1	61.1

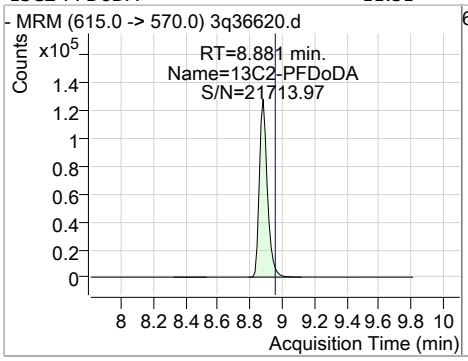


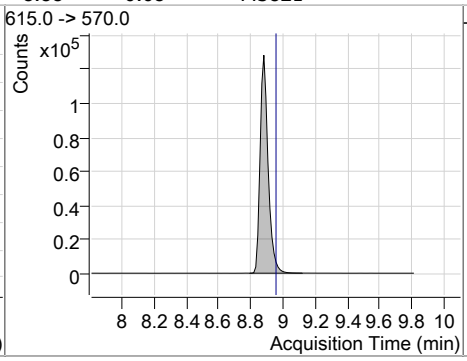


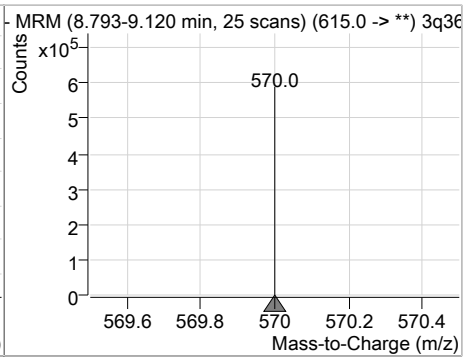


Perfluorinated Compounds by LC/MS/MS

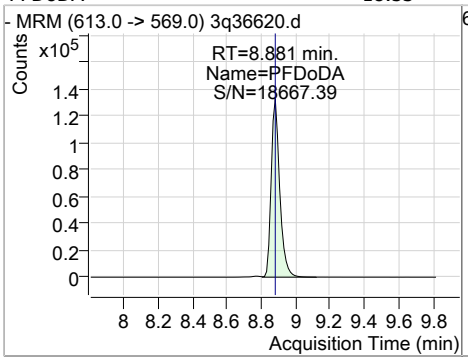
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	11.51	8.88	-0.08	443821				

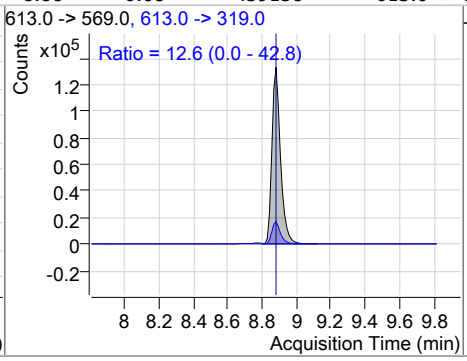


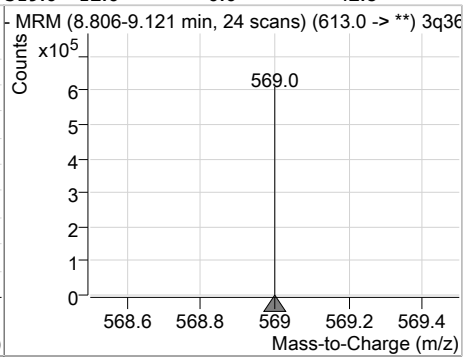




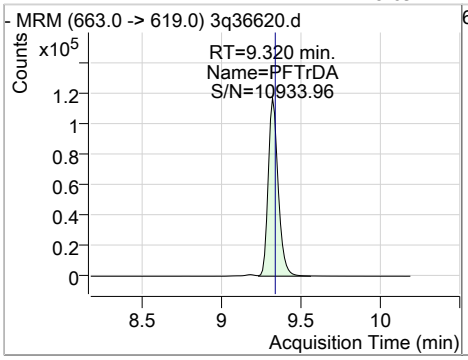
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	18.53	8.88	-0.08	459158	613.0 -> 319.0	12.6	0.0	42.8

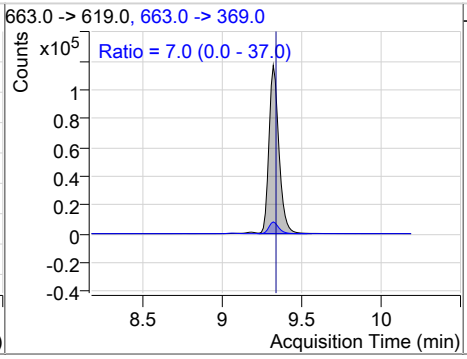


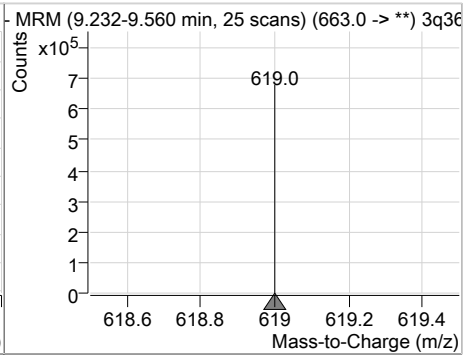




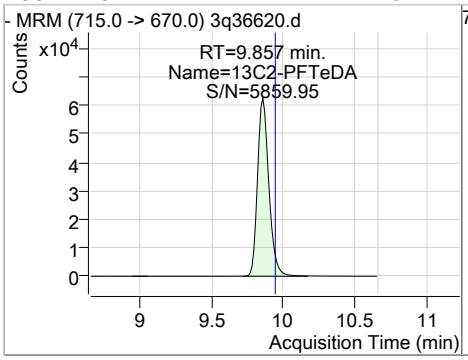
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	18.69	9.32	-0.10	510016	663.0 -> 369.0	7.0	0.0	37.0

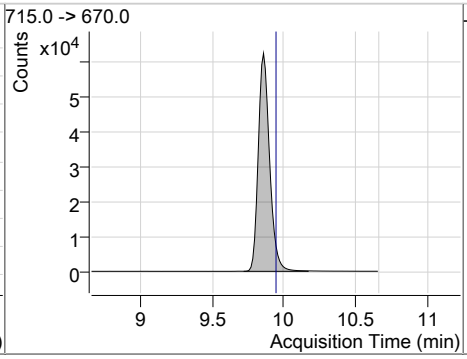


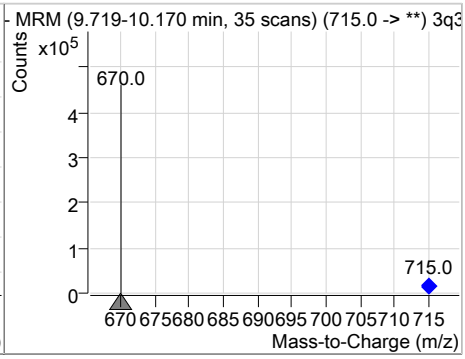




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	12.32	9.86	-0.09	344412				

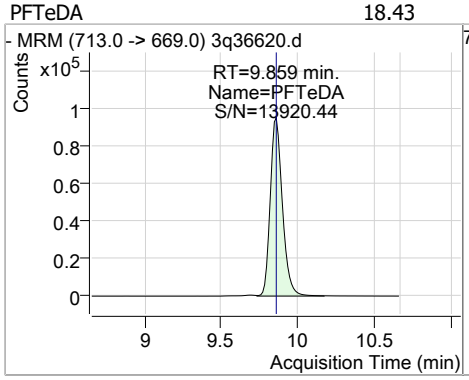


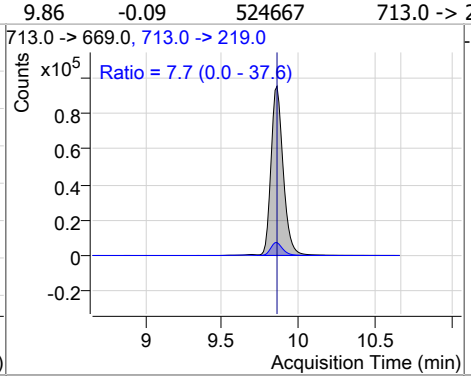


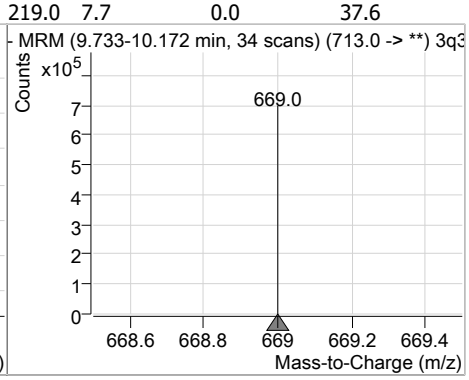


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	18.43	9.86	-0.09	524667	713.0 -> 219.0	7.7	0.0	37.6







Manual Integration Approval Summary

Sample Number:	OP84900-MS	**Method:**	EPA 537M BY ID
Lab FileID:	3Q36620.D	**Analyst approved:**	04/15/21 09:33 Martha Valls
Injection Time:	04/14/21 22:22	**Supervisor approved:**	04/15/21 10:01 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.54	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.73	Split peak
MeFOSAA	2355-31-9		8.10	Split peak
EtFOSAA	2991-50-6		8.23	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:44

Perfluorinated Compounds by LC/MS/MS

Data File : 2q66246.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/17/2021 4:56:07 AM
Sample Name : op84941-ms
Vial : P4-A1
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q963.batch.bin
Sample Information : op84941,S2Q963,2.00,,,1.0,1,soil

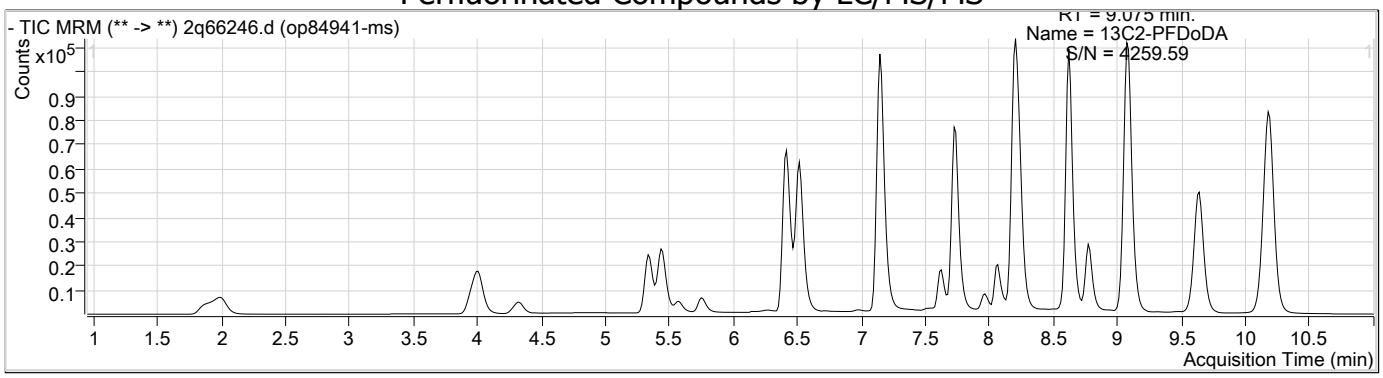
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.180	589.0 -> 419.0	29050	20.00	µg/L	0.025
M4-PFBA	1.989	217.0 -> 172.0	57603	20.00	µg/L	0.000
M5-PFPeA	4.012	268.0 -> 223.0	46013	20.00	µg/L	0.000
M5-PFHxA	5.442	318.0 -> 273.0	69538	20.00	µg/L	0.000
M4-PFHpA	6.421	367.0 -> 322.0	100727	20.00	µg/L	0.000
M8-PFOA	7.151	421.0 -> 376.0	113849	20.00	µg/L	0.000
M9-PFNA	7.733	472.0 -> 427.0	116506	20.00	µg/L	0.000
M6-PFDA	8.210	519.0 -> 474.0	156778	20.00	µg/L	0.000
M7-PFUnDA	8.624	570.0 -> 525.0	212935	20.00	µg/L	-0.012
M2-PFDoDA	9.075	615.0 -> 570.0	247586	20.00	µg/L	-0.025
M2-PFTeDA	10.176	715.0 -> 670.0	199801	20.00	µg/L	-0.062
M8-FOSA	7.630	506.0 -> 78.0	32338	20.00	µg/L	0.026
M3-PFBS	4.317	302.0 -> 99.0	5606	20.00	µg/L	-0.012
M3-PFHxS	6.456	402.0 -> 99.0	6289	20.00	µg/L	0.000
M8-PFOS	7.718	507.0 -> 99.0	8808	20.00	µg/L	0.000
M2-4:2FTS	5.335	329.0 -> 309.0	47889	20.00	µg/L	0.000
M2-6:2FTS	7.137	429.0 -> 409.0	66484	20.00	µg/L	0.000
M2-8:2FTS	8.235	529.0 -> 509.0	60036	20.00	µg/L	-0.012
M3-MeFOSAA	8.054	573.0 -> 419.0	34069	20.00	µg/L	0.013
M3-HFPO-DA	5.759	287.0 -> 169.0	4771	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.335	329.0 -> 309.0	47889	16.45	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 82.3%		
13C2-6:2FTS	7.137	429.0 -> 409.0	66484	16.34	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.7%		
13C2-8:2FTS	8.235	529.0 -> 509.0	60036	16.83	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.1%		
13C2-PFDoDA	9.075	615.0 -> 570.0	247586	15.39	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 77.0%		
13C2-PFTeDA	10.176	715.0 -> 670.0	199801	15.49	µg/L	-0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 77.4%		
13C3-PFBS	4.317	302.0 -> 99.0	5606	16.59	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.0%		
13C3-PFHxS	6.456	402.0 -> 99.0	6289	16.75	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.8%		
13C4-PFBA	1.989	217.0 -> 172.0	57603	17.15	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.8%		
13C4-PFHpA	6.421	367.0 -> 322.0	100727	16.55	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 82.8%		
d5-EtFOSAA	8.180	589.0 -> 419.0	29050	14.29	ng/ml	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 71.4%		
13C5-PFHxA	5.442	318.0 -> 273.0	69538	16.69	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.4%		
13C5-PFPeA	4.012	268.0 -> 223.0	46013	16.68	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.4%		

Perfluorinated Compounds by LC/MS/MS

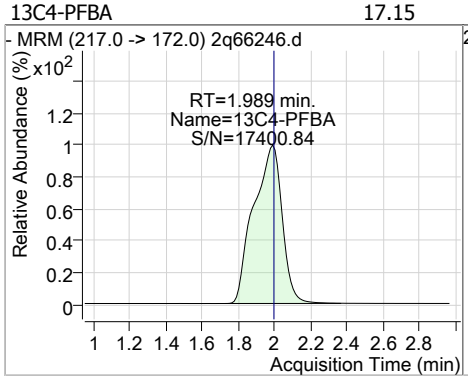
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	156778	16.93	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.6%			
13C7-PFUnDA	8.624	570.0 -> 525.0	212935	16.16	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 80.8%			
13C8-FOSA	7.630	506.0 -> 78.0	32338	16.83	µg/L		0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.2%			
13C8-PFOA	7.151	421.0 -> 376.0	113849	16.32	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.6%			
13C8-PFOS	7.718	507.0 -> 99.0	8808	16.58	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 82.9%			
13C9-PFNA	7.733	472.0 -> 427.0	116506	16.38	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.9%			
d3-MeFOSAA	8.054	573.0 -> 419.0	34069	14.36	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 71.8%			
13C3-HFPO-DA	5.759	287.0 -> 169.0	4771	14.71	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 73.6%			
Target Compounds							QValue
4:2FTS	5.337	327.0 -> 307.0	49833	19.76	µg/L		98
6:2FTS	7.138	427.0 -> 407.0	69257	19.72	µg/L		98
8:2FTS	8.235	527.0 -> 507.0	62251	19.78	µg/L		99
EtFOSAA	8.180	584.0 -> 419.0	25609	19.43	µg/L	m	100
FOSA	7.631	498.0 -> 78.0	30597	19.02	µg/L		98
MeFOSAA	8.067	570.0 -> 419.0	29204	19.72	µg/L	m	92
PFBA	1.996	213.0 -> 169.0	18778	19.32	µg/L		100
PFBS	4.320	299.0 -> 80.0	17285	19.81	µg/L		98
PFDA	8.211	513.0 -> 469.0	144454	19.23	µg/L		99
PFDoDA	9.075	613.0 -> 569.0	232972	19.59	µg/L		100
PFDS	8.583	599.0 -> 80.0	7302	19.52	µg/L		99
PFHpA	6.421	363.0 -> 319.0	170507	20.02	µg/L		100
PFHpS	7.163	449.0 -> 80.0	15279	19.60	µg/L		98
PFHxA	5.443	313.0 -> 269.0	47363	19.47	µg/L		99
PFHxS	6.457	399.0 -> 80.0	16655	19.35	µg/L	m	98
PFNA	7.733	463.0 -> 419.0	133382	20.16	µg/L		99
PFNS	8.170	549.0 -> 80.0	13028	20.37	µg/L		99
PFOA	7.152	413.0 -> 369.0	137124	20.24	µg/L	m	100
PFOS	7.719	499.0 -> 80.0	17159	20.37	µg/L	m	86
PFPeA	4.014	263.0 -> 219.0	75261	20.01	µg/L		100
PFPeS	5.577	349.0 -> 80.0	13160	19.88	µg/L		100
PFTeDA	10.179	713.0 -> 669.0	282487	19.62	µg/L		100
PFTrDA	9.641	663.0 -> 619.0	256007	17.83	µg/L		100
PFUnDA	8.625	563.0 -> 519.0	174325	20.06	µg/L		99
11Cl-PF3OUdS	8.772	631.0 -> 451.0	80415	20.61	µg/L		99
9Cl-PF3ONS	7.968	531.0 -> 351.0	17158	19.12	µg/L		96
ADONA	6.521	377.0 -> 251.0	200690	19.65	µg/L		100
HFPO-DA	5.754	329.0 -> 169.0	19270	21.63	µg/L		98

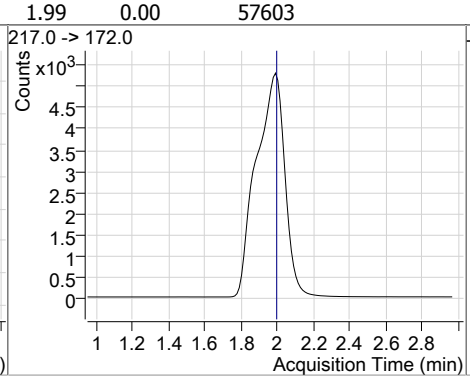
 # = Qualifier out of range, m = manually integrated, + = Area summed

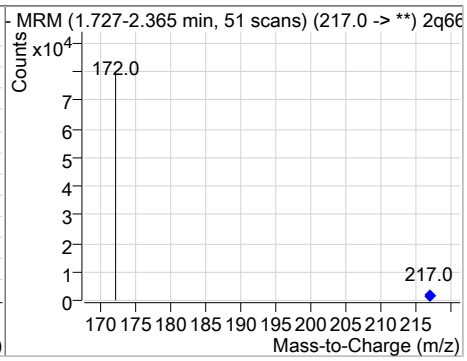
Perfluorinated Compounds by LC/MS/MS



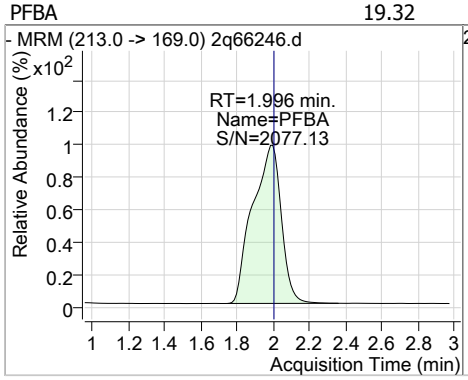
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	17.15	1.99	0.00	57603				

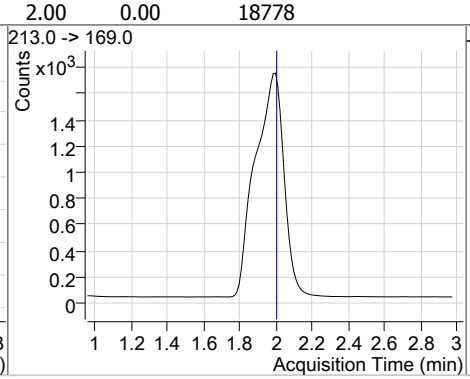


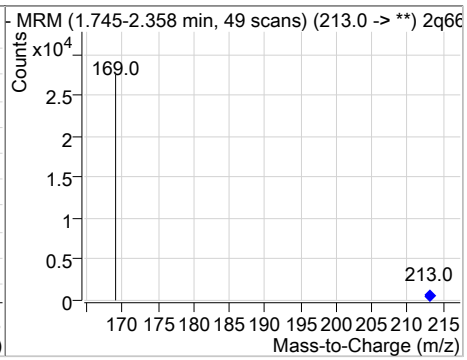




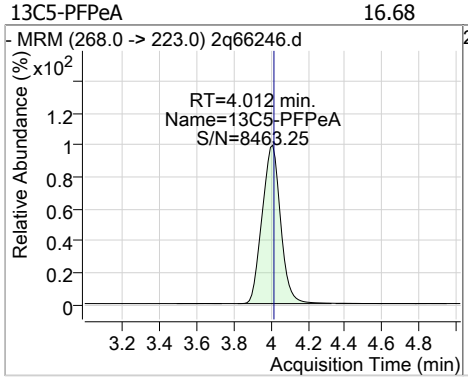
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.32	2.00	0.00	18778				

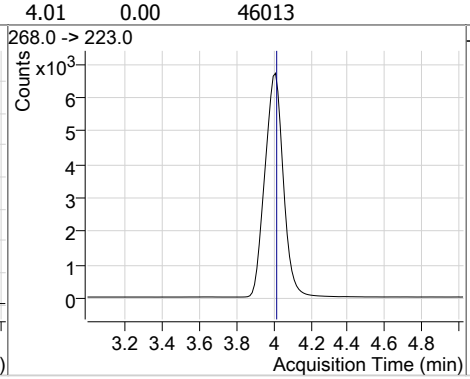


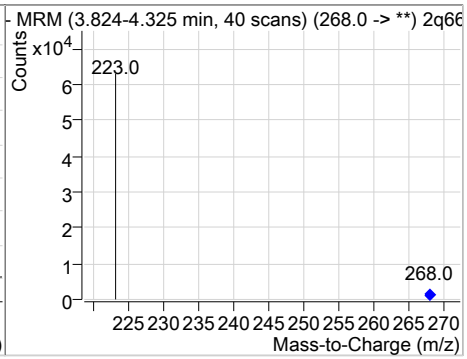




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	16.68	4.01	0.00	46013				

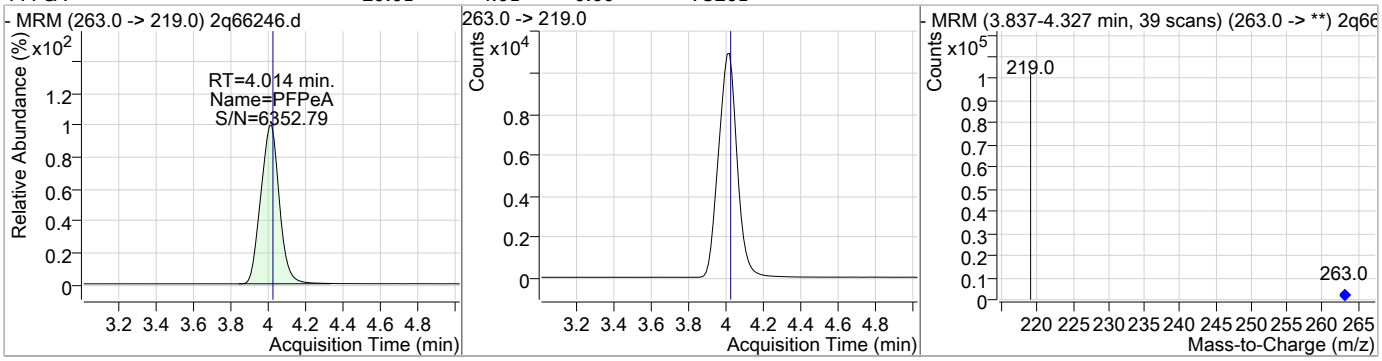




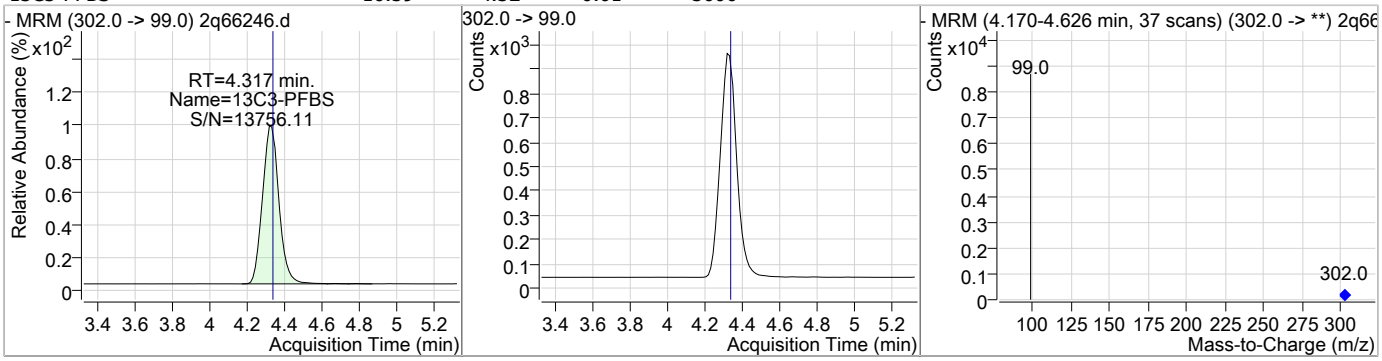


Perfluorinated Compounds by LC/MS/MS

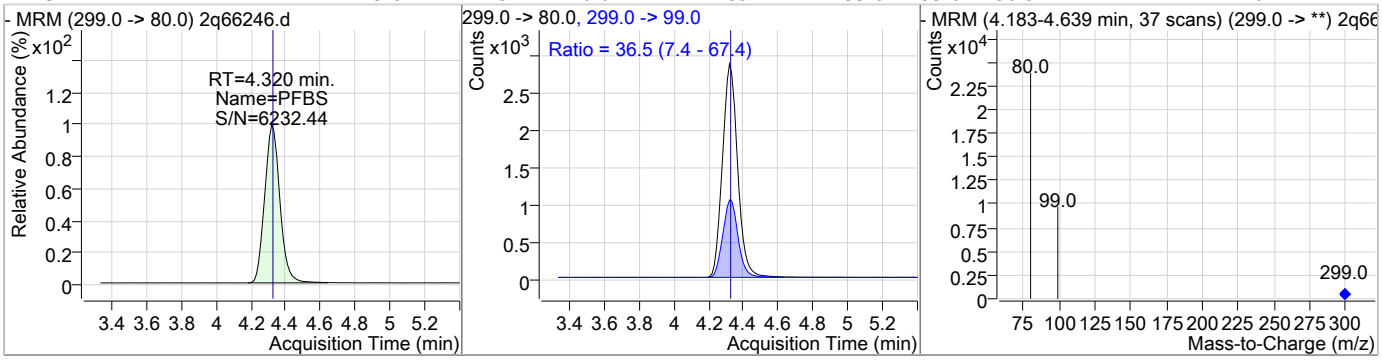
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	20.01	4.01	0.00	75261				



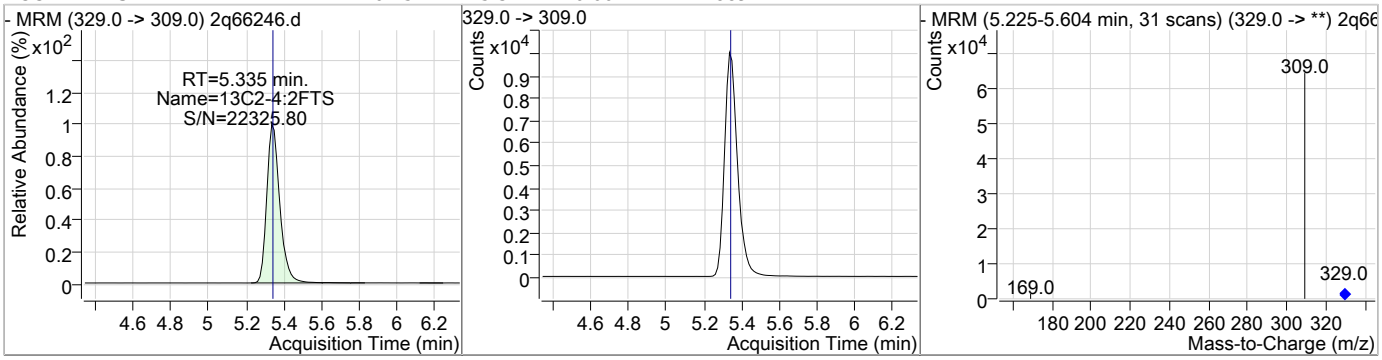
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	16.59	4.32	-0.01	5606				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.81	4.32	-0.01	17285	299.0 -> 99.0	36.5	7.4	67.4

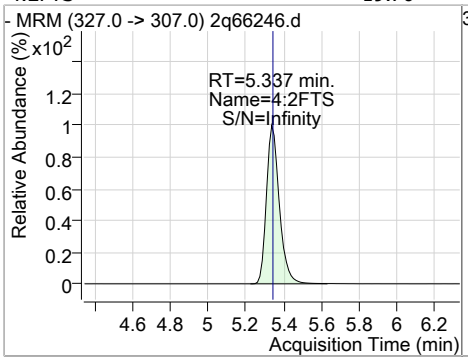


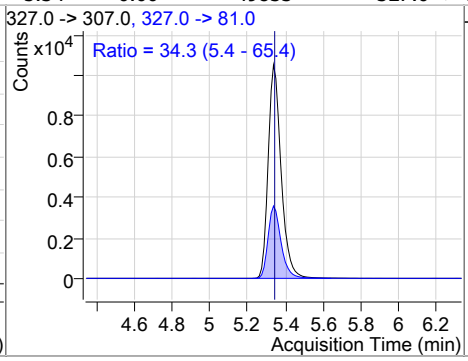
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	16.45	5.34	0.00	47889				

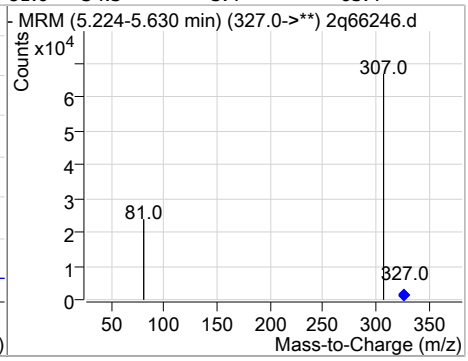


Perfluorinated Compounds by LC/MS/MS

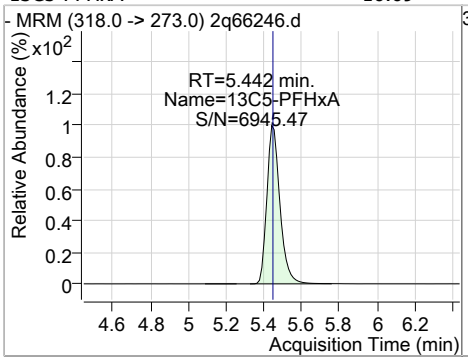
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	19.76	5.34	0.00	49833	327.0 -> 81.0	34.3	5.4	65.4

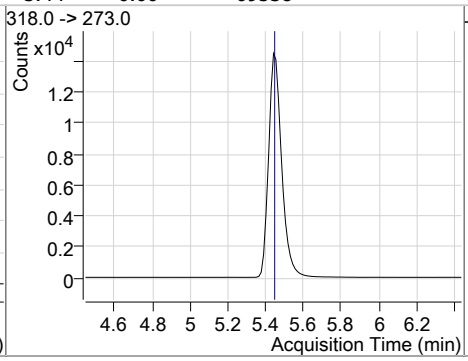


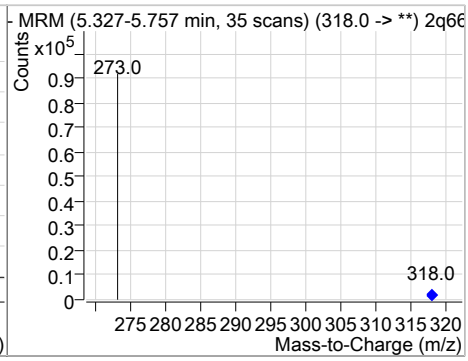




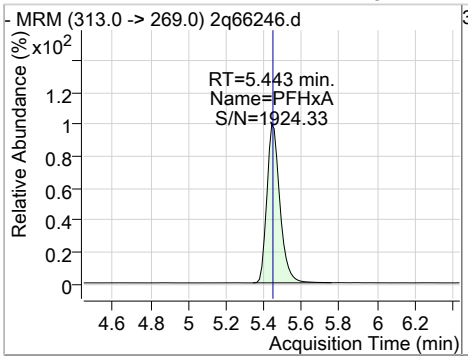
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	16.69	5.44	0.00	69538				

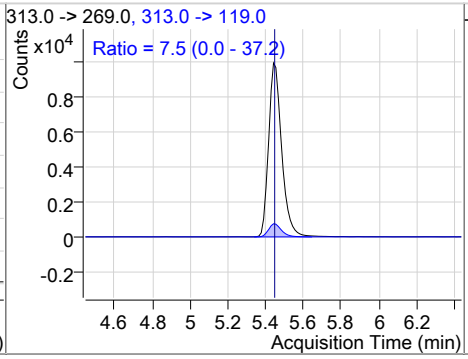


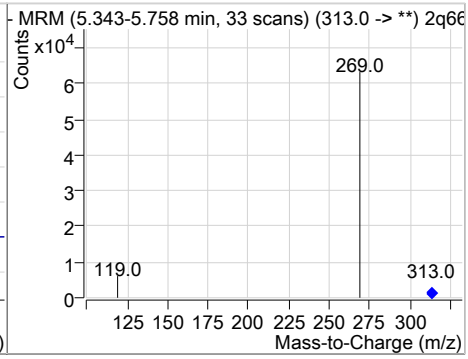




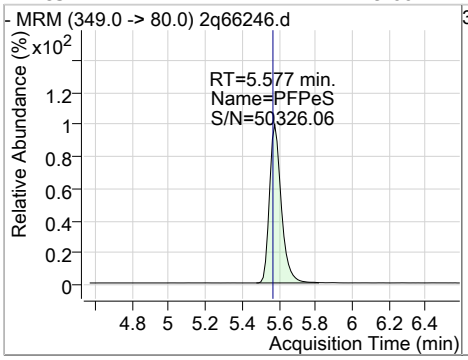
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.47	5.44	0.00	47363	313.0 -> 119.0	7.5	0.0	37.2

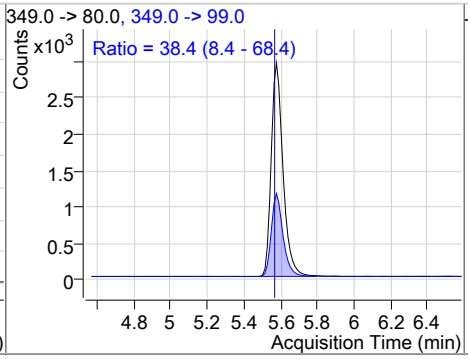


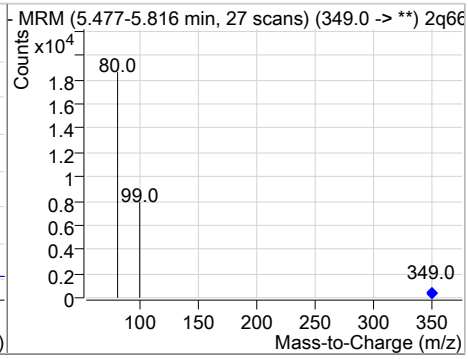




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	19.88	5.58	0.00	13160	349.0 -> 99.0	38.4	8.4	68.4

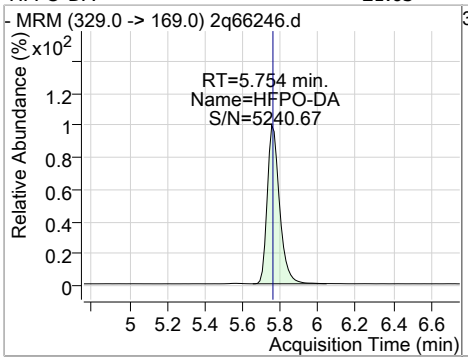


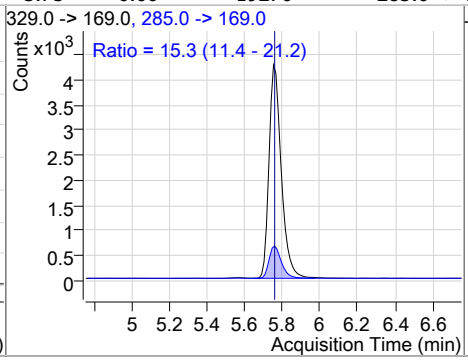


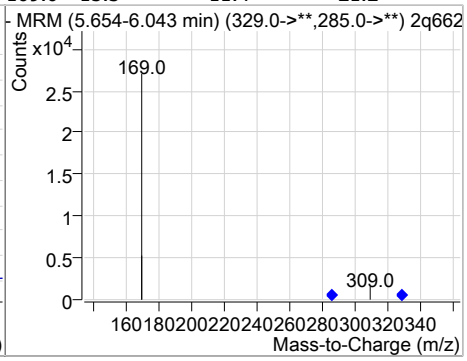


Perfluorinated Compounds by LC/MS/MS

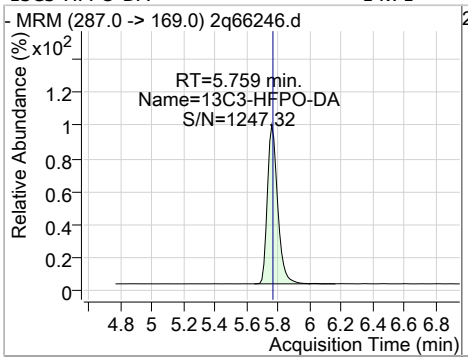
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	21.63	5.75	0.00	19270	285.0 -> 169.0	15.3	11.4	21.2

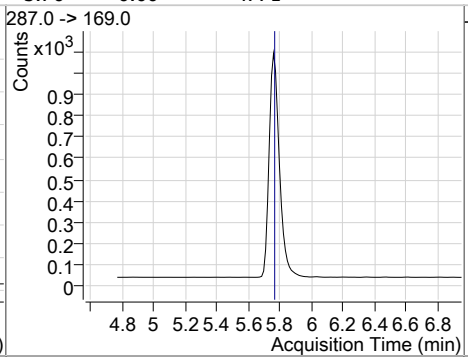


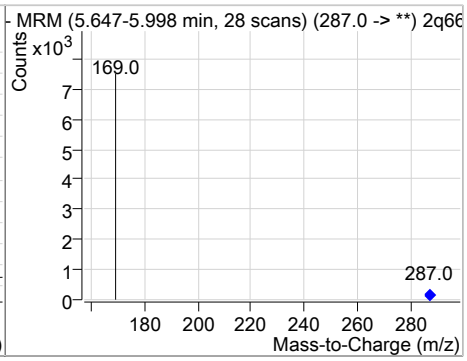




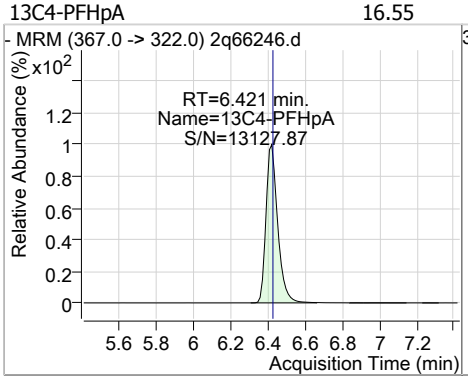
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	14.71	5.76	0.00	4771				

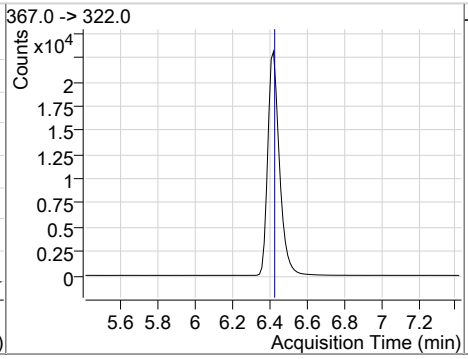


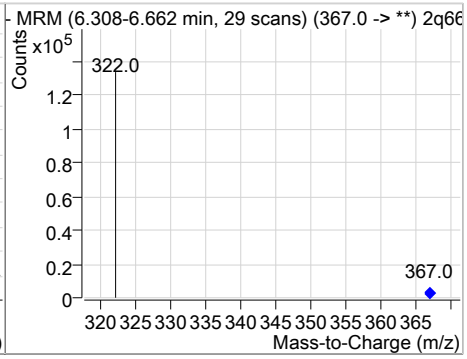




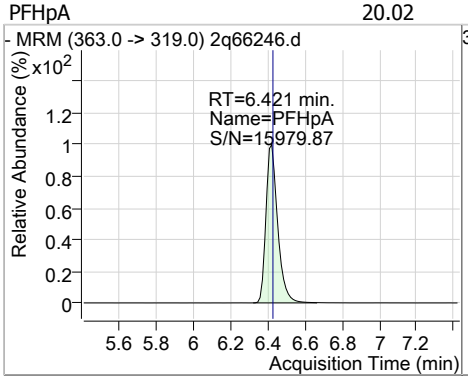
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	16.55	6.42	0.00	100727				

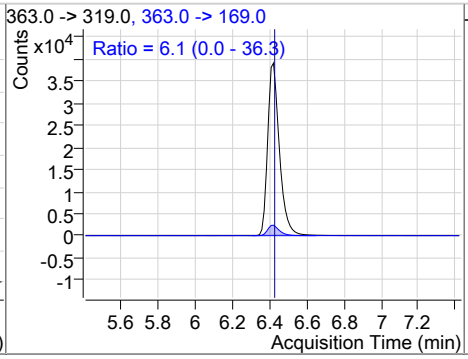


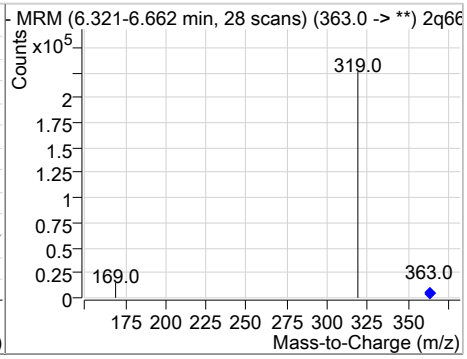




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	20.02	6.42	0.00	170507	363.0 -> 169.0	6.1	0.0	36.3

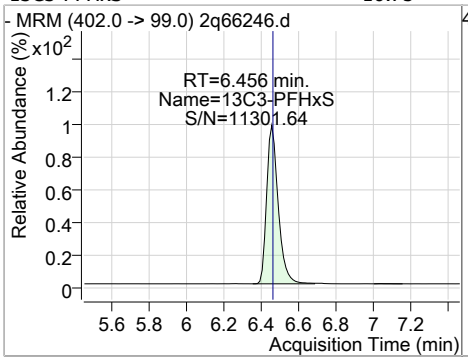


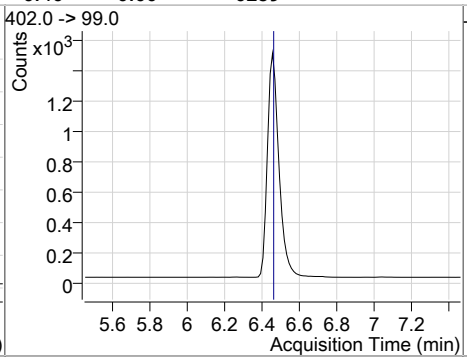


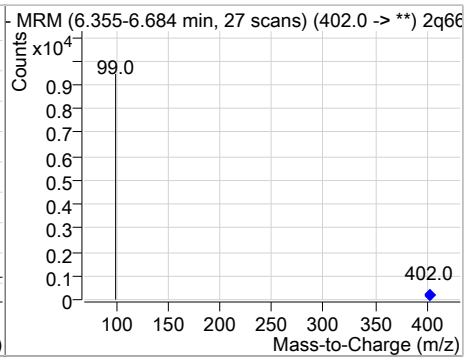


Perfluorinated Compounds by LC/MS/MS

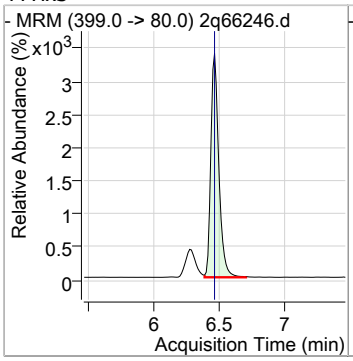
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	16.75	6.46	0.00	6289				

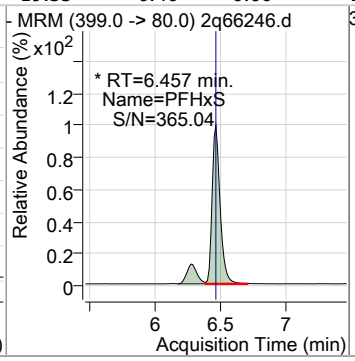


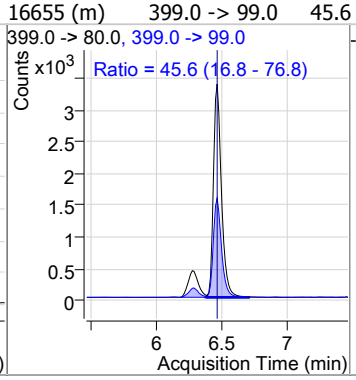


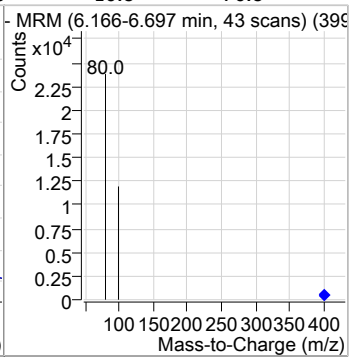


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	19.35	6.46	0.00	16655 (m)	399.0 -> 99.0	45.6	16.8	76.8

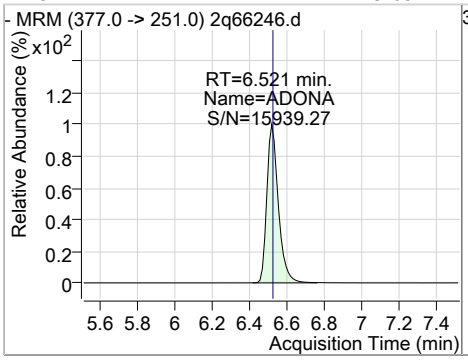


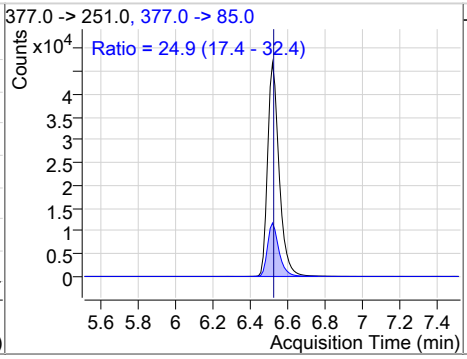


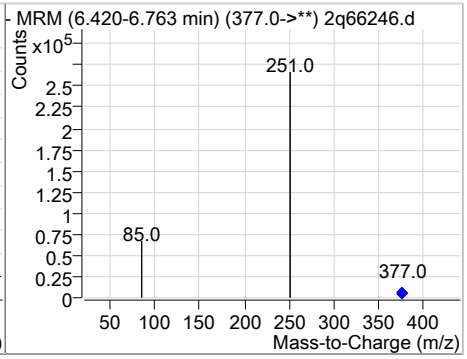




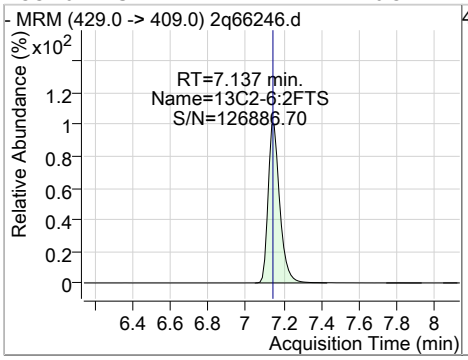
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	19.65	6.52	0.00	200690	377.0 -> 85.0	24.9	17.4	32.4

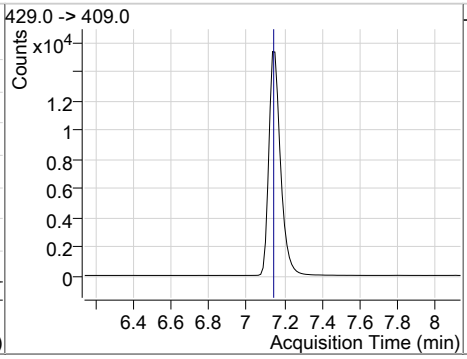


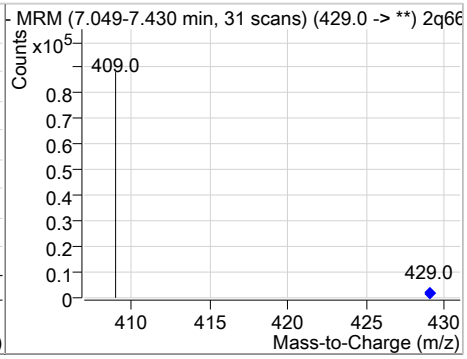




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	16.34	7.14	0.00	66484				

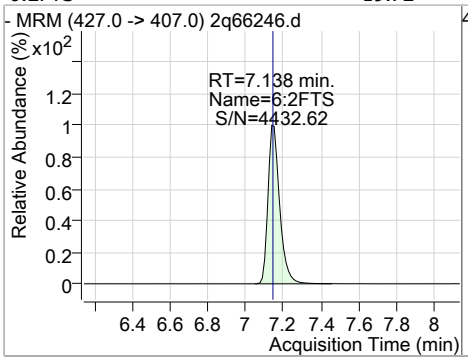


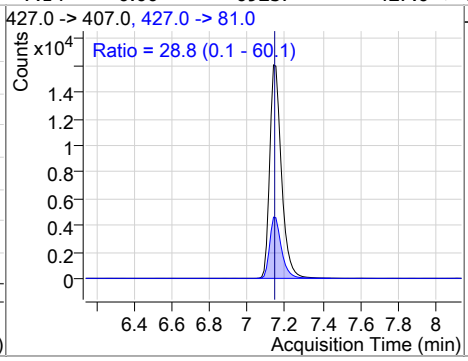


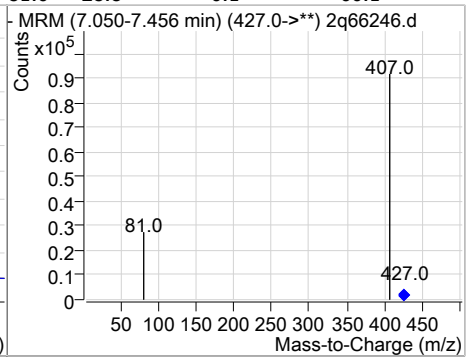


Perfluorinated Compounds by LC/MS/MS

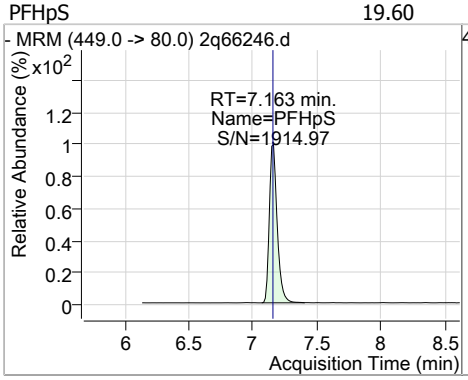
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	19.72	7.14	0.00	69257	427.0 -> 81.0	28.8	0.1	60.1

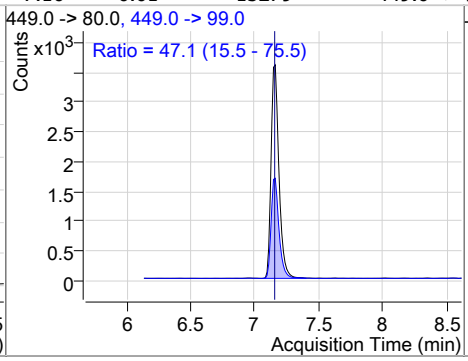


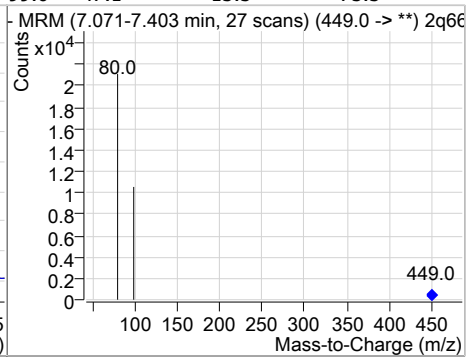




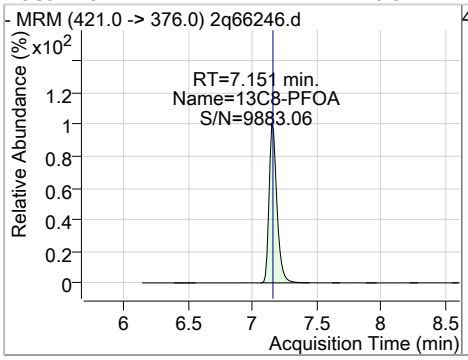
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	19.60	7.16	0.01	15279	449.0 -> 99.0	47.1	15.5	75.5

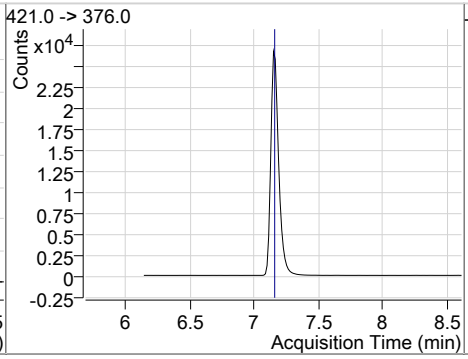


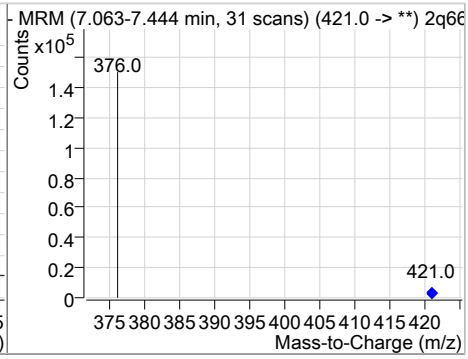




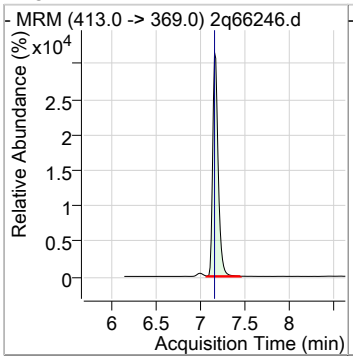
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	16.32	7.15	0.00	113849				

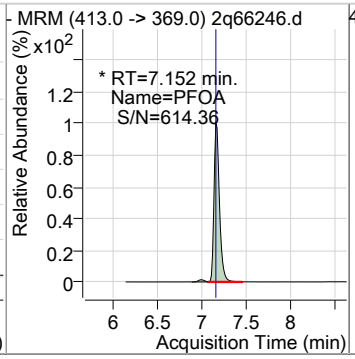


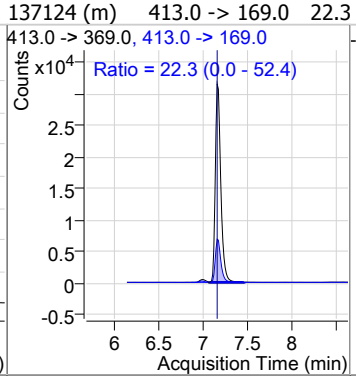


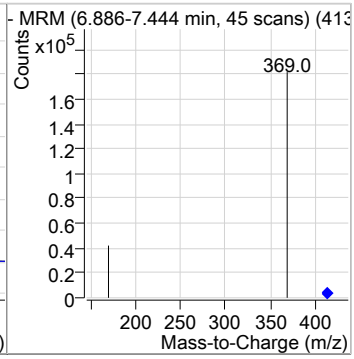


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	20.24	7.15	0.00	137124 (m)	413.0 -> 169.0	22.3	0.0	52.4



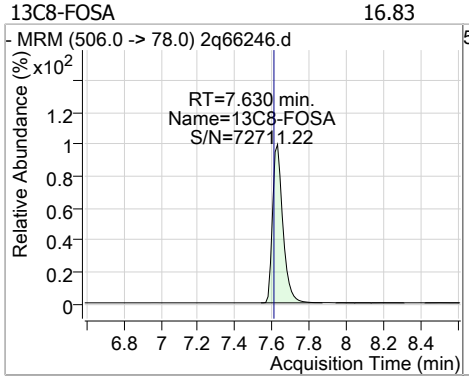


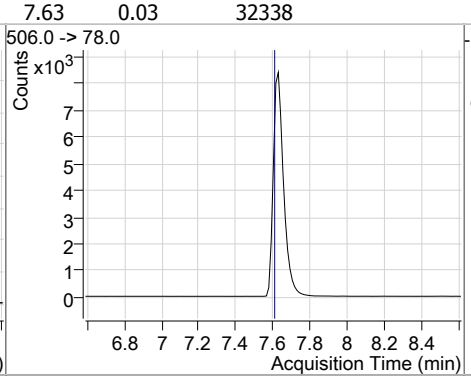


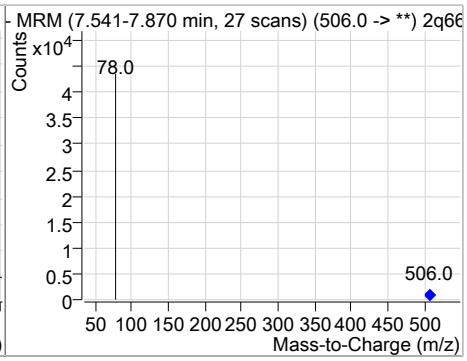


Perfluorinated Compounds by LC/MS/MS

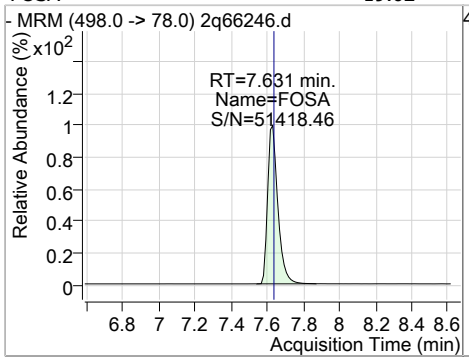
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	16.83	7.63	0.03	32338				

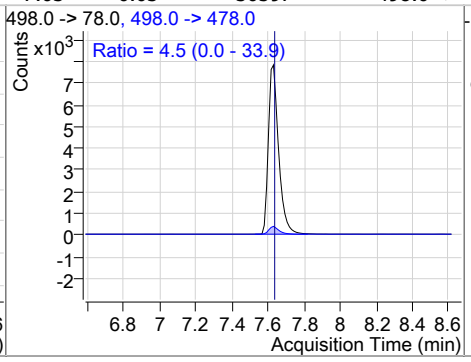


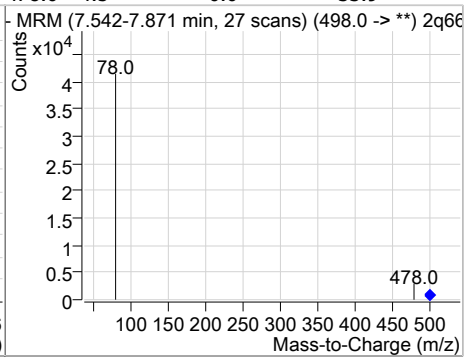




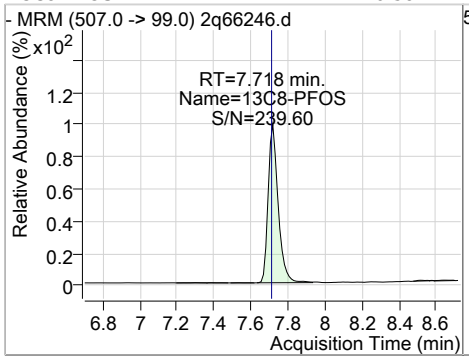
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	19.02	7.63	0.03	30597	498.0 -> 478.0	4.5	0.0	33.9

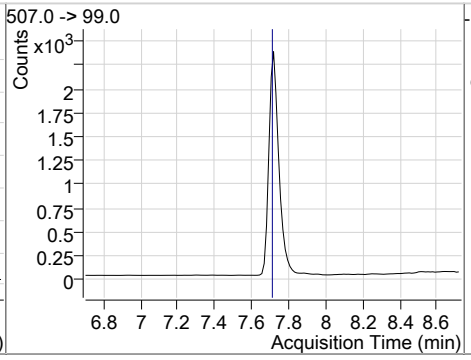


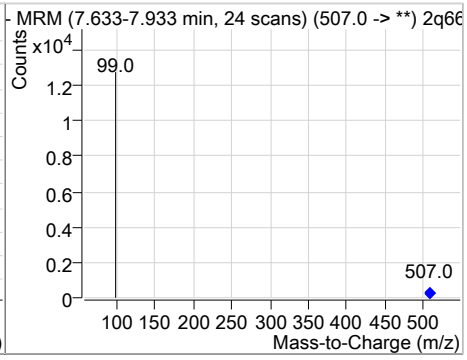




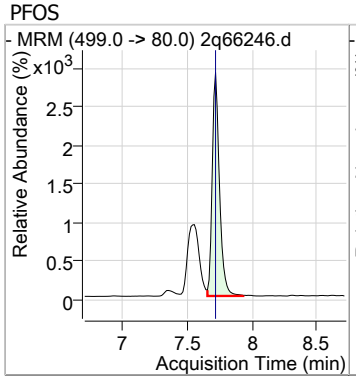
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	16.58	7.72	0.00	8808				

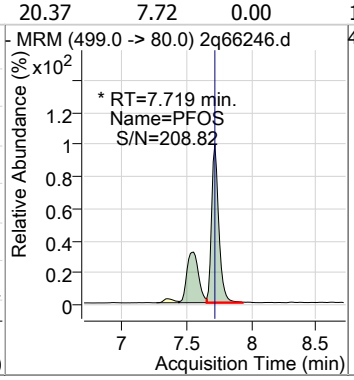


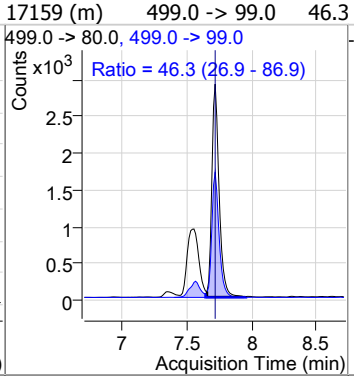


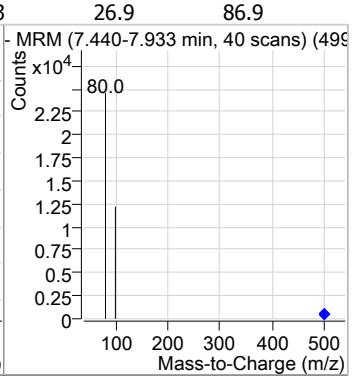


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	20.37	7.72	0.00	17159 (m)	499.0 -> 99.0	46.3	26.9	86.9



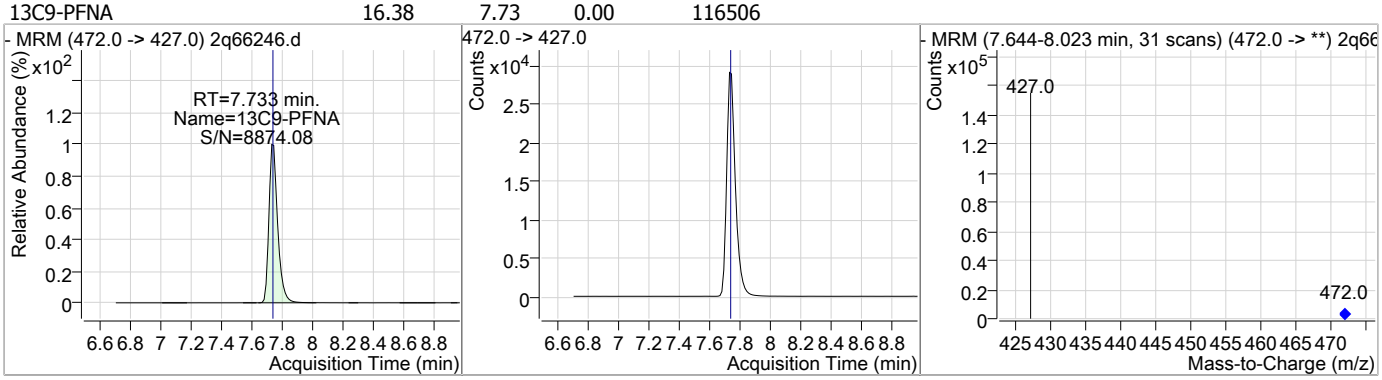




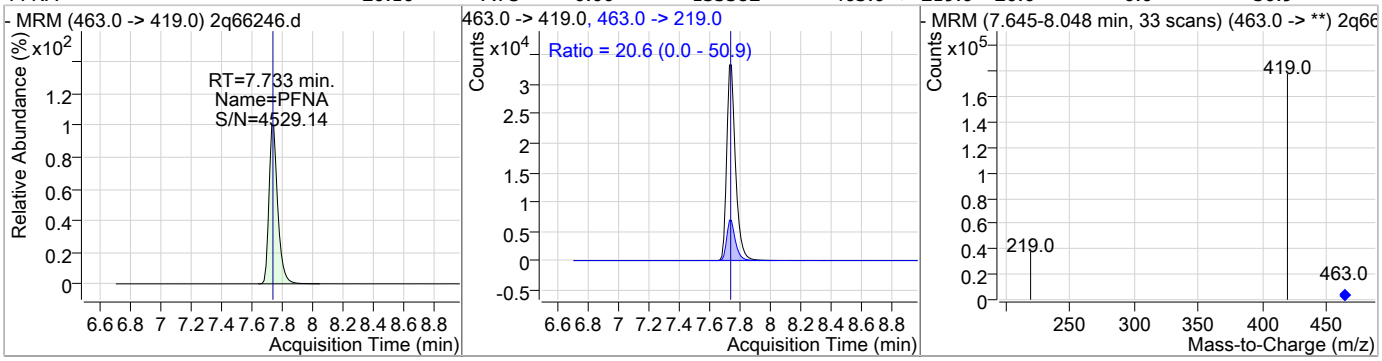


Perfluorinated Compounds by LC/MS/MS

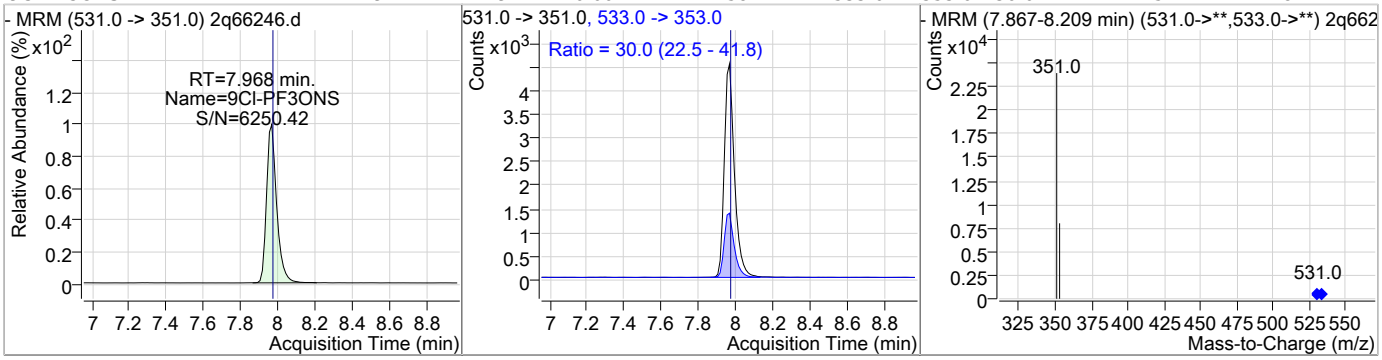
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	16.38	7.73	0.00	116506				



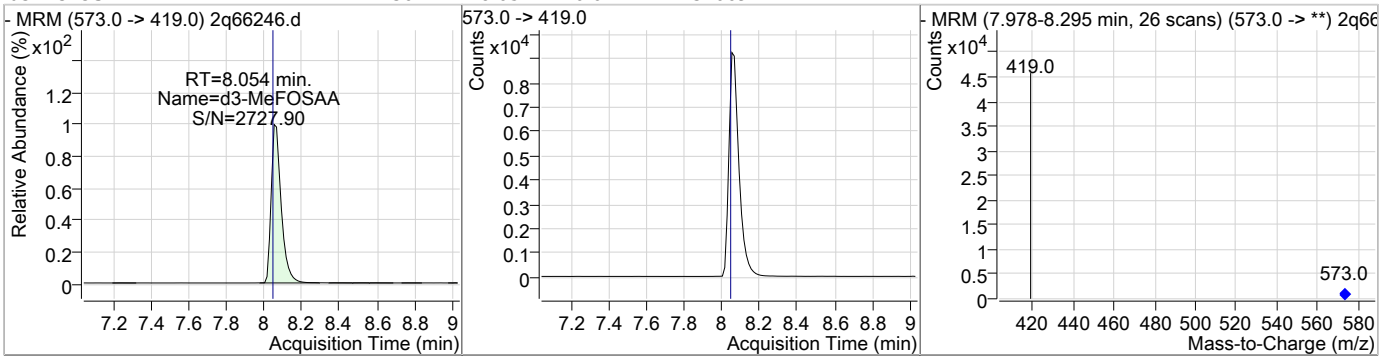
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	20.16	7.73	0.00	133382	463.0 -> 219.0	20.6	0.0	50.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	19.12	7.97	0.00	17158	533.0 -> 353.0	30.0	22.5	41.8

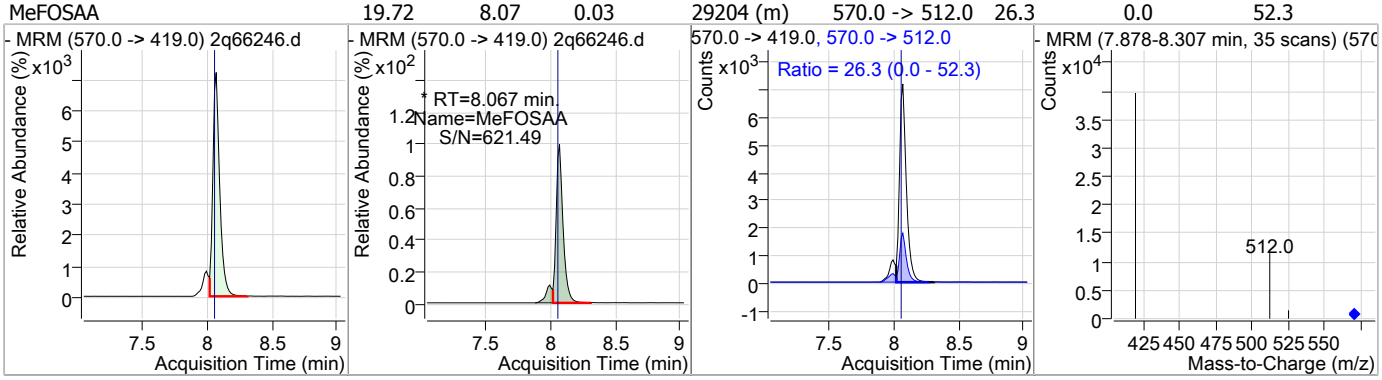


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	14.36	8.05	0.01	34069				

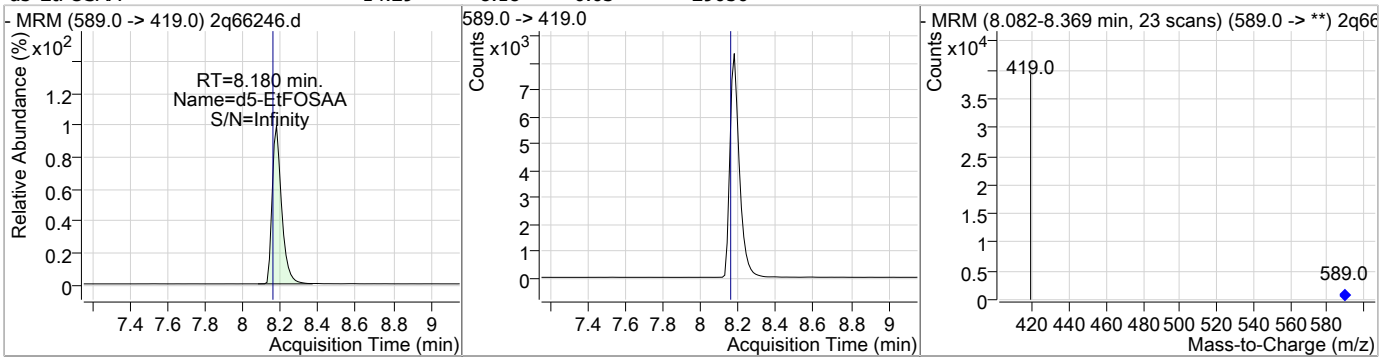


Perfluorinated Compounds by LC/MS/MS

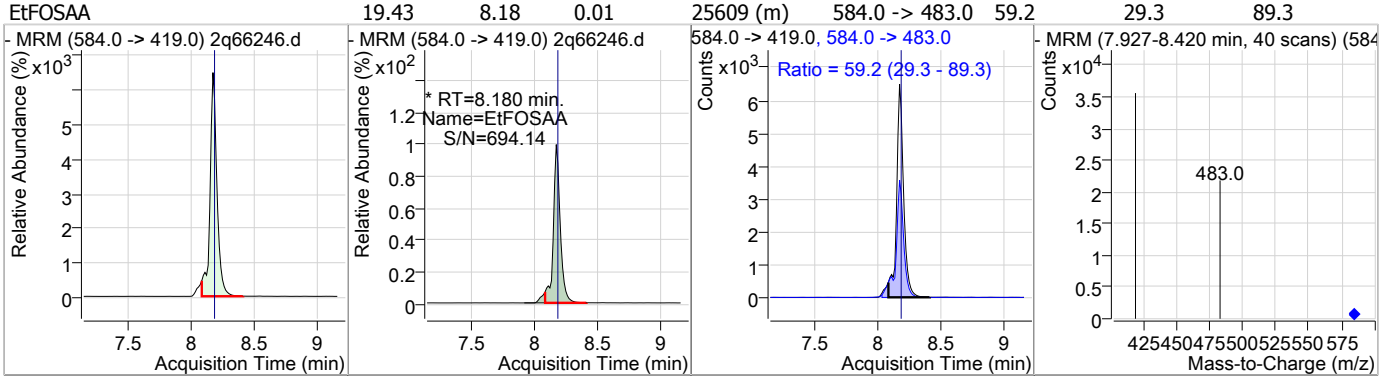
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	19.72	8.07	0.03	29204 (m)	570.0 -> 512.0	26.3	0.0	52.3



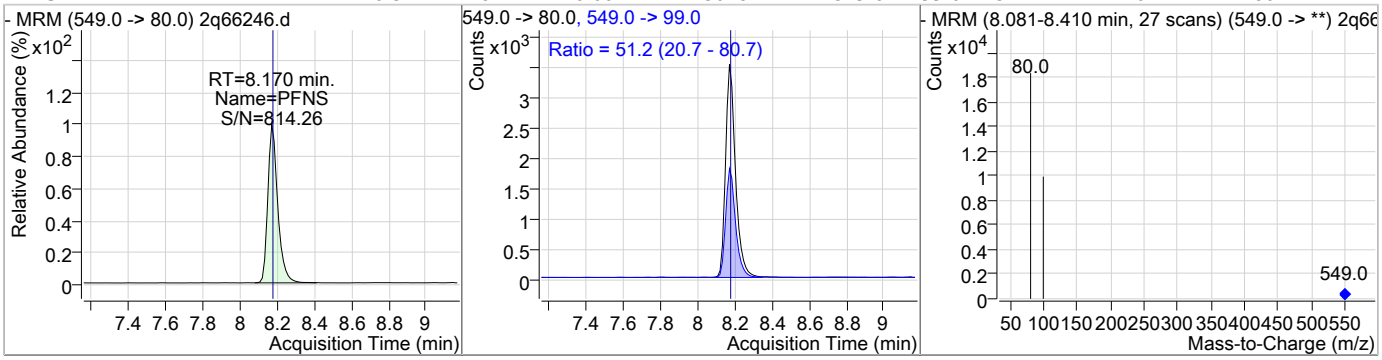
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	14.29	8.18	0.03	29050				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	19.43	8.18	0.01	25609 (m)	584.0 -> 483.0	59.2	29.3	89.3

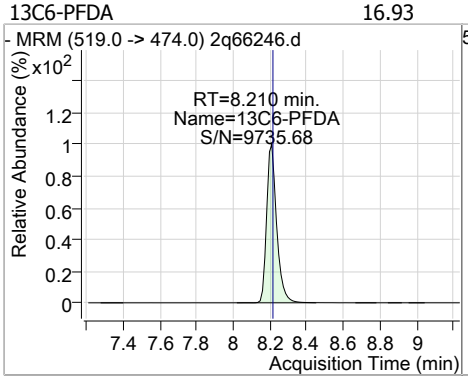


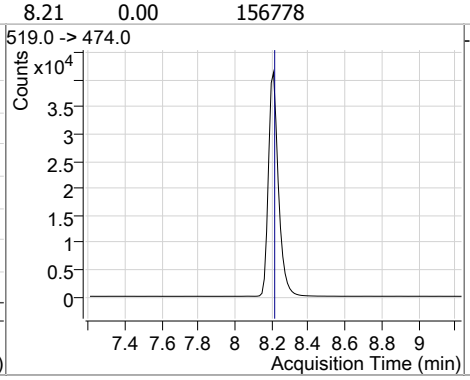
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	20.37	8.17	0.00	13028	549.0 -> 99.0	51.2	20.7	80.7

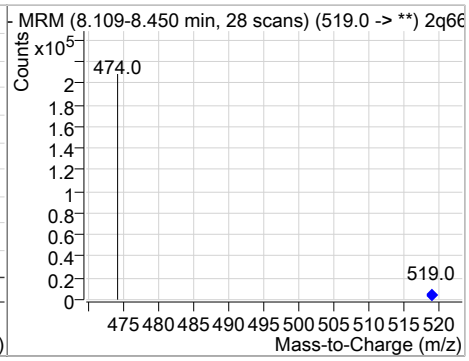


Perfluorinated Compounds by LC/MS/MS

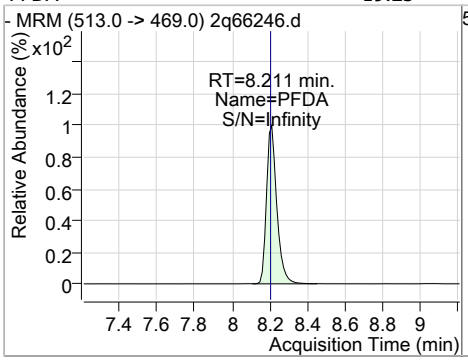
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	16.93	8.21	0.00	156778				

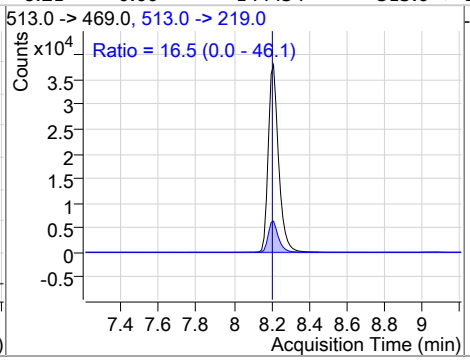


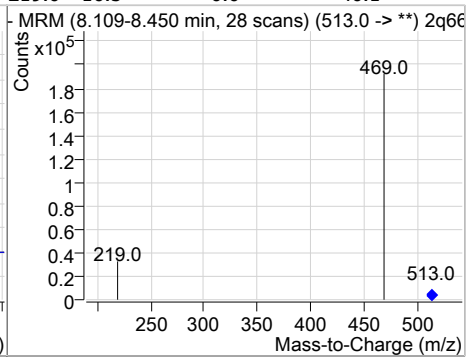




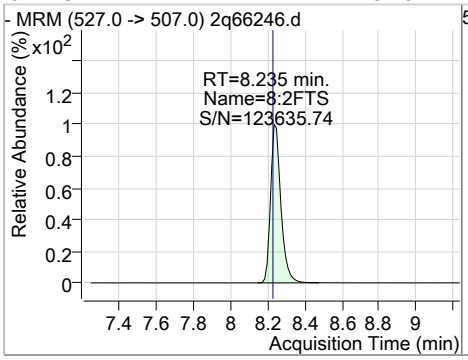
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.23	8.21	0.00	144454	513.0 -> 219.0	16.5	0.0	46.1

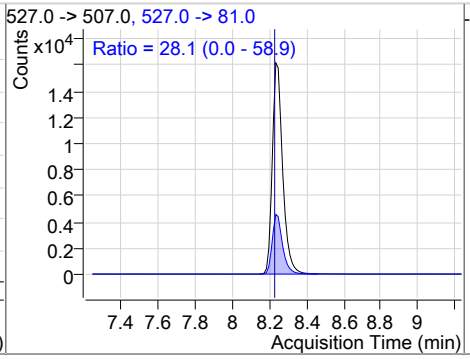


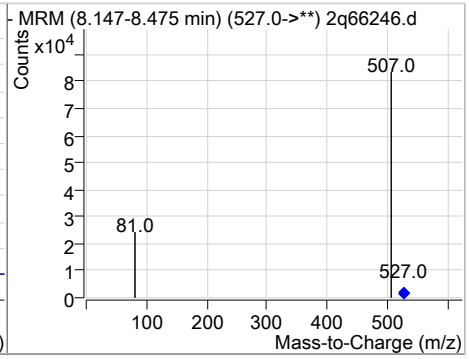




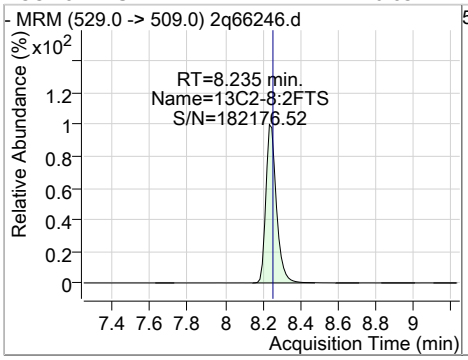
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	19.78	8.23	0.00	62251	527.0 -> 81.0	28.1	0.0	58.9

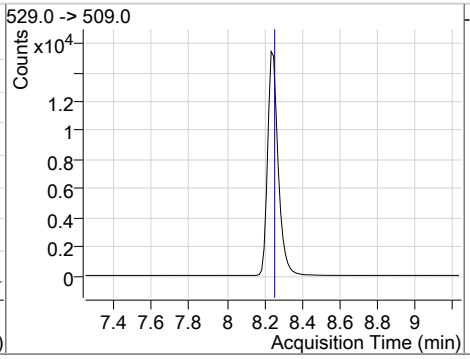


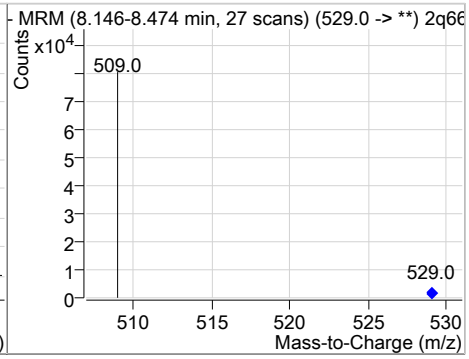




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	16.83	8.23	-0.01	60036				

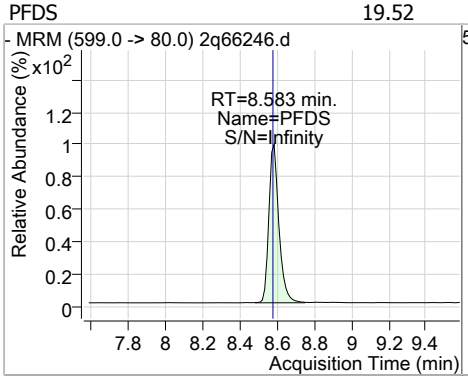


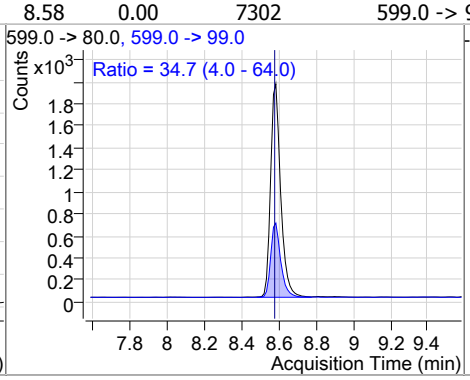


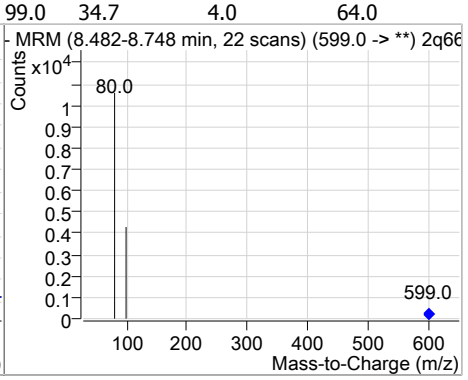


Perfluorinated Compounds by LC/MS/MS

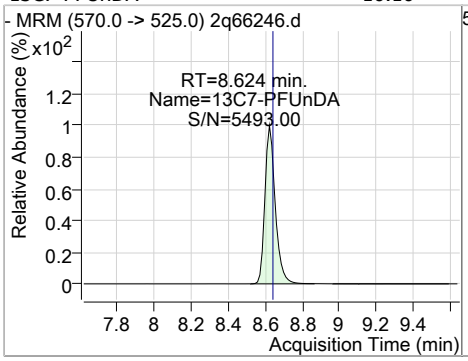
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	19.52	8.58	0.00	7302	599.0 -> 99.0	34.7	4.0	64.0

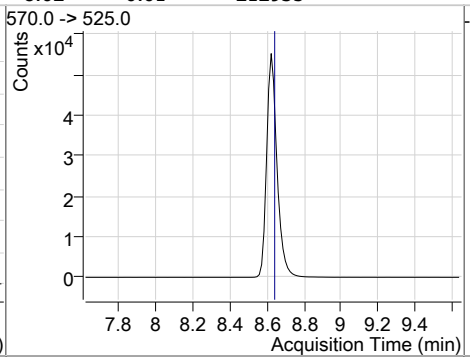


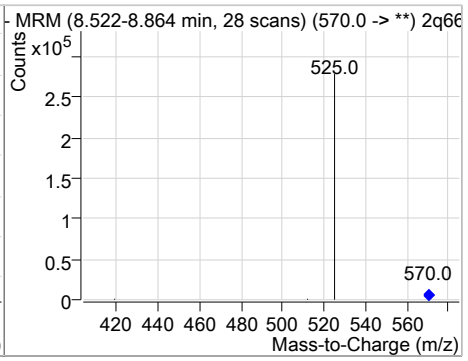




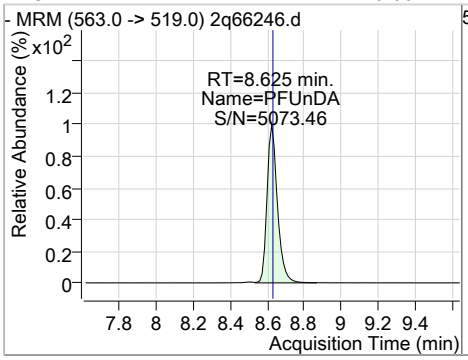
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	16.16	8.62	-0.01	212935				

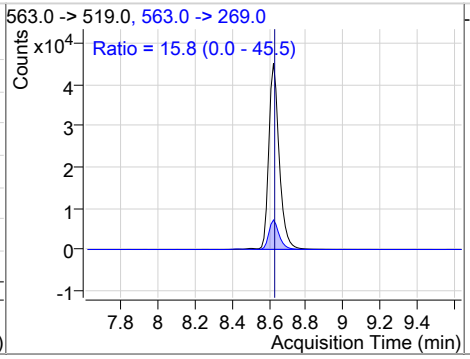


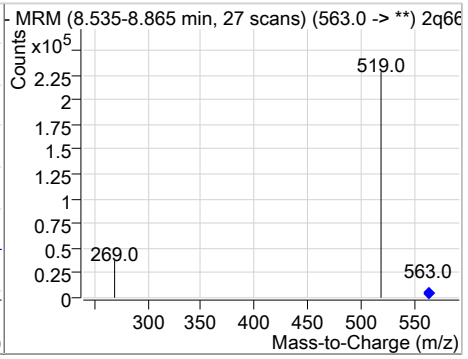




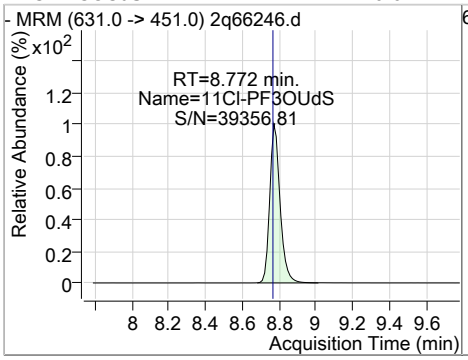
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	20.06	8.62	-0.01	174325	563.0 -> 269.0	15.8	0.0	45.5

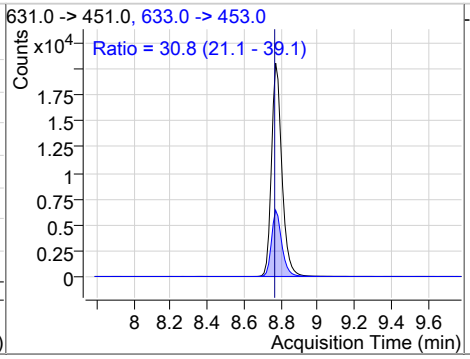


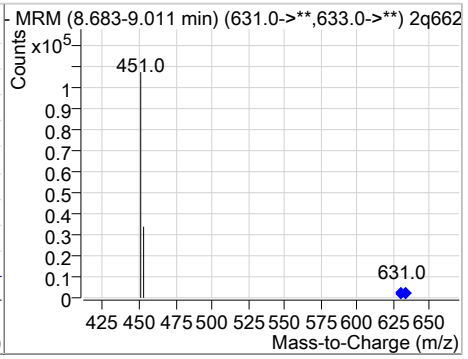




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	20.61	8.77	-0.01	80415	633.0 -> 453.0	30.8	21.1	39.1

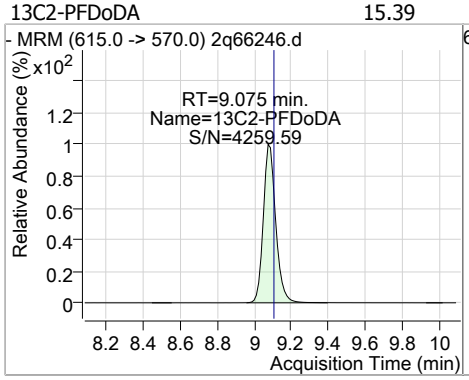


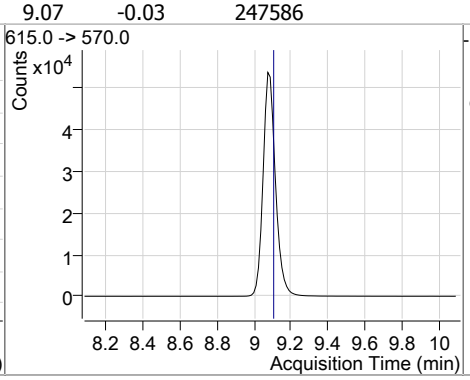


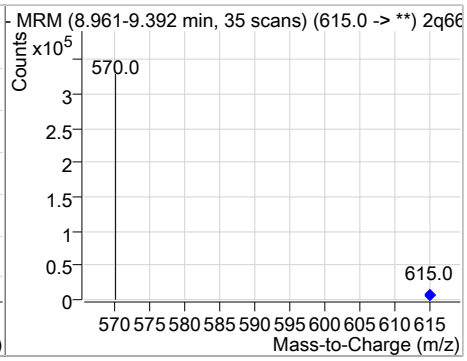


Perfluorinated Compounds by LC/MS/MS

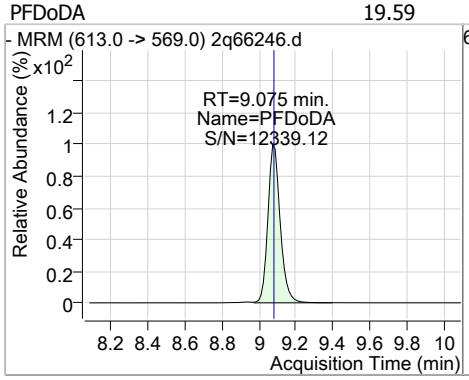
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	15.39	9.07	-0.03	247586				

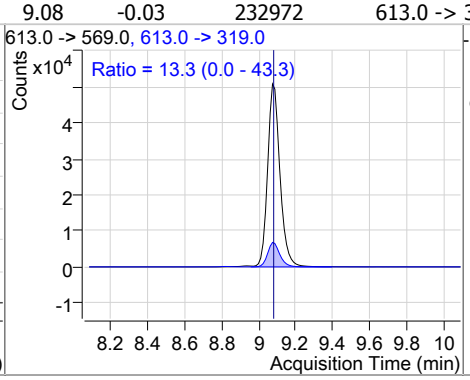


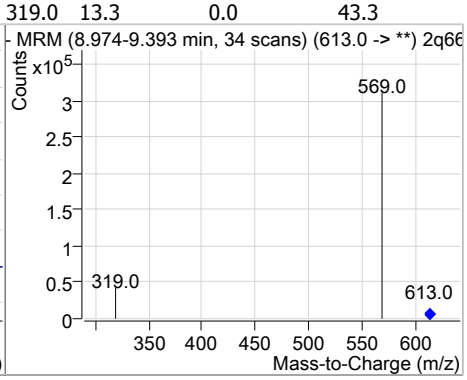




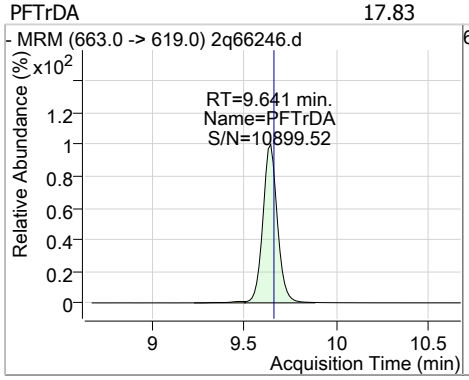
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	19.59	9.08	-0.03	232972	613.0 -> 319.0	13.3	0.0	43.3

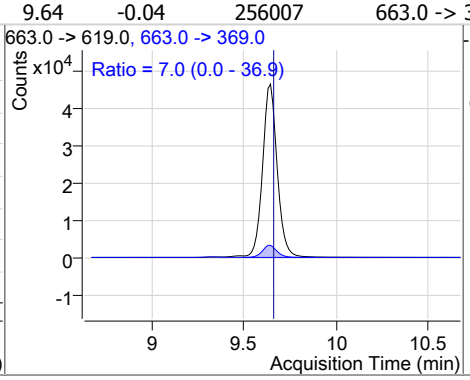


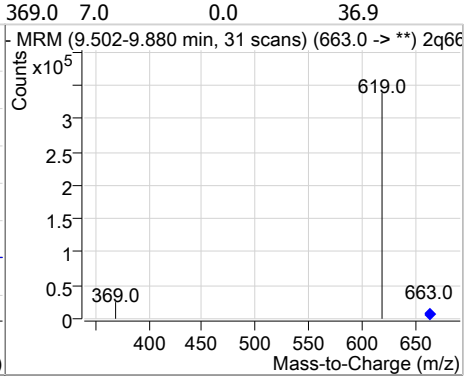




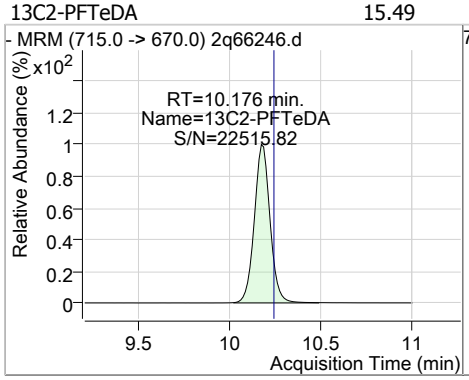
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	17.83	9.64	-0.04	256007	663.0 -> 369.0	7.0	0.0	36.9

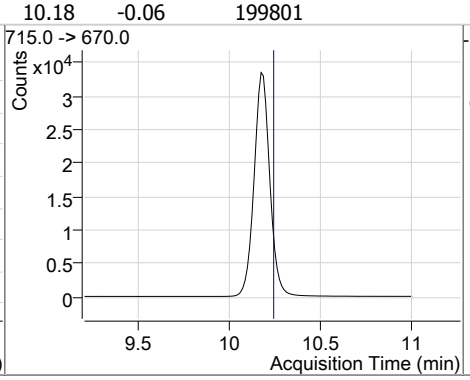


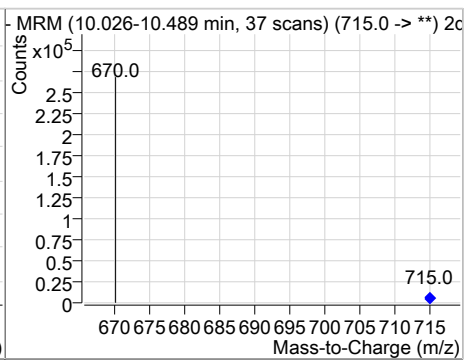




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	15.49	10.18	-0.06	199801				

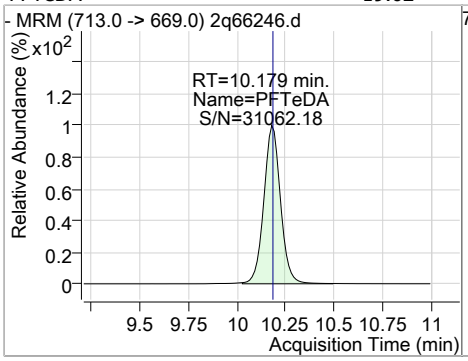


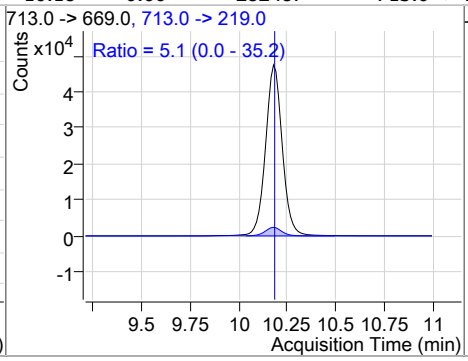


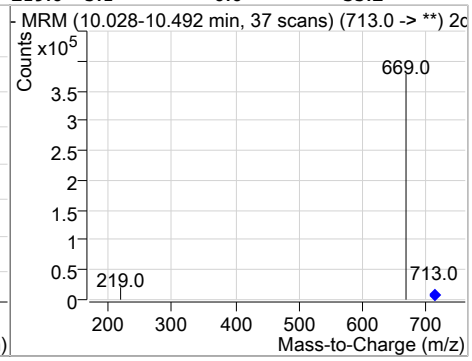


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	19.62	10.18	-0.06	282487	713.0 -> 219.0	5.1	0.0	35.2







Manual Integration Approval Summary

Sample Number: OP84941-MS
Lab FileID: 2Q66246.D
Injection Time: 04/17/21 04:56
Method: EPA 537M BY ID
Analyst approved: 04/18/21 11:57 Nancy Saunders
Supervisor approved: 04/19/21 15:44 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.46	Split peak
Perfluorooctanoic acid	335-67-1		7.15	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
MeFOSAA	2355-31-9		8.07	Split peak
EtFOSAA	2991-50-6		8.18	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:44

Perfluorinated Compounds by LC/MS/MS

Data File : 2q66247.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/17/2021 5:12:40 AM
Sample Name : op84941-msd
Vial : P4-A2
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q963.batch.bin
Sample Information : op84941,S2Q963,2.01,,,1.0,1,soil

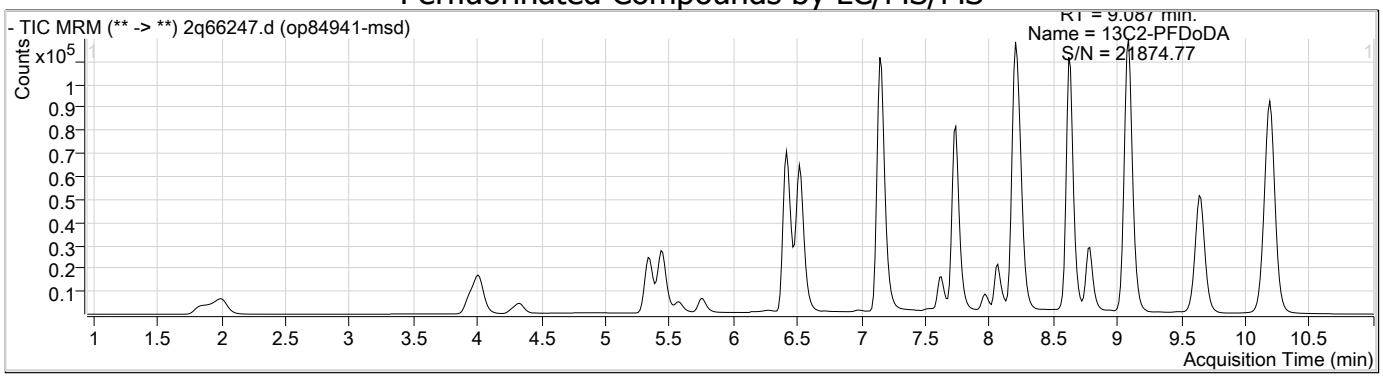
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.180	589.0 -> 419.0	32142	20.00	µg/L	0.025
M4-PFBA	1.989	217.0 -> 172.0	62826	20.00	µg/L	0.000
M5-PFPeA	4.012	268.0 -> 223.0	49657	20.00	µg/L	0.000
M5-PFHxA	5.442	318.0 -> 273.0	75630	20.00	µg/L	0.000
M4-PFHpA	6.421	367.0 -> 322.0	109423	20.00	µg/L	0.000
M8-PFOA	7.165	421.0 -> 376.0	124319	20.00	µg/L	0.013
M9-PFNA	7.745	472.0 -> 427.0	127517	20.00	µg/L	0.013
M6-PFDA	8.210	519.0 -> 474.0	168874	20.00	µg/L	0.000
M7-PFUnDA	8.624	570.0 -> 525.0	229019	20.00	µg/L	-0.012
M2-PFDoDA	9.087	615.0 -> 570.0	269410	20.00	µg/L	-0.012
M2-PFTeDA	10.189	715.0 -> 670.0	227518	20.00	µg/L	-0.050
M8-FOSA	7.630	506.0 -> 78.0	28856	20.00	µg/L	0.026
M3-PFBS	4.330	302.0 -> 99.0	6145	20.00	µg/L	0.000
M3-PFHxS	6.456	402.0 -> 99.0	6814	20.00	µg/L	0.000
M8-PFOS	7.718	507.0 -> 99.0	9550	20.00	µg/L	0.000
M2-4:2FTS	5.335	329.0 -> 309.0	52221	20.00	µg/L	0.000
M2-6:2FTS	7.150	429.0 -> 409.0	70638	20.00	µg/L	0.013
M2-8:2FTS	8.247	529.0 -> 509.0	64571	20.00	µg/L	0.000
M3-MeFOSAA	8.066	573.0 -> 419.0	37125	20.00	µg/L	0.025
M3-HFPO-DA	5.759	287.0 -> 169.0	5086	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.335	329.0 -> 309.0	52221	17.94	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.7%		
13C2-6:2FTS	7.150	429.0 -> 409.0	70638	17.36	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.8%		
13C2-8:2FTS	8.247	529.0 -> 509.0	64571	18.10	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.5%		
13C2-PFDoDA	9.087	615.0 -> 570.0	269410	16.75	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.7%		
13C2-PFTeDA	10.189	715.0 -> 670.0	227518	17.63	µg/L	-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.2%		
13C3-PFBS	4.330	302.0 -> 99.0	6145	18.19	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.9%		
13C3-PFHxS	6.456	402.0 -> 99.0	6814	18.15	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.7%		
13C4-PFBA	1.989	217.0 -> 172.0	62826	18.71	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.5%		
13C4-PFHpA	6.421	367.0 -> 322.0	109423	17.98	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.9%		
d5-EtFOSAA	8.180	589.0 -> 419.0	32142	15.81	ng/ml	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 79.1%		
13C5-PFHxA	5.442	318.0 -> 273.0	75630	18.15	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.8%		
13C5-PFPeA	4.012	268.0 -> 223.0	49657	18.00	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.0%		

Perfluorinated Compounds by LC/MS/MS

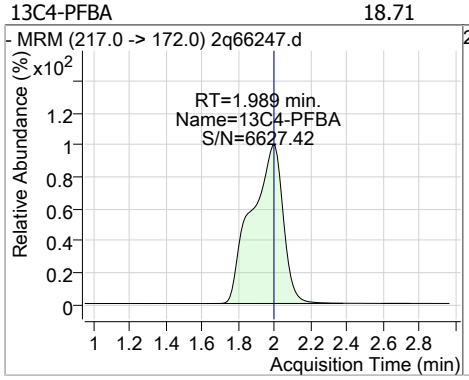
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	168874	18.23	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.2%			
13C7-PFUnDA	8.624	570.0 -> 525.0	229019	17.38	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.9%			
13C8-FOSA	7.630	506.0 -> 78.0	28856	15.02	µg/L		0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 75.1%			
13C8-PFOA	7.165	421.0 -> 376.0	124319	17.82	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.1%			
13C8-PFOS	7.718	507.0 -> 99.0	9550	17.98	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.9%			
13C9-PFNA	7.745	472.0 -> 427.0	127517	17.93	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.6%			
d3-MeFOSAA	8.066	573.0 -> 419.0	37125	15.65	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 78.3%			
13C3-HFPO-DA	5.759	287.0 -> 169.0	5086	15.68	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 78.4%			
Target Compounds							QValue
4:2FTS	5.337	327.0 -> 307.0	51336	18.66	µg/L		98
6:2FTS	7.150	427.0 -> 407.0	70908	19.01	µg/L		99
8:2FTS	8.248	527.0 -> 507.0	62677	18.52	µg/L		98
EtFOSAA	8.180	584.0 -> 419.0	26524	18.18	µg/L	m	99
FOSA	7.631	498.0 -> 78.0	26834	18.70	µg/L		99
MeFOSAA	8.067	570.0 -> 419.0	30345	18.80	µg/L	m	94
PFBA	1.996	213.0 -> 169.0	19377	18.28	µg/L		100
PFBS	4.320	299.0 -> 80.0	17877	18.69	µg/L		100
PFDA	8.211	513.0 -> 469.0	148212	18.32	µg/L		99
PFDoDA	9.088	613.0 -> 569.0	242755	18.76	µg/L		99
PFDS	8.583	599.0 -> 80.0	7676	19.08	µg/L		99
PFHpA	6.421	363.0 -> 319.0	175284	18.94	µg/L		99
PFHpS	7.163	449.0 -> 80.0	16114	19.08	µg/L		99
PFHxA	5.443	313.0 -> 269.0	48365	18.28	µg/L		99
PFHxS	6.457	399.0 -> 80.0	17424	18.69	µg/L	m	97
PFNA	7.745	463.0 -> 419.0	139677	19.29	µg/L		97
PFNS	8.170	549.0 -> 80.0	13276	19.15	µg/L		100
PFOA	7.165	413.0 -> 369.0	141018	19.06	µg/L	m	100
PFOS	7.719	499.0 -> 80.0	17422	19.08	µg/L	m	85
PFPeA	4.014	263.0 -> 219.0	77225	19.03	µg/L		100
PFPeS	5.577	349.0 -> 80.0	13693	18.87	µg/L		100
PFTeDA	10.191	713.0 -> 669.0	305675	18.65	µg/L		100
PFTrDA	9.641	663.0 -> 619.0	263729	16.88	µg/L		100
PFUnDA	8.625	563.0 -> 519.0	175823	18.81	µg/L		99
11Cl-PF3OUdS	8.784	631.0 -> 451.0	81958	19.30	µg/L		98
9Cl-PF3ONS	7.968	531.0 -> 351.0	17231	17.82	µg/L		100
ADONA	6.521	377.0 -> 251.0	207845	18.64	µg/L		99
HFPO-DA	5.754	329.0 -> 169.0	19822	20.87	µg/L		98

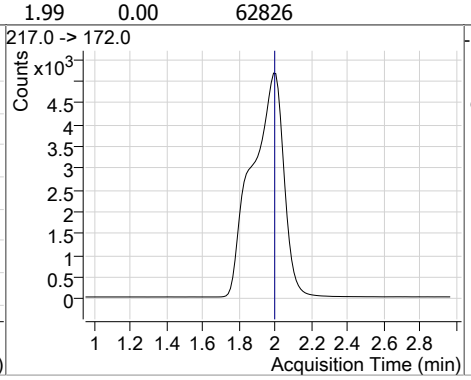
 # = Qualifier out of range, m = manually integrated, + = Area summed

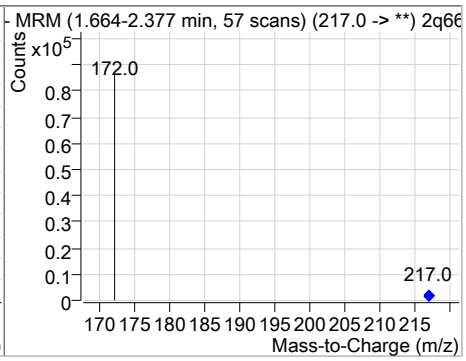
Perfluorinated Compounds by LC/MS/MS



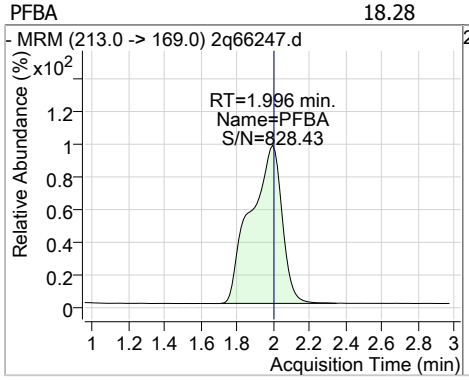
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.71	1.99	0.00	62826				

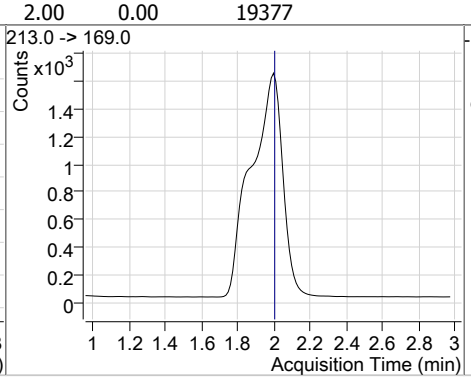


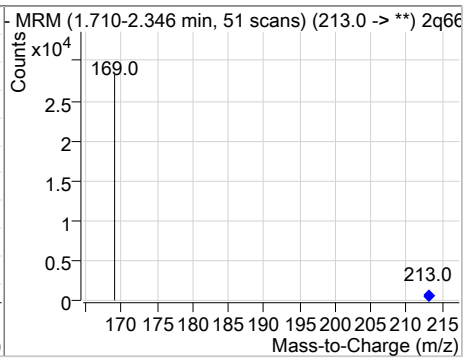




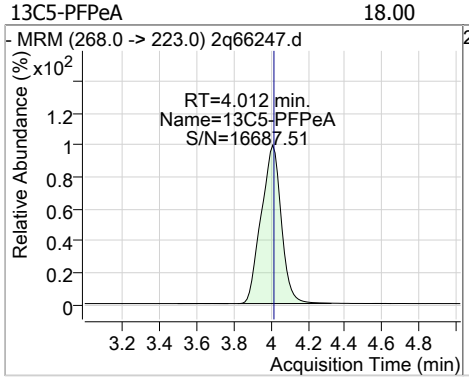
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	18.28	2.00	0.00	19377				

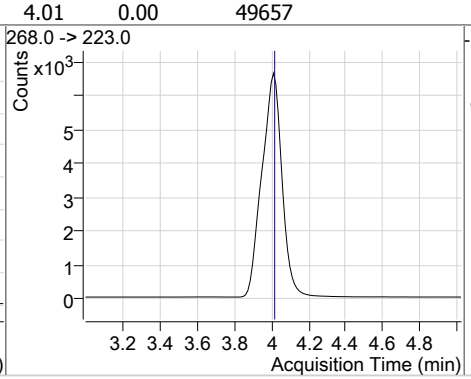


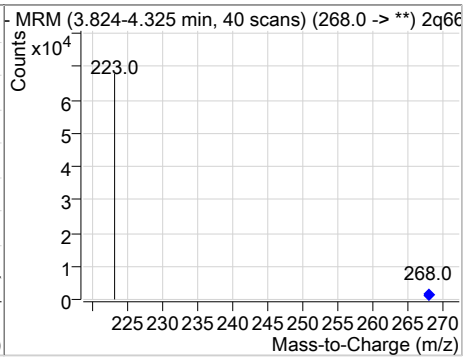




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	18.00	4.01	0.00	49657				

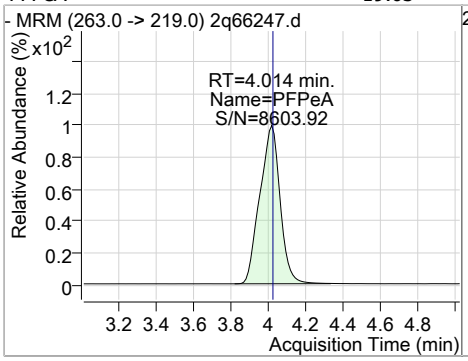


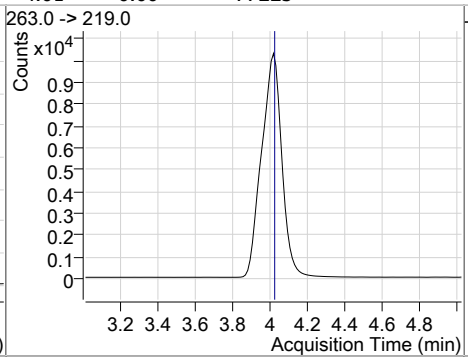


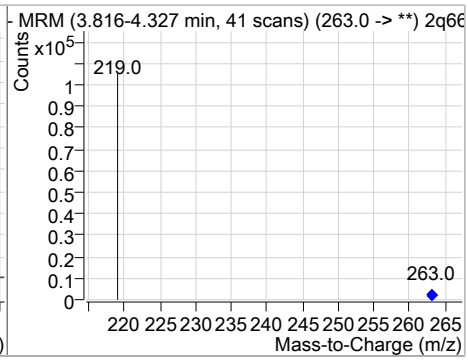


Perfluorinated Compounds by LC/MS/MS

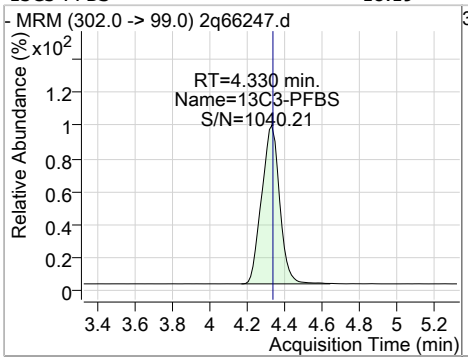
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.03	4.01	0.00	77225				

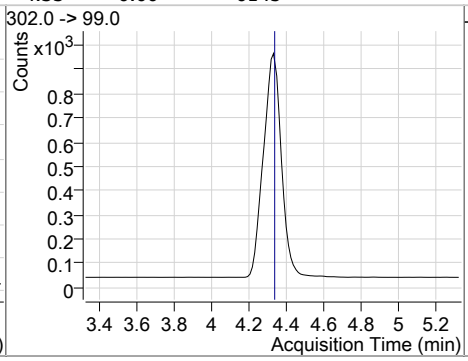


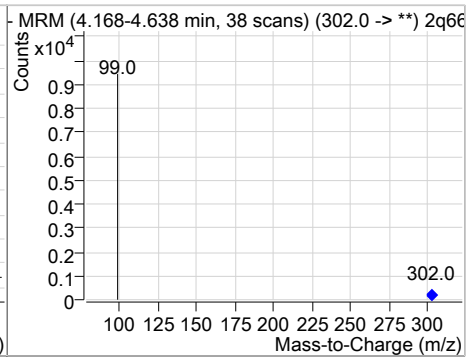




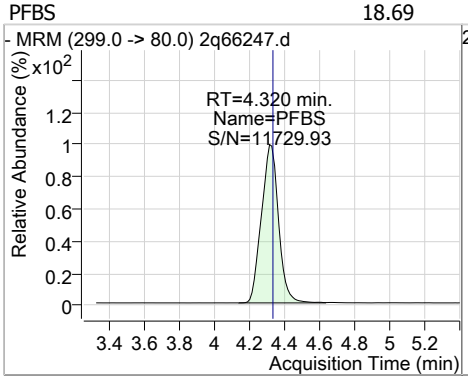
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	18.19	4.33	0.00	6145				

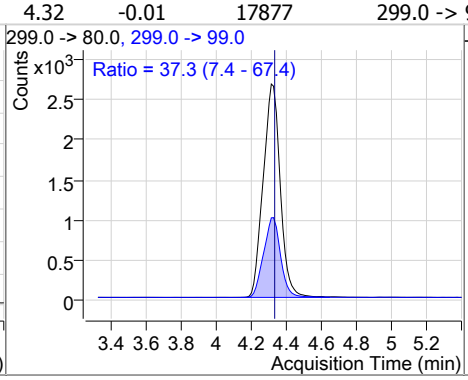


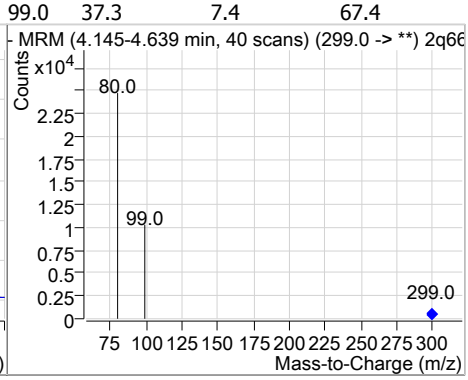




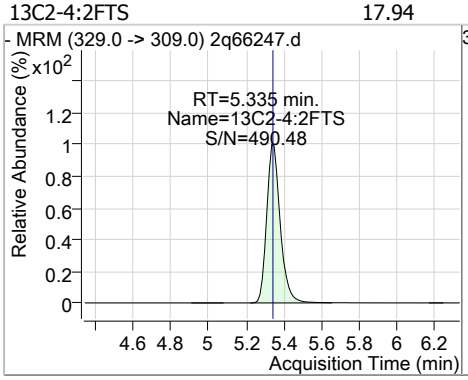
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	18.69	4.32	-0.01	17877	299.0 -> 99.0	37.3	7.4	67.4

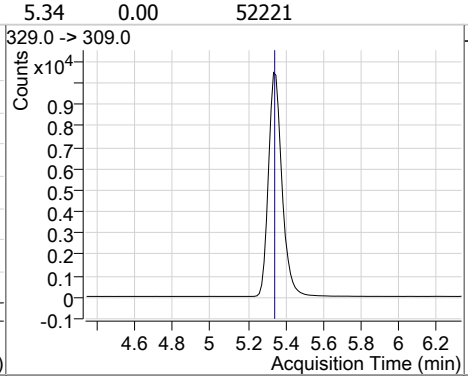


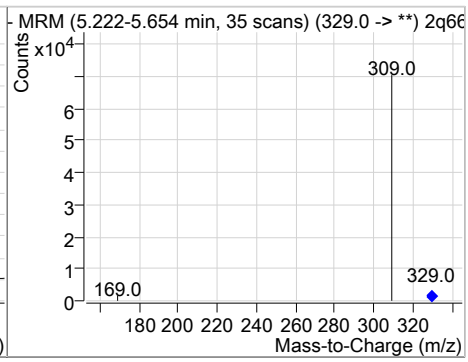




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	17.94	5.34	0.00	52221				

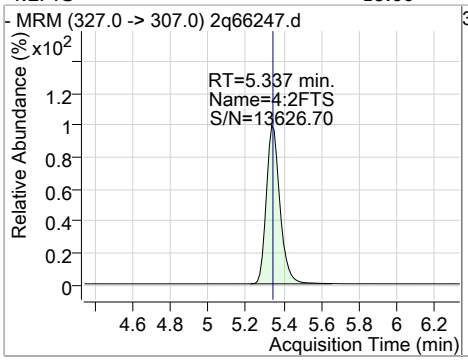


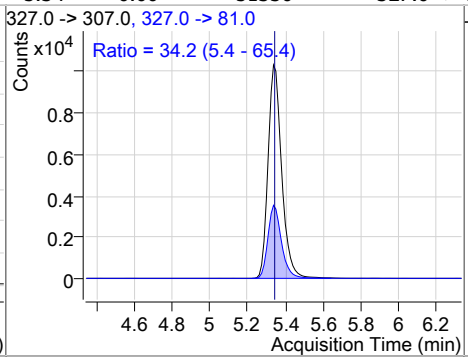


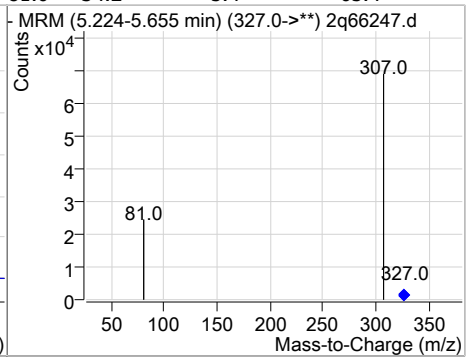


Perfluorinated Compounds by LC/MS/MS

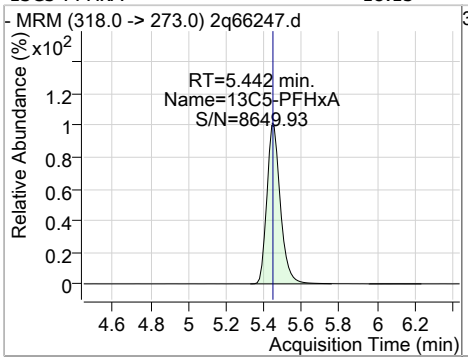
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	18.66	5.34	0.00	51336	327.0 -> 81.0	34.2	5.4	65.4

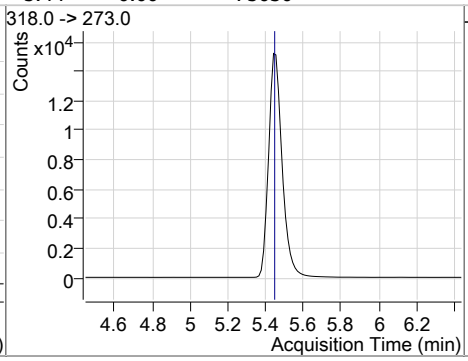


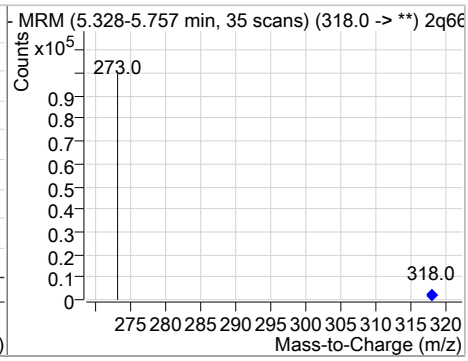




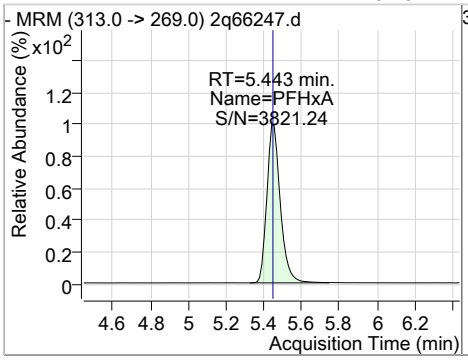
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	18.15	5.44	0.00	75630				

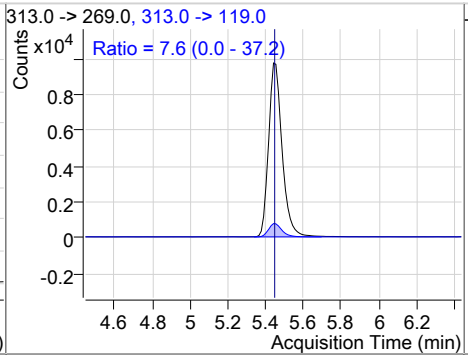


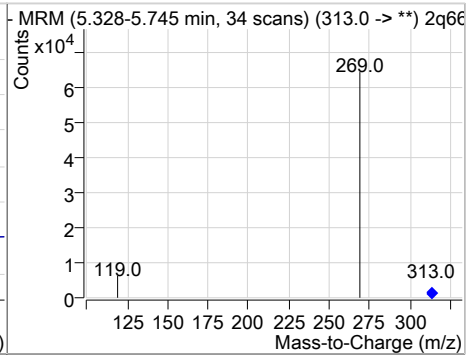




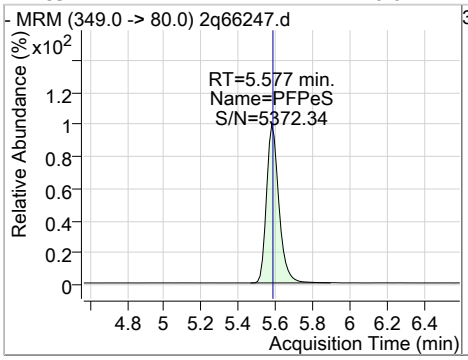
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	18.28	5.44	0.00	48365	313.0 -> 119.0	7.6	0.0	37.2

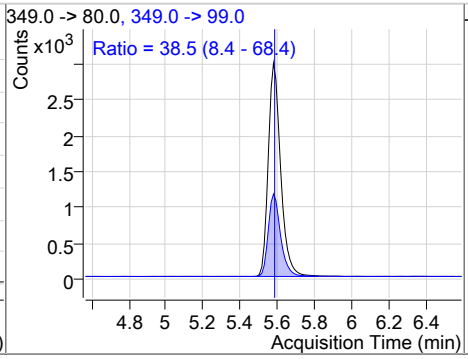


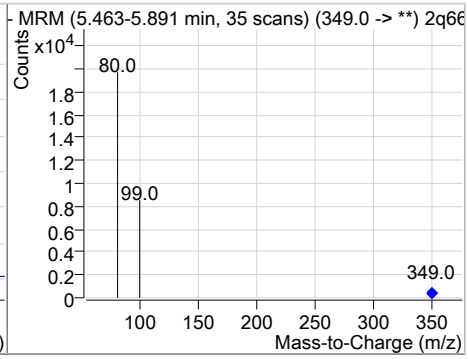




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	18.87	5.58	0.00	13693	349.0 -> 99.0	38.5	8.4	68.4

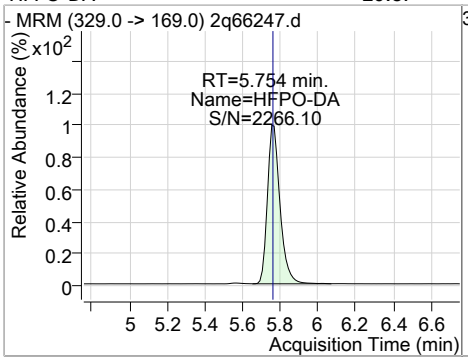


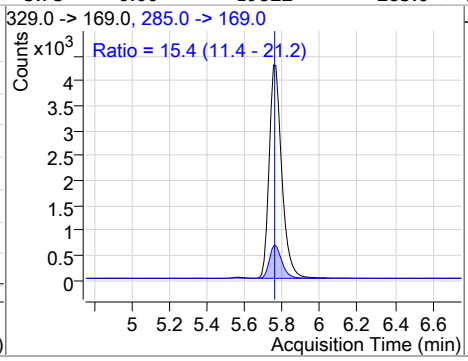


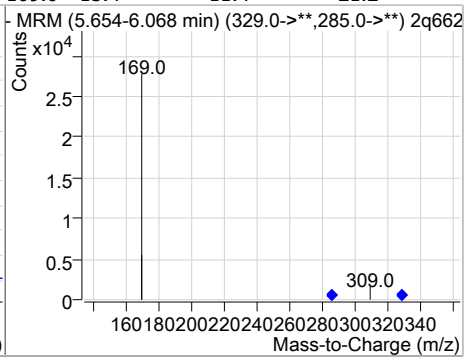


Perfluorinated Compounds by LC/MS/MS

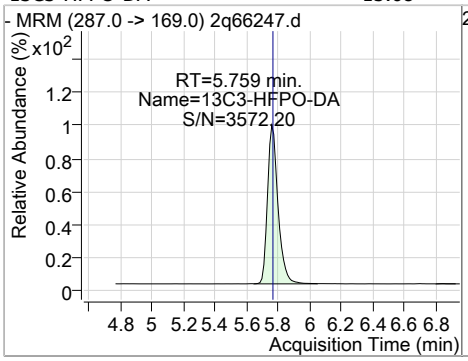
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	20.87	5.75	0.00	19822	285.0 -> 169.0	15.4	11.4	21.2

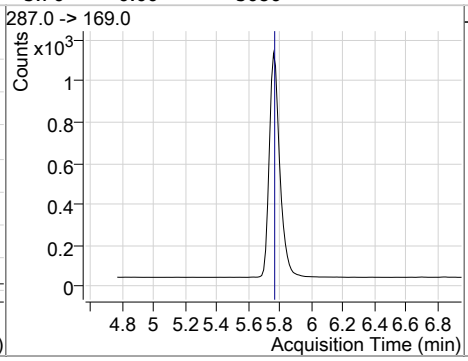


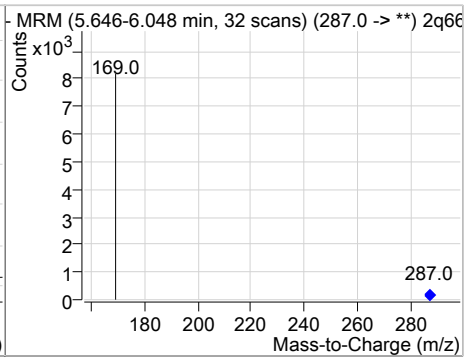




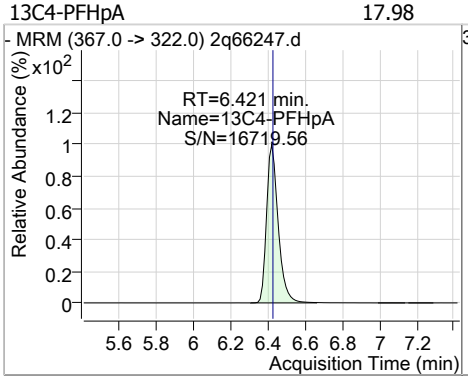
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	15.68	5.76	0.00	5086				

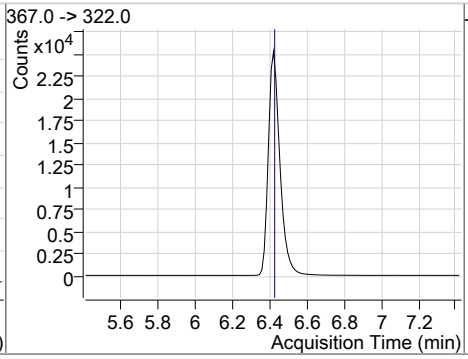


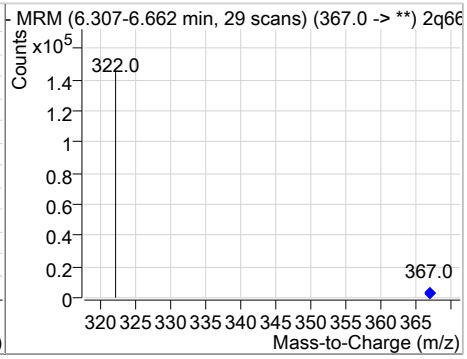




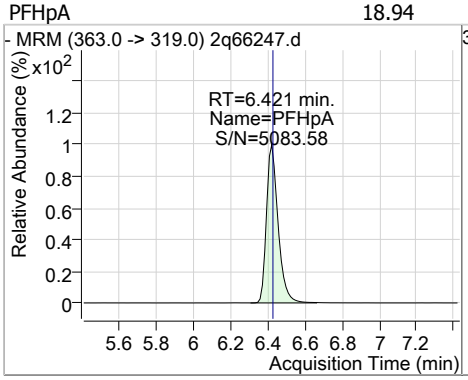
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	17.98	6.42	0.00	109423				

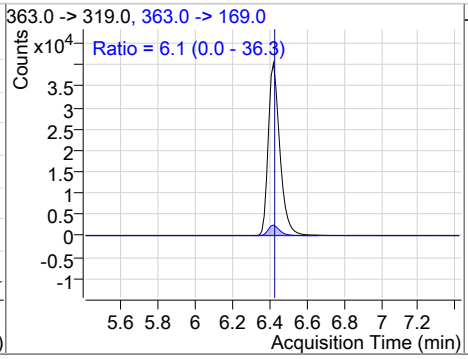


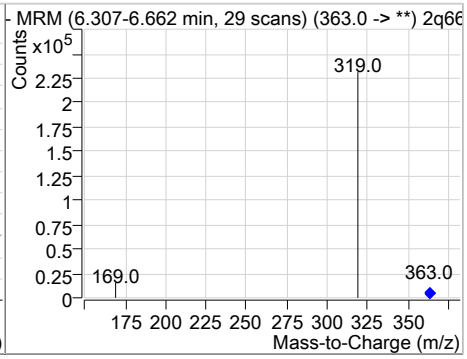




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	18.94	6.42	0.00	175284	363.0 -> 169.0	6.1	0.0	36.3

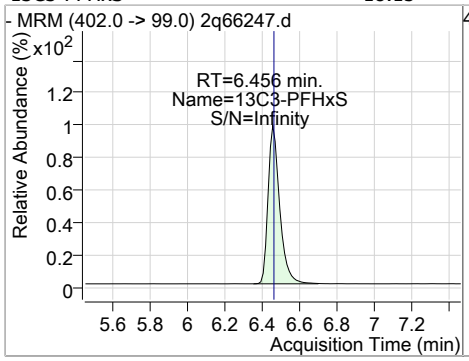


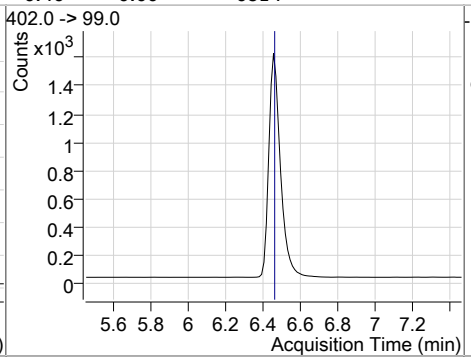


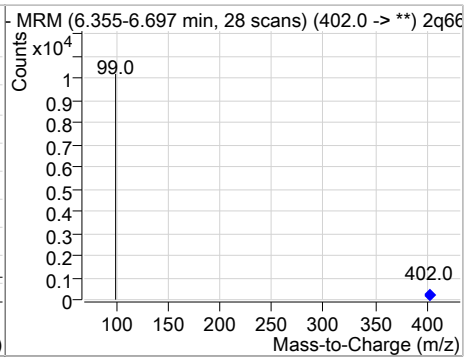


Perfluorinated Compounds by LC/MS/MS

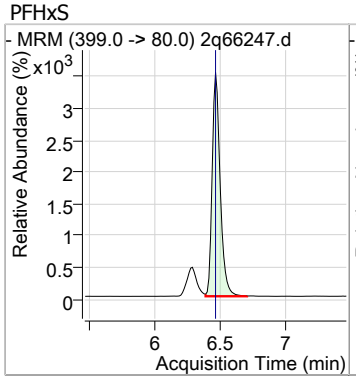
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	18.15	6.46	0.00	6814				

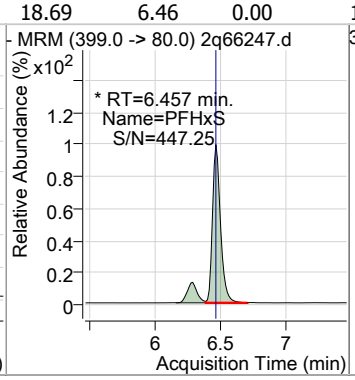


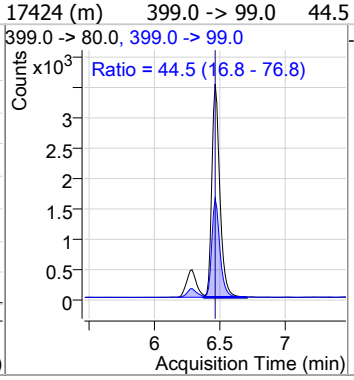


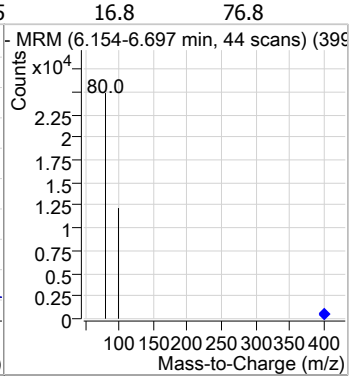


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	18.69	6.46	0.00	17424 (m)	399.0 -> 99.0	44.5	16.8	76.8

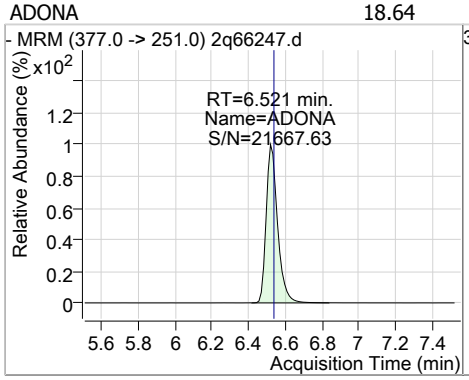


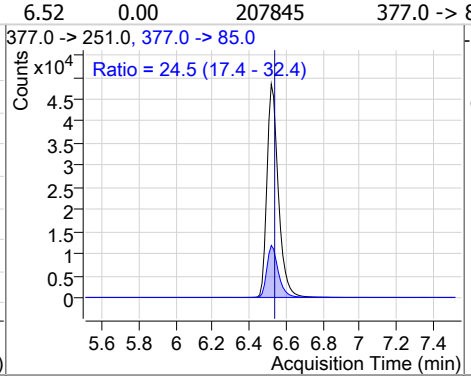


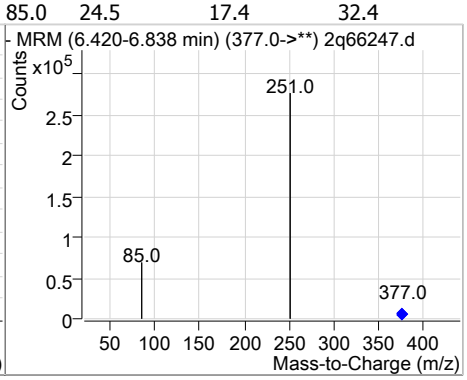




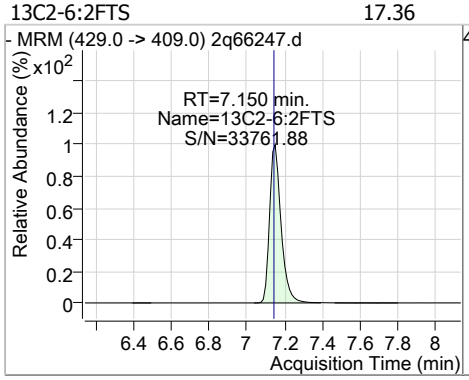
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	18.64	6.52	0.00	207845	377.0 -> 85.0	24.5	17.4	32.4

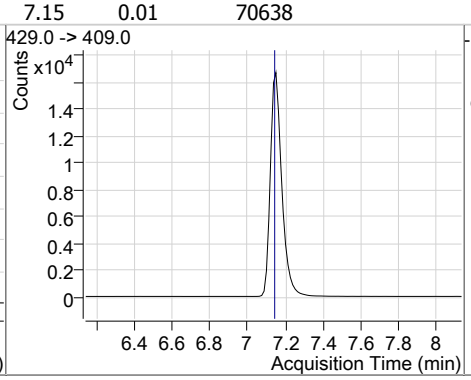


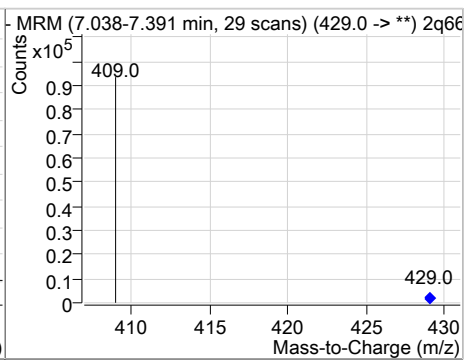




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	17.36	7.15	0.01	70638				

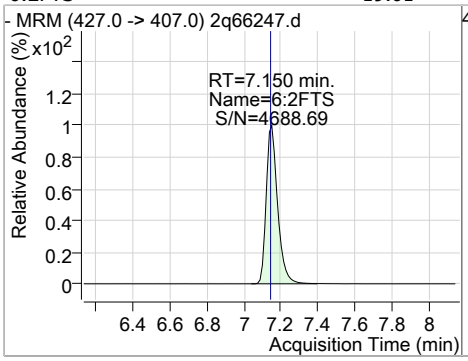


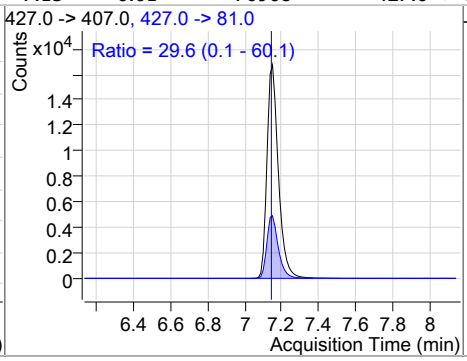


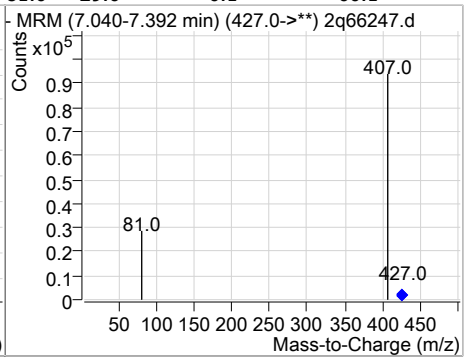


Perfluorinated Compounds by LC/MS/MS

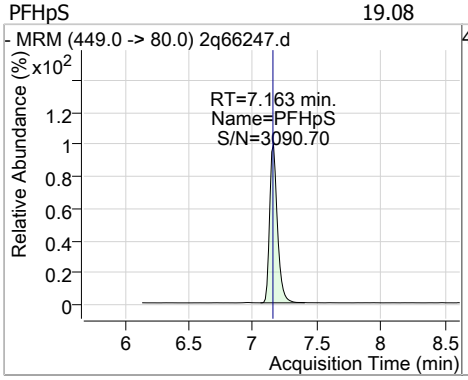
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	19.01	7.15	0.01	70908	427.0 -> 81.0	29.6	0.1	60.1

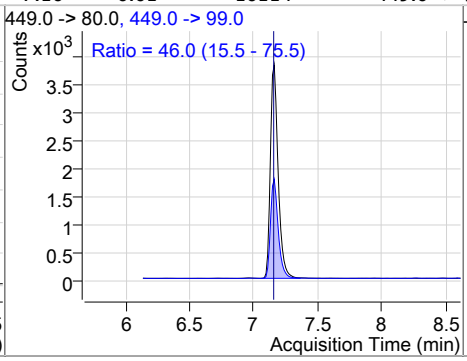


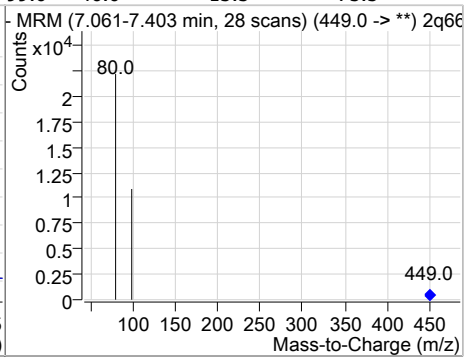




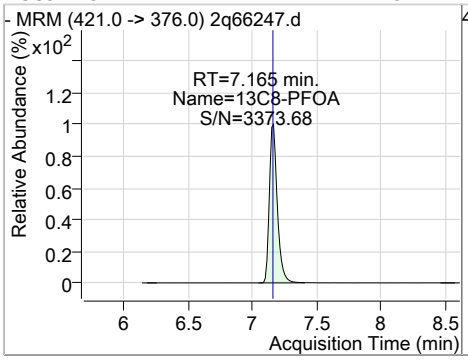
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	19.08	7.16	0.01	16114	449.0 -> 99.0	46.0	15.5	75.5

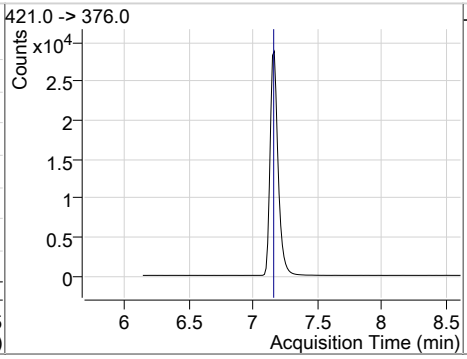


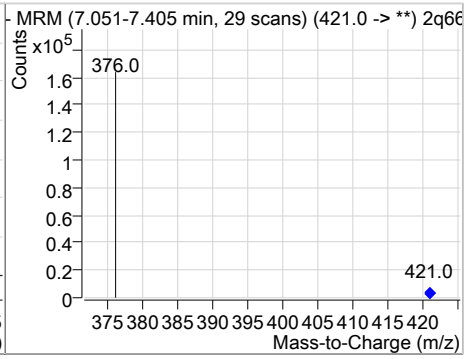




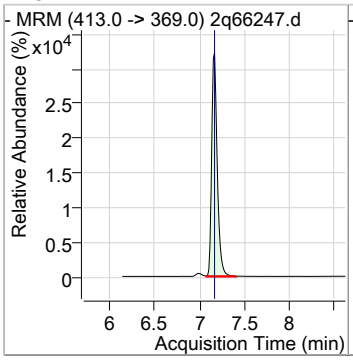
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	17.82	7.16	0.01	124319				

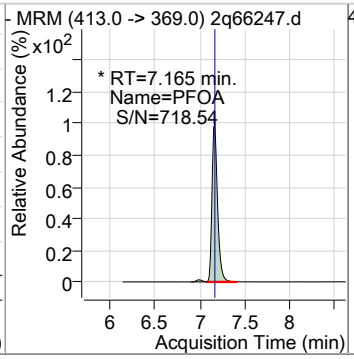


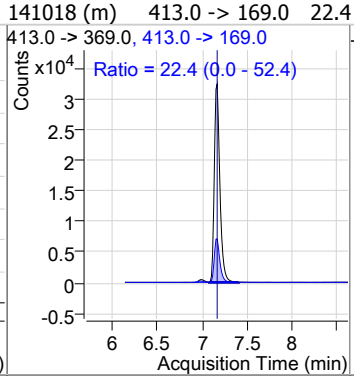


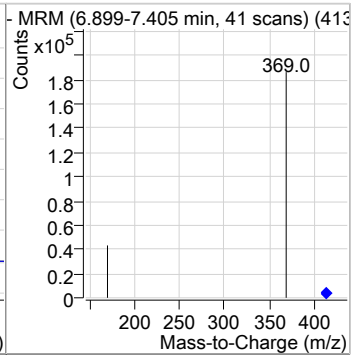


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.06	7.16	0.01	141018 (m)	413.0 -> 169.0	22.4	0.0	52.4



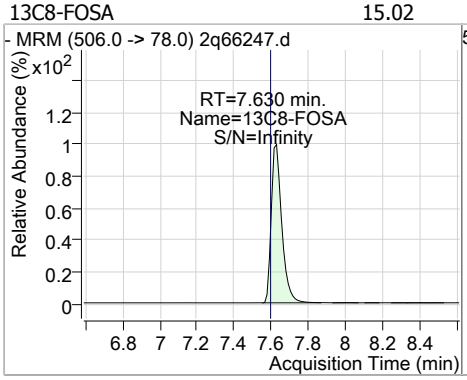


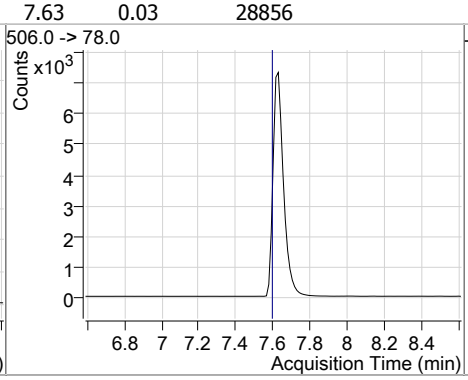


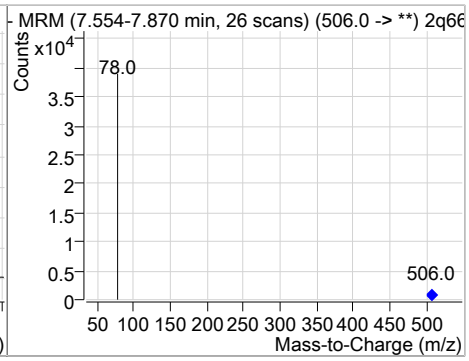


Perfluorinated Compounds by LC/MS/MS

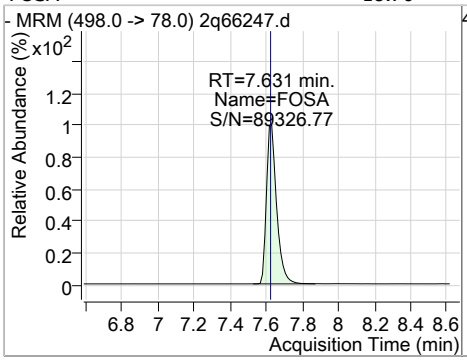
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	15.02	7.63	0.03	28856				

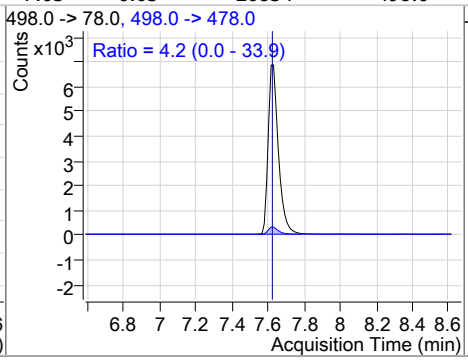


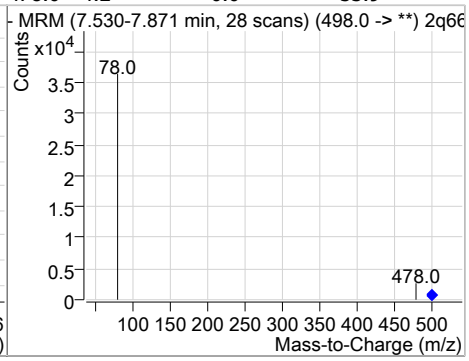




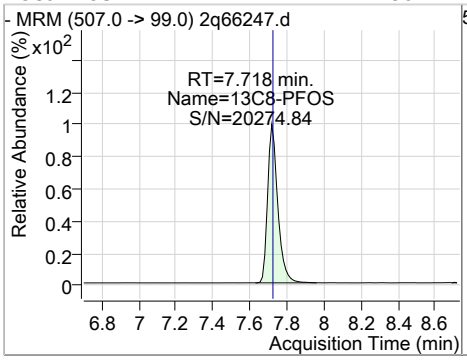
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	18.70	7.63	0.03	26834	498.0 -> 478.0	4.2	0.0	33.9

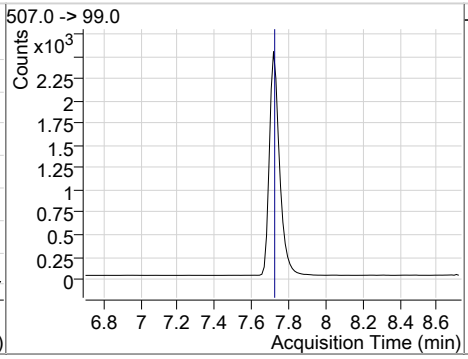


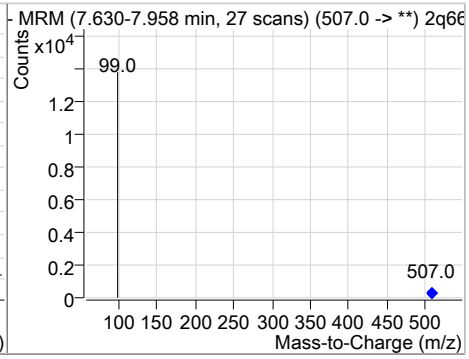




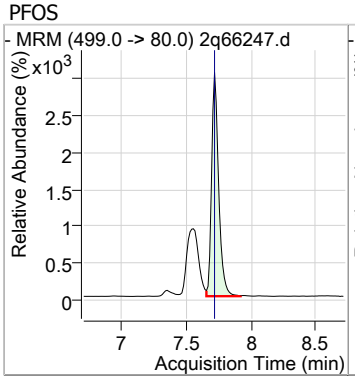
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	17.98	7.72	0.00	9550				

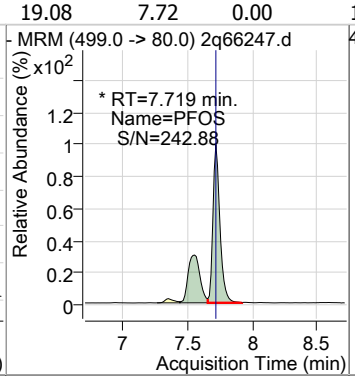


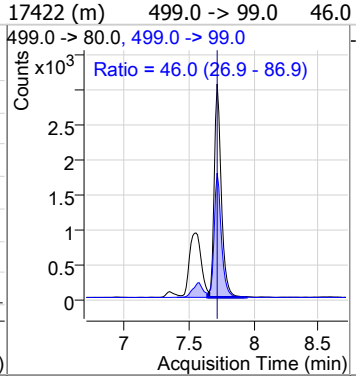


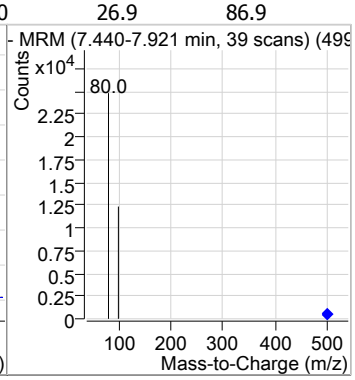


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.08	7.72	0.00	17422 (m)	499.0 -> 99.0	46.0	26.9	86.9



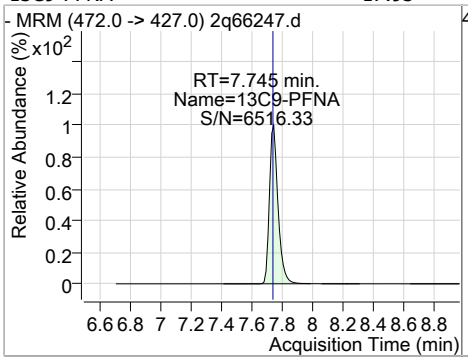


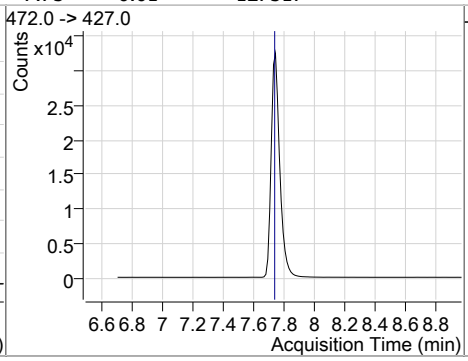


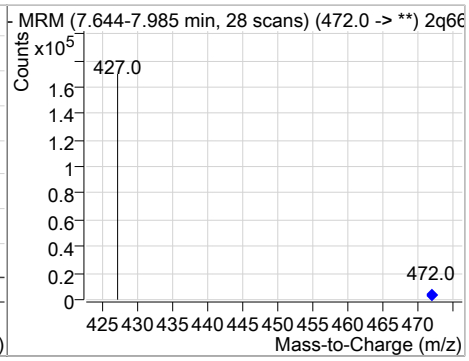


Perfluorinated Compounds by LC/MS/MS

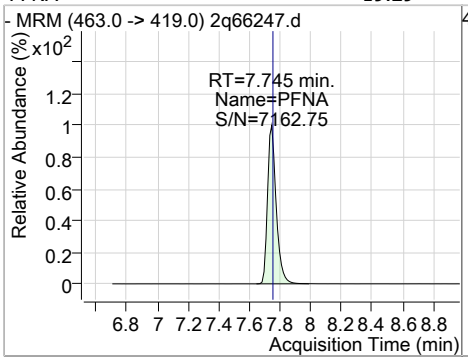
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	17.93	7.75	0.01	127517				

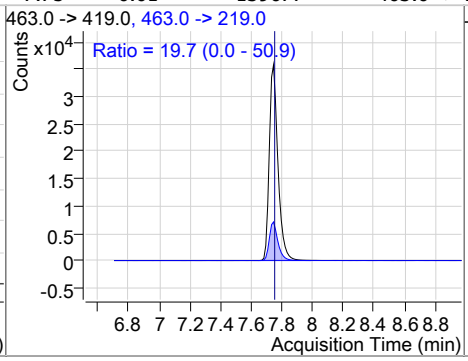


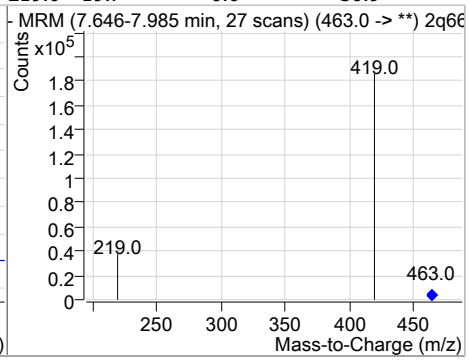




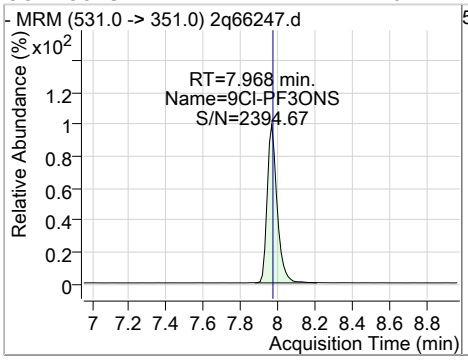
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.29	7.75	0.01	139677	463.0 -> 219.0	19.7	0.0	50.9

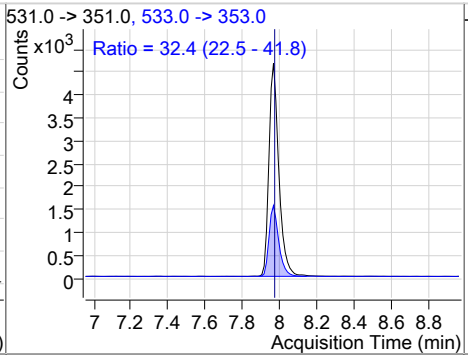


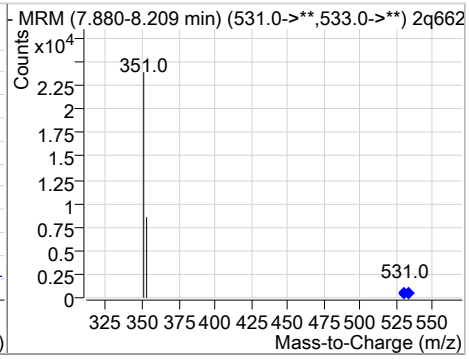




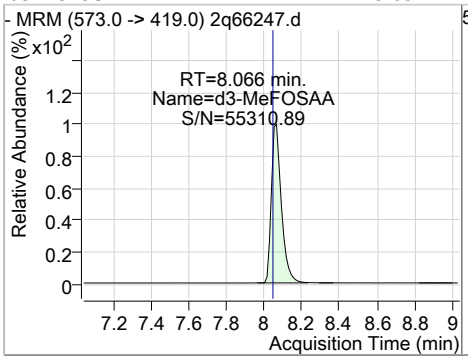
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	17.82	7.97	0.00	17231	533.0 -> 353.0	32.4	22.5	41.8

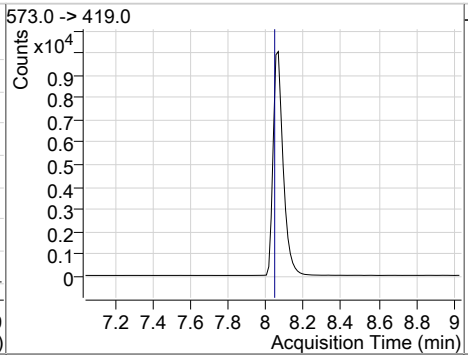


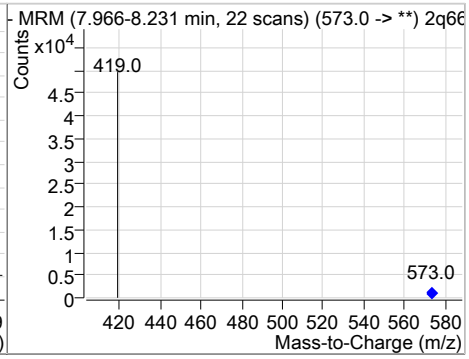




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	15.65	8.07	0.03	37125				

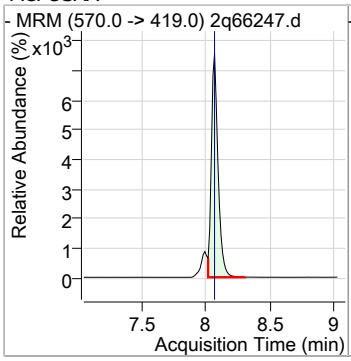


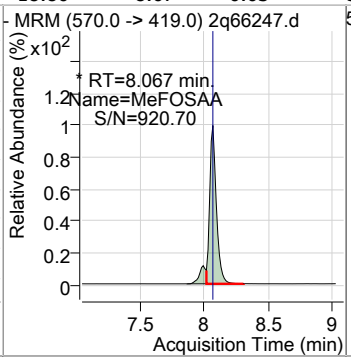


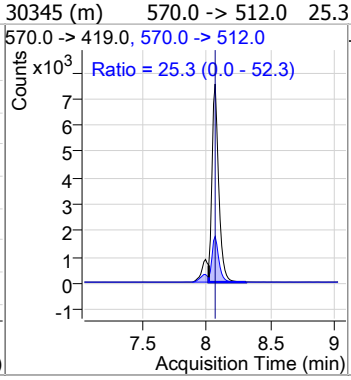


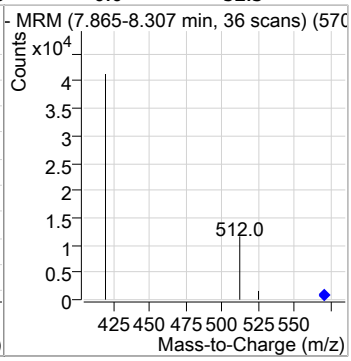
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	18.80	8.07	0.03	30345 (m)	570.0 -> 512.0	25.3	0.0	52.3

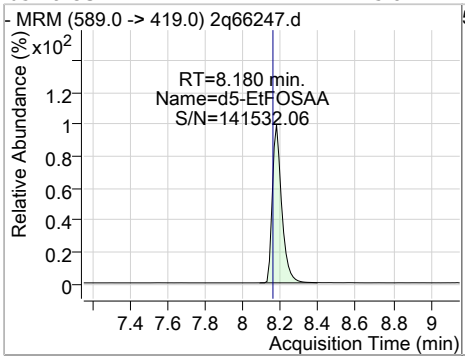


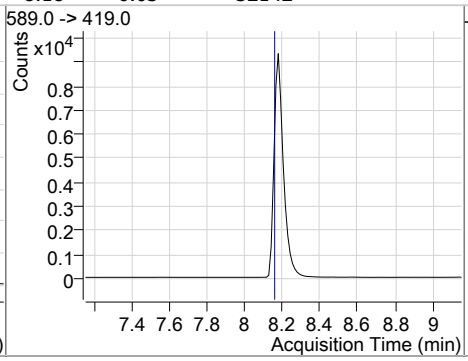


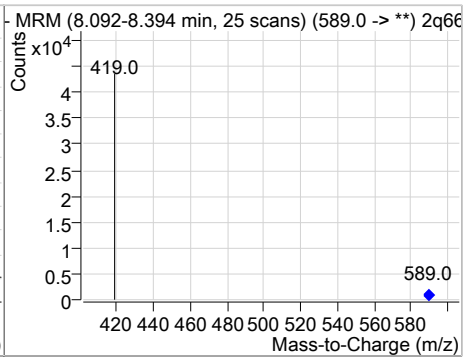




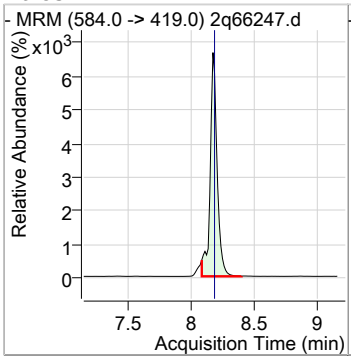
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	15.81	8.18	0.03	32142				

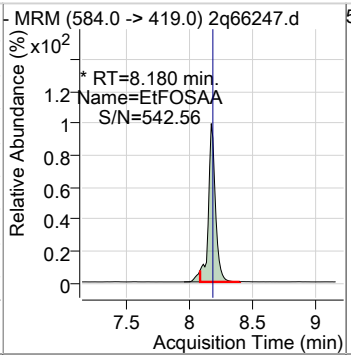


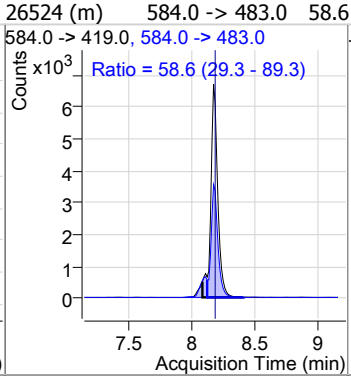


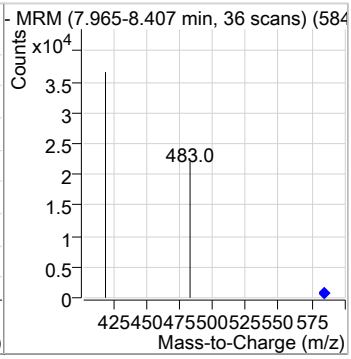


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	18.18	8.18	0.01	26524 (m)	584.0 -> 483.0	58.6	29.3	89.3

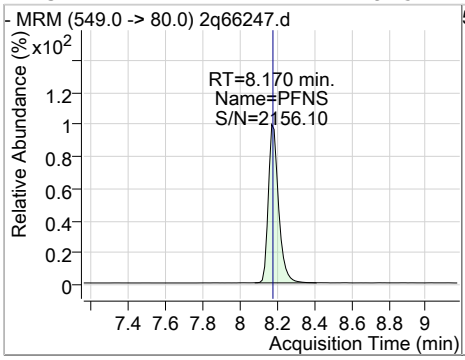


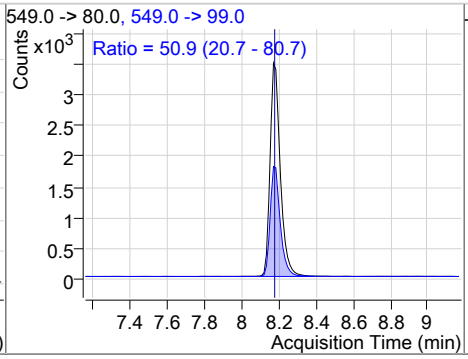


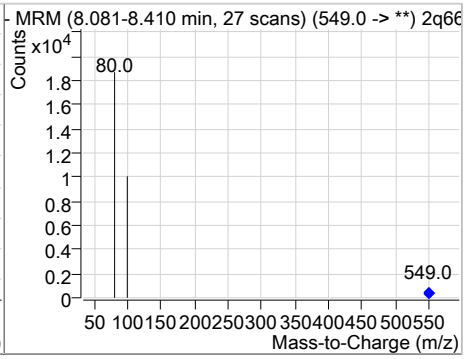




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	19.15	8.17	0.00	13276	549.0 -> 99.0	50.9	20.7	80.7

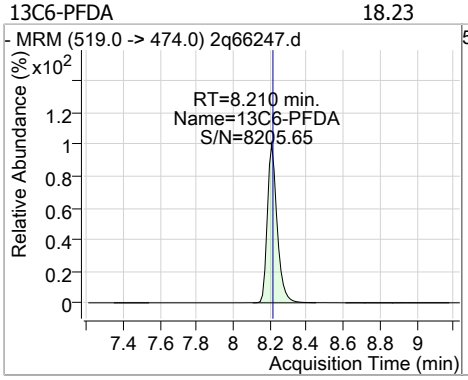


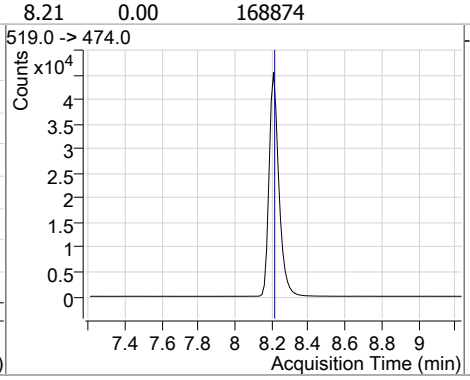


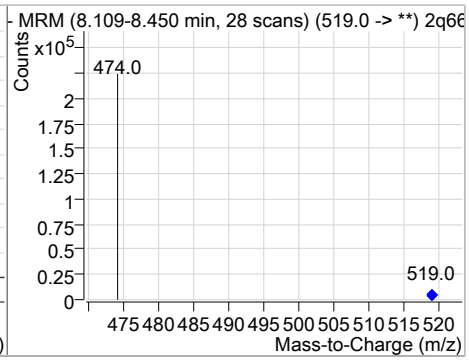


Perfluorinated Compounds by LC/MS/MS

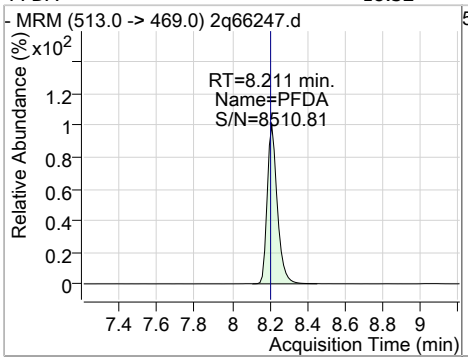
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.23	8.21	0.00	168874				

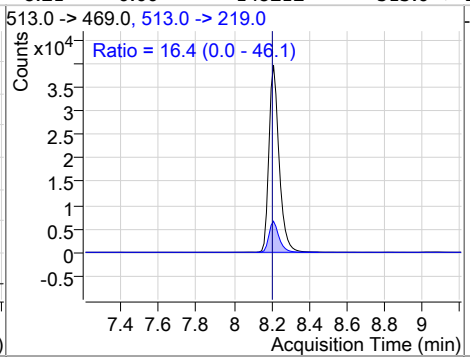


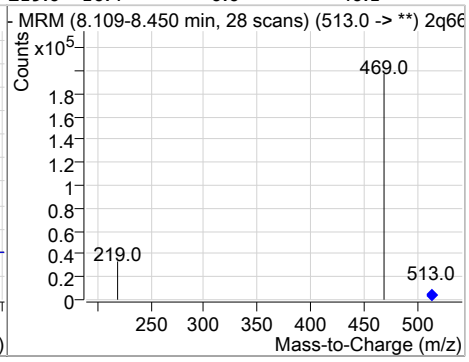




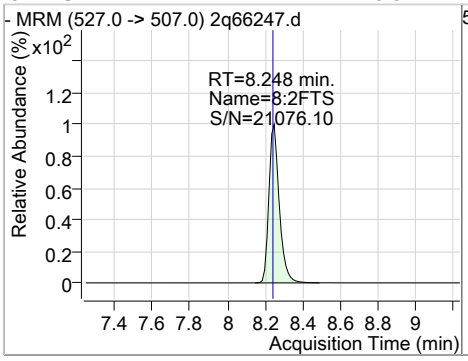
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	18.32	8.21	0.00	148212	513.0 -> 219.0	16.4	0.0	46.1

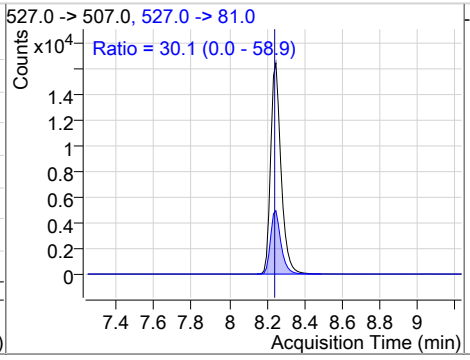


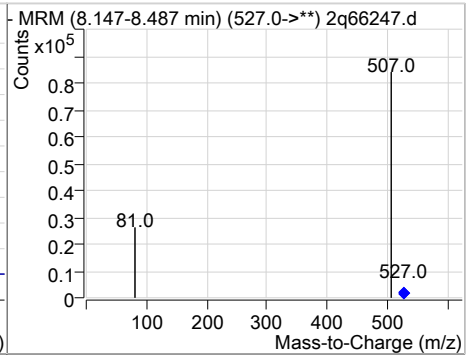




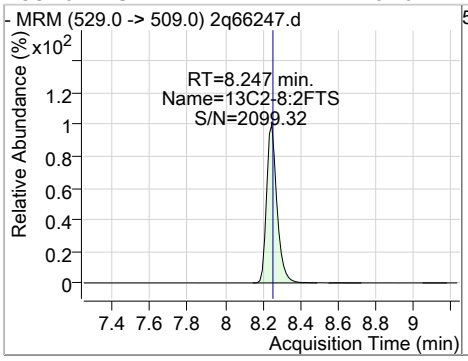
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	18.52	8.25	0.01	62677	527.0 -> 81.0	30.1	0.0	58.9

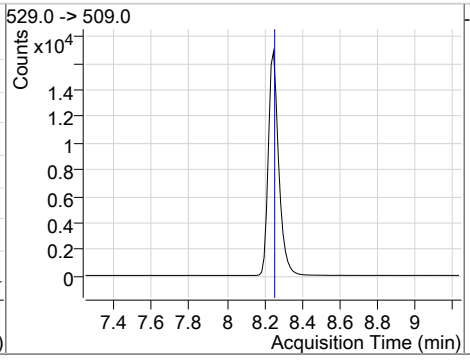


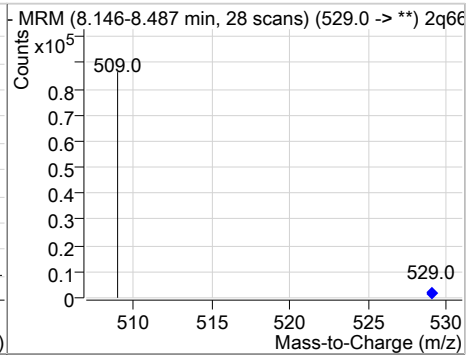




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.10	8.25	0.00	64571				

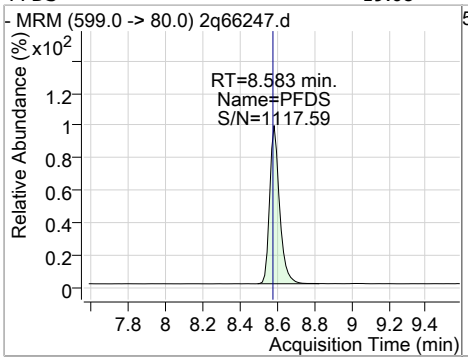


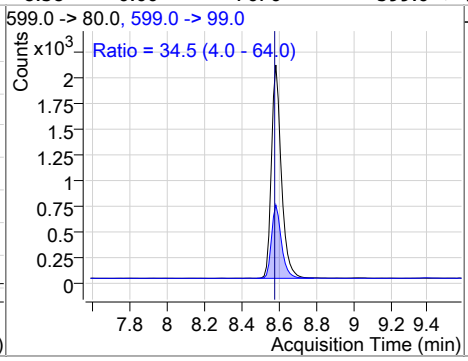


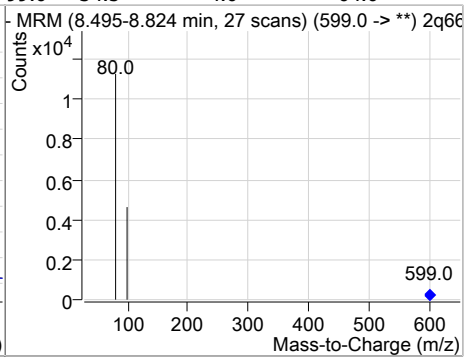


Perfluorinated Compounds by LC/MS/MS

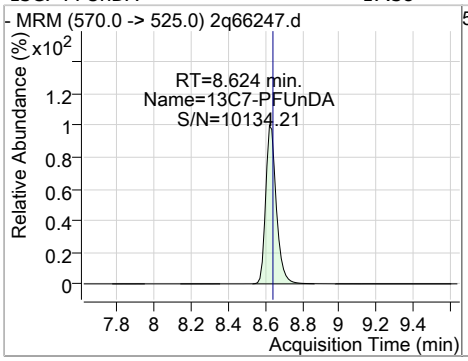
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	19.08	8.58	0.00	7676	599.0 -> 99.0	34.5	4.0	64.0

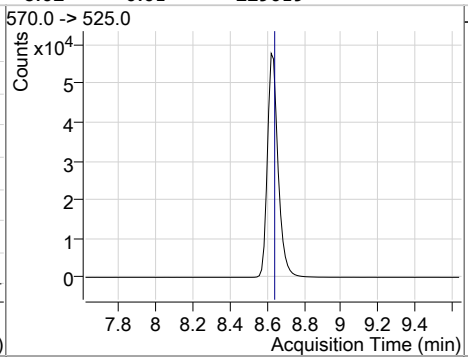


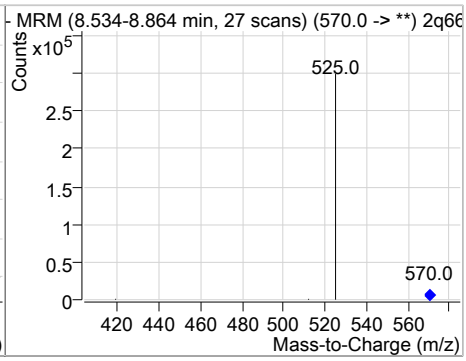




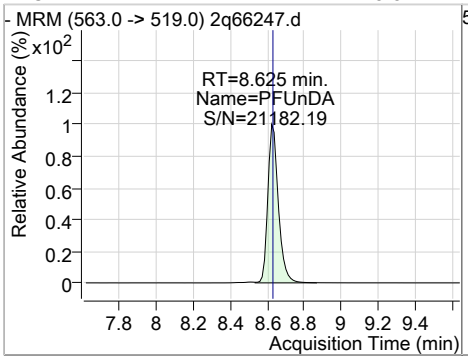
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	17.38	8.62	-0.01	229019				

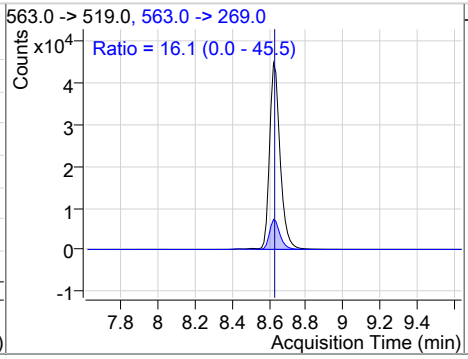


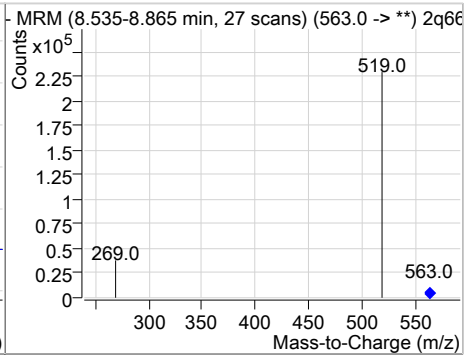




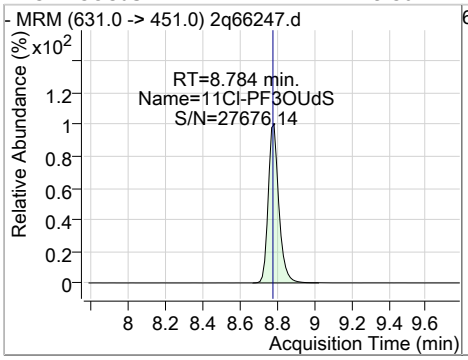
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	18.81	8.62	-0.01	175823	563.0 -> 269.0	16.1	0.0	45.5

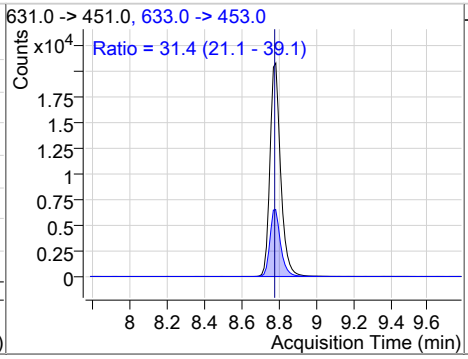


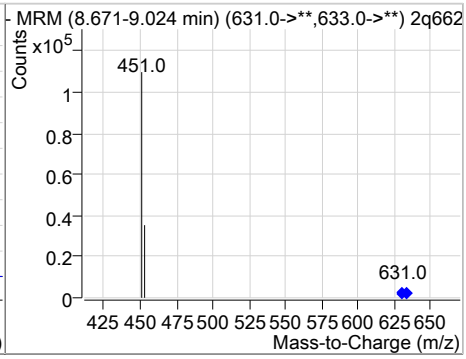




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	19.30	8.78	0.00	81958	633.0 -> 453.0	31.4	21.1	39.1

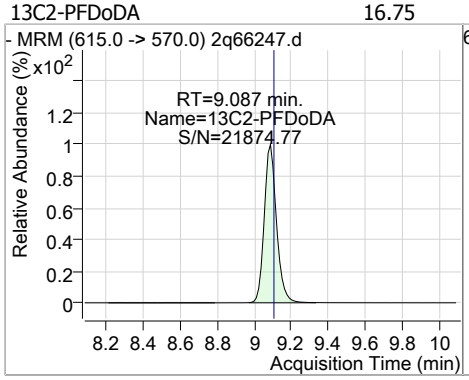


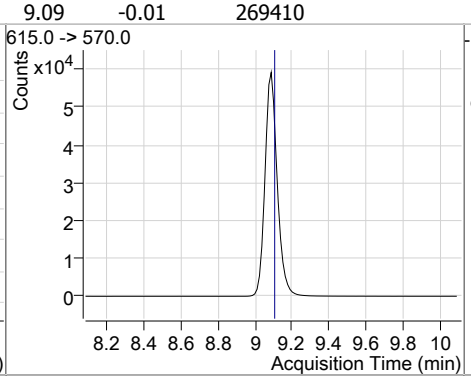


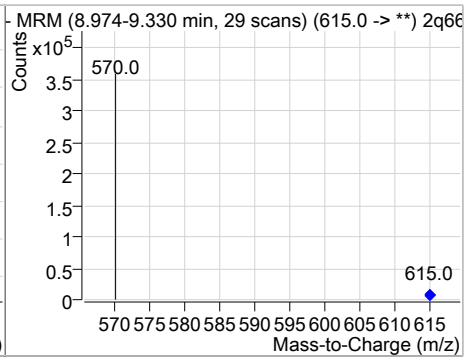


Perfluorinated Compounds by LC/MS/MS

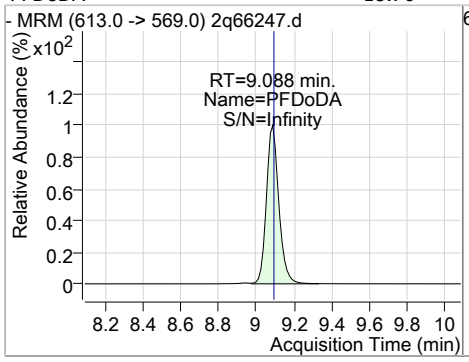
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	16.75	9.09	-0.01	269410				

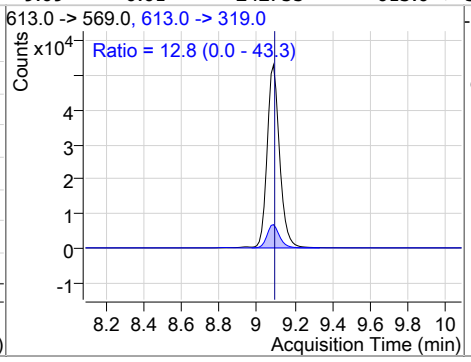


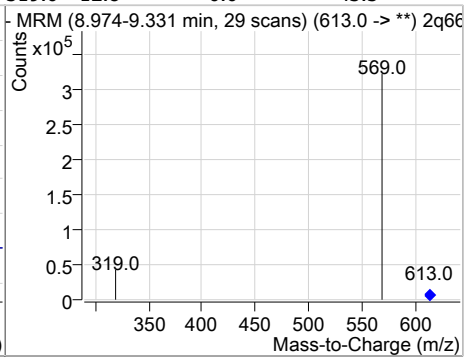




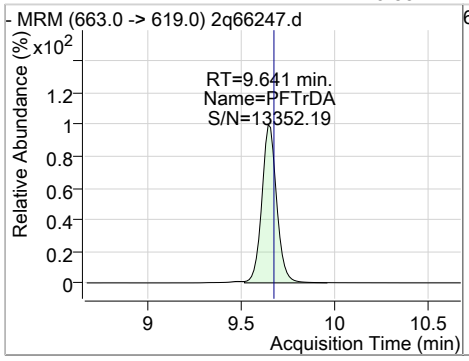
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	18.76	9.09	-0.01	242755	613.0 -> 319.0	12.8	0.0	43.3

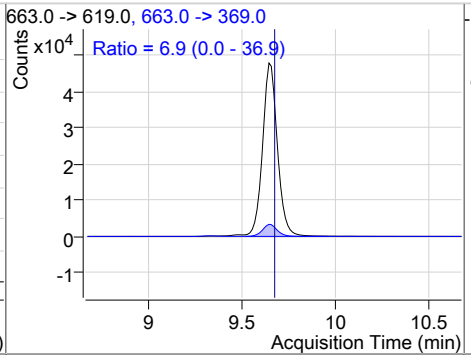


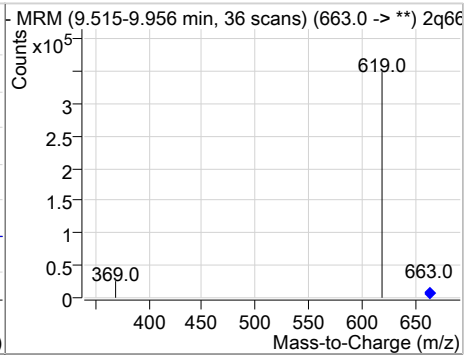




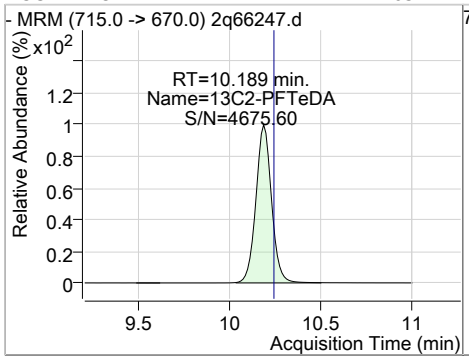
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	16.88	9.64	-0.04	263729	663.0 -> 369.0	6.9	0.0	36.9

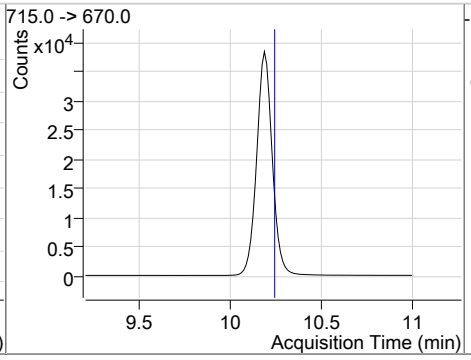


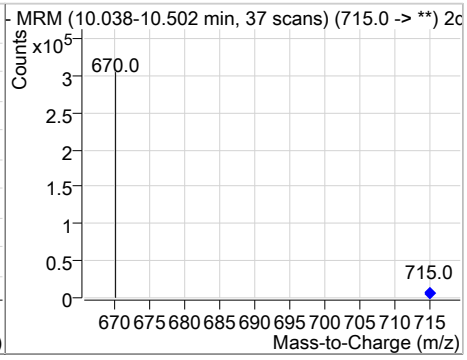




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	17.63	10.19	-0.05	227518				

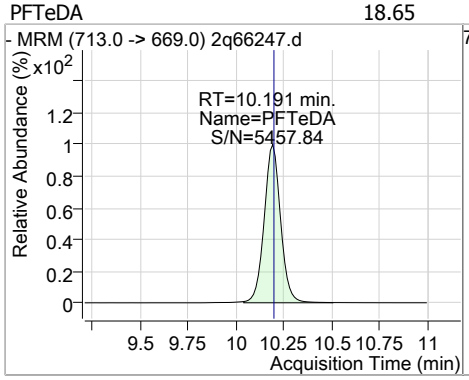


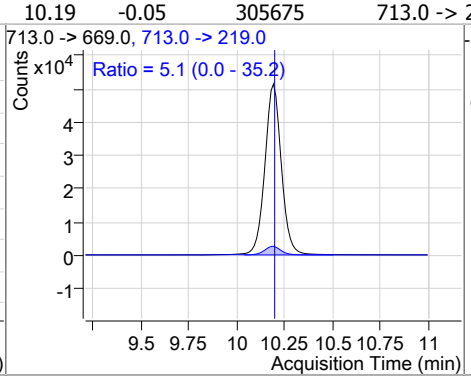


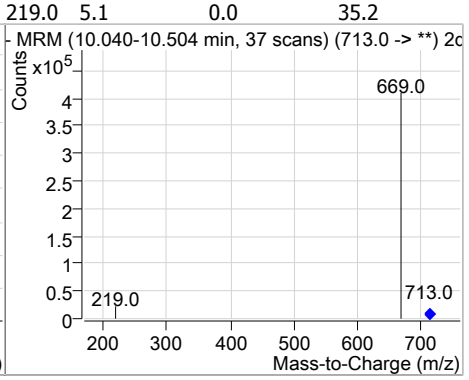


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	18.65	10.19	-0.05	305675	713.0 -> 219.0	5.1	0.0	35.2







Manual Integration Approval Summary

Sample Number: OP84941-MSD
Lab FileID: 2Q66247.D
Injection Time: 04/17/21 05:12
Method: EPA 537M BY ID
Analyst approved: 04/18/21 11:57 Nancy Saunders
Supervisor approved: 04/19/21 15:44 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.46	Split peak
Perfluorooctanoic acid	335-67-1		7.17	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
MeFOSAA	2355-31-9		8.07	Split peak
EtFOSAA	2991-50-6		8.18	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/15/21 10:01

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36622.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/14/2021 10:55:14 PM
Sample Name : op84900-dup
Vial : P2-D1
DA Method File : ID_041321_S3Q537.quantmethod.xml
Batch Name : s3q538.batch.bin
Sample Information : op84900,S3Q538,280,,,1,1.1,water

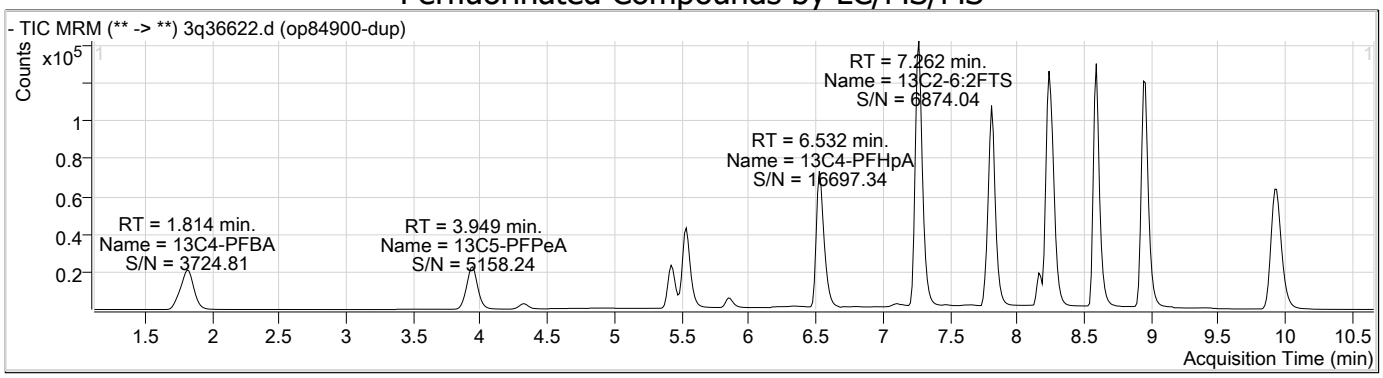
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.814	217.0 -> 172.0	143442	20.00	µg/L	-0.025
M5-PFPeA	3.949	268.0 -> 223.0	106313	20.00	µg/L	-0.125
M5-PFHxA	5.542	318.0 -> 273.0	159965	20.00	µg/L	-0.088
M4-PFHpA	6.532	367.0 -> 322.0	226167	20.00	µg/L	-0.075
M8-PFOA	7.275	421.0 -> 376.0	267954	20.00	µg/L	-0.050
M9-PFNA	7.817	472.0 -> 427.0	292224	20.00	µg/L	-0.038
M6-PFDA	8.245	519.0 -> 474.0	326624	20.00	µg/L	-0.013
M7-PFUnDA	8.593	570.0 -> 525.0	408834	20.00	µg/L	-0.013
M2-PFDoDA	8.944	615.0 -> 570.0	445142	20.00	µg/L	-0.013
M2-PFTeDA	9.919	715.0 -> 670.0	354068	20.00	µg/L	-0.025
M8-FOSA	7.790	506.0 -> 78.0	73875	20.00	µg/L	-0.026
M3-PFBS	4.317	302.0 -> 99.0	14165	20.00	µg/L	-0.130
M3-PFHxS	6.579	402.0 -> 99.0	19547	20.00	µg/L	-0.075
M8-PFOS	7.803	507.0 -> 99.0	24299	20.00	µg/L	-0.038
M2-4:2FTS	5.422	329.0 -> 309.0	94693	20.00	µg/L	-0.090
M2-6:2FTS	7.262	429.0 -> 409.0	144616	20.00	µg/L	-0.050
M2-8:2FTS	8.269	529.0 -> 509.0	129221	20.00	µg/L	-0.013
M3-MeFOSAA	8.164	573.0 -> 419.0	53134	20.00	µg/L	-0.013
M3-HFPO-DA	5.858	287.0 -> 169.0	20187	20.00	µg/L	-0.088
M5-EtFOSAA	8.277	589.0 -> 419.0	44785	20.00	µg/L	-0.013
System Monitoring Compounds						
13C2-4:2FTS	5.422	329.0 -> 309.0	94693	16.54	µg/L	-0.090
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 82.7%		
13C2-6:2FTS	7.262	429.0 -> 409.0	144616	17.10	µg/L	-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.5%		
13C2-8:2FTS	8.269	529.0 -> 509.0	129221	13.96	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 69.8%		
13C2-PFDoDA	8.944	615.0 -> 570.0	445142	11.54	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 57.7%		
13C2-PFTeDA	9.919	715.0 -> 670.0	354068	12.66	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 63.3%		
13C3-PFBS	4.317	302.0 -> 99.0	14165	17.57	µg/L	-0.130
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.8%		
13C3-PFHxS	6.579	402.0 -> 99.0	19547	17.17	µg/L	-0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.8%		
13C4-PFBA	1.814	217.0 -> 172.0	143442	18.30	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.5%		
13C4-PFHpA	6.532	367.0 -> 322.0	226167	17.45	µg/L	-0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.2%		
13C5-PFHxA	5.542	318.0 -> 273.0	159965	17.48	µg/L	-0.088
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.4%		
13C5-PFPeA	3.949	268.0 -> 223.0	106313	18.11	µg/L	-0.125
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.5%		
13C6-PFDA	8.245	519.0 -> 474.0	326624	14.21	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 71.1%		

Perfluorinated Compounds by LC/MS/MS

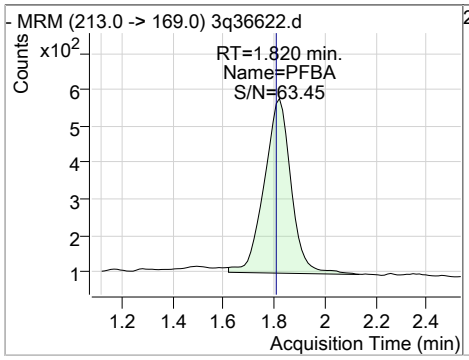
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.593	570.0 -> 525.0	408834	12.93	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 64.7%			
13C8-FOSA	7.790	506.0 -> 78.0	73875	13.91	µg/L		-0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 69.6%			
13C8-PFOA	7.275	421.0 -> 376.0	267954	17.60	µg/L		-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.0%			
13C8-PFOS	7.803	507.0 -> 99.0	24299	13.76	µg/L		-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 68.8%			
13C9-PFNA	7.817	472.0 -> 427.0	292224	16.55	µg/L		-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 82.8%			
d3-MeFOSAA	8.164	573.0 -> 419.0	53134	11.13	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 55.6%			
13C3-HFPO-DA	5.858	287.0 -> 169.0	20172	16.63	µg/L		-0.088
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.2%			
d5-EtFOSAA	8.277	589.0 -> 419.0	44776	10.88	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 54.4%			
Target Compounds							QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.			
6:2FTS	-	427.0 -> 407.0	-	N.D.			
8:2FTS	-	527.0 -> 507.0	-	N.D.			
EtFOSAA	-	584.0 -> 419.0	-	N.D.			
FOSA	-	498.0 -> 78.0	-	N.D.			
MeFOSAA	-	570.0 -> 419.0	-	N.D.			
PFBA	1.820	213.0 -> 169.0	3519	1.14	µg/L		100
PFBS	4.319	299.0 -> 80.0	443	0.18	µg/L		97
PFDA	-	513.0 -> 469.0	-	N.D.			
PFDoDA	-	613.0 -> 569.0	-	N.D.			
PFDS	-	599.0 -> 80.0	-	N.D.			
PFHpA	6.532	363.0 -> 319.0	38900	1.69	µg/L	m	99
PFHpS	-	449.0 -> 80.0	-	N.D.			
PFHxA	5.542	313.0 -> 269.0	12210	1.94	µg/L		98
PFHxS	6.580	399.0 -> 80.0	2187	0.87	µg/L	m	99
PFNA	7.818	463.0 -> 419.0	6861	0.35	µg/L	m	93
PFNS	-	549.0 -> 80.0	-	N.D.			
PFOA	7.276	413.0 -> 369.0	88050	5.41	µg/L	m	99
PFOS	7.803	499.0 -> 80.0	2909	1.14	µg/L	m	71
PFPeA	3.951	263.0 -> 219.0	24183	2.14	µg/L		100
PFPeS	-	349.0 -> 80.0	-	N.D.			
PFTeDA	-	713.0 -> 669.0	-	N.D.			
PFTrDA	-	663.0 -> 619.0	-	N.D.			
PFUnDA	-	563.0 -> 519.0	-	N.D.			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.			
ADONA	-	377.0 -> 251.0	-	N.D.			
HFPO-DA	-	329.0 -> 169.0	-	N.D.			

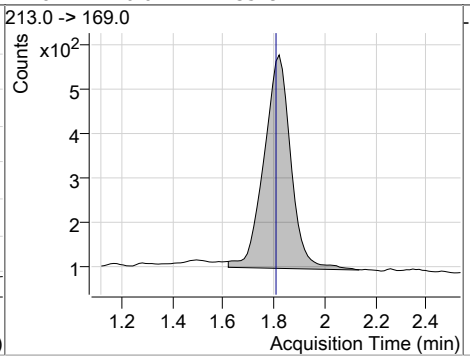
 # = Qualifier out of range, m = manually integrated, + = Area summed

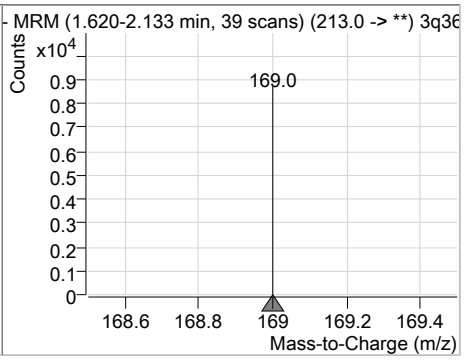
Perfluorinated Compounds by LC/MS/MS



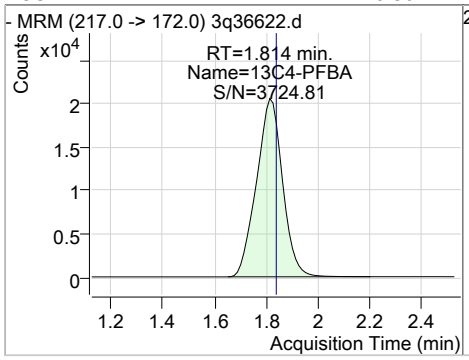
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	1.14	1.82	-0.01	3519				

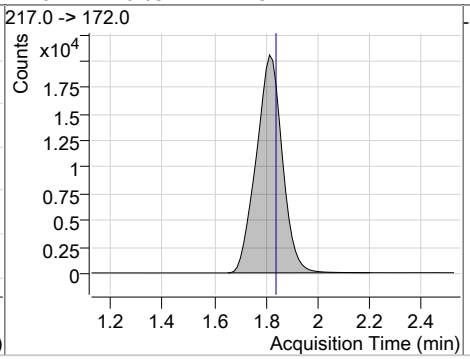


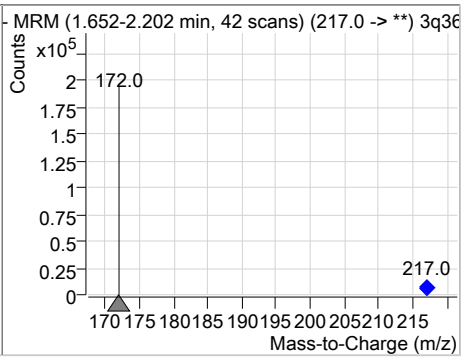




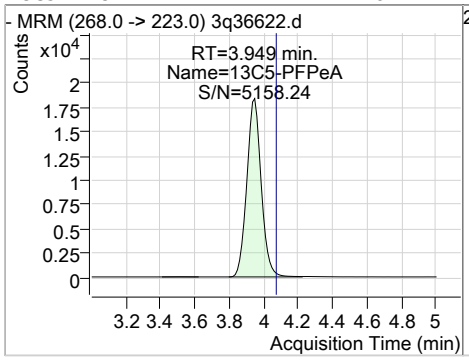
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.30	1.81	-0.03	143442				

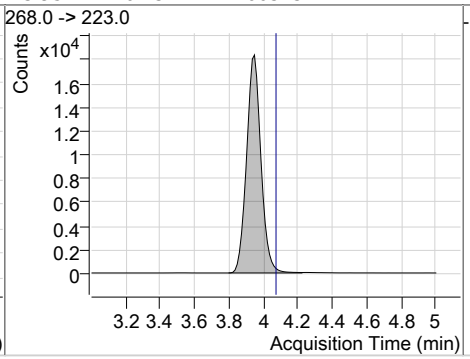


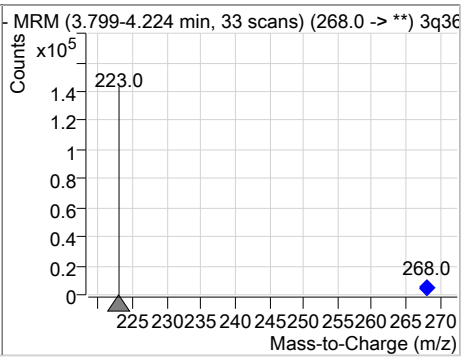




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	18.11	3.95	-0.13	106313				

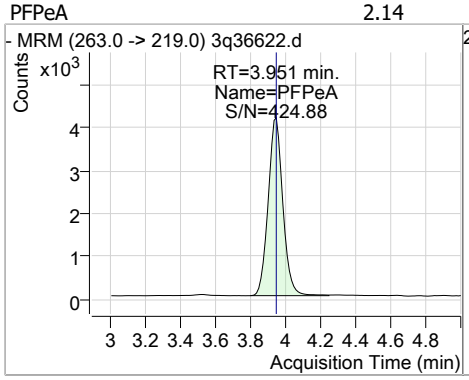


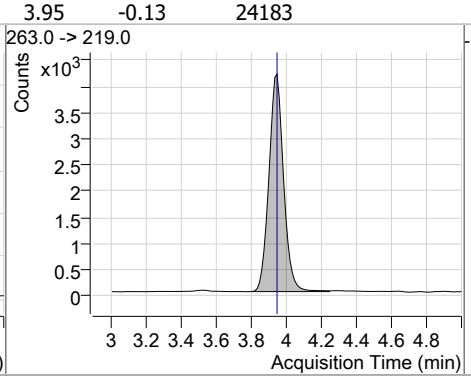


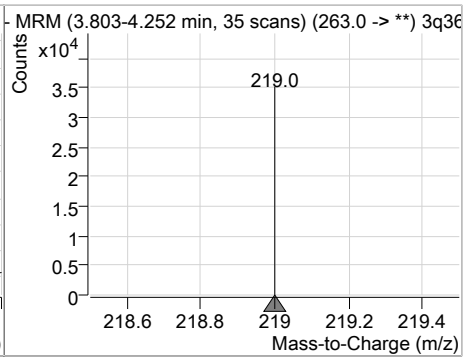


Perfluorinated Compounds by LC/MS/MS

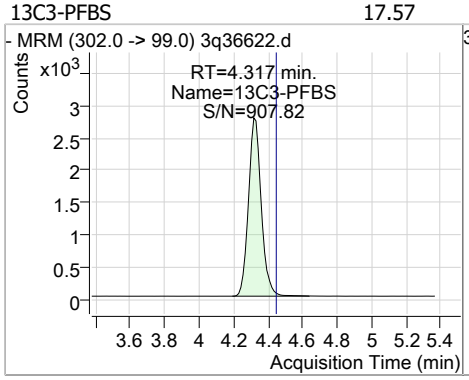
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	2.14	3.95	-0.13	24183				

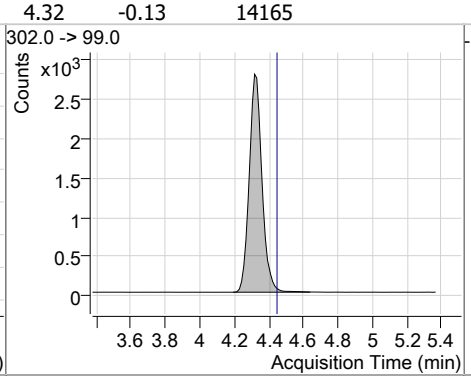


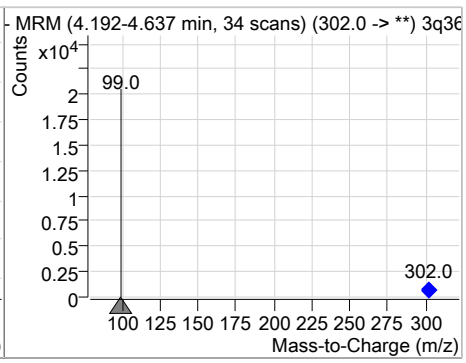




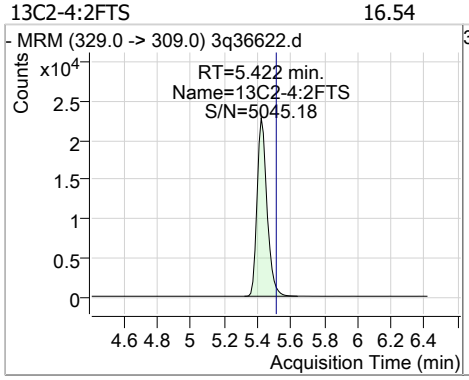
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	17.57	4.32	-0.13	14165				

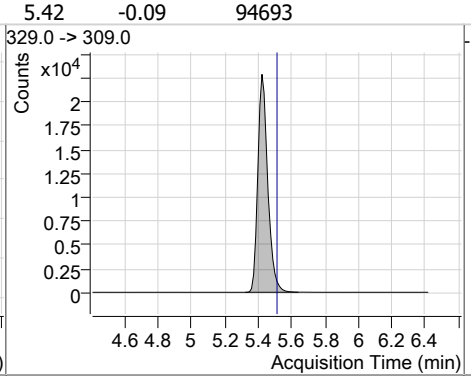


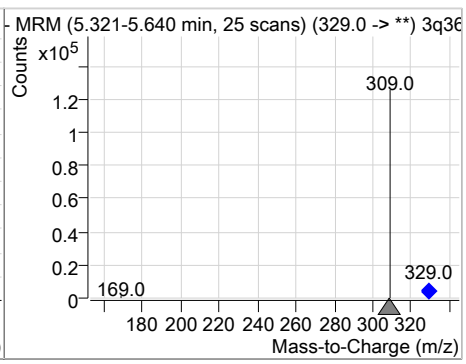




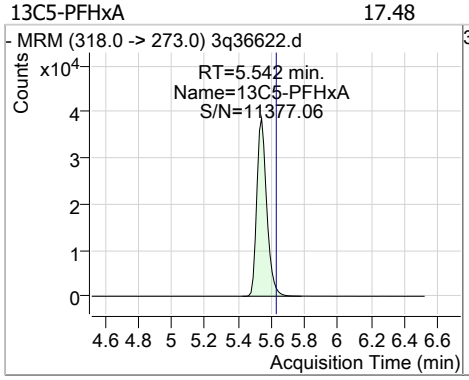
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	16.54	5.42	-0.09	94693				

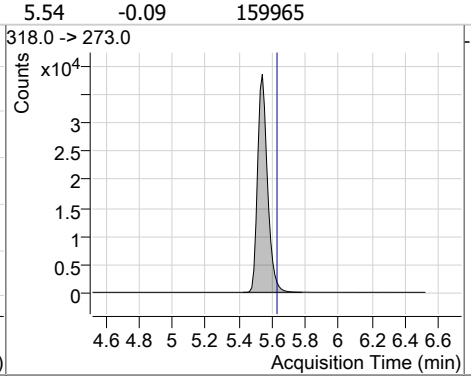


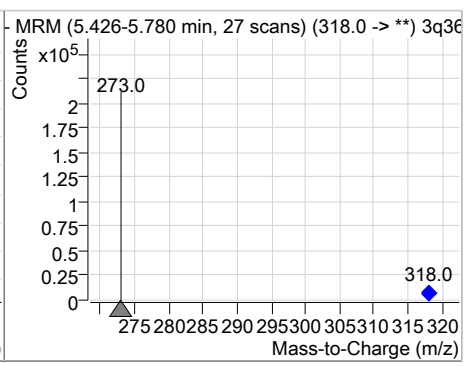




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	17.48	5.54	-0.09	159965				

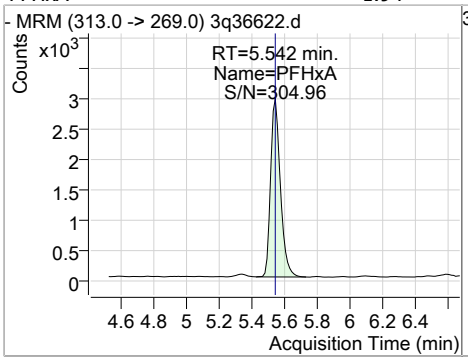


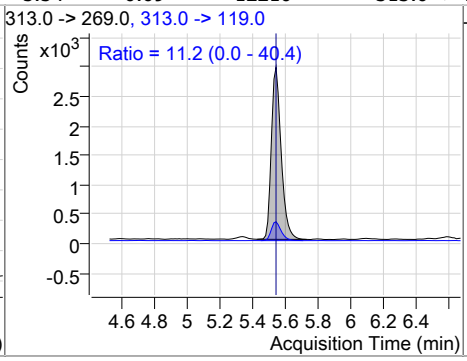


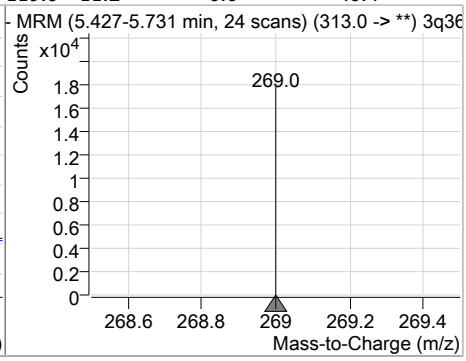


Perfluorinated Compounds by LC/MS/MS

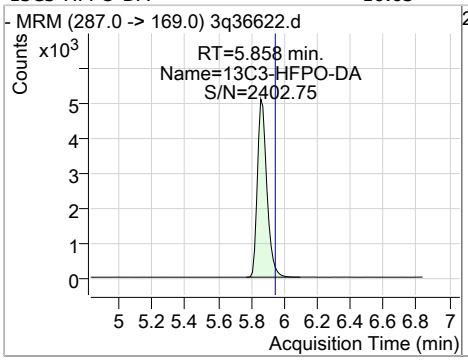
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	1.94	5.54	-0.09	12210	313.0 -> 119.0	11.2	0.0	40.4

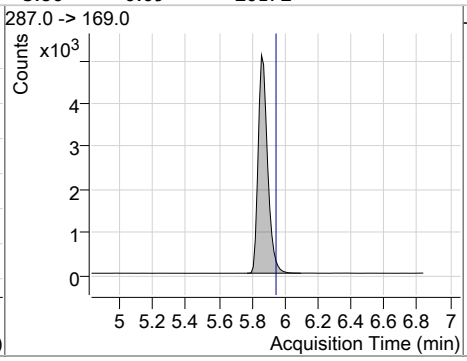


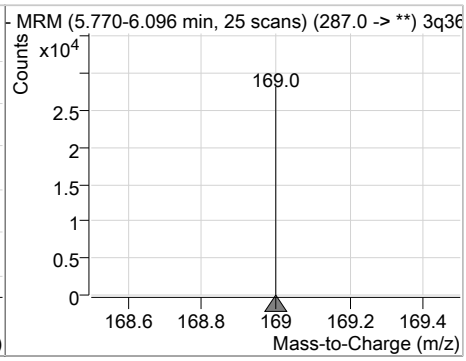




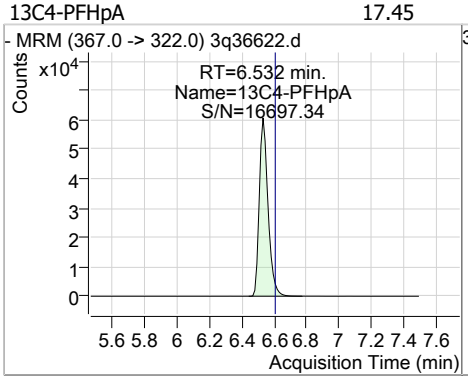
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	16.63	5.86	-0.09	20172				

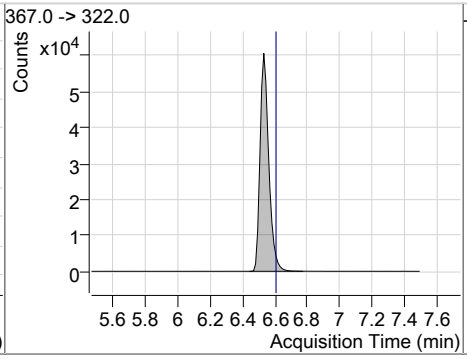


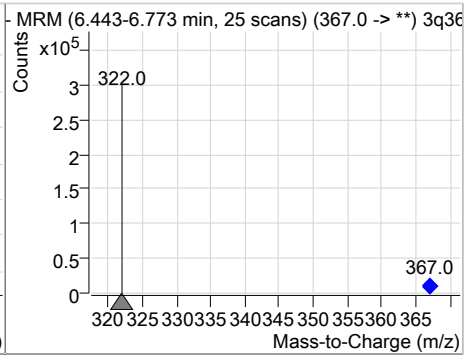




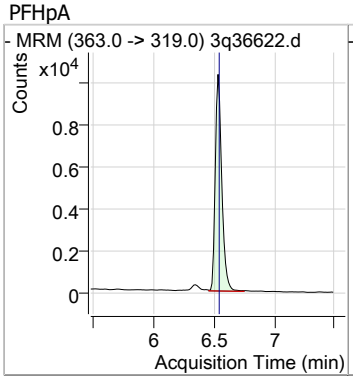
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	17.45	6.53	-0.08	226167				

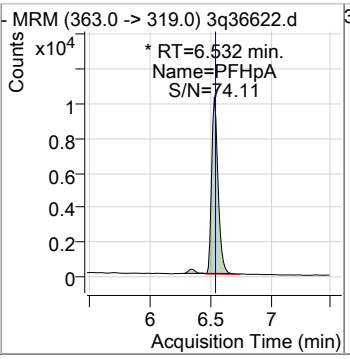


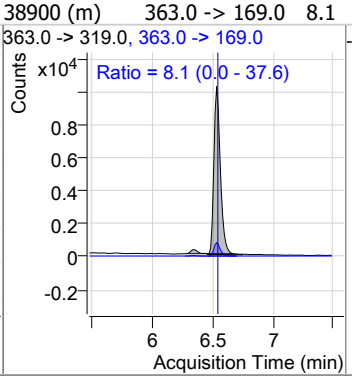


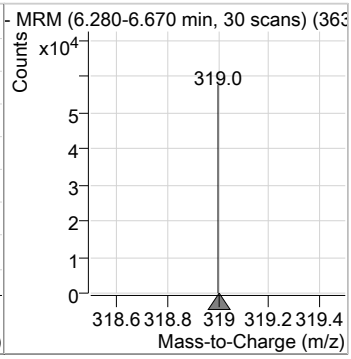


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	1.69	6.53	-0.08	38900 (m)	363.0 -> 169.0	8.1	0.0	37.6



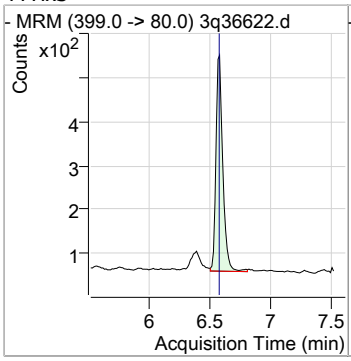


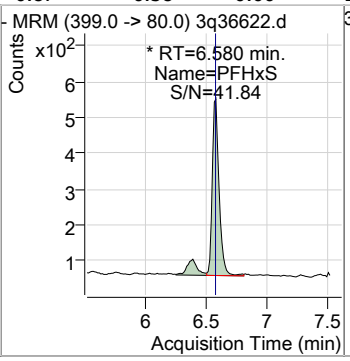


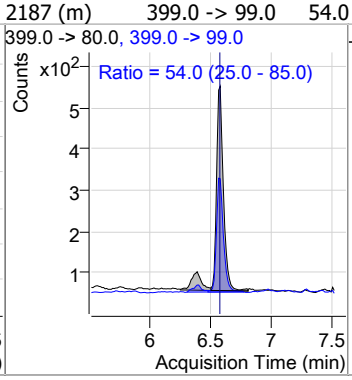


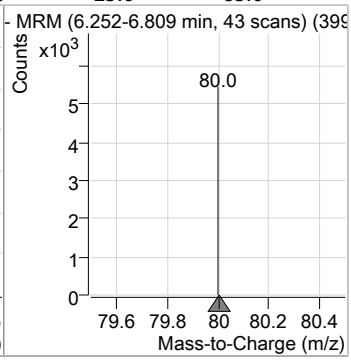
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.87	6.58	-0.06	2187 (m)	399.0 -> 99.0	54.0	25.0	85.0

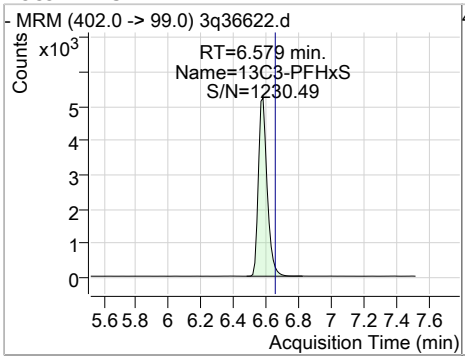


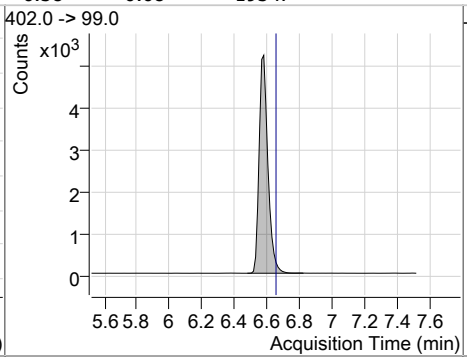


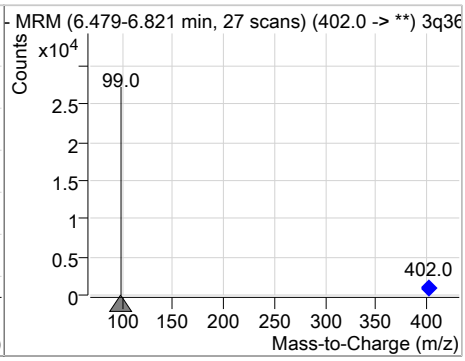




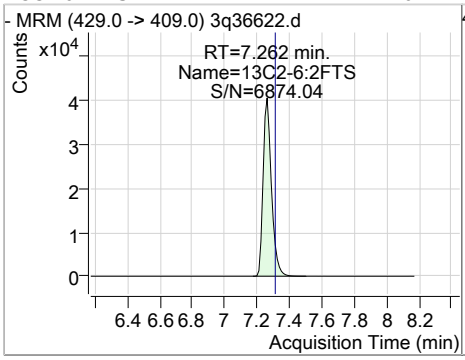
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	17.17	6.58	-0.08	19547				

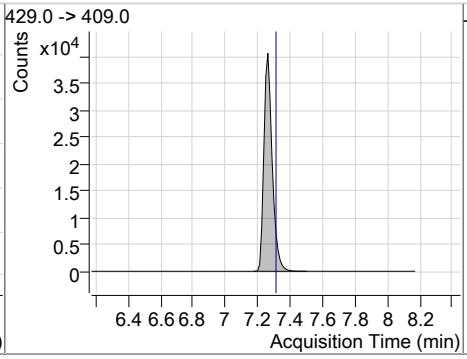


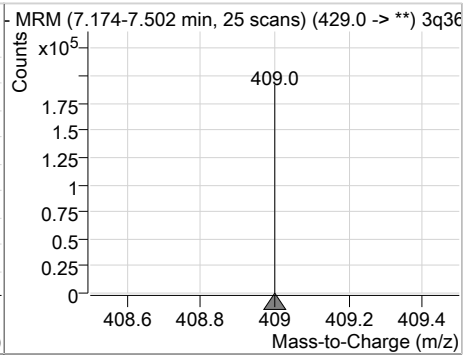




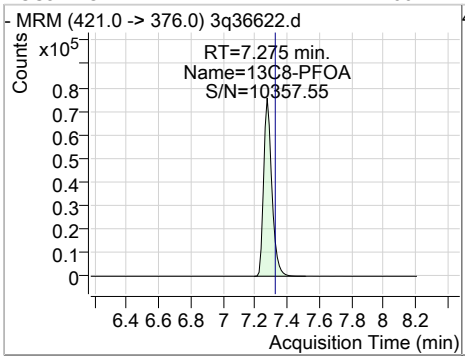
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	17.10	7.26	-0.05	144616				

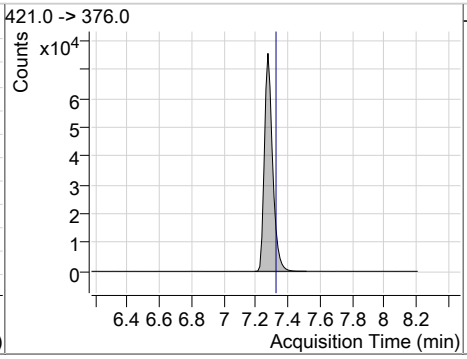


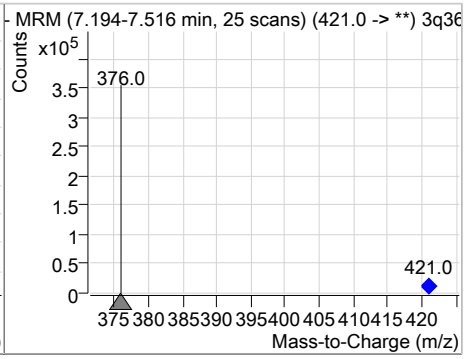




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	17.60	7.28	-0.05	267954				

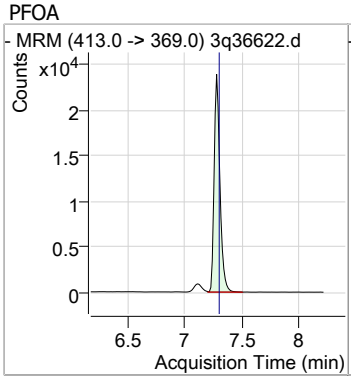


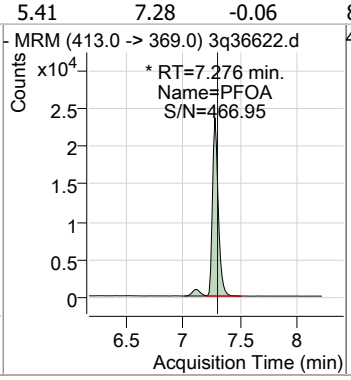


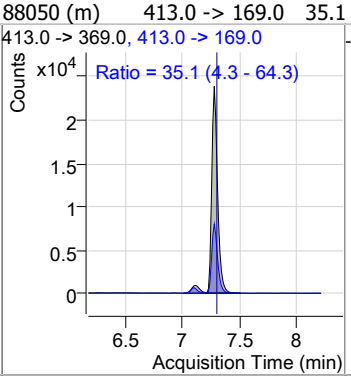


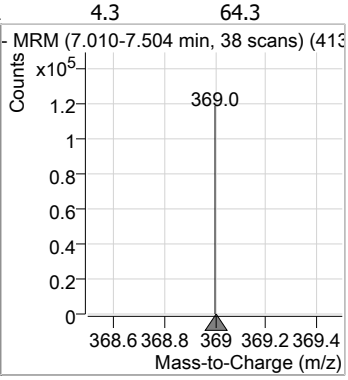
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	5.41	7.28	-0.06	88050 (m)	413.0 -> 169.0	35.1	4.3	64.3

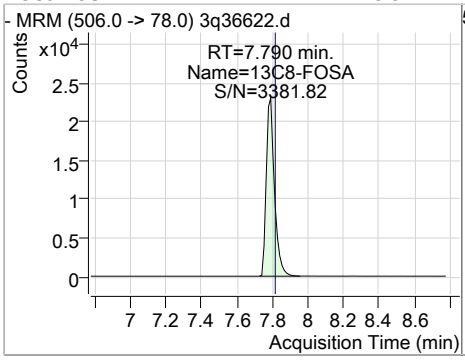


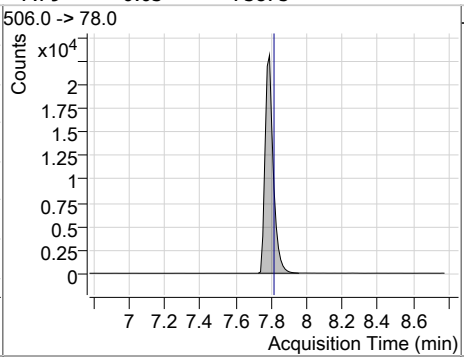


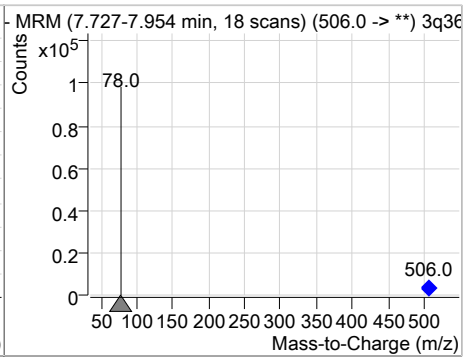




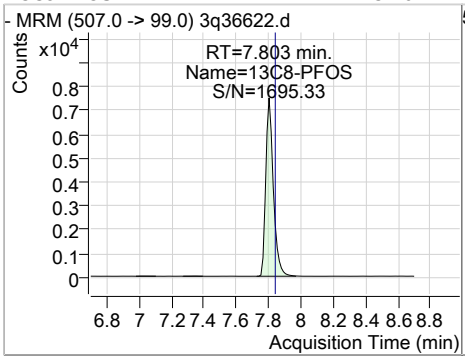
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	13.91	7.79	-0.03	73875				

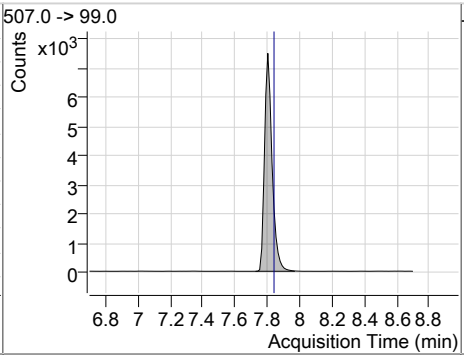


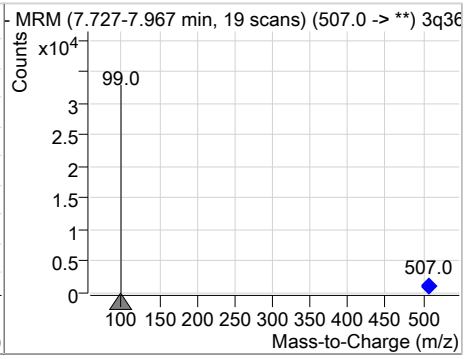




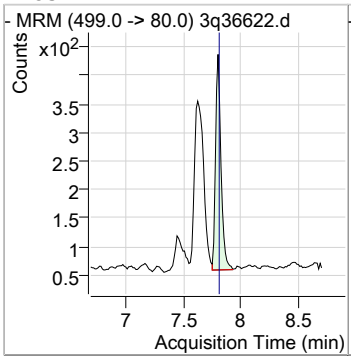
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	13.76	7.80	-0.04	24299				

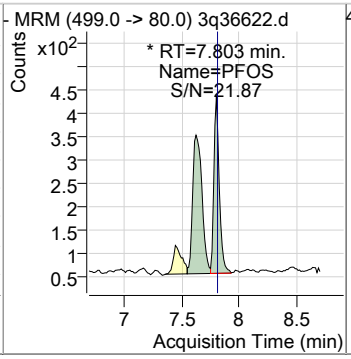


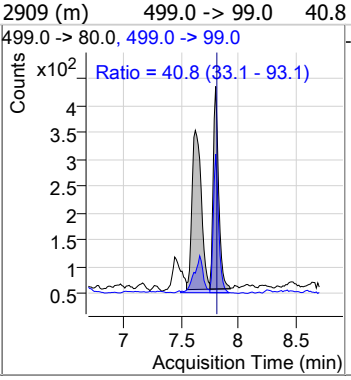


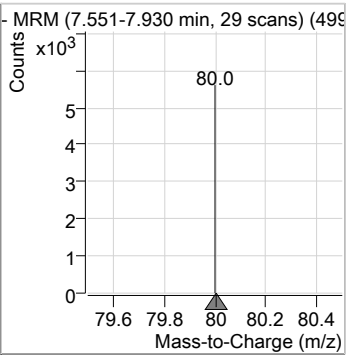


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	1.14	7.80	-0.04	2909 (m)	499.0 -> 99.0	40.8	33.1	93.1



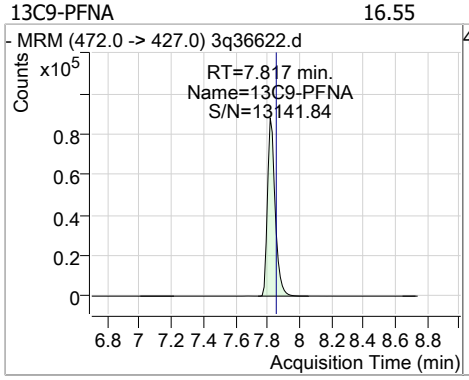


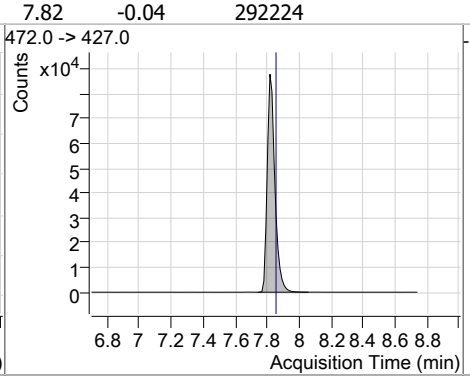


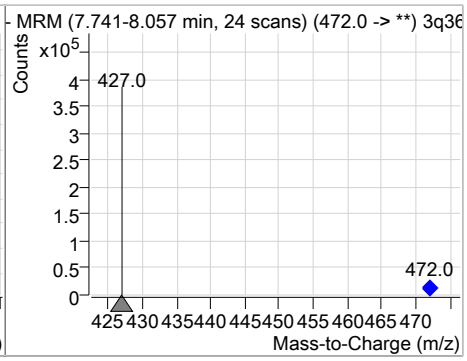


Perfluorinated Compounds by LC/MS/MS

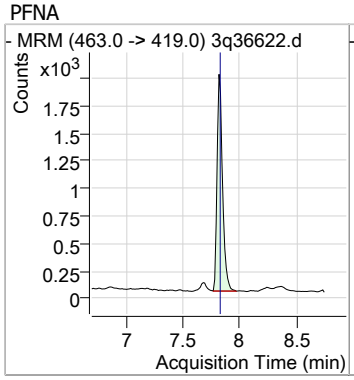
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	16.55	7.82	-0.04	292224				

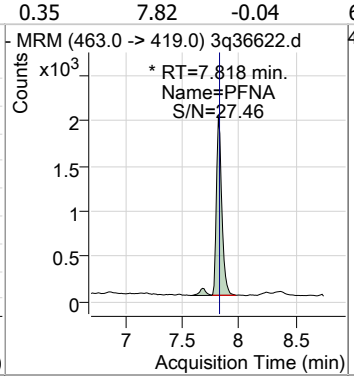


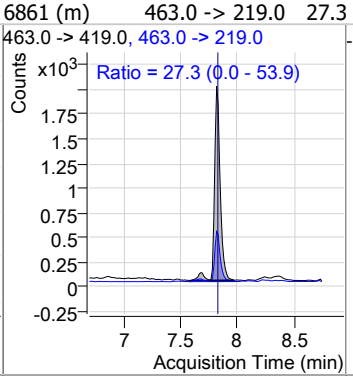


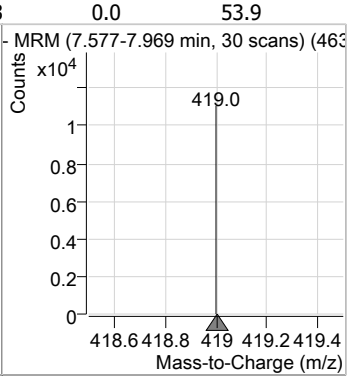


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.35	7.82	-0.04	6861 (m)	463.0 -> 219.0	27.3	0.0	53.9

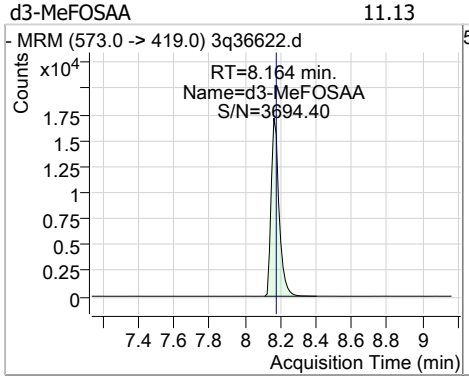


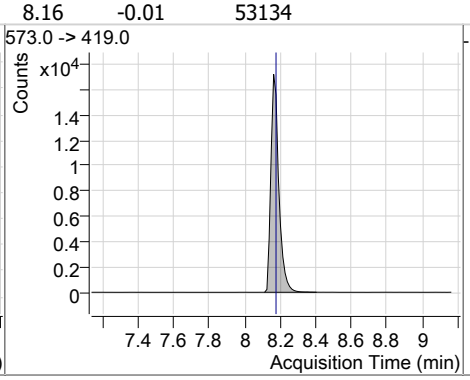


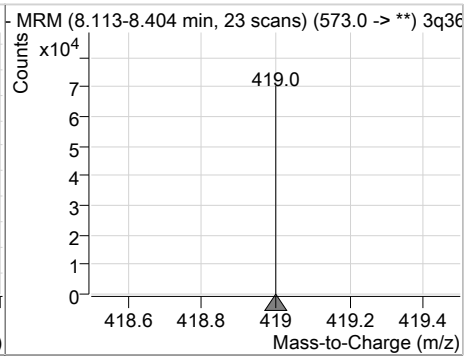




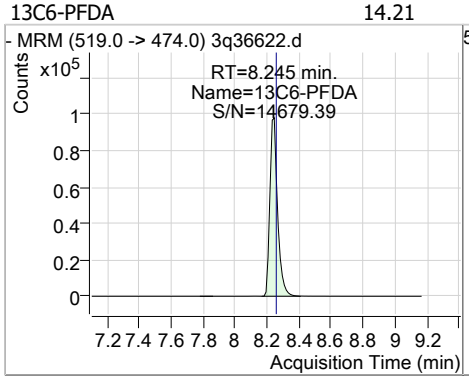
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	11.13	8.16	-0.01	53134				

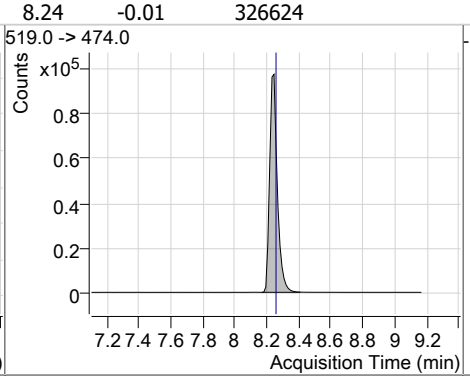


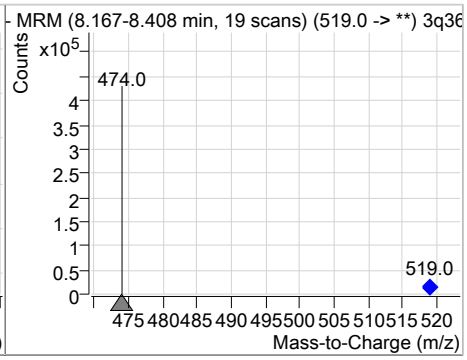




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	14.21	8.24	-0.01	326624				

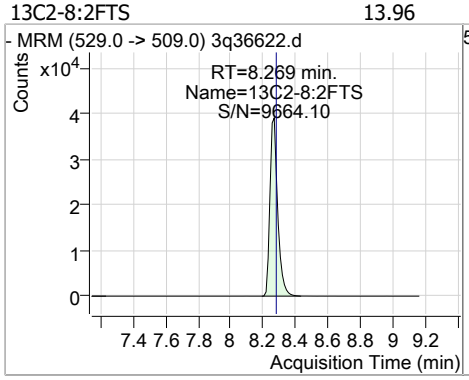


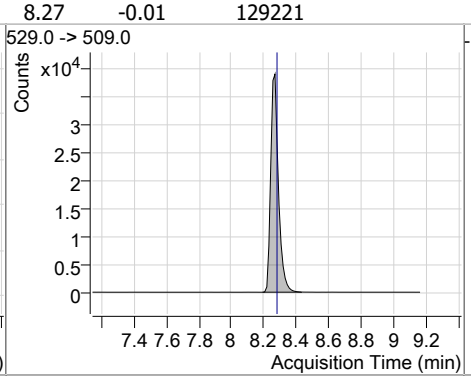


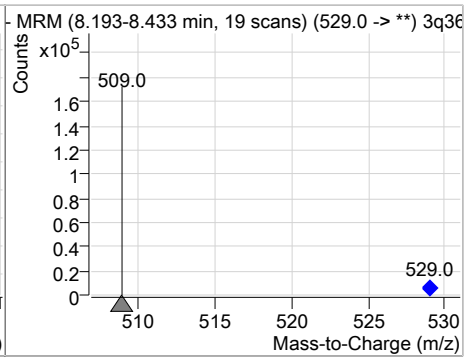


Perfluorinated Compounds by LC/MS/MS

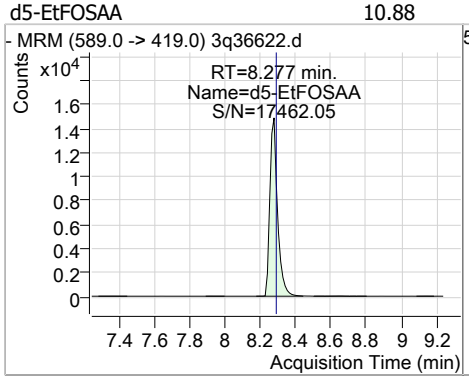
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	13.96	8.27	-0.01	129221				

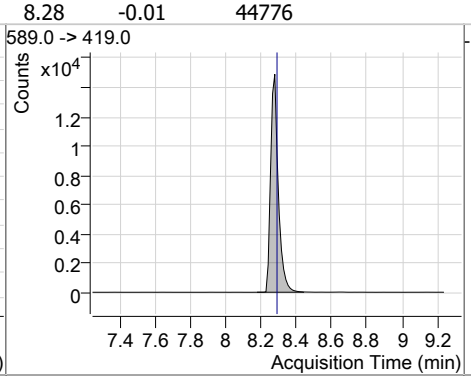


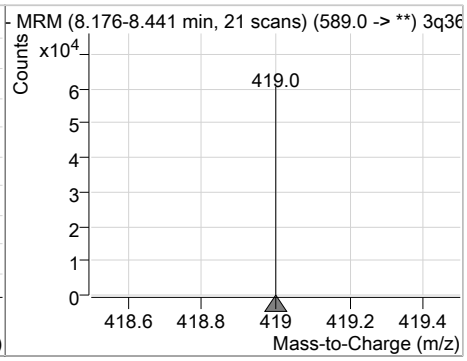




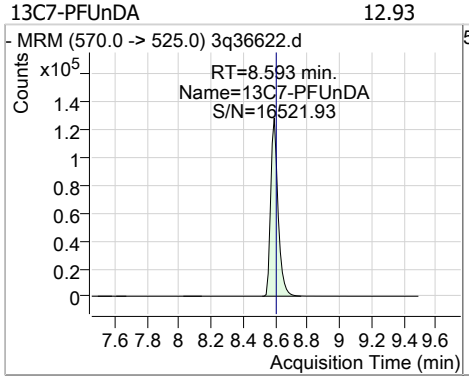
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	10.88	8.28	-0.01	44776				

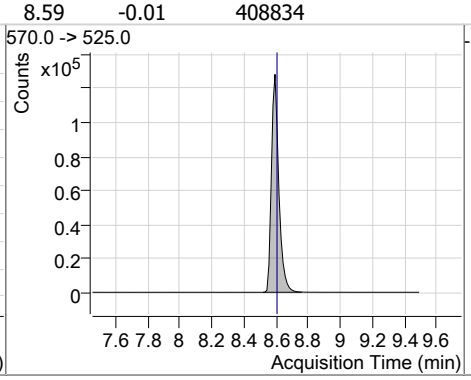


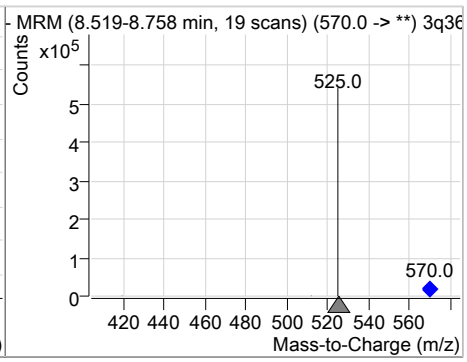




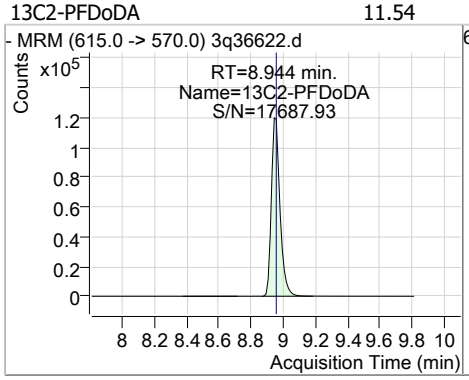
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	12.93	8.59	-0.01	408834				

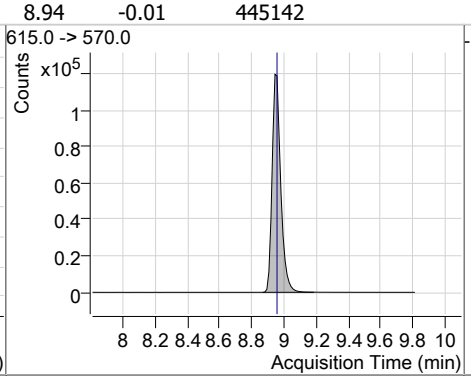


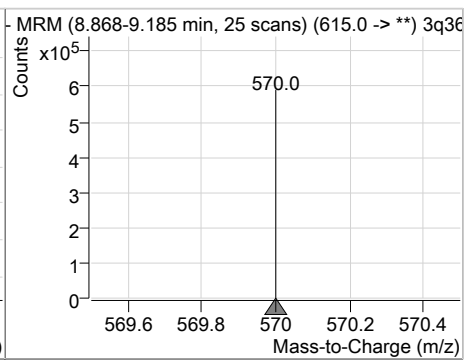




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	11.54	8.94	-0.01	445142				

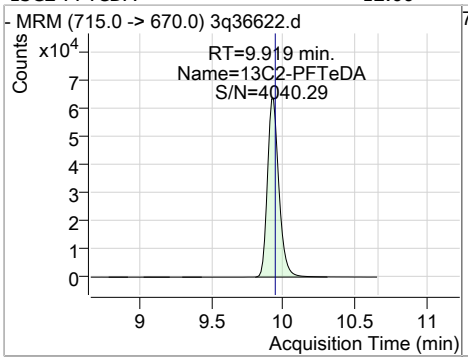


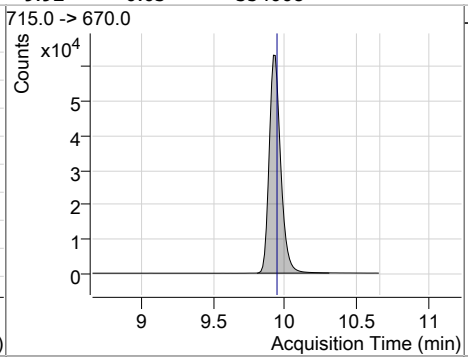


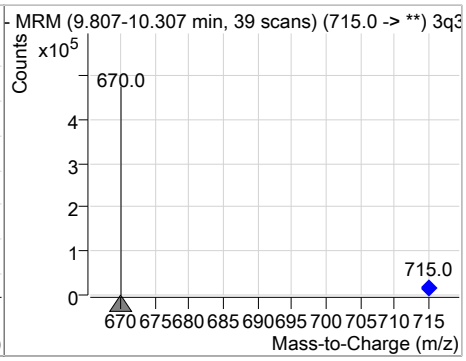


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	12.66	9.92	-0.03	354068				







Manual Integration Approval Summary

Sample Number: OP84900-DUP
Lab FileID: 3Q36622.D
Injection Time: 04/14/21 22:55
Method: EPA 537M BY ID
Analyst approved: 04/15/21 09:33 Martha Valls
Supervisor approved: 04/15/21 10:01 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluoroheptanoic acid	375-85-9		6.53	Split peak
Perfluorohexanesulfonic acid	355-46-4		6.58	Split peak
Perfluorooctanoic acid	335-67-1		7.28	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.80	Split peak
Perfluorononanoic acid	375-95-1		7.82	Split peak

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Instrument Name	Instrument 1
MS Model	G6470A
MS Instrument Serial	SG1636G008
Software_Firmware Version	B.08.00.B8023.0, FW: A.00.08.21
Tune Date & Time	04:05:21 10:21:50
Data Path	D:\MassHunter\Tune\QQQ\G6470A\atunes.TUNE.XML
Ion Source	AJS ESI
Ionization Mode	AJS ESI
Tuned Resolution	All
Vacuum Pressure	1.59E+0[R]; 3.04E-5[H]

Source Parameters

Parameter	Value
Gas Temp	300
Gas Flow	8
Nebulizer	15
Capillary	4000
Nozzle Voltage	1500
Sheath Gas Temp	250
Sheath Gas Flow	7

Positive Results

Analyzer: MS1 Polarity: Positive Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.11	0.02	Pass	0.70	0.65	-0.05	Pass	467376
322.05	322.07	0.02	Pass	0.70	0.63	-0.07	Pass	154190
622.03	622.03	0.00	Pass	0.70	0.62	-0.08	Pass	127019
922.01	921.94	-0.07	Pass	0.70	0.60	-0.10	Pass	98666
1521.97	1521.81	-0.16	Pass	0.70	0.60	-0.10	Pass	21252
2121.93	2121.64	-0.29	Pass	0.70	0.67	-0.03	Pass	6156

Analyzer: MS2 Polarity: Positive Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
58.07	58.02	-0.05	Pass	0.70	0.71	0.01	Pass	144248
118.09	118.09	0.00	Pass	0.70	0.69	-0.01	Pass	395358
322.05	322.06	0.01	Pass	0.70	0.65	-0.05	Pass	202863
622.03	622.04	0.01	Pass	0.70	0.65	-0.05	Pass	239354
922.01	921.97	-0.04	Pass	0.70	0.64	-0.06	Pass	182800
1521.97	1521.88	-0.09	Pass	0.70	0.61	-0.09	Pass	136794
2121.93	2121.77	-0.16	Pass	0.70	0.63	-0.07	Pass	151089

Analyzer: MS1 Polarity: Positive Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.12	0.03	Pass	1.20	1.14	-0.06	Pass	584688
322.05	322.05	0.00	Pass	1.20	1.31	0.11	Pass	241010
622.03	622.01	-0.02	Pass	1.20	1.19	-0.01	Pass	260805
922.01	921.94	-0.07	Pass	1.20	1.18	-0.02	Pass	224654
1521.97	1521.75	-0.22	Pass	1.20	0.96	-0.24	Pass	58605
2121.93	2121.62	-0.31	Pass	1.20	1.05	-0.15	Pass	21892

Analyzer: MS2 Polarity: Positive Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
58.07	58.04	-0.03	Pass	1.20	1.18	-0.02	Pass	157906
118.09	118.10	0.01	Pass	1.20	1.17	-0.03	Pass	556189
322.05	322.02	-0.03	Pass	1.20	1.08	-0.12	Pass	280120
622.03	622.01	-0.02	Pass	1.20	1.09	-0.11	Pass	343897
922.01	921.93	-0.08	Pass	1.20	1.09	-0.11	Pass	334012
1521.97	1521.83	-0.14	Pass	1.20	1.12	-0.08	Pass	285751
2121.93	2121.76	-0.17	Pass	1.20	1.08	-0.12	Pass	330754

Analyzer: MS1 Polarity: Positive Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.11	0.02	Pass	2.50	2.50	0.00	Pass	805078
322.05	322.12	0.07	Pass	2.50	2.91	0.41	Pass	380926
622.03	622.04	0.01	Pass	2.50	3.38	0.88	Pass	413016
922.01	921.98	-0.03	Pass	2.50	3.37	0.87	Pass	445850
1521.97	1521.85	-0.12	Pass	2.50	2.76	0.26	Pass	152564
2121.93	2122.07	0.14	Pass	2.50	1.95	-0.55	Pass	79947

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Analyzer: MS2 Polarity: Positive Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
58.07	58.00	-0.07	Pass	2.50	2.51	0.01	Pass	229908
118.09	118.08	-0.01	Pass	2.50	2.54	0.04	Pass	809360
322.05	322.07	0.02	Pass	2.50	2.38	-0.12	Pass	430689
622.03	622.00	-0.03	Pass	2.50	2.40	-0.10	Pass	560864
922.01	921.96	-0.05	Pass	2.50	2.32	-0.18	Pass	683258
1521.97	1521.81	-0.16	Pass	2.50	2.36	-0.14	Pass	706095
2121.93	2121.68	-0.25	Pass	2.50	2.37	-0.13	Pass	1064660

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Negative Results

Analyzer: MS1 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	113.02	0.03	Pass	0.70	0.70	0.00	Pass	139011
302.00	302.03	0.03	Pass	0.70	0.71	0.01	Pass	3871
601.98	601.99	0.01	Pass	0.70	0.72	0.02	Pass	62929
1033.99	1033.93	-0.06	Pass	0.70	0.69	-0.01	Pass	396665
1633.95	1633.82	-0.13	Pass	0.70	0.63	-0.07	Pass	471955
2233.91	2233.63	-0.28	Pass	0.70	0.65	-0.05	Pass	155543

Analyzer: MS2 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	68.93	-0.07	Pass	0.70	0.71	0.01	Pass	36988
112.99	112.98	-0.01	Pass	0.70	0.70	0.00	Pass	107856
302.00	301.98	-0.02	Pass	0.70	0.70	0.00	Pass	4556
601.98	601.93	-0.05	Pass	0.70	0.68	-0.02	Pass	81657
1033.99	1033.91	-0.08	Pass	0.70	0.69	-0.01	Pass	417235
1633.95	1633.82	-0.13	Pass	0.70	0.69	-0.01	Pass	815255
2233.91	2233.70	-0.21	Pass	0.70	0.74	0.04	Pass	522002

Analyzer: MS1 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	113.06	0.07	Pass	1.20	1.23	0.03	Pass	166175
302.00	302.08	0.08	Pass	1.20	1.33	0.13	Pass	6068
601.98	601.97	-0.01	Pass	1.20	1.36	0.16	Pass	119508
1033.99	1033.94	-0.05	Pass	1.20	1.25	0.05	Pass	629074
1633.95	1633.75	-0.20	Pass	1.20	0.97	-0.23	Pass	792405
2233.91	2233.54	-0.37	Pass	1.20	0.94	-0.26	Pass	244722

Analyzer: MS2 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	68.93	-0.07	Pass	1.20	1.20	0.00	Pass	48843
112.99	112.97	-0.02	Pass	1.20	1.21	0.01	Pass	144387
302.00	301.96	-0.04	Pass	1.20	1.17	-0.03	Pass	6033
601.98	601.94	-0.04	Pass	1.20	1.25	0.05	Pass	116875
1033.99	1033.88	-0.11	Pass	1.20	1.26	0.06	Pass	620053
1633.95	1633.81	-0.14	Pass	1.20	1.34	0.14	Pass	1868187
2233.91	2233.76	-0.15	Pass	1.20	1.24	0.04	Pass	1351107

Analyzer: MS1 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	113.06	0.07	Pass	2.50	2.53	0.03	Pass	204774
302.00	302.09	0.09	Pass	2.50	2.75	0.25	Pass	7264
601.98	602.03	0.05	Pass	2.50	2.98	0.48	Pass	148210
1033.99	1033.94	-0.05	Pass	2.50	3.01	0.51	Pass	1173270
1633.95	1633.73	-0.22	Pass	2.50	2.87	0.37	Pass	1619306
2233.91	2233.48	-0.43	Pass	2.50	2.57	0.07	Pass	662625

Analyzer: MS2 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	68.87	-0.13	Pass	2.50	2.54	0.04	Pass	59067
112.99	112.97	-0.02	Pass	2.50	2.55	0.05	Pass	169867
302.00	302.01	0.01	Pass	2.50	2.47	-0.03	Pass	8224
601.98	601.93	-0.05	Pass	2.50	2.38	-0.12	Pass	163318
1033.99	1033.93	-0.06	Pass	2.50	2.36	-0.14	Pass	1331192
1633.95	1633.81	-0.14	Pass	2.50	2.47	-0.03	Pass	4118200
2233.91	2233.70	-0.21	Pass	2.50	2.21	-0.29	Pass	4039740

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/12/21 13:27

Perfluorinated Compounds by LC/MS/MS

Data File : 2q65759.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/8/2021 1:33:51 PM
Sample Name : ic956-0.5
Vial : P1-A2
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q956.batch.bin
Sample Information : op84308,S2Q956,250,,,1.0,1,water

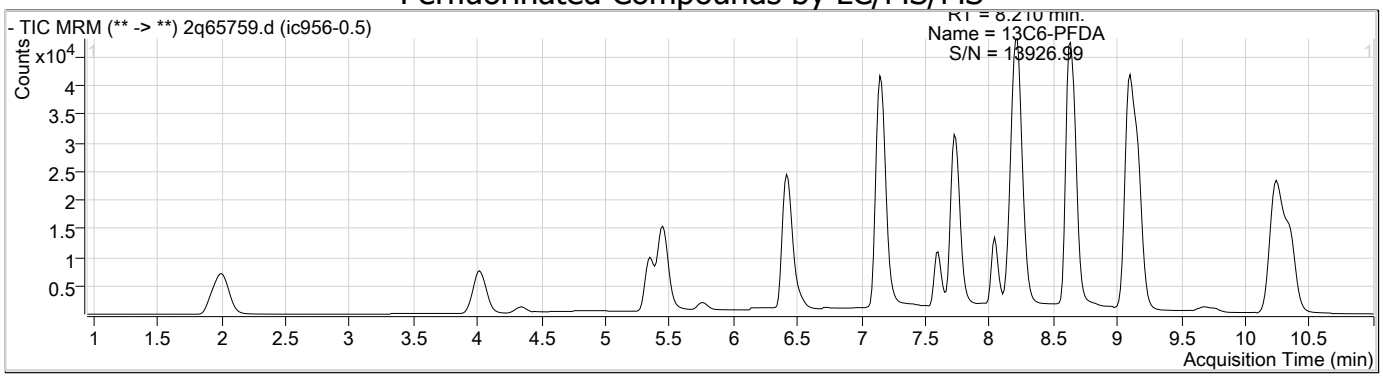
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.155	589.0 -> 419.0	38356	20.00	µg/L	0.000
M4-PFBA	2.002	217.0 -> 172.0	65169	20.00	µg/L	0.013
M5-PFPeA	4.024	268.0 -> 223.0	52761	20.00	µg/L	0.013
M5-PFHxA	5.454	318.0 -> 273.0	80328	20.00	µg/L	0.013
M4-PFHpA	6.420	367.0 -> 322.0	119257	20.00	µg/L	0.000
M8-PFOA	7.151	421.0 -> 376.0	136890	20.00	µg/L	0.000
M9-PFNA	7.732	472.0 -> 427.0	137445	20.00	µg/L	0.000
M6-PFDA	8.210	519.0 -> 474.0	181038	20.00	µg/L	0.000
M7-PFUnDA	8.636	570.0 -> 525.0	253525	20.00	µg/L	0.000
M2-PFDoDA	9.100	615.0 -> 570.0	304968	20.00	µg/L	0.000
M2-PFTeDA	10.239	715.0 -> 670.0	239609	20.00	µg/L	0.000
M8-FOSA	7.604	506.0 -> 78.0	38470	20.00	µg/L	0.000
M3-PFBS	4.330	302.0 -> 99.0	6502	20.00	µg/L	0.000
M3-PFHxS	6.456	402.0 -> 99.0	7291	20.00	µg/L	0.000
M8-PFOS	7.718	507.0 -> 99.0	10456	20.00	µg/L	0.000
M2-4:2FTS	5.348	329.0 -> 309.0	52789	20.00	µg/L	0.013
M2-6:2FTS	7.150	429.0 -> 409.0	76059	20.00	µg/L	0.013
M2-8:2FTS	8.247	529.0 -> 509.0	64999	20.00	µg/L	0.000
M3-MeFOSAA	8.041	573.0 -> 419.0	44449	20.00	µg/L	0.000
M3-HFPO-DA	5.771	287.0 -> 169.0	6280	20.00	µg/L	0.013
System Monitoring Compounds						
13C2-4:2FTS	5.348	329.0 -> 309.0	52789	18.14	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.7%		
13C2-6:2FTS	7.150	429.0 -> 409.0	76059	18.69	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.5%		
13C2-8:2FTS	8.247	529.0 -> 509.0	64999	18.22	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.1%		
13C2-PFDoDA	9.100	615.0 -> 570.0	304968	18.96	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.8%		
13C2-PFTeDA	10.239	715.0 -> 670.0	239609	18.57	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.9%		
13C3-PFBS	4.330	302.0 -> 99.0	6502	19.24	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.2%		
13C3-PFHxS	6.456	402.0 -> 99.0	7291	19.42	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.1%		
13C4-PFBA	2.002	217.0 -> 172.0	65169	19.41	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.0%		
13C4-PFHpA	6.420	367.0 -> 322.0	119257	19.60	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%		
d5-EtFOSAA	8.155	589.0 -> 419.0	38356	18.87	ng/ml	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.3%		
13C5-PFHxA	5.454	318.0 -> 273.0	80328	19.28	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.4%		
13C5-PFPeA	4.024	268.0 -> 223.0	52761	19.12	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.6%		

Perfluorinated Compounds by LC/MS/MS

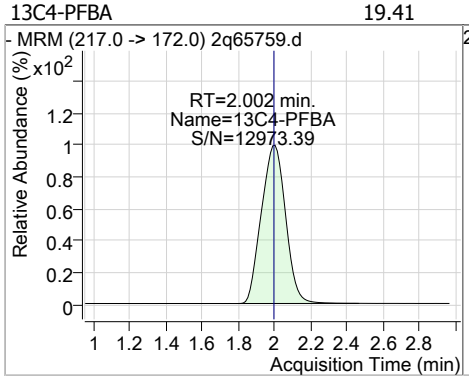
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	181038	19.54	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.7%			
13C7-PFUnDA	8.636	570.0 -> 525.0	253525	19.24	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.2%			
13C8-FOSA	7.604	506.0 -> 78.0	38470	20.02	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.1%			
13C8-PFOA	7.151	421.0 -> 376.0	136890	19.63	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.1%			
13C8-PFOS	7.718	507.0 -> 99.0	10456	19.68	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%			
13C9-PFNA	7.732	472.0 -> 427.0	137445	19.32	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.6%			
d3-MeFOSAA	8.041	573.0 -> 419.0	44449	18.74	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.7%			
13C3-HFPO-DA	5.771	287.0 -> 169.0	6280	19.37	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.8%			
Target Compounds							QValue
4:2FTS	5.350	327.0 -> 307.0	1426	0.51	µg/L		94
6:2FTS	7.150	427.0 -> 407.0	2023	0.50	µg/L		95
8:2FTS	8.247	527.0 -> 507.0	1819	0.53	µg/L		90
EtFOSAA	8.168	584.0 -> 419.0	887	0.51	µg/L	m	99
FOSA	7.593	498.0 -> 78.0	873	0.46	µg/L		97
MeFOSAA	8.041	570.0 -> 419.0	910	0.47	µg/L	m	74
PFBA	1.996	213.0 -> 169.0	529	0.48	µg/L		100
PFBS	4.332	299.0 -> 80.0	508	0.50	µg/L		98
PFDA	8.211	513.0 -> 469.0	4091	0.47	µg/L		92
PFDoDA	9.100	613.0 -> 569.0	7050	0.48	µg/L		97
PFDS	8.583	599.0 -> 80.0	212	0.48	µg/L		91
PFHpA	6.421	363.0 -> 319.0	5172	0.51	µg/L		98
PFHpS	7.163	449.0 -> 80.0	423	0.47	µg/L		94
PFHxA	5.455	313.0 -> 269.0	1367	0.49	µg/L		96
PFHxS	6.457	399.0 -> 80.0	481	0.48	µg/L	m	99
PFNA	7.733	463.0 -> 419.0	3724	0.48	µg/L		97
PFNS	8.183	549.0 -> 80.0	441	0.58	µg/L		84
PFOA	7.152	413.0 -> 369.0	3862	0.47	µg/L		99
PFOS	7.718	499.0 -> 80.0	527	0.53	µg/L	m	81
PFPeA	4.027	263.0 -> 219.0	2185	0.51	µg/L		100
PFPeS	5.590	349.0 -> 80.0	354	0.46	µg/L		98
PFTeDA	10.241	713.0 -> 669.0	8798	0.51	µg/L		100
PFTrDA	9.679	663.0 -> 619.0	8398	0.47	µg/L		99
PFUnDA	8.637	563.0 -> 519.0	5216	0.50	µg/L		99
11Cl-PF3OUdS	8.797	631.0 -> 451.0	2344	0.49	µg/L		93
9Cl-PF3ONS	7.956	531.0 -> 351.0	470	0.45	µg/L		86
ADONA	6.521	377.0 -> 251.0	5610	0.46	µg/L		97
HFPO-DA	5.767	329.0 -> 169.0	600	0.51	µg/L		92

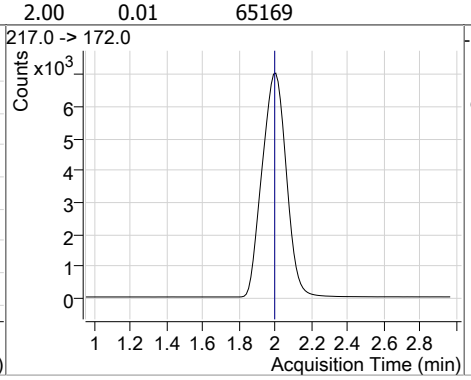
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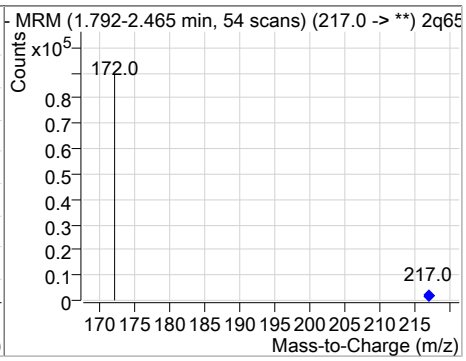
Perfluorinated Compounds by LC/MS/MS



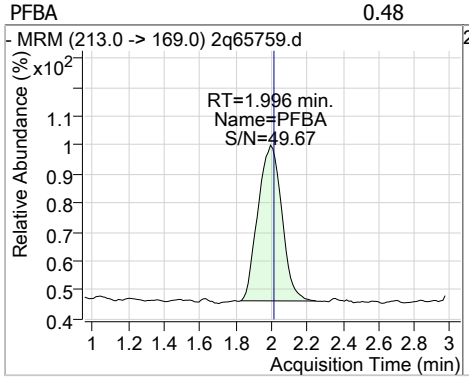
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.41	2.00	0.01	65169				

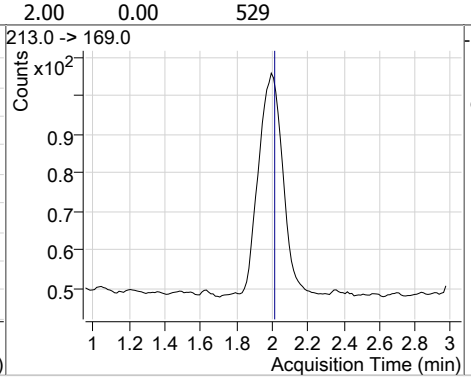


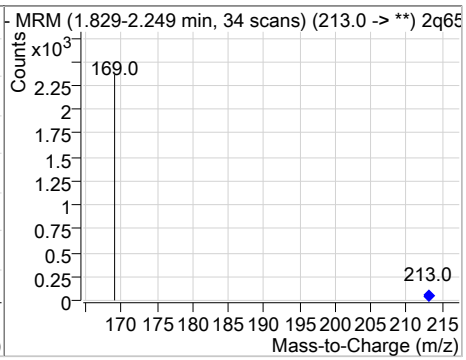




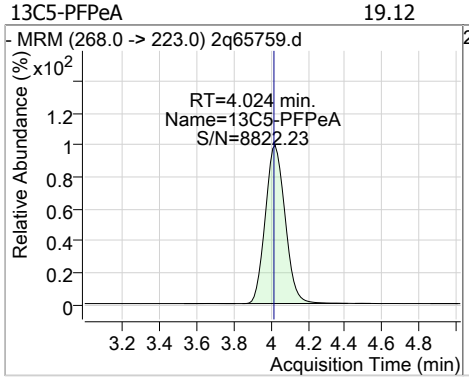
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.48	2.00	0.00	529				

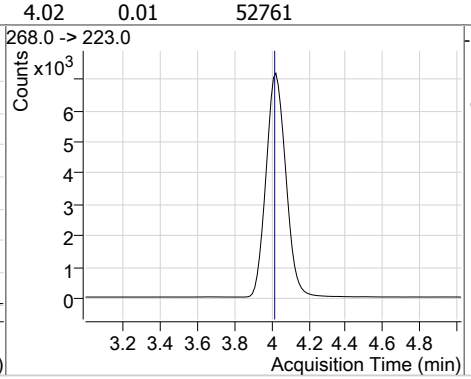


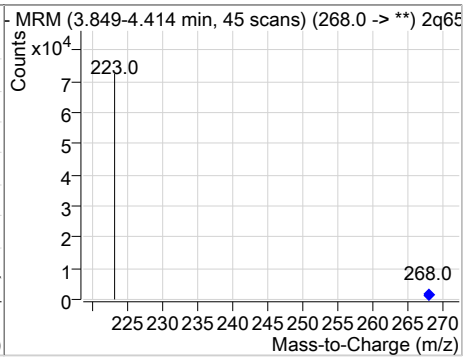




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.12	4.02	0.01	52761				

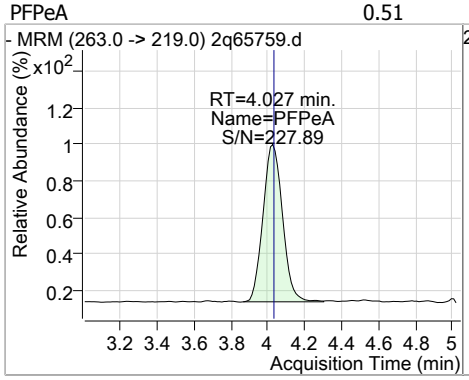


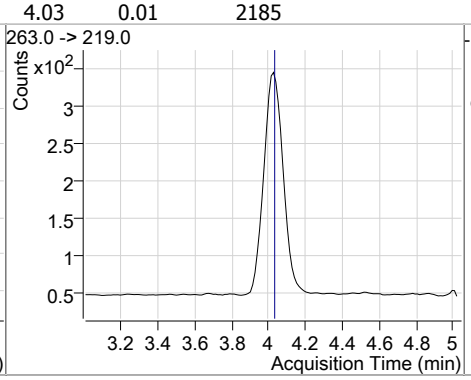


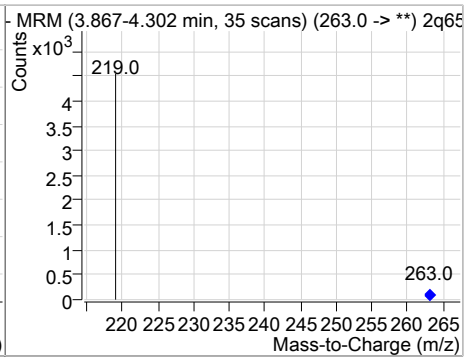


Perfluorinated Compounds by LC/MS/MS

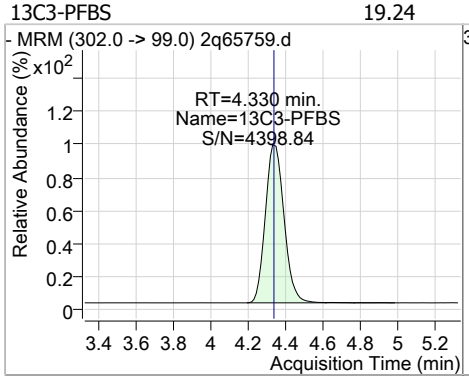
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.51	4.03	0.01	2185				

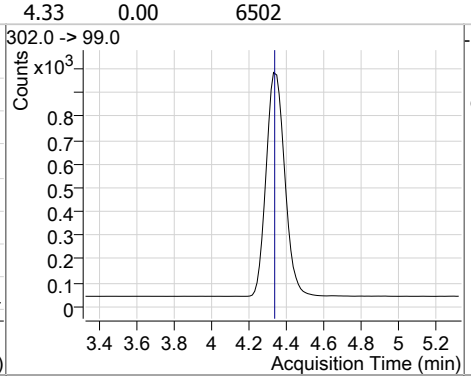


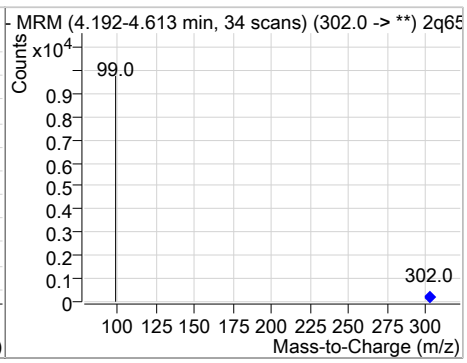




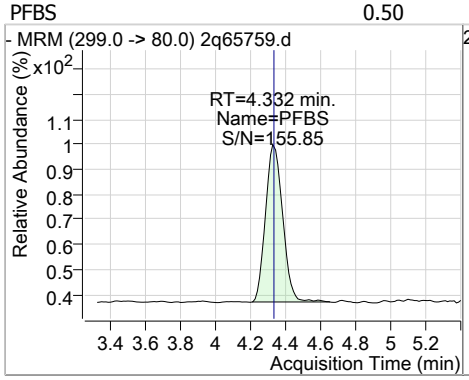
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.24	4.33	0.00	6502				

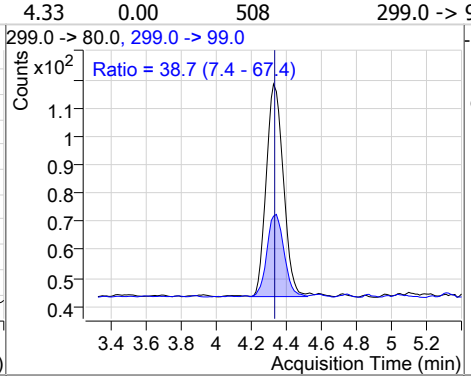


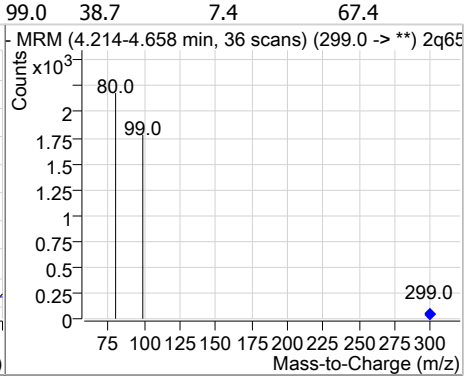




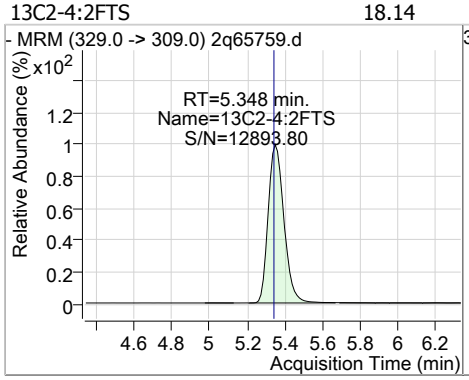
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.50	4.33	0.00	508	299.0 -> 99.0	38.7	7.4	67.4

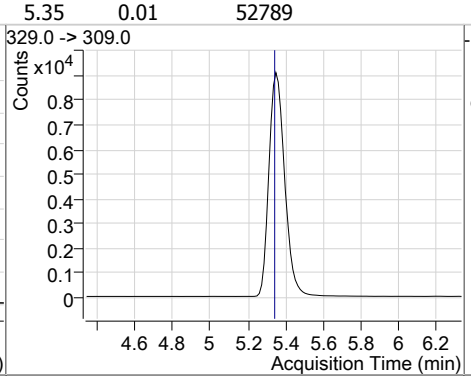


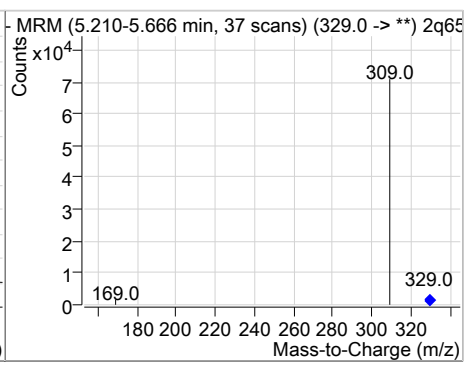




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.14	5.35	0.01	52789				

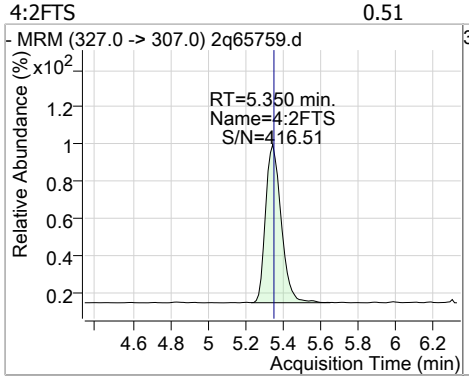


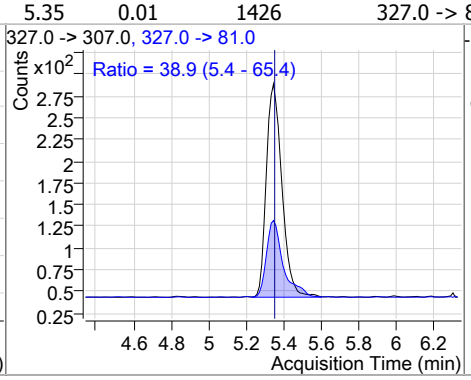


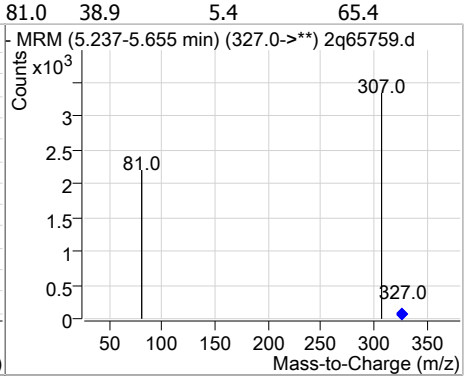


Perfluorinated Compounds by LC/MS/MS

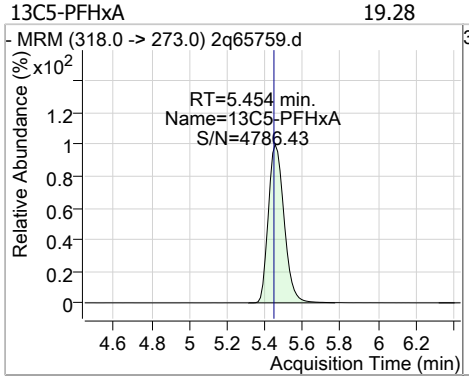
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	0.51	5.35	0.01	1426	327.0 -> 81.0	38.9	5.4	65.4

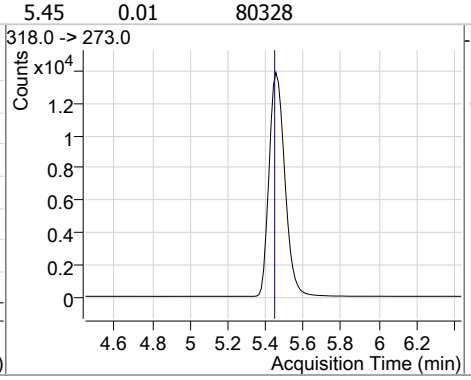


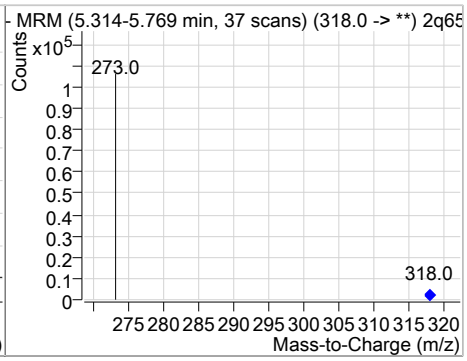




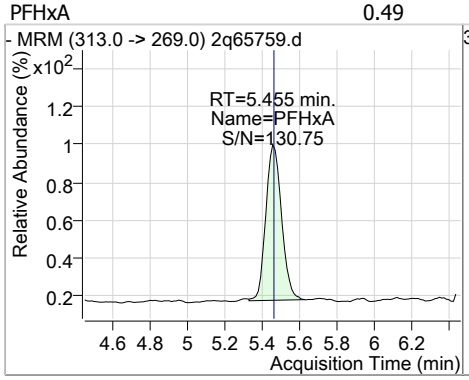
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.28	5.45	0.01	80328				

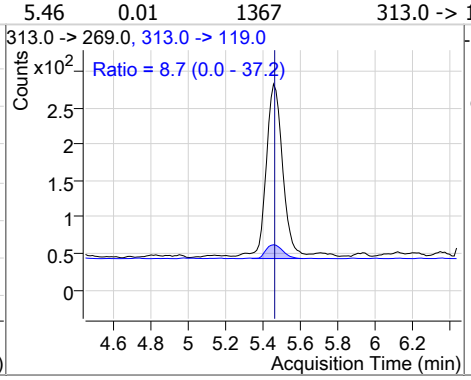


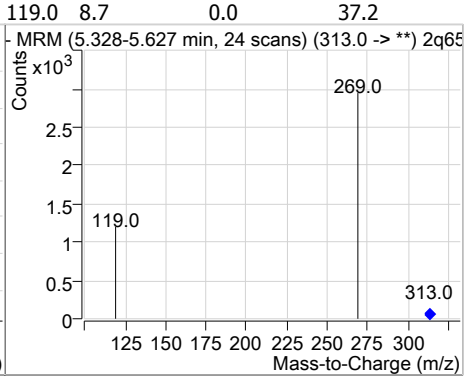




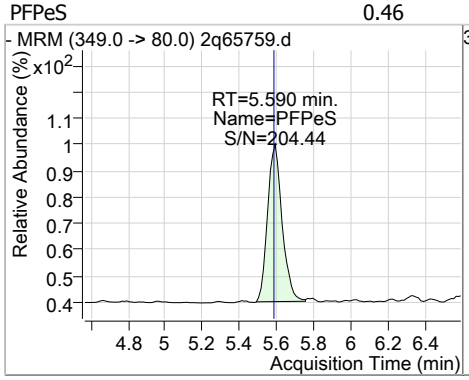
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.49	5.46	0.01	1367	313.0 -> 119.0	8.7	0.0	37.2

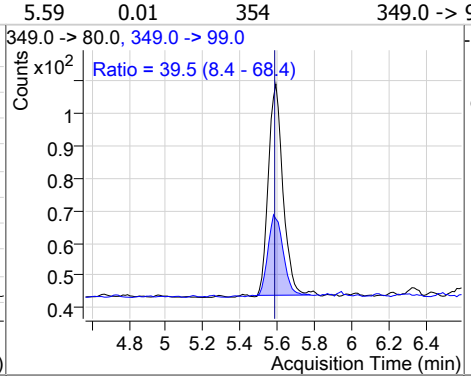


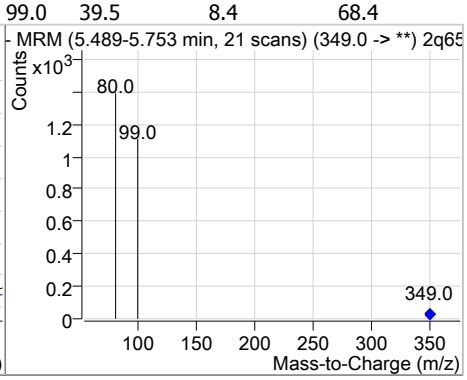




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	0.46	5.59	0.01	354	349.0 -> 99.0	39.5	8.4	68.4

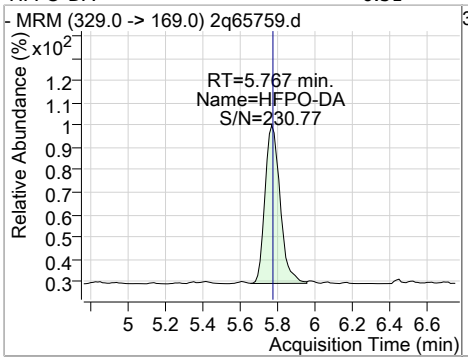


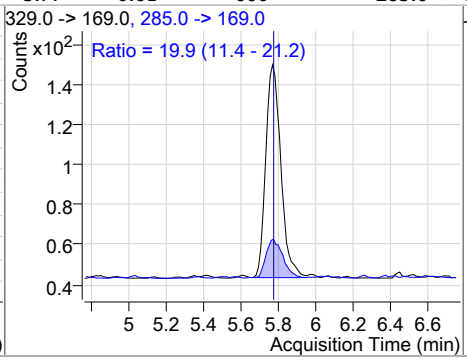


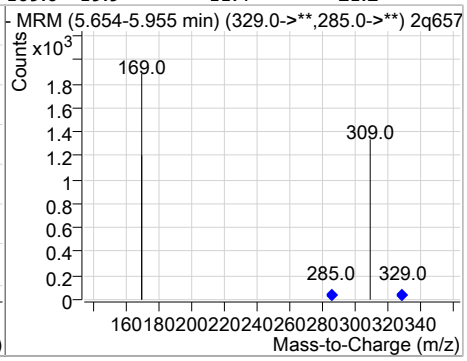


Perfluorinated Compounds by LC/MS/MS

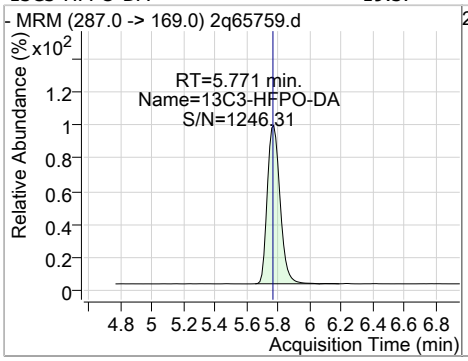
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.51	5.77	0.01	600	285.0 -> 169.0	19.9	11.4	21.2

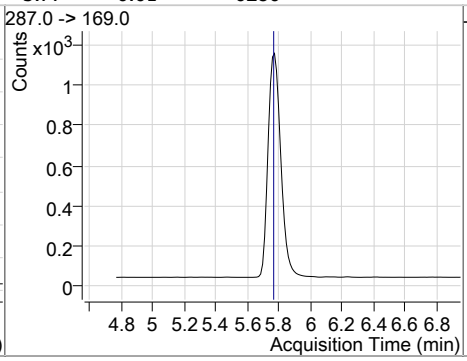


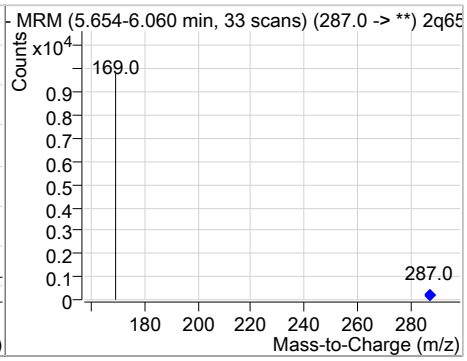




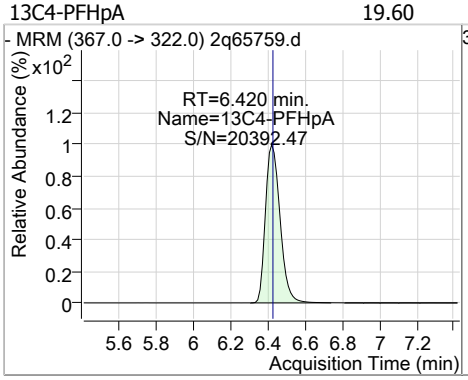
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.37	5.77	0.01	6280				

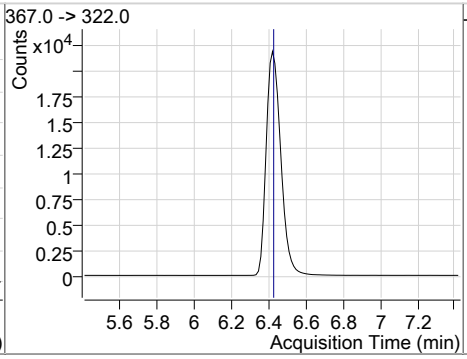


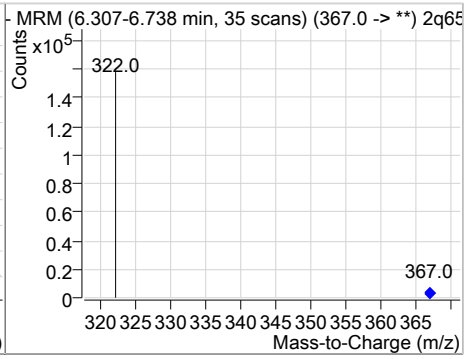




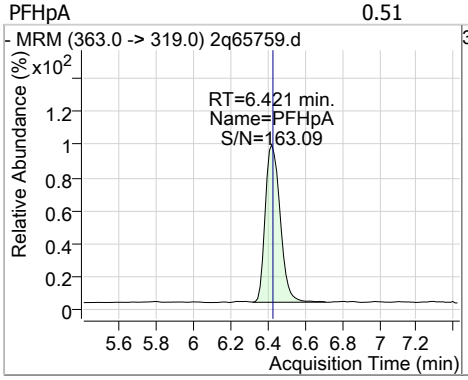
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.60	6.42	0.00	119257				

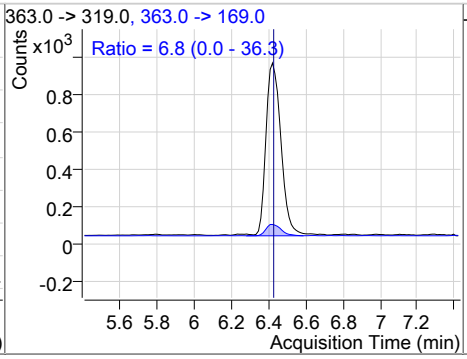


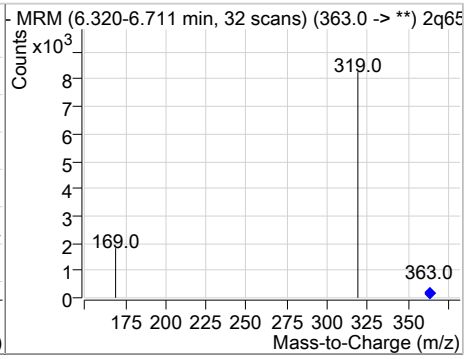




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.51	6.42	0.00	5172	363.0 -> 169.0	6.8	0.0	36.3

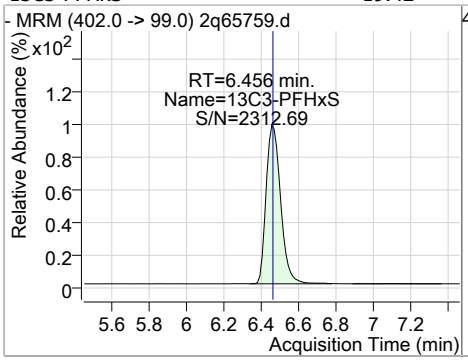


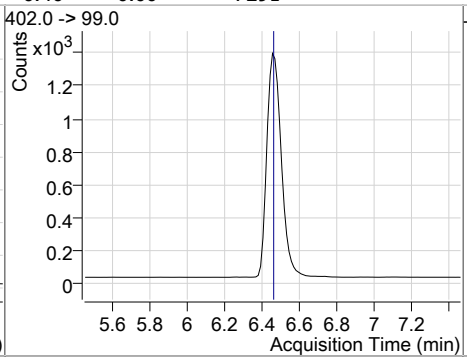


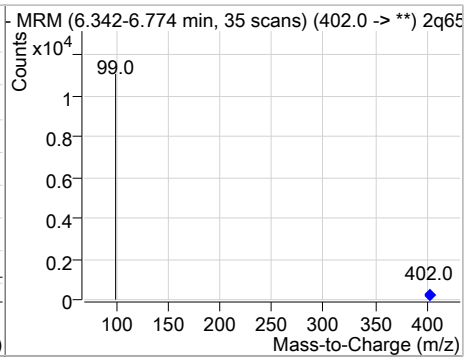


Perfluorinated Compounds by LC/MS/MS

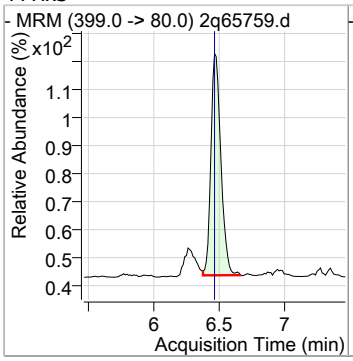
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.42	6.46	0.00	7291				

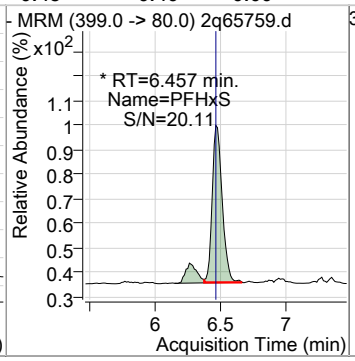


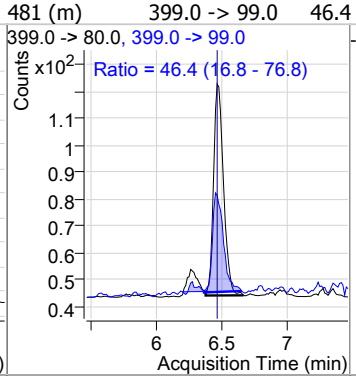


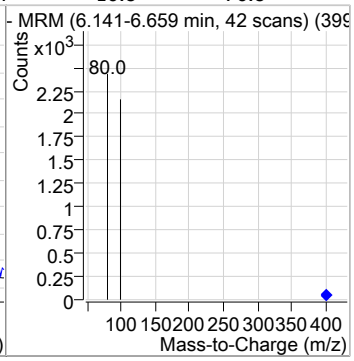


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.48	6.46	0.00	481 (m)	399.0 -> 99.0	46.4	16.8	76.8

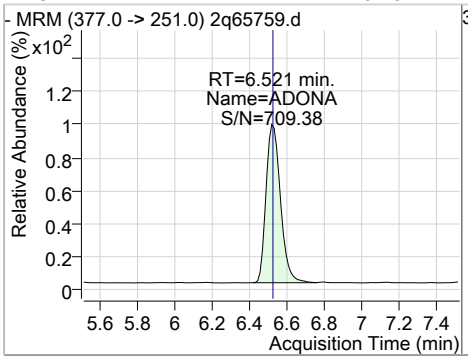


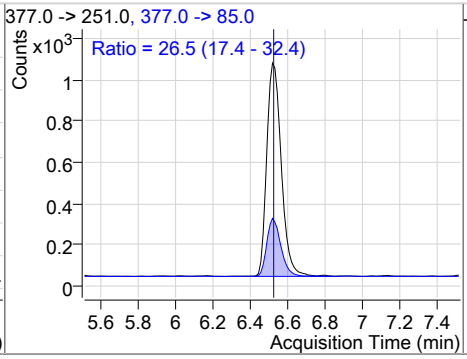


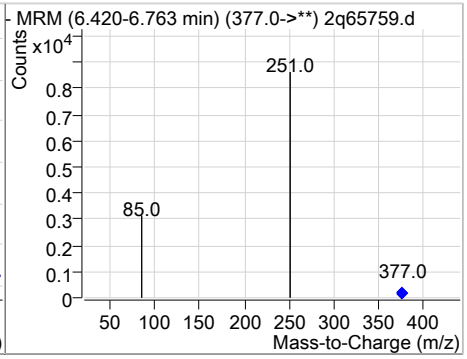




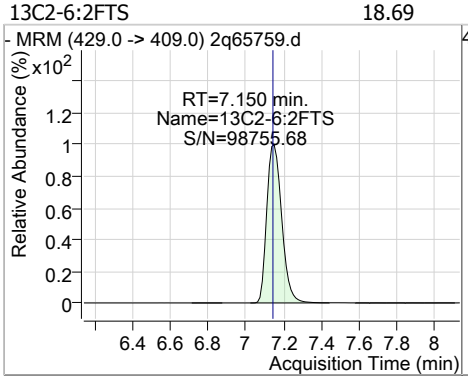
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.46	6.52	0.00	5610	377.0 -> 85.0	26.5	17.4	32.4

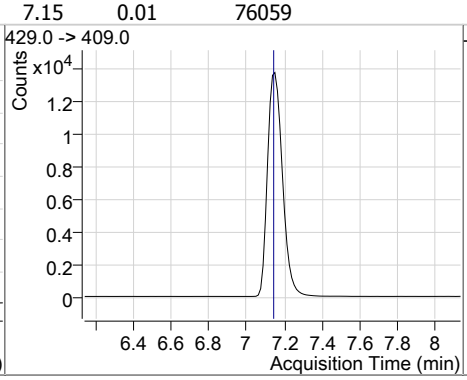


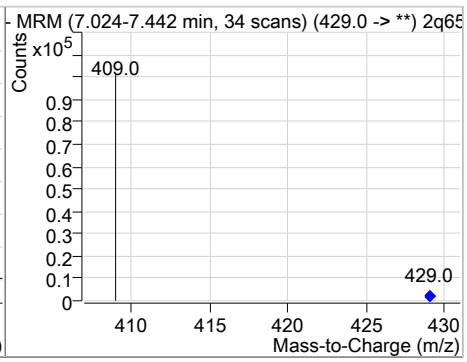




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.69	7.15	0.01	76059				

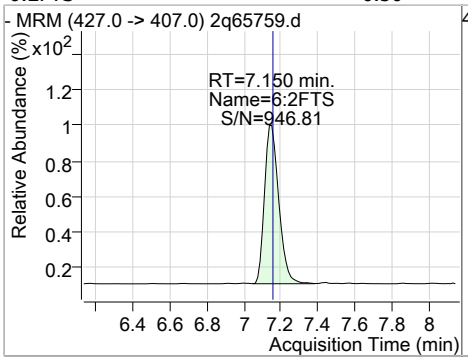


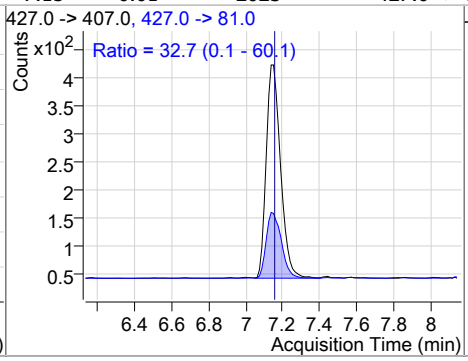


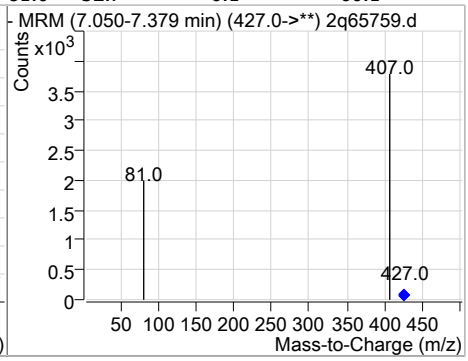


Perfluorinated Compounds by LC/MS/MS

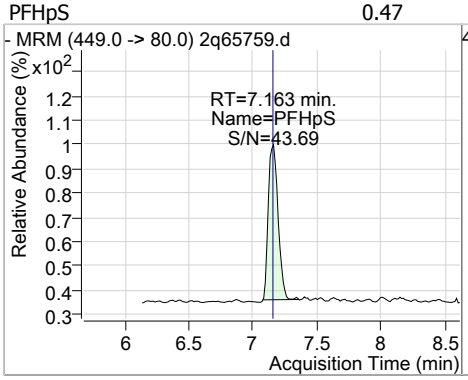
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	0.50	7.15	0.01	2023	427.0 -> 81.0	32.7	0.1	60.1

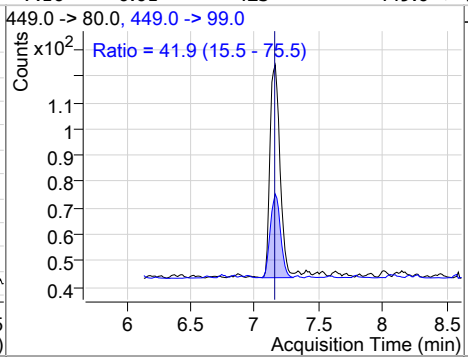


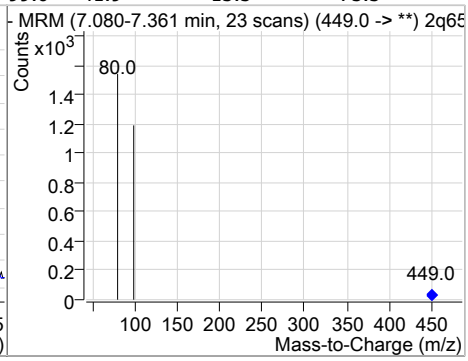




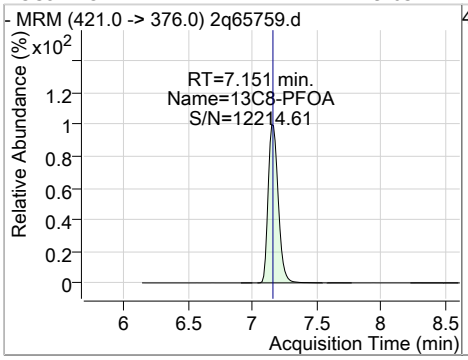
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	0.47	7.16	0.01	423	449.0 -> 99.0	41.9	15.5	75.5

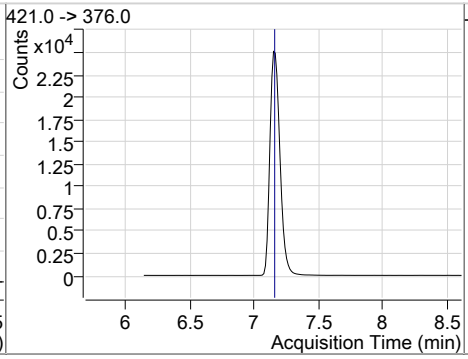


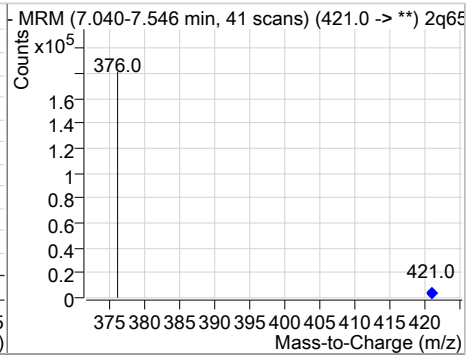




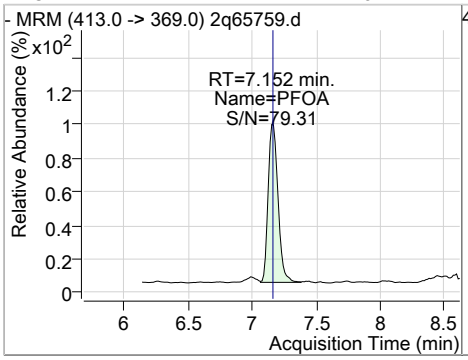
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.63	7.15	0.00	136890				

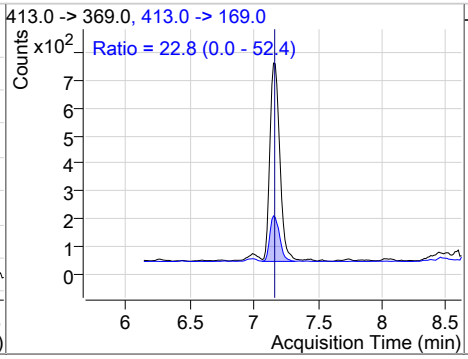


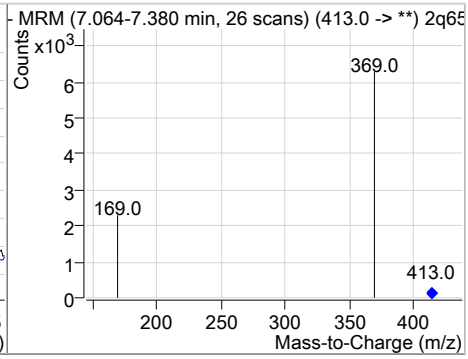




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.47	7.15	0.00	3862	413.0 -> 169.0	22.8	0.0	52.4

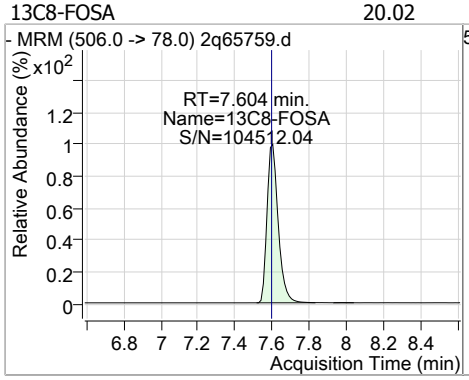


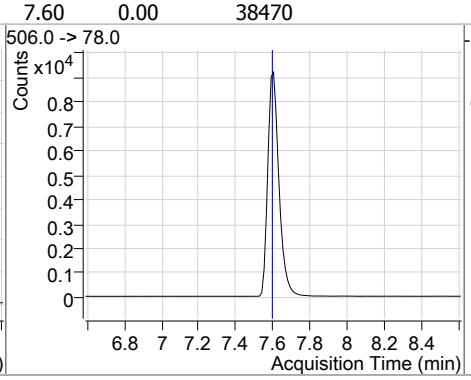


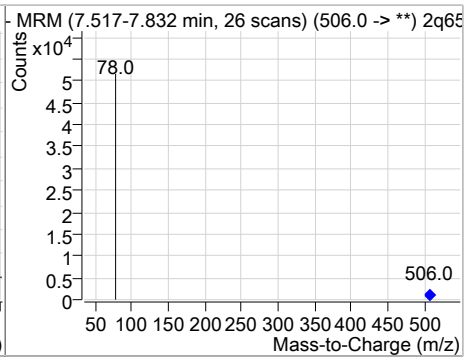


Perfluorinated Compounds by LC/MS/MS

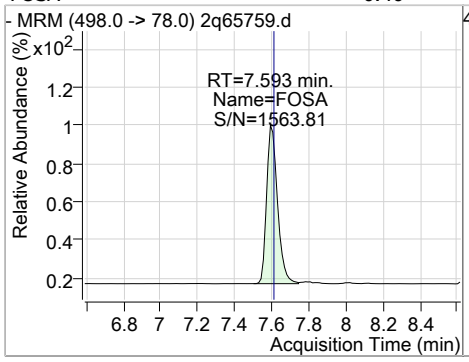
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.02	7.60	0.00	38470				

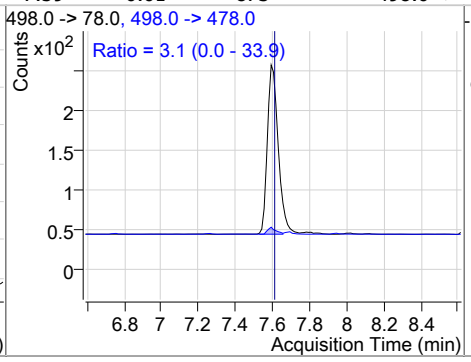


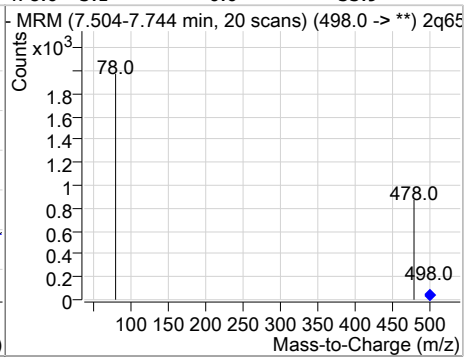




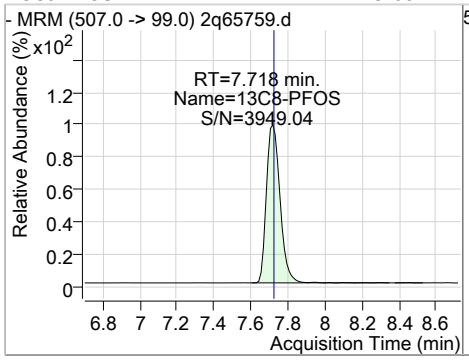
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	0.46	7.59	-0.01	873	498.0 -> 478.0	3.1	0.0	33.9

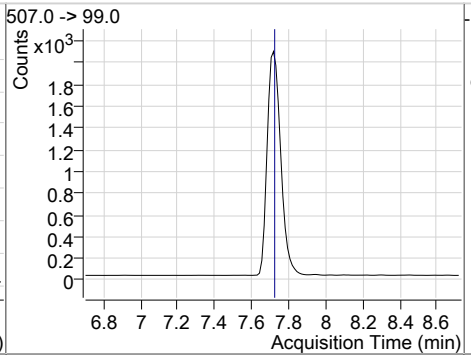


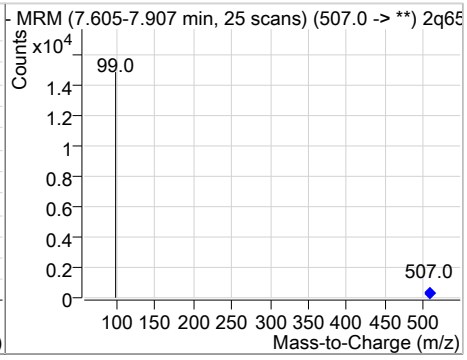




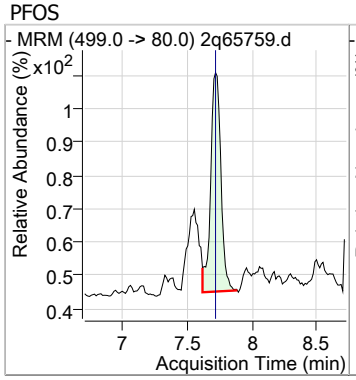
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.68	7.72	0.00	10456				

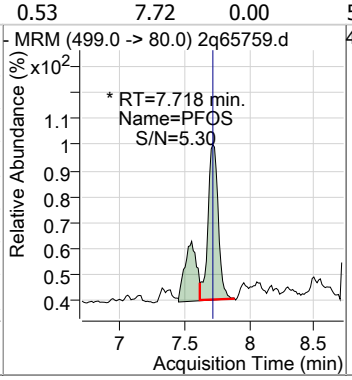


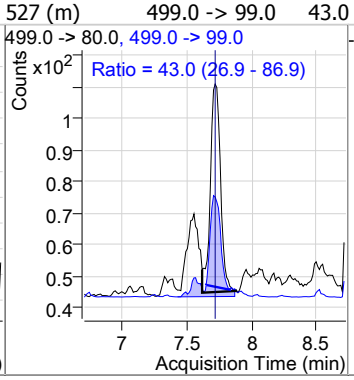


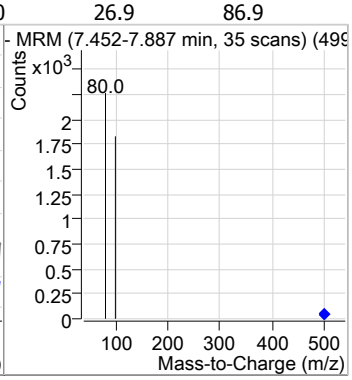


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.53	7.72	0.00	527 (m)	499.0 -> 99.0	43.0	26.9	86.9





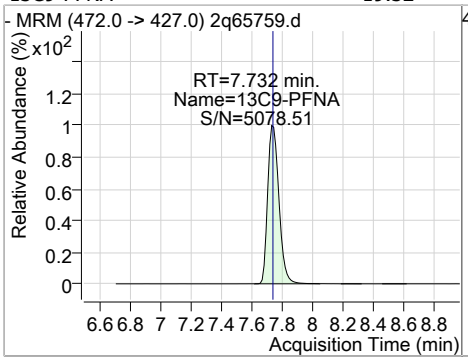


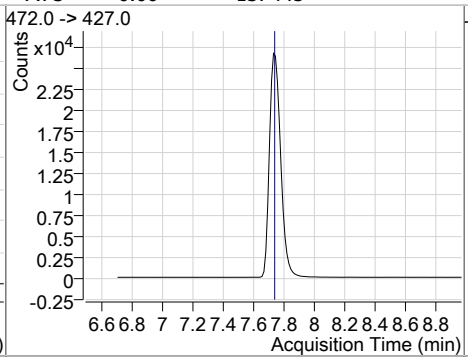


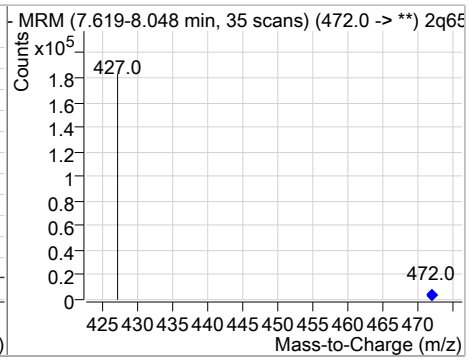
11.6.2 11

Perfluorinated Compounds by LC/MS/MS

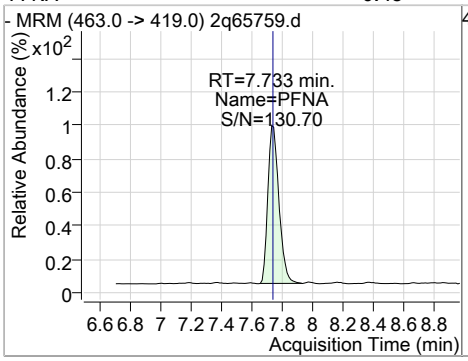
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.32	7.73	0.00	137445				

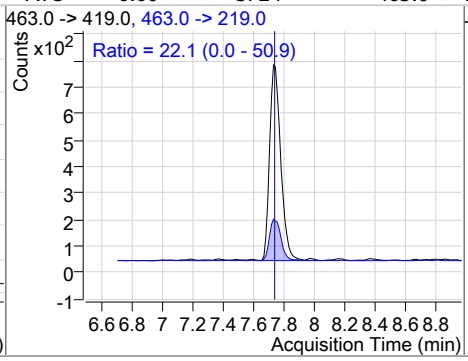


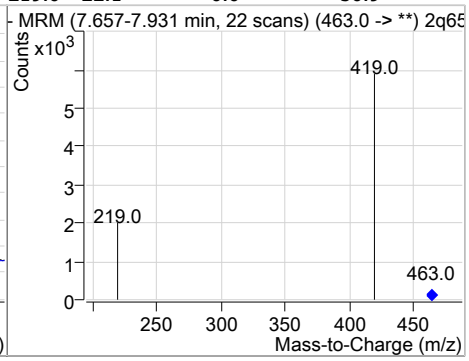




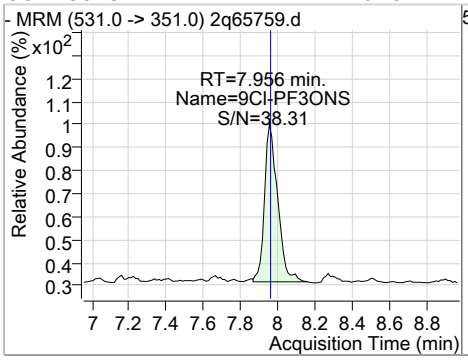
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.48	7.73	0.00	3724	463.0 -> 219.0	22.1	0.0	50.9

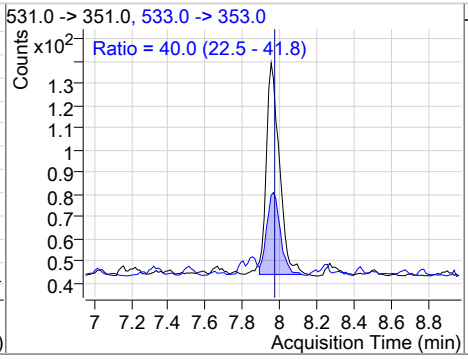


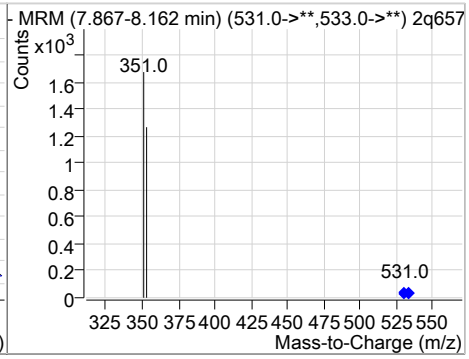




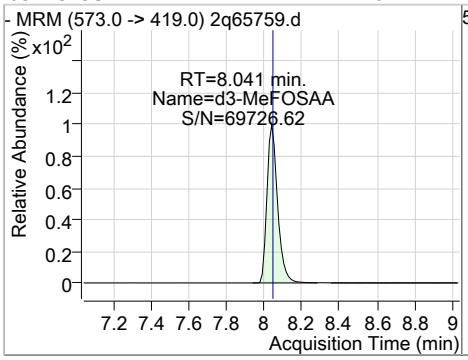
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.45	7.96	-0.01	470	533.0 -> 353.0	40.0	22.5	41.8

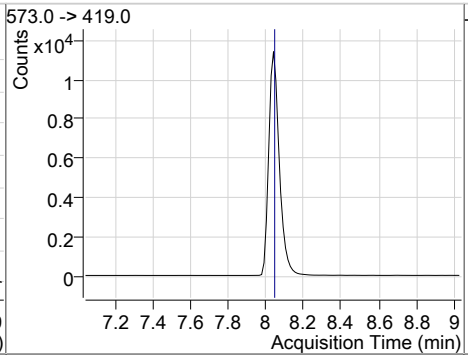


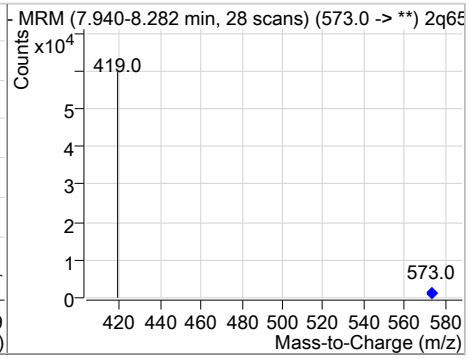




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	18.74	8.04	0.00	44449				

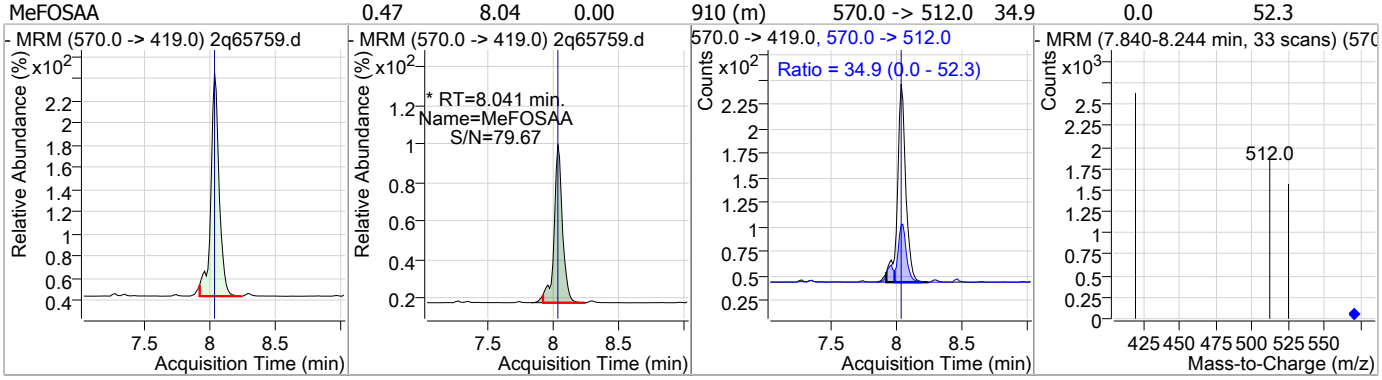




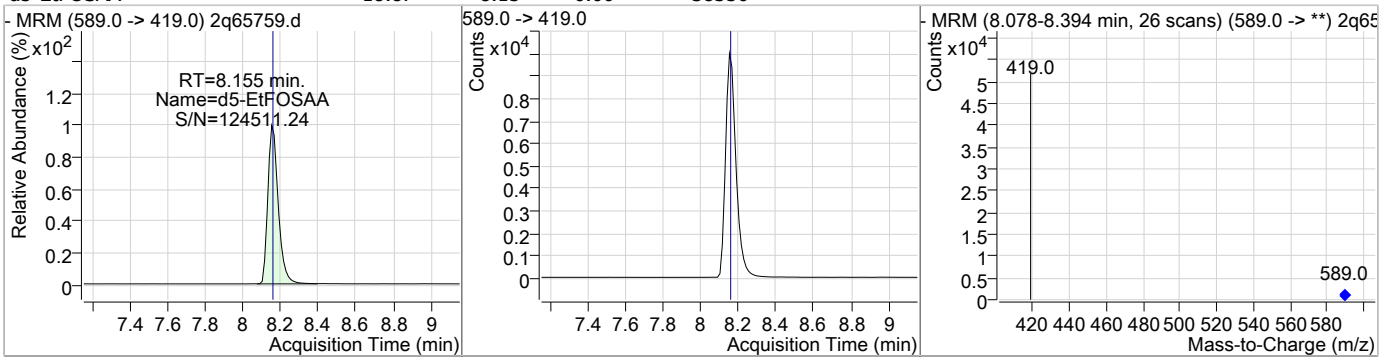


Perfluorinated Compounds by LC/MS/MS

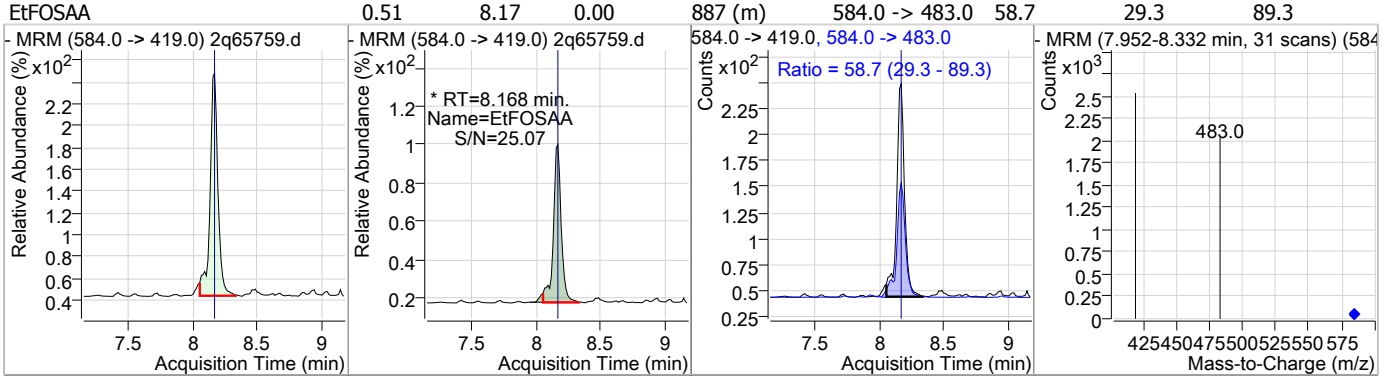
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.47	8.04	0.00	910 (m)	570.0 -> 512.0	34.9	0.0	52.3



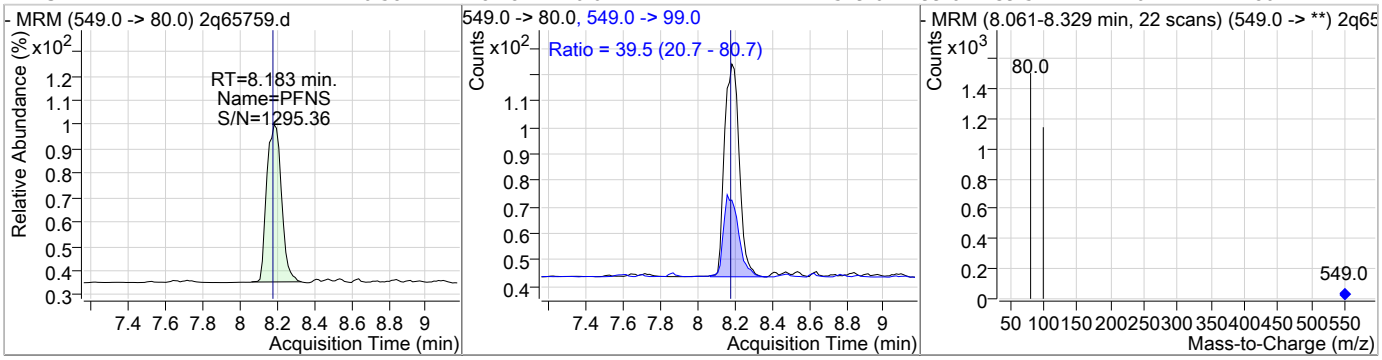
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.87	8.15	0.00	38356				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	0.51	8.17	0.00	887 (m)	584.0 -> 483.0	58.7	29.3	89.3

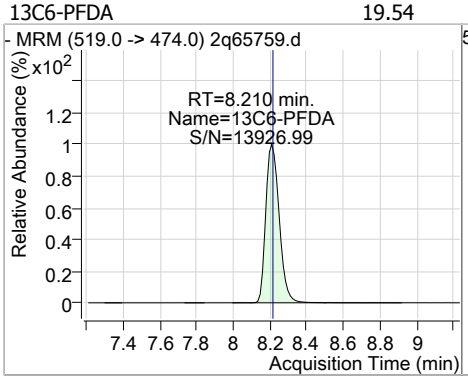


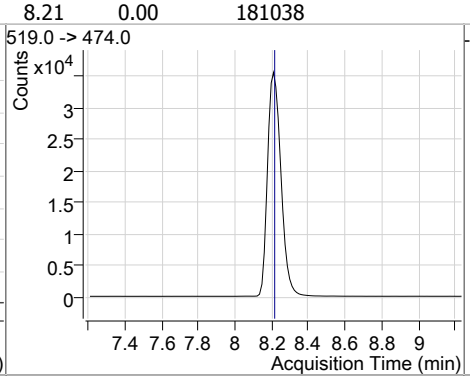
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	0.58	8.18	0.01	441	549.0 -> 99.0	39.5	20.7	80.7

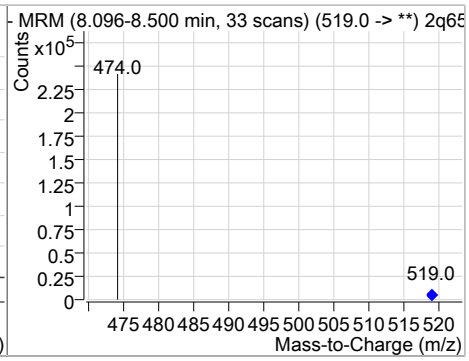


Perfluorinated Compounds by LC/MS/MS

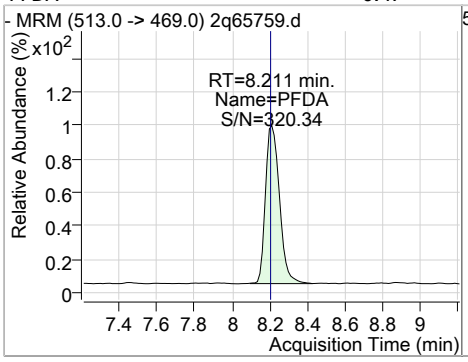
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.54	8.21	0.00	181038				

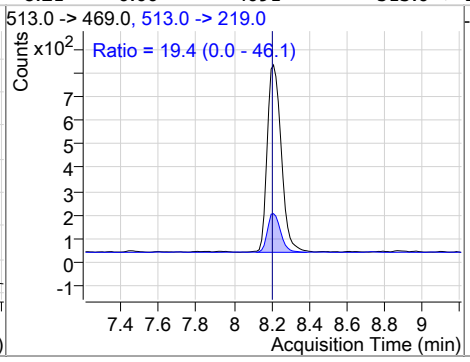


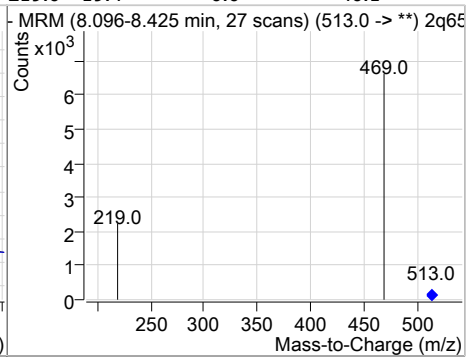




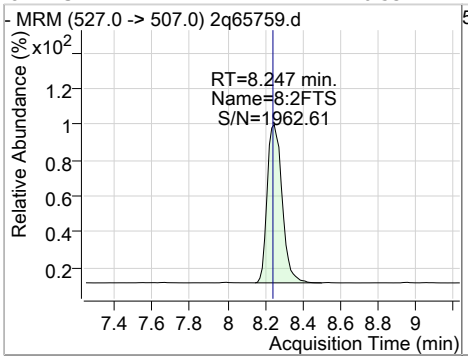
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.47	8.21	0.00	4091	513.0 -> 219.0	19.4	0.0	46.1

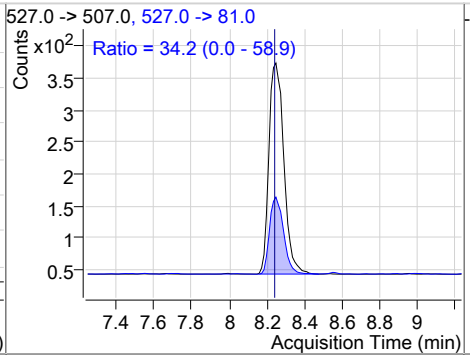


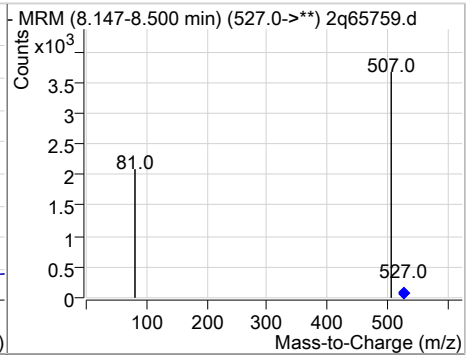




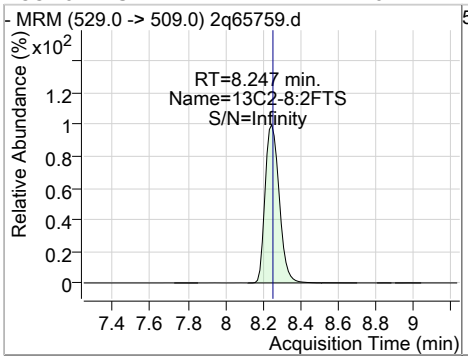
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	0.53	8.25	0.01	1819	527.0 -> 81.0	34.2	0.0	58.9

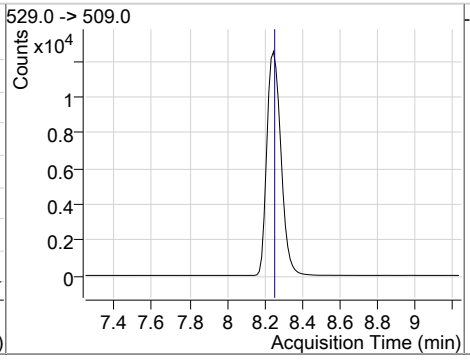


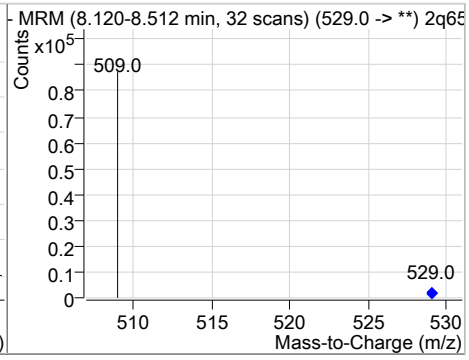




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.22	8.25	0.00	64999				

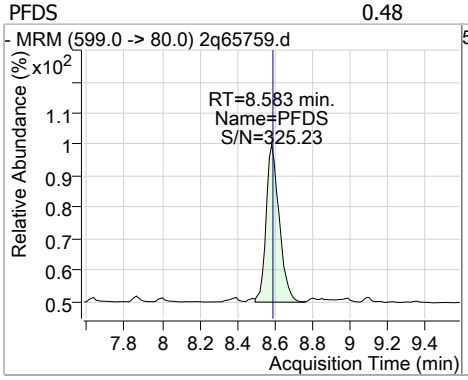


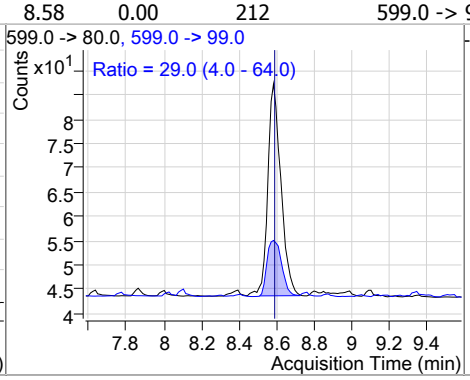


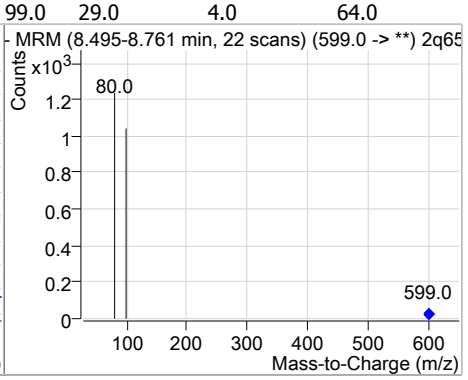


Perfluorinated Compounds by LC/MS/MS

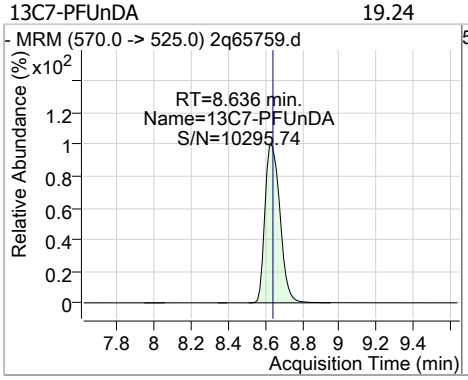
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	0.48	8.58	0.00	212	599.0 -> 99.0	29.0	4.0	64.0

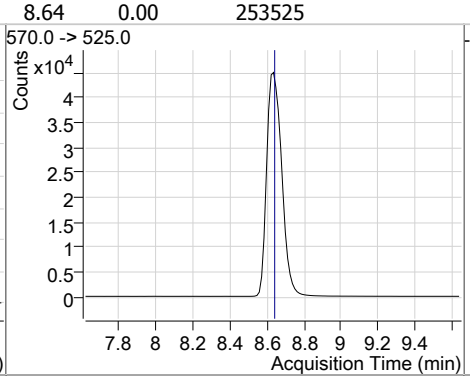


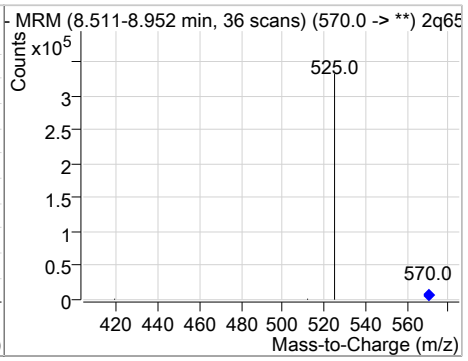




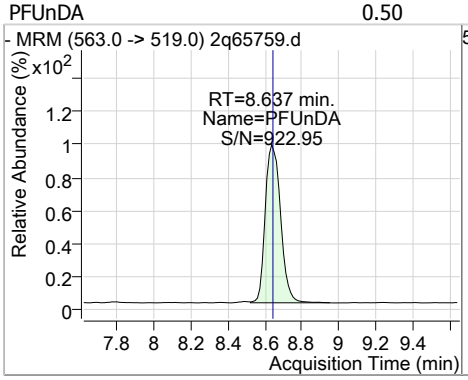
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.24	8.64	0.00	253525				

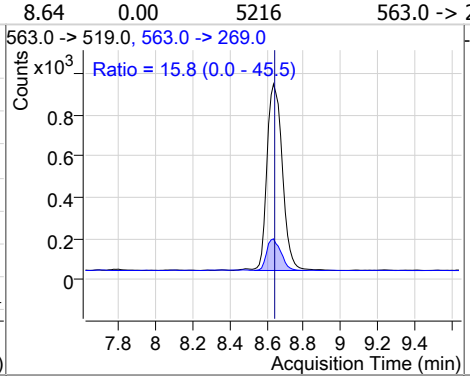


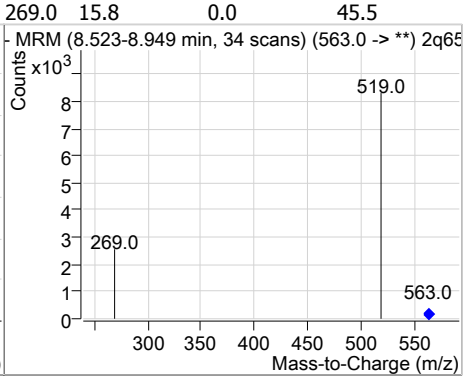




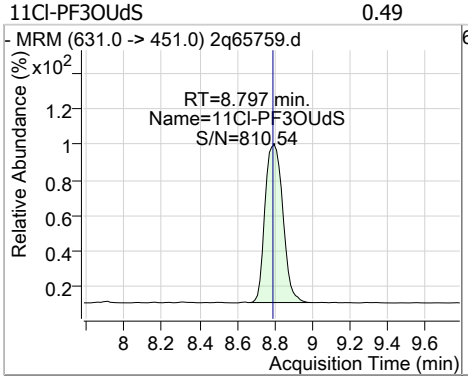
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.50	8.64	0.00	5216	563.0 -> 269.0	15.8	0.0	45.5

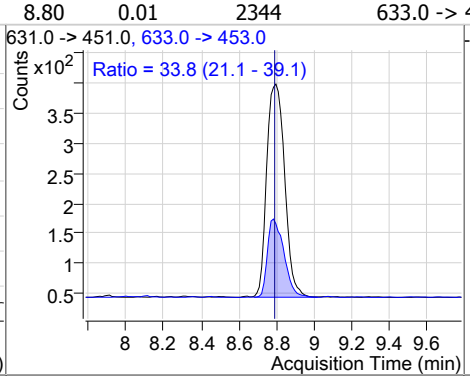


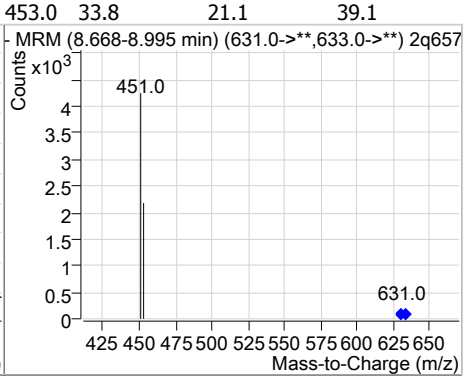




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.49	8.80	0.01	2344	633.0 -> 453.0	33.8	21.1	39.1

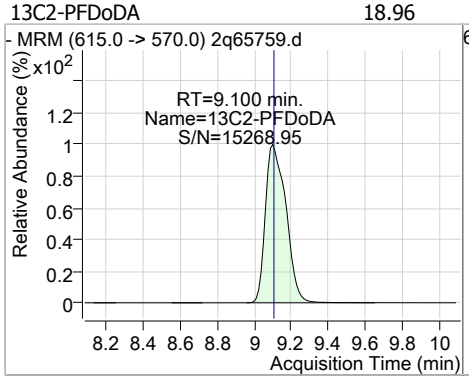


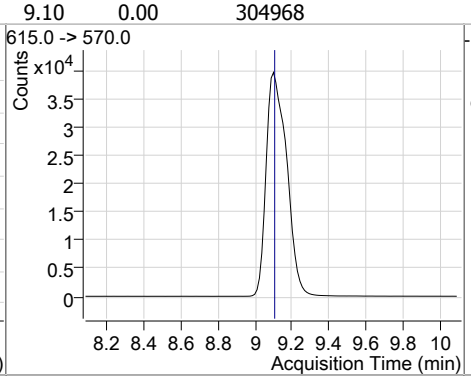


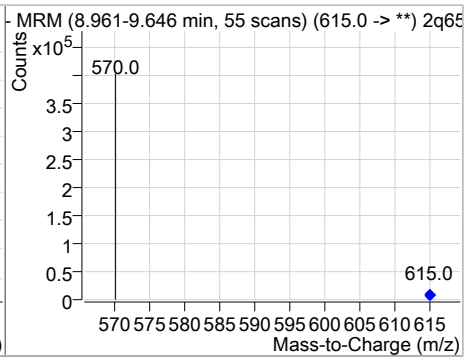


Perfluorinated Compounds by LC/MS/MS

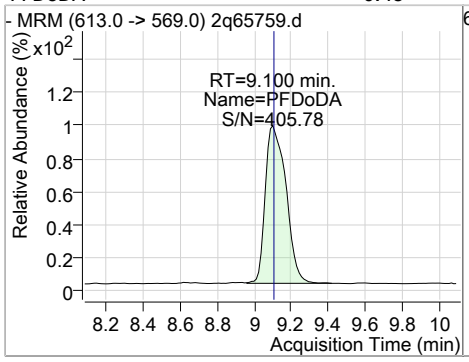
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	18.96	9.10	0.00	304968				

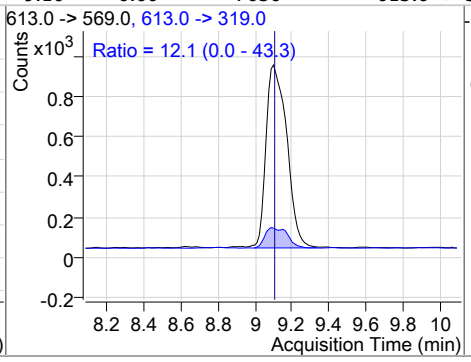


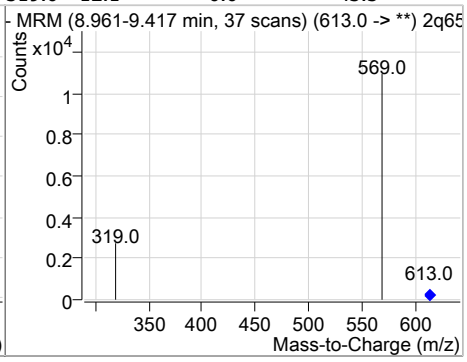




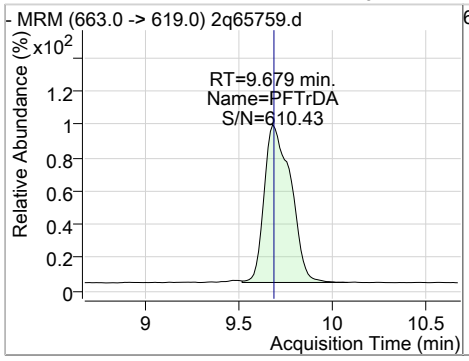
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.48	9.10	0.00	7050	613.0 -> 319.0	12.1	0.0	43.3

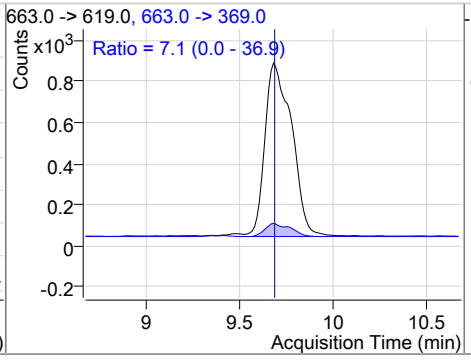


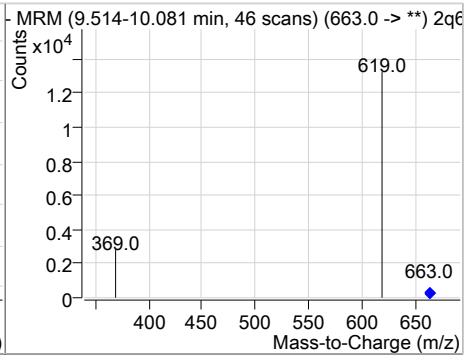




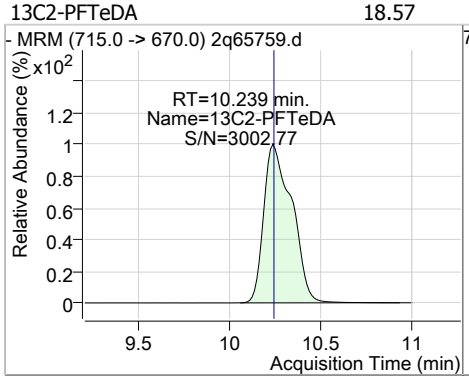
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.47	9.68	0.00	8398	663.0 -> 369.0	7.1	0.0	36.9

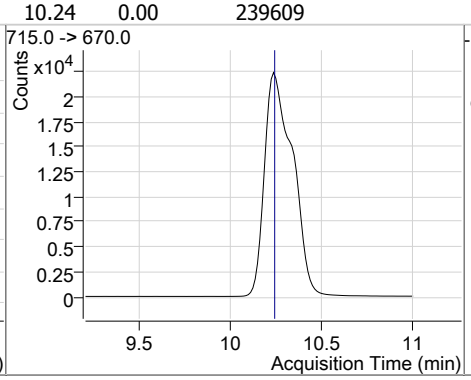


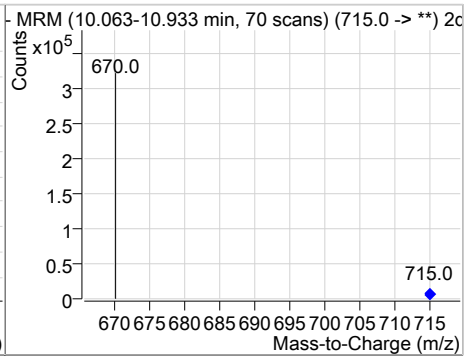




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	18.57	10.24	0.00	239609				

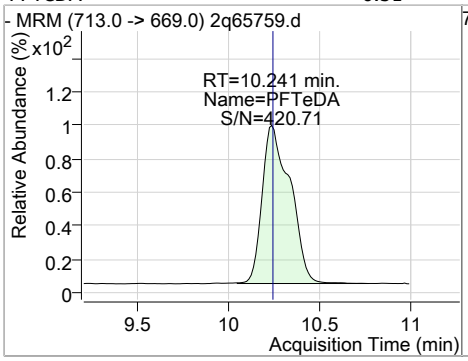


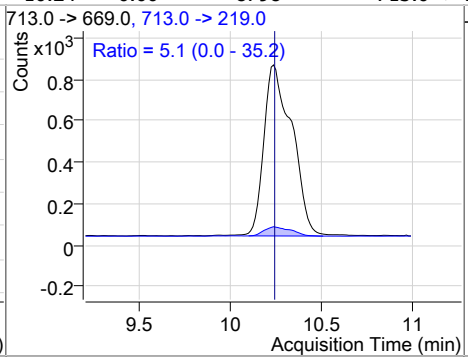


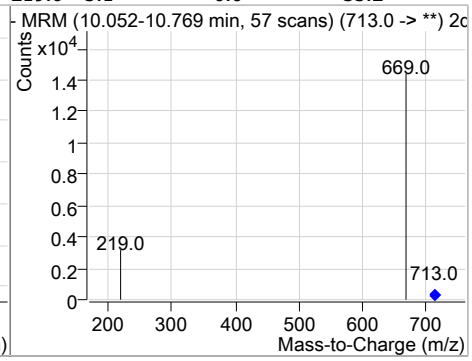


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.51	10.24	0.00	8798	713.0 -> 219.0	5.1	0.0	35.2







Manual Integration Approval Summary

Sample Number: S2Q956-IC956
Lab FileID: 2Q65759.D
Injection Time: 04/08/21 13:33
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/09/21 09:05 Natasha Gumtie
Supervisor approved: 04/12/21 13:27 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.46	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
MeFOSAA	2355-31-9		8.04	Split peak
EtFOSAA	2991-50-6		8.17	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/12/21 13:27

Perfluorinated Compounds by LC/MS/MS

Data File : 2q65760.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/8/2021 1:56:22 PM
Sample Name : ic956-1.0
Vial : P1-A3
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q956.batch.bin
Sample Information : op84308,S2Q956,250,,,1.0,1,water

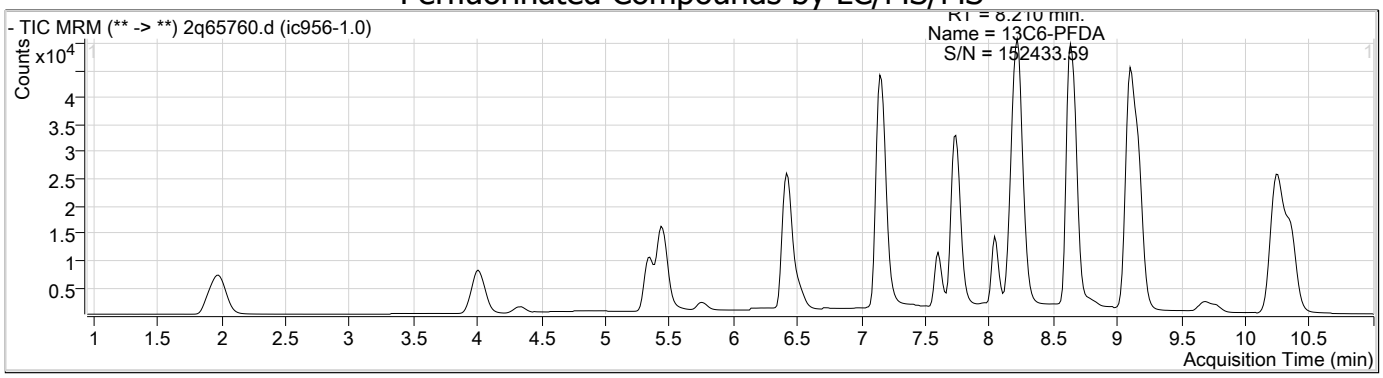
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.155	589.0 -> 419.0	41822	20.00	µg/L	0.000
M4-PFBA	1.977	217.0 -> 172.0	67161	20.00	µg/L	-0.013
M5-PFPeA	4.012	268.0 -> 223.0	55454	20.00	µg/L	0.000
M5-PFHxA	5.442	318.0 -> 273.0	84161	20.00	µg/L	0.000
M4-PFHpA	6.420	367.0 -> 322.0	122640	20.00	µg/L	0.000
M8-PFOA	7.165	421.0 -> 376.0	141057	20.00	µg/L	0.013
M9-PFNA	7.745	472.0 -> 427.0	142615	20.00	µg/L	0.013
M6-PFDA	8.210	519.0 -> 474.0	185095	20.00	µg/L	0.000
M7-PFUnDA	8.636	570.0 -> 525.0	262542	20.00	µg/L	0.000
M2-PFDoDA	9.100	615.0 -> 570.0	321136	20.00	µg/L	0.000
M2-PFTeDA	10.239	715.0 -> 670.0	258205	20.00	µg/L	0.000
M8-FOSA	7.604	506.0 -> 78.0	38979	20.00	µg/L	0.000
M3-PFBS	4.330	302.0 -> 99.0	6821	20.00	µg/L	0.000
M3-PFHxS	6.456	402.0 -> 99.0	7681	20.00	µg/L	0.000
M8-PFOS	7.718	507.0 -> 99.0	10450	20.00	µg/L	0.000
M2-4:2FTS	5.348	329.0 -> 309.0	55102	20.00	µg/L	0.013
M2-6:2FTS	7.150	429.0 -> 409.0	79075	20.00	µg/L	0.013
M2-8:2FTS	8.247	529.0 -> 509.0	66215	20.00	µg/L	0.000
M3-MeFOSAA	8.041	573.0 -> 419.0	47091	20.00	µg/L	0.000
M3-HFPO-DA	5.759	287.0 -> 169.0	6483	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.348	329.0 -> 309.0	55102	18.93	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.7%		
13C2-6:2FTS	7.150	429.0 -> 409.0	79075	19.43	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.2%		
13C2-8:2FTS	8.247	529.0 -> 509.0	66215	18.56	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%		
13C2-PFDoDA	9.100	615.0 -> 570.0	321136	19.96	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.8%		
13C2-PFTeDA	10.239	715.0 -> 670.0	258205	20.01	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.1%		
13C3-PFBS	4.330	302.0 -> 99.0	6821	20.19	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.9%		
13C3-PFHxS	6.456	402.0 -> 99.0	7681	20.46	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.3%		
13C4-PFBA	1.977	217.0 -> 172.0	67161	20.00	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.0%		
13C4-PFHpA	6.420	367.0 -> 322.0	122640	20.15	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.8%		
d5-EtFOSAA	8.155	589.0 -> 419.0	41822	20.57	ng/ml	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.9%		
13C5-PFHxA	5.442	318.0 -> 273.0	84161	20.20	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.0%		
13C5-PFPeA	4.012	268.0 -> 223.0	55454	20.10	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.5%		

Perfluorinated Compounds by LC/MS/MS

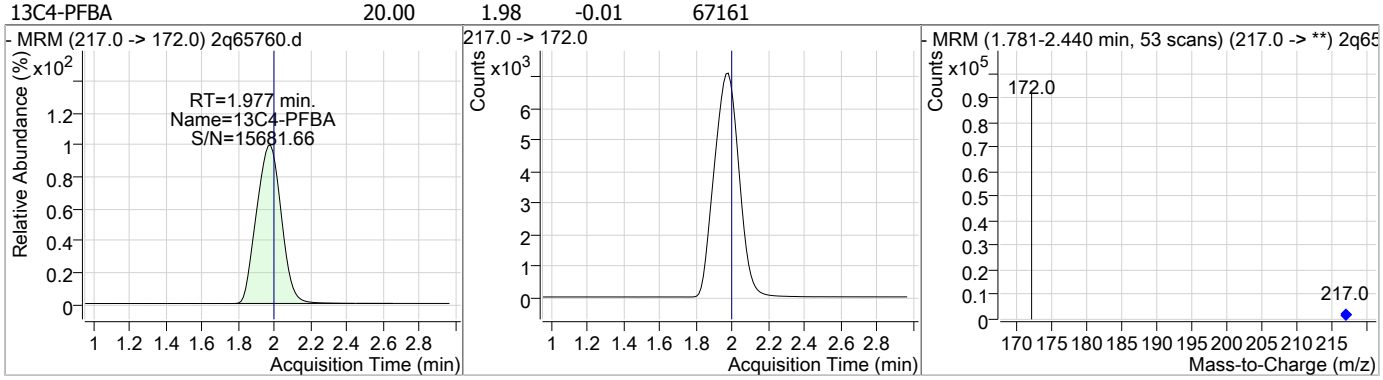
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	185095	19.98	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.9%			
13C7-PFUnDA	8.636	570.0 -> 525.0	262542	19.92	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.6%			
13C8-FOSA	7.604	506.0 -> 78.0	38979	20.29	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.4%			
13C8-PFOA	7.165	421.0 -> 376.0	141057	20.22	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.1%			
13C8-PFOS	7.718	507.0 -> 99.0	10450	19.67	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%			
13C9-PFNA	7.745	472.0 -> 427.0	142615	20.05	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.3%			
d3-MeFOSAA	8.041	573.0 -> 419.0	47091	19.85	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%			
13C3-HFPO-DA	5.759	287.0 -> 169.0	6483	19.99	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.9%			
Target Compounds							**QValue**
4:2FTS	5.337	327.0 -> 307.0	3052	1.05	µg/L		92
6:2FTS	7.138	427.0 -> 407.0	4339	1.04	µg/L		98
8:2FTS	8.247	527.0 -> 507.0	3735	1.08	µg/L		94
EtFOSAA	8.168	584.0 -> 419.0	1639	0.86	µg/L	m	92
FOSA	7.605	498.0 -> 78.0	2071	1.07	µg/L		97
MeFOSAA	8.054	570.0 -> 419.0	2209	1.08	µg/L	m	99
PFBA	1.971	213.0 -> 169.0	1161	1.02	µg/L		100
PFBS	4.320	299.0 -> 80.0	1102	1.04	µg/L		99
PFDA	8.211	513.0 -> 469.0	9261	1.04	µg/L		99
PFDoDA	9.100	613.0 -> 569.0	15229	0.99	µg/L		100
PFDS	8.583	599.0 -> 80.0	410	0.89	µg/L		87
PFHpA	6.421	363.0 -> 319.0	10349	1.00	µg/L		98
PFHpS	7.163	449.0 -> 80.0	1013	1.06	µg/L		97
PFHxA	5.455	313.0 -> 269.0	2926	0.99	µg/L		100
PFHxS	6.457	399.0 -> 80.0	1065	1.01	µg/L	m	95
PFNA	7.745	463.0 -> 419.0	8317	1.03	µg/L		100
PFNS	8.183	549.0 -> 80.0	855	1.13	µg/L		93
PFOA	7.152	413.0 -> 369.0	8397	1.00	µg/L		97
PFOS	7.718	499.0 -> 80.0	1138	1.14	µg/L	m	84
PFPeA	4.014	263.0 -> 219.0	4587	1.01	µg/L		100
PFPeS	5.577	349.0 -> 80.0	850	1.05	µg/L		98
PFTeDA	10.241	713.0 -> 669.0	18417	0.99	µg/L		100
PFTrDA	9.691	663.0 -> 619.0	18096	0.97	µg/L		100
PFUnDA	8.637	563.0 -> 519.0	10942	1.02	µg/L		98
11Cl-PF3OUdS	8.784	631.0 -> 451.0	5024	0.99	µg/L		95
9Cl-PF3ONS	7.968	531.0 -> 351.0	1022	0.96	µg/L		94
ADONA	6.521	377.0 -> 251.0	12283	0.97	µg/L		98
HFPO-DA	5.754	329.0 -> 169.0	1225	1.01	µg/L		95

 # = Qualifier out of range, m = manually integrated, + = Area summed

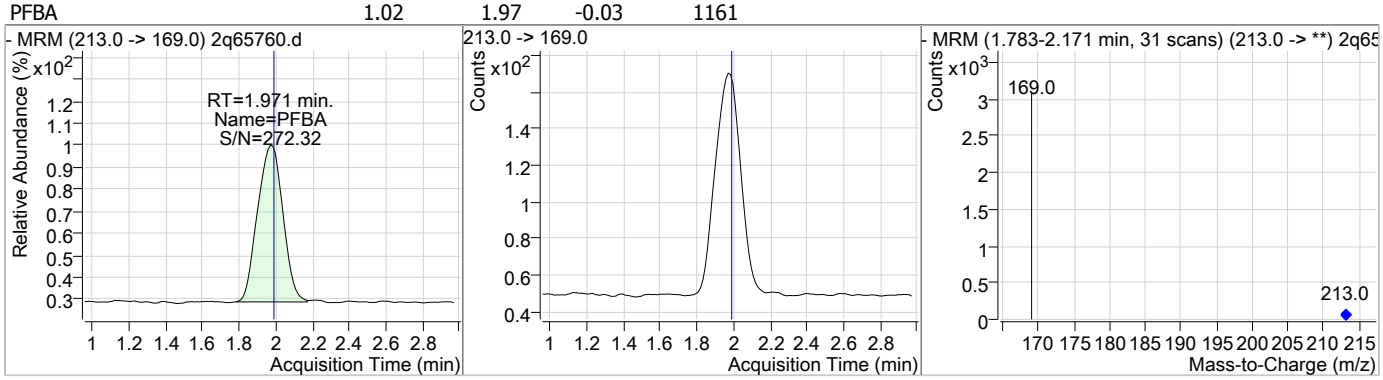
Perfluorinated Compounds by LC/MS/MS



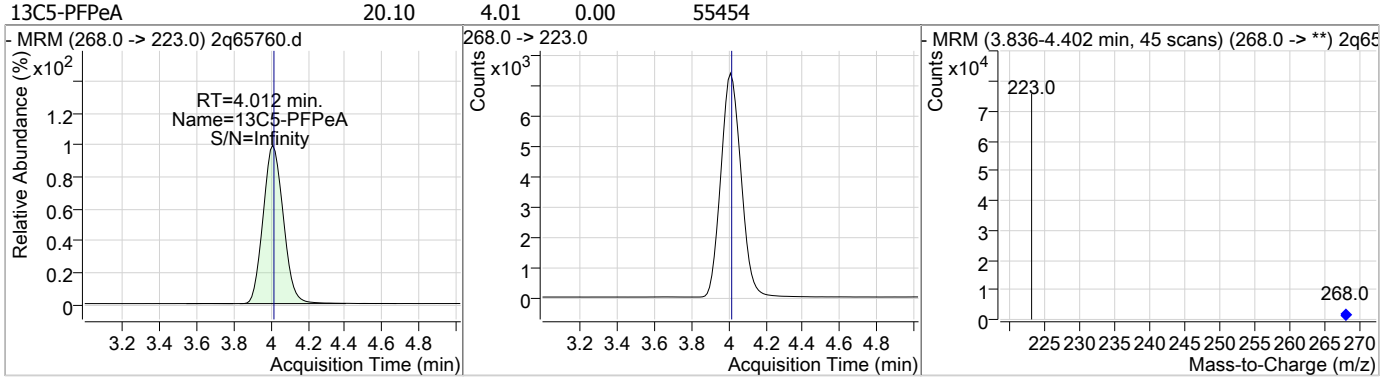
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.00	1.98	-0.01	67161				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	1.02	1.97	-0.03	1161				

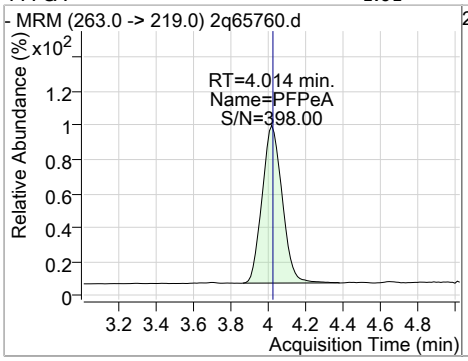


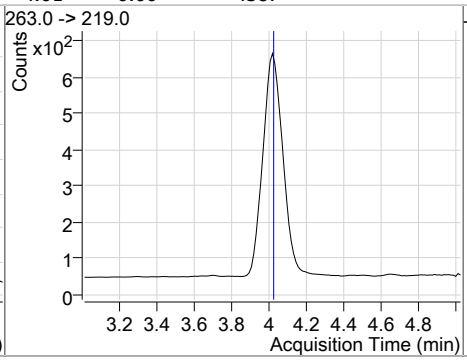
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.10	4.01	0.00	55454				

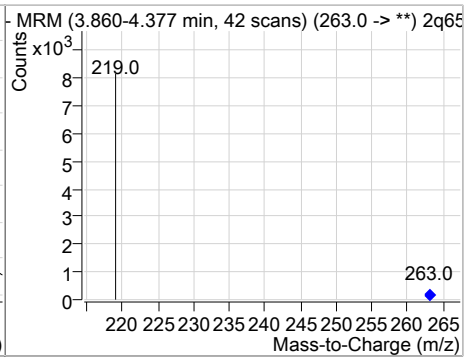


Perfluorinated Compounds by LC/MS/MS

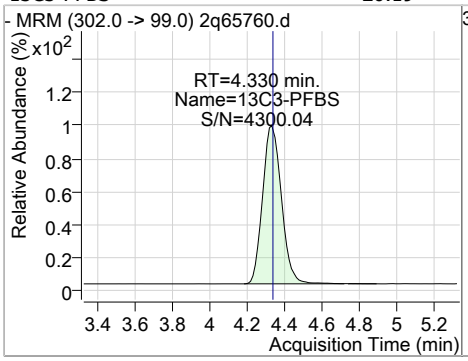
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	1.01	4.01	0.00	4587				

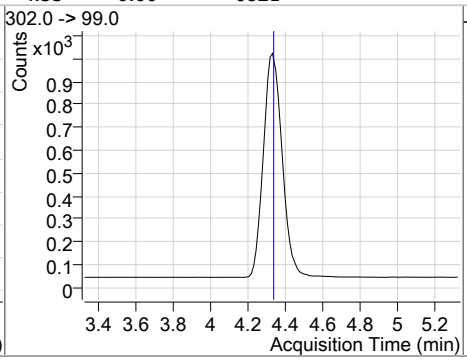


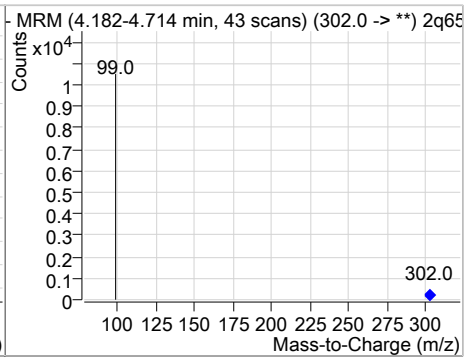




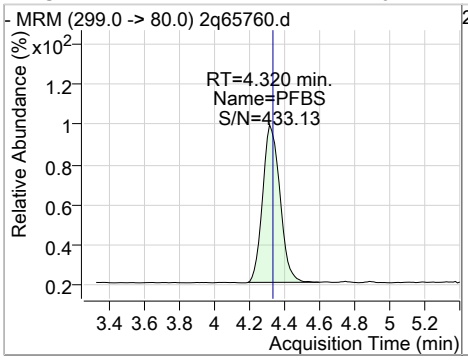
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.19	4.33	0.00	6821				

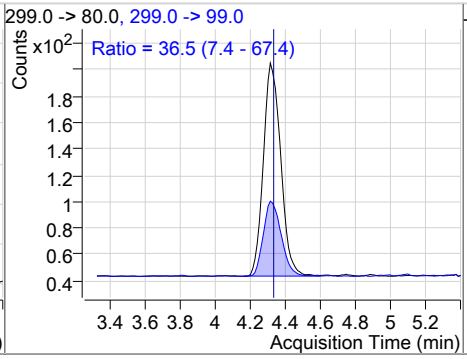


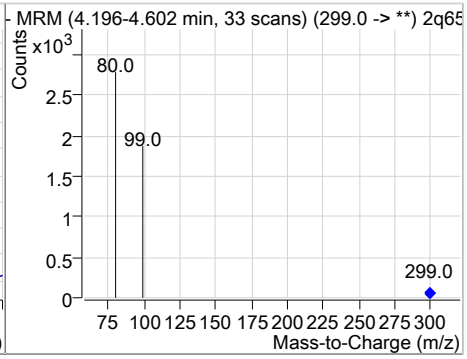




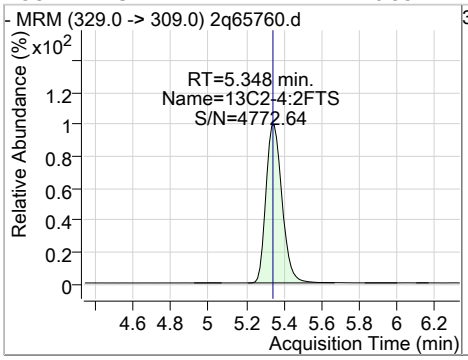
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	1.04	4.32	-0.01	1102	299.0 -> 99.0	36.5	7.4	67.4

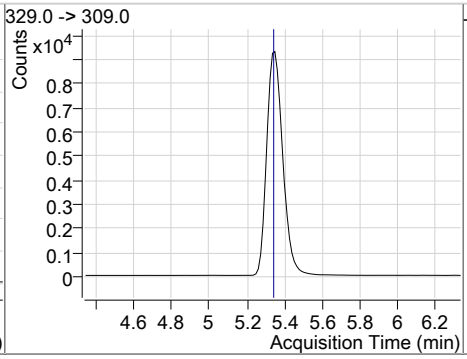


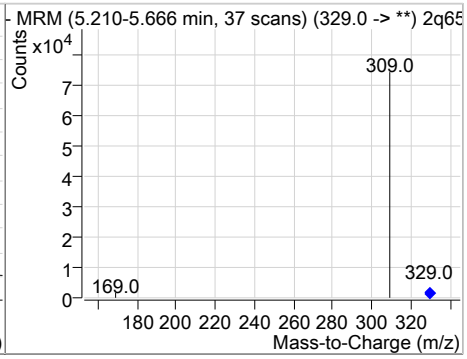




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.93	5.35	0.01	55102				

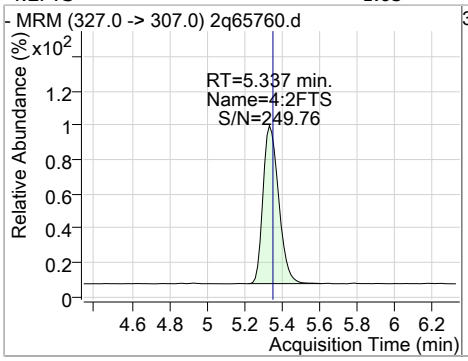


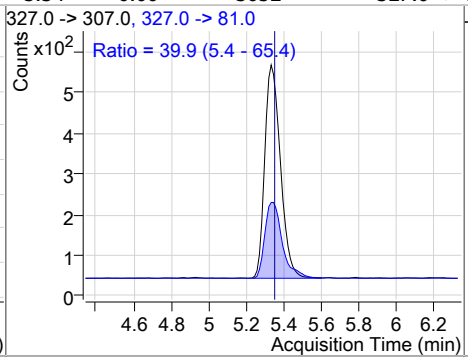


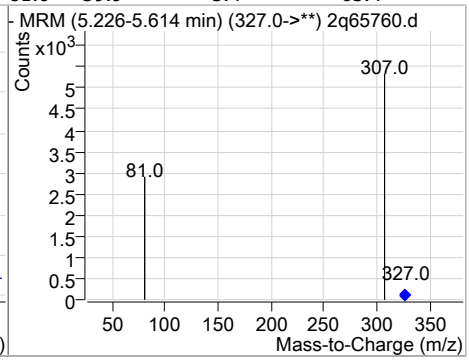


Perfluorinated Compounds by LC/MS/MS

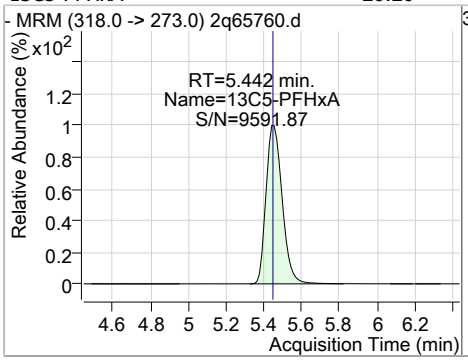
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	1.05	5.34	0.00	3052	327.0 -> 81.0	39.9	5.4	65.4

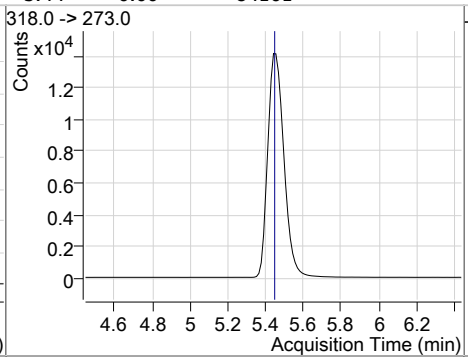


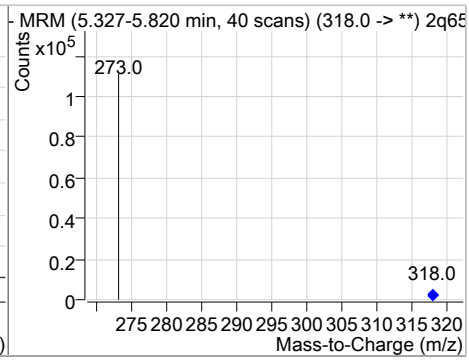




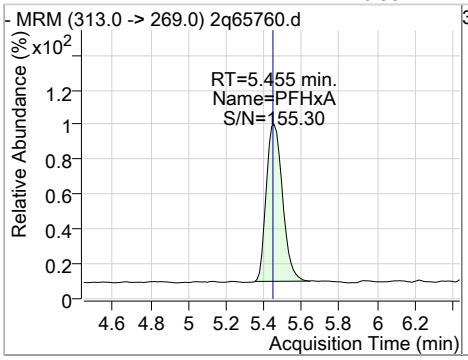
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.20	5.44	0.00	84161				

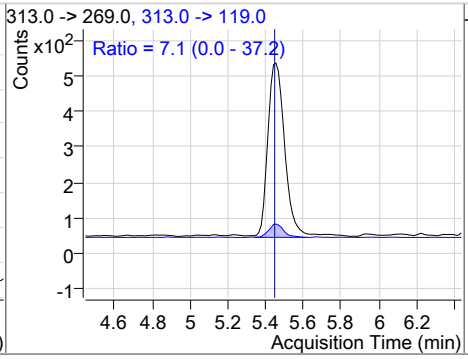


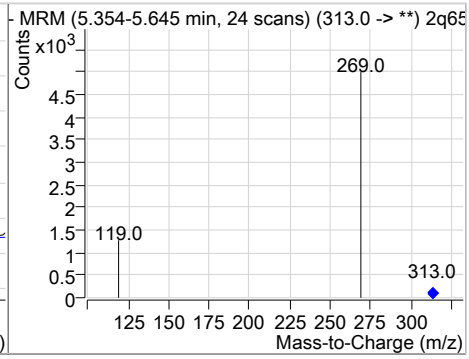




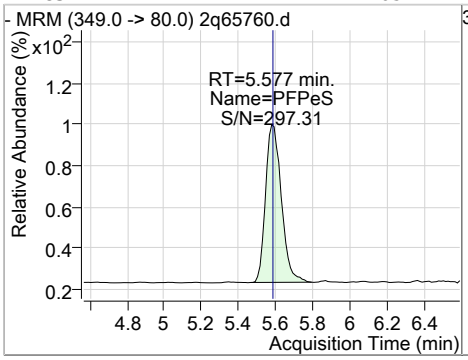
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.99	5.46	0.01	2926	313.0 -> 119.0	7.1	0.0	37.2

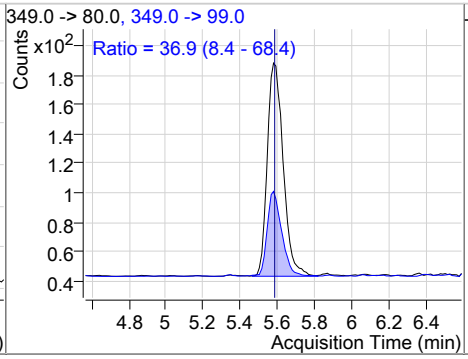


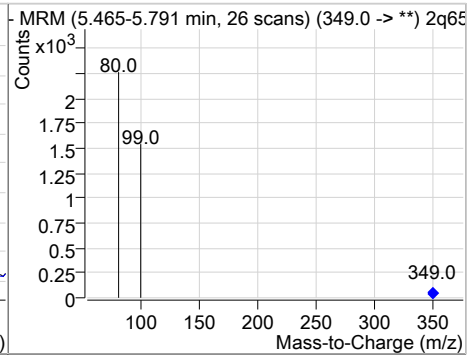




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	1.05	5.58	0.00	850	349.0 -> 99.0	36.9	8.4	68.4

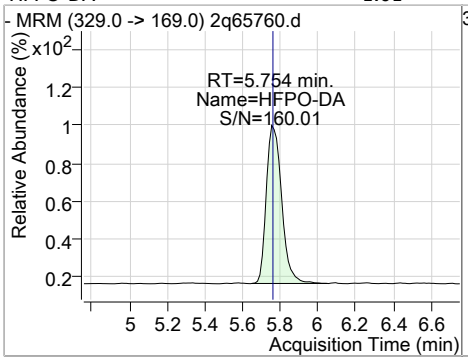


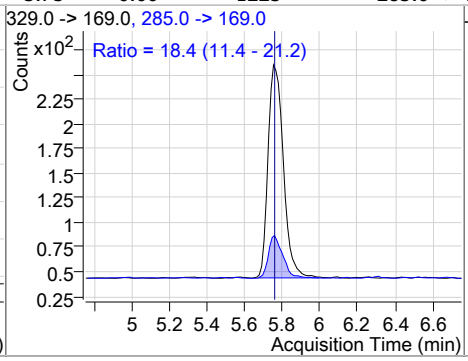


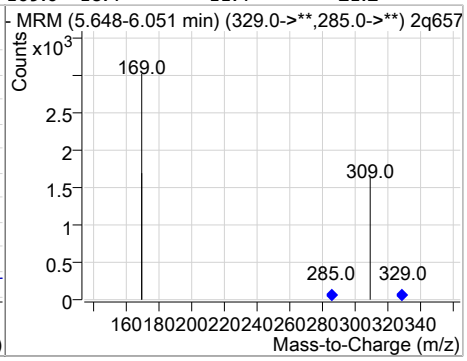


Perfluorinated Compounds by LC/MS/MS

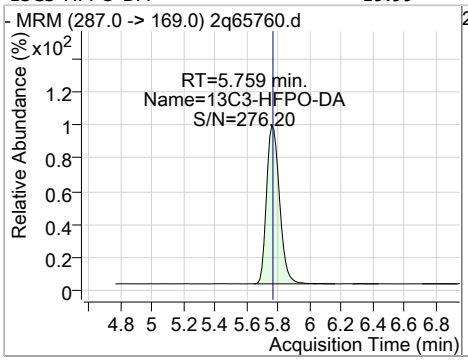
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	1.01	5.75	0.00	1225	285.0 -> 169.0	18.4	11.4	21.2

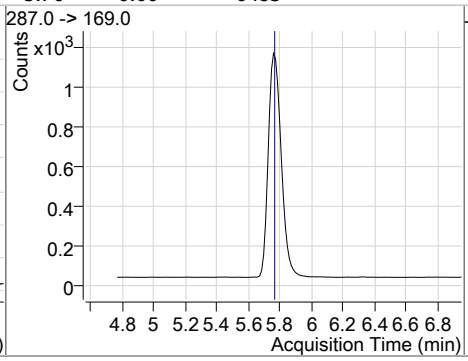


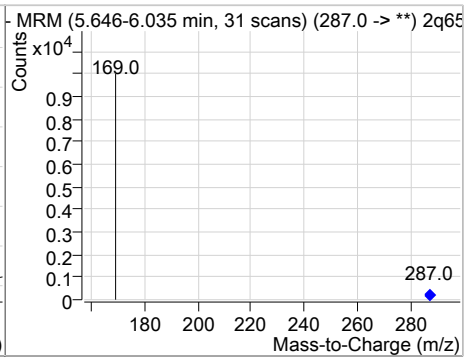




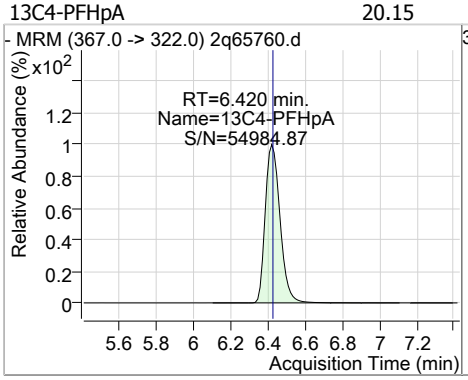
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.99	5.76	0.00	6483				

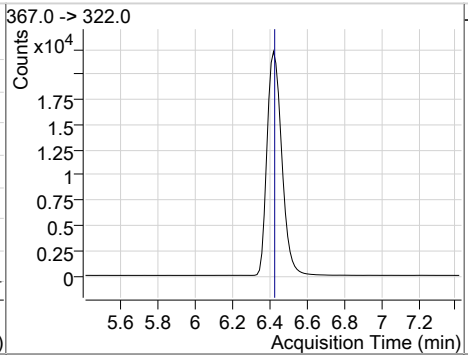


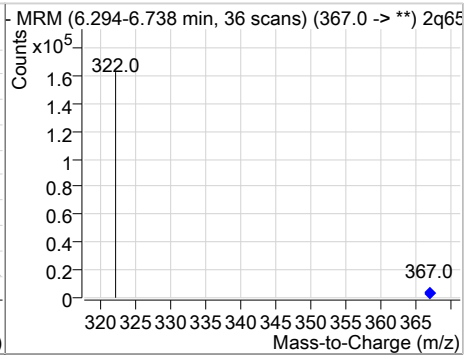




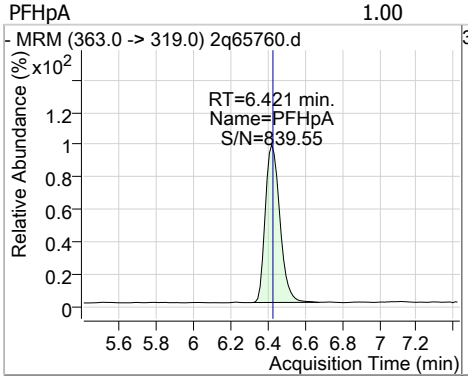
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.15	6.42	0.00	122640				

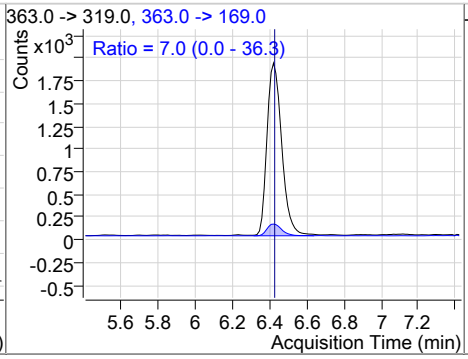


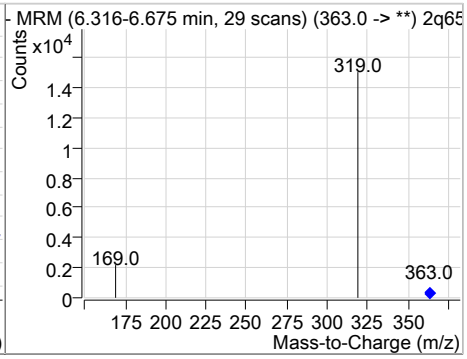




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	1.00	6.42	0.00	10349	363.0 -> 169.0	7.0	0.0	36.3

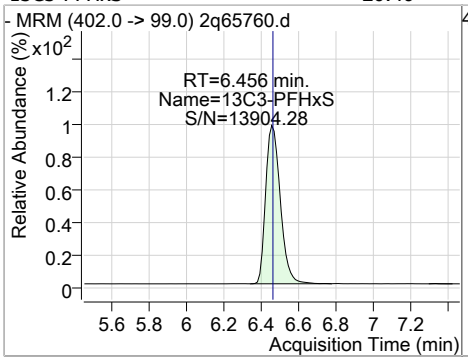


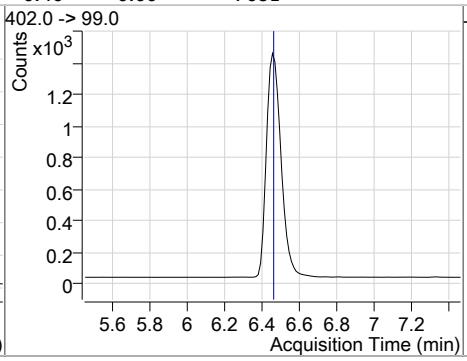


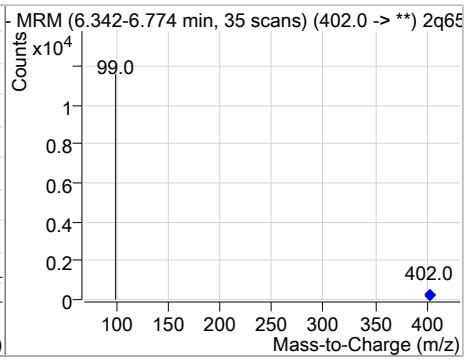


Perfluorinated Compounds by LC/MS/MS

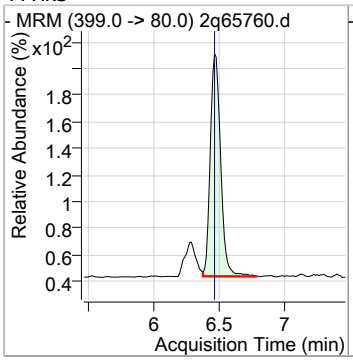
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.46	6.46	0.00	7681				

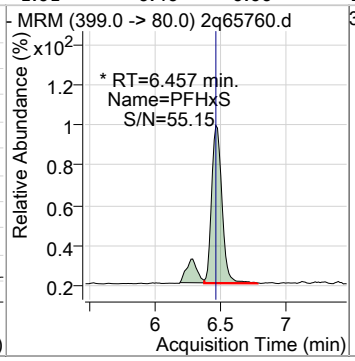


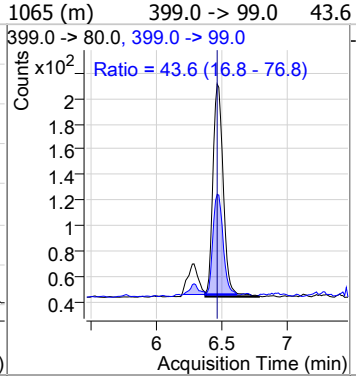


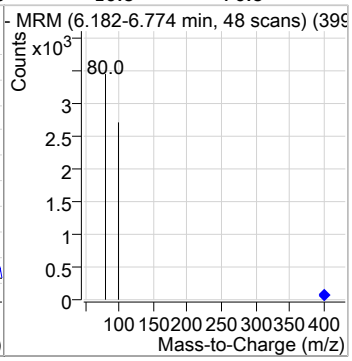


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	1.01	6.46	0.00	1065 (m)	399.0 -> 99.0	43.6	16.8	76.8

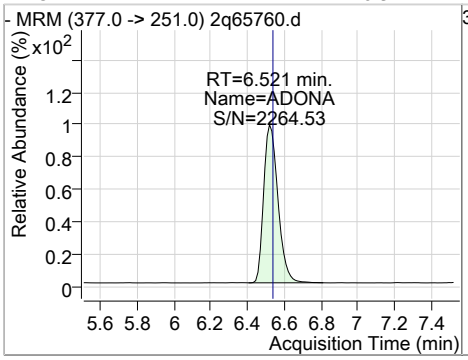


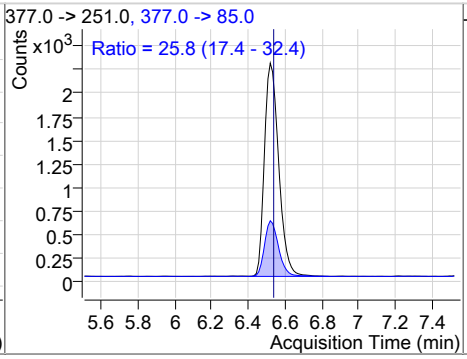


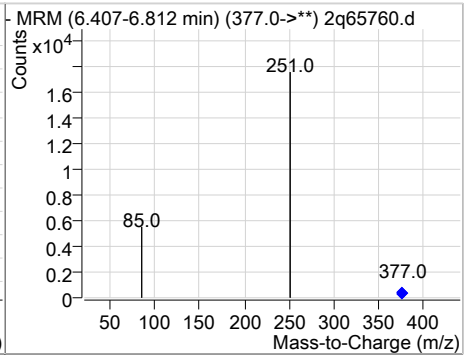




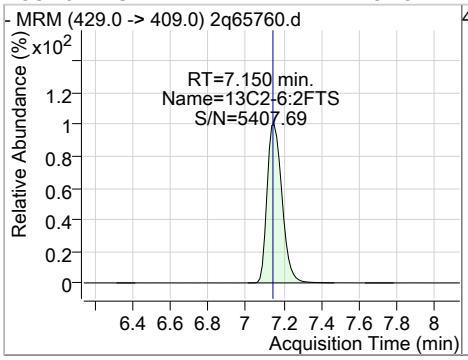
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.97	6.52	0.00	12283	377.0 -> 85.0	25.8	17.4	32.4

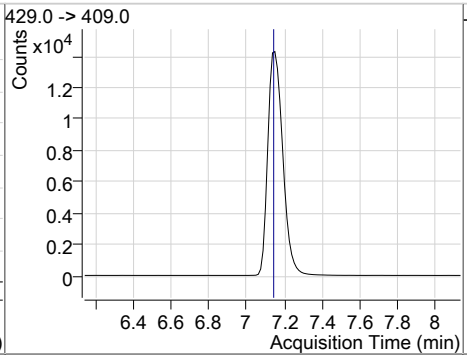


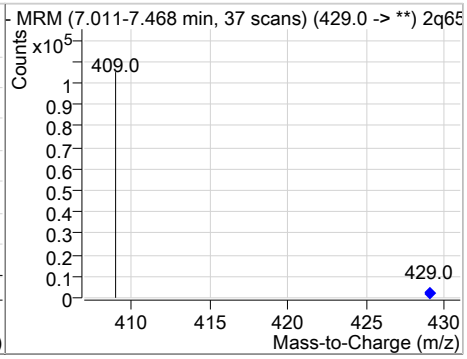




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.43	7.15	0.01	79075				

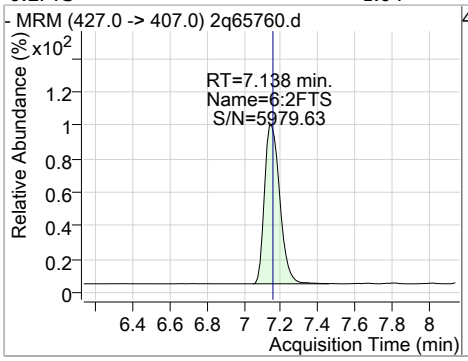


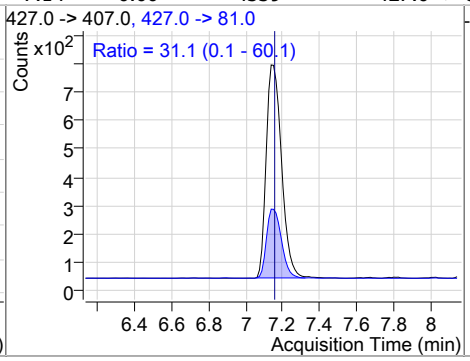


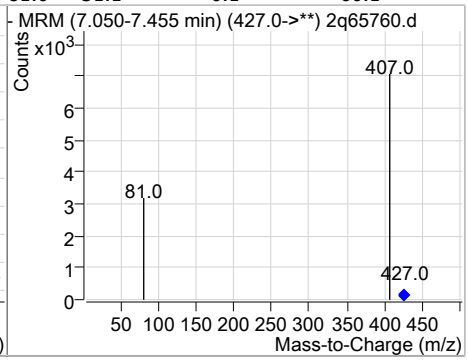


Perfluorinated Compounds by LC/MS/MS

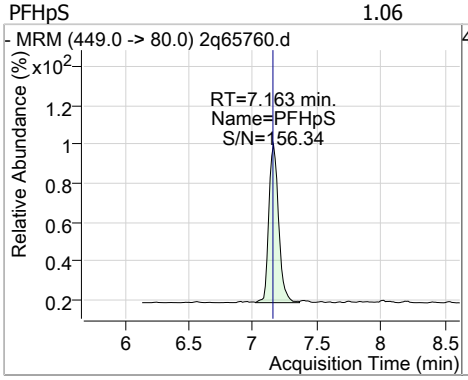
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	1.04	7.14	0.00	4339	427.0 -> 81.0	31.1	0.1	60.1

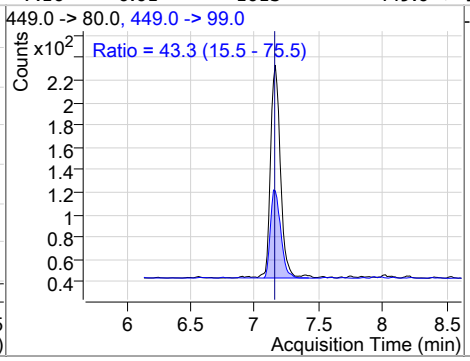


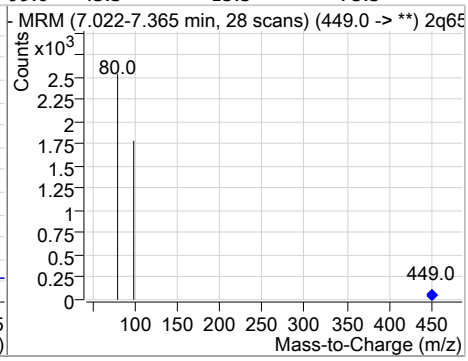




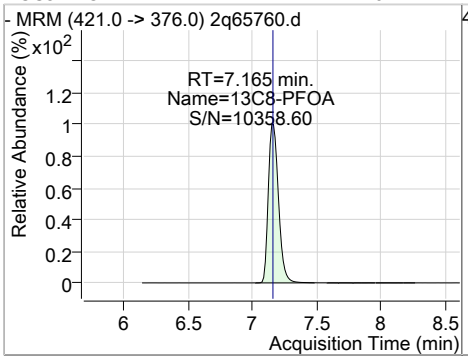
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	1.06	7.16	0.01	1013	449.0 -> 99.0	43.3	15.5	75.5

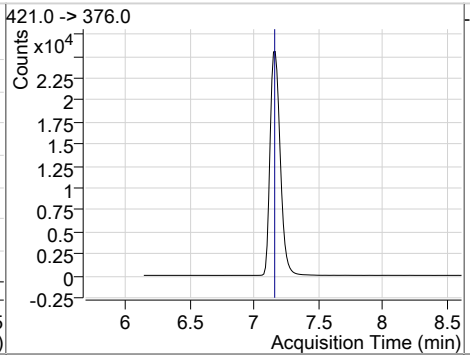


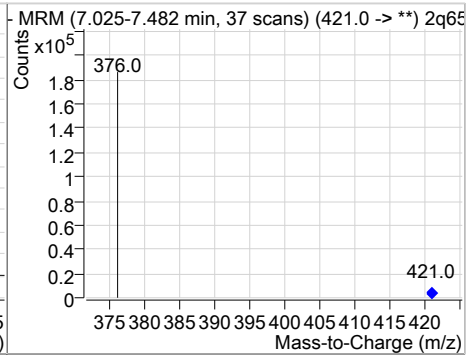




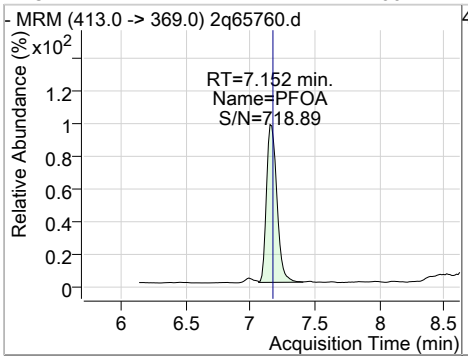
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.22	7.16	0.01	141057				

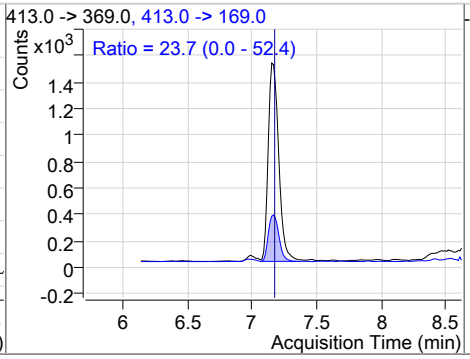


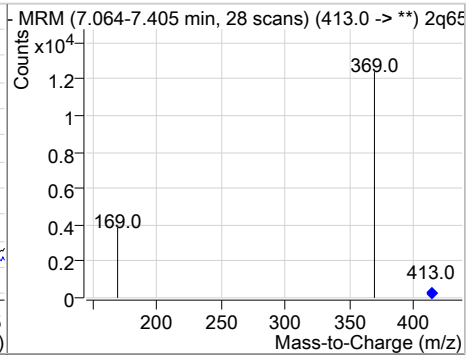




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	1.00	7.15	0.00	8397	413.0 -> 169.0	23.7	0.0	52.4

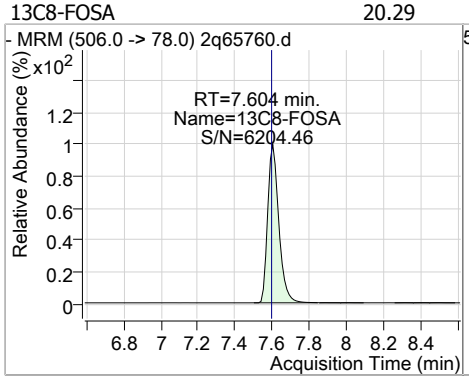


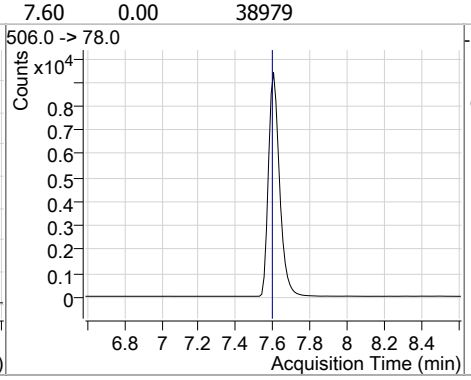


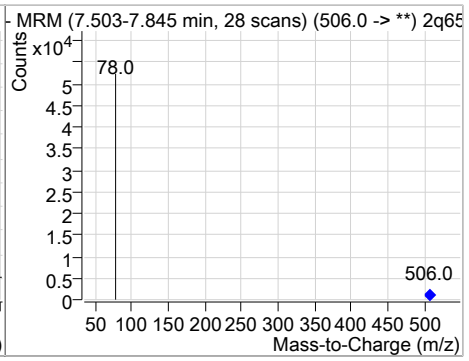


Perfluorinated Compounds by LC/MS/MS

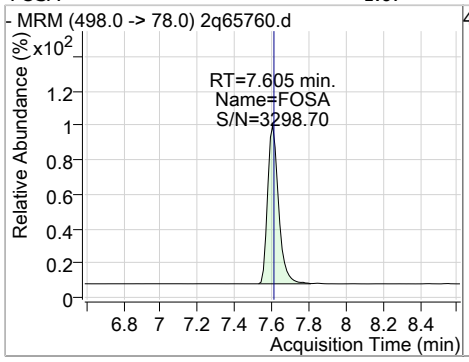
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.29	7.60	0.00	38979				

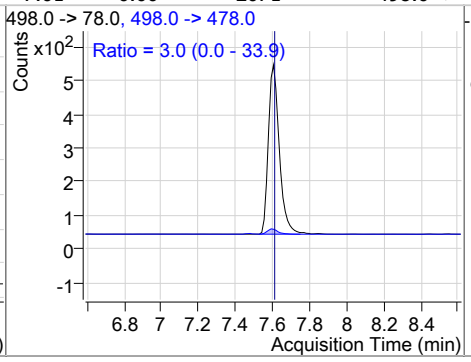


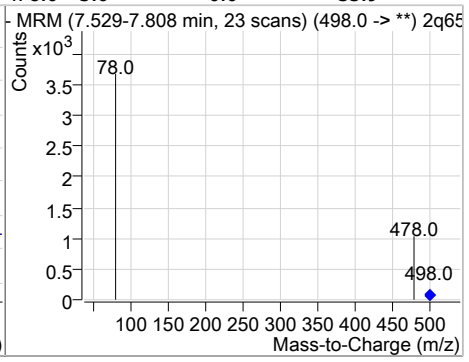




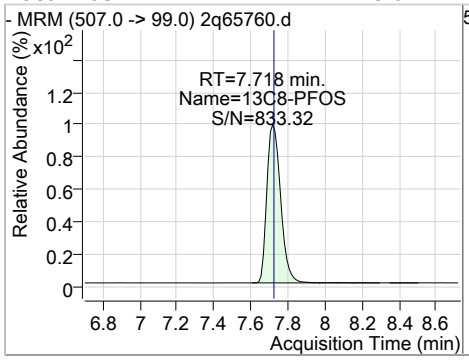
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	1.07	7.61	0.00	2071	498.0 -> 478.0	3.0	0.0	33.9

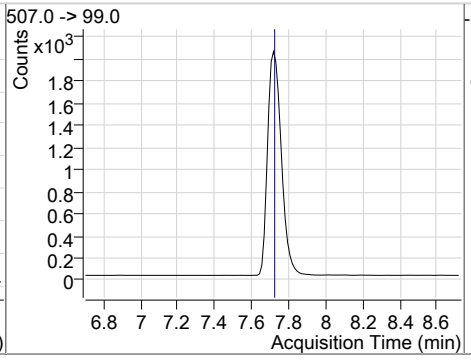


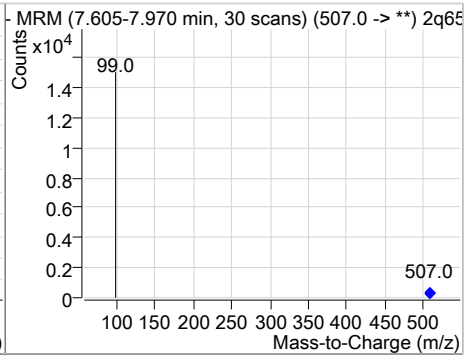




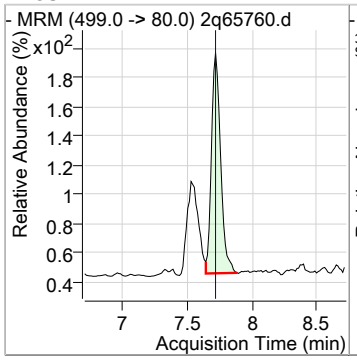
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.67	7.72	0.00	10450				

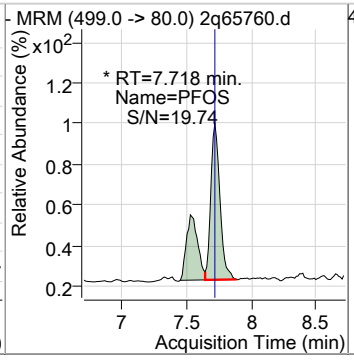


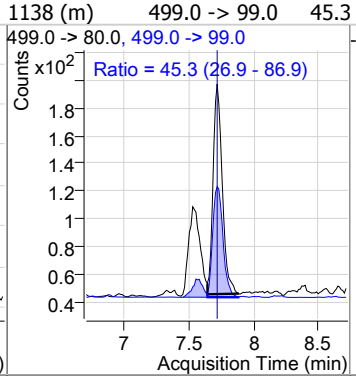


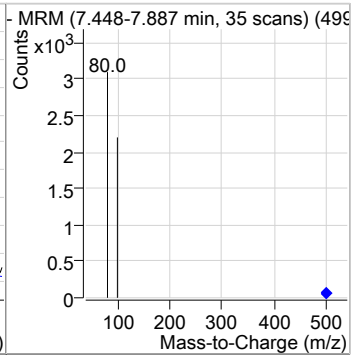


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	1.14	7.72	0.00	1138 (m)	499.0 -> 99.0	45.3	26.9	86.9



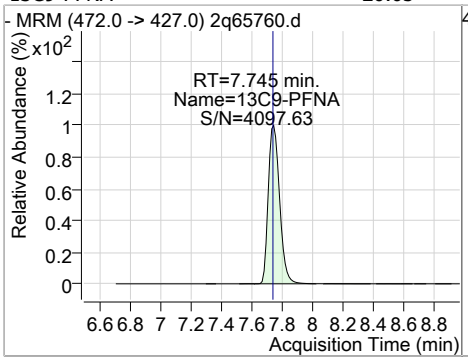


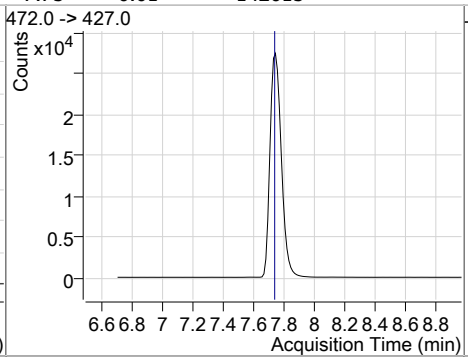


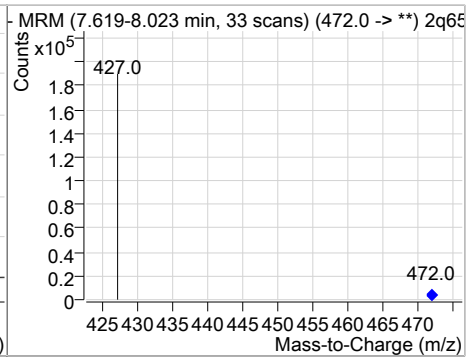


Perfluorinated Compounds by LC/MS/MS

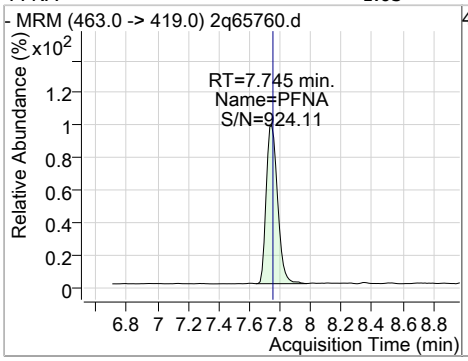
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.05	7.75	0.01	142615				

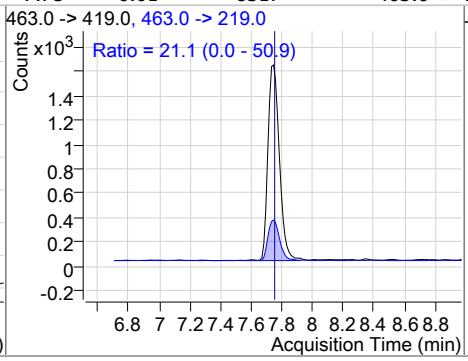


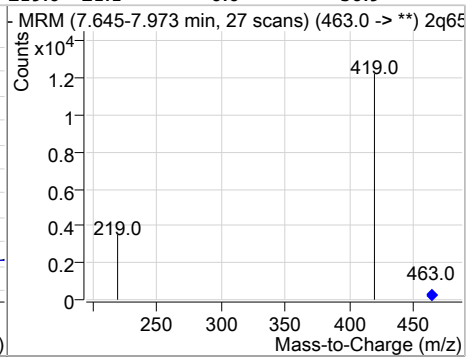




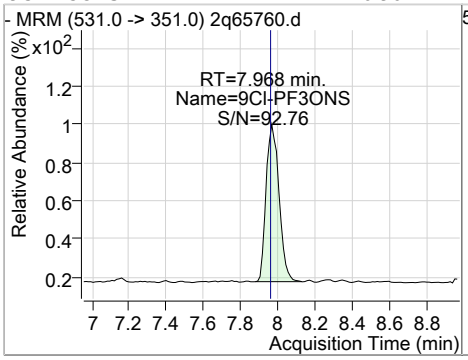
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	1.03	7.75	0.01	8317	463.0 -> 219.0	21.1	0.0	50.9

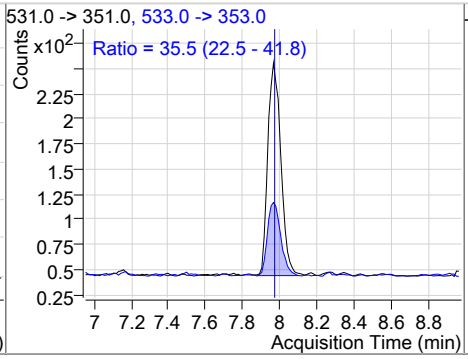


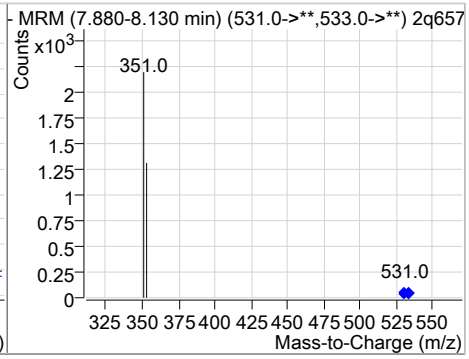




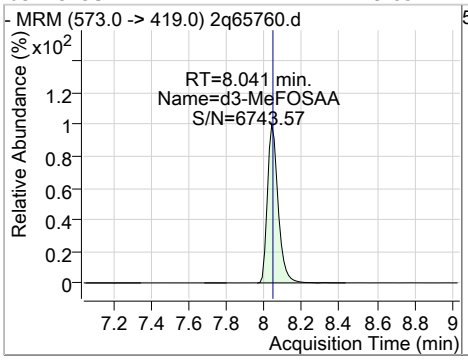
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.96	7.97	0.00	1022	533.0 -> 353.0	35.5	22.5	41.8

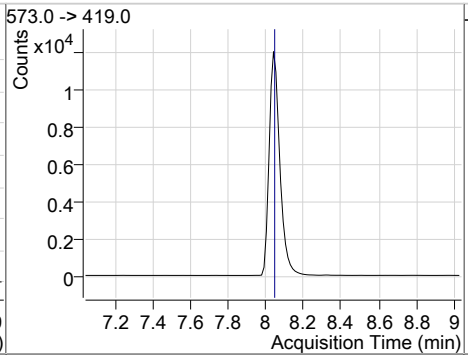


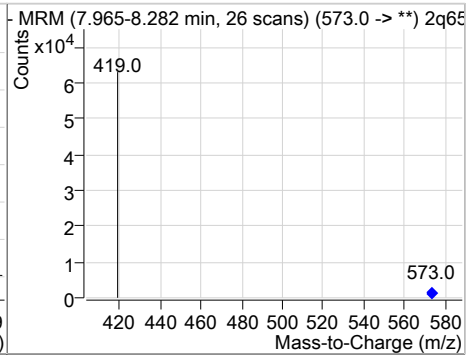




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.85	8.04	0.00	47091				

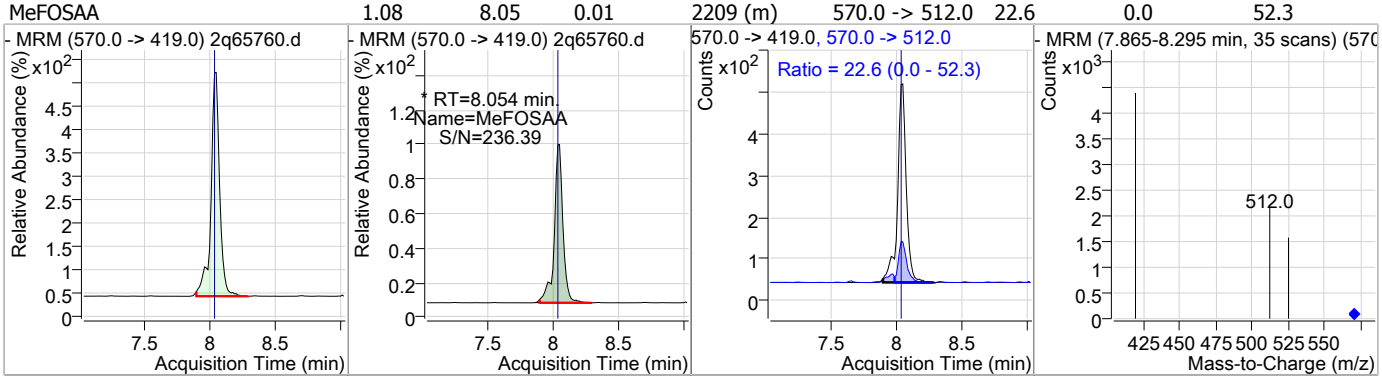




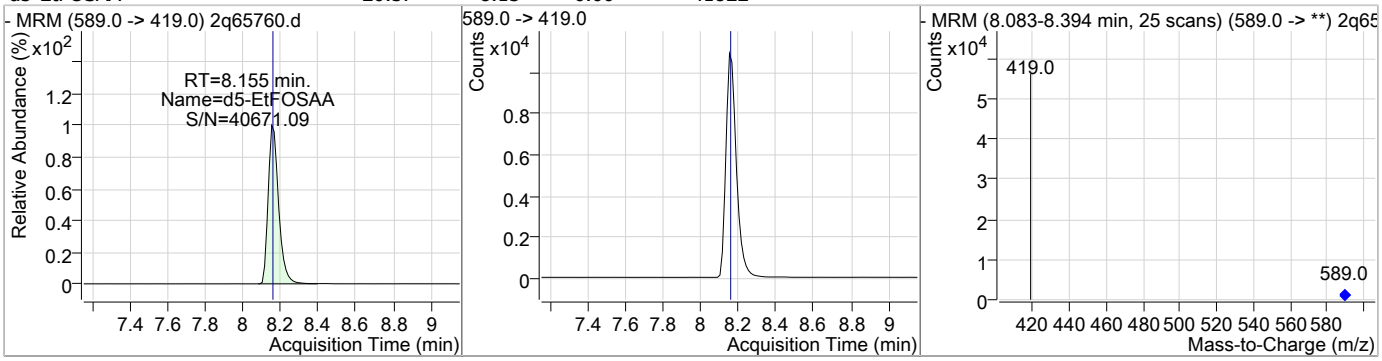


Perfluorinated Compounds by LC/MS/MS

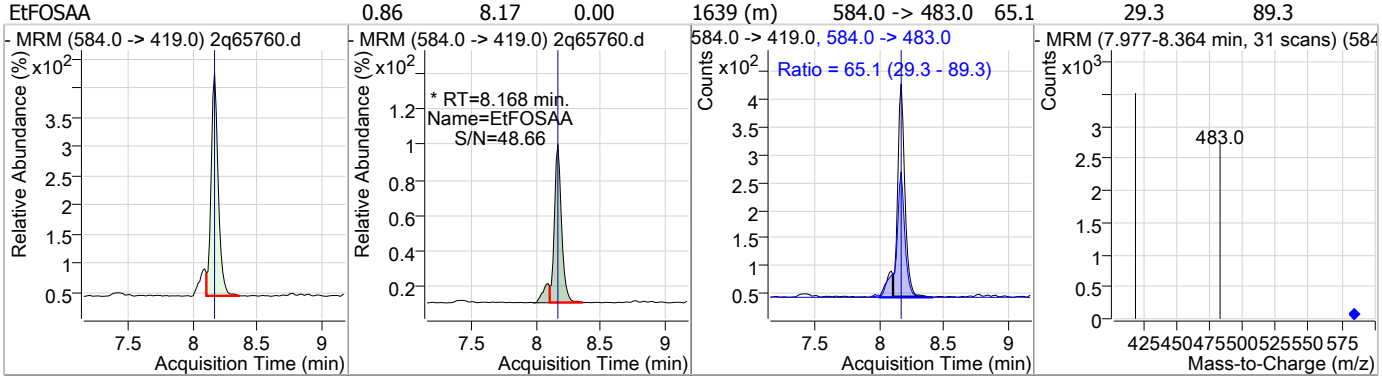
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	1.08	8.05	0.01	2209 (m)	570.0 -> 512.0	22.6	0.0	52.3



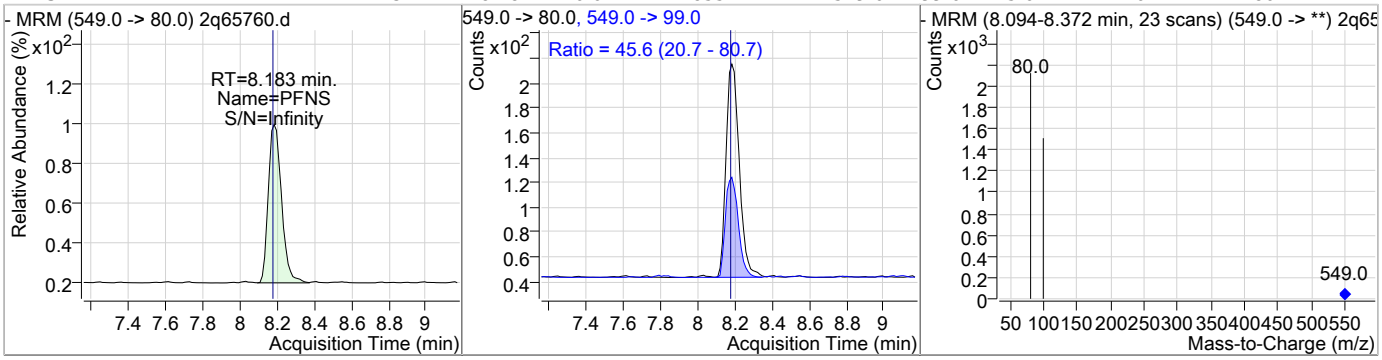
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.57	8.15	0.00	41822				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	0.86	8.17	0.00	1639 (m)	584.0 -> 483.0	65.1	29.3	89.3

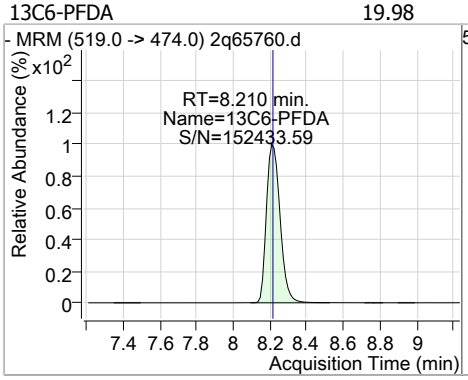


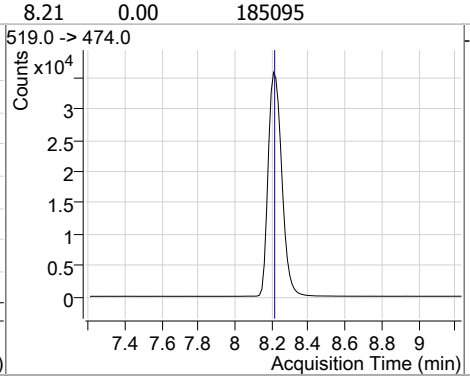
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	1.13	8.18	0.01	855	549.0 -> 99.0	45.6	20.7	80.7

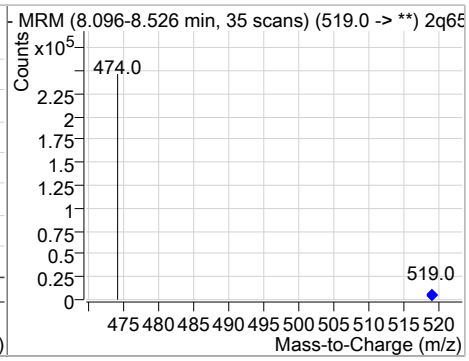


Perfluorinated Compounds by LC/MS/MS

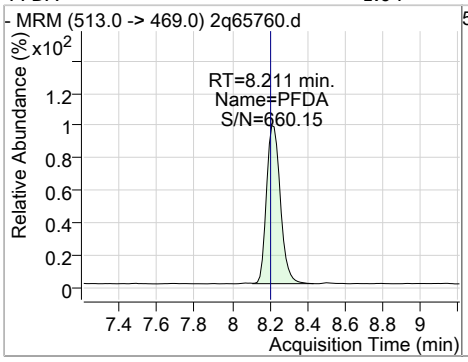
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.98	8.21	0.00	185095				

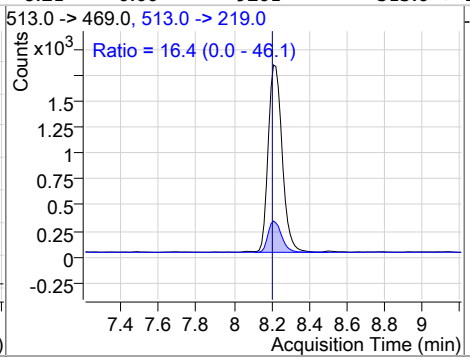


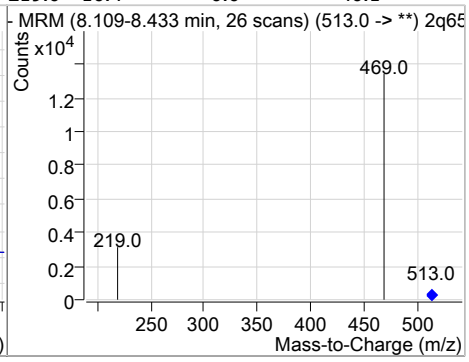




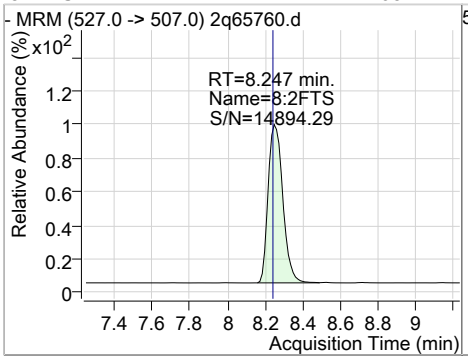
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	1.04	8.21	0.00	9261	513.0 -> 219.0	16.4	0.0	46.1

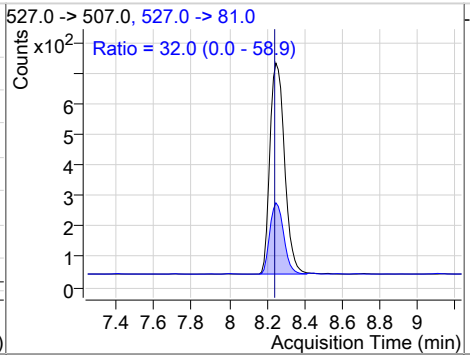


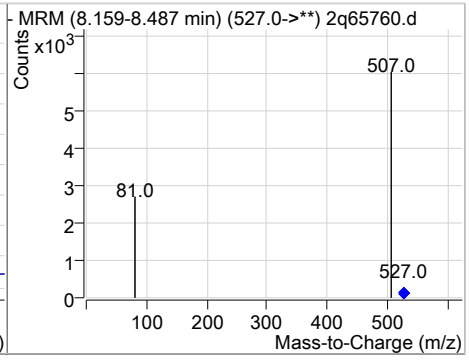




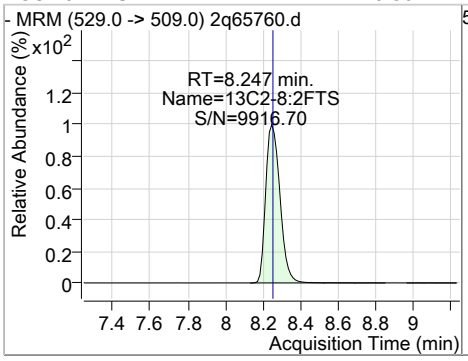
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	1.08	8.25	0.01	3735	527.0 -> 81.0	32.0	0.0	58.9

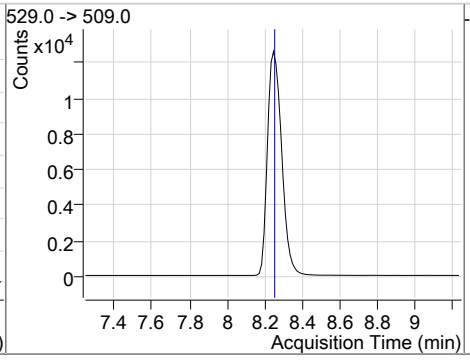


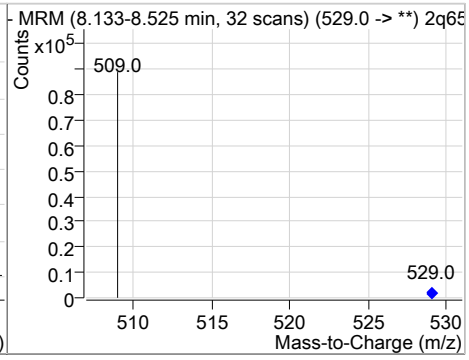




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.56	8.25	0.00	66215				

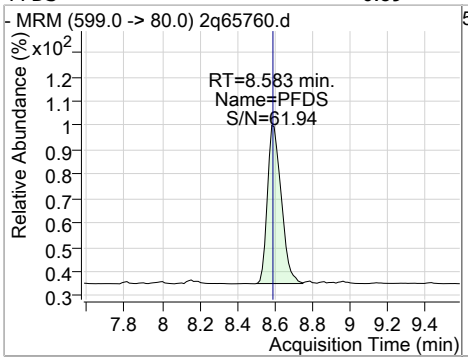


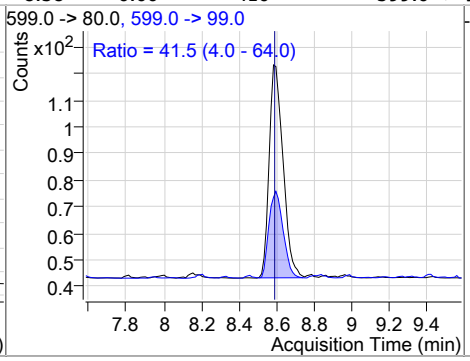


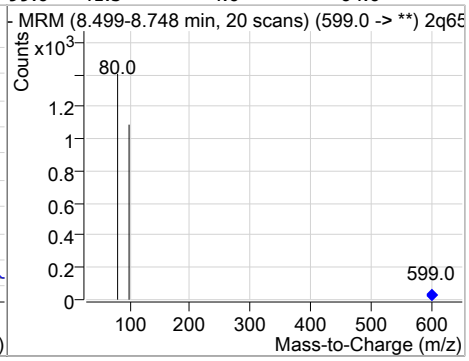


Perfluorinated Compounds by LC/MS/MS

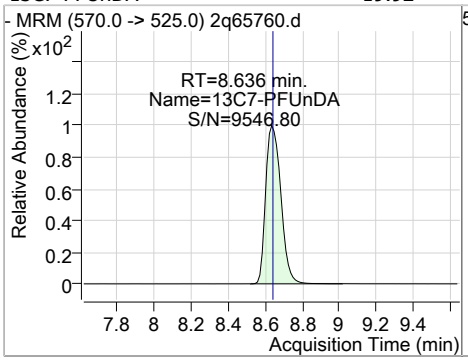
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	0.89	8.58	0.00	410	599.0 -> 99.0	41.5	4.0	64.0

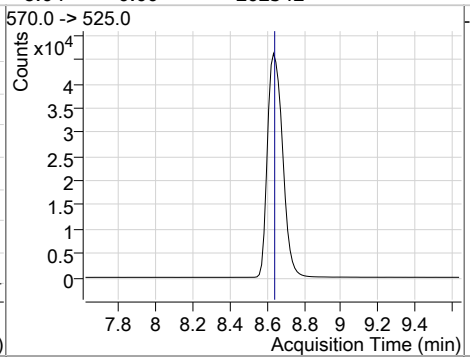


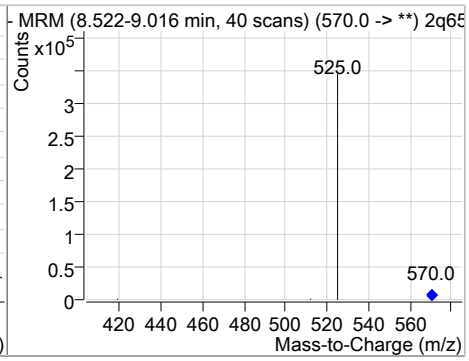




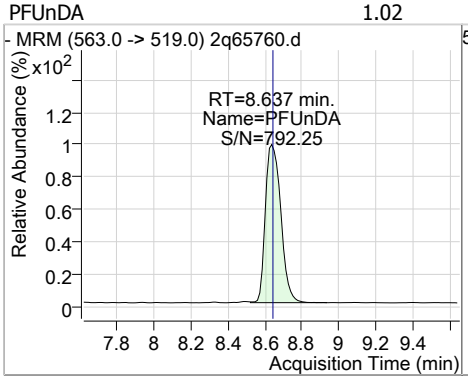
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.92	8.64	0.00	262542				

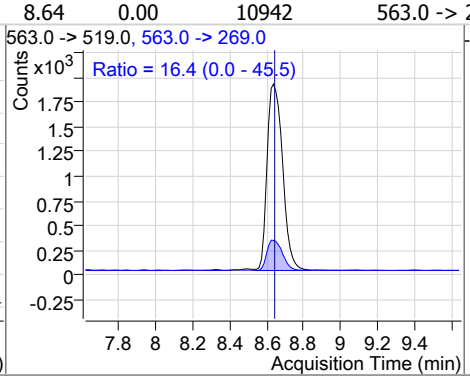


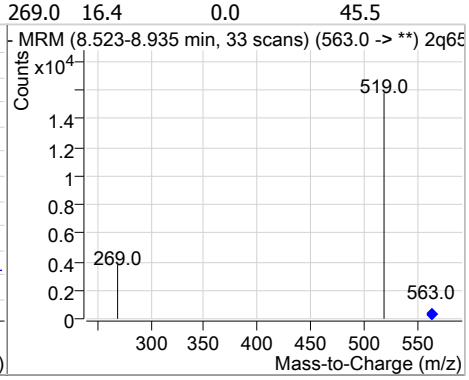




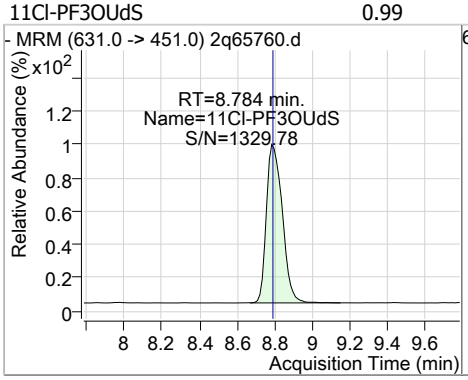
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	1.02	8.64	0.00	10942	563.0 -> 269.0	16.4	0.0	45.5

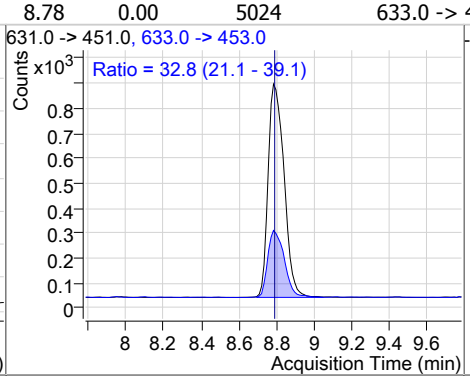


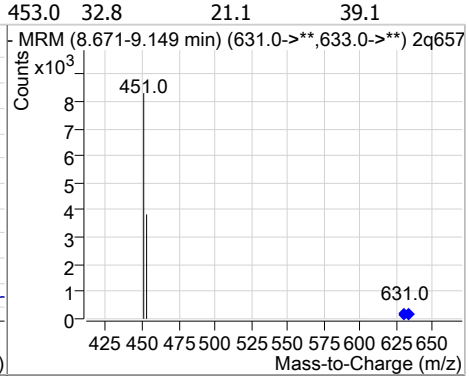




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.99	8.78	0.00	5024	633.0 -> 453.0	32.8	21.1	39.1

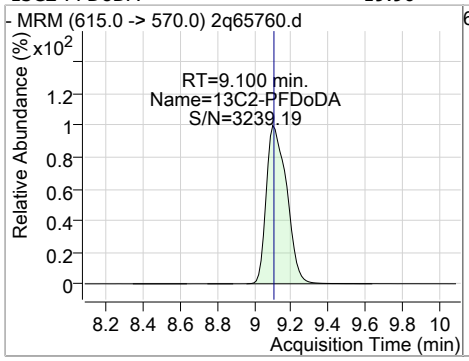


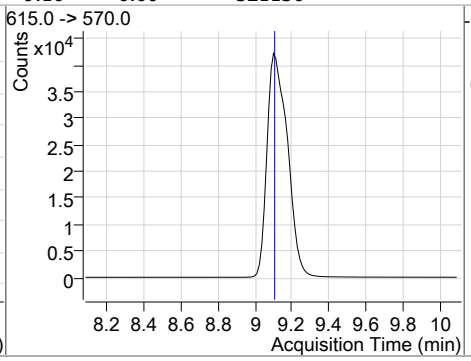


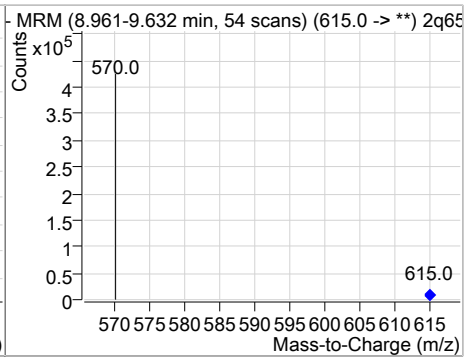


Perfluorinated Compounds by LC/MS/MS

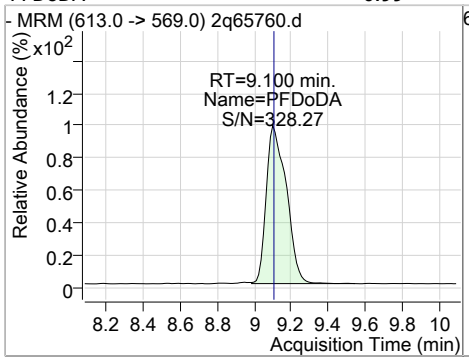
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.96	9.10	0.00	321136				

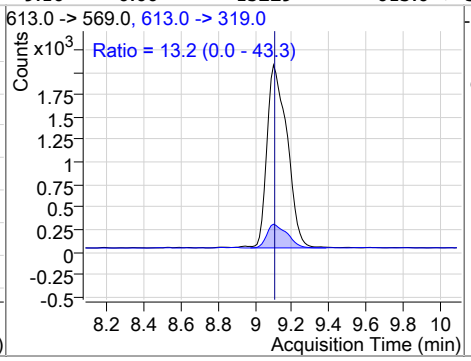


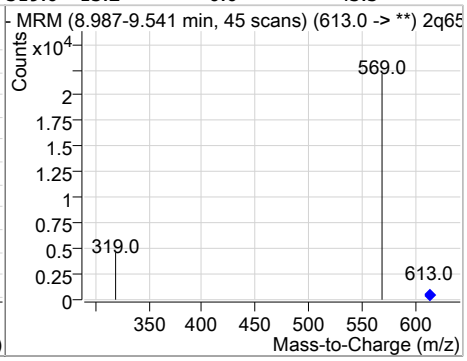




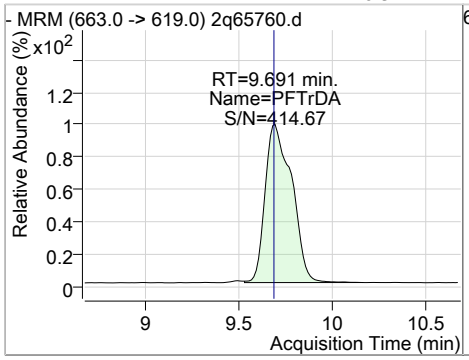
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.99	9.10	0.00	15229	613.0 -> 319.0	13.2	0.0	43.3

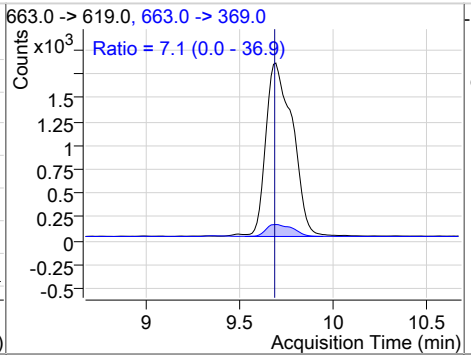


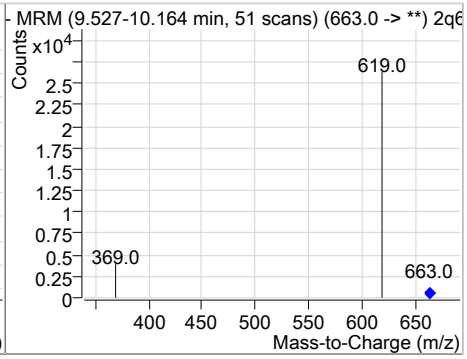




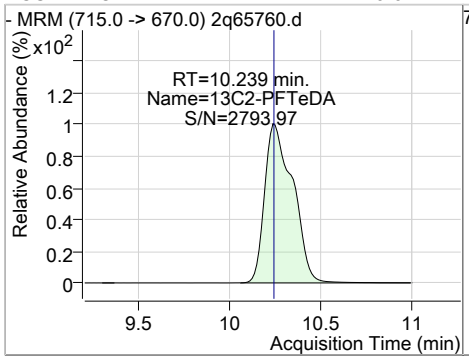
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.97	9.69	0.01	18096	663.0 -> 369.0	7.1	0.0	36.9

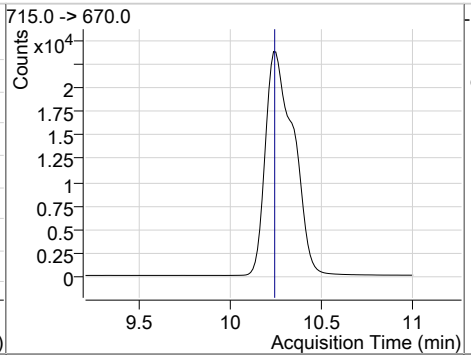


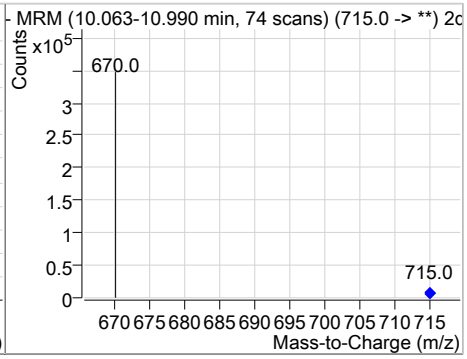




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.01	10.24	0.00	258205				

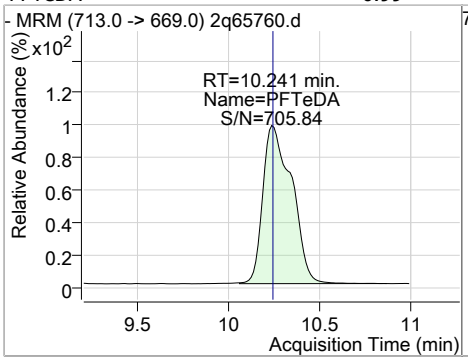


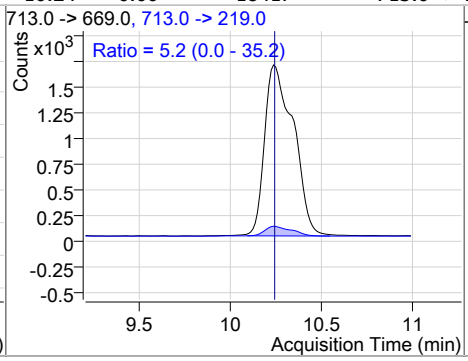


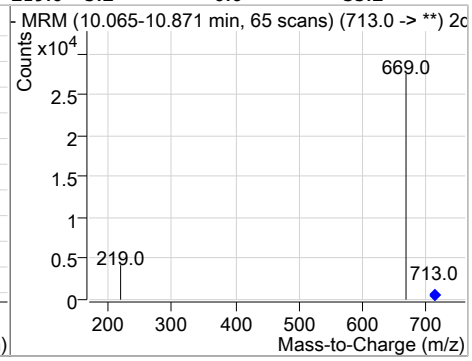


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.99	10.24	0.00	18417	713.0 -> 219.0	5.2	0.0	35.2







Manual Integration Approval Summary

Sample Number: S2Q956-IC956
Lab FileID: 2Q65760.D
Injection Time: 04/08/21 13:56
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/09/21 09:05 Natasha Gumtie
Supervisor approved: 04/12/21 13:27 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.46	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
MeFOSAA	2355-31-9		8.05	Split peak
EtFOSAA	2991-50-6		8.17	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/12/21 13:27

Perfluorinated Compounds by LC/MS/MS

Data File : 2q65761.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/8/2021 2:12:56 PM
Sample Name : ic956-2.0
Vial : P1-A4
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q956.batch.bin
Sample Information : op84308,S2Q956,250,,,1.0,1,water

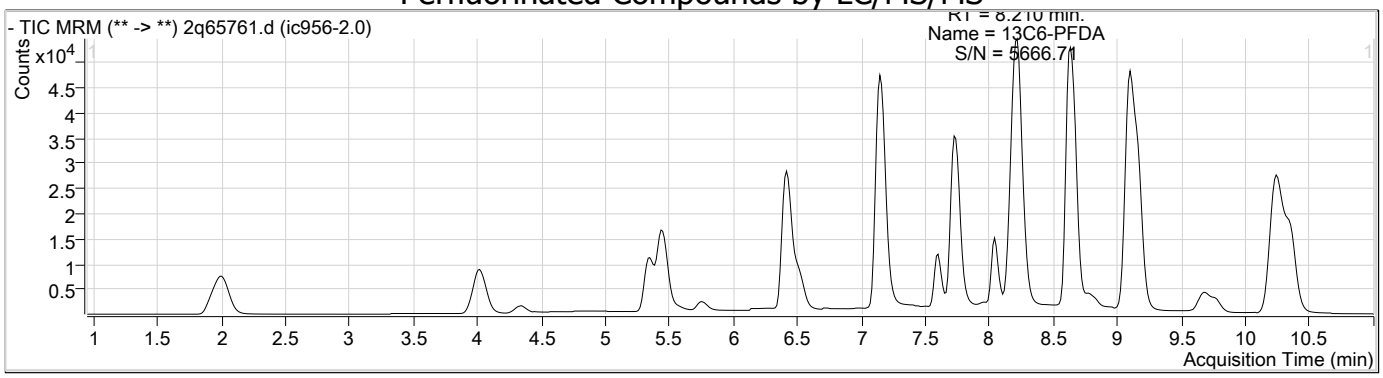
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.155	589.0 -> 419.0	41644	20.00	µg/L	0.000
M4-PFBA	2.002	217.0 -> 172.0	67910	20.00	µg/L	0.013
M5-PFPeA	4.024	268.0 -> 223.0	55697	20.00	µg/L	0.013
M5-PFHxA	5.454	318.0 -> 273.0	83417	20.00	µg/L	0.013
M4-PFHpA	6.420	367.0 -> 322.0	123886	20.00	µg/L	0.000
M8-PFOA	7.151	421.0 -> 376.0	140338	20.00	µg/L	0.000
M9-PFNA	7.732	472.0 -> 427.0	143358	20.00	µg/L	0.000
M6-PFDA	8.210	519.0 -> 474.0	188195	20.00	µg/L	0.000
M7-PFUnDA	8.636	570.0 -> 525.0	267885	20.00	µg/L	0.000
M2-PFDoDA	9.100	615.0 -> 570.0	323342	20.00	µg/L	0.000
M2-PFTeDA	10.239	715.0 -> 670.0	258585	20.00	µg/L	0.000
M8-FOSA	7.604	506.0 -> 78.0	39157	20.00	µg/L	0.000
M3-PFBS	4.330	302.0 -> 99.0	6848	20.00	µg/L	0.000
M3-PFHxS	6.456	402.0 -> 99.0	7494	20.00	µg/L	0.000
M8-PFOS	7.718	507.0 -> 99.0	10681	20.00	µg/L	0.000
M2-4:2FTS	5.348	329.0 -> 309.0	55511	20.00	µg/L	0.013
M2-6:2FTS	7.137	429.0 -> 409.0	78159	20.00	µg/L	0.000
M2-8:2FTS	8.247	529.0 -> 509.0	68703	20.00	µg/L	0.000
M3-MeFOSAA	8.041	573.0 -> 419.0	47539	20.00	µg/L	0.000
M3-HFPO-DA	5.759	287.0 -> 169.0	6705	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.348	329.0 -> 309.0	55511	19.07	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.4%		
13C2-6:2FTS	7.137	429.0 -> 409.0	78159	19.21	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.0%		
13C2-8:2FTS	8.247	529.0 -> 509.0	68703	19.26	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.3%		
13C2-PFDoDA	9.100	615.0 -> 570.0	323342	20.10	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.5%		
13C2-PFTeDA	10.239	715.0 -> 670.0	258585	20.04	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.2%		
13C3-PFBS	4.330	302.0 -> 99.0	6848	20.27	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%		
13C3-PFHxS	6.456	402.0 -> 99.0	7494	19.96	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.8%		
13C4-PFBA	2.002	217.0 -> 172.0	67910	20.22	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.1%		
13C4-PFHpA	6.420	367.0 -> 322.0	123886	20.36	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.8%		
d5-EtFOSAA	8.155	589.0 -> 419.0	41644	20.48	ng/ml	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.4%		
13C5-PFHxA	5.454	318.0 -> 273.0	83417	20.02	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.1%		
13C5-PFPeA	4.024	268.0 -> 223.0	55697	20.19	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.9%		

Perfluorinated Compounds by LC/MS/MS

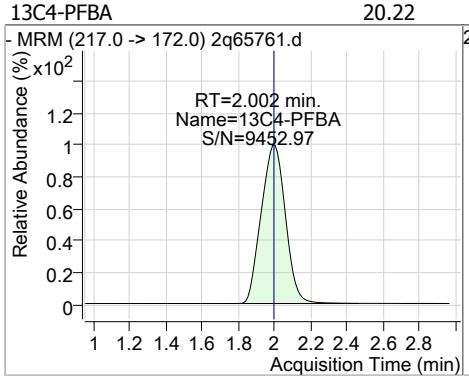
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	188195	20.32	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.6%			
13C7-PFUnDA	8.636	570.0 -> 525.0	267885	20.33	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.6%			
13C8-FOSA	7.604	506.0 -> 78.0	39157	20.38	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.9%			
13C8-PFOA	7.151	421.0 -> 376.0	140338	20.12	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.6%			
13C8-PFOS	7.718	507.0 -> 99.0	10681	20.11	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.5%			
13C9-PFNA	7.732	472.0 -> 427.0	143358	20.16	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.8%			
d3-MeFOSAA	8.041	573.0 -> 419.0	47539	20.04	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.2%			
13C3-HFPO-DA	5.759	287.0 -> 169.0	6705	20.68	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.4%			
Target Compounds							QValue
4:2FTS	5.337	327.0 -> 307.0	6129	2.10	µg/L		96
6:2FTS	7.138	427.0 -> 407.0	8897	2.16	µg/L		98
8:2FTS	8.247	527.0 -> 507.0	7437	2.06	µg/L		96
EtFOSAA	8.168	584.0 -> 419.0	3517	1.86	µg/L	m	93
FOSA	7.605	498.0 -> 78.0	3915	2.01	µg/L		97
MeFOSAA	8.041	570.0 -> 419.0	4147	2.01	µg/L		94
PFBA	1.996	213.0 -> 169.0	2347	2.05	µg/L		100
PFBS	4.332	299.0 -> 80.0	2205	2.07	µg/L		99
PFDA	8.211	513.0 -> 469.0	18441	2.05	µg/L		99
PFDoDA	9.100	613.0 -> 569.0	31386	2.02	µg/L		99
PFDS	8.596	599.0 -> 80.0	1042	2.21	µg/L		92
PFHpA	6.421	363.0 -> 319.0	20812	1.99	µg/L		99
PFHpS	7.149	449.0 -> 80.0	2006	2.16	µg/L		98
PFHxA	5.455	313.0 -> 269.0	5788	1.98	µg/L		98
PFHxS	6.457	399.0 -> 80.0	2086	2.03	µg/L	m	95
PFNA	7.733	463.0 -> 419.0	16592	2.04	µg/L		99
PFNS	8.170	549.0 -> 80.0	1576	2.03	µg/L		98
PFOA	7.152	413.0 -> 369.0	17330	2.08	µg/L		99
PFOS	7.718	499.0 -> 80.0	2110	2.07	µg/L	m	86
PFPeA	4.027	263.0 -> 219.0	9304	2.04	µg/L		100
PFPeS	5.590	349.0 -> 80.0	1686	2.09	µg/L		97
PFTeDA	10.241	713.0 -> 669.0	37418	2.01	µg/L		100
PFTrDA	9.679	663.0 -> 619.0	36723	1.96	µg/L		100
PFUnDA	8.637	563.0 -> 519.0	21511	1.97	µg/L		99
11Cl-PF3OUdS	8.784	631.0 -> 451.0	10453	2.05	µg/L		100
9Cl-PF3ONS	7.956	531.0 -> 351.0	1904	1.77	µg/L		96
ADONA	6.521	377.0 -> 251.0	24693	1.96	µg/L		99
HFPO-DA	5.767	329.0 -> 169.0	2516	2.01	µg/L		98

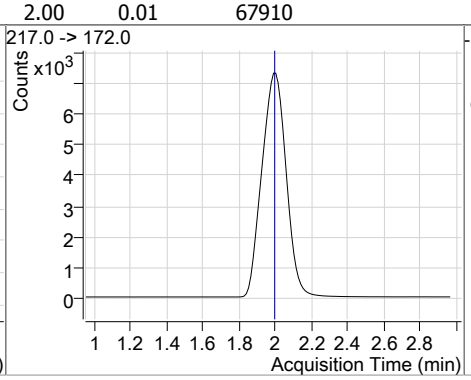
 # = Qualifier out of range, m = manually integrated, + = Area summed

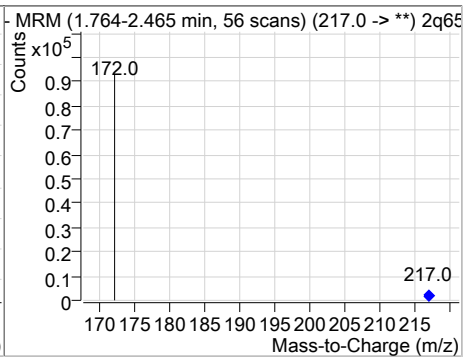
Perfluorinated Compounds by LC/MS/MS



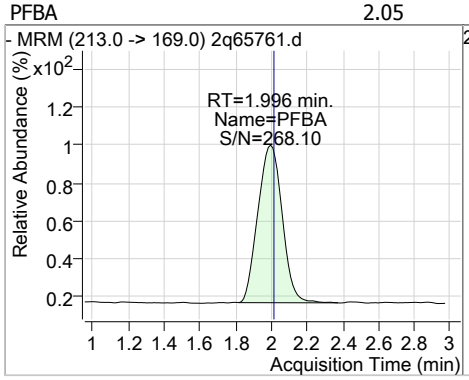
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.22	2.00	0.01	67910				

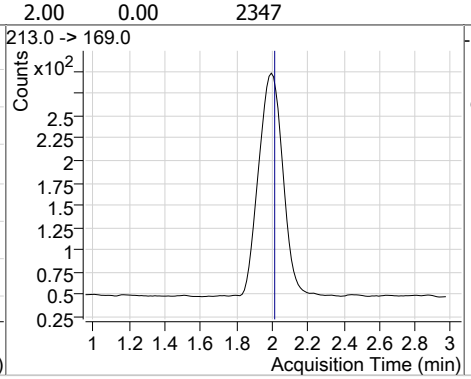


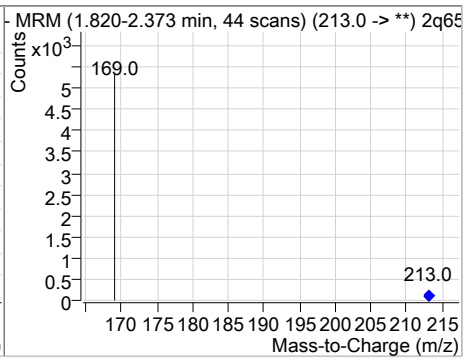




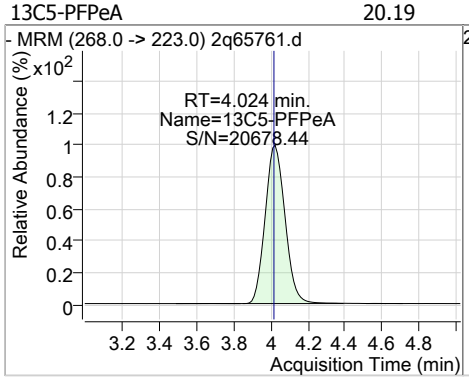
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	2.05	2.00	0.00	2347				

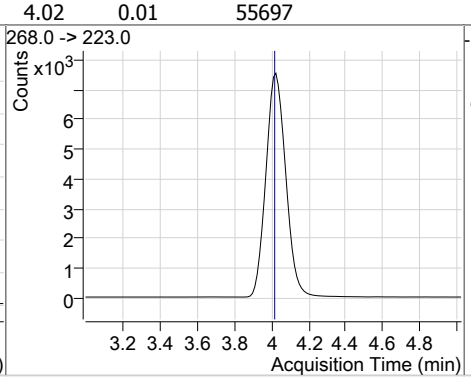


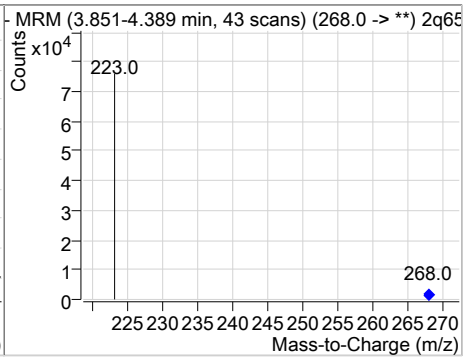




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.19	4.02	0.01	55697				

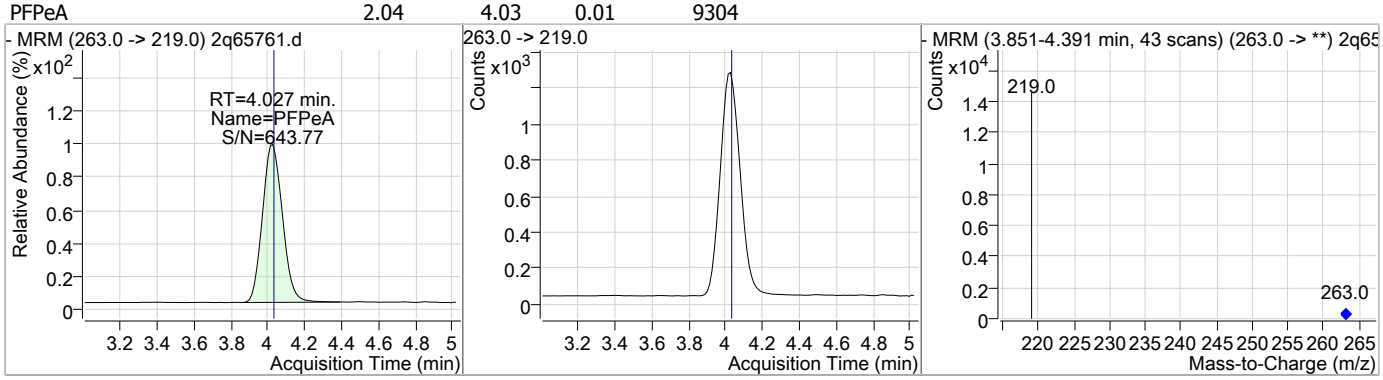




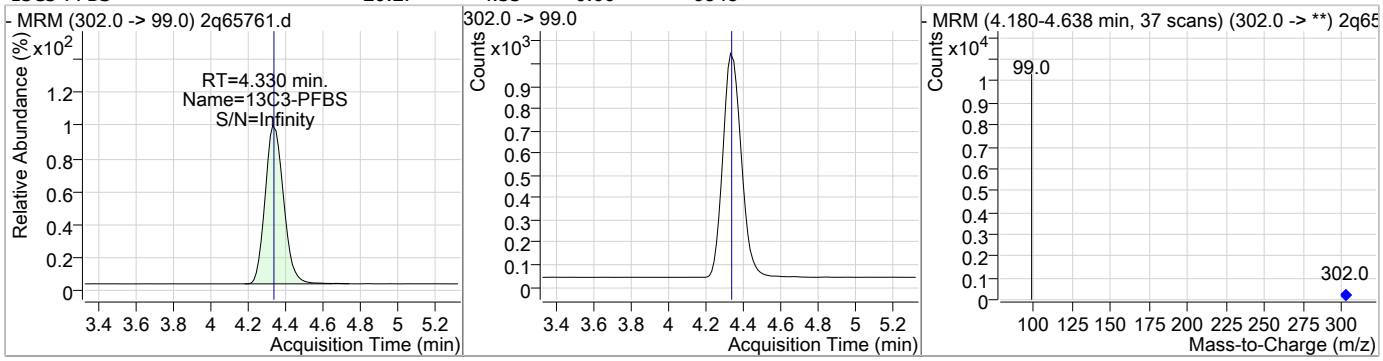


Perfluorinated Compounds by LC/MS/MS

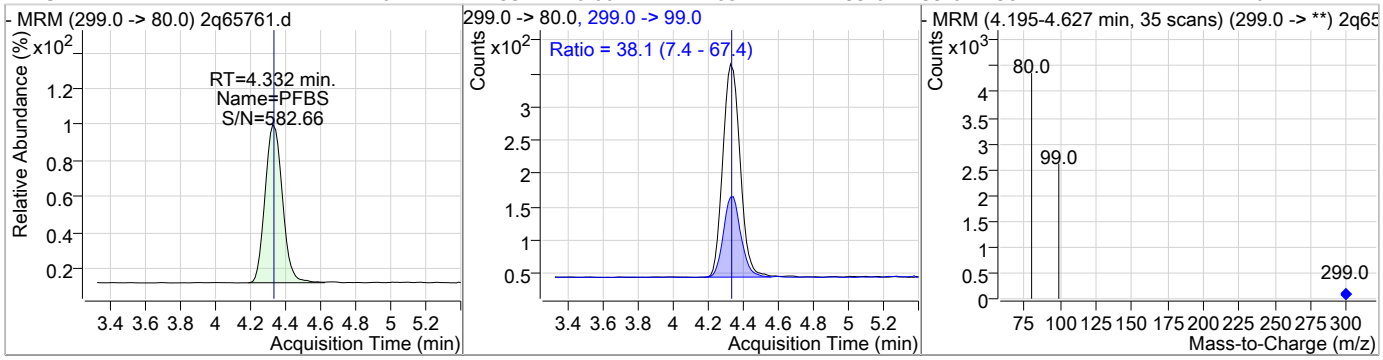
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PFPeA	2.04	4.03	0.01	9304				



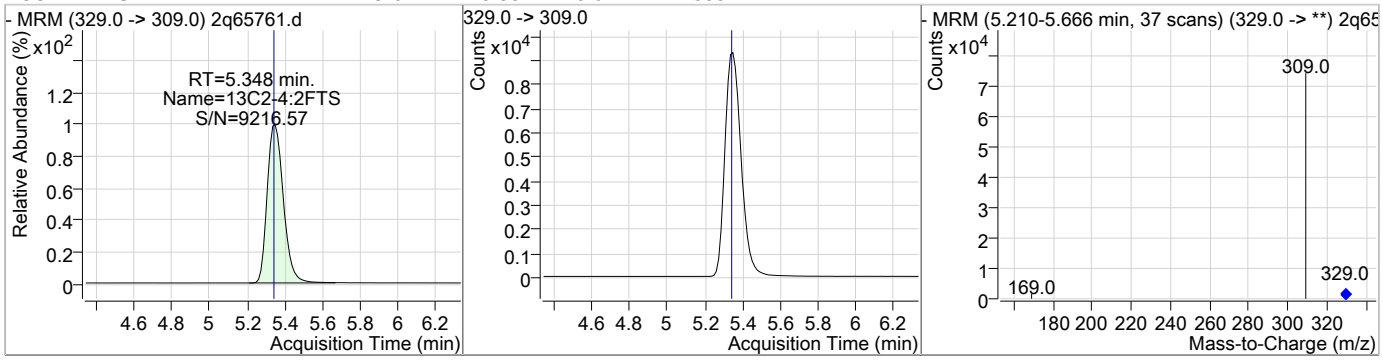
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.27	4.33	0.00	6848				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	2.07	4.33	0.00	2205	299.0 -> 99.0	38.1	7.4	67.4

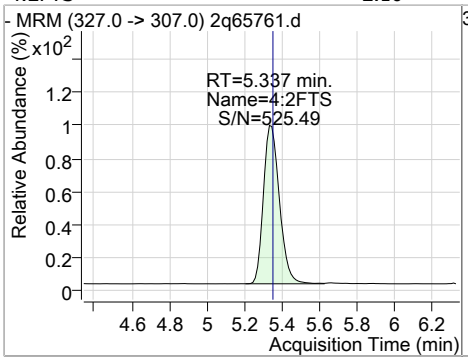


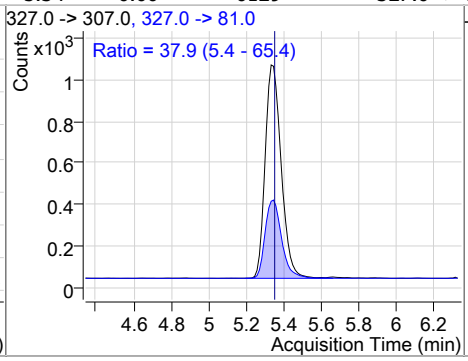
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.07	5.35	0.01	55511				

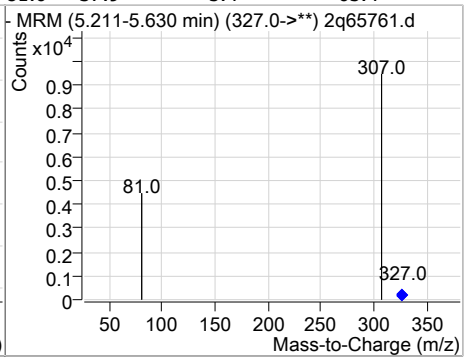


Perfluorinated Compounds by LC/MS/MS

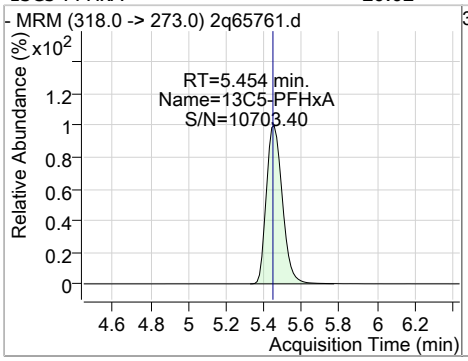
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	2.10	5.34	0.00	6129	327.0 -> 81.0	37.9	5.4	65.4

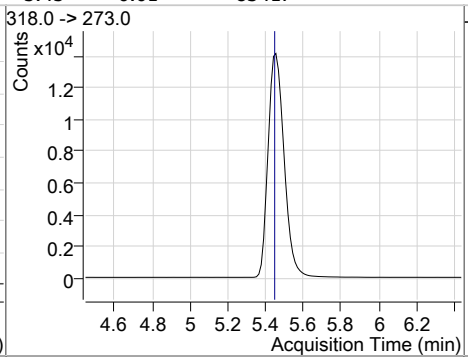


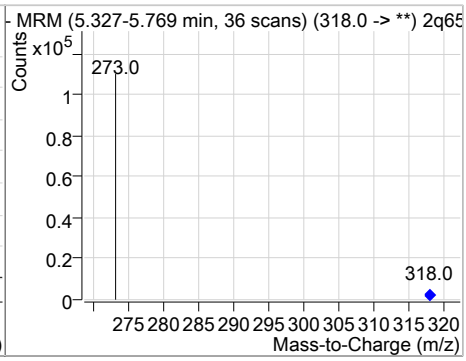




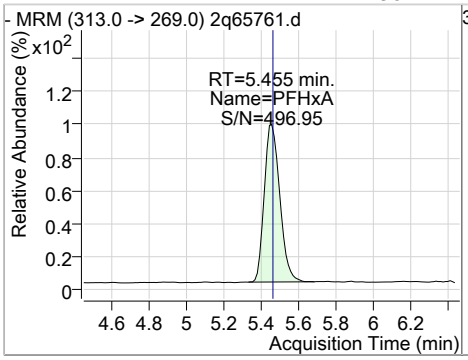
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.02	5.45	0.01	83417				

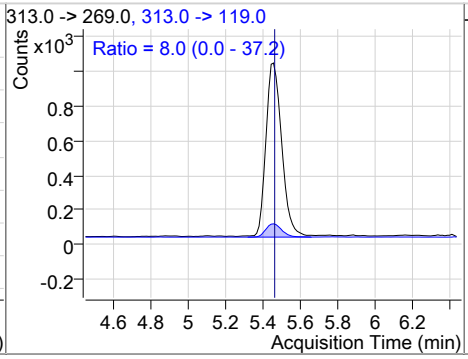


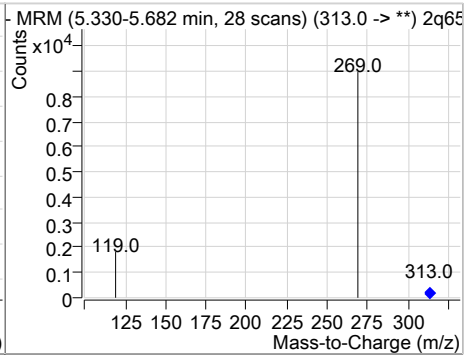




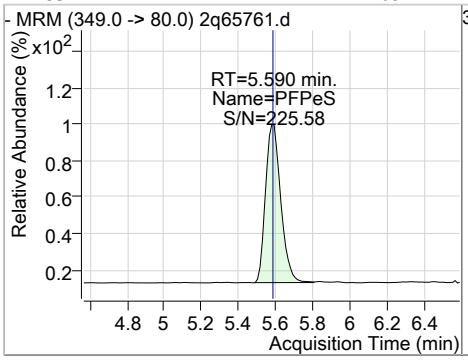
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	1.98	5.46	0.01	5788	313.0 -> 119.0	8.0	0.0	37.2

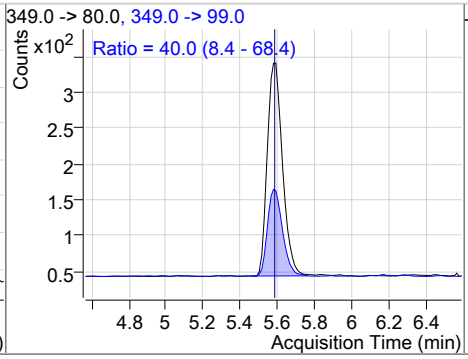


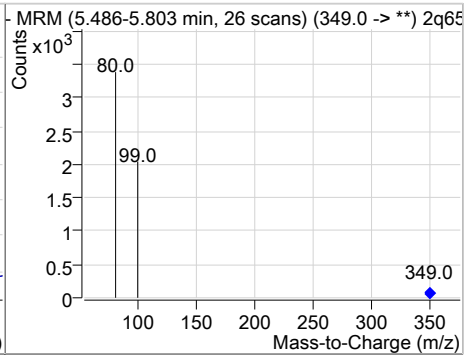




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	2.09	5.59	0.01	1686	349.0 -> 99.0	40.0	8.4	68.4

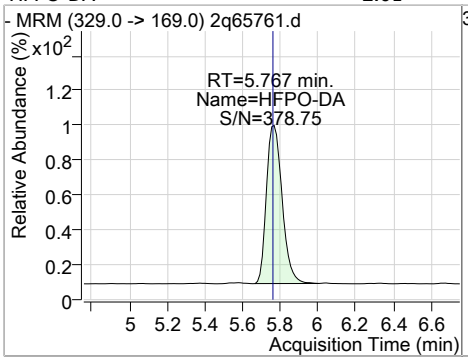


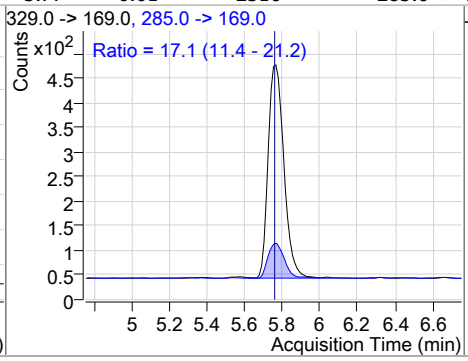


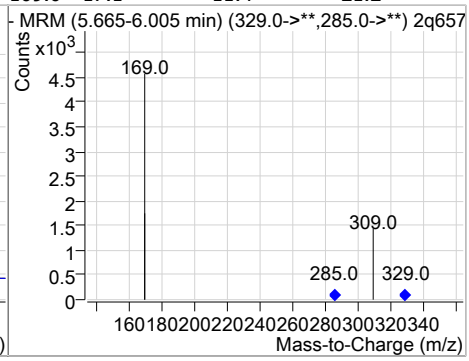


Perfluorinated Compounds by LC/MS/MS

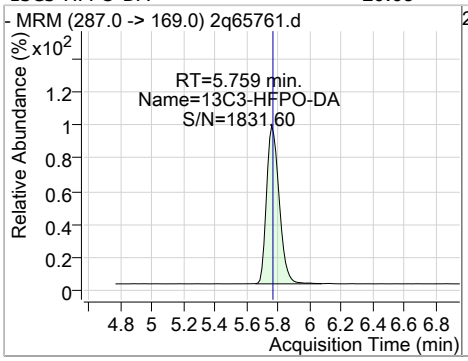
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	2.01	5.77	0.01	2516	285.0 -> 169.0	17.1	11.4	21.2

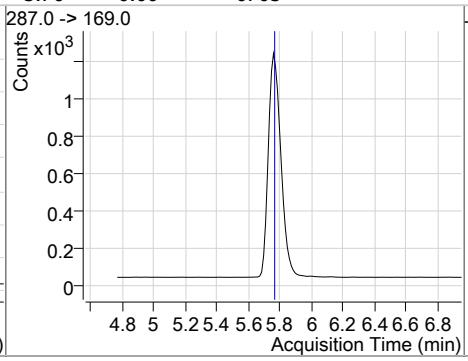


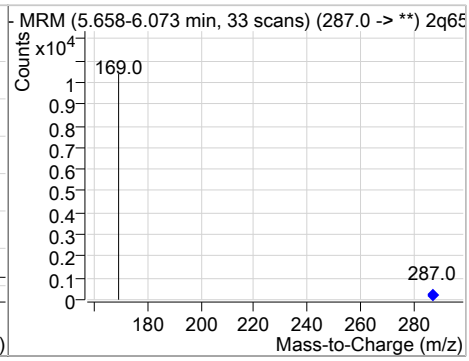




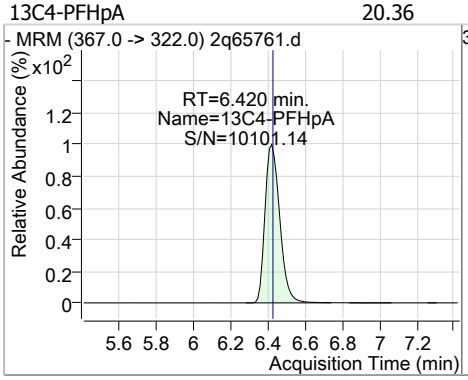
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.68	5.76	0.00	6705				

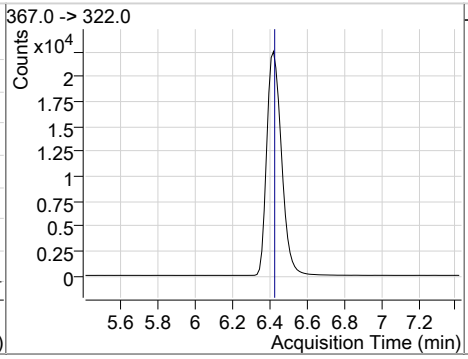


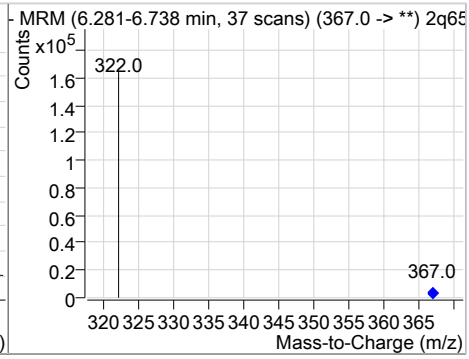




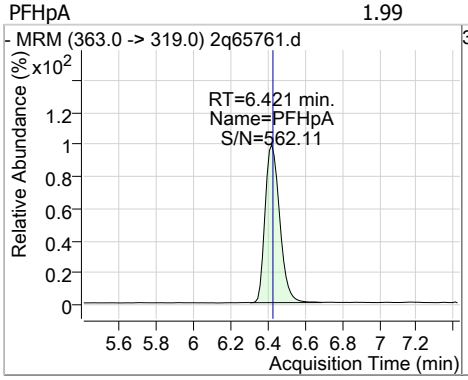
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.36	6.42	0.00	123886				

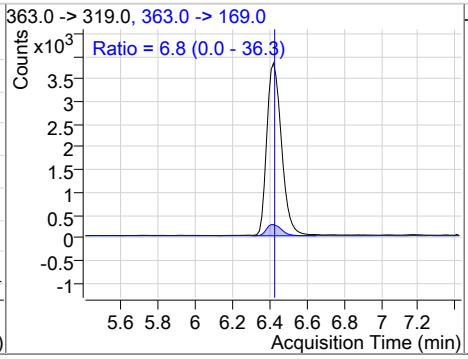


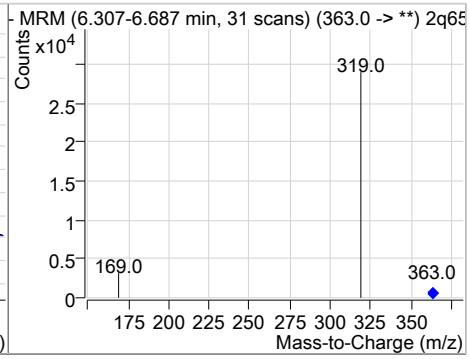




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	1.99	6.42	0.00	20812	363.0 -> 169.0	6.8	0.0	36.3

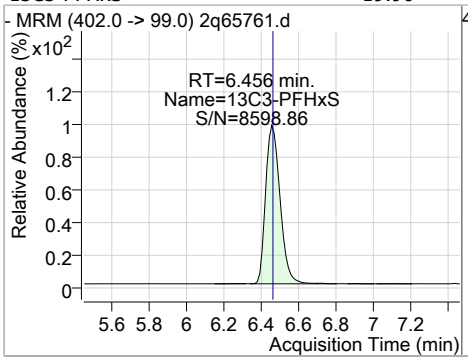


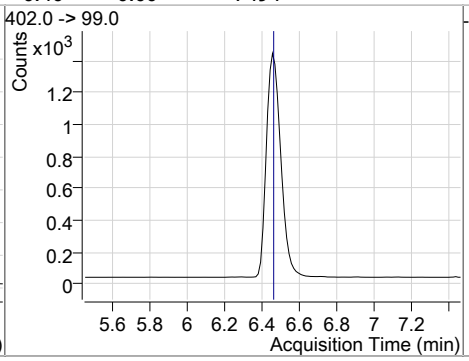


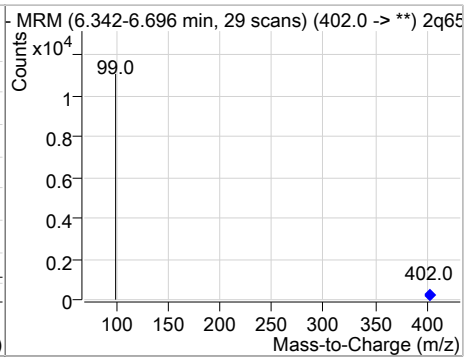


Perfluorinated Compounds by LC/MS/MS

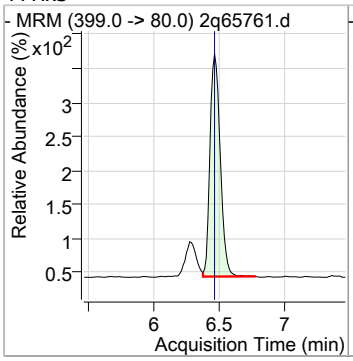
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.96	6.46	0.00	7494				

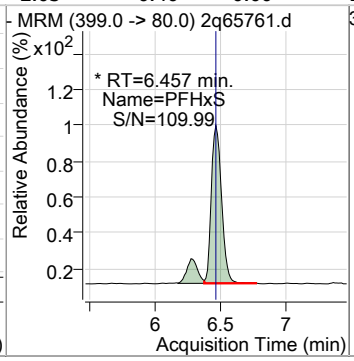


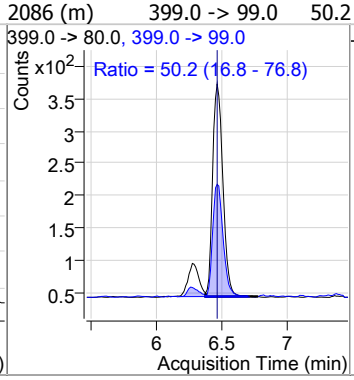


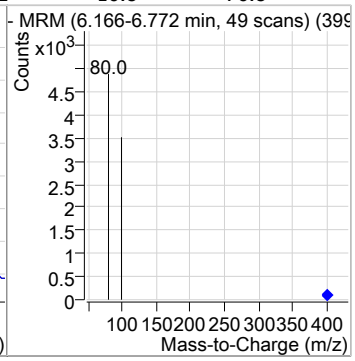


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	2.03	6.46	0.00	2086 (m)	399.0 -> 99.0	50.2	16.8	76.8

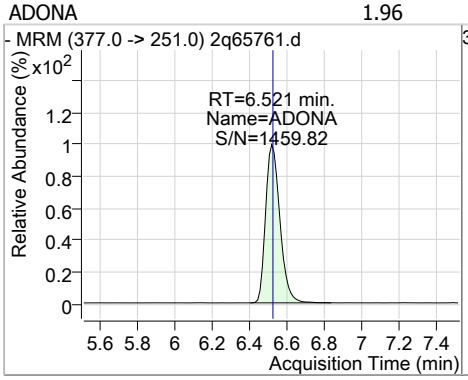


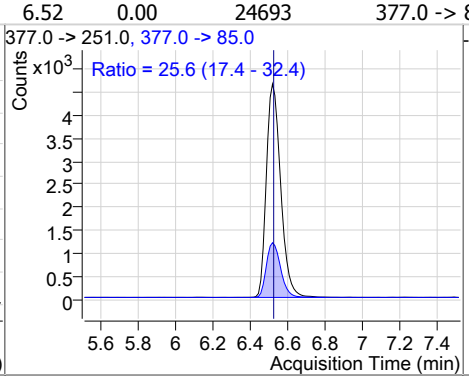


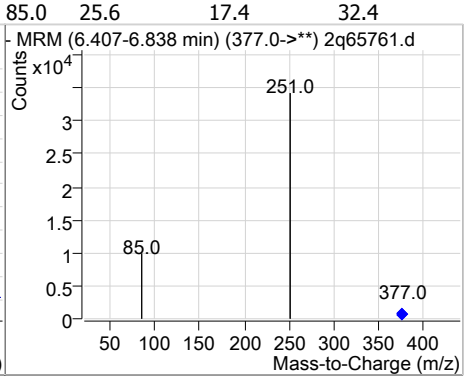




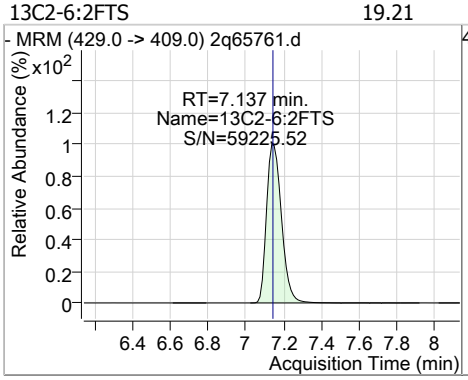
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	1.96	6.52	0.00	24693	377.0 -> 85.0	25.6	17.4	32.4

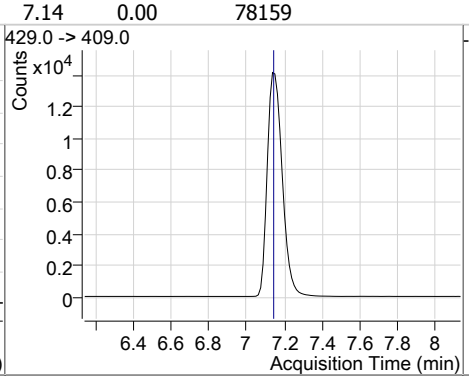


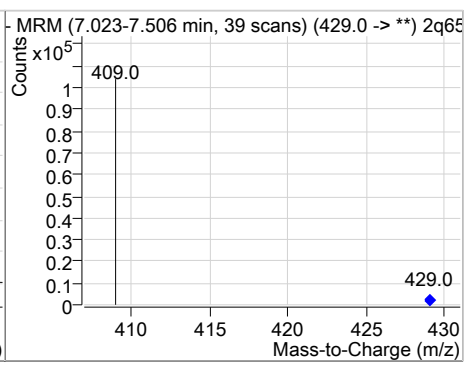




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.21	7.14	0.00	78159				

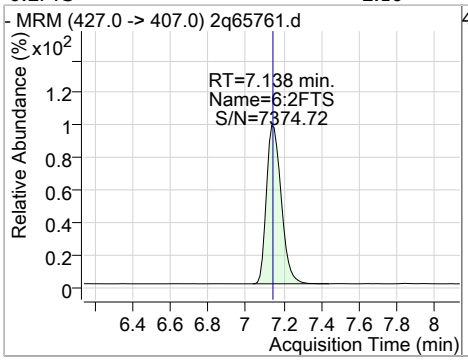


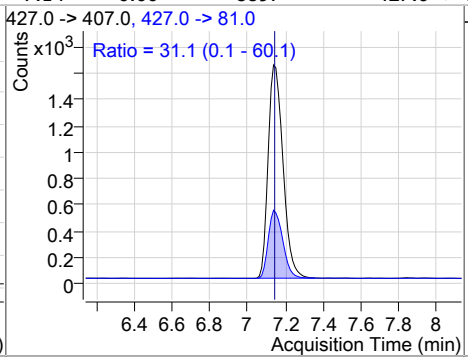


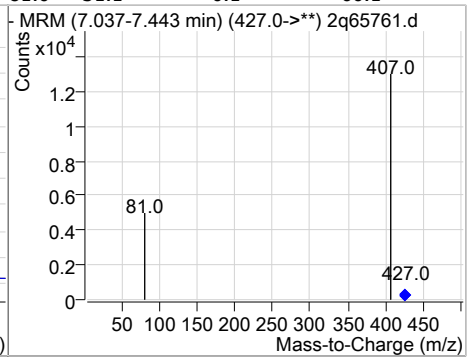


Perfluorinated Compounds by LC/MS/MS

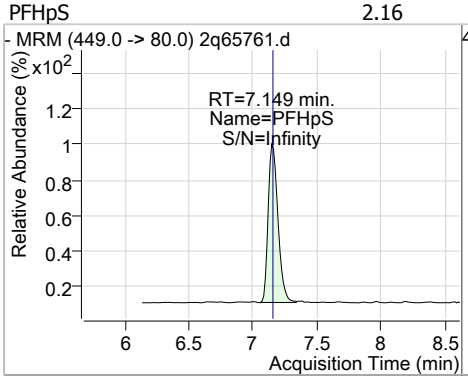
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	2.16	7.14	0.00	8897	427.0 -> 81.0	31.1	0.1	60.1

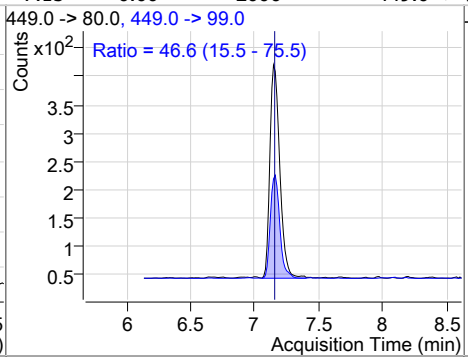


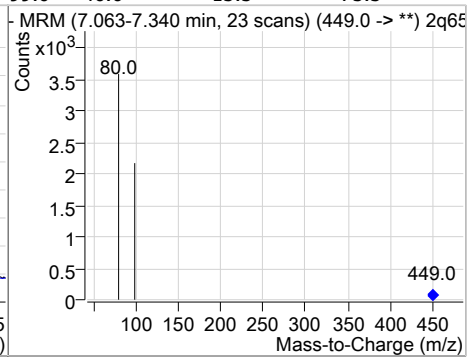




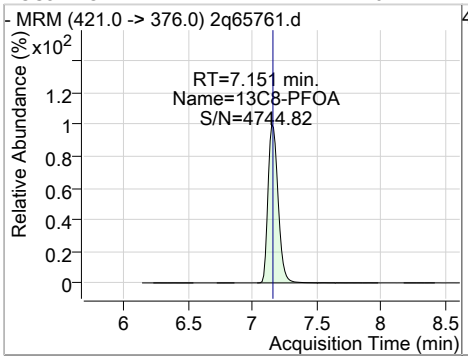
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	2.16	7.15	0.00	2006	449.0 -> 99.0	46.6	15.5	75.5

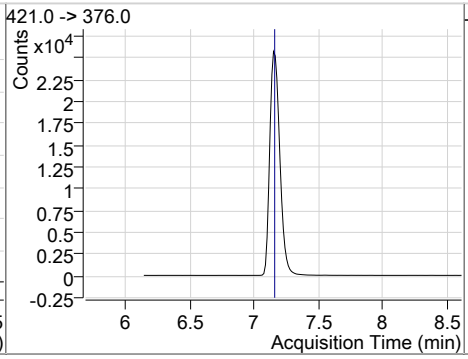


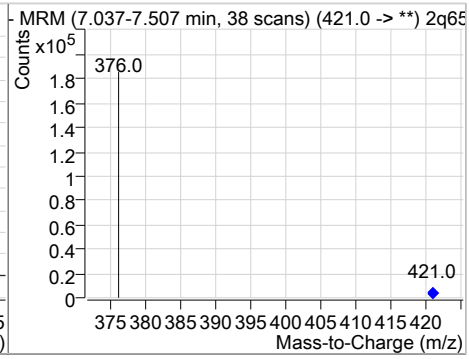




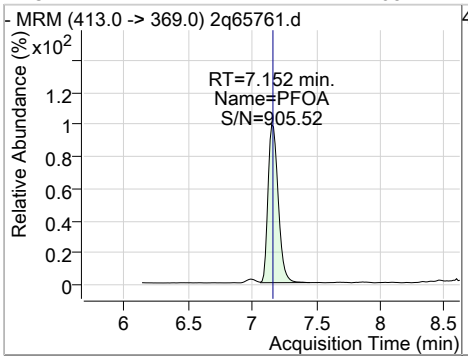
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.12	7.15	0.00	140338				

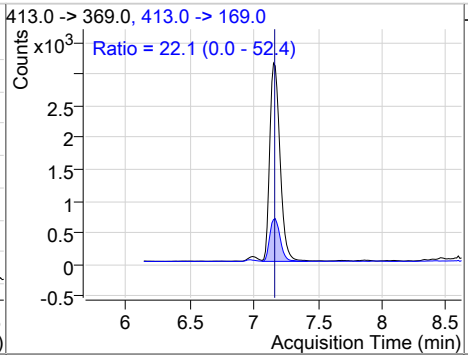


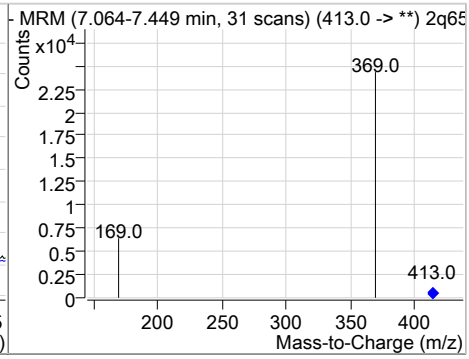




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	2.08	7.15	0.00	17330	413.0 -> 169.0	22.1	0.0	52.4

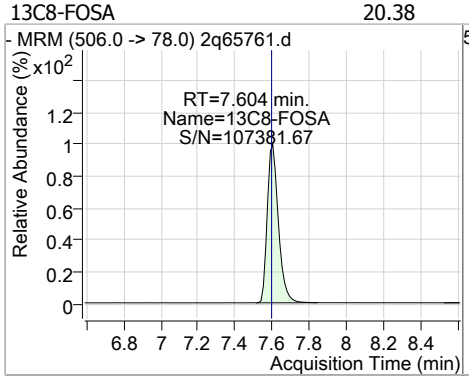


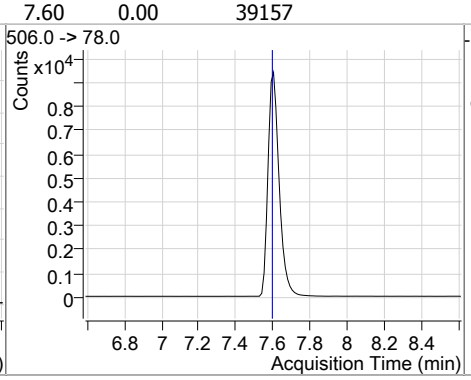


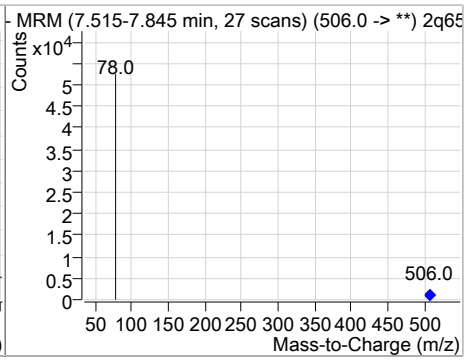


Perfluorinated Compounds by LC/MS/MS

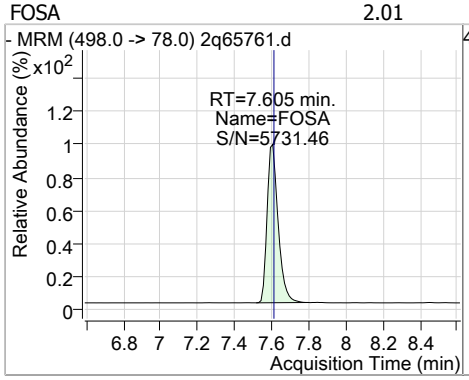
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.38	7.60	0.00	39157				

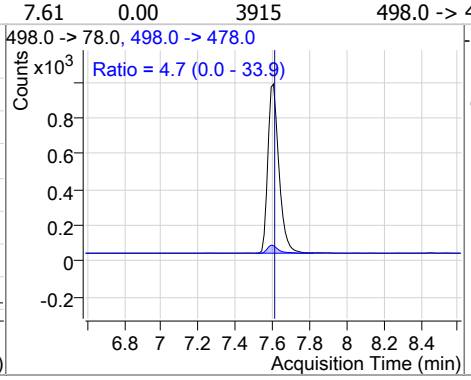


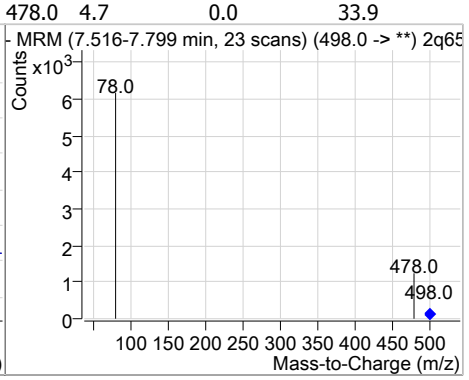




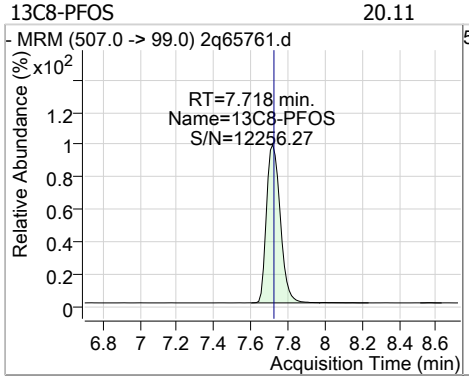
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	2.01	7.61	0.00	3915	498.0 -> 478.0	4.7	0.0	33.9

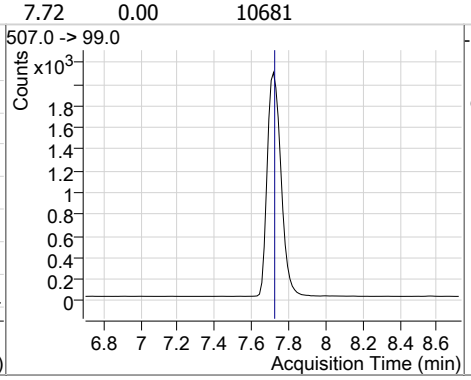


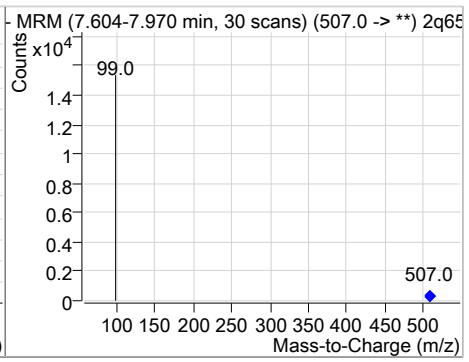




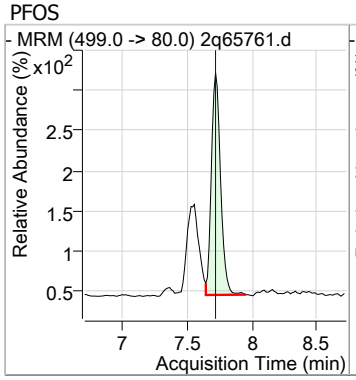
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.11	7.72	0.00	10681				

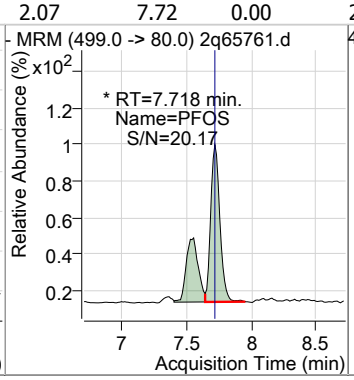


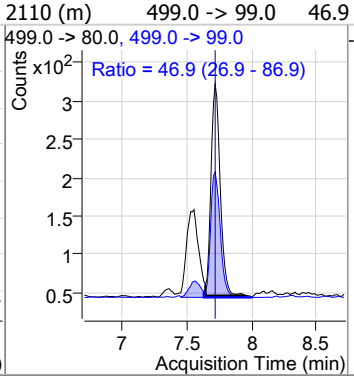


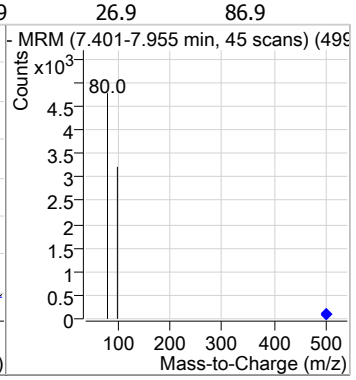


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	2.07	7.72	0.00	2110 (m)	499.0 -> 99.0	46.9	26.9	86.9



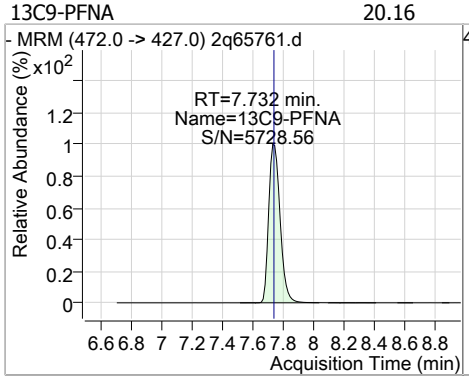


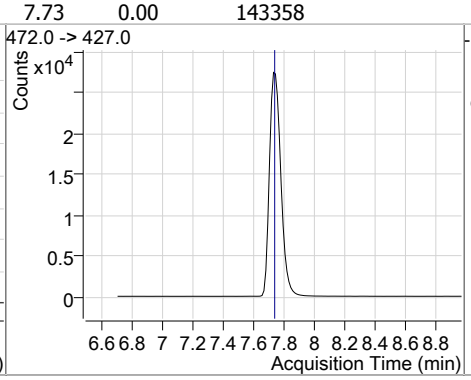


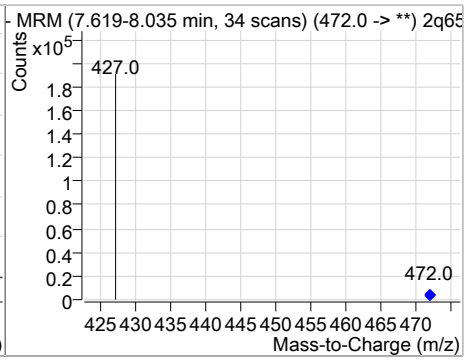


Perfluorinated Compounds by LC/MS/MS

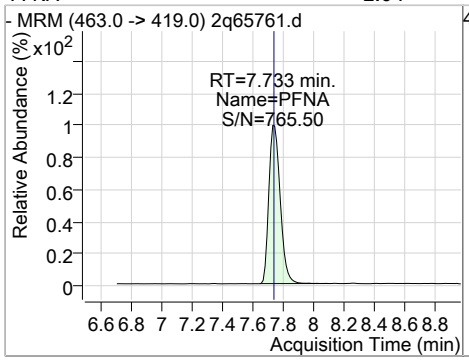
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.16	7.73	0.00	143358				

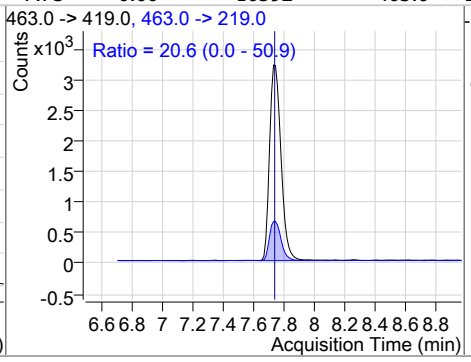


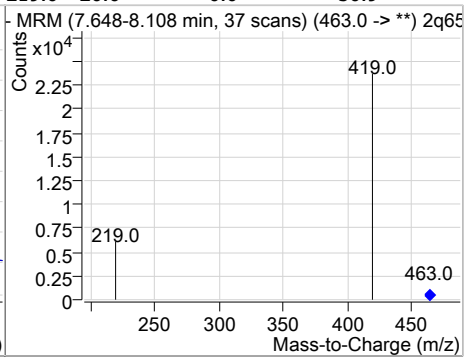




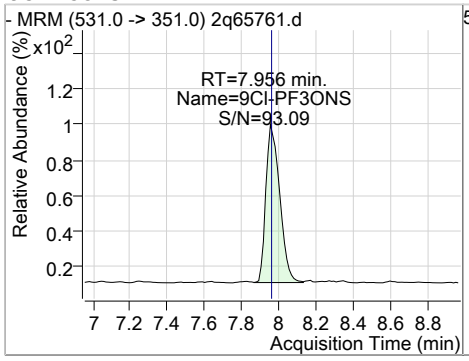
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	2.04	7.73	0.00	16592	463.0 -> 219.0	20.6	0.0	50.9

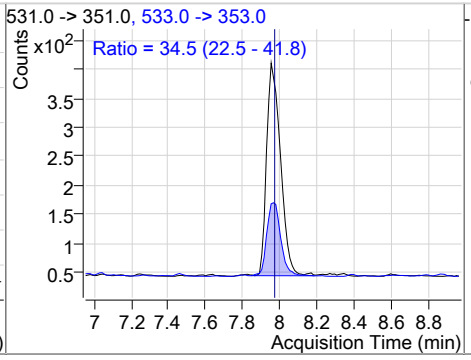


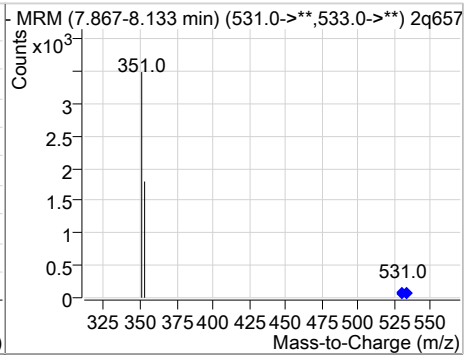




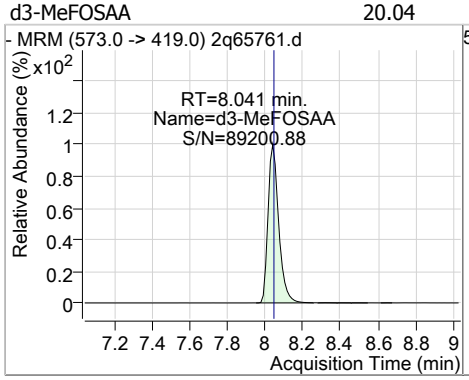
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	1.77	7.96	-0.01	1904	533.0 -> 353.0	34.5	22.5	41.8

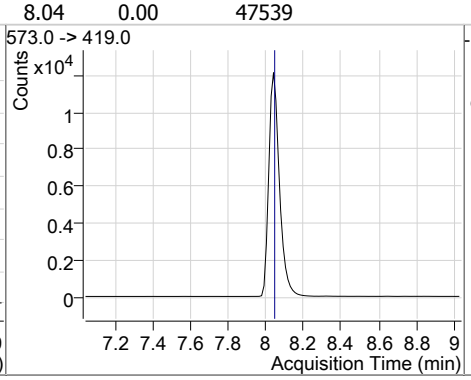


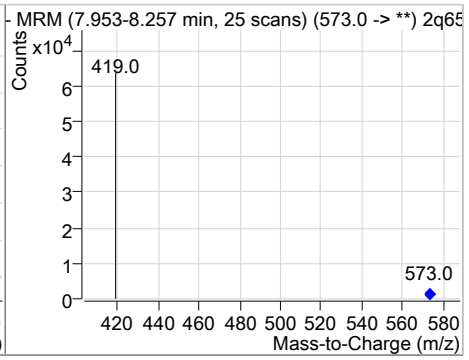




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.04	8.04	0.00	47539				



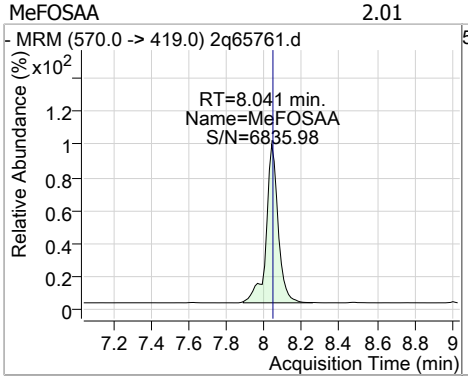


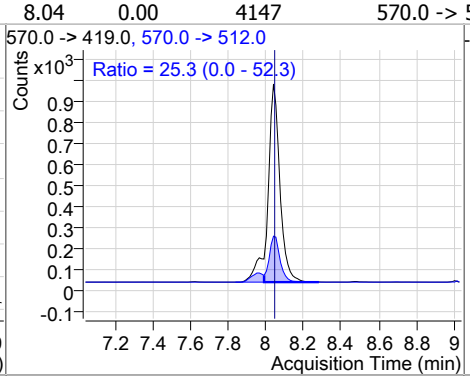


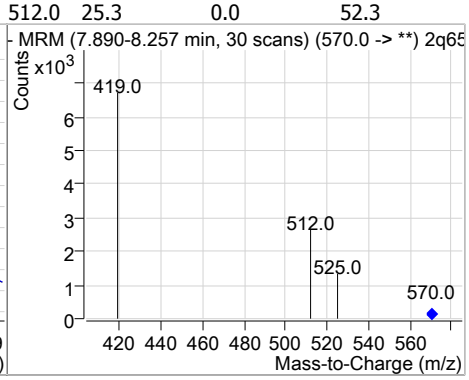
11.6.4 11

Perfluorinated Compounds by LC/MS/MS

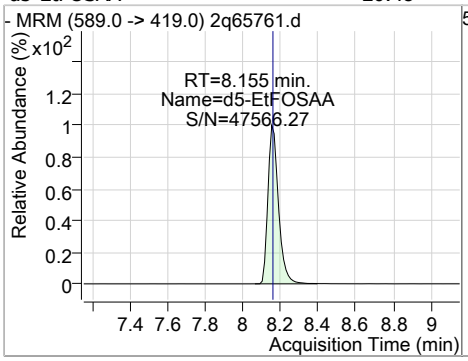
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	2.01	8.04	0.00	4147	570.0 -> 512.0	25.3	0.0	52.3

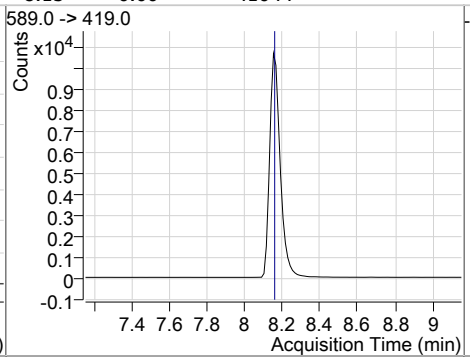


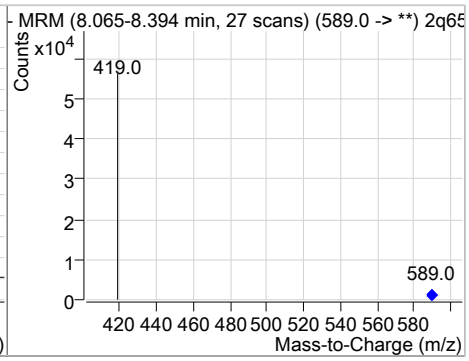




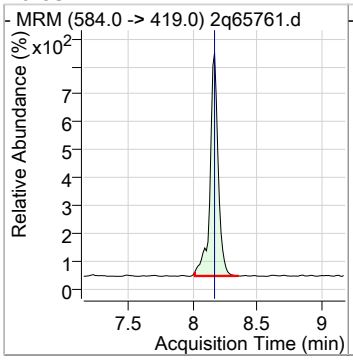
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.48	8.15	0.00	41644				

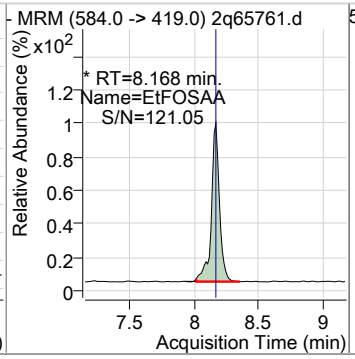


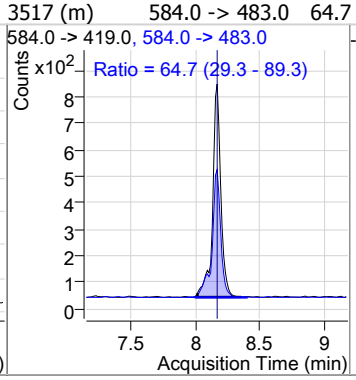


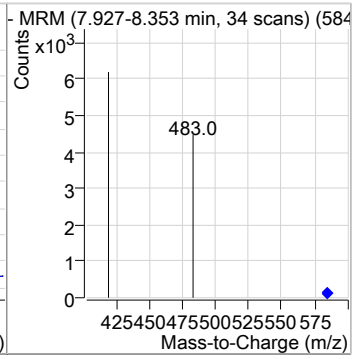


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	1.86	8.17	0.00	3517 (m)	584.0 -> 483.0	64.7	29.3	89.3

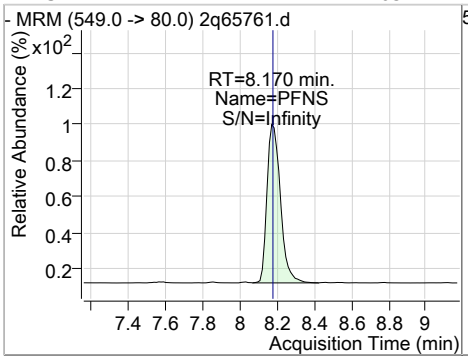


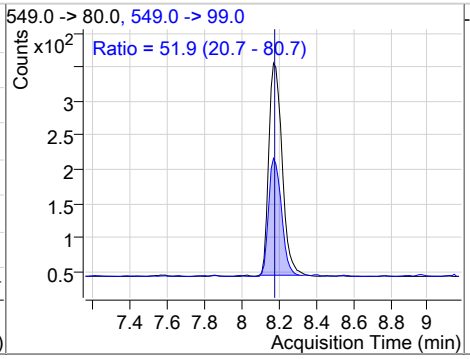


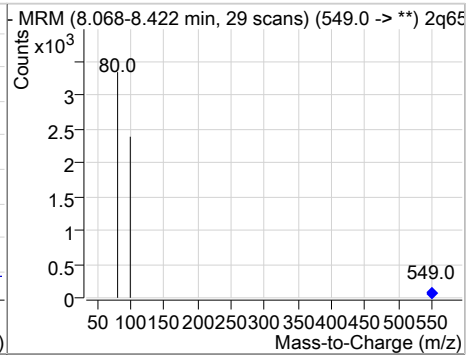




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	2.03	8.17	0.00	1576	549.0 -> 99.0	51.9	20.7	80.7

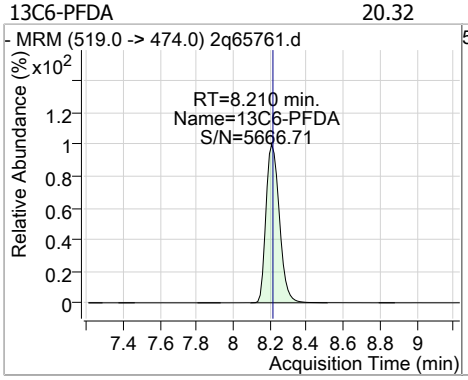


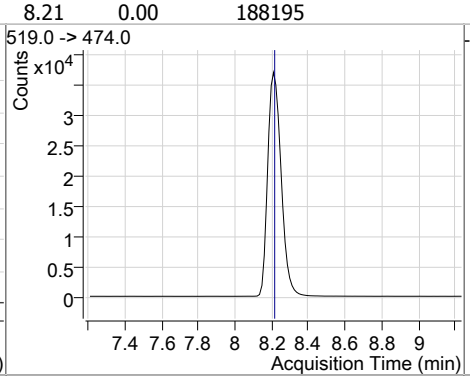


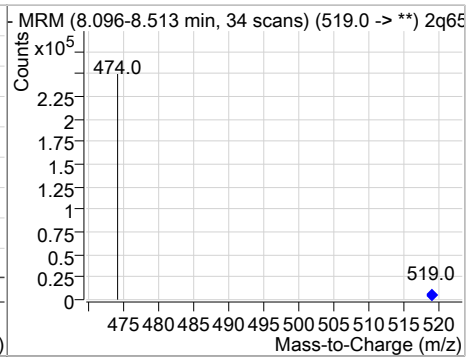


Perfluorinated Compounds by LC/MS/MS

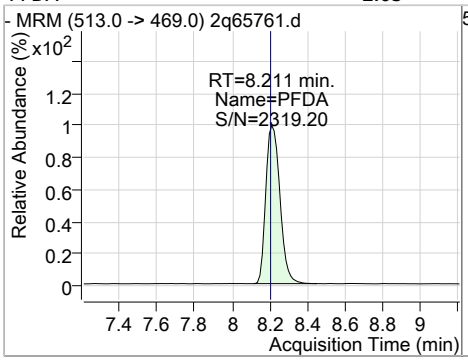
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.32	8.21	0.00	188195				

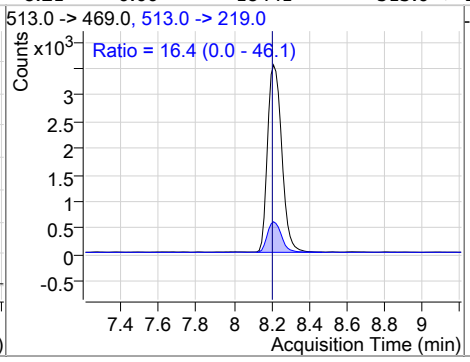


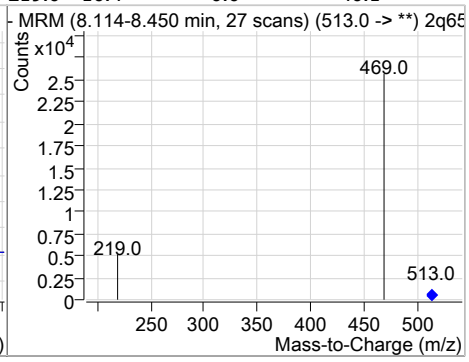




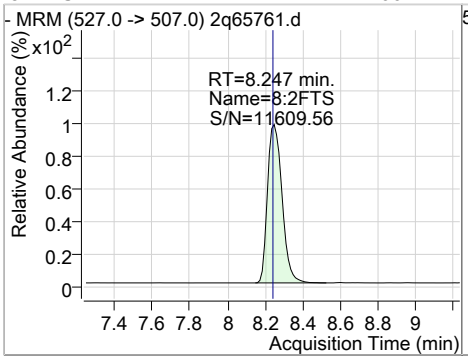
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	2.05	8.21	0.00	18441	513.0 -> 219.0	16.4	0.0	46.1

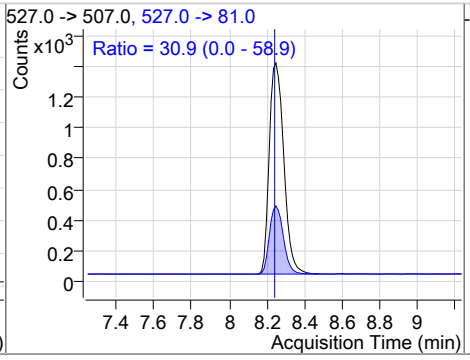


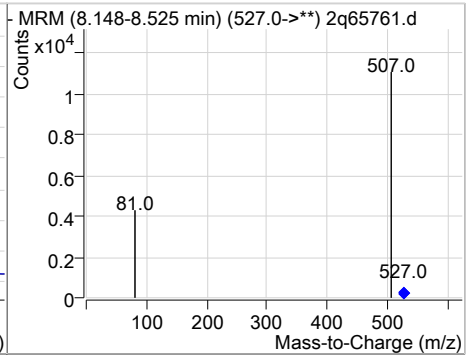




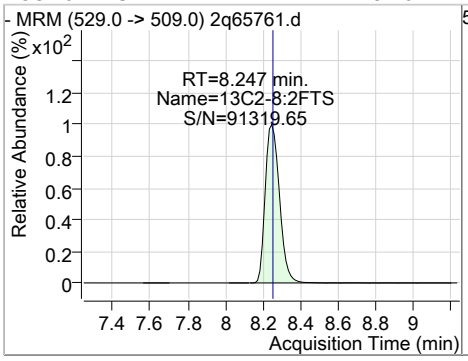
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	2.06	8.25	0.01	7437	527.0 -> 81.0	30.9	0.0	58.9

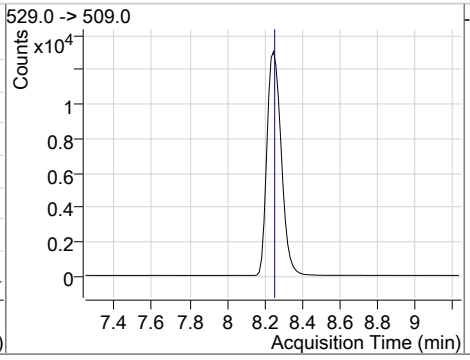


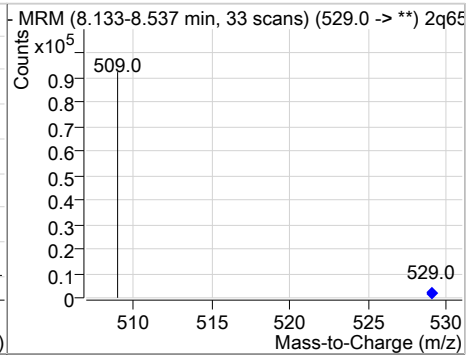




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.26	8.25	0.00	68703				

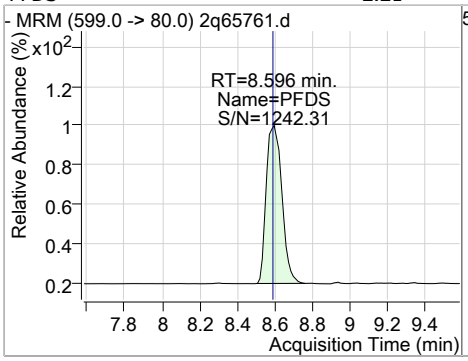


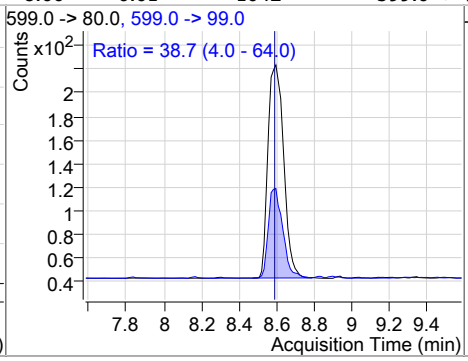


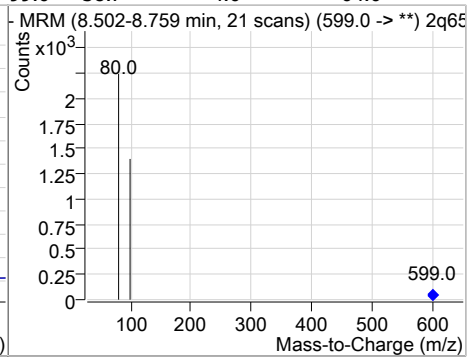


Perfluorinated Compounds by LC/MS/MS

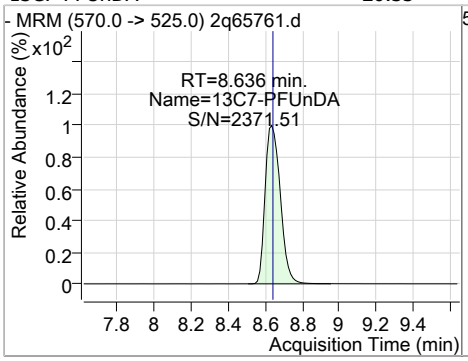
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	2.21	8.60	0.01	1042	599.0 -> 99.0	38.7	4.0	64.0

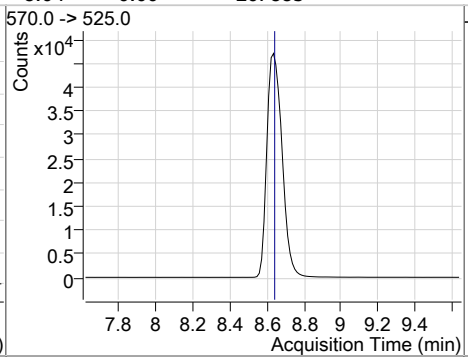


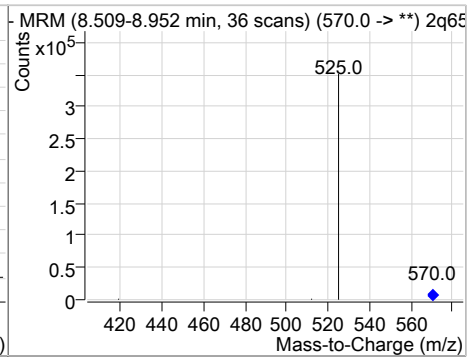




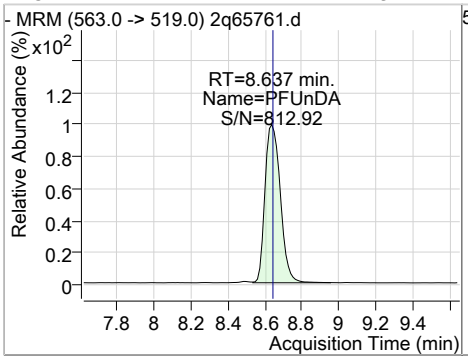
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.33	8.64	0.00	267885				

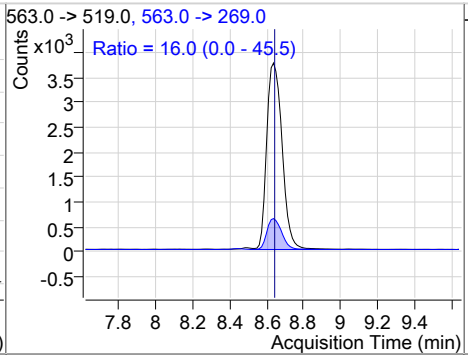


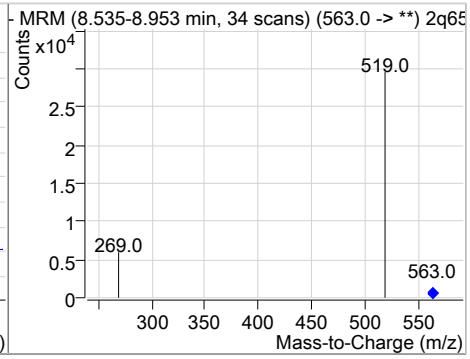




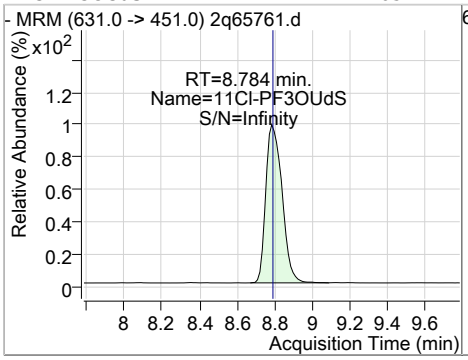
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	1.97	8.64	0.00	21511	563.0 -> 269.0	16.0	0.0	45.5

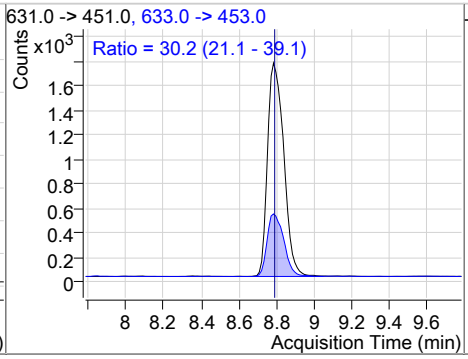


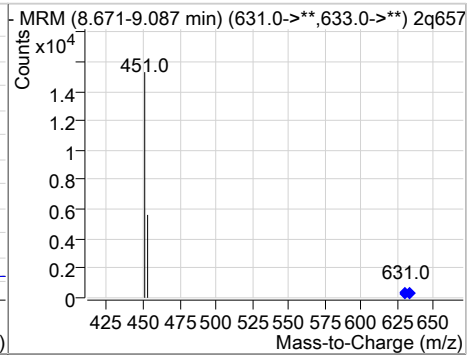




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	2.05	8.78	0.00	10453	633.0 -> 453.0	30.2	21.1	39.1

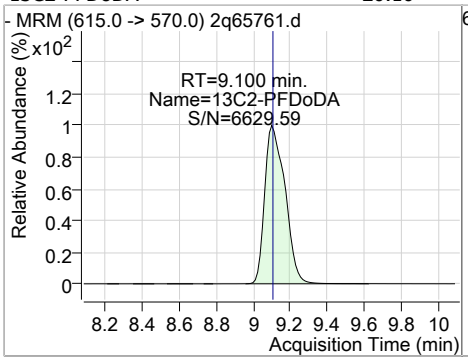


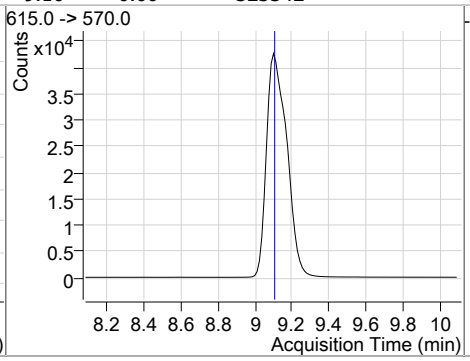


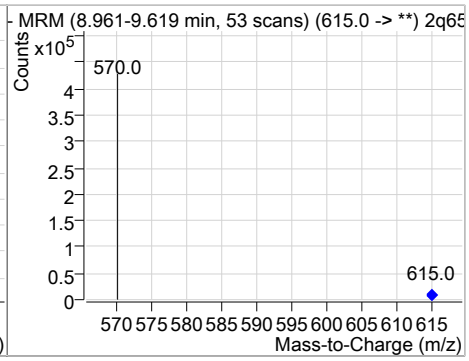


Perfluorinated Compounds by LC/MS/MS

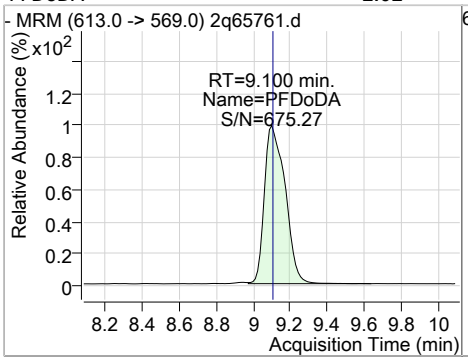
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.10	9.10	0.00	323342				

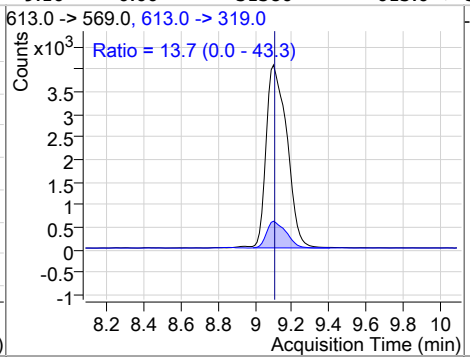


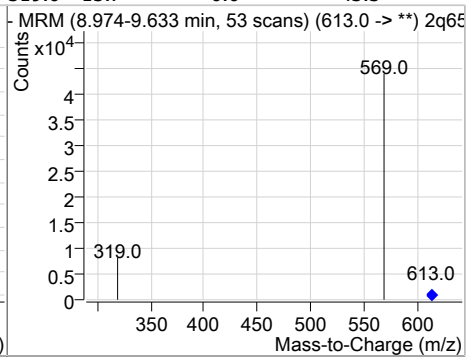




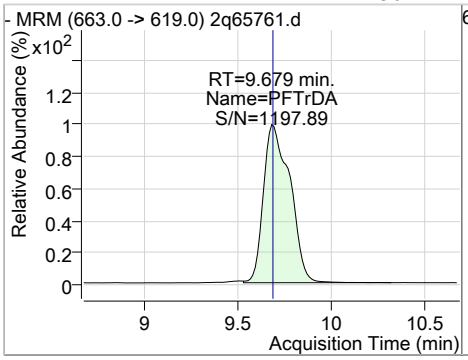
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	2.02	9.10	0.00	31386	613.0 -> 319.0	13.7	0.0	43.3

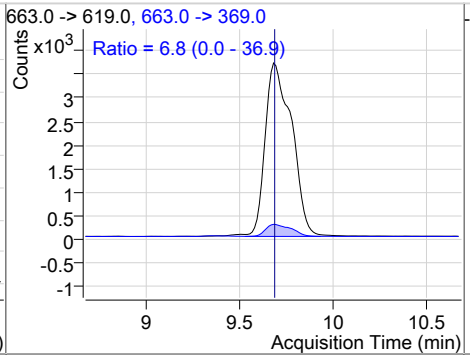


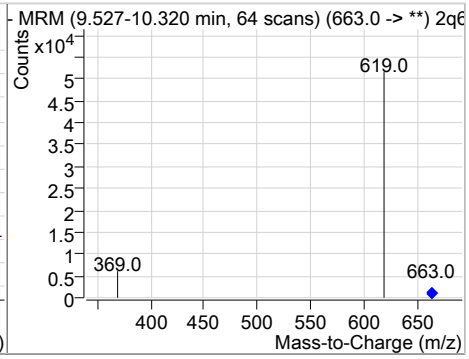




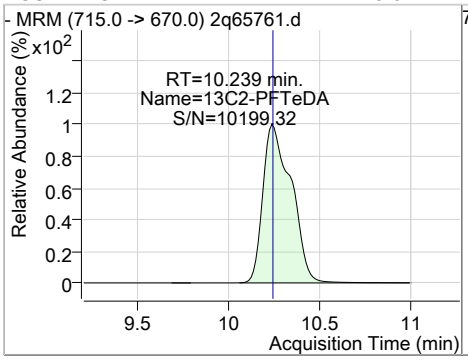
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	1.96	9.68	0.00	36723	663.0 -> 369.0	6.8	0.0	36.9

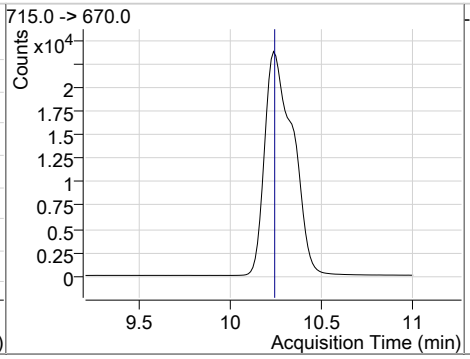


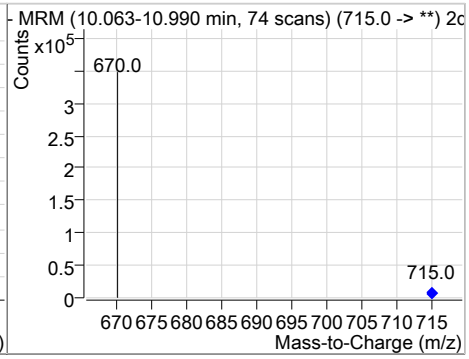




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.04	10.24	0.00	258585				

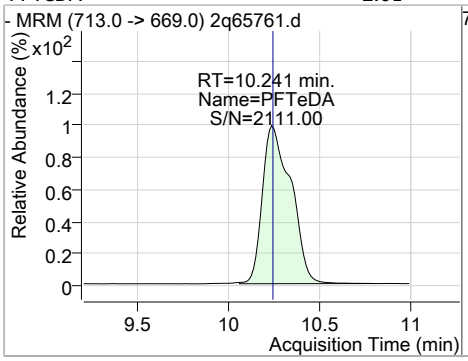


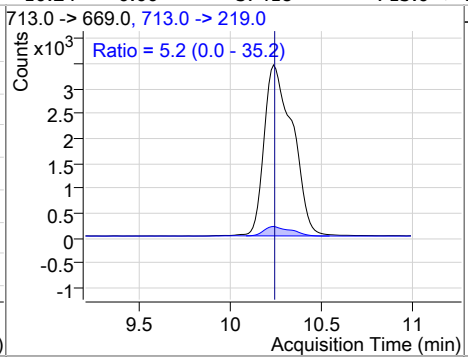


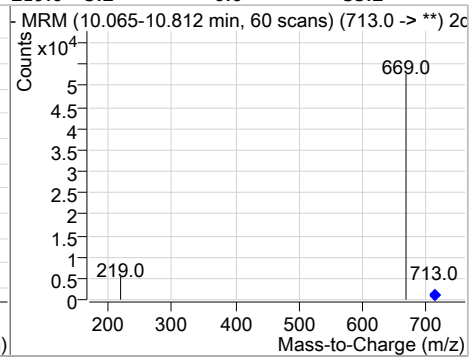


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	2.01	10.24	0.00	37418	713.0 -> 219.0	5.2	0.0	35.2







11.6.4 11

Manual Integration Approval Summary

Sample Number: S2Q956-IC956
Lab FileID: 2Q65761.D
Injection Time: 04/08/21 14:12
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/09/21 09:05 Natasha Gumtie
Supervisor approved: 04/12/21 13:27 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.46	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
EtFOSAA	2991-50-6		8.17	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 04/12/21 13:27

Perfluorinated Compounds by LC/MS/MS

Data File : 2q65762.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/8/2021 2:28:38 PM
Sample Name : ic956-5.0
Vial : P1-A5
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q956.batch.bin
Sample Information : op84308,S2Q956,250,,,1.0,1,water

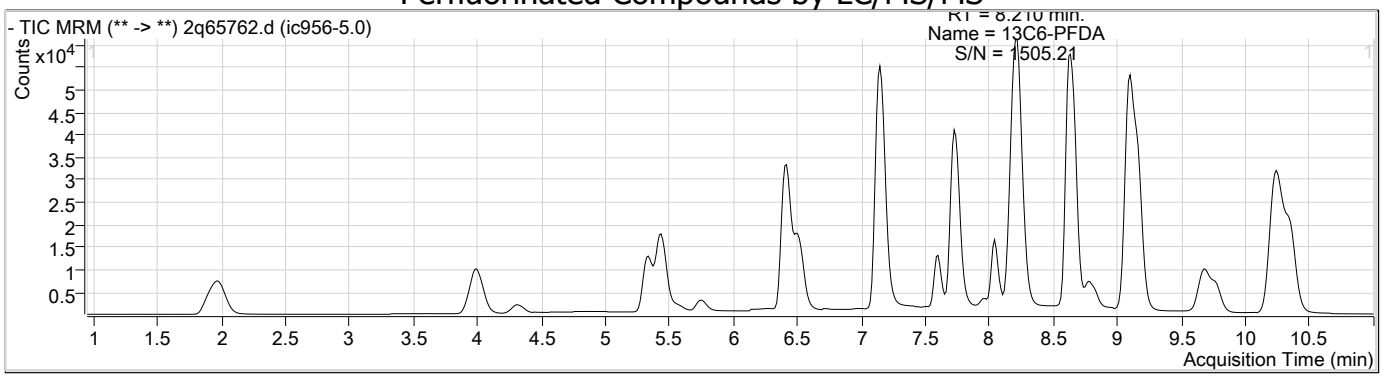
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.155	589.0 -> 419.0	40063	20.00	µg/L	0.000
M4-PFBA	1.964	217.0 -> 172.0	65888	20.00	µg/L	-0.025
M5-PFPeA	3.999	268.0 -> 223.0	54101	20.00	µg/L	-0.013
M5-PFHxA	5.442	318.0 -> 273.0	81486	20.00	µg/L	0.000
M4-PFHpA	6.408	367.0 -> 322.0	118376	20.00	µg/L	-0.013
M8-PFOA	7.151	421.0 -> 376.0	137041	20.00	µg/L	0.000
M9-PFNA	7.732	472.0 -> 427.0	140634	20.00	µg/L	0.000
M6-PFDA	8.210	519.0 -> 474.0	183253	20.00	µg/L	0.000
M7-PFUnDA	8.636	570.0 -> 525.0	262374	20.00	µg/L	0.000
M2-PFDoDA	9.100	615.0 -> 570.0	315934	20.00	µg/L	0.000
M2-PFTeDA	10.239	715.0 -> 670.0	249327	20.00	µg/L	0.000
M8-FOSA	7.604	506.0 -> 78.0	38379	20.00	µg/L	0.000
M3-PFBS	4.317	302.0 -> 99.0	6546	20.00	µg/L	-0.013
M3-PFHxS	6.456	402.0 -> 99.0	7378	20.00	µg/L	0.000
M8-PFOS	7.718	507.0 -> 99.0	10489	20.00	µg/L	0.000
M2-4:2FTS	5.335	329.0 -> 309.0	54054	20.00	µg/L	0.000
M2-6:2FTS	7.137	429.0 -> 409.0	76346	20.00	µg/L	0.000
M2-8:2FTS	8.247	529.0 -> 509.0	66739	20.00	µg/L	0.000
M3-MeFOSAA	8.041	573.0 -> 419.0	46236	20.00	µg/L	0.000
M3-HFPO-DA	5.759	287.0 -> 169.0	6339	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.335	329.0 -> 309.0	54054	18.57	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.9%		
13C2-6:2FTS	7.137	429.0 -> 409.0	76346	18.76	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.8%		
13C2-8:2FTS	8.247	529.0 -> 509.0	66739	18.71	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.5%		
13C2-PFDoDA	9.100	615.0 -> 570.0	315934	19.64	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%		
13C2-PFTeDA	10.239	715.0 -> 670.0	249327	19.32	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.6%		
13C3-PFBS	4.317	302.0 -> 99.0	6546	19.38	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.9%		
13C3-PFHxS	6.456	402.0 -> 99.0	7378	19.65	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.3%		
13C4-PFBA	1.964	217.0 -> 172.0	65888	19.62	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.1%		
13C4-PFHpA	6.408	367.0 -> 322.0	118376	19.45	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.3%		
d5-EtFOSAA	8.155	589.0 -> 419.0	40063	19.71	ng/ml	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.5%		
13C5-PFHxA	5.442	318.0 -> 273.0	81486	19.56	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.8%		
13C5-PFPeA	3.999	268.0 -> 223.0	54101	19.61	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%		

Perfluorinated Compounds by LC/MS/MS

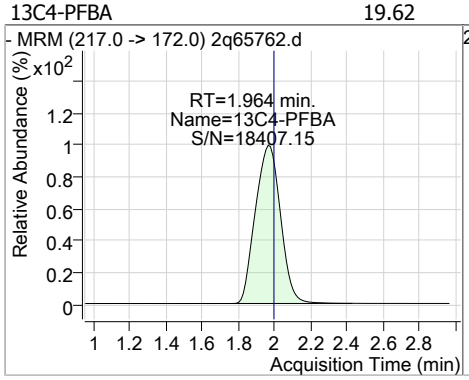
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	183253	19.78	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.9%			
13C7-PFUnDA	8.636	570.0 -> 525.0	262374	19.91	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.5%			
13C8-FOSA	7.604	506.0 -> 78.0	38379	19.97	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.9%			
13C8-PFOA	7.151	421.0 -> 376.0	137041	19.65	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%			
13C8-PFOS	7.718	507.0 -> 99.0	10489	19.75	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%			
13C9-PFNA	7.732	472.0 -> 427.0	140634	19.77	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.9%			
d3-MeFOSAA	8.041	573.0 -> 419.0	46236	19.49	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.5%			
13C3-HFPO-DA	5.759	287.0 -> 169.0	6339	19.55	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.7%			
Target Compounds							QValue
4:2FTS	5.337	327.0 -> 307.0	15096	5.30	µg/L		100
6:2FTS	7.138	427.0 -> 407.0	21310	5.28	µg/L		100
8:2FTS	8.247	527.0 -> 507.0	18067	5.16	µg/L		96
EtFOSAA	8.168	584.0 -> 419.0	9066	4.99	µg/L	m	98
FOSA	7.605	498.0 -> 78.0	9610	5.03	µg/L		98
MeFOSAA	8.041	570.0 -> 419.0	10046	5.00	µg/L	m	90
PFBA	1.971	213.0 -> 169.0	5677	5.11	µg/L		100
PFBS	4.307	299.0 -> 80.0	5207	5.11	µg/L		99
PFDA	8.211	513.0 -> 469.0	43981	5.01	µg/L		99
PFDoDA	9.100	613.0 -> 569.0	75670	4.99	µg/L		100
PFDS	8.583	599.0 -> 80.0	2314	5.02	µg/L		95
PFHpA	6.408	363.0 -> 319.0	50572	5.05	µg/L		99
PFHpS	7.149	449.0 -> 80.0	4758	5.20	µg/L		98
PFHxA	5.443	313.0 -> 269.0	14161	4.97	µg/L		99
PFHxS	6.457	399.0 -> 80.0	5388	5.34	µg/L	m	96
PFNA	7.733	463.0 -> 419.0	39951	5.00	µg/L		99
PFNS	8.170	549.0 -> 80.0	3853	5.06	µg/L		99
PFOA	7.152	413.0 -> 369.0	41758	5.12	µg/L		100
PFOS	7.718	499.0 -> 80.0	5241	5.23	µg/L	m	84
PFPeA	4.002	263.0 -> 219.0	22264	5.04	µg/L		100
PFPeS	5.577	349.0 -> 80.0	3922	5.07	µg/L		95
PFTeDA	10.241	713.0 -> 669.0	91137	5.07	µg/L		100
PFTrDA	9.679	663.0 -> 619.0	90128	4.92	µg/L		100
PFUnDA	8.637	563.0 -> 519.0	53331	4.98	µg/L		100
11Cl-PF3OUdS	8.784	631.0 -> 451.0	24520	4.92	µg/L		95
9Cl-PF3ONS	7.968	531.0 -> 351.0	5115	4.88	µg/L		99
ADONA	6.521	377.0 -> 251.0	59847	4.87	µg/L		100
HFPO-DA	5.754	329.0 -> 169.0	6155	5.20	µg/L		96

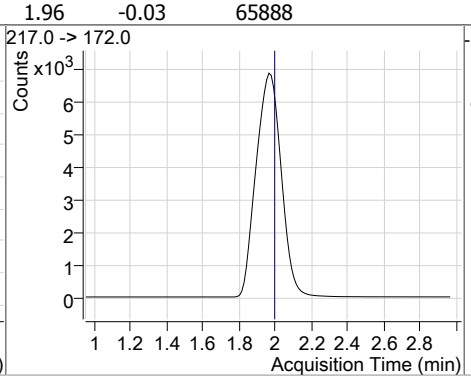
 # = Qualifier out of range, m = manually integrated, + = Area summed

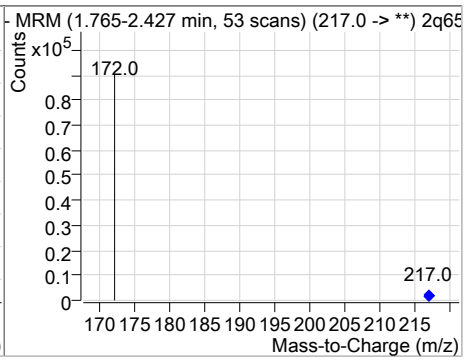
Perfluorinated Compounds by LC/MS/MS



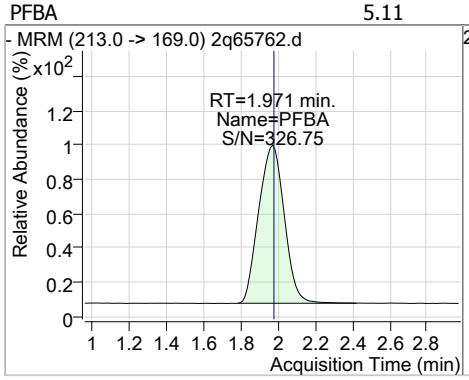
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.62	1.96	-0.03	65888				

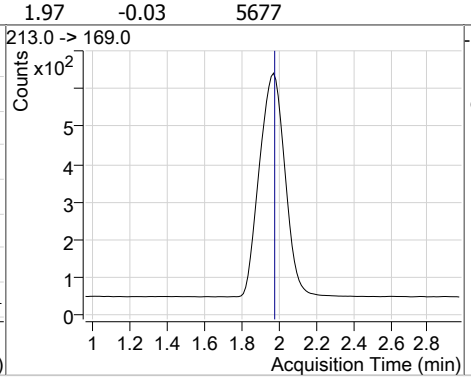


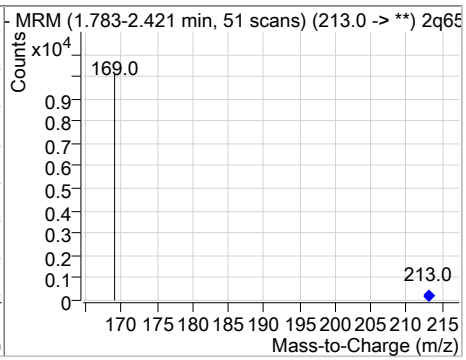




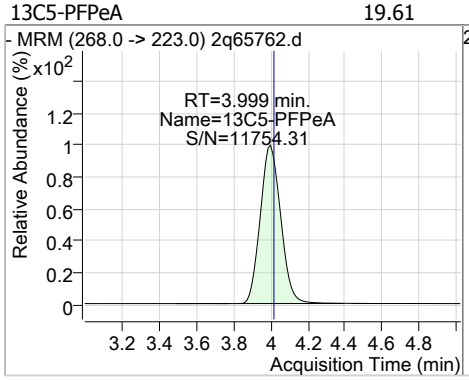
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	5.11	1.97	-0.03	5677				

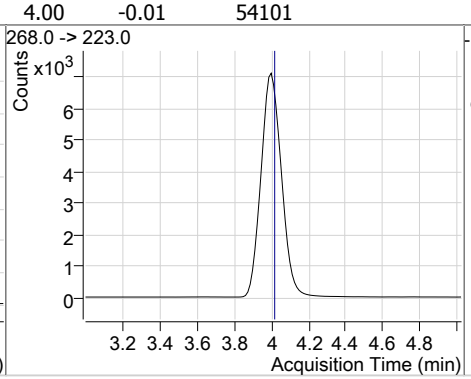


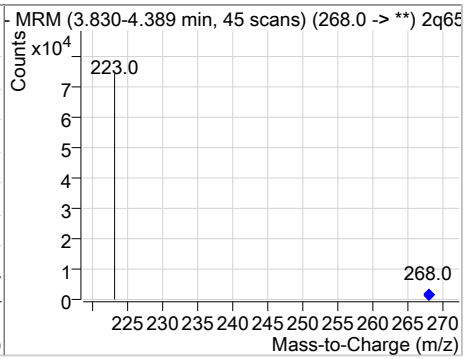




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.61	4.00	-0.01	54101				

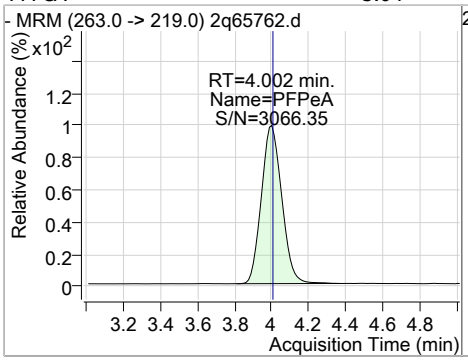


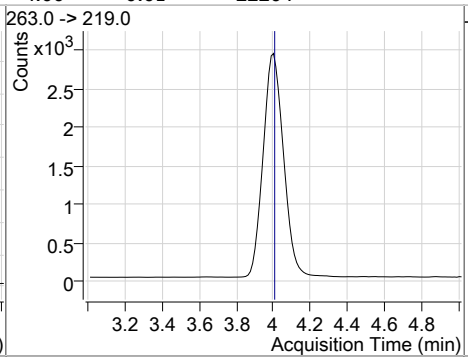


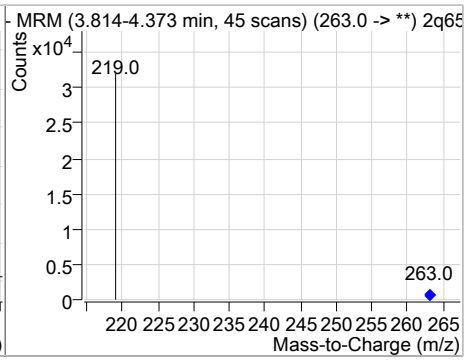


Perfluorinated Compounds by LC/MS/MS

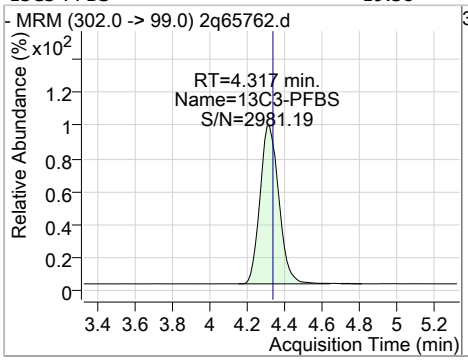
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	5.04	4.00	-0.01	22264				

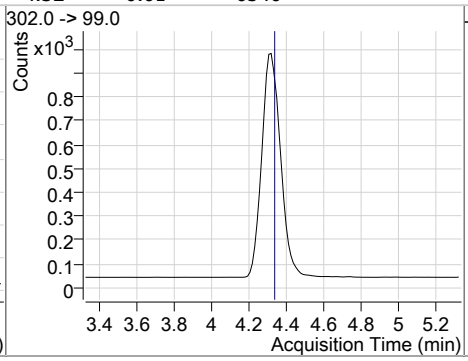


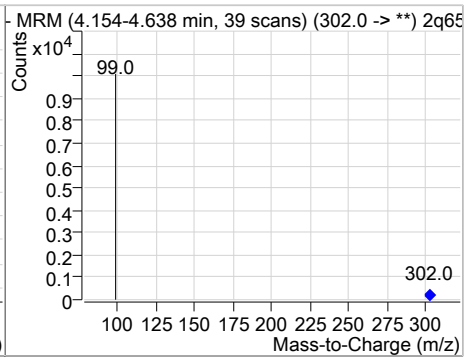




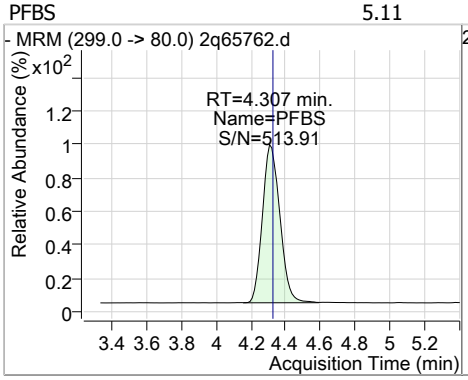
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.38	4.32	-0.01	6546				

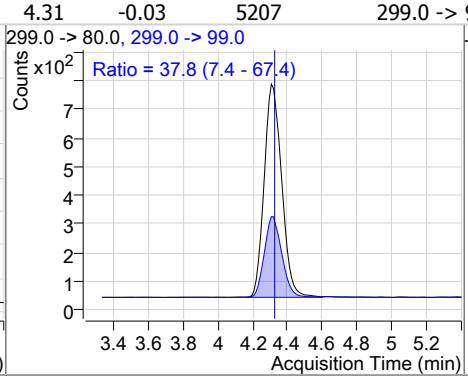


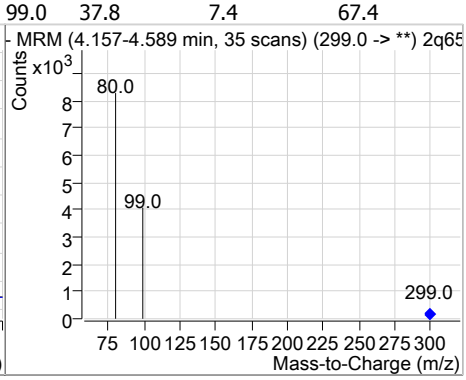




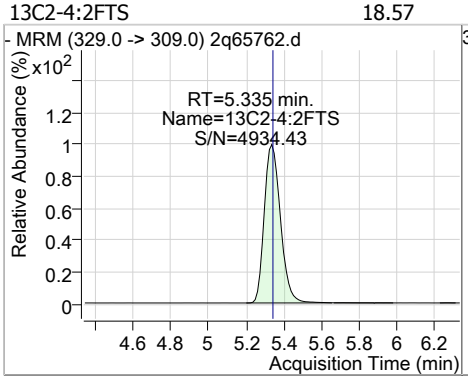
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	5.11	4.31	-0.03	5207	299.0 -> 99.0	37.8	7.4	67.4

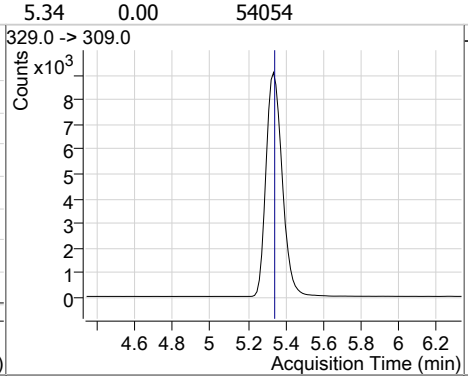


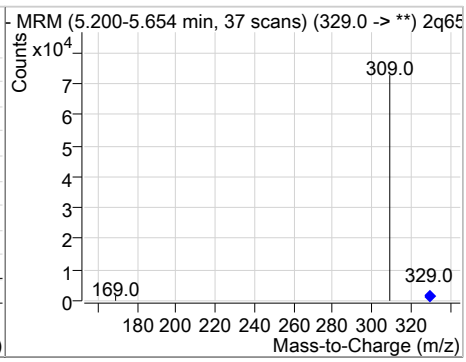




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.57	5.34	0.00	54054				

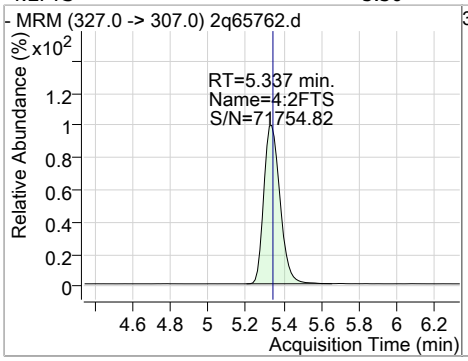


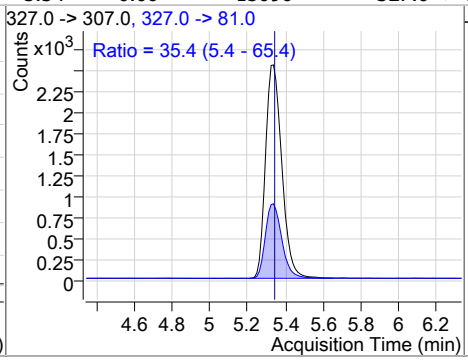


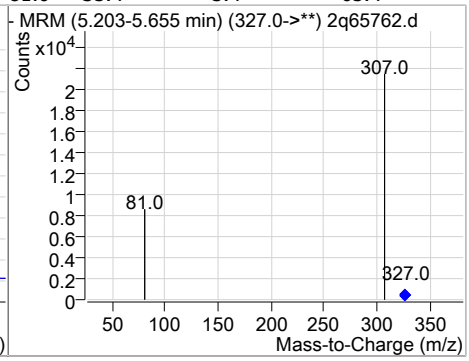


Perfluorinated Compounds by LC/MS/MS

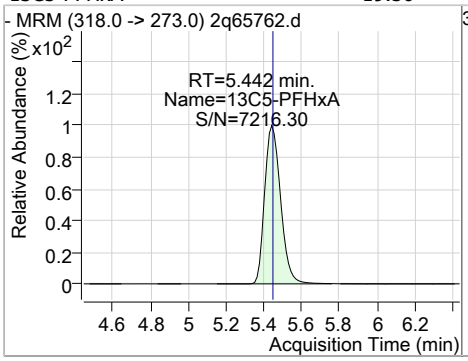
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	5.30	5.34	0.00	15096	327.0 -> 81.0	35.4	5.4	65.4

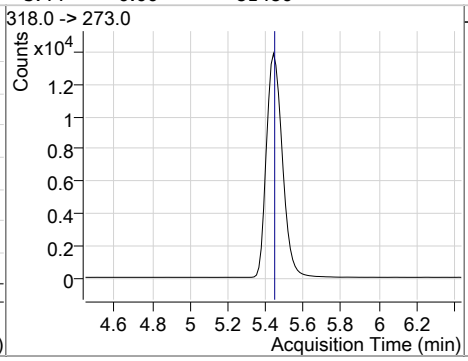


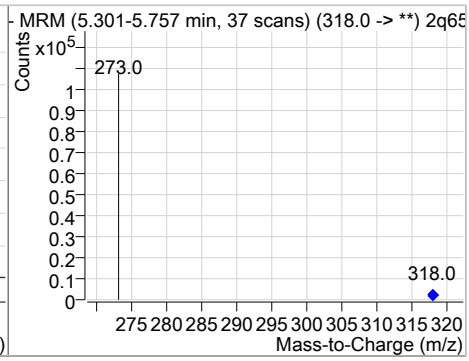




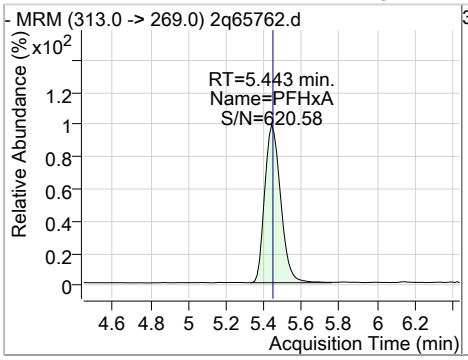
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.56	5.44	0.00	81486				

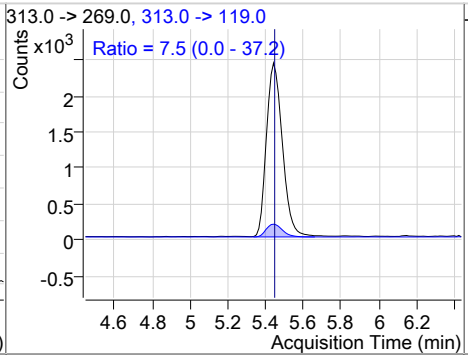


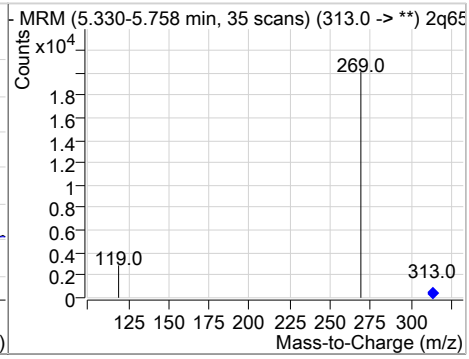




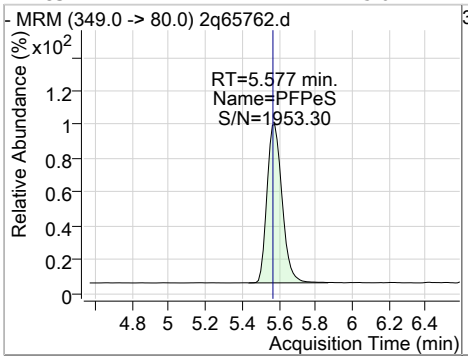
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	4.97	5.44	0.00	14161	313.0 -> 119.0	7.5	0.0	37.2

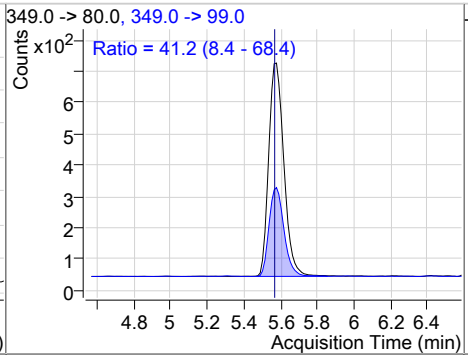


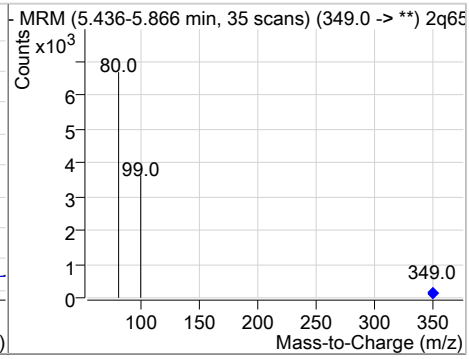




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	5.07	5.58	0.00	3922	349.0 -> 99.0	41.2	8.4	68.4

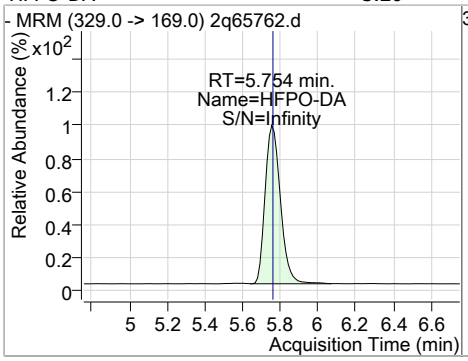


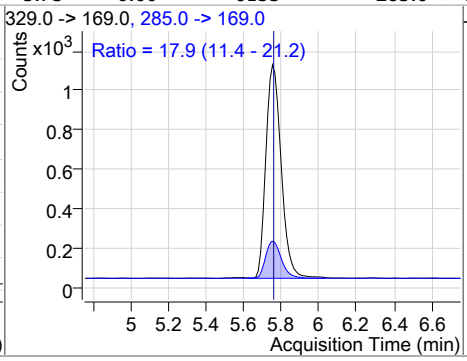


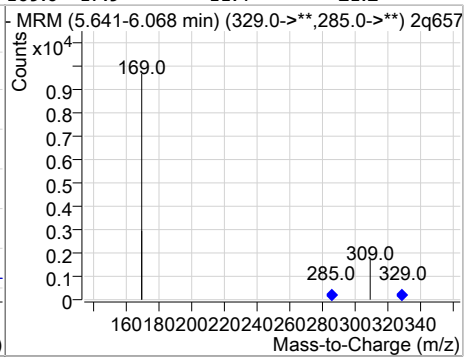


Perfluorinated Compounds by LC/MS/MS

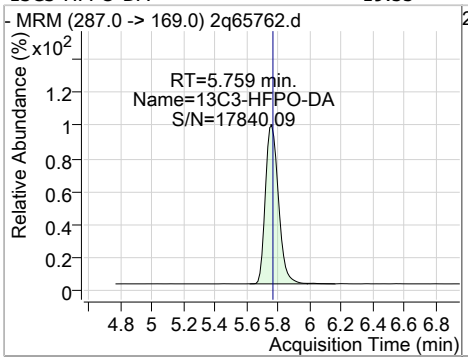
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	5.20	5.75	0.00	6155	285.0 -> 169.0	17.9	11.4	21.2

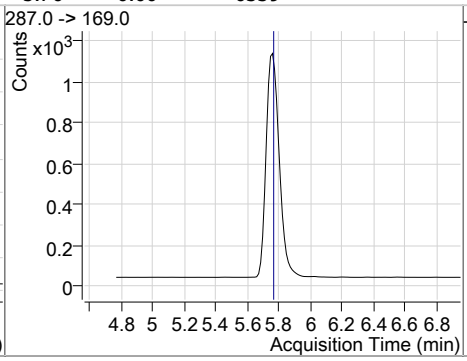


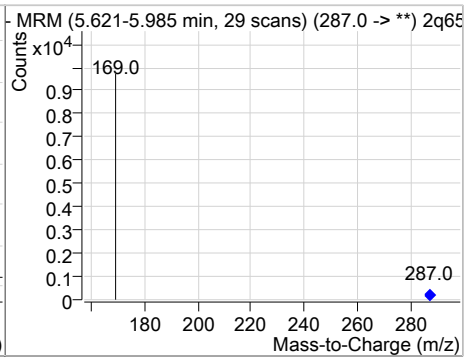




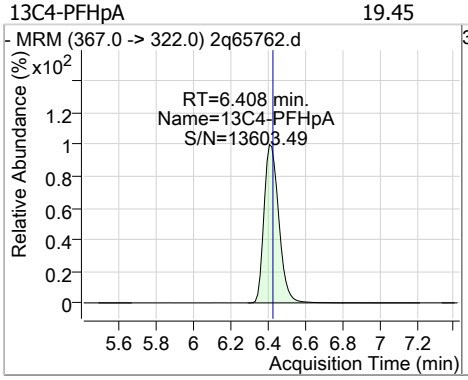
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.55	5.76	0.00	6339				

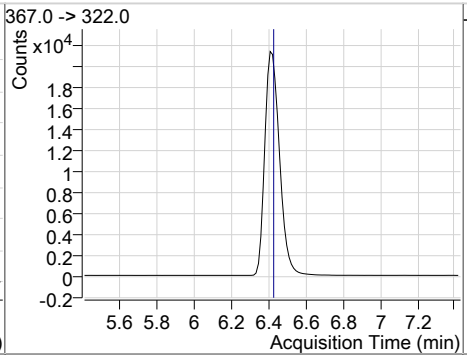


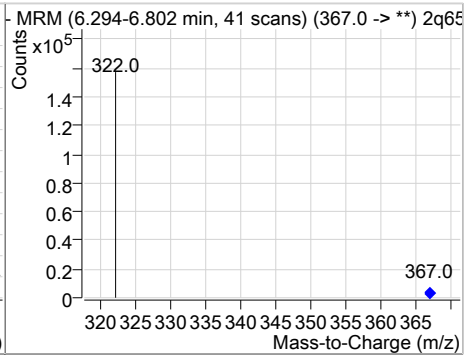




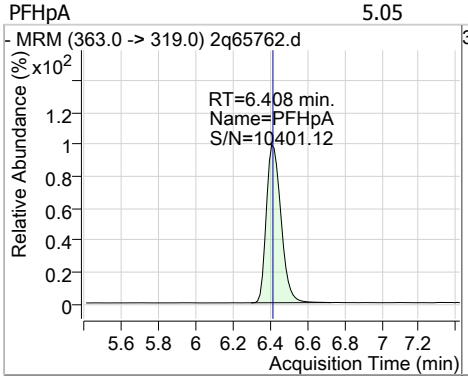
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.45	6.41	-0.01	118376				

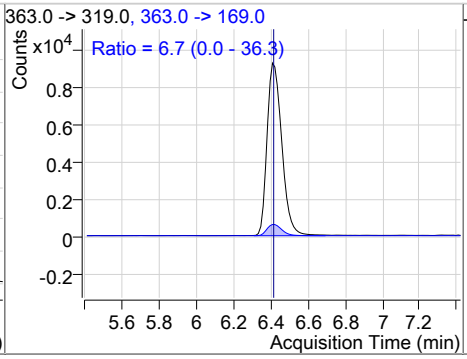


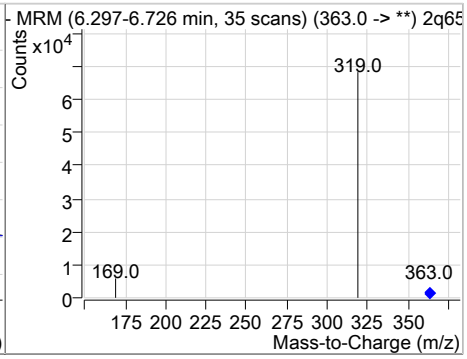




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	5.05	6.41	-0.01	50572	363.0 -> 169.0	6.7	0.0	36.3

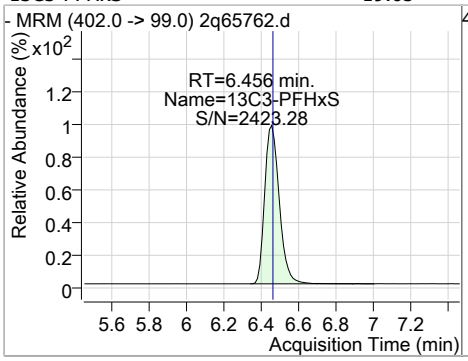


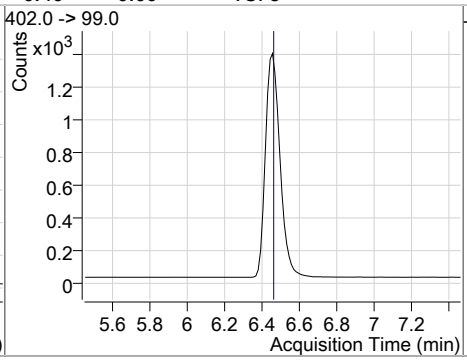


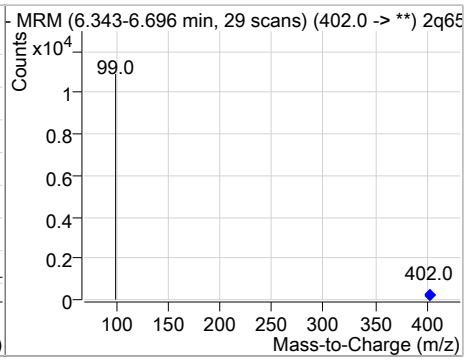


Perfluorinated Compounds by LC/MS/MS

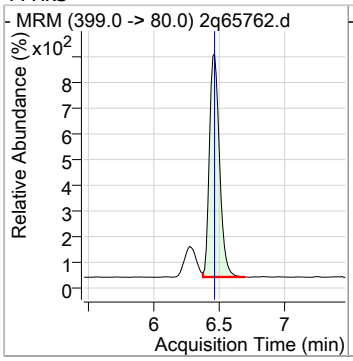
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.65	6.46	0.00	7378				

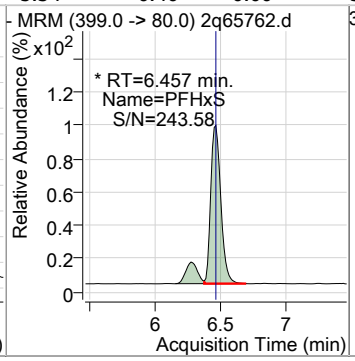


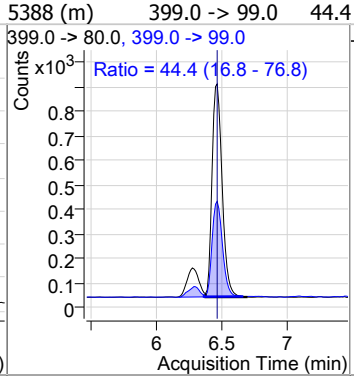


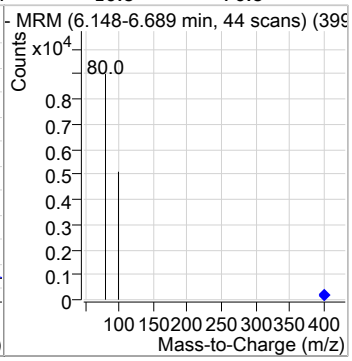


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	5.34	6.46	0.00	5388 (m)	399.0 -> 99.0	44.4	16.8	76.8

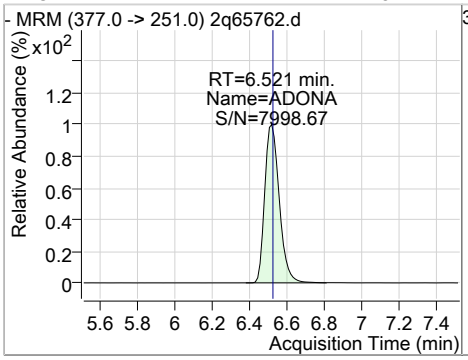


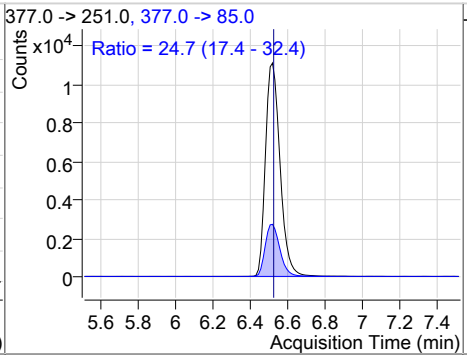


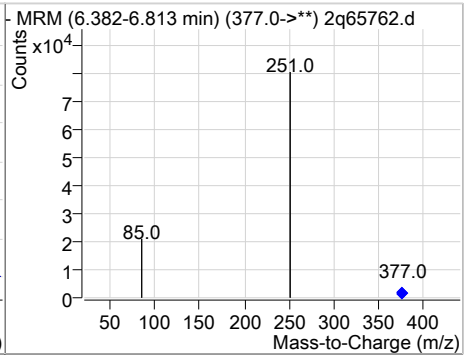




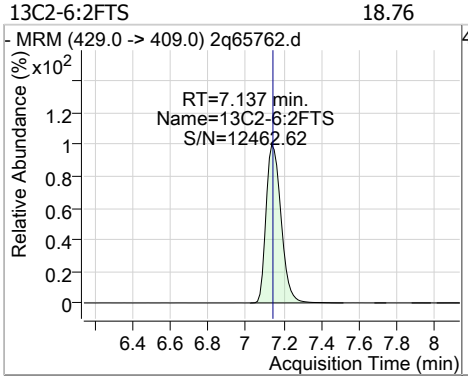
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	4.87	6.52	0.00	59847	377.0 -> 85.0	24.7	17.4	32.4

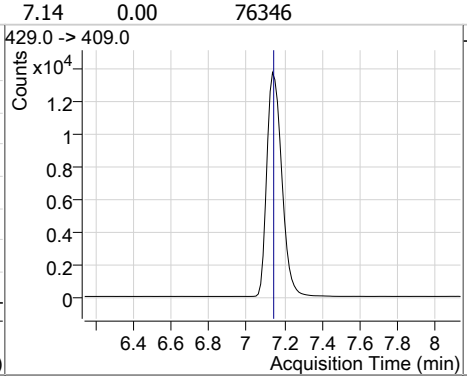


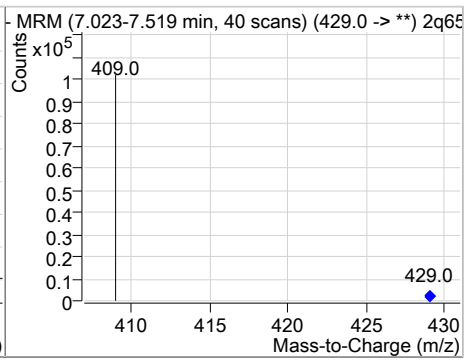




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.76	7.14	0.00	76346				

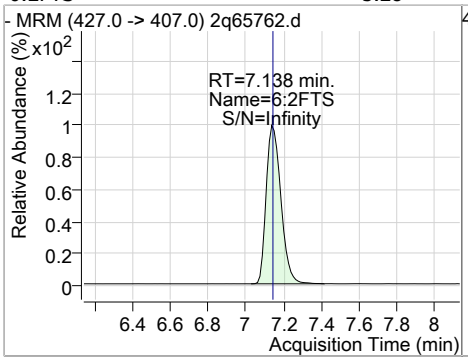


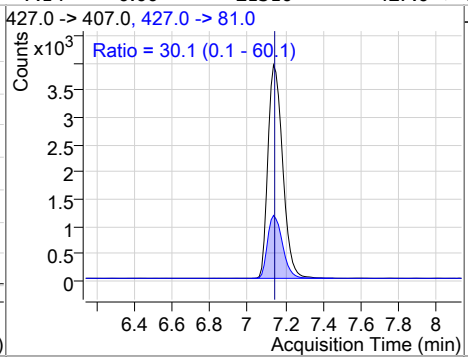


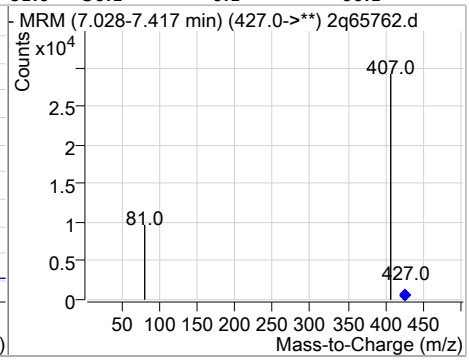


Perfluorinated Compounds by LC/MS/MS

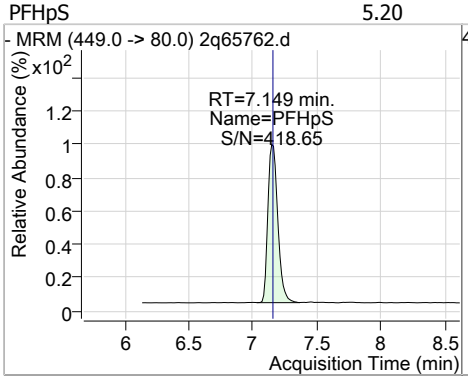
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	5.28	7.14	0.00	21310	427.0 -> 81.0	30.1	0.1	60.1

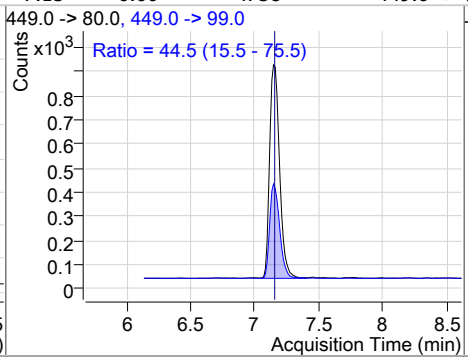


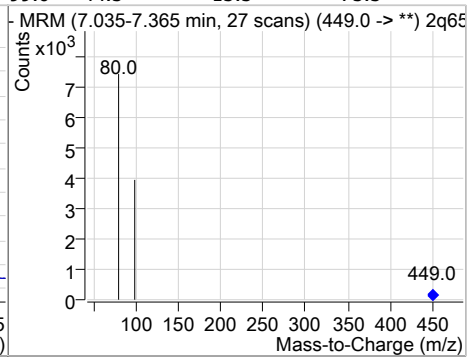




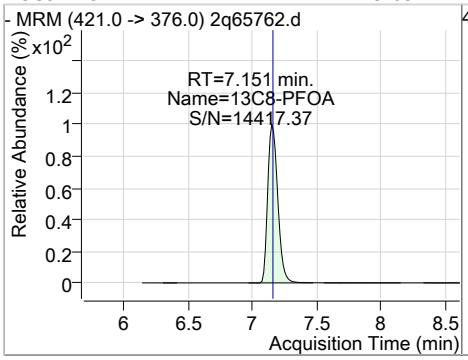
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	5.20	7.15	0.00	4758	449.0 -> 99.0	44.5	15.5	75.5

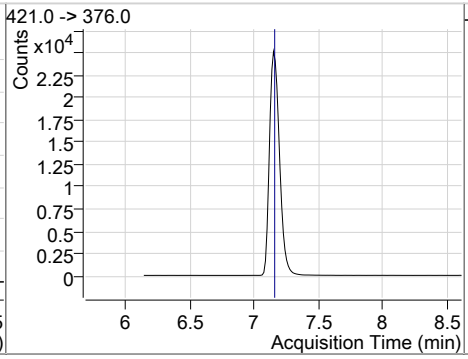


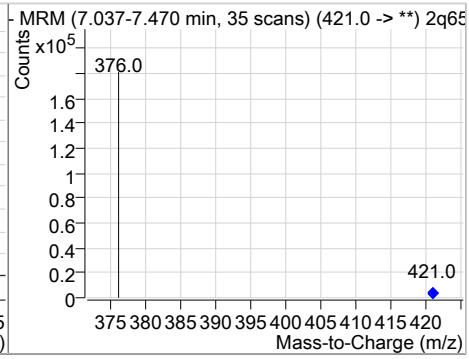




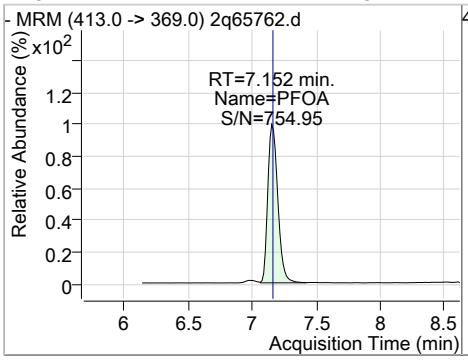
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.65	7.15	0.00	137041				

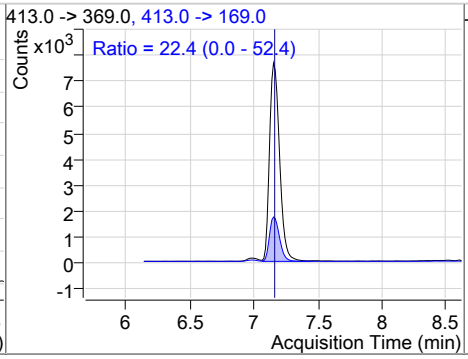


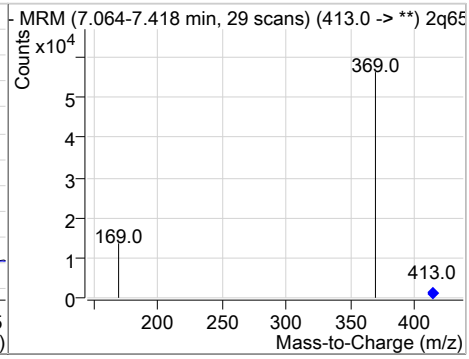




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	5.12	7.15	0.00	41758	413.0 -> 169.0	22.4	0.0	52.4

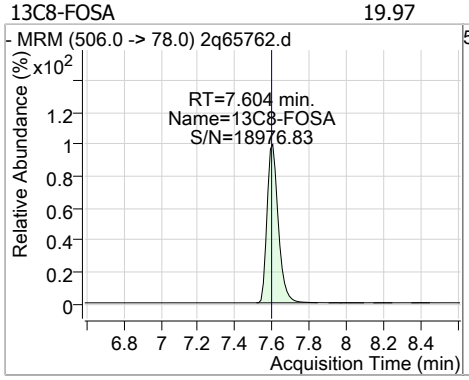


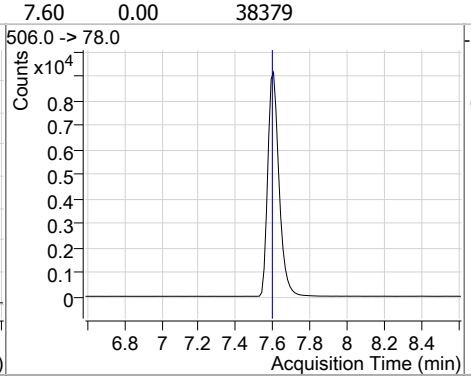


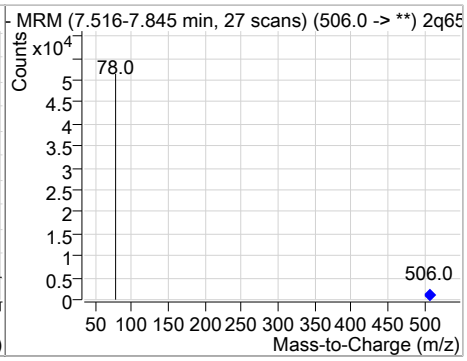


Perfluorinated Compounds by LC/MS/MS

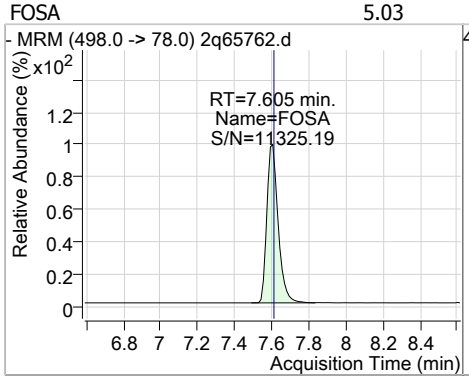
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	19.97	7.60	0.00	38379				

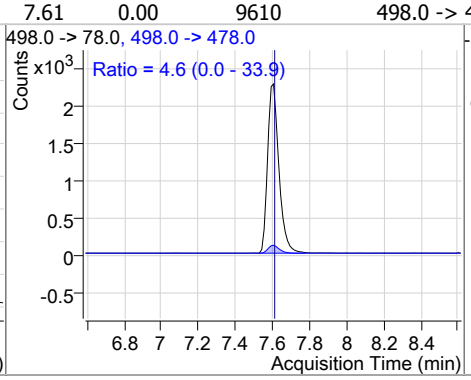


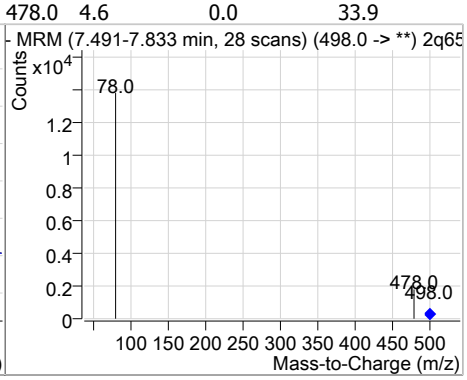




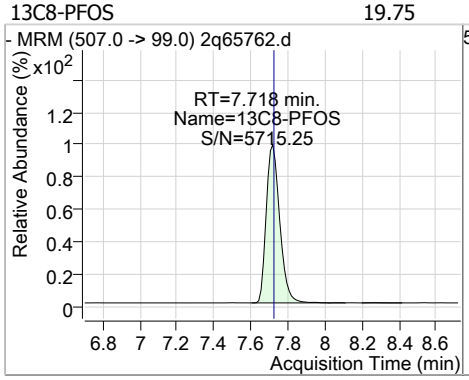
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	5.03	7.61	0.00	9610	498.0 -> 478.0	4.6	0.0	33.9

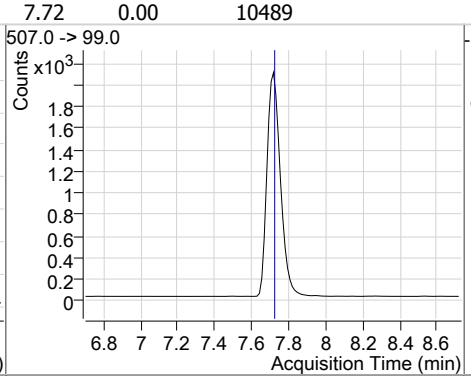


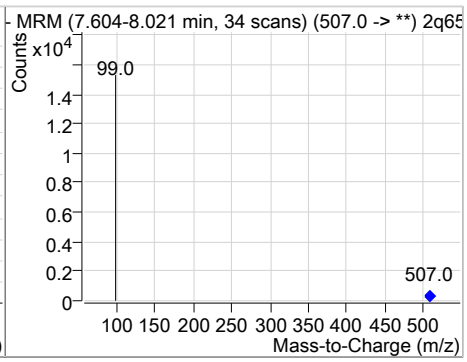




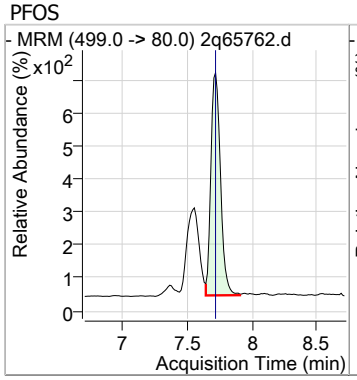
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.75	7.72	0.00	10489				

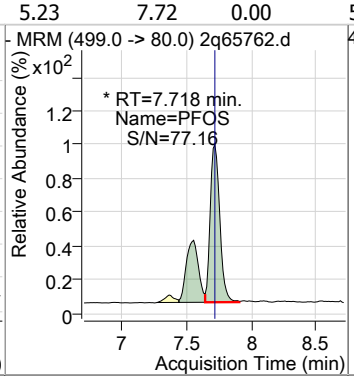


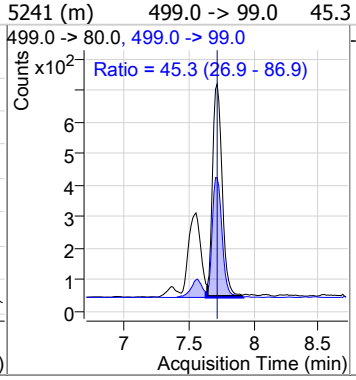


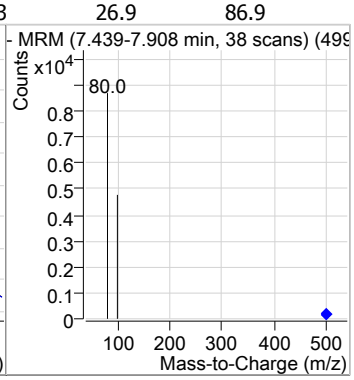


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	5.23	7.72	0.00	5241 (m)	499.0 -> 99.0	45.3	26.9	86.9



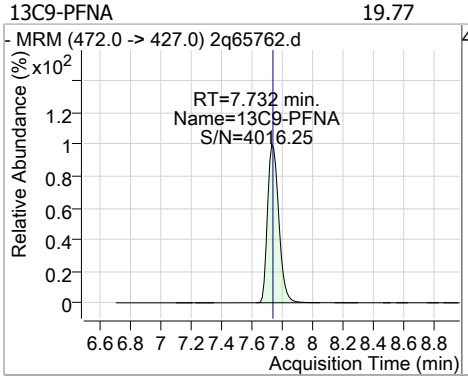


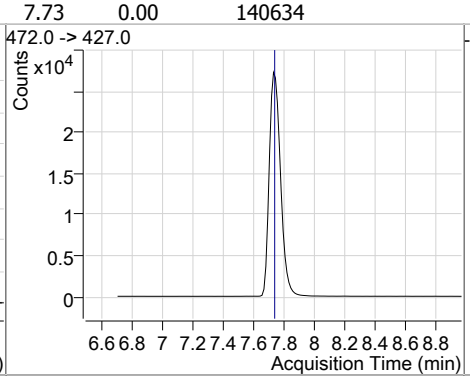


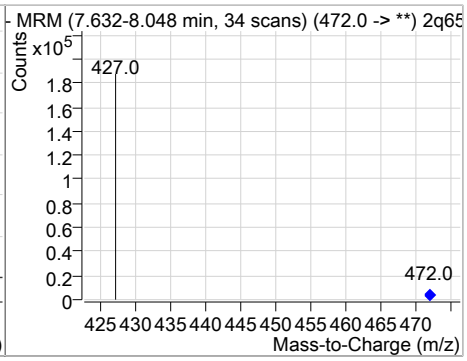


Perfluorinated Compounds by LC/MS/MS

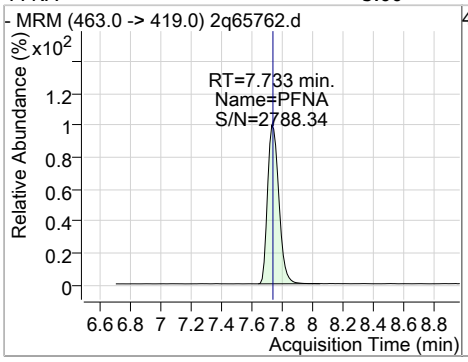
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.77	7.73	0.00	140634				

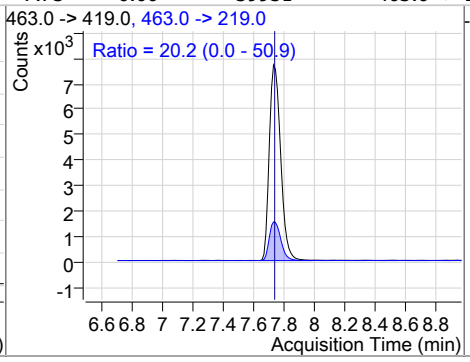


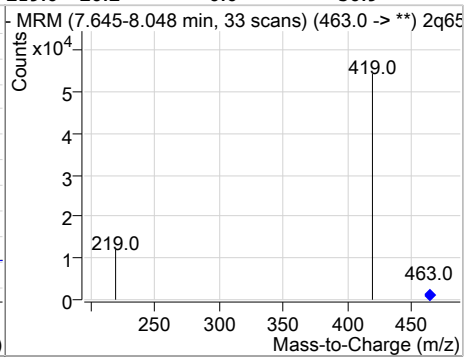




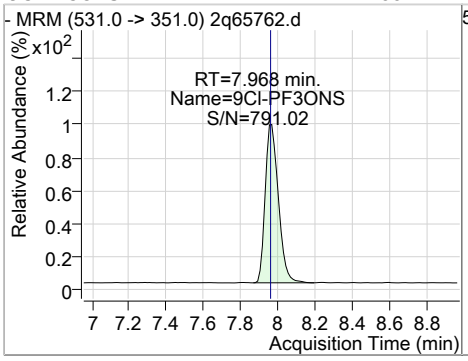
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	5.00	7.73	0.00	39951	463.0 -> 219.0	20.2	0.0	50.9

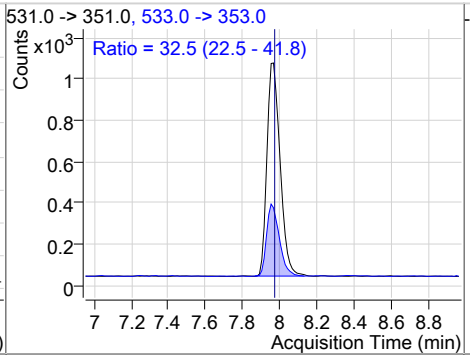


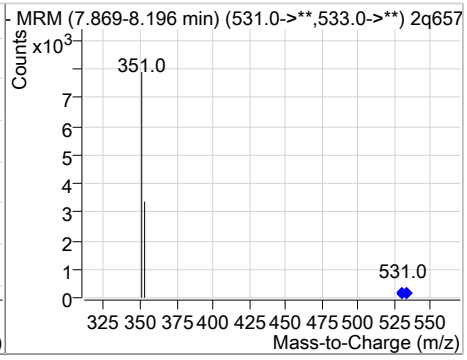




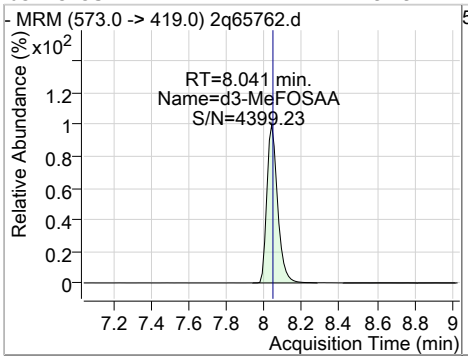
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	4.88	7.97	0.00	5115	533.0 -> 353.0	32.5	22.5	41.8

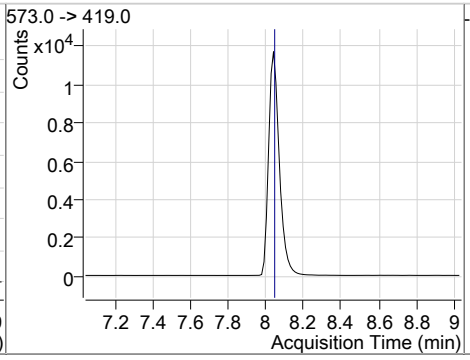


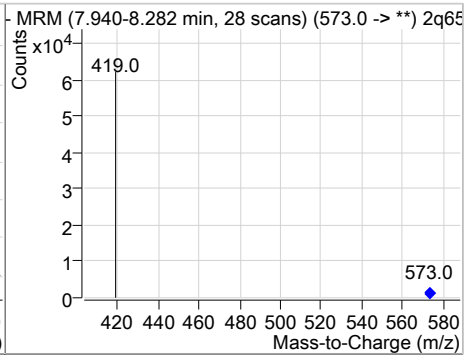




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.49	8.04	0.00	46236				

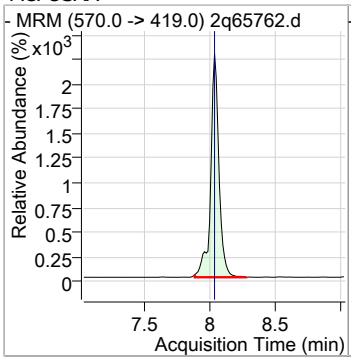


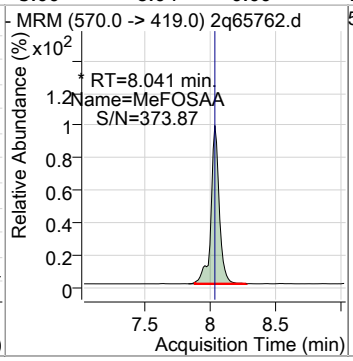


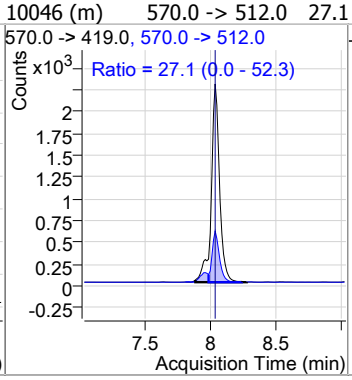


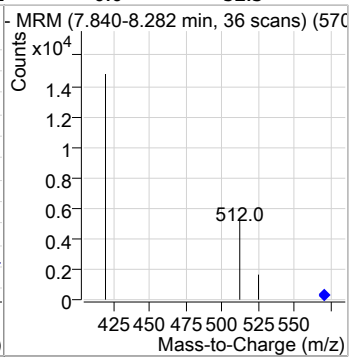
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	5.00	8.04	0.00	10046 (m)	570.0 -> 512.0	27.1	0.0	52.3

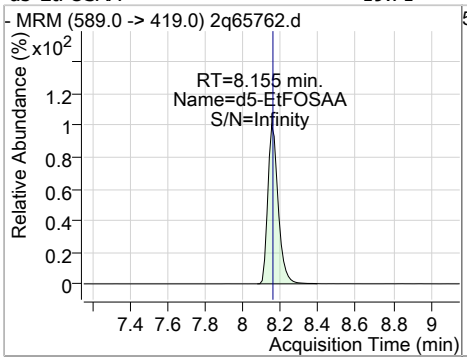


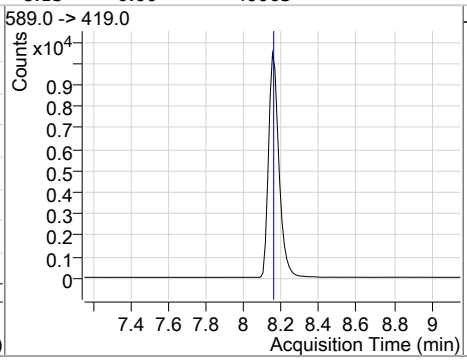


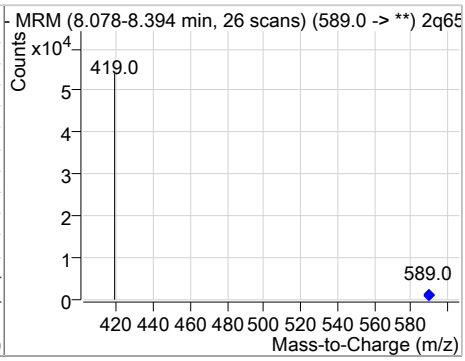




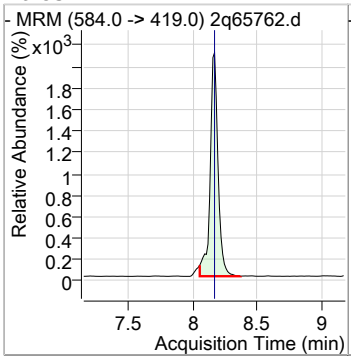
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.71	8.15	0.00	40063				

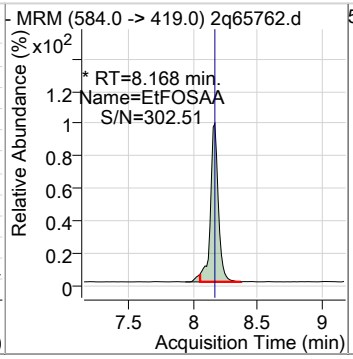


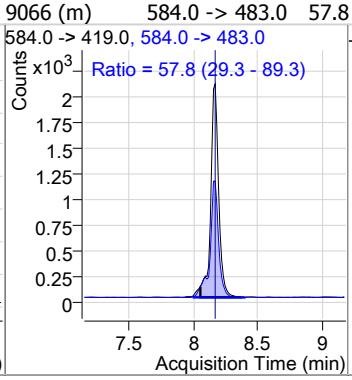


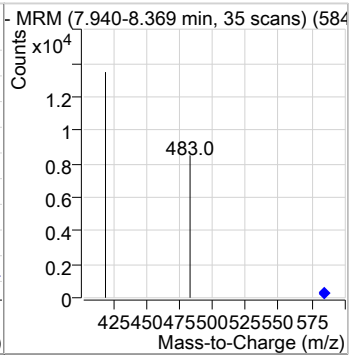


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	4.99	8.17	0.00	9066 (m)	584.0 -> 483.0	57.8	29.3	89.3

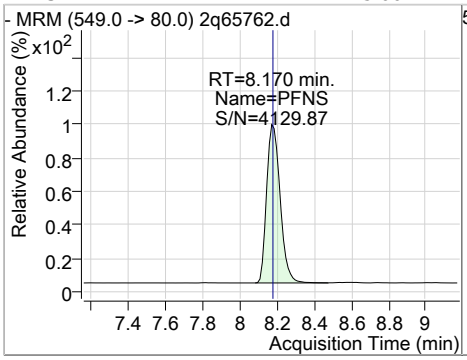


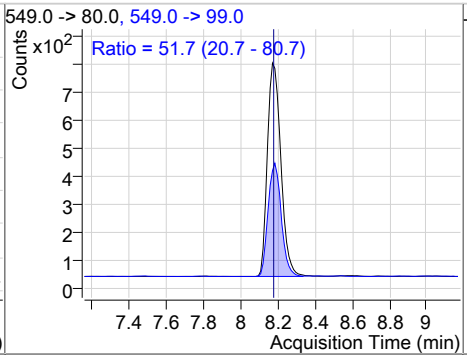


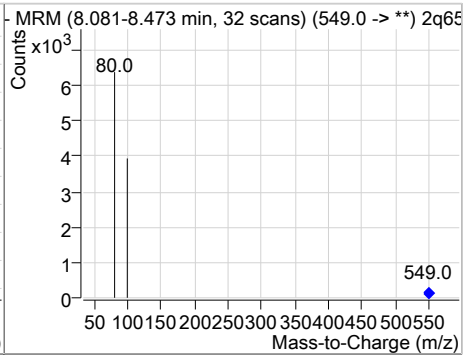




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	5.06	8.17	0.00	3853	549.0 -> 99.0	51.7	20.7	80.7

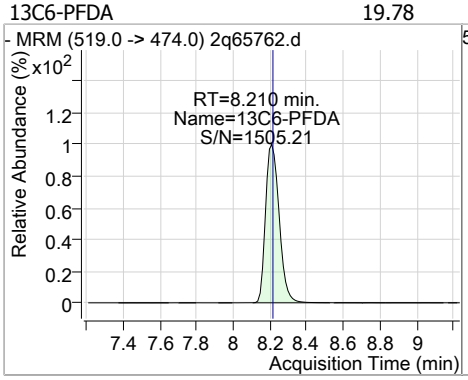


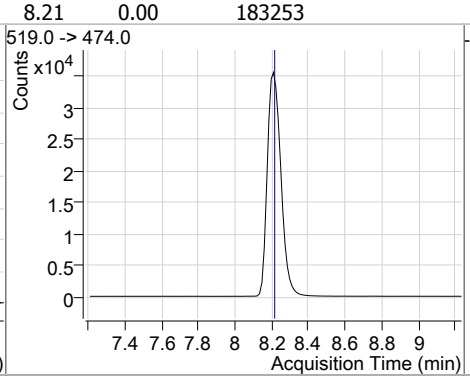


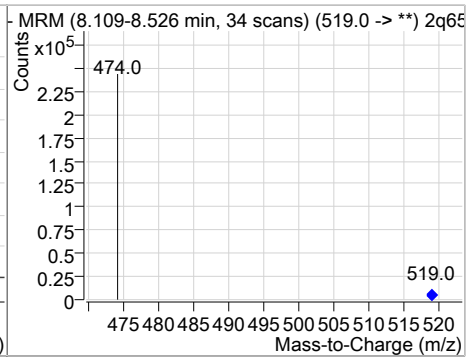


Perfluorinated Compounds by LC/MS/MS

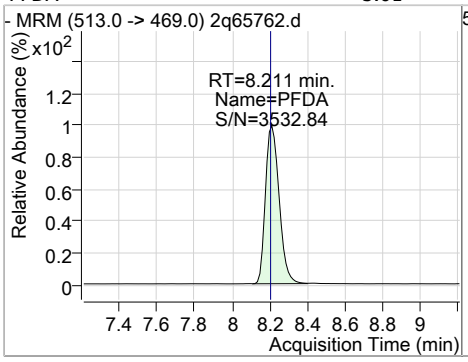
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.78	8.21	0.00	183253				

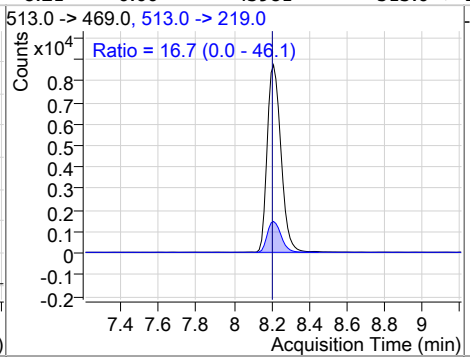


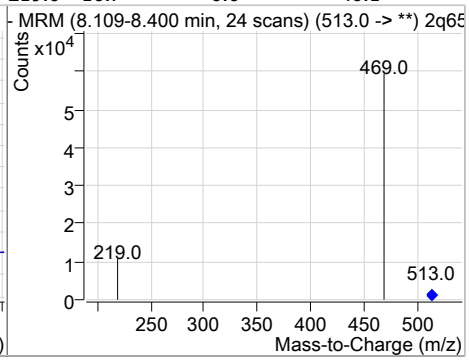




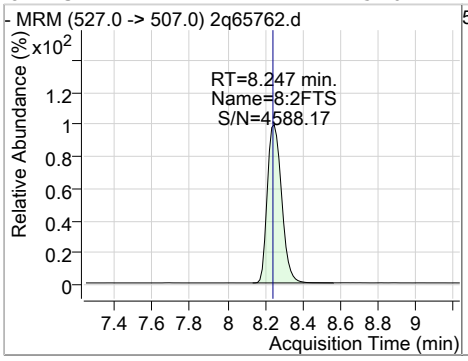
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	5.01	8.21	0.00	43981	513.0 -> 219.0	16.7	0.0	46.1

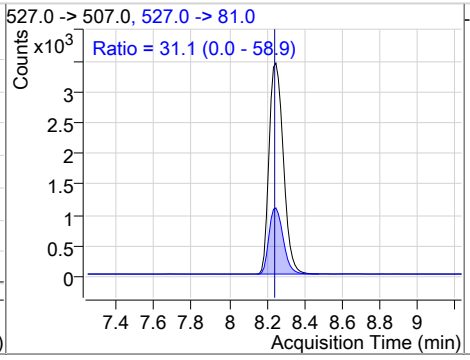


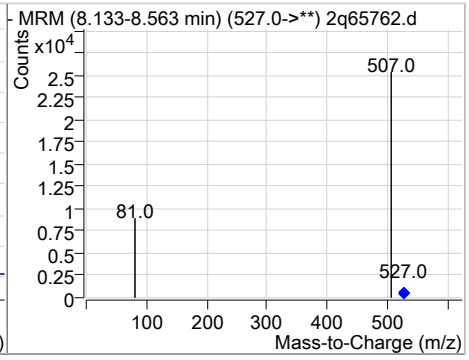




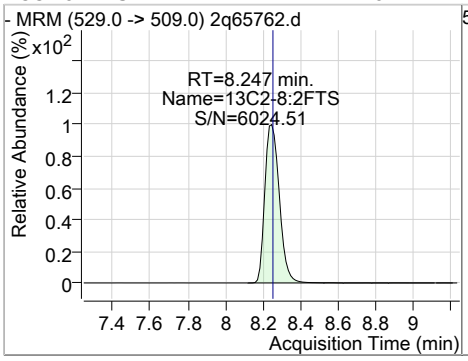
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	5.16	8.25	0.01	18067	527.0 -> 81.0	31.1	0.0	58.9

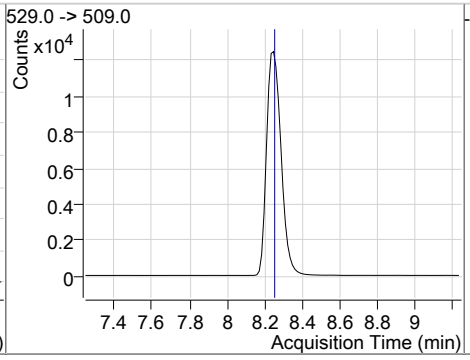


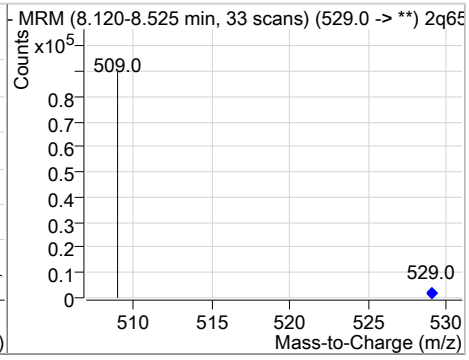




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.71	8.25	0.00	66739				

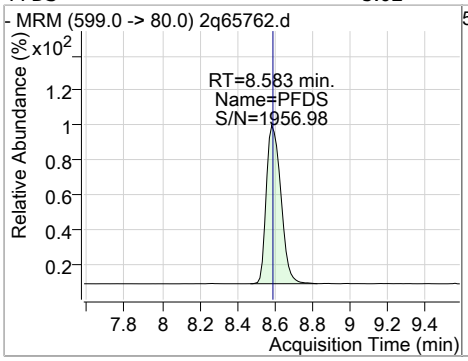


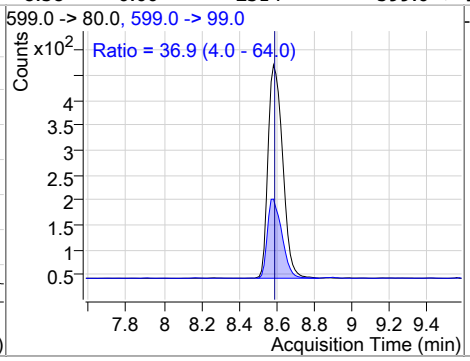


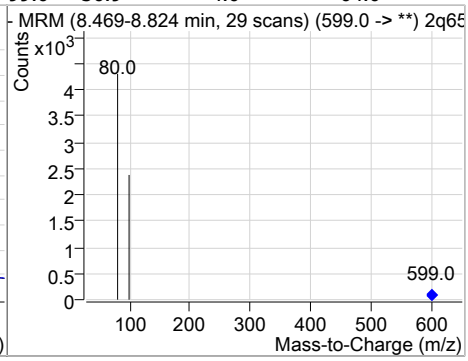


Perfluorinated Compounds by LC/MS/MS

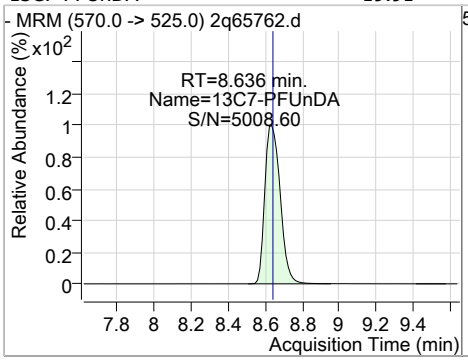
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	5.02	8.58	0.00	2314	599.0 -> 99.0	36.9	4.0	64.0

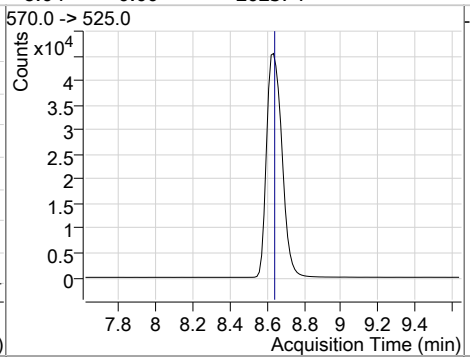


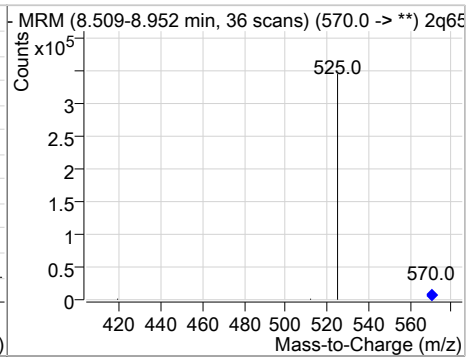




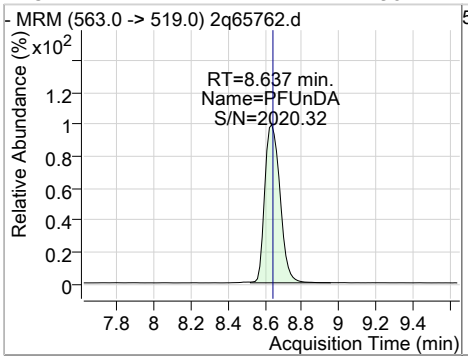
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.91	8.64	0.00	262374				

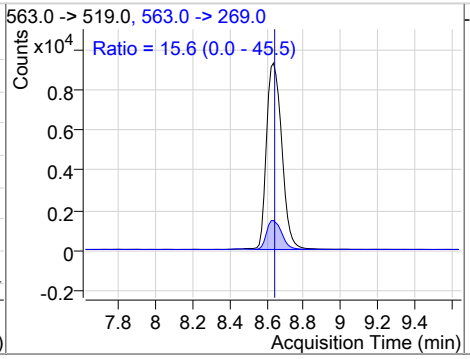


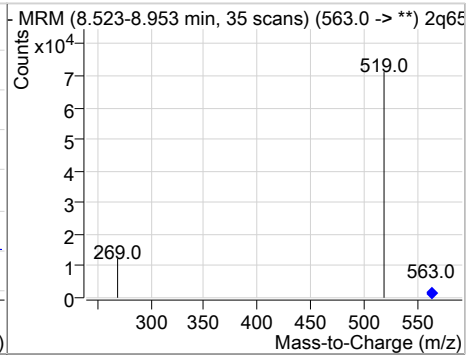




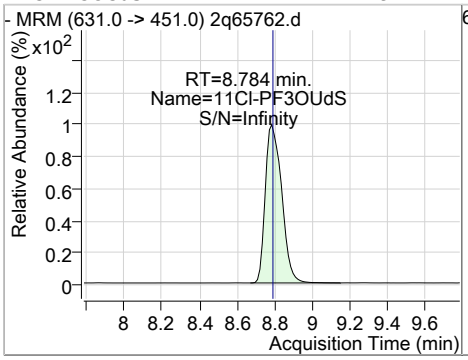
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	4.98	8.64	0.00	53331	563.0 -> 269.0	15.6	0.0	45.5

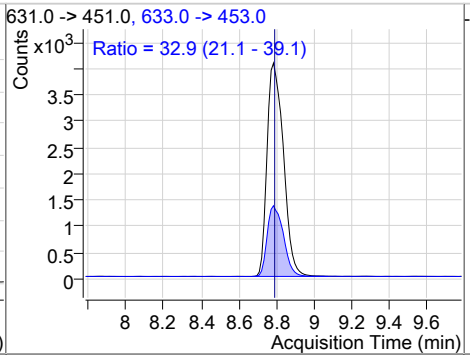


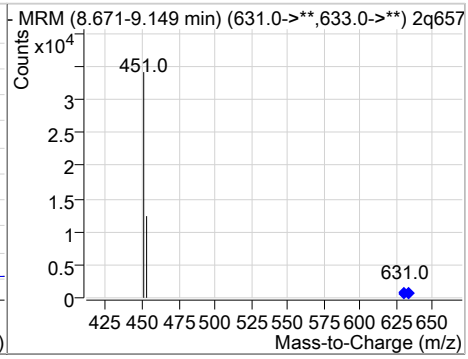




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	4.92	8.78	0.00	24520	633.0 -> 453.0	32.9	21.1	39.1

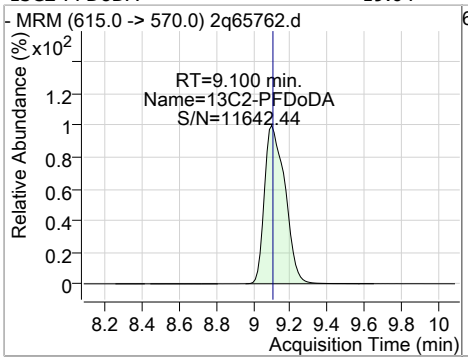


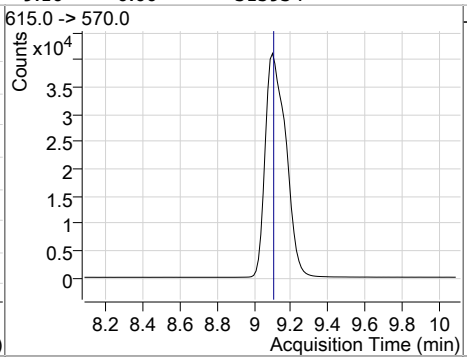


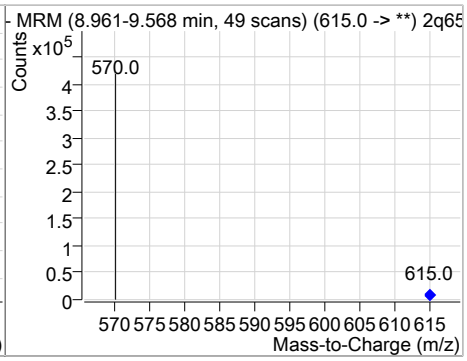


Perfluorinated Compounds by LC/MS/MS

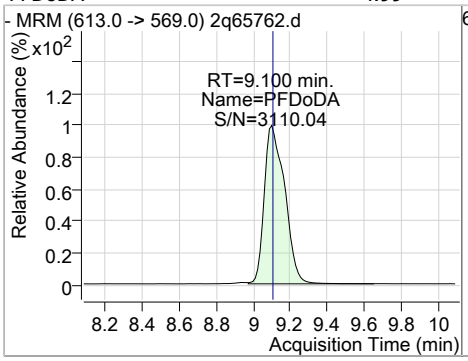
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.64	9.10	0.00	315934				

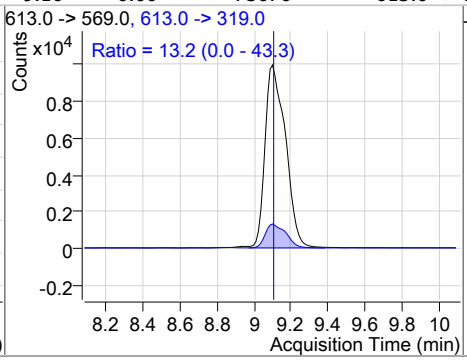


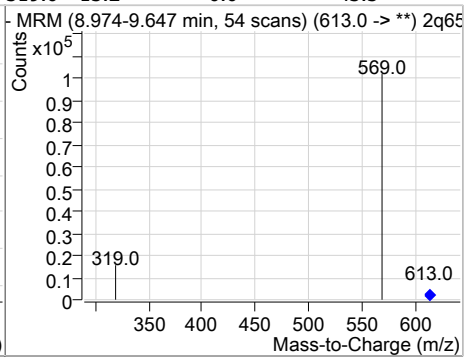




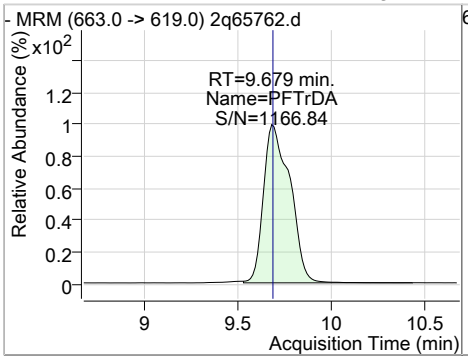
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	4.99	9.10	0.00	75670	613.0 -> 319.0	13.2	0.0	43.3

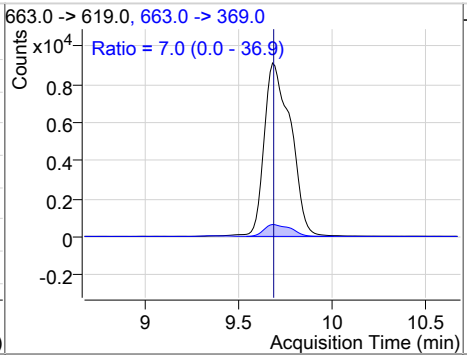


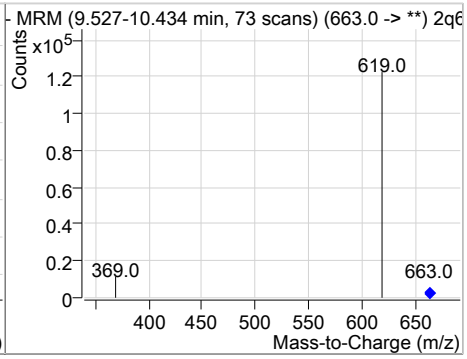




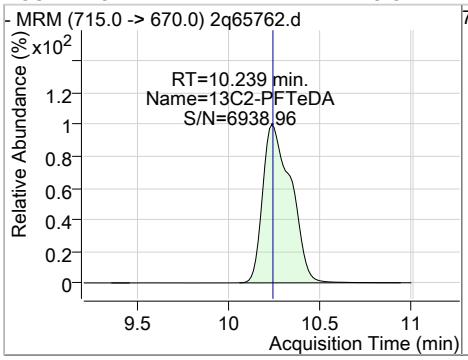
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	4.92	9.68	0.00	90128	663.0 -> 369.0	7.0	0.0	36.9

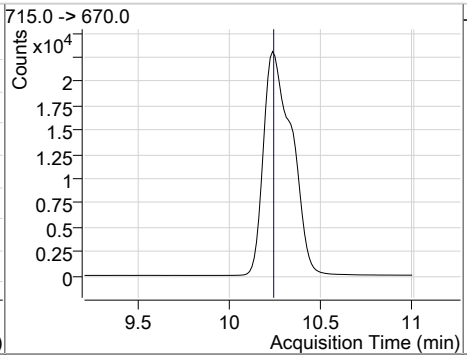


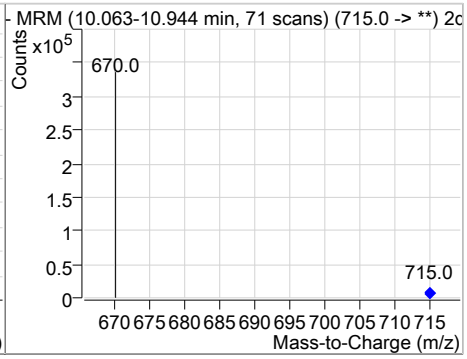




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.32	10.24	0.00	249327				

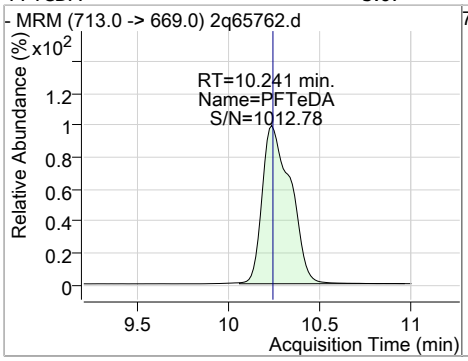


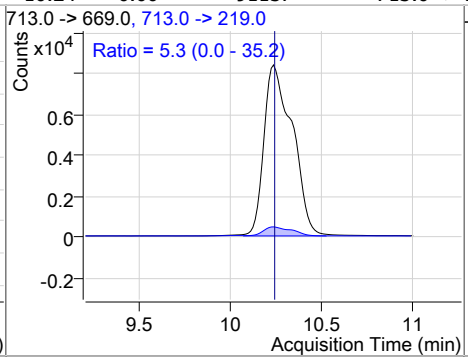


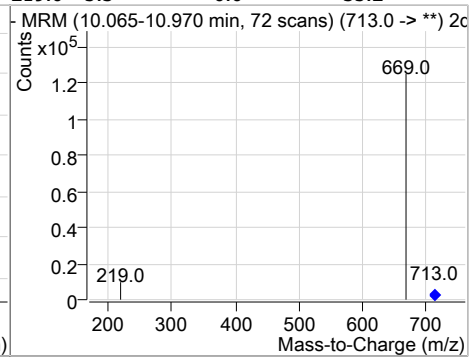


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	5.07	10.24	0.00	91137	713.0 -> 219.0	5.3	0.0	35.2







Manual Integration Approval Summary

Sample Number:	S2Q956-IC956	**Method:**	EPA 537M QSM5.3 B-15
Lab FileID:	2Q65762.D	**Analyst approved:**	04/09/21 09:05 Natasha Gumtie
Injection Time:	04/08/21 14:28	**Supervisor approved:**	04/12/21 13:27 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.46	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
MeFOSAA	2355-31-9		8.04	Split peak
EtFOSAA	2991-50-6		8.17	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/12/21 13:27

Perfluorinated Compounds by LC/MS/MS

Data File : 2q65763.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/8/2021 2:45:11 PM
Sample Name : ic956-10
Vial : P1-A6
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q956.batch.bin
Sample Information : op84308,S2Q956,250,,,1.0,1,water

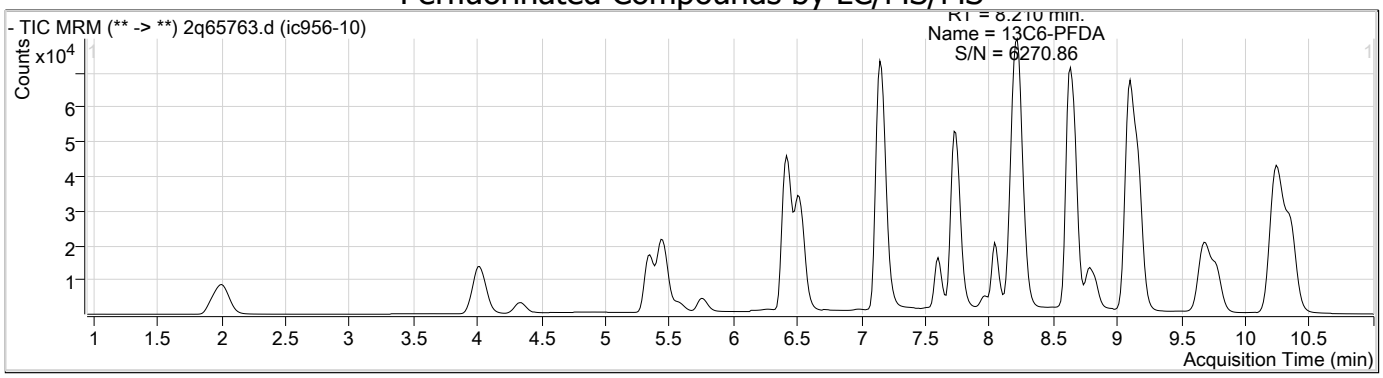
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.155	589.0 -> 419.0	42884	20.00	µg/L	0.000
M4-PFBA	2.002	217.0 -> 172.0	68381	20.00	µg/L	0.013
M5-PFPeA	4.024	268.0 -> 223.0	56250	20.00	µg/L	0.013
M5-PFHxA	5.454	318.0 -> 273.0	84981	20.00	µg/L	0.013
M4-PFHpA	6.420	367.0 -> 322.0	123444	20.00	µg/L	0.000
M8-PFOA	7.151	421.0 -> 376.0	142440	20.00	µg/L	0.000
M9-PFNA	7.732	472.0 -> 427.0	146054	20.00	µg/L	0.000
M6-PFDA	8.210	519.0 -> 474.0	191904	20.00	µg/L	0.000
M7-PFUnDA	8.636	570.0 -> 525.0	270499	20.00	µg/L	0.000
M2-PFDoDA	9.100	615.0 -> 570.0	328243	20.00	µg/L	0.000
M2-PFTeDA	10.239	715.0 -> 670.0	262703	20.00	µg/L	0.000
M8-FOSA	7.604	506.0 -> 78.0	39733	20.00	µg/L	0.000
M3-PFBS	4.330	302.0 -> 99.0	6867	20.00	µg/L	0.000
M3-PFHxS	6.456	402.0 -> 99.0	7641	20.00	µg/L	0.000
M8-PFOS	7.718	507.0 -> 99.0	10689	20.00	µg/L	0.000
M2-4:2FTS	5.348	329.0 -> 309.0	56941	20.00	µg/L	0.013
M2-6:2FTS	7.150	429.0 -> 409.0	79733	20.00	µg/L	0.013
M2-8:2FTS	8.247	529.0 -> 509.0	71210	20.00	µg/L	0.000
M3-MeFOSAA	8.041	573.0 -> 419.0	48584	20.00	µg/L	0.000
M3-HFPO-DA	5.759	287.0 -> 169.0	6569	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.348	329.0 -> 309.0	56941	19.56	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.8%		
13C2-6:2FTS	7.150	429.0 -> 409.0	79733	19.59	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%		
13C2-8:2FTS	8.247	529.0 -> 509.0	71210	19.96	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.8%		
13C2-PFDoDA	9.100	615.0 -> 570.0	328243	20.41	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.0%		
13C2-PFTeDA	10.239	715.0 -> 670.0	262703	20.36	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.8%		
13C3-PFBS	4.330	302.0 -> 99.0	6867	20.32	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.6%		
13C3-PFHxS	6.456	402.0 -> 99.0	7641	20.35	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.8%		
13C4-PFBA	2.002	217.0 -> 172.0	68381	20.36	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.8%		
13C4-PFHpA	6.420	367.0 -> 322.0	123444	20.28	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.4%		
d5-EtFOSAA	8.155	589.0 -> 419.0	42884	21.09	ng/ml	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.5%		
13C5-PFHxA	5.454	318.0 -> 273.0	84981	20.39	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.0%		
13C5-PFPeA	4.024	268.0 -> 223.0	56250	20.39	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.9%		

Perfluorinated Compounds by LC/MS/MS

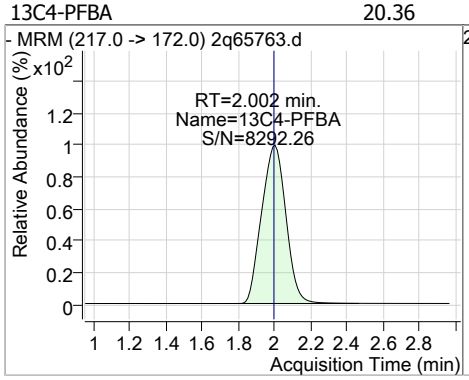
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	191904	20.72	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.6%			
13C7-PFUnDA	8.636	570.0 -> 525.0	270499	20.52	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.6%			
13C8-FOSA	7.604	506.0 -> 78.0	39733	20.68	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.4%			
13C8-PFOA	7.151	421.0 -> 376.0	142440	20.42	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.1%			
13C8-PFOS	7.718	507.0 -> 99.0	10689	20.12	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.6%			
13C9-PFNA	7.732	472.0 -> 427.0	146054	20.53	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.7%			
d3-MeFOSAA	8.041	573.0 -> 419.0	48584	20.48	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.4%			
13C3-HFPO-DA	5.759	287.0 -> 169.0	6569	20.25	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%			
Target Compounds							QValue
4:2FTS	5.337	327.0 -> 307.0	31463	10.49	µg/L		99
6:2FTS	7.150	427.0 -> 407.0	45588	10.83	µg/L		98
8:2FTS	8.247	527.0 -> 507.0	39156	10.49	µg/L		99
EtFOSAA	8.168	584.0 -> 419.0	19762	10.15	µg/L	m	95
FOSA	7.605	498.0 -> 78.0	20242	10.24	µg/L		100
MeFOSAA	8.041	570.0 -> 419.0	21529	10.19	µg/L	m	91
PFBA	1.996	213.0 -> 169.0	11909	10.32	µg/L		100
PFBS	4.332	299.0 -> 80.0	10955	10.25	µg/L		100
PFDA	8.211	513.0 -> 469.0	93675	10.19	µg/L		99
PFDoDA	9.100	613.0 -> 569.0	160627	10.19	µg/L		100
PFDS	8.596	599.0 -> 80.0	4727	9.95	µg/L		100
PFHpA	6.421	363.0 -> 319.0	107970	10.34	µg/L		100
PFHpS	7.149	449.0 -> 80.0	9957	10.51	µg/L		100
PFHxA	5.455	313.0 -> 269.0	29961	10.08	µg/L		99
PFHxS	6.457	399.0 -> 80.0	10787	10.32	µg/L	m	97
PFNA	7.745	463.0 -> 419.0	84205	10.15	µg/L		100
PFNS	8.183	549.0 -> 80.0	8154	10.51	µg/L		97
PFOA	7.152	413.0 -> 369.0	86843	10.25	µg/L		100
PFOS	7.718	499.0 -> 80.0	10562	10.34	µg/L	m	83
PFPeA	4.027	263.0 -> 219.0	46837	10.19	µg/L		100
PFPeS	5.577	349.0 -> 80.0	8439	10.41	µg/L		99
PFTeDA	10.241	713.0 -> 669.0	196016	10.36	µg/L		100
PFTrDA	9.679	663.0 -> 619.0	191391	10.05	µg/L		100
PFUnDA	8.637	563.0 -> 519.0	112943	10.23	µg/L		100
11Cl-PF3OUdS	8.784	631.0 -> 451.0	52716	10.19	µg/L		97
9Cl-PF3ONS	7.968	531.0 -> 351.0	10258	9.34	µg/L		99
ADONA	6.521	377.0 -> 251.0	127233	9.96	µg/L		100
HFPO-DA	5.767	329.0 -> 169.0	12760	10.40	µg/L		98

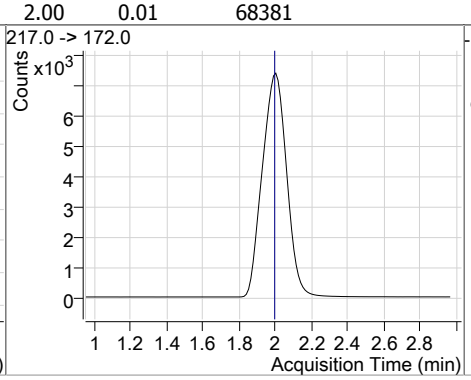
 # = Qualifier out of range, m = manually integrated, + = Area summed

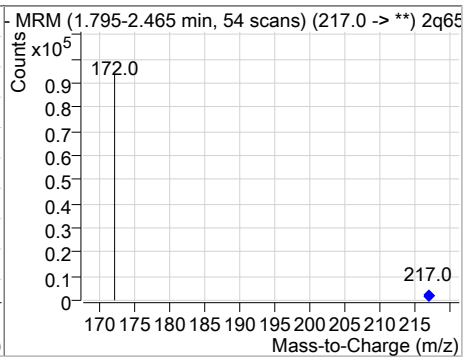
Perfluorinated Compounds by LC/MS/MS



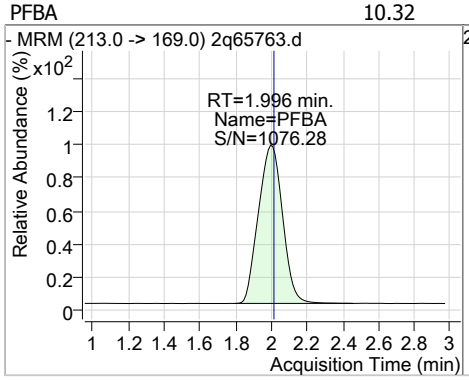
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.36	2.00	0.01	68381				

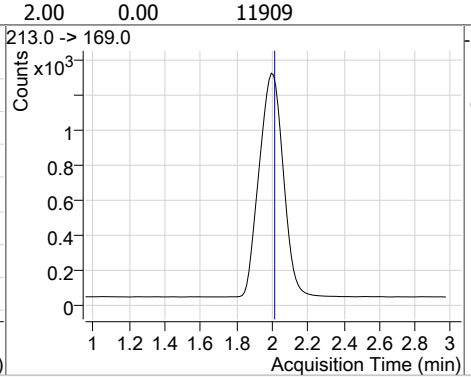


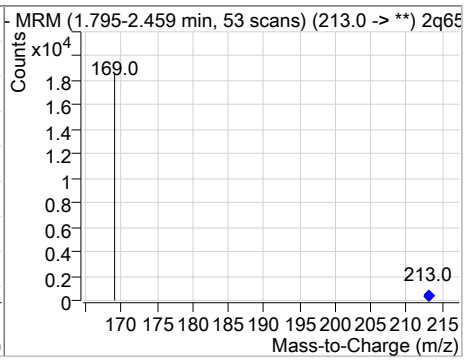




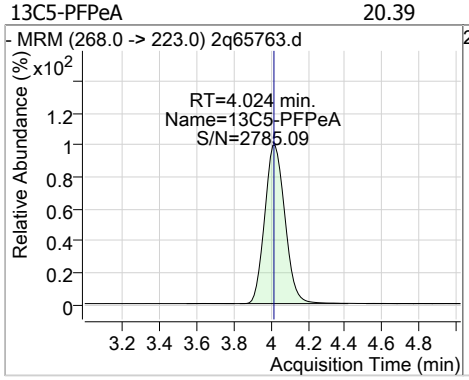
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	10.32	2.00	0.00	11909				

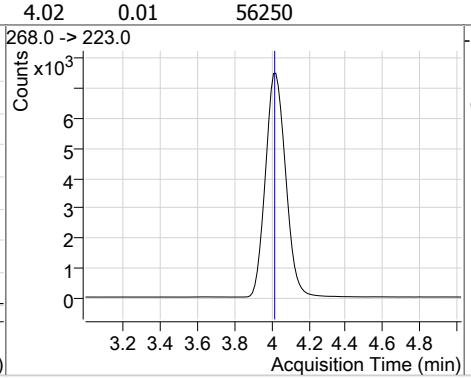


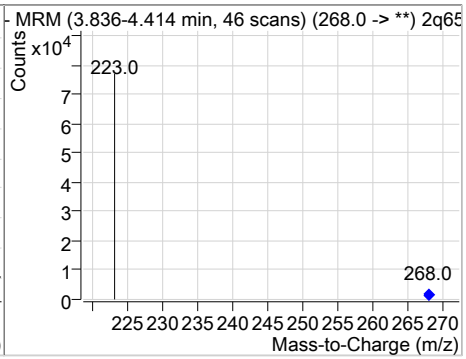




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.39	4.02	0.01	56250				

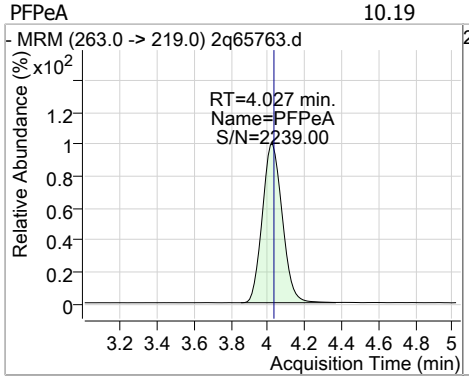


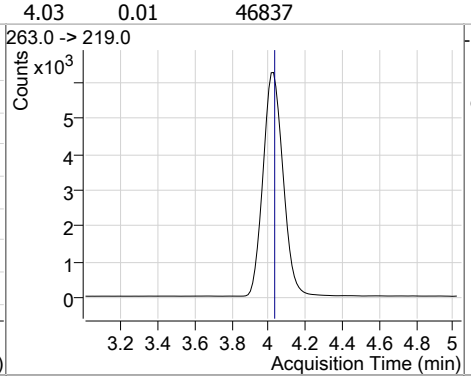


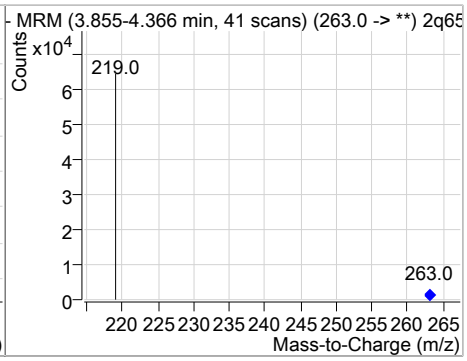


Perfluorinated Compounds by LC/MS/MS

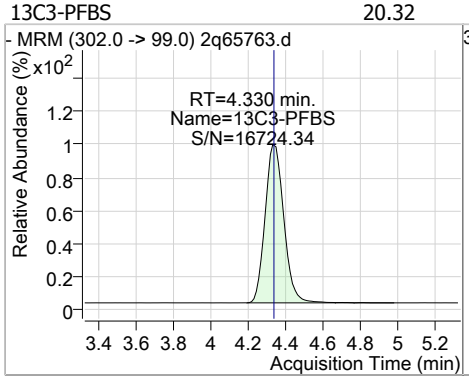
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	10.19	4.03	0.01	46837				

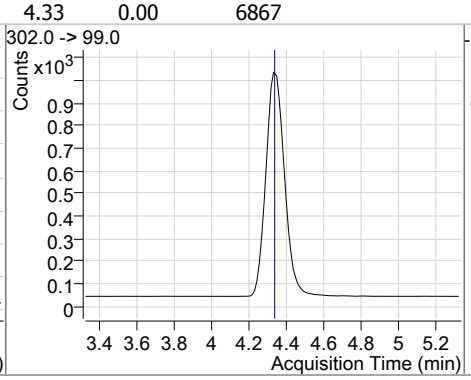


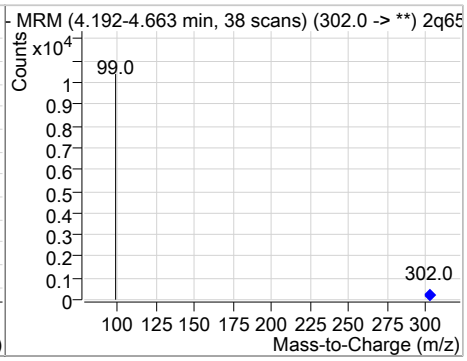




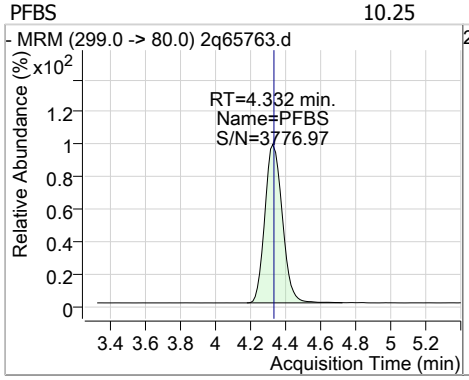
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.32	4.33	0.00	6867				

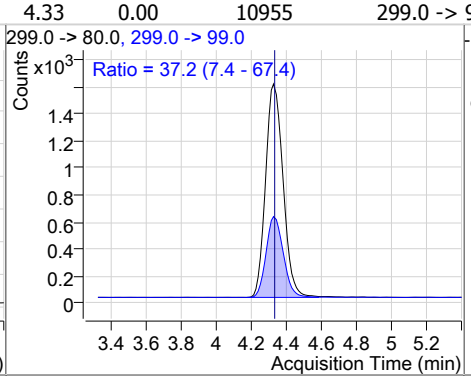


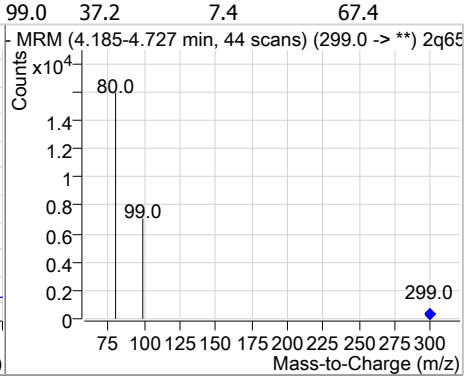




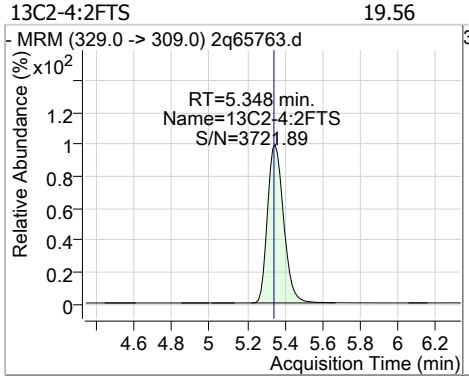
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	10.25	4.33	0.00	10955	299.0 -> 99.0	37.2	7.4	67.4

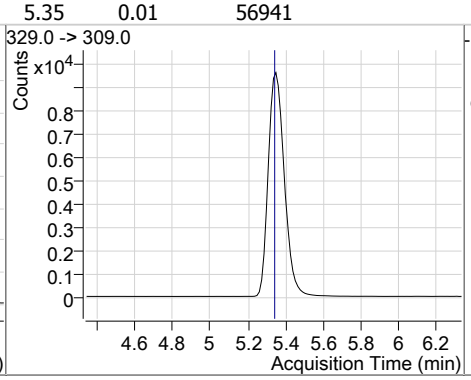


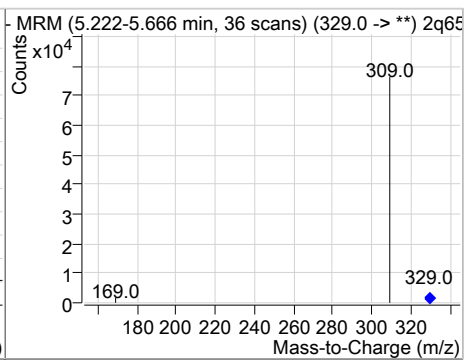




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.56	5.35	0.01	56941				

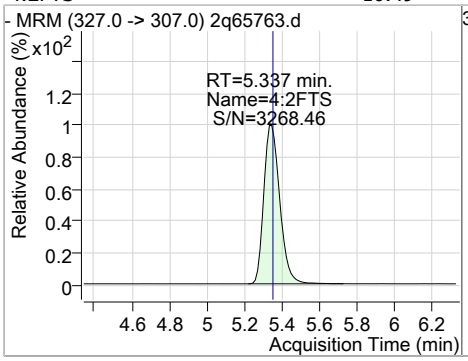


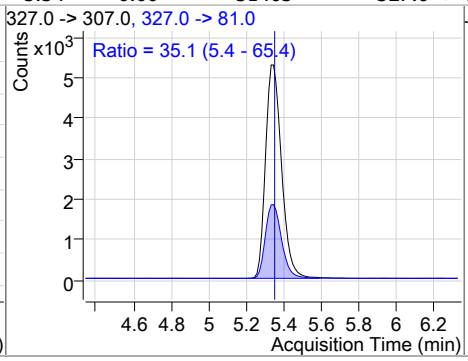


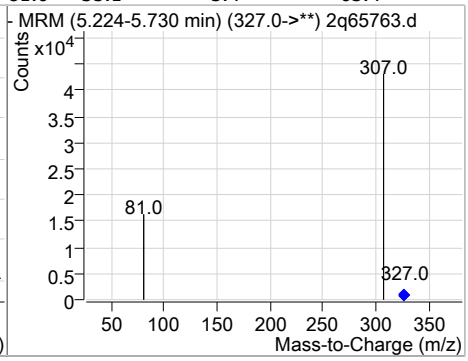


Perfluorinated Compounds by LC/MS/MS

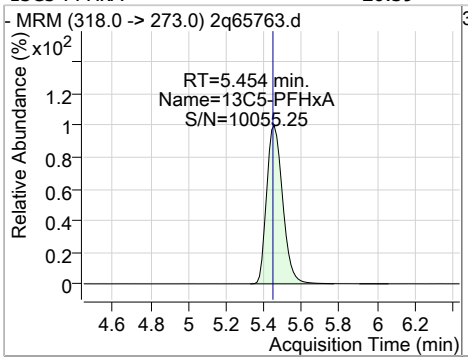
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	10.49	5.34	0.00	31463	327.0 -> 81.0	35.1	5.4	65.4

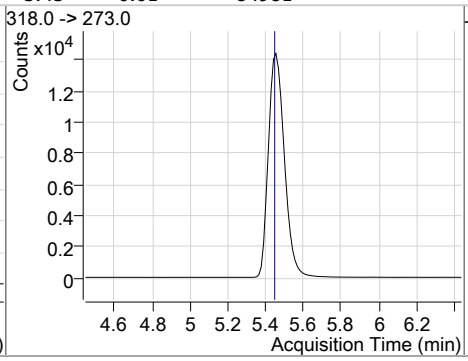


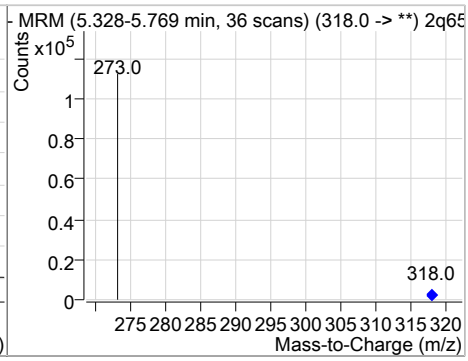




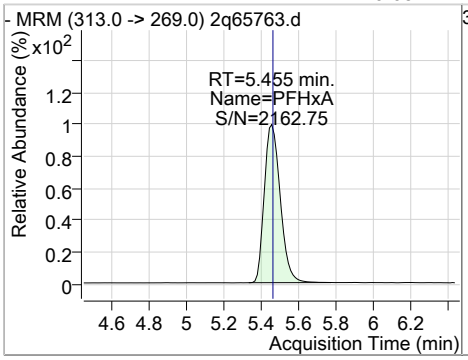
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.39	5.45	0.01	84981				

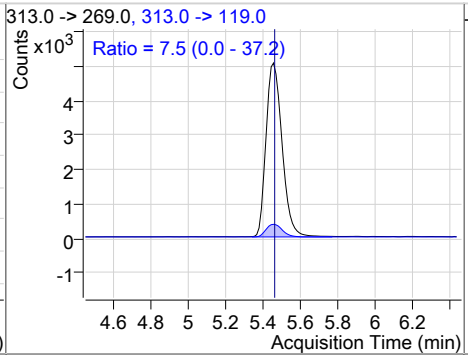


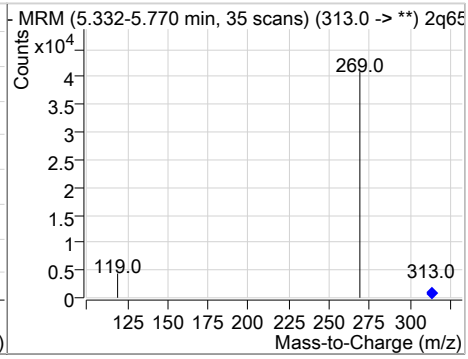




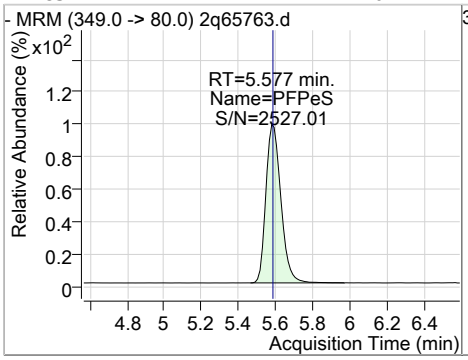
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	10.08	5.46	0.01	29961	313.0 -> 119.0	7.5	0.0	37.2

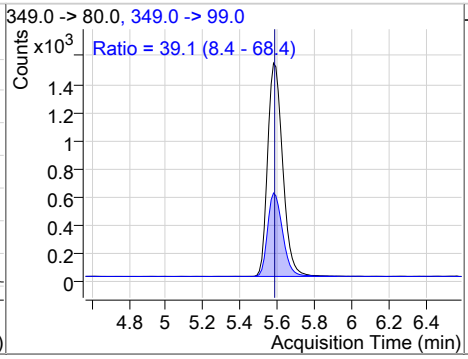


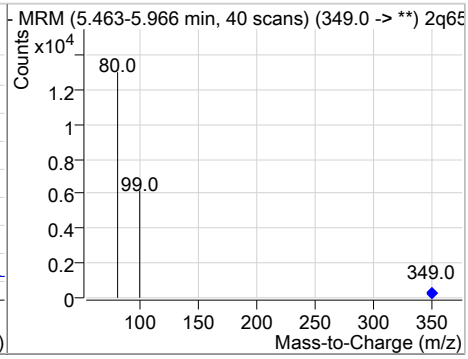




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	10.41	5.58	0.00	8439	349.0 -> 99.0	39.1	8.4	68.4

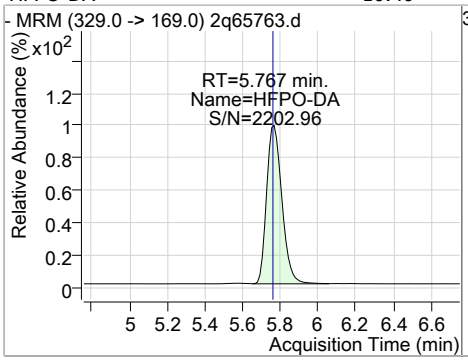


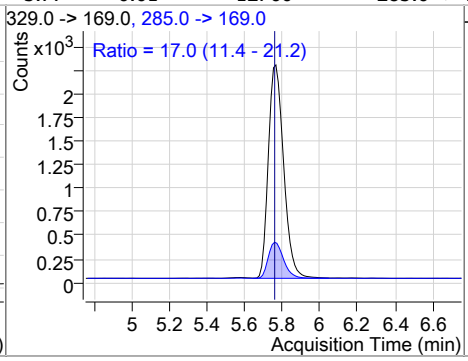


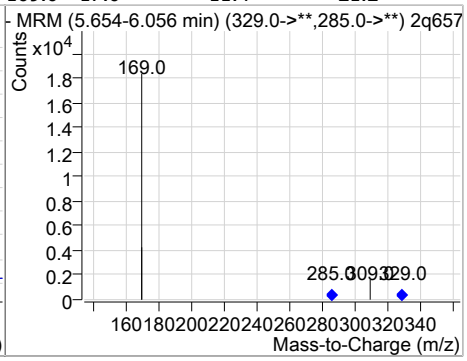


Perfluorinated Compounds by LC/MS/MS

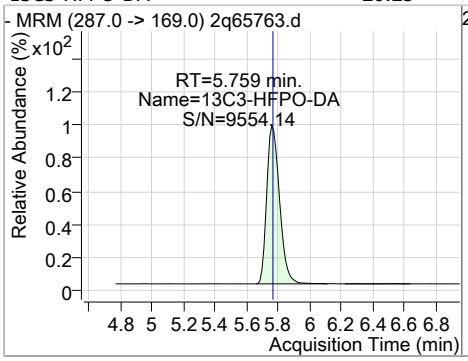
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	10.40	5.77	0.01	12760	285.0 -> 169.0	17.0	11.4	21.2

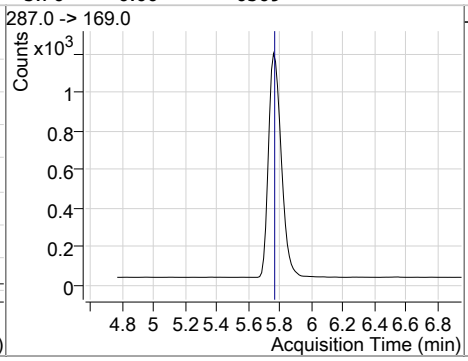


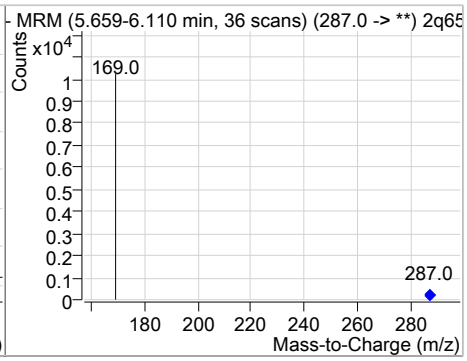




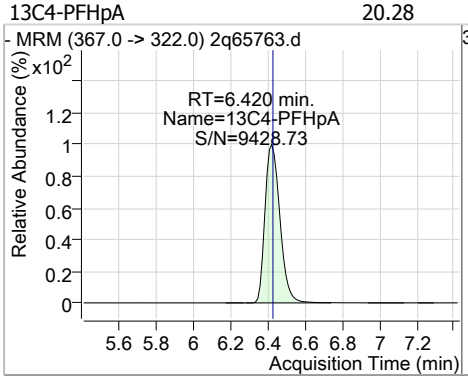
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.25	5.76	0.00	6569				

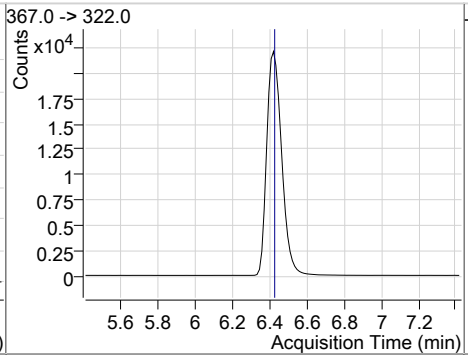


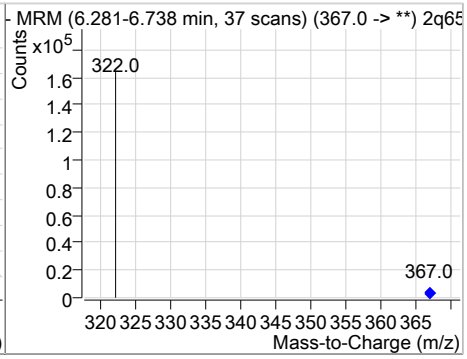




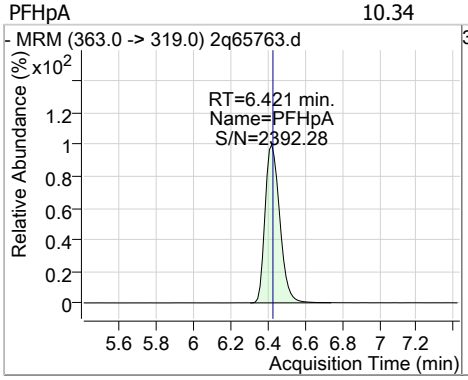
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.28	6.42	0.00	123444				

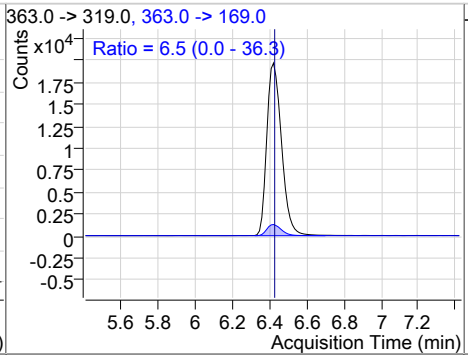


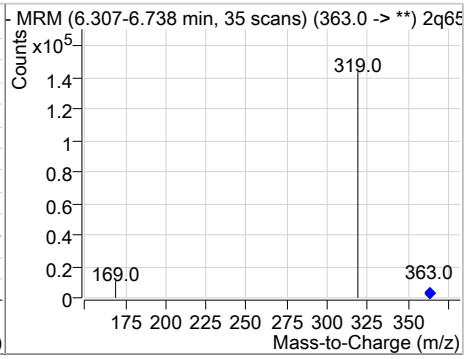




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	10.34	6.42	0.00	107970	363.0 -> 169.0	6.5	0.0	36.3

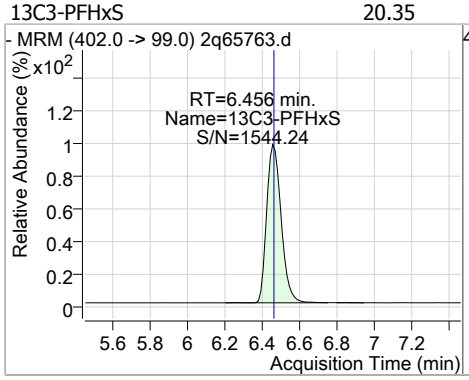


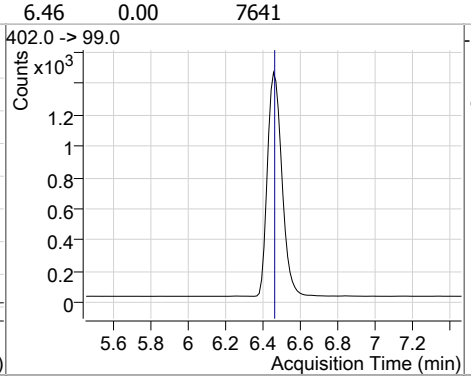


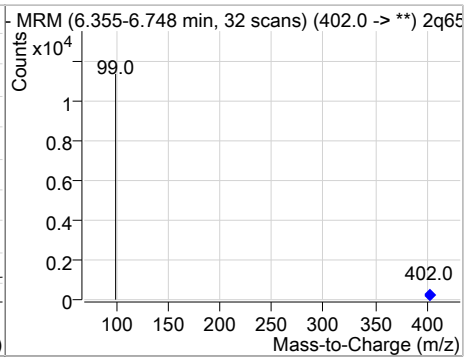


Perfluorinated Compounds by LC/MS/MS

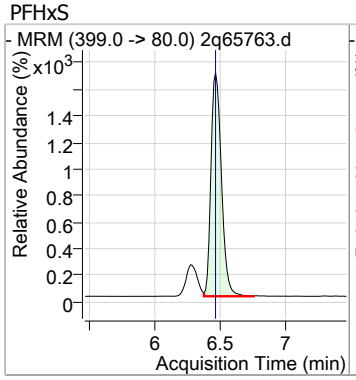
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.35	6.46	0.00	7641				

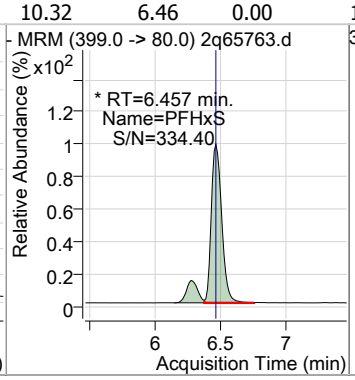


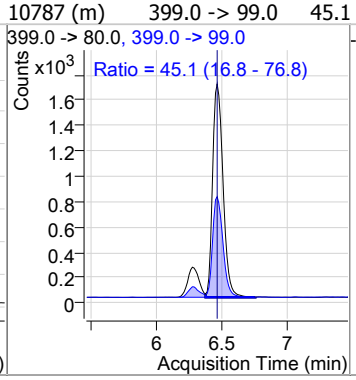


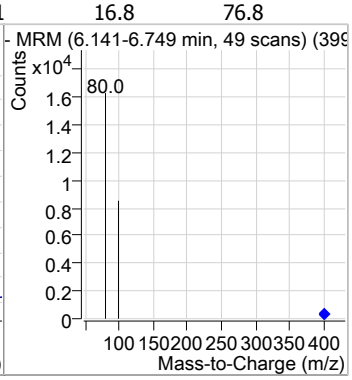


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	10.32	6.46	0.00	10787 (m)	399.0 -> 99.0	45.1	16.8	76.8

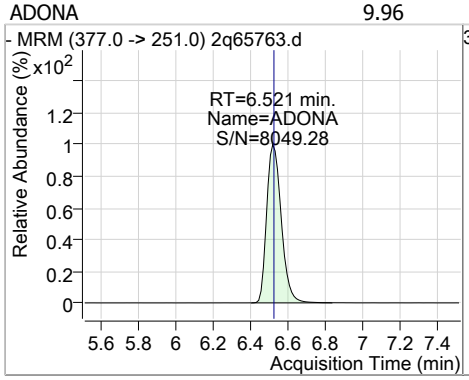


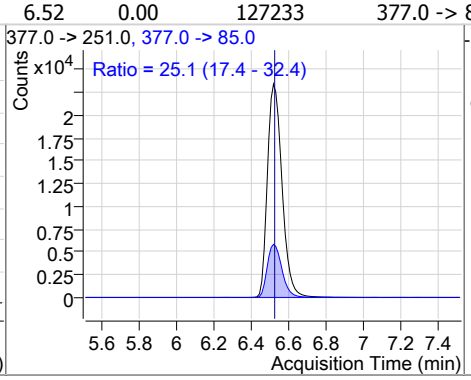


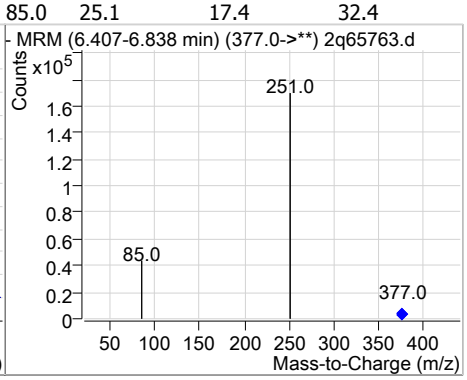




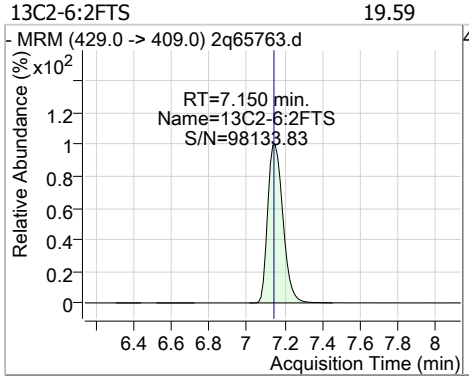
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	9.96	6.52	0.00	127233	377.0 -> 85.0	25.1	17.4	32.4

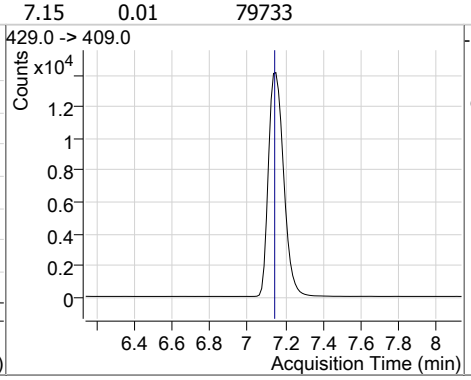


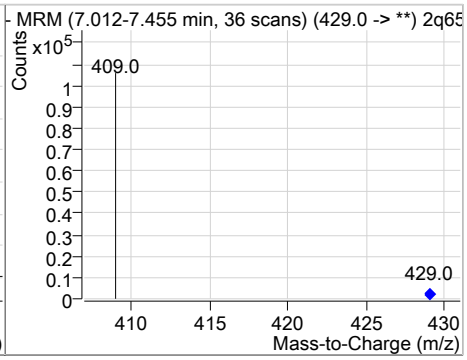




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.59	7.15	0.01	79733				

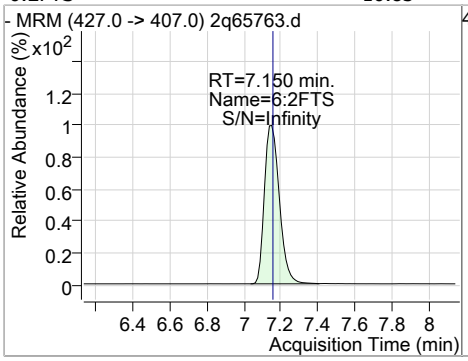


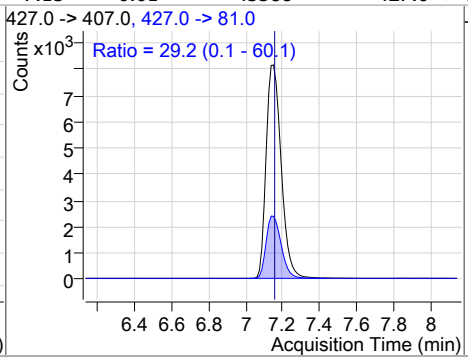


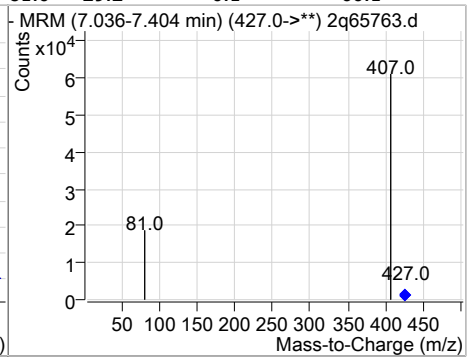


Perfluorinated Compounds by LC/MS/MS

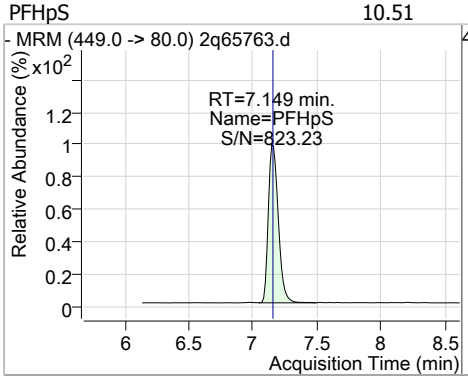
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	10.83	7.15	0.01	45588	427.0 -> 81.0	29.2	0.1	60.1

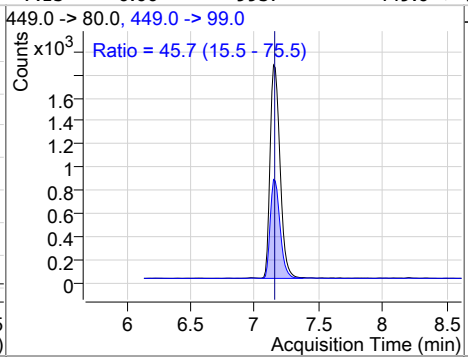


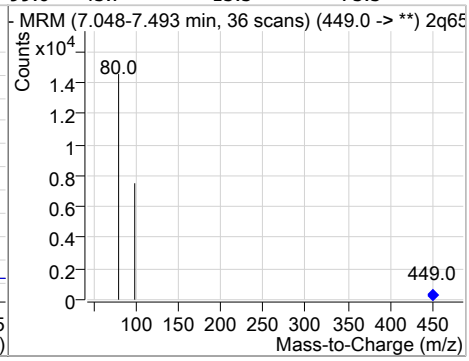




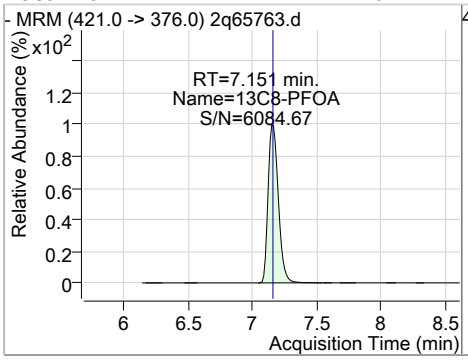
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	10.51	7.15	0.00	9957	449.0 -> 99.0	45.7	15.5	75.5

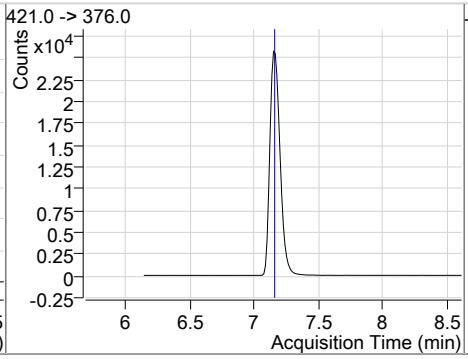


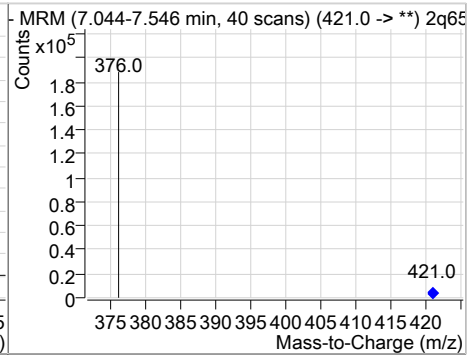




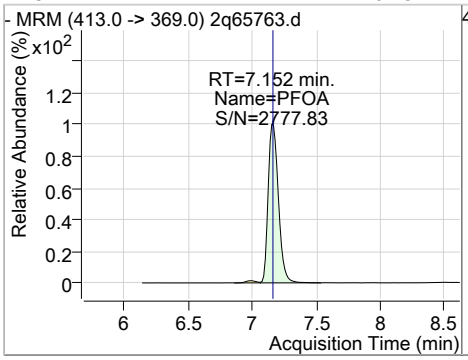
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.42	7.15	0.00	142440				

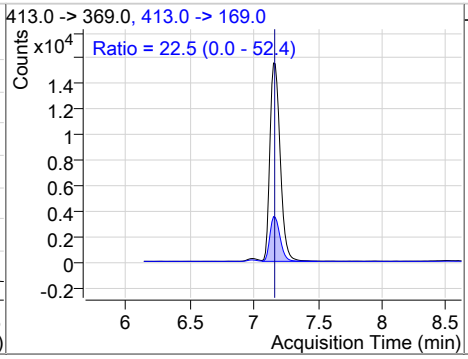


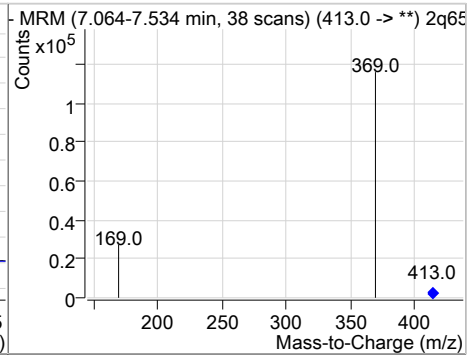




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	10.25	7.15	0.00	86843	413.0 -> 169.0	22.5	0.0	52.4

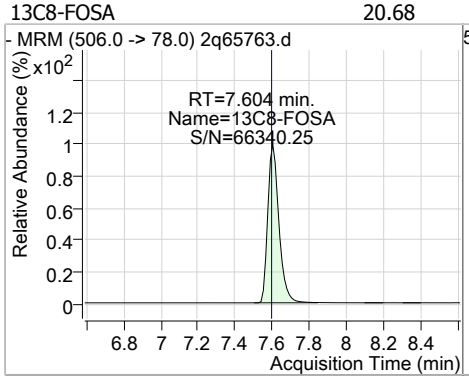


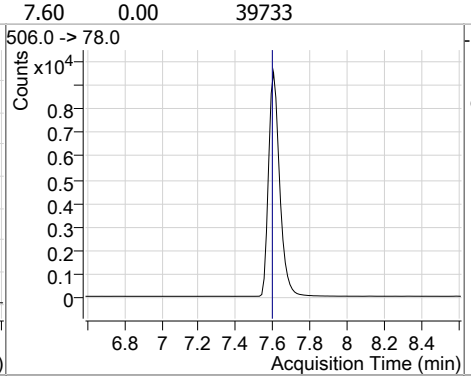


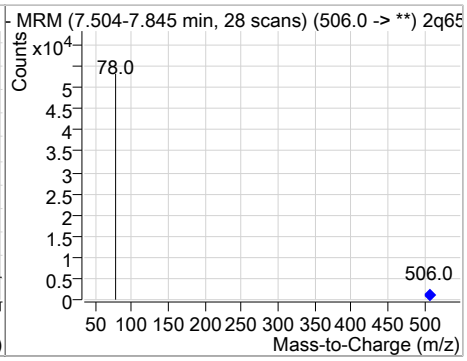


Perfluorinated Compounds by LC/MS/MS

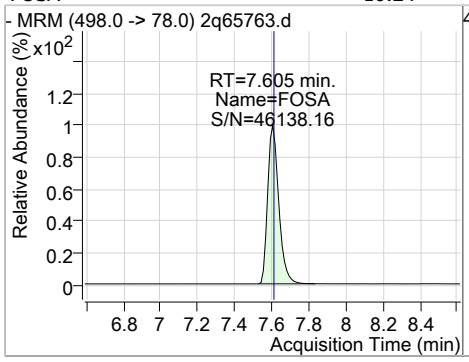
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.68	7.60	0.00	39733				

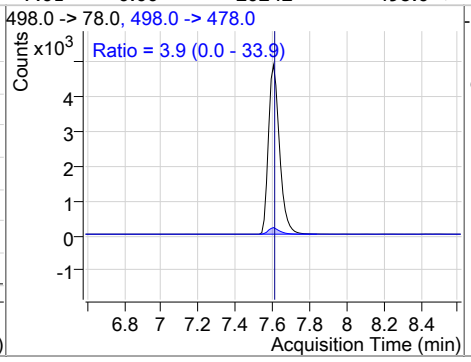


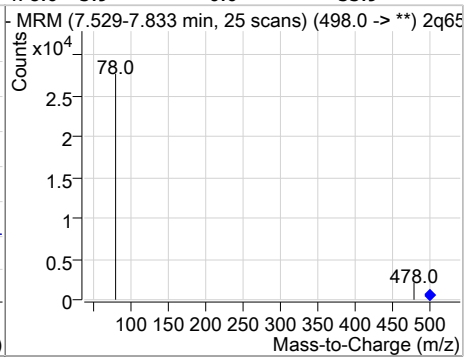




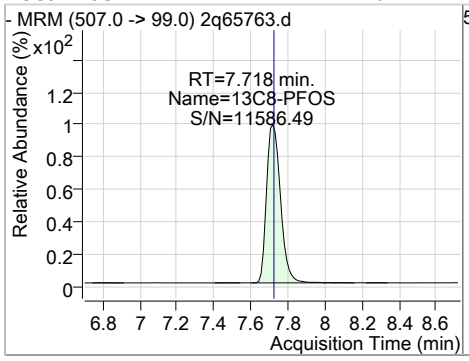
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	10.24	7.61	0.00	20242	498.0 -> 478.0	3.9	0.0	33.9

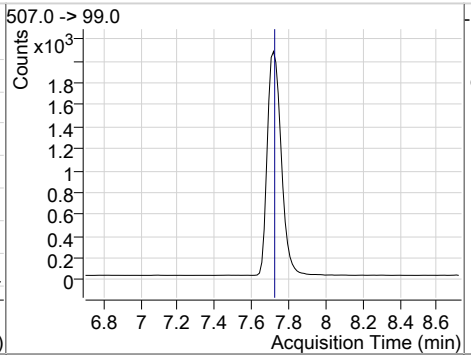


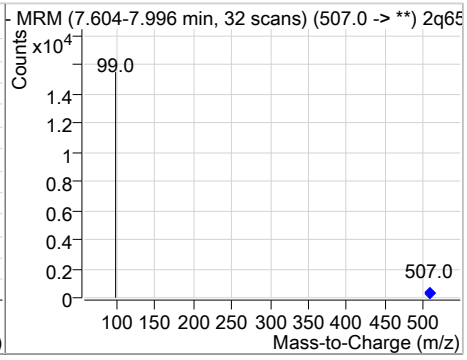




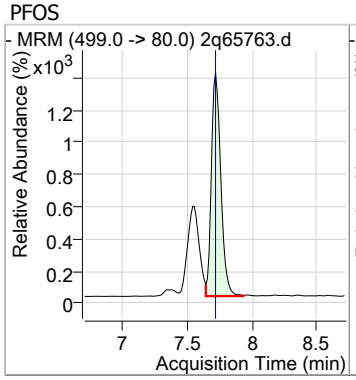
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.12	7.72	0.00	10689				

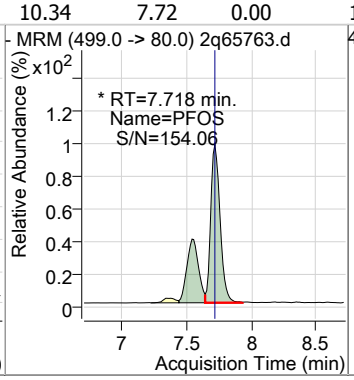


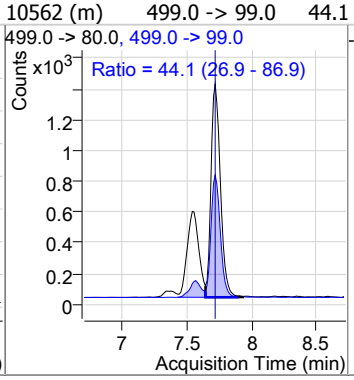


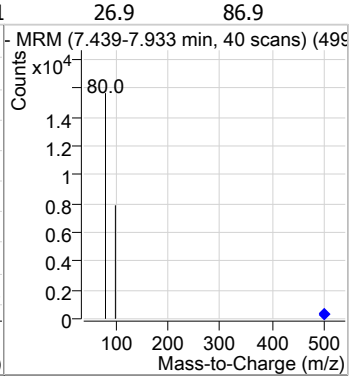


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	10.34	7.72	0.00	10562 (m)	499.0 -> 99.0	44.1	26.9	86.9



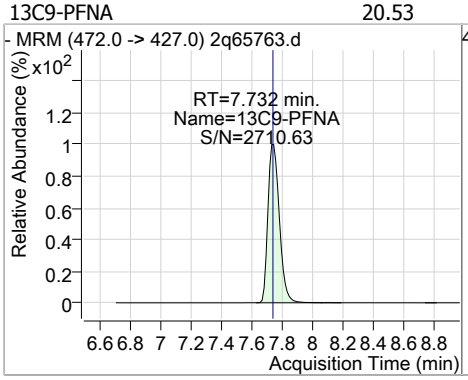


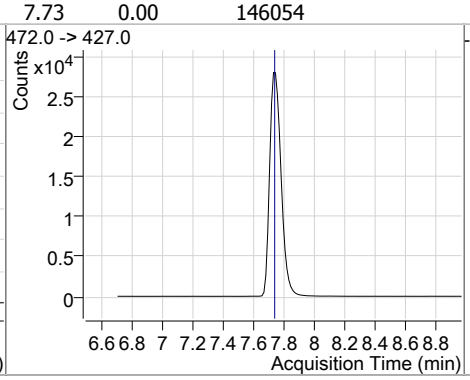


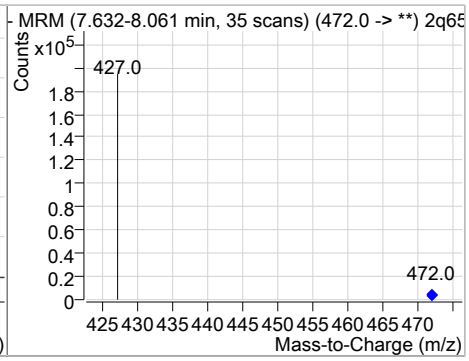


Perfluorinated Compounds by LC/MS/MS

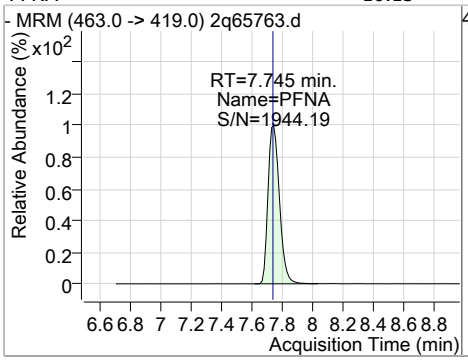
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.53	7.73	0.00	146054				

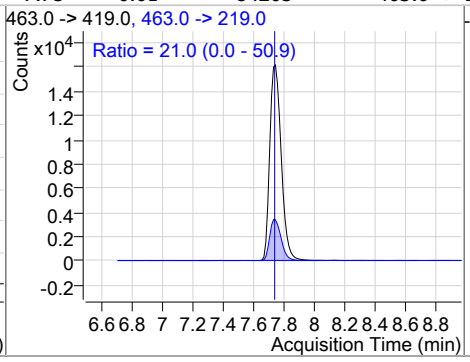


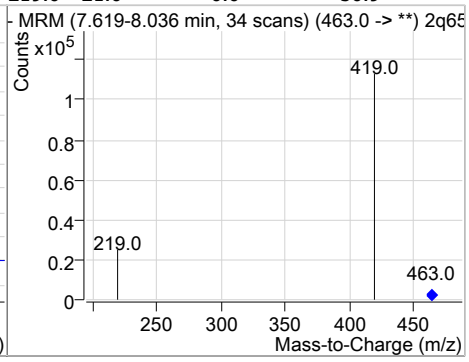




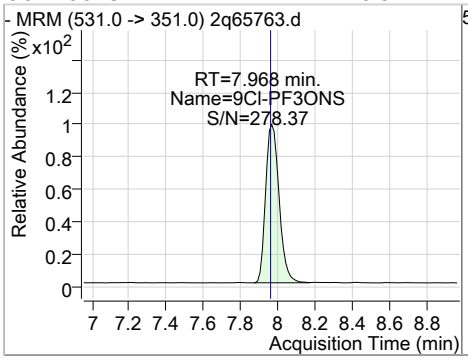
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	10.15	7.75	0.01	84205	463.0 -> 219.0	21.0	0.0	50.9

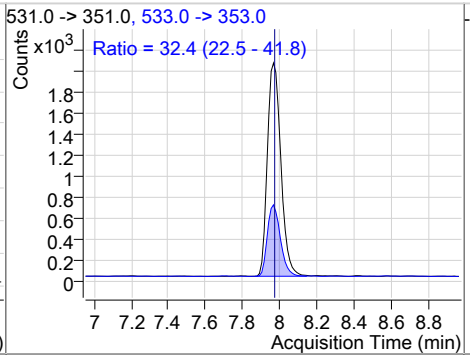


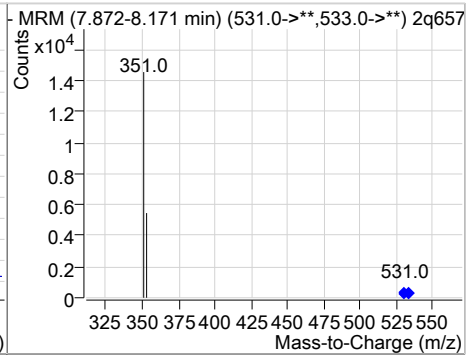




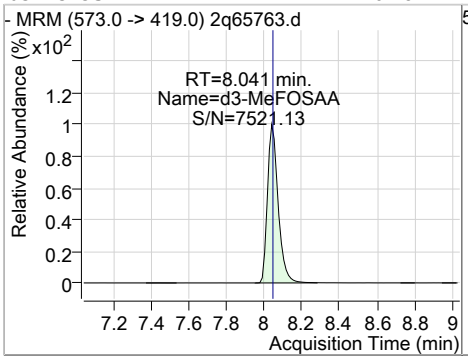
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	9.34	7.97	0.00	10258	533.0 -> 353.0	32.4	22.5	41.8

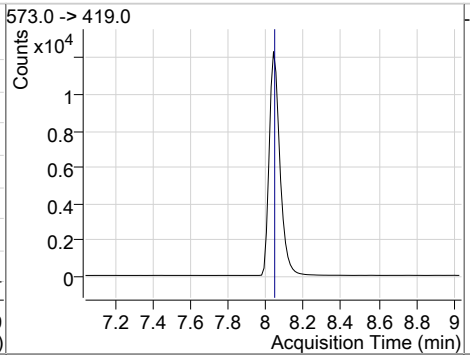


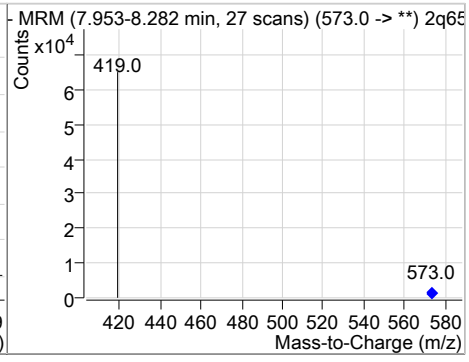




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.48	8.04	0.00	48584				

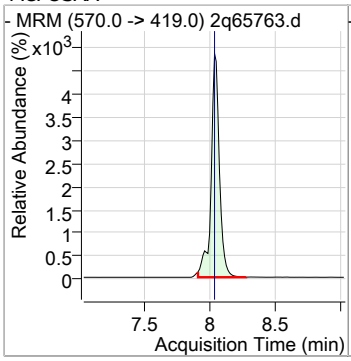


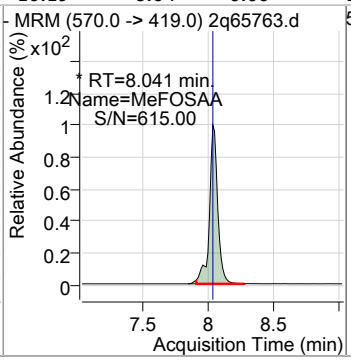


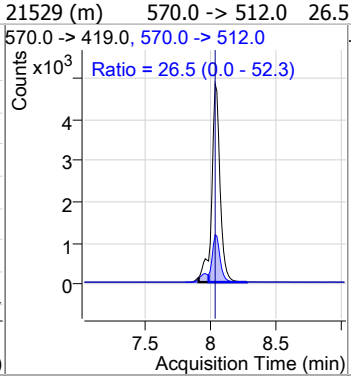


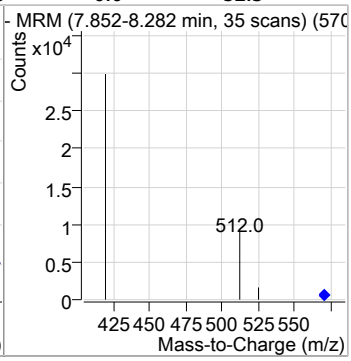
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	10.19	8.04	0.00	21529 (m)	570.0 -> 512.0	26.5	0.0	52.3

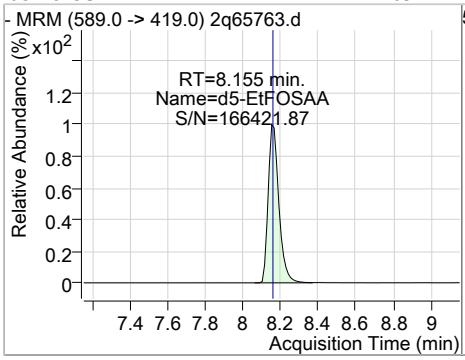


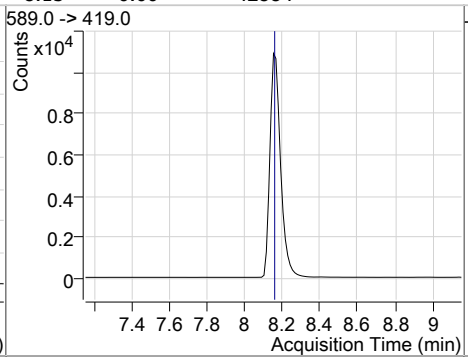


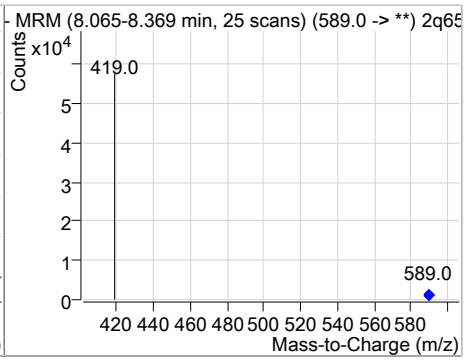




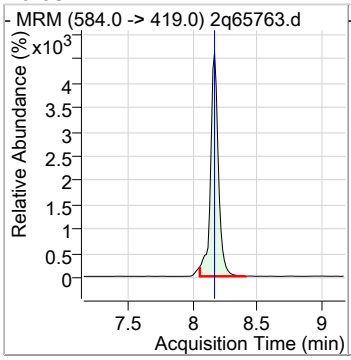
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	21.09	8.15	0.00	42884				

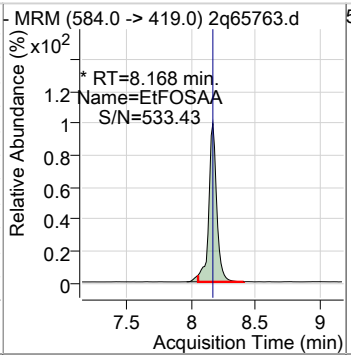


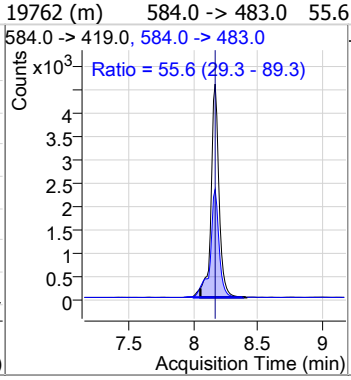


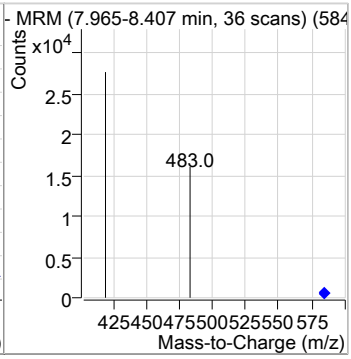


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	10.15	8.17	0.00	19762 (m)	584.0 -> 483.0	55.6	29.3	89.3

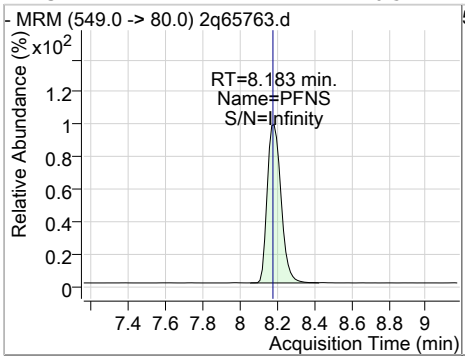


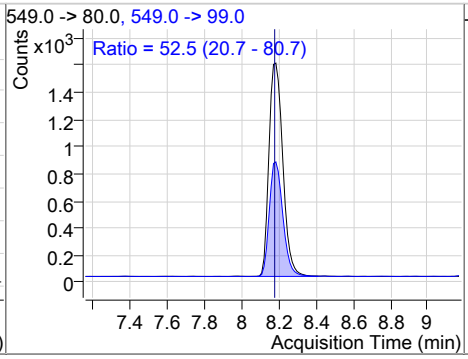


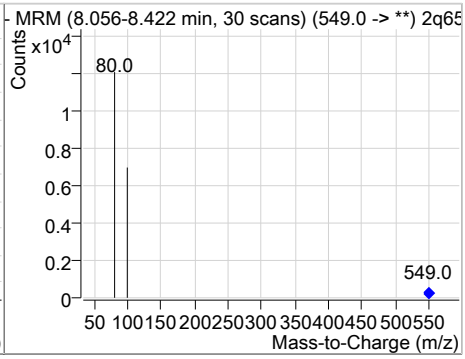




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	10.51	8.18	0.01	8154	549.0 -> 99.0	52.5	20.7	80.7

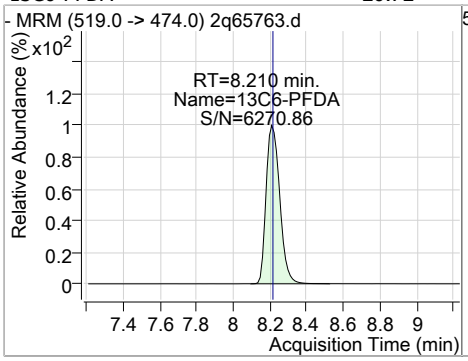


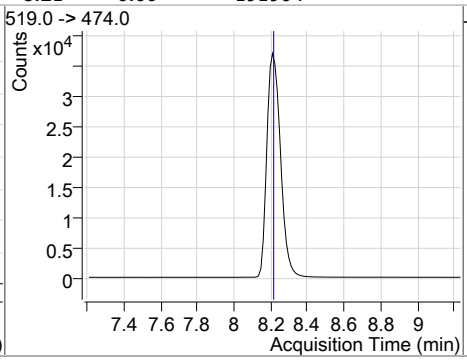


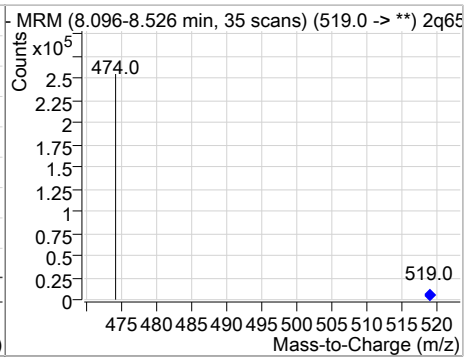


Perfluorinated Compounds by LC/MS/MS

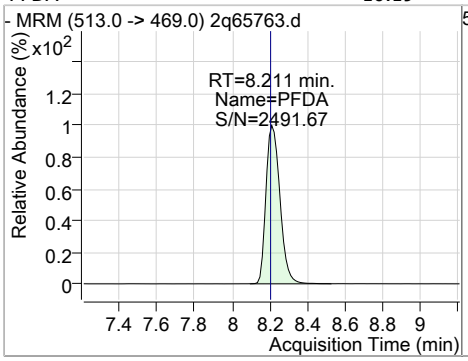
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.72	8.21	0.00	191904				

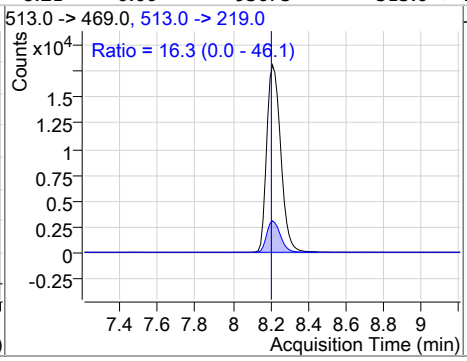


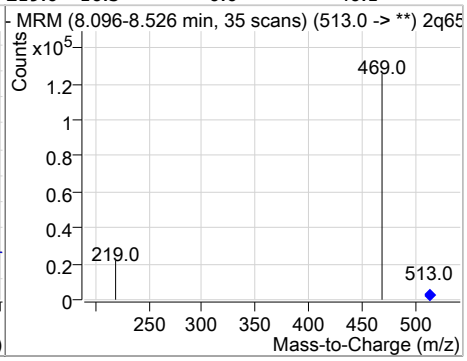




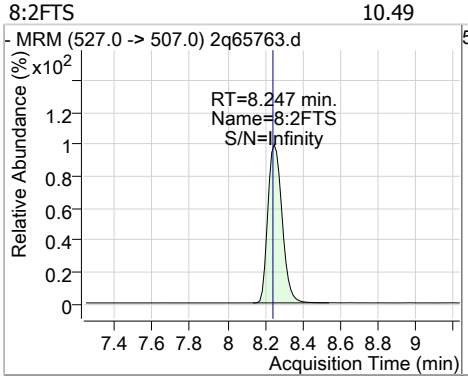
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	10.19	8.21	0.00	93675	513.0 -> 219.0	16.3	0.0	46.1

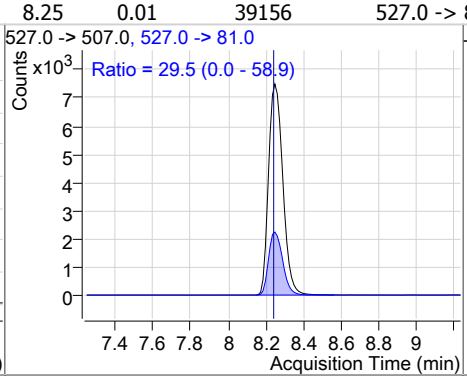


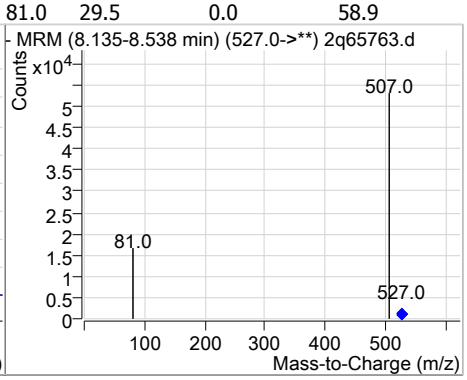




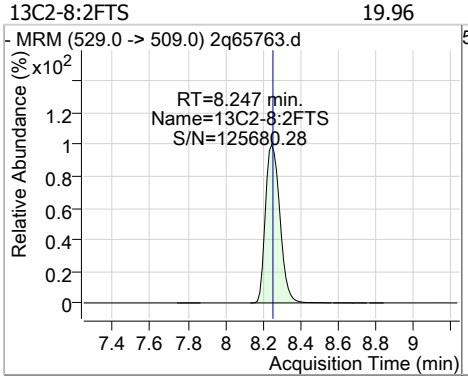
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	10.49	8.25	0.01	39156	527.0 -> 81.0	29.5	0.0	58.9

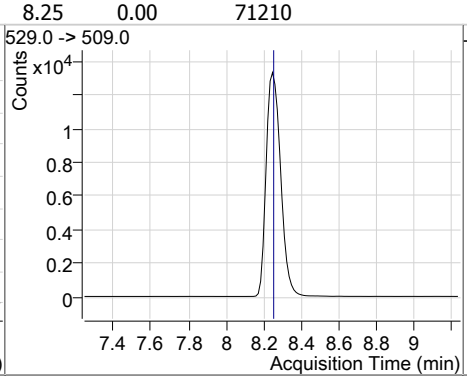


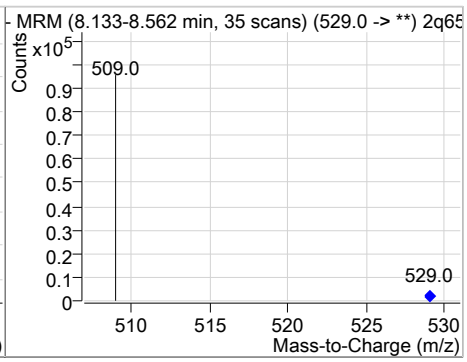




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.96	8.25	0.00	71210				

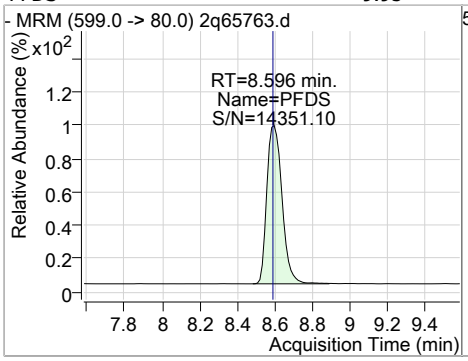


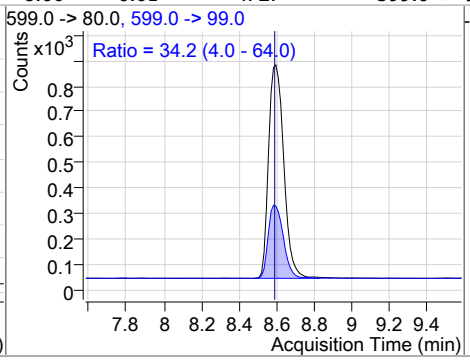


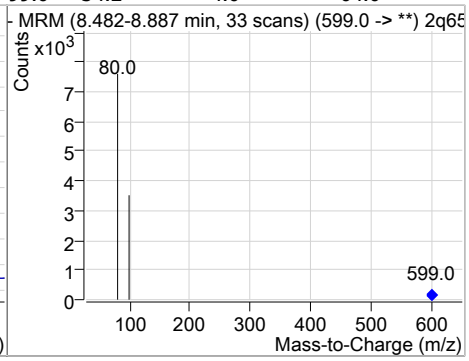


Perfluorinated Compounds by LC/MS/MS

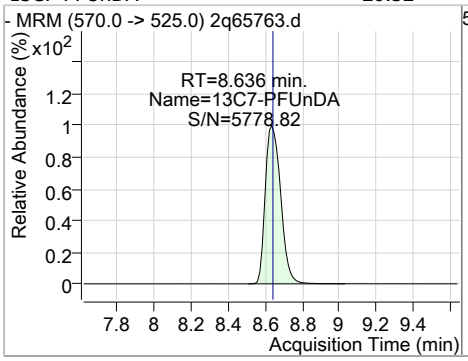
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	9.95	8.60	0.01	4727	599.0 -> 99.0	34.2	4.0	64.0

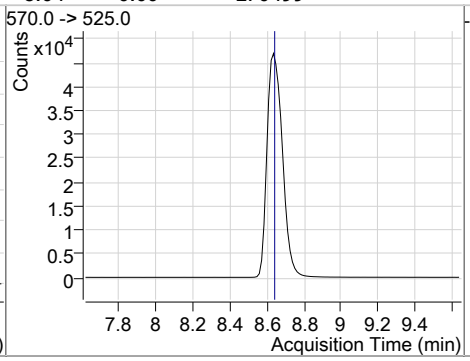


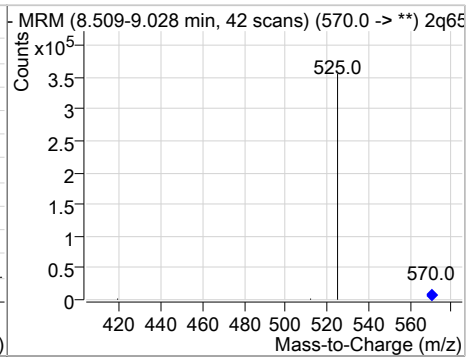




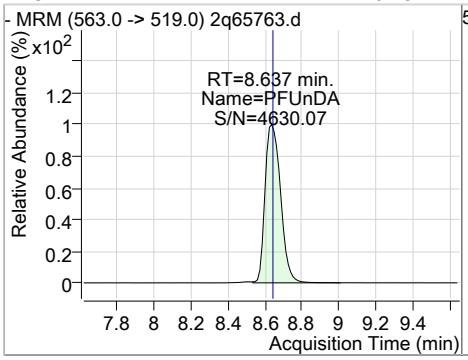
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.52	8.64	0.00	270499				

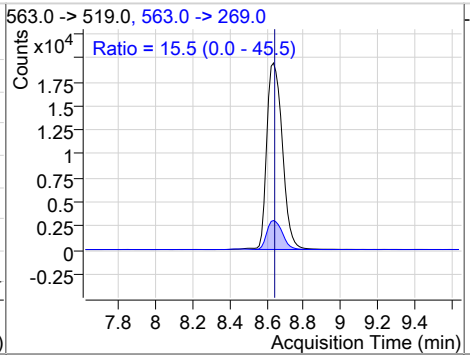


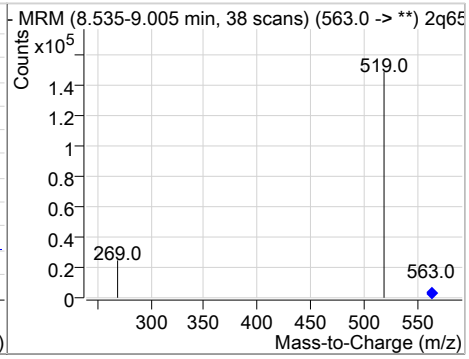




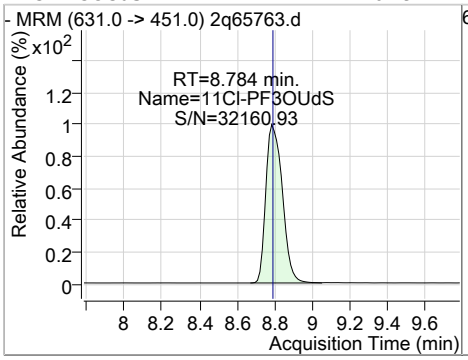
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	10.23	8.64	0.00	112943	563.0 -> 269.0	15.5	0.0	45.5

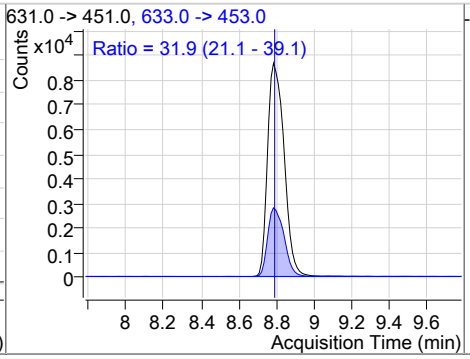


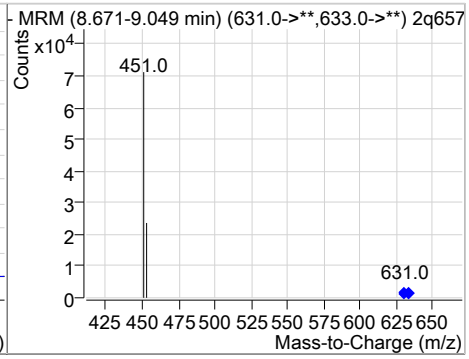




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	10.19	8.78	0.00	52716	633.0 -> 453.0	31.9	21.1	39.1

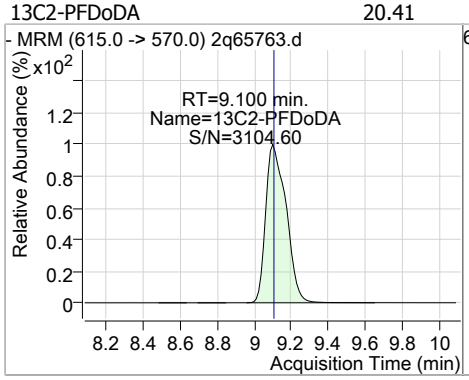


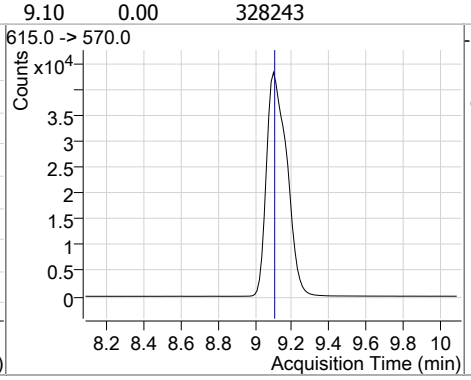


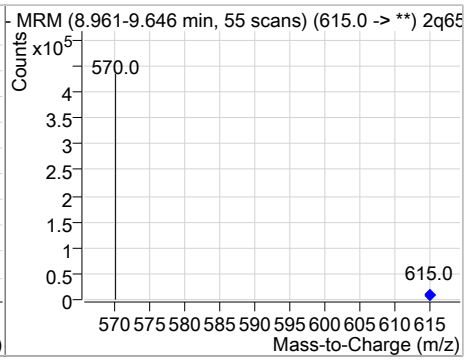


Perfluorinated Compounds by LC/MS/MS

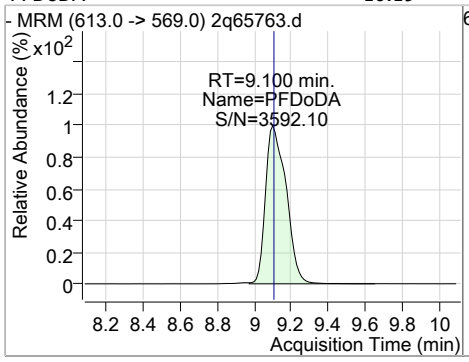
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.41	9.10	0.00	328243				

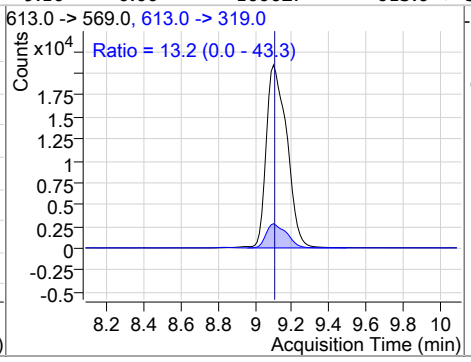


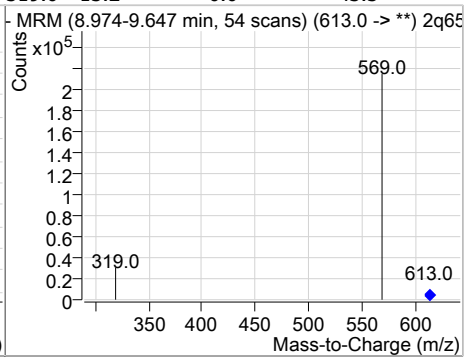




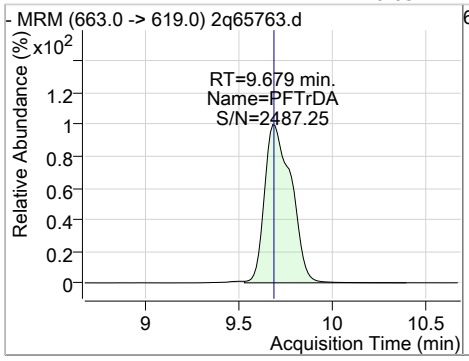
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	10.19	9.10	0.00	160627	613.0 -> 319.0	13.2	0.0	43.3

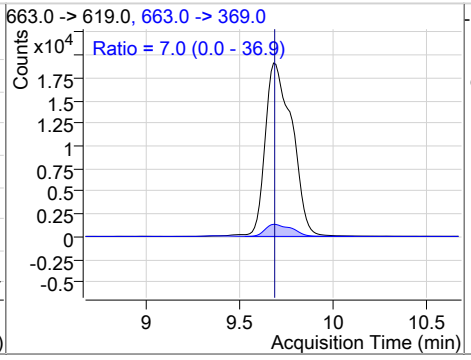


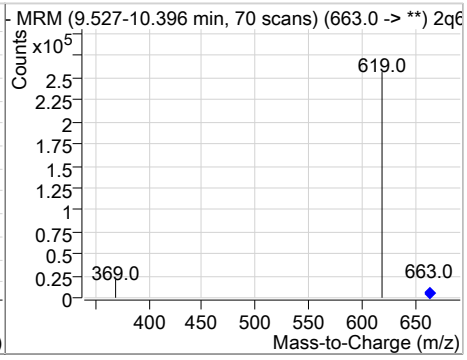




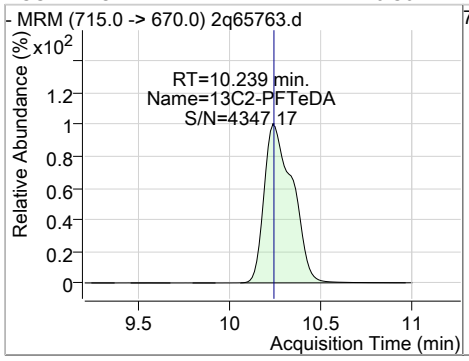
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	10.05	9.68	0.00	191391	663.0 -> 369.0	7.0	0.0	36.9

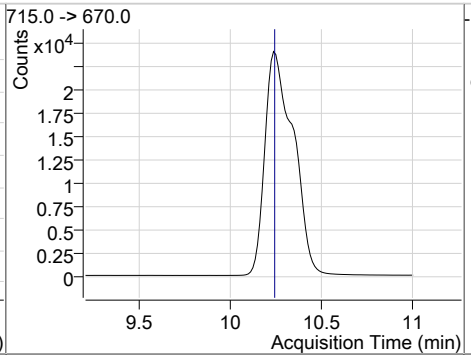


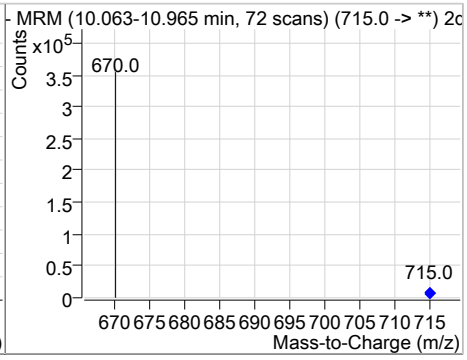




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.36	10.24	0.00	262703				

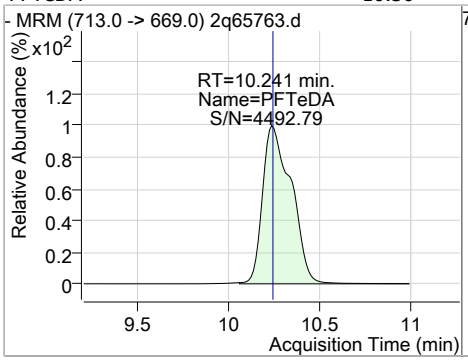


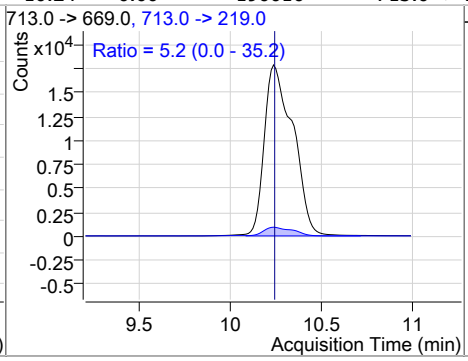


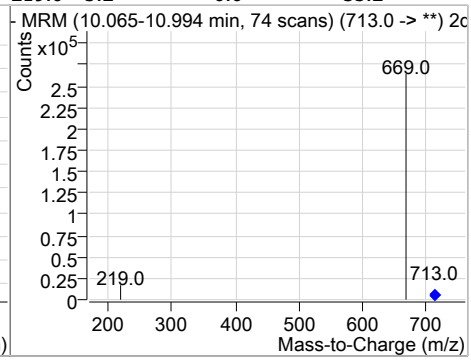


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	10.36	10.24	0.00	196016	713.0 -> 219.0	5.2	0.0	35.2







Manual Integration Approval Summary

Sample Number: S2Q956-IC956
Lab FileID: 2Q65763.D
Injection Time: 04/08/21 14:45
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/09/21 09:05 Natasha Gumtie
Supervisor approved: 04/12/21 13:27 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.46	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
MeFOSAA	2355-31-9		8.04	Split peak
EtFOSAA	2991-50-6		8.17	Split peak

2Q65764.D

Manual Integrations APPROVED (compounds with "m" flag)

Mike Eger 04/12/21 13:27

Perfluorinated Compounds by LC/MS/MS

Data File	:	2q65764.d
Operator	:	nancyf
Acq. Method	:	537_ID.m
Acq. Date-Time	:	4/8/2021 3:01:44 PM
Sample Name	:	icc956-20
Vial	:	P1-A7
DA Method File	:	ID_040821_S2Q956.quantmethod.xml
Batch Name	:	s2q956.batch.bin
Sample Information	:	op84308,S2Q956,250,,,1.0,1,water

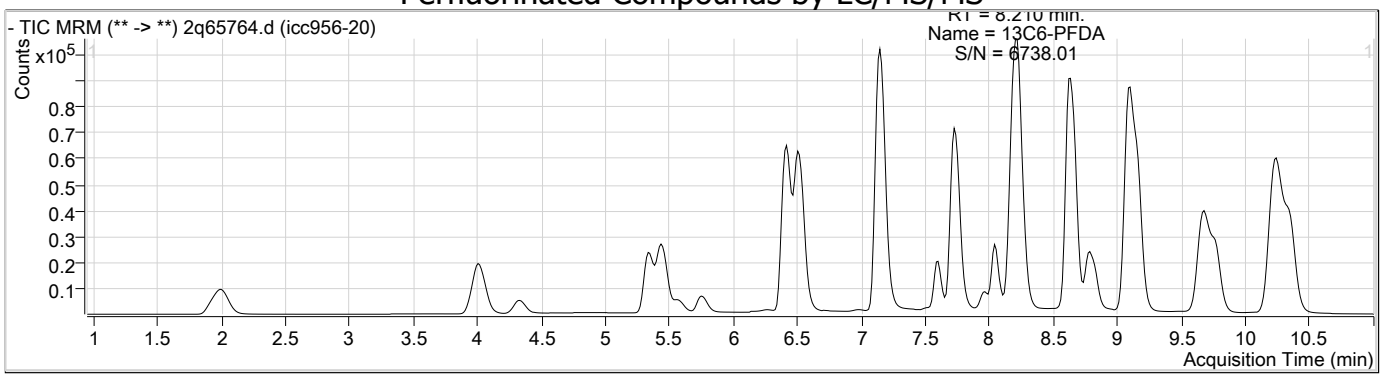
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.155	589.0 -> 419.0	41123	20.00	µg/L	0.000
M4-PFBA	1.989	217.0 -> 172.0	66393	20.00	µg/L	0.000
M5-PFPeA	4.012	268.0 -> 223.0	54637	20.00	µg/L	0.000
M5-PFHxA	5.442	318.0 -> 273.0	82954	20.00	µg/L	0.000
M4-PFHpA	6.420	367.0 -> 322.0	120488	20.00	µg/L	0.000
M8-PFOA	7.151	421.0 -> 376.0	139897	20.00	µg/L	0.000
M9-PFNA	7.732	472.0 -> 427.0	140857	20.00	µg/L	0.000
M6-PFDA	8.210	519.0 -> 474.0	184637	20.00	µg/L	0.000
M7-PFUnDA	8.636	570.0 -> 525.0	264366	20.00	µg/L	0.000
M2-PFDoDA	9.100	615.0 -> 570.0	319328	20.00	µg/L	0.000
M2-PFTeDA	10.239	715.0 -> 670.0	258639	20.00	µg/L	0.000
M8-FOSA	7.604	506.0 -> 78.0	38041	20.00	µg/L	0.000
M3-PFBS	4.330	302.0 -> 99.0	6710	20.00	µg/L	0.000
M3-PFHxS	6.456	402.0 -> 99.0	7452	20.00	µg/L	0.000
M8-PFOS	7.718	507.0 -> 99.0	10676	20.00	µg/L	0.000
M2-4:2FTS	5.335	329.0 -> 309.0	56748	20.00	µg/L	0.000
M2-6:2FTS	7.137	429.0 -> 409.0	80837	20.00	µg/L	0.000
M2-8:2FTS	8.247	529.0 -> 509.0	70390	20.00	µg/L	0.000
M3-MeFOSAA	8.041	573.0 -> 419.0	47909	20.00	µg/L	0.000
M3-HFPO-DA	5.759	287.0 -> 169.0	6224	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.335	329.0 -> 309.0	56748	19.50	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.5%		
13C2-6:2FTS	7.137	429.0 -> 409.0	80837	19.86	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%		
13C2-8:2FTS	8.247	529.0 -> 509.0	70390	19.73	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%		
13C2-PFDoDA	9.100	615.0 -> 570.0	319328	19.85	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%		
13C2-PFTeDA	10.239	715.0 -> 670.0	258639	20.05	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.2%		
13C3-PFBS	4.330	302.0 -> 99.0	6710	19.86	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%		
13C3-PFHxS	6.456	402.0 -> 99.0	7452	19.85	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%		
13C4-PFBA	1.989	217.0 -> 172.0	66393	19.77	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.9%		
13C4-PFHpA	6.420	367.0 -> 322.0	120488	19.80	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.0%		
d5-EtFOSAA	8.155	589.0 -> 419.0	41123	20.23	ng/ml	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.1%		
13C5-PFHxA	5.442	318.0 -> 273.0	82954	19.91	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.5%		
13C5-PFPeA	4.012	268.0 -> 223.0	54637	19.80	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.0%		

Perfluorinated Compounds by LC/MS/MS

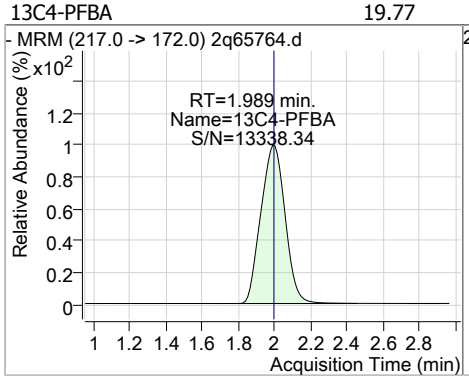
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	184637	19.93	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.7%			
13C7-PFUnDA	8.636	570.0 -> 525.0	264366	20.06	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.3%			
13C8-FOSA	7.604	506.0 -> 78.0	38041	19.80	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.0%			
13C8-PFOA	7.151	421.0 -> 376.0	139897	20.06	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.3%			
13C8-PFOS	7.718	507.0 -> 99.0	10676	20.10	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.5%			
13C9-PFNA	7.732	472.0 -> 427.0	140857	19.80	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.0%			
d3-MeFOSAA	8.041	573.0 -> 419.0	47909	20.20	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.0%			
13C3-HFPO-DA	5.759	287.0 -> 169.0	6224	19.19	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.0%			
Target Compounds							QValue
4:2FTS	5.337	327.0 -> 307.0	60811	20.35	µg/L		100
6:2FTS	7.138	427.0 -> 407.0	85368	19.99	µg/L		100
8:2FTS	8.235	527.0 -> 507.0	74636	20.23	µg/L		100
EtFOSAA	8.168	584.0 -> 419.0	37422	20.05	µg/L	m	99
FOSA	7.605	498.0 -> 78.0	38676	20.44	µg/L		100
MeFOSAA	8.041	570.0 -> 419.0	42263	20.29	µg/L	m	91
PFBA	1.996	213.0 -> 169.0	22717	20.27	µg/L		100
PFBS	4.332	299.0 -> 80.0	20990	20.09	µg/L		100
PFDA	8.211	513.0 -> 469.0	181991	20.57	µg/L		100
PFDoDA	9.100	613.0 -> 569.0	311810	20.32	µg/L		100
PFDS	8.583	599.0 -> 80.0	9443	20.33	µg/L		100
PFHpA	6.421	363.0 -> 319.0	204493	20.07	µg/L		100
PFHpS	7.149	449.0 -> 80.0	18880	20.44	µg/L		100
PFHxA	5.443	313.0 -> 269.0	58179	20.05	µg/L		100
PFHxS	6.457	399.0 -> 80.0	20335	19.94	µg/L	m	97
PFNA	7.733	463.0 -> 419.0	162804	20.36	µg/L		100
PFNS	8.170	549.0 -> 80.0	15708	20.27	µg/L		100
PFOA	7.152	413.0 -> 369.0	166674	20.02	µg/L		100
PFOS	7.718	499.0 -> 80.0	20367	19.95	µg/L	m	82
PFPeA	4.014	263.0 -> 219.0	89956	20.14	µg/L		100
PFPeS	5.577	349.0 -> 80.0	16010	20.20	µg/L		100
PFTeDA	10.241	713.0 -> 669.0	380424	20.41	µg/L		100
PFTrDA	9.679	663.0 -> 619.0	371318	20.05	µg/L		100
PFUnDA	8.637	563.0 -> 519.0	216291	20.04	µg/L		100
11Cl-PF3OUdS	8.784	631.0 -> 451.0	101821	20.23	µg/L		100
9Cl-PF3ONS	7.968	531.0 -> 351.0	20251	19.16	µg/L		100
ADONA	6.521	377.0 -> 251.0	244285	19.47	µg/L		100
HFPO-DA	5.754	329.0 -> 169.0	24608	21.17	µg/L		100

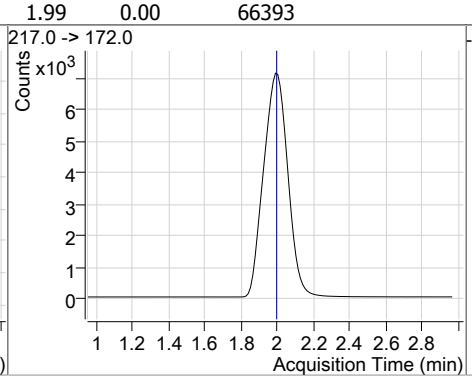
 # = Qualifier out of range, m = manually integrated, + = Area summed

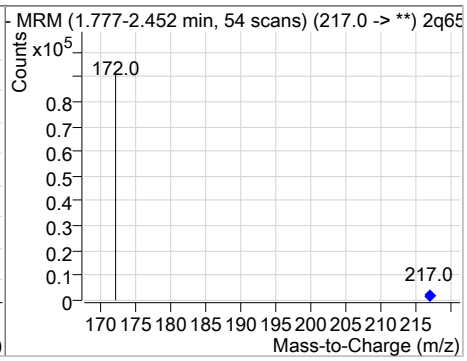
Perfluorinated Compounds by LC/MS/MS



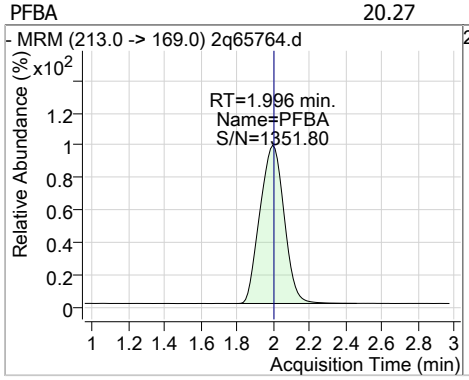
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.77	1.99	0.00	66393				

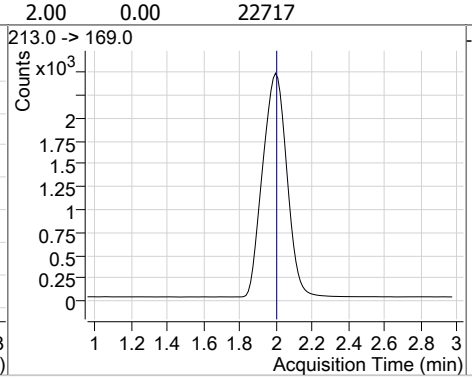


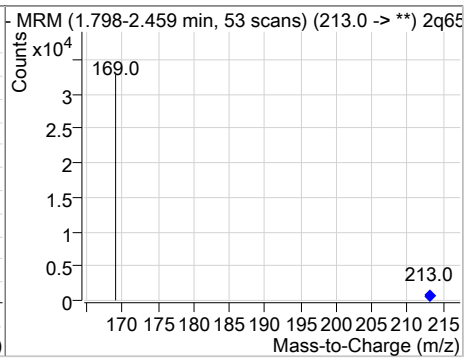




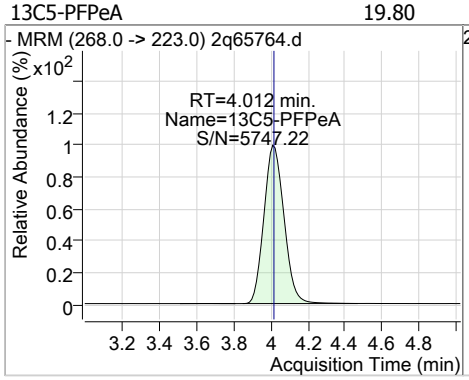
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	20.27	2.00	0.00	22717				

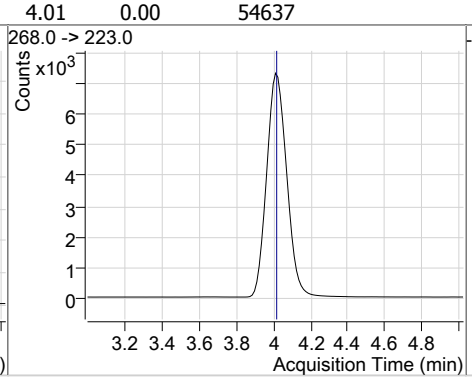


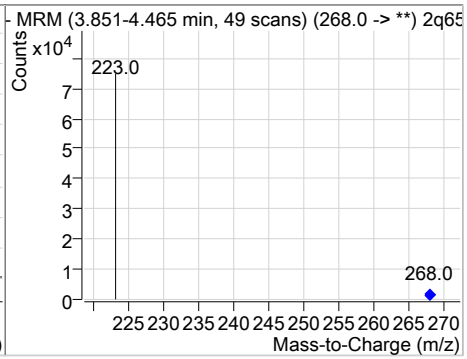




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.80	4.01	0.00	54637				



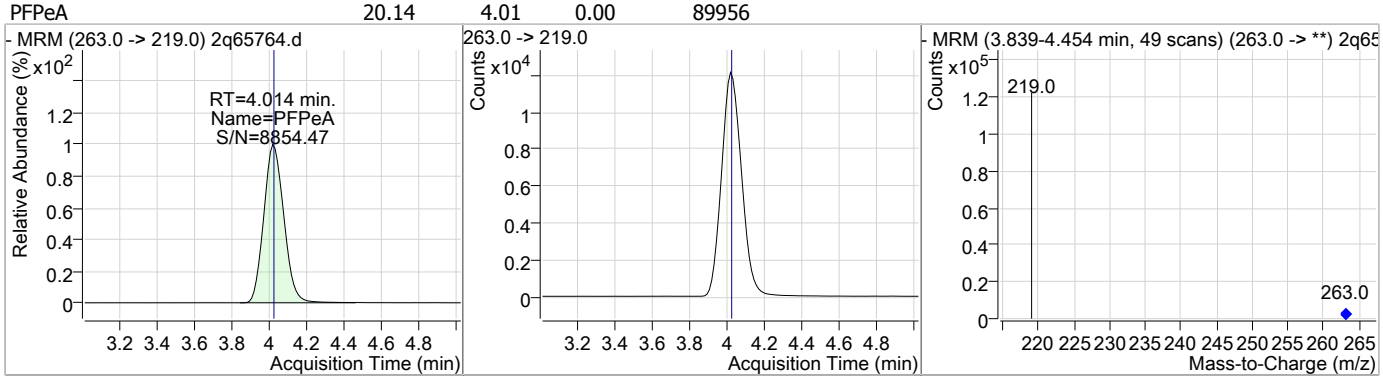




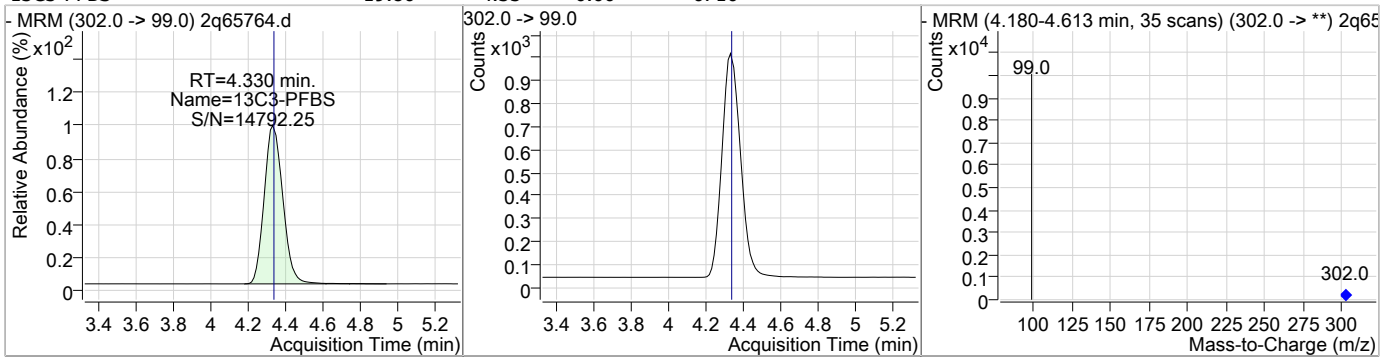
11.6.7 11

Perfluorinated Compounds by LC/MS/MS

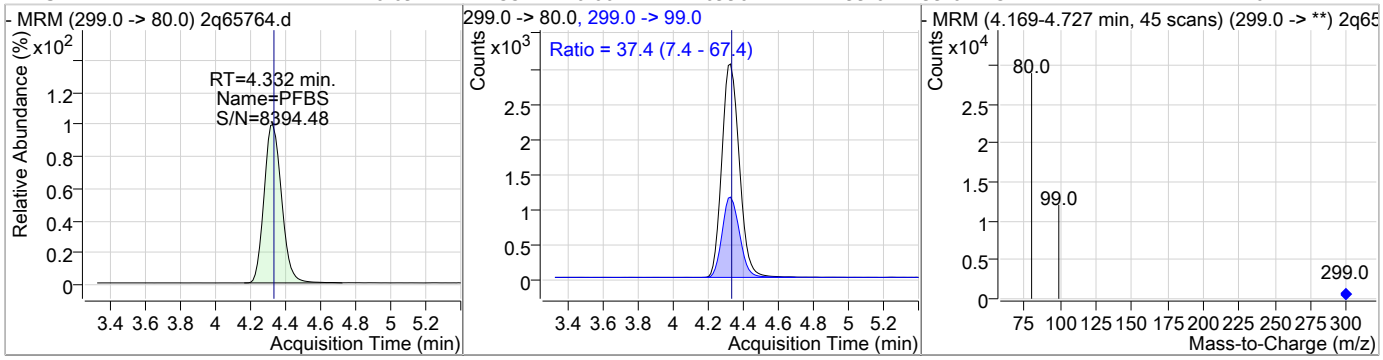
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	20.14	4.01	0.00	89956				



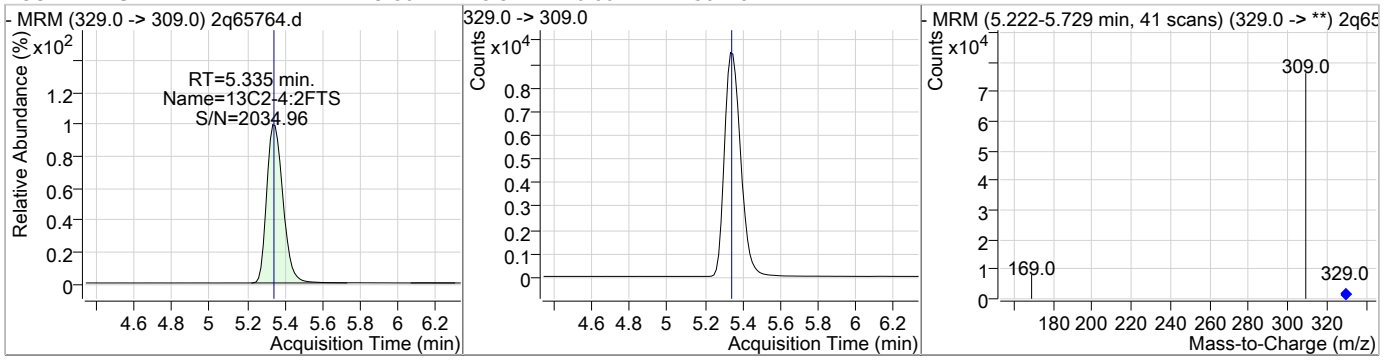
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.86	4.33	0.00	6710				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	20.09	4.33	0.00	20990	299.0 -> 99.0	37.4	7.4	67.4

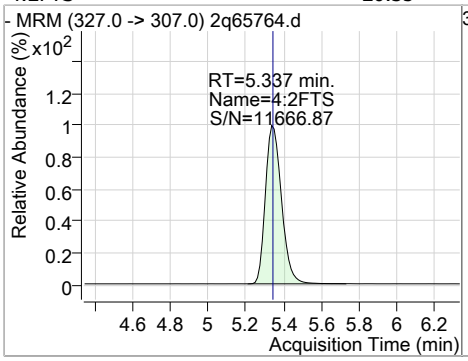


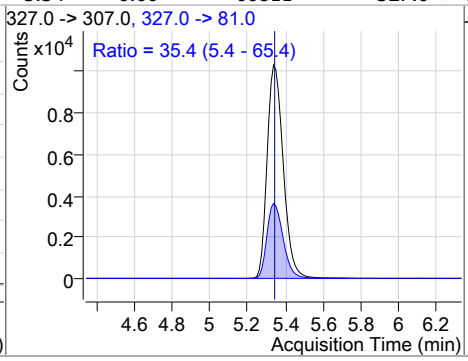
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.50	5.34	0.00	56748				

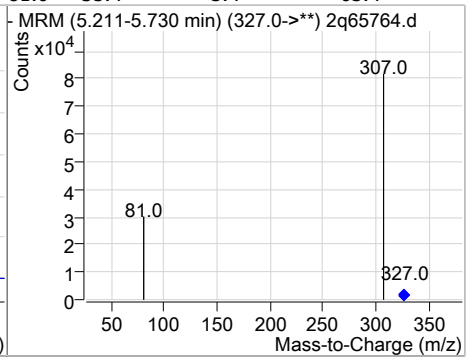


Perfluorinated Compounds by LC/MS/MS

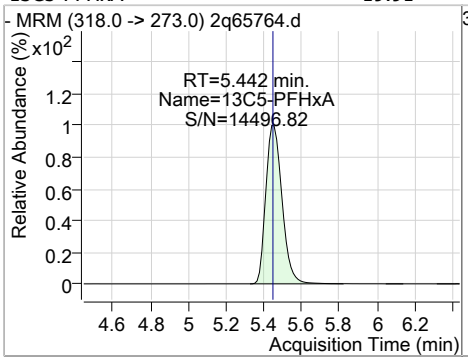
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.35	5.34	0.00	60811	327.0 -> 81.0	35.4	5.4	65.4

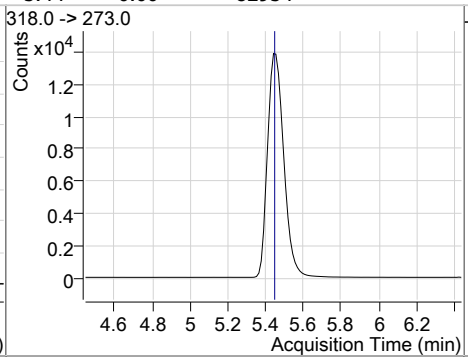


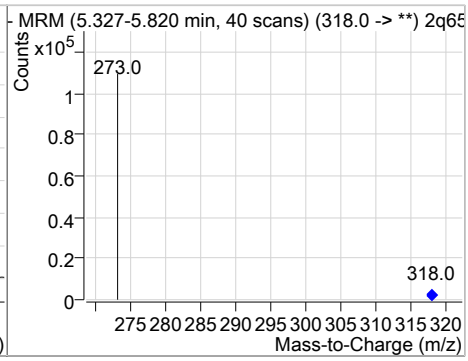




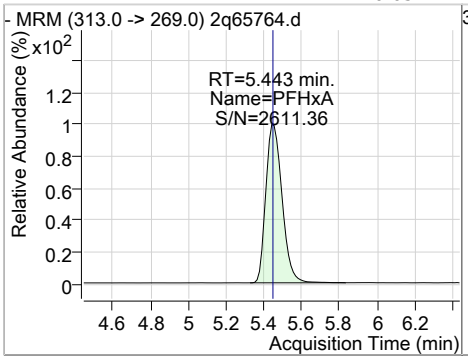
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.91	5.44	0.00	82954				

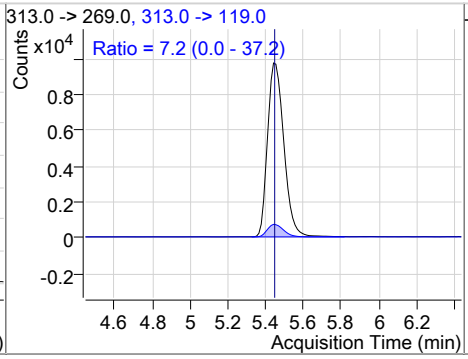


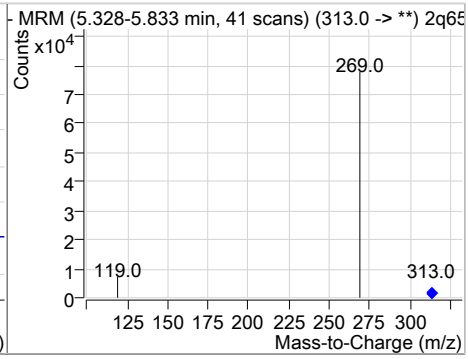




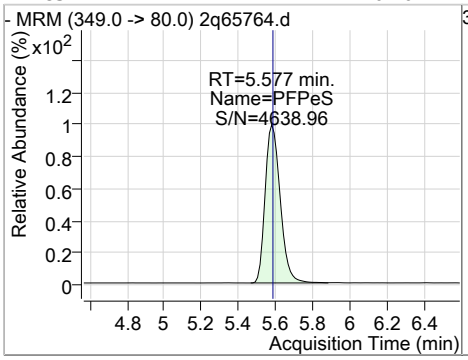
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	20.05	5.44	0.00	58179	313.0 -> 119.0	7.2	0.0	37.2

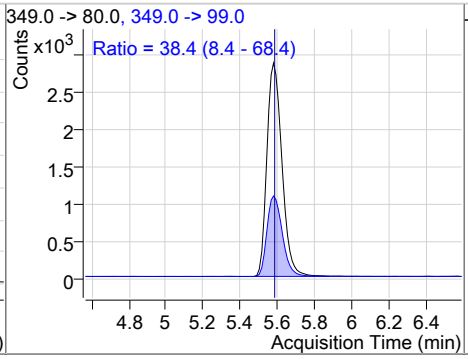


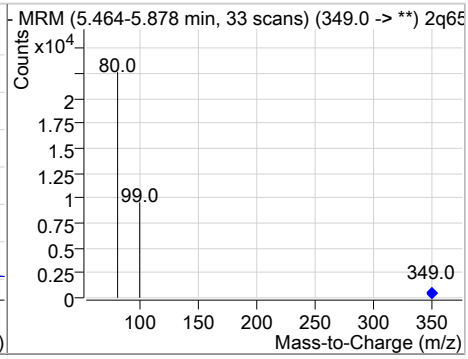




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	20.20	5.58	0.00	16010	349.0 -> 99.0	38.4	8.4	68.4

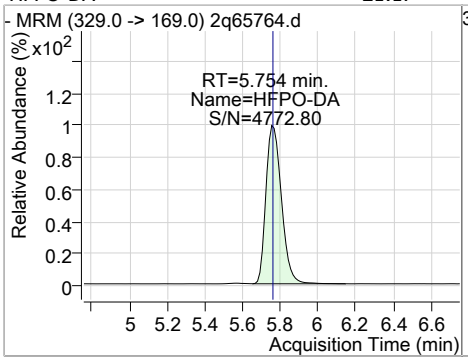


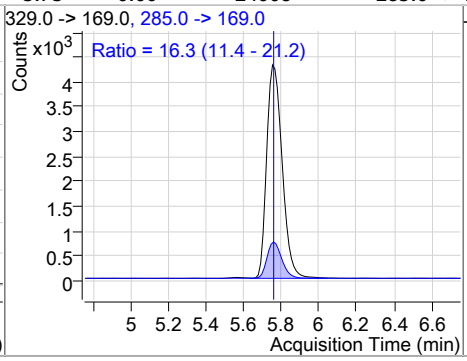


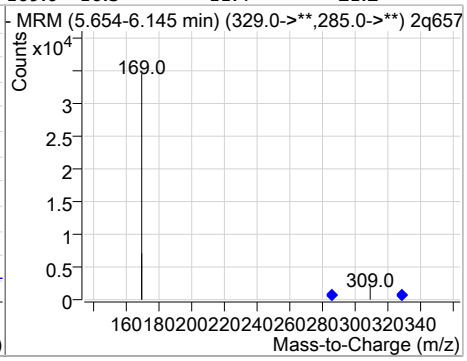


Perfluorinated Compounds by LC/MS/MS

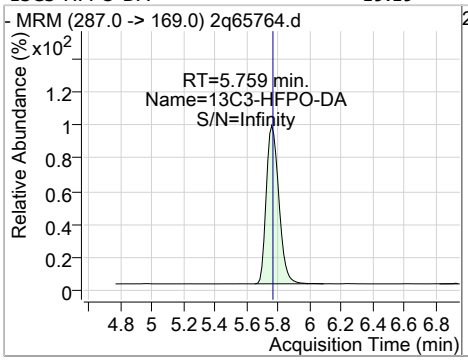
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	21.17	5.75	0.00	24608	285.0 -> 169.0	16.3	11.4	21.2

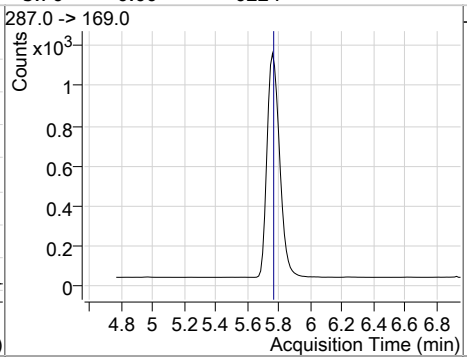


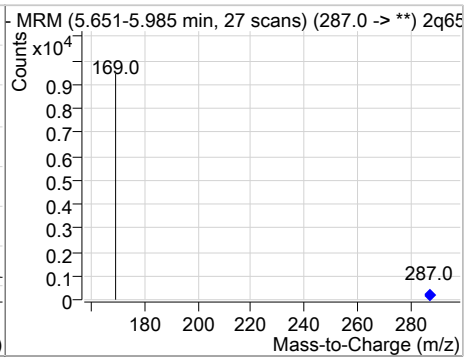




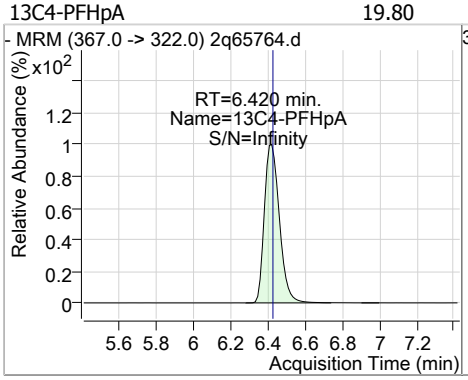
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.19	5.76	0.00	6224				

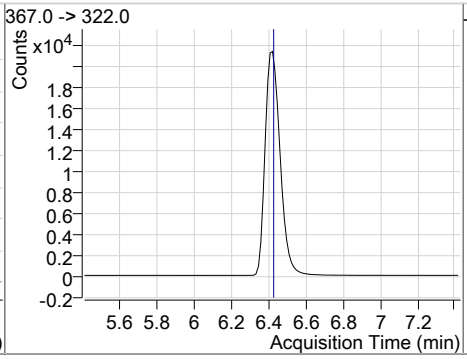


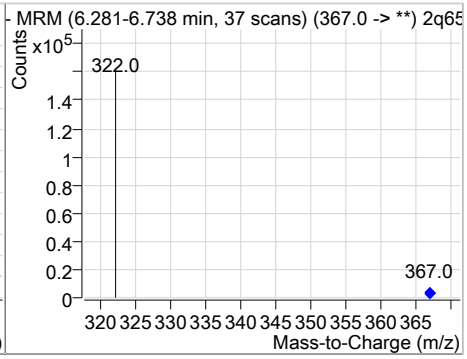




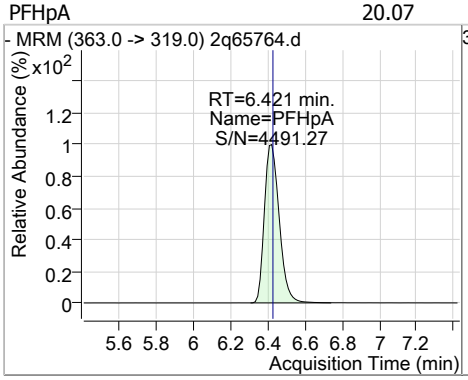
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.80	6.42	0.00	120488				

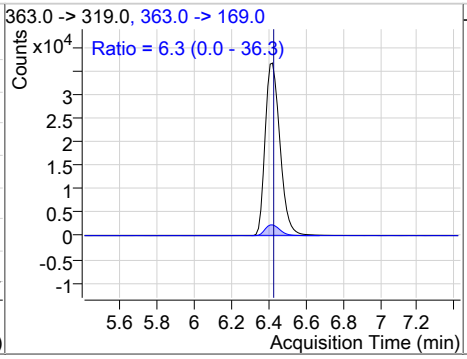


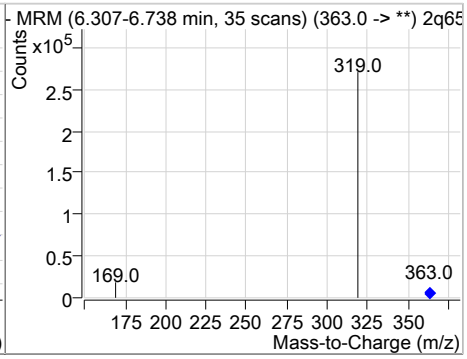




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	20.07	6.42	0.00	204493	363.0 -> 169.0	6.3	0.0	36.3

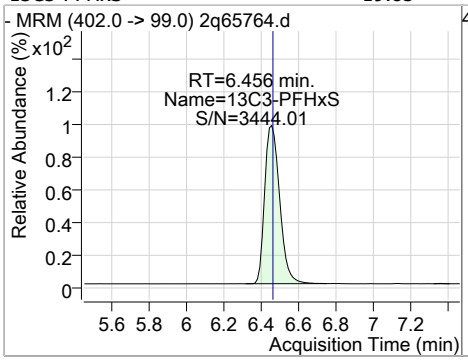


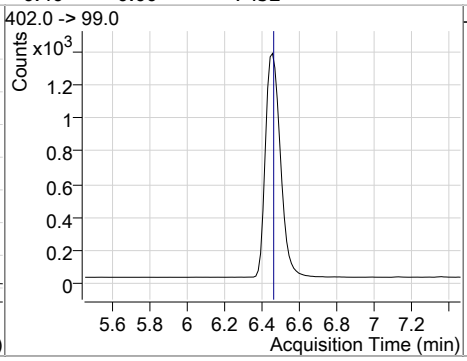


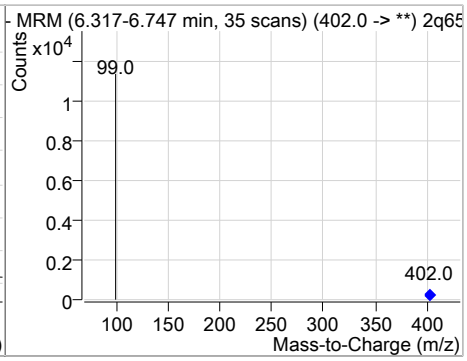


Perfluorinated Compounds by LC/MS/MS

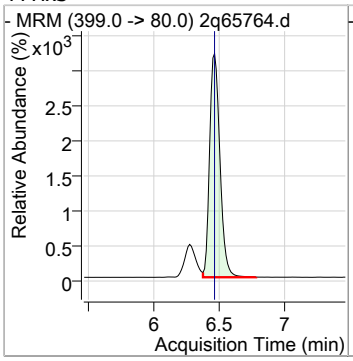
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.85	6.46	0.00	7452				

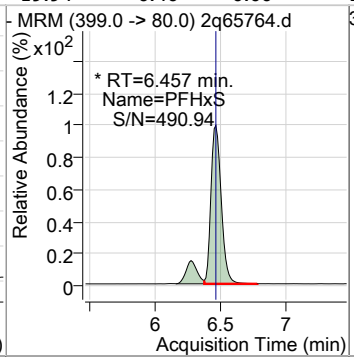


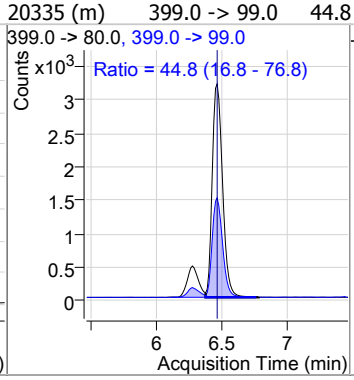


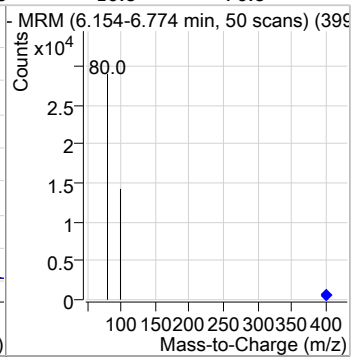


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	19.94	6.46	0.00	20335 (m)	399.0 -> 99.0	44.8	16.8	76.8

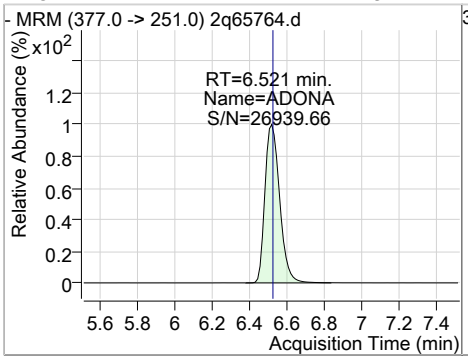


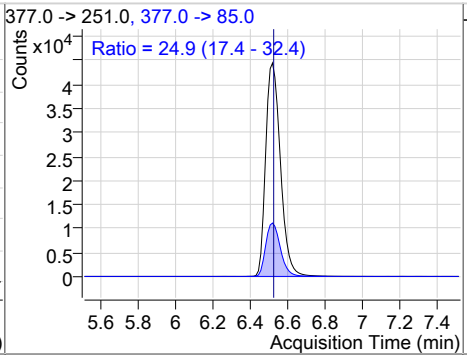


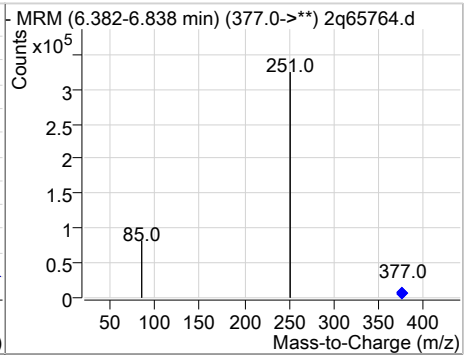




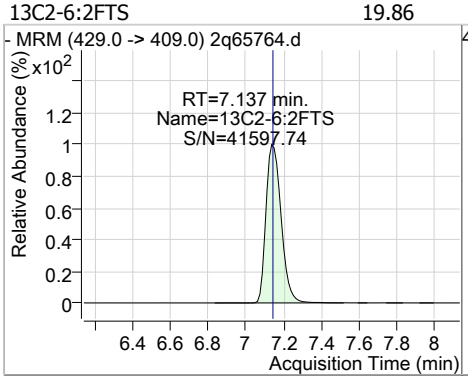
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	19.47	6.52	0.00	244285	377.0 -> 85.0	24.9	17.4	32.4

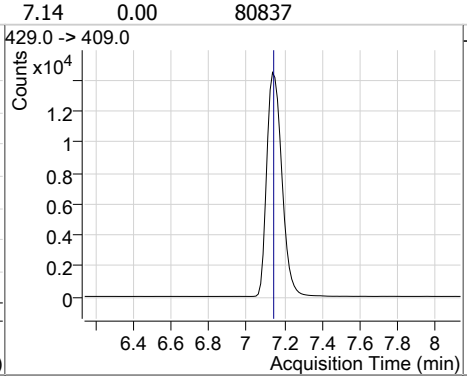


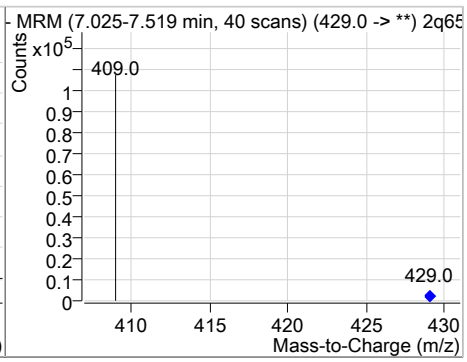




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.86	7.14	0.00	80837				

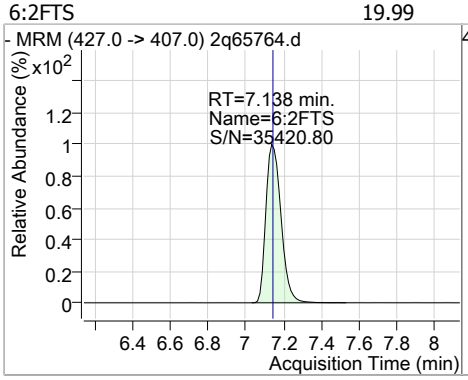


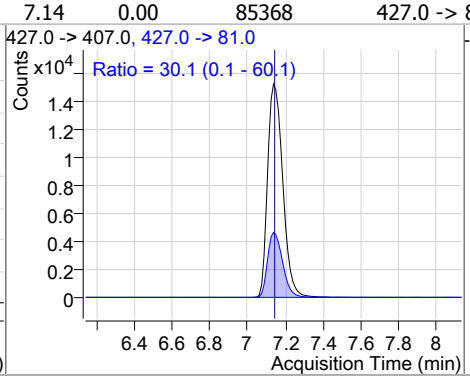


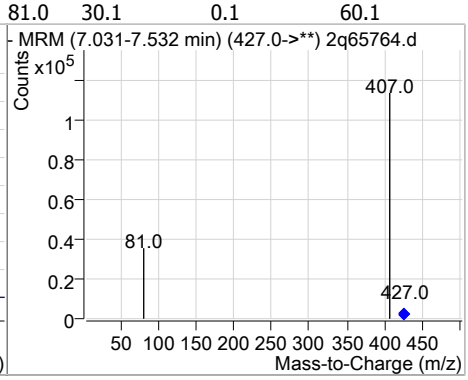


Perfluorinated Compounds by LC/MS/MS

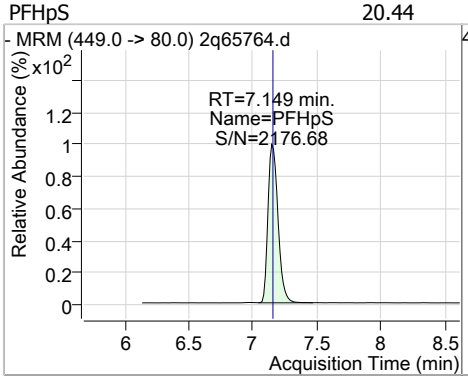
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	19.99	7.14	0.00	85368	427.0 -> 81.0	30.1	0.1	60.1

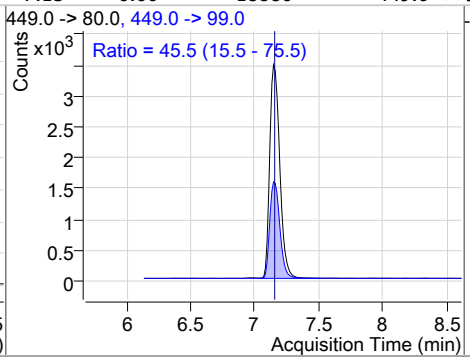


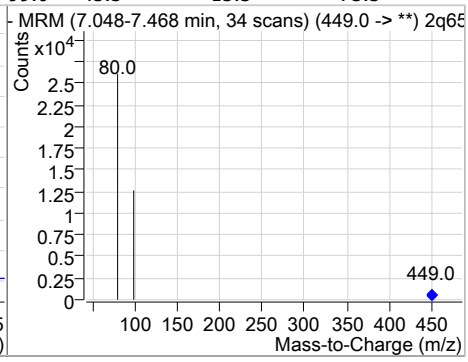




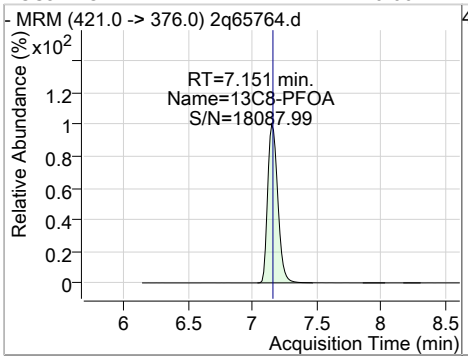
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	20.44	7.15	0.00	18880	449.0 -> 99.0	45.5	15.5	75.5

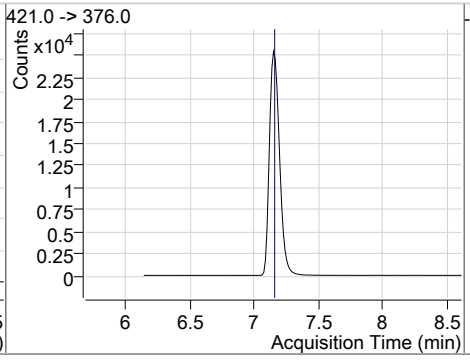


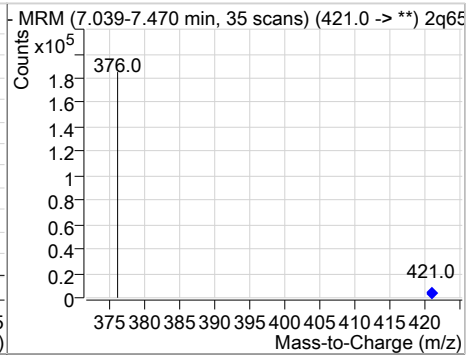




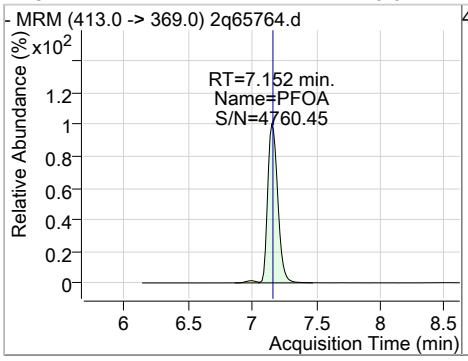
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.06	7.15	0.00	139897				

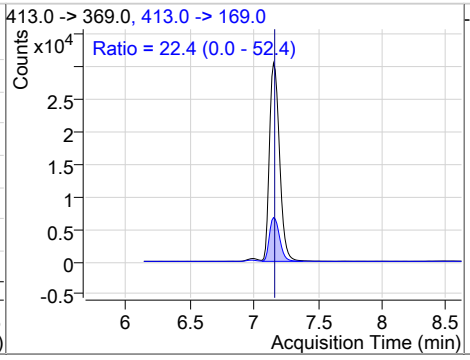


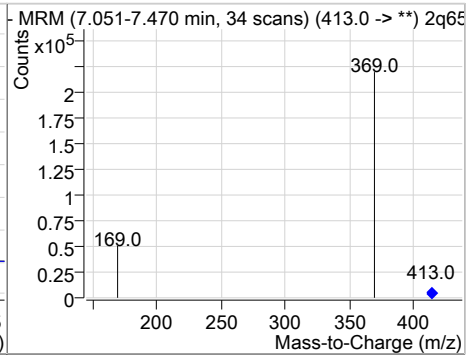




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	20.02	7.15	0.00	166674	413.0 -> 169.0	22.4	0.0	52.4

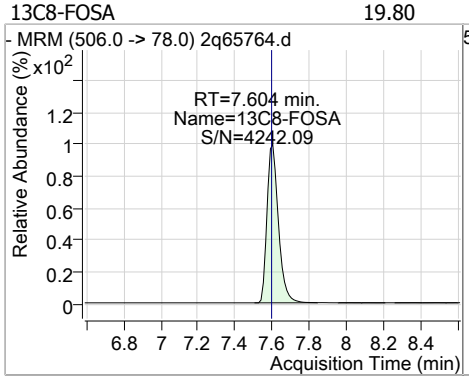


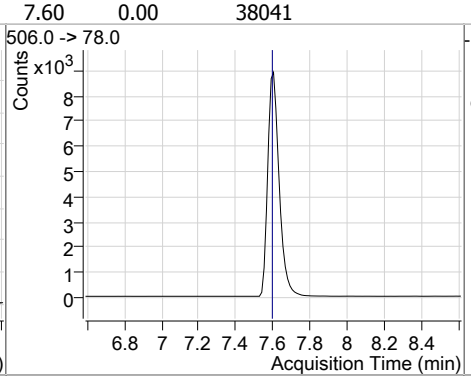


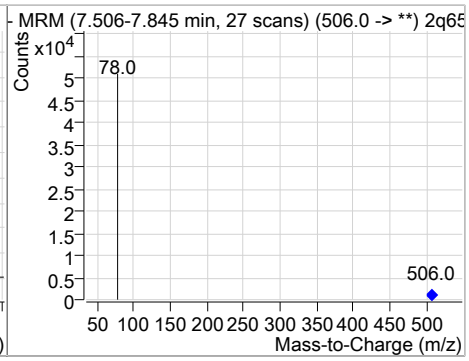


Perfluorinated Compounds by LC/MS/MS

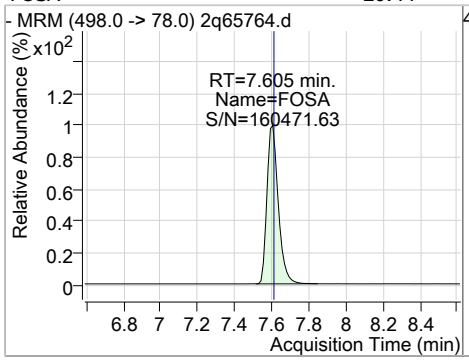
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	19.80	7.60	0.00	38041				

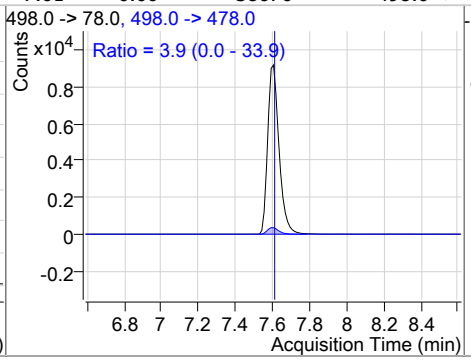


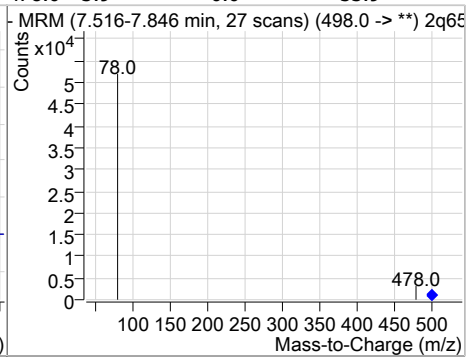




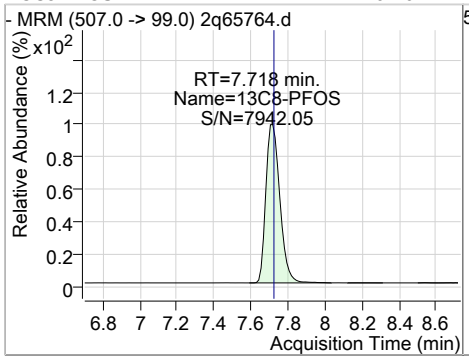
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	20.44	7.61	0.00	38676	498.0 -> 478.0	3.9	0.0	33.9

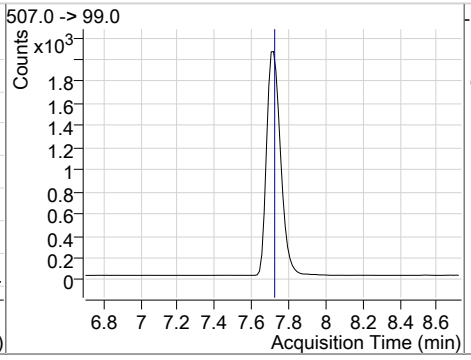


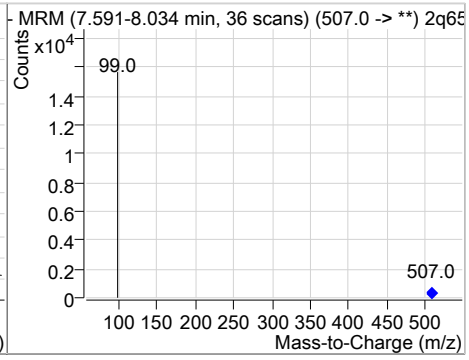




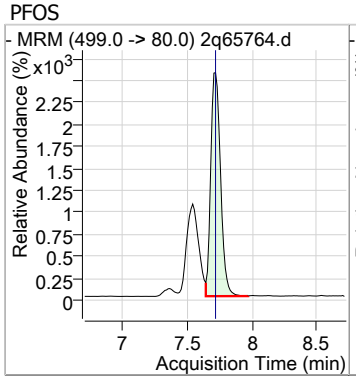
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.10	7.72	0.00	10676				

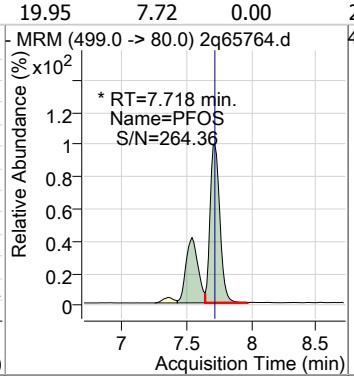


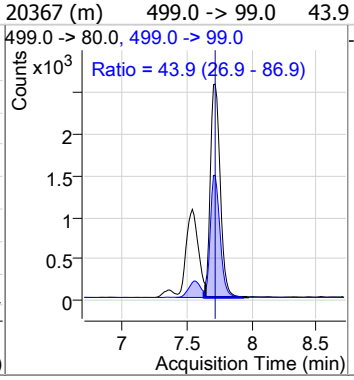


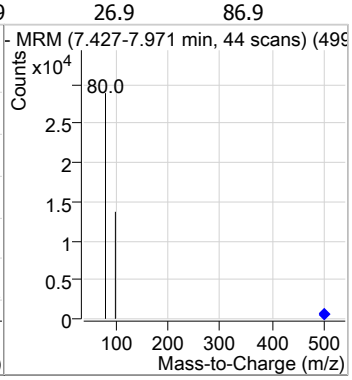


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.95	7.72	0.00	20367 (m)	499.0 -> 99.0	43.9	26.9	86.9



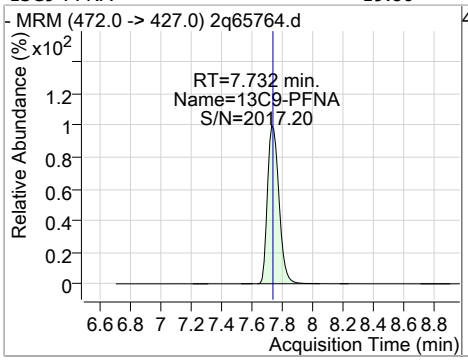


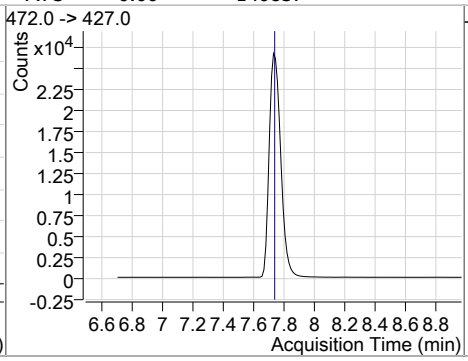


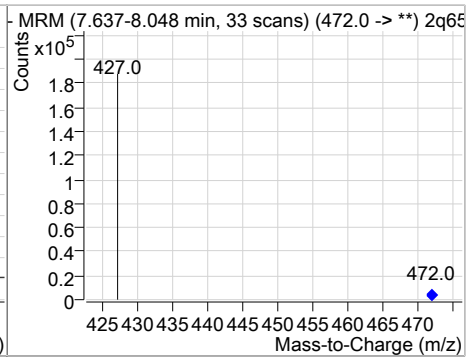


Perfluorinated Compounds by LC/MS/MS

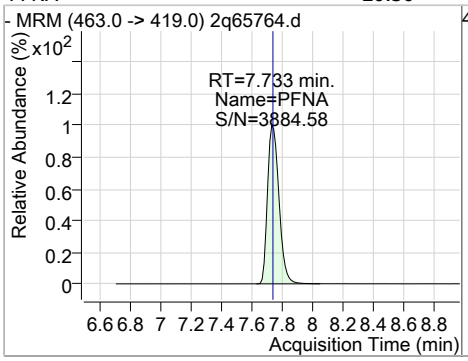
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.80	7.73	0.00	140857				

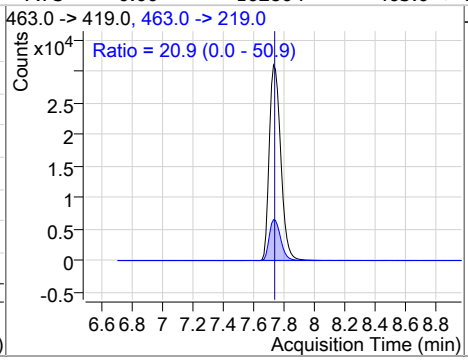


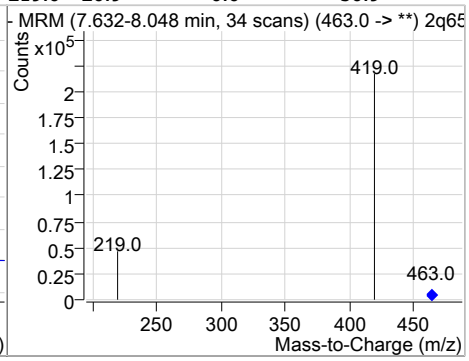




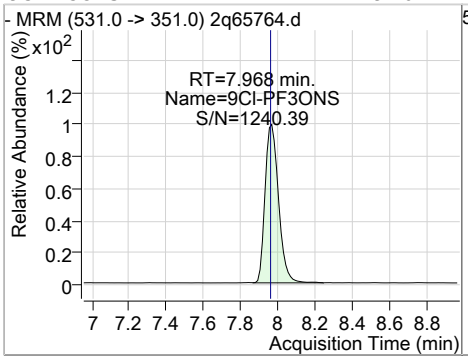
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	20.36	7.73	0.00	162804	463.0 -> 219.0	20.9	0.0	50.9

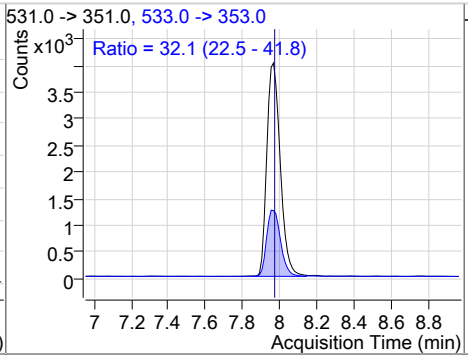


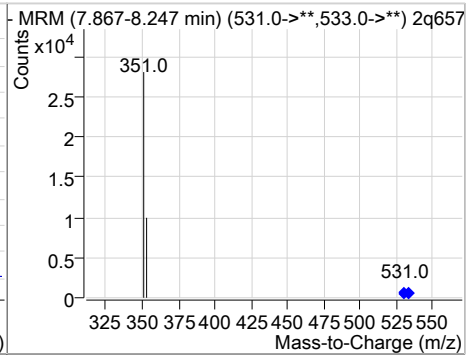




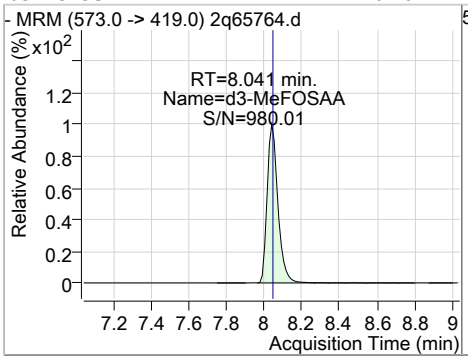
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	19.16	7.97	0.00	20251	533.0 -> 353.0	32.1	22.5	41.8

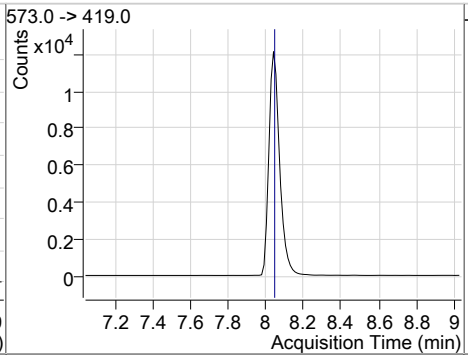


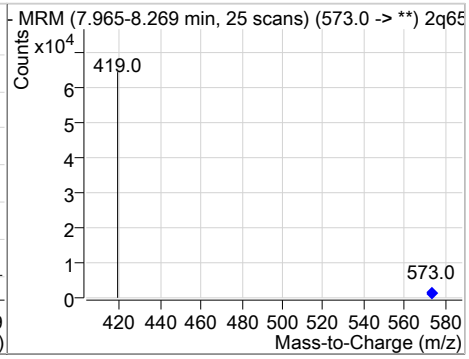




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.20	8.04	0.00	47909				

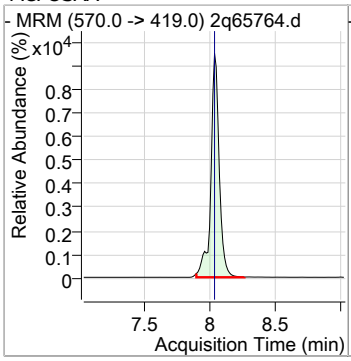


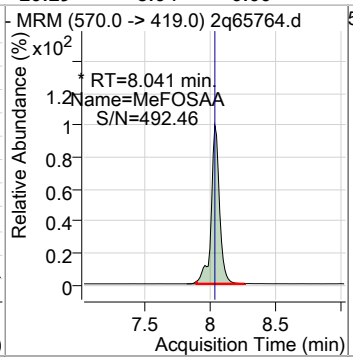


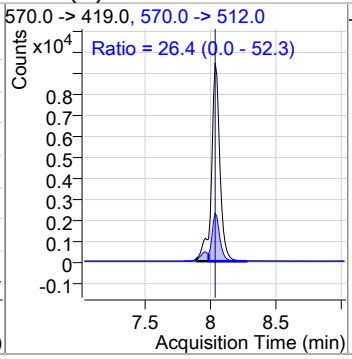


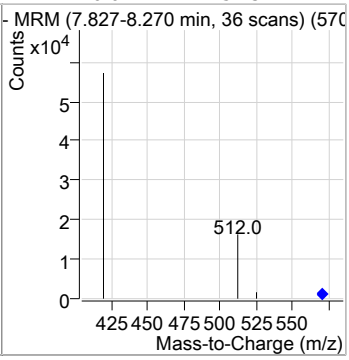
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	20.29	8.04	0.00	42263 (m)	570.0 -> 512.0	26.4	0.0	52.3

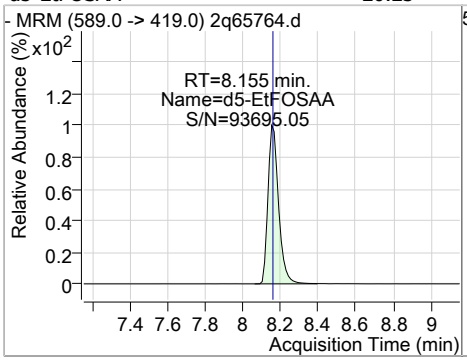


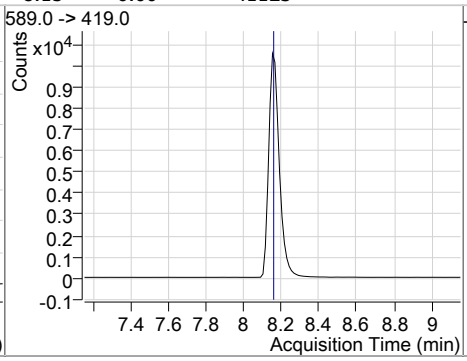


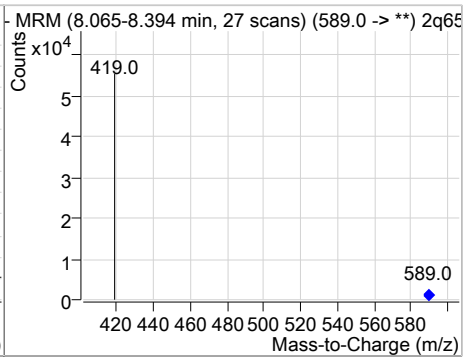




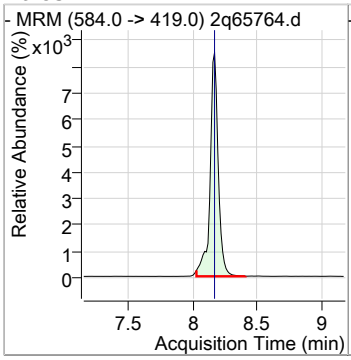
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.23	8.15	0.00	41123				

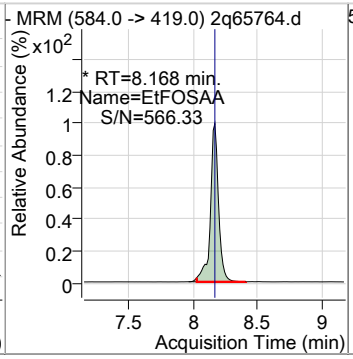


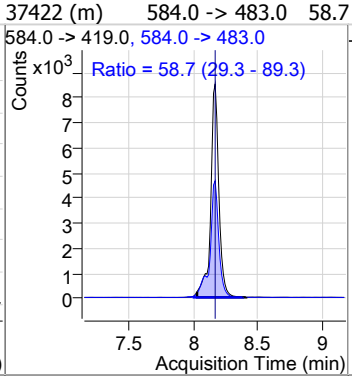


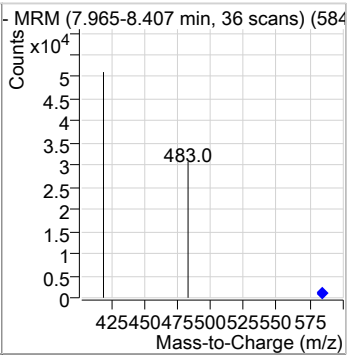


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	20.05	8.17	0.00	37422 (m)	584.0 -> 483.0	58.7	29.3	89.3

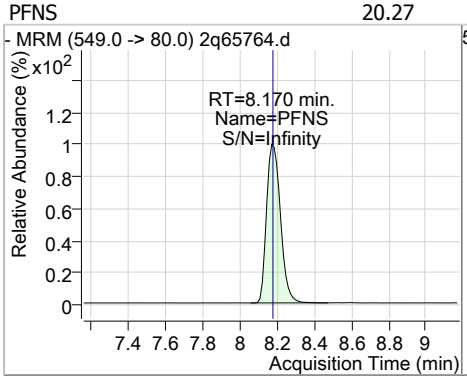


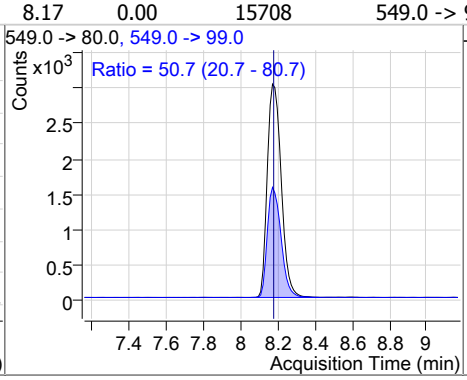


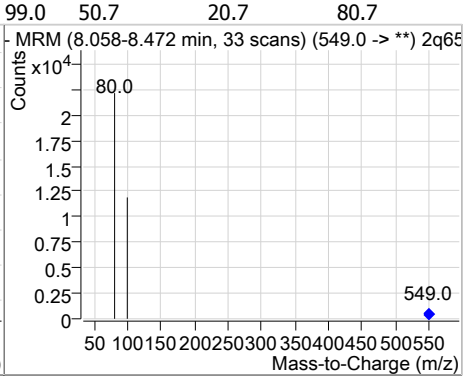




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	20.27	8.17	0.00	15708	549.0 -> 99.0	50.7	20.7	80.7

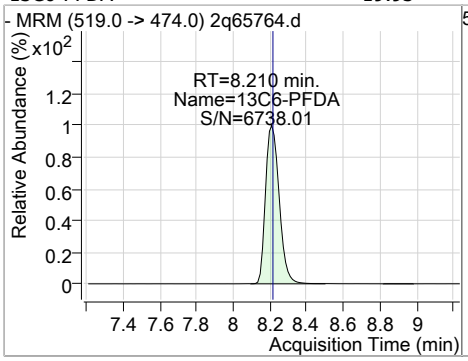


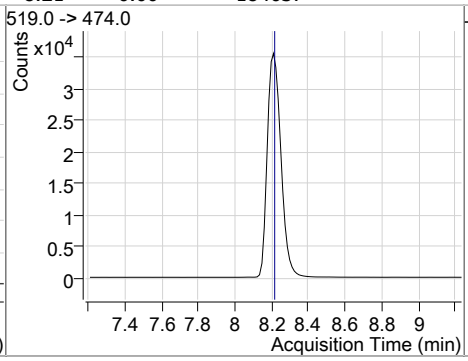


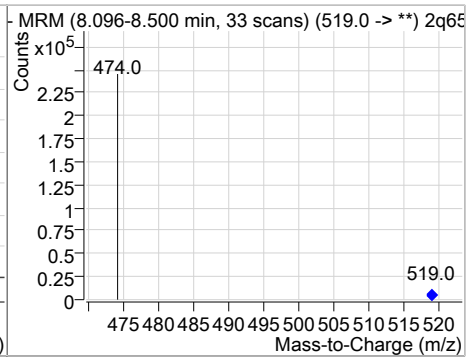


Perfluorinated Compounds by LC/MS/MS

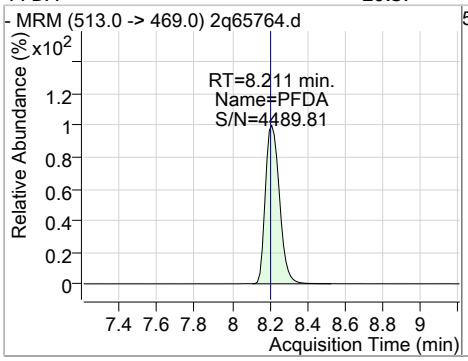
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.93	8.21	0.00	184637				

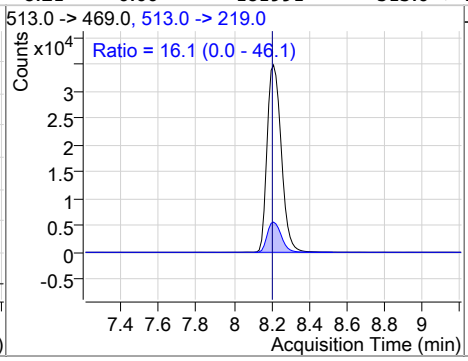


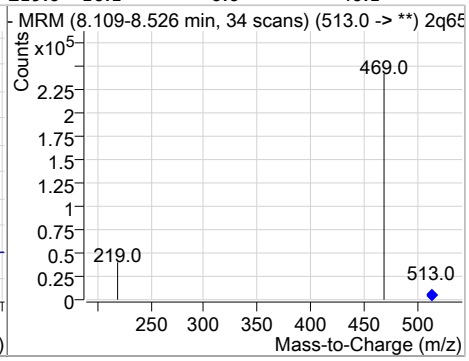




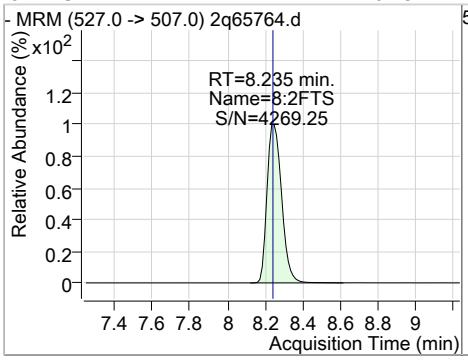
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	20.57	8.21	0.00	181991	513.0 -> 219.0	16.1	0.0	46.1

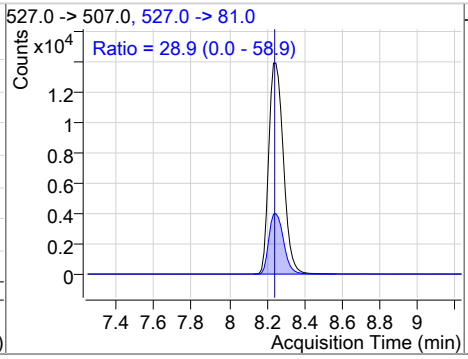


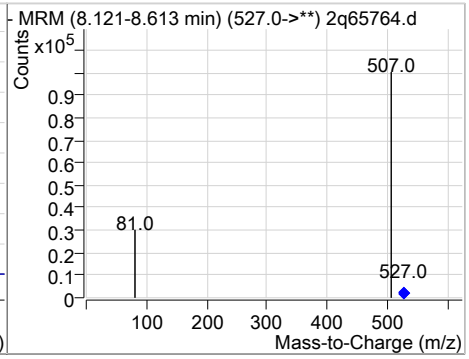




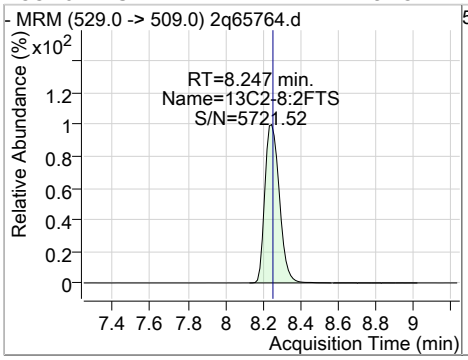
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.23	8.23	0.00	74636	527.0 -> 81.0	28.9	0.0	58.9

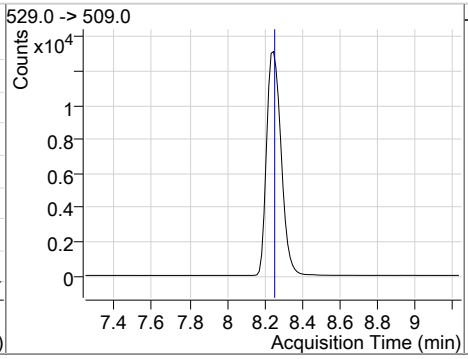


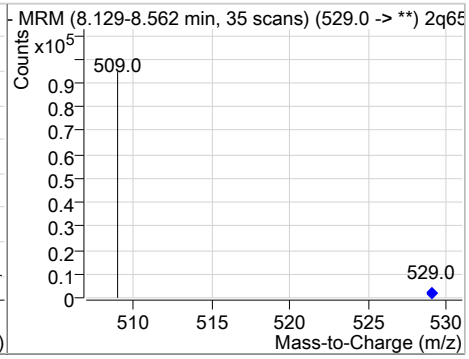




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.73	8.25	0.00	70390				

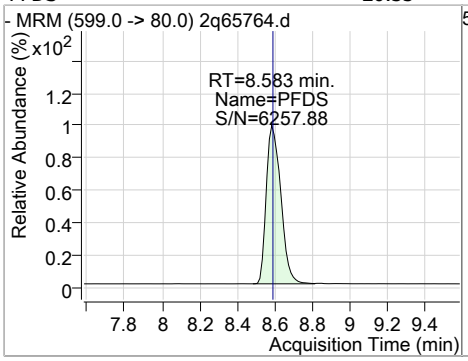


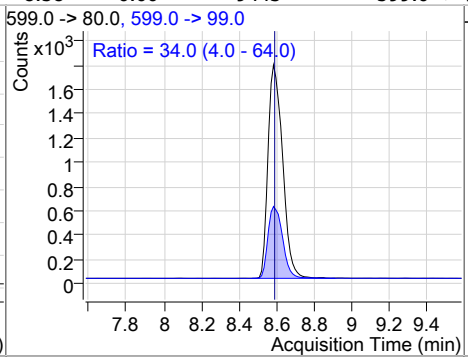


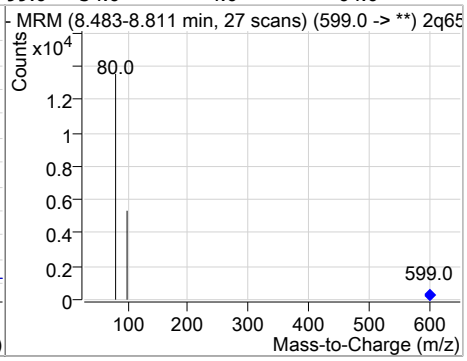


Perfluorinated Compounds by LC/MS/MS

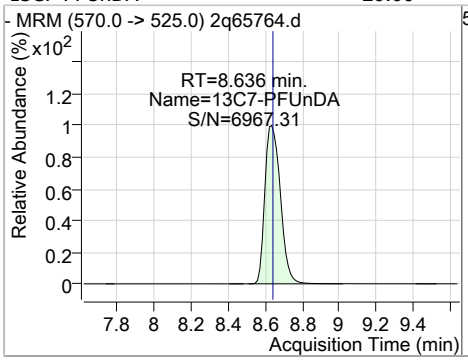
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	20.33	8.58	0.00	9443	599.0 -> 99.0	34.0	4.0	64.0

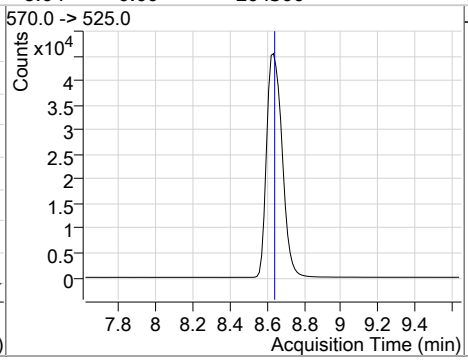


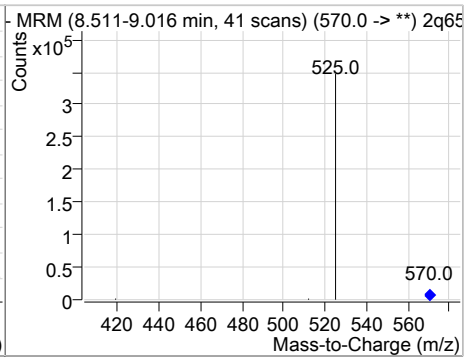




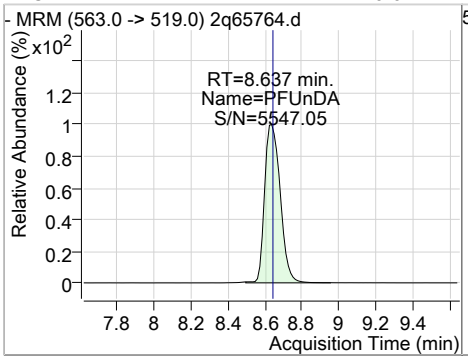
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.06	8.64	0.00	264366				

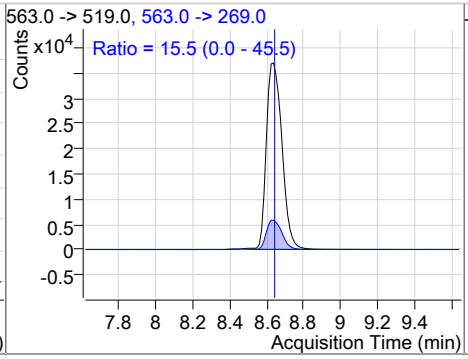


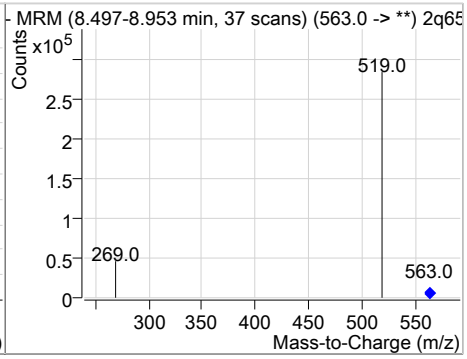




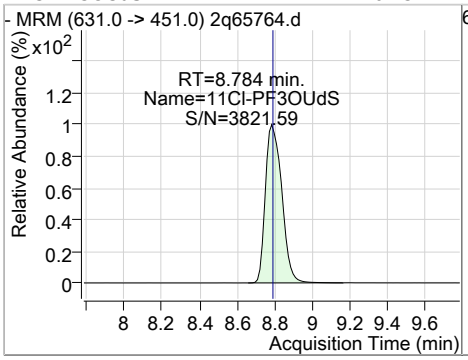
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	20.04	8.64	0.00	216291	563.0 -> 269.0	15.5	0.0	45.5

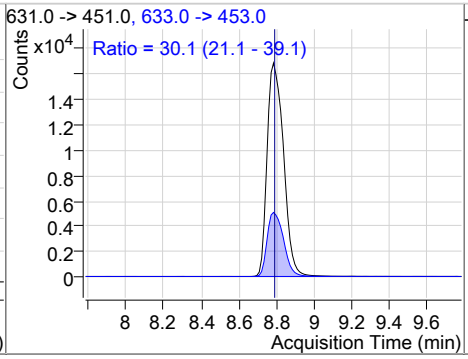


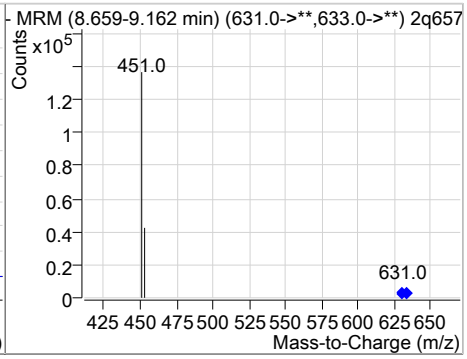




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	20.23	8.78	0.00	101821	633.0 -> 453.0	30.1	21.1	39.1

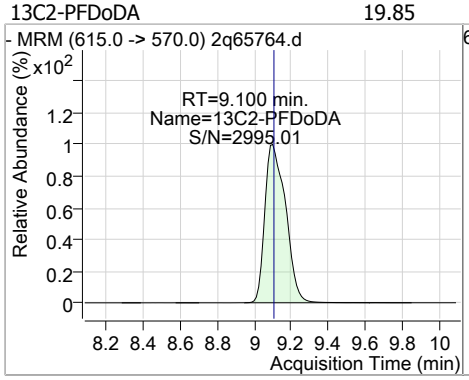


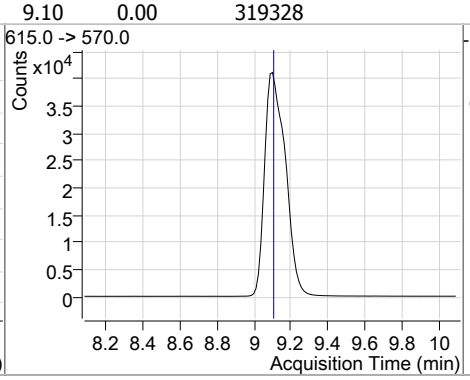


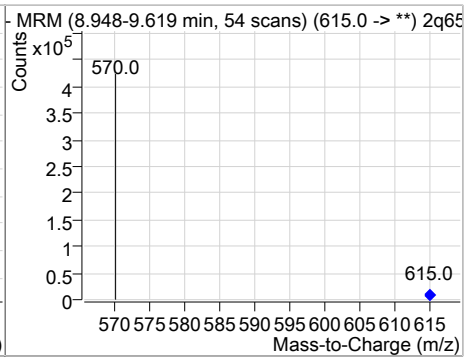


Perfluorinated Compounds by LC/MS/MS

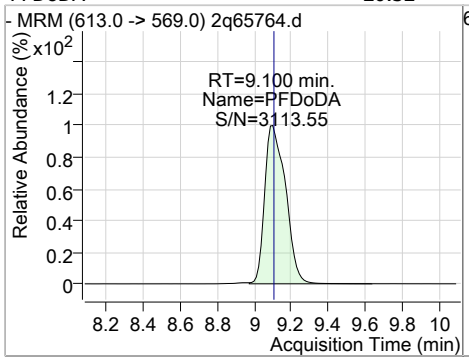
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.85	9.10	0.00	319328				

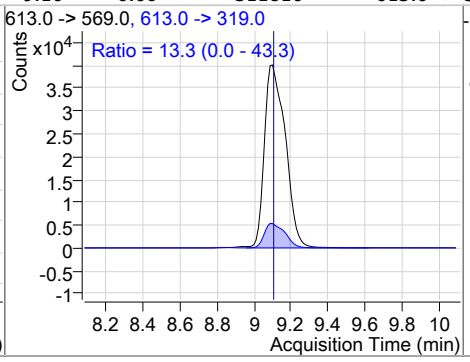


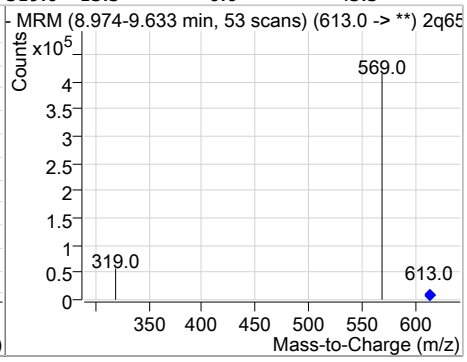




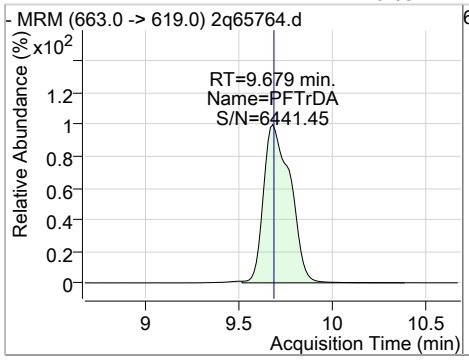
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	20.32	9.10	0.00	311810	613.0 -> 319.0	13.3	0.0	43.3

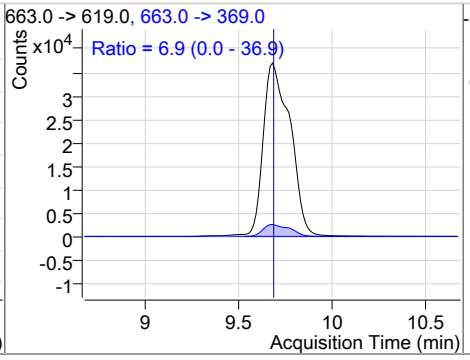


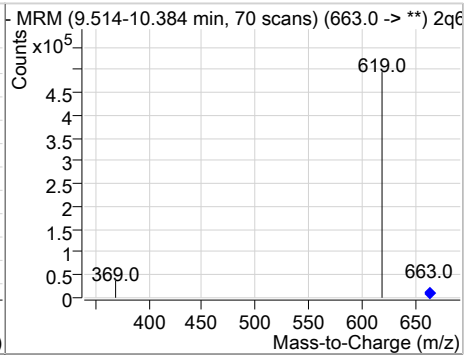




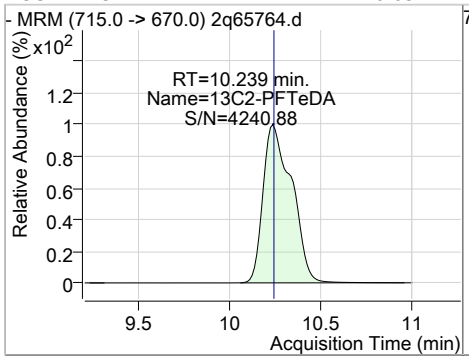
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	20.05	9.68	0.00	371318	663.0 -> 369.0	6.9	0.0	36.9

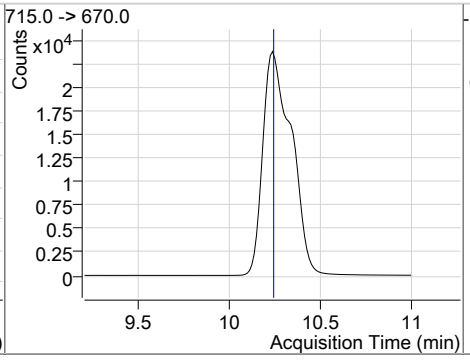


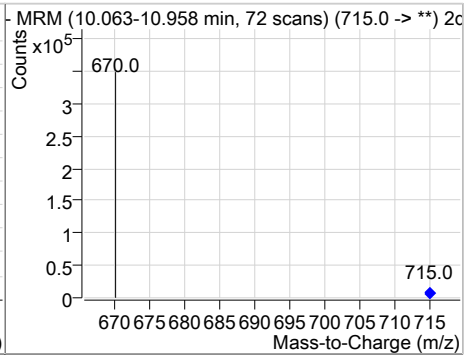




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.05	10.24	0.00	258639				

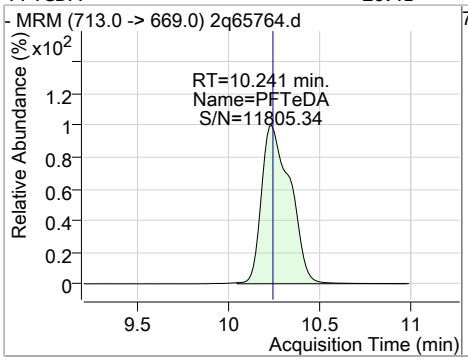


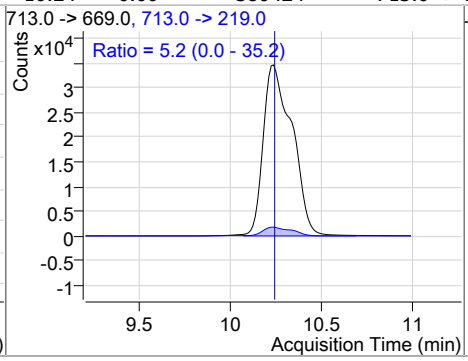


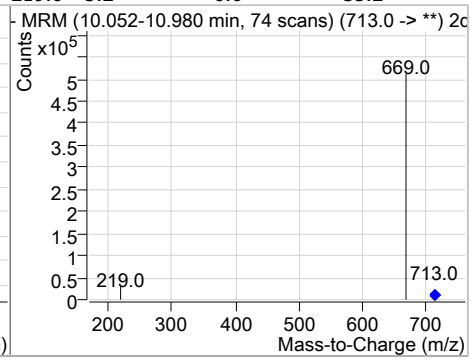


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	20.41	10.24	0.00	380424	713.0 -> 219.0	5.2	0.0	35.2







Manual Integration Approval Summary

Sample Number: S2Q956-ICC956
Lab FileID: 2Q65764.D
Injection Time: 04/08/21 15:01
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/09/21 09:05 Natasha Gumtie
Supervisor approved: 04/12/21 13:27 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.46	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
MeFOSAA	2355-31-9		8.04	Split peak
EtFOSAA	2991-50-6		8.17	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/12/21 13:27

Perfluorinated Compounds by LC/MS/MS

Data File : 2q65765.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/8/2021 3:18:18 PM
Sample Name : ic956-50
Vial : P1-A8
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q956.batch.bin
Sample Information : op84308,S2Q956,250,,,1.0,1,water

Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.155	589.0 -> 419.0	40774	20.00	µg/L	0.000
M4-PFBA	2.002	217.0 -> 172.0	68094	20.00	µg/L	0.013
M5-PFPeA	4.012	268.0 -> 223.0	56202	20.00	µg/L	0.000
M5-PFHxA	5.454	318.0 -> 273.0	84389	20.00	µg/L	0.013
M4-PFHpA	6.420	367.0 -> 322.0	123572	20.00	µg/L	0.000
M8-PFOA	7.151	421.0 -> 376.0	141076	20.00	µg/L	0.000
M9-PFNA	7.732	472.0 -> 427.0	144781	20.00	µg/L	0.000
M6-PFDA	8.210	519.0 -> 474.0	187553	20.00	µg/L	0.000
M7-PFUnDA	8.636	570.0 -> 525.0	265761	20.00	µg/L	0.000
M2-PFDoDA	9.100	615.0 -> 570.0	329385	20.00	µg/L	0.000
M2-PFTeDA	10.239	715.0 -> 670.0	266663	20.00	µg/L	0.000
M8-FOSA	7.604	506.0 -> 78.0	38365	20.00	µg/L	0.000
M3-PFBS	4.330	302.0 -> 99.0	6870	20.00	µg/L	0.000
M3-PFHxS	6.456	402.0 -> 99.0	7540	20.00	µg/L	0.000
M8-PFOS	7.718	507.0 -> 99.0	10620	20.00	µg/L	0.000
M2-4:2FTS	5.348	329.0 -> 309.0	63436	20.00	µg/L	0.013
M2-6:2FTS	7.137	429.0 -> 409.0	86990	20.00	µg/L	0.000
M2-8:2FTS	8.247	529.0 -> 509.0	77913	20.00	µg/L	0.000
M3-MeFOSAA	8.041	573.0 -> 419.0	48218	20.00	µg/L	0.000
M3-HFPO-DA	5.771	287.0 -> 169.0	6573	20.00	µg/L	0.013
System Monitoring Compounds						
13C2-4:2FTS	5.348	329.0 -> 309.0	63436	21.79	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.0%		
13C2-6:2FTS	7.137	429.0 -> 409.0	86990	21.38	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.9%		
13C2-8:2FTS	8.247	529.0 -> 509.0	77913	21.84	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.2%		
13C2-PFDoDA	9.100	615.0 -> 570.0	329385	20.48	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.4%		
13C2-PFTeDA	10.239	715.0 -> 670.0	266663	20.67	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.3%		
13C3-PFBS	4.330	302.0 -> 99.0	6870	20.33	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.7%		
13C3-PFHxS	6.456	402.0 -> 99.0	7540	20.08	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.4%		
13C4-PFBA	2.002	217.0 -> 172.0	68094	20.28	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.4%		
13C4-PFHpA	6.420	367.0 -> 322.0	123572	20.30	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.5%		
d5-EtFOSAA	8.155	589.0 -> 419.0	40774	20.06	ng/ml	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.3%		
13C5-PFHxA	5.454	318.0 -> 273.0	84389	20.25	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%		
13C5-PFPeA	4.012	268.0 -> 223.0	56202	20.37	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.8%		

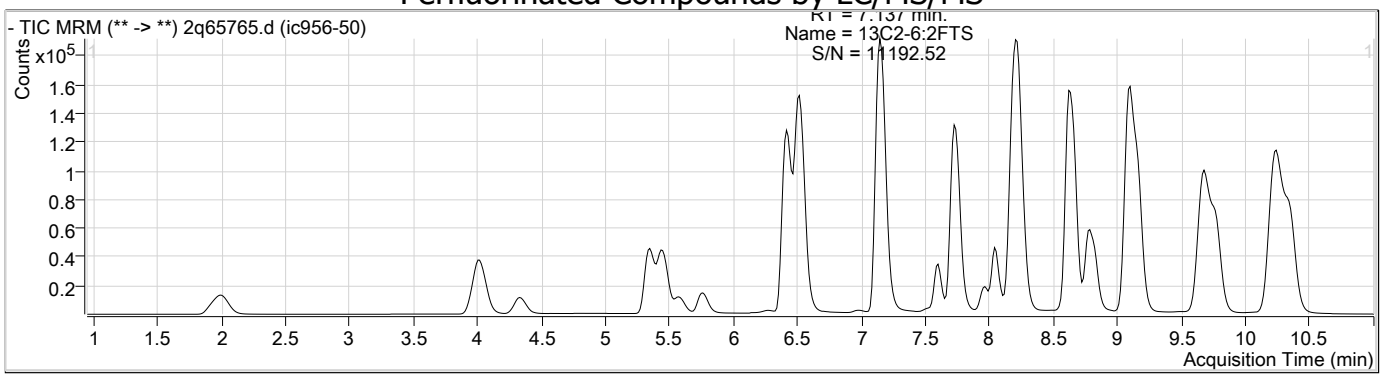
11.6.8

Perfluorinated Compounds by LC/MS/MS

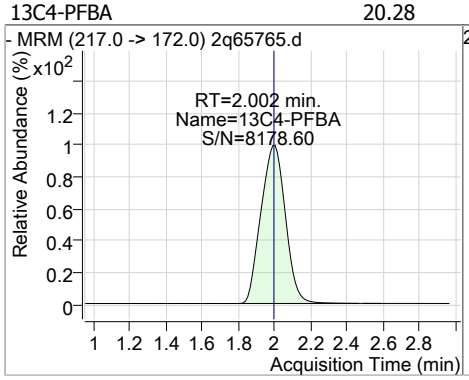
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	187553	20.25	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.2%			
13C7-PFUnDA	8.636	570.0 -> 525.0	265761	20.16	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.8%			
13C8-FOSA	7.604	506.0 -> 78.0	38365	19.97	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.8%			
13C8-PFOA	7.151	421.0 -> 376.0	141076	20.23	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.1%			
13C8-PFOS	7.718	507.0 -> 99.0	10620	19.99	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.0%			
13C9-PFNA	7.732	472.0 -> 427.0	144781	20.36	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.8%			
d3-MeFOSAA	8.041	573.0 -> 419.0	48218	20.33	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.6%			
13C3-HFPO-DA	5.771	287.0 -> 169.0	6573	20.27	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%			
Target Compounds							QValue
4:2FTS	5.350	327.0 -> 307.0	153990	46.09	µg/L		99
6:2FTS	7.138	427.0 -> 407.0	210805	45.88	µg/L		100
8:2FTS	8.247	527.0 -> 507.0	186388	45.63	µg/L		98
EtFOSAA	8.168	584.0 -> 419.0	92090	49.77	µg/L	m	98
FOSA	7.605	498.0 -> 78.0	93120	48.80	µg/L		99
MeFOSAA	8.041	570.0 -> 419.0	106840	50.97	µg/L	m	92
PFBA	1.996	213.0 -> 169.0	57274	49.84	µg/L		100
PFBS	4.332	299.0 -> 80.0	52902	49.47	µg/L		99
PFDA	8.211	513.0 -> 469.0	440343	49.00	µg/L		99
PFDoDA	9.100	613.0 -> 569.0	784559	49.58	µg/L		100
PFDS	8.583	599.0 -> 80.0	23319	49.95	µg/L		99
PFHpA	6.421	363.0 -> 319.0	515340	49.32	µg/L		100
PFHpS	7.149	449.0 -> 80.0	46861	50.14	µg/L		98
PFHxA	5.455	313.0 -> 269.0	147480	49.96	µg/L		100
PFHxS	6.457	399.0 -> 80.0	51547	49.96	µg/L	m	97
PFNA	7.733	463.0 -> 419.0	404092	49.16	µg/L		99
PFNS	8.170	549.0 -> 80.0	39489	51.22	µg/L		99
PFOA	7.152	413.0 -> 369.0	415930	49.54	µg/L		100
PFOS	7.718	499.0 -> 80.0	51429	50.65	µg/L	m	83
PFPeA	4.014	263.0 -> 219.0	228047	49.65	µg/L		100
PFPeS	5.577	349.0 -> 80.0	40508	49.93	µg/L		100
PFTeDA	10.241	713.0 -> 669.0	958614	49.89	µg/L		100
PFTrDA	9.679	663.0 -> 619.0	943895	49.40	µg/L		100
PFUnDA	8.625	563.0 -> 519.0	534518	49.28	µg/L		99
11Cl-PF3OUdS	8.784	631.0 -> 451.0	262347	50.53	µg/L		98
9Cl-PF3ONS	7.968	531.0 -> 351.0	51538	48.00	µg/L		99
ADONA	6.521	377.0 -> 251.0	610085	48.22	µg/L		98
HFPO-DA	5.767	329.0 -> 169.0	63004	51.33	µg/L		100

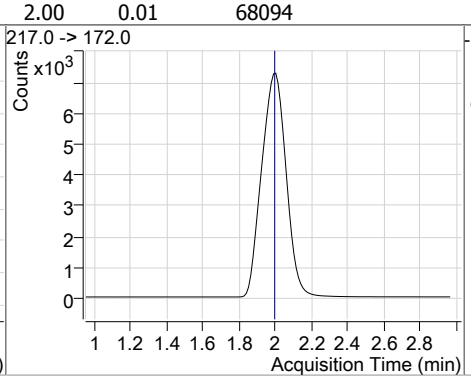
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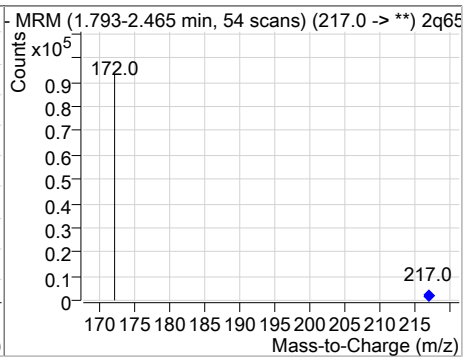
Perfluorinated Compounds by LC/MS/MS



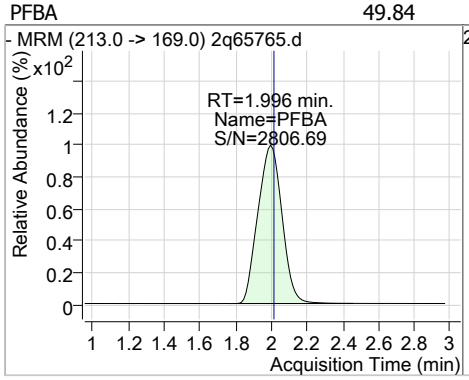
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.28	2.00	0.01	68094				

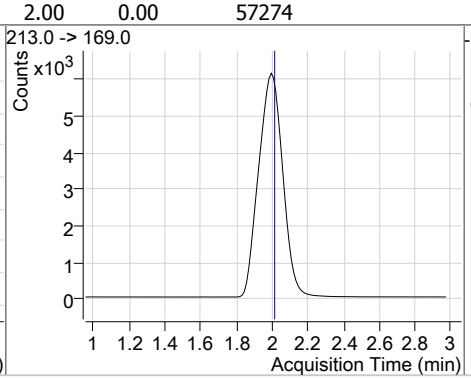


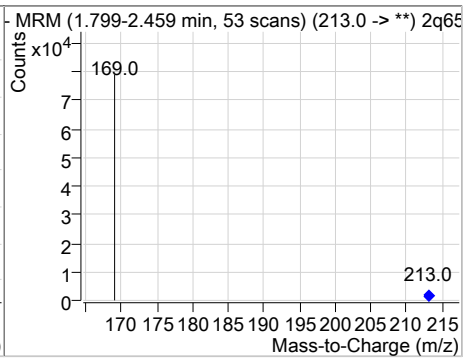




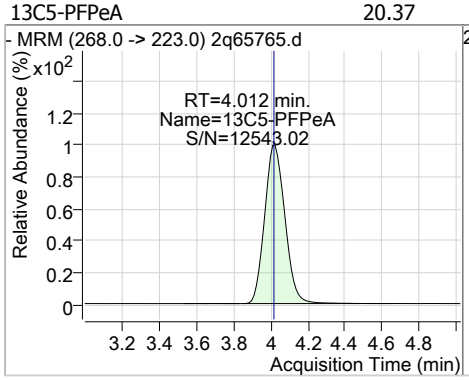
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	49.84	2.00	0.00	57274				

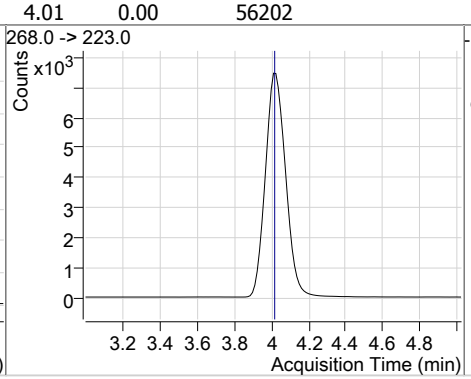


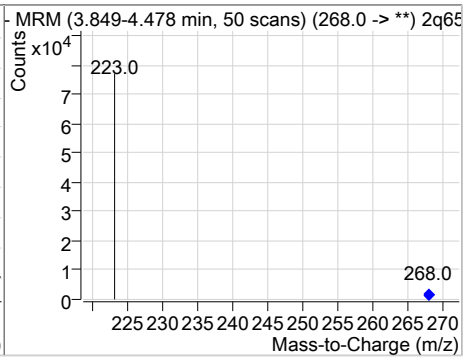




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.37	4.01	0.00	56202				

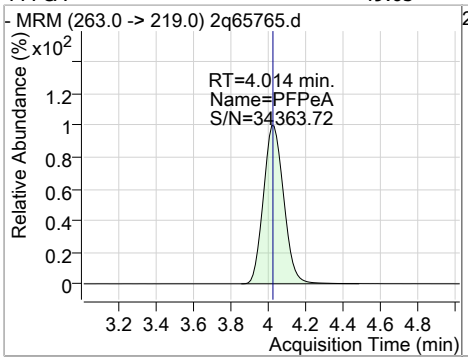


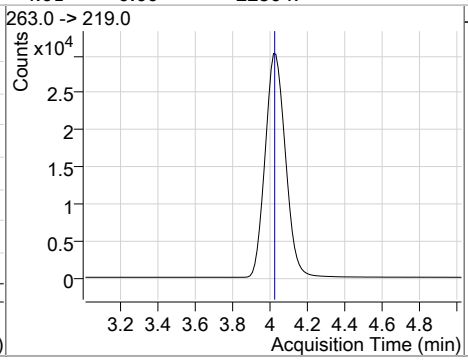


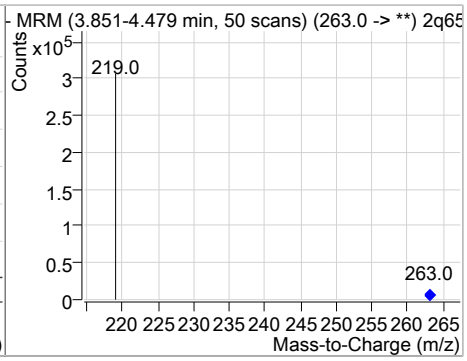


Perfluorinated Compounds by LC/MS/MS

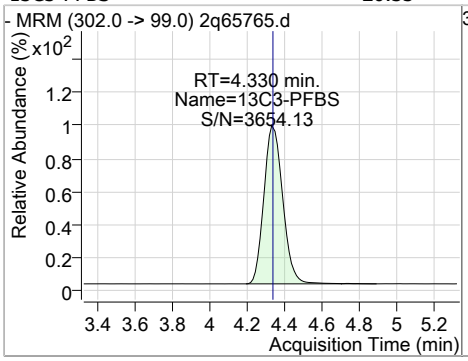
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	49.65	4.01	0.00	228047				

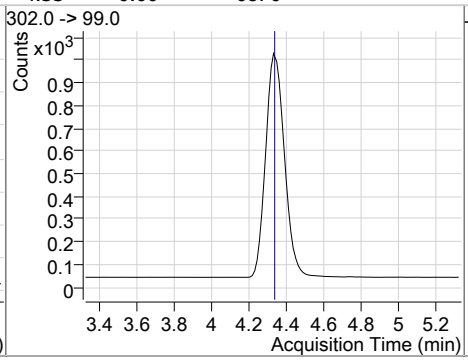


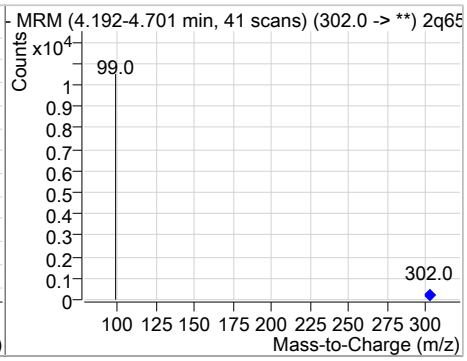




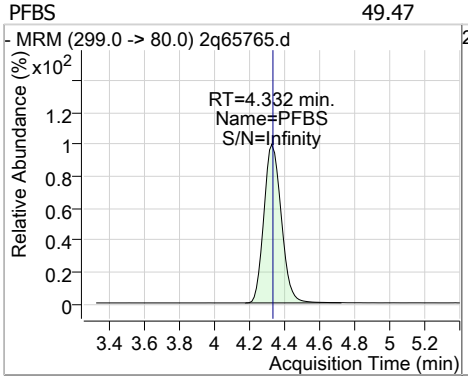
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.33	4.33	0.00	6870				

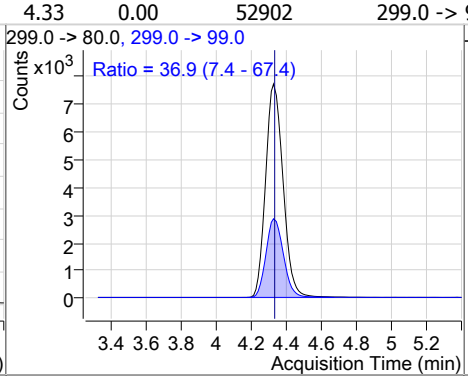


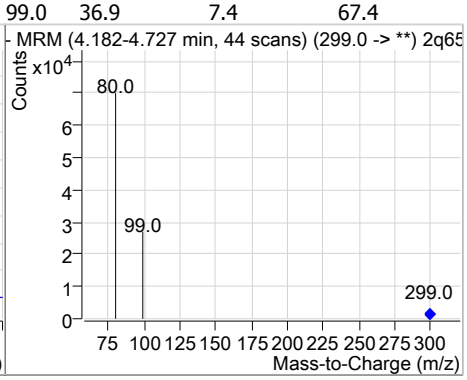




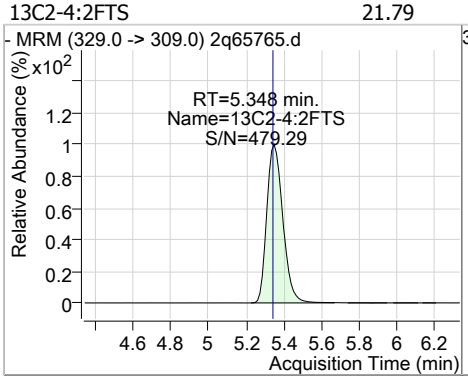
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	49.47	4.33	0.00	52902	299.0 -> 99.0	36.9	7.4	67.4

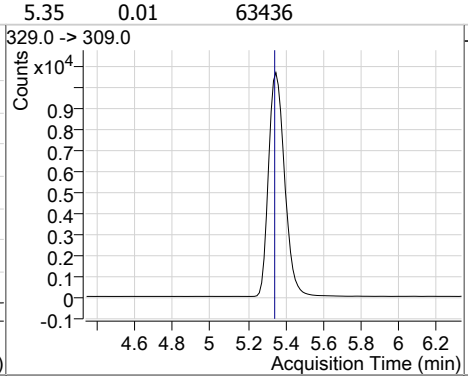


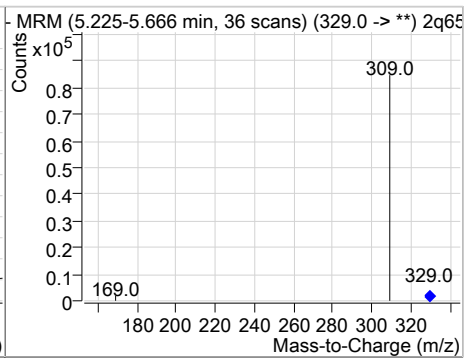




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	21.79	5.35	0.01	63436				

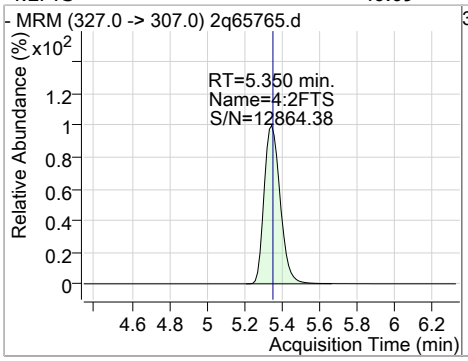


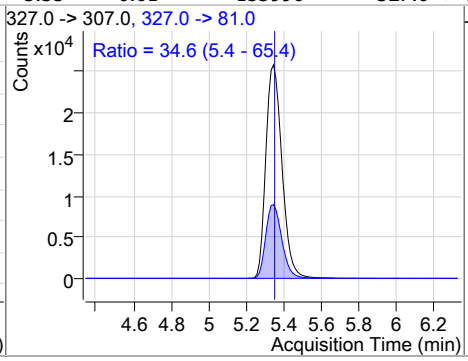


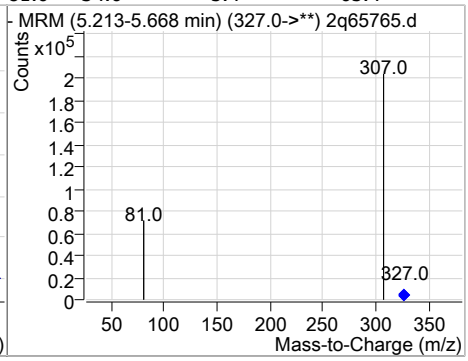


Perfluorinated Compounds by LC/MS/MS

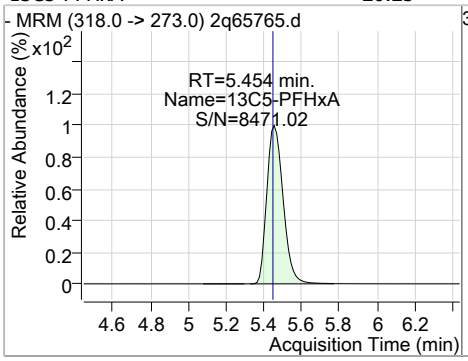
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	46.09	5.35	0.01	153990	327.0 -> 81.0	34.6	5.4	65.4

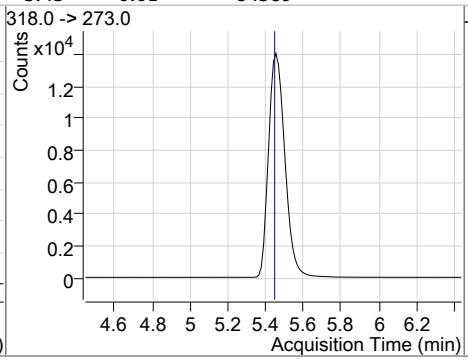


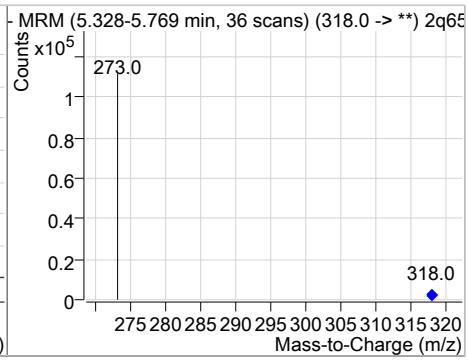




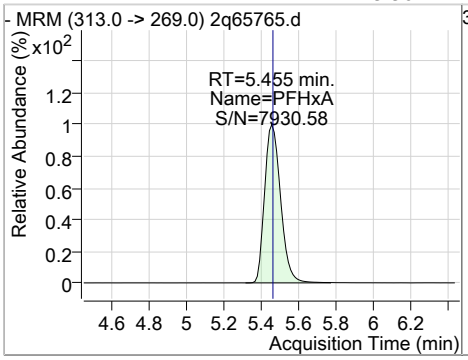
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.25	5.45	0.01	84389				

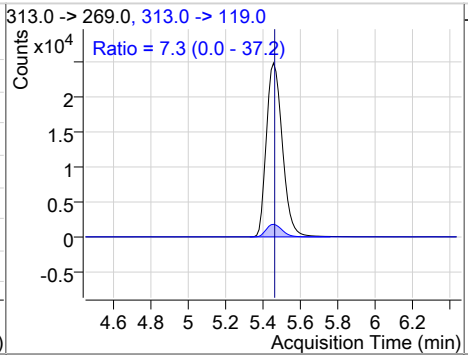


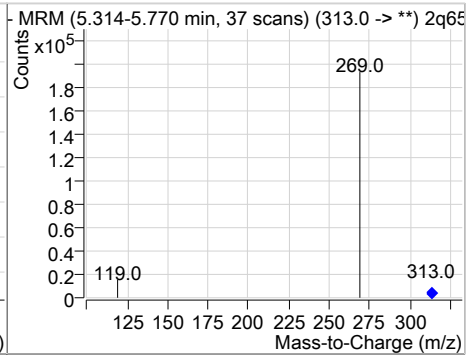




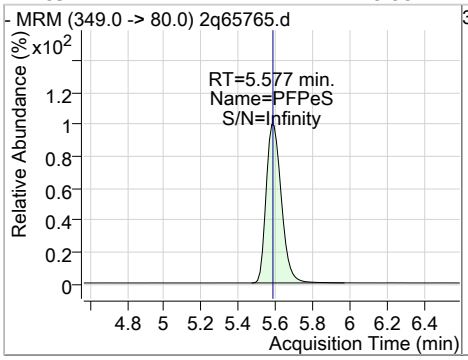
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	49.96	5.46	0.01	147480	313.0 -> 119.0	7.3	0.0	37.2

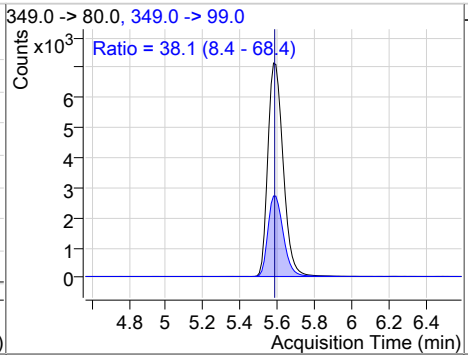


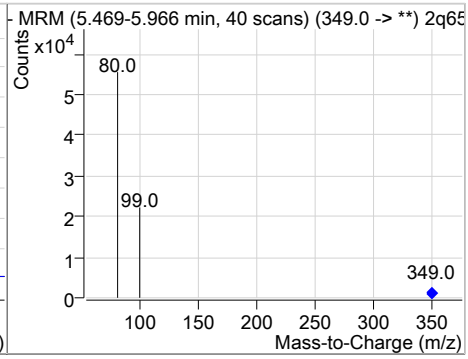




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	49.93	5.58	0.00	40508	349.0 -> 99.0	38.1	8.4	68.4

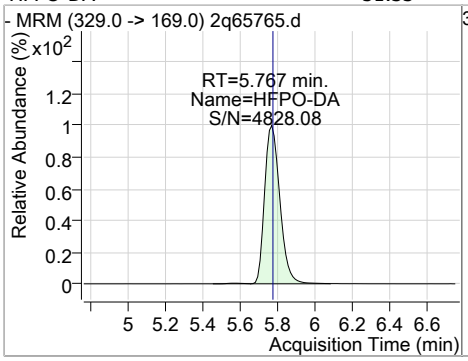


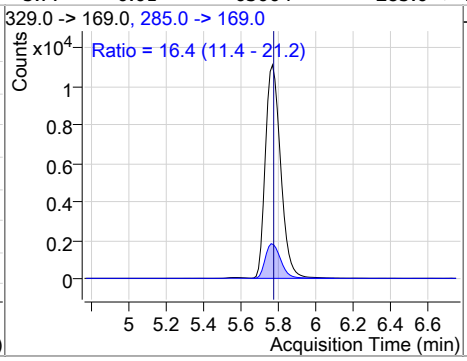


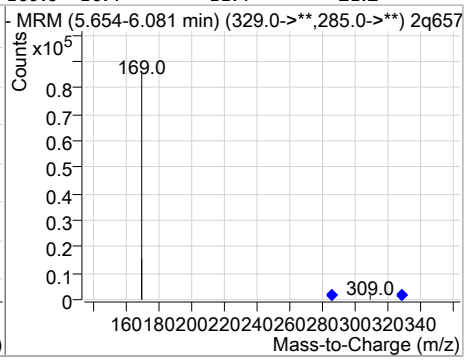


Perfluorinated Compounds by LC/MS/MS

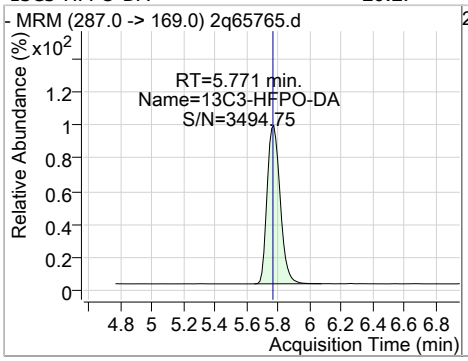
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	51.33	5.77	0.01	63004	285.0 -> 169.0	16.4	11.4	21.2

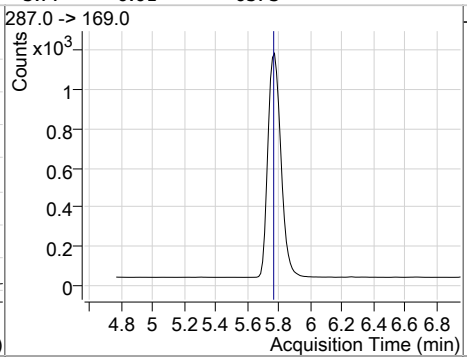


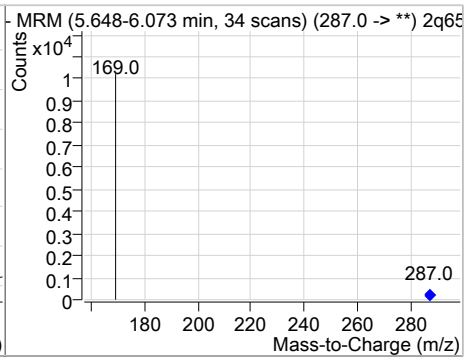




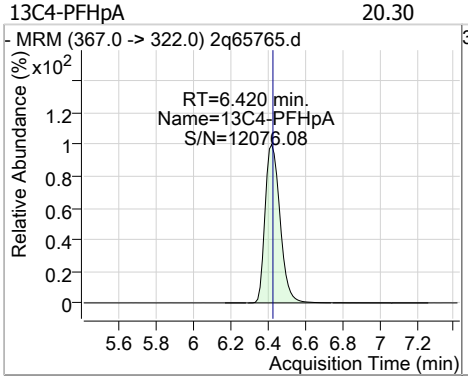
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.27	5.77	0.01	6573				

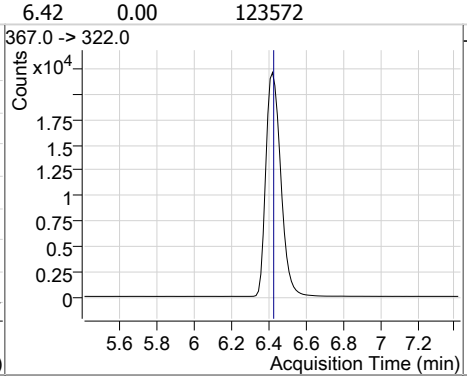


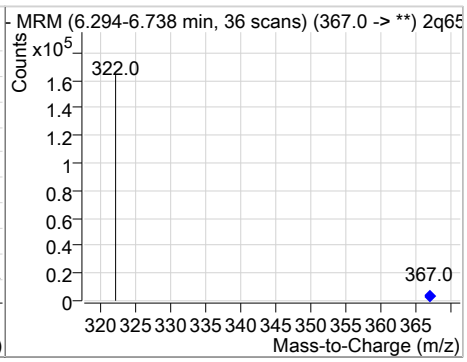




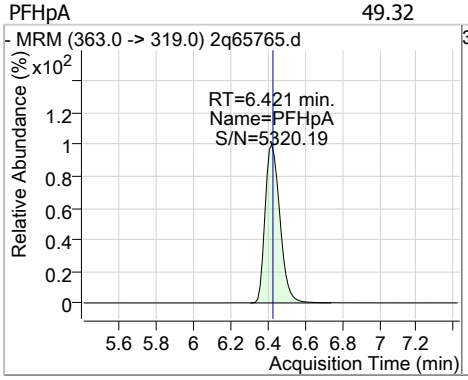
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.30	6.42	0.00	123572				

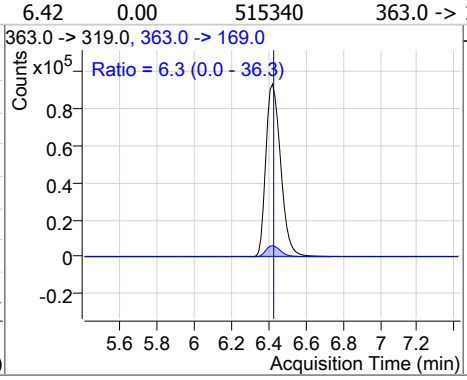


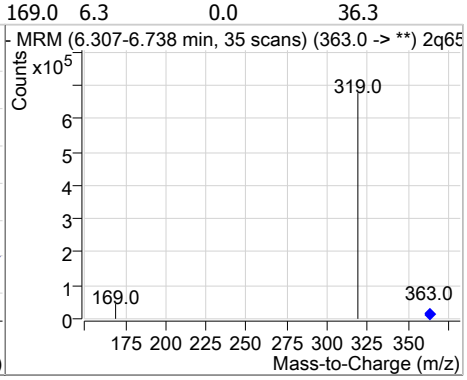




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	49.32	6.42	0.00	515340	363.0 -> 169.0	6.3	0.0	36.3

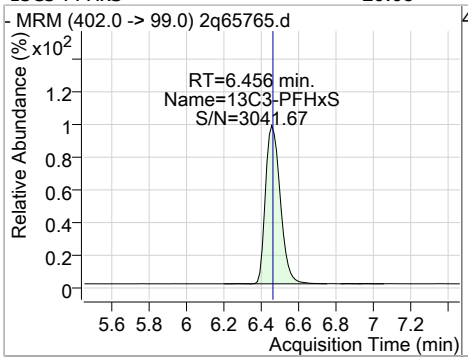


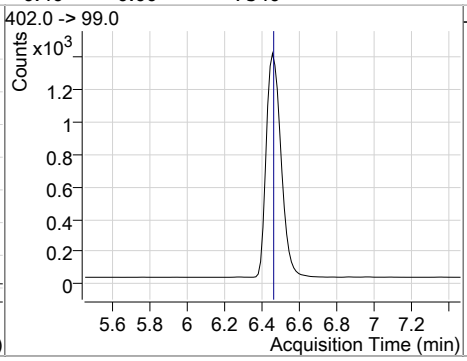


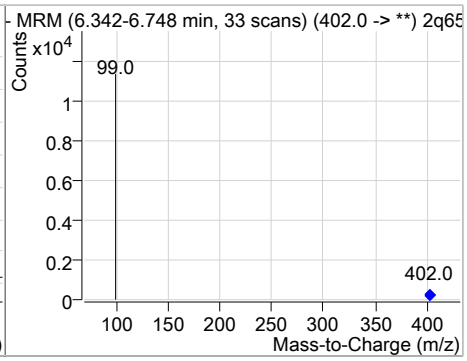


Perfluorinated Compounds by LC/MS/MS

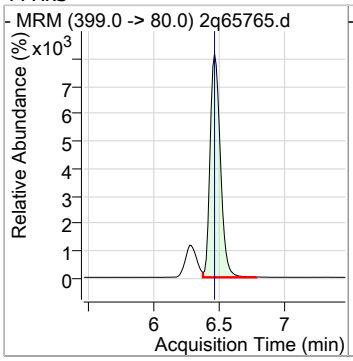
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.08	6.46	0.00	7540				

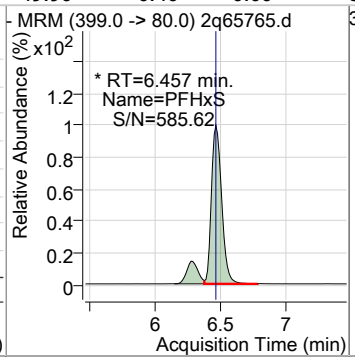


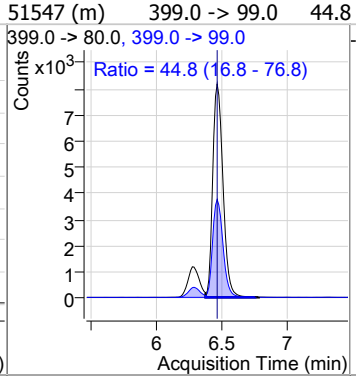


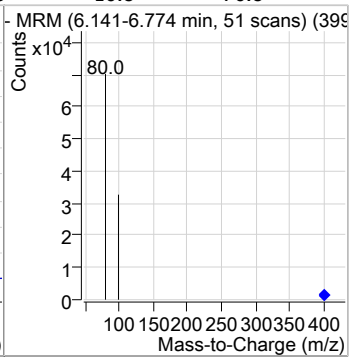


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	49.96	6.46	0.00	51547 (m)	399.0 -> 99.0	44.8	16.8	76.8

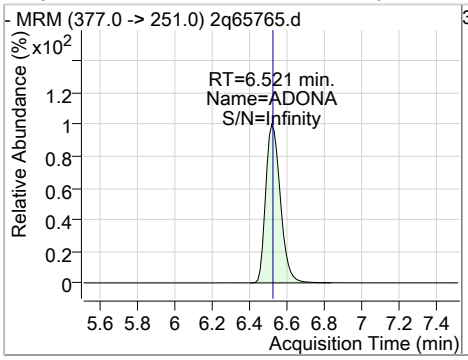


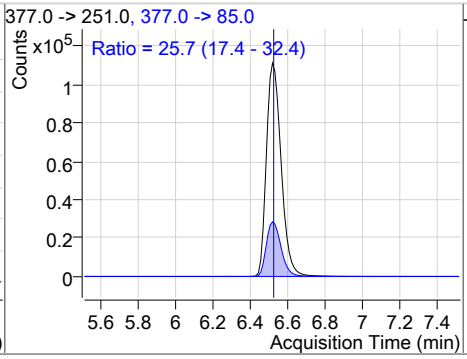


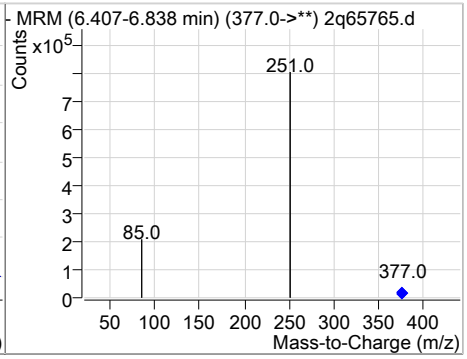




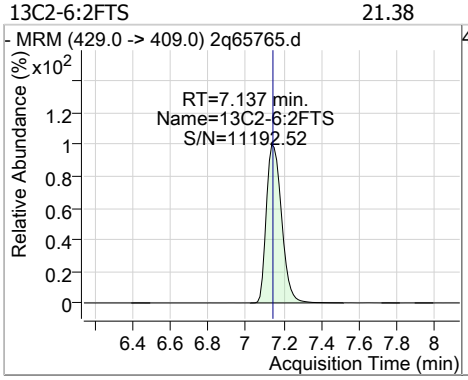
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	48.22	6.52	0.00	610085	377.0 -> 85.0	25.7	17.4	32.4

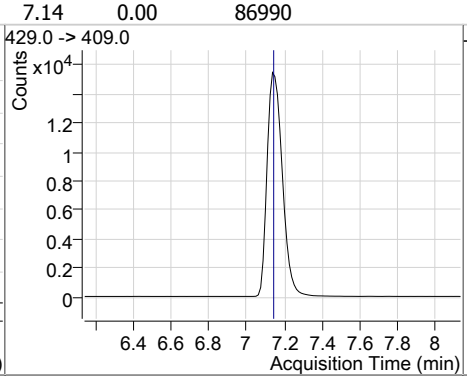


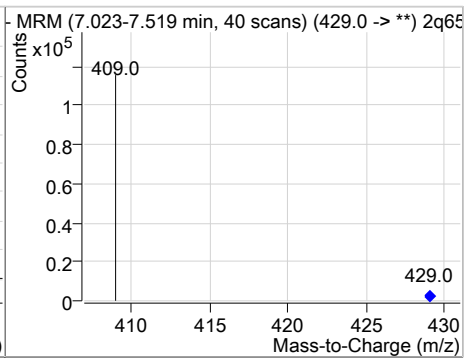




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	21.38	7.14	0.00	86990				

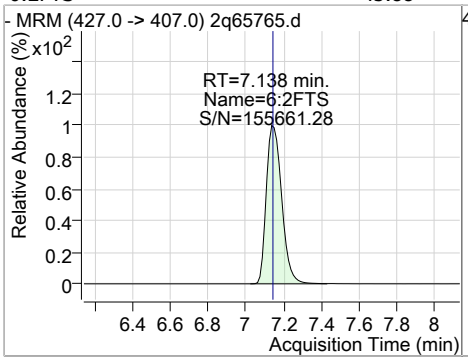


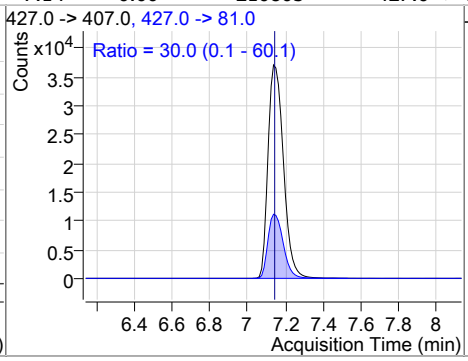


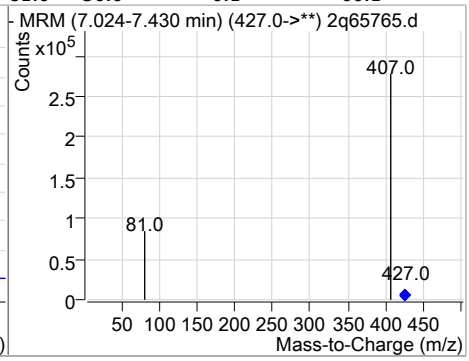


Perfluorinated Compounds by LC/MS/MS

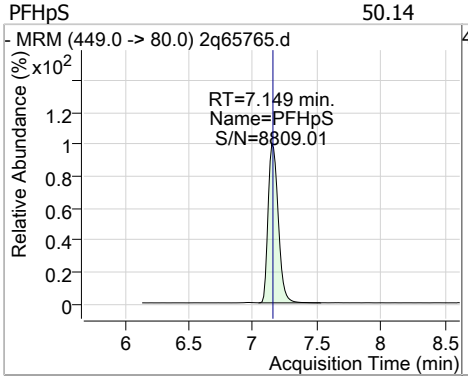
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	45.88	7.14	0.00	210805	427.0 -> 81.0	30.0	0.1	60.1

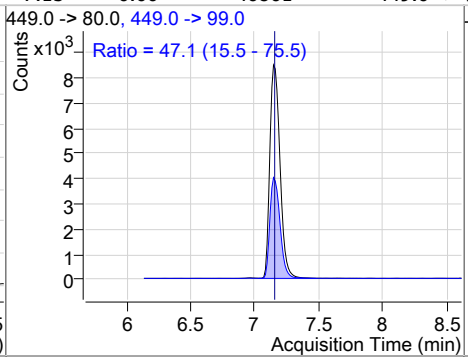


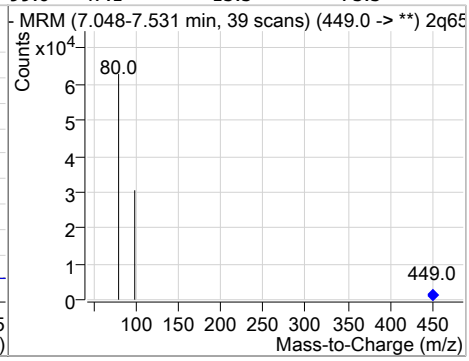




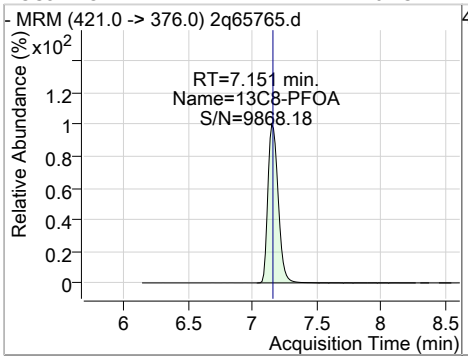
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	50.14	7.15	0.00	46861	449.0 -> 99.0	47.1	15.5	75.5

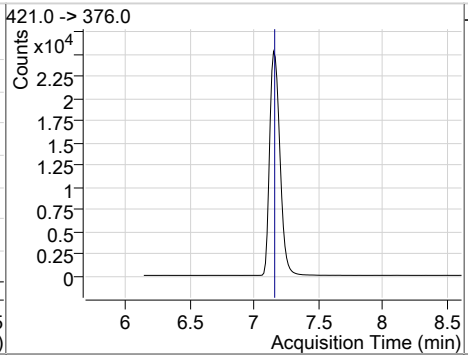


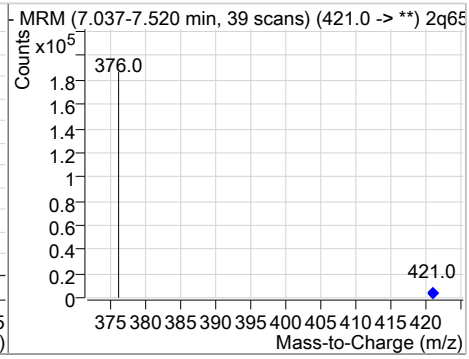




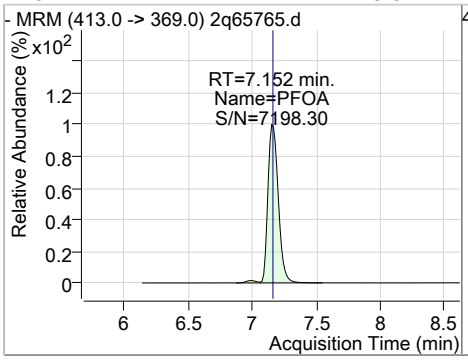
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.23	7.15	0.00	141076				

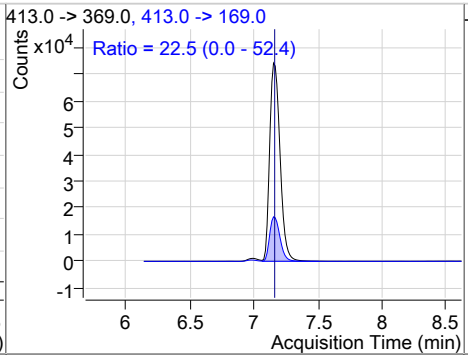


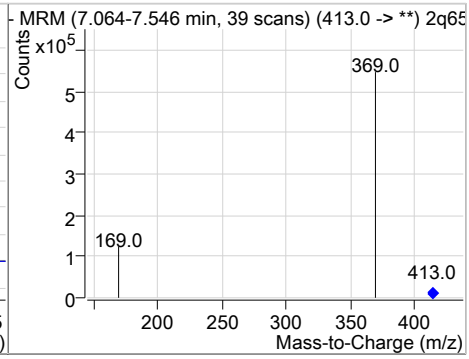




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	49.54	7.15	0.00	415930	413.0 -> 169.0	22.5	0.0	52.4

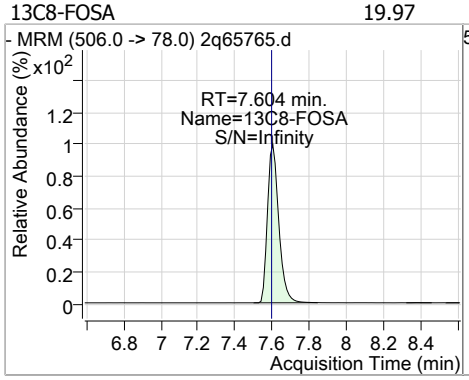


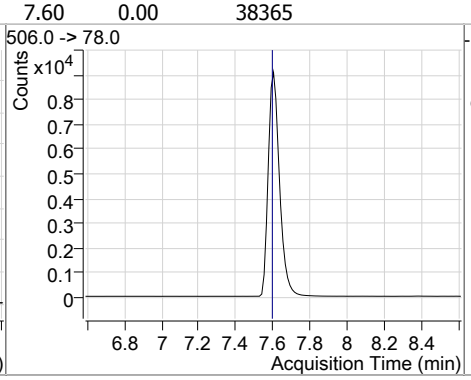


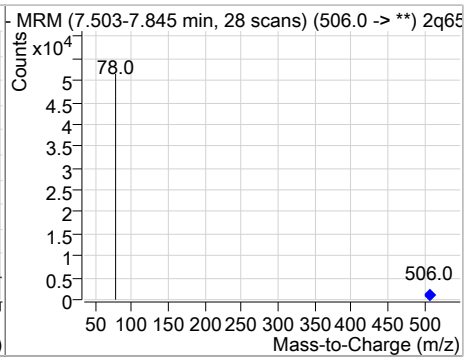


Perfluorinated Compounds by LC/MS/MS

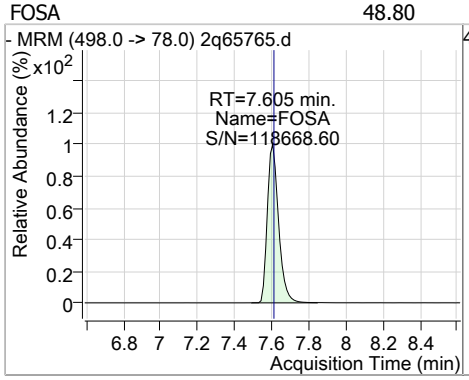
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	19.97	7.60	0.00	38365				

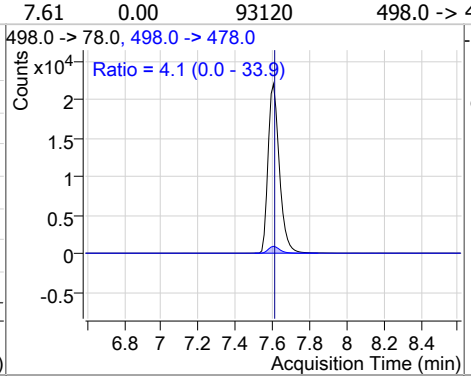


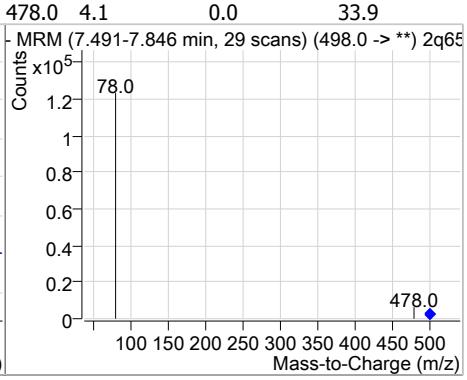




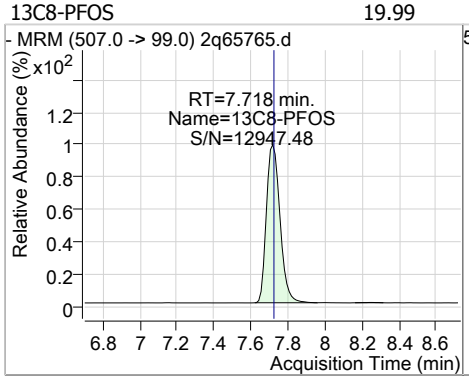
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	48.80	7.61	0.00	93120	498.0 -> 478.0	4.1	0.0	33.9

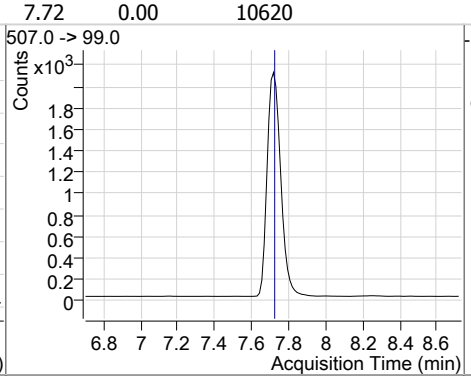


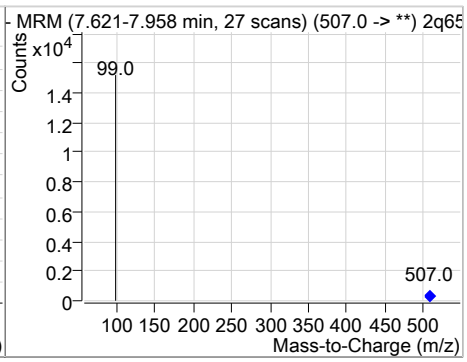




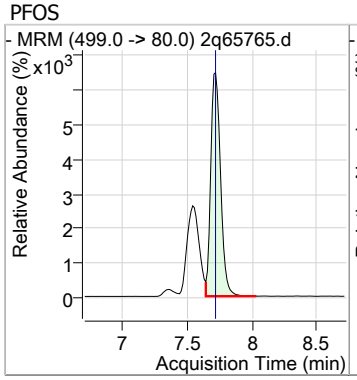
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.99	7.72	0.00	10620				

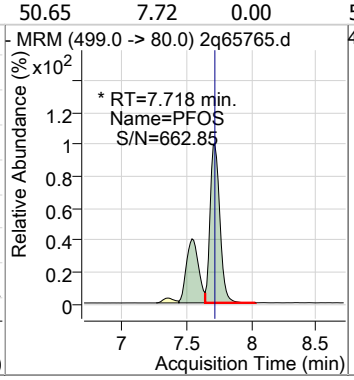


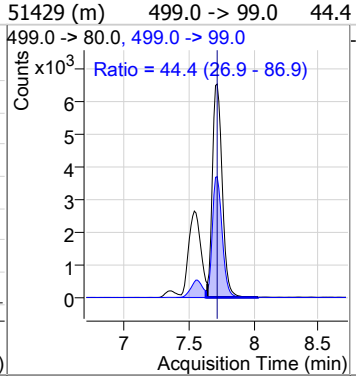


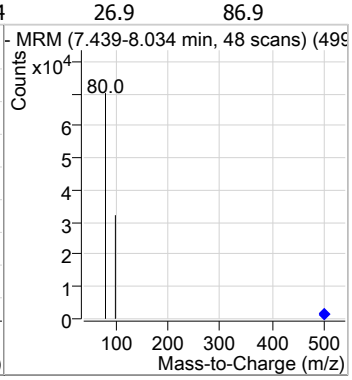


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	50.65	7.72	0.00	51429 (m)	499.0 -> 99.0	44.4	26.9	86.9



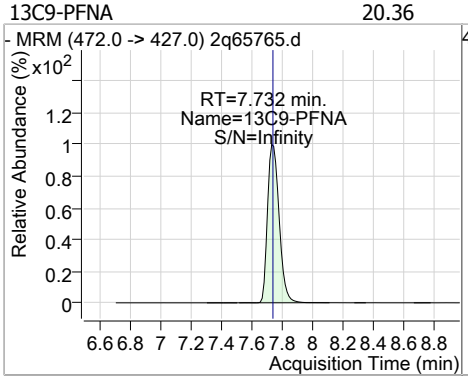


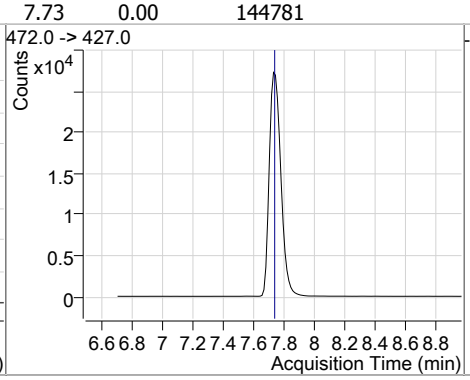


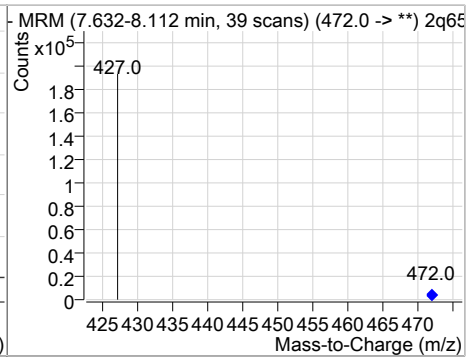


Perfluorinated Compounds by LC/MS/MS

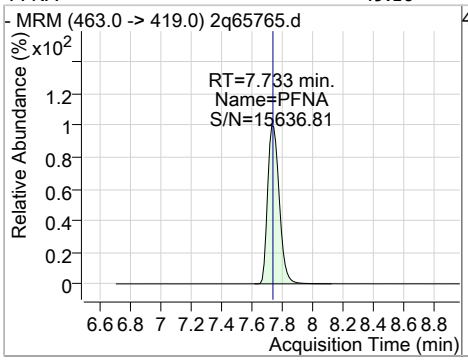
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.36	7.73	0.00	144781				

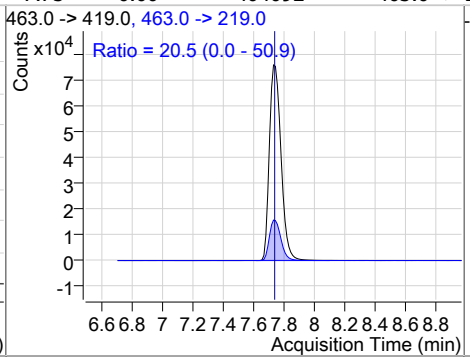


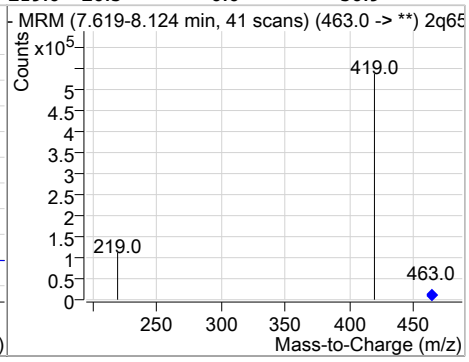




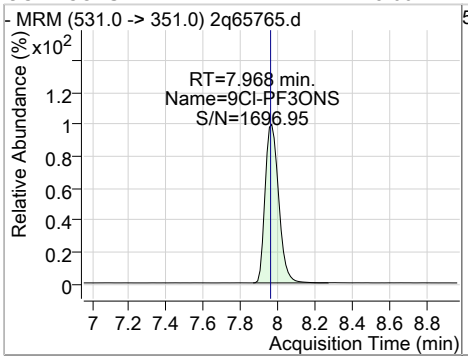
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	49.16	7.73	0.00	404092	463.0 -> 219.0	20.5	0.0	50.9

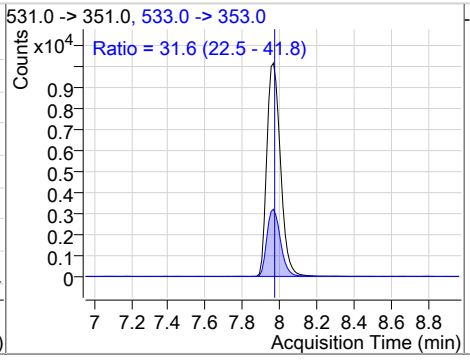


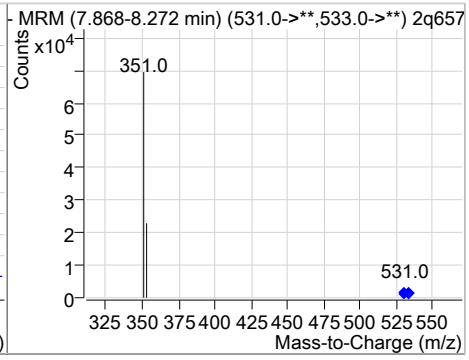




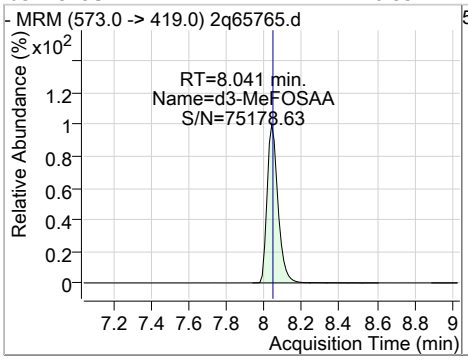
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	48.00	7.97	0.00	51538	533.0 -> 353.0	31.6	22.5	41.8

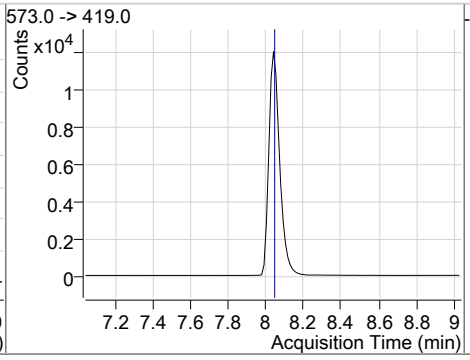


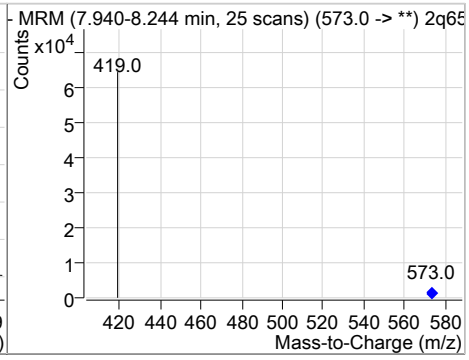




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.33	8.04	0.00	48218				

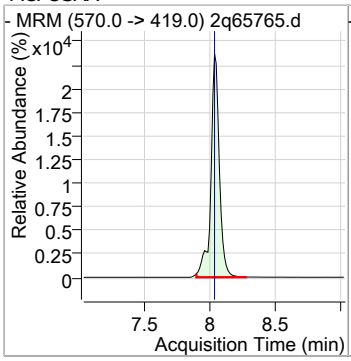


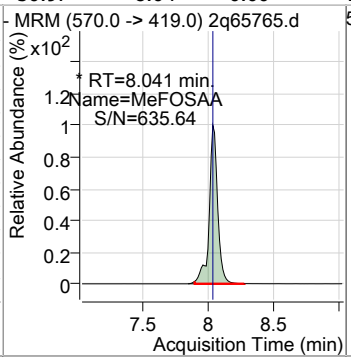


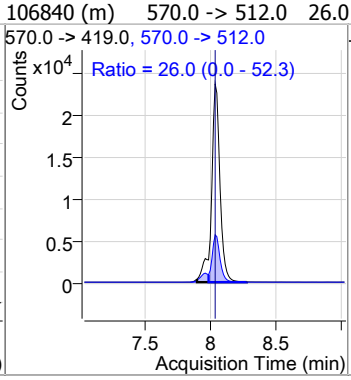


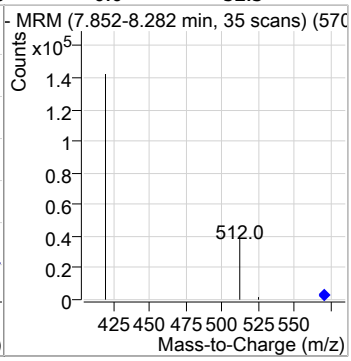
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	50.97	8.04	0.00	106840 (m)	570.0 -> 512.0	26.0	0.0	52.3

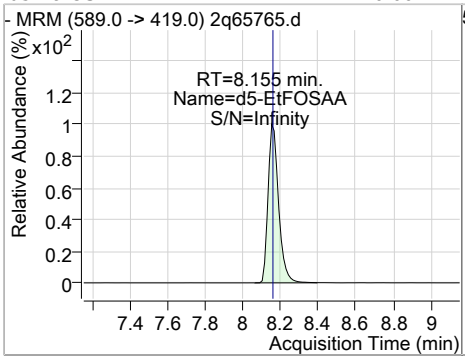


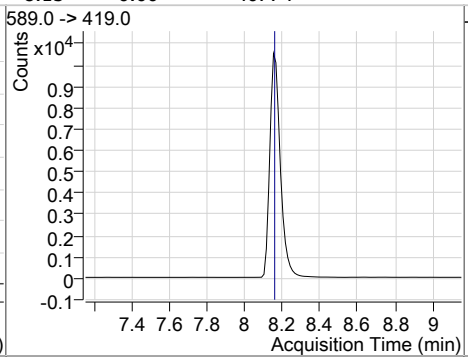


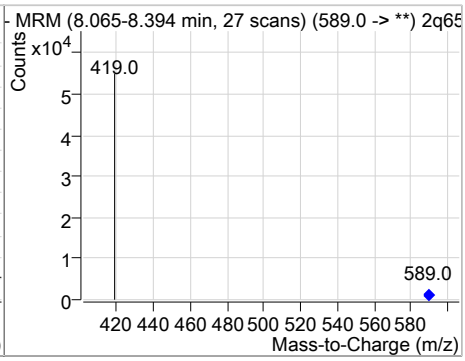




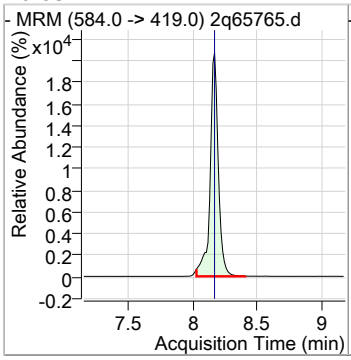
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.06	8.15	0.00	40774				

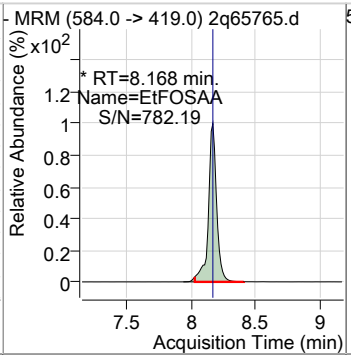


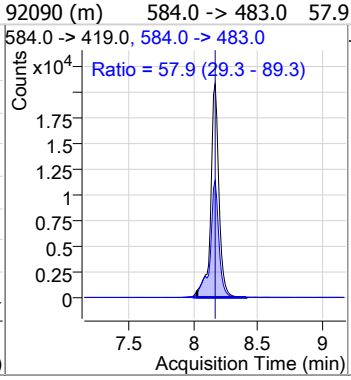


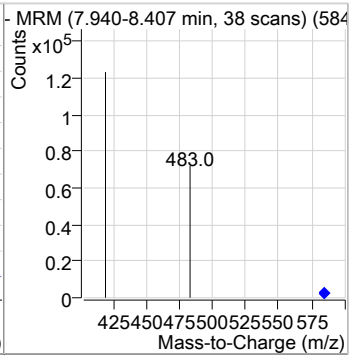


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	49.77	8.17	0.00	92090 (m)	584.0 -> 483.0	57.9	29.3	89.3

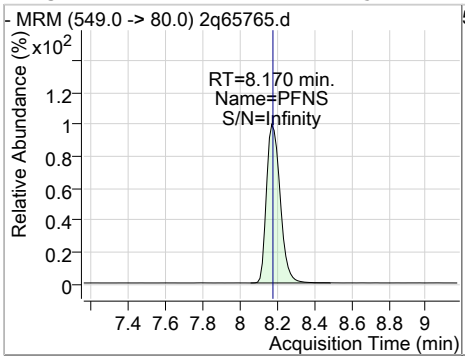


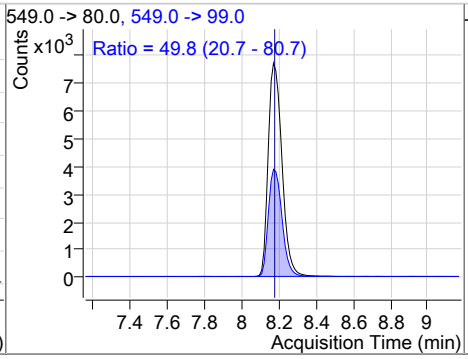


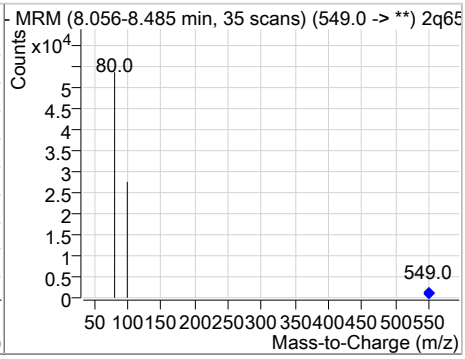




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	51.22	8.17	0.00	39489	549.0 -> 99.0	49.8	20.7	80.7

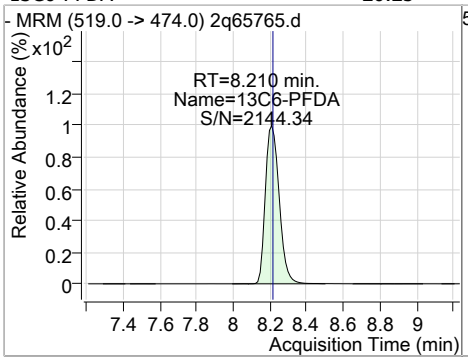


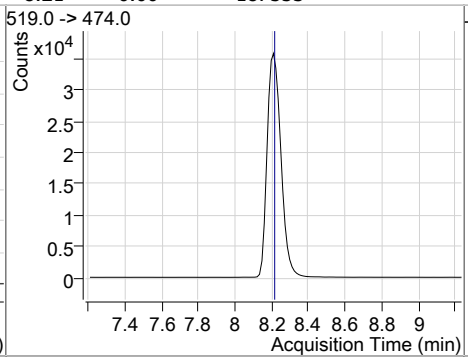


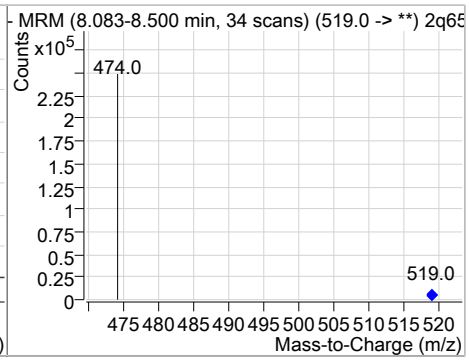


Perfluorinated Compounds by LC/MS/MS

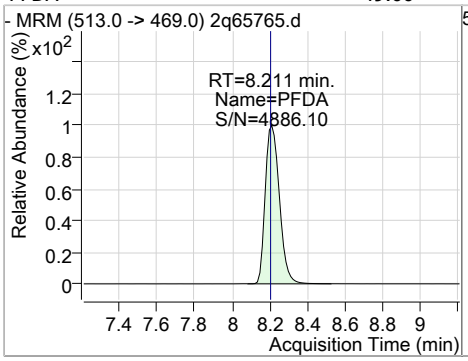
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.25	8.21	0.00	187553				

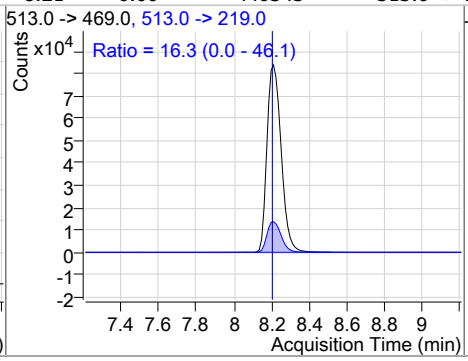


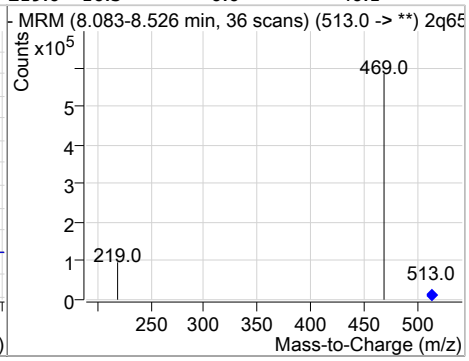




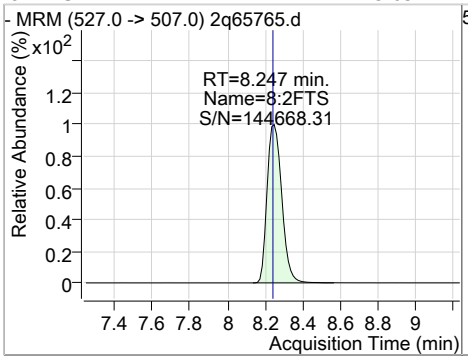
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	49.00	8.21	0.00	440343	513.0 -> 219.0	16.3	0.0	46.1

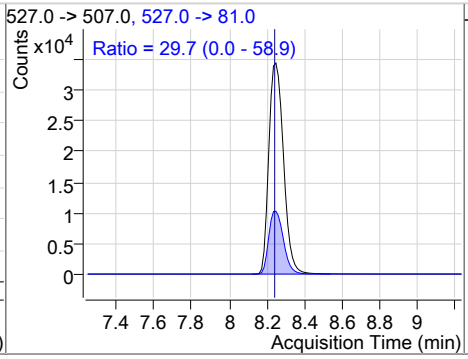


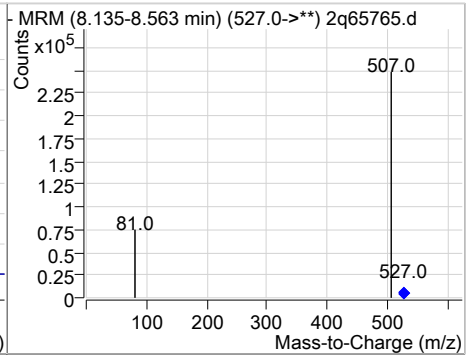




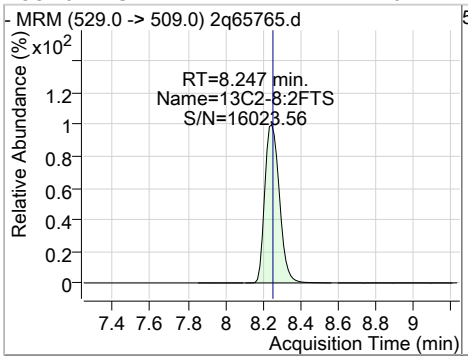
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	45.63	8.25	0.01	186388	527.0 -> 81.0	29.7	0.0	58.9

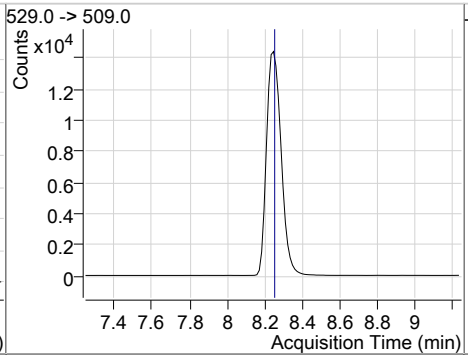


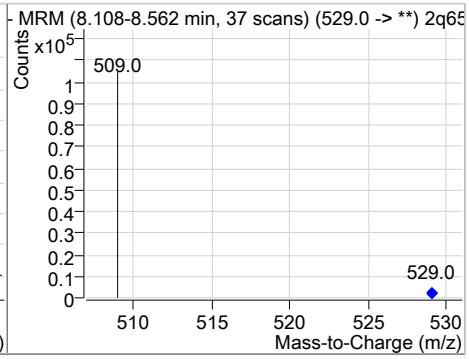




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	21.84	8.25	0.00	77913				

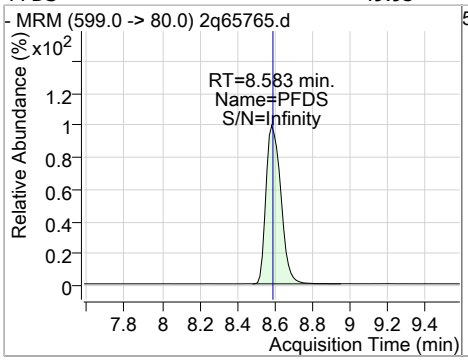


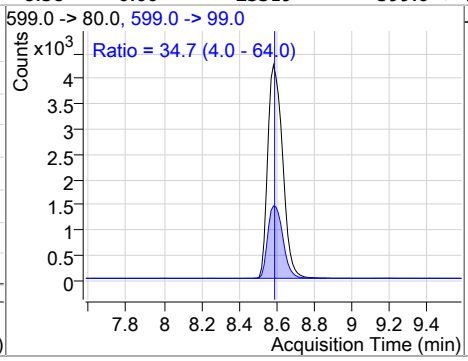


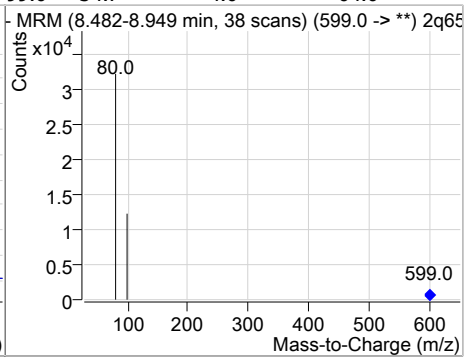


Perfluorinated Compounds by LC/MS/MS

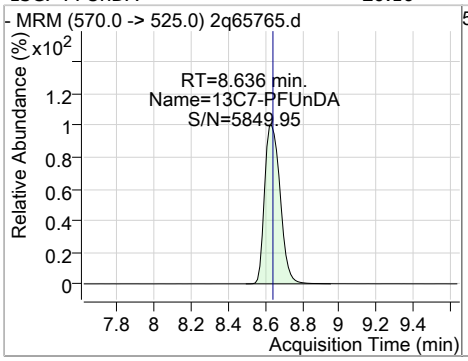
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	49.95	8.58	0.00	23319	599.0 -> 99.0	34.7	4.0	64.0

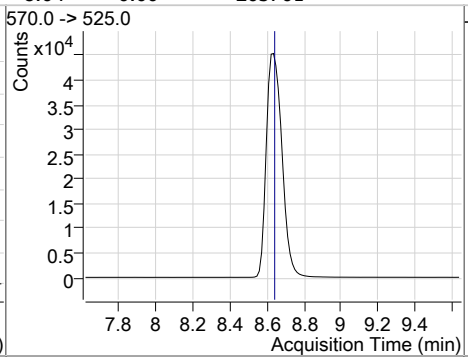


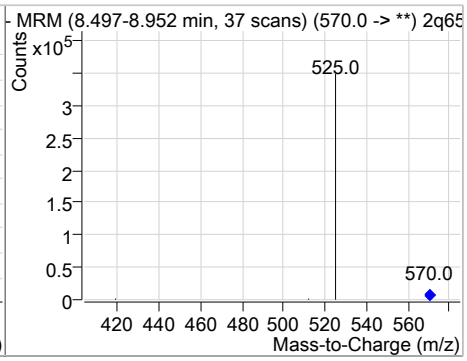




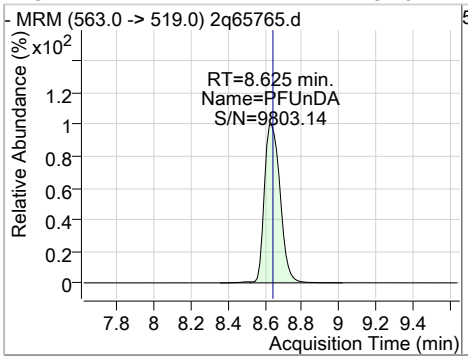
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.16	8.64	0.00	265761				

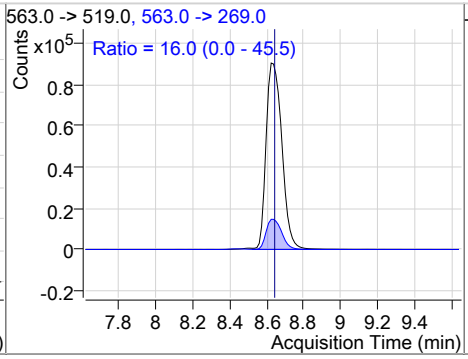


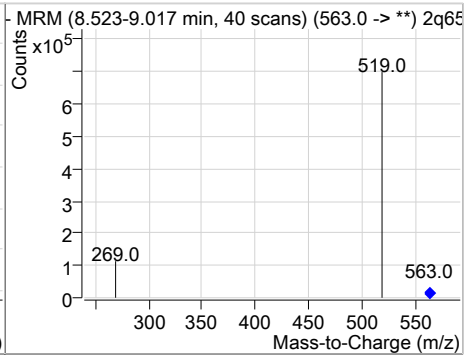




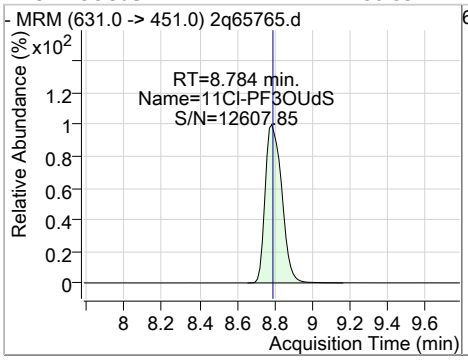
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	49.28	8.62	-0.01	534518	563.0 -> 269.0	16.0	0.0	45.5

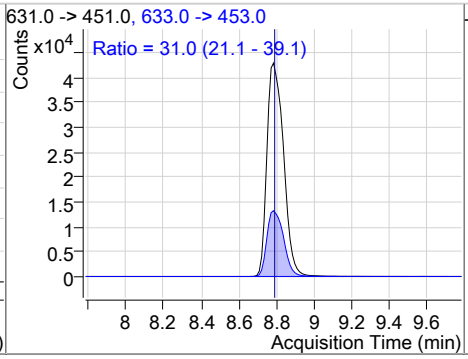


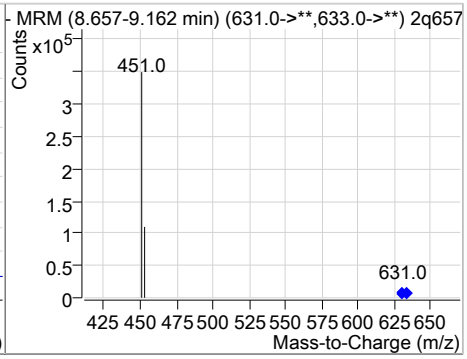




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	50.53	8.78	0.00	262347	633.0 -> 453.0	31.0	21.1	39.1

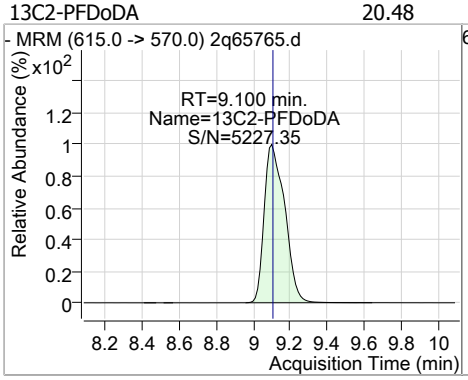


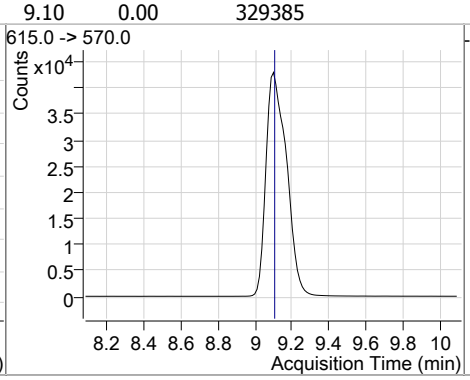


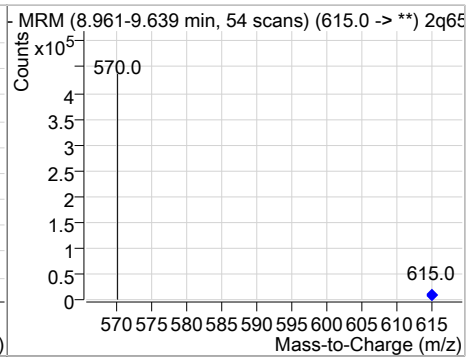


Perfluorinated Compounds by LC/MS/MS

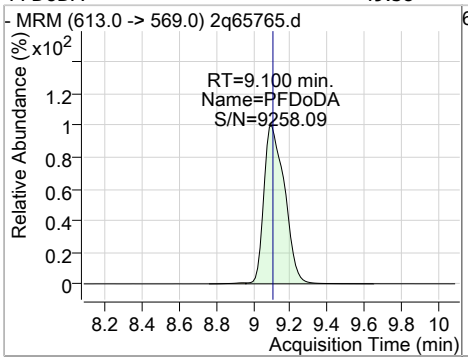
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.48	9.10	0.00	329385				

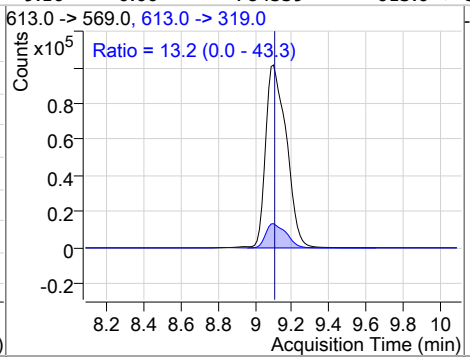


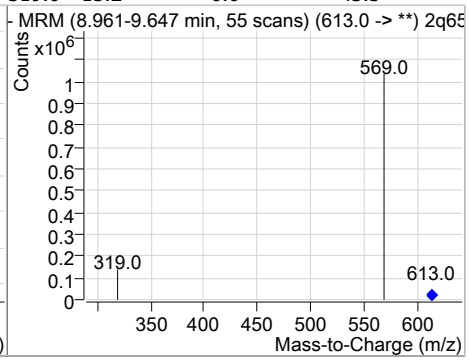




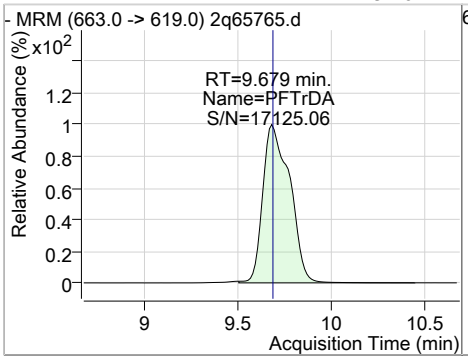
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	49.58	9.10	0.00	784559	613.0 -> 319.0	13.2	0.0	43.3

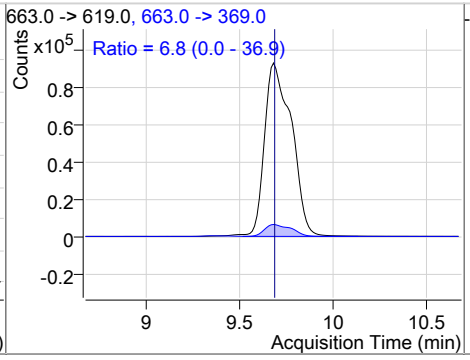


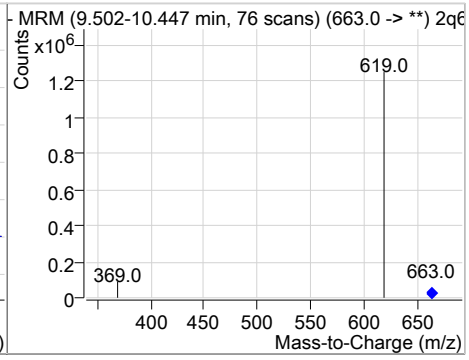




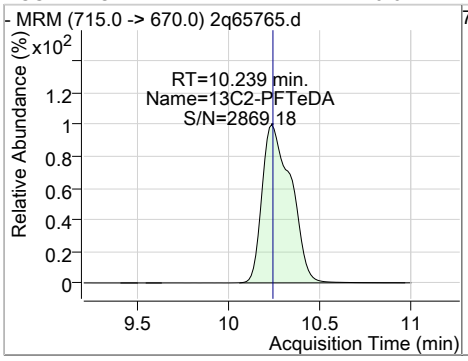
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	49.40	9.68	0.00	943895	663.0 -> 369.0	6.8	0.0	36.9

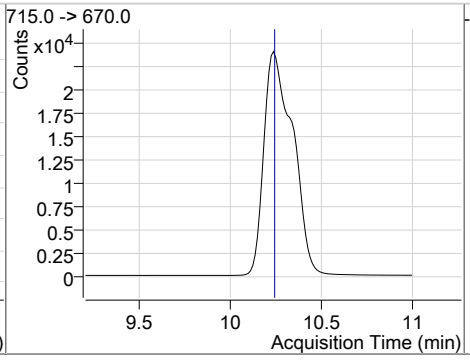


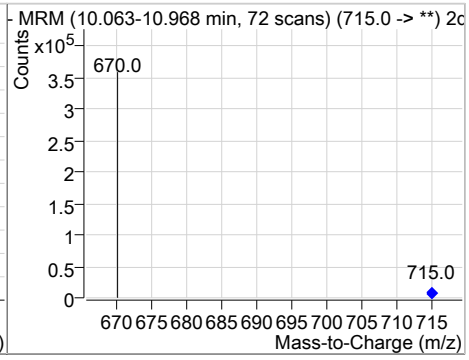




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.67	10.24	0.00	266663				

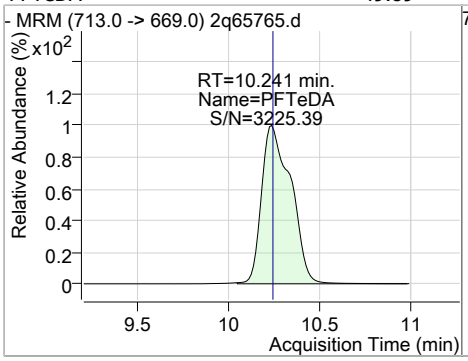


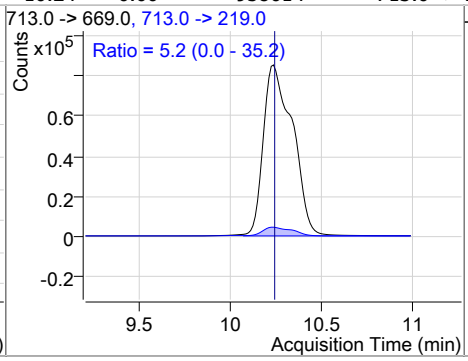


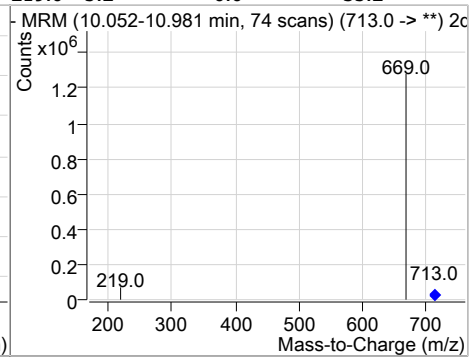


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	49.89	10.24	0.00	958614	713.0 -> 219.0	5.2	0.0	35.2







Manual Integration Approval Summary

Sample Number: S2Q956-IC956
Lab FileID: 2Q65765.D
Injection Time: 04/08/21 15:18
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/09/21 09:05 Natasha Gumtie
Supervisor approved: 04/12/21 13:27 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.46	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
MeFOSAA	2355-31-9		8.04	Split peak
EtFOSAA	2991-50-6		8.17	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/12/21 13:27

Perfluorinated Compounds by LC/MS/MS

Data File : 2q65766.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/8/2021 3:34:52 PM
Sample Name : ic956-100
Vial : P1-A9
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q956.batch.bin
Sample Information : op84308,S2Q956,250,,,1.0,1,water

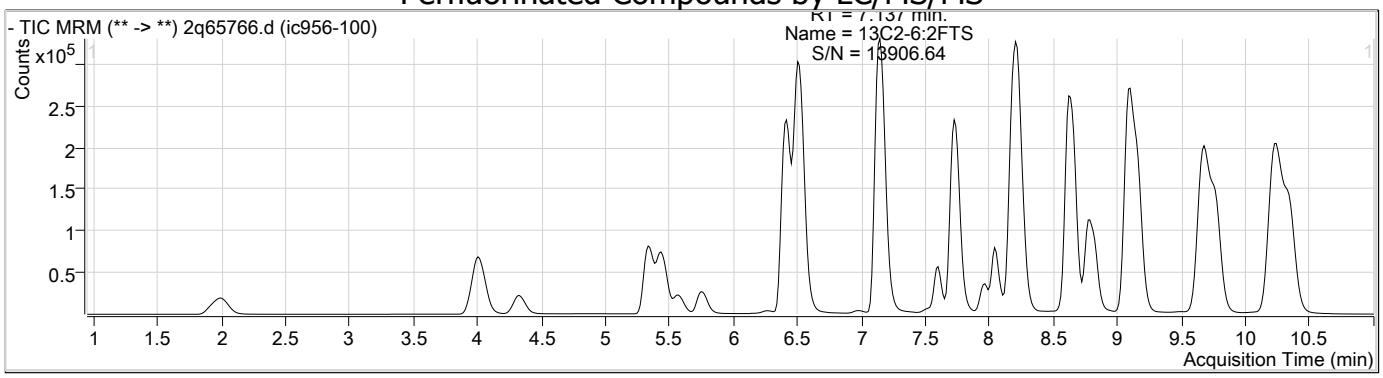
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.155	589.0 -> 419.0	38599	20.00	µg/L	0.000
M4-PFBA	1.989	217.0 -> 172.0	68263	20.00	µg/L	0.000
M5-PFPeA	4.012	268.0 -> 223.0	56356	20.00	µg/L	0.000
M5-PFHxA	5.442	318.0 -> 273.0	84976	20.00	µg/L	0.000
M4-PFHpA	6.408	367.0 -> 322.0	122104	20.00	µg/L	-0.013
M8-PFOA	7.151	421.0 -> 376.0	137208	20.00	µg/L	0.000
M9-PFNA	7.732	472.0 -> 427.0	142279	20.00	µg/L	0.000
M6-PFDA	8.210	519.0 -> 474.0	180399	20.00	µg/L	0.000
M7-PFUnDA	8.636	570.0 -> 525.0	261843	20.00	µg/L	0.000
M2-PFDoDA	9.100	615.0 -> 570.0	331341	20.00	µg/L	0.000
M2-PFTeDA	10.239	715.0 -> 670.0	270585	20.00	µg/L	0.000
M8-FOSA	7.604	506.0 -> 78.0	36305	20.00	µg/L	0.000
M3-PFBS	4.330	302.0 -> 99.0	6894	20.00	µg/L	0.000
M3-PFHxS	6.456	402.0 -> 99.0	7593	20.00	µg/L	0.000
M8-PFOS	7.718	507.0 -> 99.0	10928	20.00	µg/L	0.000
M2-4:2FTS	5.335	329.0 -> 309.0	71148	20.00	µg/L	0.000
M2-6:2FTS	7.137	429.0 -> 409.0	93914	20.00	µg/L	0.000
M2-8:2FTS	8.247	529.0 -> 509.0	84603	20.00	µg/L	0.000
M3-MeFOSAA	8.041	573.0 -> 419.0	49506	20.00	µg/L	0.000
M3-HFPO-DA	5.759	287.0 -> 169.0	6717	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.335	329.0 -> 309.0	71148	24.44	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 122.2%		
13C2-6:2FTS	7.137	429.0 -> 409.0	93914	23.08	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 115.4%		
13C2-8:2FTS	8.247	529.0 -> 509.0	84603	23.72	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 118.6%		
13C2-PFDoDA	9.100	615.0 -> 570.0	331341	20.60	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.0%		
13C2-PFTeDA	10.239	715.0 -> 670.0	270585	20.97	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.9%		
13C3-PFBS	4.330	302.0 -> 99.0	6894	20.40	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.0%		
13C3-PFHxS	6.456	402.0 -> 99.0	7593	20.22	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.1%		
13C4-PFBA	1.989	217.0 -> 172.0	68263	20.33	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.6%		
13C4-PFHpA	6.408	367.0 -> 322.0	122104	20.06	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.3%		
d5-EtFOSAA	8.155	589.0 -> 419.0	38599	18.99	ng/ml	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.9%		
13C5-PFHxA	5.442	318.0 -> 273.0	84976	20.39	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.0%		
13C5-PFPeA	4.012	268.0 -> 223.0	56356	20.43	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.1%		

Perfluorinated Compounds by LC/MS/MS

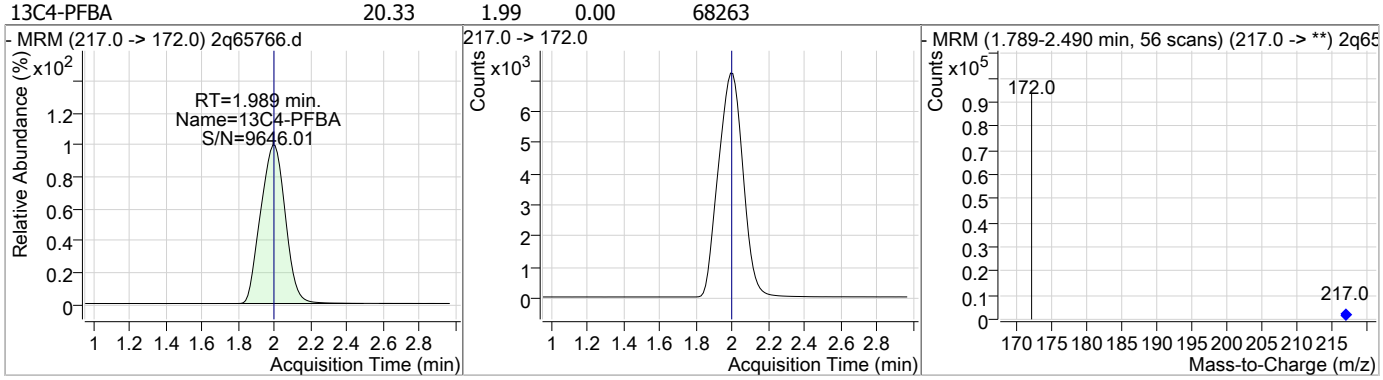
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	180399	19.48	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.4%			
13C7-PFUnDA	8.636	570.0 -> 525.0	261843	19.87	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%			
13C8-FOSA	7.604	506.0 -> 78.0	36305	18.89	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.5%			
13C8-PFOA	7.151	421.0 -> 376.0	137208	19.67	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%			
13C8-PFOS	7.718	507.0 -> 99.0	10928	20.57	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.9%			
13C9-PFNA	7.732	472.0 -> 427.0	142279	20.00	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.0%			
d3-MeFOSAA	8.041	573.0 -> 419.0	49506	20.87	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.4%			
13C3-HFPO-DA	5.759	287.0 -> 169.0	6717	20.71	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.6%			
Target Compounds							QValue
4:2FTS	5.337	327.0 -> 307.0	309469	82.58	µg/L		99
6:2FTS	7.138	427.0 -> 407.0	406367	81.93	µg/L		100
8:2FTS	8.235	527.0 -> 507.0	362870	81.82	µg/L		98
EtFOSAA	8.168	584.0 -> 419.0	175333	100.09	µg/L	m	98
FOSA	7.605	498.0 -> 78.0	181467	100.49	µg/L		99
MeFOSAA	8.041	570.0 -> 419.0	214019	99.44	µg/L	m	91
PFBA	1.996	213.0 -> 169.0	115187	99.99	µg/L		100
PFBS	4.320	299.0 -> 80.0	107548	100.22	µg/L		99
PFDA	8.211	513.0 -> 469.0	867475	100.36	µg/L		100
PFDoDA	9.100	613.0 -> 569.0	1593915	100.13	µg/L		100
PFDS	8.583	599.0 -> 80.0	45976	99.96	µg/L		99
PFHpA	6.408	363.0 -> 319.0	1035581	100.29	µg/L		100
PFHpS	7.149	449.0 -> 80.0	93894	99.78	µg/L		99
PFHxA	5.443	313.0 -> 269.0	297229	100.00	µg/L		100
PFHxS	6.457	399.0 -> 80.0	103884	99.98	µg/L	m	96
PFNA	7.733	463.0 -> 419.0	810494	100.33	µg/L		100
PFNS	8.170	549.0 -> 80.0	78765	99.28	µg/L		99
PFOA	7.152	413.0 -> 369.0	818064	100.19	µg/L		100
PFOS	7.706	499.0 -> 80.0	104110	99.64	µg/L	m	83
PFPeA	4.014	263.0 -> 219.0	461189	100.13	µg/L		100
PFPeS	5.577	349.0 -> 80.0	81369	99.95	µg/L		100
PFTeDA	10.241	713.0 -> 669.0	1948191	99.93	µg/L		99
PFTrDA	9.679	663.0 -> 619.0	1927642	100.29	µg/L		100
PFUnDA	8.637	563.0 -> 519.0	1072315	100.33	µg/L		99
11Cl-PF3OUdS	8.784	631.0 -> 451.0	520577	99.67	µg/L		97
9Cl-PF3ONS	7.968	531.0 -> 351.0	104557	101.25	µg/L		98
ADONA	6.521	377.0 -> 251.0	1243070	101.01	µg/L		99
HFPO-DA	5.754	329.0 -> 169.0	124250	99.05	µg/L		100

 # = Qualifier out of range, m = manually integrated, + = Area summed

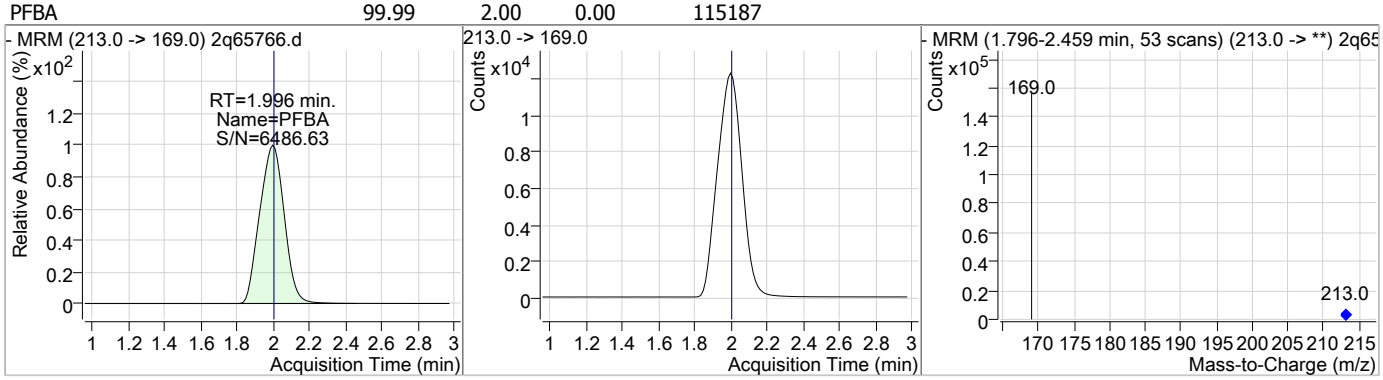
Perfluorinated Compounds by LC/MS/MS



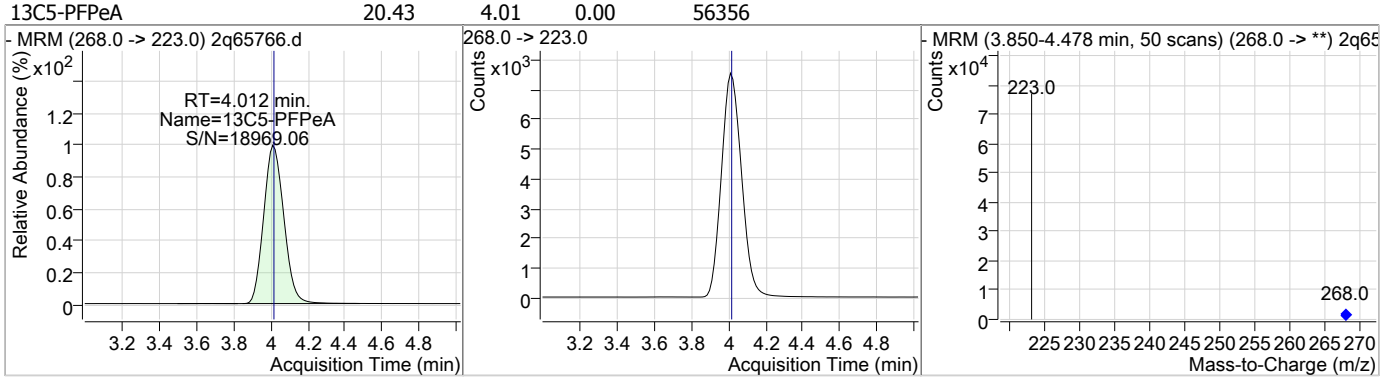
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.33	1.99	0.00	68263				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	99.99	2.00	0.00	115187				

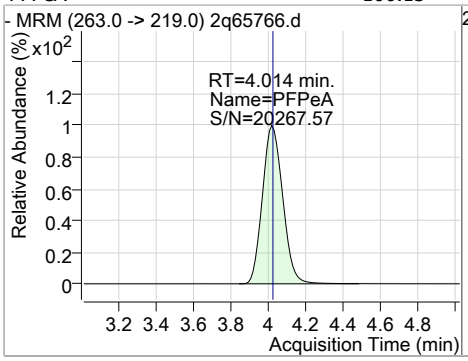


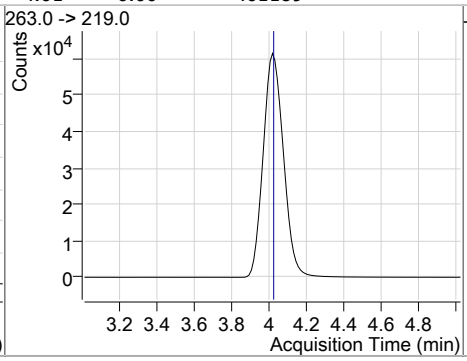
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.43	4.01	0.00	56356				

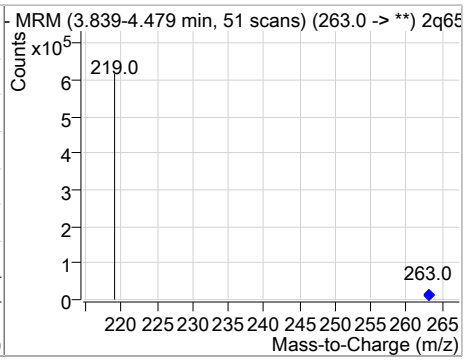


Perfluorinated Compounds by LC/MS/MS

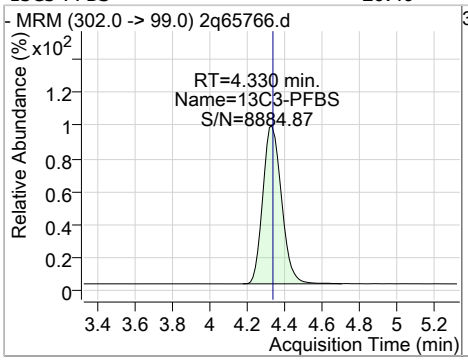
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	100.13	4.01	0.00	461189				

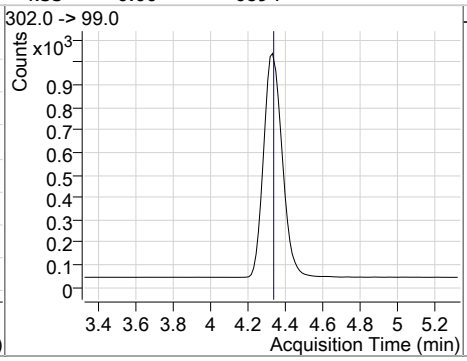


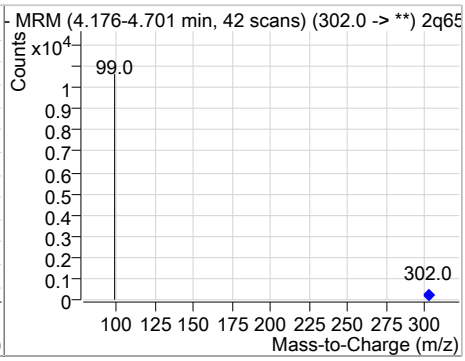




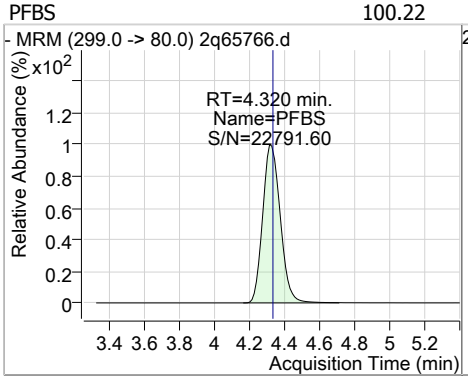
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.40	4.33	0.00	6894				

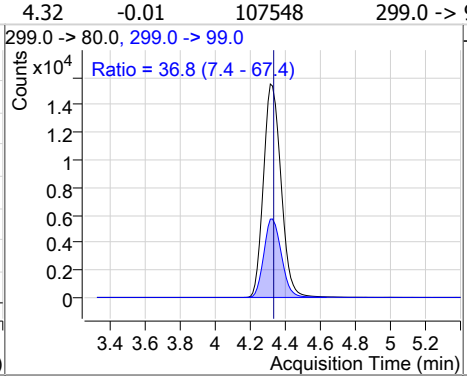


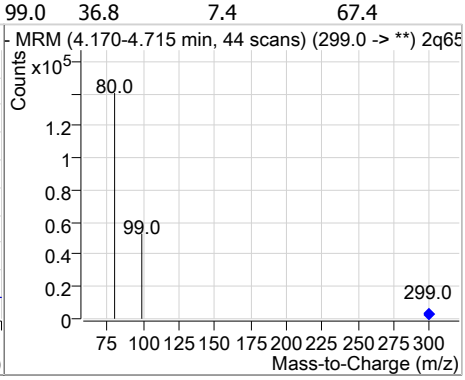




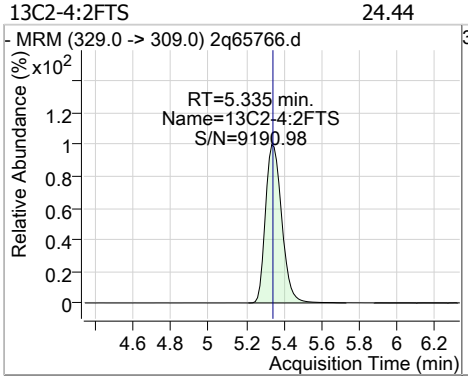
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	100.22	4.32	-0.01	107548	299.0 -> 99.0	36.8	7.4	67.4

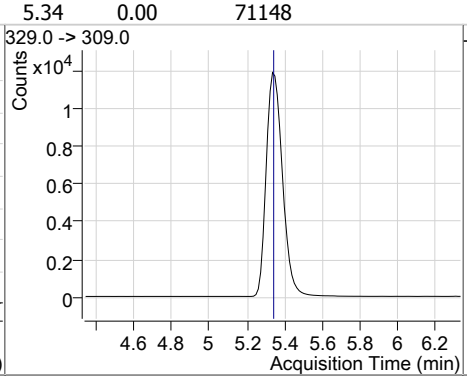


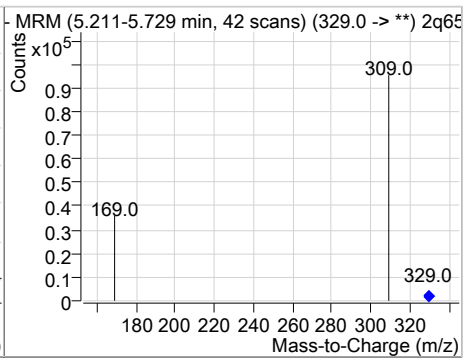




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	24.44	5.34	0.00	71148				

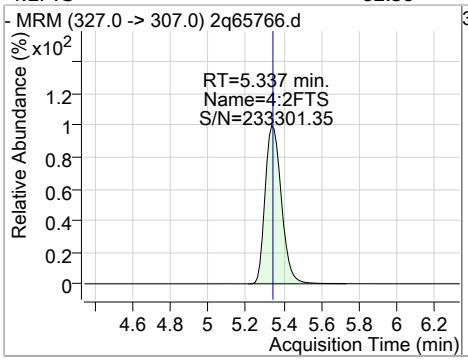


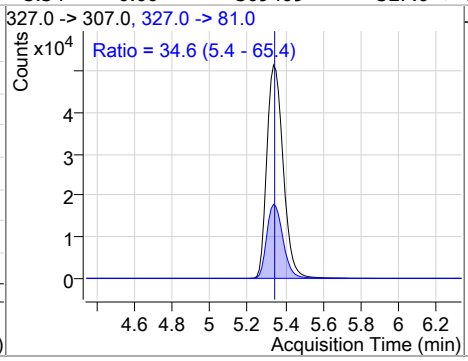


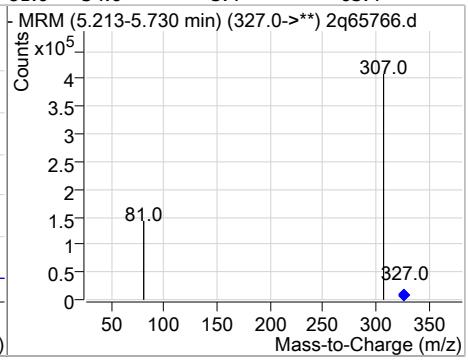


Perfluorinated Compounds by LC/MS/MS

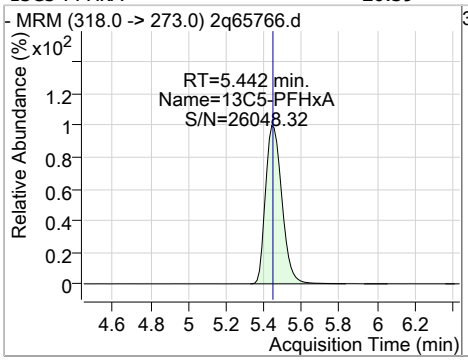
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	82.58	5.34	0.00	309469	327.0 -> 81.0	34.6	5.4	65.4

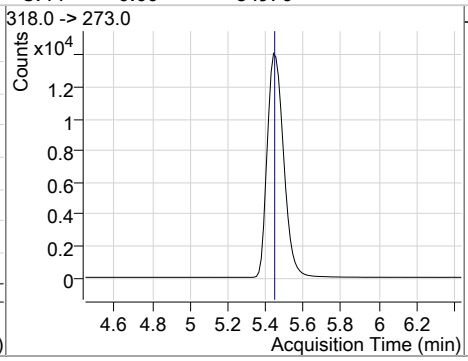


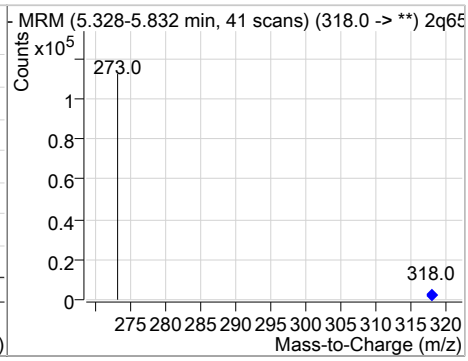




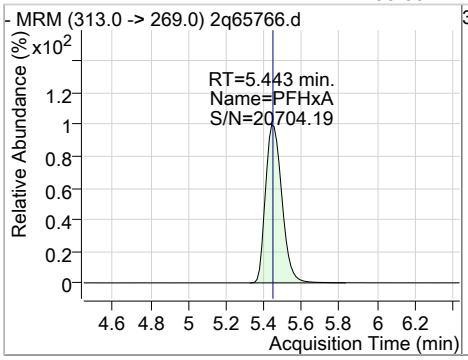
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.39	5.44	0.00	84976				

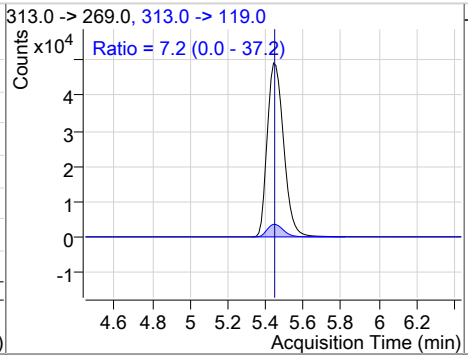


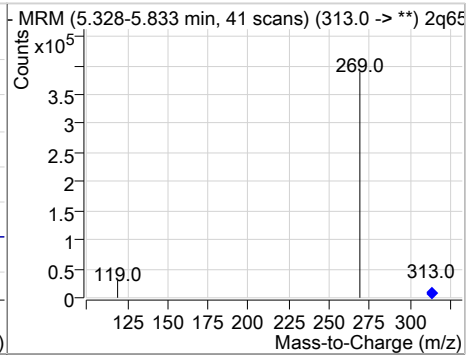




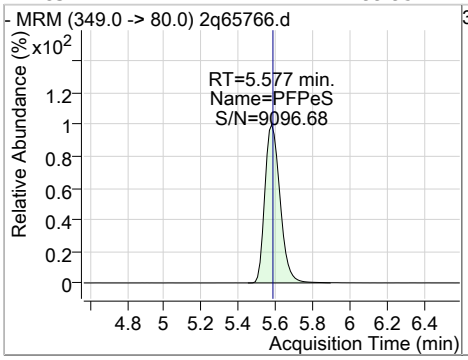
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	100.00	5.44	0.00	297229	313.0 -> 119.0	7.2	0.0	37.2

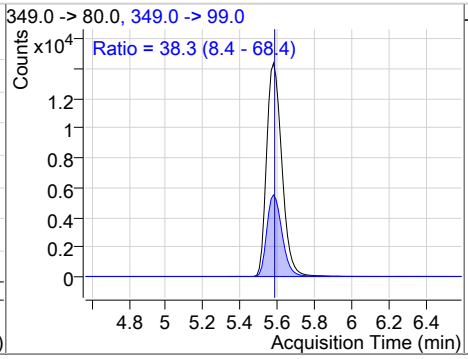


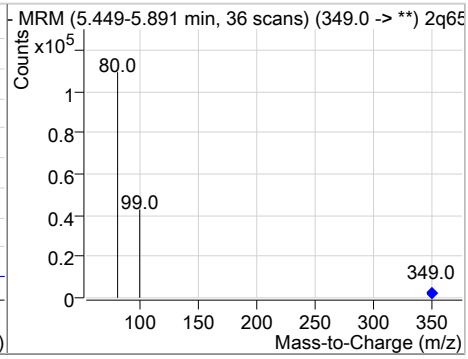




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	99.95	5.58	0.00	81369	349.0 -> 99.0	38.3	8.4	68.4

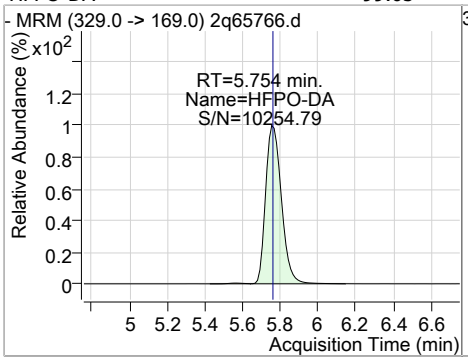


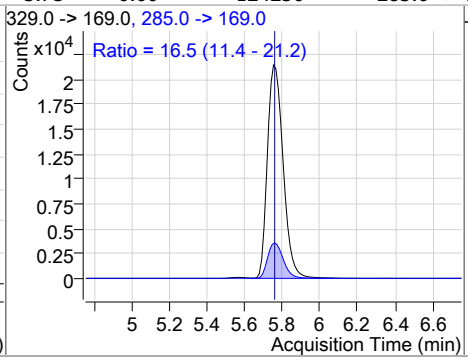


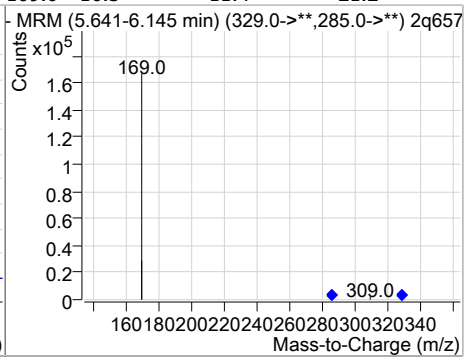


Perfluorinated Compounds by LC/MS/MS

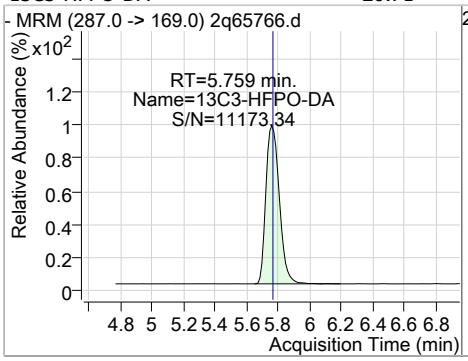
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	99.05	5.75	0.00	124250	285.0 -> 169.0	16.5	11.4	21.2

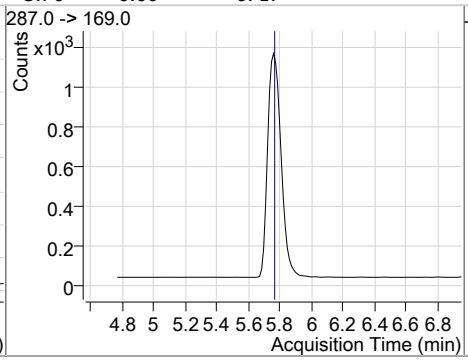


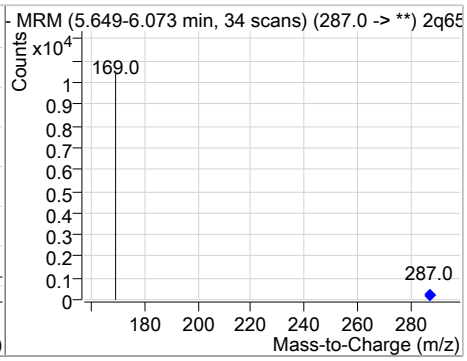




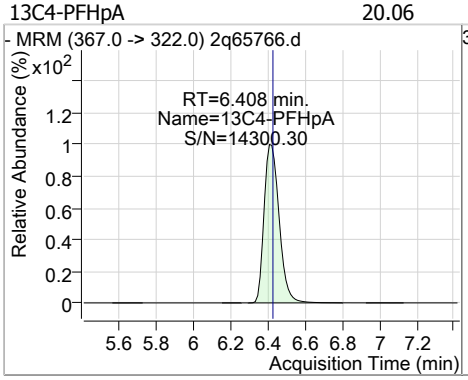
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.71	5.76	0.00	6717				

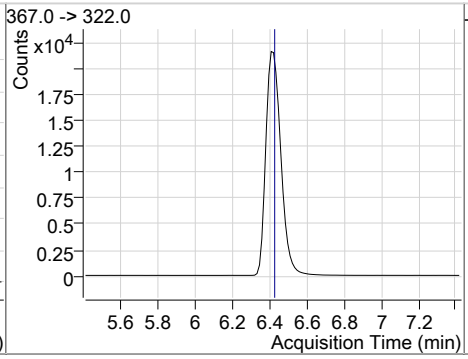


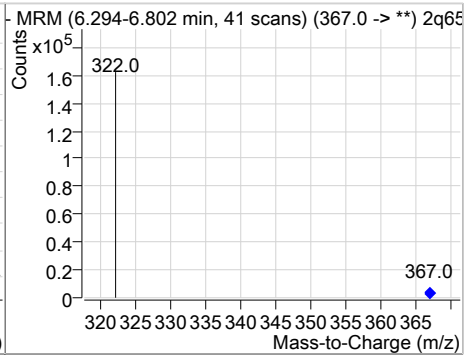




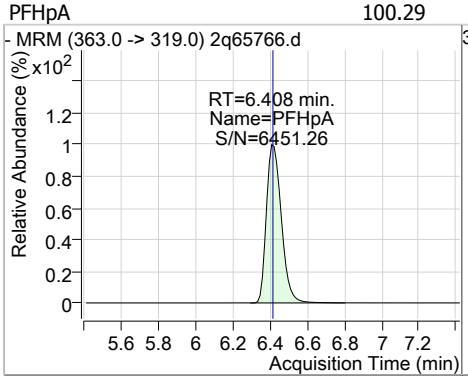
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.06	6.41	-0.01	122104				

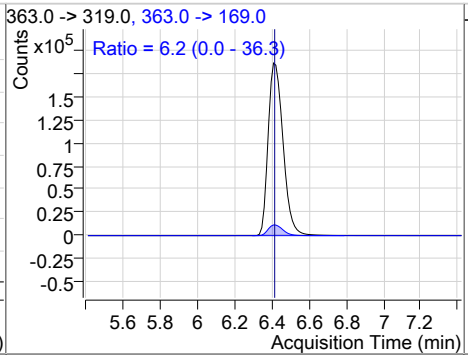


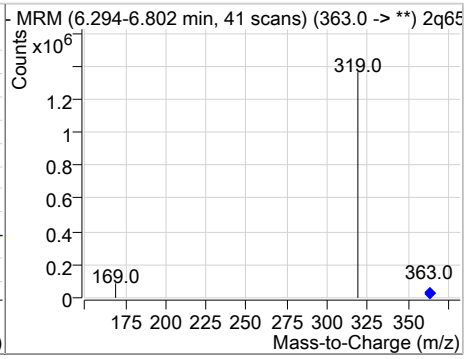




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	100.29	6.41	-0.01	1035581	363.0 -> 169.0	6.2	0.0	36.3

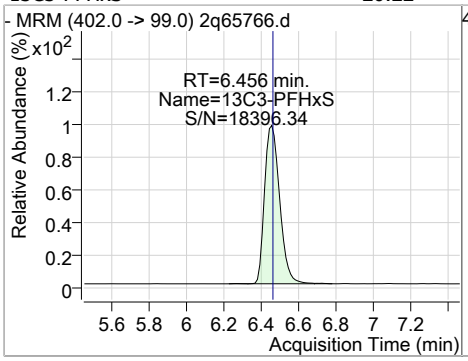


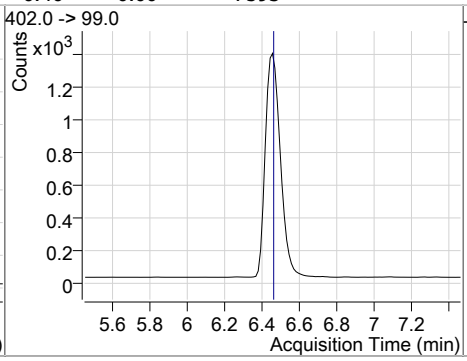


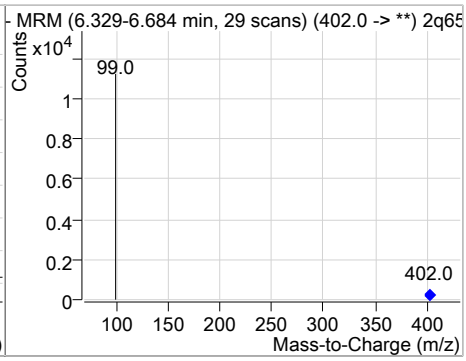


Perfluorinated Compounds by LC/MS/MS

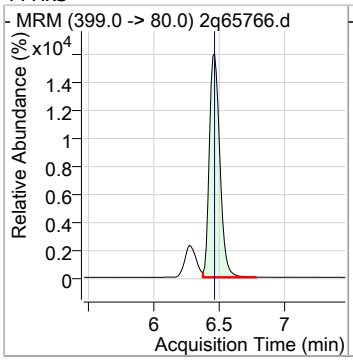
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.22	6.46	0.00	7593				

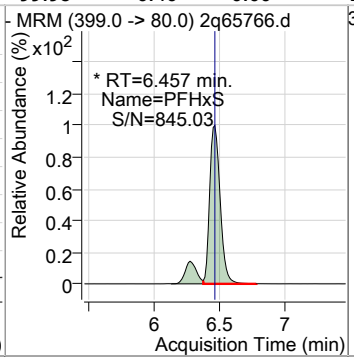


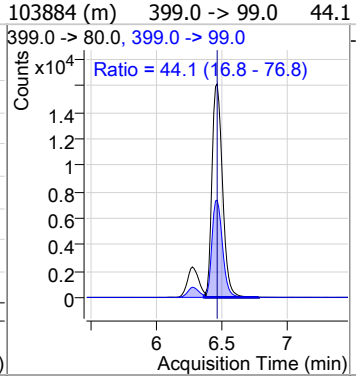


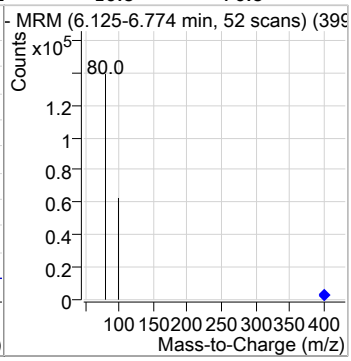


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	99.98	6.46	0.00	103884 (m)	399.0 -> 99.0	44.1	16.8	76.8

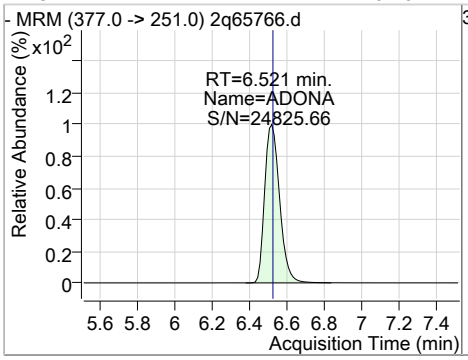


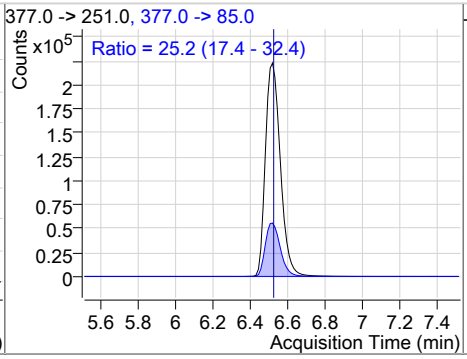


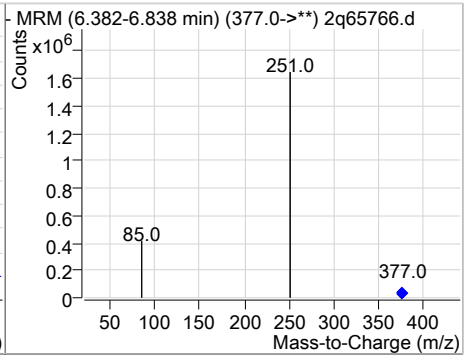




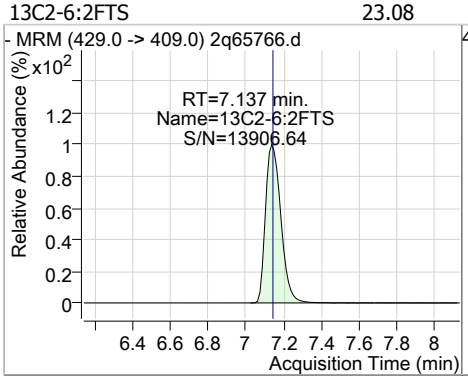
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	101.01	6.52	0.00	1243070	377.0 -> 85.0	25.2	17.4	32.4

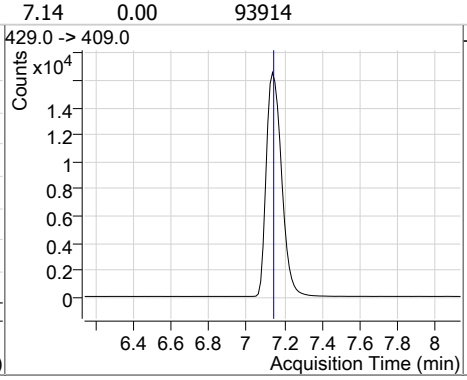


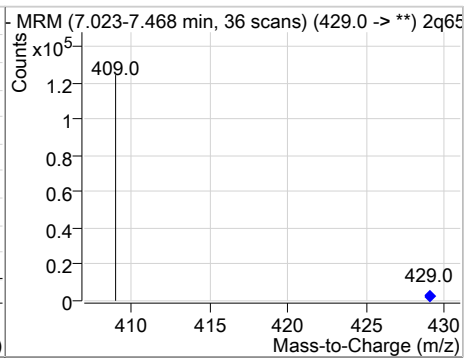




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	23.08	7.14	0.00	93914				

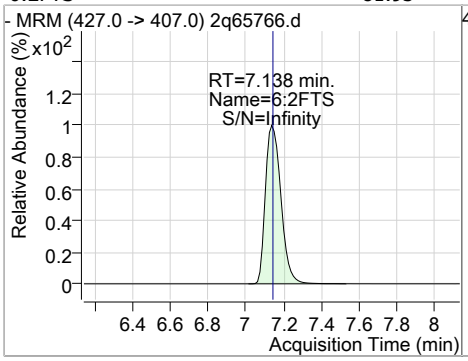


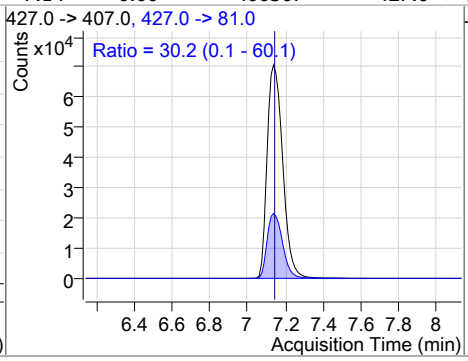


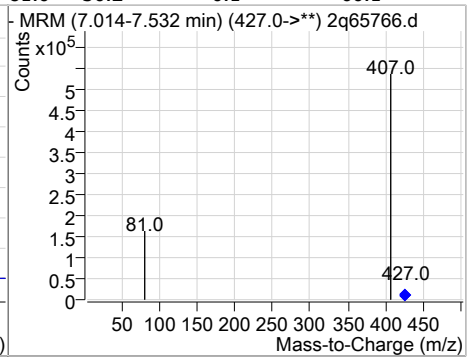


Perfluorinated Compounds by LC/MS/MS

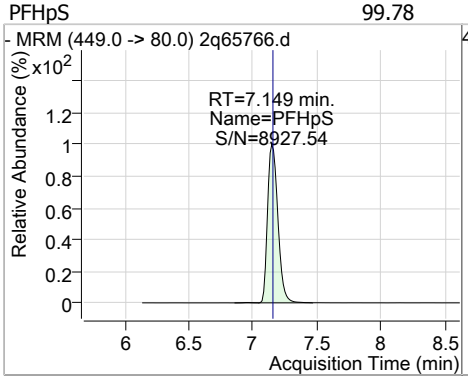
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	81.93	7.14	0.00	406367	427.0 -> 81.0	30.2	0.1	60.1

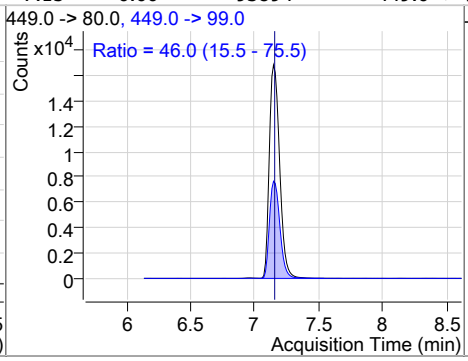


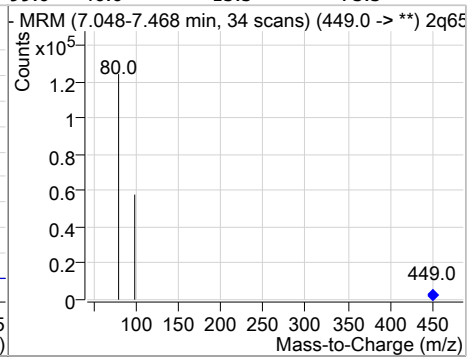




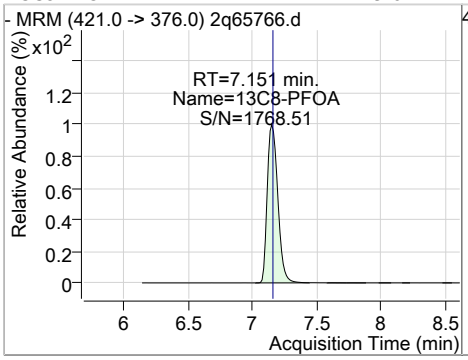
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	99.78	7.15	0.00	93894	449.0 -> 99.0	46.0	15.5	75.5

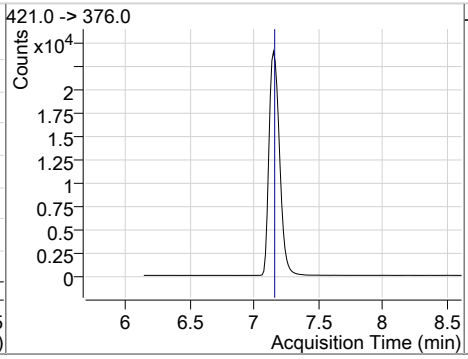


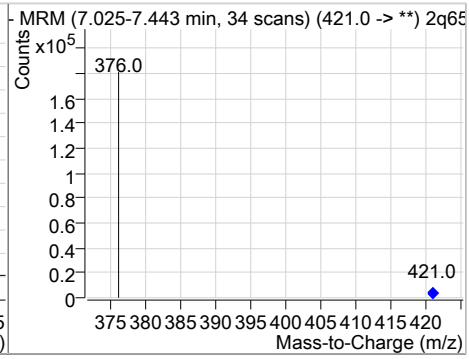




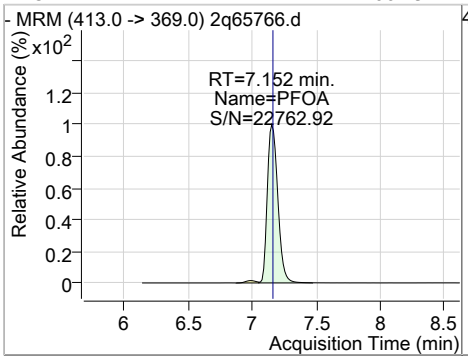
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.67	7.15	0.00	137208				

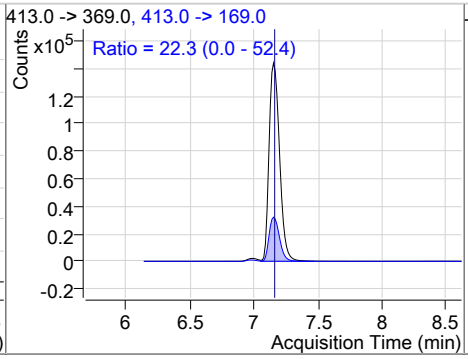


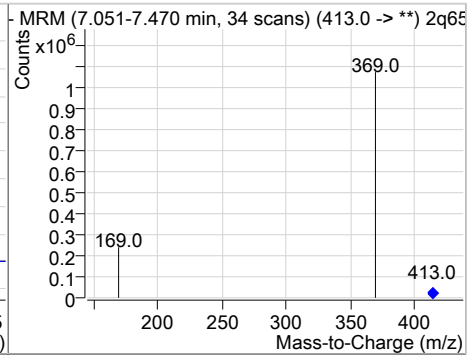




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	100.19	7.15	0.00	818064	413.0 -> 169.0	22.3	0.0	52.4

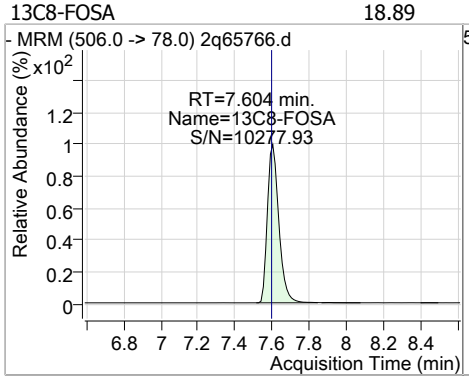


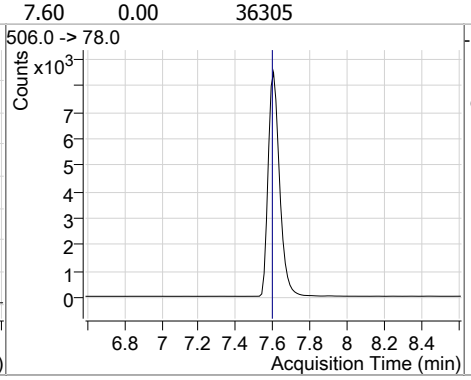


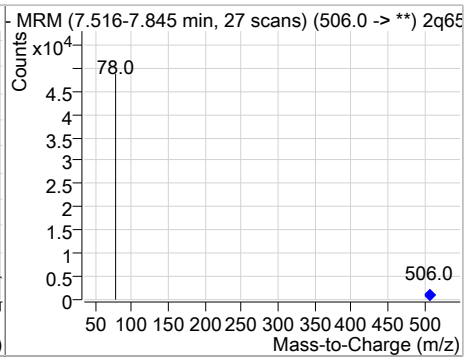


Perfluorinated Compounds by LC/MS/MS

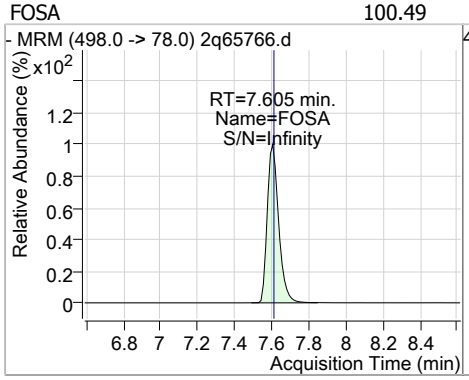
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	18.89	7.60	0.00	36305				

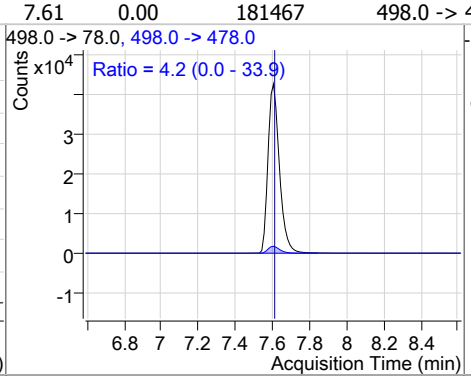


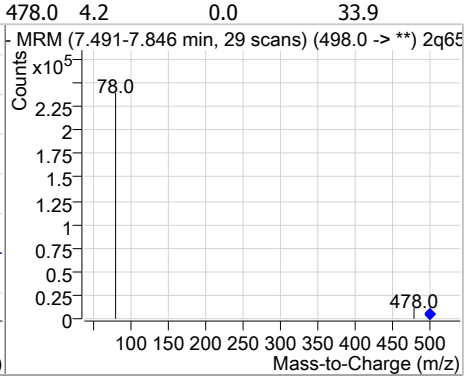




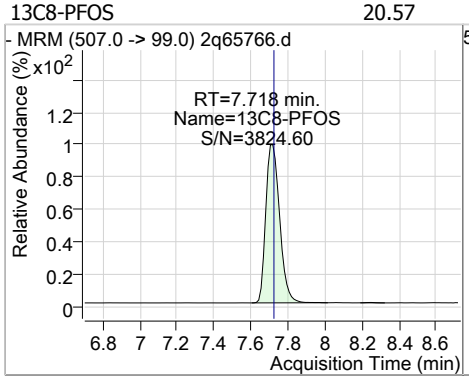
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	100.49	7.61	0.00	181467	498.0 -> 478.0	4.2	0.0	33.9

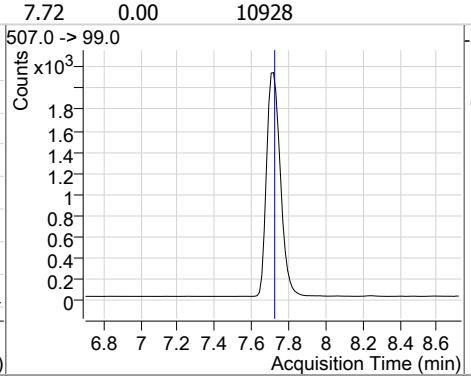


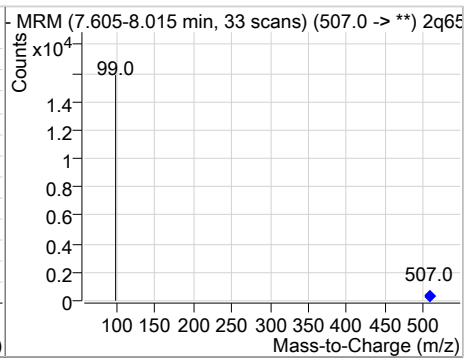




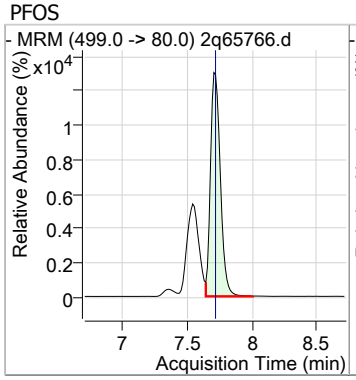
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.57	7.72	0.00	10928				

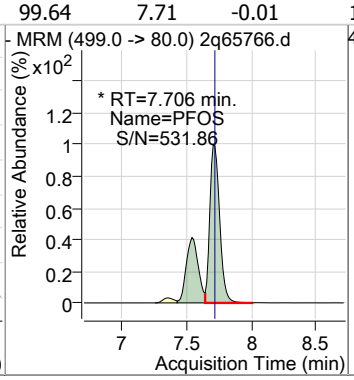


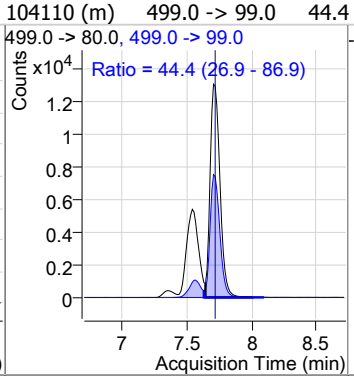


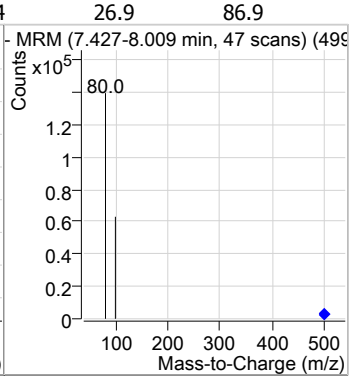


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	99.64	7.71	-0.01	104110 (m)	499.0 -> 99.0	44.4	26.9	86.9



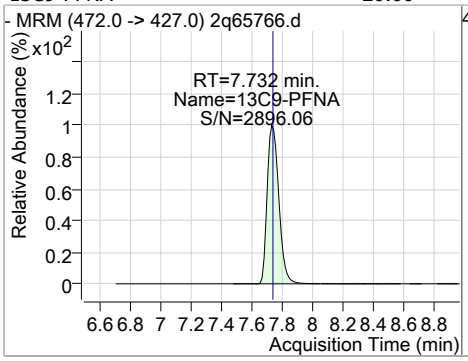


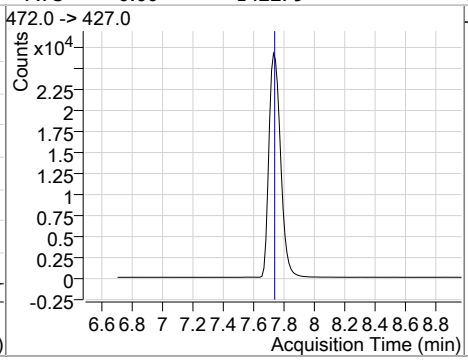


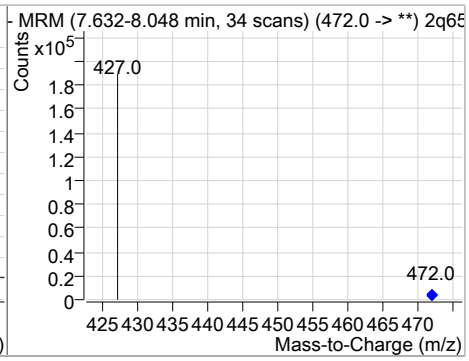


Perfluorinated Compounds by LC/MS/MS

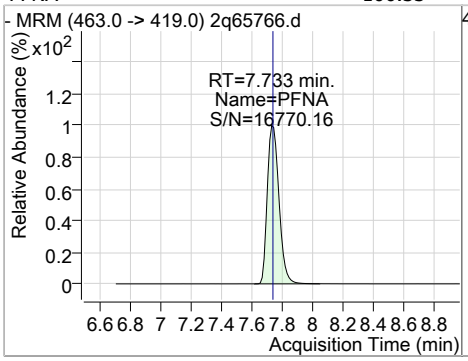
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.00	7.73	0.00	142279				

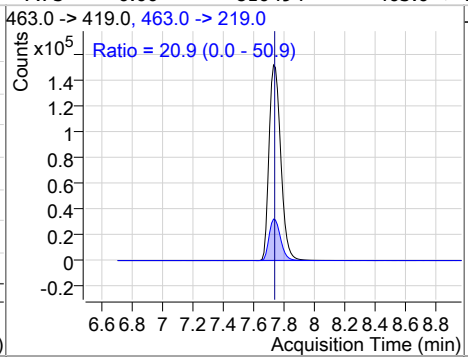


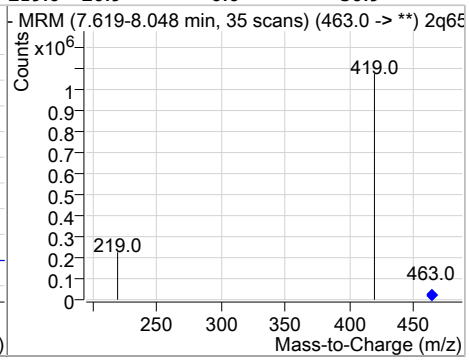




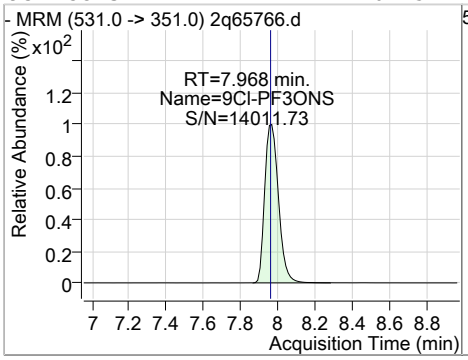
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	100.33	7.73	0.00	810494	463.0 -> 219.0	20.9	0.0	50.9

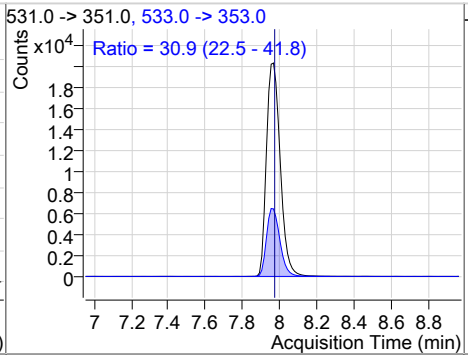


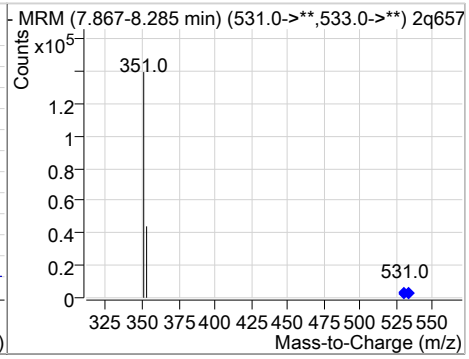




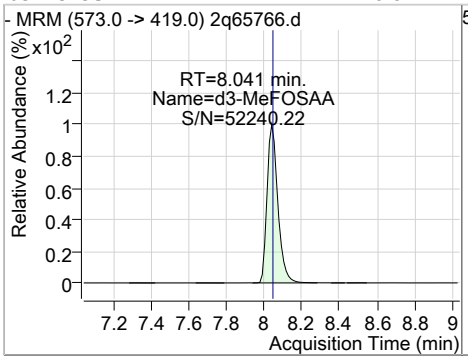
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	101.25	7.97	0.00	104557	533.0 -> 353.0	30.9	22.5	41.8

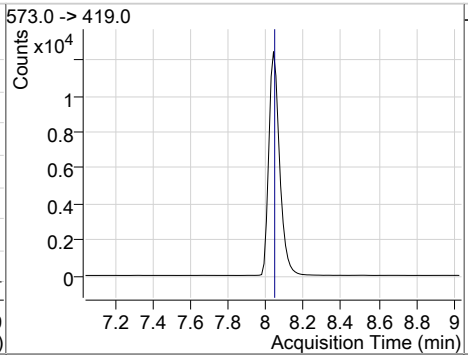


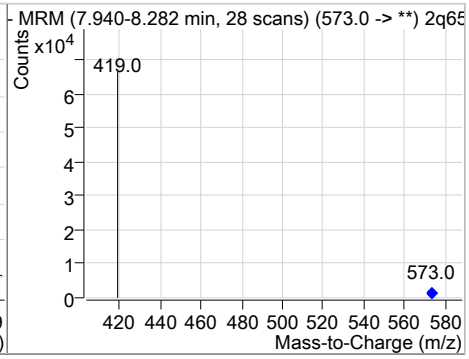




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.87	8.04	0.00	49506				

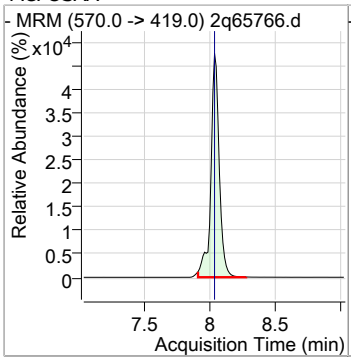


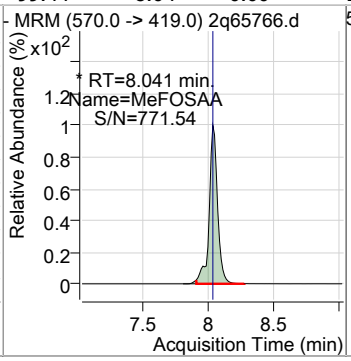


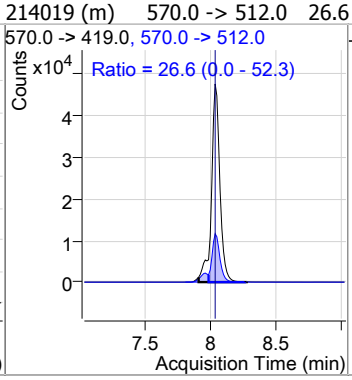


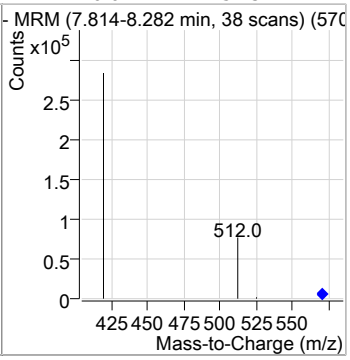
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	99.44	8.04	0.00	214019 (m)	570.0 -> 512.0	26.6	0.0	52.3

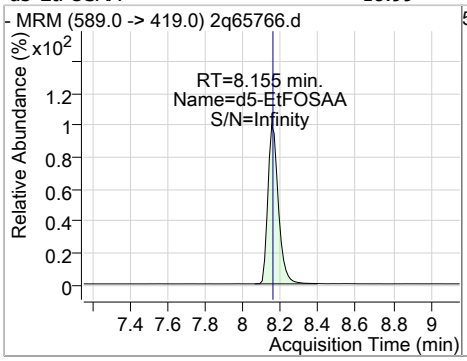


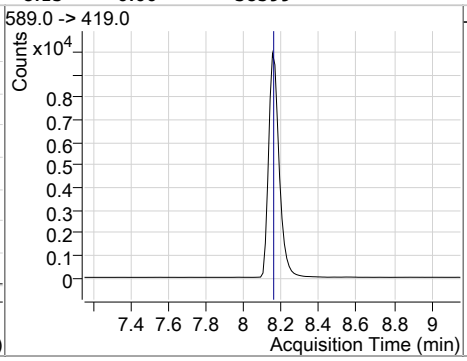


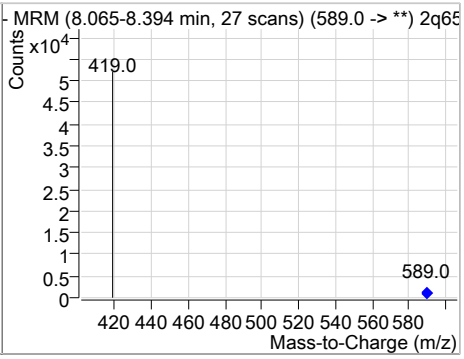




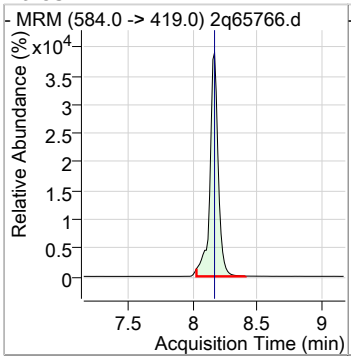
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.99	8.15	0.00	38599				

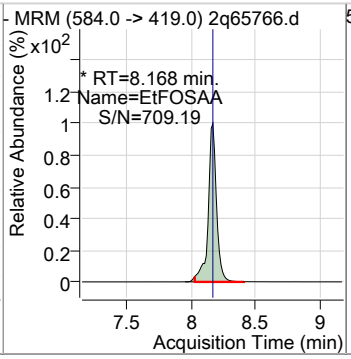


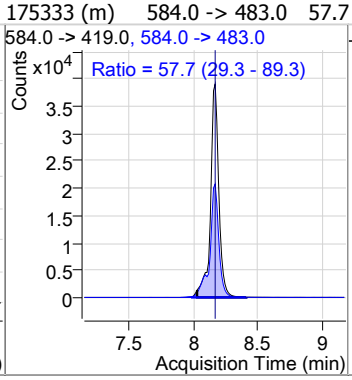


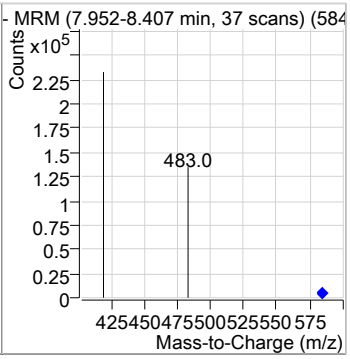


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	100.09	8.17	0.00	175333 (m)	584.0 -> 483.0	57.7	29.3	89.3

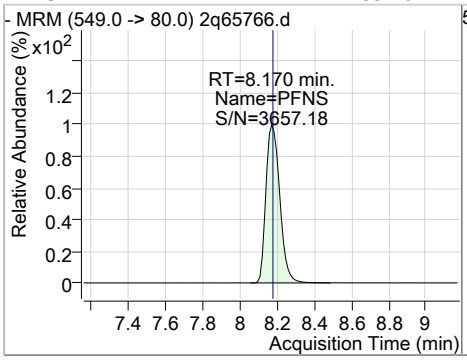


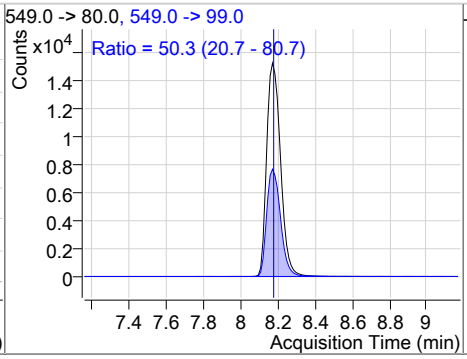


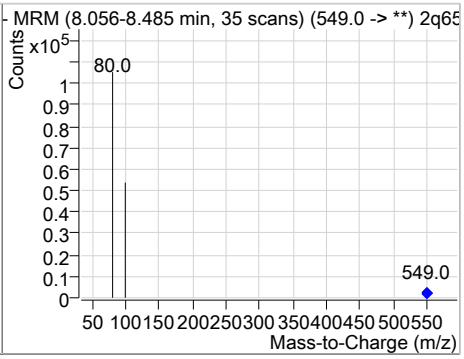




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	99.28	8.17	0.00	78765	549.0 -> 99.0	50.3	20.7	80.7

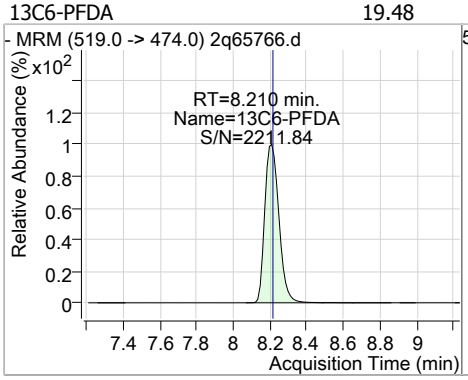


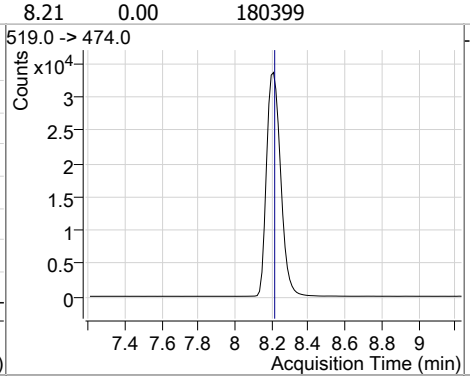


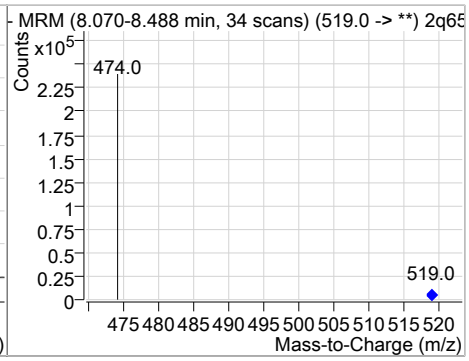


Perfluorinated Compounds by LC/MS/MS

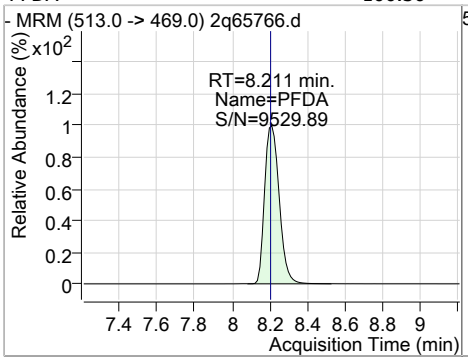
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.48	8.21	0.00	180399				

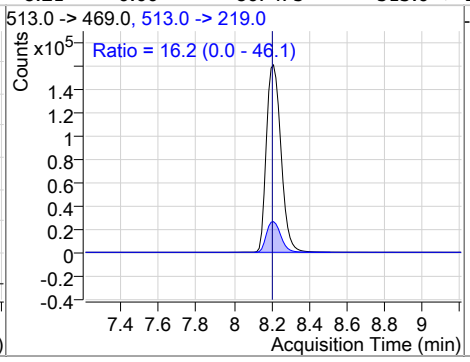


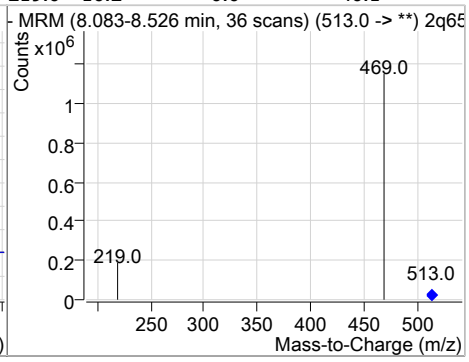




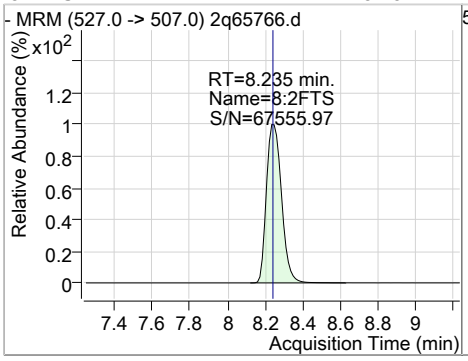
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	100.36	8.21	0.00	867475	513.0 -> 219.0	16.2	0.0	46.1

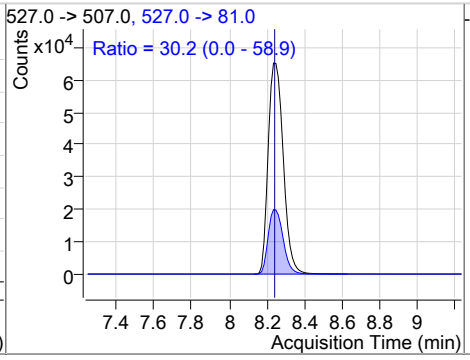


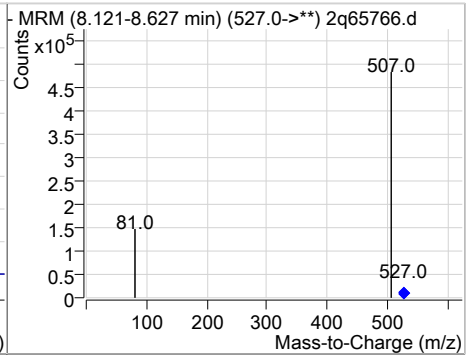




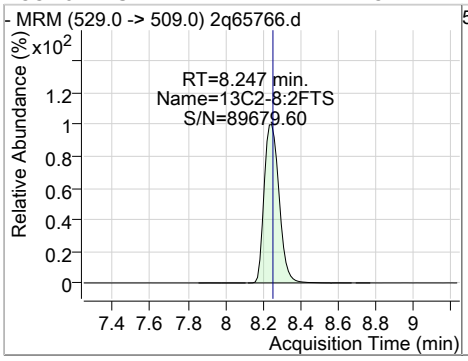
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	81.82	8.23	0.00	362870	527.0 -> 81.0	30.2	0.0	58.9

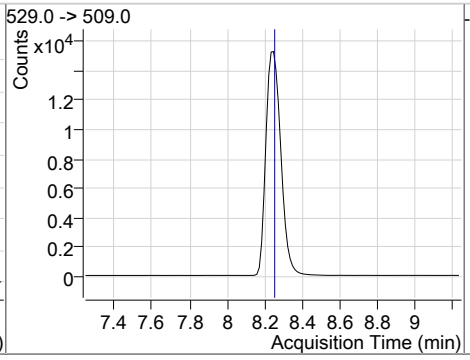


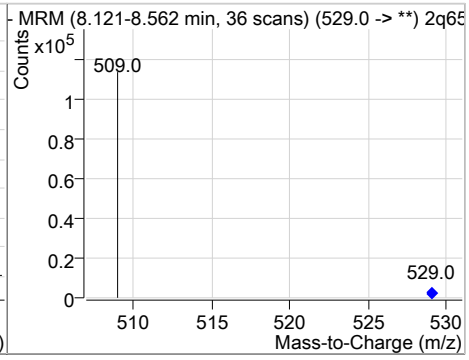




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	23.72	8.25	0.00	84603				

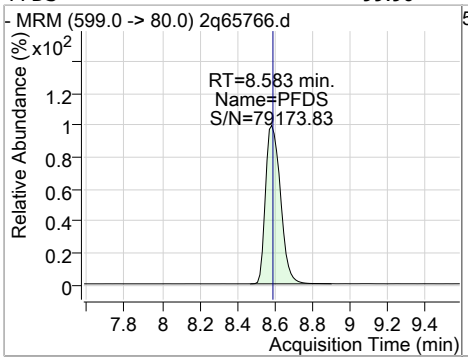


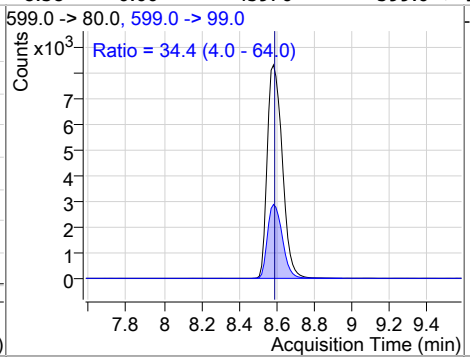


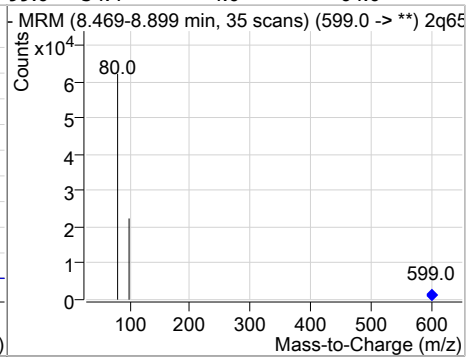


Perfluorinated Compounds by LC/MS/MS

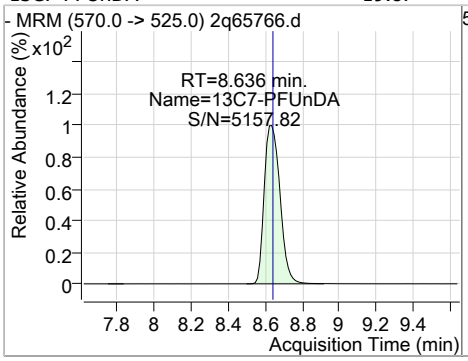
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	99.96	8.58	0.00	45976	599.0 -> 99.0	34.4	4.0	64.0

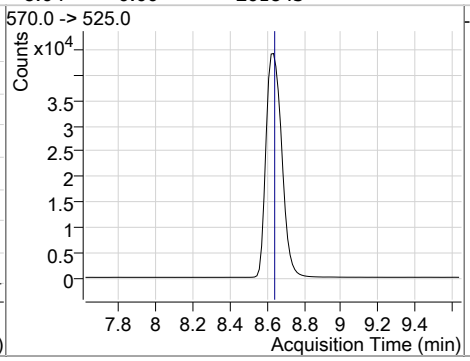


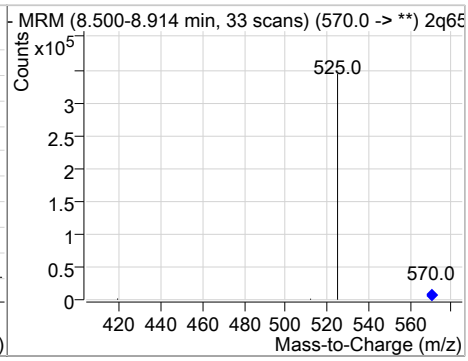




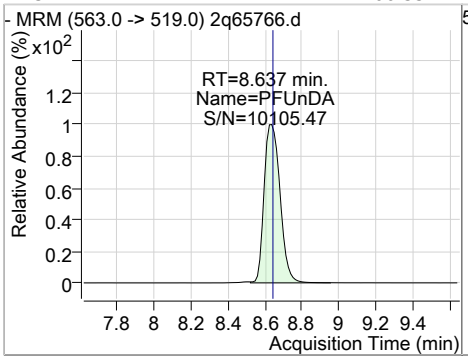
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.87	8.64	0.00	261843				

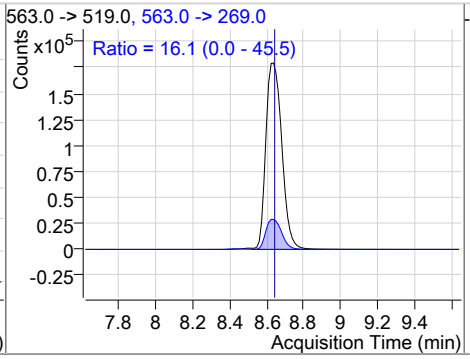


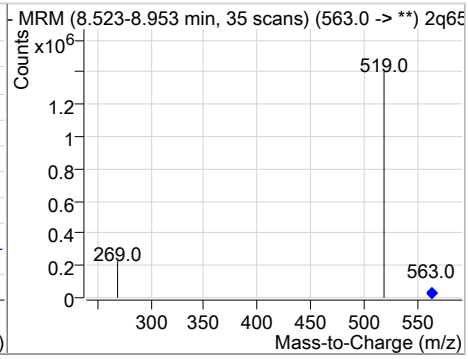




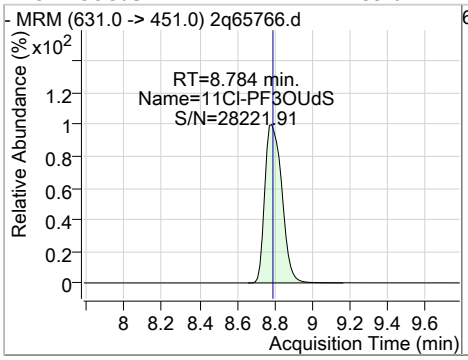
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	100.33	8.64	0.00	1072315	563.0 -> 269.0	16.1	0.0	45.5

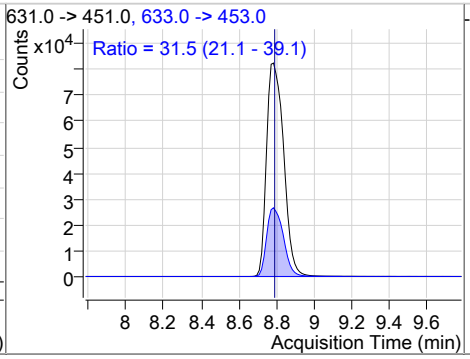


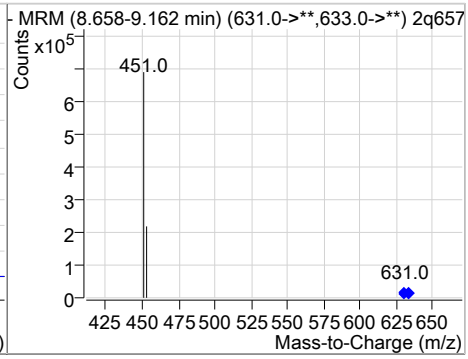




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	99.67	8.78	0.00	520577	633.0 -> 453.0	31.5	21.1	39.1

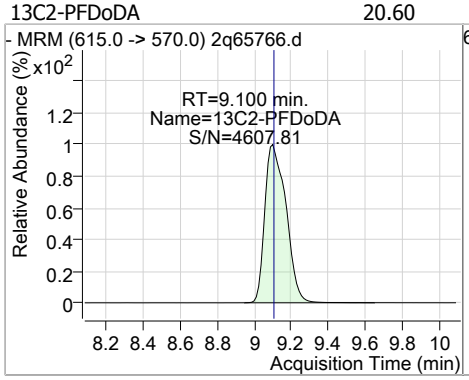


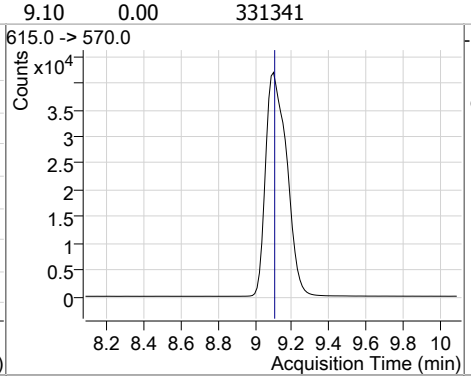


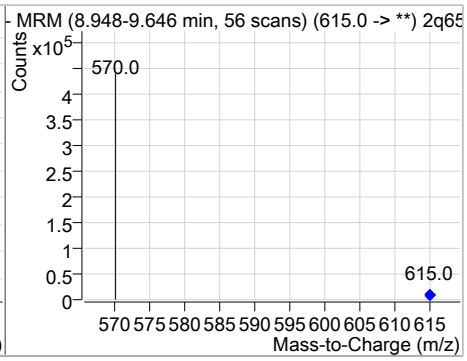


Perfluorinated Compounds by LC/MS/MS

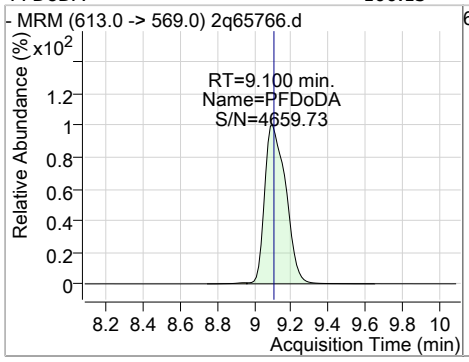
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.60	9.10	0.00	331341				

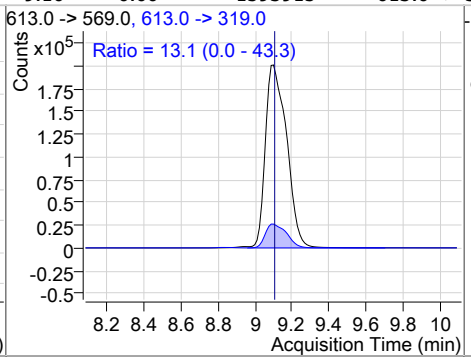


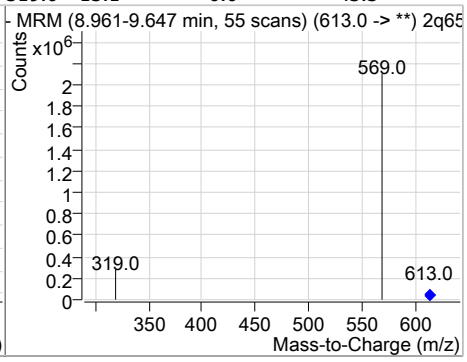




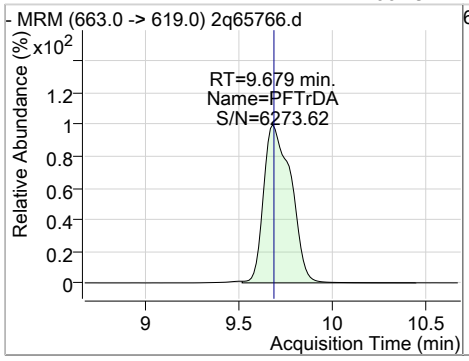
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	100.13	9.10	0.00	1593915	613.0 -> 319.0	13.1	0.0	43.3

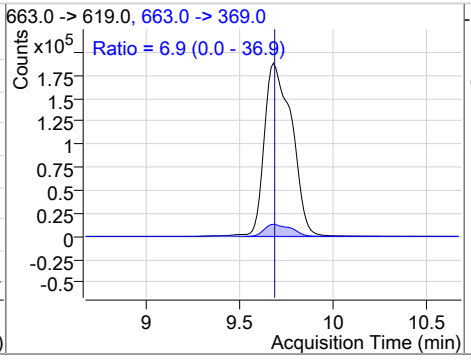


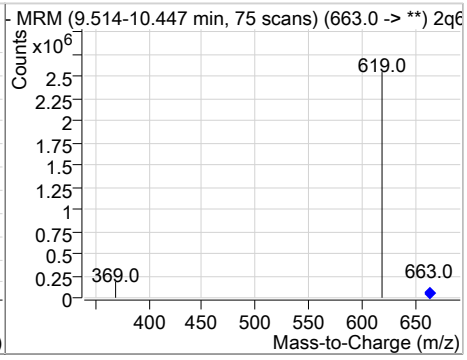




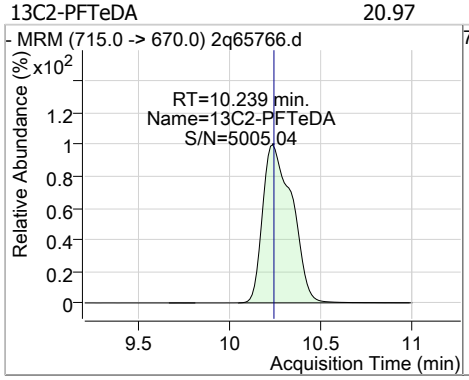
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	100.29	9.68	0.00	1927642	663.0 -> 369.0	6.9	0.0	36.9

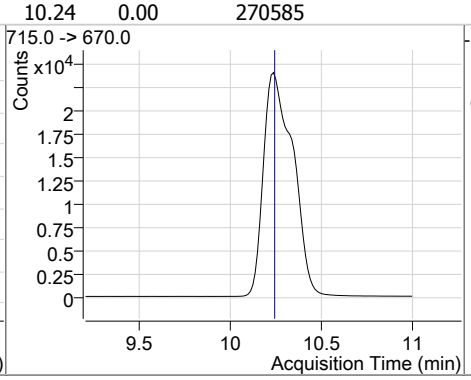


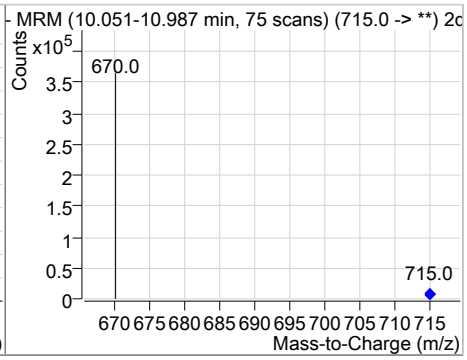




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.97	10.24	0.00	270585				

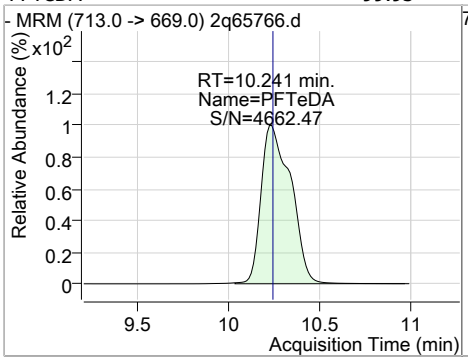


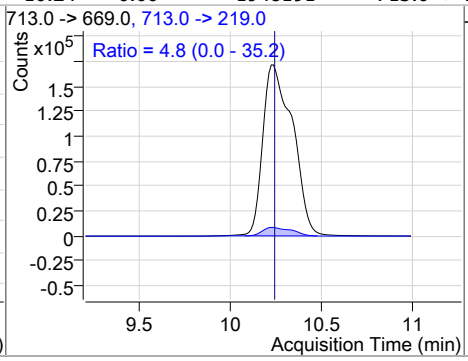


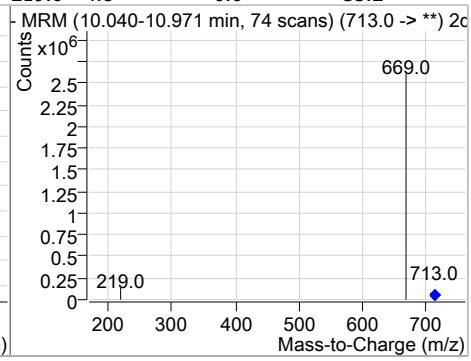


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	99.93	10.24	0.00	1948191	713.0 -> 219.0	4.8	0.0	35.2







Manual Integration Approval Summary

Sample Number: S2Q956-IC956
Lab FileID: 2Q65766.D
Injection Time: 04/08/21 15:34
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/09/21 09:05 Natasha Gumtie
Supervisor approved: 04/12/21 13:27 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.46	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.71	Split peak
MeFOSAA	2355-31-9		8.04	Split peak
EtFOSAA	2991-50-6		8.17	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/12/21 13:27

Perfluorinated Compounds by LC/MS/MS

Data File : 2q65768.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/8/2021 4:07:57 PM
Sample Name : icv956-20
Vial : P1-B1
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q956.batch.bin
Sample Information : op84308,S2Q956,250,,,1.0,1,water

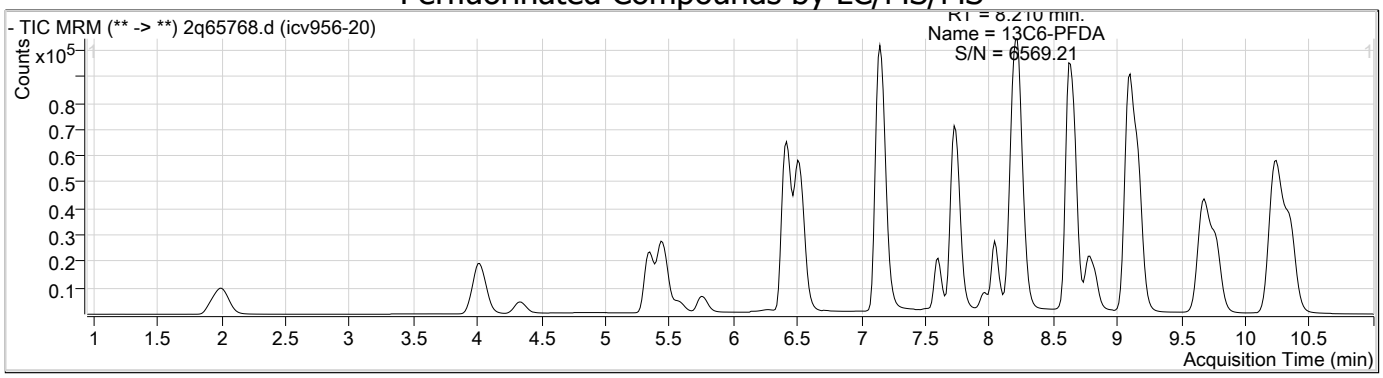
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.155	589.0 -> 419.0	44367	20.00	µg/L	0.000
M4-PFBA	1.989	217.0 -> 172.0	71164	20.00	µg/L	0.000
M5-PFPeA	4.024	268.0 -> 223.0	59079	20.00	µg/L	0.013
M5-PFHxA	5.454	318.0 -> 273.0	90182	20.00	µg/L	0.013
M4-PFHpA	6.420	367.0 -> 322.0	132374	20.00	µg/L	0.000
M8-PFOA	7.151	421.0 -> 376.0	152130	20.00	µg/L	0.000
M9-PFNA	7.732	472.0 -> 427.0	155804	20.00	µg/L	0.000
M6-PFDA	8.210	519.0 -> 474.0	204150	20.00	µg/L	0.000
M7-PFUnDA	8.624	570.0 -> 525.0	289754	20.00	µg/L	-0.013
M2-PFDoDA	9.100	615.0 -> 570.0	347666	20.00	µg/L	0.000
M2-PFTeDA	10.239	715.0 -> 670.0	285683	20.00	µg/L	0.000
M8-FOSA	7.604	506.0 -> 78.0	41913	20.00	µg/L	0.000
M3-PFBS	4.330	302.0 -> 99.0	7226	20.00	µg/L	0.000
M3-PFHxS	6.456	402.0 -> 99.0	8216	20.00	µg/L	0.000
M8-PFOS	7.718	507.0 -> 99.0	11515	20.00	µg/L	0.000
M2-4:2FTS	5.348	329.0 -> 309.0	61097	20.00	µg/L	0.013
M2-6:2FTS	7.137	429.0 -> 409.0	87438	20.00	µg/L	0.000
M2-8:2FTS	8.247	529.0 -> 509.0	77206	20.00	µg/L	0.000
M3-MeFOSAA	8.041	573.0 -> 419.0	50923	20.00	µg/L	0.000
M3-HFPO-DA	5.759	287.0 -> 169.0	6997	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.348	329.0 -> 309.0	61097	20.99	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.9%		
13C2-6:2FTS	7.137	429.0 -> 409.0	87438	21.49	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.4%		
13C2-8:2FTS	8.247	529.0 -> 509.0	77206	21.64	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.2%		
13C2-PFDoDA	9.100	615.0 -> 570.0	347666	21.61	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.1%		
13C2-PFTeDA	10.239	715.0 -> 670.0	285683	22.14	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.7%		
13C3-PFBS	4.330	302.0 -> 99.0	7226	21.39	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.9%		
13C3-PFHxS	6.456	402.0 -> 99.0	8216	21.89	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.4%		
13C4-PFBA	1.989	217.0 -> 172.0	71164	21.19	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.0%		
13C4-PFHpA	6.420	367.0 -> 322.0	132374	21.75	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.8%		
d5-EtFOSAA	8.155	589.0 -> 419.0	44367	21.82	ng/ml	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.1%		
13C5-PFHxA	5.454	318.0 -> 273.0	90182	21.64	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.2%		
13C5-PFPeA	4.024	268.0 -> 223.0	59079	21.41	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.1%		

Perfluorinated Compounds by LC/MS/MS

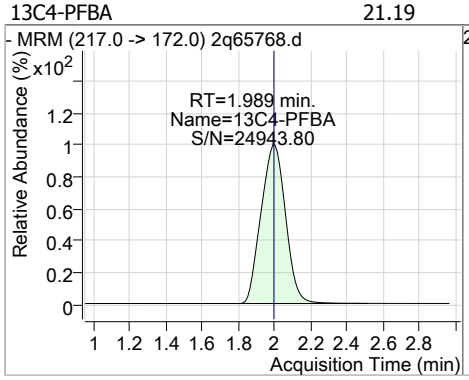
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	204150	22.04	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.2%			
13C7-PFUnDA	8.624	570.0 -> 525.0	289754	21.98	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.9%			
13C8-FOSA	7.604	506.0 -> 78.0	41913	21.81	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.1%			
13C8-PFOA	7.151	421.0 -> 376.0	152130	21.81	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.1%			
13C8-PFOS	7.718	507.0 -> 99.0	11515	21.68	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.4%			
13C9-PFNA	7.732	472.0 -> 427.0	155804	21.91	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.5%			
d3-MeFOSAA	8.041	573.0 -> 419.0	50923	21.47	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.3%			
13C3-HFPO-DA	5.759	287.0 -> 169.0	6997	21.57	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.9%			
Target Compounds							QValue
4:2FTS	5.350	327.0 -> 307.0	57153	17.76	µg/L		100
6:2FTS	7.138	427.0 -> 407.0	77309	16.74	µg/L		100
8:2FTS	8.247	527.0 -> 507.0	68826	17.01	µg/L		99
EtFOSAA	8.168	584.0 -> 419.0	37506	18.63	µg/L	m	96
FOSA	7.605	498.0 -> 78.0	37928	18.19	µg/L		99
MeFOSAA	8.041	570.0 -> 419.0	42203	19.06	µg/L	m	90
PFBA	1.996	213.0 -> 169.0	21594	17.98	µg/L		100
PFBS	4.332	299.0 -> 80.0	17499	15.56	µg/L		99
PFDA	8.211	513.0 -> 469.0	160379	16.40	µg/L		99
PFDoDA	9.100	613.0 -> 569.0	306477	18.35	µg/L		99
PFDS	8.583	599.0 -> 80.0	8537	16.77	µg/L		99
PFHpA	6.421	363.0 -> 319.0	200479	17.91	µg/L		100
PFHpS	7.149	449.0 -> 80.0	17371	17.06	µg/L		99
PFHxA	5.455	313.0 -> 269.0	55910	17.73	µg/L		100
PFHxS	6.457	399.0 -> 80.0	17809	15.84	µg/L	m	99
PFNA	7.733	463.0 -> 419.0	148417	16.78	µg/L		99
PFNS	8.170	549.0 -> 80.0	14510	17.36	µg/L		96
PFOA	7.152	413.0 -> 369.0	163944	18.11	µg/L		100
PFOS	7.718	499.0 -> 80.0	19985	18.15	µg/L	m	87
PFPeA	4.027	263.0 -> 219.0	85232	17.65	µg/L		100
PFPeS	5.577	349.0 -> 80.0	13863	16.25	µg/L		100
PFTeDA	10.241	713.0 -> 669.0	331192	16.09	µg/L		100
PFTrDA	9.679	663.0 -> 619.0	402461	19.96	µg/L		100
PFUnDA	8.637	563.0 -> 519.0	213401	18.04	µg/L		98
11Cl-PF3OUdS	8.784	631.0 -> 451.0	92315	16.85	µg/L		99
9Cl-PF3ONS	7.968	531.0 -> 351.0	18824	16.11	µg/L		98
ADONA	6.521	377.0 -> 251.0	224295	16.44	µg/L		100
HFPO-DA	5.754	329.0 -> 169.0	23348	17.87	µg/L		100

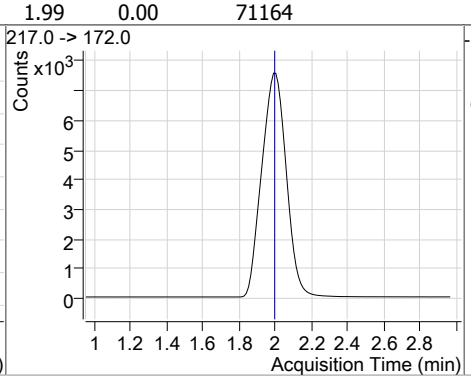
 # = Qualifier out of range, m = manually integrated, + = Area summed

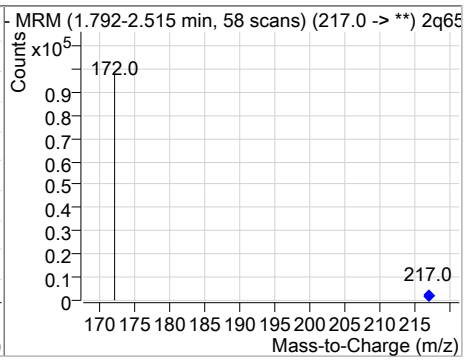
Perfluorinated Compounds by LC/MS/MS



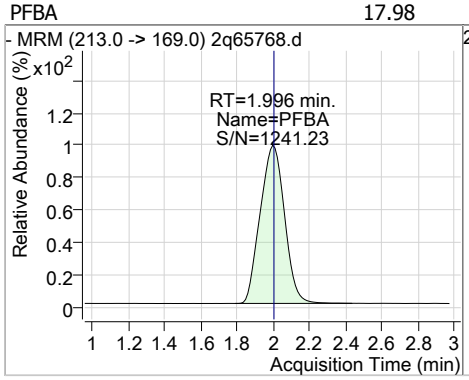
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	21.19	1.99	0.00	71164				

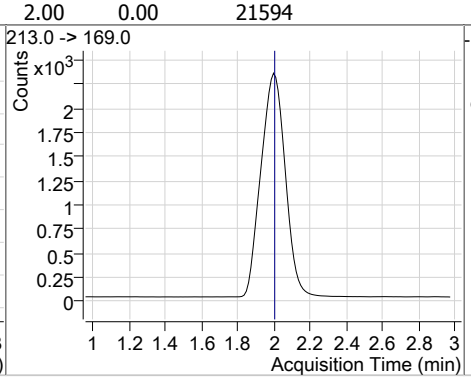


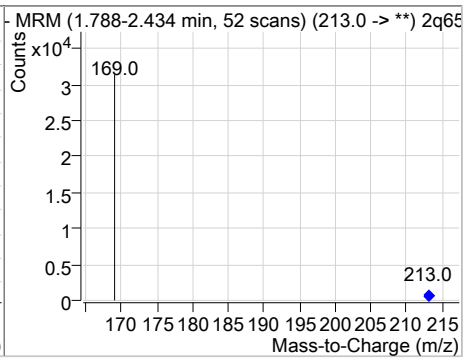




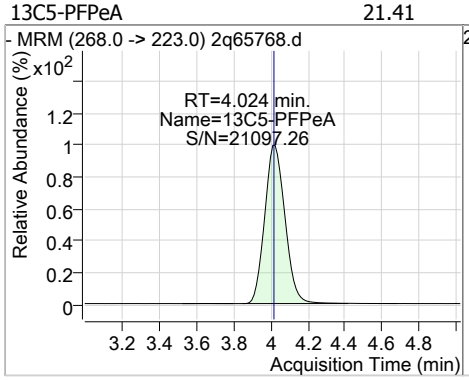
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	17.98	2.00	0.00	21594				

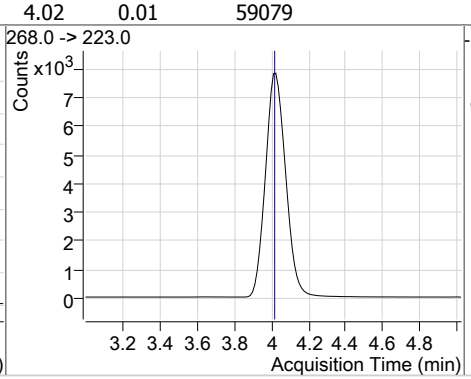


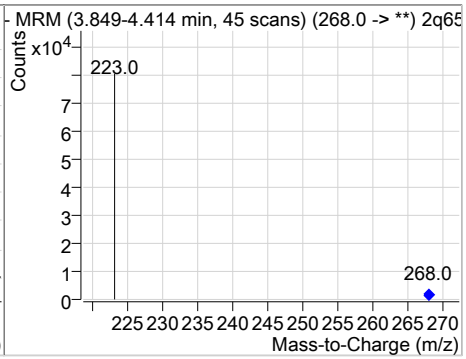




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	21.41	4.02	0.01	59079				

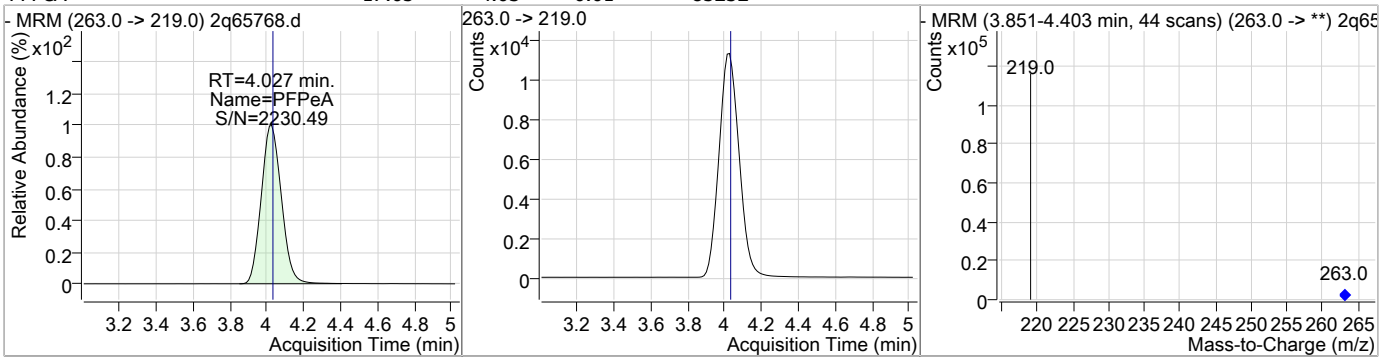




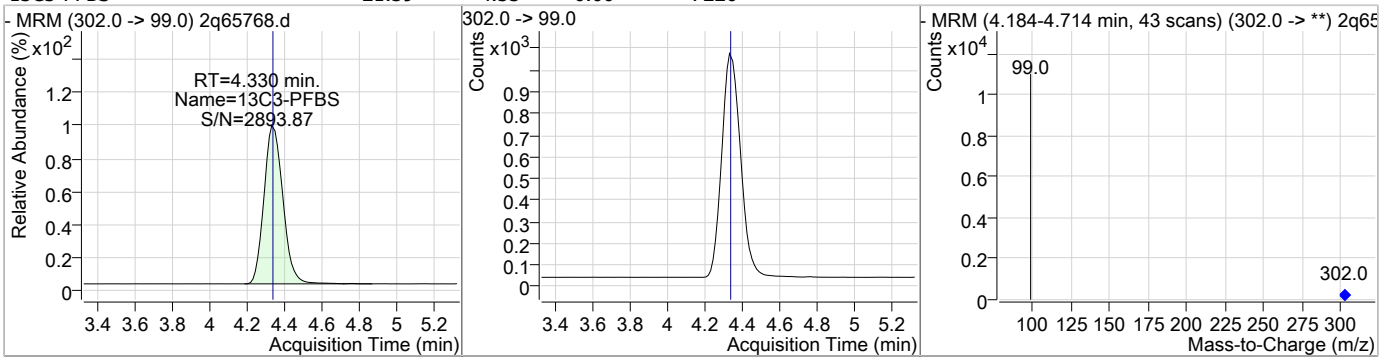


Perfluorinated Compounds by LC/MS/MS

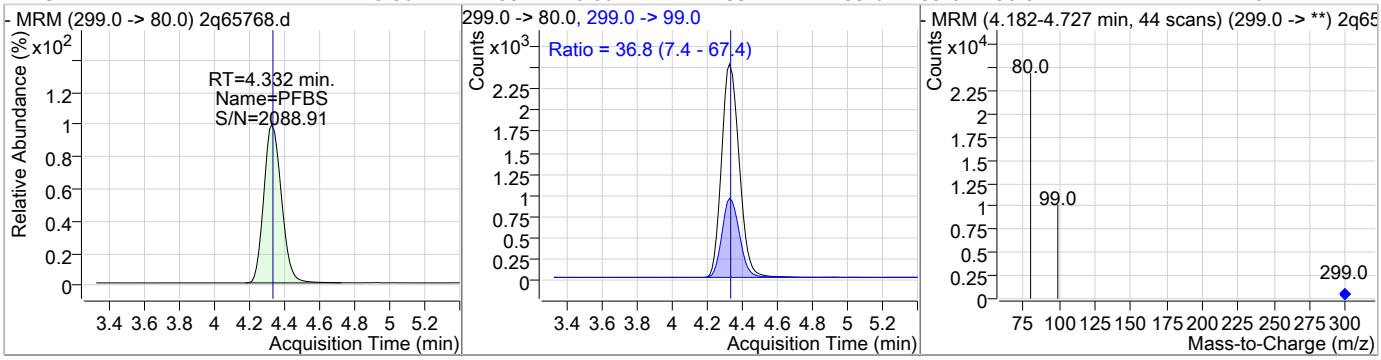
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	17.65	4.03	0.01	85232				



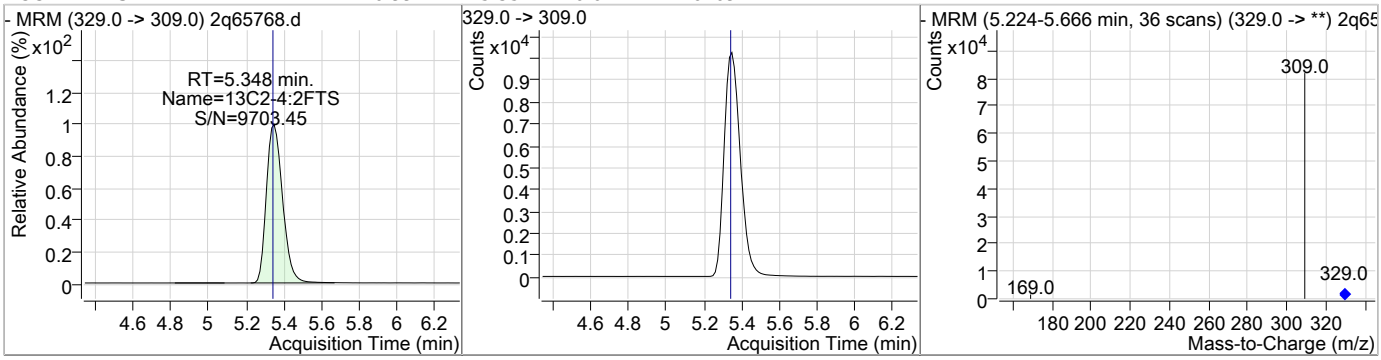
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	21.39	4.33	0.00	7226				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	15.56	4.33	0.00	17499	299.0 -> 99.0	36.8	7.4	67.4

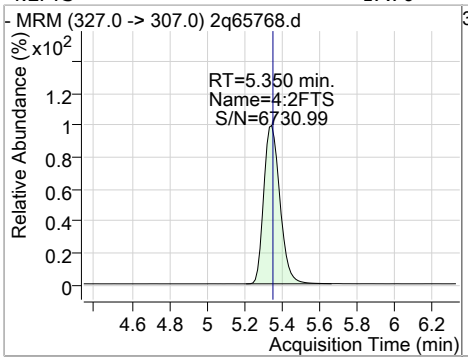


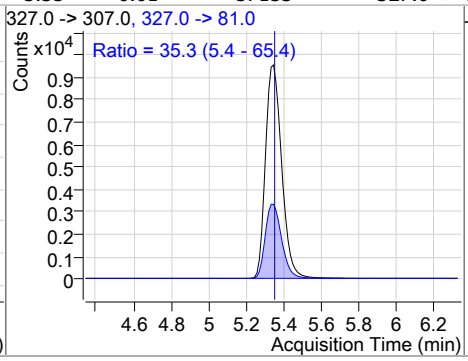
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	20.99	5.35	0.01	61097				

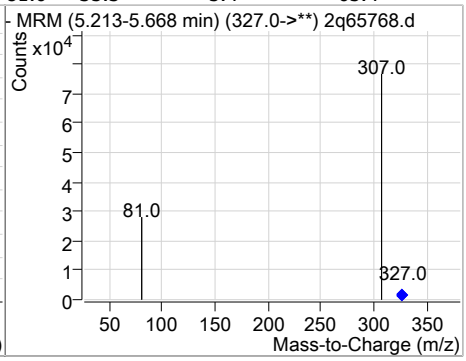


Perfluorinated Compounds by LC/MS/MS

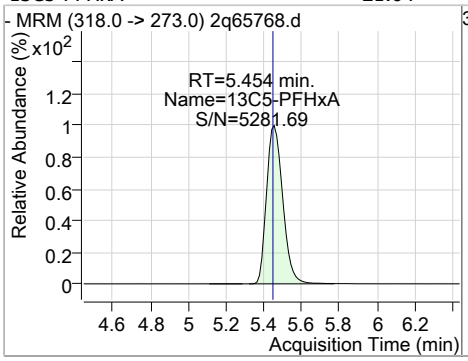
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	17.76	5.35	0.01	57153	327.0 -> 81.0	35.3	5.4	65.4

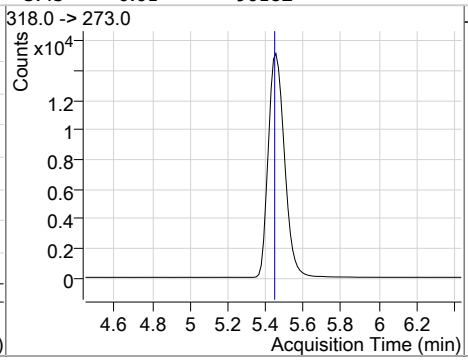


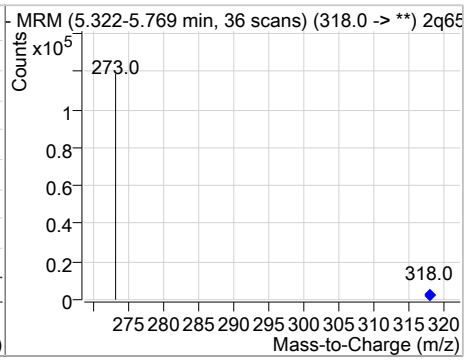




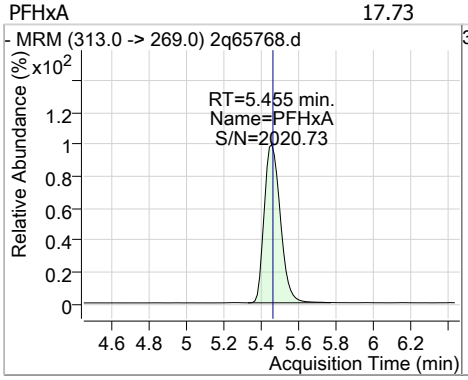
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	21.64	5.45	0.01	90182				

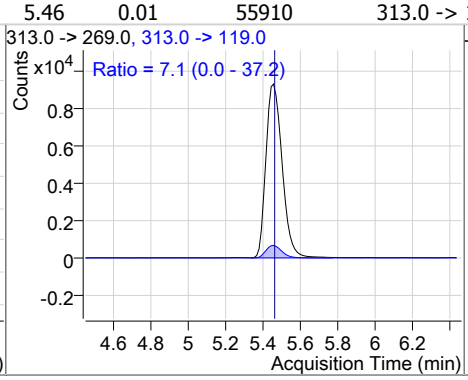


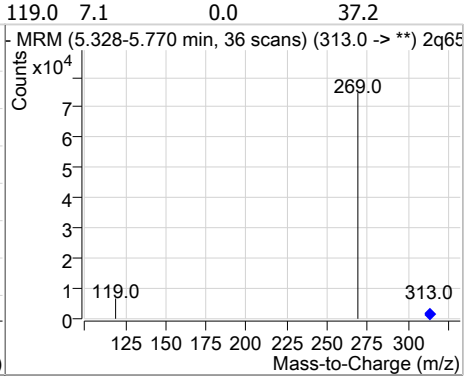




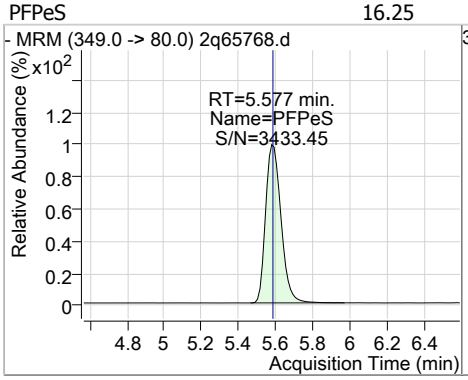
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	17.73	5.46	0.01	55910	313.0 -> 119.0	7.1	0.0	37.2

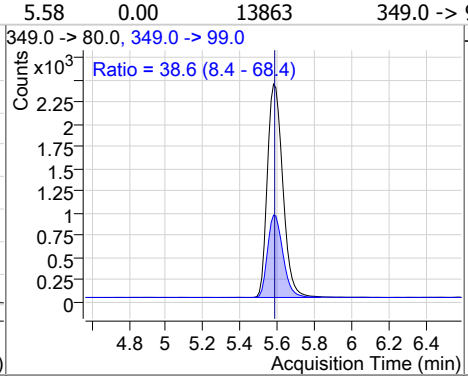


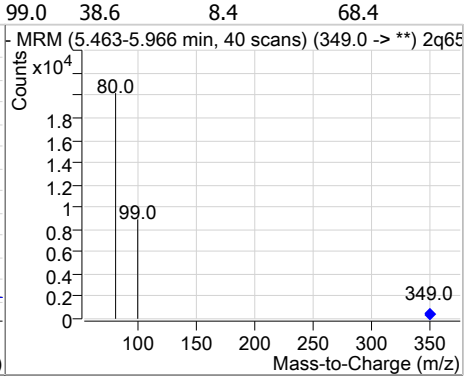




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	16.25	5.58	0.00	13863	349.0 -> 99.0	38.6	8.4	68.4

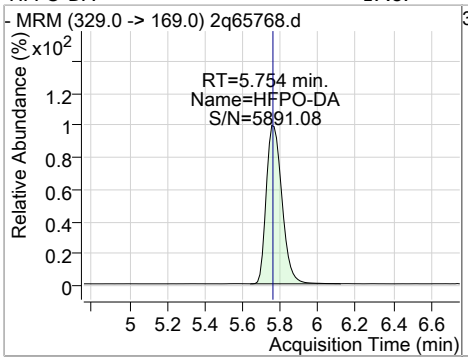


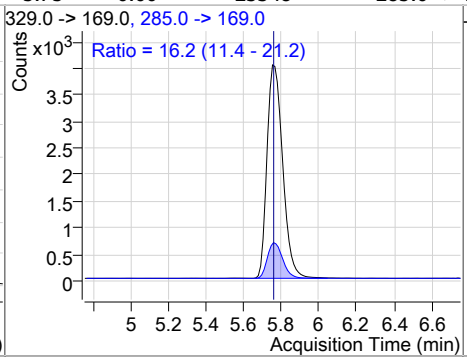


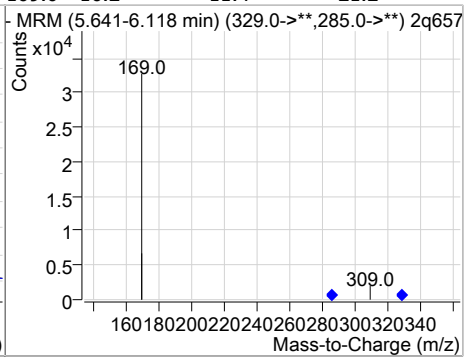


Perfluorinated Compounds by LC/MS/MS

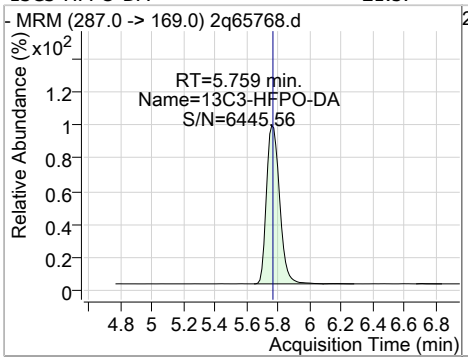
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	17.87	5.75	0.00	23348	285.0 -> 169.0	16.2	11.4	21.2

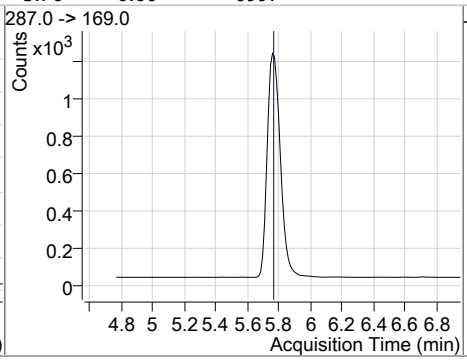


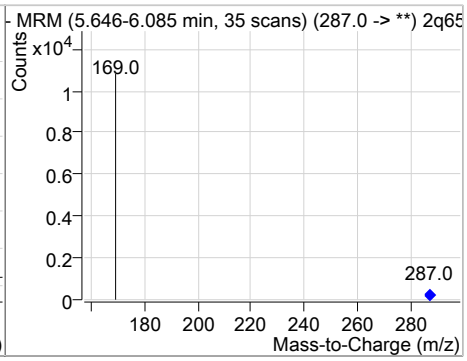




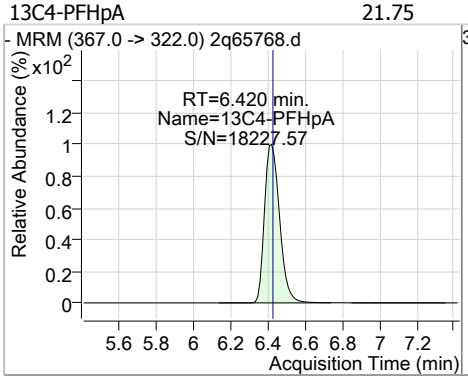
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	21.57	5.76	0.00	6997				

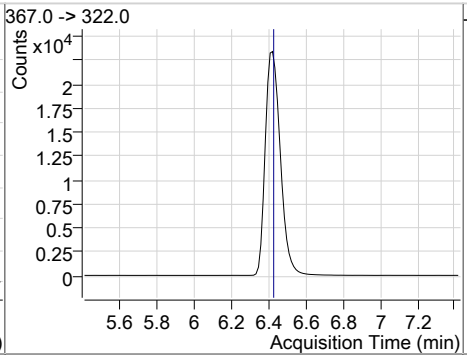


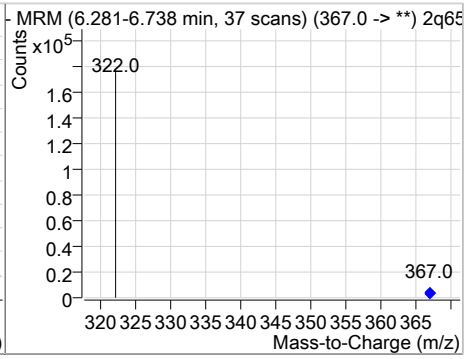




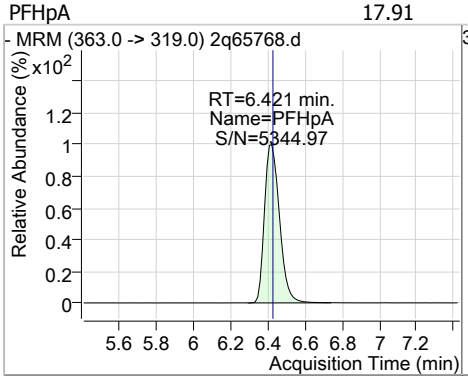
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	21.75	6.42	0.00	132374				

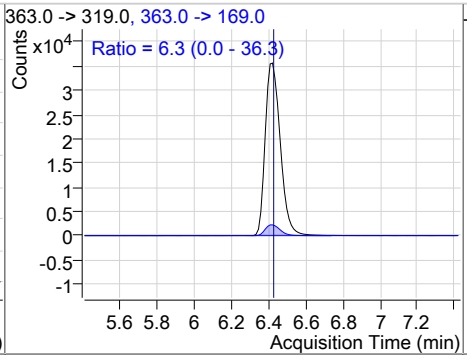


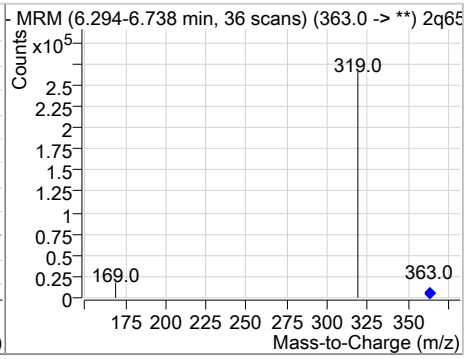




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	17.91	6.42	0.00	200479	363.0 -> 169.0	6.3	0.0	36.3

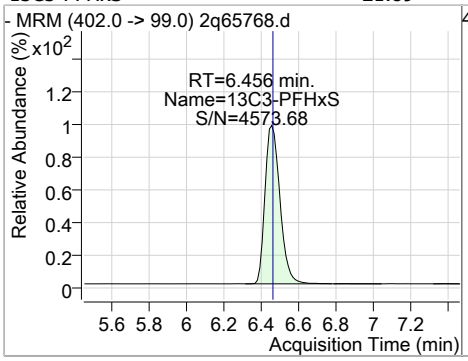


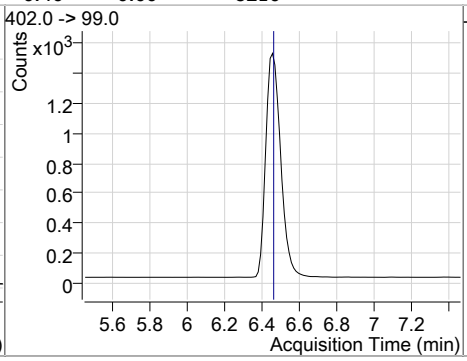


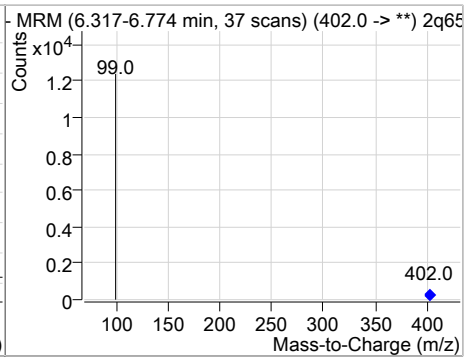


Perfluorinated Compounds by LC/MS/MS

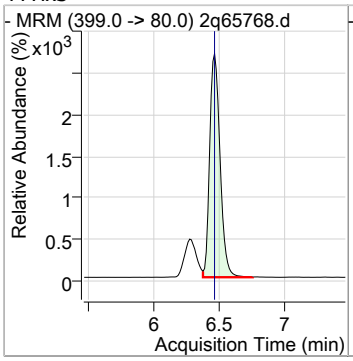
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	21.89	6.46	0.00	8216				

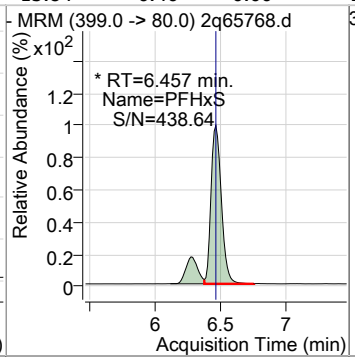


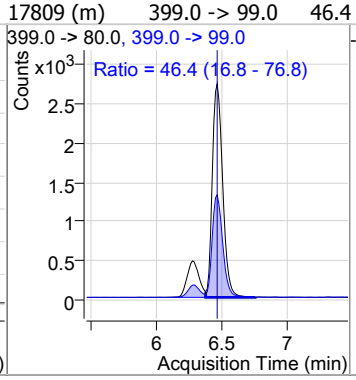


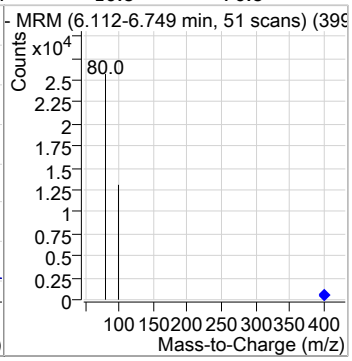


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	15.84	6.46	0.00	17809 (m)	399.0 -> 99.0	46.4	16.8	76.8

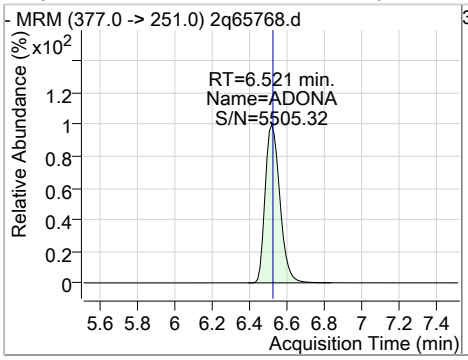


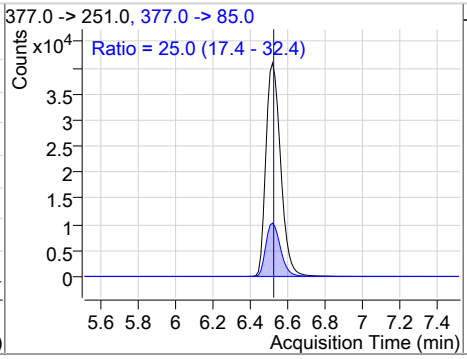


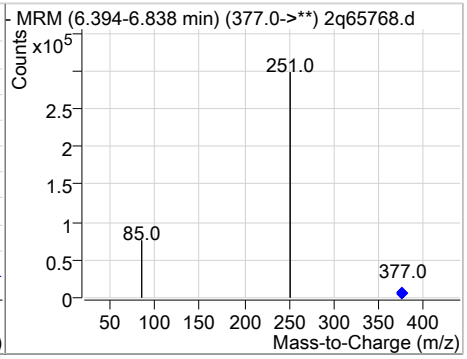




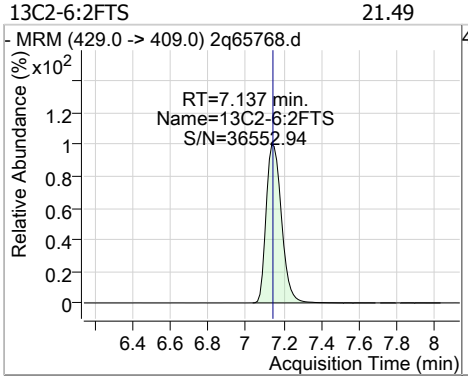
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	16.44	6.52	0.00	224295	377.0 -> 85.0	25.0	17.4	32.4

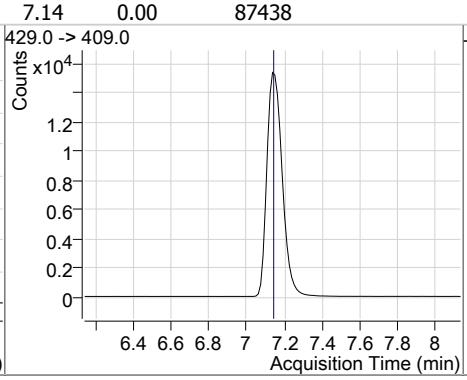


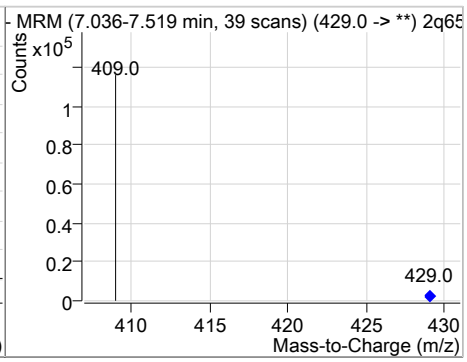




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	21.49	7.14	0.00	87438				

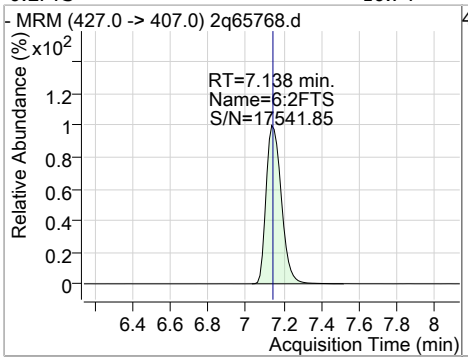


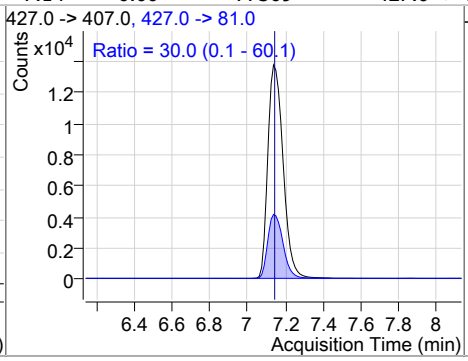


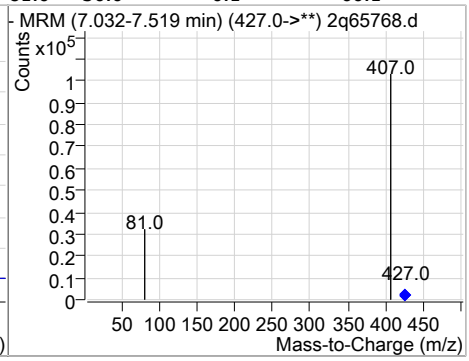


Perfluorinated Compounds by LC/MS/MS

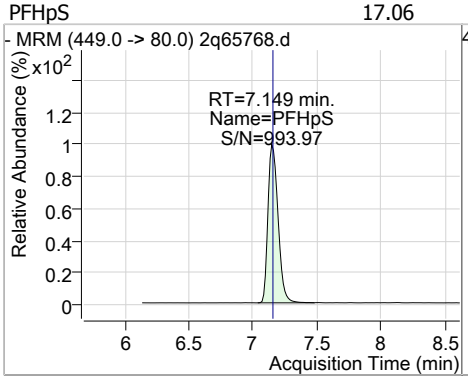
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	16.74	7.14	0.00	77309	427.0 -> 81.0	30.0	0.1	60.1

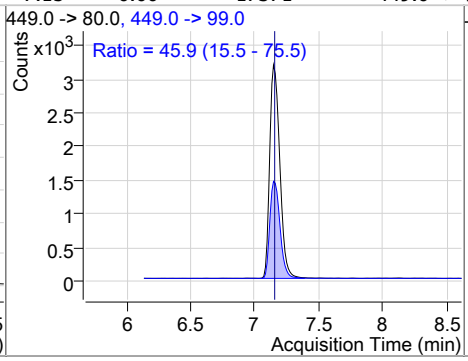


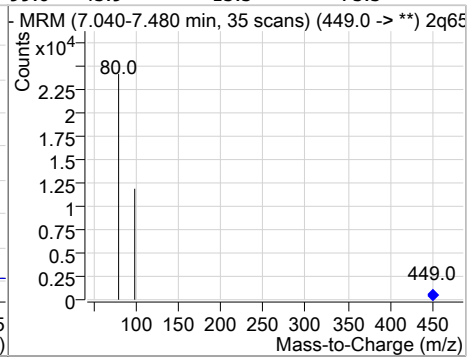




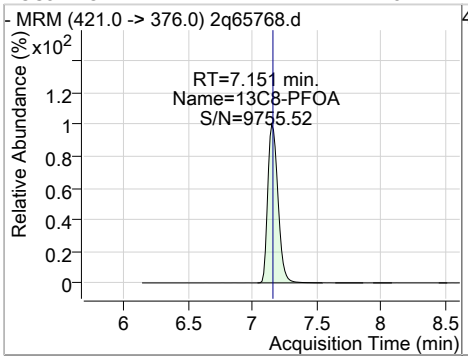
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	17.06	7.15	0.00	17371	449.0 -> 99.0	45.9	15.5	75.5

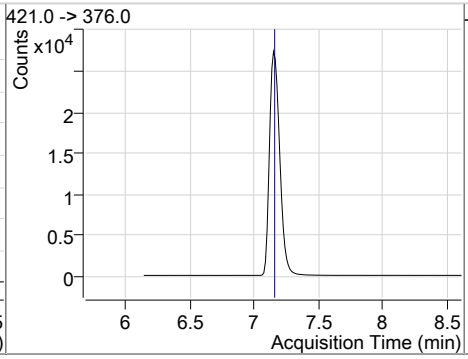


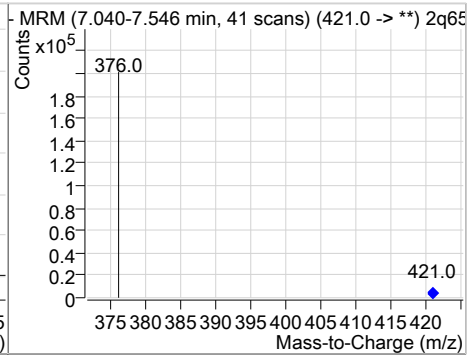




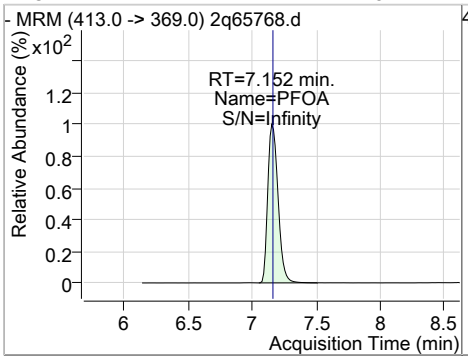
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	21.81	7.15	0.00	152130				

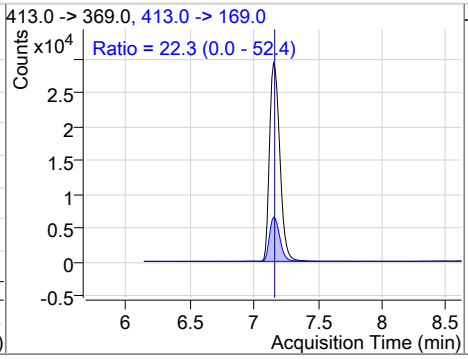


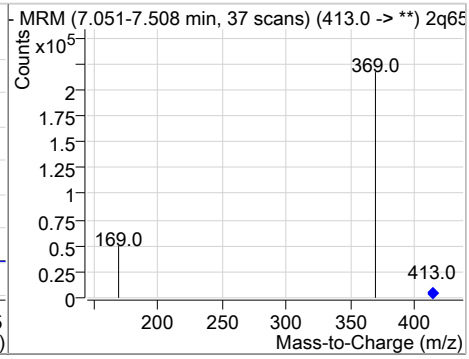




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	18.11	7.15	0.00	163944	413.0 -> 169.0	22.3	0.0	52.4

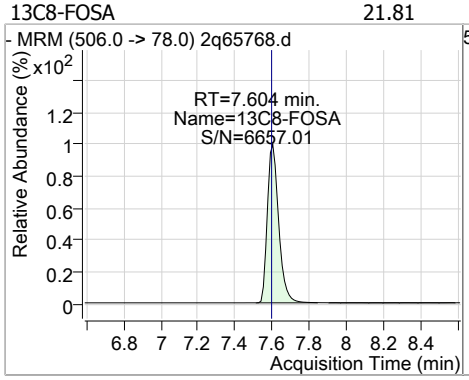


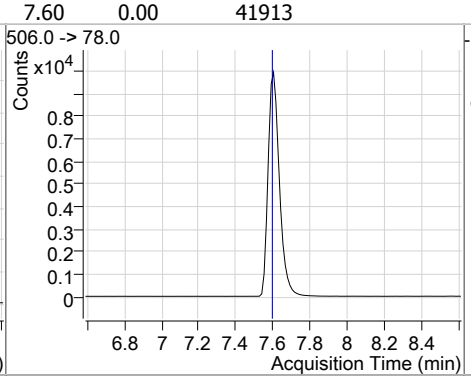


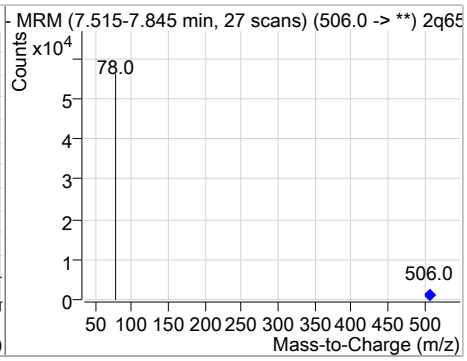


Perfluorinated Compounds by LC/MS/MS

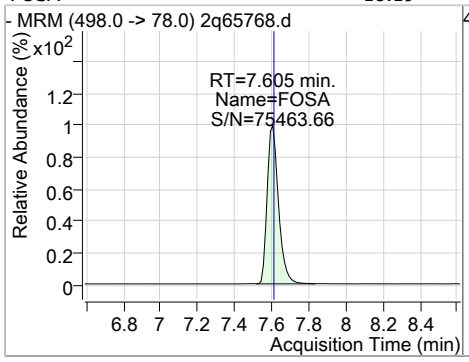
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	21.81	7.60	0.00	41913				

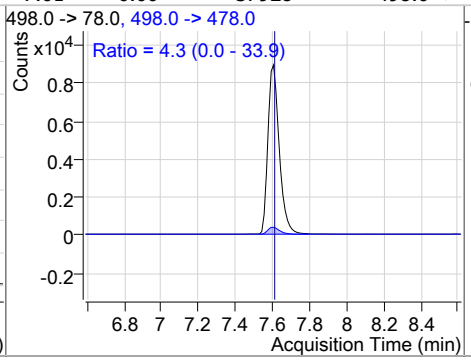


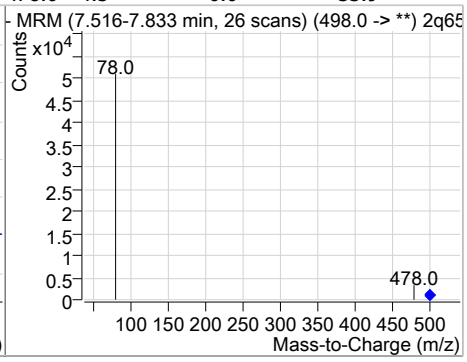




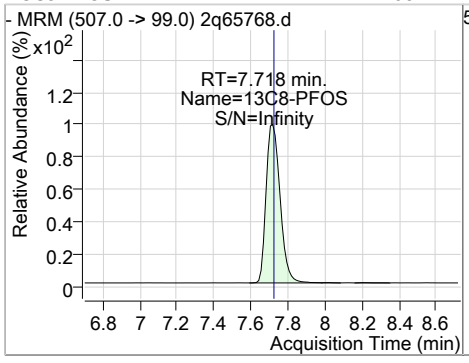
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	18.19	7.61	0.00	37928	498.0 -> 478.0	4.3	0.0	33.9

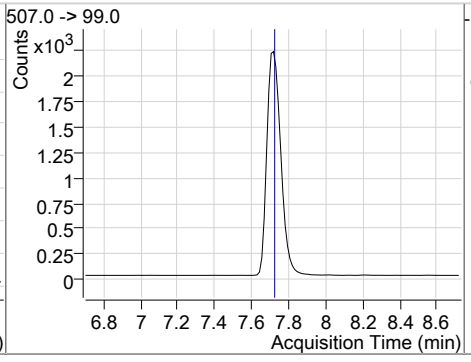


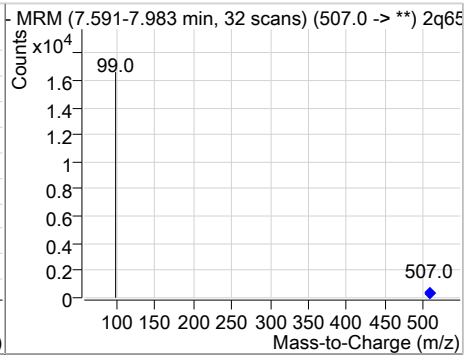




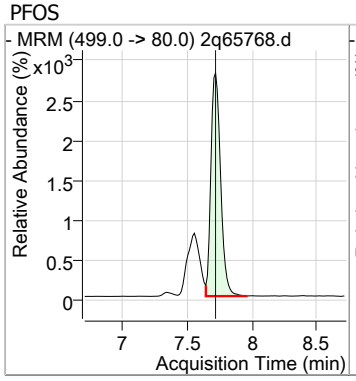
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	21.68	7.72	0.00	11515				

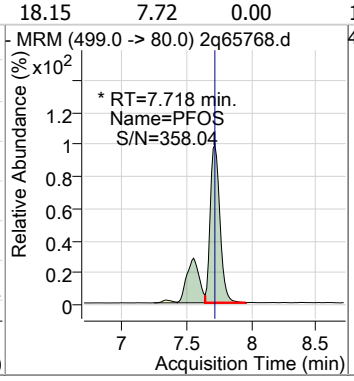


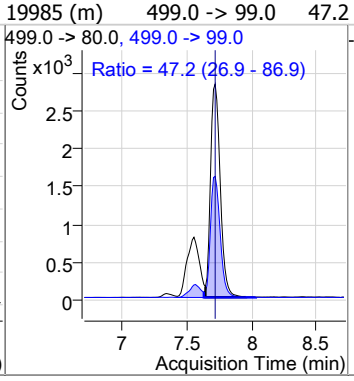


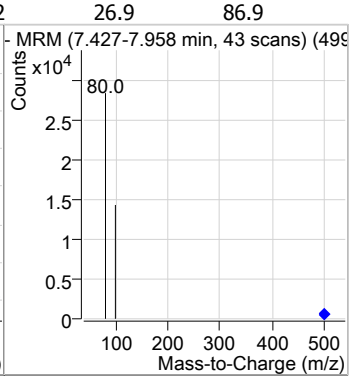


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	18.15	7.72	0.00	19985 (m)	499.0 -> 99.0	47.2	26.9	86.9



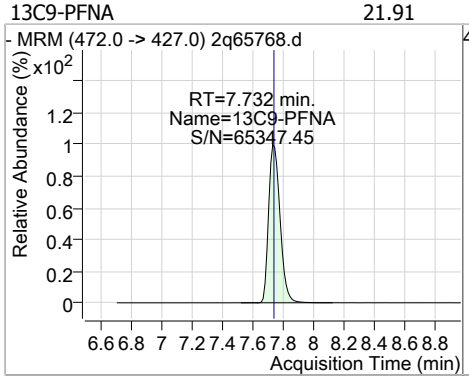


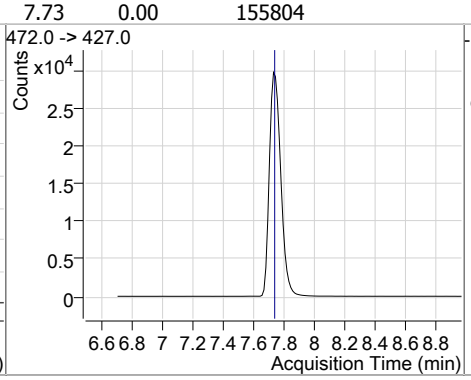


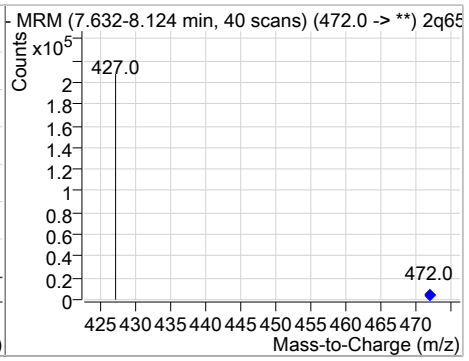


Perfluorinated Compounds by LC/MS/MS

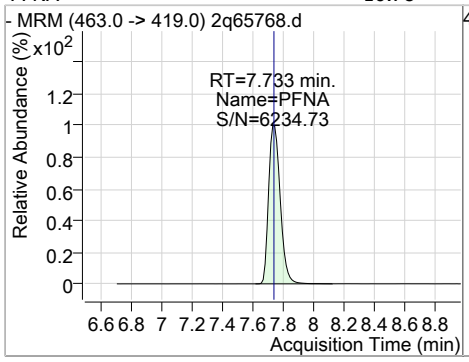
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	21.91	7.73	0.00	155804				

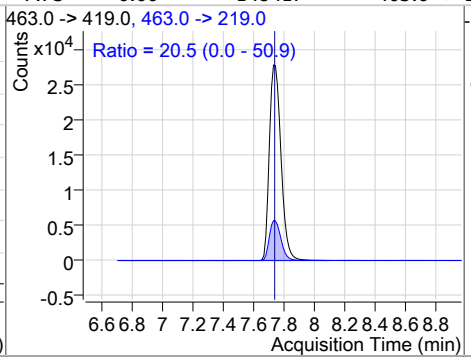


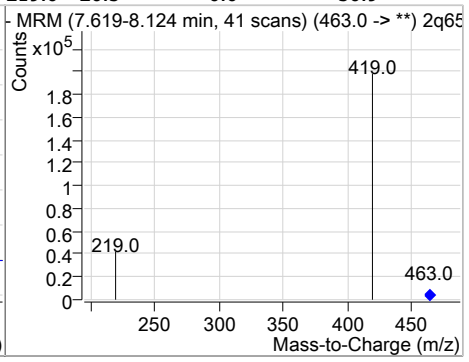




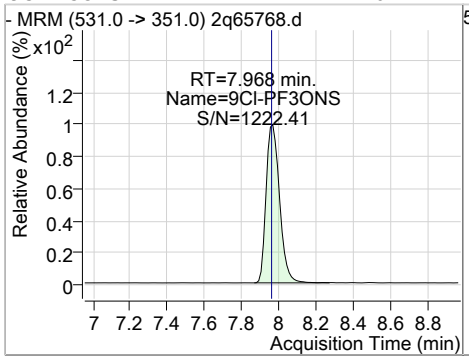
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	16.78	7.73	0.00	148417	463.0 -> 219.0	20.5	0.0	50.9

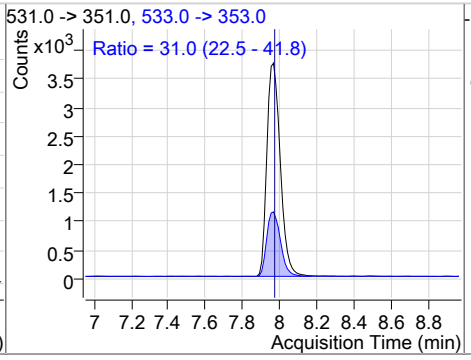


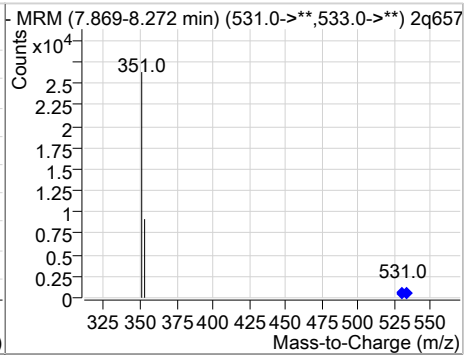




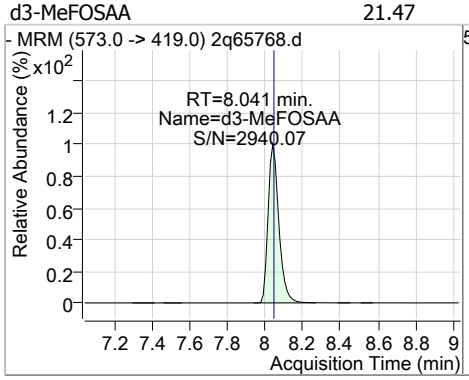
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	16.11	7.97	0.00	18824	533.0 -> 353.0	31.0	22.5	41.8

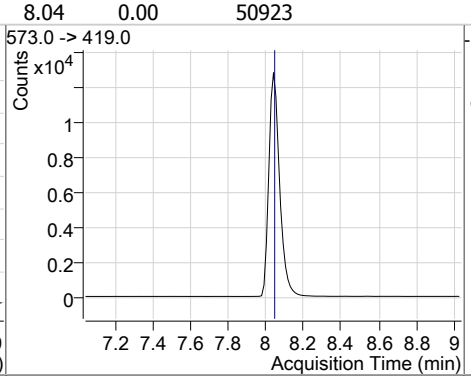


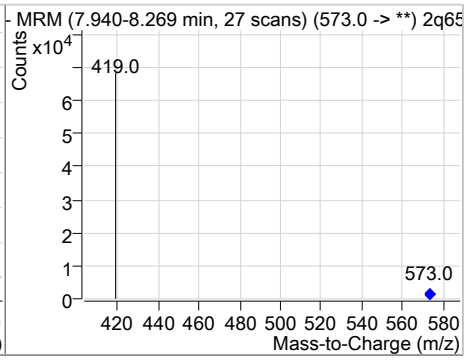




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	21.47	8.04	0.00	50923				

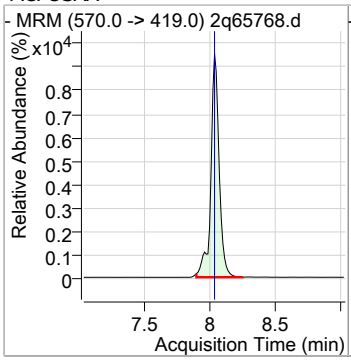


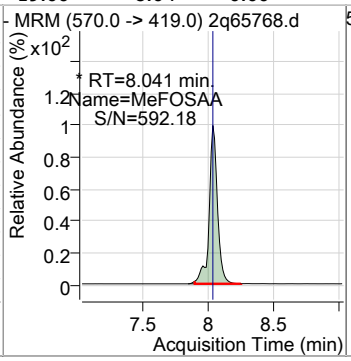


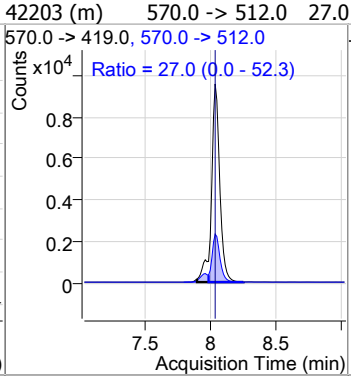


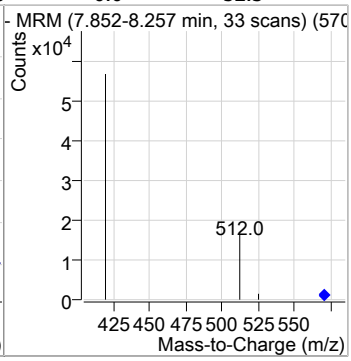
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	19.06	8.04	0.00	42203 (m)	570.0 -> 512.0	27.0	0.0	52.3

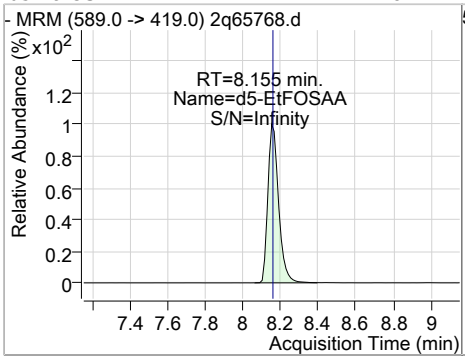


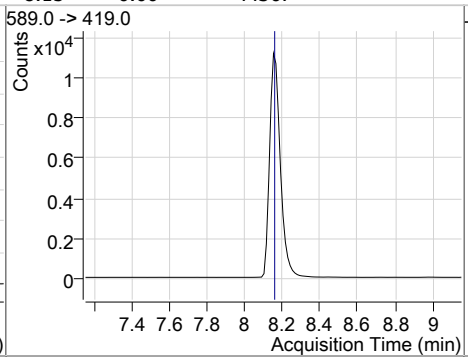


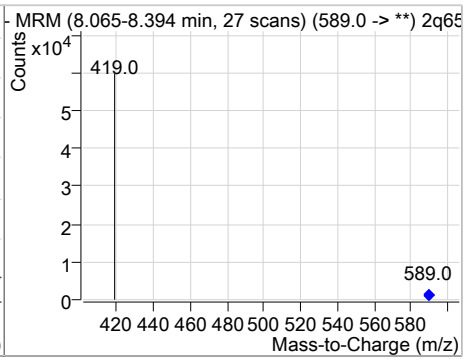




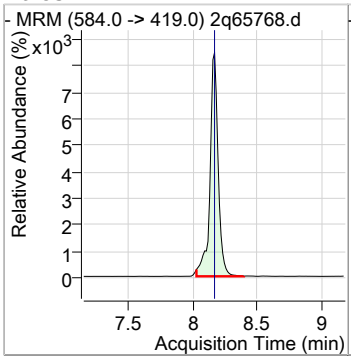
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	21.82	8.15	0.00	44367				

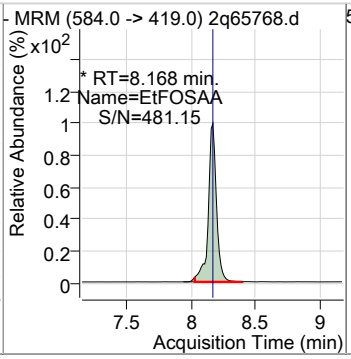


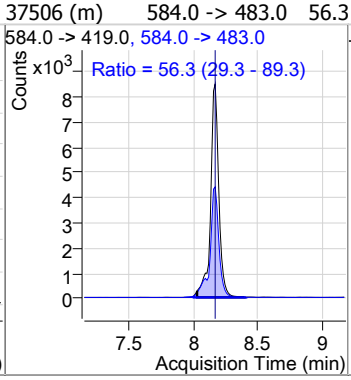


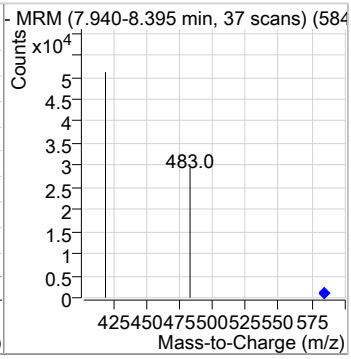


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	18.63	8.17	0.00	37506 (m)	584.0 -> 483.0	56.3	29.3	89.3

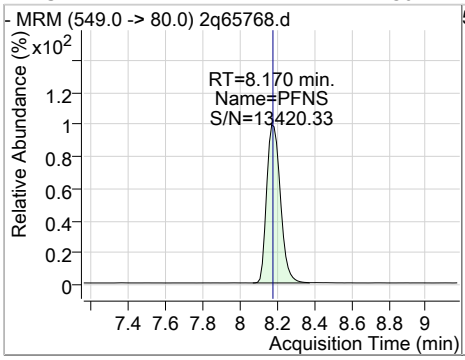


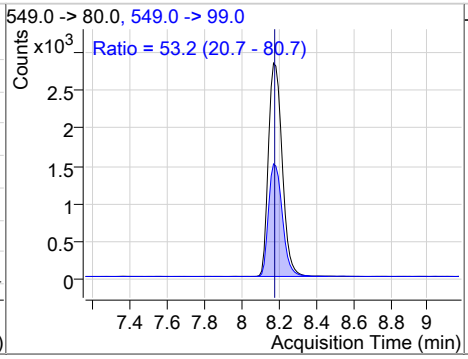


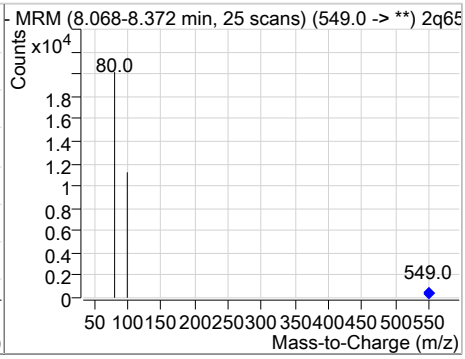




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	17.36	8.17	0.00	14510	549.0 -> 99.0	53.2	20.7	80.7

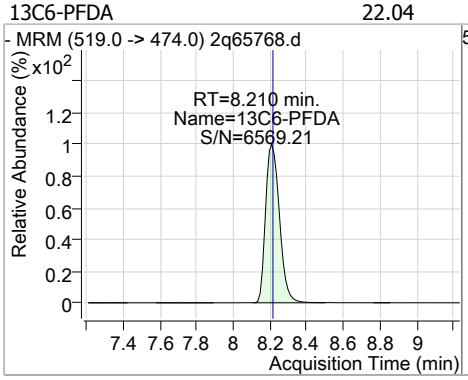


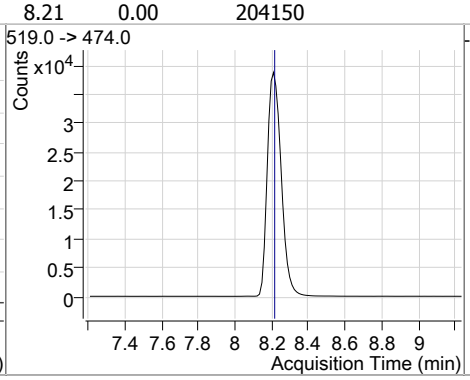


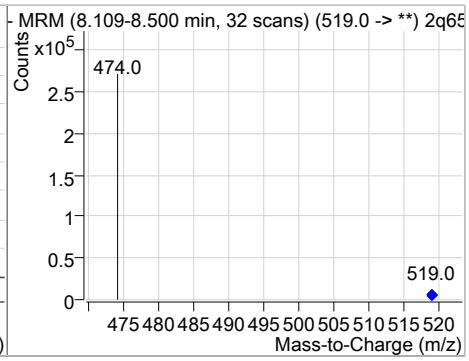


Perfluorinated Compounds by LC/MS/MS

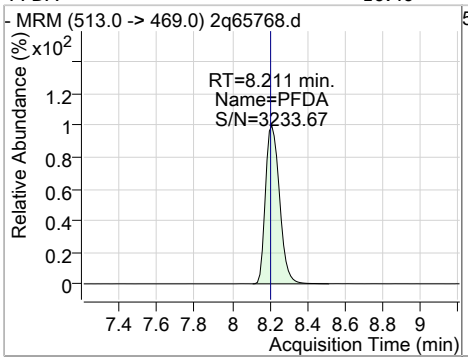
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	22.04	8.21	0.00	204150				

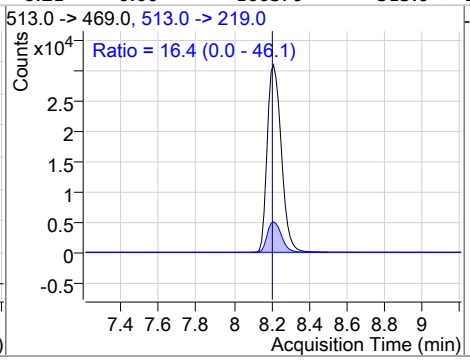


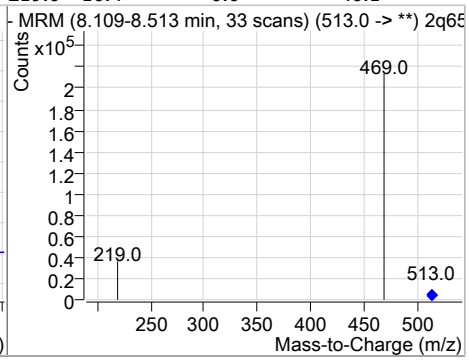




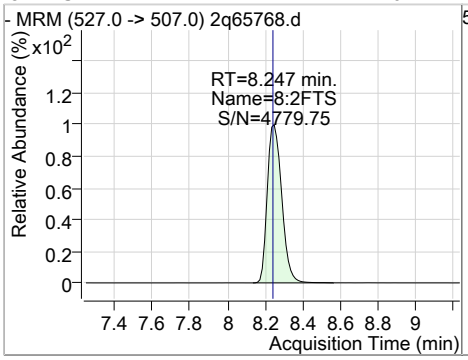
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	16.40	8.21	0.00	160379	513.0 -> 219.0	16.4	0.0	46.1

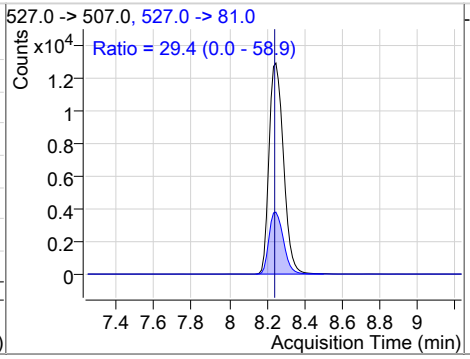


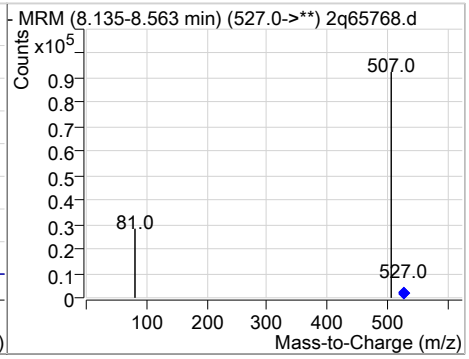




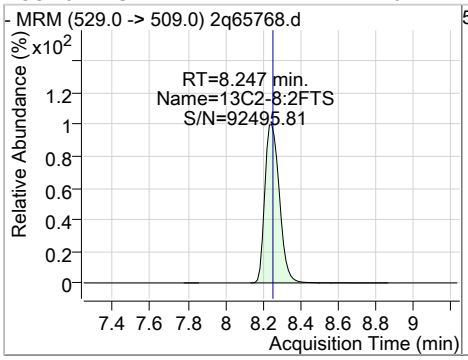
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	17.01	8.25	0.01	68826	527.0 -> 81.0	29.4	0.0	58.9

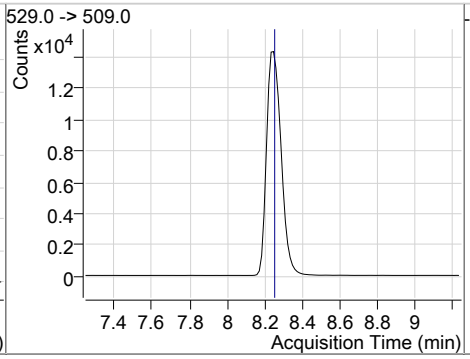


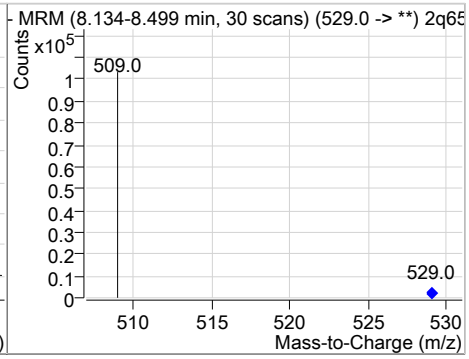




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	21.64	8.25	0.00	77206				

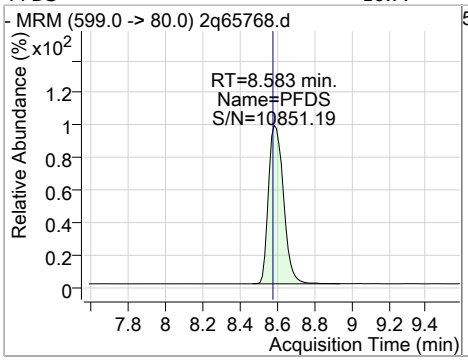


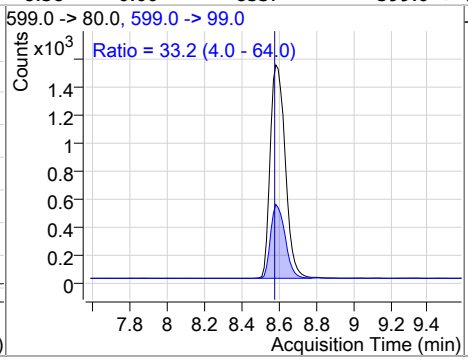


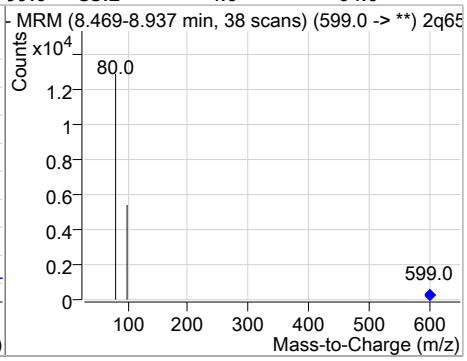


Perfluorinated Compounds by LC/MS/MS

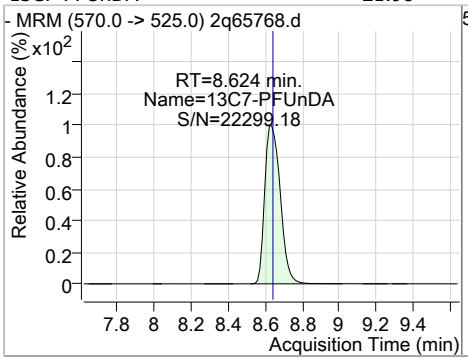
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	16.77	8.58	0.00	8537	599.0 -> 99.0	33.2	4.0	64.0

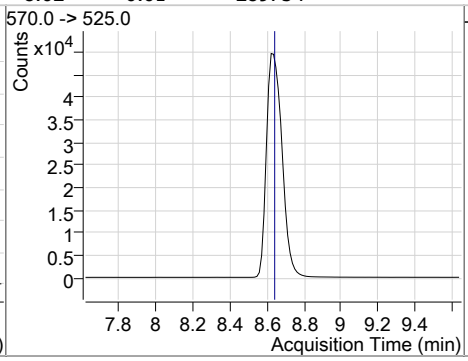


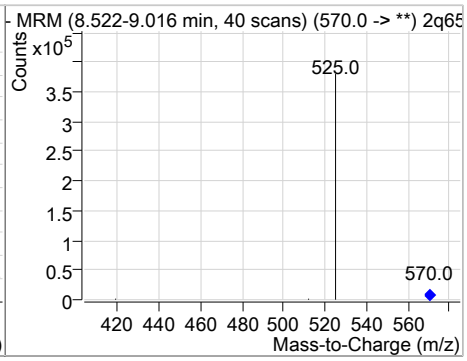




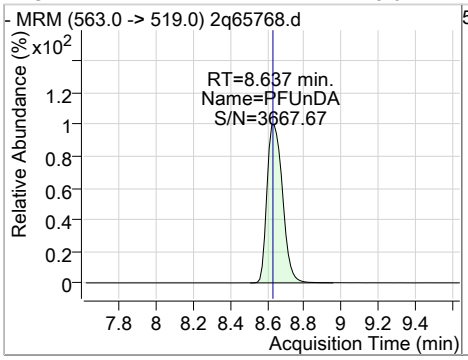
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	21.98	8.62	-0.01	289754				

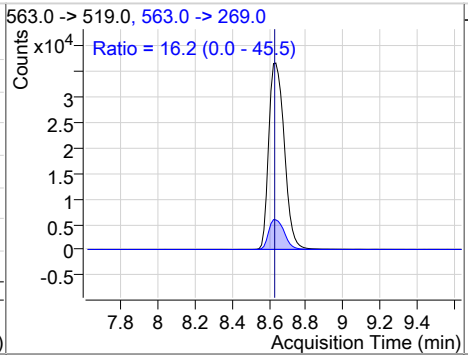


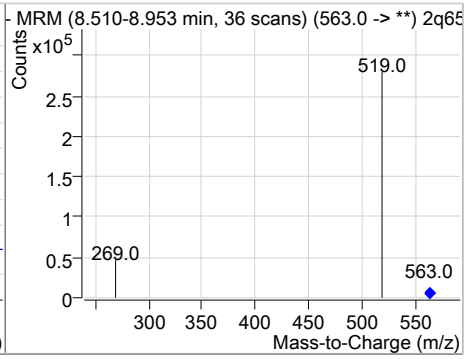




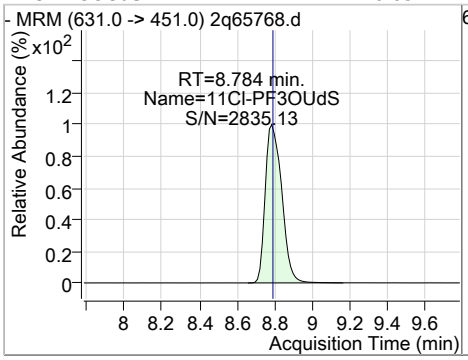
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	18.04	8.64	0.00	213401	563.0 -> 269.0	16.2	0.0	45.5

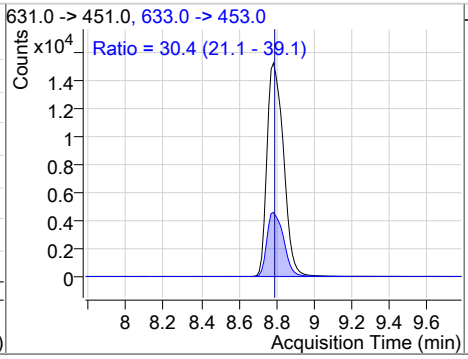


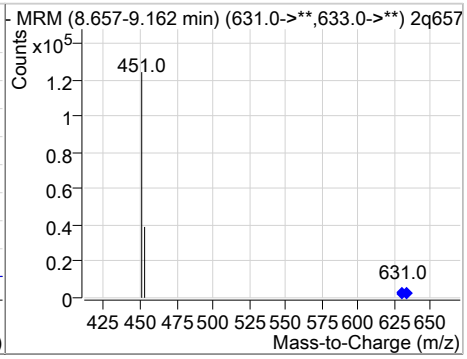




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	16.85	8.78	0.00	92315	633.0 -> 453.0	30.4	21.1	39.1

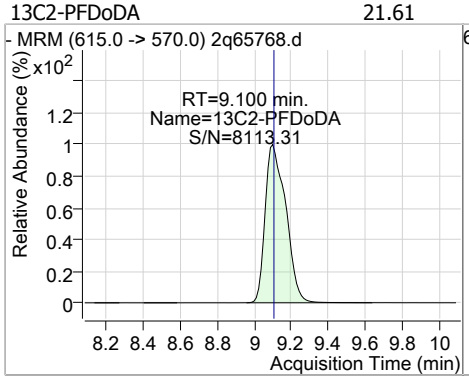


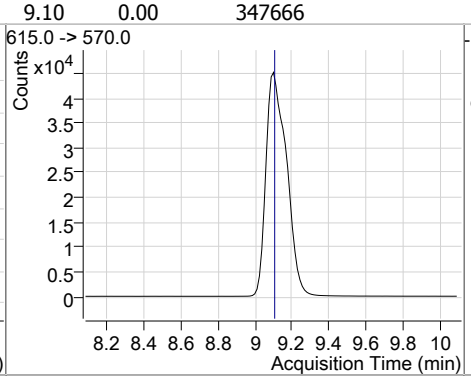


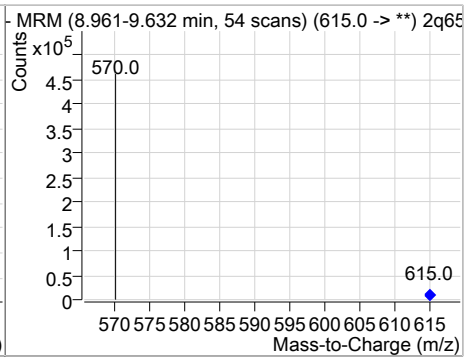


Perfluorinated Compounds by LC/MS/MS

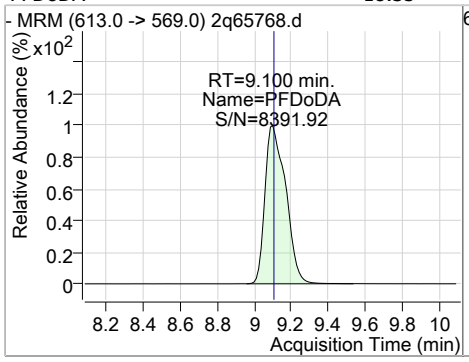
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	21.61	9.10	0.00	347666				

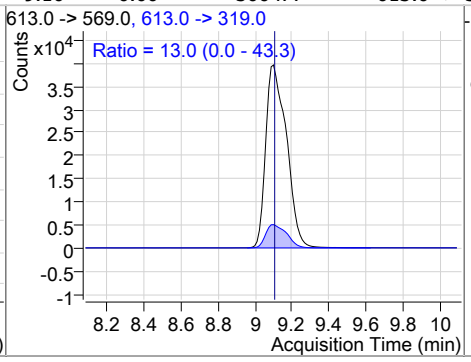


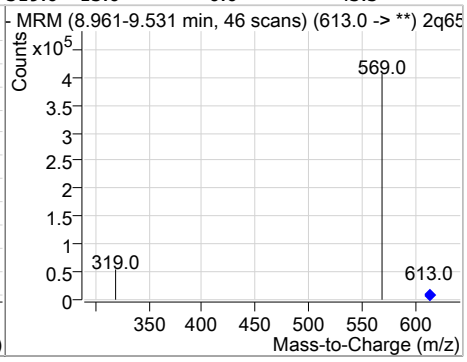




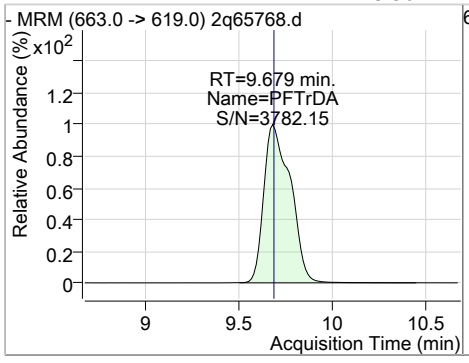
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	18.35	9.10	0.00	306477	613.0 -> 319.0	13.0	0.0	43.3

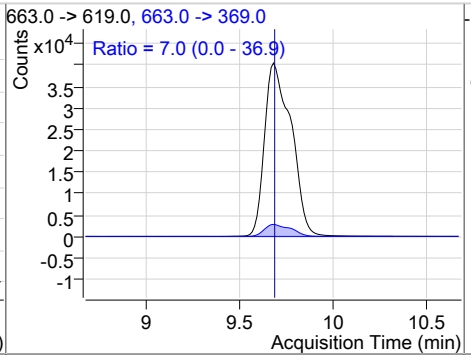


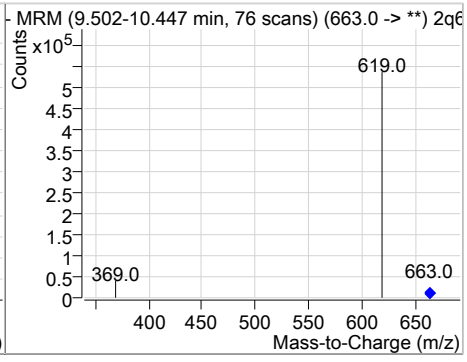




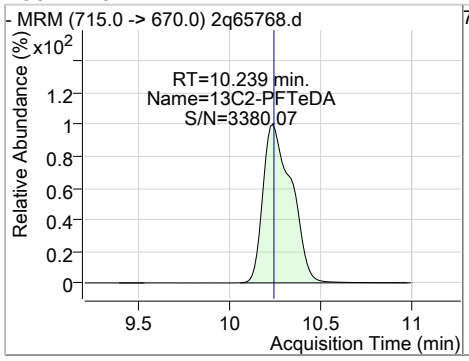
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	19.96	9.68	0.00	402461	663.0 -> 369.0	7.0	0.0	36.9

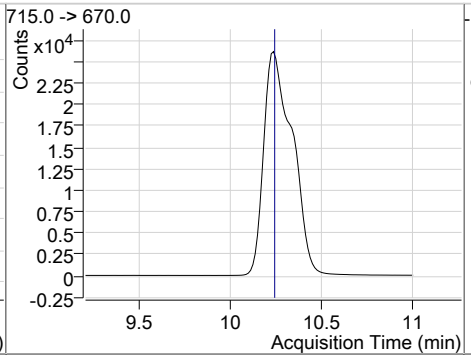


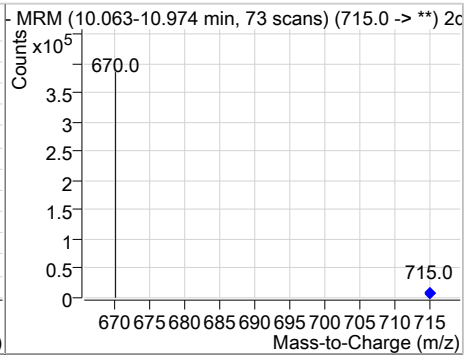




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	22.14	10.24	0.00	285683				

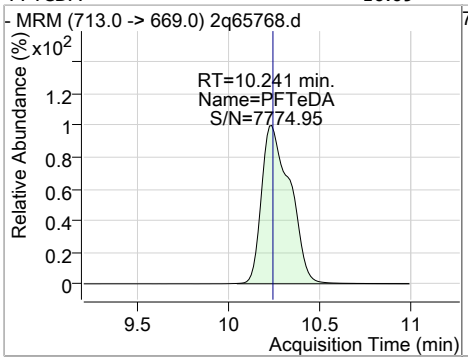


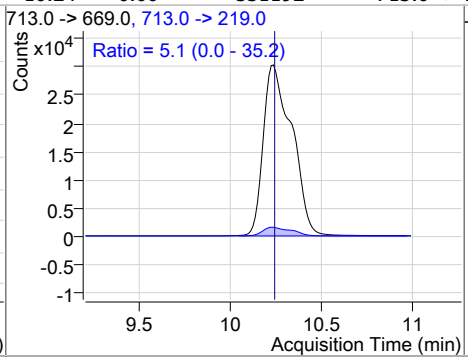


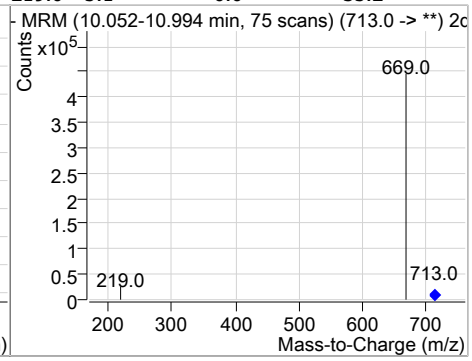


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	16.09	10.24	0.00	331192	713.0 -> 219.0	5.1	0.0	35.2







Manual Integration Approval Summary

Sample Number: S2Q956-ICV956
Lab FileID: 2Q65768.D
Injection Time: 04/08/21 16:07
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/09/21 09:05 Natasha Gumtie
Supervisor approved: 04/12/21 13:27 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.46	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
MeFOSAA	2355-31-9		8.04	Split peak
EtFOSAA	2991-50-6		8.17	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/12/21 13:27

Perfluorinated Compounds by LC/MS/MS

Data File : 2q65769.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/8/2021 4:24:30 PM
Sample Name : icv956-20 t-pfoa
Vial : P1-B2
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q956.batch.bin
Sample Information : op84308,S2Q956,250,,,1.0,1,water

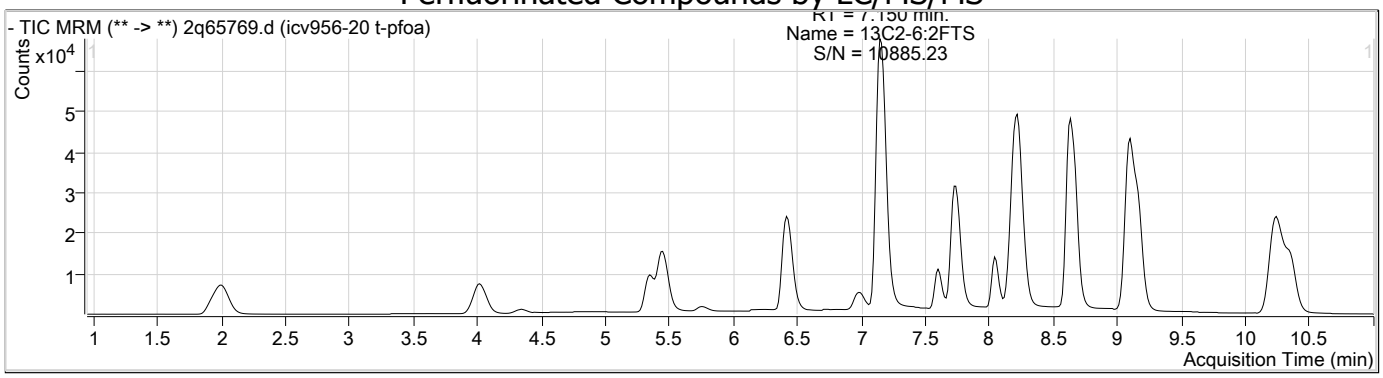
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.155	589.0 -> 419.0	42972	20.00	µg/L	0.000
M4-PFBA	1.989	217.0 -> 172.0	66636	20.00	µg/L	0.000
M5-PFPeA	4.024	268.0 -> 223.0	54989	20.00	µg/L	0.013
M5-PFHxA	5.454	318.0 -> 273.0	84018	20.00	µg/L	0.013
M4-PFHpA	6.420	367.0 -> 322.0	123974	20.00	µg/L	0.000
M8-PFOA	7.151	421.0 -> 376.0	142534	20.00	µg/L	0.000
M9-PFNA	7.745	472.0 -> 427.0	148028	20.00	µg/L	0.013
M6-PFDA	8.210	519.0 -> 474.0	193672	20.00	µg/L	0.000
M7-PFUnDA	8.636	570.0 -> 525.0	270084	20.00	µg/L	0.000
M2-PFDoDA	9.100	615.0 -> 570.0	325104	20.00	µg/L	0.000
M2-PFTeDA	10.239	715.0 -> 670.0	260268	20.00	µg/L	0.000
M8-FOSA	7.604	506.0 -> 78.0	40172	20.00	µg/L	0.000
M3-PFBS	4.330	302.0 -> 99.0	6756	20.00	µg/L	0.000
M3-PFHxS	6.456	402.0 -> 99.0	7504	20.00	µg/L	0.000
M8-PFOS	7.718	507.0 -> 99.0	11041	20.00	µg/L	0.000
M2-4:2FTS	5.348	329.0 -> 309.0	55067	20.00	µg/L	0.013
M2-6:2FTS	7.150	429.0 -> 409.0	78974	20.00	µg/L	0.013
M2-8:2FTS	8.247	529.0 -> 509.0	69197	20.00	µg/L	0.000
M3-MeFOSAA	8.041	573.0 -> 419.0	49412	20.00	µg/L	0.000
M3-HFPO-DA	5.759	287.0 -> 169.0	6349	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.348	329.0 -> 309.0	55067	18.92	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.6%		
13C2-6:2FTS	7.150	429.0 -> 409.0	78974	19.41	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.0%		
13C2-8:2FTS	8.247	529.0 -> 509.0	69197	19.40	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.0%		
13C2-PFDoDA	9.100	615.0 -> 570.0	325104	20.21	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.1%		
13C2-PFTeDA	10.239	715.0 -> 670.0	260268	20.17	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.9%		
13C3-PFBS	4.330	302.0 -> 99.0	6756	20.00	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.0%		
13C3-PFHxS	6.456	402.0 -> 99.0	7504	19.99	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.9%		
13C4-PFBA	1.989	217.0 -> 172.0	66636	19.84	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%		
13C4-PFHpA	6.420	367.0 -> 322.0	123974	20.37	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.9%		
d5-EtFOSAA	8.155	589.0 -> 419.0	42972	21.14	ng/ml	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.7%		
13C5-PFHxA	5.454	318.0 -> 273.0	84018	20.16	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.8%		
13C5-PFPeA	4.024	268.0 -> 223.0	54989	19.93	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.7%		

Perfluorinated Compounds by LC/MS/MS

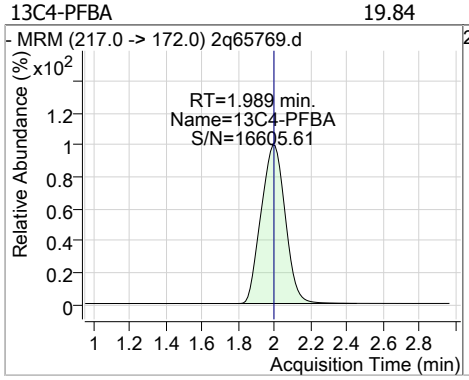
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	193672	20.91	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.5%			
13C7-PFUnDA	8.636	570.0 -> 525.0	270084	20.49	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.5%			
13C8-FOSA	7.604	506.0 -> 78.0	40172	20.91	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.5%			
13C8-PFOA	7.151	421.0 -> 376.0	142534	20.44	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.2%			
13C8-PFOS	7.718	507.0 -> 99.0	11041	20.79	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.9%			
13C9-PFNA	7.745	472.0 -> 427.0	148028	20.81	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.1%			
d3-MeFOSAA	8.041	573.0 -> 419.0	49412	20.83	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.2%			
13C3-HFPO-DA	5.759	287.0 -> 169.0	6349	19.58	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.9%			
Target Compounds							QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.			
6:2FTS	-	427.0 -> 407.0	-	N.D.			
8:2FTS	-	527.0 -> 507.0	-	N.D.			
EtFOSAA	-	584.0 -> 419.0	-	N.D.			
FOSA	-	498.0 -> 78.0	-	N.D.			
MeFOSAA	-	570.0 -> 419.0	-	N.D.			
PFBA	-	213.0 -> 169.0	-	N.D.			
PFBS	-	299.0 -> 80.0	-	N.D.			
PFDA	-	513.0 -> 469.0	-	N.D.			
PFDoDA	-	613.0 -> 569.0	-	N.D.			
PFDS	-	599.0 -> 80.0	-	N.D.			
PFHpA	6.421	363.0 -> 319.0	0	0.00	µg/L	m	1
PFHpS	-	449.0 -> 80.0	-	N.D.			
PFHxA	-	313.0 -> 269.0	-	N.D.			
PFHxS	-	399.0 -> 80.0	-	N.D.			
PFNA	-	463.0 -> 419.0	-	N.D.			
PFNS	-	549.0 -> 80.0	-	N.D.			
PFOA	7.152	413.0 -> 369.0	144700	17.06	µg/L	m	97
PFOS	-	499.0 -> 80.0	-	N.D.			
PFPeA	-	263.0 -> 219.0	-	N.D.			
PFPeS	-	349.0 -> 80.0	-	N.D.			
PFTeDA	-	713.0 -> 669.0	-	N.D.			
PFTrDA	-	663.0 -> 619.0	-	N.D.			
PFUnDA	-	563.0 -> 519.0	-	N.D.			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.			
ADONA	-	377.0 -> 251.0	-	N.D.			
HFPO-DA	-	329.0 -> 169.0	-	N.D.			

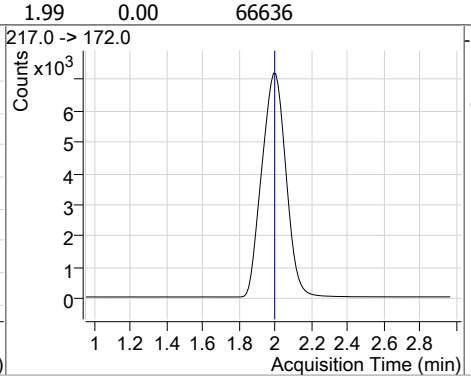
 # = Qualifier out of range, m = manually integrated, + = Area summed

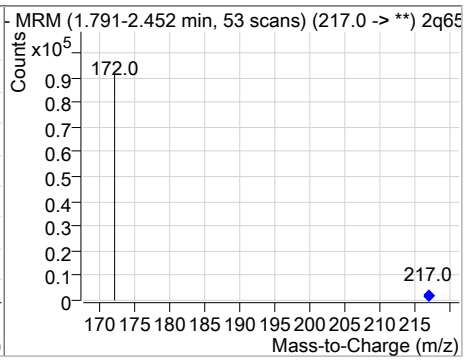
Perfluorinated Compounds by LC/MS/MS



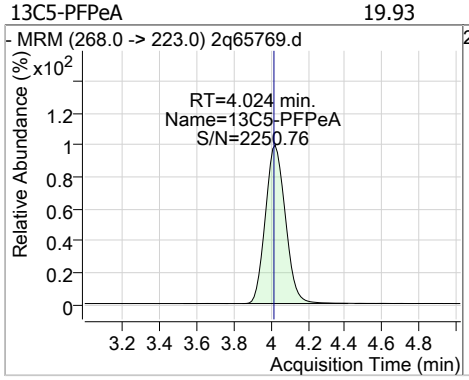
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13C4-PFBA	19.84	1.99	0.00	66636				

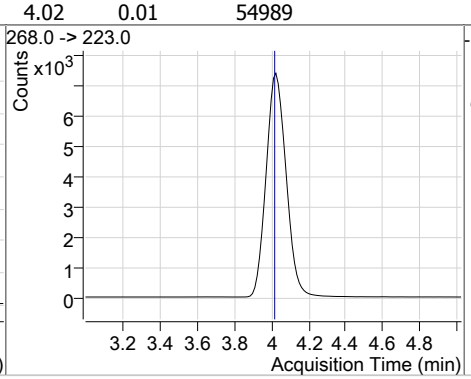


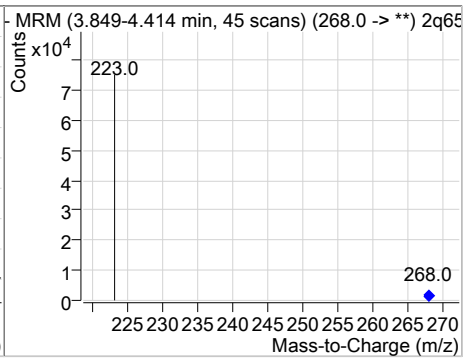




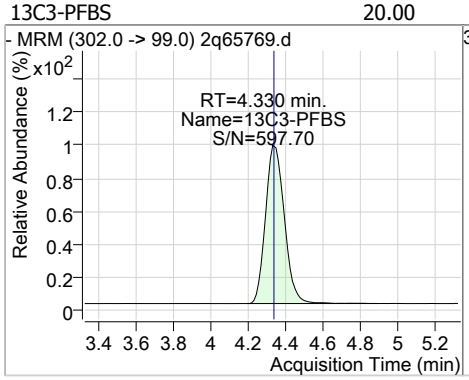
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.93	4.02	0.01	54989				

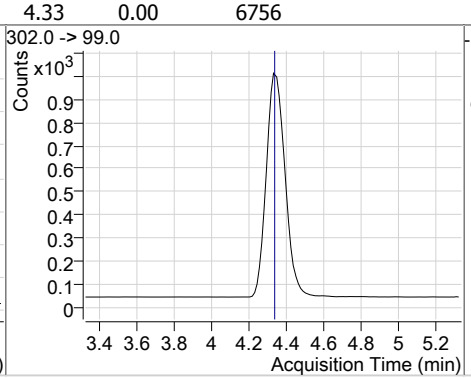


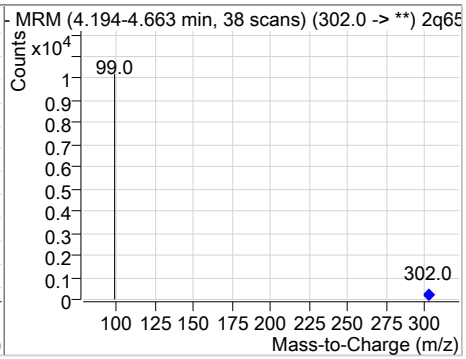




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.00	4.33	0.00	6756				

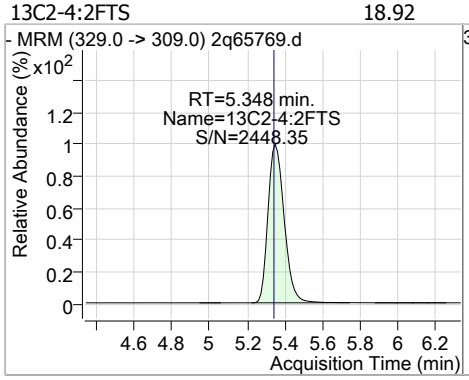


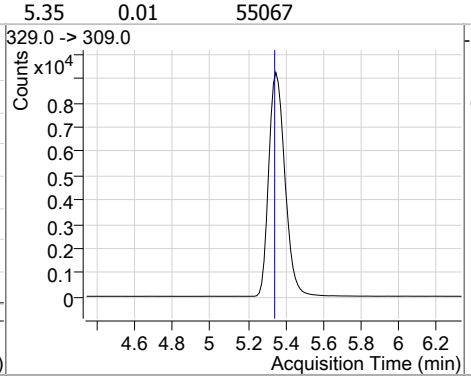


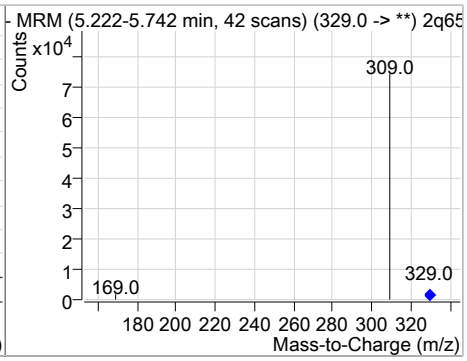


Perfluorinated Compounds by LC/MS/MS

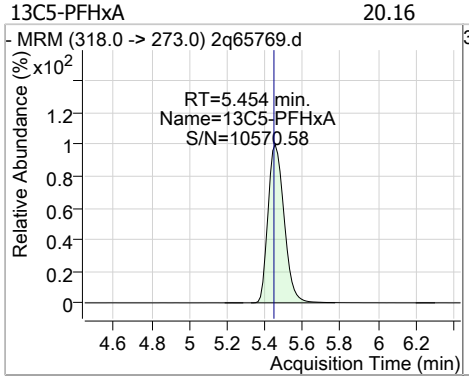
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13C2-4:2FTS	18.92	5.35	0.01	55067				

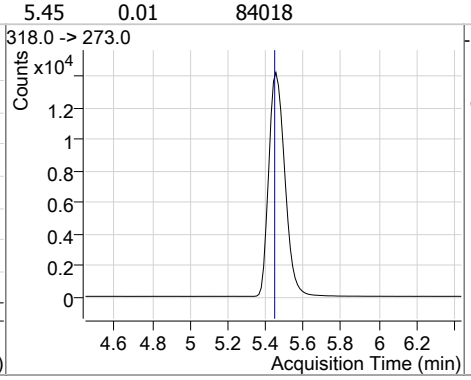


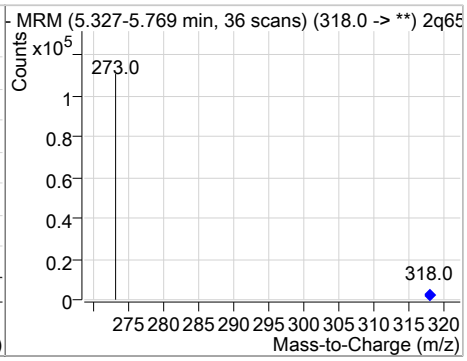




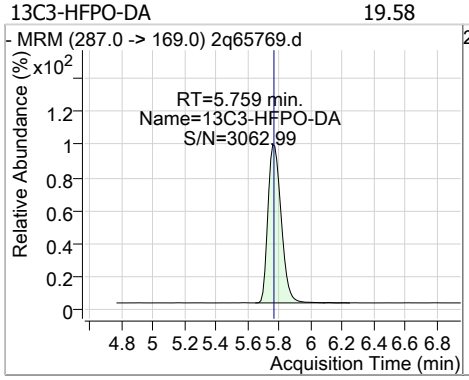
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13C5-PFHxA	20.16	5.45	0.01	84018				

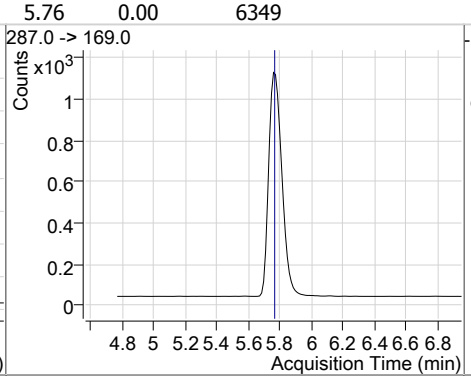


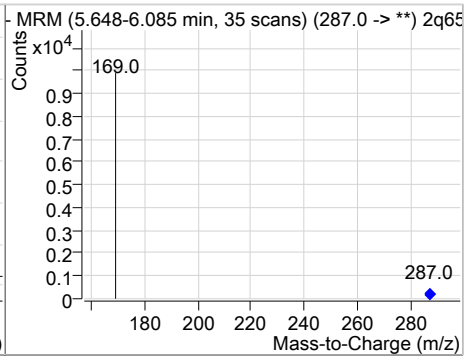




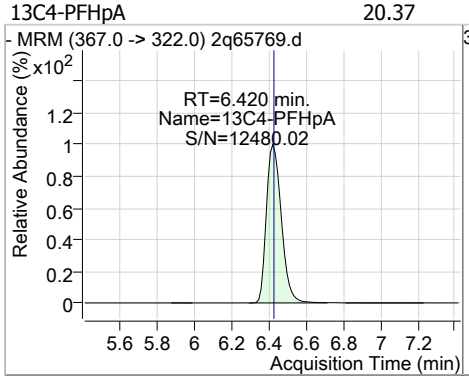
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.58	5.76	0.00	6349				

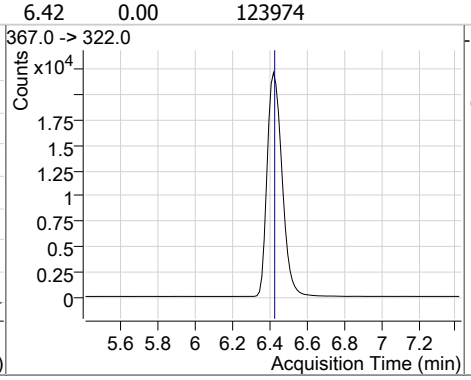


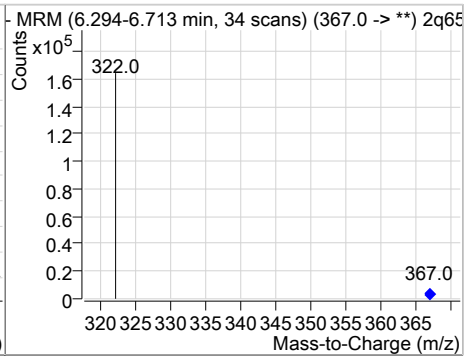




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.37	6.42	0.00	123974				

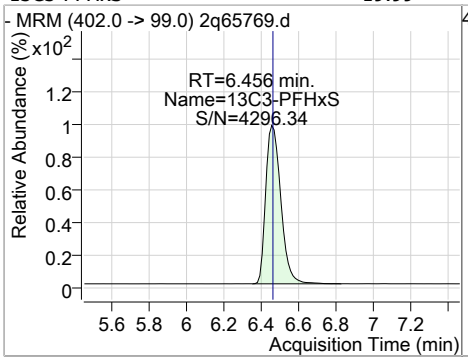


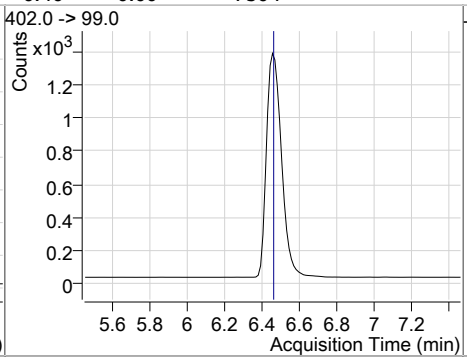


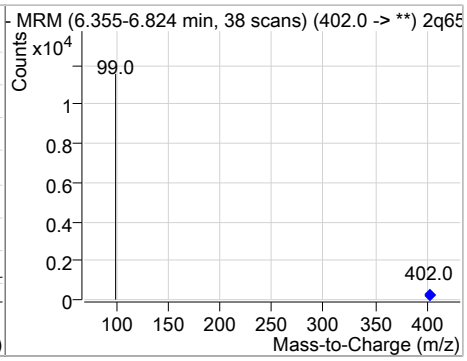


Perfluorinated Compounds by LC/MS/MS

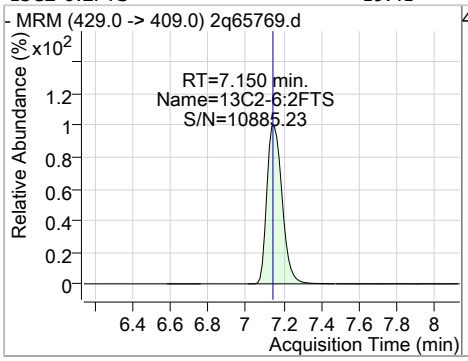
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.99	6.46	0.00	7504				

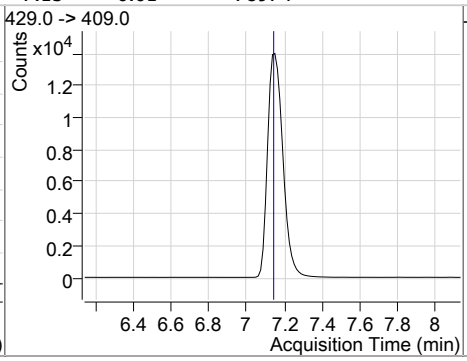


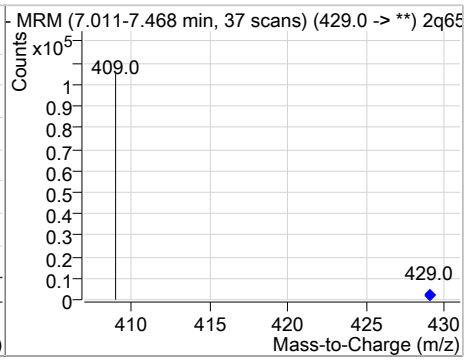




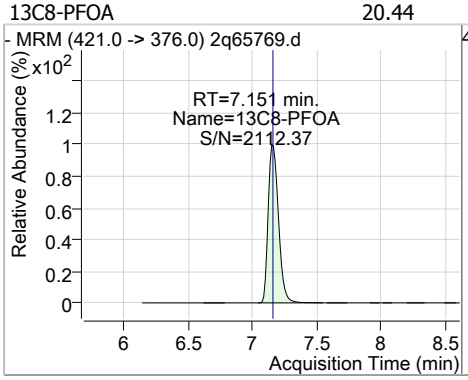
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.41	7.15	0.01	78974				

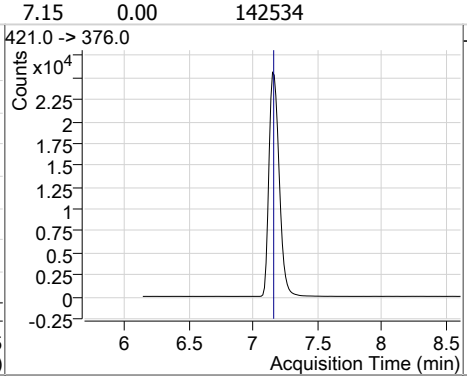


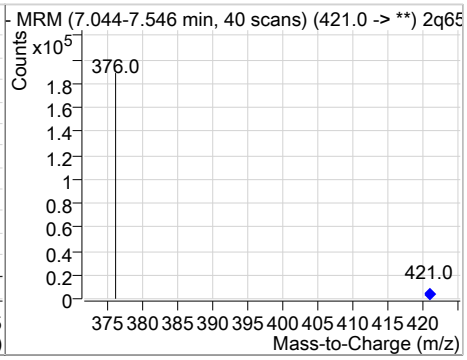




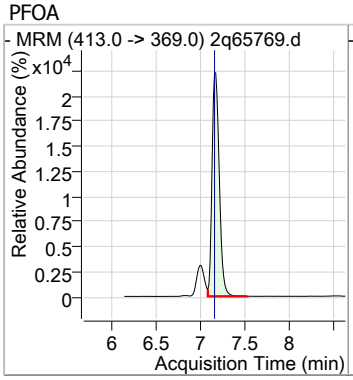
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.44	7.15	0.00	142534				

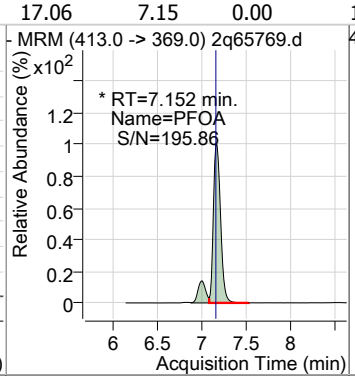


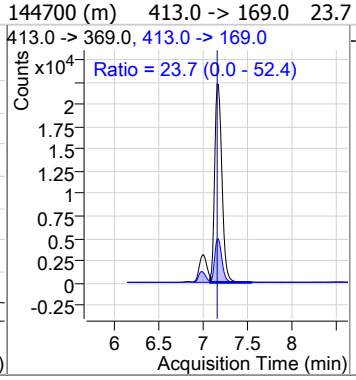


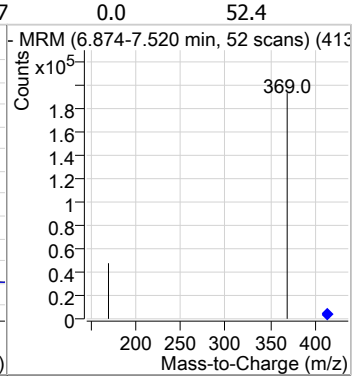


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	17.06	7.15	0.00	144700 (m)	413.0 -> 169.0	23.7	0.0	52.4



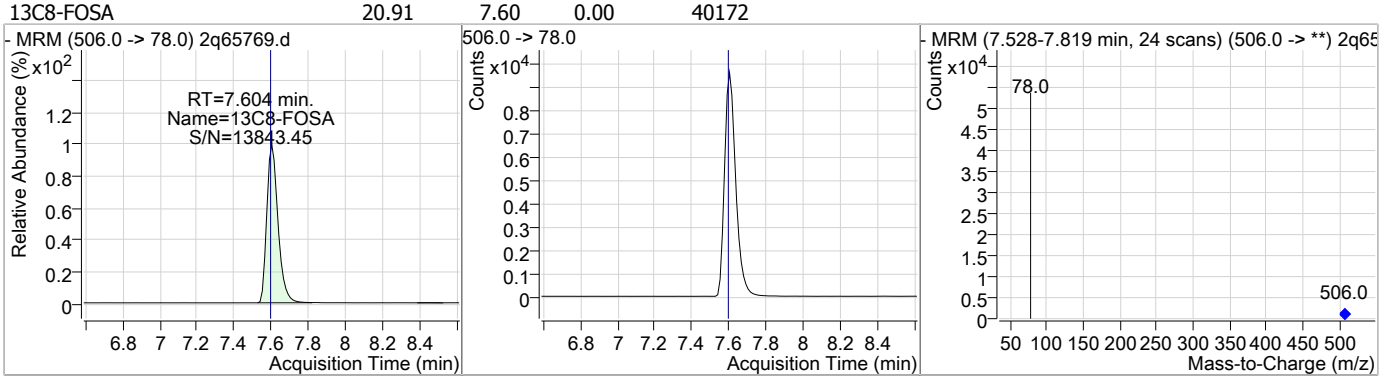




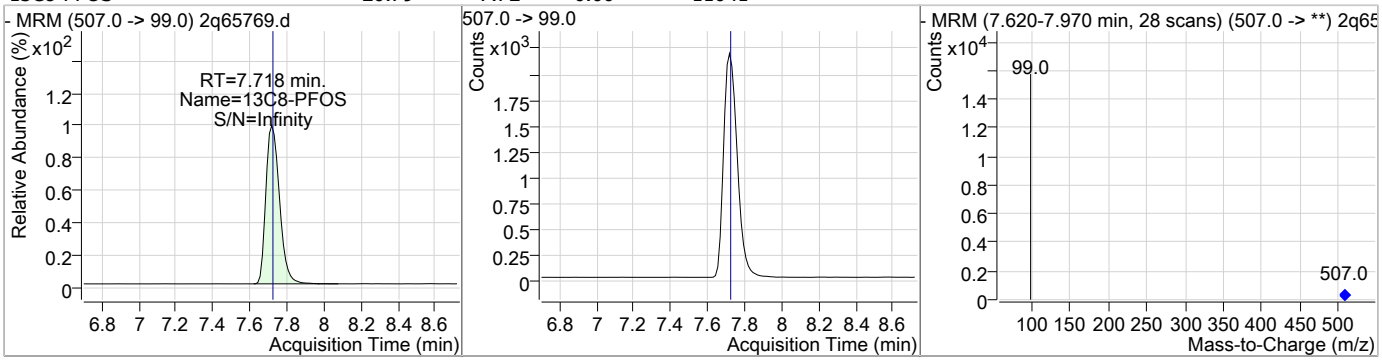


Perfluorinated Compounds by LC/MS/MS

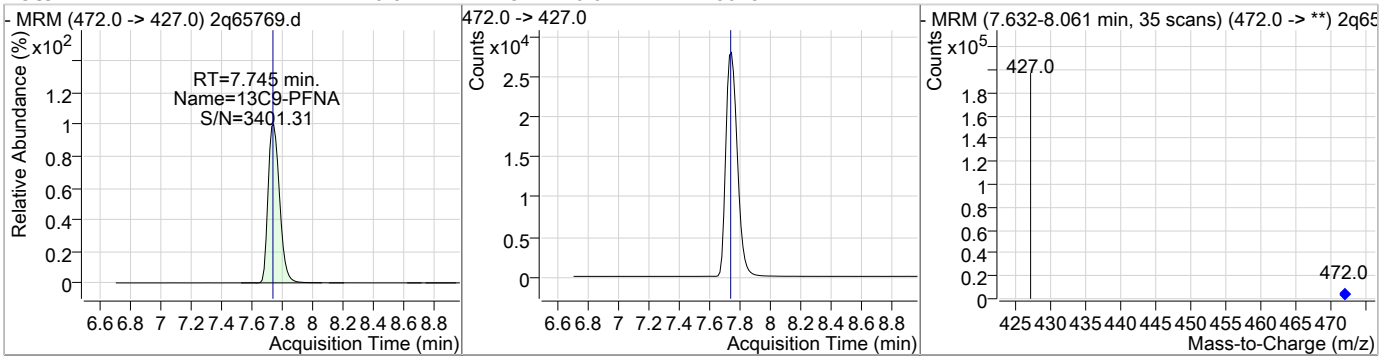
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.91	7.60	0.00	40172				



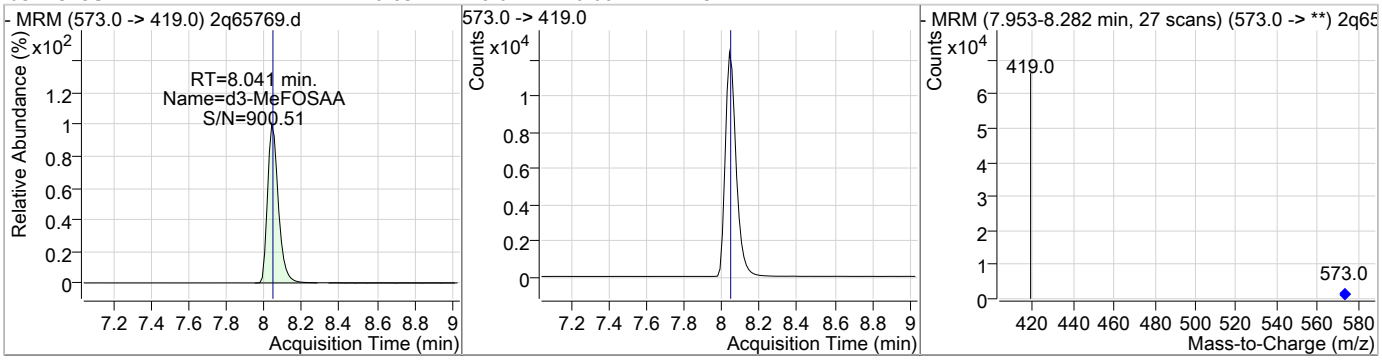
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.79	7.72	0.00	11041				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.81	7.75	0.01	148028				

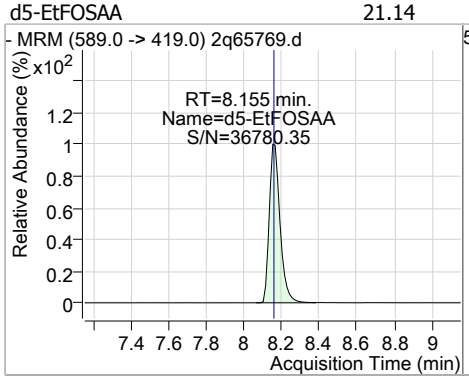


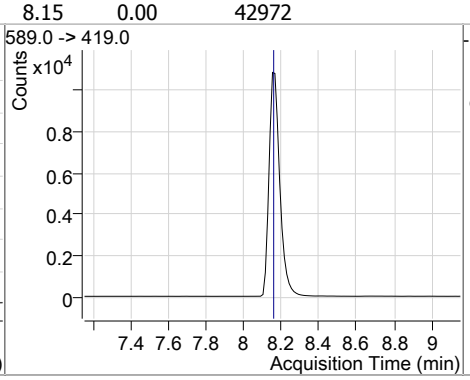
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.83	8.04	0.00	49412				

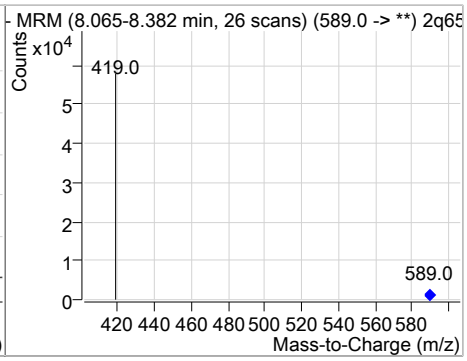


Perfluorinated Compounds by LC/MS/MS

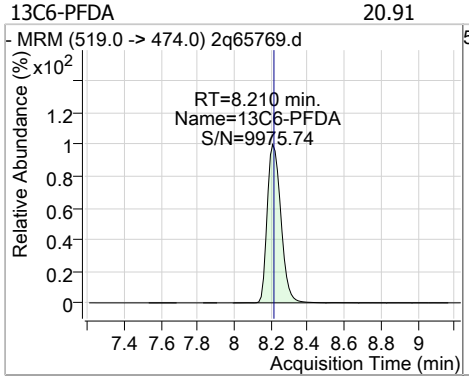
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	21.14	8.15	0.00	42972				

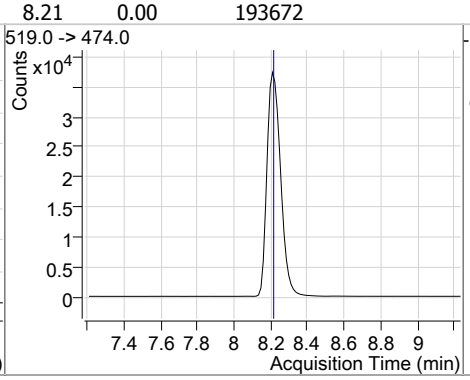


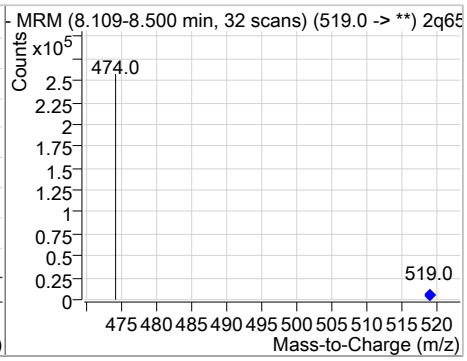




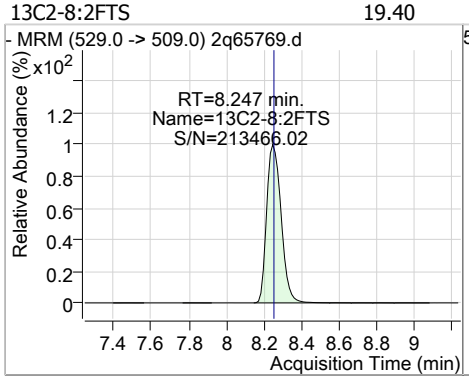
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.91	8.21	0.00	193672				

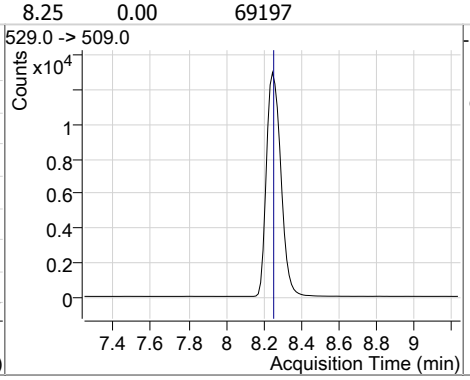


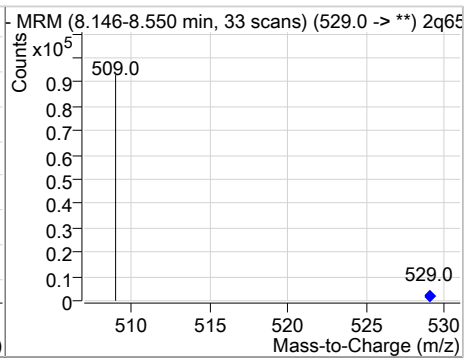




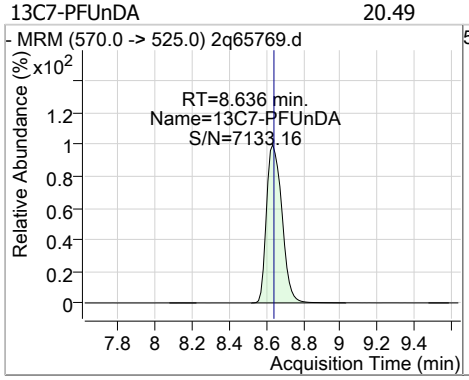
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.40	8.25	0.00	69197				

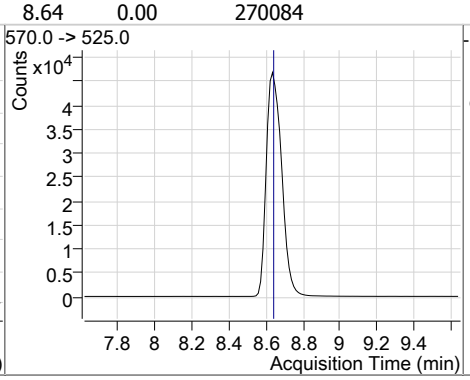


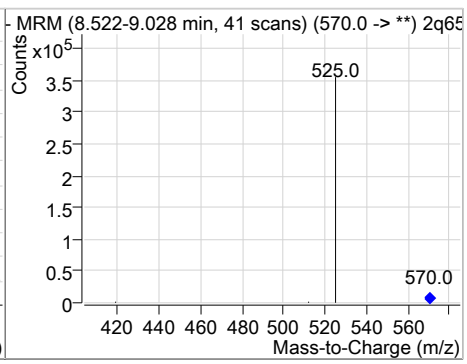




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.49	8.64	0.00	270084				

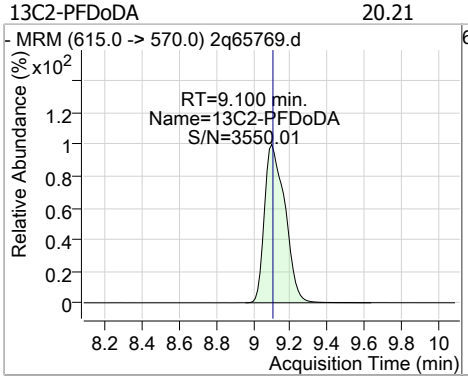


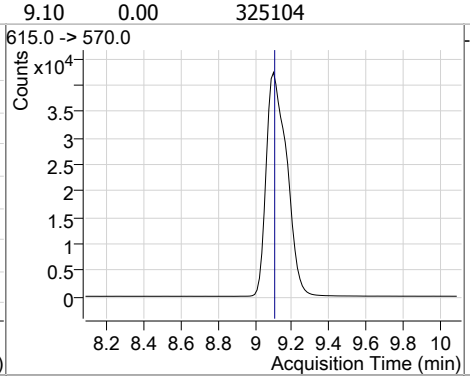


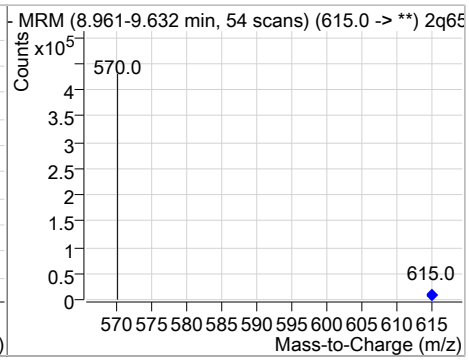


Perfluorinated Compounds by LC/MS/MS

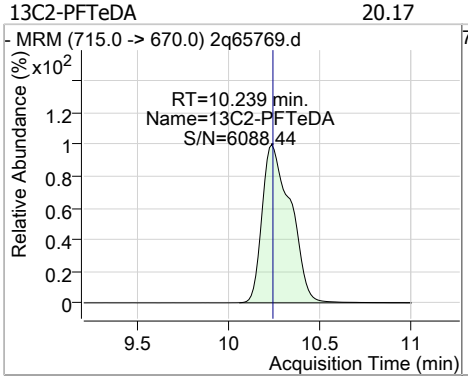
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.21	9.10	0.00	325104				

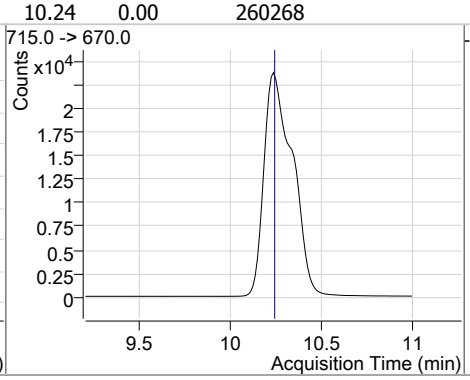


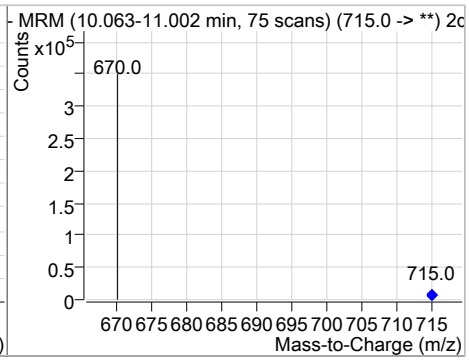




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.17	10.24	0.00	260268				







Manual Integration Approval Summary

Sample Number:	S2Q956-ICV956	**Method:**	EPA 537M QSM5.3 B-15
Lab FileID:	2Q65769.D	**Analyst approved:**	04/09/21 09:05 Natasha Gumtie
Injection Time:	04/08/21 16:24	**Supervisor approved:**	04/12/21 13:27 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanoic acid	335-67-1		7.15	Split peak

Perfluorinated Compounds by LC/MS/MS

Data File : 2q66238.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/17/2021 2:43:45 AM
Sample Name : cc956-1.0LL
Vial : P1-A3
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q963.batch.bin
Sample Information : op84308,S2Q963,250,,,1.0,1,water

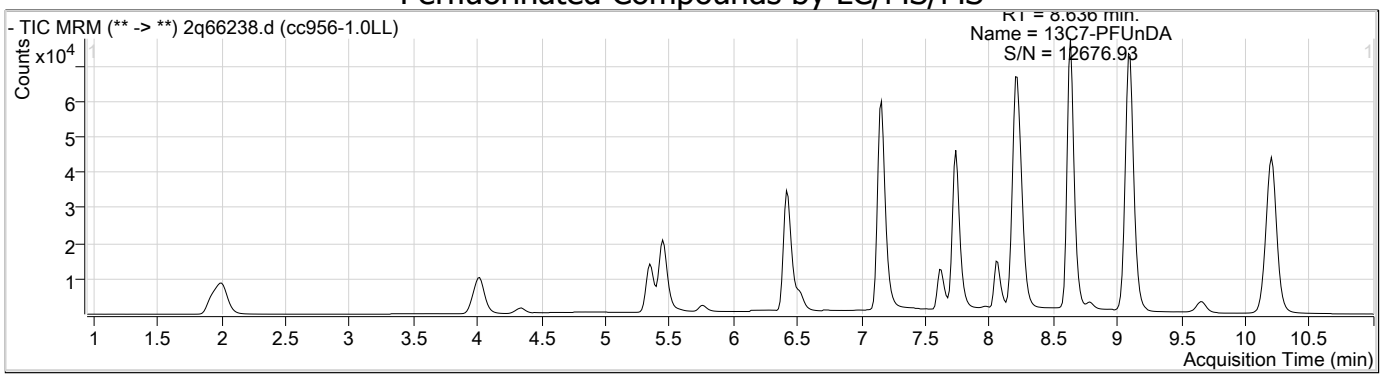
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.180	589.0 -> 419.0	39072	20.00	µg/L	0.025
M4-PFBA	1.989	217.0 -> 172.0	75823	20.00	µg/L	0.000
M5-PFPeA	4.024	268.0 -> 223.0	60090	20.00	µg/L	0.013
M5-PFHxA	5.454	318.0 -> 273.0	90558	20.00	µg/L	0.013
M4-PFHpA	6.421	367.0 -> 322.0	133334	20.00	µg/L	0.000
M8-PFOA	7.165	421.0 -> 376.0	151280	20.00	µg/L	0.013
M9-PFNA	7.745	472.0 -> 427.0	154022	20.00	µg/L	0.013
M6-PFDA	8.210	519.0 -> 474.0	199094	20.00	µg/L	0.000
M7-PFUnDA	8.636	570.0 -> 525.0	283611	20.00	µg/L	0.000
M2-PFDoDA	9.087	615.0 -> 570.0	326928	20.00	µg/L	-0.012
M2-PFTeDA	10.201	715.0 -> 670.0	246890	20.00	µg/L	-0.037
M8-FOSA	7.617	506.0 -> 78.0	41985	20.00	µg/L	0.013
M3-PFBS	4.330	302.0 -> 99.0	7362	20.00	µg/L	0.000
M3-PFHxS	6.456	402.0 -> 99.0	8160	20.00	µg/L	0.000
M8-PFOS	7.718	507.0 -> 99.0	11513	20.00	µg/L	0.000
M2-4:2FTS	5.348	329.0 -> 309.0	60387	20.00	µg/L	0.013
M2-6:2FTS	7.150	429.0 -> 409.0	85057	20.00	µg/L	0.013
M2-8:2FTS	8.247	529.0 -> 509.0	73519	20.00	µg/L	0.000
M3-MeFOSAA	8.054	573.0 -> 419.0	45958	20.00	µg/L	0.013
M3-HFPO-DA	5.771	287.0 -> 169.0	6139	20.00	µg/L	0.013
System Monitoring Compounds						
13C2-4:2FTS	5.348	329.0 -> 309.0	60387	20.75	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.7%		
13C2-6:2FTS	7.150	429.0 -> 409.0	85057	20.90	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.5%		
13C2-8:2FTS	8.247	529.0 -> 509.0	73519	20.61	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.0%		
13C2-PFDoDA	9.087	615.0 -> 570.0	326928	20.32	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.6%		
13C2-PFTeDA	10.201	715.0 -> 670.0	246890	19.14	µg/L	-0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.7%		
13C3-PFBS	4.330	302.0 -> 99.0	7362	21.79	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.9%		
13C3-PFHxS	6.456	402.0 -> 99.0	8160	21.74	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.7%		
13C4-PFBA	1.989	217.0 -> 172.0	75823	22.58	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 112.9%		
13C4-PFHpA	6.421	367.0 -> 322.0	133334	21.91	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.5%		
d5-EtFOSAA	8.180	589.0 -> 419.0	39072	19.22	ng/ml	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.1%		
13C5-PFHxA	5.454	318.0 -> 273.0	90558	21.73	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.7%		
13C5-PFPeA	4.024	268.0 -> 223.0	60090	21.78	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.9%		

Perfluorinated Compounds by LC/MS/MS

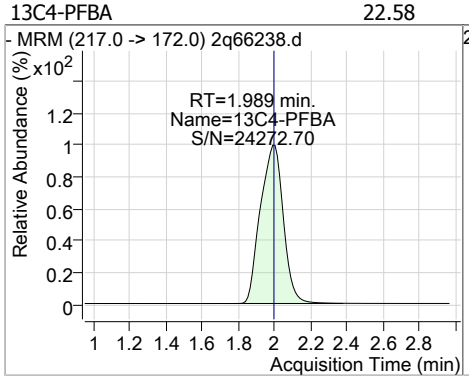
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	199094	21.49	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.5%			
13C7-PFUnDA	8.636	570.0 -> 525.0	283611	21.52	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.6%			
13C8-FOSA	7.617	506.0 -> 78.0	41985	21.85	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.3%			
13C8-PFOA	7.165	421.0 -> 376.0	151280	21.69	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.4%			
13C8-PFOS	7.718	507.0 -> 99.0	11513	21.67	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.4%			
13C9-PFNA	7.745	472.0 -> 427.0	154022	21.65	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.3%			
d3-MeFOSAA	8.054	573.0 -> 419.0	45958	19.37	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.9%			
13C3-HFPO-DA	5.771	287.0 -> 169.0	6139	18.93	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.6%			
Target Compounds							QValue
4:2FTS	5.350	327.0 -> 307.0	3360	1.06	µg/L		96
6:2FTS	7.150	427.0 -> 407.0	4734	1.05	µg/L		97
8:2FTS	8.248	527.0 -> 507.0	4050	1.05	µg/L		100
EtFOSAA	8.180	584.0 -> 419.0	1969	1.11	µg/L	m	96
FOSA	7.618	498.0 -> 78.0	2099	1.01	µg/L		100
MeFOSAA	8.067	570.0 -> 419.0	2119	1.06	µg/L	m	92
PFBA	1.996	213.0 -> 169.0	1262	0.99	µg/L		100
PFBS	4.332	299.0 -> 80.0	1175	1.03	µg/L		99
PFDA	8.211	513.0 -> 469.0	9468	0.99	µg/L		98
PFDoDA	9.088	613.0 -> 569.0	15389	0.98	µg/L		99
PFDS	8.596	599.0 -> 80.0	482	0.97	µg/L		76
PFHpA	6.421	363.0 -> 319.0	11441	1.01	µg/L		100
PFHpS	7.163	449.0 -> 80.0	1098	1.09	µg/L		94
PFHxA	5.455	313.0 -> 269.0	3127	0.99	µg/L		96
PFHxS	6.457	399.0 -> 80.0	1097	0.98	µg/L	m	98
PFNA	7.745	463.0 -> 419.0	8793	1.01	µg/L		100
PFNS	8.183	549.0 -> 80.0	850	1.02	µg/L		91
PFOA	7.165	413.0 -> 369.0	9214	1.02	µg/L		99
PFOS	7.719	499.0 -> 80.0	1146	1.04	µg/L	m	86
PFPeA	4.027	263.0 -> 219.0	5149	1.05	µg/L		100
PFPeS	5.590	349.0 -> 80.0	906	1.04	µg/L		98
PFTeDA	10.204	713.0 -> 669.0	17680	0.99	µg/L		100
PFTrDA	9.654	663.0 -> 619.0	16810	0.89	µg/L		100
PFUnDA	8.637	563.0 -> 519.0	11485	0.99	µg/L		98
11Cl-PF3OUdS	8.784	631.0 -> 451.0	5480	1.06	µg/L		99
9Cl-PF3ONS	7.968	531.0 -> 351.0	1145	1.00	µg/L		94
ADONA	6.533	377.0 -> 251.0	13397	0.99	µg/L		99
HFPO-DA	5.767	329.0 -> 169.0	1462	1.28	µg/L		97

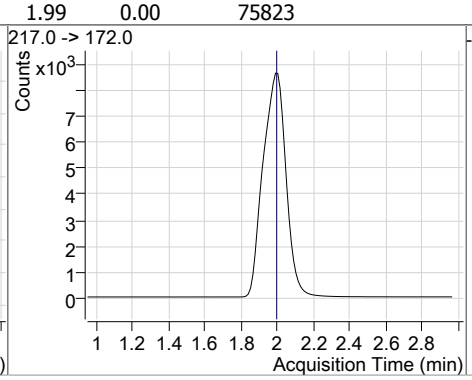
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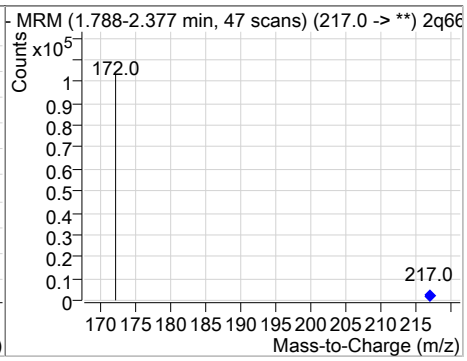
Perfluorinated Compounds by LC/MS/MS



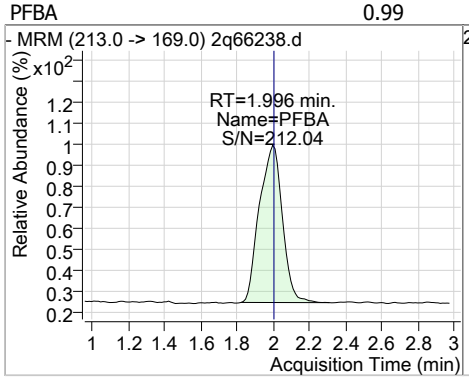
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	22.58	1.99	0.00	75823				

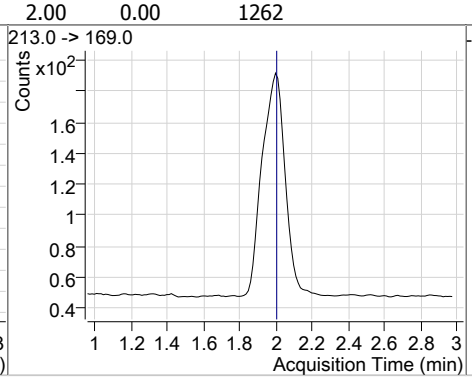


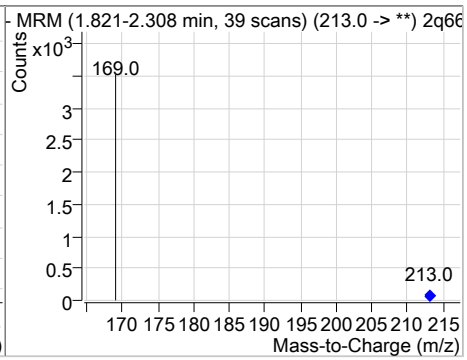




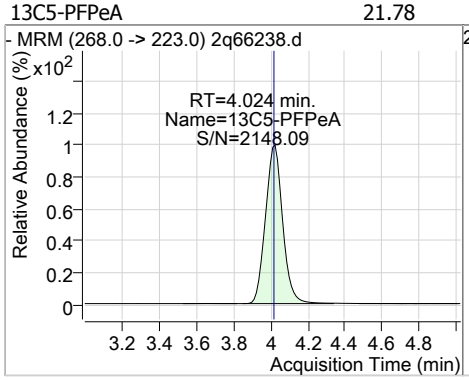
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.99	2.00	0.00	1262				

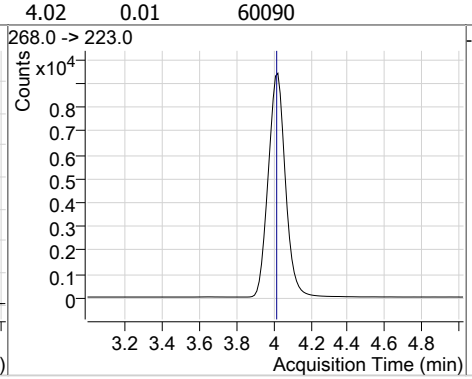


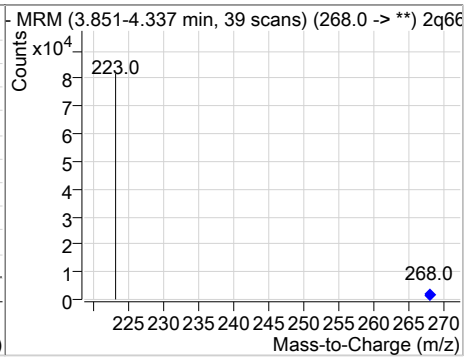




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	21.78	4.02	0.01	60090				





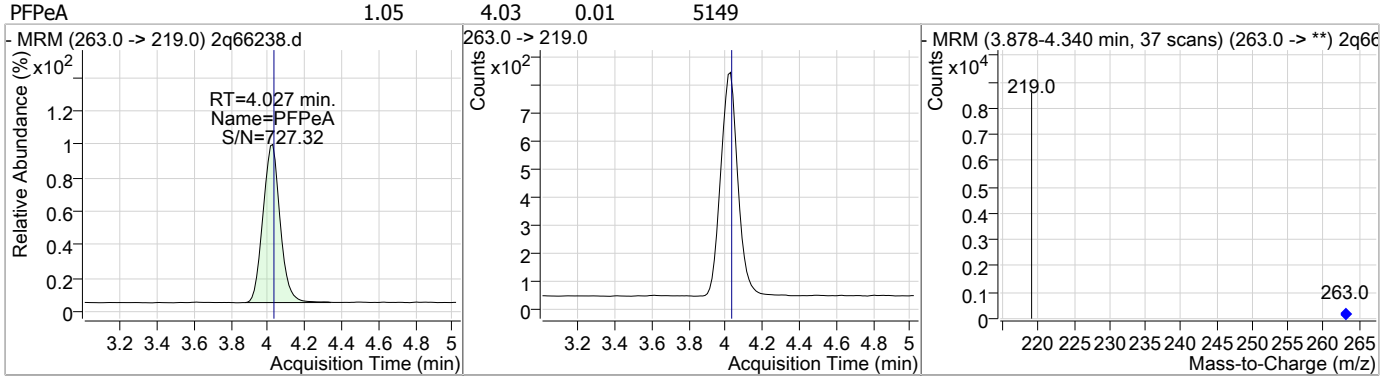


11.6.12

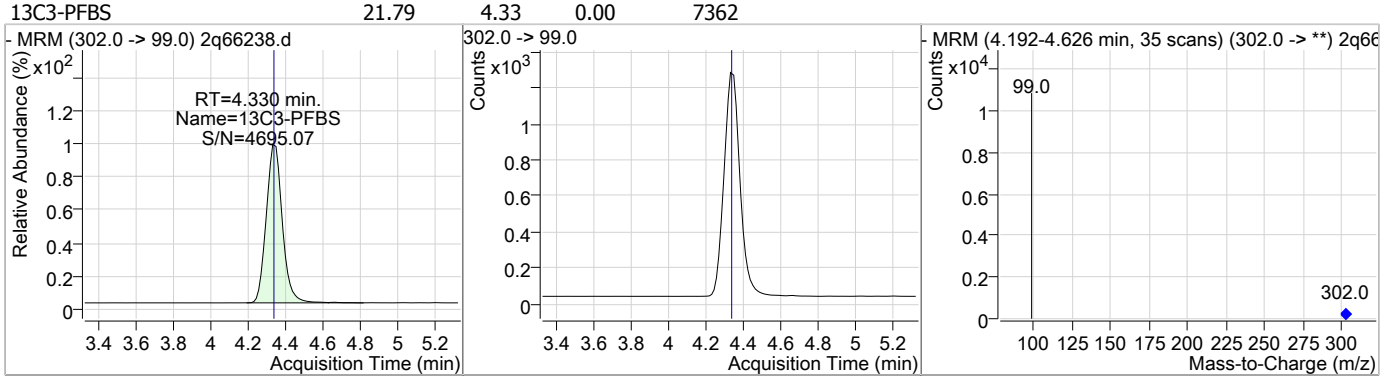
11

Perfluorinated Compounds by LC/MS/MS

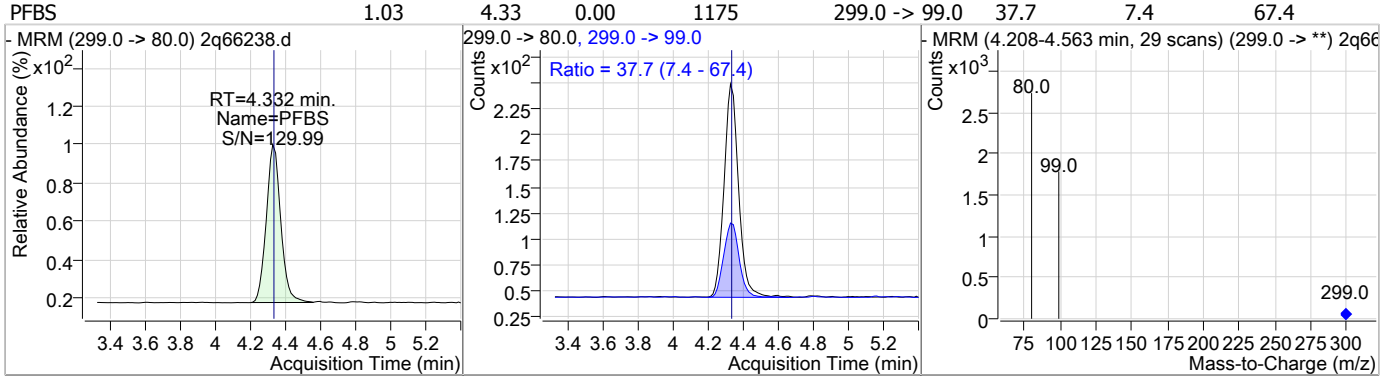
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	1.05	4.03	0.01	5149				



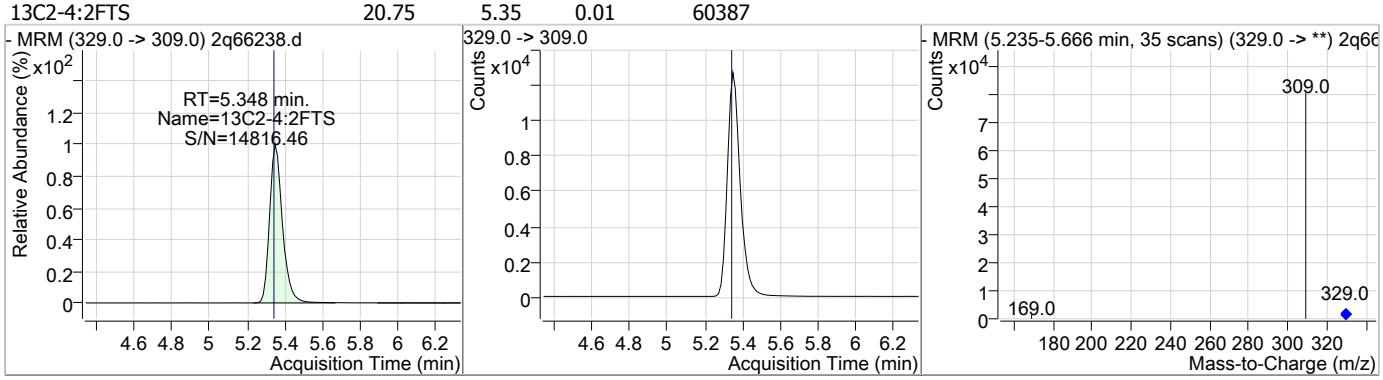
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	21.79	4.33	0.00	7362				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	1.03	4.33	0.00	1175	299.0 -> 99.0	37.7	7.4	67.4

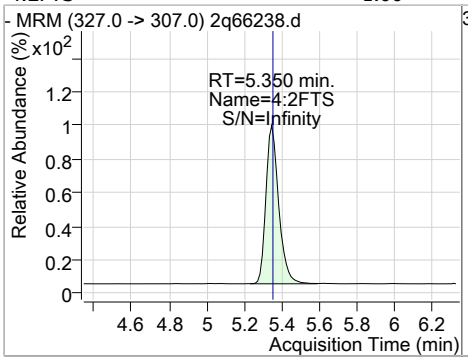


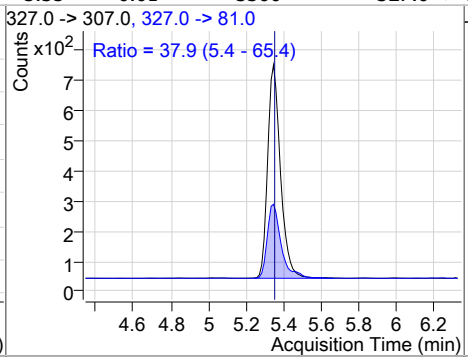
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	20.75	5.35	0.01	60387				

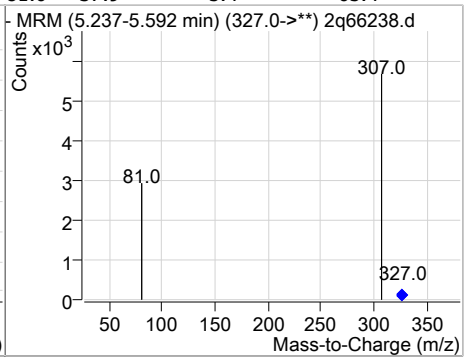


Perfluorinated Compounds by LC/MS/MS

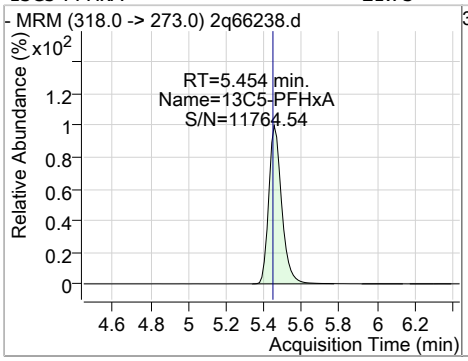
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	1.06	5.35	0.01	3360	327.0 -> 81.0	37.9	5.4	65.4

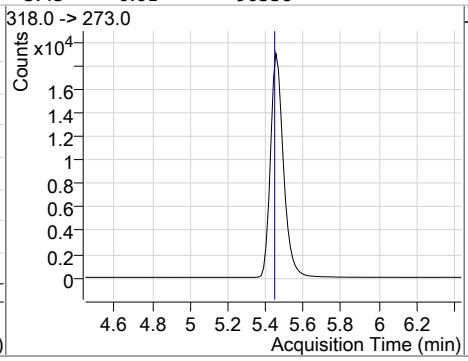


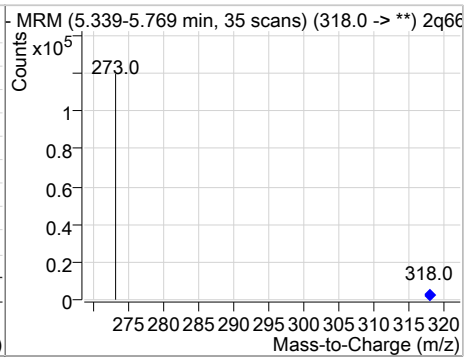




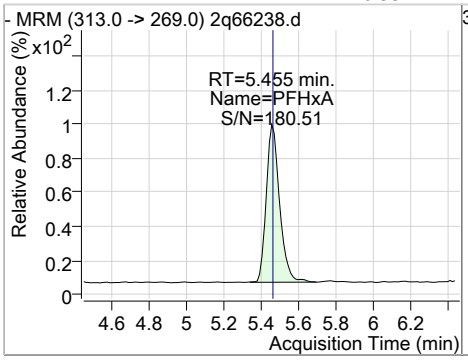
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	21.73	5.45	0.01	90558				

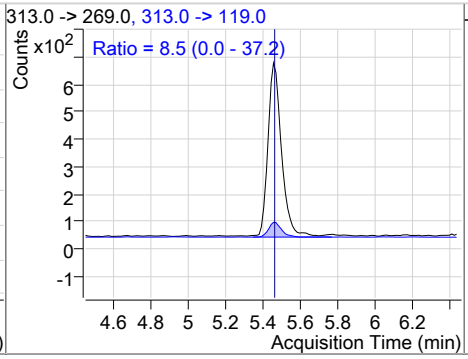


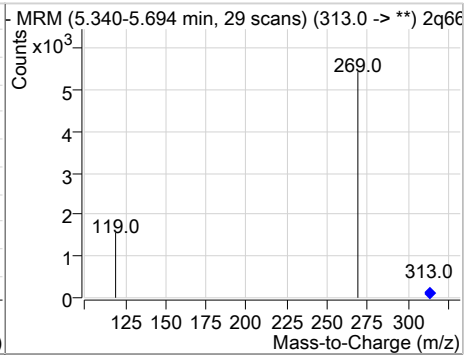




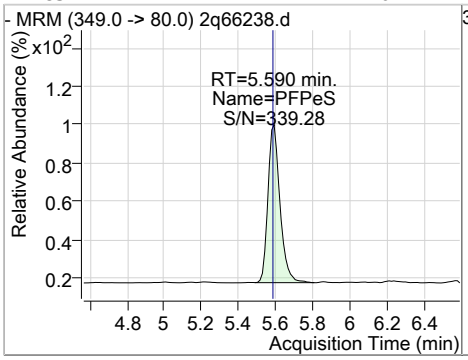
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.99	5.46	0.01	3127	313.0 -> 119.0	8.5	0.0	37.2

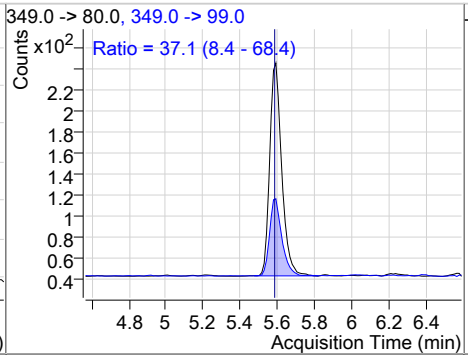


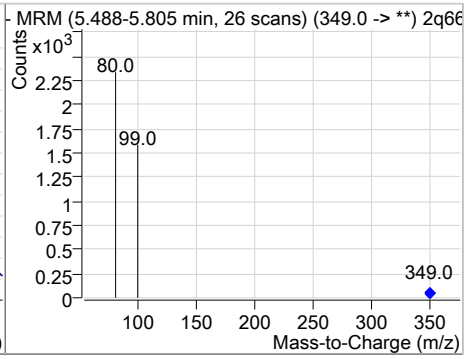




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	1.04	5.59	0.01	906	349.0 -> 99.0	37.1	8.4	68.4

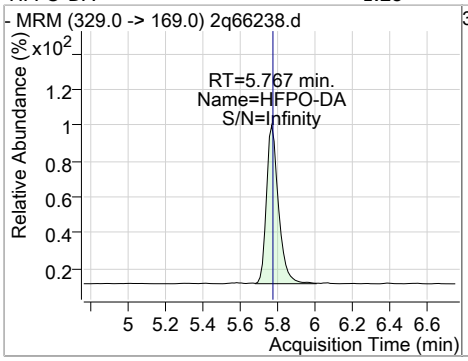


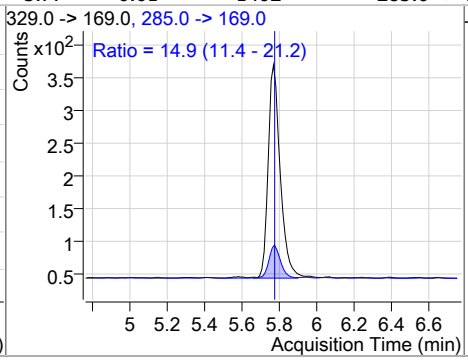


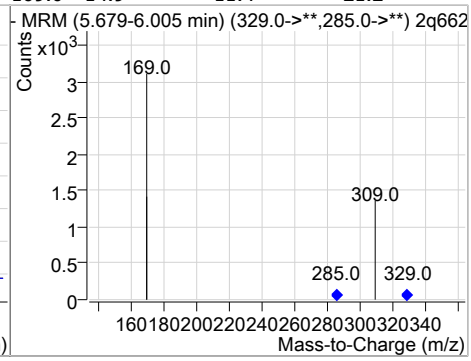


Perfluorinated Compounds by LC/MS/MS

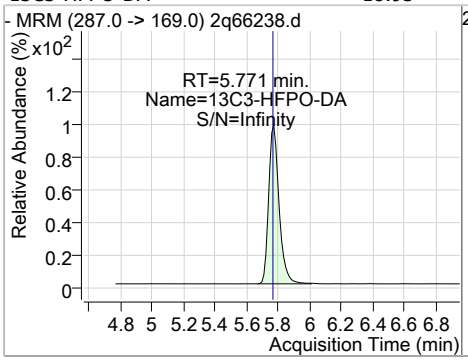
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	1.28	5.77	0.01	1462	285.0 -> 169.0	14.9	11.4	21.2

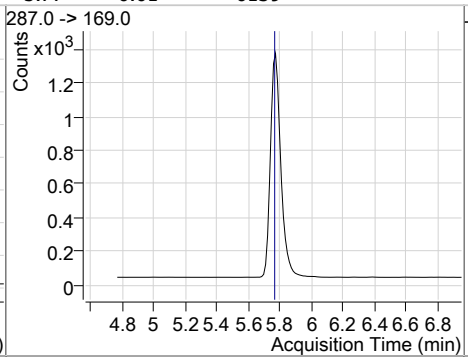


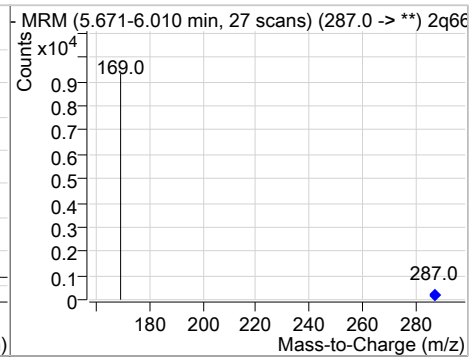




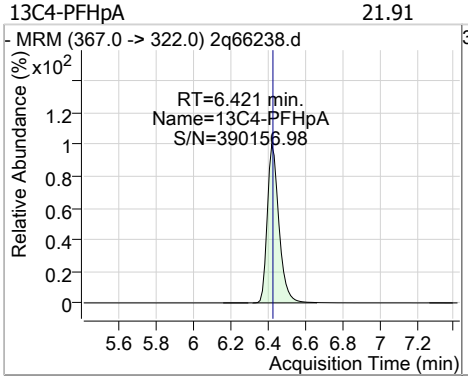
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	18.93	5.77	0.01	6139				

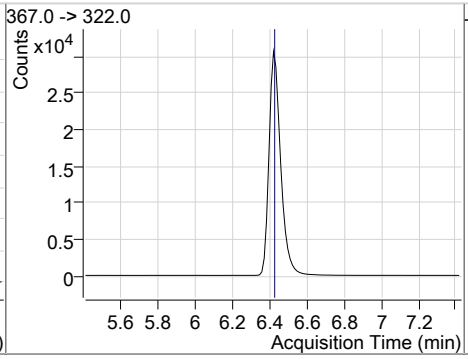


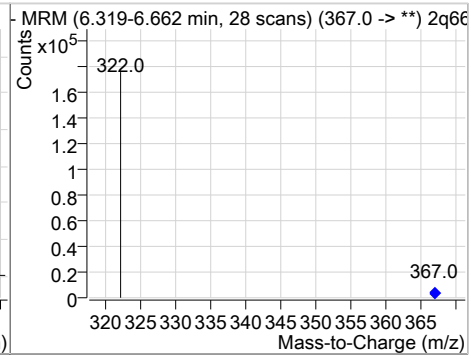




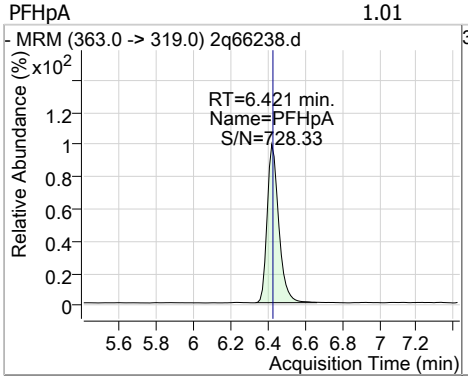
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	21.91	6.42	0.00	133334				

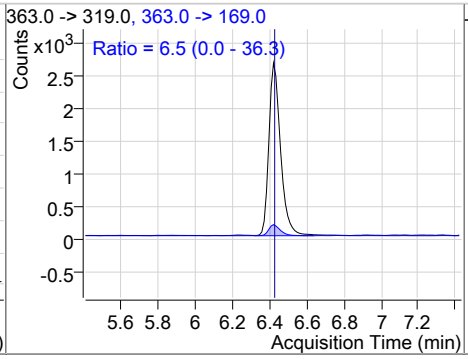


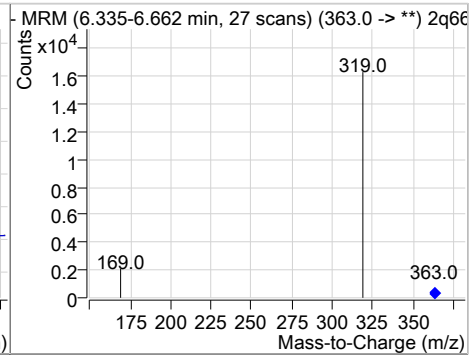




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	1.01	6.42	0.00	11441	363.0 -> 169.0	6.5	0.0	36.3

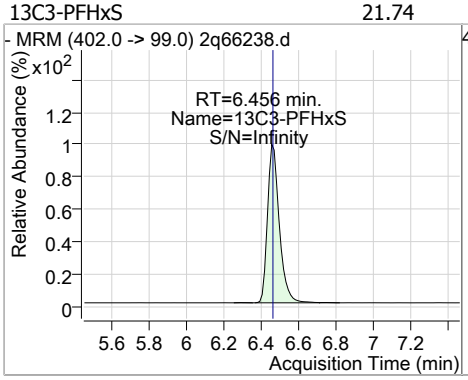


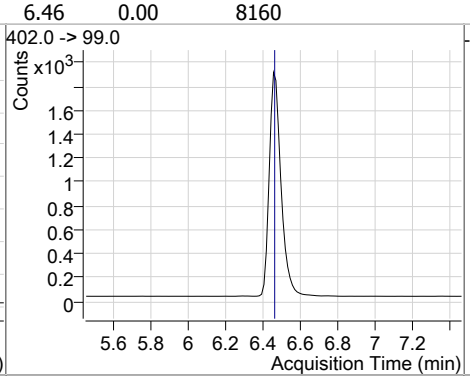


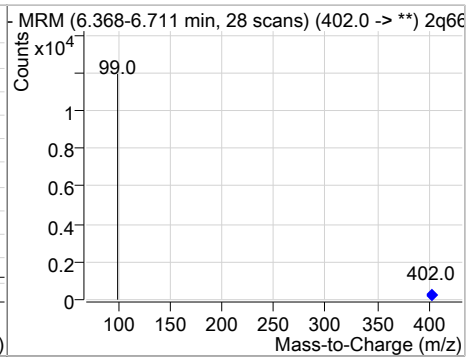


Perfluorinated Compounds by LC/MS/MS

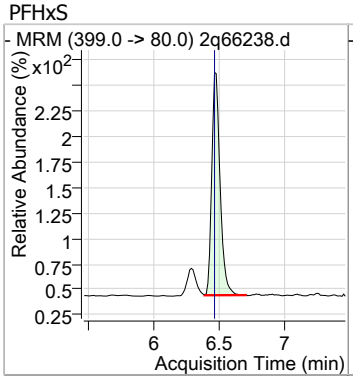
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	21.74	6.46	0.00	8160				

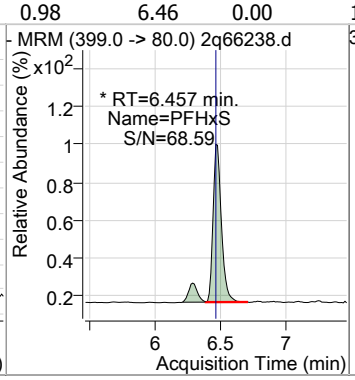


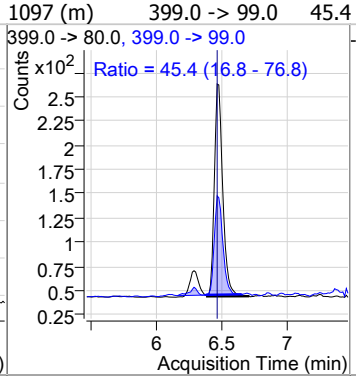


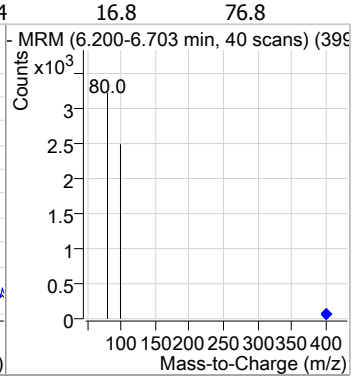


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.98	6.46	0.00	1097 (m)	399.0 -> 99.0	45.4	16.8	76.8

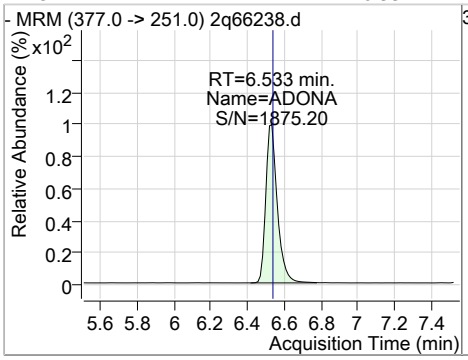


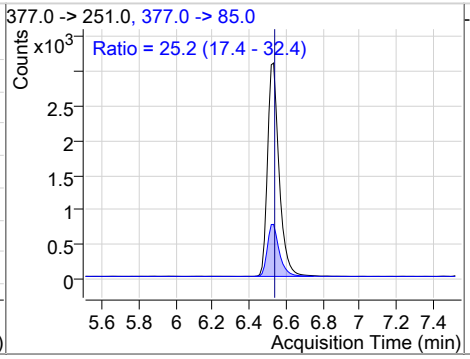


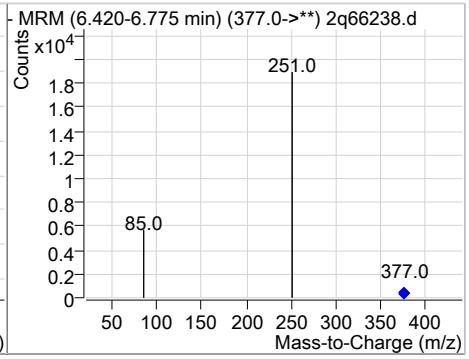




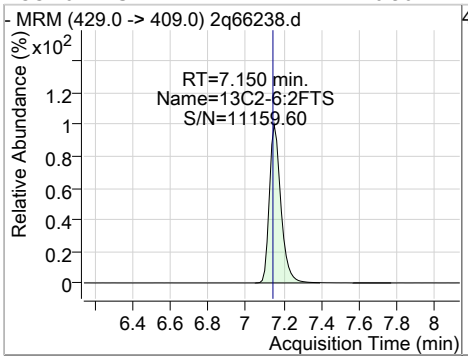
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.99	6.53	0.01	13397	377.0 -> 85.0	25.2	17.4	32.4

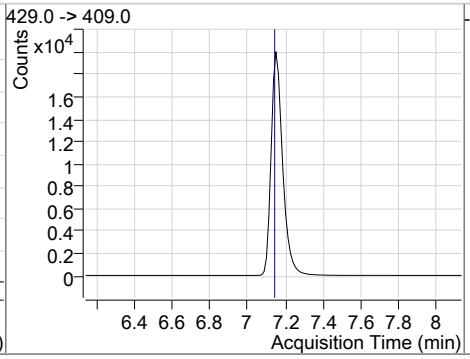


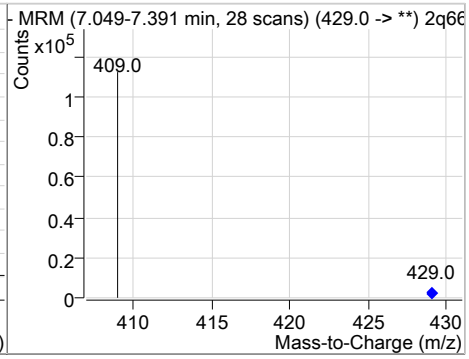




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.90	7.15	0.01	85057				

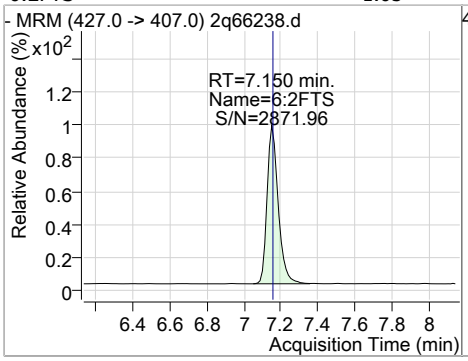


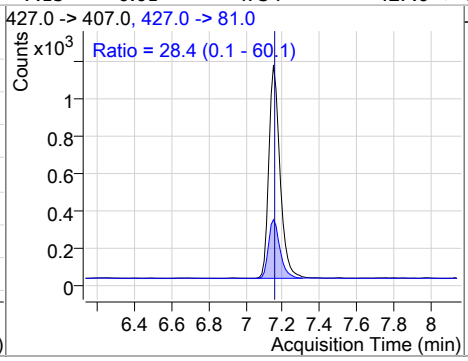


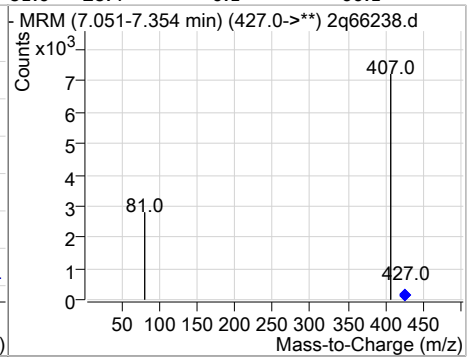


Perfluorinated Compounds by LC/MS/MS

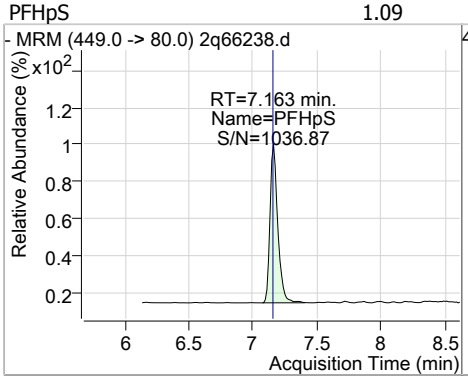
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	1.05	7.15	0.01	4734	427.0 -> 81.0	28.4	0.1	60.1

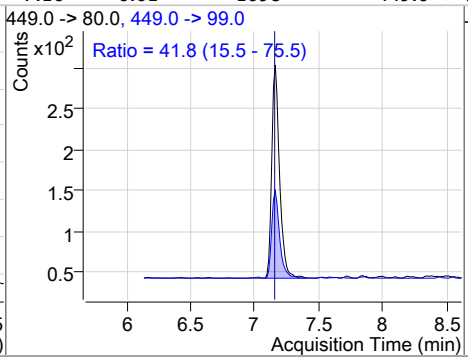


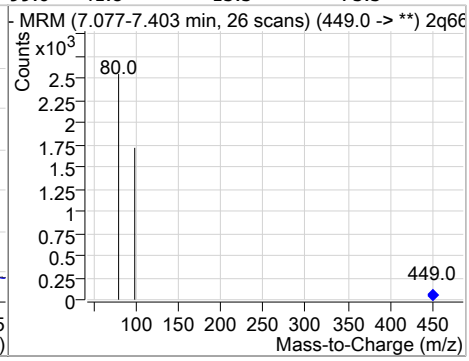




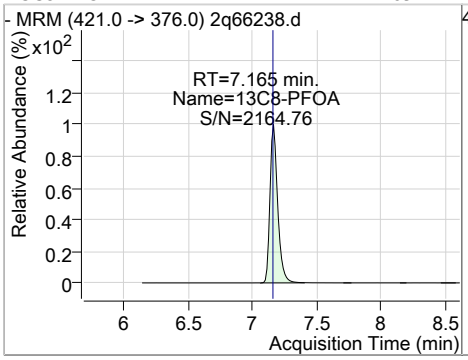
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	1.09	7.16	0.01	1098	449.0 -> 99.0	41.8	15.5	75.5

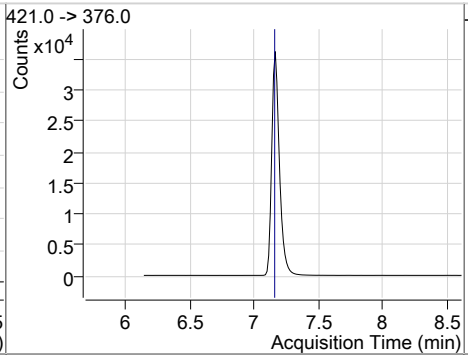


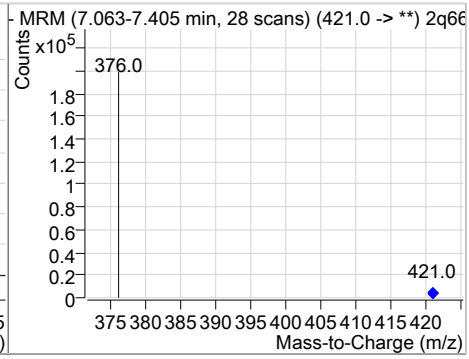




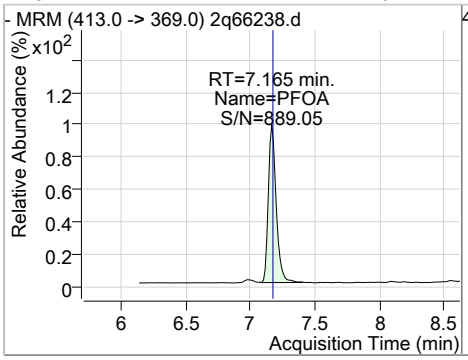
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	21.69	7.16	0.01	151280				

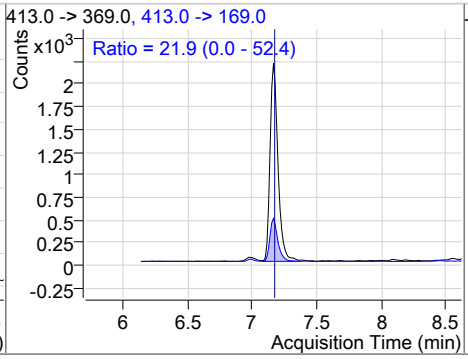


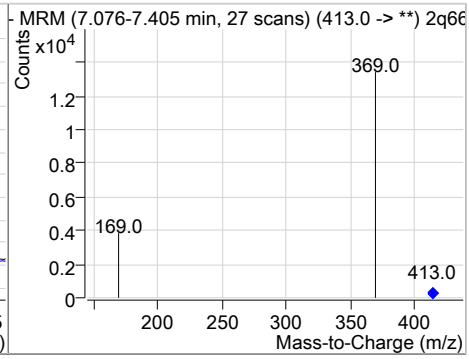




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	1.02	7.16	0.01	9214	413.0 -> 169.0	21.9	0.0	52.4

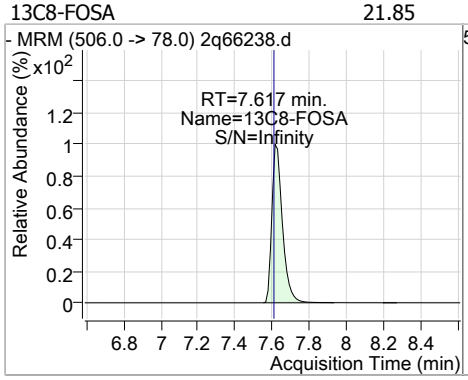


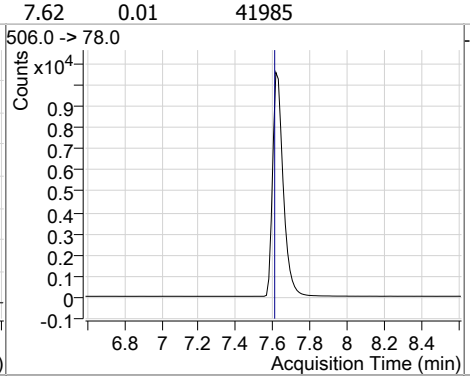


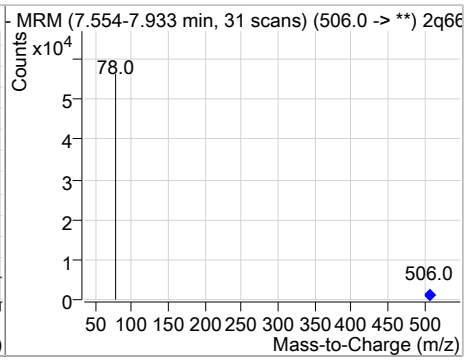


Perfluorinated Compounds by LC/MS/MS

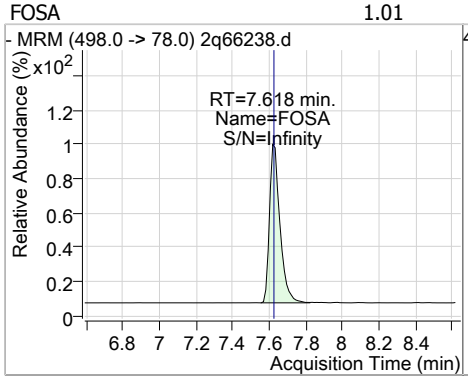
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	21.85	7.62	0.01	41985				

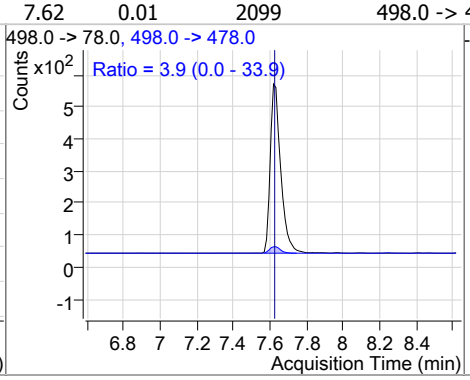


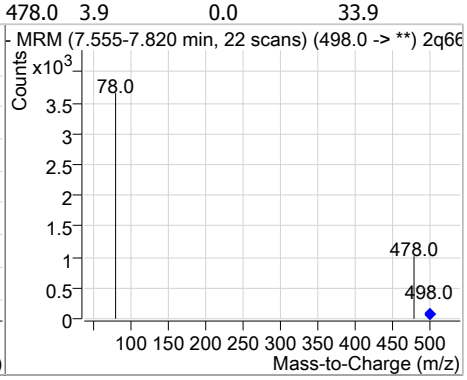




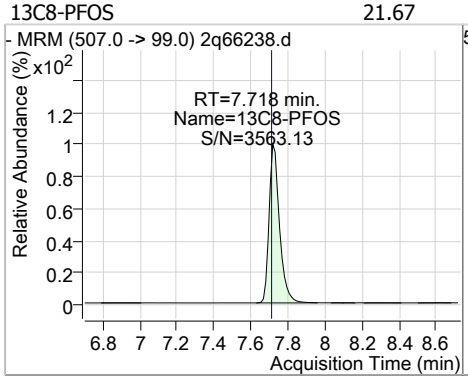
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	1.01	7.62	0.01	2099	498.0 -> 478.0	3.9	0.0	33.9

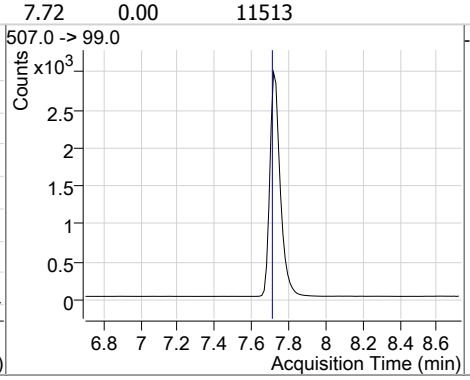


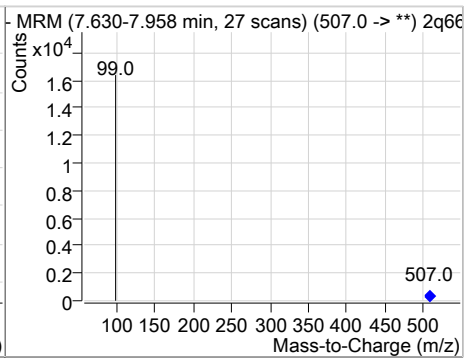




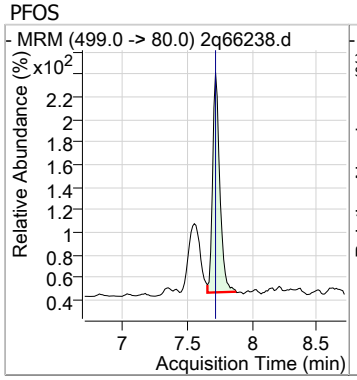
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	21.67	7.72	0.00	11513				

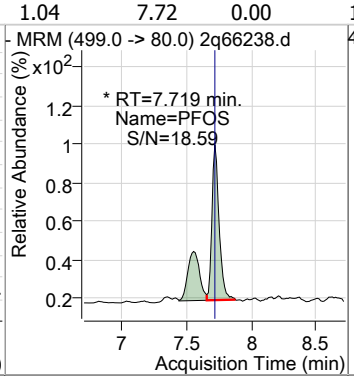


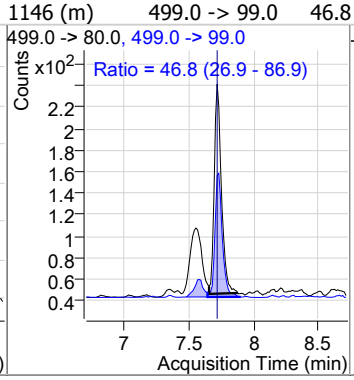


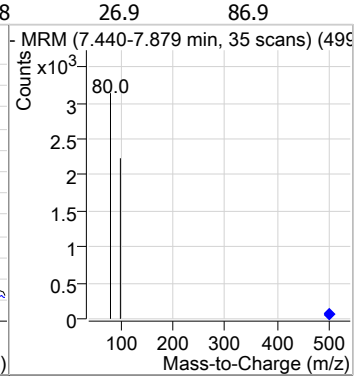


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	1.04	7.72	0.00	1146 (m)	499.0 -> 99.0	46.8	26.9	86.9



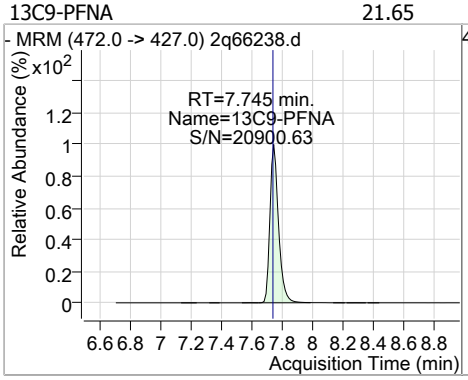


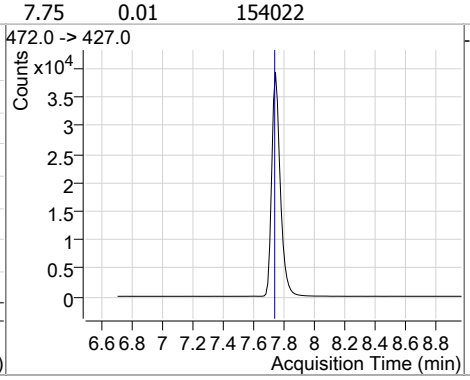


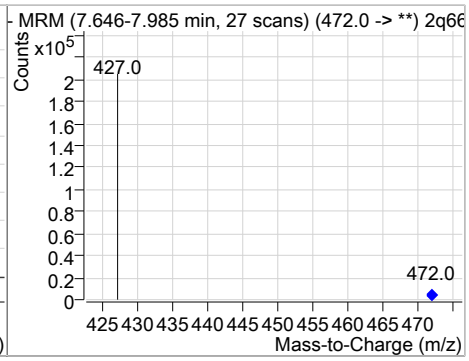


Perfluorinated Compounds by LC/MS/MS

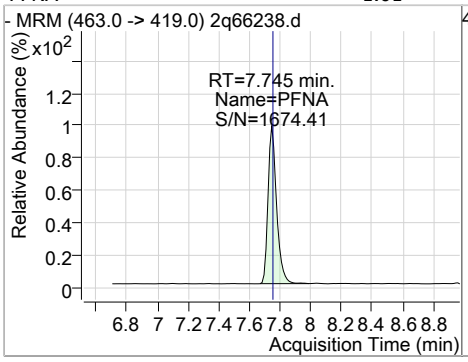
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	21.65	7.75	0.01	154022				

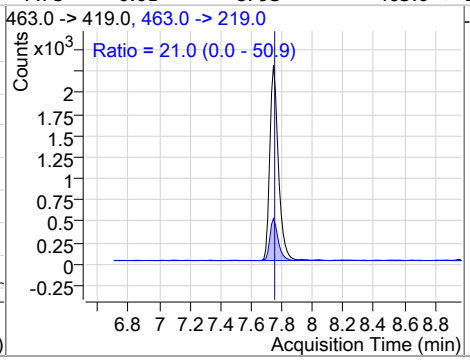


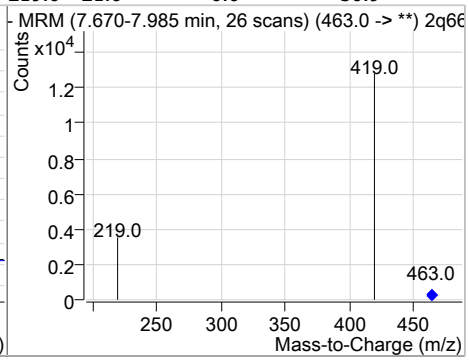




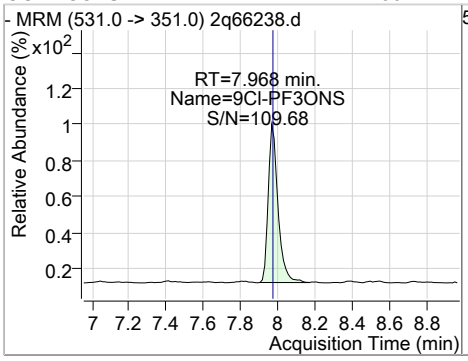
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	1.01	7.75	0.01	8793	463.0 -> 219.0	21.0	0.0	50.9

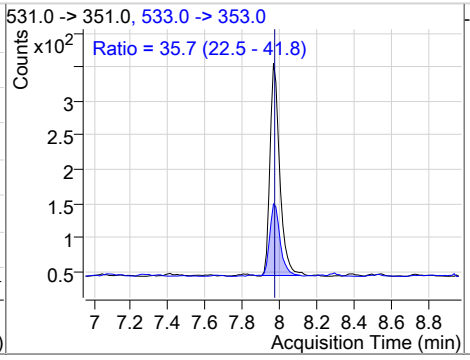


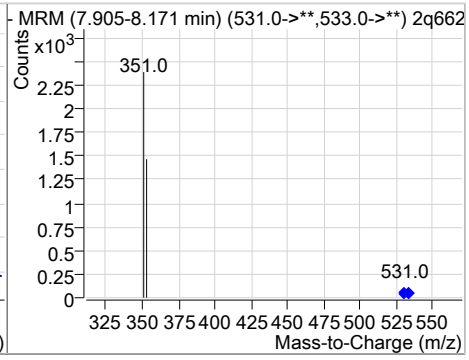




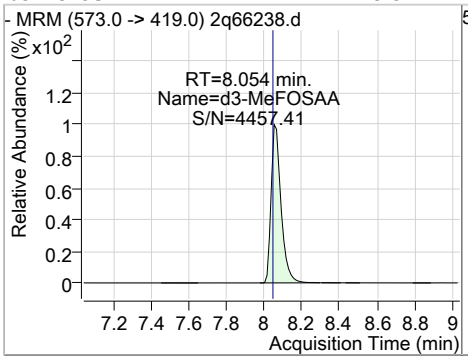
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	1.00	7.97	0.00	1145	533.0 -> 353.0	35.7	22.5	41.8

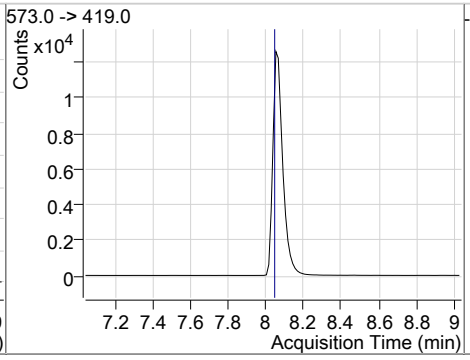


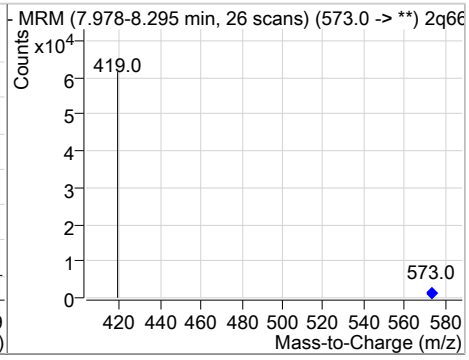




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.37	8.05	0.01	45958				

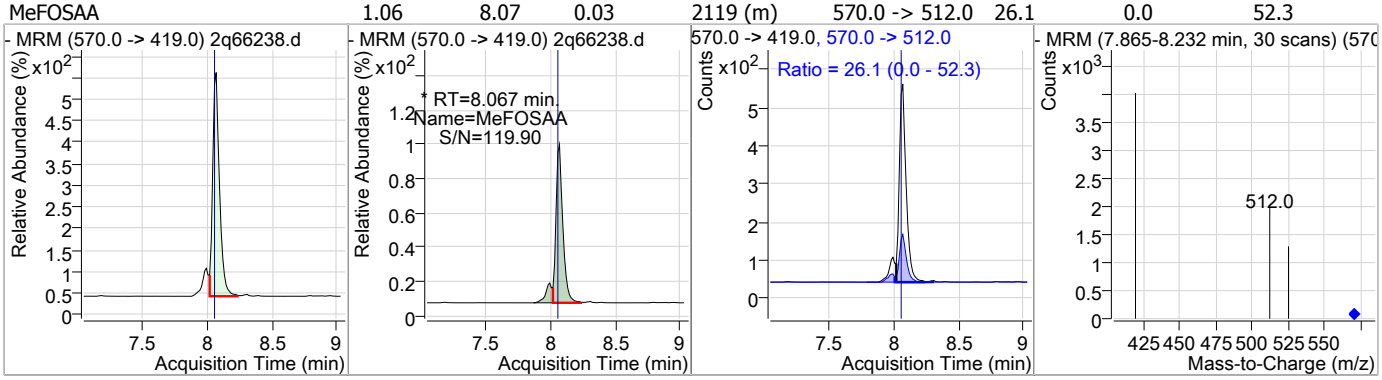




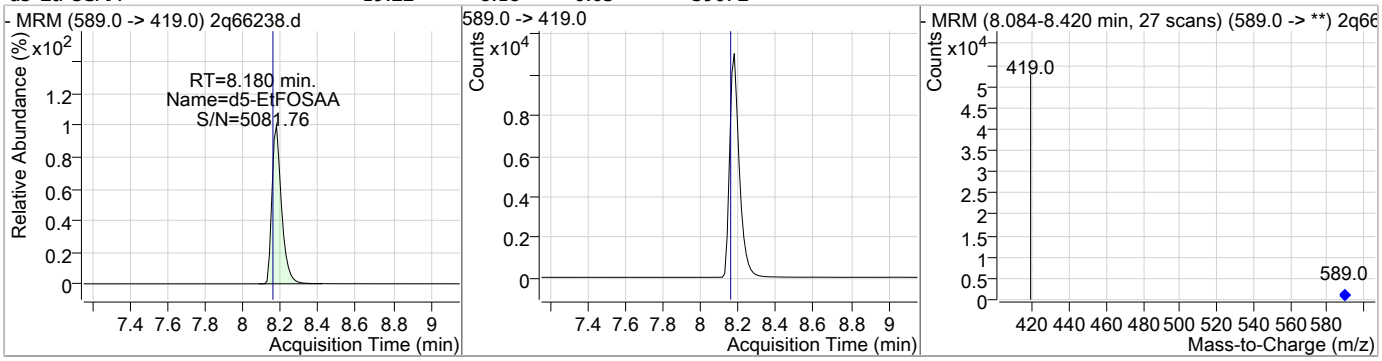


Perfluorinated Compounds by LC/MS/MS

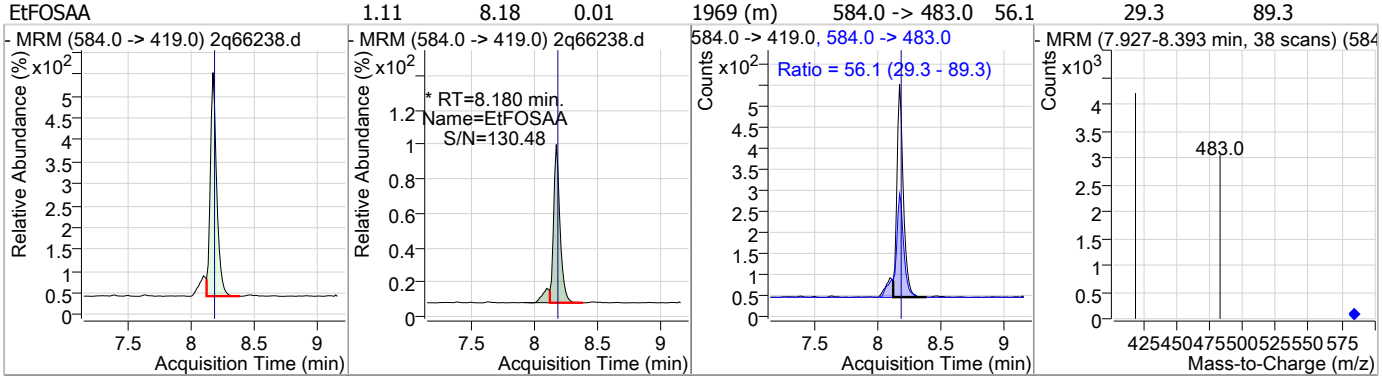
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	1.06	8.07	0.03	2119 (m)	570.0 -> 512.0	26.1	0.0	52.3



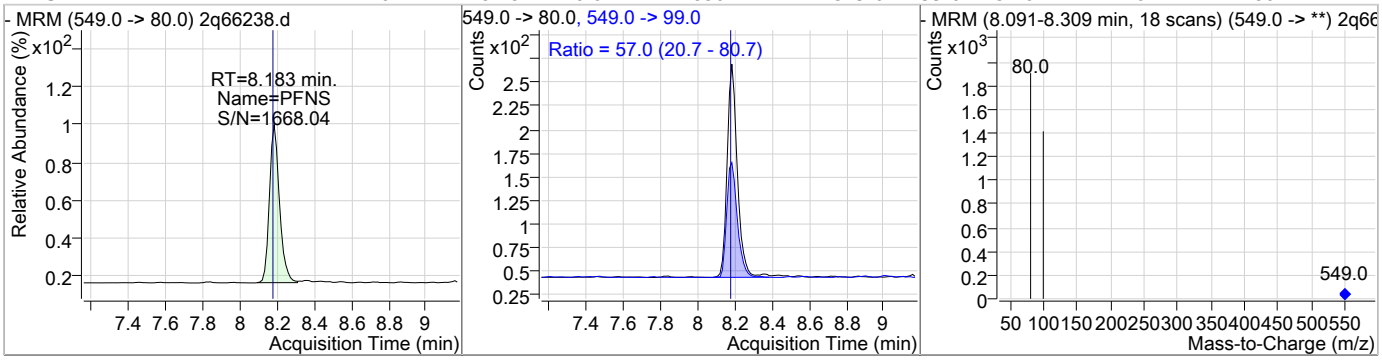
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.22	8.18	0.03	39072				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	1.11	8.18	0.01	1969 (m)	584.0 -> 483.0	56.1	29.3	89.3

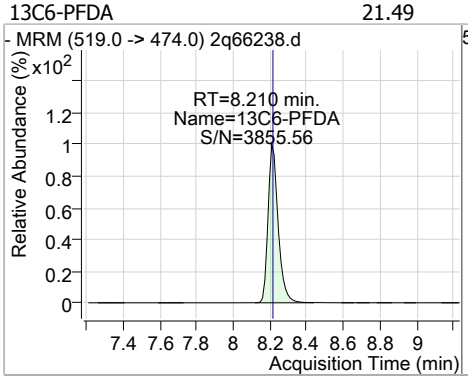


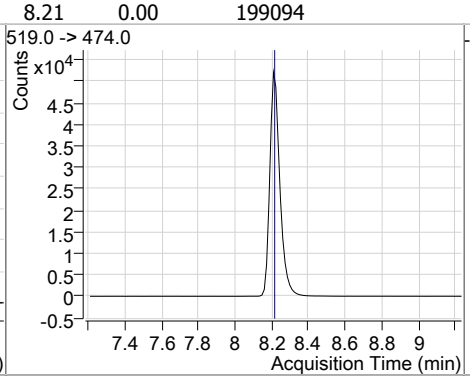
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	1.02	8.18	0.01	850	549.0 -> 99.0	57.0	20.7	80.7

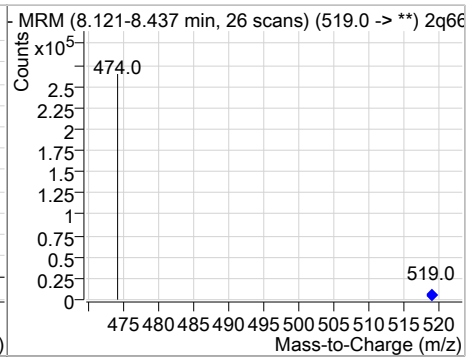


Perfluorinated Compounds by LC/MS/MS

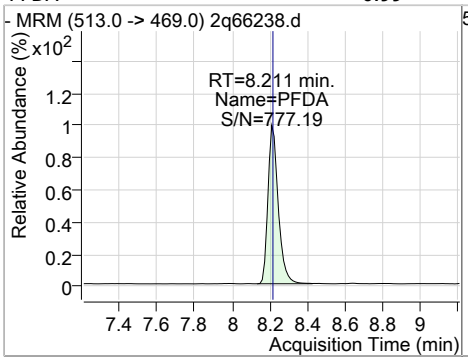
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	21.49	8.21	0.00	199094				

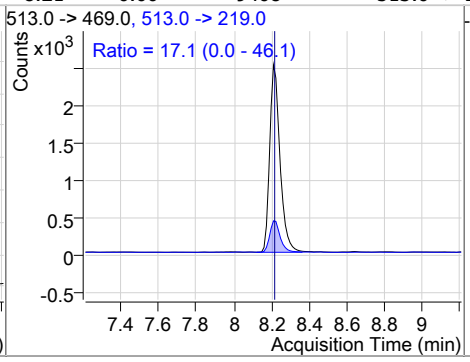


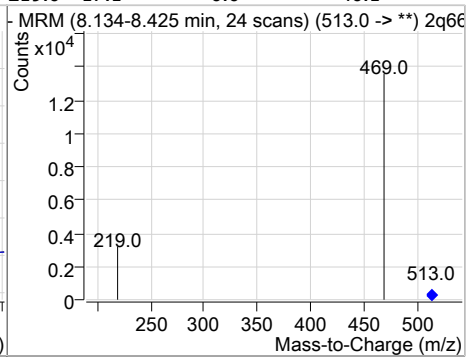




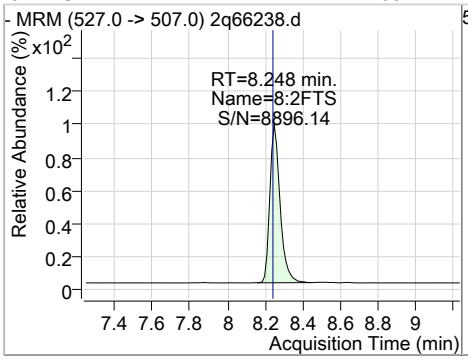
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.99	8.21	0.00	9468	513.0 -> 219.0	17.1	0.0	46.1

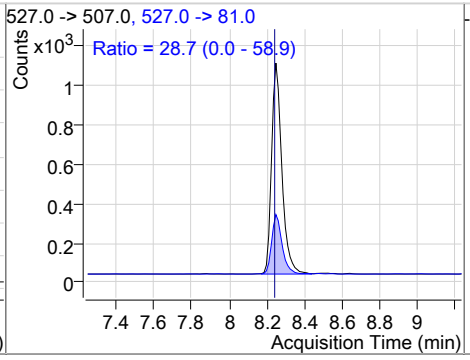


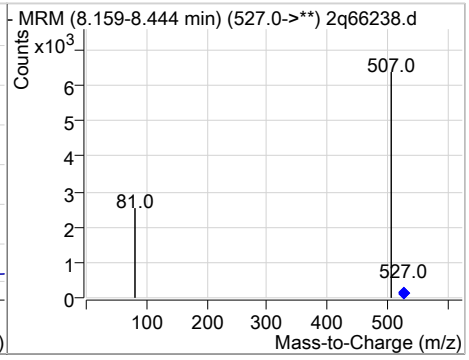




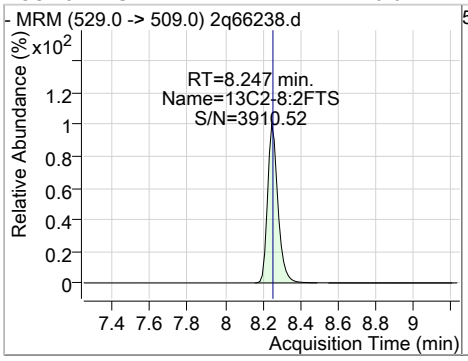
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	1.05	8.25	0.01	4050	527.0 -> 81.0	28.7	0.0	58.9

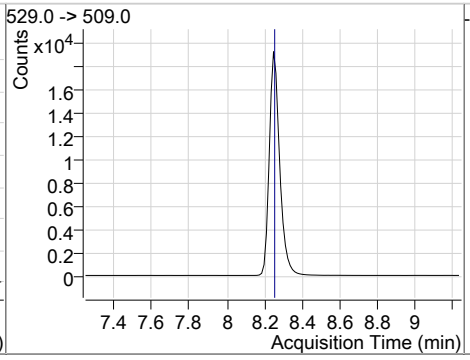


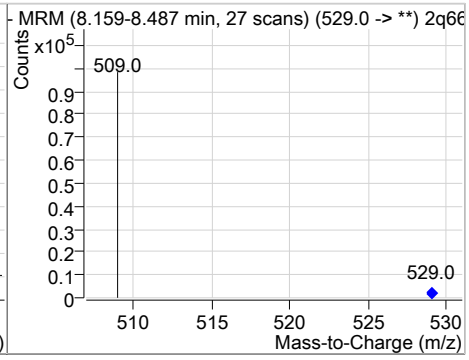




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	20.61	8.25	0.00	73519				

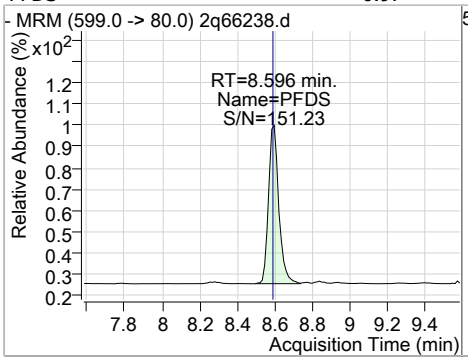


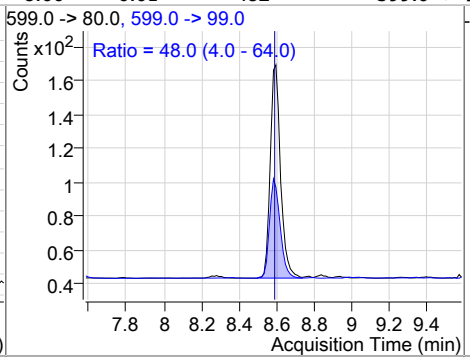


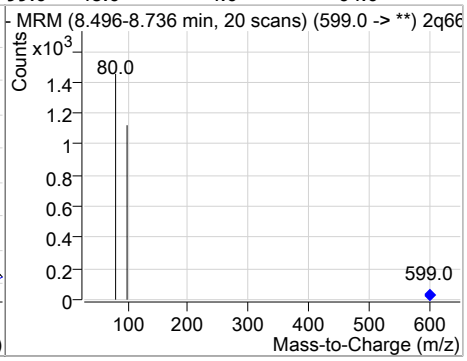


Perfluorinated Compounds by LC/MS/MS

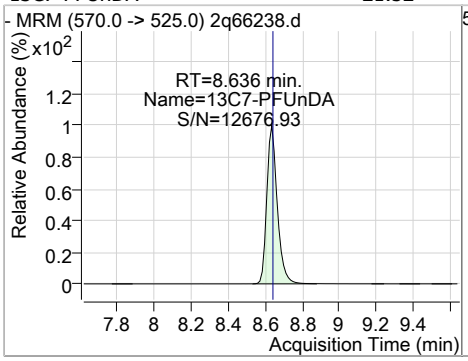
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	0.97	8.60	0.01	482	599.0 -> 99.0	48.0	4.0	64.0

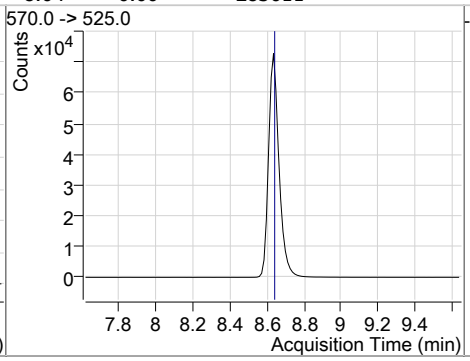


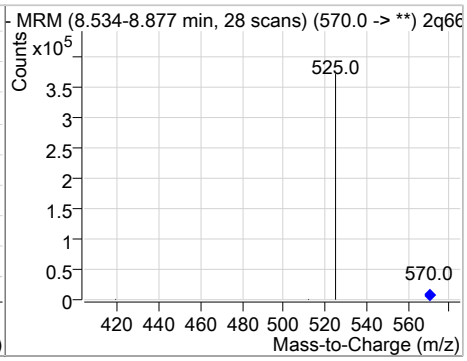




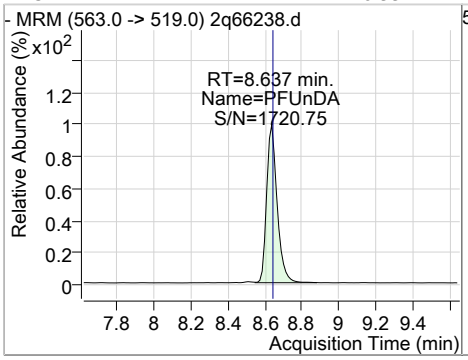
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	21.52	8.64	0.00	283611				

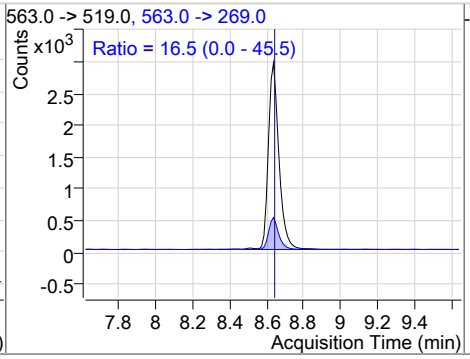


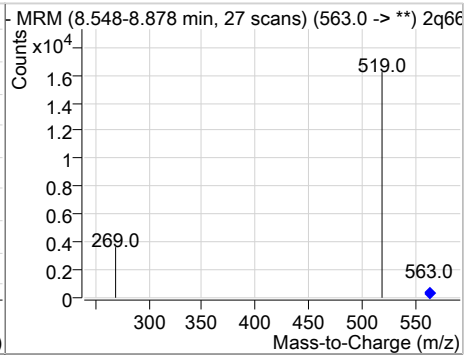




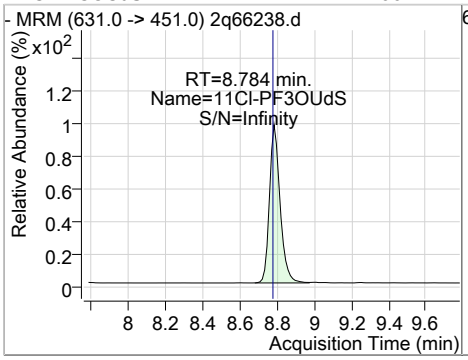
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.99	8.64	0.00	11485	563.0 -> 269.0	16.5	0.0	45.5

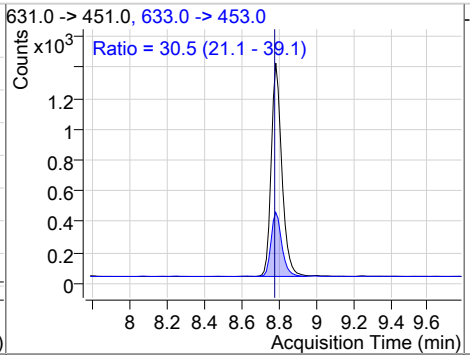


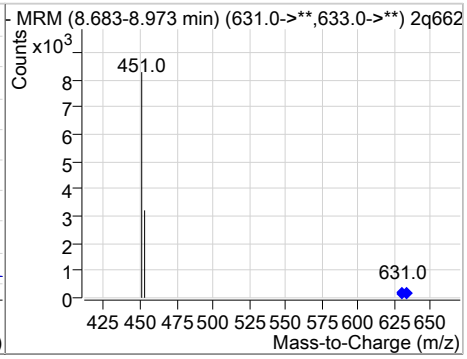




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	1.06	8.78	0.00	5480	633.0 -> 453.0	30.5	21.1	39.1

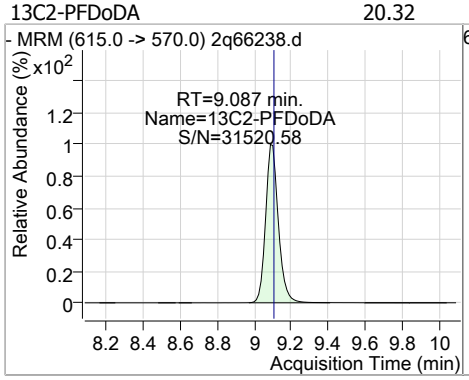


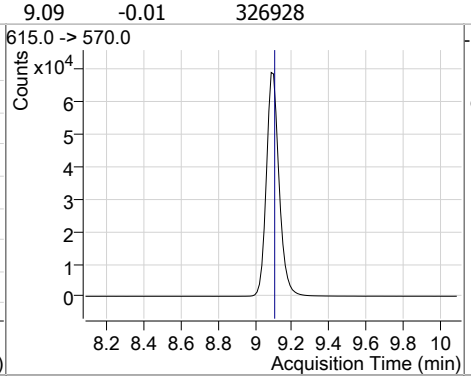


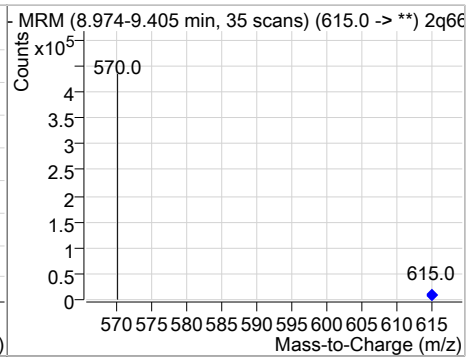


Perfluorinated Compounds by LC/MS/MS

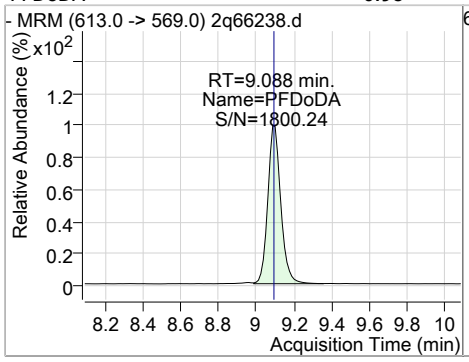
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.32	9.09	-0.01	326928				

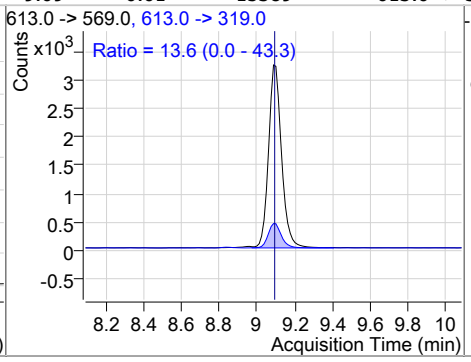


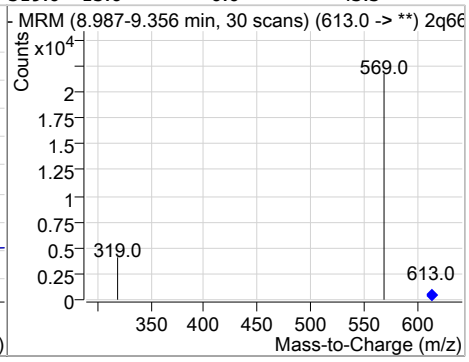




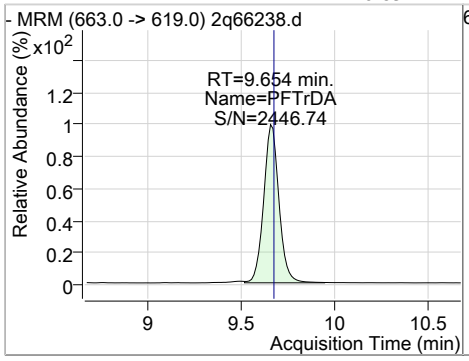
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.98	9.09	-0.01	15389	613.0 -> 319.0	13.6	0.0	43.3

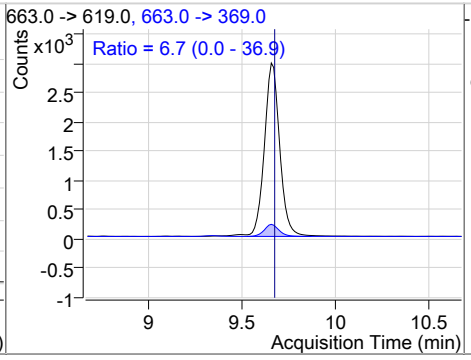


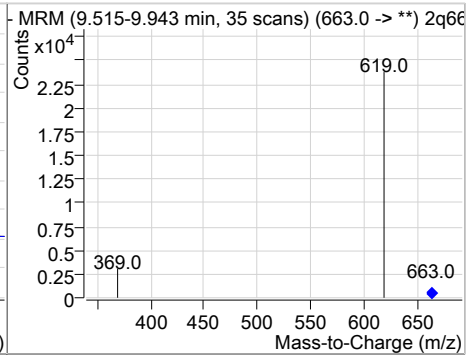




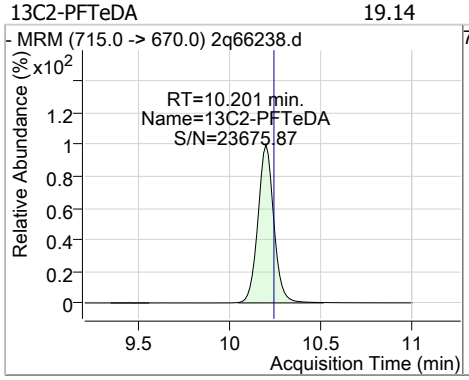
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.89	9.65	-0.02	16810	663.0 -> 369.0	6.7	0.0	36.9

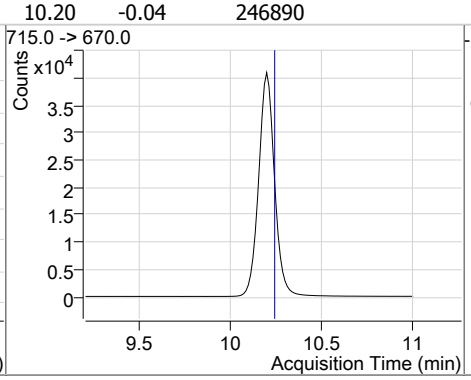


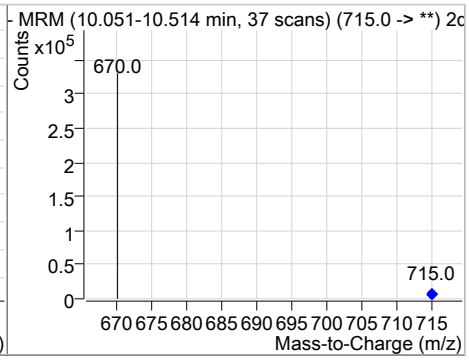




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.14	10.20	-0.04	246890				

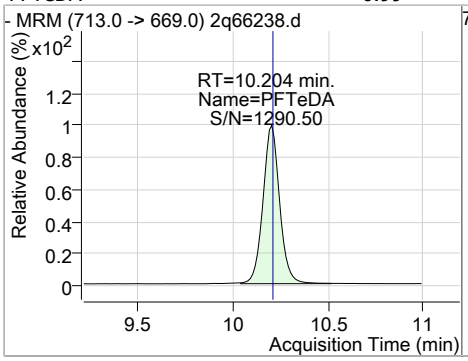


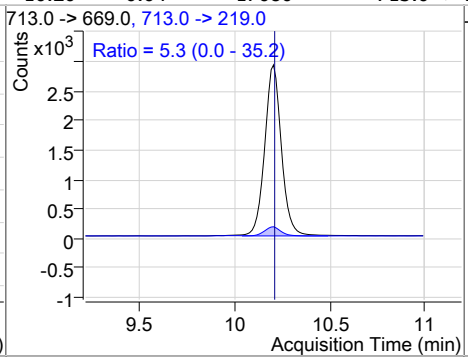


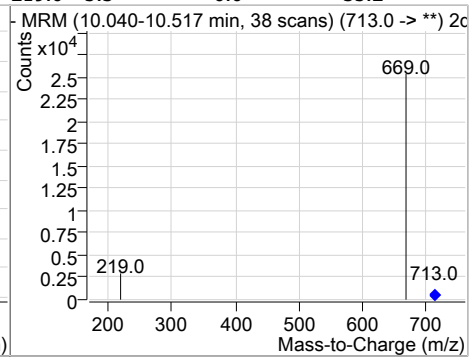


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.99	10.20	-0.04	17680	713.0 -> 219.0	5.3	0.0	35.2







Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:44

Perfluorinated Compounds by LC/MS/MS

Data File : 2q66250.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/17/2021 6:02:19 AM
Sample Name : cc956-20
Vial : P1-A7
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q963.batch.bin
Sample Information : op84308,S2Q963,250,,,1.0,1,water

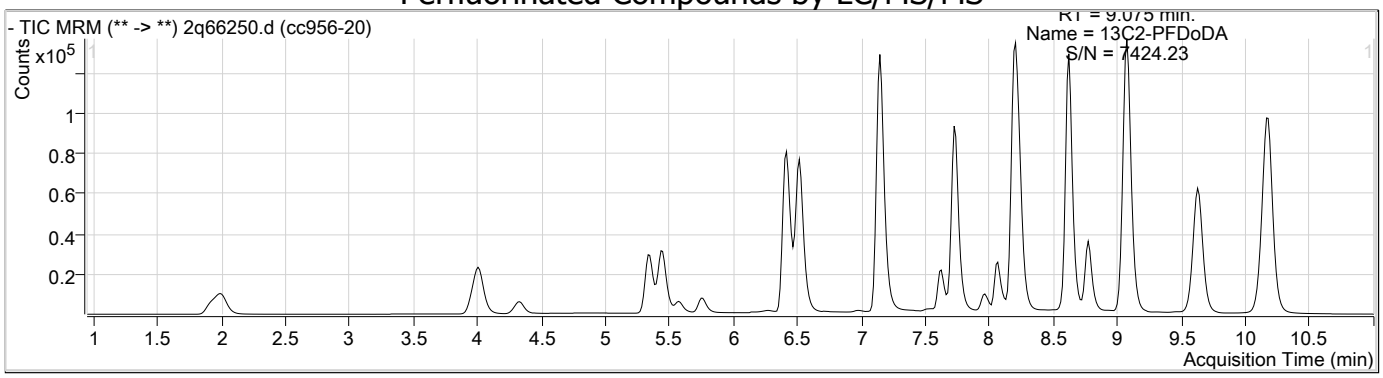
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.180	589.0 -> 419.0	34413	20.00	µg/L	0.025
M4-PFBA	1.989	217.0 -> 172.0	66519	20.00	µg/L	0.000
M5-PFPeA	4.012	268.0 -> 223.0	53098	20.00	µg/L	0.000
M5-PFHxA	5.454	318.0 -> 273.0	80253	20.00	µg/L	0.013
M4-PFHpA	6.421	367.0 -> 322.0	116471	20.00	µg/L	0.000
M8-PFOA	7.151	421.0 -> 376.0	130471	20.00	µg/L	0.000
M9-PFNA	7.733	472.0 -> 427.0	135905	20.00	µg/L	0.000
M6-PFDA	8.198	519.0 -> 474.0	175420	20.00	µg/L	-0.012
M7-PFUnDA	8.624	570.0 -> 525.0	247373	20.00	µg/L	-0.012
M2-PFDoDA	9.075	615.0 -> 570.0	288357	20.00	µg/L	-0.025
M2-PFTeDA	10.176	715.0 -> 670.0	223042	20.00	µg/L	-0.062
M8-FOSA	7.630	506.0 -> 78.0	37229	20.00	µg/L	0.026
M3-PFBS	4.330	302.0 -> 99.0	6408	20.00	µg/L	0.000
M3-PFHxS	6.456	402.0 -> 99.0	6993	20.00	µg/L	0.000
M8-PFOS	7.718	507.0 -> 99.0	10275	20.00	µg/L	0.000
M2-4:2FTS	5.348	329.0 -> 309.0	56244	20.00	µg/L	0.013
M2-6:2FTS	7.137	429.0 -> 409.0	77730	20.00	µg/L	0.000
M2-8:2FTS	8.235	529.0 -> 509.0	69329	20.00	µg/L	-0.012
M3-MeFOSAA	8.066	573.0 -> 419.0	41548	20.00	µg/L	0.025
M3-HFPO-DA	5.759	287.0 -> 169.0	5390	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.348	329.0 -> 309.0	56244	19.32	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.6%		
13C2-6:2FTS	7.137	429.0 -> 409.0	77730	19.10	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.5%		
13C2-8:2FTS	8.235	529.0 -> 509.0	69329	19.43	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.2%		
13C2-PFDoDA	9.075	615.0 -> 570.0	288357	17.93	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.6%		
13C2-PFTeDA	10.176	715.0 -> 670.0	223042	17.29	µg/L	-0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.4%		
13C3-PFBS	4.330	302.0 -> 99.0	6408	18.97	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.8%		
13C3-PFHxS	6.456	402.0 -> 99.0	6993	18.63	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.1%		
13C4-PFBA	1.989	217.0 -> 172.0	66519	19.81	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.0%		
13C4-PFHpA	6.421	367.0 -> 322.0	116471	19.14	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.7%		
d5-EtFOSAA	8.180	589.0 -> 419.0	34413	16.93	ng/ml	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.6%		
13C5-PFHxA	5.454	318.0 -> 273.0	80253	19.26	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.3%		
13C5-PFPeA	4.012	268.0 -> 223.0	53098	19.24	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.2%		

Perfluorinated Compounds by LC/MS/MS

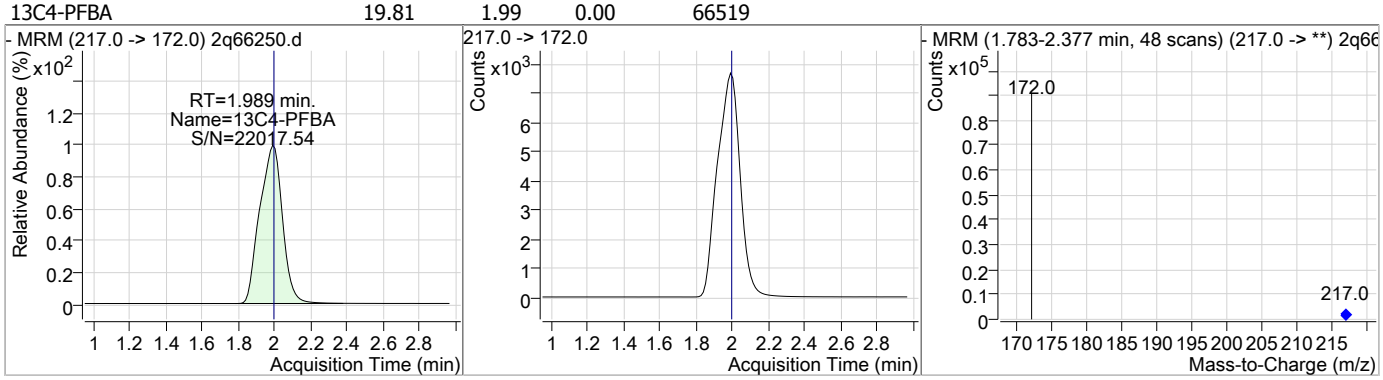
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.198	519.0 -> 474.0	175420	18.94	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.7%			
13C7-PFUnDA	8.624	570.0 -> 525.0	247373	18.77	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.8%			
13C8-FOSA	7.630	506.0 -> 78.0	37229	19.38	µg/L		0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.9%			
13C8-PFOA	7.151	421.0 -> 376.0	130471	18.71	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.5%			
13C8-PFOS	7.718	507.0 -> 99.0	10275	19.34	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.7%			
13C9-PFNA	7.733	472.0 -> 427.0	135905	19.11	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.5%			
d3-MeFOSAA	8.066	573.0 -> 419.0	41548	17.52	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.6%			
13C3-HFPO-DA	5.759	287.0 -> 169.0	5390	16.62	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.1%			
Target Compounds							**QValue**
4:2FTS	5.337	327.0 -> 307.0	62901	21.23	µg/L		98
6:2FTS	7.138	427.0 -> 407.0	87770	21.38	µg/L		98
8:2FTS	8.235	527.0 -> 507.0	75637	20.81	µg/L		99
EtFOSAA	8.180	584.0 -> 419.0	33296	21.32	µg/L	m	100
FOSA	7.631	498.0 -> 78.0	40371	21.80	µg/L		100
MeFOSAA	8.067	570.0 -> 419.0	40764	22.57	µg/L	m	93
PFBA	1.996	213.0 -> 169.0	23281	20.74	µg/L		100
PFBS	4.332	299.0 -> 80.0	21203	21.25	µg/L		100
PFDA	8.198	513.0 -> 469.0	182049	21.66	µg/L		99
PFDoDA	9.075	613.0 -> 569.0	296347	21.39	µg/L		100
PFDS	8.583	599.0 -> 80.0	9084	20.90	µg/L		96
PFHpA	6.421	363.0 -> 319.0	211559	21.48	µg/L		100
PFHpS	7.149	449.0 -> 80.0	19274	22.24	µg/L		99
PFHxA	5.455	313.0 -> 269.0	58040	20.68	µg/L		99
PFHxS	6.457	399.0 -> 80.0	20614	21.54	µg/L	m	99
PFNA	7.733	463.0 -> 419.0	167400	21.69	µg/L		99
PFNS	8.170	549.0 -> 80.0	16309	21.86	µg/L		100
PFOA	7.152	413.0 -> 369.0	167242	21.54	µg/L		100
PFOS	7.719	499.0 -> 80.0	20766	21.14	µg/L	m	84
PFPeA	4.014	263.0 -> 219.0	94302	21.73	µg/L		100
PFPeS	5.577	349.0 -> 80.0	16386	21.65	µg/L		100
PFTeDA	10.166	713.0 -> 669.0	346600	21.57	µg/L		100
PFTrDA	9.628	663.0 -> 619.0	325588	19.46	µg/L		100
PFUnDA	8.625	563.0 -> 519.0	212812	21.08	µg/L		99
11Cl-PF3OUdS	8.772	631.0 -> 451.0	101599	22.35	µg/L		98
9Cl-PF3ONS	7.968	531.0 -> 351.0	21206	21.12	µg/L		98
ADONA	6.521	377.0 -> 251.0	248807	21.26	µg/L		99
HFPO-DA	5.767	329.0 -> 169.0	24408	24.25	µg/L		96

 # = Qualifier out of range, m = manually integrated, + = Area summed

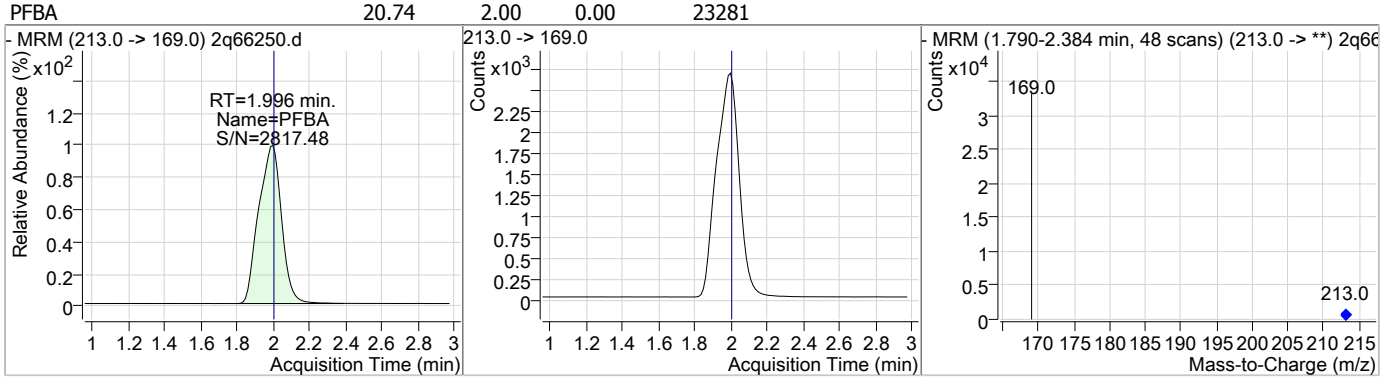
Perfluorinated Compounds by LC/MS/MS



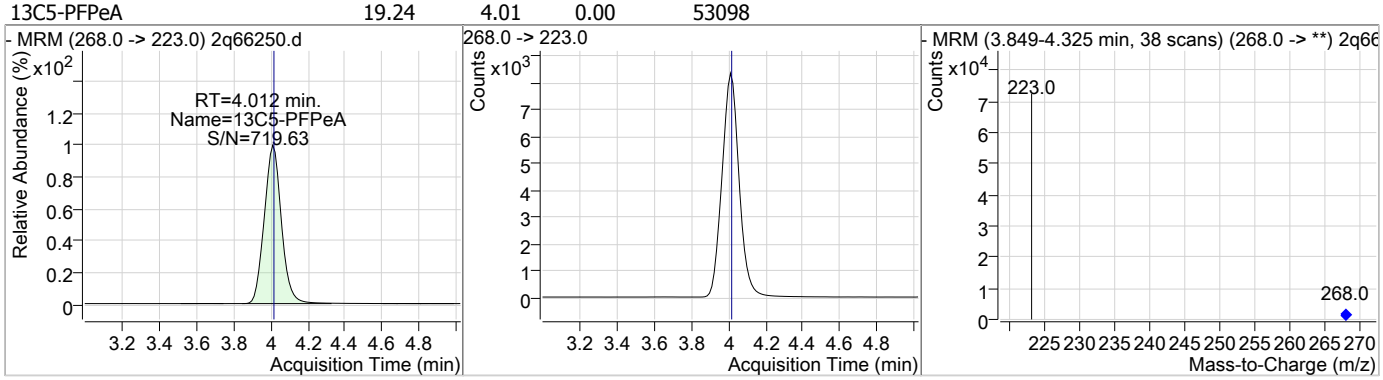
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.81	1.99	0.00	66519				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	20.74	2.00	0.00	23281				

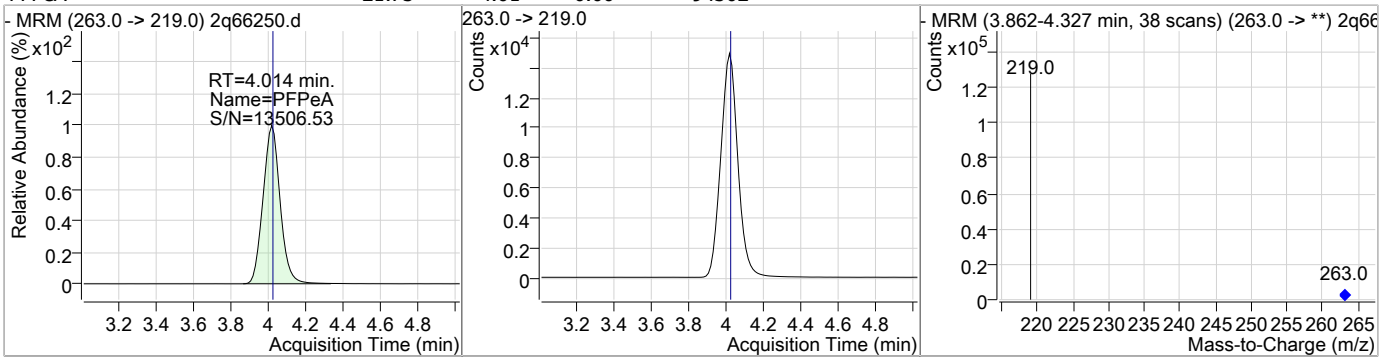


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.24	4.01	0.00	53098				

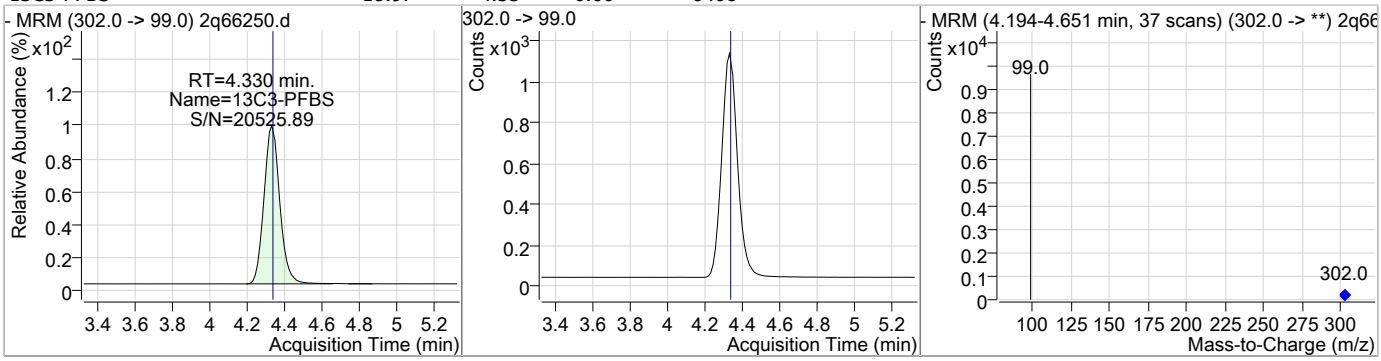


Perfluorinated Compounds by LC/MS/MS

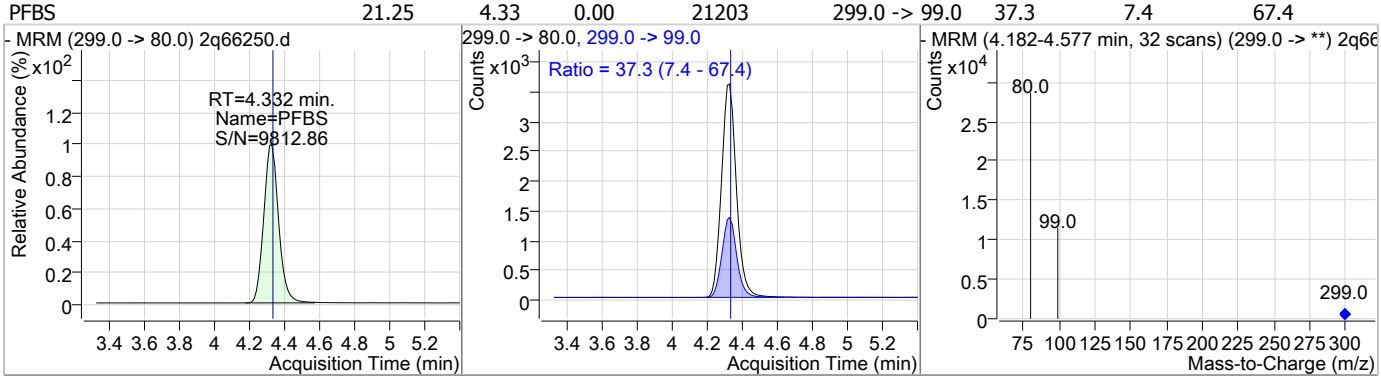
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	21.73	4.01	0.00	94302				



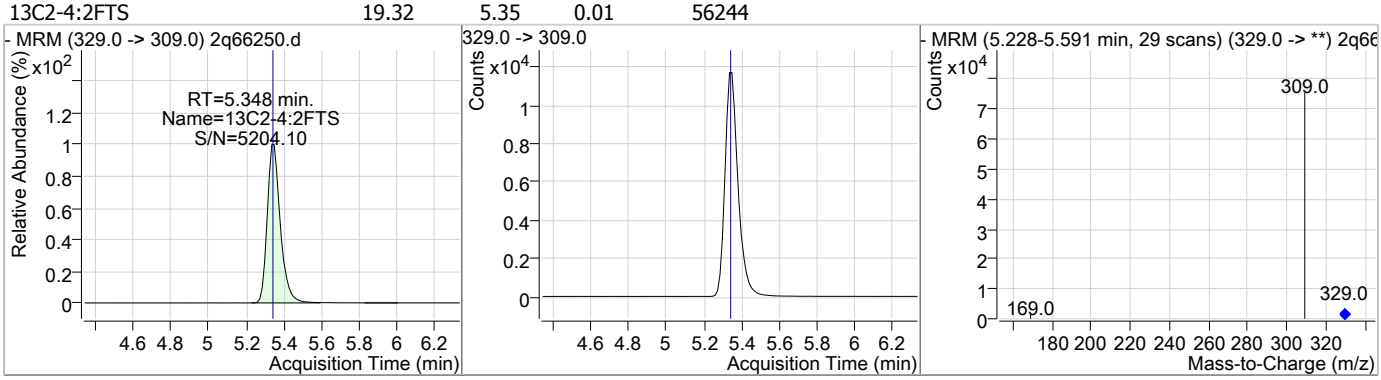
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	18.97	4.33	0.00	6408				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	21.25	4.33	0.00	21203	299.0 -> 99.0	37.3	7.4	67.4

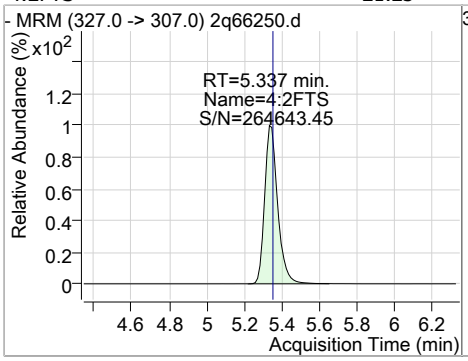


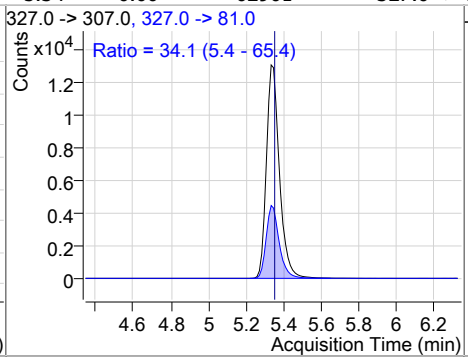
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.32	5.35	0.01	56244				

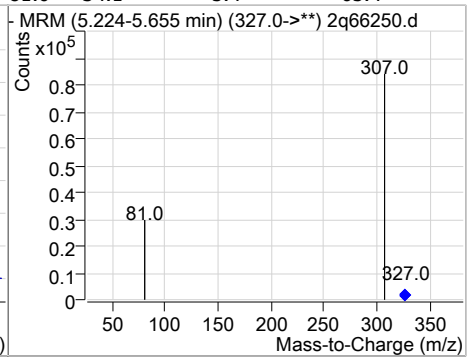


Perfluorinated Compounds by LC/MS/MS

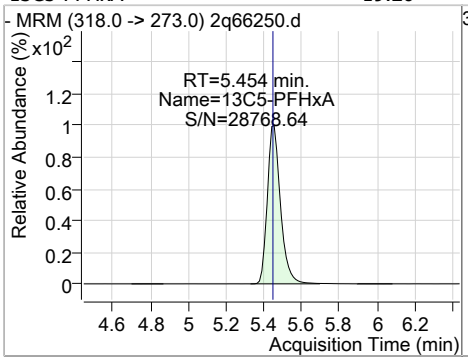
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	21.23	5.34	0.00	62901	327.0 -> 81.0	34.1	5.4	65.4

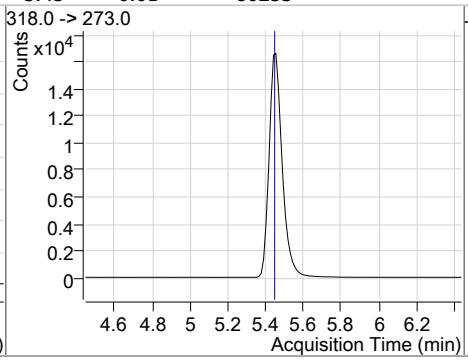


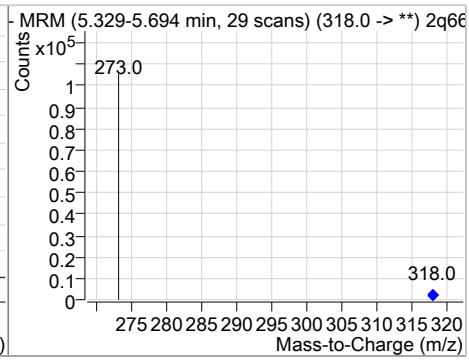




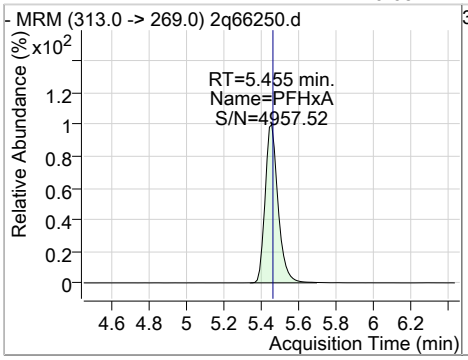
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.26	5.45	0.01	80253				

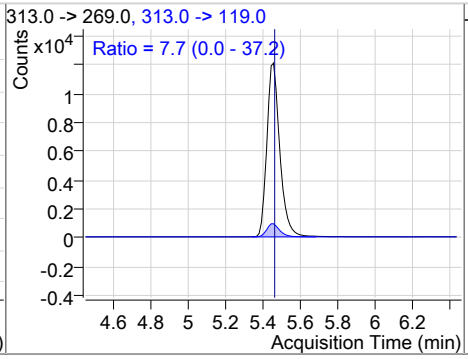


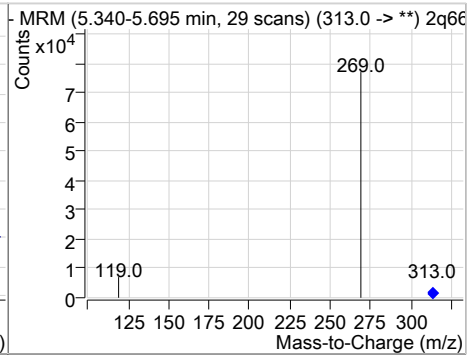




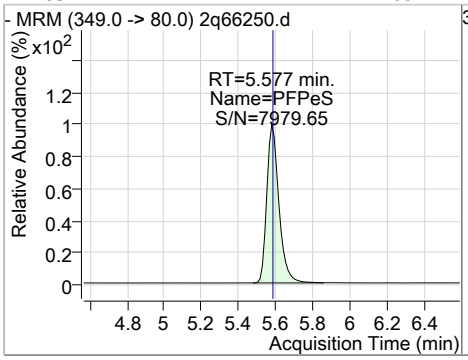
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	20.68	5.46	0.01	58040	313.0 -> 119.0	7.7	0.0	37.2

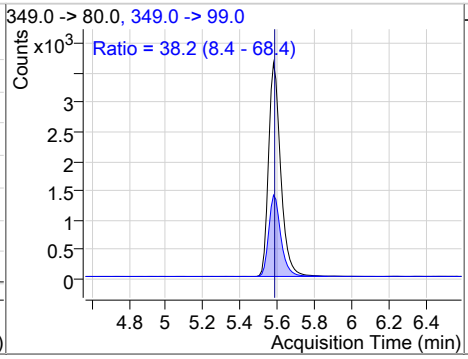


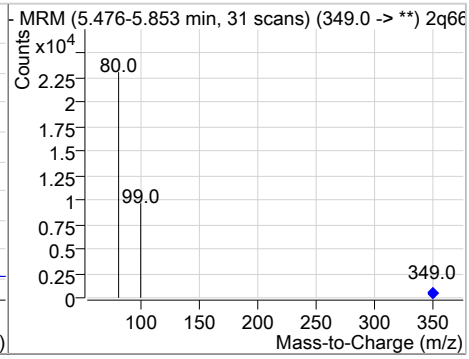




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	21.65	5.58	0.00	16386	349.0 -> 99.0	38.2	8.4	68.4

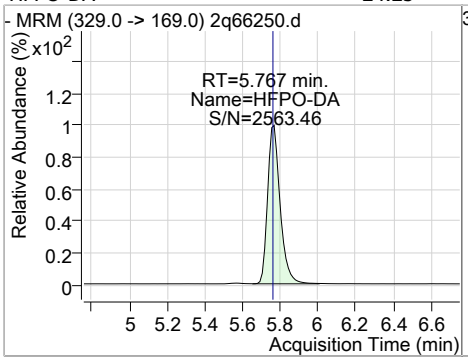


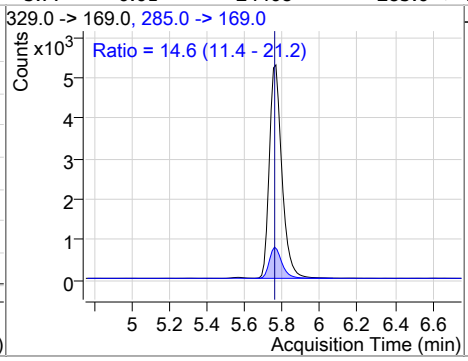


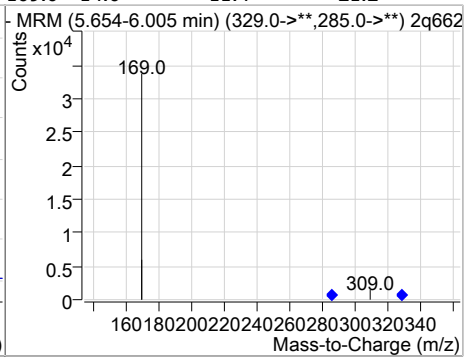


Perfluorinated Compounds by LC/MS/MS

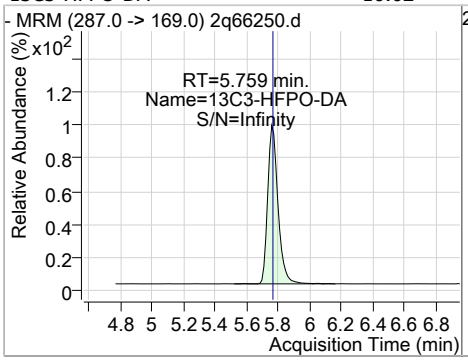
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	24.25	5.77	0.01	24408	285.0 -> 169.0	14.6	11.4	21.2

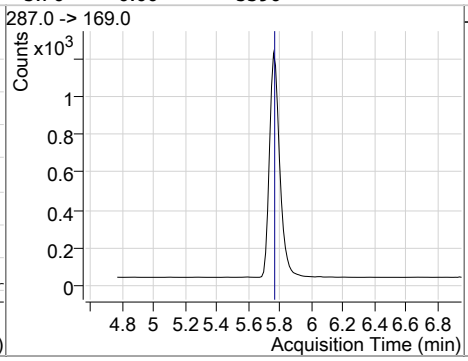


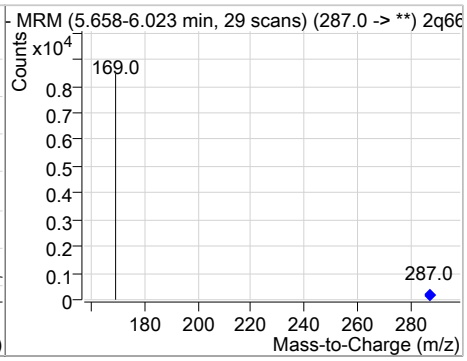




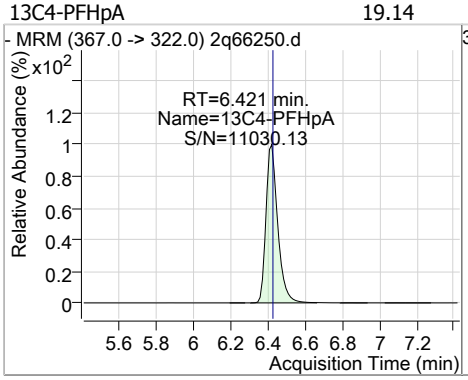
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	16.62	5.76	0.00	5390				

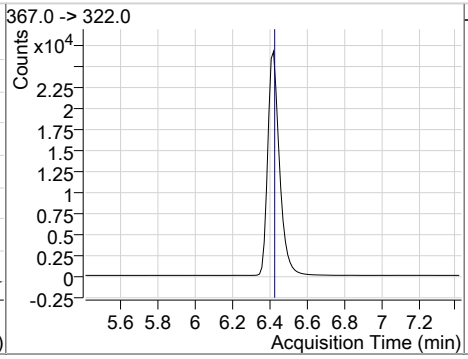


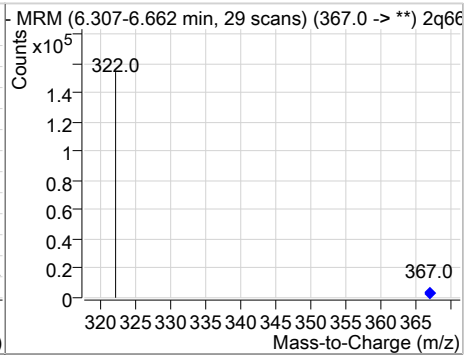




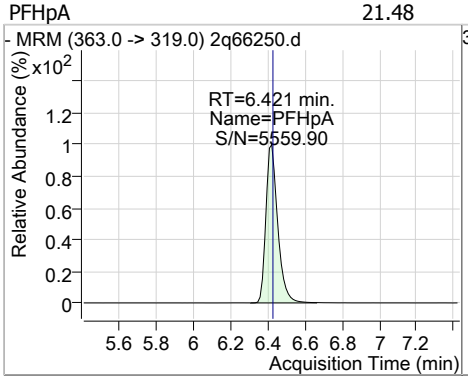
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.14	6.42	0.00	116471				

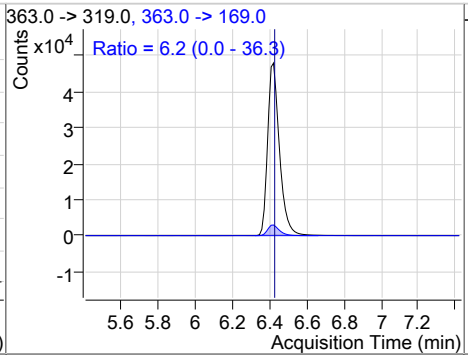


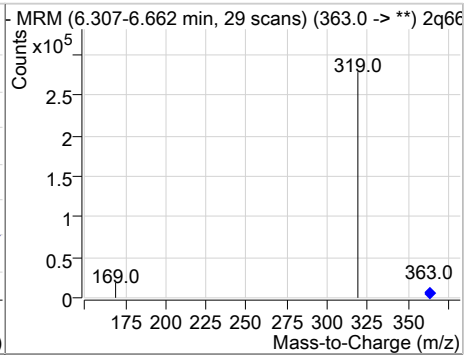




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	21.48	6.42	0.00	211559	363.0 -> 169.0	6.2	0.0	36.3

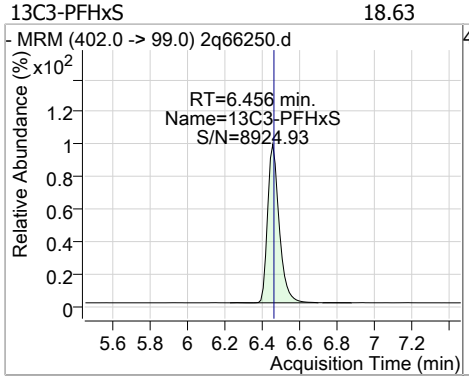


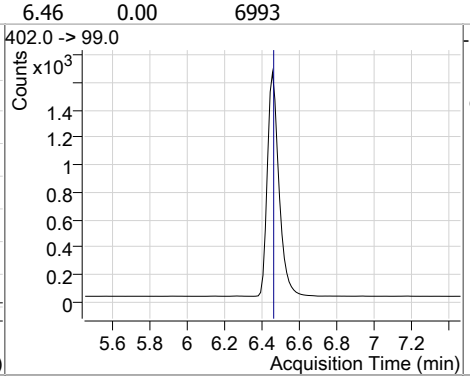


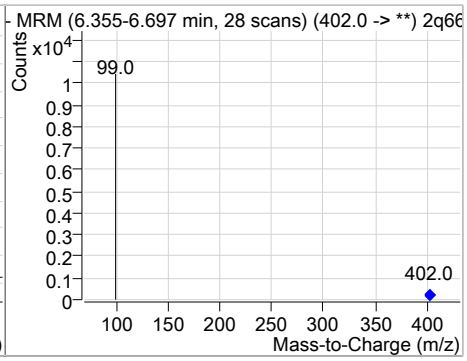


Perfluorinated Compounds by LC/MS/MS

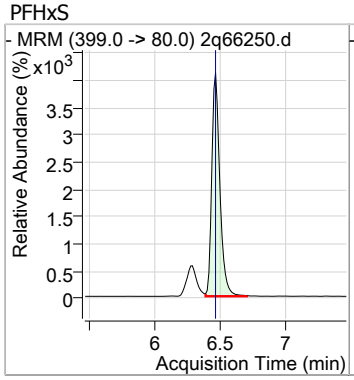
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	18.63	6.46	0.00	6993				

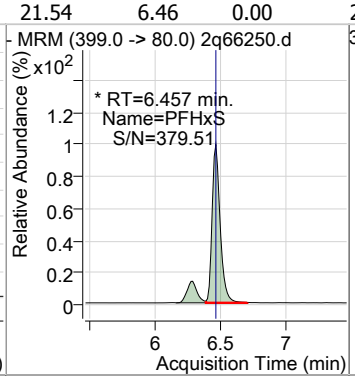


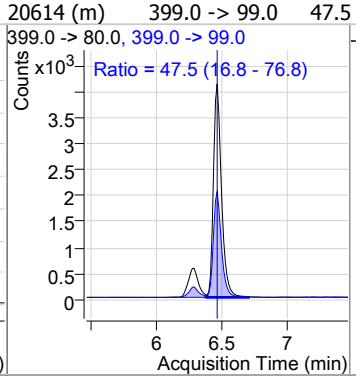


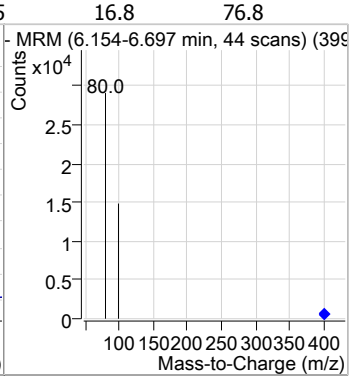


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	21.54	6.46	0.00	20614 (m)	399.0 -> 99.0	47.5	16.8	76.8

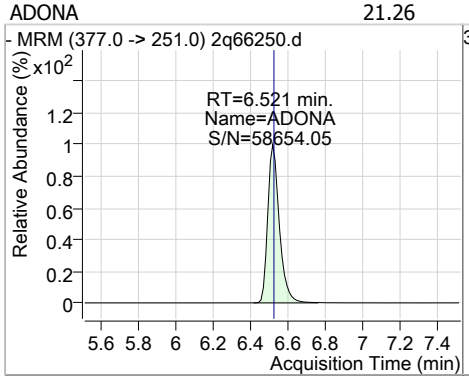


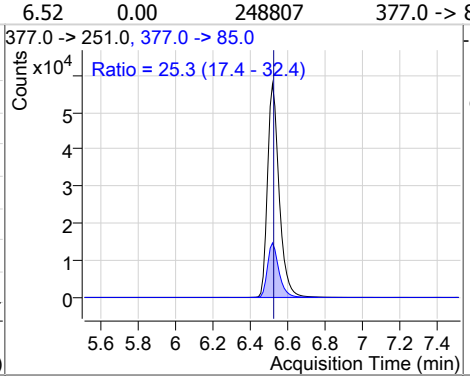


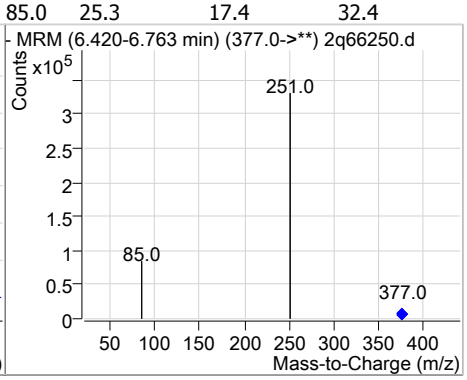




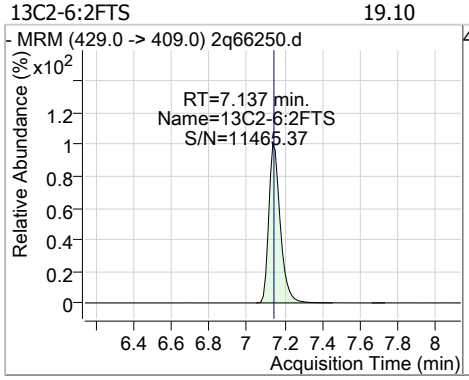
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	21.26	6.52	0.00	248807	377.0 -> 85.0	25.3	17.4	32.4

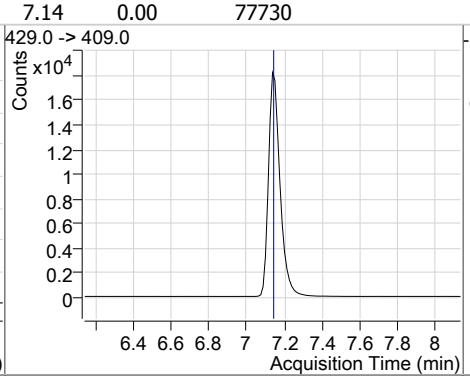


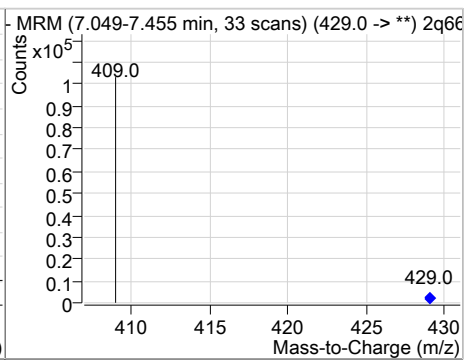




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.10	7.14	0.00	77730				

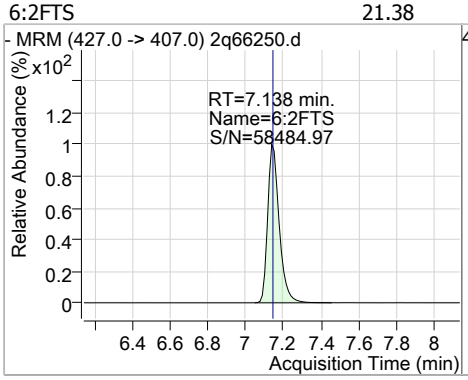


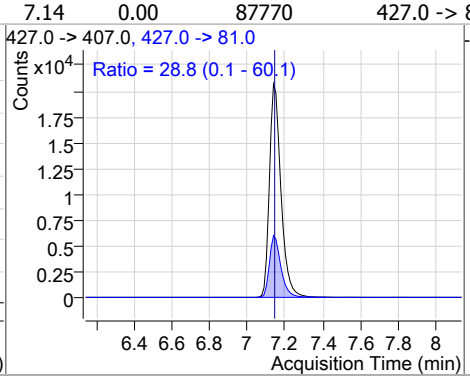


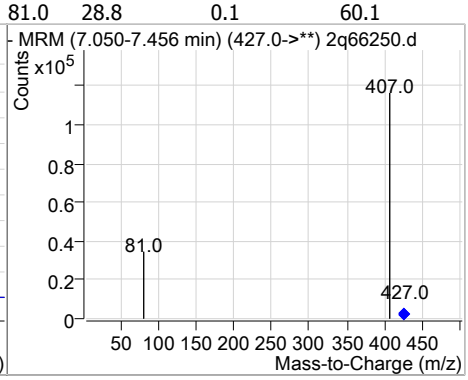


Perfluorinated Compounds by LC/MS/MS

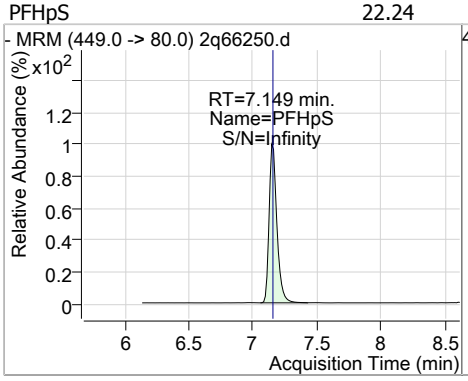
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	21.38	7.14	0.00	87770	427.0 -> 81.0	28.8	0.1	60.1

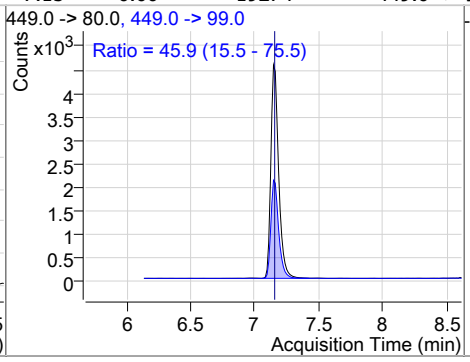


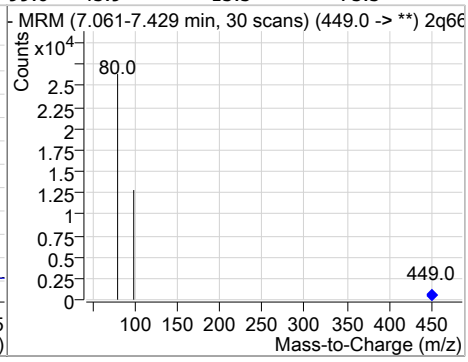




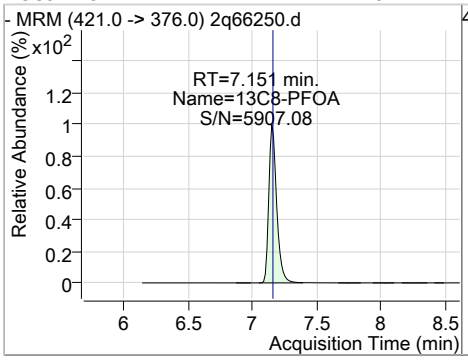
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	22.24	7.15	0.00	19274	449.0 -> 99.0	45.9	15.5	75.5

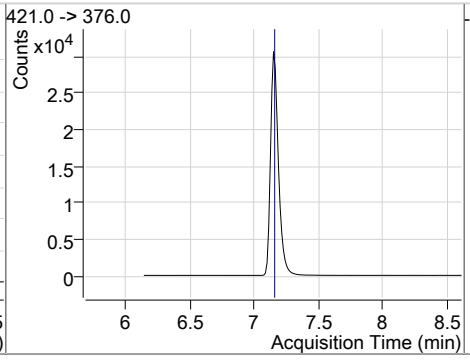


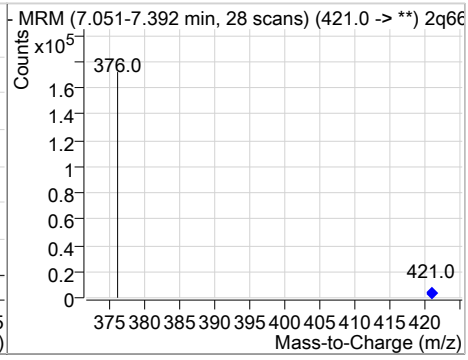




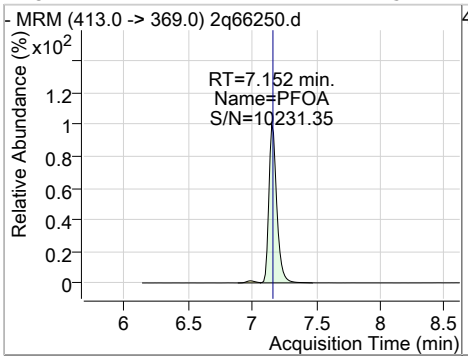
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	18.71	7.15	0.00	130471				

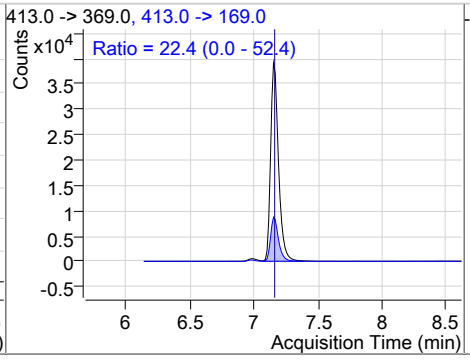


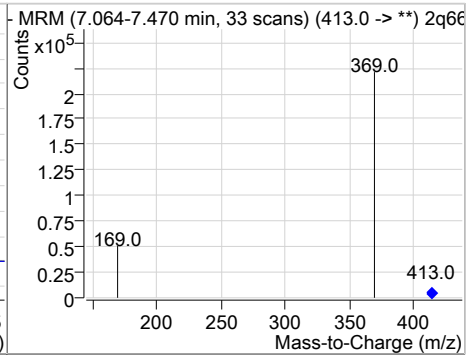




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	21.54	7.15	0.00	167242	413.0 -> 169.0	22.4	0.0	52.4

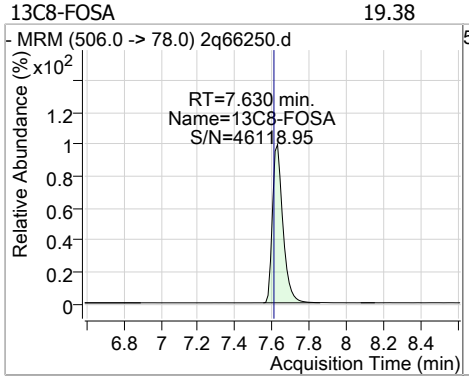


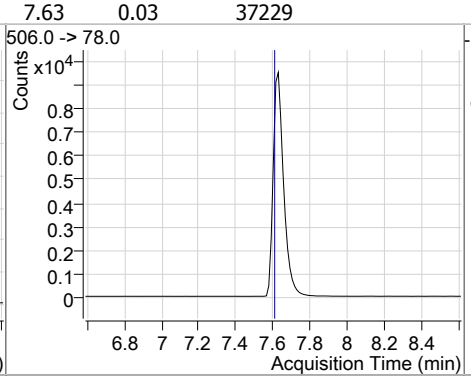


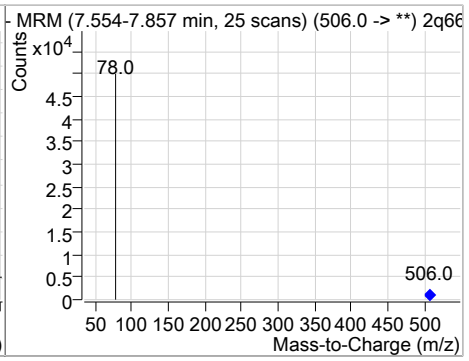


Perfluorinated Compounds by LC/MS/MS

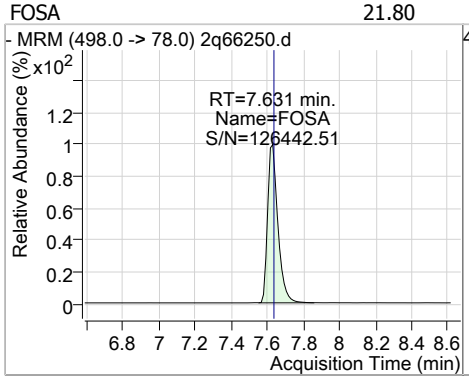
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	19.38	7.63	0.03	37229				

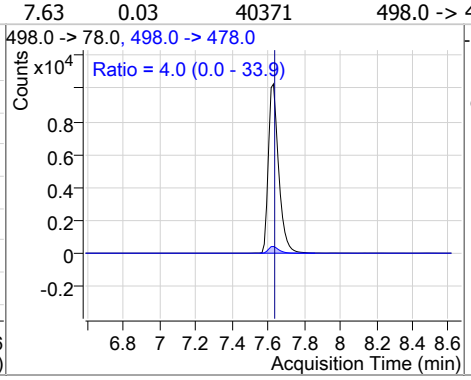


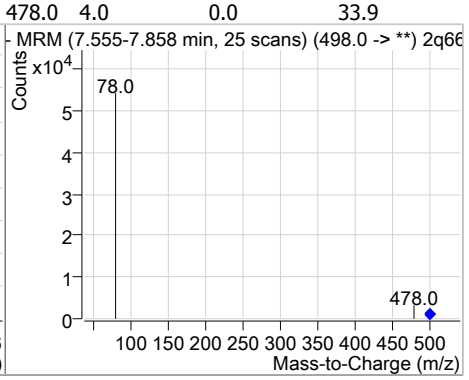




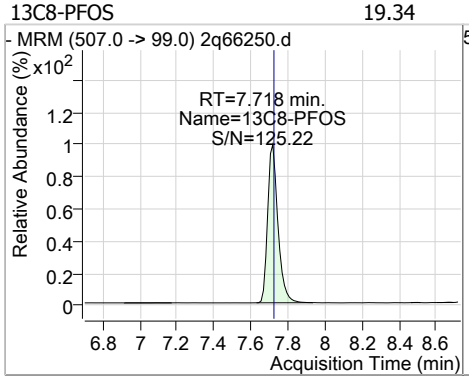
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	21.80	7.63	0.03	40371	498.0 -> 478.0	4.0	0.0	33.9

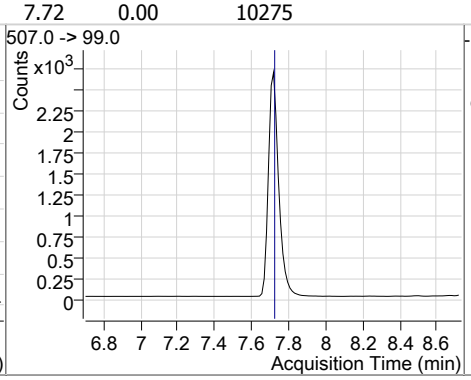


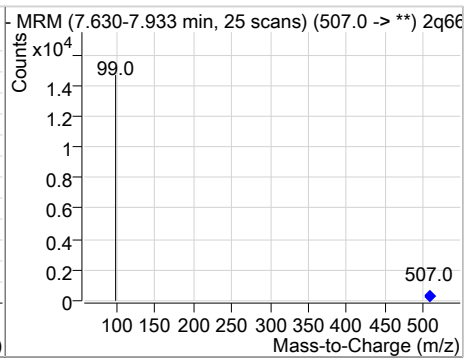




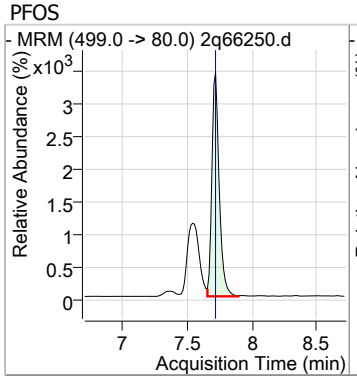
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.34	7.72	0.00	10275				

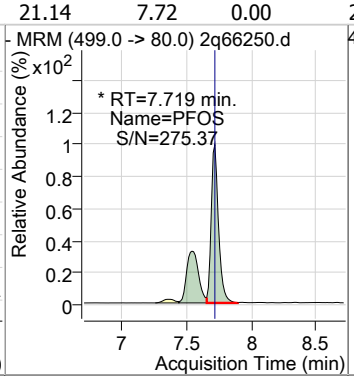


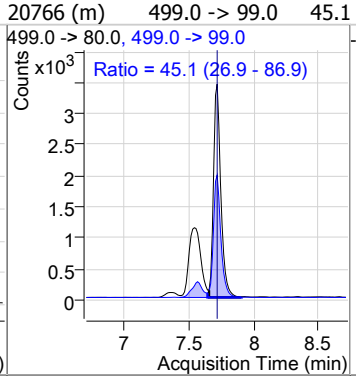


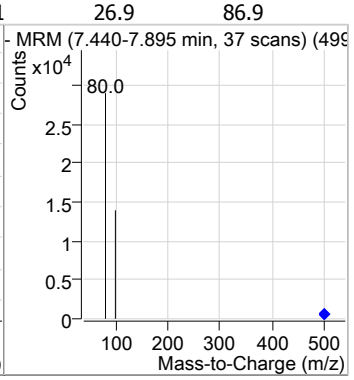


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	21.14	7.72	0.00	20766 (m)	499.0 -> 99.0	45.1	26.9	86.9



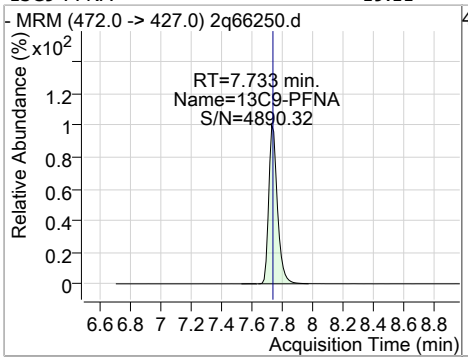


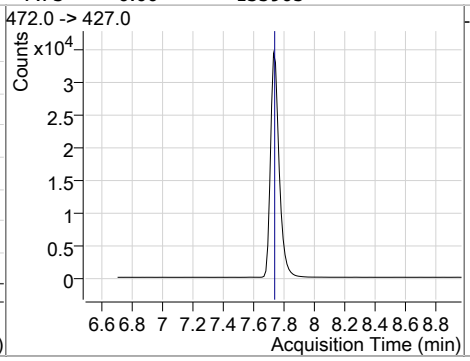


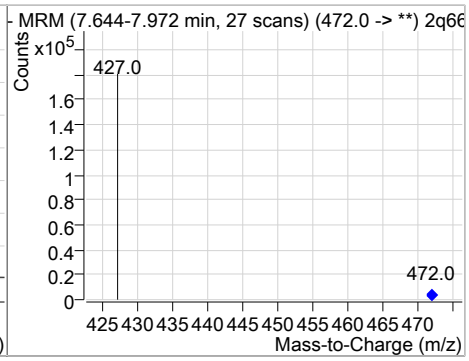


Perfluorinated Compounds by LC/MS/MS

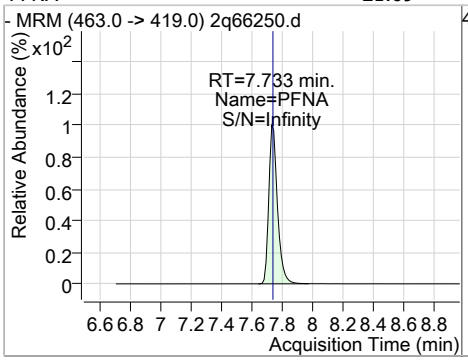
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.11	7.73	0.00	135905				

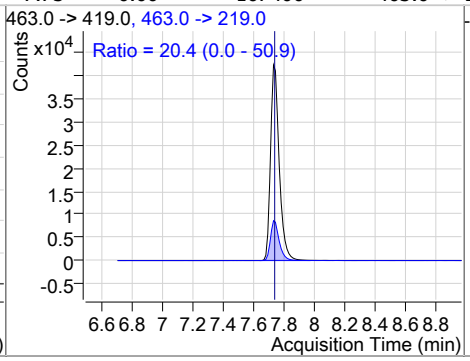


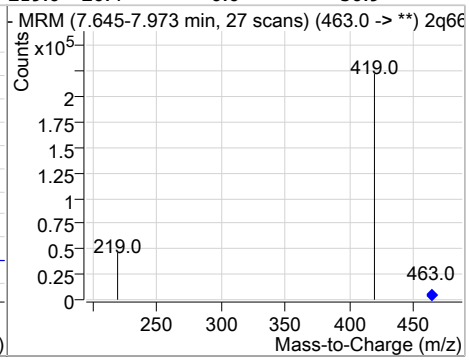




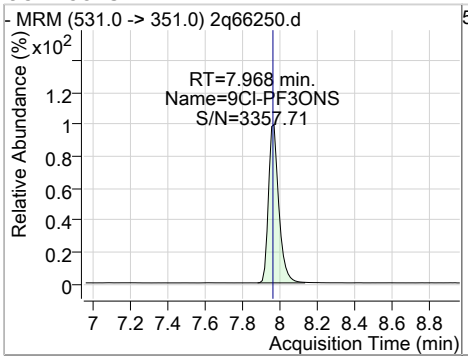
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	21.69	7.73	0.00	167400	463.0 -> 219.0	20.4	0.0	50.9

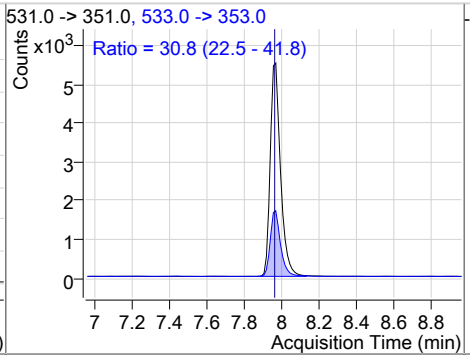


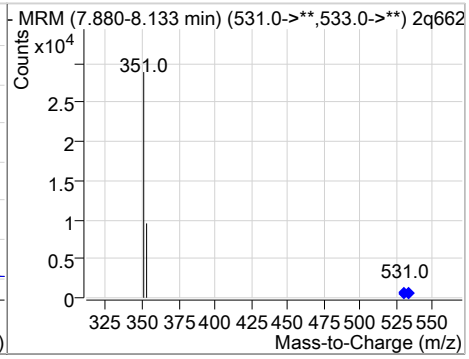




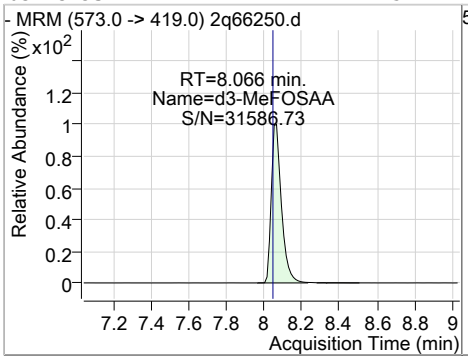
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	21.12	7.97	0.00	21206	533.0 -> 353.0	30.8	22.5	41.8

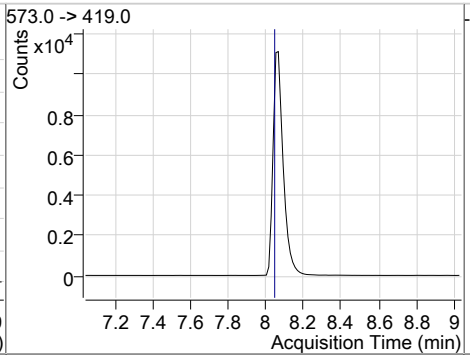


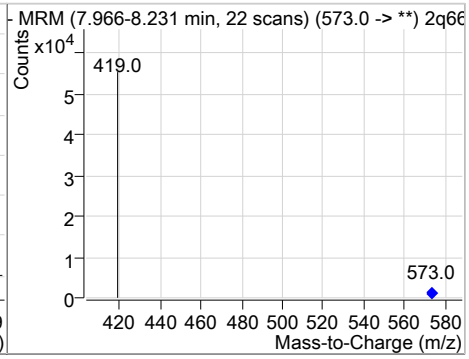




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	17.52	8.07	0.03	41548				

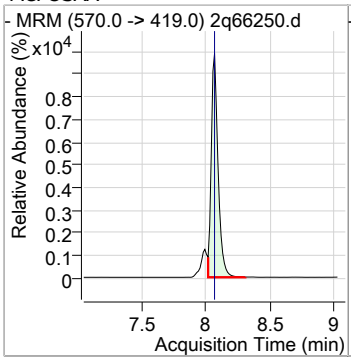


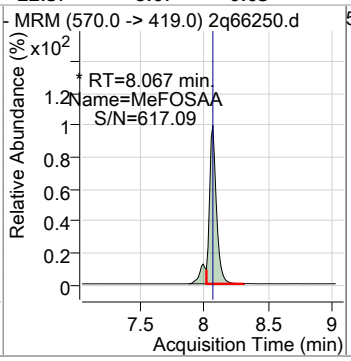


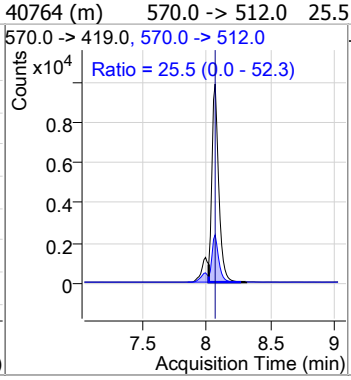


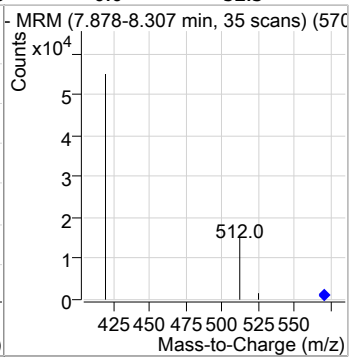
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	22.57	8.07	0.03	40764 (m)	570.0 -> 512.0	25.5	0.0	52.3

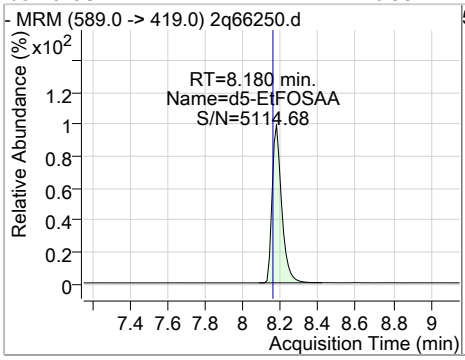


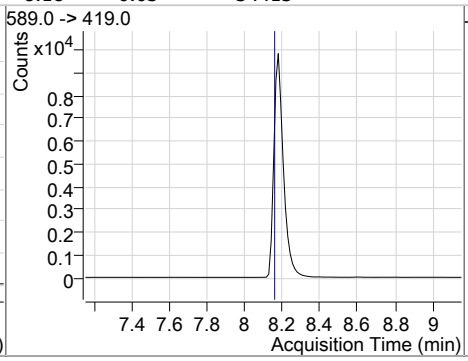


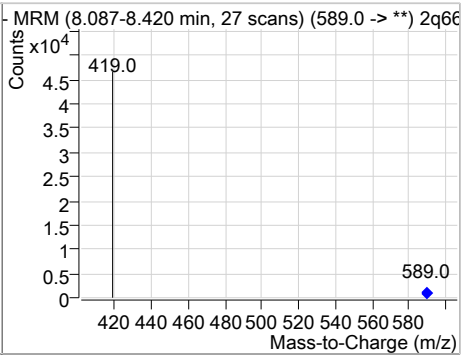




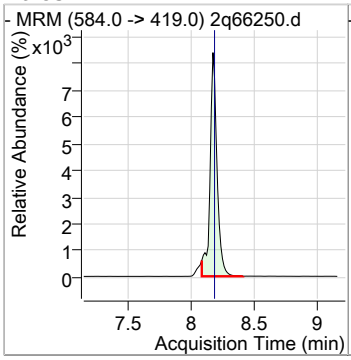
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	16.93	8.18	0.03	34413				

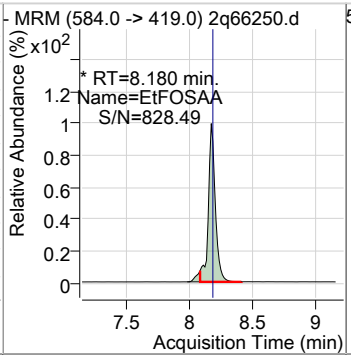


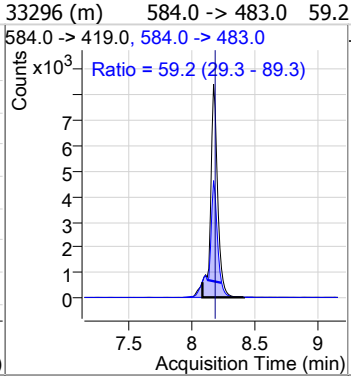


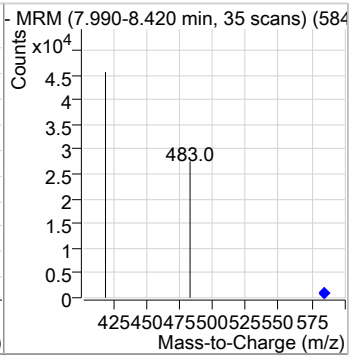


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	21.32	8.18	0.01	33296 (m)	584.0 -> 483.0	59.2	29.3	89.3

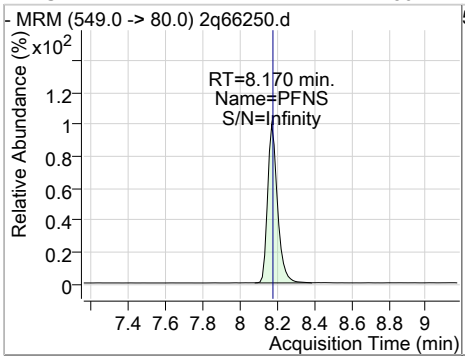


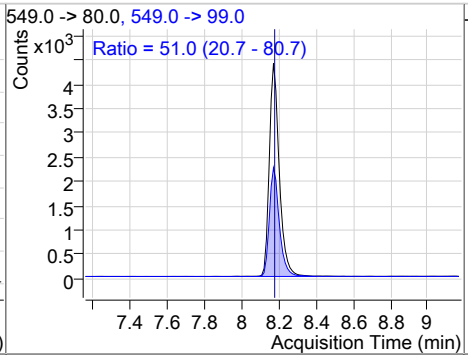


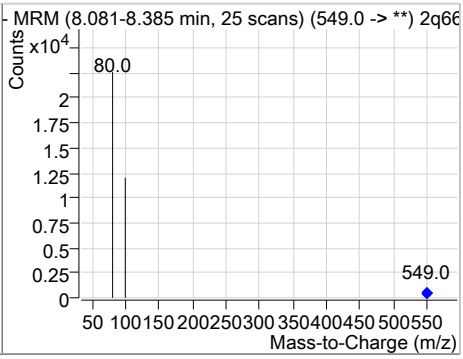




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	21.86	8.17	0.00	16309	549.0 -> 99.0	51.0	20.7	80.7

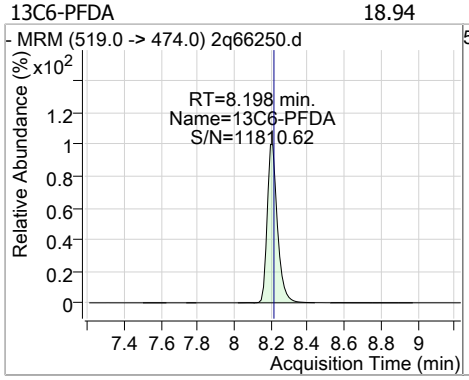


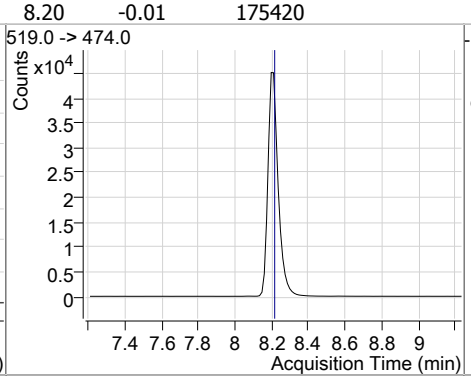


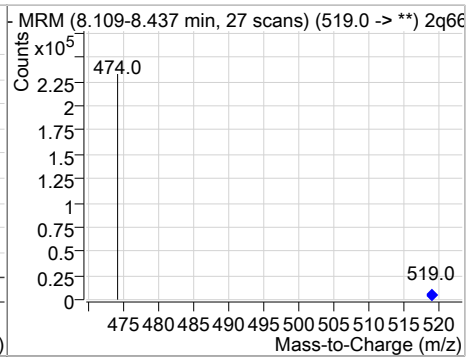


Perfluorinated Compounds by LC/MS/MS

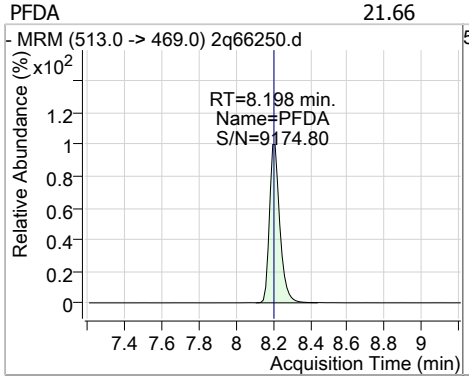
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.94	8.20	-0.01	175420				

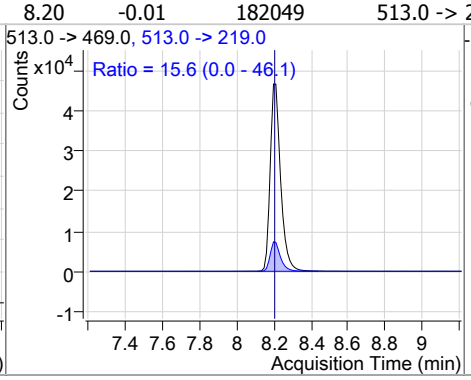


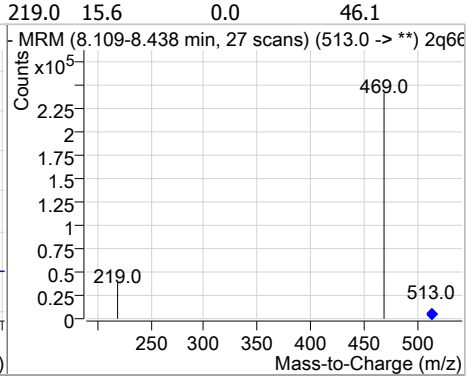




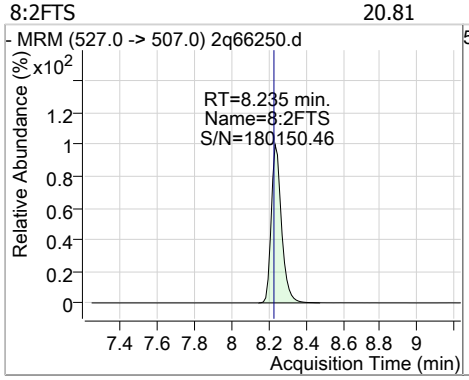
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	21.66	8.20	-0.01	182049	513.0 -> 219.0	15.6	0.0	46.1

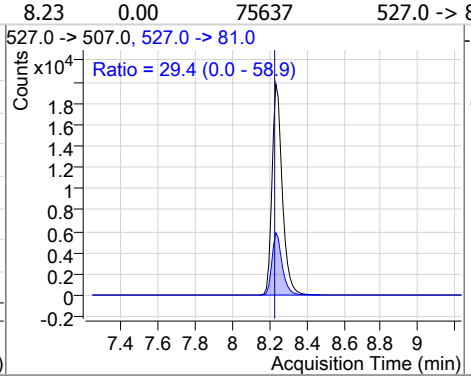


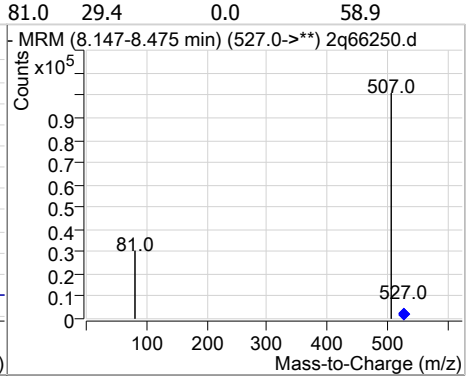




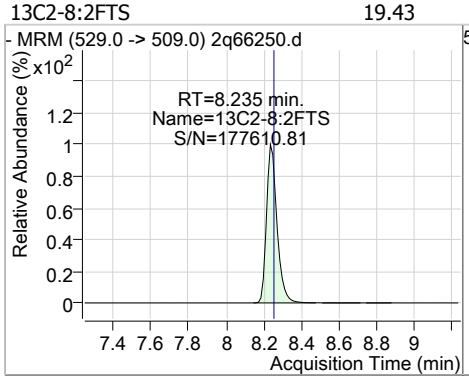
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.81	8.23	0.00	75637	527.0 -> 81.0	29.4	0.0	58.9

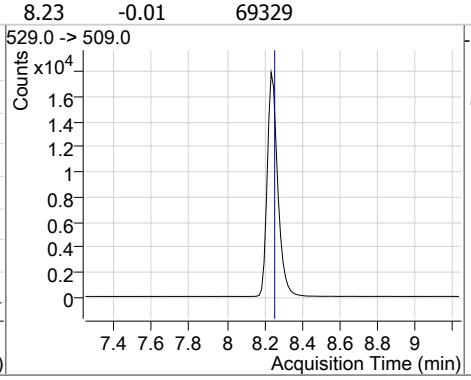


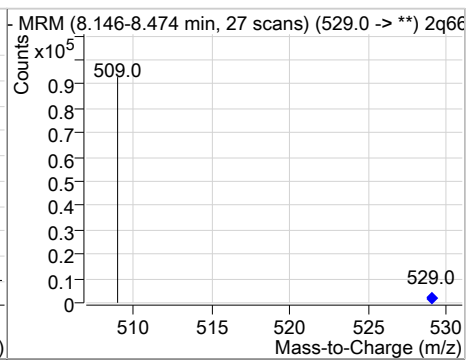




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.43	8.23	-0.01	69329				

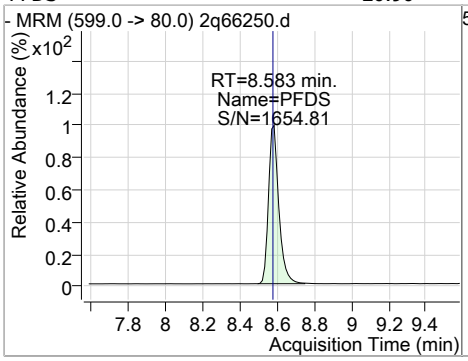


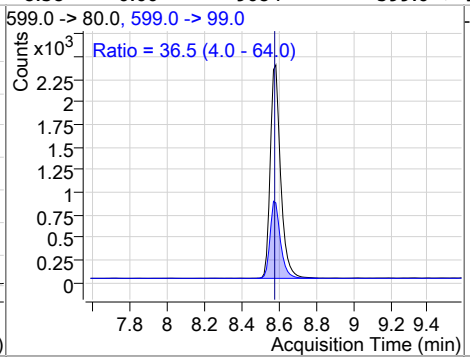


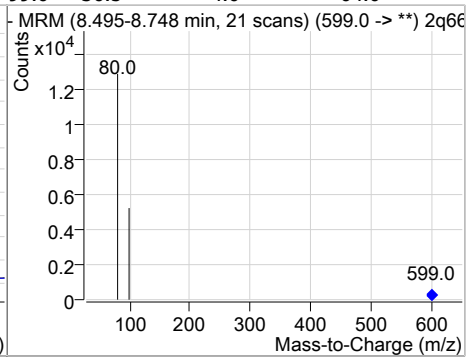


Perfluorinated Compounds by LC/MS/MS

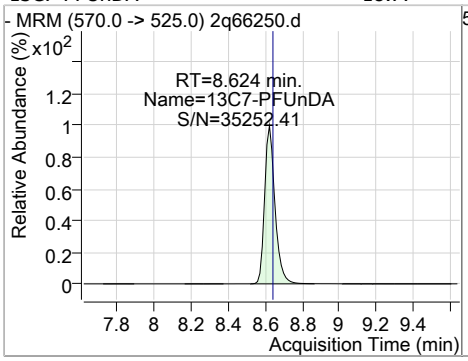
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	20.90	8.58	0.00	9084	599.0 -> 99.0	36.5	4.0	64.0

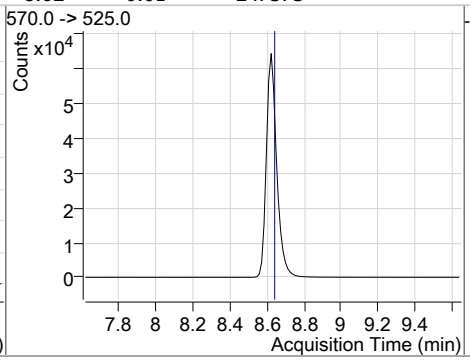


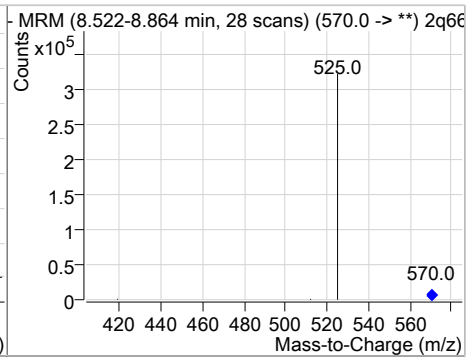




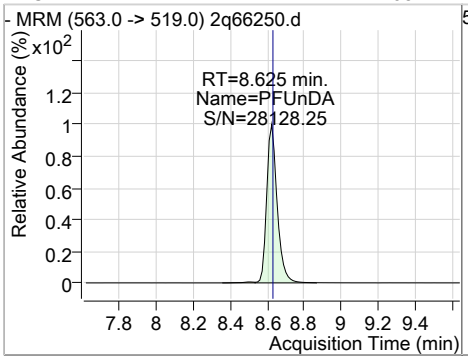
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	18.77	8.62	-0.01	247373				

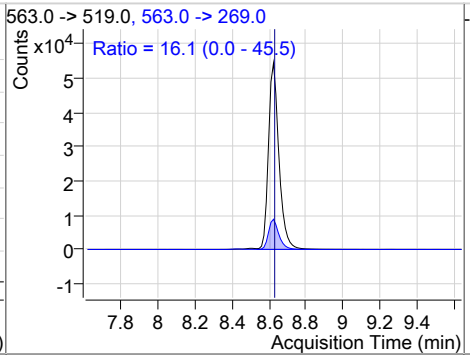


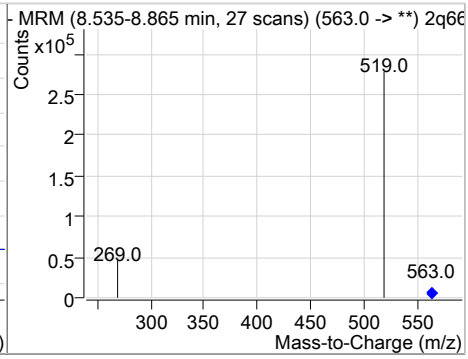




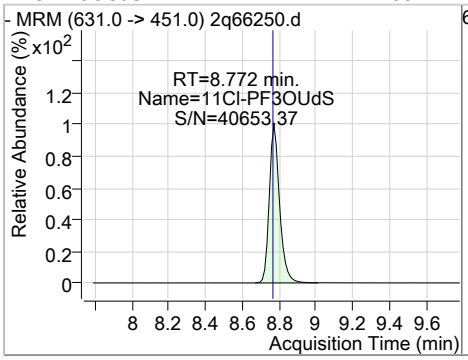
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	21.08	8.62	-0.01	212812	563.0 -> 269.0	16.1	0.0	45.5

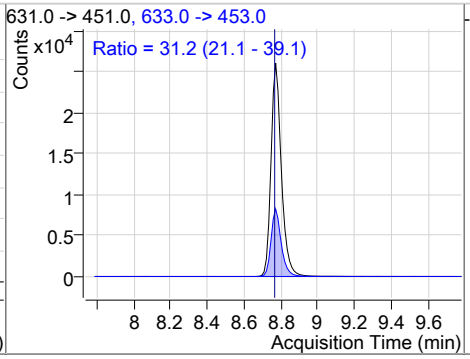


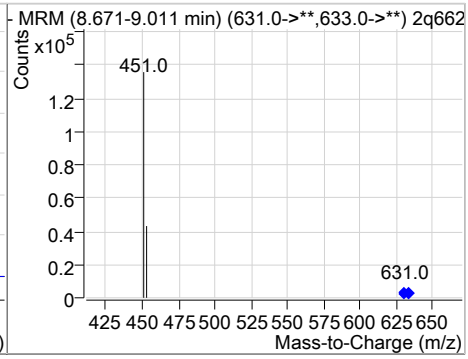




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	22.35	8.77	-0.01	101599	633.0 -> 453.0	31.2	21.1	39.1

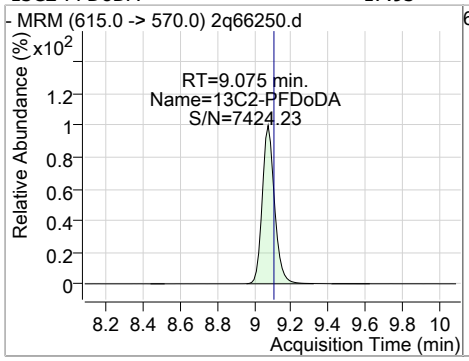


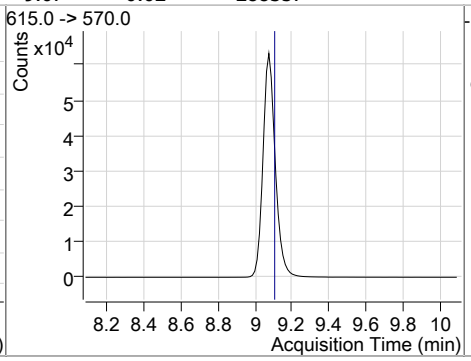


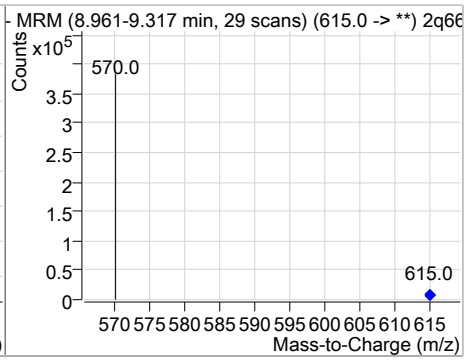


Perfluorinated Compounds by LC/MS/MS

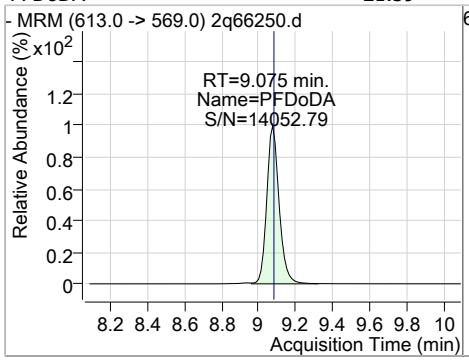
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	17.93	9.07	-0.02	288357				

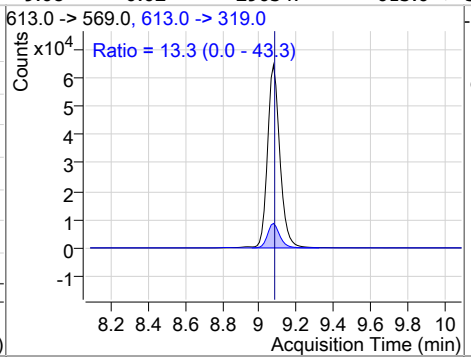


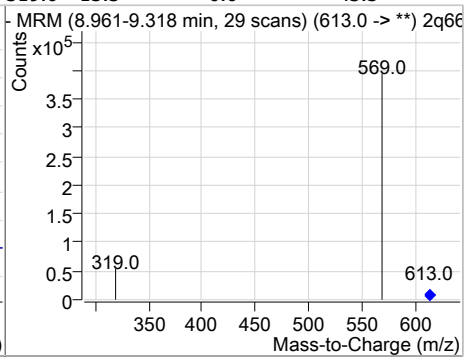




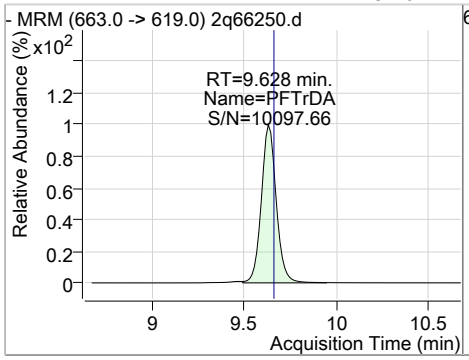
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	21.39	9.08	-0.02	296347	613.0 -> 319.0	13.3	0.0	43.3

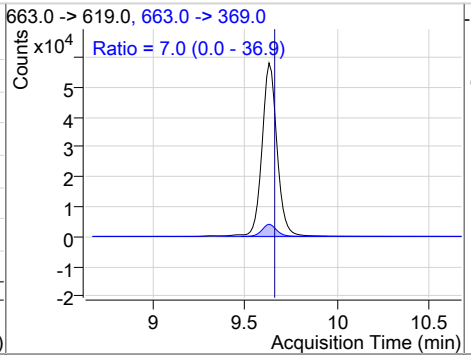


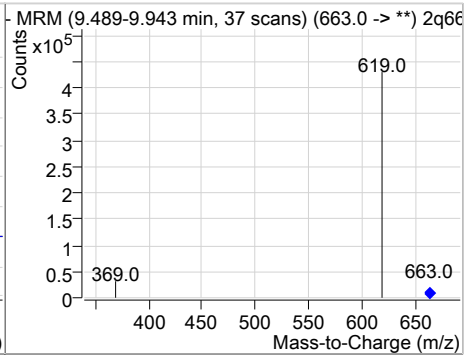




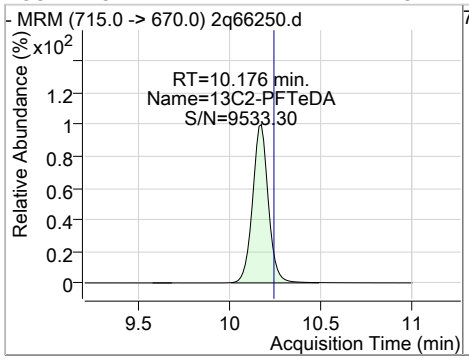
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	19.46	9.63	-0.05	325588	663.0 -> 369.0	7.0	0.0	36.9

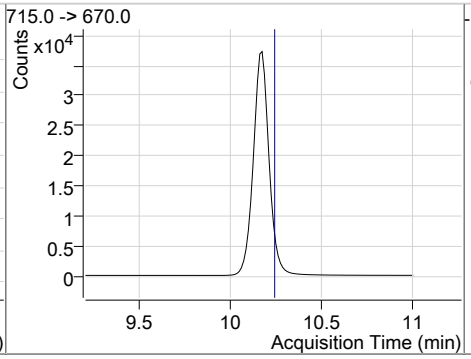


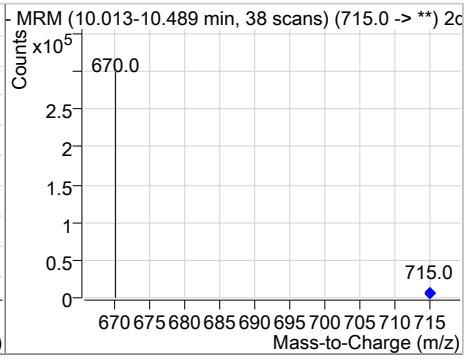




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	17.29	10.18	-0.06	223042				



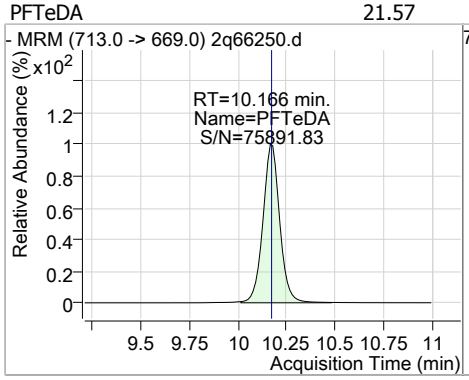


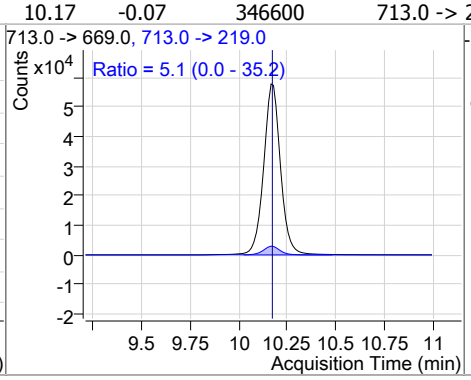


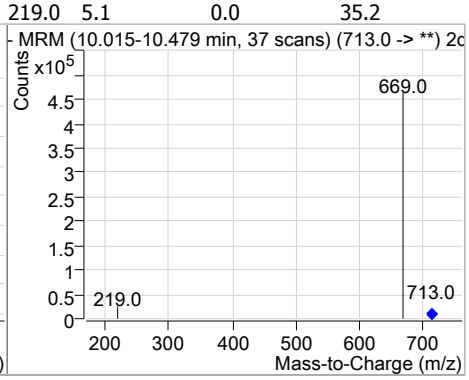
11.6.13 11

Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	21.57	10.17	-0.07	346600	713.0 -> 219.0	5.1	0.0	35.2







Manual Integration Approval Summary

Sample Number: S2Q963-CC956
Lab FileID: 2Q66250.D
Injection Time: 04/17/21 06:02
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/18/21 11:31 Nancy Saunders
Supervisor approved: 04/19/21 15:44 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.46	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
MeFOSAA	2355-31-9		8.07	Split peak
EtFOSAA	2991-50-6		8.18	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:44

Perfluorinated Compounds by LC/MS/MS

Data File : 2q66258.d
Operator : nancyf
Acq. Method : 537_ID.m
Acq. Date-Time : 4/17/2021 8:14:42 AM
Sample Name : ecc956-20
Vial : P1-A7
DA Method File : ID_040821_S2Q956.quantmethod.xml
Batch Name : s2q963.batch.bin
Sample Information : op84308,S2Q963,250,,,1.0,1,water

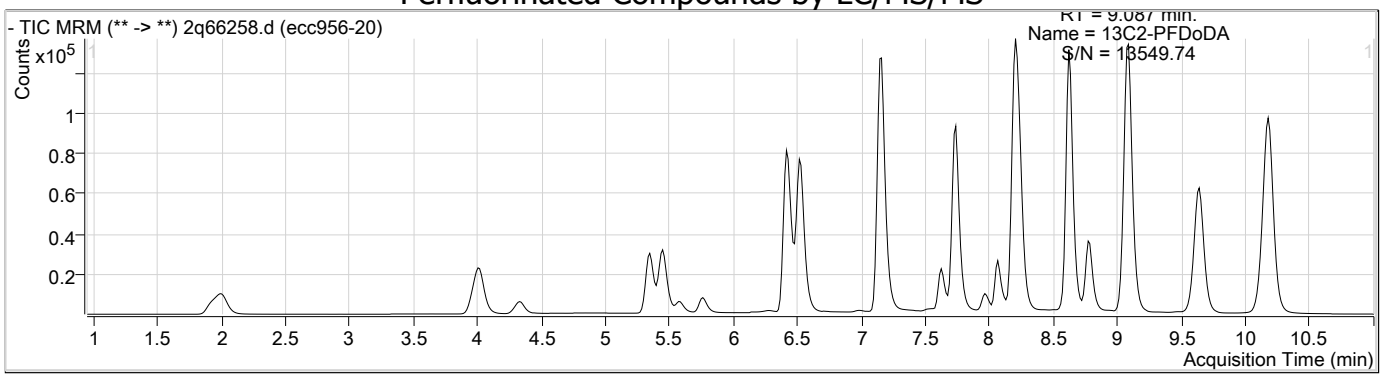
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M5-EtFOSAA	8.180	589.0 -> 419.0	34637	20.00	µg/L	0.025
M4-PFBA	1.989	217.0 -> 172.0	66042	20.00	µg/L	0.000
M5-PFPeA	4.012	268.0 -> 223.0	53330	20.00	µg/L	0.000
M5-PFHxA	5.454	318.0 -> 273.0	79894	20.00	µg/L	0.013
M4-PFHpA	6.421	367.0 -> 322.0	116938	20.00	µg/L	0.000
M8-PFOA	7.165	421.0 -> 376.0	132866	20.00	µg/L	0.013
M9-PFNA	7.745	472.0 -> 427.0	135689	20.00	µg/L	0.013
M6-PFDA	8.210	519.0 -> 474.0	178463	20.00	µg/L	0.000
M7-PFUnDA	8.624	570.0 -> 525.0	250205	20.00	µg/L	-0.012
M2-PFDoDA	9.087	615.0 -> 570.0	292153	20.00	µg/L	-0.012
M2-PFTeDA	10.176	715.0 -> 670.0	224200	20.00	µg/L	-0.062
M8-FOSA	7.630	506.0 -> 78.0	37658	20.00	µg/L	0.026
M3-PFBS	4.330	302.0 -> 99.0	6487	20.00	µg/L	0.000
M3-PFHxS	6.456	402.0 -> 99.0	7248	20.00	µg/L	0.000
M8-PFOS	7.718	507.0 -> 99.0	10470	20.00	µg/L	0.000
M2-4:2FTS	5.348	329.0 -> 309.0	56489	20.00	µg/L	0.013
M2-6:2FTS	7.150	429.0 -> 409.0	77938	20.00	µg/L	0.013
M2-8:2FTS	8.247	529.0 -> 509.0	69819	20.00	µg/L	0.000
M3-MeFOSAA	8.066	573.0 -> 419.0	42162	20.00	µg/L	0.025
M3-HFPO-DA	5.771	287.0 -> 169.0	5432	20.00	µg/L	0.013
System Monitoring Compounds						
13C2-4:2FTS	5.348	329.0 -> 309.0	56489	19.41	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.0%		
13C2-6:2FTS	7.150	429.0 -> 409.0	77938	19.15	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.8%		
13C2-8:2FTS	8.247	529.0 -> 509.0	69819	19.57	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.9%		
13C2-PFDoDA	9.087	615.0 -> 570.0	292153	18.16	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.8%		
13C2-PFTeDA	10.176	715.0 -> 670.0	224200	17.38	µg/L	-0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.9%		
13C3-PFBS	4.330	302.0 -> 99.0	6487	19.20	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.0%		
13C3-PFHxS	6.456	402.0 -> 99.0	7248	19.30	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.5%		
13C4-PFBA	1.989	217.0 -> 172.0	66042	19.67	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.3%		
13C4-PFHpA	6.421	367.0 -> 322.0	116938	19.21	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.1%		
d5-EtFOSAA	8.180	589.0 -> 419.0	34637	17.04	ng/ml	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.2%		
13C5-PFHxA	5.454	318.0 -> 273.0	79894	19.17	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.9%		
13C5-PFPeA	4.012	268.0 -> 223.0	53330	19.33	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.6%		

Perfluorinated Compounds by LC/MS/MS

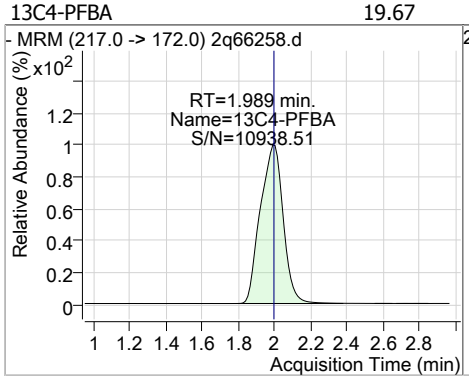
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C6-PFDA	8.210	519.0 -> 474.0	178463	19.27	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.3%			
13C7-PFUnDA	8.624	570.0 -> 525.0	250205	18.98	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.9%			
13C8-FOSA	7.630	506.0 -> 78.0	37658	19.60	µg/L		0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%			
13C8-PFOA	7.165	421.0 -> 376.0	132866	19.05	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.2%			
13C8-PFOS	7.718	507.0 -> 99.0	10470	19.71	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.5%			
13C9-PFNA	7.745	472.0 -> 427.0	135689	19.08	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.4%			
d3-MeFOSAA	8.066	573.0 -> 419.0	42162	17.77	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.9%			
13C3-HFPO-DA	5.771	287.0 -> 169.0	5432	16.75	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.7%			
Target Compounds							**QValue**
4:2FTS	5.350	327.0 -> 307.0	63559	21.36	µg/L		98
6:2FTS	7.150	427.0 -> 407.0	87997	21.38	µg/L		97
8:2FTS	8.248	527.0 -> 507.0	77411	21.15	µg/L		100
EtFOSAA	8.180	584.0 -> 419.0	34465	21.93	µg/L	m	97
FOSA	7.631	498.0 -> 78.0	40490	21.62	µg/L		99
MeFOSAA	8.067	570.0 -> 419.0	39138	21.35	µg/L	m	92
PFBA	1.996	213.0 -> 169.0	23174	20.79	µg/L		100
PFBS	4.332	299.0 -> 80.0	21339	21.13	µg/L		99
PFDA	8.211	513.0 -> 469.0	182318	21.32	µg/L		100
PFDoDA	9.088	613.0 -> 569.0	295193	21.03	µg/L		99
PFDS	8.583	599.0 -> 80.0	9370	21.32	µg/L		99
PFHpA	6.421	363.0 -> 319.0	211542	21.39	µg/L		100
PFHpS	7.163	449.0 -> 80.0	19438	21.64	µg/L		98
PFHxA	5.455	313.0 -> 269.0	58398	20.90	µg/L		99
PFHxS	6.457	399.0 -> 80.0	20922	21.10	µg/L	m	99
PFNA	7.745	463.0 -> 419.0	168639	21.89	µg/L		99
PFNS	8.170	549.0 -> 80.0	16387	21.56	µg/L		100
PFOA	7.165	413.0 -> 369.0	169236	21.40	µg/L		99
PFOS	7.719	499.0 -> 80.0	20920	20.90	µg/L	m	82
PFPeA	4.014	263.0 -> 219.0	93498	21.45	µg/L		100
PFPeS	5.577	349.0 -> 80.0	16288	21.26	µg/L		99
PFTeDA	10.179	713.0 -> 669.0	344701	21.34	µg/L		100
PFTrDA	9.641	663.0 -> 619.0	328324	19.37	µg/L		100
PFUnDA	8.625	563.0 -> 519.0	217385	21.29	µg/L		99
11Cl-PF3OUdS	8.772	631.0 -> 451.0	105279	22.86	µg/L		99
9Cl-PF3ONS	7.968	531.0 -> 351.0	21057	20.61	µg/L		99
ADONA	6.521	377.0 -> 251.0	250149	20.99	µg/L		100
HFPO-DA	5.767	329.0 -> 169.0	24336	23.99	µg/L		98

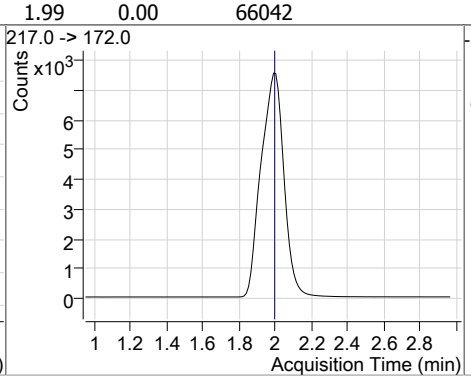
 # = Qualifier out of range, m = manually integrated, + = Area summed

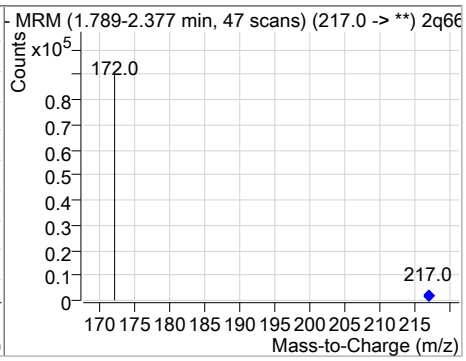
Perfluorinated Compounds by LC/MS/MS



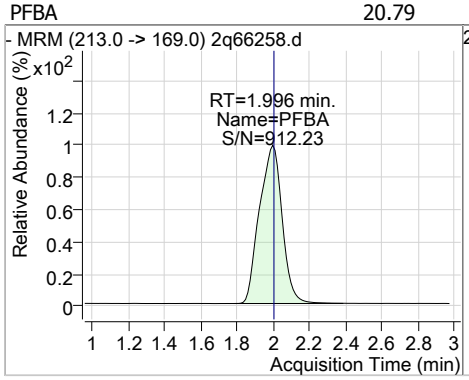
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.67	1.99	0.00	66042				

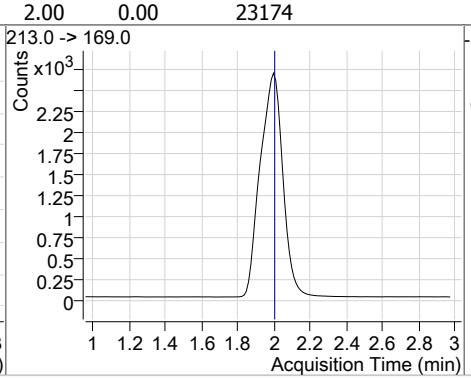


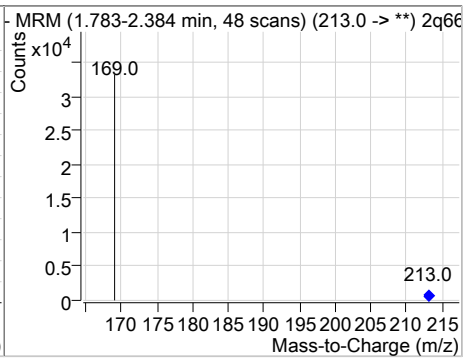




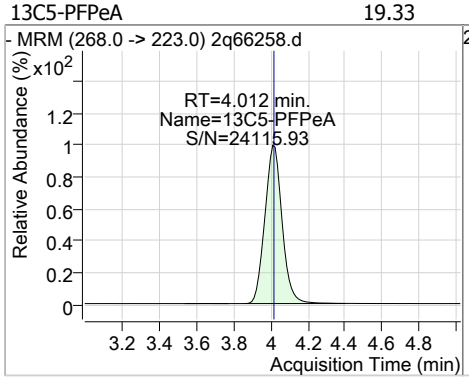
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	20.79	2.00	0.00	23174				

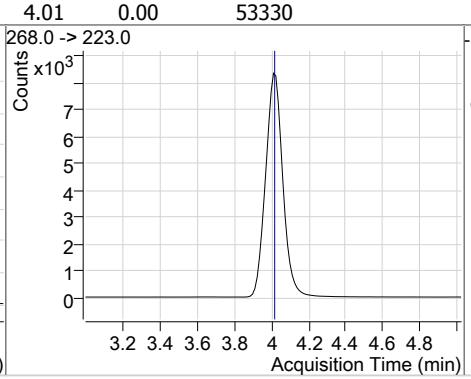


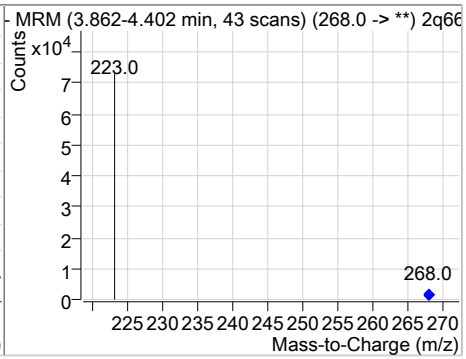




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.33	4.01	0.00	53330				





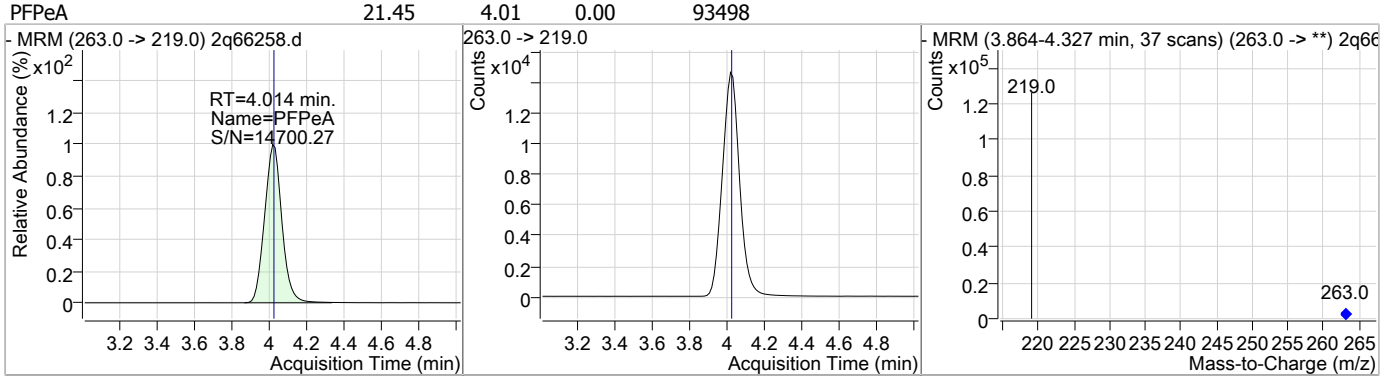


11.6.14

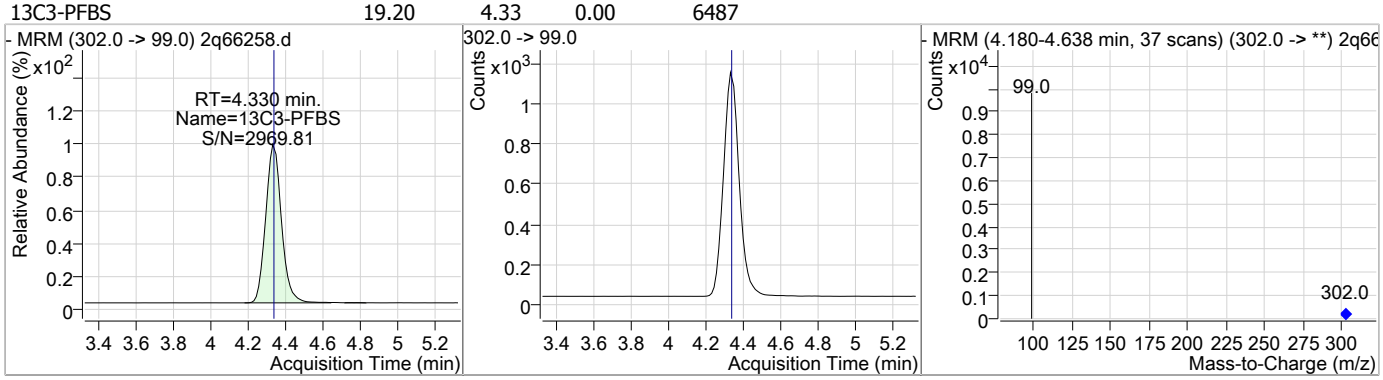
11

Perfluorinated Compounds by LC/MS/MS

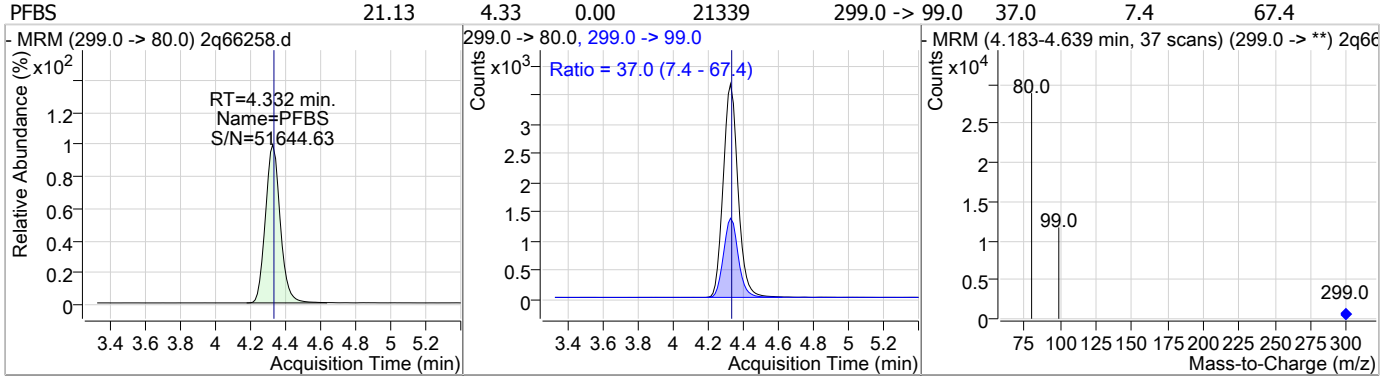
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	21.45	4.01	0.00	93498				



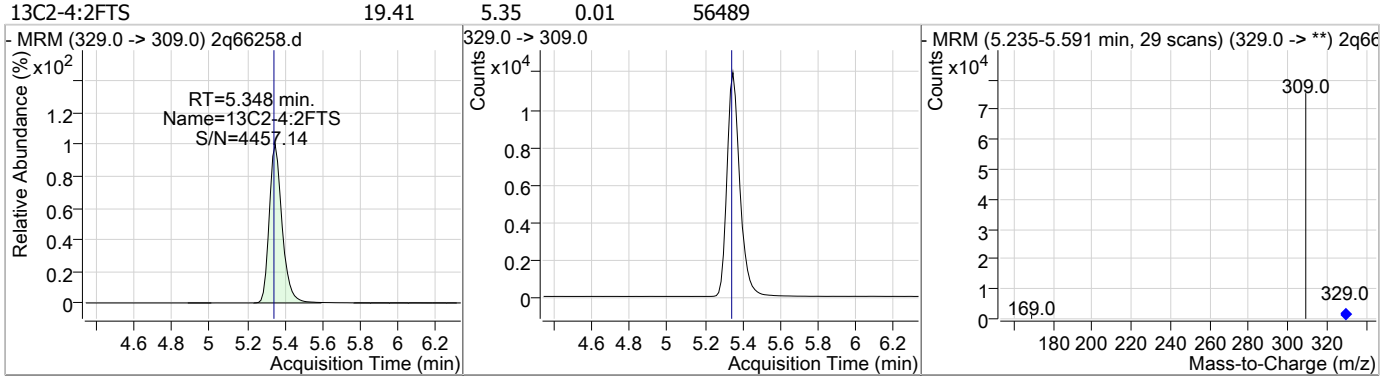
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.20	4.33	0.00	6487				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	21.13	4.33	0.00	21339	299.0 -> 99.0	37.0	7.4	67.4

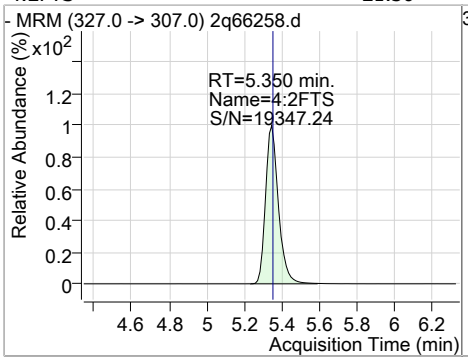


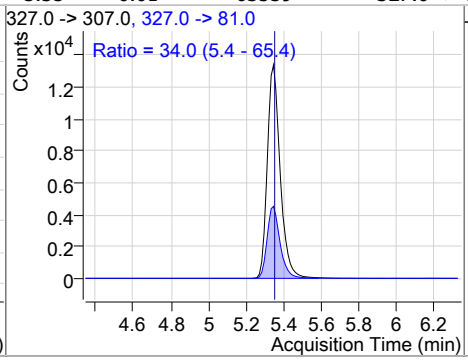
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.41	5.35	0.01	56489				

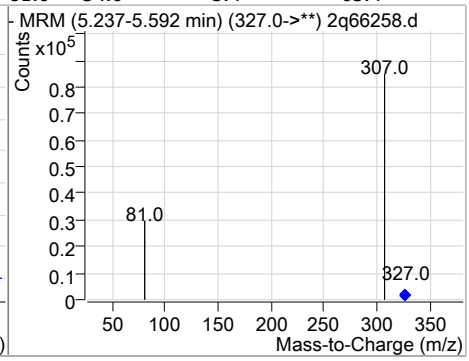


Perfluorinated Compounds by LC/MS/MS

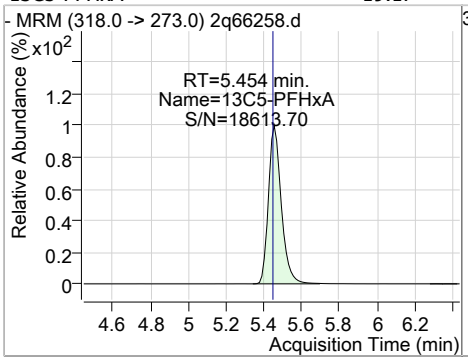
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	21.36	5.35	0.01	63559	327.0 -> 81.0	34.0	5.4	65.4

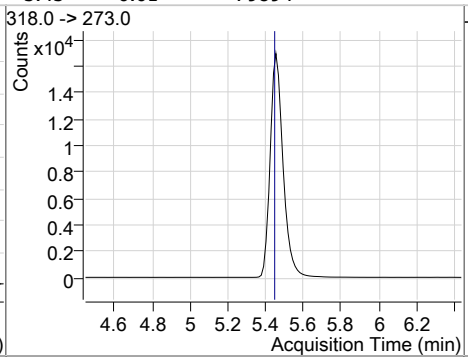


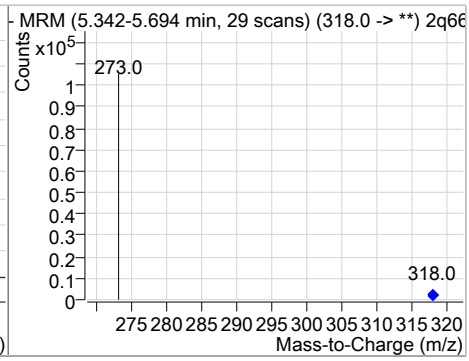




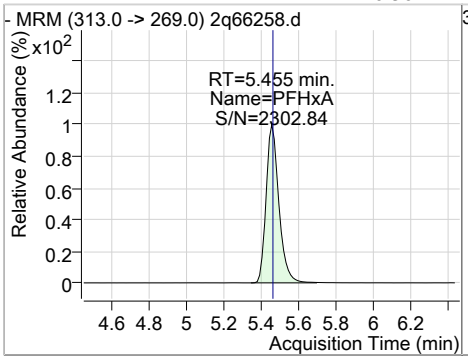
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.17	5.45	0.01	79894				

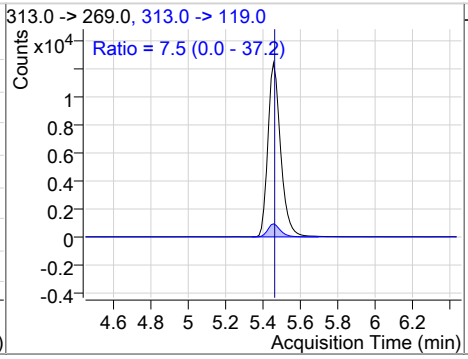


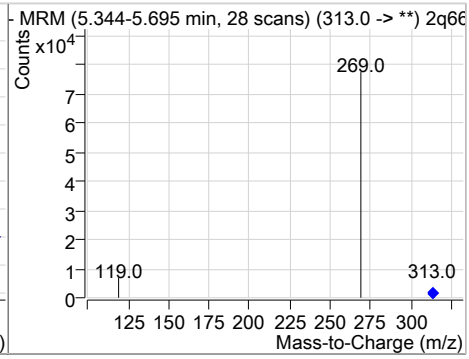




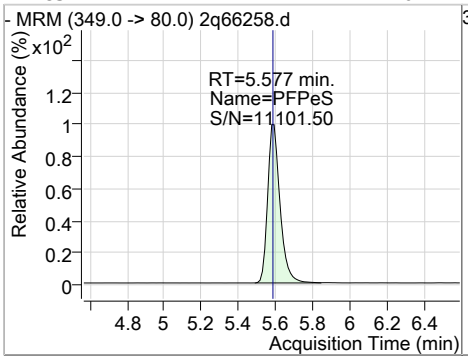
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	20.90	5.46	0.01	58398	313.0 -> 119.0	7.5	0.0	37.2

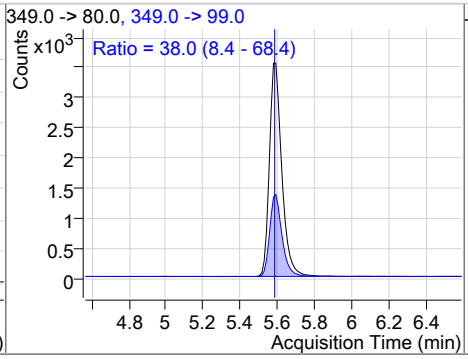


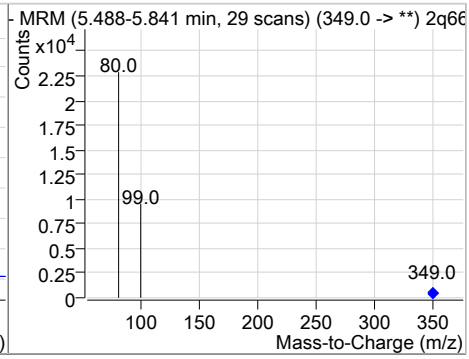




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	21.26	5.58	0.00	16288	349.0 -> 99.0	38.0	8.4	68.4

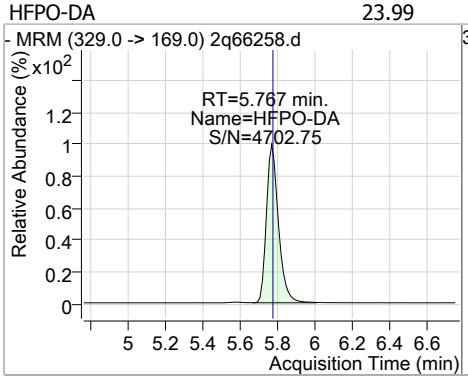


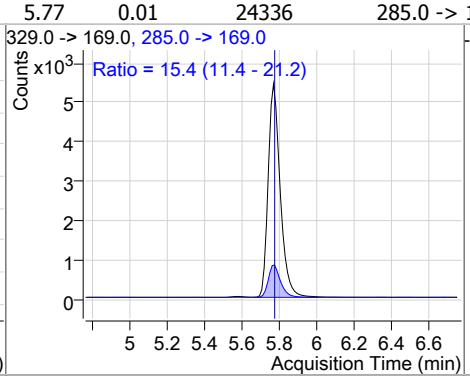


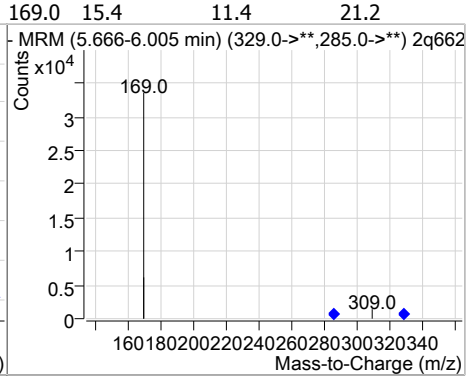


Perfluorinated Compounds by LC/MS/MS

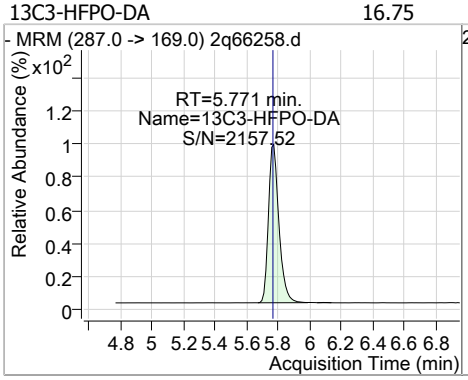
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	23.99	5.77	0.01	24336	285.0 -> 169.0	15.4	11.4	21.2

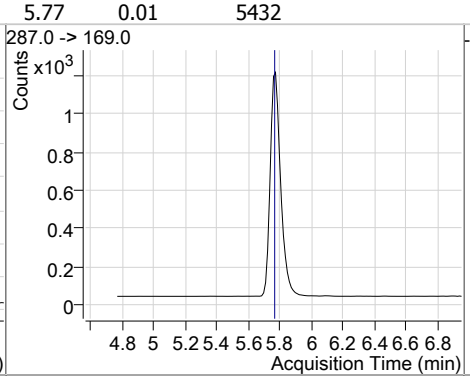


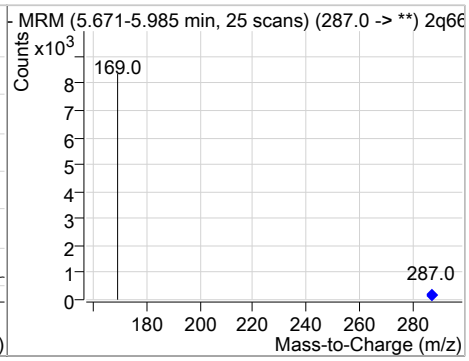




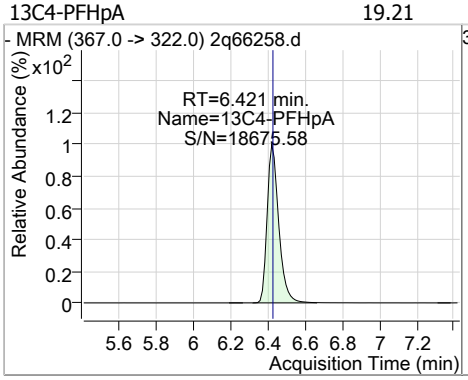
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	16.75	5.77	0.01	5432				

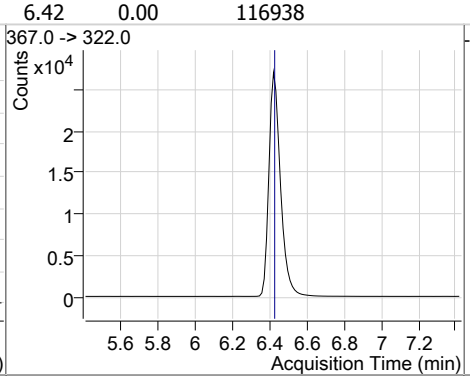


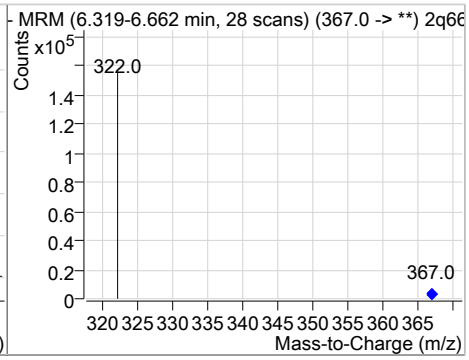




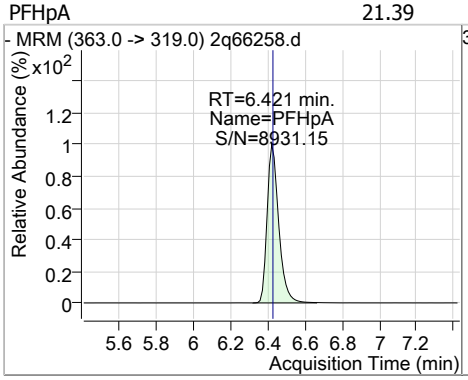
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.21	6.42	0.00	116938				

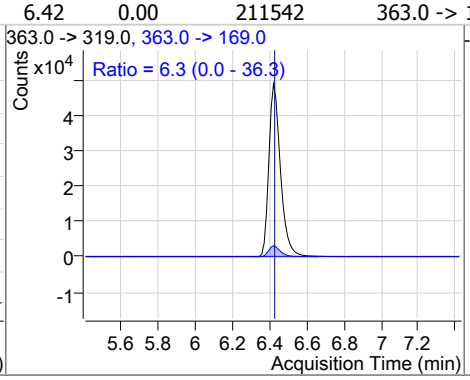


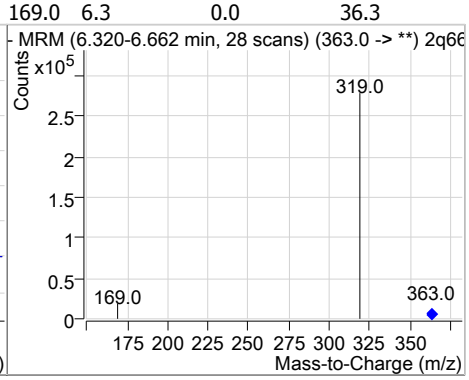




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	21.39	6.42	0.00	211542	363.0 -> 169.0	6.3	0.0	36.3

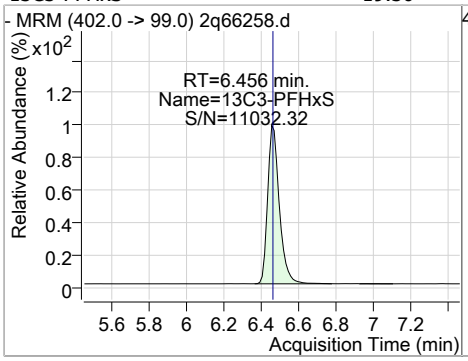


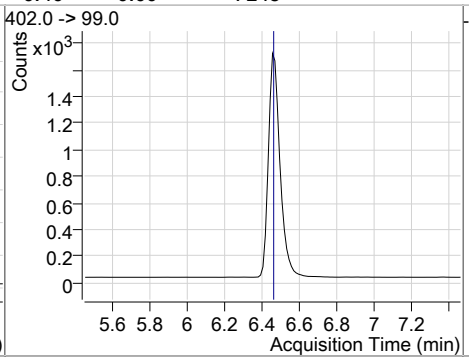


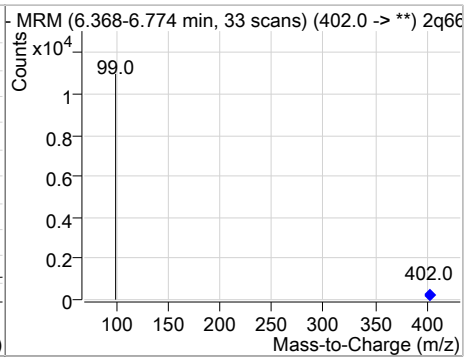


Perfluorinated Compounds by LC/MS/MS

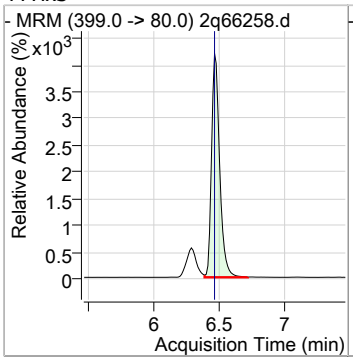
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.30	6.46	0.00	7248				

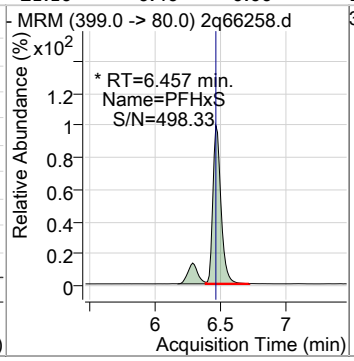


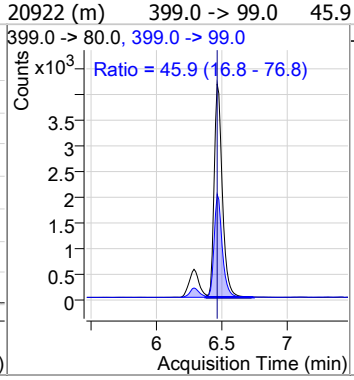


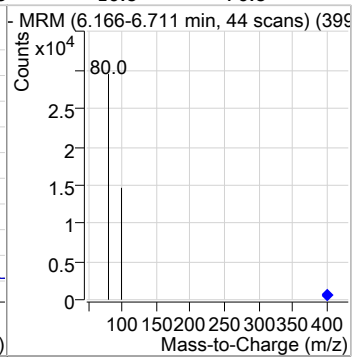


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	21.10	6.46	0.00	20922 (m)	399.0 -> 99.0	45.9	16.8	76.8

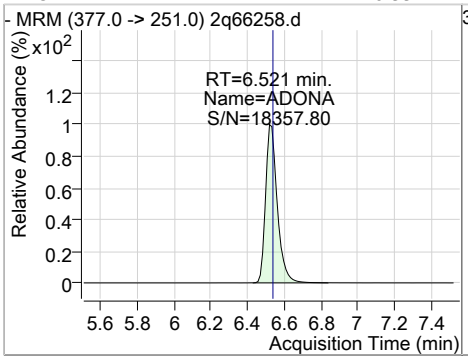


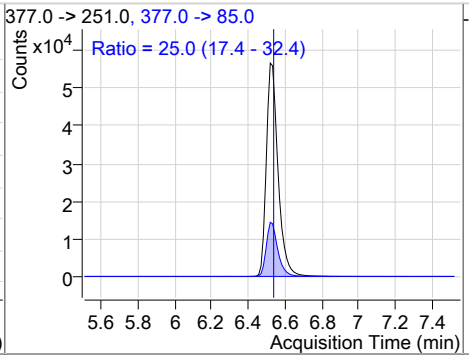


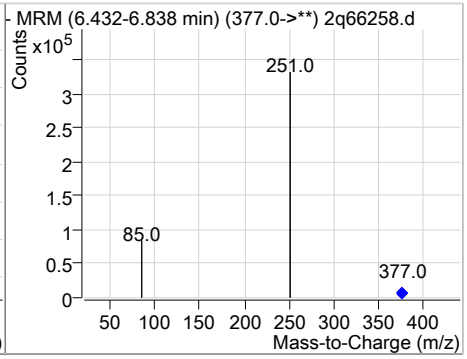




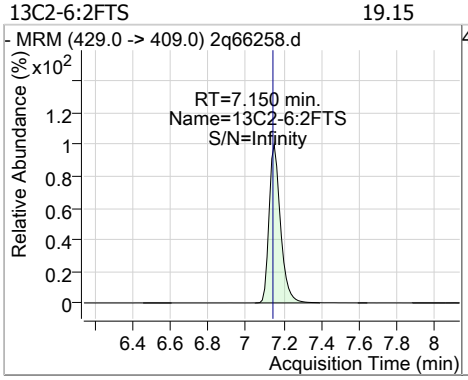
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	20.99	6.52	0.00	250149	377.0 -> 85.0	25.0	17.4	32.4

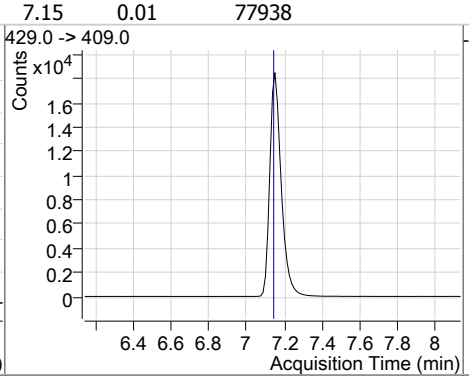


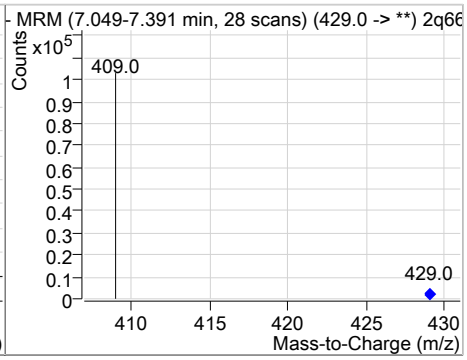




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.15	7.15	0.01	77938				

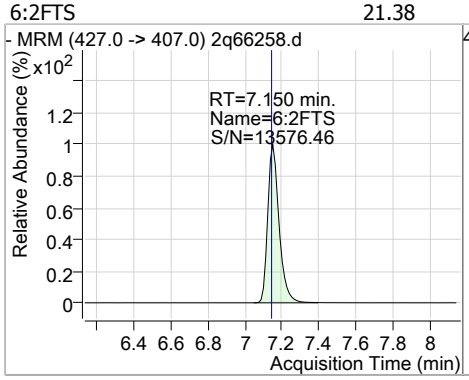


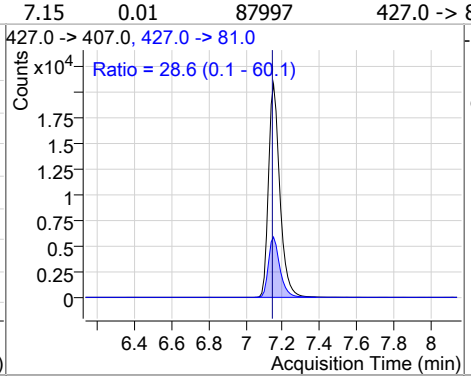


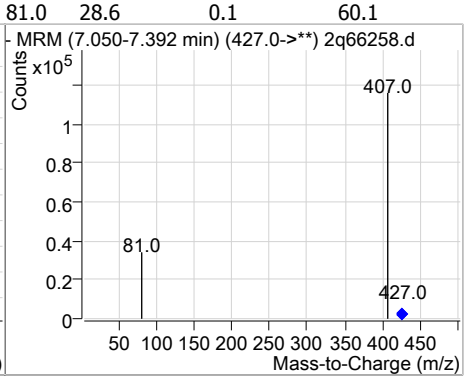


Perfluorinated Compounds by LC/MS/MS

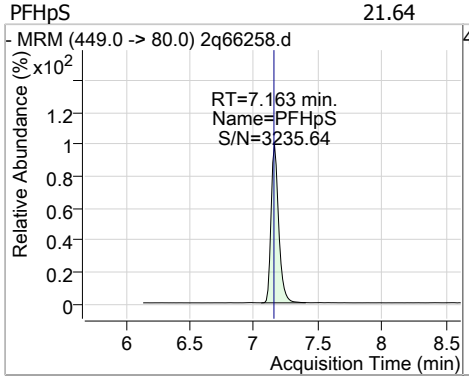
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	21.38	7.15	0.01	87997	427.0 -> 81.0	28.6	0.1	60.1

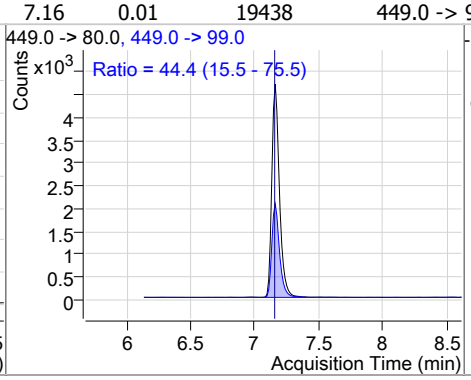


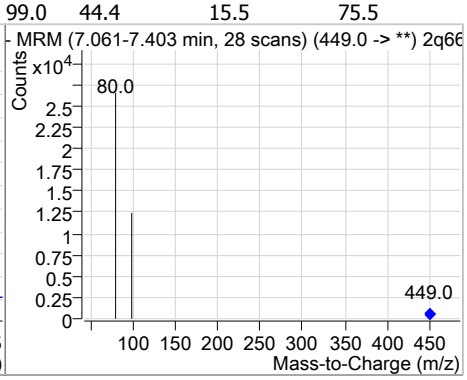




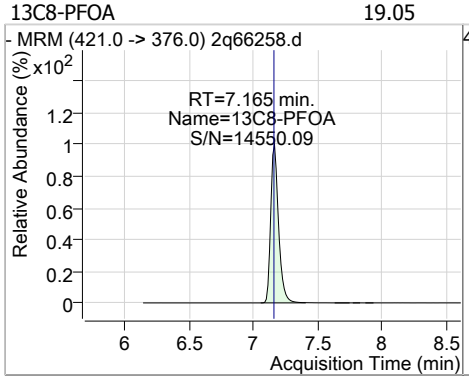
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	21.64	7.16	0.01	19438	449.0 -> 99.0	44.4	15.5	75.5

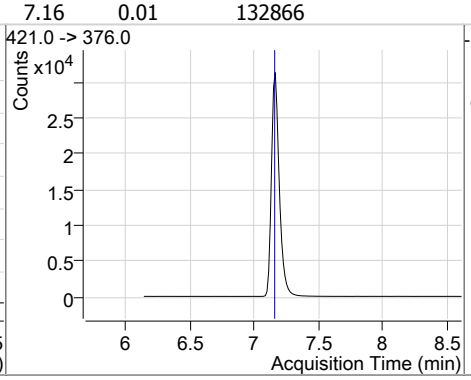


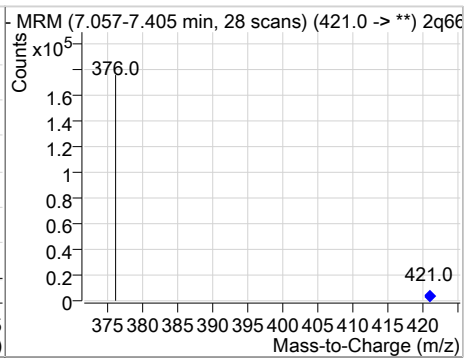




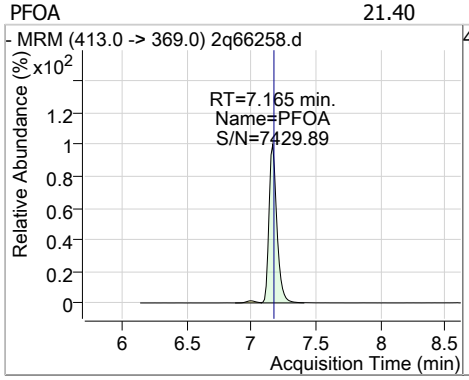
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.05	7.16	0.01	132866				

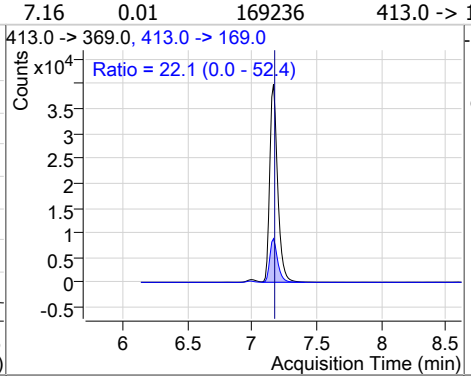


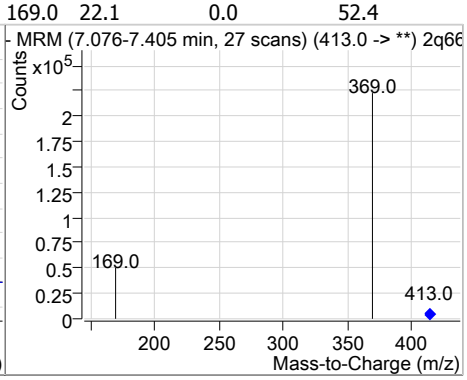




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	21.40	7.16	0.01	169236	413.0 -> 169.0	22.1	0.0	52.4

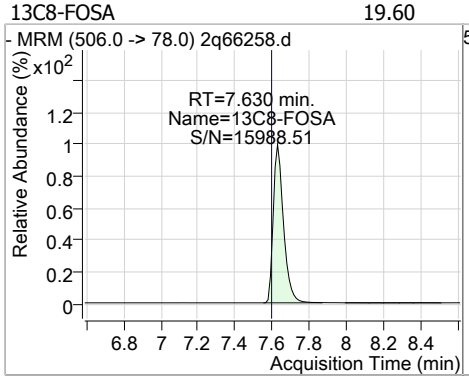


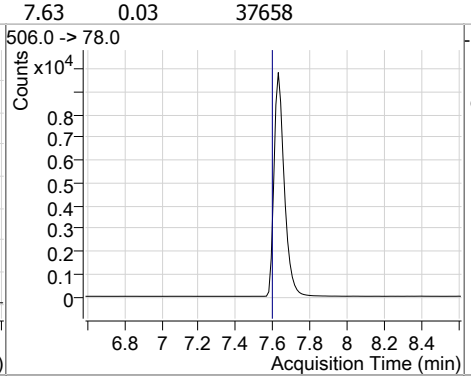


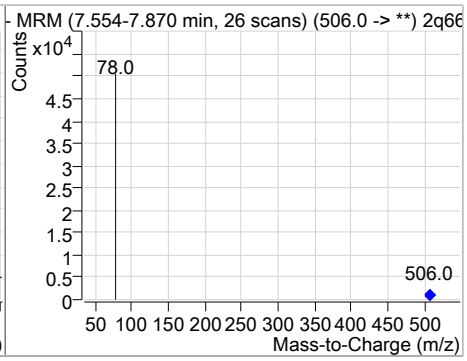


Perfluorinated Compounds by LC/MS/MS

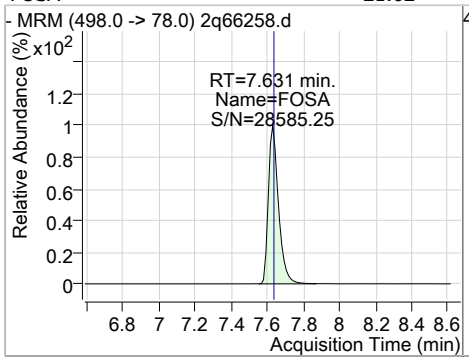
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	19.60	7.63	0.03	37658				

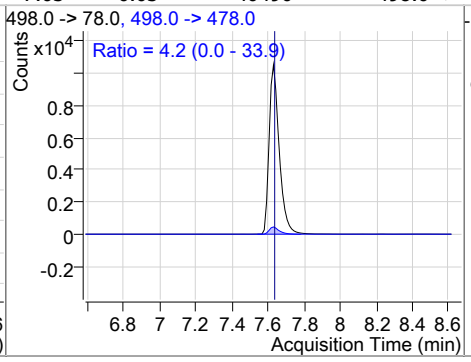


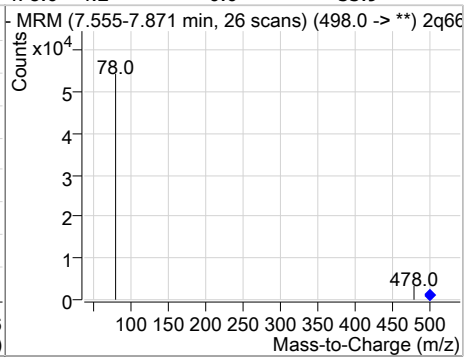




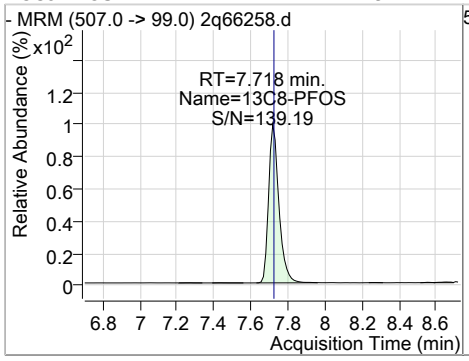
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	21.62	7.63	0.03	40490	498.0 -> 478.0	4.2	0.0	33.9

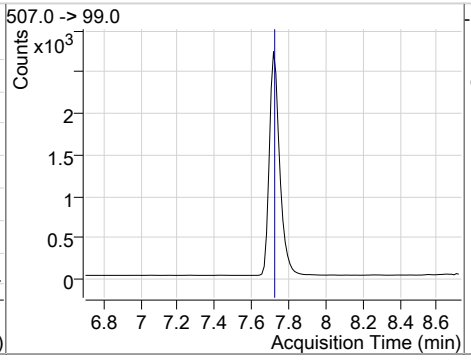


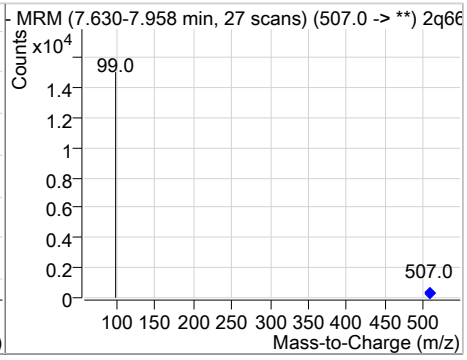




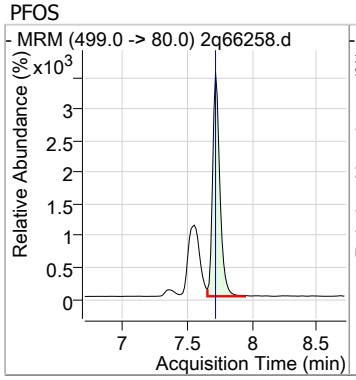
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.71	7.72	0.00	10470				

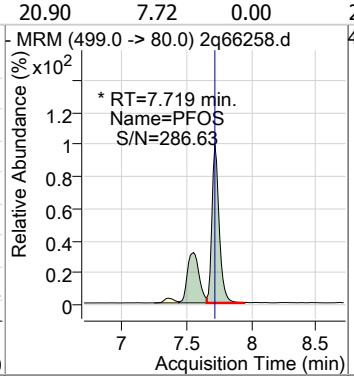


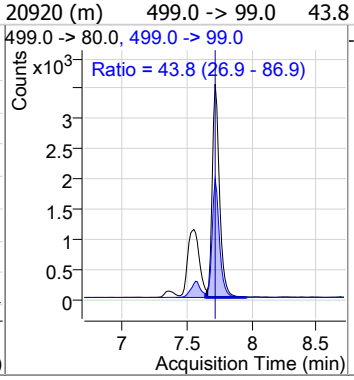


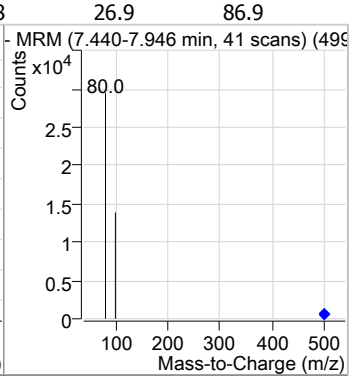


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	20.90	7.72	0.00	20920 (m)	499.0 -> 99.0	43.8	26.9	86.9



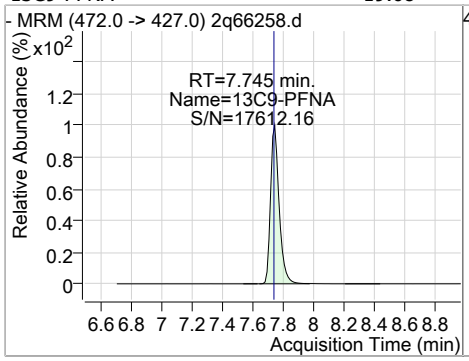


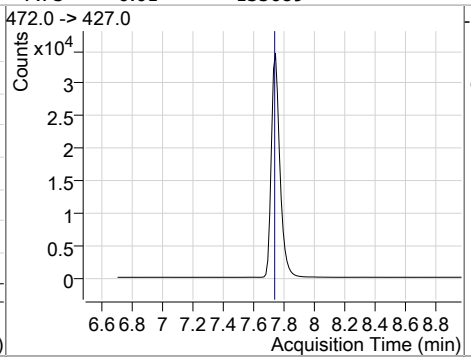


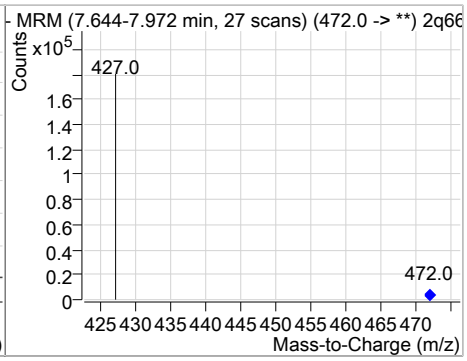


Perfluorinated Compounds by LC/MS/MS

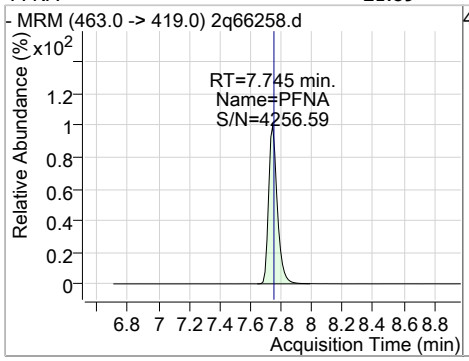
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.08	7.75	0.01	135689				

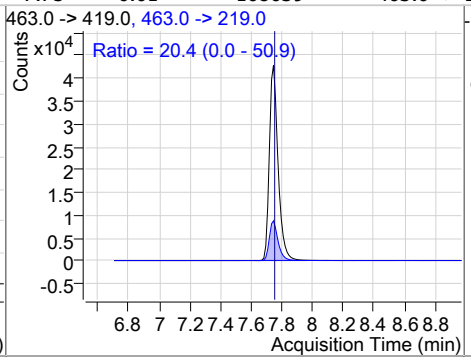


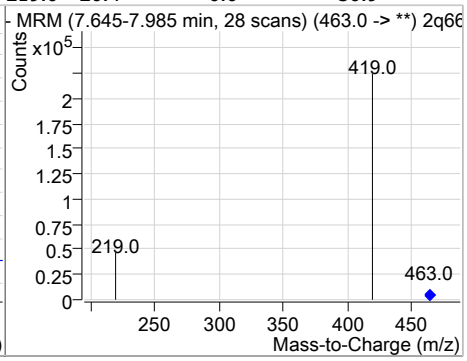




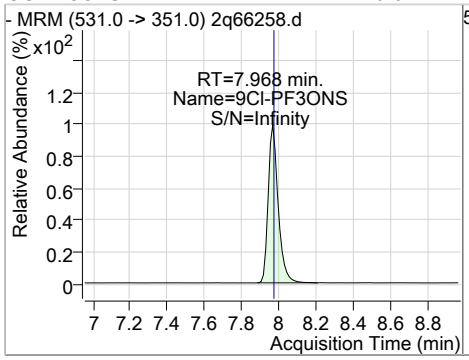
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	21.89	7.75	0.01	168639	463.0 -> 219.0	20.4	0.0	50.9

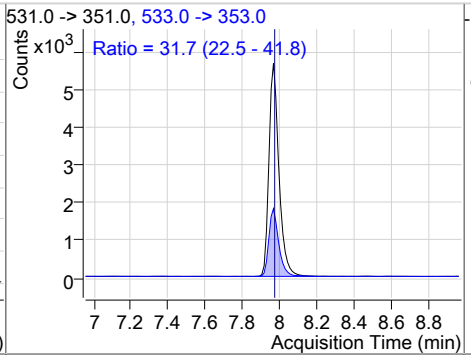


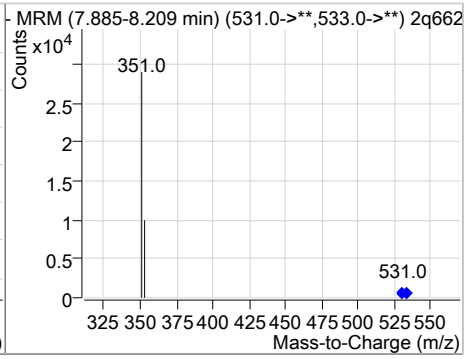




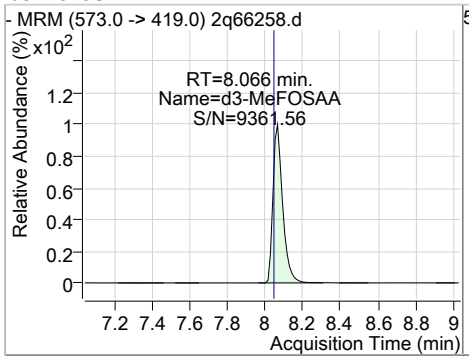
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	20.61	7.97	0.00	21057	533.0 -> 353.0	31.7	22.5	41.8

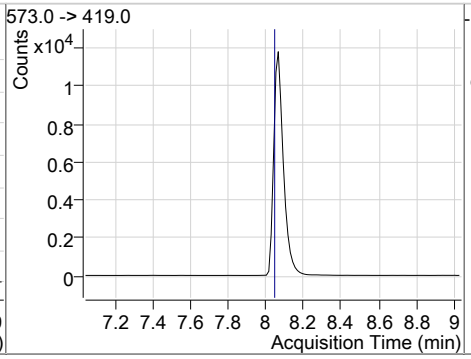


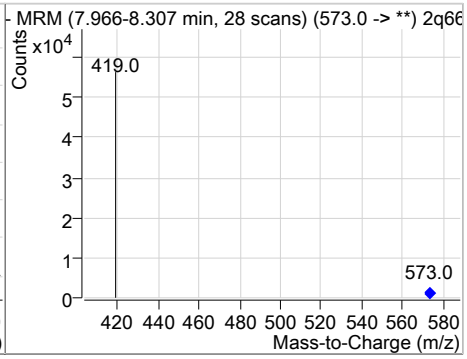




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	17.77	8.07	0.03	42162				

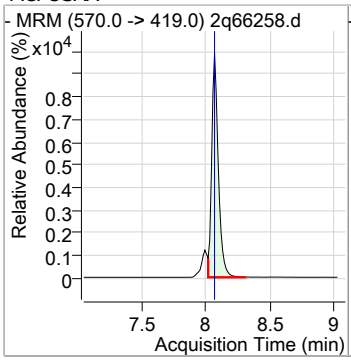


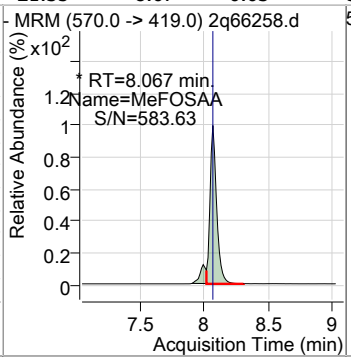


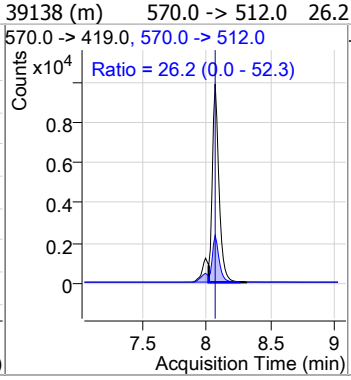


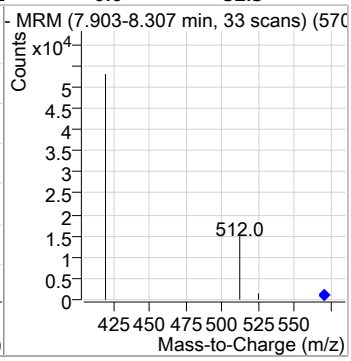
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	21.35	8.07	0.03	39138 (m)	570.0 -> 512.0	26.2	0.0	52.3

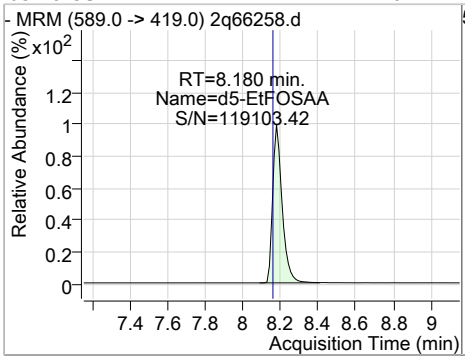


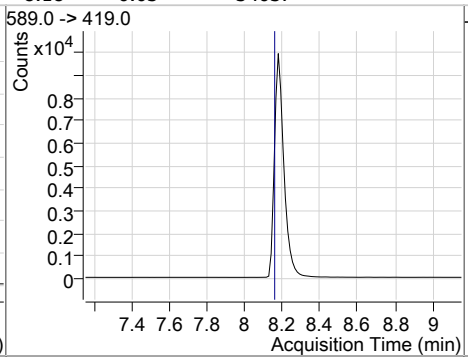


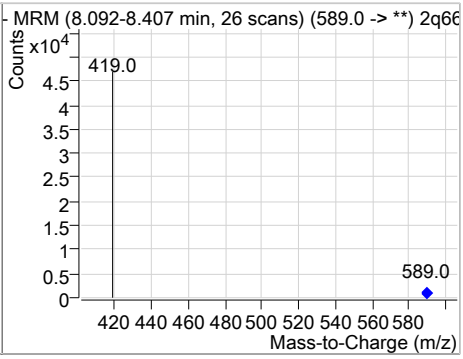




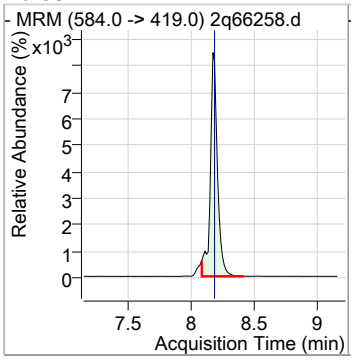
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	17.04	8.18	0.03	34637				

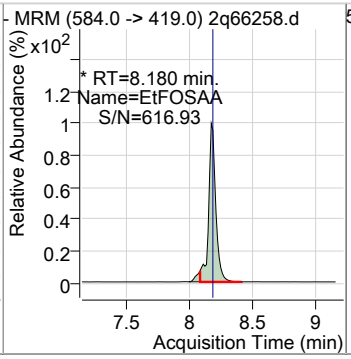


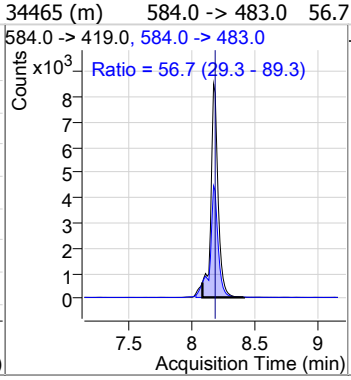


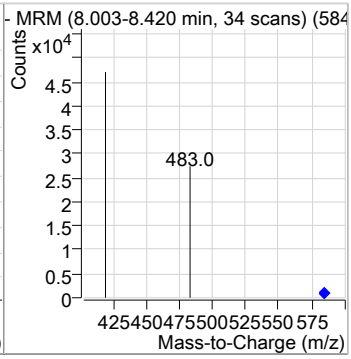


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	21.93	8.18	0.01	34465 (m)	584.0 -> 483.0	56.7	29.3	89.3

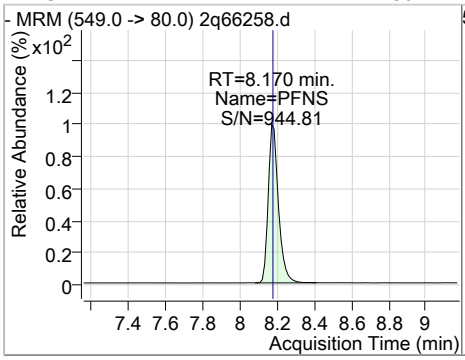


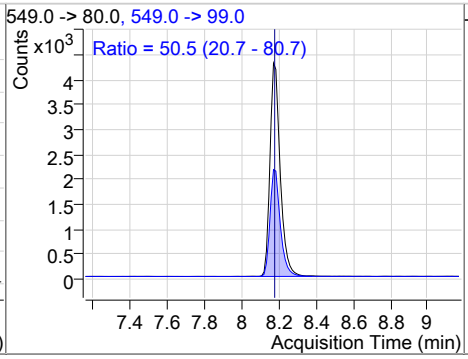


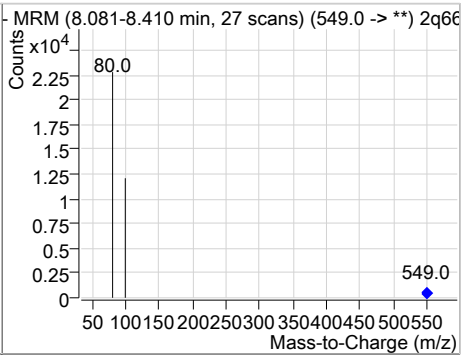




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	21.56	8.17	0.00	16387	549.0 -> 99.0	50.5	20.7	80.7

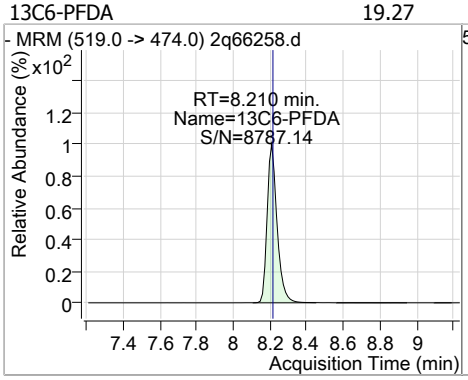


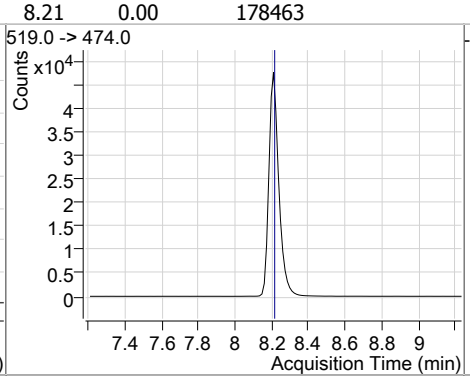


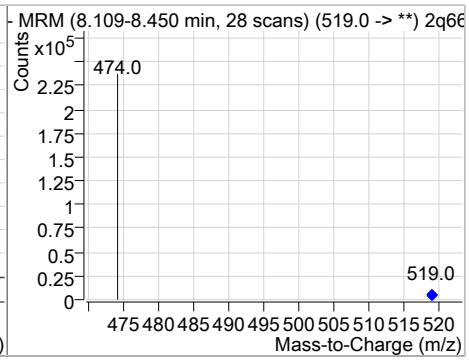


Perfluorinated Compounds by LC/MS/MS

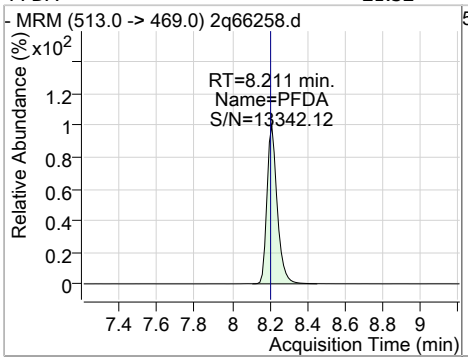
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.27	8.21	0.00	178463				

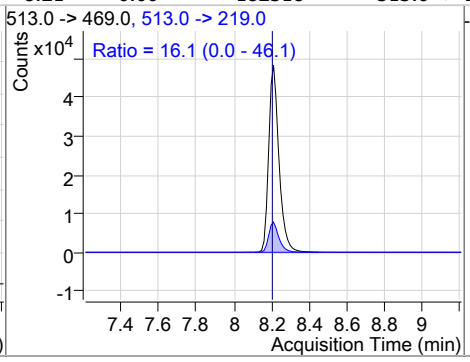


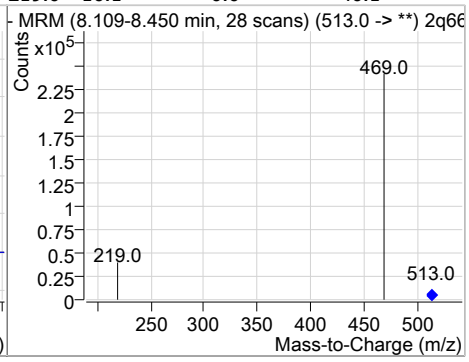




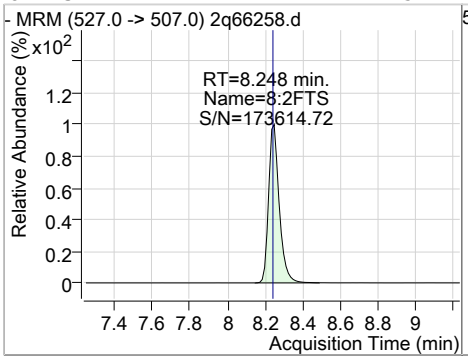
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	21.32	8.21	0.00	182318	513.0 -> 219.0	16.1	0.0	46.1

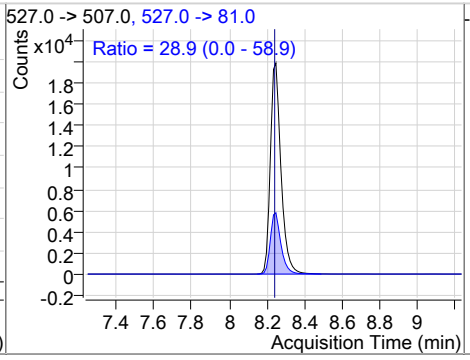


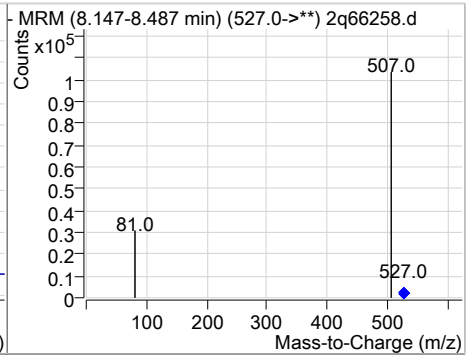




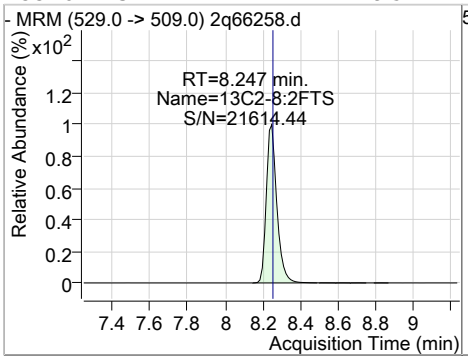
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	21.15	8.25	0.01	77411	527.0 -> 81.0	28.9	0.0	58.9

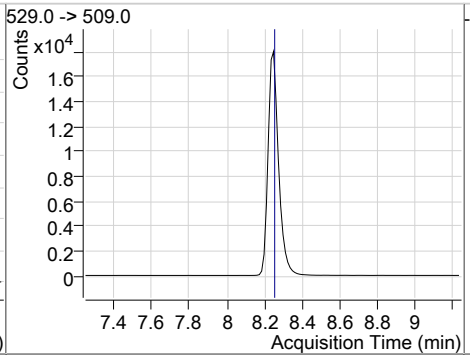


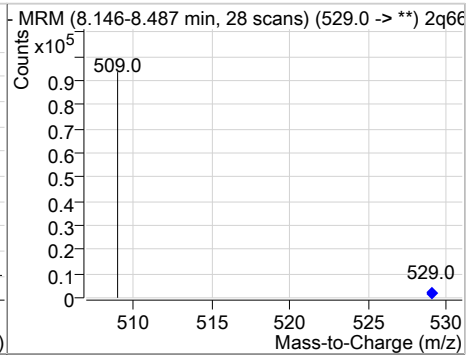




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.57	8.25	0.00	69819				

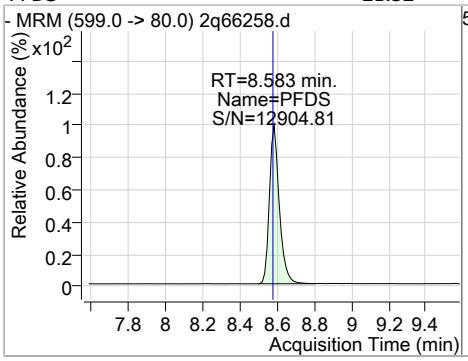


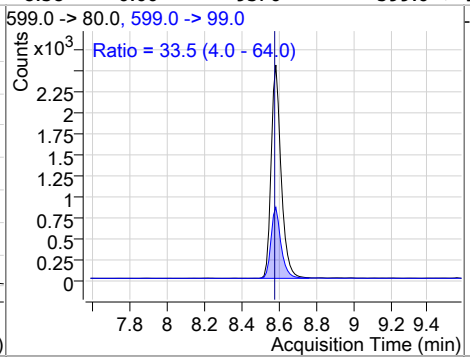


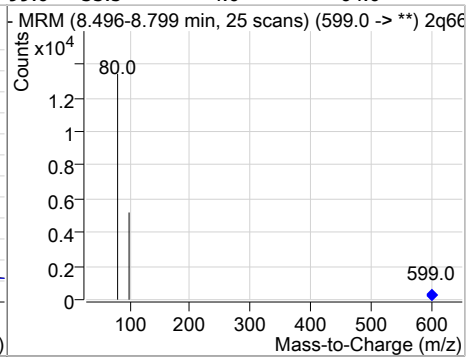


Perfluorinated Compounds by LC/MS/MS

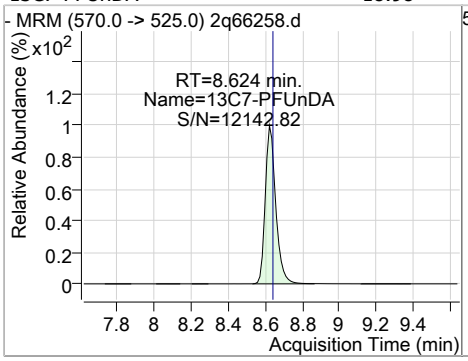
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	21.32	8.58	0.00	9370	599.0 -> 99.0	33.5	4.0	64.0

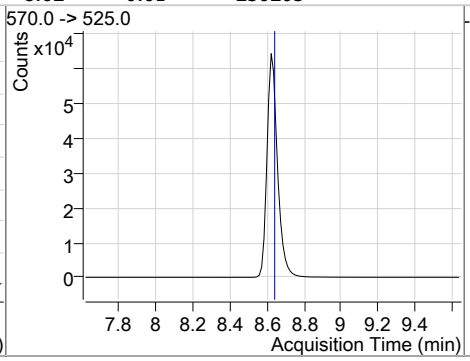


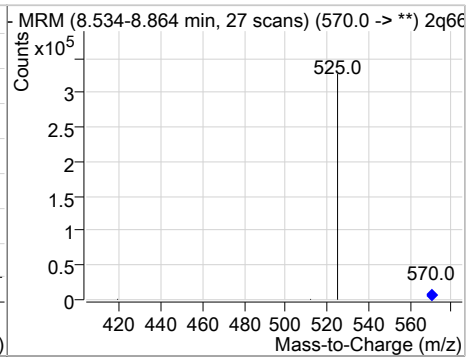




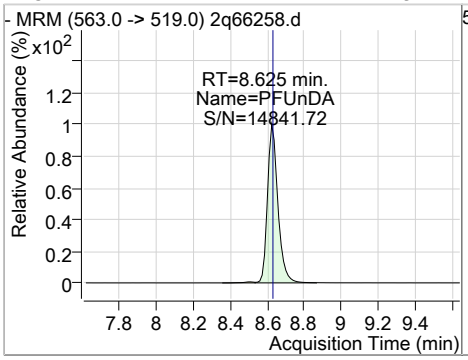
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	18.98	8.62	-0.01	250205				

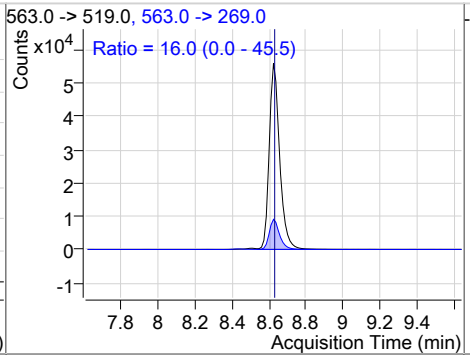


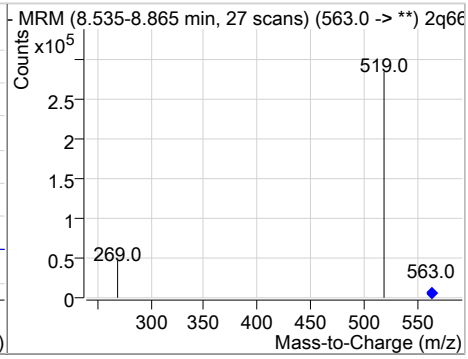




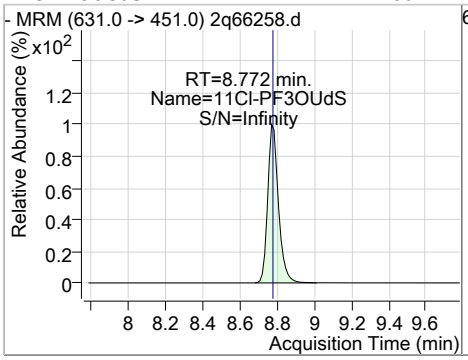
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	21.29	8.62	-0.01	217385	563.0 -> 269.0	16.0	0.0	45.5

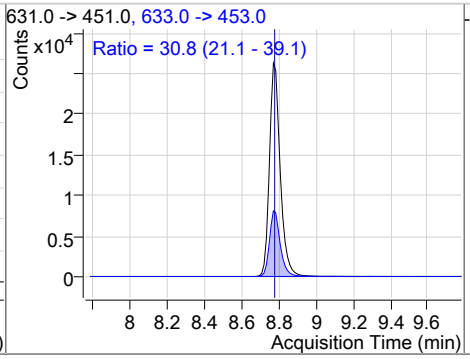


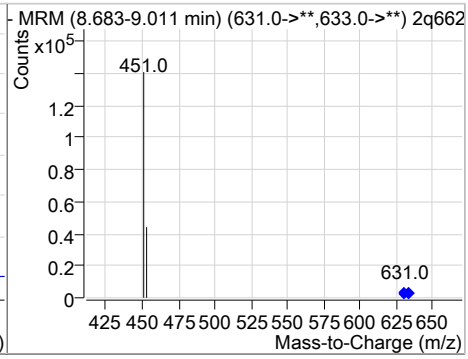




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	22.86	8.77	-0.01	105279	633.0 -> 453.0	30.8	21.1	39.1

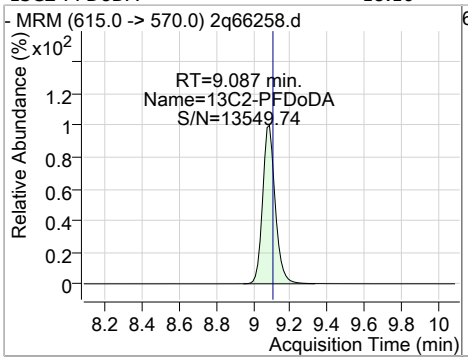


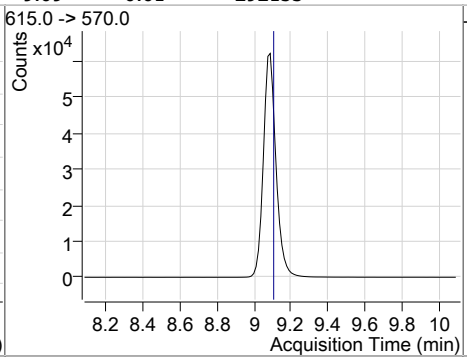


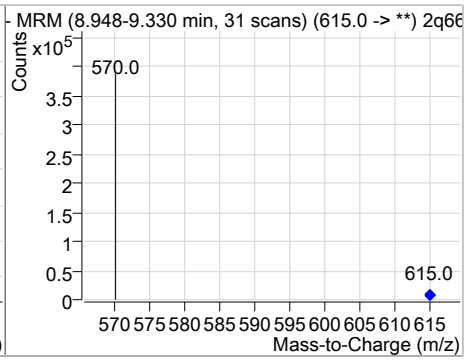


Perfluorinated Compounds by LC/MS/MS

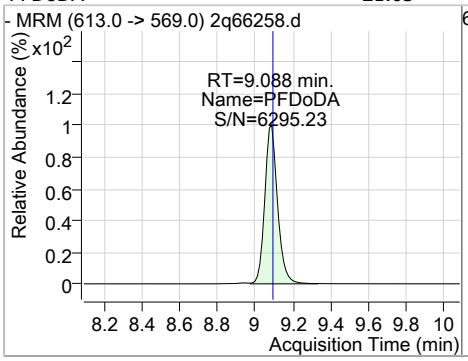
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	18.16	9.09	-0.01	292153				

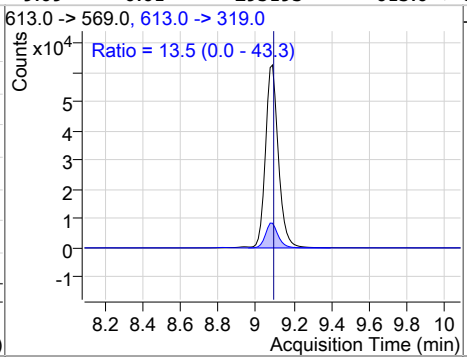


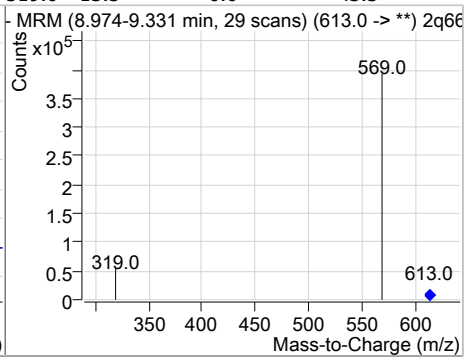




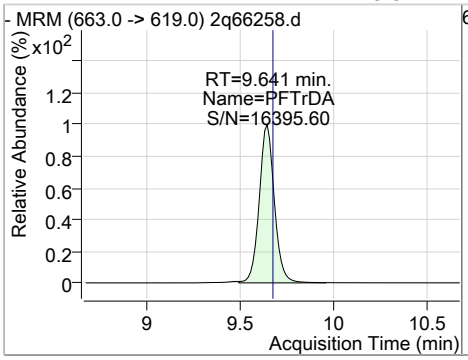
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	21.03	9.09	-0.01	295193	613.0 -> 319.0	13.5	0.0	43.3

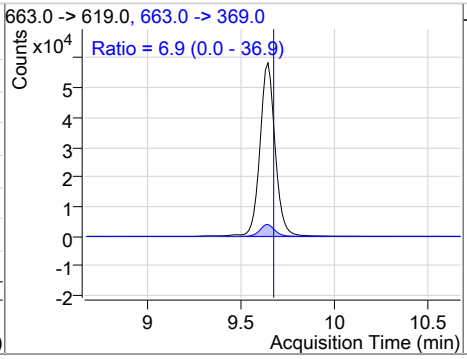


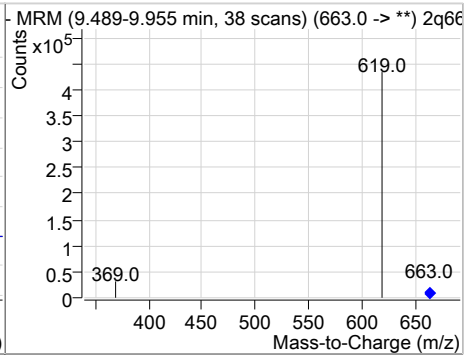




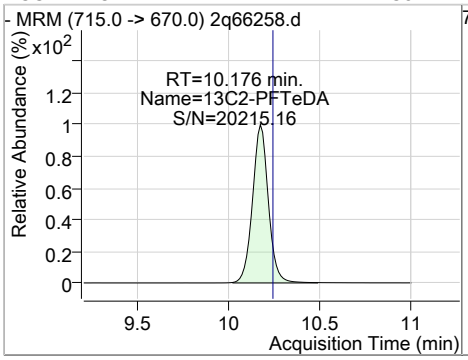
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	19.37	9.64	-0.04	328324	663.0 -> 369.0	6.9	0.0	36.9

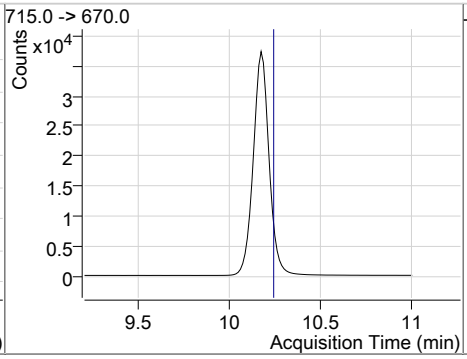


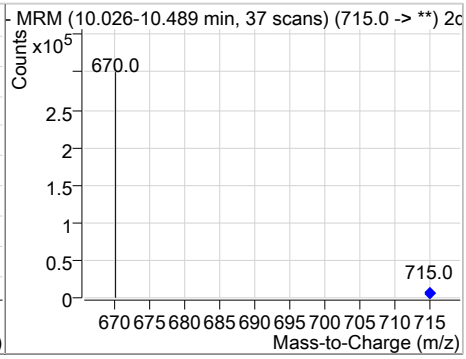




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	17.38	10.18	-0.06	224200				

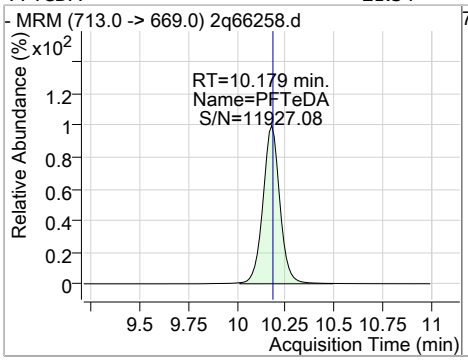


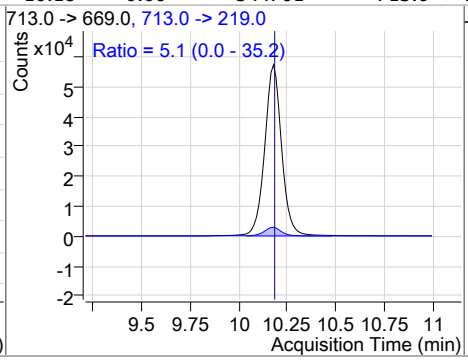


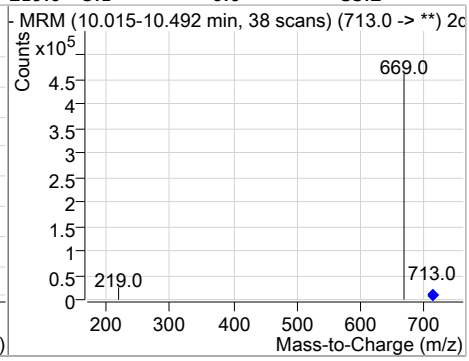


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	21.34	10.18	-0.06	344701	713.0 -> 219.0	5.1	0.0	35.2







Manual Integration Approval Summary

Sample Number: S2Q963-ECC956
Lab FileID: 2Q66258.D
Injection Time: 04/17/21 08:14
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/18/21 11:31 Nancy Saunders
Supervisor approved: 04/19/21 15:44 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.46	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
MeFOSAA	2355-31-9		8.07	Split peak
EtFOSAA	2991-50-6		8.18	Split peak

QQQ Check Tune Report

Agilent Technologies

Instrument Name	Instrument 1
MS Model	G6470A
MS Instrument Serial	SG1752G107
Software_Firmware Version	B.08.02.B8260.0, FW: A.00.08.62
Tune Date & Time	13 April 2021 10:28:52
Data Path	D:\MassHunter\Tune\QQQ\G6470A\atunes.TUNE.XML
Ion Source	AJS ESI
Ionization Mode	AJS ESI
Tuned Resolution	All
Vacuum Pressure	1.60E+0[R]; 3.03E-5[H]

Source Parameters

Parameter	Value
Gas Temp	300
Gas Flow	8
Nebulizer	15
Capillary	4000
Nozzle Voltage	1500
Sheath Gas Temp	250
Sheath Gas Flow	7

QQQ Check Tune Report

Agilent Technologies

Negative Results

Analyzer: MS1 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.99	0.00	Pass	0.70	0.69	-0.01	Pass	205976
302.00	302.00	0.00	Pass	0.70	0.71	0.01	Pass	104649
601.98	601.98	0.00	Pass	0.70	0.71	0.01	Pass	459790
1033.99	1033.95	-0.04	Pass	0.70	0.72	0.02	Pass	457977
1633.95	1633.87	-0.08	Pass	0.70	0.72	0.02	Pass	1000424
2233.91	2233.73	-0.18	Pass	0.70	0.72	0.02	Pass	822884

Analyzer: MS2 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.10	0.10	Pass	0.70	0.61	-0.09	Pass	42168
112.99	112.99	0.00	Pass	0.70	0.71	0.01	Pass	170745
302.00	301.99	-0.01	Pass	0.70	0.71	0.01	Pass	89251
601.98	601.98	0.00	Pass	0.70	0.70	0.00	Pass	358244
1033.99	1033.93	-0.06	Pass	0.70	0.70	0.00	Pass	461059
1633.95	1633.88	-0.07	Pass	0.70	0.69	-0.01	Pass	976794
2233.91	2233.76	-0.15	Pass	0.70	0.74	0.04	Pass	821171

Analyzer: MS1 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	113.03	0.04	Pass	1.20	1.23	0.03	Pass	260332
302.00	302.00	0.00	Pass	1.20	1.29	0.09	Pass	144419
601.98	601.93	-0.05	Pass	1.20	1.45	0.25	Pass	683197
1033.99	1033.81	-0.18	Pass	1.20	1.44	0.24	Pass	773621
1633.95	1633.81	-0.14	Pass	1.20	1.36	0.16	Pass	1824929
2233.91	2233.75	-0.16	Pass	1.20	1.28	0.08	Pass	1360915

Analyzer: MS2 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.05	0.05	Pass	1.20	1.14	-0.06	Pass	55877
112.99	112.96	-0.03	Pass	1.20	1.25	0.05	Pass	219806
302.00	301.98	-0.02	Pass	1.20	1.33	0.13	Pass	123219
601.98	602.02	0.04	Pass	1.20	1.41	0.21	Pass	521956
1033.99	1033.90	-0.09	Pass	1.20	1.44	0.24	Pass	737952
1633.95	1633.81	-0.14	Pass	1.20	1.33	0.13	Pass	1850679
2233.91	2233.75	-0.16	Pass	1.20	1.24	0.04	Pass	1282593

Analyzer: MS1 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.99	0.00	Pass	2.50	2.62	0.12	Pass	325558
302.00	302.00	0.00	Pass	2.50	2.64	0.14	Pass	184353
601.98	601.95	-0.03	Pass	2.50	2.75	0.25	Pass	955061
1033.99	1033.94	-0.05	Pass	2.50	2.66	0.16	Pass	1312432
1633.95	1633.67	-0.28	Pass	2.50	2.49	-0.01	Pass	4057118
2233.91	2233.73	-0.18	Pass	2.50	2.31	-0.19	Pass	3998029

Analyzer: MS2 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.06	0.06	Pass	2.50	2.29	-0.21	Pass	66652
112.99	112.98	-0.01	Pass	2.50	2.40	-0.10	Pass	278788
302.00	301.97	-0.03	Pass	2.50	2.52	0.02	Pass	160252
601.98	601.94	-0.04	Pass	2.50	2.59	0.09	Pass	758810
1033.99	1033.92	-0.07	Pass	2.50	2.66	0.16	Pass	1227488
1633.95	1633.85	-0.10	Pass	2.50	2.57	0.07	Pass	4123273
2233.91	2233.74	-0.17	Pass	2.50	2.46	-0.04	Pass	3817760

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/14/21 15:06

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36533.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/13/2021 2:19:04 PM
Sample Name : ic537-0.5
Vial : P1-A2
DA Method File : BR_LN_041321_S3Q537.quantmethod.xml
Batch Name : s3q537.batch.bin
Sample Information : op84308,S3Q537,250,,,1,1,water

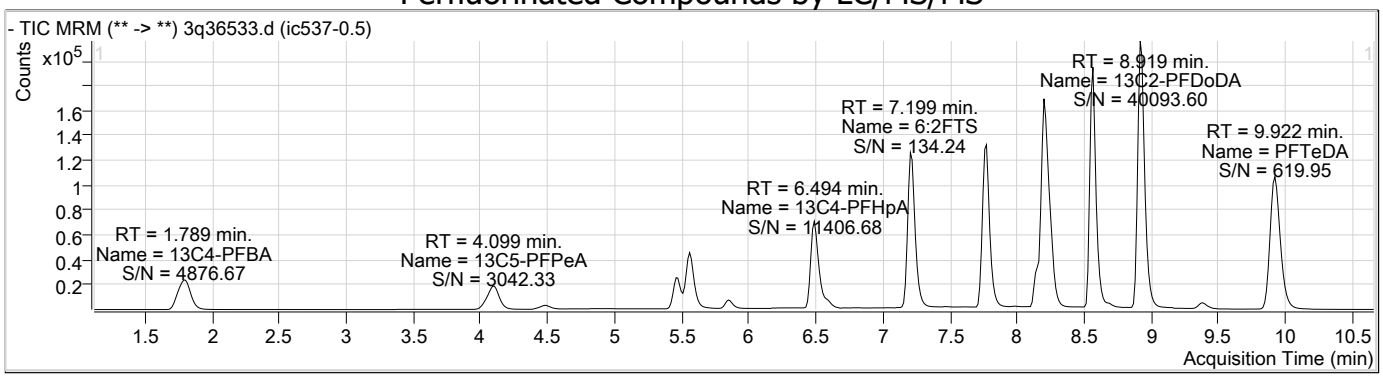
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.789	217.0 -> 172.0	157704	20.00	µg/L	-0.050
M5-PFPeA	4.099	268.0 -> 223.0	114203	20.00	µg/L	0.025
M5-PFHxA	5.567	318.0 -> 273.0	180579	20.00	µg/L	-0.063
M4-PFHpA	6.494	367.0 -> 322.0	252942	20.00	µg/L	-0.113
M8-PFOA	7.225	421.0 -> 376.0	299156	20.00	µg/L	-0.101
M9-PFNA	7.779	472.0 -> 427.0	337576	20.00	µg/L	-0.076
M6-PFDA	8.206	519.0 -> 474.0	432529	20.00	µg/L	-0.051
M7-PFUnDA	8.568	570.0 -> 525.0	604600	20.00	µg/L	-0.038
M2-PFDoDA	8.919	615.0 -> 570.0	756954	20.00	µg/L	-0.038
M2-PFTeDA	9.919	715.0 -> 670.0	552635	20.00	µg/L	-0.025
M8-FOSA	7.752	506.0 -> 78.0	105397	20.00	µg/L	-0.063
M3-PFBS	4.484	302.0 -> 99.0	15608	20.00	µg/L	0.038
M3-PFHxS	6.529	402.0 -> 99.0	22421	20.00	µg/L	-0.126
M8-PFOS	7.752	507.0 -> 99.0	34237	20.00	µg/L	-0.089
M2-4:2FTS	5.459	329.0 -> 309.0	104972	20.00	µg/L	-0.053
M2-6:2FTS	7.211	429.0 -> 409.0	160153	20.00	µg/L	-0.101
M2-8:2FTS	8.231	529.0 -> 509.0	170457	20.00	µg/L	-0.050
M3-MeFOSAA	8.151	573.0 -> 419.0	90529	20.00	µg/L	-0.026
M3-HFPO-DA	5.858	287.0 -> 169.0	24272	20.00	µg/L	-0.088
M5-EtFOSAA	8.252	589.0 -> 419.0	82325	20.00	µg/L	-0.038
System Monitoring Compounds						
13C2-4:2FTS	5.459	329.0 -> 309.0	104972	18.34	µg/L	-0.053
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.7%		
13C2-6:2FTS	7.211	429.0 -> 409.0	160153	18.94	µg/L	-0.101
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.7%		
13C2-8:2FTS	8.231	529.0 -> 509.0	170457	18.41	µg/L	-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.1%		
13C2-PFDoDA	8.919	615.0 -> 570.0	756954	19.63	µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.1%		
13C2-PFTeDA	9.919	715.0 -> 670.0	552635	19.77	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.8%		
13C3-PFBS	4.484	302.0 -> 99.0	15608	19.36	µg/L	0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.8%		
13C3-PFHxS	6.529	402.0 -> 99.0	22421	19.69	µg/L	-0.126
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%		
13C4-PFBA	1.789	217.0 -> 172.0	157704	20.12	µg/L	-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.6%		
13C4-PFHpA	6.494	367.0 -> 322.0	252942	19.51	µg/L	-0.113
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.6%		
13C5-PFHxA	5.567	318.0 -> 273.0	180579	19.73	µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%		
13C5-PFPeA	4.099	268.0 -> 223.0	114203	19.45	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.3%		
13C6-PFDA	8.206	519.0 -> 474.0	432529	18.82	µg/L	-0.051
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.1%		

Perfluorinated Compounds by LC/MS/MS

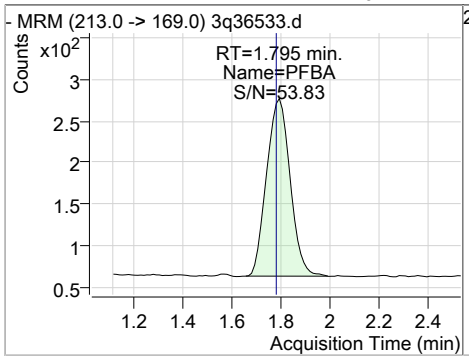
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.568	570.0 -> 525.0	604600	19.13	µg/L		-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.6%			
13C8-FOSA	7.752	506.0 -> 78.0	105397	19.85	µg/L		-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%			
13C8-PFOA	7.225	421.0 -> 376.0	299156	19.65	µg/L		-0.101
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.3%			
13C8-PFOS	7.752	507.0 -> 99.0	34237	19.39	µg/L		-0.089
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.9%			
13C9-PFNA	7.779	472.0 -> 427.0	337576	19.12	µg/L		-0.076
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.6%			
d3-MeFOSAA	8.151	573.0 -> 419.0	90529	18.96	µg/L		-0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.8%			
13C3-HFPO-DA	5.858	287.0 -> 169.0	24269	20.01	µg/L		-0.088
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.0%			
d5-EtFOSAA	8.252	589.0 -> 419.0	82326	20.01	µg/L		-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.1%			
Target Compounds							QValue
4:2FTS	5.461	327.0 -> 307.0	2828	0.50	µg/L		100
6:2FTS	7.199	427.0 -> 407.0	4301	0.50	µg/L		95
8:2FTS	8.232	527.0 -> 507.0	4525	0.51	µg/L		97
EtFOSAA	8.265	584.0 -> 419.0	1724	0.45	µg/L	m	78
FOSA	7.753	498.0 -> 78.0	2346	0.43	µg/L		99
MeFOSAA	8.151	570.0 -> 419.0	2091	0.51	µg/L	m	88
PFBA	1.795	213.0 -> 169.0	1420	0.47	µg/L		100
PFBS	4.486	299.0 -> 80.0	1140	0.48	µg/L		98
PFDA	8.206	513.0 -> 469.0	10226	0.46	µg/L		98
PFDoDA	8.919	613.0 -> 569.0	17730	0.47	µg/L		99
PFDS	8.528	599.0 -> 80.0	583	0.43	µg/L		100
PFHpA	6.494	363.0 -> 319.0	10993	0.48	µg/L		99
PFHpS	7.223	449.0 -> 80.0	1146	0.45	µg/L		93
PFHxA	5.567	313.0 -> 269.0	3148	0.50	µg/L		98
PFHxS	6.530	399.0 -> 80.0	1201	0.47	µg/L	m	99
PFNA	7.780	463.0 -> 419.0	9284	0.46	µg/L		99
PFNS	8.179	549.0 -> 80.0	1110	0.45	µg/L		89
PFOA	7.225	413.0 -> 369.0	7957	0.49	µg/L		97
PFOS	7.765	499.0 -> 80.0	1422	0.44	µg/L	m	87
PFPeA	4.101	263.0 -> 219.0	5314	0.49	µg/L		100
PFPeS	5.689	349.0 -> 80.0	879	0.48	µg/L		99
PFTeDA	9.922	713.0 -> 669.0	21398	0.53	µg/L		99
PFTrDA	9.383	663.0 -> 619.0	19088	0.49	µg/L		99
PFUnDA	8.569	563.0 -> 519.0	13766	0.47	µg/L		100
11Cl-PF3OUdS	8.691	631.0 -> 451.0	5004	0.42	µg/L		99
9Cl-PF3ONS	7.990	531.0 -> 351.0	1166	0.44	µg/L		98
ADONA	6.593	377.0 -> 251.0	13561	0.46	µg/L		100
HFPO-DA	5.853	329.0 -> 169.0	2096	0.48	µg/L		99
br-PFOS	7.614	499.0 -> 80.0	382	0.08	µg/L		77
LN-PFOS	7.765	499.0 -> 80.0	1036	0.37	µg/L		97
br-PFHxS	6.353	399.0 -> 80.0	153	0.05	µg/L		99
LN-PFHxS	6.530	399.0 -> 80.0	1041	0.42	µg/L		96
br-PFOA	7.225	413.0 -> 369.0	7957	0.49	µg/L		97
LN-PFOA	7.225	413.0 -> 369.0	7957	0.49	µg/L		97
br-PFNA	7.780	463.0 -> 419.0	9284	0.46	µg/L		99
LN-PFNA	7.780	463.0 -> 419.0	9284	0.46	µg/L		99

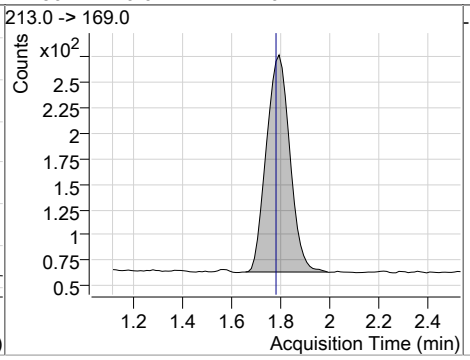
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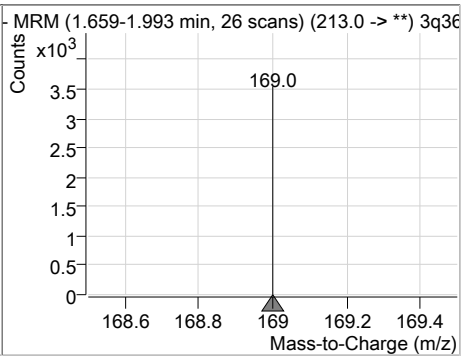
Perfluorinated Compounds by LC/MS/MS



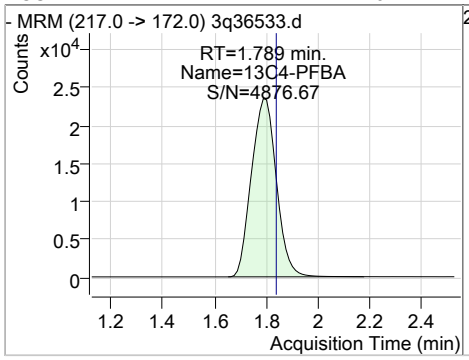
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.47	1.80	-0.04	1420				

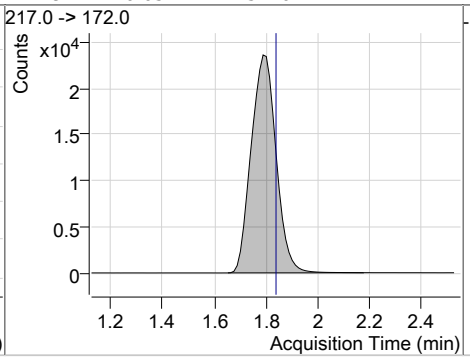


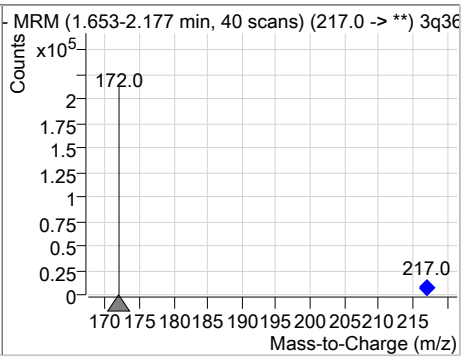




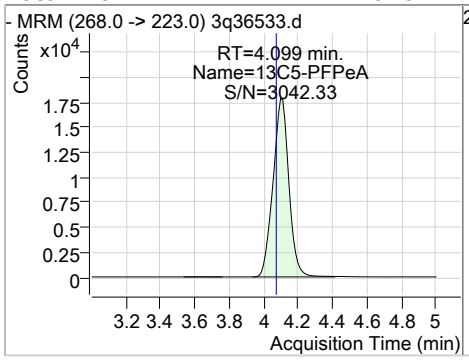
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.12	1.79	-0.05	157704				

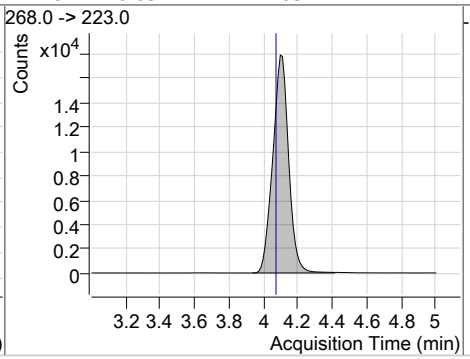


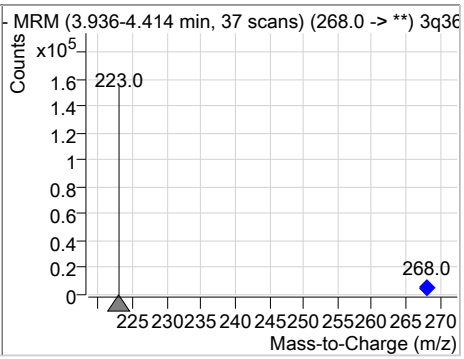




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.45	4.10	0.03	114203				

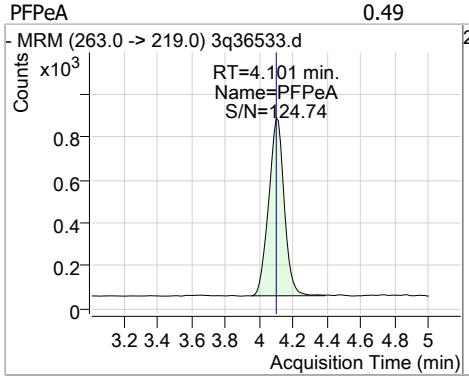


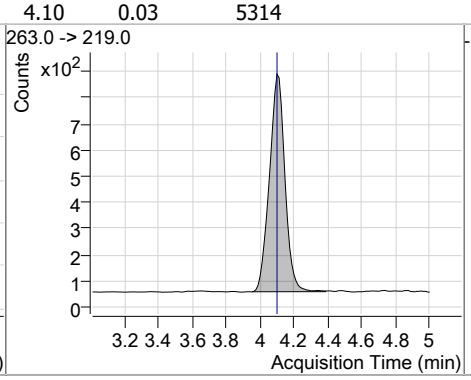


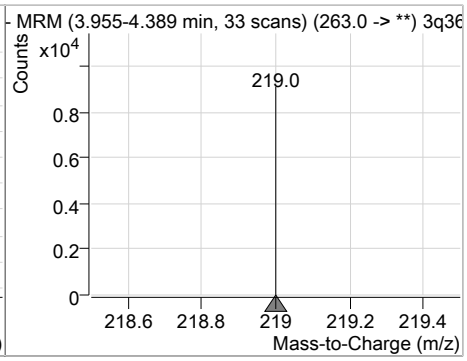


Perfluorinated Compounds by LC/MS/MS

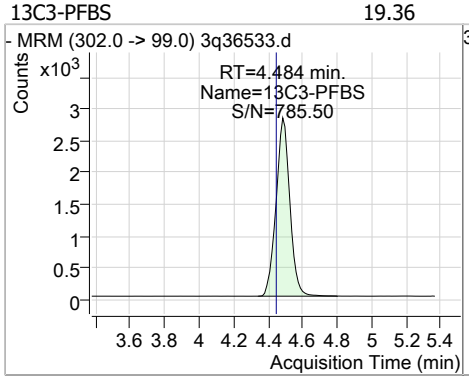
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.49	4.10	0.03	5314				

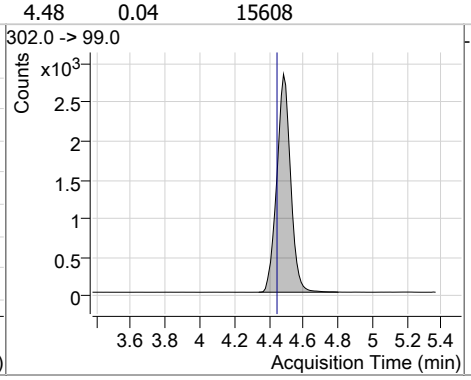


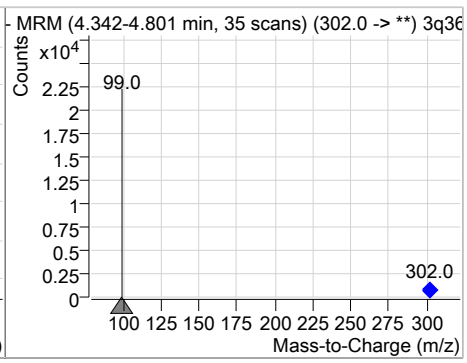




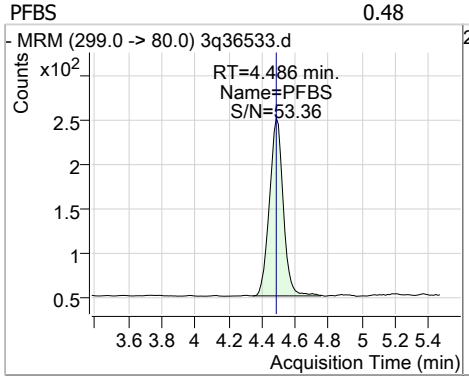
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.36	4.48	0.04	15608				

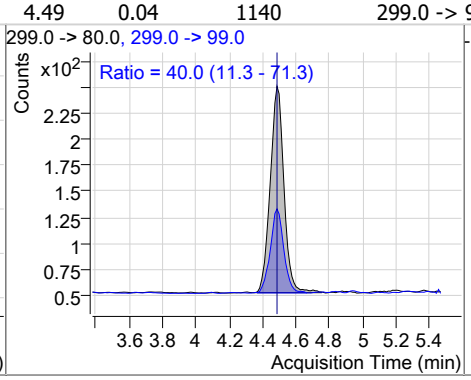


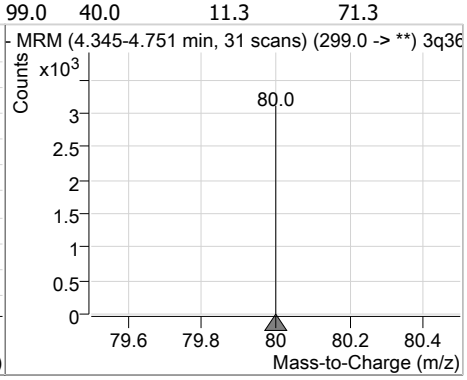




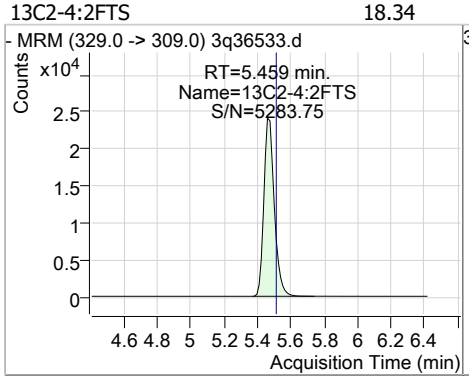
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.48	4.49	0.04	1140	299.0 -> 99.0	40.0	11.3	71.3

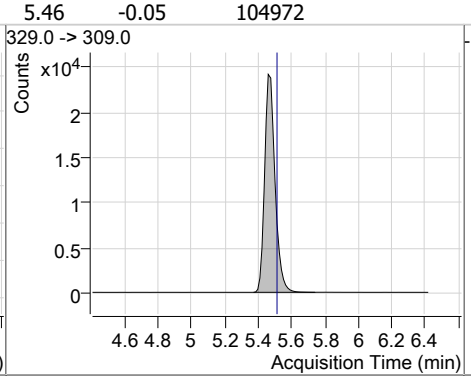


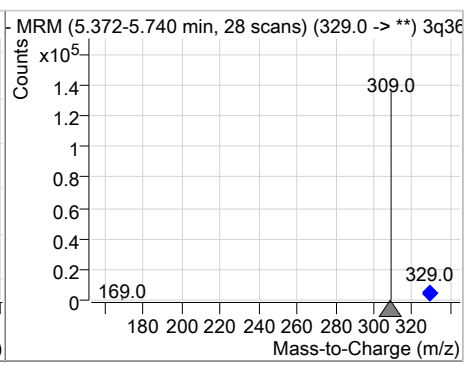




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.34	5.46	-0.05	104972				

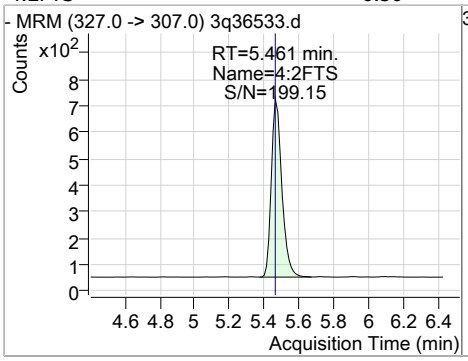


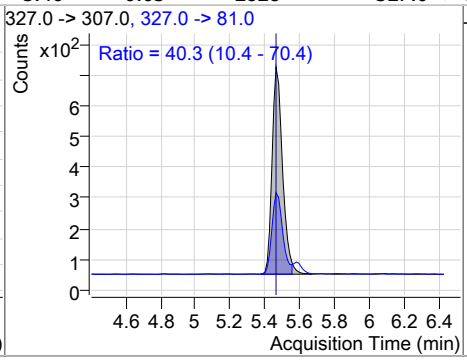


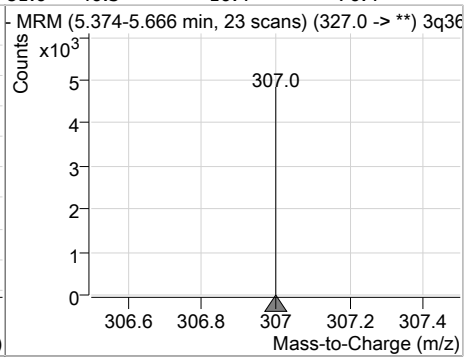


Perfluorinated Compounds by LC/MS/MS

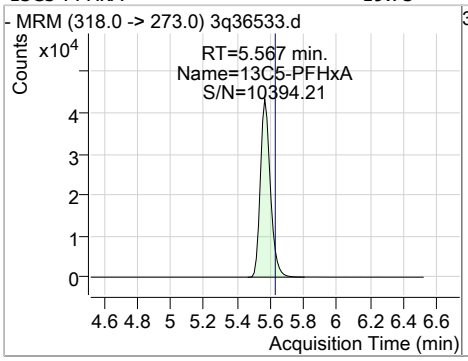
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	0.50	5.46	-0.05	2828	327.0 -> 81.0	40.3	10.4	70.4

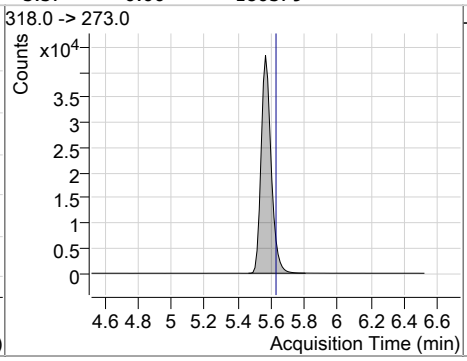


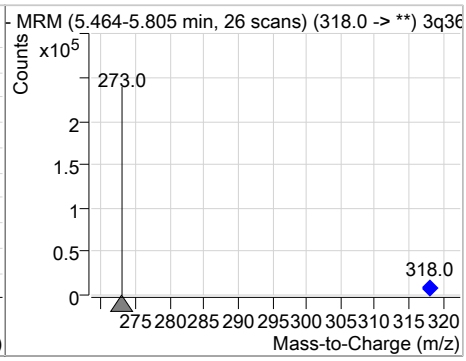




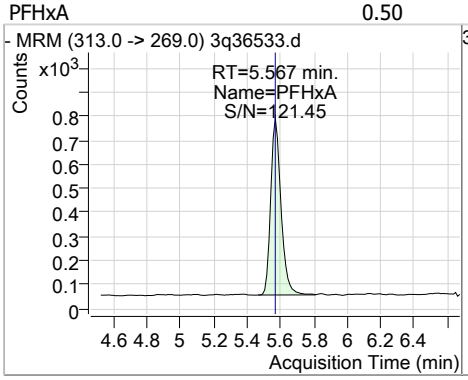
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.73	5.57	-0.06	180579				

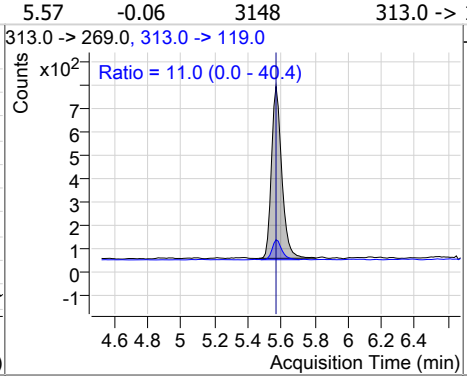


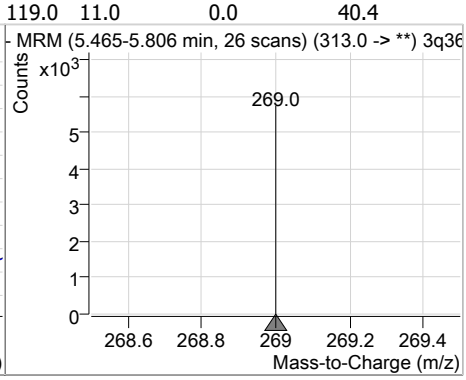




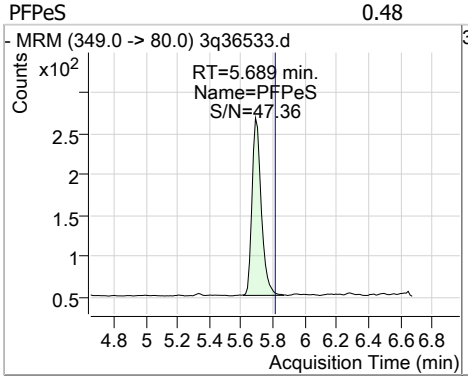
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.50	5.57	-0.06	3148	313.0 -> 119.0	11.0	0.0	40.4

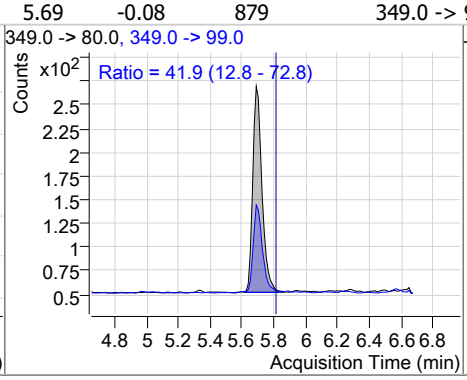


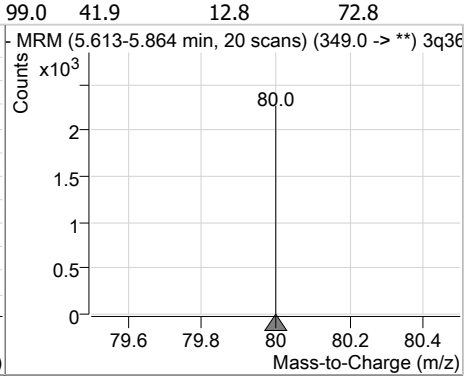




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	0.48	5.69	-0.08	879	349.0 -> 99.0	41.9	12.8	72.8



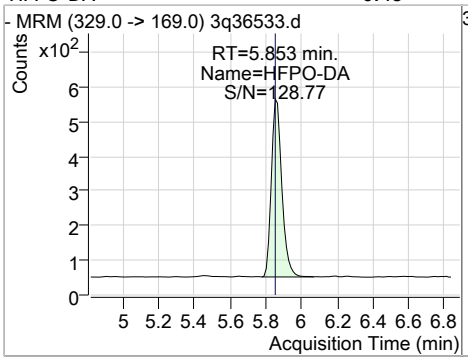


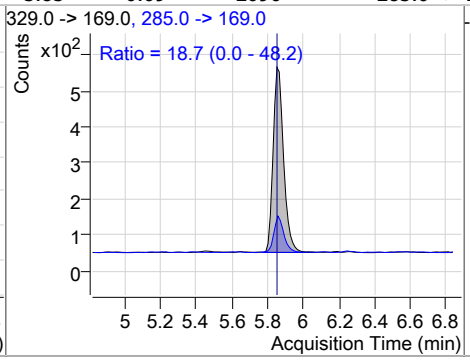


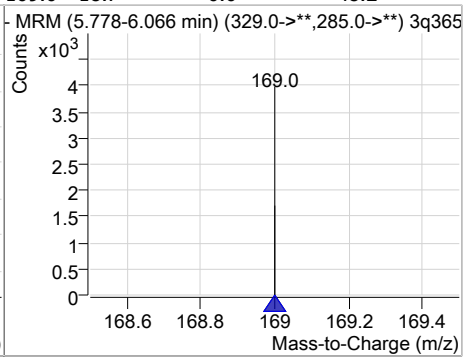
11.6.16 11

Perfluorinated Compounds by LC/MS/MS

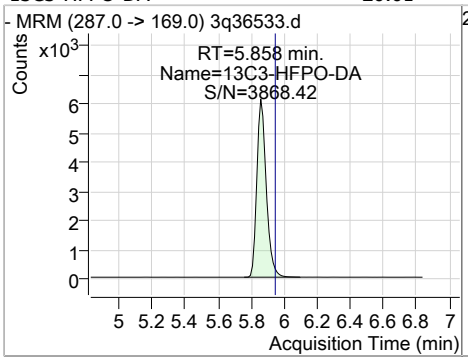
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.48	5.85	-0.09	2096	285.0 -> 169.0	18.7	0.0	48.2

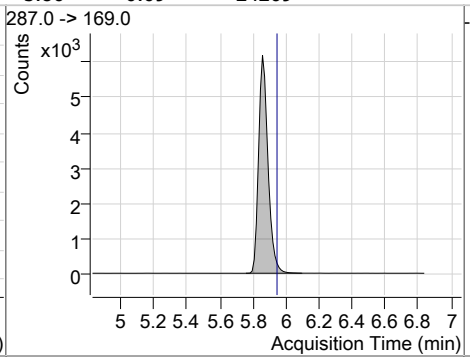


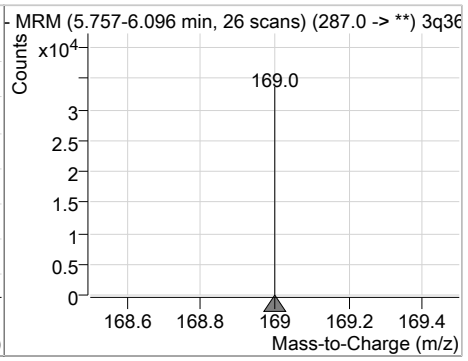




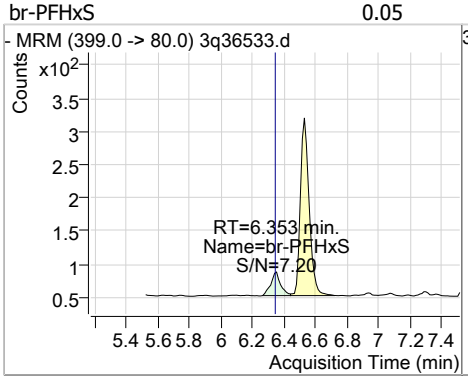
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.01	5.86	-0.09	24269				

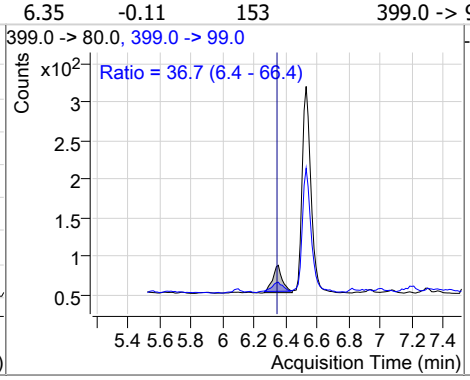


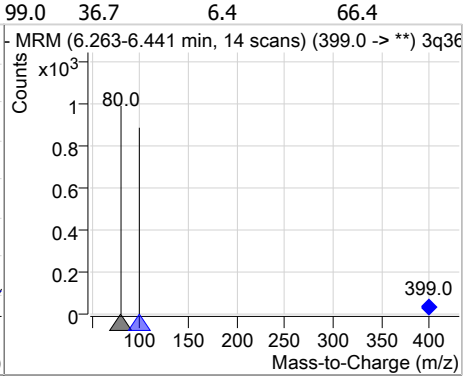




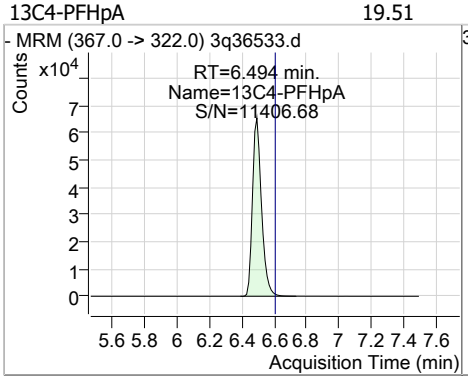
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	0.05	6.35	-0.11	153	399.0 -> 99.0	36.7	6.4	66.4

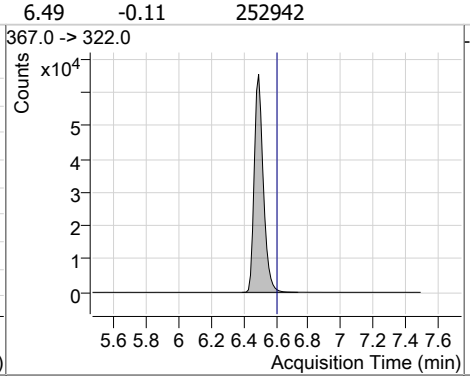


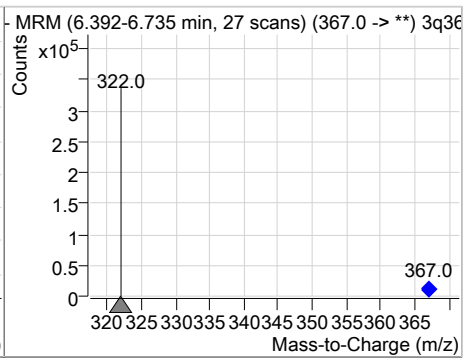




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.51	6.49	-0.11	252942				

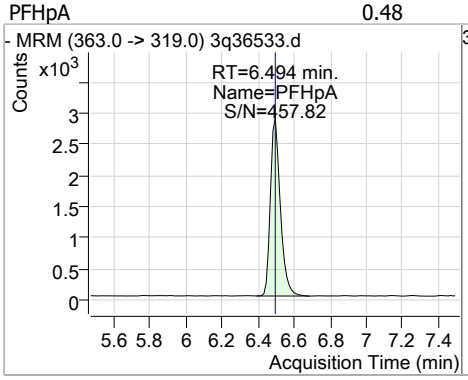


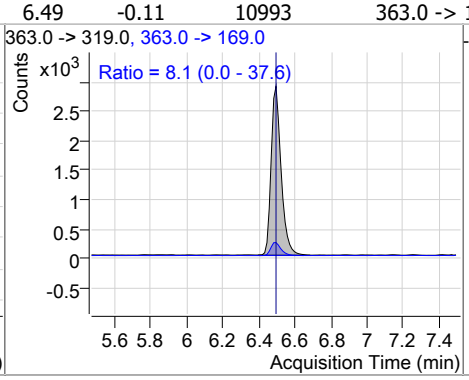


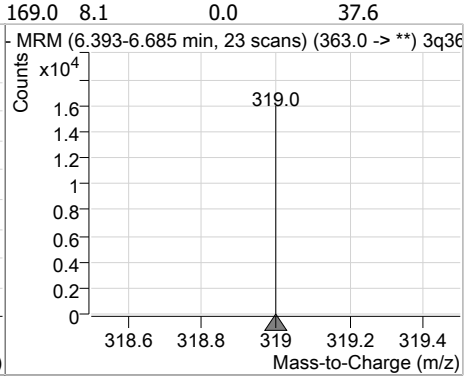


Perfluorinated Compounds by LC/MS/MS

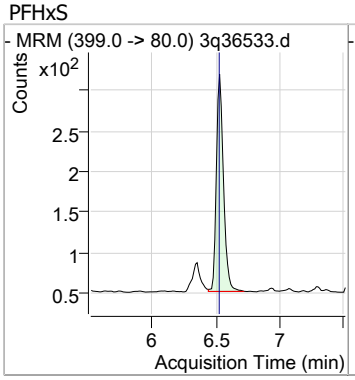
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.48	6.49	-0.11	10993	363.0 -> 169.0	8.1	0.0	37.6

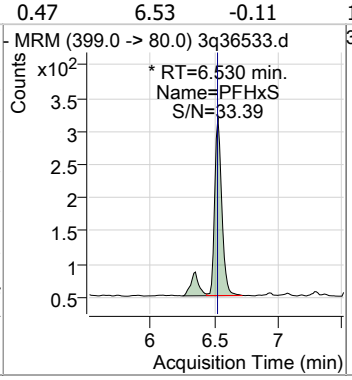


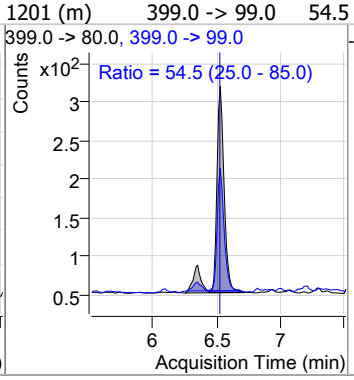


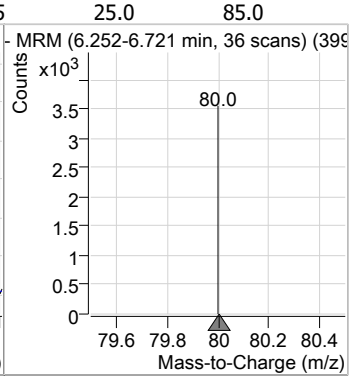


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.47	6.53	-0.11	1201 (m)	399.0 -> 99.0	54.5	25.0	85.0

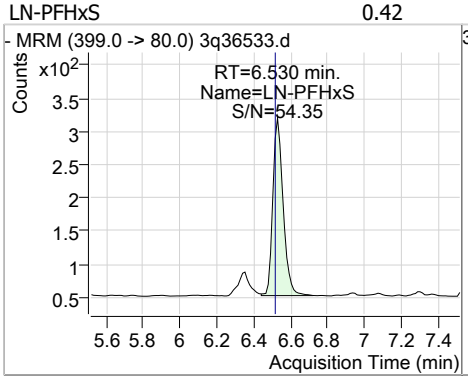


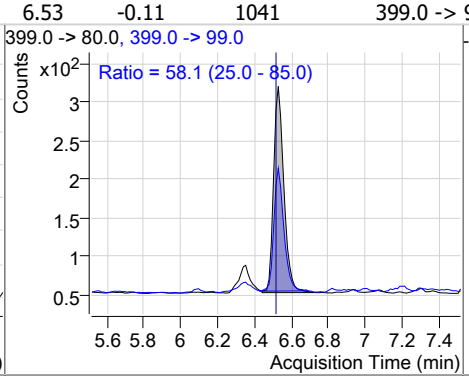


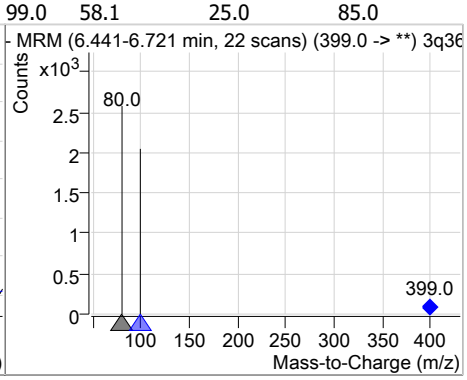




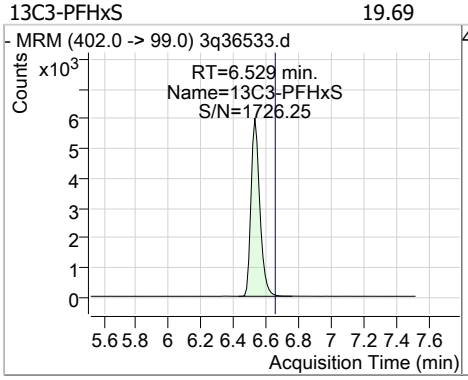
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	0.42	6.53	-0.11	1041	399.0 -> 99.0	58.1	25.0	85.0

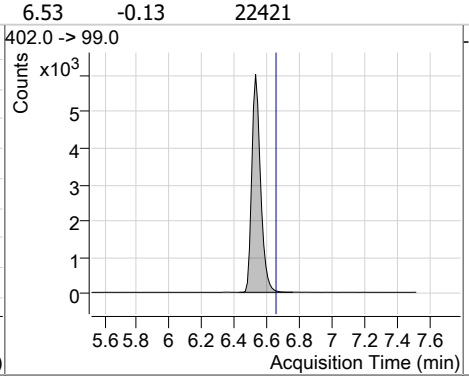


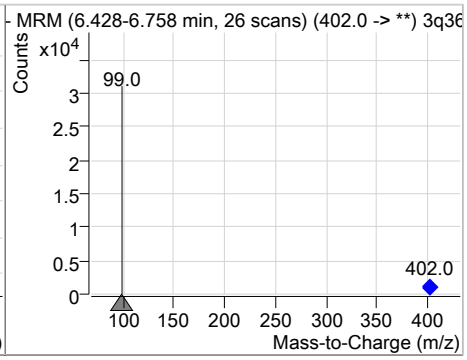




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.69	6.53	-0.13	22421				





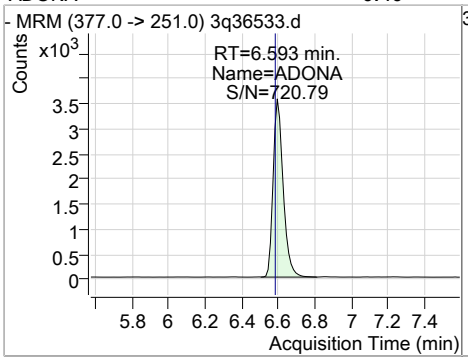


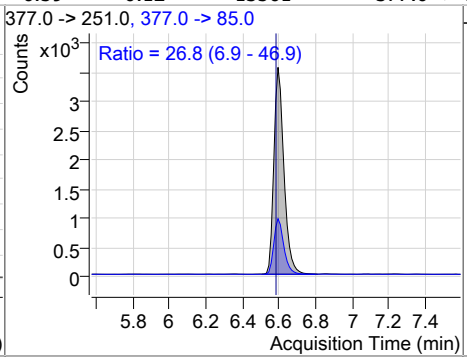
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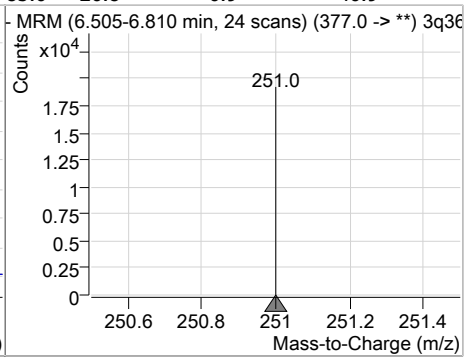
11

Perfluorinated Compounds by LC/MS/MS

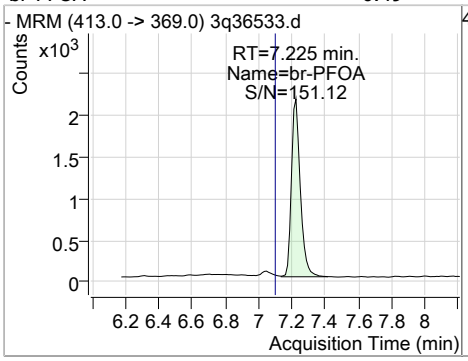
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.46	6.59	-0.12	13561	377.0 -> 85.0	26.8	6.9	46.9

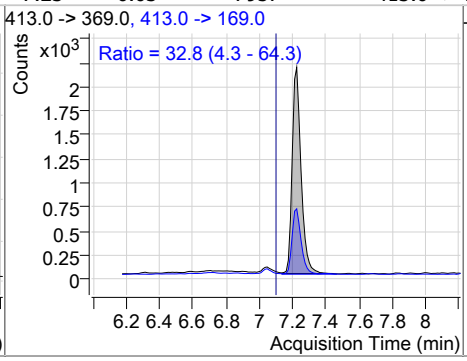


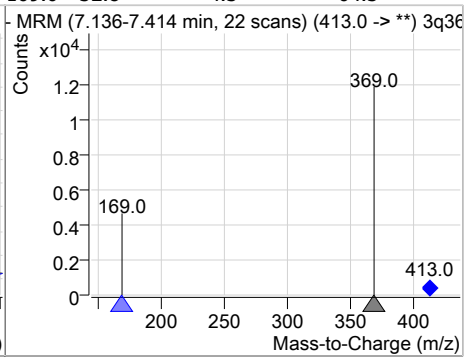




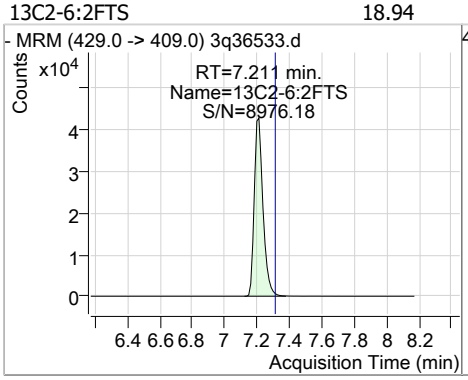
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	0.49	7.23	0.03	7957	413.0 -> 169.0	32.8	4.3	64.3

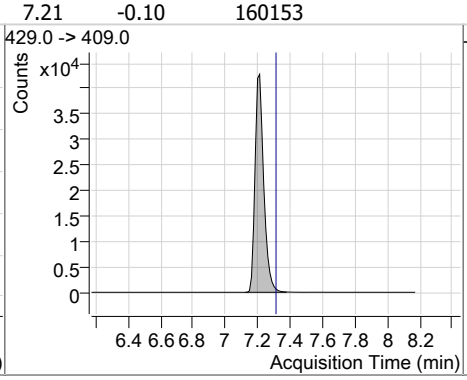


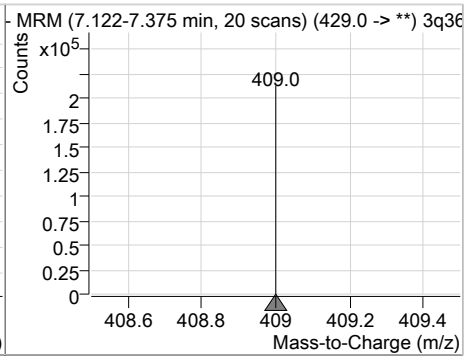




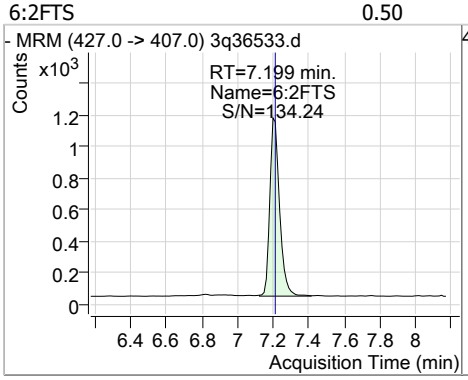
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.94	7.21	-0.10	160153				

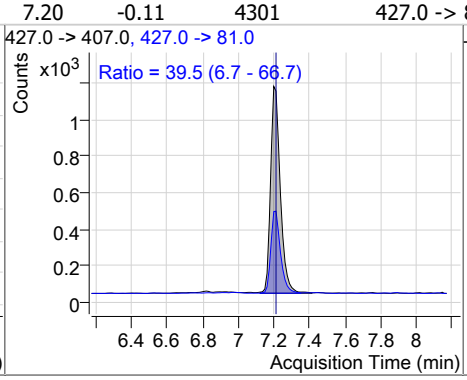


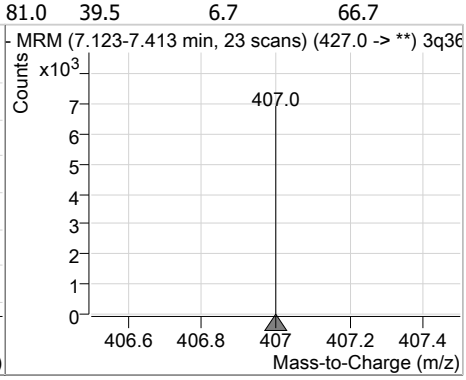




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	0.50	7.20	-0.11	4301	427.0 -> 81.0	39.5	6.7	66.7

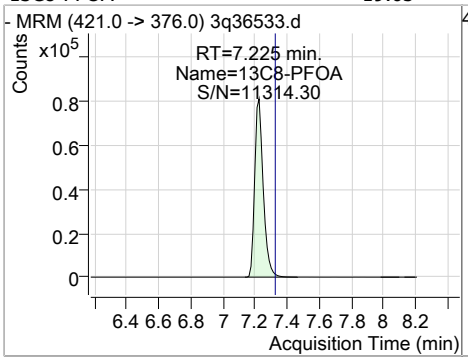


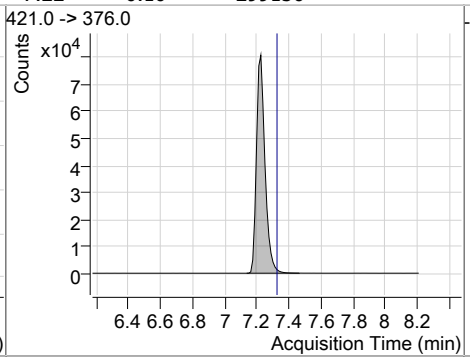


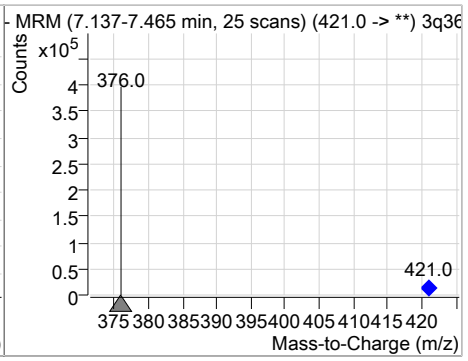


Perfluorinated Compounds by LC/MS/MS

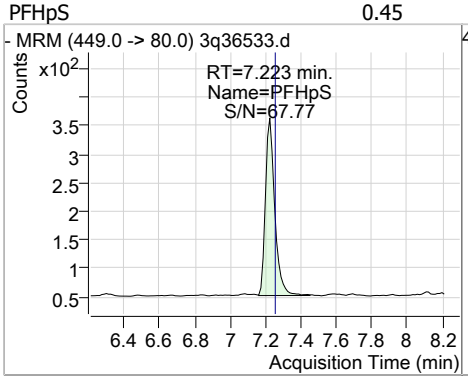
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.65	7.22	-0.10	299156				

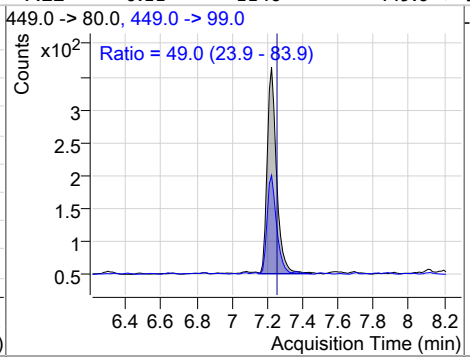


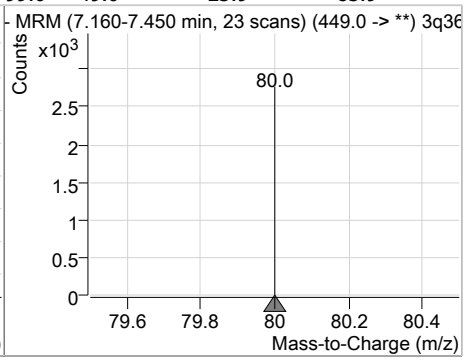




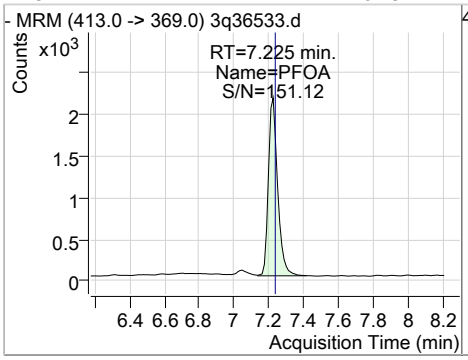
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	0.45	7.22	-0.11	1146	449.0 -> 99.0	49.0	23.9	83.9

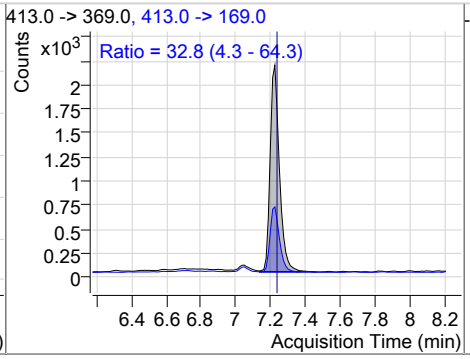


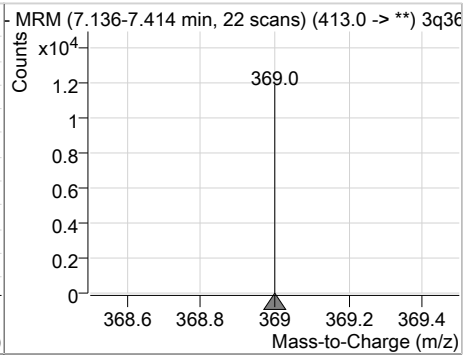




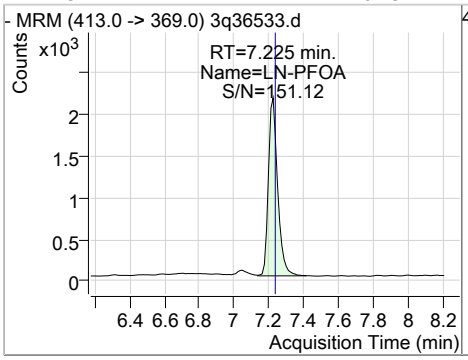
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.49	7.23	-0.11	7957	413.0 -> 169.0	32.8	4.3	64.3

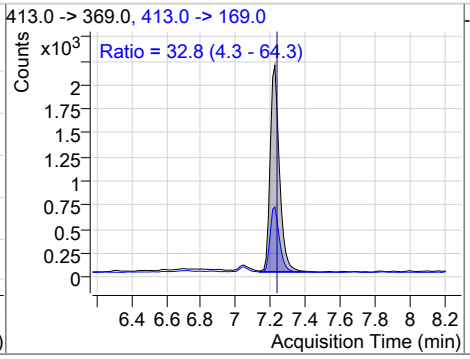


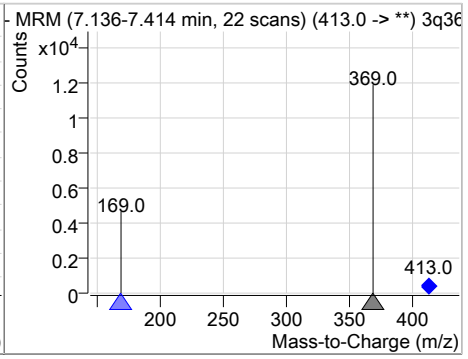




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	0.49	7.23	-0.11	7957	413.0 -> 169.0	32.8	4.3	64.3

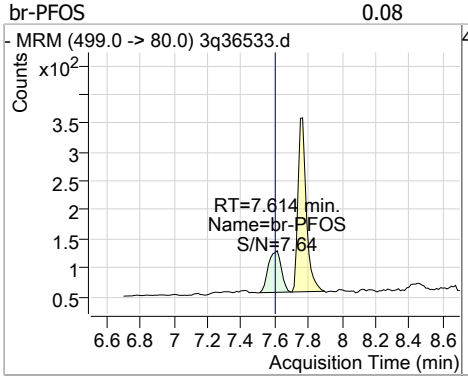


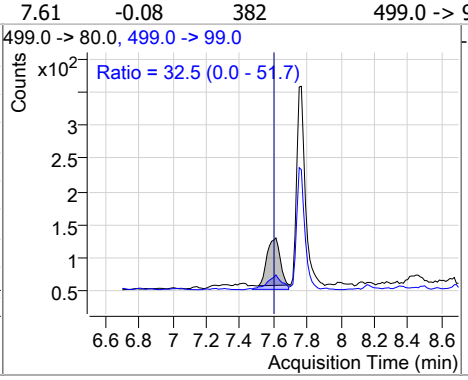


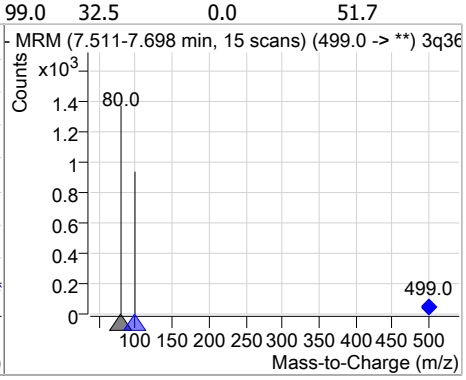


Perfluorinated Compounds by LC/MS/MS

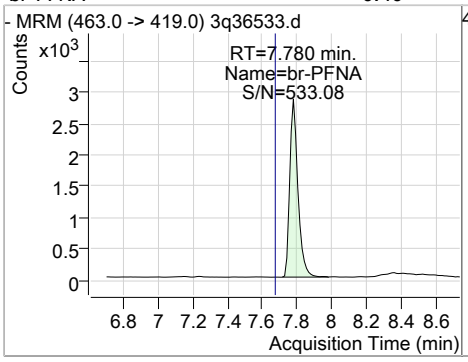
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	0.08	7.61	-0.08	382	499.0 -> 99.0	32.5	0.0	51.7

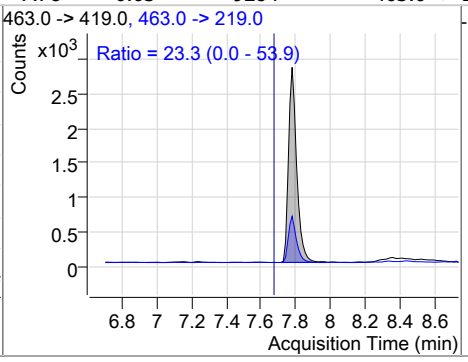


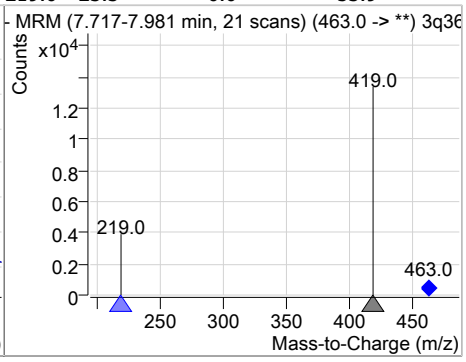




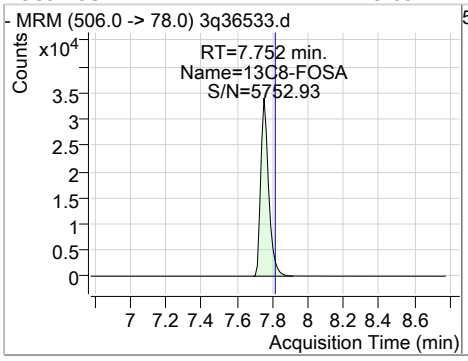
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFNA	0.46	7.78	0.03	9284	463.0 -> 219.0	23.3	0.0	53.9

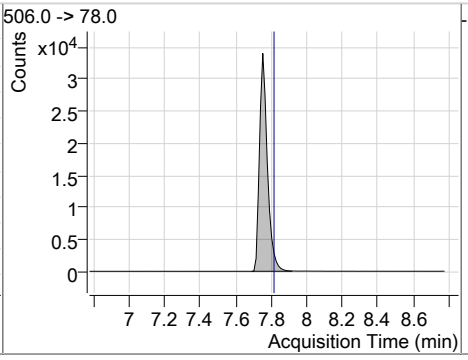


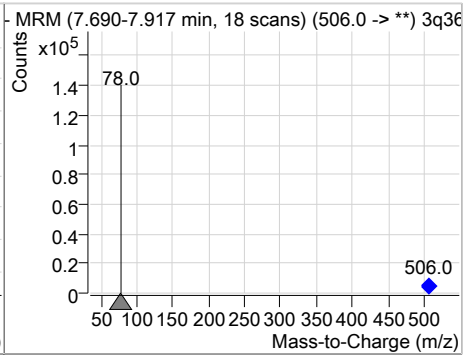




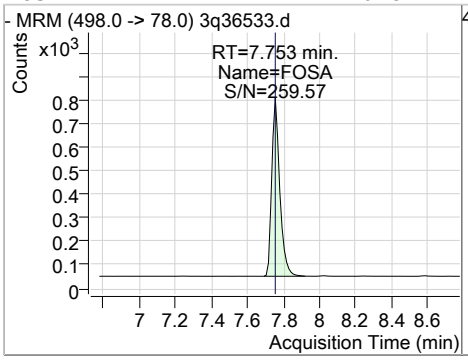
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	19.85	7.75	-0.06	105397				

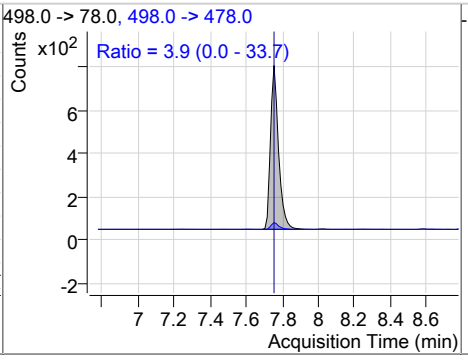


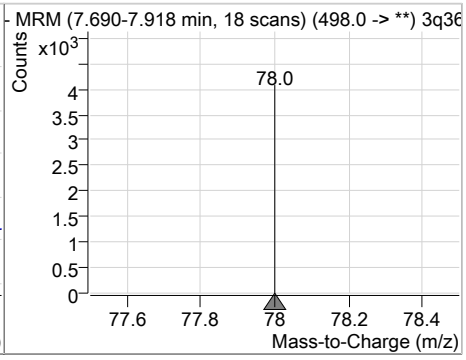




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	0.43	7.75	-0.06	2346	498.0 -> 478.0	3.9	0.0	33.7

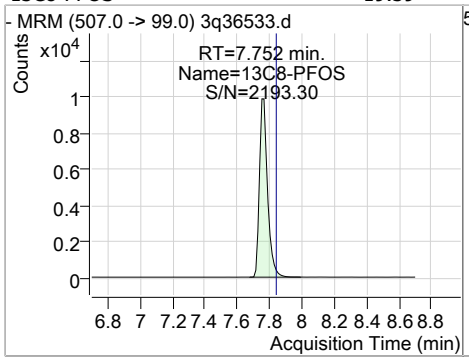


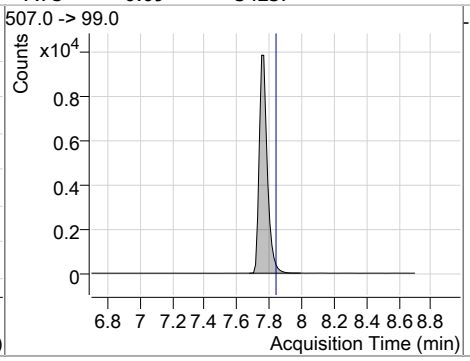


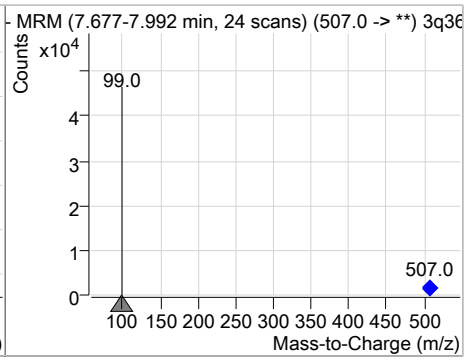


Perfluorinated Compounds by LC/MS/MS

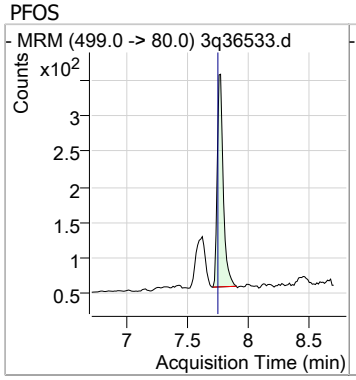
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.39	7.75	-0.09	34237				

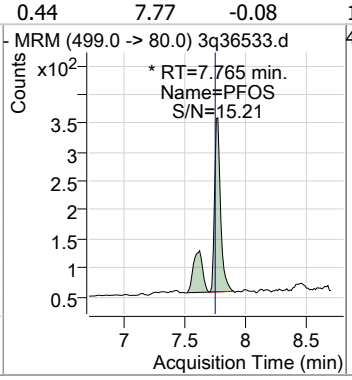


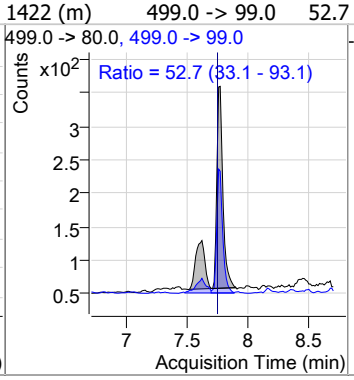


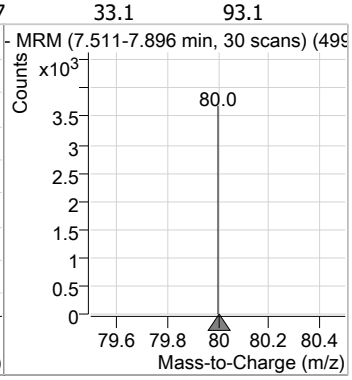


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.44	7.77	-0.08	1422 (m)	499.0 -> 99.0	52.7	33.1	93.1

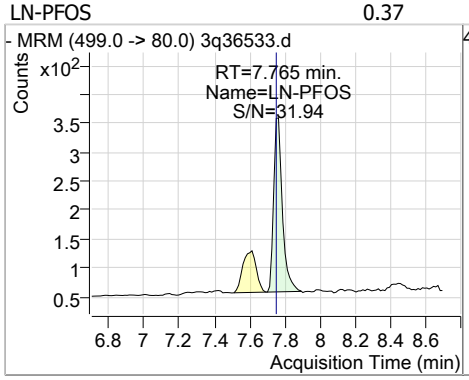


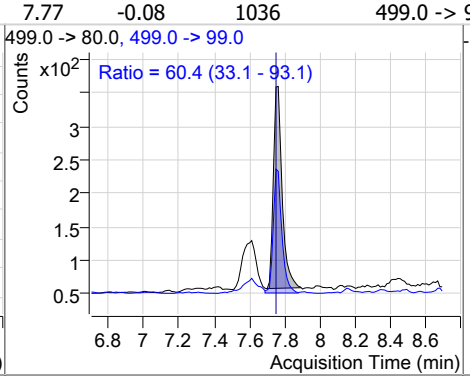


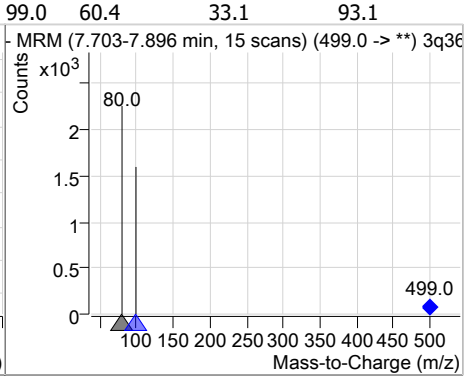




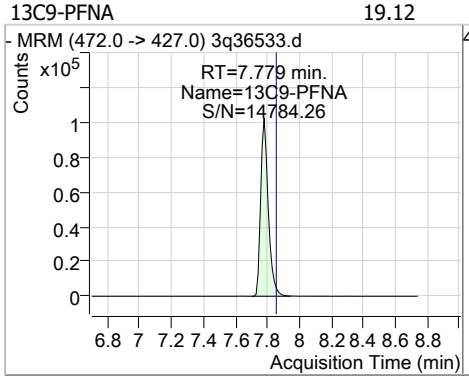
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	0.37	7.77	-0.08	1036	499.0 -> 99.0	60.4	33.1	93.1

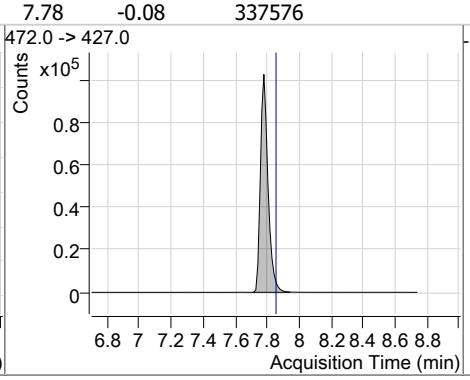


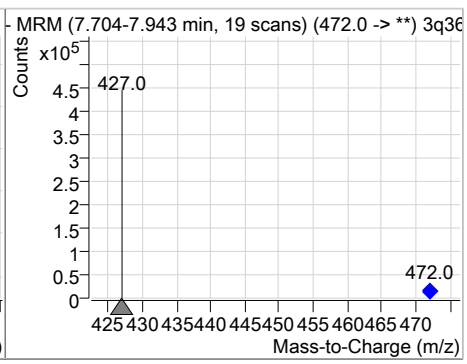




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.12	7.78	-0.08	337576				





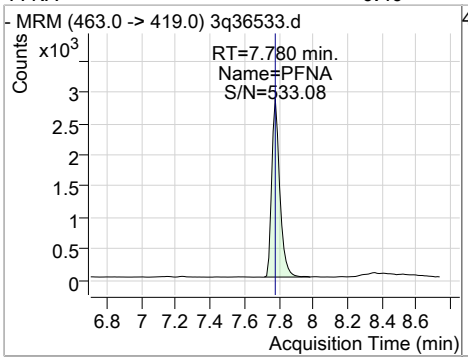


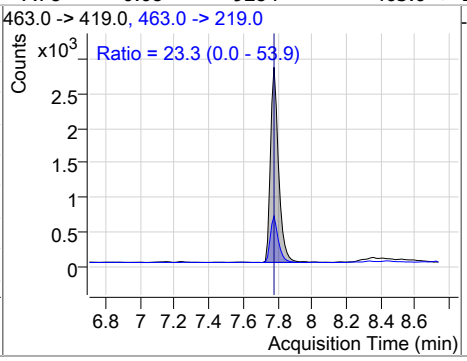
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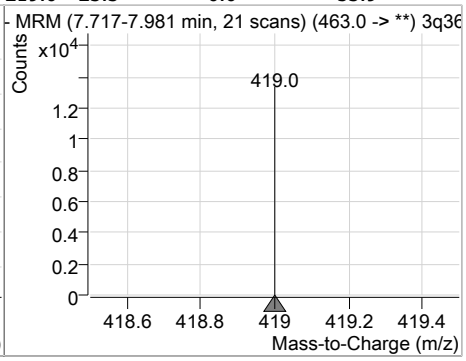
11

Perfluorinated Compounds by LC/MS/MS

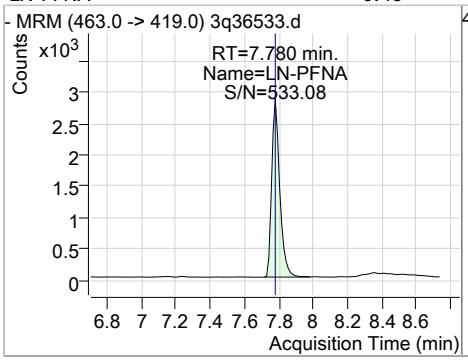
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.46	7.78	-0.08	9284	463.0 -> 219.0	23.3	0.0	53.9

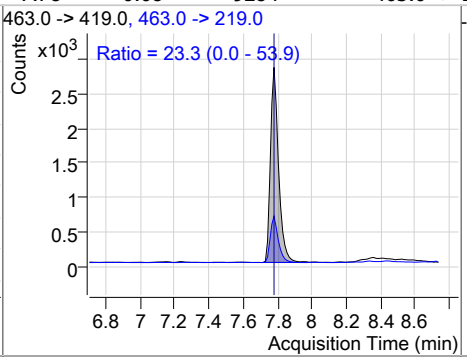


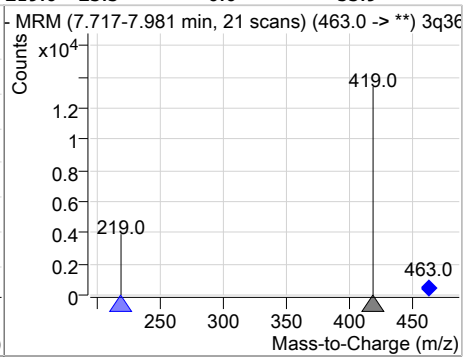




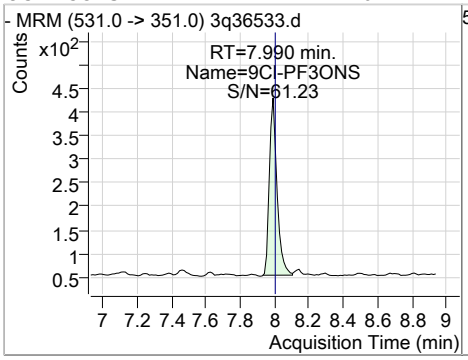
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	0.46	7.78	-0.08	9284	463.0 -> 219.0	23.3	0.0	53.9

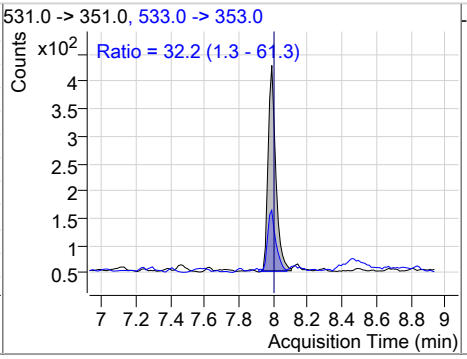


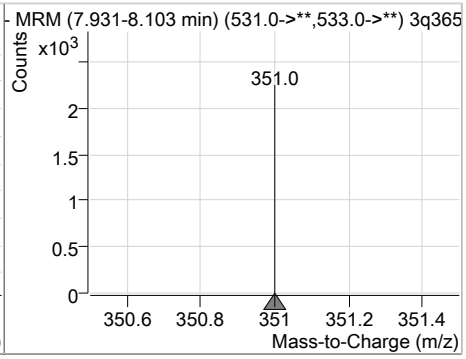




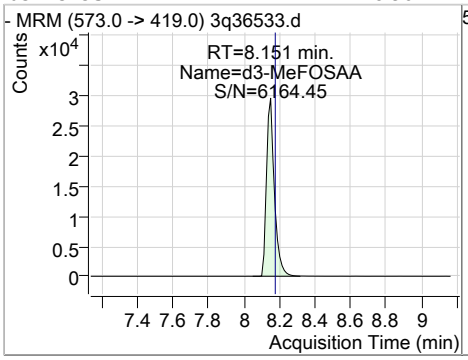
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.44	7.99	-0.06	1166	533.0 -> 353.0	32.2	1.3	61.3

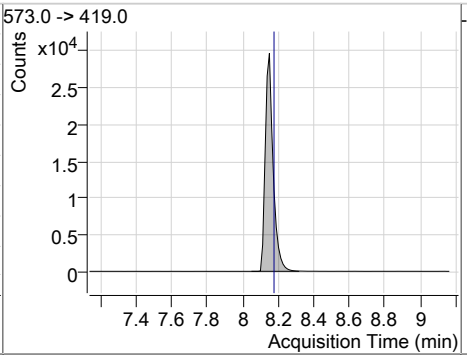


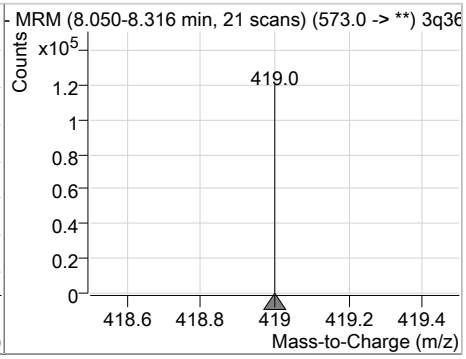




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	18.96	8.15	-0.03	90529				

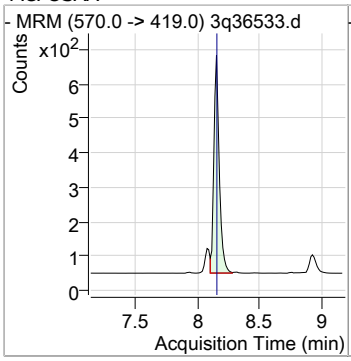


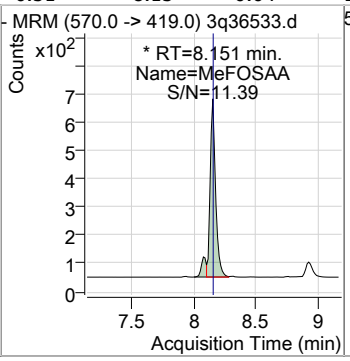


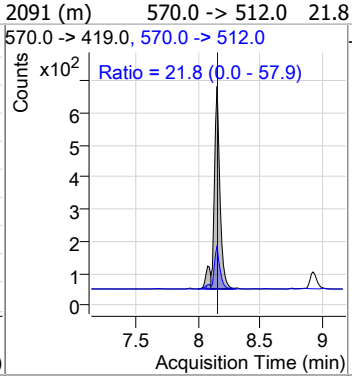


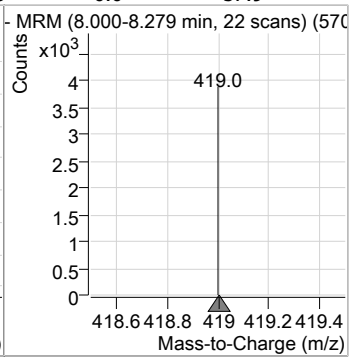
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.51	8.15	-0.04	2091 (m)	570.0 -> 512.0	21.8	0.0	57.9

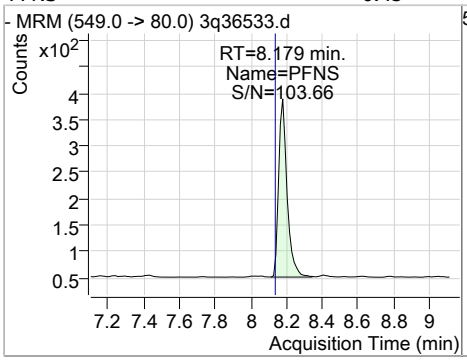


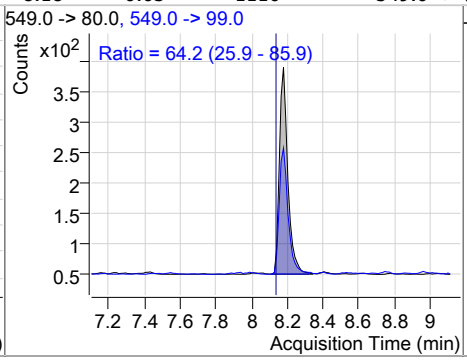


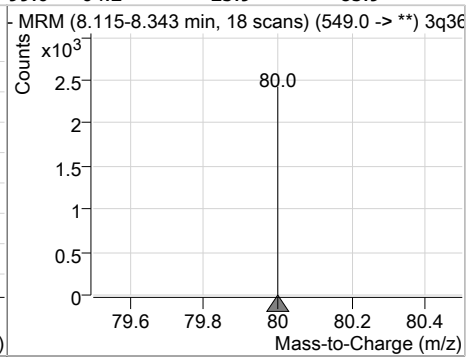




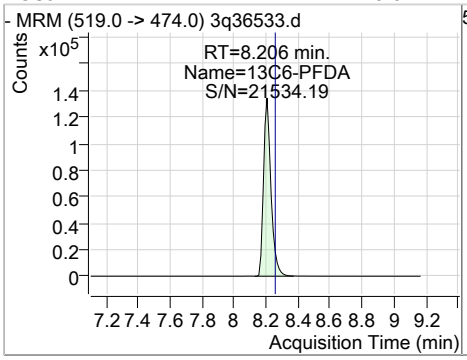
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	0.45	8.18	-0.05	1110	549.0 -> 99.0	64.2	25.9	85.9

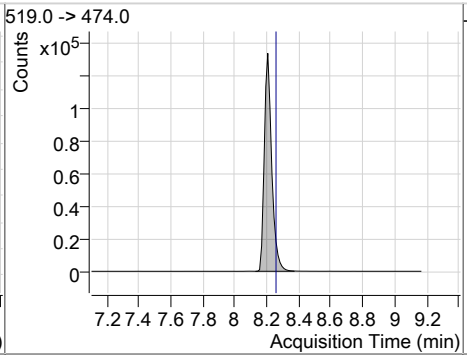


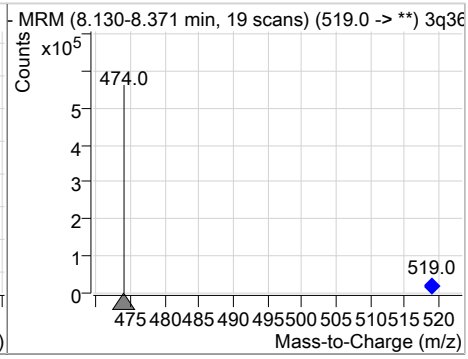




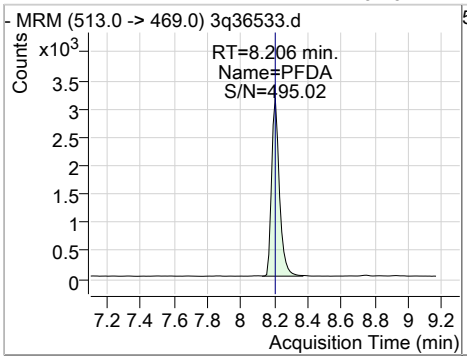
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.82	8.21	-0.05	432529				

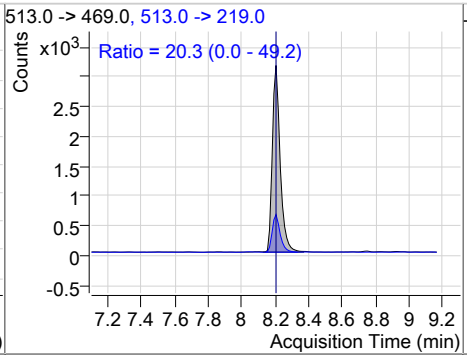


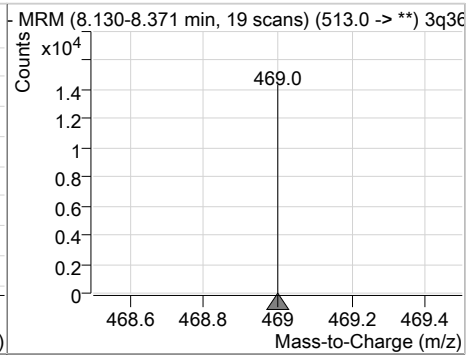




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.46	8.21	-0.05	10226	513.0 -> 219.0	20.3	0.0	49.2

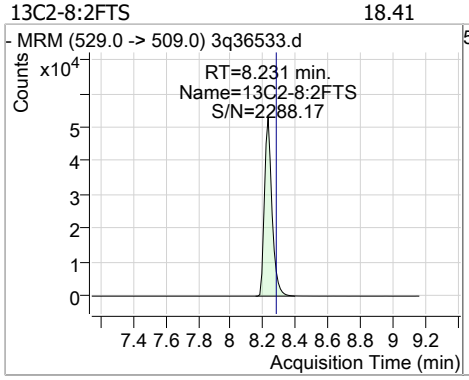


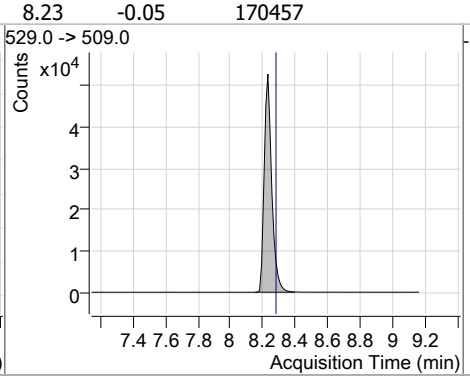


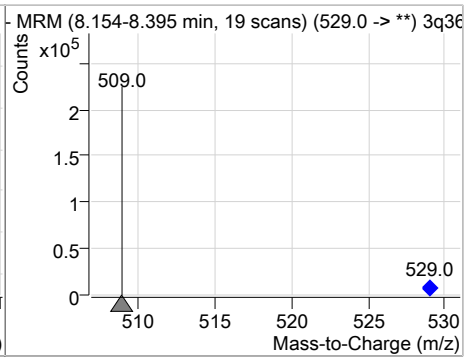


Perfluorinated Compounds by LC/MS/MS

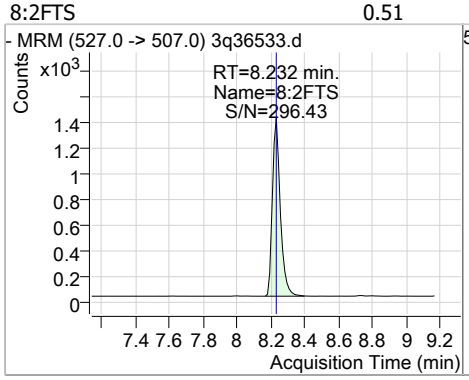
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.41	8.23	-0.05	170457				

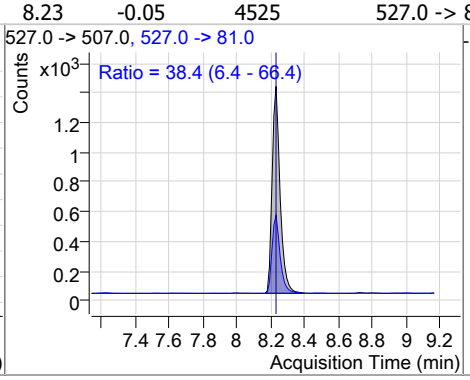


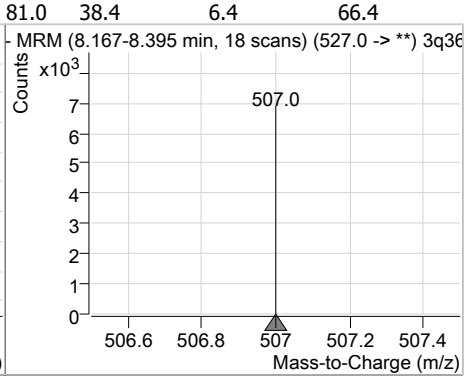




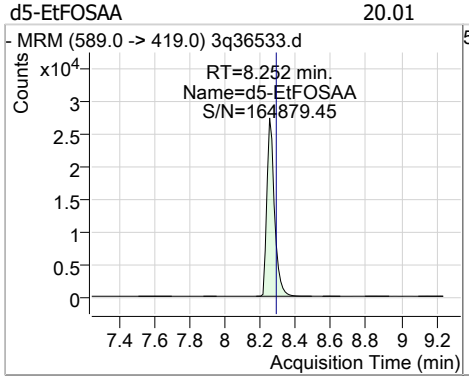
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	0.51	8.23	-0.05	4525	527.0 -> 81.0	38.4	6.4	66.4

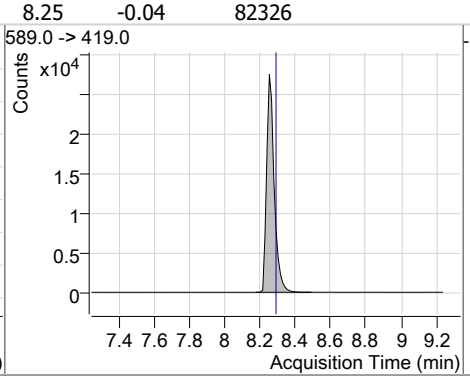


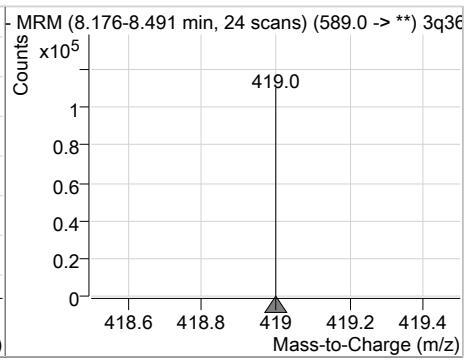




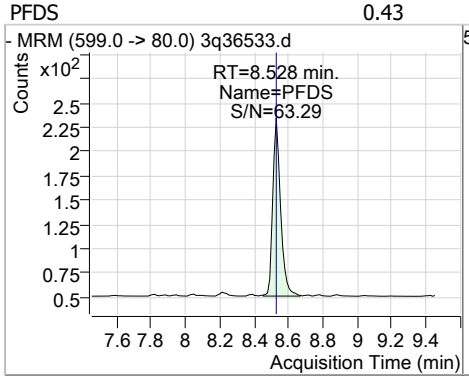
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.01	8.25	-0.04	82326				

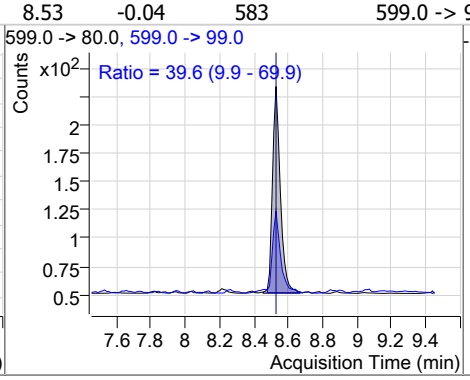


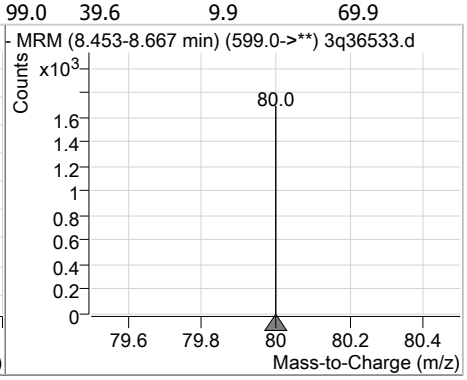




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	0.43	8.53	-0.04	583	599.0 -> 99.0	39.6	9.9	69.9



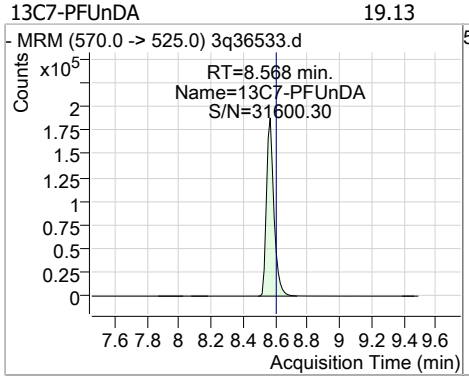


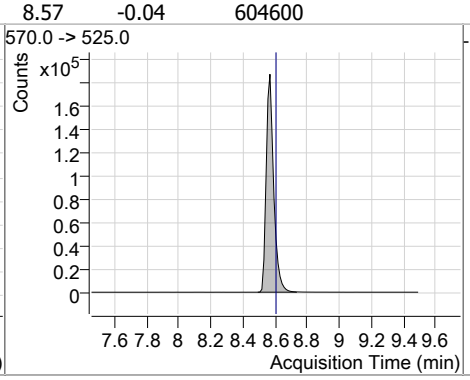


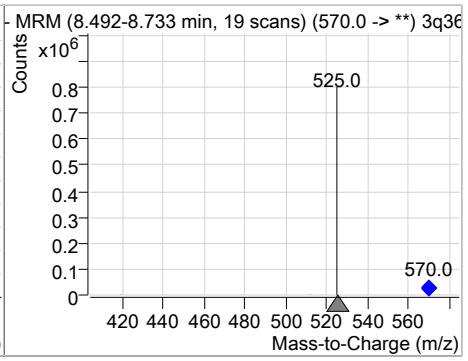
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Perfluorinated Compounds by LC/MS/MS

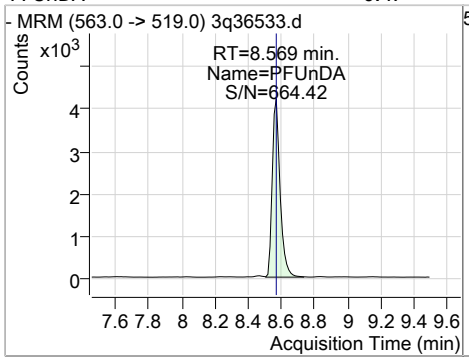
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.13	8.57	-0.04	604600				

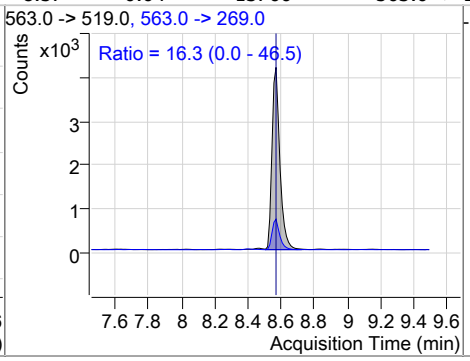


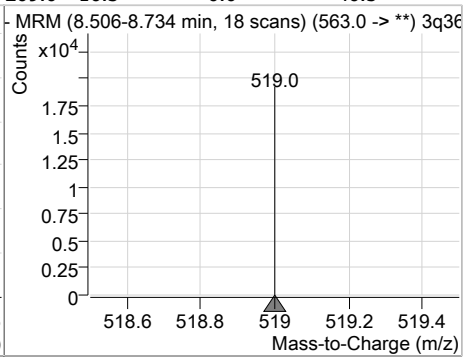




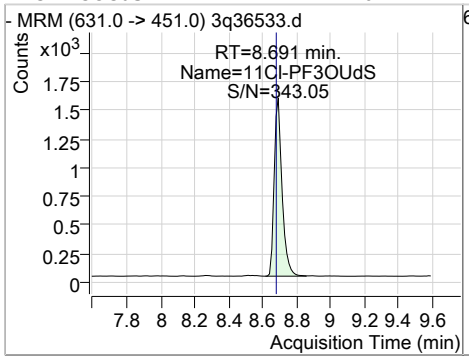
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.47	8.57	-0.04	13766	563.0 -> 269.0	16.3	0.0	46.5

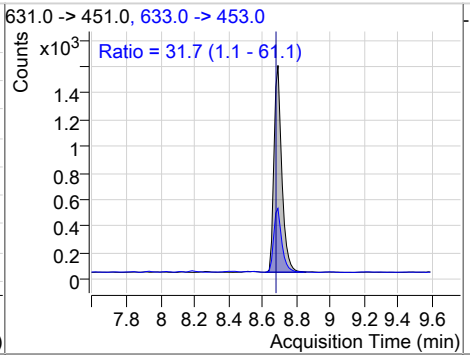


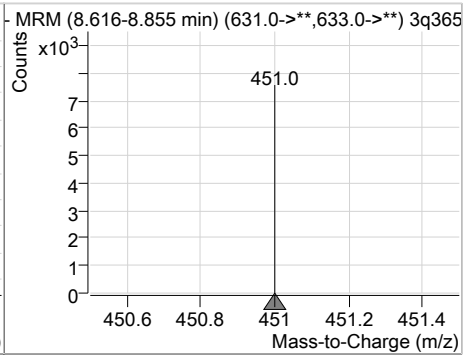




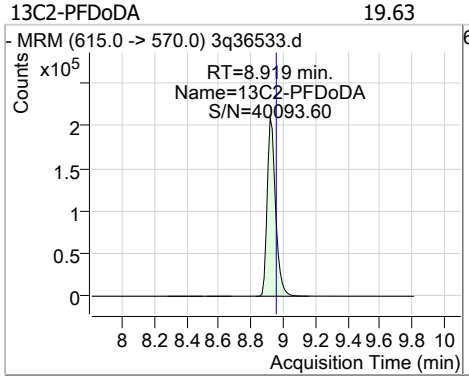
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.42	8.69	-0.03	5004	633.0 -> 453.0	31.7	1.1	61.1

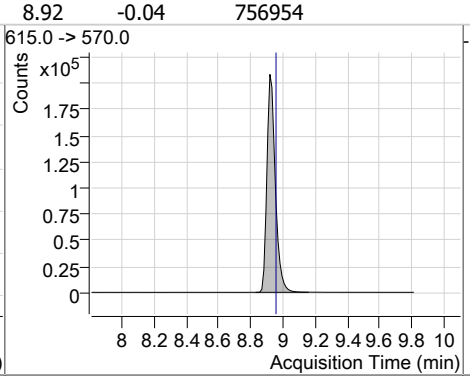


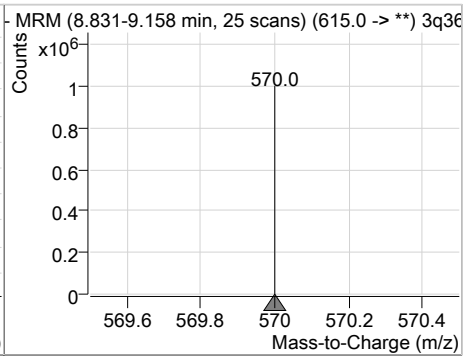




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.63	8.92	-0.04	756954				

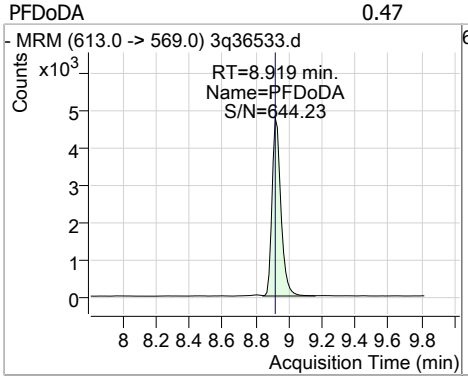


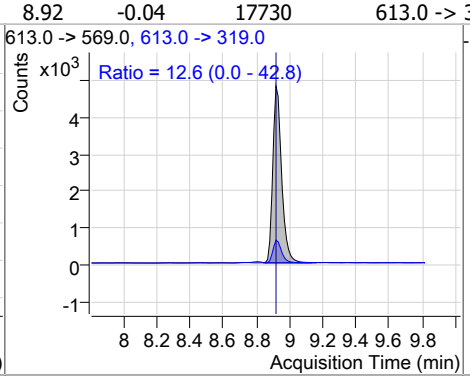


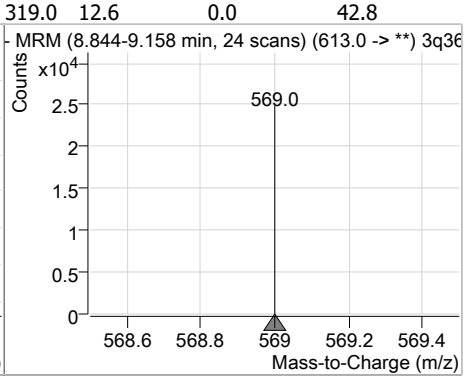


Perfluorinated Compounds by LC/MS/MS

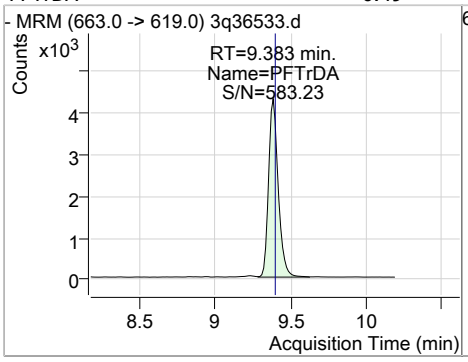
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.47	8.92	-0.04	17730	613.0 -> 319.0	12.6	0.0	42.8

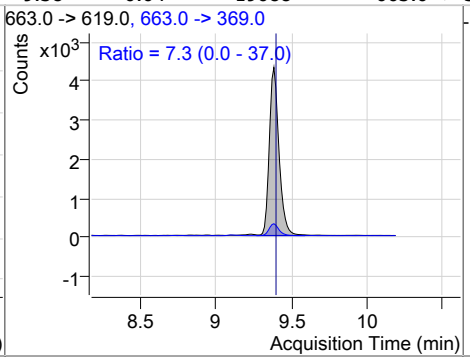


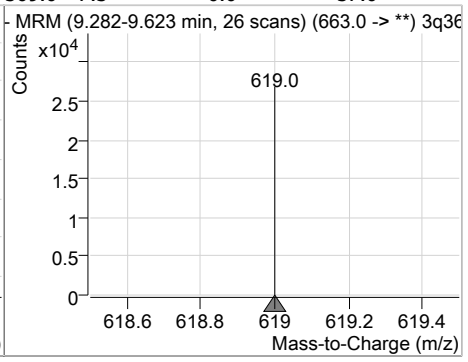




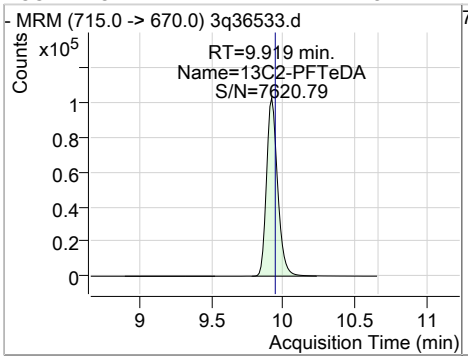
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.49	9.38	-0.04	19088	663.0 -> 369.0	7.3	0.0	37.0

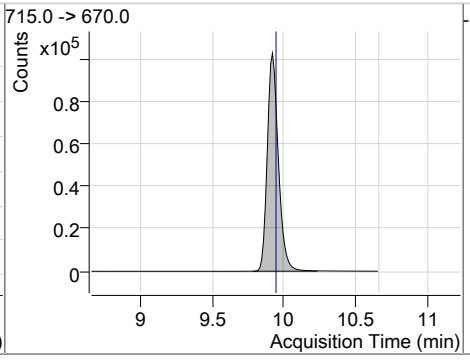


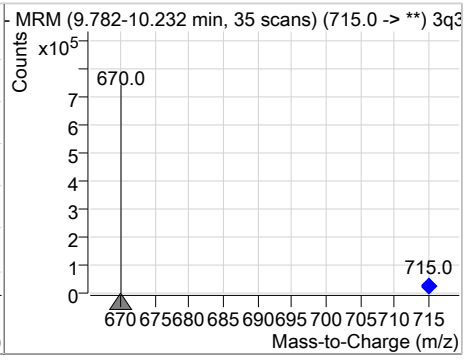




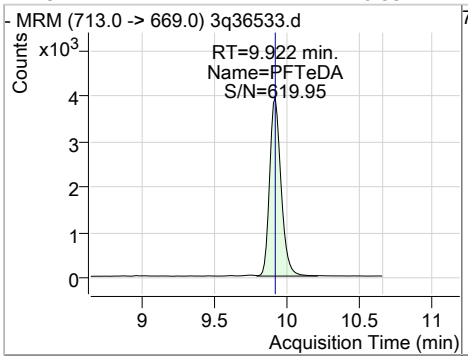
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.77	9.92	-0.03	552635				

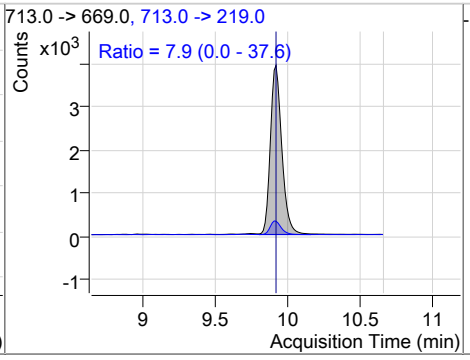


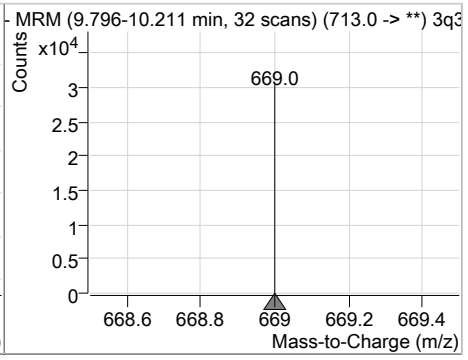




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.53	9.92	-0.03	21398	713.0 -> 219.0	7.9	0.0	37.6







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Manual Integration Approval Summary

Sample Number: S3Q537-IC537
Lab FileID: 3Q36533.D
Injection Time: 04/13/21 14:19
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/14/21 10:44 Martha Valls
Supervisor approved: 04/14/21 15:06 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.53	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.76	Split peak
MeFOSAA	2355-31-9		8.15	Split peak
EtFOSAA	2991-50-6		8.27	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/14/21 15:06

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36534.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/13/2021 2:35:37 PM
Sample Name : ic537-1
Vial : P1-A3
DA Method File : BR_LN_041321_S3Q537.quantmethod.xml
Batch Name : s3q537.batch.bin
Sample Information : op84308,S3Q537,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.914	217.0 -> 172.0	158306	20.00	µg/L	0.075
M5-PFPeA	4.086	268.0 -> 223.0	119941	20.00	µg/L	0.013
M5-PFHxA	5.630	318.0 -> 273.0	185912	20.00	µg/L	0.000
M4-PFHpA	6.657	367.0 -> 322.0	265407	20.00	µg/L	0.050
M8-PFOA	7.364	421.0 -> 376.0	323608	20.00	µg/L	0.038
M9-PFNA	7.804	472.0 -> 427.0	381452	20.00	µg/L	-0.051
M6-PFDA	8.167	519.0 -> 474.0	518851	20.00	µg/L	-0.090
M7-PFUnDA	8.518	570.0 -> 525.0	721354	20.00	µg/L	-0.088
M2-PFDoDA	8.894	615.0 -> 570.0	851384	20.00	µg/L	-0.063
M2-PFTeDA	9.807	715.0 -> 670.0	561778	20.00	µg/L	-0.138
M8-FOSA	7.702	506.0 -> 78.0	118824	20.00	µg/L	-0.114
M3-PFBS	4.434	302.0 -> 99.0	16572	20.00	µg/L	-0.013
M3-PFHxS	6.693	402.0 -> 99.0	23207	20.00	µg/L	0.039
M8-PFOS	7.790	507.0 -> 99.0	38813	20.00	µg/L	-0.051
M2-4:2FTS	5.512	329.0 -> 309.0	110948	20.00	µg/L	0.000
M2-6:2FTS	7.350	429.0 -> 409.0	167984	20.00	µg/L	0.038
M2-8:2FTS	8.193	529.0 -> 509.0	194567	20.00	µg/L	-0.089
M3-MeFOSAA	8.012	573.0 -> 419.0	101274	20.00	µg/L	-0.165
M3-HFPO-DA	5.971	287.0 -> 169.0	25607	20.00	µg/L	0.025
M5-EtFOSAA	8.087	589.0 -> 419.0	92048	20.00	µg/L	-0.203
System Monitoring Compounds						
13C2-4:2FTS	5.512	329.0 -> 309.0	110948	19.38	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.9%		
13C2-6:2FTS	7.350	429.0 -> 409.0	167984	19.87	µg/L	0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%		
13C2-8:2FTS	8.193	529.0 -> 509.0	194567	21.02	µg/L	-0.089
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.1%		
13C2-PFDoDA	8.894	615.0 -> 570.0	851384	22.07	µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.4%		
13C2-PFTeDA	9.807	715.0 -> 670.0	561778	20.09	µg/L	-0.138
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.5%		
13C3-PFBS	4.434	302.0 -> 99.0	16572	20.55	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.8%		
13C3-PFHxS	6.693	402.0 -> 99.0	23207	20.38	µg/L	0.039
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.9%		
13C4-PFBA	1.914	217.0 -> 172.0	158306	20.20	µg/L	0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.0%		
13C4-PFHpA	6.657	367.0 -> 322.0	265407	20.47	µg/L	0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.4%		
13C5-PFHxA	5.630	318.0 -> 273.0	185912	20.31	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.6%		
13C5-PFPeA	4.086	268.0 -> 223.0	119941	20.43	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.1%		
13C6-PFDA	8.167	519.0 -> 474.0	518851	22.58	µg/L	-0.090
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 112.9%		

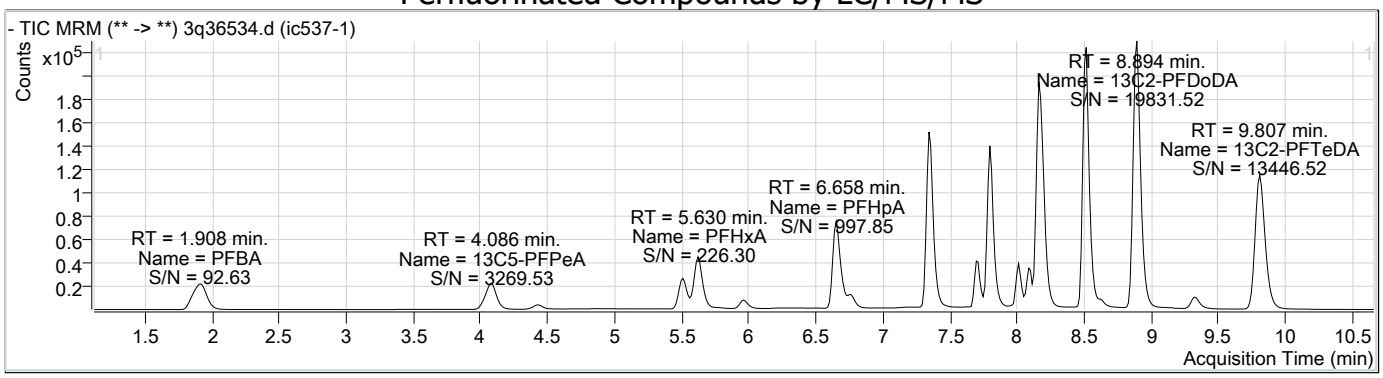
11.6.17 11

Perfluorinated Compounds by LC/MS/MS

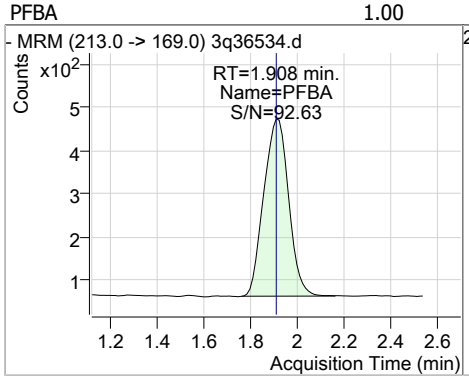
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.518	570.0 -> 525.0	721354	22.82	µg/L		-0.088
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 114.1%			
13C8-FOSA	7.702	506.0 -> 78.0	118824	22.38	µg/L		-0.114
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 111.9%			
13C8-PFOA	7.364	421.0 -> 376.0	323608	21.26	µg/L		0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.3%			
13C8-PFOS	7.790	507.0 -> 99.0	38813	21.98	µg/L		-0.051
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.9%			
13C9-PFNA	7.804	472.0 -> 427.0	381452	21.60	µg/L		-0.051
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.0%			
d3-MeFOSAA	8.012	573.0 -> 419.0	101274	21.21	µg/L		-0.165
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.1%			
13C3-HFPO-DA	5.971	287.0 -> 169.0	25598	21.10	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.5%			
d5-EtFOSAA	8.087	589.0 -> 419.0	92053	22.38	µg/L	m	-0.203
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 111.9%			
Target Compounds							**QValue**
4:2FTS	5.514	327.0 -> 307.0	6371	1.06	µg/L		99
6:2FTS	7.350	427.0 -> 407.0	9669	1.07	µg/L		100
8:2FTS	8.193	527.0 -> 507.0	10843	1.07	µg/L		99
EtFOSAA	8.100	584.0 -> 419.0	4147	0.97	µg/L		90
FOSA	7.703	498.0 -> 78.0	6171	1.01	µg/L		99
MeFOSAA	8.013	570.0 -> 419.0	4470	0.97	µg/L	m	99
PFBA	1.908	213.0 -> 169.0	3023	1.00	µg/L		100
PFBS	4.436	299.0 -> 80.0	2503	0.99	µg/L		98
PFDA	8.168	513.0 -> 469.0	25669	0.96	µg/L		99
PFDoDA	8.894	613.0 -> 569.0	41266	0.98	µg/L		99
PFDS	8.478	599.0 -> 80.0	1486	0.93	µg/L		93
PFHpA	6.658	363.0 -> 319.0	24041	1.00	µg/L		99
PFHpS	7.362	449.0 -> 80.0	2805	0.98	µg/L		98
PFHxA	5.630	313.0 -> 269.0	6464	0.99	µg/L		98
PFHxS	6.694	399.0 -> 80.0	2623	0.99	µg/L	m	95
PFNA	7.805	463.0 -> 419.0	22162	0.97	µg/L		99
PFNS	8.140	549.0 -> 80.0	2953	1.07	µg/L		97
PFOA	7.364	413.0 -> 369.0	17814	1.02	µg/L		98
PFOS	7.791	499.0 -> 80.0	3820	1.05	µg/L	m	81
PFPeA	4.089	263.0 -> 219.0	11422	1.01	µg/L		100
PFPeS	5.776	349.0 -> 80.0	1979	1.01	µg/L		99
PFTeDA	9.808	713.0 -> 669.0	42174	1.02	µg/L		99
PFTrDA	9.320	663.0 -> 619.0	41125	1.04	µg/L		99
PFUnDA	8.519	563.0 -> 519.0	33293	0.94	µg/L		98
11Cl-PF3OUdS	8.627	631.0 -> 451.0	12418	0.93	µg/L		100
9Cl-PF3ONS	7.977	531.0 -> 351.0	2856	0.91	µg/L		96
ADONA	6.772	377.0 -> 251.0	30118	0.99	µg/L		100
HFPO-DA	5.966	329.0 -> 169.0	4758	1.03	µg/L		99
br-PFOS	7.652	499.0 -> 80.0	1269	0.25	µg/L		100
LN-PFOS	7.791	499.0 -> 80.0	2551	0.81	µg/L		97
br-PFHxS	6.504	399.0 -> 80.0	345	0.11	µg/L		90
LN-PFHxS	6.694	399.0 -> 80.0	2278	0.88	µg/L		92
br-PFOA	7.364	413.0 -> 369.0	17814	1.02	µg/L		98
LN-PFOA	7.364	413.0 -> 369.0	17814	1.02	µg/L		98
br-PFNA	7.805	463.0 -> 419.0	22162	0.97	µg/L		99
LN-PFNA	7.805	463.0 -> 419.0	22162	0.97	µg/L		99

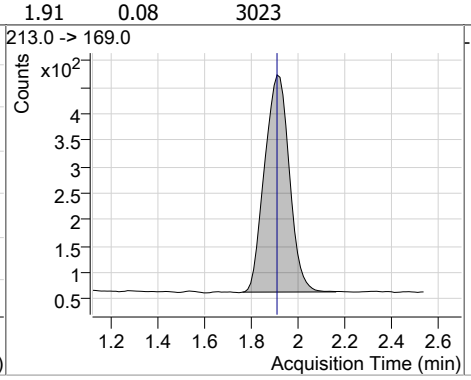
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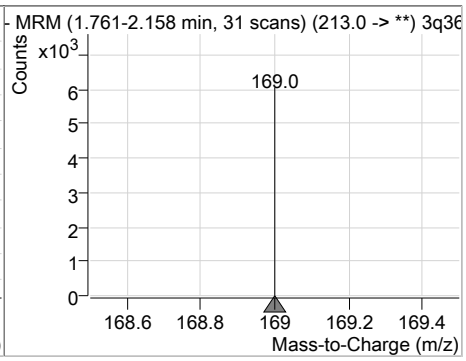
Perfluorinated Compounds by LC/MS/MS



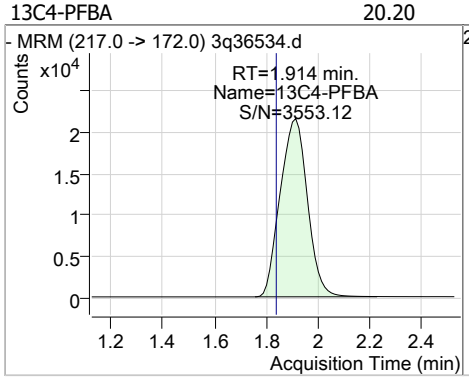
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	1.00	1.91	0.08	3023				

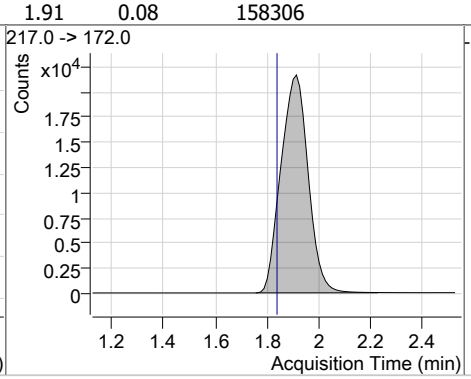


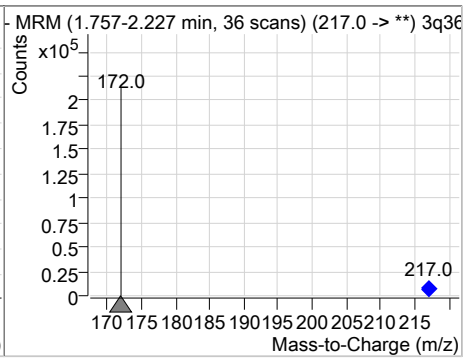




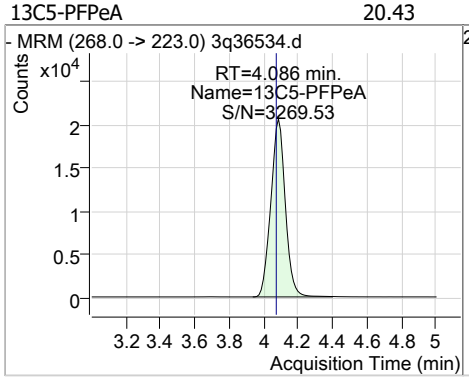
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.20	1.91	0.08	158306				

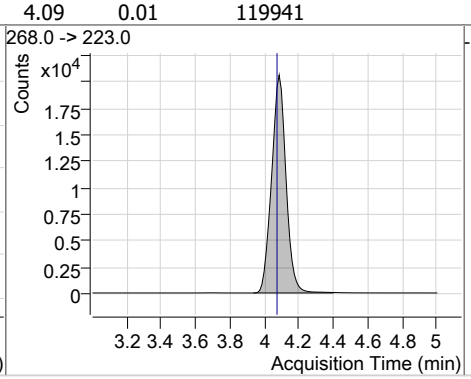


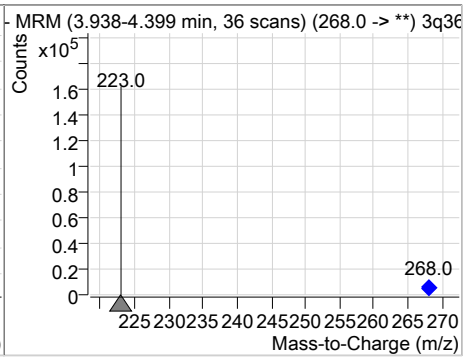




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.43	4.09	0.01	119941				





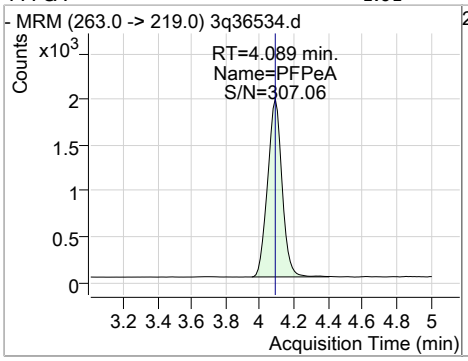


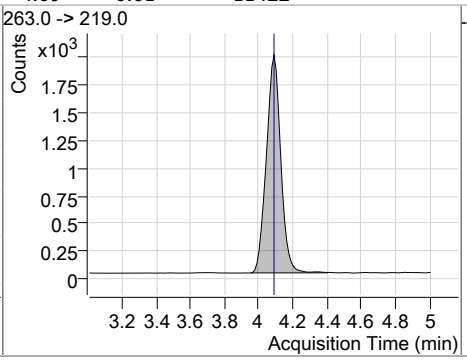
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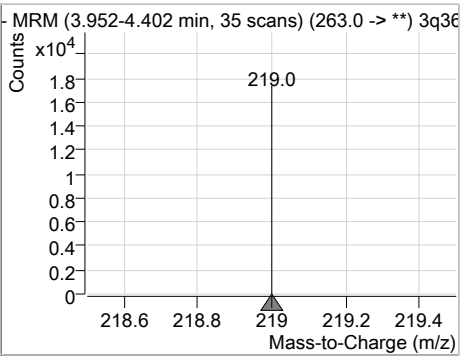
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Perfluorinated Compounds by LC/MS/MS

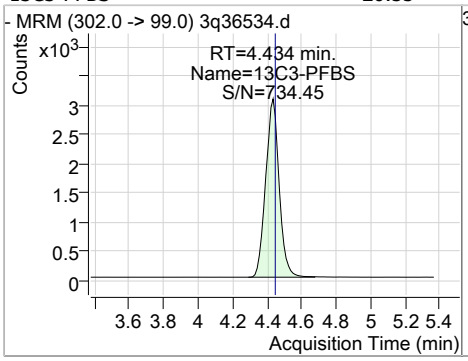
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	1.01	4.09	0.01	11422				

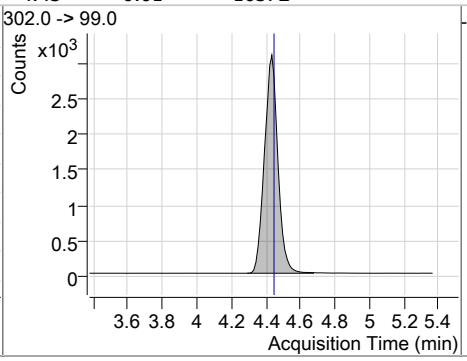


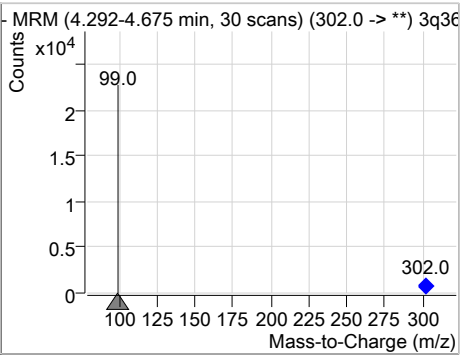




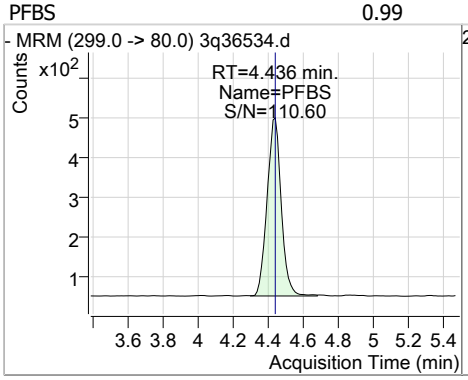
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.55	4.43	-0.01	16572				

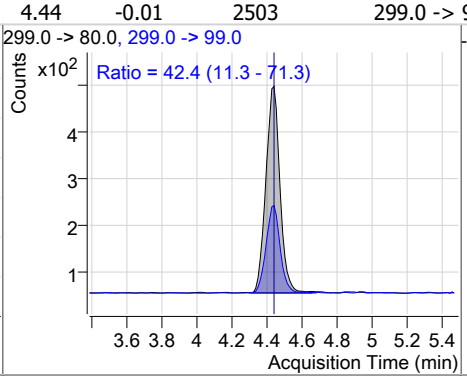


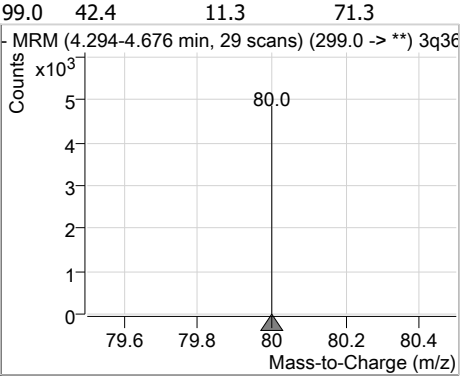




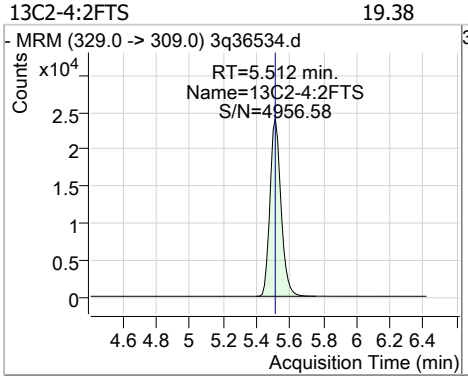
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.99	4.44	-0.01	2503	299.0 -> 99.0	42.4	11.3	71.3

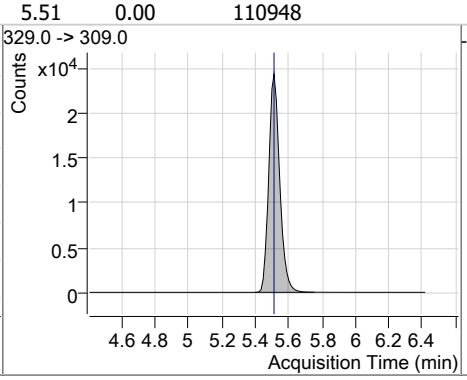


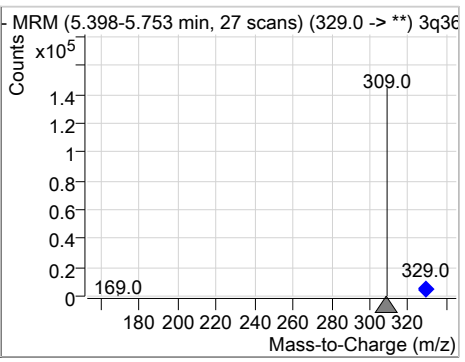




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.38	5.51	0.00	110948				

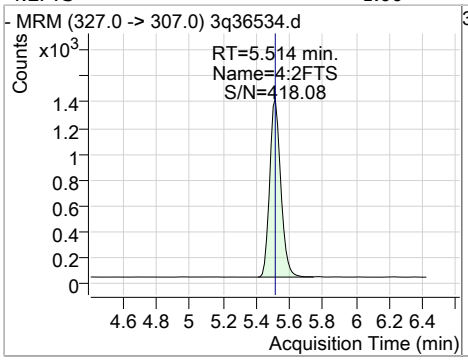


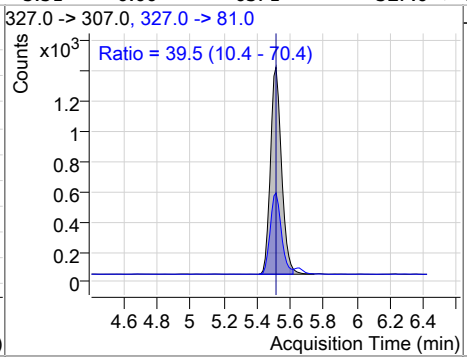


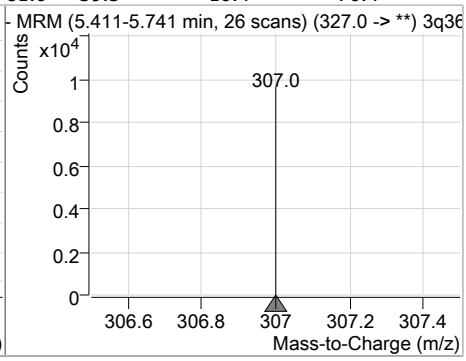


Perfluorinated Compounds by LC/MS/MS

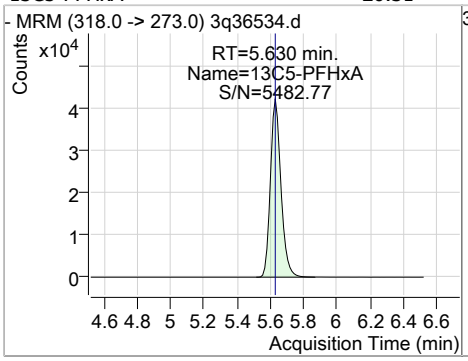
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	1.06	5.51	0.00	6371	327.0 -> 81.0	39.5	10.4	70.4

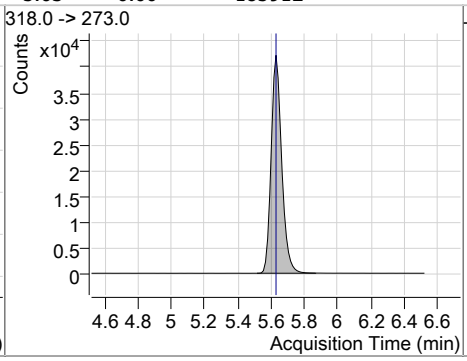


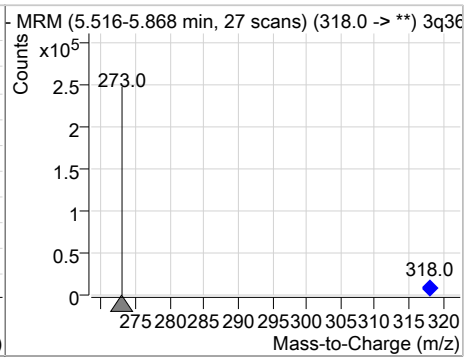




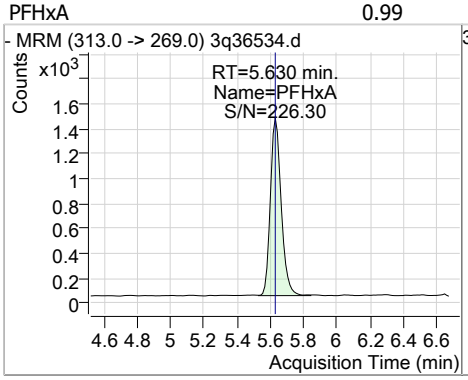
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.31	5.63	0.00	185912				

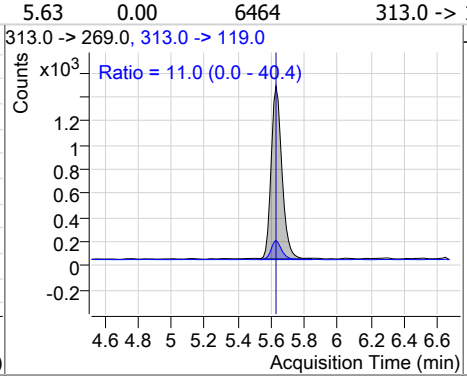


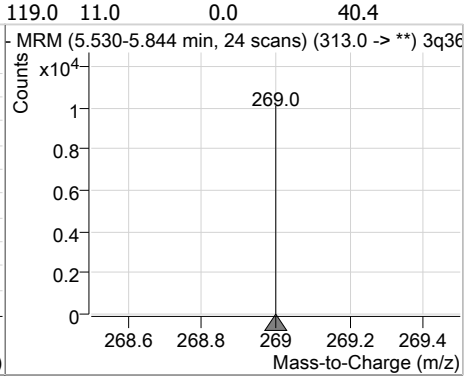




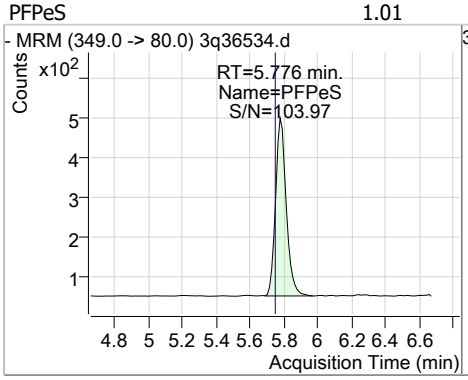
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.99	5.63	0.00	6464	313.0 -> 119.0	11.0	0.0	40.4

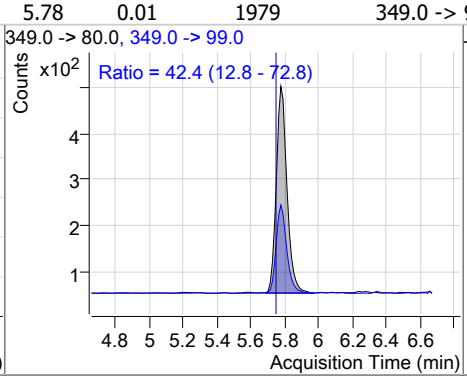


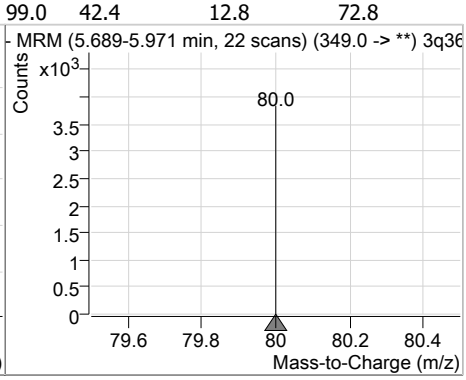




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	1.01	5.78	0.01	1979	349.0 -> 99.0	42.4	12.8	72.8

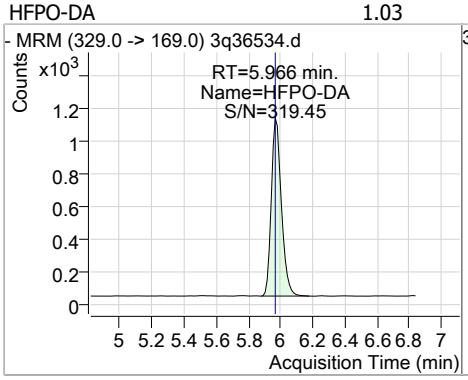


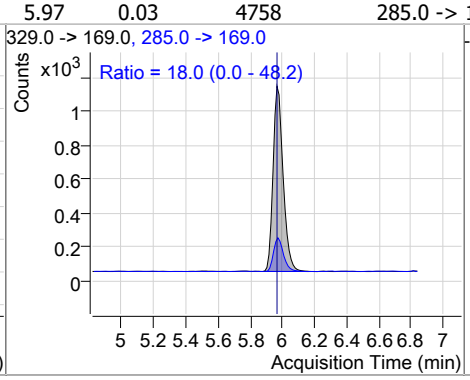


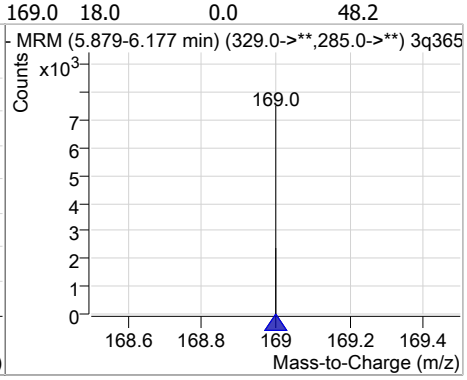


Perfluorinated Compounds by LC/MS/MS

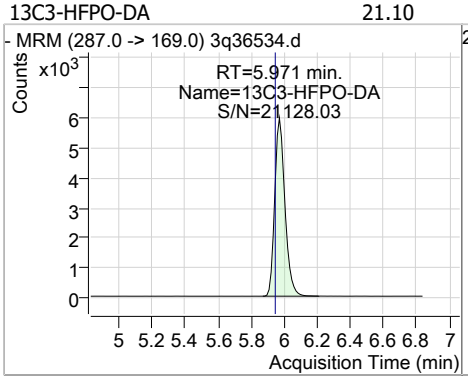
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	1.03	5.97	0.03	4758	285.0 -> 169.0	18.0	0.0	48.2

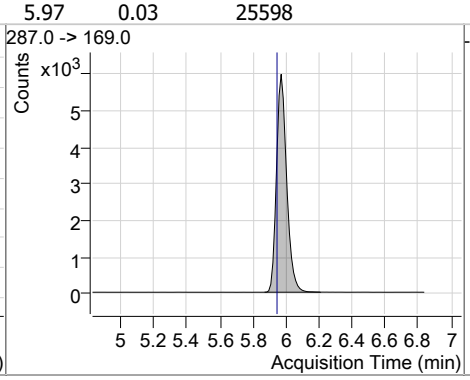


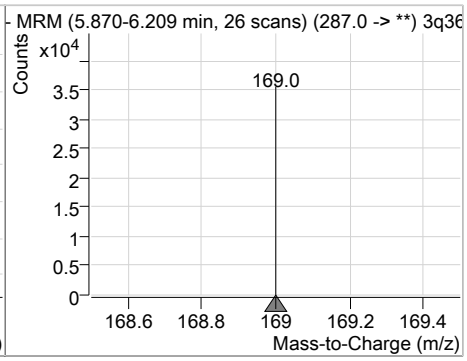




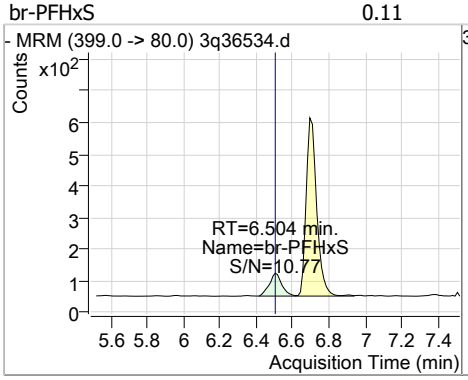
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	21.10	5.97	0.03	25598				

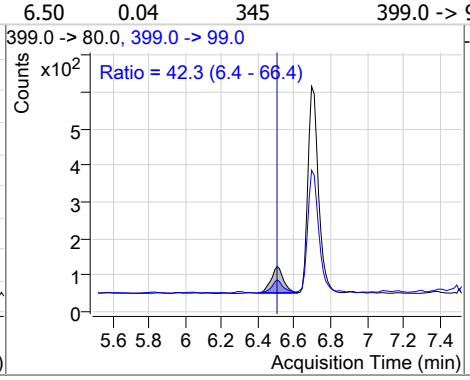


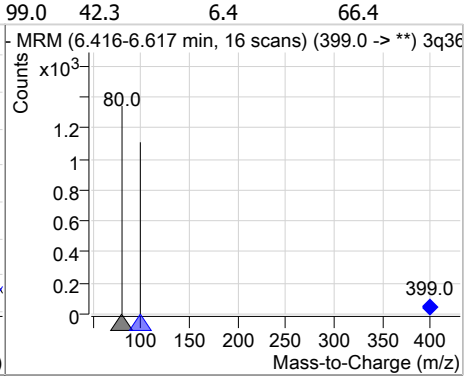




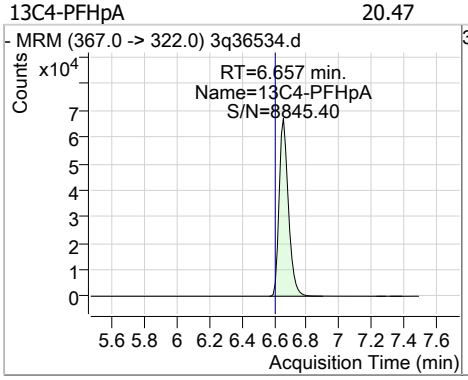
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	0.11	6.50	0.04	345	399.0 -> 99.0	42.3	6.4	66.4

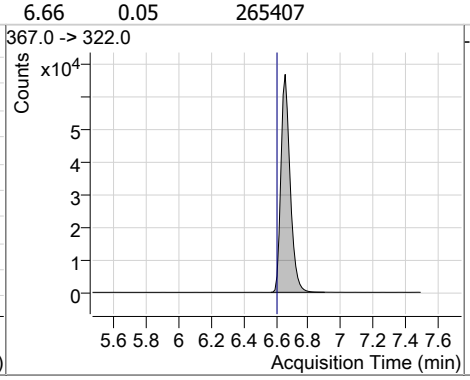


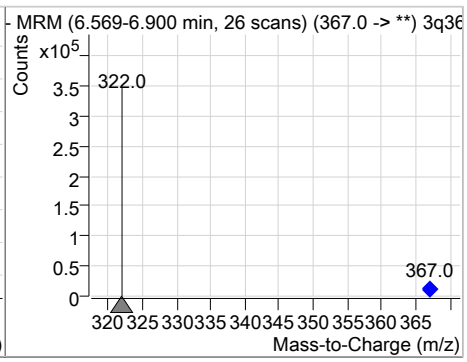




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.47	6.66	0.05	265407				

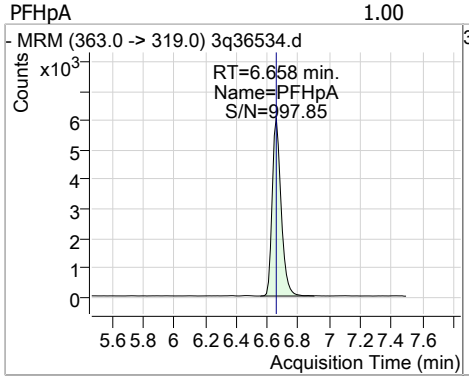


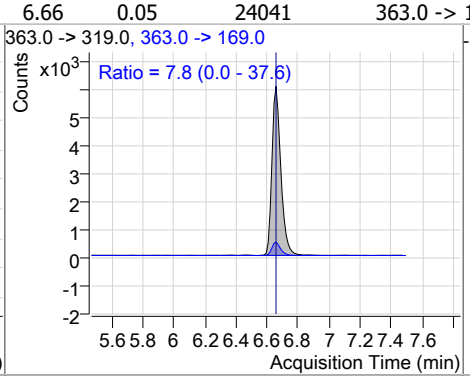


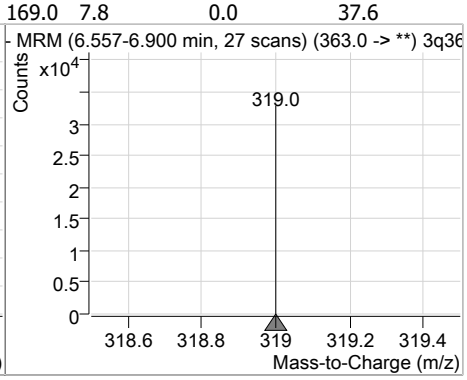


Perfluorinated Compounds by LC/MS/MS

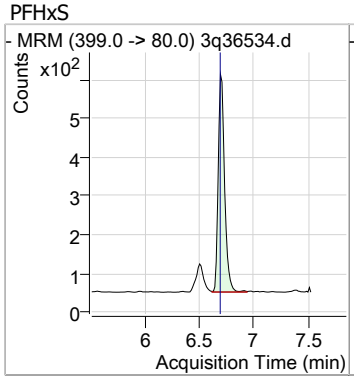
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	1.00	6.66	0.05	24041	363.0 -> 169.0	7.8	0.0	37.6

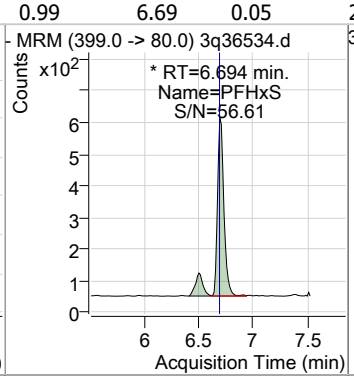


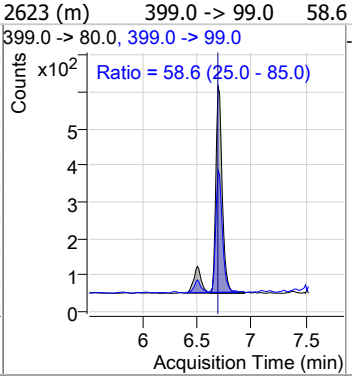


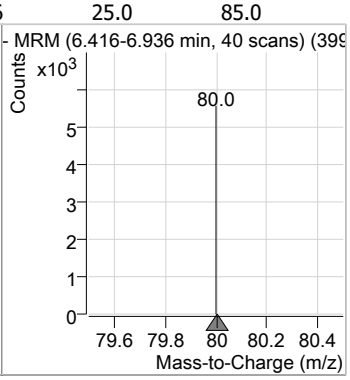


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.99	6.69	0.05	2623 (m)	399.0 -> 99.0	58.6	25.0	85.0

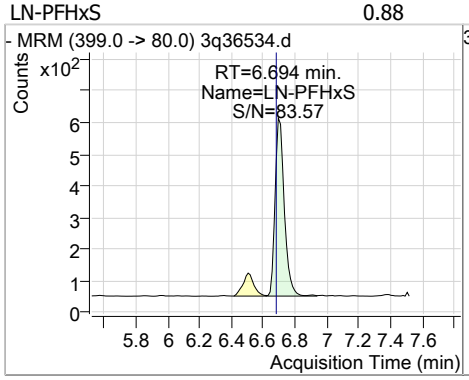


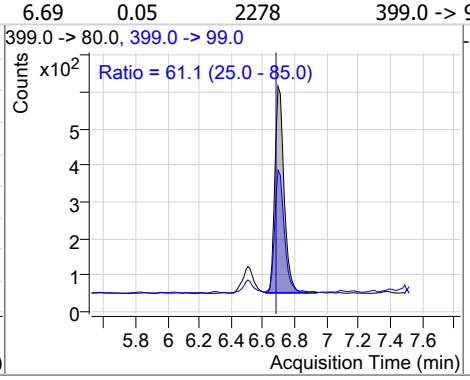


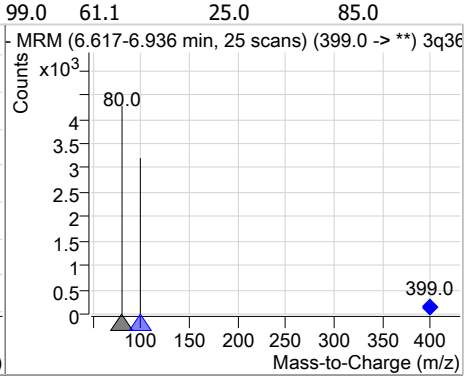




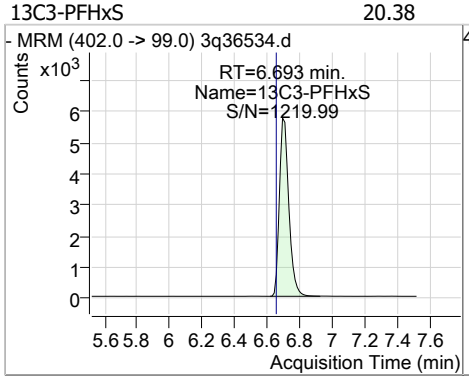
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	0.88	6.69	0.05	2278	399.0 -> 99.0	61.1	25.0	85.0

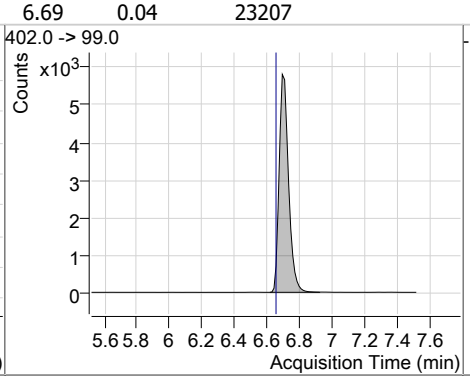


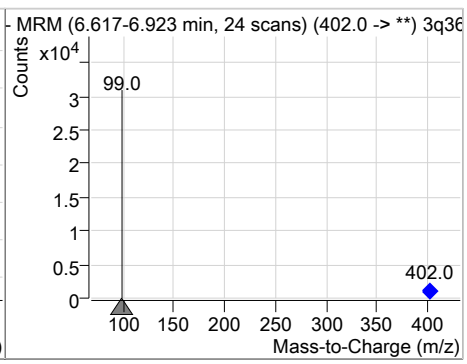




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.38	6.69	0.04	23207				

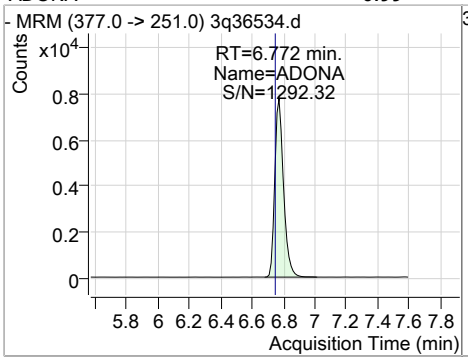


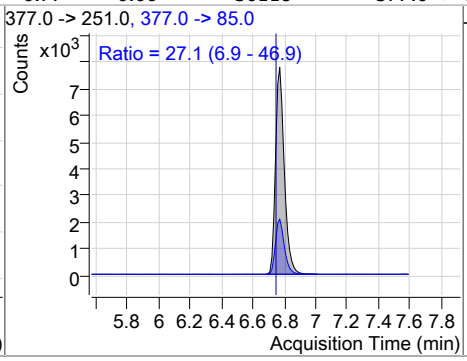


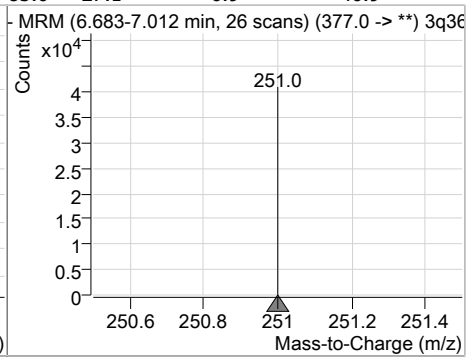


Perfluorinated Compounds by LC/MS/MS

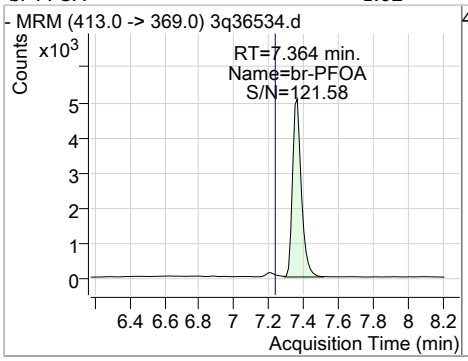
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.99	6.77	0.06	30118	377.0 -> 85.0	27.1	6.9	46.9

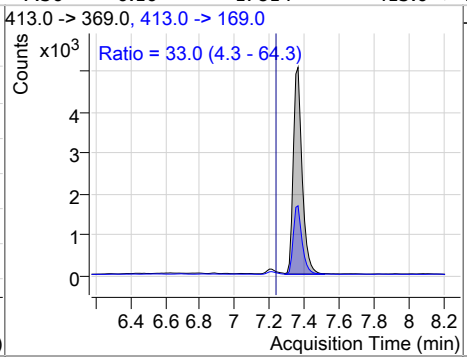


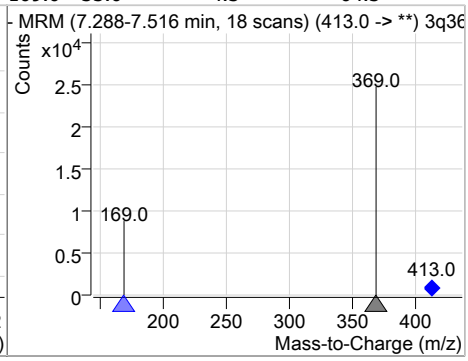




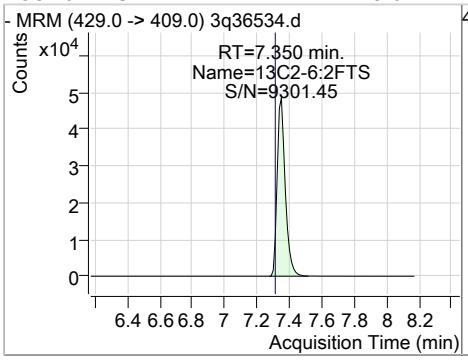
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	1.02	7.36	0.16	17814	413.0 -> 169.0	33.0	4.3	64.3

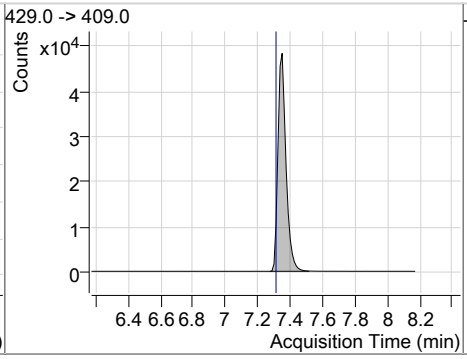


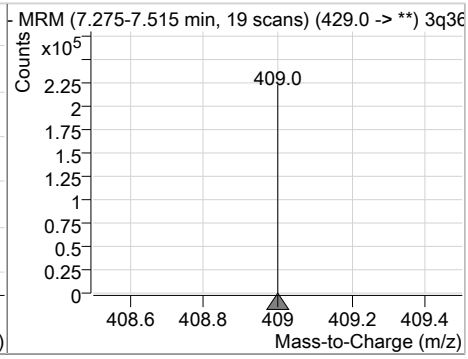




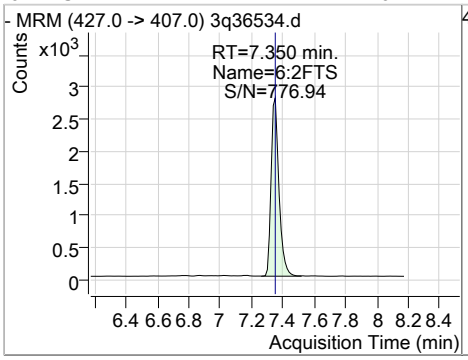
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.87	7.35	0.04	167984				

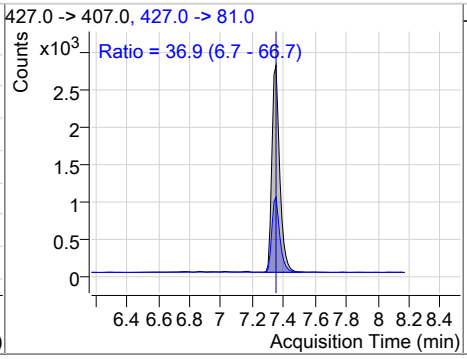


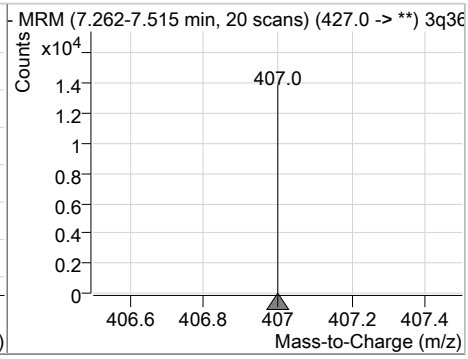




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	1.07	7.35	0.04	9669	427.0 -> 81.0	36.9	6.7	66.7



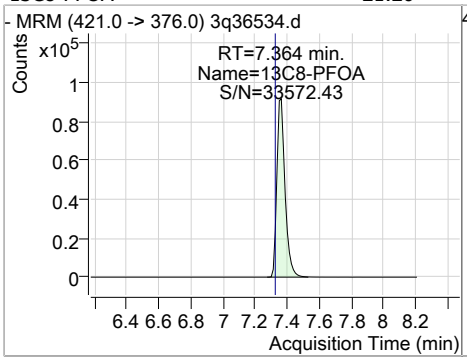


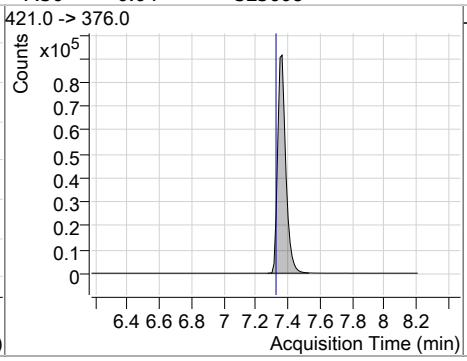


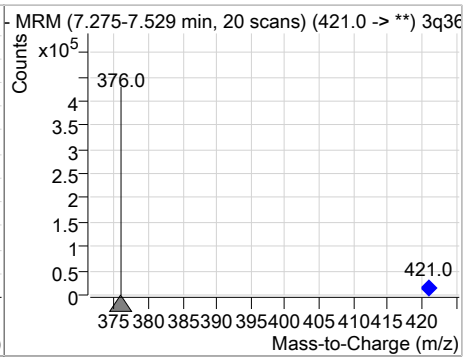
11.6.17 11

Perfluorinated Compounds by LC/MS/MS

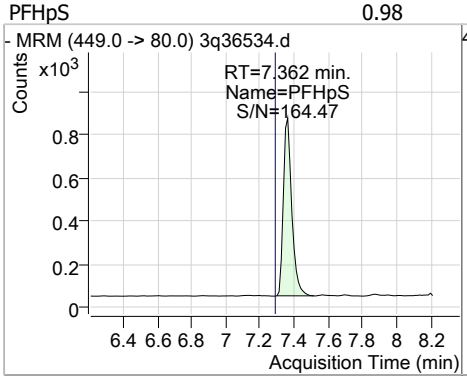
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	21.26	7.36	0.04	323608				

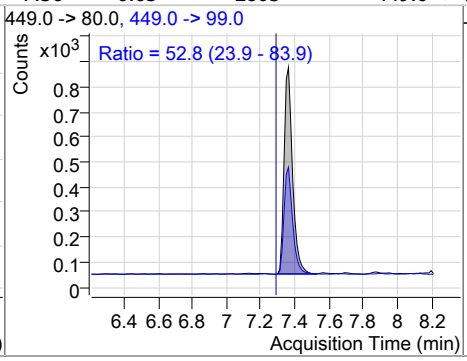


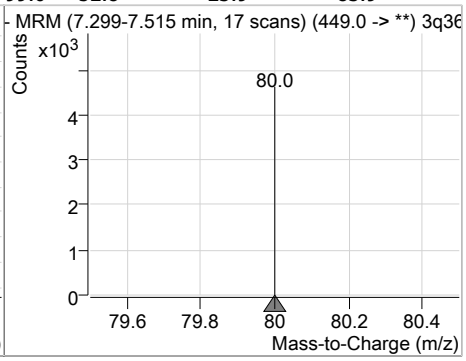




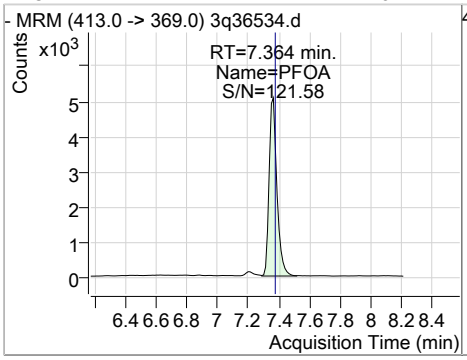
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	0.98	7.36	0.03	2805	449.0 -> 99.0	52.8	23.9	83.9

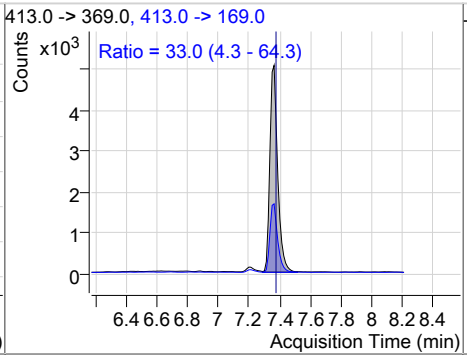


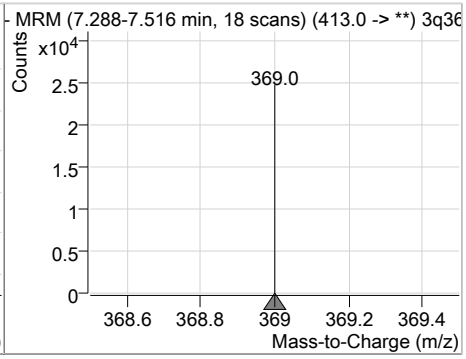




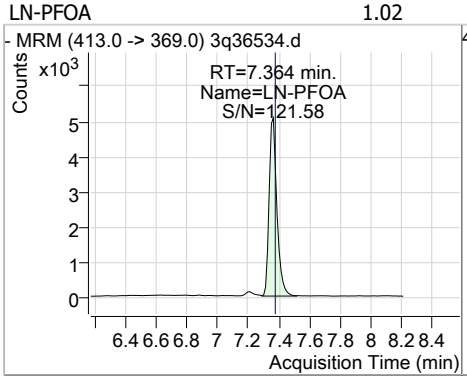
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	1.02	7.36	0.03	17814	413.0 -> 169.0	33.0	4.3	64.3

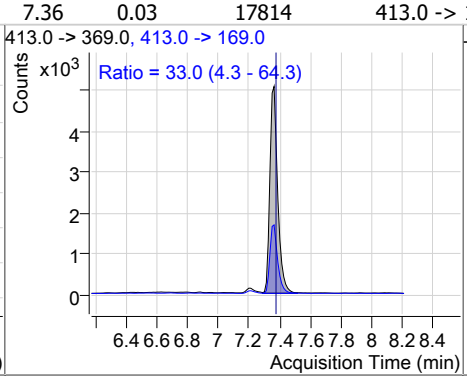


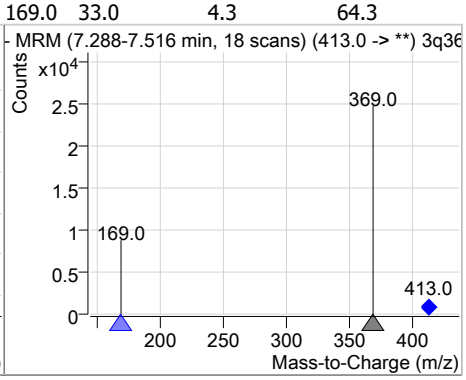




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	1.02	7.36	0.03	17814	413.0 -> 169.0	33.0	4.3	64.3

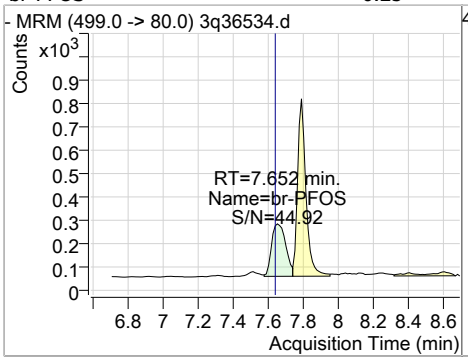


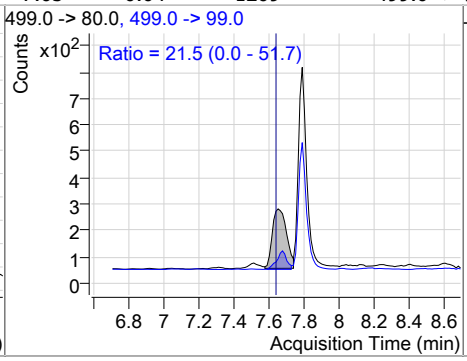


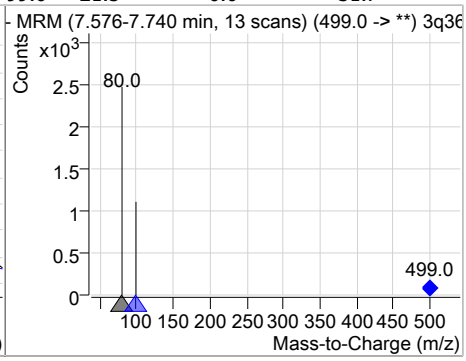


Perfluorinated Compounds by LC/MS/MS

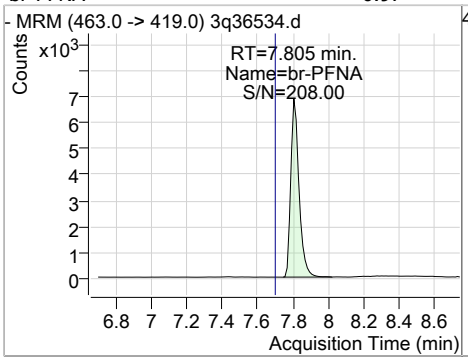
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	0.25	7.65	-0.04	1269	499.0 -> 99.0	21.5	0.0	51.7

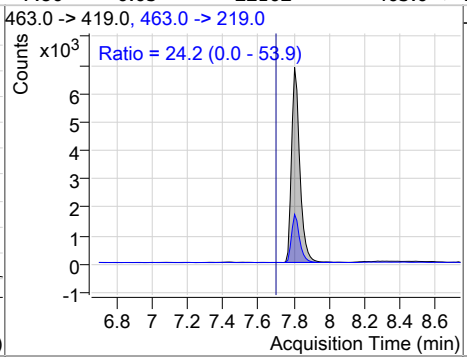


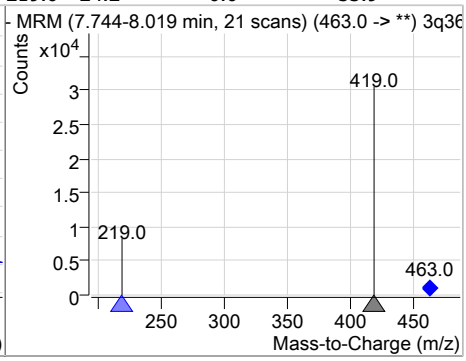




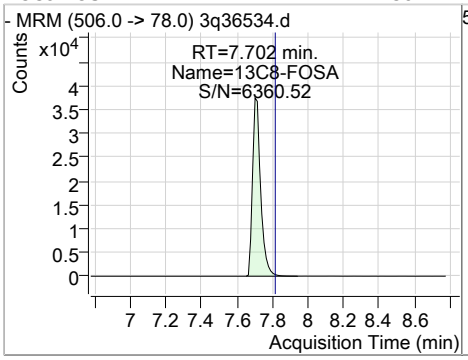
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFNA	0.97	7.80	0.05	22162	463.0 -> 219.0	24.2	0.0	53.9

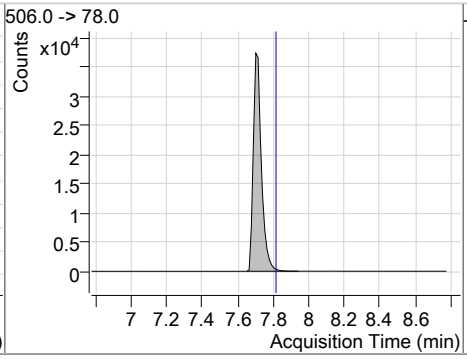


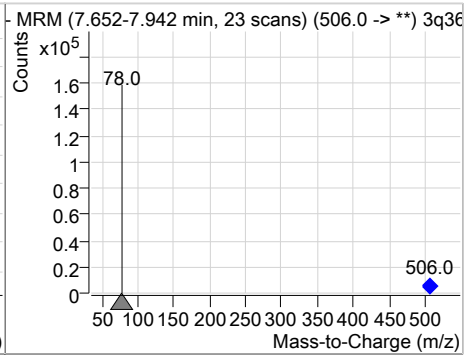




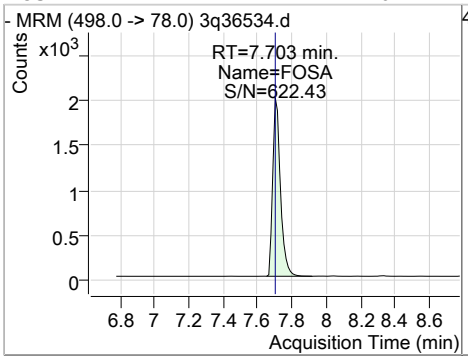
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	22.38	7.70	-0.11	118824				

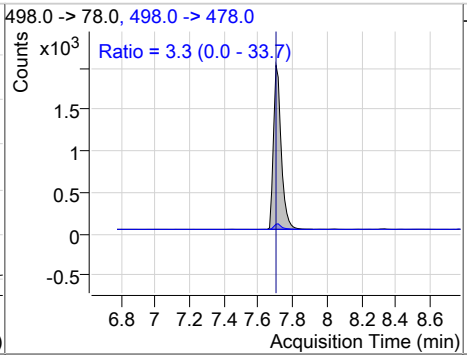


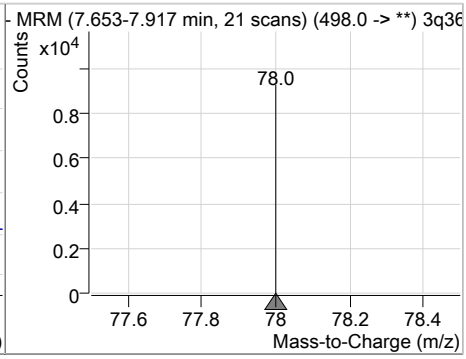




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	1.01	7.70	-0.11	6171	498.0 -> 478.0	3.3	0.0	33.7



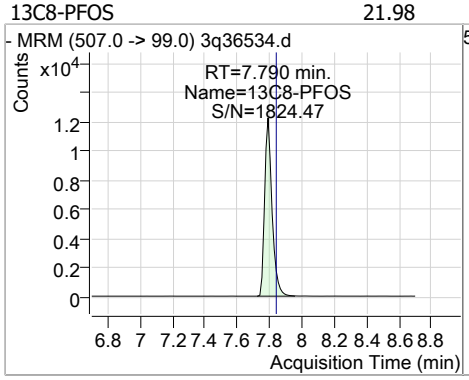


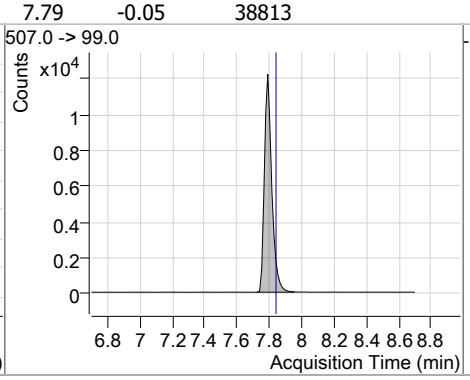


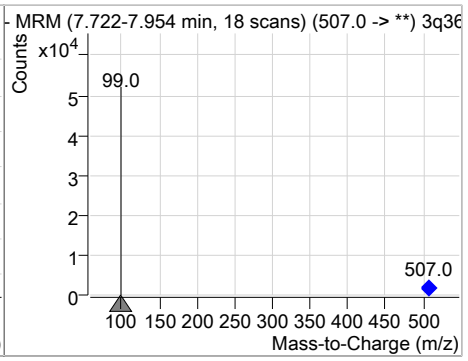
11.6.17 11

Perfluorinated Compounds by LC/MS/MS

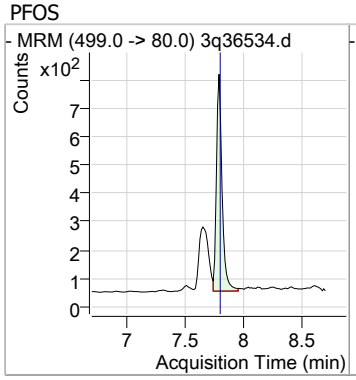
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	21.98	7.79	-0.05	38813				

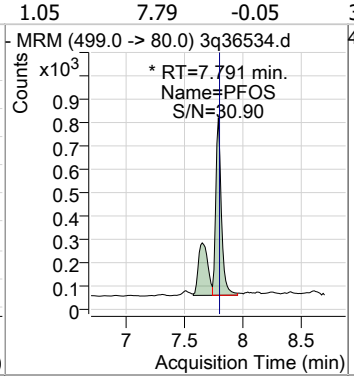


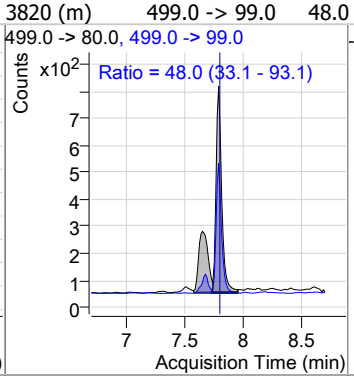


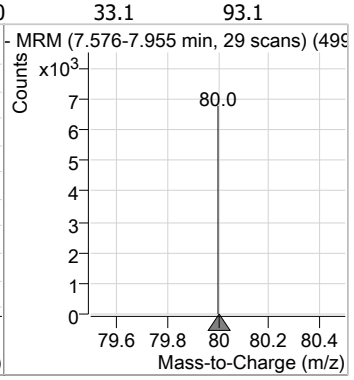


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	1.05	7.79	-0.05	3820 (m)	499.0 -> 99.0	48.0	33.1	93.1

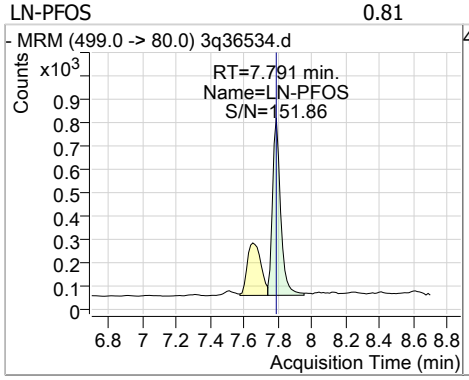


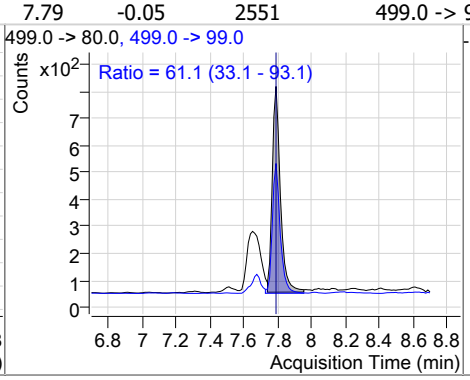


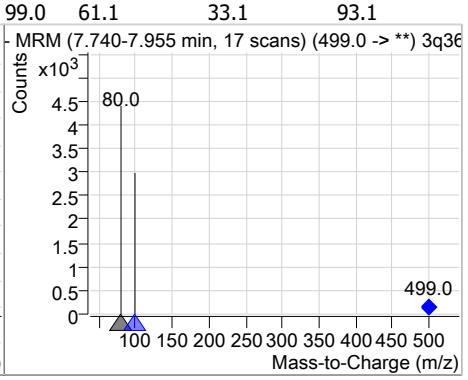




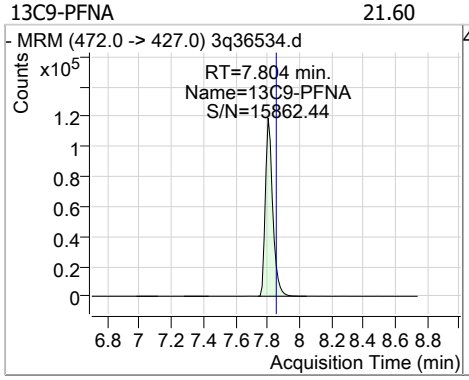
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	0.81	7.79	-0.05	2551	499.0 -> 99.0	61.1	33.1	93.1

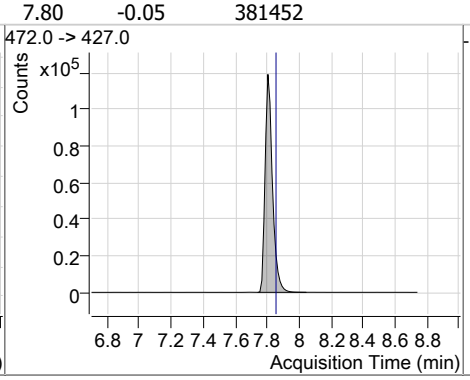


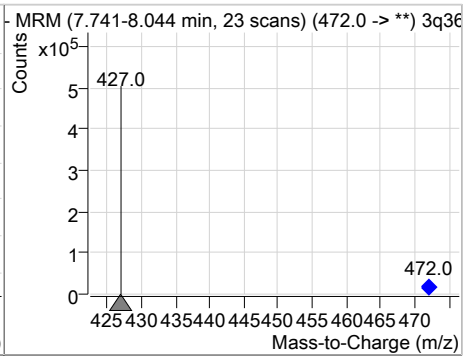




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	21.60	7.80	-0.05	381452				





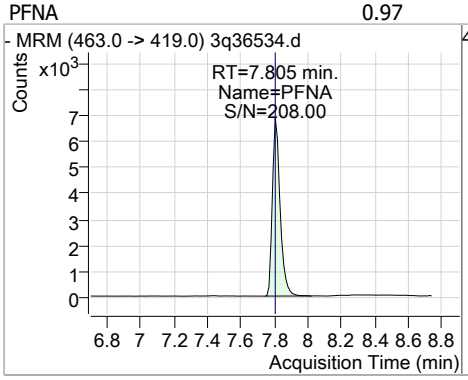


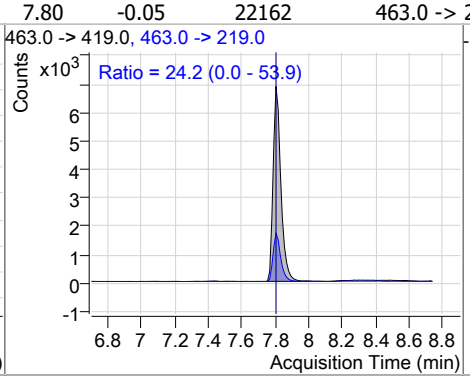
11.6.17

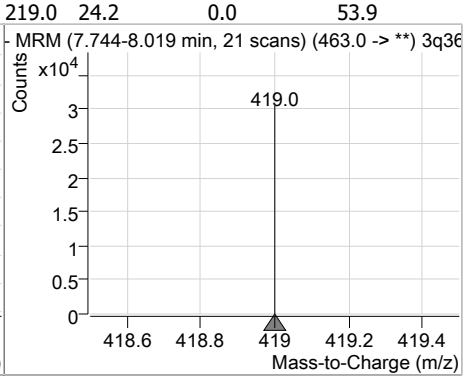
11

Perfluorinated Compounds by LC/MS/MS

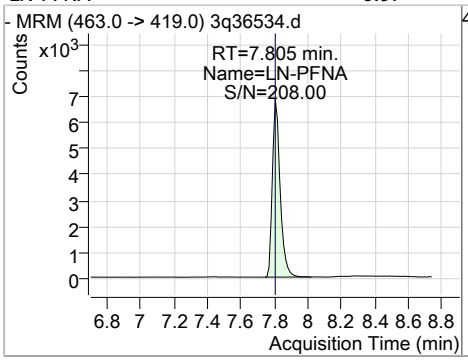
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.97	7.80	-0.05	22162	463.0 -> 219.0	24.2	0.0	53.9

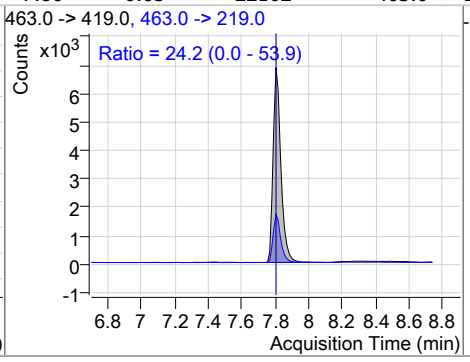


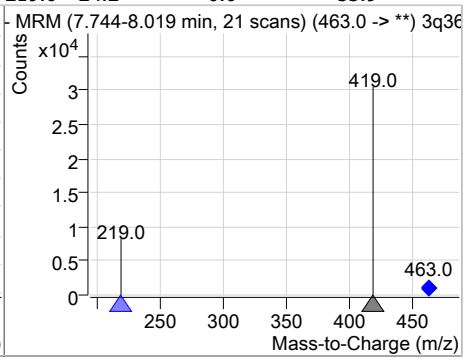




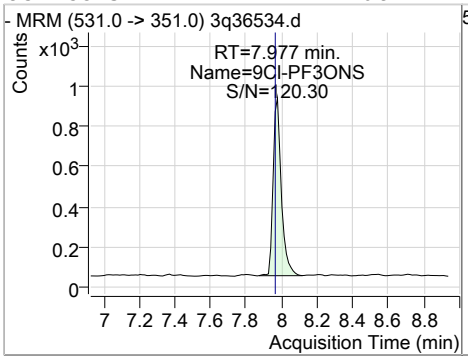
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	0.97	7.80	-0.05	22162	463.0 -> 219.0	24.2	0.0	53.9

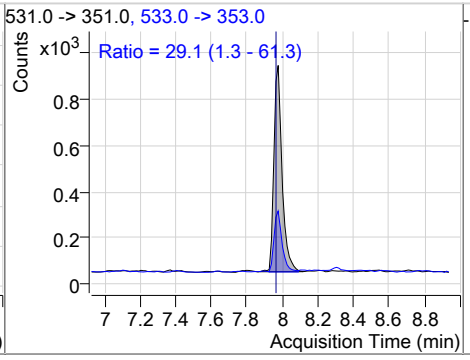


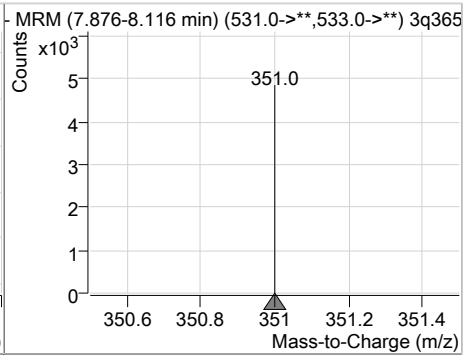




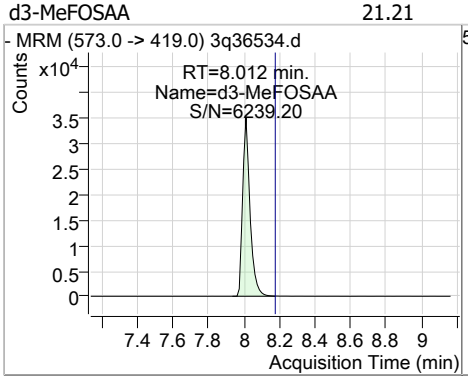
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.91	7.98	-0.08	2856	533.0 -> 353.0	29.1	1.3	61.3

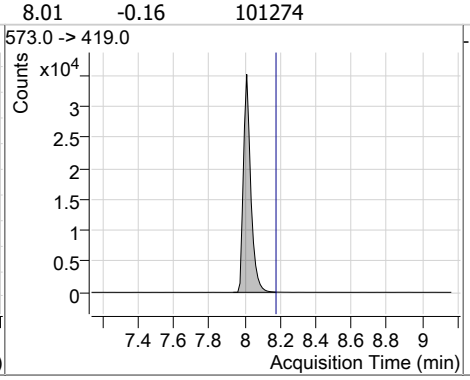


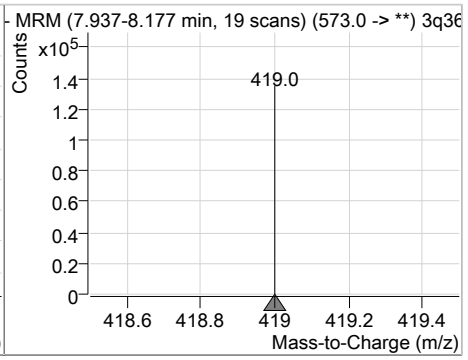




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	21.21	8.01	-0.16	101274				



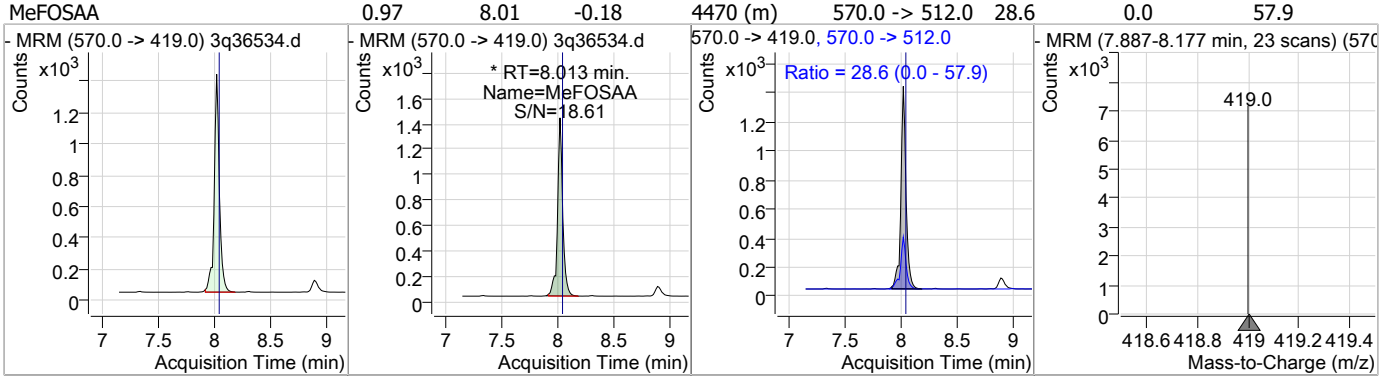




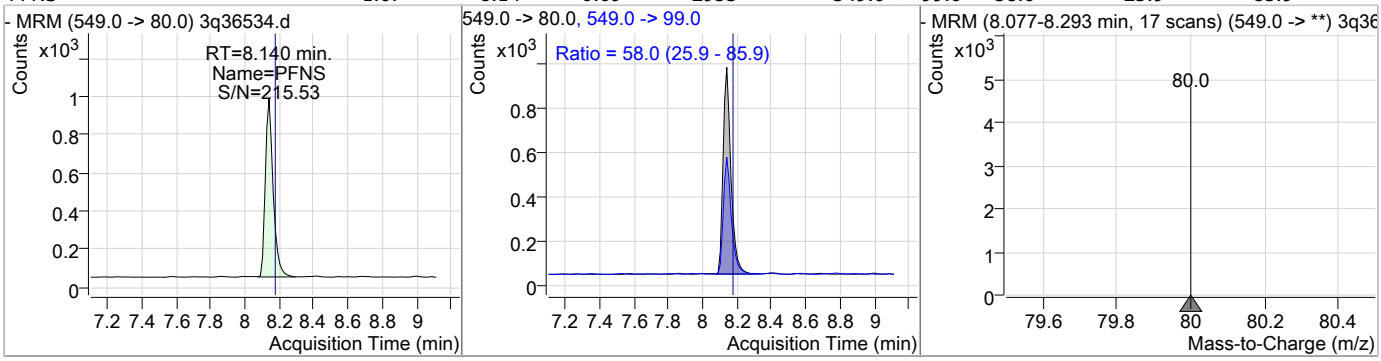
11.6.17 11

Perfluorinated Compounds by LC/MS/MS

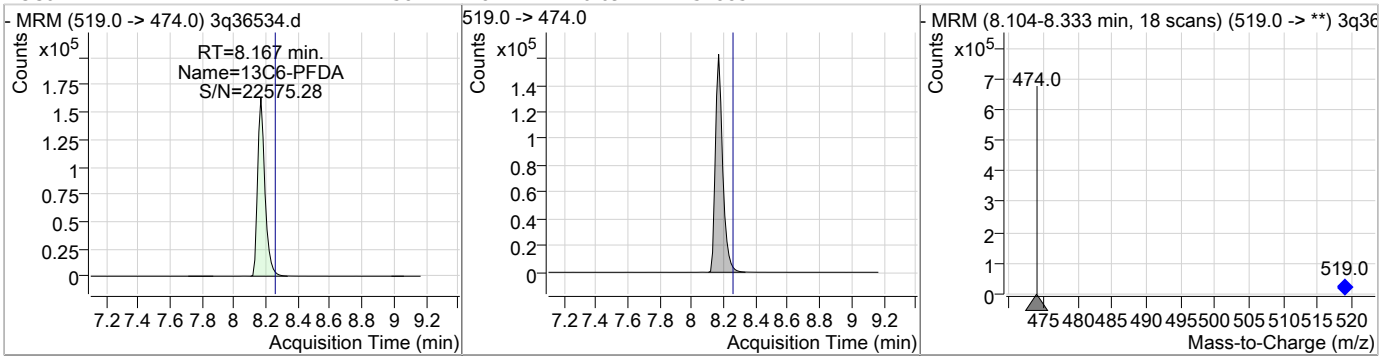
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.97	8.01	-0.18	4470 (m)	570.0 -> 512.0	28.6	0.0	57.9



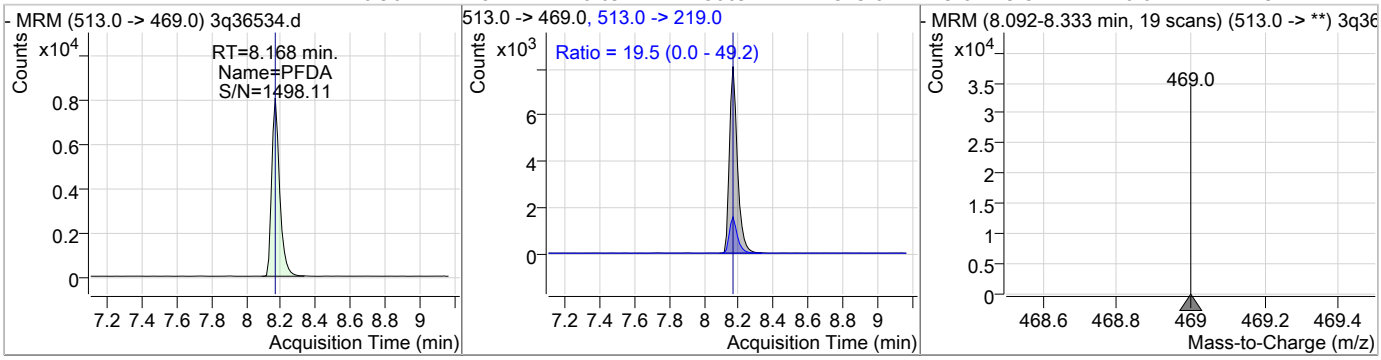
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	1.07	8.14	-0.09	2953	549.0 -> 99.0	58.0	25.9	85.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	22.58	8.17	-0.09	518851				

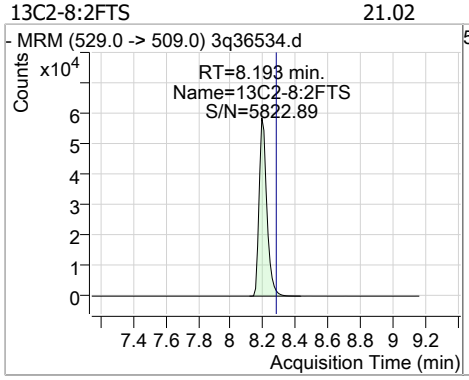


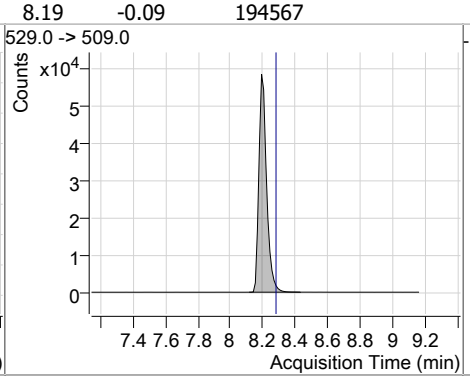
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.96	8.17	-0.09	25669	513.0 -> 219.0	19.5	0.0	49.2

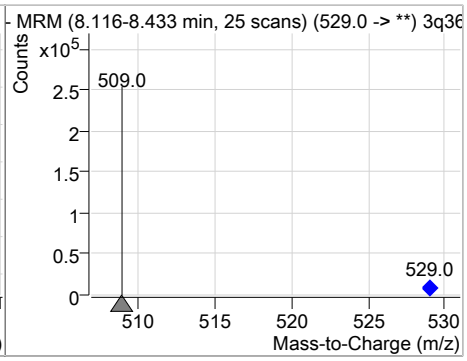


Perfluorinated Compounds by LC/MS/MS

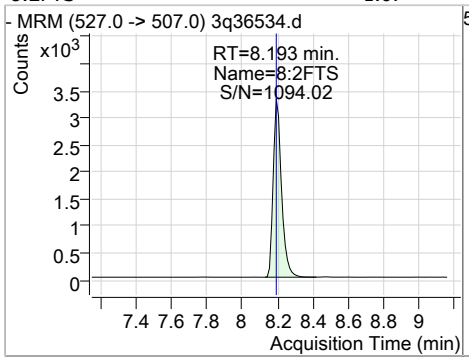
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	21.02	8.19	-0.09	194567				

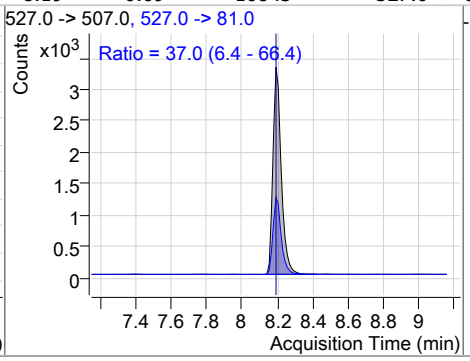


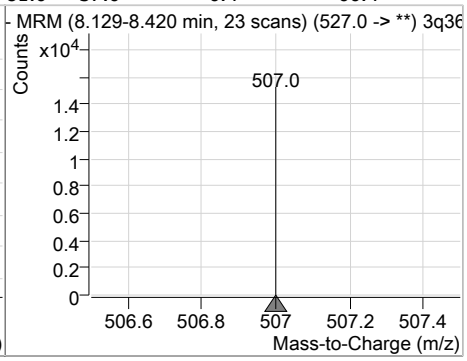




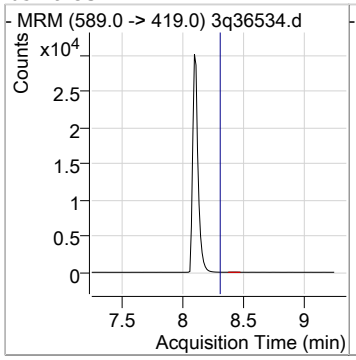
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	1.07	8.19	-0.09	10843	527.0 -> 81.0	37.0	6.4	66.4

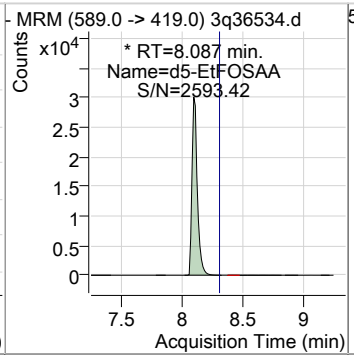


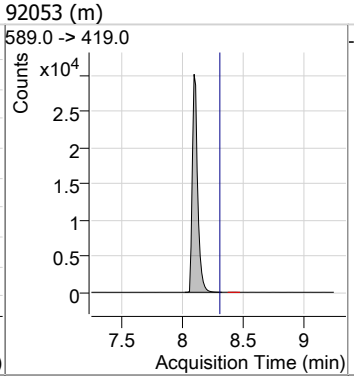


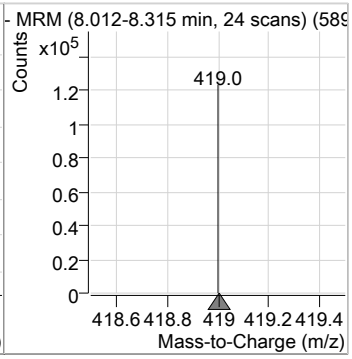


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	22.38	8.09	-0.20	92053 (m)				

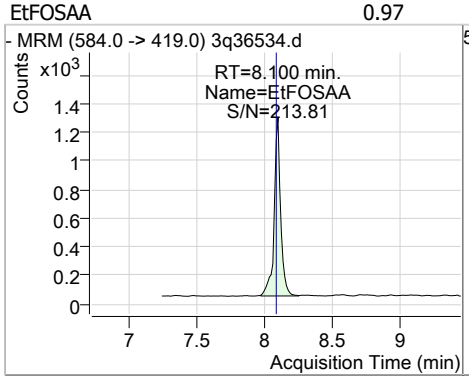


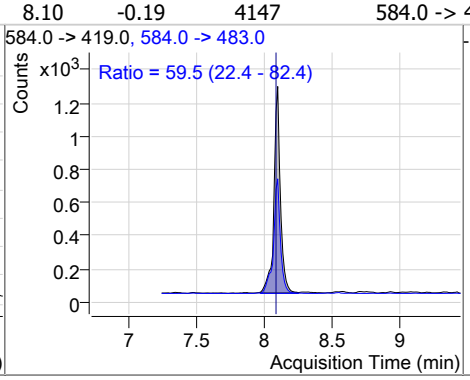


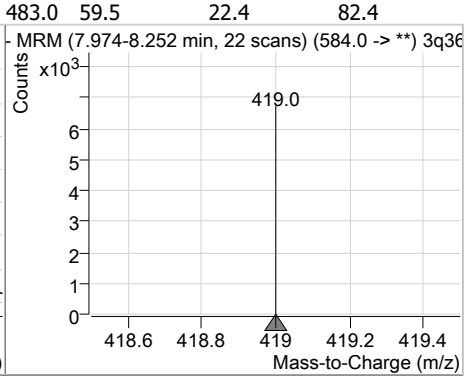




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	0.97	8.10	-0.19	4147	584.0 -> 483.0	59.5	22.4	82.4

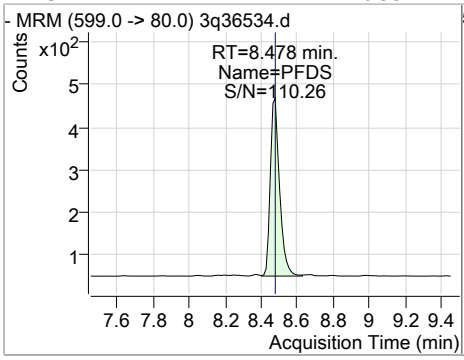


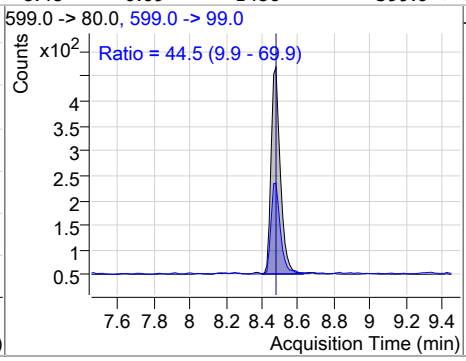


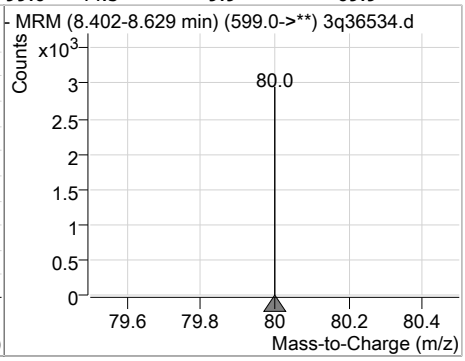


Perfluorinated Compounds by LC/MS/MS

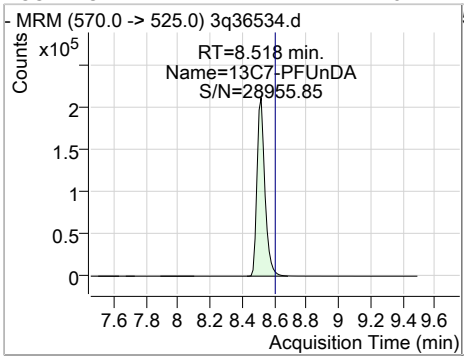
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	0.93	8.48	-0.09	1486	599.0 -> 99.0	44.5	9.9	69.9

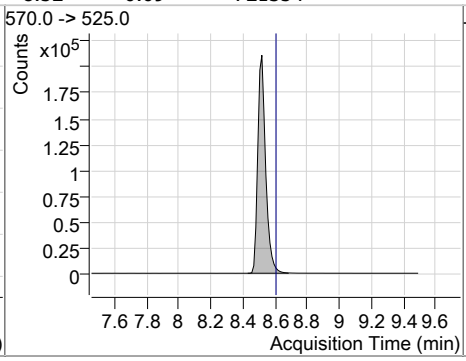


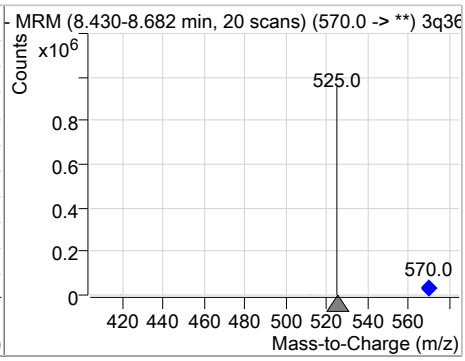




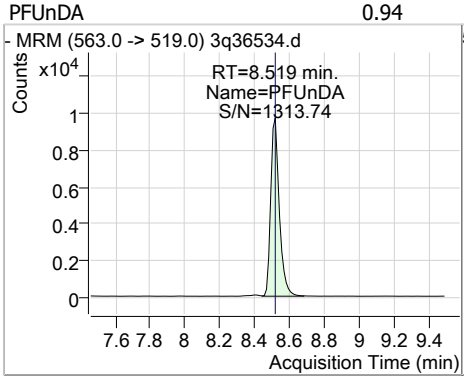
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	22.82	8.52	-0.09	721354				

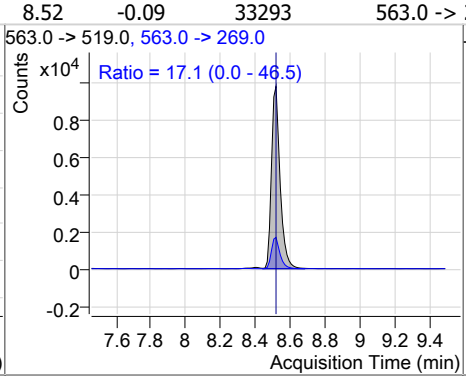


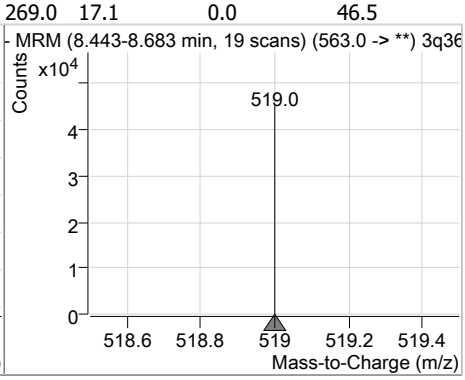




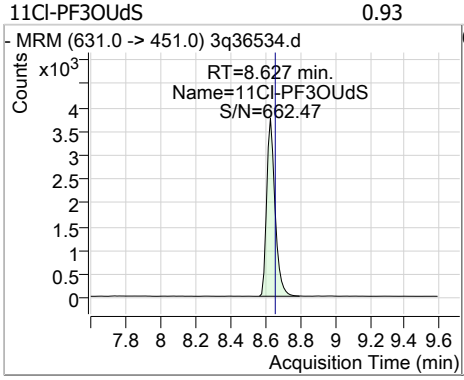
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.94	8.52	-0.09	33293	563.0 -> 269.0	17.1	0.0	46.5

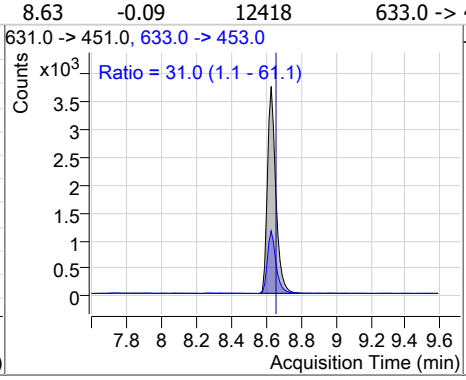


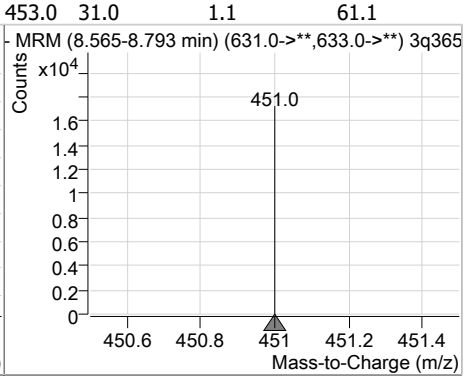




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.93	8.63	-0.09	12418	633.0 -> 453.0	31.0	1.1	61.1

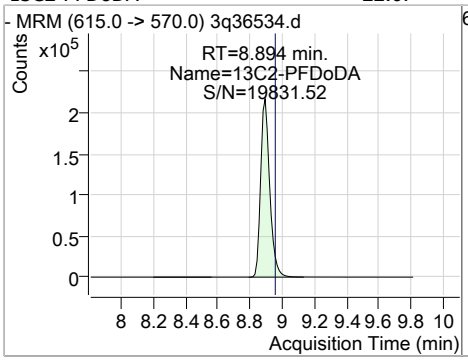


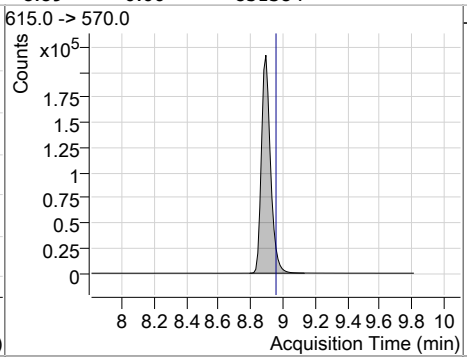


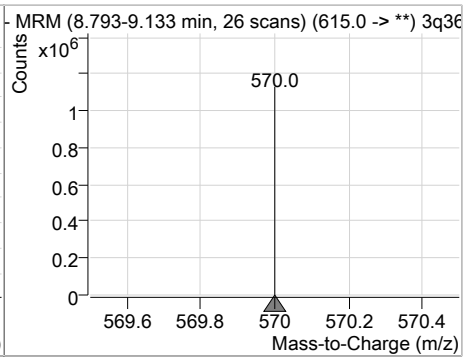


Perfluorinated Compounds by LC/MS/MS

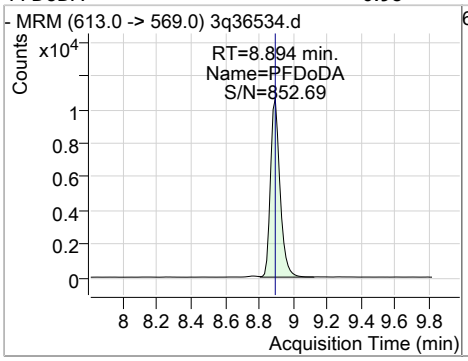
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	22.07	8.89	-0.06	851384				

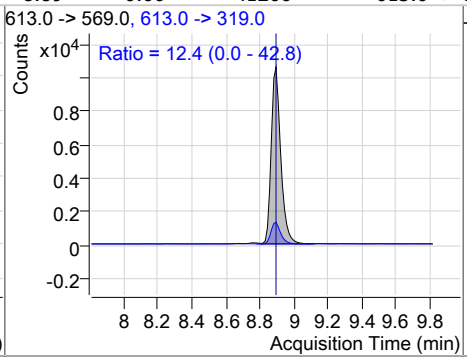


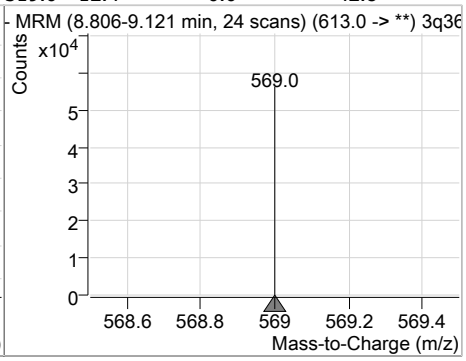




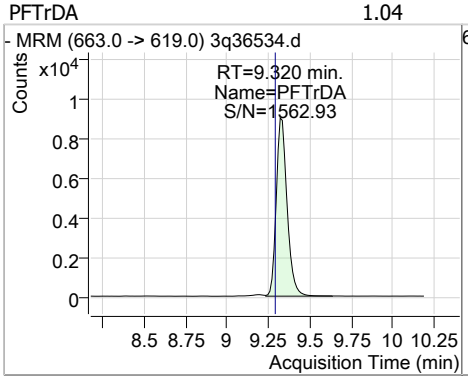
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.98	8.89	-0.06	41266	613.0 -> 319.0	12.4	0.0	42.8

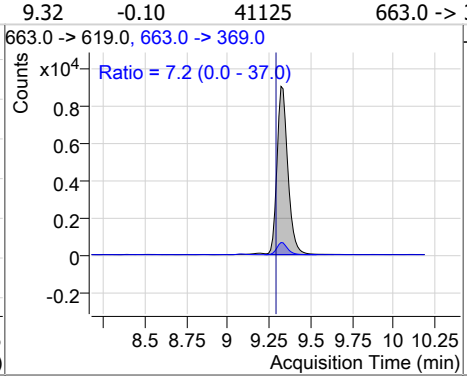


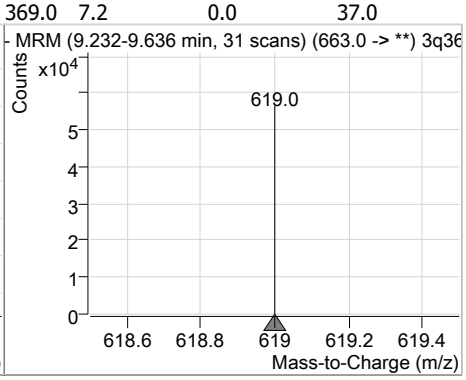




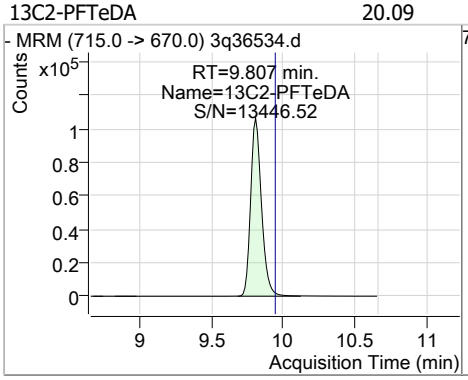
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	1.04	9.32	-0.10	41125	663.0 -> 369.0	7.2	0.0	37.0

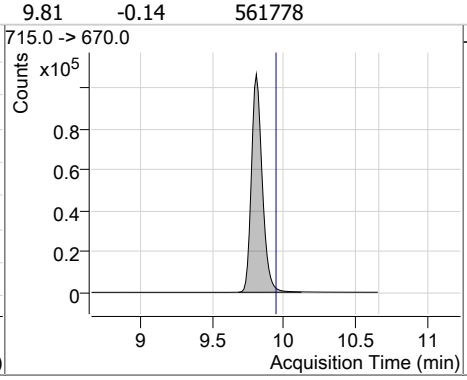


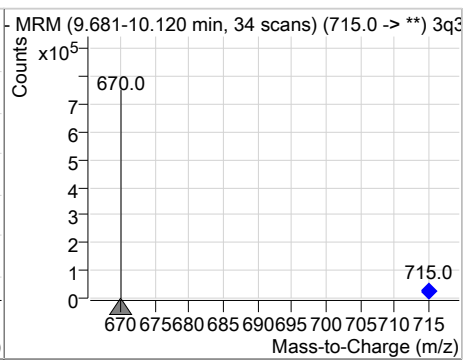




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.09	9.81	-0.14	561778				

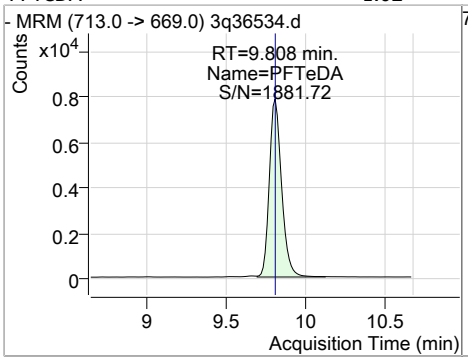


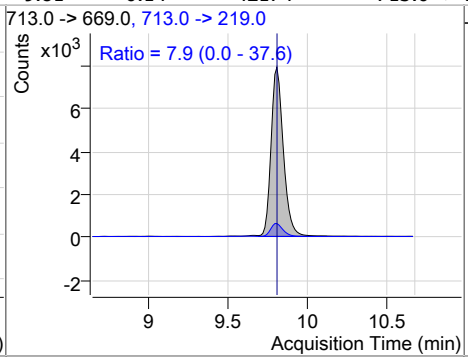


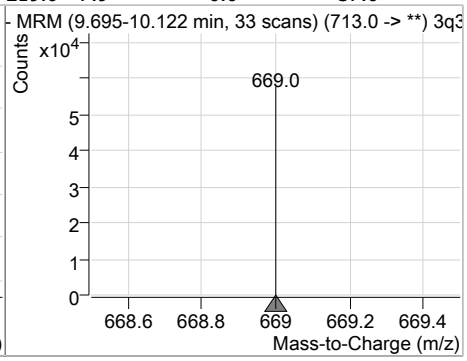


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	1.02	9.81	-0.14	42174	713.0 -> 219.0	7.9	0.0	37.6







Manual Integration Approval Summary

Sample Number:	S3Q537-IC537	**Method:**	EPA 537M QSM5.3 B-15
Lab FileID:	3Q36534.D	**Analyst approved:**	04/14/21 10:44 Martha Valls
Injection Time:	04/13/21 14:35	**Supervisor approved:**	04/14/21 15:06 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.69	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.79	Split peak
MeFOSAA	2355-31-9		8.01	Split peak
d5-EtFOSAA			8.09	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/14/21 15:06

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36535.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/13/2021 2:52:09 PM
Sample Name : ic537-2
Vial : P1-A4
DA Method File : BR_LN_041321_S3Q537.quantmethod.xml
Batch Name : s3q537.batch.bin
Sample Information : op84308,S3Q537,250,,,1,1,water

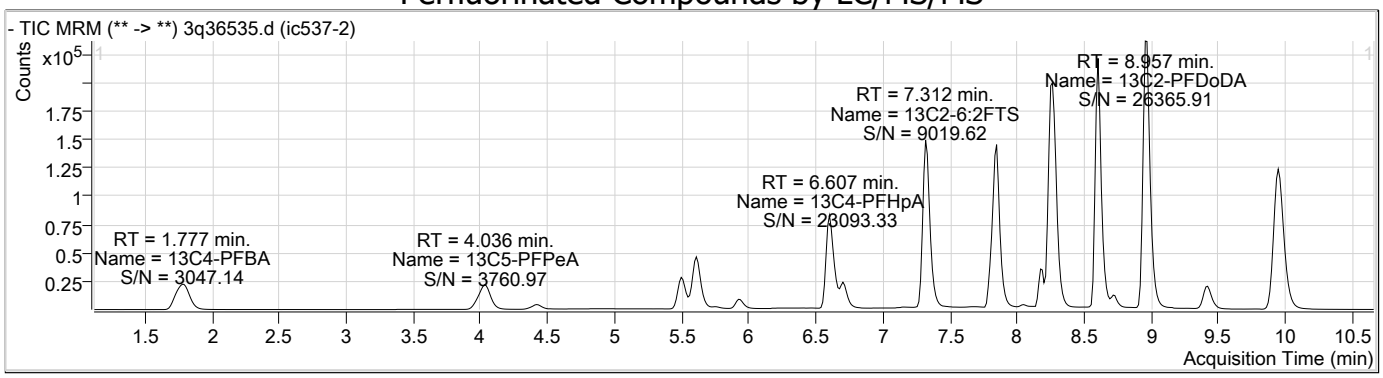
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.777	217.0 -> 172.0	156699	20.00	µg/L	-0.063
M5-PFPeA	4.036	268.0 -> 223.0	116627	20.00	µg/L	-0.038
M5-PFHxA	5.617	318.0 -> 273.0	181008	20.00	µg/L	-0.013
M4-PFHpA	6.607	367.0 -> 322.0	260490	20.00	µg/L	0.000
M8-PFOA	7.338	421.0 -> 376.0	306289	20.00	µg/L	0.013
M9-PFNA	7.855	472.0 -> 427.0	353695	20.00	µg/L	0.000
M6-PFDA	8.257	519.0 -> 474.0	461045	20.00	µg/L	0.000
M7-PFUnDA	8.606	570.0 -> 525.0	624614	20.00	µg/L	0.000
M2-PFDoDA	8.957	615.0 -> 570.0	788696	20.00	µg/L	0.000
M2-PFTeDA	9.944	715.0 -> 670.0	572059	20.00	µg/L	0.000
M8-FOSA	7.816	506.0 -> 78.0	110095	20.00	µg/L	0.000
M3-PFBS	4.422	302.0 -> 99.0	15995	20.00	µg/L	-0.025
M3-PFHxS	6.642	402.0 -> 99.0	23052	20.00	µg/L	-0.013
M8-PFOS	7.841	507.0 -> 99.0	34158	20.00	µg/L	0.000
M2-4:2FTS	5.500	329.0 -> 309.0	105767	20.00	µg/L	-0.013
M2-6:2FTS	7.312	429.0 -> 409.0	161483	20.00	µg/L	0.000
M2-8:2FTS	8.282	529.0 -> 509.0	172621	20.00	µg/L	0.000
M3-MeFOSAA	8.177	573.0 -> 419.0	95732	20.00	µg/L	0.000
M3-HFPO-DA	5.933	287.0 -> 169.0	23948	20.00	µg/L	-0.013
M5-EtFOSAA	8.290	589.0 -> 419.0	81709	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.500	329.0 -> 309.0	105767	18.48	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.4%		
13C2-6:2FTS	7.312	429.0 -> 409.0	161483	19.10	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.5%		
13C2-8:2FTS	8.282	529.0 -> 509.0	172621	18.65	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.2%		
13C2-PFDoDA	8.957	615.0 -> 570.0	788696	20.45	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.2%		
13C2-PFTeDA	9.944	715.0 -> 670.0	572059	20.46	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.3%		
13C3-PFBS	4.422	302.0 -> 99.0	15995	19.84	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%		
13C3-PFHxS	6.642	402.0 -> 99.0	23052	20.24	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.2%		
13C4-PFBA	1.777	217.0 -> 172.0	156699	19.99	µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.0%		
13C4-PFHpA	6.607	367.0 -> 322.0	260490	20.09	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.5%		
13C5-PFHxA	5.617	318.0 -> 273.0	181008	19.78	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.9%		
13C5-PFPeA	4.036	268.0 -> 223.0	116627	19.87	µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%		
13C6-PFDA	8.257	519.0 -> 474.0	461045	20.06	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.3%		

Perfluorinated Compounds by LC/MS/MS

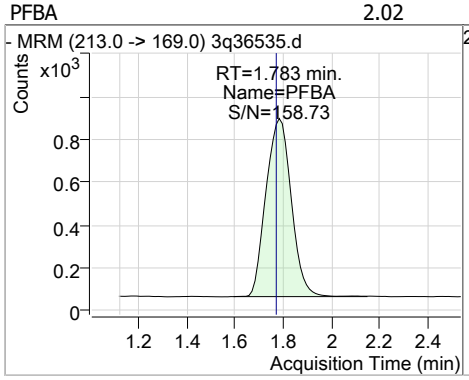
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.606	570.0 -> 525.0	624614	19.76	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.8%			
13C8-FOSA	7.816	506.0 -> 78.0	110095	20.73	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.7%			
13C8-PFOA	7.338	421.0 -> 376.0	306289	20.12	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.6%			
13C8-PFOS	7.841	507.0 -> 99.0	34158	19.34	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.7%			
13C9-PFNA	7.855	472.0 -> 427.0	353695	20.03	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.2%			
d3-MeFOSAA	8.177	573.0 -> 419.0	95732	20.05	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.3%			
13C3-HFPO-DA	5.933	287.0 -> 169.0	23937	19.73	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%			
d5-EtFOSAA	8.290	589.0 -> 419.0	81673	19.85	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%			
Target Compounds							**QValue**
4:2FTS	5.501	327.0 -> 307.0	12452	2.18	µg/L		98
6:2FTS	7.313	427.0 -> 407.0	18846	2.17	µg/L		100
8:2FTS	8.282	527.0 -> 507.0	18882	2.09	µg/L		97
EtFOSAA	8.290	584.0 -> 419.0	7621	2.00	µg/L	m	92
FOSA	7.817	498.0 -> 78.0	11290	2.00	µg/L		99
MeFOSAA	8.190	570.0 -> 419.0	8726	2.00	µg/L	m	98
PFBA	1.783	213.0 -> 169.0	6066	2.02	µg/L		100
PFBS	4.423	299.0 -> 80.0	5121	2.09	µg/L		99
PFDA	8.258	513.0 -> 469.0	46377	1.94	µg/L		100
PFDoDA	8.957	613.0 -> 569.0	79047	2.02	µg/L		99
PFDS	8.566	599.0 -> 80.0	2810	2.02	µg/L		99
PFHpA	6.608	363.0 -> 319.0	47856	2.02	µg/L		100
PFHpS	7.337	449.0 -> 80.0	5396	2.14	µg/L		99
PFHxA	5.618	313.0 -> 269.0	13125	2.07	µg/L		100
PFHxS	6.643	399.0 -> 80.0	5424	2.06	µg/L	m	95
PFNA	7.855	463.0 -> 419.0	41654	1.97	µg/L		99
PFNS	8.230	549.0 -> 80.0	5056	2.07	µg/L		96
PFOA	7.339	413.0 -> 369.0	34111	2.06	µg/L		100
PFOS	7.841	499.0 -> 80.0	6586	2.07	µg/L	m	79
PFPeA	4.039	263.0 -> 219.0	22309	2.02	µg/L		100
PFPeS	5.764	349.0 -> 80.0	3947	2.08	µg/L		98
PFTeDA	9.947	713.0 -> 669.0	87220	2.07	µg/L		100
PFTrDA	9.420	663.0 -> 619.0	82734	2.05	µg/L		100
PFUnDA	8.607	563.0 -> 519.0	60805	1.99	µg/L		98
11Cl-PF3OUdS	8.729	631.0 -> 451.0	23585	1.90	µg/L		100
9Cl-PF3ONS	8.053	531.0 -> 351.0	4880	1.75	µg/L		96
ADONA	6.709	377.0 -> 251.0	60577	2.00	µg/L		99
HFPO-DA	5.941	329.0 -> 169.0	8679	2.00	µg/L		97
br-PFOS	7.665	499.0 -> 80.0	2091	0.46	µg/L		99
LN-PFOS	7.841	499.0 -> 80.0	4496	1.62	µg/L		94
br-PFHxS	6.466	399.0 -> 80.0	735	0.24	µg/L		100
LN-PFHxS	6.643	399.0 -> 80.0	4689	1.82	µg/L		99
br-PFOA	7.339	413.0 -> 369.0	34111	2.06	µg/L		100
LN-PFOA	7.339	413.0 -> 369.0	34111	2.06	µg/L		100
br-PFNA	7.855	463.0 -> 419.0	41654	1.97	µg/L		99
LN-PFNA	7.855	463.0 -> 419.0	41654	1.97	µg/L		99

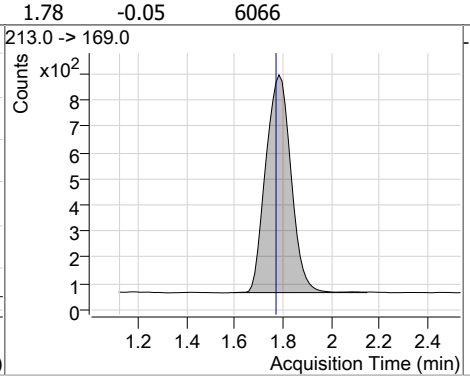
 # = Qualifier out of range, m = manually integrated, + = Area summed

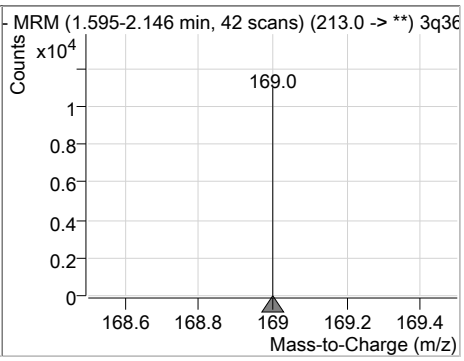
Perfluorinated Compounds by LC/MS/MS



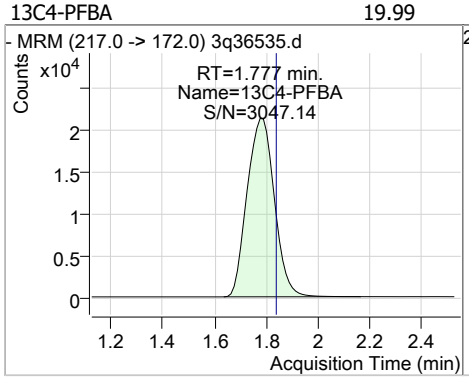
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	2.02	1.78	-0.05	6066				

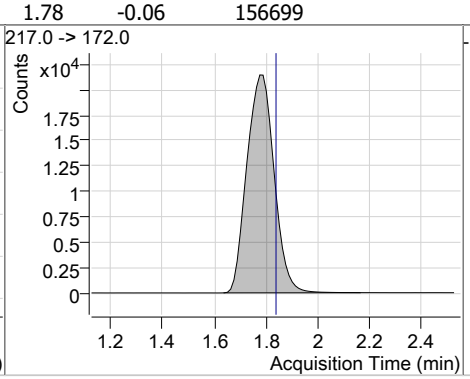


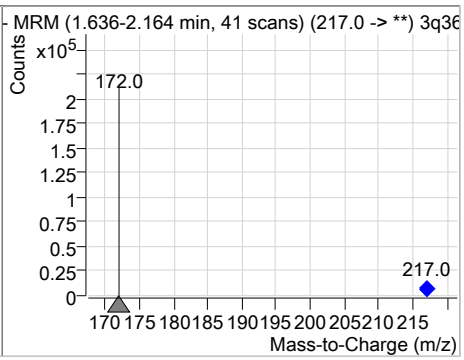




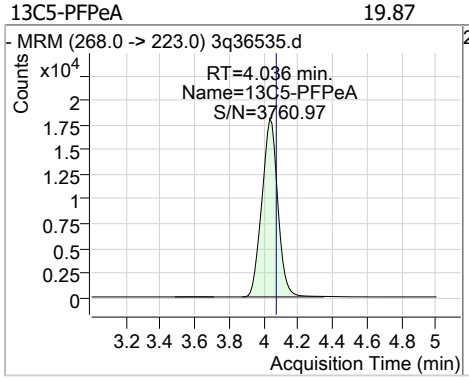
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.99	1.78	-0.06	156699				

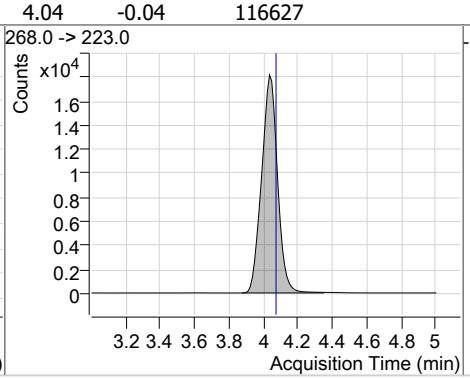


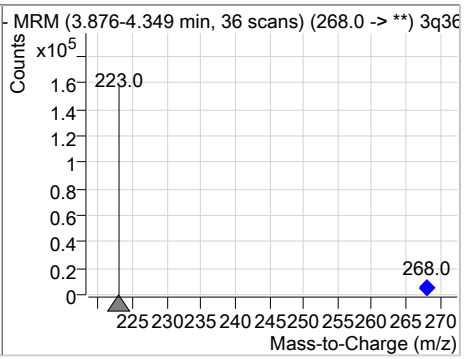




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.87	4.04	-0.04	116627				





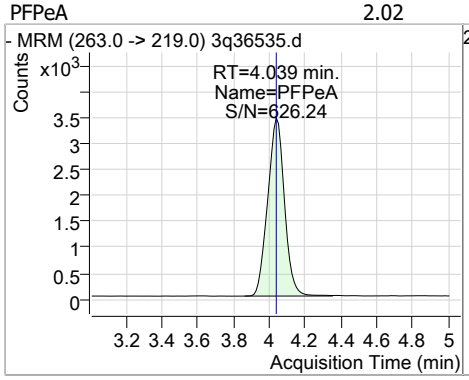


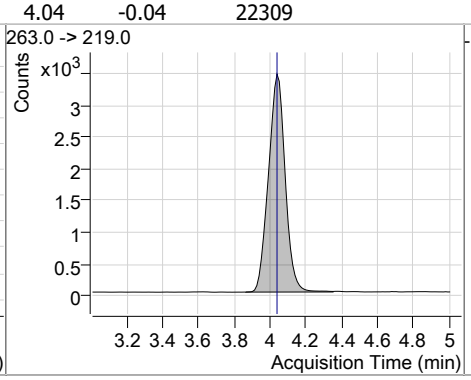
11.6.18

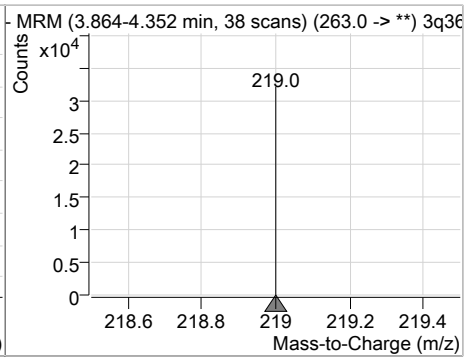
11

Perfluorinated Compounds by LC/MS/MS

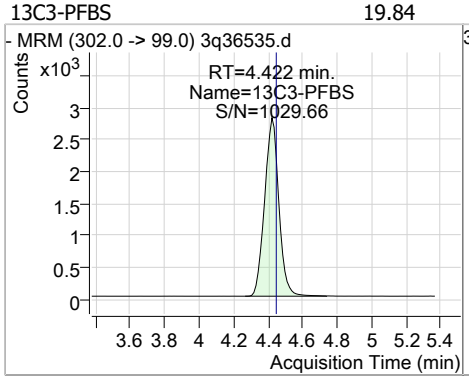
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	2.02	4.04	-0.04	22309				

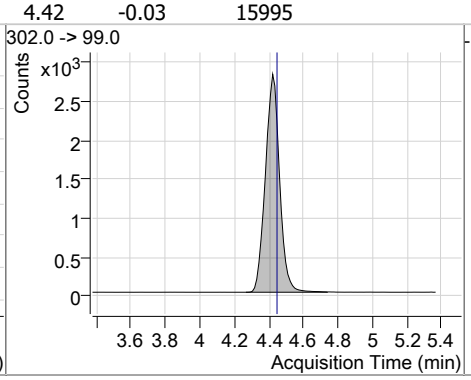


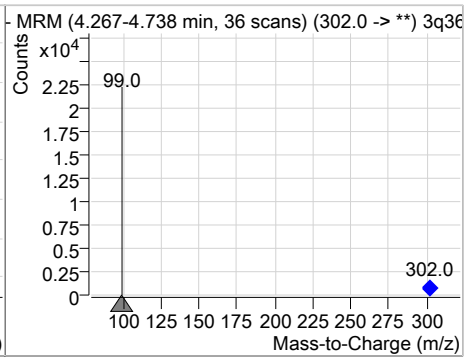




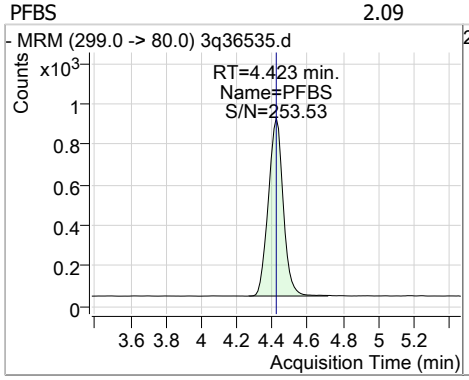
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.84	4.42	-0.03	15995				

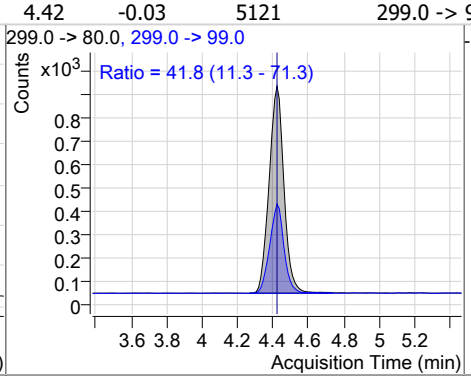


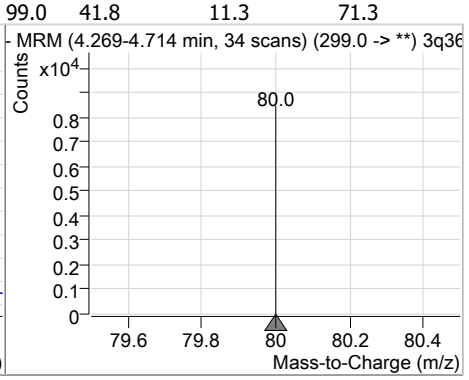




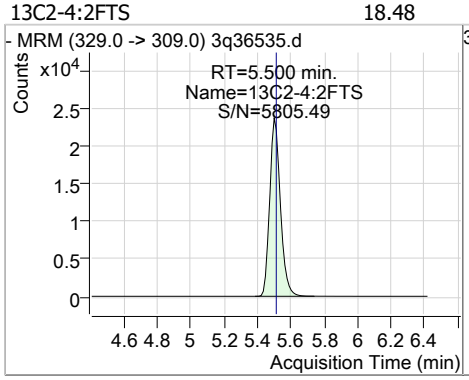
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	2.09	4.42	-0.03	5121	299.0 -> 99.0	41.8	11.3	71.3

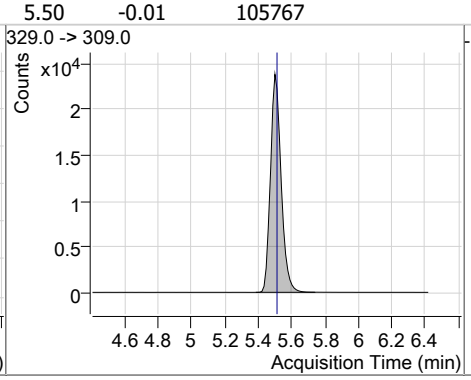


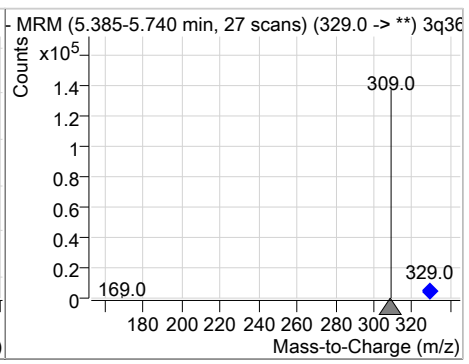




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.48	5.50	-0.01	105767				

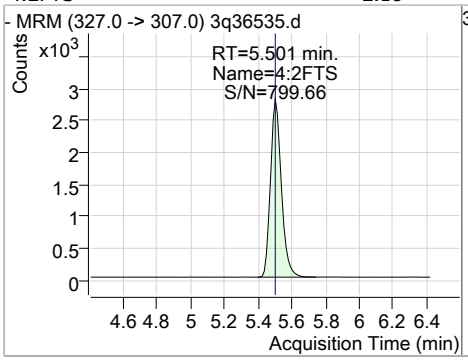


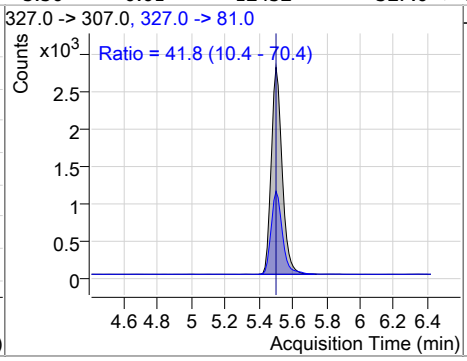


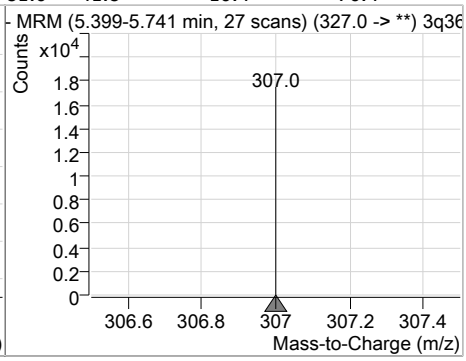


Perfluorinated Compounds by LC/MS/MS

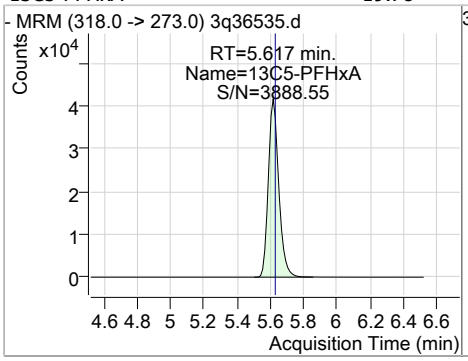
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	2.18	5.50	-0.01	12452	327.0 -> 81.0	41.8	10.4	70.4

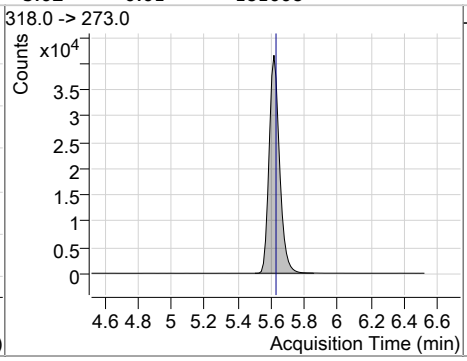


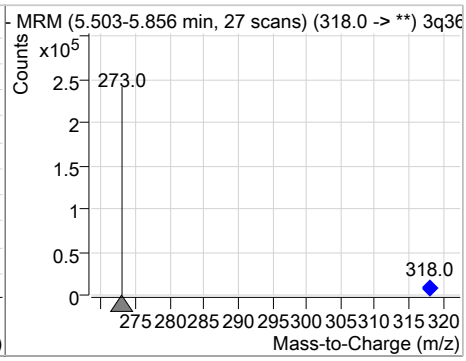




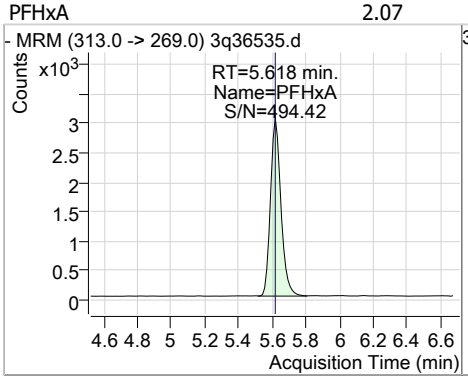
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.78	5.62	-0.01	181008				

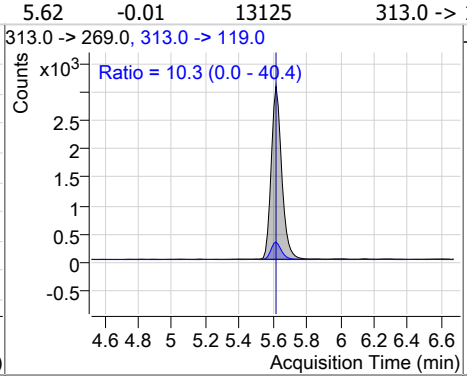


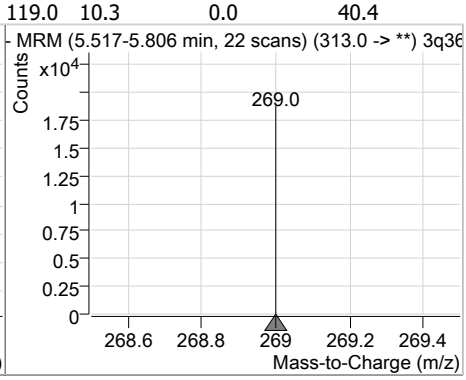




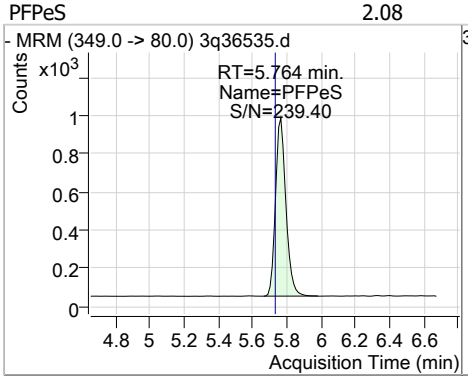
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	2.07	5.62	-0.01	13125	313.0 -> 119.0	10.3	0.0	40.4

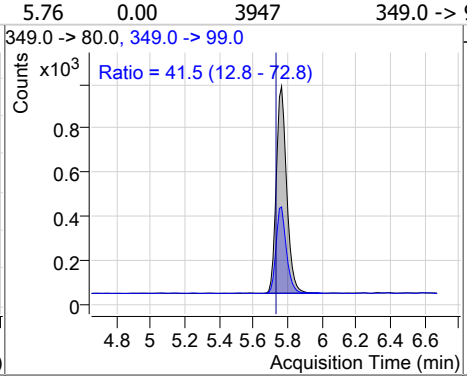


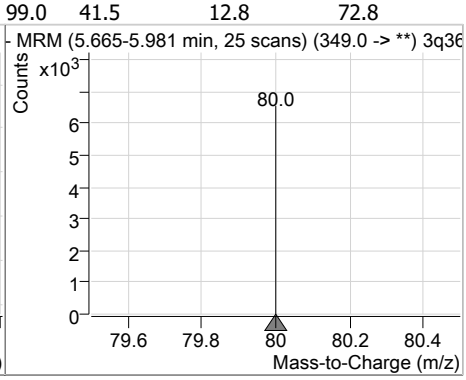




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	2.08	5.76	0.00	3947	349.0 -> 99.0	41.5	12.8	72.8



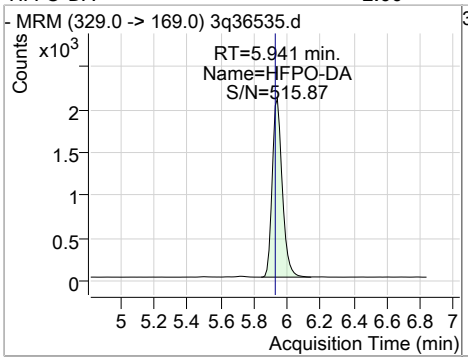


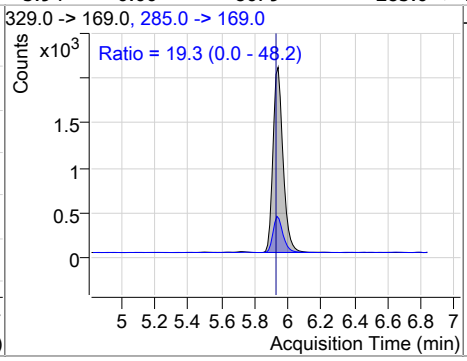


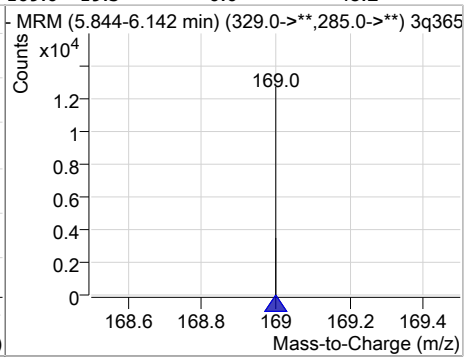
11.6.18 11

Perfluorinated Compounds by LC/MS/MS

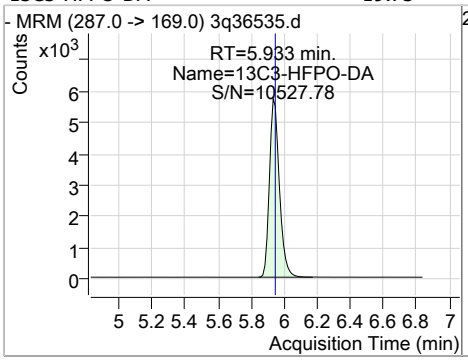
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	2.00	5.94	0.00	8679	285.0 -> 169.0	19.3	0.0	48.2

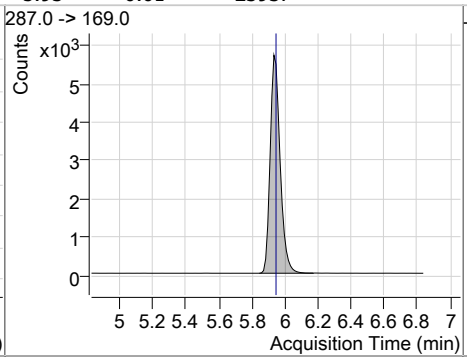


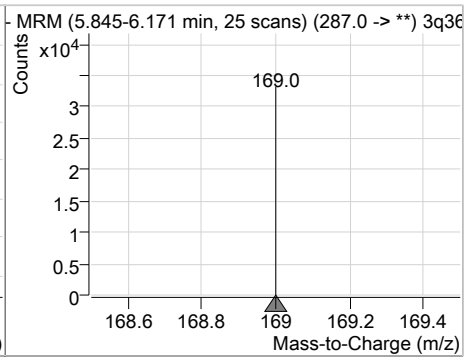




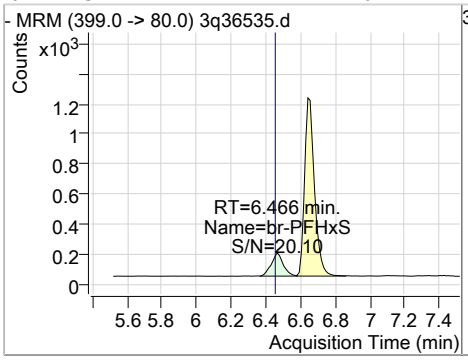
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.73	5.93	-0.01	23937				

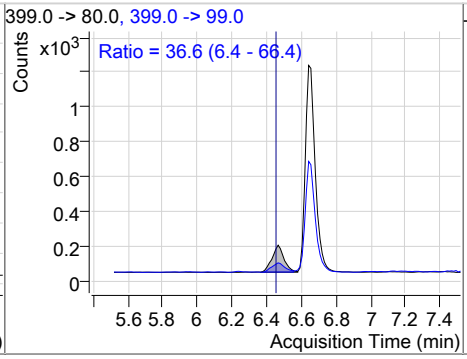


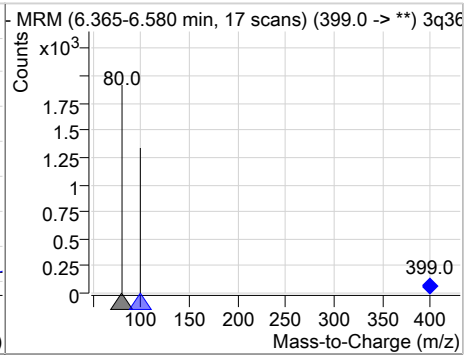




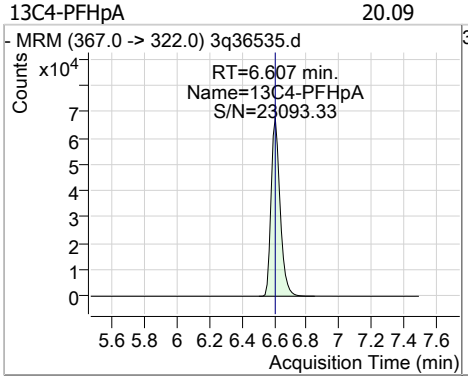
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	0.24	6.47	0.00	735	399.0 -> 99.0	36.6	6.4	66.4

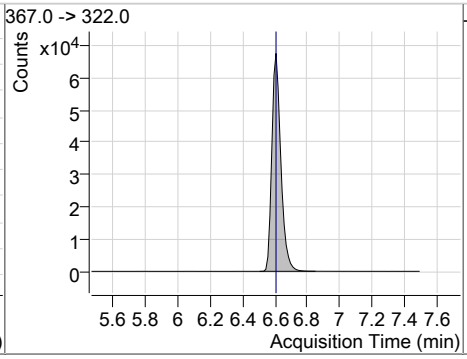


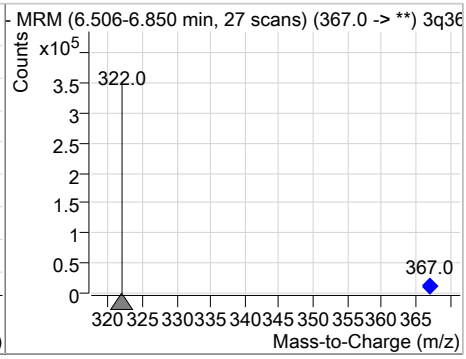




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.09	6.61	0.00	260490				

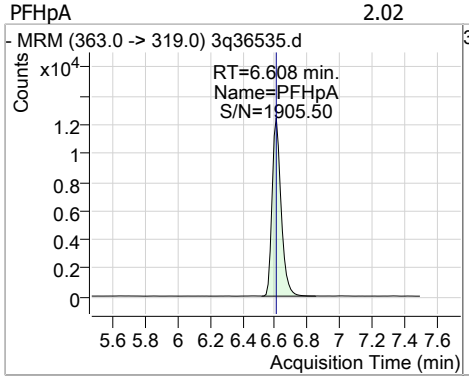


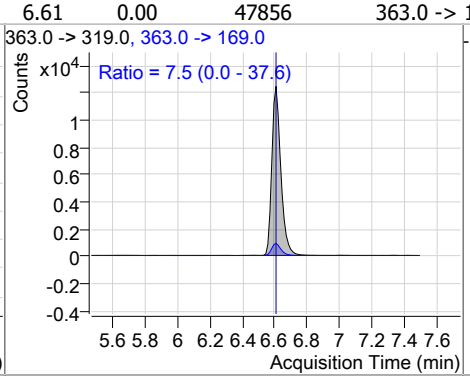


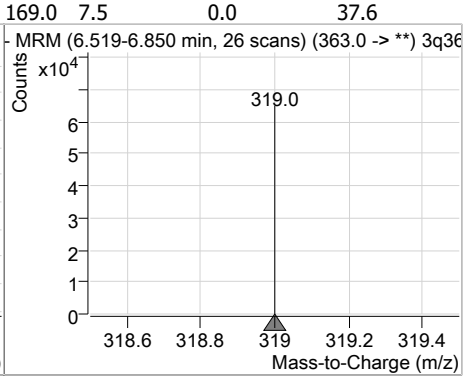


Perfluorinated Compounds by LC/MS/MS

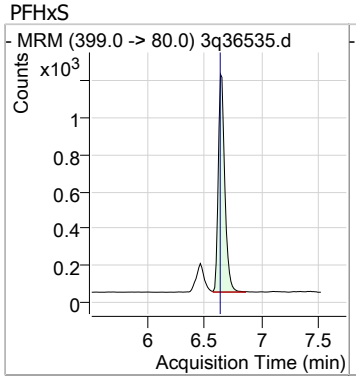
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	2.02	6.61	0.00	47856	363.0 -> 169.0	7.5	0.0	37.6

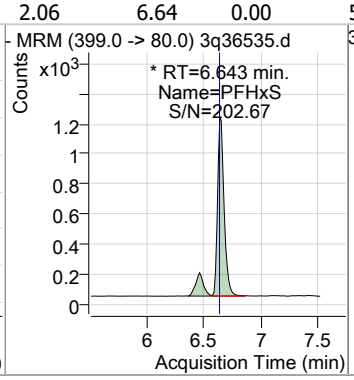


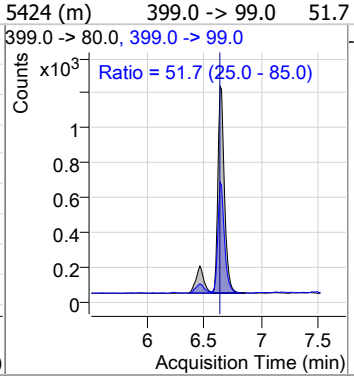


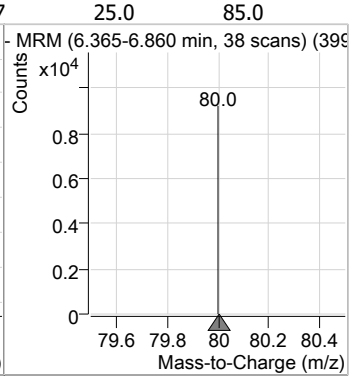


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	2.06	6.64	0.00	5424 (m)	399.0 -> 99.0	51.7	25.0	85.0

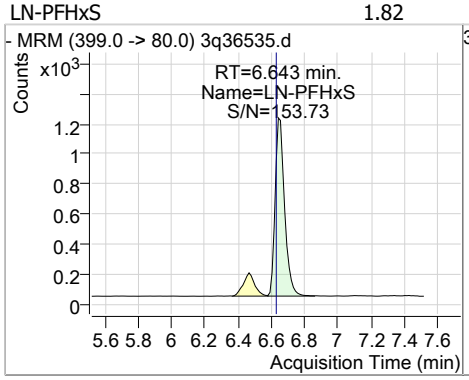


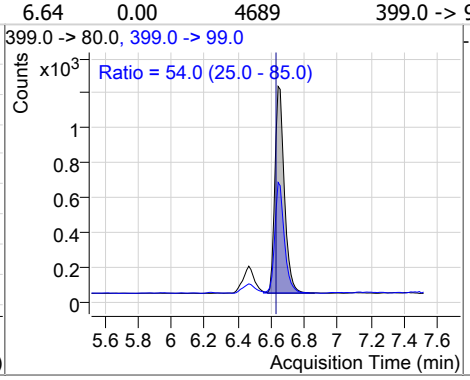


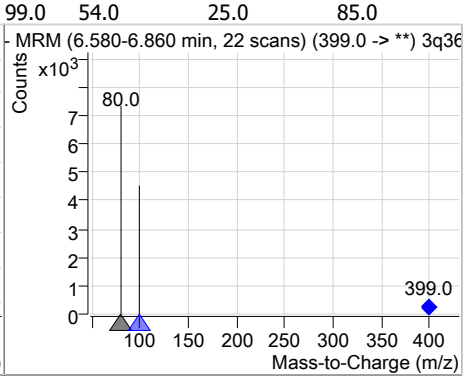




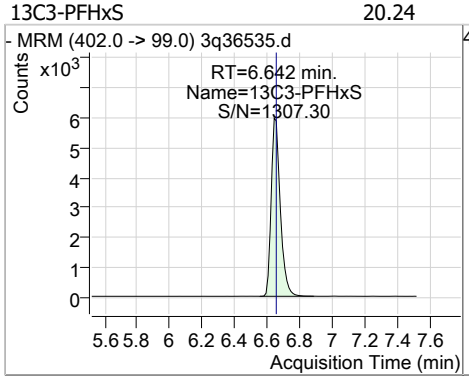
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	1.82	6.64	0.00	4689	399.0 -> 99.0	54.0	25.0	85.0

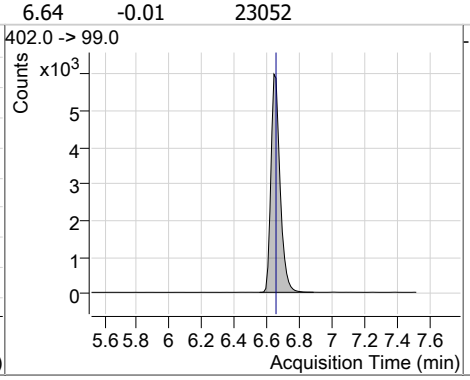


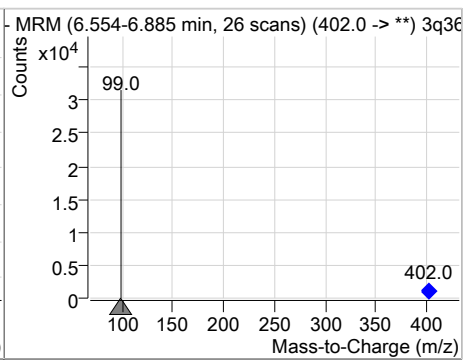




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.24	6.64	-0.01	23052				

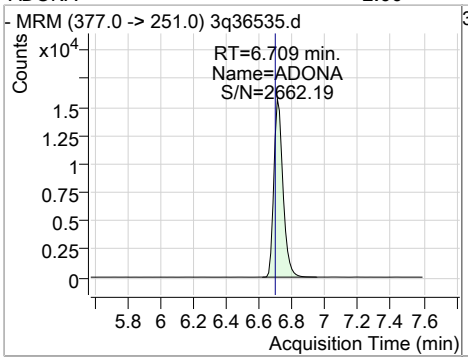


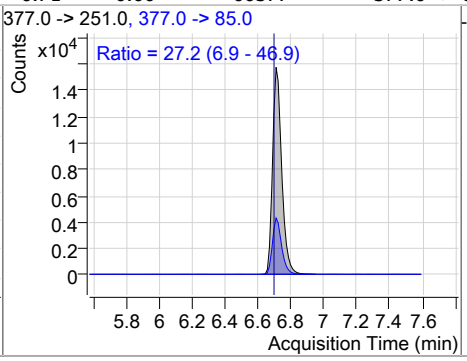


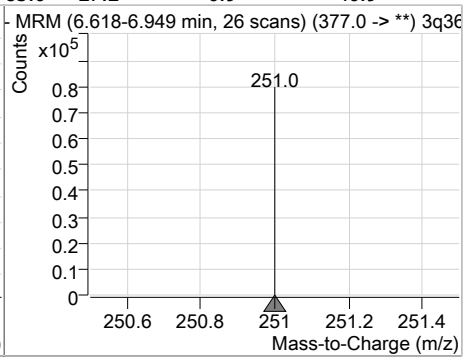


Perfluorinated Compounds by LC/MS/MS

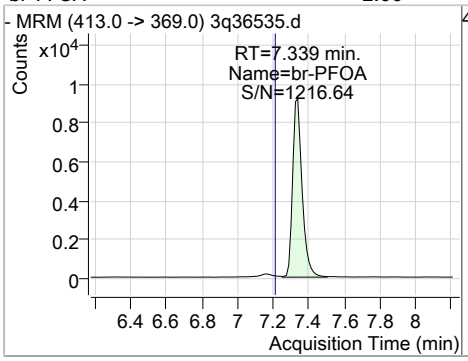
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	2.00	6.71	0.00	60577	377.0 -> 85.0	27.2	6.9	46.9

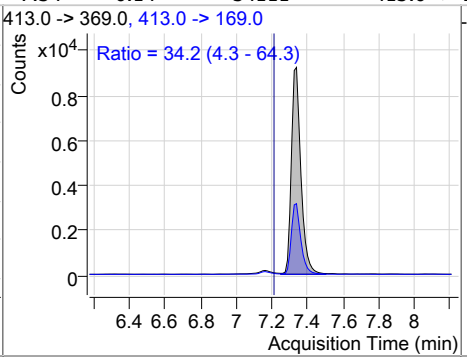


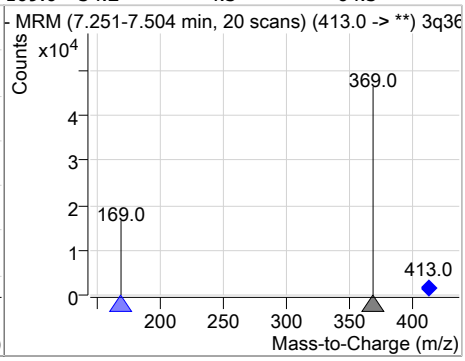




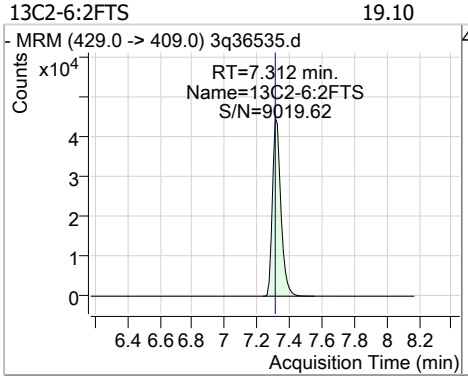
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	2.06	7.34	0.14	34111	413.0 -> 169.0	34.2	4.3	64.3

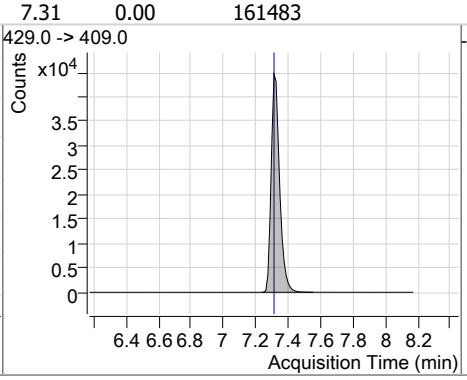


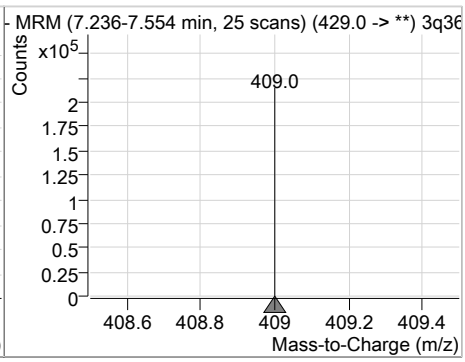




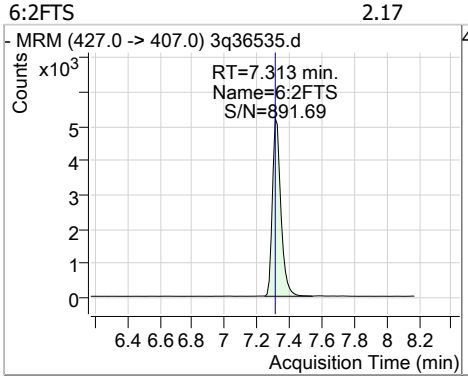
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.10	7.31	0.00	161483				

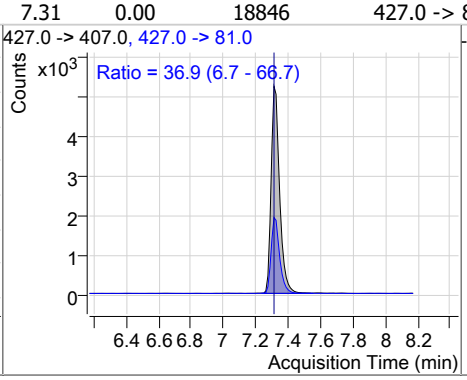


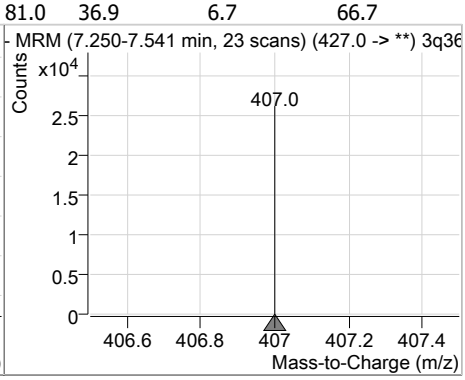




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	2.17	7.31	0.00	18846	427.0 -> 81.0	36.9	6.7	66.7

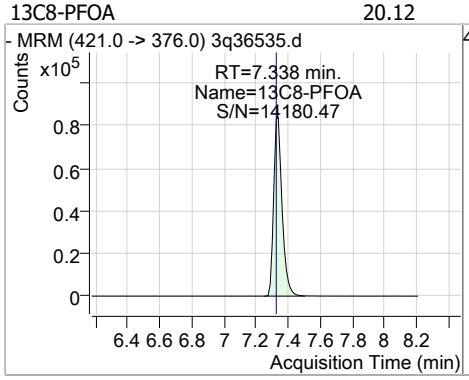


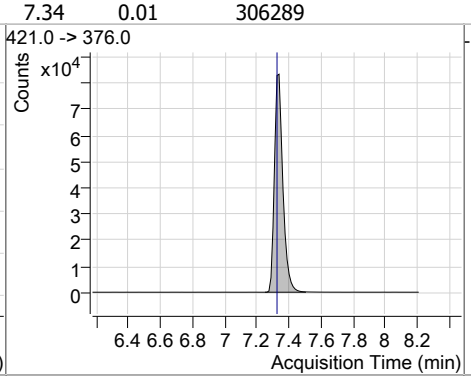


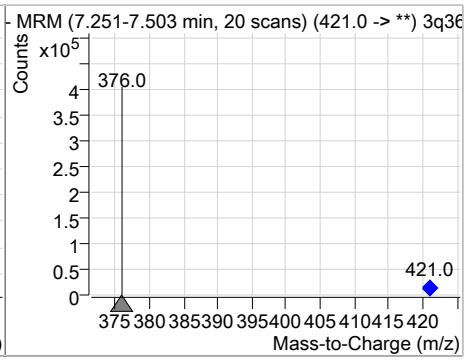


Perfluorinated Compounds by LC/MS/MS

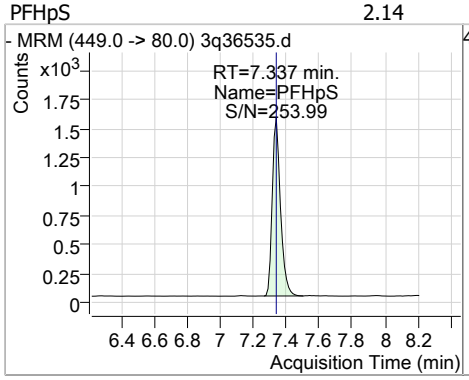
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.12	7.34	0.01	306289				

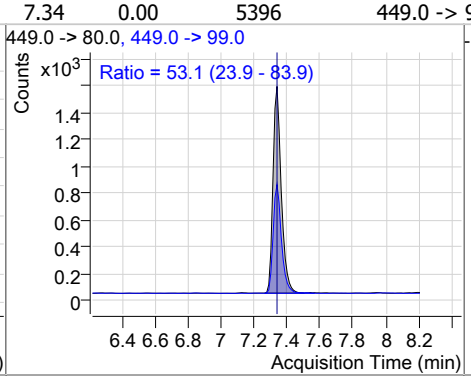


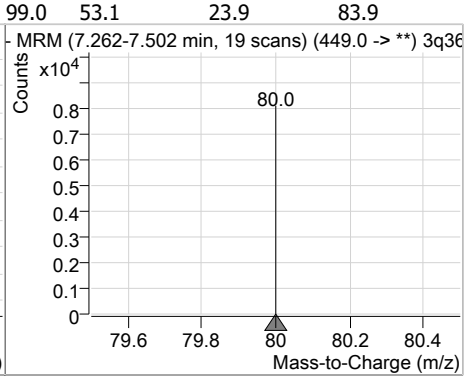




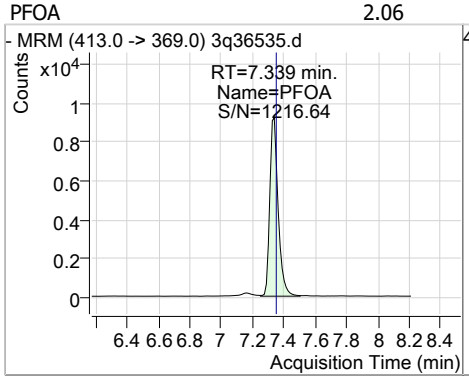
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	2.14	7.34	0.00	5396	449.0 -> 99.0	53.1	23.9	83.9

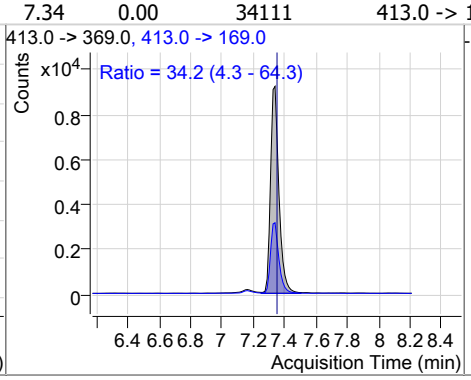


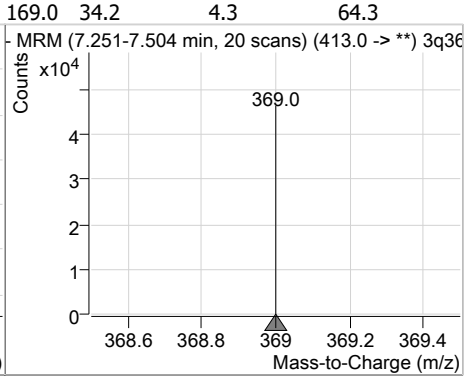




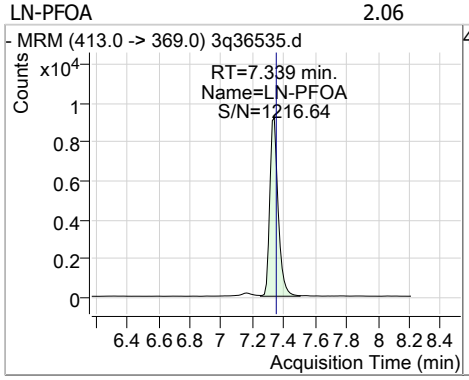
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	2.06	7.34	0.00	34111	413.0 -> 169.0	34.2	4.3	64.3

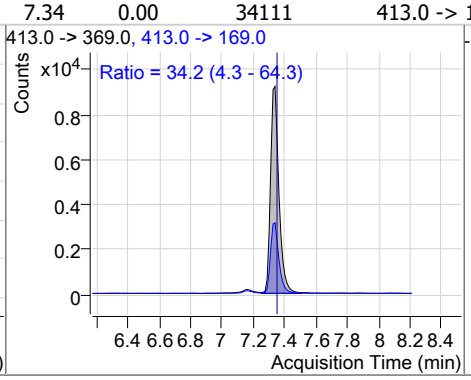


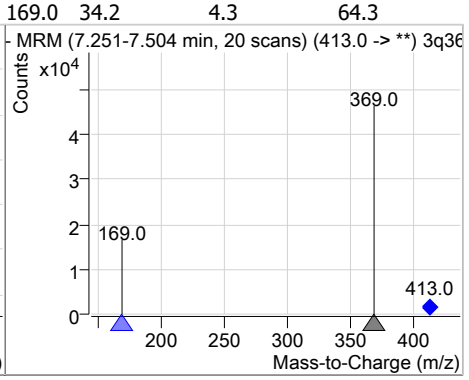




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	2.06	7.34	0.00	34111	413.0 -> 169.0	34.2	4.3	64.3

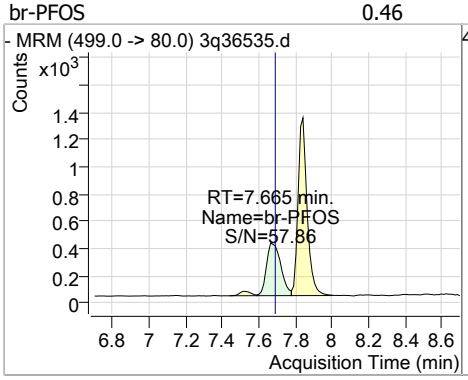


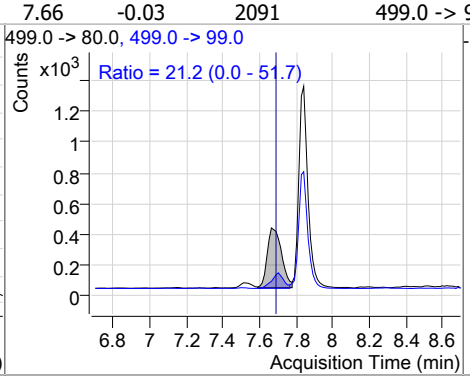


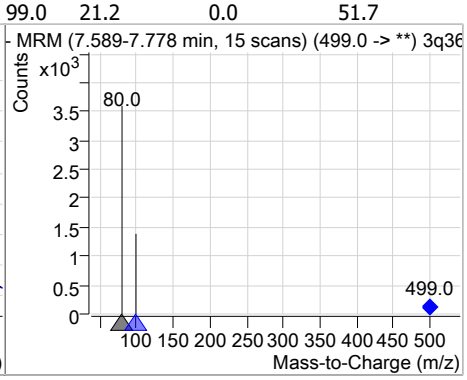


Perfluorinated Compounds by LC/MS/MS

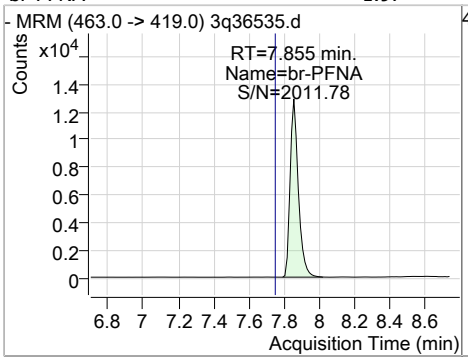
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	0.46	7.66	-0.03	2091	499.0 -> 99.0	21.2	0.0	51.7

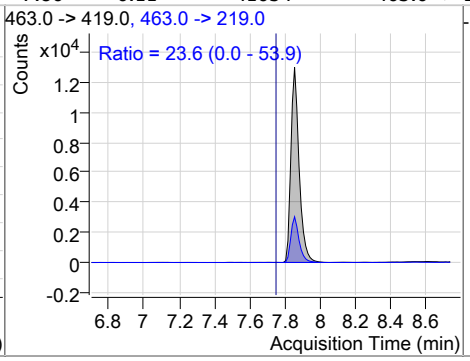


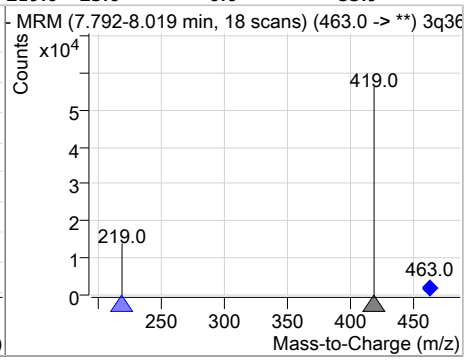




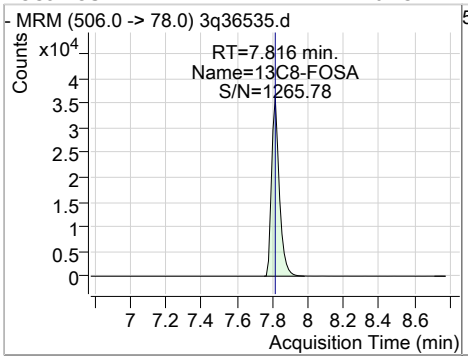
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFNA	1.97	7.86	0.11	41654	463.0 -> 219.0	23.6	0.0	53.9

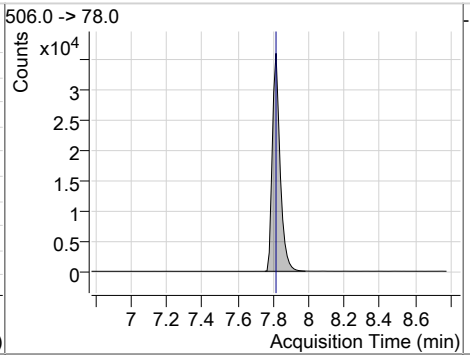


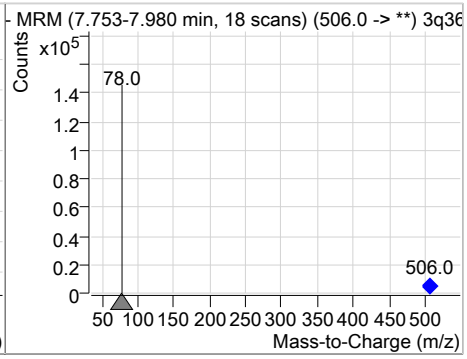




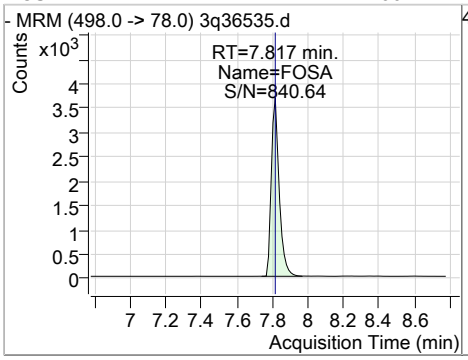
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.73	7.82	0.00	110095				

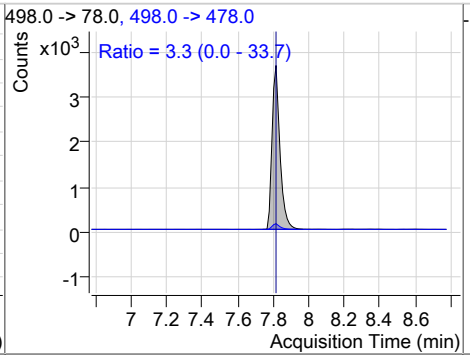


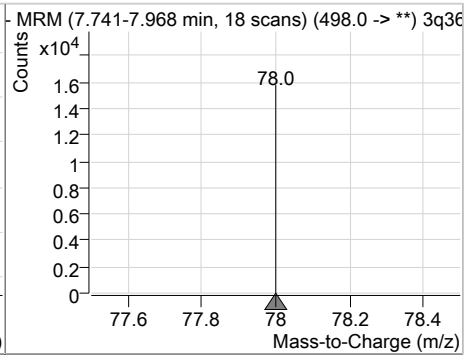




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	2.00	7.82	0.00	11290	498.0 -> 478.0	3.3	0.0	33.7

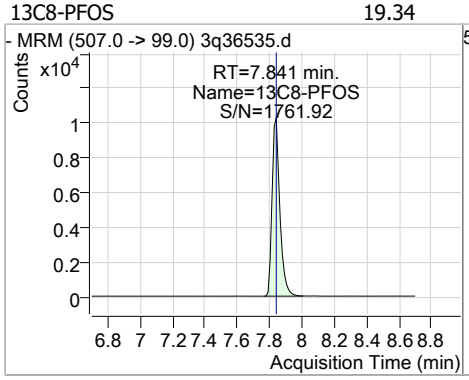


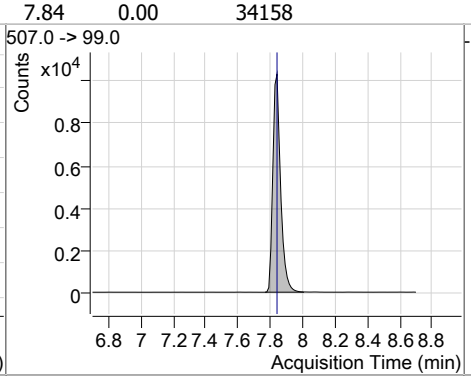


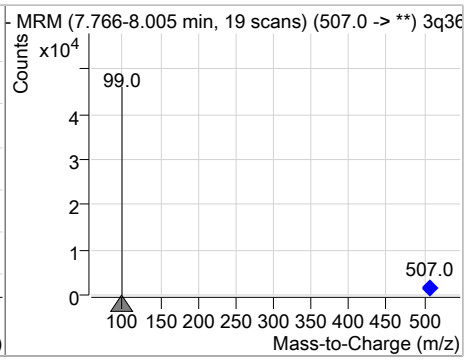


Perfluorinated Compounds by LC/MS/MS

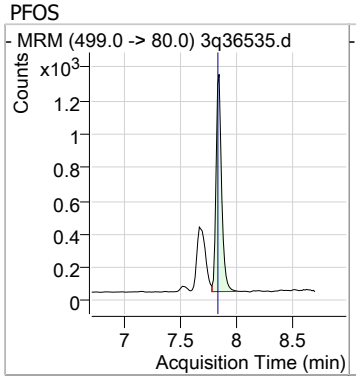
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.34	7.84	0.00	34158				

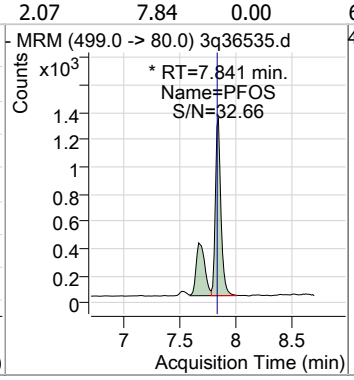


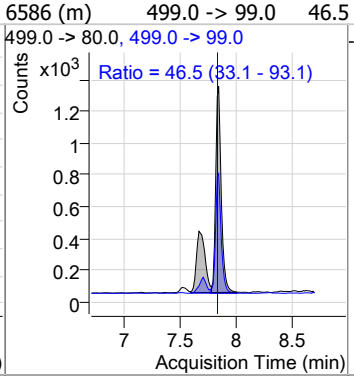


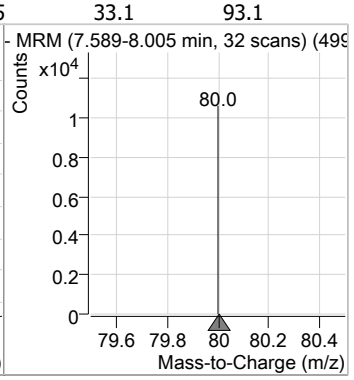


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	2.07	7.84	0.00	6586 (m)	499.0 -> 99.0	46.5	33.1	93.1

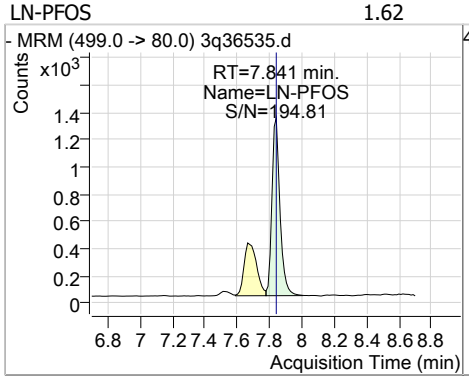


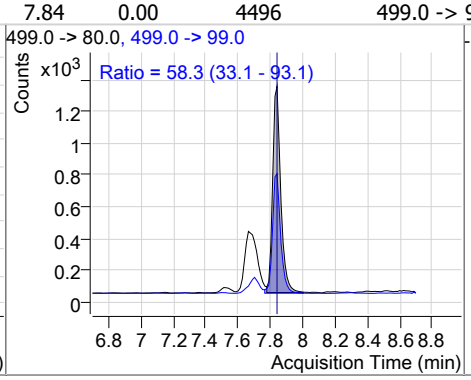


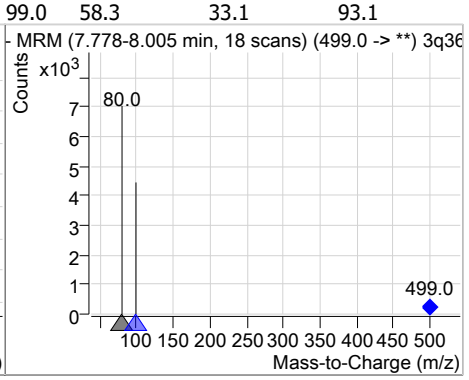




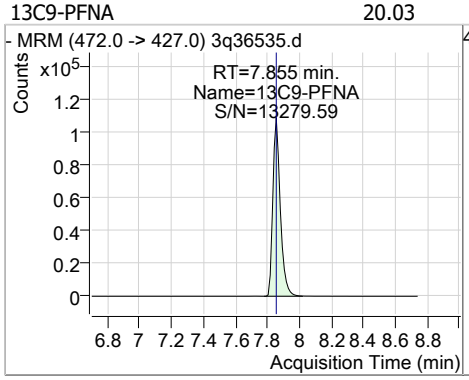
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	1.62	7.84	0.00	4496	499.0 -> 99.0	58.3	33.1	93.1

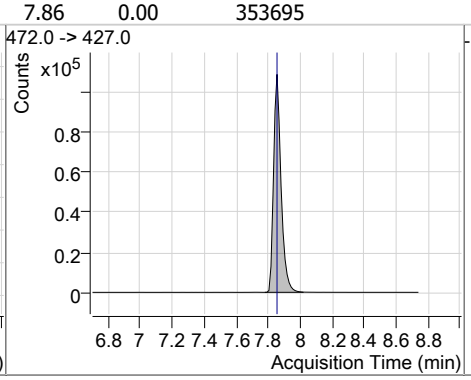


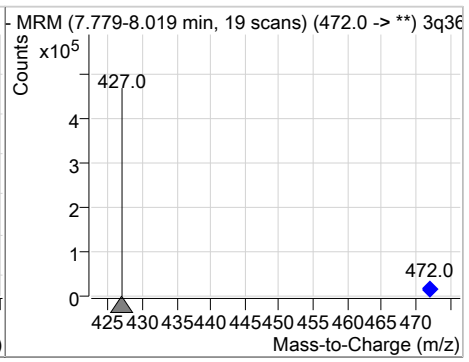




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.03	7.86	0.00	353695				

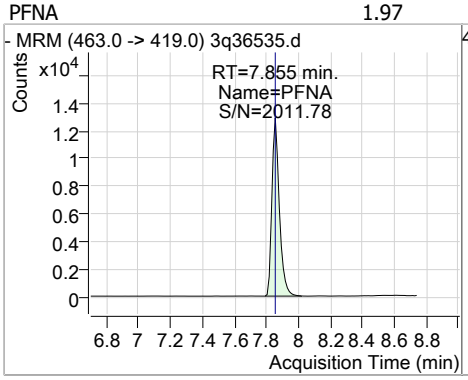


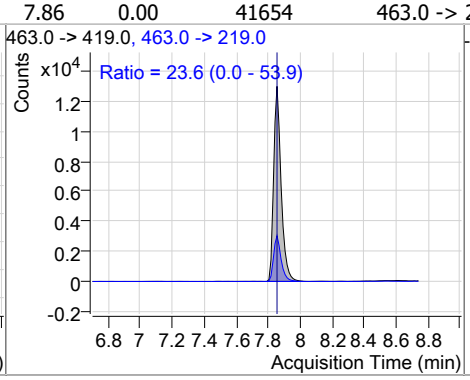


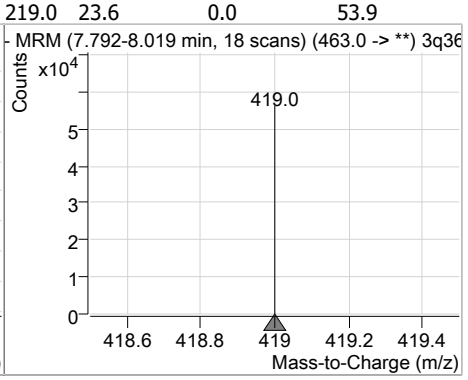


Perfluorinated Compounds by LC/MS/MS

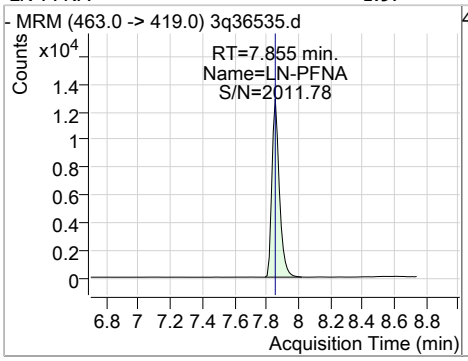
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	1.97	7.86	0.00	41654	463.0 -> 219.0	23.6	0.0	53.9

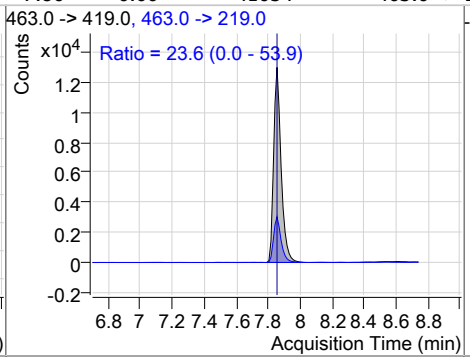


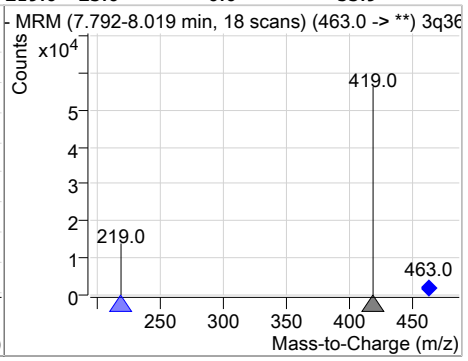




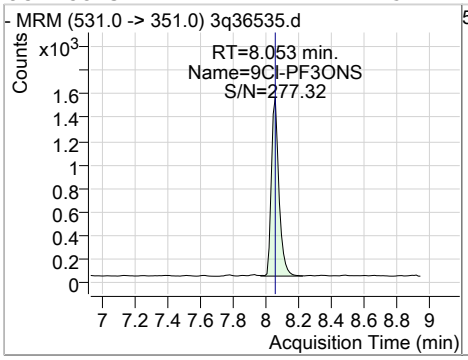
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	1.97	7.86	0.00	41654	463.0 -> 219.0	23.6	0.0	53.9

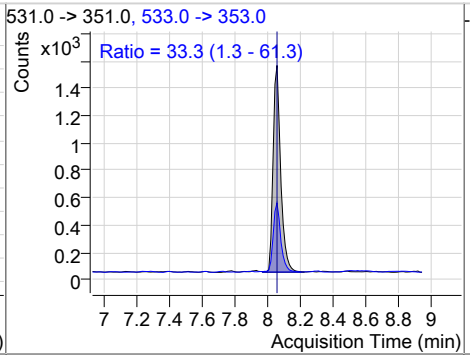


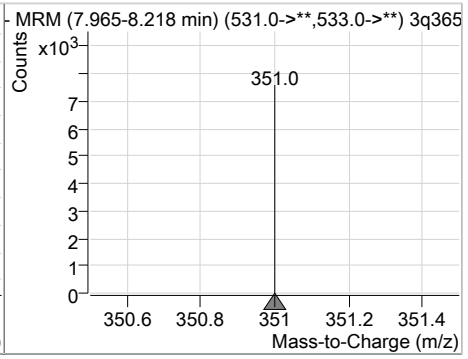




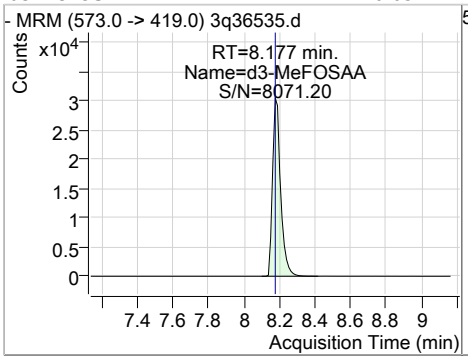
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	1.75	8.05	0.00	4880	533.0 -> 353.0	33.3	1.3	61.3

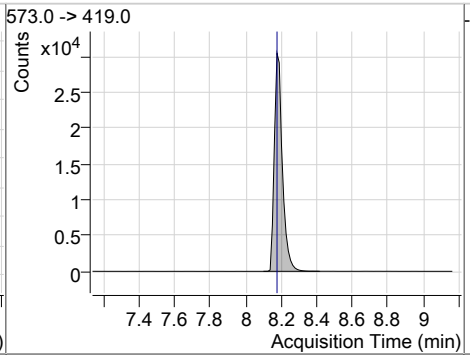


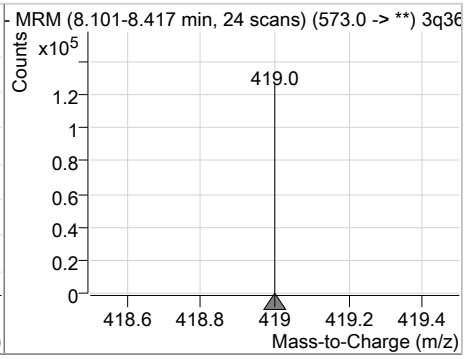




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.05	8.18	0.00	95732				

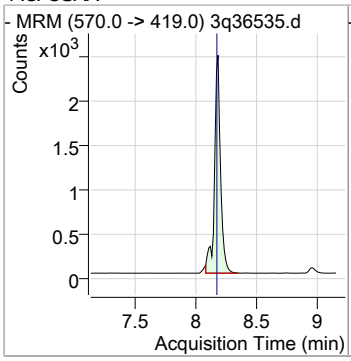


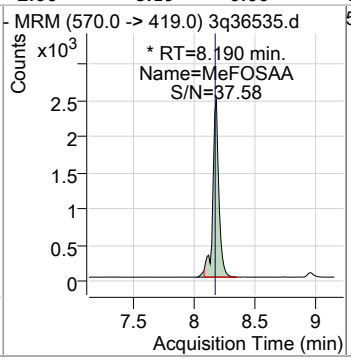


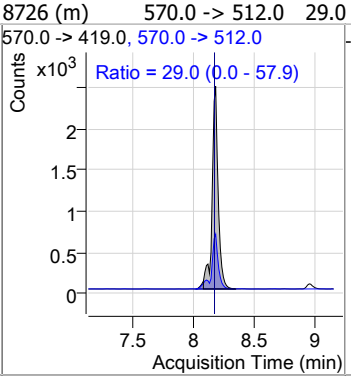


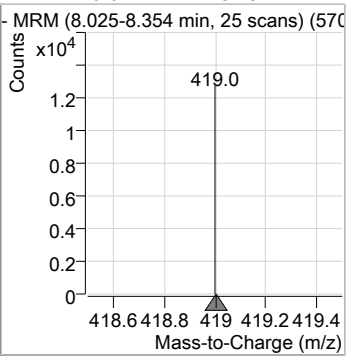
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	2.00	8.19	0.00	8726 (m)	570.0 -> 512.0	29.0	0.0	57.9

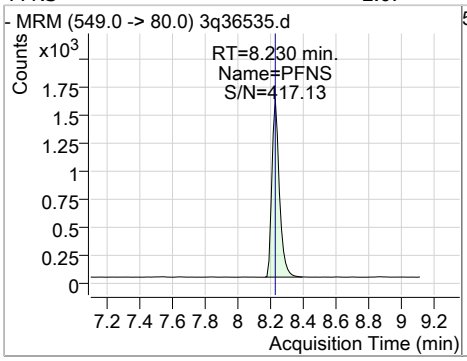


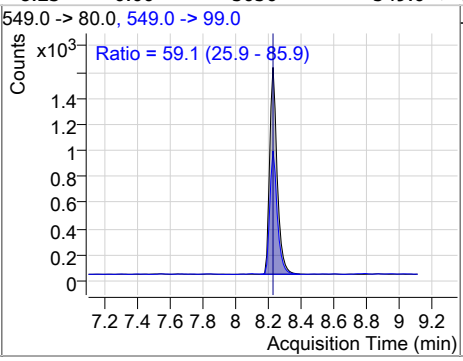


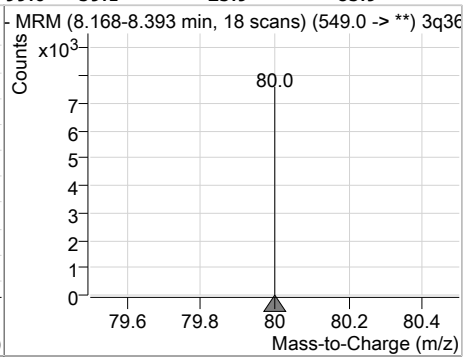




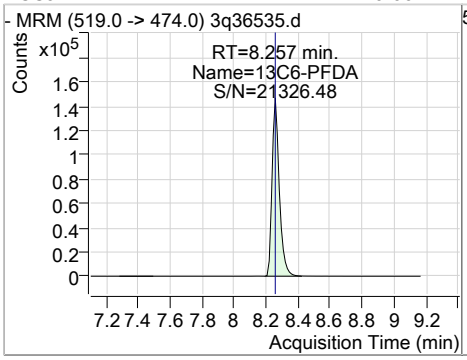
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	2.07	8.23	0.00	5056	549.0 -> 99.0	59.1	25.9	85.9

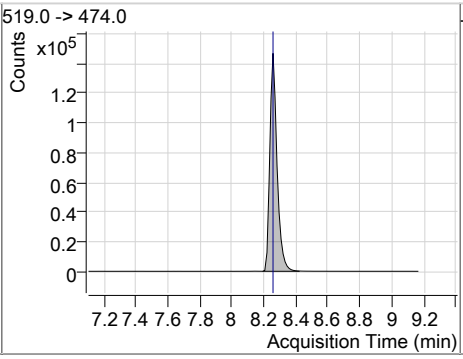


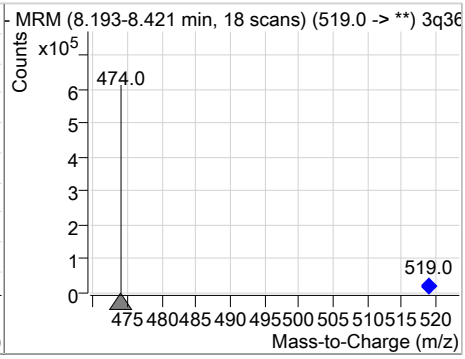




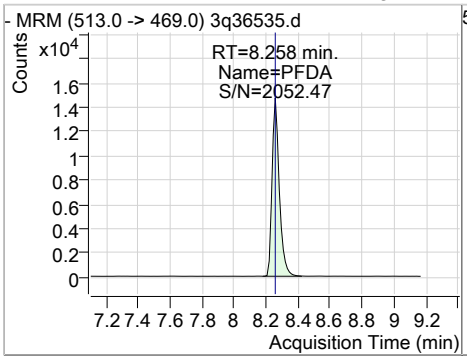
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.06	8.26	0.00	461045				

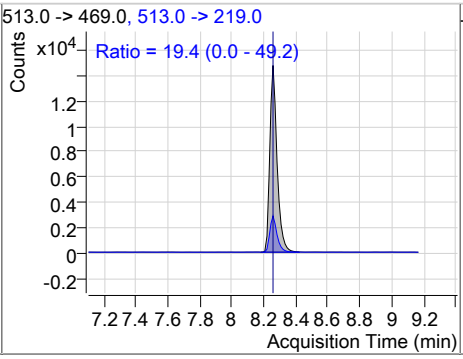


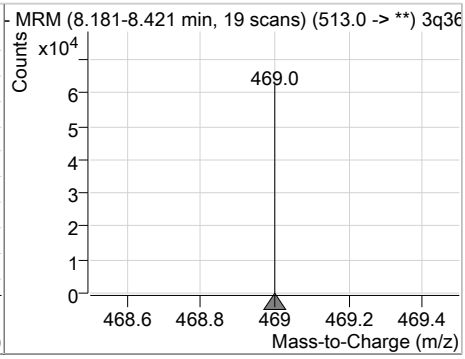




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	1.94	8.26	0.00	46377	513.0 -> 219.0	19.4	0.0	49.2

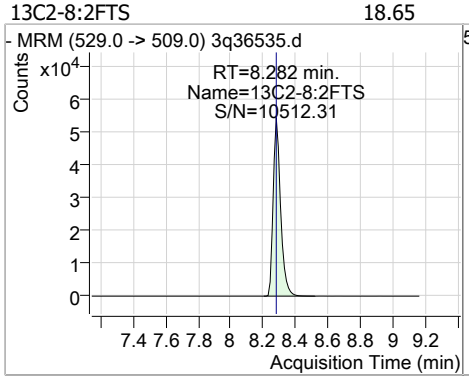


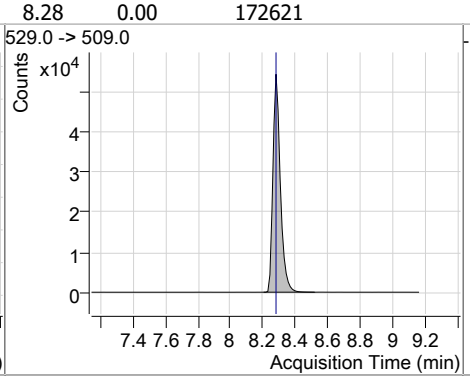


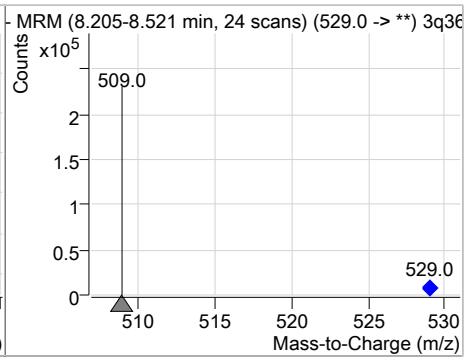


Perfluorinated Compounds by LC/MS/MS

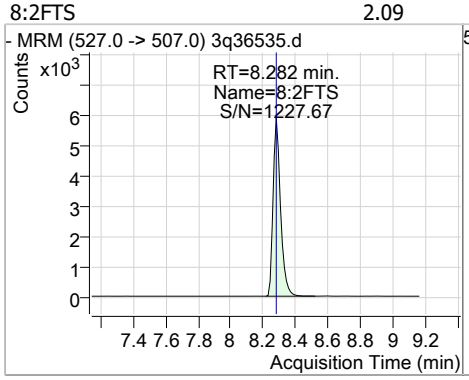
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.65	8.28	0.00	172621				

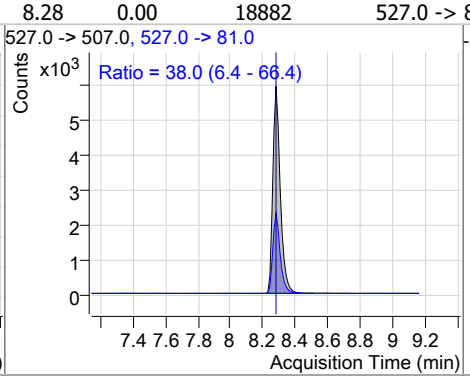


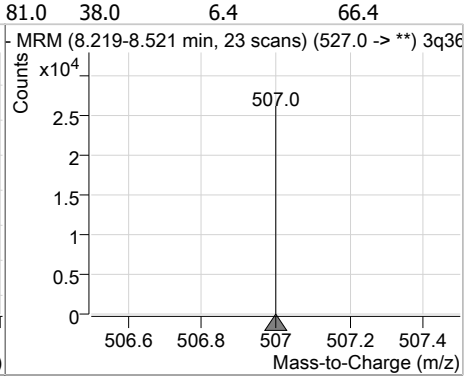




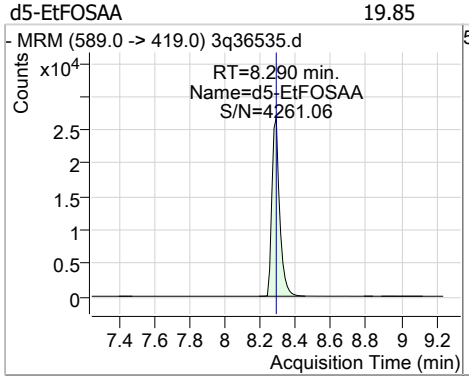
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	2.09	8.28	0.00	18882	527.0 -> 81.0	38.0	6.4	66.4

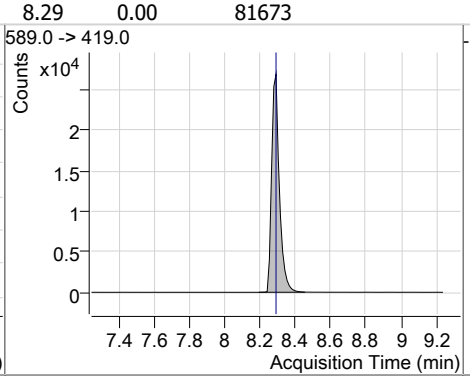


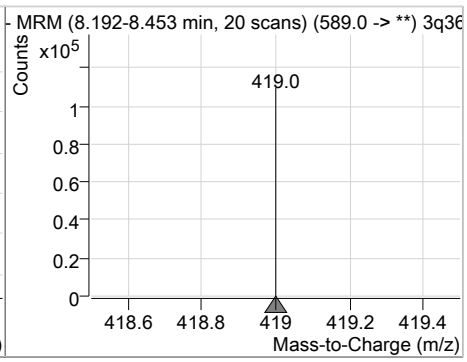




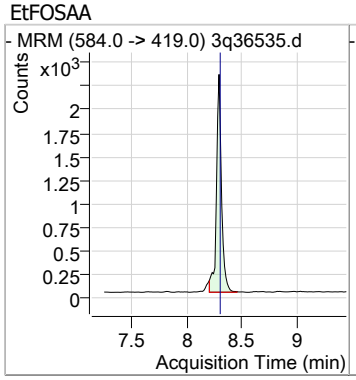
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.85	8.29	0.00	81673				

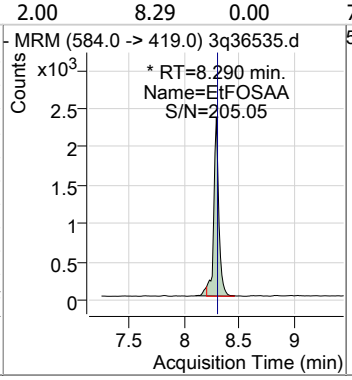


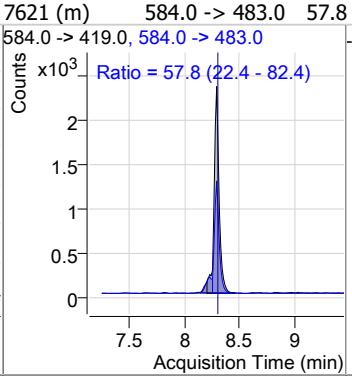


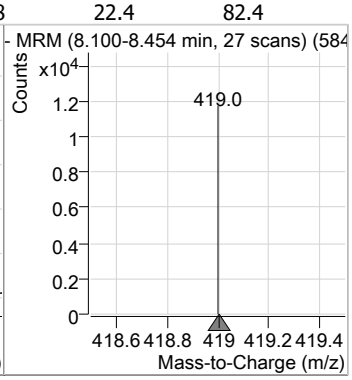


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	2.00	8.29	0.00	7621 (m)	584.0 -> 483.0	57.8	22.4	82.4







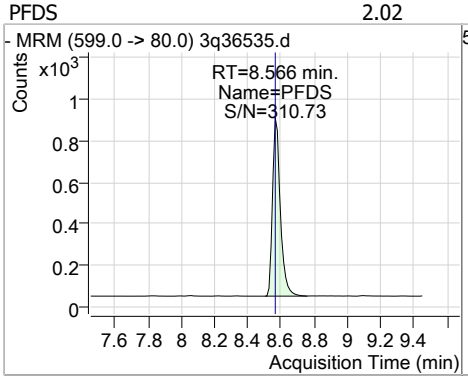


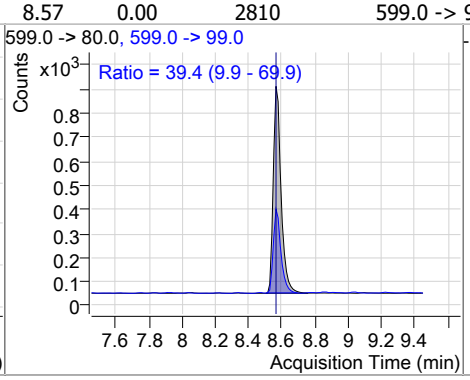
11.6.18

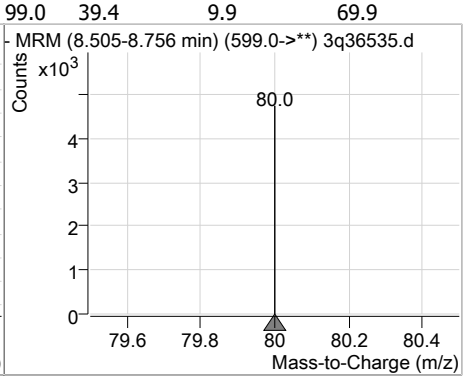
11

Perfluorinated Compounds by LC/MS/MS

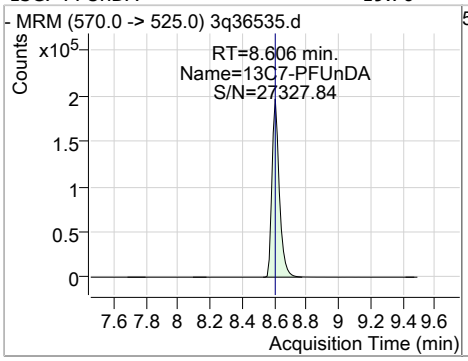
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	2.02	8.57	0.00	2810	599.0 -> 99.0	39.4	9.9	69.9

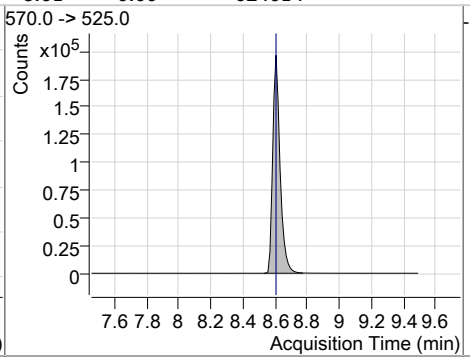


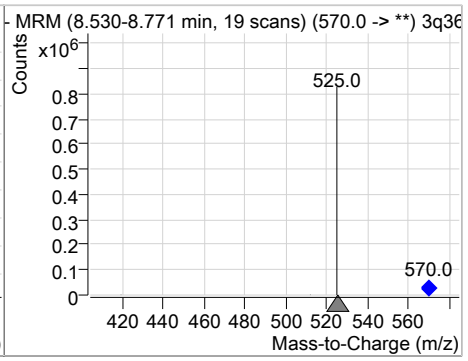




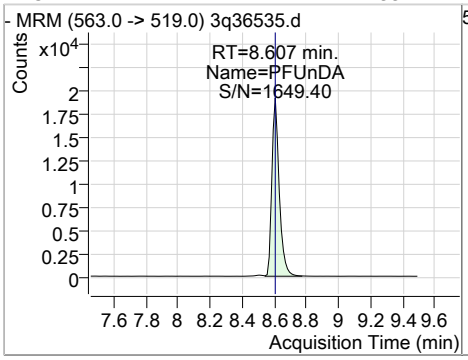
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.76	8.61	0.00	624614				

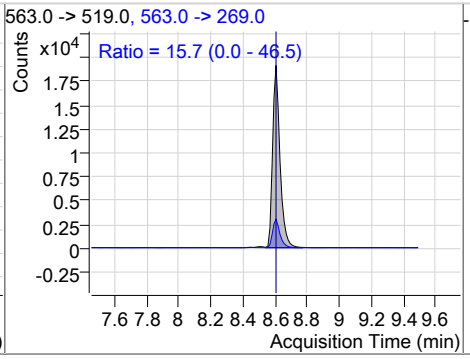


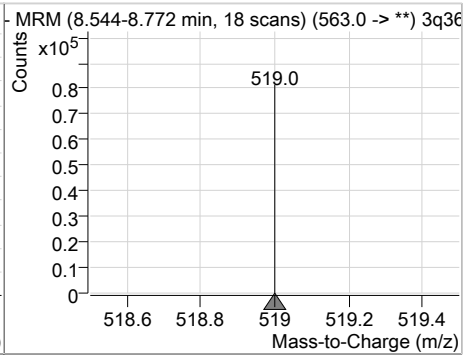




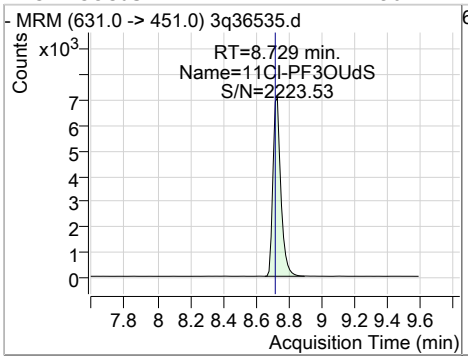
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	1.99	8.61	0.00	60805	563.0 -> 269.0	15.7	0.0	46.5

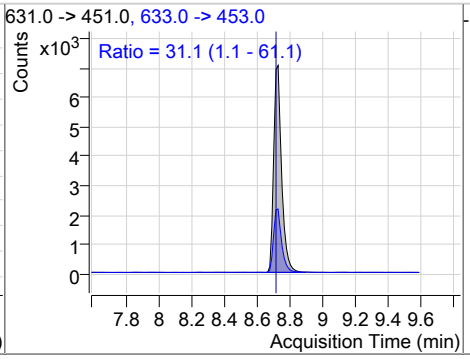


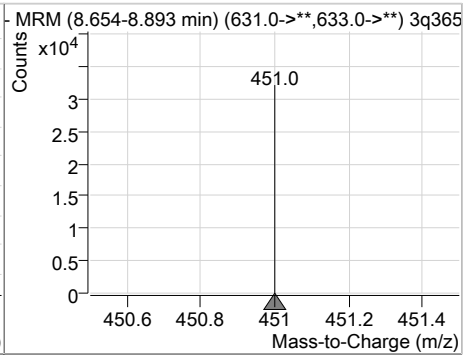




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	1.90	8.73	0.01	23585	633.0 -> 453.0	31.1	1.1	61.1

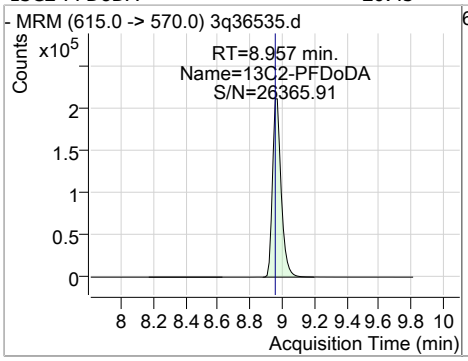


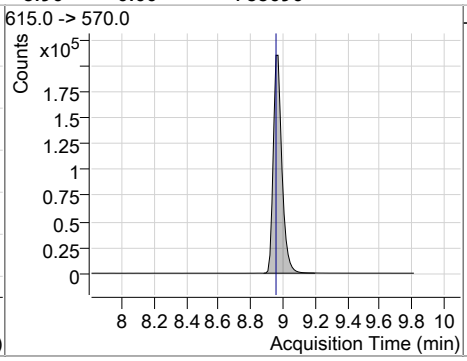


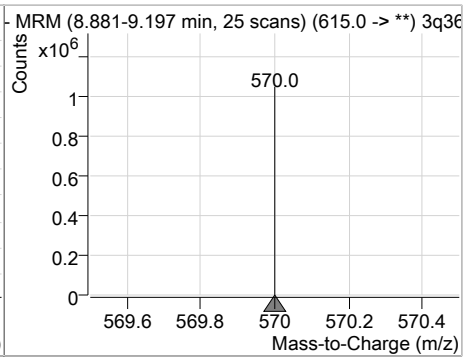


Perfluorinated Compounds by LC/MS/MS

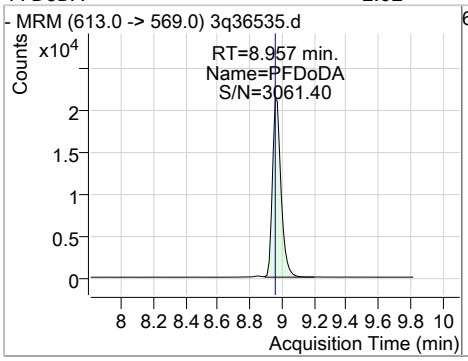
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.45	8.96	0.00	788696				

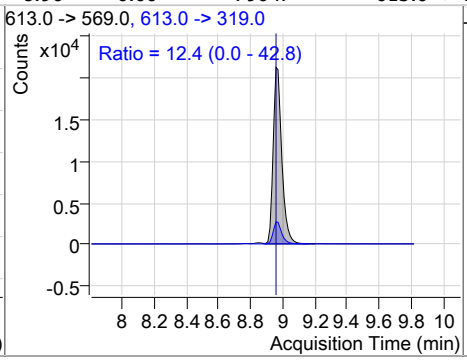


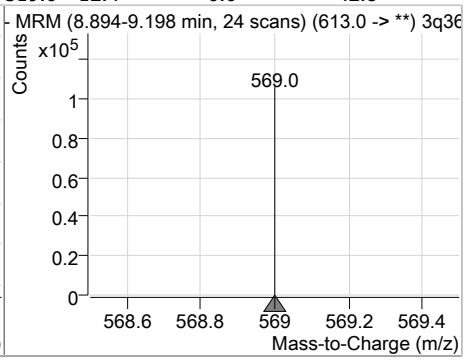




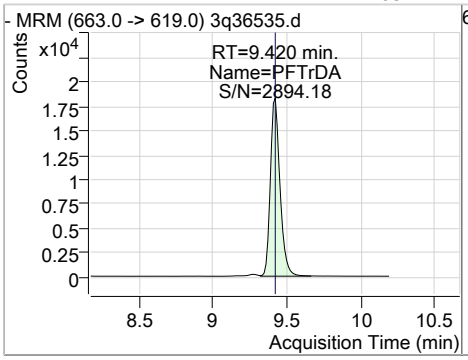
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	2.02	8.96	0.00	79047	613.0 -> 319.0	12.4	0.0	42.8

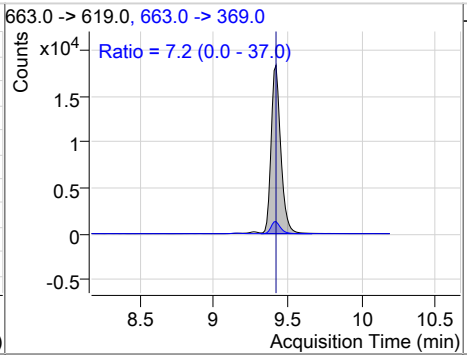


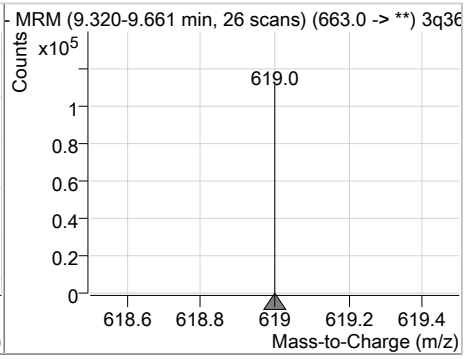




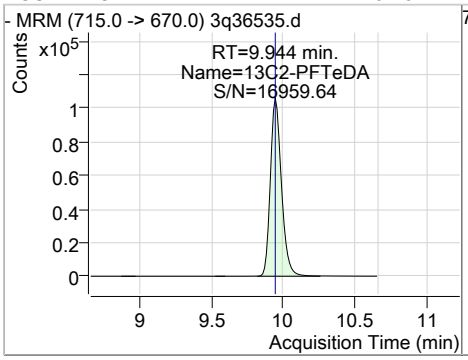
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	2.05	9.42	0.00	82734	663.0 -> 369.0	7.2	0.0	37.0

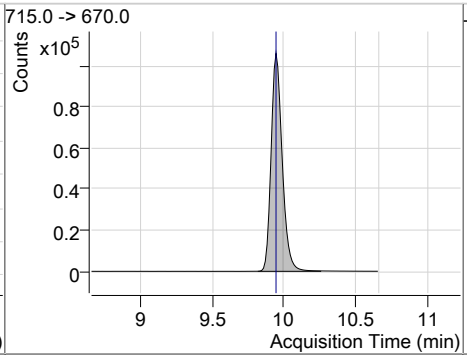


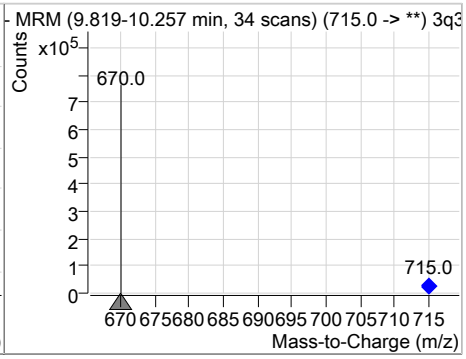




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.46	9.94	0.00	572059				

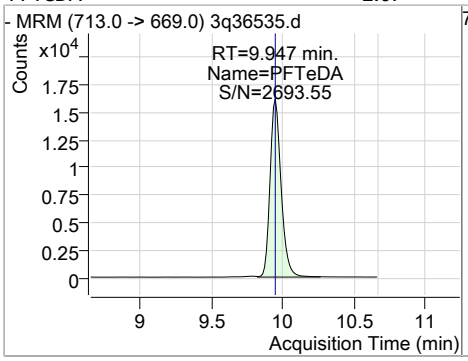


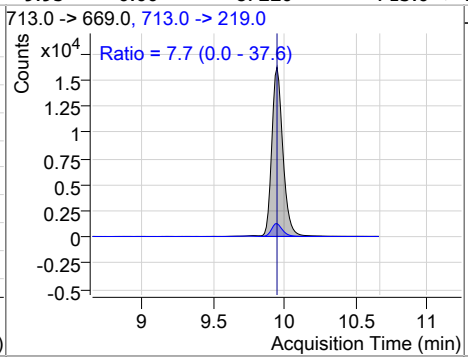


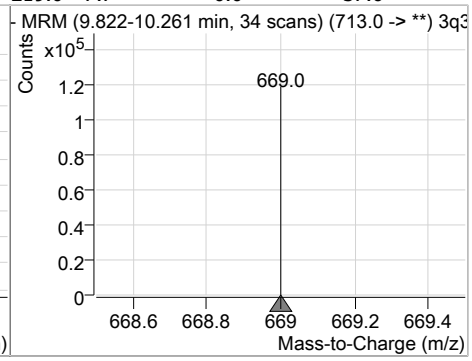


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	2.07	9.95	0.00	87220	713.0 -> 219.0	7.7	0.0	37.6







Manual Integration Approval Summary

Sample Number:	S3Q537-IC537	**Method:**	EPA 537M QSM5.3 B-15
Lab FileID:	3Q36535.D	**Analyst approved:**	04/14/21 10:44 Martha Valls
Injection Time:	04/13/21 14:52	**Supervisor approved:**	04/14/21 15:06 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.64	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.84	Split peak
MeFOSAA	2355-31-9		8.19	Split peak
EtFOSAA	2991-50-6		8.29	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/14/21 15:06

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36536.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/13/2021 3:08:41 PM
Sample Name : ic537-5
Vial : P1-A5
DA Method File : BR_LN_041321_S3Q537.quantmethod.xml
Batch Name : s3q537.batch.bin
Sample Information : op84308,S3Q537,250,,,1,1,water

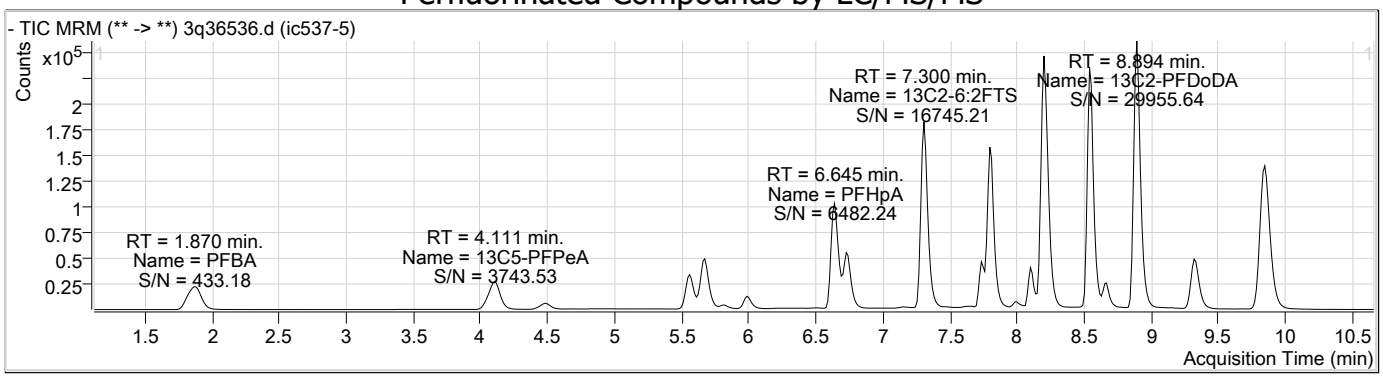
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.877	217.0 -> 172.0	147615	20.00	µg/L	0.038
M5-PFPeA	4.111	268.0 -> 223.0	113025	20.00	µg/L	0.038
M5-PFHxA	5.680	318.0 -> 273.0	175332	20.00	µg/L	0.050
M4-PFHpA	6.645	367.0 -> 322.0	254303	20.00	µg/L	0.038
M8-PFOA	7.313	421.0 -> 376.0	300464	20.00	µg/L	-0.013
M9-PFNA	7.804	472.0 -> 427.0	343572	20.00	µg/L	-0.051
M6-PFDA	8.206	519.0 -> 474.0	440351	20.00	µg/L	-0.051
M7-PFUnDA	8.543	570.0 -> 525.0	596375	20.00	µg/L	-0.063
M2-PFDoDA	8.894	615.0 -> 570.0	716108	20.00	µg/L	-0.063
M2-PFTeDA	9.844	715.0 -> 670.0	534396	20.00	µg/L	-0.100
M8-FOSA	7.740	506.0 -> 78.0	107222	20.00	µg/L	-0.076
M3-PFBS	4.484	302.0 -> 99.0	15434	20.00	µg/L	0.038
M3-PFHxS	6.681	402.0 -> 99.0	21996	20.00	µg/L	0.026
M8-PFOS	7.790	507.0 -> 99.0	34232	20.00	µg/L	-0.051
M2-4:2FTS	5.564	329.0 -> 309.0	103860	20.00	µg/L	0.052
M2-6:2FTS	7.300	429.0 -> 409.0	158819	20.00	µg/L	-0.013
M2-8:2FTS	8.231	529.0 -> 509.0	172146	20.00	µg/L	-0.050
M3-MeFOSAA	8.101	573.0 -> 419.0	91054	20.00	µg/L	-0.076
M3-HFPO-DA	5.996	287.0 -> 169.0	23404	20.00	µg/L	0.050
M5-EtFOSAA	8.201	589.0 -> 419.0	76940	20.00	µg/L	-0.088
System Monitoring Compounds						
13C2-4:2FTS	5.564	329.0 -> 309.0	103860	18.15	µg/L	0.052
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.7%		
13C2-6:2FTS	7.300	429.0 -> 409.0	158819	18.78	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.9%		
13C2-8:2FTS	8.231	529.0 -> 509.0	172146	18.60	µg/L	-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.0%		
13C2-PFDoDA	8.894	615.0 -> 570.0	716108	18.57	µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%		
13C2-PFTeDA	9.844	715.0 -> 670.0	534396	19.11	µg/L	-0.100
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.6%		
13C3-PFBS	4.484	302.0 -> 99.0	15434	19.14	µg/L	0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.7%		
13C3-PFHxS	6.681	402.0 -> 99.0	21996	19.32	µg/L	0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.6%		
13C4-PFBA	1.877	217.0 -> 172.0	147615	18.84	µg/L	0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.2%		
13C4-PFHpA	6.645	367.0 -> 322.0	254303	19.62	µg/L	0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.1%		
13C5-PFHxA	5.680	318.0 -> 273.0	175332	19.16	µg/L	0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.8%		
13C5-PFPeA	4.111	268.0 -> 223.0	113025	19.25	µg/L	0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.3%		
13C6-PFDA	8.206	519.0 -> 474.0	440351	19.16	µg/L	-0.051
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.8%		

Perfluorinated Compounds by LC/MS/MS

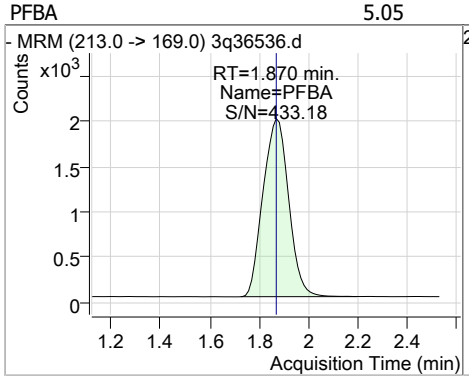
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.543	570.0 -> 525.0	596375	18.87	µg/L		-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.3%			
13C8-FOSA	7.740	506.0 -> 78.0	107222	20.19	µg/L		-0.076
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.0%			
13C8-PFOA	7.313	421.0 -> 376.0	300464	19.74	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%			
13C8-PFOS	7.790	507.0 -> 99.0	34232	19.38	µg/L		-0.051
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.9%			
13C9-PFNA	7.804	472.0 -> 427.0	343572	19.46	µg/L		-0.051
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.3%			
d3-MeFOSAA	8.101	573.0 -> 419.0	91054	19.07	µg/L		-0.076
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.4%			
13C3-HFPO-DA	5.996	287.0 -> 169.0	23405	19.30	µg/L		0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.5%			
d5-EtFOSAA	8.201	589.0 -> 419.0	76938	18.70	µg/L		-0.088
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.5%			
Target Compounds							QValue
4:2FTS	5.565	327.0 -> 307.0	29803	5.31	µg/L		100
6:2FTS	7.300	427.0 -> 407.0	44864	5.25	µg/L		96
8:2FTS	8.232	527.0 -> 507.0	47303	5.26	µg/L		99
EtFOSAA	8.215	584.0 -> 419.0	18183	5.06	µg/L	m	87
FOSA	7.741	498.0 -> 78.0	28349	5.16	µg/L		99
MeFOSAA	8.101	570.0 -> 419.0	21079	5.08	µg/L	m	99
PFBA	1.870	213.0 -> 169.0	14271	5.05	µg/L		100
PFBS	4.486	299.0 -> 80.0	12107	5.13	µg/L		100
PFDA	8.206	513.0 -> 469.0	110538	4.85	µg/L		99
PFDoDA	8.894	613.0 -> 569.0	180328	5.07	µg/L		99
PFDS	8.516	599.0 -> 80.0	6424	4.85	µg/L		98
PFHpA	6.645	363.0 -> 319.0	117425	5.09	µg/L		100
PFHpS	7.312	449.0 -> 80.0	12687	5.03	µg/L		99
PFHxA	5.681	313.0 -> 269.0	30622	4.99	µg/L		100
PFHxS	6.681	399.0 -> 80.0	12620	5.02	µg/L	m	97
PFNA	7.805	463.0 -> 419.0	103065	5.02	µg/L		99
PFNS	8.179	549.0 -> 80.0	12184	4.98	µg/L		98
PFOA	7.314	413.0 -> 369.0	81481	5.02	µg/L		99
PFOS	7.791	499.0 -> 80.0	16301	5.10	µg/L	m	83
PFPeA	4.114	263.0 -> 219.0	54467	5.09	µg/L		100
PFPeS	5.814	349.0 -> 80.0	9583	5.24	µg/L		99
PFTeDA	9.847	713.0 -> 669.0	200651	5.10	µg/L		100
PFTrDA	9.320	663.0 -> 619.0	196770	5.22	µg/L		99
PFUnDA	8.544	563.0 -> 519.0	144508	4.96	µg/L		100
11Cl-PF3OUdS	8.666	631.0 -> 451.0	56359	5.01	µg/L		100
9Cl-PF3ONS	7.990	531.0 -> 351.0	12408	4.65	µg/L		95
ADONA	6.734	377.0 -> 251.0	148440	5.15	µg/L		100
HFPO-DA	5.991	329.0 -> 169.0	21369	5.04	µg/L		99
br-PFOS	7.652	499.0 -> 80.0	5558	1.23	µg/L		97
LN-PFOS	7.791	499.0 -> 80.0	10743	3.86	µg/L		98
br-PFHxS	6.504	399.0 -> 80.0	1716	0.59	µg/L		100
LN-PFHxS	6.681	399.0 -> 80.0	10904	4.43	µg/L		100
br-PFOA	7.314	413.0 -> 369.0	81481	5.02	µg/L		99
LN-PFOA	7.314	413.0 -> 369.0	81481	5.02	µg/L		99
br-PFNA	7.805	463.0 -> 419.0	103065	5.02	µg/L		99
LN-PFNA	7.805	463.0 -> 419.0	103065	5.02	µg/L		99

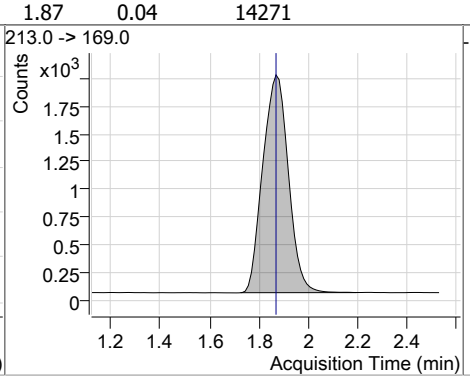
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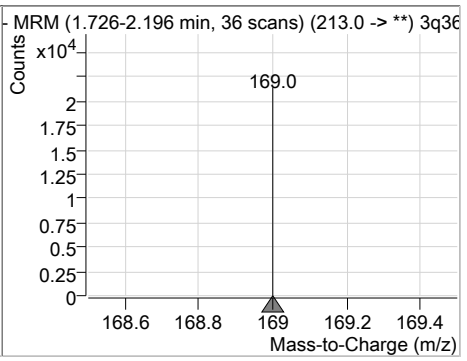
Perfluorinated Compounds by LC/MS/MS



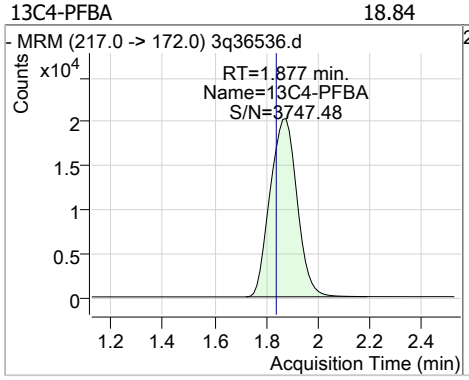
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	5.05	1.87	0.04	14271				

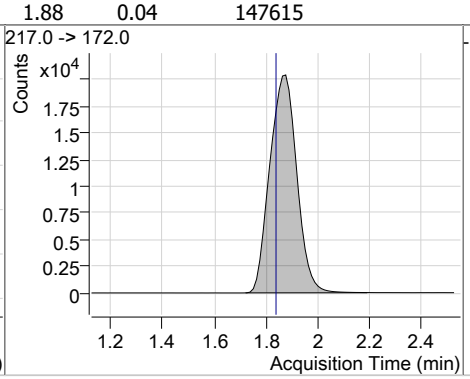


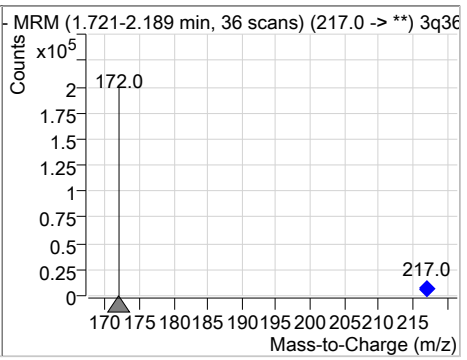




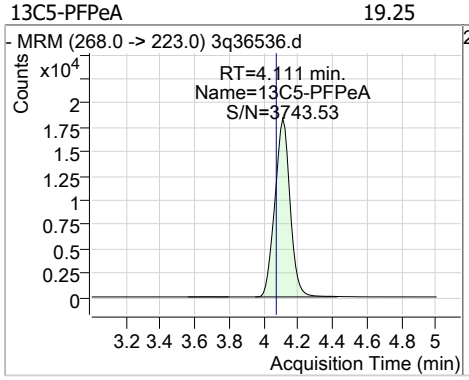
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.84	1.88	0.04	147615				

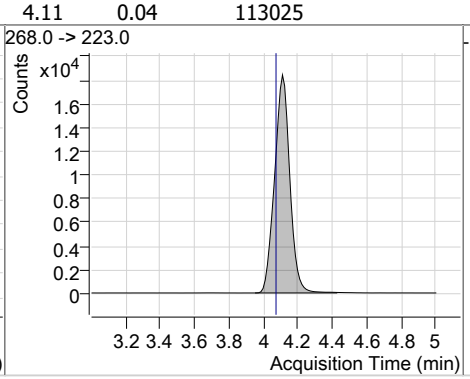


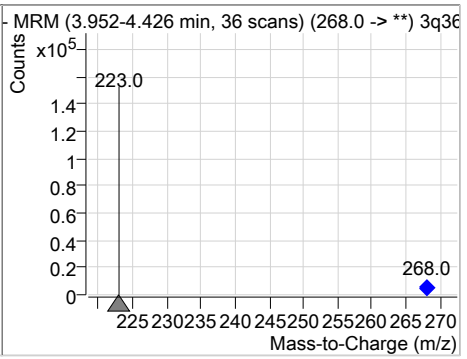




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.25	4.11	0.04	113025				





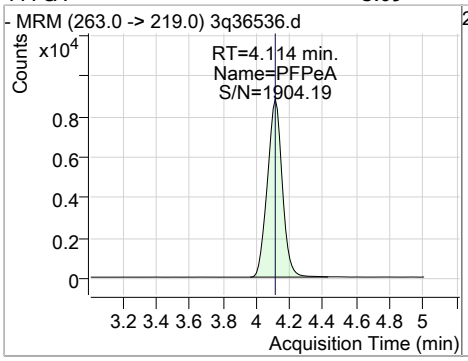


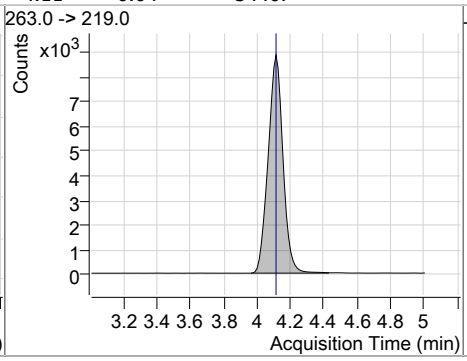
11.6.19

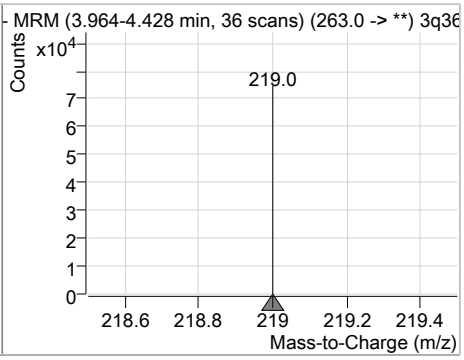
11

Perfluorinated Compounds by LC/MS/MS

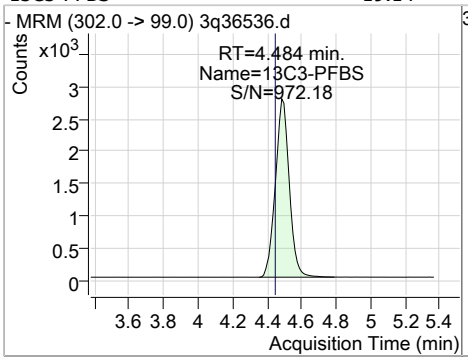
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	5.09	4.11	0.04	54467				

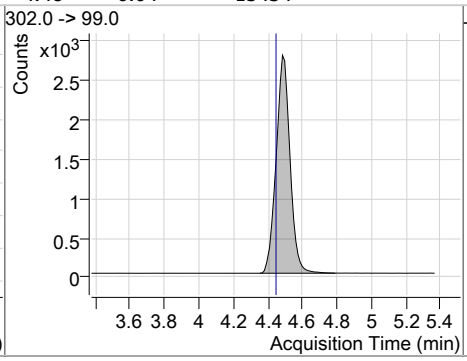


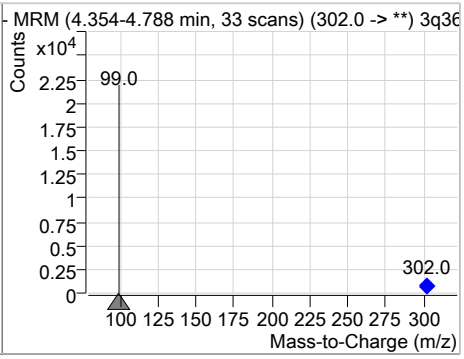




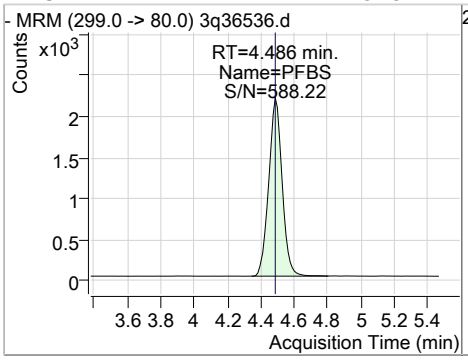
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.14	4.48	0.04	15434				

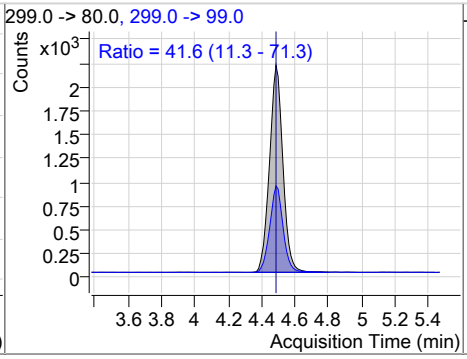


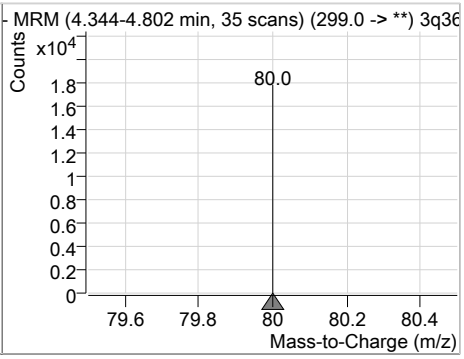




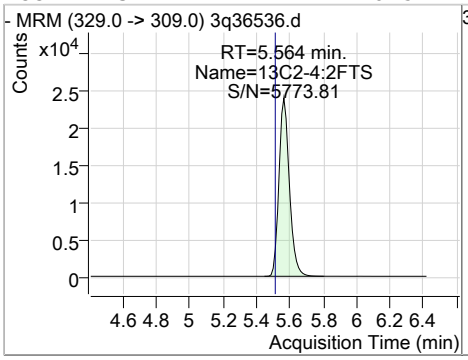
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	5.13	4.49	0.04	12107	299.0 -> 99.0	41.6	11.3	71.3

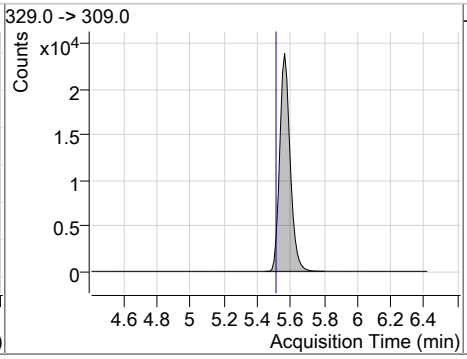


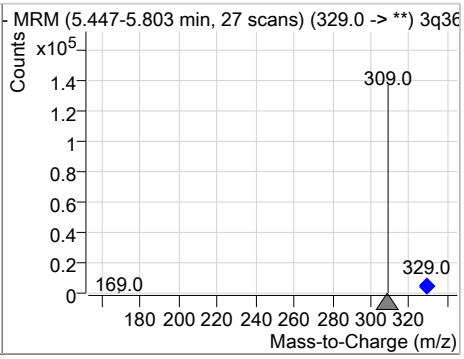




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.15	5.56	0.05	103860				



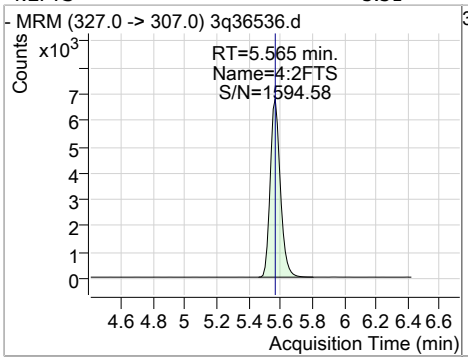


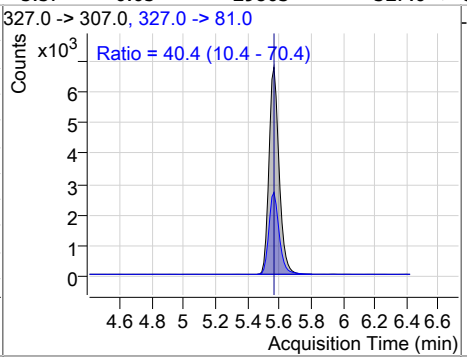


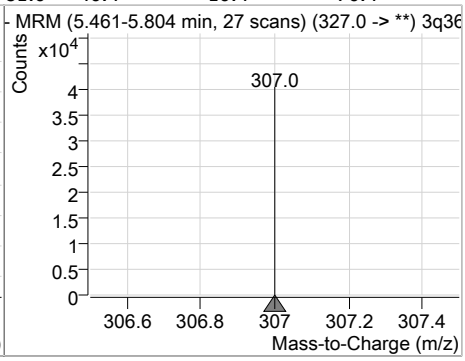
11.6.19 11

Perfluorinated Compounds by LC/MS/MS

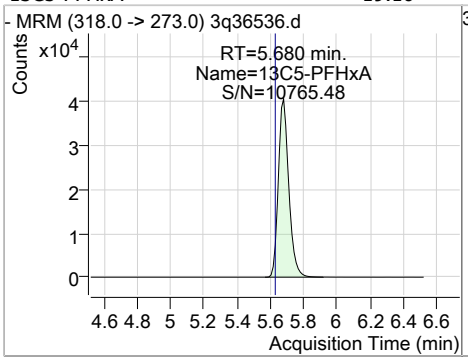
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	5.31	5.57	0.05	29803	327.0 -> 81.0	40.4	10.4	70.4

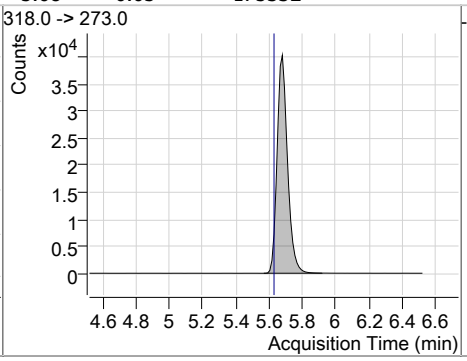


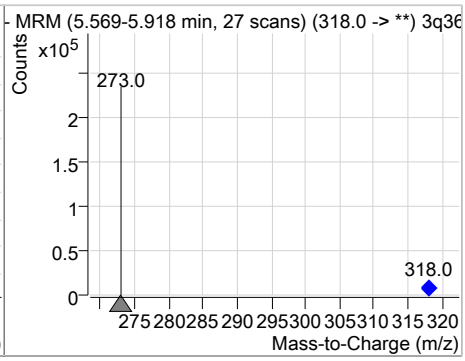




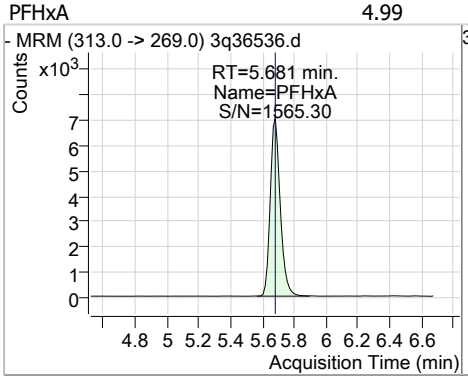
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.16	5.68	0.05	175332				

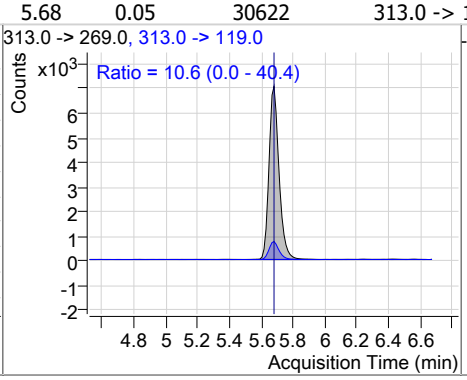


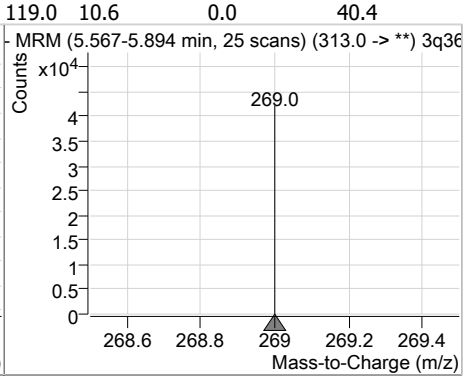




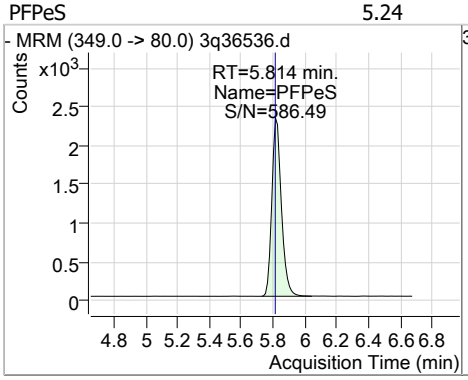
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	4.99	5.68	0.05	30622	313.0 -> 119.0	10.6	0.0	40.4

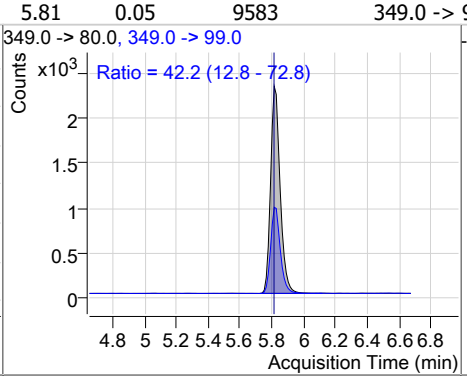


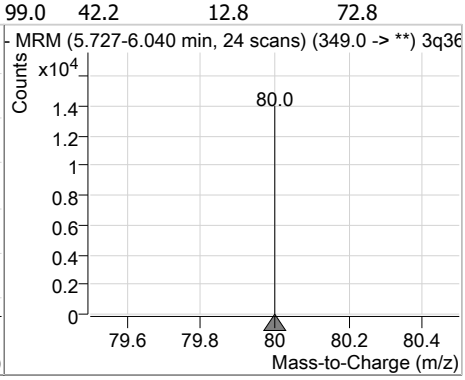




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	5.24	5.81	0.05	9583	349.0 -> 99.0	42.2	12.8	72.8



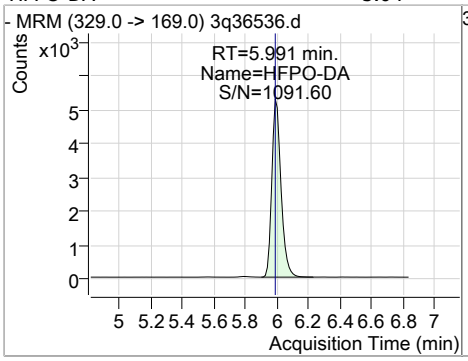


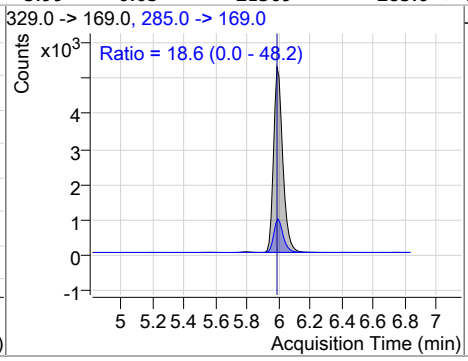


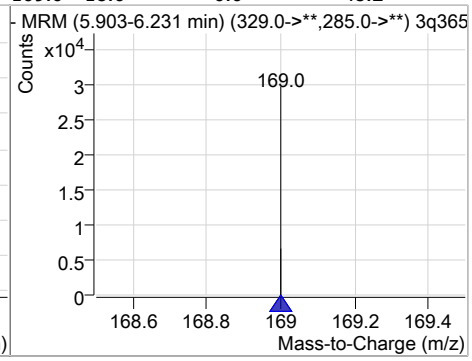
11.6.19 11

Perfluorinated Compounds by LC/MS/MS

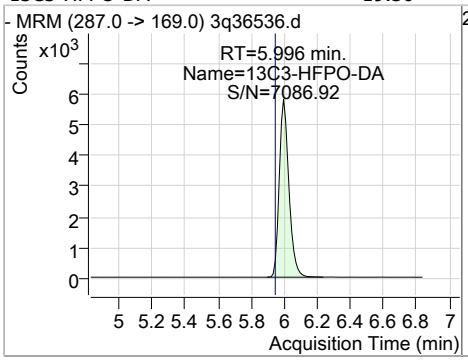
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	5.04	5.99	0.05	21369	285.0 -> 169.0	18.6	0.0	48.2

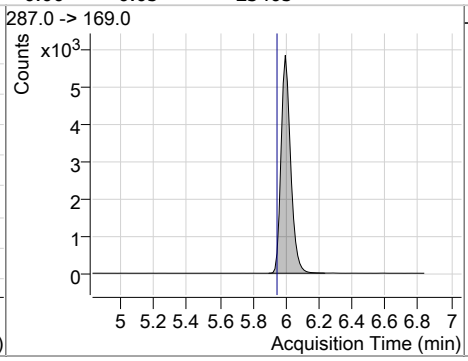


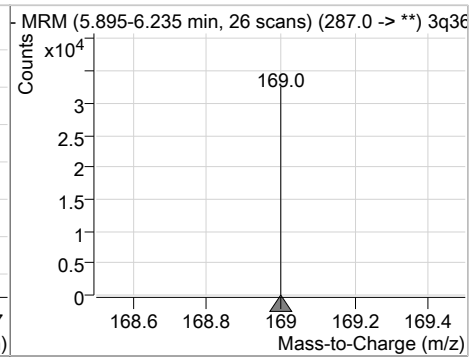




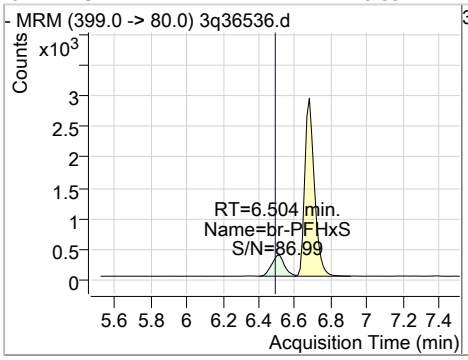
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.30	6.00	0.05	23405				

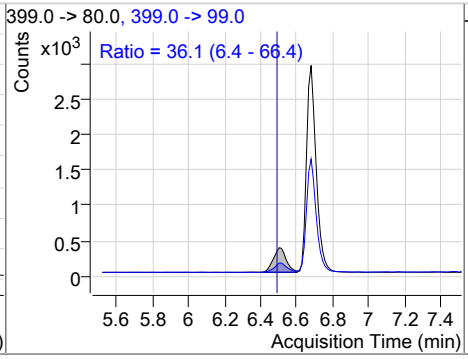


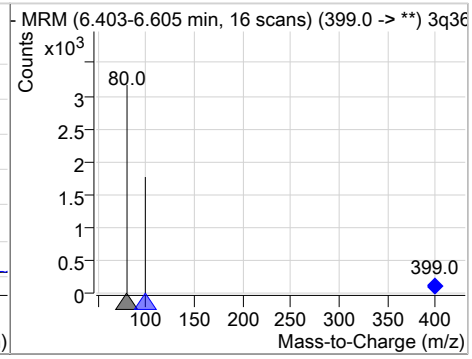




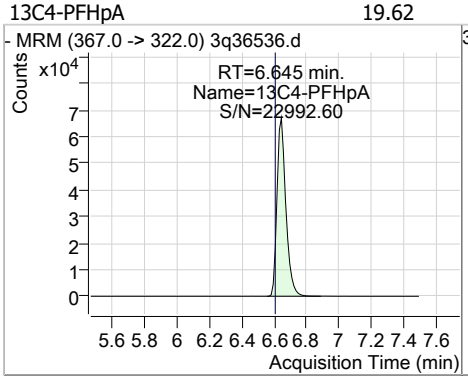
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	0.59	6.50	0.04	1716	399.0 -> 99.0	36.1	6.4	66.4

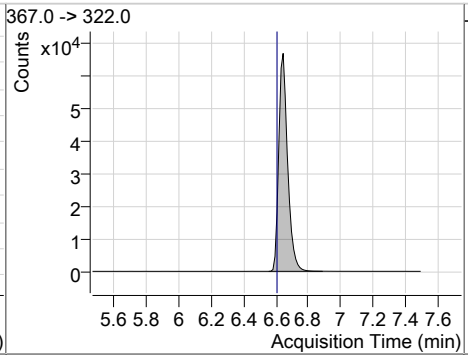


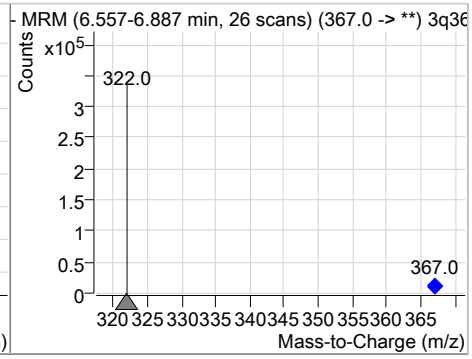




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.62	6.64	0.04	254303				

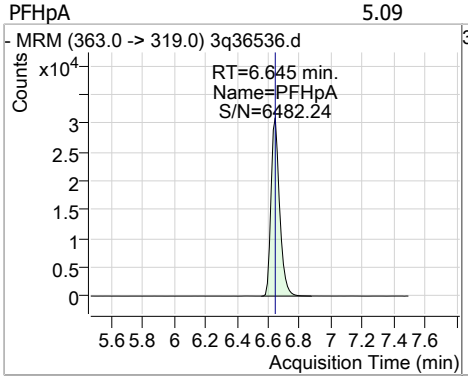


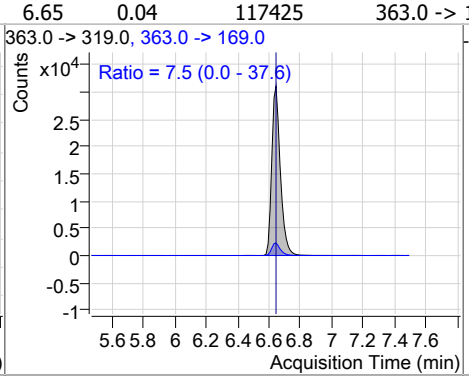


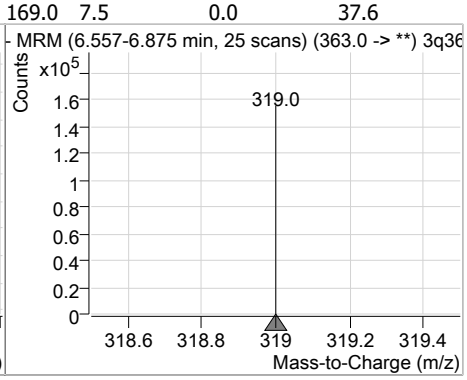


Perfluorinated Compounds by LC/MS/MS

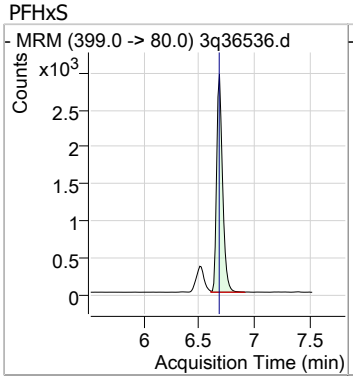
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	5.09	6.65	0.04	117425	363.0 -> 169.0	7.5	0.0	37.6

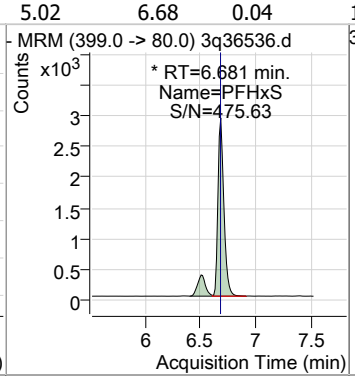


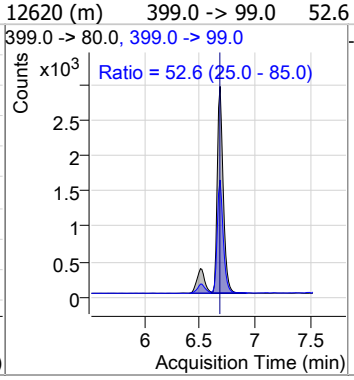


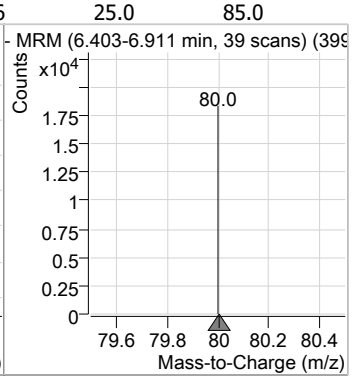


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	5.02	6.68	0.04	12620 (m)	399.0 -> 99.0	52.6	25.0	85.0

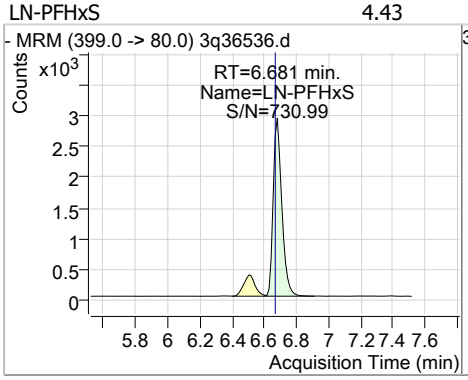


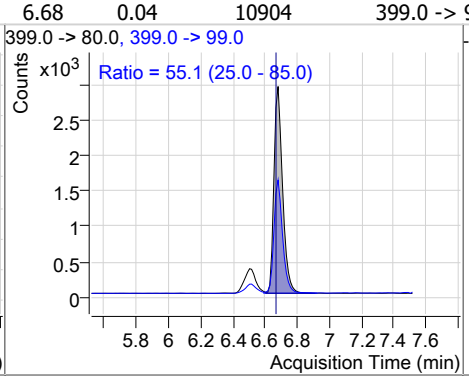


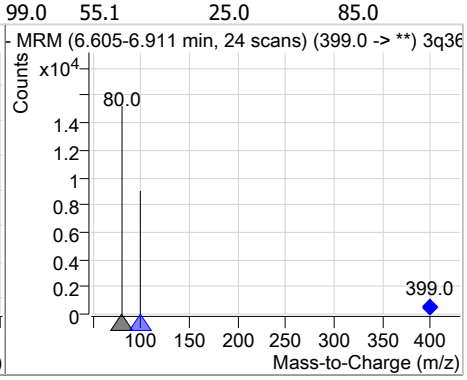




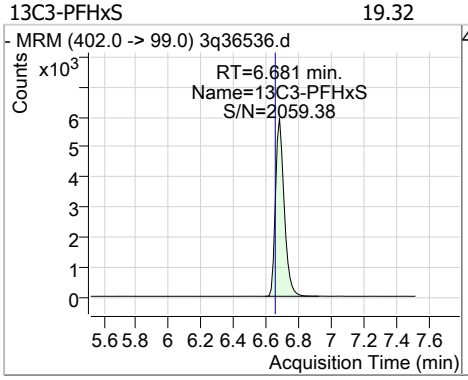
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	4.43	6.68	0.04	10904	399.0 -> 99.0	55.1	25.0	85.0

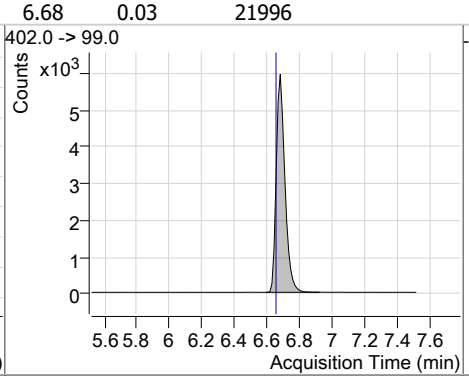


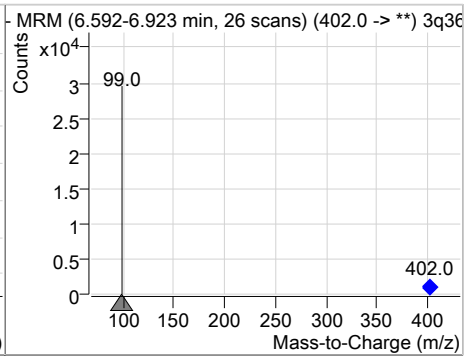




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.32	6.68	0.03	21996				

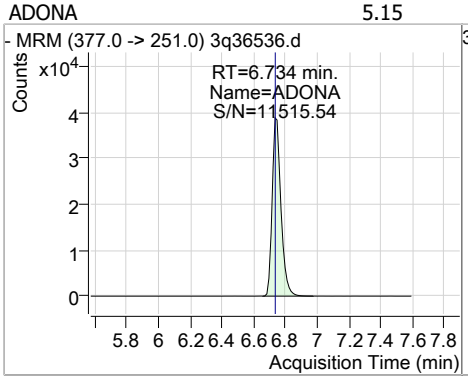


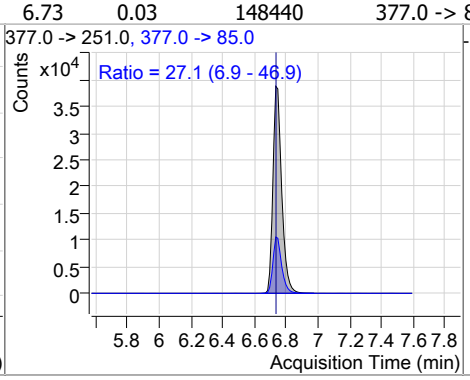


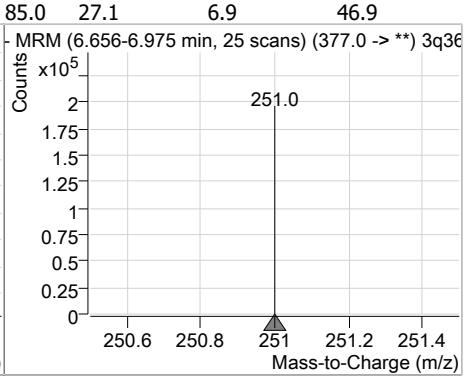


Perfluorinated Compounds by LC/MS/MS

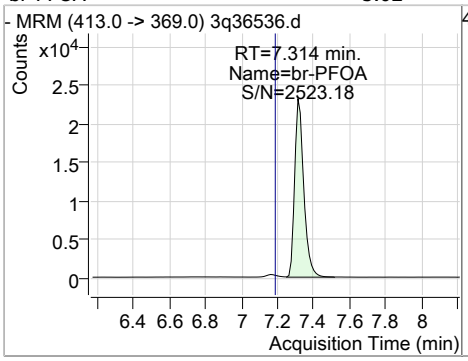
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	5.15	6.73	0.03	148440	377.0 -> 85.0	27.1	6.9	46.9

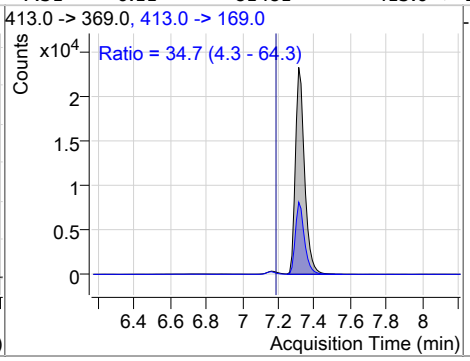


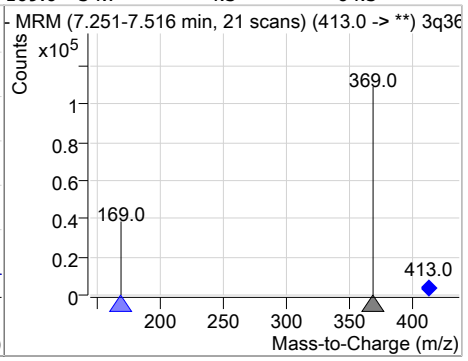




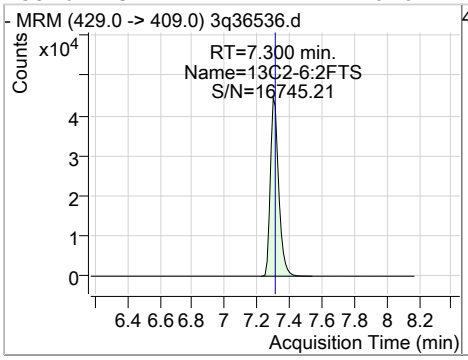
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	5.02	7.31	0.11	81481	413.0 -> 169.0	34.7	4.3	64.3

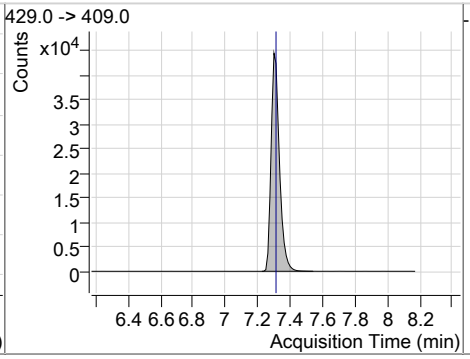


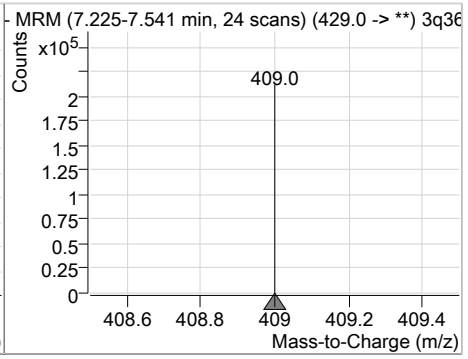




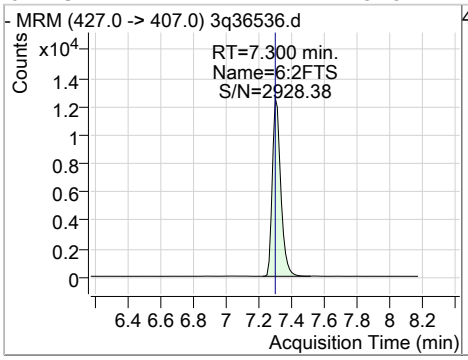
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.78	7.30	-0.01	158819				

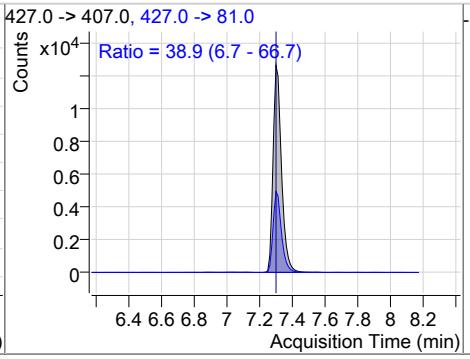


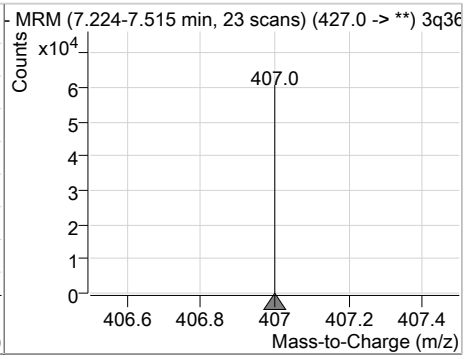




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	5.25	7.30	-0.01	44864	427.0 -> 81.0	38.9	6.7	66.7

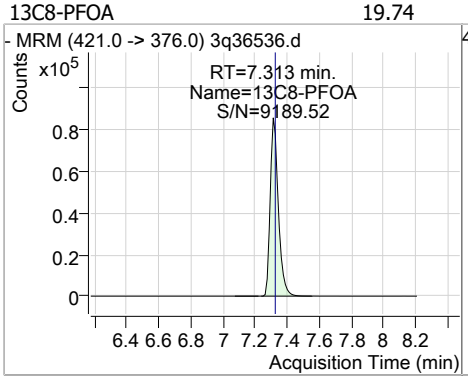


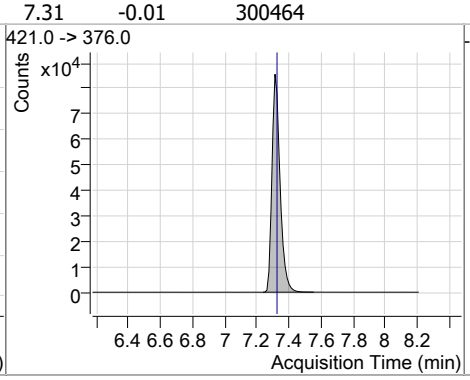


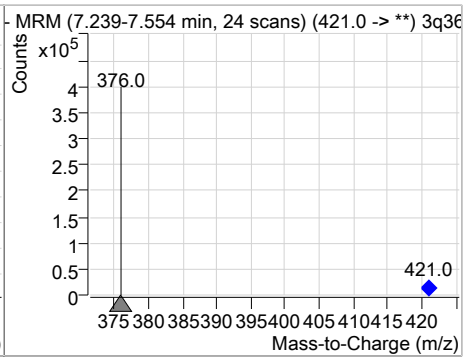


Perfluorinated Compounds by LC/MS/MS

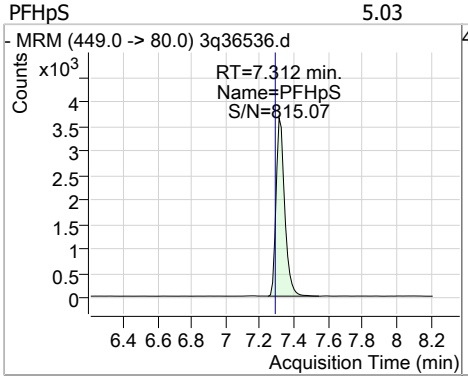
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.74	7.31	-0.01	300464				

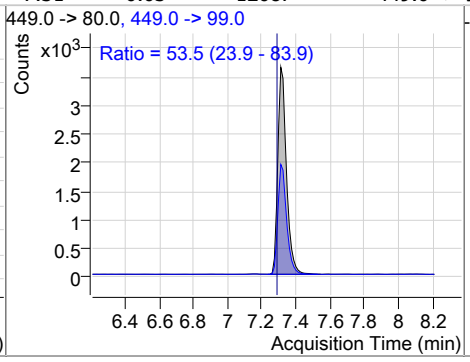


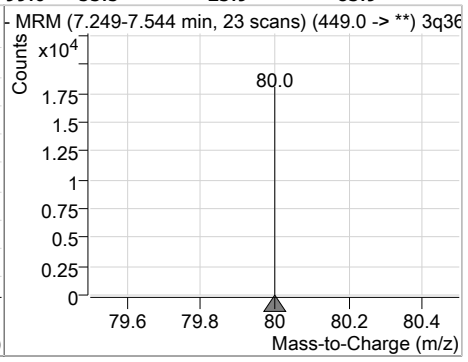




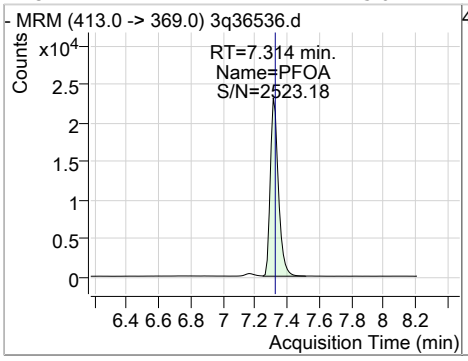
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	5.03	7.31	-0.03	12687	449.0 -> 99.0	53.5	23.9	83.9

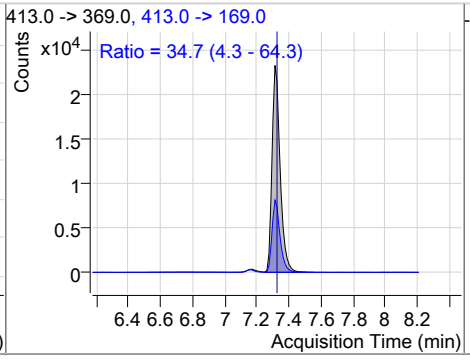


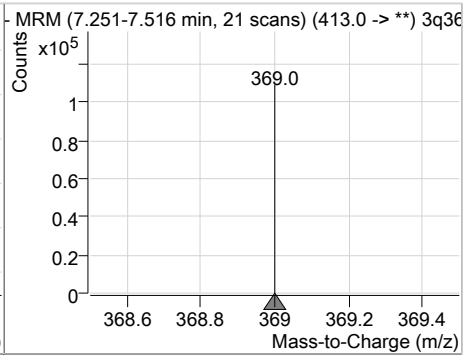




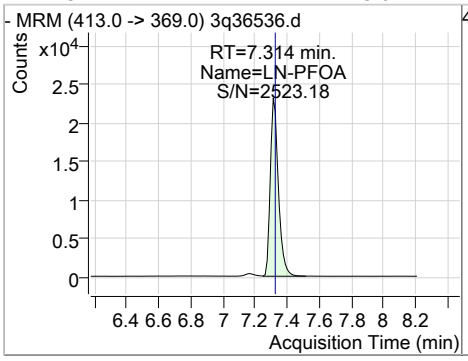
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	5.02	7.31	-0.03	81481	413.0 -> 169.0	34.7	4.3	64.3

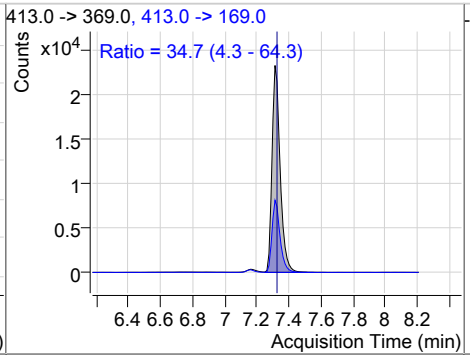


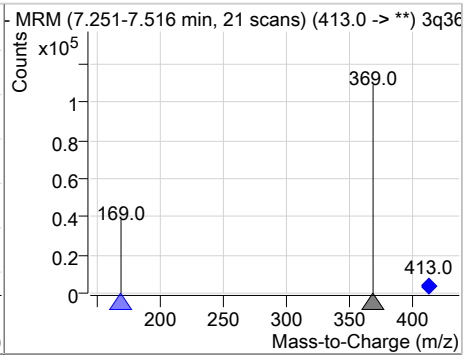




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	5.02	7.31	-0.03	81481	413.0 -> 169.0	34.7	4.3	64.3

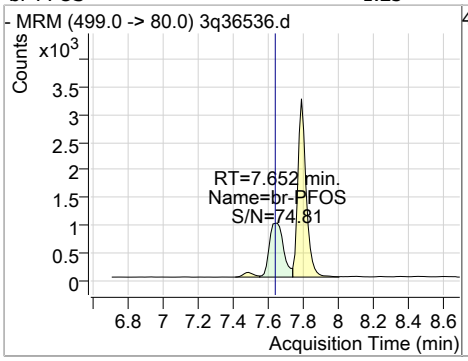


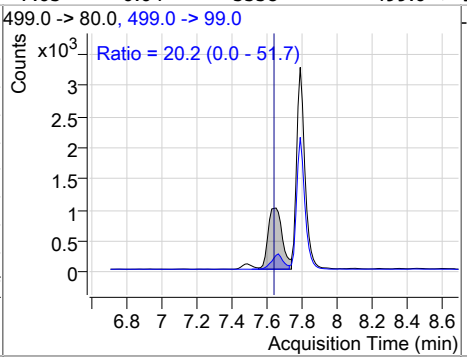


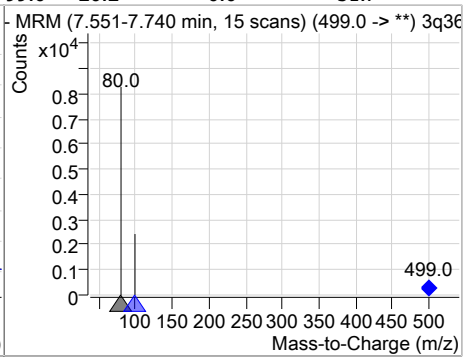


Perfluorinated Compounds by LC/MS/MS

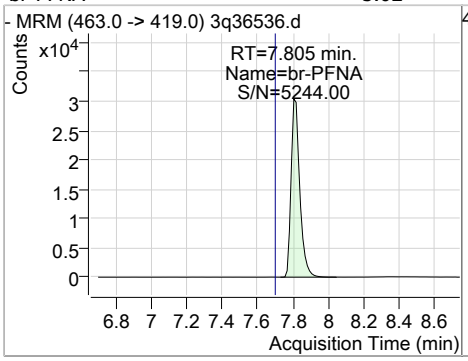
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	1.23	7.65	-0.04	5558	499.0 -> 99.0	20.2	0.0	51.7

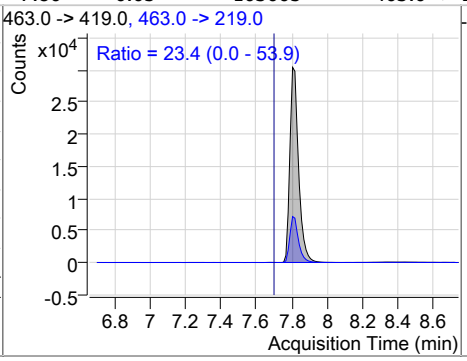


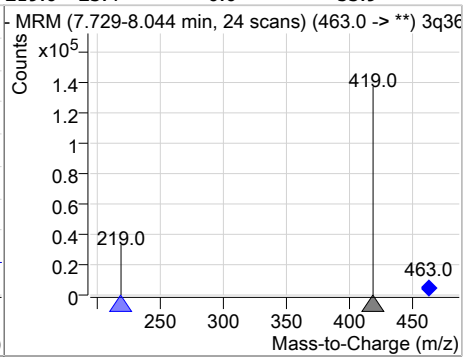




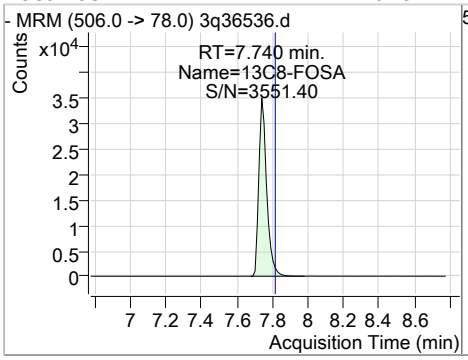
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFNA	5.02	7.80	0.05	103065	463.0 -> 219.0	23.4	0.0	53.9

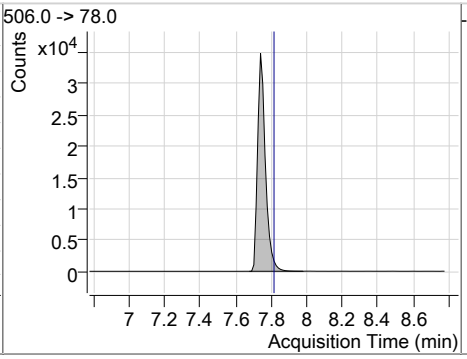


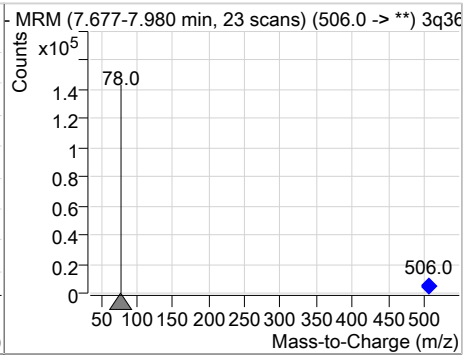




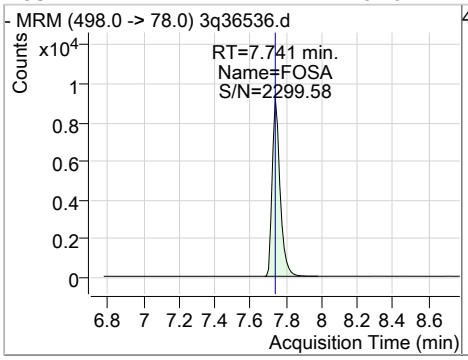
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.19	7.74	-0.08	107222				

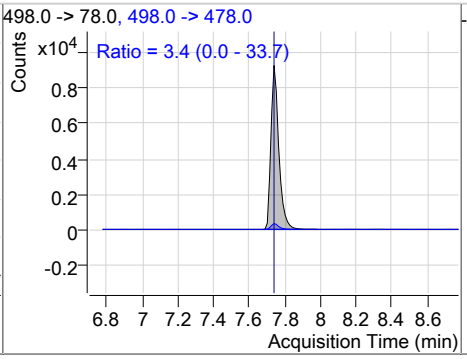


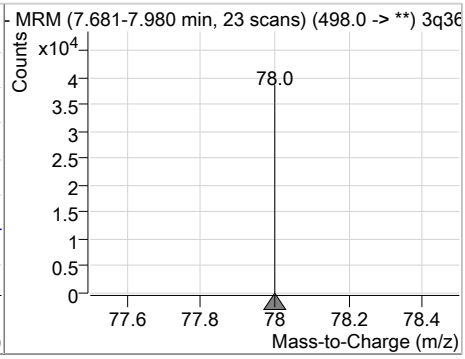




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	5.16	7.74	-0.08	28349	498.0 -> 478.0	3.4	0.0	33.7

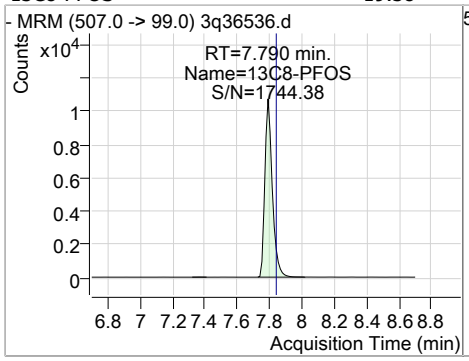


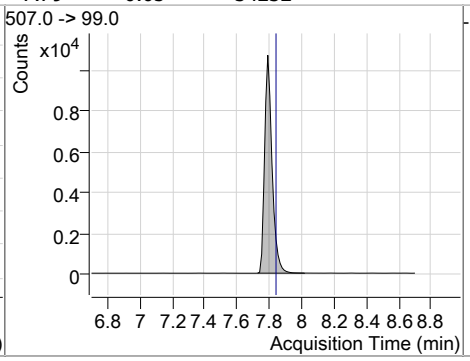


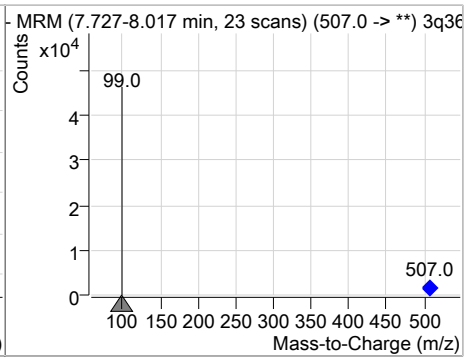


Perfluorinated Compounds by LC/MS/MS

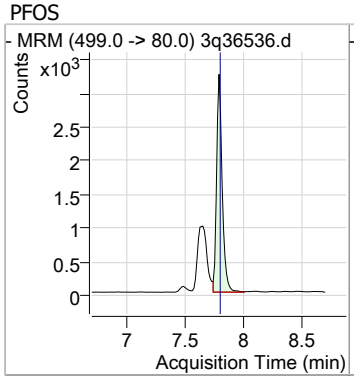
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.38	7.79	-0.05	34232				

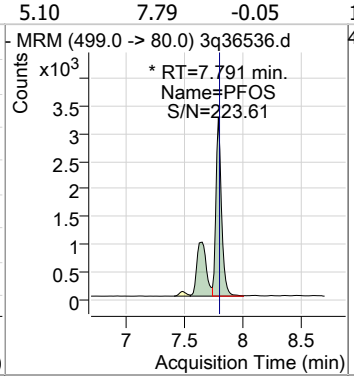


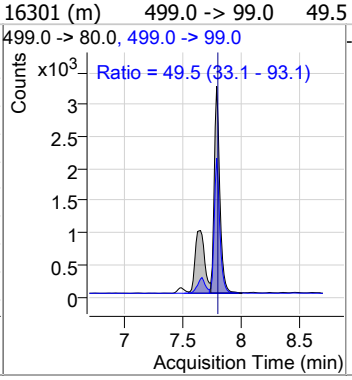


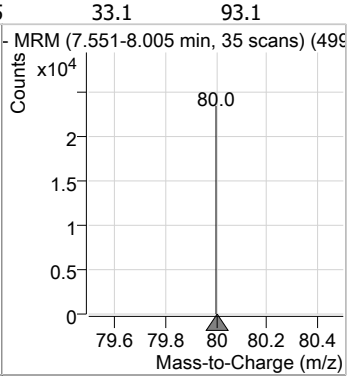


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	5.10	7.79	-0.05	16301 (m)	499.0 -> 99.0	49.5	33.1	93.1

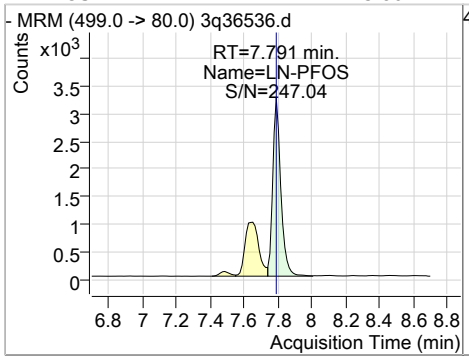


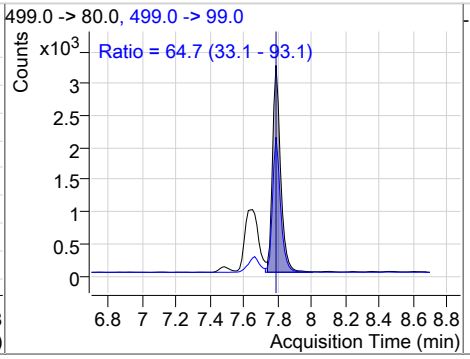


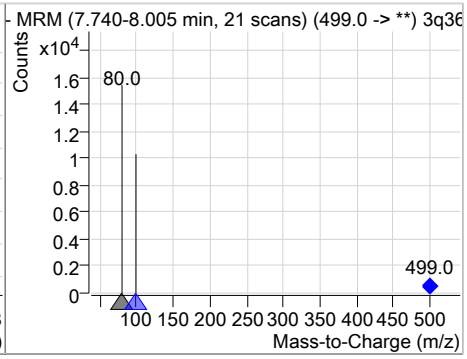




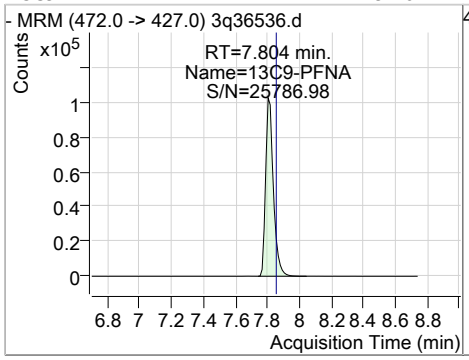
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	3.86	7.79	-0.05	10743	499.0 -> 99.0	64.7	33.1	93.1

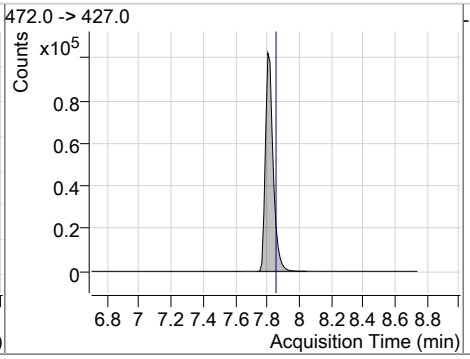


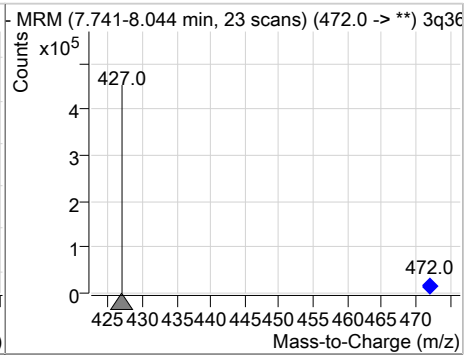




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.46	7.80	-0.05	343572				





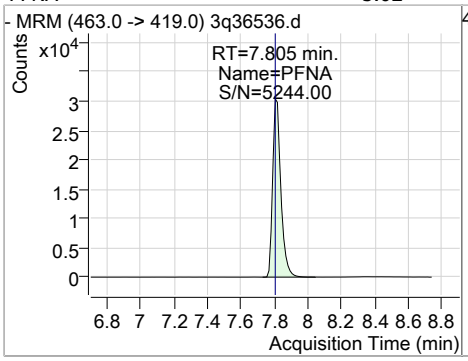


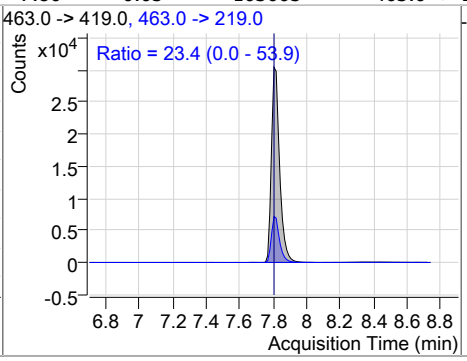
11.6.19

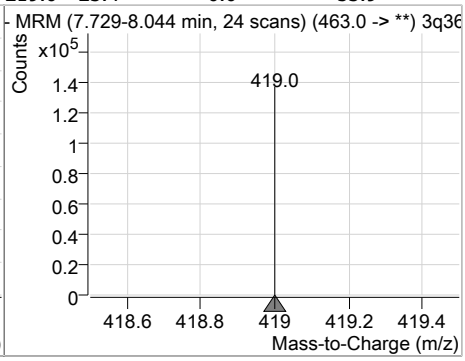
11

Perfluorinated Compounds by LC/MS/MS

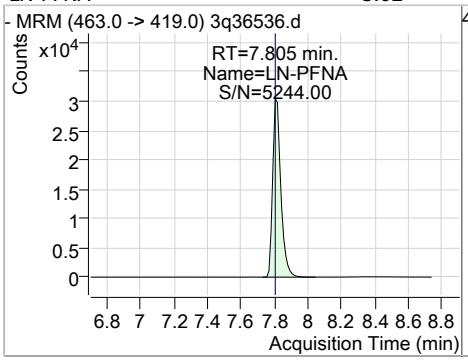
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	5.02	7.80	-0.05	103065	463.0 -> 219.0	23.4	0.0	53.9

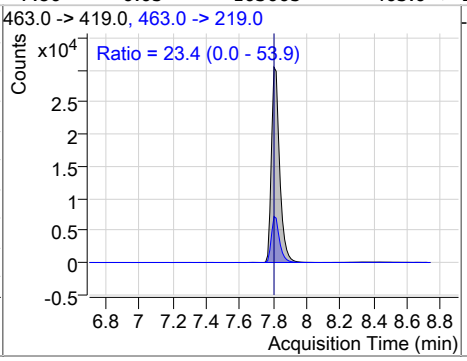


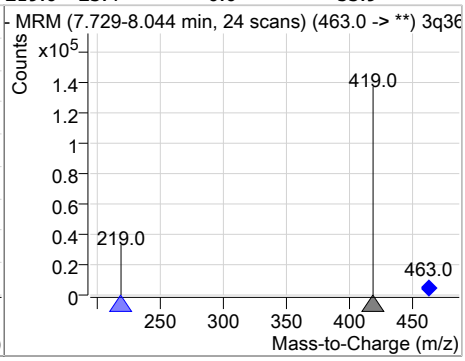




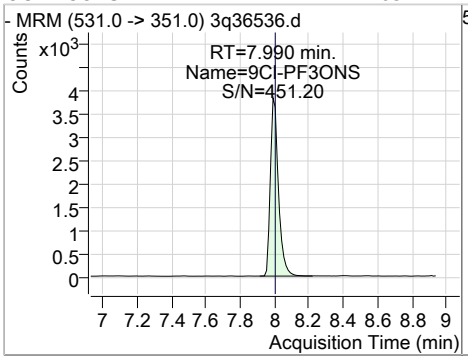
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	5.02	7.80	-0.05	103065	463.0 -> 219.0	23.4	0.0	53.9

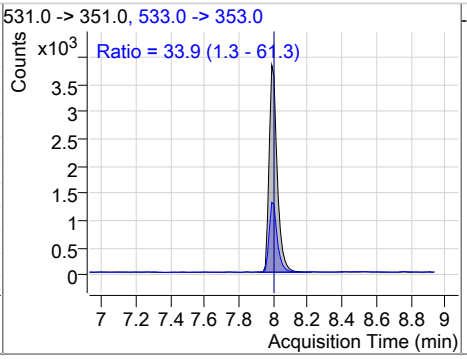


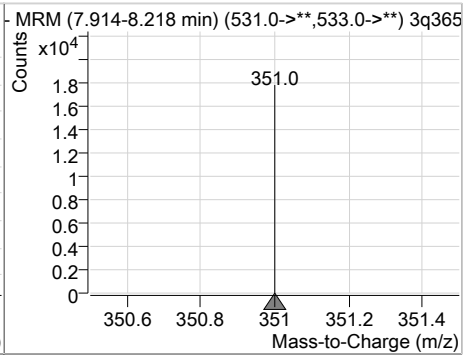




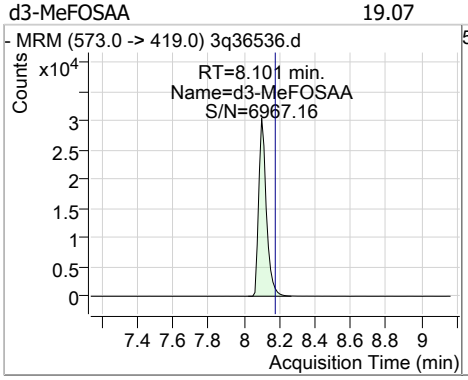
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	4.65	7.99	-0.06	12408	533.0 -> 353.0	33.9	1.3	61.3

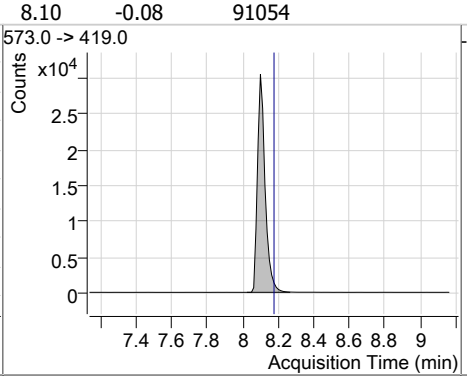


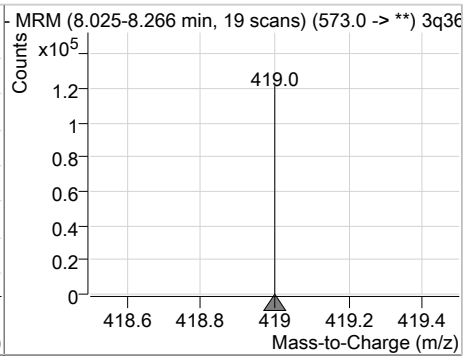




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.07	8.10	-0.08	91054				

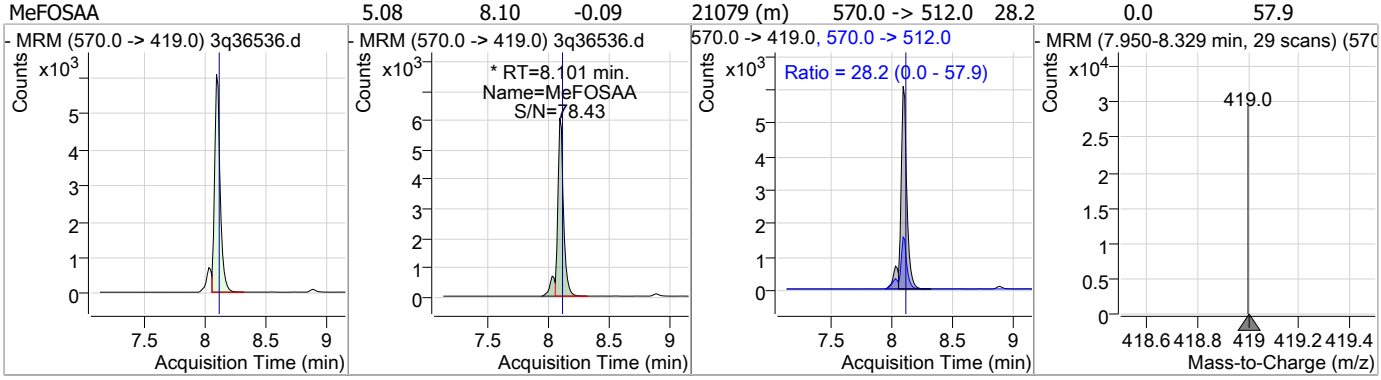




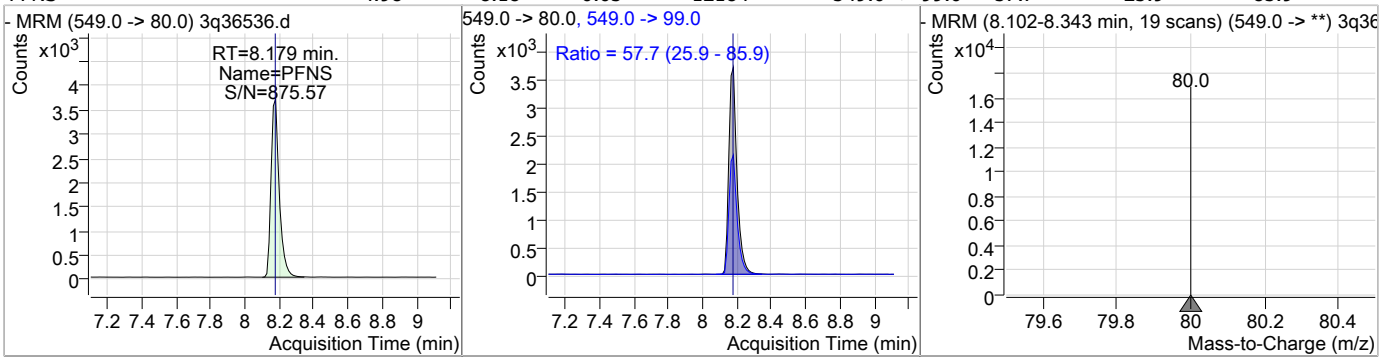


Perfluorinated Compounds by LC/MS/MS

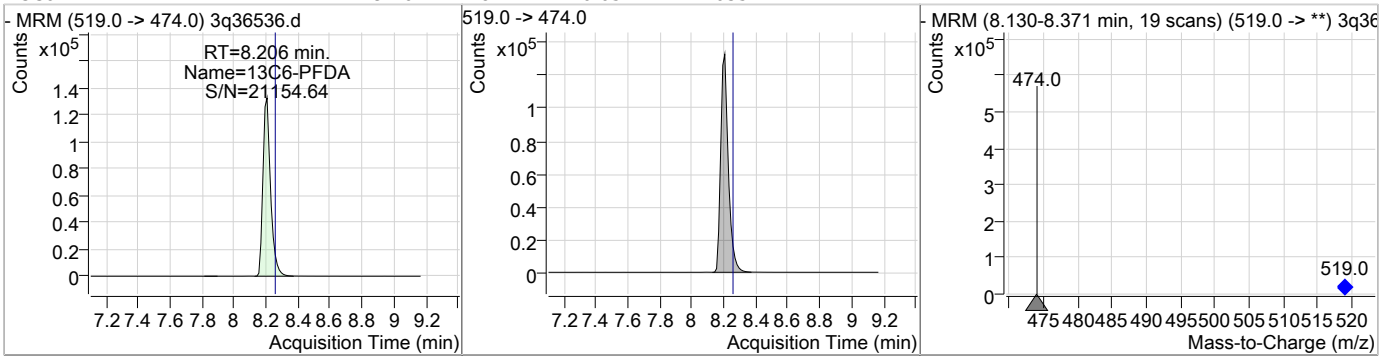
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	5.08	8.10	-0.09	21079 (m)	570.0 -> 512.0	28.2	0.0	57.9



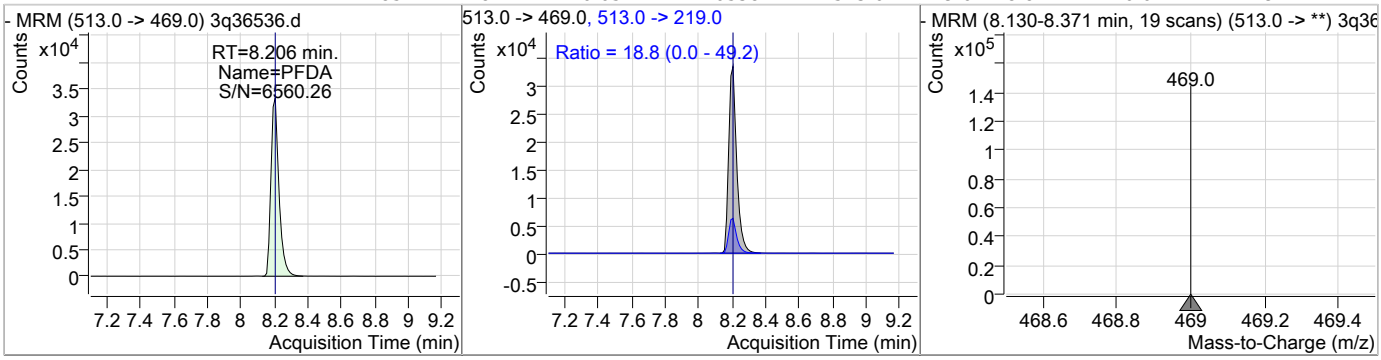
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	4.98	8.18	-0.05	12184	549.0 -> 99.0	57.7	25.9	85.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.16	8.21	-0.05	440351				

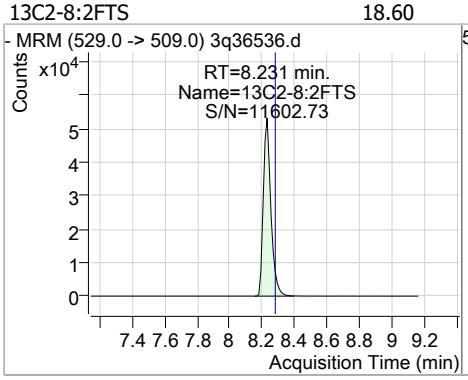


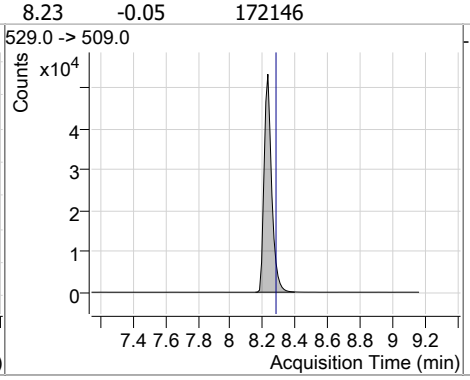
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	4.85	8.21	-0.05	110538	513.0 -> 219.0	18.8	0.0	49.2

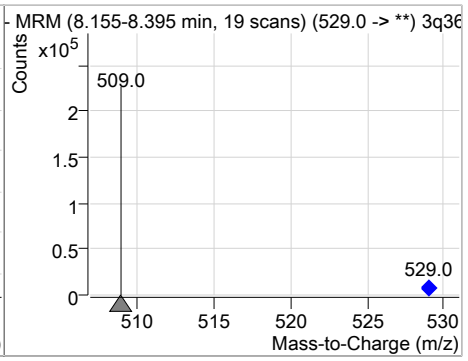


Perfluorinated Compounds by LC/MS/MS

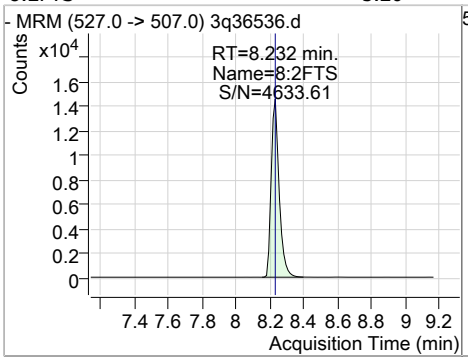
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.60	8.23	-0.05	172146				

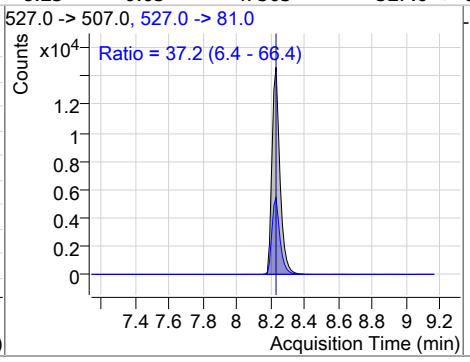


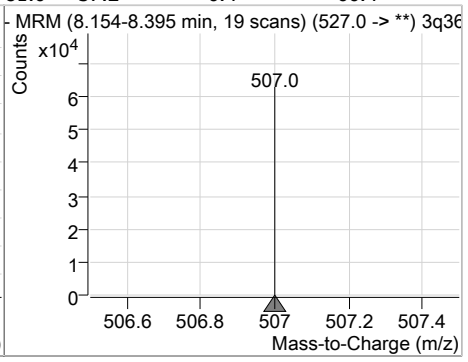




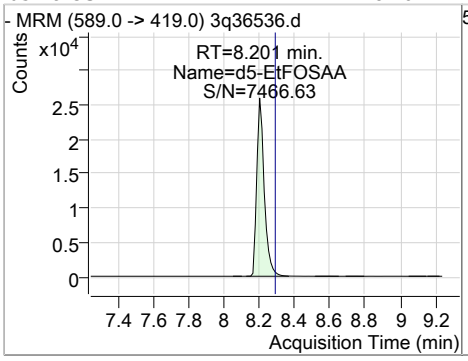
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	5.26	8.23	-0.05	47303	527.0 -> 81.0	37.2	6.4	66.4

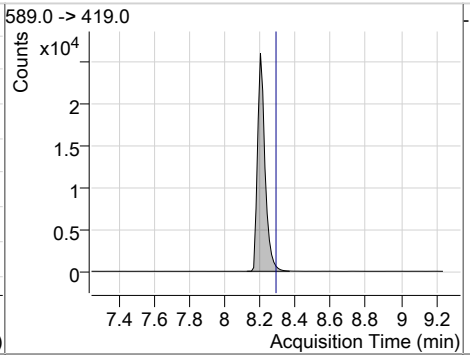


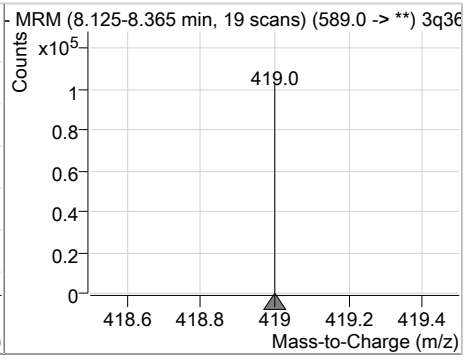




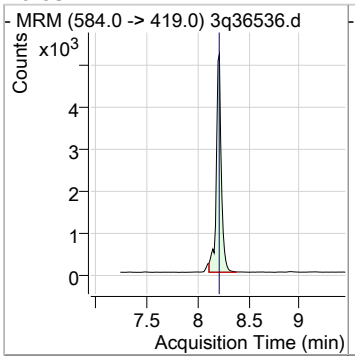
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.70	8.20	-0.09	76938				

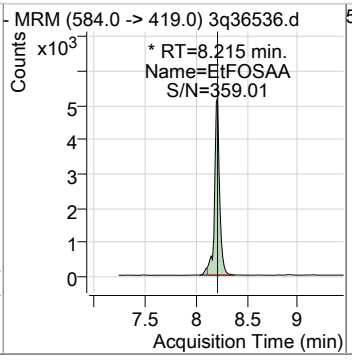


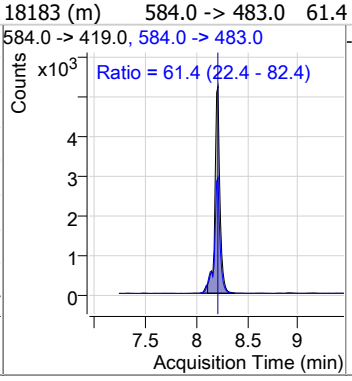


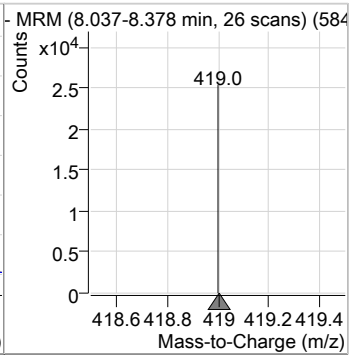


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	5.06	8.21	-0.08	18183 (m)	584.0 -> 483.0	61.4	22.4	82.4



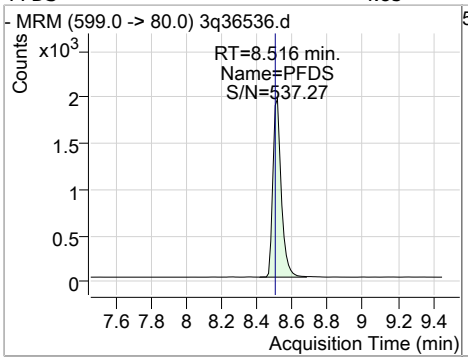


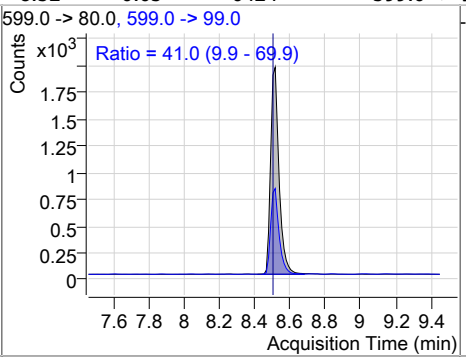


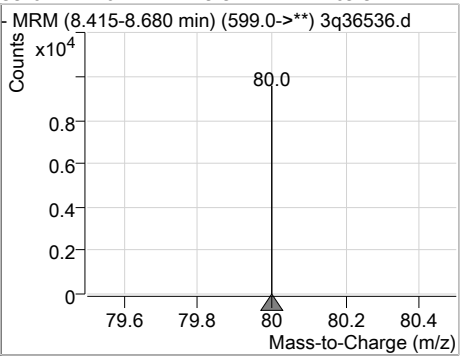


Perfluorinated Compounds by LC/MS/MS

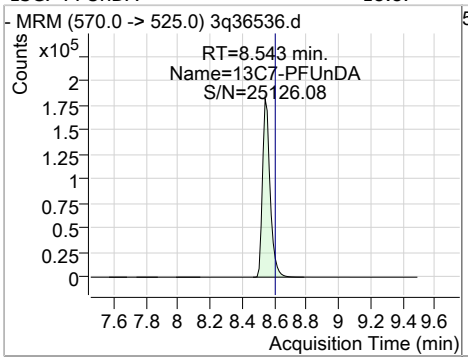
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	4.85	8.52	-0.05	6424	599.0 -> 99.0	41.0	9.9	69.9

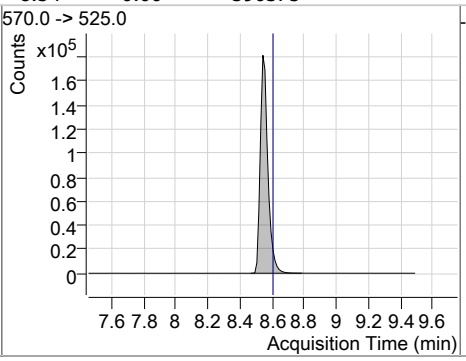


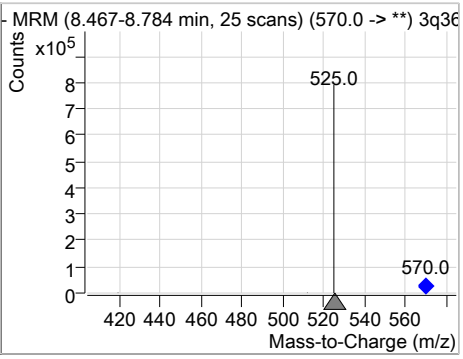




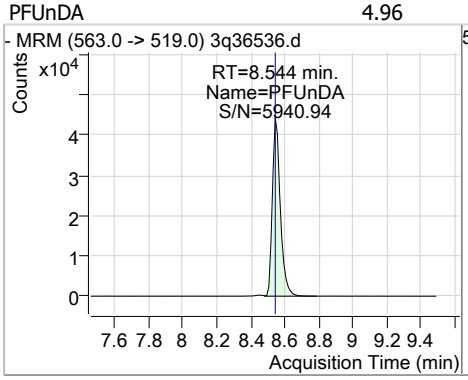
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	18.87	8.54	-0.06	596375				

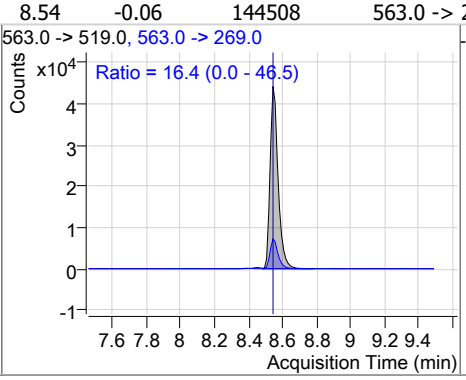


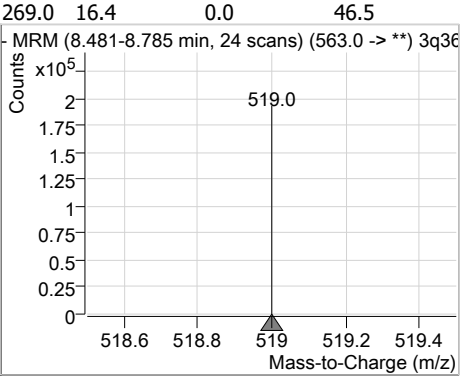




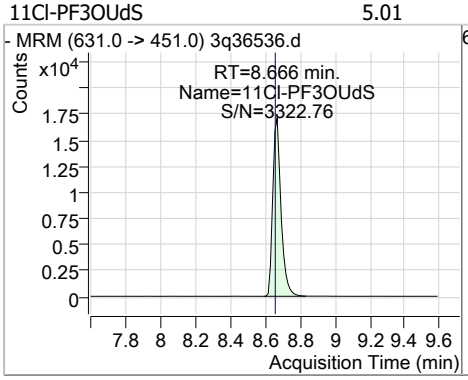
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	4.96	8.54	-0.06	144508	563.0 -> 269.0	16.4	0.0	46.5

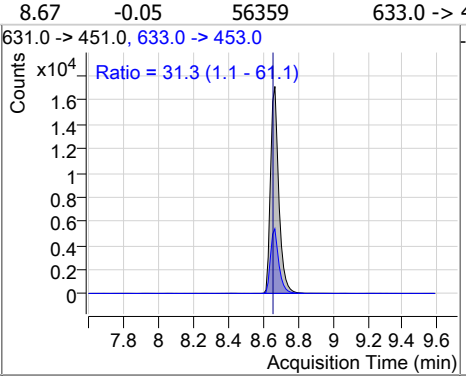


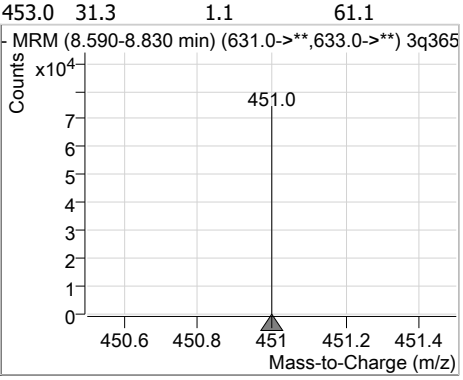




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	5.01	8.67	-0.05	56359	633.0 -> 453.0	31.3	1.1	61.1

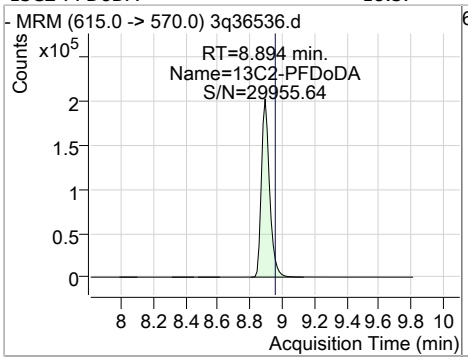


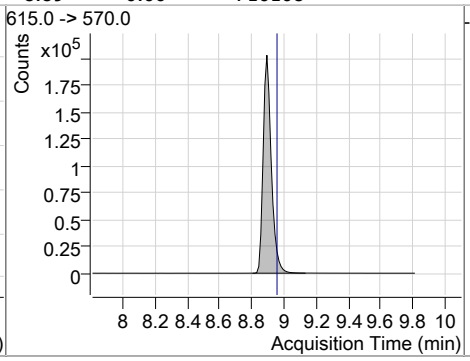


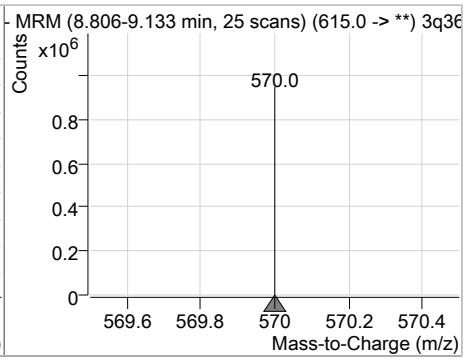


Perfluorinated Compounds by LC/MS/MS

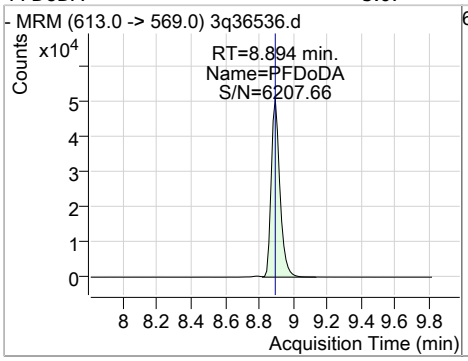
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	18.57	8.89	-0.06	716108				

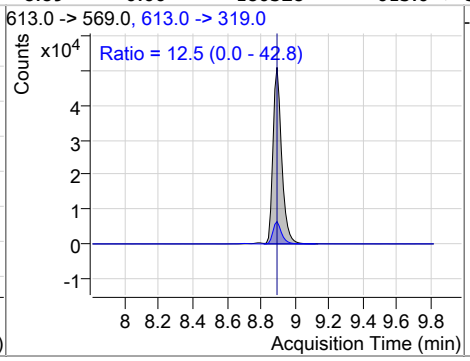


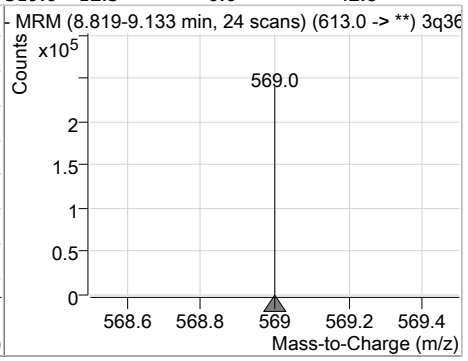




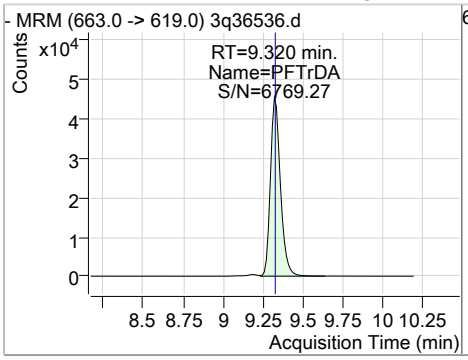
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	5.07	8.89	-0.06	180328	613.0 -> 319.0	12.5	0.0	42.8

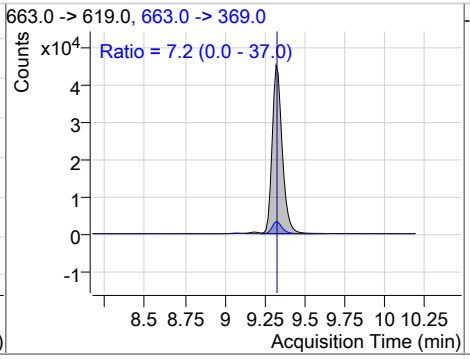


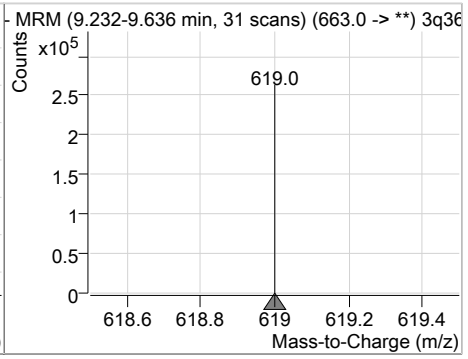




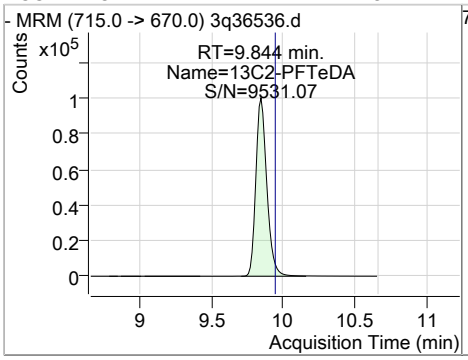
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	5.22	9.32	-0.10	196770	663.0 -> 369.0	7.2	0.0	37.0

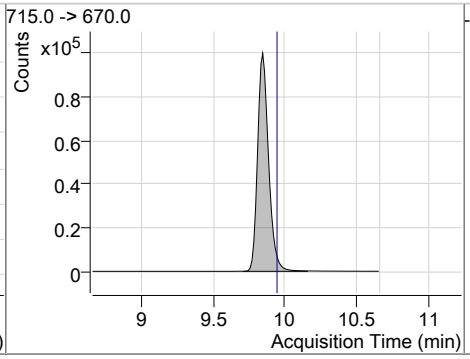


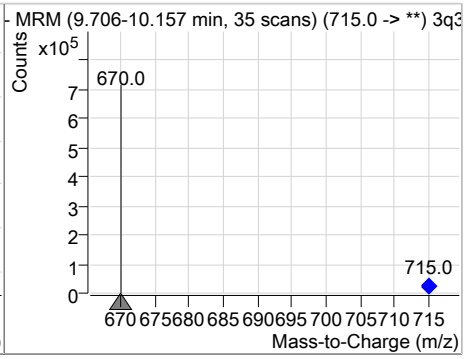




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.11	9.84	-0.10	534396				

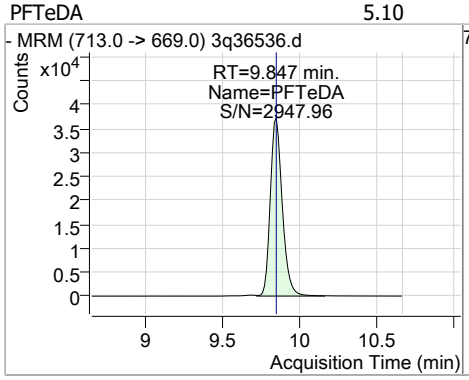


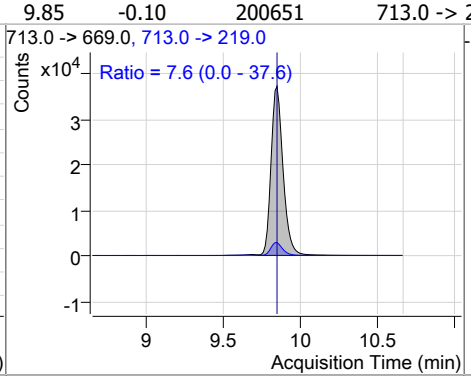


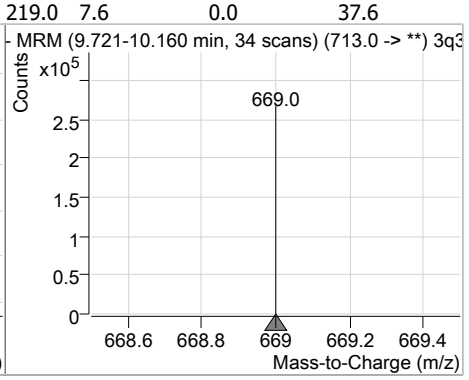


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	5.10	9.85	-0.10	200651	713.0 -> 219.0	7.6	0.0	37.6







Manual Integration Approval Summary

Sample Number: S3Q537-IC537
Lab FileID: 3Q36536.D
Injection Time: 04/13/21 15:08
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/14/21 10:44 Martha Valls
Supervisor approved: 04/14/21 15:06 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.68	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.79	Split peak
MeFOSAA	2355-31-9		8.10	Split peak
EtFOSAA	2991-50-6		8.21	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 04/14/21 15:06

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36537.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/13/2021 3:25:41 PM
Sample Name : ic537-10
Vial : P1-A6
DA Method File : BR_LN_041321_S3Q537.quantmethod.xml
Batch Name : s3q537.batch.bin
Sample Information : op84308,S3Q537,250,,,1,1,water

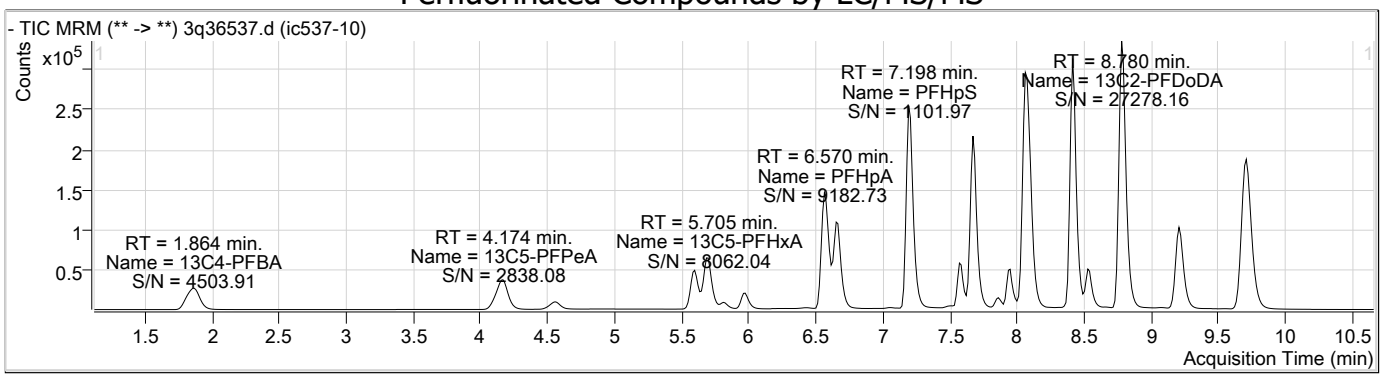
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.864	217.0 -> 172.0	156409	20.00	µg/L	0.025
M5-PFPeA	4.174	268.0 -> 223.0	120938	20.00	µg/L	0.100
M5-PFHxA	5.705	318.0 -> 273.0	192231	20.00	µg/L	0.075
M4-PFHpA	6.569	367.0 -> 322.0	275638	20.00	µg/L	-0.038
M8-PFOA	7.212	421.0 -> 376.0	325798	20.00	µg/L	-0.114
M9-PFNA	7.679	472.0 -> 427.0	379873	20.00	µg/L	-0.177
M6-PFDA	8.067	519.0 -> 474.0	480193	20.00	µg/L	-0.191
M7-PFUnDA	8.417	570.0 -> 525.0	649830	20.00	µg/L	-0.189
M2-PFDoDA	8.780	615.0 -> 570.0	800086	20.00	µg/L	-0.176
M2-PFTeDA	9.706	715.0 -> 670.0	555624	20.00	µg/L	-0.238
M8-FOSA	7.576	506.0 -> 78.0	116305	20.00	µg/L	-0.240
M3-PFBS	4.562	302.0 -> 99.0	16778	20.00	µg/L	0.115
M3-PFHxS	6.604	402.0 -> 99.0	24011	20.00	µg/L	-0.050
M8-PFOS	7.664	507.0 -> 99.0	37281	20.00	µg/L	-0.177
M2-4:2FTS	5.602	329.0 -> 309.0	114437	20.00	µg/L	0.090
M2-6:2FTS	7.199	429.0 -> 409.0	175089	20.00	µg/L	-0.114
M2-8:2FTS	8.104	529.0 -> 509.0	186794	20.00	µg/L	-0.178
M3-MeFOSAA	7.937	573.0 -> 419.0	98917	20.00	µg/L	-0.240
M3-HFPO-DA	5.971	287.0 -> 169.0	25324	20.00	µg/L	0.025
M5-EtFOSAA	8.049	589.0 -> 419.0	86244	20.00	µg/L	-0.240
System Monitoring Compounds						
13C2-4:2FTS	5.602	329.0 -> 309.0	114437	19.99	µg/L	0.090
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.0%		
13C2-6:2FTS	7.199	429.0 -> 409.0	175089	20.71	µg/L	-0.114
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.5%		
13C2-8:2FTS	8.104	529.0 -> 509.0	186794	20.18	µg/L	-0.178
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.9%		
13C2-PFDoDA	8.780	615.0 -> 570.0	800086	20.74	µg/L	-0.176
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.7%		
13C2-PFTeDA	9.706	715.0 -> 670.0	555624	19.87	µg/L	-0.238
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.4%		
13C3-PFBS	4.562	302.0 -> 99.0	16778	20.81	µg/L	0.115
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.0%		
13C3-PFHxS	6.604	402.0 -> 99.0	24011	21.09	µg/L	-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.4%		
13C4-PFBA	1.864	217.0 -> 172.0	156409	19.96	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.8%		
13C4-PFHpA	6.569	367.0 -> 322.0	275638	21.26	µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.3%		
13C5-PFHxA	5.705	318.0 -> 273.0	192231	21.00	µg/L	0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.0%		
13C5-PFPeA	4.174	268.0 -> 223.0	120938	20.60	µg/L	0.100
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.0%		
13C6-PFDA	8.067	519.0 -> 474.0	480193	20.90	µg/L	-0.191
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.5%		

Perfluorinated Compounds by LC/MS/MS

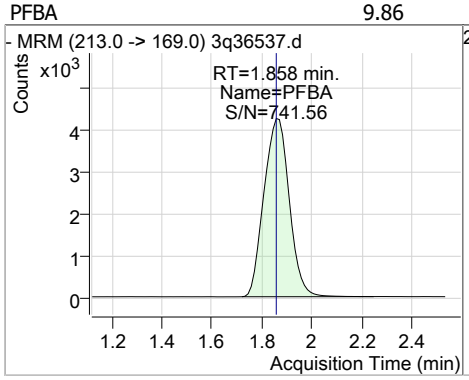
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.417	570.0 -> 525.0	649830	20.56	µg/L		-0.189
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.8%			
13C8-FOSA	7.576	506.0 -> 78.0	116305	21.90	µg/L		-0.240
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.5%			
13C8-PFOA	7.212	421.0 -> 376.0	325798	21.40	µg/L		-0.114
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.0%			
13C8-PFOS	7.664	507.0 -> 99.0	37281	21.11	µg/L		-0.177
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.5%			
13C9-PFNA	7.679	472.0 -> 427.0	379873	21.51	µg/L		-0.177
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.6%			
d3-MeFOSAA	7.937	573.0 -> 419.0	98917	20.72	µg/L		-0.240
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.6%			
13C3-HFPO-DA	5.971	287.0 -> 169.0	25326	20.88	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.4%			
d5-EtFOSAA	8.049	589.0 -> 419.0	86247	20.97	µg/L	m	-0.240
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.8%			
Target Compounds							**QValue**
4:2FTS	5.603	327.0 -> 307.0	63972	10.34	µg/L		100
6:2FTS	7.199	427.0 -> 407.0	97587	10.35	µg/L		100
8:2FTS	8.104	527.0 -> 507.0	102099	10.46	µg/L		97
EtFOSAA	8.050	584.0 -> 419.0	38815	9.64	µg/L	m	88
FOSA	7.577	498.0 -> 78.0	59952	10.07	µg/L		100
MeFOSAA	7.950	570.0 -> 419.0	45025	9.98	µg/L	m	100
PFBA	1.858	213.0 -> 169.0	29556	9.86	µg/L		100
PFBS	4.563	299.0 -> 80.0	25014	9.75	µg/L		100
PFDA	8.067	513.0 -> 469.0	240142	9.66	µg/L		99
PFDoDA	8.781	613.0 -> 569.0	393246	9.89	µg/L		99
PFDS	8.377	599.0 -> 80.0	14188	9.82	µg/L		100
PFHpA	6.570	363.0 -> 319.0	243011	9.72	µg/L		100
PFHpS	7.198	449.0 -> 80.0	27947	10.18	µg/L		96
PFHxA	5.706	313.0 -> 269.0	66896	9.94	µg/L		100
PFHxS	6.605	399.0 -> 80.0	27169	9.90	µg/L	m	98
PFNA	7.679	463.0 -> 419.0	221776	9.76	µg/L		99
PFNS	8.039	549.0 -> 80.0	26240	9.86	µg/L		98
PFOA	7.213	413.0 -> 369.0	173920	9.88	µg/L		100
PFOS	7.665	499.0 -> 80.0	33823	9.72	µg/L	m	84
PFPeA	4.177	263.0 -> 219.0	114203	9.98	µg/L		100
PFPeS	5.814	349.0 -> 80.0	20102	10.11	µg/L		99
PFTeDA	9.708	713.0 -> 669.0	405050	9.91	µg/L		100
PFTrDA	9.207	663.0 -> 619.0	402784	10.28	µg/L		100
PFUnDA	8.418	563.0 -> 519.0	309844	9.76	µg/L		100
11Cl-PF3OUdS	8.527	631.0 -> 451.0	116818	9.29	µg/L		100
9Cl-PF3ONS	7.864	531.0 -> 351.0	27321	9.39	µg/L		100
ADONA	6.669	377.0 -> 251.0	306497	9.74	µg/L		100
HFPO-DA	5.979	329.0 -> 169.0	45745	9.97	µg/L		99
br-PFOS	7.512	499.0 -> 80.0	11030	2.24	µg/L		96
LN-PFOS	7.665	499.0 -> 80.0	22793	7.53	µg/L		99
br-PFHxS	6.441	399.0 -> 80.0	3709	1.16	µg/L		98
LN-PFHxS	6.605	399.0 -> 80.0	23460	8.74	µg/L		99
br-PFOA	7.213	413.0 -> 369.0	173920	9.88	µg/L		100
LN-PFOA	7.213	413.0 -> 369.0	173920	9.88	µg/L		100
br-PFNA	7.679	463.0 -> 419.0	221776	9.76	µg/L		99
LN-PFNA	7.679	463.0 -> 419.0	221776	9.76	µg/L		99

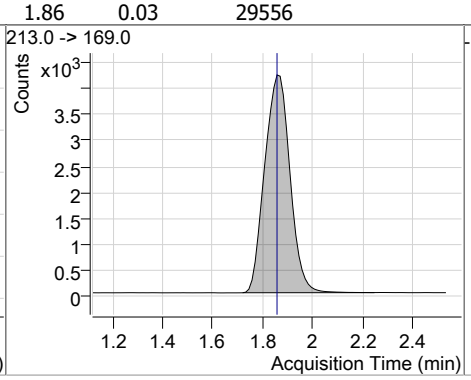
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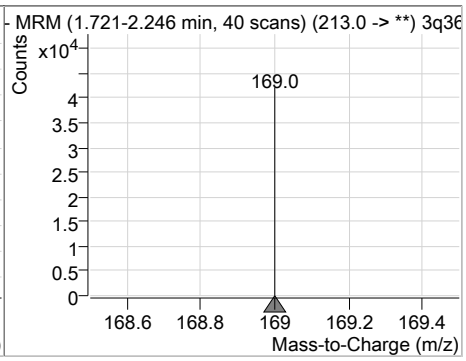
Perfluorinated Compounds by LC/MS/MS



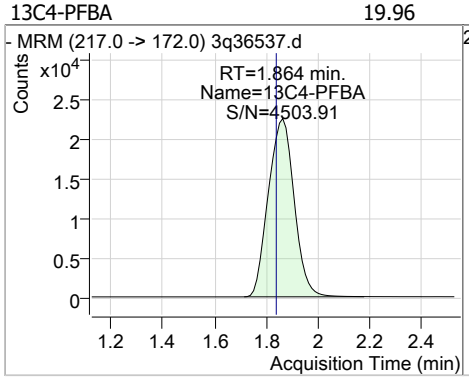
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	9.86	1.86	0.03	29556				

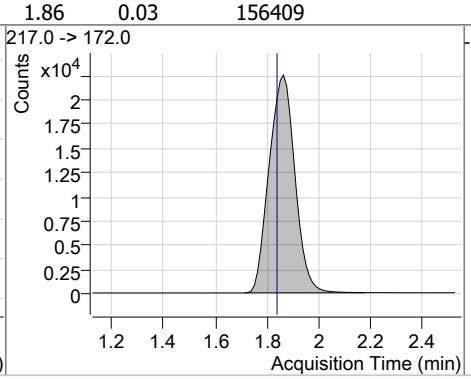


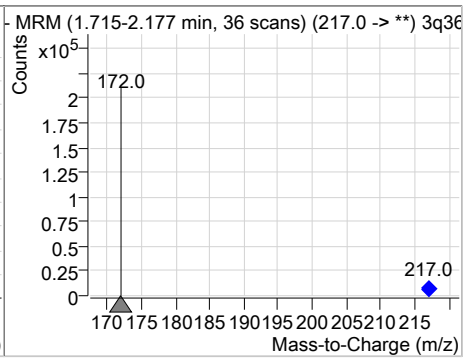




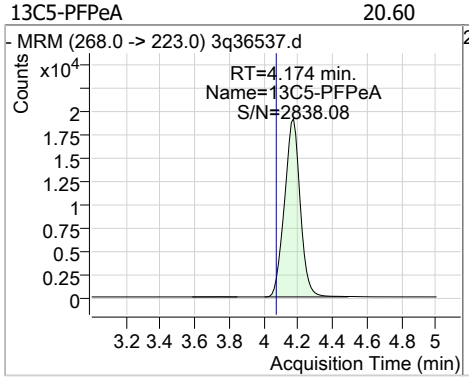
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.96	1.86	0.03	156409				

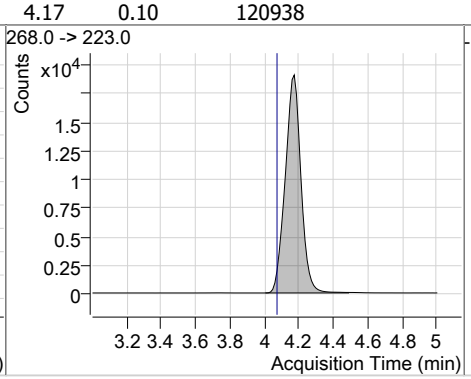


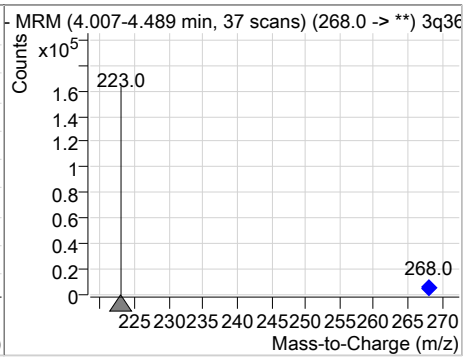




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.60	4.17	0.10	120938				





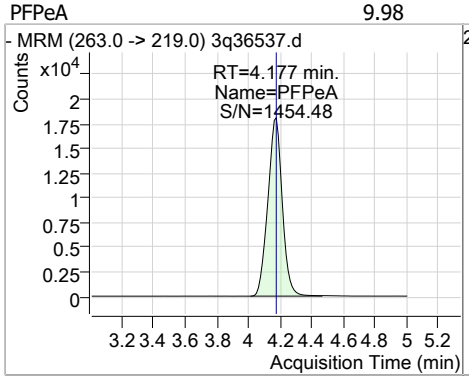


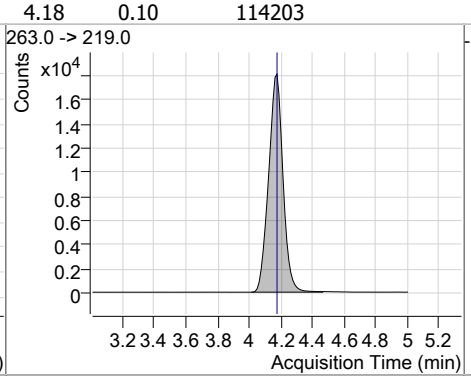
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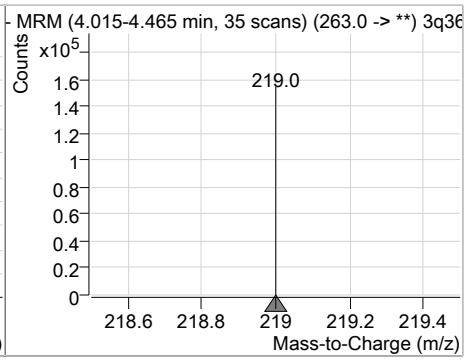
11

Perfluorinated Compounds by LC/MS/MS

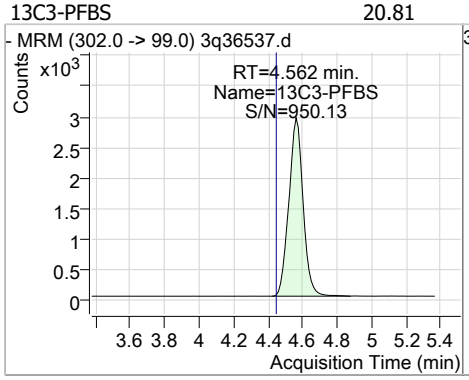
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	9.98	4.18	0.10	114203				

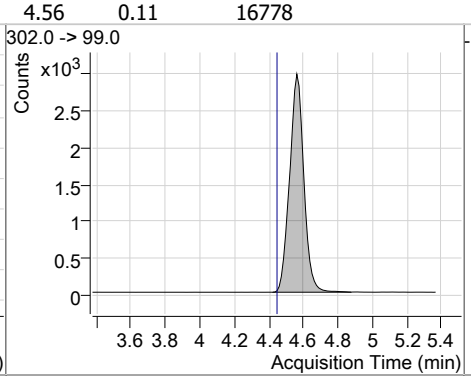


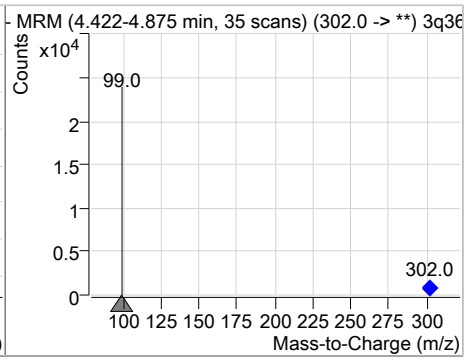




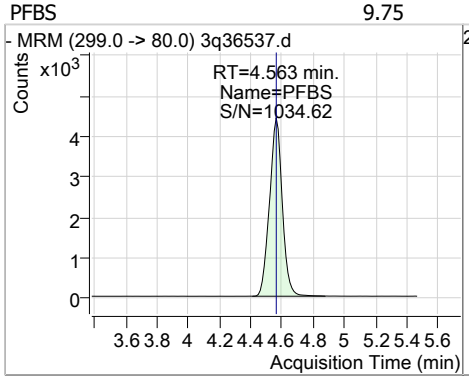
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.81	4.56	0.11	16778				

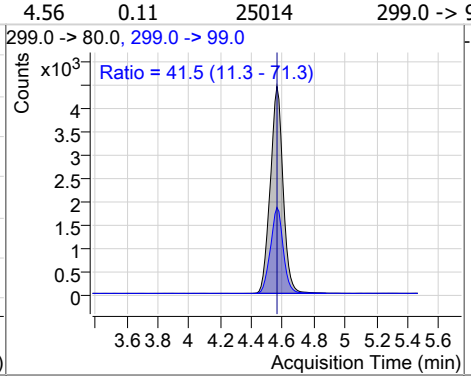


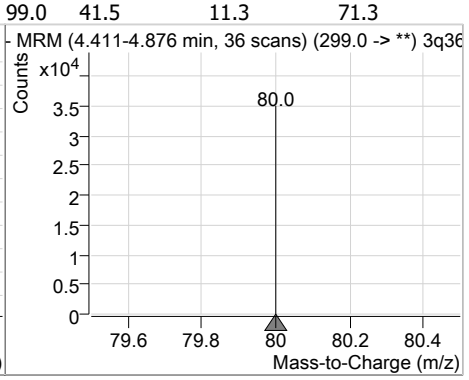




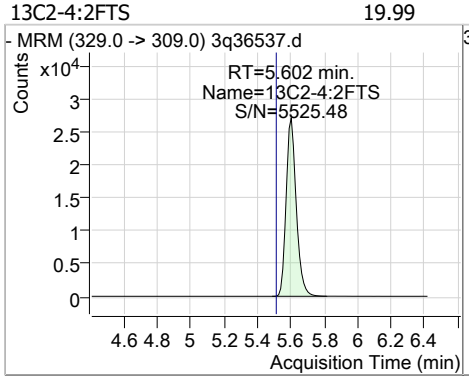
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	9.75	4.56	0.11	25014	299.0 -> 99.0	41.5	11.3	71.3

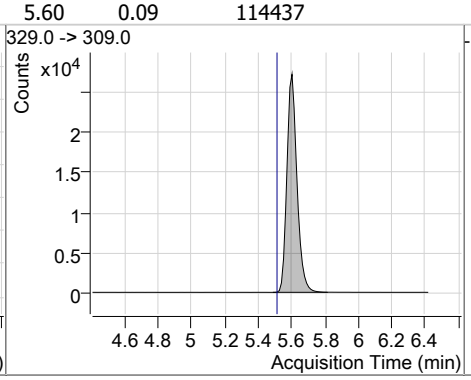


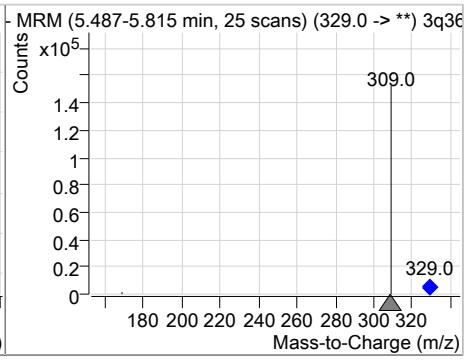




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.99	5.60	0.09	114437				



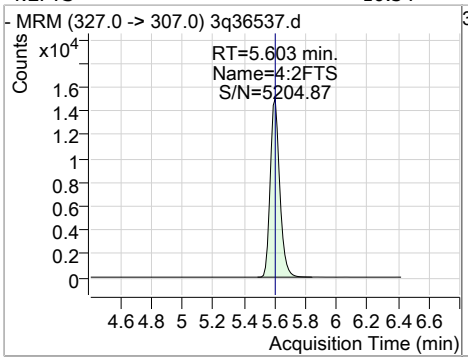


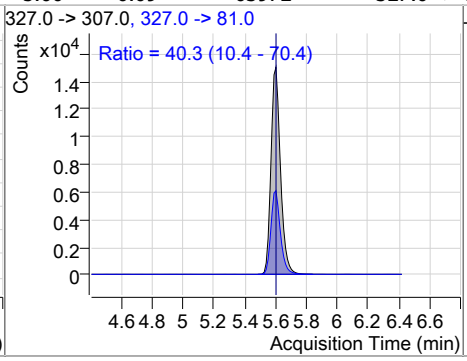


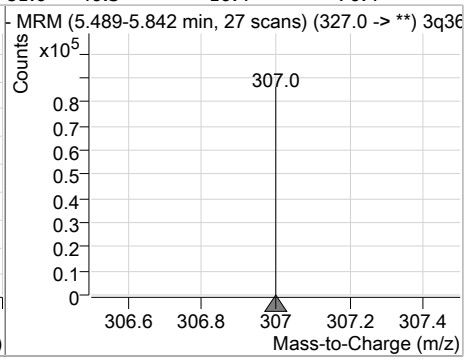
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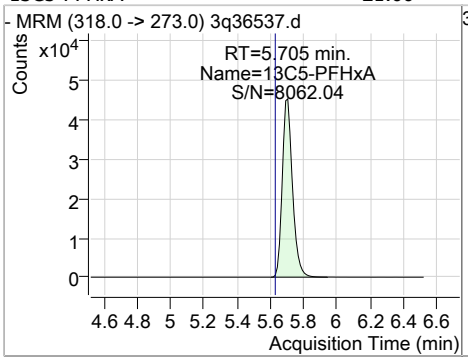
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	10.34	5.60	0.09	63972	327.0 -> 81.0	40.3	10.4	70.4

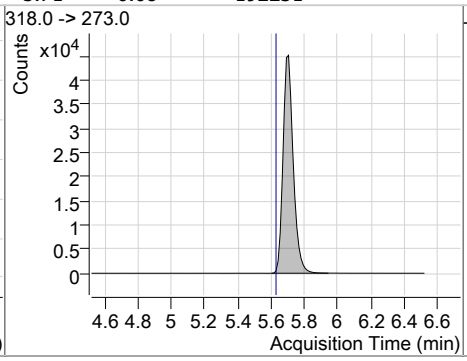


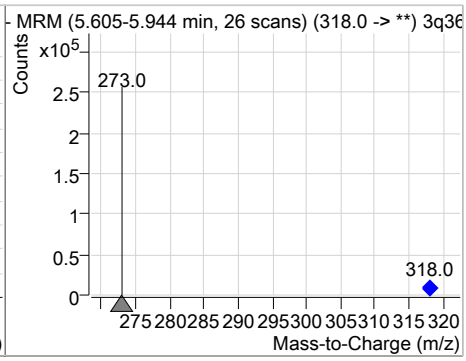




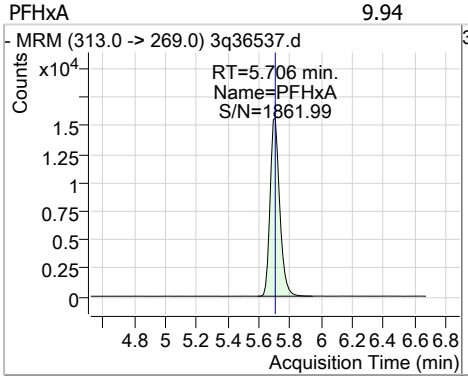
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	21.00	5.71	0.08	192231				

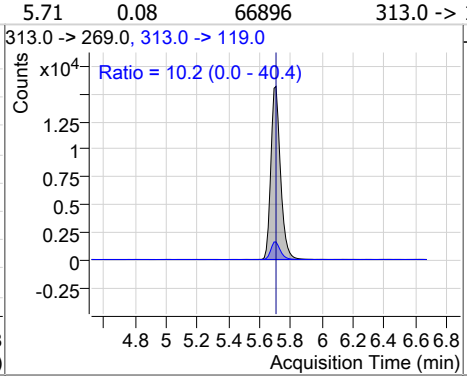


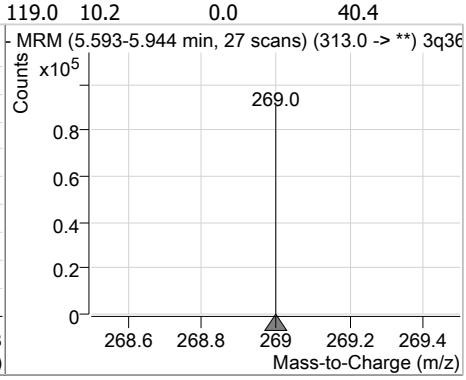




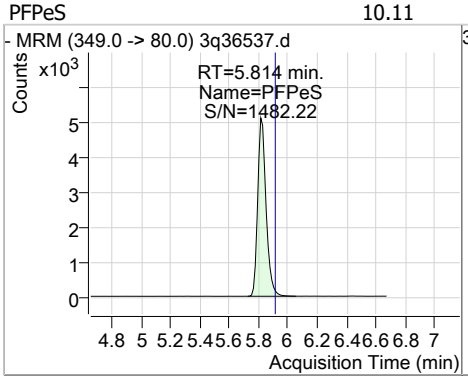
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	9.94	5.71	0.08	66896	313.0 -> 119.0	10.2	0.0	40.4

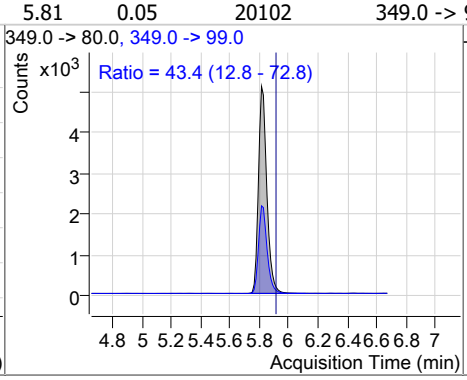


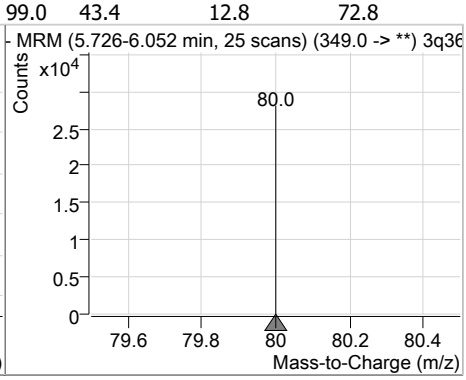




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	10.11	5.81	0.05	20102	349.0 -> 99.0	43.4	12.8	72.8



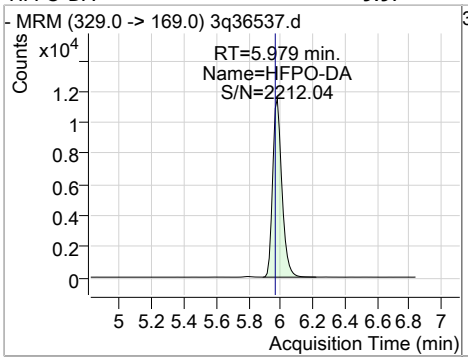


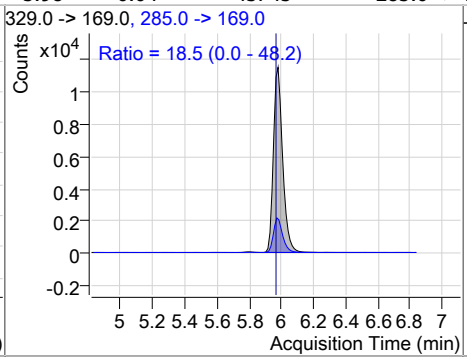


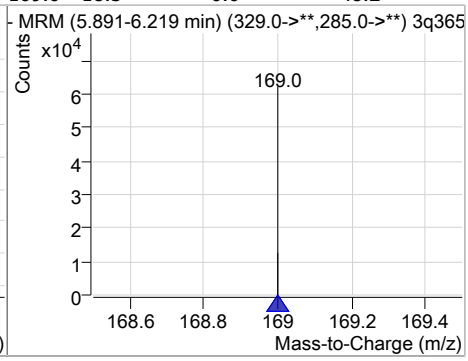
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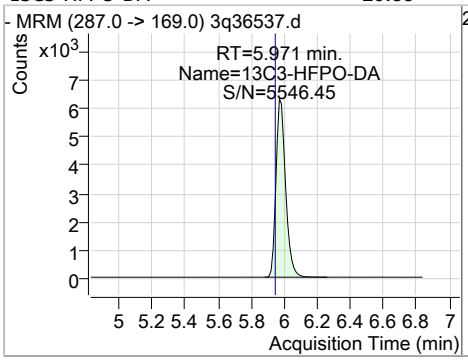
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	9.97	5.98	0.04	45745	285.0 -> 169.0	18.5	0.0	48.2

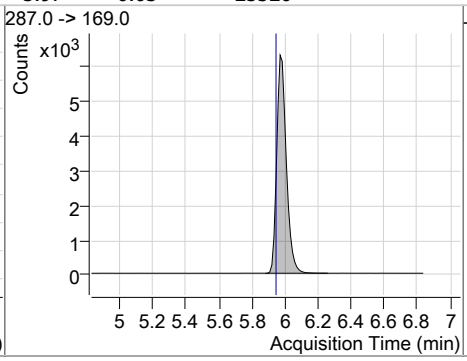


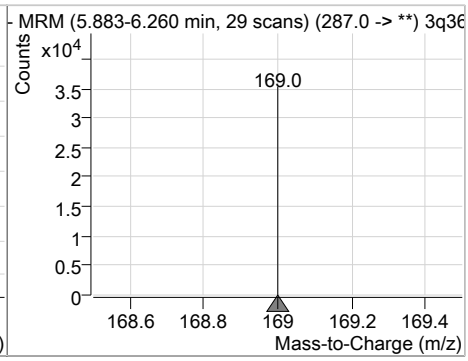




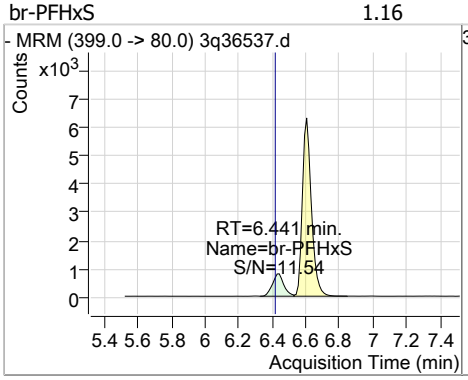
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.88	5.97	0.03	25326				

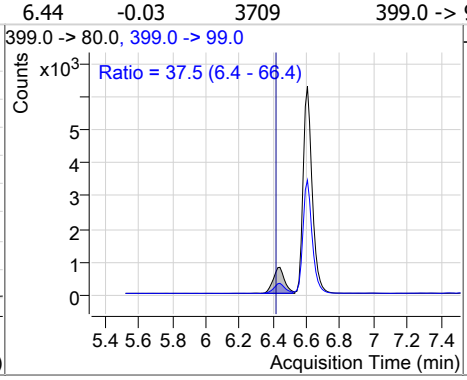


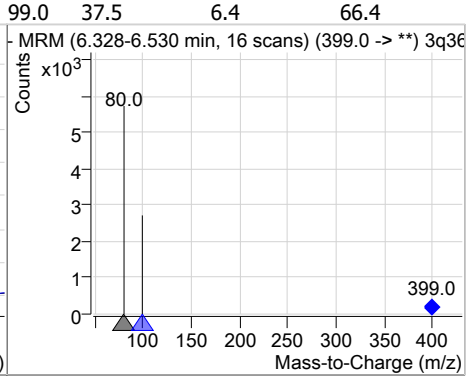




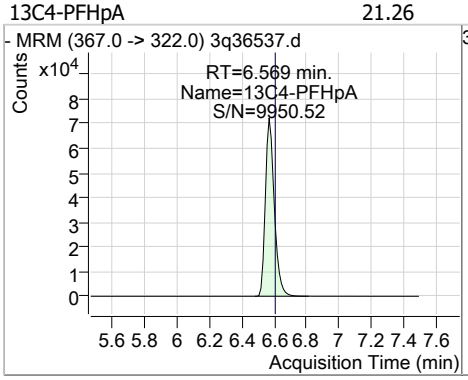
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	1.16	6.44	-0.03	3709	399.0 -> 99.0	37.5	6.4	66.4

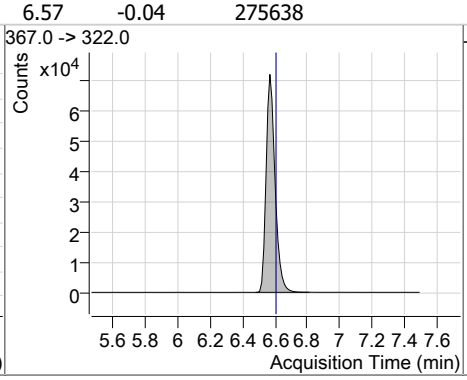


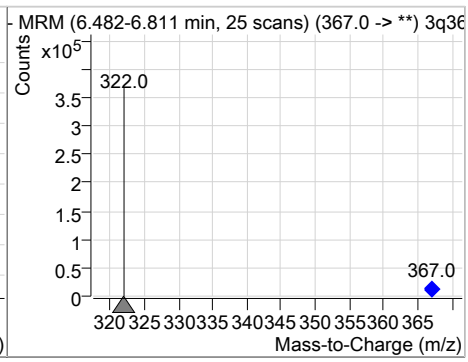




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	21.26	6.57	-0.04	275638				



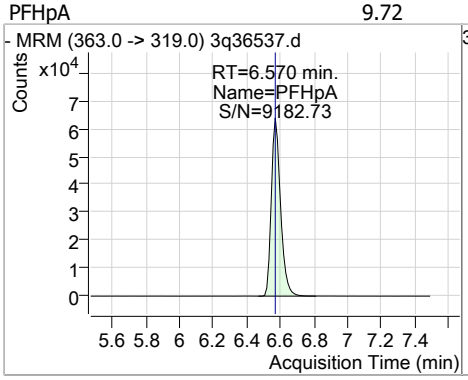


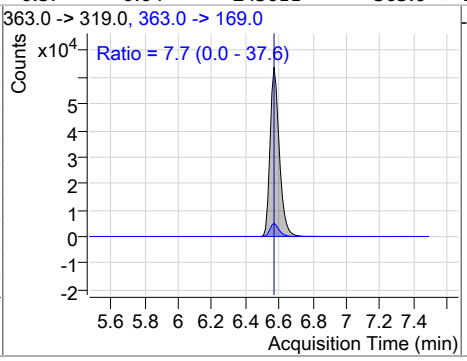


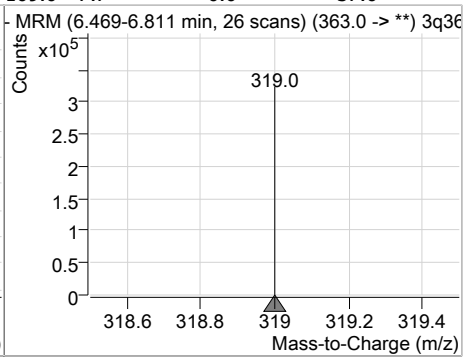
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Perfluorinated Compounds by LC/MS/MS

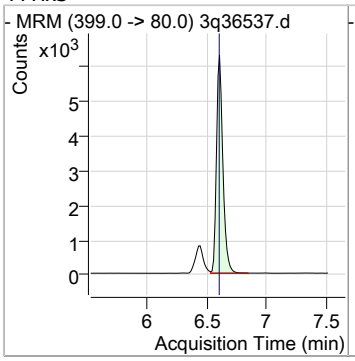
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	9.72	6.57	-0.04	243011	363.0 -> 169.0	7.7	0.0	37.6

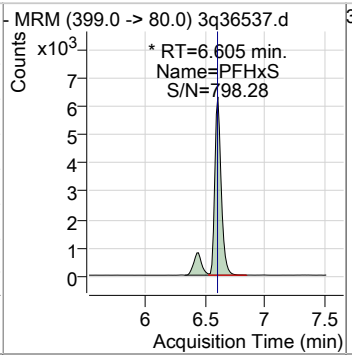


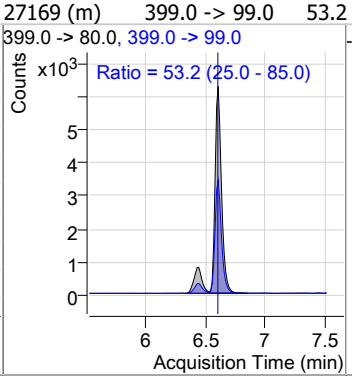


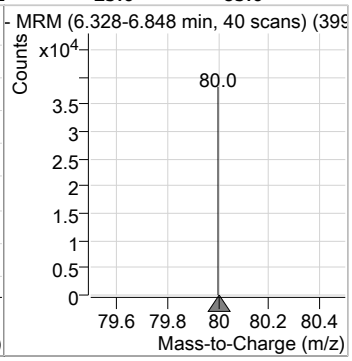


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	9.90	6.60	-0.04	27169 (m)	399.0 -> 99.0	53.2	25.0	85.0

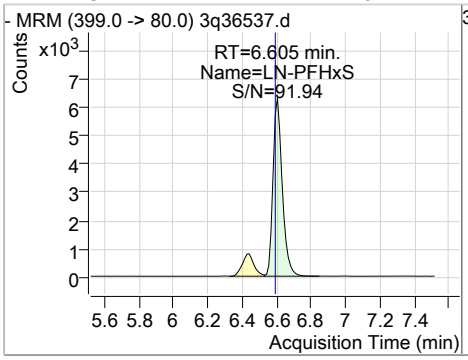


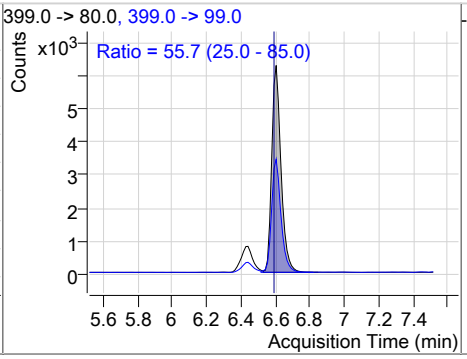


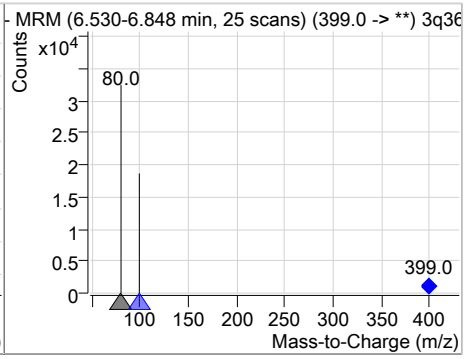




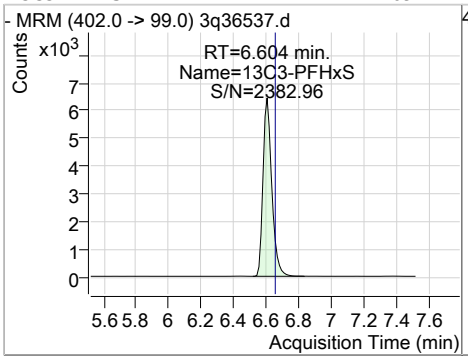
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	8.74	6.60	-0.04	23460	399.0 -> 99.0	55.7	25.0	85.0

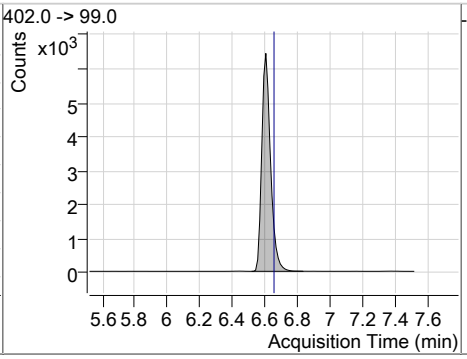


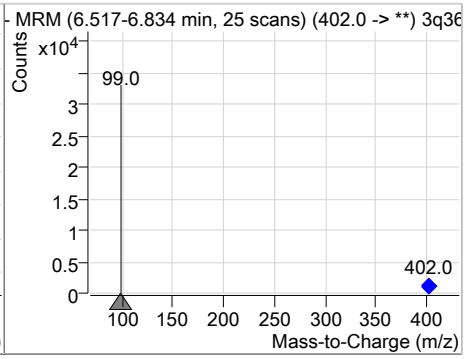




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	21.09	6.60	-0.05	24011				



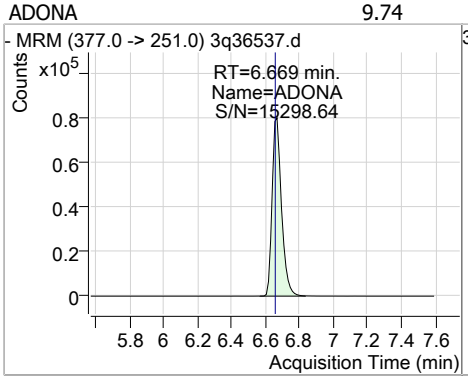


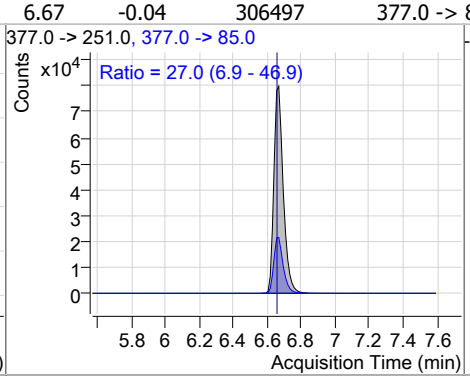


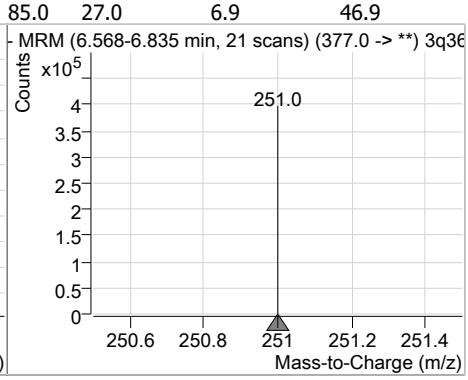
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Perfluorinated Compounds by LC/MS/MS

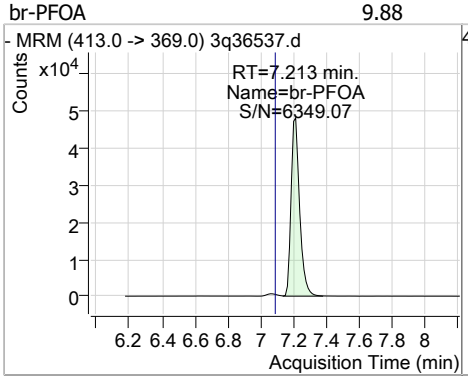
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	9.74	6.67	-0.04	306497	377.0 -> 85.0	27.0	6.9	46.9

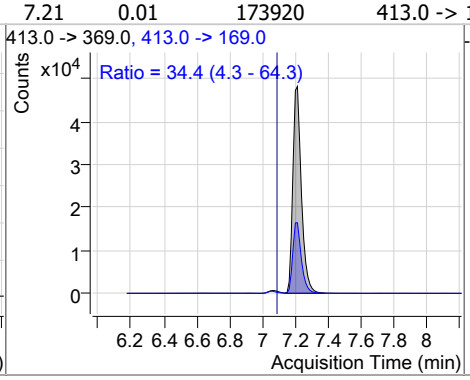


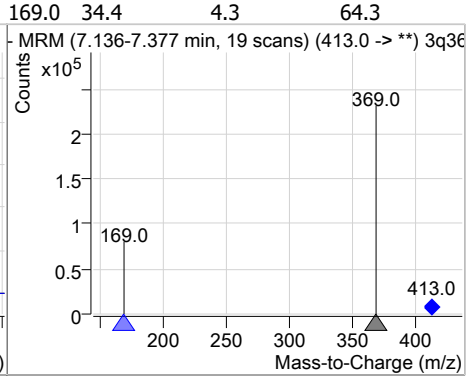




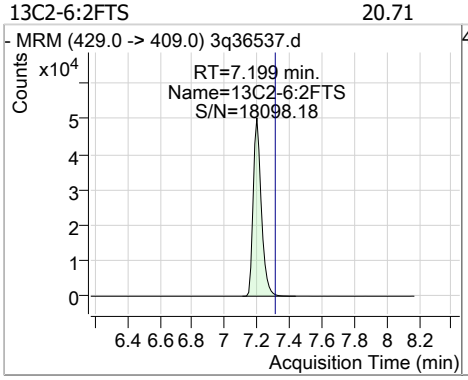
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	9.88	7.21	0.01	173920	413.0 -> 169.0	34.4	4.3	64.3

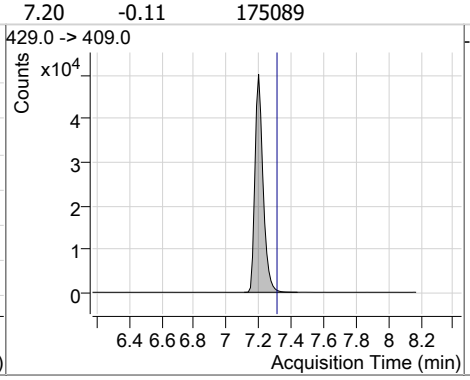


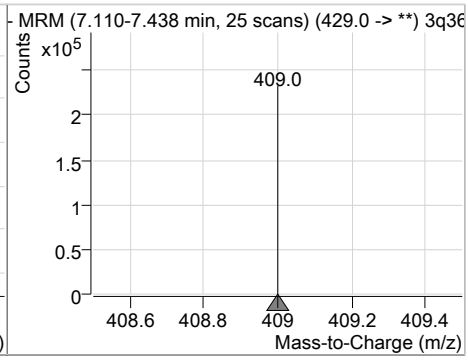




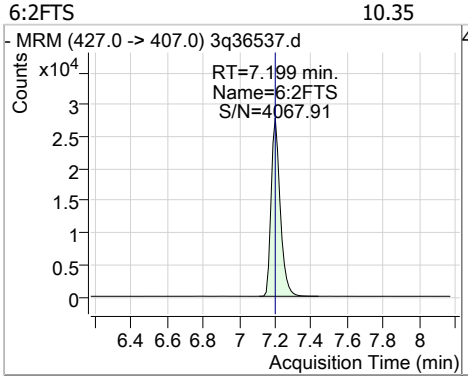
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.71	7.20	-0.11	175089				

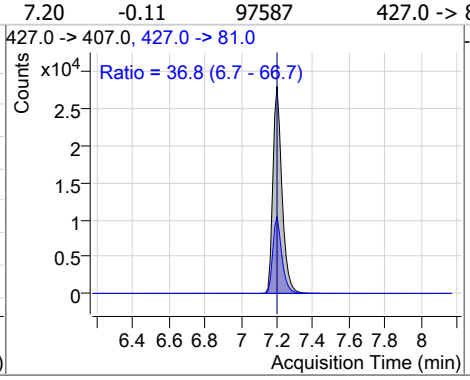


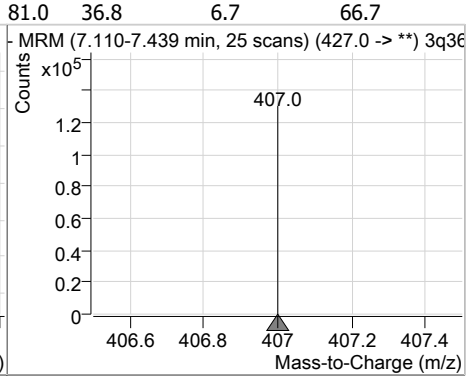




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	10.35	7.20	-0.11	97587	427.0 -> 81.0	36.8	6.7	66.7





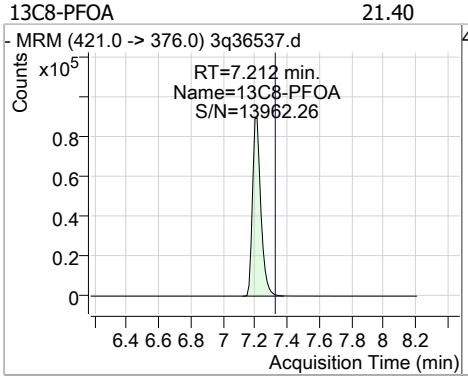


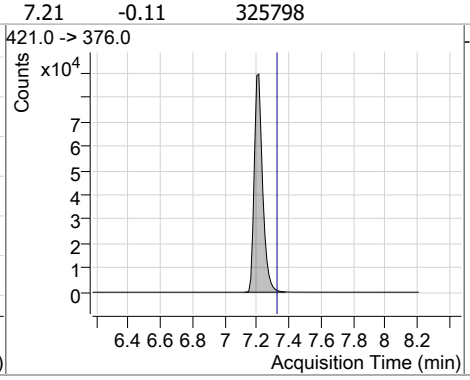
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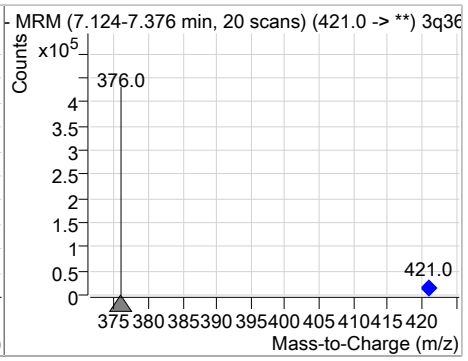
11

Perfluorinated Compounds by LC/MS/MS

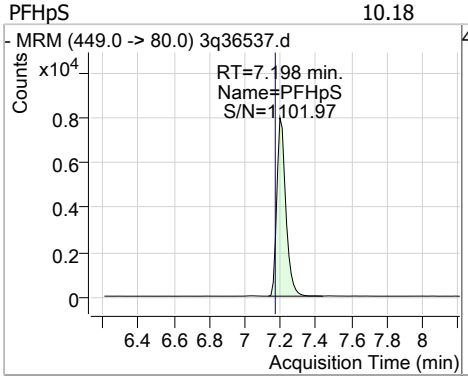
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	21.40	7.21	-0.11	325798				

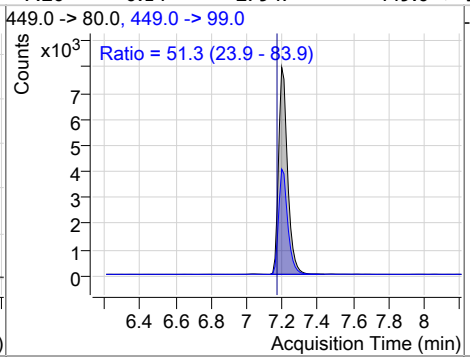


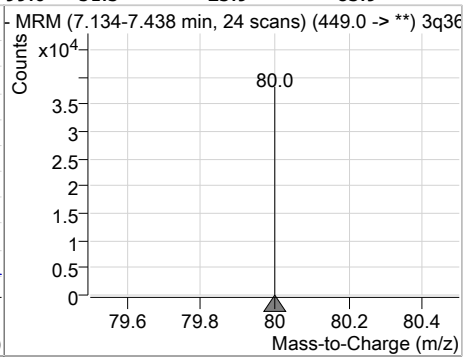




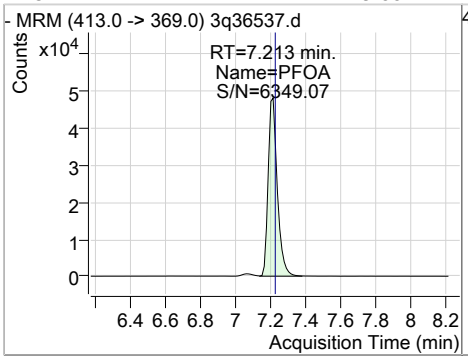
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	10.18	7.20	-0.14	27947	449.0 -> 99.0	51.3	23.9	83.9

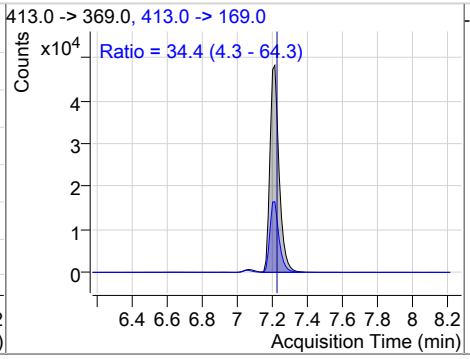


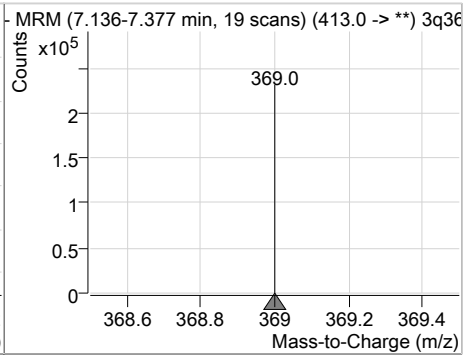




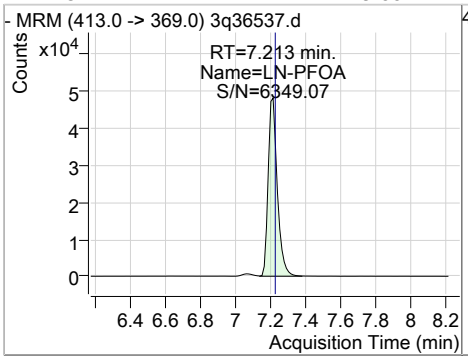
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	9.88	7.21	-0.13	173920	413.0 -> 169.0	34.4	4.3	64.3

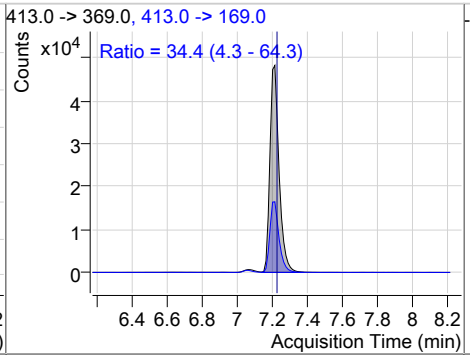


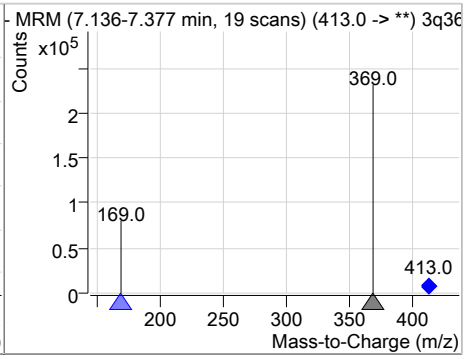




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	9.88	7.21	-0.13	173920	413.0 -> 169.0	34.4	4.3	64.3



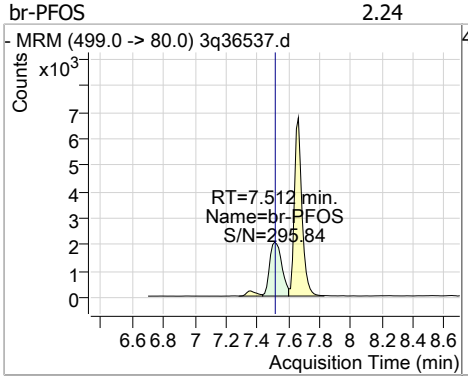


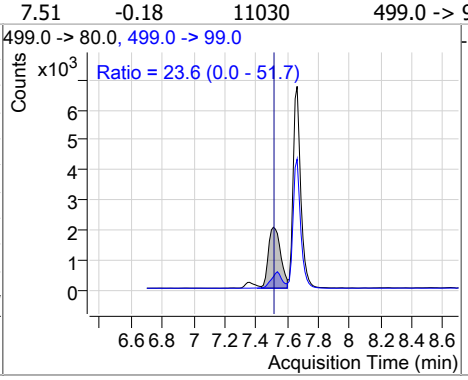


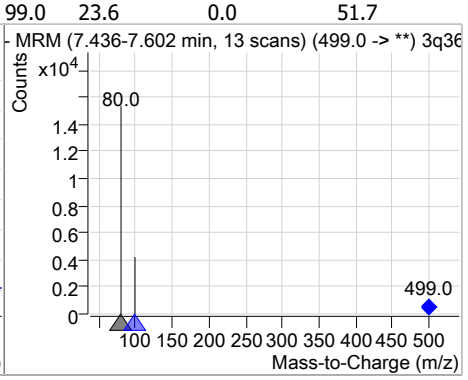
11.6.20 11

Perfluorinated Compounds by LC/MS/MS

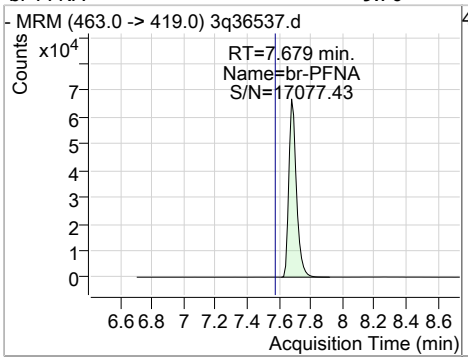
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	2.24	7.51	-0.18	11030	499.0 -> 99.0	23.6	0.0	51.7

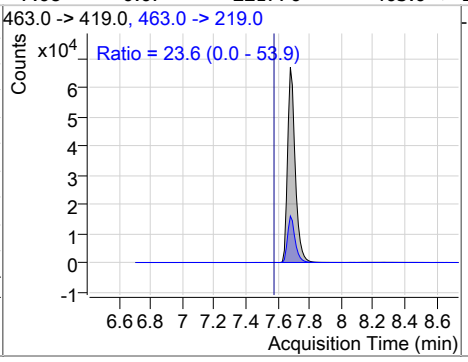


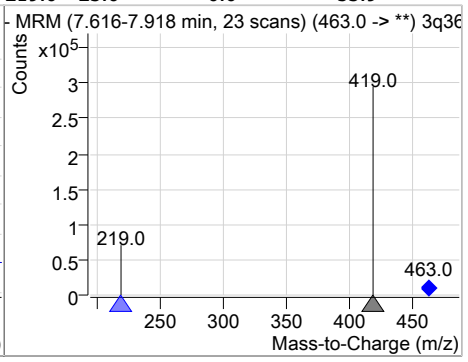




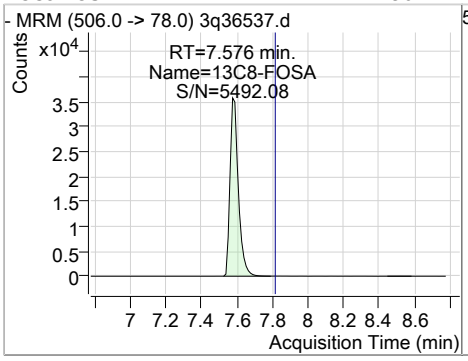
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFNA	9.76	7.68	-0.07	221776	463.0 -> 219.0	23.6	0.0	53.9

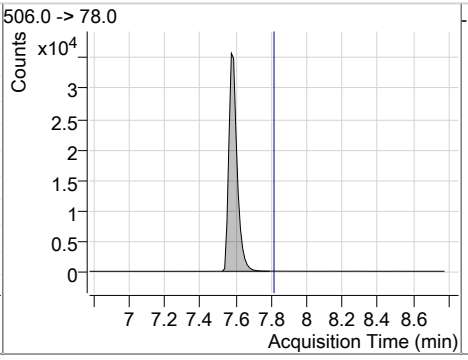


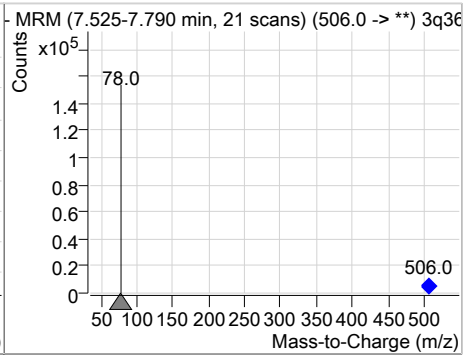




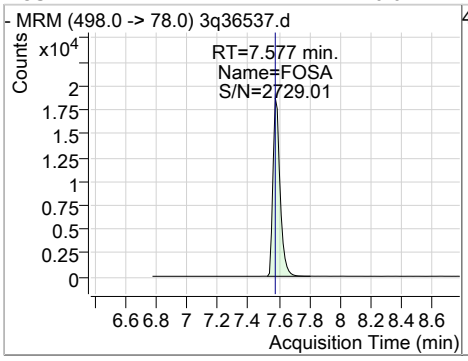
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	21.90	7.58	-0.24	116305				

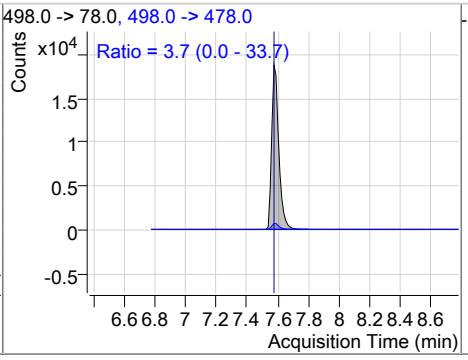


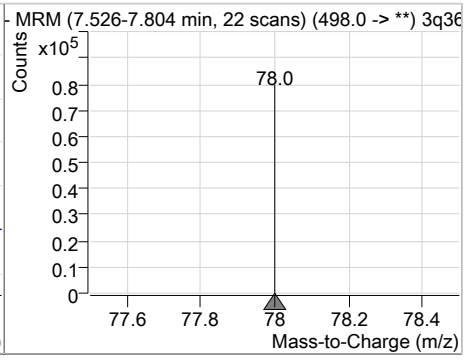




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	10.07	7.58	-0.24	59952	498.0 -> 478.0	3.7	0.0	33.7

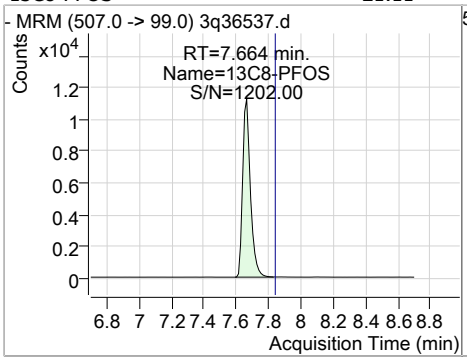


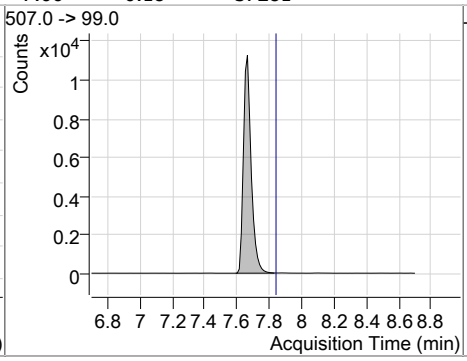


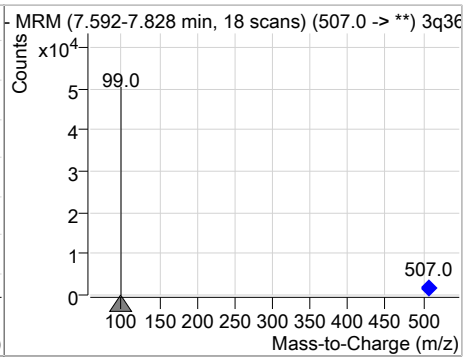


Perfluorinated Compounds by LC/MS/MS

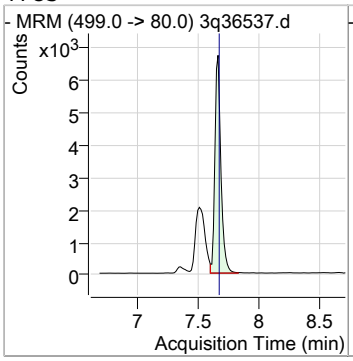
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	21.11	7.66	-0.18	37281				

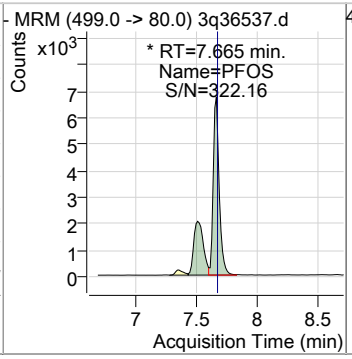


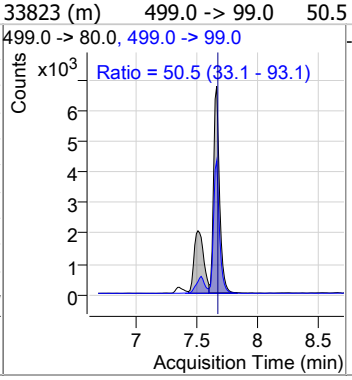


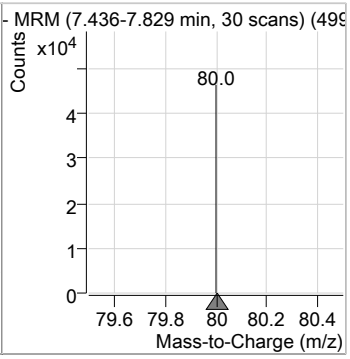


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	9.72	7.66	-0.18	33823 (m)	499.0 -> 99.0	50.5	33.1	93.1

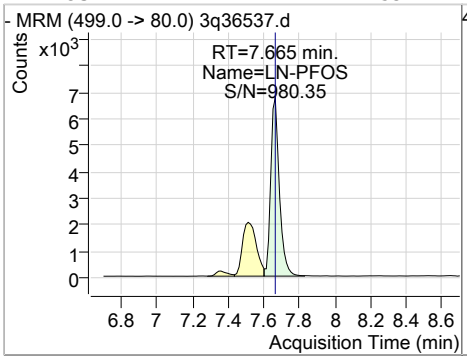


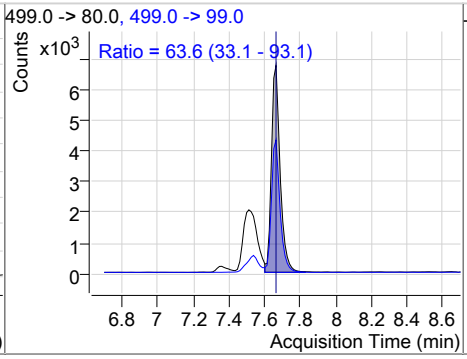


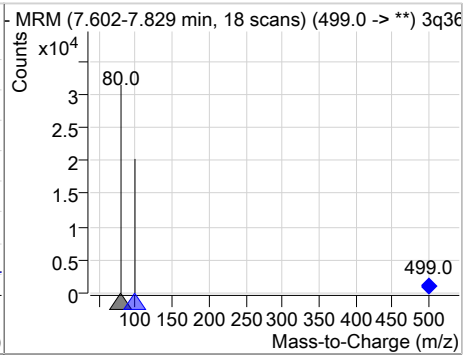




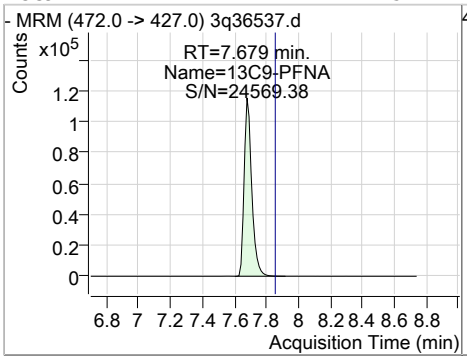
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	7.53	7.66	-0.18	22793	499.0 -> 99.0	63.6	33.1	93.1

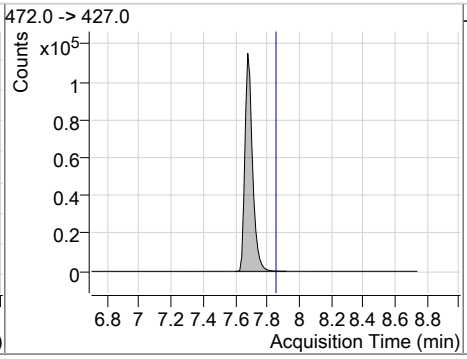


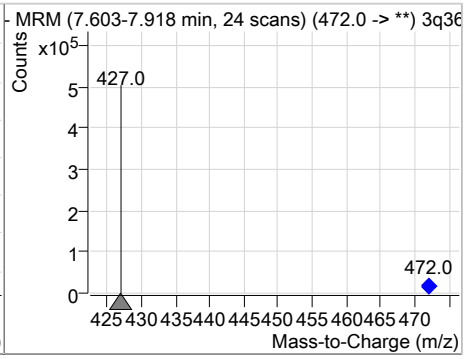




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	21.51	7.68	-0.18	379873				

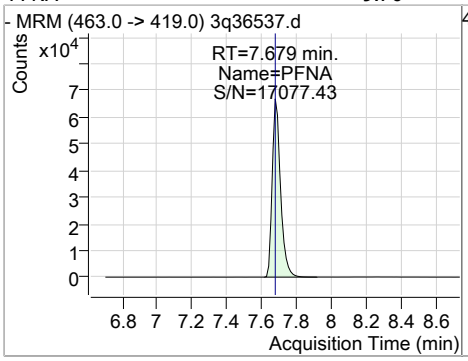


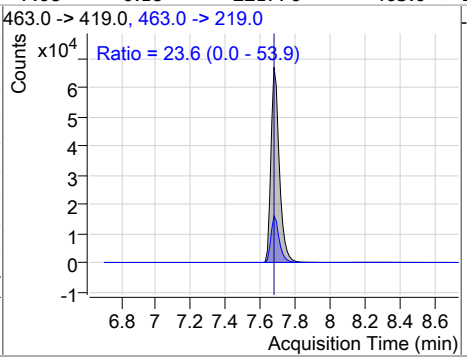


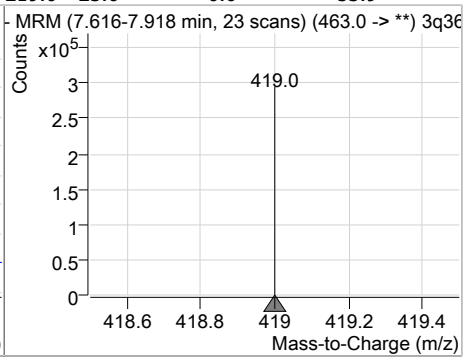


Perfluorinated Compounds by LC/MS/MS

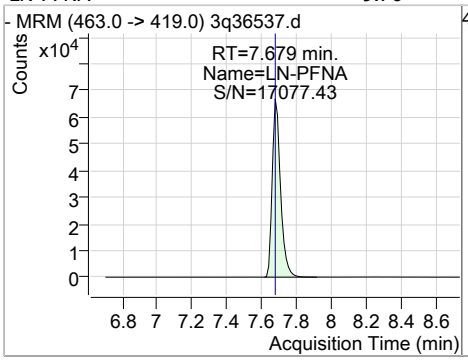
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	9.76	7.68	-0.18	221776	463.0 -> 219.0	23.6	0.0	53.9

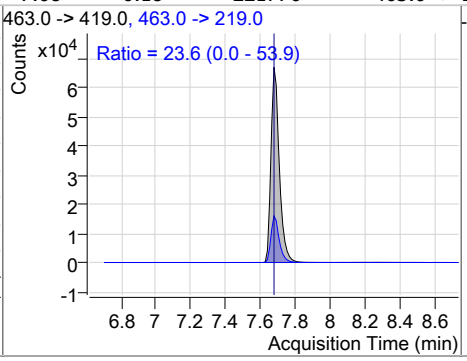


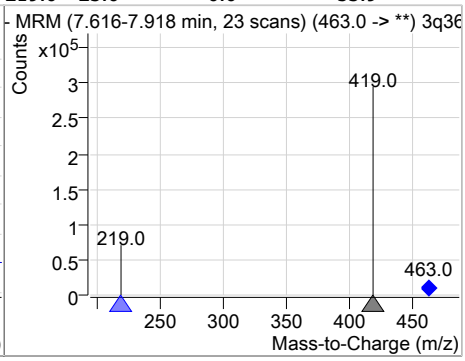




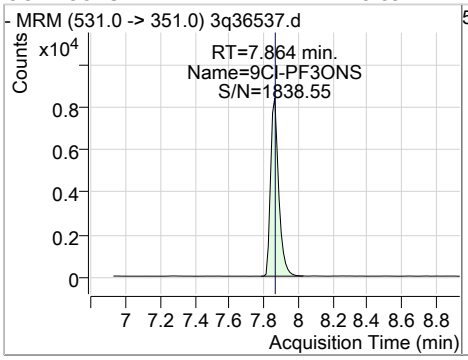
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	9.76	7.68	-0.18	221776	463.0 -> 219.0	23.6	0.0	53.9

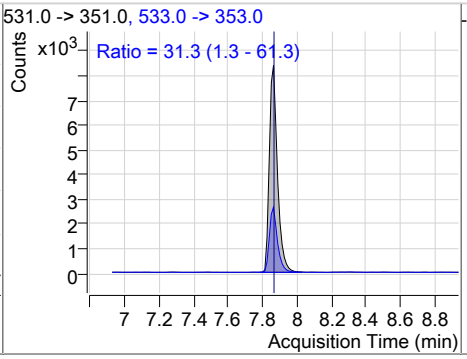


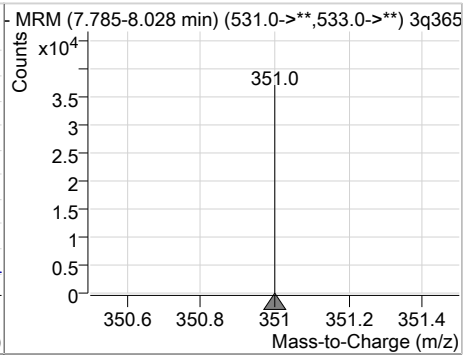




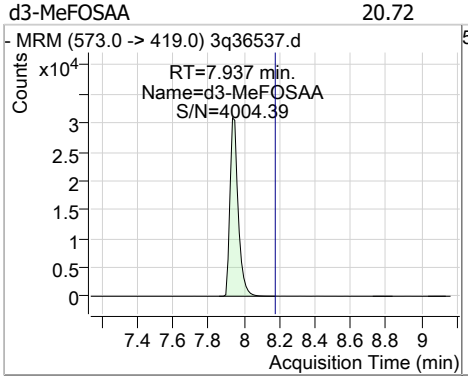
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	9.39	7.86	-0.19	27321	533.0 -> 353.0	31.3	1.3	61.3

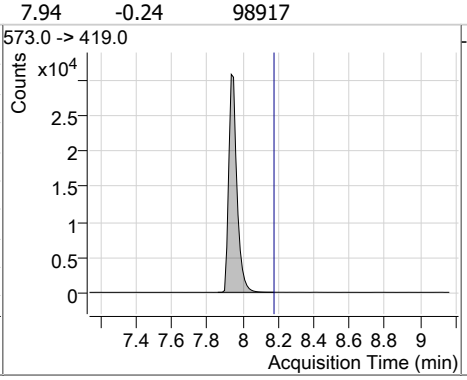


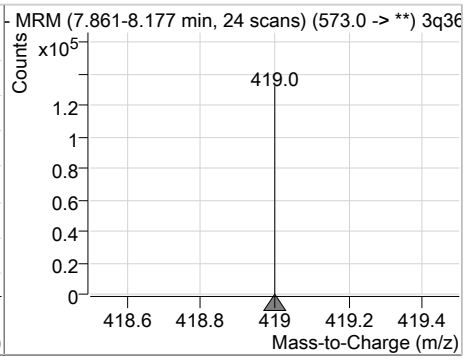




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.72	7.94	-0.24	98917				

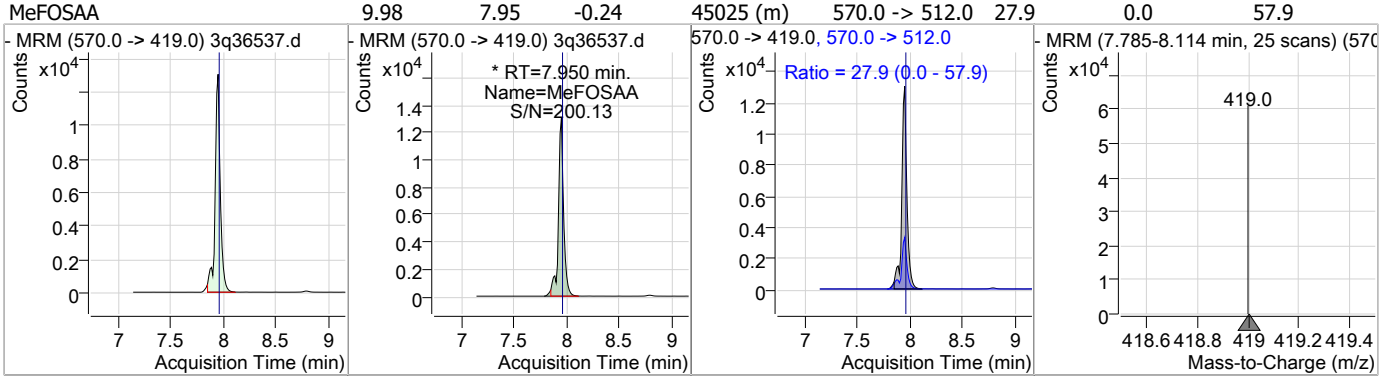




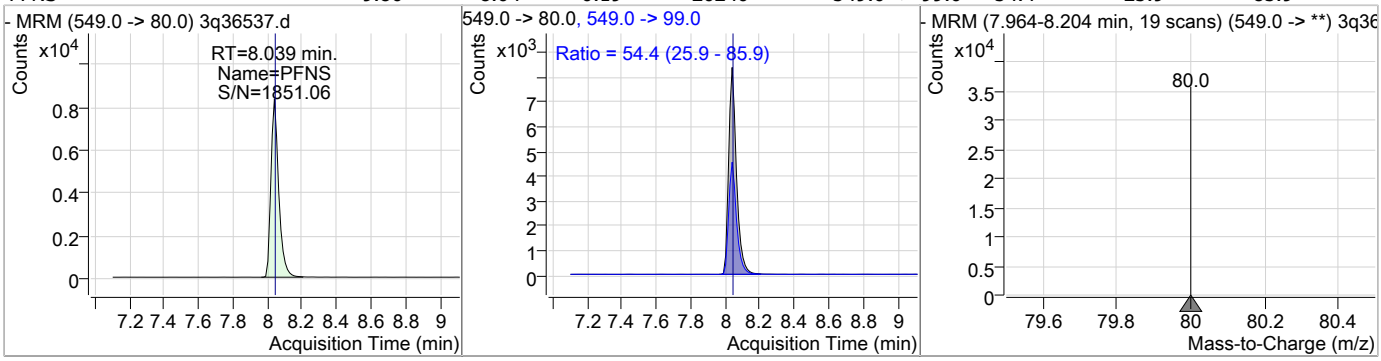


Perfluorinated Compounds by LC/MS/MS

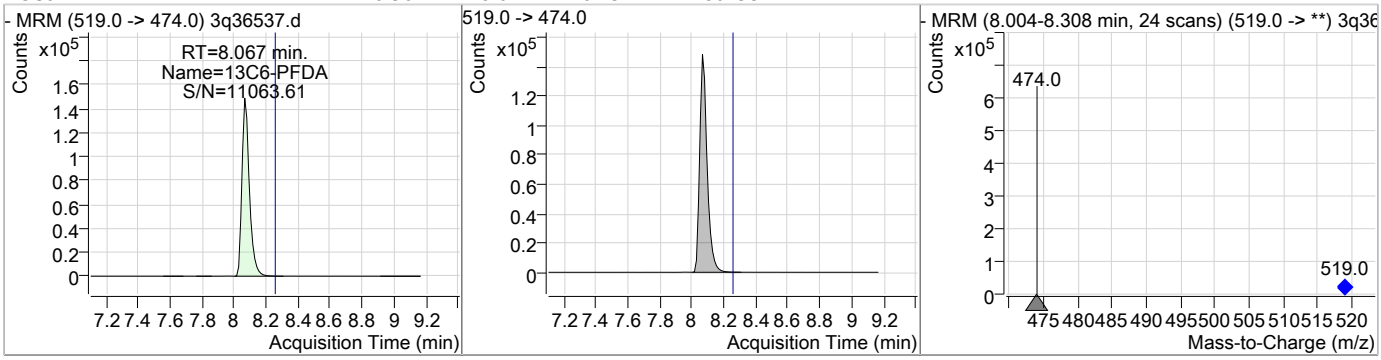
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	9.98	7.95	-0.24	45025 (m)	570.0 -> 512.0	27.9	0.0	57.9



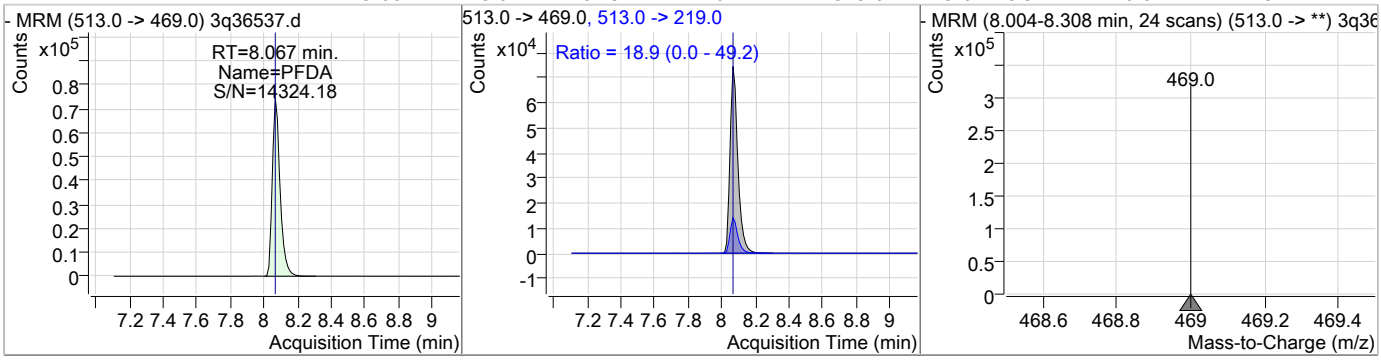
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	9.86	8.04	-0.19	26240	549.0 -> 99.0	54.4	25.9	85.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.90	8.07	-0.19	480193				



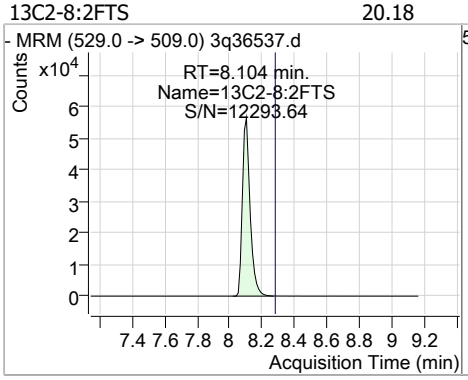
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	9.66	8.07	-0.19	240142	513.0 -> 219.0	18.9	0.0	49.2

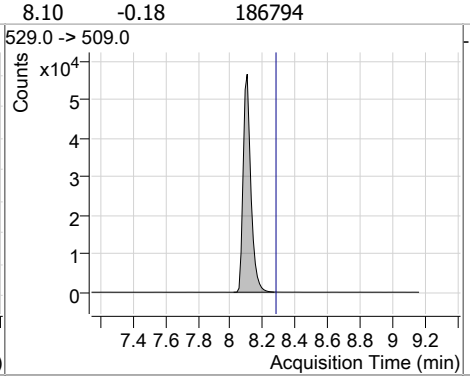


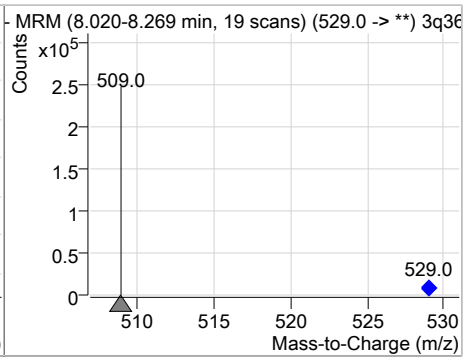
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Perfluorinated Compounds by LC/MS/MS

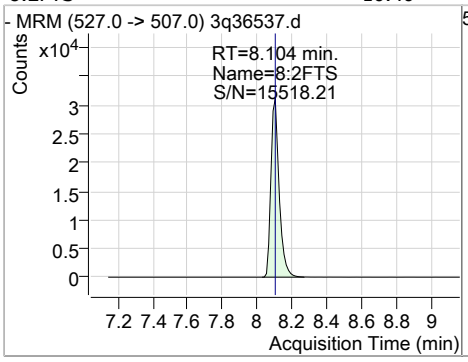
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	20.18	8.10	-0.18	186794				

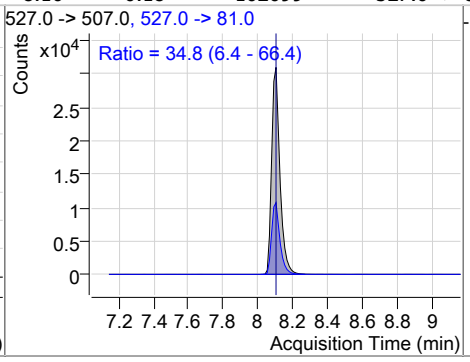


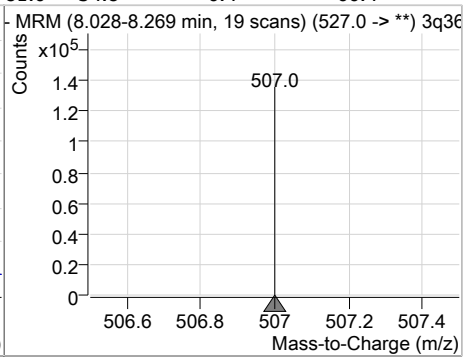




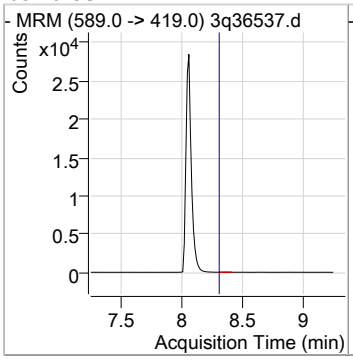
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	10.46	8.10	-0.18	102099	527.0 -> 81.0	34.8	6.4	66.4

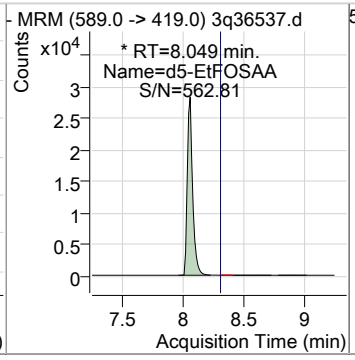


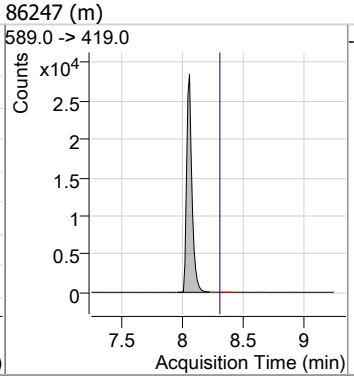


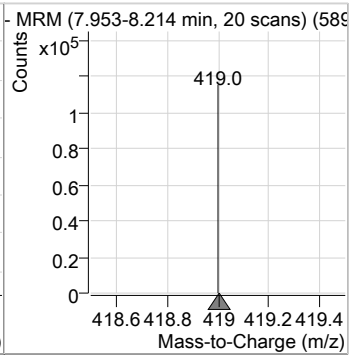


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.97	8.05	-0.24	86247 (m)				

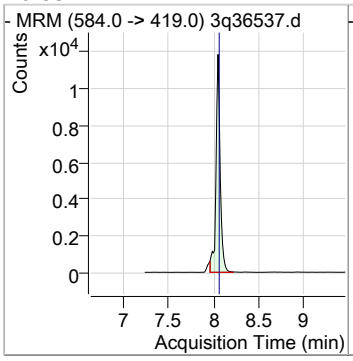


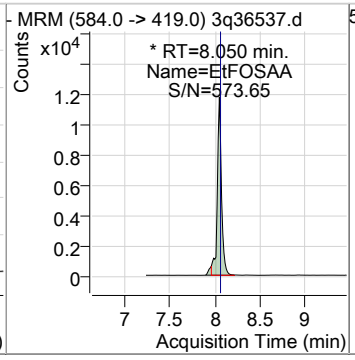


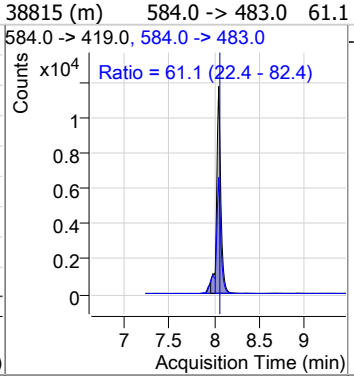


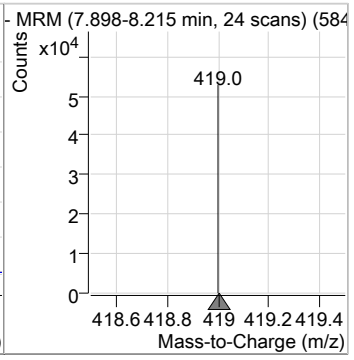


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	9.64	8.05	-0.24	38815 (m)	584.0 -> 483.0	61.1	22.4	82.4





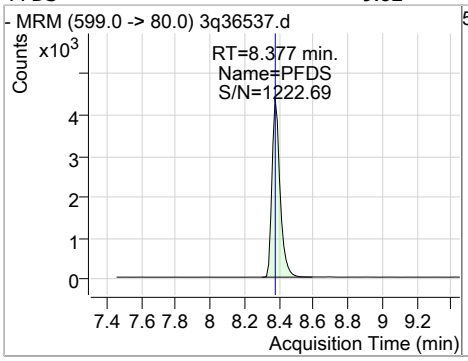


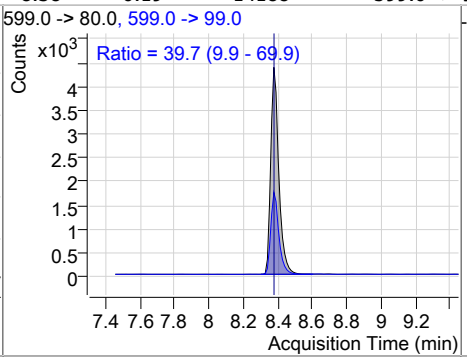


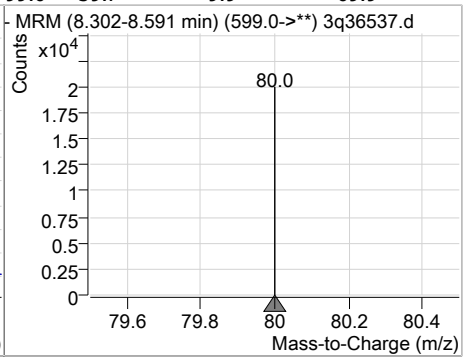
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Perfluorinated Compounds by LC/MS/MS

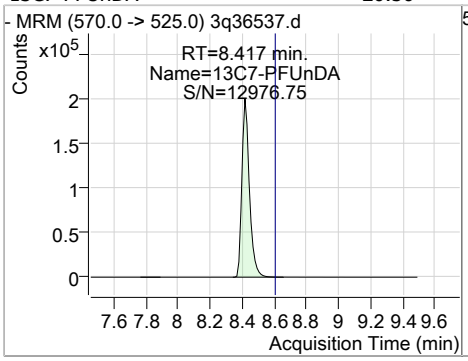
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	9.82	8.38	-0.19	14188	599.0 -> 99.0	39.7	9.9	69.9

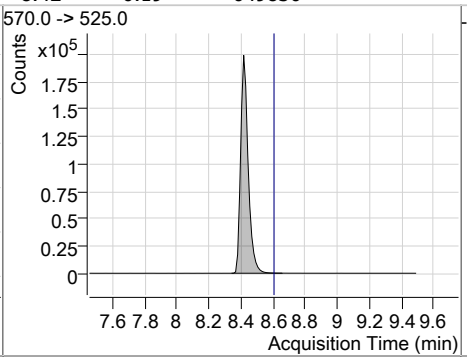


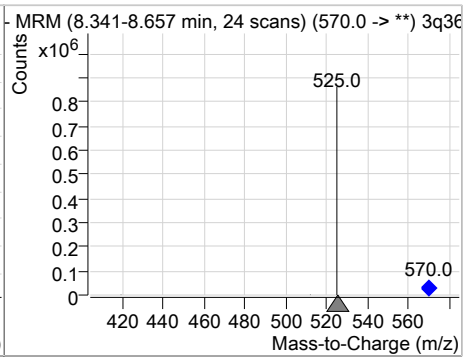




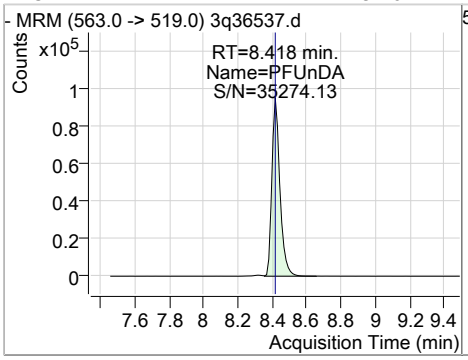
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.56	8.42	-0.19	649830				

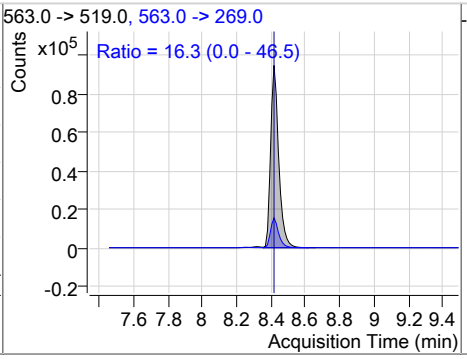


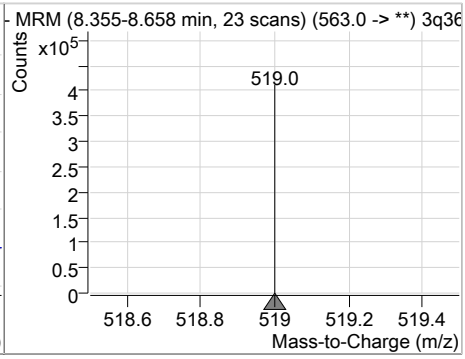




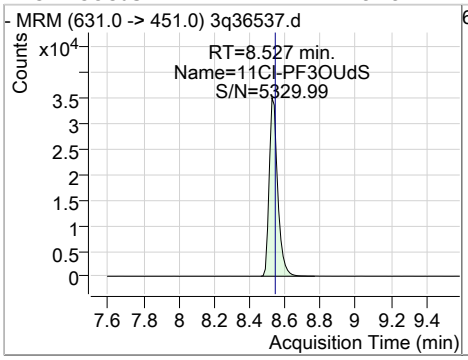
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	9.76	8.42	-0.19	309844	563.0 -> 269.0	16.3	0.0	46.5

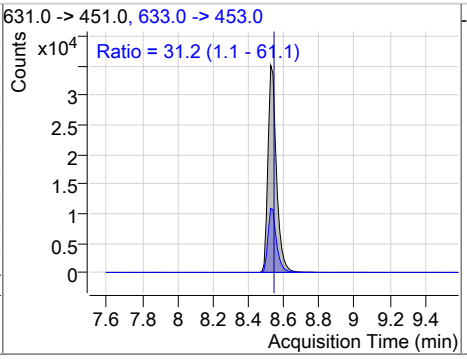


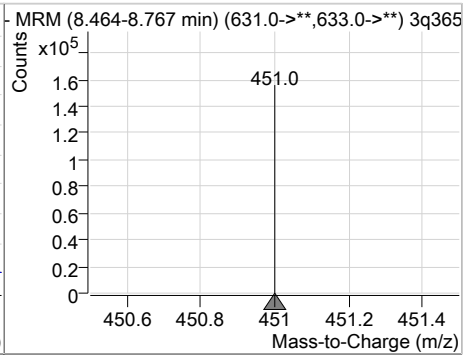




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	9.29	8.53	-0.19	116818	633.0 -> 453.0	31.2	1.1	61.1

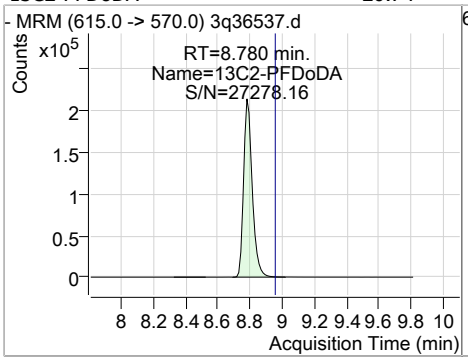


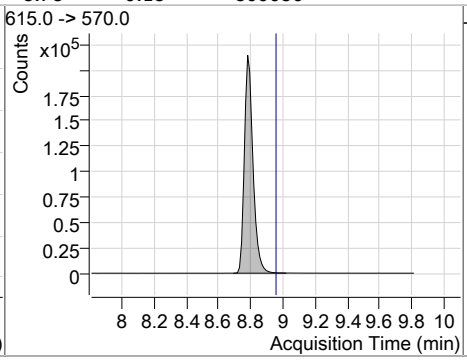


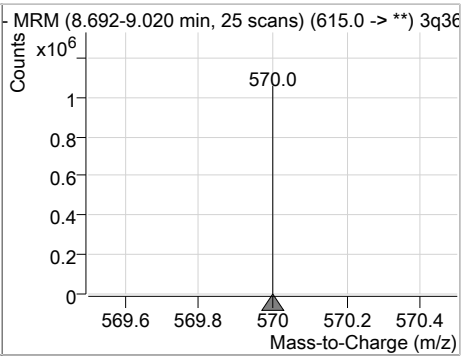


Perfluorinated Compounds by LC/MS/MS

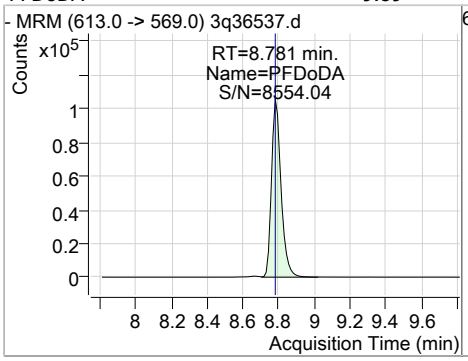
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.74	8.78	-0.18	800086				

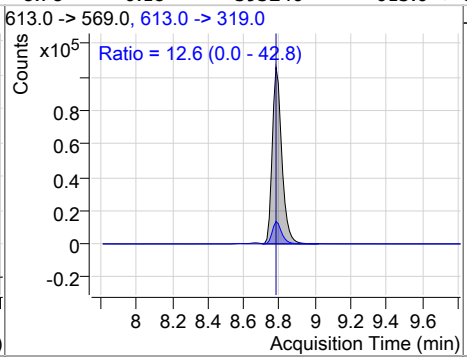


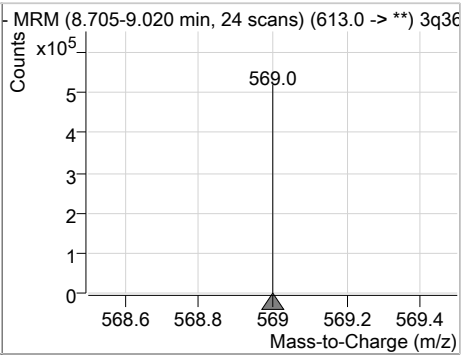




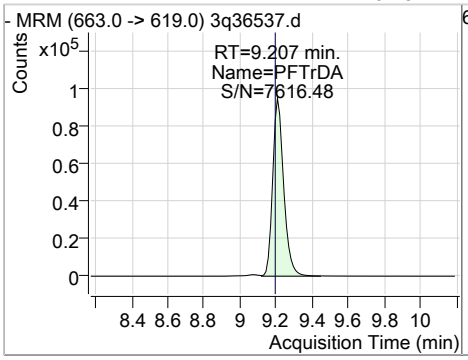
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	9.89	8.78	-0.18	393246	613.0 -> 319.0	12.6	0.0	42.8

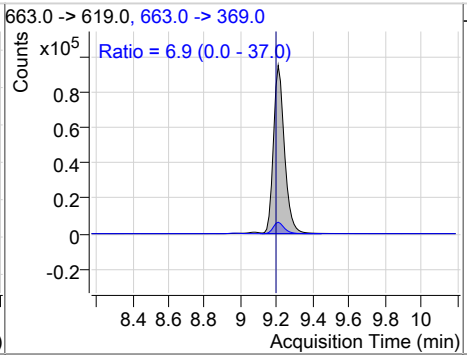


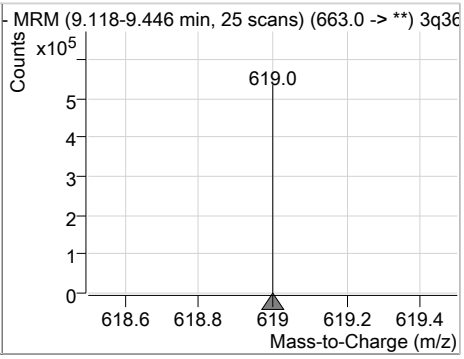




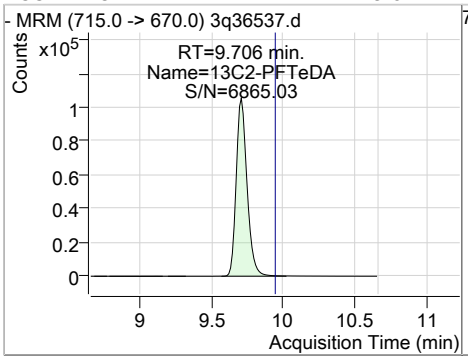
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	10.28	9.21	-0.21	402784	663.0 -> 369.0	6.9	0.0	37.0

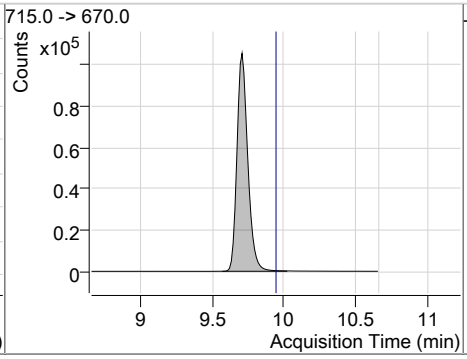


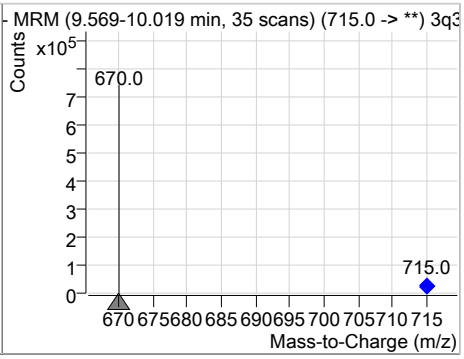




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.87	9.71	-0.24	555624				



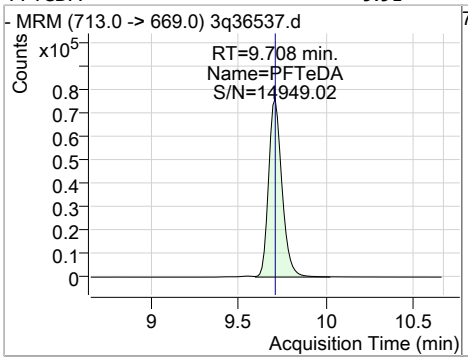


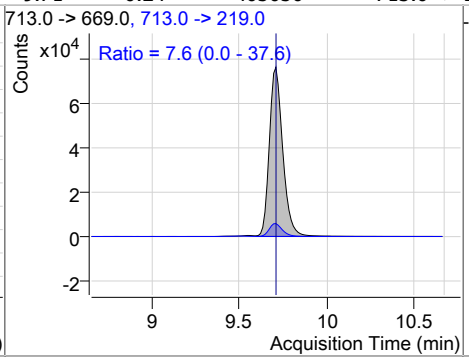


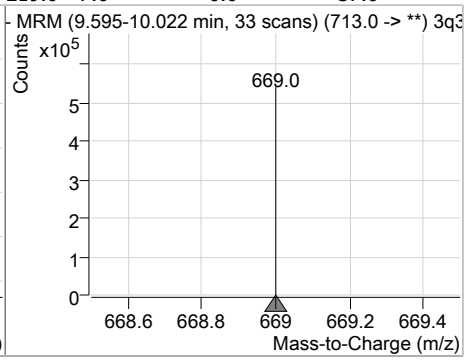
11.6.20 11

Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	9.91	9.71	-0.24	405050	713.0 -> 219.0	7.6	0.0	37.6







11.6.20 11

Manual Integration Approval Summary

Sample Number: S3Q537-IC537
Lab FileID: 3Q36537.D
Injection Time: 04/13/21 15:25
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/14/21 10:44 Martha Valls
Supervisor approved: 04/14/21 15:06 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.61	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.67	Split peak
MeFOSAA	2355-31-9		7.95	Split peak
d5-EtFOSAA			8.05	Split peak
EtFOSAA	2991-50-6		8.05	Split peak

3Q36538.D

Manual Integrations APPROVED (compounds with "m" flag)

Mike Eger 04/14/21 15:06

Perfluorinated Compounds by LC/MS/MS

Data File	:	3q36538.d
Operator	:	marthav
Acq. Method	:	537_ID.m
Acq. Date-Time	:	4/13/2021 3:42:13 PM
Sample Name	:	icc537-20
Vial	:	P1-A7
DA Method File	:	BR_LN_041321_S3Q537.quantmethod.xml
Batch Name	:	s3q537.batch.bin
Sample Information	:	op84308,S3Q537,250,,,1,1,water

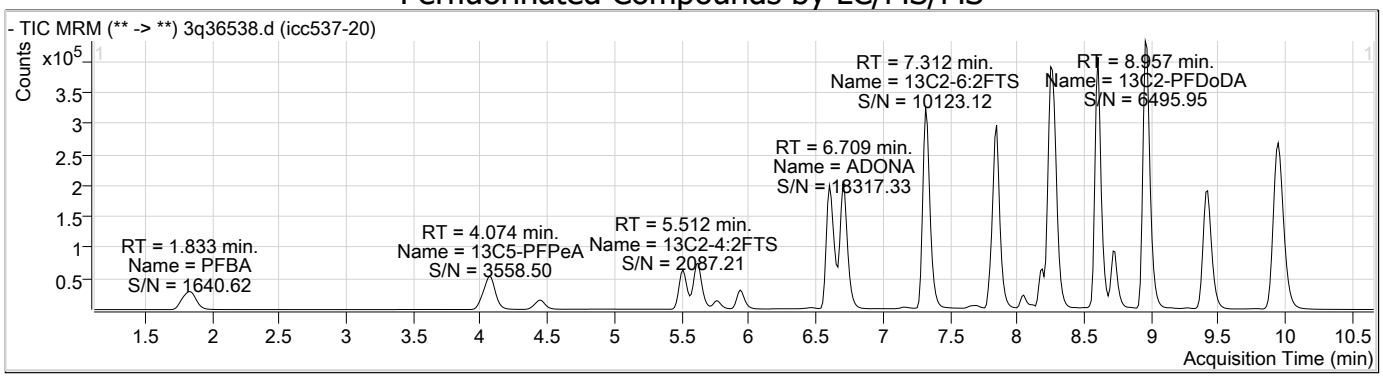
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.839	217.0 -> 172.0	154813	20.00	µg/L	0.000
M5-PFPeA	4.074	268.0 -> 223.0	116686	20.00	µg/L	0.000
M5-PFHxA	5.630	318.0 -> 273.0	180174	20.00	µg/L	0.000
M4-PFHpA	6.607	367.0 -> 322.0	257686	20.00	µg/L	0.000
M8-PFOA	7.326	421.0 -> 376.0	299911	20.00	µg/L	0.000
M9-PFNA	7.855	472.0 -> 427.0	344215	20.00	µg/L	0.000
M6-PFDA	8.257	519.0 -> 474.0	449689	20.00	µg/L	0.000
M7-PFUnDA	8.606	570.0 -> 525.0	607273	20.00	µg/L	0.000
M2-PFDoDA	8.957	615.0 -> 570.0	760586	20.00	µg/L	0.000
M2-PFTeDA	9.944	715.0 -> 670.0	564019	20.00	µg/L	0.000
M8-FOSA	7.816	506.0 -> 78.0	103368	20.00	µg/L	0.000
M3-PFBS	4.447	302.0 -> 99.0	16117	20.00	µg/L	0.000
M3-PFHxS	6.655	402.0 -> 99.0	22681	20.00	µg/L	0.000
M8-PFOS	7.841	507.0 -> 99.0	33968	20.00	µg/L	0.000
M2-4:2FTS	5.512	329.0 -> 309.0	111659	20.00	µg/L	0.000
M2-6:2FTS	7.312	429.0 -> 409.0	163306	20.00	µg/L	0.000
M2-8:2FTS	8.282	529.0 -> 509.0	174936	20.00	µg/L	0.000
M3-MeFOSAA	8.177	573.0 -> 419.0	95058	20.00	µg/L	0.000
M3-HFPO-DA	5.945	287.0 -> 169.0	23614	20.00	µg/L	0.000
M5-EtFOSAA	8.290	589.0 -> 419.0	78331	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.512	329.0 -> 309.0	111659	19.51	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.5%		
13C2-6:2FTS	7.312	429.0 -> 409.0	163306	19.31	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.6%		
13C2-8:2FTS	8.282	529.0 -> 509.0	174936	18.90	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.5%		
13C2-PFDoDA	8.957	615.0 -> 570.0	760586	19.72	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.6%		
13C2-PFTeDA	9.944	715.0 -> 670.0	564019	20.17	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.9%		
13C3-PFBS	4.447	302.0 -> 99.0	16117	19.99	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.9%		
13C3-PFHxS	6.655	402.0 -> 99.0	22681	19.92	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.6%		
13C4-PFBA	1.839	217.0 -> 172.0	154813	19.75	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.8%		
13C4-PFHpA	6.607	367.0 -> 322.0	257686	19.88	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.4%		
13C5-PFHxA	5.630	318.0 -> 273.0	180174	19.69	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%		
13C5-PFPeA	4.074	268.0 -> 223.0	116686	19.88	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.4%		
13C6-PFDA	8.257	519.0 -> 474.0	449689	19.57	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.8%		

Perfluorinated Compounds by LC/MS/MS

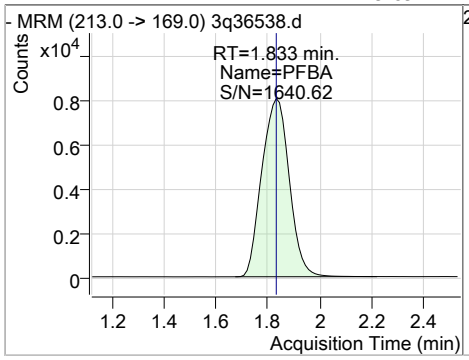
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.606	570.0 -> 525.0	607273	19.21	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.1%			
13C8-FOSA	7.816	506.0 -> 78.0	103368	19.47	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.3%			
13C8-PFOA	7.326	421.0 -> 376.0	299911	19.70	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.5%			
13C8-PFOS	7.841	507.0 -> 99.0	33968	19.23	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.2%			
13C9-PFNA	7.855	472.0 -> 427.0	344215	19.49	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.5%			
d3-MeFOSAA	8.177	573.0 -> 419.0	95058	19.91	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.5%			
13C3-HFPO-DA	5.945	287.0 -> 169.0	23611	19.47	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.3%			
d5-EtFOSAA	8.290	589.0 -> 419.0	78319	19.04	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.2%			
Target Compounds							QValue
4:2FTS	5.514	327.0 -> 307.0	120714	20.00	µg/L		100
6:2FTS	7.313	427.0 -> 407.0	178358	20.28	µg/L		100
8:2FTS	8.282	527.0 -> 507.0	183128	20.03	µg/L		100
EtFOSAA	8.290	584.0 -> 419.0	72116	19.72	µg/L	m	88
FOSA	7.817	498.0 -> 78.0	104423	19.73	µg/L		100
MeFOSAA	8.190	570.0 -> 419.0	85955	19.82	µg/L	m	99
PFBA	1.833	213.0 -> 169.0	58998	19.89	µg/L		100
PFBS	4.448	299.0 -> 80.0	48573	19.70	µg/L		100
PFDA	8.258	513.0 -> 469.0	445555	19.15	µg/L		100
PFDoDA	8.957	613.0 -> 569.0	746103	19.74	µg/L		100
PFDS	8.566	599.0 -> 80.0	26367	19.53	µg/L		100
PFHpA	6.608	363.0 -> 319.0	461193	19.73	µg/L		100
PFHpS	7.337	449.0 -> 80.0	50490	20.18	µg/L		100
PFHxA	5.630	313.0 -> 269.0	125427	19.89	µg/L		100
PFHxS	6.643	399.0 -> 80.0	51525	19.87	µg/L	m	96
PFNA	7.855	463.0 -> 419.0	398792	19.37	µg/L		100
PFNS	8.230	549.0 -> 80.0	48837	20.13	µg/L		100
PFOA	7.339	413.0 -> 369.0	317649	19.59	µg/L		100
PFOS	7.841	499.0 -> 80.0	63094	19.89	µg/L	m	82
PFPeA	4.076	263.0 -> 219.0	219660	19.90	µg/L		100
PFPeS	5.764	349.0 -> 80.0	37588	19.68	µg/L		100
PFTeDA	9.947	713.0 -> 669.0	826841	19.92	µg/L		100
PFTrDA	9.420	663.0 -> 619.0	809947	20.37	µg/L		100
PFUnDA	8.607	563.0 -> 519.0	583866	19.68	µg/L		100
11Cl-PF3OUdS	8.717	631.0 -> 451.0	231099	19.34	µg/L		100
9Cl-PF3ONS	8.053	531.0 -> 351.0	50573	18.56	µg/L		100
ADONA	6.709	377.0 -> 251.0	591732	19.91	µg/L		100
HFPO-DA	5.941	329.0 -> 169.0	86169	20.14	µg/L		100
br-PFOS	7.690	499.0 -> 80.0	20764	4.64	µg/L		100
LN-PFOS	7.841	499.0 -> 80.0	42330	15.34	µg/L		100
br-PFHxS	6.466	399.0 -> 80.0	7174	2.38	µg/L		100
LN-PFHxS	6.643	399.0 -> 80.0	44351	17.49	µg/L		100
br-PFOA	7.339	413.0 -> 369.0	317649	19.59	µg/L		100
LN-PFOA	7.339	413.0 -> 369.0	317649	19.59	µg/L		100
br-PFNA	7.855	463.0 -> 419.0	398792	19.37	µg/L		100
LN-PFNA	7.855	463.0 -> 419.0	398792	19.37	µg/L		100

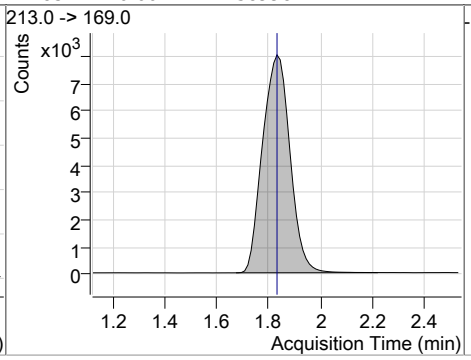
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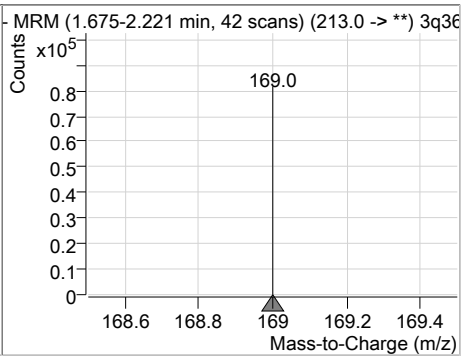
Perfluorinated Compounds by LC/MS/MS



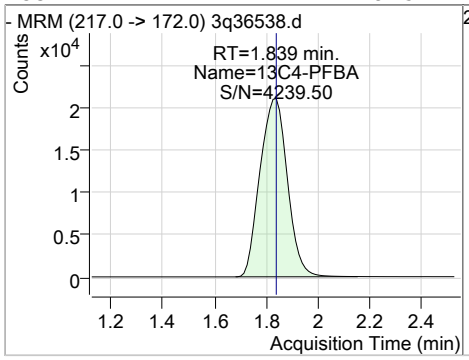
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.89	1.83	0.00	58998				

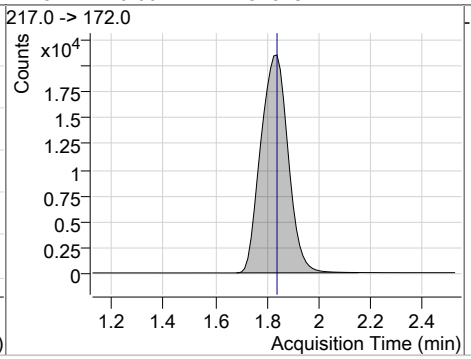


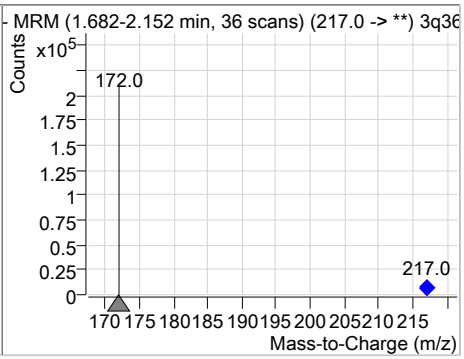




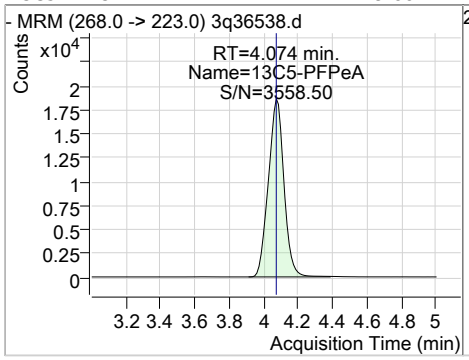
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.75	1.84	0.00	154813				

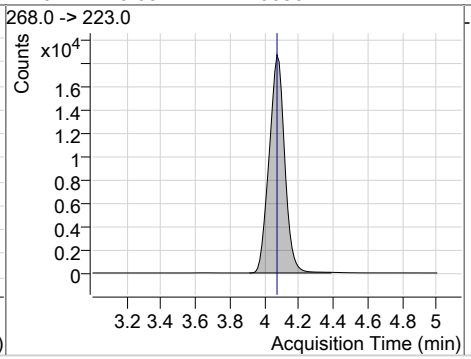


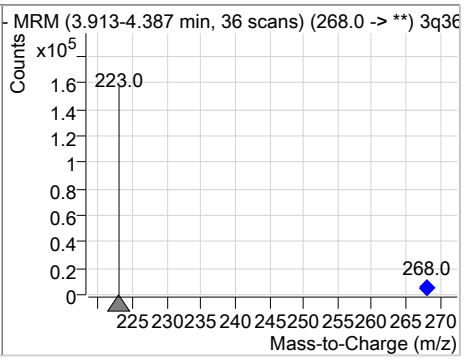




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.88	4.07	0.00	116686				





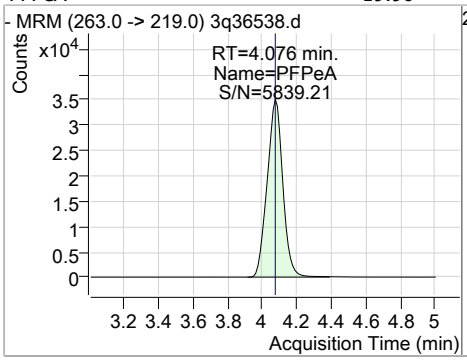


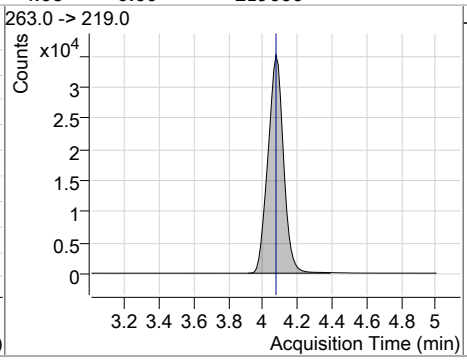
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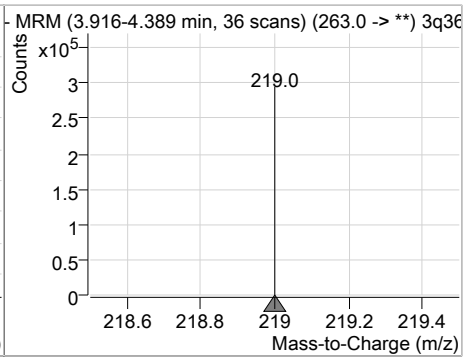
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Perfluorinated Compounds by LC/MS/MS

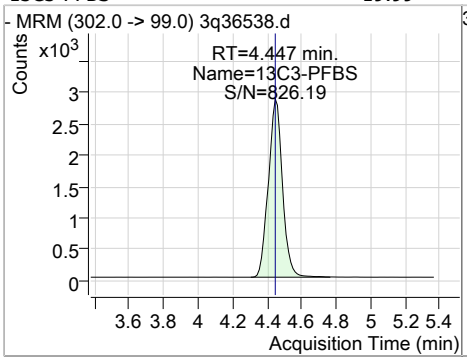
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.90	4.08	0.00	219660				

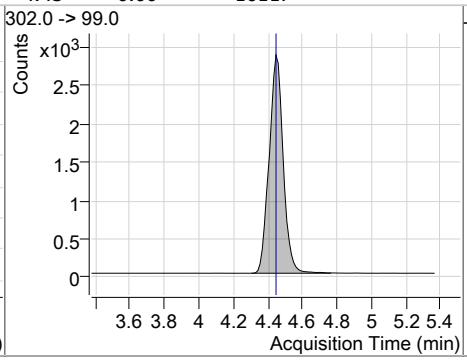


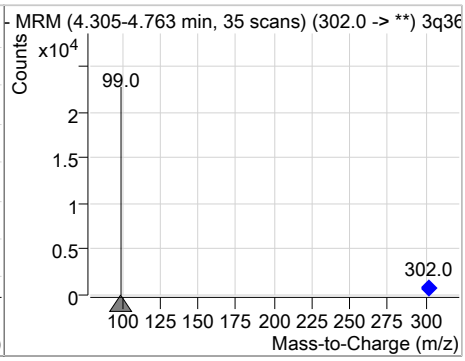




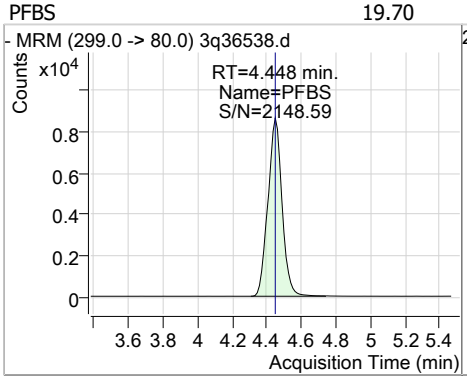
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.99	4.45	0.00	16117				

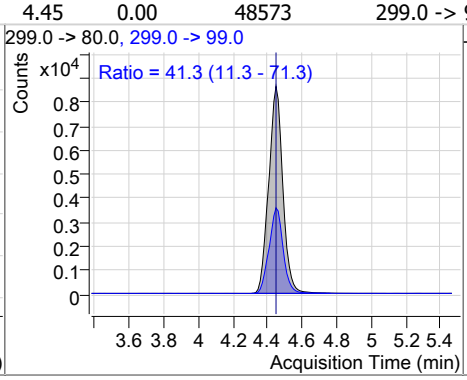


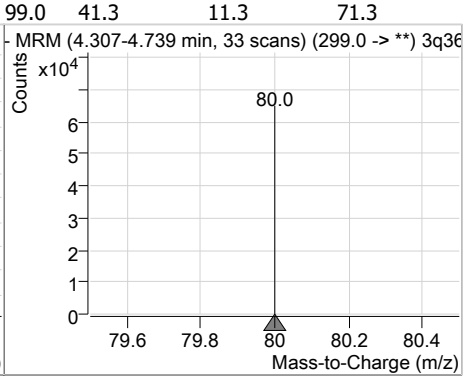




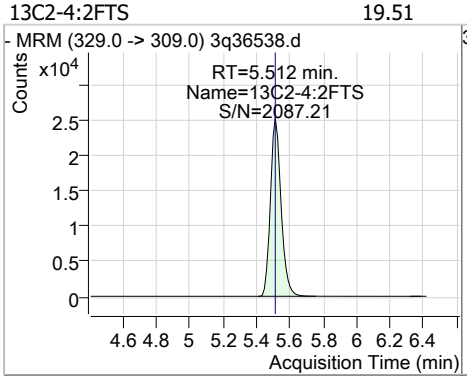
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.70	4.45	0.00	48573	299.0 -> 99.0	41.3	11.3	71.3

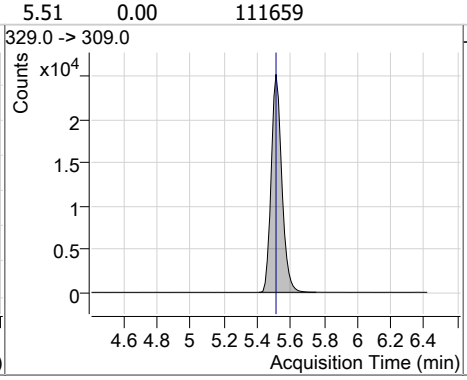


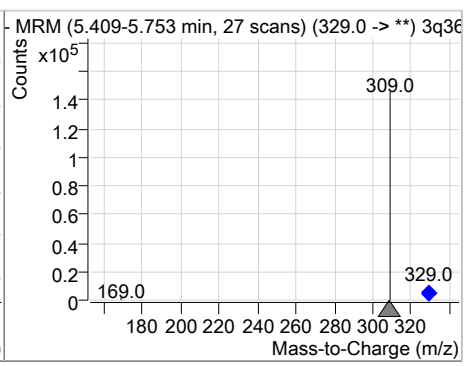




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.51	5.51	0.00	111659				

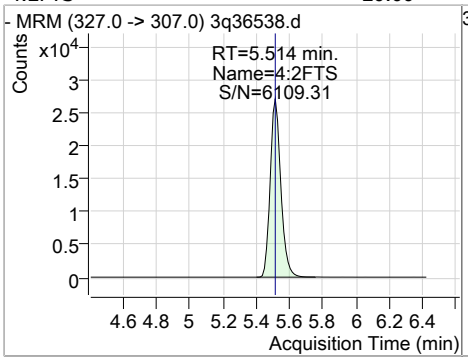


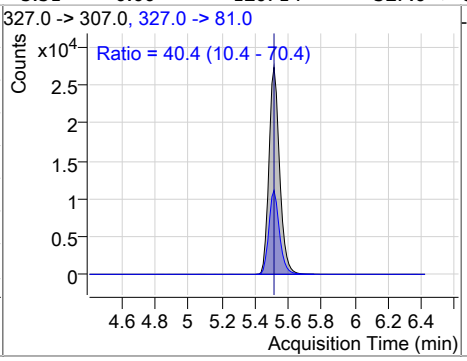


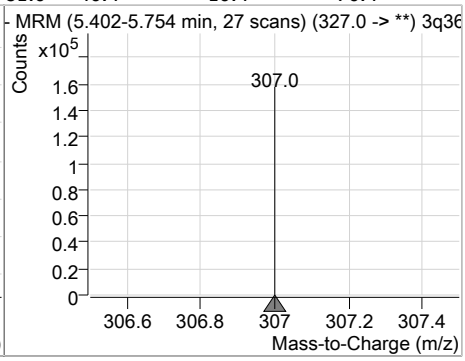


Perfluorinated Compounds by LC/MS/MS

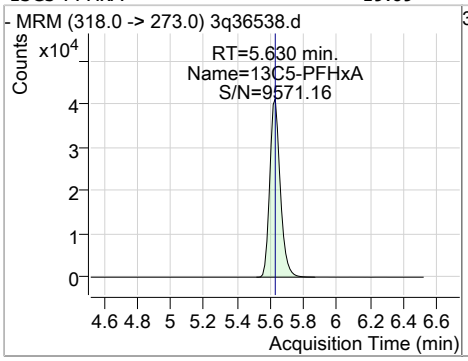
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.00	5.51	0.00	120714	327.0 -> 81.0	40.4	10.4	70.4

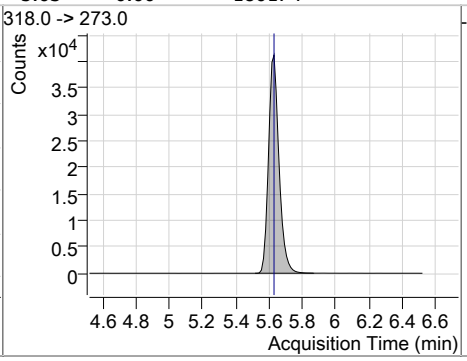


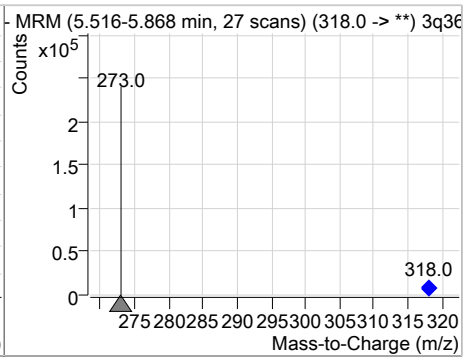




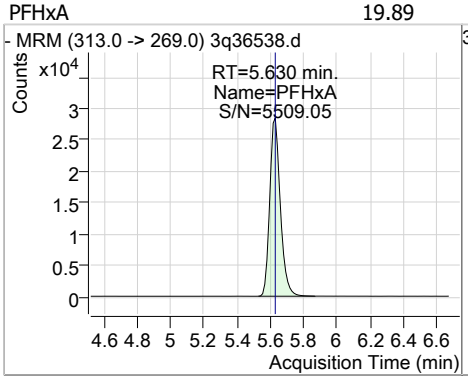
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.69	5.63	0.00	180174				

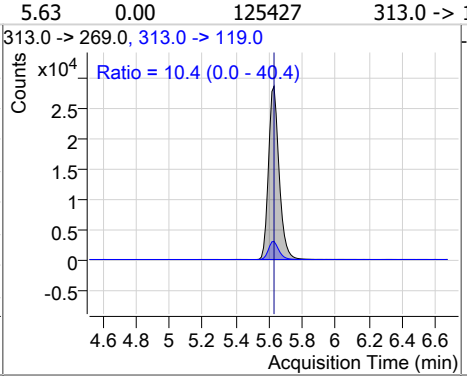


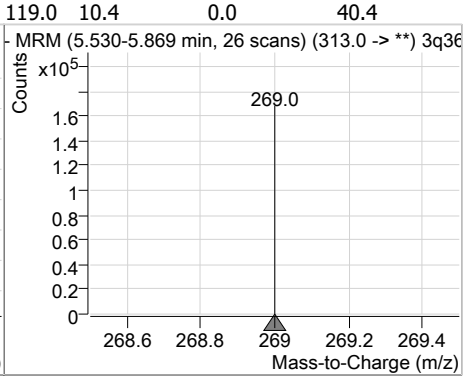




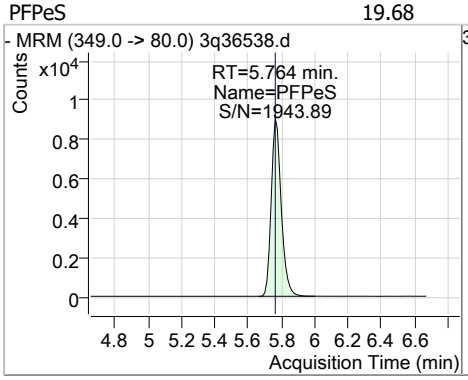
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.89	5.63	0.00	125427	313.0 -> 119.0	10.4	0.0	40.4

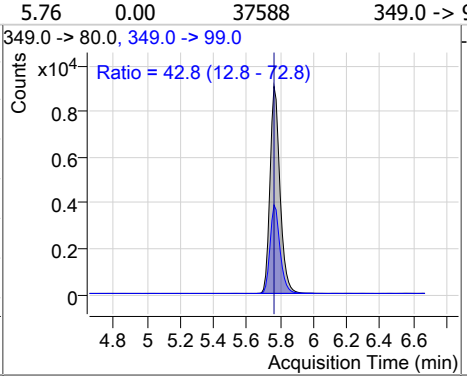


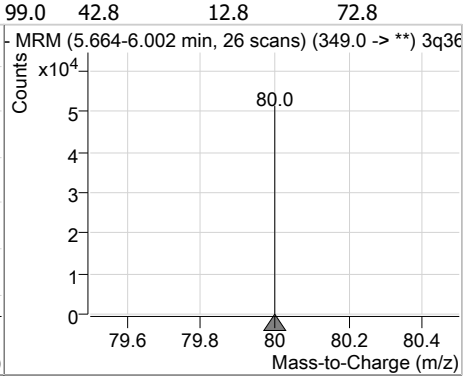




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	19.68	5.76	0.00	37588	349.0 -> 99.0	42.8	12.8	72.8





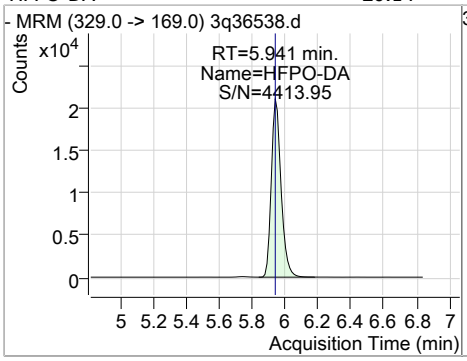


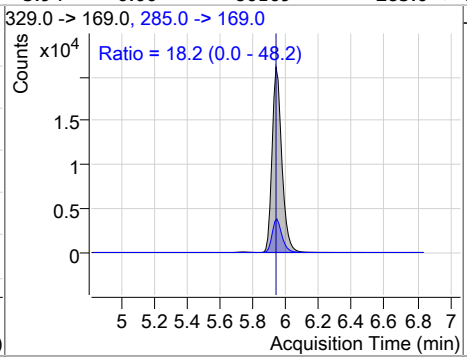
11.6.21

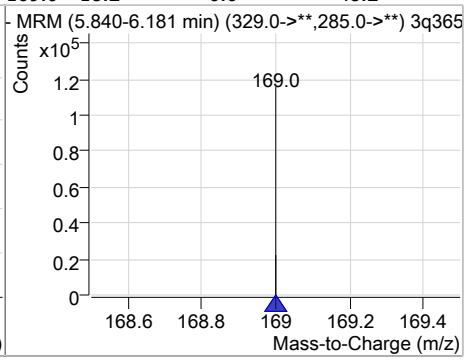
11

Perfluorinated Compounds by LC/MS/MS

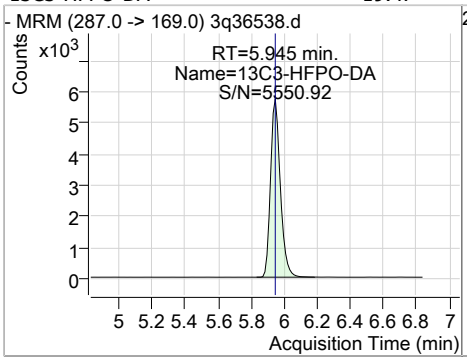
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	20.14	5.94	0.00	86169	285.0 -> 169.0	18.2	0.0	48.2

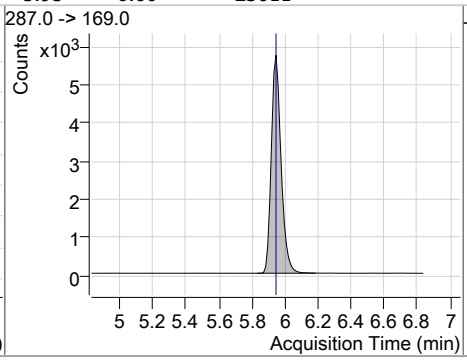


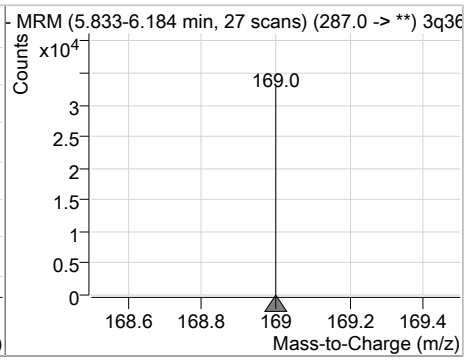




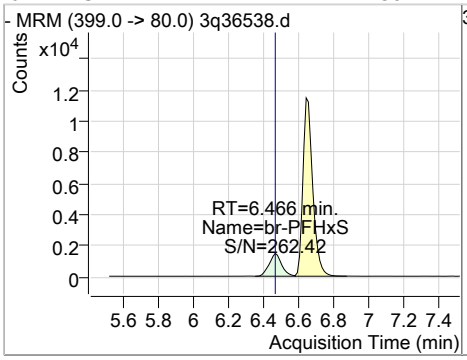
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.47	5.95	0.00	23611				

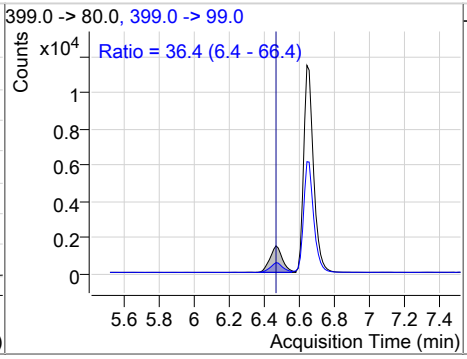


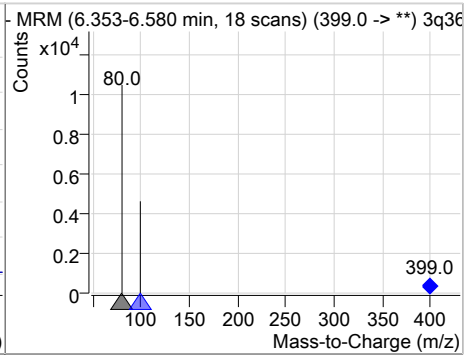




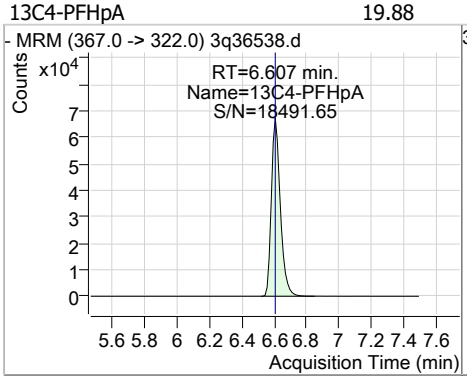
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	2.38	6.47	0.00	7174	399.0 -> 99.0	36.4	6.4	66.4

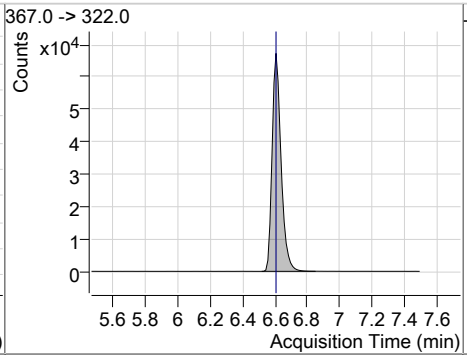


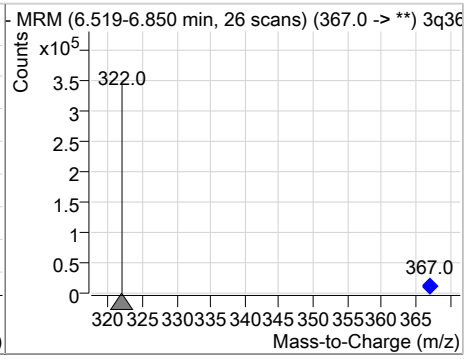




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.88	6.61	0.00	257686				





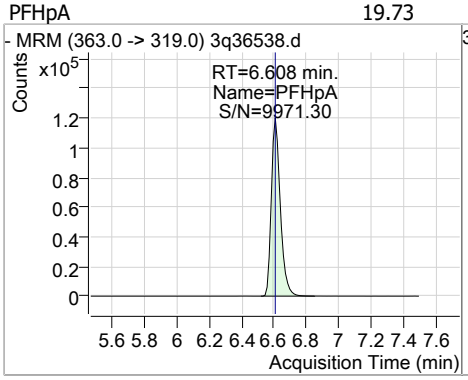


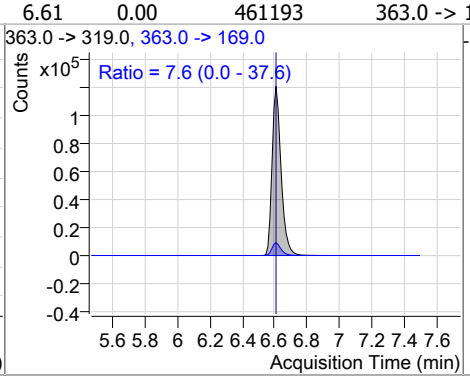
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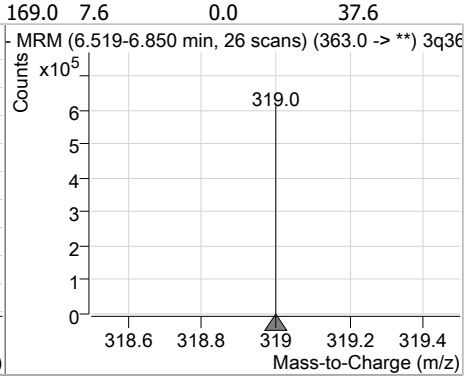
11

Perfluorinated Compounds by LC/MS/MS

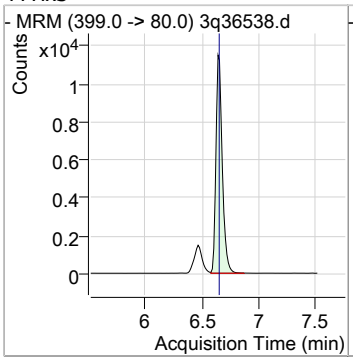
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	19.73	6.61	0.00	461193	363.0 -> 169.0	7.6	0.0	37.6

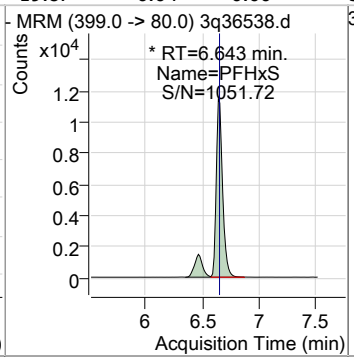


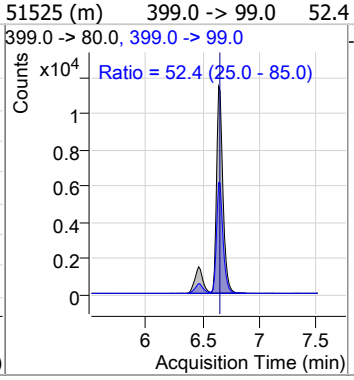


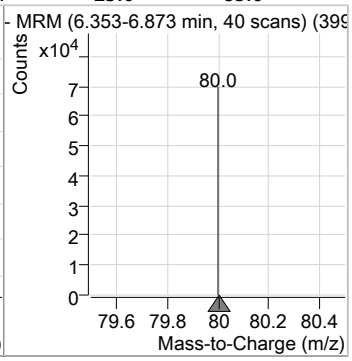


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	19.87	6.64	0.00	51525 (m)	399.0 -> 99.0	52.4	25.0	85.0

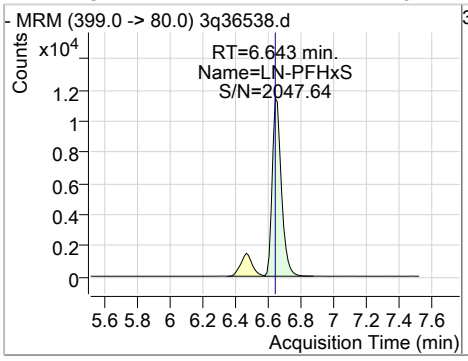


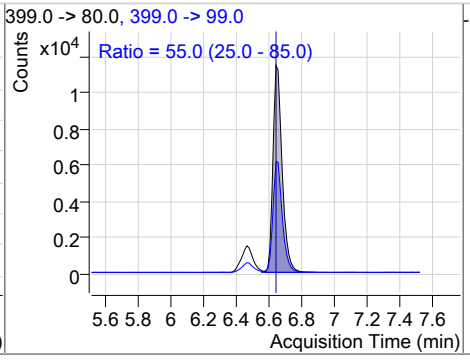


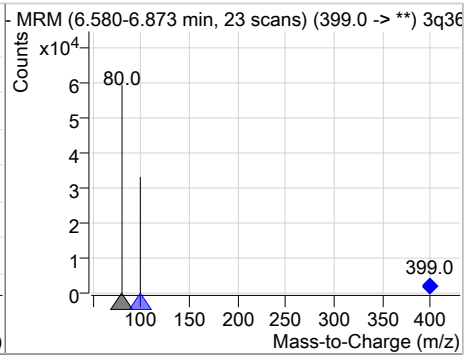




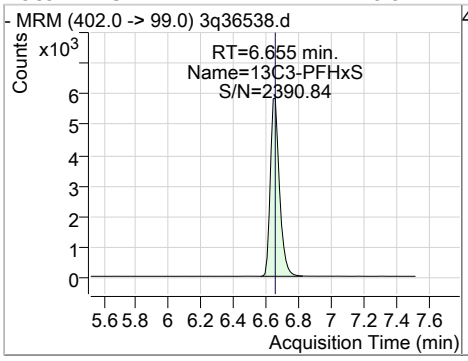
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	17.49	6.64	0.00	44351	399.0 -> 99.0	55.0	25.0	85.0

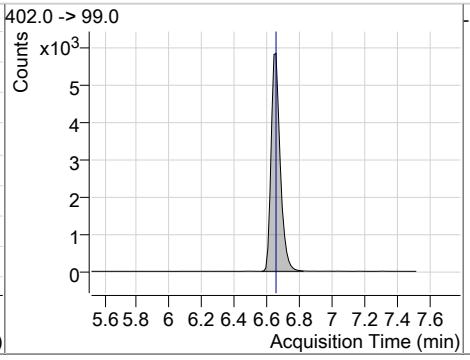


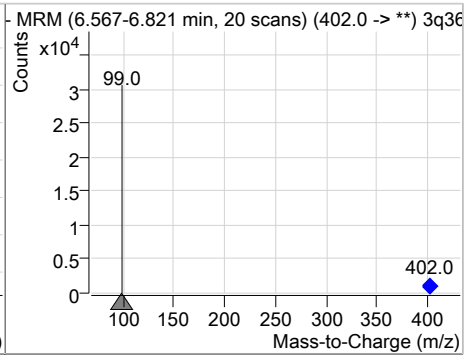




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.92	6.65	0.00	22681				





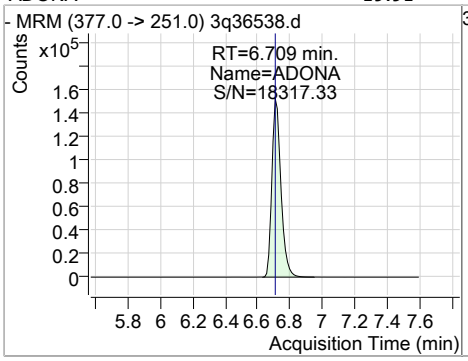


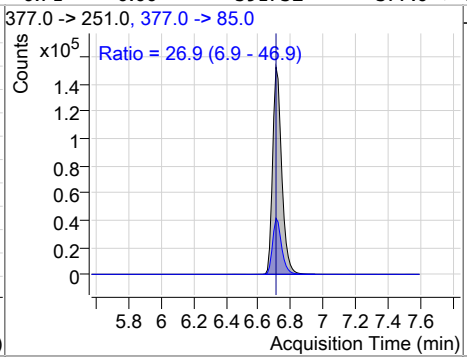
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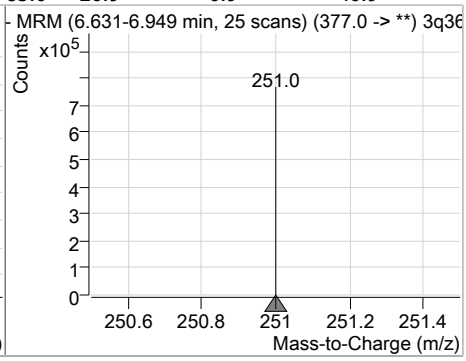
11

Perfluorinated Compounds by LC/MS/MS

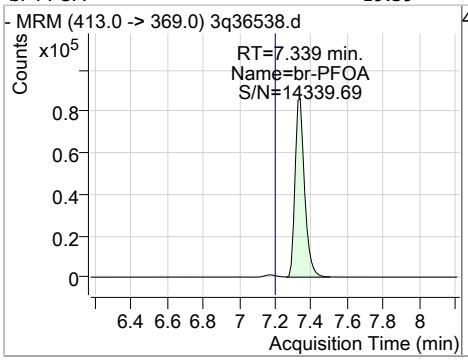
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	19.91	6.71	0.00	591732	377.0 -> 85.0	26.9	6.9	46.9

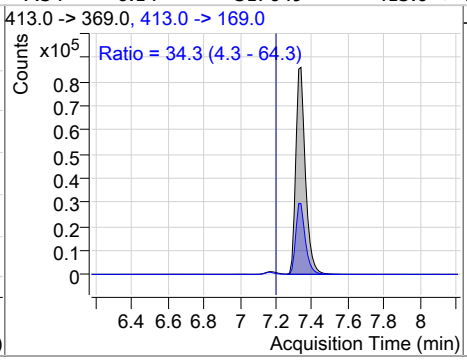


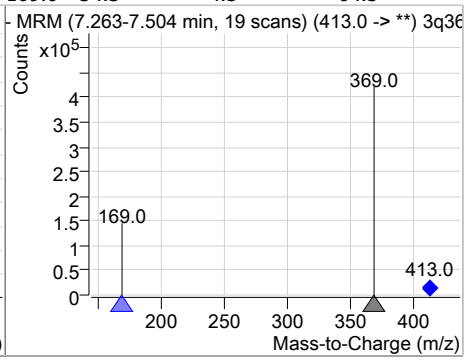




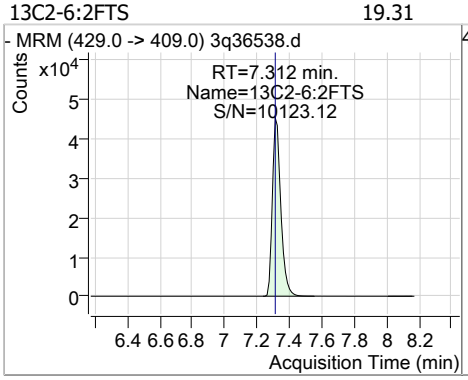
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	19.59	7.34	0.14	317649	413.0 -> 169.0	34.3	4.3	64.3

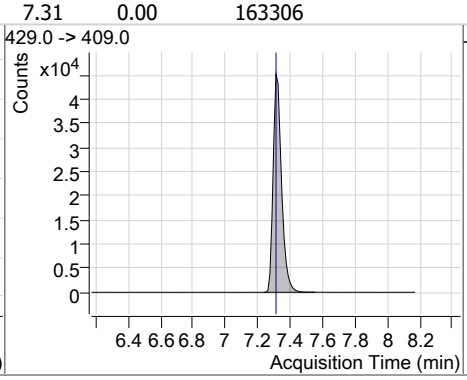


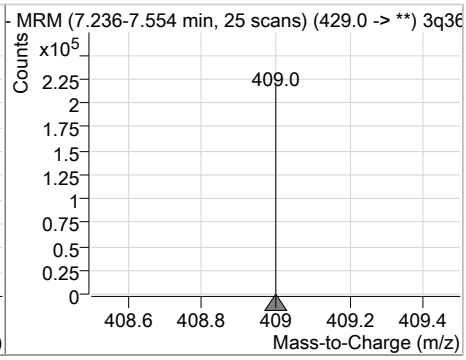




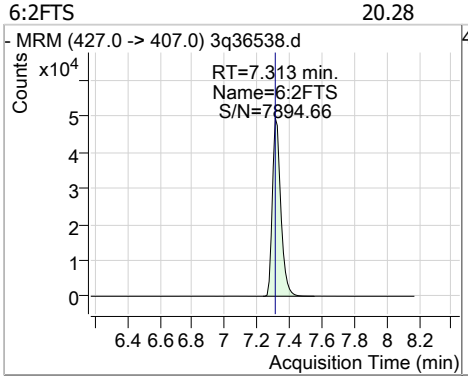
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.31	7.31	0.00	163306				

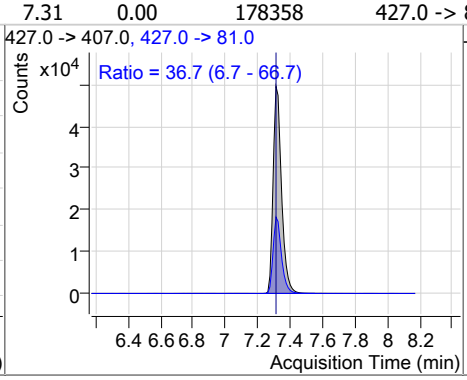


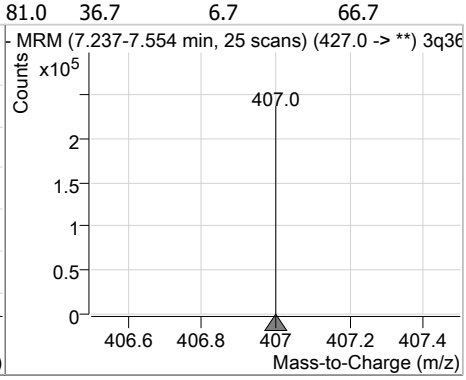




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	20.28	7.31	0.00	178358	427.0 -> 81.0	36.7	6.7	66.7

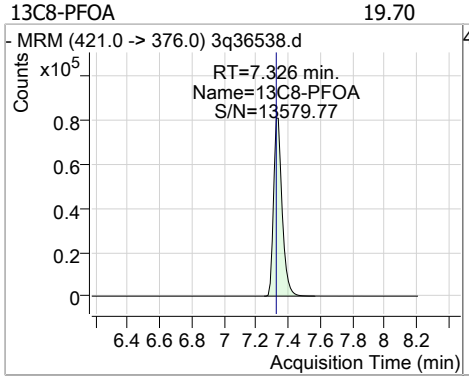


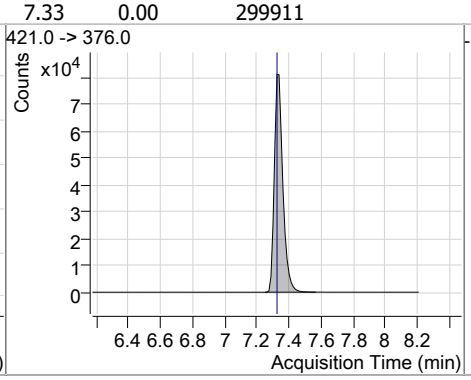


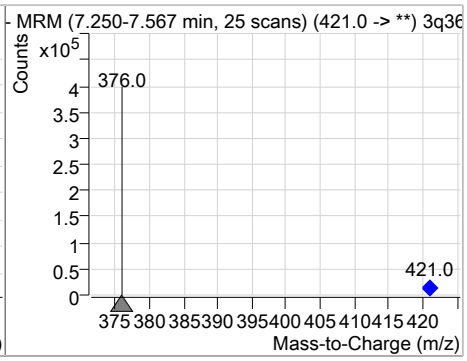


Perfluorinated Compounds by LC/MS/MS

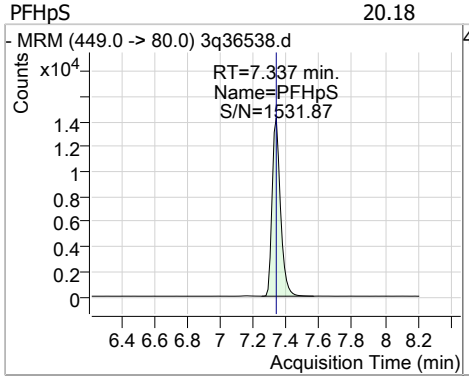
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.70	7.33	0.00	299911				

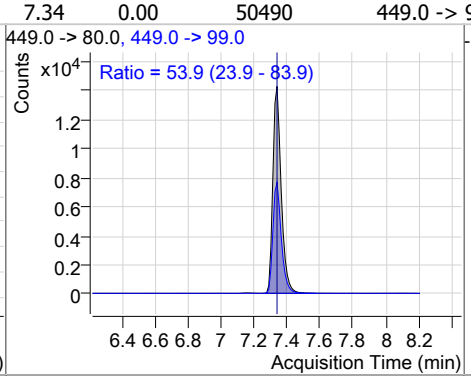


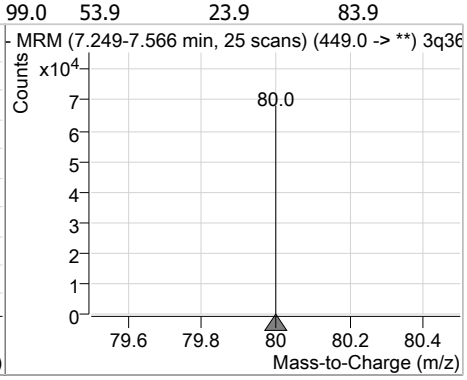




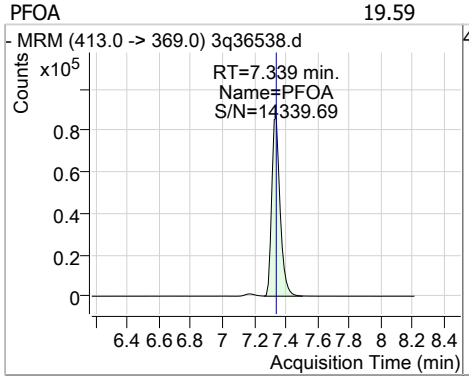
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	20.18	7.34	0.00	50490	449.0 -> 99.0	53.9	23.9	83.9

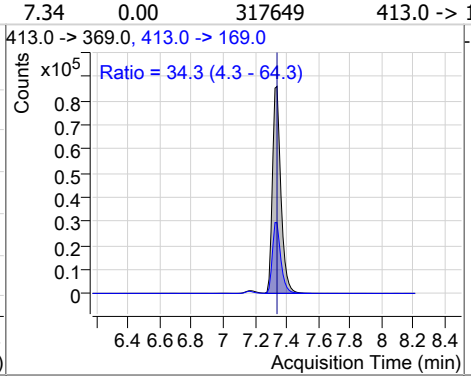


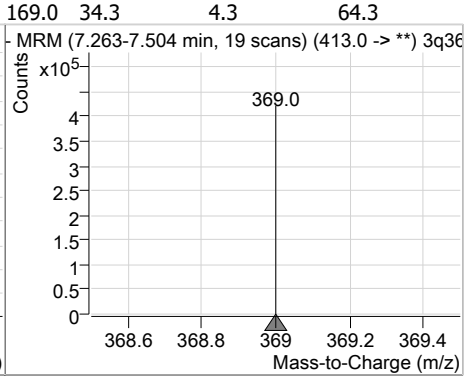




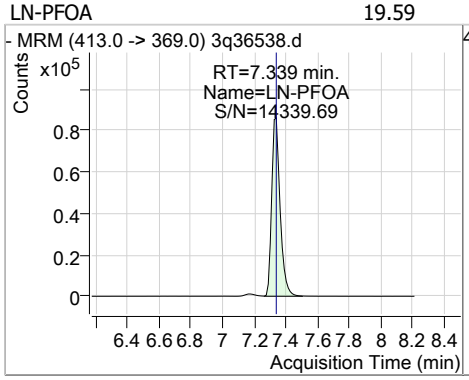
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.59	7.34	0.00	317649	413.0 -> 169.0	34.3	4.3	64.3

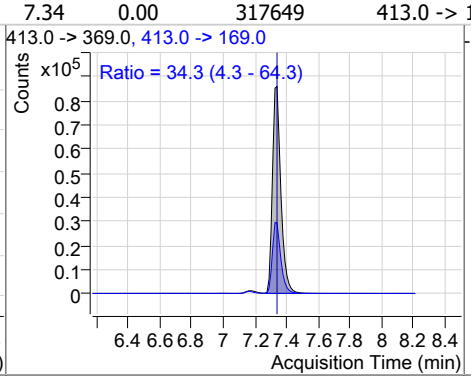


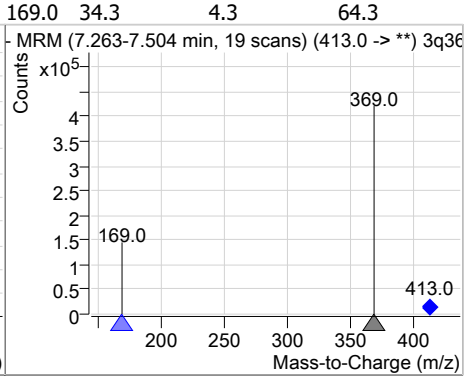




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	19.59	7.34	0.00	317649	413.0 -> 169.0	34.3	4.3	64.3

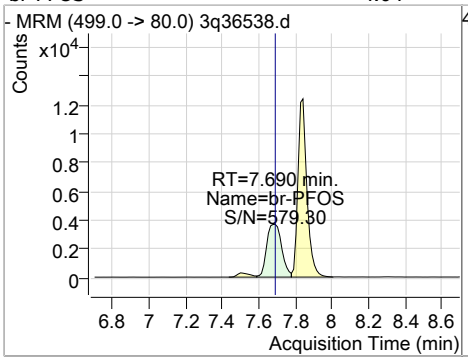


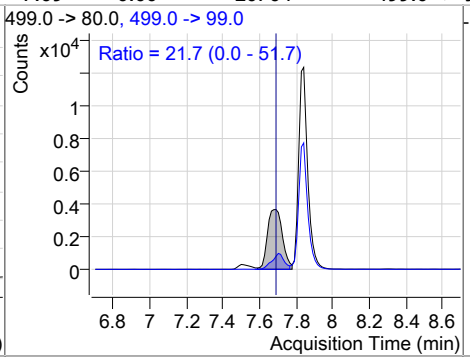


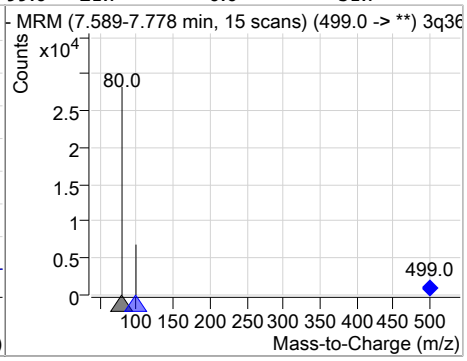


Perfluorinated Compounds by LC/MS/MS

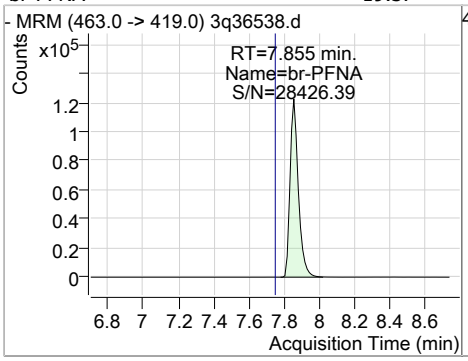
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	4.64	7.69	0.00	20764	499.0 -> 99.0	21.7	0.0	51.7

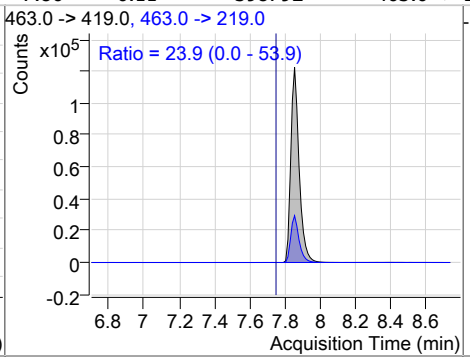


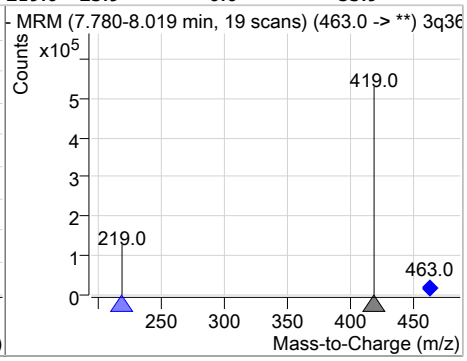




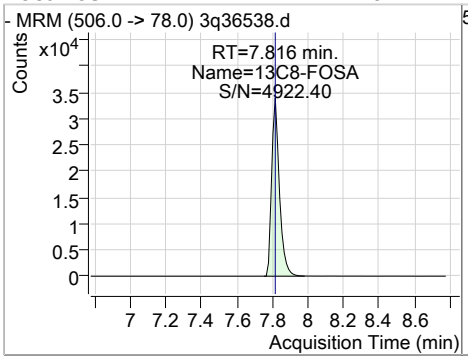
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFNA	19.37	7.86	0.11	398792	463.0 -> 219.0	23.9	0.0	53.9

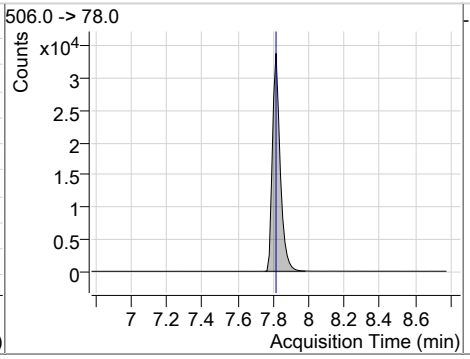


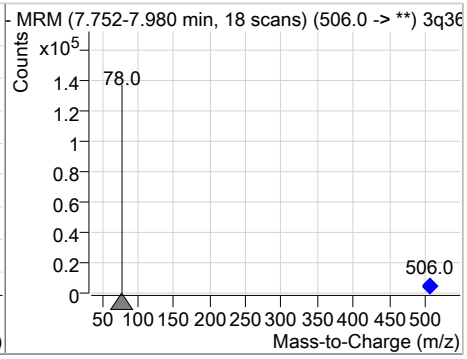




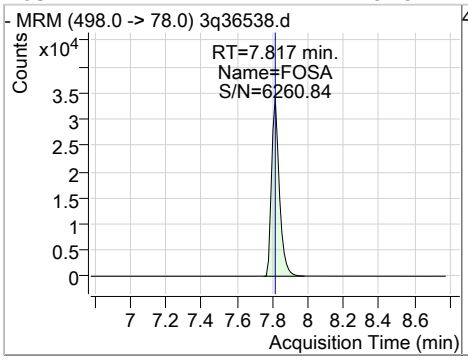
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	19.47	7.82	0.00	103368				

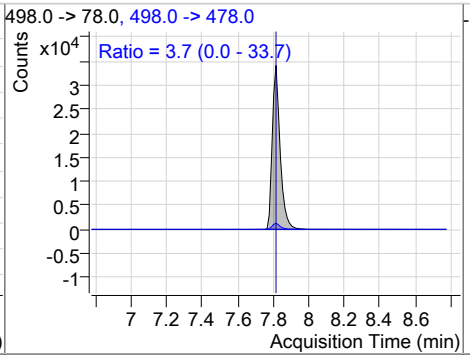


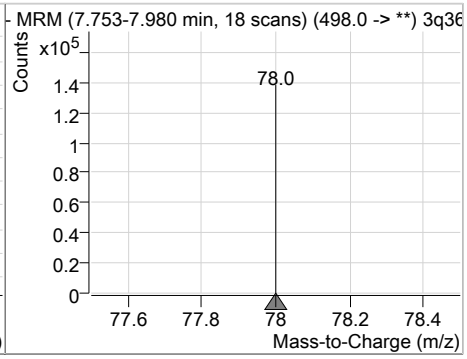




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	19.73	7.82	0.00	104423	498.0 -> 478.0	3.7	0.0	33.7

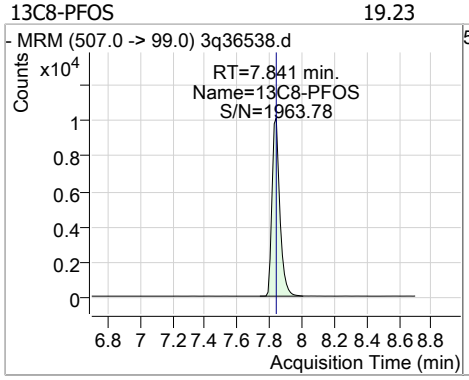


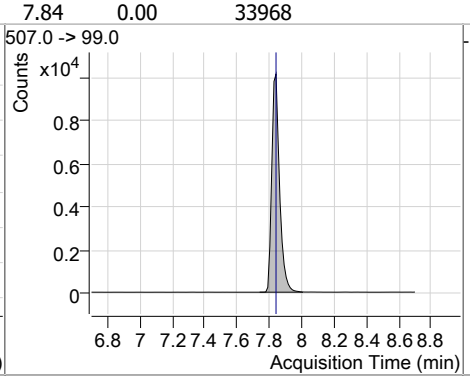


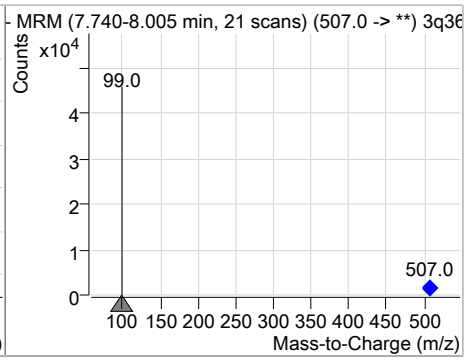


Perfluorinated Compounds by LC/MS/MS

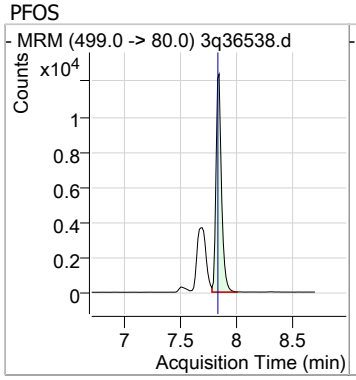
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.23	7.84	0.00	33968				

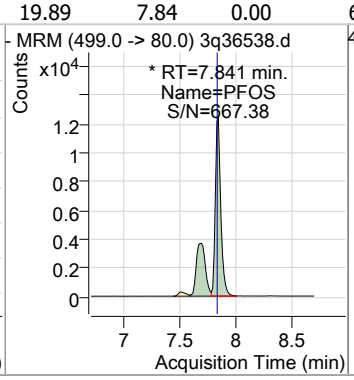


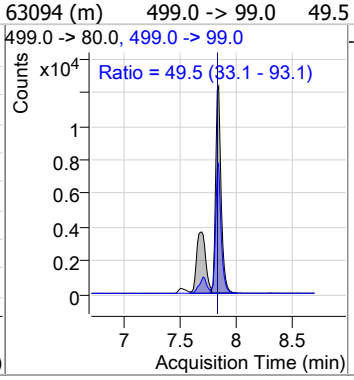


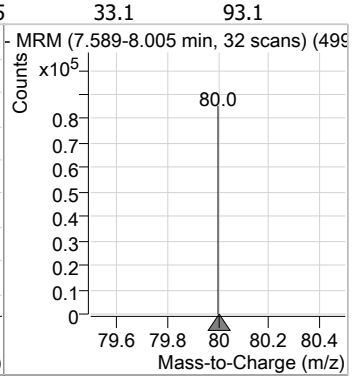


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.89	7.84	0.00	63094 (m)	499.0 -> 99.0	49.5	33.1	93.1

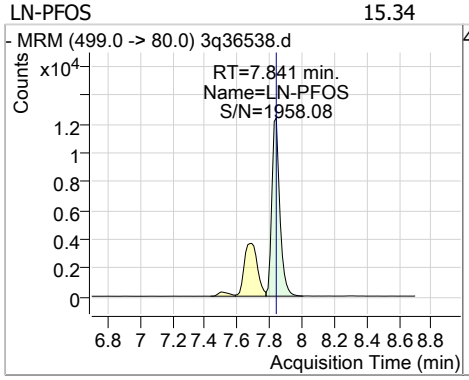


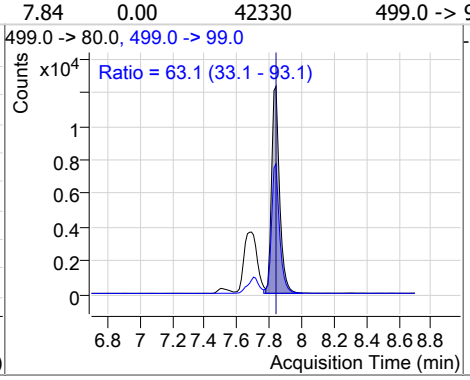


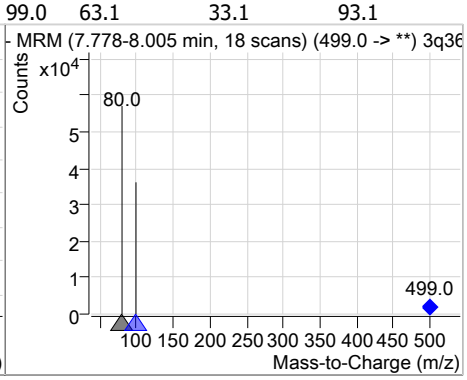




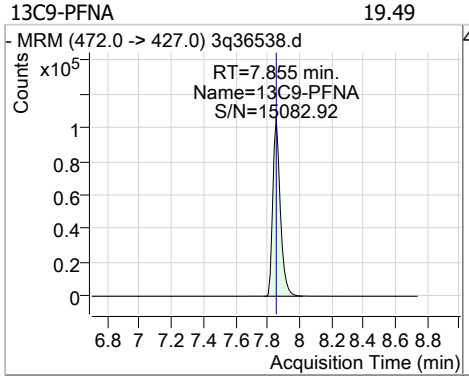
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	15.34	7.84	0.00	42330	499.0 -> 99.0	63.1	33.1	93.1

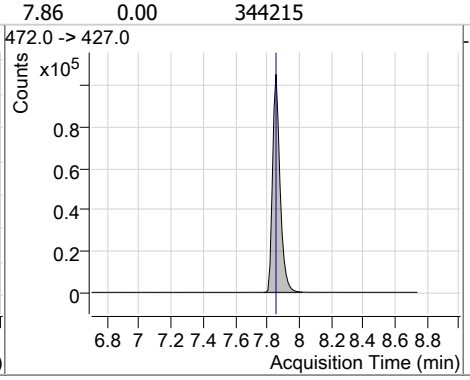


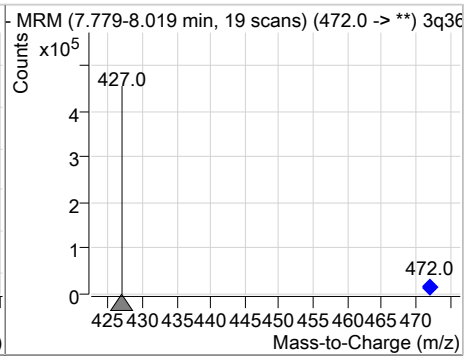




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.49	7.86	0.00	344215				





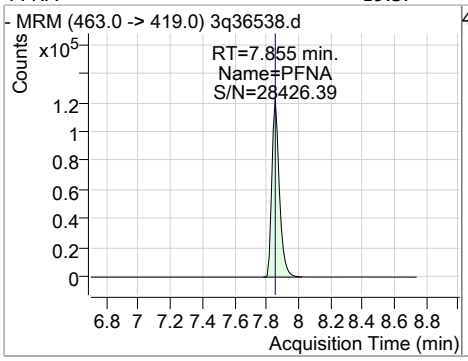


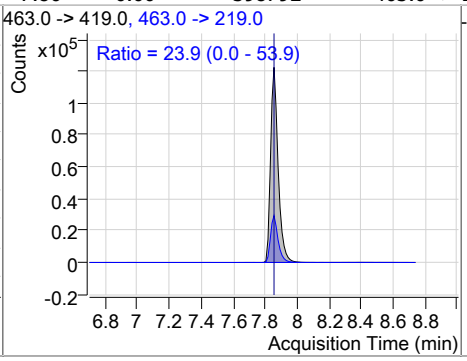
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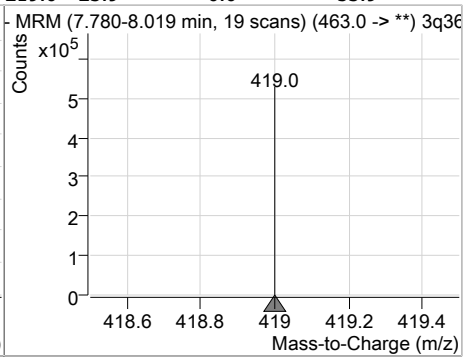
11

Perfluorinated Compounds by LC/MS/MS

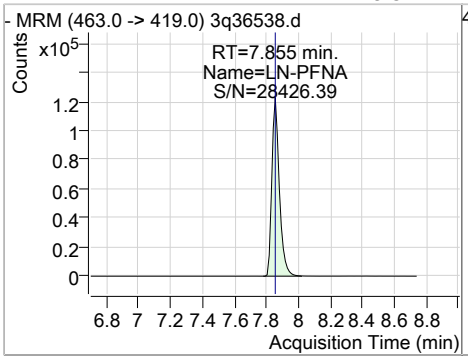
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.37	7.86	0.00	398792	463.0 -> 219.0	23.9	0.0	53.9

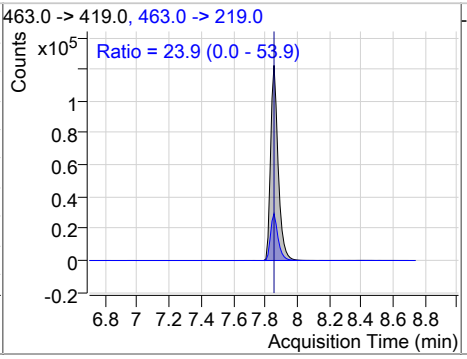


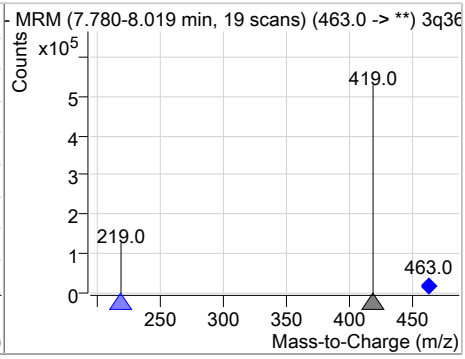




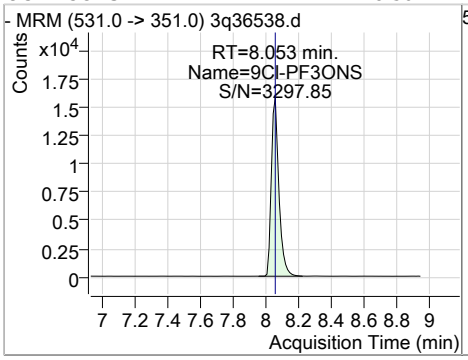
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	19.37	7.86	0.00	398792	463.0 -> 219.0	23.9	0.0	53.9

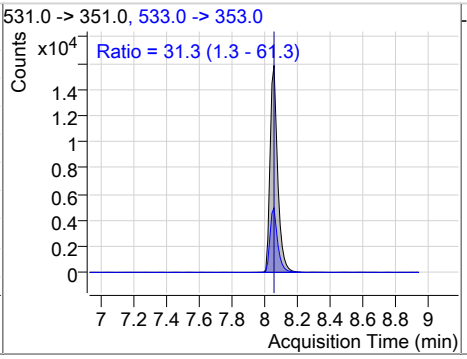


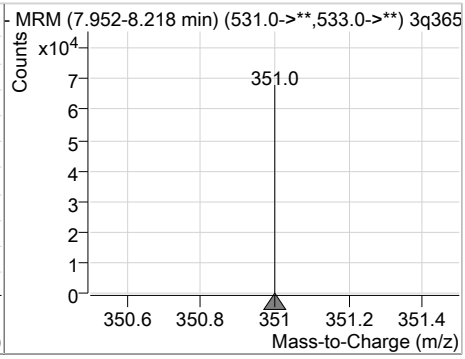




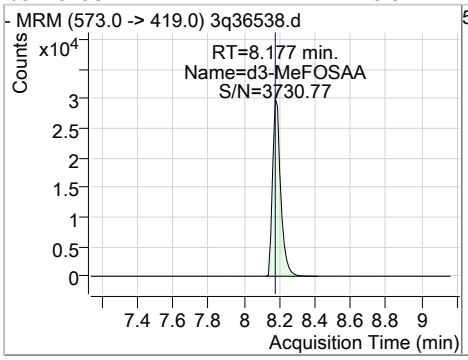
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	18.56	8.05	0.00	50573	533.0 -> 353.0	31.3	1.3	61.3

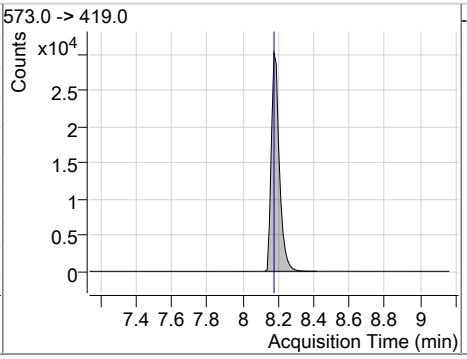


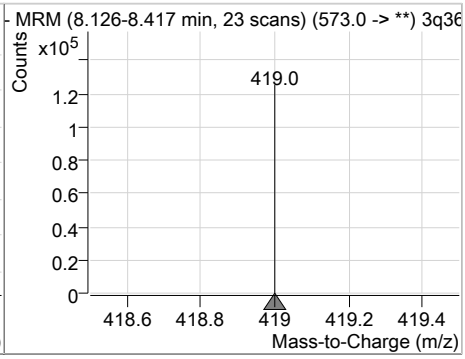




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.91	8.18	0.00	95058				

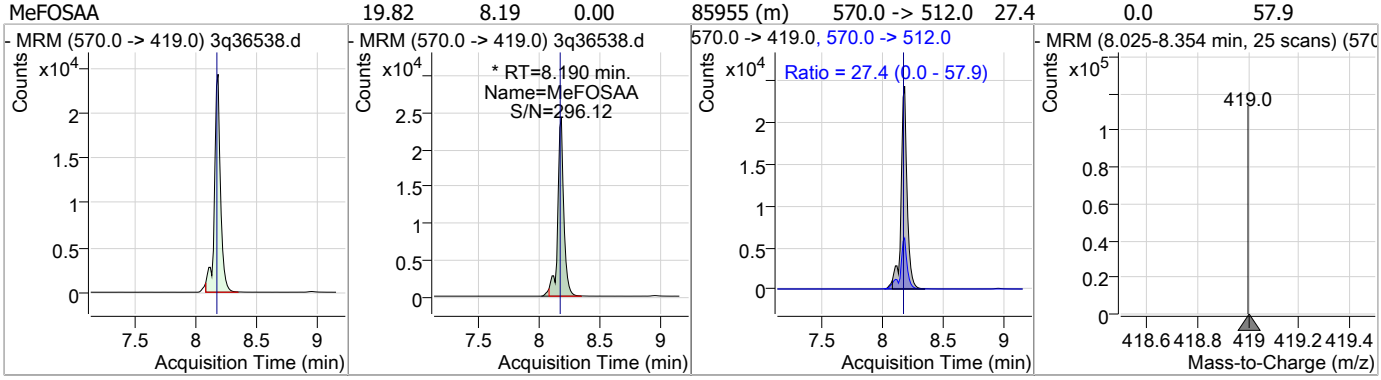




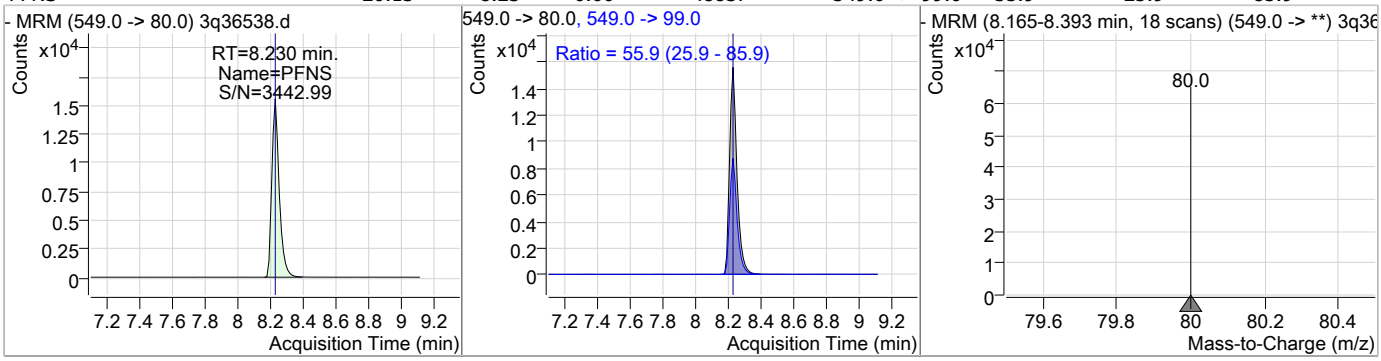


Perfluorinated Compounds by LC/MS/MS

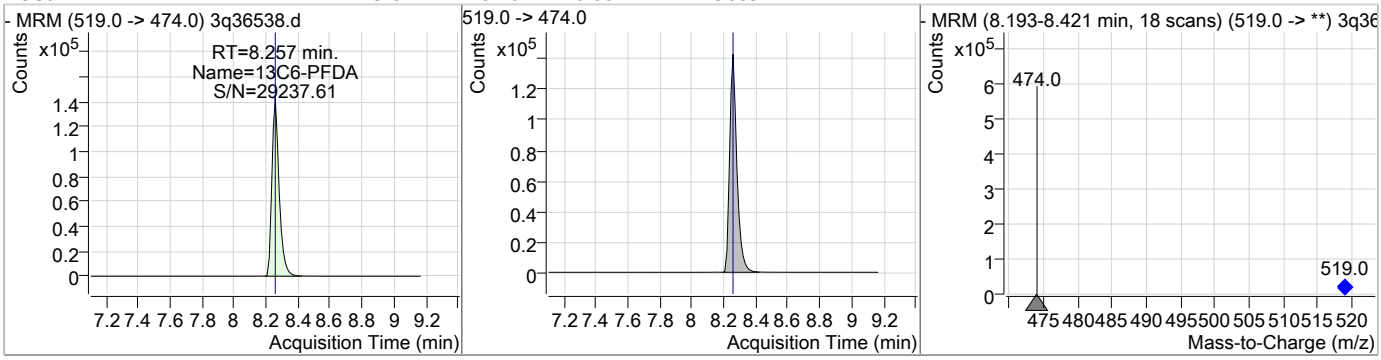
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	19.82	8.19	0.00	85955 (m)	570.0 -> 512.0	27.4	0.0	57.9



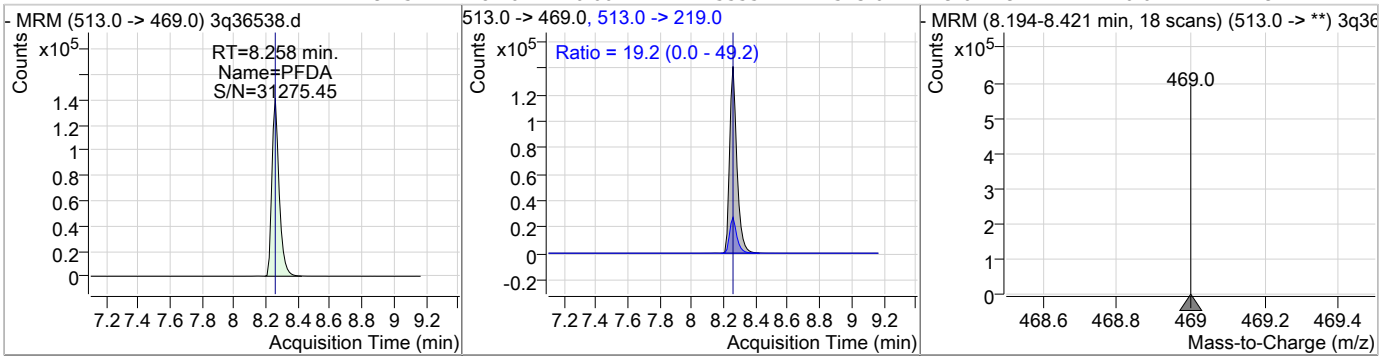
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	20.13	8.23	0.00	48837	549.0 -> 99.0	55.9	25.9	85.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.57	8.26	0.00	449689				

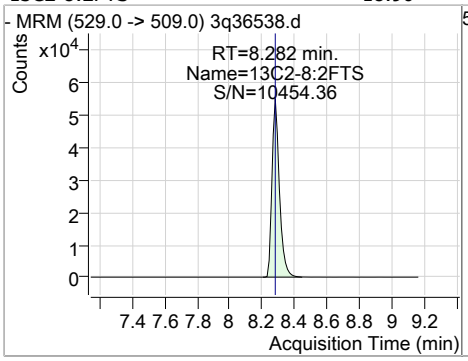


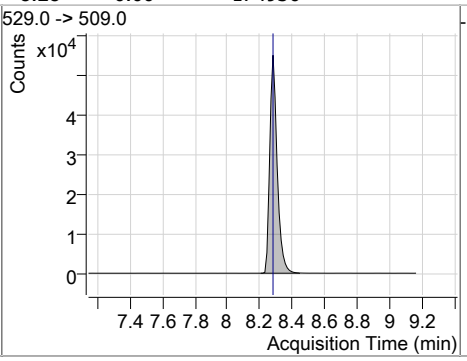
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.15	8.26	0.00	445555	513.0 -> 219.0	19.2	0.0	49.2

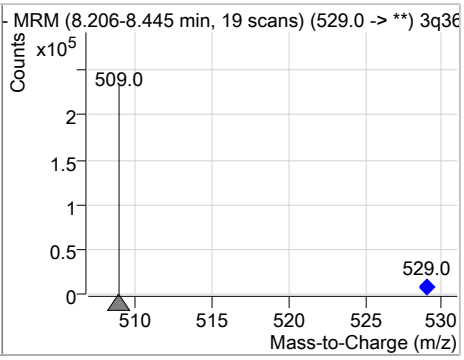


Perfluorinated Compounds by LC/MS/MS

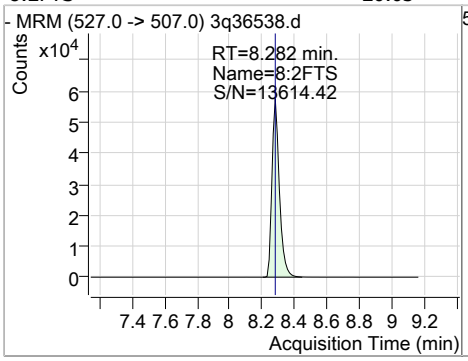
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.90	8.28	0.00	174936				

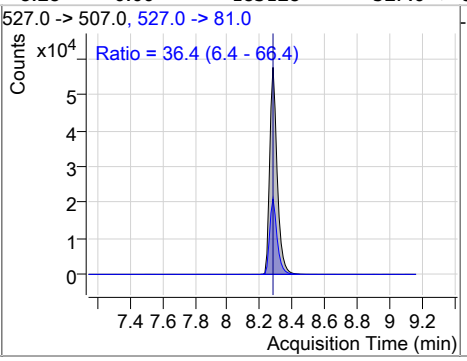


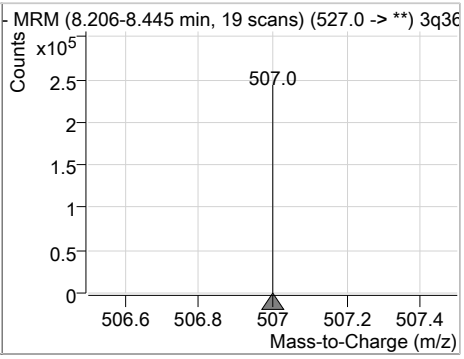




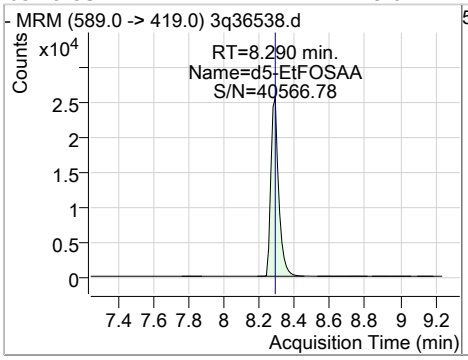
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.03	8.28	0.00	183128	527.0 -> 81.0	36.4	6.4	66.4

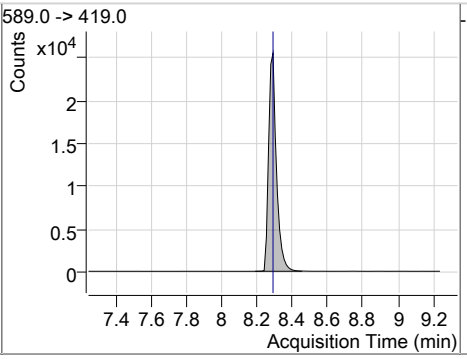


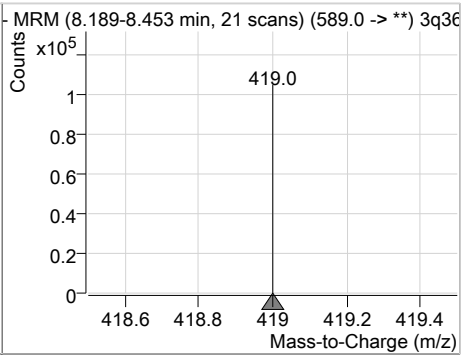




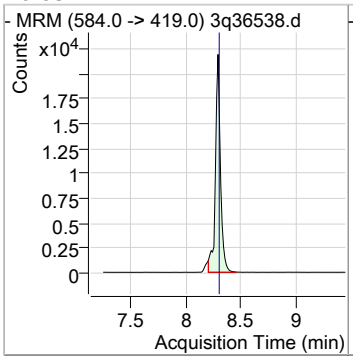
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.04	8.29	0.00	78319				

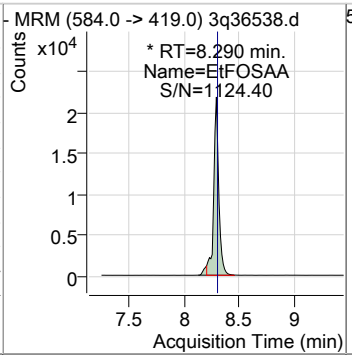


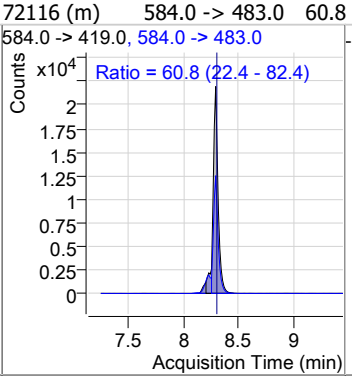


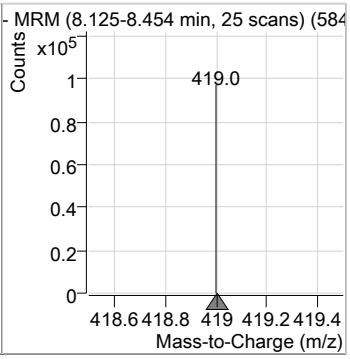


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	19.72	8.29	0.00	72116 (m)	584.0 -> 483.0	60.8	22.4	82.4



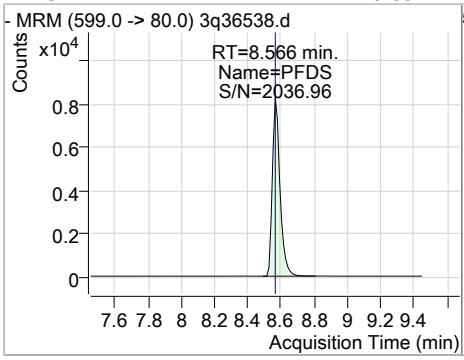


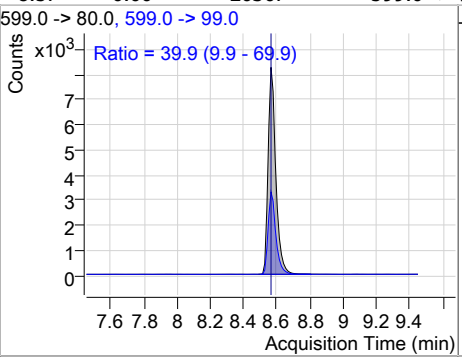


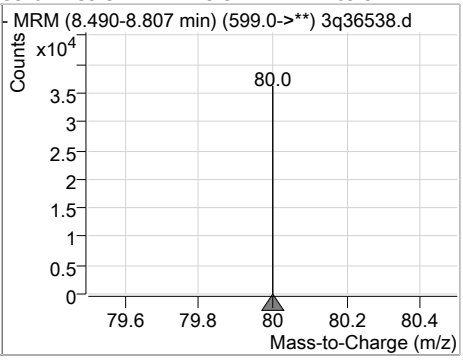


Perfluorinated Compounds by LC/MS/MS

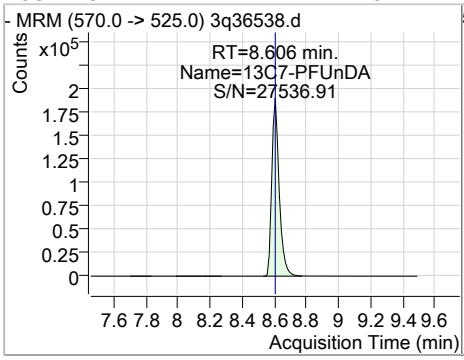
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	19.53	8.57	0.00	26367	599.0 -> 99.0	39.9	9.9	69.9

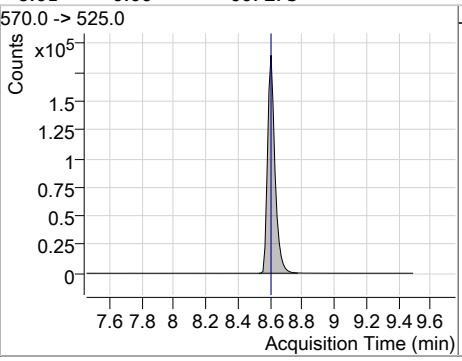


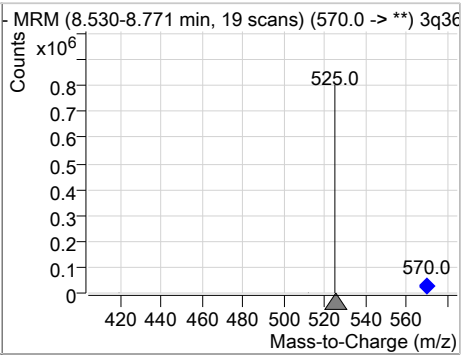




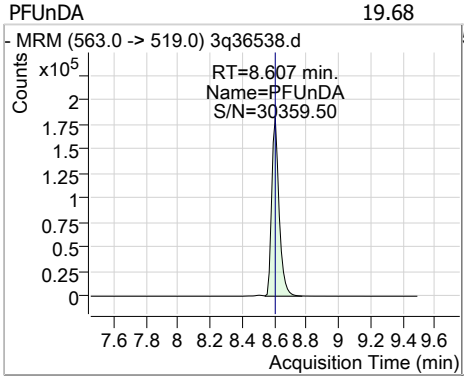
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.21	8.61	0.00	607273				

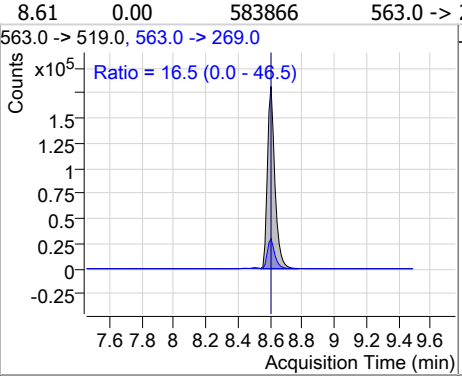


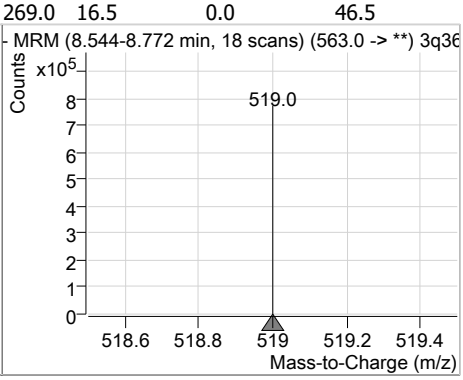




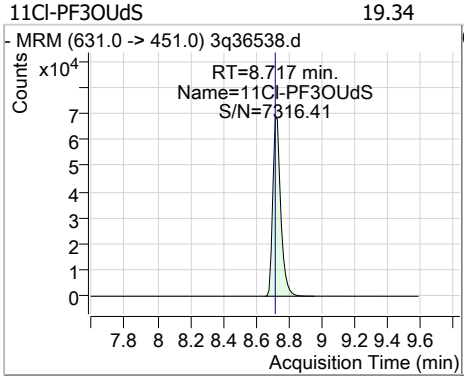
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	19.68	8.61	0.00	583866	563.0 -> 269.0	16.5	0.0	46.5

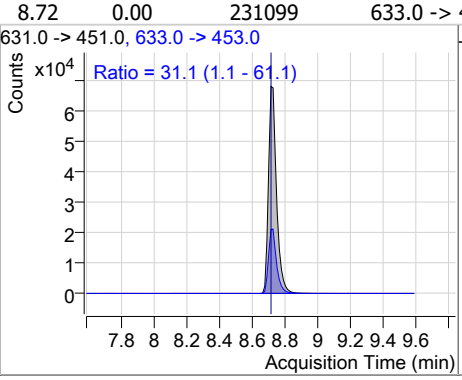


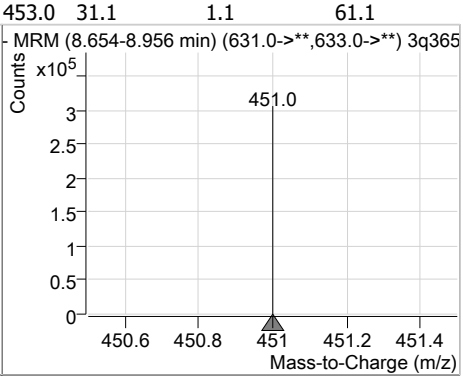




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	19.34	8.72	0.00	231099	633.0 -> 453.0	31.1	1.1	61.1

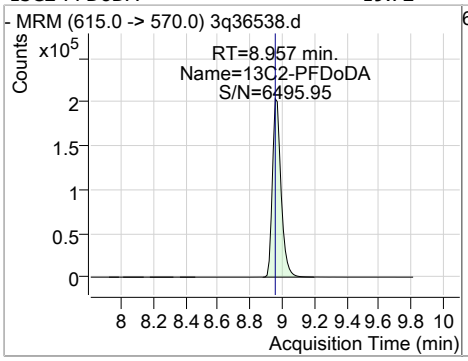


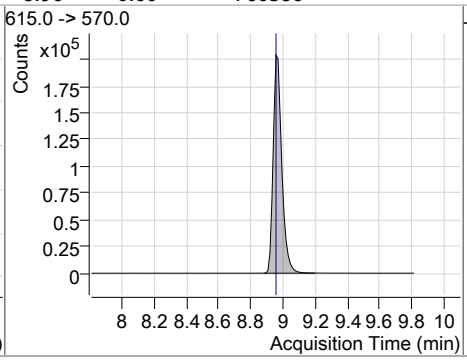


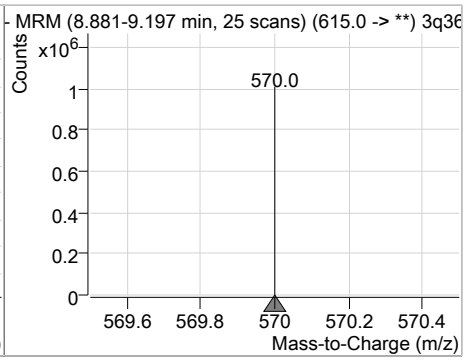


Perfluorinated Compounds by LC/MS/MS

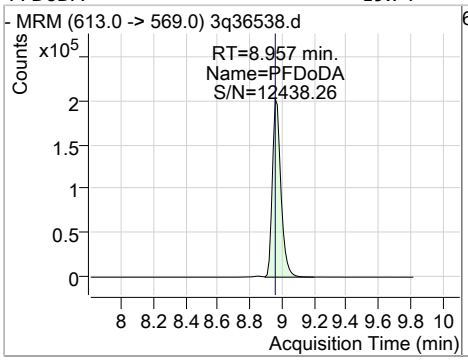
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.72	8.96	0.00	760586				

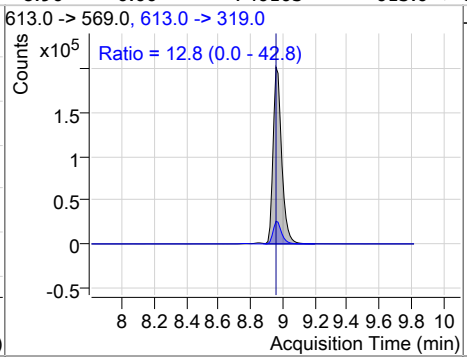


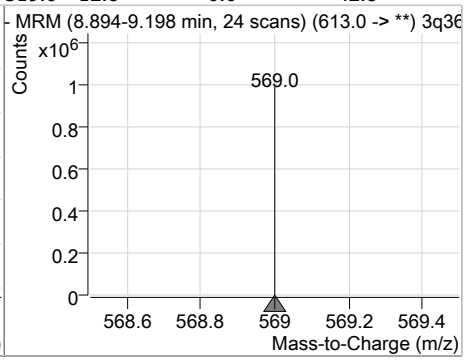




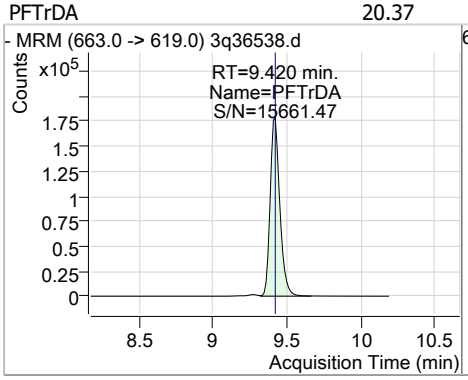
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	19.74	8.96	0.00	746103	613.0 -> 319.0	12.8	0.0	42.8

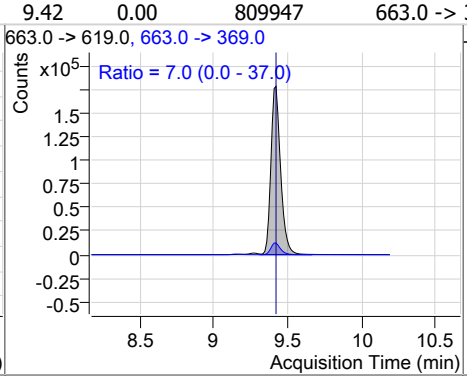


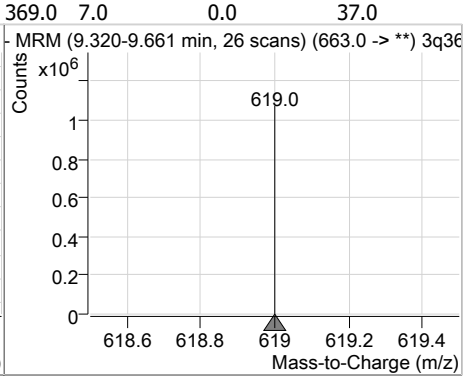




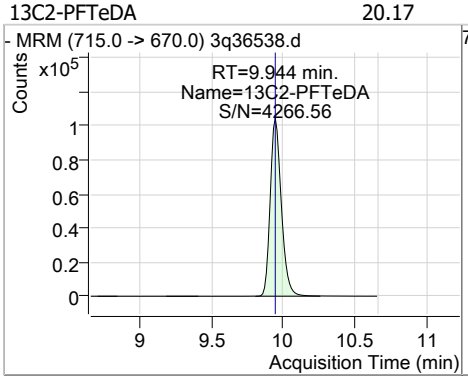
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	20.37	9.42	0.00	809947	663.0 -> 369.0	7.0	0.0	37.0

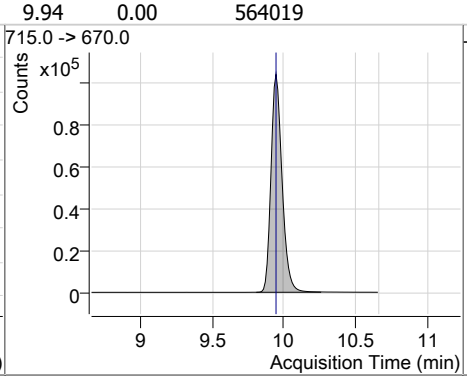


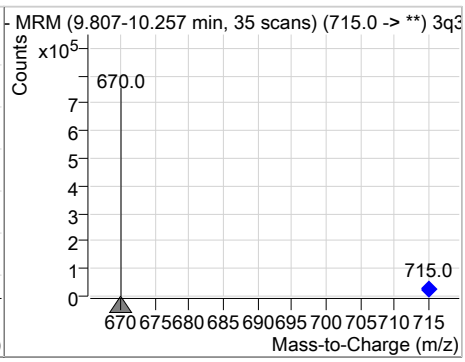




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.17	9.94	0.00	564019				

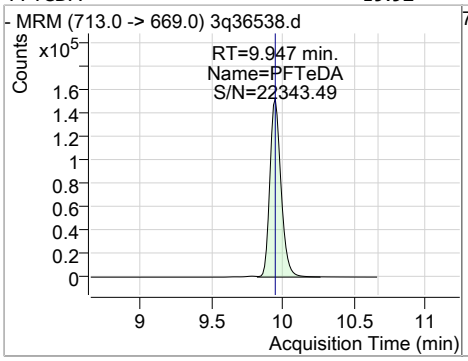


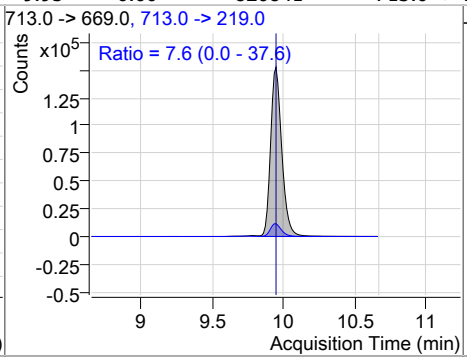


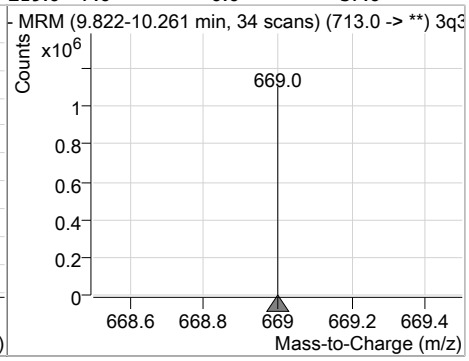


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	19.92	9.95	0.00	826841	713.0 -> 219.0	7.6	0.0	37.6







11.6.21

11

Manual Integration Approval Summary

Sample Number:	S3Q537-ICC537	**Method:**	EPA 537M QSM5.3 B-15
Lab FileID:	3Q36538.D	**Analyst approved:**	04/14/21 10:44 Martha Valls
Injection Time:	04/13/21 15:42	**Supervisor approved:**	04/14/21 15:06 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.64	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.84	Split peak
MeFOSAA	2355-31-9		8.19	Split peak
EtFOSAA	2991-50-6		8.29	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 04/14/21 15:06

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36539.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/13/2021 4:03:36 PM
Sample Name : ic537-50
Vial : P1-A8
DA Method File : BR_LN_041321_S3Q537.quantmethod.xml
Batch Name : s3q537.batch.bin
Sample Information : op84308,S3Q537,250,,,1,1,water

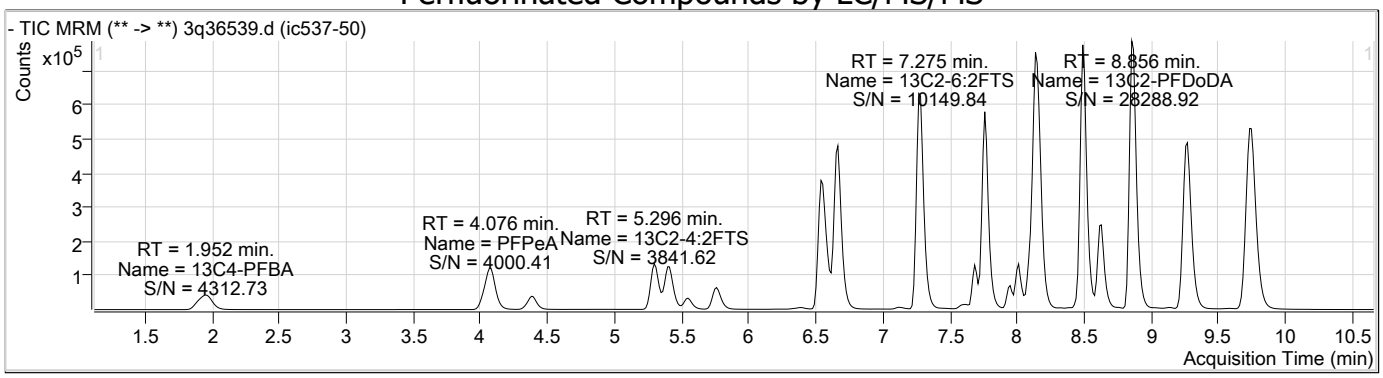
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
M4-PFBA	1.952	217.0 -> 172.0	164106	20.00 µg/L	0.113
M5-PFPeA	4.074	268.0 -> 223.0	121373	20.00 µg/L	0.000
M5-PFHxA	5.413	318.0 -> 273.0	189435	20.00 µg/L	-0.217
M4-PFHpA	6.544	367.0 -> 322.0	254874	20.00 µg/L	-0.063
M8-PFOA	7.288	421.0 -> 376.0	302270	20.00 µg/L	-0.038
M9-PFNA	7.767	472.0 -> 427.0	362045	20.00 µg/L	-0.088
M6-PFDA	8.142	519.0 -> 474.0	482823	20.00 µg/L	-0.115
M7-PFUnDA	8.492	570.0 -> 525.0	670169	20.00 µg/L	-0.113
M2-PFDoDA	8.856	615.0 -> 570.0	757555	20.00 µg/L	-0.101
M2-PFTeDA	9.744	715.0 -> 670.0	566520	20.00 µg/L	-0.200
M8-FOSA	7.690	506.0 -> 78.0	104092	20.00 µg/L	-0.126
M3-PFBS	4.392	302.0 -> 99.0	16561	20.00 µg/L	-0.055
M3-PFHxS	6.592	402.0 -> 99.0	22286	20.00 µg/L	-0.063
M8-PFOS	7.752	507.0 -> 99.0	36749	20.00 µg/L	-0.089
M2-4:2FTS	5.296	329.0 -> 309.0	128752	20.00 µg/L	-0.216
M2-6:2FTS	7.275	429.0 -> 409.0	179554	20.00 µg/L	-0.038
M2-8:2FTS	8.167	529.0 -> 509.0	208562	20.00 µg/L	-0.115
M3-MeFOSAA	8.012	573.0 -> 419.0	98960	20.00 µg/L	-0.165
M3-HFPO-DA	5.770	287.0 -> 169.0	24176	20.00 µg/L	-0.176
M5-EtFOSAA	8.087	589.0 -> 419.0	88336	20.00 µg/L	-0.203
System Monitoring Compounds					
13C2-4:2FTS	5.296	329.0 -> 309.0	128752	22.50 µg/L	-0.216
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 112.5%	
13C2-6:2FTS	7.275	429.0 -> 409.0	179554	21.24 µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.2%	
13C2-8:2FTS	8.167	529.0 -> 509.0	208562	22.53 µg/L	-0.115
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 112.6%	
13C2-PFDoDA	8.856	615.0 -> 570.0	757555	19.64 µg/L	-0.101
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%	
13C2-PFTeDA	9.744	715.0 -> 670.0	566520	20.26 µg/L	-0.200
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%	
13C3-PFBS	4.392	302.0 -> 99.0	16561	20.54 µg/L	-0.055
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.7%	
13C3-PFHxS	6.592	402.0 -> 99.0	22286	19.57 µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.9%	
13C4-PFBA	1.952	217.0 -> 172.0	164106	20.94 µg/L	0.113
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.7%	
13C4-PFHpA	6.544	367.0 -> 322.0	254874	19.66 µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.3%	
13C5-PFHxA	5.413	318.0 -> 273.0	189435	20.70 µg/L	-0.217
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.5%	
13C5-PFPeA	4.074	268.0 -> 223.0	121373	20.67 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.4%	
13C6-PFDA	8.142	519.0 -> 474.0	482823	21.01 µg/L	-0.115
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.1%	

Perfluorinated Compounds by LC/MS/MS

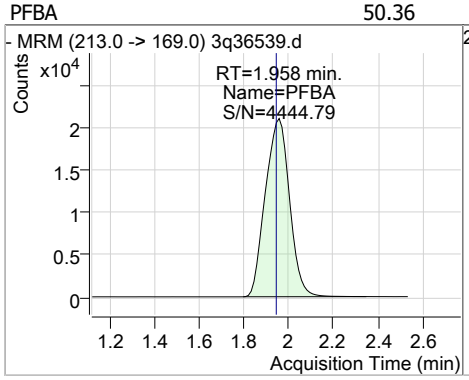
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.492	570.0 -> 525.0	670169	21.20	µg/L		-0.113
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.0%			
13C8-FOSA	7.690	506.0 -> 78.0	104092	19.60	µg/L		-0.126
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%			
13C8-PFOA	7.288	421.0 -> 376.0	302270	19.86	µg/L		-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%			
13C8-PFOS	7.752	507.0 -> 99.0	36749	20.81	µg/L		-0.089
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.0%			
13C9-PFNA	7.767	472.0 -> 427.0	362045	20.50	µg/L		-0.088
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.5%			
d3-MeFOSAA	8.012	573.0 -> 419.0	98960	20.73	µg/L		-0.165
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.6%			
13C3-HFPO-DA	5.770	287.0 -> 169.0	24166	19.92	µg/L		-0.176
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.6%			
d5-EtFOSAA	8.087	589.0 -> 419.0	88342	21.47	µg/L		-0.203
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.4%			
Target Compounds							QValue
4:2FTS	5.298	327.0 -> 307.0	325096	46.72	µg/L		100
6:2FTS	7.275	427.0 -> 407.0	452171	46.77	µg/L		100
8:2FTS	8.167	527.0 -> 507.0	515107	47.26	µg/L		98
EtFOSAA	8.100	584.0 -> 419.0	200676	48.67	µg/L		88
FOSA	7.690	498.0 -> 78.0	271608	50.95	µg/L		100
MeFOSAA	8.013	570.0 -> 419.0	231931	51.38	µg/L	m	98
PFBA	1.958	213.0 -> 169.0	158295	50.36	µg/L		100
PFBS	4.382	299.0 -> 80.0	129447	51.10	µg/L		100
PFDA	8.143	513.0 -> 469.0	1248203	49.96	µg/L		99
PFDoDA	8.856	613.0 -> 569.0	1897703	50.42	µg/L		99
PFDS	8.453	599.0 -> 80.0	77496	52.02	µg/L		100
PFHpA	6.545	363.0 -> 319.0	1157703	50.06	µg/L		100
PFHpS	7.287	449.0 -> 80.0	132946	49.13	µg/L		99
PFHxA	5.414	313.0 -> 269.0	334982	50.52	µg/L		100
PFHxS	6.592	399.0 -> 80.0	129573	50.86	µg/L	m	96
PFNA	7.767	463.0 -> 419.0	1075036	49.66	µg/L		99
PFNS	8.115	549.0 -> 80.0	135009	51.44	µg/L		98
PFOA	7.288	413.0 -> 369.0	828739	50.72	µg/L		99
PFOS	7.753	499.0 -> 80.0	172789	50.36	µg/L	m	82
PFPeA	4.076	263.0 -> 219.0	580299	50.55	µg/L		100
PFPeS	5.550	349.0 -> 80.0	97870	49.87	µg/L		100
PFTeDA	9.733	713.0 -> 669.0	2093829	50.23	µg/L		100
PFTrDA	9.270	663.0 -> 619.0	2031753	50.87	µg/L		100
PFUnDA	8.493	563.0 -> 519.0	1666390	50.89	µg/L		99
11Cl-PF3OUdS	8.627	631.0 -> 451.0	662635	55.67	µg/L		99
9Cl-PF3ONS	7.952	531.0 -> 351.0	140975	48.18	µg/L		100
ADONA	6.669	377.0 -> 251.0	1465773	50.18	µg/L		100
HFPO-DA	5.765	329.0 -> 169.0	222268	50.73	µg/L		99
br-PFOS	7.614	499.0 -> 80.0	58127	12.00	µg/L		98
LN-PFOS	7.753	499.0 -> 80.0	114662	38.42	µg/L		100
br-PFHxS	6.391	399.0 -> 80.0	18109	6.13	µg/L		99
LN-PFHxS	6.592	399.0 -> 80.0	111464	44.73	µg/L		99
br-PFOA	7.288	413.0 -> 369.0	828739	50.72	µg/L		99
LN-PFOA	7.288	413.0 -> 369.0	828739	50.72	µg/L		99
br-PFNA	7.767	463.0 -> 419.0	1075036	49.66	µg/L		99
LN-PFNA	7.767	463.0 -> 419.0	1075036	49.66	µg/L		99

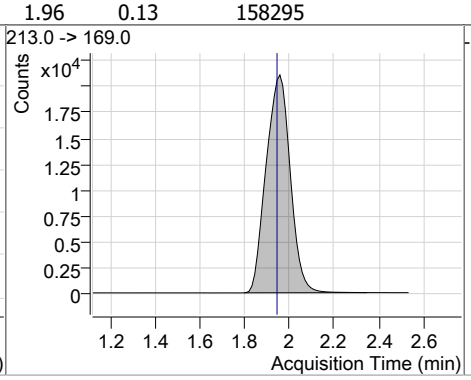
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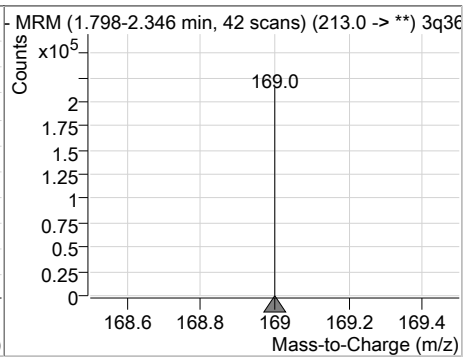
Perfluorinated Compounds by LC/MS/MS



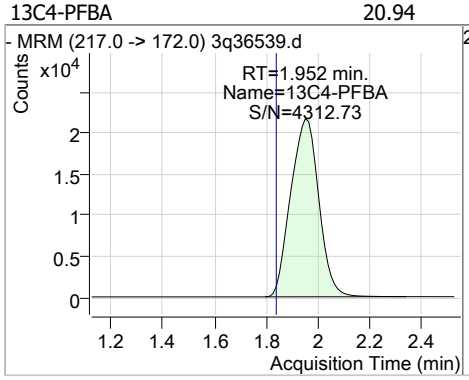
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	50.36	1.96	0.13	158295				

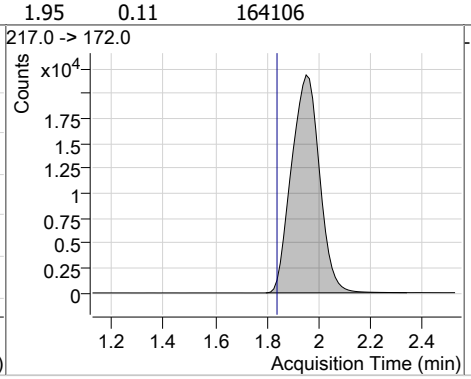


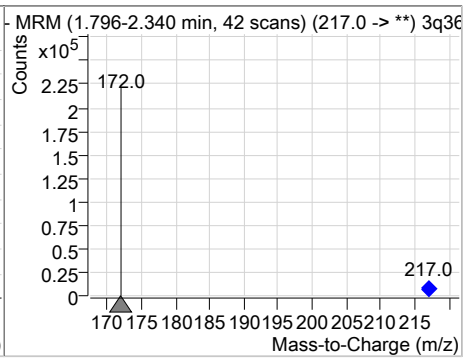




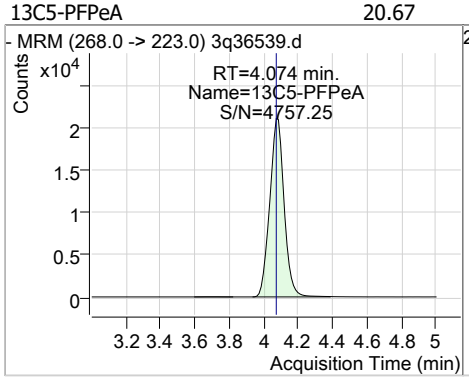
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.94	1.95	0.11	164106				

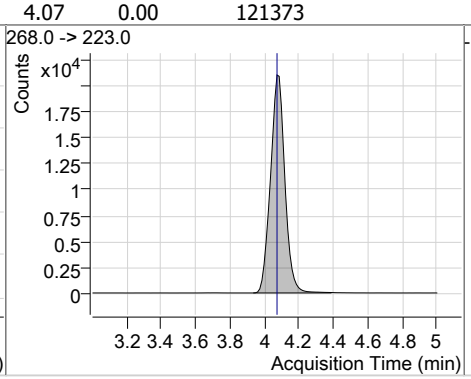


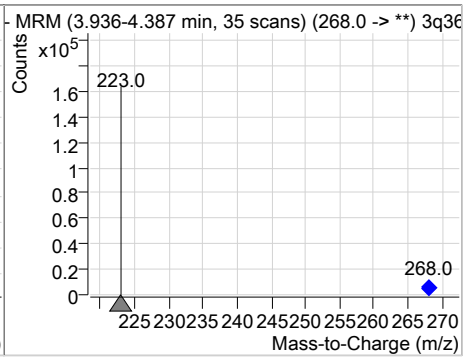




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.67	4.07	0.00	121373				





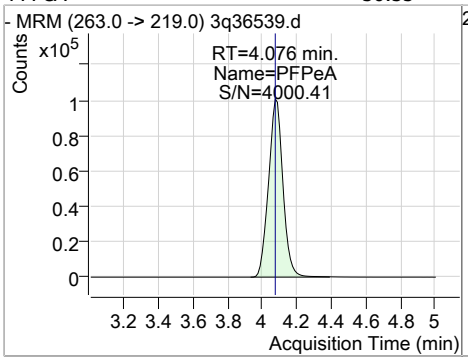


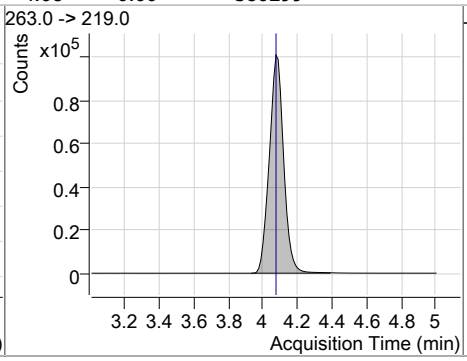
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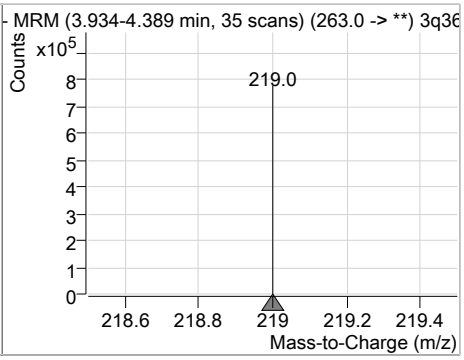
11

Perfluorinated Compounds by LC/MS/MS

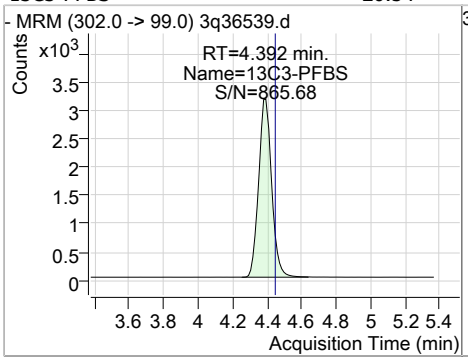
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	50.55	4.08	0.00	580299				

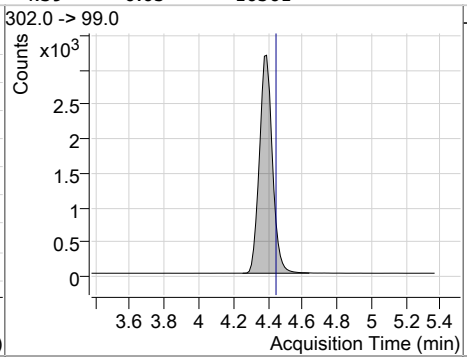


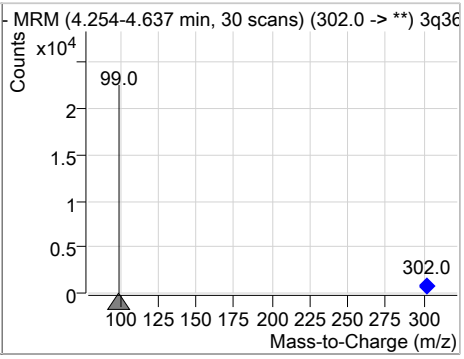




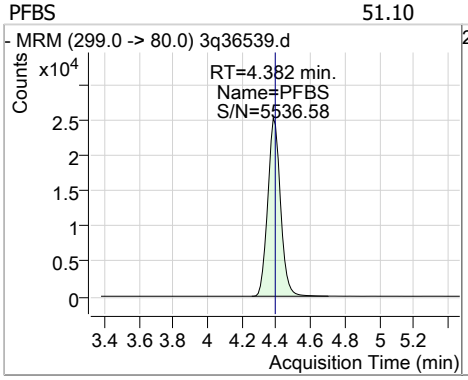
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.54	4.39	-0.05	16561				

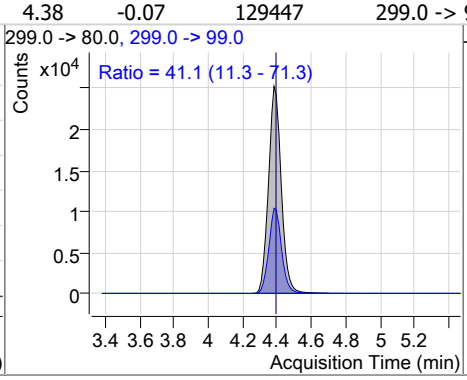


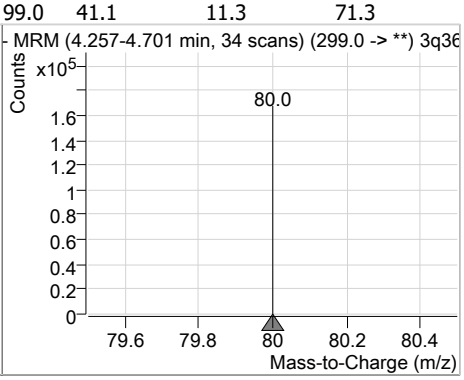




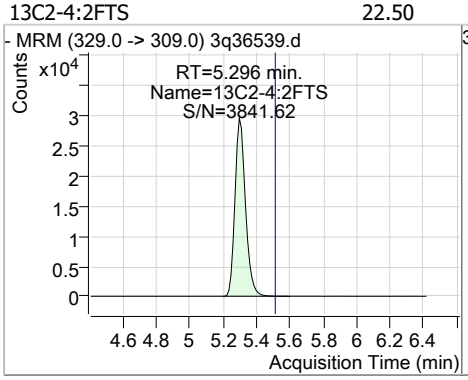
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	51.10	4.38	-0.07	129447	299.0 -> 99.0	41.1	11.3	71.3

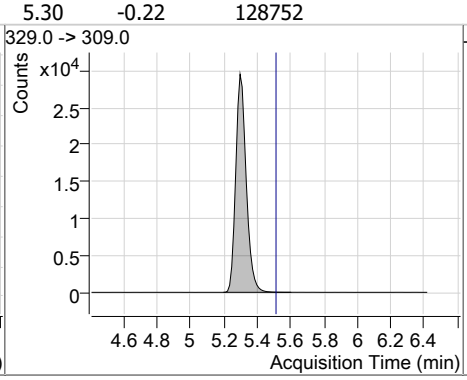


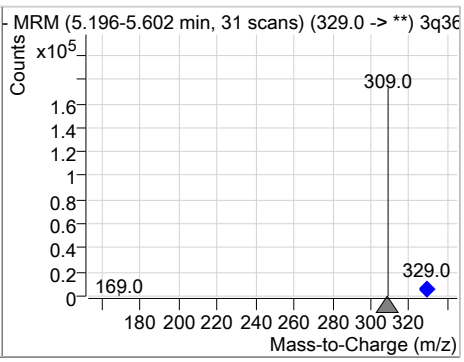




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	22.50	5.30	-0.22	128752				





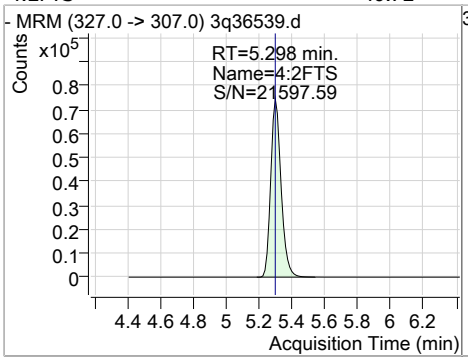


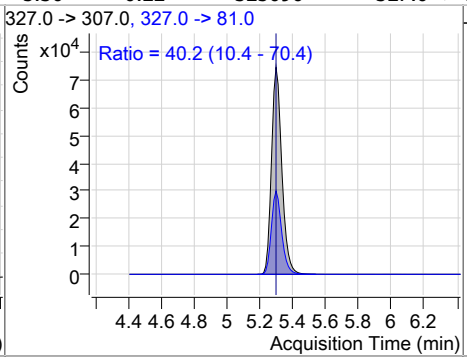
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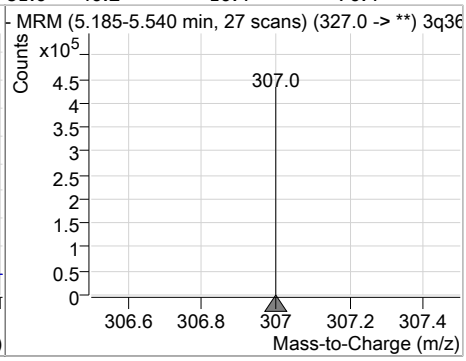
11

Perfluorinated Compounds by LC/MS/MS

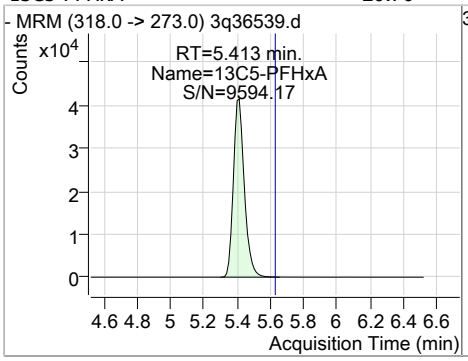
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	46.72	5.30	-0.22	325096	327.0 -> 81.0	40.2	10.4	70.4

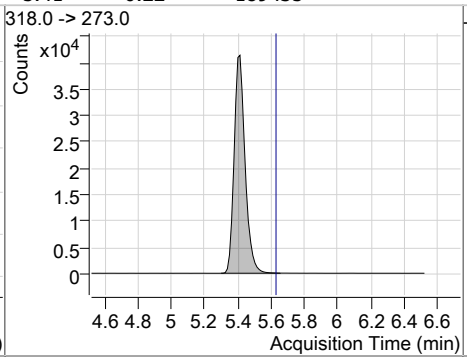


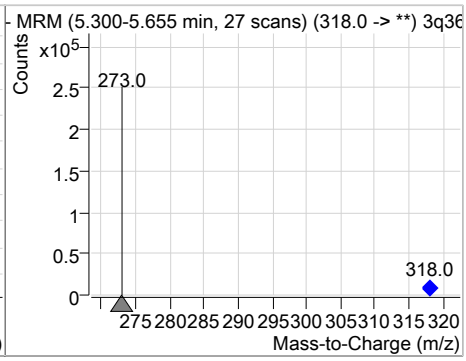




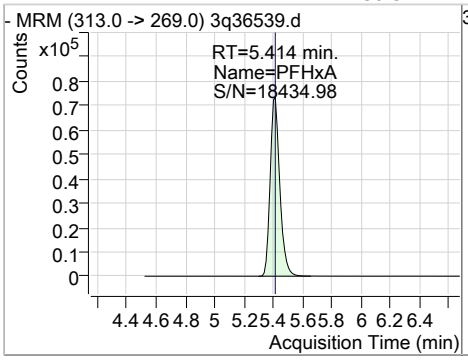
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.70	5.41	-0.22	189435				

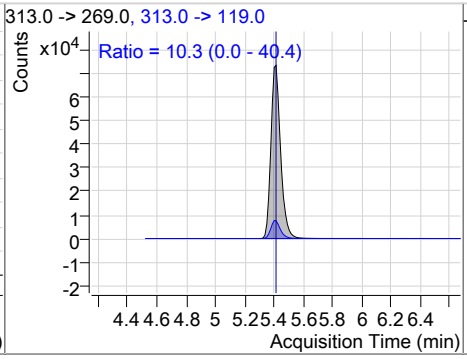


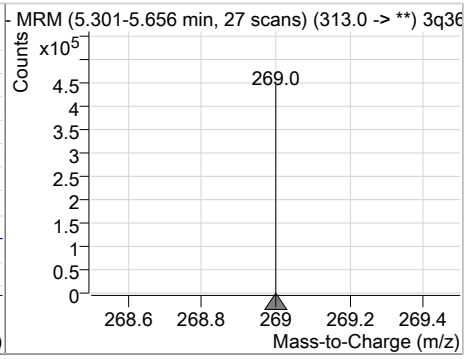




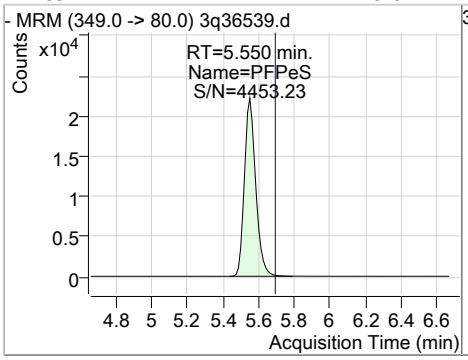
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	50.52	5.41	-0.22	334982	313.0 -> 119.0	10.3	0.0	40.4

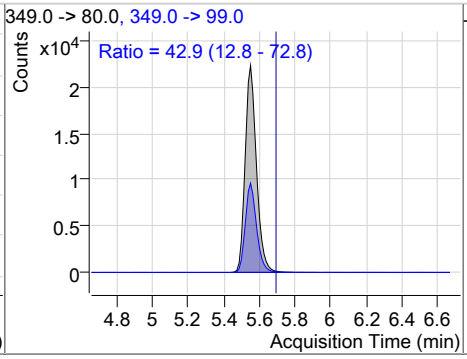


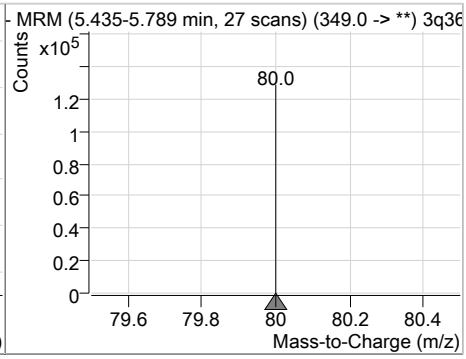




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	49.87	5.55	-0.21	97870	349.0 -> 99.0	42.9	12.8	72.8





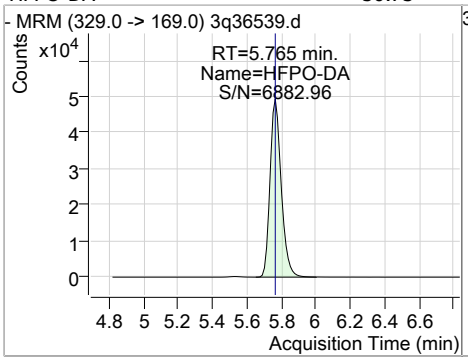


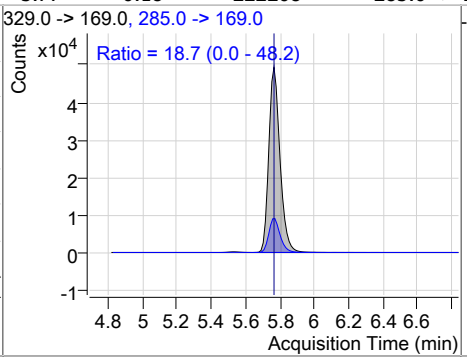
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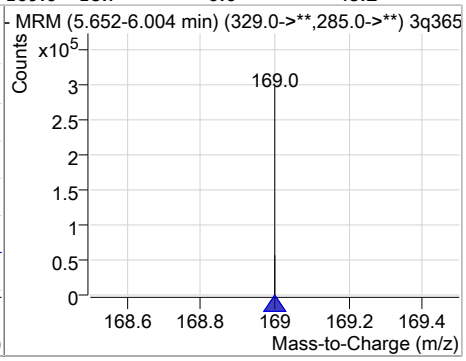
11

Perfluorinated Compounds by LC/MS/MS

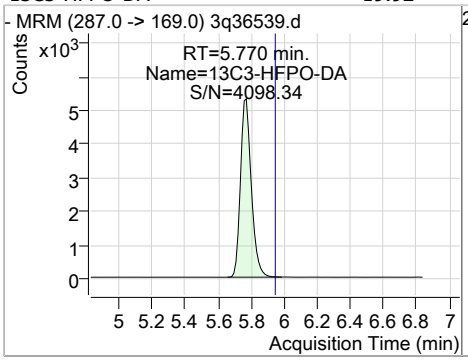
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	50.73	5.77	-0.18	222268	285.0 -> 169.0	18.7	0.0	48.2

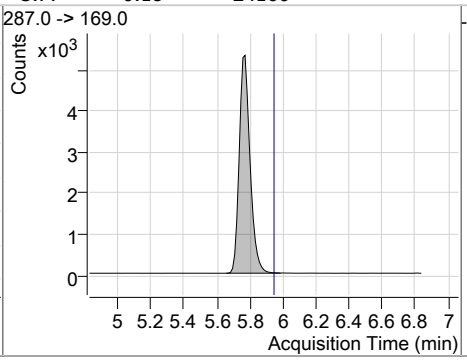


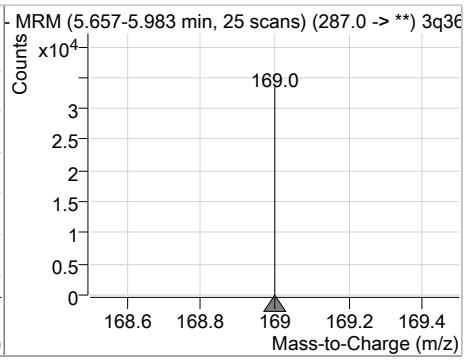




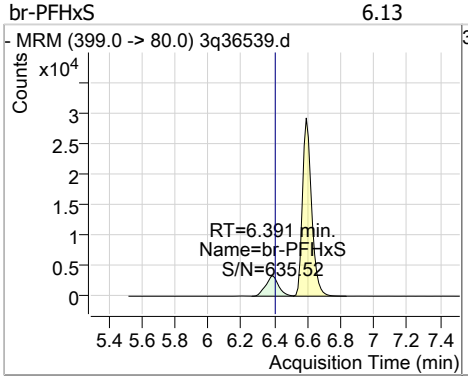
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.92	5.77	-0.18	24166				

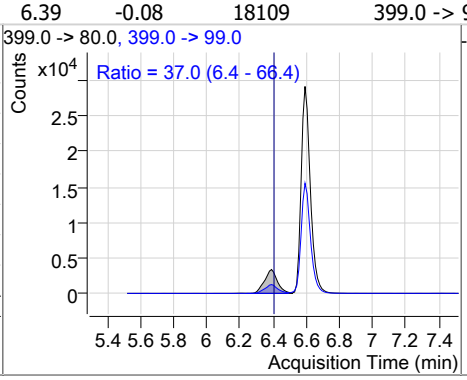


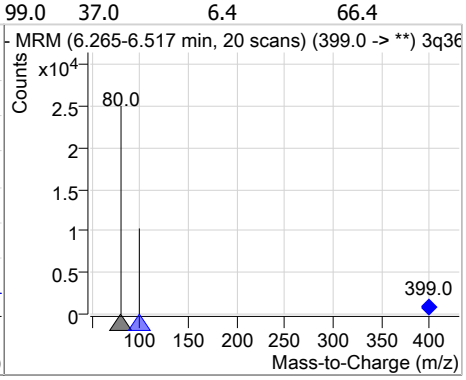




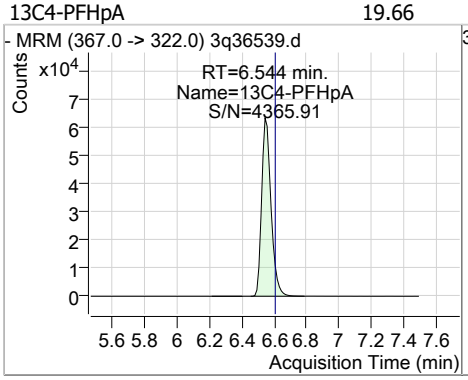
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	6.13	6.39	-0.08	18109	399.0 -> 99.0	37.0	6.4	66.4

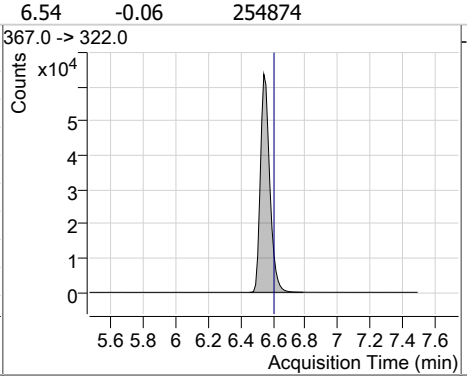


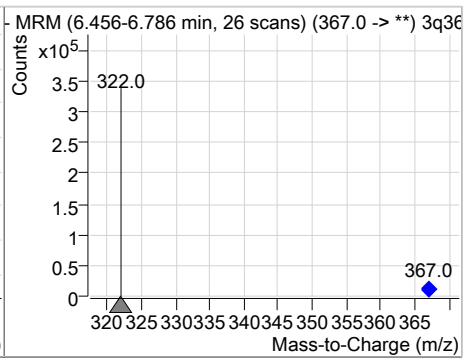




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.66	6.54	-0.06	254874				





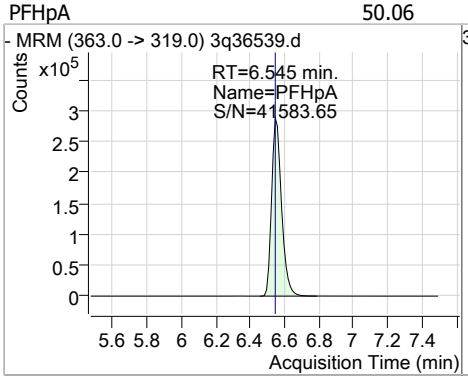


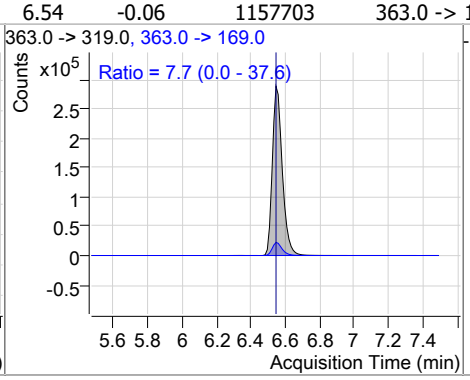
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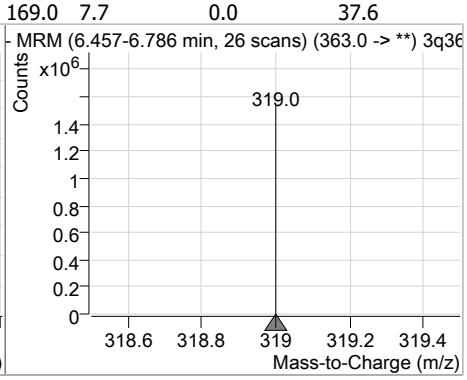
11

Perfluorinated Compounds by LC/MS/MS

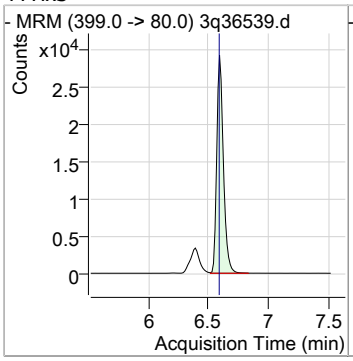
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	50.06	6.54	-0.06	1157703	363.0 -> 169.0	7.7	0.0	37.6

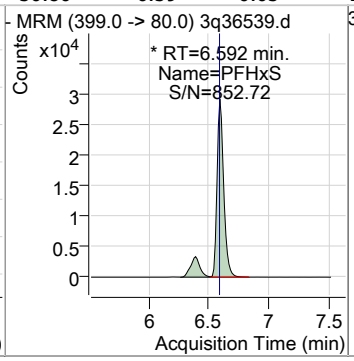


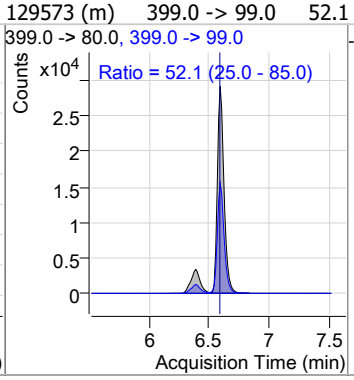


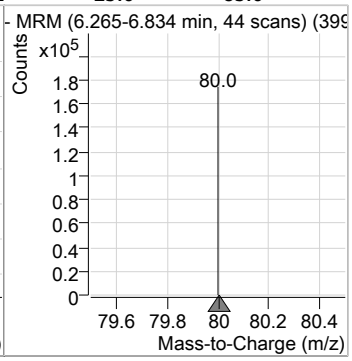


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	50.86	6.59	-0.05	129573 (m)	399.0 -> 99.0	52.1	25.0	85.0

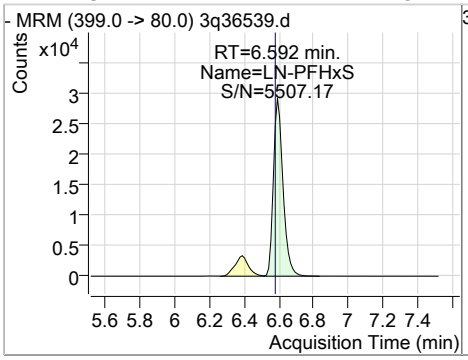


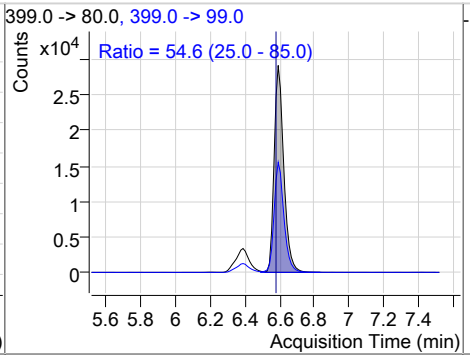


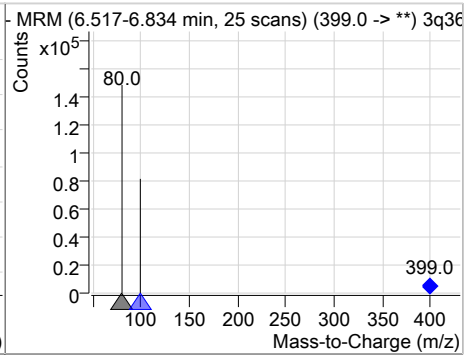




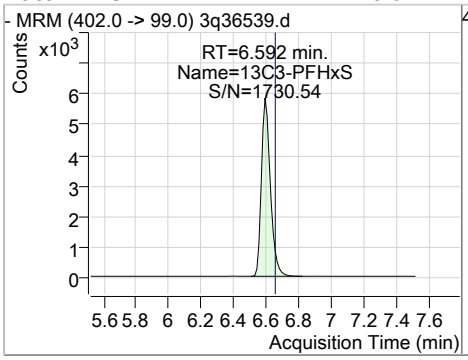
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	44.73	6.59	-0.05	111464	399.0 -> 99.0	54.6	25.0	85.0

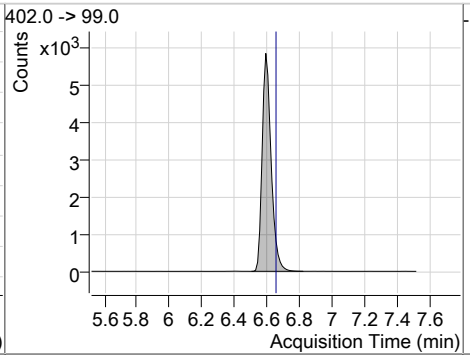


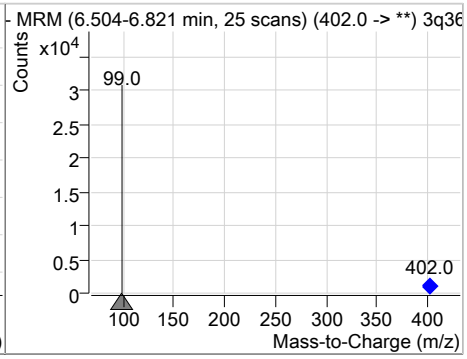




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.57	6.59	-0.06	22286				





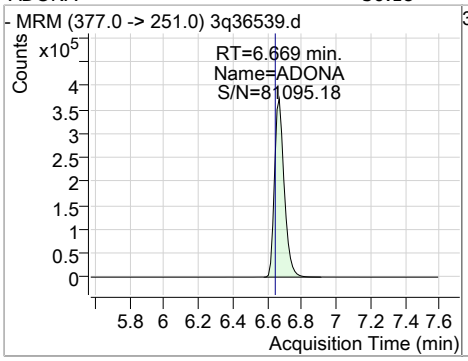


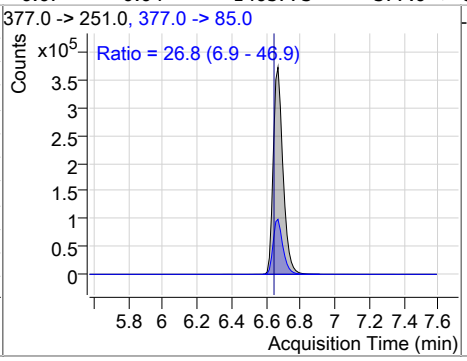
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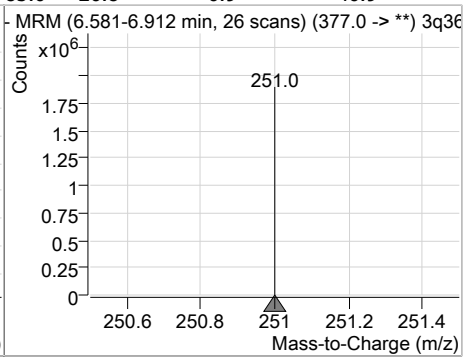
11

Perfluorinated Compounds by LC/MS/MS

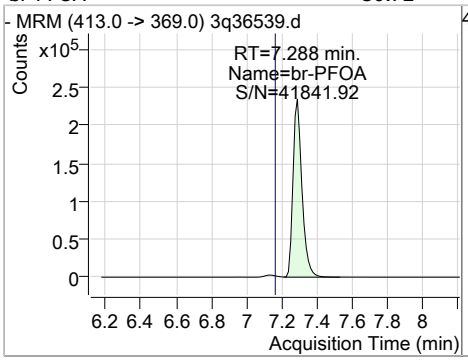
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	50.18	6.67	-0.04	1465773	377.0 -> 85.0	26.8	6.9	46.9

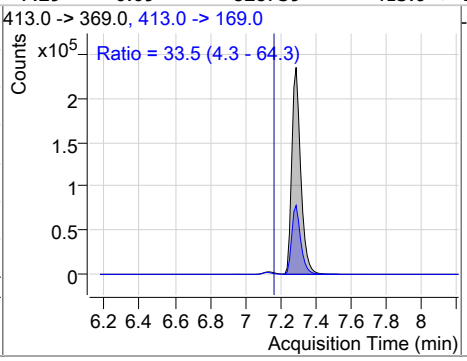


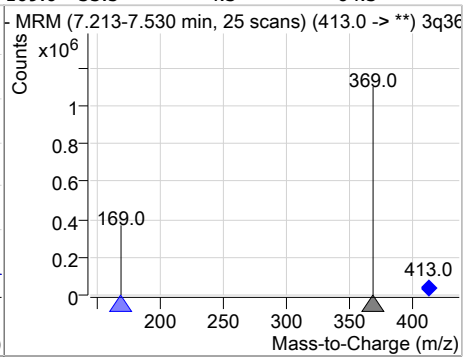




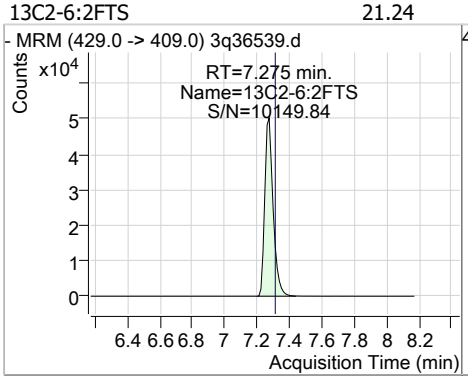
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	50.72	7.29	0.09	828739	413.0 -> 169.0	33.5	4.3	64.3

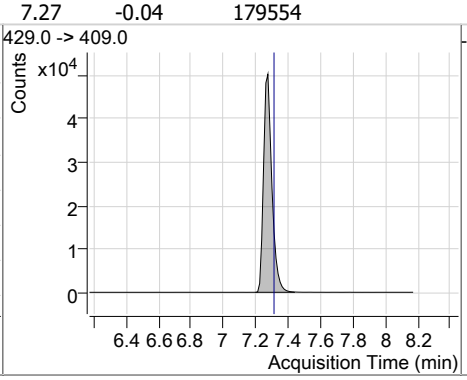


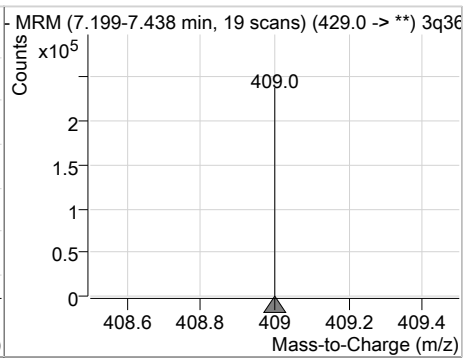




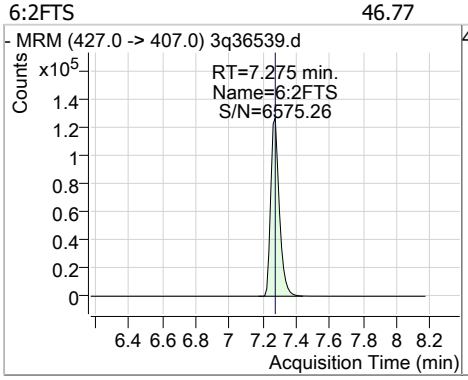
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	21.24	7.27	-0.04	179554				

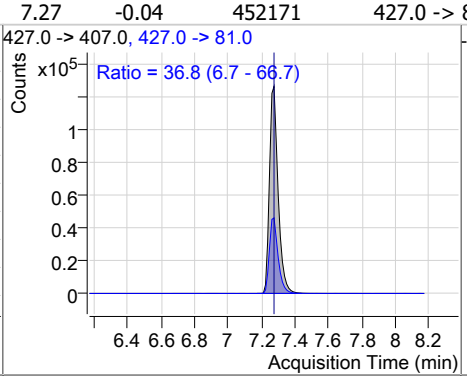


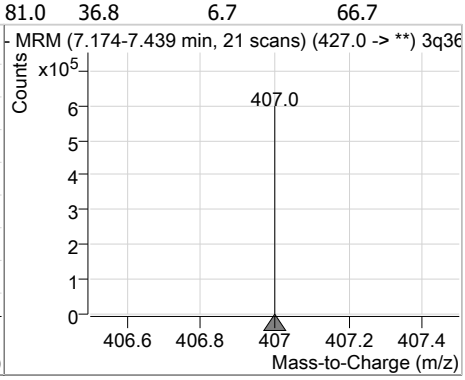




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	46.77	7.27	-0.04	452171	427.0 -> 81.0	36.8	6.7	66.7



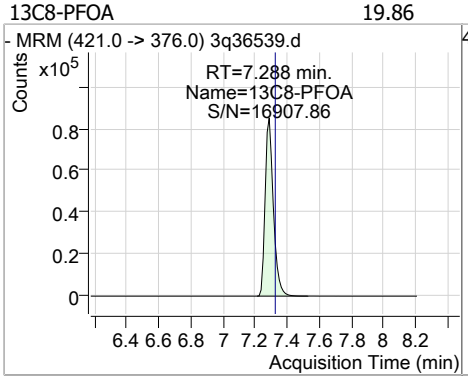


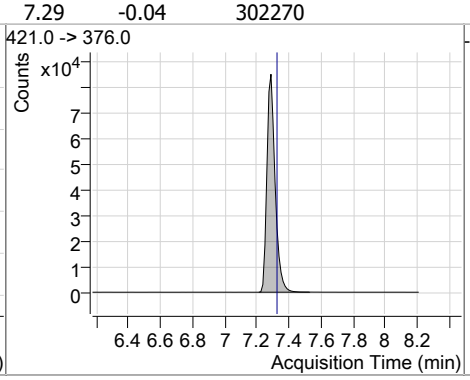


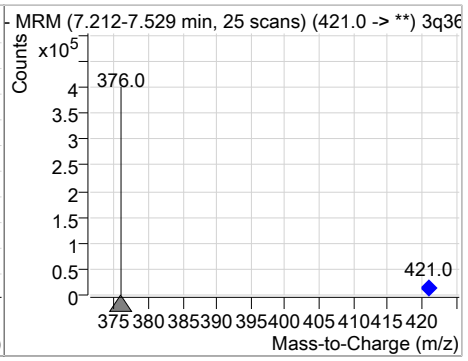
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Perfluorinated Compounds by LC/MS/MS

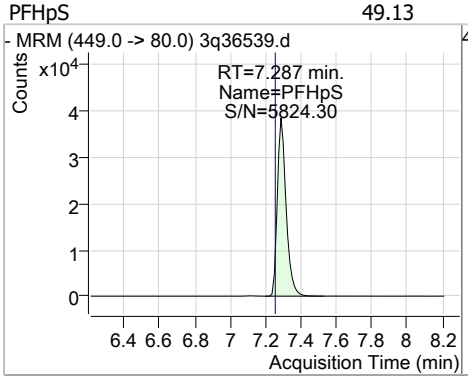
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.86	7.29	-0.04	302270				

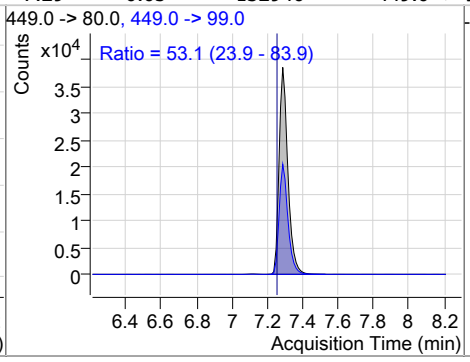


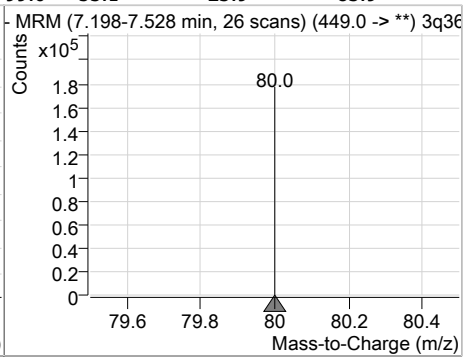




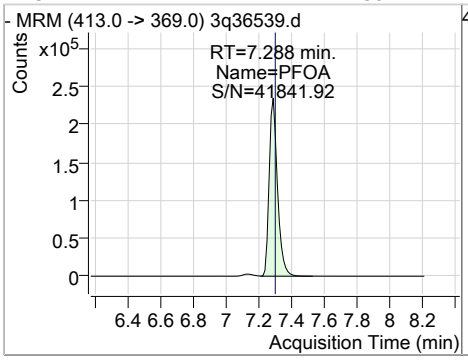
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	49.13	7.29	-0.05	132946	449.0 -> 99.0	53.1	23.9	83.9

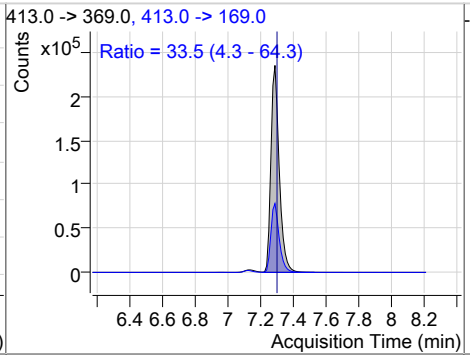


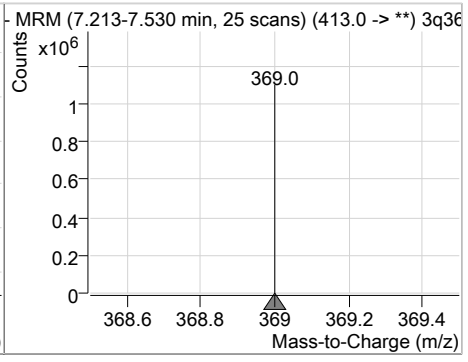




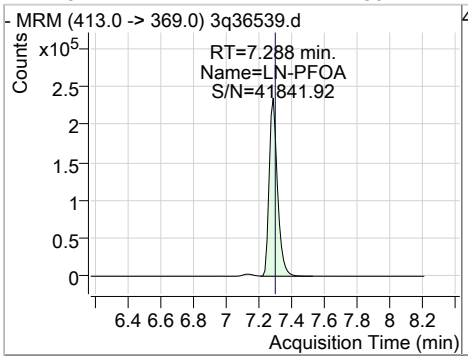
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	50.72	7.29	-0.05	828739	413.0 -> 169.0	33.5	4.3	64.3

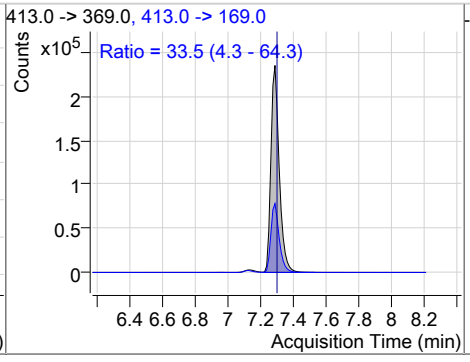


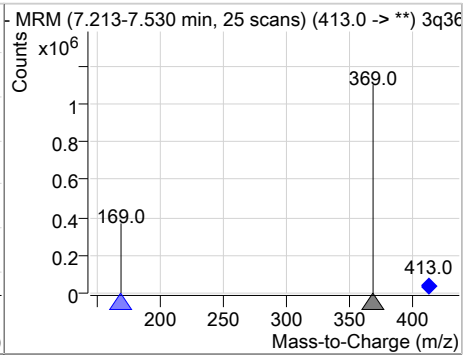




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	50.72	7.29	-0.05	828739	413.0 -> 169.0	33.5	4.3	64.3

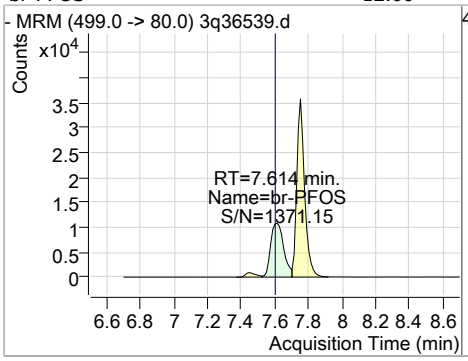


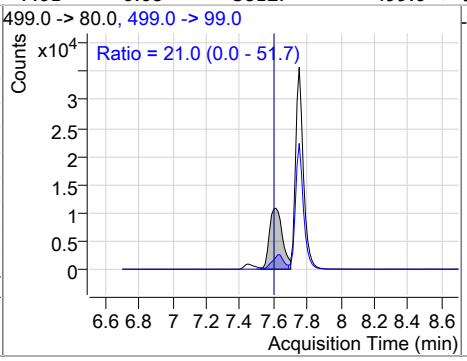


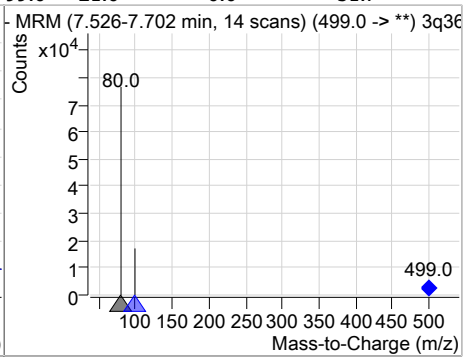


Perfluorinated Compounds by LC/MS/MS

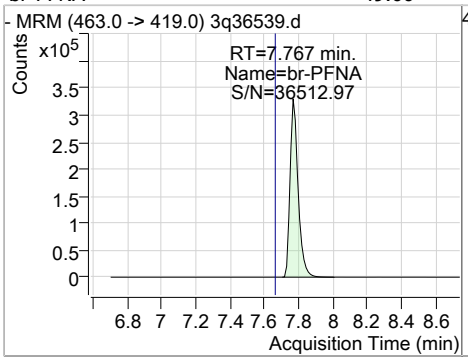
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	12.00	7.61	-0.08	58127	499.0 -> 99.0	21.0	0.0	51.7

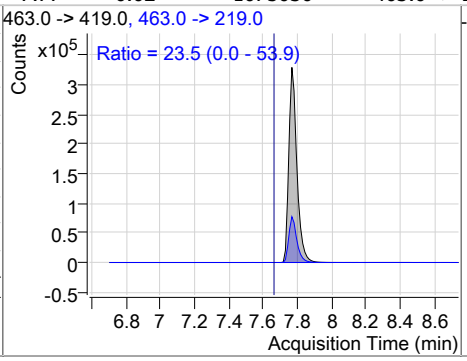


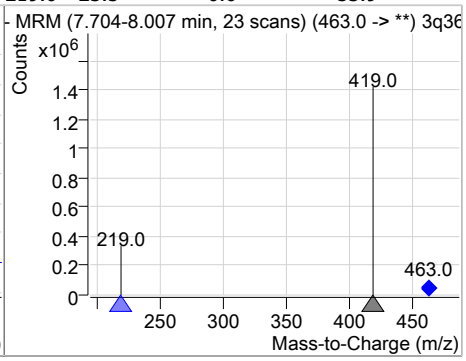




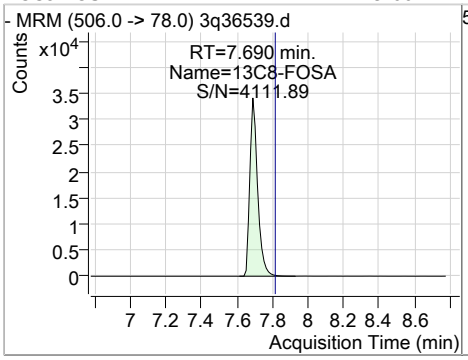
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFNA	49.66	7.77	0.02	1075036	463.0 -> 219.0	23.5	0.0	53.9

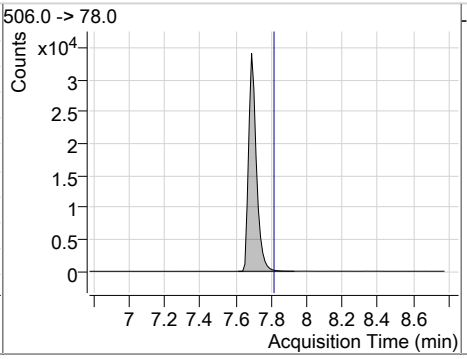


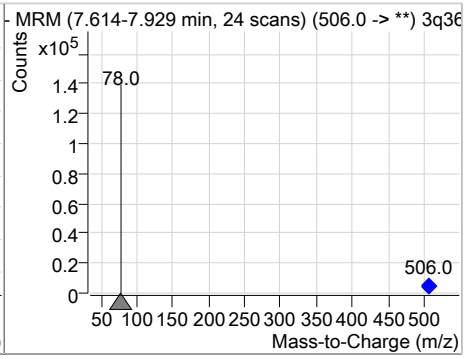




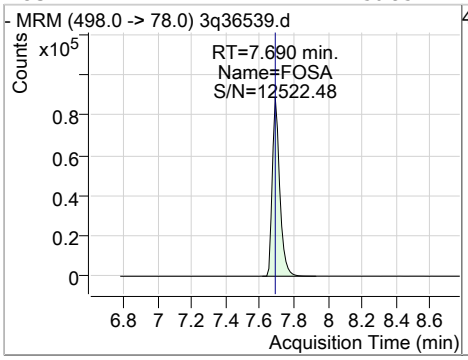
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	19.60	7.69	-0.13	104092				

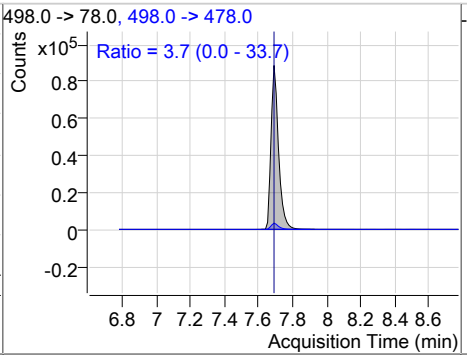


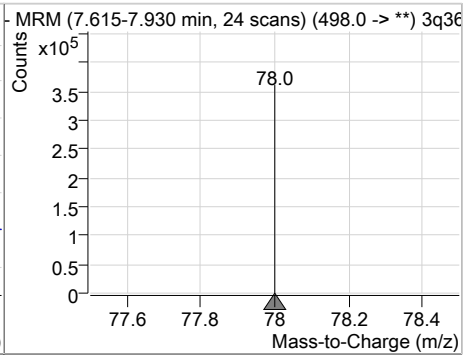




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	50.95	7.69	-0.13	271608	498.0 -> 478.0	3.7	0.0	33.7





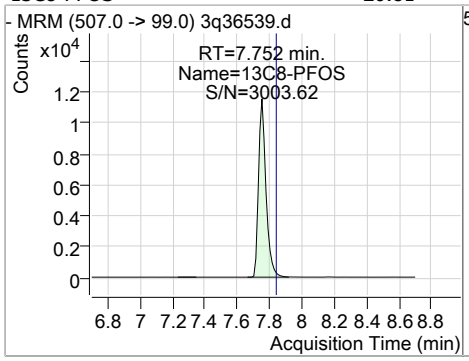


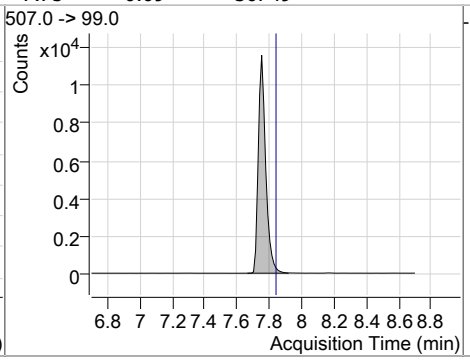
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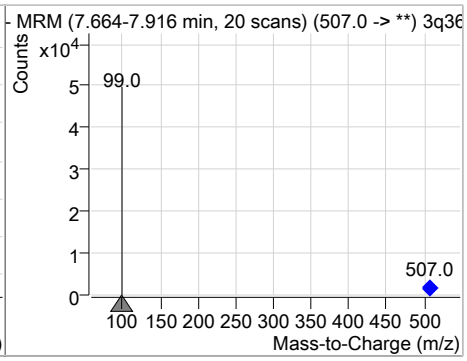
11

Perfluorinated Compounds by LC/MS/MS

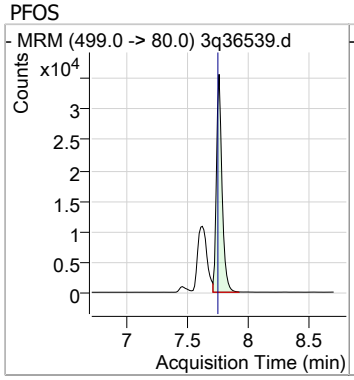
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.81	7.75	-0.09	36749				

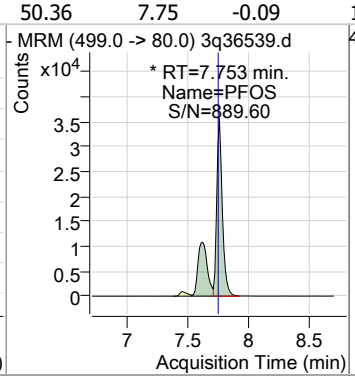


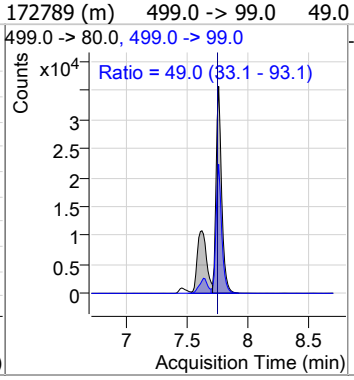


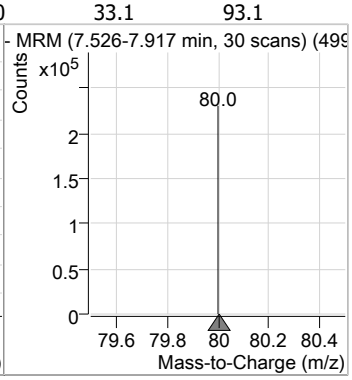


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	50.36	7.75	-0.09	172789 (m)	499.0 -> 99.0	49.0	33.1	93.1

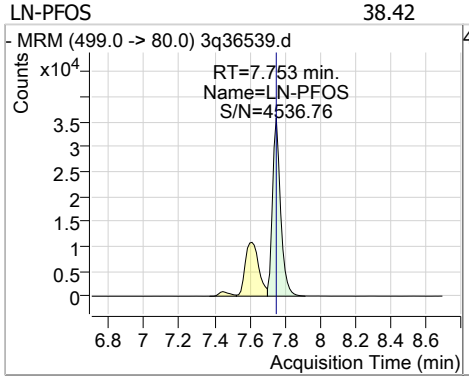


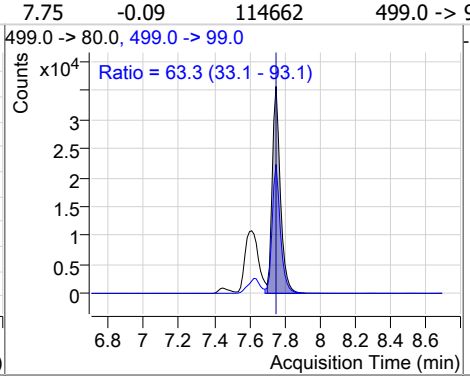


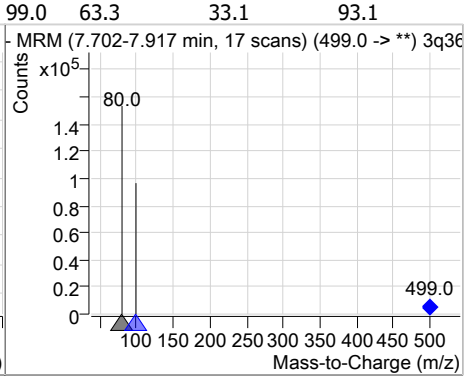




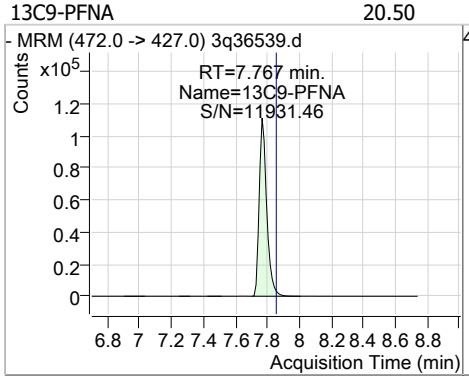
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	38.42	7.75	-0.09	114662	499.0 -> 99.0	63.3	33.1	93.1

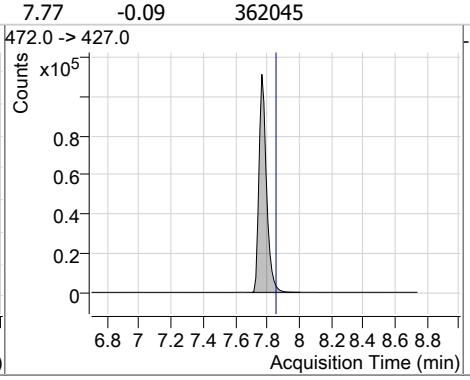


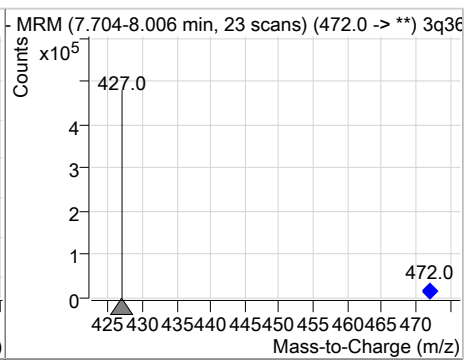




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.50	7.77	-0.09	362045				





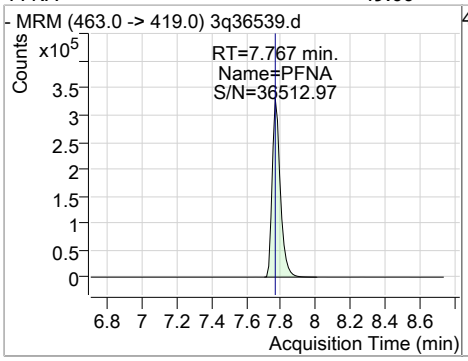


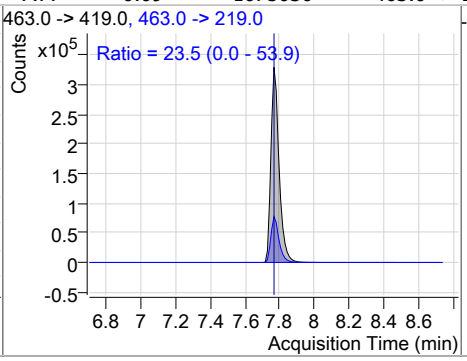
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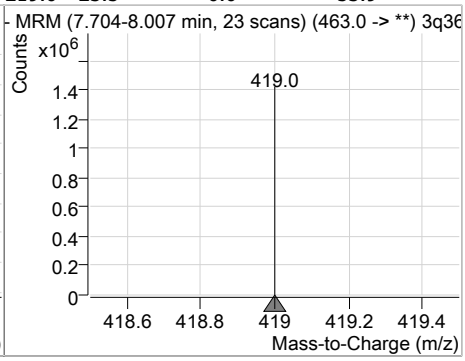
11

Perfluorinated Compounds by LC/MS/MS

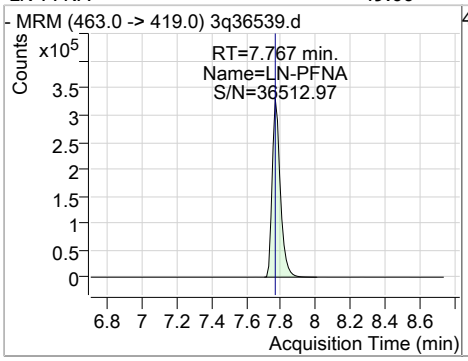
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	49.66	7.77	-0.09	1075036	463.0 -> 219.0	23.5	0.0	53.9

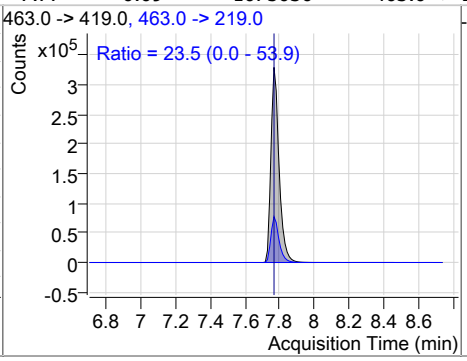


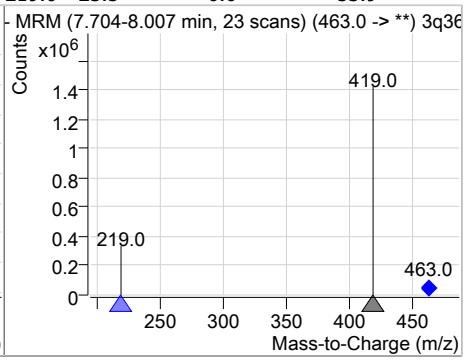




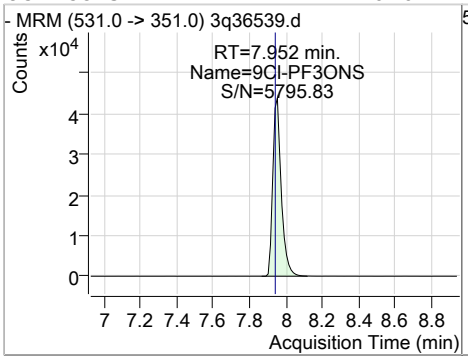
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	49.66	7.77	-0.09	1075036	463.0 -> 219.0	23.5	0.0	53.9

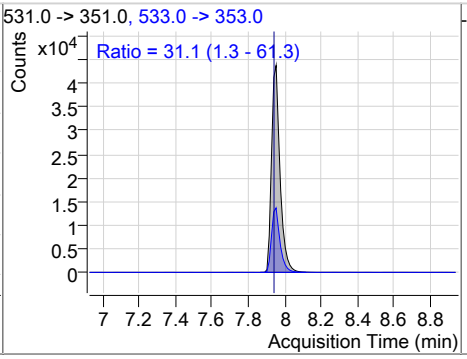


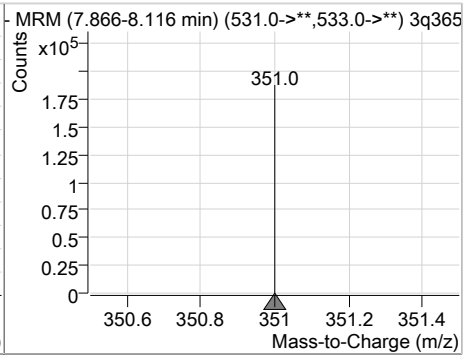




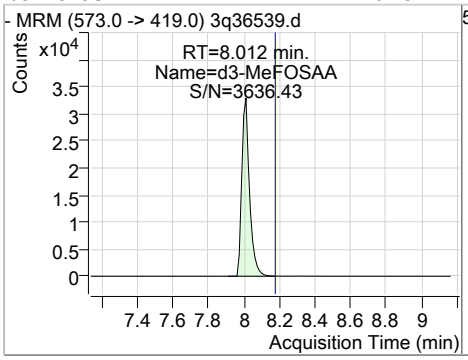
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	48.18	7.95	-0.10	140975	533.0 -> 353.0	31.1	1.3	61.3

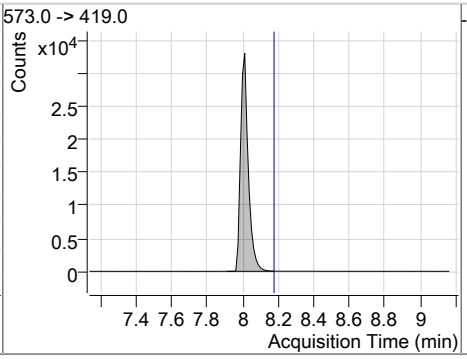


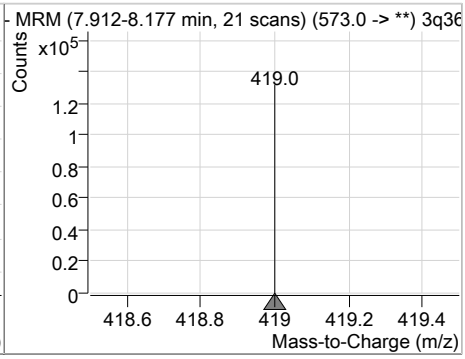




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.73	8.01	-0.16	98960				



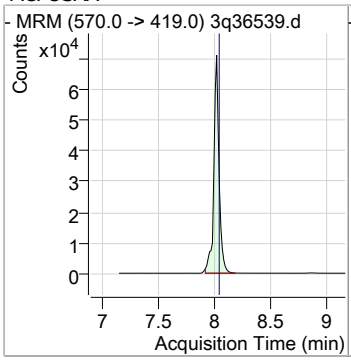


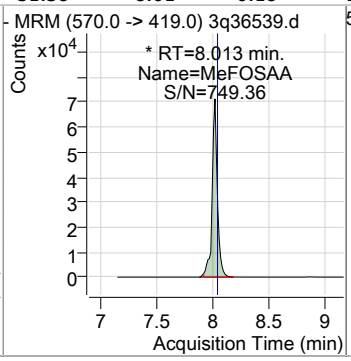


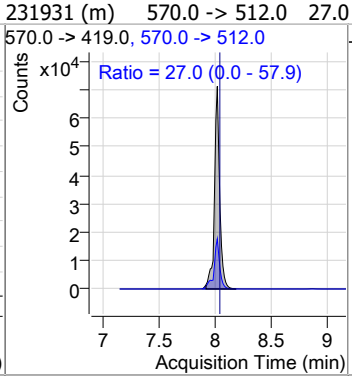
11.6.22 11

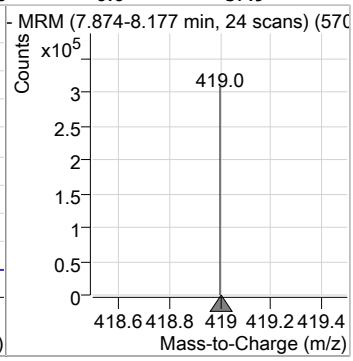
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	51.38	8.01	-0.18	231931 (m)	570.0 -> 512.0	27.0	0.0	57.9

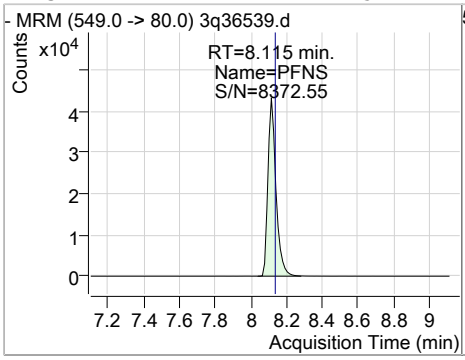


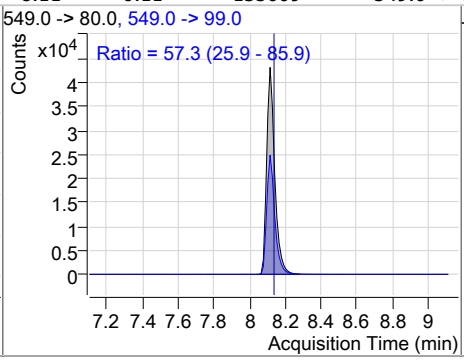


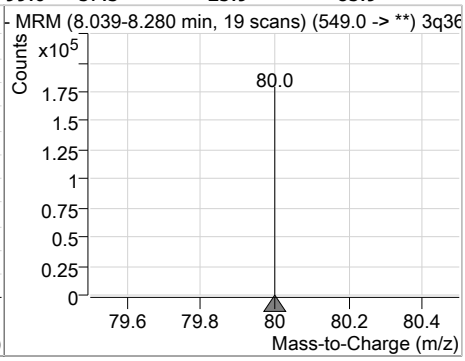




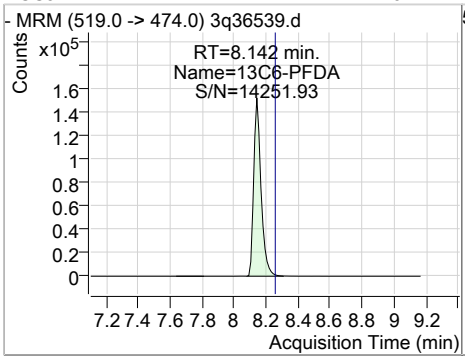
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	51.44	8.11	-0.11	135009	549.0 -> 99.0	57.3	25.9	85.9

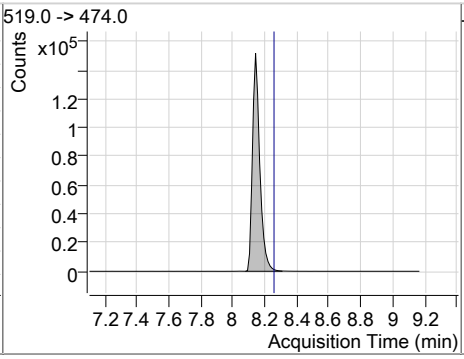


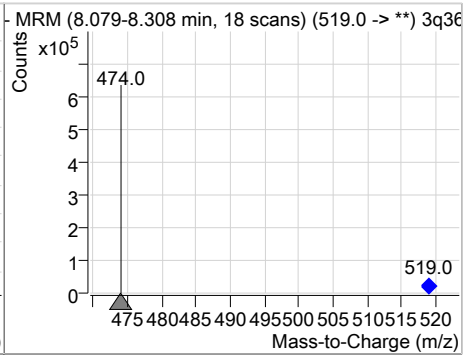




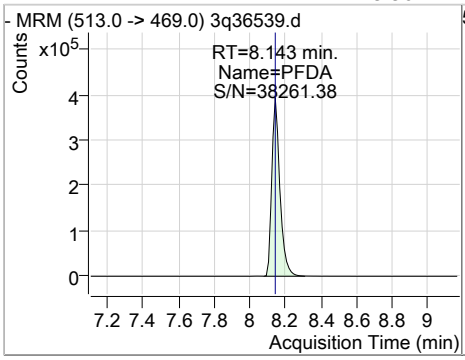
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	21.01	8.14	-0.12	482823				

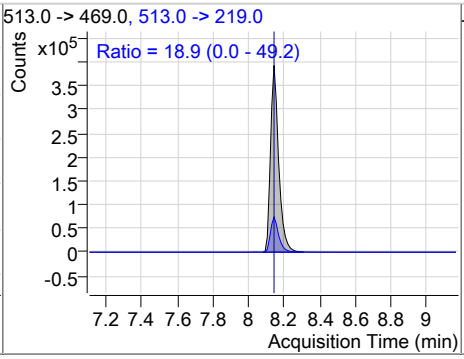


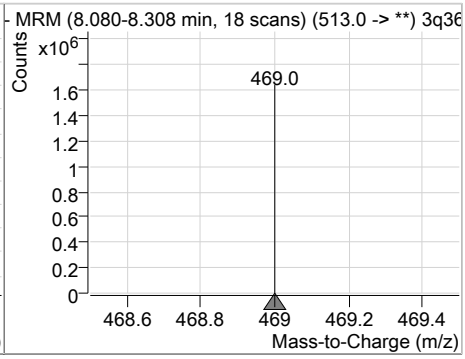




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	49.96	8.14	-0.12	1248203	513.0 -> 219.0	18.9	0.0	49.2

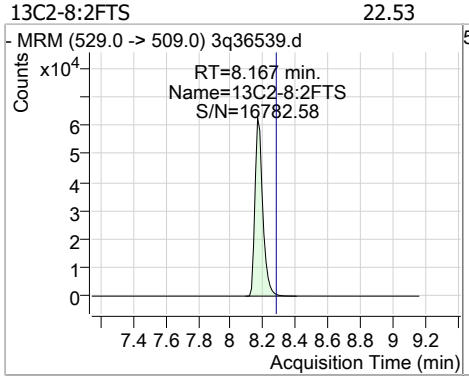


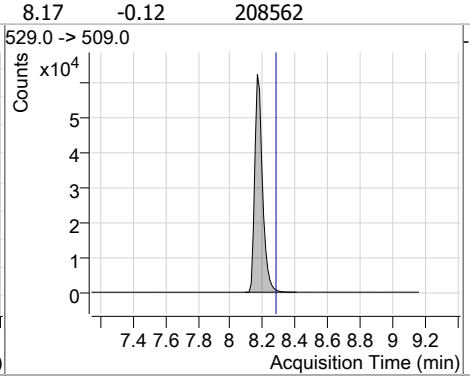


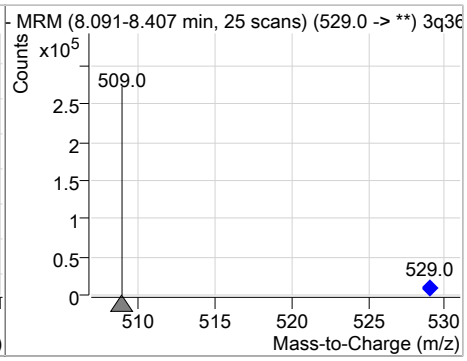


Perfluorinated Compounds by LC/MS/MS

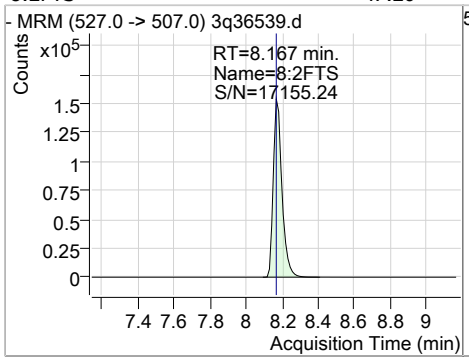
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	22.53	8.17	-0.12	208562				

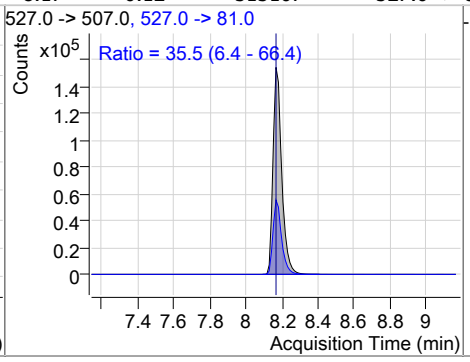


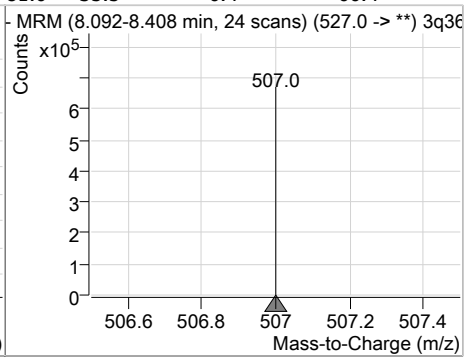




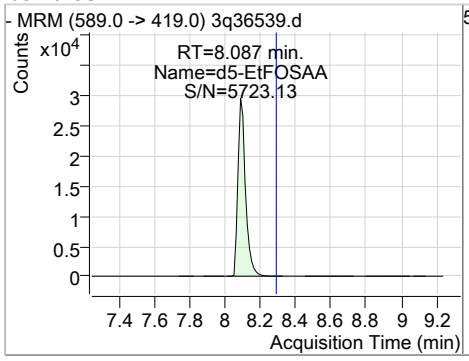
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	47.26	8.17	-0.12	515107	527.0 -> 81.0	35.5	6.4	66.4

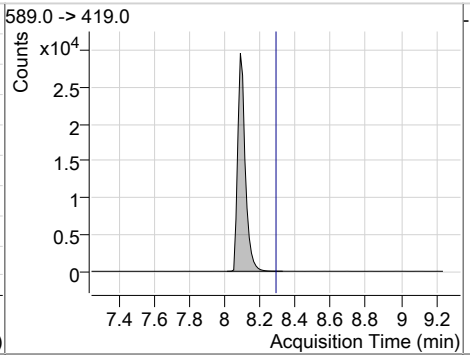


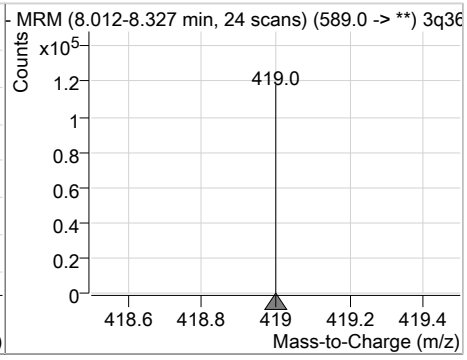




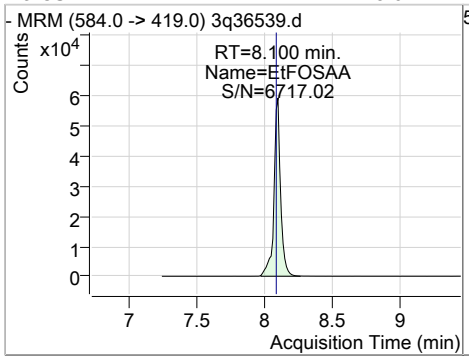
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	21.47	8.09	-0.20	88342				

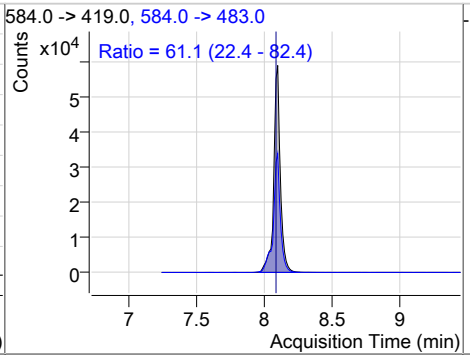


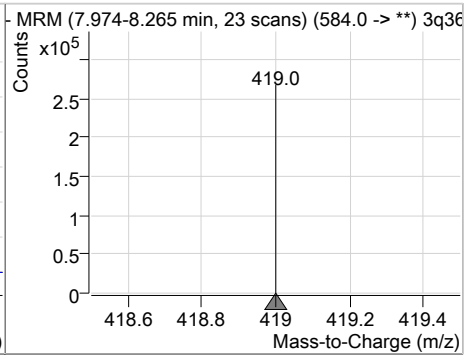




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	48.67	8.10	-0.19	200676	584.0 -> 483.0	61.1	22.4	82.4



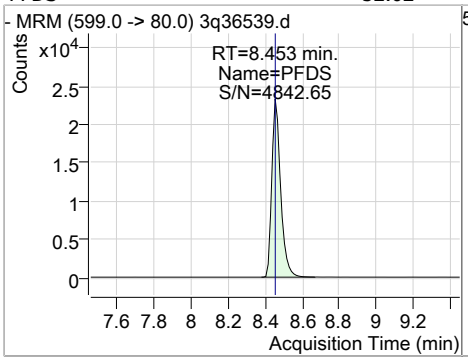


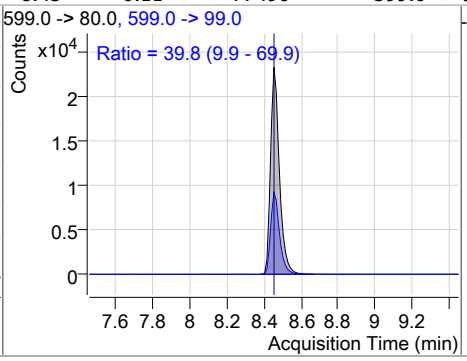


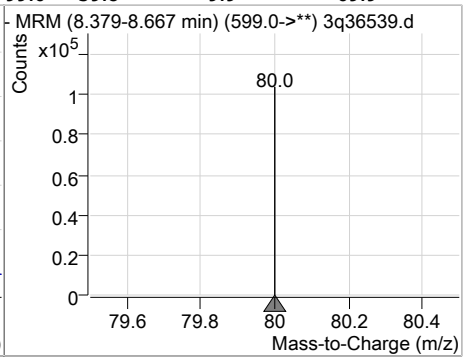
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Perfluorinated Compounds by LC/MS/MS

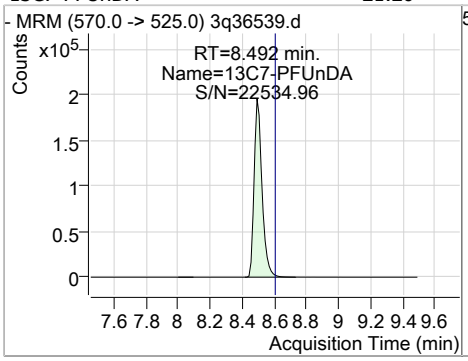
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	52.02	8.45	-0.11	77496	599.0 -> 99.0	39.8	9.9	69.9

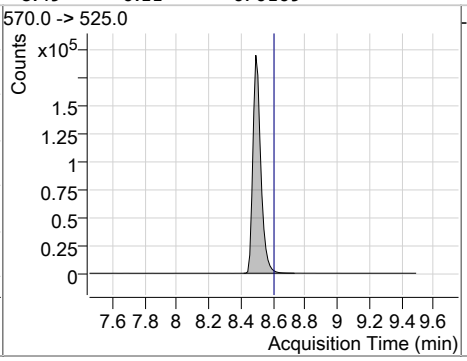


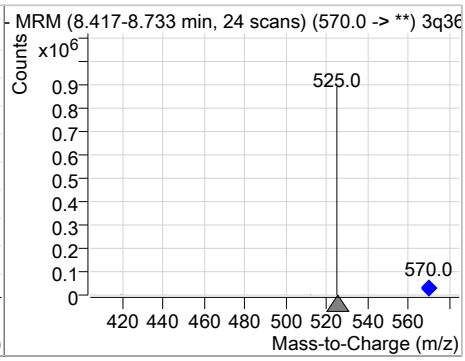




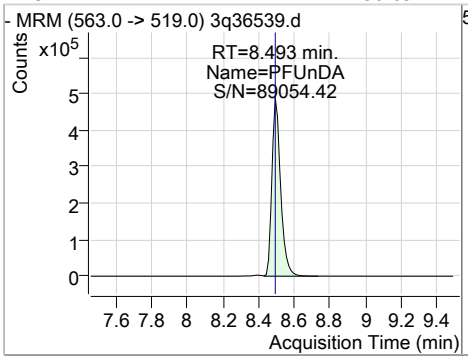
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	21.20	8.49	-0.11	670169				

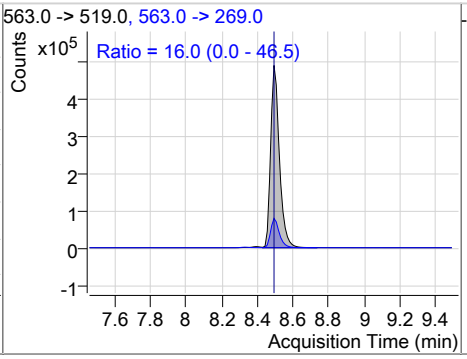


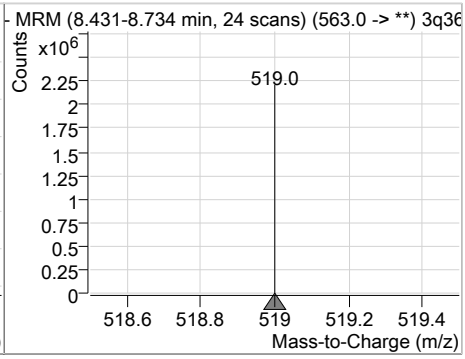




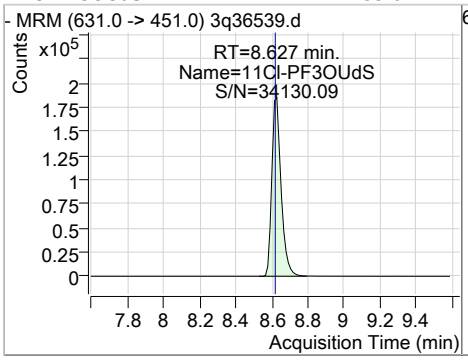
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	50.89	8.49	-0.11	1666390	563.0 -> 269.0	16.0	0.0	46.5

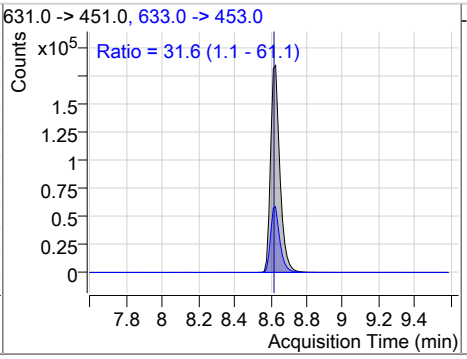


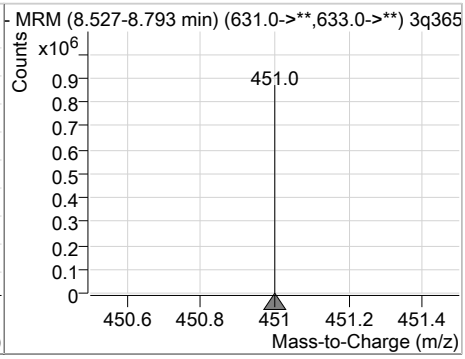




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	55.67	8.63	-0.09	662635	633.0 -> 453.0	31.6	1.1	61.1



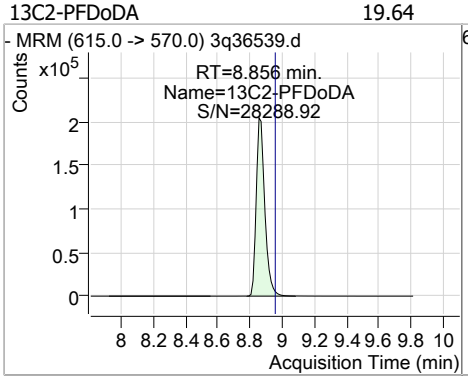


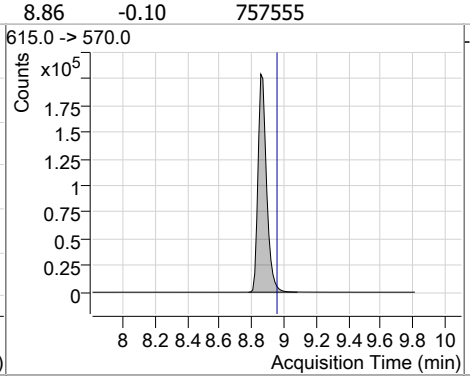


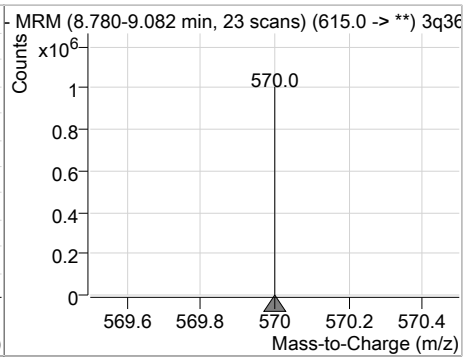
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Perfluorinated Compounds by LC/MS/MS

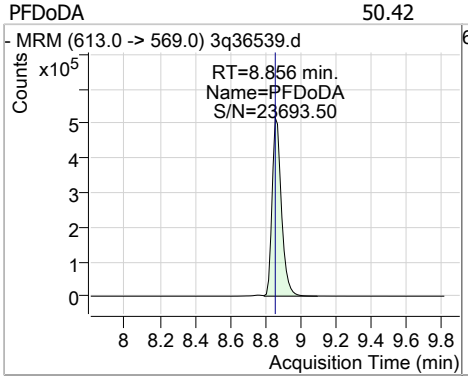
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.64	8.86	-0.10	757555				

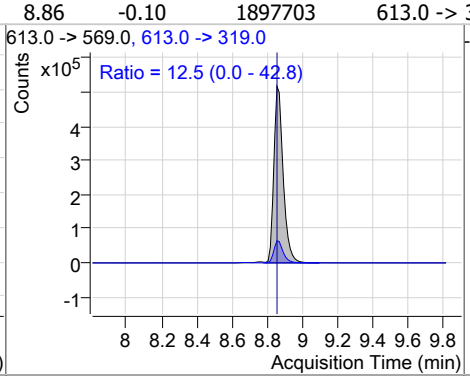


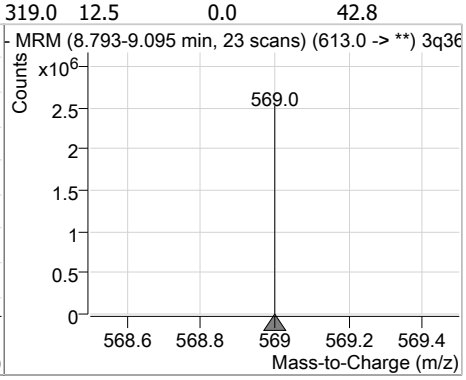




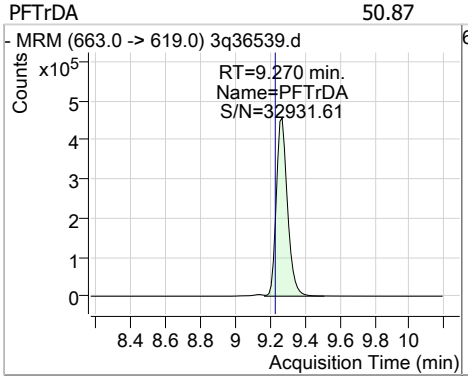
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	50.42	8.86	-0.10	1897703	613.0 -> 319.0	12.5	0.0	42.8

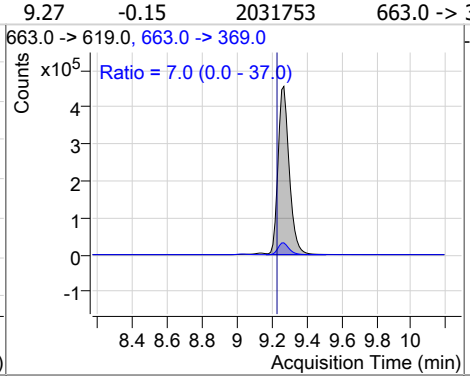


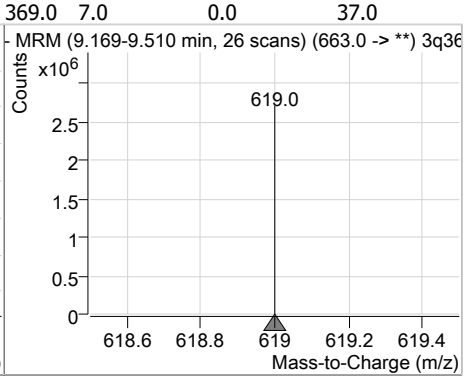




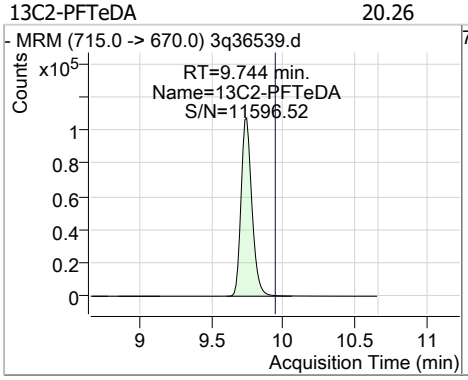
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	50.87	9.27	-0.15	2031753	663.0 -> 369.0	7.0	0.0	37.0

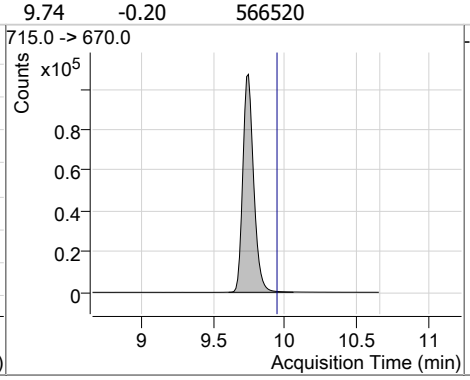


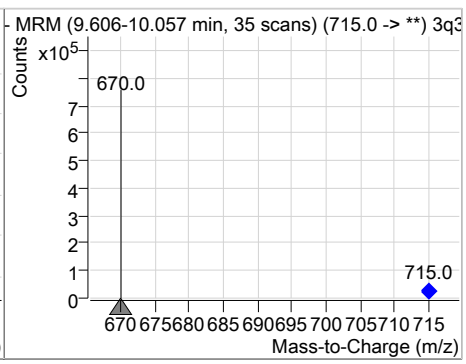




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.26	9.74	-0.20	566520				



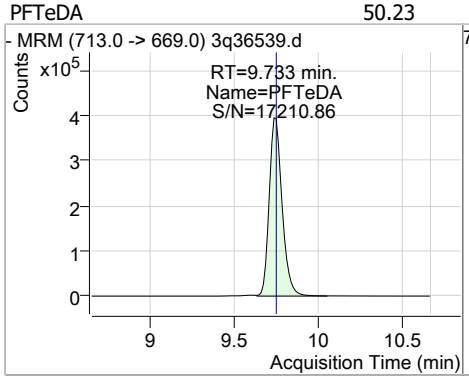


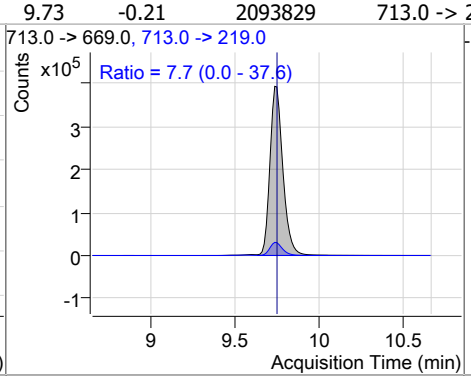


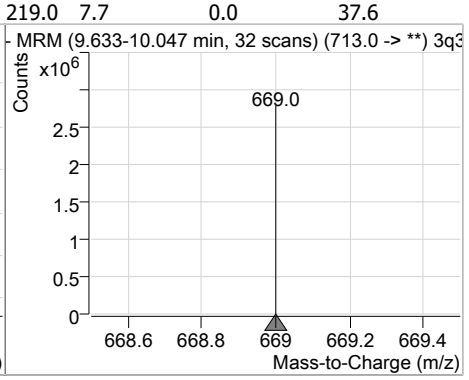
11.6.22 11

Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	50.23	9.73	-0.21	2093829	713.0 -> 219.0	7.7	0.0	37.6







Manual Integration Approval Summary

Sample Number: S3Q537-IC537
Lab FileID: 3Q36539.D
Injection Time: 04/13/21 16:03
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/14/21 10:44 Martha Valls
Supervisor approved: 04/14/21 15:06 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.75	Split peak
MeFOSAA	2355-31-9		8.01	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/14/21 15:06

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36540.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/13/2021 4:20:09 PM
Sample Name : ic537-100
Vial : P1-A9
DA Method File : BR_LN_041321_S3Q537.quantmethod.xml
Batch Name : s3q537.batch.bin
Sample Information : op84308,S3Q537,250,,,1,1,water

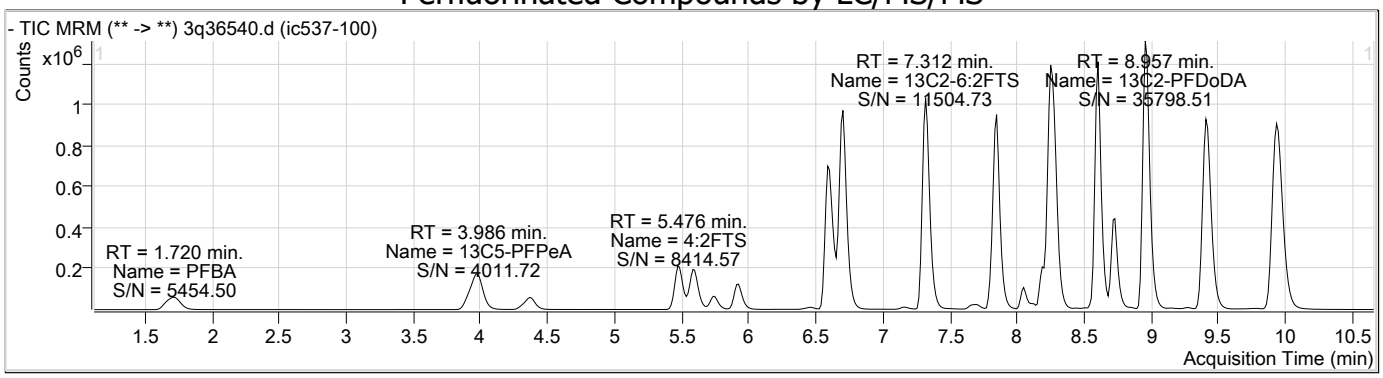
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.714	217.0 -> 172.0	158269	20.00	µg/L	-0.125
M5-PFPeA	3.986	268.0 -> 223.0	116557	20.00	µg/L	-0.088
M5-PFHxA	5.592	318.0 -> 273.0	179689	20.00	µg/L	-0.038
M4-PFHpA	6.594	367.0 -> 322.0	252739	20.00	µg/L	-0.013
M8-PFOA	7.326	421.0 -> 376.0	278235	20.00	µg/L	0.000
M9-PFNA	7.855	472.0 -> 427.0	322650	20.00	µg/L	0.000
M6-PFDA	8.257	519.0 -> 474.0	411074	20.00	µg/L	0.000
M7-PFUnDA	8.606	570.0 -> 525.0	583753	20.00	µg/L	0.000
M2-PFDoDA	8.957	615.0 -> 570.0	739541	20.00	µg/L	0.000
M2-PFTeDA	9.932	715.0 -> 670.0	566189	20.00	µg/L	-0.013
M8-FOSA	7.816	506.0 -> 78.0	84275	20.00	µg/L	0.000
M3-PFBS	4.367	302.0 -> 99.0	15950	20.00	µg/L	-0.080
M3-PFHxS	6.642	402.0 -> 99.0	22542	20.00	µg/L	-0.013
M8-PFOS	7.841	507.0 -> 99.0	33130	20.00	µg/L	0.000
M2-4:2FTS	5.487	329.0 -> 309.0	135367	20.00	µg/L	-0.025
M2-6:2FTS	7.312	429.0 -> 409.0	186424	20.00	µg/L	0.000
M2-8:2FTS	8.282	529.0 -> 509.0	201121	20.00	µg/L	0.000
M3-MeFOSAA	8.190	573.0 -> 419.0	92386	20.00	µg/L	0.013
M3-HFPO-DA	5.920	287.0 -> 169.0	23777	20.00	µg/L	-0.025
M5-EtFOSAA	8.290	589.0 -> 419.0	72341	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.487	329.0 -> 309.0	135367	23.65	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 118.3%		
13C2-6:2FTS	7.312	429.0 -> 409.0	186424	22.05	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.2%		
13C2-8:2FTS	8.282	529.0 -> 509.0	201121	21.73	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.6%		
13C2-PFDoDA	8.957	615.0 -> 570.0	739541	19.17	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.9%		
13C2-PFTeDA	9.932	715.0 -> 670.0	566189	20.25	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%		
13C3-PFBS	4.367	302.0 -> 99.0	15950	19.78	µg/L	-0.080
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.9%		
13C3-PFHxS	6.642	402.0 -> 99.0	22542	19.80	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.0%		
13C4-PFBA	1.714	217.0 -> 172.0	158269	20.20	µg/L	-0.125
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.0%		
13C4-PFHpA	6.594	367.0 -> 322.0	252739	19.50	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.5%		
13C5-PFHxA	5.592	318.0 -> 273.0	179689	19.63	µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%		
13C5-PFPeA	3.986	268.0 -> 223.0	116557	19.85	µg/L	-0.088
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%		
13C6-PFDA	8.257	519.0 -> 474.0	411074	17.89	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.4%		

Perfluorinated Compounds by LC/MS/MS

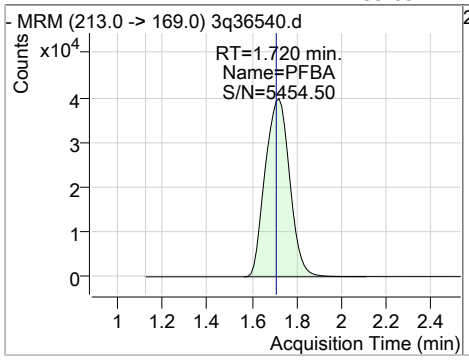
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.606	570.0 -> 525.0	583753	18.47	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.3%			
13C8-FOSA	7.816	506.0 -> 78.0	84275	15.87	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 79.4%			
13C8-PFOA	7.326	421.0 -> 376.0	278235	18.28	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.4%			
13C8-PFOS	7.841	507.0 -> 99.0	33130	18.76	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.8%			
13C9-PFNA	7.855	472.0 -> 427.0	322650	18.27	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.4%			
d3-MeFOSAA	8.190	573.0 -> 419.0	92386	19.35	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.8%			
13C3-HFPO-DA	5.920	287.0 -> 169.0	23758	19.59	µg/L		-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.9%			
d5-EtFOSAA	8.290	589.0 -> 419.0	72318	17.58	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.9%			
Target Compounds							QValue
4:2FTS	5.476	327.0 -> 307.0	600203	82.04	µg/L		100
6:2FTS	7.313	427.0 -> 407.0	818900	81.58	µg/L		100
8:2FTS	8.282	527.0 -> 507.0	868377	82.63	µg/L		98
EtFOSAA	8.290	584.0 -> 419.0	340223	100.75	µg/L	m	89
FOSA	7.817	498.0 -> 78.0	429708	99.56	µg/L		100
MeFOSAA	8.190	570.0 -> 419.0	418640	99.34	µg/L	m	100
PFBA	1.720	213.0 -> 169.0	302730	99.85	µg/L		100
PFBS	4.369	299.0 -> 80.0	242844	99.53	µg/L		100
PFDA	8.258	513.0 -> 469.0	2132232	100.23	µg/L		99
PFDoDA	8.957	613.0 -> 569.0	3669164	99.85	µg/L		99
PFDS	8.566	599.0 -> 80.0	128606	99.11	µg/L		97
PFHpA	6.595	363.0 -> 319.0	2294101	100.05	µg/L		100
PFHpS	7.337	449.0 -> 80.0	244900	100.38	µg/L		98
PFHxA	5.593	313.0 -> 269.0	627456	99.77	µg/L		100
PFHxS	6.643	399.0 -> 80.0	256650	99.60	µg/L	m	96
PFNA	7.855	463.0 -> 419.0	1935509	100.32	µg/L		98
PFNS	8.230	549.0 -> 80.0	234859	99.27	µg/L		99
PFOA	7.326	413.0 -> 369.0	1499883	99.73	µg/L		99
PFOS	7.841	499.0 -> 80.0	308892	99.86	µg/L	m	82
PFPeA	3.989	263.0 -> 219.0	1099689	99.74	µg/L		100
PFPeS	5.739	349.0 -> 80.0	189177	100.10	µg/L		100
PFTeDA	9.934	713.0 -> 669.0	4161645	99.90	µg/L		100
PFTrDA	9.408	663.0 -> 619.0	3970229	99.45	µg/L		100
PFUnDA	8.607	563.0 -> 519.0	2842231	99.65	µg/L		99
11Cl-PF3OUdS	8.729	631.0 -> 451.0	1131385	97.37	µg/L		100
9Cl-PF3ONS	8.053	531.0 -> 351.0	252294	101.28	µg/L		100
ADONA	6.709	377.0 -> 251.0	2953027	99.95	µg/L		100
HFPO-DA	5.928	329.0 -> 169.0	429155	99.61	µg/L		99
br-PFOS	7.677	499.0 -> 80.0	105017	24.05	µg/L		100
LN-PFOS	7.841	499.0 -> 80.0	203875	75.77	µg/L		100
br-PFHxS	6.466	399.0 -> 80.0	35715	11.94	µg/L		98
LN-PFHxS	6.643	399.0 -> 80.0	220935	87.66	µg/L		100
br-PFOA	7.326	413.0 -> 369.0	1499883	99.73	µg/L		99
LN-PFOA	7.326	413.0 -> 369.0	1499883	99.73	µg/L		99
br-PFNA	7.855	463.0 -> 419.0	1935509	100.32	µg/L		98
LN-PFNA	7.855	463.0 -> 419.0	1935509	100.32	µg/L		98

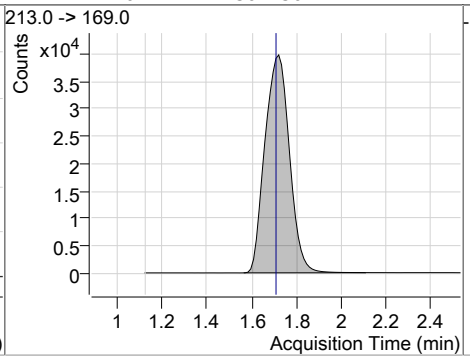
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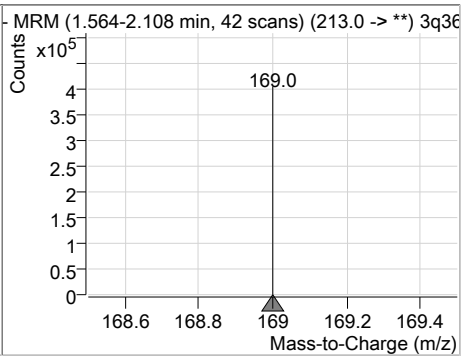
Perfluorinated Compounds by LC/MS/MS



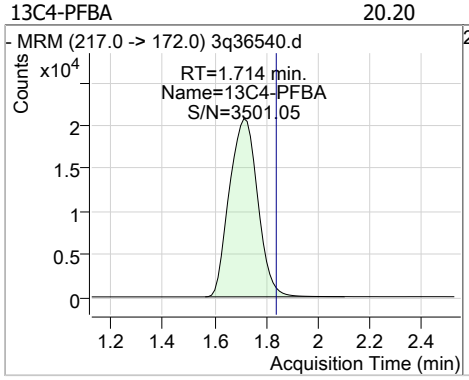
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	99.85	1.72	-0.11	302730				

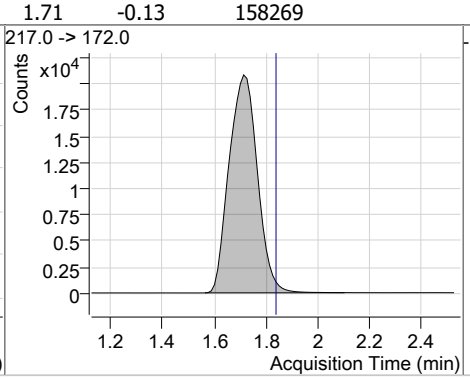


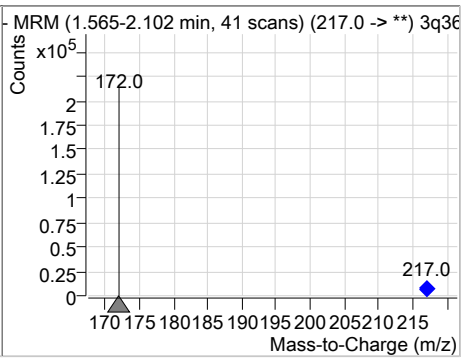




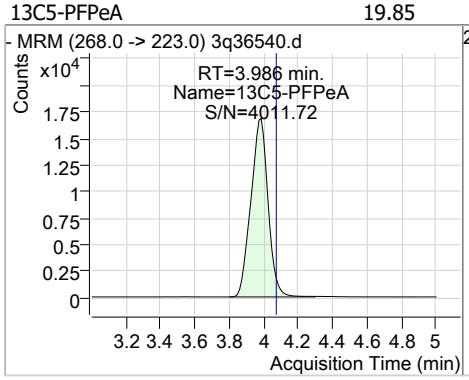
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.20	1.71	-0.13	158269				

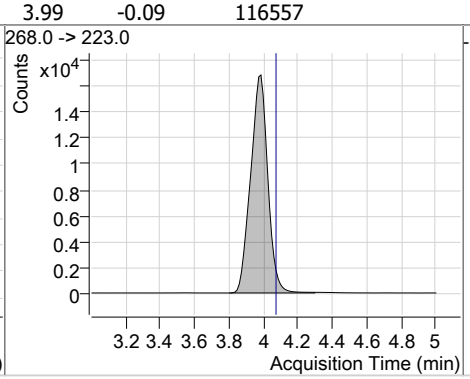


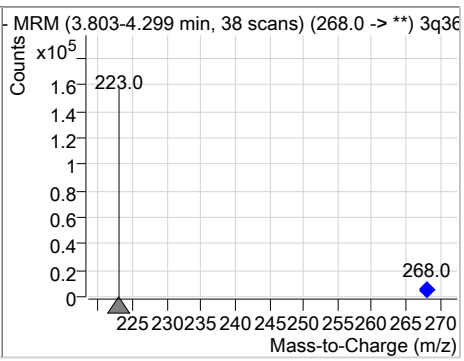




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.85	3.99	-0.09	116557				

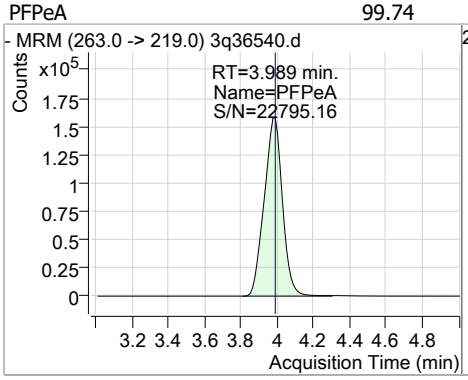


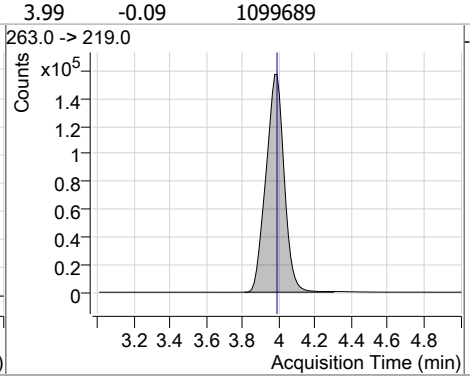


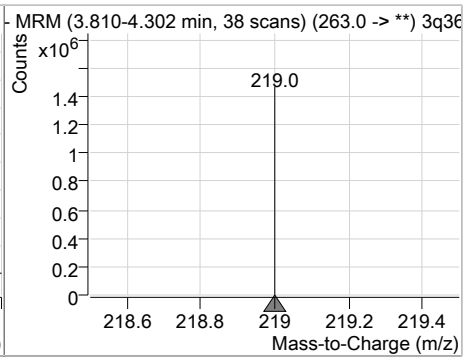


Perfluorinated Compounds by LC/MS/MS

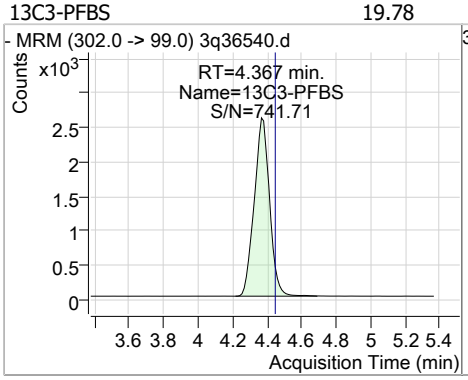
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	99.74	3.99	-0.09	1099689				

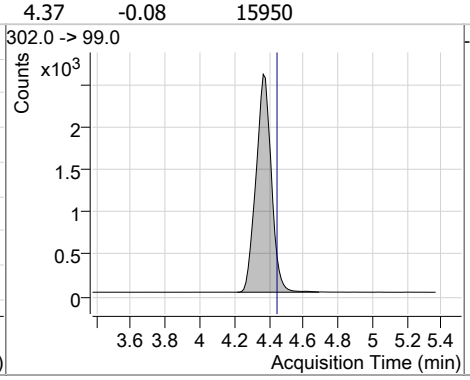


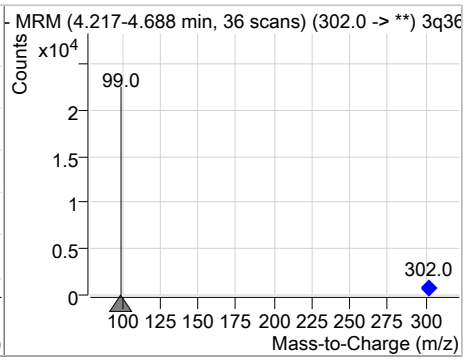




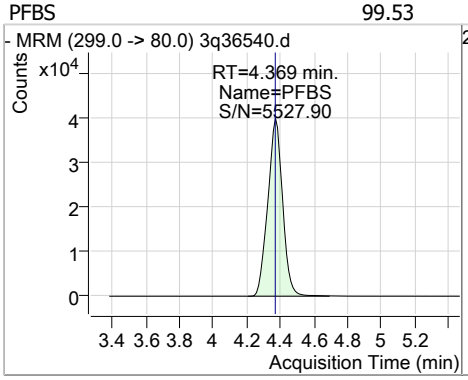
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.78	4.37	-0.08	15950				

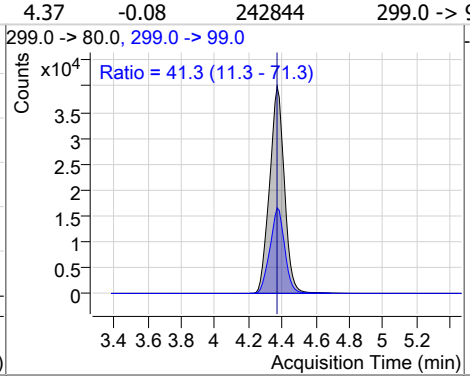


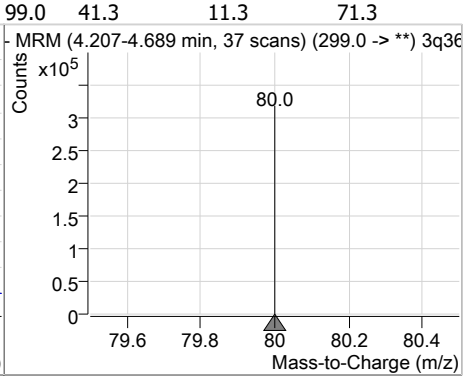




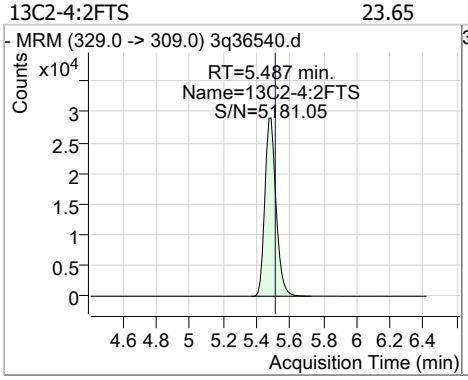
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	99.53	4.37	-0.08	242844	299.0 -> 99.0	41.3	11.3	71.3

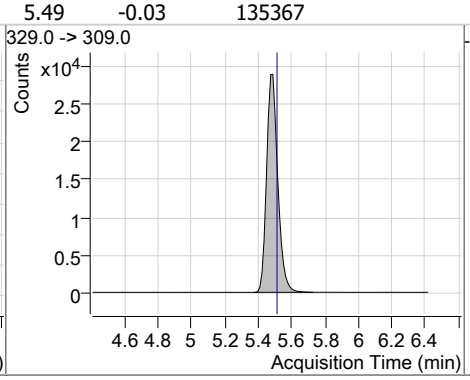


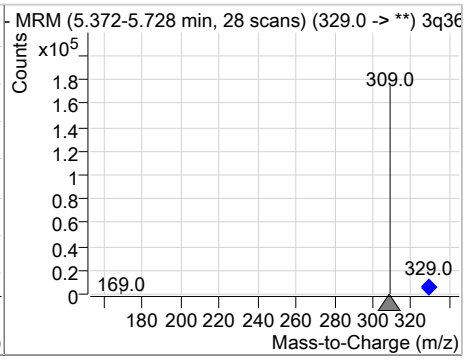




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	23.65	5.49	-0.03	135367				

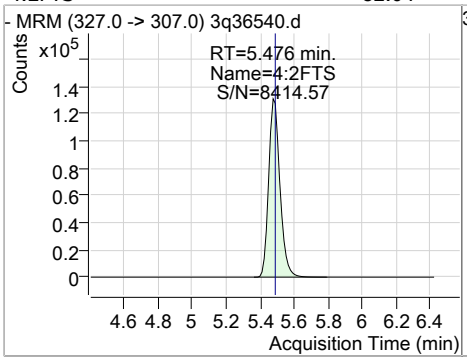


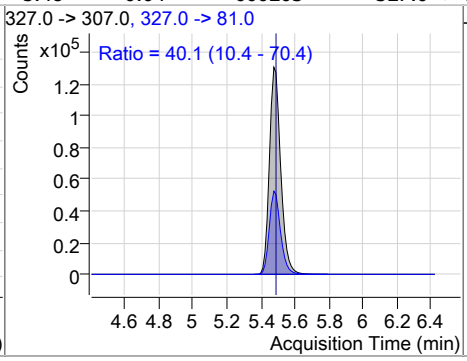


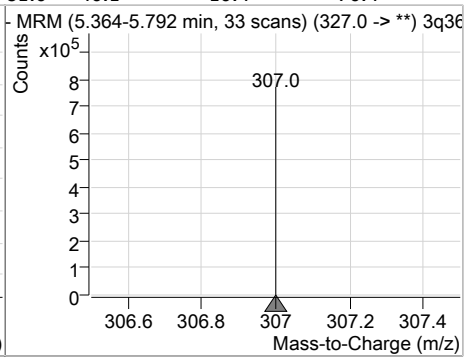


Perfluorinated Compounds by LC/MS/MS

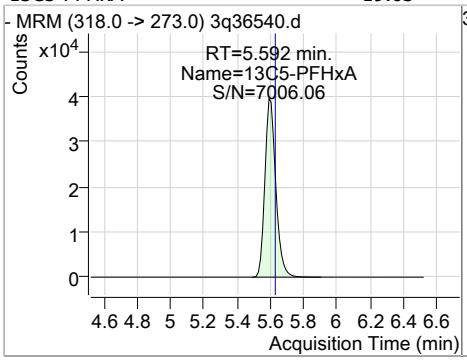
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	82.04	5.48	-0.04	600203	327.0 -> 81.0	40.1	10.4	70.4

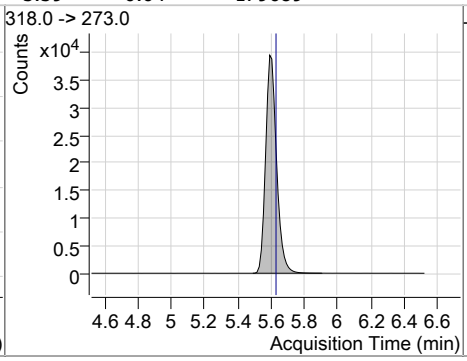


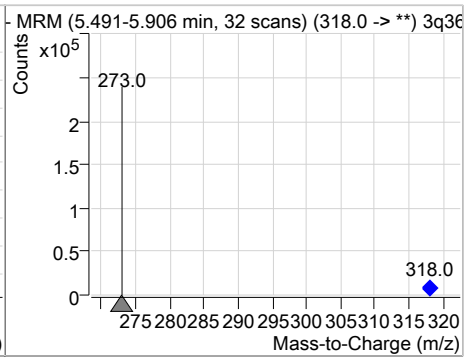




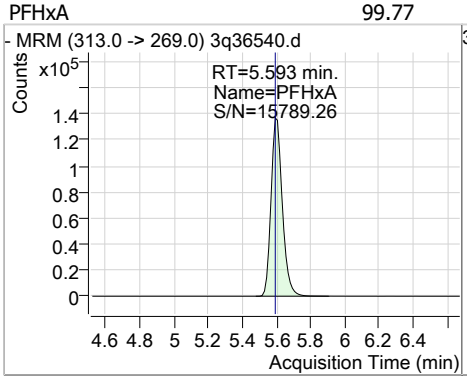
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.63	5.59	-0.04	179689				

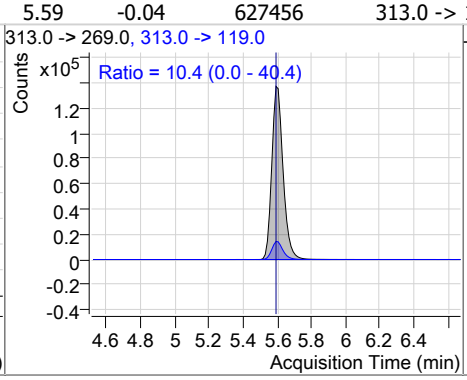


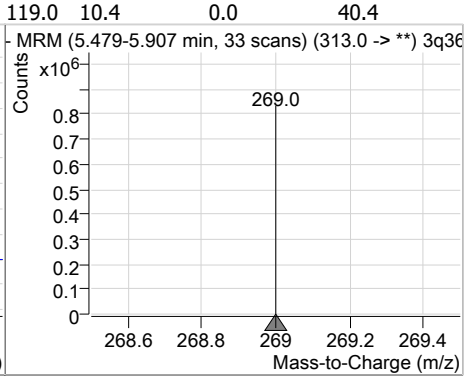




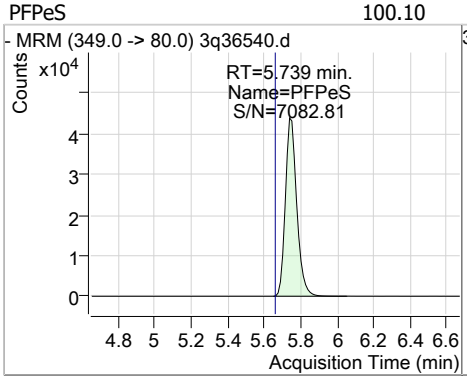
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	99.77	5.59	-0.04	627456	313.0 -> 119.0	10.4	0.0	40.4

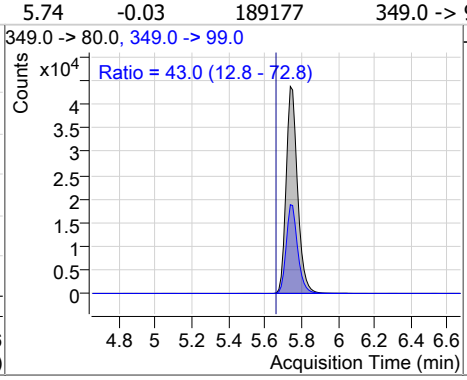


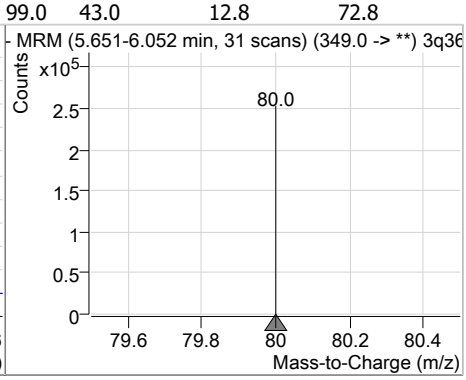




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	100.10	5.74	-0.03	189177	349.0 -> 99.0	43.0	12.8	72.8

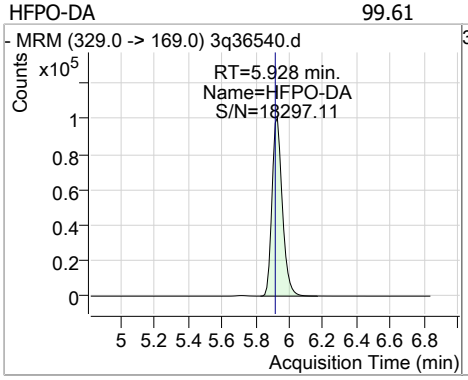


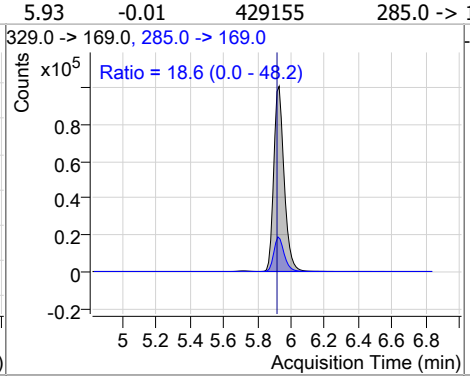


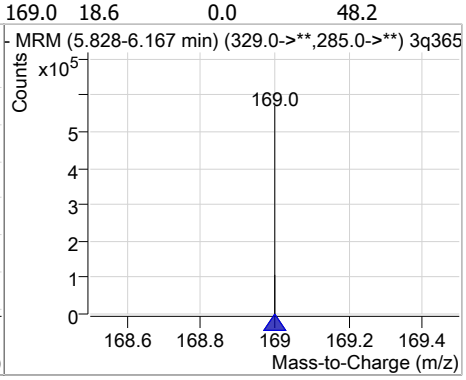


Perfluorinated Compounds by LC/MS/MS

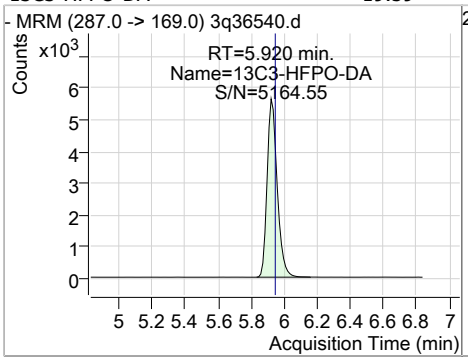
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	99.61	5.93	-0.01	429155	285.0 -> 169.0	18.6	0.0	48.2

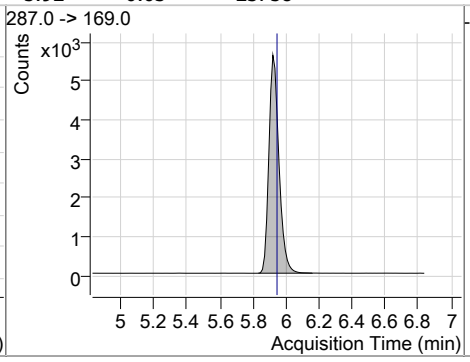


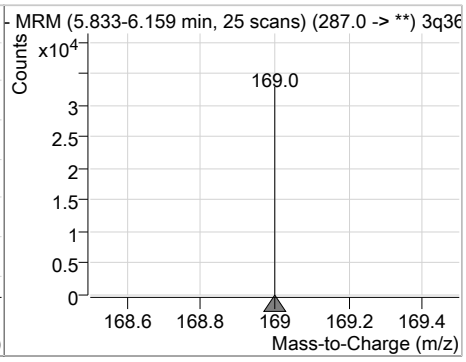




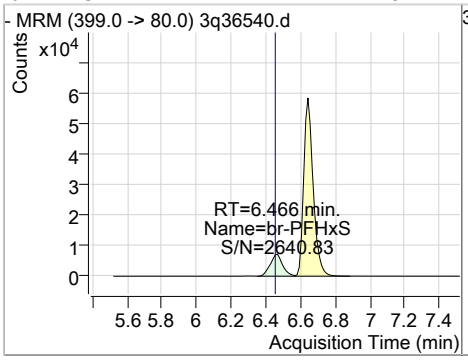
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.59	5.92	-0.03	23758				

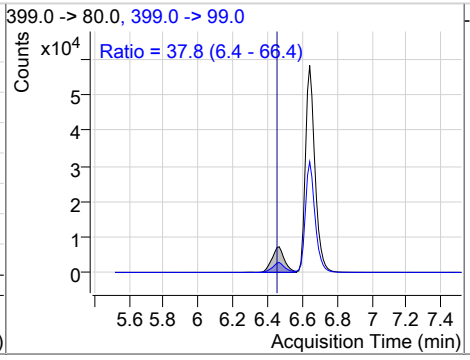


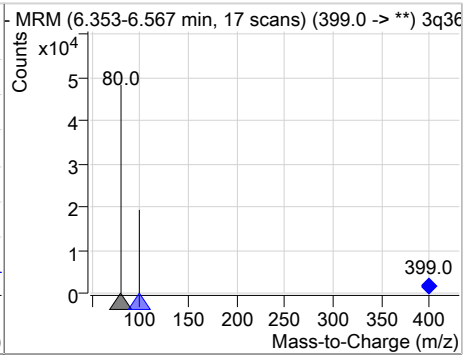




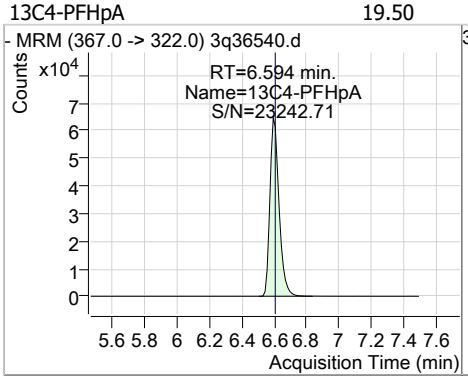
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	11.94	6.47	0.00	35715	399.0 -> 99.0	37.8	6.4	66.4

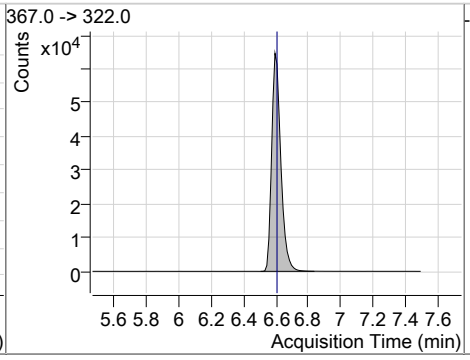


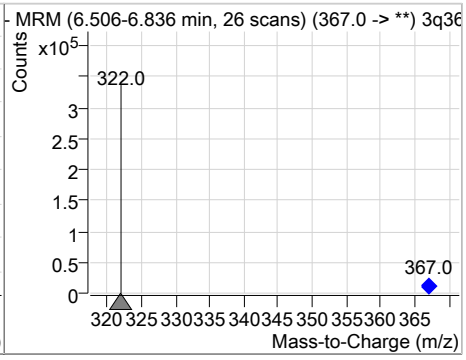




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.50	6.59	-0.01	252739				

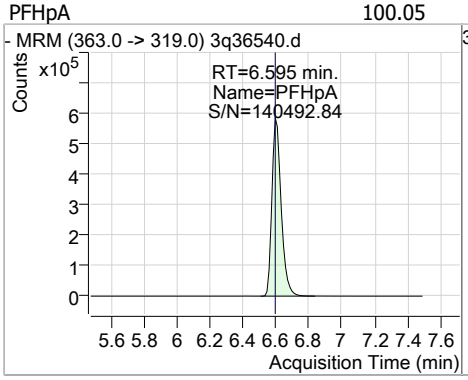


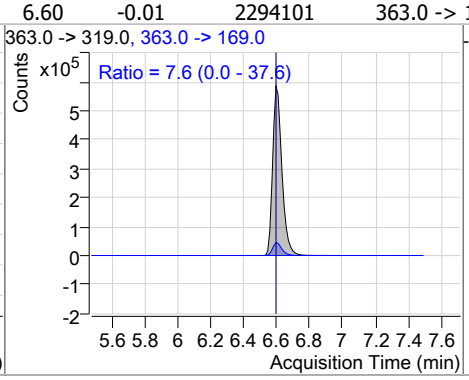


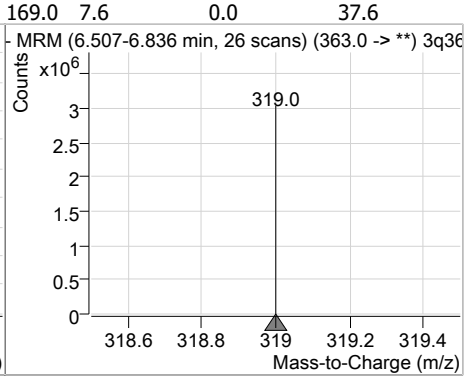


Perfluorinated Compounds by LC/MS/MS

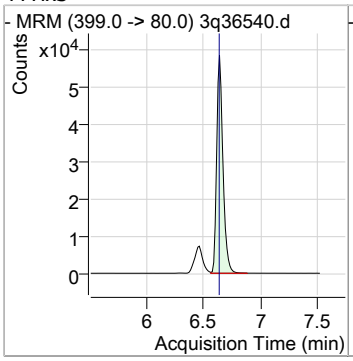
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	100.05	6.60	-0.01	2294101	363.0 -> 169.0	7.6	0.0	37.6

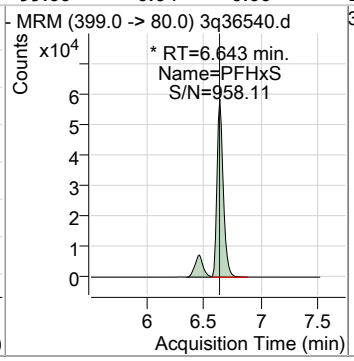


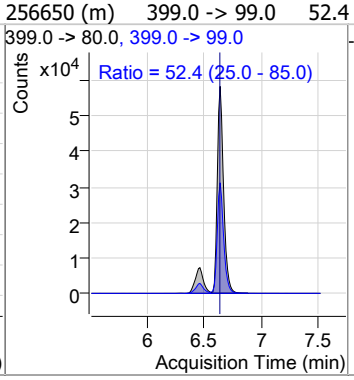


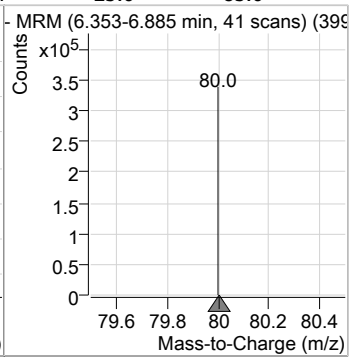


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	99.60	6.64	0.00	256650 (m)	399.0 -> 99.0	52.4	25.0	85.0

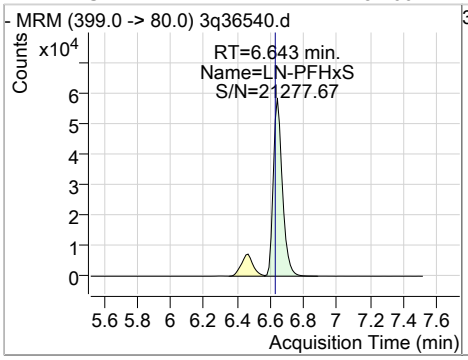


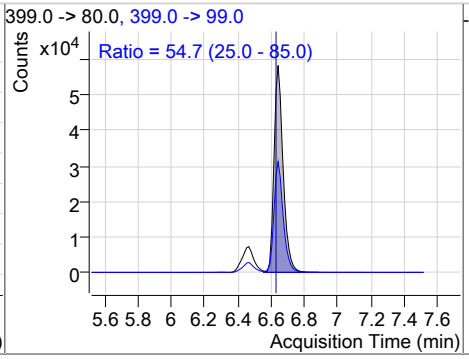


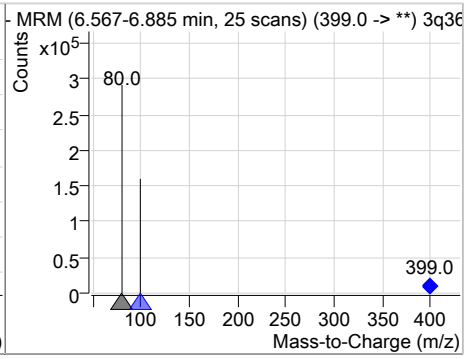




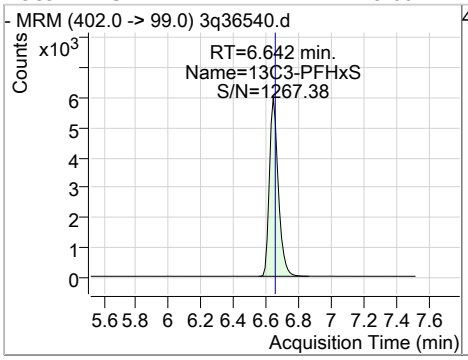
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	87.66	6.64	0.00	220935	399.0 -> 99.0	54.7	25.0	85.0

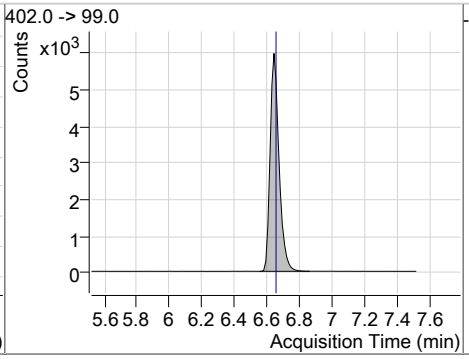


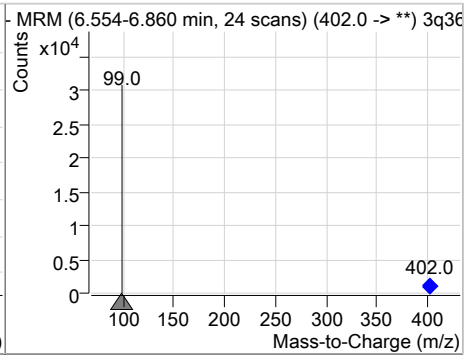




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.80	6.64	-0.01	22542				

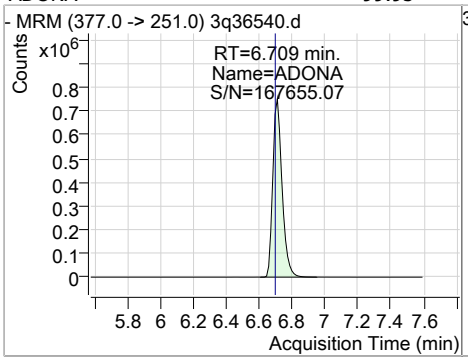


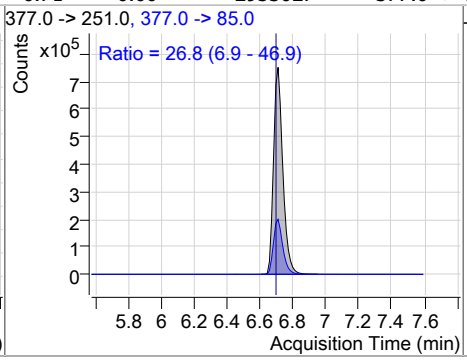


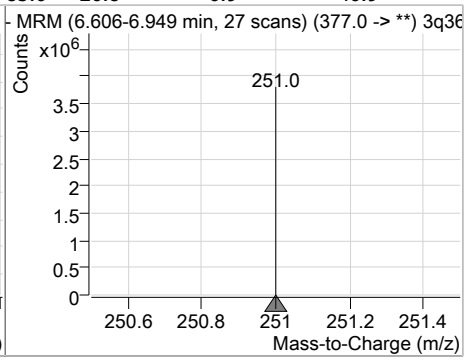


Perfluorinated Compounds by LC/MS/MS

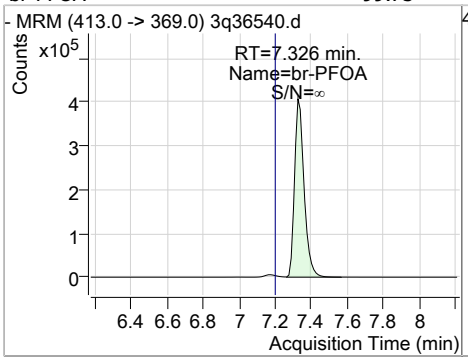
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	99.95	6.71	0.00	2953027	377.0 -> 85.0	26.8	6.9	46.9

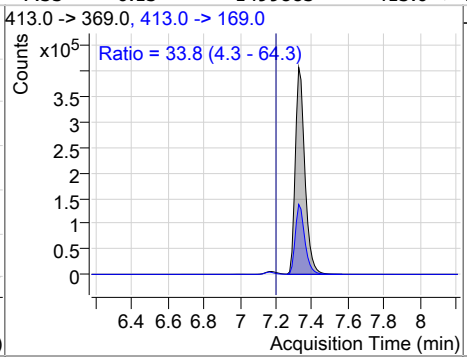


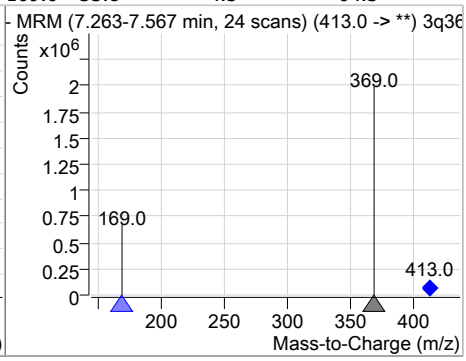




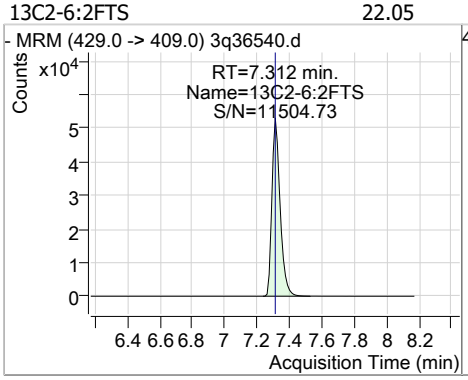
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	99.73	7.33	0.13	1499883	413.0 -> 169.0	33.8	4.3	64.3

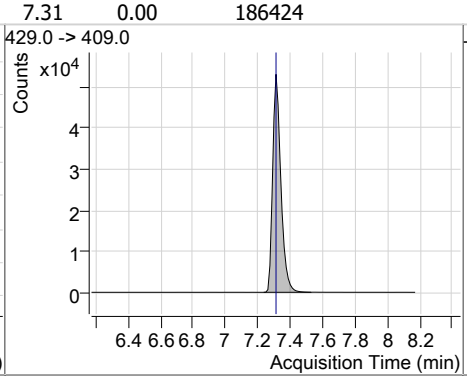


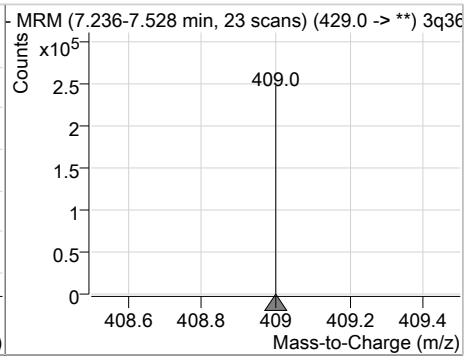




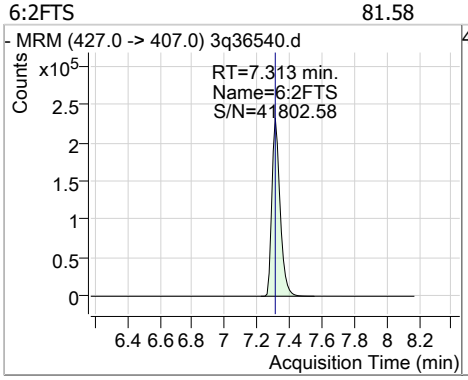
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	22.05	7.31	0.00	186424				

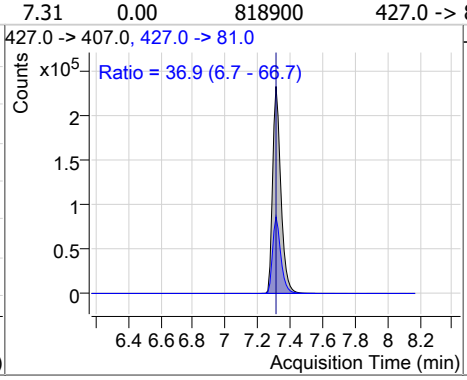


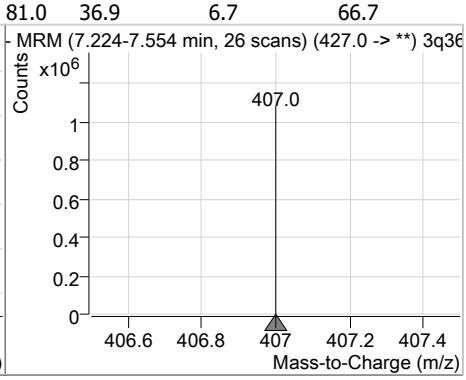




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	81.58	7.31	0.00	818900	427.0 -> 81.0	36.9	6.7	66.7

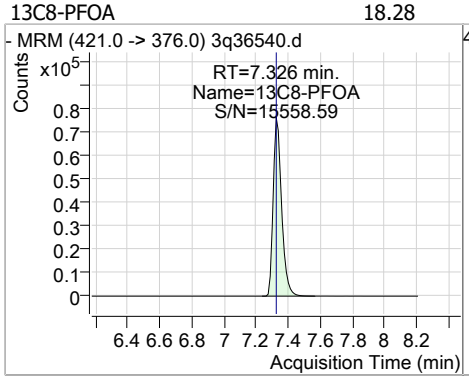


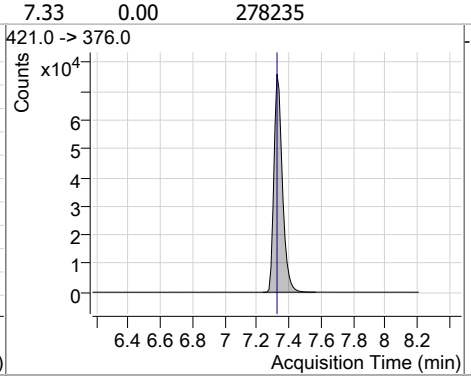


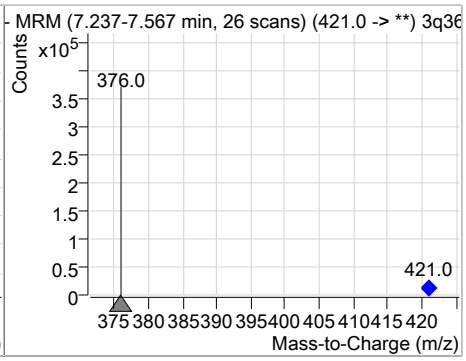


Perfluorinated Compounds by LC/MS/MS

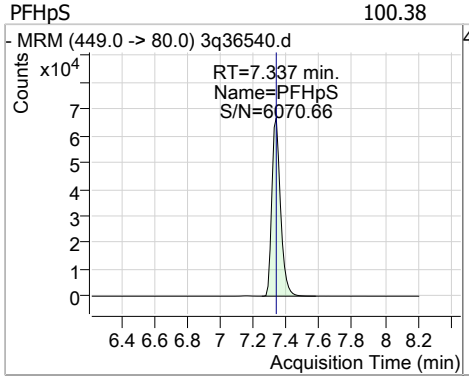
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	18.28	7.33	0.00	278235				

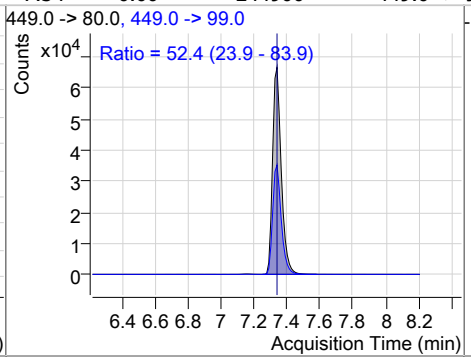


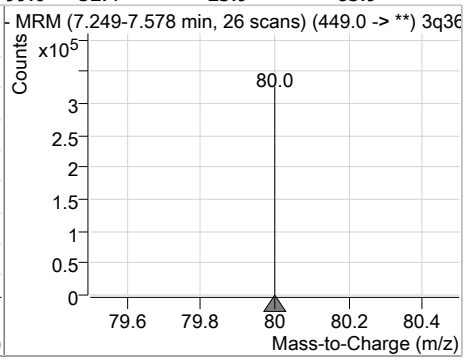




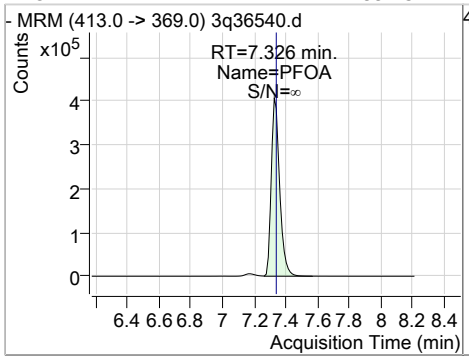
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	100.38	7.34	0.00	244900	449.0 -> 99.0	52.4	23.9	83.9

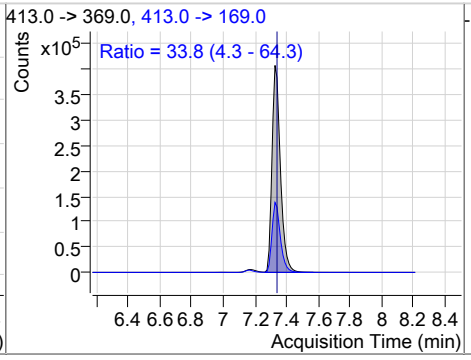


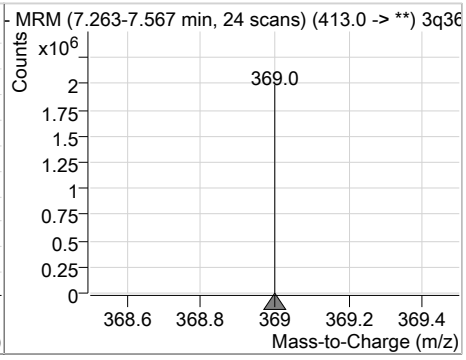




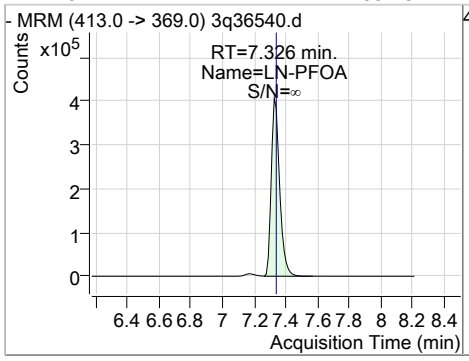
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	99.73	7.33	-0.01	1499883	413.0 -> 169.0	33.8	4.3	64.3

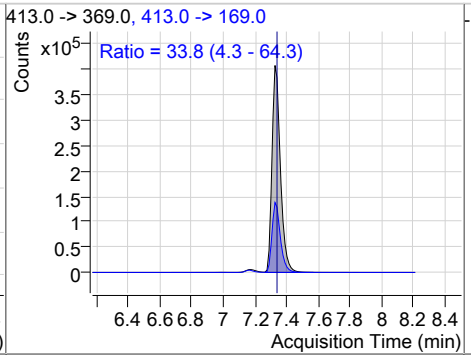


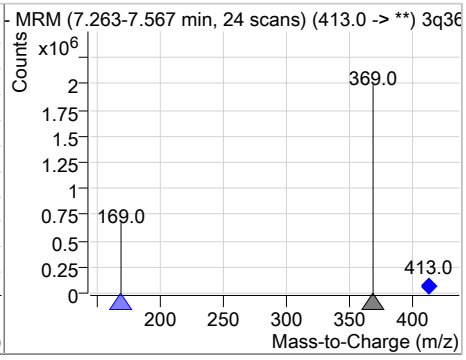




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	99.73	7.33	-0.01	1499883	413.0 -> 169.0	33.8	4.3	64.3

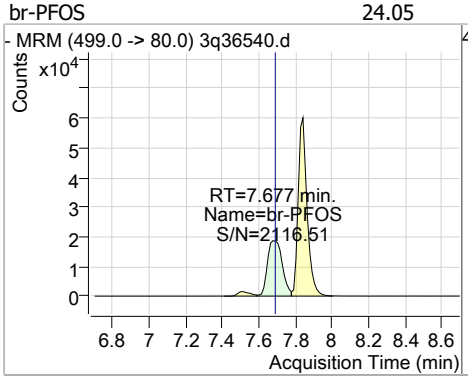


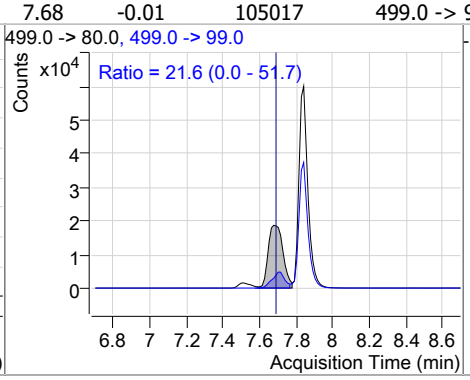


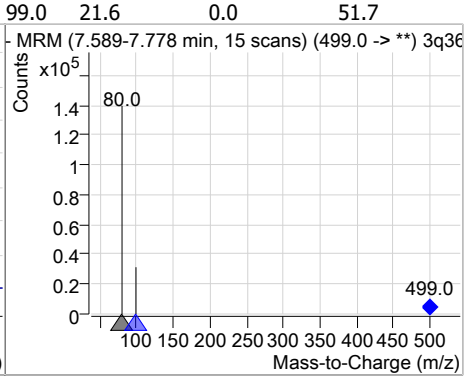


Perfluorinated Compounds by LC/MS/MS

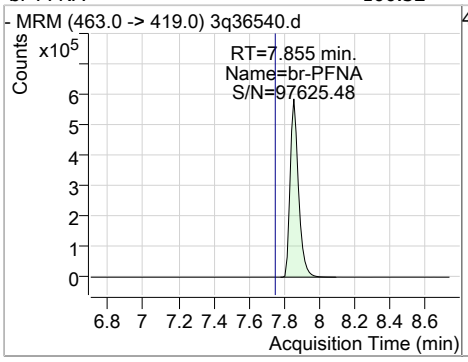
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	24.05	7.68	-0.01	105017	499.0 -> 99.0	21.6	0.0	51.7

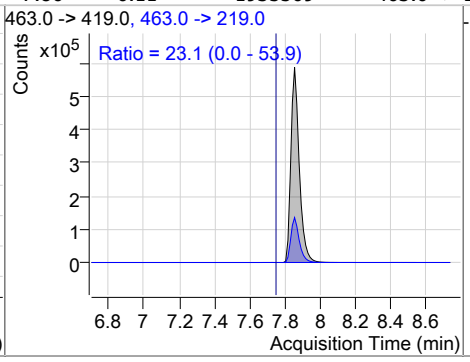


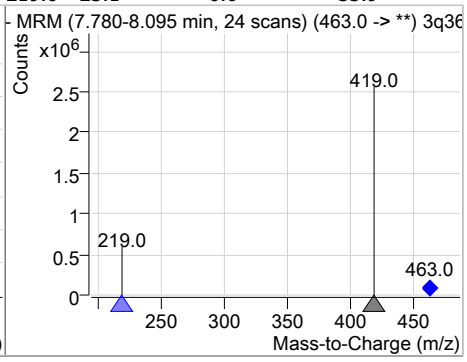




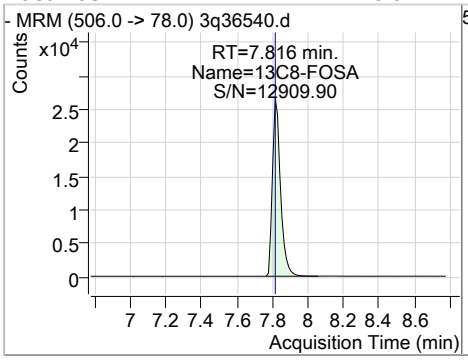
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFNA	100.32	7.86	0.11	1935509	463.0 -> 219.0	23.1	0.0	53.9

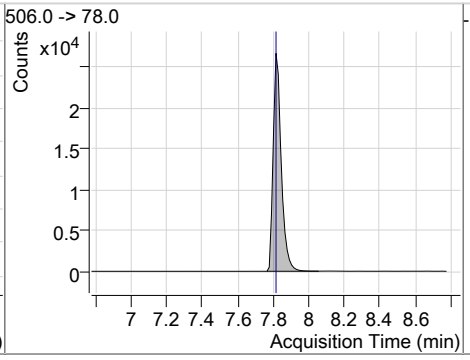


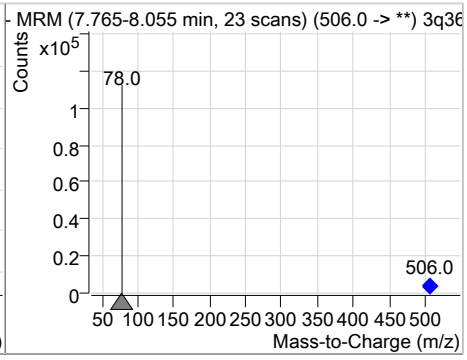




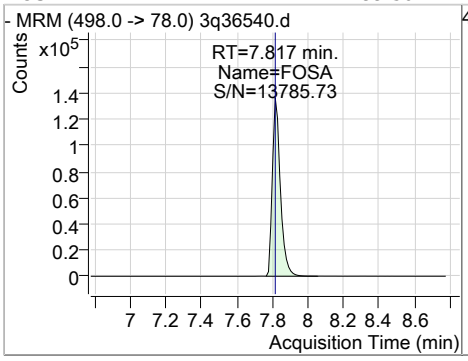
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	15.87	7.82	0.00	84275				

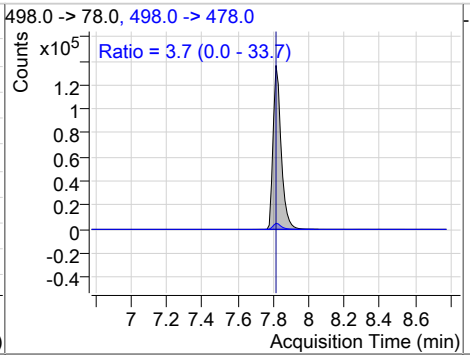


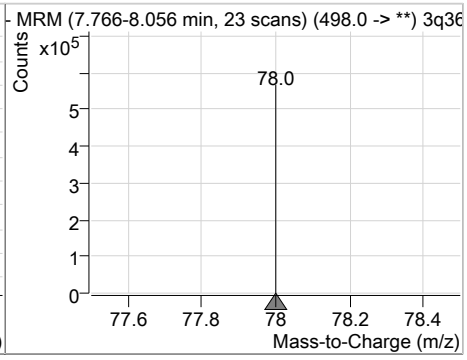




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	99.56	7.82	0.00	429708	498.0 -> 478.0	3.7	0.0	33.7

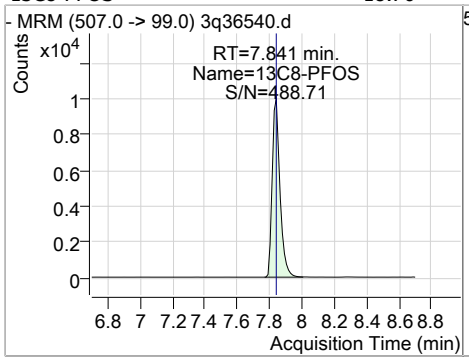


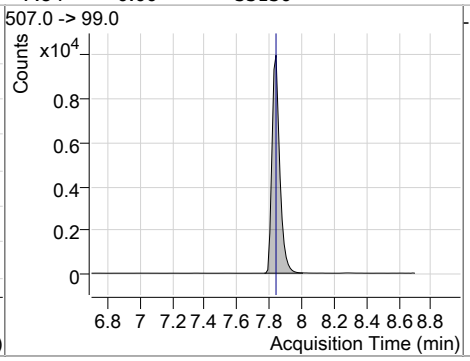


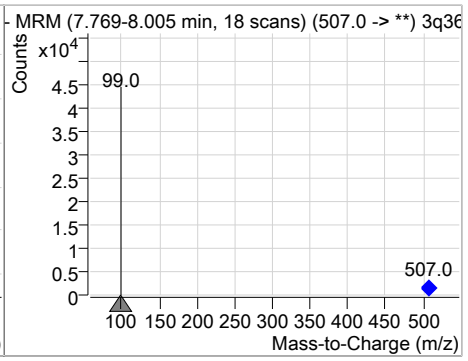


Perfluorinated Compounds by LC/MS/MS

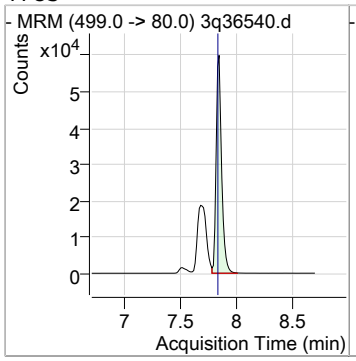
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	18.76	7.84	0.00	33130				

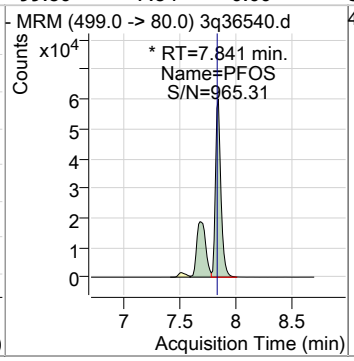


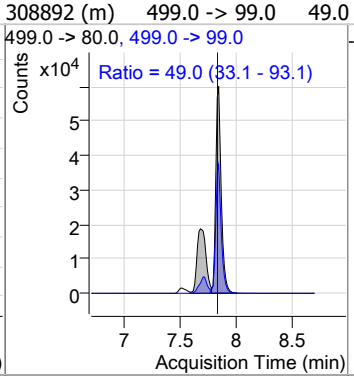


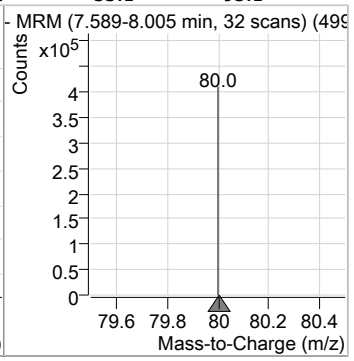


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	99.86	7.84	0.00	308892 (m)	499.0 -> 99.0	49.0	33.1	93.1

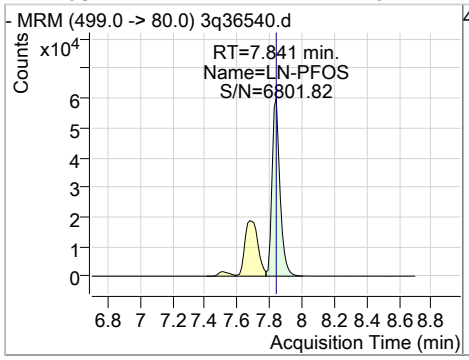


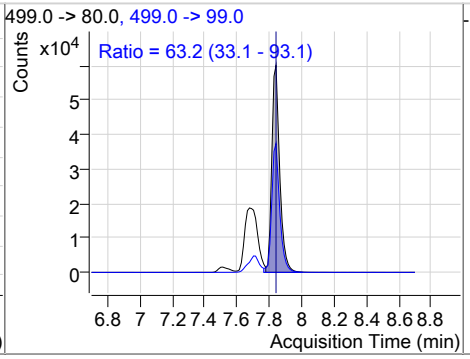


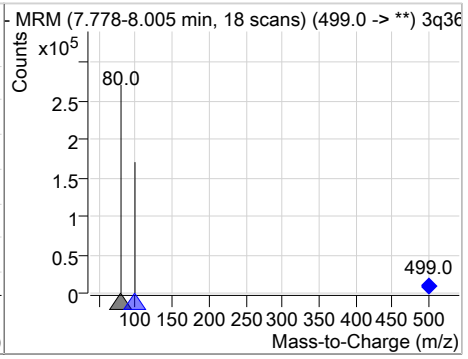




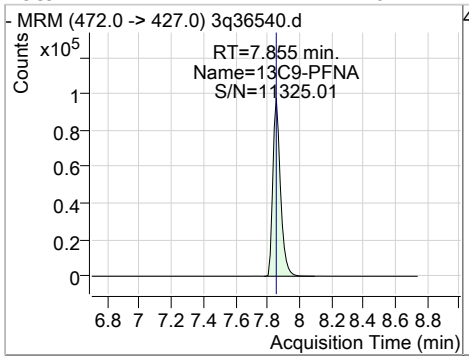
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	75.77	7.84	0.00	203875	499.0 -> 99.0	63.2	33.1	93.1

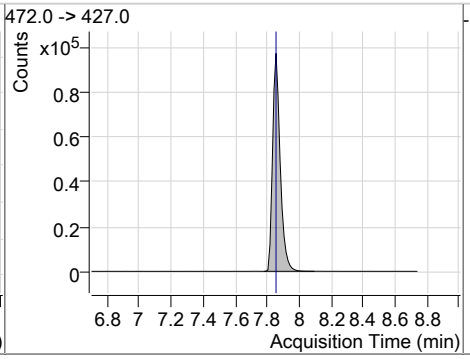


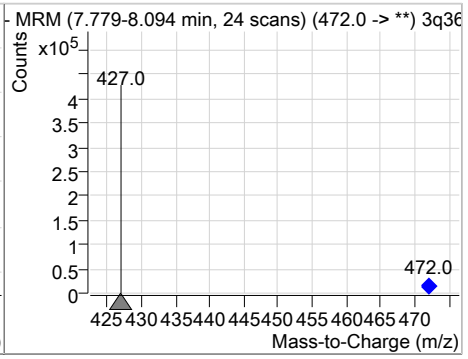




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.27	7.86	0.00	322650				



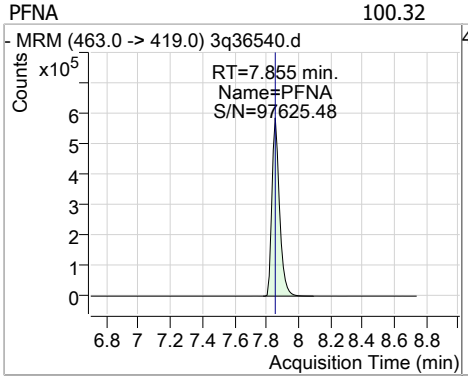


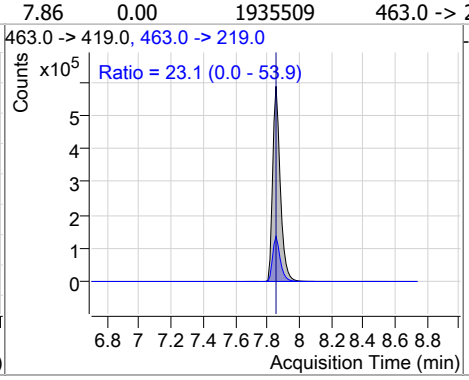


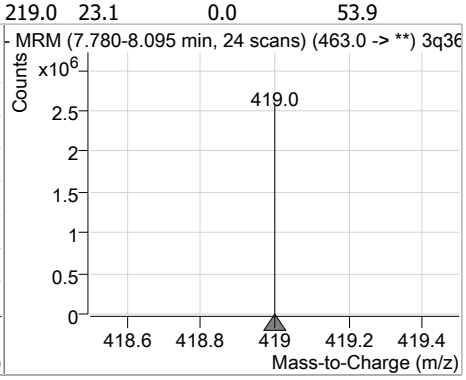
11.6.23 11

Perfluorinated Compounds by LC/MS/MS

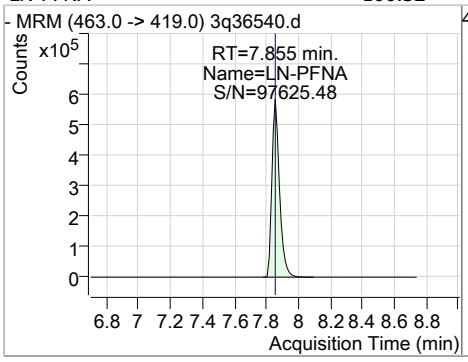
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	100.32	7.86	0.00	1935509	463.0 -> 219.0	23.1	0.0	53.9

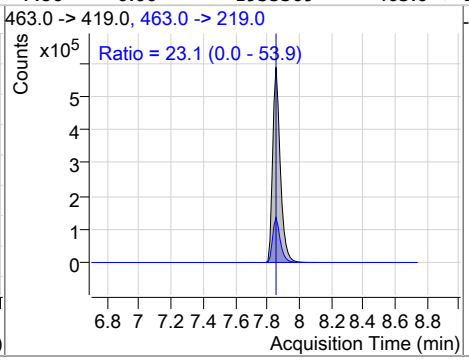


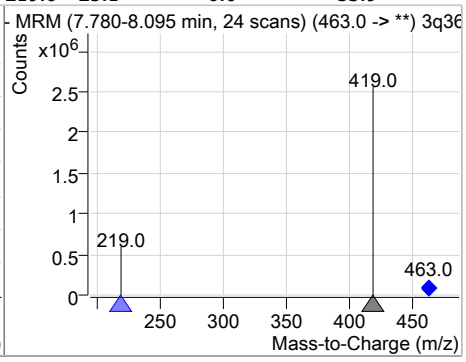




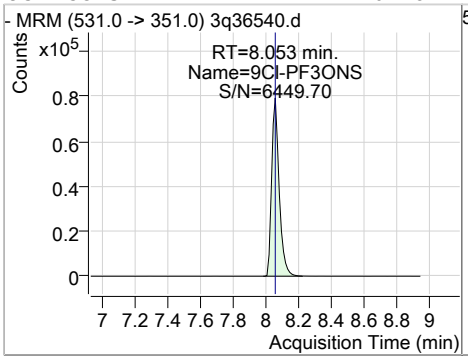
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	100.32	7.86	0.00	1935509	463.0 -> 219.0	23.1	0.0	53.9

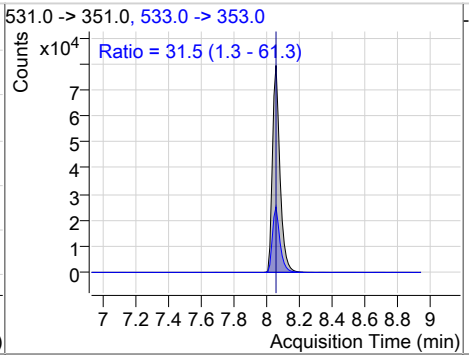


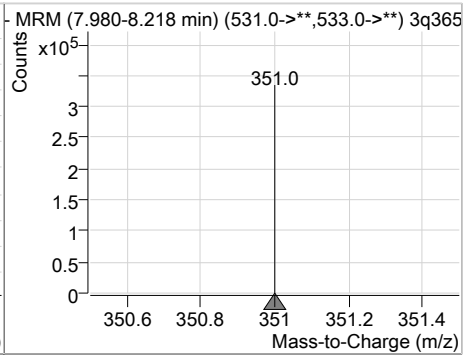




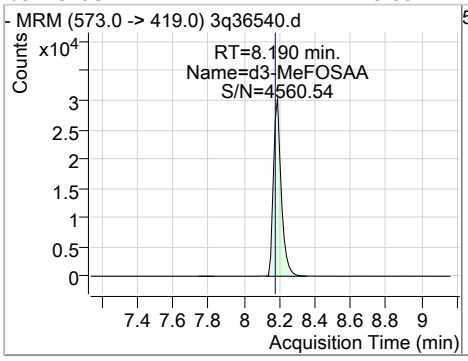
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	101.28	8.05	0.00	252294	533.0 -> 353.0	31.5	1.3	61.3

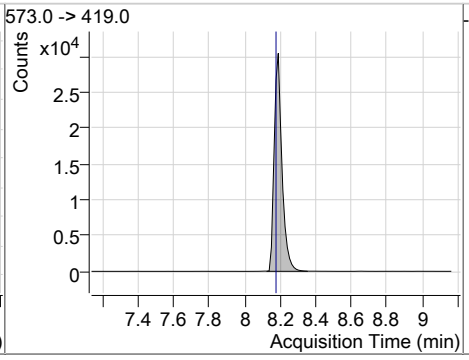


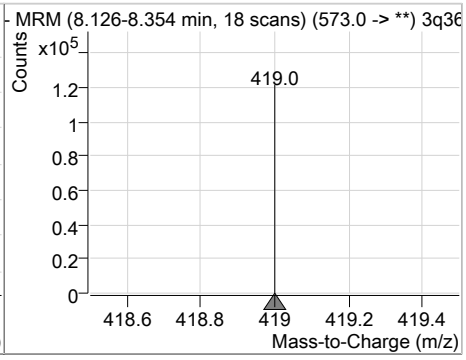




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.35	8.19	0.01	92386				



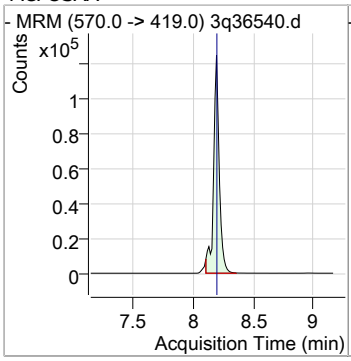


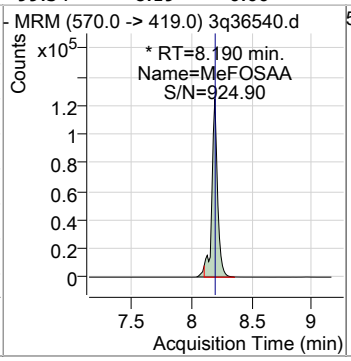


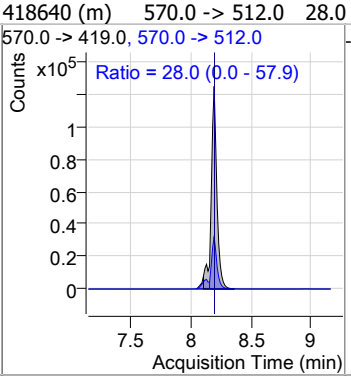
11.6.23 11

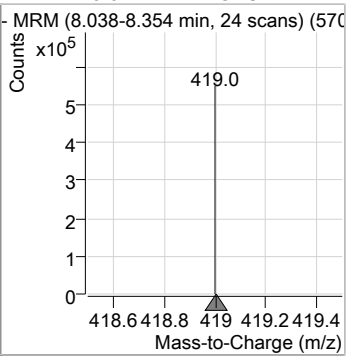
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	99.34	8.19	0.00	418640 (m)	570.0 -> 512.0	28.0	0.0	57.9

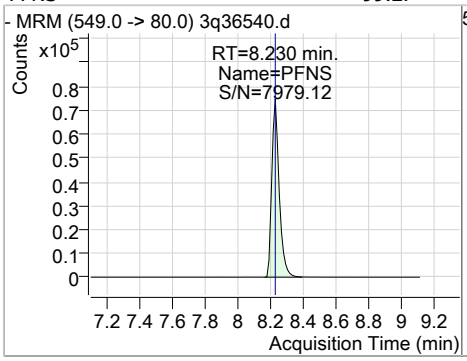


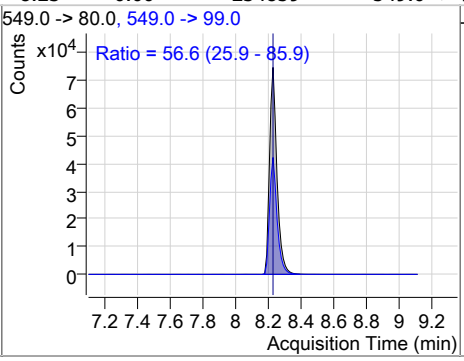


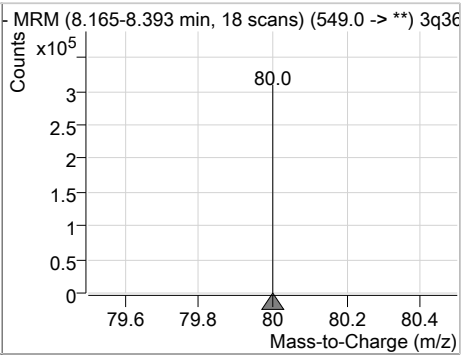




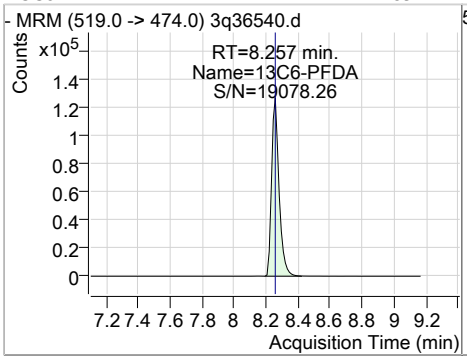
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	99.27	8.23	0.00	234859	549.0 -> 99.0	56.6	25.9	85.9

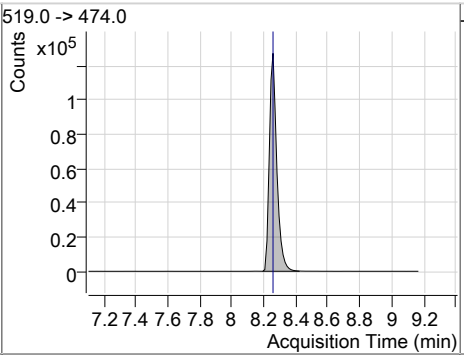


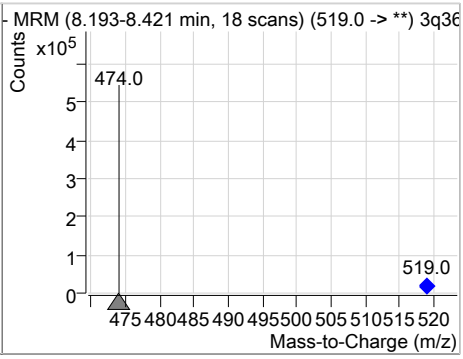




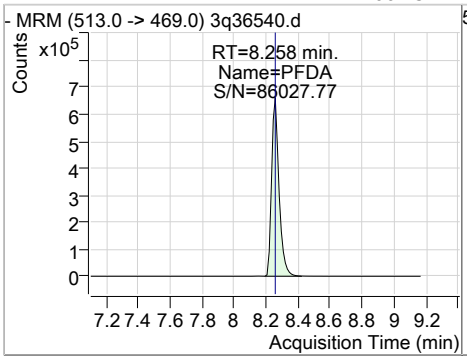
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	17.89	8.26	0.00	411074				

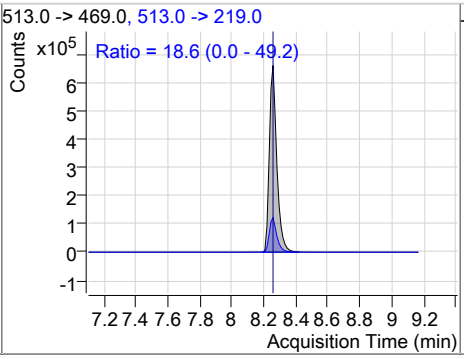


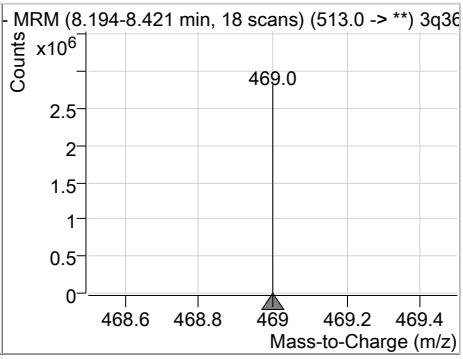




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	100.23	8.26	0.00	2132232	513.0 -> 219.0	18.6	0.0	49.2

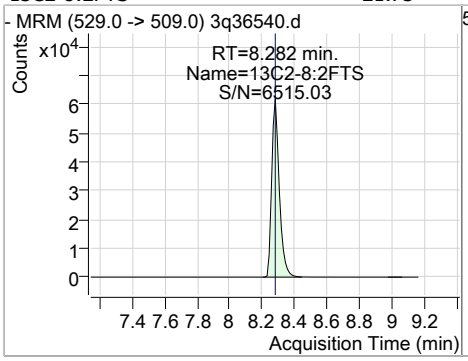


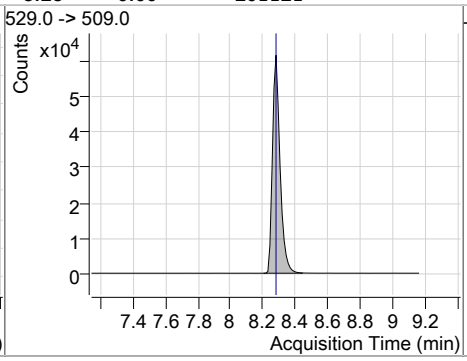


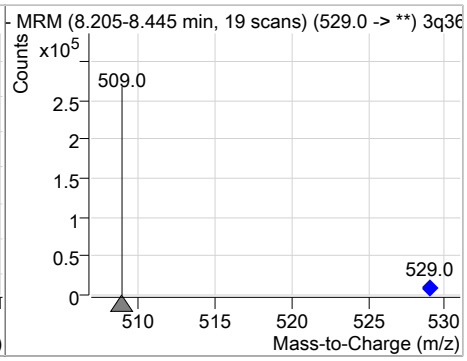


Perfluorinated Compounds by LC/MS/MS

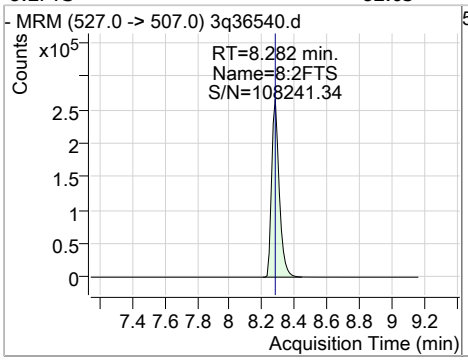
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	21.73	8.28	0.00	201121				

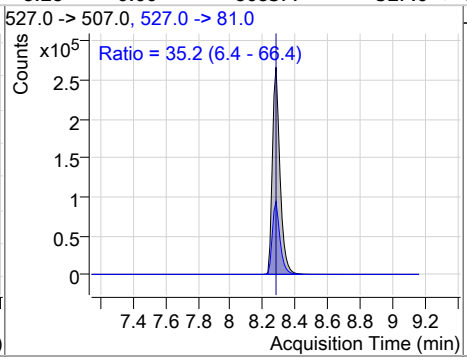


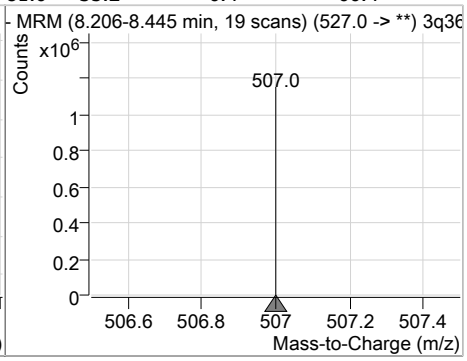




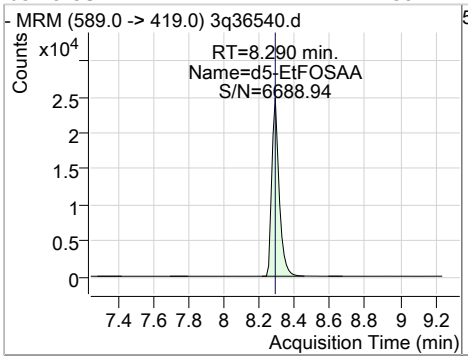
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	82.63	8.28	0.00	868377	527.0 -> 81.0	35.2	6.4	66.4

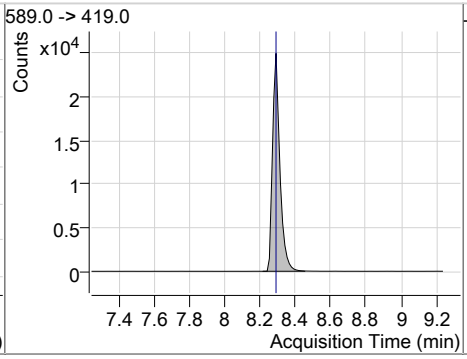


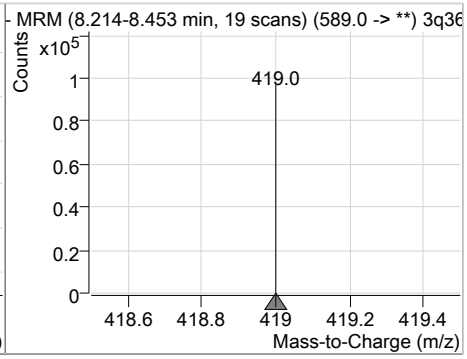




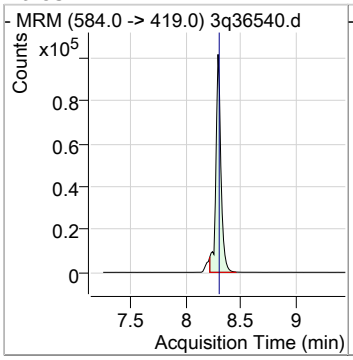
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	17.58	8.29	0.00	72318				

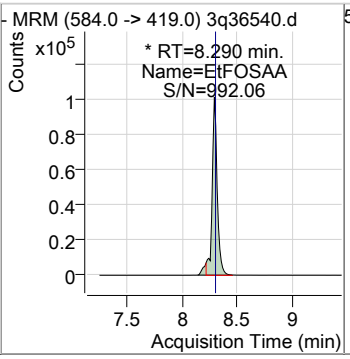


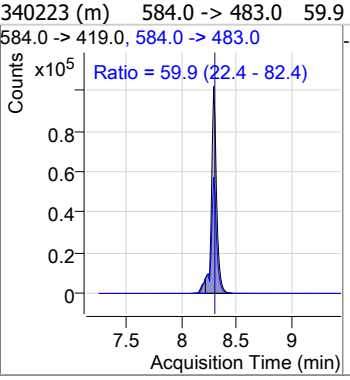


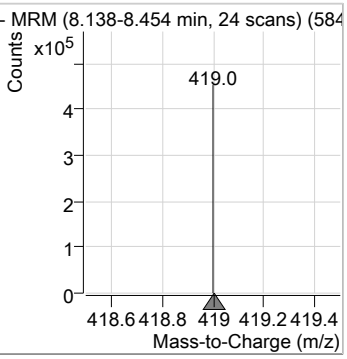


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	100.75	8.29	0.00	340223 (m)	584.0 -> 483.0	59.9	22.4	82.4



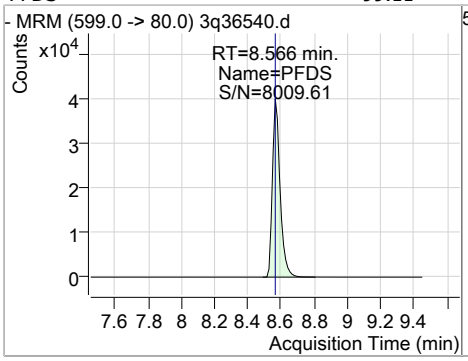


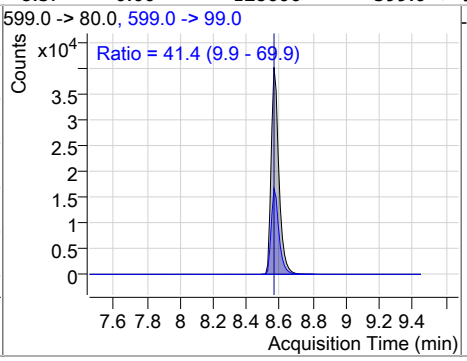


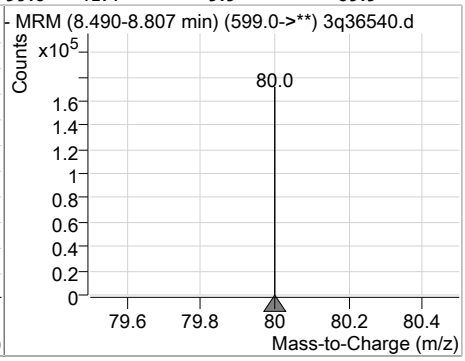


Perfluorinated Compounds by LC/MS/MS

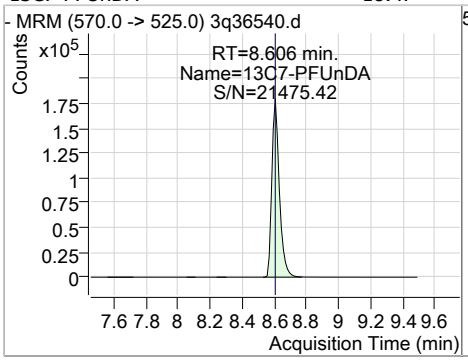
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	99.11	8.57	0.00	128606	599.0 -> 99.0	41.4	9.9	69.9

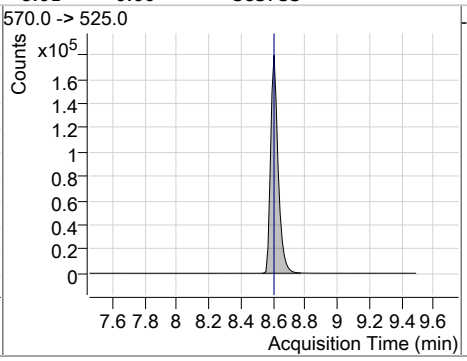


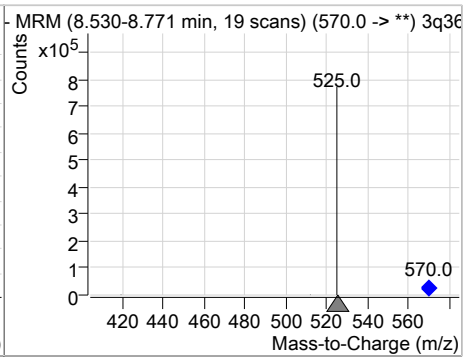




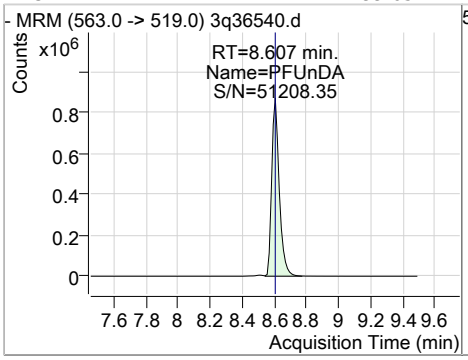
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	18.47	8.61	0.00	583753				

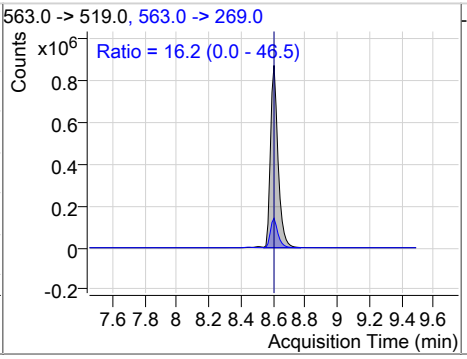


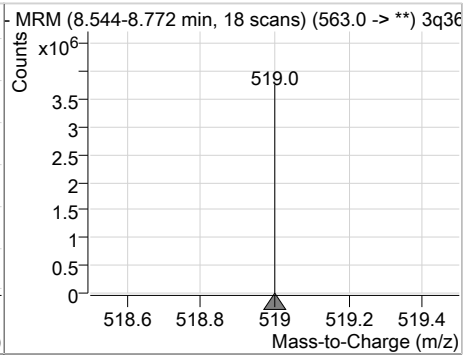




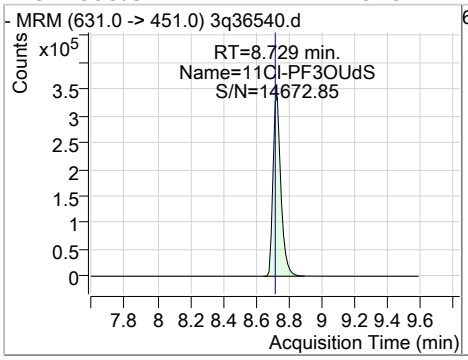
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	99.65	8.61	0.00	2842231	563.0 -> 269.0	16.2	0.0	46.5

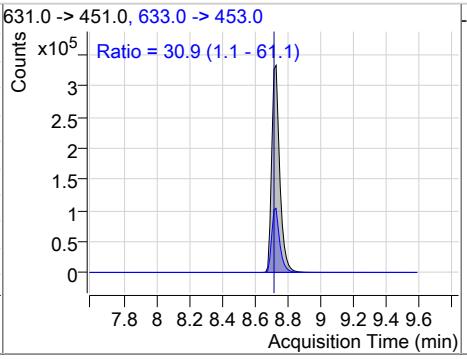


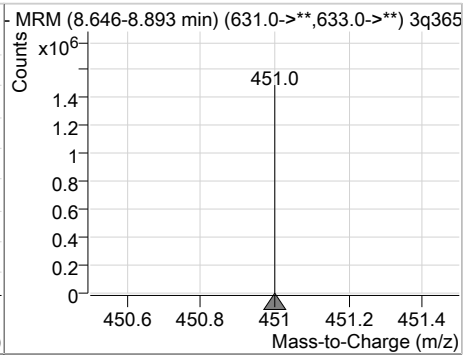




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	97.37	8.73	0.01	1131385	633.0 -> 453.0	30.9	1.1	61.1

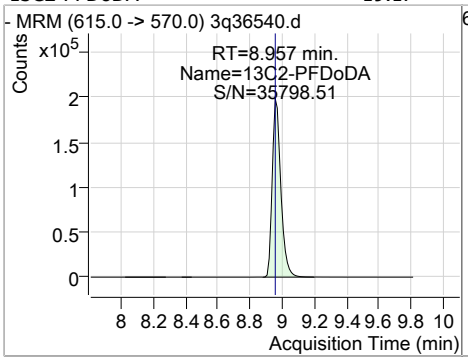


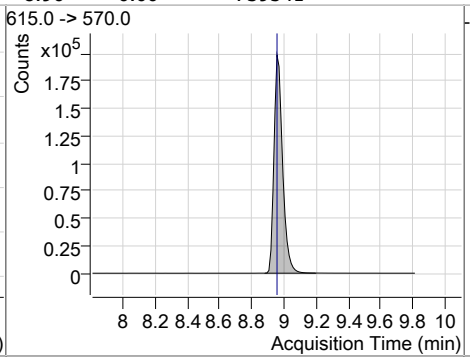


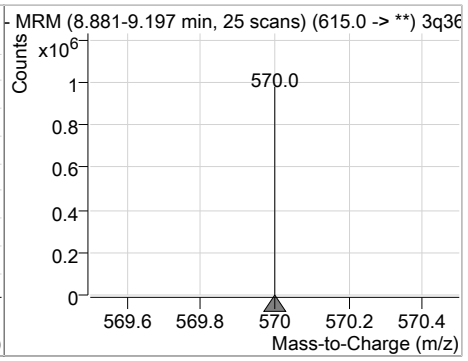


Perfluorinated Compounds by LC/MS/MS

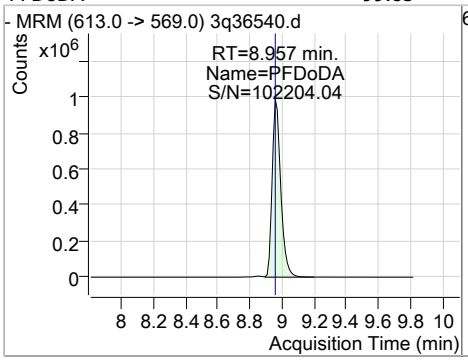
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.17	8.96	0.00	739541				

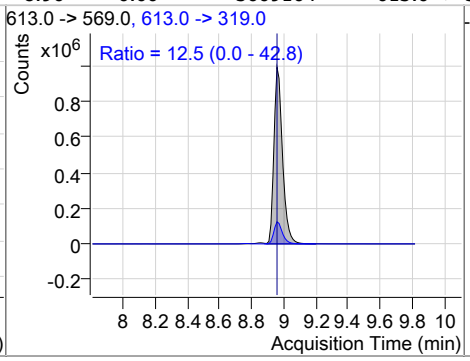


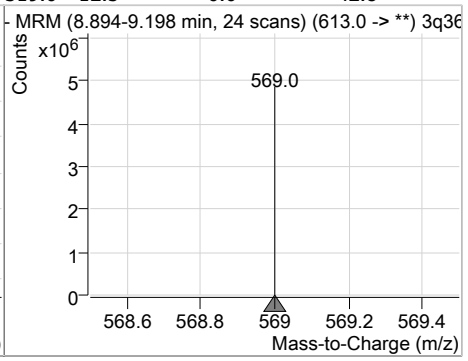




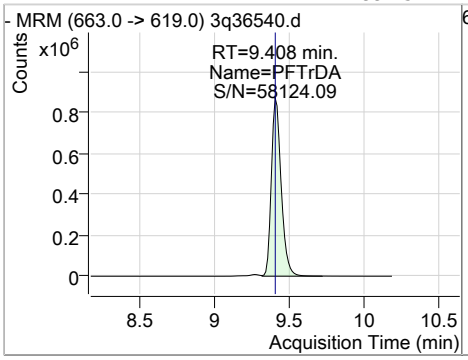
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	99.85	8.96	0.00	3669164	613.0 -> 319.0	12.5	0.0	42.8

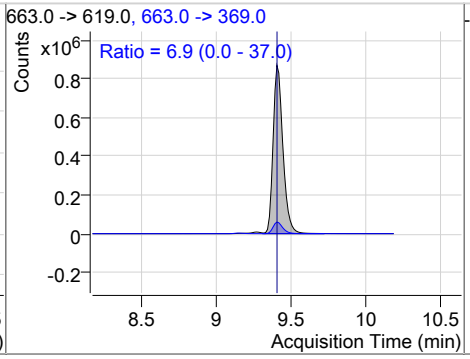


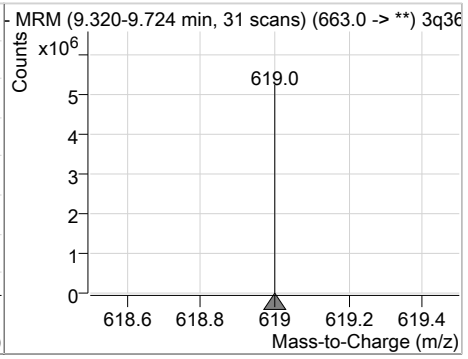




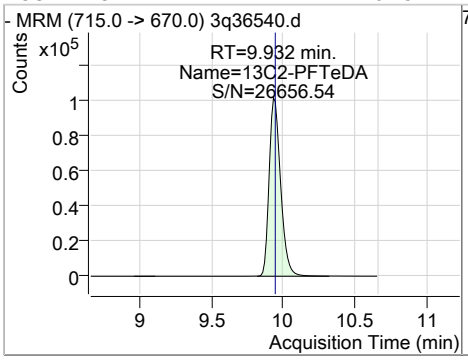
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	99.45	9.41	-0.01	3970229	663.0 -> 369.0	6.9	0.0	37.0

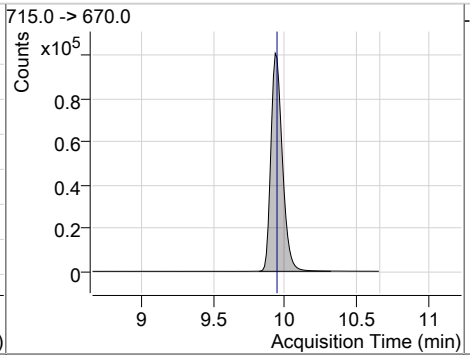


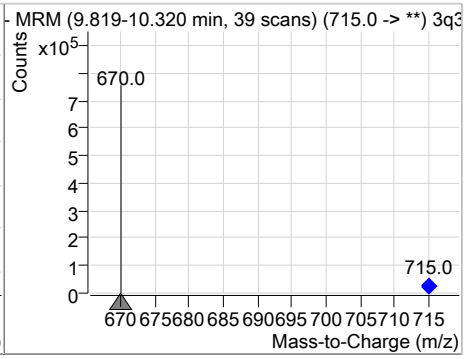




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.25	9.93	-0.01	566189				

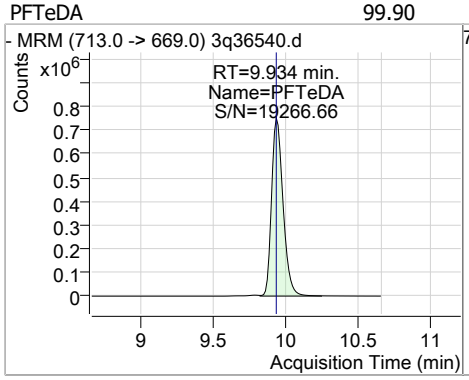


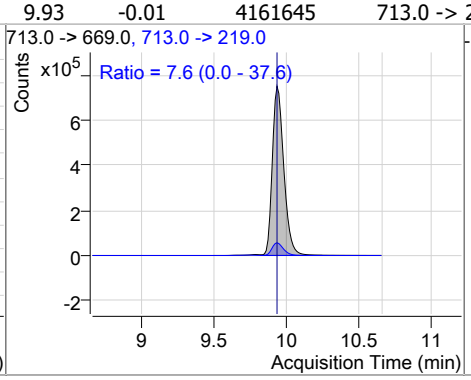


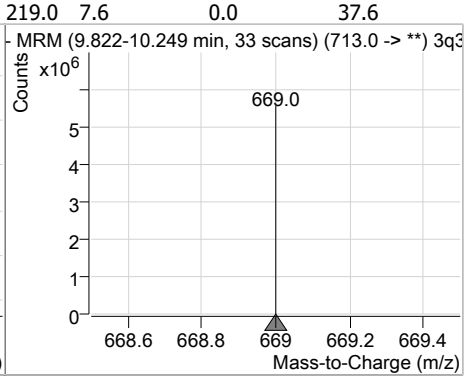


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	99.90	9.93	-0.01	4161645	713.0 -> 219.0	7.6	0.0	37.6







Manual Integration Approval Summary

Sample Number: S3Q537-IC537
Lab FileID: 3Q36540.D
Injection Time: 04/13/21 16:20
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/14/21 10:44 Martha Valls
Supervisor approved: 04/14/21 15:06 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.64	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.84	Split peak
MeFOSAA	2355-31-9		8.19	Split peak
EtFOSAA	2991-50-6		8.29	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/14/21 15:06

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36542.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/13/2021 4:53:13 PM
Sample Name : icv537-20 t-pfoa
Vial : P1-B1
DA Method File : BR_LN_041321_S3Q537.quantmethod.xml
Batch Name : s3q537.batch.bin
Sample Information : op84308,S3Q537,250,,,1,1,water

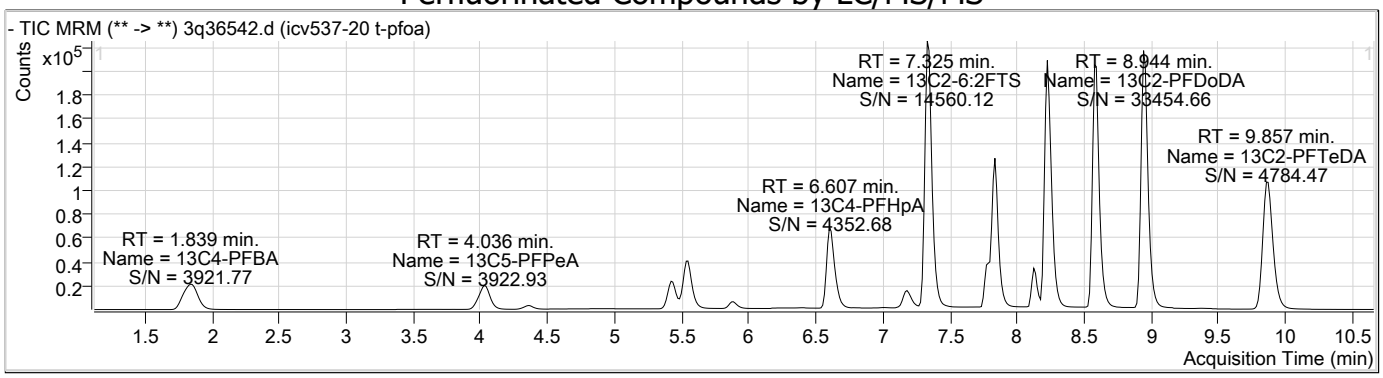
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.839	217.0 -> 172.0	163134	20.00	µg/L	0.000
M5-PFPeA	4.036	268.0 -> 223.0	118919	20.00	µg/L	-0.038
M5-PFHxA	5.554	318.0 -> 273.0	181724	20.00	µg/L	-0.076
M4-PFHpA	6.607	367.0 -> 322.0	260078	20.00	µg/L	0.000
M8-PFOA	7.351	421.0 -> 376.0	309504	20.00	µg/L	0.025
M9-PFNA	7.842	472.0 -> 427.0	362566	20.00	µg/L	-0.013
M6-PFDA	8.232	519.0 -> 474.0	479821	20.00	µg/L	-0.025
M7-PFUnDA	8.581	570.0 -> 525.0	721282	20.00	µg/L	-0.025
M2-PFDoDA	8.944	615.0 -> 570.0	785074	20.00	µg/L	-0.013
M2-PFTeDA	9.857	715.0 -> 670.0	568978	20.00	µg/L	-0.088
M8-FOSA	7.778	506.0 -> 78.0	114132	20.00	µg/L	-0.038
M3-PFBS	4.354	302.0 -> 99.0	16546	20.00	µg/L	-0.092
M3-PFHxS	6.655	402.0 -> 99.0	22748	20.00	µg/L	0.000
M8-PFOS	7.828	507.0 -> 99.0	35606	20.00	µg/L	-0.013
M2-4:2FTS	5.422	329.0 -> 309.0	106401	20.00	µg/L	-0.090
M2-6:2FTS	7.325	429.0 -> 409.0	162564	20.00	µg/L	0.013
M2-8:2FTS	8.256	529.0 -> 509.0	177600	20.00	µg/L	-0.025
M3-MeFOSAA	8.126	573.0 -> 419.0	97253	20.00	µg/L	-0.051
M3-HFPO-DA	5.895	287.0 -> 169.0	24091	20.00	µg/L	-0.050
M5-EtFOSAA	8.227	589.0 -> 419.0	86638	20.00	µg/L	-0.063
System Monitoring Compounds						
13C2-4:2FTS	5.422	329.0 -> 309.0	106401	18.59	µg/L	-0.090
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.0%		
13C2-6:2FTS	7.325	429.0 -> 409.0	162564	19.23	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.1%		
13C2-8:2FTS	8.256	529.0 -> 509.0	177600	19.18	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.9%		
13C2-PFDoDA	8.944	615.0 -> 570.0	785074	20.36	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.8%		
13C2-PFTeDA	9.857	715.0 -> 670.0	568978	20.35	µg/L	-0.088
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.8%		
13C3-PFBS	4.354	302.0 -> 99.0	16546	20.52	µg/L	-0.092
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.6%		
13C3-PFHxS	6.655	402.0 -> 99.0	22748	19.98	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.9%		
13C4-PFBA	1.839	217.0 -> 172.0	163134	20.82	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.1%		
13C4-PFHpA	6.607	367.0 -> 322.0	260078	20.06	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.3%		
13C5-PFHxA	5.554	318.0 -> 273.0	181724	19.86	µg/L	-0.076
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%		
13C5-PFPeA	4.036	268.0 -> 223.0	118919	20.26	µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%		
13C6-PFDA	8.232	519.0 -> 474.0	479821	20.88	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.4%		

Perfluorinated Compounds by LC/MS/MS

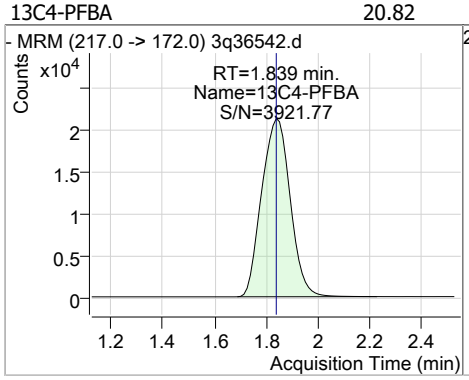
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.581	570.0 -> 525.0	721282	22.82	µg/L		-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 114.1%			
13C8-FOSA	7.778	506.0 -> 78.0	114132	21.49	µg/L		-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.5%			
13C8-PFOA	7.351	421.0 -> 376.0	309504	20.33	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.7%			
13C8-PFOS	7.828	507.0 -> 99.0	35606	20.16	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.8%			
13C9-PFNA	7.842	472.0 -> 427.0	362566	20.53	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.7%			
d3-MeFOSAA	8.126	573.0 -> 419.0	97253	20.37	µg/L		-0.051
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.8%			
13C3-HFPO-DA	5.895	287.0 -> 169.0	24073	19.85	µg/L		-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%			
d5-EtFOSAA	8.227	589.0 -> 419.0	86651	21.06	µg/L		-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.3%			
Target Compounds							QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.			
6:2FTS	-	427.0 -> 407.0	-	N.D.			
8:2FTS	-	527.0 -> 507.0	-	N.D.			
EtFOSAA	-	584.0 -> 419.0	-	N.D.			
FOSA	-	498.0 -> 78.0	-	N.D.			
MeFOSAA	-	570.0 -> 419.0	-	N.D.			
PFBA	-	213.0 -> 169.0	-	N.D.			
PFBS	-	299.0 -> 80.0	-	N.D.			
PFDA	-	513.0 -> 469.0	-	N.D.			
PFDoDA	-	613.0 -> 569.0	-	N.D.			
PFDS	-	599.0 -> 80.0	-	N.D.			
PFHpA	6.608	363.0 -> 319.0	0	0.00	µg/L	m	1
PFHpS	-	449.0 -> 80.0	-	N.D.			
PFHxA	-	313.0 -> 269.0	-	N.D.			
PFHxS	-	399.0 -> 80.0	-	N.D.			
PFNA	-	463.0 -> 419.0	-	N.D.			
PFNS	-	549.0 -> 80.0	-	N.D.			
PFOA	7.351	413.0 -> 369.0	300455	17.96	µg/L	m	96
PFOS	-	499.0 -> 80.0	-	N.D.			
PFPeA	-	263.0 -> 219.0	-	N.D.			
PFPeS	-	349.0 -> 80.0	-	N.D.			
PFTeDA	-	713.0 -> 669.0	-	N.D.			
PFTrDA	-	663.0 -> 619.0	-	N.D.			
PFUnDA	-	563.0 -> 519.0	-	N.D.			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.			
ADONA	-	377.0 -> 251.0	-	N.D.			
HFPO-DA	-	329.0 -> 169.0	-	N.D.			
br-PFOS	8.448	499.0 -> 80.0	0	0.00	µg/L	m	1
LN-PFOS	-	499.0 -> 80.0	-	N.D.			
br-PFHxS	-	399.0 -> 80.0	-	N.D.			
LN-PFHxS	-	399.0 -> 80.0	-	N.D.			
br-PFOA	7.187	413.0 -> 369.0	39346	2.35	µg/L		63
LN-PFOA	7.351	413.0 -> 369.0	261109	15.61	µg/L		99
br-PFNA	-	463.0 -> 419.0	-	N.D.			
LN-PFNA	-	463.0 -> 419.0	-	N.D.			

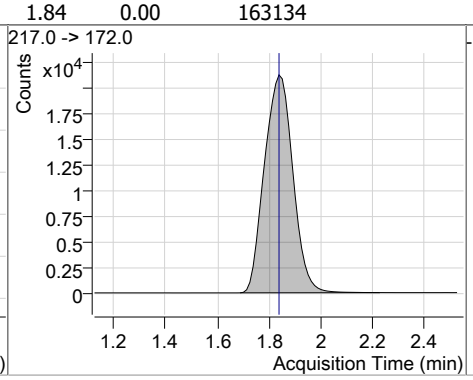
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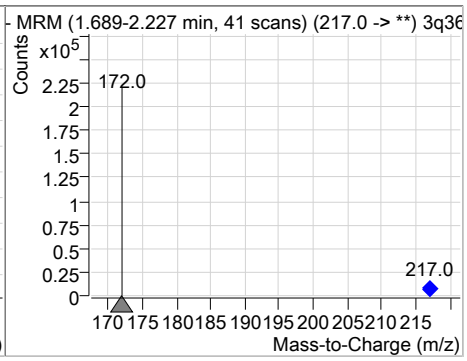
Perfluorinated Compounds by LC/MS/MS



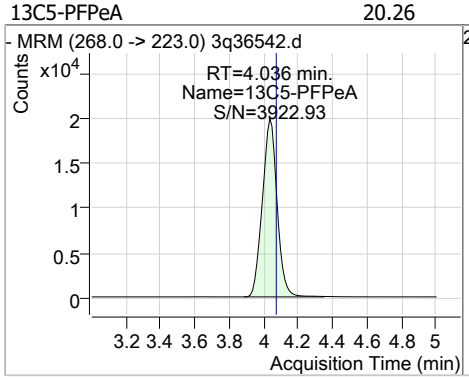
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.82	1.84	0.00	163134				

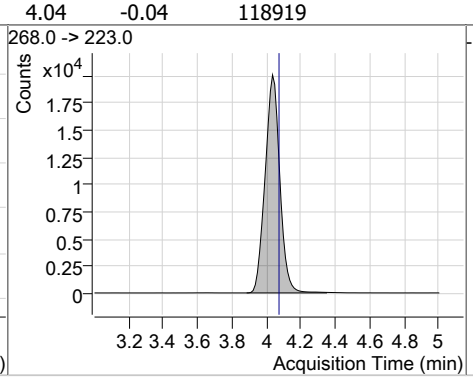


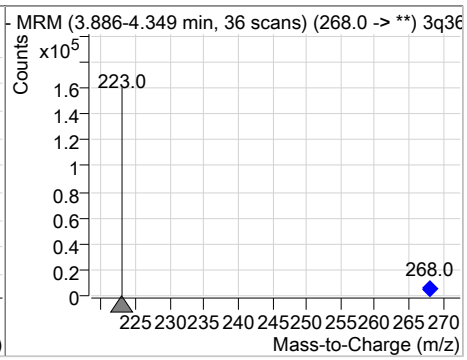




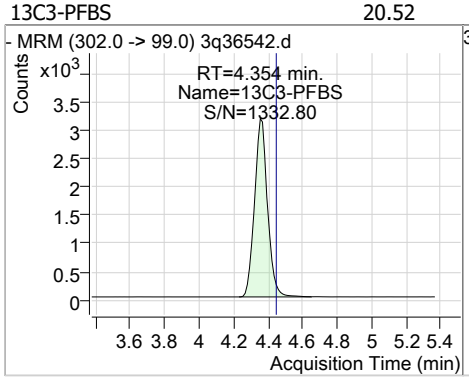
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13C5-PFPeA	20.26	4.04	-0.04	118919				

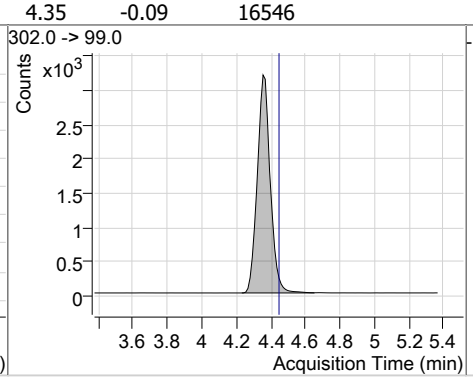


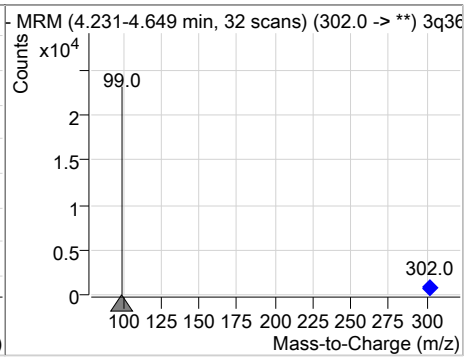




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.52	4.35	-0.09	16546				

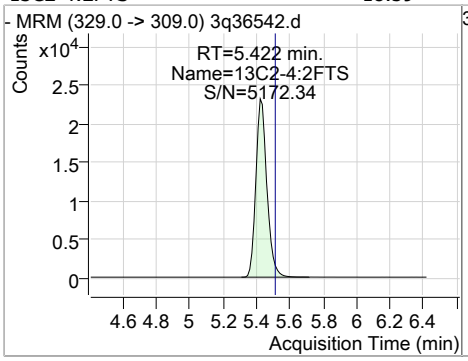


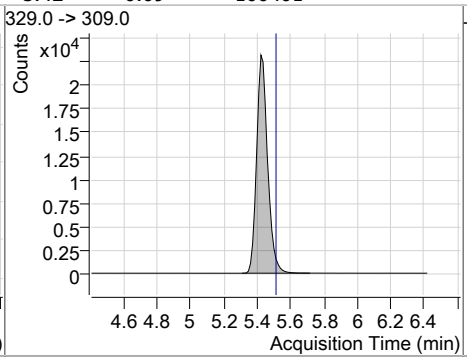


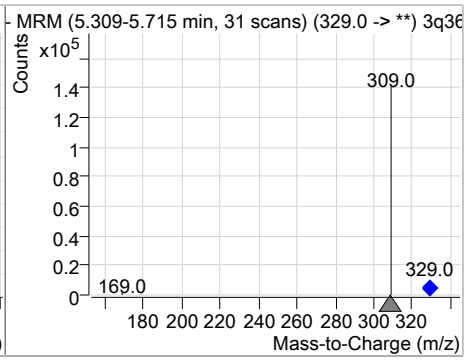


Perfluorinated Compounds by LC/MS/MS

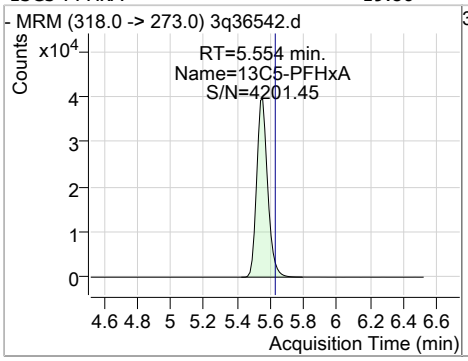
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.59	5.42	-0.09	106401				

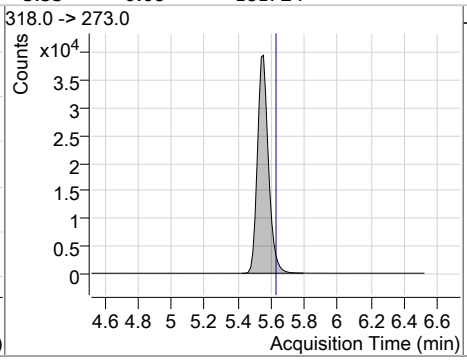


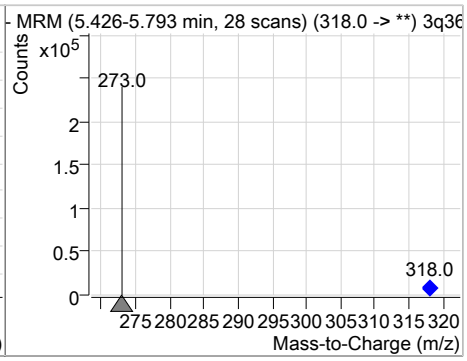




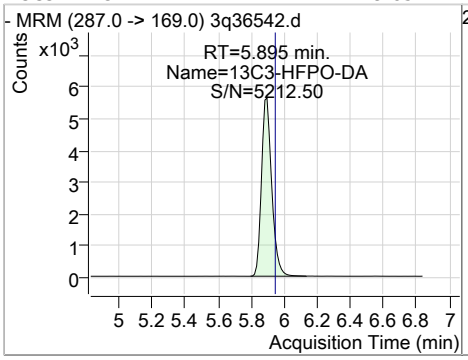
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.86	5.55	-0.08	181724				

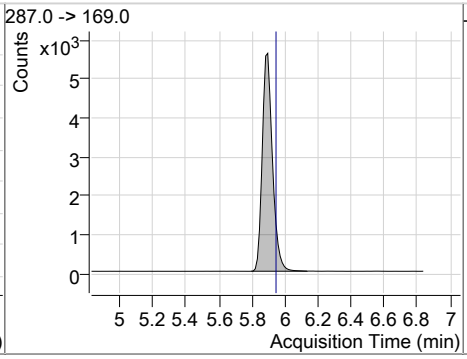


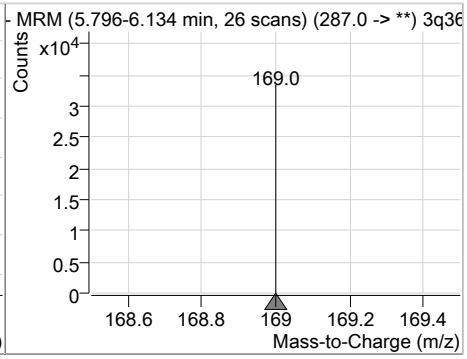




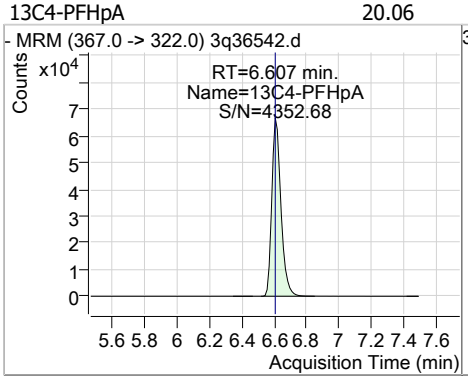
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.85	5.90	-0.05	24073				

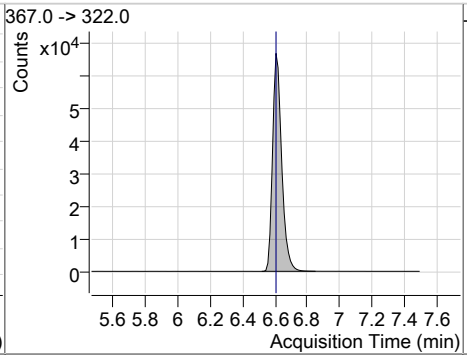


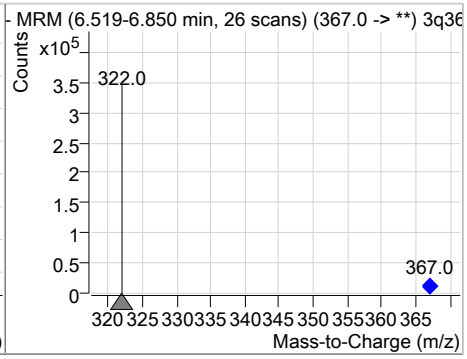




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.06	6.61	0.00	260078				

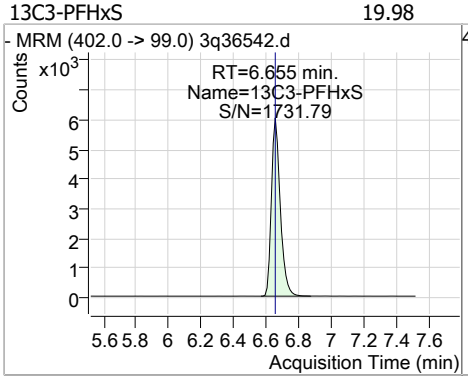


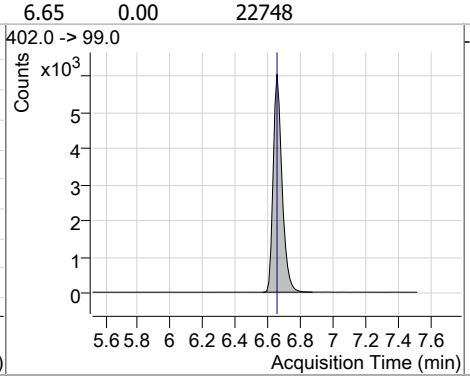


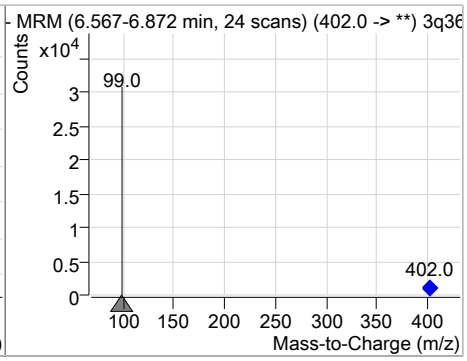


Perfluorinated Compounds by LC/MS/MS

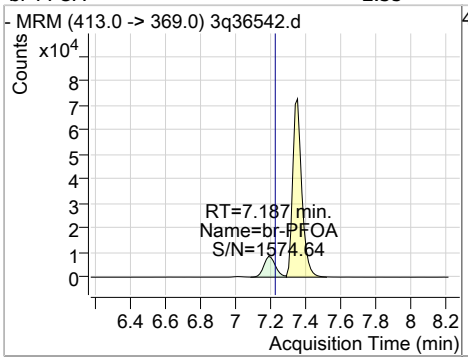
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.98	6.65	0.00	22748				

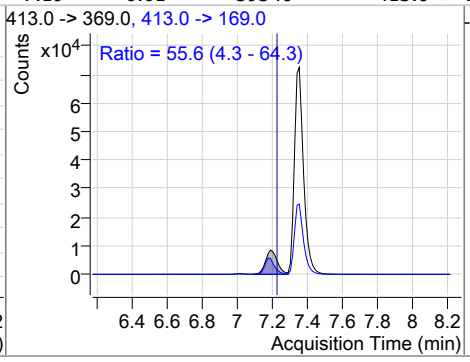


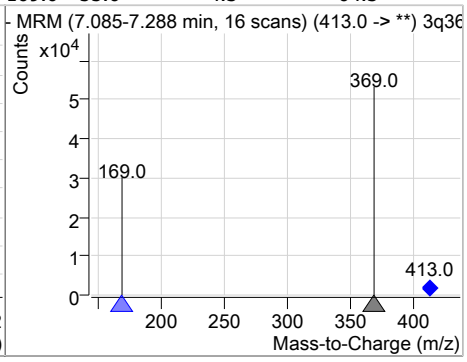




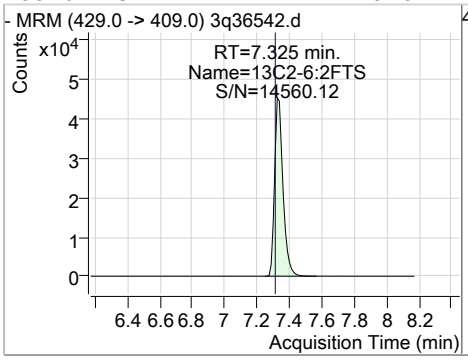
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	2.35	7.19	-0.01	39346	413.0 -> 169.0	55.6	4.3	64.3

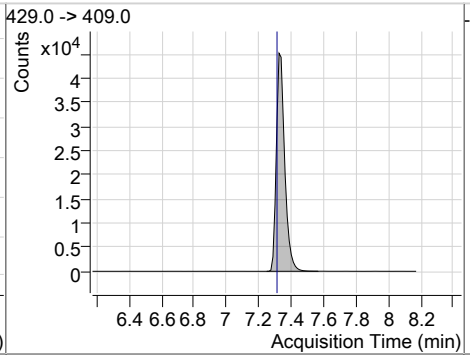


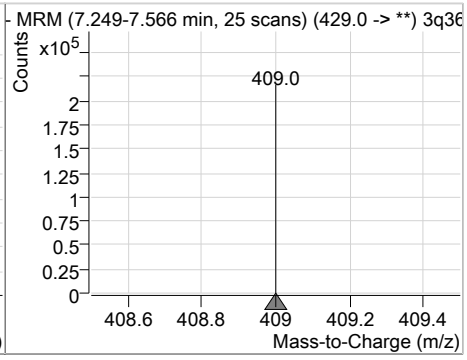




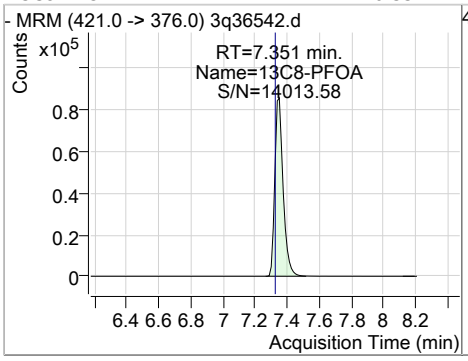
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.23	7.32	0.01	162564				

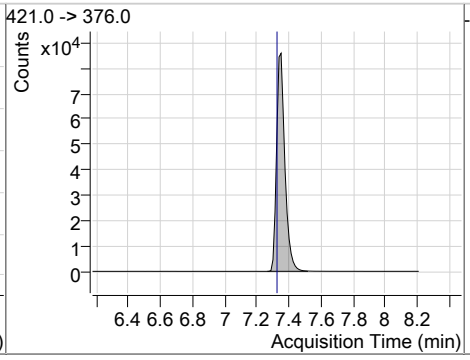


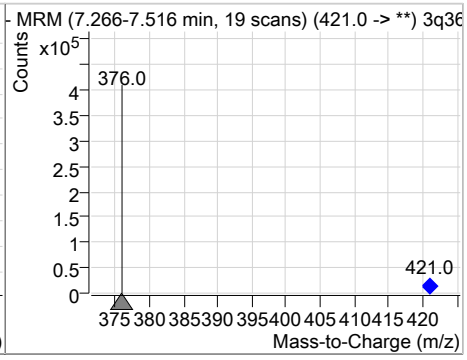




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.33	7.35	0.03	309504				

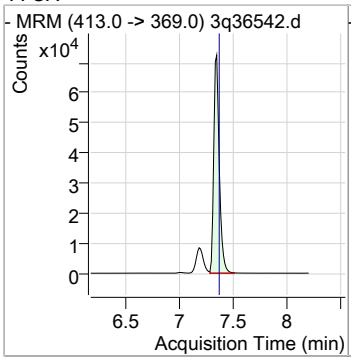


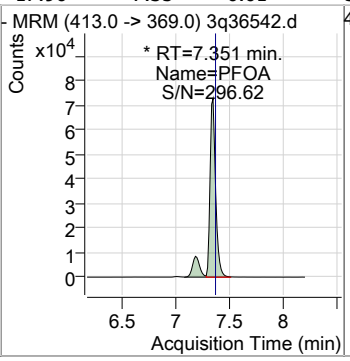


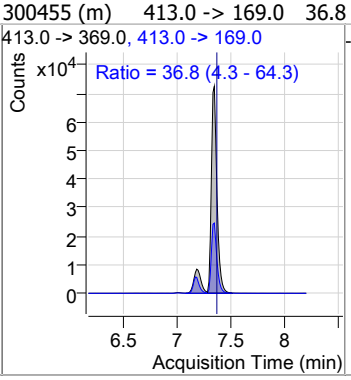


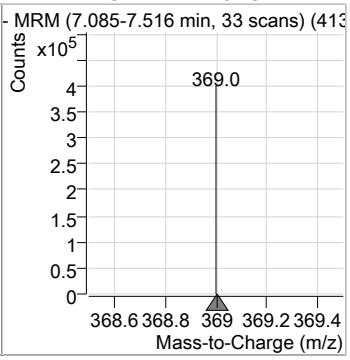
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	17.96	7.35	0.01	300455 (m)	413.0 -> 169.0	36.8	4.3	64.3

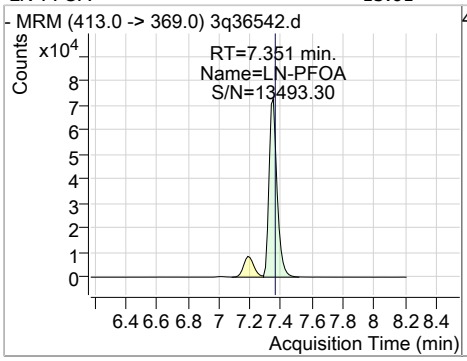


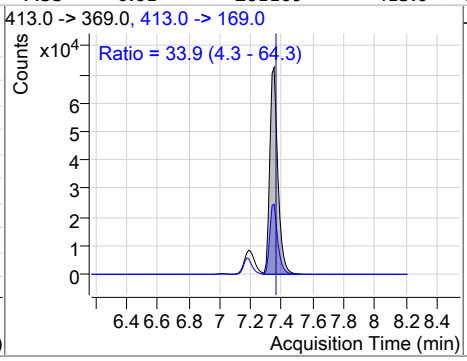


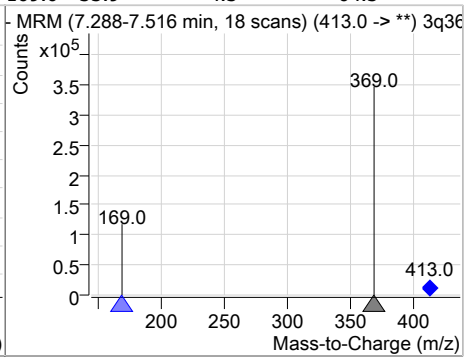




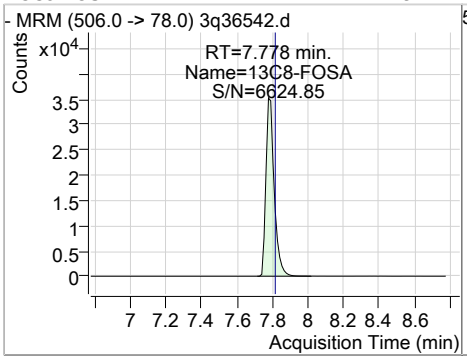
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	15.61	7.35	0.01	261109	413.0 -> 169.0	33.9	4.3	64.3

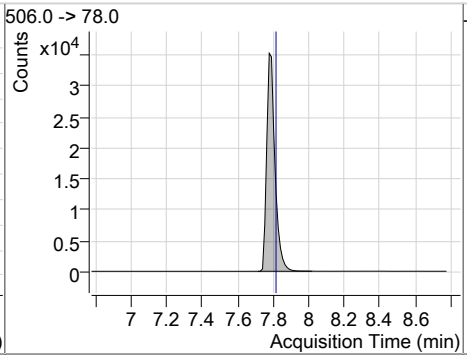


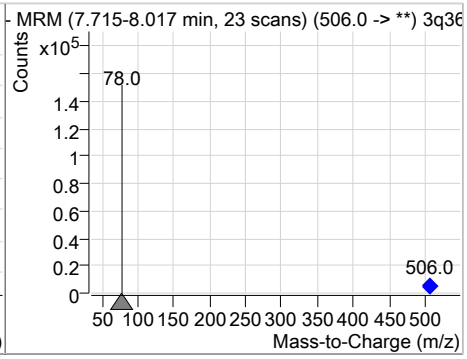




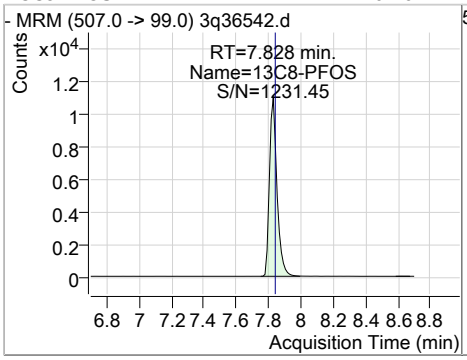
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	21.49	7.78	-0.04	114132				

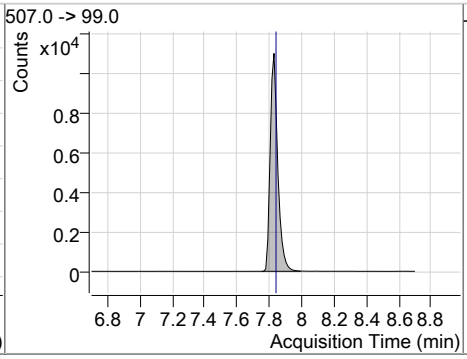


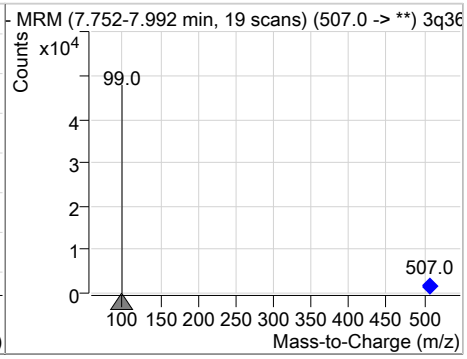




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.16	7.83	-0.01	35606				

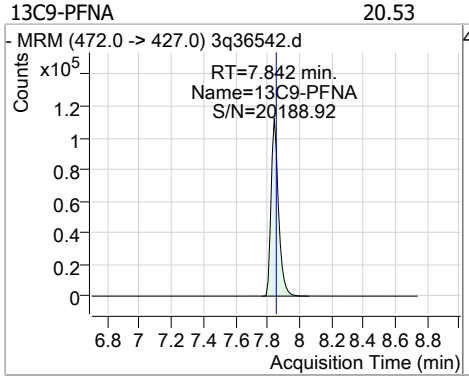


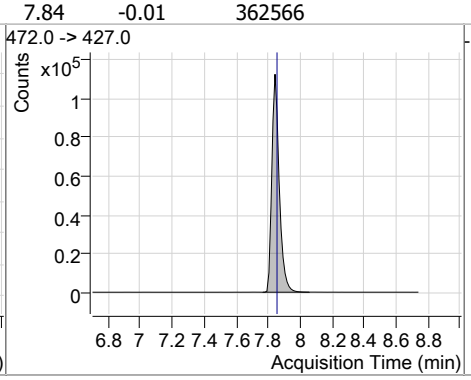


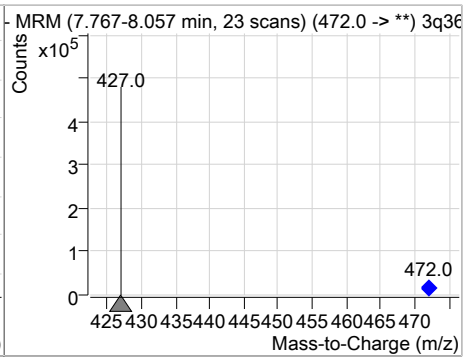


Perfluorinated Compounds by LC/MS/MS

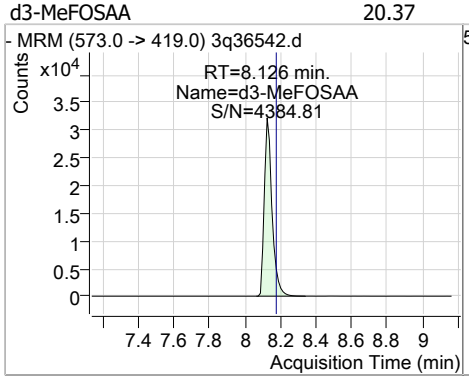
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.53	7.84	-0.01	362566				

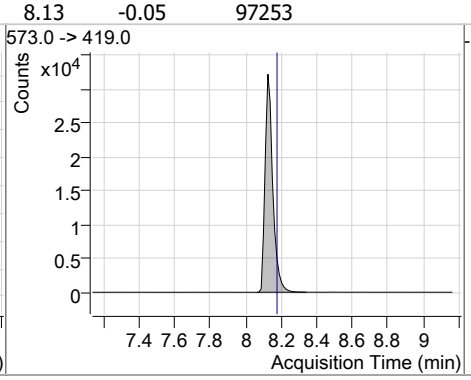


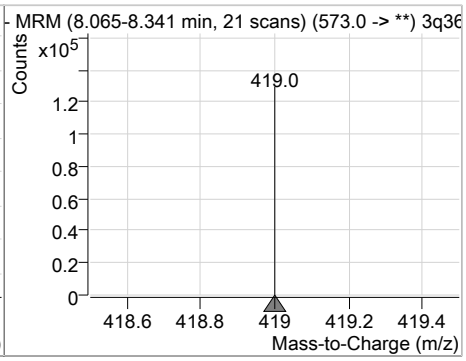




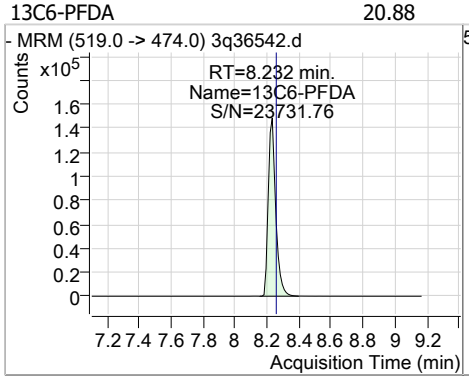
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.37	8.13	-0.05	97253				

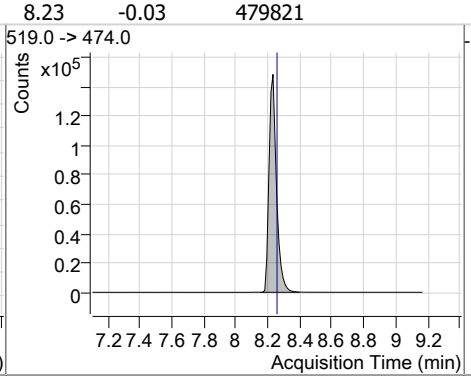


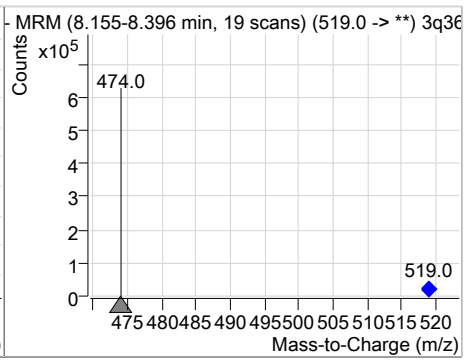




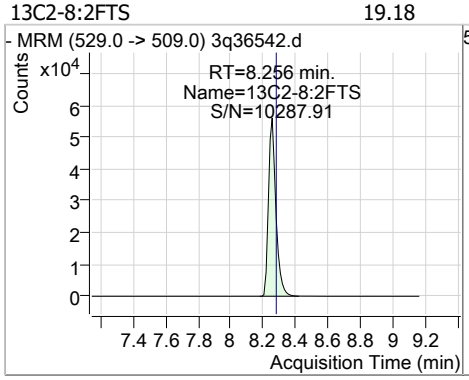
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.88	8.23	-0.03	479821				

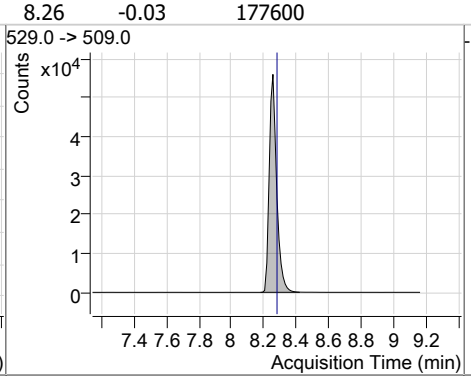


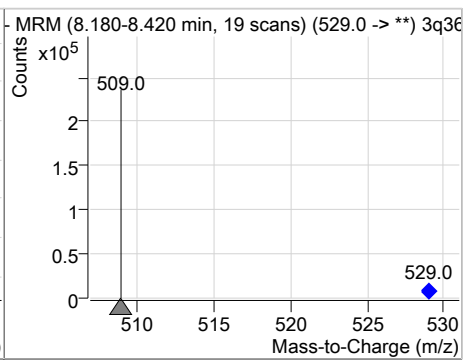




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.18	8.26	-0.03	177600				

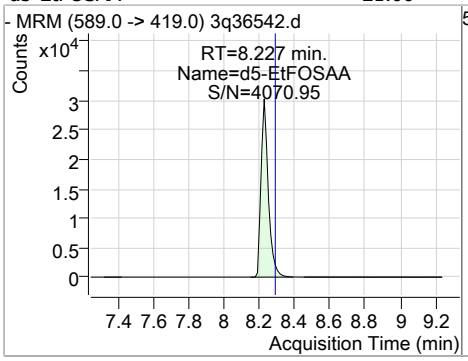


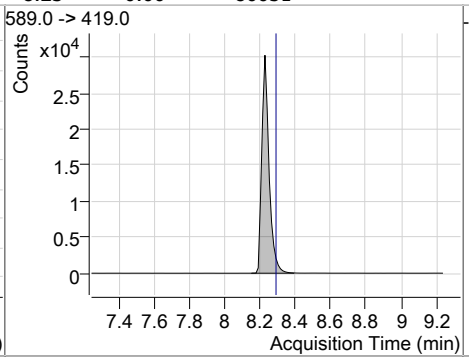


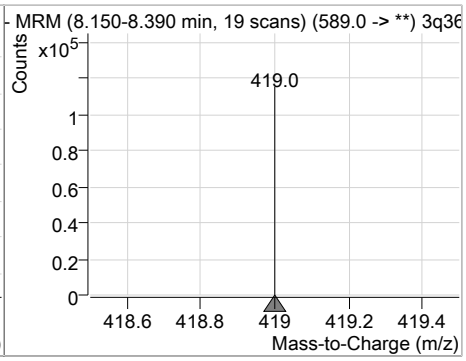


Perfluorinated Compounds by LC/MS/MS

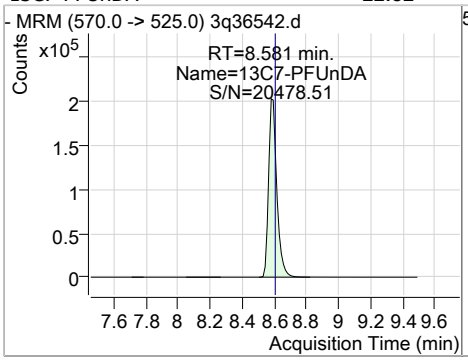
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	21.06	8.23	-0.06	86651				

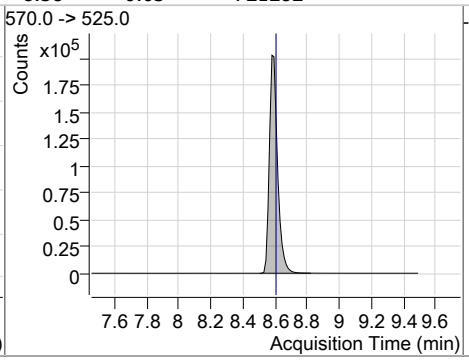


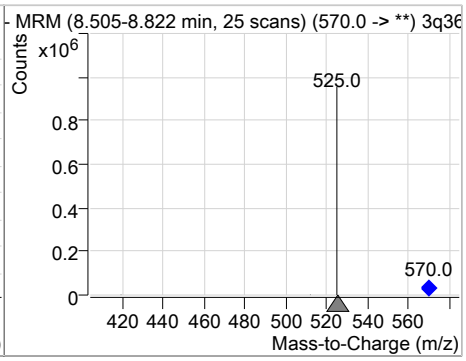




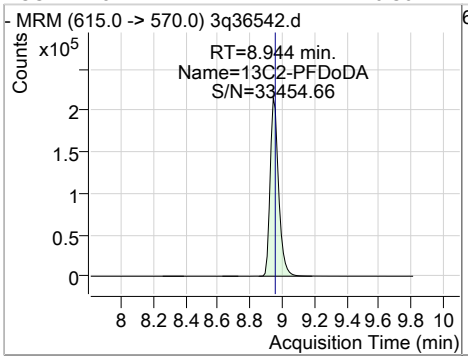
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	22.82	8.58	-0.03	721282				

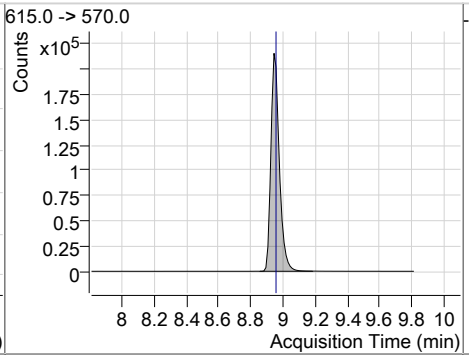


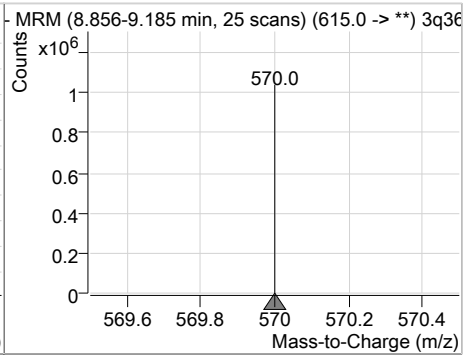




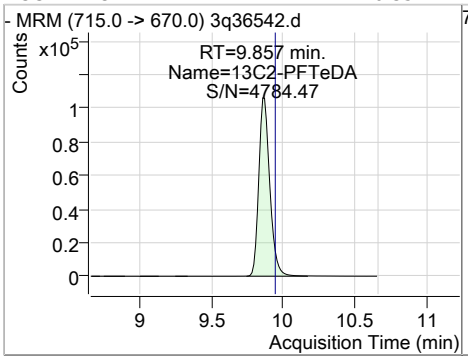
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.36	8.94	-0.01	785074				

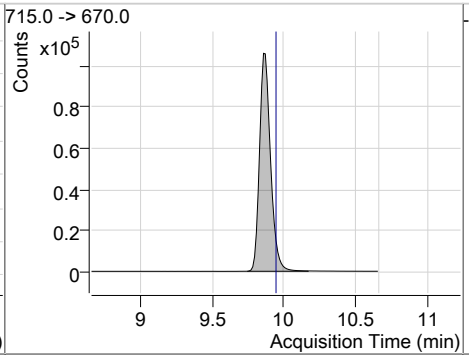


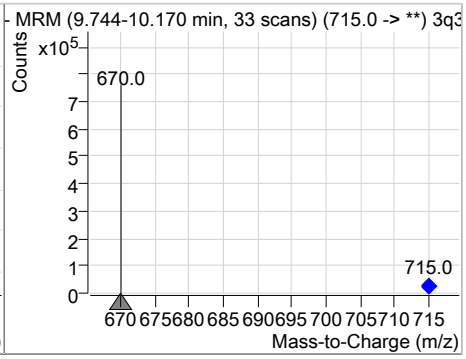




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.35	9.86	-0.09	568978				







11.6.24

11

Manual Integration Approval Summary

Sample Number: S3Q537-ICV537
Lab FileID: 3Q36542.D
Injection Time: 04/13/21 16:53
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/14/21 10:44 Martha Valls
Supervisor approved: 04/14/21 15:06 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanoic acid	335-67-1		7.35	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/14/21 15:06

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36543.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/13/2021 5:09:47 PM
Sample Name : icv537-20
Vial : P1-B2
DA Method File : BR_LN_041321_S3Q537.quantmethod.xml
Batch Name : s3q537.batch.bin
Sample Information : op84308,S3Q537,250,,,1,1,water

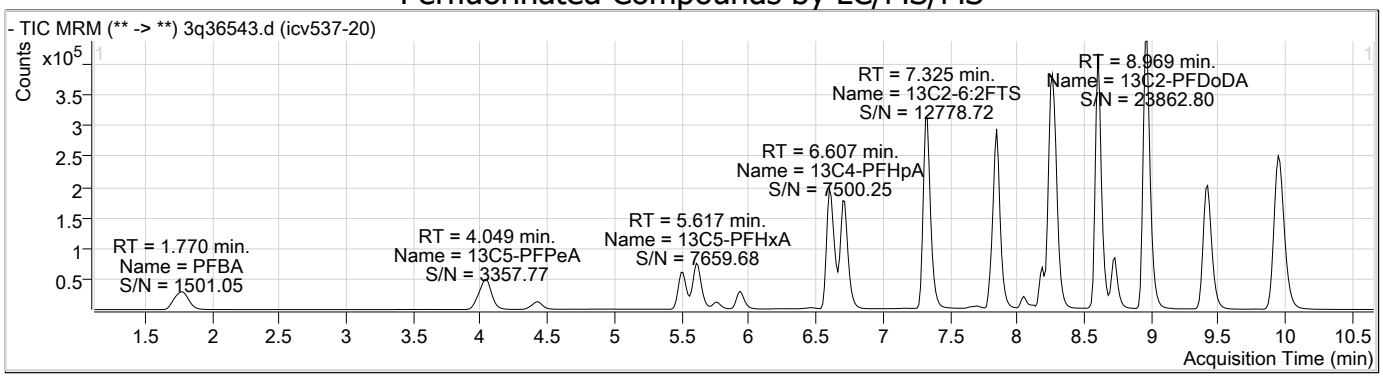
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.777	217.0 -> 172.0	167115	20.00	µg/L	-0.063
M5-PFPeA	4.049	268.0 -> 223.0	124161	20.00	µg/L	-0.025
M5-PFHxA	5.617	318.0 -> 273.0	192695	20.00	µg/L	-0.013
M4-PFHpA	6.607	367.0 -> 322.0	278339	20.00	µg/L	0.000
M8-PFOA	7.338	421.0 -> 376.0	324028	20.00	µg/L	0.013
M9-PFNA	7.855	472.0 -> 427.0	372015	20.00	µg/L	0.000
M6-PFDA	8.257	519.0 -> 474.0	486264	20.00	µg/L	0.000
M7-PFUnDA	8.606	570.0 -> 525.0	659364	20.00	µg/L	0.000
M2-PFDoDA	8.969	615.0 -> 570.0	823785	20.00	µg/L	0.013
M2-PFTeDA	9.944	715.0 -> 670.0	608670	20.00	µg/L	0.000
M8-FOSA	7.816	506.0 -> 78.0	111440	20.00	µg/L	0.000
M3-PFBS	4.434	302.0 -> 99.0	17298	20.00	µg/L	-0.013
M3-PFHxS	6.655	402.0 -> 99.0	24161	20.00	µg/L	0.000
M8-PFOS	7.841	507.0 -> 99.0	36822	20.00	µg/L	0.000
M2-4:2FTS	5.512	329.0 -> 309.0	119416	20.00	µg/L	0.000
M2-6:2FTS	7.325	429.0 -> 409.0	176558	20.00	µg/L	0.013
M2-8:2FTS	8.282	529.0 -> 509.0	186433	20.00	µg/L	0.000
M3-MeFOSAA	8.190	573.0 -> 419.0	102144	20.00	µg/L	0.013
M3-HFPO-DA	5.945	287.0 -> 169.0	25385	20.00	µg/L	0.000
M5-EtFOSAA	8.290	589.0 -> 419.0	84896	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.512	329.0 -> 309.0	119416	20.86	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.3%		
13C2-6:2FTS	7.325	429.0 -> 409.0	176558	20.88	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.4%		
13C2-8:2FTS	8.282	529.0 -> 509.0	186433	20.14	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.7%		
13C2-PFDoDA	8.969	615.0 -> 570.0	823785	21.36	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.8%		
13C2-PFTeDA	9.944	715.0 -> 670.0	608670	21.77	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.9%		
13C3-PFBS	4.434	302.0 -> 99.0	17298	21.45	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.3%		
13C3-PFHxS	6.655	402.0 -> 99.0	24161	21.22	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.1%		
13C4-PFBA	1.777	217.0 -> 172.0	167115	21.32	µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.6%		
13C4-PFHpA	6.607	367.0 -> 322.0	278339	21.47	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.4%		
13C5-PFHxA	5.617	318.0 -> 273.0	192695	21.05	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.3%		
13C5-PFPeA	4.049	268.0 -> 223.0	124161	21.15	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.7%		
13C6-PFDA	8.257	519.0 -> 474.0	486264	21.16	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.8%		

Perfluorinated Compounds by LC/MS/MS

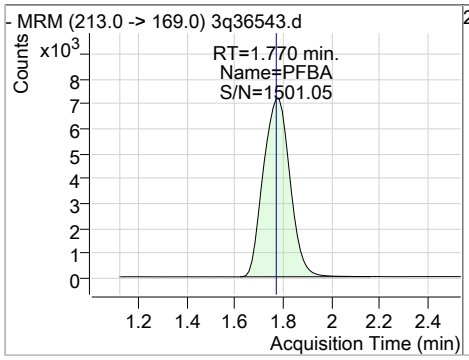
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.606	570.0 -> 525.0	659364	20.86	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.3%			
13C8-FOSA	7.816	506.0 -> 78.0	111440	20.99	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.9%			
13C8-PFOA	7.338	421.0 -> 376.0	324028	21.28	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.4%			
13C8-PFOS	7.841	507.0 -> 99.0	36822	20.85	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.2%			
13C9-PFNA	7.855	472.0 -> 427.0	372015	21.07	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.3%			
d3-MeFOSAA	8.190	573.0 -> 419.0	102144	21.39	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.0%			
13C3-HFPO-DA	5.945	287.0 -> 169.0	25379	20.92	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.6%			
d5-EtFOSAA	8.290	589.0 -> 419.0	84893	20.64	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.2%			
Target Compounds							QValue
4:2FTS	5.501	327.0 -> 307.0	112520	17.44	µg/L		100
6:2FTS	7.325	427.0 -> 407.0	154748	16.28	µg/L		100
8:2FTS	8.282	527.0 -> 507.0	165396	16.98	µg/L		99
EtFOSAA	8.290	584.0 -> 419.0	69963	17.65	µg/L	m	89
FOSA	7.817	498.0 -> 78.0	100658	17.64	µg/L		100
MeFOSAA	8.190	570.0 -> 419.0	82684	17.75	µg/L	m	98
PFBA	1.770	213.0 -> 169.0	54860	17.14	µg/L		100
PFBS	4.423	299.0 -> 80.0	39764	15.03	µg/L		100
PFDA	8.258	513.0 -> 469.0	389741	15.49	µg/L		99
PFDoDA	8.957	613.0 -> 569.0	718929	17.56	µg/L		99
PFDS	8.566	599.0 -> 80.0	24226	16.53	µg/L		100
PFHpA	6.608	363.0 -> 319.0	438980	17.38	µg/L		100
PFHpS	7.337	449.0 -> 80.0	45691	16.85	µg/L		100
PFHxA	5.618	313.0 -> 269.0	118774	17.61	µg/L		99
PFHxS	6.655	399.0 -> 80.0	44277	16.03	µg/L	m	98
PFNA	7.855	463.0 -> 419.0	354327	15.93	µg/L		99
PFNS	8.230	549.0 -> 80.0	44137	16.78	µg/L		100
PFOA	7.339	413.0 -> 369.0	308603	17.62	µg/L		99
PFOS	7.841	499.0 -> 80.0	59010	17.16	µg/L	m	86
PFPeA	4.051	263.0 -> 219.0	202964	17.28	µg/L		100
PFPeS	5.764	349.0 -> 80.0	31994	15.61	µg/L		99
PFTeDA	9.947	713.0 -> 669.0	697832	15.58	µg/L		100
PFTrDA	9.420	663.0 -> 619.0	857017	19.97	µg/L		100
PFUnDA	8.607	563.0 -> 519.0	566536	17.58	µg/L		99
11Cl-PF3OUdS	8.729	631.0 -> 451.0	202670	15.66	µg/L		100
9Cl-PF3ONS	8.053	531.0 -> 351.0	45473	15.43	µg/L		99
ADONA	6.722	377.0 -> 251.0	532777	16.82	µg/L		100
HFPO-DA	5.941	329.0 -> 169.0	79976	17.39	µg/L		100
br-PFOS	7.702	499.0 -> 80.0	15693	3.23	µg/L		93
LN-PFOS	7.841	499.0 -> 80.0	43317	14.48	µg/L		98
br-PFHxS	6.466	399.0 -> 80.0	7000	2.18	µg/L		92
LN-PFHxS	6.655	399.0 -> 80.0	37276	13.80	µg/L		99
br-PFOA	7.339	413.0 -> 369.0	308603	17.62	µg/L	#	40
LN-PFOA	7.339	413.0 -> 369.0	308603	17.62	µg/L		99
br-PFNA	7.855	463.0 -> 419.0	0	0.00	µg/L	m	1
LN-PFNA	7.855	463.0 -> 419.0	354327	15.93	µg/L		99

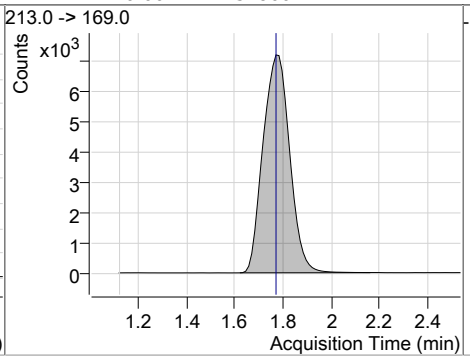
 # = Qualifier out of range, m = manually integrated, + = Area summed

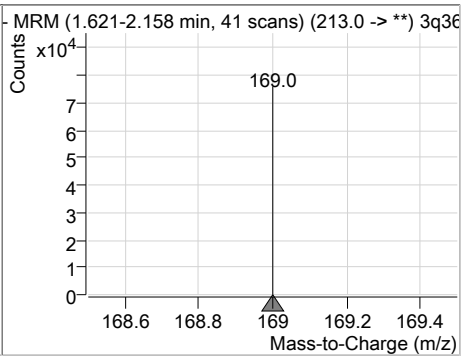
Perfluorinated Compounds by LC/MS/MS



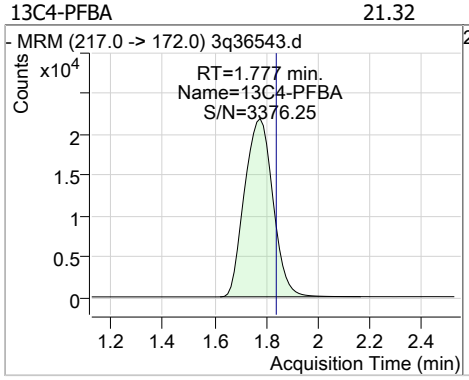
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	17.14	1.77	-0.06	54860				

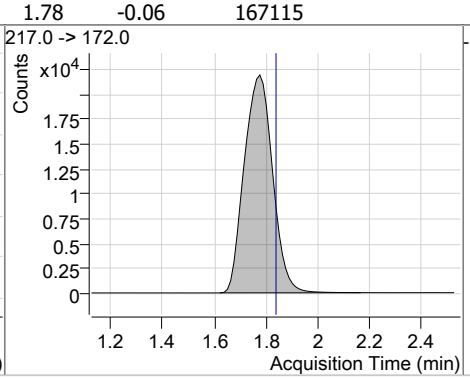


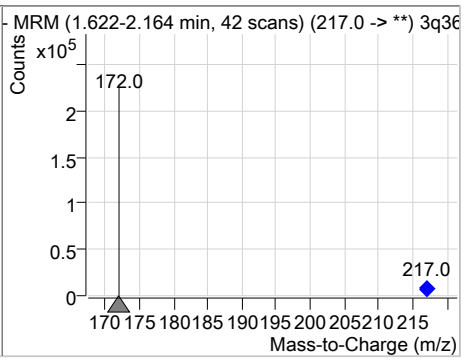




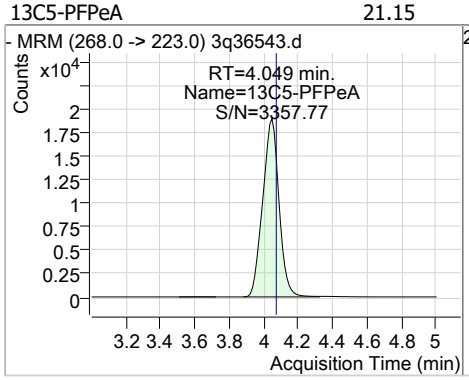
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	21.32	1.78	-0.06	167115				

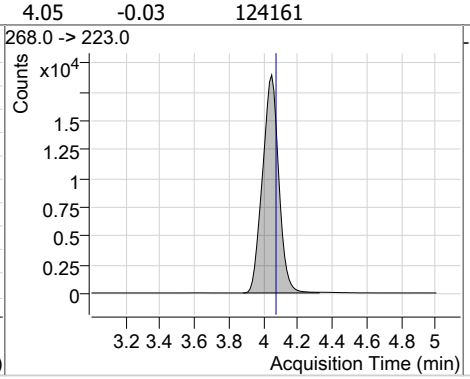


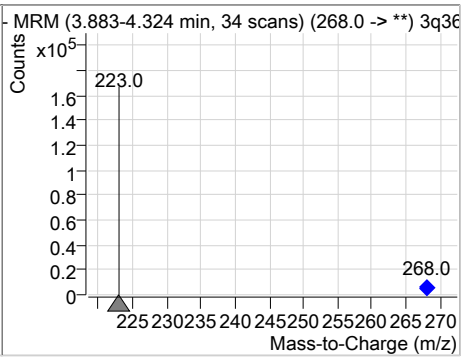




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	21.15	4.05	-0.03	124161				

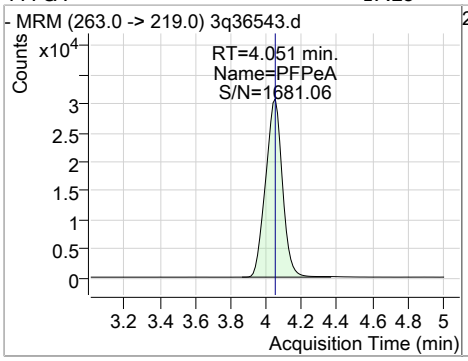


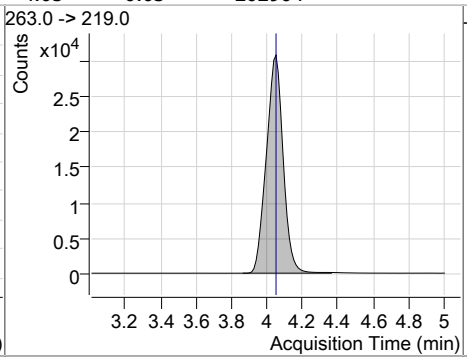


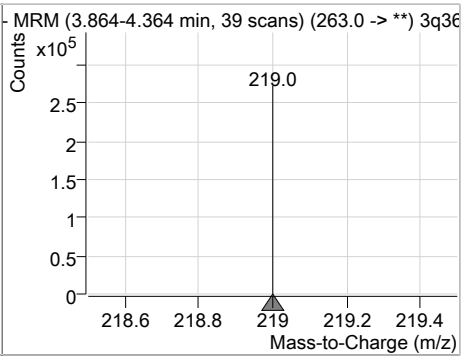


Perfluorinated Compounds by LC/MS/MS

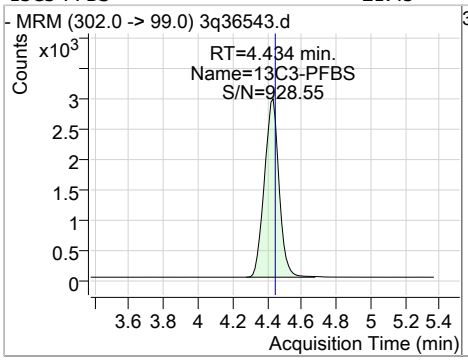
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	17.28	4.05	-0.03	202964				

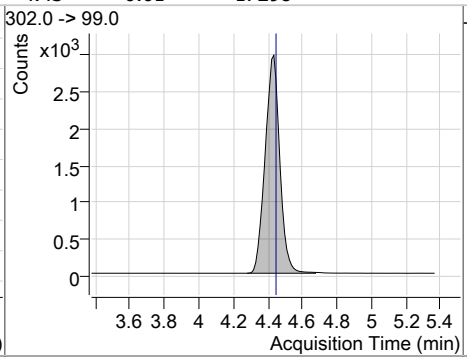


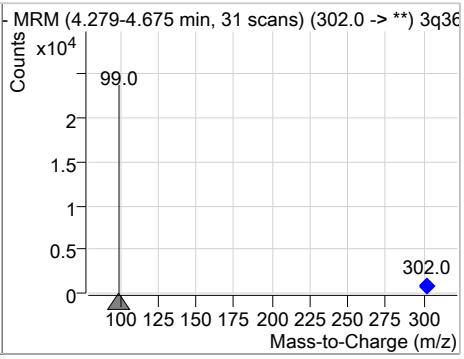




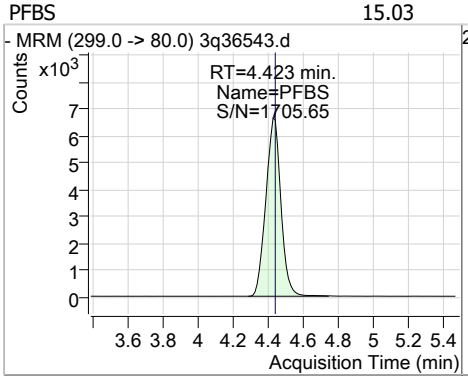
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	21.45	4.43	-0.01	17298				

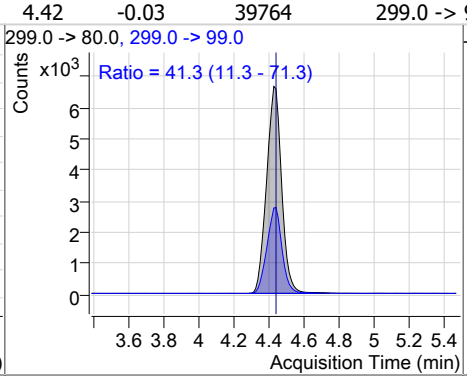


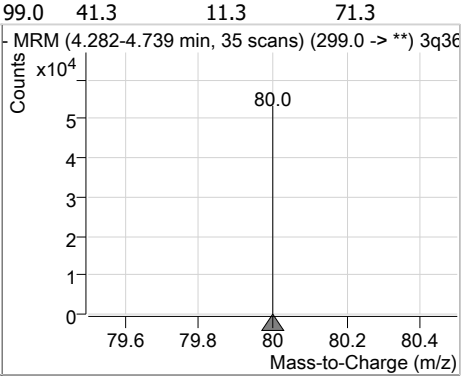




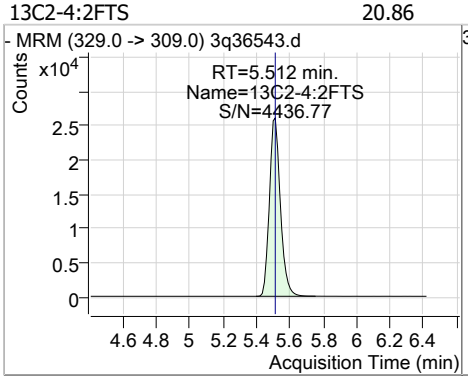
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	15.03	4.42	-0.03	39764	299.0 -> 99.0	41.3	11.3	71.3

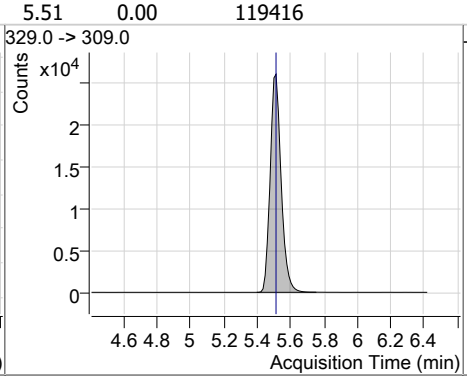


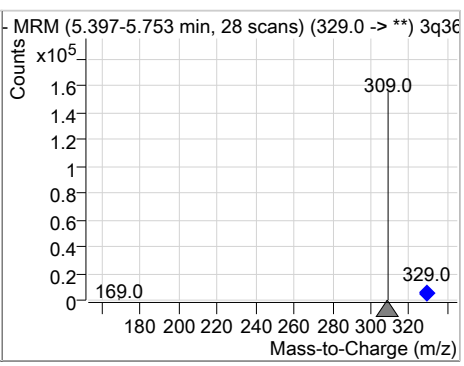




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	20.86	5.51	0.00	119416				



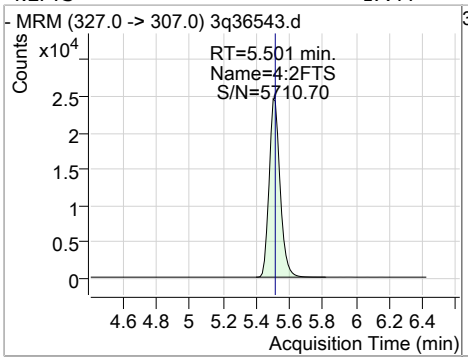


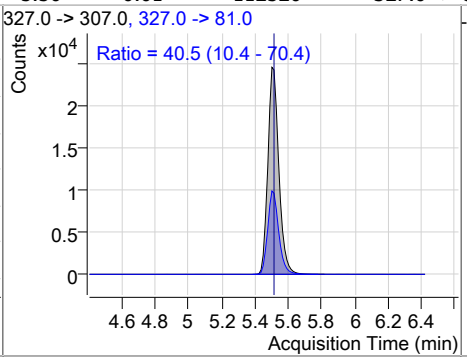


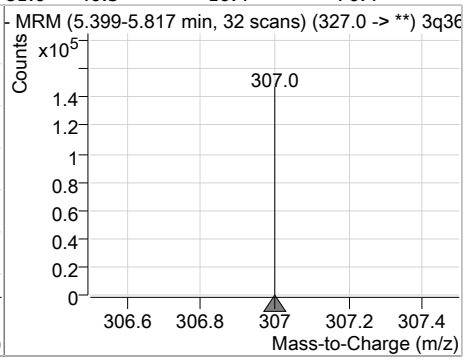
11.6.25 11

Perfluorinated Compounds by LC/MS/MS

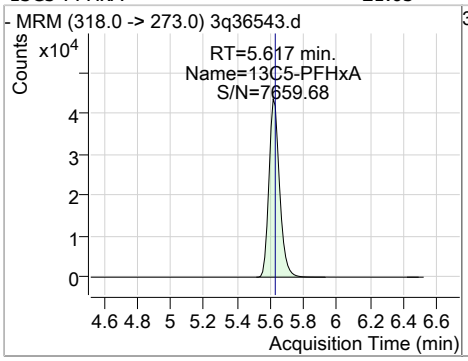
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	17.44	5.50	-0.01	112520	327.0 -> 81.0	40.5	10.4	70.4

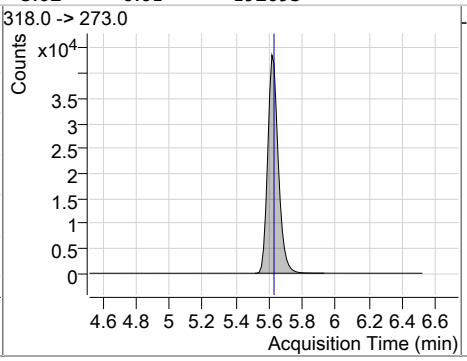


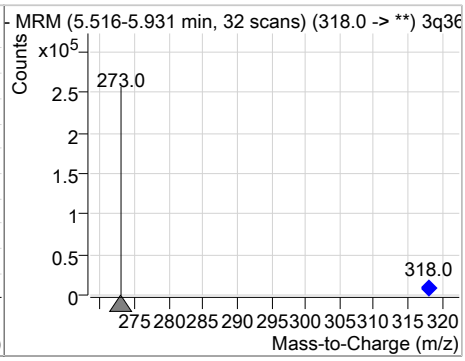




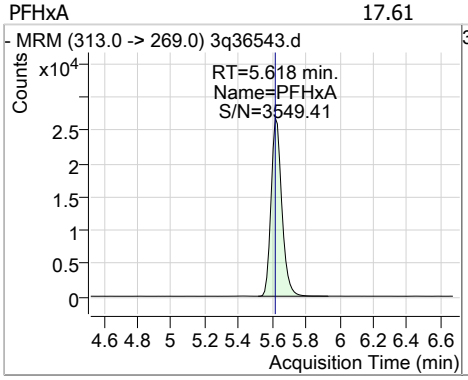
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	21.05	5.62	-0.01	192695				

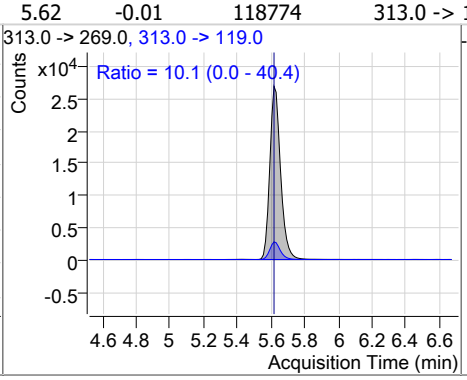


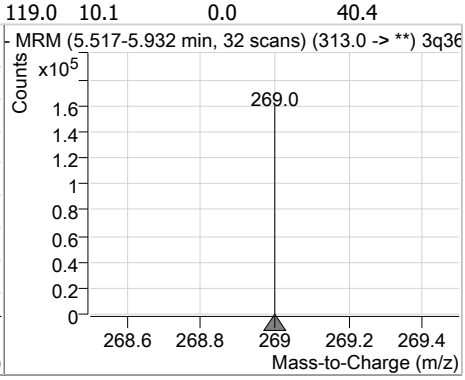




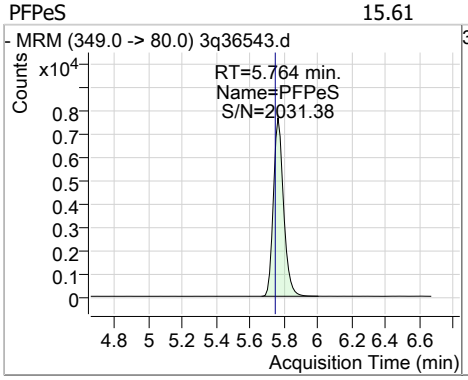
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	17.61	5.62	-0.01	118774	313.0 -> 119.0	10.1	0.0	40.4

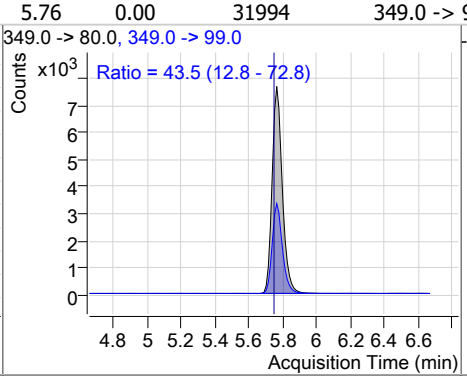


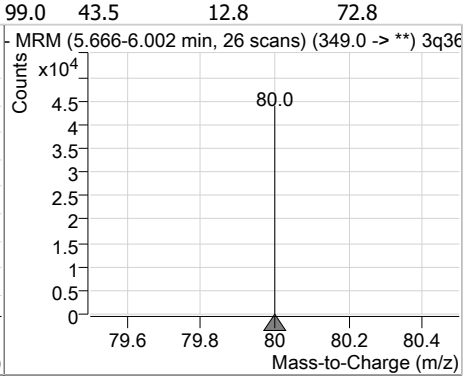




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	15.61	5.76	0.00	31994	349.0 -> 99.0	43.5	12.8	72.8

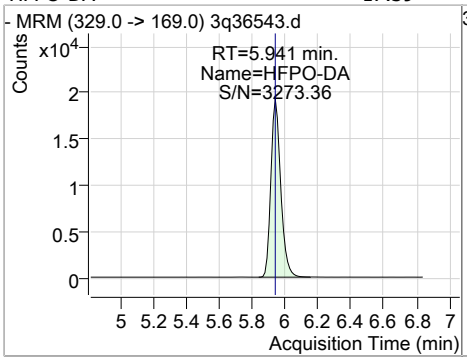


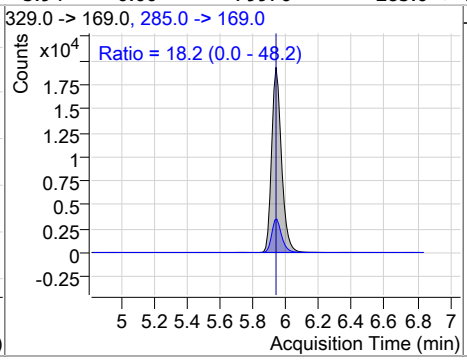


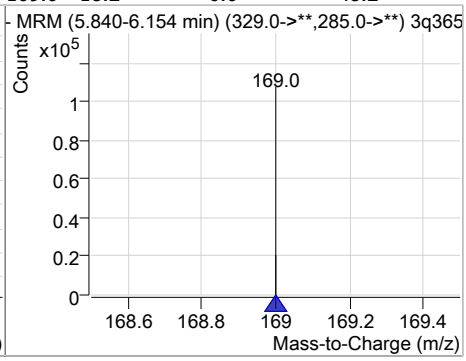


Perfluorinated Compounds by LC/MS/MS

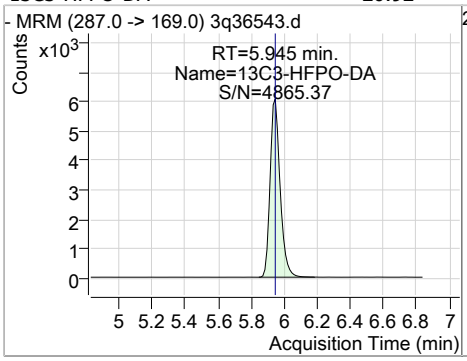
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	17.39	5.94	0.00	79976	285.0 -> 169.0	18.2	0.0	48.2

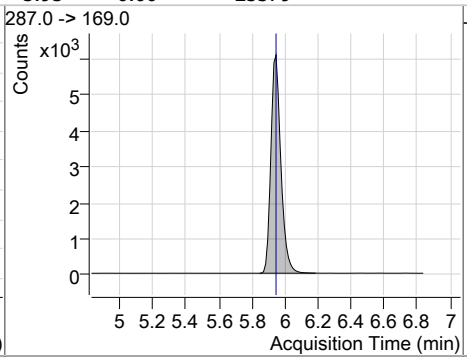


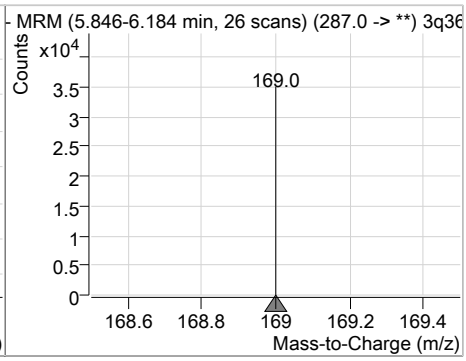




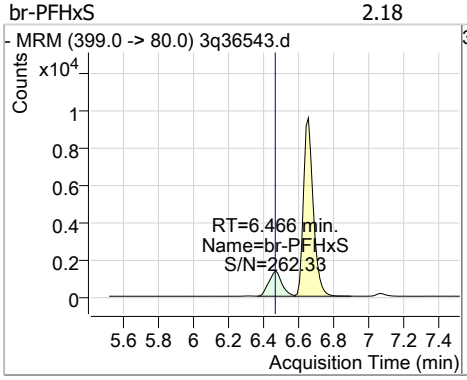
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.92	5.95	0.00	25379				

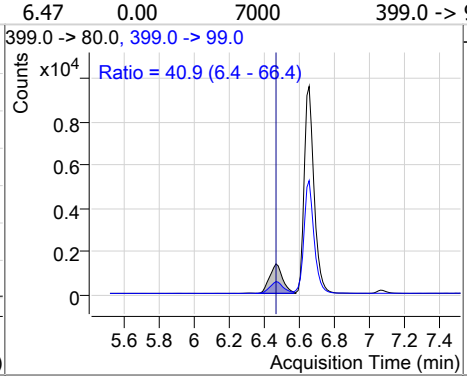


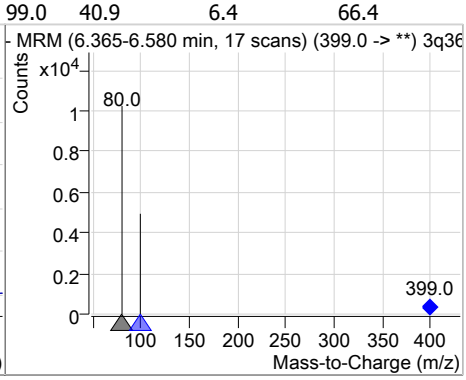




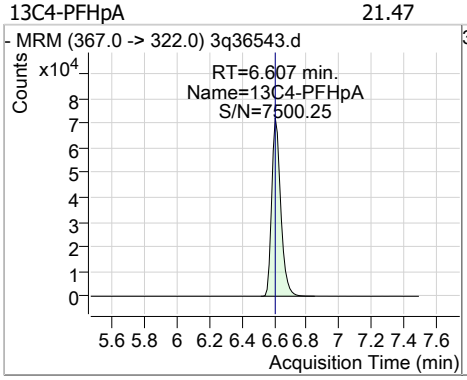
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	2.18	6.47	0.00	7000	399.0 -> 99.0	40.9	6.4	66.4

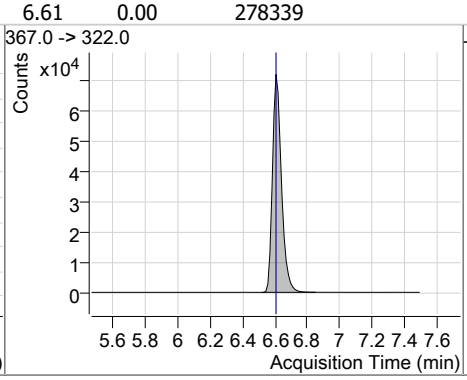


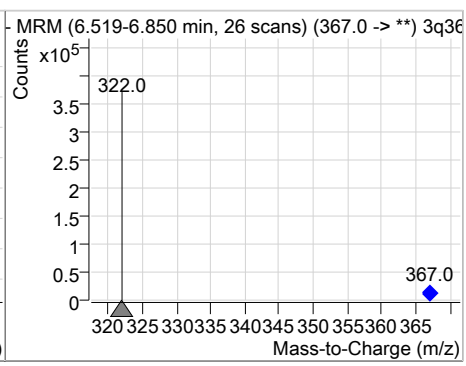




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	21.47	6.61	0.00	278339				

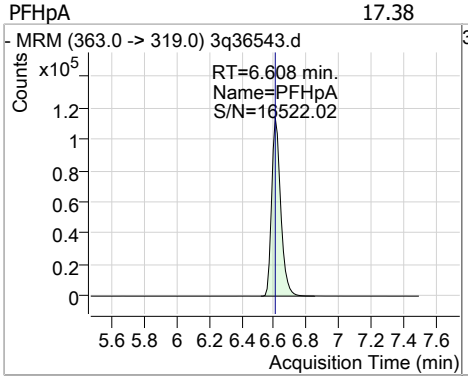


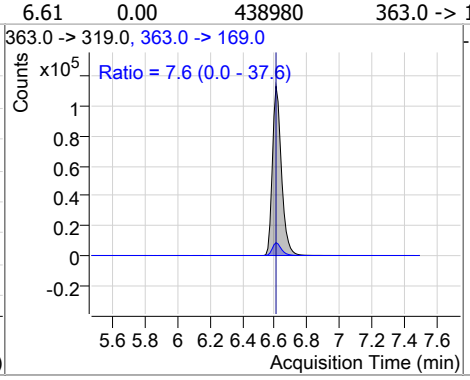


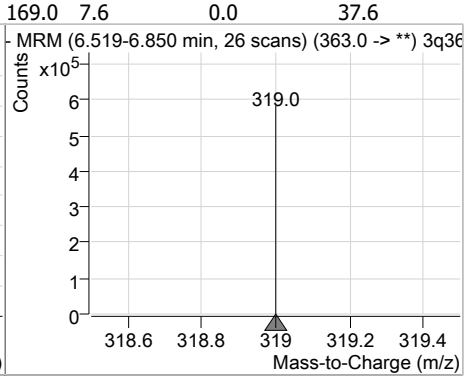


Perfluorinated Compounds by LC/MS/MS

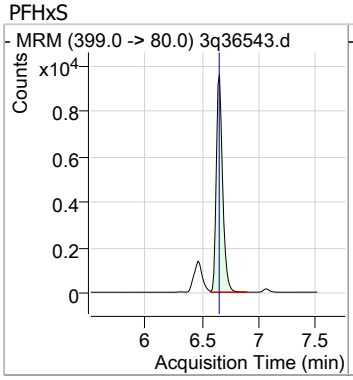
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	17.38	6.61	0.00	438980	363.0 -> 169.0	7.6	0.0	37.6

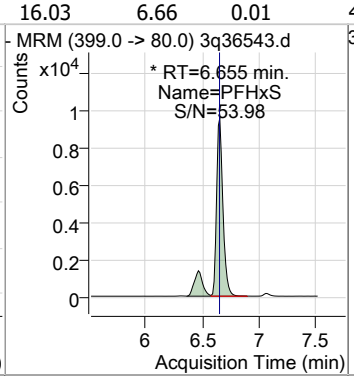


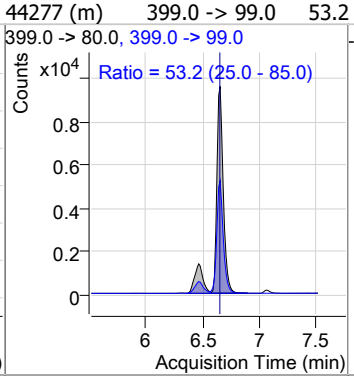


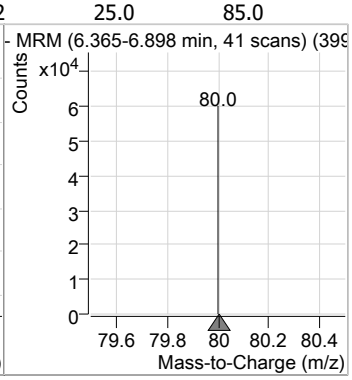


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	16.03	6.66	0.01	44277 (m)	399.0 -> 99.0	53.2	25.0	85.0

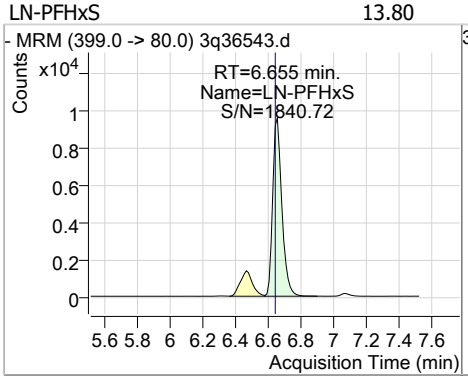


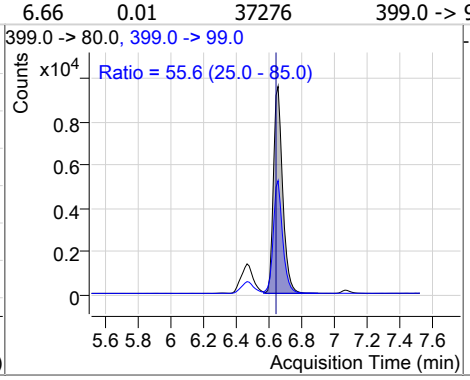


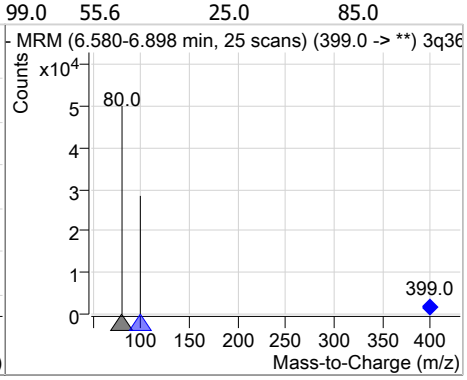




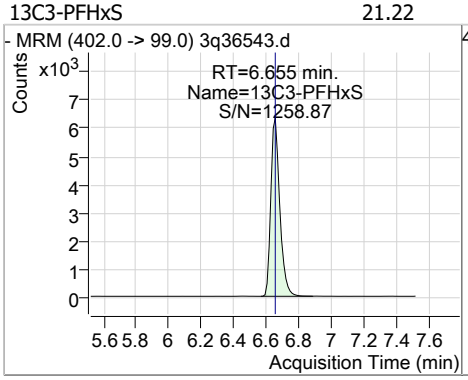
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	13.80	6.66	0.01	37276	399.0 -> 99.0	55.6	25.0	85.0

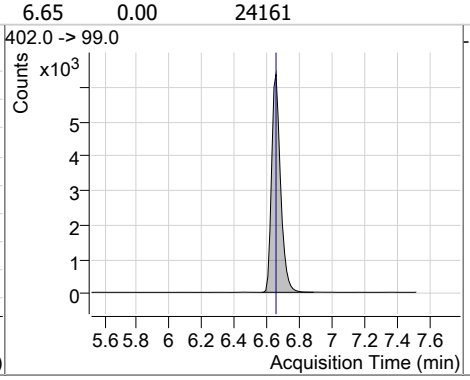


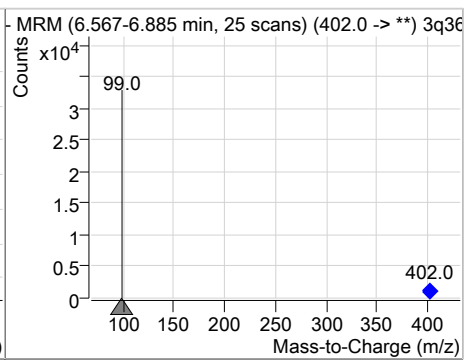




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	21.22	6.65	0.00	24161				

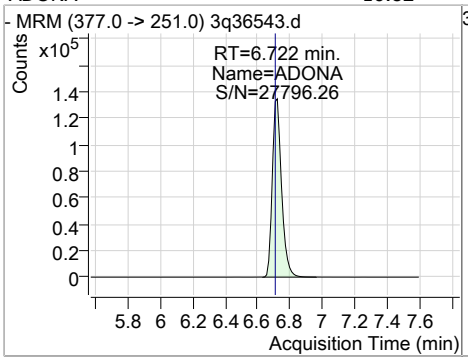


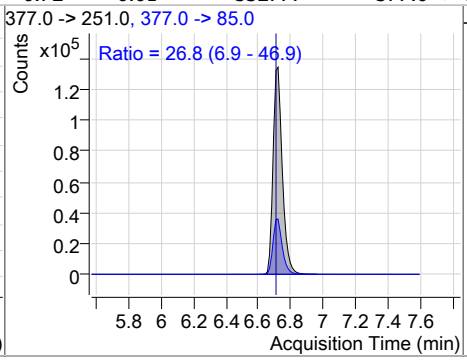


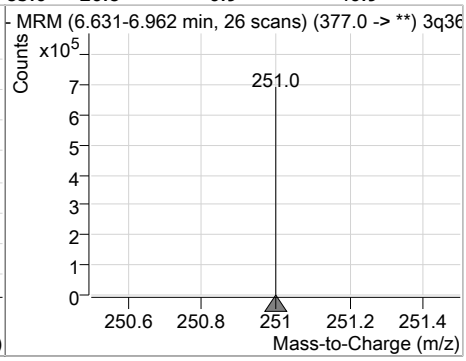


Perfluorinated Compounds by LC/MS/MS

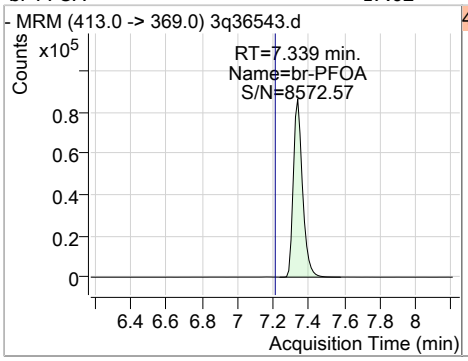
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	16.82	6.72	0.01	532777	377.0 -> 85.0	26.8	6.9	46.9

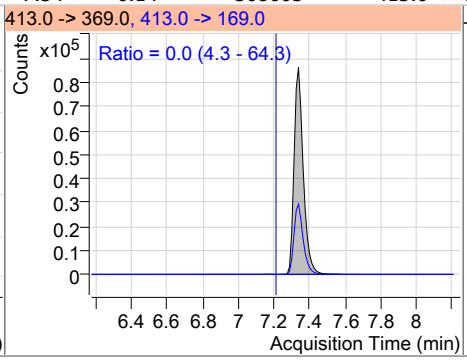


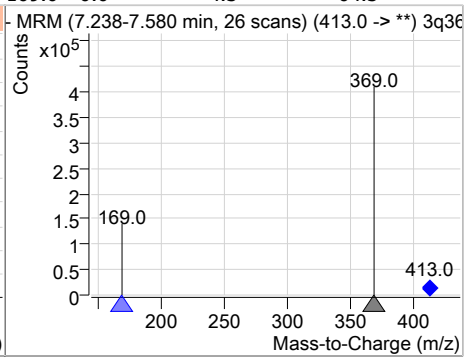




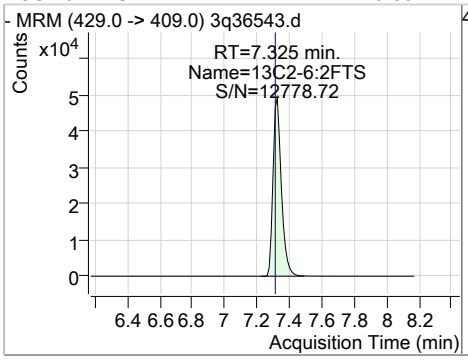
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	17.62	7.34	0.14	308603	413.0 -> 169.0	0.0	4.3	64.3

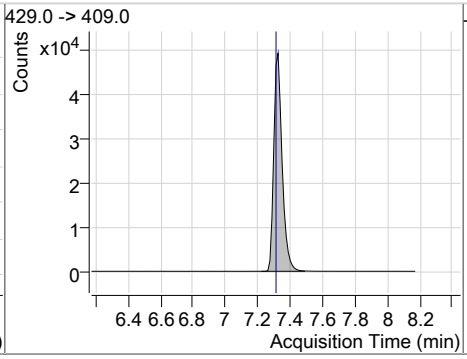


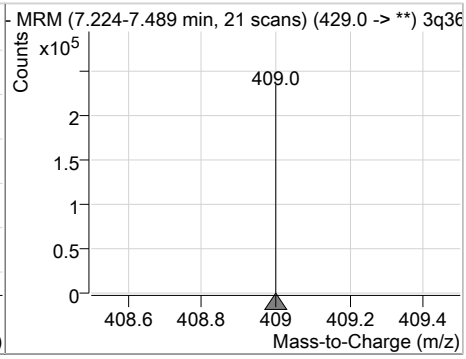




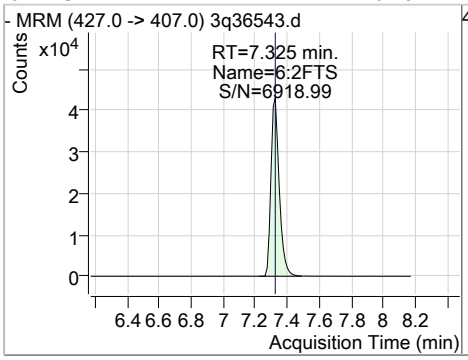
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.88	7.32	0.01	176558				

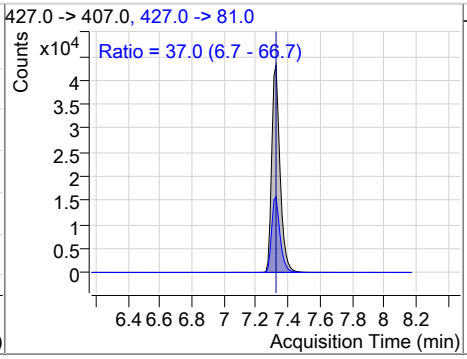


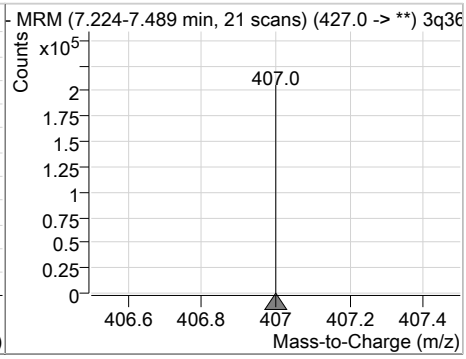




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	16.28	7.33	0.01	154748	427.0 -> 81.0	37.0	6.7	66.7

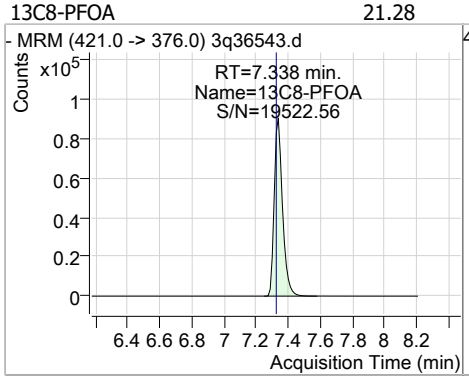


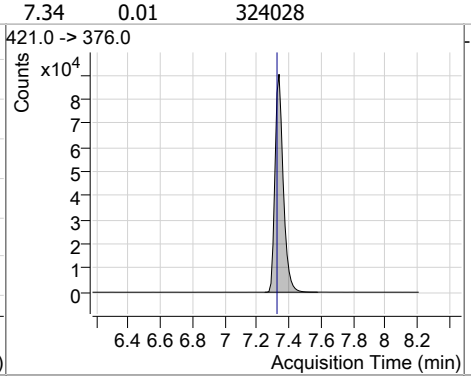


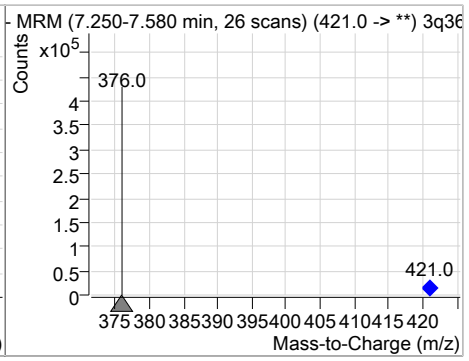


Perfluorinated Compounds by LC/MS/MS

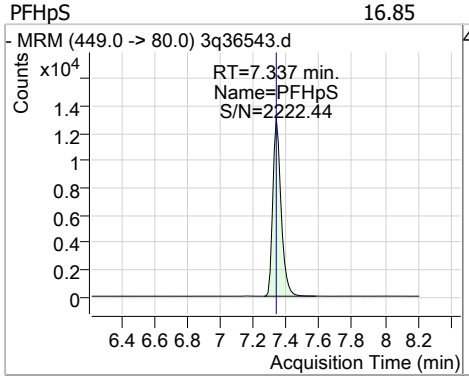
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	21.28	7.34	0.01	324028				

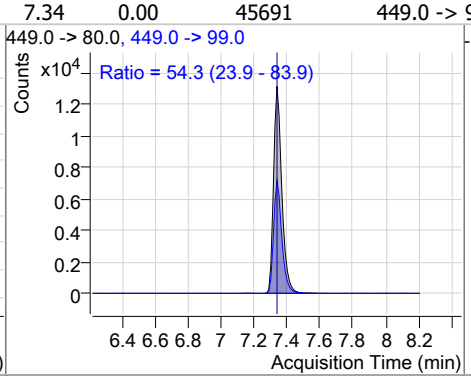


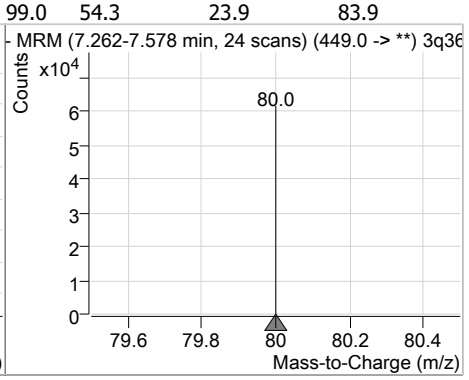




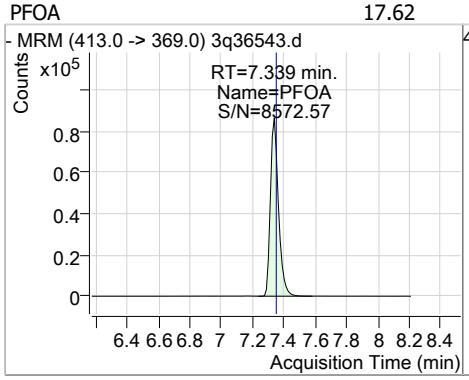
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	16.85	7.34	0.00	45691	449.0 -> 99.0	54.3	23.9	83.9

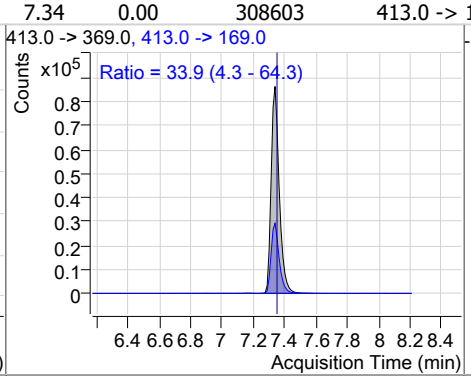


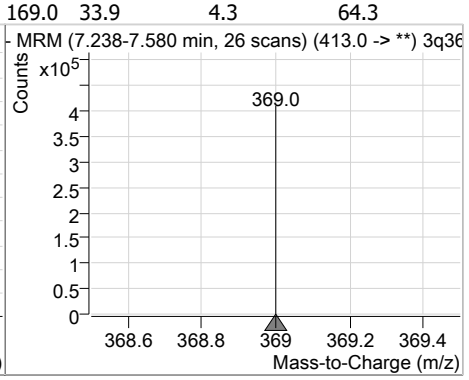




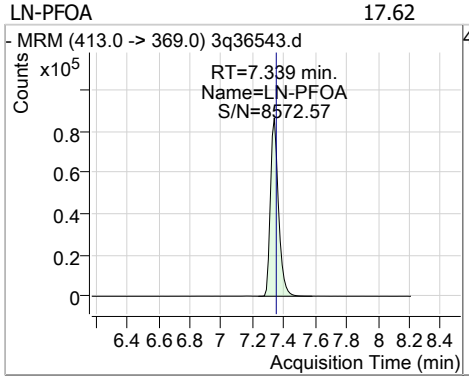
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	17.62	7.34	0.00	308603	413.0 -> 169.0	33.9	4.3	64.3

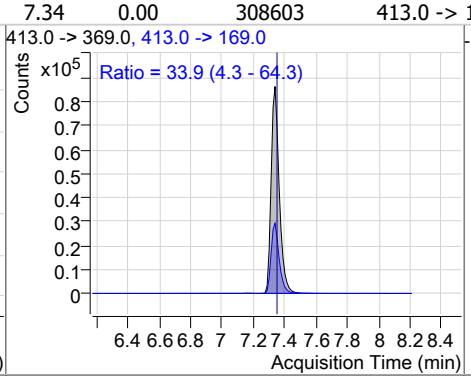


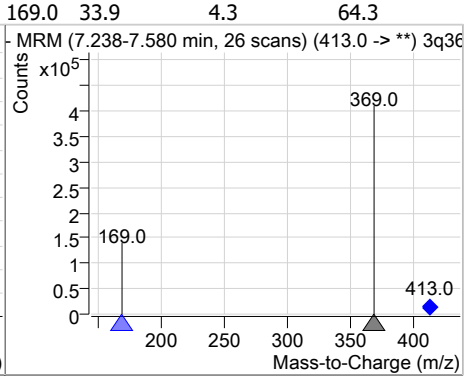




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	17.62	7.34	0.00	308603	413.0 -> 169.0	33.9	4.3	64.3

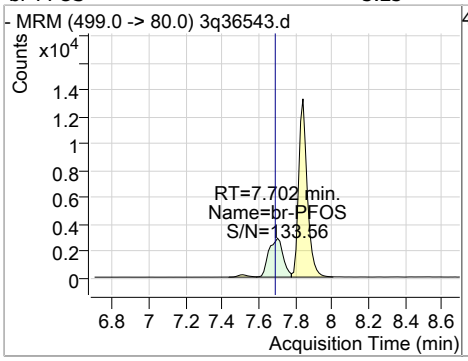


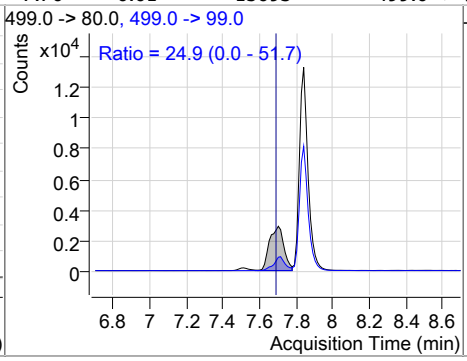


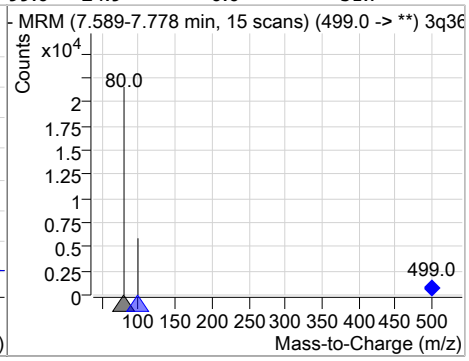


Perfluorinated Compounds by LC/MS/MS

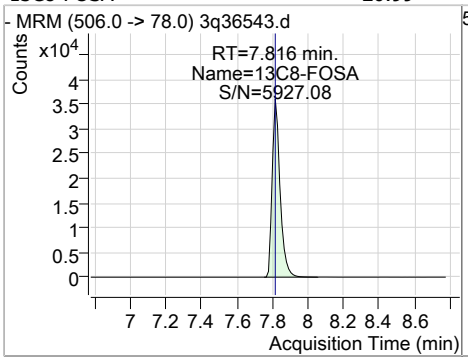
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	3.23	7.70	0.01	15693	499.0 -> 99.0	24.9	0.0	51.7

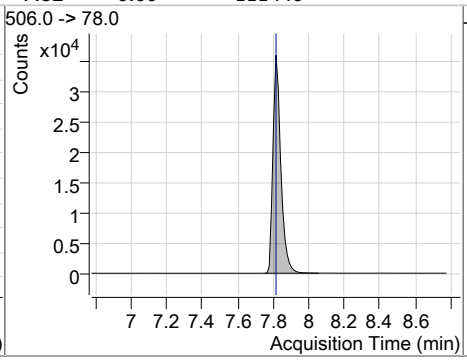


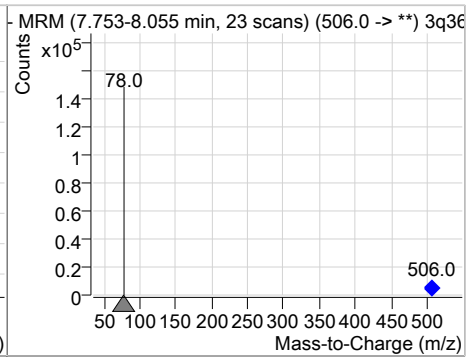




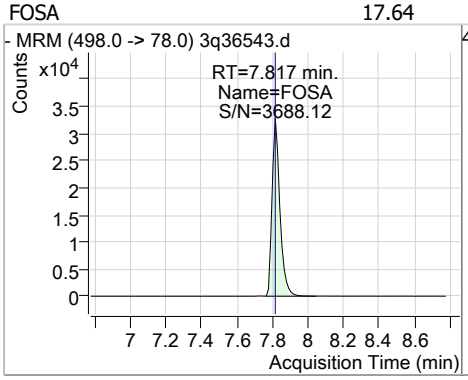
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.99	7.82	0.00	111440				

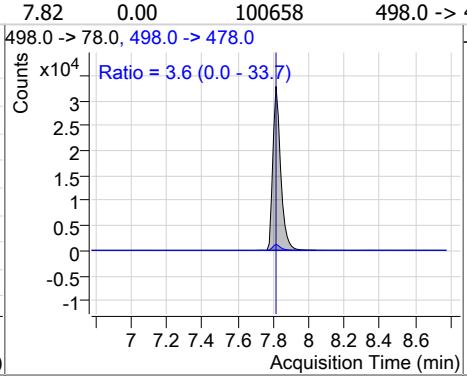


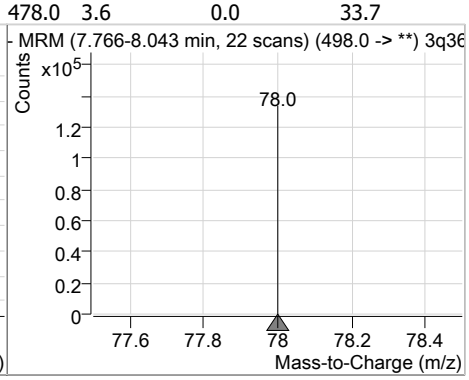




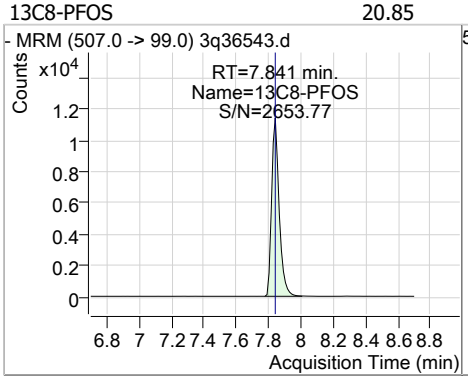
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	17.64	7.82	0.00	100658	498.0 -> 478.0	3.6	0.0	33.7

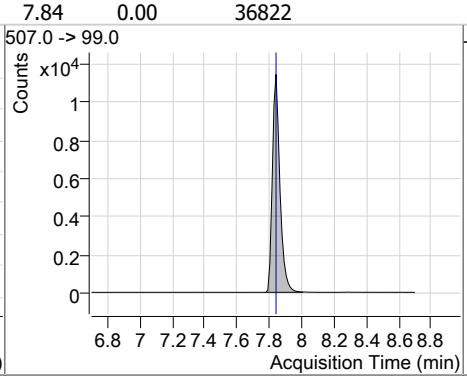


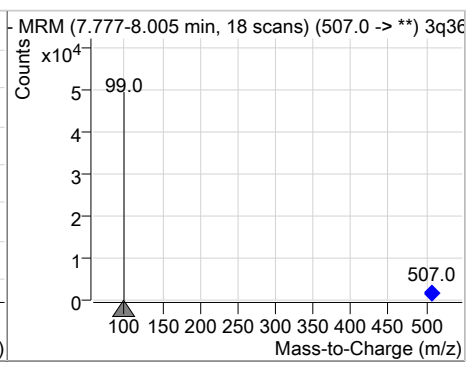




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.85	7.84	0.00	36822				

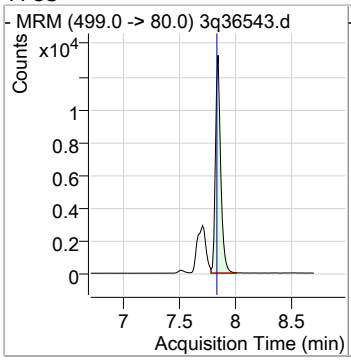


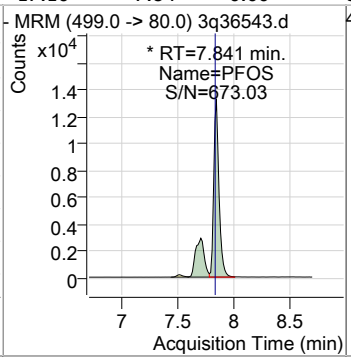


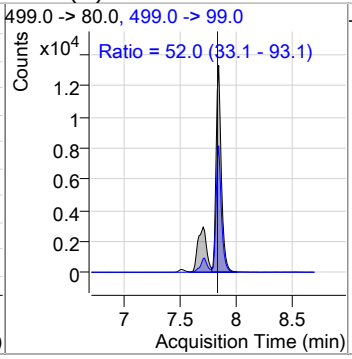


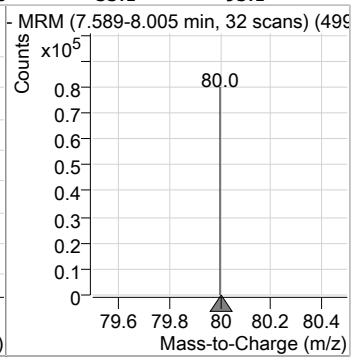
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	17.16	7.84	0.00	59010 (m)	499.0 -> 99.0	52.0	33.1	93.1

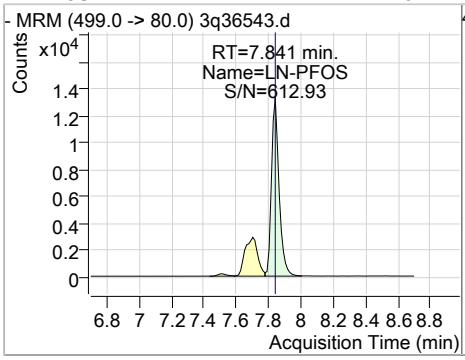


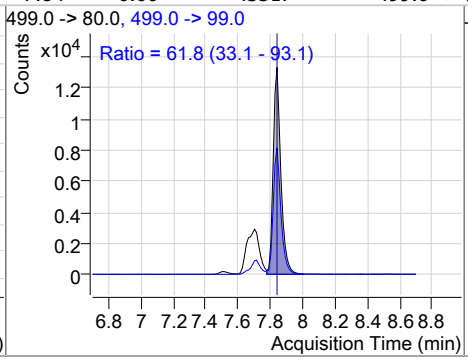


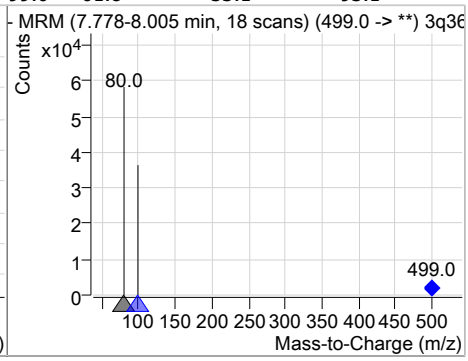




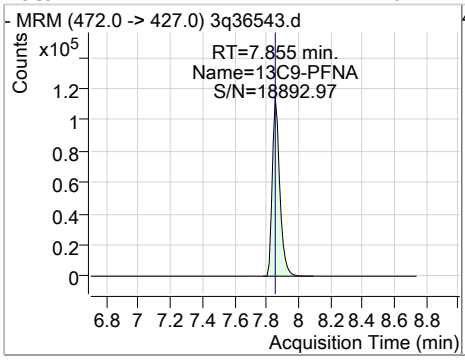
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	14.48	7.84	0.00	43317	499.0 -> 99.0	61.8	33.1	93.1

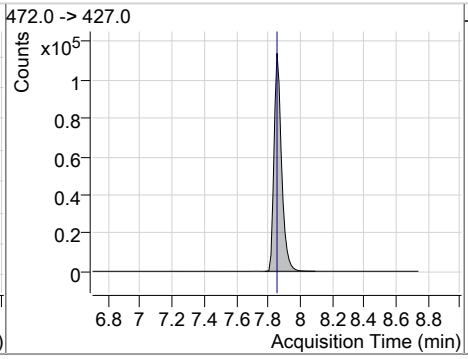


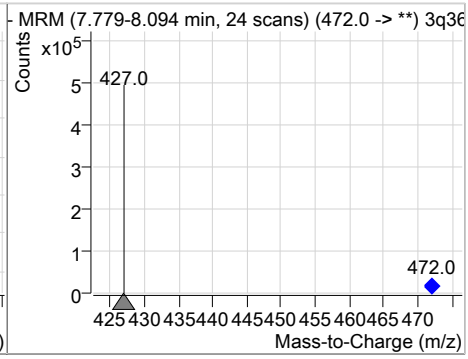




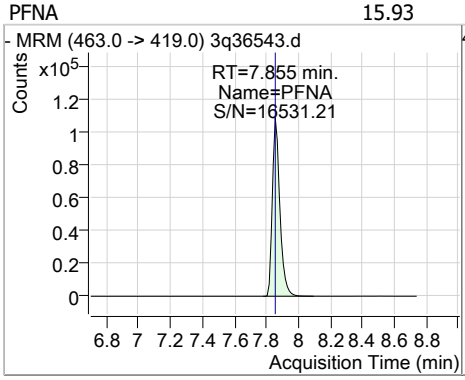
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	21.07	7.86	0.00	372015				

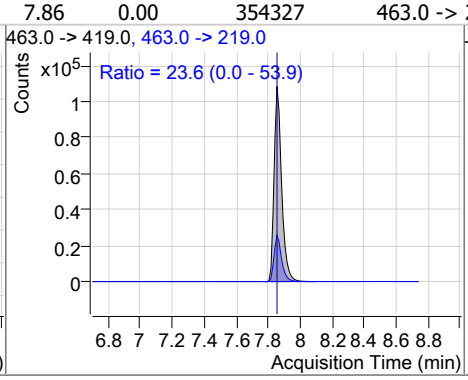


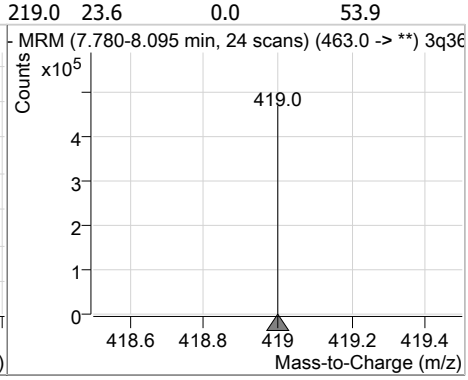




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	15.93	7.86	0.00	354327	463.0 -> 219.0	23.6	0.0	53.9

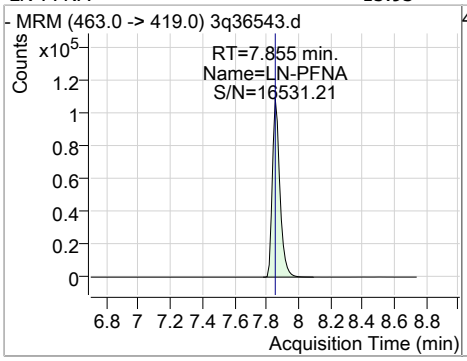


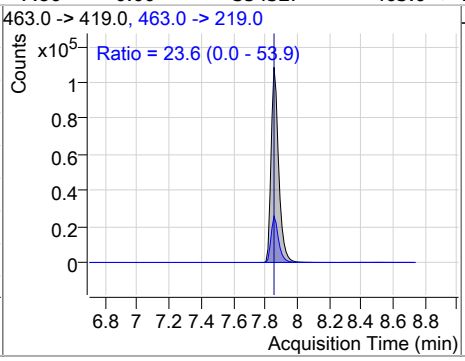


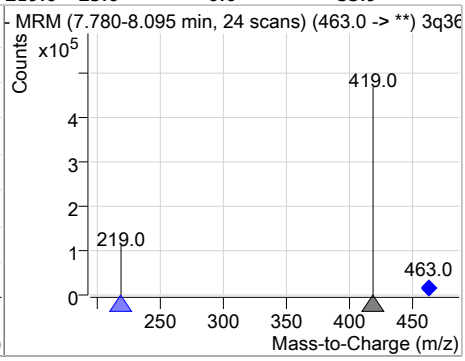


Perfluorinated Compounds by LC/MS/MS

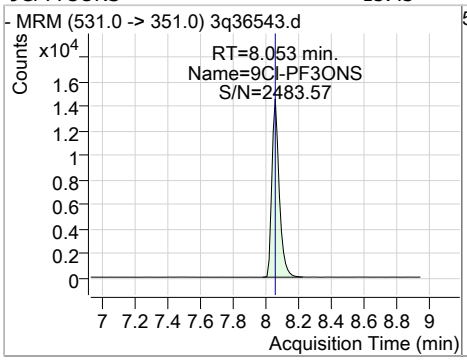
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	15.93	7.86	0.00	354327	463.0 -> 219.0	23.6	0.0	53.9

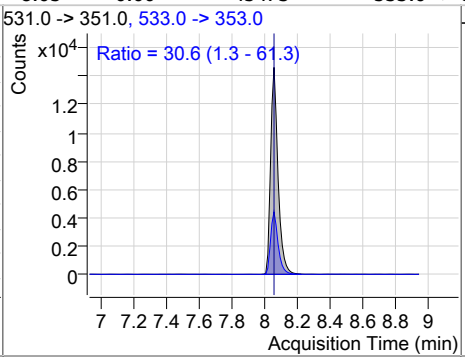


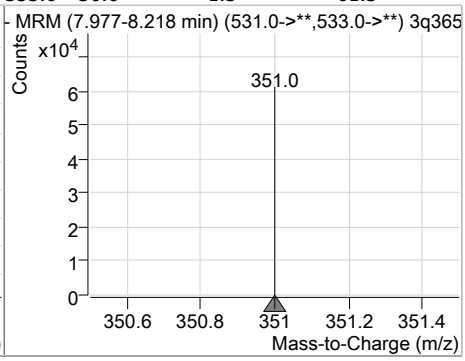




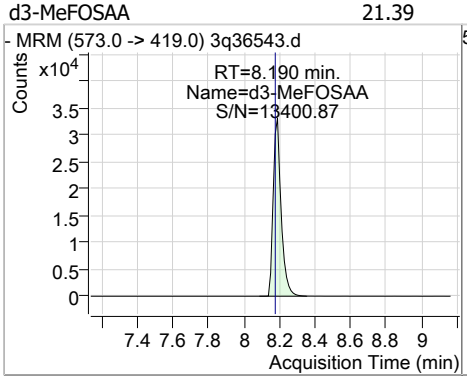
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	15.43	8.05	0.00	45473	533.0 -> 353.0	30.6	1.3	61.3

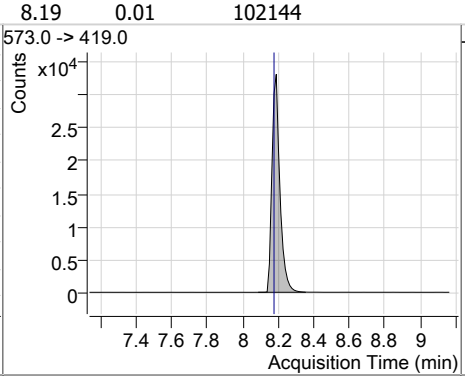


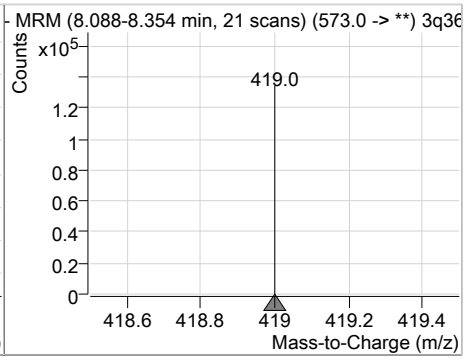




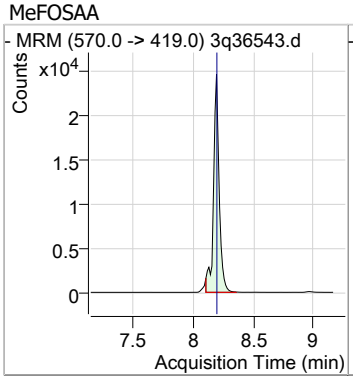
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	21.39	8.19	0.01	102144				

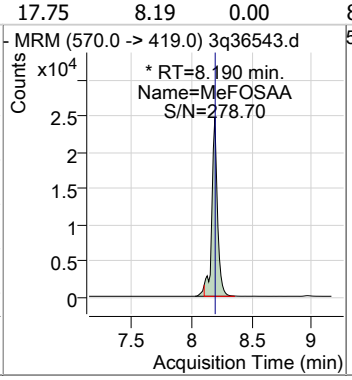


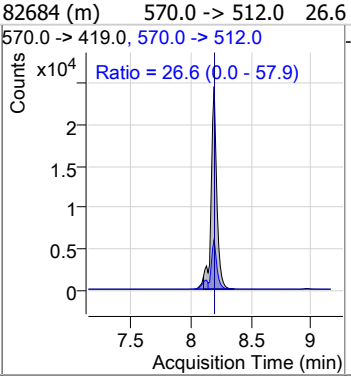


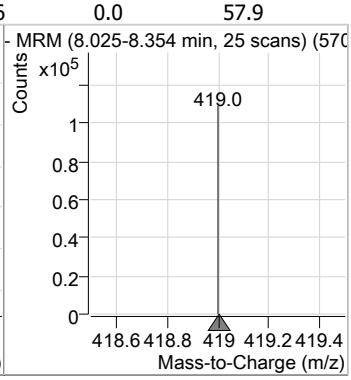


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	17.75	8.19	0.00	82684 (m)	570.0 -> 512.0	26.6	0.0	57.9



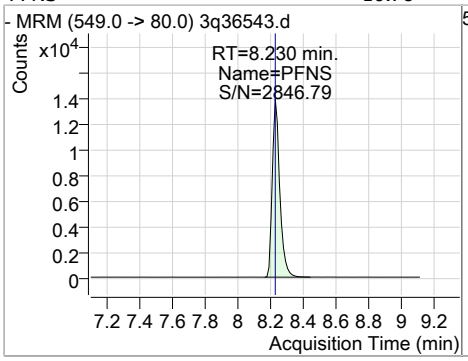


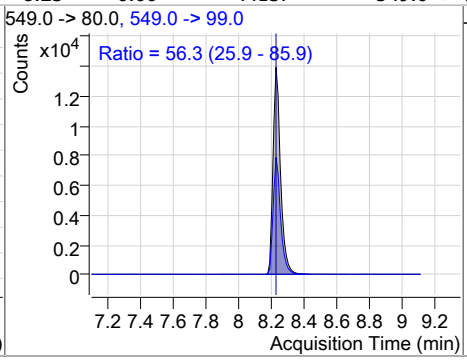


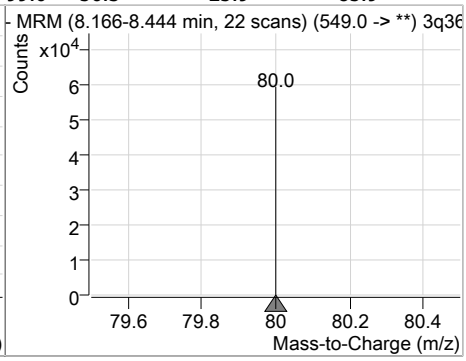


Perfluorinated Compounds by LC/MS/MS

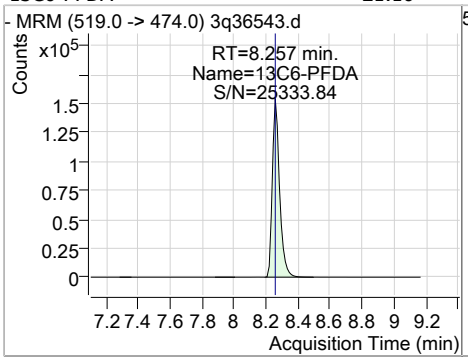
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	16.78	8.23	0.00	44137	549.0 -> 99.0	56.3	25.9	85.9

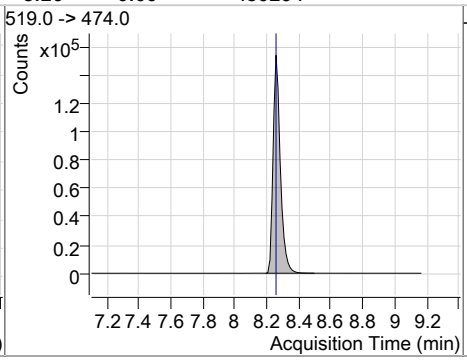


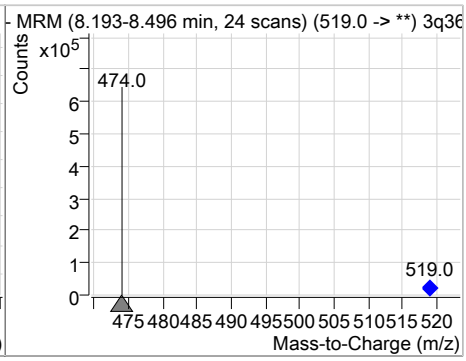




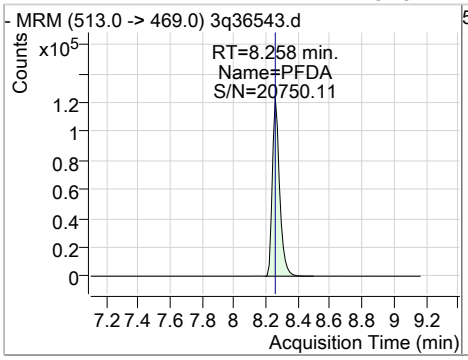
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	21.16	8.26	0.00	486264				

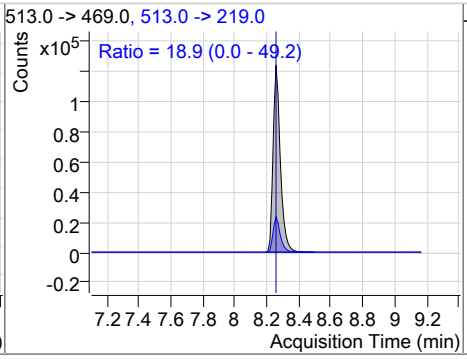


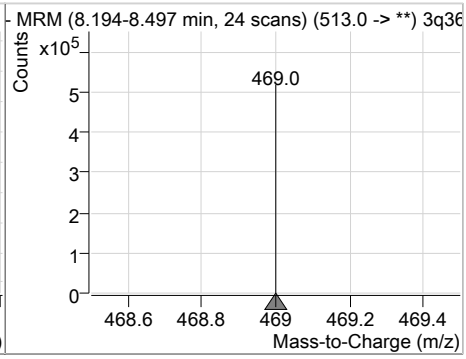




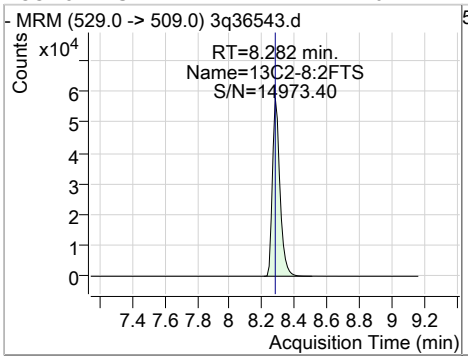
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	15.49	8.26	0.00	389741	513.0 -> 219.0	18.9	0.0	49.2

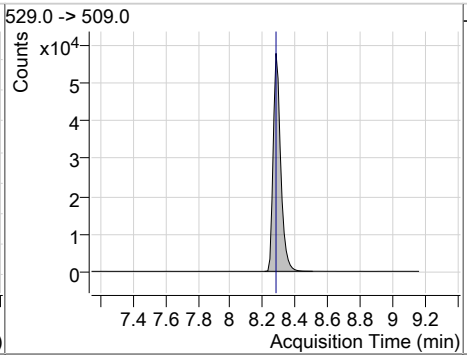


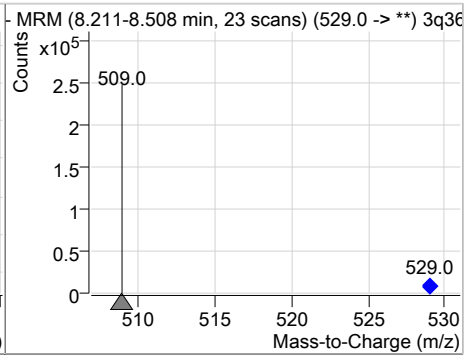




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	20.14	8.28	0.00	186433				

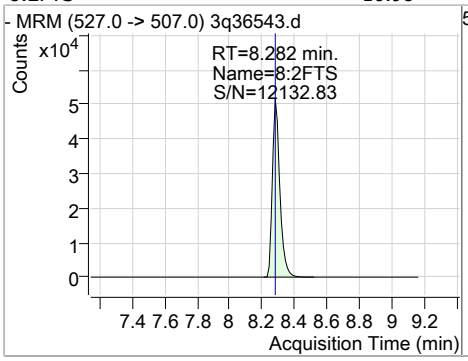


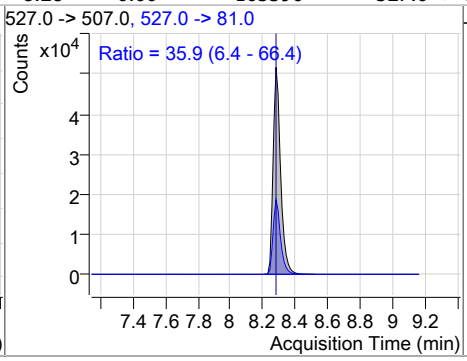


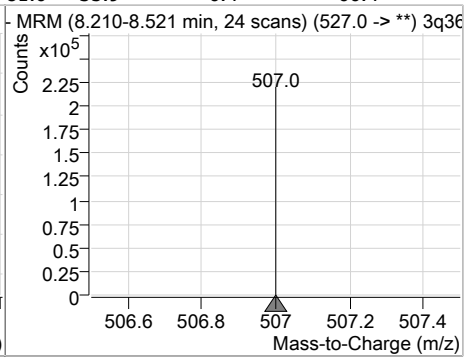


Perfluorinated Compounds by LC/MS/MS

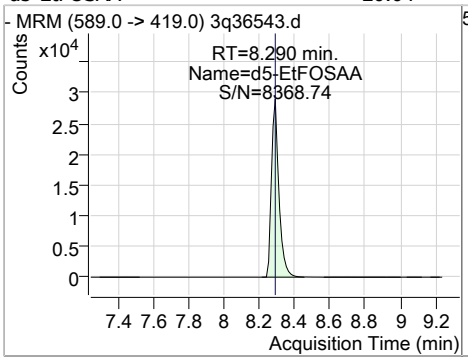
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	16.98	8.28	0.00	165396	527.0 -> 81.0	35.9	6.4	66.4

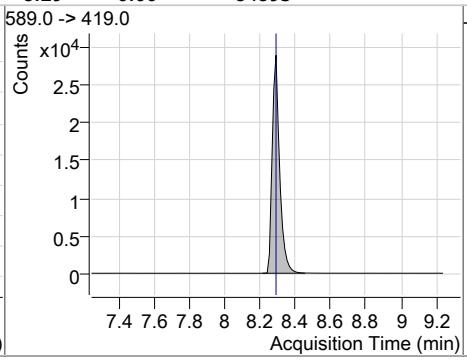


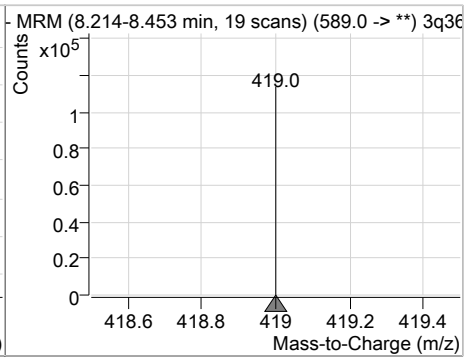




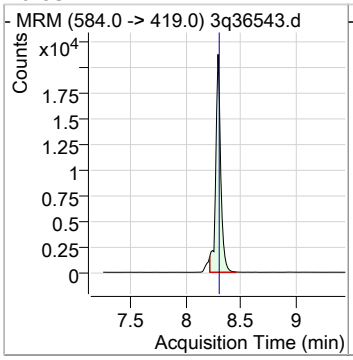
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.64	8.29	0.00	84893				

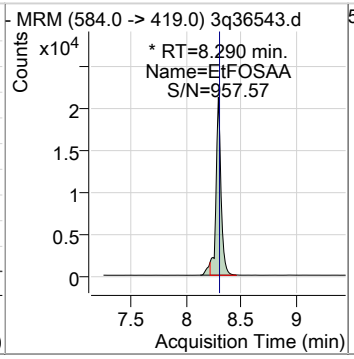


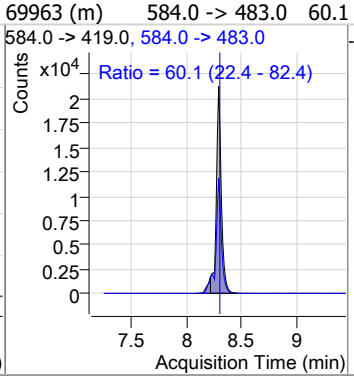


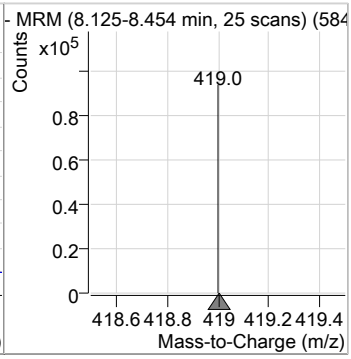


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	17.65	8.29	0.00	69963 (m)	584.0 -> 483.0	60.1	22.4	82.4

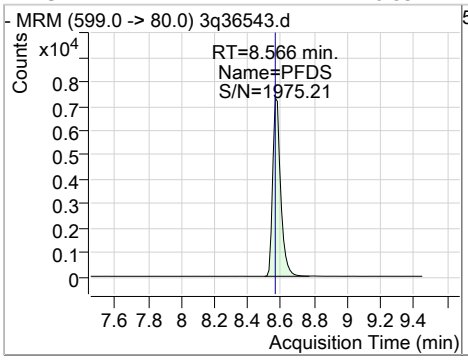


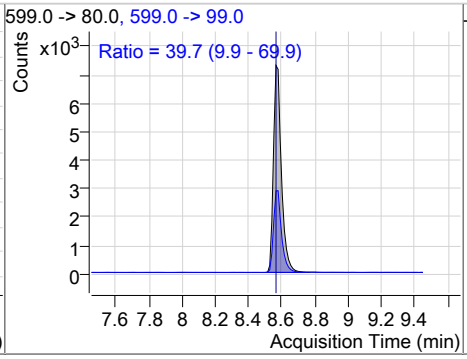


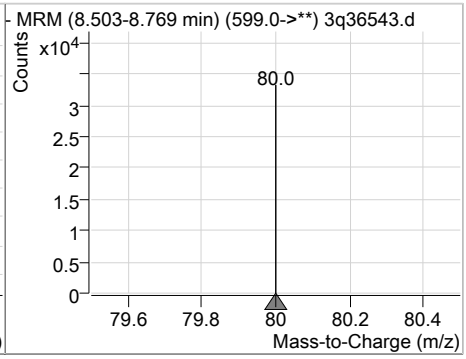




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	16.53	8.57	0.00	24226	599.0 -> 99.0	39.7	9.9	69.9

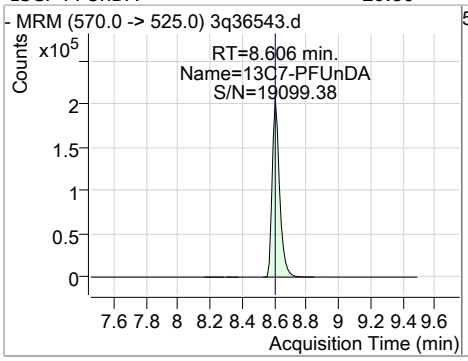


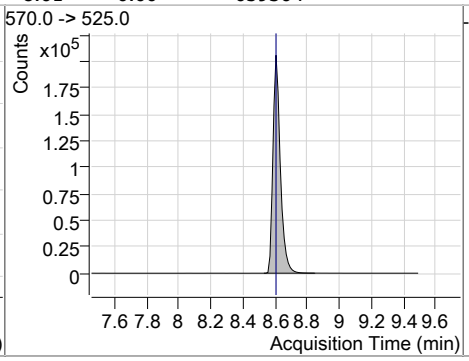


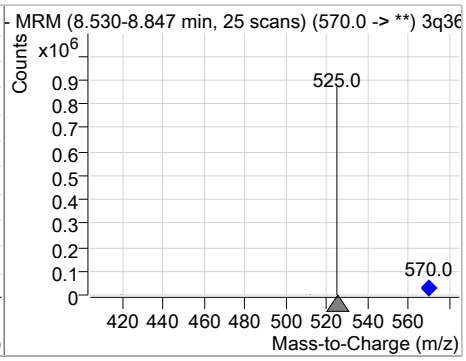


Perfluorinated Compounds by LC/MS/MS

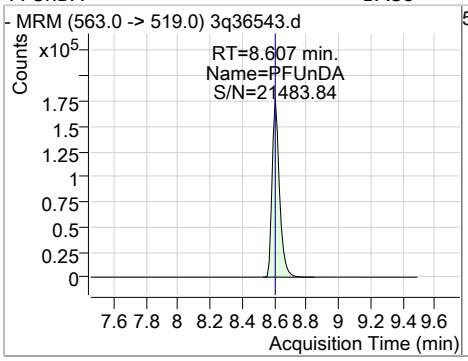
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.86	8.61	0.00	659364				

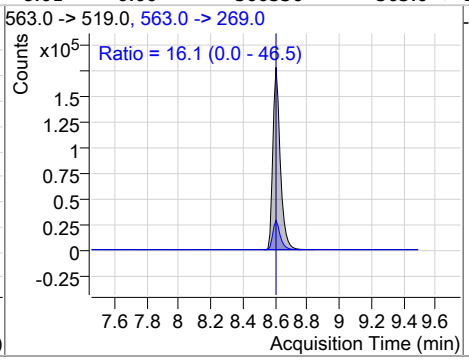


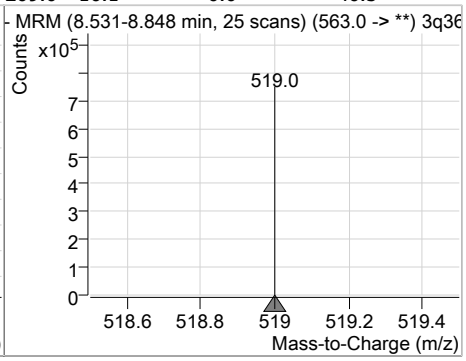




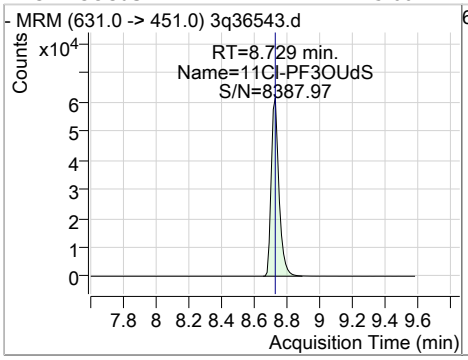
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	17.58	8.61	0.00	566536	563.0 -> 269.0	16.1	0.0	46.5

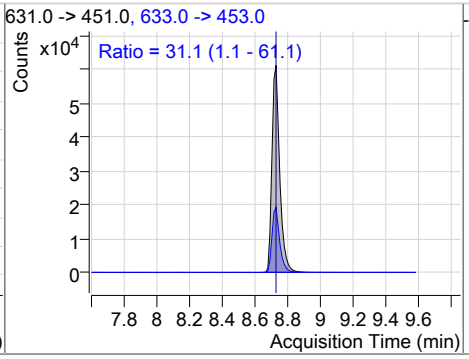


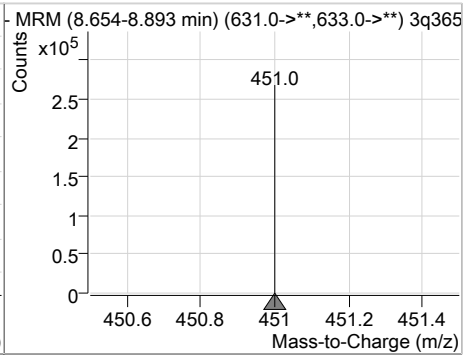




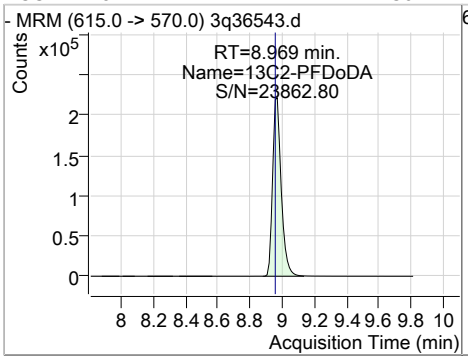
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	15.66	8.73	0.01	202670	633.0 -> 453.0	31.1	1.1	61.1

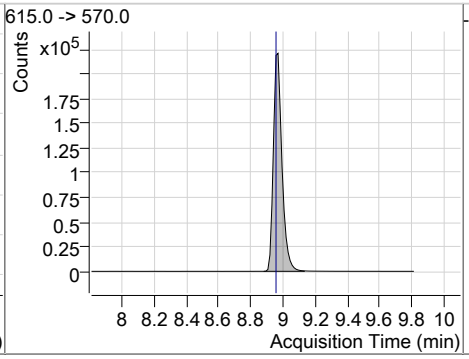


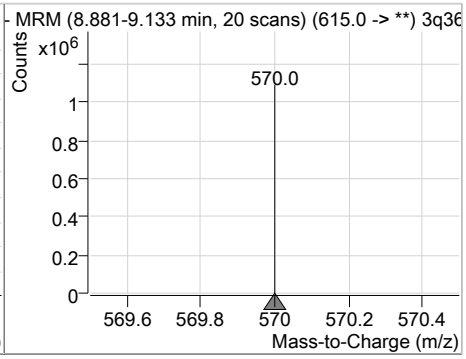




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	21.36	8.97	0.01	823785				

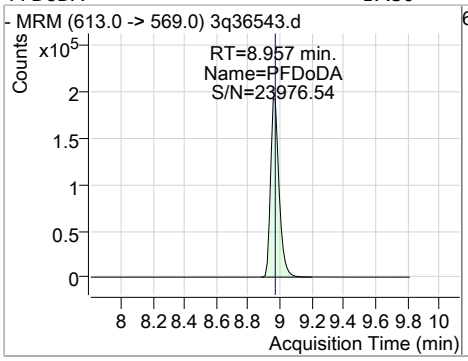


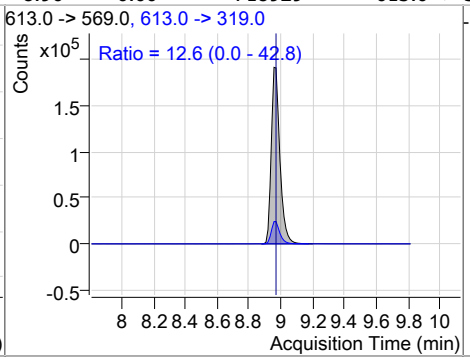


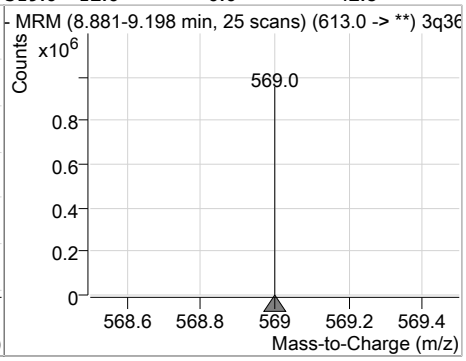


Perfluorinated Compounds by LC/MS/MS

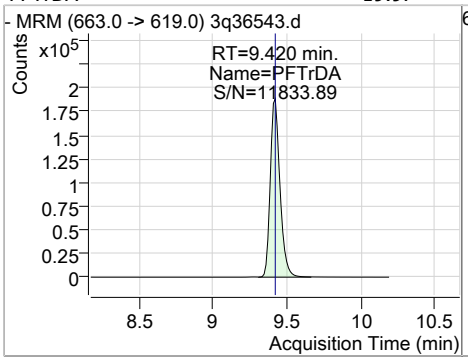
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	17.56	8.96	0.00	718929	613.0 -> 319.0	12.6	0.0	42.8

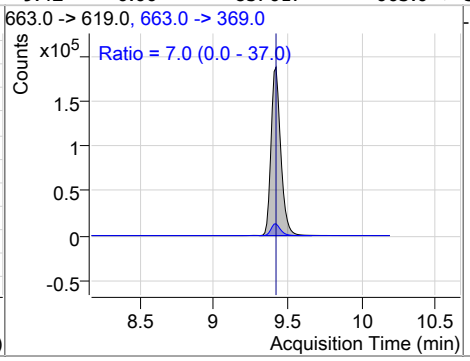


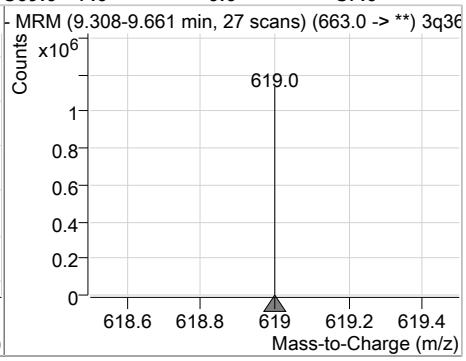




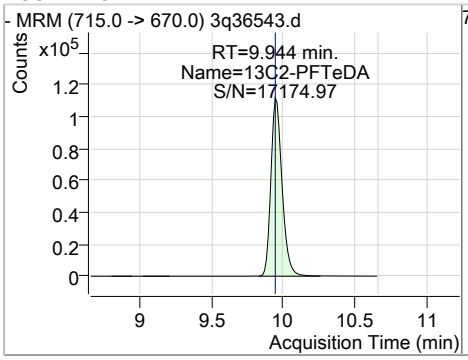
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	19.97	9.42	0.00	857017	663.0 -> 369.0	7.0	0.0	37.0

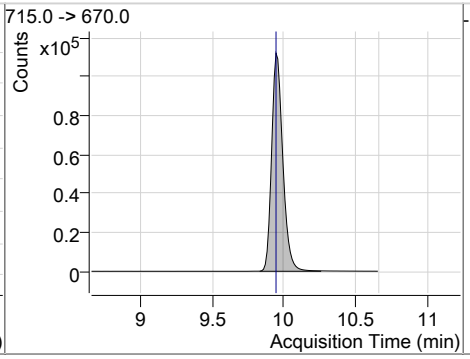


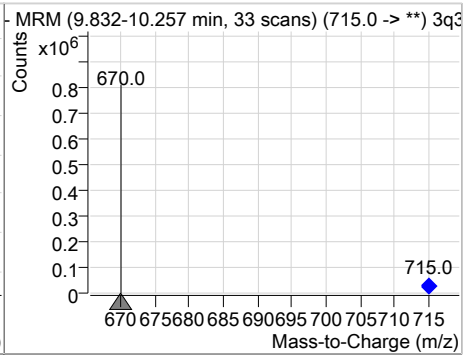




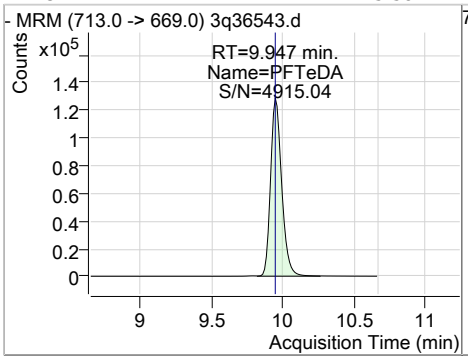
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	21.77	9.94	0.00	608670				

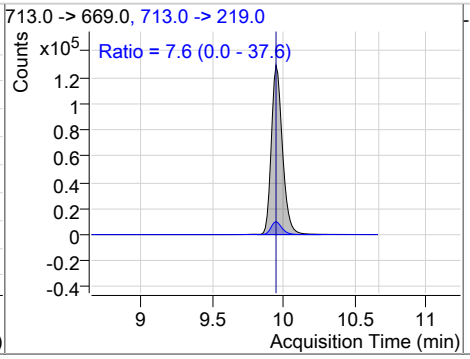


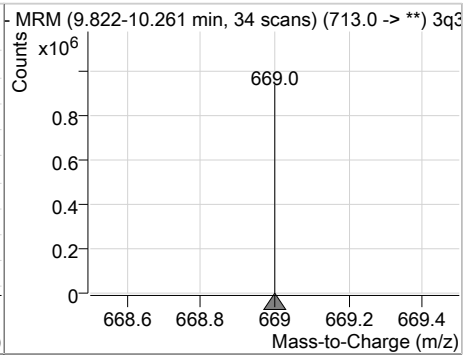




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	15.58	9.95	0.00	697832	713.0 -> 219.0	7.6	0.0	37.6







Manual Integration Approval Summary

Sample Number: S3Q537-ICV537
Lab FileID: 3Q36543.D
Injection Time: 04/13/21 17:09
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/14/21 10:44 Martha Valls
Supervisor approved: 04/14/21 15:06 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.66	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.84	Split peak
MeFOSAA	2355-31-9		8.19	Split peak
EtFOSAA	2991-50-6		8.29	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/15/21 10:01

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36611.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/14/2021 7:52:40 PM
Sample Name : cc537-20
Vial : P1-A7
DA Method File : ID_041321_S3Q537.quantmethod.xml
Batch Name : s3q538.batch.bin
Sample Information : op84892,S3Q538,250,,,1,1,water

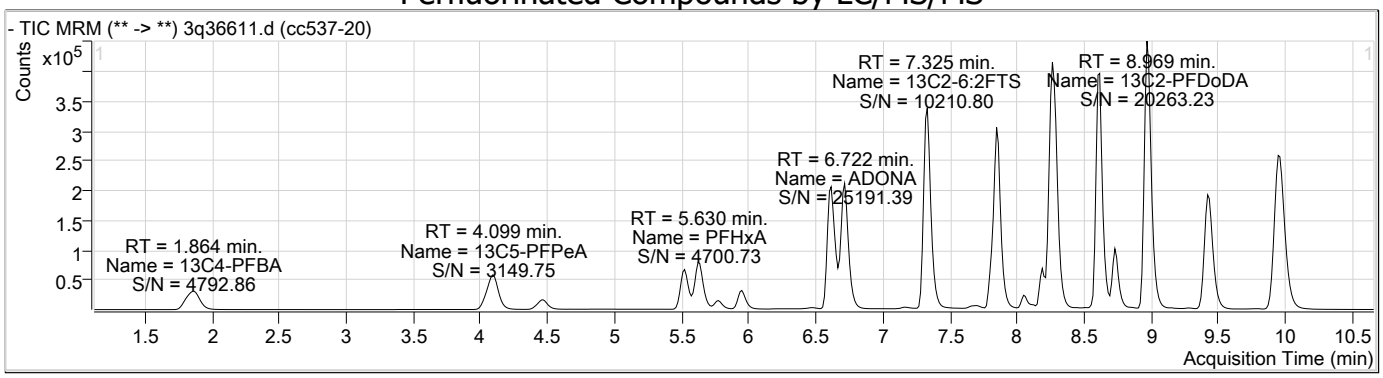
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.864	217.0 -> 172.0	163297	20.00	µg/L	0.025
M5-PFPeA	4.099	268.0 -> 223.0	123405	20.00	µg/L	0.025
M5-PFHxA	5.630	318.0 -> 273.0	191081	20.00	µg/L	0.000
M4-PFHpA	6.620	367.0 -> 322.0	268987	20.00	µg/L	0.013
M8-PFOA	7.338	421.0 -> 376.0	313220	20.00	µg/L	0.013
M9-PFNA	7.855	472.0 -> 427.0	357946	20.00	µg/L	0.000
M6-PFDA	8.257	519.0 -> 474.0	465086	20.00	µg/L	0.000
M7-PFUnDA	8.618	570.0 -> 525.0	629837	20.00	µg/L	0.013
M2-PFDoDA	8.969	615.0 -> 570.0	780684	20.00	µg/L	0.013
M2-PFTeDA	9.957	715.0 -> 670.0	558990	20.00	µg/L	0.013
M8-FOSA	7.816	506.0 -> 78.0	109979	20.00	µg/L	0.000
M3-PFBS	4.472	302.0 -> 99.0	17021	20.00	µg/L	0.025
M3-PFHxS	6.655	402.0 -> 99.0	23909	20.00	µg/L	0.000
M8-PFOS	7.841	507.0 -> 99.0	35536	20.00	µg/L	0.000
M2-4:2FTS	5.526	329.0 -> 309.0	116005	20.00	µg/L	0.014
M2-6:2FTS	7.325	429.0 -> 409.0	172902	20.00	µg/L	0.013
M2-8:2FTS	8.294	529.0 -> 509.0	180261	20.00	µg/L	0.013
M3-MeFOSAA	8.190	573.0 -> 419.0	95032	20.00	µg/L	0.013
M3-HFPO-DA	5.945	287.0 -> 169.0	24169	20.00	µg/L	0.000
M5-EtFOSAA	8.290	589.0 -> 419.0	80339	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.526	329.0 -> 309.0	116005	20.27	µg/L	0.014
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%		
13C2-6:2FTS	7.325	429.0 -> 409.0	172902	20.45	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.2%		
13C2-8:2FTS	8.294	529.0 -> 509.0	180261	19.47	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.4%		
13C2-PFDoDA	8.969	615.0 -> 570.0	780684	20.24	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.2%		
13C2-PFTeDA	9.957	715.0 -> 670.0	558990	19.99	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.0%		
13C3-PFBS	4.472	302.0 -> 99.0	17021	21.11	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.5%		
13C3-PFHxS	6.655	402.0 -> 99.0	23909	21.00	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.0%		
13C4-PFBA	1.864	217.0 -> 172.0	163297	20.84	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.2%		
13C4-PFHpA	6.620	367.0 -> 322.0	268987	20.75	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.8%		
13C5-PFHxA	5.630	318.0 -> 273.0	191081	20.88	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.4%		
13C5-PFPeA	4.099	268.0 -> 223.0	123405	21.02	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.1%		
13C6-PFDA	8.257	519.0 -> 474.0	465086	20.24	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.2%		

Perfluorinated Compounds by LC/MS/MS

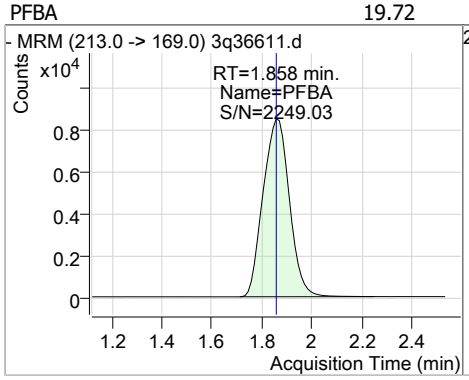
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.618	570.0 -> 525.0	629837	19.92	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.6%			
13C8-FOSA	7.816	506.0 -> 78.0	109979	20.71	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.6%			
13C8-PFOA	7.338	421.0 -> 376.0	313220	20.57	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.9%			
13C8-PFOS	7.841	507.0 -> 99.0	35536	20.12	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.6%			
13C9-PFNA	7.855	472.0 -> 427.0	357946	20.27	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.4%			
d3-MeFOSAA	8.190	573.0 -> 419.0	95032	19.90	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.5%			
13C3-HFPO-DA	5.945	287.0 -> 169.0	24136	19.90	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.5%			
d5-EtFOSAA	8.290	589.0 -> 419.0	80338	19.53	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.6%			
Target Compounds							QValue
4:2FTS	5.528	327.0 -> 307.0	126519	20.18	µg/L		100
6:2FTS	7.325	427.0 -> 407.0	186856	20.07	µg/L		100
8:2FTS	8.294	527.0 -> 507.0	192089	20.39	µg/L		99
EtFOSAA	8.290	584.0 -> 419.0	74660	19.91	µg/L	m	90
FOSA	7.817	498.0 -> 78.0	113067	20.07	µg/L		100
MeFOSAA	8.190	570.0 -> 419.0	88447	20.40	µg/L	m	99
PFBA	1.858	213.0 -> 169.0	61679	19.72	µg/L		100
PFBS	4.473	299.0 -> 80.0	51189	19.66	µg/L		100
PFDA	8.258	513.0 -> 469.0	459634	19.10	µg/L		99
PFDoDA	8.970	613.0 -> 569.0	770387	19.86	µg/L		99
PFDS	8.578	599.0 -> 80.0	28004	20.00	µg/L		99
PFHpA	6.620	363.0 -> 319.0	482478	19.77	µg/L		100
PFHpS	7.337	449.0 -> 80.0	54080	20.67	µg/L		99
PFHxA	5.630	313.0 -> 269.0	130978	19.58	µg/L		100
PFHxS	6.655	399.0 -> 80.0	53605	19.61	µg/L	m	96
PFNA	7.855	463.0 -> 419.0	416923	19.48	µg/L		99
PFNS	8.242	549.0 -> 80.0	51004	20.10	µg/L		98
PFOA	7.339	413.0 -> 369.0	334885	19.78	µg/L		99
PFOS	7.841	499.0 -> 80.0	64435	19.42	µg/L	m	83
PFPeA	4.101	263.0 -> 219.0	231964	19.87	µg/L		100
PFPeS	5.776	349.0 -> 80.0	39548	19.61	µg/L		99
PFTeDA	9.947	713.0 -> 669.0	810344	19.70	µg/L		100
PFTrDA	9.420	663.0 -> 619.0	812802	20.62	µg/L		100
PFUnDA	8.619	563.0 -> 519.0	594473	19.32	µg/L		100
11Cl-PF3OUdS	8.729	631.0 -> 451.0	240910	19.64	µg/L		100
9Cl-PF3ONS	8.053	531.0 -> 351.0	52267	18.55	µg/L		100
ADONA	6.722	377.0 -> 251.0	617402	19.70	µg/L		99
HFPO-DA	5.953	329.0 -> 169.0	87536	19.99	µg/L		99

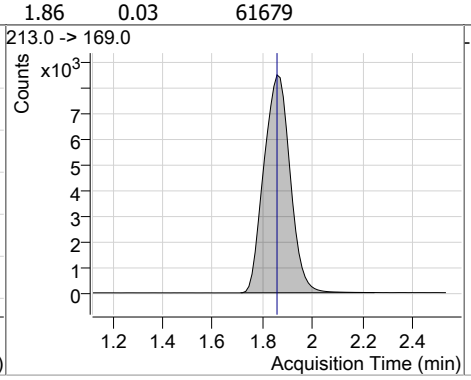
 # = Qualifier out of range, m = manually integrated, + = Area summed

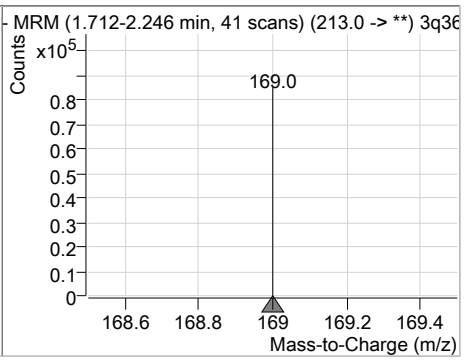
Perfluorinated Compounds by LC/MS/MS



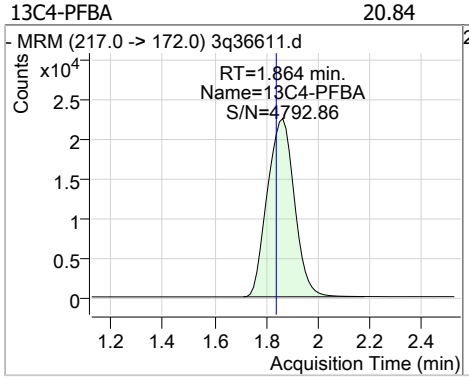
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.72	1.86	0.03	61679				

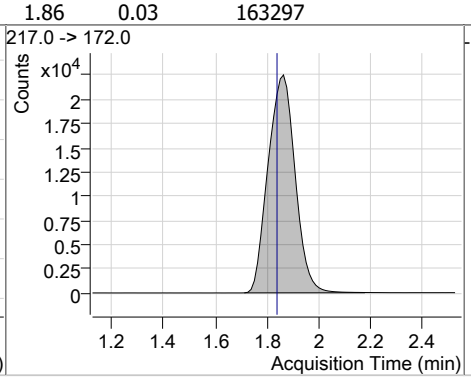


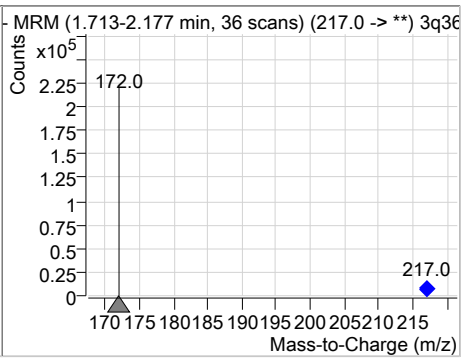




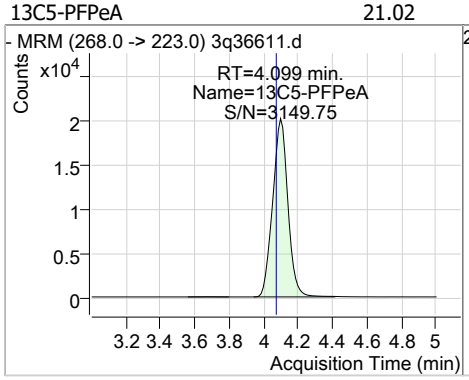
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.84	1.86	0.03	163297				

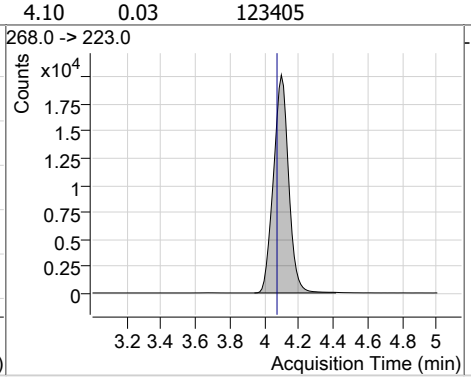


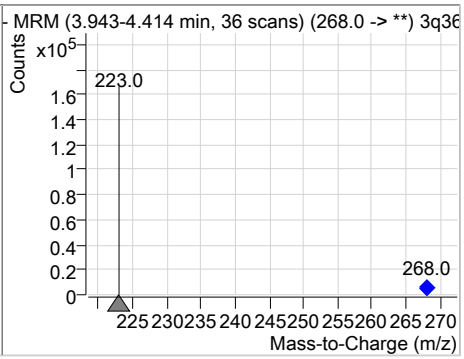




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	21.02	4.10	0.03	123405				





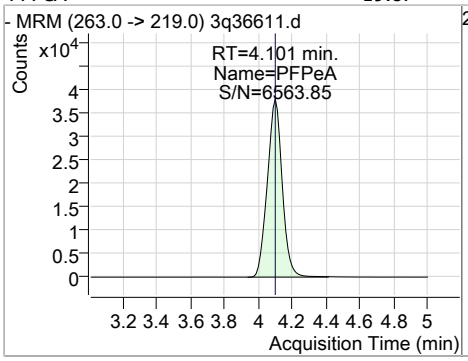


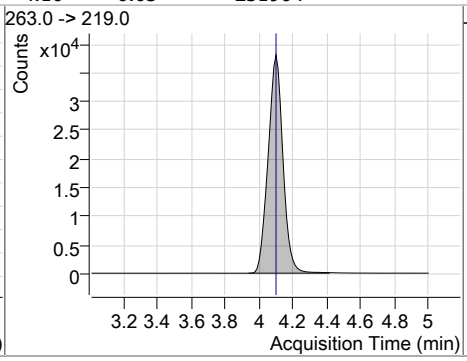
11.6.26

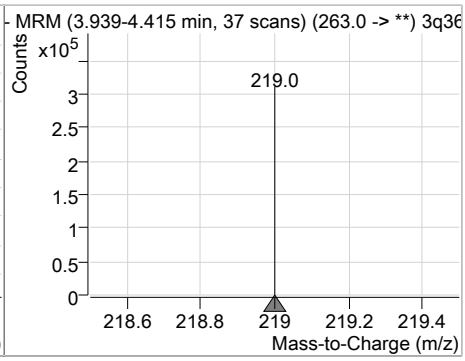
11

Perfluorinated Compounds by LC/MS/MS

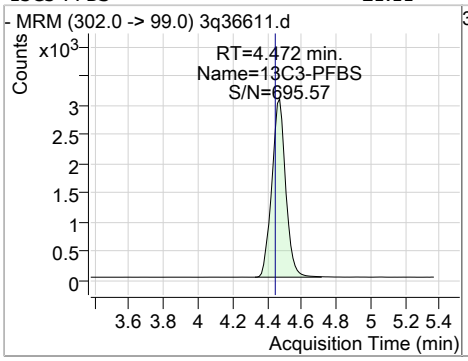
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.87	4.10	0.03	231964				

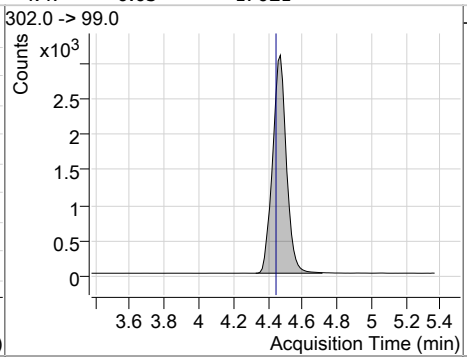


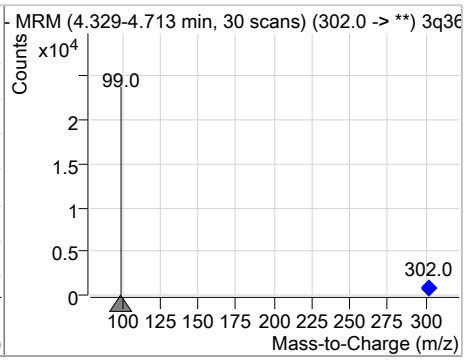




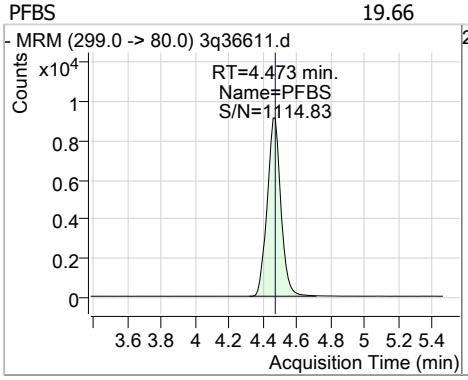
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	21.11	4.47	0.03	17021				

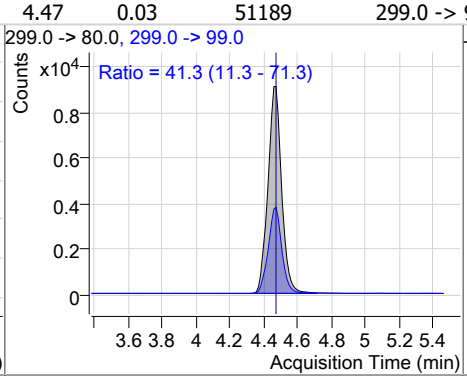


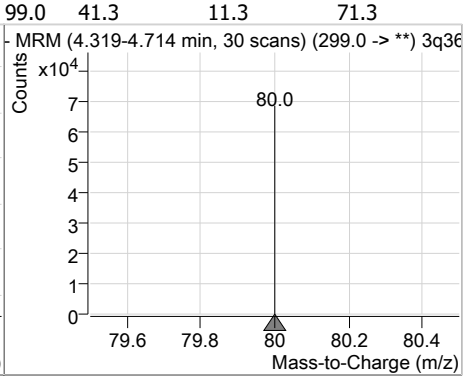




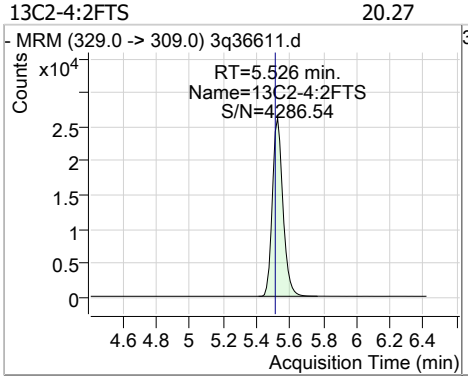
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.66	4.47	0.03	51189	299.0 -> 99.0	41.3	11.3	71.3

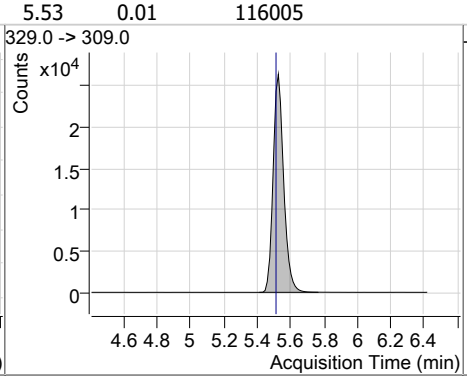


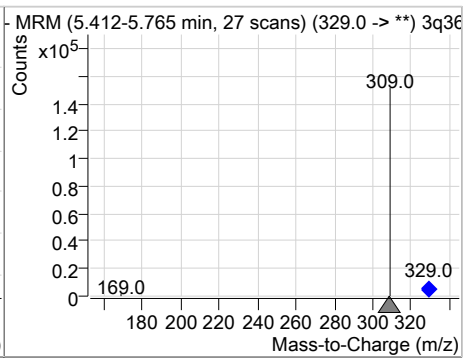




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	20.27	5.53	0.01	116005				

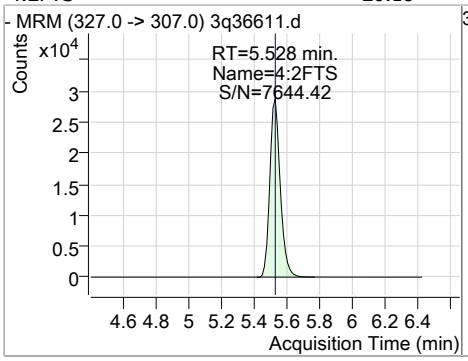


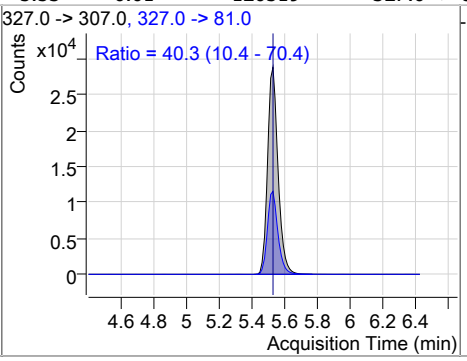


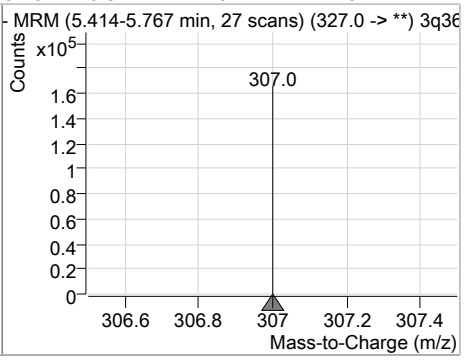


Perfluorinated Compounds by LC/MS/MS

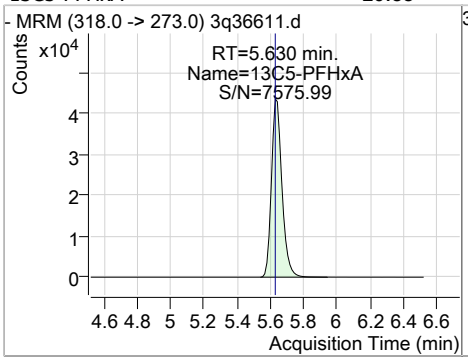
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.18	5.53	0.01	126519	327.0 -> 81.0	40.3	10.4	70.4

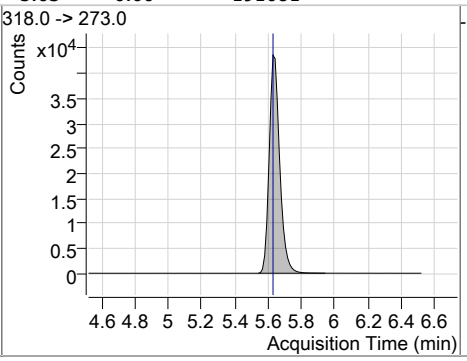


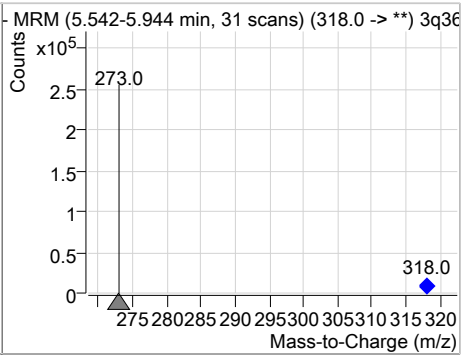




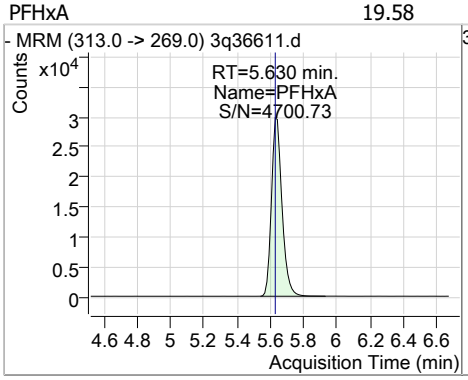
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.88	5.63	0.00	191081				

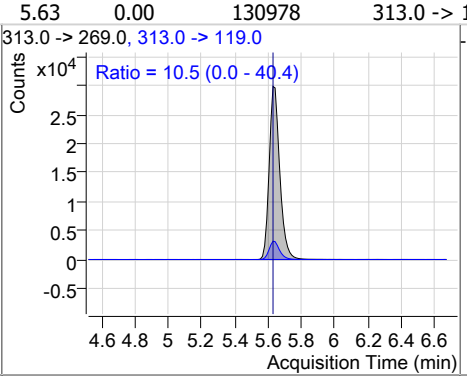


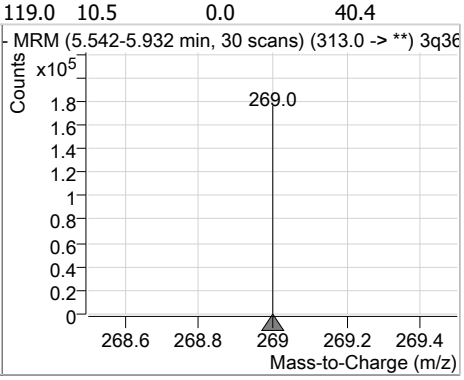




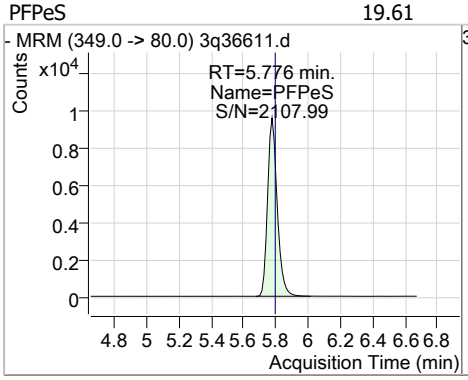
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.58	5.63	0.00	130978	313.0 -> 119.0	10.5	0.0	40.4

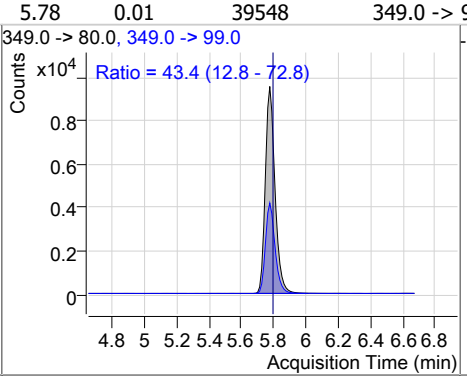


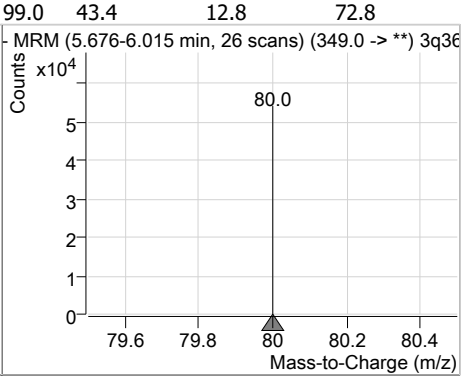




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	19.61	5.78	0.01	39548	349.0 -> 99.0	43.4	12.8	72.8

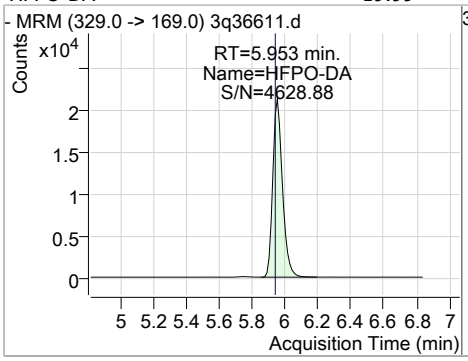


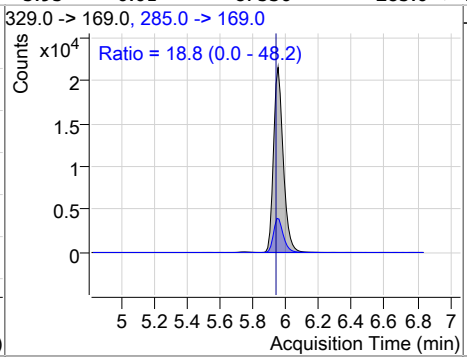


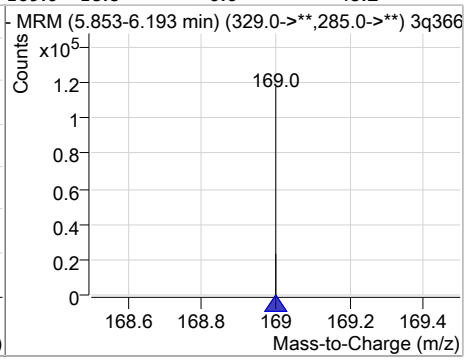


Perfluorinated Compounds by LC/MS/MS

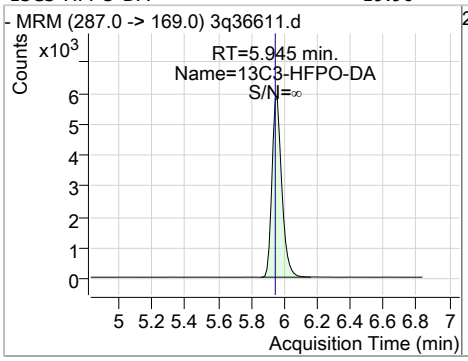
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	19.99	5.95	0.01	87536	285.0 -> 169.0	18.8	0.0	48.2

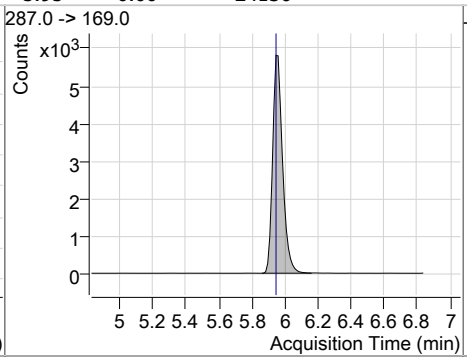


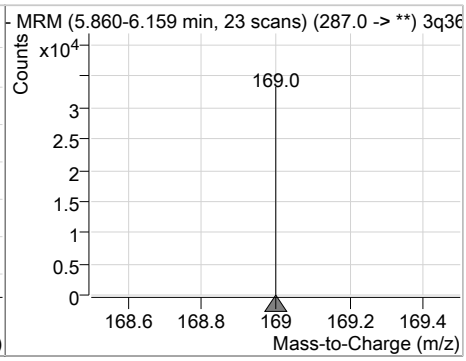




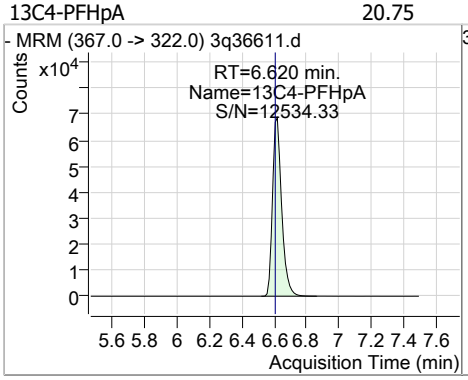
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.90	5.95	0.00	24136				

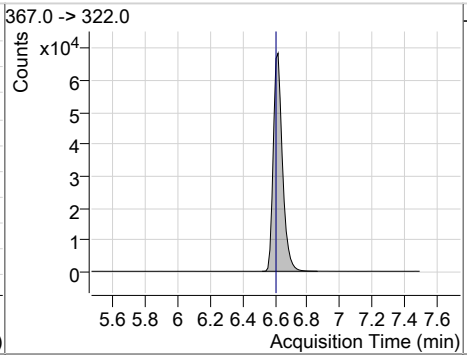


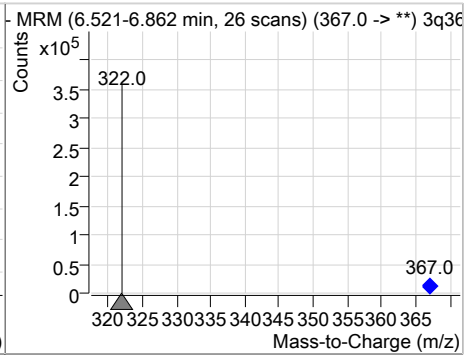




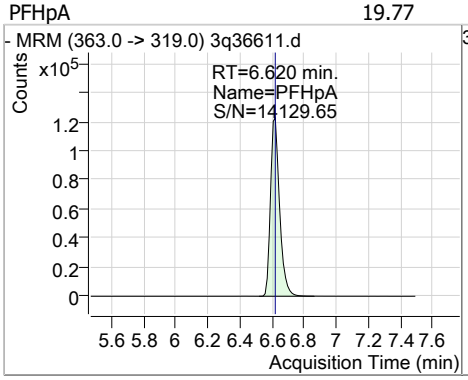
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.75	6.62	0.01	268987				

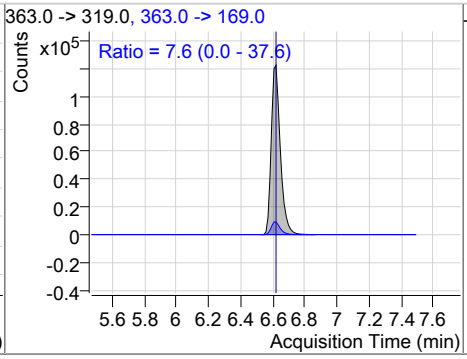


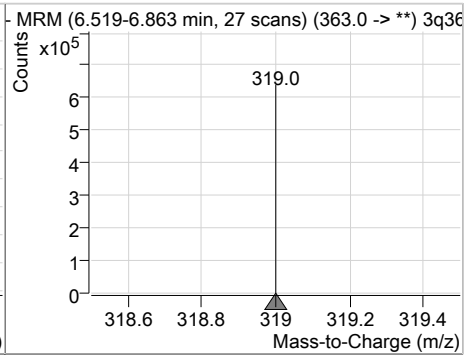




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	19.77	6.62	0.01	482478	363.0 -> 169.0	7.6	0.0	37.6

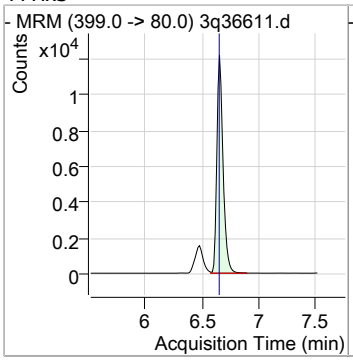


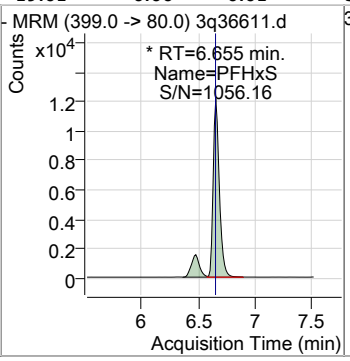


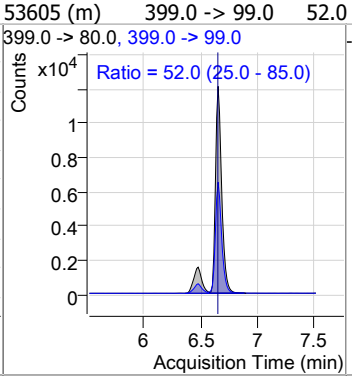


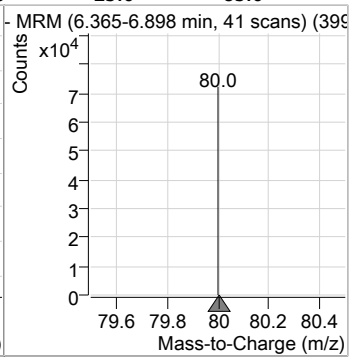
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	19.61	6.66	0.01	53605 (m)	399.0 -> 99.0	52.0	25.0	85.0

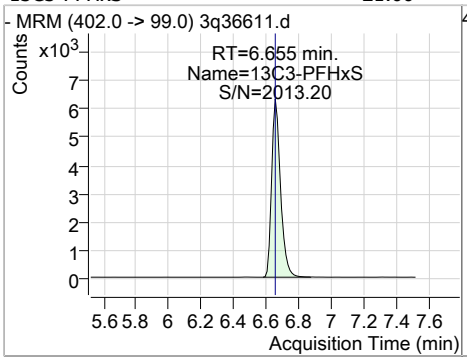


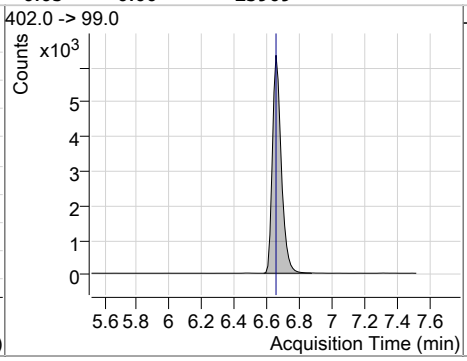


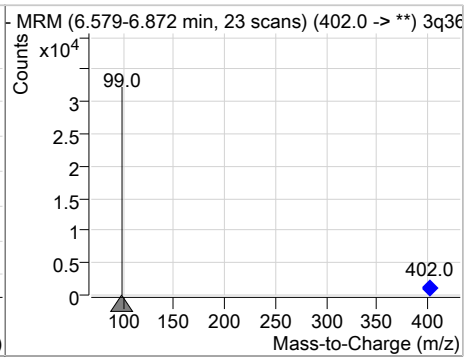




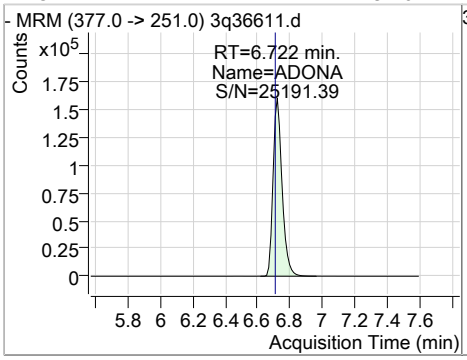
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	21.00	6.65	0.00	23909				

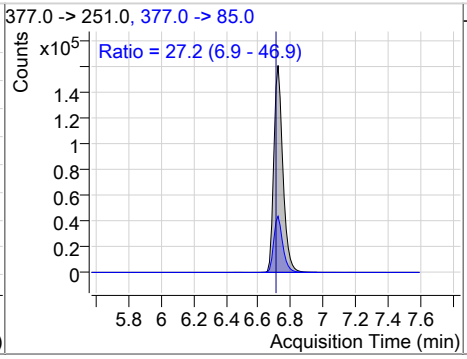


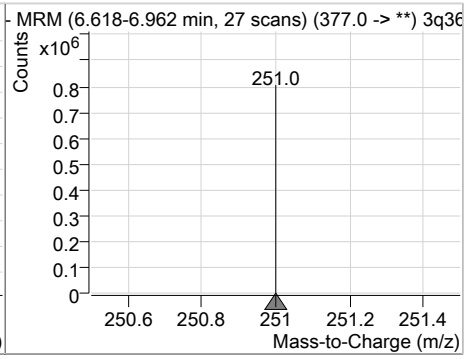




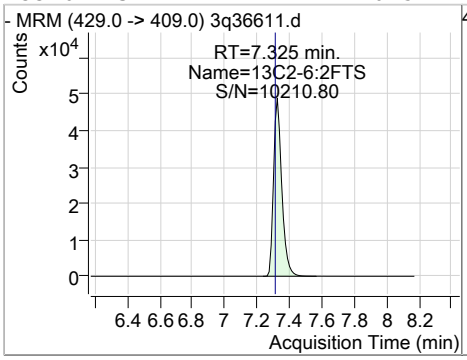
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	19.70	6.72	0.01	617402	377.0 -> 85.0	27.2	6.9	46.9

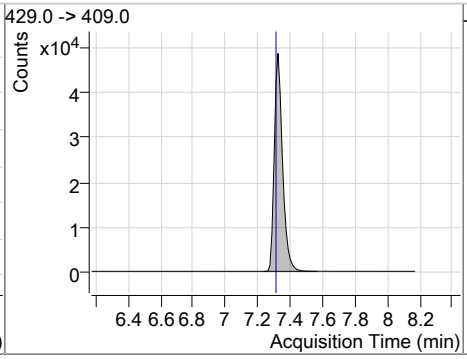


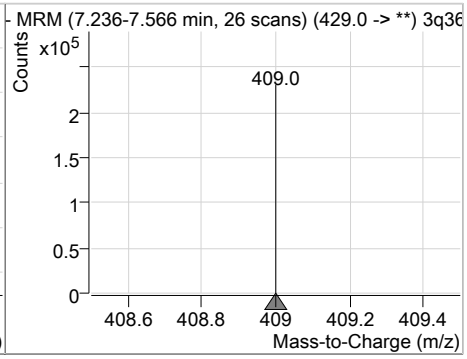




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.45	7.32	0.01	172902				

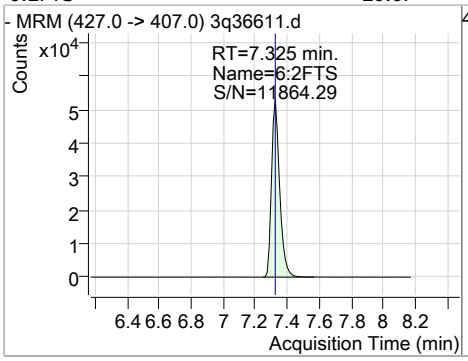


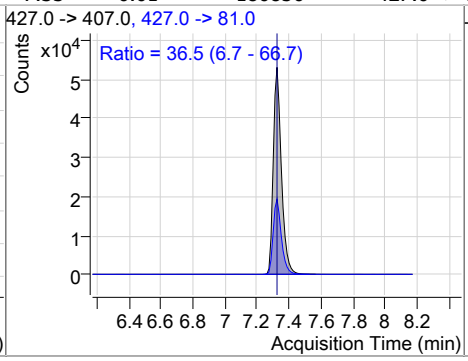


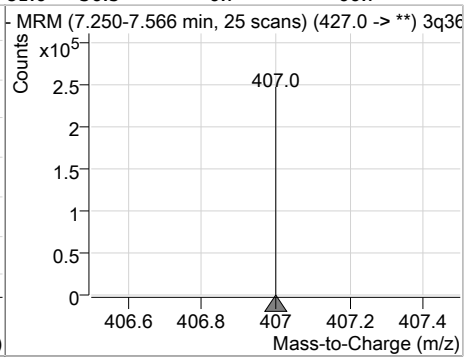


Perfluorinated Compounds by LC/MS/MS

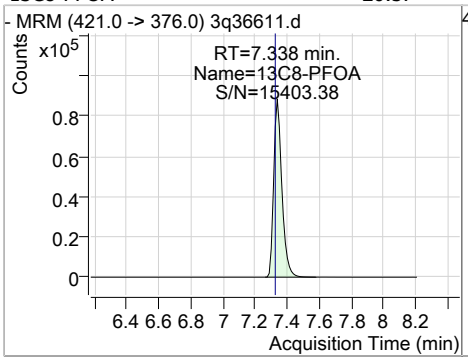
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	20.07	7.33	0.01	186856	427.0 -> 81.0	36.5	6.7	66.7

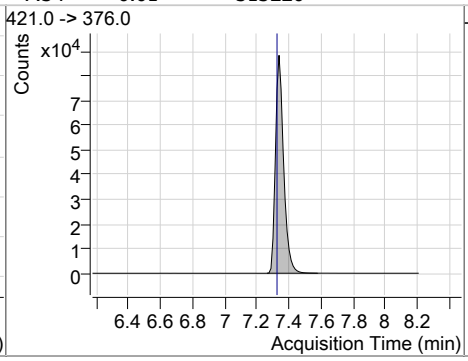


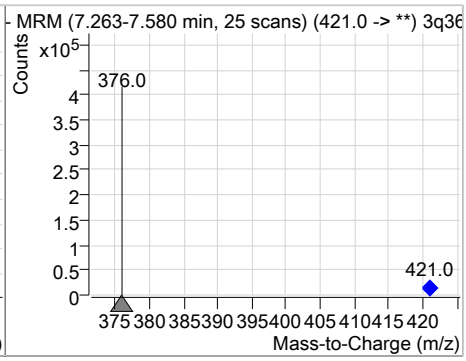




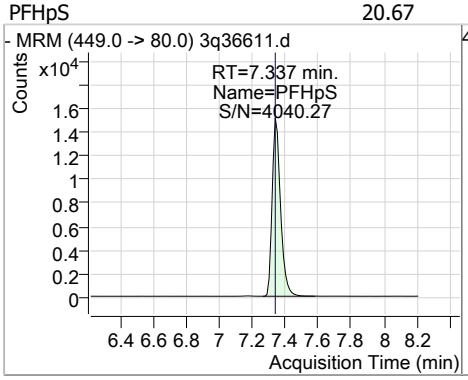
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.57	7.34	0.01	313220				

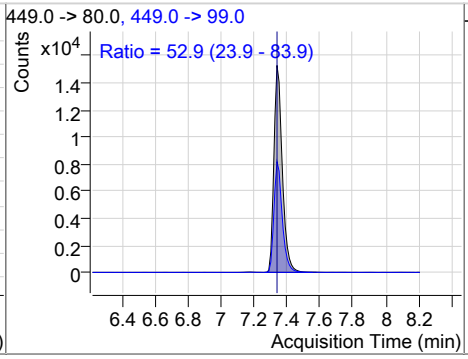


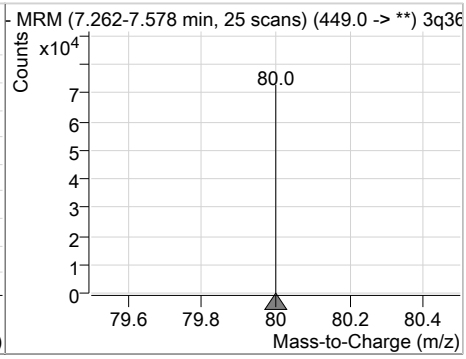




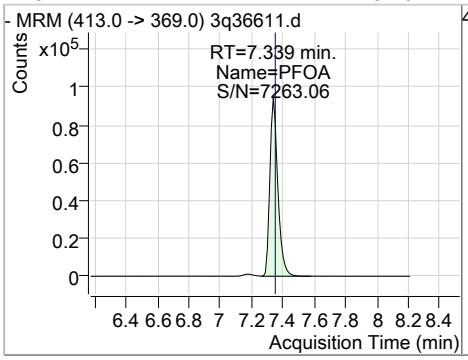
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	20.67	7.34	0.00	54080	449.0 -> 99.0	52.9	23.9	83.9

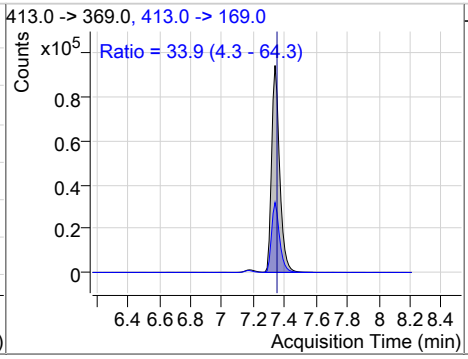


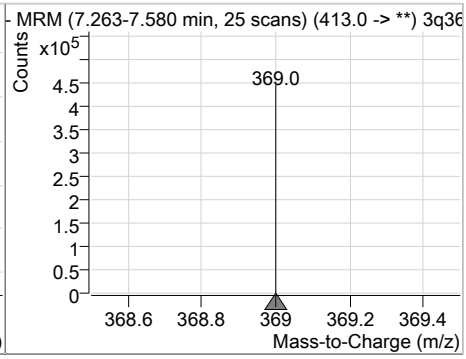




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.78	7.34	0.00	334885	413.0 -> 169.0	33.9	4.3	64.3

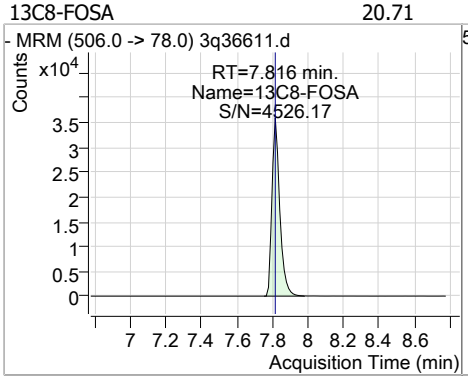


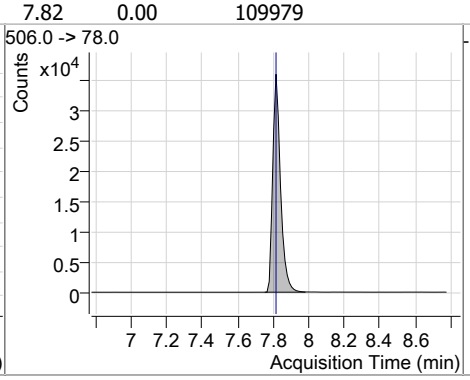


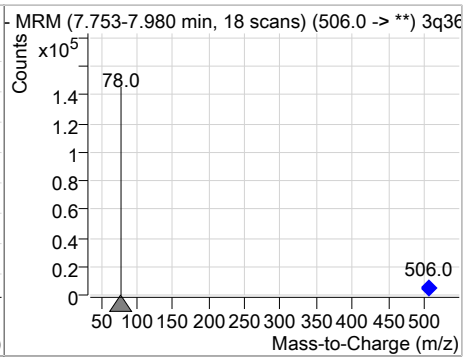


Perfluorinated Compounds by LC/MS/MS

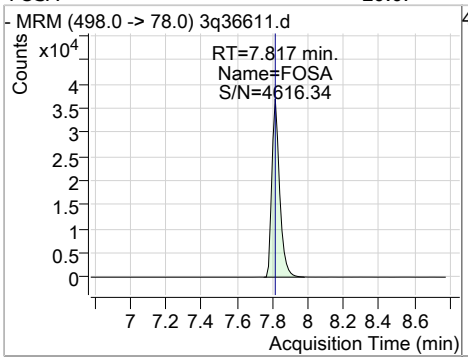
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.71	7.82	0.00	109979				

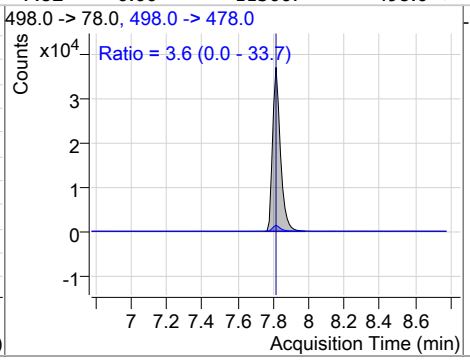


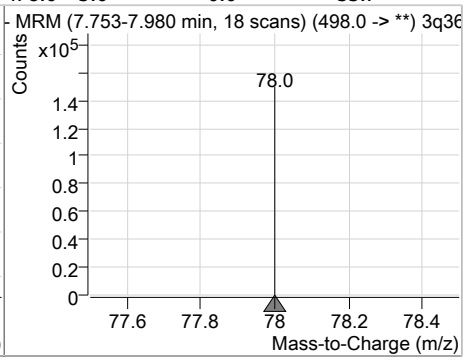




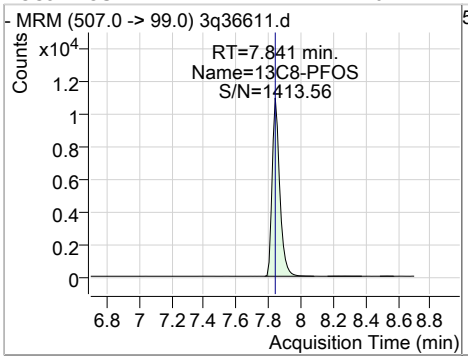
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	20.07	7.82	0.00	113067	498.0 -> 478.0	3.6	0.0	33.7

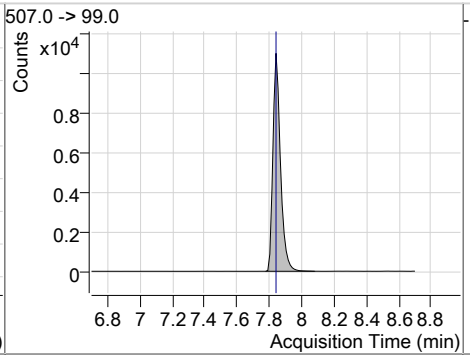


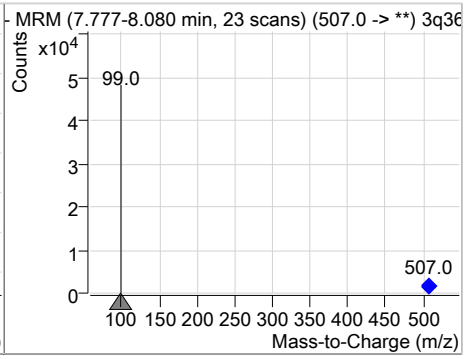




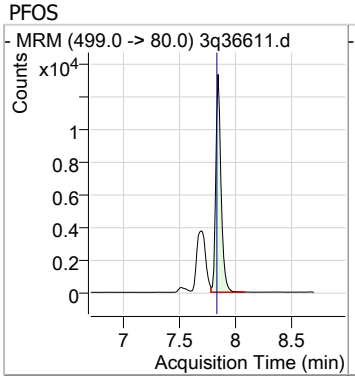
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.12	7.84	0.00	35536				

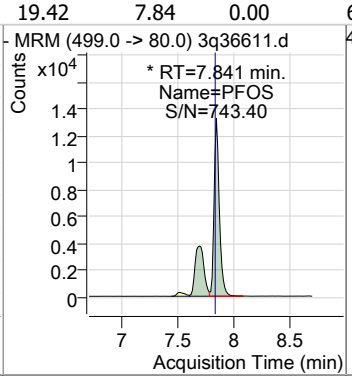


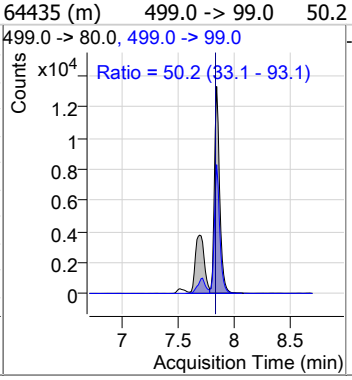


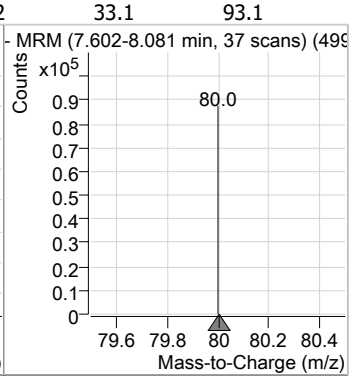


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.42	7.84	0.00	64435 (m)	499.0 -> 99.0	50.2	33.1	93.1



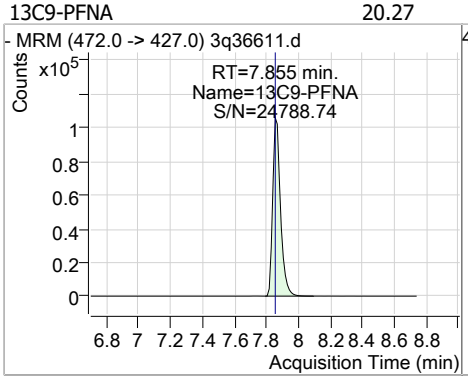


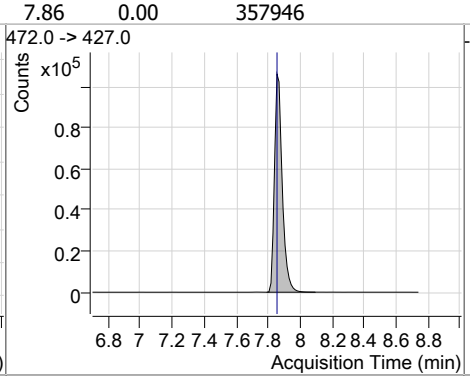


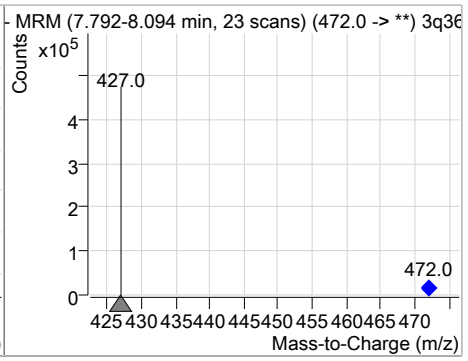


Perfluorinated Compounds by LC/MS/MS

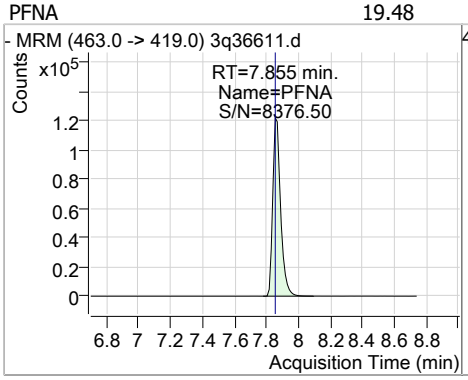
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.27	7.86	0.00	357946				

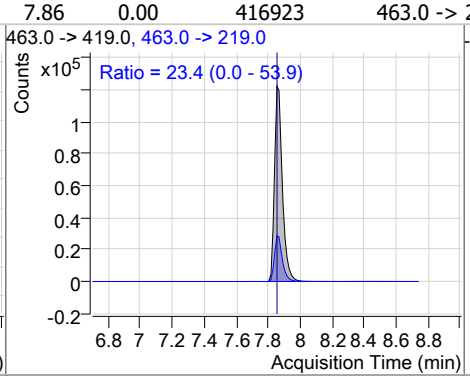


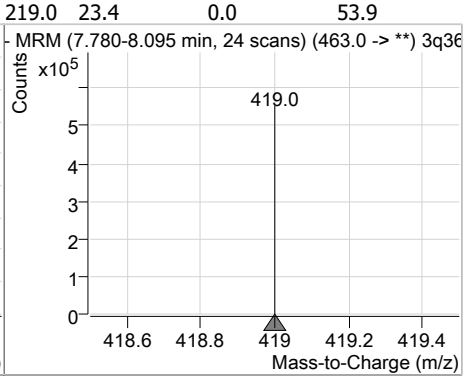




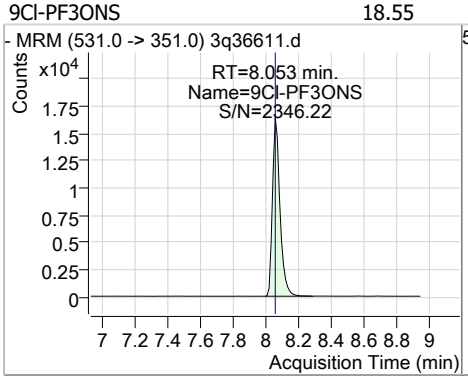
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.48	7.86	0.00	416923	463.0 -> 219.0	23.4	0.0	53.9

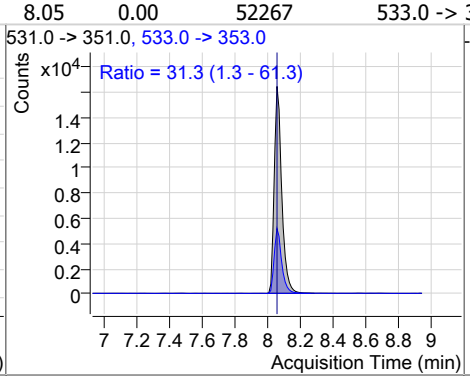


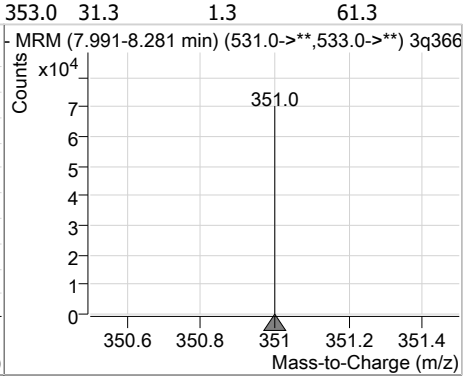




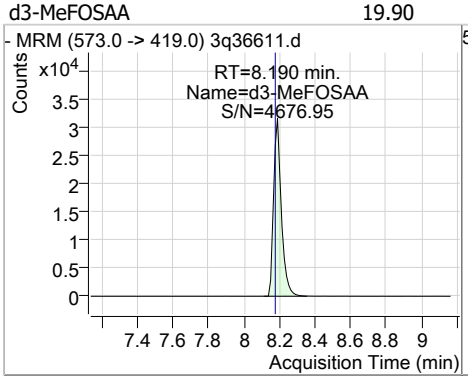
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	18.55	8.05	0.00	52267	533.0 -> 353.0	31.3	1.3	61.3

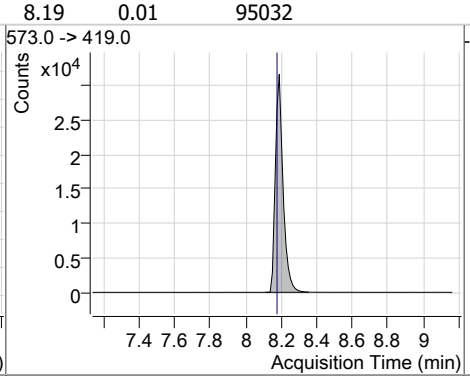


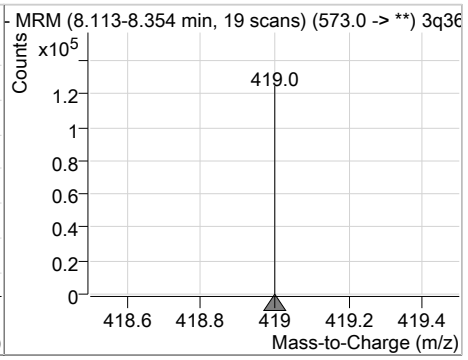




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.90	8.19	0.01	95032				

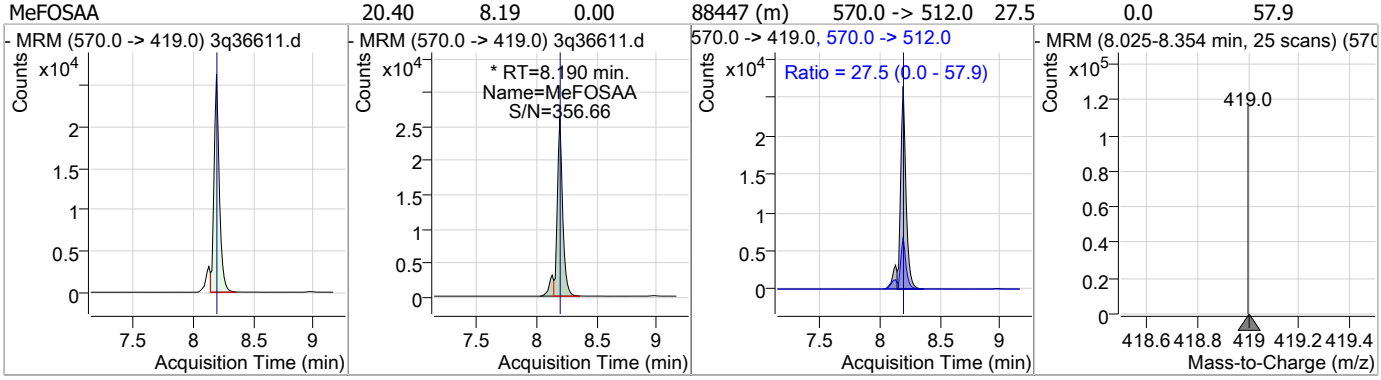




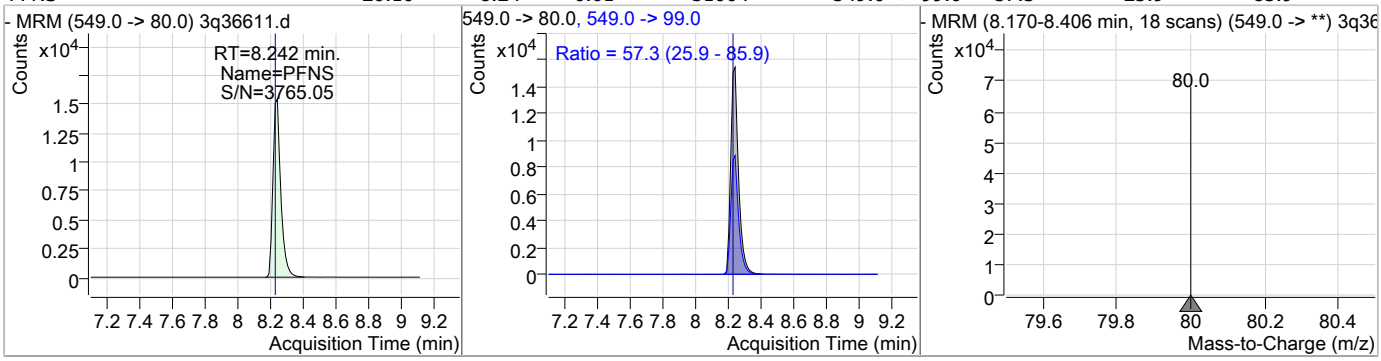


Perfluorinated Compounds by LC/MS/MS

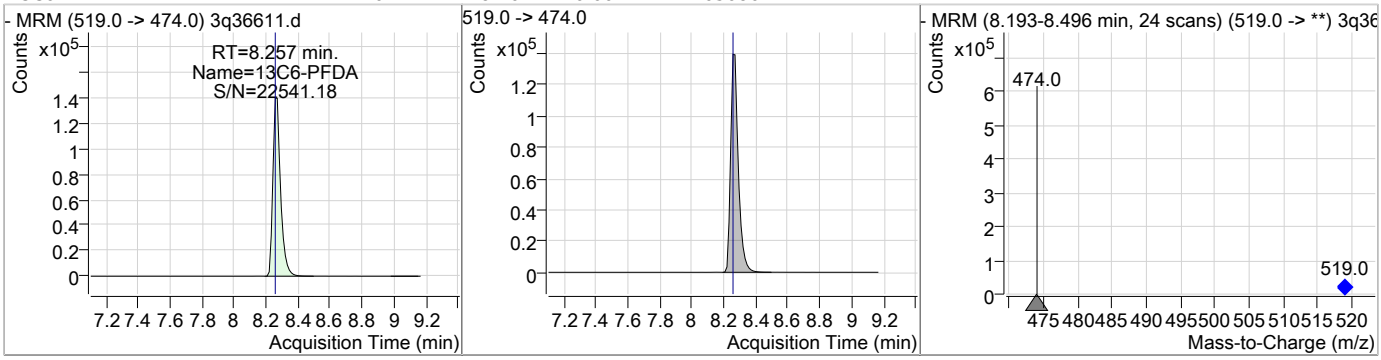
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	20.40	8.19	0.00	88447 (m)	570.0 -> 512.0	27.5	0.0	57.9



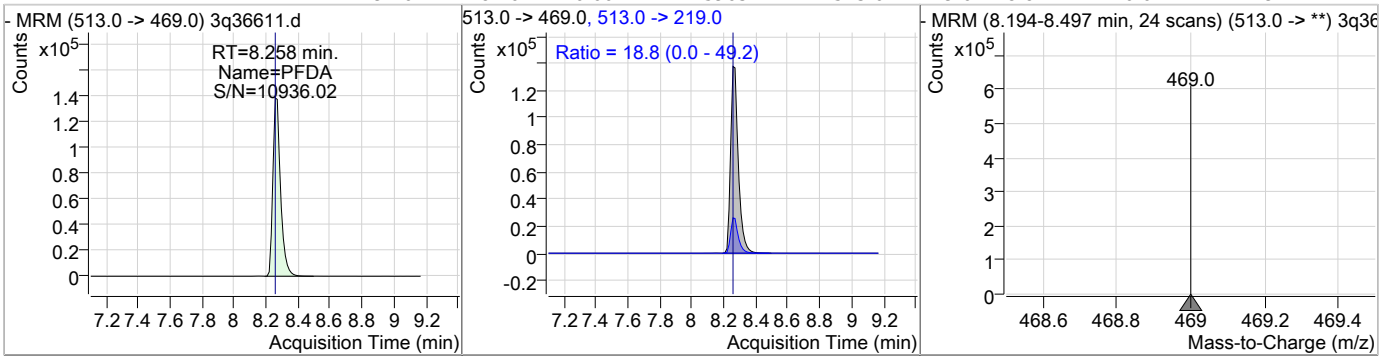
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	20.10	8.24	0.01	51004	549.0 -> 99.0	57.3	25.9	85.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.24	8.26	0.00	465086				

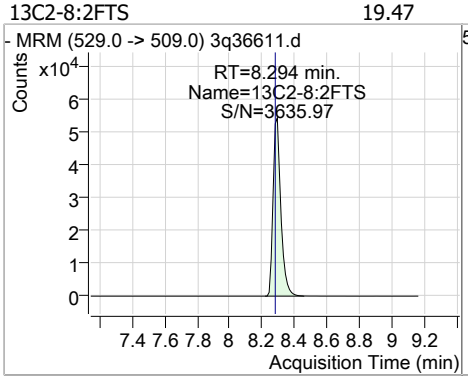


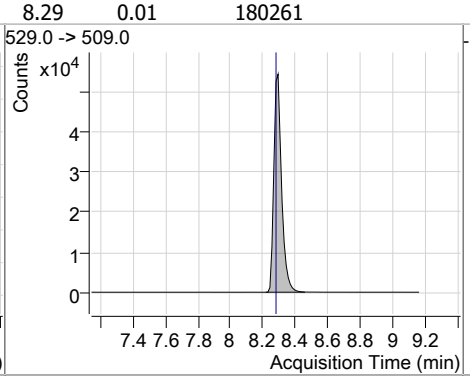
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.10	8.26	0.00	459634	513.0 -> 219.0	18.8	0.0	49.2

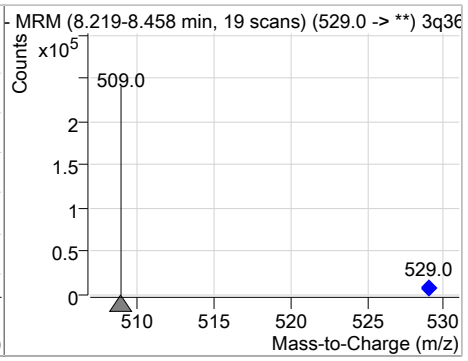


Perfluorinated Compounds by LC/MS/MS

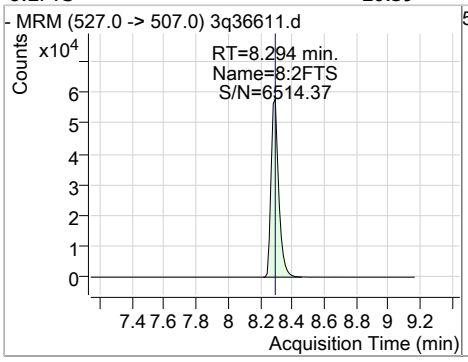
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.47	8.29	0.01	180261				

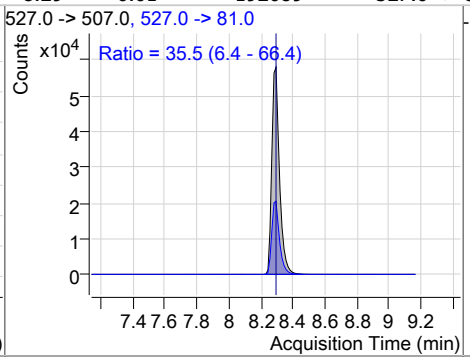


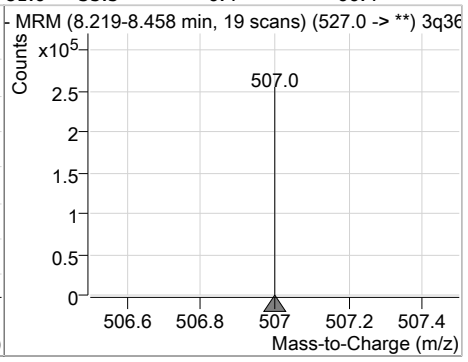




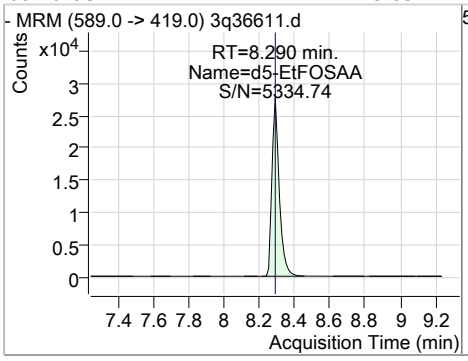
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.39	8.29	0.01	192089	527.0 -> 81.0	35.5	6.4	66.4

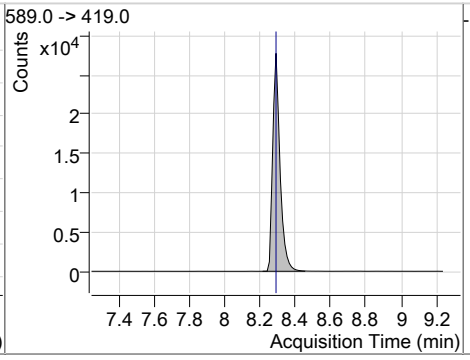


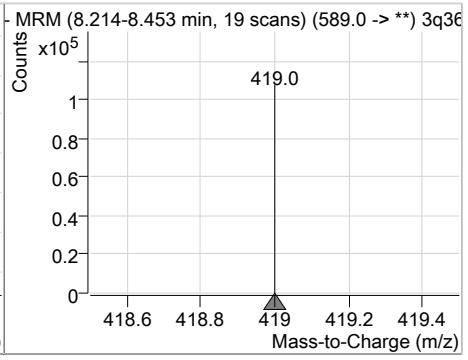




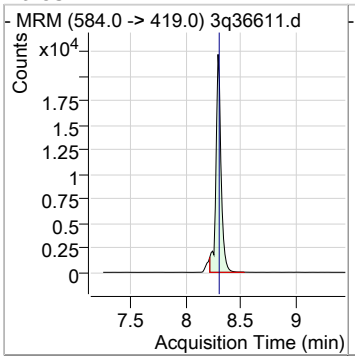
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.53	8.29	0.00	80338				

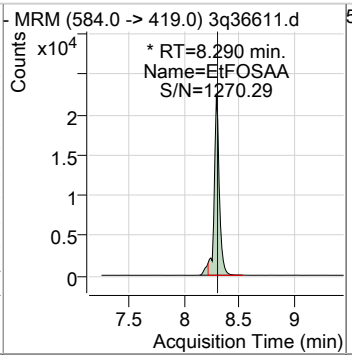


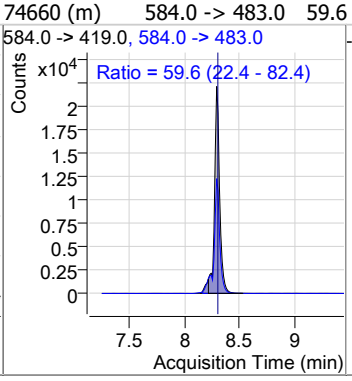


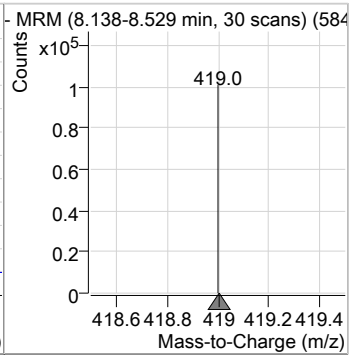


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	19.91	8.29	0.00	74660 (m)	584.0 -> 483.0	59.6	22.4	82.4



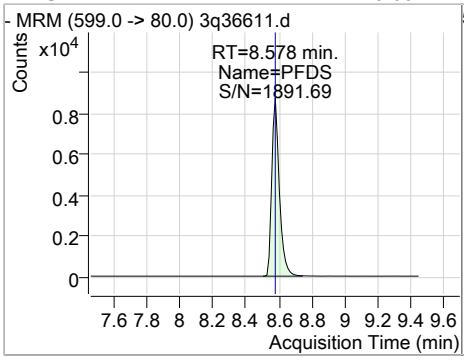


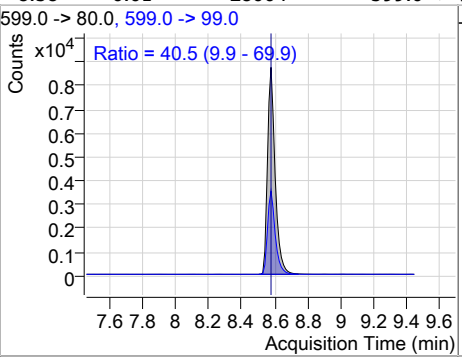


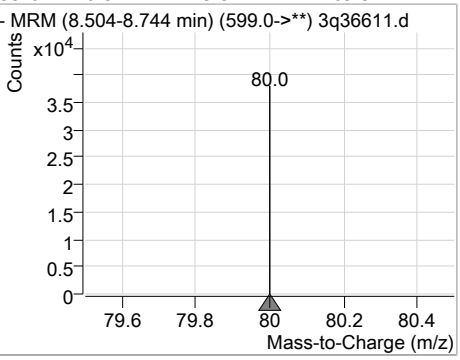


Perfluorinated Compounds by LC/MS/MS

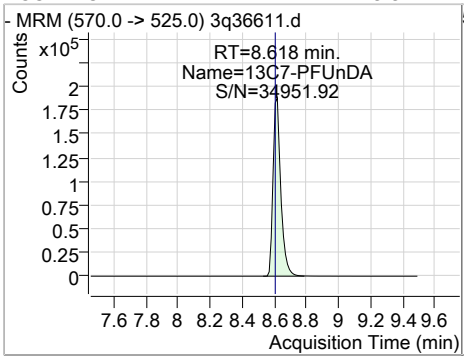
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	20.00	8.58	0.01	28004	599.0 -> 99.0	40.5	9.9	69.9

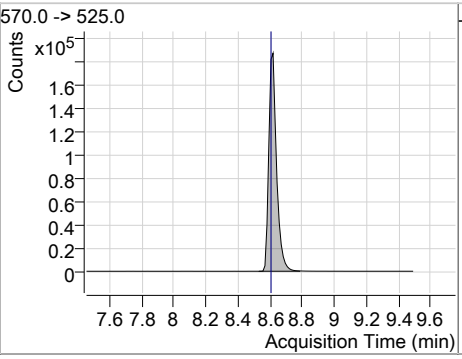


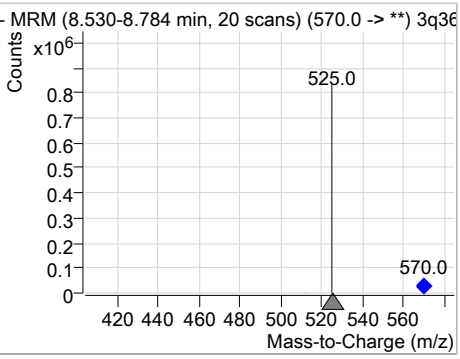




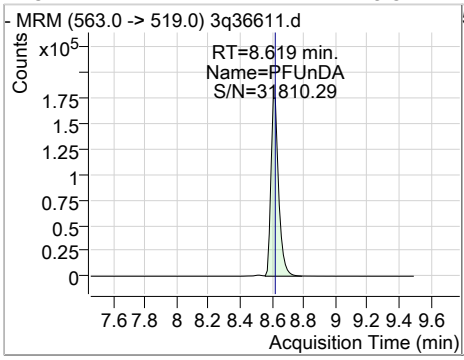
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.92	8.62	0.01	629837				

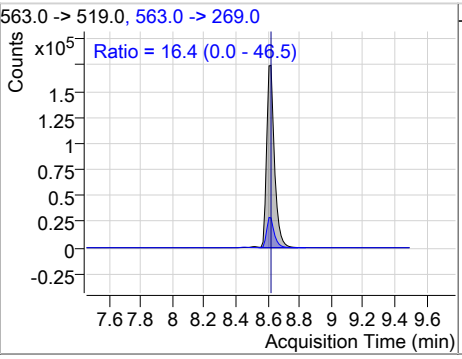


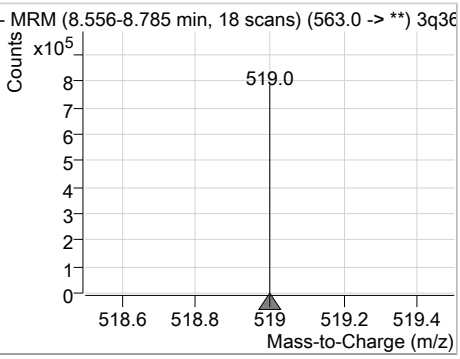




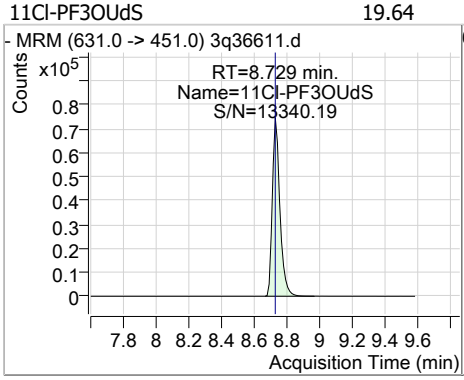
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	19.32	8.62	0.01	594473	563.0 -> 269.0	16.4	0.0	46.5

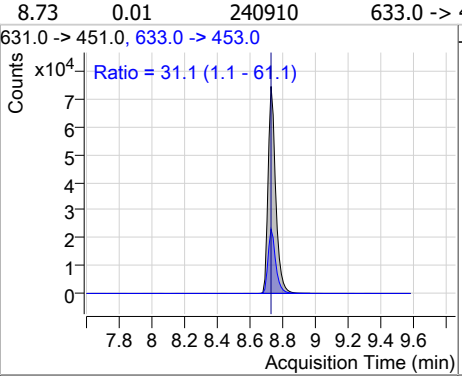


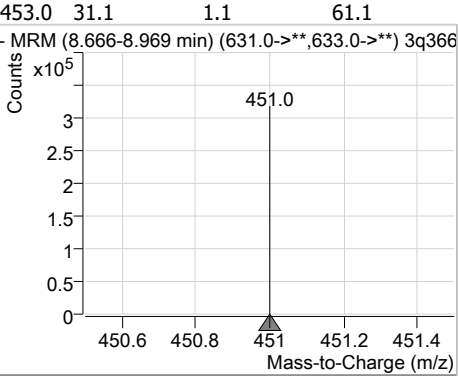




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	19.64	8.73	0.01	240910	633.0 -> 453.0	31.1	1.1	61.1

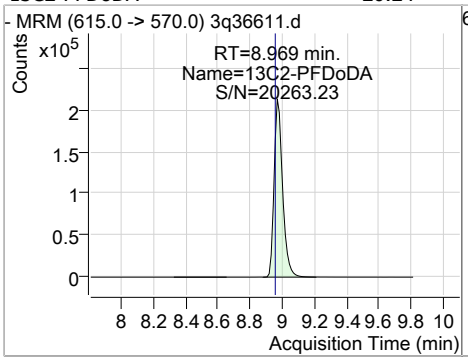


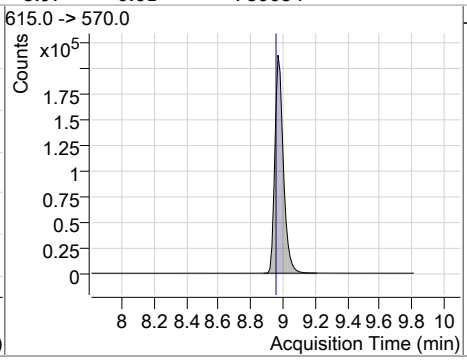


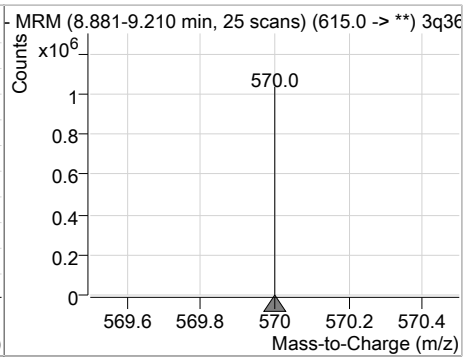


Perfluorinated Compounds by LC/MS/MS

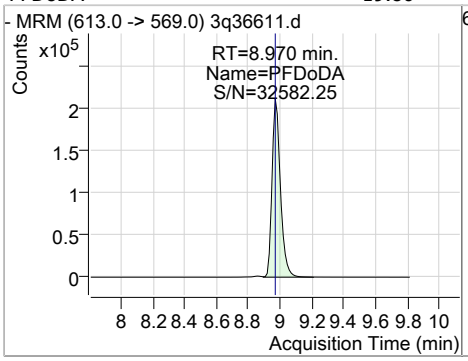
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.24	8.97	0.01	780684				

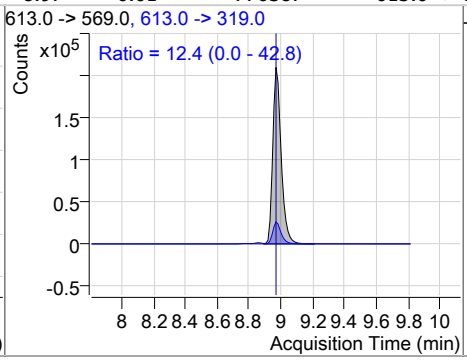


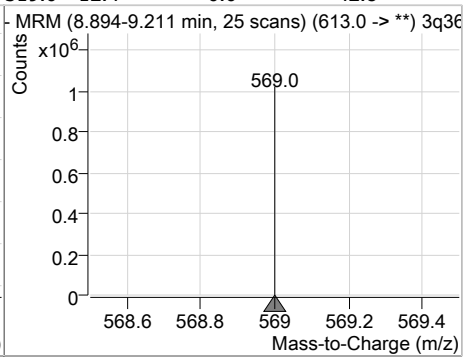




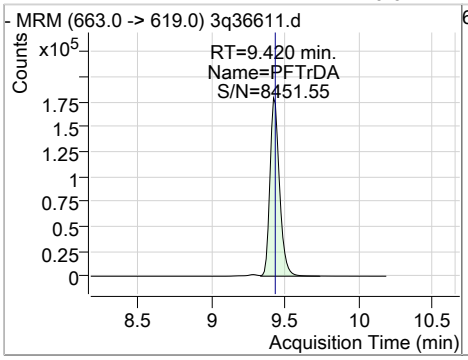
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	19.86	8.97	0.01	770387	613.0 -> 319.0	12.4	0.0	42.8

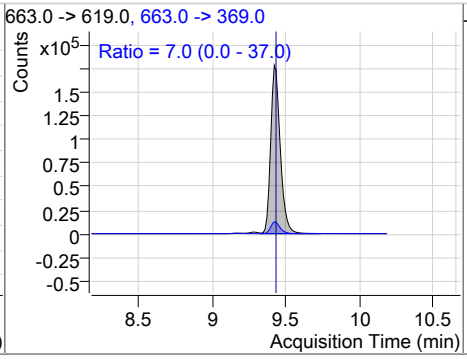


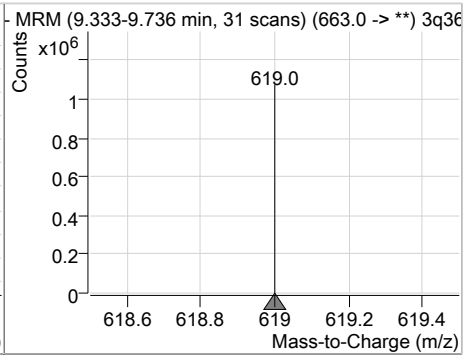




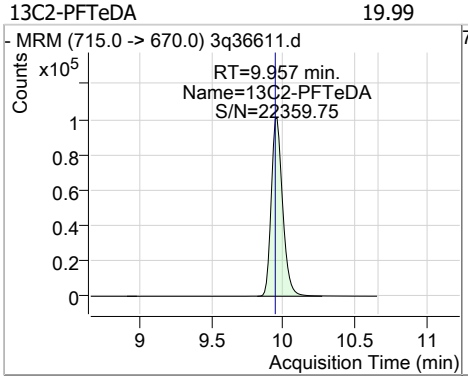
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	20.62	9.42	0.00	812802	663.0 -> 369.0	7.0	0.0	37.0

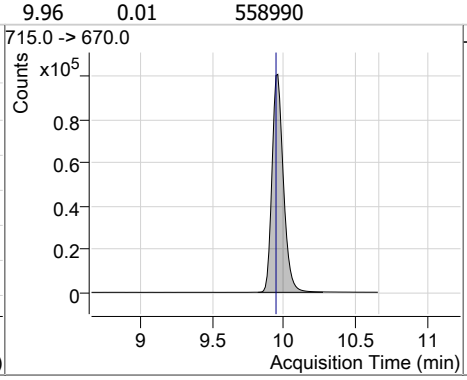


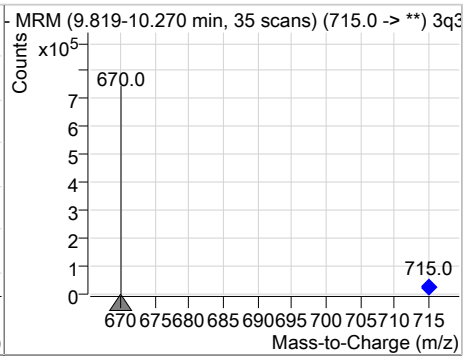




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.99	9.96	0.01	558990				

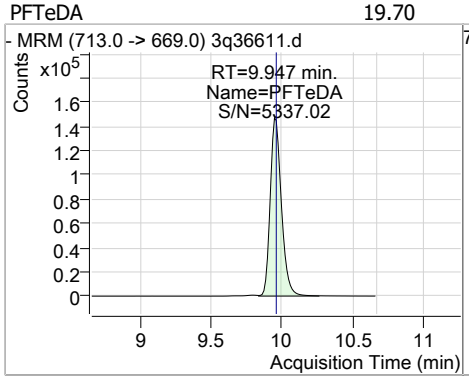


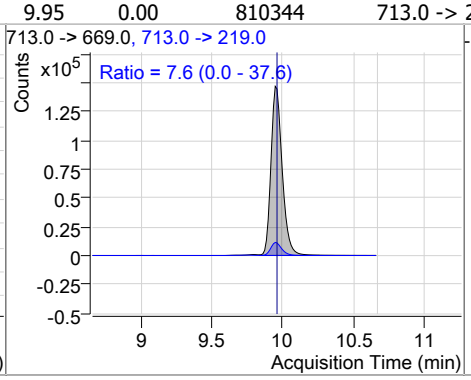


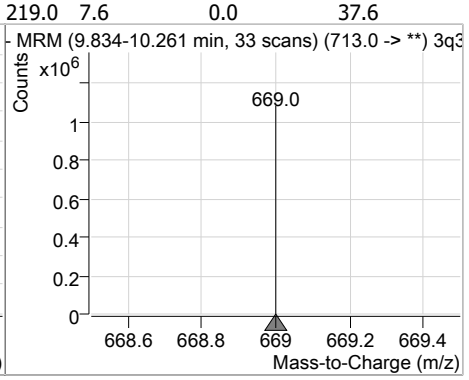


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	19.70	9.95	0.00	810344	713.0 -> 219.0	7.6	0.0	37.6







Manual Integration Approval Summary

Sample Number: S3Q538-CC537
Lab FileID: 3Q36611.D
Injection Time: 04/14/21 19:52
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/15/21 09:10 Martha Valls
Supervisor approved: 04/15/21 10:01 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.66	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.84	Split peak
MeFOSAA	2355-31-9		8.19	Split peak
EtFOSAA	2991-50-6		8.29	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/15/21 10:01

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36613.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/14/2021 8:25:52 PM
Sample Name : cc537-1.0LL
Vial : P1-A3
DA Method File : ID_041321_S3Q537.quantmethod.xml
Batch Name : s3q538.batch.bin
Sample Information : op84892,S3Q538,250,,,1,1,water

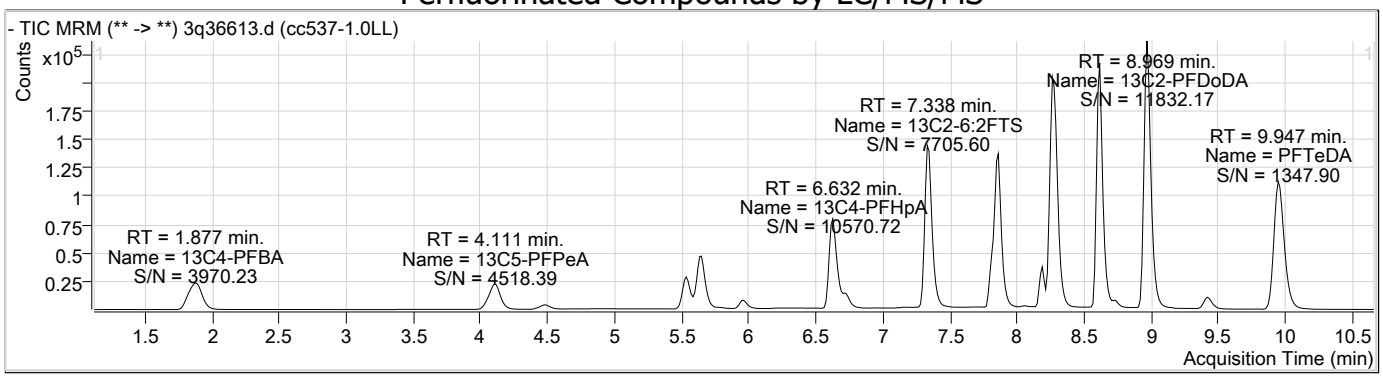
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.877	217.0 -> 172.0	166116	20.00	µg/L	0.038
M5-PFPeA	4.111	268.0 -> 223.0	125211	20.00	µg/L	0.038
M5-PFHxA	5.655	318.0 -> 273.0	192938	20.00	µg/L	0.025
M4-PFHpA	6.632	367.0 -> 322.0	276404	20.00	µg/L	0.025
M8-PFOA	7.351	421.0 -> 376.0	326659	20.00	µg/L	0.025
M9-PFNA	7.868	472.0 -> 427.0	367366	20.00	µg/L	0.013
M6-PFDA	8.270	519.0 -> 474.0	487045	20.00	µg/L	0.013
M7-PFUnDA	8.618	570.0 -> 525.0	659760	20.00	µg/L	0.013
M2-PFDoDA	8.969	615.0 -> 570.0	799241	20.00	µg/L	0.013
M2-PFTeDA	9.944	715.0 -> 670.0	566260	20.00	µg/L	0.000
M8-FOSA	7.816	506.0 -> 78.0	119494	20.00	µg/L	0.000
M3-PFBS	4.484	302.0 -> 99.0	17336	20.00	µg/L	0.038
M3-PFHxS	6.667	402.0 -> 99.0	24278	20.00	µg/L	0.013
M8-PFOS	7.841	507.0 -> 99.0	37146	20.00	µg/L	0.000
M2-4:2FTS	5.539	329.0 -> 309.0	112747	20.00	µg/L	0.027
M2-6:2FTS	7.338	429.0 -> 409.0	169803	20.00	µg/L	0.025
M2-8:2FTS	8.294	529.0 -> 509.0	178932	20.00	µg/L	0.013
M3-MeFOSAA	8.190	573.0 -> 419.0	100061	20.00	µg/L	0.013
M3-HFPO-DA	5.971	287.0 -> 169.0	24821	20.00	µg/L	0.025
M5-EtFOSAA	8.290	589.0 -> 419.0	84321	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.539	329.0 -> 309.0	112747	19.70	µg/L	0.027
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.5%		
13C2-6:2FTS	7.338	429.0 -> 409.0	169803	20.08	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.4%		
13C2-8:2FTS	8.294	529.0 -> 509.0	178932	19.33	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.6%		
13C2-PFDoDA	8.969	615.0 -> 570.0	799241	20.72	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.6%		
13C2-PFTeDA	9.944	715.0 -> 670.0	566260	20.25	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%		
13C3-PFBS	4.484	302.0 -> 99.0	17336	21.50	µg/L	0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.5%		
13C3-PFHxS	6.667	402.0 -> 99.0	24278	21.32	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.6%		
13C4-PFBA	1.877	217.0 -> 172.0	166116	21.20	µg/L	0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.0%		
13C4-PFHpA	6.632	367.0 -> 322.0	276404	21.32	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.6%		
13C5-PFHxA	5.655	318.0 -> 273.0	192938	21.08	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.4%		
13C5-PFPeA	4.111	268.0 -> 223.0	125211	21.33	µg/L	0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.6%		
13C6-PFDA	8.270	519.0 -> 474.0	487045	21.20	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.0%		

Perfluorinated Compounds by LC/MS/MS

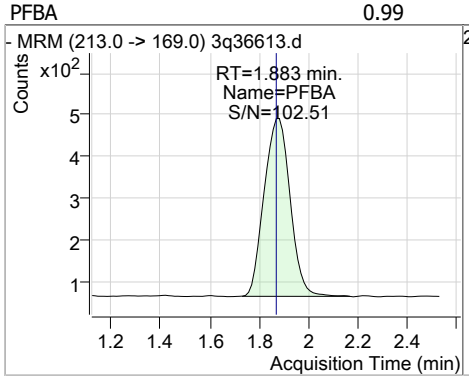
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.618	570.0 -> 525.0	659760	20.87	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.4%			
13C8-FOSA	7.816	506.0 -> 78.0	119494	22.50	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 112.5%			
13C8-PFOA	7.351	421.0 -> 376.0	326659	21.46	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.3%			
13C8-PFOS	7.841	507.0 -> 99.0	37146	21.03	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.2%			
13C9-PFNA	7.868	472.0 -> 427.0	367366	20.81	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.0%			
d3-MeFOSAA	8.190	573.0 -> 419.0	100061	20.96	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.8%			
13C3-HFPO-DA	5.971	287.0 -> 169.0	24817	20.46	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.3%			
d5-EtFOSAA	8.290	589.0 -> 419.0	84274	20.49	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.4%			
Target Compounds							**QValue**
4:2FTS	5.540	327.0 -> 307.0	6304	1.03	µg/L		93
6:2FTS	7.338	427.0 -> 407.0	9483	1.04	µg/L		96
8:2FTS	8.294	527.0 -> 507.0	10012	1.07	µg/L		98
EtFOSAA	8.290	584.0 -> 419.0	4007	1.02	µg/L	m	87
FOSA	7.817	498.0 -> 78.0	5853	0.96	µg/L		99
MeFOSAA	8.190	570.0 -> 419.0	4656	1.02	µg/L	m	98
PFBA	1.883	213.0 -> 169.0	3150	0.99	µg/L		100
PFBS	4.486	299.0 -> 80.0	2653	1.00	µg/L		98
PFDA	8.270	513.0 -> 469.0	23497	0.93	µg/L		99
PFDoDA	8.970	613.0 -> 569.0	38970	0.98	µg/L		99
PFDS	8.578	599.0 -> 80.0	1468	1.00	µg/L		99
PFHpA	6.633	363.0 -> 319.0	24471	0.98	µg/L		100
PFHpS	7.350	449.0 -> 80.0	2863	1.05	µg/L		94
PFHxA	5.656	313.0 -> 269.0	6693	0.99	µg/L		100
PFHxS	6.668	399.0 -> 80.0	2624	0.95	µg/L	m	98
PFNA	7.868	463.0 -> 419.0	21541	0.98	µg/L		99
PFNS	8.242	549.0 -> 80.0	2575	0.97	µg/L		99
PFOA	7.351	413.0 -> 369.0	17392	0.98	µg/L		100
PFOS	7.841	499.0 -> 80.0	3355	0.97	µg/L	m	83
PFPeA	4.114	263.0 -> 219.0	11893	1.00	µg/L		100
PFPeS	5.789	349.0 -> 80.0	2100	1.02	µg/L		99
PFTeDA	9.947	713.0 -> 669.0	42067	1.01	µg/L		99
PFTrDA	9.420	663.0 -> 619.0	41463	1.04	µg/L		100
PFUnDA	8.619	563.0 -> 519.0	31279	0.97	µg/L		100
11Cl-PF3OUdS	8.729	631.0 -> 451.0	11960	0.95	µg/L		100
9Cl-PF3ONS	8.065	531.0 -> 351.0	2496	0.85	µg/L		97
ADONA	6.734	377.0 -> 251.0	30595	0.96	µg/L		99
HFPO-DA	5.966	329.0 -> 169.0	4334	0.96	µg/L		97

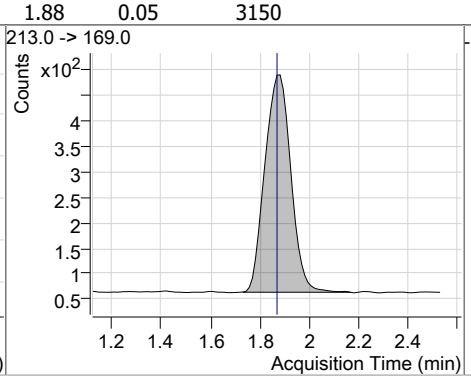
 # = Qualifier out of range, m = manually integrated, + = Area summed

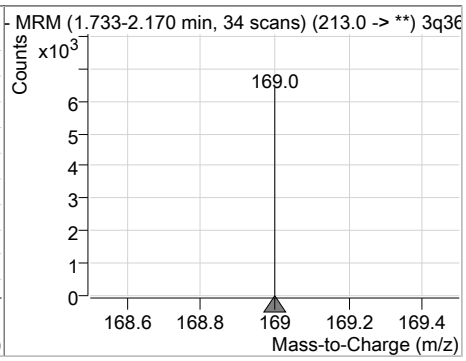
Perfluorinated Compounds by LC/MS/MS



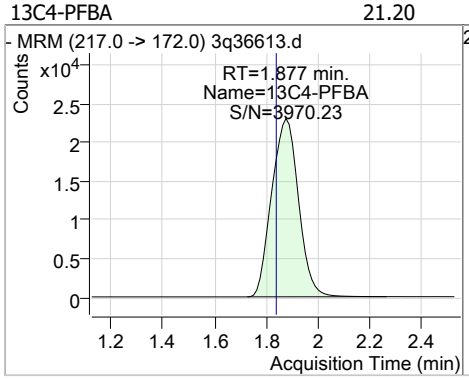
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.99	1.88	0.05	3150				

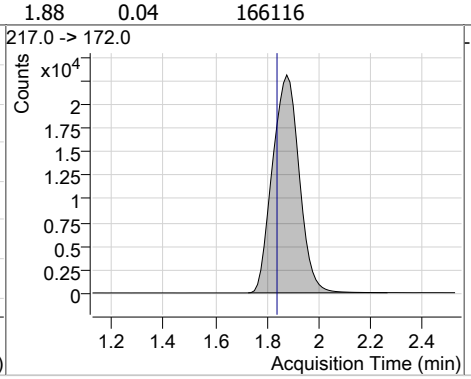


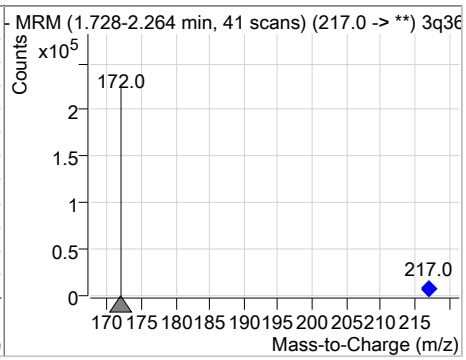




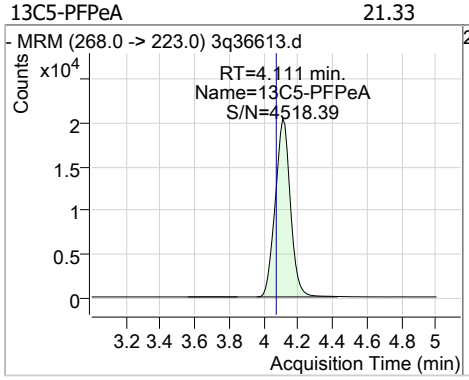
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13C4-PFBA	21.20	1.88	0.04	166116				

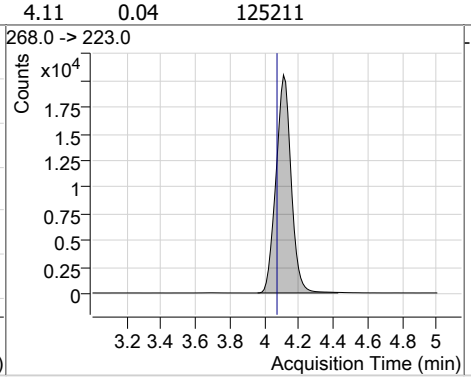


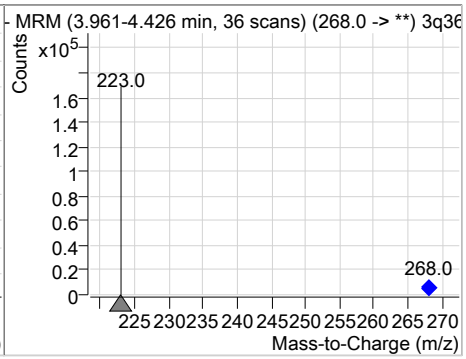




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	21.33	4.11	0.04	125211				

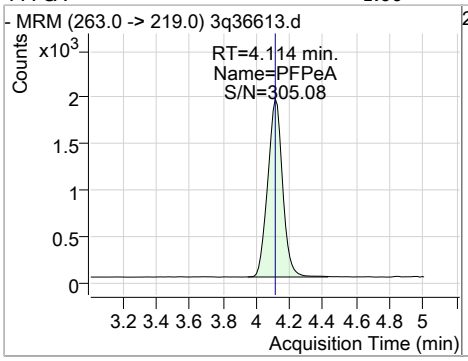


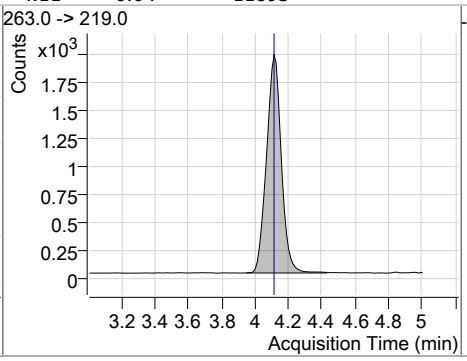


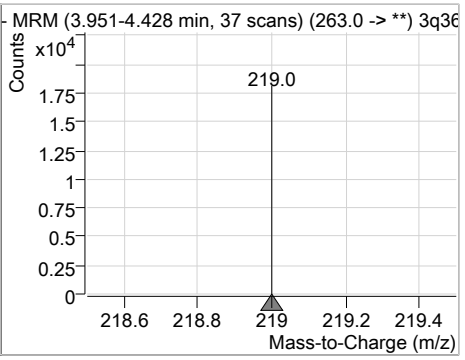


Perfluorinated Compounds by LC/MS/MS

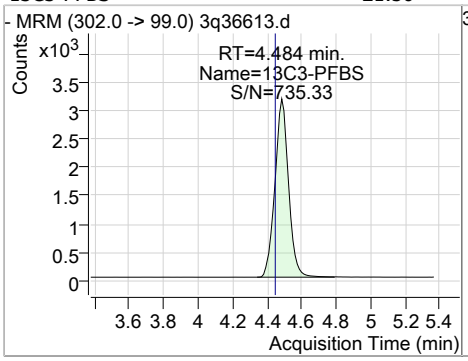
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	1.00	4.11	0.04	11893				

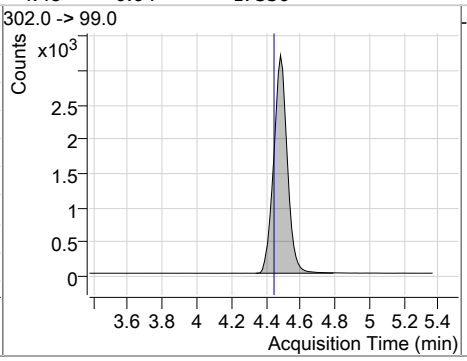


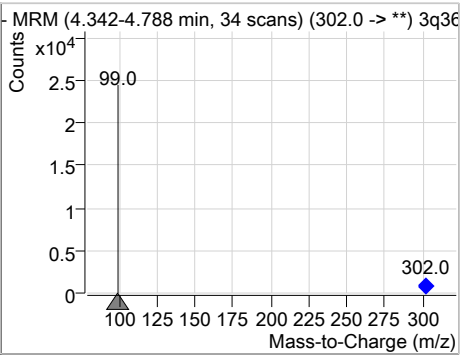




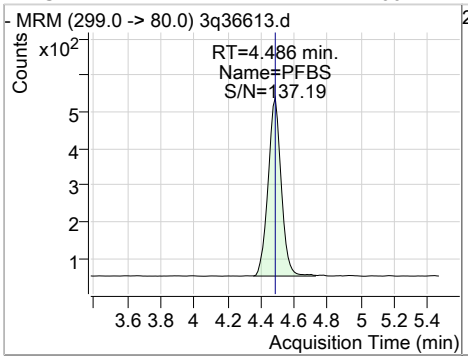
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	21.50	4.48	0.04	17336				

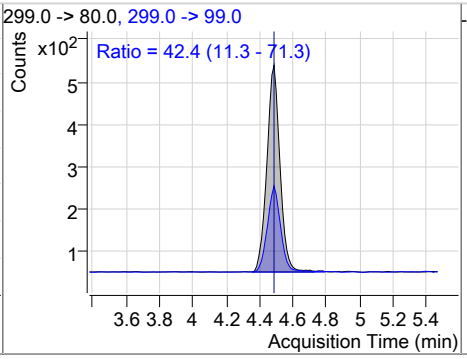


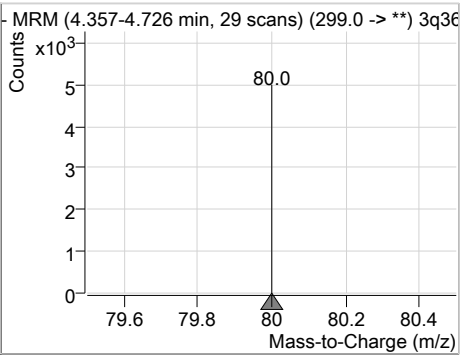




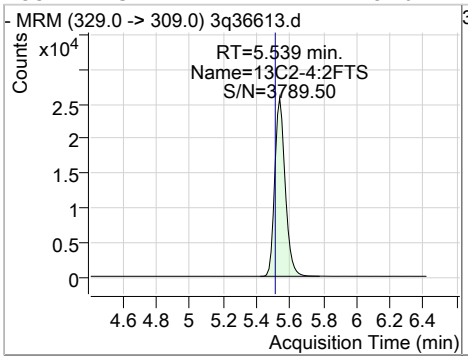
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	1.00	4.49	0.04	2653	299.0 -> 99.0	42.4	11.3	71.3

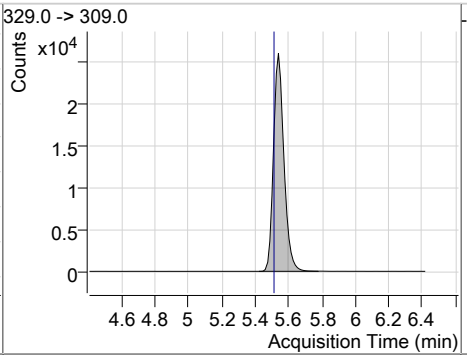


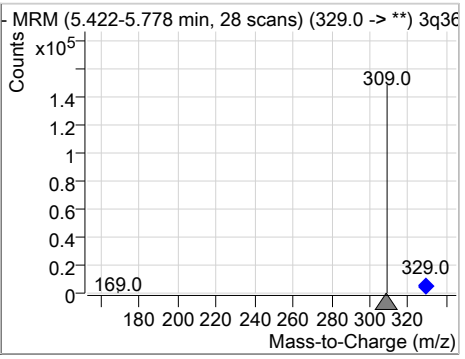




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.70	5.54	0.03	112747				

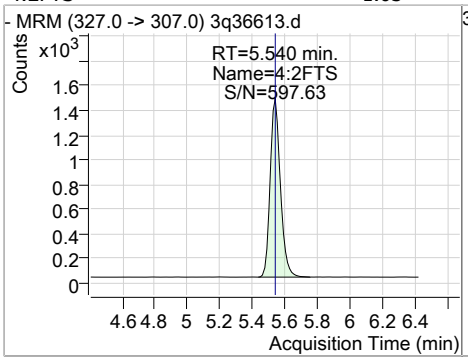


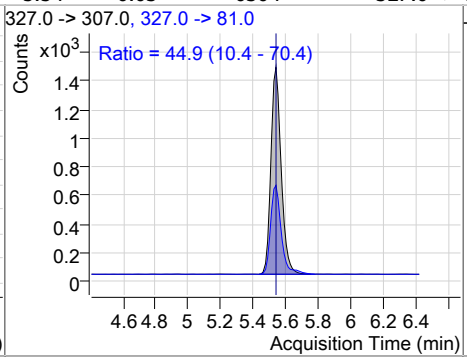


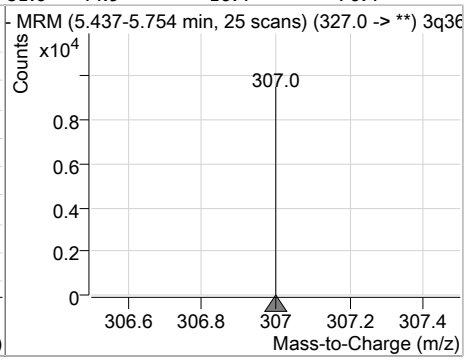


Perfluorinated Compounds by LC/MS/MS

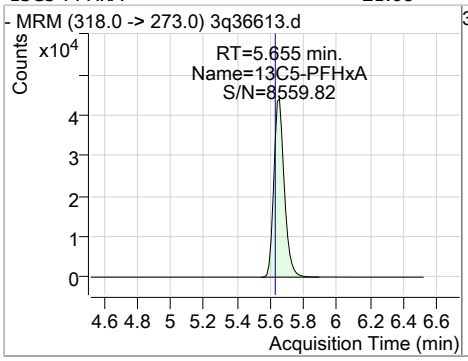
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	1.03	5.54	0.03	6304	327.0 -> 81.0	44.9	10.4	70.4

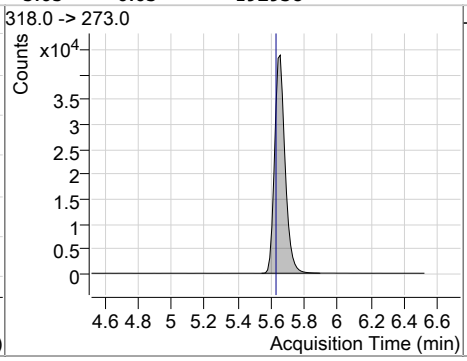


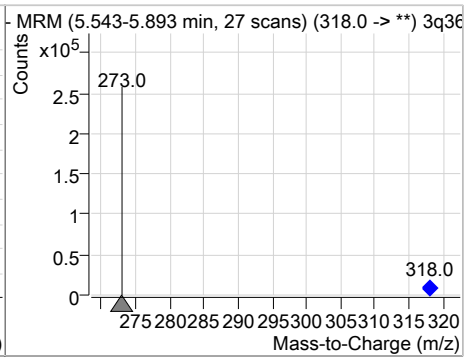




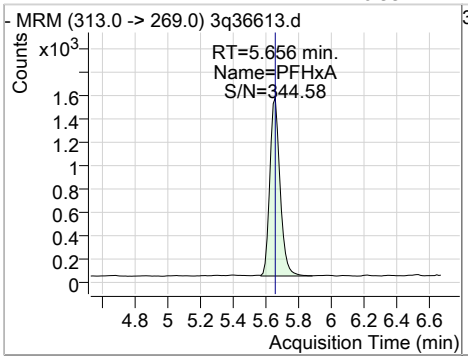
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	21.08	5.65	0.03	192938				

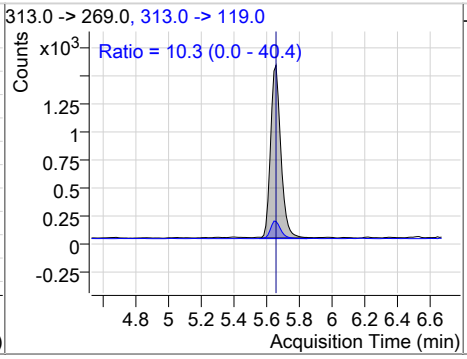


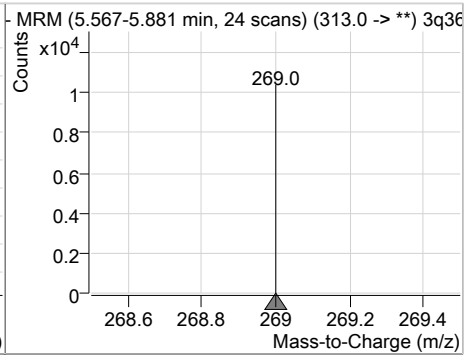




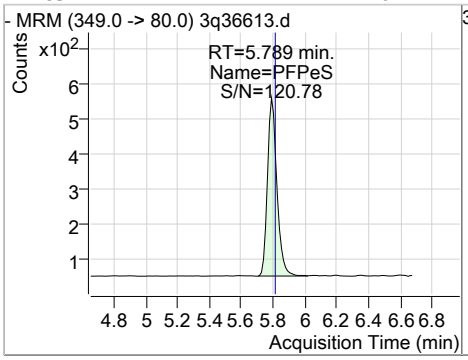
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.99	5.66	0.03	6693	313.0 -> 119.0	10.3	0.0	40.4

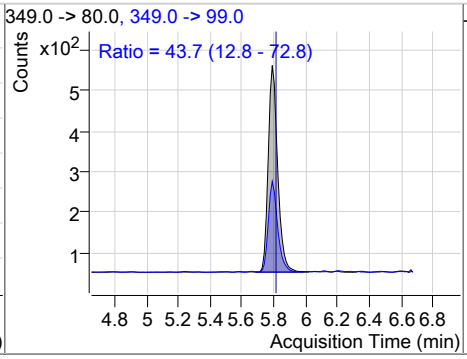


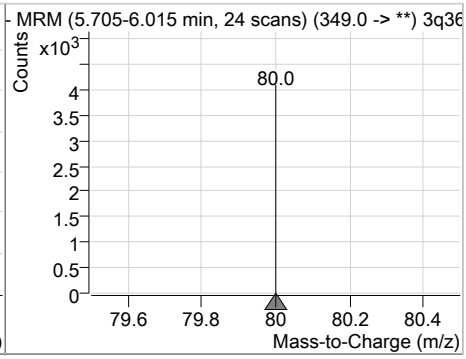




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	1.02	5.79	0.03	2100	349.0 -> 99.0	43.7	12.8	72.8

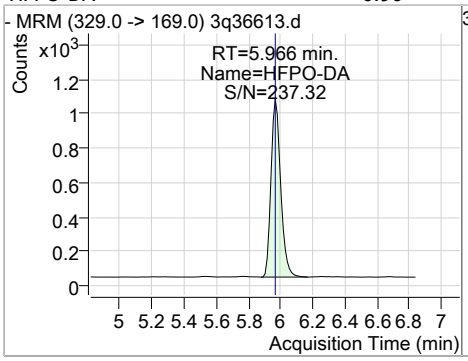


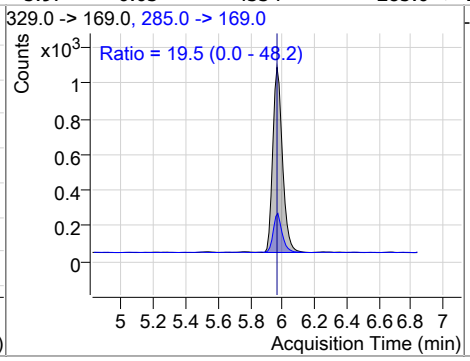


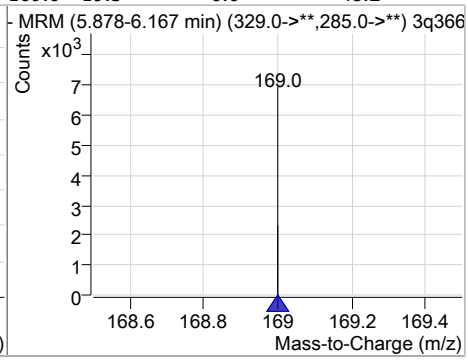


Perfluorinated Compounds by LC/MS/MS

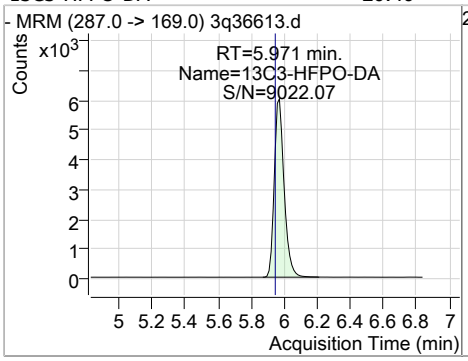
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.96	5.97	0.03	4334	285.0 -> 169.0	19.5	0.0	48.2

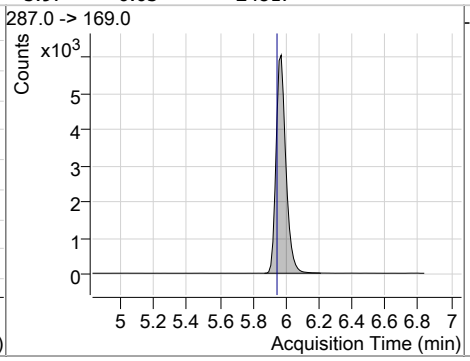


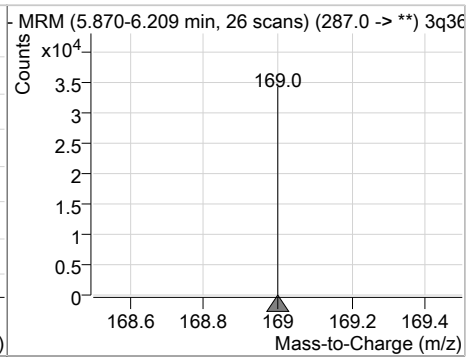




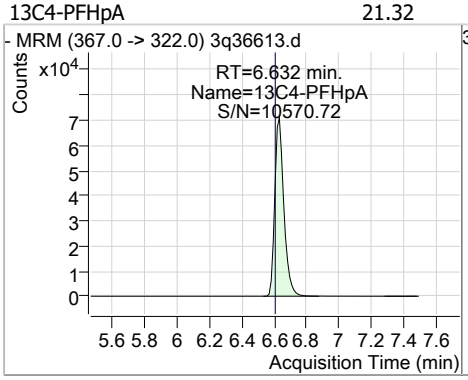
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.46	5.97	0.03	24817				

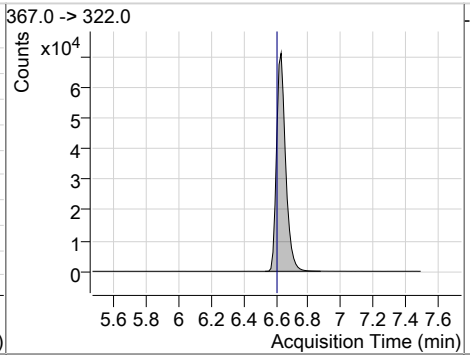


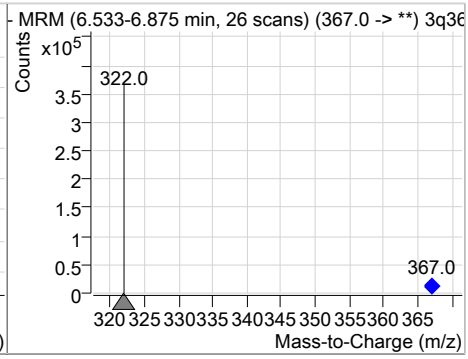




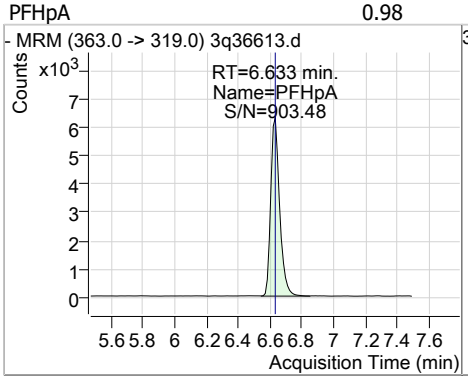
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	21.32	6.63	0.03	276404				

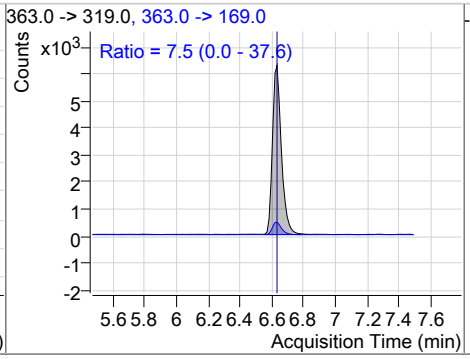


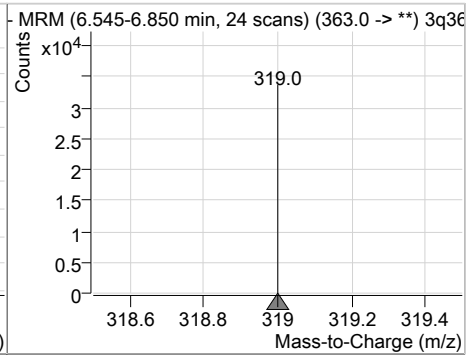




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.98	6.63	0.03	24471	363.0 -> 169.0	7.5	0.0	37.6

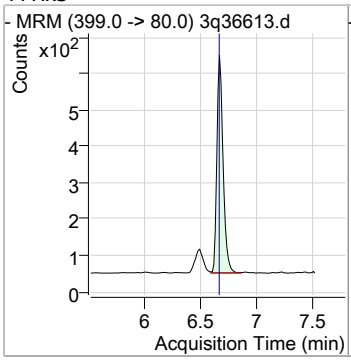


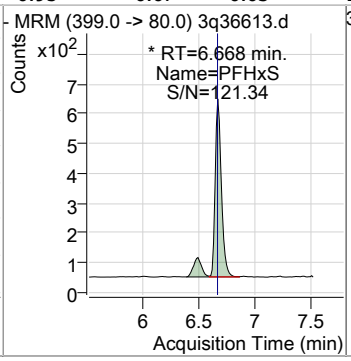


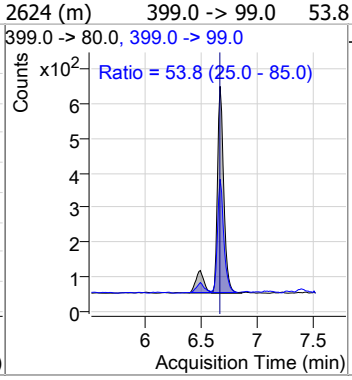


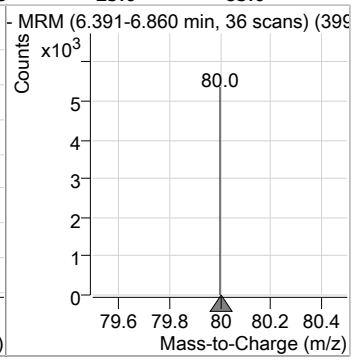
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.95	6.67	0.03	2624 (m)	399.0 -> 99.0	53.8	25.0	85.0

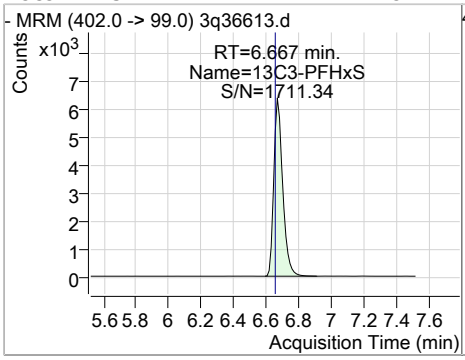


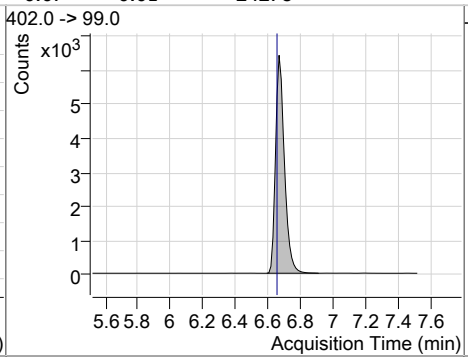


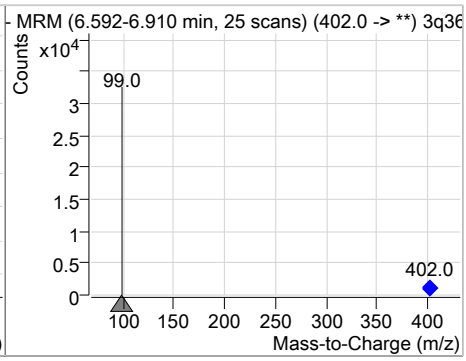




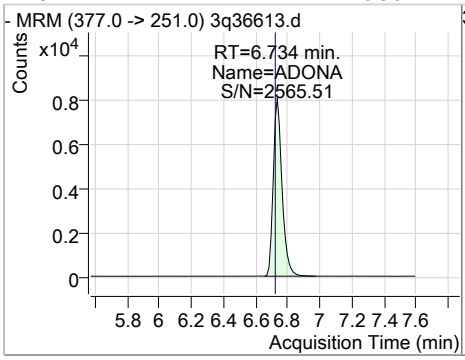
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	21.32	6.67	0.01	24278				

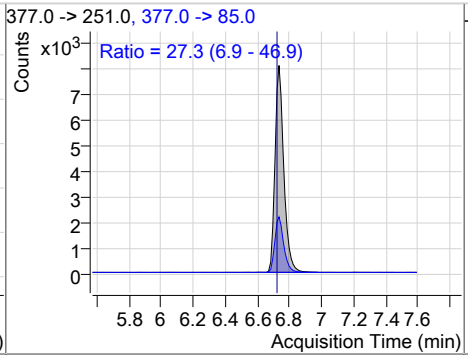


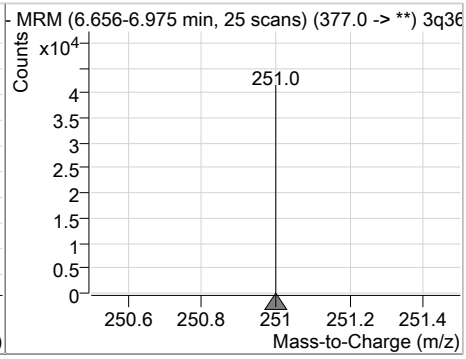




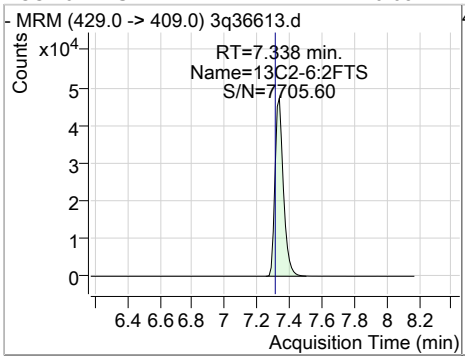
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.96	6.73	0.03	30595	377.0 -> 85.0	27.3	6.9	46.9

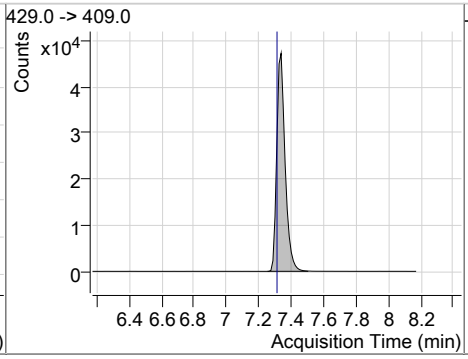


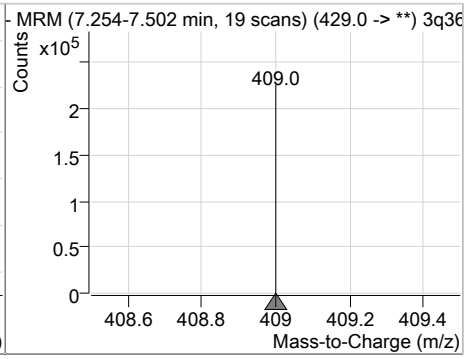




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.08	7.34	0.03	169803				



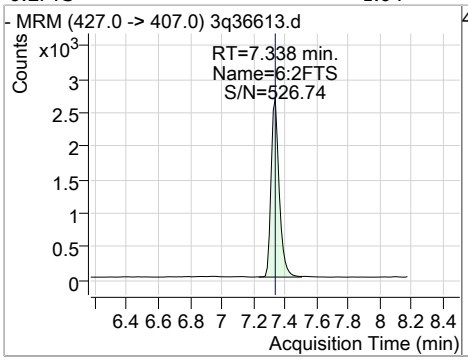


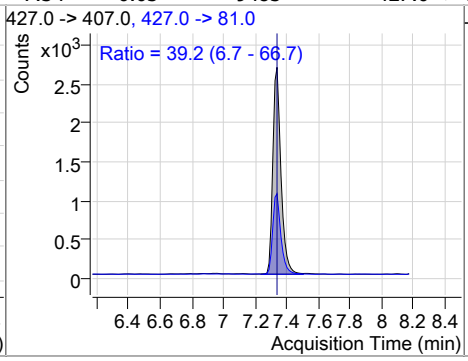


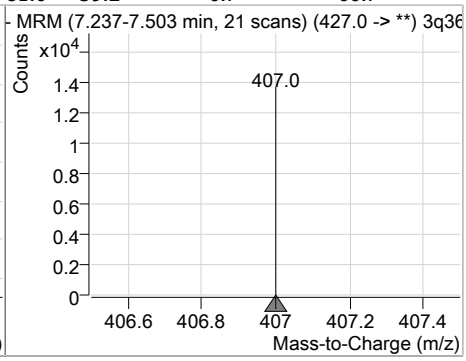
11.6.27 11

Perfluorinated Compounds by LC/MS/MS

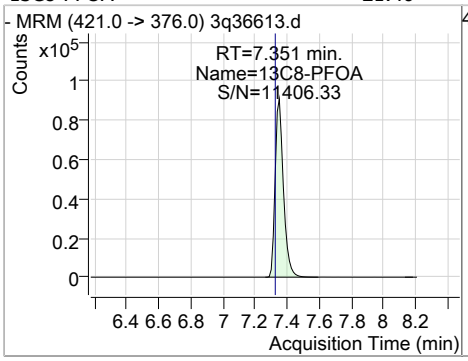
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	1.04	7.34	0.03	9483	427.0 -> 81.0	39.2	6.7	66.7

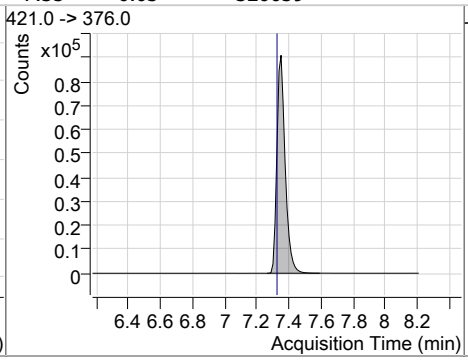


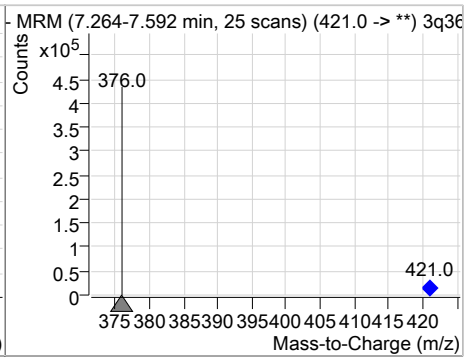




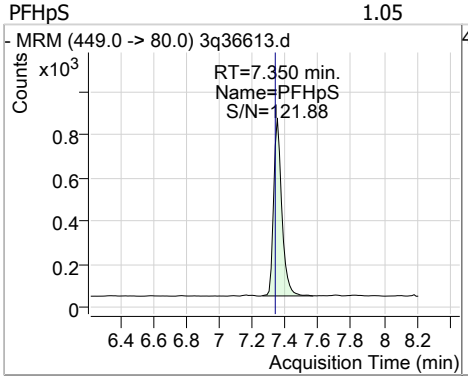
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	21.46	7.35	0.03	326659				

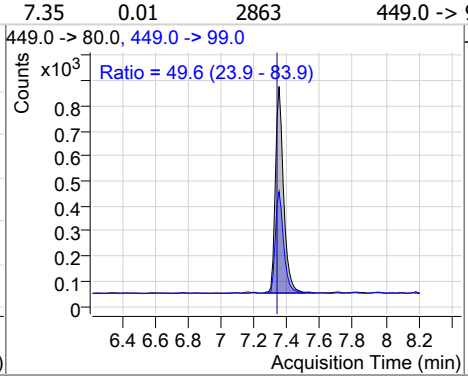


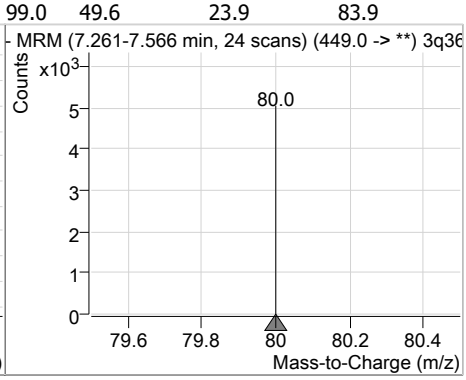




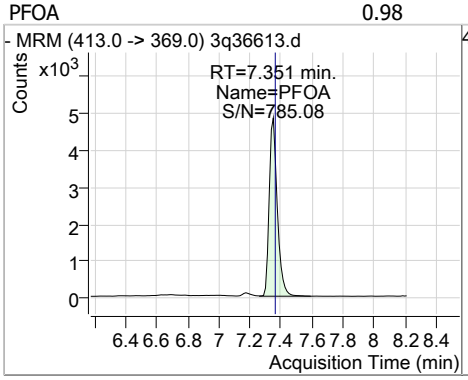
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	1.05	7.35	0.01	2863	449.0 -> 99.0	49.6	23.9	83.9

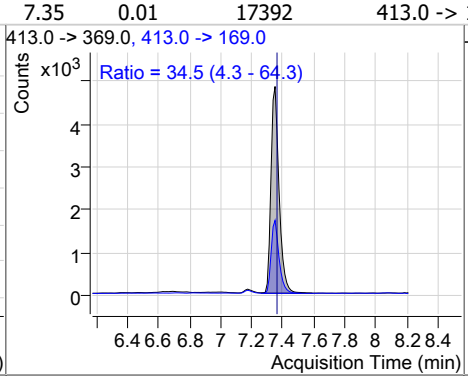


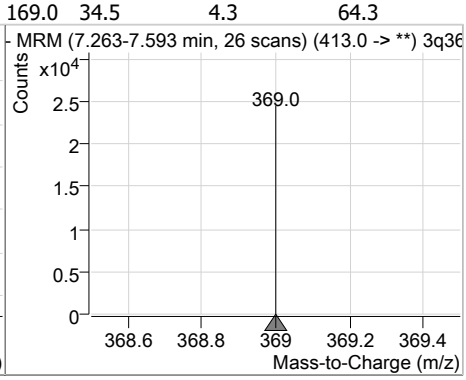




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.98	7.35	0.01	17392	413.0 -> 169.0	34.5	4.3	64.3



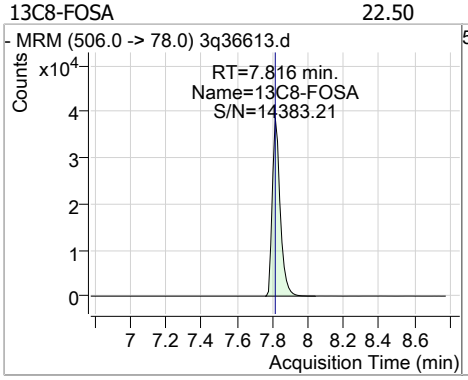


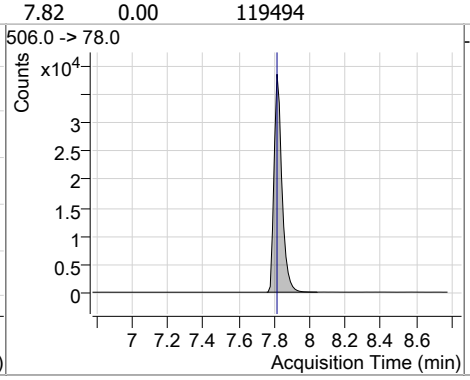


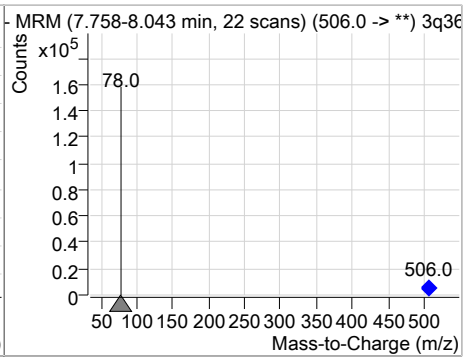
11.6.27 11

Perfluorinated Compounds by LC/MS/MS

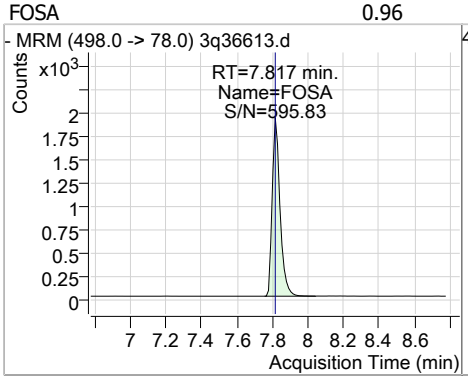
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	22.50	7.82	0.00	119494				

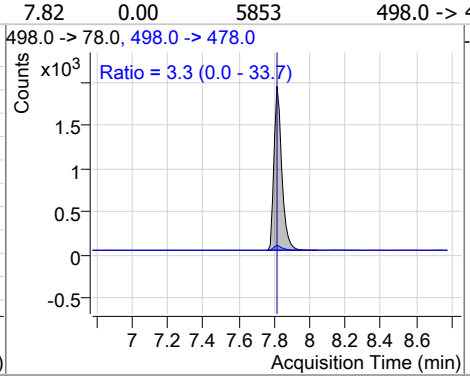


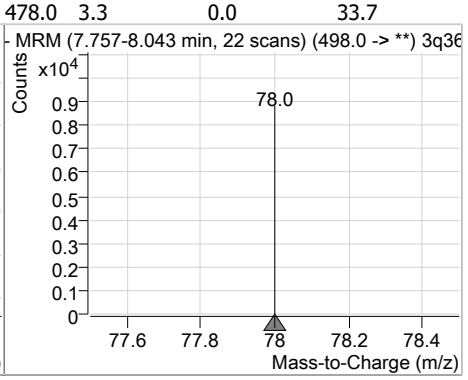




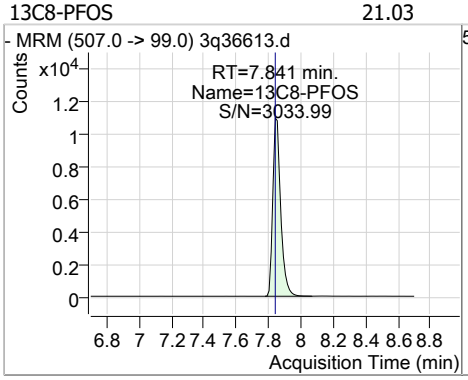
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	0.96	7.82	0.00	5853	498.0 -> 478.0	3.3	0.0	33.7

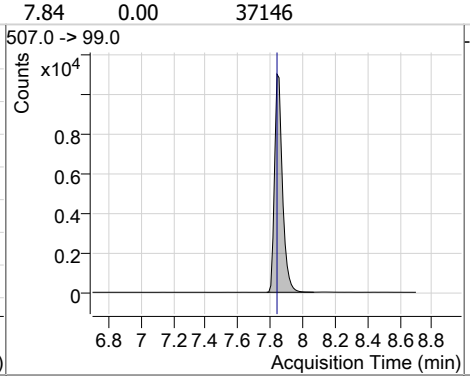


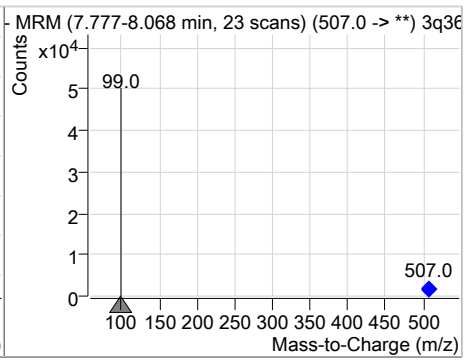




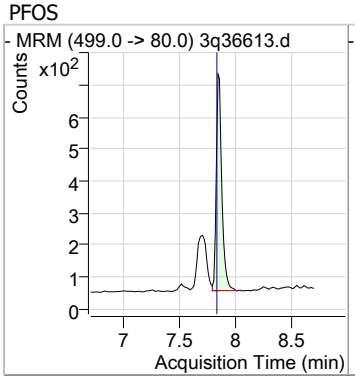
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	21.03	7.84	0.00	37146				

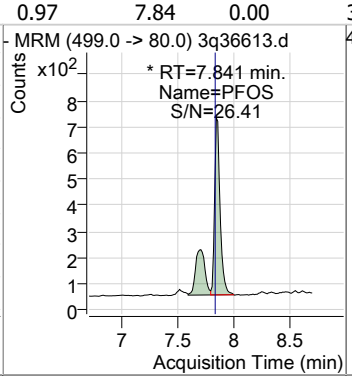


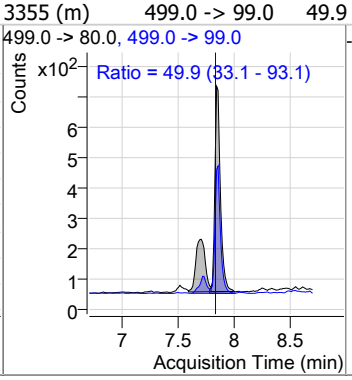


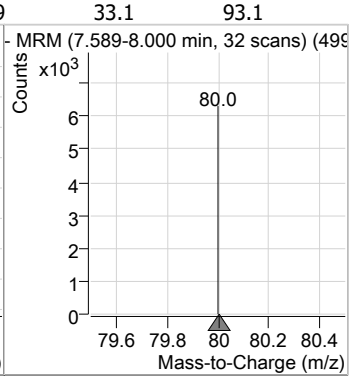


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.97	7.84	0.00	3355 (m)	499.0 -> 99.0	49.9	33.1	93.1



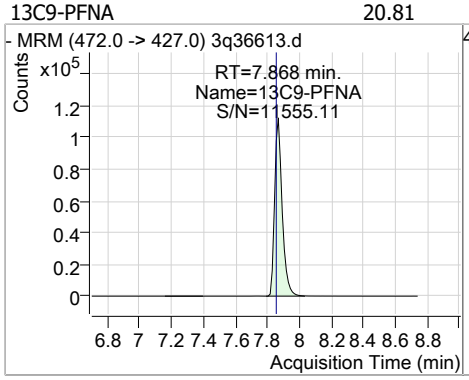


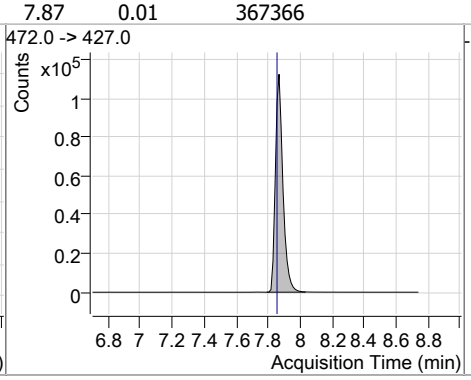


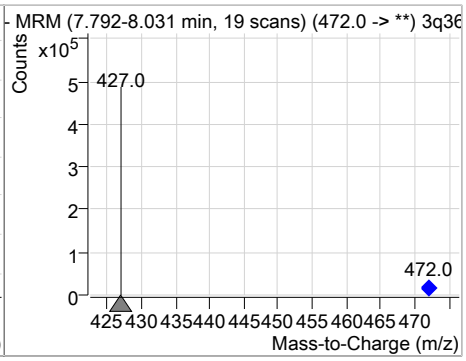


Perfluorinated Compounds by LC/MS/MS

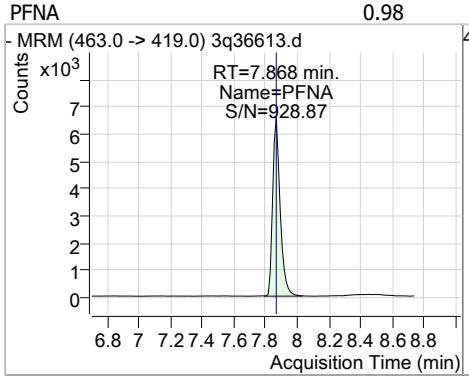
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.81	7.87	0.01	367366				

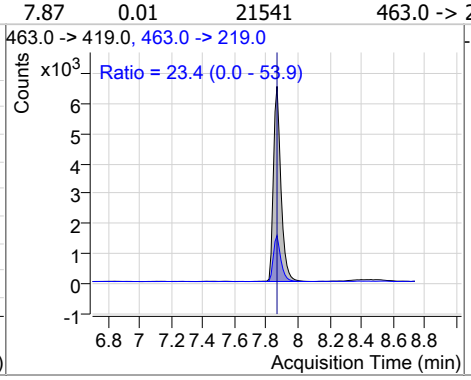


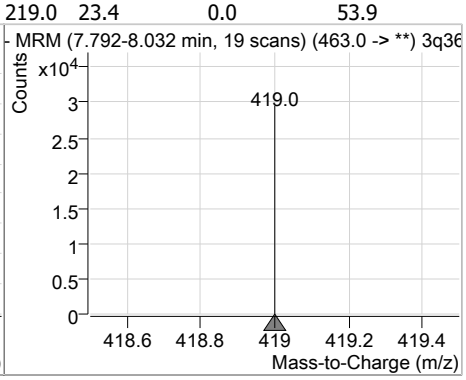




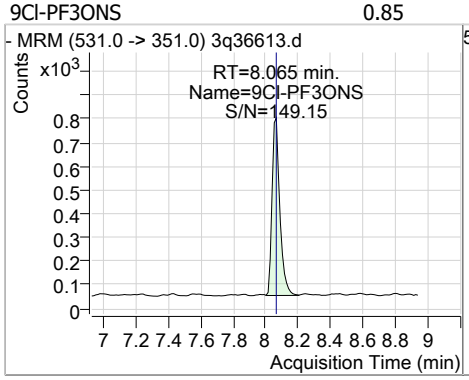
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.98	7.87	0.01	21541	463.0 -> 219.0	23.4	0.0	53.9

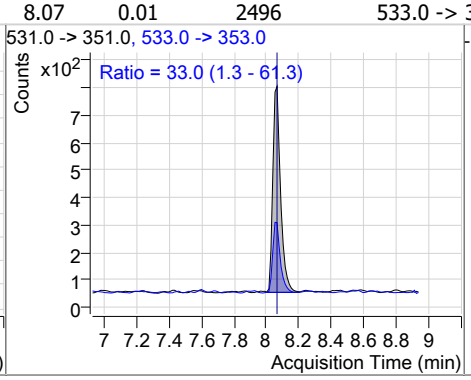


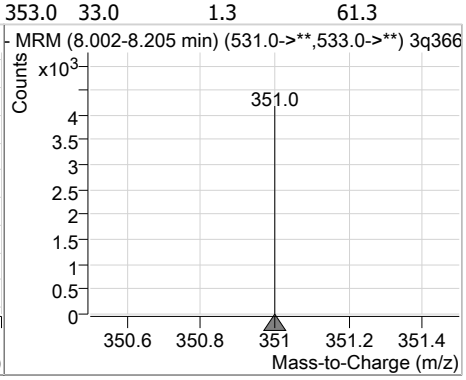




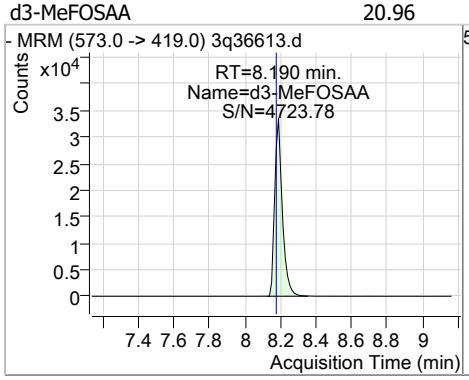
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.85	8.07	0.01	2496	533.0 -> 353.0	33.0	1.3	61.3

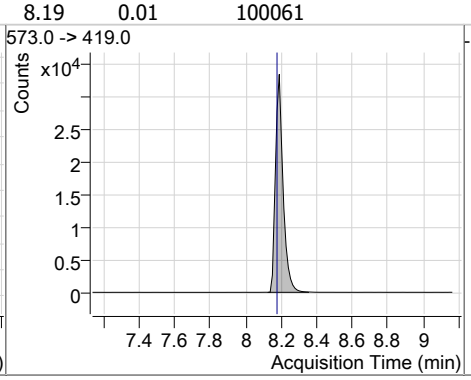


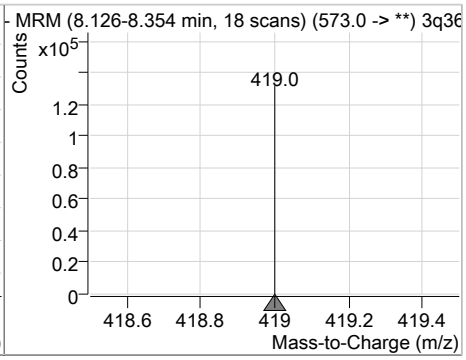




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.96	8.19	0.01	100061				

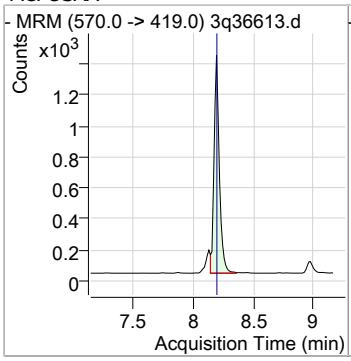


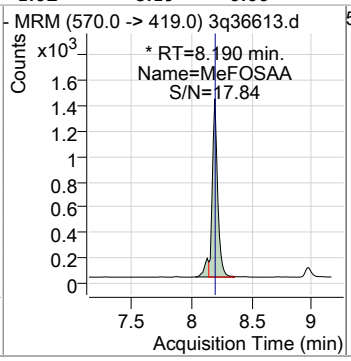


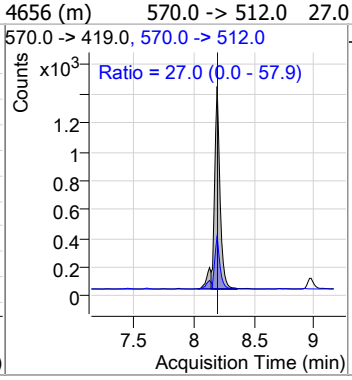


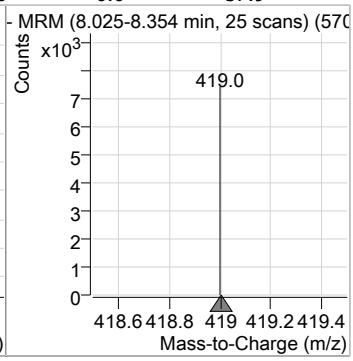
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	1.02	8.19	0.00	4656 (m)	570.0 -> 512.0	27.0	0.0	57.9

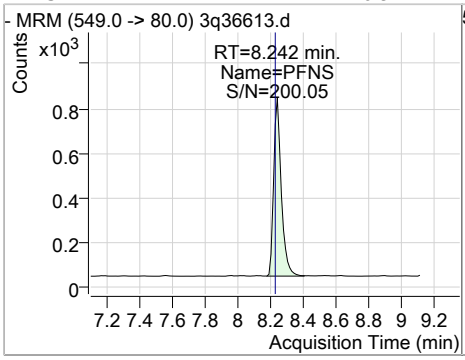


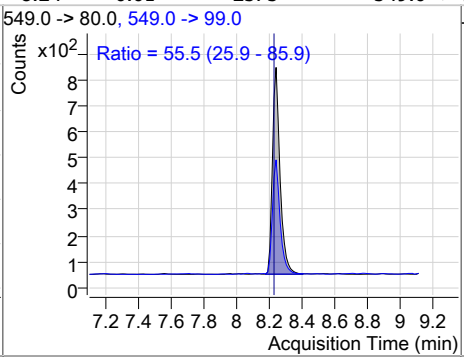


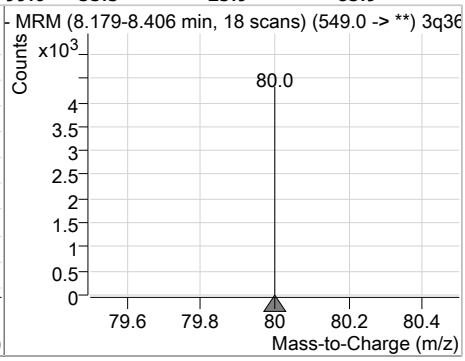




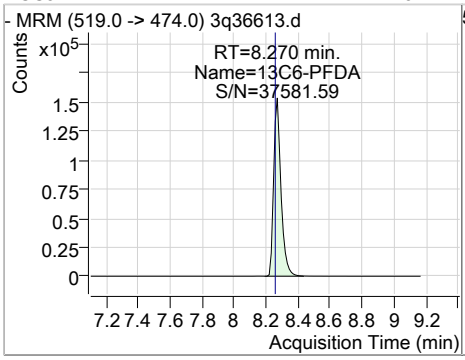
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	0.97	8.24	0.01	2575	549.0 -> 99.0	55.5	25.9	85.9

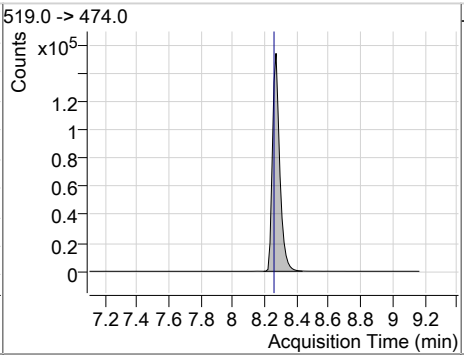


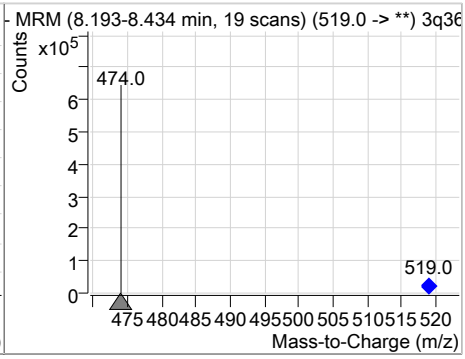




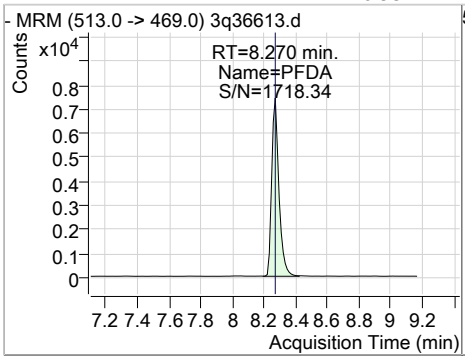
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	21.20	8.27	0.01	487045				

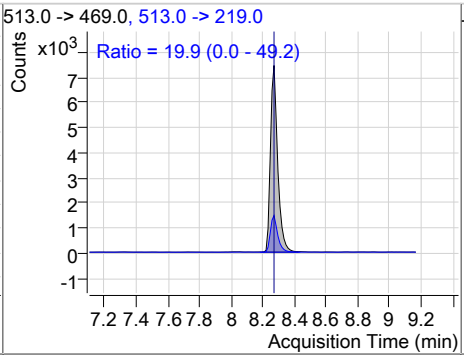


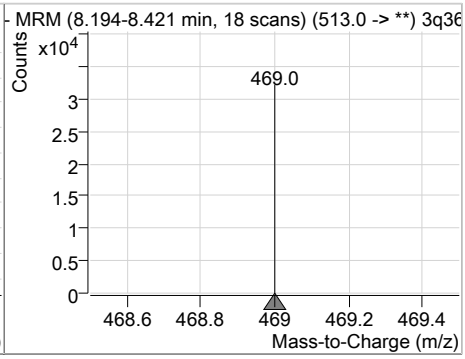




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.93	8.27	0.01	23497	513.0 -> 219.0	19.9	0.0	49.2

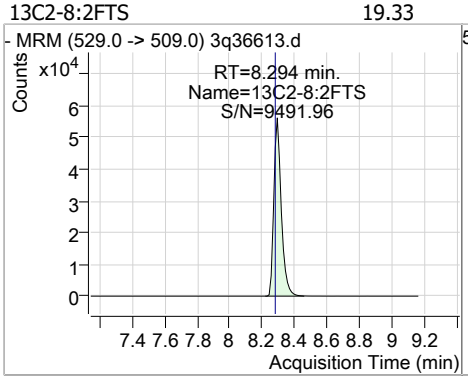


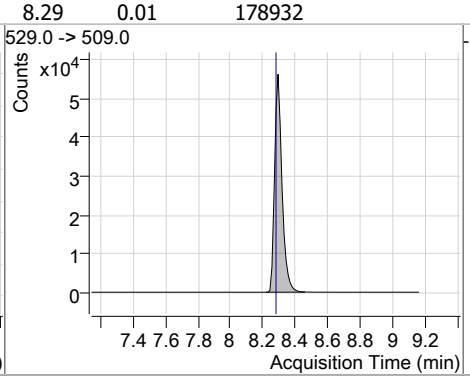


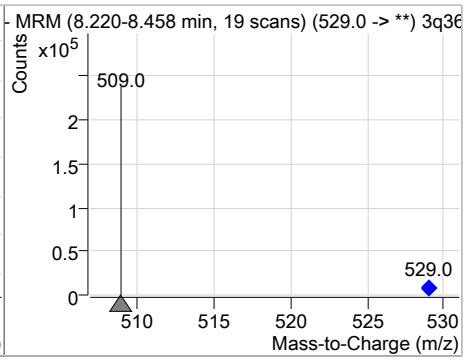


Perfluorinated Compounds by LC/MS/MS

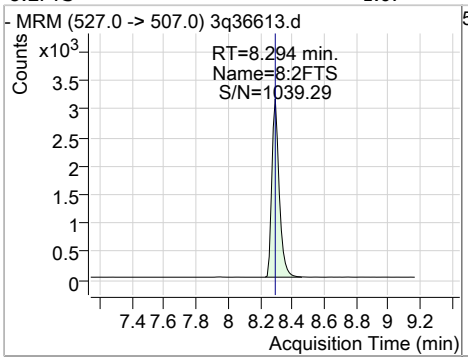
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.33	8.29	0.01	178932				

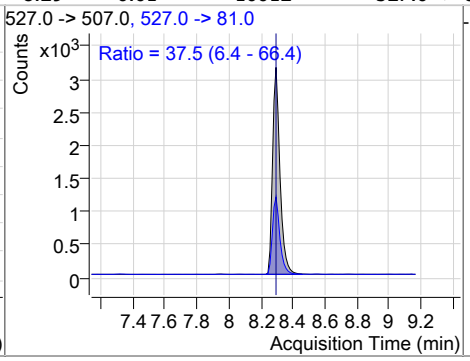


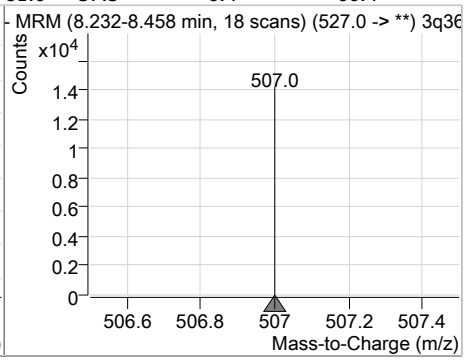




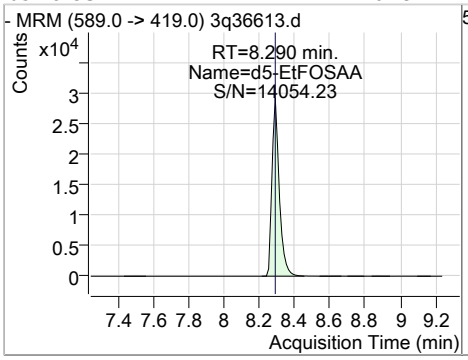
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	1.07	8.29	0.01	10012	527.0 -> 81.0	37.5	6.4	66.4

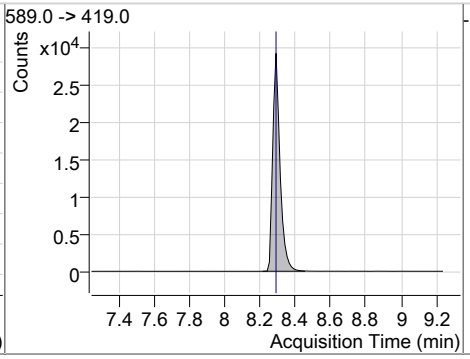


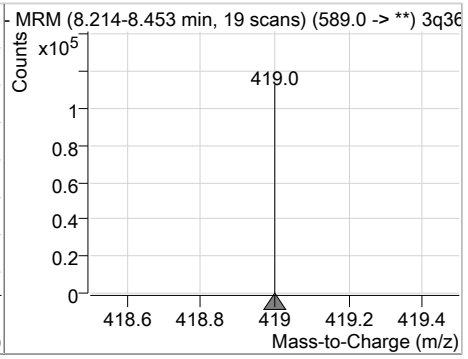




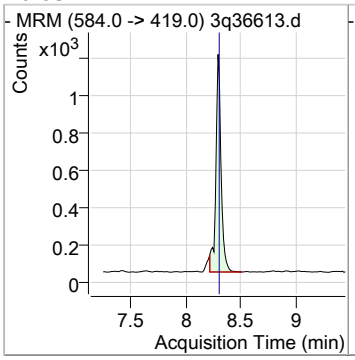
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.49	8.29	0.00	84274				

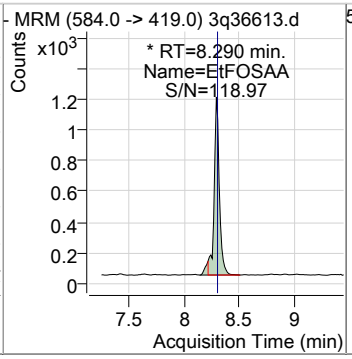


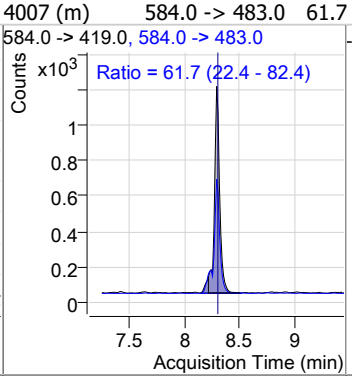


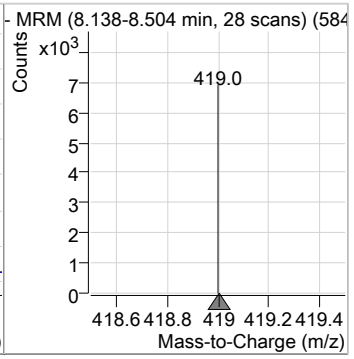


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	1.02	8.29	0.00	4007 (m)	584.0 -> 483.0	61.7	22.4	82.4



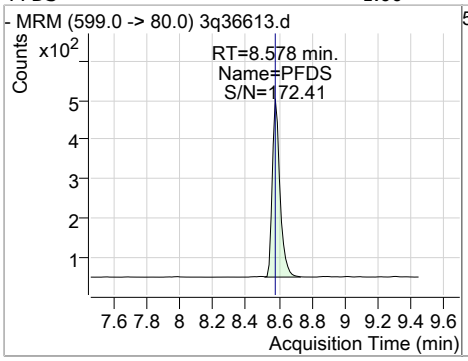


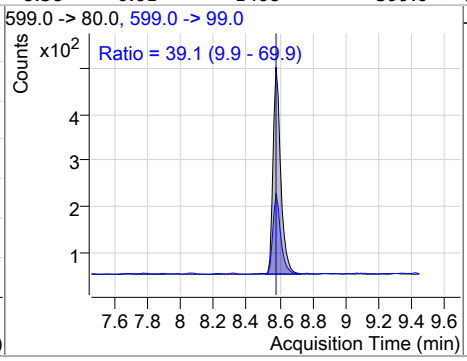


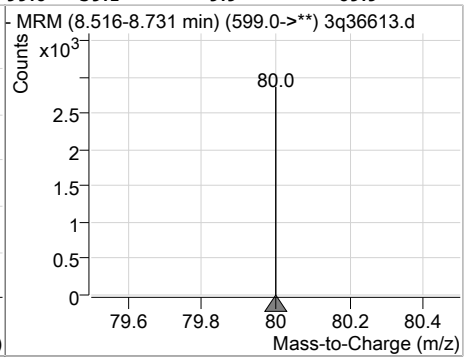


Perfluorinated Compounds by LC/MS/MS

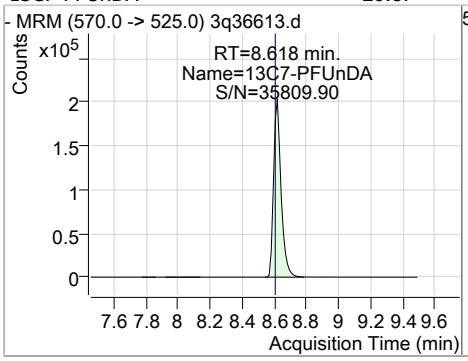
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	1.00	8.58	0.01	1468	599.0 -> 99.0	39.1	9.9	69.9

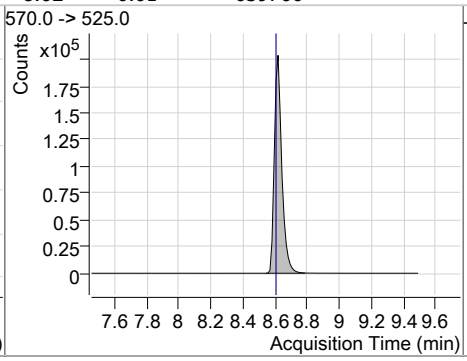


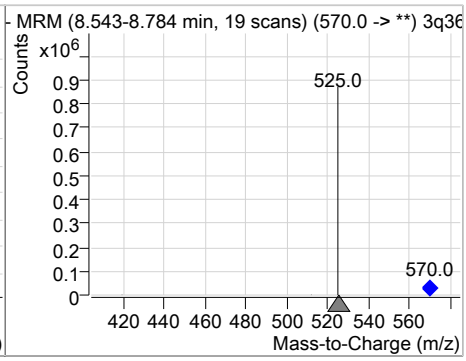




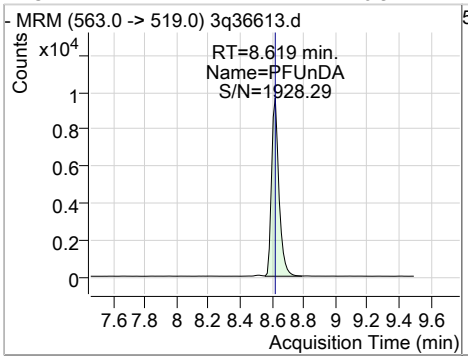
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.87	8.62	0.01	659760				

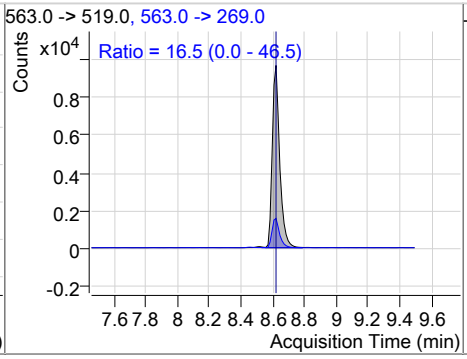


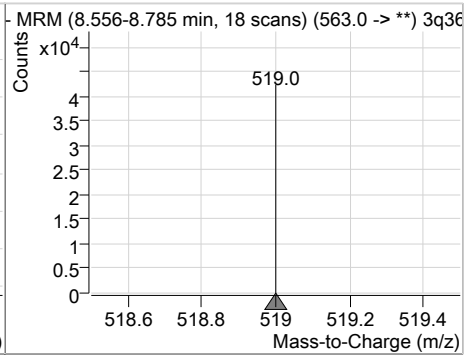




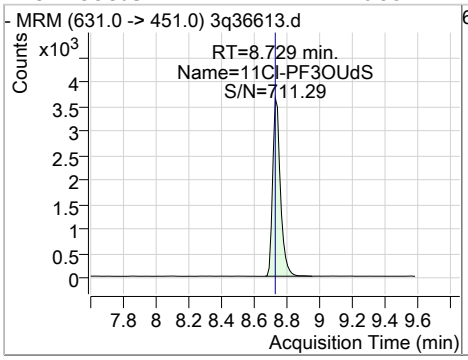
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.97	8.62	0.01	31279	563.0 -> 269.0	16.5	0.0	46.5

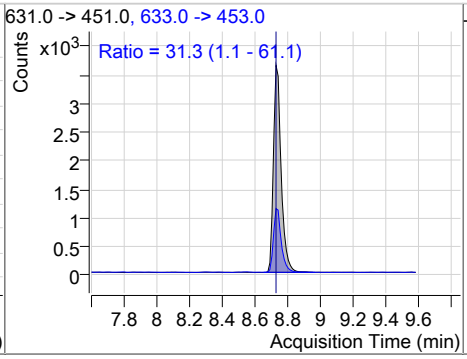


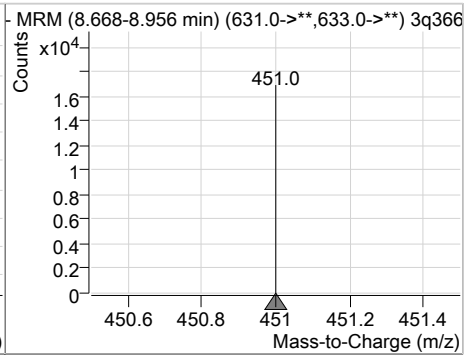




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.95	8.73	0.01	11960	633.0 -> 453.0	31.3	1.1	61.1

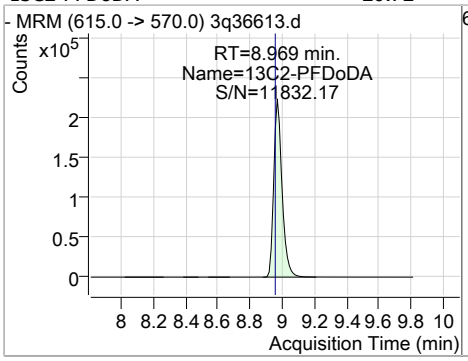


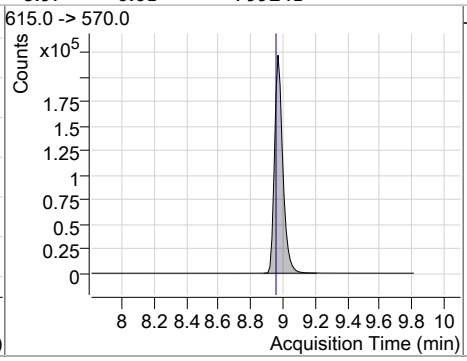


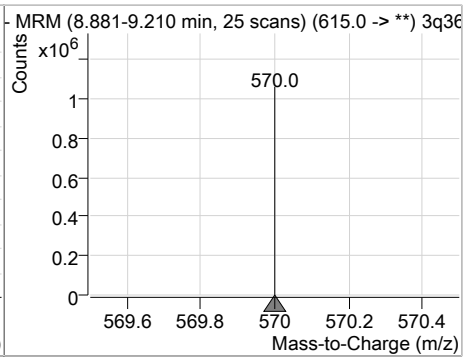


Perfluorinated Compounds by LC/MS/MS

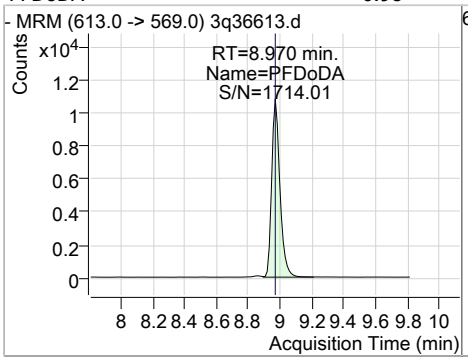
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.72	8.97	0.01	799241				

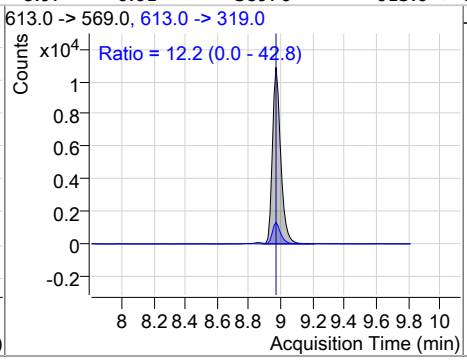


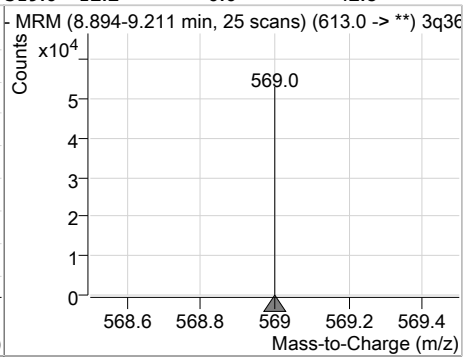




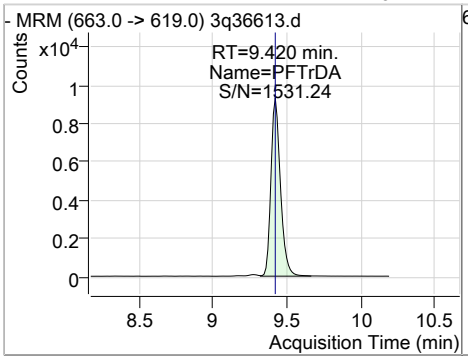
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.98	8.97	0.01	38970	613.0 -> 319.0	12.2	0.0	42.8

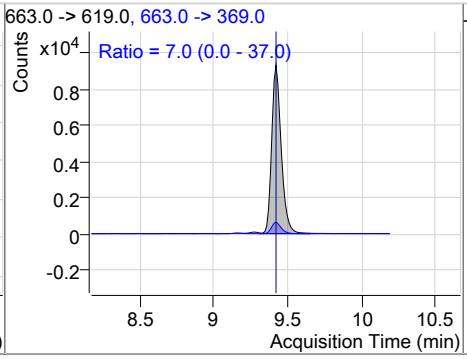


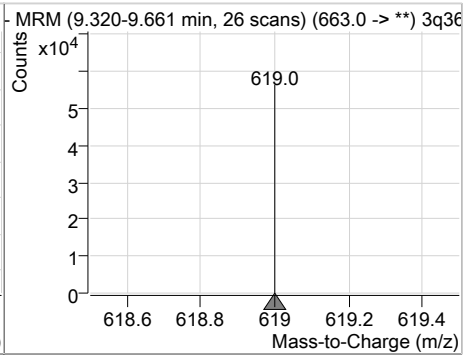




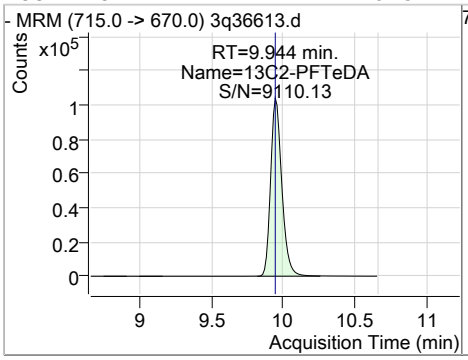
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	1.04	9.42	0.00	41463	663.0 -> 369.0	7.0	0.0	37.0

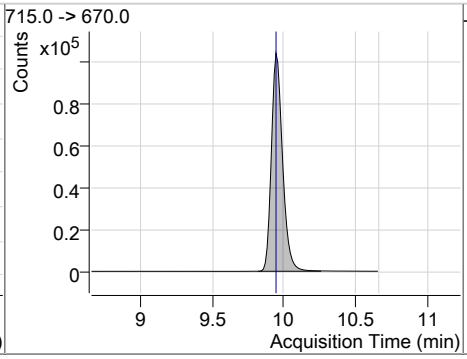


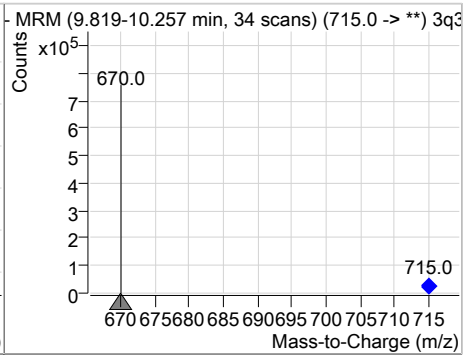




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.25	9.94	0.00	566260				

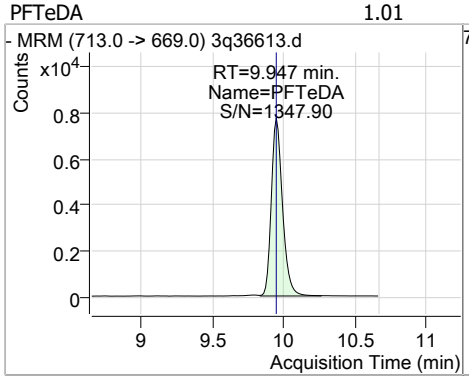


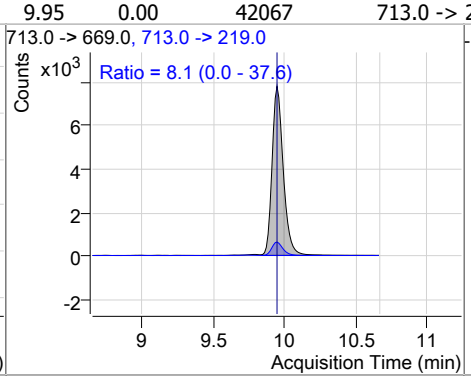


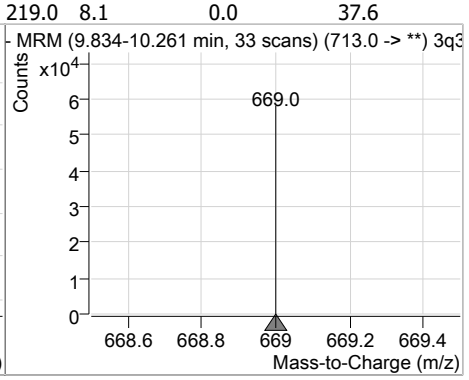


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	1.01	9.95	0.00	42067	713.0 -> 219.0	8.1	0.0	37.6







Manual Integration Approval Summary

Sample Number: S3Q538-CC537
Lab FileID: 3Q36613.D
Injection Time: 04/14/21 20:25
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/15/21 09:10 Martha Valls
Supervisor approved: 04/15/21 10:01 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.67	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.84	Split peak
MeFOSAA	2355-31-9		8.19	Split peak
EtFOSAA	2991-50-6		8.29	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 04/15/21 10:01

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36624.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/14/2021 11:28:18 PM
Sample Name : cc537-20
Vial : P1-A7
DA Method File : ID_041321_S3Q537.quantmethod.xml
Batch Name : s3q538.batch.bin
Sample Information : op84892,S3Q538,250,,,1,1,water

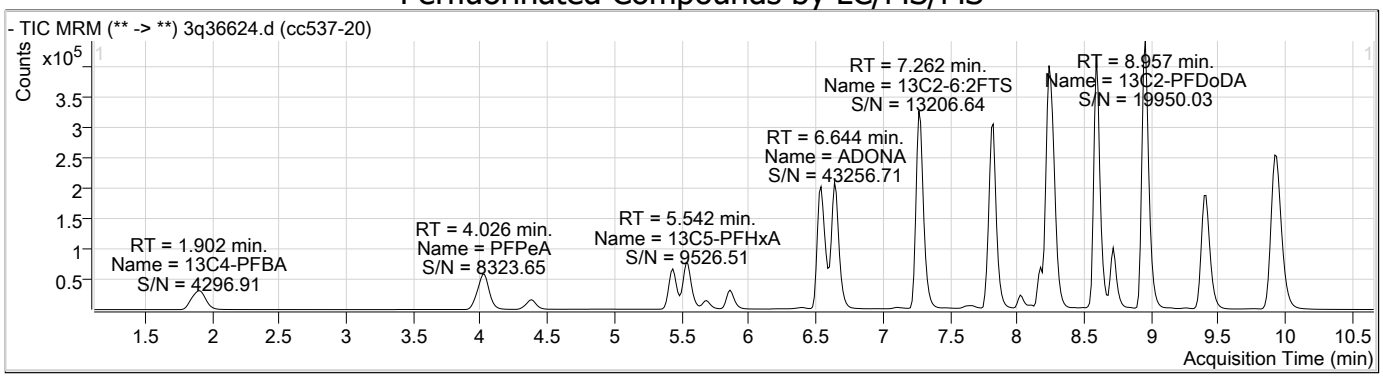
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
M4-PFBA	1.902	217.0 -> 172.0	167755	20.00 µg/L	0.063
M5-PFPeA	4.036	268.0 -> 223.0	124481	20.00 µg/L	-0.038
M5-PFHxA	5.542	318.0 -> 273.0	189745	20.00 µg/L	-0.088
M4-PFHpA	6.544	367.0 -> 322.0	266337	20.00 µg/L	-0.063
M8-PFOA	7.288	421.0 -> 376.0	311108	20.00 µg/L	-0.038
M9-PFNA	7.830	472.0 -> 427.0	351571	20.00 µg/L	-0.025
M6-PFDA	8.245	519.0 -> 474.0	465411	20.00 µg/L	-0.013
M7-PFUnDA	8.593	570.0 -> 525.0	635708	20.00 µg/L	-0.013
M2-PFDoDA	8.957	615.0 -> 570.0	763631	20.00 µg/L	0.000
M2-PFTeDA	9.932	715.0 -> 670.0	550975	20.00 µg/L	-0.013
M8-FOSA	7.790	506.0 -> 78.0	111008	20.00 µg/L	-0.026
M3-PFBS	4.379	302.0 -> 99.0	16825	20.00 µg/L	-0.067
M3-PFHxS	6.579	402.0 -> 99.0	23652	20.00 µg/L	-0.075
M8-PFOS	7.816	507.0 -> 99.0	35630	20.00 µg/L	-0.025
M2-4:2FTS	5.434	329.0 -> 309.0	116101	20.00 µg/L	-0.078
M2-6:2FTS	7.262	429.0 -> 409.0	172866	20.00 µg/L	-0.050
M2-8:2FTS	8.269	529.0 -> 509.0	183615	20.00 µg/L	-0.013
M3-MeFOSAA	8.177	573.0 -> 419.0	94845	20.00 µg/L	0.000
M3-HFPO-DA	5.870	287.0 -> 169.0	24814	20.00 µg/L	-0.075
M5-EtFOSAA	8.277	589.0 -> 419.0	81672	20.00 µg/L	-0.013
System Monitoring Compounds					
13C2-4:2FTS	5.434	329.0 -> 309.0	116101	20.28 µg/L	-0.078
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.4%	
13C2-6:2FTS	7.262	429.0 -> 409.0	172866	20.45 µg/L	-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.2%	
13C2-8:2FTS	8.269	529.0 -> 509.0	183615	19.83 µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%	
13C2-PFDoDA	8.957	615.0 -> 570.0	763631	19.80 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.0%	
13C2-PFTeDA	9.932	715.0 -> 670.0	550975	19.71 µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.5%	
13C3-PFBS	4.379	302.0 -> 99.0	16825	20.87 µg/L	-0.067
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.3%	
13C3-PFHxS	6.579	402.0 -> 99.0	23652	20.77 µg/L	-0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.9%	
13C4-PFBA	1.902	217.0 -> 172.0	167755	21.41 µg/L	0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.0%	
13C4-PFHpA	6.544	367.0 -> 322.0	266337	20.55 µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.7%	
13C5-PFHxA	5.542	318.0 -> 273.0	189745	20.73 µg/L	-0.088
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.7%	
13C5-PFPeA	4.036	268.0 -> 223.0	124481	21.20 µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.0%	
13C6-PFDA	8.245	519.0 -> 474.0	465411	20.25 µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%	

Perfluorinated Compounds by LC/MS/MS

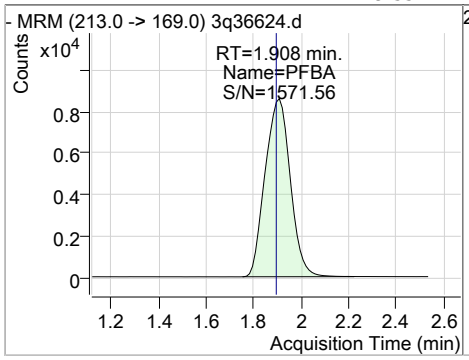
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.593	570.0 -> 525.0	635708	20.11	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.5%			
13C8-FOSA	7.790	506.0 -> 78.0	111008	20.91	µg/L		-0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.5%			
13C8-PFOA	7.288	421.0 -> 376.0	311108	20.44	µg/L		-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.2%			
13C8-PFOS	7.816	507.0 -> 99.0	35630	20.17	µg/L		-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.9%			
13C9-PFNA	7.830	472.0 -> 427.0	351571	19.91	µg/L		-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.6%			
d3-MeFOSAA	8.177	573.0 -> 419.0	94845	19.87	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%			
13C3-HFPO-DA	5.870	287.0 -> 169.0	24813	20.46	µg/L		-0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.3%			
d5-EtFOSAA	8.277	589.0 -> 419.0	81668	19.85	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%			
Target Compounds							QValue
4:2FTS	5.436	327.0 -> 307.0	125871	20.06	µg/L		100
6:2FTS	7.262	427.0 -> 407.0	185914	19.97	µg/L		100
8:2FTS	8.269	527.0 -> 507.0	193642	20.18	µg/L		99
EtFOSAA	8.277	584.0 -> 419.0	75623	19.84	µg/L	m	87
FOSA	7.791	498.0 -> 78.0	110620	19.46	µg/L		100
MeFOSAA	8.177	570.0 -> 419.0	87559	20.24	µg/L	m	99
PFBA	1.908	213.0 -> 169.0	62814	19.55	µg/L		100
PFBS	4.382	299.0 -> 80.0	51212	19.90	µg/L		100
PFDA	8.245	513.0 -> 469.0	460598	19.12	µg/L		100
PFDoDA	8.957	613.0 -> 569.0	752486	19.83	µg/L		99
PFDS	8.566	599.0 -> 80.0	27757	19.64	µg/L		98
PFHpA	6.545	363.0 -> 319.0	479418	19.84	µg/L		100
PFHpS	7.287	449.0 -> 80.0	54110	20.62	µg/L		98
PFHxA	5.542	313.0 -> 269.0	129031	19.43	µg/L		100
PFHxS	6.580	399.0 -> 80.0	54129	20.02	µg/L	m	96
PFNA	7.830	463.0 -> 419.0	415912	19.78	µg/L		99
PFNS	8.217	549.0 -> 80.0	50929	20.02	µg/L		98
PFOA	7.288	413.0 -> 369.0	329843	19.61	µg/L		99
PFOS	7.803	499.0 -> 80.0	64618	19.42	µg/L	m	84
PFPeA	4.026	263.0 -> 219.0	234513	19.92	µg/L		100
PFPeS	5.689	349.0 -> 80.0	39189	19.66	µg/L		99
PFTeDA	9.922	713.0 -> 669.0	798731	19.70	µg/L		100
PFTrDA	9.408	663.0 -> 619.0	803907	20.69	µg/L		100
PFUnDA	8.594	563.0 -> 519.0	599713	19.31	µg/L		100
11Cl-PF3OUdS	8.717	631.0 -> 451.0	239898	19.99	µg/L		100
9Cl-PF3ONS	8.028	531.0 -> 351.0	52533	18.63	µg/L		99
ADONA	6.644	377.0 -> 251.0	613522	19.79	µg/L		100
HFPO-DA	5.866	329.0 -> 169.0	87812	19.53	µg/L		99

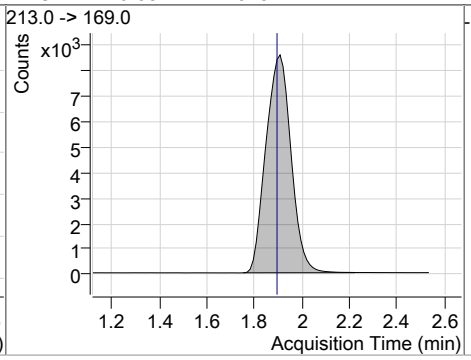
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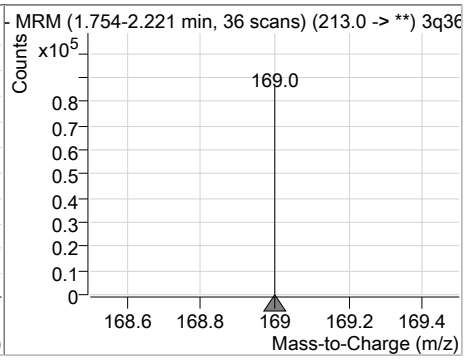
Perfluorinated Compounds by LC/MS/MS



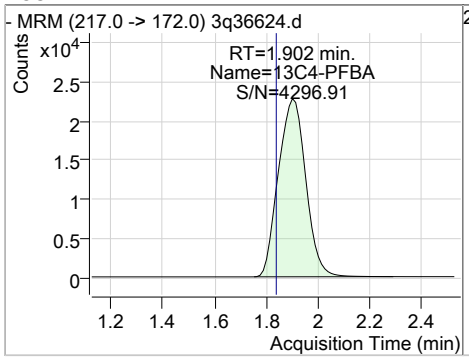
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.55	1.91	0.08	62814				

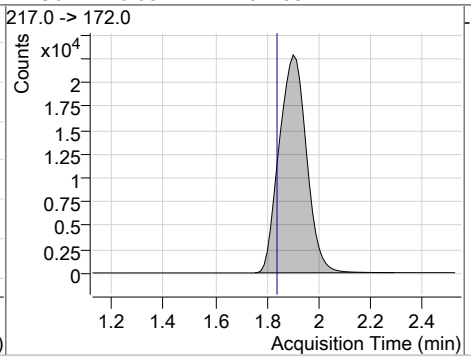


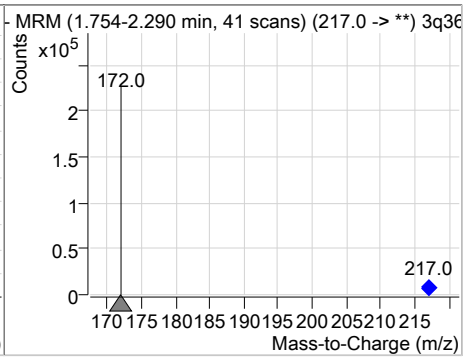




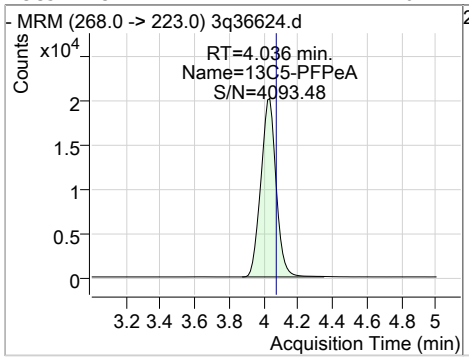
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	21.41	1.90	0.06	167755				

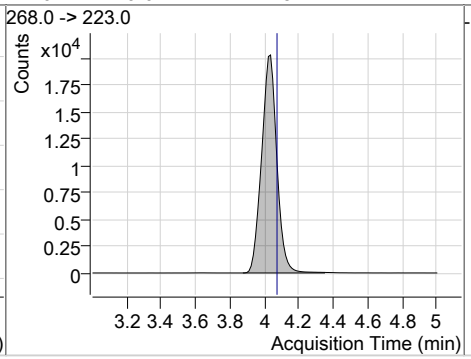


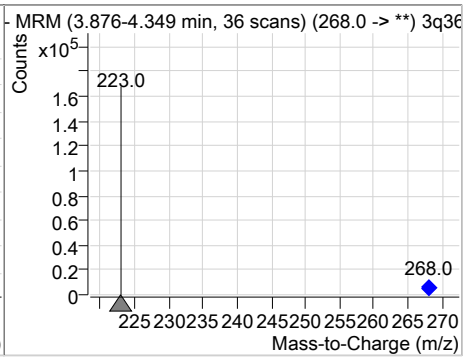




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	21.20	4.04	-0.04	124481				

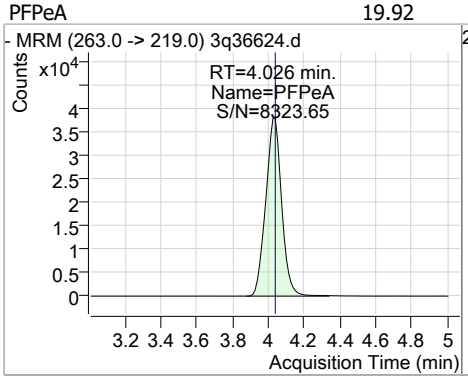


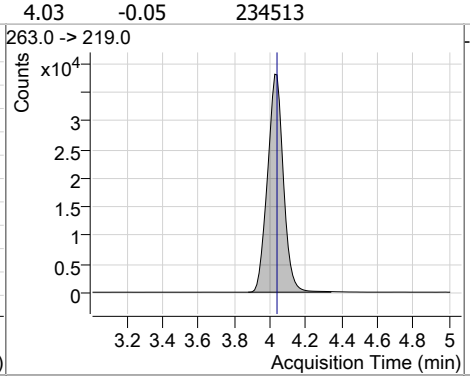


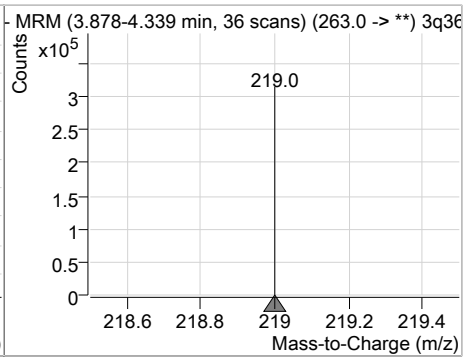


Perfluorinated Compounds by LC/MS/MS

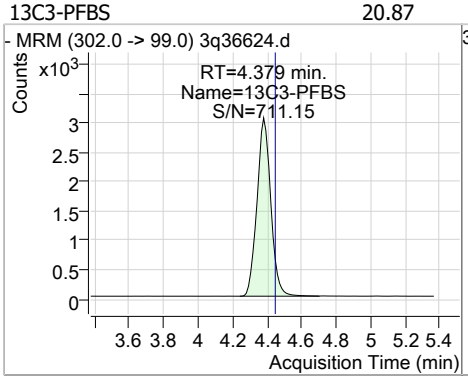
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.92	4.03	-0.05	234513				

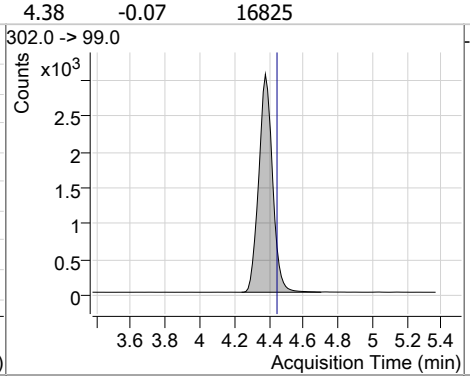


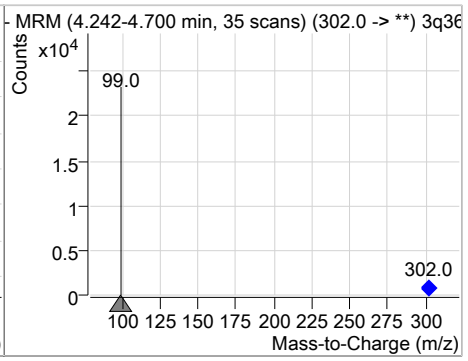




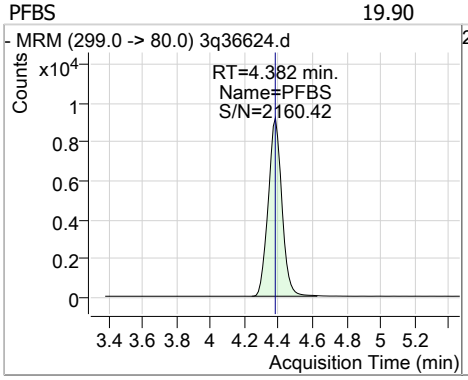
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.87	4.38	-0.07	16825				

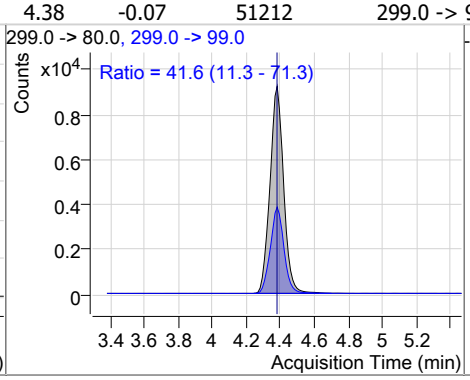


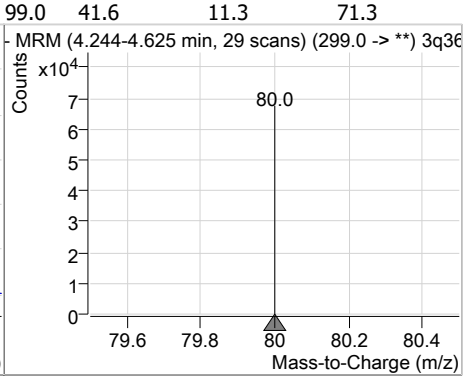




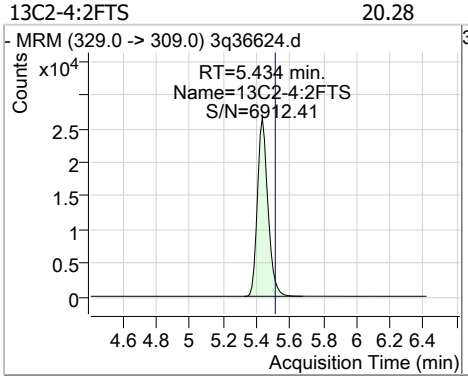
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.90	4.38	-0.07	51212	299.0 -> 99.0	41.6	11.3	71.3

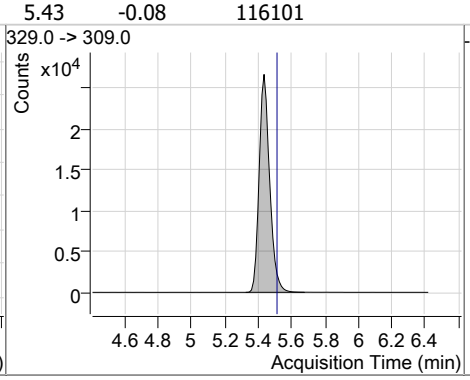


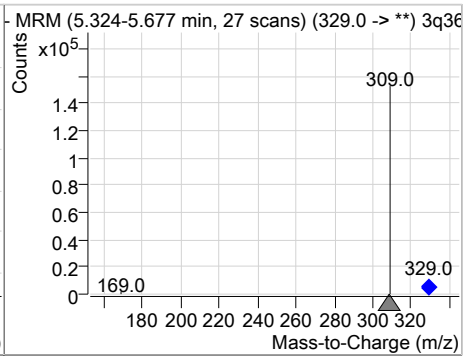




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	20.28	5.43	-0.08	116101				



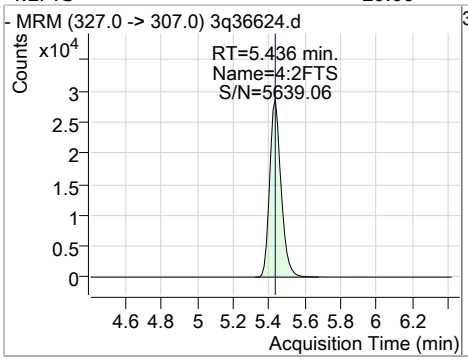


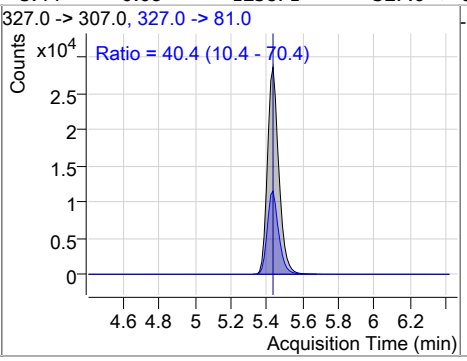


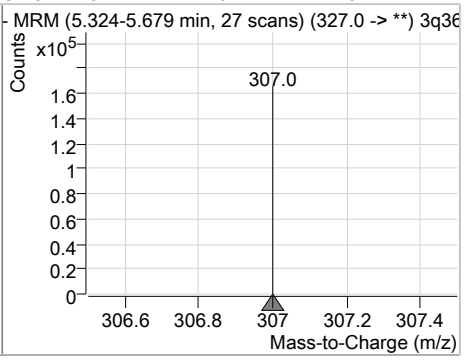
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Perfluorinated Compounds by LC/MS/MS

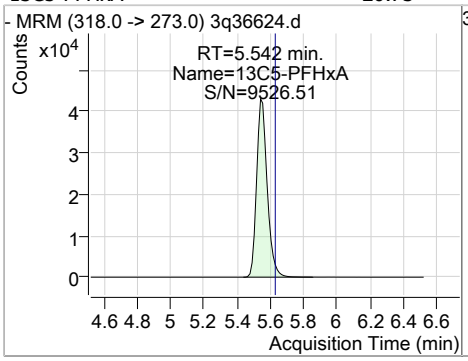
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.06	5.44	-0.08	125871	327.0 -> 81.0	40.4	10.4	70.4

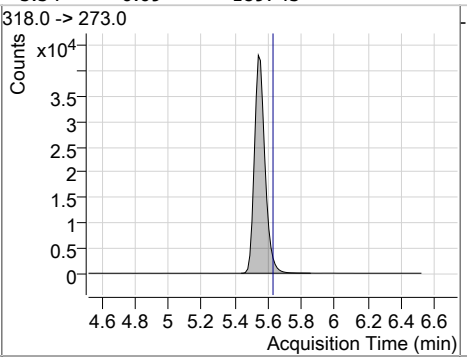


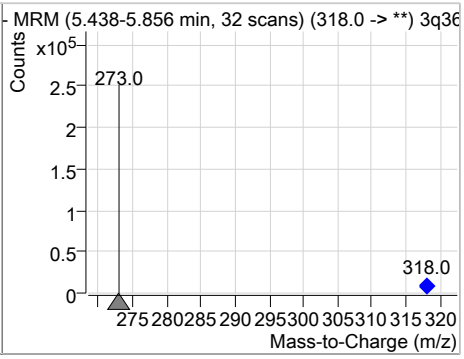




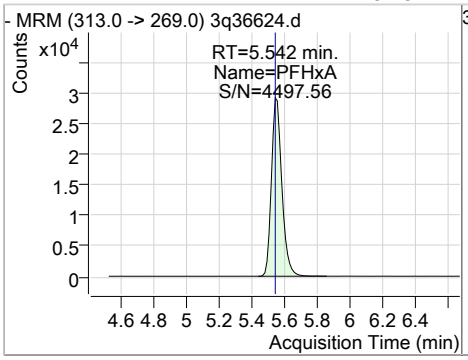
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.73	5.54	-0.09	189745				

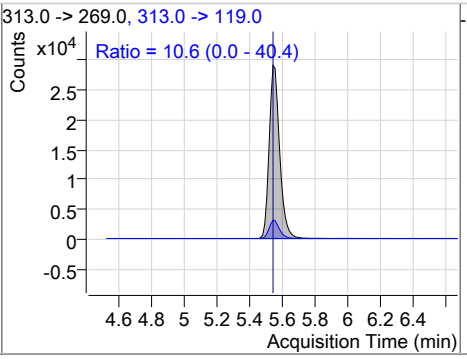


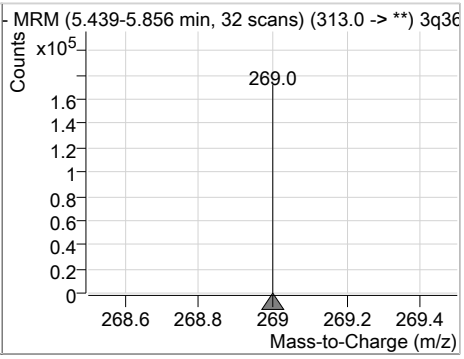




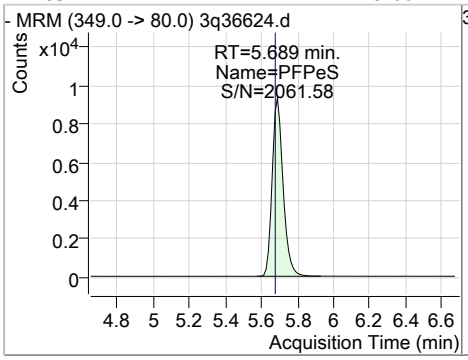
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.43	5.54	-0.09	129031	313.0 -> 119.0	10.6	0.0	40.4

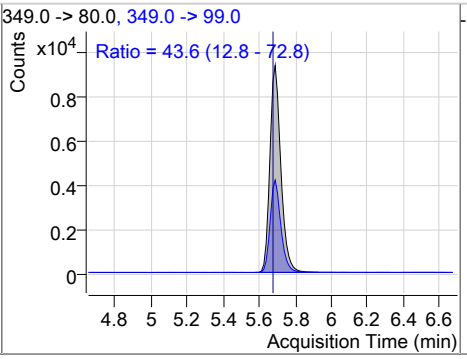


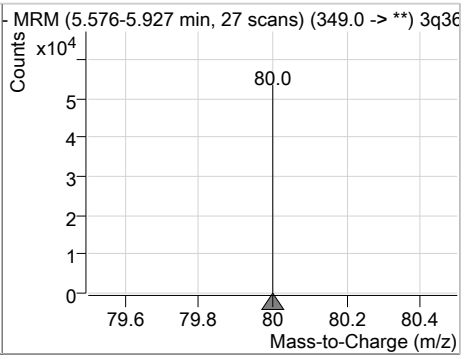




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	19.66	5.69	-0.08	39189	349.0 -> 99.0	43.6	12.8	72.8

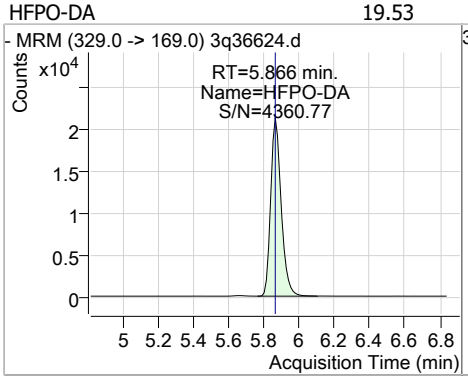


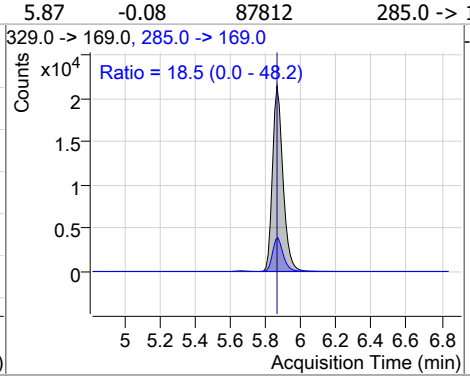


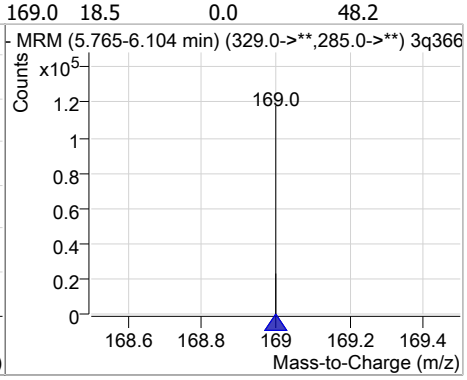


Perfluorinated Compounds by LC/MS/MS

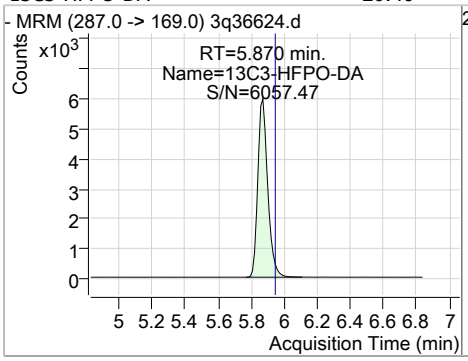
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	19.53	5.87	-0.08	87812	285.0 -> 169.0	18.5	0.0	48.2

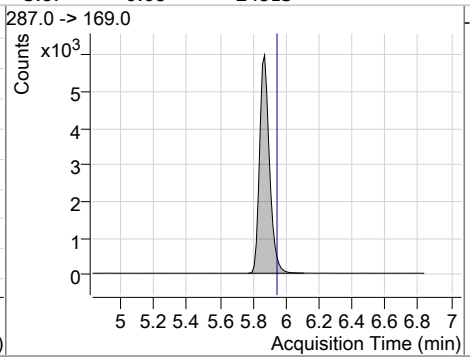


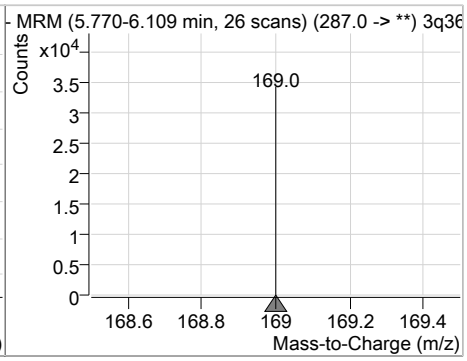




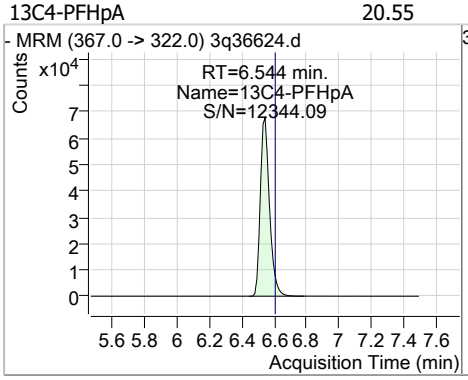
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.46	5.87	-0.08	24813				

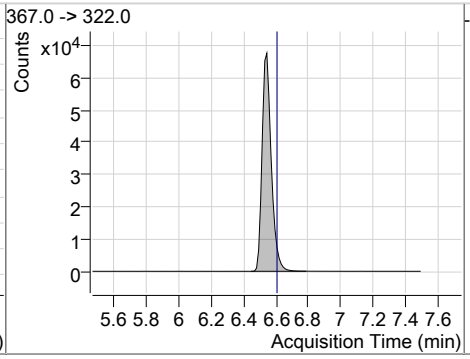


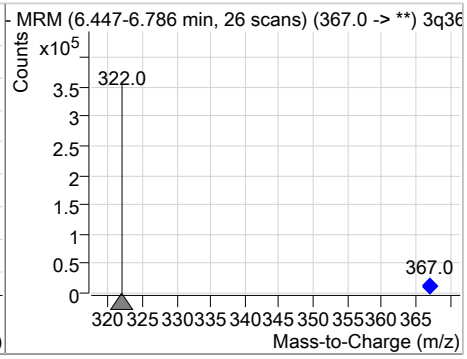




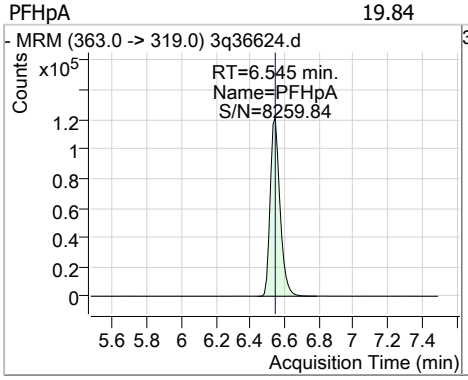
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.55	6.54	-0.06	266337				

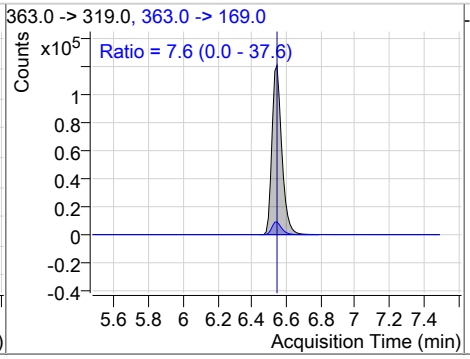


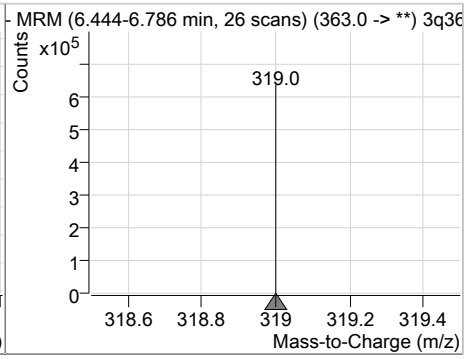




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	19.84	6.54	-0.06	479418	363.0 -> 169.0	7.6	0.0	37.6

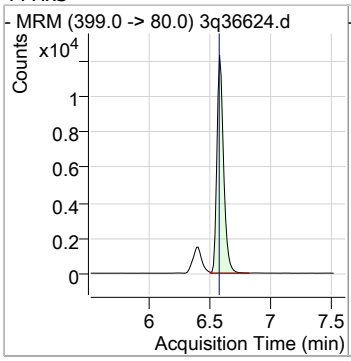


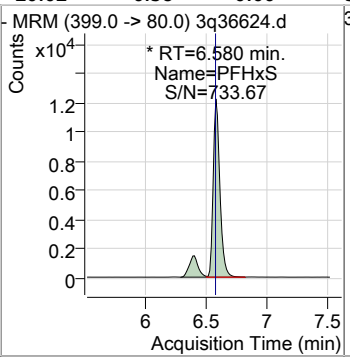


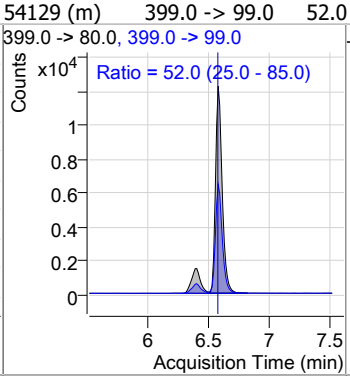


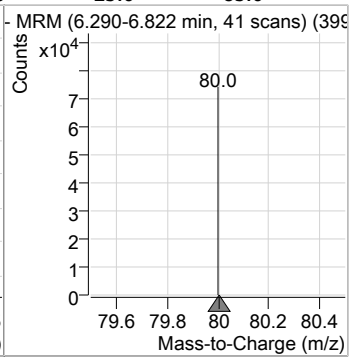
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	20.02	6.58	-0.06	54129 (m)	399.0 -> 99.0	52.0	25.0	85.0

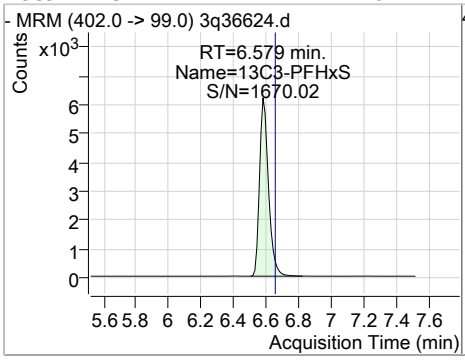


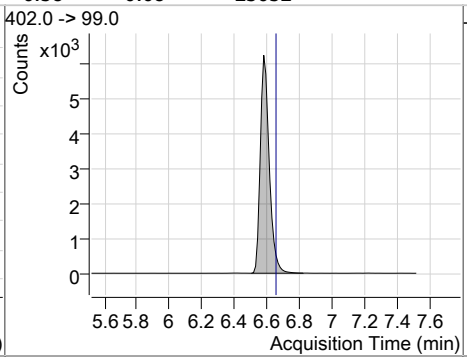


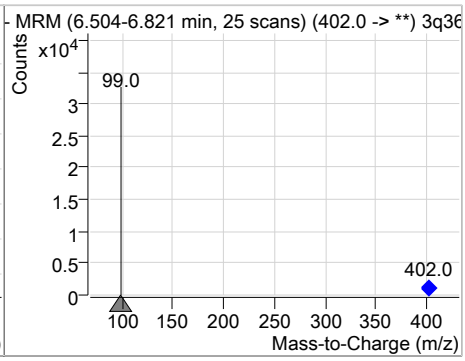




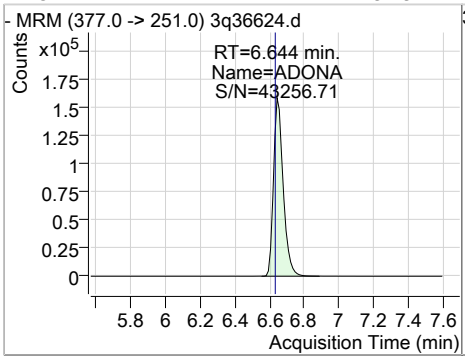
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.77	6.58	-0.08	23652				

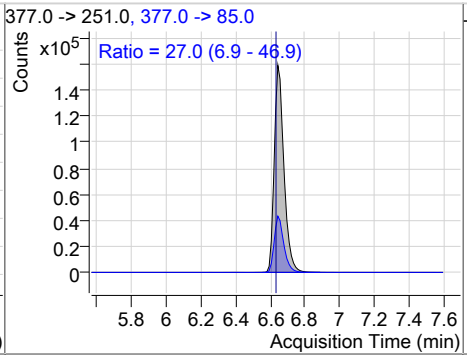


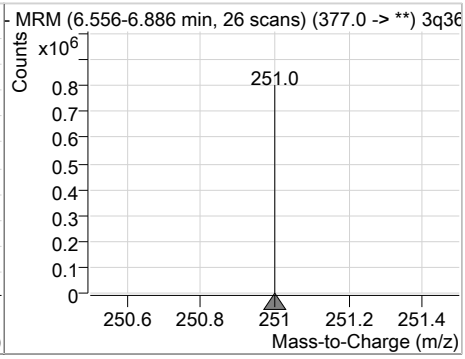




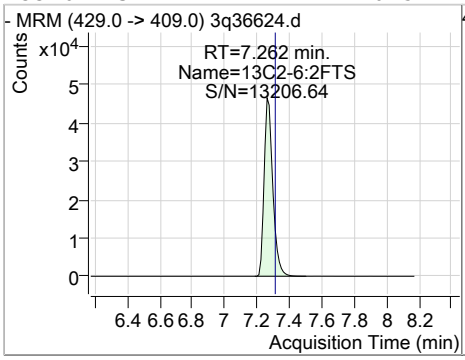
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	19.79	6.64	-0.07	613522	377.0 -> 85.0	27.0	6.9	46.9

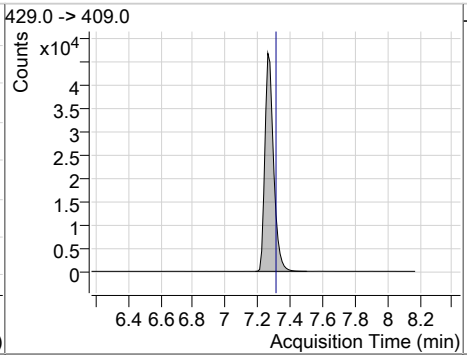


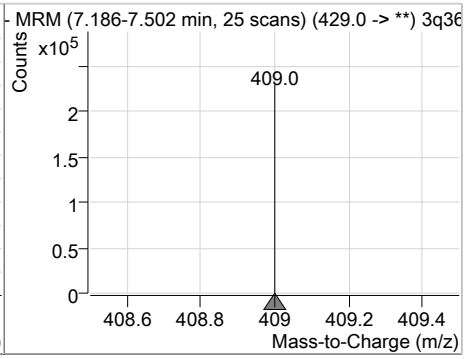




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.45	7.26	-0.05	172866				

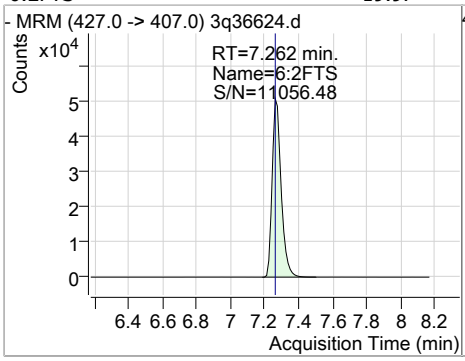


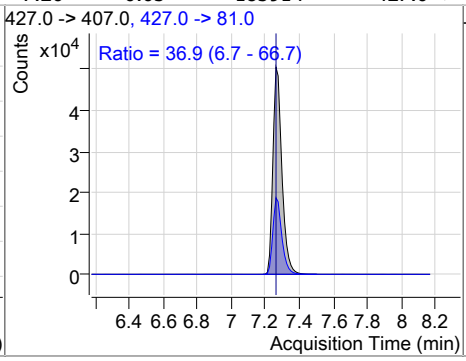


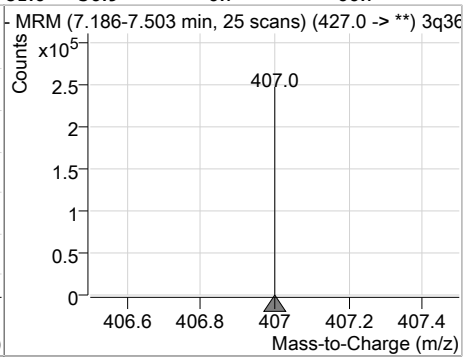


Perfluorinated Compounds by LC/MS/MS

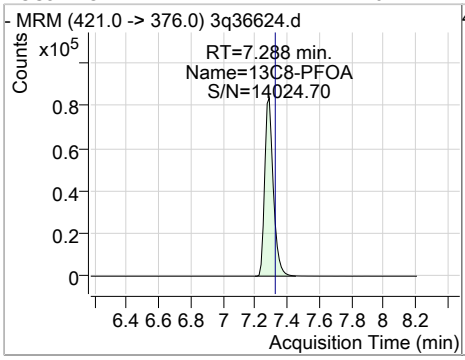
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	19.97	7.26	-0.05	185914	427.0 -> 81.0	36.9	6.7	66.7

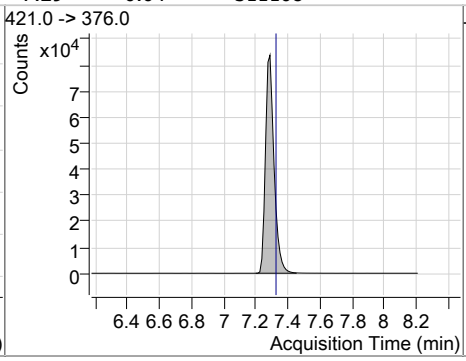


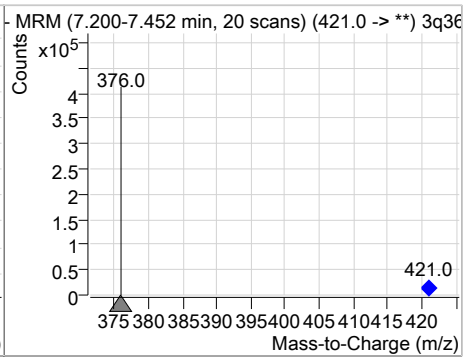




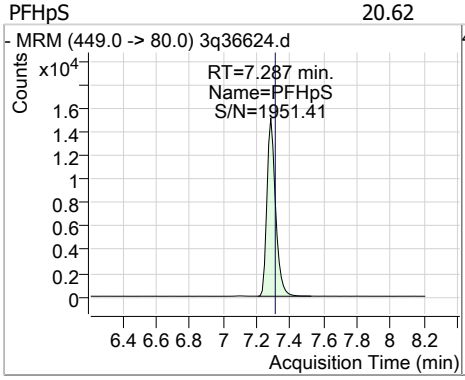
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.44	7.29	-0.04	311108				

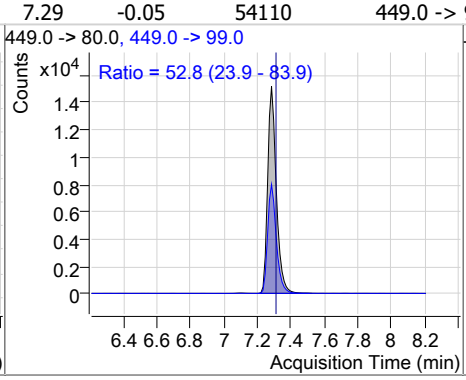


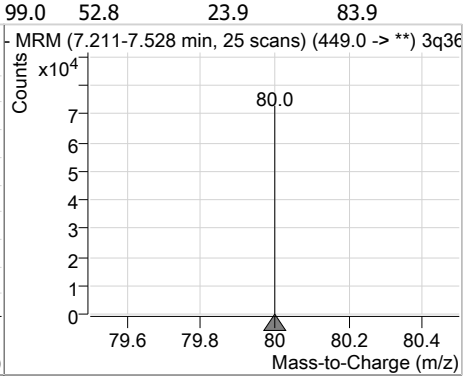




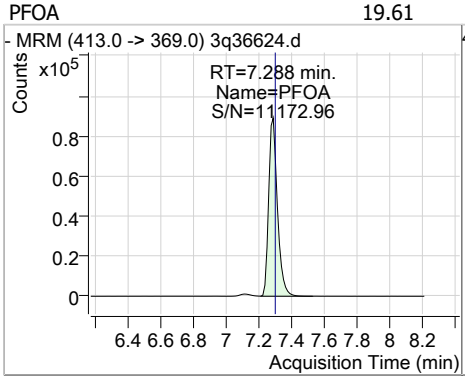
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	20.62	7.29	-0.05	54110	449.0 -> 99.0	52.8	23.9	83.9

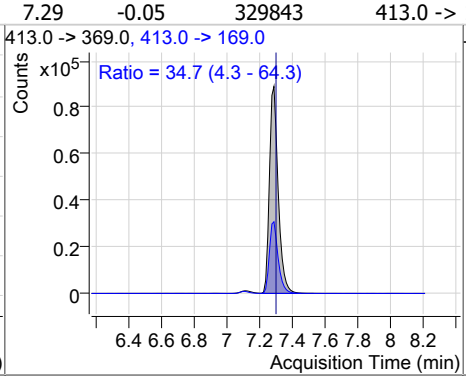


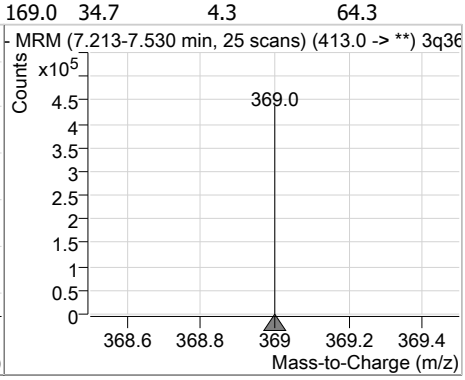




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.61	7.29	-0.05	329843	413.0 -> 169.0	34.7	4.3	64.3

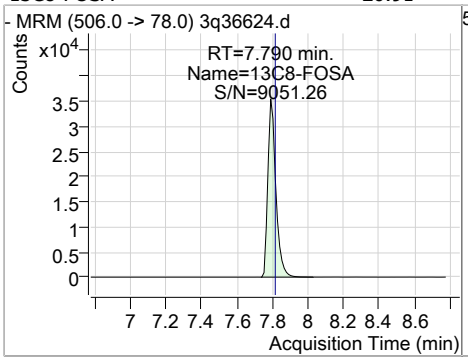


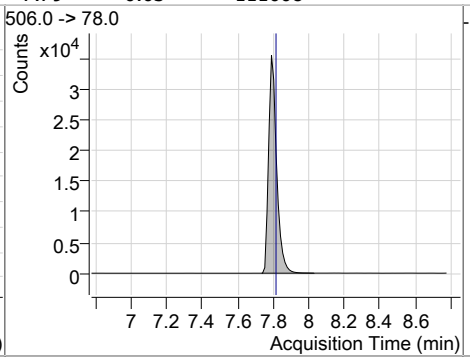


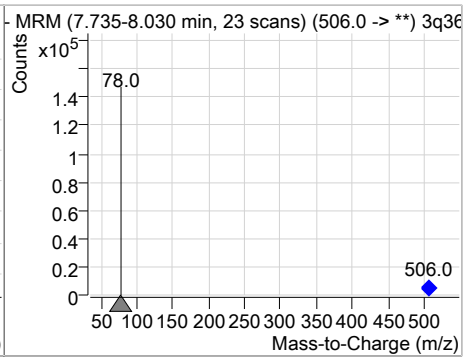


Perfluorinated Compounds by LC/MS/MS

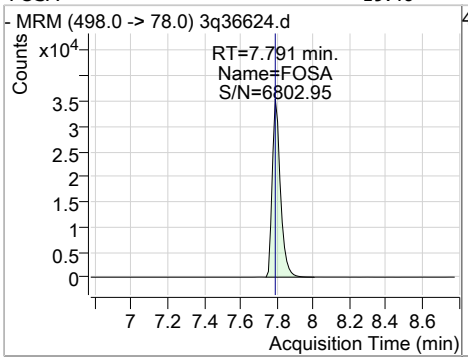
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.91	7.79	-0.03	111008				

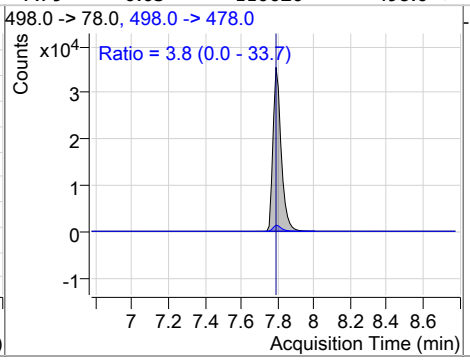


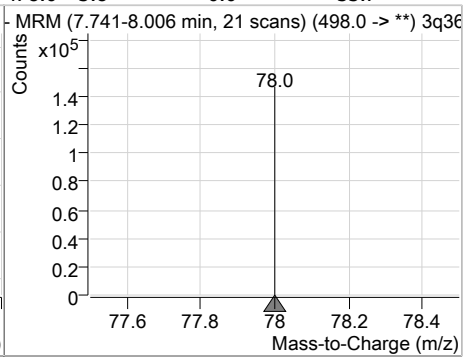




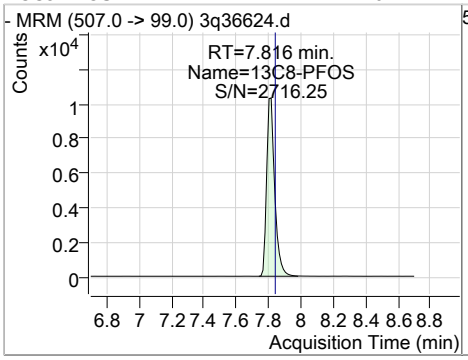
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	19.46	7.79	-0.03	110620	498.0 -> 478.0	3.8	0.0	33.7

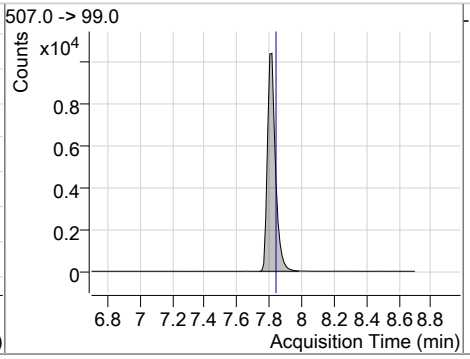


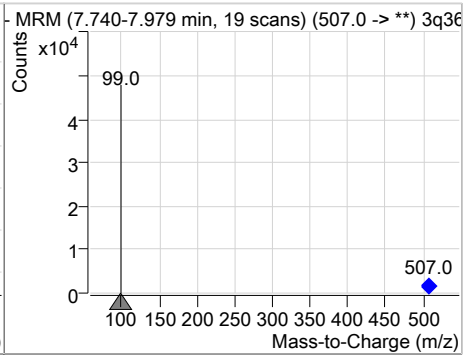




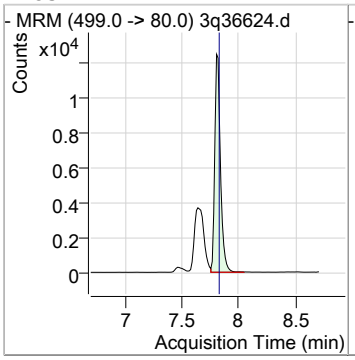
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.17	7.82	-0.03	35630				

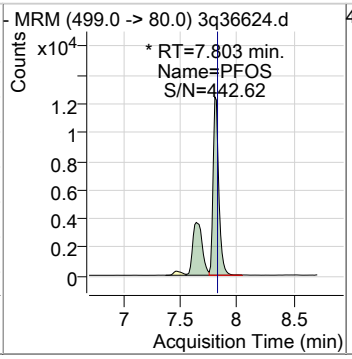


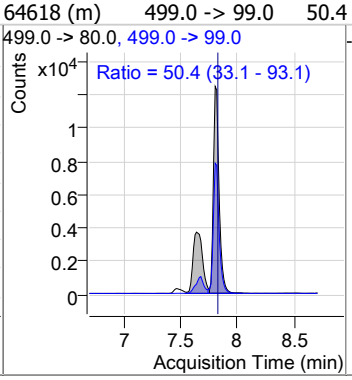


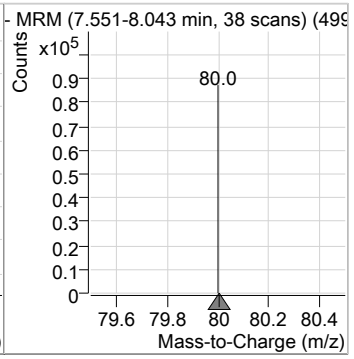


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.42	7.80	-0.04	64618 (m)	499.0 -> 99.0	50.4	33.1	93.1



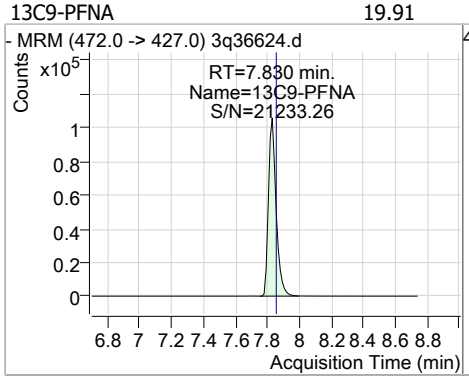


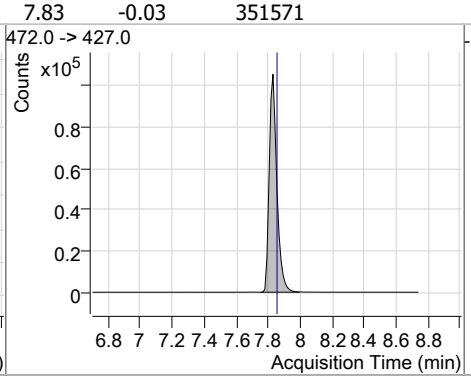


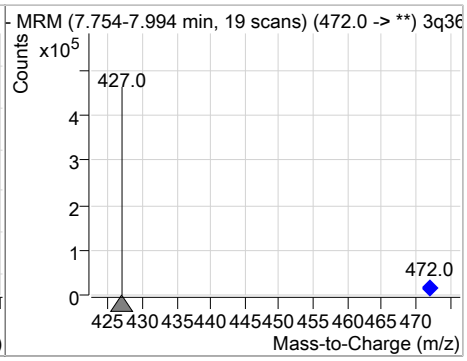


Perfluorinated Compounds by LC/MS/MS

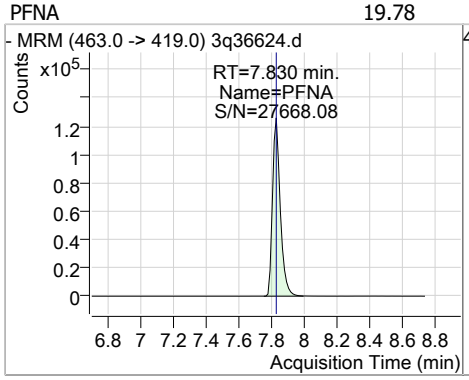
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.91	7.83	-0.03	351571				

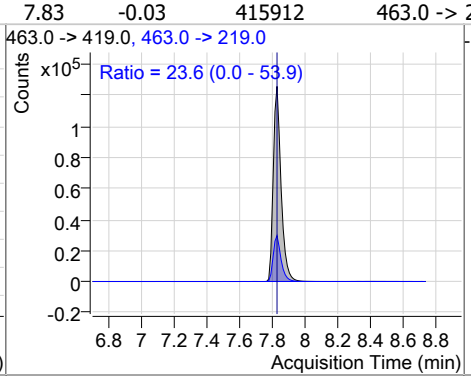


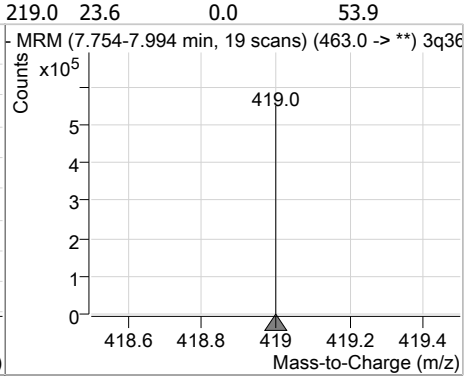




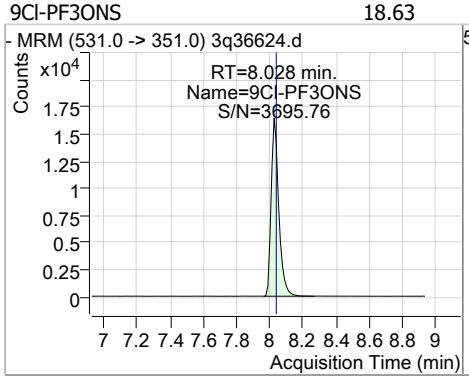
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.78	7.83	-0.03	415912	463.0 -> 219.0	23.6	0.0	53.9

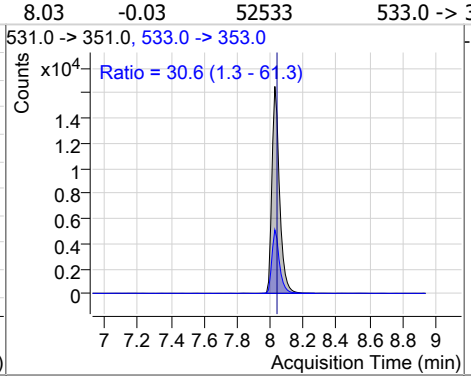


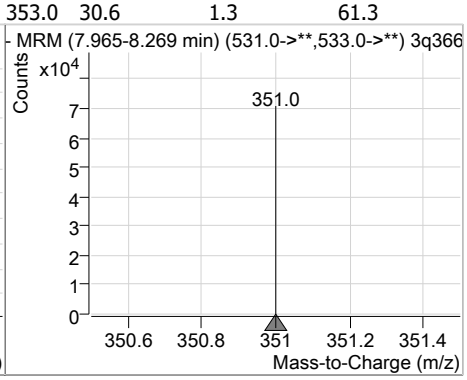




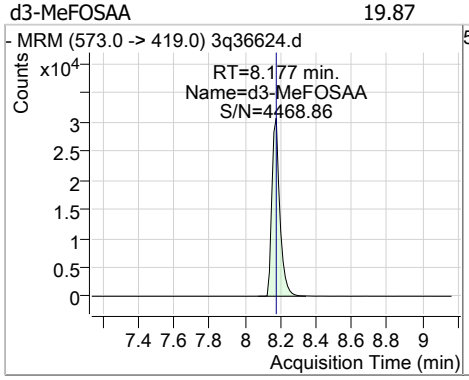
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	18.63	8.03	-0.03	52533	533.0 -> 353.0	30.6	1.3	61.3

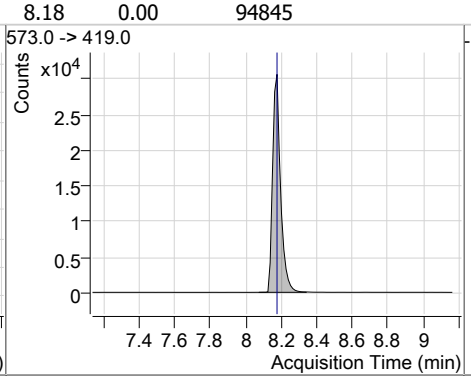


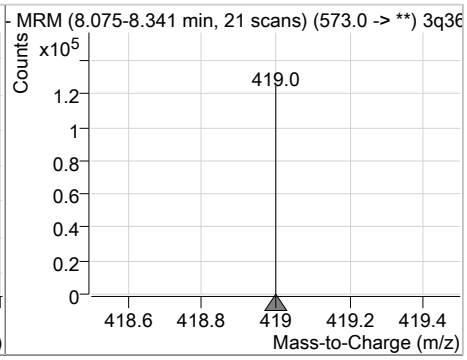




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.87	8.18	0.00	94845				

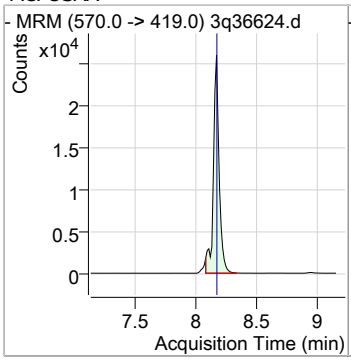


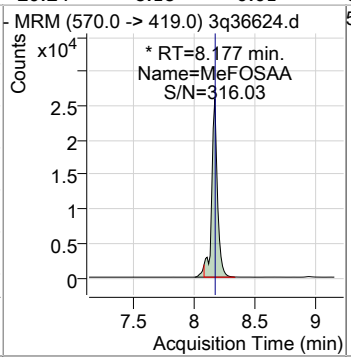


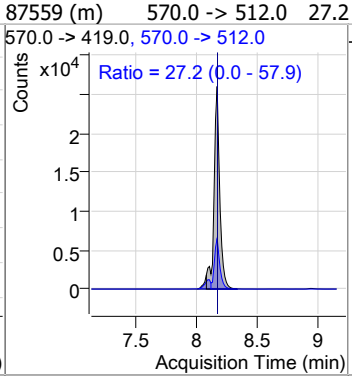


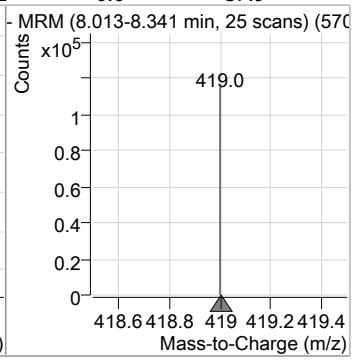
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	20.24	8.18	-0.01	87559 (m)	570.0 -> 512.0	27.2	0.0	57.9

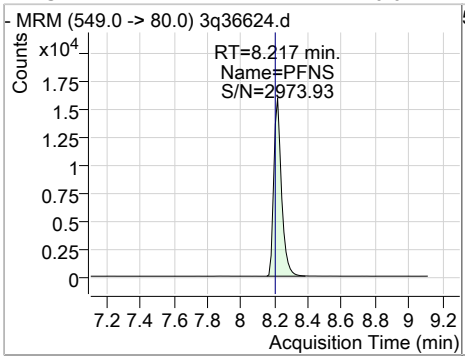


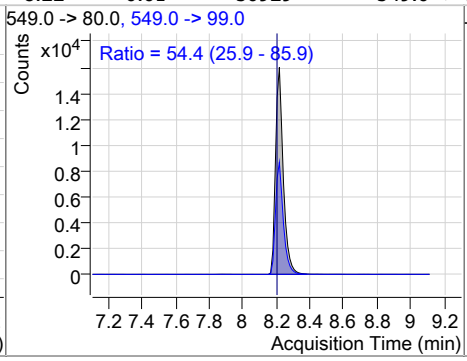


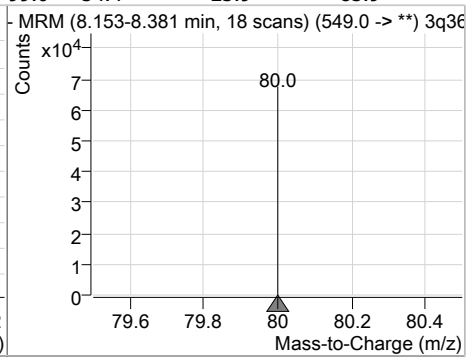




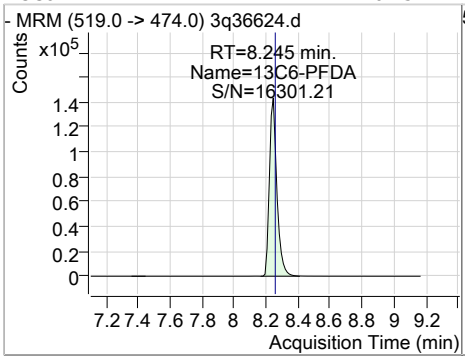
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	20.02	8.22	-0.01	50929	549.0 -> 99.0	54.4	25.9	85.9

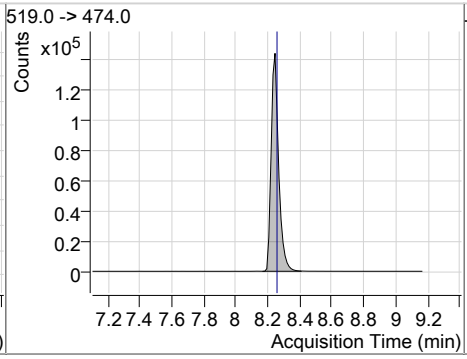


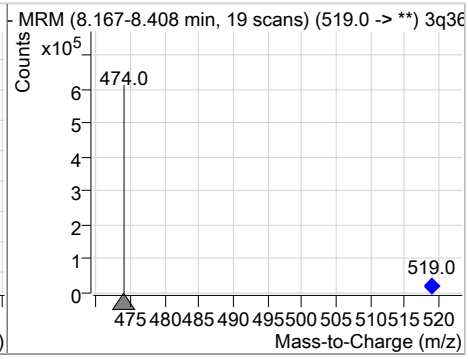




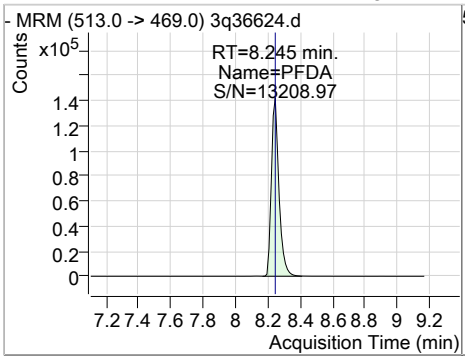
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.25	8.24	-0.01	465411				

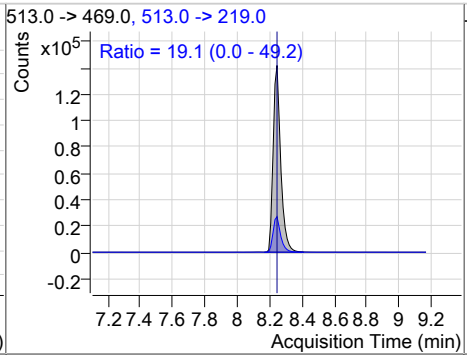


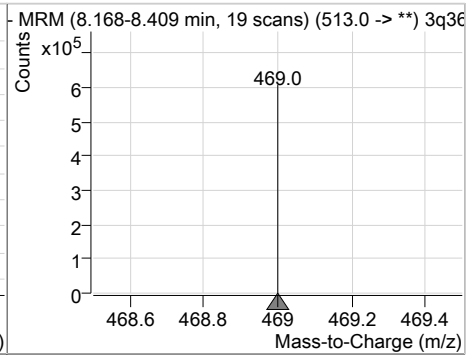




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.12	8.25	-0.01	460598	513.0 -> 219.0	19.1	0.0	49.2

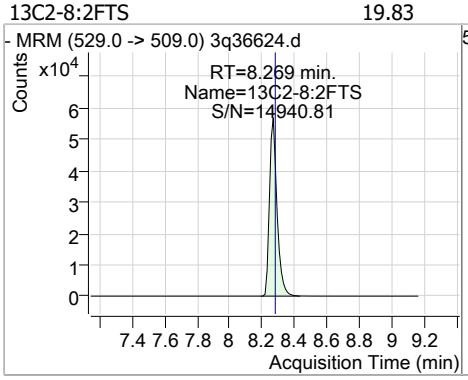


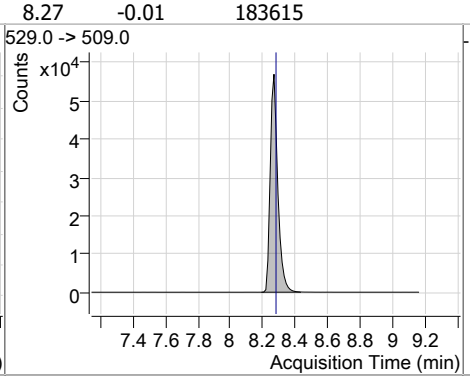


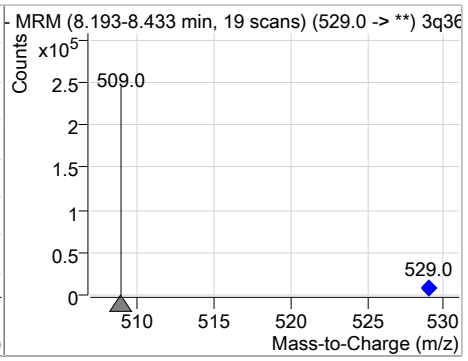


Perfluorinated Compounds by LC/MS/MS

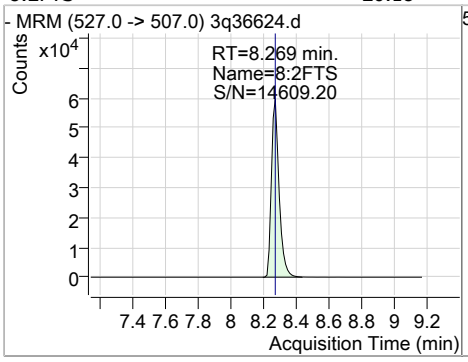
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.83	8.27	-0.01	183615				

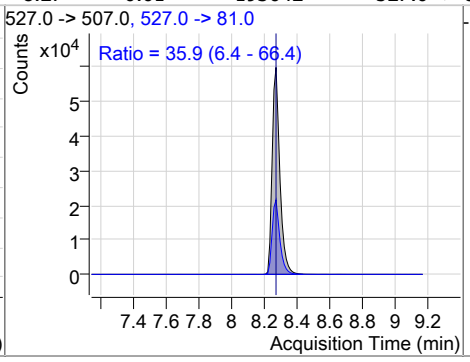


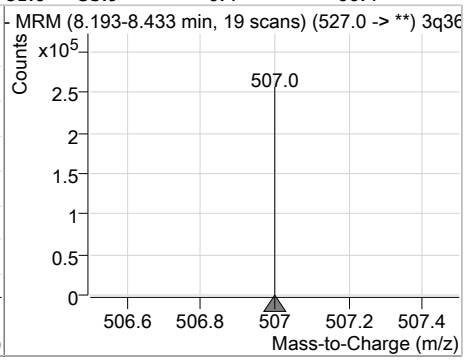




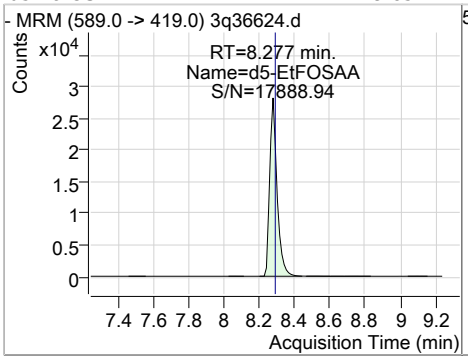
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.18	8.27	-0.01	193642	527.0 -> 81.0	35.9	6.4	66.4

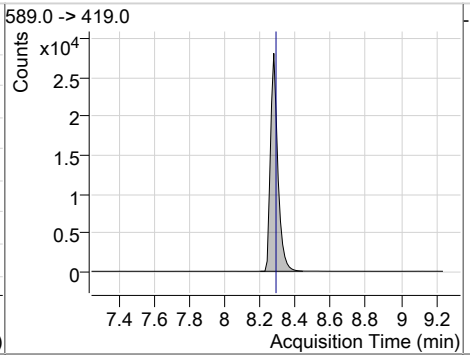


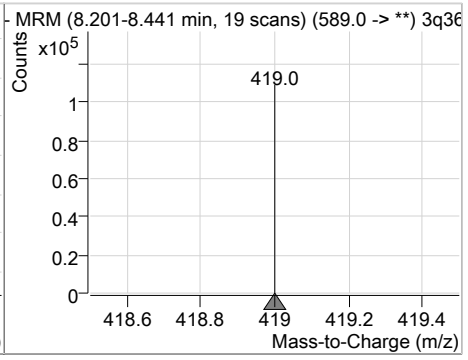




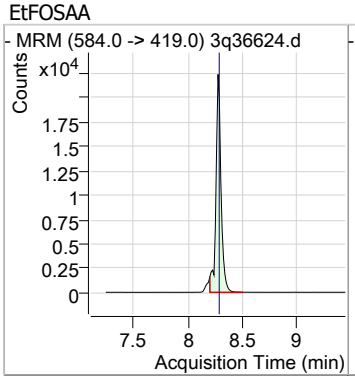
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.85	8.28	-0.01	81668				

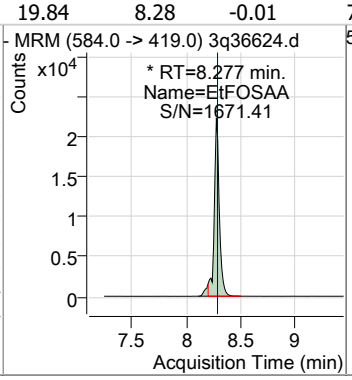


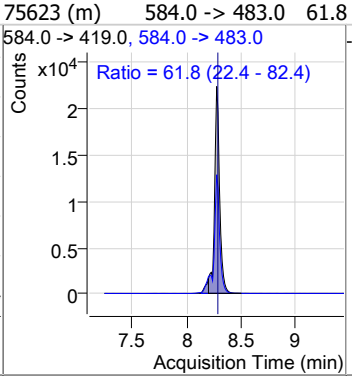


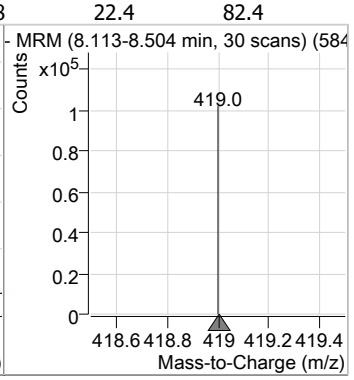


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	19.84	8.28	-0.01	75623 (m)	584.0 -> 483.0	61.8	22.4	82.4



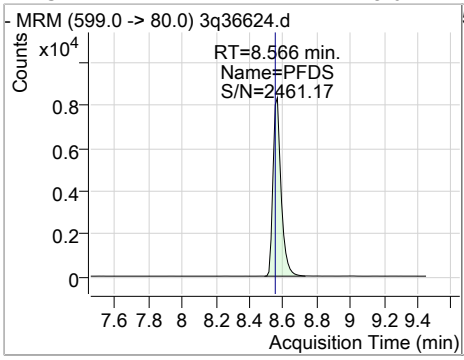


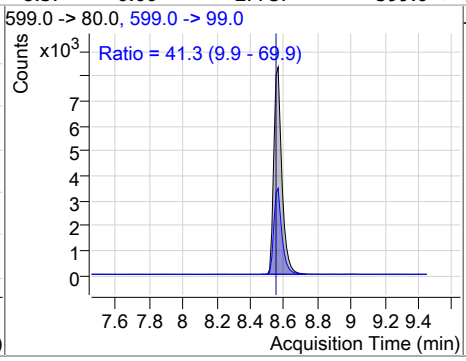


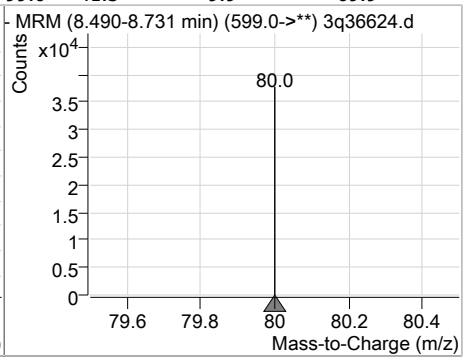


Perfluorinated Compounds by LC/MS/MS

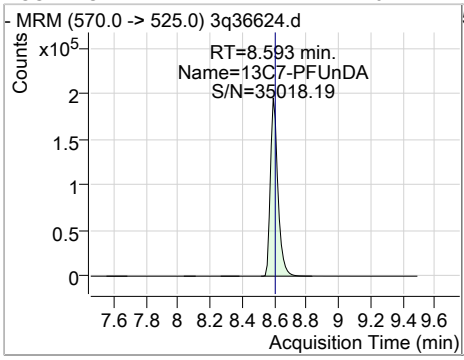
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	19.64	8.57	0.00	27757	599.0 -> 99.0	41.3	9.9	69.9

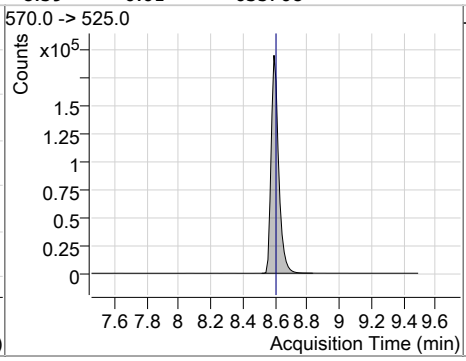


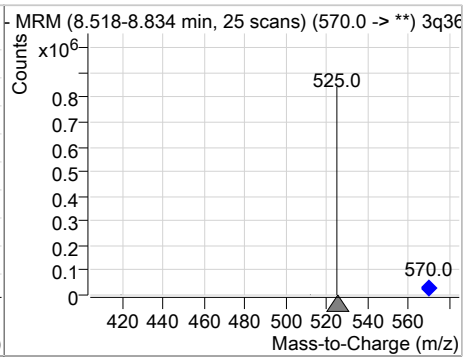




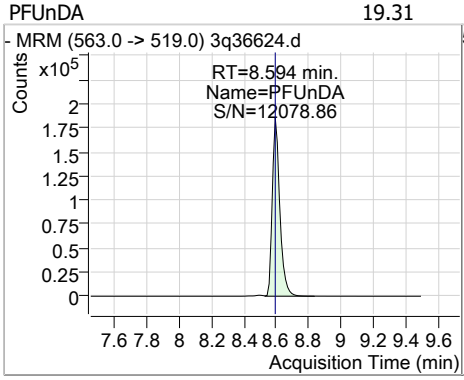
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.11	8.59	-0.01	635708				

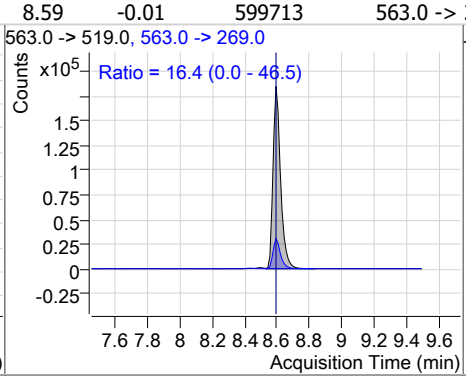


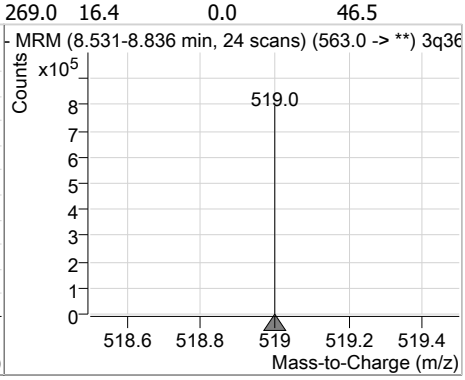




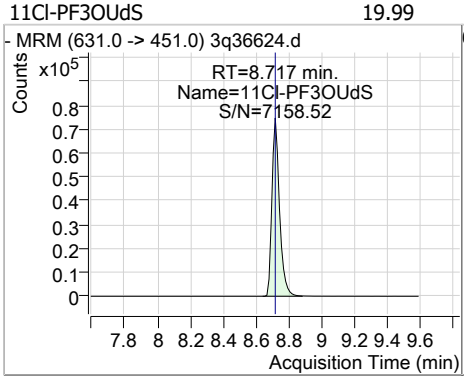
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	19.31	8.59	-0.01	599713	563.0 -> 269.0	16.4	0.0	46.5

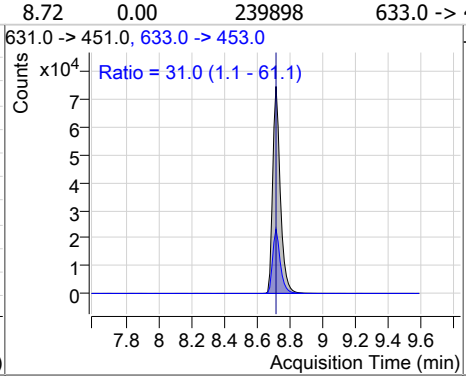


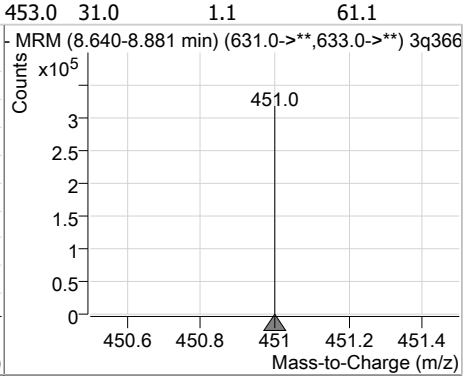




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	19.99	8.72	0.00	239898	633.0 -> 453.0	31.0	1.1	61.1

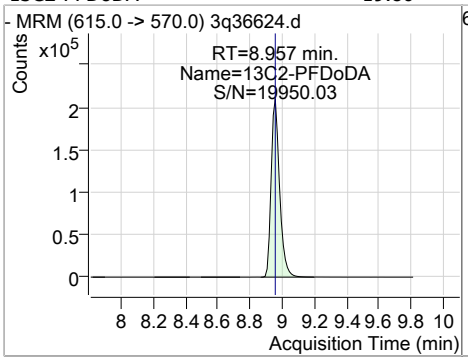


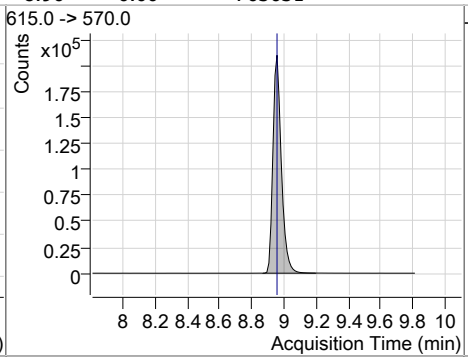


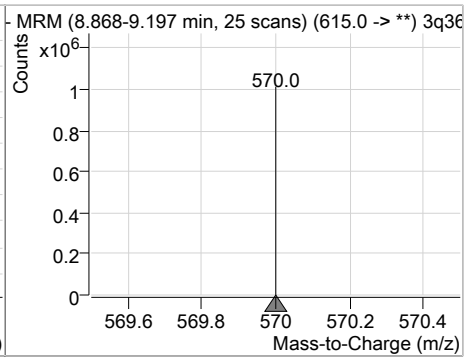


Perfluorinated Compounds by LC/MS/MS

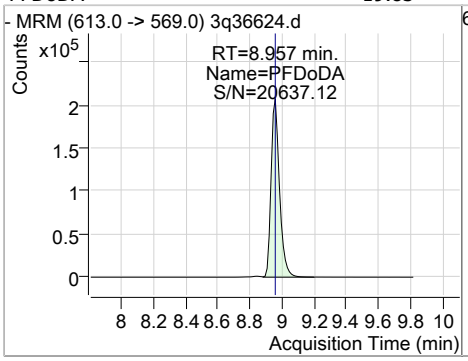
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.80	8.96	0.00	763631				

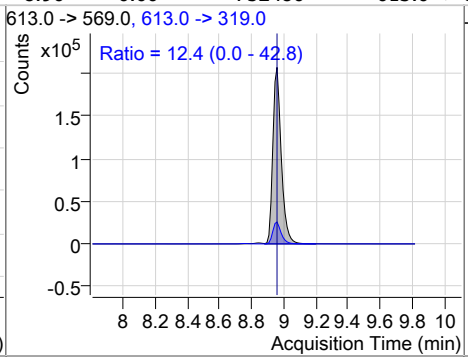


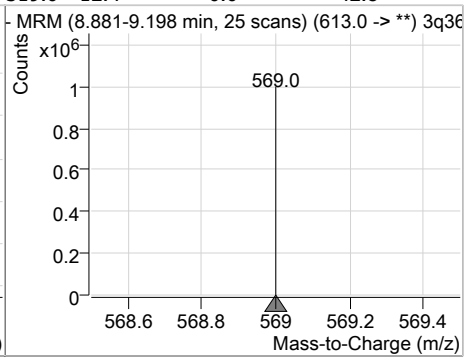




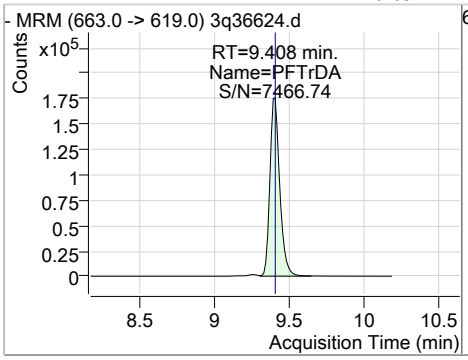
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	19.83	8.96	0.00	752486	613.0 -> 319.0	12.4	0.0	42.8

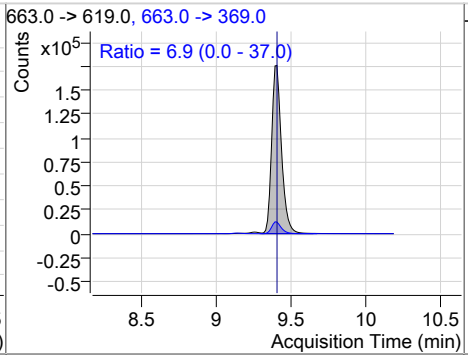


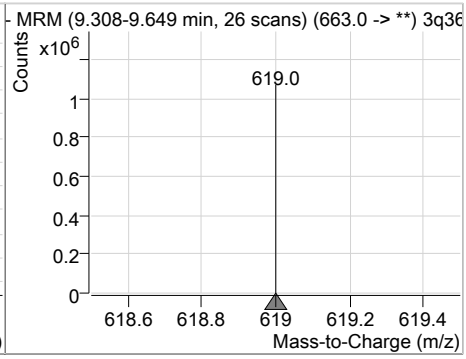




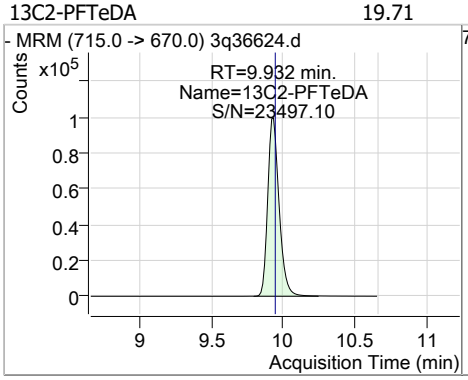
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	20.69	9.41	-0.01	803907	663.0 -> 369.0	6.9	0.0	37.0

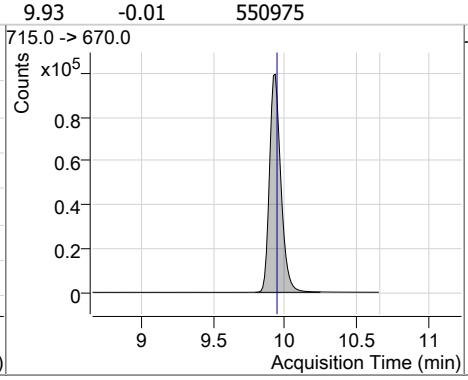


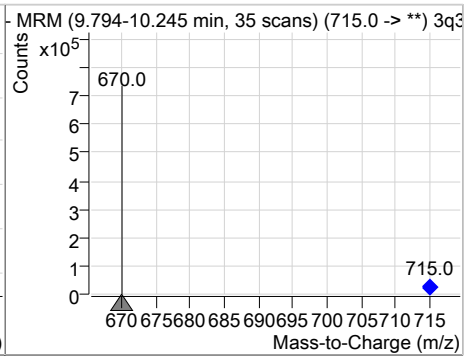




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.71	9.93	-0.01	550975				

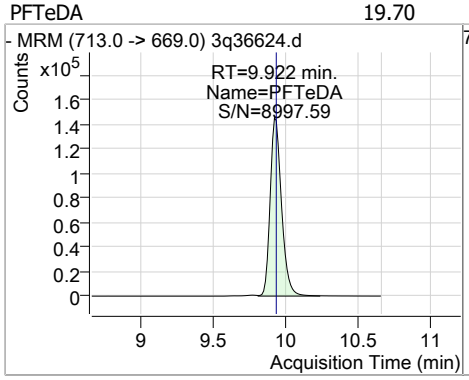


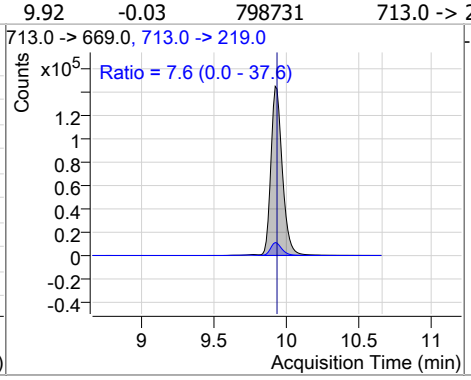


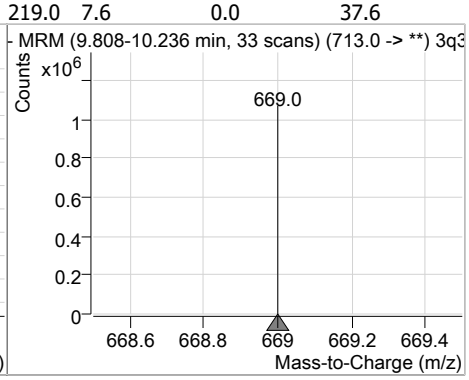


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	19.70	9.92	-0.03	798731	713.0 -> 219.0	7.6	0.0	37.6







Manual Integration Approval Summary

Sample Number: S3Q538-CC537
Lab FileID: 3Q36624.D
Injection Time: 04/14/21 23:28
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/15/21 09:10 Martha Valls
Supervisor approved: 04/15/21 10:01 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.58	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.80	Split peak
MeFOSAA	2355-31-9		8.18	Split peak
EtFOSAA	2991-50-6		8.28	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 04/15/21 10:01

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36636.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/15/2021 2:47:01 AM
Sample Name : cc537-20
Vial : P1-A7
DA Method File : ID_041321_S3Q537.quantmethod.xml
Batch Name : s3q538.batch.bin
Sample Information : op84892,S3Q538,250,,,1,1,water

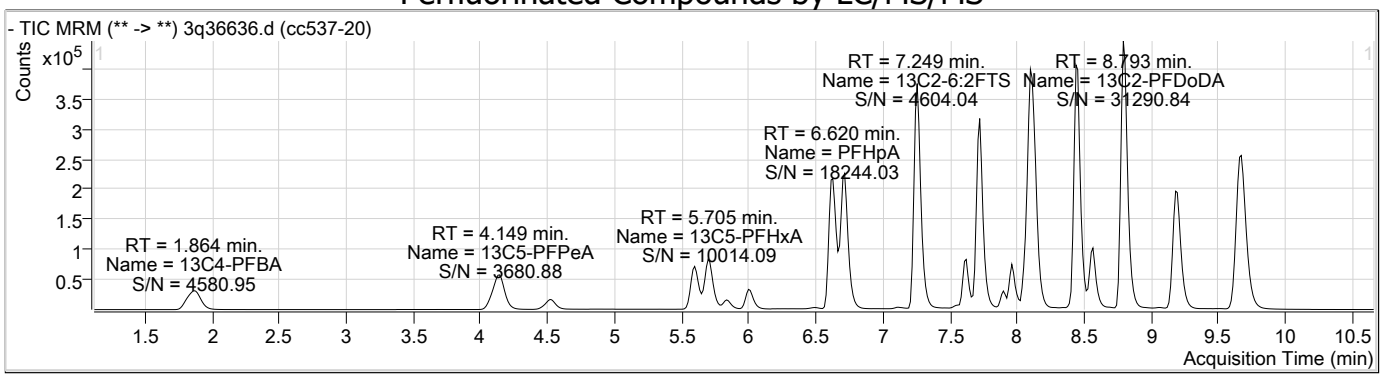
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.864	217.0 -> 172.0	165339	20.00	µg/L	0.025
M5-PFPeA	4.149	268.0 -> 223.0	126194	20.00	µg/L	0.075
M5-PFHxA	5.705	318.0 -> 273.0	196183	20.00	µg/L	0.075
M4-PFHpA	6.620	367.0 -> 322.0	277452	20.00	µg/L	0.013
M8-PFOA	7.263	421.0 -> 376.0	325770	20.00	µg/L	-0.063
M9-PFNA	7.729	472.0 -> 427.0	386121	20.00	µg/L	-0.126
M6-PFDA	8.104	519.0 -> 474.0	494800	20.00	µg/L	-0.153
M7-PFUnDA	8.442	570.0 -> 525.0	645070	20.00	µg/L	-0.164
M2-PFDoDA	8.793	615.0 -> 570.0	747791	20.00	µg/L	-0.164
M2-PFTeDA	9.669	715.0 -> 670.0	528786	20.00	µg/L	-0.275
M8-FOSA	7.627	506.0 -> 78.0	123670	20.00	µg/L	-0.189
M3-PFBS	4.524	302.0 -> 99.0	17330	20.00	µg/L	0.077
M3-PFHxS	6.655	402.0 -> 99.0	24805	20.00	µg/L	0.000
M8-PFOS	7.702	507.0 -> 99.0	39579	20.00	µg/L	-0.139
M2-4:2FTS	5.602	329.0 -> 309.0	121038	20.00	µg/L	0.090
M2-6:2FTS	7.249	429.0 -> 409.0	179657	20.00	µg/L	-0.063
M2-8:2FTS	8.141	529.0 -> 509.0	198847	20.00	µg/L	-0.140
M3-MeFOSAA	7.962	573.0 -> 419.0	100815	20.00	µg/L	-0.215
M3-HFPO-DA	6.008	287.0 -> 169.0	25235	20.00	µg/L	0.063
M5-EtFOSAA	8.062	589.0 -> 419.0	88305	20.00	µg/L	-0.228
System Monitoring Compounds						
13C2-4:2FTS	5.602	329.0 -> 309.0	121038	21.15	µg/L	0.090
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.7%		
13C2-6:2FTS	7.249	429.0 -> 409.0	179657	21.25	µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.2%		
13C2-8:2FTS	8.141	529.0 -> 509.0	198847	21.48	µg/L	-0.140
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.4%		
13C2-PFDoDA	8.793	615.0 -> 570.0	747791	19.39	µg/L	-0.164
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.9%		
13C2-PFTeDA	9.669	715.0 -> 670.0	528786	18.91	µg/L	-0.275
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.6%		
13C3-PFBS	4.524	302.0 -> 99.0	17330	21.49	µg/L	0.077
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.5%		
13C3-PFHxS	6.655	402.0 -> 99.0	24805	21.78	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.9%		
13C4-PFBA	1.864	217.0 -> 172.0	165339	21.10	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.5%		
13C4-PFHpA	6.620	367.0 -> 322.0	277452	21.40	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.0%		
13C5-PFHxA	5.705	318.0 -> 273.0	196183	21.44	µg/L	0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.2%		
13C5-PFPeA	4.149	268.0 -> 223.0	126194	21.49	µg/L	0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.5%		
13C6-PFDA	8.104	519.0 -> 474.0	494800	21.53	µg/L	-0.153
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.7%		

Perfluorinated Compounds by LC/MS/MS

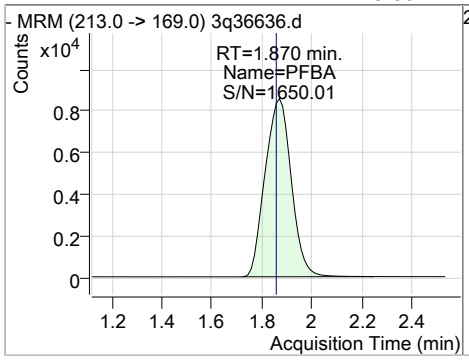
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.442	570.0 -> 525.0	645070	20.41	µg/L		-0.164
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.0%			
13C8-FOSA	7.627	506.0 -> 78.0	123670	23.29	µg/L		-0.189
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 116.5%			
13C8-PFOA	7.263	421.0 -> 376.0	325770	21.40	µg/L		-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.0%			
13C8-PFOS	7.702	507.0 -> 99.0	39579	22.41	µg/L		-0.139
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 112.1%			
13C9-PFNA	7.729	472.0 -> 427.0	386121	21.87	µg/L		-0.126
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.3%			
d3-MeFOSAA	7.962	573.0 -> 419.0	100815	21.12	µg/L		-0.215
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.6%			
13C3-HFPO-DA	6.008	287.0 -> 169.0	25232	20.80	µg/L		0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.0%			
d5-EtFOSAA	8.062	589.0 -> 419.0	88260	21.45	µg/L	m	-0.228
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.3%			
Target Compounds							**QValue**
4:2FTS	5.603	327.0 -> 307.0	133723	20.44	µg/L		100
6:2FTS	7.250	427.0 -> 407.0	194466	20.10	µg/L		99
8:2FTS	8.142	527.0 -> 507.0	210117	20.22	µg/L		98
EtFOSAA	8.062	584.0 -> 419.0	82619	20.04	µg/L	m	92
FOSA	7.628	498.0 -> 78.0	125891	19.88	µg/L		100
MeFOSAA	7.962	570.0 -> 419.0	94456	20.54	µg/L	m	99
PFBA	1.870	213.0 -> 169.0	62015	19.58	µg/L		100
PFBS	4.525	299.0 -> 80.0	52835	19.93	µg/L		100
PFDA	8.105	513.0 -> 469.0	482595	18.85	µg/L		100
PFDoDA	8.793	613.0 -> 569.0	732308	19.71	µg/L		99
PFDS	8.415	599.0 -> 80.0	28738	20.04	µg/L		98
PFHpA	6.620	363.0 -> 319.0	496395	19.72	µg/L		100
PFHpS	7.261	449.0 -> 80.0	57276	19.65	µg/L		100
PFHxA	5.706	313.0 -> 269.0	135109	19.68	µg/L		99
PFHxS	6.655	399.0 -> 80.0	55734	19.66	µg/L	m	95
PFNA	7.729	463.0 -> 419.0	455284	19.72	µg/L		99
PFNS	8.077	549.0 -> 80.0	53709	19.00	µg/L		98
PFOA	7.263	413.0 -> 369.0	349174	19.83	µg/L		99
PFOS	7.702	499.0 -> 80.0	71968	19.48	µg/L	m	83
PFPeA	4.152	263.0 -> 219.0	239007	20.02	µg/L		100
PFPeS	5.839	349.0 -> 80.0	41687	20.30	µg/L		100
PFTeDA	9.670	713.0 -> 669.0	764021	19.64	µg/L		100
PFTrDA	9.182	663.0 -> 619.0	785167	21.06	µg/L		100
PFUnDA	8.443	563.0 -> 519.0	619453	19.65	µg/L		99
11Cl-PF3OUdS	8.565	631.0 -> 451.0	246953	21.02	µg/L		99
9Cl-PF3ONS	7.902	531.0 -> 351.0	57123	19.05	µg/L		99
ADONA	6.722	377.0 -> 251.0	640845	19.71	µg/L		100
HFPO-DA	6.004	329.0 -> 169.0	91357	19.98	µg/L		100

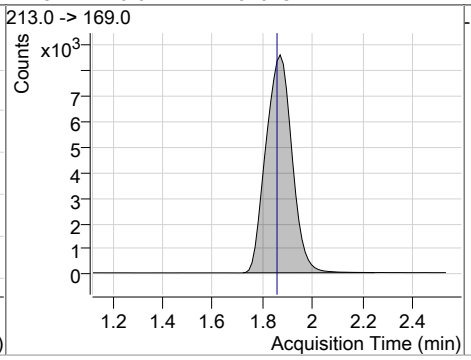
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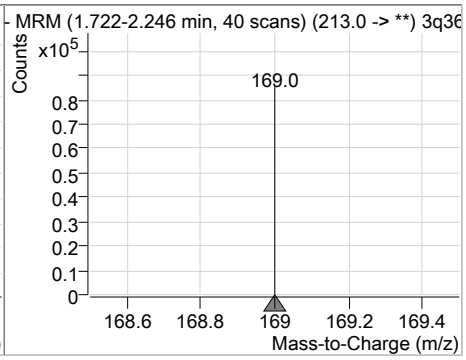
Perfluorinated Compounds by LC/MS/MS



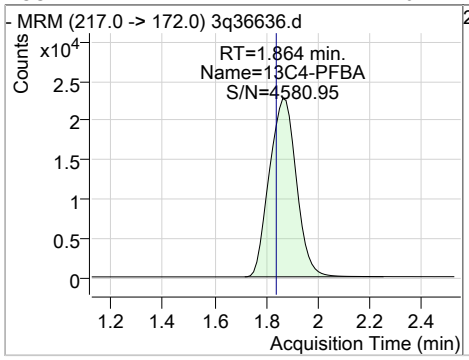
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.58	1.87	0.04	62015				

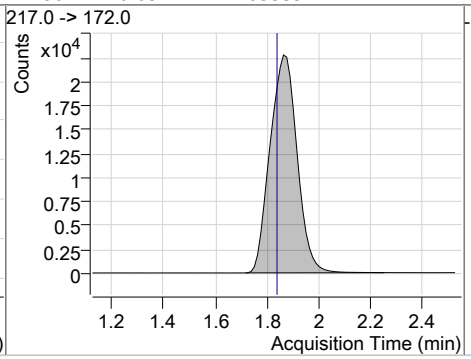


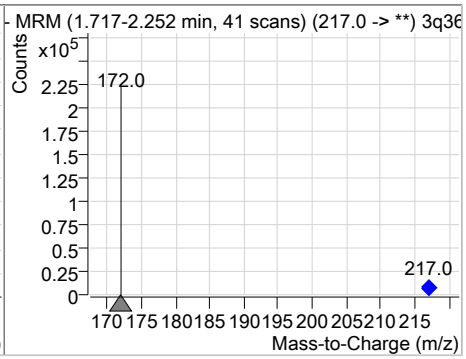




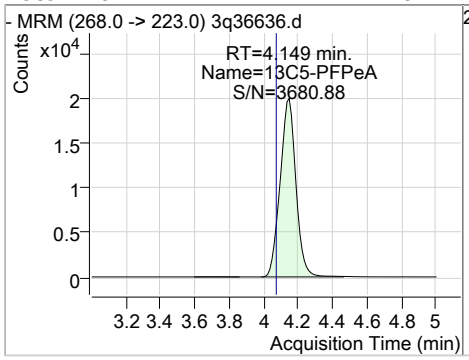
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	21.10	1.86	0.03	165339				

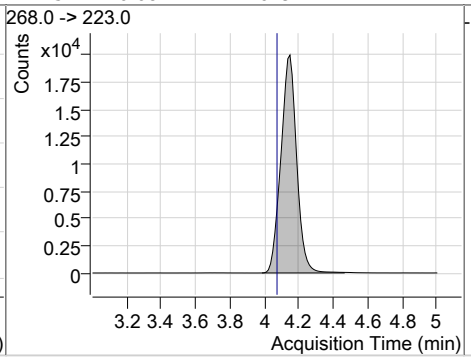


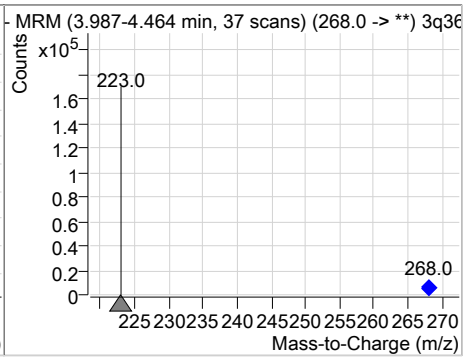




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	21.49	4.15	0.08	126194				

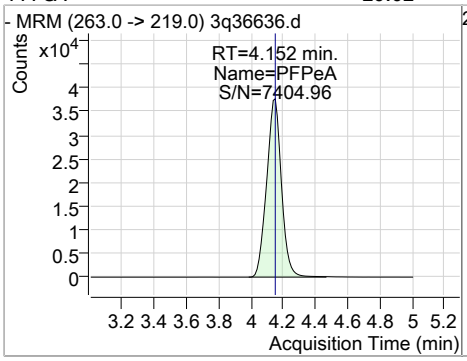


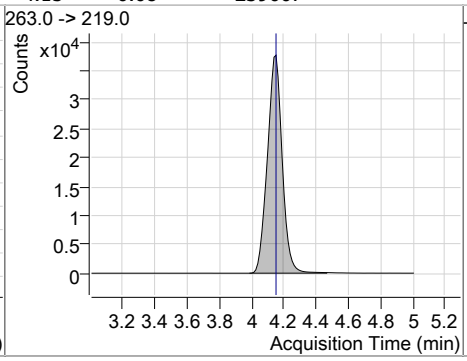


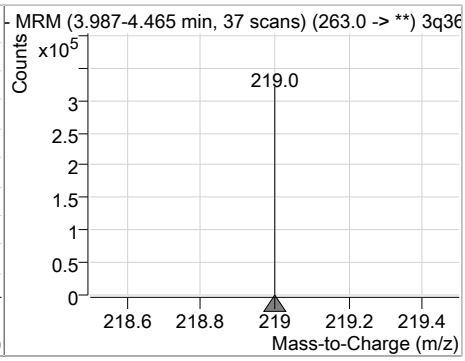


Perfluorinated Compounds by LC/MS/MS

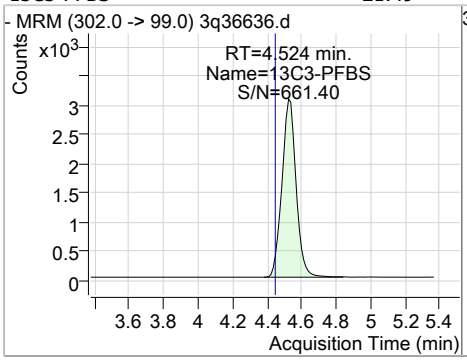
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	20.02	4.15	0.08	239007				

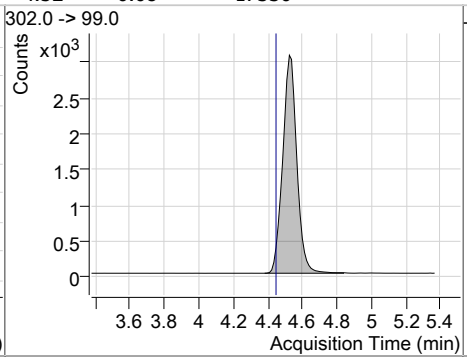


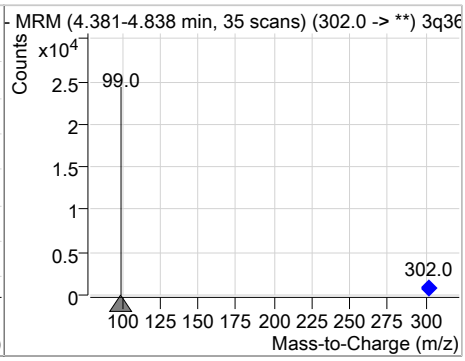




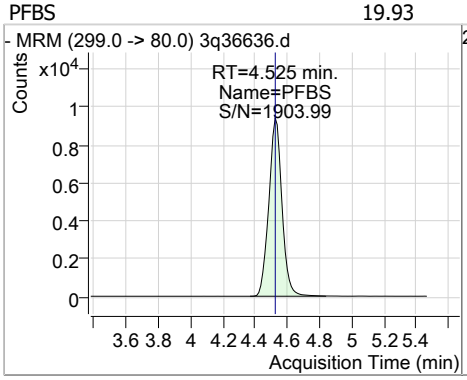
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	21.49	4.52	0.08	17330				

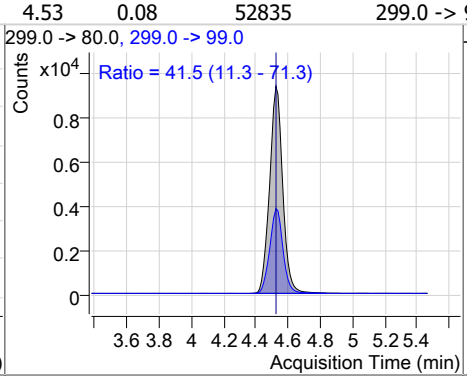


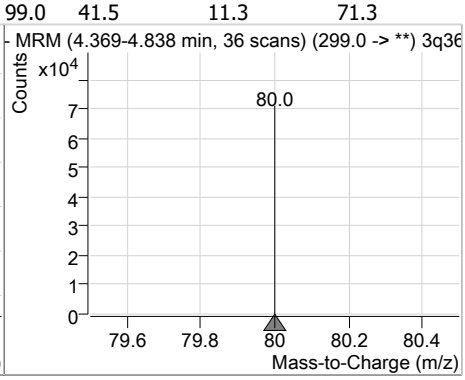




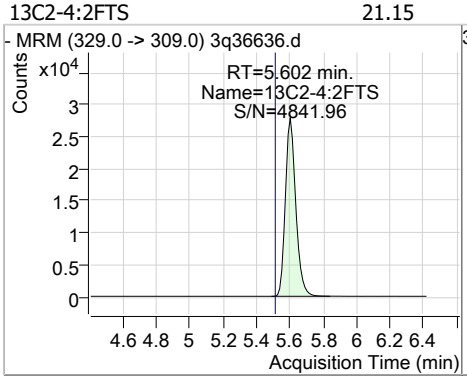
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.93	4.53	0.08	52835	299.0 -> 99.0	41.5	11.3	71.3

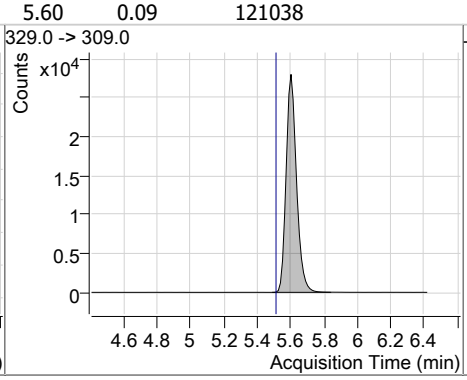


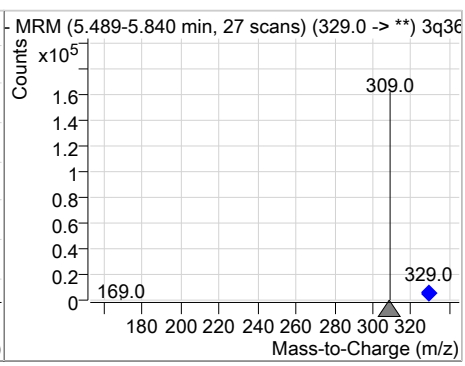




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	21.15	5.60	0.09	121038				

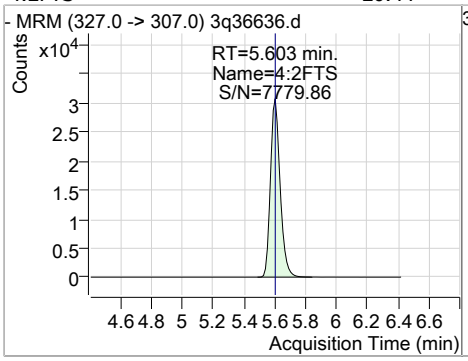


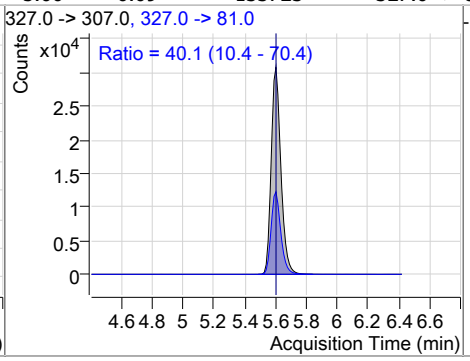


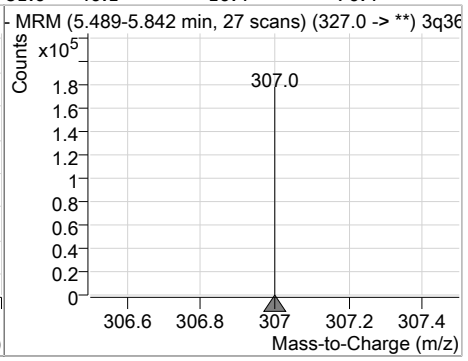


Perfluorinated Compounds by LC/MS/MS

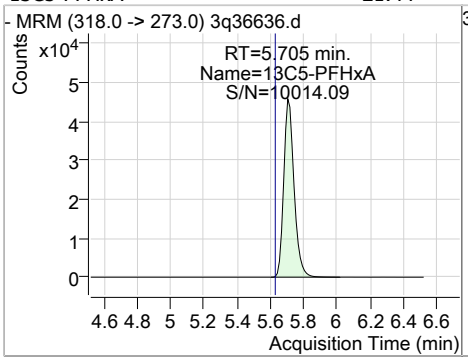
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.44	5.60	0.09	133723	327.0 -> 81.0	40.1	10.4	70.4

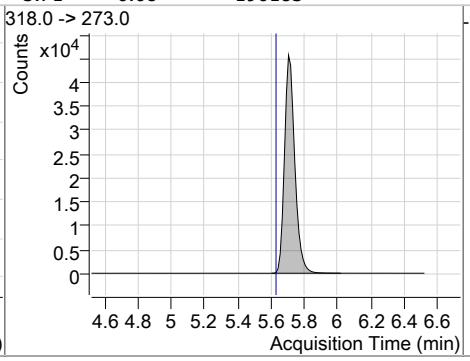


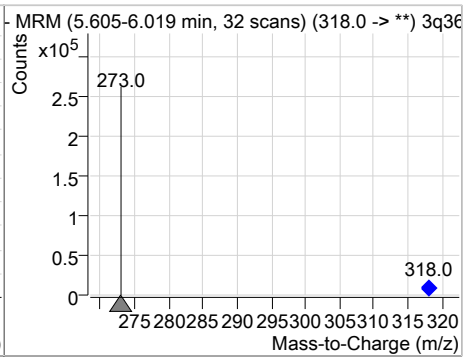




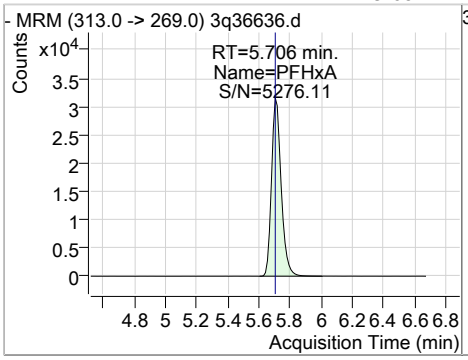
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	21.44	5.71	0.08	196183				

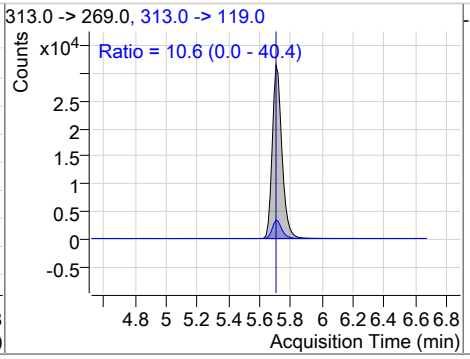


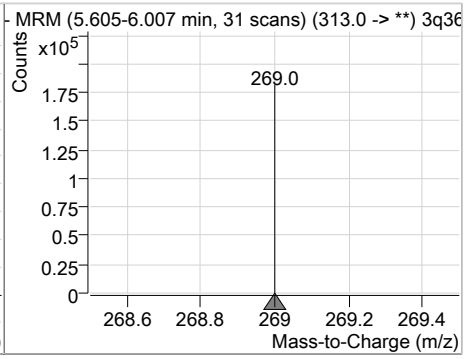




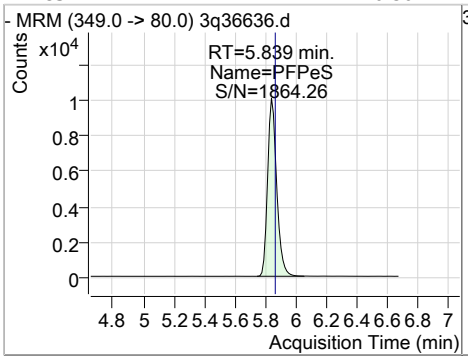
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.68	5.71	0.08	135109	313.0 -> 119.0	10.6	0.0	40.4

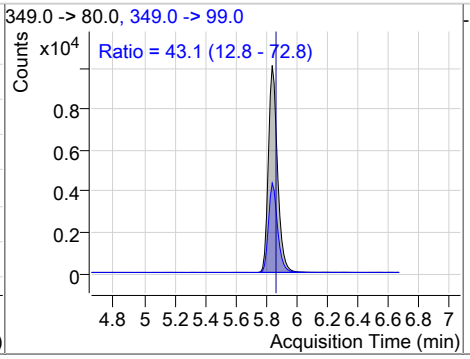


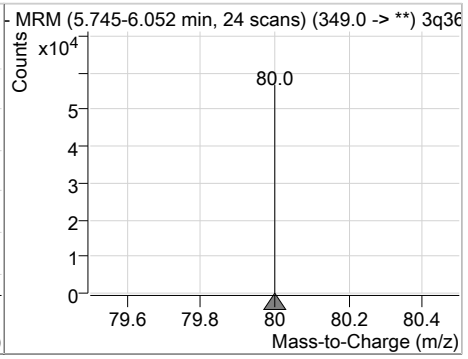




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	20.30	5.84	0.08	41687	349.0 -> 99.0	43.1	12.8	72.8

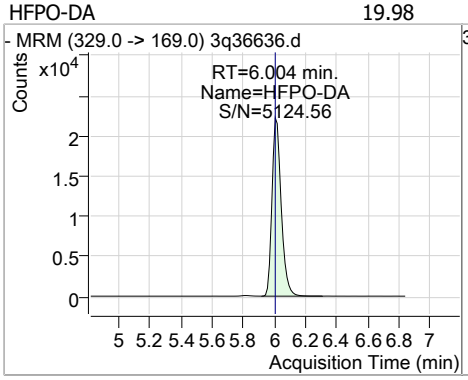


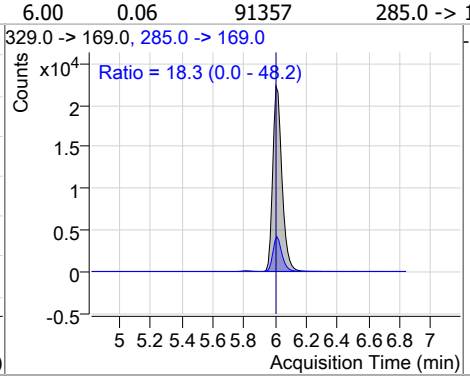


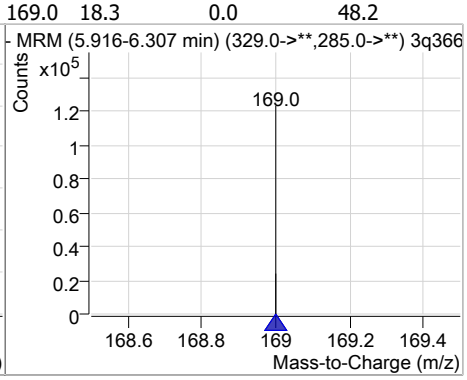


Perfluorinated Compounds by LC/MS/MS

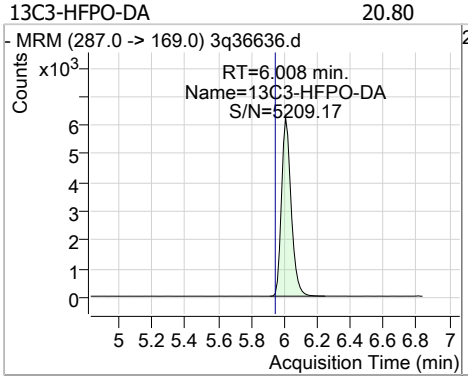
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	19.98	6.00	0.06	91357	285.0 -> 169.0	18.3	0.0	48.2

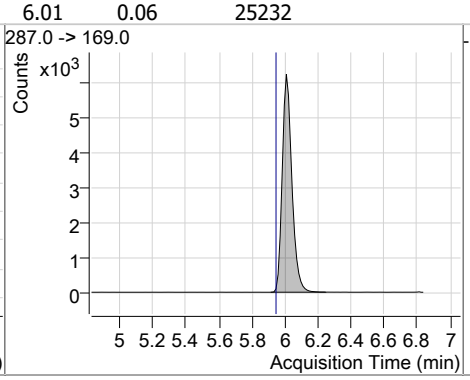


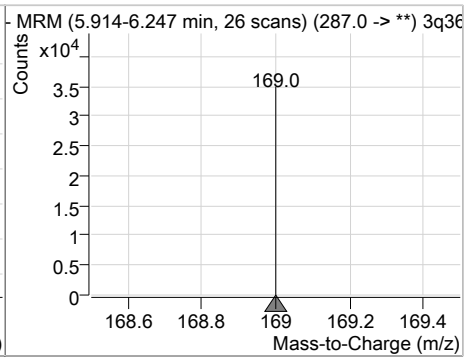




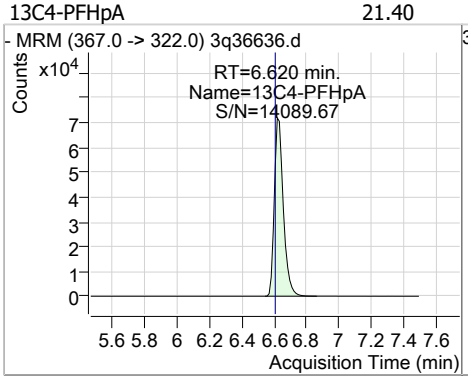
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.80	6.01	0.06	25232				

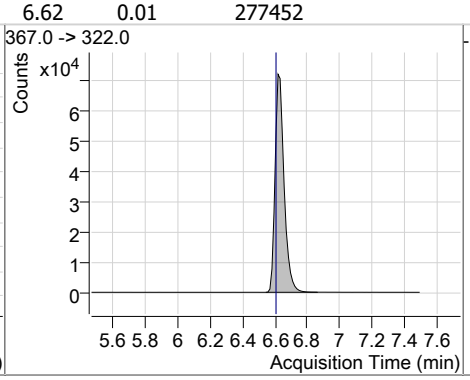


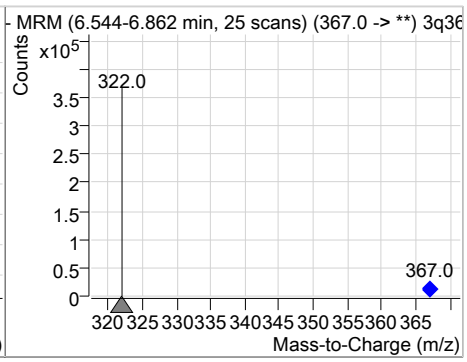




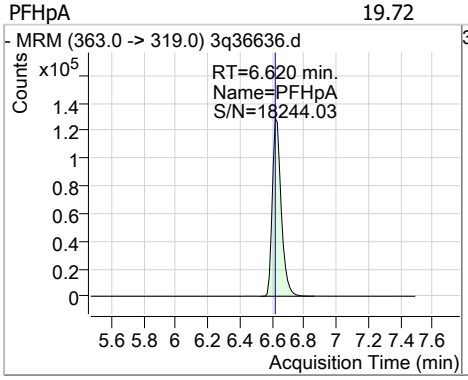
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	21.40	6.62	0.01	277452				

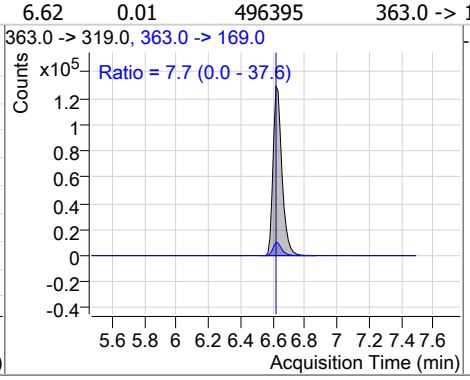


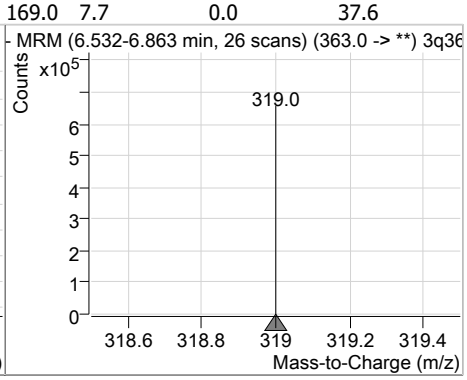




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	19.72	6.62	0.01	496395	363.0 -> 169.0	7.7	0.0	37.6

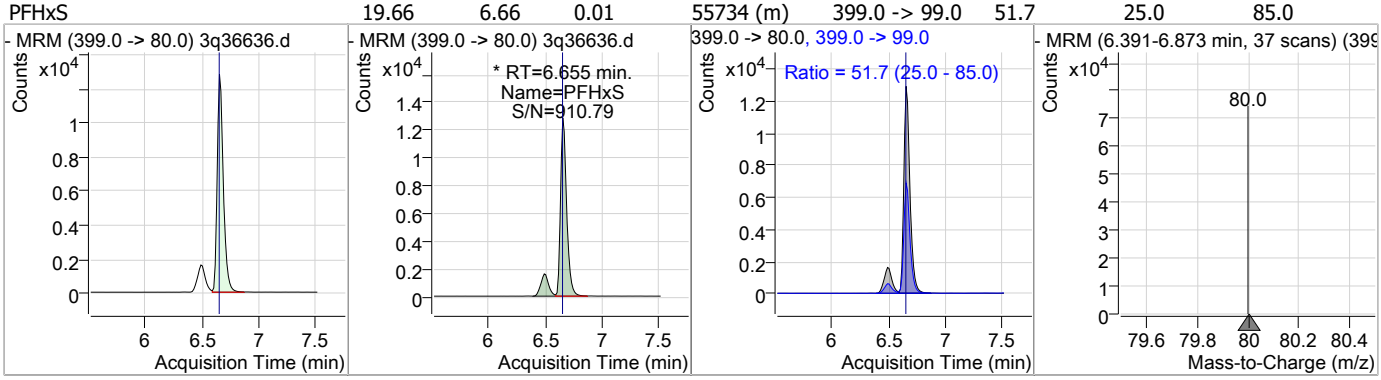




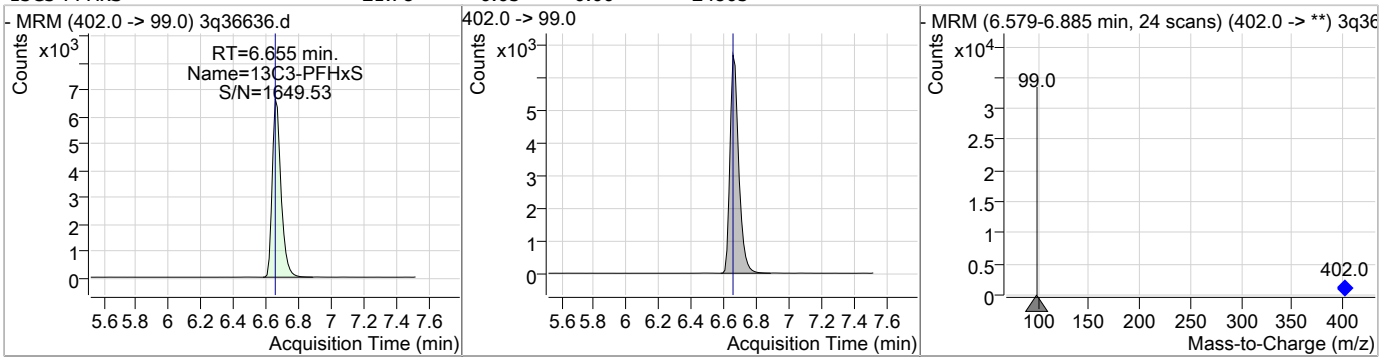


Perfluorinated Compounds by LC/MS/MS

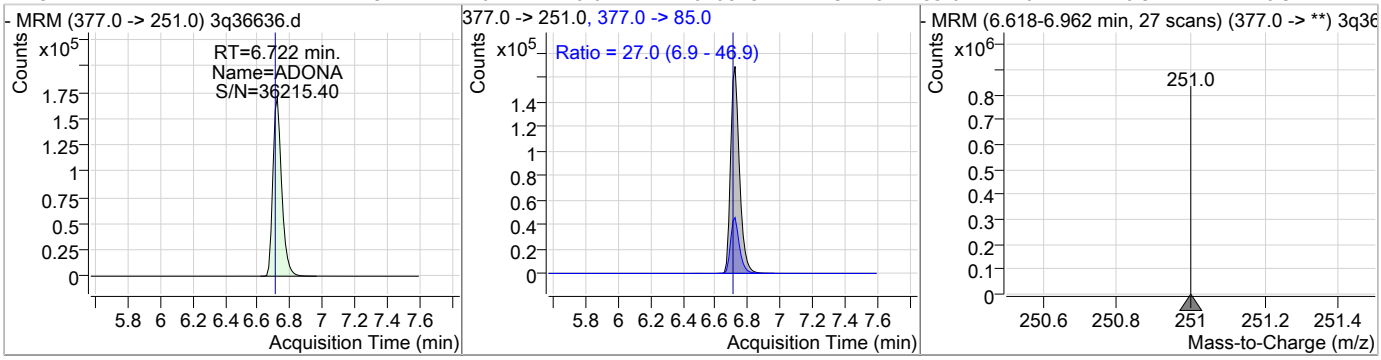
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	19.66	6.66	0.01	55734 (m)	399.0 -> 99.0	51.7	25.0	85.0



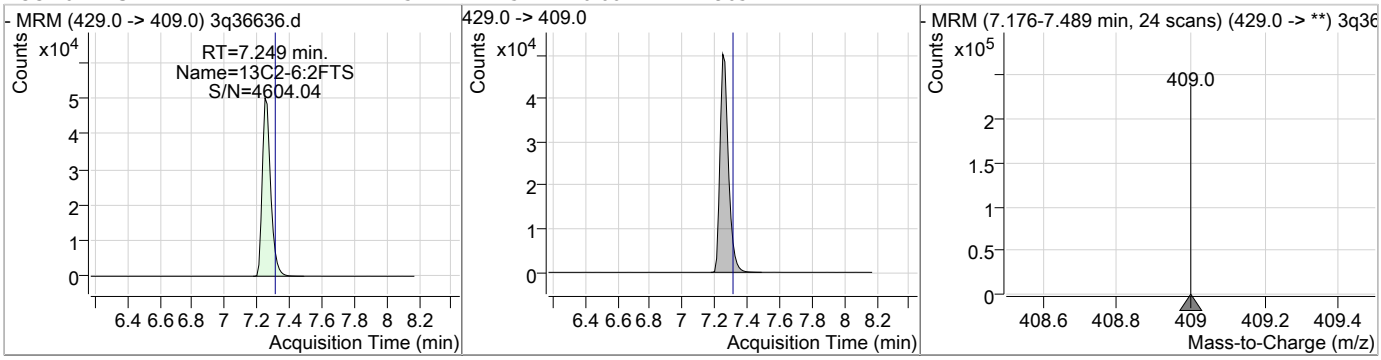
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	21.78	6.65	0.00	24805				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	19.71	6.72	0.01	640845	377.0 -> 85.0	27.0	6.9	46.9

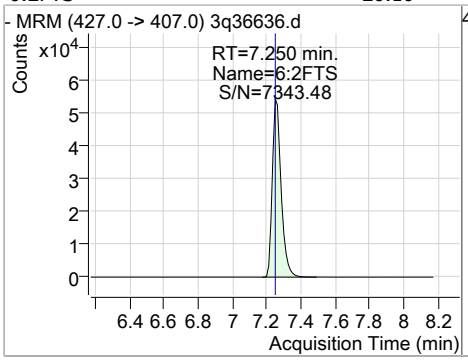


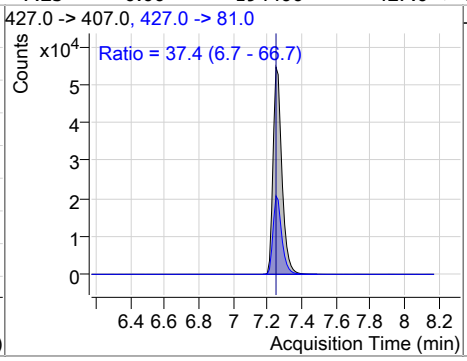
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	21.25	7.25	-0.06	179657				

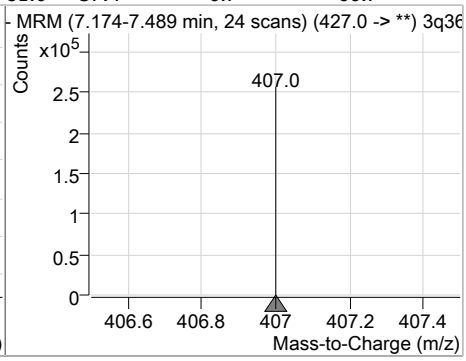


Perfluorinated Compounds by LC/MS/MS

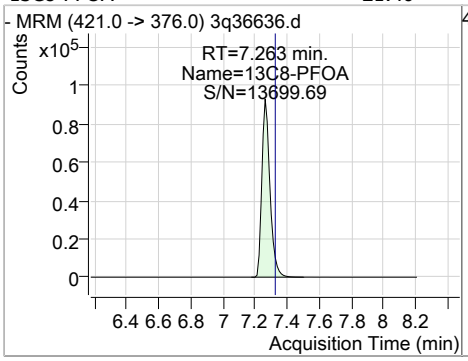
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	20.10	7.25	-0.06	194466	427.0 -> 81.0	37.4	6.7	66.7

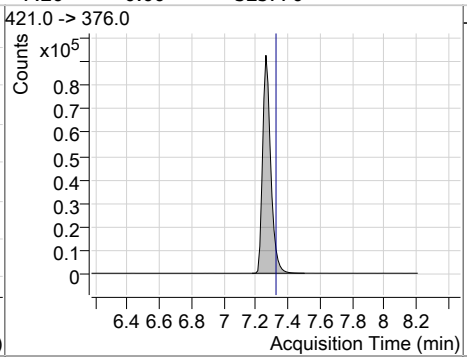


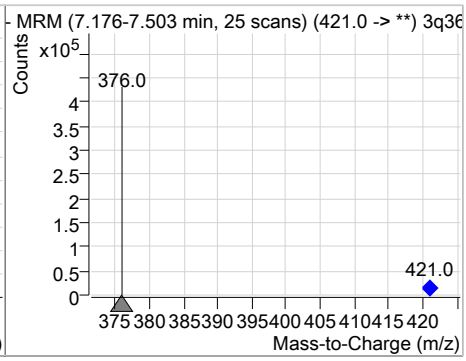




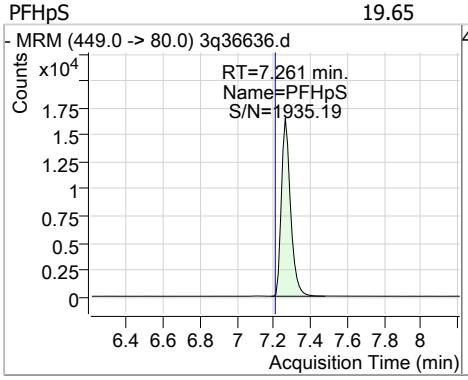
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	21.40	7.26	-0.06	325770				

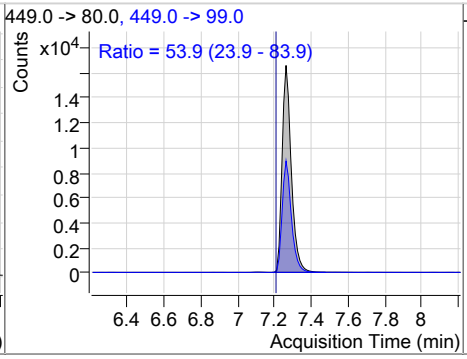


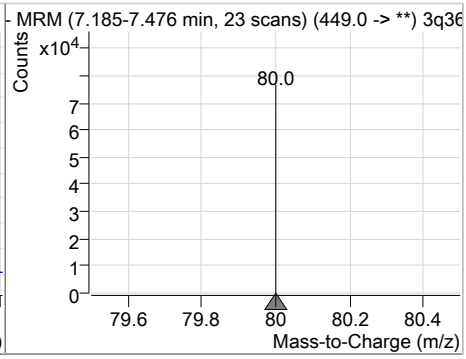




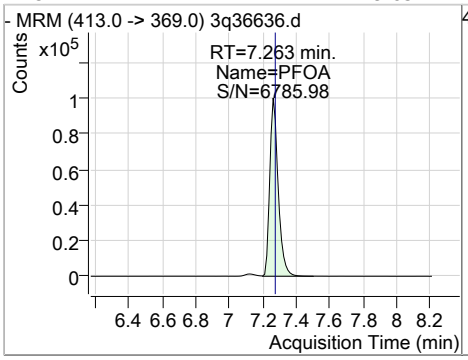
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	19.65	7.26	-0.08	57276	449.0 -> 99.0	53.9	23.9	83.9

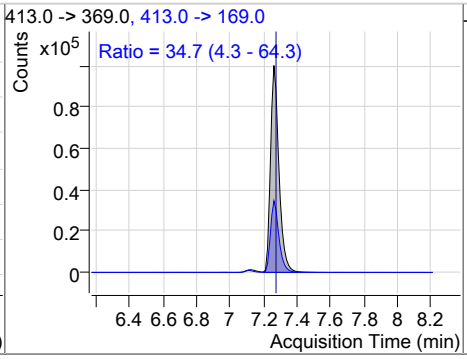


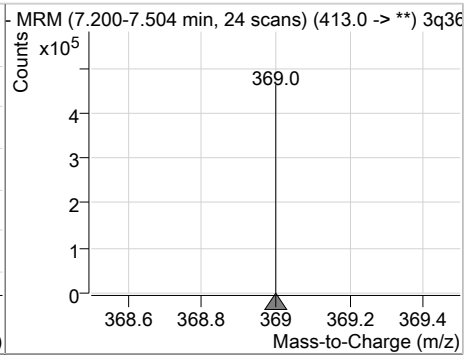




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.83	7.26	-0.08	349174	413.0 -> 169.0	34.7	4.3	64.3

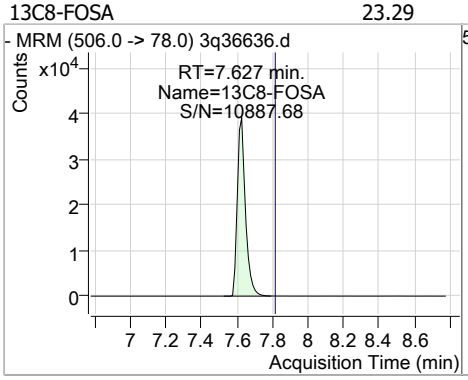


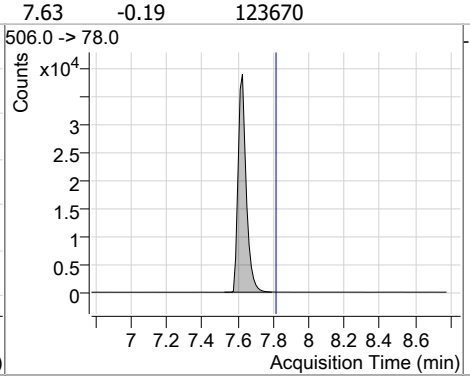


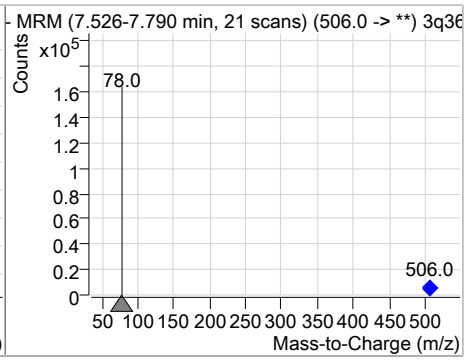


Perfluorinated Compounds by LC/MS/MS

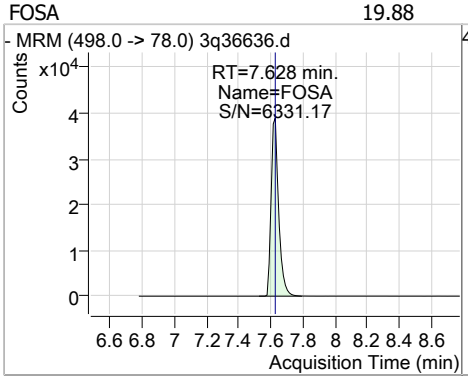
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	23.29	7.63	-0.19	123670				

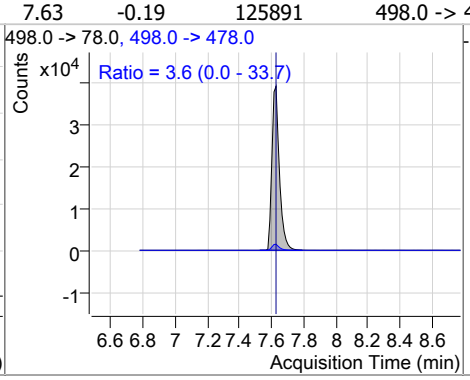


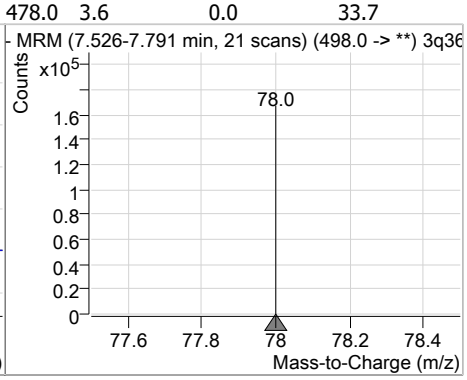




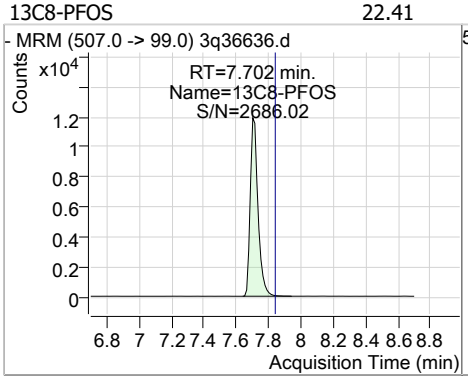
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	19.88	7.63	-0.19	125891	498.0 -> 478.0	3.6	0.0	33.7

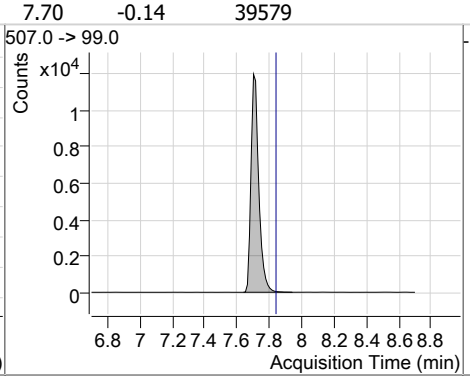


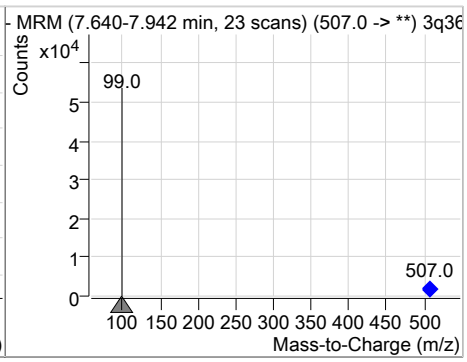




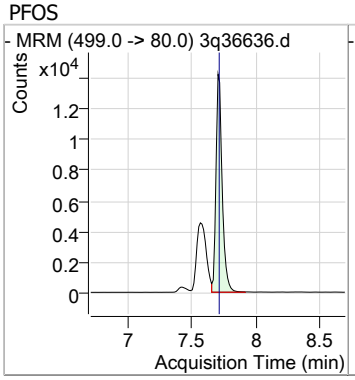
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	22.41	7.70	-0.14	39579				

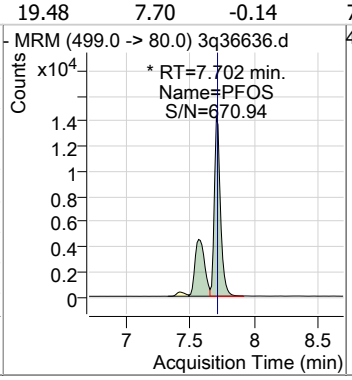


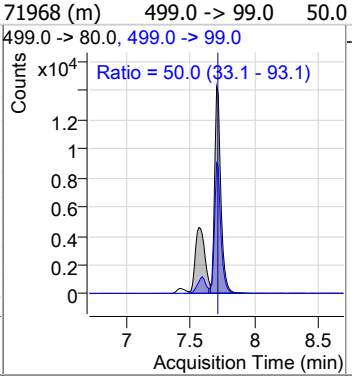


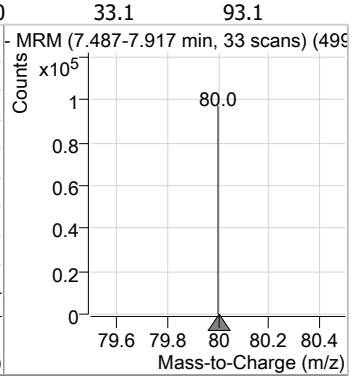


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.48	7.70	-0.14	71968 (m)	499.0 -> 99.0	50.0	33.1	93.1



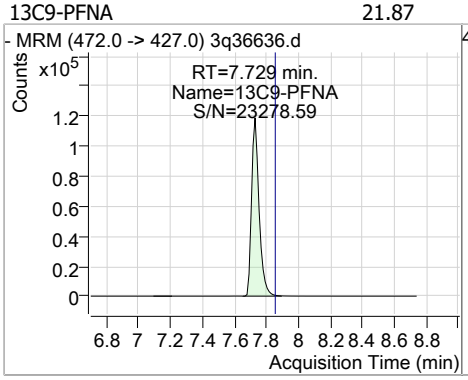


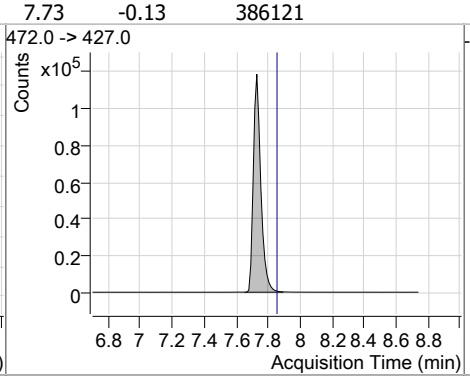


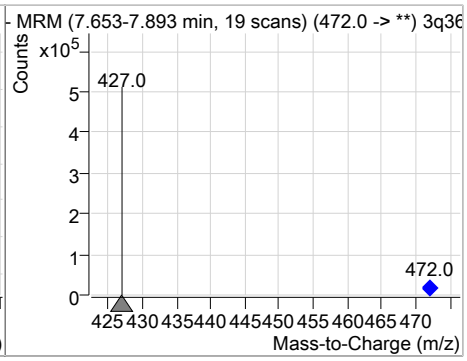


Perfluorinated Compounds by LC/MS/MS

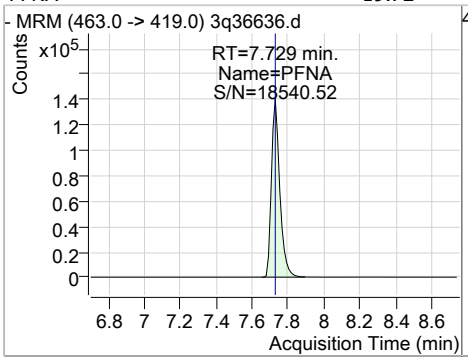
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	21.87	7.73	-0.13	386121				

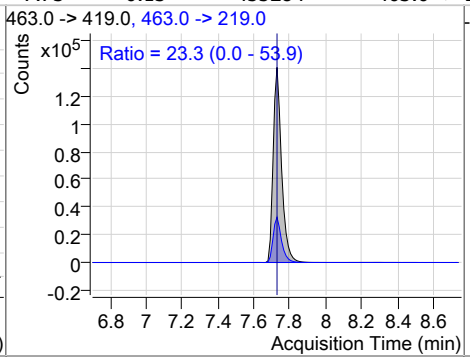


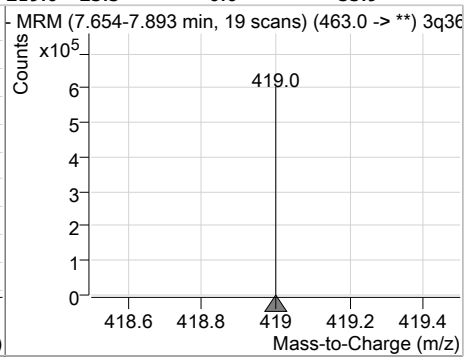




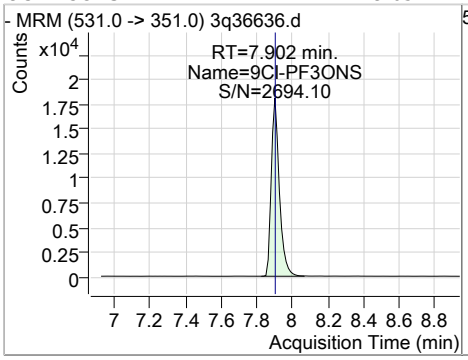
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.72	7.73	-0.13	455284	463.0 -> 219.0	23.3	0.0	53.9

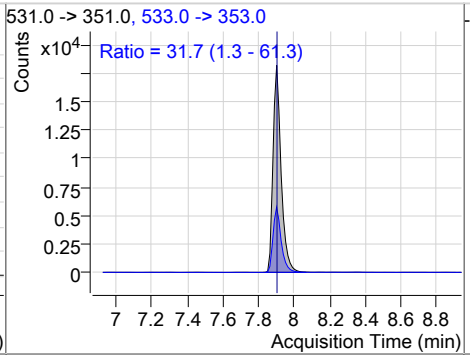


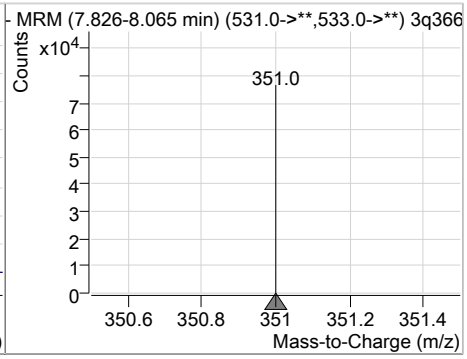




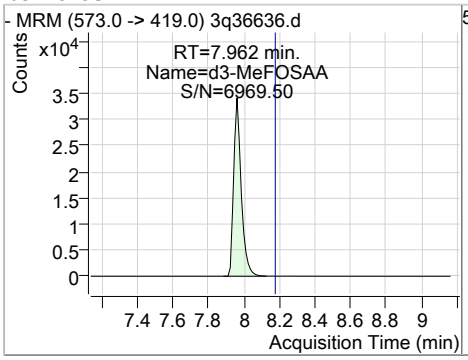
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	19.05	7.90	-0.15	57123	533.0 -> 353.0	31.7	1.3	61.3

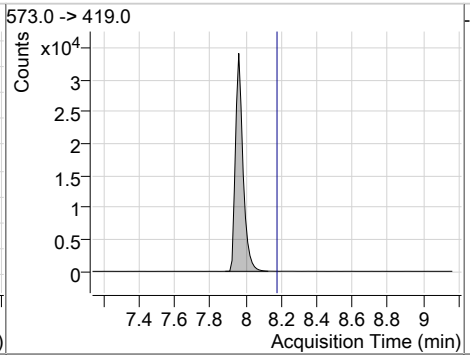


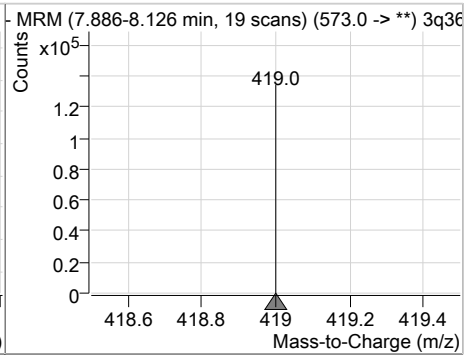




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	21.12	7.96	-0.21	100815				

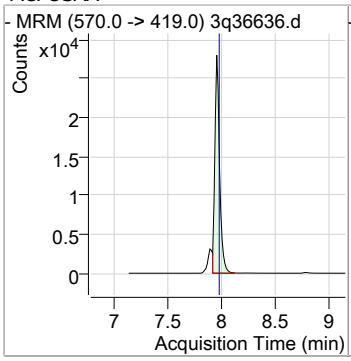


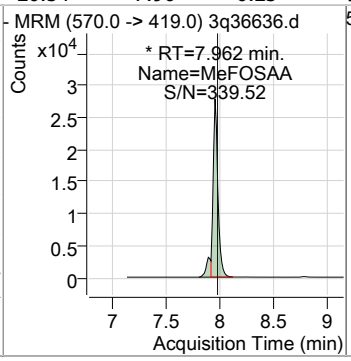


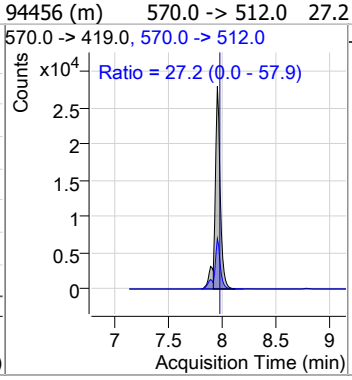


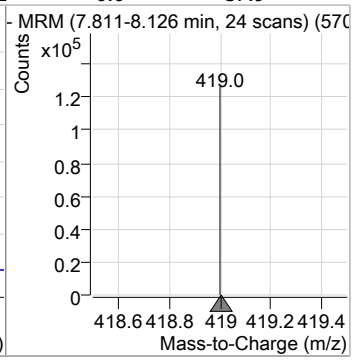
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	20.54	7.96	-0.23	94456 (m)	570.0 -> 512.0	27.2	0.0	57.9

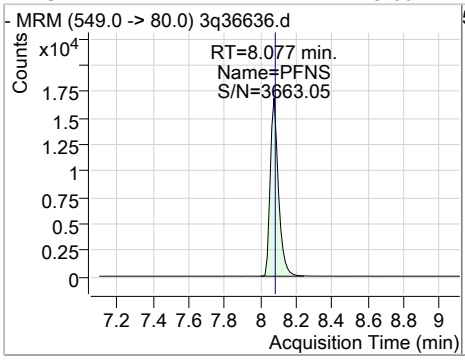


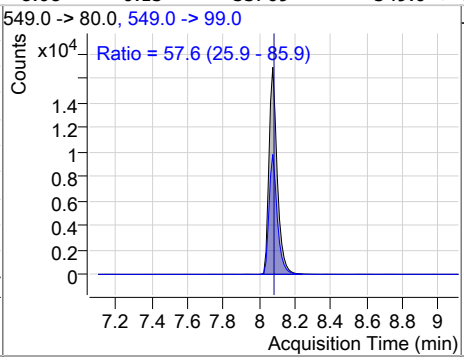


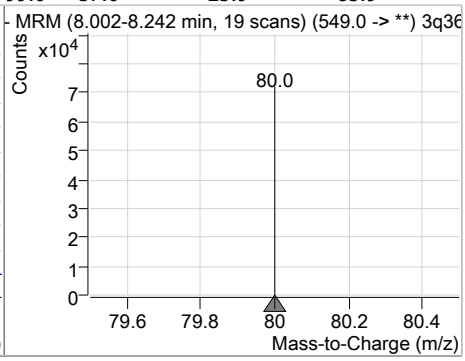




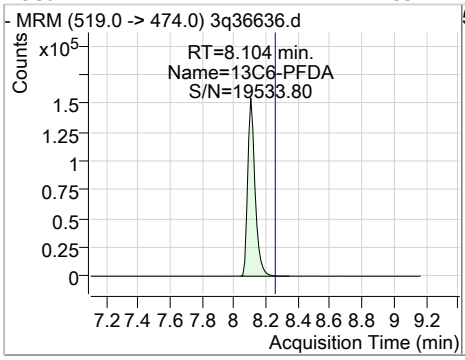
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	19.00	8.08	-0.15	53709	549.0 -> 99.0	57.6	25.9	85.9

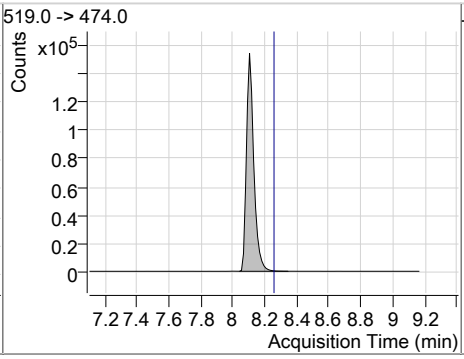


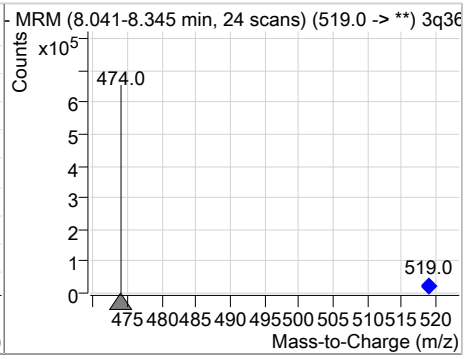




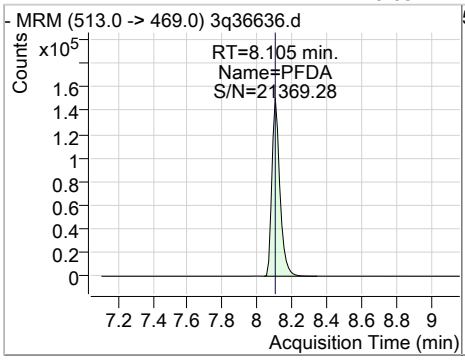
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	21.53	8.10	-0.15	494800				

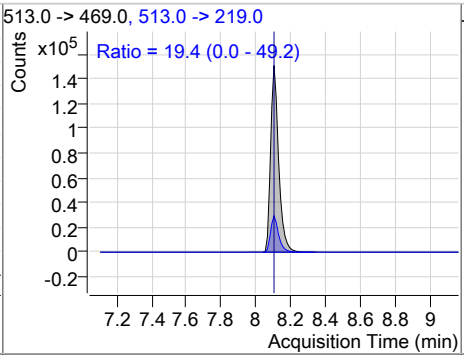


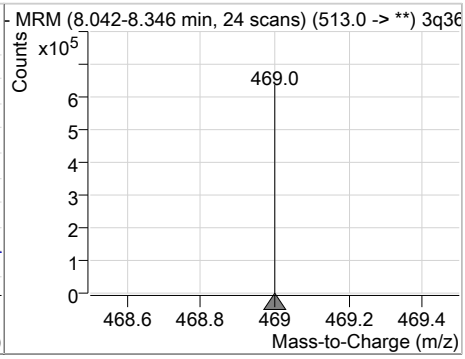




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	18.85	8.10	-0.15	482595	513.0 -> 219.0	19.4	0.0	49.2

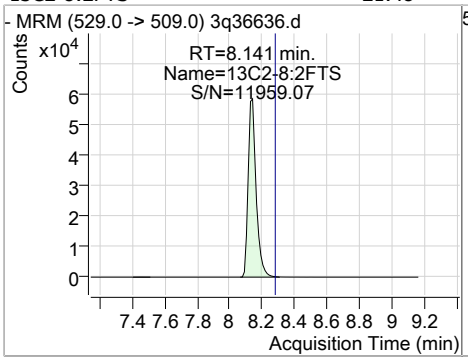


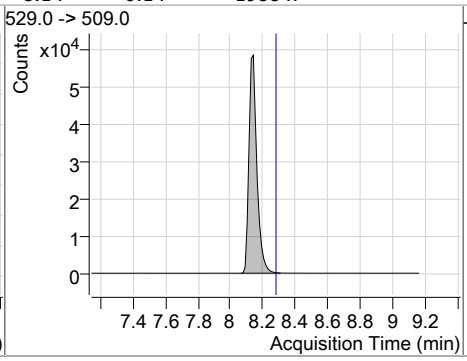


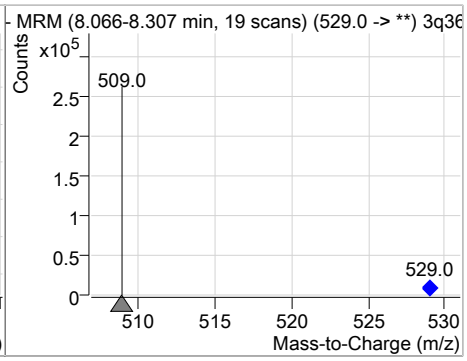


Perfluorinated Compounds by LC/MS/MS

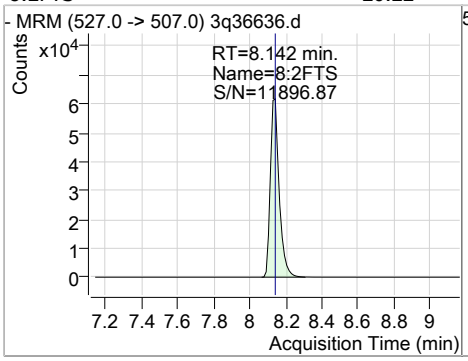
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	21.48	8.14	-0.14	198847				

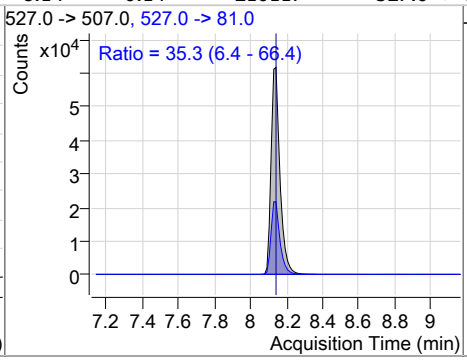


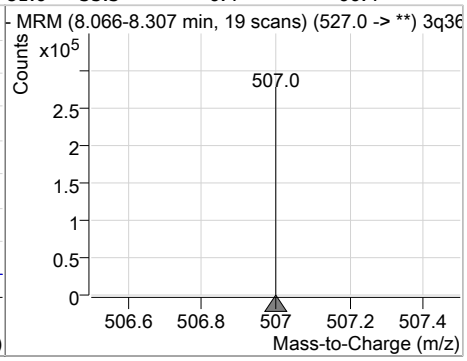




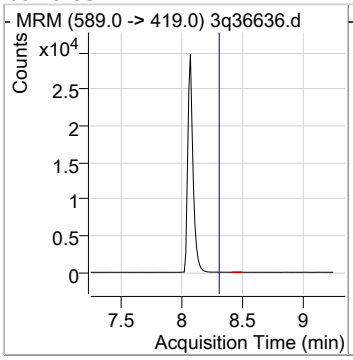
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.22	8.14	-0.14	210117	527.0 -> 81.0	35.3	6.4	66.4

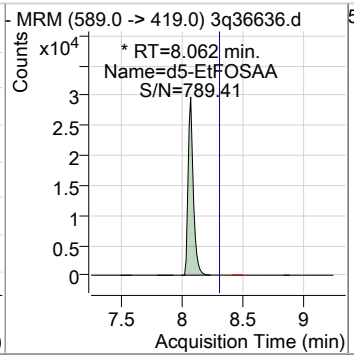


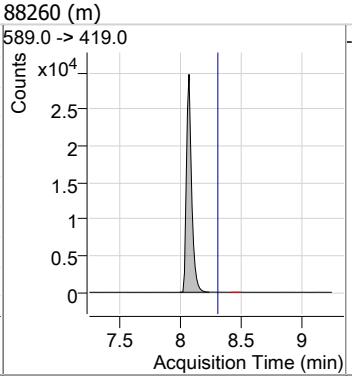


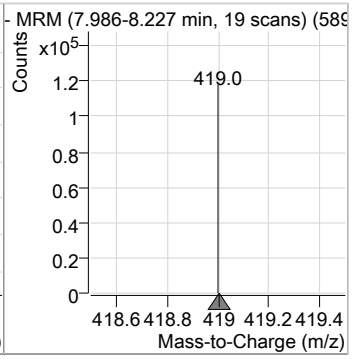


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	21.45	8.06	-0.23	88260 (m)				

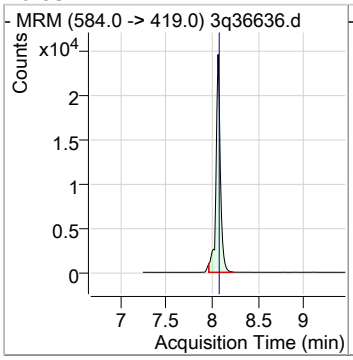


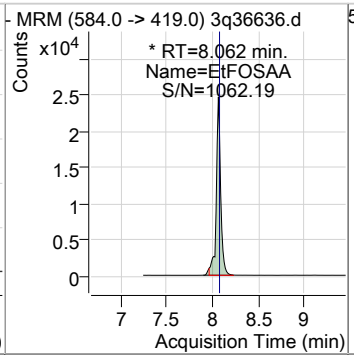


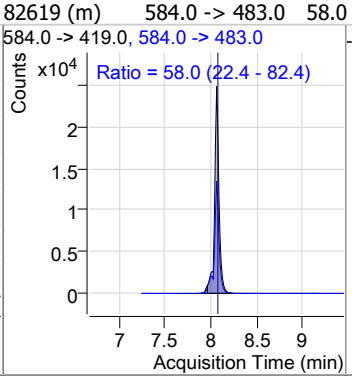


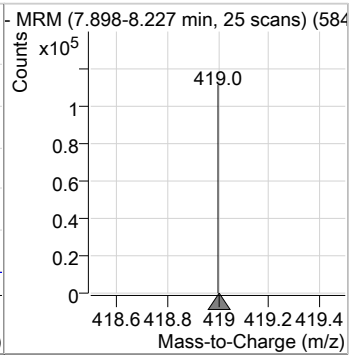


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	20.04	8.06	-0.23	82619 (m)	584.0 -> 483.0	58.0	22.4	82.4



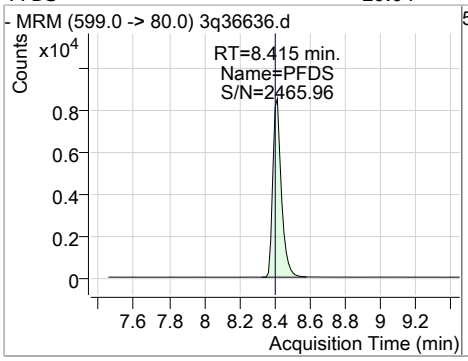


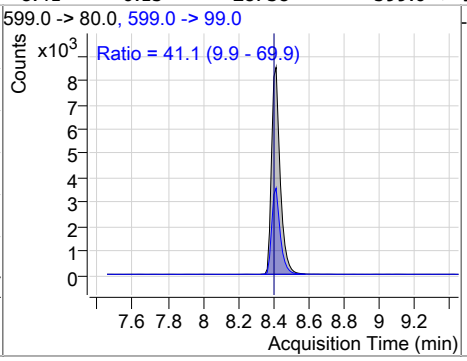


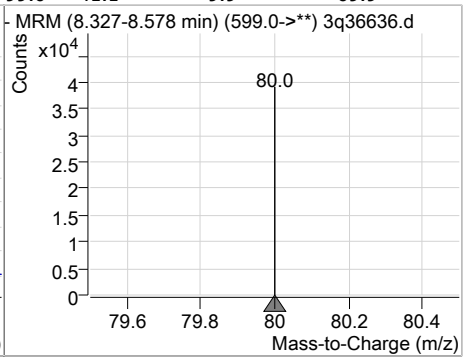


Perfluorinated Compounds by LC/MS/MS

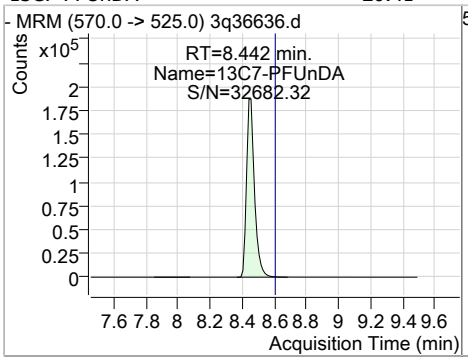
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	20.04	8.41	-0.15	28738	599.0 -> 99.0	41.1	9.9	69.9

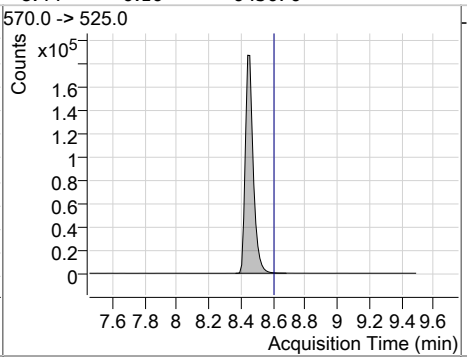


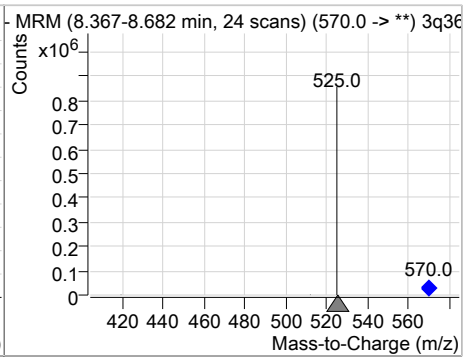




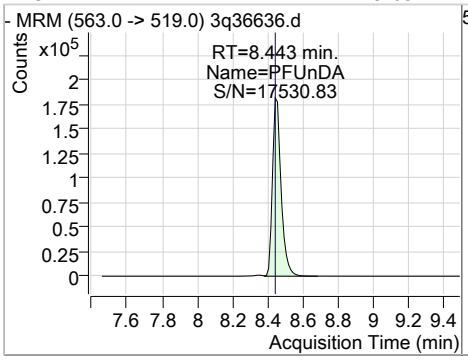
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.41	8.44	-0.16	645070				

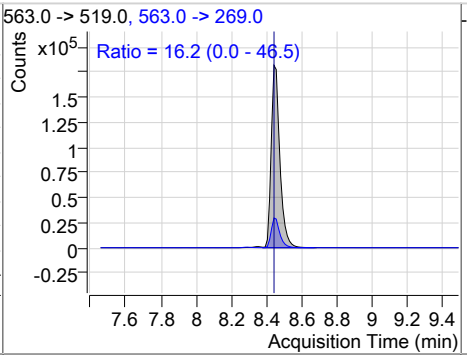


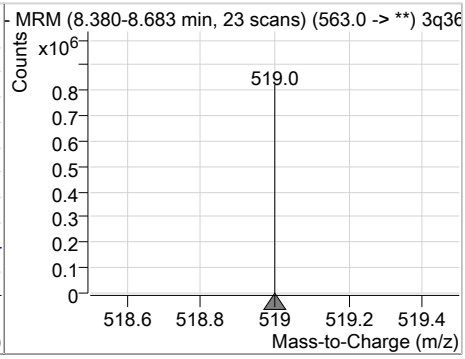




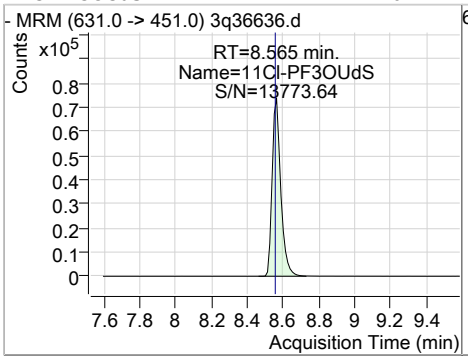
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	19.65	8.44	-0.16	619453	563.0 -> 269.0	16.2	0.0	46.5

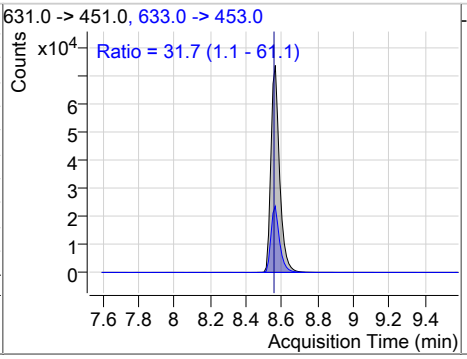


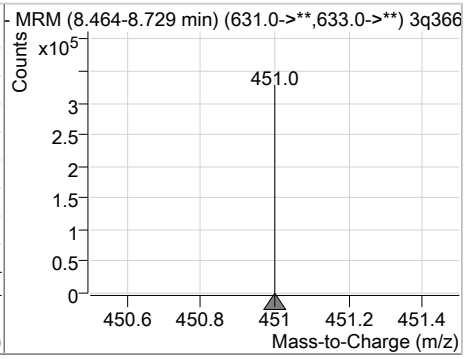




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	21.02	8.56	-0.15	246953	633.0 -> 453.0	31.7	1.1	61.1

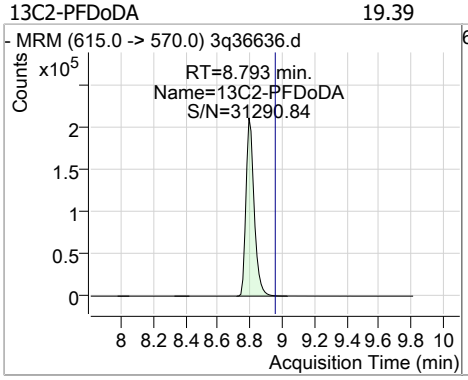


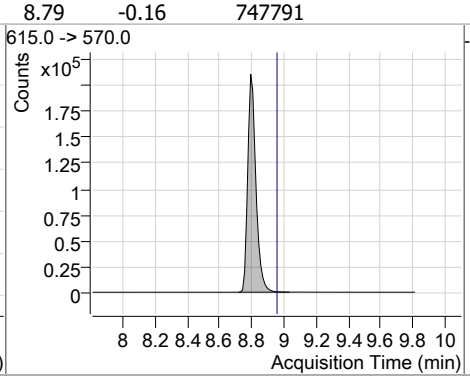


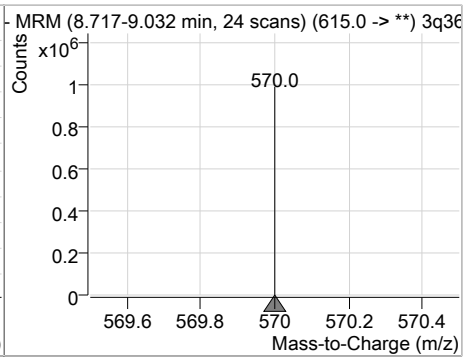


Perfluorinated Compounds by LC/MS/MS

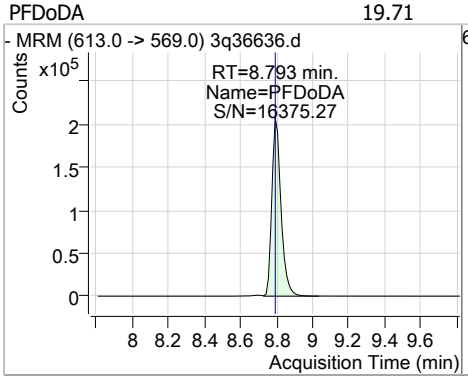
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.39	8.79	-0.16	747791				

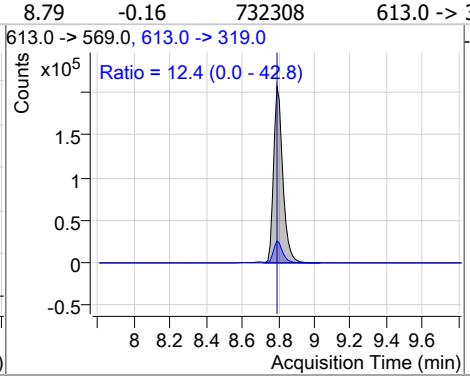


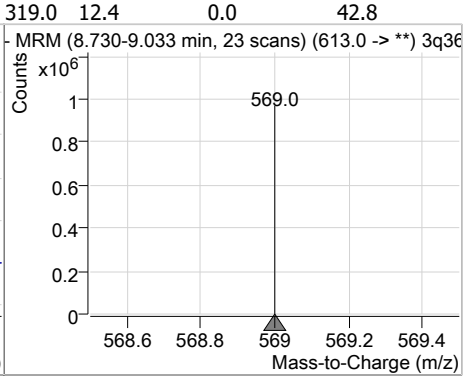




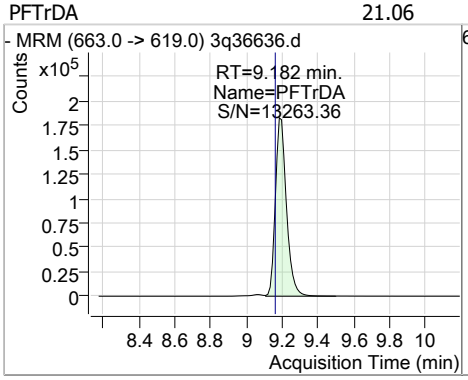
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	19.71	8.79	-0.16	732308	613.0 -> 319.0	12.4	0.0	42.8

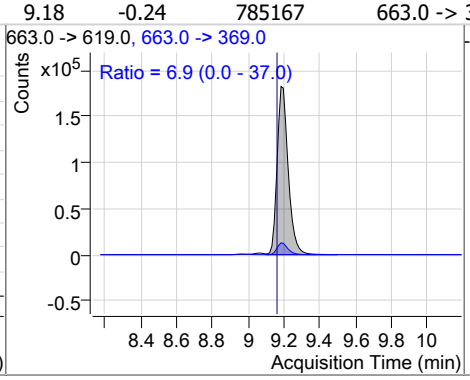


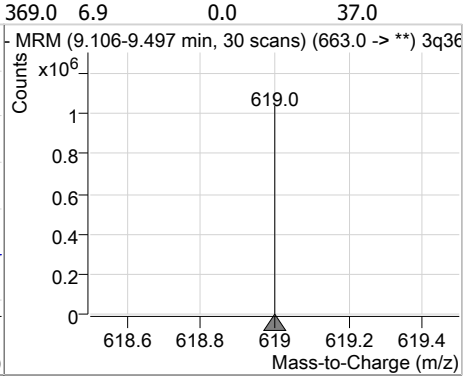




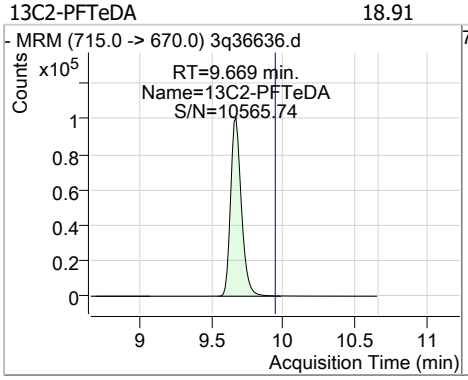
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	21.06	9.18	-0.24	785167	663.0 -> 369.0	6.9	0.0	37.0

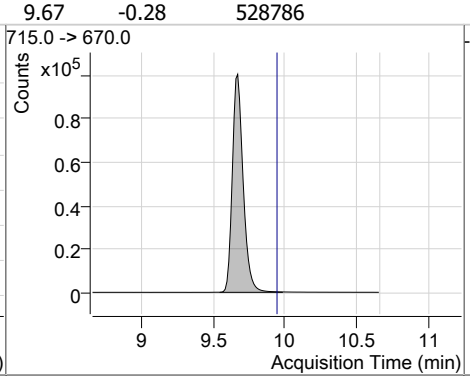


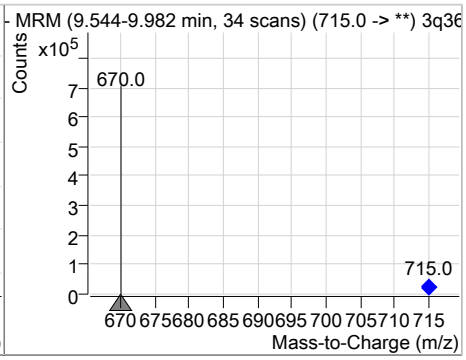




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	18.91	9.67	-0.28	528786				

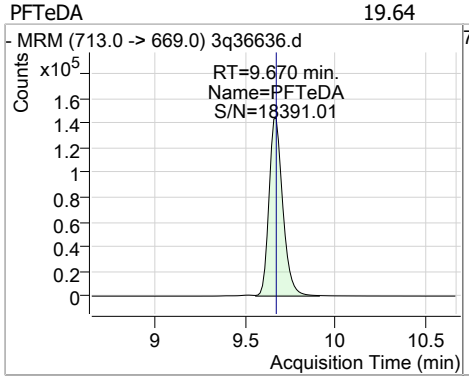


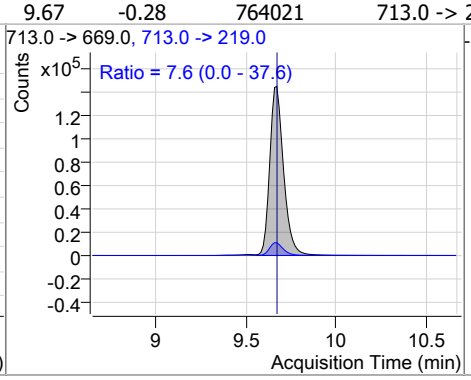


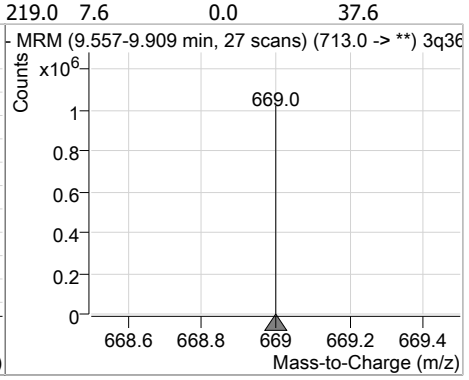


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	19.64	9.67	-0.28	764021	713.0 -> 219.0	7.6	0.0	37.6







Manual Integration Approval Summary

Sample Number: S3Q538-CC537
Lab FileID: 3Q36636.D
Injection Time: 04/15/21 02:47
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/15/21 09:10 Martha Valls
Supervisor approved: 04/15/21 10:01 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.66	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.70	Split peak
MeFOSAA	2355-31-9		7.96	Split peak
EtFOSAA	2991-50-6		8.06	Split peak
d5-EtFOSAA			8.06	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/15/21 10:01

Perfluorinated Compounds by LC/MS/MS

Data File : 3q36639.d
Operator : marthav
Acq. Method : 537_ID.m
Acq. Date-Time : 4/15/2021 3:36:40 AM
Sample Name : ecc537-20
Vial : P1-A7
DA Method File : ID_041321_S3Q537.quantmethod.xml
Batch Name : s3q538.batch.bin
Sample Information : op84892,S3Q538,250,,,1,1,water

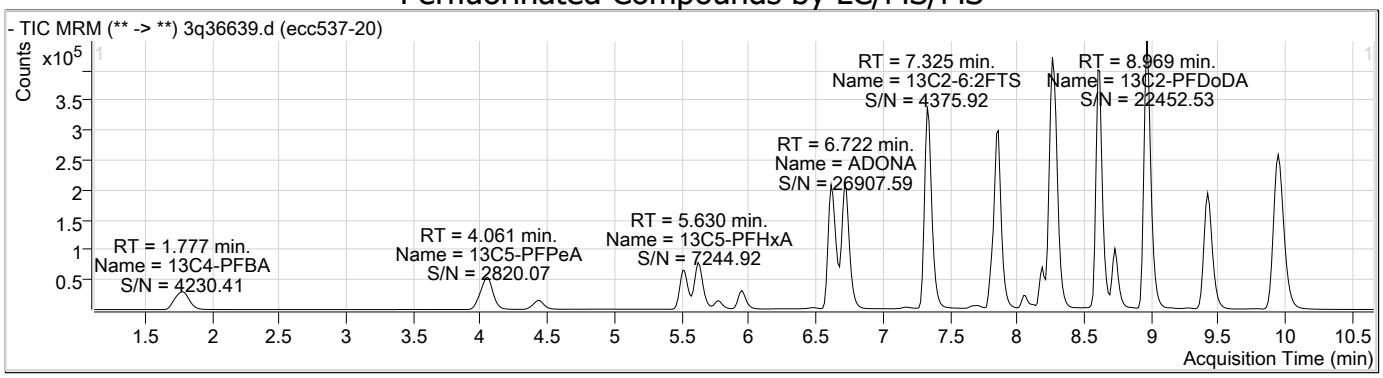
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.777	217.0 -> 172.0	163894	20.00	µg/L	-0.063
M5-PFPeA	4.061	268.0 -> 223.0	122435	20.00	µg/L	-0.013
M5-PFHxA	5.630	318.0 -> 273.0	189403	20.00	µg/L	0.000
M4-PFHpA	6.620	367.0 -> 322.0	268163	20.00	µg/L	0.013
M8-PFOA	7.351	421.0 -> 376.0	310223	20.00	µg/L	0.025
M9-PFNA	7.868	472.0 -> 427.0	356093	20.00	µg/L	0.013
M6-PFDA	8.270	519.0 -> 474.0	463368	20.00	µg/L	0.013
M7-PFUnDA	8.618	570.0 -> 525.0	632487	20.00	µg/L	0.013
M2-PFDoDA	8.969	615.0 -> 570.0	766479	20.00	µg/L	0.013
M2-PFTeDA	9.944	715.0 -> 670.0	550996	20.00	µg/L	0.000
M8-FOSA	7.816	506.0 -> 78.0	112911	20.00	µg/L	0.000
M3-PFBS	4.434	302.0 -> 99.0	16838	20.00	µg/L	-0.013
M3-PFHxS	6.667	402.0 -> 99.0	23895	20.00	µg/L	0.013
M8-PFOS	7.841	507.0 -> 99.0	36243	20.00	µg/L	0.000
M2-4:2FTS	5.512	329.0 -> 309.0	117311	20.00	µg/L	0.000
M2-6:2FTS	7.325	429.0 -> 409.0	170153	20.00	µg/L	0.013
M2-8:2FTS	8.294	529.0 -> 509.0	182133	20.00	µg/L	0.013
M3-MeFOSAA	8.190	573.0 -> 419.0	98345	20.00	µg/L	0.013
M3-HFPO-DA	5.958	287.0 -> 169.0	23920	20.00	µg/L	0.013
M5-EtFOSAA	8.290	589.0 -> 419.0	80787	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	5.512	329.0 -> 309.0	117311	20.50	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.5%		
13C2-6:2FTS	7.325	429.0 -> 409.0	170153	20.12	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.6%		
13C2-8:2FTS	8.294	529.0 -> 509.0	182133	19.67	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%		
13C2-PFDoDA	8.969	615.0 -> 570.0	766479	19.87	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.4%		
13C2-PFTeDA	9.944	715.0 -> 670.0	550996	19.71	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.5%		
13C3-PFBS	4.434	302.0 -> 99.0	16838	20.88	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.4%		
13C3-PFHxS	6.667	402.0 -> 99.0	23895	20.98	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.9%		
13C4-PFBA	1.777	217.0 -> 172.0	163894	20.91	µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.6%		
13C4-PFHpA	6.620	367.0 -> 322.0	268163	20.69	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.4%		
13C5-PFHxA	5.630	318.0 -> 273.0	189403	20.69	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.5%		
13C5-PFPeA	4.061	268.0 -> 223.0	122435	20.85	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.3%		
13C6-PFDA	8.270	519.0 -> 474.0	463368	20.17	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.8%		

Perfluorinated Compounds by LC/MS/MS

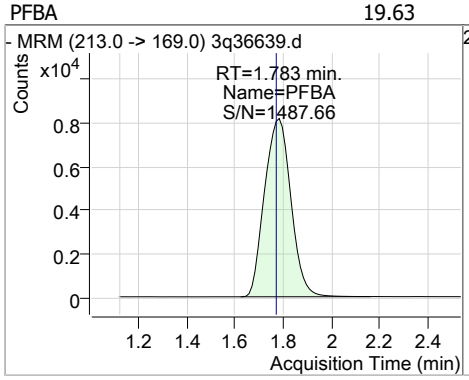
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	8.618	570.0 -> 525.0	632487	20.01	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.0%			
13C8-FOSA	7.816	506.0 -> 78.0	112911	21.26	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.3%			
13C8-PFOA	7.351	421.0 -> 376.0	310223	20.38	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.9%			
13C8-PFOS	7.841	507.0 -> 99.0	36243	20.52	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.6%			
13C9-PFNA	7.868	472.0 -> 427.0	356093	20.17	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.8%			
d3-MeFOSAA	8.190	573.0 -> 419.0	98345	20.60	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.0%			
13C3-HFPO-DA	5.958	287.0 -> 169.0	23920	19.72	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.6%			
d5-EtFOSAA	8.290	589.0 -> 419.0	80787	19.64	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%			
Target Compounds							QValue
4:2FTS	5.514	327.0 -> 307.0	127342	20.09	µg/L		100
6:2FTS	7.325	427.0 -> 407.0	188116	20.53	µg/L		100
8:2FTS	8.294	527.0 -> 507.0	192285	20.20	µg/L		99
EtFOSAA	8.290	584.0 -> 419.0	74980	19.88	µg/L	m	91
FOSA	7.817	498.0 -> 78.0	114232	19.76	µg/L		100
MeFOSAA	8.190	570.0 -> 419.0	90407	20.15	µg/L	m	100
PFBA	1.783	213.0 -> 169.0	61615	19.63	µg/L		100
PFBS	4.436	299.0 -> 80.0	50634	19.66	µg/L		100
PFDA	8.270	513.0 -> 469.0	461864	19.26	µg/L		99
PFDoDA	8.970	613.0 -> 569.0	759554	19.94	µg/L		99
PFDS	8.578	599.0 -> 80.0	27364	19.46	µg/L		97
PFHpA	6.620	363.0 -> 319.0	486356	19.99	µg/L		100
PFHpS	7.350	449.0 -> 80.0	54130	20.28	µg/L		98
PFHxA	5.630	313.0 -> 269.0	130488	19.68	µg/L		100
PFHxS	6.668	399.0 -> 80.0	53586	19.62	µg/L	m	96
PFNA	7.868	463.0 -> 419.0	418982	19.68	µg/L		99
PFNS	8.242	549.0 -> 80.0	51577	19.93	µg/L		99
PFOA	7.351	413.0 -> 369.0	333226	19.87	µg/L		99
PFOS	7.841	499.0 -> 80.0	65982	19.50	µg/L	m	83
PFPeA	4.064	263.0 -> 219.0	230223	19.88	µg/L		100
PFPeS	5.776	349.0 -> 80.0	39272	19.68	µg/L		99
PFTeDA	9.947	713.0 -> 669.0	799783	19.73	µg/L		100
PFTrDA	9.420	663.0 -> 619.0	809508	20.84	µg/L		100
PFUnDA	8.607	563.0 -> 519.0	601393	19.46	µg/L		100
11Cl-PF3OUdS	8.729	631.0 -> 451.0	239388	19.88	µg/L		99
9Cl-PF3ONS	8.053	531.0 -> 351.0	52970	18.86	µg/L		99
ADONA	6.722	377.0 -> 251.0	620338	19.81	µg/L		100
HFPO-DA	5.953	329.0 -> 169.0	87780	20.25	µg/L		100

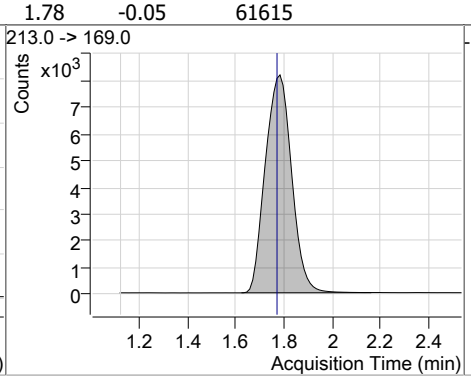
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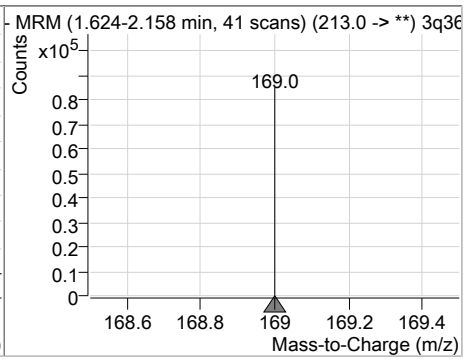
Perfluorinated Compounds by LC/MS/MS



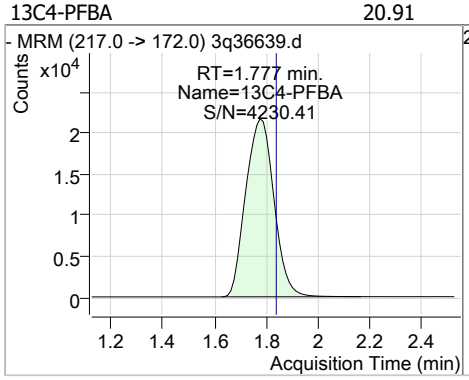
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.63	1.78	-0.05	61615				

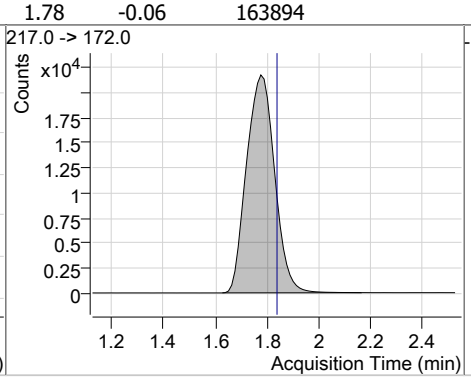


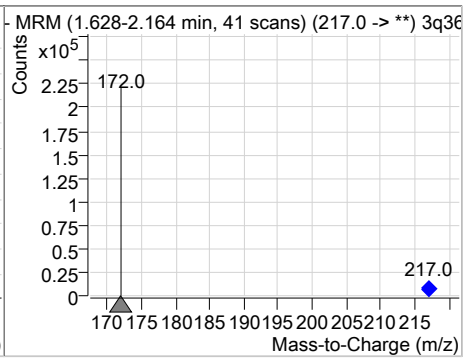




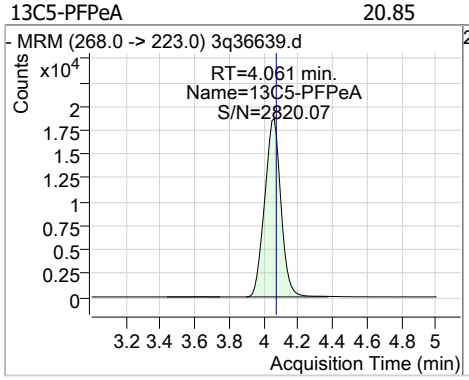
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.91	1.78	-0.06	163894				

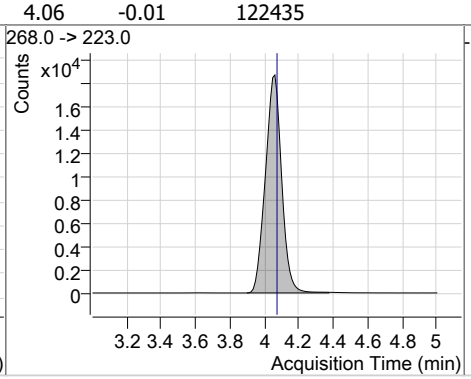


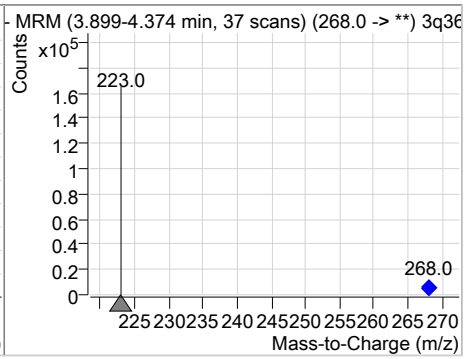




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.85	4.06	-0.01	122435				

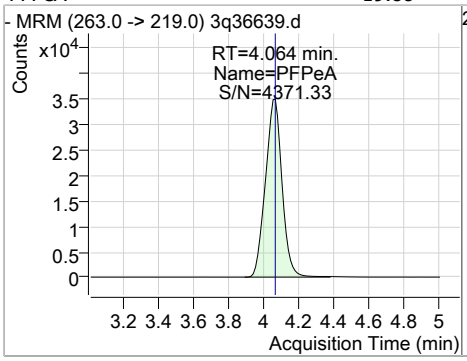


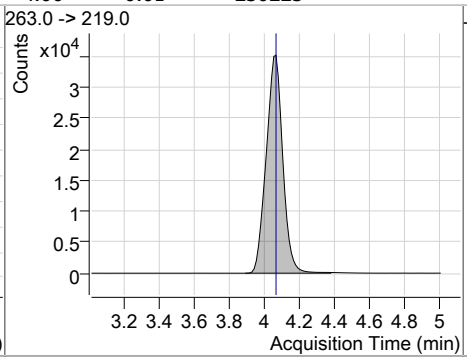


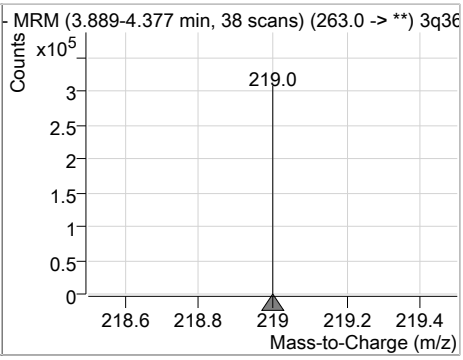


Perfluorinated Compounds by LC/MS/MS

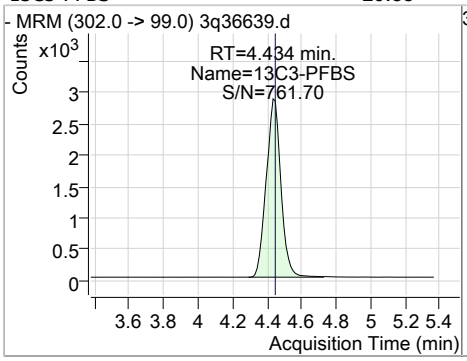
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.88	4.06	-0.01	230223				

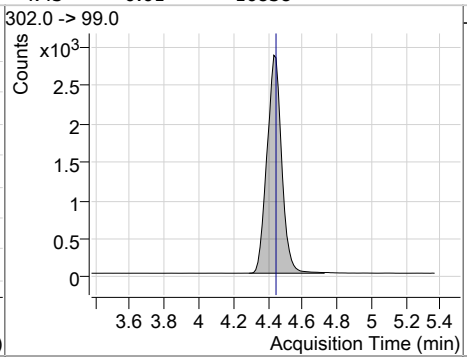


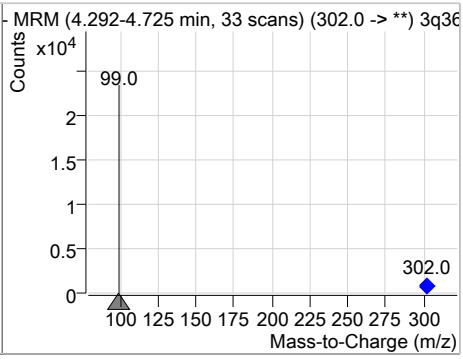




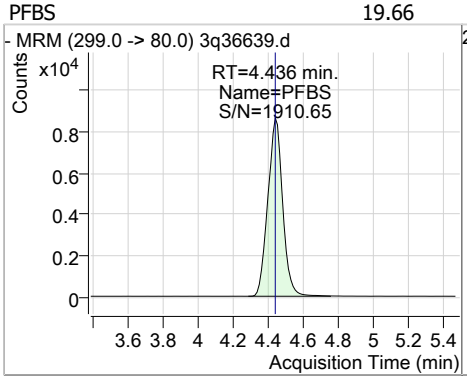
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.88	4.43	-0.01	16838				

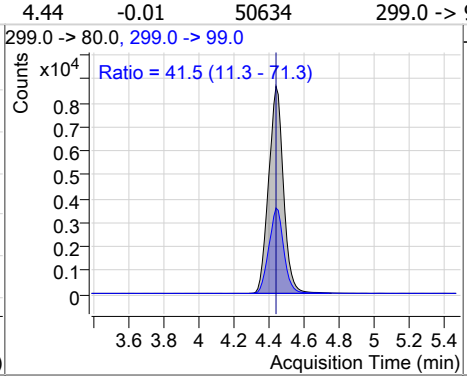


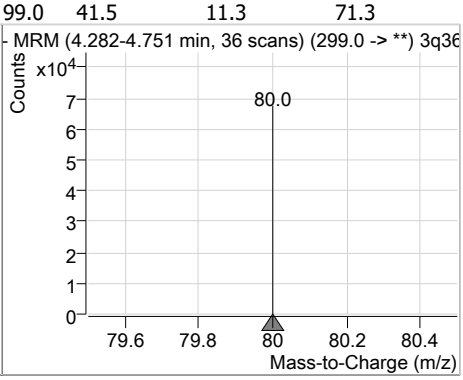




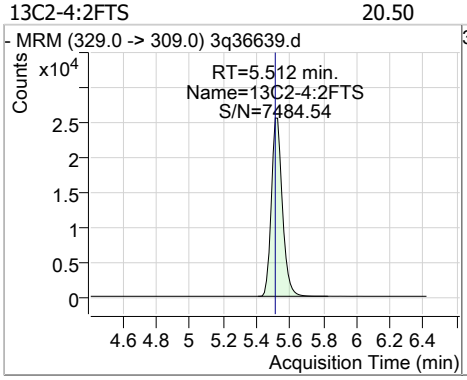
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.66	4.44	-0.01	50634	299.0 -> 99.0	41.5	11.3	71.3

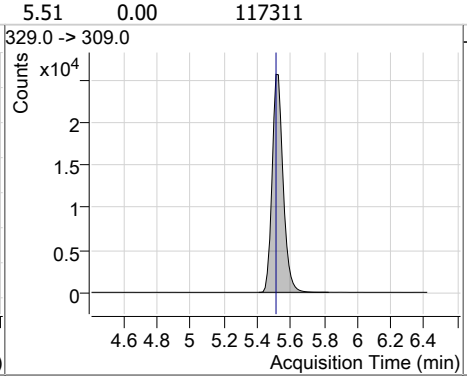


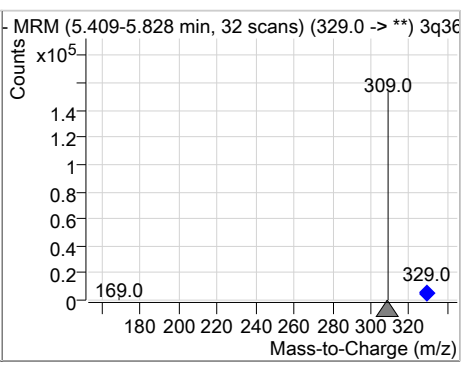




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	20.50	5.51	0.00	117311				

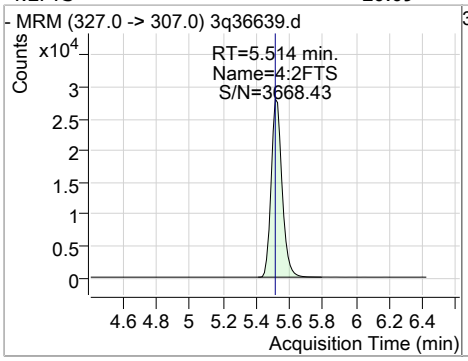


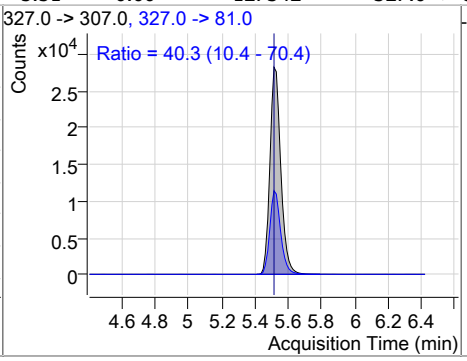


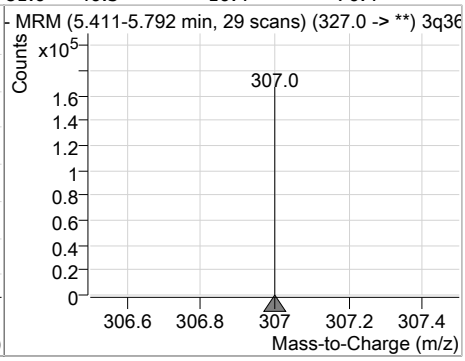


Perfluorinated Compounds by LC/MS/MS

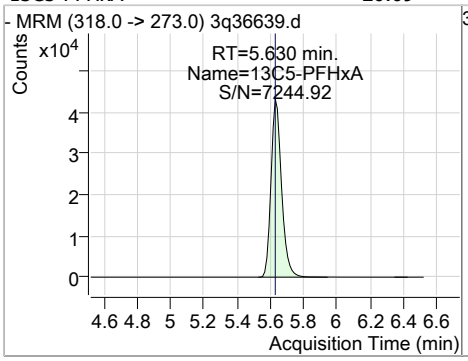
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.09	5.51	0.00	127342	327.0 -> 81.0	40.3	10.4	70.4

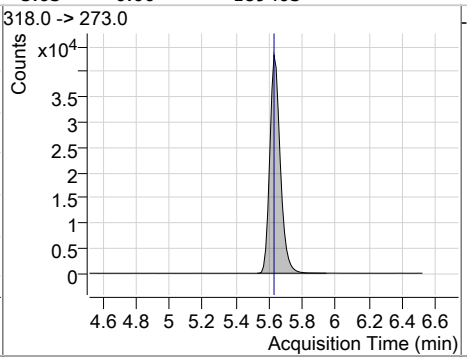


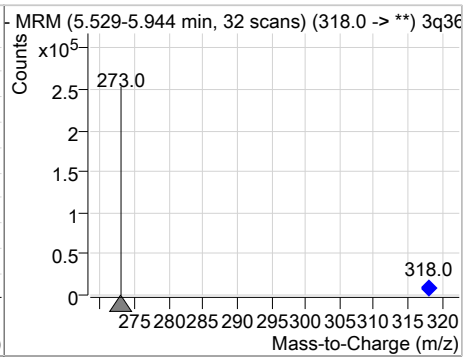




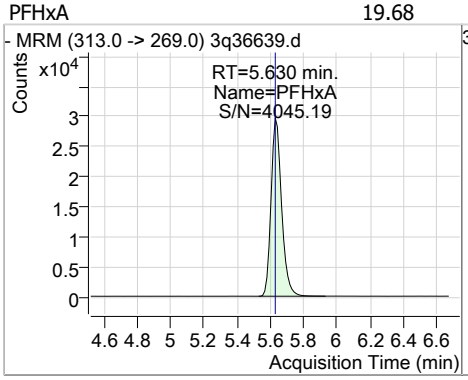
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.69	5.63	0.00	189403				

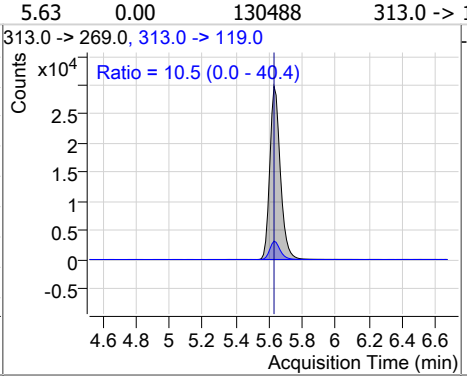


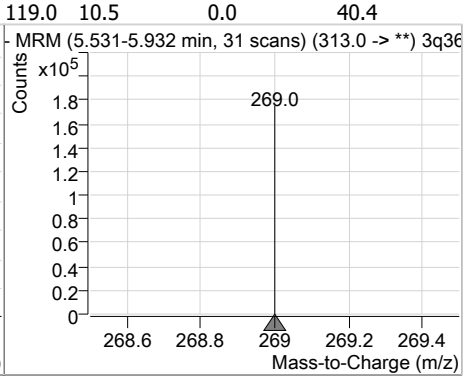




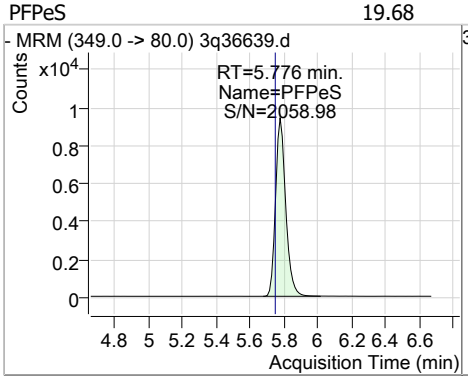
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.68	5.63	0.00	130488	313.0 -> 119.0	10.5	0.0	40.4

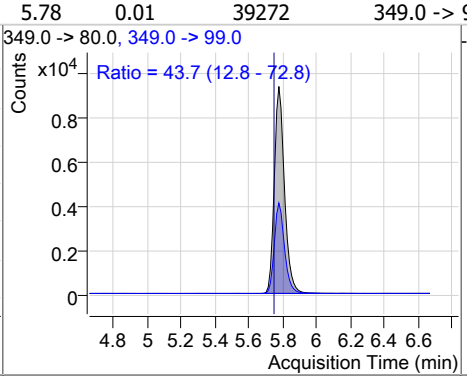


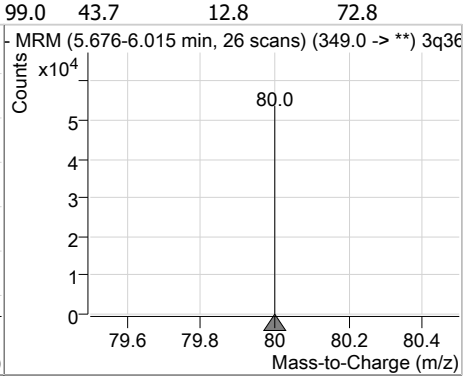




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	19.68	5.78	0.01	39272	349.0 -> 99.0	43.7	12.8	72.8

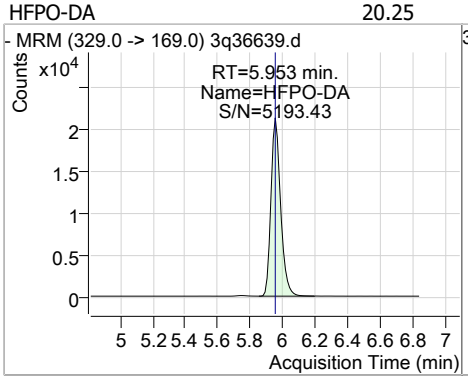


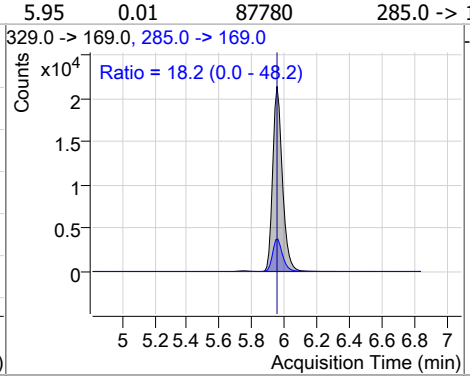


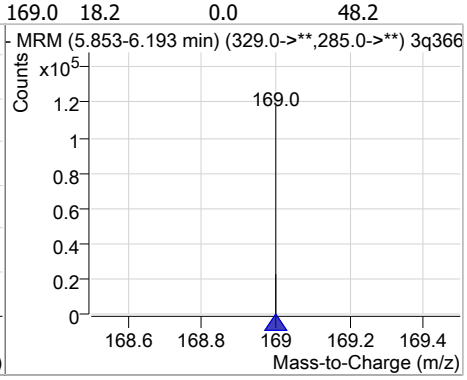


Perfluorinated Compounds by LC/MS/MS

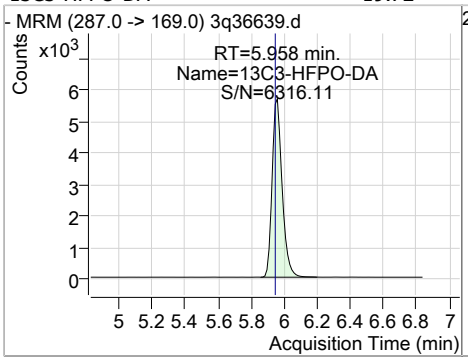
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	20.25	5.95	0.01	87780	285.0 -> 169.0	18.2	0.0	48.2

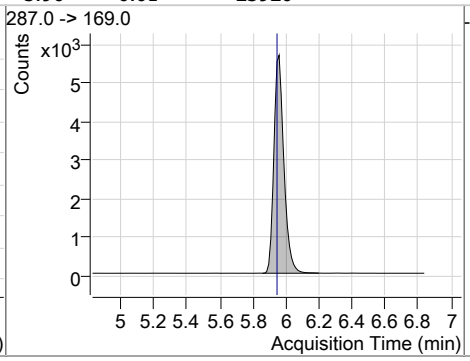


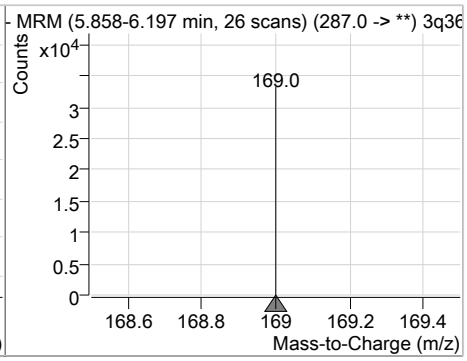




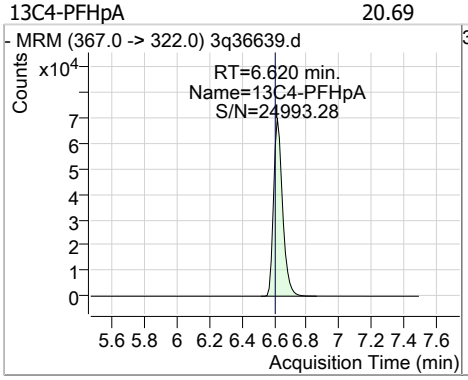
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.72	5.96	0.01	23920				

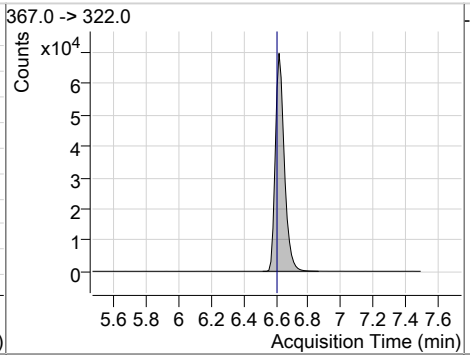


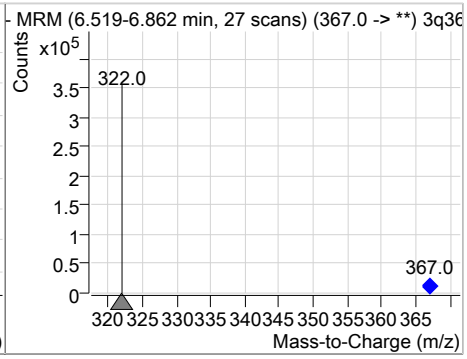




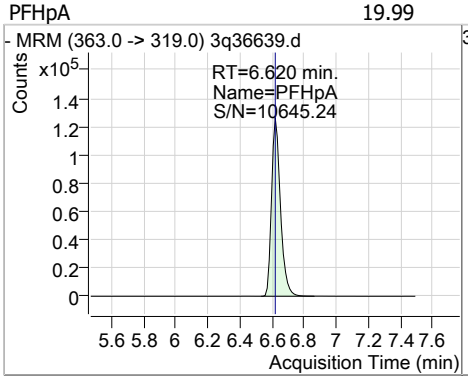
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.69	6.62	0.01	268163				

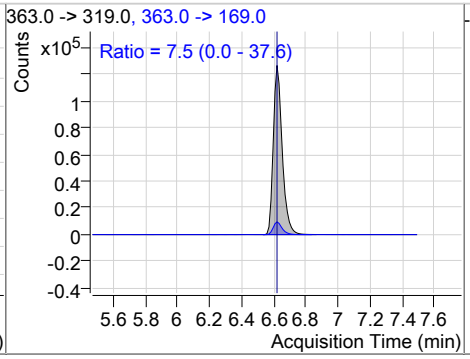


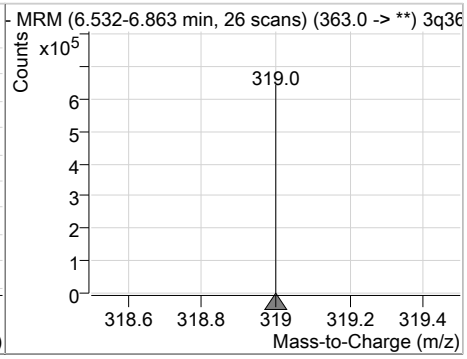




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	19.99	6.62	0.01	486356	363.0 -> 169.0	7.5	0.0	37.6

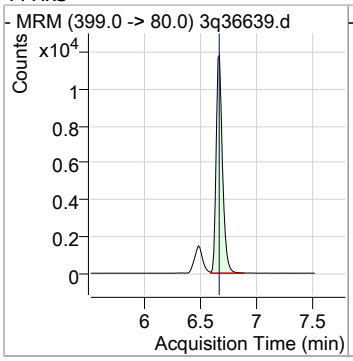


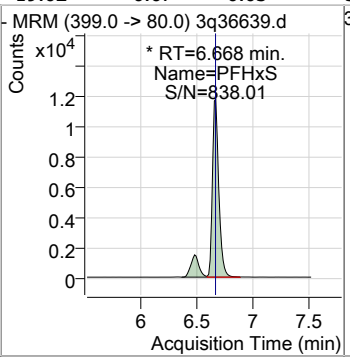


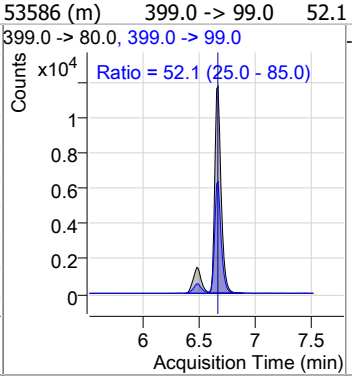


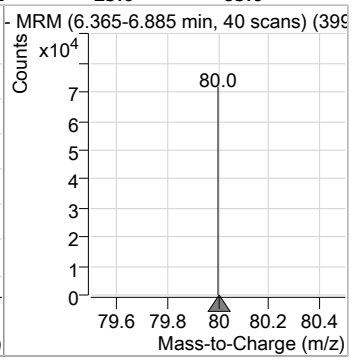
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	19.62	6.67	0.03	53586 (m)	399.0 -> 99.0	52.1	25.0	85.0

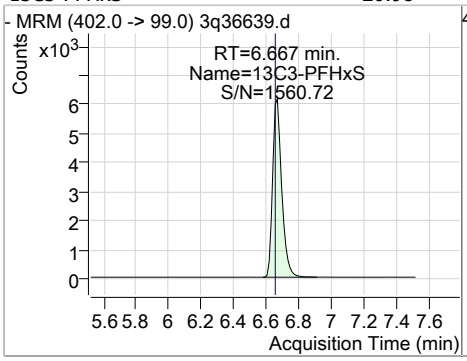


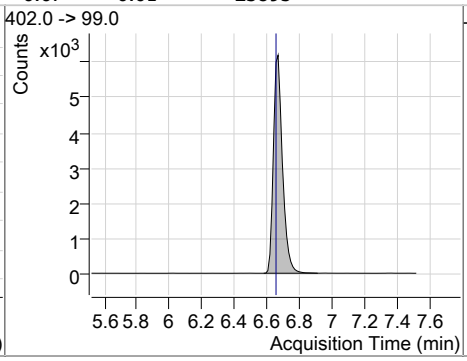


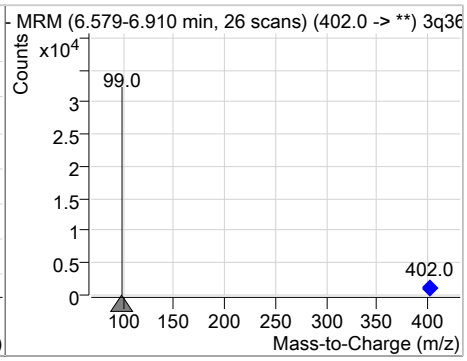




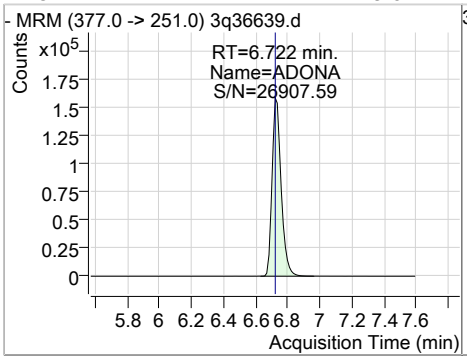
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.98	6.67	0.01	23895				

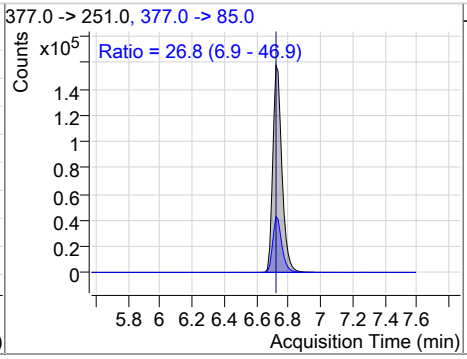


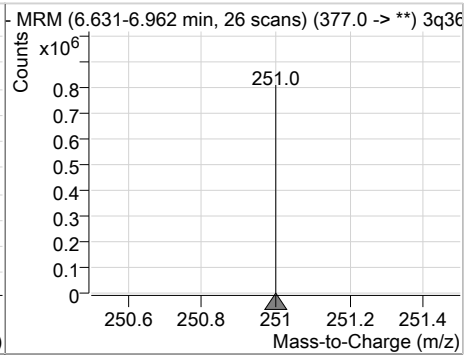




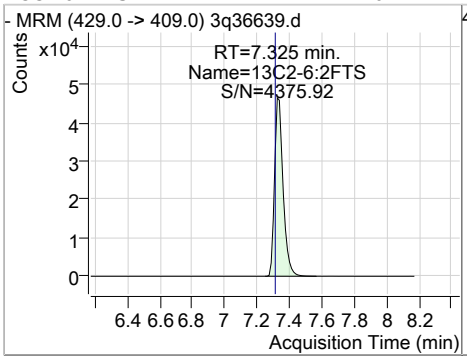
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	19.81	6.72	0.01	620338	377.0 -> 85.0	26.8	6.9	46.9

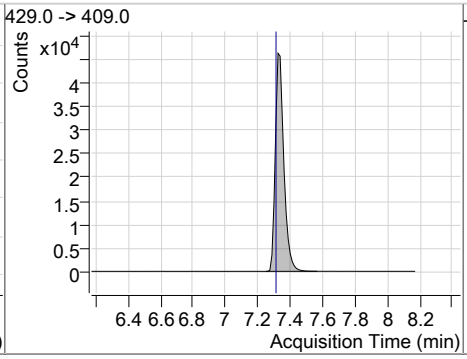


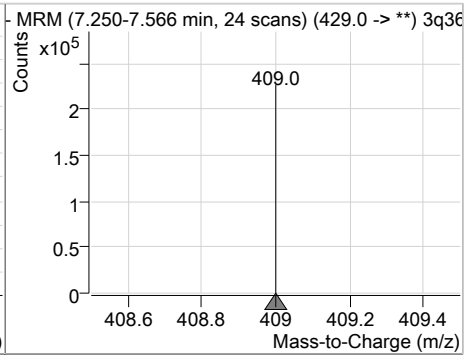




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.12	7.32	0.01	170153				

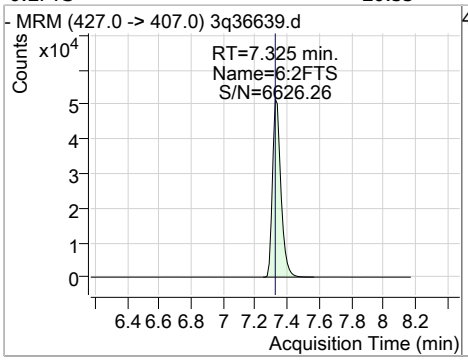


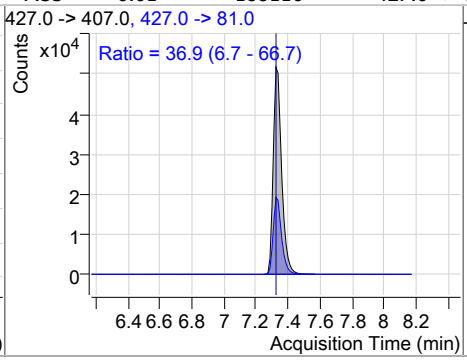


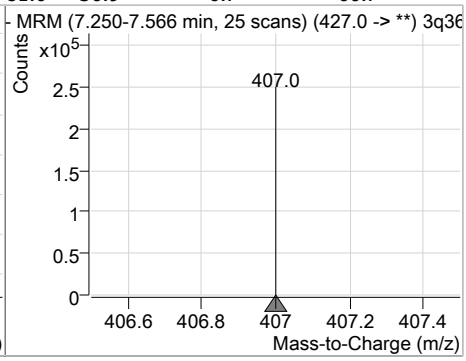


Perfluorinated Compounds by LC/MS/MS

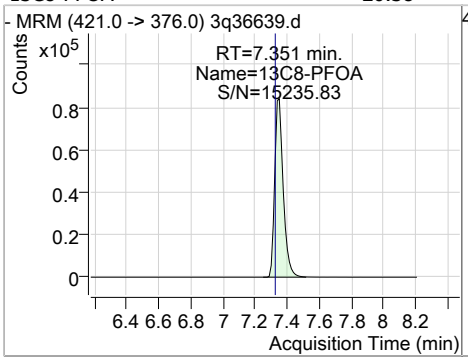
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	20.53	7.33	0.01	188116	427.0 -> 81.0	36.9	6.7	66.7

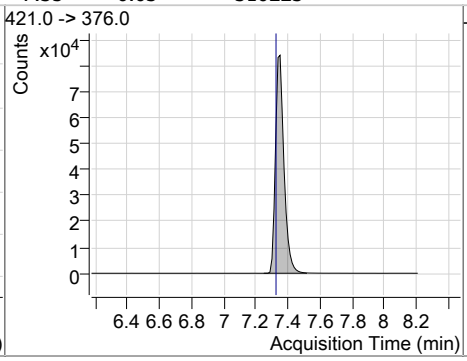


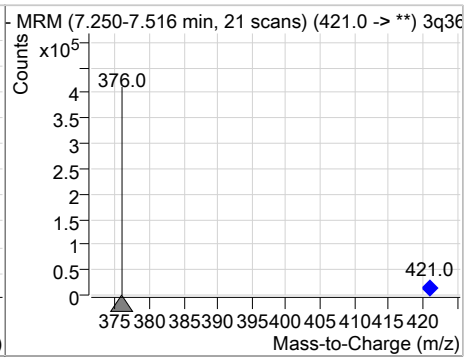




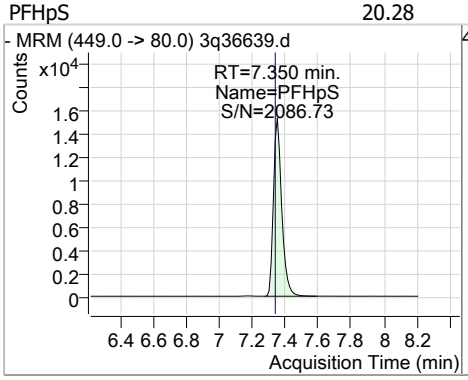
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.38	7.35	0.03	310223				

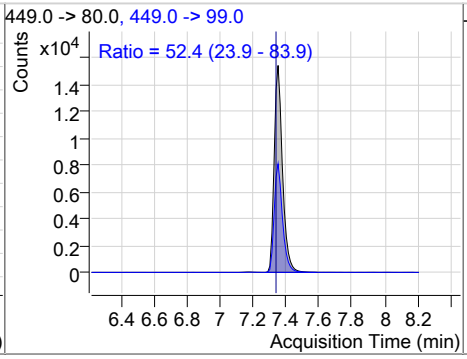


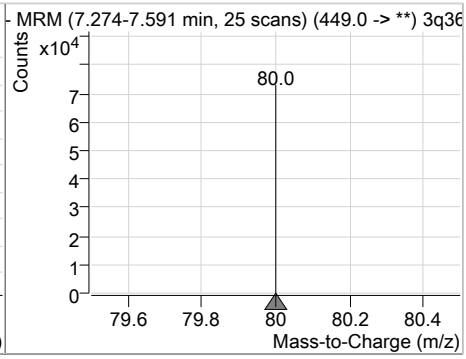




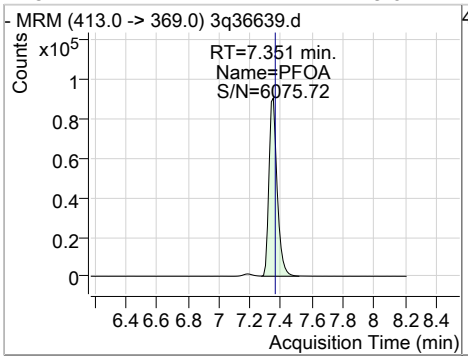
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	20.28	7.35	0.01	54130	449.0 -> 99.0	52.4	23.9	83.9

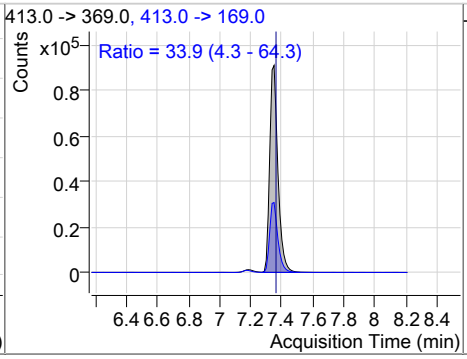


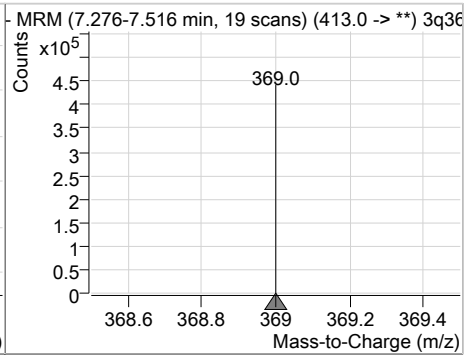




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.87	7.35	0.01	333226	413.0 -> 169.0	33.9	4.3	64.3

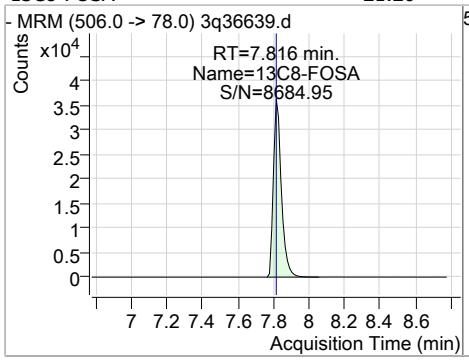


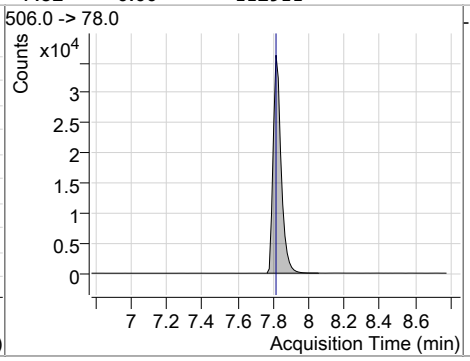


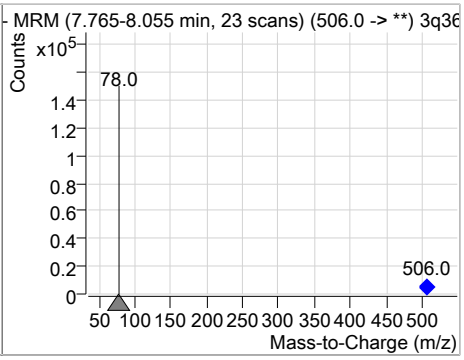


Perfluorinated Compounds by LC/MS/MS

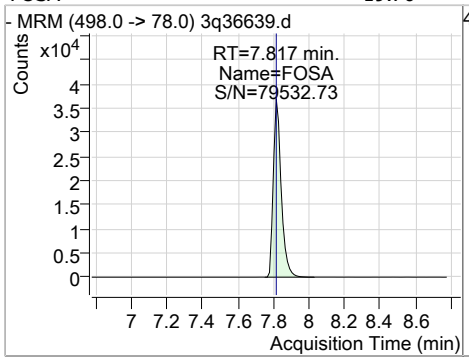
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	21.26	7.82	0.00	112911				

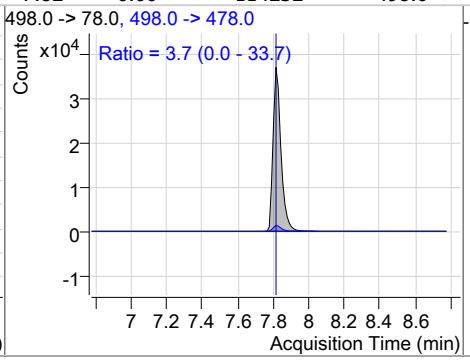


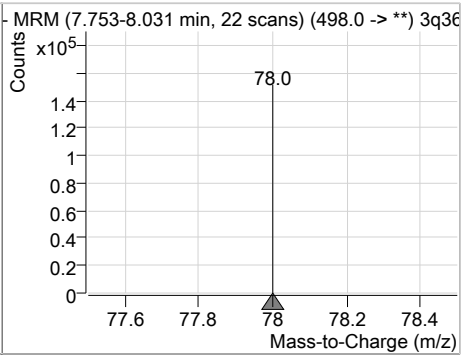




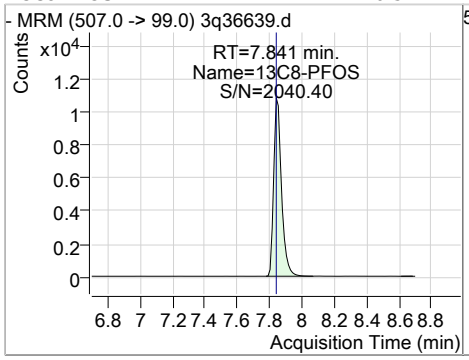
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	19.76	7.82	0.00	114232	498.0 -> 478.0	3.7	0.0	33.7

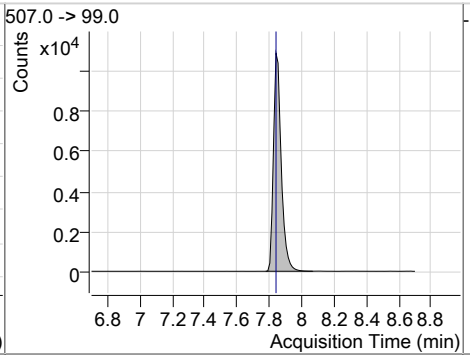


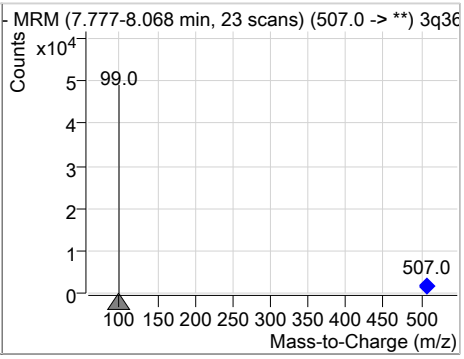




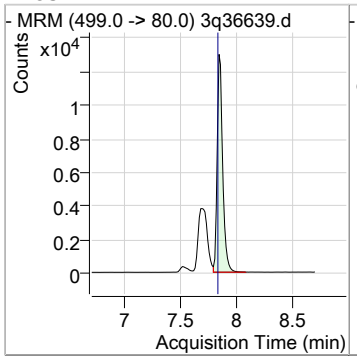
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.52	7.84	0.00	36243				

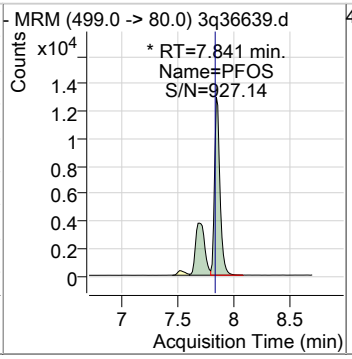


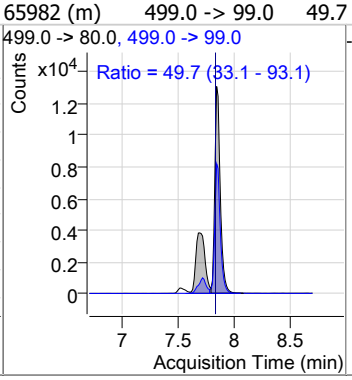


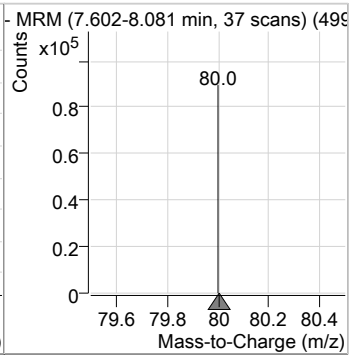


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.50	7.84	0.00	65982 (m)	499.0 -> 99.0	49.7	33.1	93.1



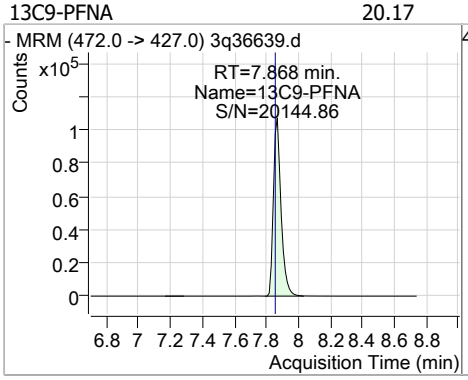


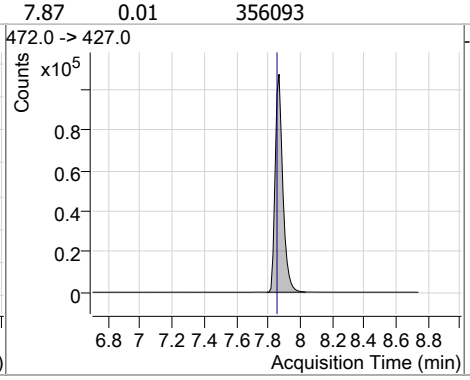


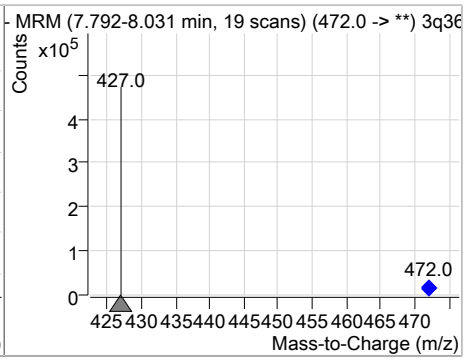


Perfluorinated Compounds by LC/MS/MS

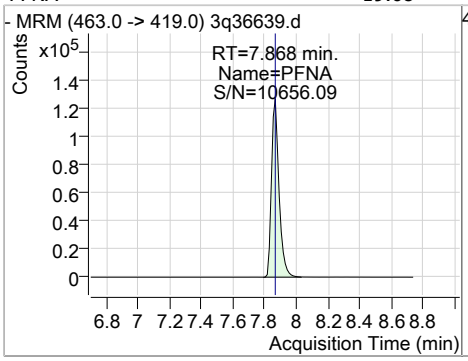
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.17	7.87	0.01	356093				

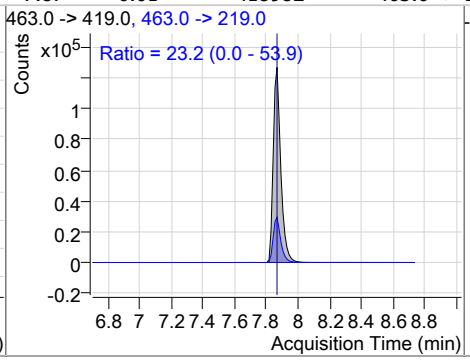


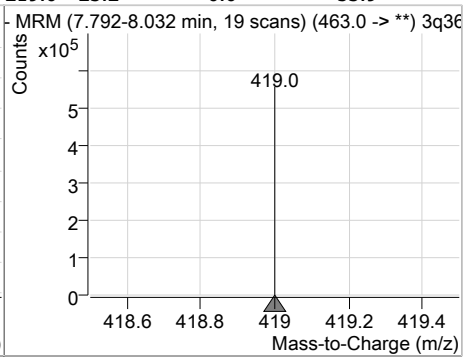




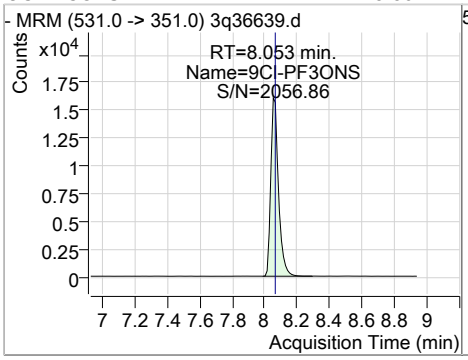
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.68	7.87	0.01	418982	463.0 -> 219.0	23.2	0.0	53.9

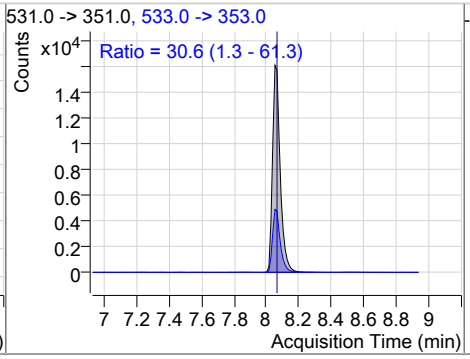


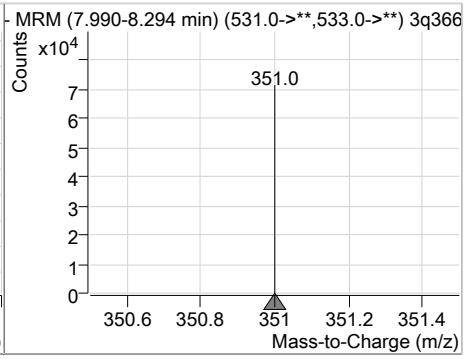




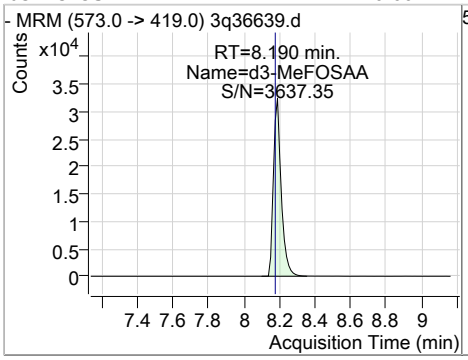
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	18.86	8.05	0.00	52970	533.0 -> 353.0	30.6	1.3	61.3

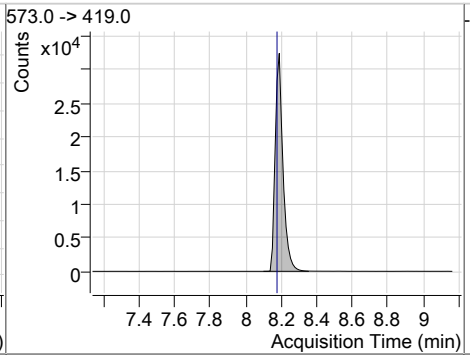


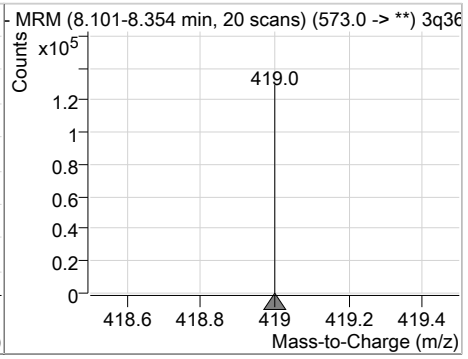




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.60	8.19	0.01	98345				

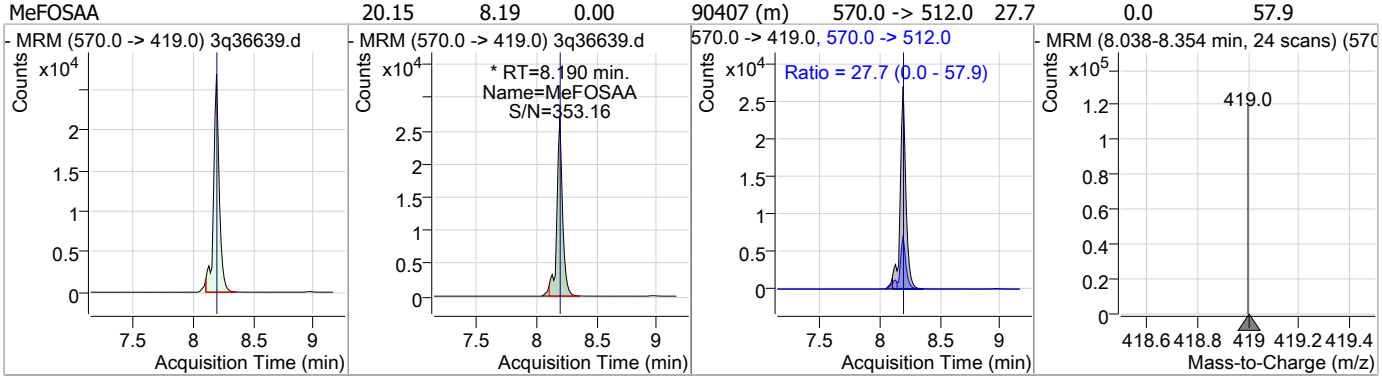




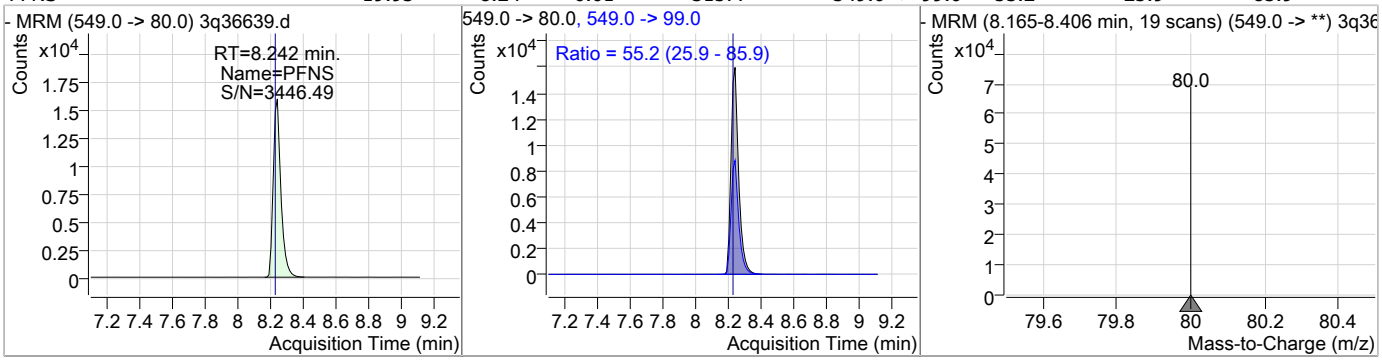


Perfluorinated Compounds by LC/MS/MS

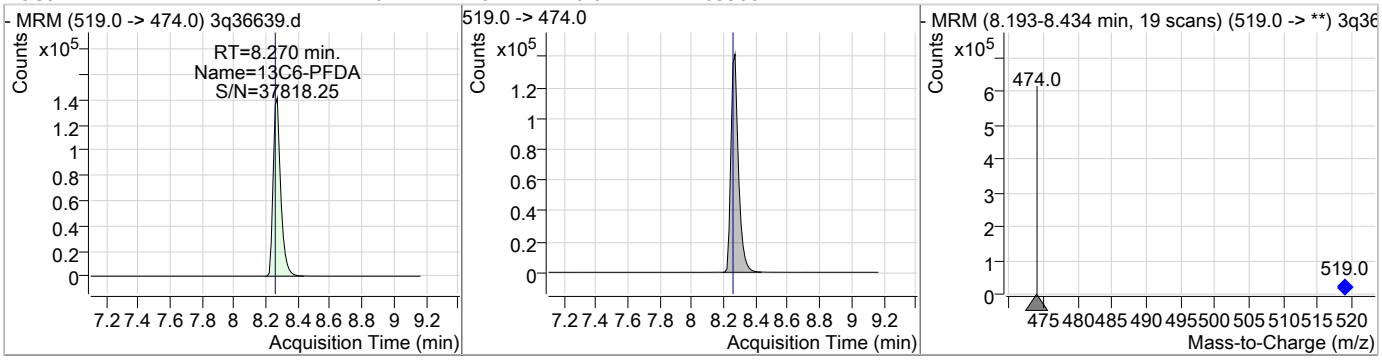
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	20.15	8.19	0.00	90407 (m)	570.0 -> 512.0	27.7	0.0	57.9



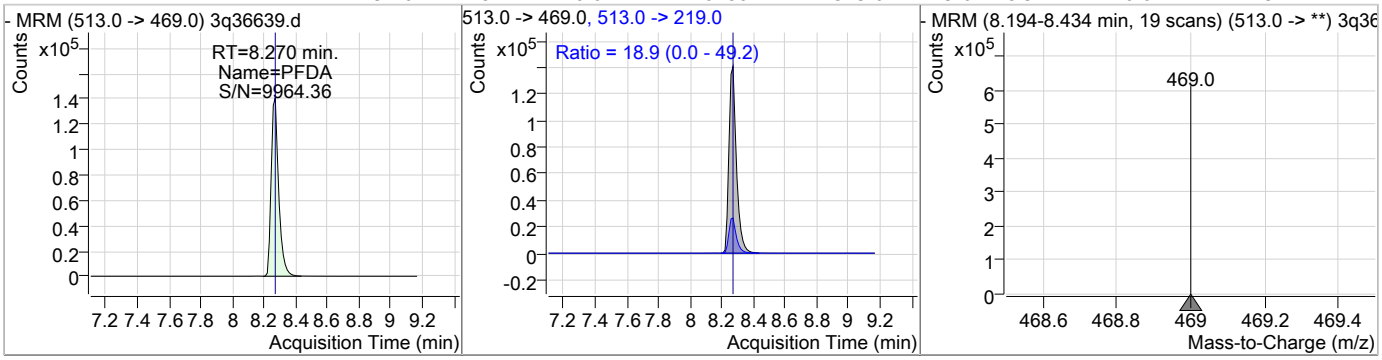
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	19.93	8.24	0.01	51577	549.0 -> 99.0	55.2	25.9	85.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.17	8.27	0.01	463368				

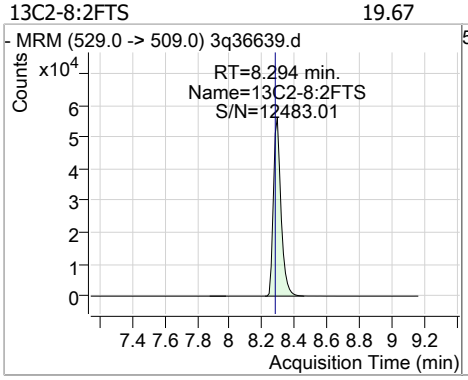


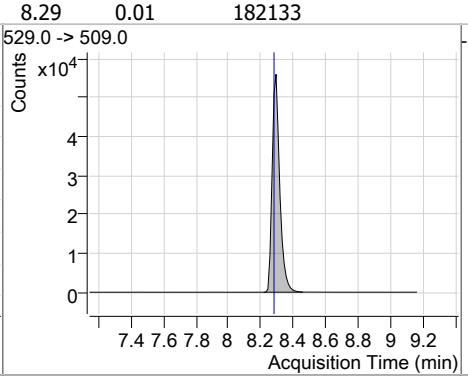
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.26	8.27	0.01	461864	513.0 -> 219.0	18.9	0.0	49.2

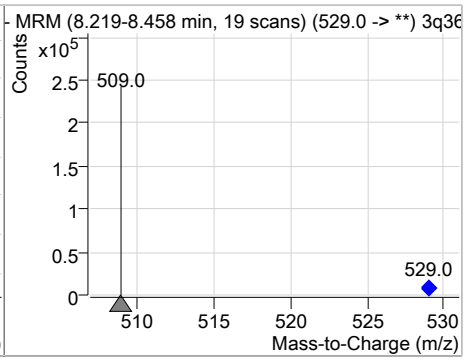


Perfluorinated Compounds by LC/MS/MS

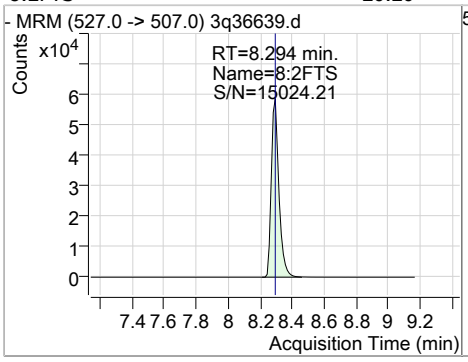
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.67	8.29	0.01	182133				

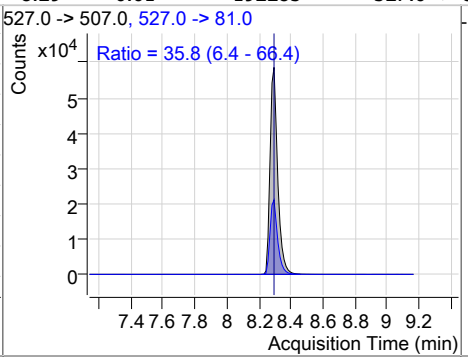


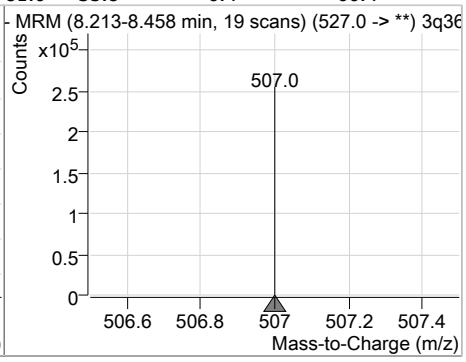




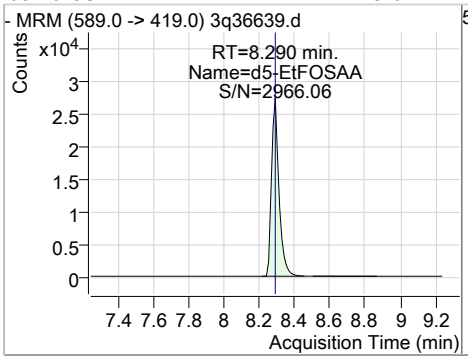
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.20	8.29	0.01	192285	527.0 -> 81.0	35.8	6.4	66.4

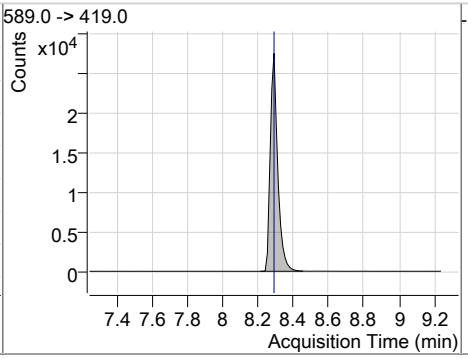


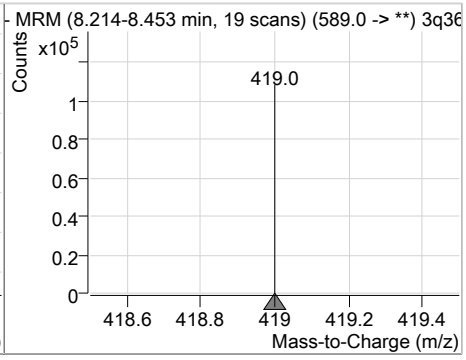




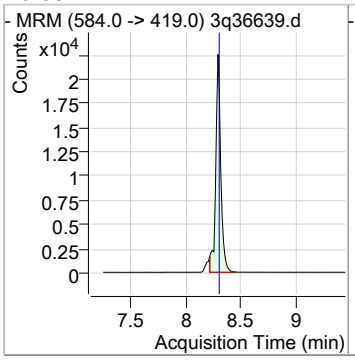
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.64	8.29	0.00	80787				

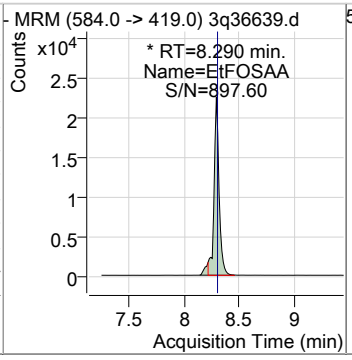


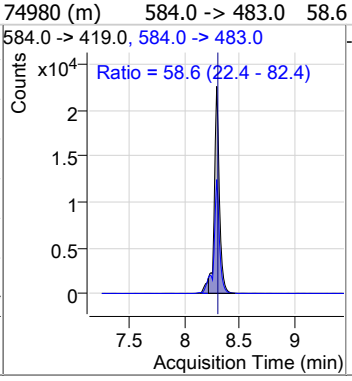


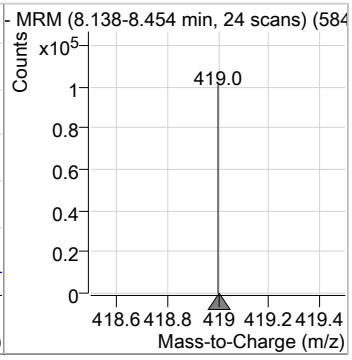


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	19.88	8.29	0.00	74980 (m)	584.0 -> 483.0	58.6	22.4	82.4



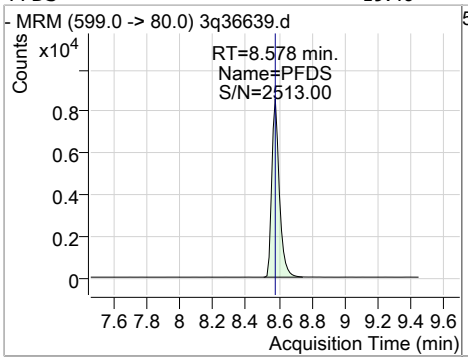


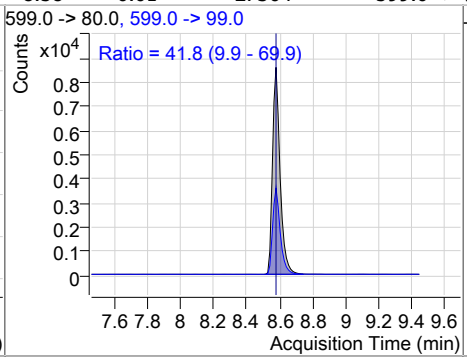


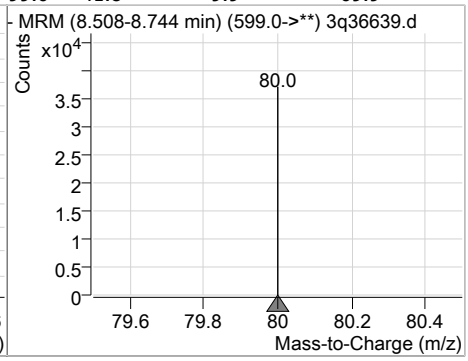


Perfluorinated Compounds by LC/MS/MS

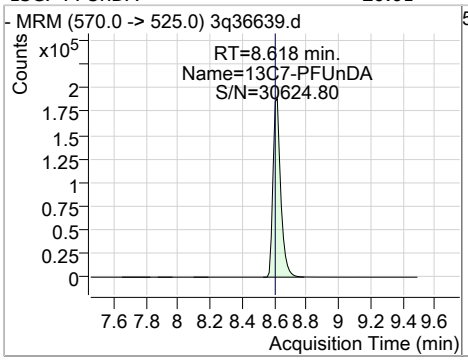
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	19.46	8.58	0.01	27364	599.0 -> 99.0	41.8	9.9	69.9

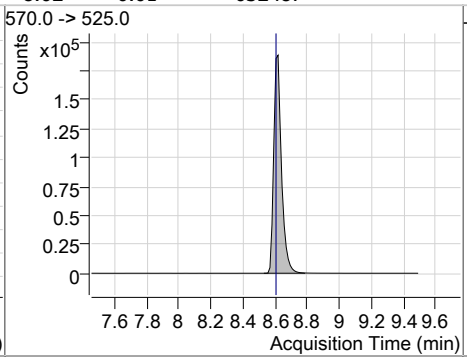


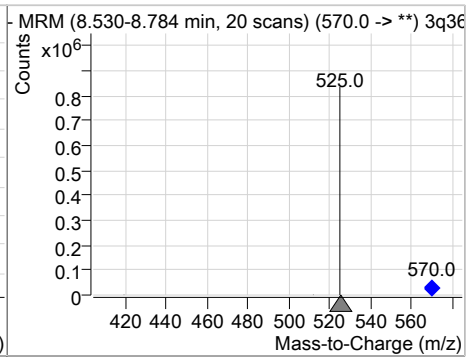




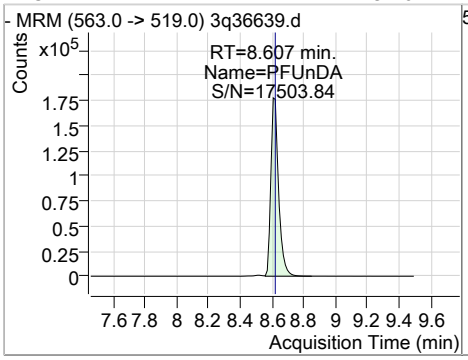
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.01	8.62	0.01	632487				

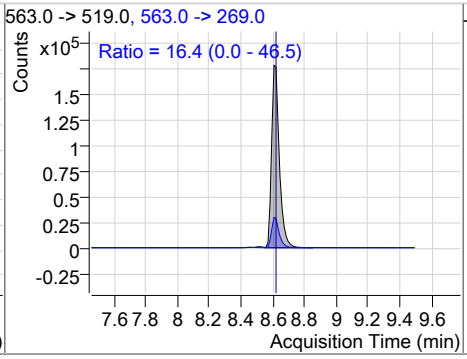


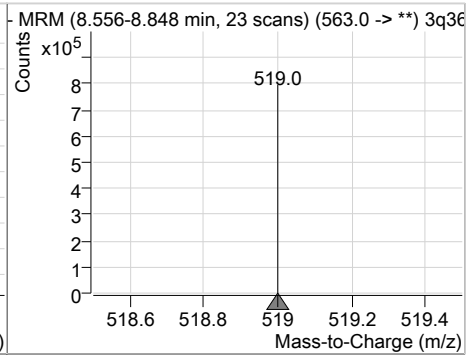




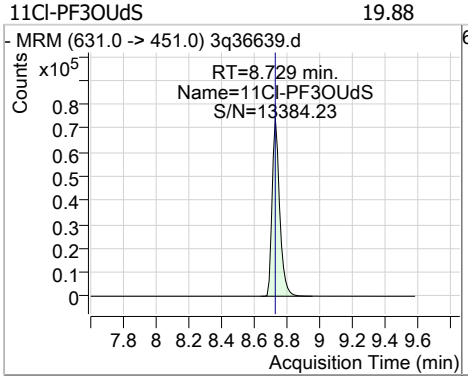
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	19.46	8.61	0.00	601393	563.0 -> 269.0	16.4	0.0	46.5

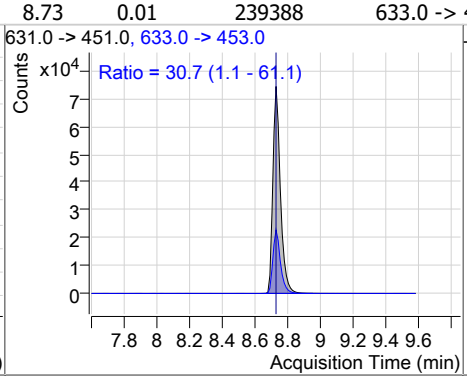


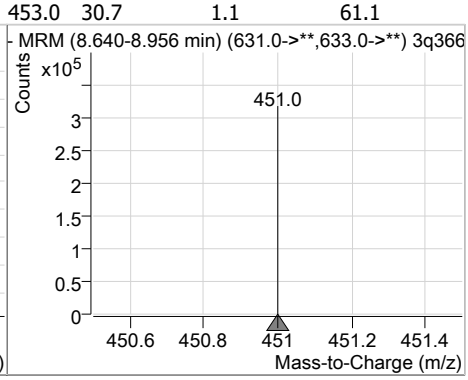




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	19.88	8.73	0.01	239388	633.0 -> 453.0	30.7	1.1	61.1

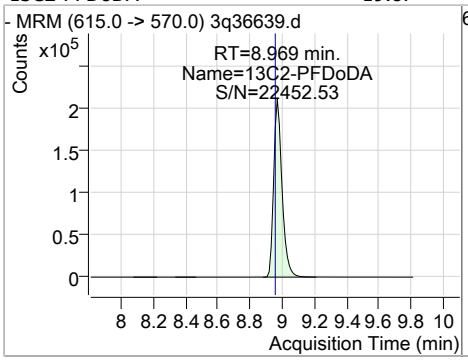


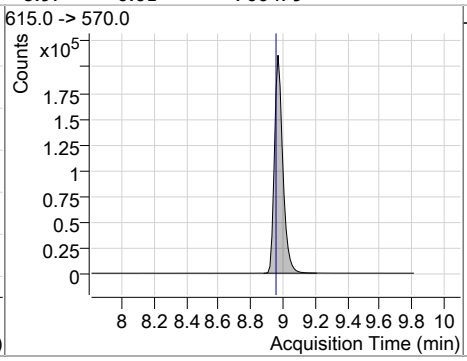


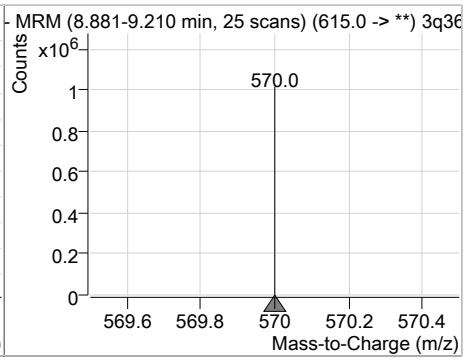


Perfluorinated Compounds by LC/MS/MS

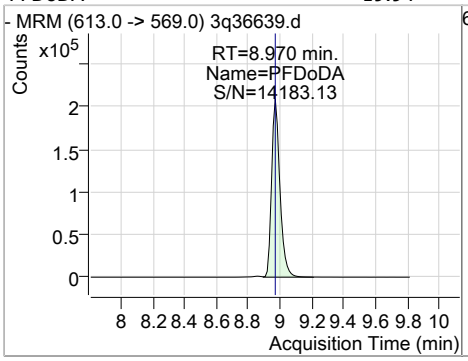
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.87	8.97	0.01	766479				

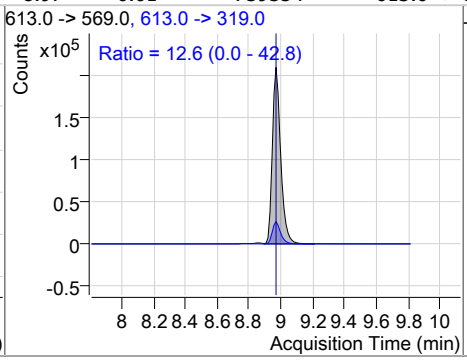


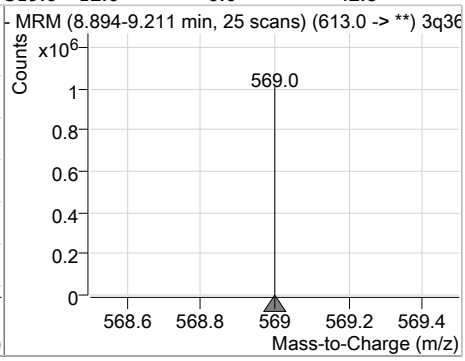




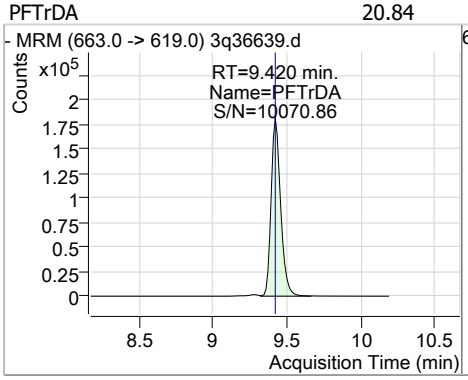
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	19.94	8.97	0.01	759554	613.0 -> 319.0	12.6	0.0	42.8

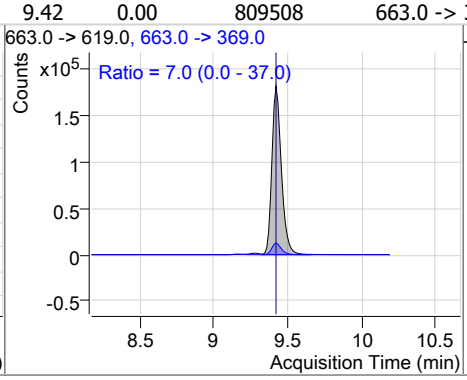


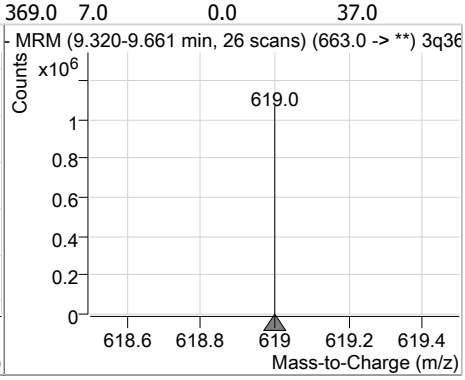




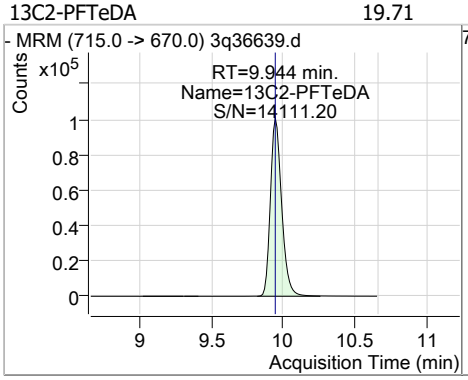
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	20.84	9.42	0.00	809508	663.0 -> 369.0	7.0	0.0	37.0

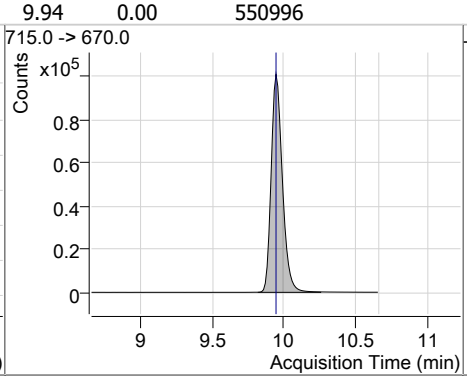


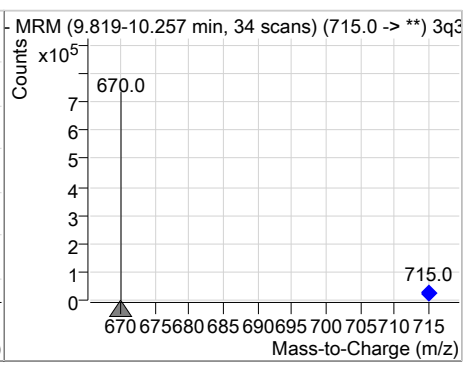




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.71	9.94	0.00	550996				

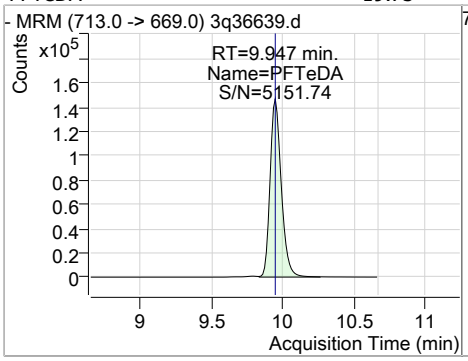


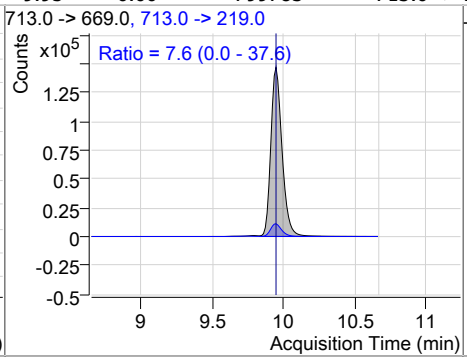


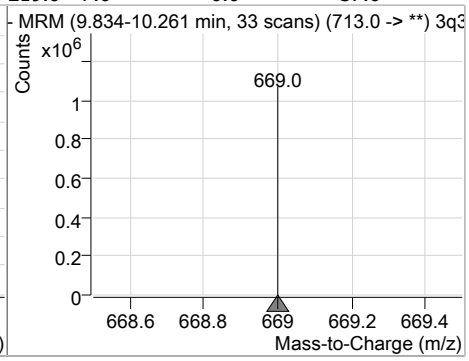


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	19.73	9.95	0.00	799783	713.0 -> 219.0	7.6	0.0	37.6







Manual Integration Approval Summary

Sample Number: S3Q538-ECC537
Lab FileID: 3Q36639.D
Injection Time: 04/15/21 03:36
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/15/21 09:10 Martha Valls
Supervisor approved: 04/15/21 10:01 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.67	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.84	Split peak
MeFOSAA	2355-31-9		8.19	Split peak
EtFOSAA	2991-50-6		8.29	Split peak

QQQ Check Tune Report

Agilent | Trusted Answers

Instrument Name	LCMS4-Q
MS Model	G6470A
MS Instrument Serial	SG2004G105
Software_Firmware Version	10.0.142, FW: A.00.08.100
Tune Date & Time	18 April 2021 09:42:51
Data Path	D:\MassHunter\Tune\QQQ\G6470A\atunes.TUNE.XML
Ion Source	AJS ESI
Ionization Mode	AJS ESI
Tuned Resolution	All
Vacuum Pressure	1.67E+0 [R] (Torr); 3.60E-5 [H] (Torr)

Source Parameters

Parameter	Negative
Gas Temp (°C)	300
Gas Flow (l/min)	8
Nebulizer (psi)	15
Capillary (V)	4000
Nozzle Voltage (V)	1500
Sheath Gas Temp (°C)	250
Sheath Gas Flow (l/min)	7

QQQ Check Tune Report

Agilent | Trusted Answers

Negative Results

Analyzer: MS1 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.99	0.00	Pass	0.70	0.70	0.00	Pass	101553
302.00	302.00	0.00	Pass	0.70	0.76	0.06	Pass	1267
601.98	601.92	-0.06	Pass	0.70	0.74	0.04	Pass	107601
1033.99	1033.92	-0.07	Pass	0.70	0.73	0.03	Pass	349280
1633.95	1633.90	-0.05	Pass	0.70	0.67	-0.03	Pass	522341
2233.91	2233.85	-0.06	Pass	0.70	0.68	-0.02	Pass	286234

Analyzer: MS2 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.14	0.14	Pass	0.70	0.60	-0.10	Pass	21070
112.99	112.99	0.00	Pass	0.70	0.71	0.01	Pass	57913
302.00	302.00	0.00	Pass	0.70	0.72	0.02	Pass	1088
601.98	601.99	0.01	Pass	0.70	0.68	-0.02	Pass	66130
1033.99	1034.01	0.02	Pass	0.70	0.69	-0.01	Pass	251602
1633.95	1633.95	0.00	Pass	0.70	0.68	-0.02	Pass	382645
2233.91	2233.93	0.02	Pass	0.70	0.70	0.00	Pass	317126

Analyzer: MS1 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	113.01	0.02	Pass	1.20	1.19	-0.01	Pass	126443
302.00	302.01	0.01	Pass	1.20	1.57	0.37	Pass	1811
601.98	601.96	-0.02	Pass	1.20	1.62	0.42	Pass	184496
1033.99	1033.95	-0.04	Pass	1.20	1.61	0.41	Pass	699426
1633.95	1633.91	-0.04	Pass	1.20	1.58	0.38	Pass	1185105
2233.91	2233.82	-0.09	Pass	1.20	1.34	0.14	Pass	770726

Analyzer: MS2 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.12	0.12	Pass	1.20	1.05	-0.15	Pass	29924
112.99	112.99	0.00	Pass	1.20	1.20	0.00	Pass	87227
302.00	302.02	0.02	Pass	1.20	1.37	0.17	Pass	1569
601.98	602.04	0.06	Pass	1.20	1.42	0.22	Pass	137729
1033.99	1034.04	0.05	Pass	1.20	1.42	0.22	Pass	540916
1633.95	1634.01	0.06	Pass	1.20	1.31	0.11	Pass	1078633
2233.91	2233.99	0.08	Pass	1.20	1.23	0.03	Pass	739913

Analyzer: MS1 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.99	0.00	Pass	2.50	2.47	-0.03	Pass	154362
302.00	301.97	-0.03	Pass	2.50	2.84	0.34	Pass	2426
601.98	602.00	0.02	Pass	2.50	2.84	0.34	Pass	243374
1033.99	1033.91	-0.08	Pass	2.50	2.84	0.34	Pass	1077821
1633.95	1633.84	-0.11	Pass	2.50	2.69	0.19	Pass	2465429
2233.91	2233.75	-0.16	Pass	2.50	2.47	-0.03	Pass	1923087

Analyzer: MS2 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.12	0.12	Pass	2.50	2.41	-0.09	Pass	42673
112.99	113.00	0.01	Pass	2.50	2.58	0.08	Pass	134336
302.00	302.01	0.01	Pass	2.50	2.73	0.23	Pass	2268
601.98	601.99	0.01	Pass	2.50	2.82	0.32	Pass	208724
1033.99	1034.01	0.02	Pass	2.50	2.77	0.27	Pass	1009710
1633.95	1633.97	0.02	Pass	2.50	2.61	0.11	Pass	2554052
2233.91	2233.86	-0.05	Pass	2.50	2.52	0.02	Pass	2444865

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:40

Perfluorinated Compounds by LC/MS/MS

Data File : 4Q13435.d
Operator : natashag
Acq. Method : 537_ID.m
Acq. Date-Time : 4/18/2021 2:43:48 PM
Sample Name : ic189-0.5
Vial : P1-A2
DA Method File : BR_LN_041821_S4Q189.quantmethod.xml
Batch Name : s4q189.batch.bin
Sample Information : op84918,S4Q189,250,,,1,1,water

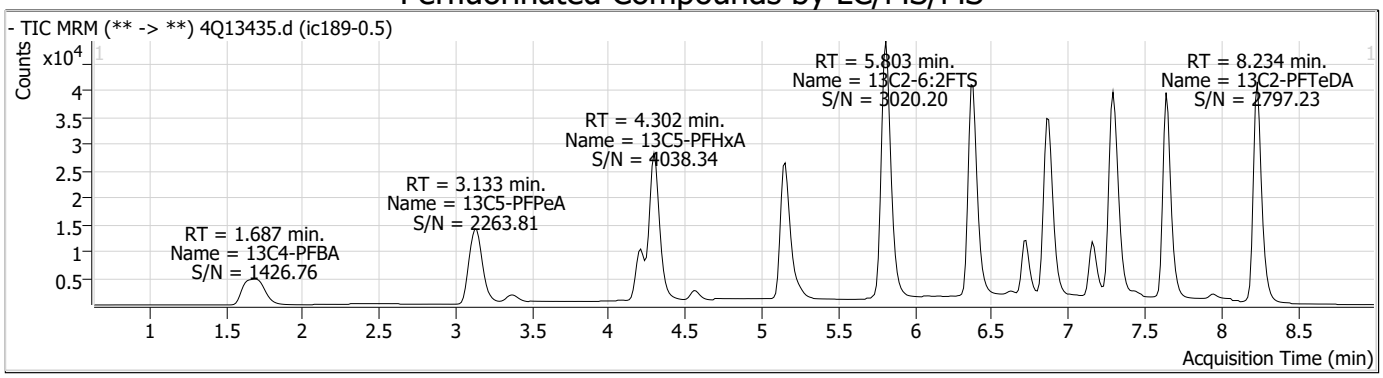
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.687	217.0 -> 172.0	48160	20.00	µg/L	0.000
M5-PFPeA	3.133	268.0 -> 223.0	86140	20.00	µg/L	-0.012
M5-PFHxA	4.302	318.0 -> 273.0	119365	20.00	µg/L	-0.013
M4-PFHpA	5.157	367.0 -> 322.0	103394	20.00	µg/L	0.000
M8-PFOA	5.816	421.0 -> 376.0	143053	20.00	µg/L	-0.012
M9-PFNA	6.386	472.0 -> 427.0	152148	20.00	µg/L	0.000
M6-PFDA	6.867	519.0 -> 474.0	94869	20.00	µg/L	0.000
M7-PFUnDA	7.297	570.0 -> 525.0	129788	20.00	µg/L	0.000
M2-PFDoDA	7.640	615.0 -> 570.0	136530	20.00	µg/L	0.000
M2-PFTeDA	8.234	715.0 -> 670.0	153510	20.00	µg/L	0.000
M8-FOSA	6.732	506.0 -> 78.0	38229	20.00	µg/L	0.000
M3-PFBS	3.381	302.0 -> 99.0	6662	20.00	µg/L	0.000
M3-PFHxS	5.192	402.0 -> 99.0	6153	20.00	µg/L	-0.012
M8-PFOS	6.372	507.0 -> 99.0	8104	20.00	µg/L	0.000
M2-4:2FTS	4.212	329.0 -> 309.0	41704	20.00	µg/L	0.000
M2-6:2FTS	5.803	429.0 -> 409.0	56331	20.00	µg/L	0.000
M2-8:2FTS	6.891	529.0 -> 509.0	43808	20.00	µg/L	0.000
M3-MeFOSAA	7.160	573.0 -> 419.0	36430	20.00	µg/L	-0.012
M3-HFPO-DA	4.566	287.0 -> 169.0	6879	20.00	µg/L	-0.012
M5-EtFOSAA	7.320	589.0 -> 419.0	30869	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.212	329.0 -> 309.0	41704	18.36	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.8%		
13C2-6:2FTS	5.803	429.0 -> 409.0	56331	18.84	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.2%		
13C2-8:2FTS	6.891	529.0 -> 509.0	43808	18.80	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.0%		
13C2-PFDoDA	7.640	615.0 -> 570.0	136530	19.53	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.7%		
13C2-PFTeDA	8.234	715.0 -> 670.0	153510	19.56	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.8%		
13C3-PFBS	3.381	302.0 -> 99.0	6662	19.54	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.7%		
13C3-PFHxS	5.192	402.0 -> 99.0	6153	19.10	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.5%		
13C4-PFBA	1.687	217.0 -> 172.0	48160	19.50	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.5%		
13C4-PFHpA	5.157	367.0 -> 322.0	103394	19.39	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.0%		
13C5-PFHxA	4.302	318.0 -> 273.0	119365	19.57	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.9%		
13C5-PFPeA	3.133	268.0 -> 223.0	86140	19.39	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.9%		
13C6-PFDA	6.867	519.0 -> 474.0	94869	19.82	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.1%		

Perfluorinated Compounds by LC/MS/MS

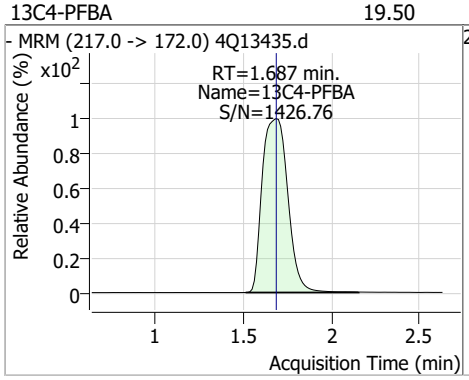
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	7.297	570.0 -> 525.0	129788	19.81	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.0%			
13C8-FOSA	6.732	506.0 -> 78.0	38229	20.60	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.0%			
13C8-PFOA	5.816	421.0 -> 376.0	143053	19.48	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.4%			
13C8-PFOS	6.372	507.0 -> 99.0	8104	19.03	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.2%			
13C9-PFNA	6.386	472.0 -> 427.0	152148	19.50	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.5%			
d3-MeFOSAA	7.160	573.0 -> 419.0	36430	19.60	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%			
13C3-HFPO-DA	4.566	287.0 -> 169.0	6879	19.72	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.6%			
d5-EtFOSAA	7.320	589.0 -> 419.0	30834	19.73	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%			
Target Compounds							**QValue**
4:2FTS	4.214	327.0 -> 307.0	1163	0.52	µg/L		90
6:2FTS	5.803	427.0 -> 407.0	1546	0.52	µg/L		99
8:2FTS	6.879	527.0 -> 507.0	1109	0.49	µg/L		97
EtFOSAA	7.321	584.0 -> 419.0	682	0.47	µg/L	m	97
FOSA	6.720	498.0 -> 78.0	861	0.48	µg/L		99
MeFOSAA	7.161	570.0 -> 419.0	795	0.47	µg/L	m	98
PFBA	1.656	213.0 -> 169.0	526	0.50	µg/L		100
PFBS	3.370	299.0 -> 80.0	554	0.51	µg/L		99
PFDA	6.867	513.0 -> 469.0	3654	0.50	µg/L		98
PFDoDA	7.641	613.0 -> 569.0	3174	0.48	µg/L		97
PFDS	7.258	599.0 -> 80.0	358	0.44	µg/L		96
PFHpA	5.157	363.0 -> 319.0	3305	0.49	µg/L		96
PFHpS	5.827	449.0 -> 80.0	416	0.56	µg/L		94
PFHxA	4.302	313.0 -> 269.0	2658	0.49	µg/L		99
PFHxS	5.193	399.0 -> 80.0	419	0.54	µg/L	m	95
PFNA	6.386	463.0 -> 419.0	2977	0.47	µg/L		98
PFNS	6.840	549.0 -> 80.0	403	0.58	µg/L		96
PFOA	5.817	413.0 -> 369.0	4227	0.50	µg/L		98
PFOS	6.373	499.0 -> 80.0	502	0.58	µg/L	m	83
PFPeA	3.147	263.0 -> 219.0	1917	0.52	µg/L		100
PFPeS	4.423	349.0 -> 80.0	385	0.49	µg/L		99
PFTeDA	8.235	713.0 -> 669.0	3613	0.49	µg/L		99
PFTrDA	7.949	663.0 -> 619.0	2759	0.45	µg/L		100
PFUnDA	7.285	563.0 -> 519.0	3178	0.49	µg/L		95
11Cl-PF3OUdS	7.442	631.0 -> 451.0	1827	0.47	µg/L		97
9Cl-PF3ONS	6.629	531.0 -> 351.0	1927	0.51	µg/L		97
ADONA	5.245	377.0 -> 251.0	3927	0.50	µg/L		98
HFPO-DA	4.574	329.0 -> 169.0	581	0.53	µg/L		100
br-PFOS	6.211	499.0 -> 80.0	140	0.12	µg/L		85
LN-PFOS	6.373	499.0 -> 80.0	362	0.47	µg/L		78
br-PFHxS	5.031	399.0 -> 80.0	72	0.08	µg/L		85
LN-PFHxS	5.193	399.0 -> 80.0	353	0.46	µg/L		94
br-PFOA	5.817	413.0 -> 369.0	4227	0.50	µg/L		98
LN-PFOA	5.817	413.0 -> 369.0	4227	0.50	µg/L		98
br-PFNA	6.386	463.0 -> 419.0	2977	0.47	µg/L		98
LN-PFNA	6.386	463.0 -> 419.0	2977	0.47	µg/L		98

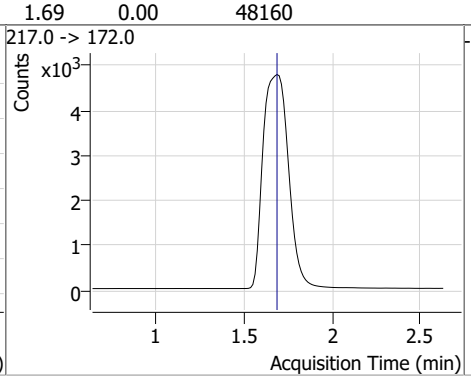
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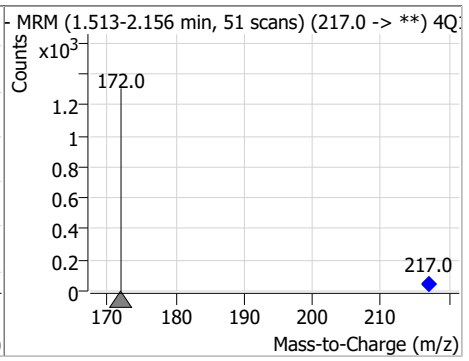
Perfluorinated Compounds by LC/MS/MS



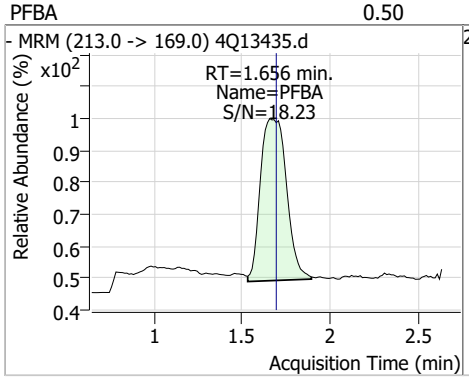
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.50	1.69	0.00	48160				

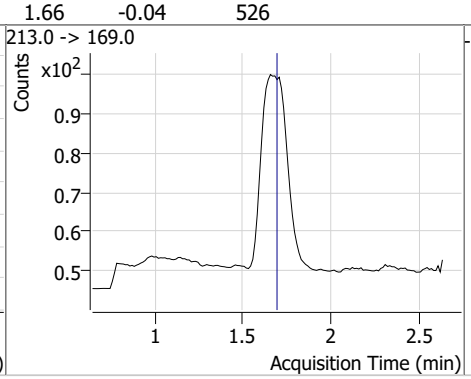


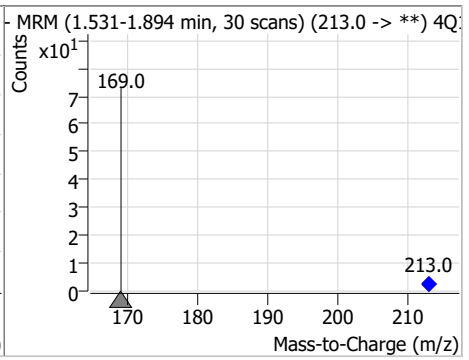




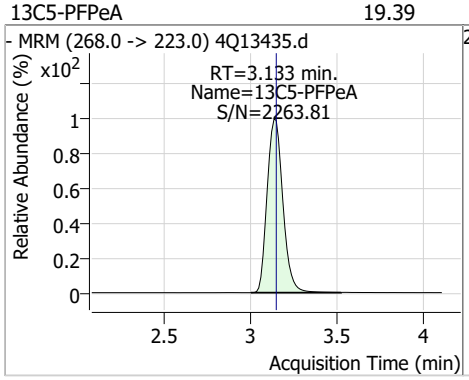
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.50	1.66	-0.04	526				

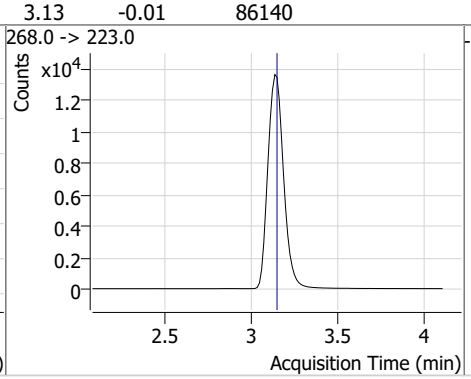


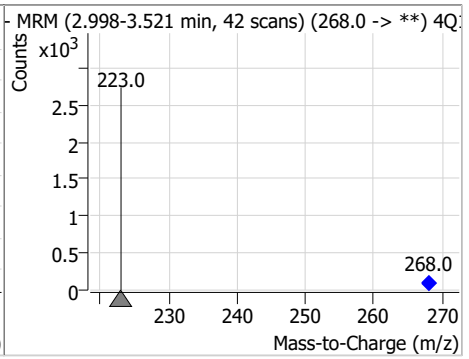




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.39	3.13	-0.01	86140				

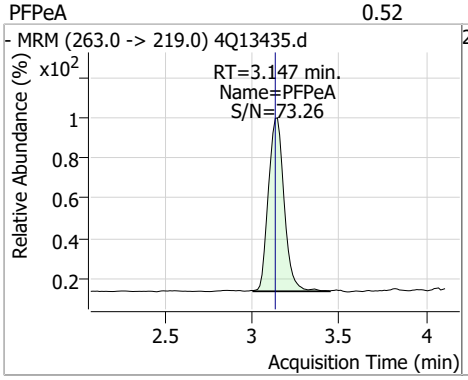


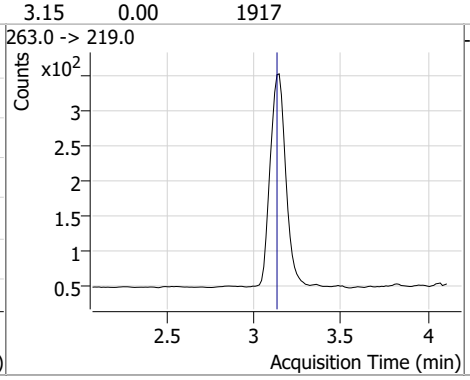


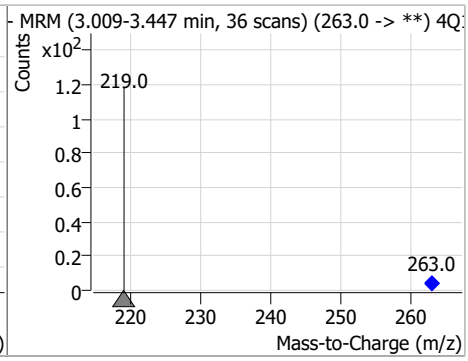


Perfluorinated Compounds by LC/MS/MS

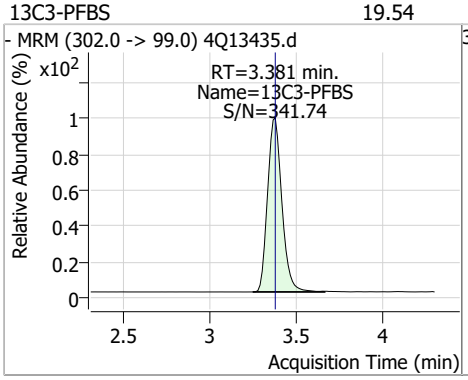
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.52	3.15	0.00	1917				

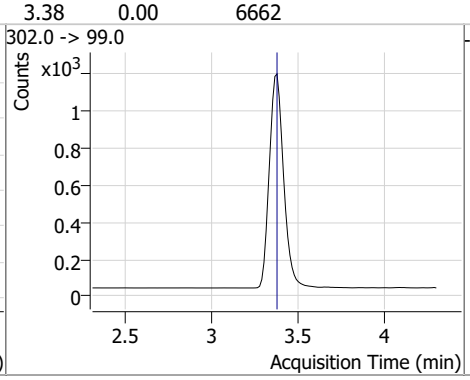


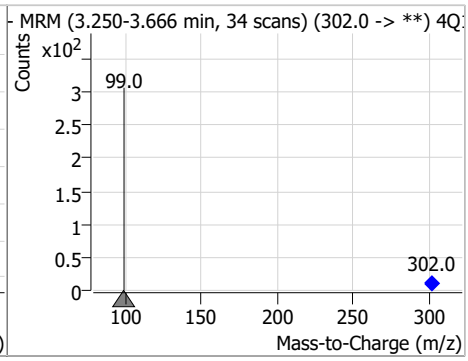




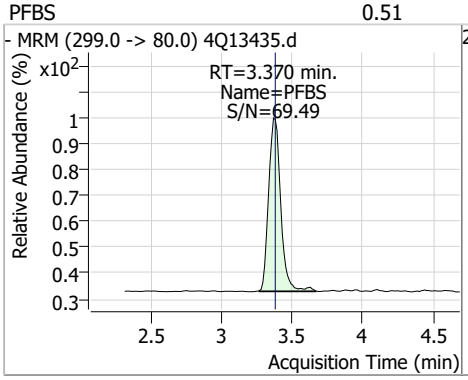
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.54	3.38	0.00	6662				

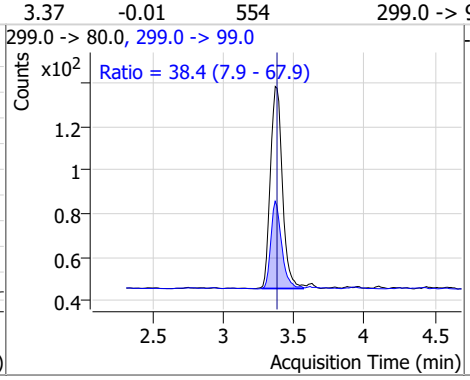


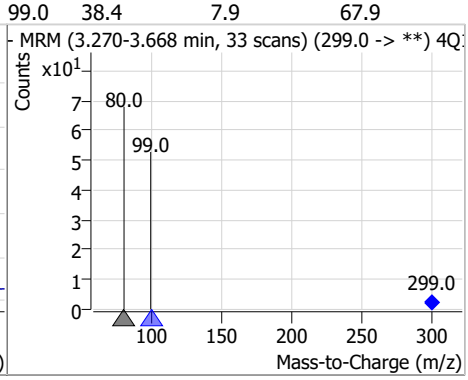




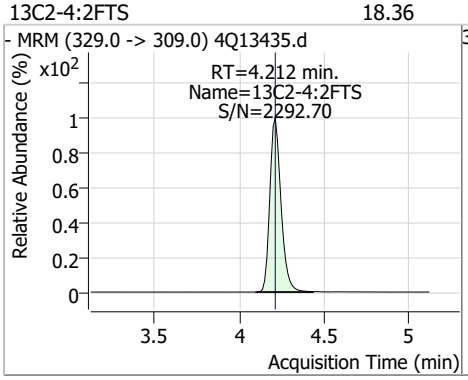
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.51	3.37	-0.01	554	299.0 -> 99.0	38.4	7.9	67.9

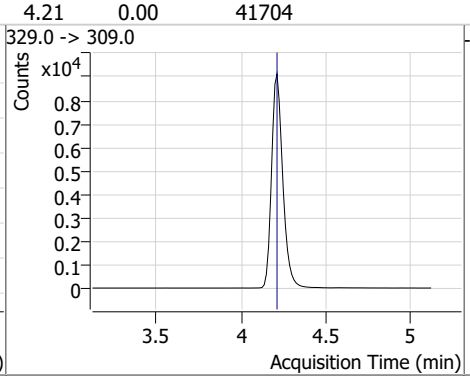


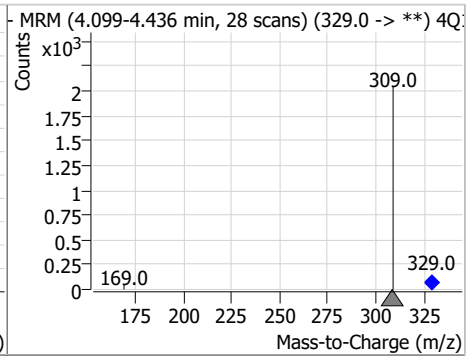




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.36	4.21	0.00	41704				

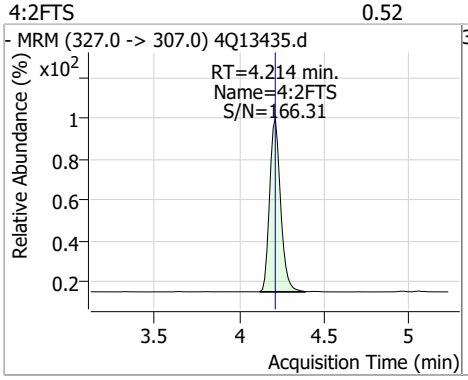


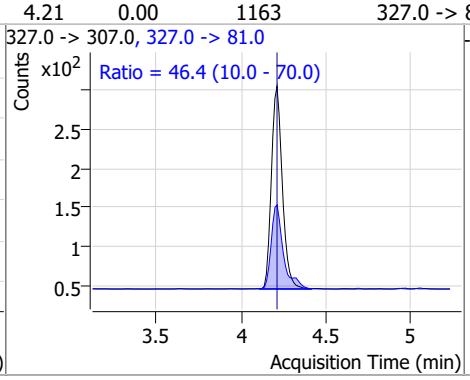


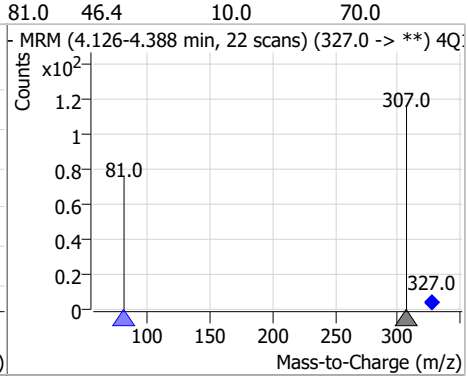


Perfluorinated Compounds by LC/MS/MS

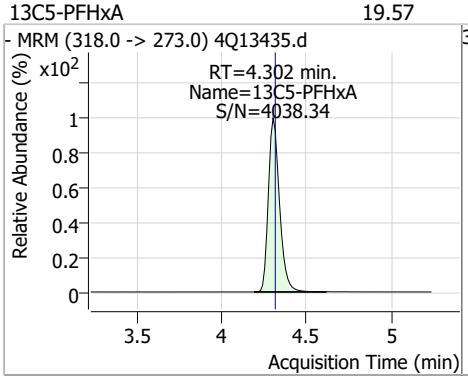
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	0.52	4.21	0.00	1163	327.0 -> 81.0	46.4	10.0	70.0

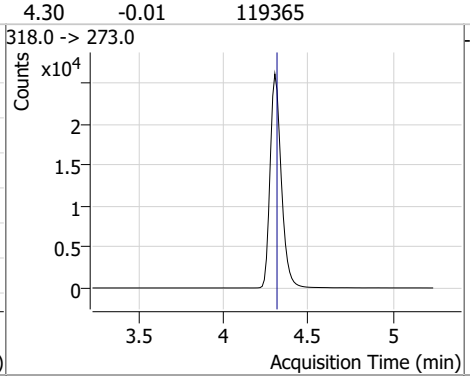


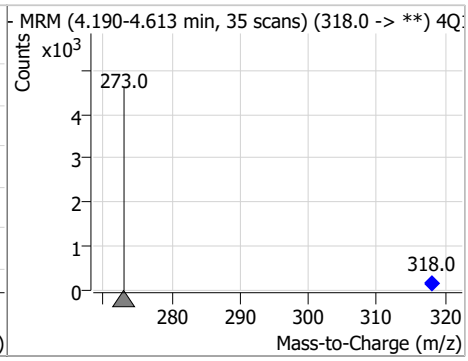




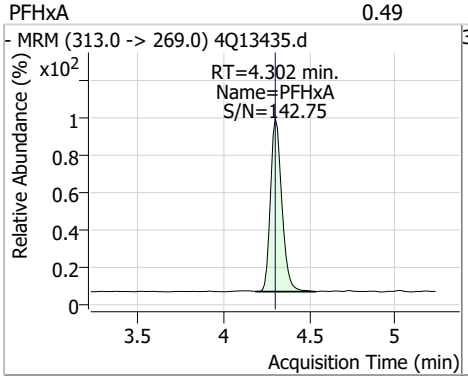
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.57	4.30	-0.01	119365				

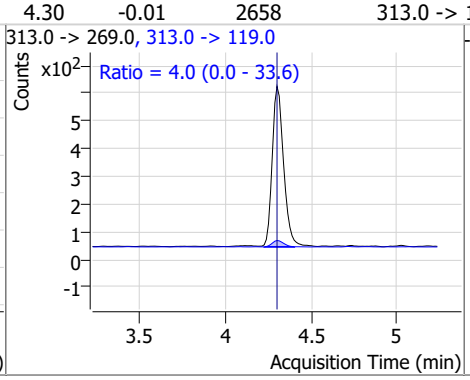


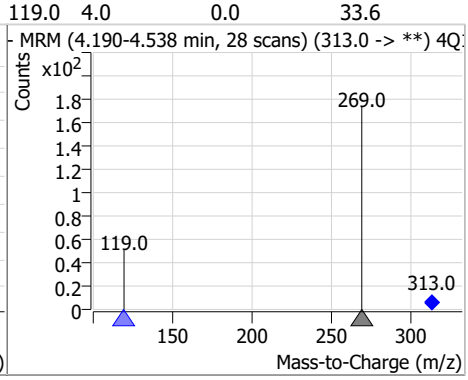




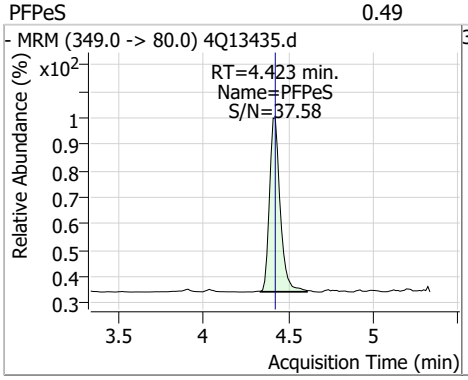
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.49	4.30	-0.01	2658	313.0 -> 119.0	4.0	0.0	33.6

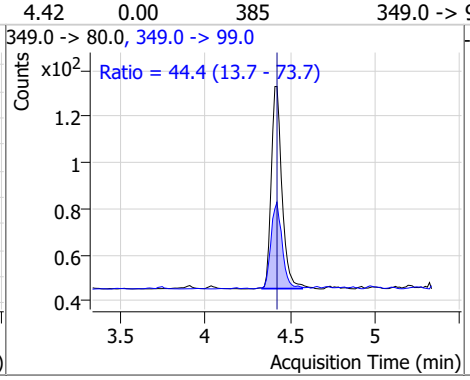


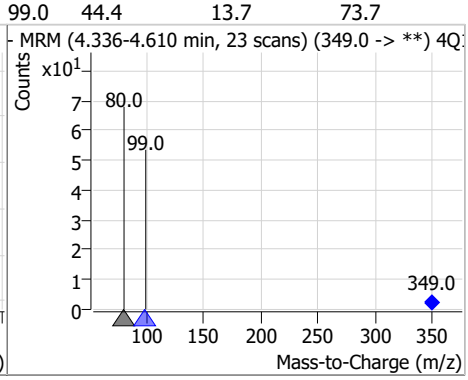




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	0.49	4.42	0.00	385	349.0 -> 99.0	44.4	13.7	73.7

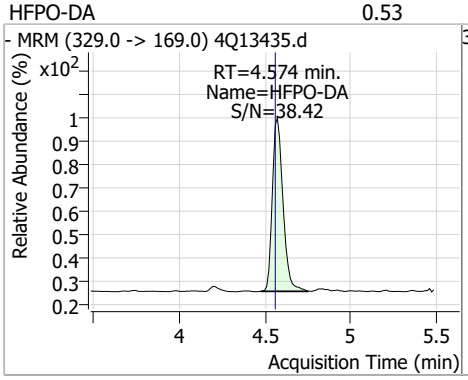


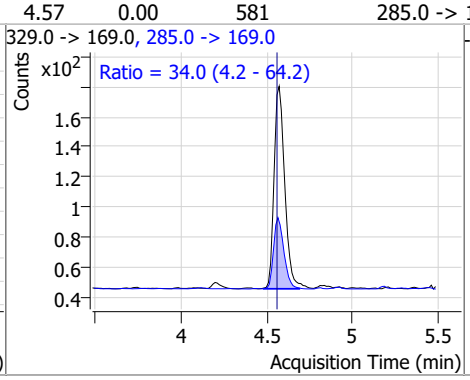


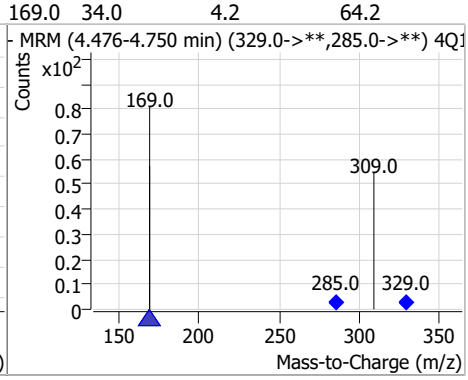


Perfluorinated Compounds by LC/MS/MS

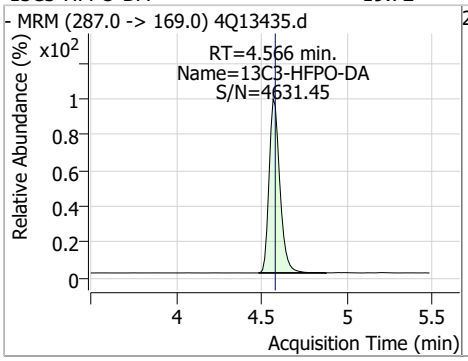
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.53	4.57	0.00	581	285.0 -> 169.0	34.0	4.2	64.2

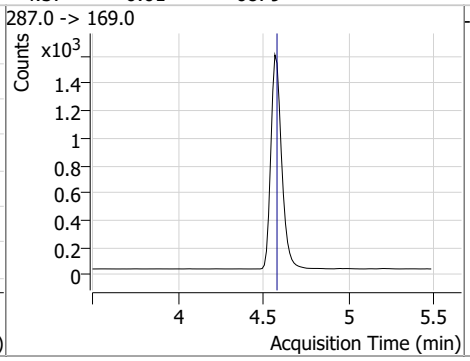


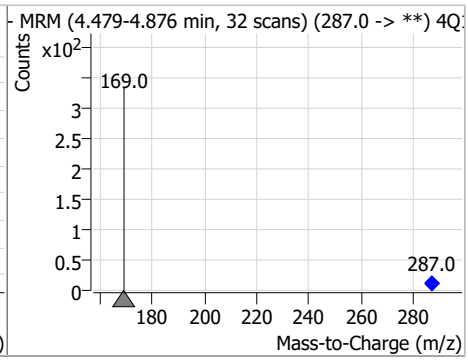




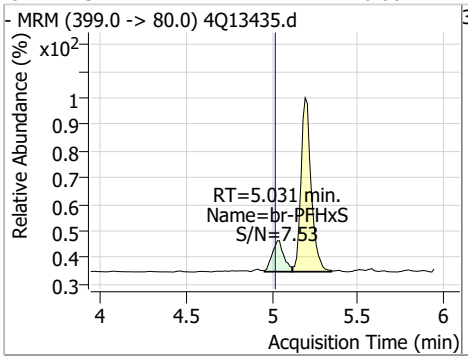
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.72	4.57	-0.01	6879				

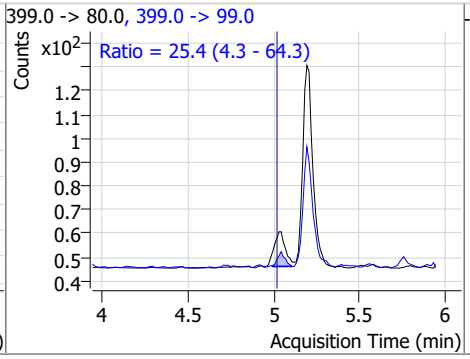


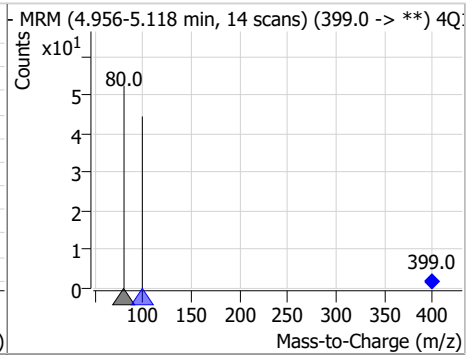




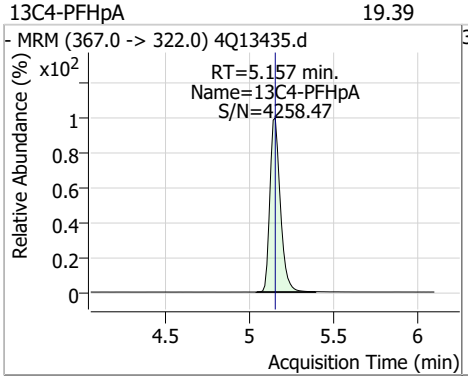
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	0.08	5.03	0.00	72	399.0 -> 99.0	25.4	4.3	64.3

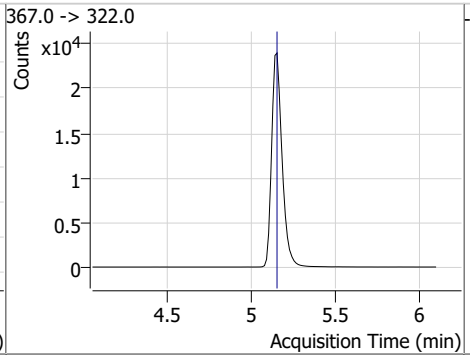


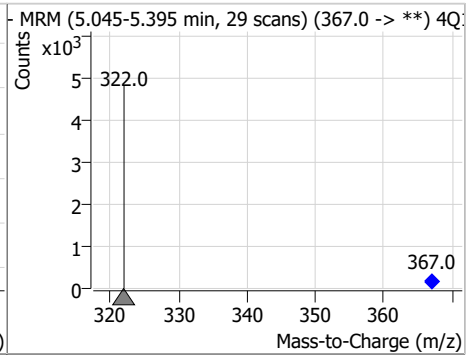




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.39	5.16	0.00	103394				

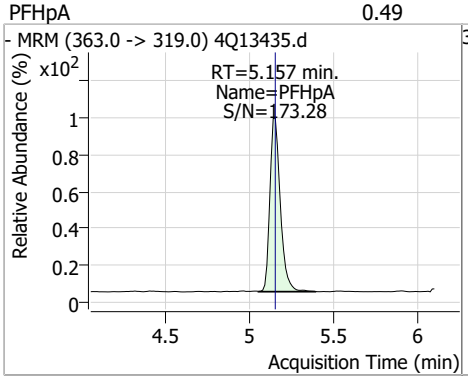


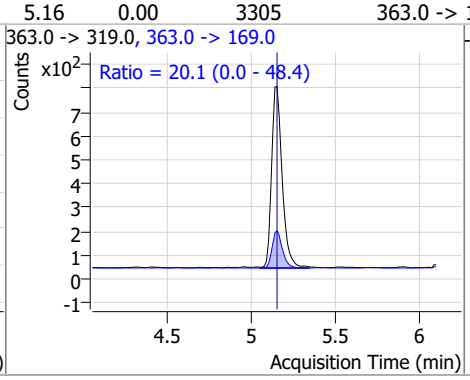


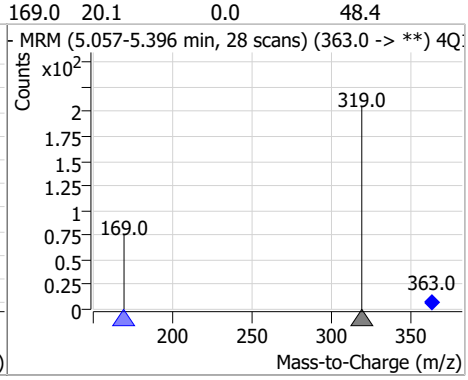


Perfluorinated Compounds by LC/MS/MS

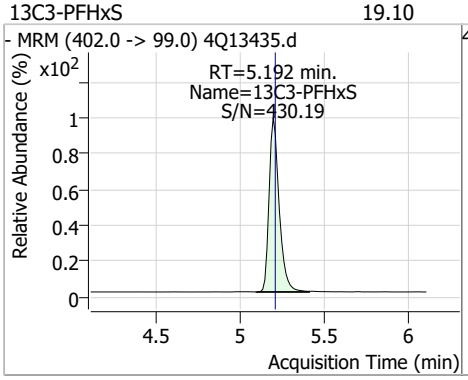
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.49	5.16	0.00	3305	363.0 -> 169.0	20.1	0.0	48.4

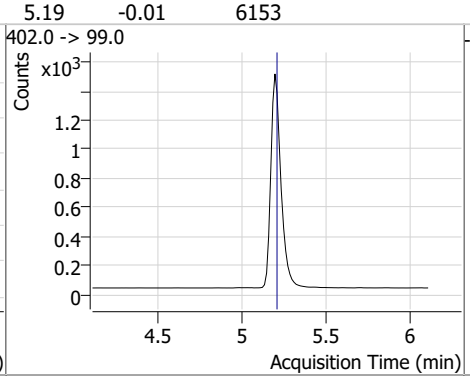


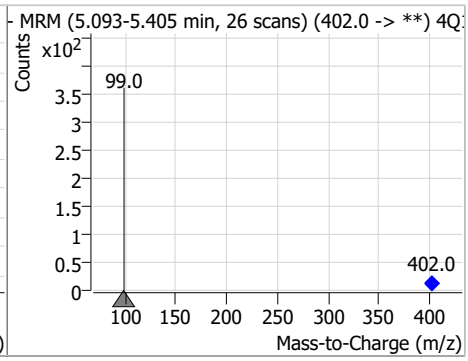




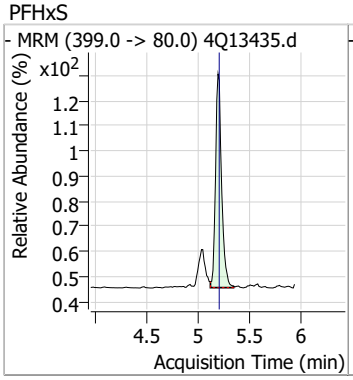
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.10	5.19	-0.01	6153				

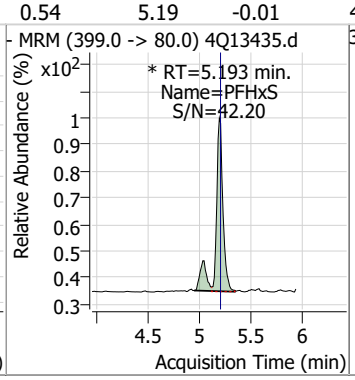


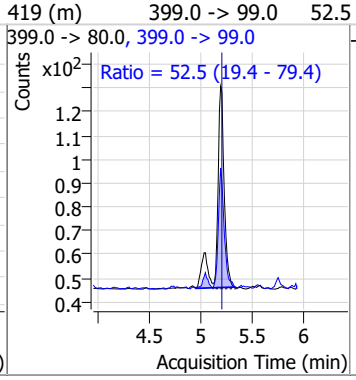


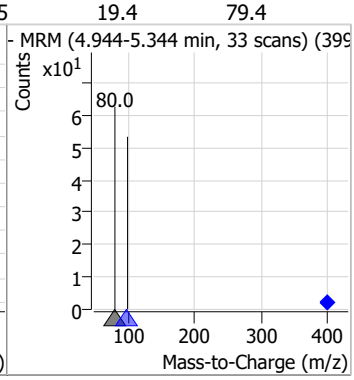


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.54	5.19	-0.01	419 (m)	399.0 -> 99.0	52.5	19.4	79.4

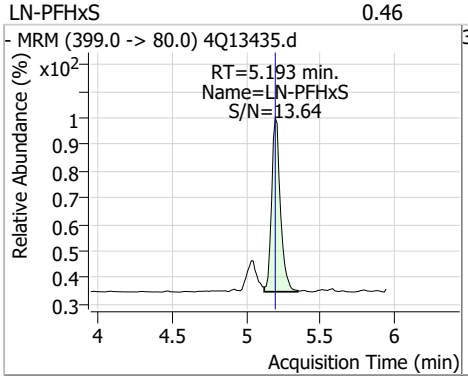


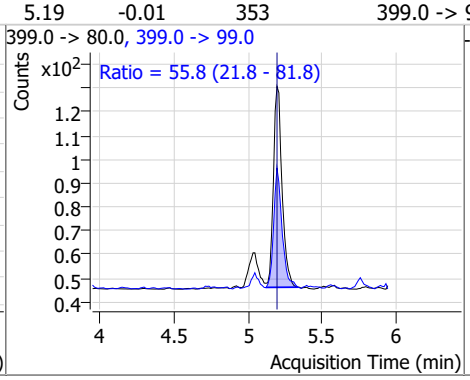


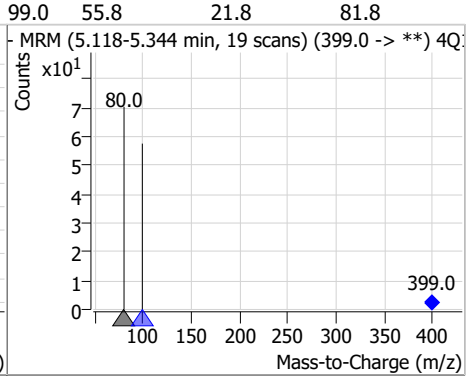




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	0.46	5.19	-0.01	353	399.0 -> 99.0	55.8	21.8	81.8

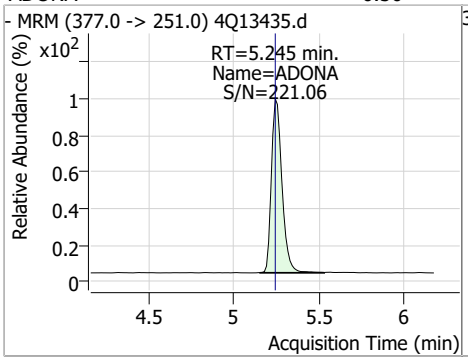


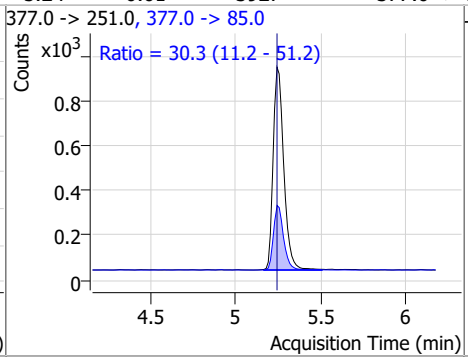


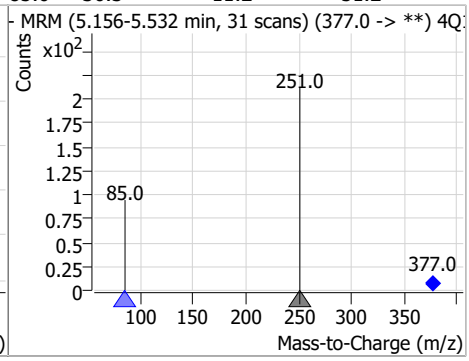


Perfluorinated Compounds by LC/MS/MS

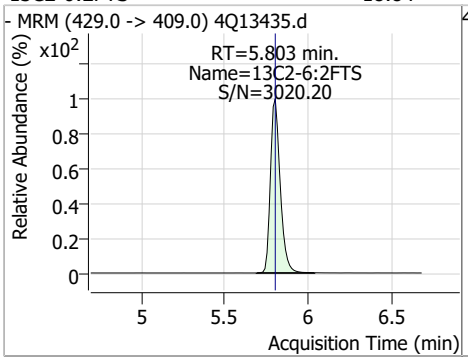
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.50	5.24	-0.01	3927	377.0 -> 85.0	30.3	11.2	51.2

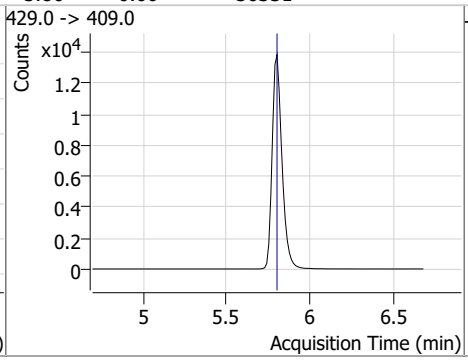


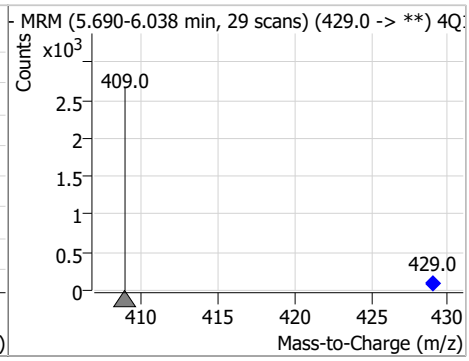




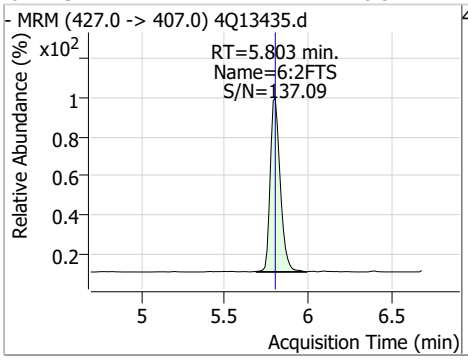
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.84	5.80	0.00	56331				

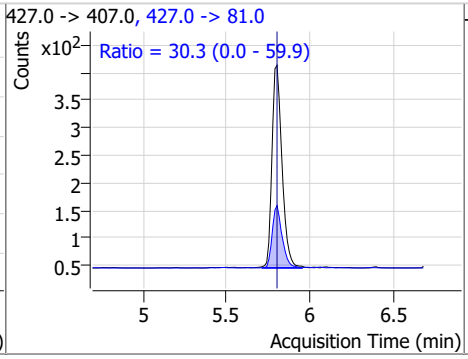


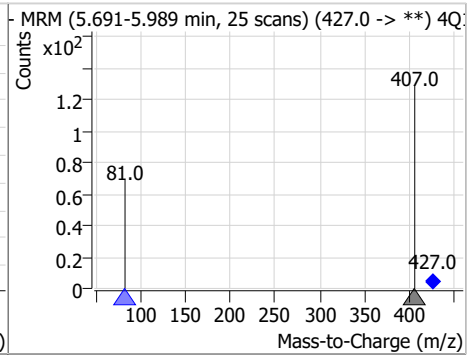




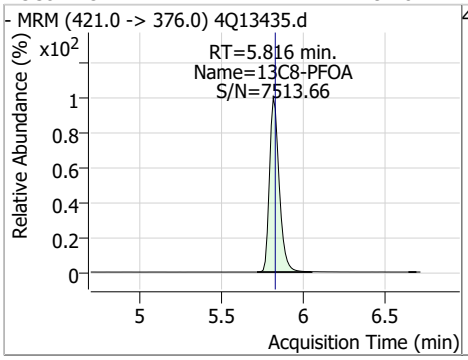
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	0.52	5.80	0.00	1546	427.0 -> 81.0	30.3	0.0	59.9

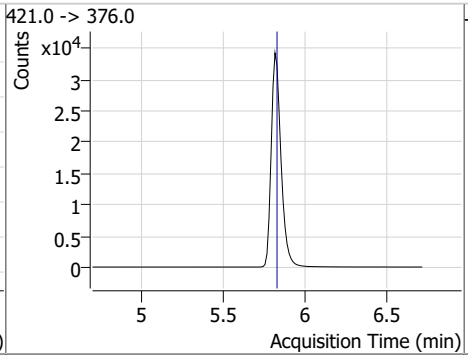


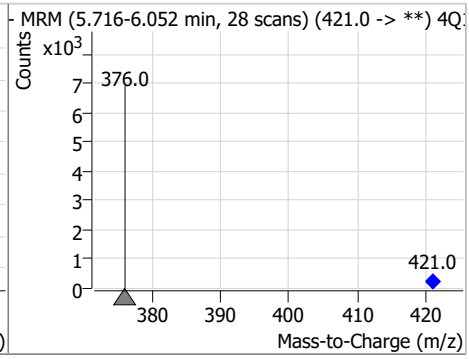




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.48	5.82	-0.01	143053				

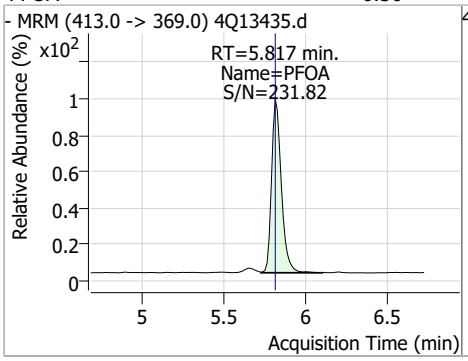


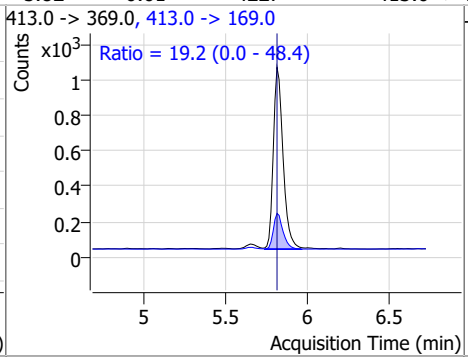


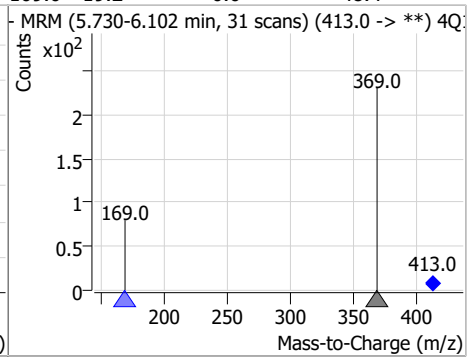


Perfluorinated Compounds by LC/MS/MS

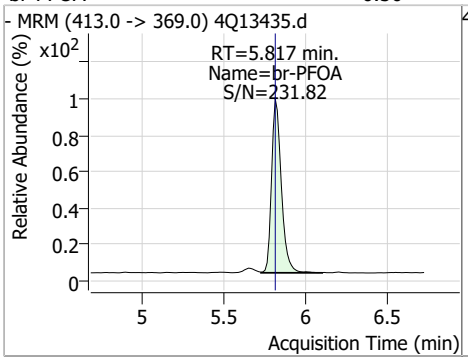
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.50	5.82	-0.01	4227	413.0 -> 169.0	19.2	0.0	48.4

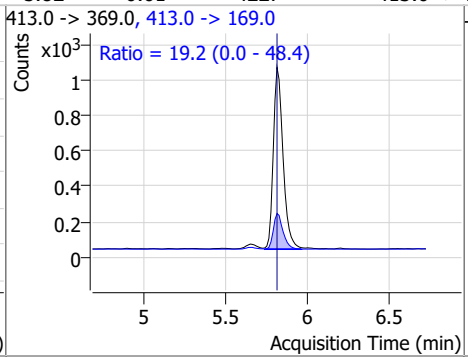


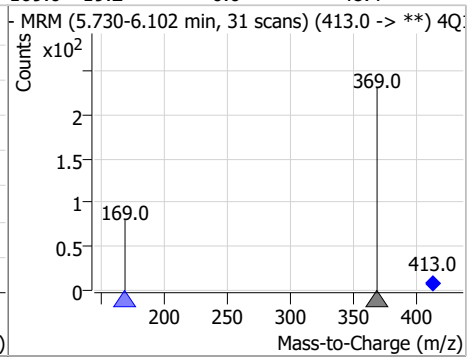




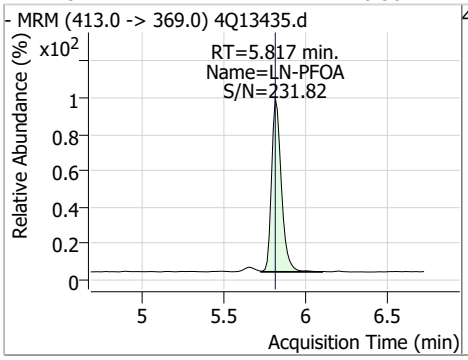
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	0.50	5.82	-0.01	4227	413.0 -> 169.0	19.2	0.0	48.4

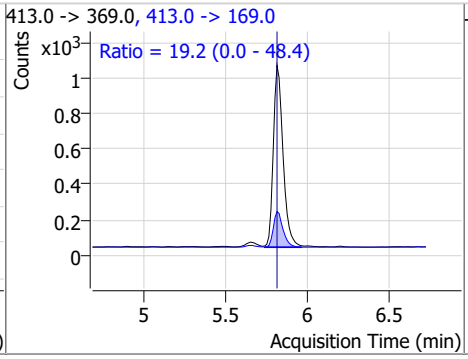


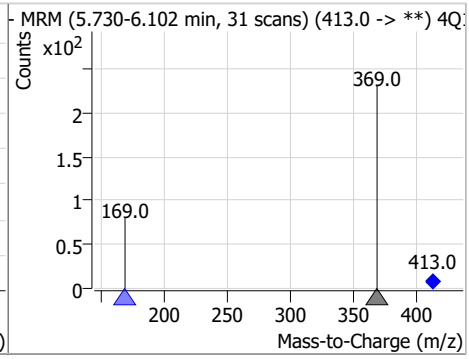




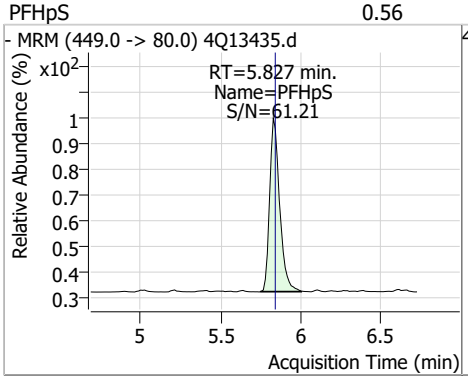
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	0.50	5.82	-0.01	4227	413.0 -> 169.0	19.2	0.0	48.4

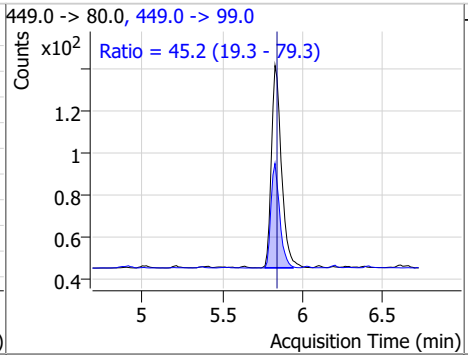


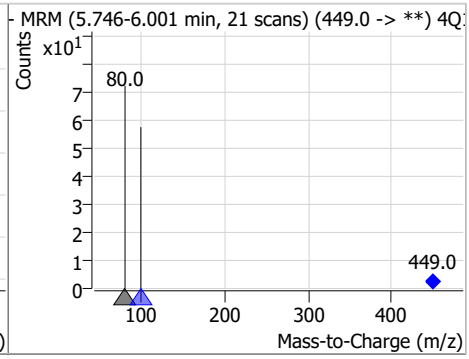




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	0.56	5.83	-0.01	416	449.0 -> 99.0	45.2	19.3	79.3

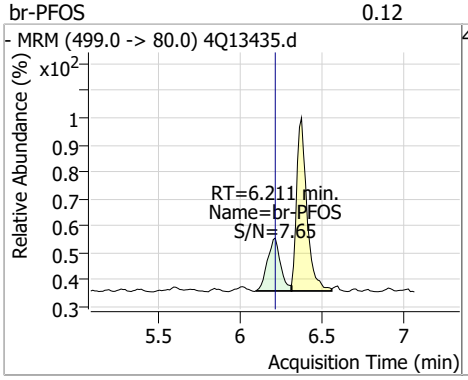


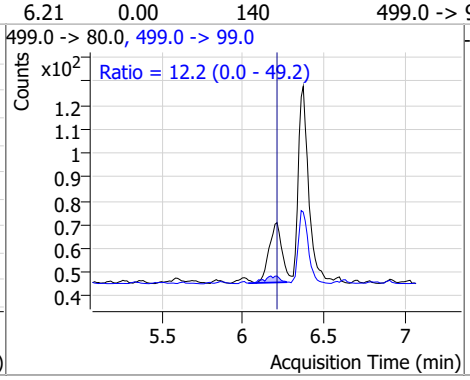


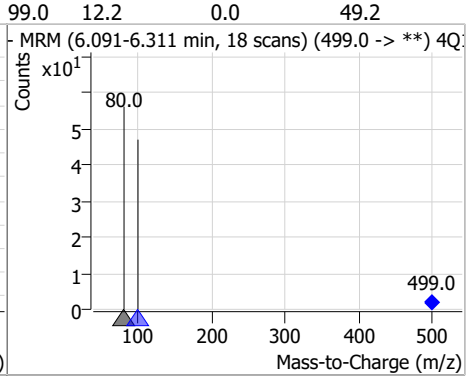


Perfluorinated Compounds by LC/MS/MS

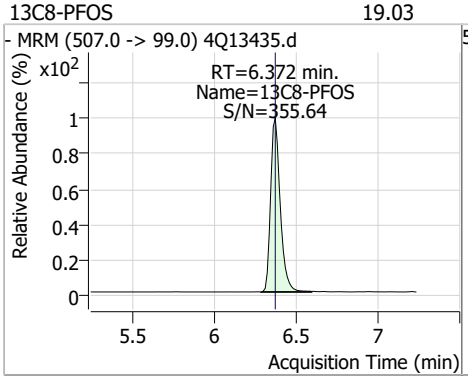
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	0.12	6.21	0.00	140	499.0 -> 99.0	12.2	0.0	49.2

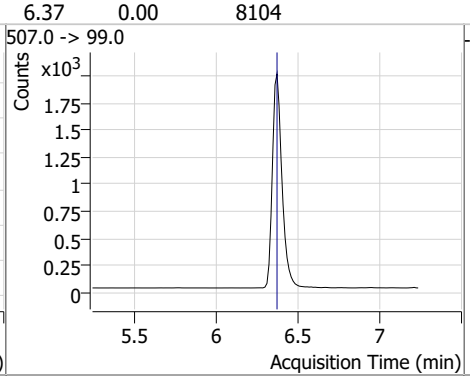


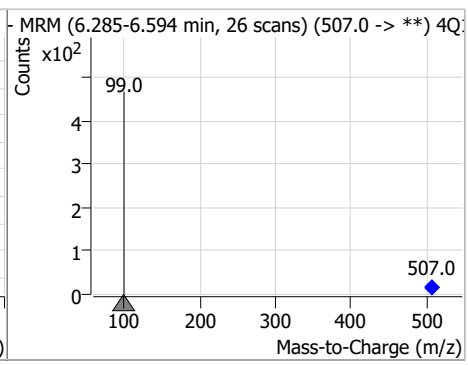




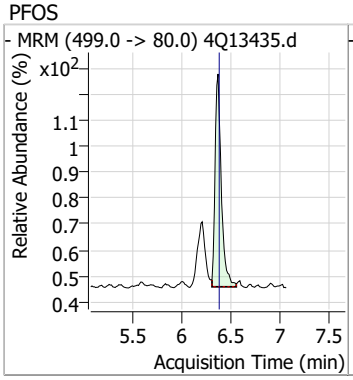
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.03	6.37	0.00	8104				

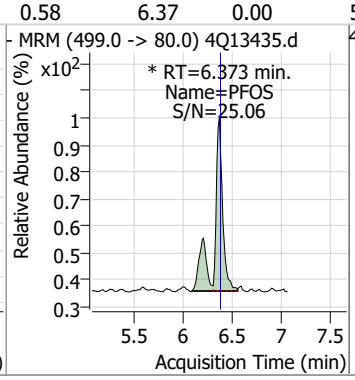


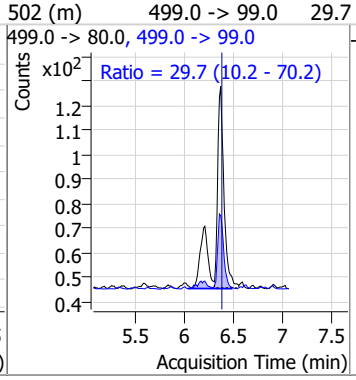


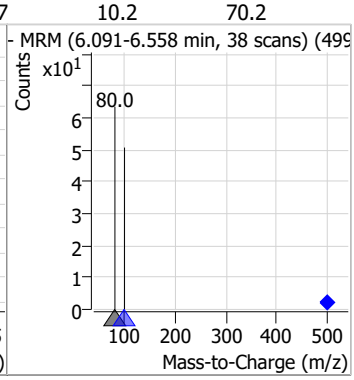


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.58	6.37	0.00	502 (m)	499.0 -> 99.0	29.7	10.2	70.2

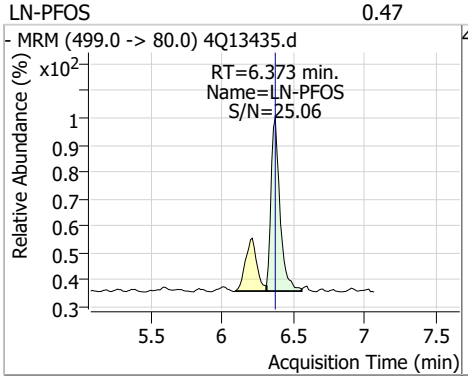


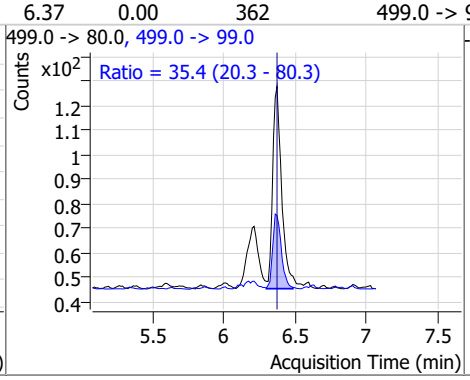


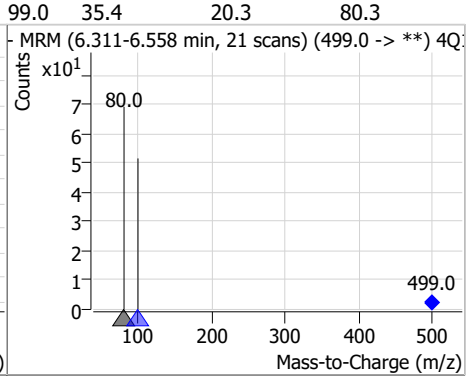




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	0.47	6.37	0.00	362	499.0 -> 99.0	35.4	20.3	80.3

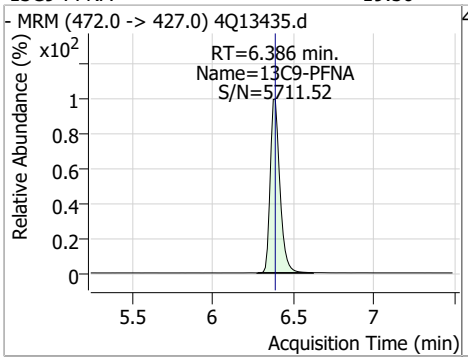


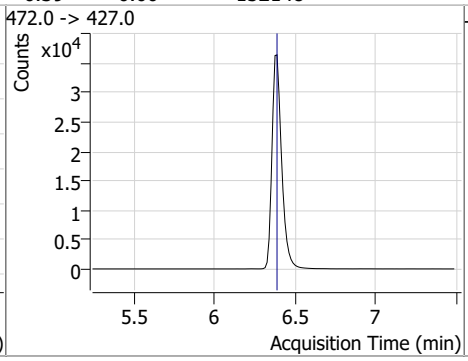


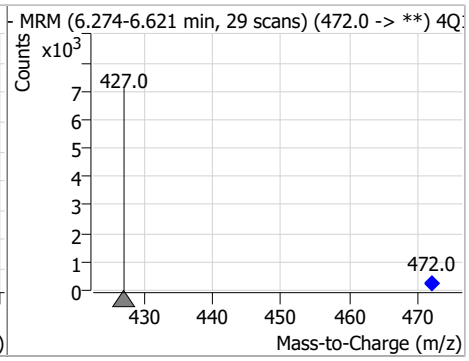


Perfluorinated Compounds by LC/MS/MS

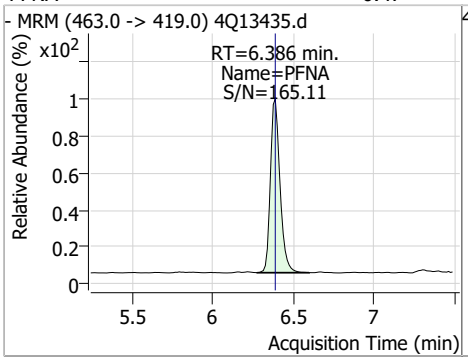
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.50	6.39	0.00	152148				

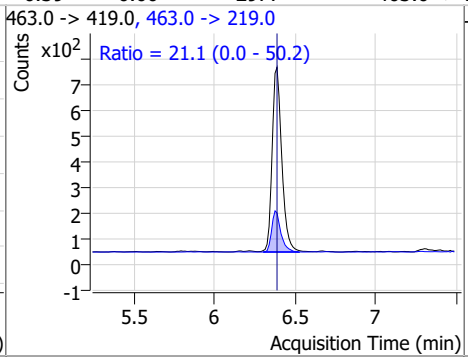


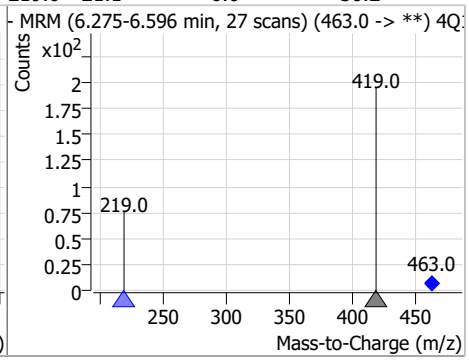




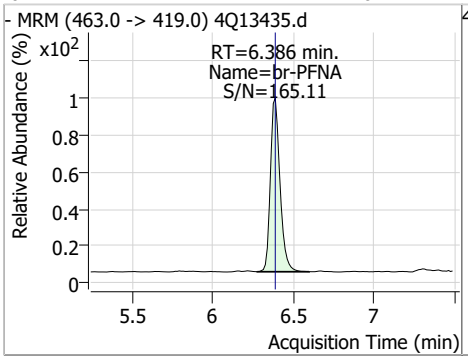
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.47	6.39	0.00	2977	463.0 -> 219.0	21.1	0.0	50.2

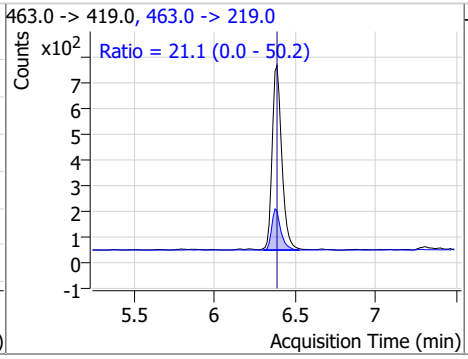


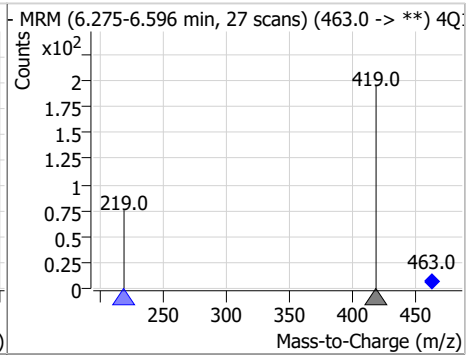




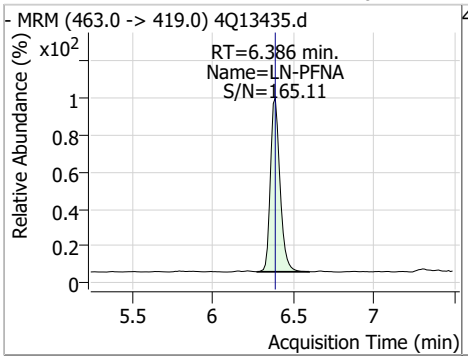
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFNA	0.47	6.39	0.00	2977	463.0 -> 219.0	21.1	0.0	50.2

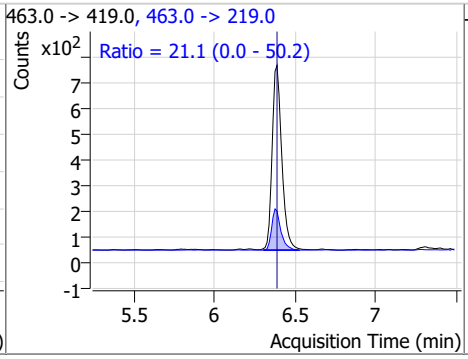


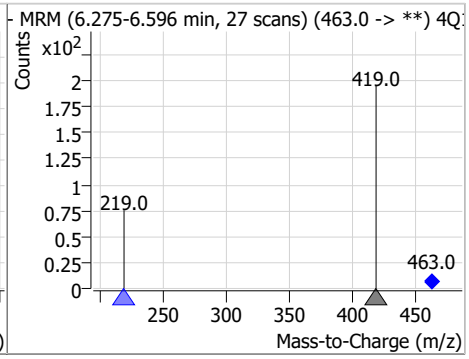




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	0.47	6.39	0.00	2977	463.0 -> 219.0	21.1	0.0	50.2

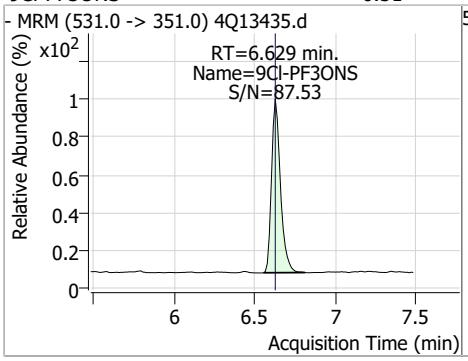


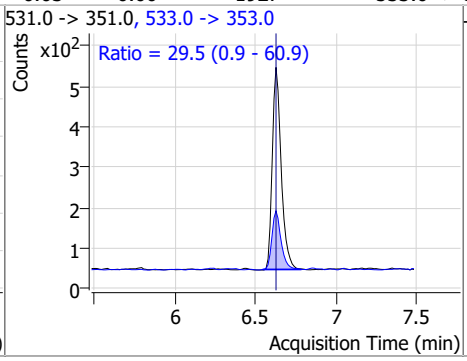


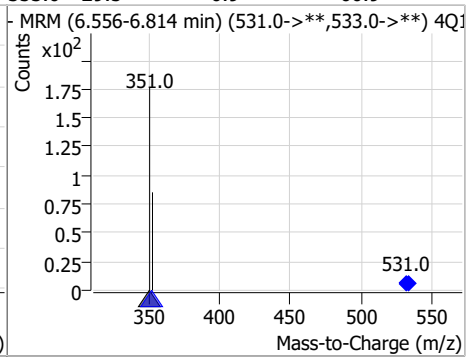


Perfluorinated Compounds by LC/MS/MS

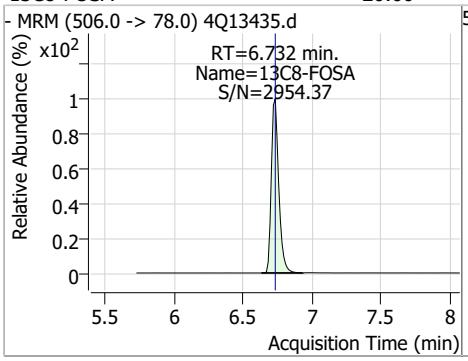
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.51	6.63	0.00	1927	533.0 -> 353.0	29.5	0.9	60.9

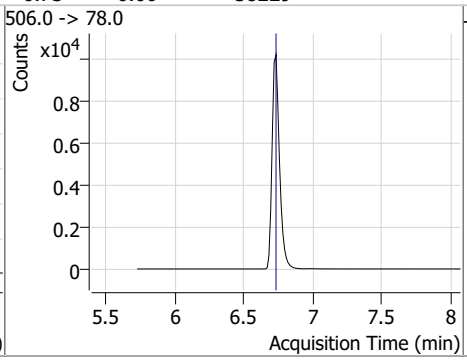


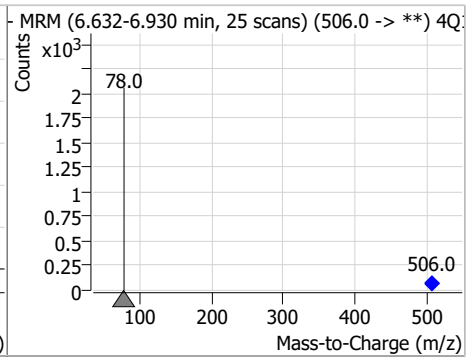




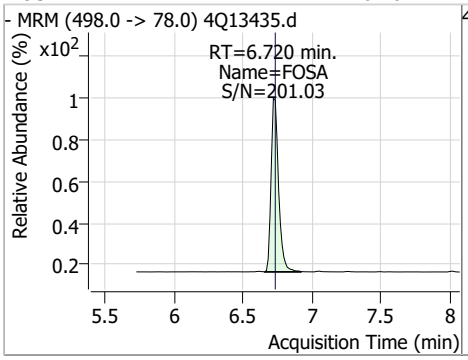
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.60	6.73	0.00	38229				

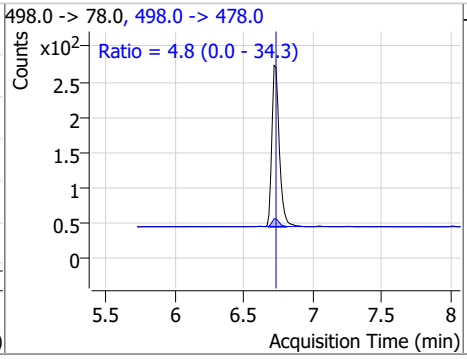


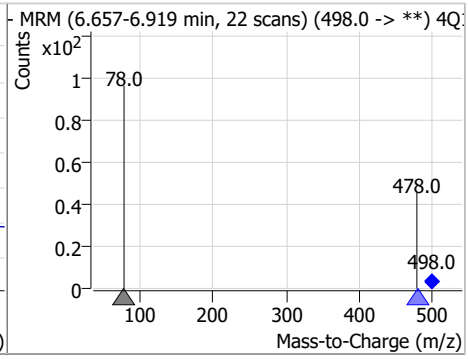




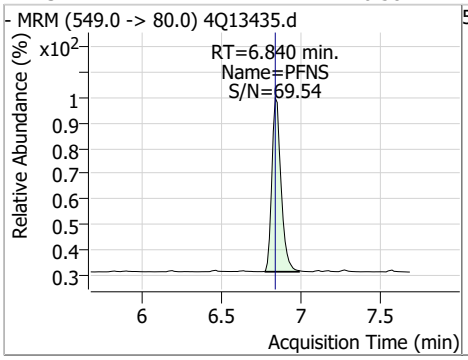
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	0.48	6.72	-0.01	861	498.0 -> 478.0	4.8	0.0	34.3

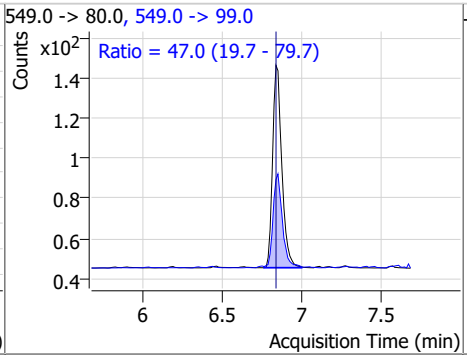


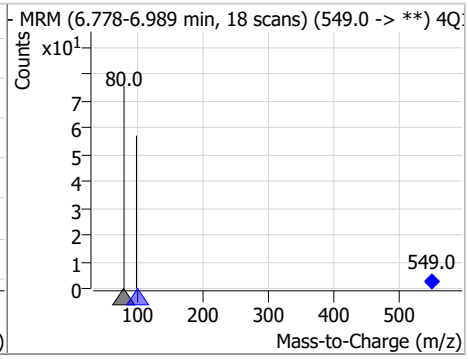




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	0.58	6.84	0.00	403	549.0 -> 99.0	47.0	19.7	79.7

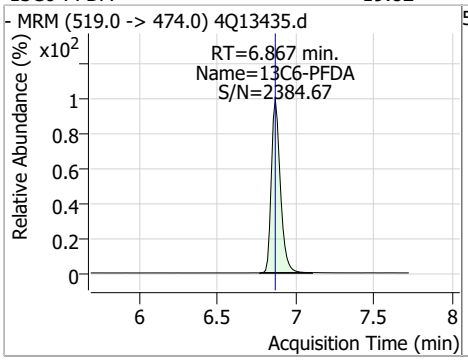


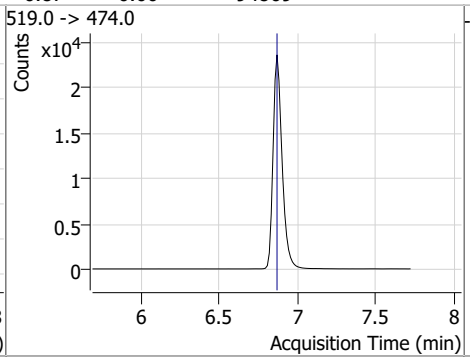


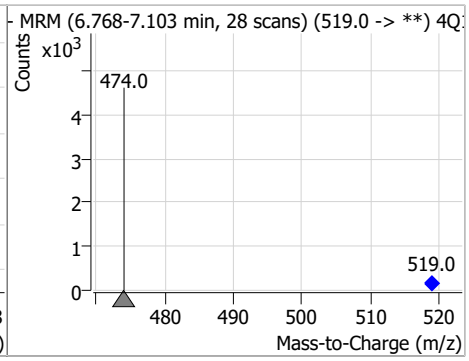


Perfluorinated Compounds by LC/MS/MS

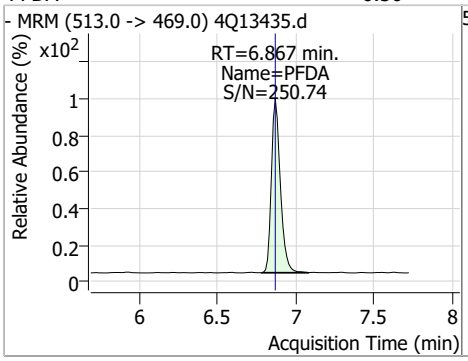
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.82	6.87	0.00	94869				

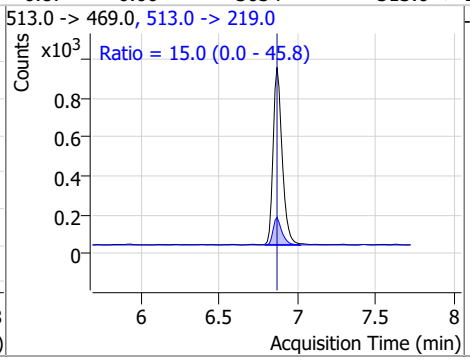


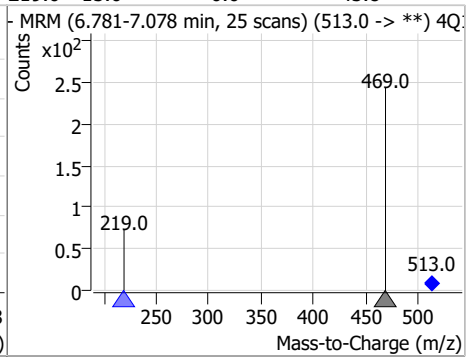




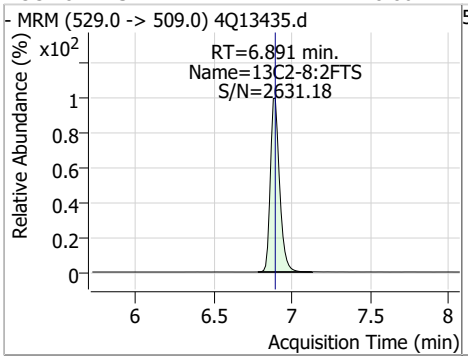
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.50	6.87	0.00	3654	513.0 -> 219.0	15.0	0.0	45.8

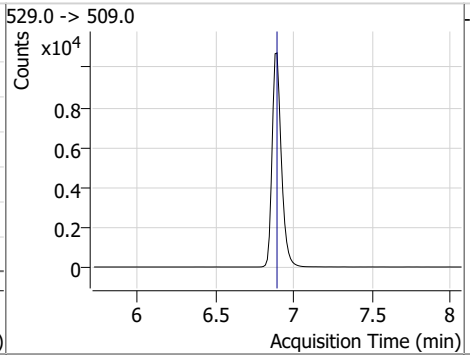


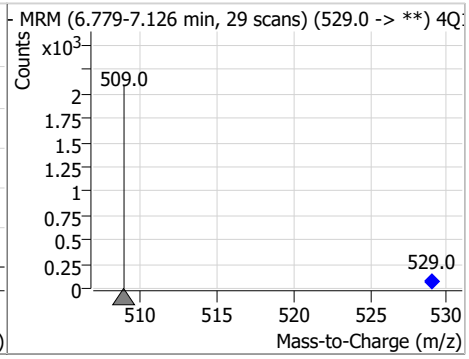




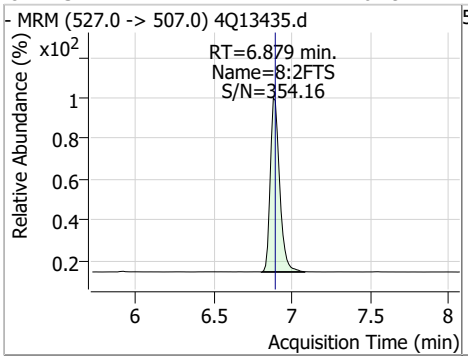
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.80	6.89	0.00	43808				

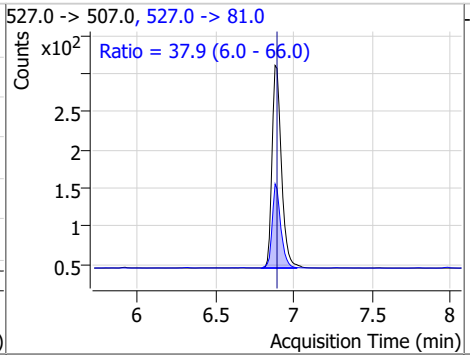


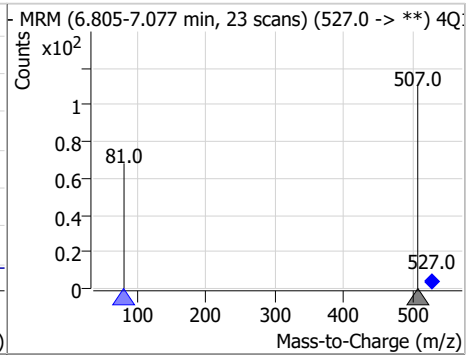




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	0.49	6.88	-0.01	1109	527.0 -> 81.0	37.9	6.0	66.0

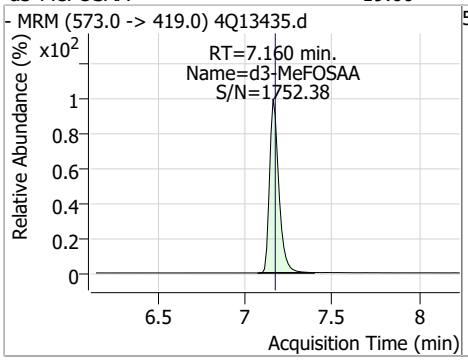


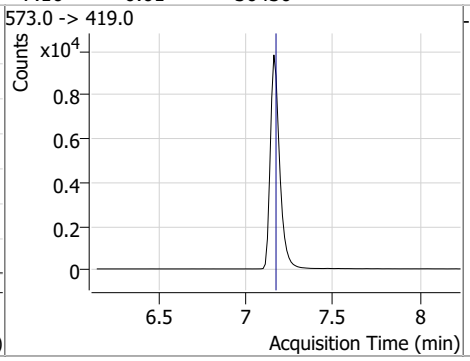


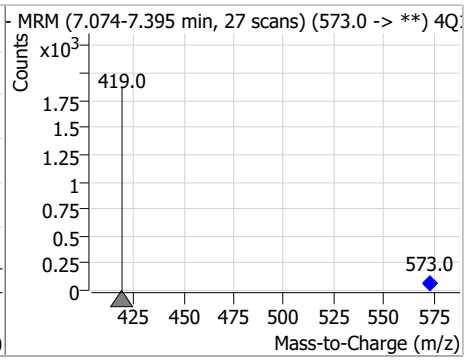


Perfluorinated Compounds by LC/MS/MS

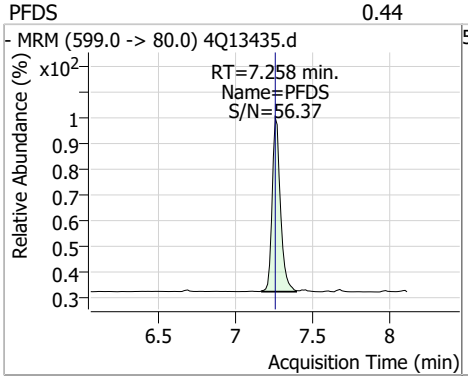
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.60	7.16	-0.01	36430				

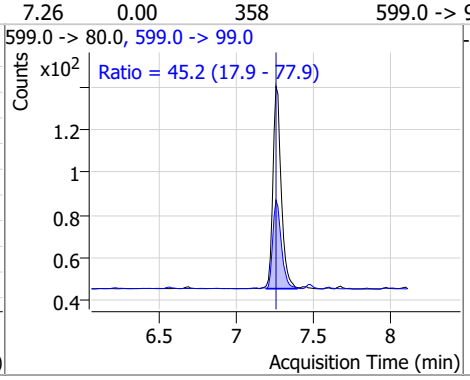


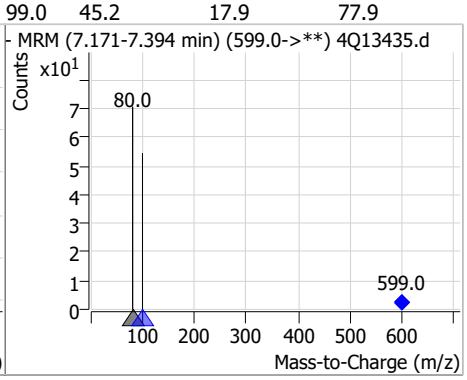




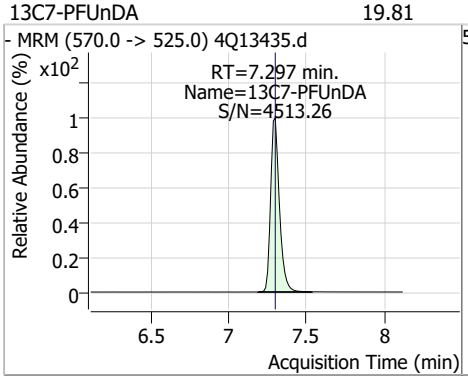
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	0.44	7.26	0.00	358	599.0 -> 99.0	45.2	17.9	77.9

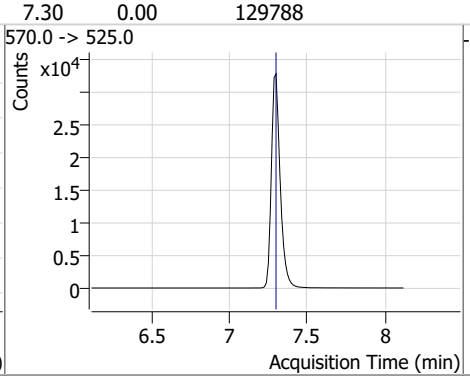


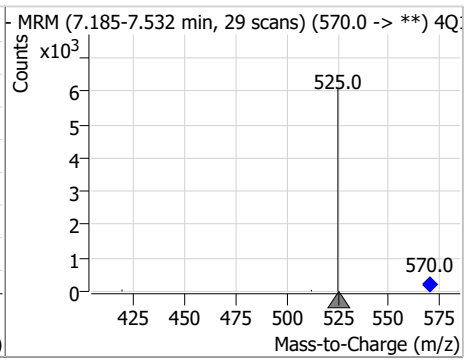




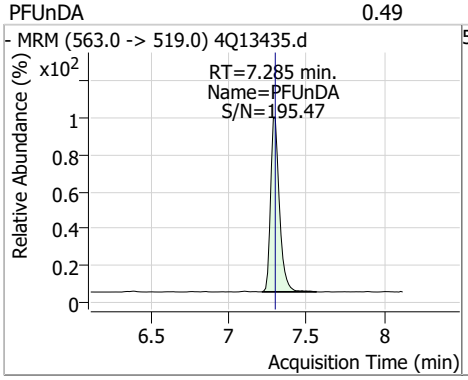
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.81	7.30	0.00	129788				

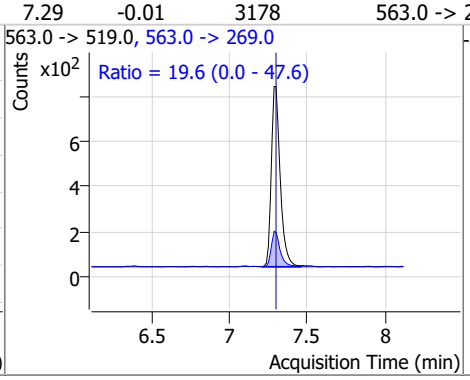


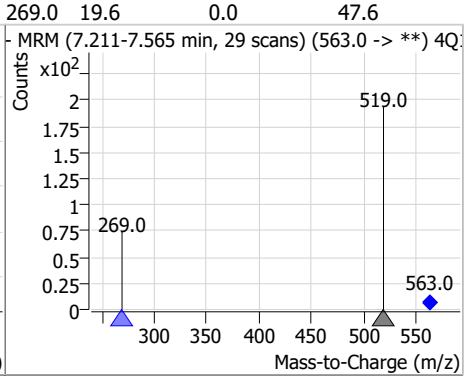




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.49	7.29	-0.01	3178	563.0 -> 269.0	19.6	0.0	47.6

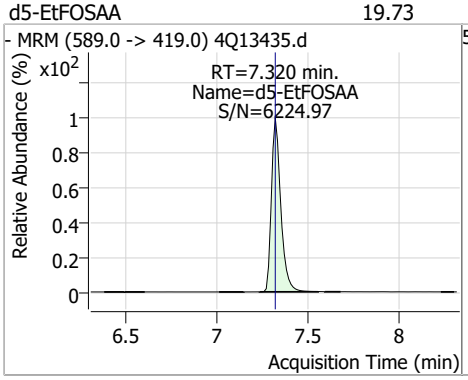


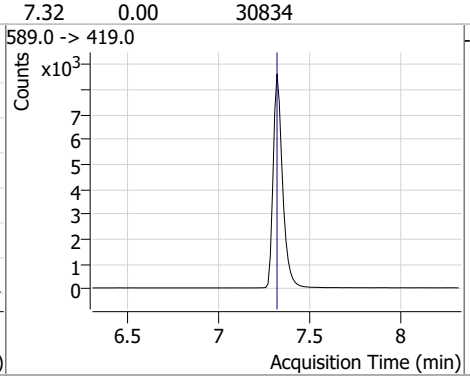


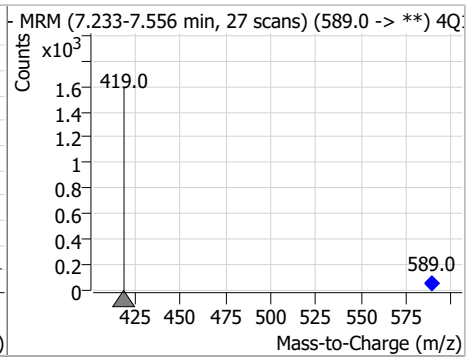


Perfluorinated Compounds by LC/MS/MS

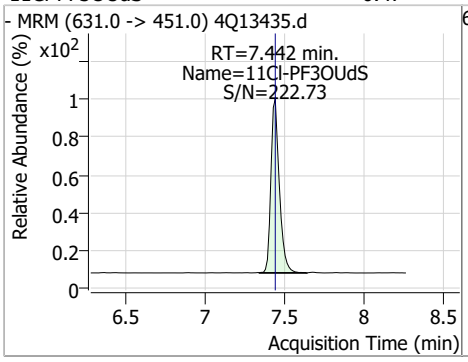
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.73	7.32	0.00	30834				

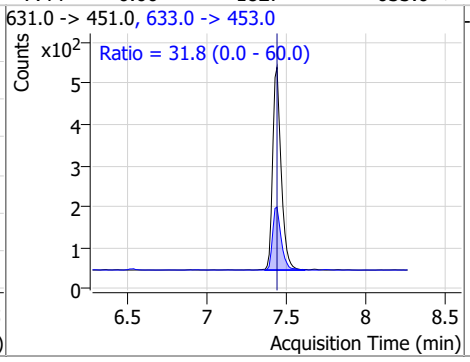


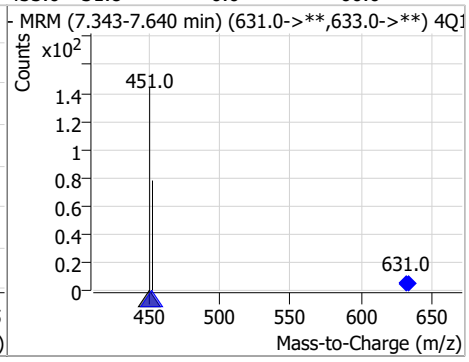




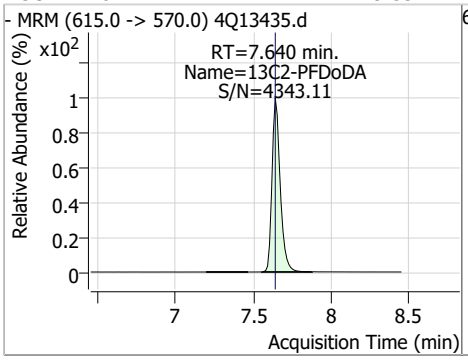
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.47	7.44	0.00	1827	633.0 -> 453.0	31.8	0.0	60.0

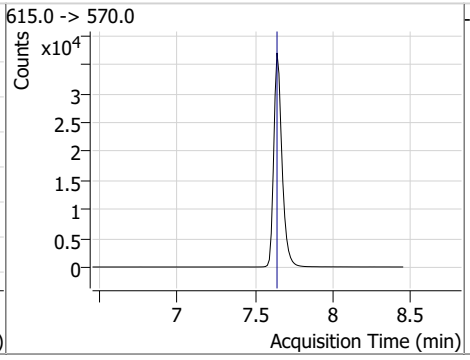


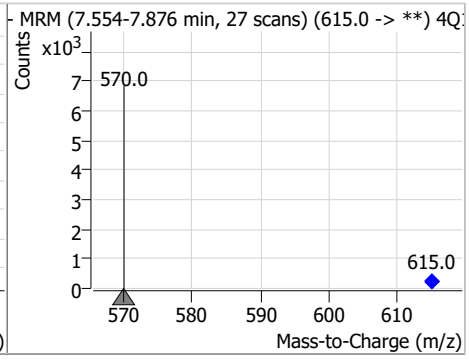




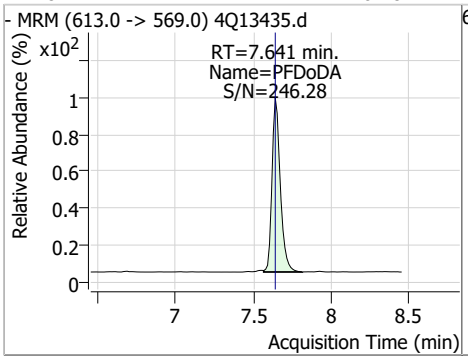
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.53	7.64	0.00	136530				

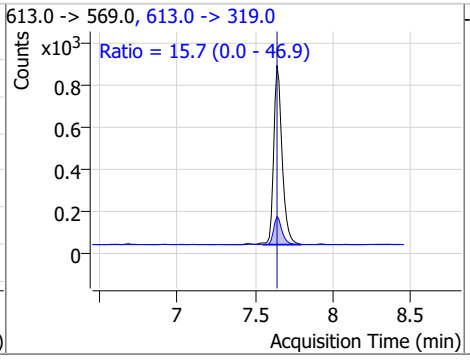


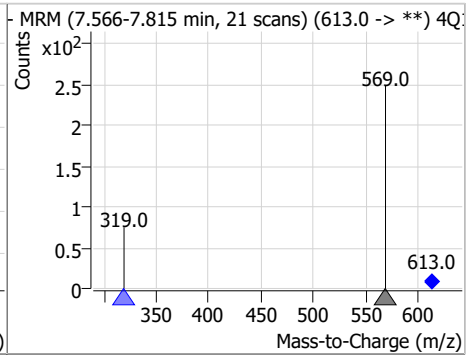




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.48	7.64	0.00	3174	613.0 -> 319.0	15.7	0.0	46.9

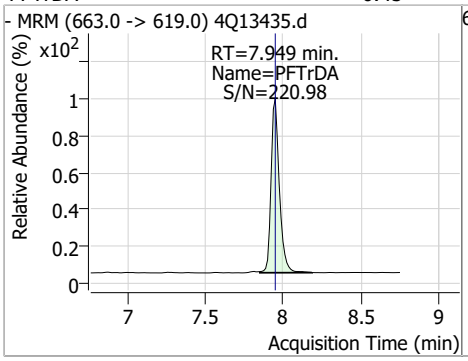


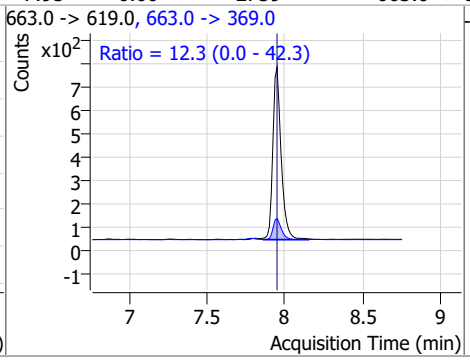


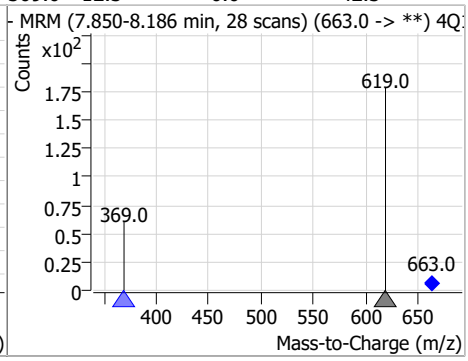


Perfluorinated Compounds by LC/MS/MS

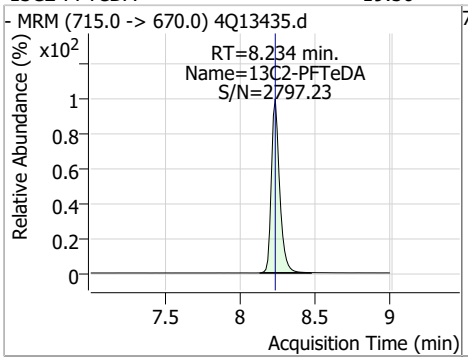
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.45	7.95	0.00	2759	663.0 -> 369.0	12.3	0.0	42.3

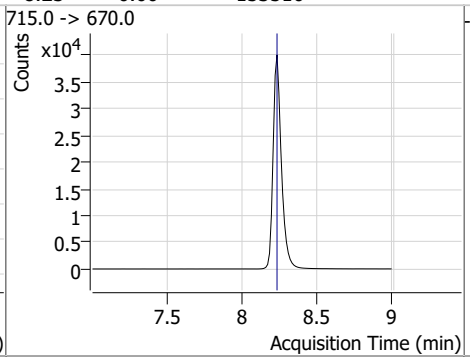


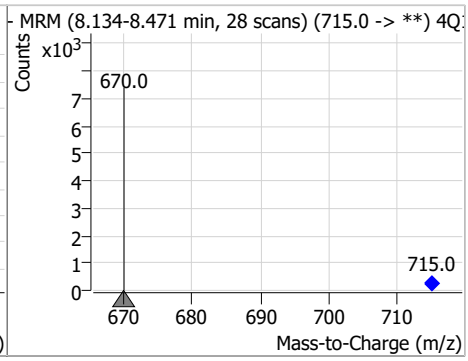




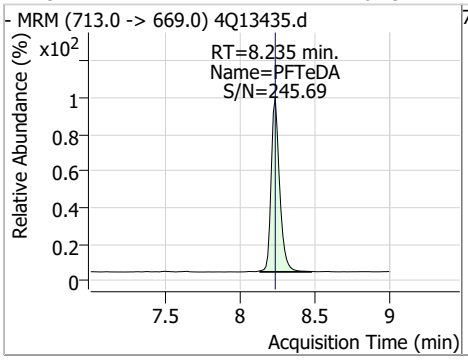
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.56	8.23	0.00	153510				

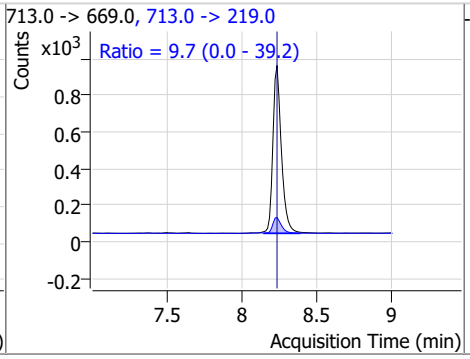


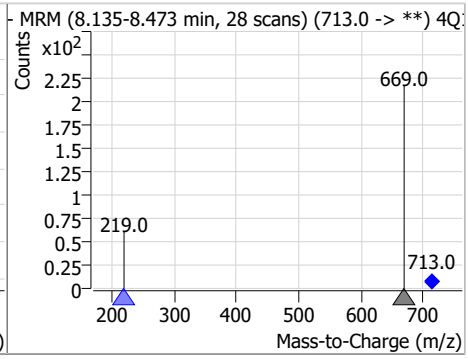




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.49	8.23	0.00	3613	713.0 -> 219.0	9.7	0.0	39.2







Manual Integration Approval Summary

Sample Number: S4Q189-IC189
Lab FileID: 4Q13435.D
Injection Time: 04/18/21 14:43
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/19/21 07:57 Nancy Saunders
Supervisor approved: 04/19/21 15:40 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.19	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.37	Split peak
MeFOSAA	2355-31-9		7.16	Split peak
EtFOSAA	2991-50-6		7.32	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:40

Perfluorinated Compounds by LC/MS/MS

Data File : 4Q13436.d
Operator : natashag
Acq. Method : 537_ID.m
Acq. Date-Time : 4/18/2021 2:58:43 PM
Sample Name : ic189-1.0
Vial : P1-A3
DA Method File : BR_LN_041821_S4Q189.quantmethod.xml
Batch Name : s4q189.batch.bin
Sample Information : op84918,S4Q189,250,,,1,1,water

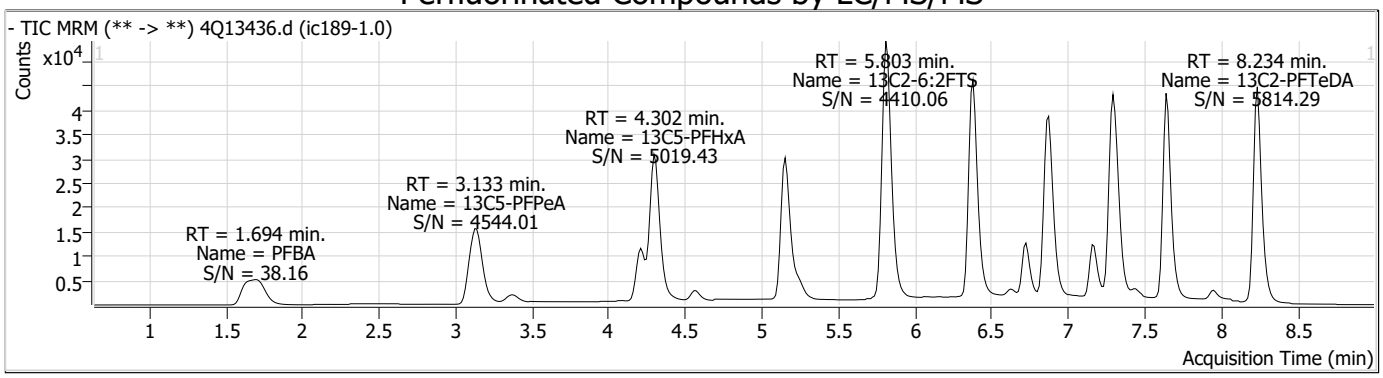
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.700	217.0 -> 172.0	51760	20.00	µg/L	0.013
M5-PFPeA	3.133	268.0 -> 223.0	93133	20.00	µg/L	-0.012
M5-PFHxA	4.302	318.0 -> 273.0	128757	20.00	µg/L	-0.013
M4-PFHpA	5.157	367.0 -> 322.0	112760	20.00	µg/L	0.000
M8-PFOA	5.829	421.0 -> 376.0	153288	20.00	µg/L	0.000
M9-PFNA	6.386	472.0 -> 427.0	165283	20.00	µg/L	0.000
M6-PFDA	6.867	519.0 -> 474.0	102250	20.00	µg/L	0.000
M7-PFUnDA	7.297	570.0 -> 525.0	141223	20.00	µg/L	0.000
M2-PFDoDA	7.640	615.0 -> 570.0	147961	20.00	µg/L	0.000
M2-PFTeDA	8.234	715.0 -> 670.0	162890	20.00	µg/L	0.000
M8-FOSA	6.732	506.0 -> 78.0	39616	20.00	µg/L	0.000
M3-PFBS	3.381	302.0 -> 99.0	7228	20.00	µg/L	0.000
M3-PFHxS	5.192	402.0 -> 99.0	6730	20.00	µg/L	-0.012
M8-PFOS	6.372	507.0 -> 99.0	8951	20.00	µg/L	0.000
M2-4:2FTS	4.212	329.0 -> 309.0	44858	20.00	µg/L	0.000
M2-6:2FTS	5.803	429.0 -> 409.0	59598	20.00	µg/L	0.000
M2-8:2FTS	6.891	529.0 -> 509.0	46378	20.00	µg/L	0.000
M3-MeFOSAA	7.160	573.0 -> 419.0	38765	20.00	µg/L	-0.012
M3-HFPO-DA	4.578	287.0 -> 169.0	7284	20.00	µg/L	0.000
M5-EtFOSAA	7.320	589.0 -> 419.0	32787	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.212	329.0 -> 309.0	44858	19.74	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%		
13C2-6:2FTS	5.803	429.0 -> 409.0	59598	19.93	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.6%		
13C2-8:2FTS	6.891	529.0 -> 509.0	46378	19.90	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.5%		
13C2-PFDoDA	7.640	615.0 -> 570.0	147961	21.17	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.8%		
13C2-PFTeDA	8.234	715.0 -> 670.0	162890	20.76	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.8%		
13C3-PFBS	3.381	302.0 -> 99.0	7228	21.20	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.0%		
13C3-PFHxS	5.192	402.0 -> 99.0	6730	20.89	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.4%		
13C4-PFBA	1.700	217.0 -> 172.0	51760	20.96	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.8%		
13C4-PFHpA	5.157	367.0 -> 322.0	112760	21.15	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.8%		
13C5-PFHxA	4.302	318.0 -> 273.0	128757	21.12	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.6%		
13C5-PFPeA	3.133	268.0 -> 223.0	93133	20.96	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.8%		
13C6-PFDA	6.867	519.0 -> 474.0	102250	21.36	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.8%		

Perfluorinated Compounds by LC/MS/MS

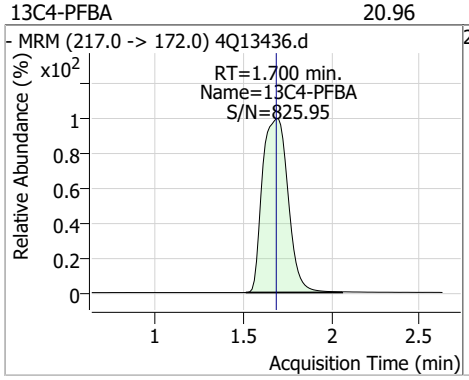
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	7.297	570.0 -> 525.0	141223	21.55	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.8%			
13C8-FOSA	6.732	506.0 -> 78.0	39616	21.34	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.7%			
13C8-PFOA	5.829	421.0 -> 376.0	153288	20.87	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.4%			
13C8-PFOS	6.372	507.0 -> 99.0	8951	21.02	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.1%			
13C9-PFNA	6.386	472.0 -> 427.0	165283	21.18	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.9%			
d3-MeFOSAA	7.160	573.0 -> 419.0	38765	20.86	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.3%			
13C3-HFPO-DA	4.578	287.0 -> 169.0	7279	20.87	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.3%			
d5-EtFOSAA	7.320	589.0 -> 419.0	32720	20.94	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.7%			
Target Compounds							QValue
4:2FTS	4.214	327.0 -> 307.0	2454	1.02	µg/L		94
6:2FTS	5.803	427.0 -> 407.0	3211	1.02	µg/L		94
8:2FTS	6.891	527.0 -> 507.0	2551	1.06	µg/L		99
EtFOSAA	7.333	584.0 -> 419.0	1515	0.97	µg/L	m	99
FOSA	6.734	498.0 -> 78.0	1774	0.96	µg/L		98
MeFOSAA	7.173	570.0 -> 419.0	1690	0.94	µg/L	m	96
PFBA	1.694	213.0 -> 169.0	1087	0.96	µg/L		100
PFBS	3.370	299.0 -> 80.0	1099	0.93	µg/L		98
PFDA	6.867	513.0 -> 469.0	7548	0.95	µg/L		99
PFDoDA	7.641	613.0 -> 569.0	6645	0.92	µg/L		99
PFDS	7.258	599.0 -> 80.0	773	0.88	µg/L		98
PFHpA	5.157	363.0 -> 319.0	6955	0.94	µg/L		100
PFHpS	5.827	449.0 -> 80.0	783	0.95	µg/L		95
PFHxA	4.302	313.0 -> 269.0	5666	0.96	µg/L		100
PFHxS	5.193	399.0 -> 80.0	901	1.06	µg/L	m	99
PFNA	6.386	463.0 -> 419.0	6661	0.98	µg/L		99
PFNS	6.840	549.0 -> 80.0	813	1.06	µg/L		94
PFOA	5.817	413.0 -> 369.0	8623	0.96	µg/L		97
PFOS	6.373	499.0 -> 80.0	934	0.98	µg/L	m	98
PFPeA	3.135	263.0 -> 219.0	3935	0.98	µg/L		100
PFPeS	4.423	349.0 -> 80.0	821	0.96	µg/L		96
PFTeDA	8.235	713.0 -> 669.0	7579	0.96	µg/L		98
PFTrDA	7.949	663.0 -> 619.0	5936	0.91	µg/L		98
PFUnDA	7.298	563.0 -> 519.0	7005	0.98	µg/L		97
11Cl-PF3OUdS	7.442	631.0 -> 451.0	3880	0.93	µg/L		99
9Cl-PF3ONS	6.629	531.0 -> 351.0	3973	0.98	µg/L		96
ADONA	5.257	377.0 -> 251.0	8126	0.94	µg/L		98
HFPO-DA	4.574	329.0 -> 169.0	1178	1.01	µg/L		97
br-PFOS	6.186	499.0 -> 80.0	276	0.22	µg/L		84
LN-PFOS	6.373	499.0 -> 80.0	658	0.78	µg/L		96
br-PFHxS	5.031	399.0 -> 80.0	141	0.14	µg/L		95
LN-PFHxS	5.193	399.0 -> 80.0	761	0.91	µg/L		98
br-PFOA	5.817	413.0 -> 369.0	8623	0.96	µg/L		97
LN-PFOA	5.817	413.0 -> 369.0	8623	0.96	µg/L		97
br-PFNA	6.386	463.0 -> 419.0	6661	0.98	µg/L		99
LN-PFNA	6.386	463.0 -> 419.0	6661	0.98	µg/L		99

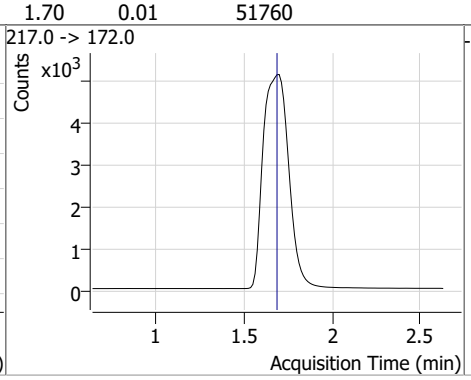
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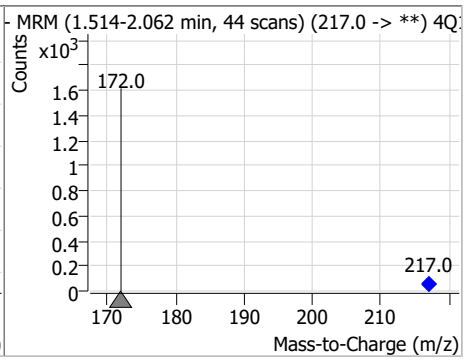
Perfluorinated Compounds by LC/MS/MS



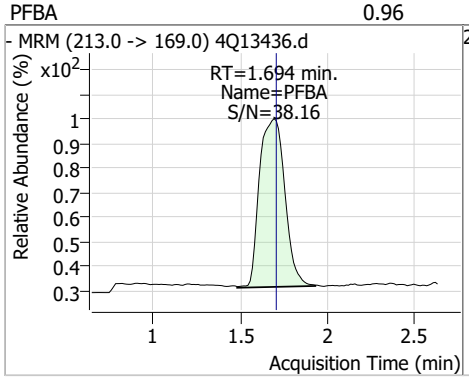
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.96	1.70	0.01	51760				

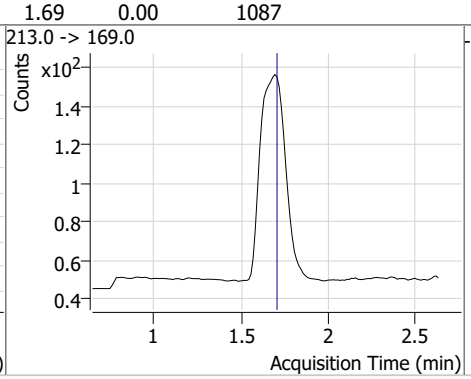


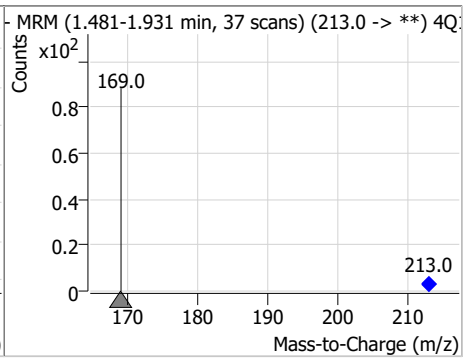




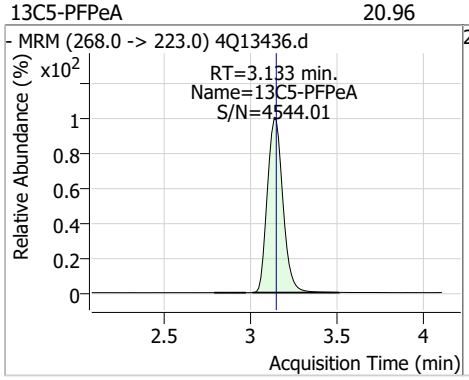
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.96	1.69	0.00	1087				

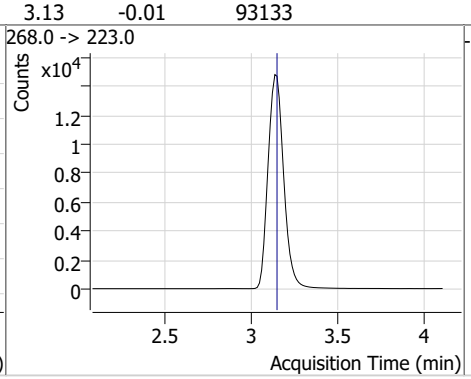


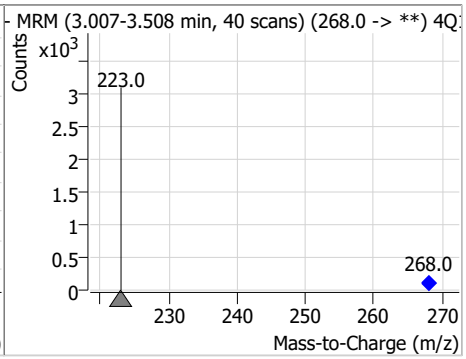




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.96	3.13	-0.01	93133				

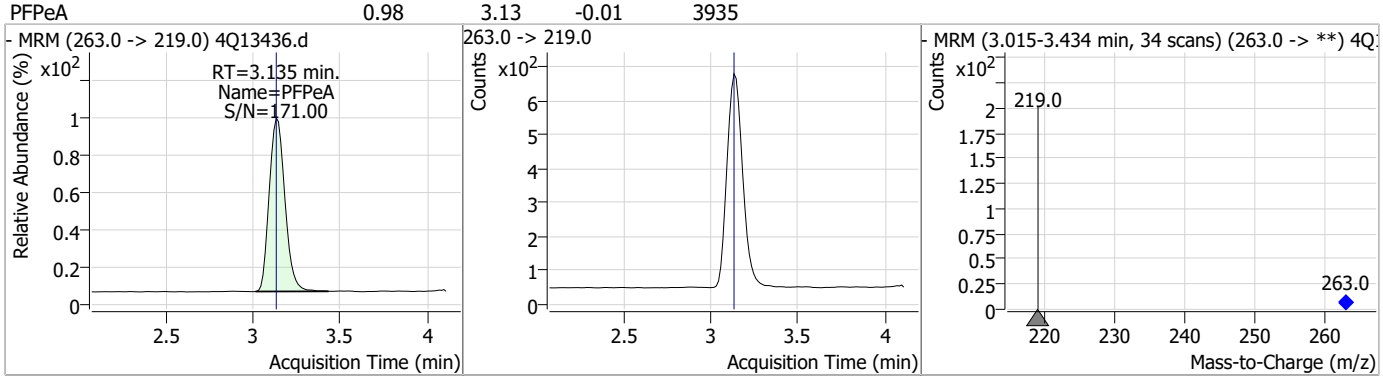




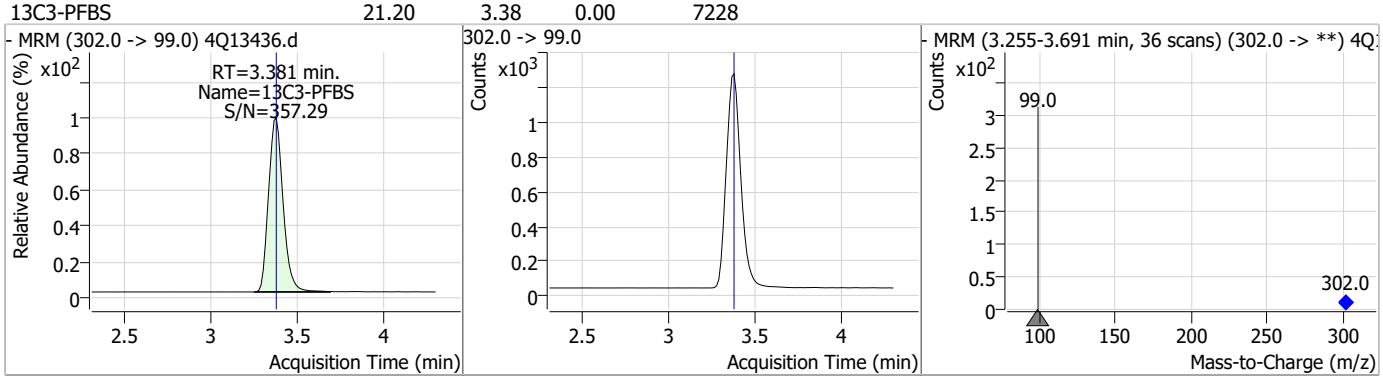


Perfluorinated Compounds by LC/MS/MS

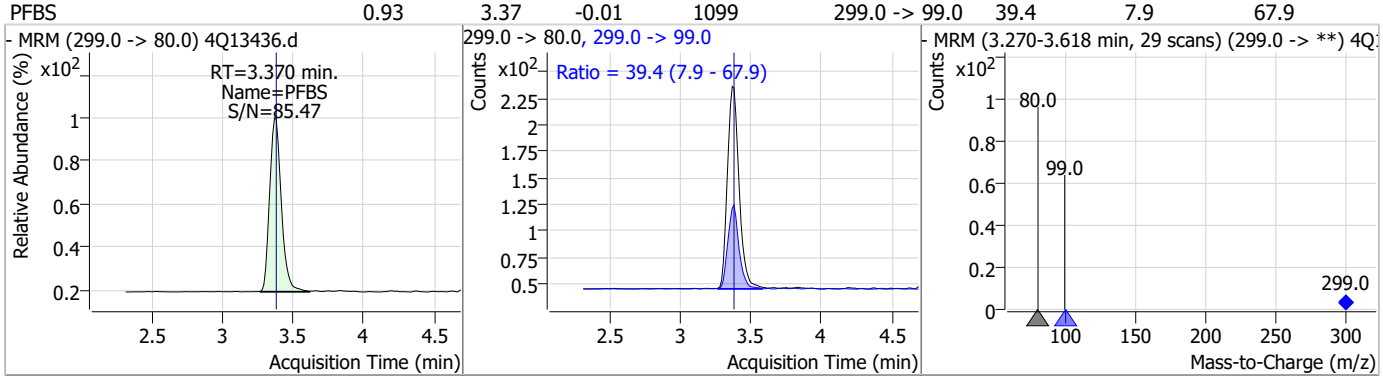
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PFPeA	0.98	3.13	-0.01	3935				



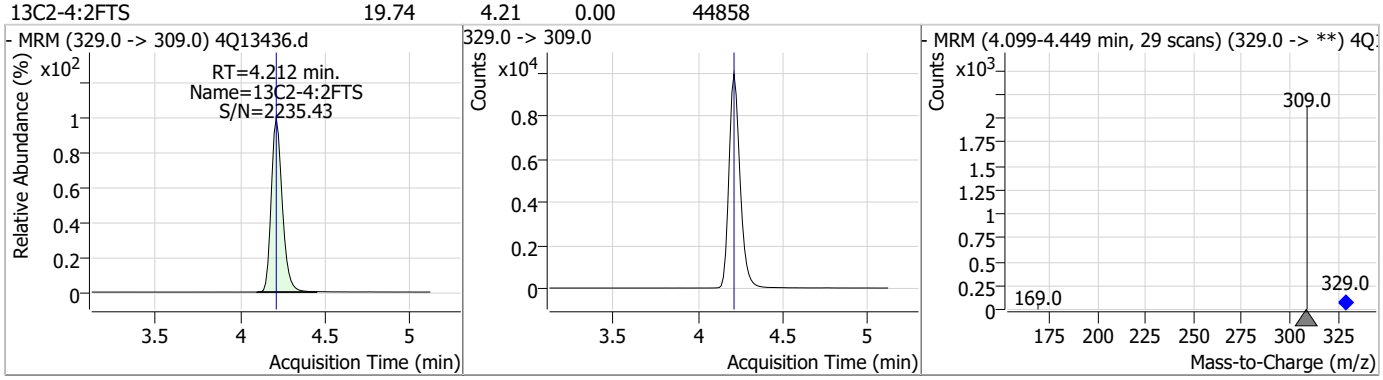
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	21.20	3.38	0.00	7228				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.93	3.37	-0.01	1099	299.0 -> 99.0	39.4	7.9	67.9

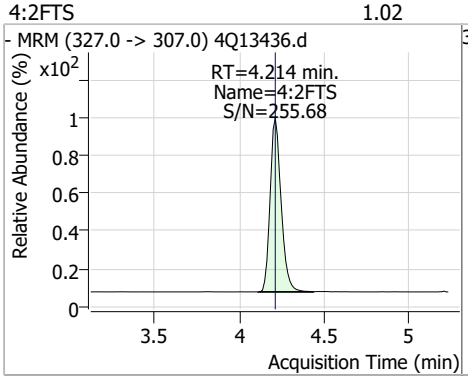


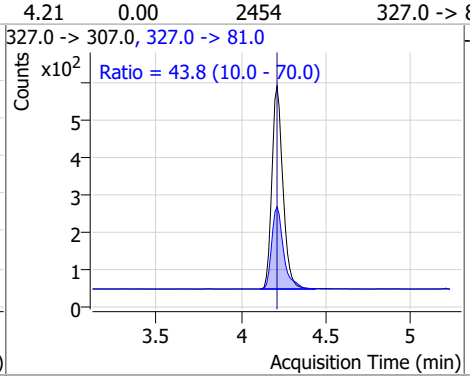
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.74	4.21	0.00	44858				

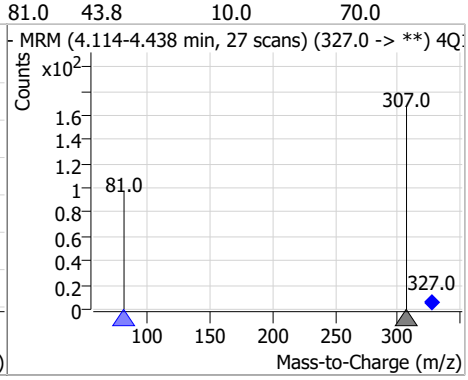


Perfluorinated Compounds by LC/MS/MS

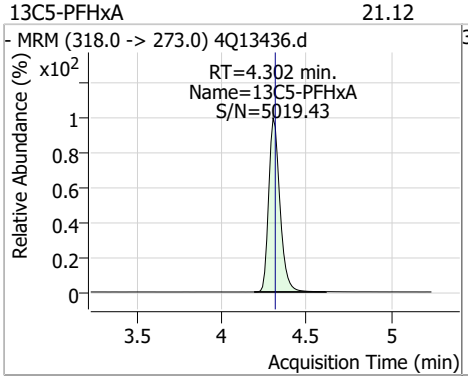
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	1.02	4.21	0.00	2454	327.0 -> 81.0	43.8	10.0	70.0

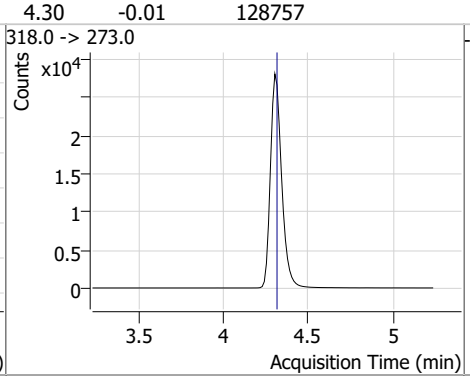


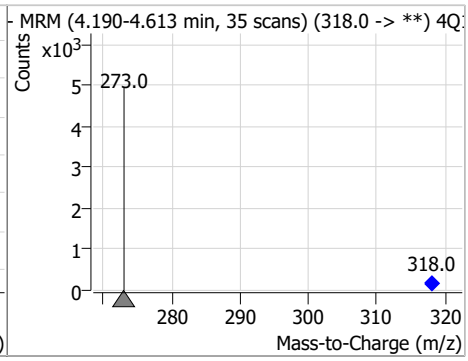




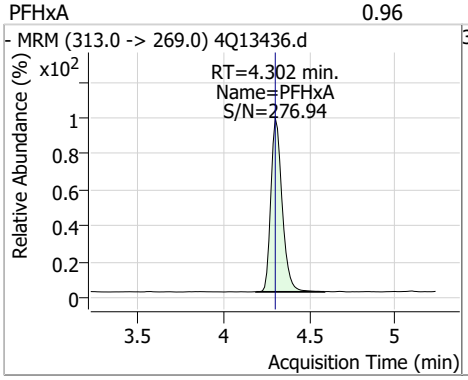
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	21.12	4.30	-0.01	128757				

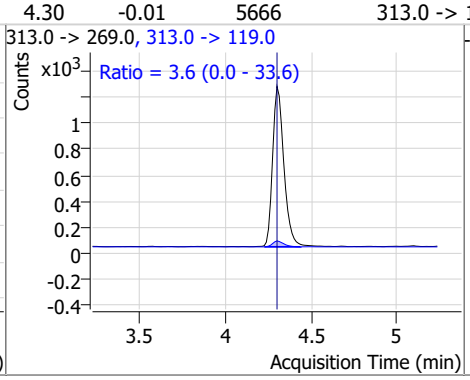


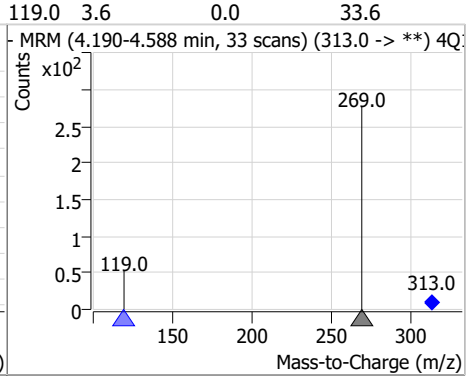




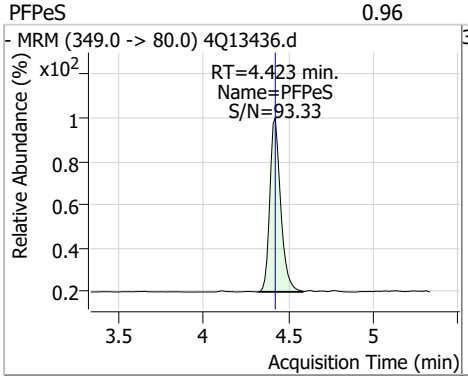
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.96	4.30	-0.01	5666	313.0 -> 119.0	3.6	0.0	33.6

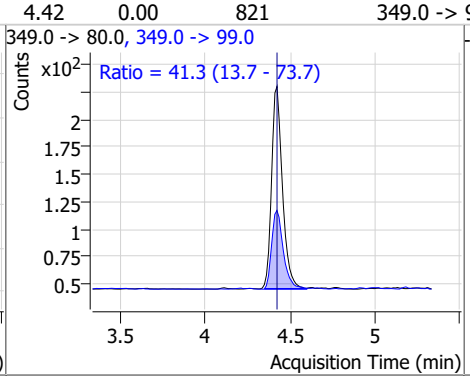


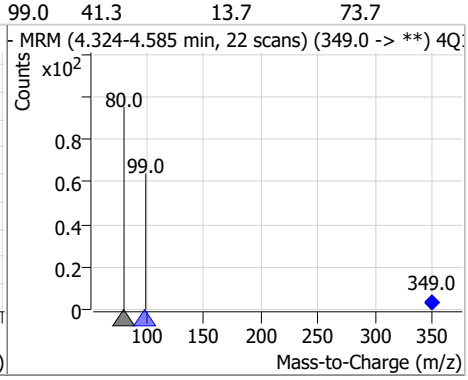




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	0.96	4.42	0.00	821	349.0 -> 99.0	41.3	13.7	73.7

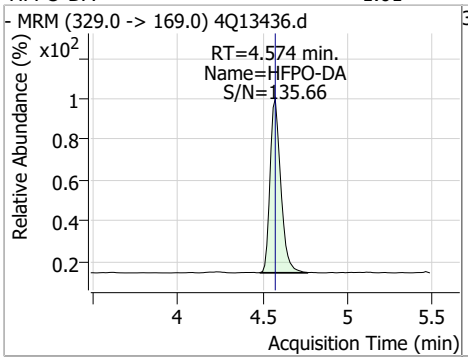


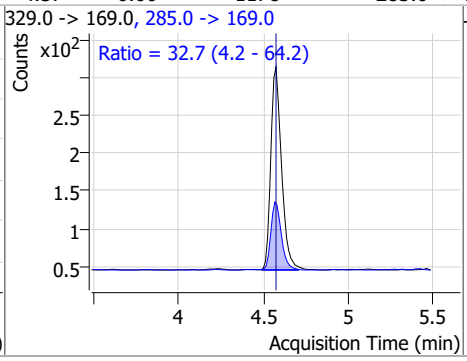


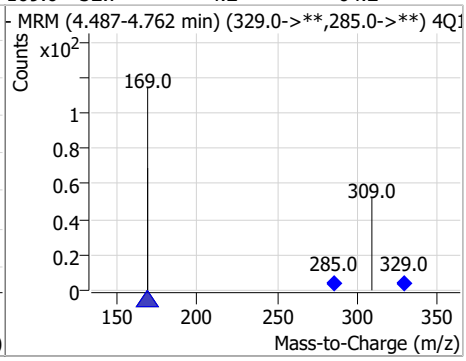


Perfluorinated Compounds by LC/MS/MS

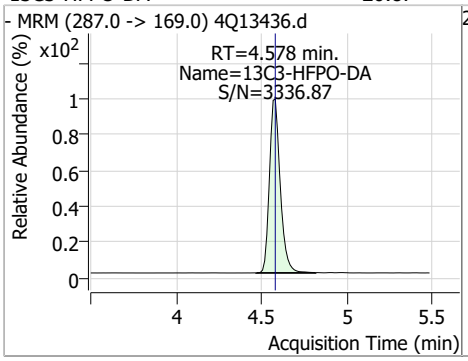
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	1.01	4.57	0.00	1178	285.0 -> 169.0	32.7	4.2	64.2

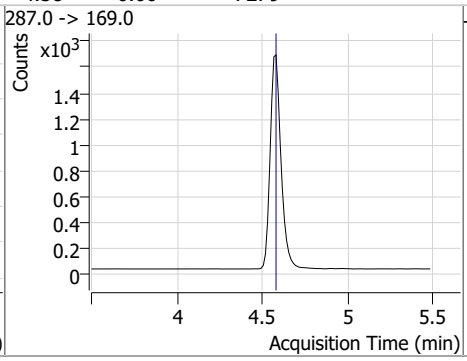


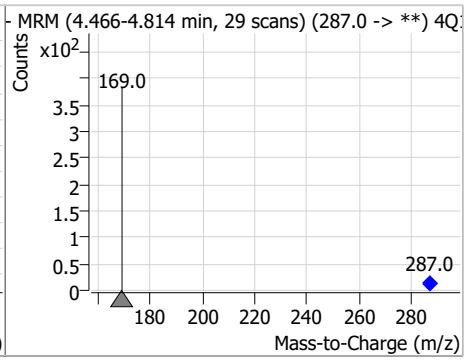




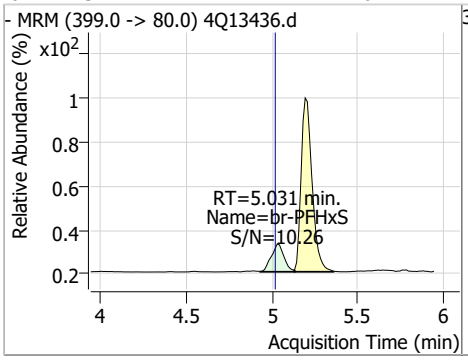
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.87	4.58	0.00	7279				

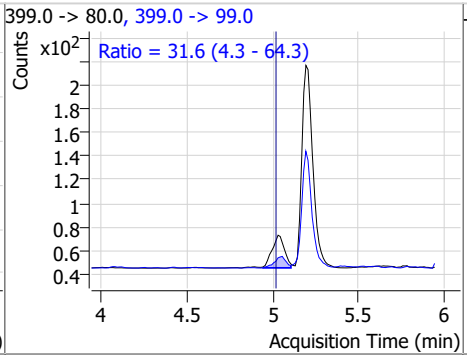


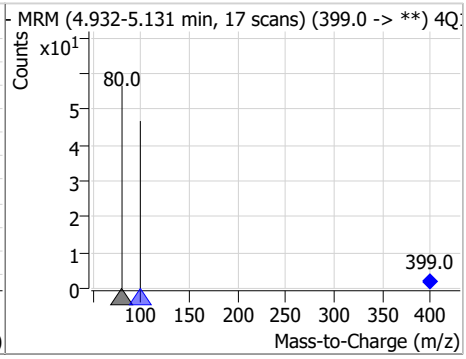




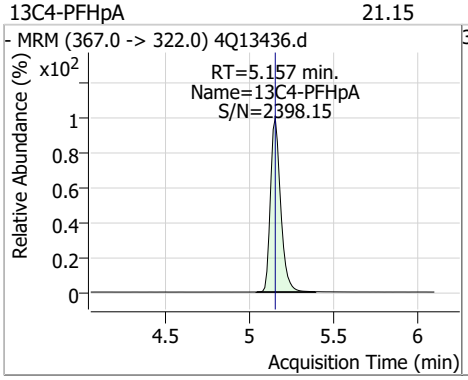
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	0.14	5.03	0.00	141	399.0 -> 99.0	31.6	4.3	64.3

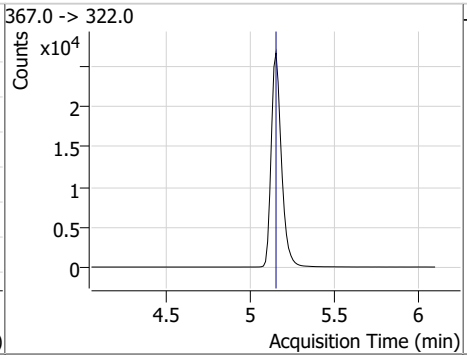


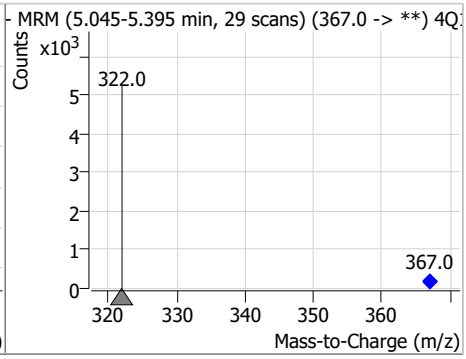




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	21.15	5.16	0.00	112760				

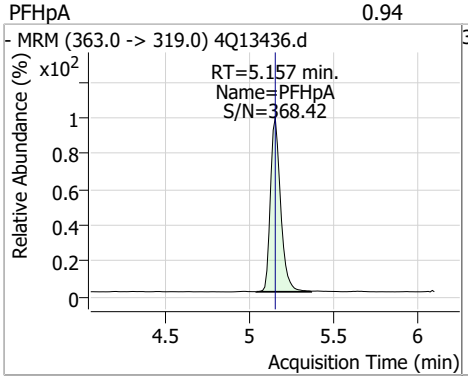


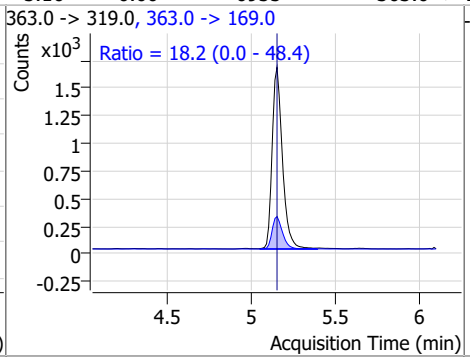


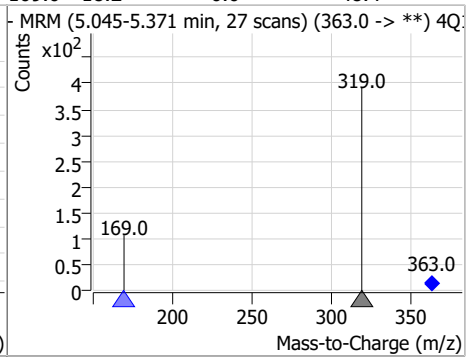


Perfluorinated Compounds by LC/MS/MS

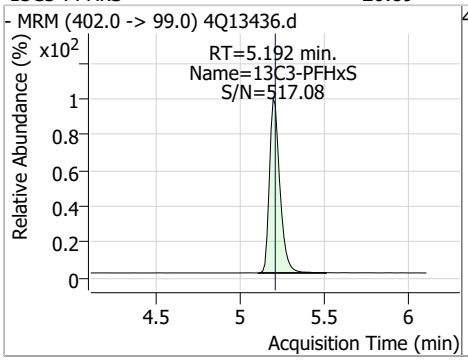
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.94	5.16	0.00	6955	363.0 -> 169.0	18.2	0.0	48.4

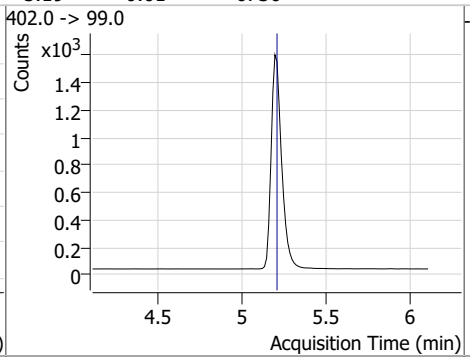


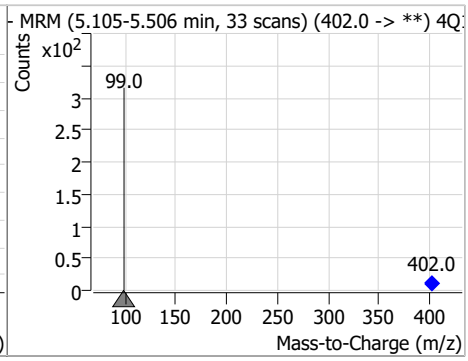




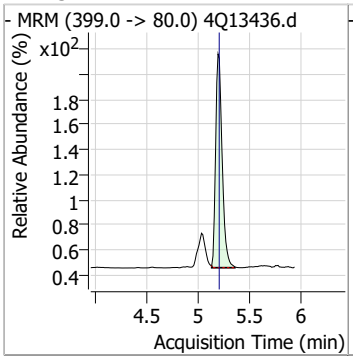
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.89	5.19	-0.01	6730				

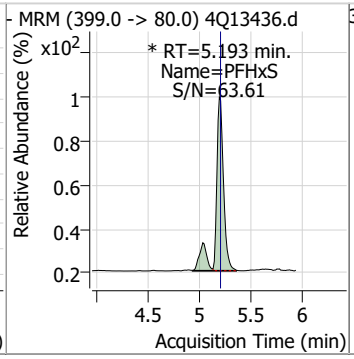


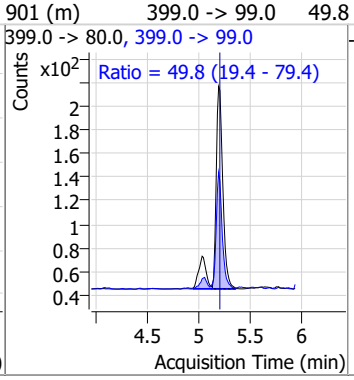


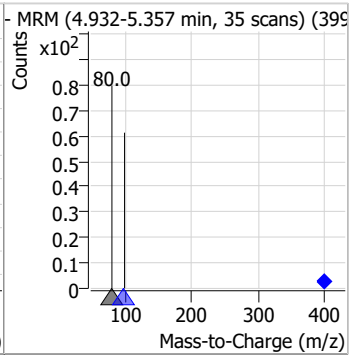


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	1.06	5.19	-0.01	901 (m)	399.0 -> 99.0	49.8	19.4	79.4

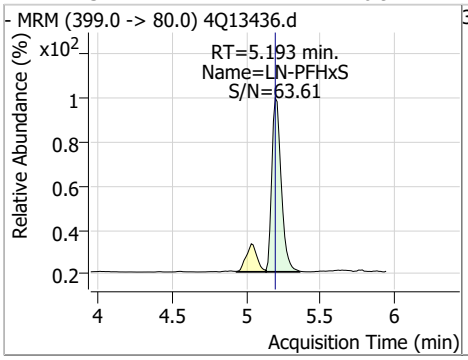


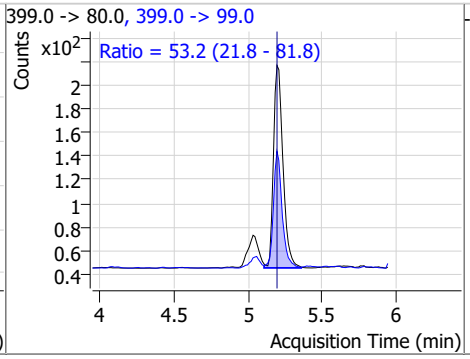


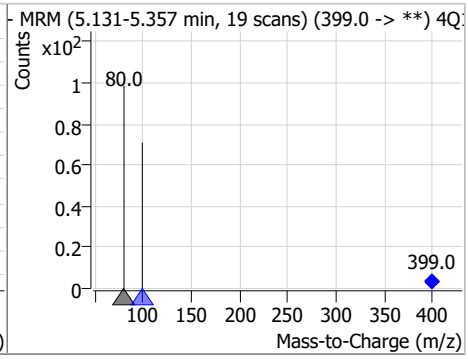




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	0.91	5.19	-0.01	761	399.0 -> 99.0	53.2	21.8	81.8

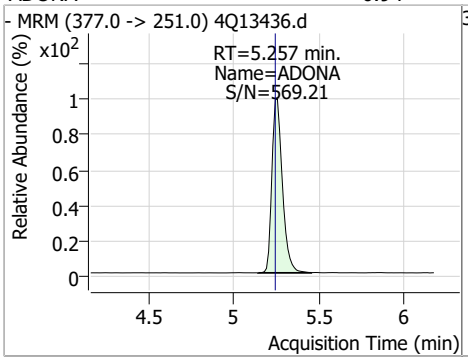


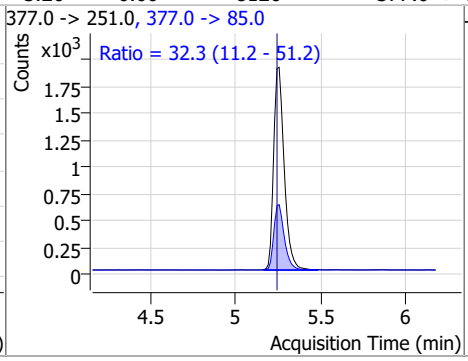


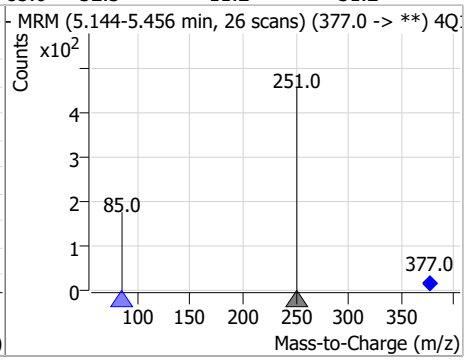


Perfluorinated Compounds by LC/MS/MS

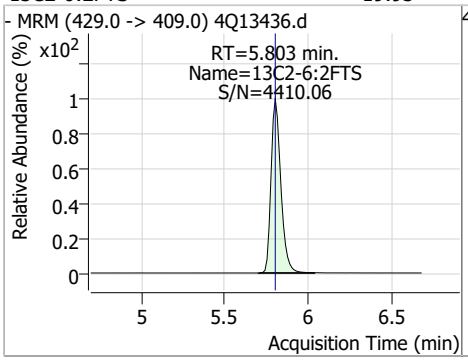
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.94	5.26	0.00	8126	377.0 -> 85.0	32.3	11.2	51.2

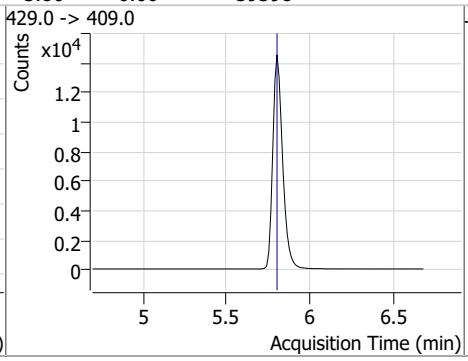


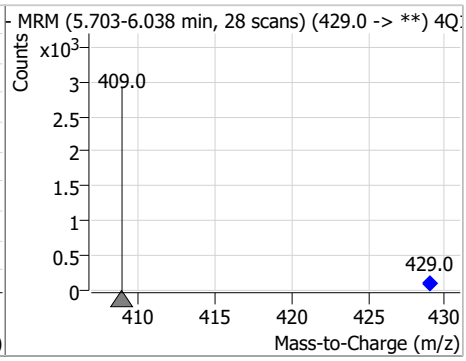




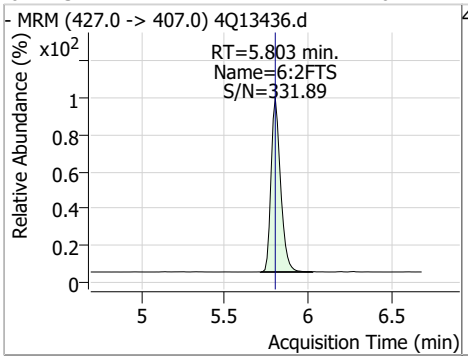
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.93	5.80	0.00	59598				

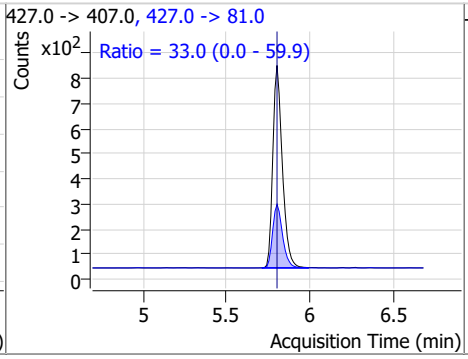


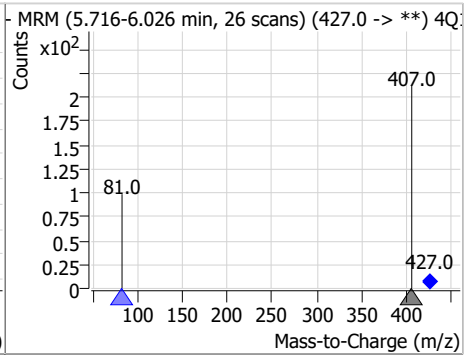




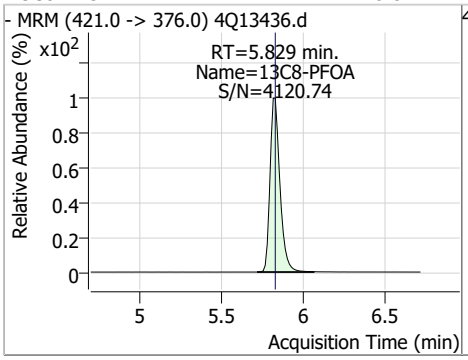
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	1.02	5.80	0.00	3211	427.0 -> 81.0	33.0	0.0	59.9

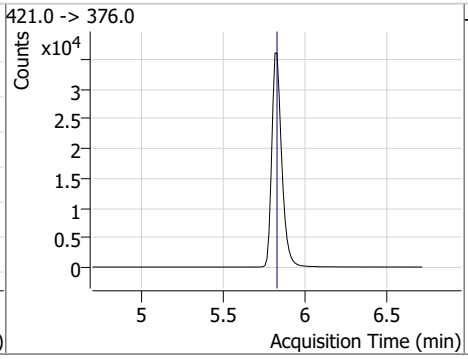


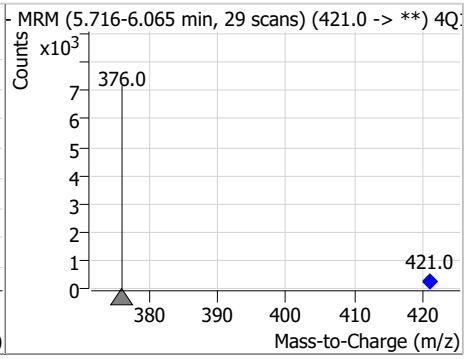




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.87	5.83	0.00	153288				

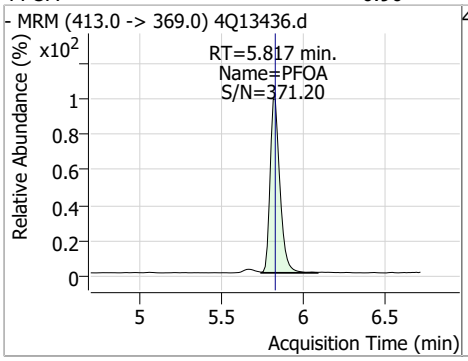


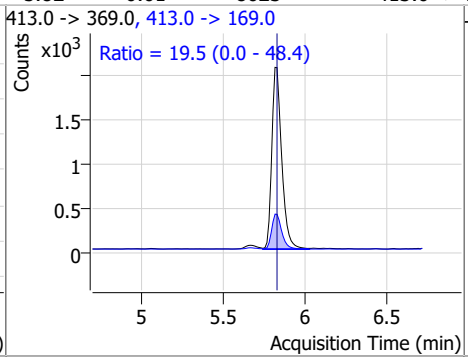


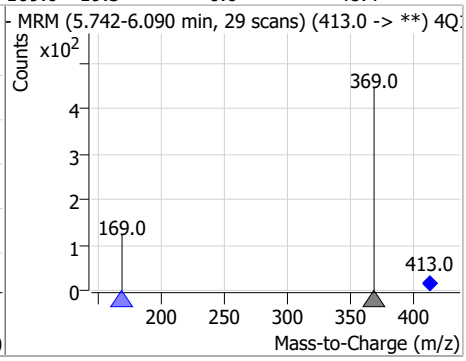


Perfluorinated Compounds by LC/MS/MS

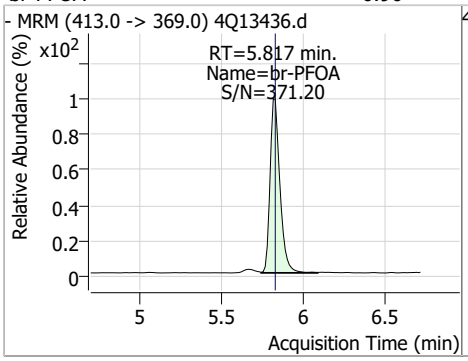
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.96	5.82	-0.01	8623	413.0 -> 169.0	19.5	0.0	48.4

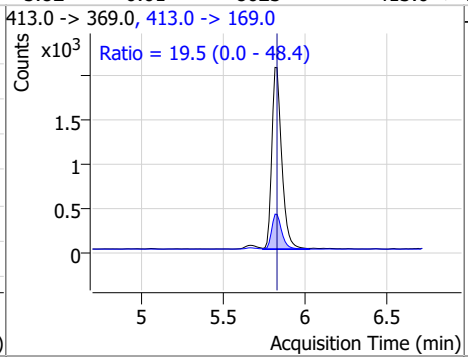


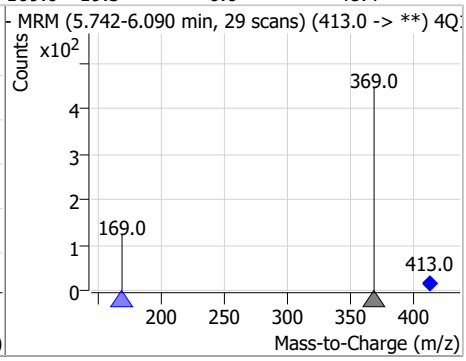




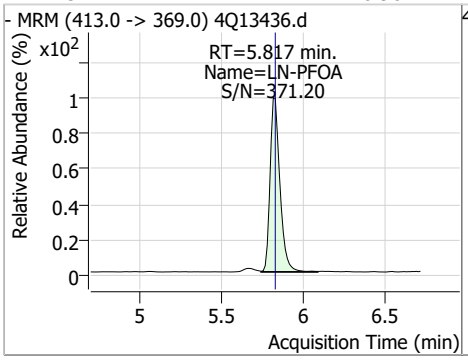
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	0.96	5.82	-0.01	8623	413.0 -> 169.0	19.5	0.0	48.4

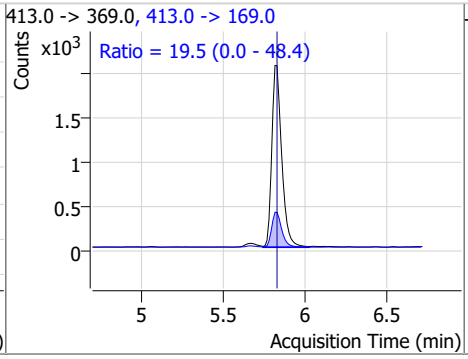


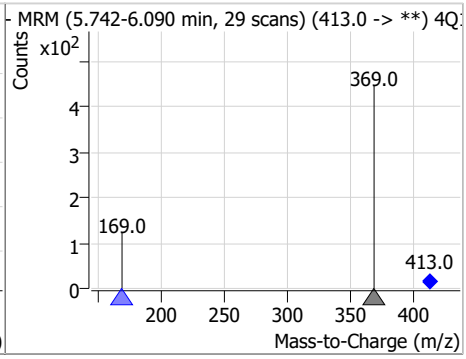




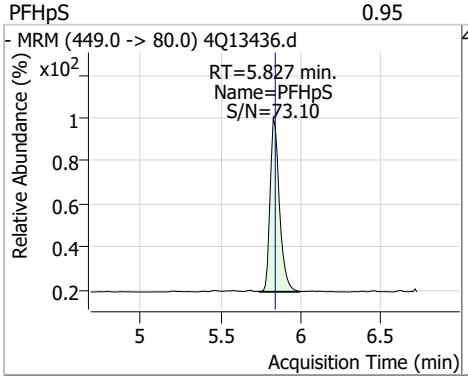
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	0.96	5.82	-0.01	8623	413.0 -> 169.0	19.5	0.0	48.4

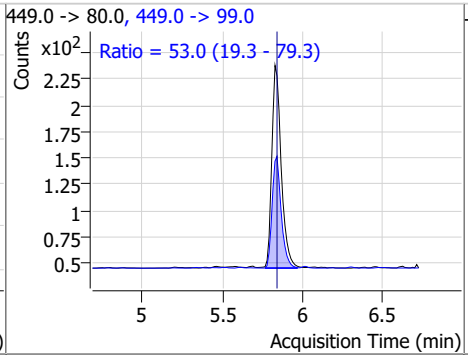


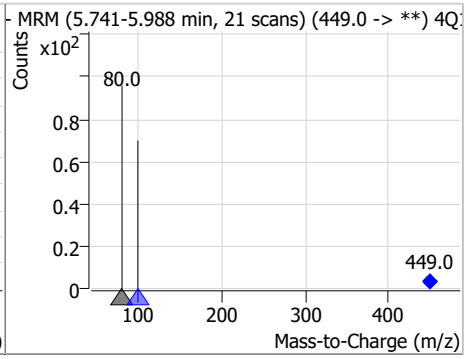




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	0.95	5.83	-0.01	783	449.0 -> 99.0	53.0	19.3	79.3

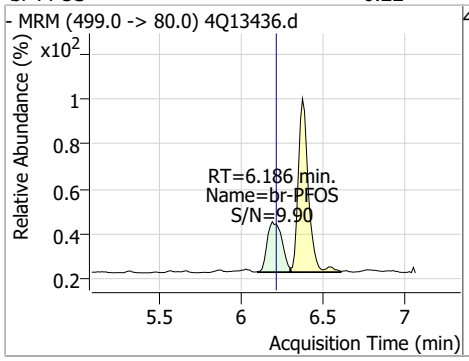


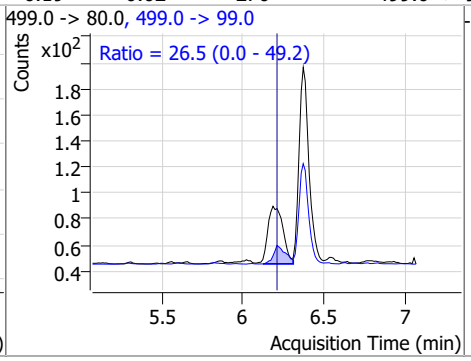


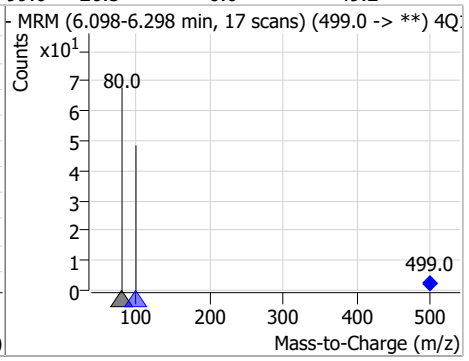


Perfluorinated Compounds by LC/MS/MS

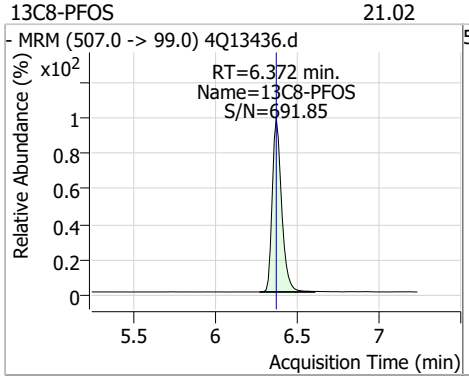
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	0.22	6.19	-0.02	276	499.0 -> 99.0	26.5	0.0	49.2

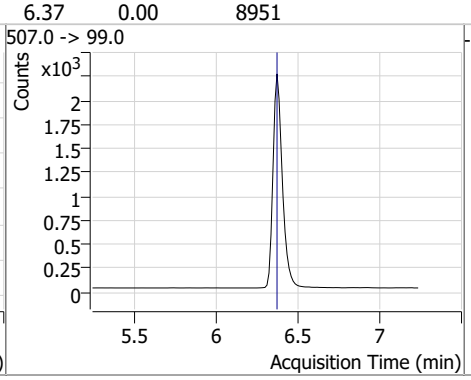


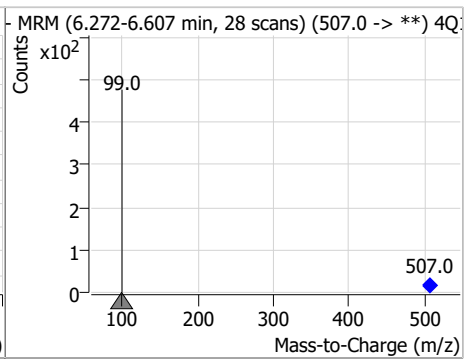




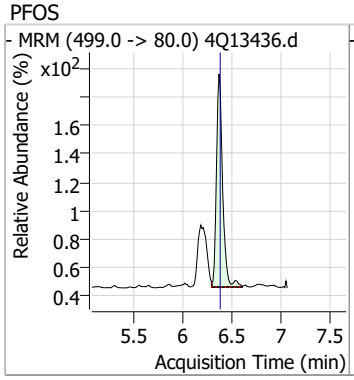
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	21.02	6.37	0.00	8951				

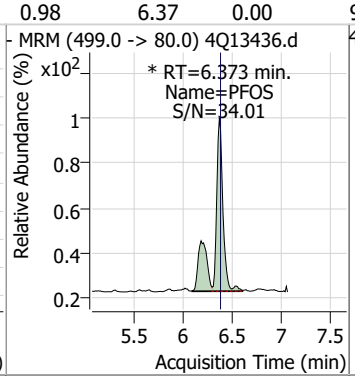


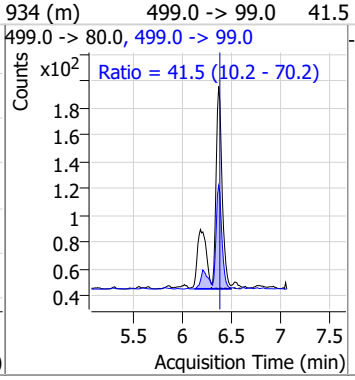


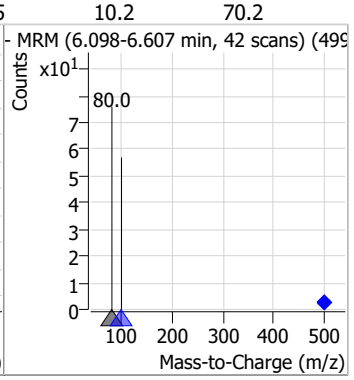


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.98	6.37	0.00	934 (m)	499.0 -> 99.0	41.5	10.2	70.2

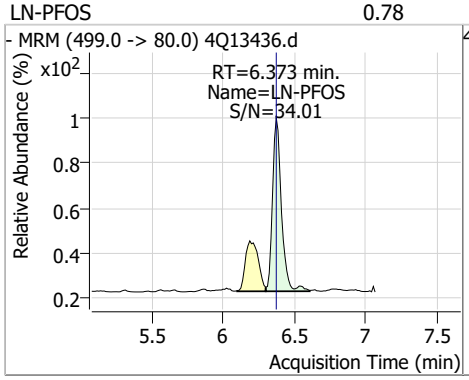


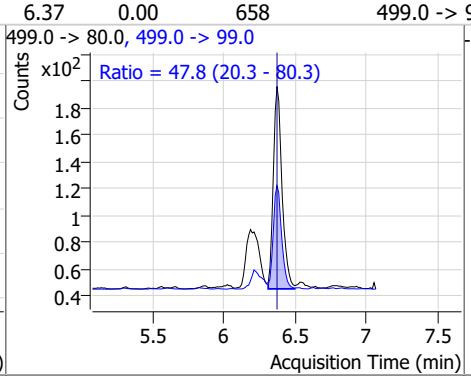


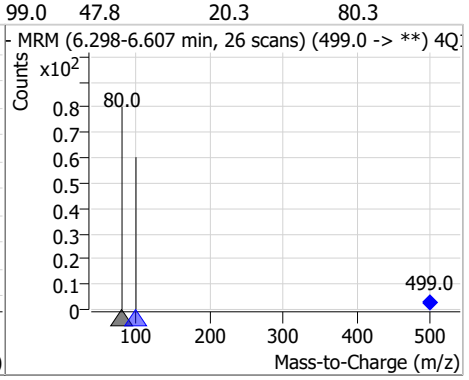




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	0.78	6.37	0.00	658	499.0 -> 99.0	47.8	20.3	80.3

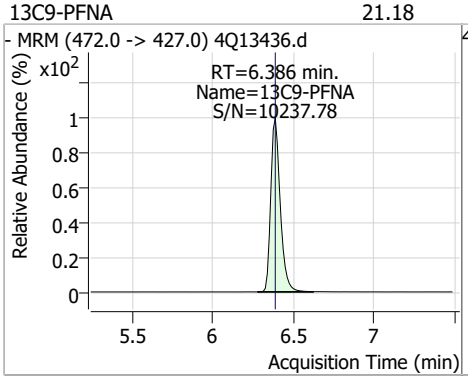


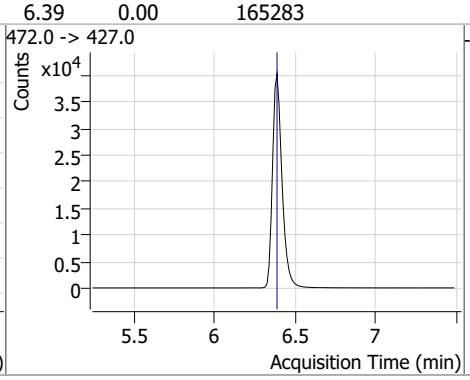


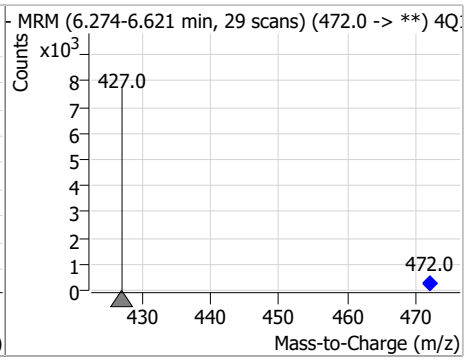


Perfluorinated Compounds by LC/MS/MS

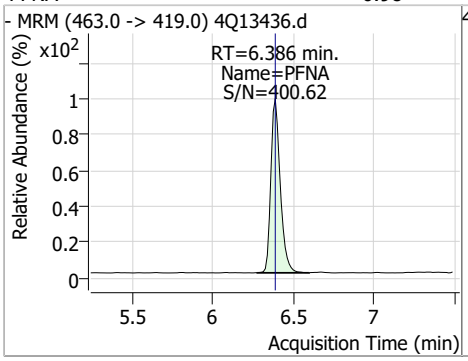
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	21.18	6.39	0.00	165283				

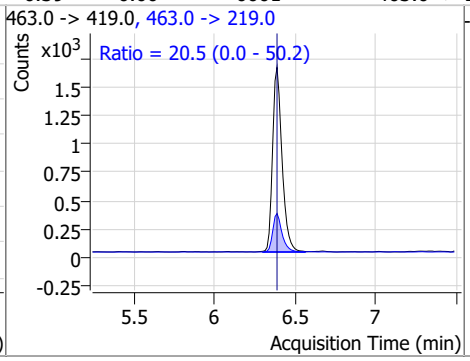


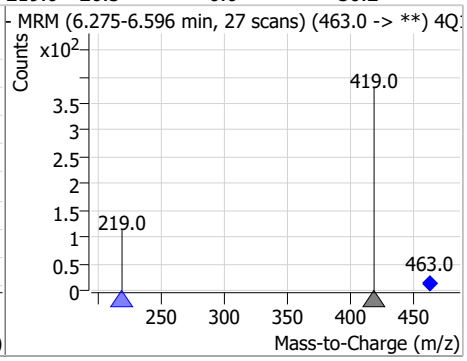




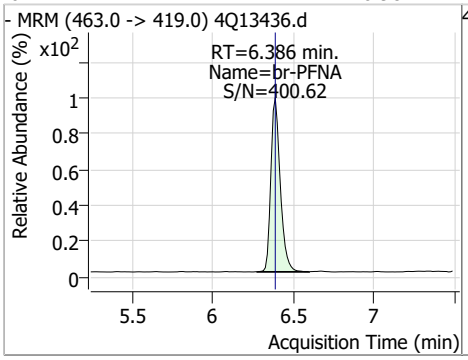
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.98	6.39	0.00	6661	463.0 -> 219.0	20.5	0.0	50.2

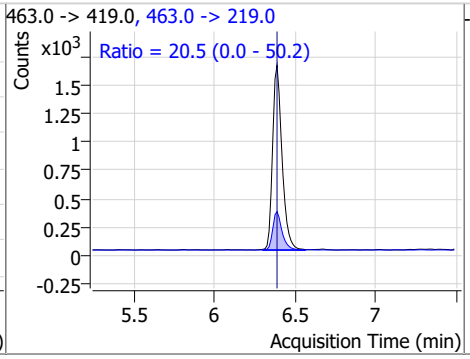


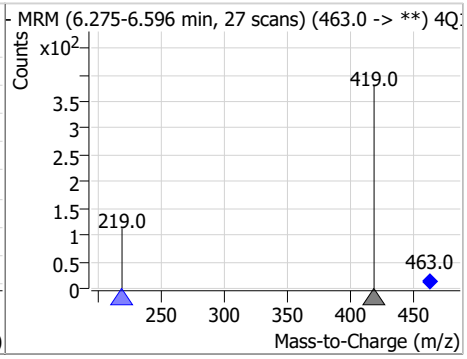




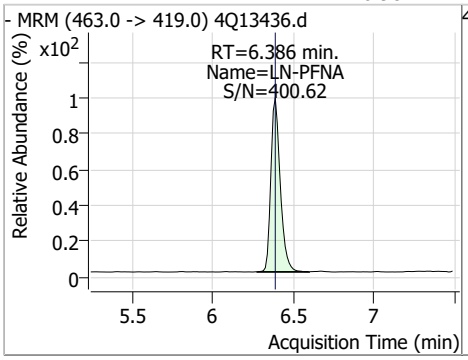
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFNA	0.98	6.39	0.00	6661	463.0 -> 219.0	20.5	0.0	50.2

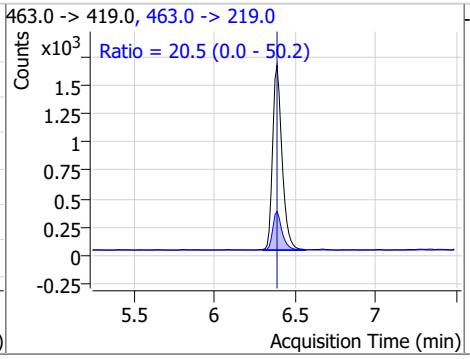


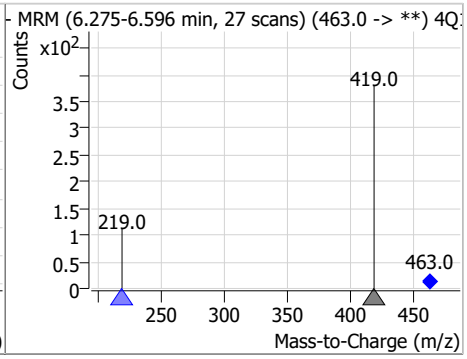




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	0.98	6.39	0.00	6661	463.0 -> 219.0	20.5	0.0	50.2

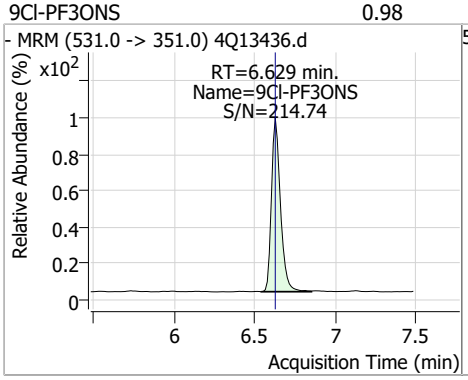


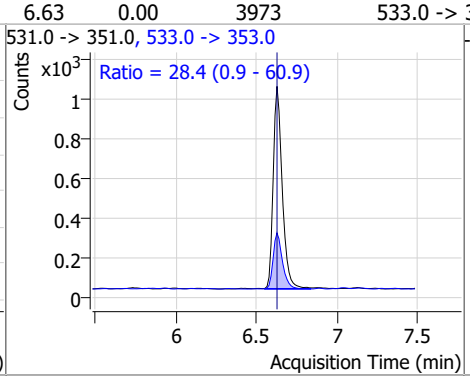


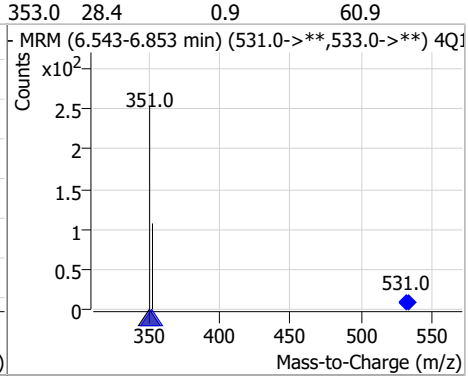


Perfluorinated Compounds by LC/MS/MS

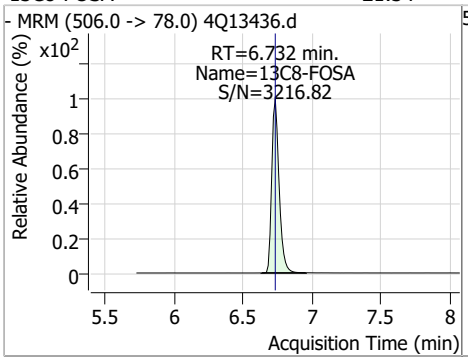
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.98	6.63	0.00	3973	533.0 -> 353.0	28.4	0.9	60.9

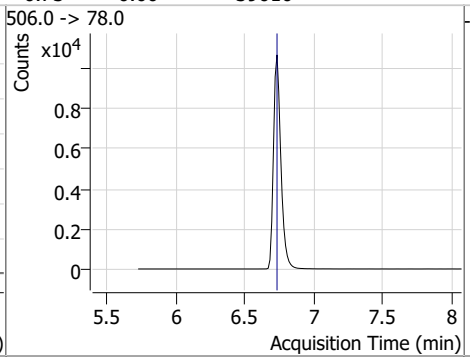


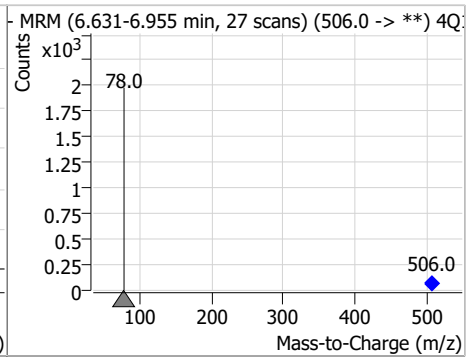




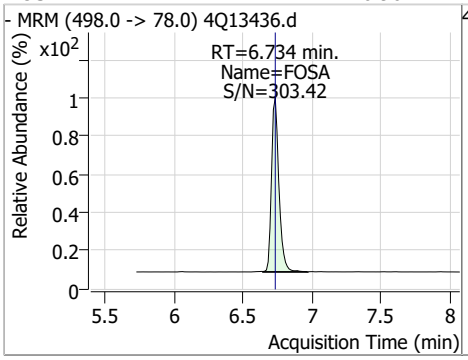
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	21.34	6.73	0.00	39616				

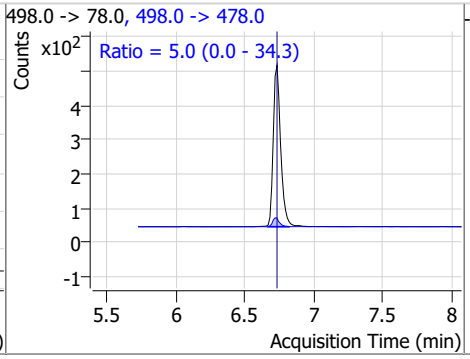


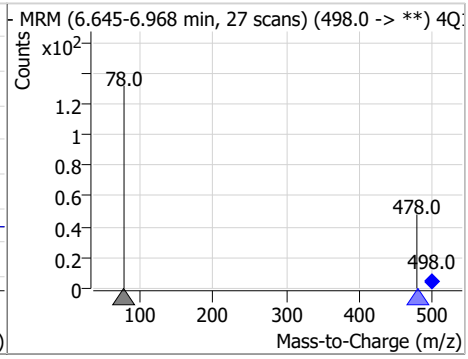




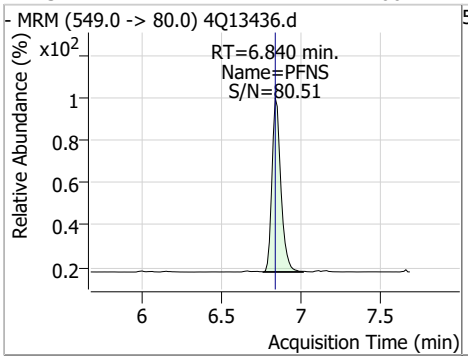
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	0.96	6.73	0.00	1774	498.0 -> 478.0	5.0	0.0	34.3

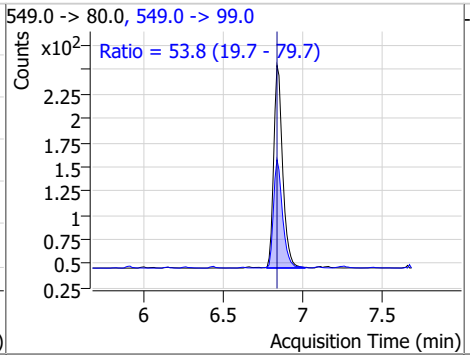


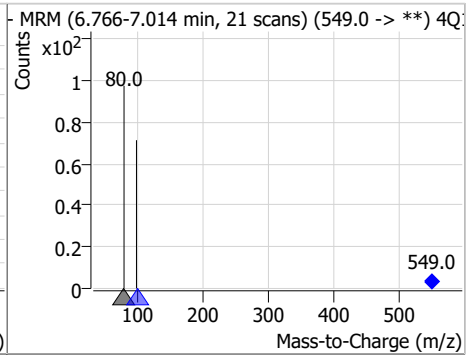




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	1.06	6.84	0.00	813	549.0 -> 99.0	53.8	19.7	79.7

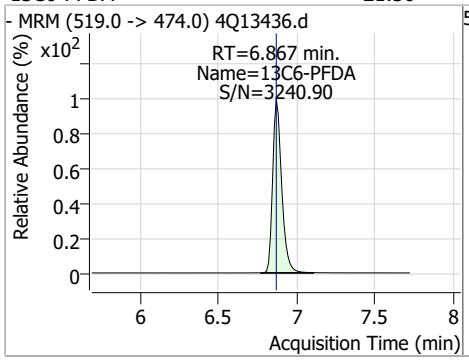


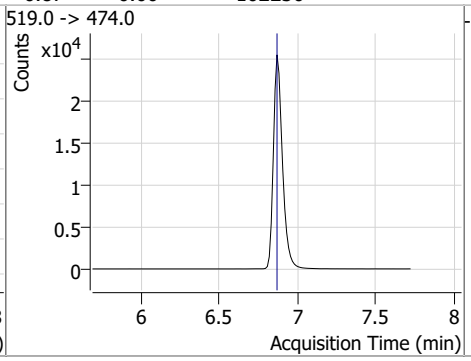


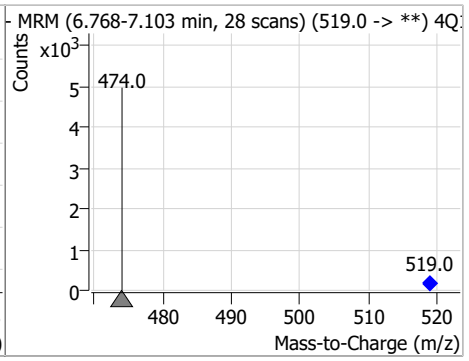


Perfluorinated Compounds by LC/MS/MS

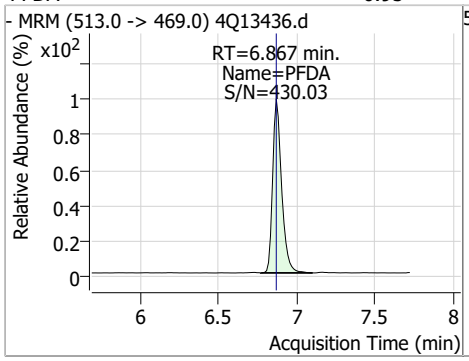
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	21.36	6.87	0.00	102250				

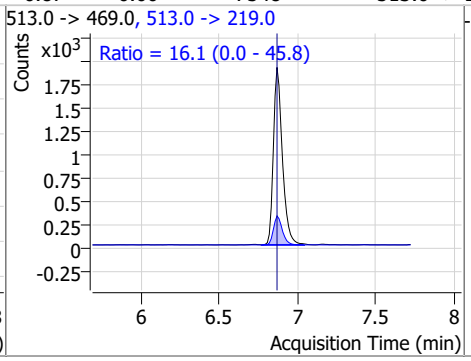


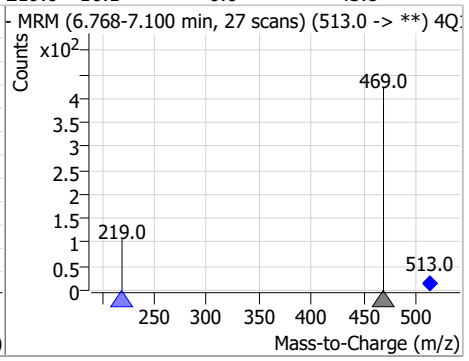




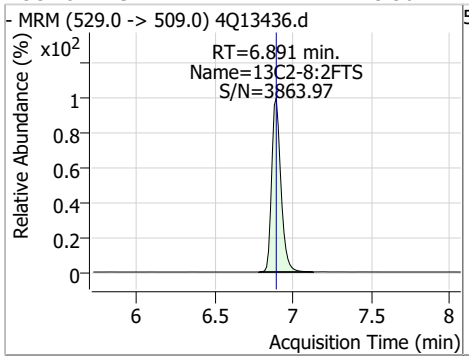
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.95	6.87	0.00	7548	513.0 -> 219.0	16.1	0.0	45.8

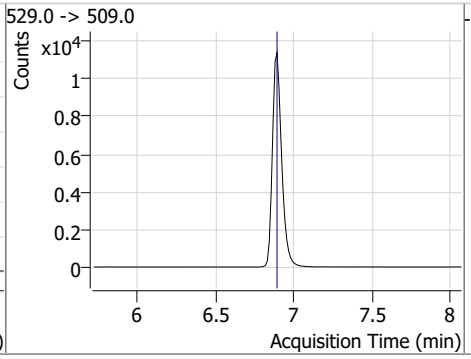


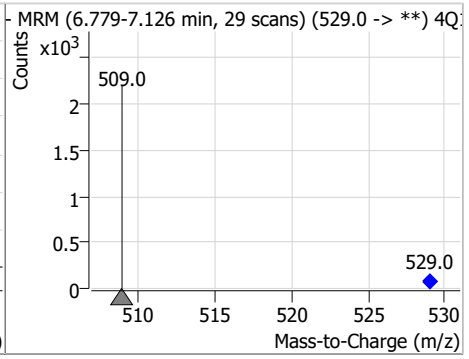




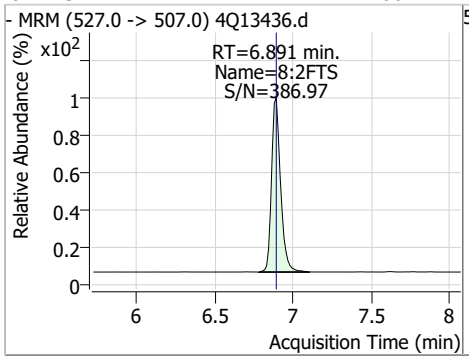
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.90	6.89	0.00	46378				

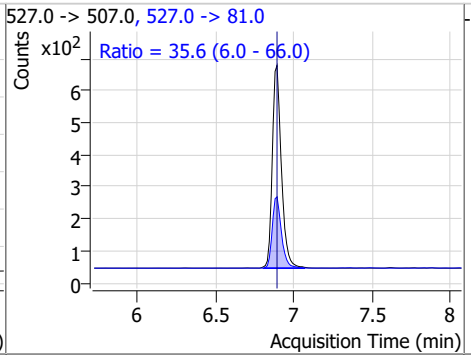


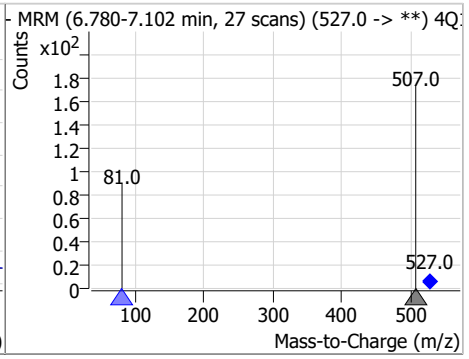




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	1.06	6.89	0.00	2551	527.0 -> 81.0	35.6	6.0	66.0

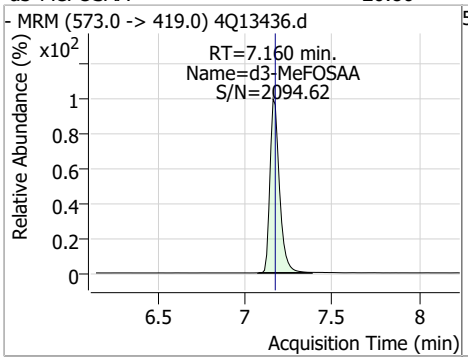


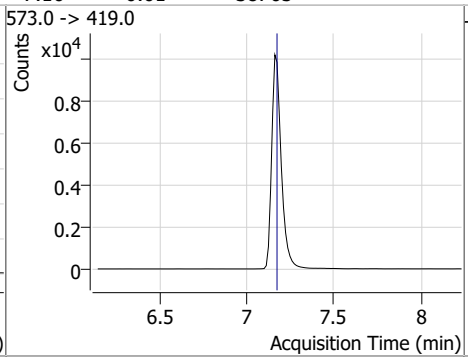


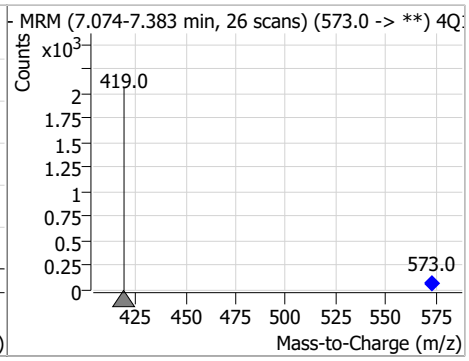


Perfluorinated Compounds by LC/MS/MS

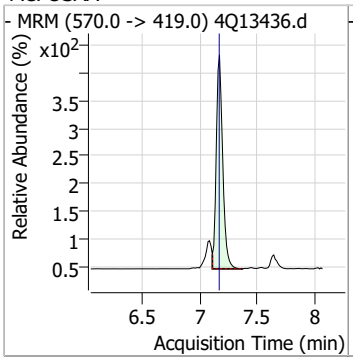
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.86	7.16	-0.01	38765				

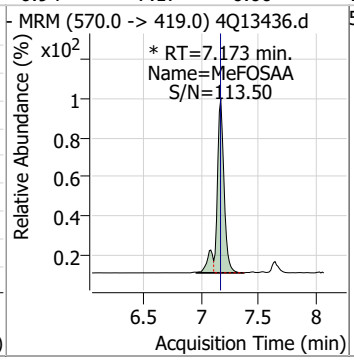


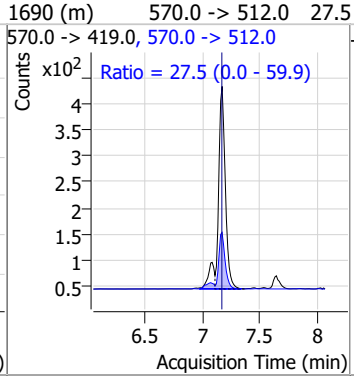


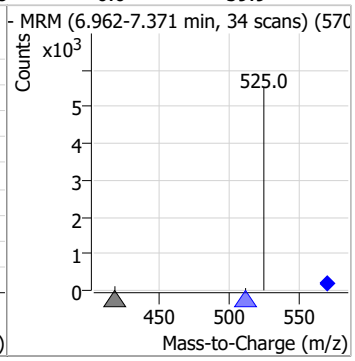


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.94	7.17	0.00	1690 (m)	570.0 -> 512.0	27.5	0.0	59.9

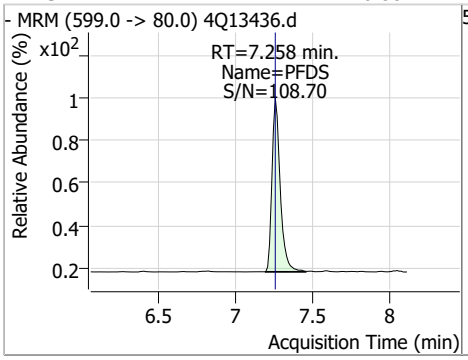


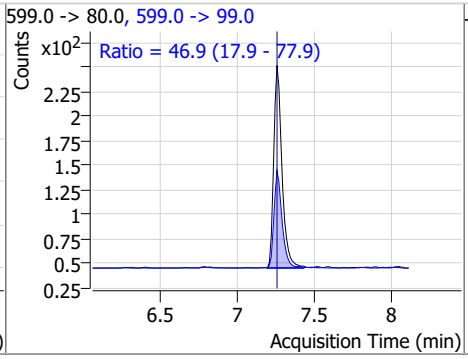


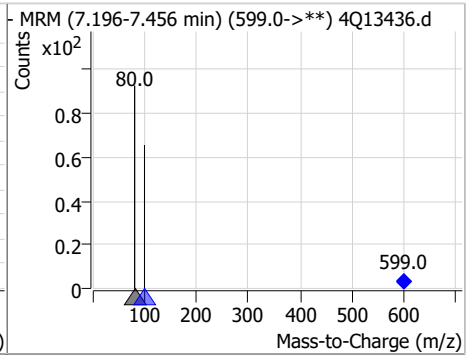




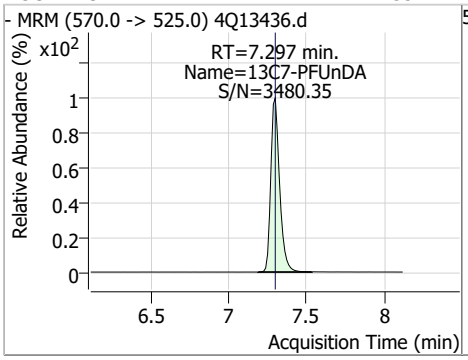
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	0.88	7.26	0.00	773	599.0 -> 99.0	46.9	17.9	77.9

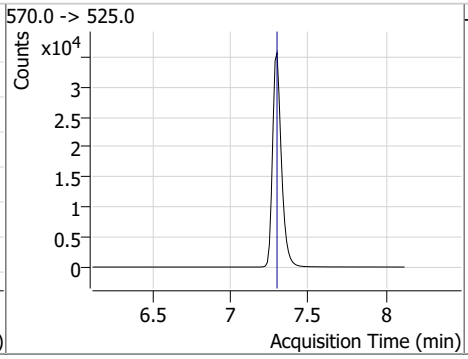


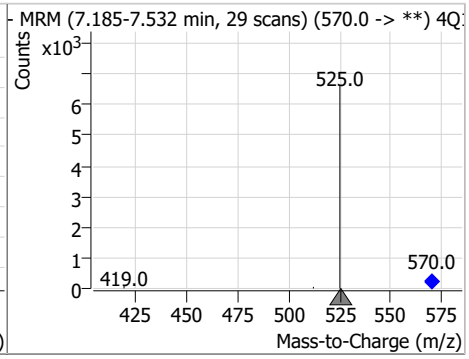




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	21.55	7.30	0.00	141223				

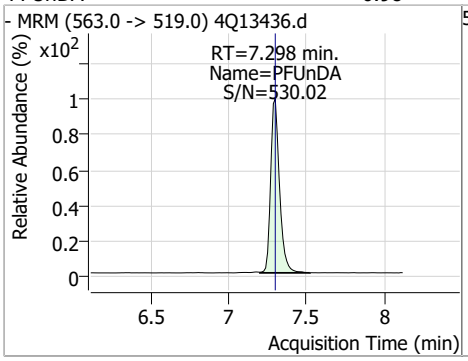


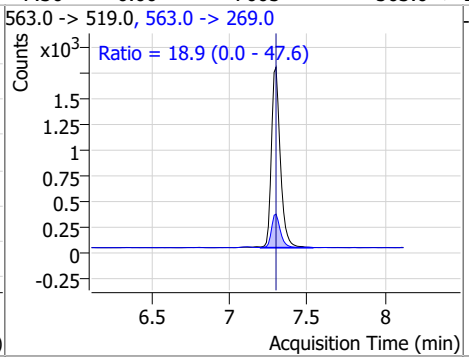


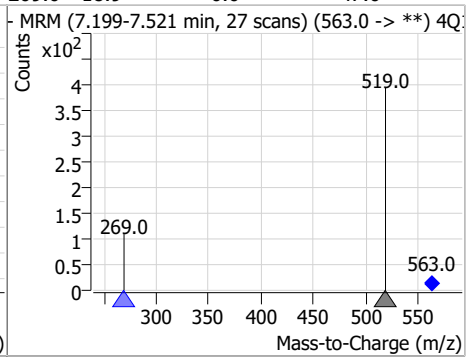


Perfluorinated Compounds by LC/MS/MS

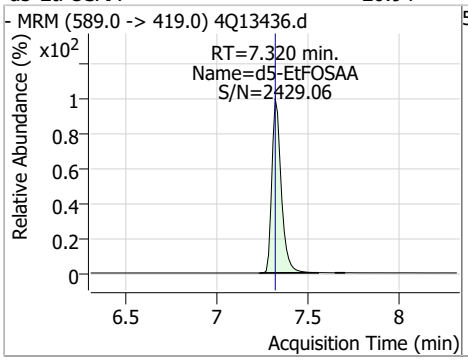
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.98	7.30	0.00	7005	563.0 -> 269.0	18.9	0.0	47.6

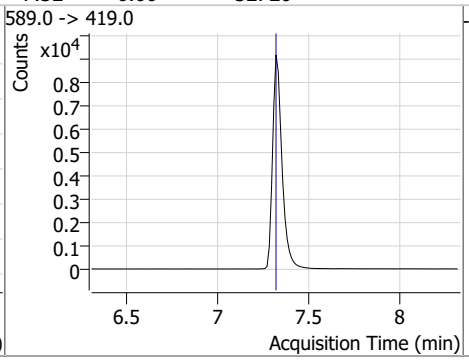


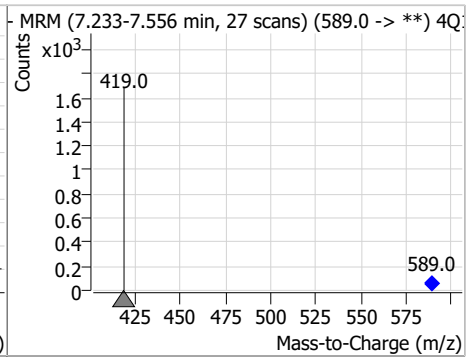




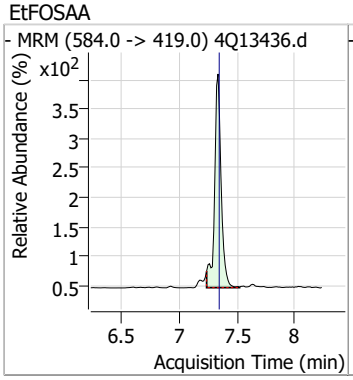
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.94	7.32	0.00	32720				

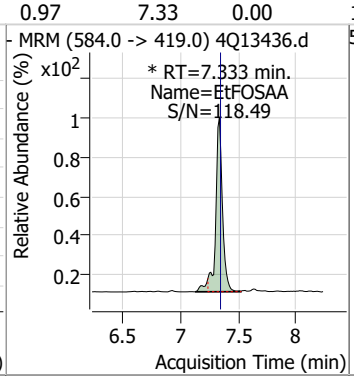


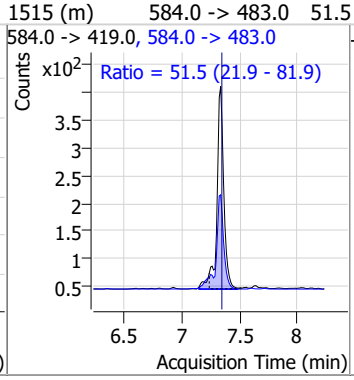


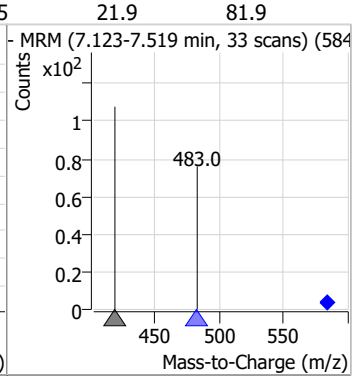


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	0.97	7.33	0.00	1515 (m)	584.0 -> 483.0	51.5	21.9	81.9

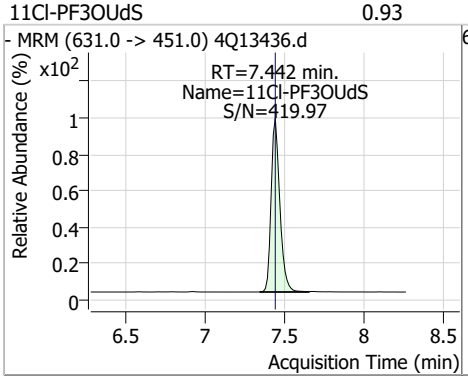


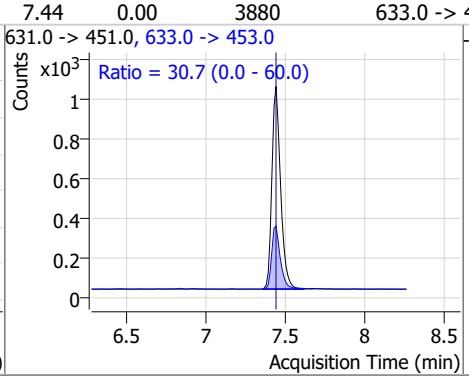


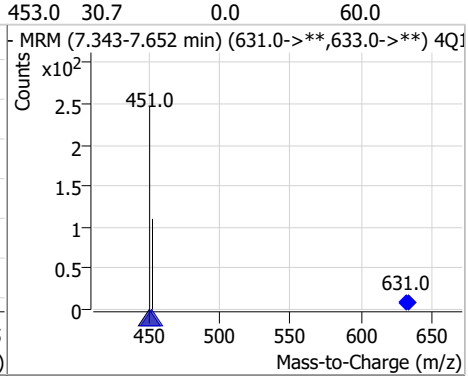




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.93	7.44	0.00	3880	633.0 -> 453.0	30.7	0.0	60.0

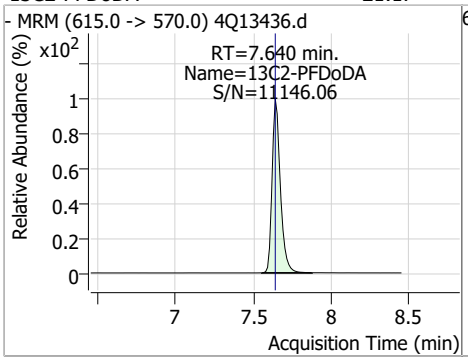


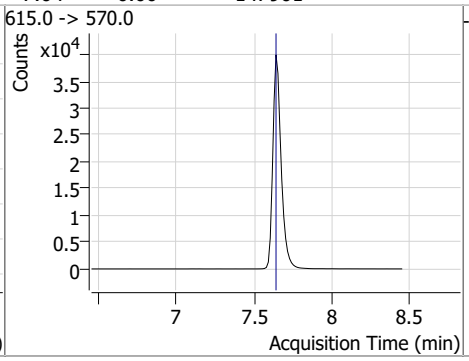


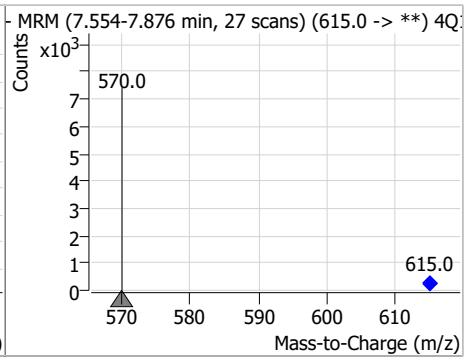


Perfluorinated Compounds by LC/MS/MS

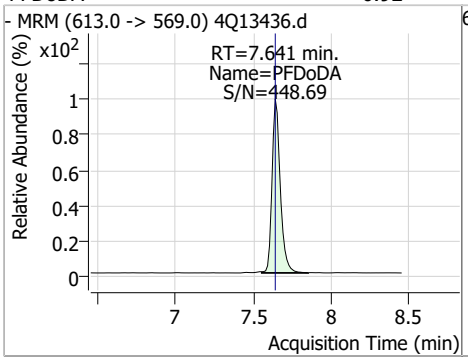
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	21.17	7.64	0.00	147961				

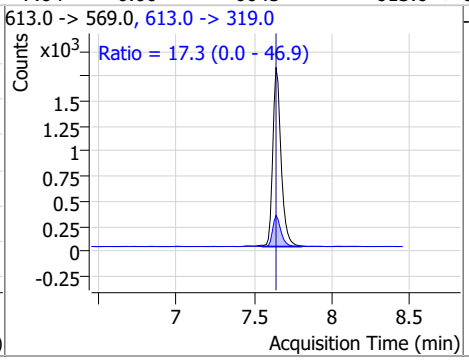


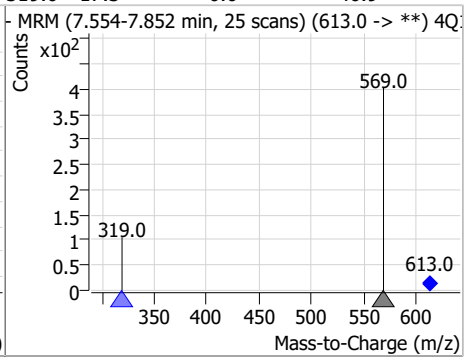




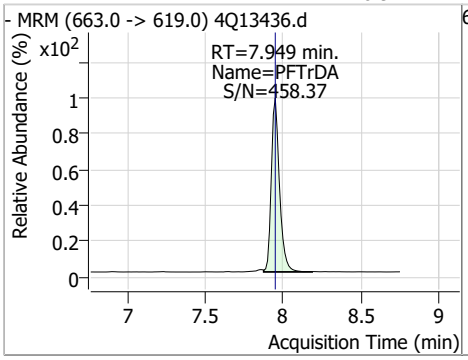
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.92	7.64	0.00	6645	613.0 -> 319.0	17.3	0.0	46.9

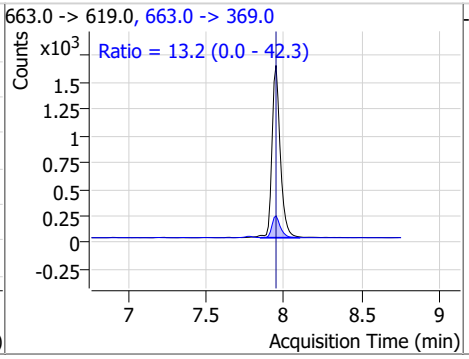


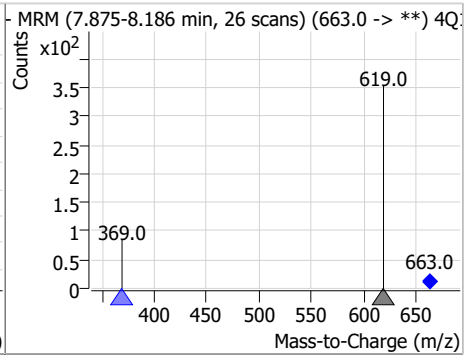




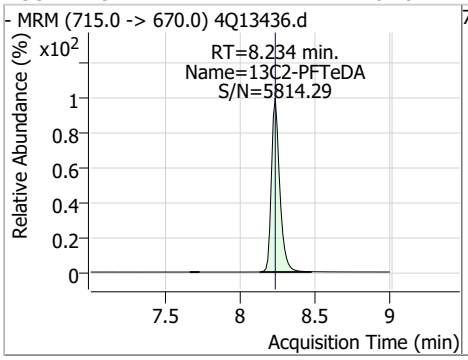
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.91	7.95	0.00	5936	663.0 -> 369.0	13.2	0.0	42.3

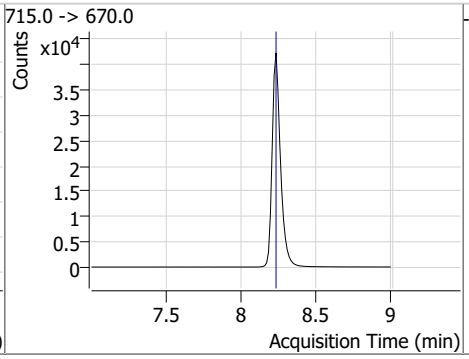


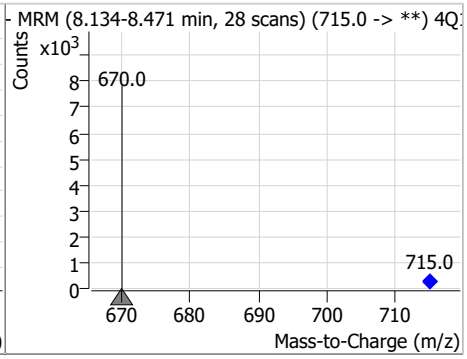




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.76	8.23	0.00	162890				

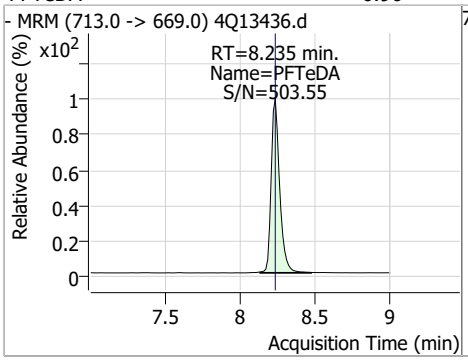


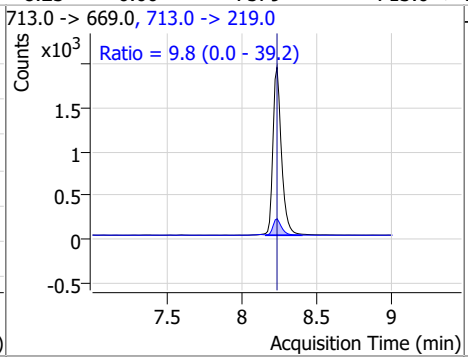


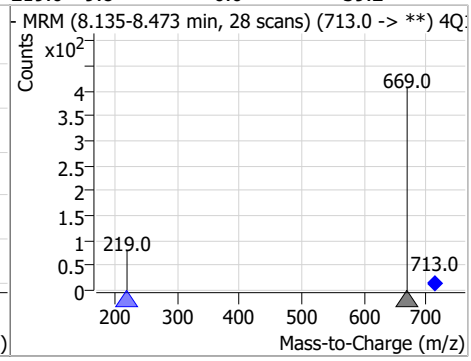


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.96	8.23	0.00	7579	713.0 -> 219.0	9.8	0.0	39.2







Manual Integration Approval Summary

Sample Number: S4Q189-IC189
Lab FileID: 4Q13436.D
Injection Time: 04/18/21 14:58
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/19/21 07:57 Nancy Saunders
Supervisor approved: 04/19/21 15:40 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.19	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.37	Split peak
MeFOSAA	2355-31-9		7.17	Split peak
EtFOSAA	2991-50-6		7.33	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:40

Perfluorinated Compounds by LC/MS/MS

Data File : 4Q13437.d
Operator : natashag
Acq. Method : 537_ID.m
Acq. Date-Time : 4/18/2021 3:13:39 PM
Sample Name : ic189-2.0
Vial : P1-A4
DA Method File : BR_LN_041821_S4Q189.quantmethod.xml
Batch Name : s4q189.batch.bin
Sample Information : op84918,S4Q189,250,,,1,1,water

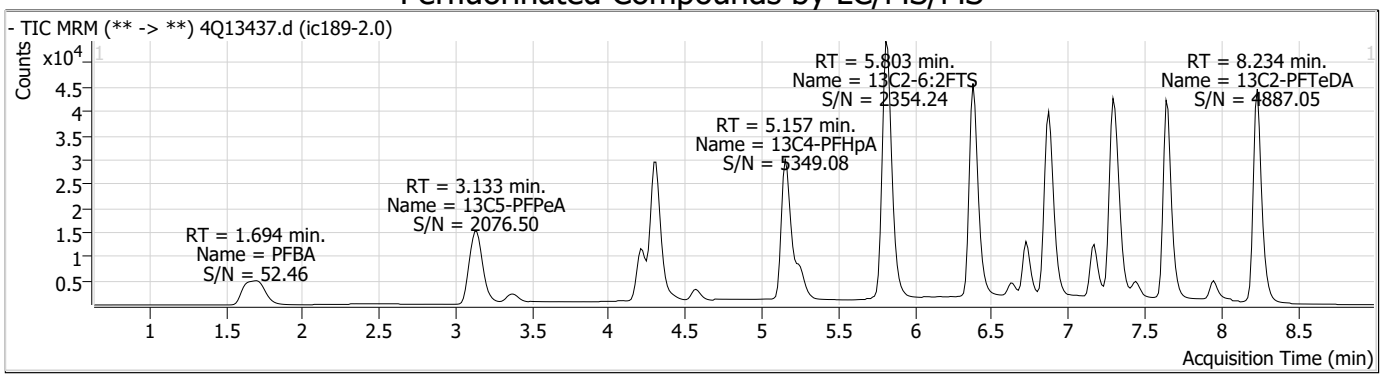
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.700	217.0 -> 172.0	48589	20.00	µg/L	0.013
M5-PFPeA	3.133	268.0 -> 223.0	87039	20.00	µg/L	-0.012
M5-PFHxA	4.314	318.0 -> 273.0	119487	20.00	µg/L	0.000
M4-PFHpA	5.157	367.0 -> 322.0	104283	20.00	µg/L	0.000
M8-PFOA	5.829	421.0 -> 376.0	145311	20.00	µg/L	0.000
M9-PFNA	6.386	472.0 -> 427.0	153197	20.00	µg/L	0.000
M6-PFDA	6.867	519.0 -> 474.0	95547	20.00	µg/L	0.000
M7-PFUnDA	7.297	570.0 -> 525.0	131060	20.00	µg/L	0.000
M2-PFDoDA	7.640	615.0 -> 570.0	137617	20.00	µg/L	0.000
M2-PFTeDA	8.234	715.0 -> 670.0	154163	20.00	µg/L	0.000
M8-FOSA	6.732	506.0 -> 78.0	38544	20.00	µg/L	0.000
M3-PFBS	3.381	302.0 -> 99.0	6616	20.00	µg/L	0.000
M3-PFHxS	5.204	402.0 -> 99.0	6434	20.00	µg/L	0.000
M8-PFOS	6.372	507.0 -> 99.0	8367	20.00	µg/L	0.000
M2-4:2FTS	4.212	329.0 -> 309.0	42315	20.00	µg/L	0.000
M2-6:2FTS	5.803	429.0 -> 409.0	56031	20.00	µg/L	0.000
M2-8:2FTS	6.891	529.0 -> 509.0	43817	20.00	µg/L	0.000
M3-MeFOSAA	7.173	573.0 -> 419.0	36512	20.00	µg/L	0.000
M3-HFPO-DA	4.578	287.0 -> 169.0	6914	20.00	µg/L	0.000
M5-EtFOSAA	7.320	589.0 -> 419.0	31003	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.212	329.0 -> 309.0	42315	18.63	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.1%		
13C2-6:2FTS	5.803	429.0 -> 409.0	56031	18.73	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.7%		
13C2-8:2FTS	6.891	529.0 -> 509.0	43817	18.80	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.0%		
13C2-PFDoDA	7.640	615.0 -> 570.0	137617	19.69	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%		
13C2-PFTeDA	8.234	715.0 -> 670.0	154163	19.65	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%		
13C3-PFBS	3.381	302.0 -> 99.0	6616	19.40	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.0%		
13C3-PFHxS	5.204	402.0 -> 99.0	6434	19.97	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.9%		
13C4-PFBA	1.700	217.0 -> 172.0	48589	19.67	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%		
13C4-PFHpA	5.157	367.0 -> 322.0	104283	19.56	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.8%		
13C5-PFHxA	4.314	318.0 -> 273.0	119487	19.60	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%		
13C5-PFPeA	3.133	268.0 -> 223.0	87039	19.59	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%		
13C6-PFDA	6.867	519.0 -> 474.0	95547	19.96	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.8%		

Perfluorinated Compounds by LC/MS/MS

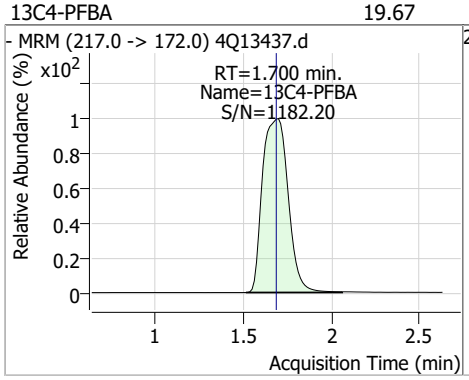
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	7.297	570.0 -> 525.0	131060	20.00	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.0%			
13C8-FOSA	6.732	506.0 -> 78.0	38544	20.77	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.8%			
13C8-PFOA	5.829	421.0 -> 376.0	145311	19.79	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.9%			
13C8-PFOS	6.372	507.0 -> 99.0	8367	19.65	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.3%			
13C9-PFNA	6.386	472.0 -> 427.0	153197	19.64	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%			
d3-MeFOSAA	7.173	573.0 -> 419.0	36512	19.64	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%			
13C3-HFPO-DA	4.578	287.0 -> 169.0	6906	19.80	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.0%			
d5-EtFOSAA	7.320	589.0 -> 419.0	30984	19.83	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.1%			
Target Compounds							QValue
4:2FTS	4.214	327.0 -> 307.0	4914	2.17	µg/L		100
6:2FTS	5.803	427.0 -> 407.0	6427	2.18	µg/L		100
8:2FTS	6.891	527.0 -> 507.0	4996	2.21	µg/L		97
EtFOSAA	7.333	584.0 -> 419.0	3148	2.14	µg/L	m	99
FOSA	6.734	498.0 -> 78.0	3546	1.96	µg/L		98
MeFOSAA	7.173	570.0 -> 419.0	3639	2.16	µg/L	m	100
PFBA	1.694	213.0 -> 169.0	2208	2.08	µg/L		100
PFBS	3.383	299.0 -> 80.0	2267	2.10	µg/L		100
PFDA	6.867	513.0 -> 469.0	15129	2.04	µg/L		98
PFDoDA	7.641	613.0 -> 569.0	13831	2.07	µg/L		99
PFDS	7.270	599.0 -> 80.0	1600	1.97	µg/L		99
PFHpA	5.157	363.0 -> 319.0	13801	2.03	µg/L		99
PFHpS	5.827	449.0 -> 80.0	1589	2.07	µg/L		100
PFHxA	4.315	313.0 -> 269.0	11250	2.06	µg/L		99
PFHxS	5.205	399.0 -> 80.0	1659	2.03	µg/L	m	99
PFNA	6.386	463.0 -> 419.0	12927	2.04	µg/L		98
PFNS	6.853	549.0 -> 80.0	1534	2.14	µg/L		96
PFOA	5.829	413.0 -> 369.0	17378	2.04	µg/L		99
PFOS	6.373	499.0 -> 80.0	1957	2.19	µg/L	m	93
PFPeA	3.147	263.0 -> 219.0	7802	2.08	µg/L		100
PFPeS	4.423	349.0 -> 80.0	1690	2.15	µg/L		98
PFTeDA	8.235	713.0 -> 669.0	15399	2.06	µg/L		98
PFTrDA	7.949	663.0 -> 619.0	12485	2.02	µg/L		100
PFUnDA	7.298	563.0 -> 519.0	13786	2.08	µg/L		99
11Cl-PF3OUdS	7.442	631.0 -> 451.0	7956	2.04	µg/L		94
9Cl-PF3ONS	6.629	531.0 -> 351.0	7634	2.01	µg/L		94
ADONA	5.257	377.0 -> 251.0	16671	2.03	µg/L		98
HFPO-DA	4.574	329.0 -> 169.0	2371	2.14	µg/L		96
br-PFOS	6.199	499.0 -> 80.0	592	0.51	µg/L		91
LN-PFOS	6.373	499.0 -> 80.0	1365	1.73	µg/L		95
br-PFHxS	5.031	399.0 -> 80.0	231	0.24	µg/L		95
LN-PFHxS	5.205	399.0 -> 80.0	1428	1.79	µg/L		99
br-PFOA	5.829	413.0 -> 369.0	17378	2.04	µg/L		99
LN-PFOA	5.829	413.0 -> 369.0	17378	2.04	µg/L		99
br-PFNA	6.386	463.0 -> 419.0	12927	2.04	µg/L		98
LN-PFNA	6.386	463.0 -> 419.0	12927	2.04	µg/L		98

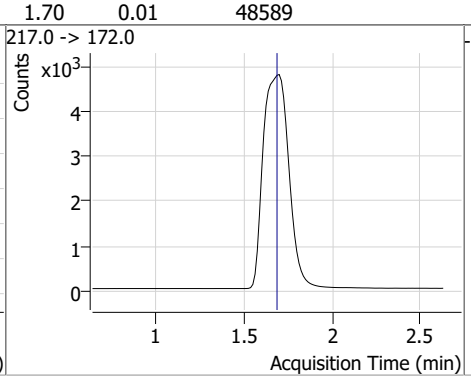
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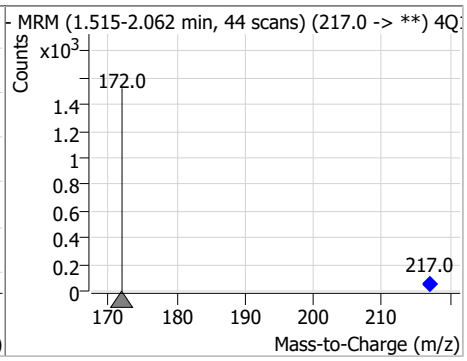
Perfluorinated Compounds by LC/MS/MS



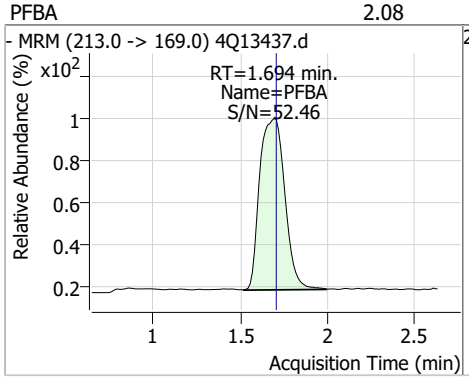
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.67	1.70	0.01	48589				

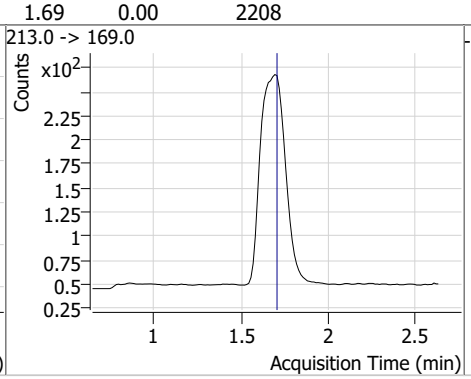


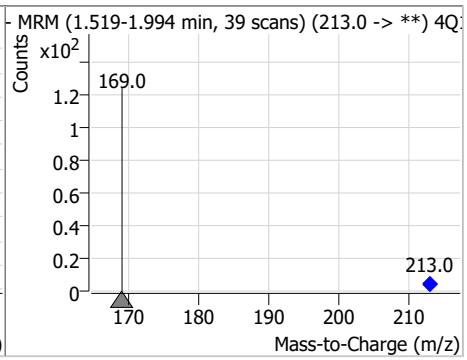




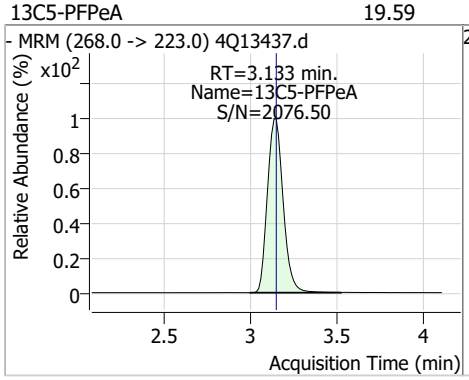
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	2.08	1.69	0.00	2208				

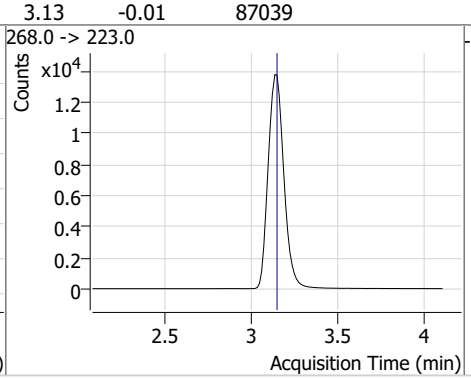


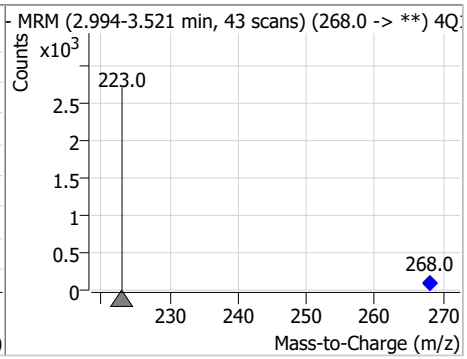




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.59	3.13	-0.01	87039				

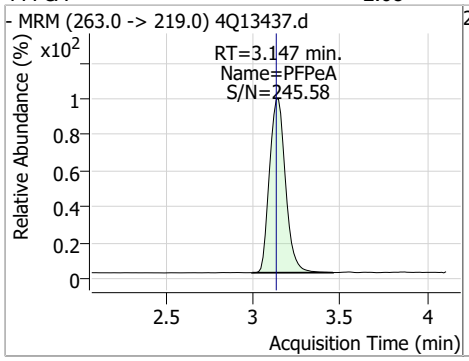


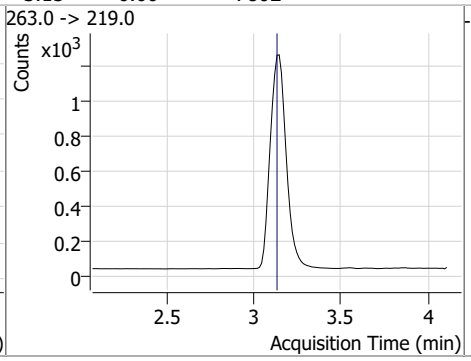


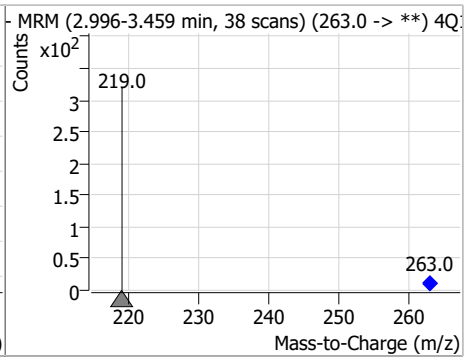


Perfluorinated Compounds by LC/MS/MS

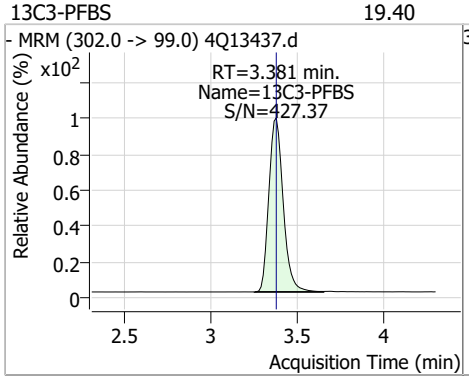
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	2.08	3.15	0.00	7802				

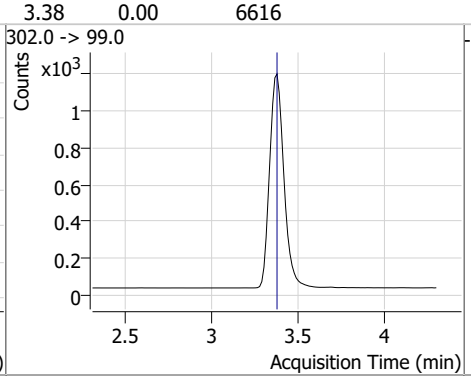


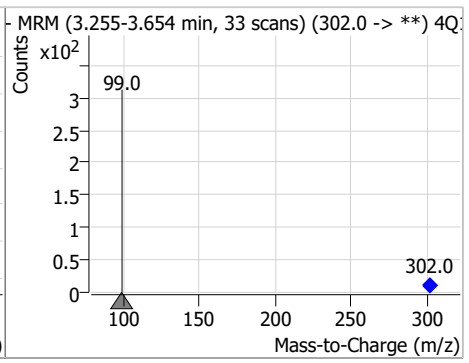




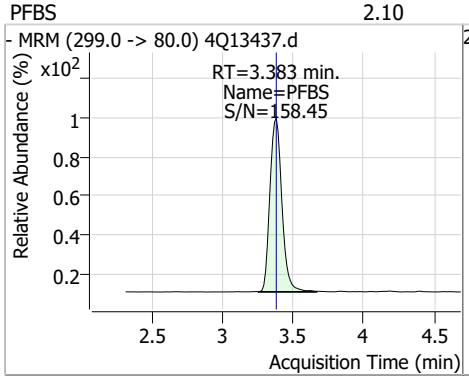
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.40	3.38	0.00	6616				

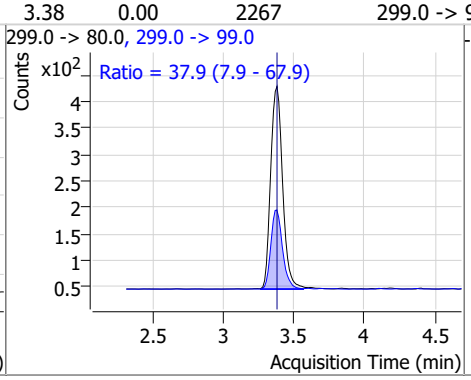


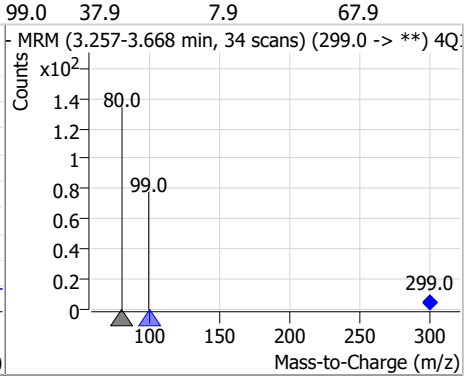




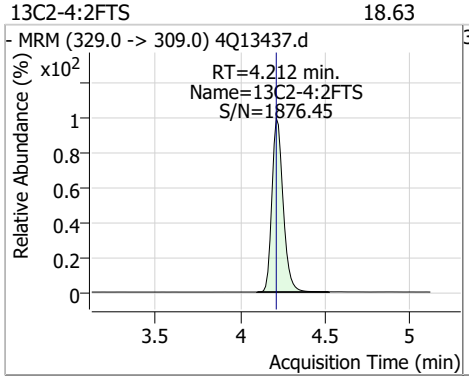
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	2.10	3.38	0.00	2267	299.0 -> 99.0	37.9	7.9	67.9

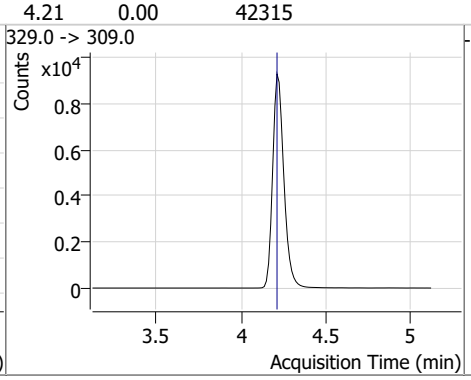


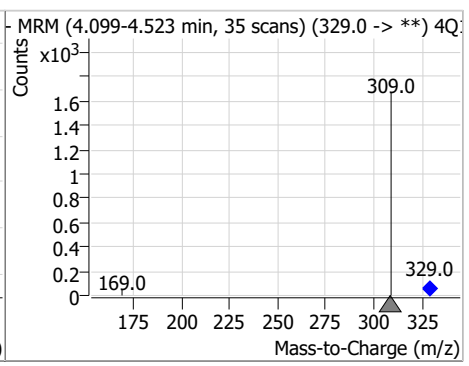




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.63	4.21	0.00	42315				

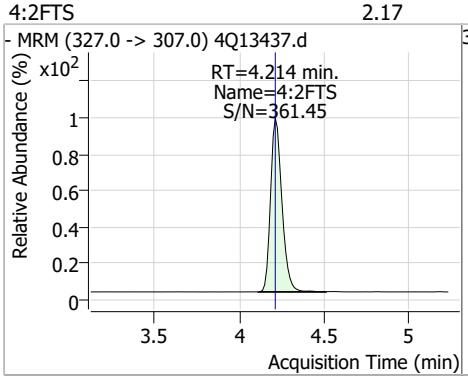


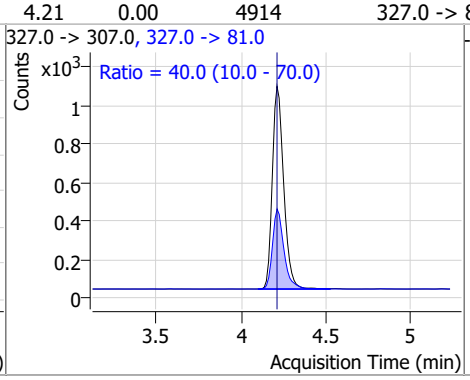


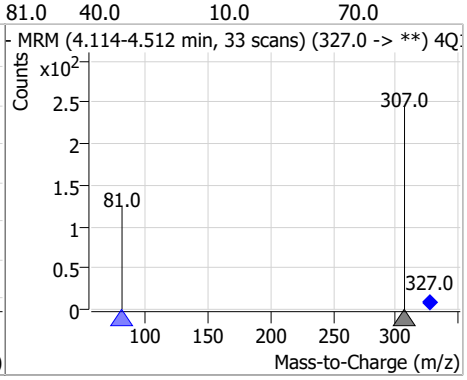


Perfluorinated Compounds by LC/MS/MS

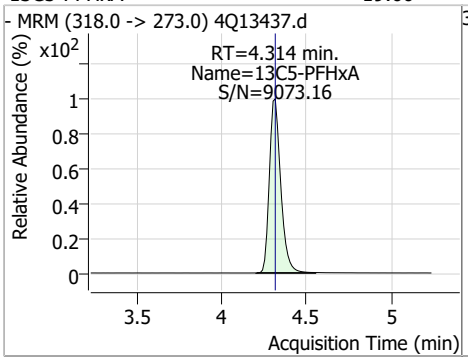
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	2.17	4.21	0.00	4914	327.0 -> 81.0	40.0	10.0	70.0

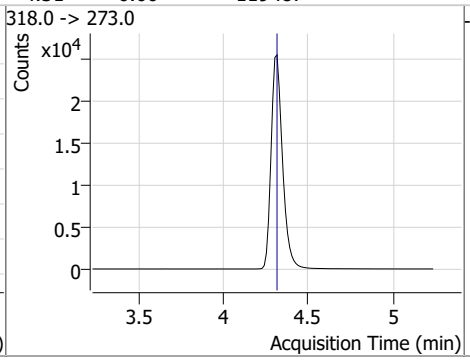


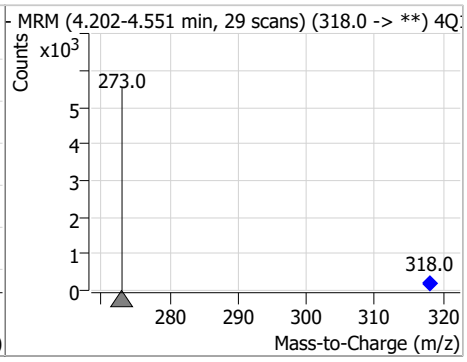




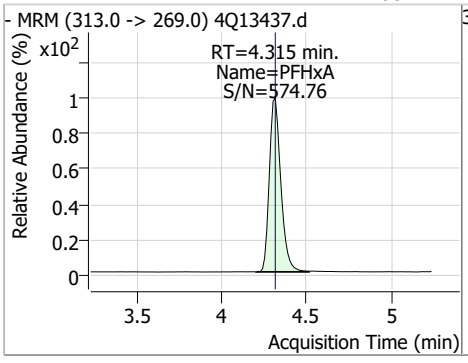
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.60	4.31	0.00	119487				

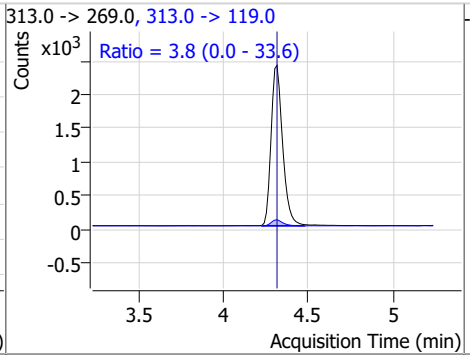


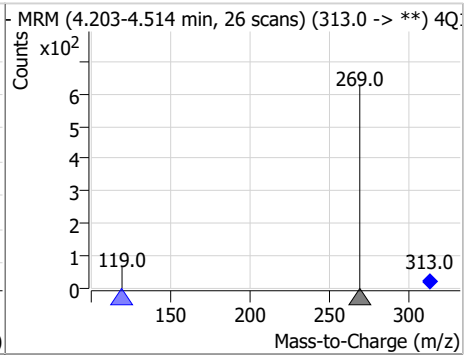




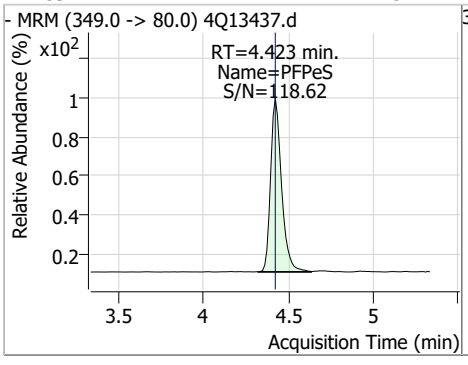
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	2.06	4.32	0.00	11250	313.0 -> 119.0	3.8	0.0	33.6

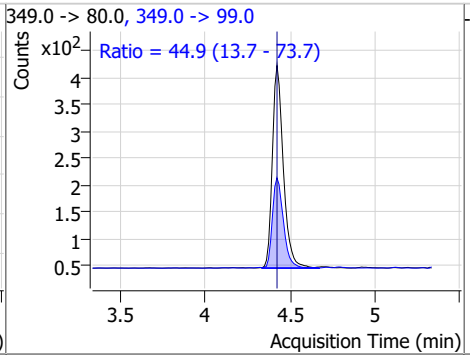


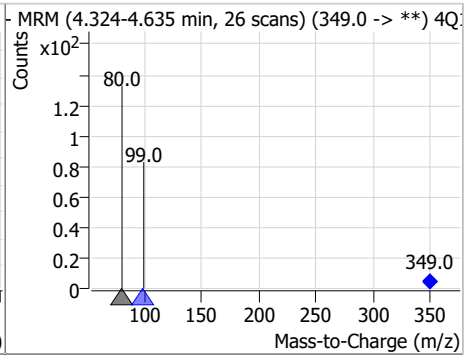




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	2.15	4.42	0.00	1690	349.0 -> 99.0	44.9	13.7	73.7

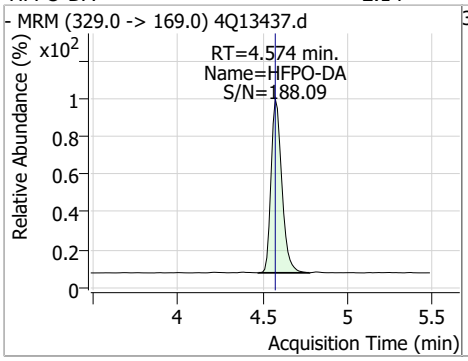


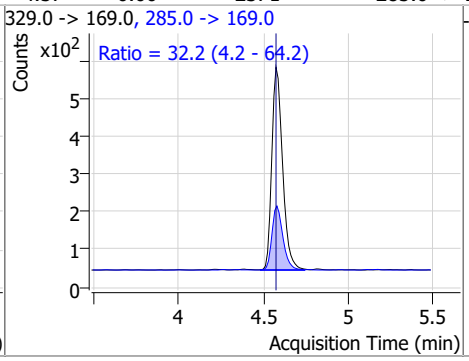


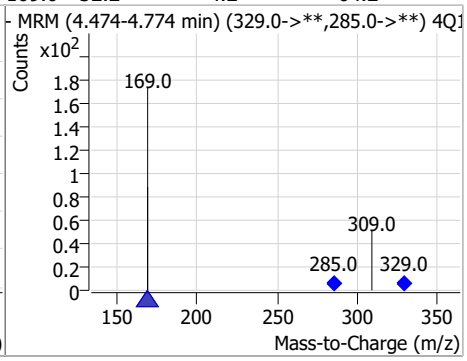


Perfluorinated Compounds by LC/MS/MS

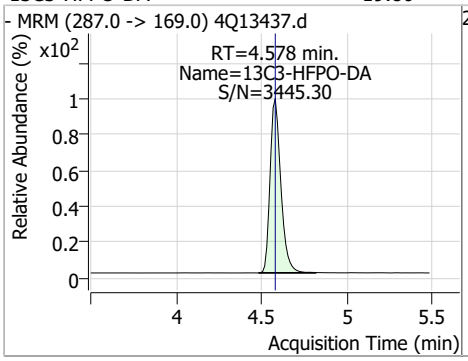
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	2.14	4.57	0.00	2371	285.0 -> 169.0	32.2	4.2	64.2

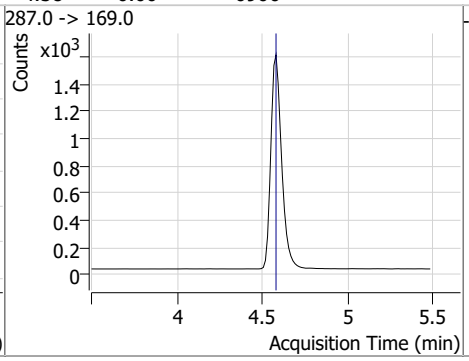


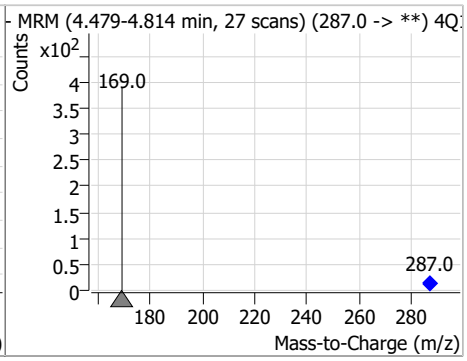




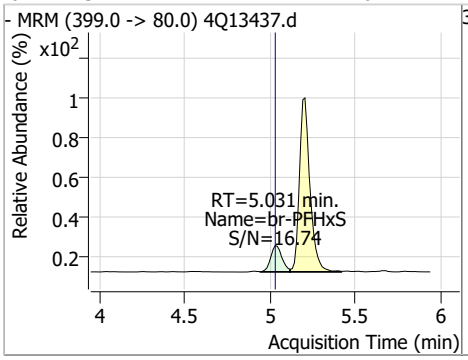
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.80	4.58	0.00	6906				

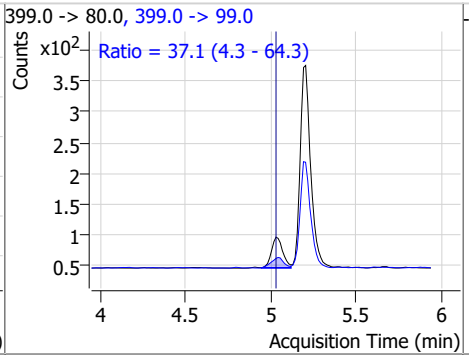


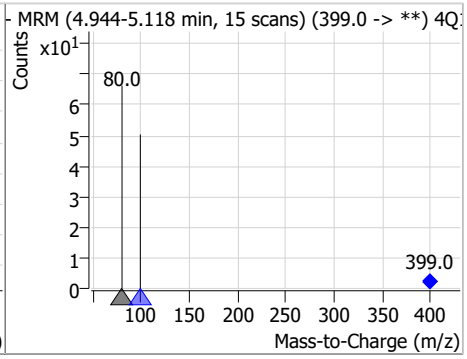




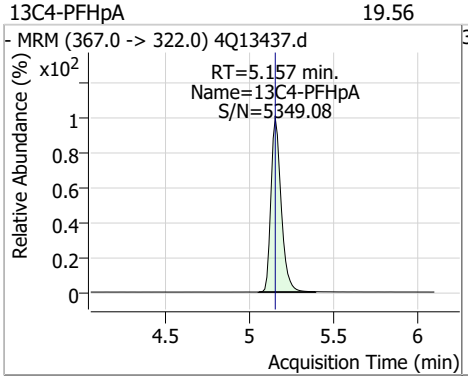
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	0.24	5.03	0.00	231	399.0 -> 99.0	37.1	4.3	64.3

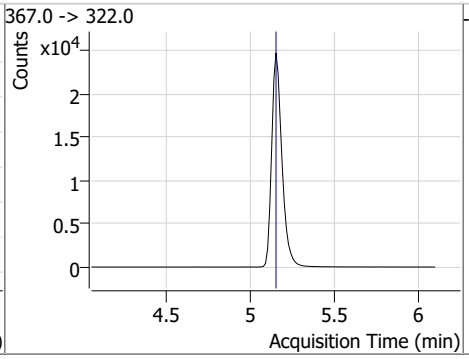


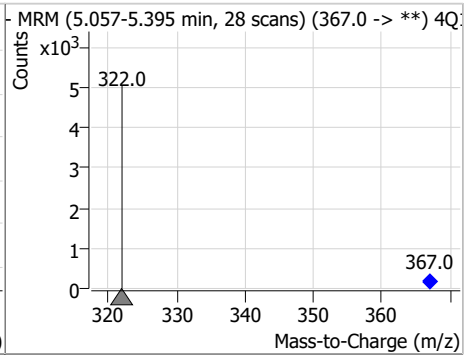




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.56	5.16	0.00	104283				

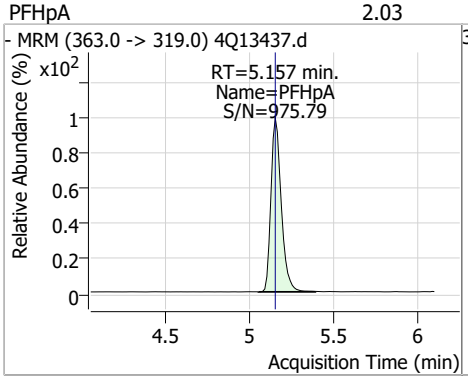


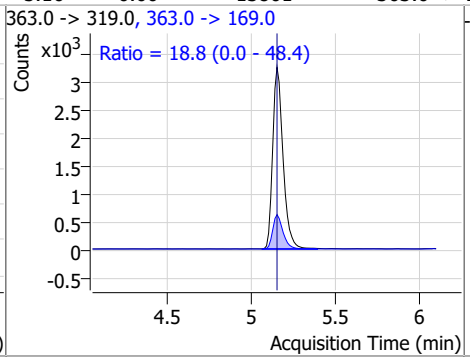


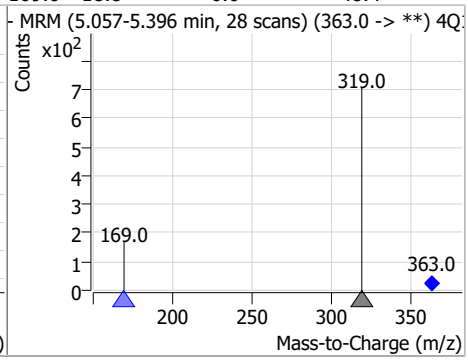


Perfluorinated Compounds by LC/MS/MS

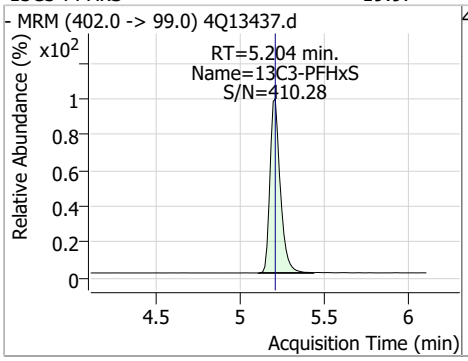
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	2.03	5.16	0.00	13801	363.0 -> 169.0	18.8	0.0	48.4

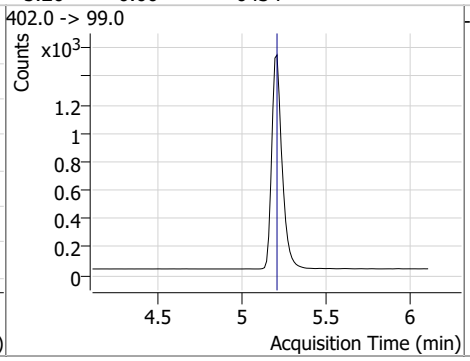


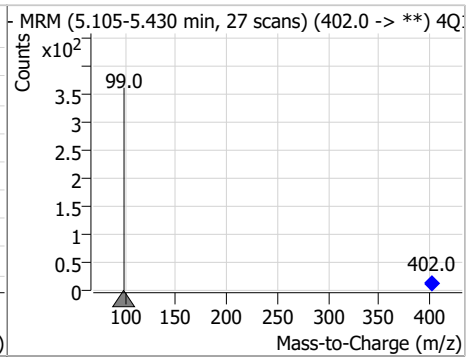




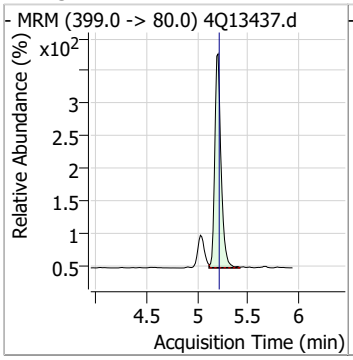
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.97	5.20	0.00	6434				

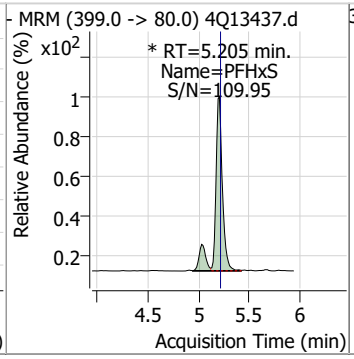


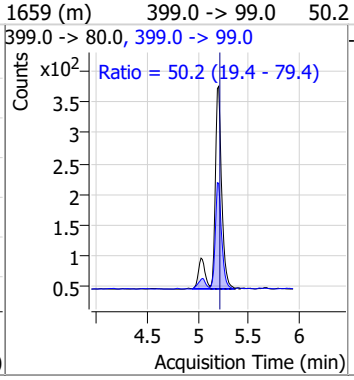


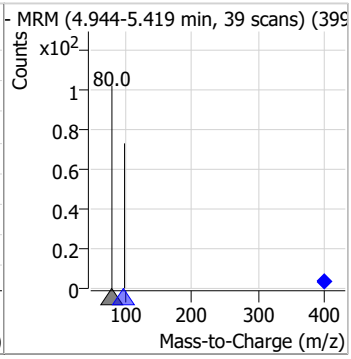


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	2.03	5.21	0.00	1659 (m)	399.0 -> 99.0	50.2	19.4	79.4

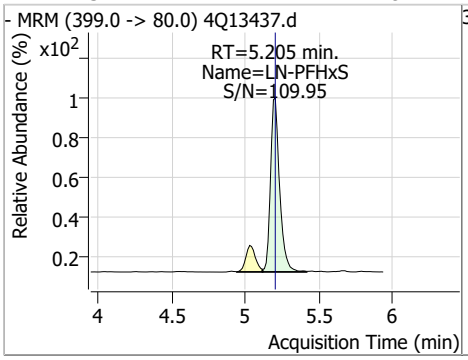


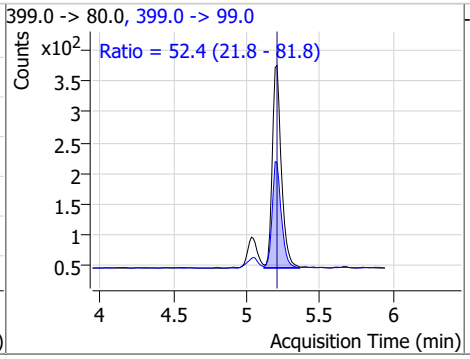


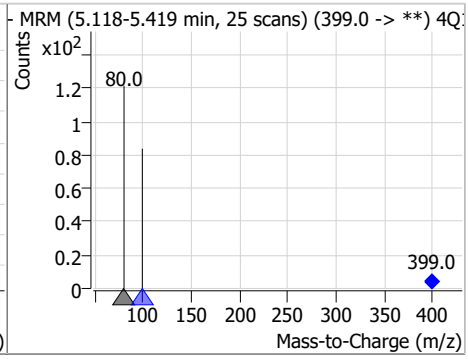




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	1.79	5.21	0.00	1428	399.0 -> 99.0	52.4	21.8	81.8

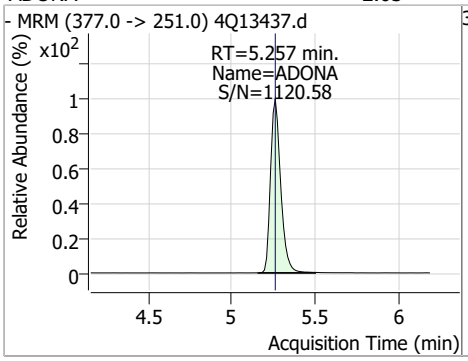


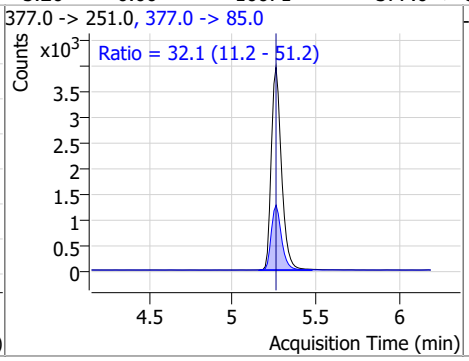


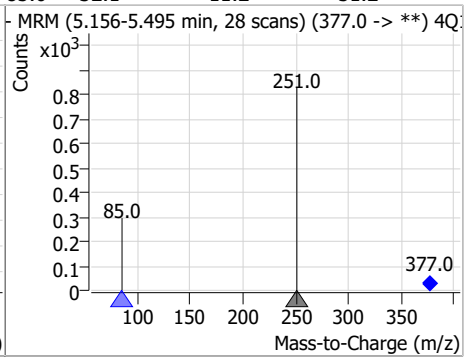


Perfluorinated Compounds by LC/MS/MS

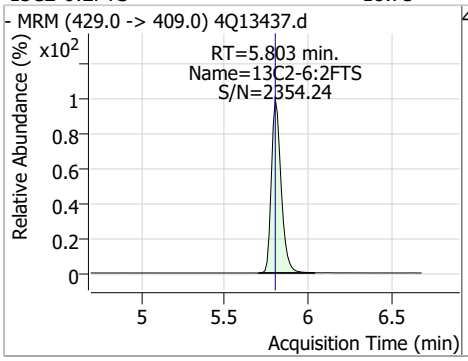
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	2.03	5.26	0.00	16671	377.0 -> 85.0	32.1	11.2	51.2

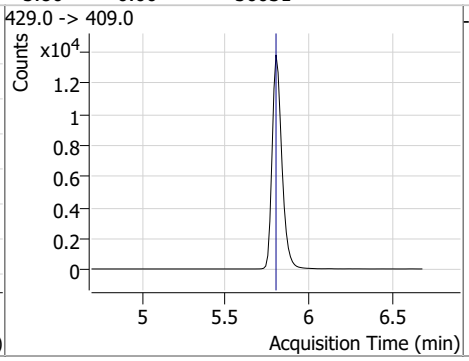


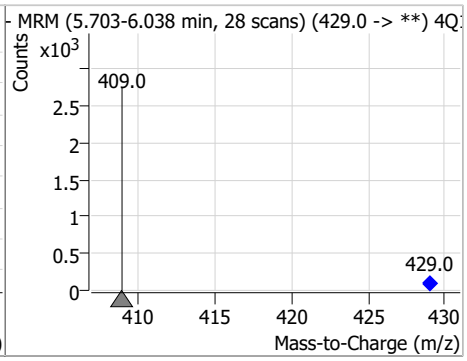




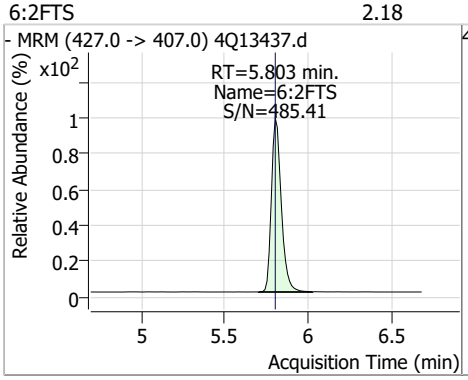
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.73	5.80	0.00	56031				

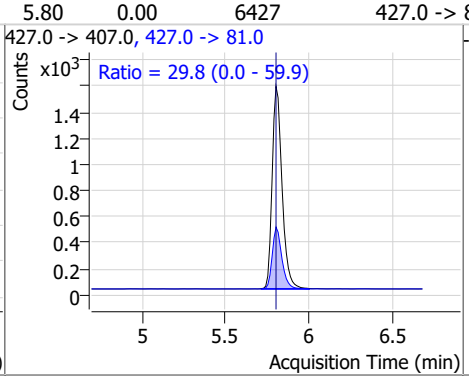


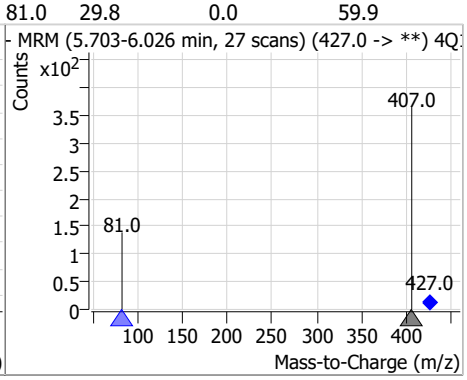




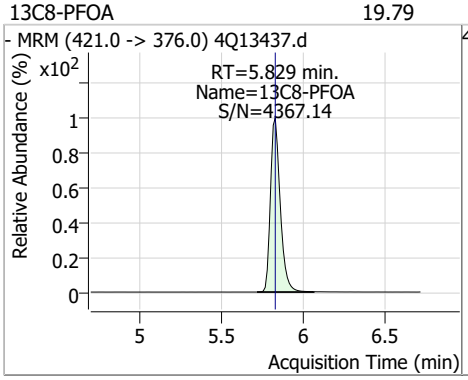
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	2.18	5.80	0.00	6427	427.0 -> 81.0	29.8	0.0	59.9

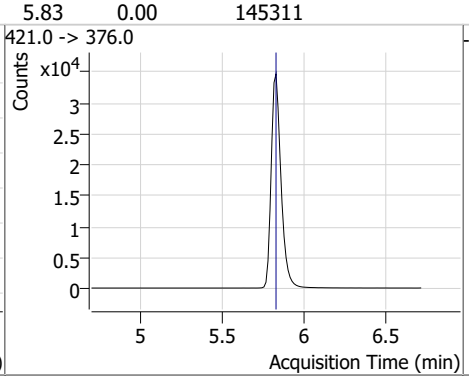


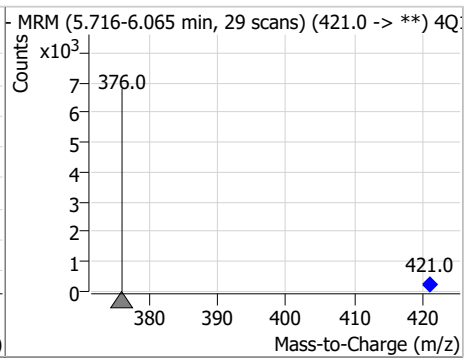




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.79	5.83	0.00	145311				

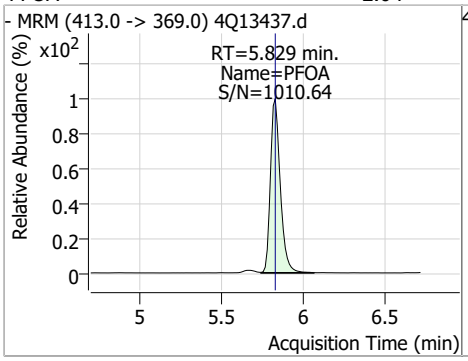


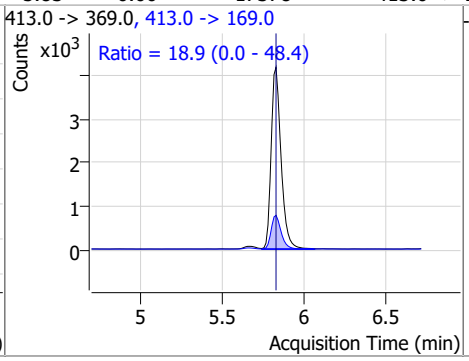


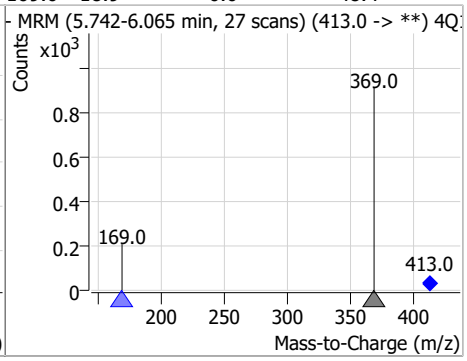


Perfluorinated Compounds by LC/MS/MS

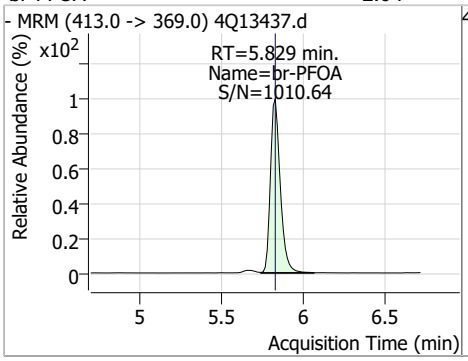
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	2.04	5.83	0.00	17378	413.0 -> 169.0	18.9	0.0	48.4

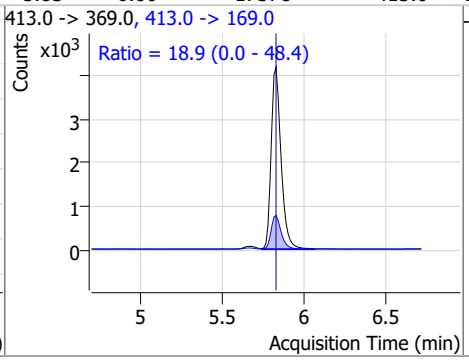


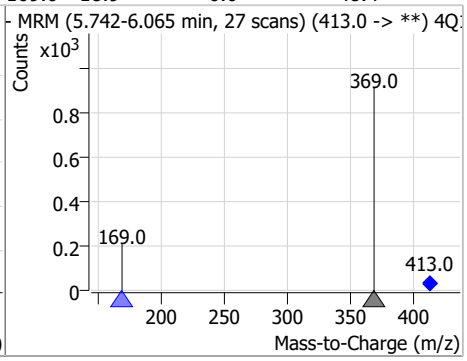




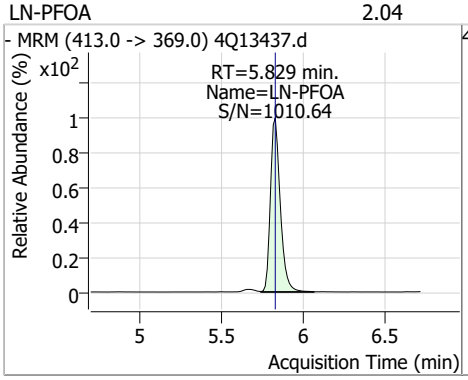
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	2.04	5.83	0.00	17378	413.0 -> 169.0	18.9	0.0	48.4

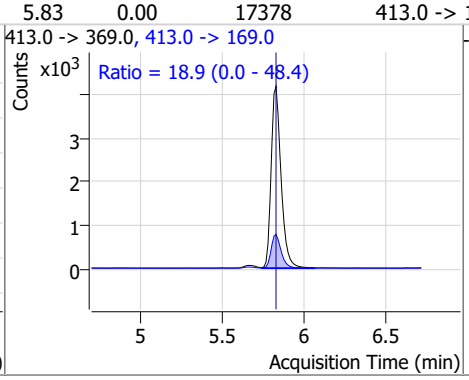


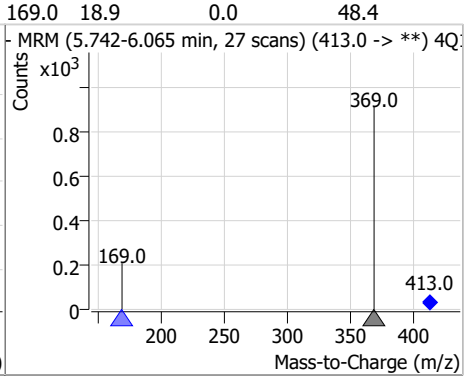




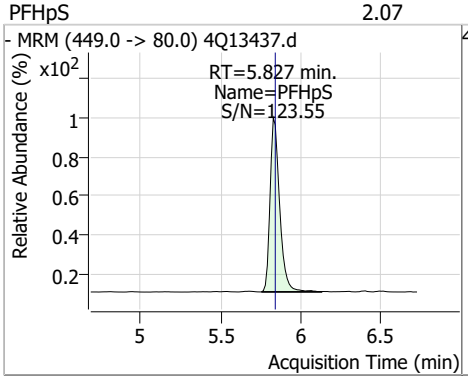
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	2.04	5.83	0.00	17378	413.0 -> 169.0	18.9	0.0	48.4

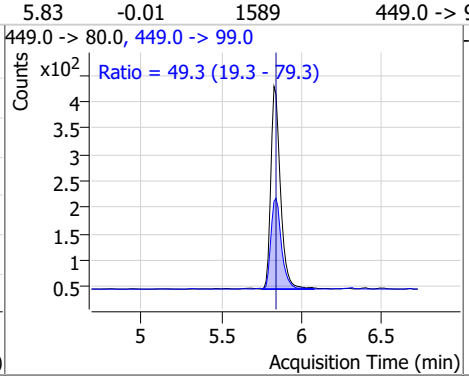


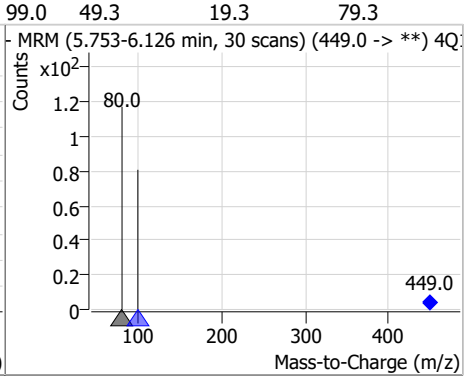




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	2.07	5.83	-0.01	1589	449.0 -> 99.0	49.3	19.3	79.3

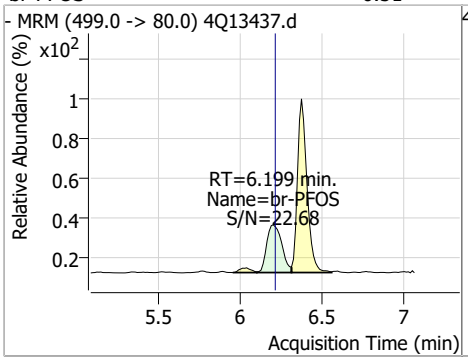


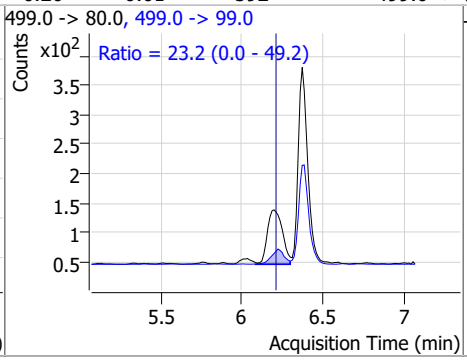


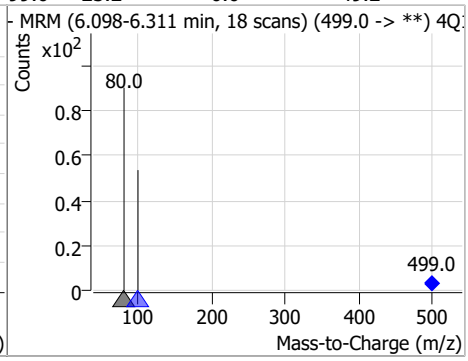


Perfluorinated Compounds by LC/MS/MS

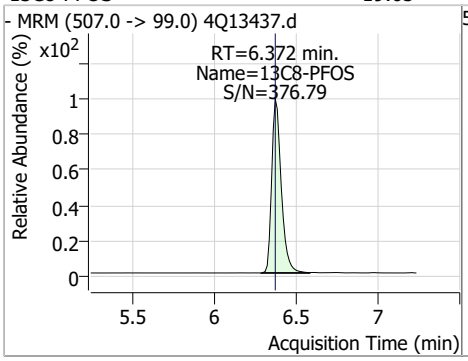
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	0.51	6.20	-0.01	592	499.0 -> 99.0	23.2	0.0	49.2

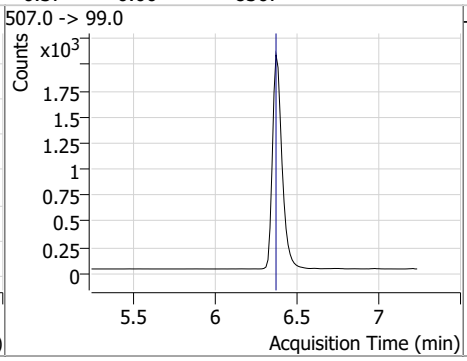


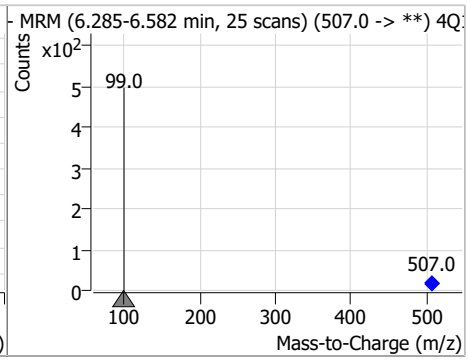




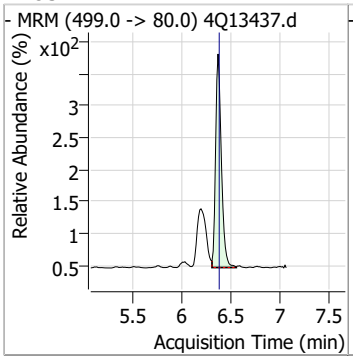
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.65	6.37	0.00	8367				

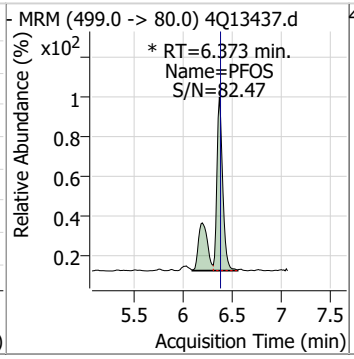


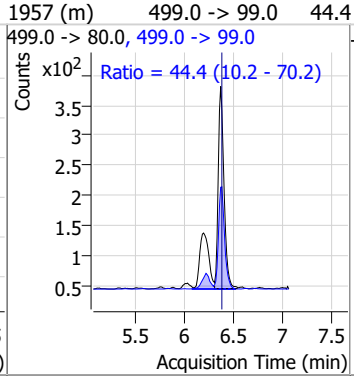


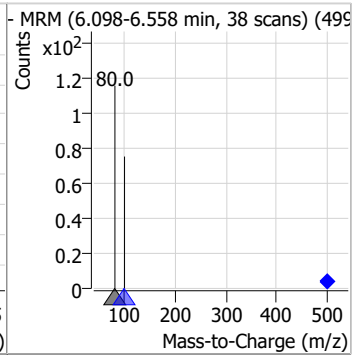


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	2.19	6.37	0.00	1957 (m)	499.0 -> 99.0	44.4	10.2	70.2

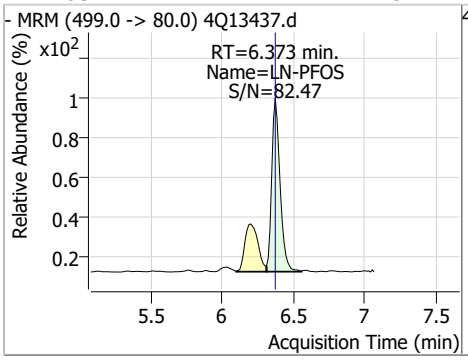


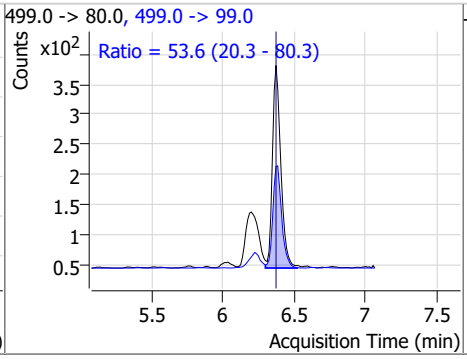


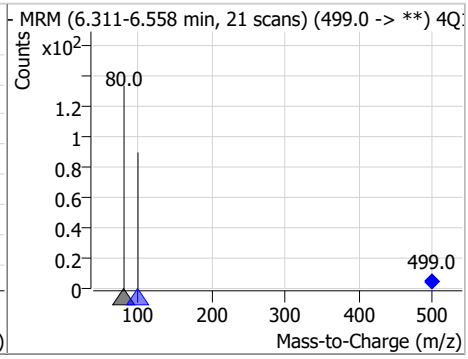




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	1.73	6.37	0.00	1365	499.0 -> 99.0	53.6	20.3	80.3

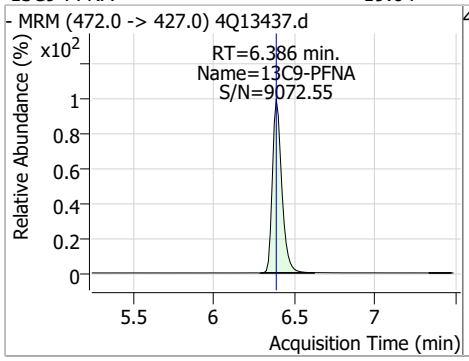


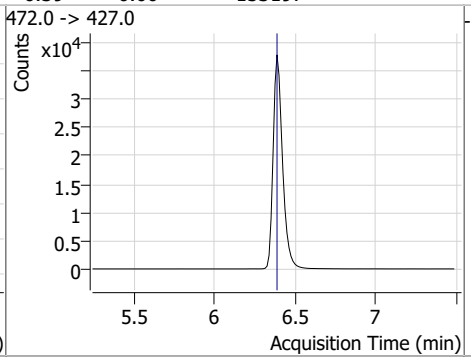


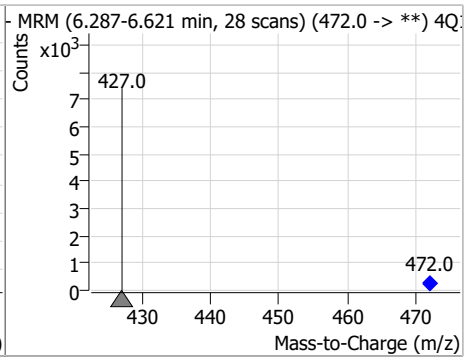


Perfluorinated Compounds by LC/MS/MS

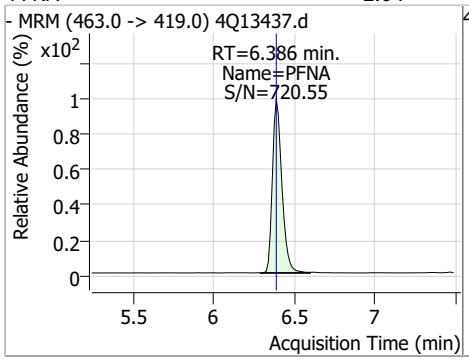
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.64	6.39	0.00	153197				

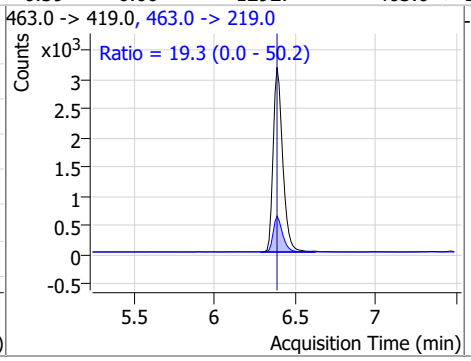


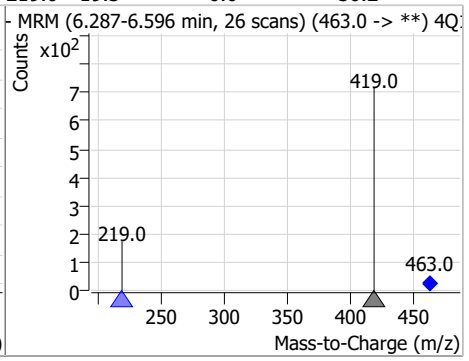




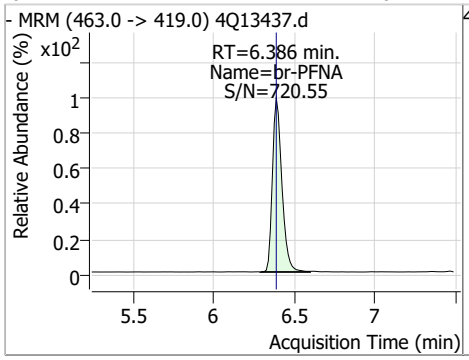
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	2.04	6.39	0.00	12927	463.0 -> 219.0	19.3	0.0	50.2

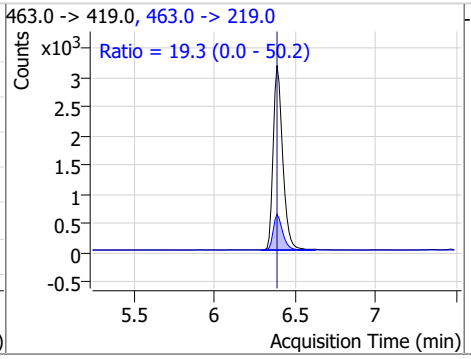


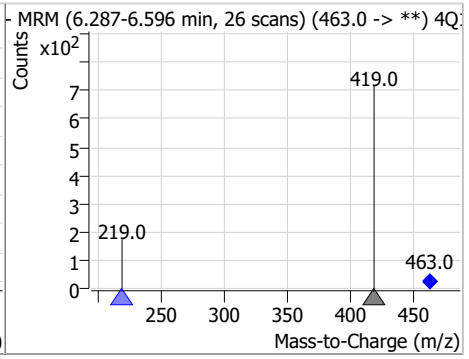




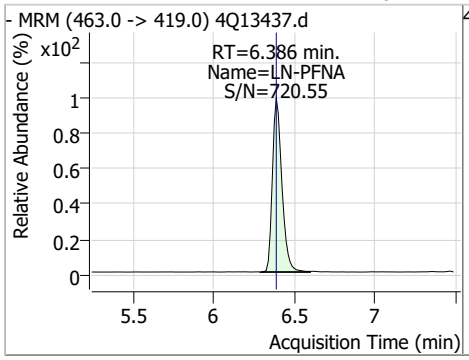
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFNA	2.04	6.39	0.00	12927	463.0 -> 219.0	19.3	0.0	50.2

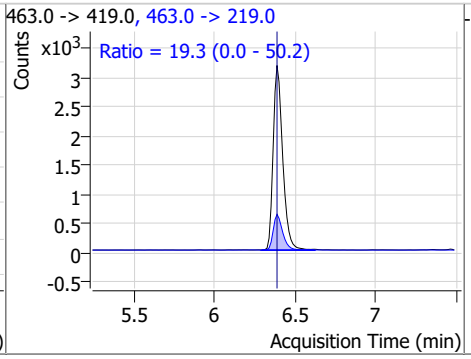


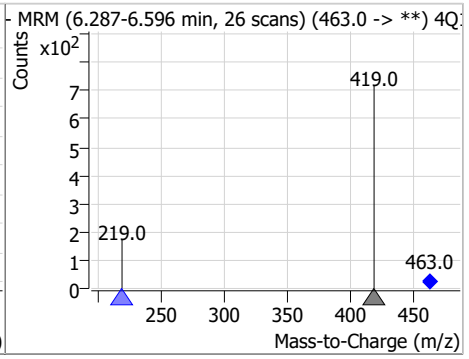




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	2.04	6.39	0.00	12927	463.0 -> 219.0	19.3	0.0	50.2

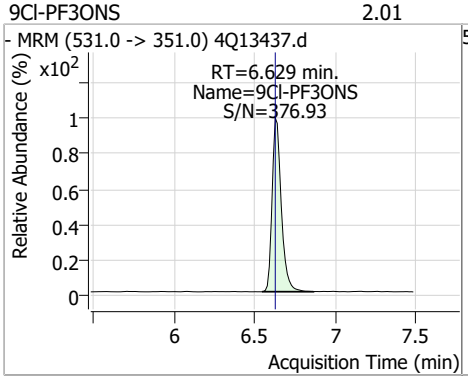


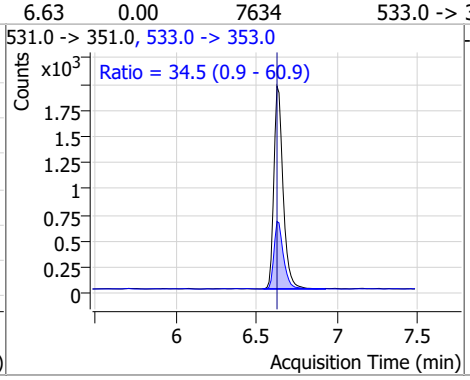


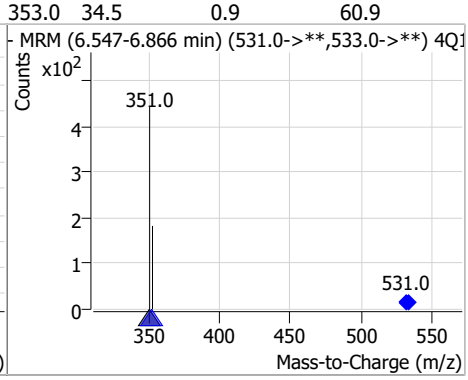


Perfluorinated Compounds by LC/MS/MS

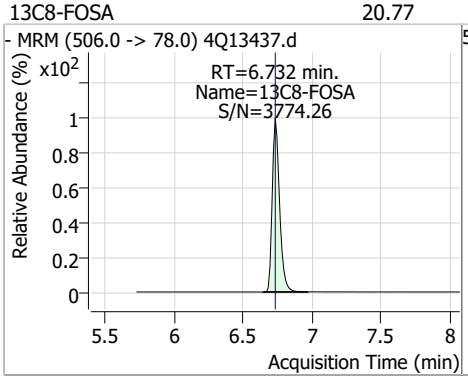
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	2.01	6.63	0.00	7634	533.0 -> 353.0	34.5	0.9	60.9

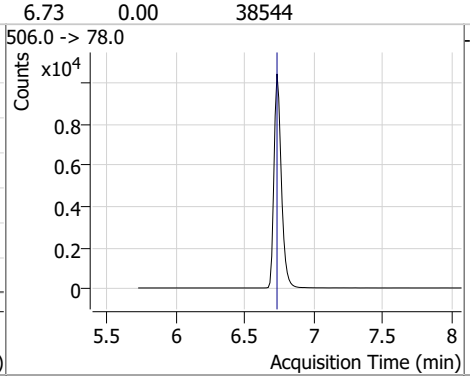


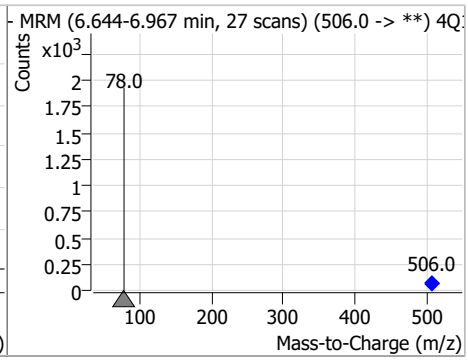




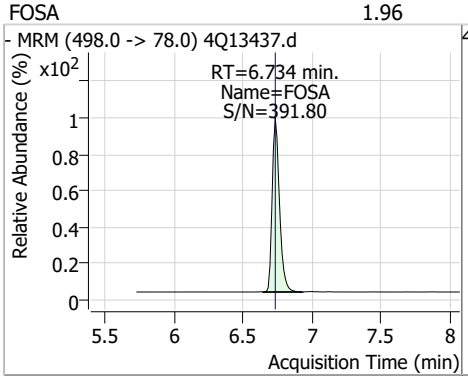
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.77	6.73	0.00	38544				

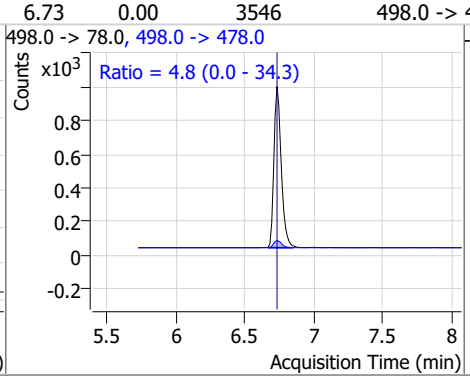


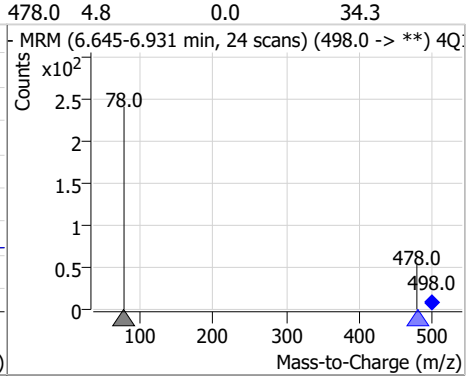




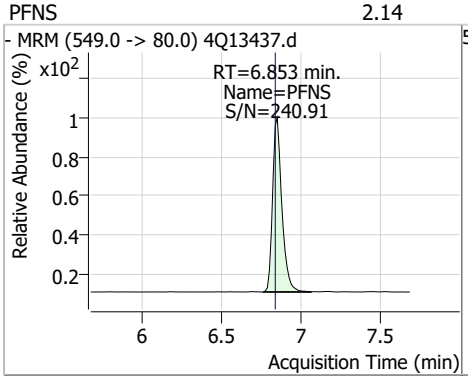
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	1.96	6.73	0.00	3546	498.0 -> 478.0	4.8	0.0	34.3

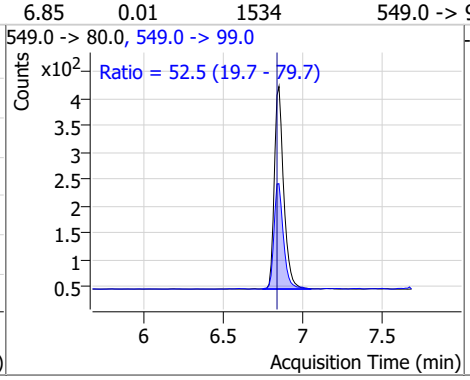


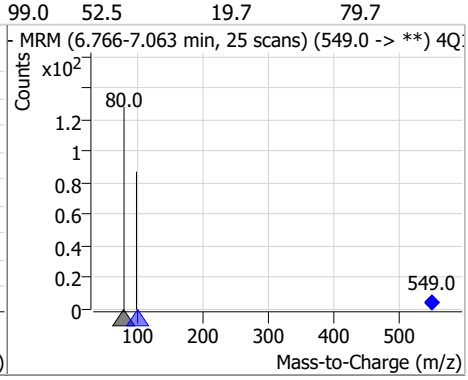




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	2.14	6.85	0.01	1534	549.0 -> 99.0	52.5	19.7	79.7

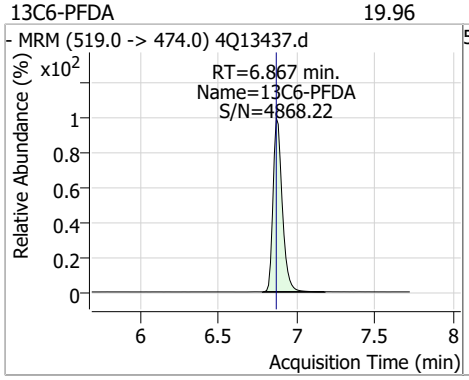


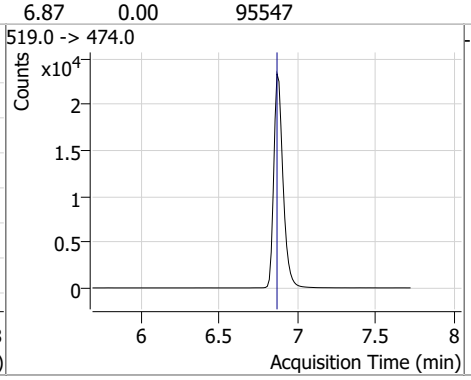


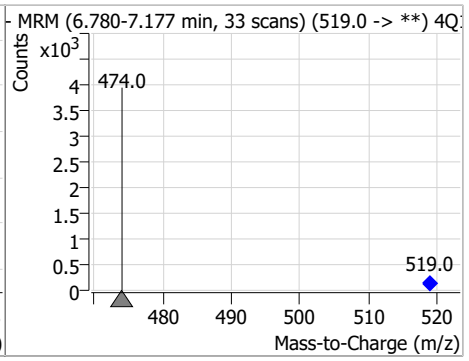


Perfluorinated Compounds by LC/MS/MS

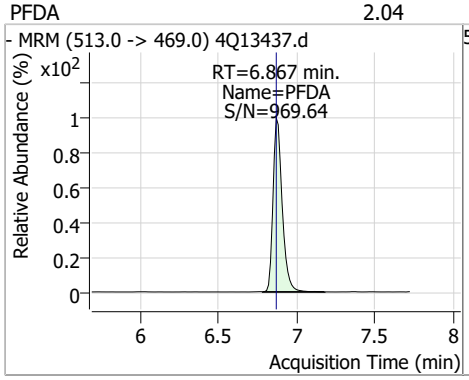
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.96	6.87	0.00	95547				

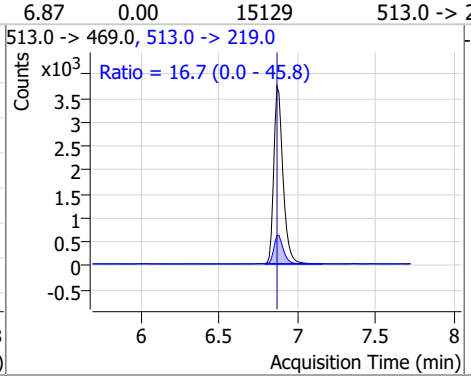


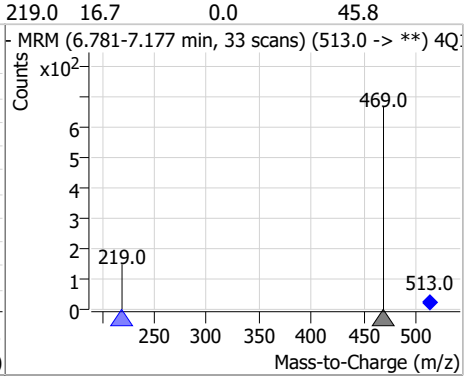




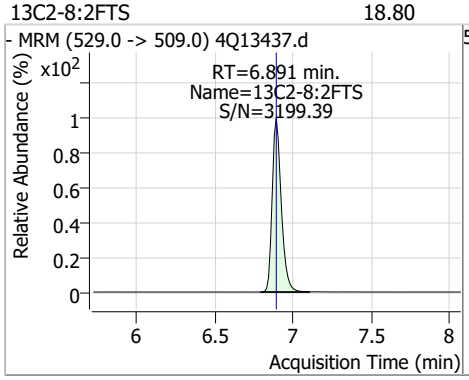
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	2.04	6.87	0.00	15129	513.0 -> 219.0	16.7	0.0	45.8

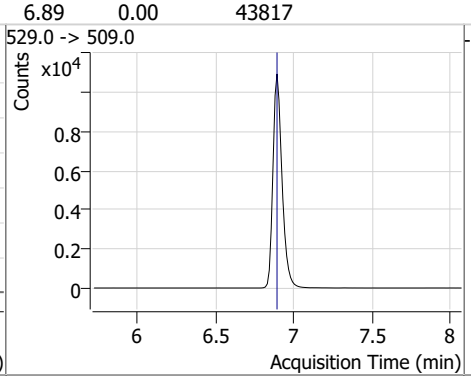


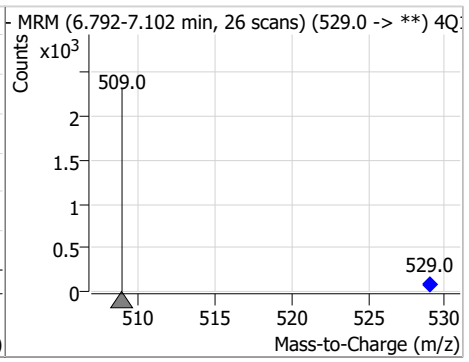




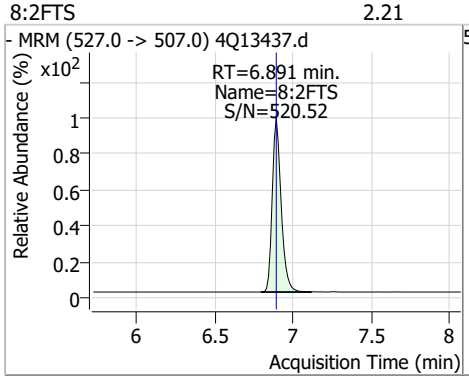
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.80	6.89	0.00	43817				

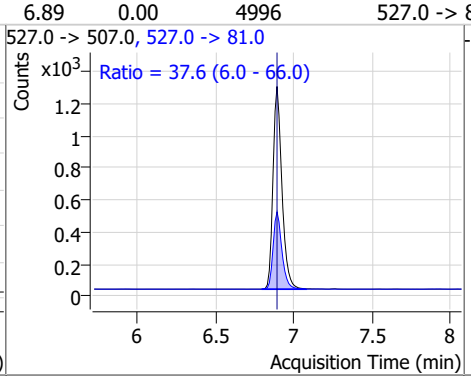


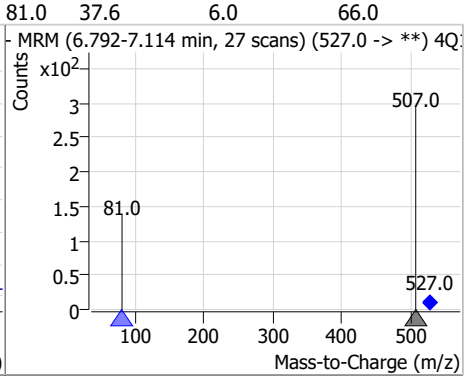




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	2.21	6.89	0.00	4996	527.0 -> 81.0	37.6	6.0	66.0

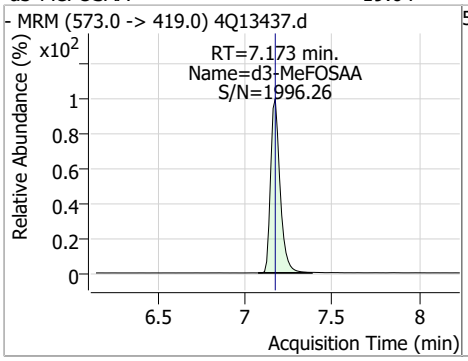


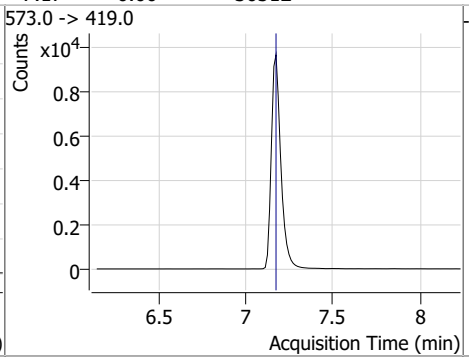


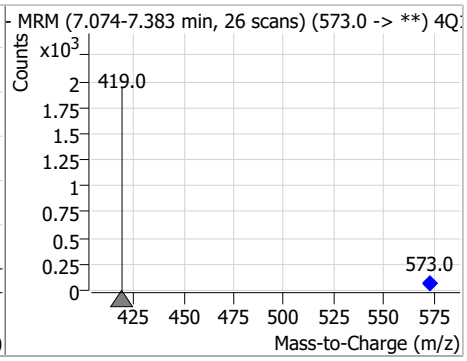


Perfluorinated Compounds by LC/MS/MS

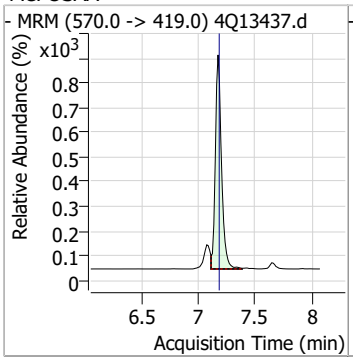
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.64	7.17	0.00	36512				

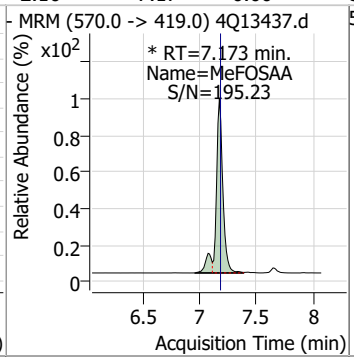


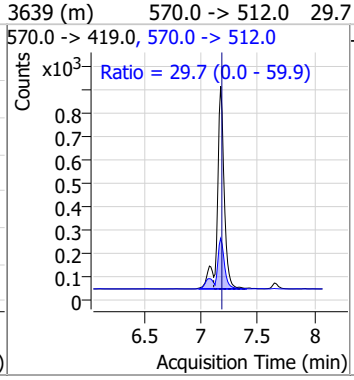


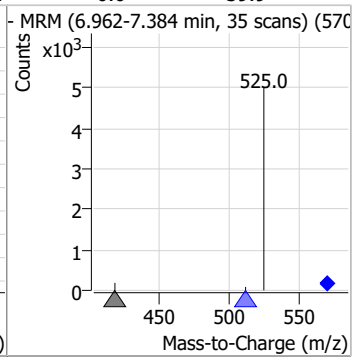


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	2.16	7.17	0.00	3639 (m)	570.0 -> 512.0	29.7	0.0	59.9

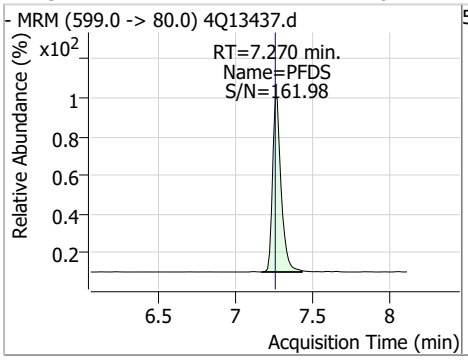


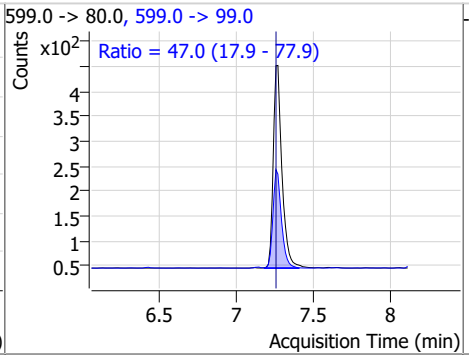


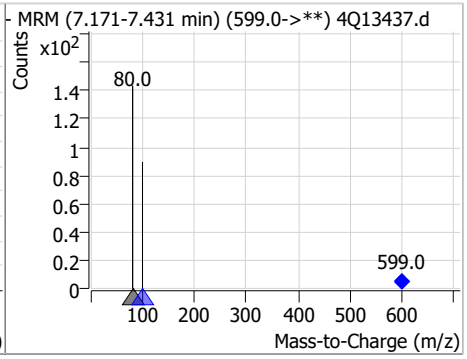




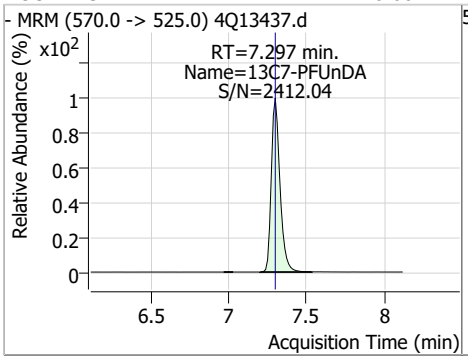
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	1.97	7.27	0.01	1600	599.0 -> 99.0	47.0	17.9	77.9

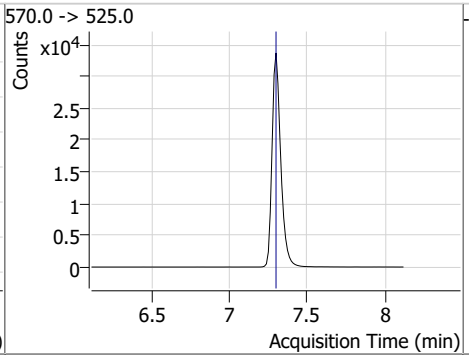


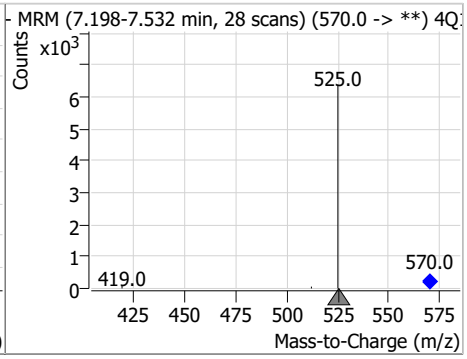




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.00	7.30	0.00	131060				

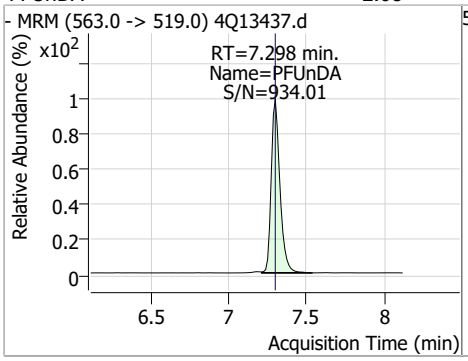


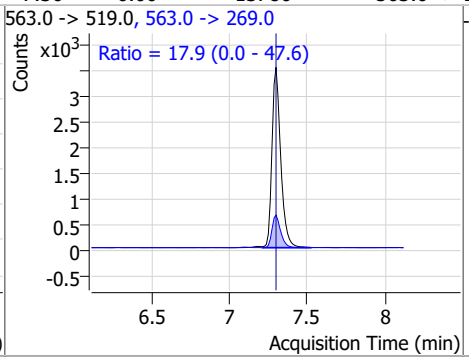


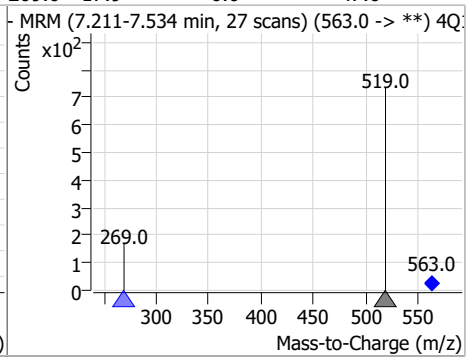


Perfluorinated Compounds by LC/MS/MS

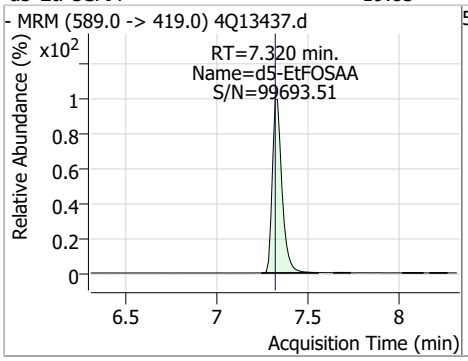
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	2.08	7.30	0.00	13786	563.0 -> 269.0	17.9	0.0	47.6

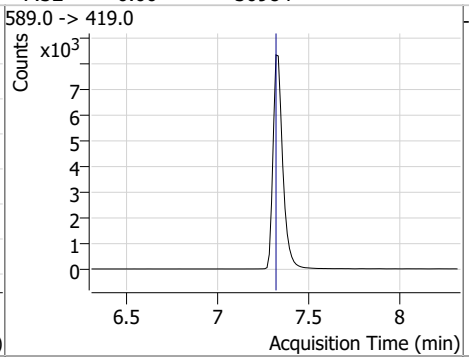


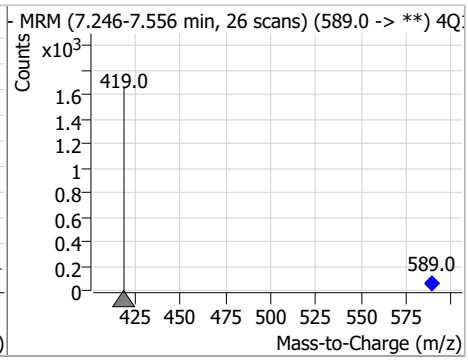




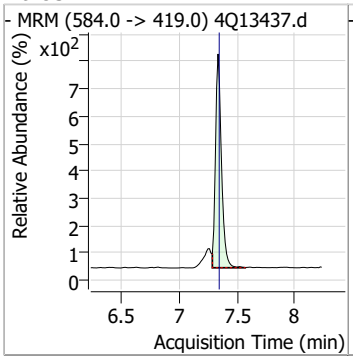
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.83	7.32	0.00	30984				

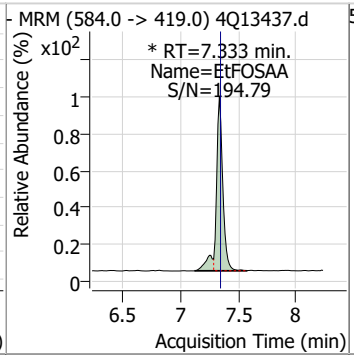


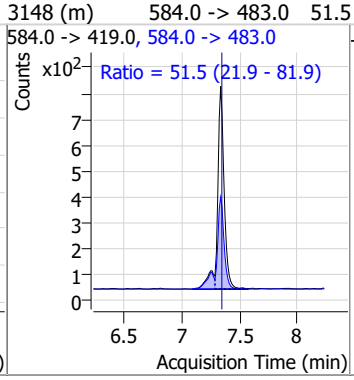


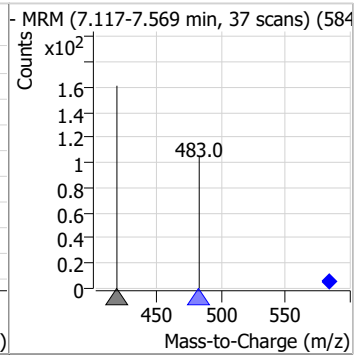


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	2.14	7.33	0.00	3148 (m)	584.0 -> 483.0	51.5	21.9	81.9

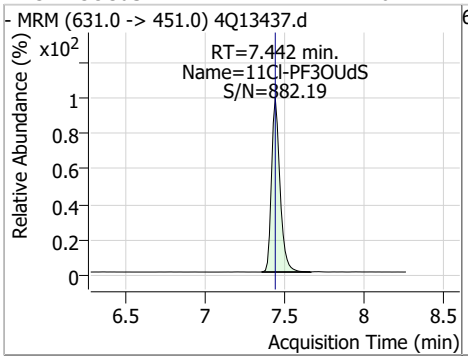


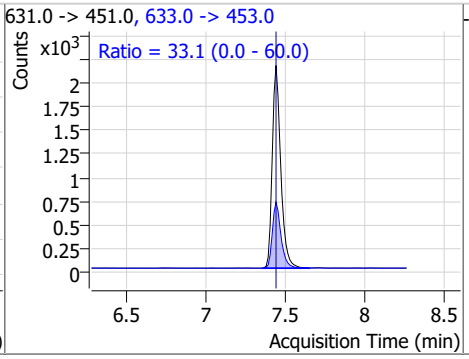


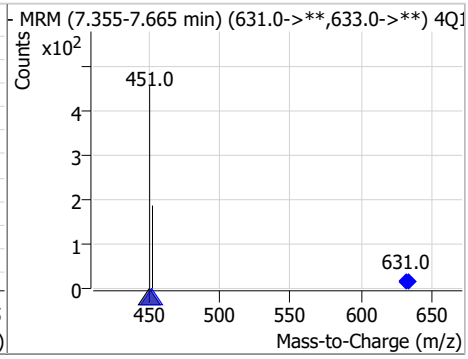




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	2.04	7.44	0.00	7956	633.0 -> 453.0	33.1	0.0	60.0

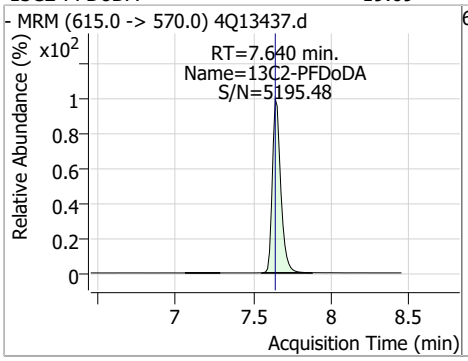


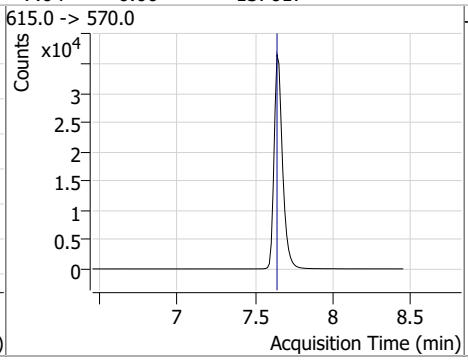


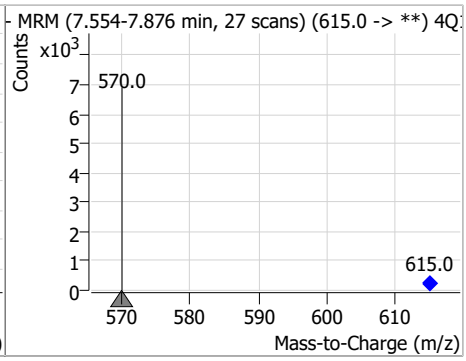


Perfluorinated Compounds by LC/MS/MS

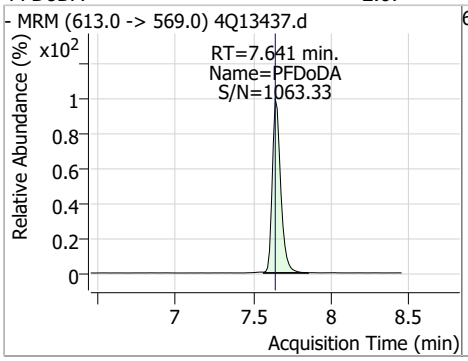
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.69	7.64	0.00	137617				

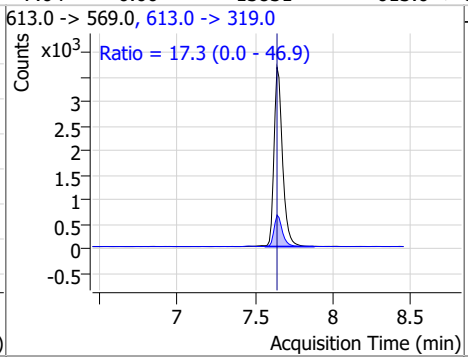


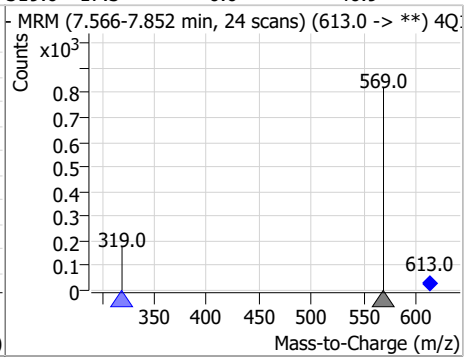




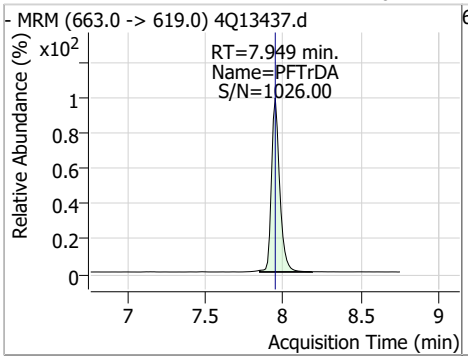
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	2.07	7.64	0.00	13831	613.0 -> 319.0	17.3	0.0	46.9

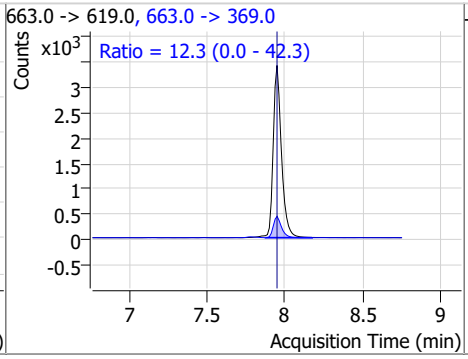


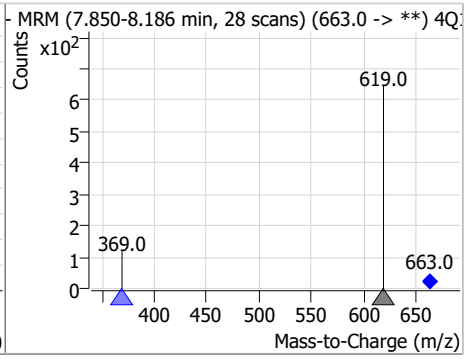




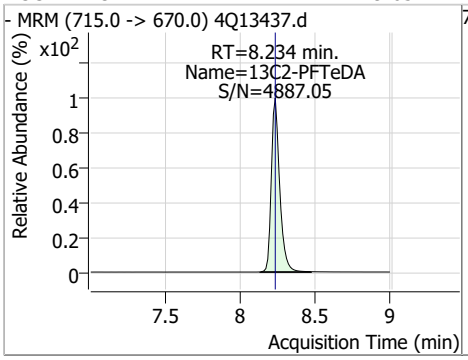
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	2.02	7.95	0.00	12485	663.0 -> 369.0	12.3	0.0	42.3

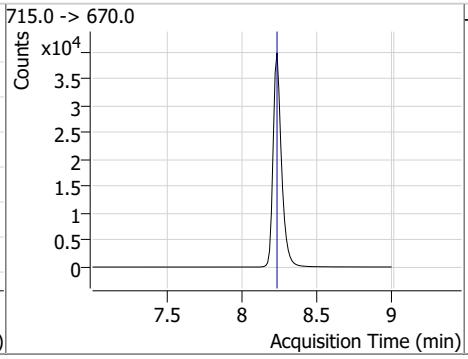


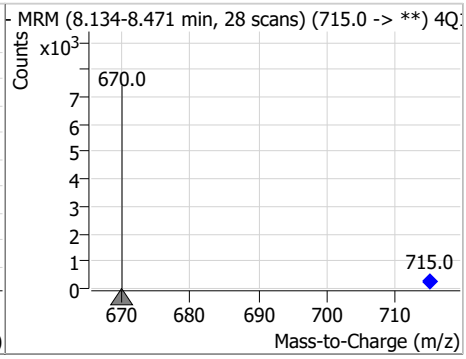




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.65	8.23	0.00	154163				

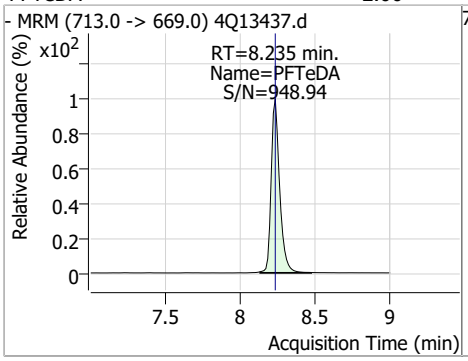


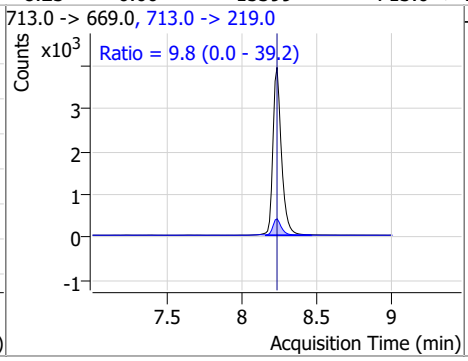


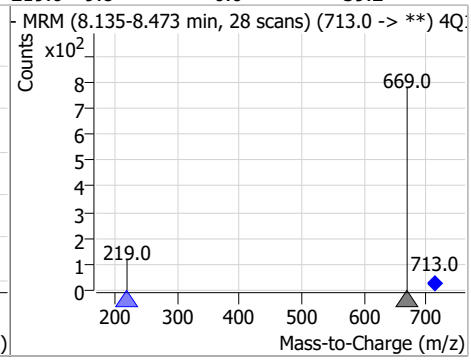


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	2.06	8.23	0.00	15399	713.0 -> 219.0	9.8	0.0	39.2







Manual Integration Approval Summary

Sample Number: S4Q189-IC189
Lab FileID: 4Q13437.D
Injection Time: 04/18/21 15:13
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/19/21 07:57 Nancy Saunders
Supervisor approved: 04/19/21 15:40 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.21	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.37	Split peak
MeFOSAA	2355-31-9		7.17	Split peak
EtFOSAA	2991-50-6		7.33	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:40

Perfluorinated Compounds by LC/MS/MS

Data File : 4Q13438.d
Operator : natashag
Acq. Method : 537_ID.m
Acq. Date-Time : 4/18/2021 3:28:34 PM
Sample Name : ic189-5.0
Vial : P1-A5
DA Method File : BR_LN_041821_S4Q189.quantmethod.xml
Batch Name : s4q189.batch.bin
Sample Information : op84918,S4Q189,250,,,1,1,water

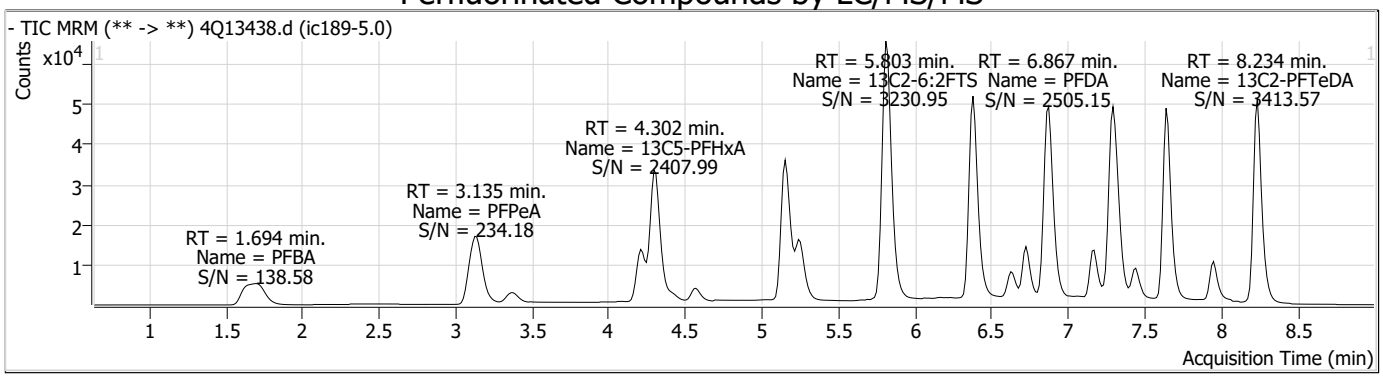
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.700	217.0 -> 172.0	48435	20.00	µg/L	0.013
M5-PFPeA	3.133	268.0 -> 223.0	86671	20.00	µg/L	-0.012
M5-PFHxA	4.302	318.0 -> 273.0	117940	20.00	µg/L	-0.013
M4-PFHpA	5.157	367.0 -> 322.0	104911	20.00	µg/L	0.000
M8-PFOA	5.829	421.0 -> 376.0	144017	20.00	µg/L	0.000
M9-PFNA	6.386	472.0 -> 427.0	153553	20.00	µg/L	0.000
M6-PFDA	6.867	519.0 -> 474.0	95635	20.00	µg/L	0.000
M7-PFUnDA	7.297	570.0 -> 525.0	131623	20.00	µg/L	0.000
M2-PFDoDA	7.640	615.0 -> 570.0	137119	20.00	µg/L	0.000
M2-PFTeDA	8.234	715.0 -> 670.0	154490	20.00	µg/L	0.000
M8-FOSA	6.732	506.0 -> 78.0	37561	20.00	µg/L	0.000
M3-PFBS	3.381	302.0 -> 99.0	6547	20.00	µg/L	0.000
M3-PFHxS	5.192	402.0 -> 99.0	6238	20.00	µg/L	-0.012
M8-PFOS	6.372	507.0 -> 99.0	8450	20.00	µg/L	0.000
M2-4:2FTS	4.212	329.0 -> 309.0	41788	20.00	µg/L	0.000
M2-6:2FTS	5.803	429.0 -> 409.0	56252	20.00	µg/L	0.000
M2-8:2FTS	6.891	529.0 -> 509.0	45044	20.00	µg/L	0.000
M3-MeFOSAA	7.160	573.0 -> 419.0	35907	20.00	µg/L	-0.012
M3-HFPO-DA	4.578	287.0 -> 169.0	6710	20.00	µg/L	0.000
M5-EtFOSAA	7.320	589.0 -> 419.0	30665	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.212	329.0 -> 309.0	41788	18.39	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.0%		
13C2-6:2FTS	5.803	429.0 -> 409.0	56252	18.81	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.0%		
13C2-8:2FTS	6.891	529.0 -> 509.0	45044	19.33	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.6%		
13C2-PFDoDA	7.640	615.0 -> 570.0	137119	19.61	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.1%		
13C2-PFTeDA	8.234	715.0 -> 670.0	154490	19.69	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%		
13C3-PFBS	3.381	302.0 -> 99.0	6547	19.20	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.0%		
13C3-PFHxS	5.192	402.0 -> 99.0	6238	19.36	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.8%		
13C4-PFBA	1.700	217.0 -> 172.0	48435	19.61	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.1%		
13C4-PFHpA	5.157	367.0 -> 322.0	104911	19.68	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%		
13C5-PFHxA	4.302	318.0 -> 273.0	117940	19.34	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.7%		
13C5-PFPeA	3.133	268.0 -> 223.0	86671	19.51	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.5%		
13C6-PFDA	6.867	519.0 -> 474.0	95635	19.98	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.9%		

Perfluorinated Compounds by LC/MS/MS

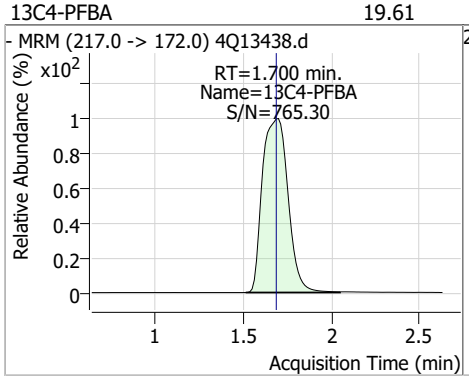
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	7.297	570.0 -> 525.0	131623	20.09	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.4%			
13C8-FOSA	6.732	506.0 -> 78.0	37561	20.24	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.2%			
13C8-PFOA	5.829	421.0 -> 376.0	144017	19.61	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%			
13C8-PFOS	6.372	507.0 -> 99.0	8450	19.85	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%			
13C9-PFNA	6.386	472.0 -> 427.0	153553	19.68	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%			
d3-MeFOSAA	7.160	573.0 -> 419.0	35907	19.32	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.6%			
13C3-HFPO-DA	4.578	287.0 -> 169.0	6699	19.20	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.0%			
d5-EtFOSAA	7.320	589.0 -> 419.0	30615	19.59	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%			
Target Compounds							QValue
4:2FTS	4.214	327.0 -> 307.0	12260	5.49	µg/L		99
6:2FTS	5.803	427.0 -> 407.0	16178	5.46	µg/L		99
8:2FTS	6.891	527.0 -> 507.0	12724	5.46	µg/L		98
EtFOSAA	7.333	584.0 -> 419.0	7424	5.10	µg/L	m	99
FOSA	6.734	498.0 -> 78.0	8948	5.09	µg/L		99
MeFOSAA	7.173	570.0 -> 419.0	8567	5.16	µg/L	m	99
PFBA	1.694	213.0 -> 169.0	5483	5.19	µg/L		100
PFBS	3.370	299.0 -> 80.0	5709	5.34	µg/L		100
PFDA	6.867	513.0 -> 469.0	38500	5.19	µg/L		100
PFDoDA	7.641	613.0 -> 569.0	33659	5.05	µg/L		100
PFDS	7.258	599.0 -> 80.0	3958	4.85	µg/L		99
PFHpA	5.157	363.0 -> 319.0	34613	5.05	µg/L		100
PFHpS	5.827	449.0 -> 80.0	4012	5.17	µg/L		97
PFHxA	4.302	313.0 -> 269.0	28256	5.25	µg/L		100
PFHxS	5.193	399.0 -> 80.0	4079	5.15	µg/L	m	97
PFNA	6.386	463.0 -> 419.0	32195	5.08	µg/L		99
PFNS	6.840	549.0 -> 80.0	3878	5.35	µg/L		98
PFOA	5.829	413.0 -> 369.0	43698	5.17	µg/L		100
PFOS	6.373	499.0 -> 80.0	4581	5.08	µg/L	m	100
PFPeA	3.135	263.0 -> 219.0	19118	5.11	µg/L		100
PFPeS	4.423	349.0 -> 80.0	3958	5.09	µg/L		97
PFTeDA	8.235	713.0 -> 669.0	38298	5.12	µg/L		100
PFTrDA	7.949	663.0 -> 619.0	31192	5.04	µg/L		99
PFUnDA	7.298	563.0 -> 519.0	33151	4.99	µg/L		97
11Cl-PF3OUdS	7.442	631.0 -> 451.0	20348	5.24	µg/L		99
9Cl-PF3ONS	6.629	531.0 -> 351.0	19292	5.07	µg/L		97
ADONA	5.257	377.0 -> 251.0	41813	5.24	µg/L		100
HFPO-DA	4.574	329.0 -> 169.0	5483	5.09	µg/L		95
br-PFOS	6.199	499.0 -> 80.0	1490	1.26	µg/L		93
LN-PFOS	6.373	499.0 -> 80.0	3091	3.88	µg/L		98
br-PFHxS	5.031	399.0 -> 80.0	589	0.63	µg/L		93
LN-PFHxS	5.193	399.0 -> 80.0	3489	4.52	µg/L		97
br-PFOA	5.829	413.0 -> 369.0	43698	5.17	µg/L		100
LN-PFOA	5.829	413.0 -> 369.0	43698	5.17	µg/L		100
br-PFNA	6.386	463.0 -> 419.0	32195	5.08	µg/L		99
LN-PFNA	6.386	463.0 -> 419.0	32195	5.08	µg/L		99

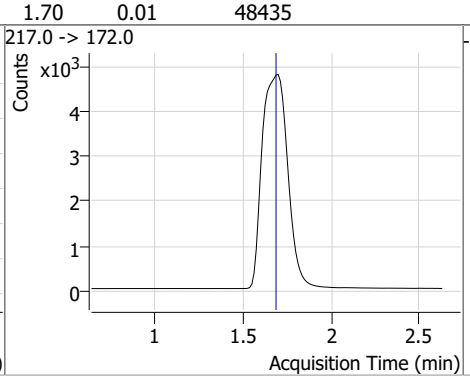
 # = Qualifier out of range, m = manually integrated, + = Area summed

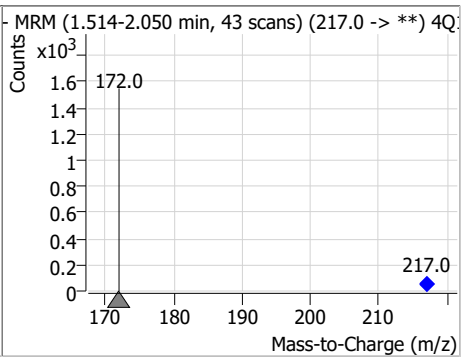
Perfluorinated Compounds by LC/MS/MS



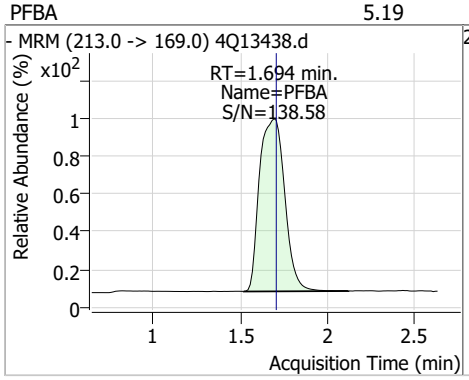
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.61	1.70	0.01	48435				

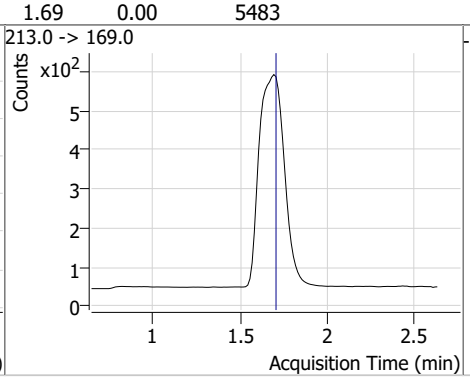


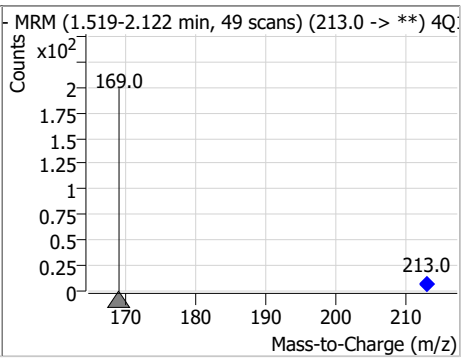




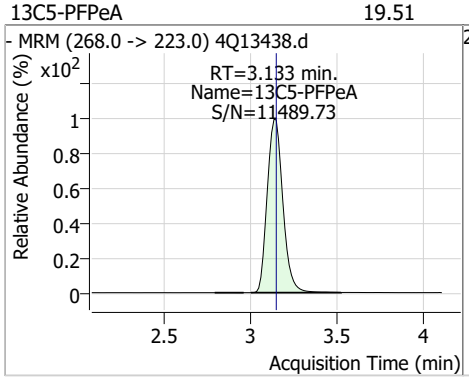
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	5.19	1.69	0.00	5483				

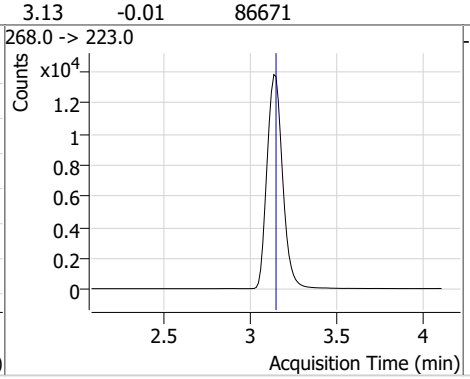


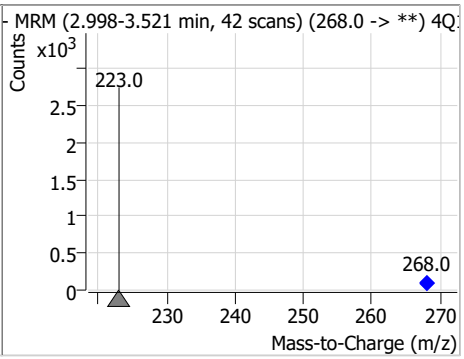




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.51	3.13	-0.01	86671				

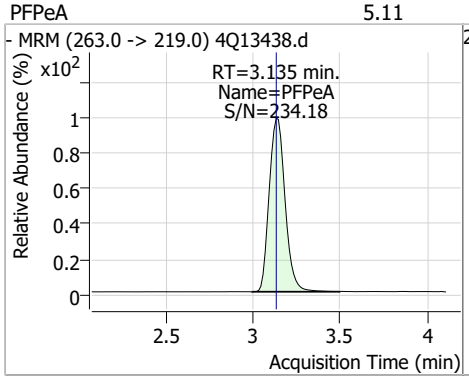


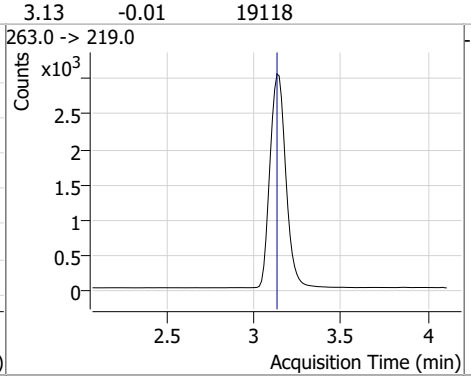


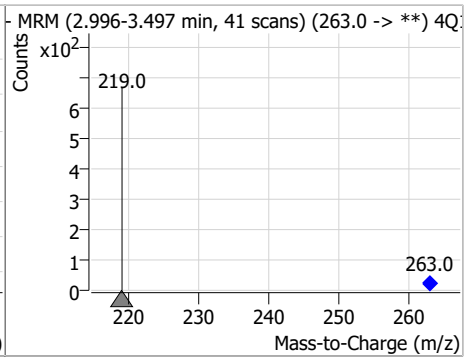


Perfluorinated Compounds by LC/MS/MS

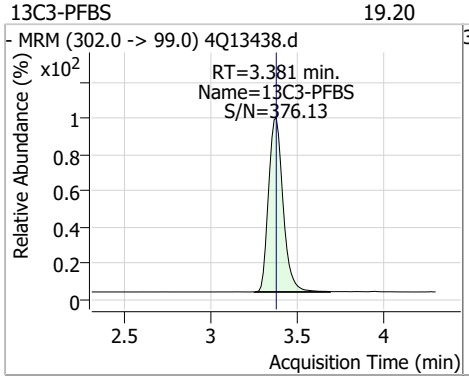
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	5.11	3.13	-0.01	19118				

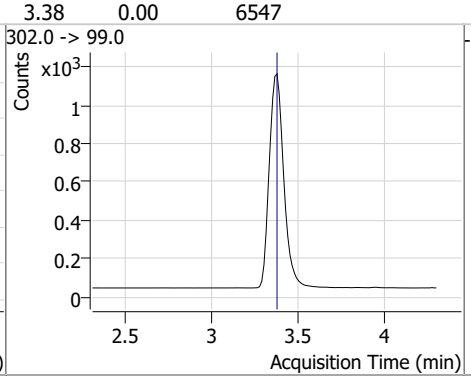


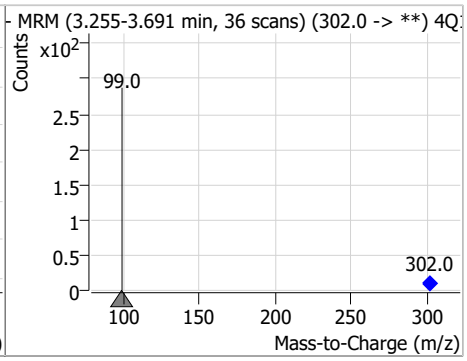




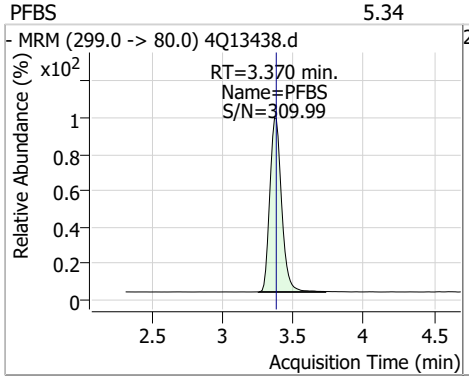
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.20	3.38	0.00	6547				

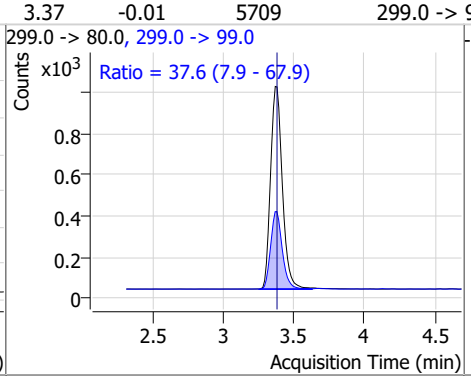


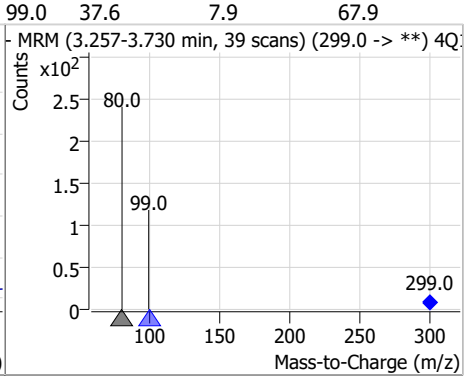




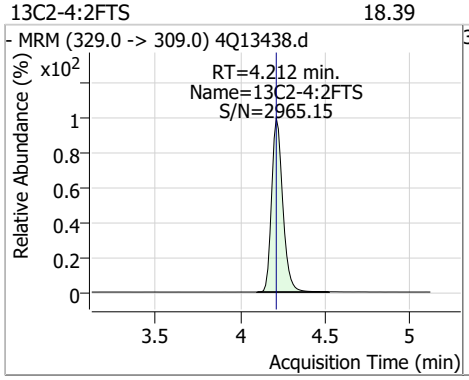
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	5.34	3.37	-0.01	5709	299.0 -> 99.0	37.6	7.9	67.9

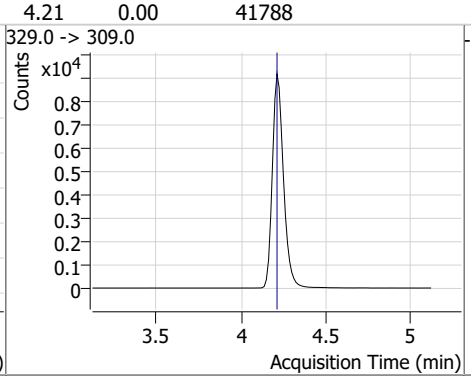


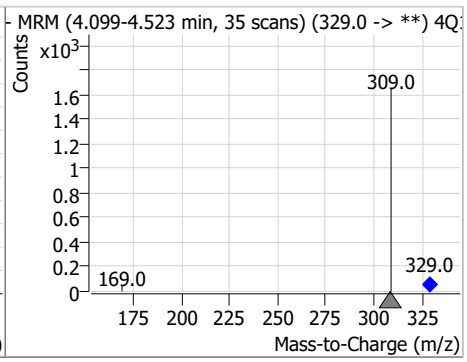




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.39	4.21	0.00	41788				

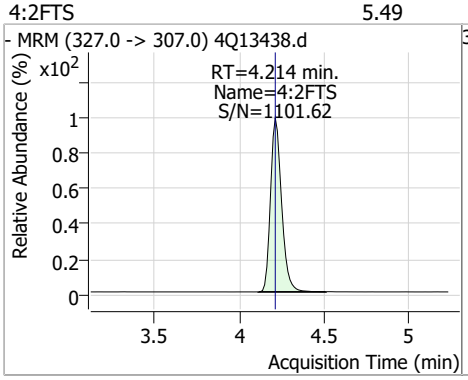


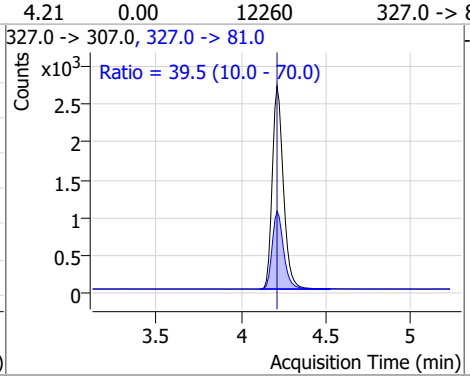


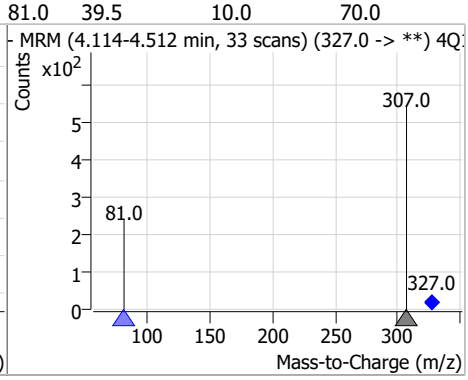


Perfluorinated Compounds by LC/MS/MS

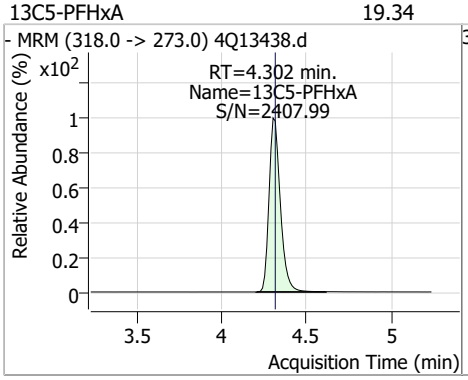
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	5.49	4.21	0.00	12260	327.0 -> 81.0	39.5	10.0	70.0

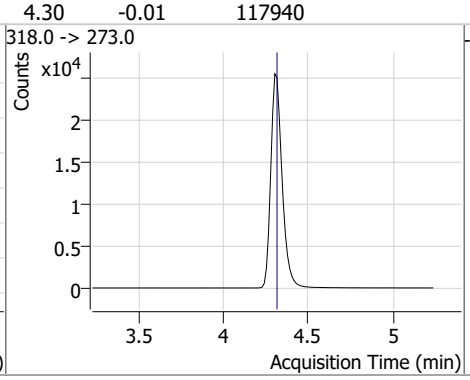


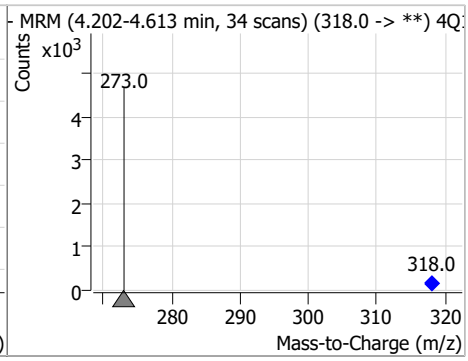




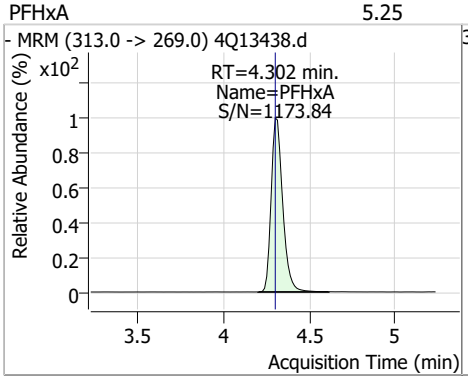
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.34	4.30	-0.01	117940				

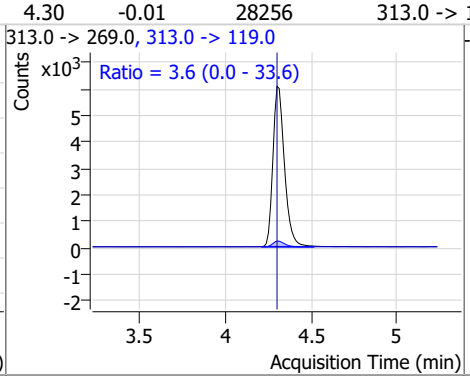


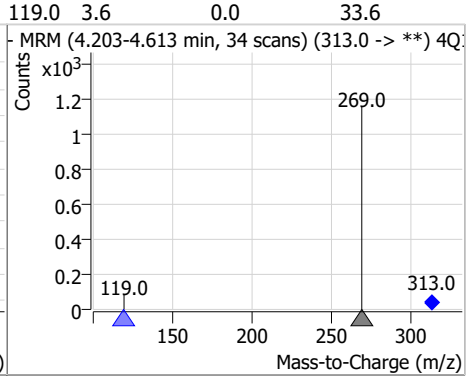




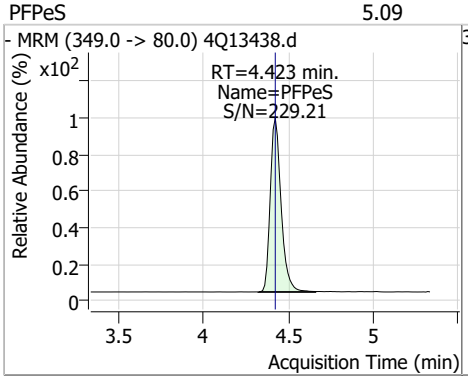
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	5.25	4.30	-0.01	28256	313.0 -> 119.0	3.6	0.0	33.6

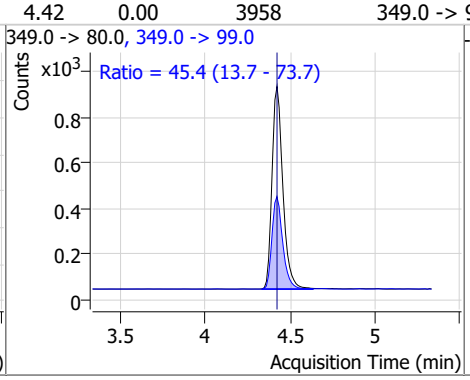


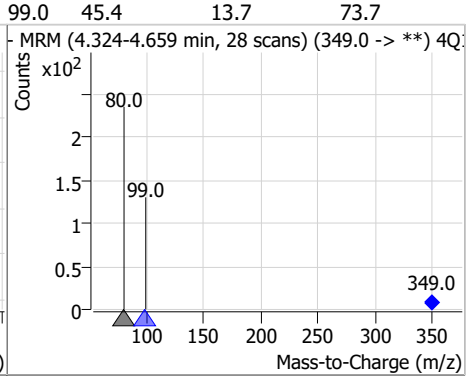




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	5.09	4.42	0.00	3958	349.0 -> 99.0	45.4	13.7	73.7

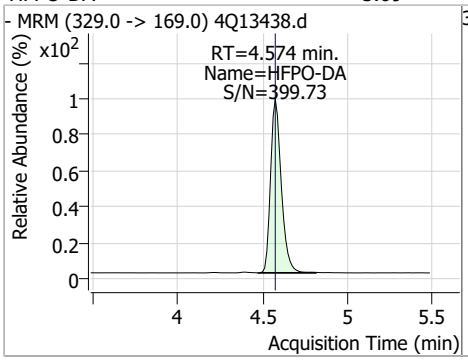


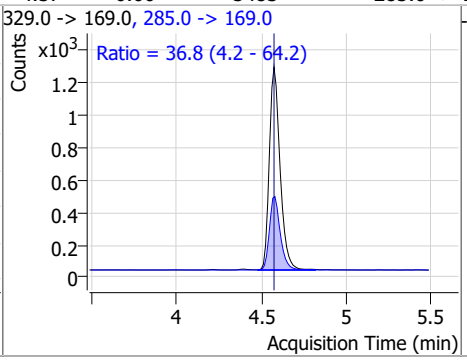


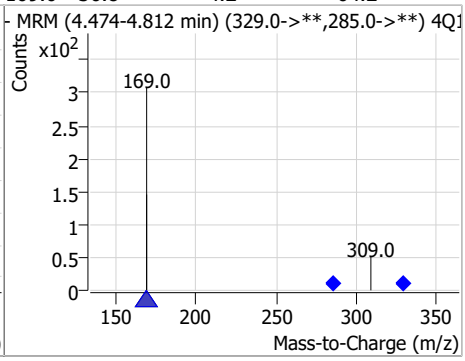


Perfluorinated Compounds by LC/MS/MS

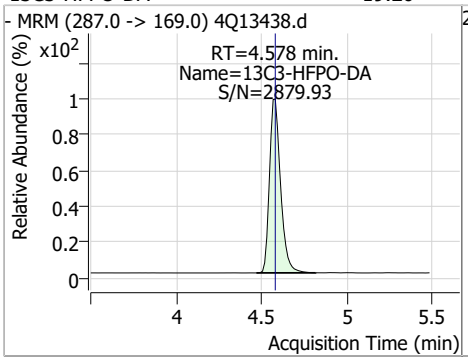
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	5.09	4.57	0.00	5483	285.0 -> 169.0	36.8	4.2	64.2

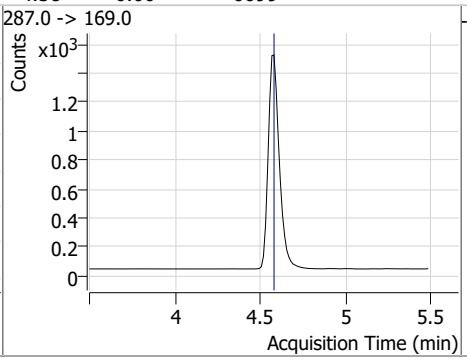


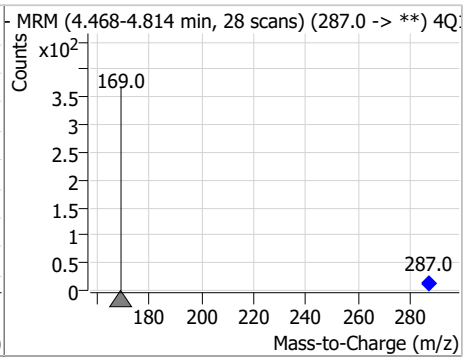




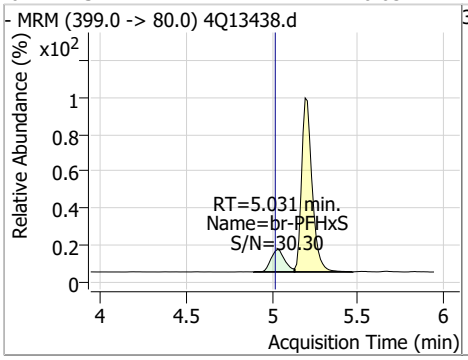
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.20	4.58	0.00	6699				

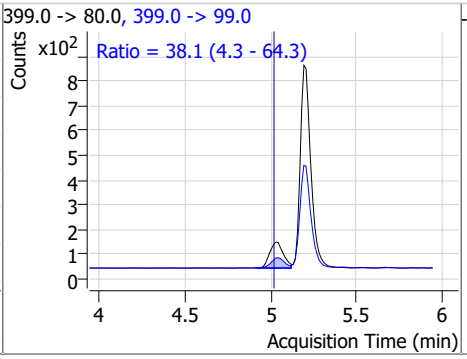


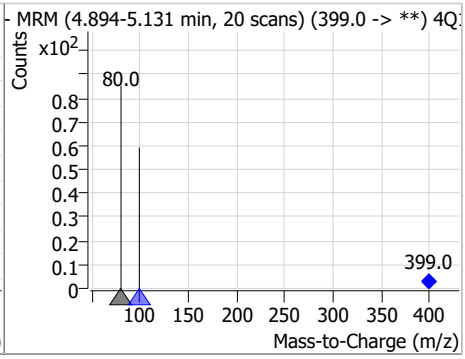




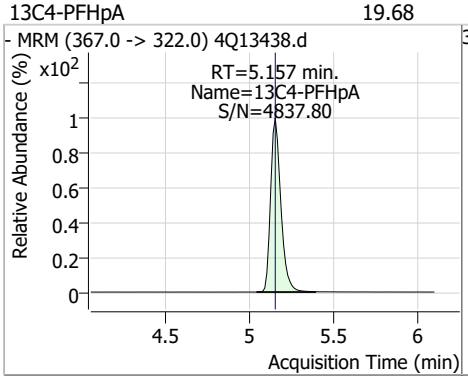
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	0.63	5.03	0.00	589	399.0 -> 99.0	38.1	4.3	64.3

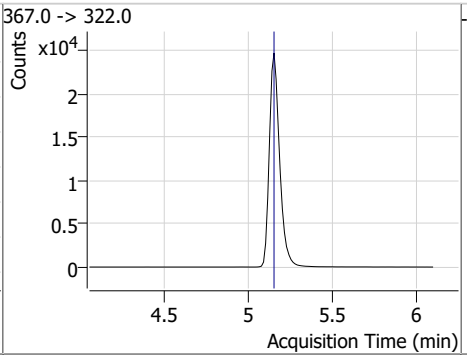


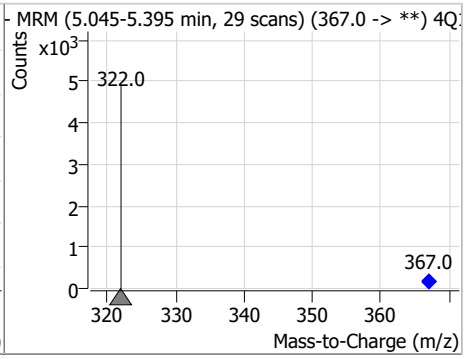




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.68	5.16	0.00	104911				

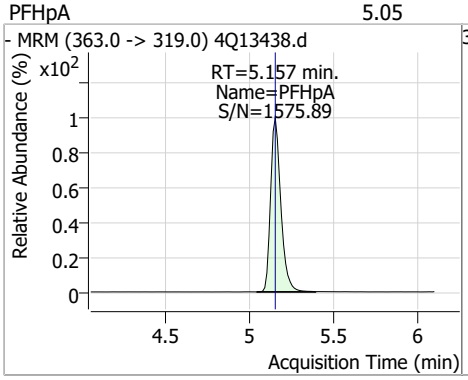


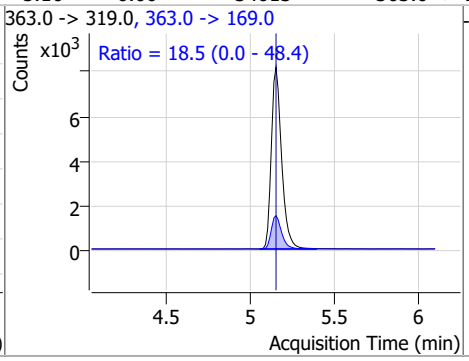


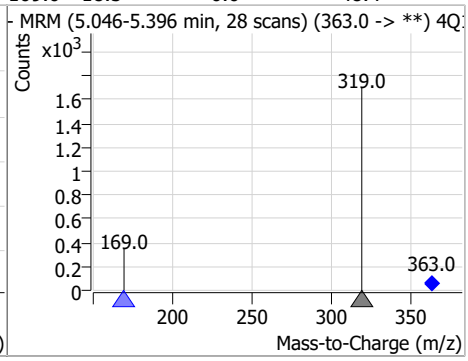


Perfluorinated Compounds by LC/MS/MS

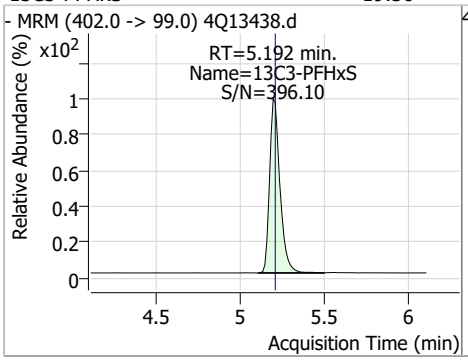
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	5.05	5.16	0.00	34613	363.0 -> 169.0	18.5	0.0	48.4

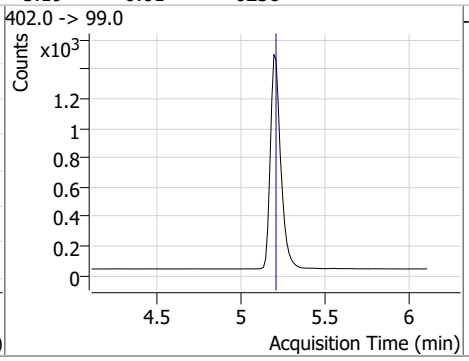


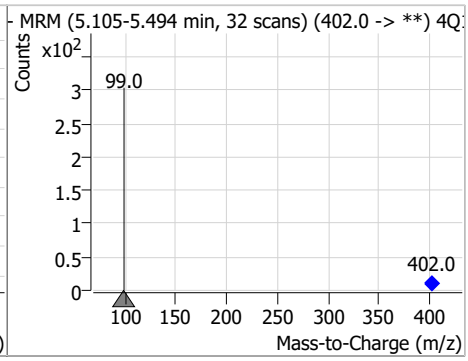




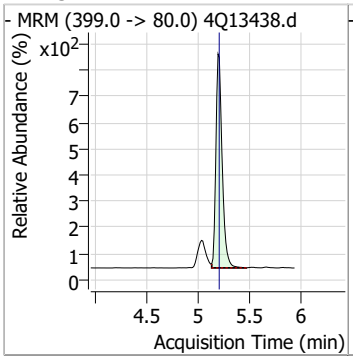
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.36	5.19	-0.01	6238				

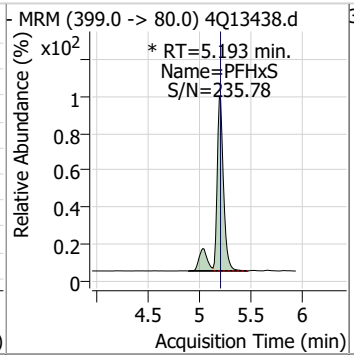


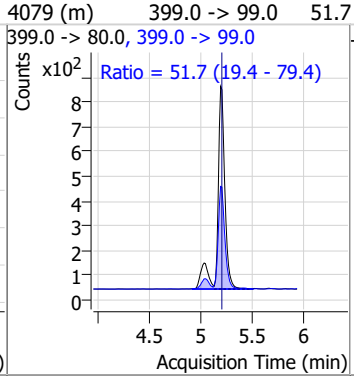


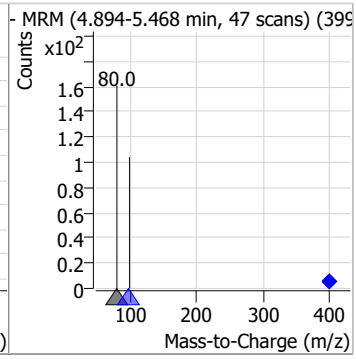


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	5.15	5.19	-0.01	4079 (m)	399.0 -> 99.0	51.7	19.4	79.4

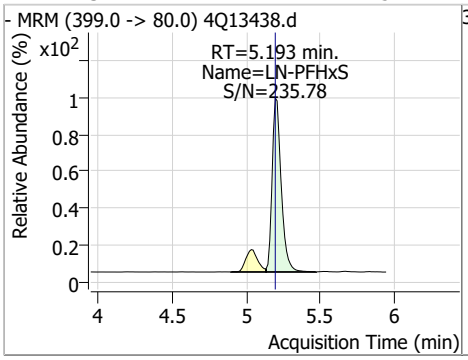


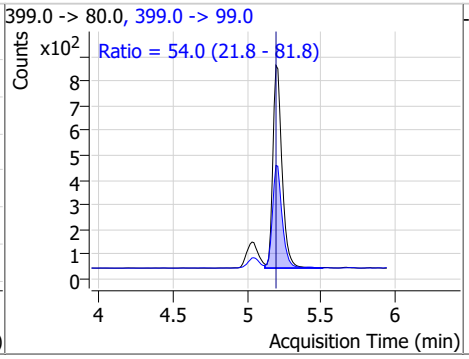


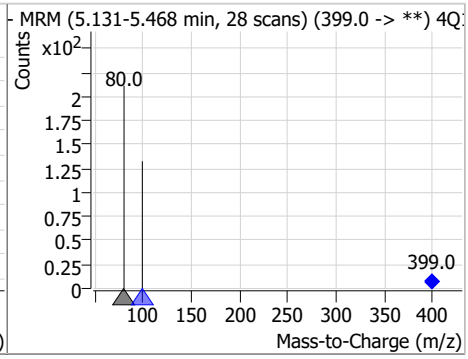




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	4.52	5.19	-0.01	3489	399.0 -> 99.0	54.0	21.8	81.8

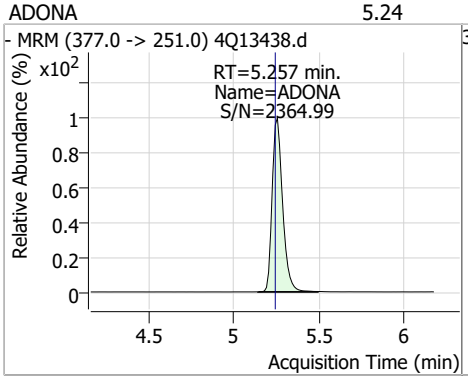


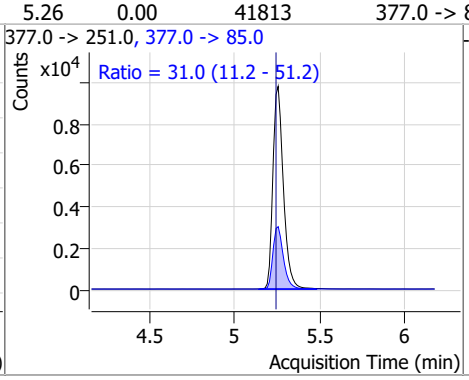


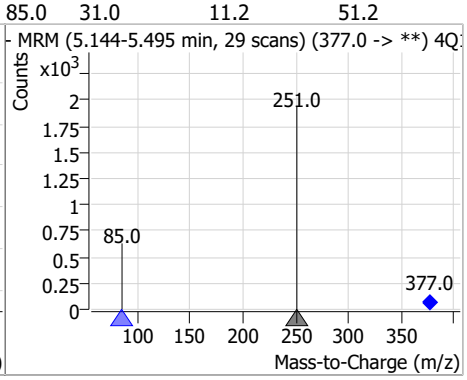


Perfluorinated Compounds by LC/MS/MS

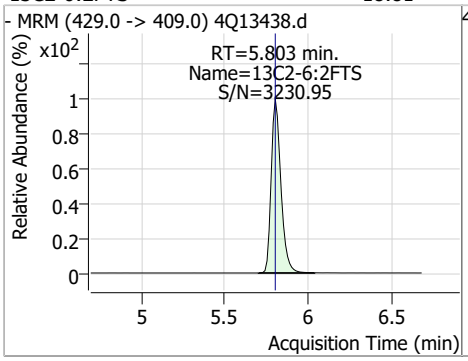
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	5.24	5.26	0.00	41813	377.0 -> 85.0	31.0	11.2	51.2

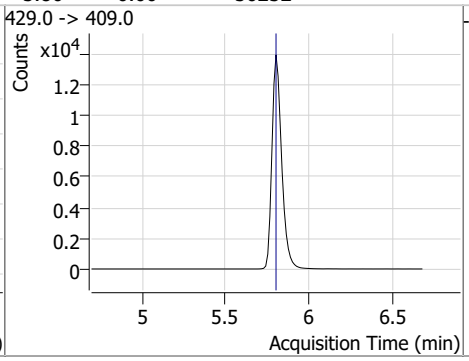


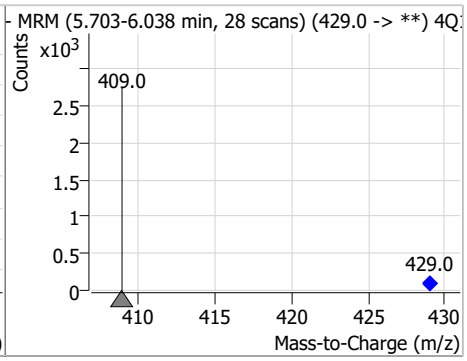




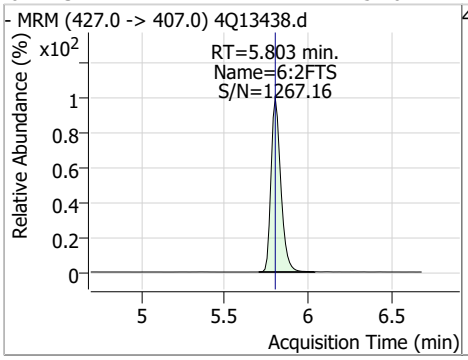
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.81	5.80	0.00	56252				

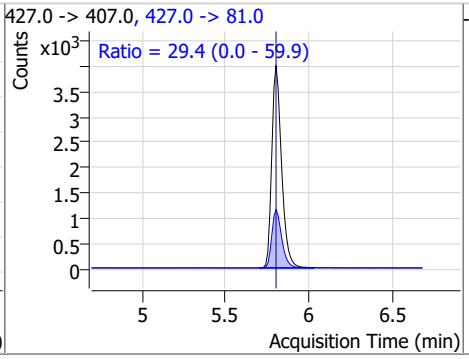


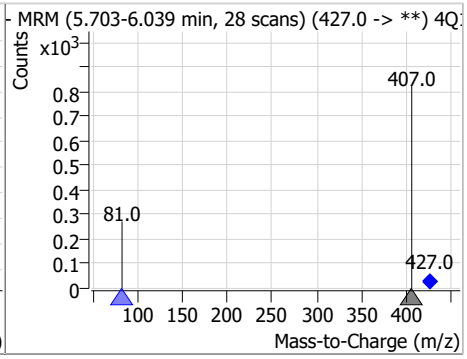




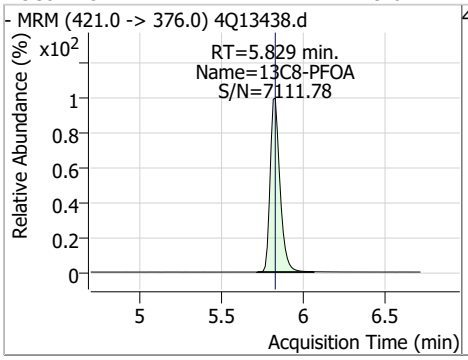
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	5.46	5.80	0.00	16178	427.0 -> 81.0	29.4	0.0	59.9

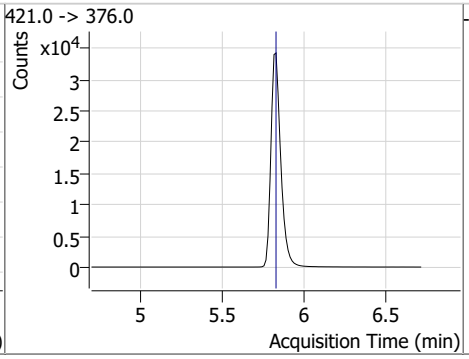


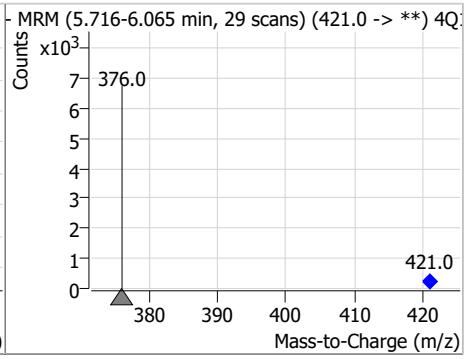




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.61	5.83	0.00	144017				

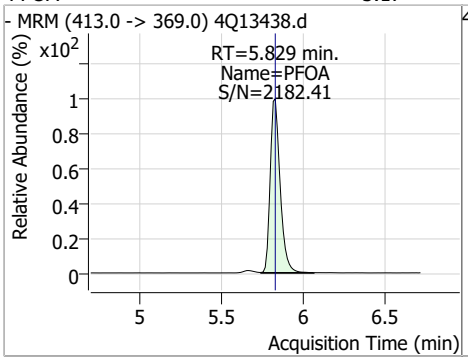


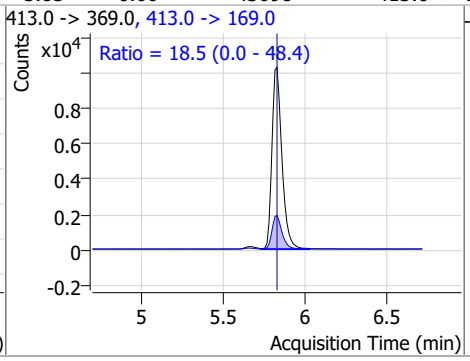


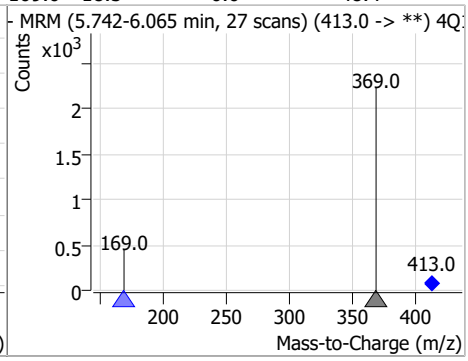


Perfluorinated Compounds by LC/MS/MS

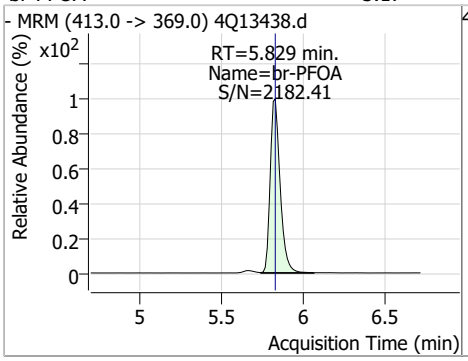
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	5.17	5.83	0.00	43698	413.0 -> 169.0	18.5	0.0	48.4

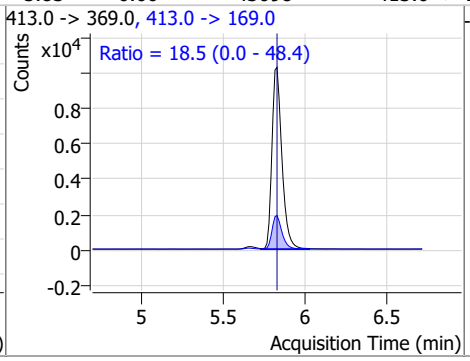


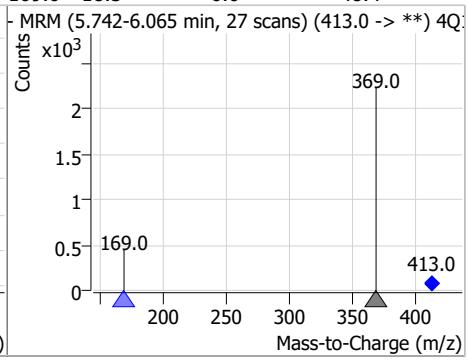




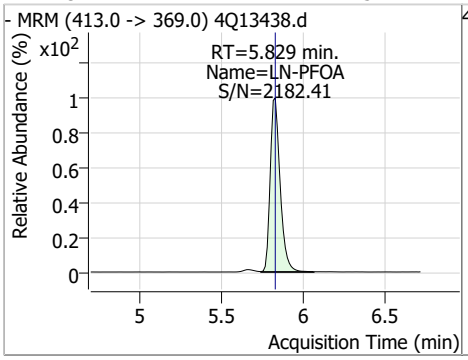
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	5.17	5.83	0.00	43698	413.0 -> 169.0	18.5	0.0	48.4

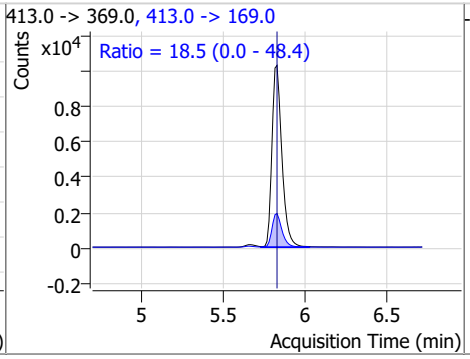


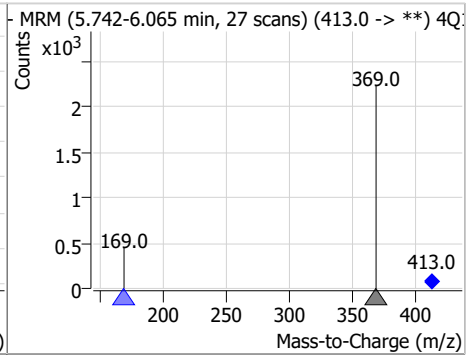




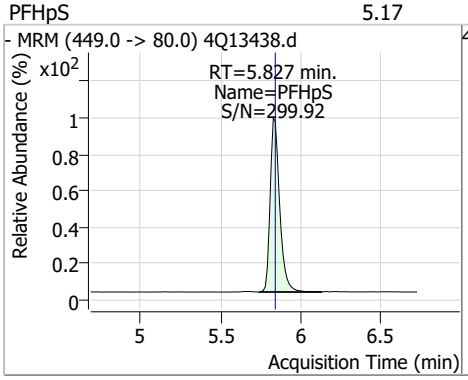
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	5.17	5.83	0.00	43698	413.0 -> 169.0	18.5	0.0	48.4

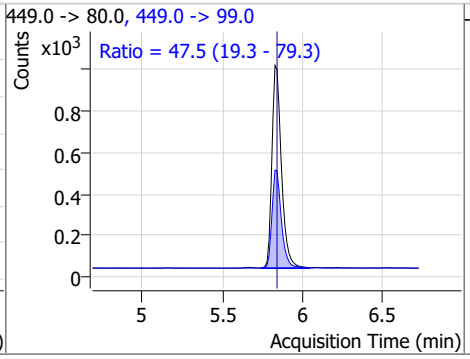


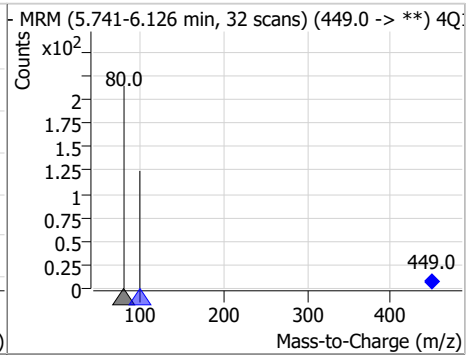




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	5.17	5.83	-0.01	4012	449.0 -> 99.0	47.5	19.3	79.3

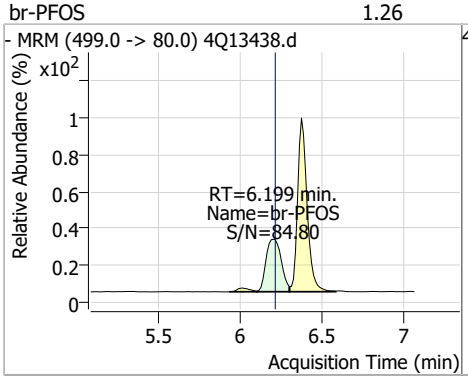


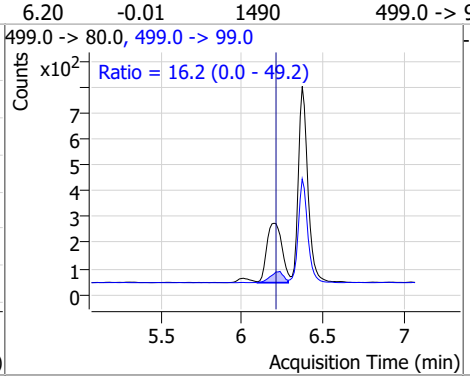


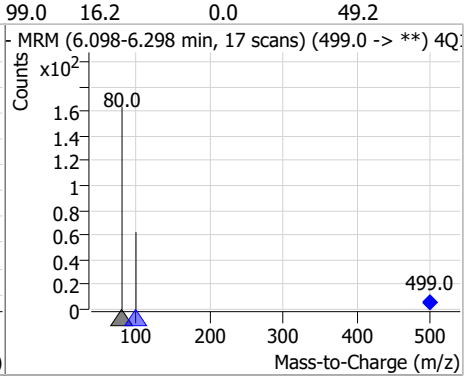


Perfluorinated Compounds by LC/MS/MS

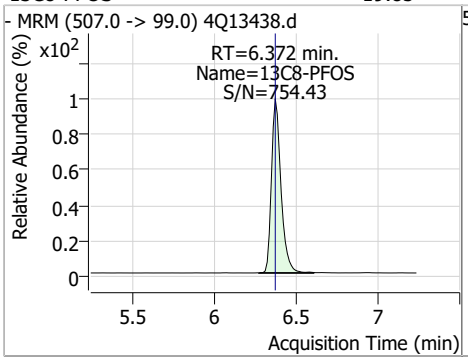
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	1.26	6.20	-0.01	1490	499.0 -> 99.0	16.2	0.0	49.2

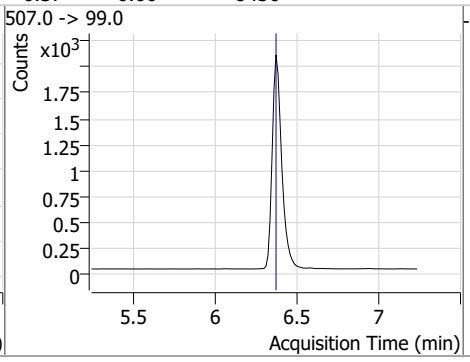


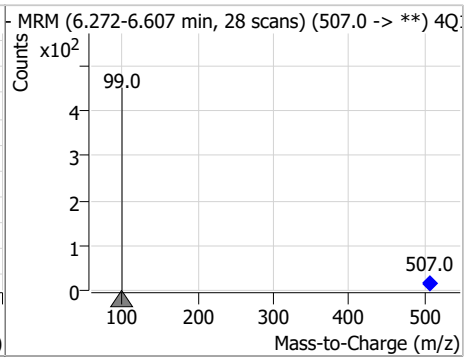




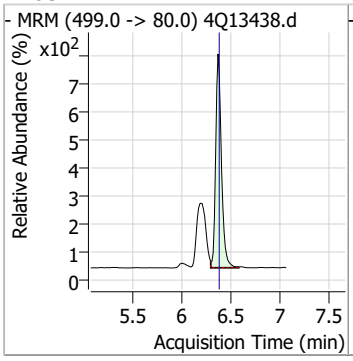
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.85	6.37	0.00	8450				

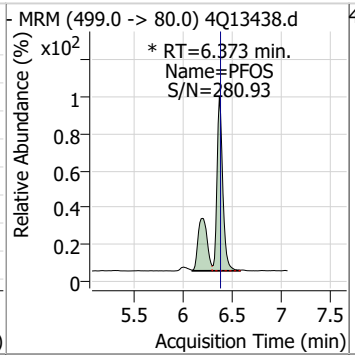


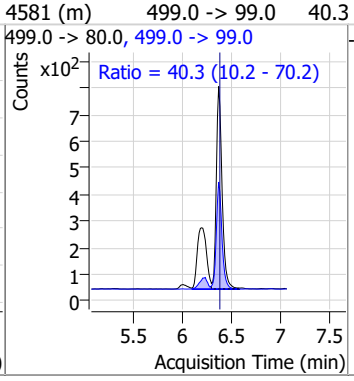


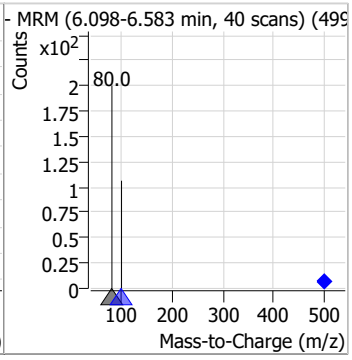


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	5.08	6.37	0.00	4581 (m)	499.0 -> 99.0	40.3	10.2	70.2

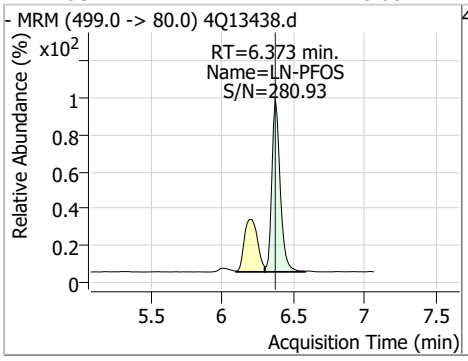


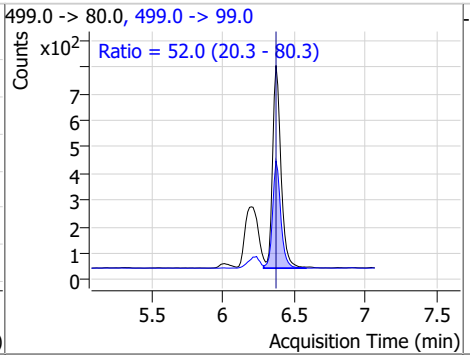


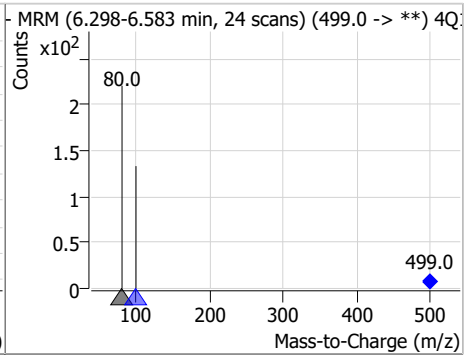




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	3.88	6.37	0.00	3091	499.0 -> 99.0	52.0	20.3	80.3

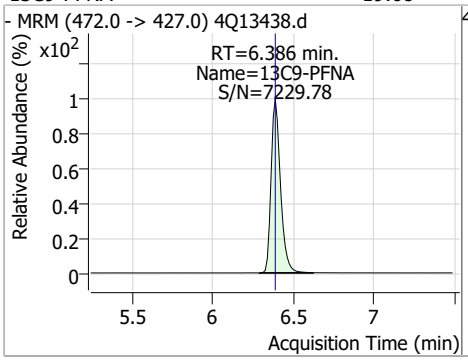


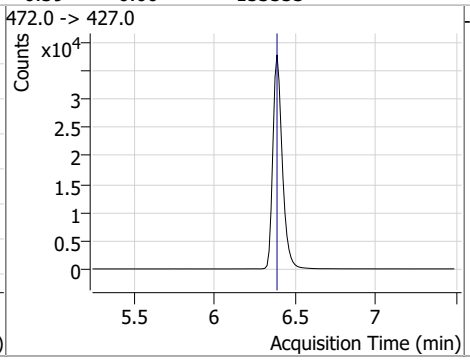


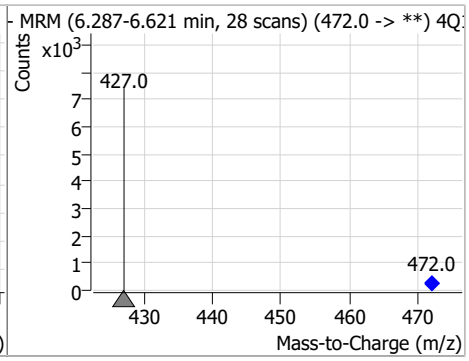


Perfluorinated Compounds by LC/MS/MS

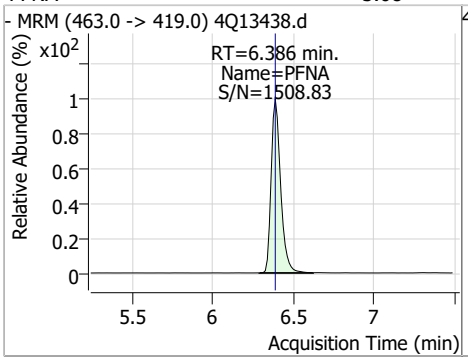
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.68	6.39	0.00	153553				

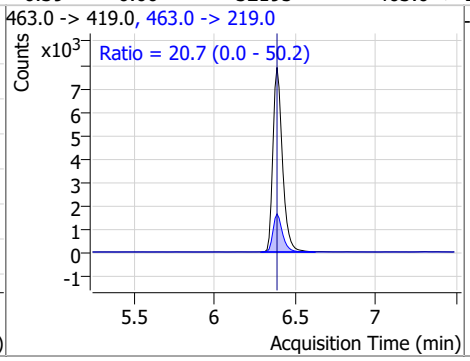


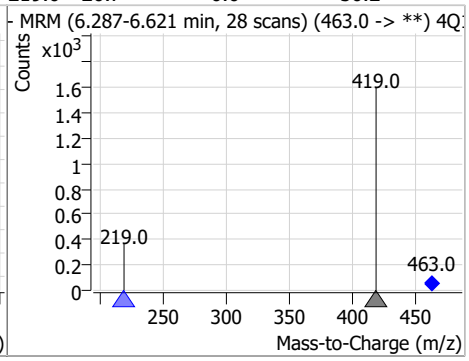




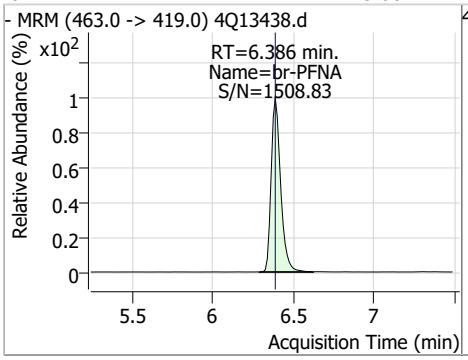
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	5.08	6.39	0.00	32195	463.0 -> 219.0	20.7	0.0	50.2

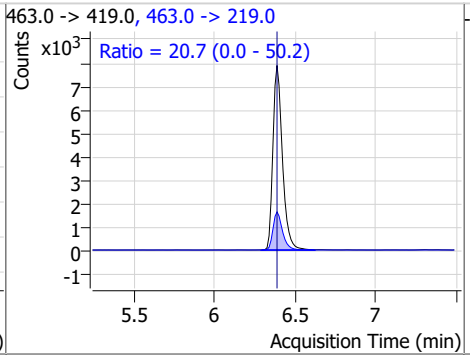


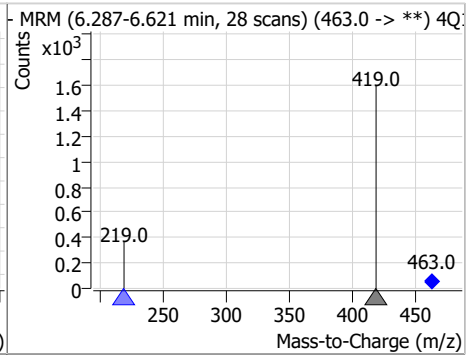




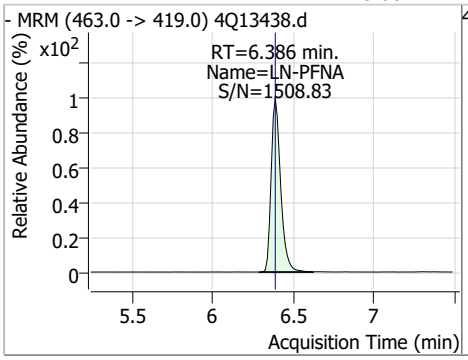
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFNA	5.08	6.39	0.00	32195	463.0 -> 219.0	20.7	0.0	50.2

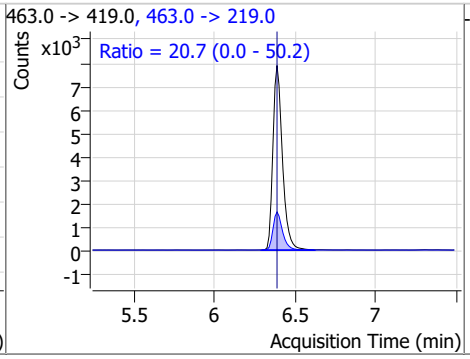


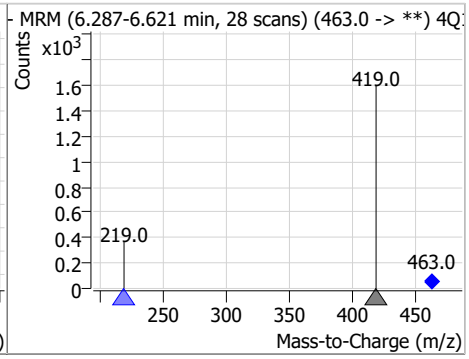




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	5.08	6.39	0.00	32195	463.0 -> 219.0	20.7	0.0	50.2

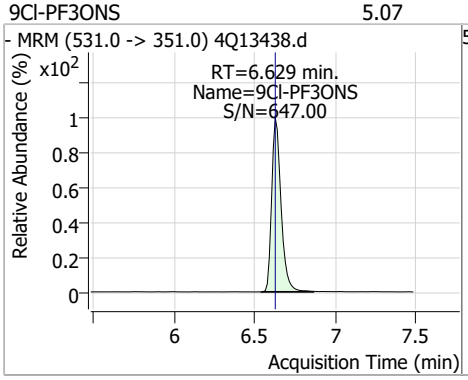


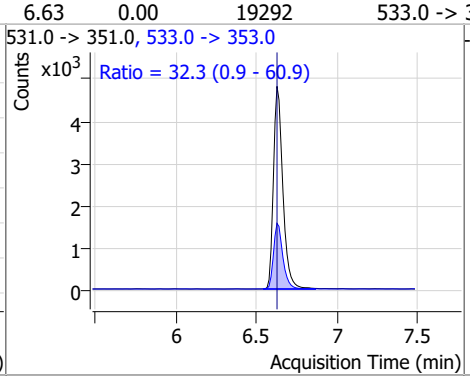


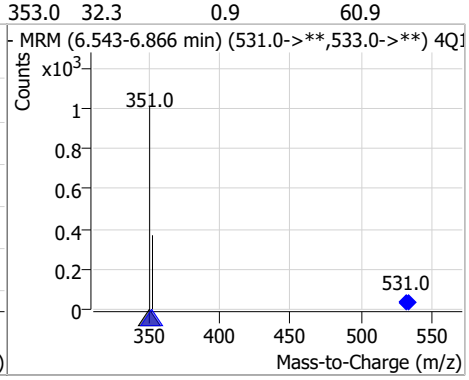


Perfluorinated Compounds by LC/MS/MS

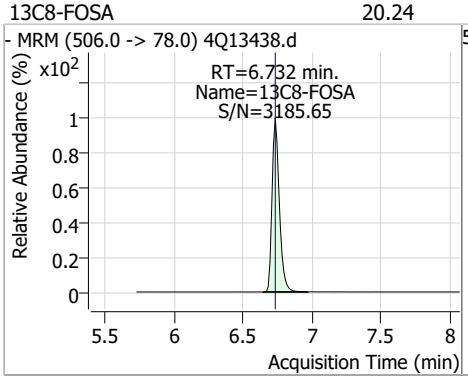
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	5.07	6.63	0.00	19292	533.0 -> 353.0	32.3	0.9	60.9

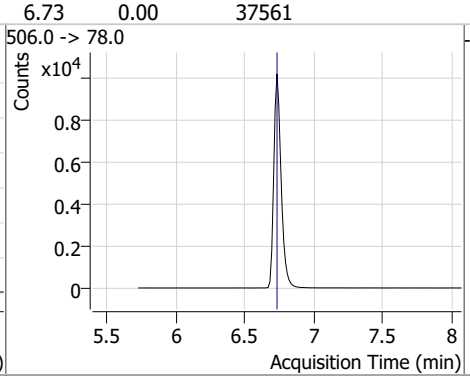


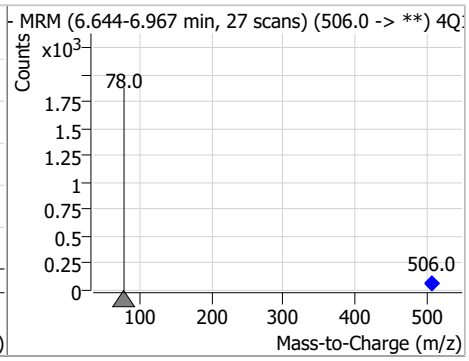




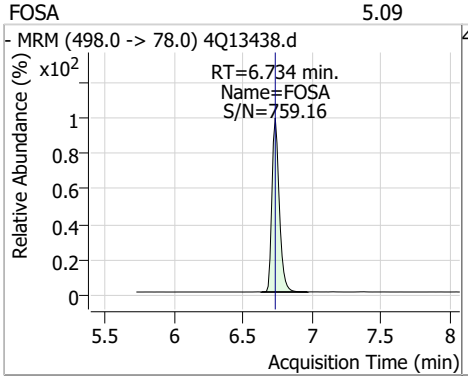
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.24	6.73	0.00	37561				

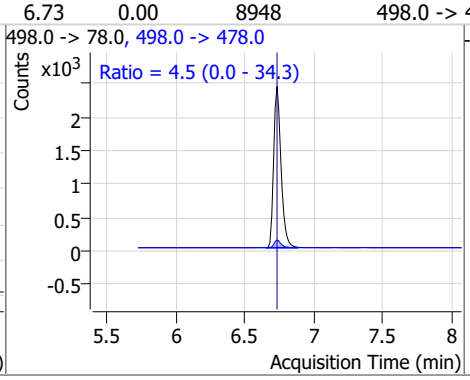


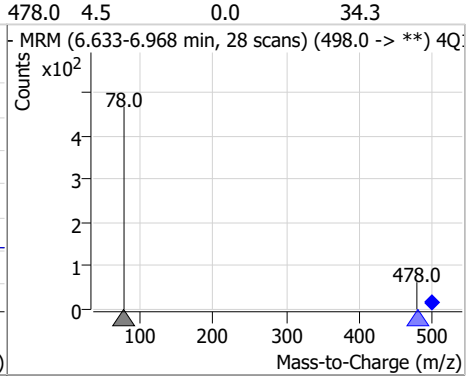




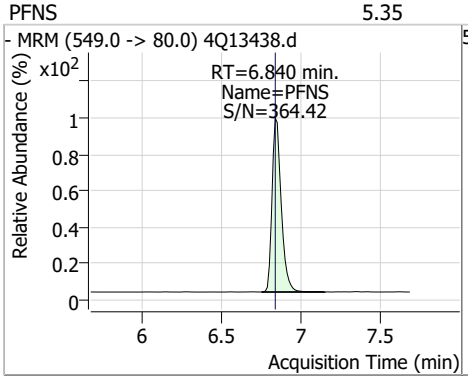
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	5.09	6.73	0.00	8948	498.0 -> 478.0	4.5	0.0	34.3

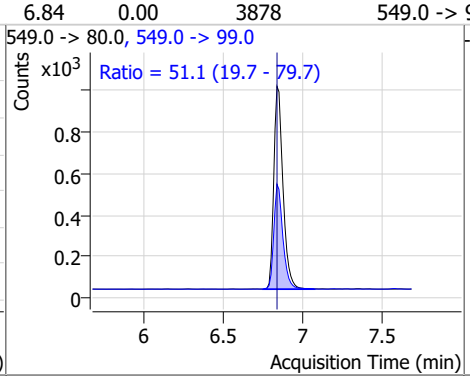


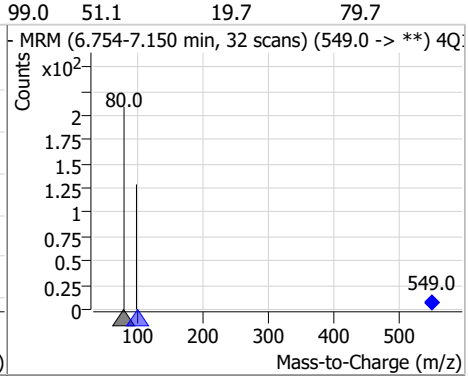




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	5.35	6.84	0.00	3878	549.0 -> 99.0	51.1	19.7	79.7

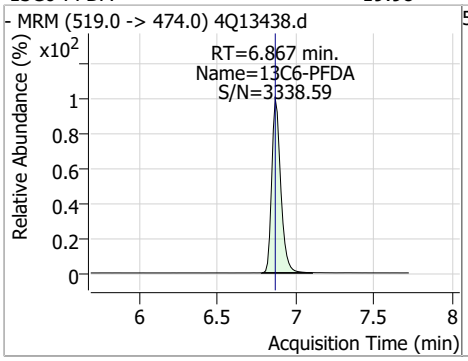


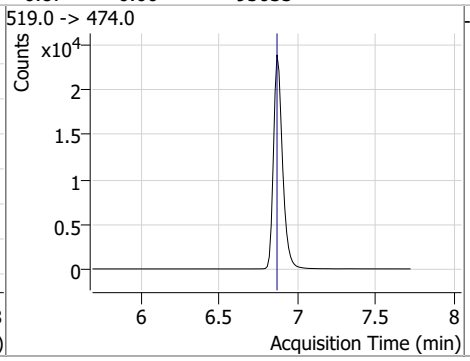


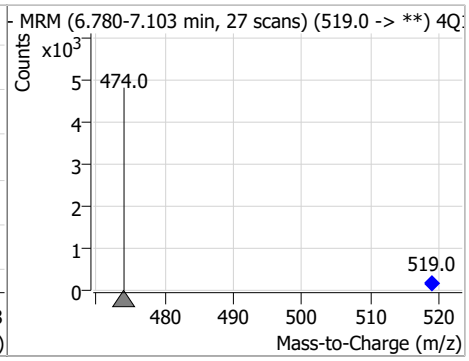


Perfluorinated Compounds by LC/MS/MS

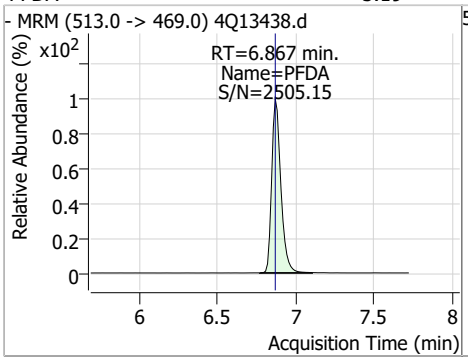
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.98	6.87	0.00	95635				

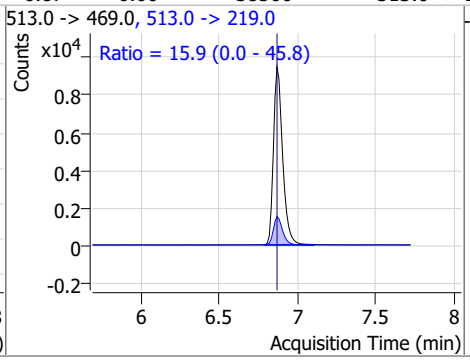


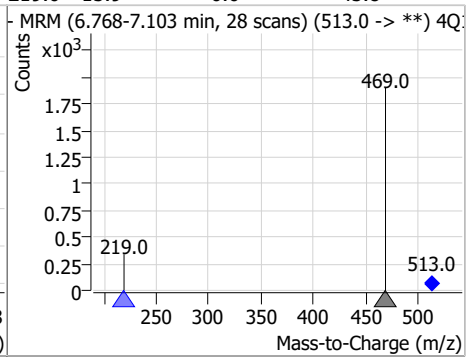




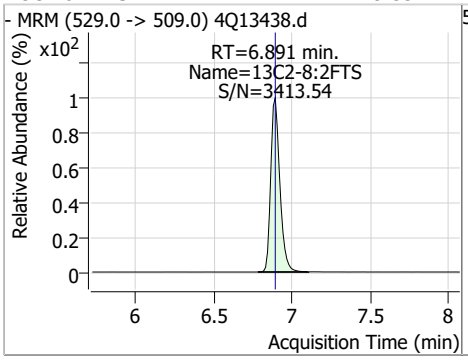
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	5.19	6.87	0.00	38500	513.0 -> 219.0	15.9	0.0	45.8

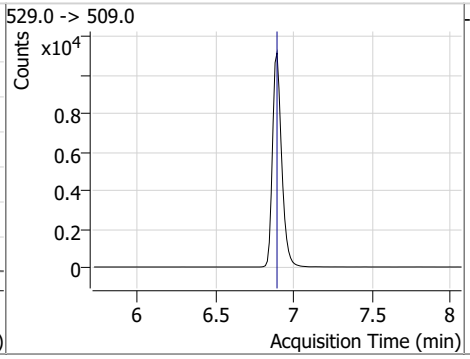


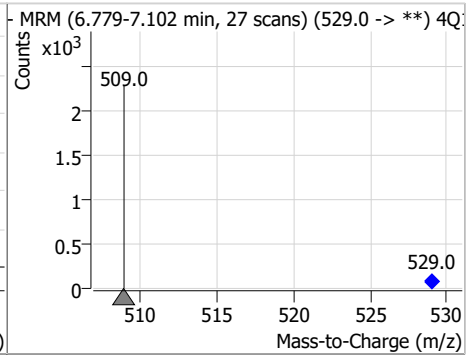




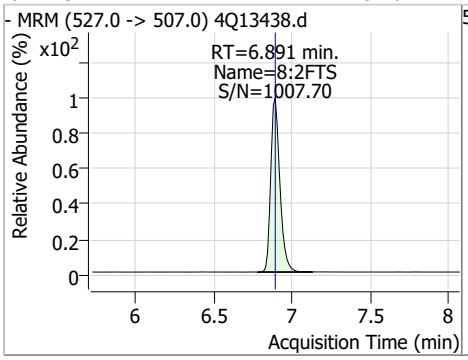
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.33	6.89	0.00	45044				

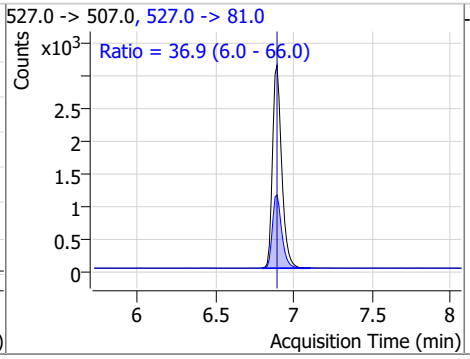


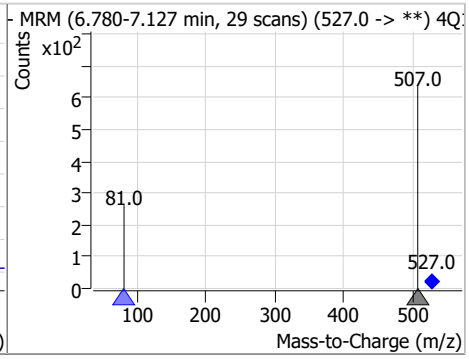




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	5.46	6.89	0.00	12724	527.0 -> 81.0	36.9	6.0	66.0

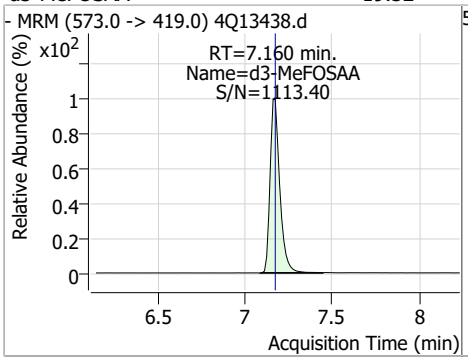


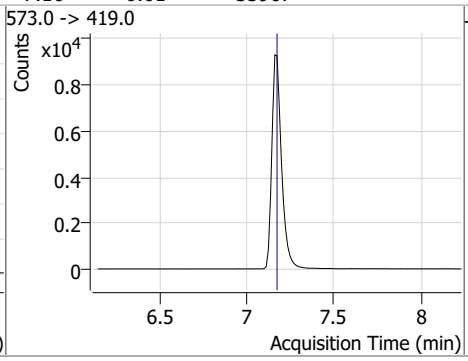


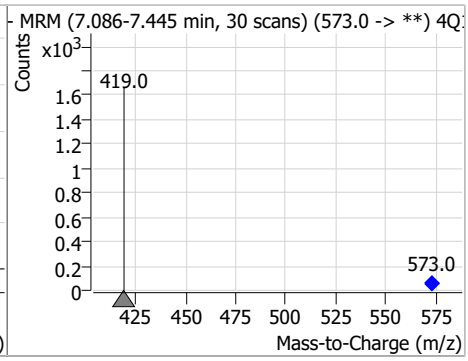


Perfluorinated Compounds by LC/MS/MS

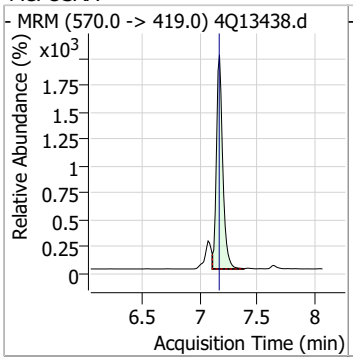
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.32	7.16	-0.01	35907				

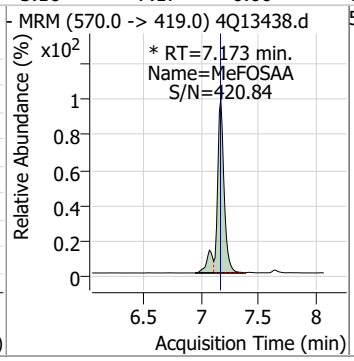


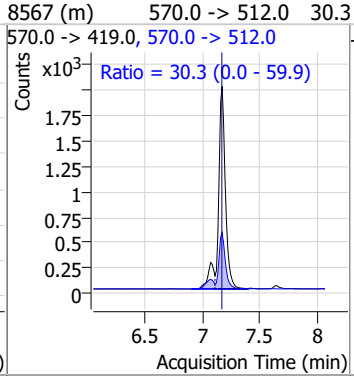


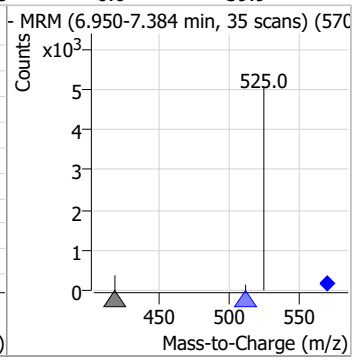


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	5.16	7.17	0.00	8567 (m)	570.0 -> 512.0	30.3	0.0	59.9

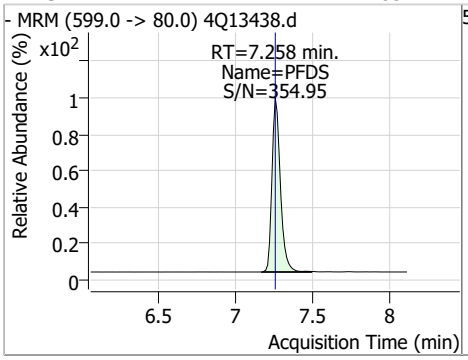


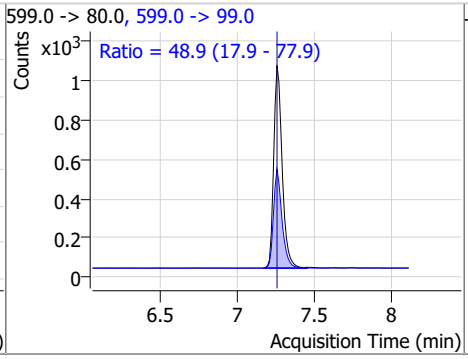


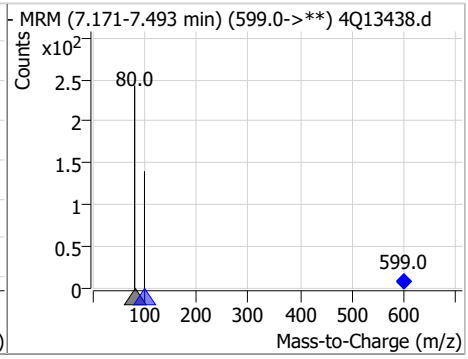




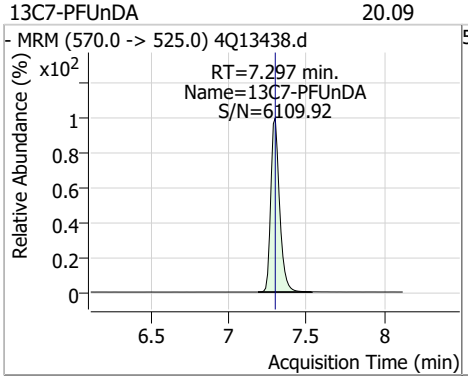
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	4.85	7.26	0.00	3958	599.0 -> 99.0	48.9	17.9	77.9

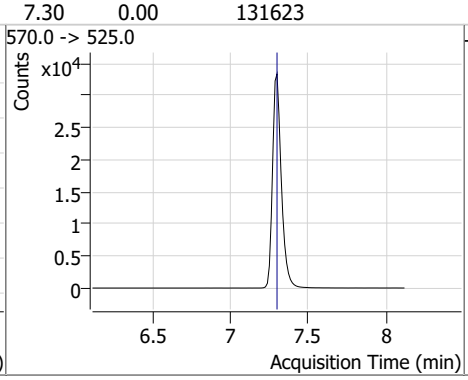


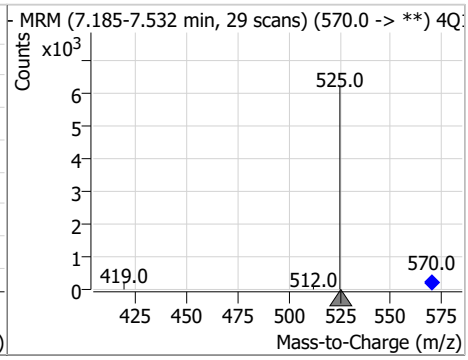




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.09	7.30	0.00	131623				

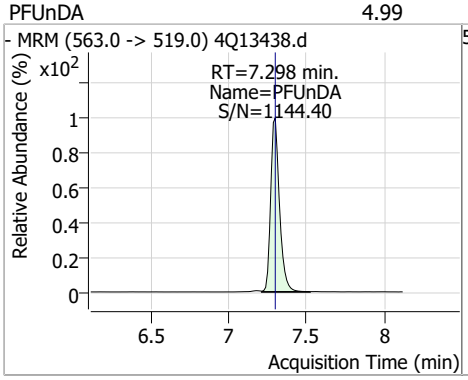


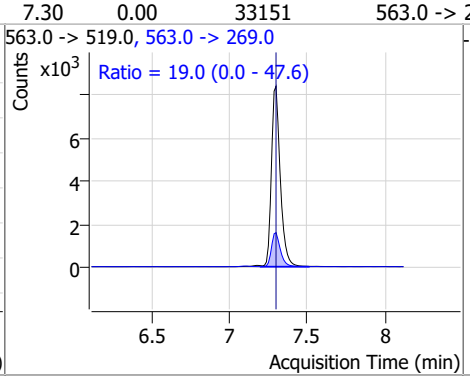


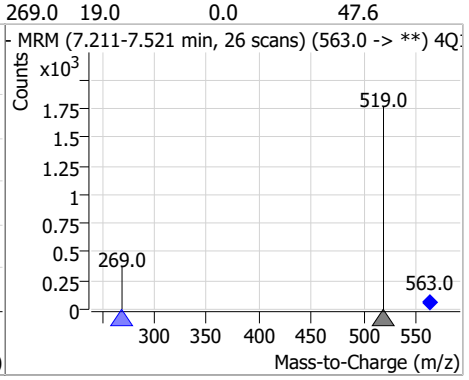


Perfluorinated Compounds by LC/MS/MS

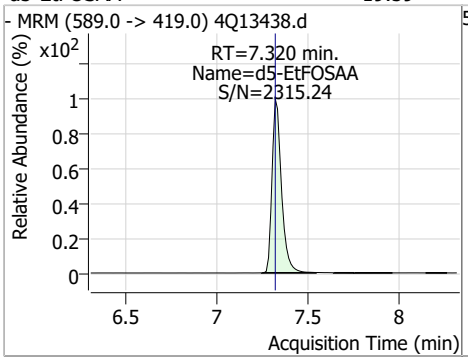
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	4.99	7.30	0.00	33151	563.0 -> 269.0	19.0	0.0	47.6

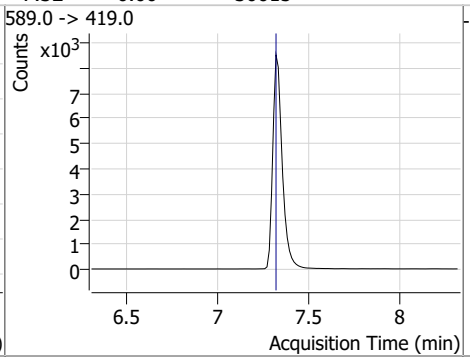


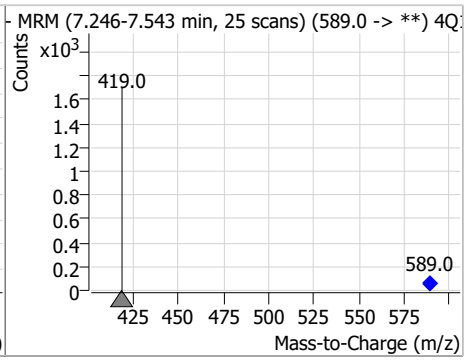




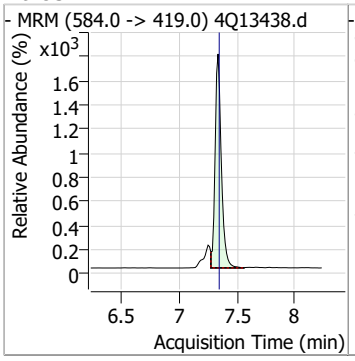
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.59	7.32	0.00	30615				

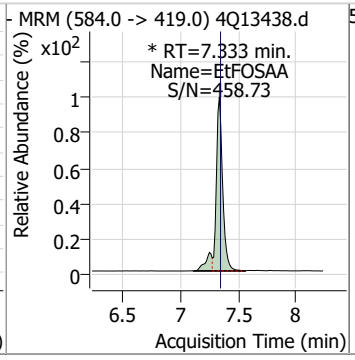


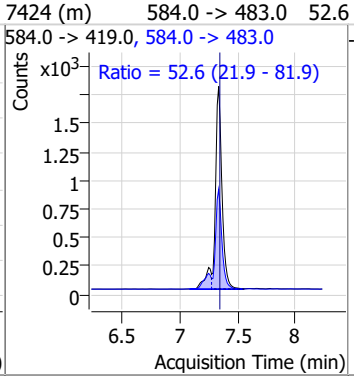


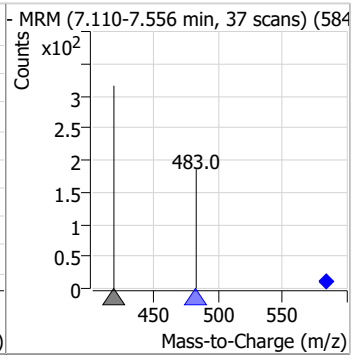


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	5.10	7.33	0.00	7424 (m)	584.0 -> 483.0	52.6	21.9	81.9

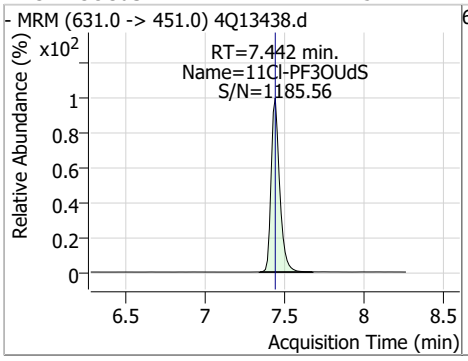


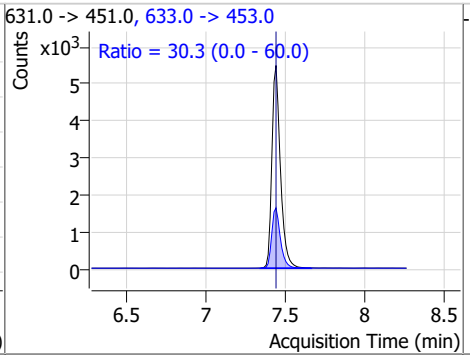


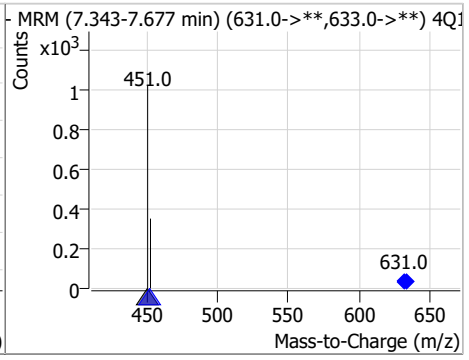




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	5.24	7.44	0.00	20348	633.0 -> 453.0	30.3	0.0	60.0

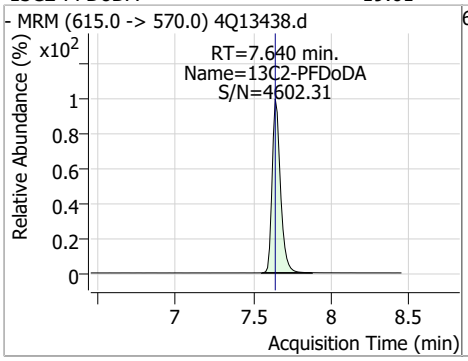


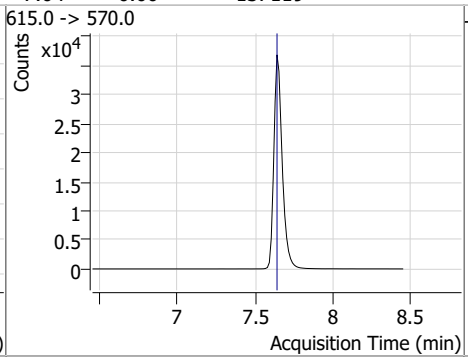


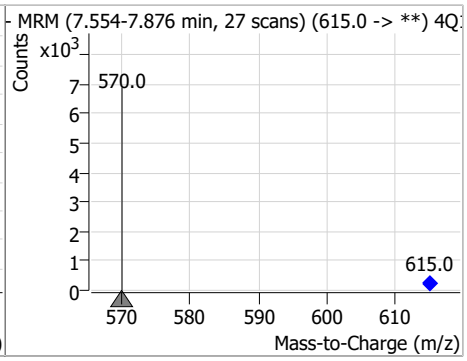


Perfluorinated Compounds by LC/MS/MS

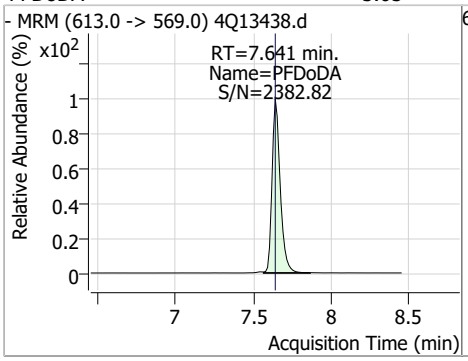
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.61	7.64	0.00	137119				

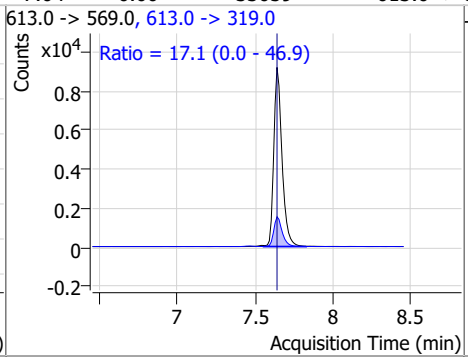


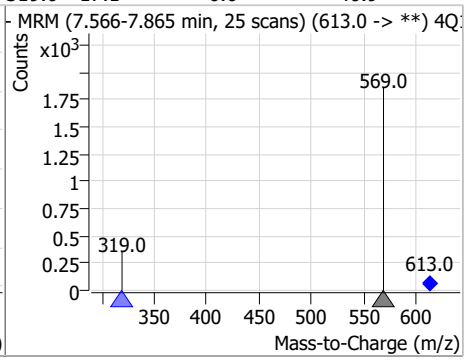




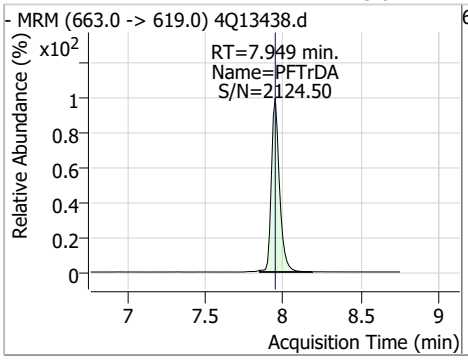
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	5.05	7.64	0.00	33659	613.0 -> 319.0	17.1	0.0	46.9

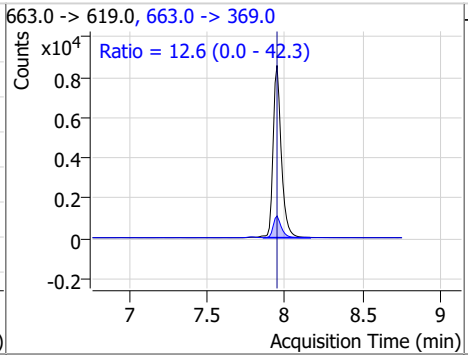


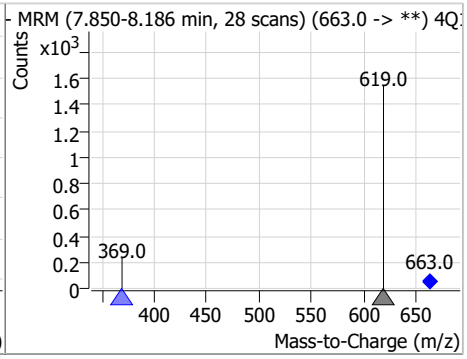




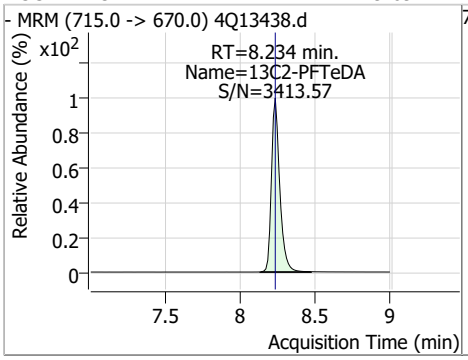
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	5.04	7.95	0.00	31192	663.0 -> 369.0	12.6	0.0	42.3

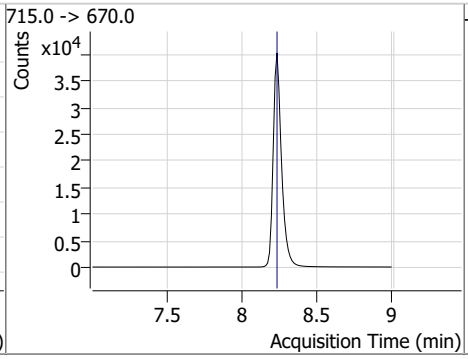


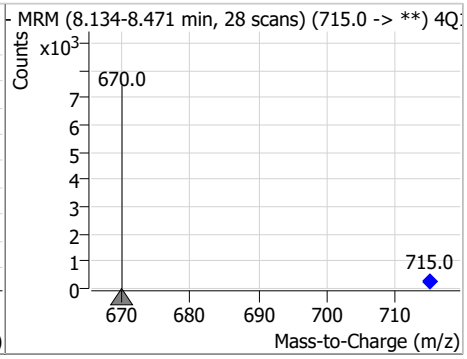




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.69	8.23	0.00	154490				

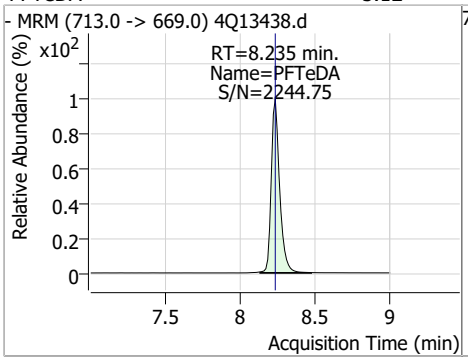


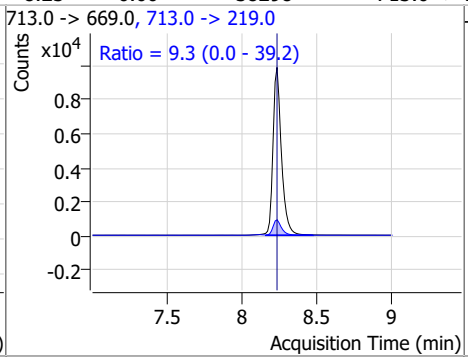


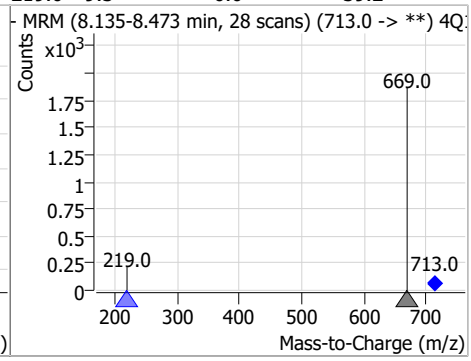


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	5.12	8.23	0.00	38298	713.0 -> 219.0	9.3	0.0	39.2







Manual Integration Approval Summary

Sample Number:	S4Q189-IC189	**Method:**	EPA 537M QSM5.3 B-15
Lab FileID:	4Q13438.D	**Analyst approved:**	04/19/21 07:57 Nancy Saunders
Injection Time:	04/18/21 15:28	**Supervisor approved:**	04/19/21 15:40 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.19	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.37	Split peak
MeFOSAA	2355-31-9		7.17	Split peak
EtFOSAA	2991-50-6		7.33	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 04/19/21 15:40

Perfluorinated Compounds by LC/MS/MS

Data File : 4Q13439.d
Operator : natashag
Acq. Method : 537_ID.m
Acq. Date-Time : 4/18/2021 3:43:29 PM
Sample Name : ic189-10
Vial : P1-A6
DA Method File : BR_LN_041821_S4Q189.quantmethod.xml
Batch Name : s4q189.batch.bin
Sample Information : op84918,S4Q189,250,,,1,1,water

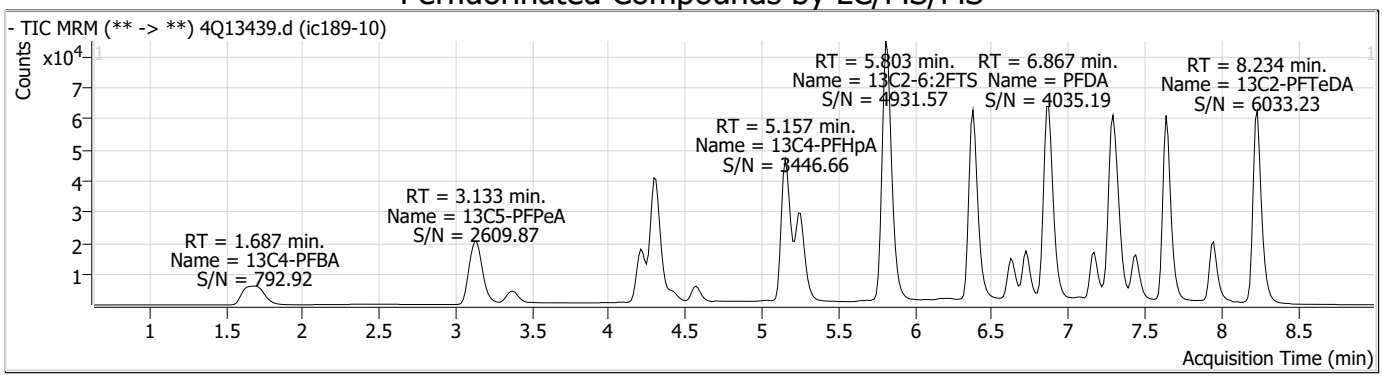
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.687	217.0 -> 172.0	50311	20.00	µg/L	0.000
M5-PFPeA	3.133	268.0 -> 223.0	89350	20.00	µg/L	-0.012
M5-PFHxA	4.302	318.0 -> 273.0	123197	20.00	µg/L	-0.013
M4-PFHpA	5.157	367.0 -> 322.0	107777	20.00	µg/L	0.000
M8-PFOA	5.829	421.0 -> 376.0	148457	20.00	µg/L	0.000
M9-PFNA	6.386	472.0 -> 427.0	157623	20.00	µg/L	0.000
M6-PFDA	6.867	519.0 -> 474.0	99690	20.00	µg/L	0.000
M7-PFUnDA	7.297	570.0 -> 525.0	135076	20.00	µg/L	0.000
M2-PFDoDA	7.640	615.0 -> 570.0	141367	20.00	µg/L	0.000
M2-PFTeDA	8.234	715.0 -> 670.0	160482	20.00	µg/L	0.000
M8-FOSA	6.732	506.0 -> 78.0	38392	20.00	µg/L	0.000
M3-PFBS	3.381	302.0 -> 99.0	6855	20.00	µg/L	0.000
M3-PFHxS	5.192	402.0 -> 99.0	6414	20.00	µg/L	-0.012
M8-PFOS	6.372	507.0 -> 99.0	8331	20.00	µg/L	0.000
M2-4:2FTS	4.212	329.0 -> 309.0	43867	20.00	µg/L	0.000
M2-6:2FTS	5.803	429.0 -> 409.0	59109	20.00	µg/L	0.000
M2-8:2FTS	6.891	529.0 -> 509.0	45973	20.00	µg/L	0.000
M3-MeFOSAA	7.172	573.0 -> 419.0	37875	20.00	µg/L	0.000
M3-HFPO-DA	4.578	287.0 -> 169.0	7221	20.00	µg/L	0.000
M5-EtFOSAA	7.320	589.0 -> 419.0	32114	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.212	329.0 -> 309.0	43867	19.31	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.5%		
13C2-6:2FTS	5.803	429.0 -> 409.0	59109	19.76	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.8%		
13C2-8:2FTS	6.891	529.0 -> 509.0	45973	19.73	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.6%		
13C2-PFDoDA	7.640	615.0 -> 570.0	141367	20.22	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.1%		
13C2-PFTeDA	8.234	715.0 -> 670.0	160482	20.45	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.3%		
13C3-PFBS	3.381	302.0 -> 99.0	6855	20.10	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.5%		
13C3-PFHxS	5.192	402.0 -> 99.0	6414	19.91	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.5%		
13C4-PFBA	1.687	217.0 -> 172.0	50311	20.37	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.9%		
13C4-PFHpA	5.157	367.0 -> 322.0	107777	20.22	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.1%		
13C5-PFHxA	4.302	318.0 -> 273.0	123197	20.20	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.0%		
13C5-PFPeA	3.133	268.0 -> 223.0	89350	20.11	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.6%		
13C6-PFDA	6.867	519.0 -> 474.0	99690	20.83	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.1%		

Perfluorinated Compounds by LC/MS/MS

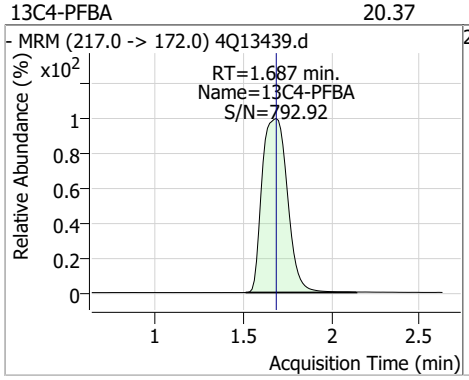
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	7.297	570.0 -> 525.0	135076	20.62	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.1%			
13C8-FOSA	6.732	506.0 -> 78.0	38392	20.68	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.4%			
13C8-PFOA	5.829	421.0 -> 376.0	148457	20.21	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.1%			
13C8-PFOS	6.372	507.0 -> 99.0	8331	19.57	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.8%			
13C9-PFNA	6.386	472.0 -> 427.0	157623	20.20	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.0%			
d3-MeFOSAA	7.172	573.0 -> 419.0	37875	20.38	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.9%			
13C3-HFPO-DA	4.578	287.0 -> 169.0	7219	20.69	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.5%			
d5-EtFOSAA	7.320	589.0 -> 419.0	32118	20.55	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.8%			
Target Compounds							QValue
4:2FTS	4.214	327.0 -> 307.0	24414	10.41	µg/L		100
6:2FTS	5.803	427.0 -> 407.0	32240	10.36	µg/L		100
8:2FTS	6.891	527.0 -> 507.0	24569	10.33	µg/L		97
EtFOSAA	7.333	584.0 -> 419.0	14676	9.63	µg/L	m	95
FOSA	6.734	498.0 -> 78.0	17897	9.95	µg/L		100
MeFOSAA	7.173	570.0 -> 419.0	17123	9.78	µg/L	m	98
PFBA	1.681	213.0 -> 169.0	11030	10.04	µg/L		100
PFBS	3.383	299.0 -> 80.0	11153	9.96	µg/L		98
PFDA	6.867	513.0 -> 469.0	76580	9.90	µg/L		99
PFDoDA	7.641	613.0 -> 569.0	68244	9.93	µg/L		99
PFDS	7.258	599.0 -> 80.0	7967	9.51	µg/L		99
PFHpA	5.157	363.0 -> 319.0	69322	9.85	µg/L		100
PFHpS	5.840	449.0 -> 80.0	8160	10.66	µg/L		97
PFHxA	4.302	313.0 -> 269.0	56614	10.06	µg/L		99
PFHxS	5.193	399.0 -> 80.0	8640	10.61	µg/L	m	100
PFNA	6.386	463.0 -> 419.0	64152	9.86	µg/L		100
PFNS	6.840	549.0 -> 80.0	7772	10.88	µg/L		99
PFOA	5.829	413.0 -> 369.0	88188	10.12	µg/L		100
PFOS	6.373	499.0 -> 80.0	9216	10.37	µg/L	m	98
PFPeA	3.135	263.0 -> 219.0	38574	10.00	µg/L		100
PFPeS	4.423	349.0 -> 80.0	8198	10.07	µg/L		98
PFTeDA	8.235	713.0 -> 669.0	78007	10.04	µg/L		99
PFTrDA	7.949	663.0 -> 619.0	63618	9.90	µg/L		99
PFUnDA	7.298	563.0 -> 519.0	67769	9.94	µg/L		100
11Cl-PF3OUdS	7.442	631.0 -> 451.0	40637	10.15	µg/L		99
9Cl-PF3ONS	6.629	531.0 -> 351.0	39312	9.88	µg/L		100
ADONA	5.257	377.0 -> 251.0	84144	10.25	µg/L		100
HFPO-DA	4.574	329.0 -> 169.0	11289	9.74	µg/L		99
br-PFOS	6.199	499.0 -> 80.0	3021	2.58	µg/L		98
LN-PFOS	6.373	499.0 -> 80.0	6195	7.89	µg/L		97
br-PFHxS	5.031	399.0 -> 80.0	1233	1.28	µg/L		95
LN-PFHxS	5.193	399.0 -> 80.0	7407	9.34	µg/L		100
br-PFOA	5.829	413.0 -> 369.0	88188	10.12	µg/L		100
LN-PFOA	5.829	413.0 -> 369.0	88188	10.12	µg/L		100
br-PFNA	6.386	463.0 -> 419.0	64152	9.86	µg/L		100
LN-PFNA	6.386	463.0 -> 419.0	64152	9.86	µg/L		100

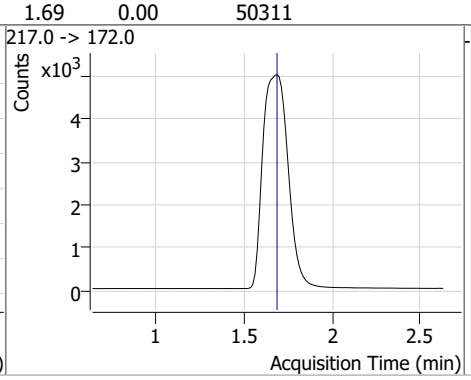
 # = Qualifier out of range, m = manually integrated, + = Area summed

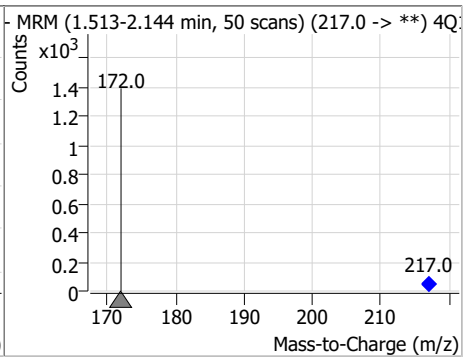
Perfluorinated Compounds by LC/MS/MS



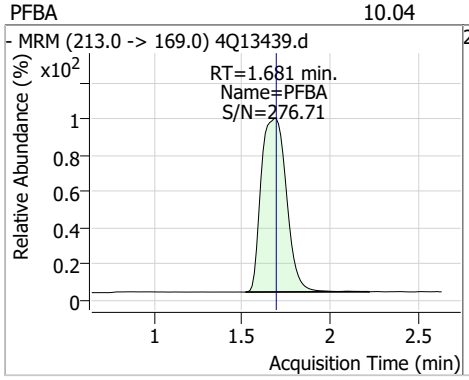
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.37	1.69	0.00	50311				

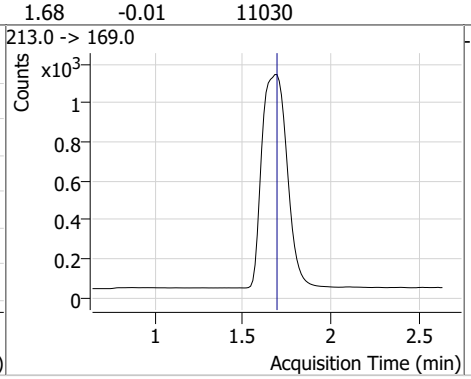


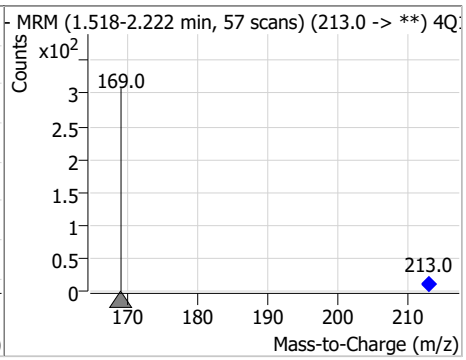




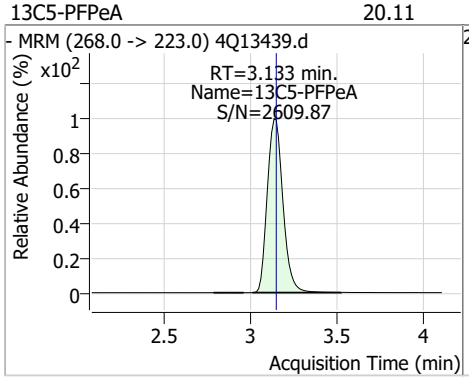
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	10.04	1.68	-0.01	11030				

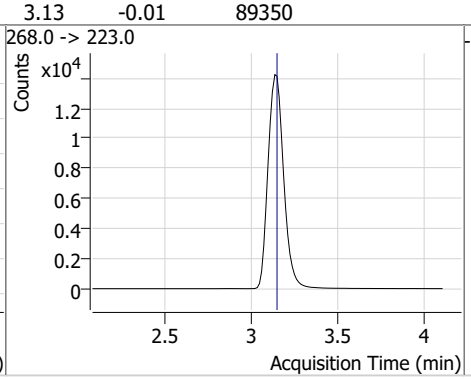


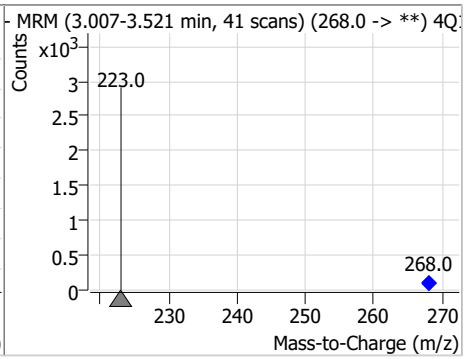




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.11	3.13	-0.01	89350				

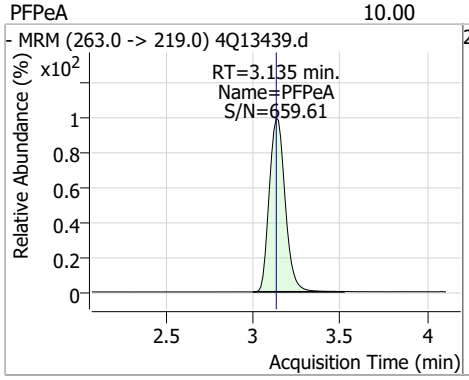


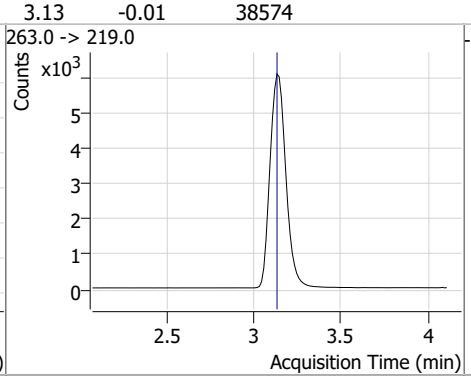


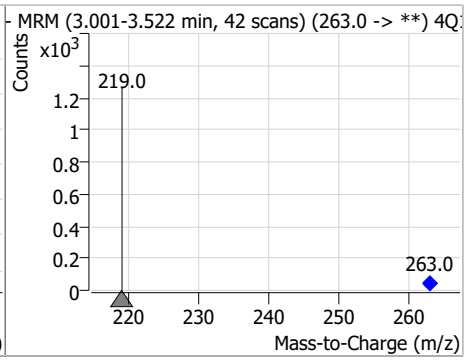


Perfluorinated Compounds by LC/MS/MS

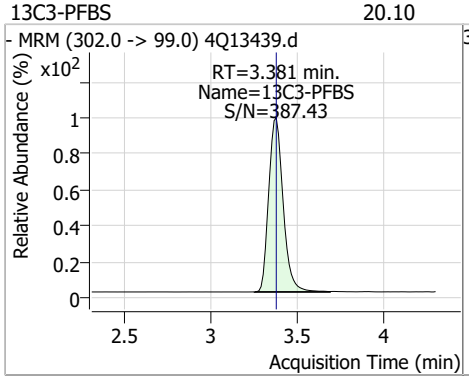
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	10.00	3.13	-0.01	38574				

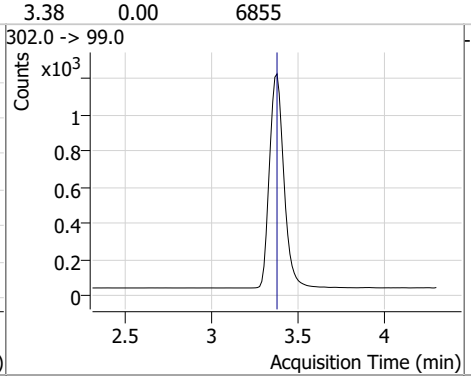


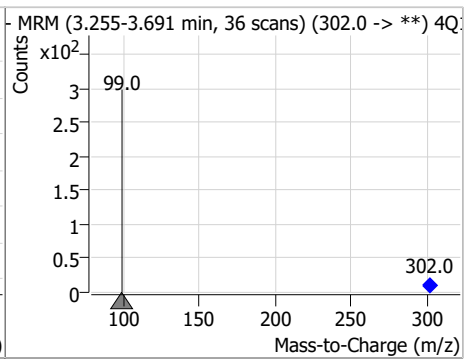




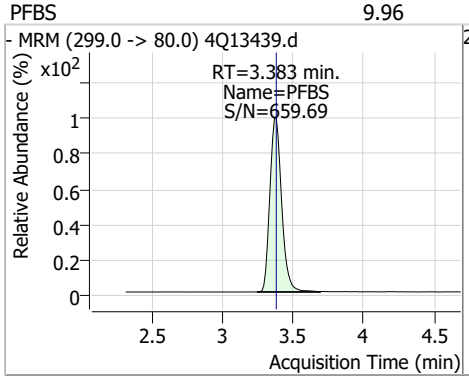
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.10	3.38	0.00	6855				

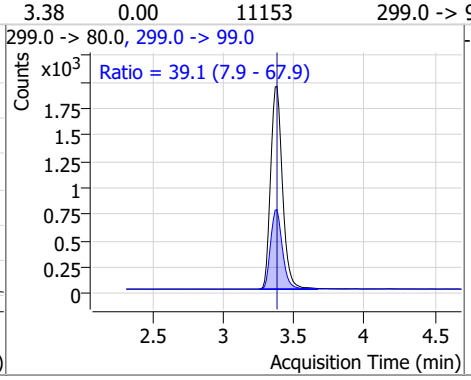


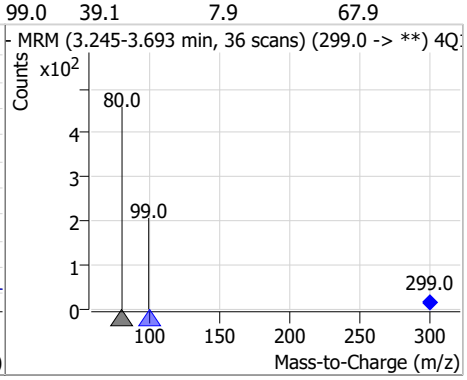




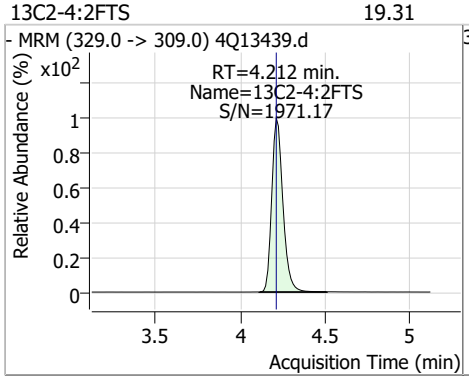
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	9.96	3.38	0.00	11153	299.0 -> 99.0	39.1	7.9	67.9

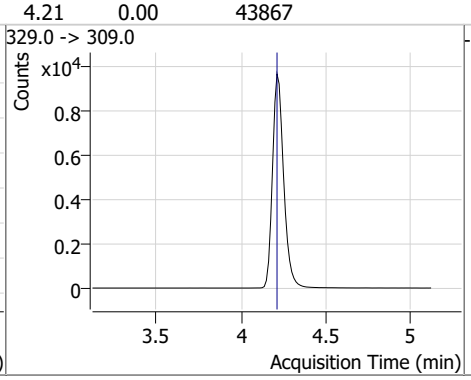


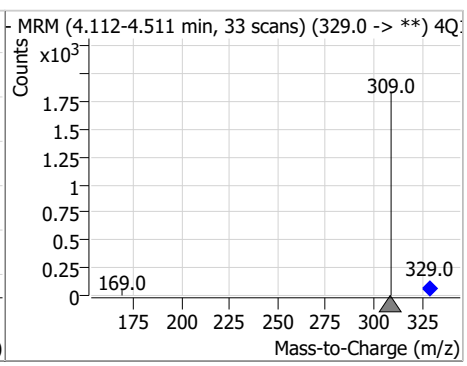




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.31	4.21	0.00	43867				

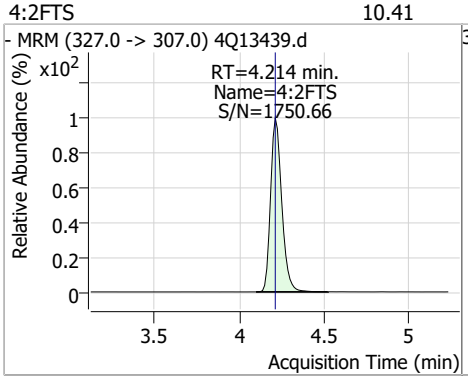


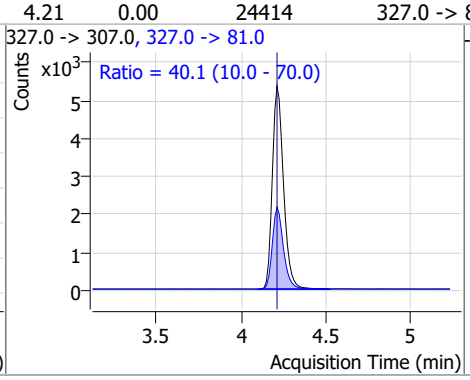


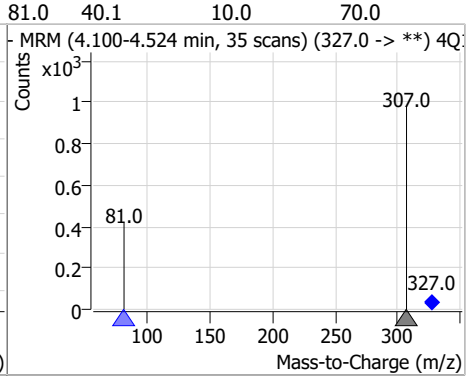


Perfluorinated Compounds by LC/MS/MS

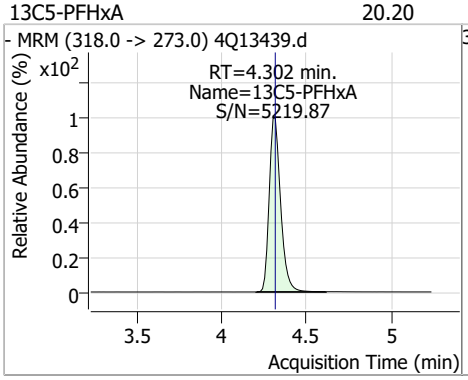
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	10.41	4.21	0.00	24414	327.0 -> 81.0	40.1	10.0	70.0

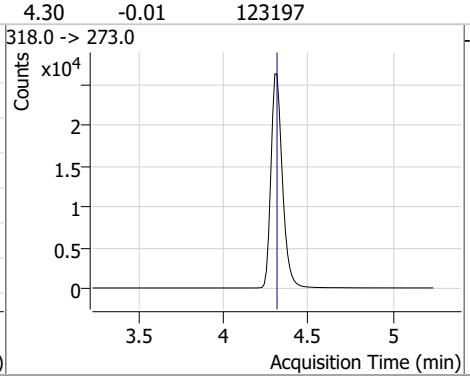


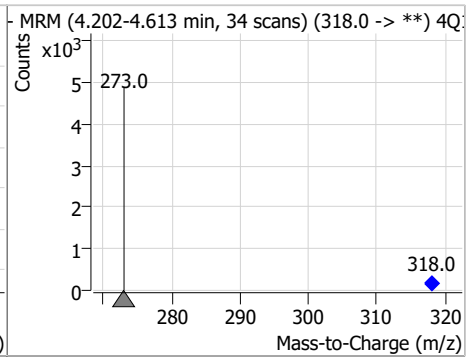




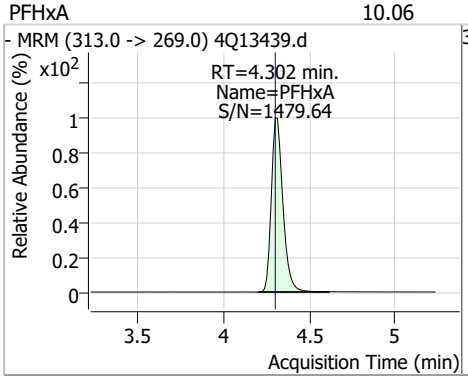
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.20	4.30	-0.01	123197				

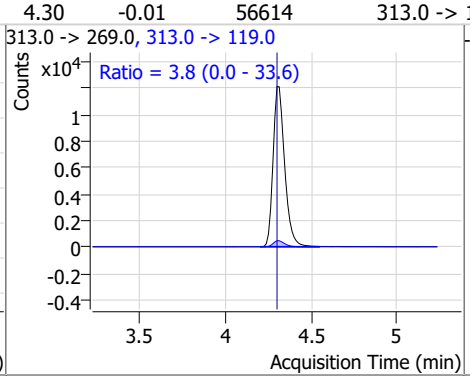


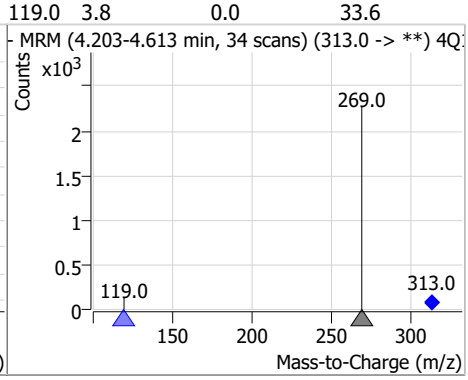




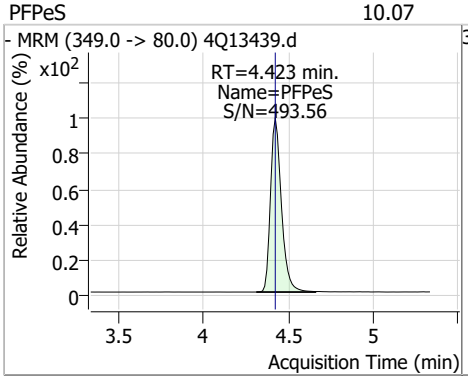
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	10.06	4.30	-0.01	56614	313.0 -> 119.0	3.8	0.0	33.6

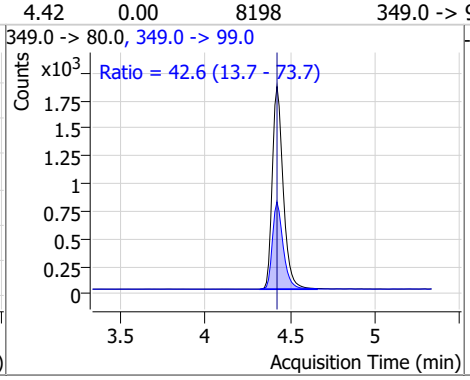


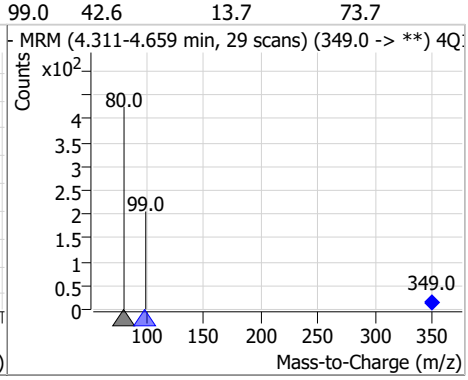




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	10.07	4.42	0.00	8198	349.0 -> 99.0	42.6	13.7	73.7

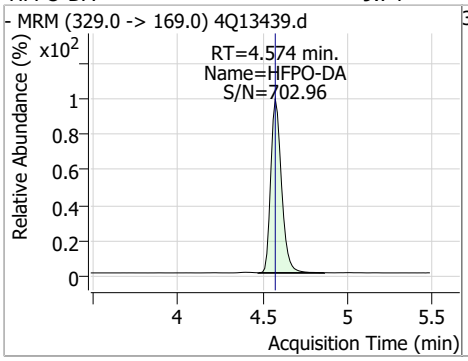


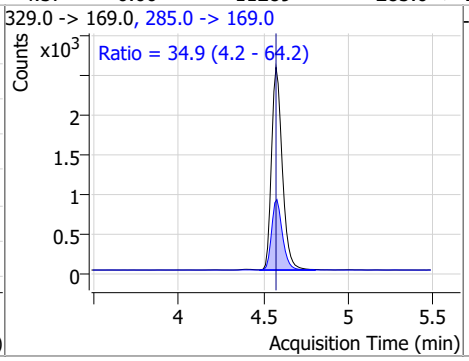


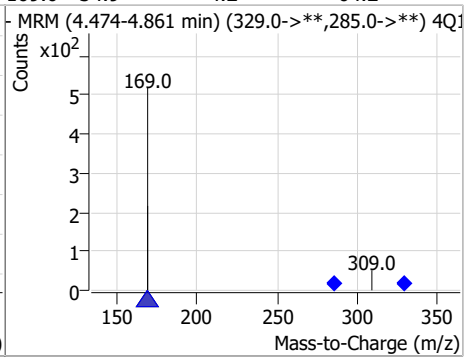


Perfluorinated Compounds by LC/MS/MS

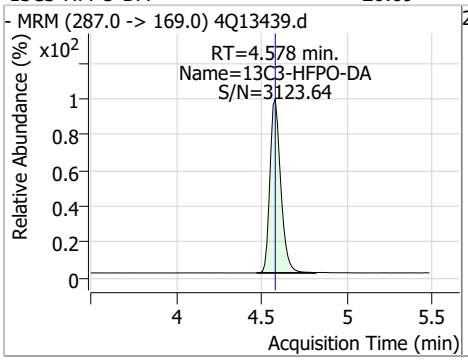
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	9.74	4.57	0.00	11289	285.0 -> 169.0	34.9	4.2	64.2

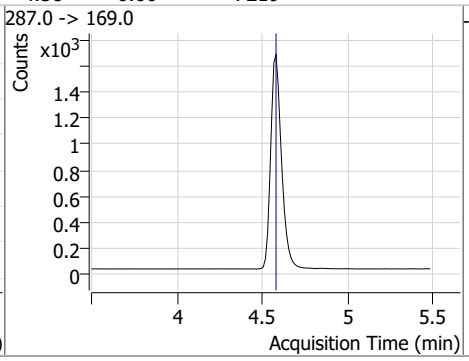


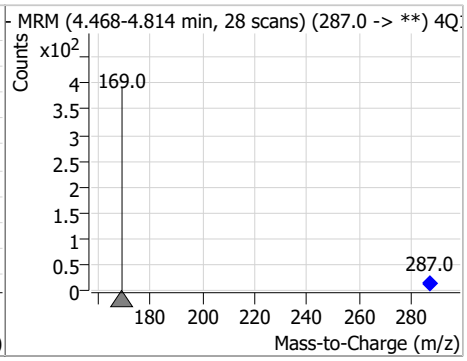




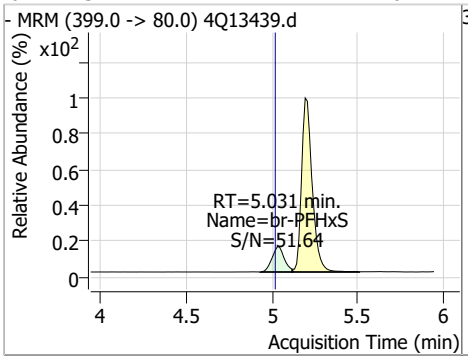
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.69	4.58	0.00	7219				

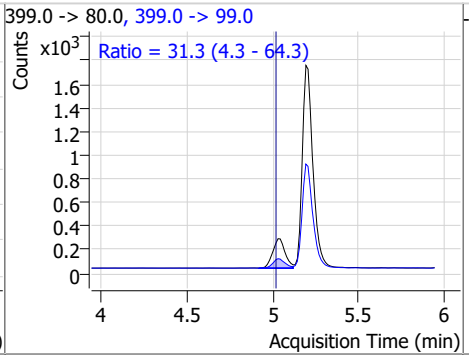


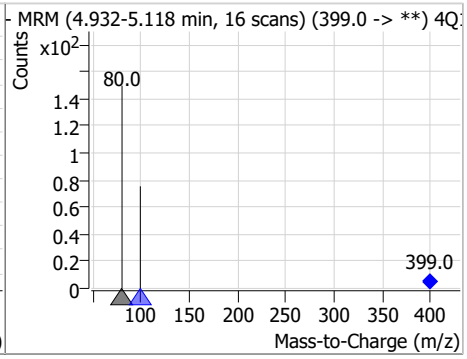




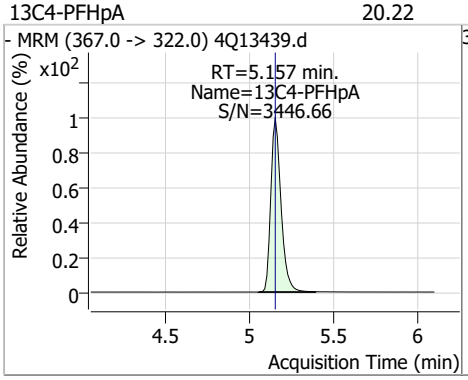
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	1.28	5.03	0.00	1233	399.0 -> 99.0	31.3	4.3	64.3

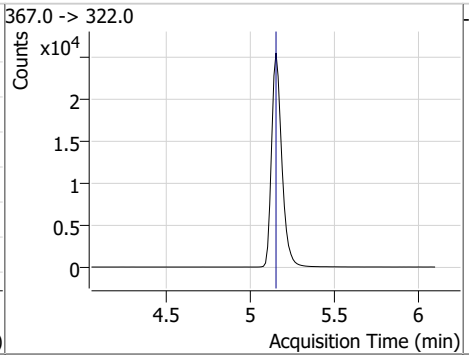


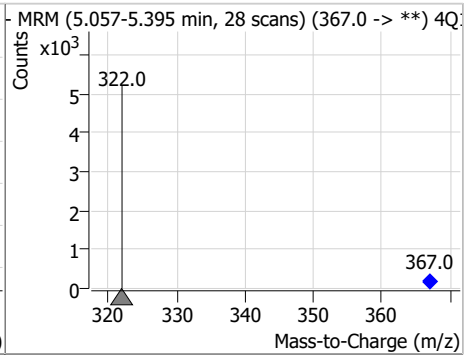




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.22	5.16	0.00	107777				

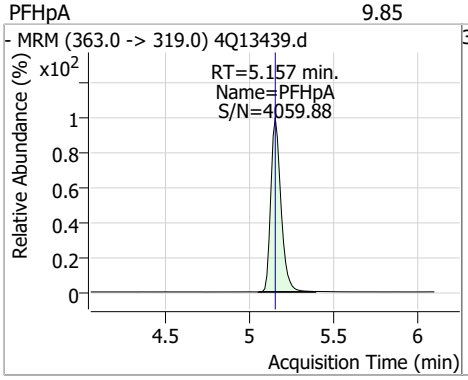


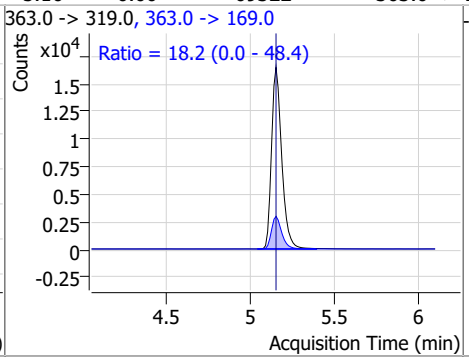


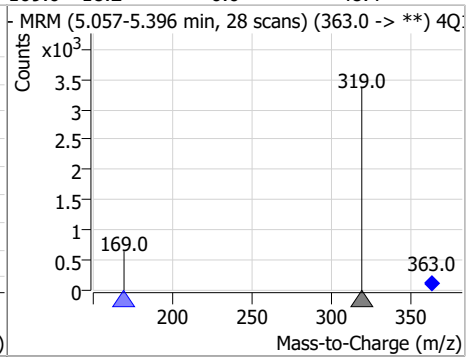


Perfluorinated Compounds by LC/MS/MS

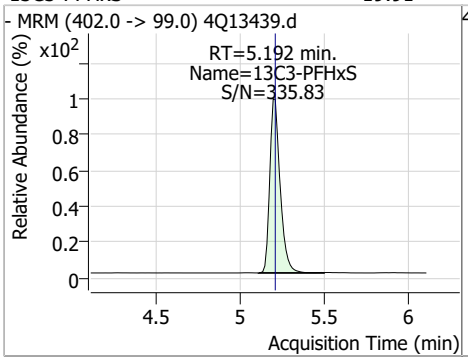
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	9.85	5.16	0.00	69322	363.0 -> 169.0	18.2	0.0	48.4

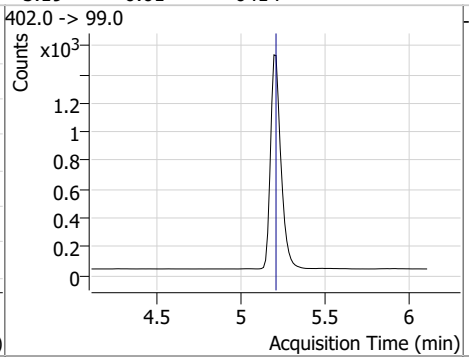


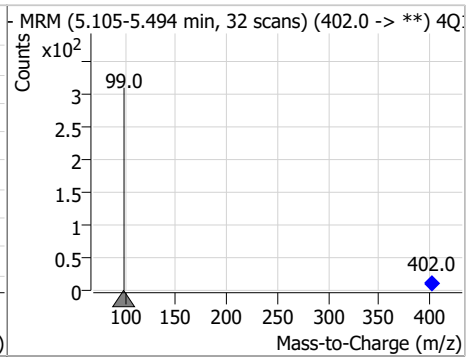




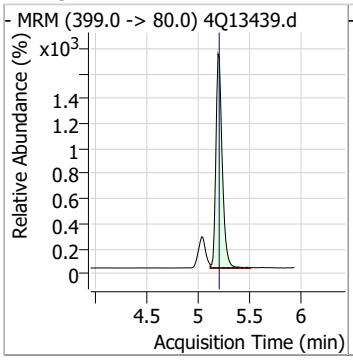
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.91	5.19	-0.01	6414				

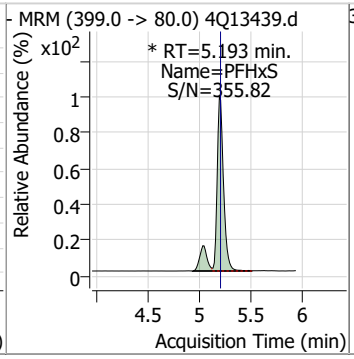


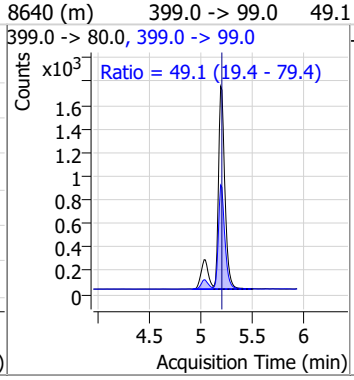


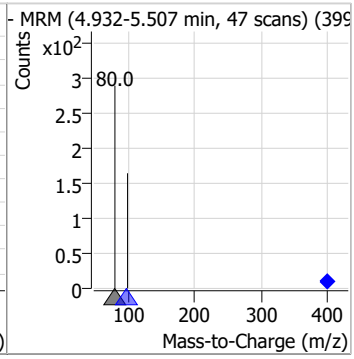


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	10.61	5.19	-0.01	8640 (m)	399.0 -> 99.0	49.1	19.4	79.4

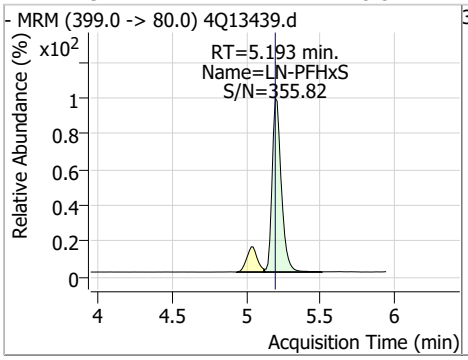


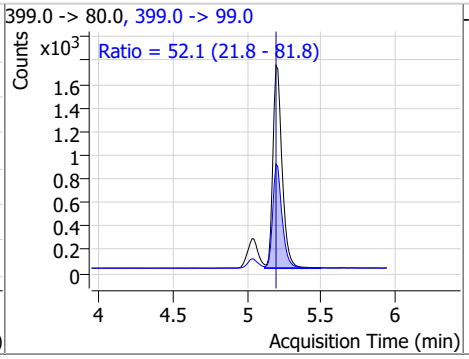


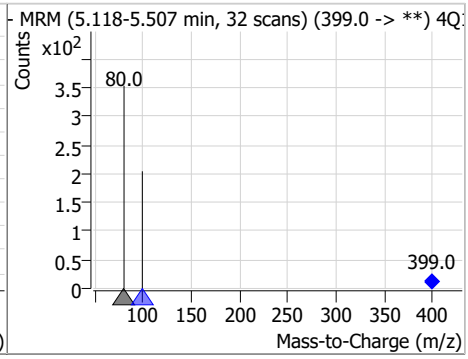




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	9.34	5.19	-0.01	7407	399.0 -> 99.0	52.1	21.8	81.8

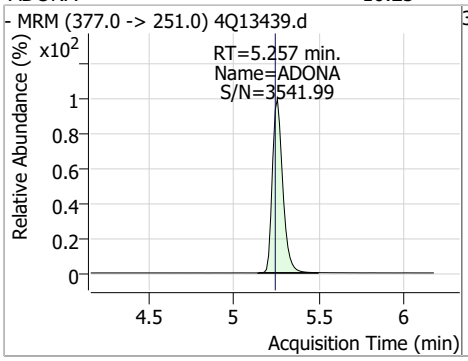


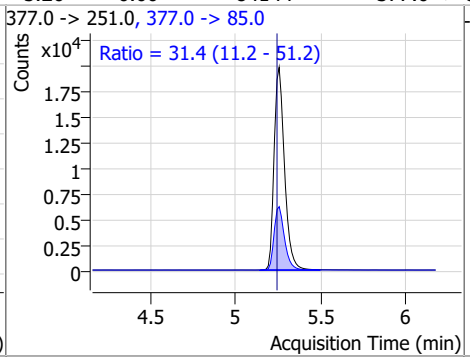


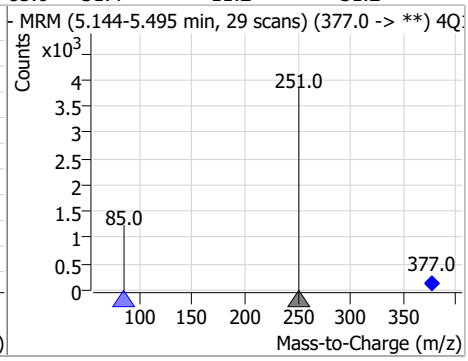


Perfluorinated Compounds by LC/MS/MS

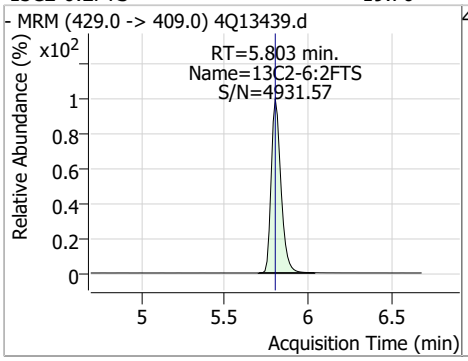
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	10.25	5.26	0.00	84144	377.0 -> 85.0	31.4	11.2	51.2

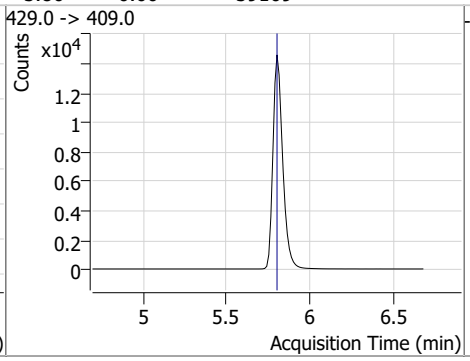


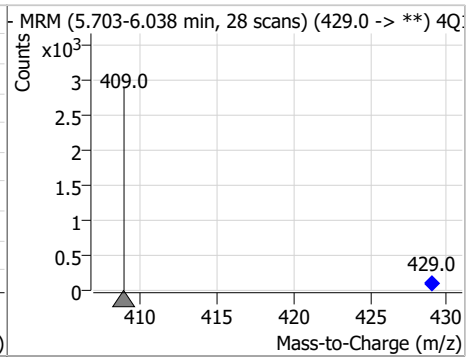




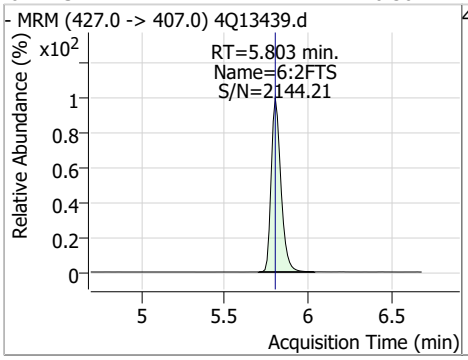
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.76	5.80	0.00	59109				

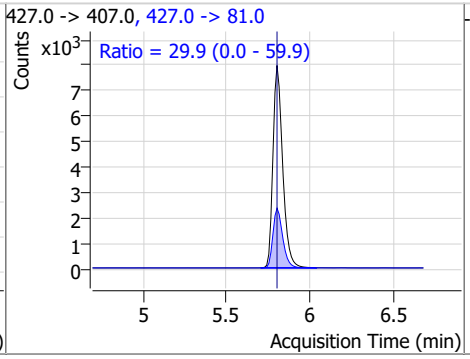


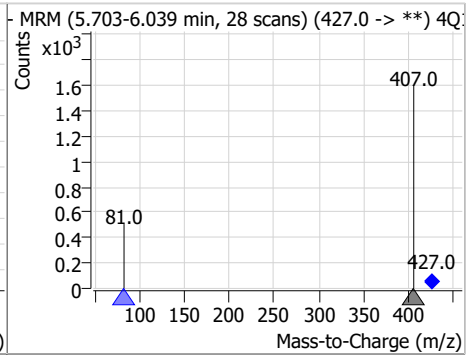




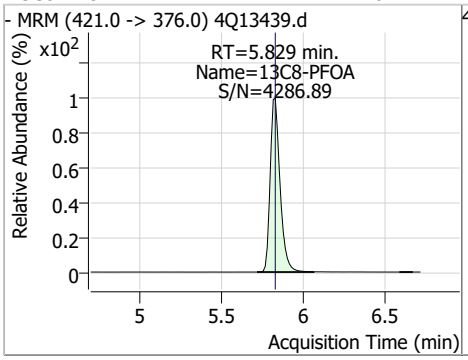
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	10.36	5.80	0.00	32240	427.0 -> 81.0	29.9	0.0	59.9

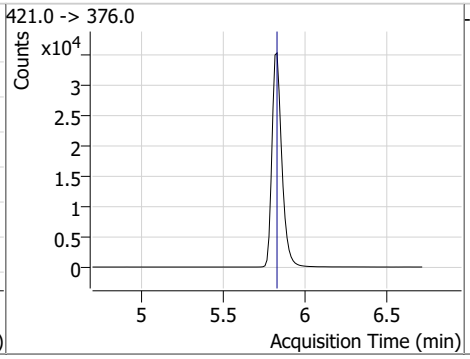


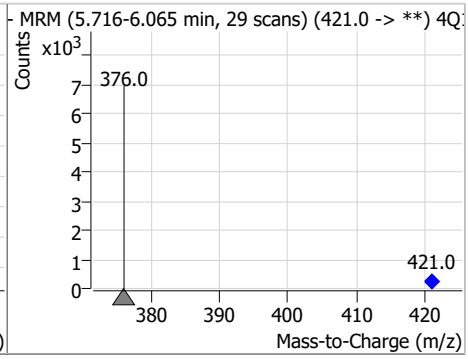




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.21	5.83	0.00	148457				

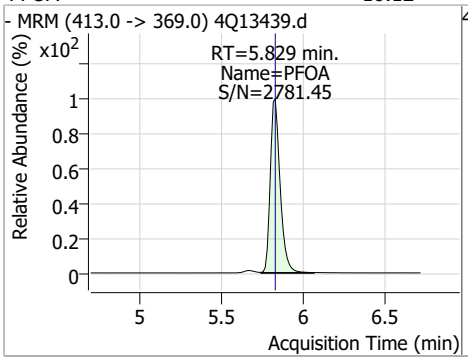


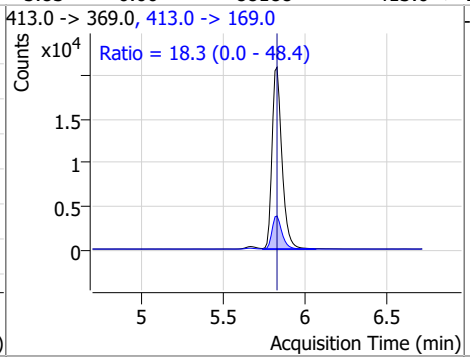


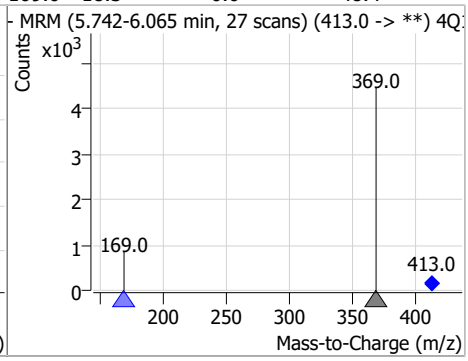


Perfluorinated Compounds by LC/MS/MS

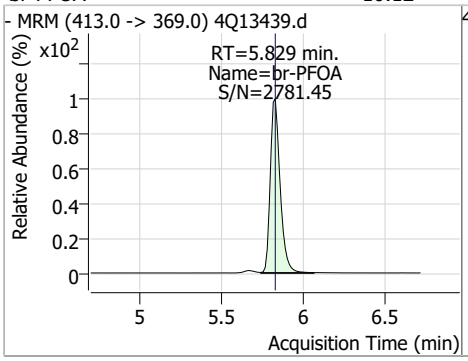
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	10.12	5.83	0.00	88188	413.0 -> 169.0	18.3	0.0	48.4

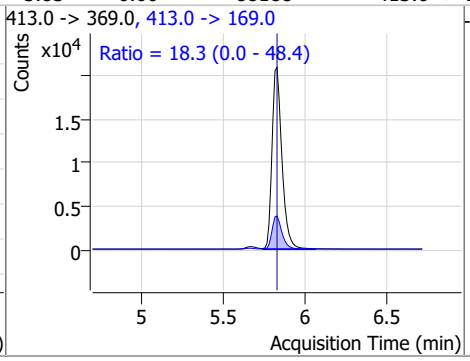


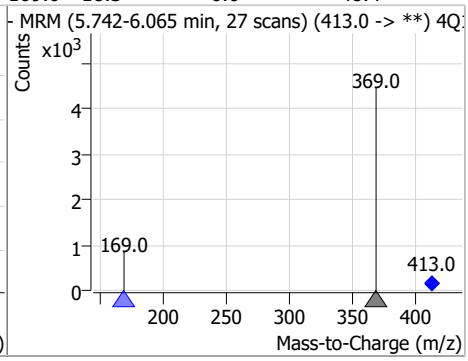




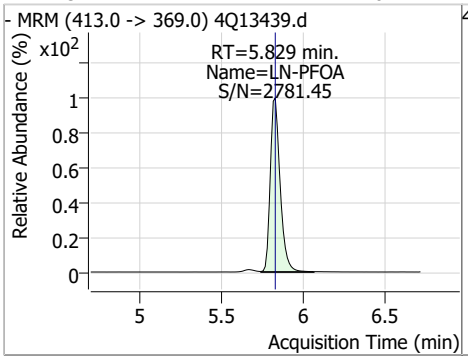
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	10.12	5.83	0.00	88188	413.0 -> 169.0	18.3	0.0	48.4

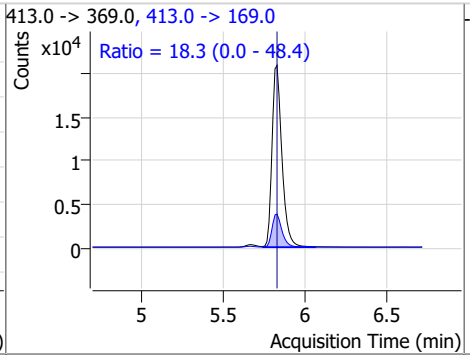


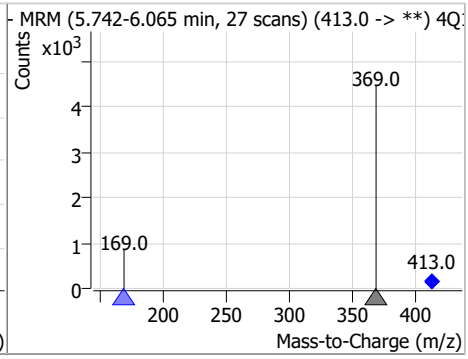




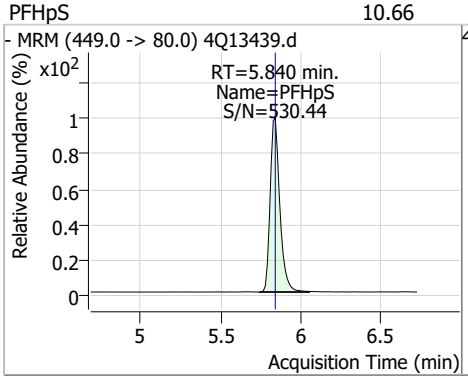
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	10.12	5.83	0.00	88188	413.0 -> 169.0	18.3	0.0	48.4

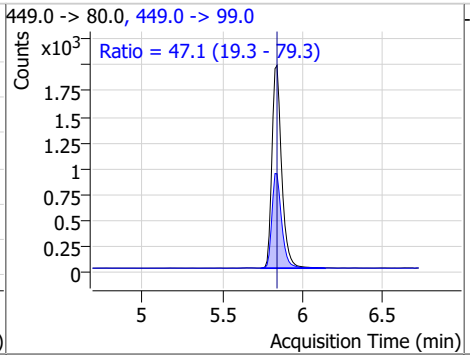


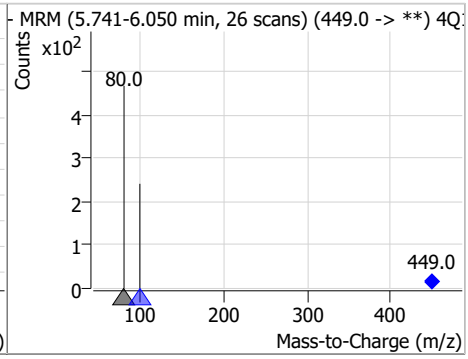




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	10.66	5.84	0.00	8160	449.0 -> 99.0	47.1	19.3	79.3

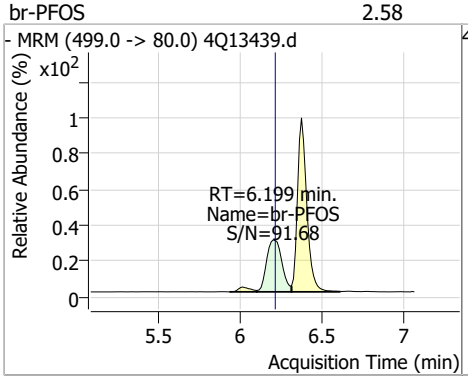


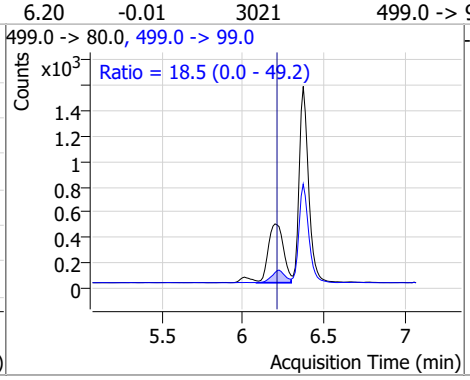


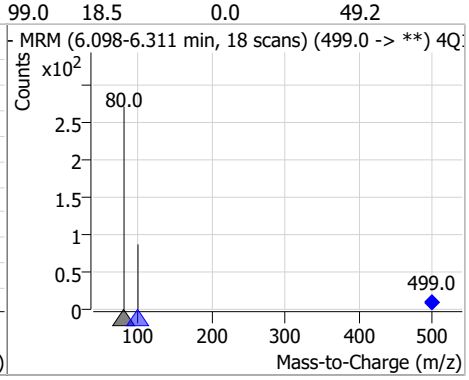


Perfluorinated Compounds by LC/MS/MS

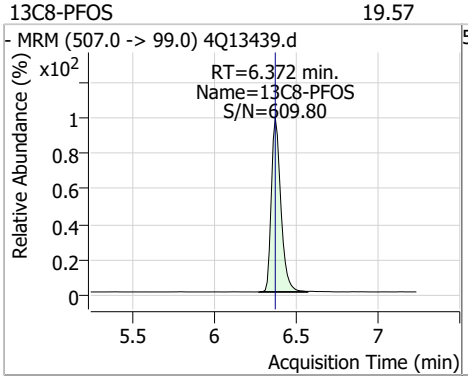
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	2.58	6.20	-0.01	3021	499.0 -> 99.0	18.5	0.0	49.2

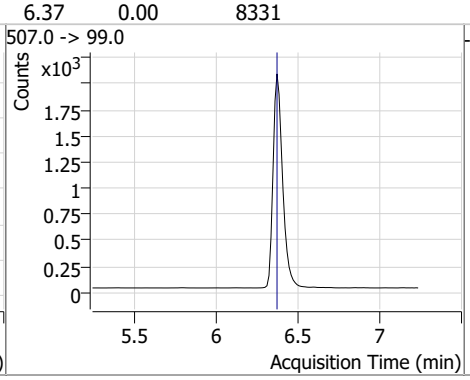


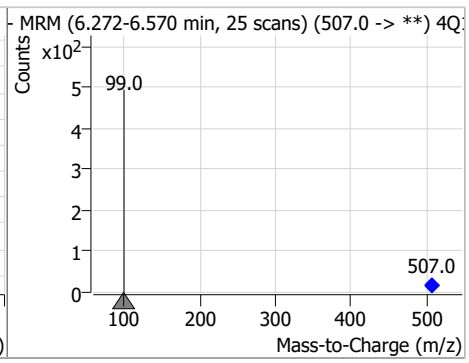




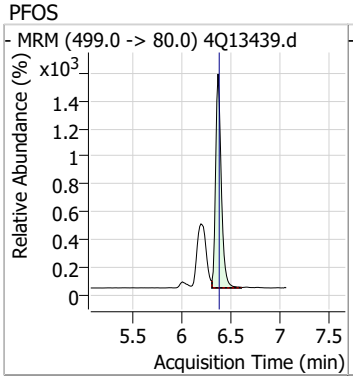
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.57	6.37	0.00	8331				

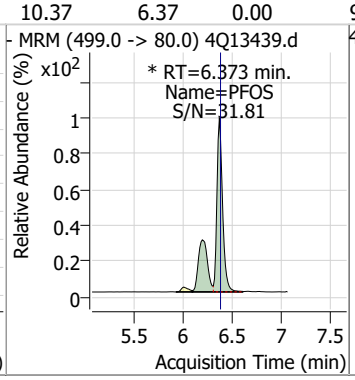


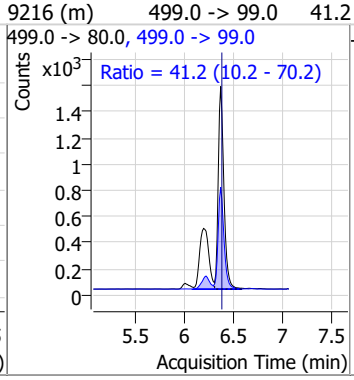


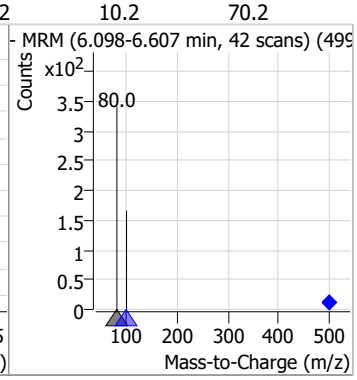


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	10.37	6.37	0.00	9216 (m)	499.0 -> 99.0	41.2	10.2	70.2

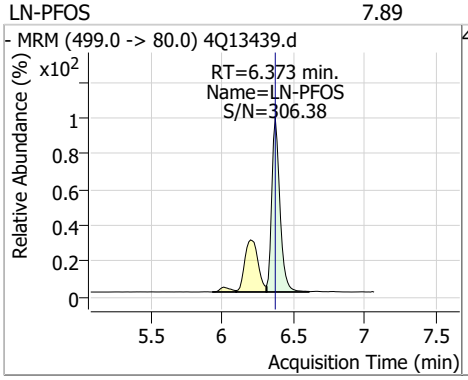


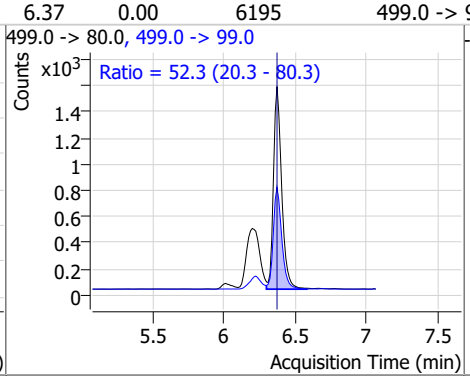


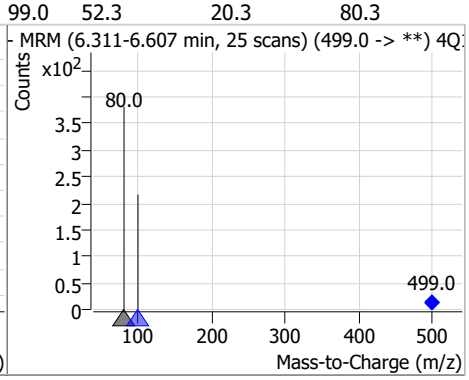




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	7.89	6.37	0.00	6195	499.0 -> 99.0	52.3	20.3	80.3

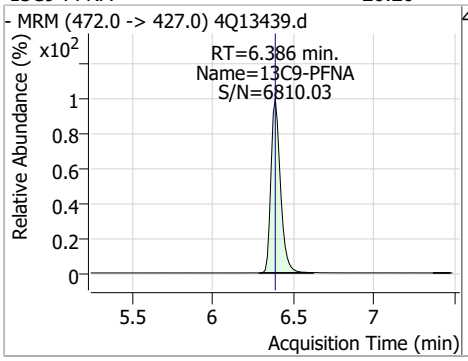


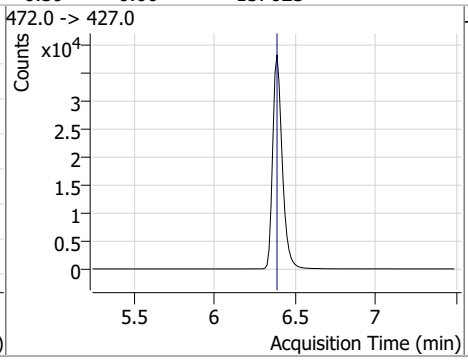


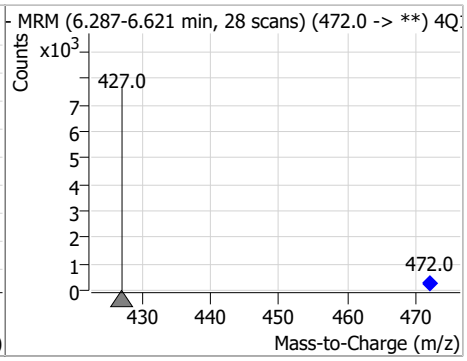


Perfluorinated Compounds by LC/MS/MS

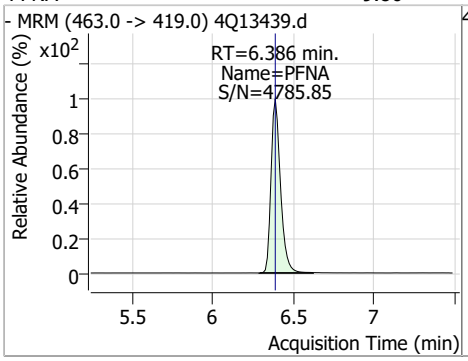
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.20	6.39	0.00	157623				

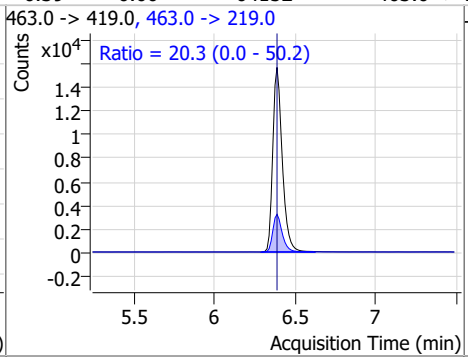


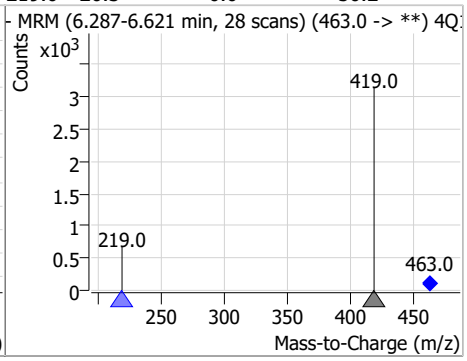




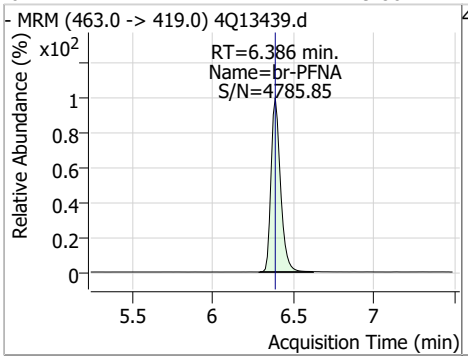
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	9.86	6.39	0.00	64152	463.0 -> 219.0	20.3	0.0	50.2

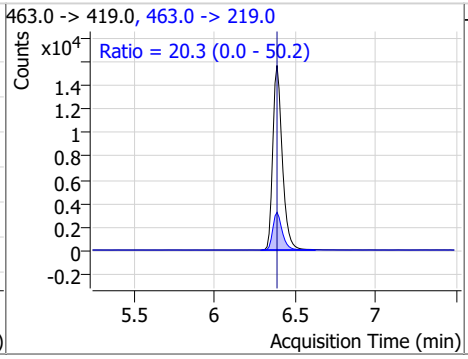


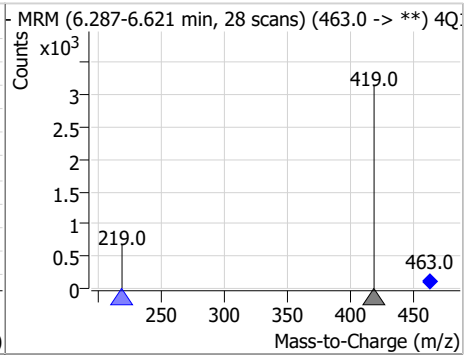




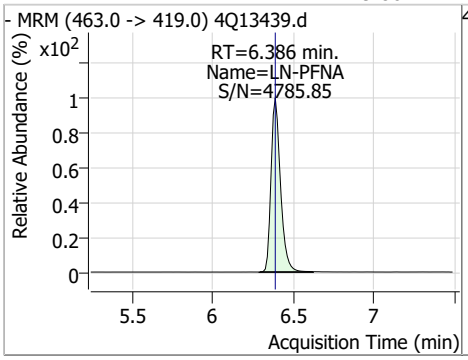
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFNA	9.86	6.39	0.00	64152	463.0 -> 219.0	20.3	0.0	50.2

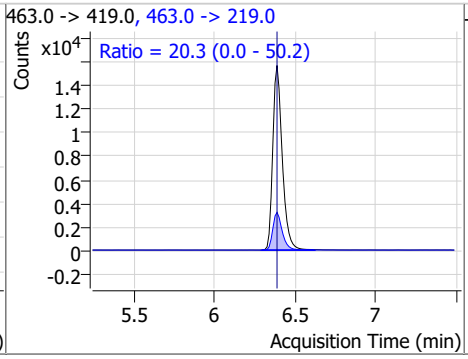


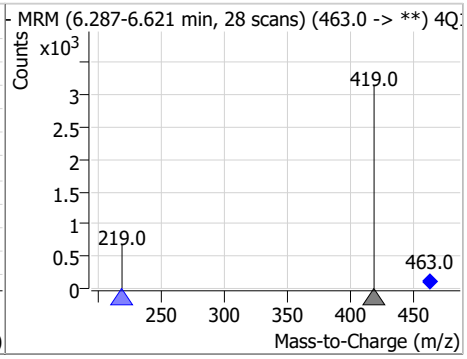




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	9.86	6.39	0.00	64152	463.0 -> 219.0	20.3	0.0	50.2

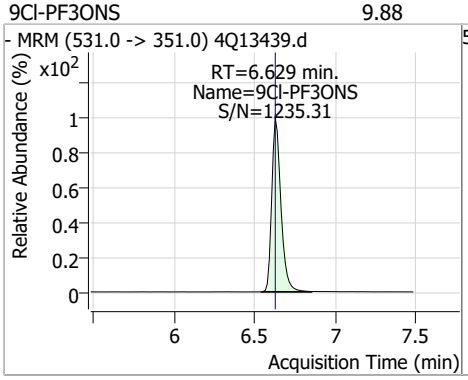


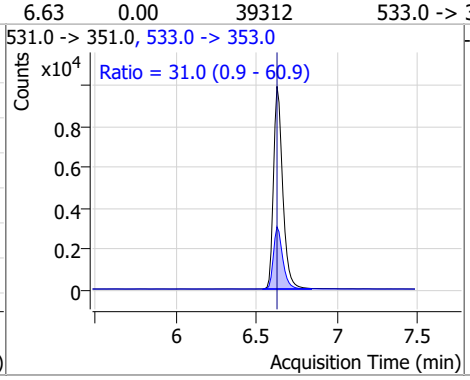


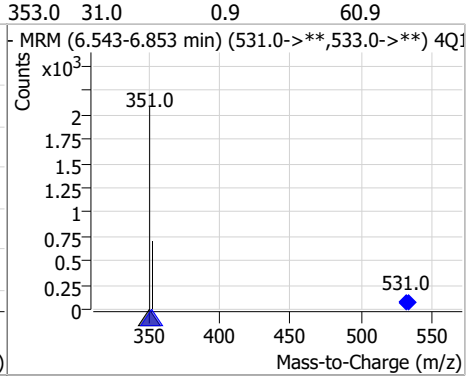


Perfluorinated Compounds by LC/MS/MS

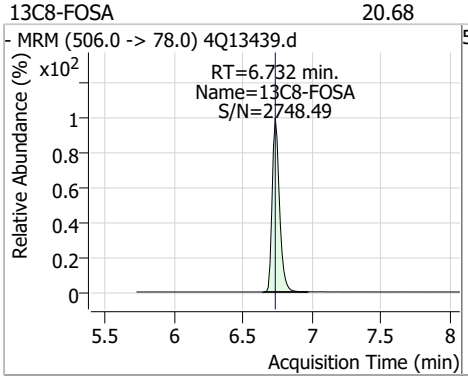
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	9.88	6.63	0.00	39312	533.0 -> 353.0	31.0	0.9	60.9

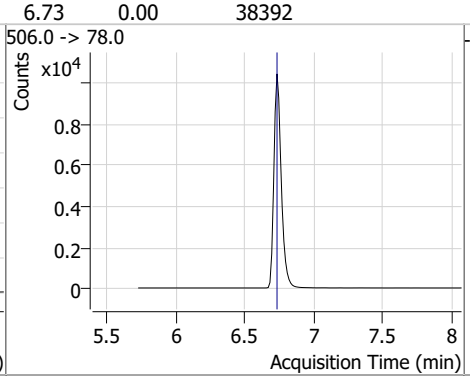


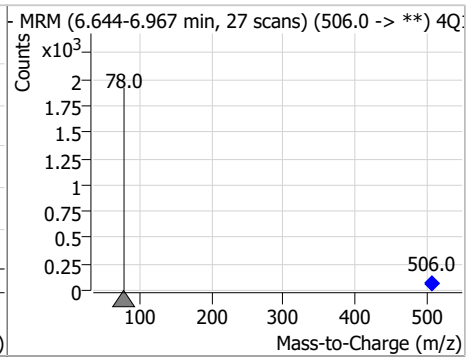




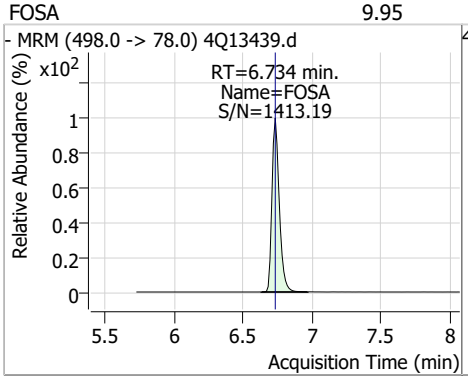
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.68	6.73	0.00	38392				

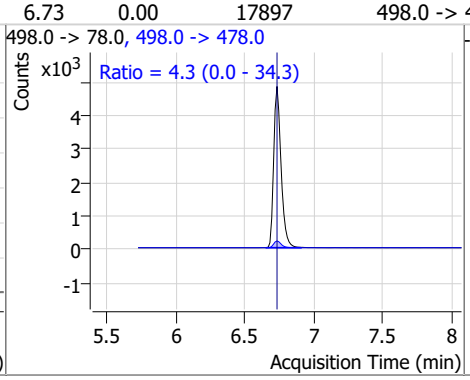


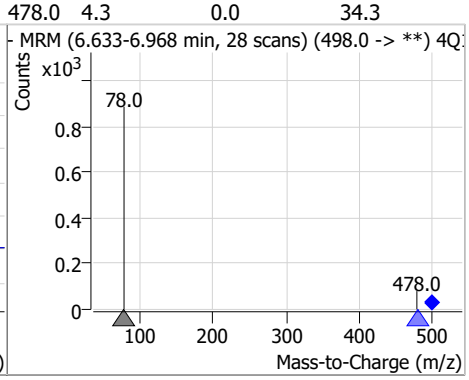




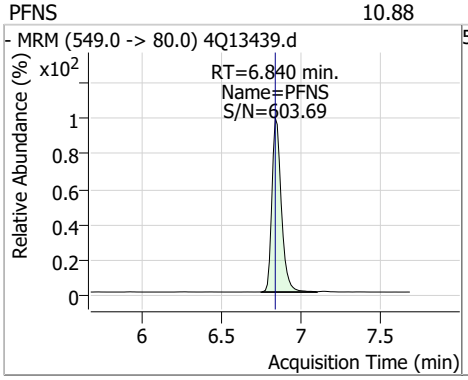
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	9.95	6.73	0.00	17897	498.0 -> 478.0	4.3	0.0	34.3

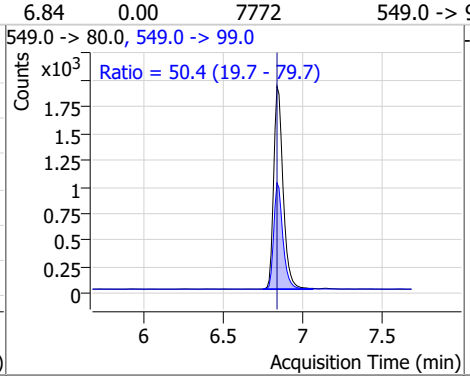


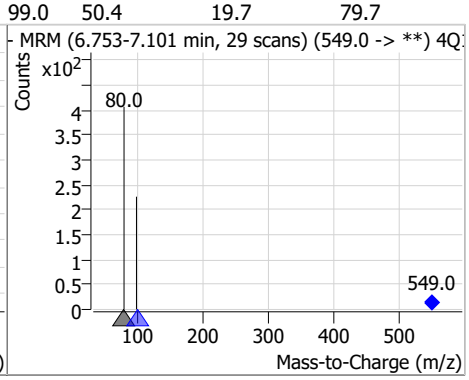




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	10.88	6.84	0.00	7772	549.0 -> 99.0	50.4	19.7	79.7

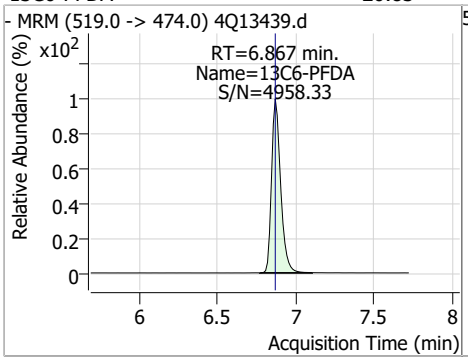


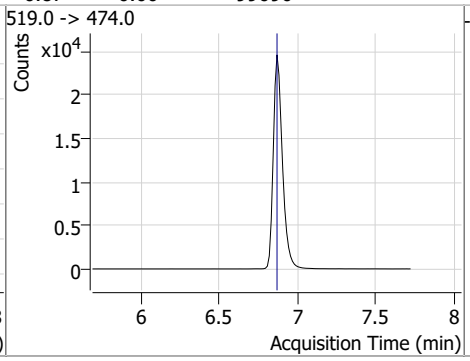


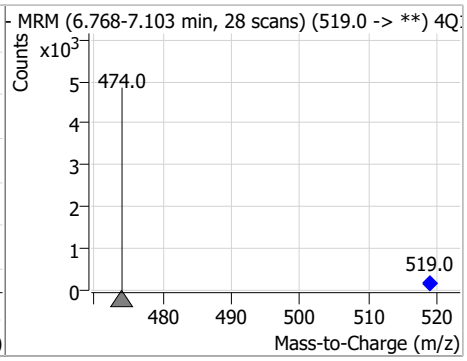


Perfluorinated Compounds by LC/MS/MS

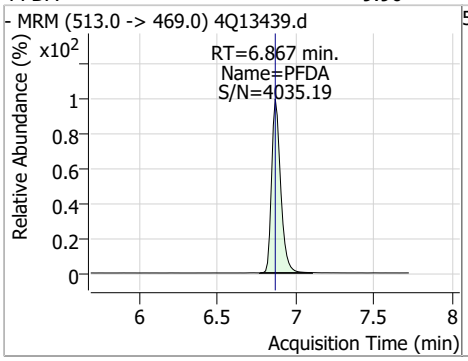
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.83	6.87	0.00	99690				

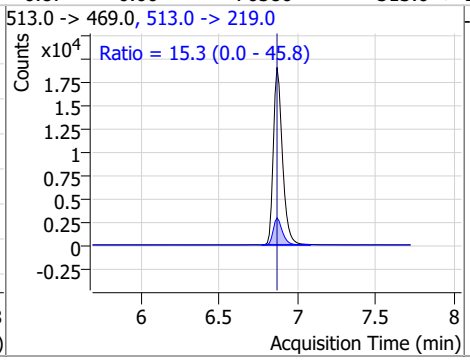


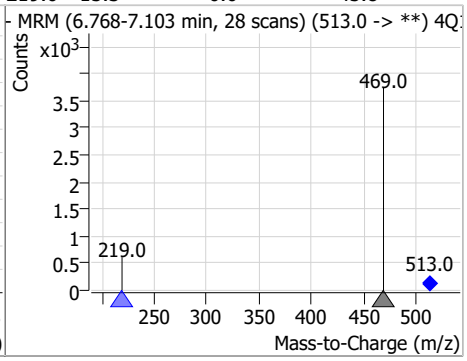




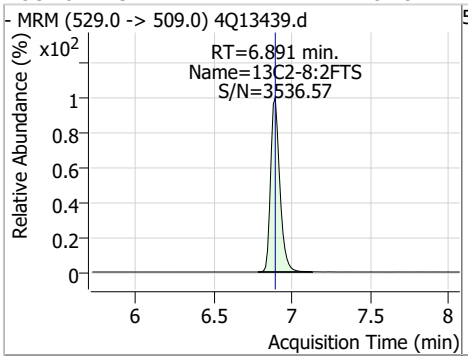
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	9.90	6.87	0.00	76580	513.0 -> 219.0	15.3	0.0	45.8

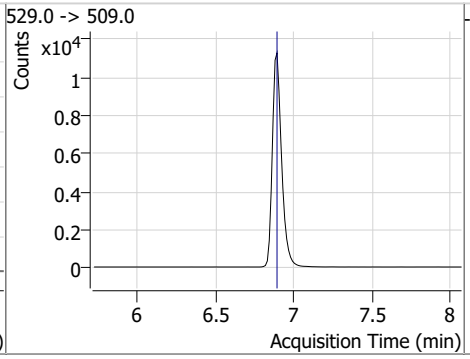


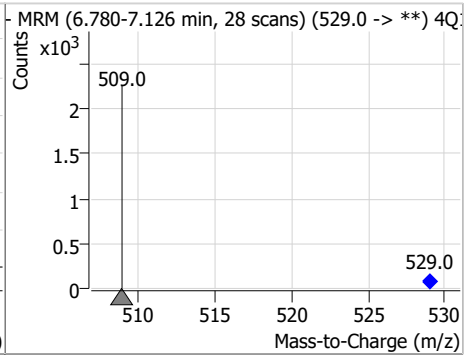




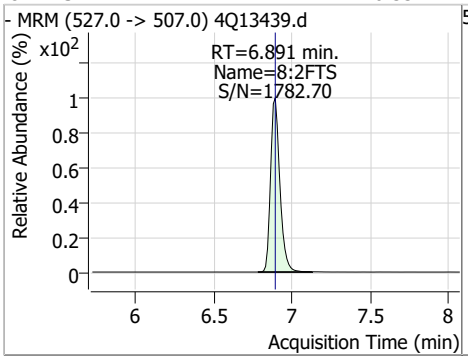
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.73	6.89	0.00	45973				

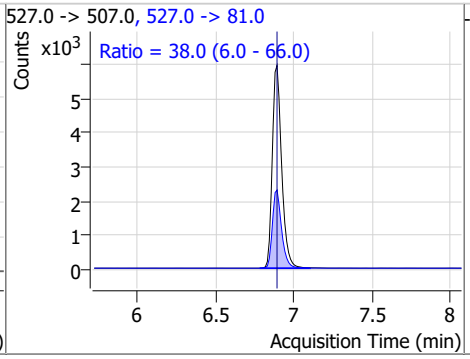


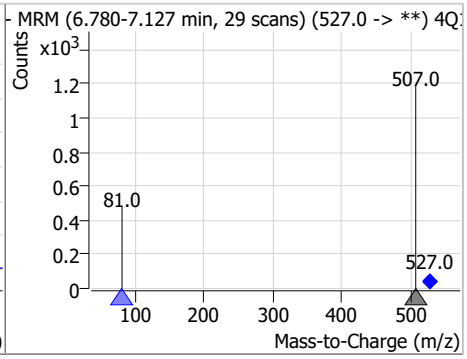




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	10.33	6.89	0.00	24569	527.0 -> 81.0	38.0	6.0	66.0

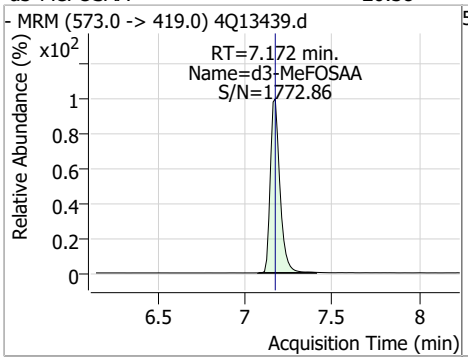


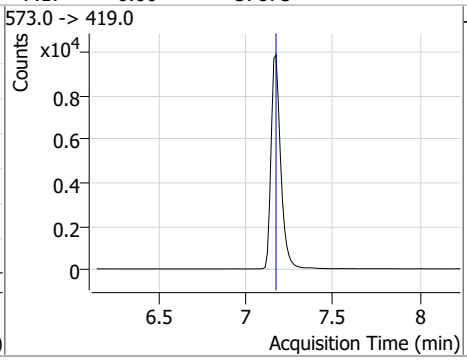


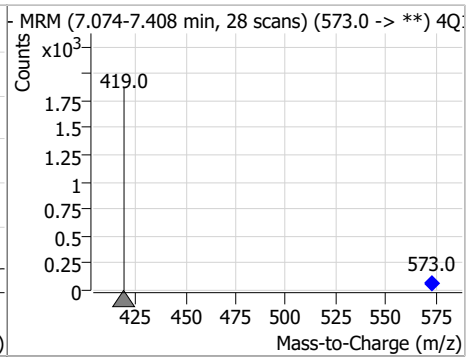


Perfluorinated Compounds by LC/MS/MS

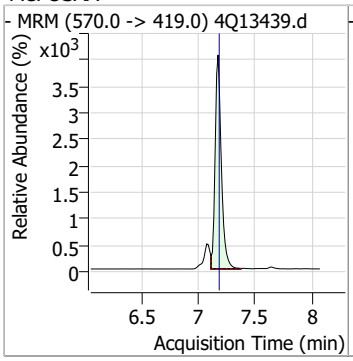
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.38	7.17	0.00	37875				

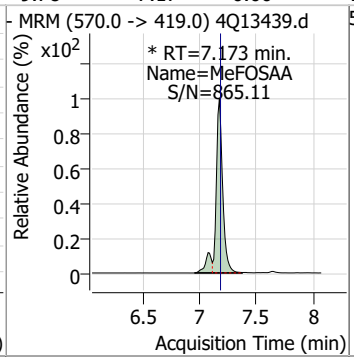


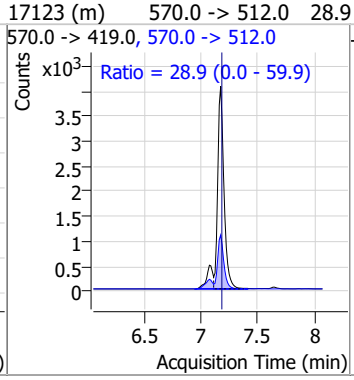


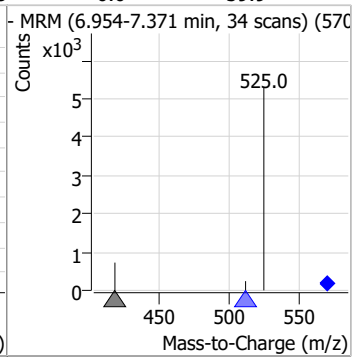


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	9.78	7.17	0.00	17123 (m)	570.0 -> 512.0	28.9	0.0	59.9

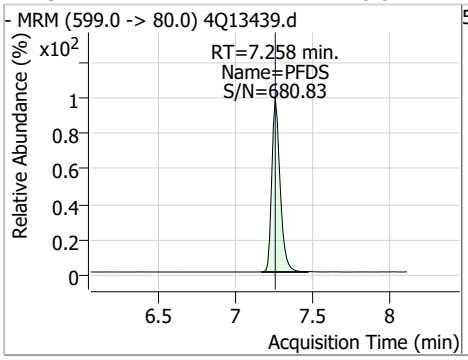


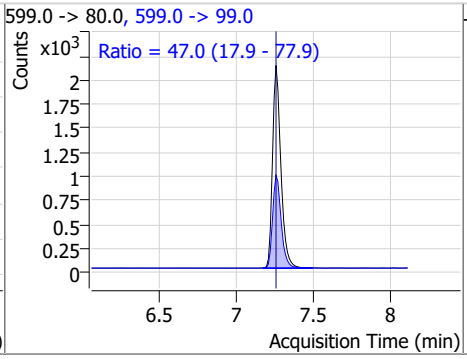


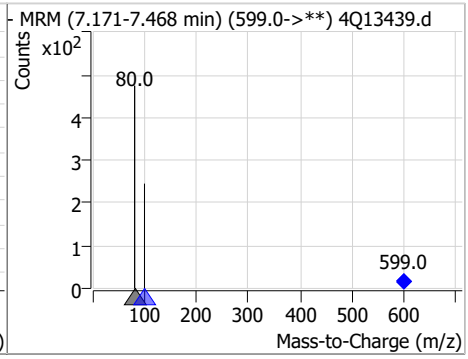




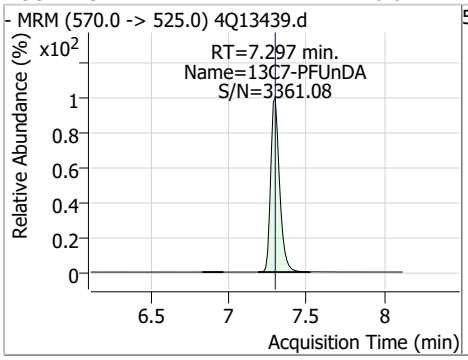
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	9.51	7.26	0.00	7967	599.0 -> 99.0	47.0	17.9	77.9

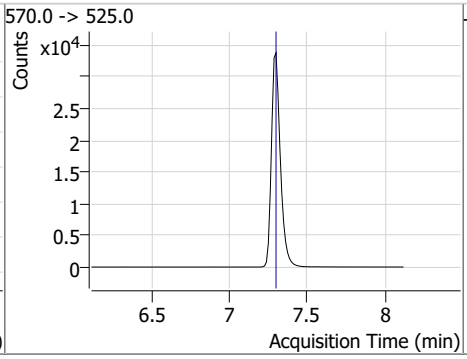


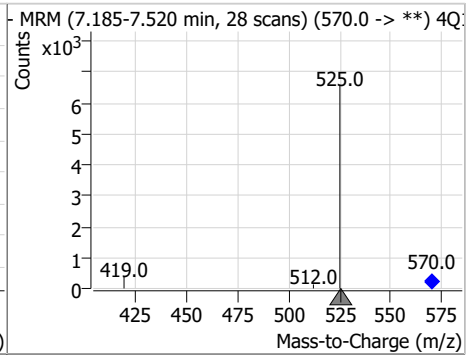




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.62	7.30	0.00	135076				

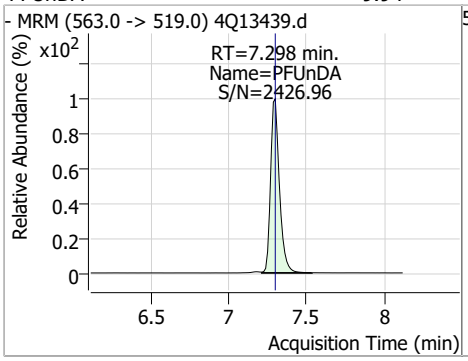


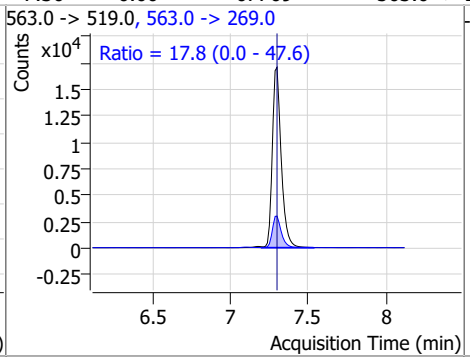


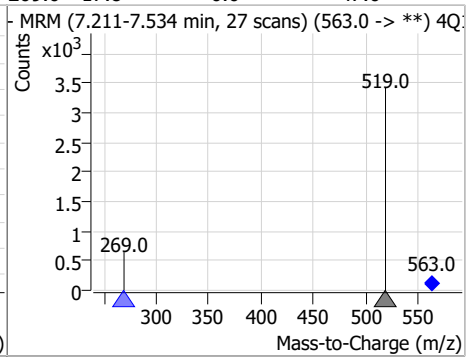


Perfluorinated Compounds by LC/MS/MS

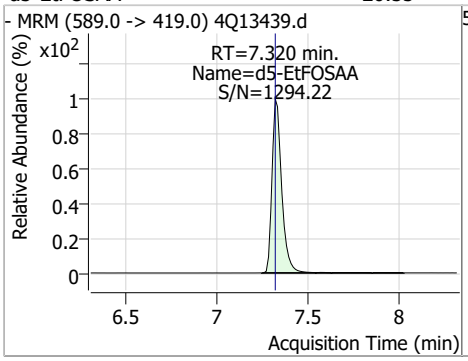
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	9.94	7.30	0.00	67769	563.0 -> 269.0	17.8	0.0	47.6

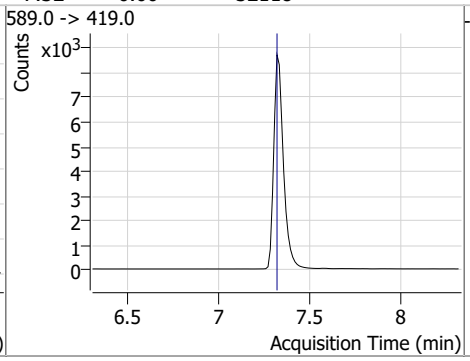


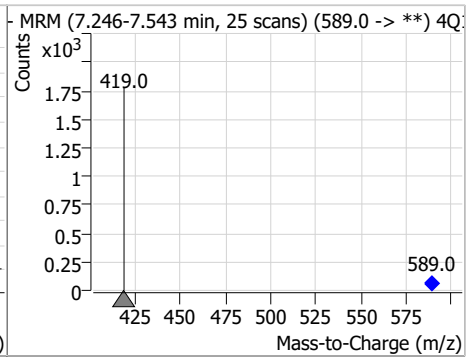




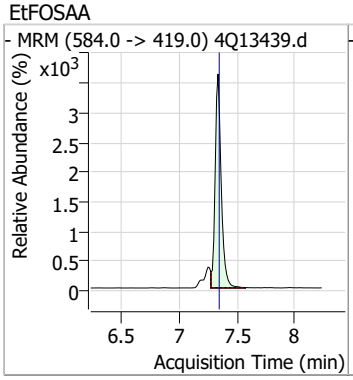
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.55	7.32	0.00	32118				

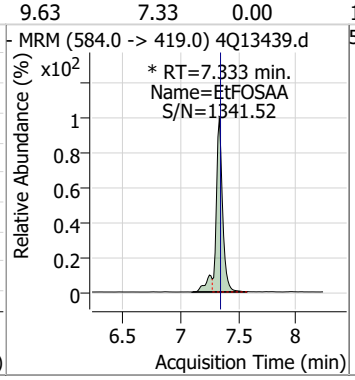


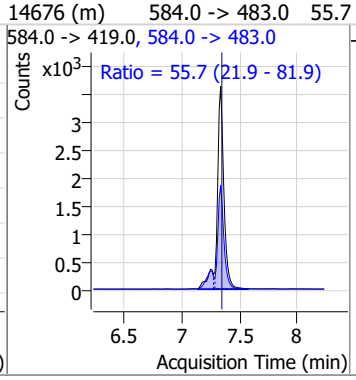


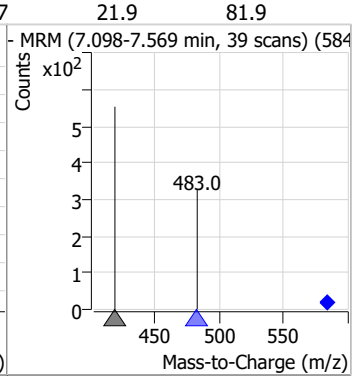


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	9.63	7.33	0.00	14676 (m)	584.0 -> 483.0	55.7	21.9	81.9

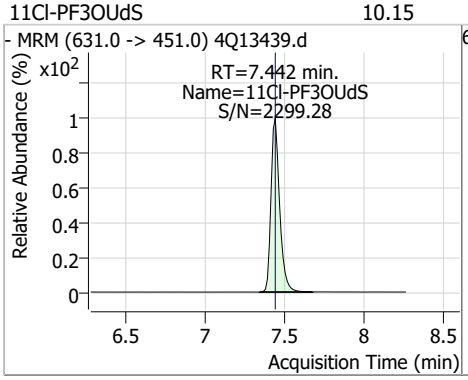


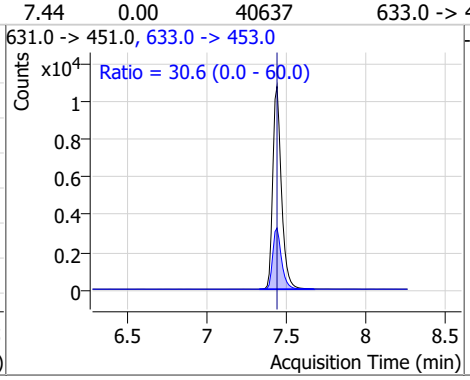


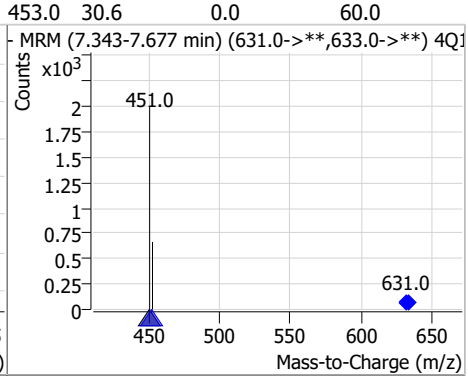




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	10.15	7.44	0.00	40637	633.0 -> 453.0	30.6	0.0	60.0

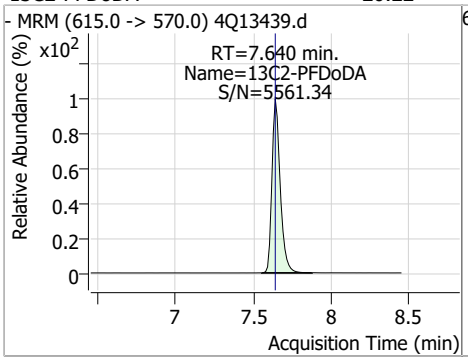


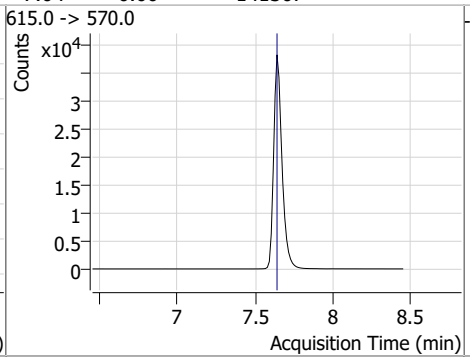


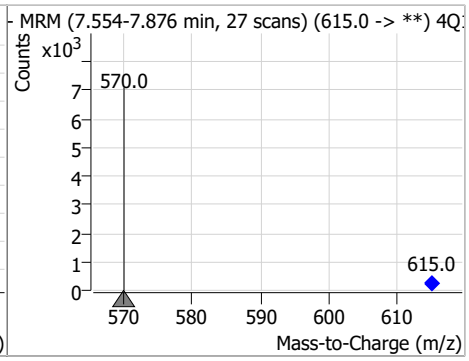


Perfluorinated Compounds by LC/MS/MS

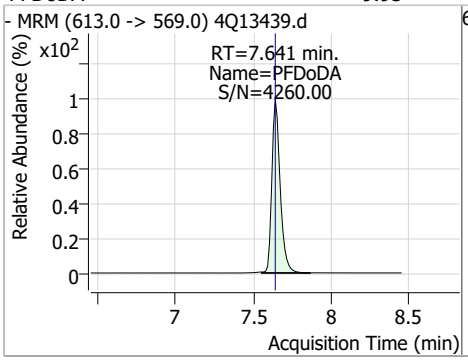
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.22	7.64	0.00	141367				

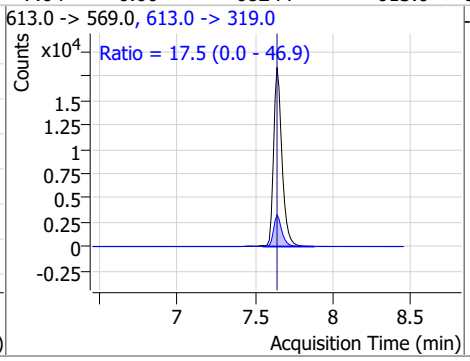


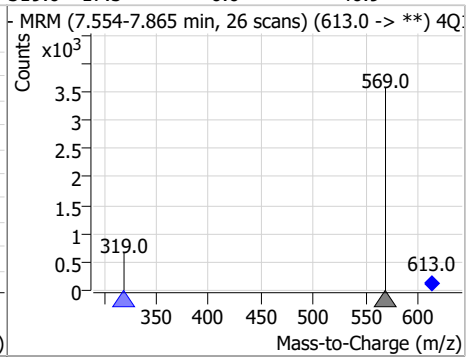




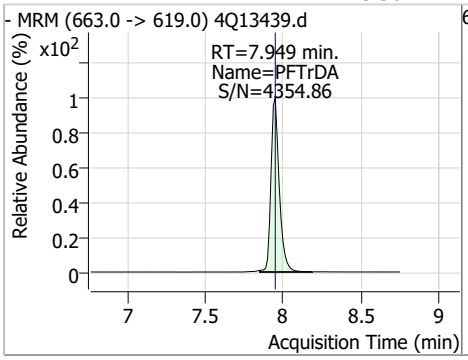
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	9.93	7.64	0.00	68244	613.0 -> 319.0	17.5	0.0	46.9

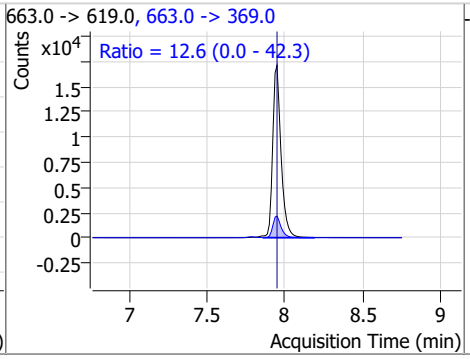


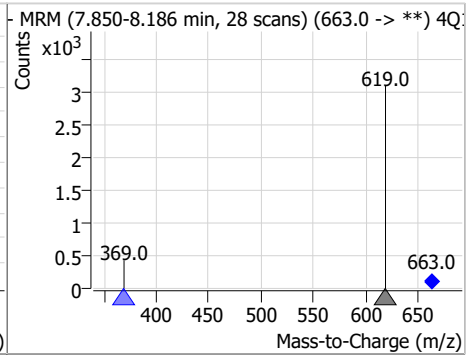




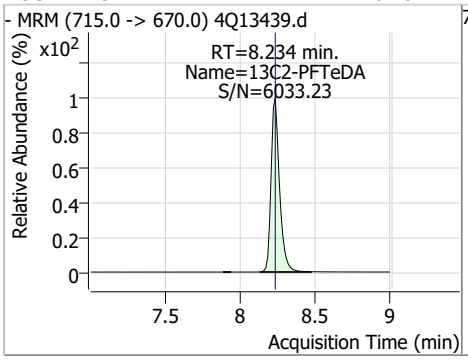
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	9.90	7.95	0.00	63618	663.0 -> 369.0	12.6	0.0	42.3

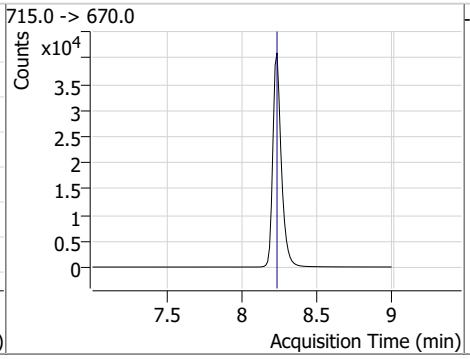


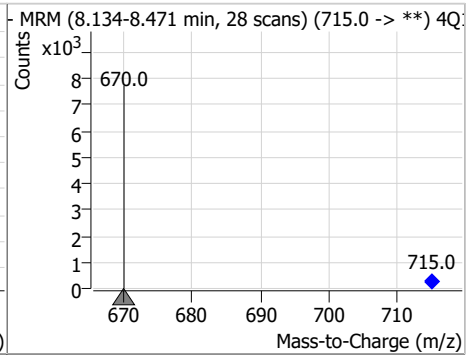




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.45	8.23	0.00	160482				

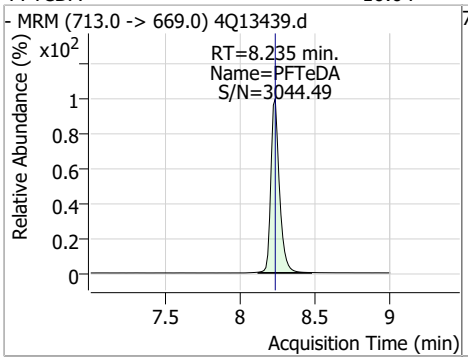


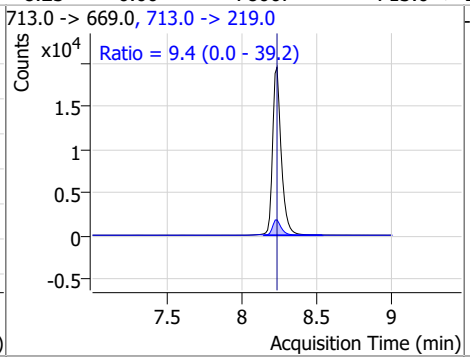


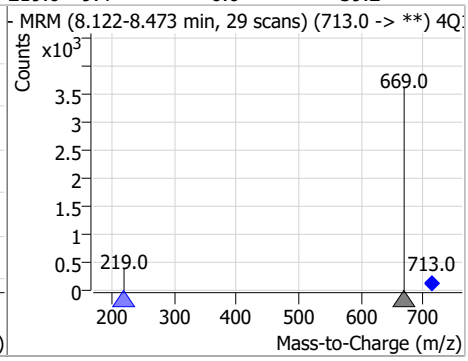


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	10.04	8.23	0.00	78007	713.0 -> 219.0	9.4	0.0	39.2







Manual Integration Approval Summary

Sample Number: S4Q189-IC189
Lab FileID: 4Q13439.D
Injection Time: 04/18/21 15:43
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/19/21 07:57 Nancy Saunders
Supervisor approved: 04/19/21 15:40 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.19	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.37	Split peak
MeFOSAA	2355-31-9		7.17	Split peak
EtFOSAA	2991-50-6		7.33	Split peak

4Q13440.D

Manual Integrations APPROVED (compounds with "m" flag)

Mike Eger 04/19/21 15:40

Perfluorinated Compounds by LC/MS/MS

Data File	:	4Q13440.d
Operator	:	natashag
Acq. Method	:	537_ID.m
Acq. Date-Time	:	4/18/2021 3:58:27 PM
Sample Name	:	icc189-20
Vial	:	P1-A7
DA Method File	:	BR_LN_041821_S4Q189.quantmethod.xml
Batch Name	:	s4q189.batch.bin
Sample Information	:	op84918,S4Q189,250,,,1,1,water

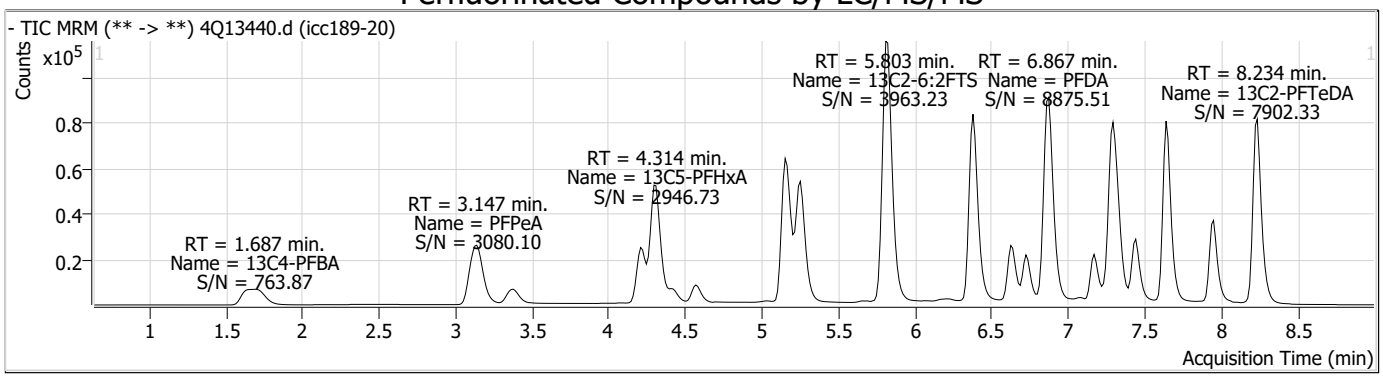
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
M4-PFBA	1.687	217.0 -> 172.0	50829	20.00 µg/L	0.000
M5-PFPeA	3.145	268.0 -> 223.0	91924	20.00 µg/L	0.000
M5-PFHxA	4.314	318.0 -> 273.0	125790	20.00 µg/L	0.000
M4-PFHpA	5.157	367.0 -> 322.0	110172	20.00 µg/L	0.000
M8-PFOA	5.829	421.0 -> 376.0	153453	20.00 µg/L	0.000
M9-PFNA	6.386	472.0 -> 427.0	163261	20.00 µg/L	0.000
M6-PFDA	6.867	519.0 -> 474.0	100906	20.00 µg/L	0.000
M7-PFUnDA	7.297	570.0 -> 525.0	133736	20.00 µg/L	0.000
M2-PFDoDA	7.640	615.0 -> 570.0	144696	20.00 µg/L	0.000
M2-PFTeDA	8.234	715.0 -> 670.0	162965	20.00 µg/L	0.000
M8-FOSA	6.732	506.0 -> 78.0	38331	20.00 µg/L	0.000
M3-PFBS	3.381	302.0 -> 99.0	7160	20.00 µg/L	0.000
M3-PFHxS	5.204	402.0 -> 99.0	6724	20.00 µg/L	0.000
M8-PFOS	6.372	507.0 -> 99.0	9005	20.00 µg/L	0.000
M2-4:2FTS	4.212	329.0 -> 309.0	46427	20.00 µg/L	0.000
M2-6:2FTS	5.803	429.0 -> 409.0	60847	20.00 µg/L	0.000
M2-8:2FTS	6.891	529.0 -> 509.0	48712	20.00 µg/L	0.000
M3-MeFOSAA	7.173	573.0 -> 419.0	38556	20.00 µg/L	0.000
M3-HFPO-DA	4.578	287.0 -> 169.0	7088	20.00 µg/L	0.000
M5-EtFOSAA	7.320	589.0 -> 419.0	32284	20.00 µg/L	0.000
System Monitoring Compounds					
13C2-4:2FTS	4.212	329.0 -> 309.0	46427	20.43 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.2%	
13C2-6:2FTS	5.803	429.0 -> 409.0	60847	20.34 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.7%	
13C2-8:2FTS	6.891	529.0 -> 509.0	48712	20.90 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.5%	
13C2-PFDoDA	7.640	615.0 -> 570.0	144696	20.70 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.5%	
13C2-PFTeDA	8.234	715.0 -> 670.0	162965	20.77 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.8%	
13C3-PFBS	3.381	302.0 -> 99.0	7160	21.00 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.0%	
13C3-PFHxS	5.204	402.0 -> 99.0	6724	20.87 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.3%	
13C4-PFBA	1.687	217.0 -> 172.0	50829	20.58 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.9%	
13C4-PFHpA	5.157	367.0 -> 322.0	110172	20.67 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.3%	
13C5-PFHxA	4.314	318.0 -> 273.0	125790	20.63 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.1%	
13C5-PFPeA	3.145	268.0 -> 223.0	91924	20.69 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.5%	
13C6-PFDA	6.867	519.0 -> 474.0	100906	21.08 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.4%	

Perfluorinated Compounds by LC/MS/MS

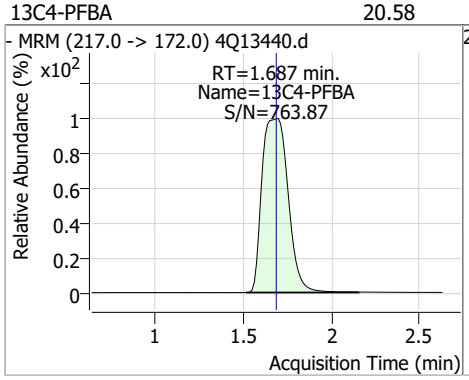
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	7.297	570.0 -> 525.0	133736	20.41	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.1%			
13C8-FOSA	6.732	506.0 -> 78.0	38331	20.65	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.3%			
13C8-PFOA	5.829	421.0 -> 376.0	153453	20.89	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.5%			
13C8-PFOS	6.372	507.0 -> 99.0	9005	21.15	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.8%			
13C9-PFNA	6.386	472.0 -> 427.0	163261	20.93	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.6%			
d3-MeFOSAA	7.173	573.0 -> 419.0	38556	20.74	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.7%			
13C3-HFPO-DA	4.578	287.0 -> 169.0	7089	20.32	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.6%			
d5-EtFOSAA	7.320	589.0 -> 419.0	32260	20.65	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.2%			
Target Compounds							QValue
4:2FTS	4.214	327.0 -> 307.0	46192	18.61	µg/L		100
6:2FTS	5.803	427.0 -> 407.0	60905	19.01	µg/L		100
8:2FTS	6.891	527.0 -> 507.0	47258	18.76	µg/L		100
EtFOSAA	7.333	584.0 -> 419.0	27535	17.96	µg/L	m	100
FOSA	6.734	498.0 -> 78.0	32794	18.27	µg/L		100
MeFOSAA	7.173	570.0 -> 419.0	31691	17.78	µg/L	m	100
PFBA	1.694	213.0 -> 169.0	20445	18.43	µg/L		100
PFBS	3.383	299.0 -> 80.0	21407	18.31	µg/L		100
PFDA	6.867	513.0 -> 469.0	143230	18.29	µg/L		100
PFDoDA	7.641	613.0 -> 569.0	129330	18.39	µg/L		100
PFDS	7.258	599.0 -> 80.0	14690	17.72	µg/L		100
PFHpA	5.157	363.0 -> 319.0	131082	18.21	µg/L		100
PFHpS	5.840	449.0 -> 80.0	15189	18.36	µg/L		100
PFHxA	4.315	313.0 -> 269.0	106439	18.53	µg/L		100
PFHxS	5.205	399.0 -> 80.0	15877	18.61	µg/L	m	100
PFNA	6.386	463.0 -> 419.0	122147	18.13	µg/L		100
PFNS	6.840	549.0 -> 80.0	14703	19.04	µg/L		100
PFOA	5.829	413.0 -> 369.0	165448	18.37	µg/L		100
PFOS	6.373	499.0 -> 80.0	17192	17.90	µg/L	m	100
PFPeA	3.147	263.0 -> 219.0	72671	18.31	µg/L		100
PFPeS	4.423	349.0 -> 80.0	15122	17.79	µg/L		100
PFTeDA	8.235	713.0 -> 669.0	147158	18.66	µg/L		100
PFTrDA	7.949	663.0 -> 619.0	119878	18.37	µg/L		100
PFUnDA	7.298	563.0 -> 519.0	127160	18.83	µg/L		100
11Cl-PF3OUdS	7.442	631.0 -> 451.0	76554	18.68	µg/L		100
9Cl-PF3ONS	6.629	531.0 -> 351.0	73584	18.15	µg/L		100
ADONA	5.257	377.0 -> 251.0	159653	18.56	µg/L		100
HFPO-DA	4.574	329.0 -> 169.0	20426	17.96	µg/L		100
br-PFOS	6.211	499.0 -> 80.0	5595	4.40	µg/L		100
LN-PFOS	6.373	499.0 -> 80.0	11596	13.66	µg/L		100
br-PFHxS	5.031	399.0 -> 80.0	2248	2.22	µg/L		100
LN-PFHxS	5.205	399.0 -> 80.0	13630	16.39	µg/L		100
br-PFOA	5.829	413.0 -> 369.0	165448	18.37	µg/L		100
LN-PFOA	5.829	413.0 -> 369.0	165448	18.37	µg/L		100
br-PFNA	6.386	463.0 -> 419.0	122147	18.13	µg/L		100
LN-PFNA	6.386	463.0 -> 419.0	122147	18.13	µg/L		100

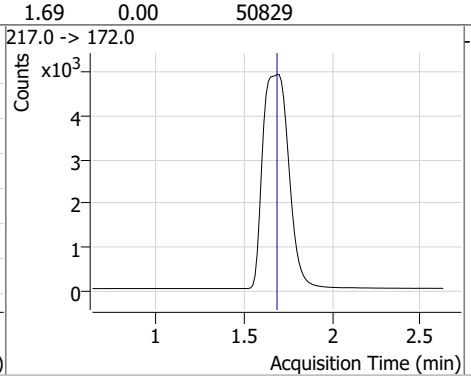
 # = Qualifier out of range, m = manually integrated, + = Area summed

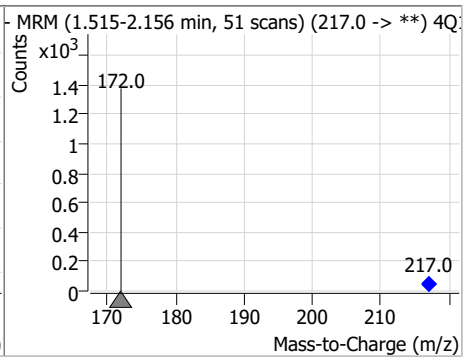
Perfluorinated Compounds by LC/MS/MS



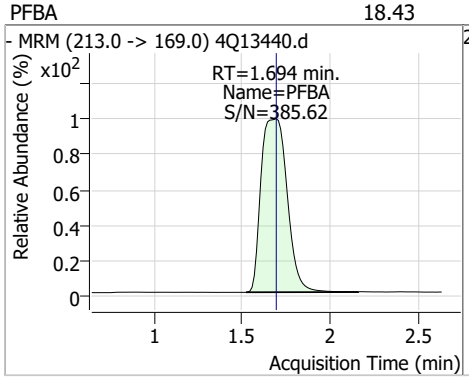
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13C4-PFBA	20.58	1.69	0.00	50829				

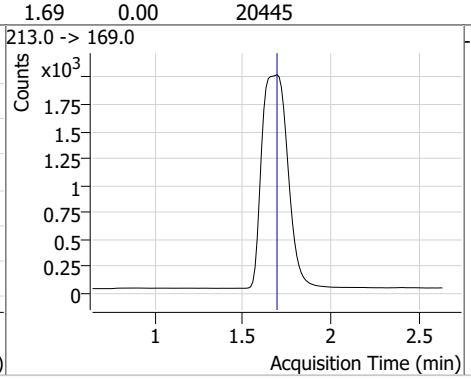


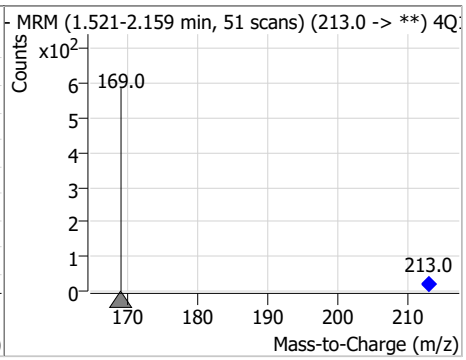




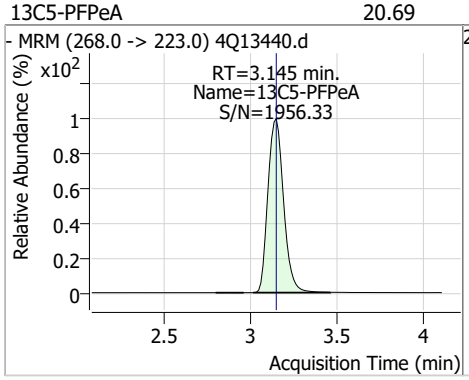
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	18.43	1.69	0.00	20445				

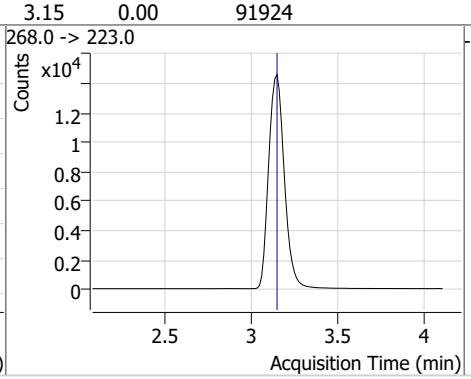


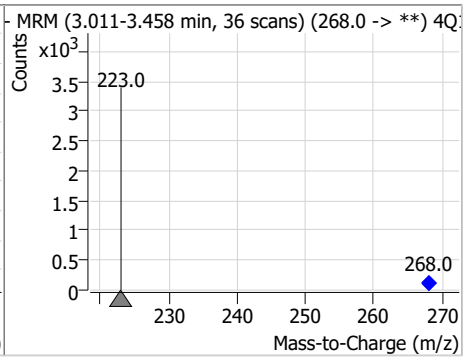




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.69	3.15	0.00	91924				

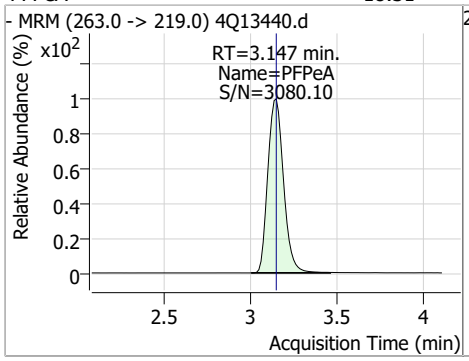


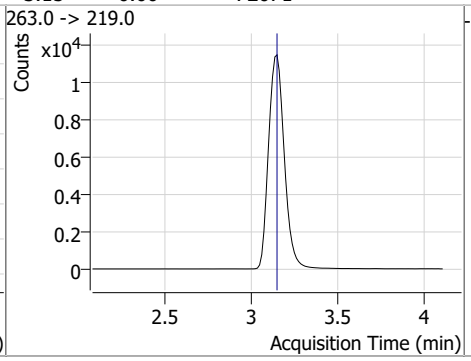


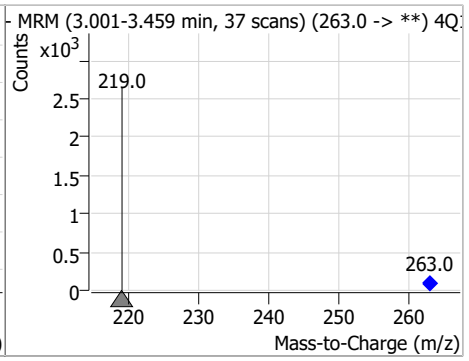


Perfluorinated Compounds by LC/MS/MS

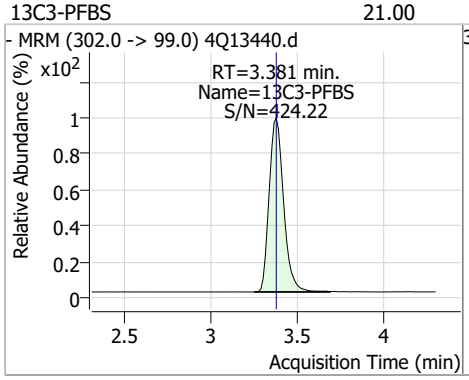
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	18.31	3.15	0.00	72671				

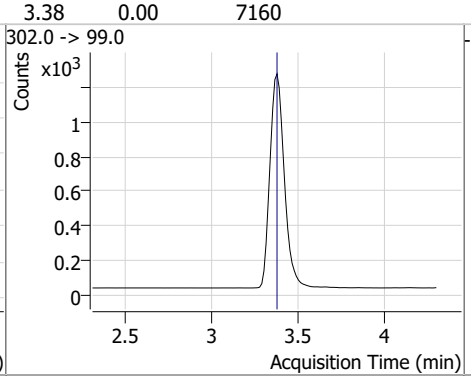


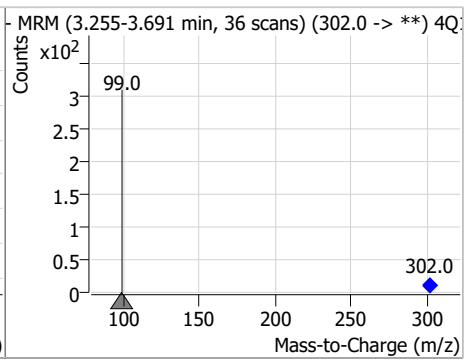




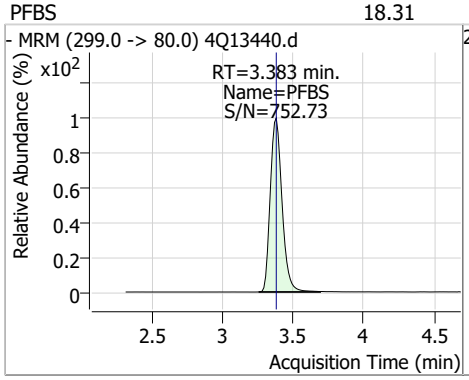
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	21.00	3.38	0.00	7160				

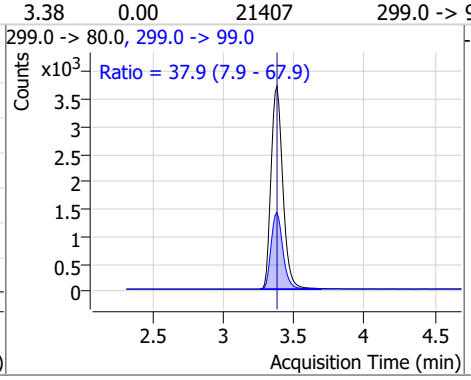


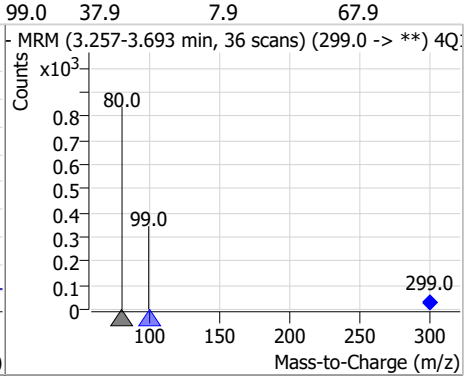




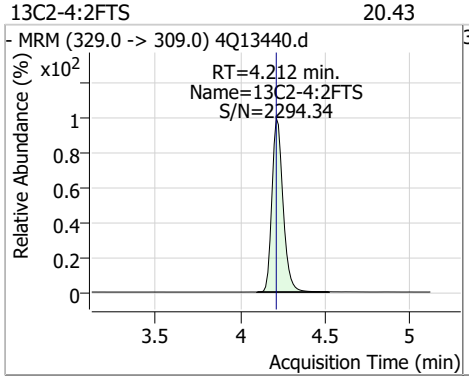
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	18.31	3.38	0.00	21407	299.0 -> 99.0	37.9	7.9	67.9

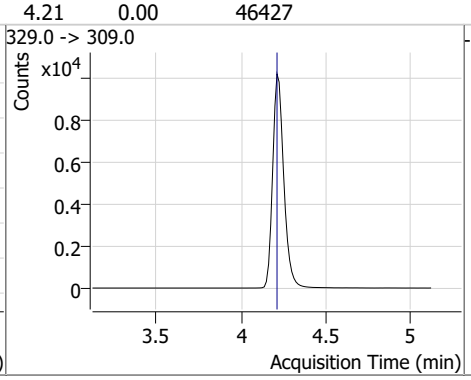


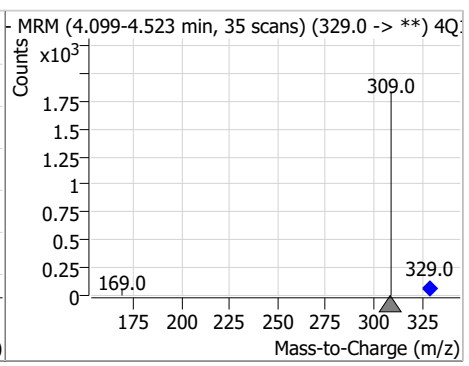




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	20.43	4.21	0.00	46427				



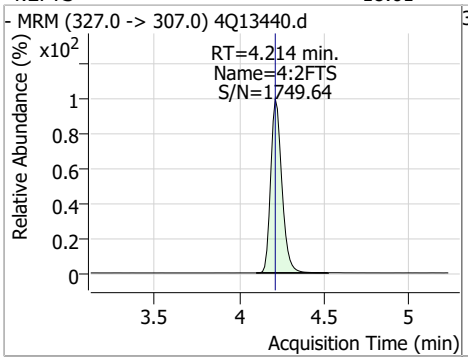


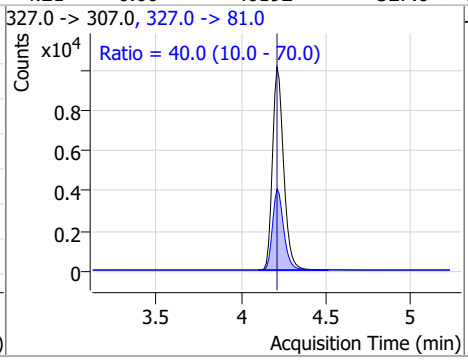


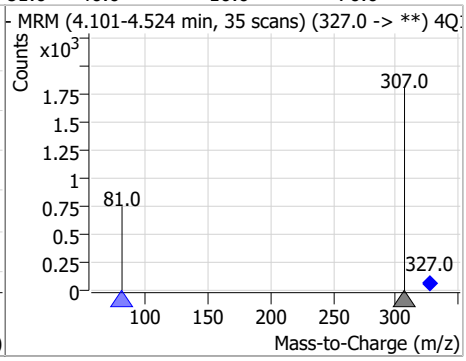
11.6.37 11

Perfluorinated Compounds by LC/MS/MS

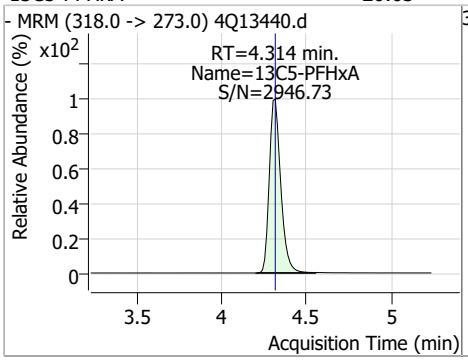
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	18.61	4.21	0.00	46192	327.0 -> 81.0	40.0	10.0	70.0

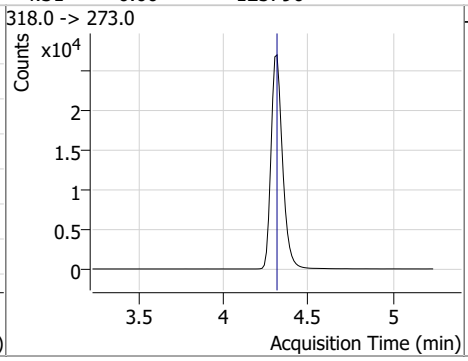


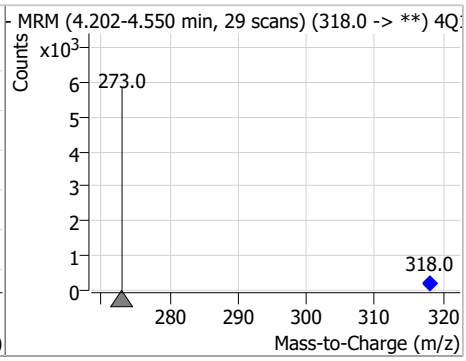




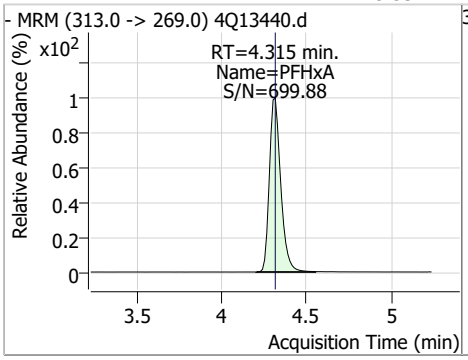
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.63	4.31	0.00	125790				

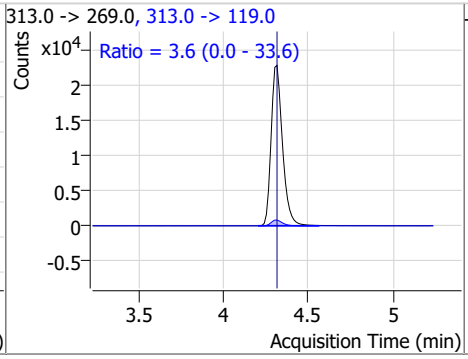


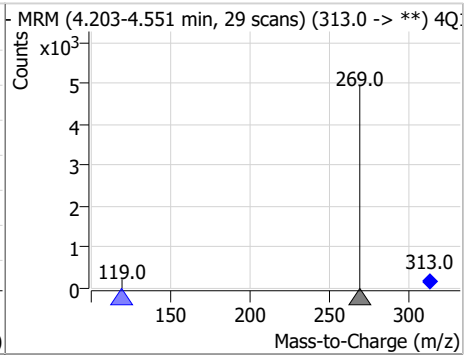




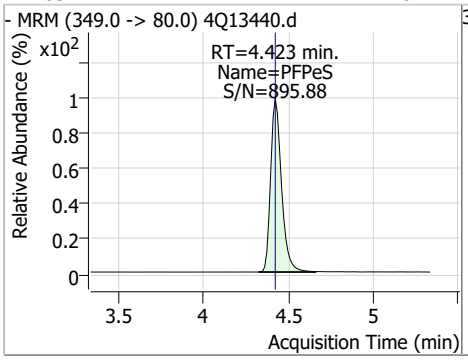
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	18.53	4.32	0.00	106439	313.0 -> 119.0	3.6	0.0	33.6

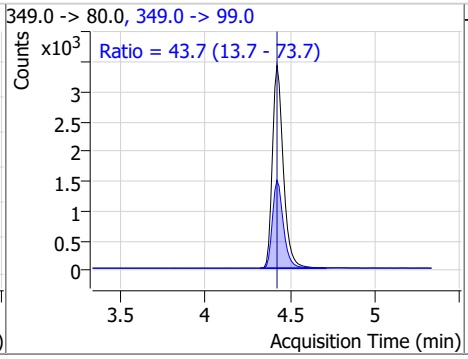


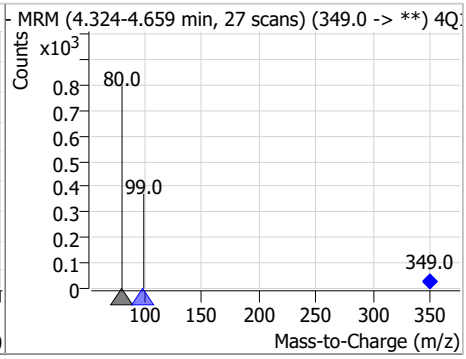




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	17.79	4.42	0.00	15122	349.0 -> 99.0	43.7	13.7	73.7

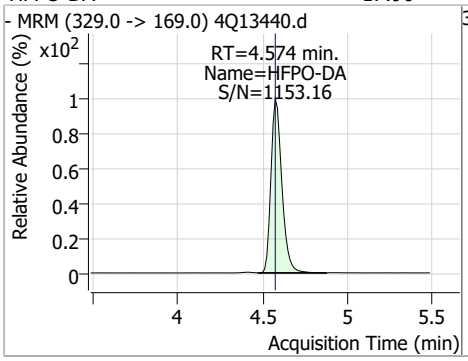


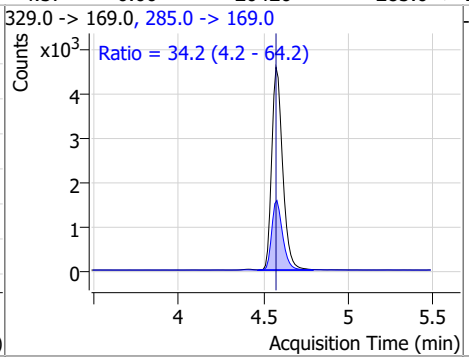


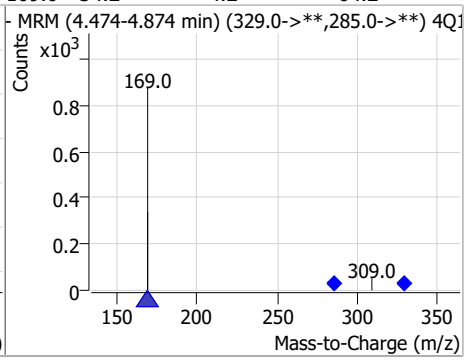


Perfluorinated Compounds by LC/MS/MS

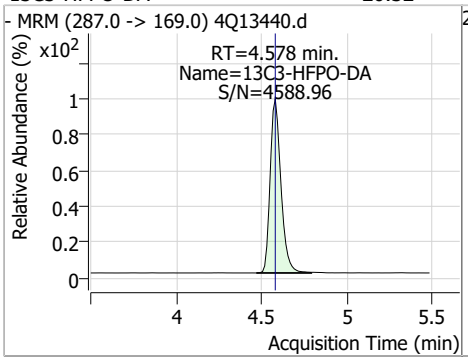
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	17.96	4.57	0.00	20426	285.0 -> 169.0	34.2	4.2	64.2

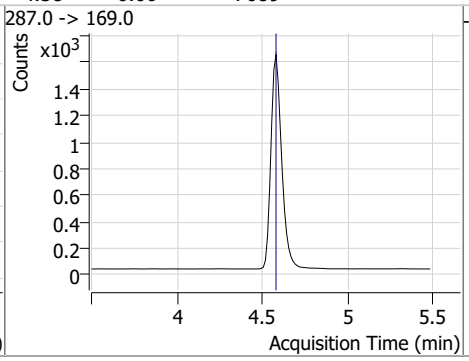


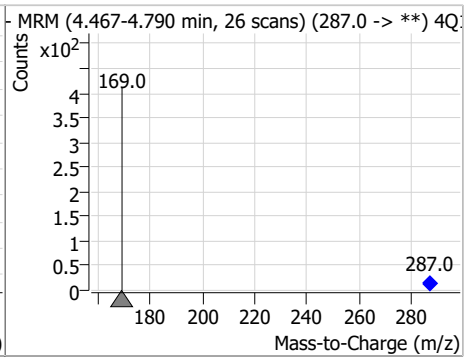




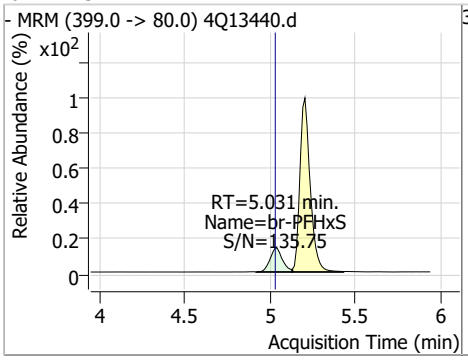
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.32	4.58	0.00	7089				

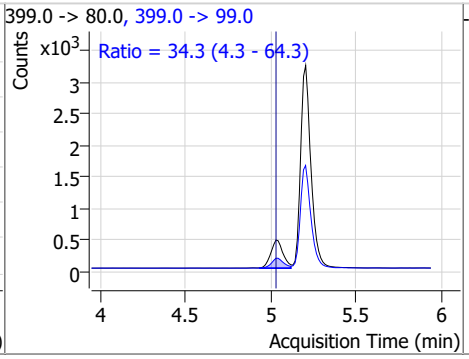


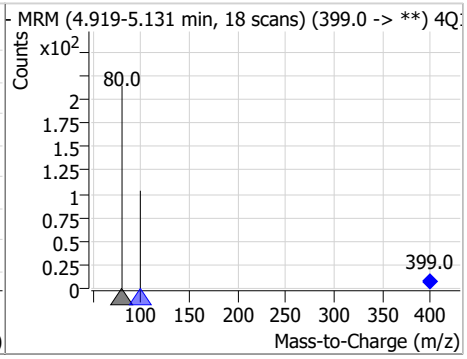




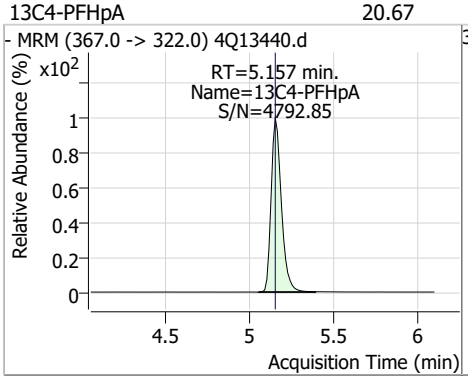
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	2.22	5.03	0.00	2248	399.0 -> 99.0	34.3	4.3	64.3

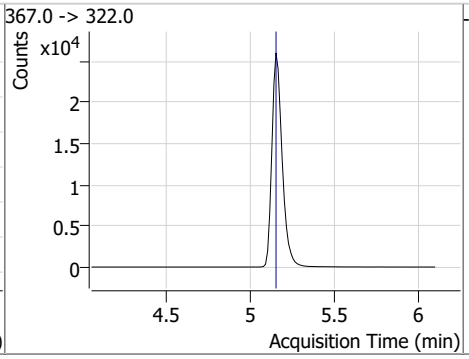


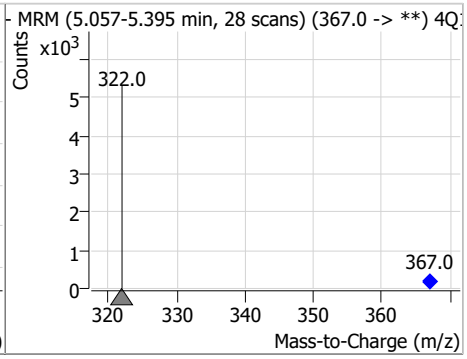




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.67	5.16	0.00	110172				

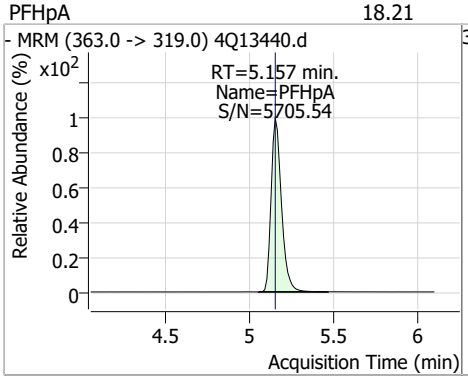


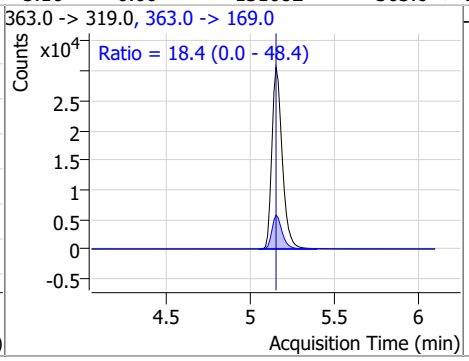


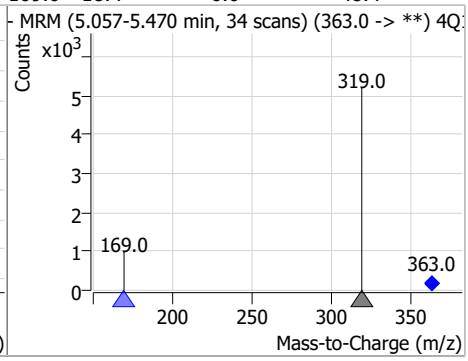


Perfluorinated Compounds by LC/MS/MS

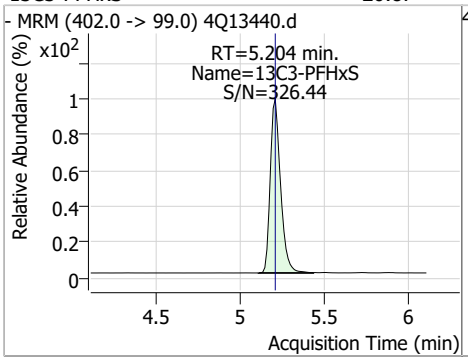
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	18.21	5.16	0.00	131082	363.0 -> 169.0	18.4	0.0	48.4

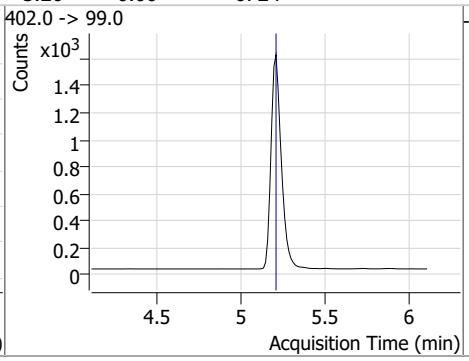


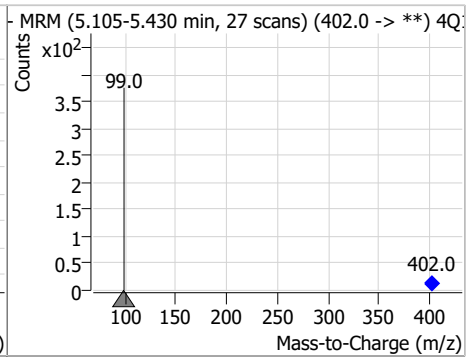




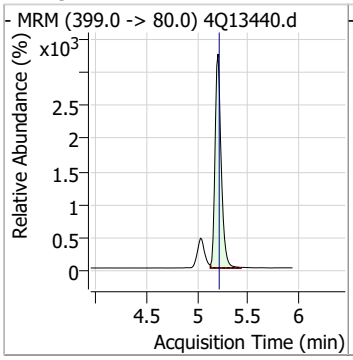
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.87	5.20	0.00	6724				

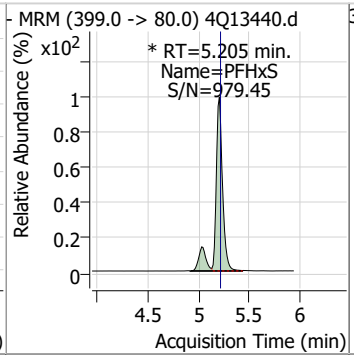


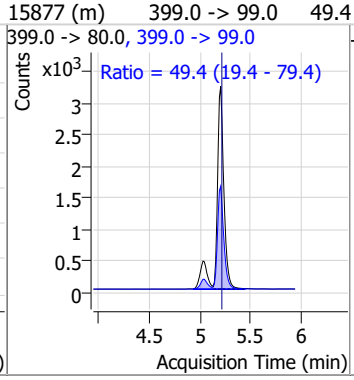


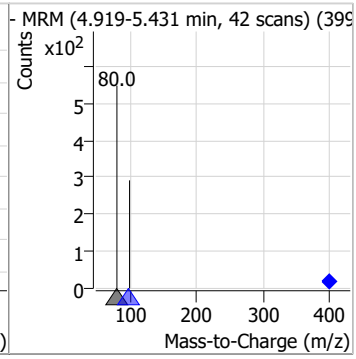


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	18.61	5.21	0.00	15877 (m)	399.0 -> 99.0	49.4	19.4	79.4

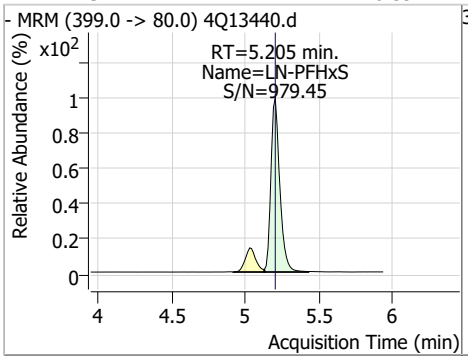


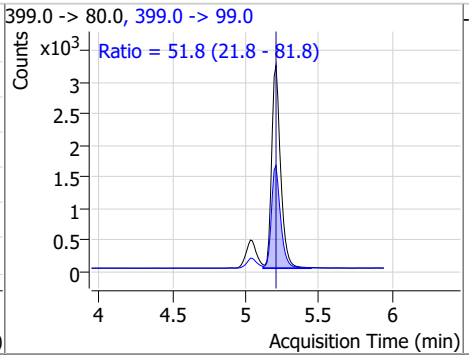


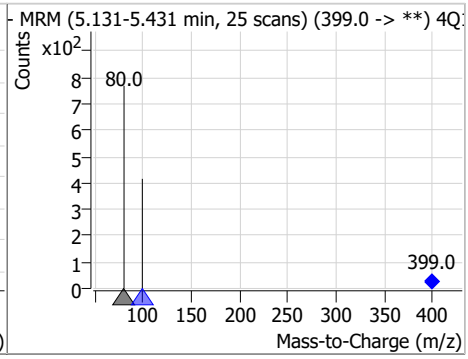




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	16.39	5.21	0.00	13630	399.0 -> 99.0	51.8	21.8	81.8

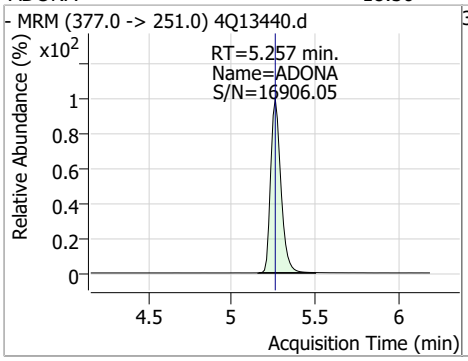


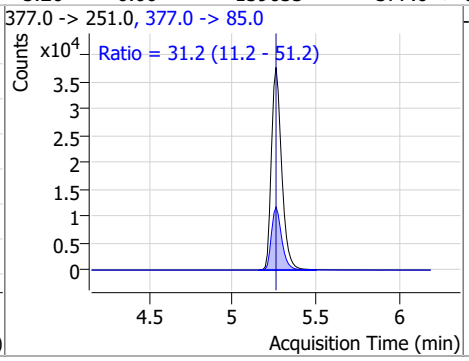


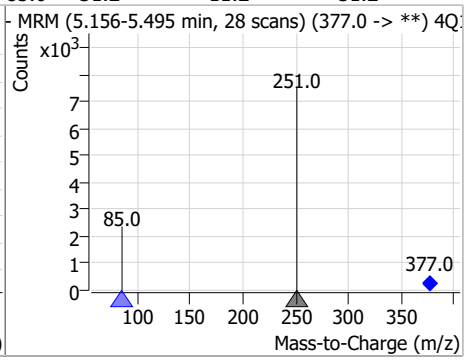


Perfluorinated Compounds by LC/MS/MS

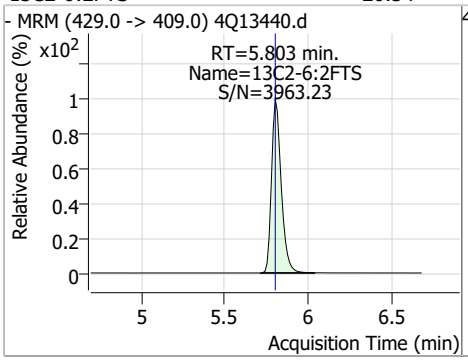
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	18.56	5.26	0.00	159653	377.0 -> 85.0	31.2	11.2	51.2

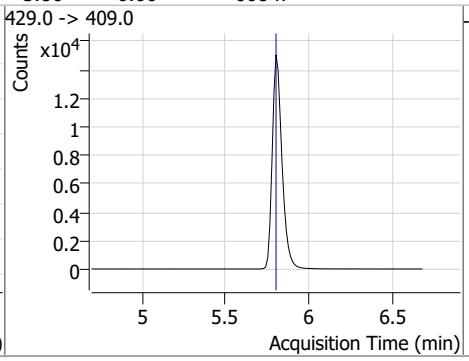


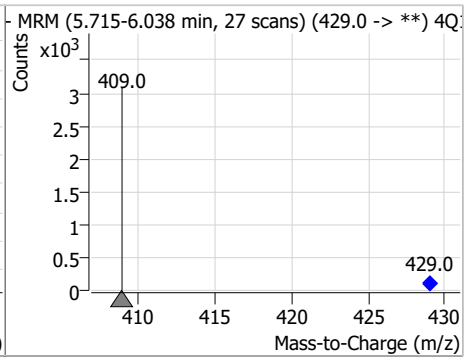




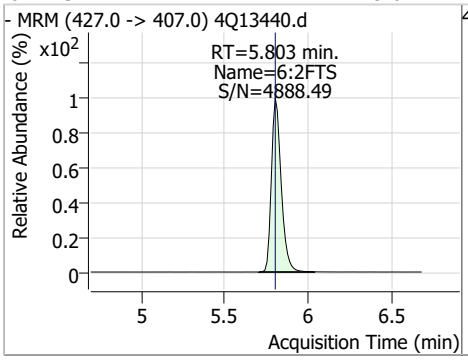
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.34	5.80	0.00	60847				

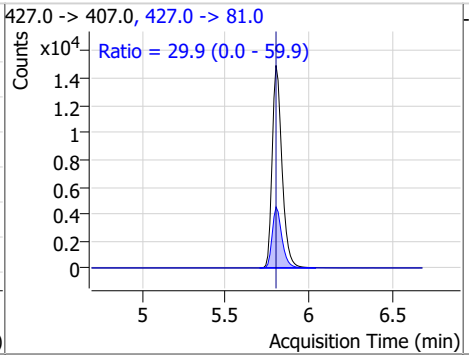


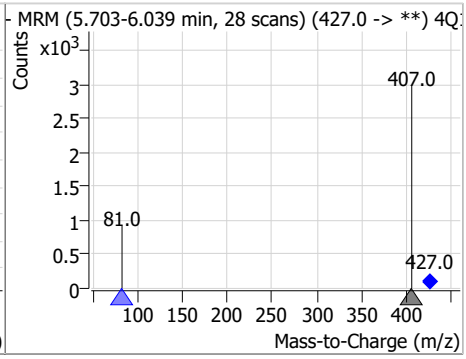




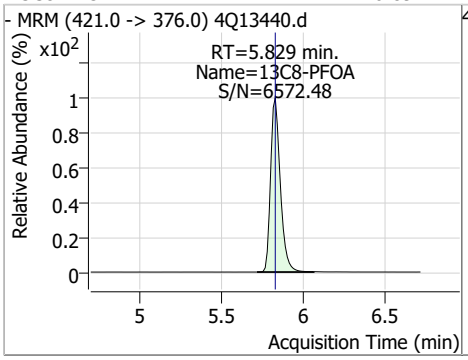
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	19.01	5.80	0.00	60905	427.0 -> 81.0	29.9	0.0	59.9

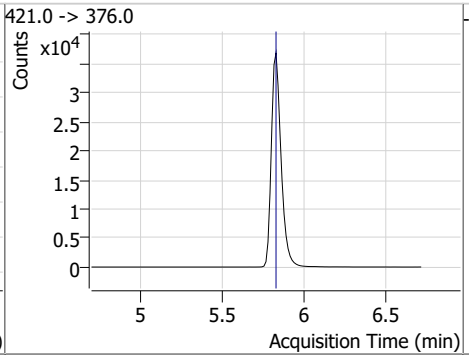


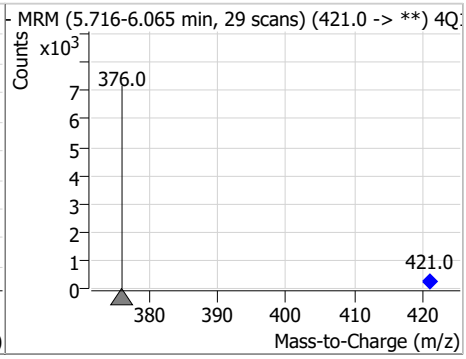




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.89	5.83	0.00	153453				

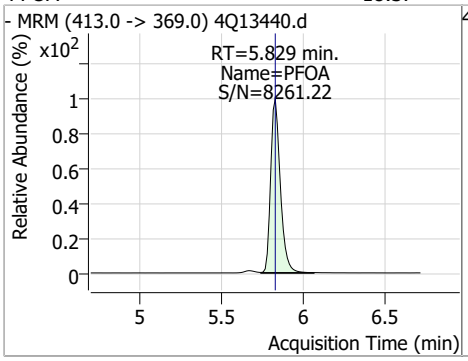


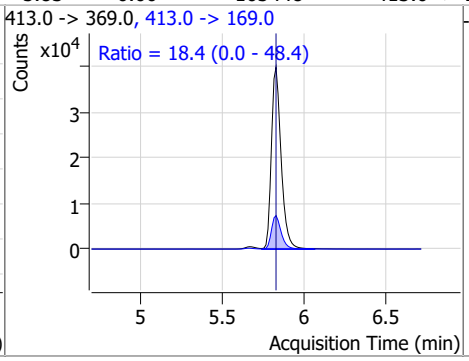


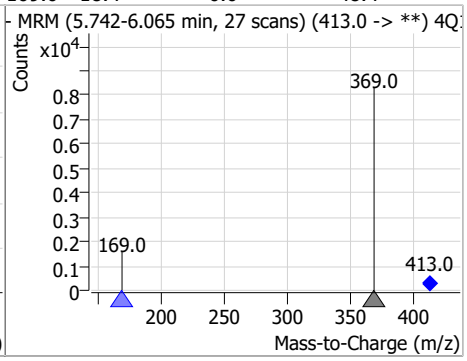


Perfluorinated Compounds by LC/MS/MS

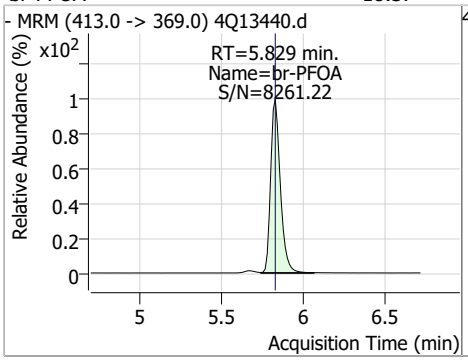
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	18.37	5.83	0.00	165448	413.0 -> 169.0	18.4	0.0	48.4

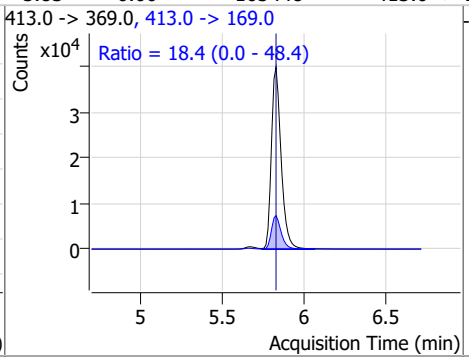


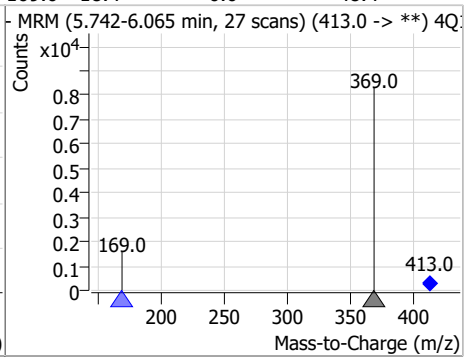




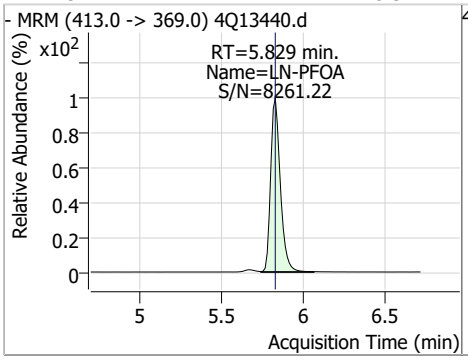
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	18.37	5.83	0.00	165448	413.0 -> 169.0	18.4	0.0	48.4

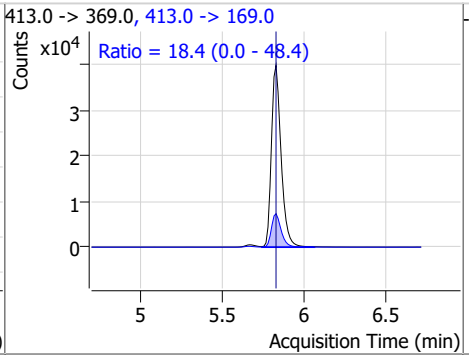


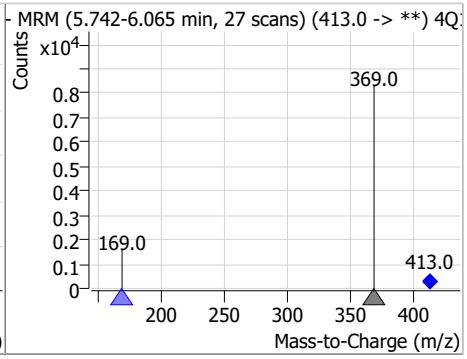




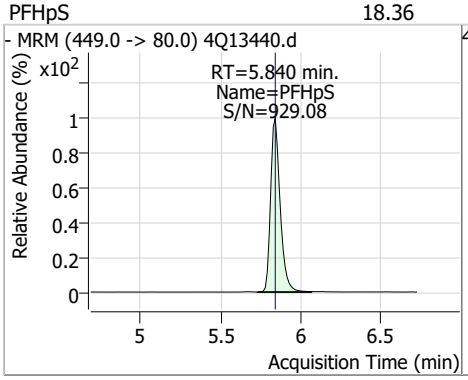
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	18.37	5.83	0.00	165448	413.0 -> 169.0	18.4	0.0	48.4

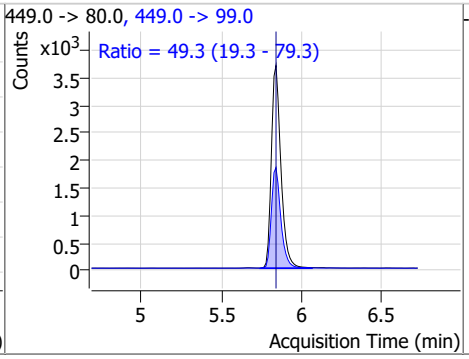


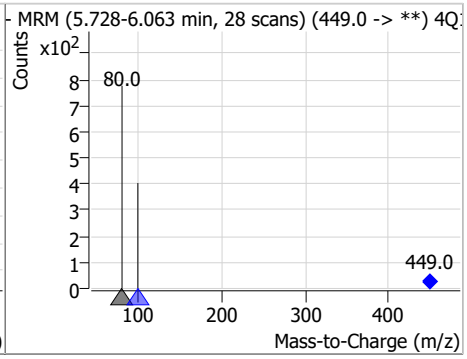




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	18.36	5.84	0.00	15189	449.0 -> 99.0	49.3	19.3	79.3

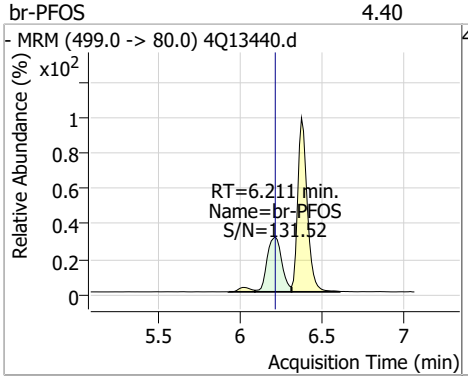


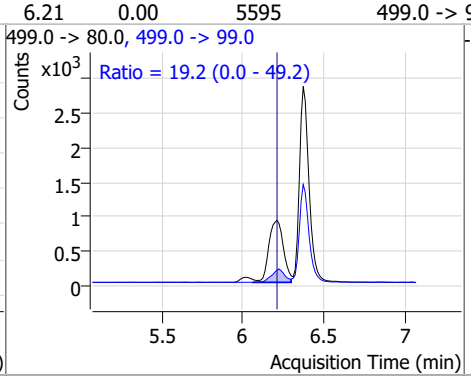


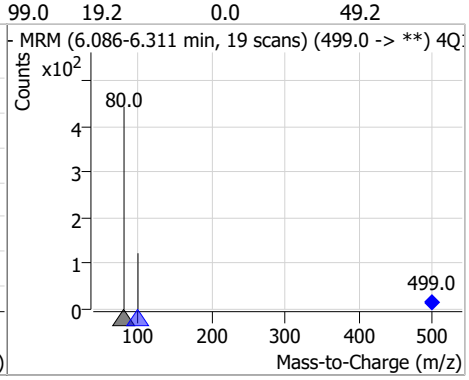


Perfluorinated Compounds by LC/MS/MS

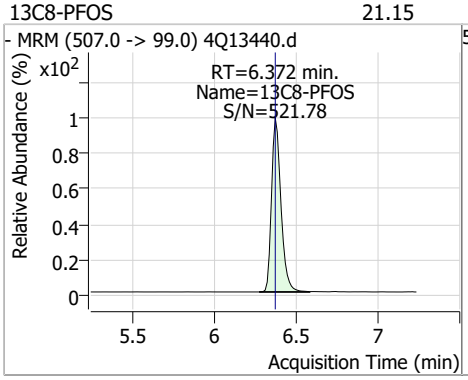
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	4.40	6.21	0.00	5595	499.0 -> 99.0	19.2	0.0	49.2

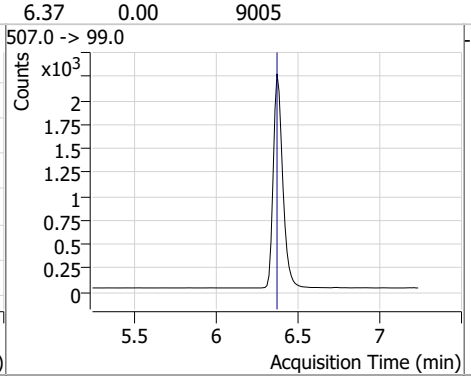


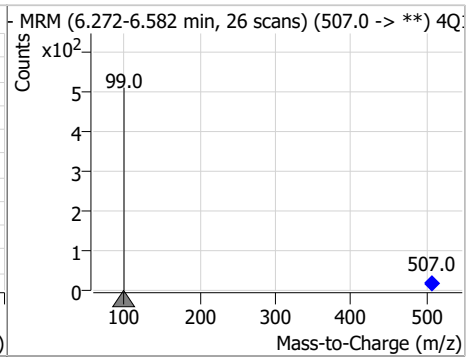




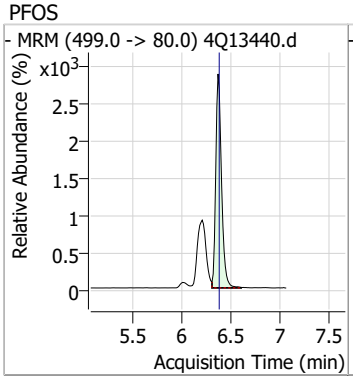
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	21.15	6.37	0.00	9005				

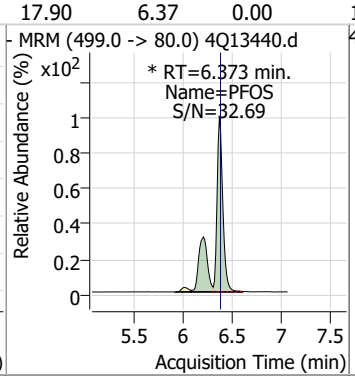


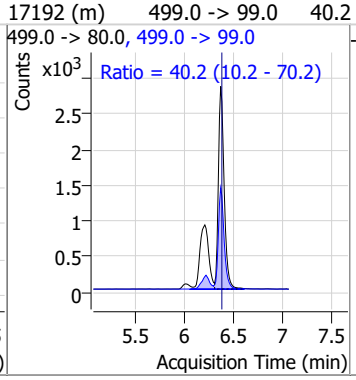


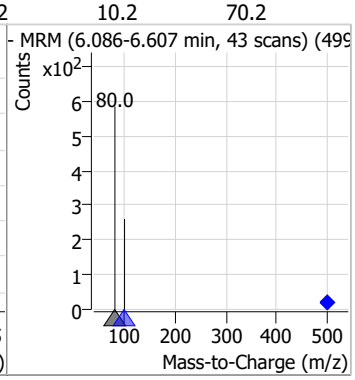


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	17.90	6.37	0.00	17192 (m)	499.0 -> 99.0	40.2	10.2	70.2

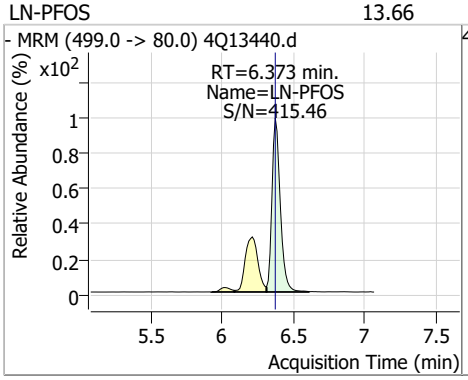


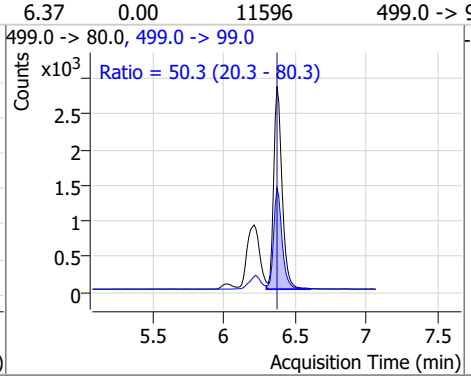


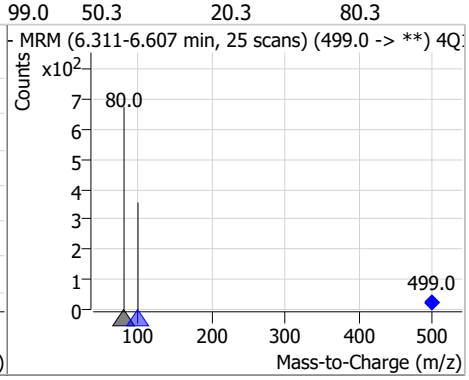




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	13.66	6.37	0.00	11596	499.0 -> 99.0	50.3	20.3	80.3

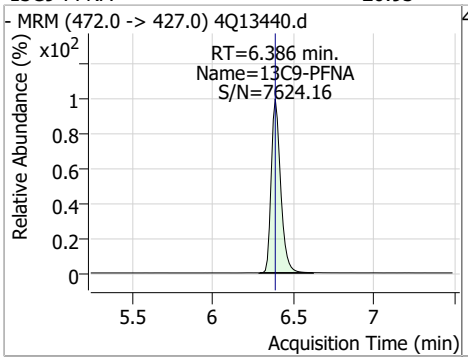


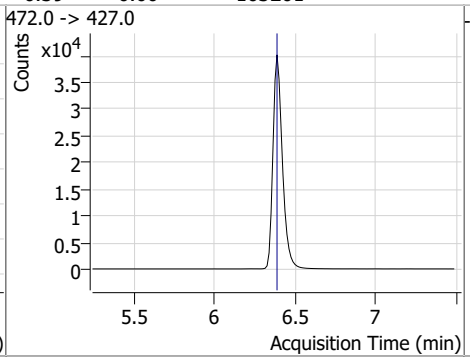


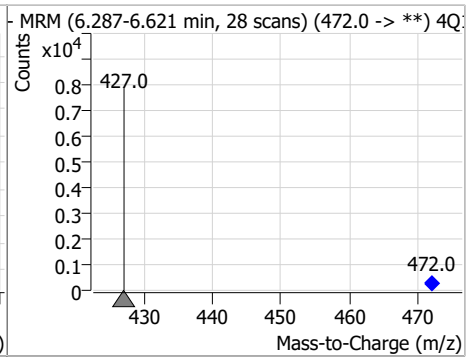


Perfluorinated Compounds by LC/MS/MS

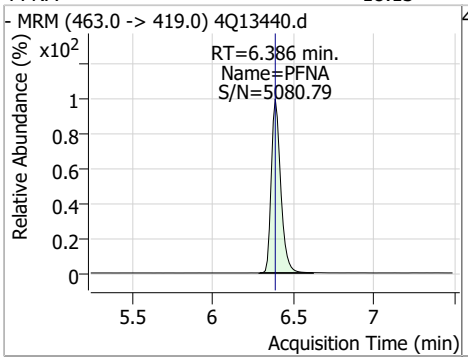
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.93	6.39	0.00	163261				

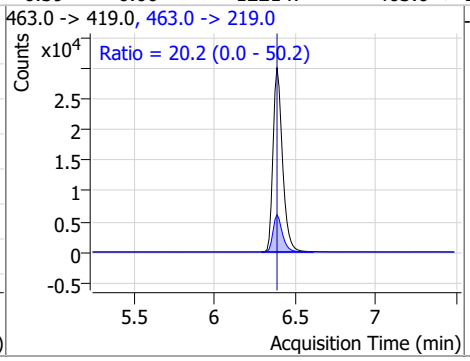


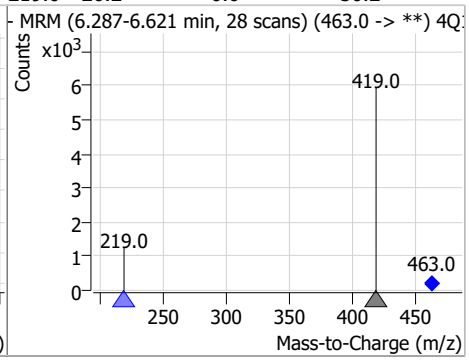




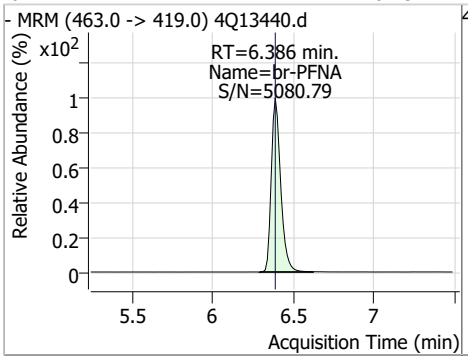
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	18.13	6.39	0.00	122147	463.0 -> 219.0	20.2	0.0	50.2

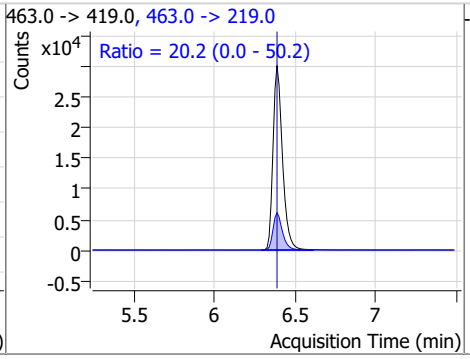


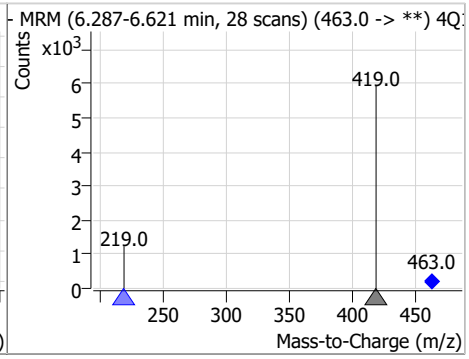




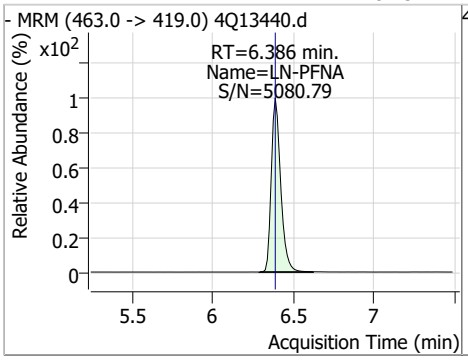
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFNA	18.13	6.39	0.00	122147	463.0 -> 219.0	20.2	0.0	50.2

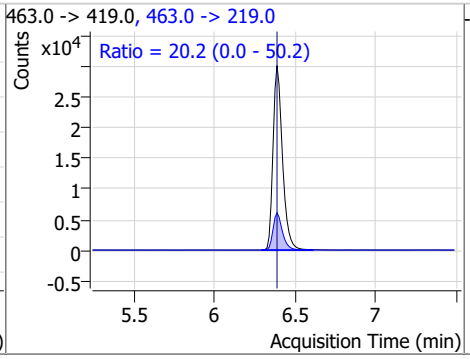


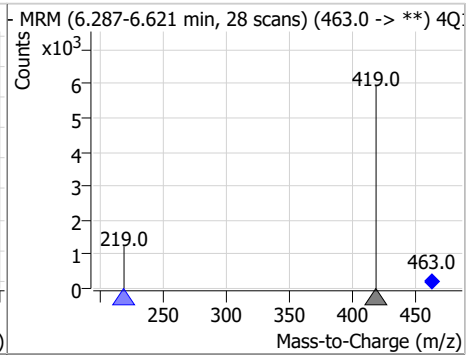




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	18.13	6.39	0.00	122147	463.0 -> 219.0	20.2	0.0	50.2

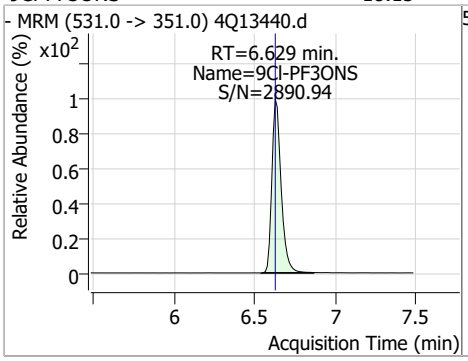


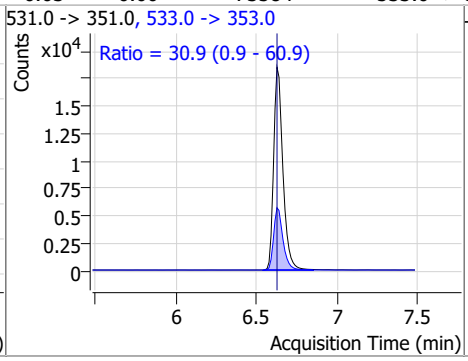


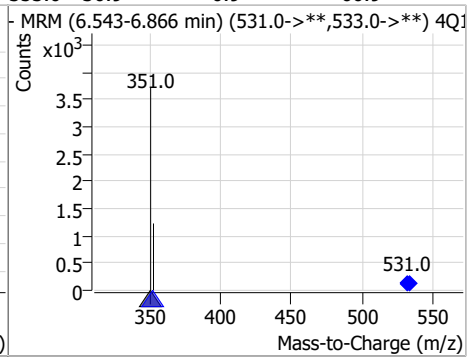


Perfluorinated Compounds by LC/MS/MS

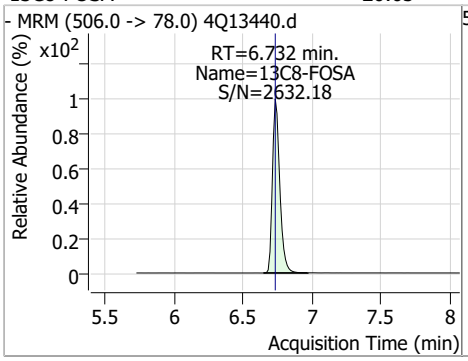
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	18.15	6.63	0.00	73584	533.0 -> 353.0	30.9	0.9	60.9

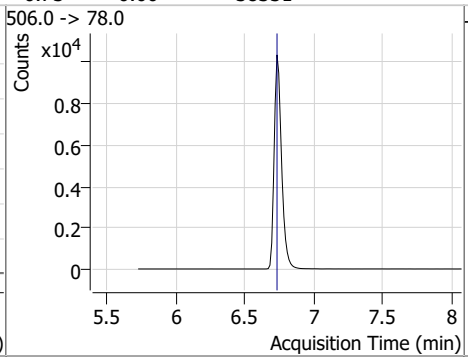


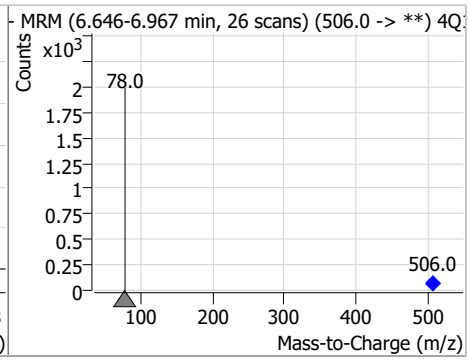




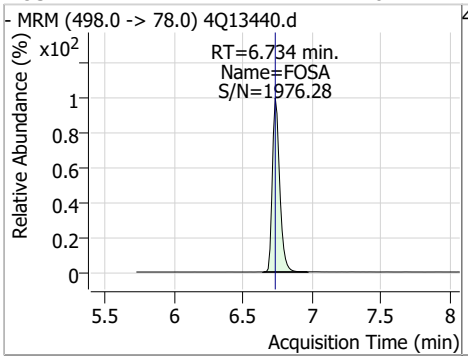
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.65	6.73	0.00	38331				

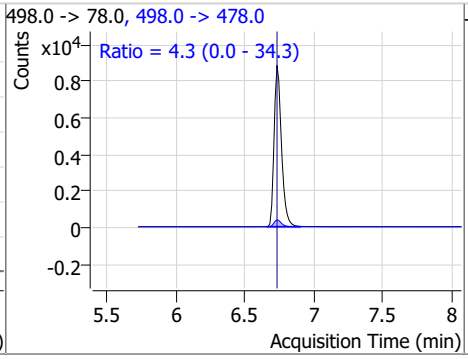


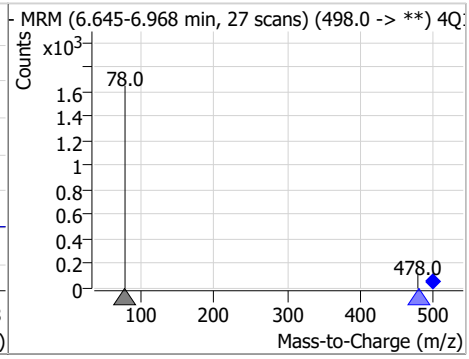




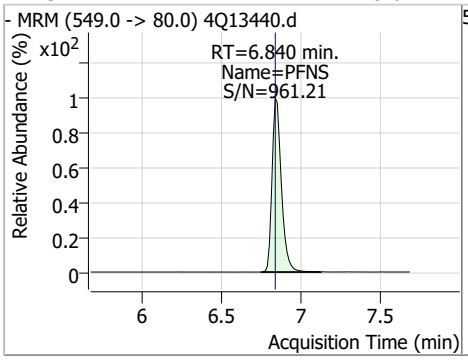
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	18.27	6.73	0.00	32794	498.0 -> 478.0	4.3	0.0	34.3

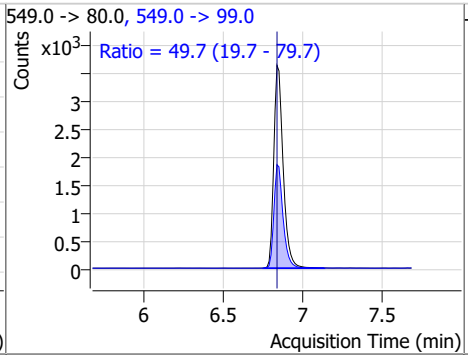


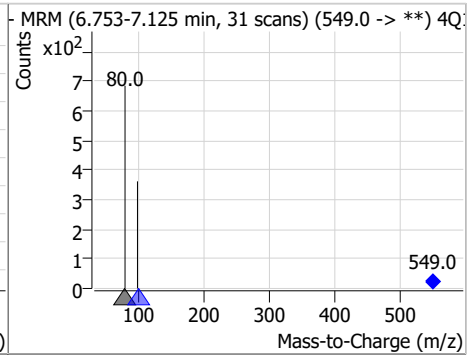




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	19.04	6.84	0.00	14703	549.0 -> 99.0	49.7	19.7	79.7

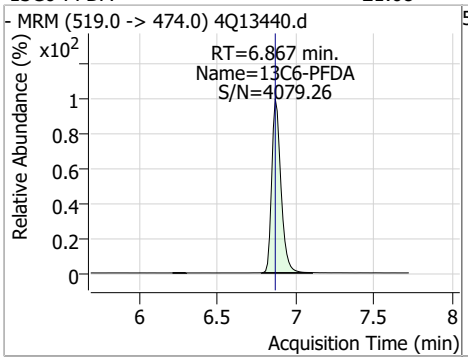


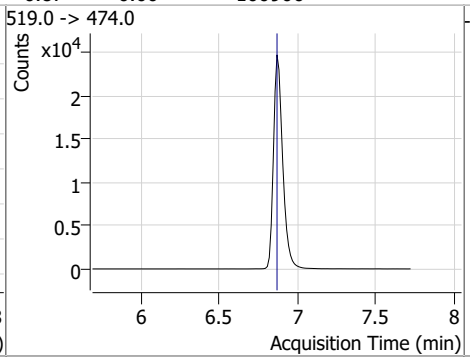


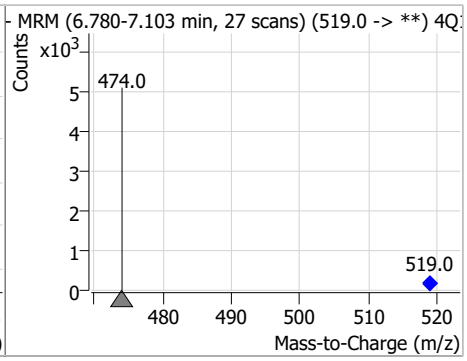


Perfluorinated Compounds by LC/MS/MS

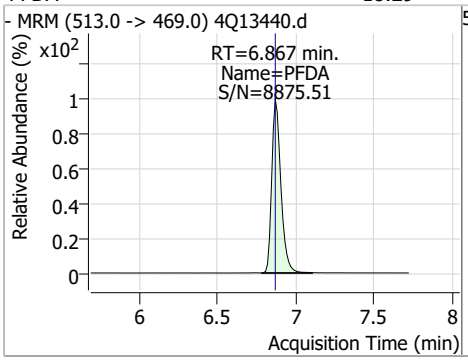
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	21.08	6.87	0.00	100906				

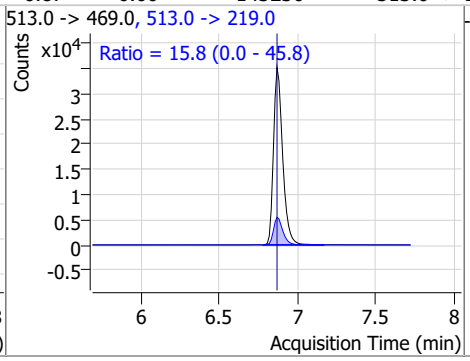


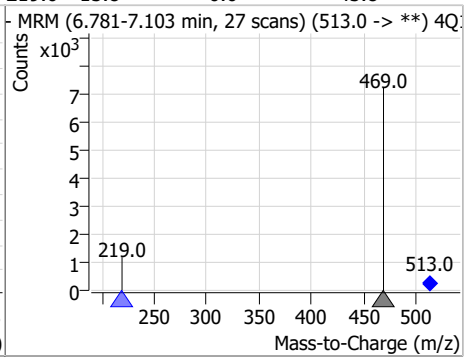




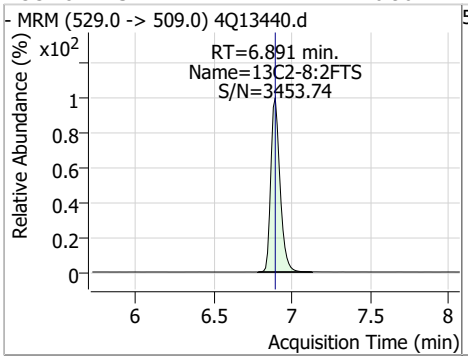
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	18.29	6.87	0.00	143230	513.0 -> 219.0	15.8	0.0	45.8

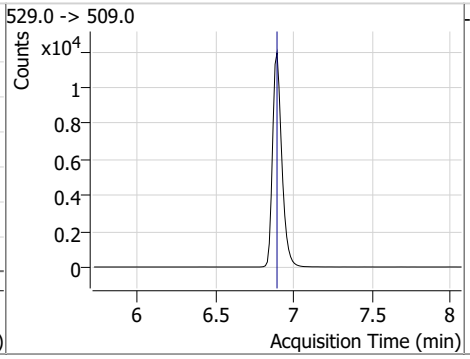


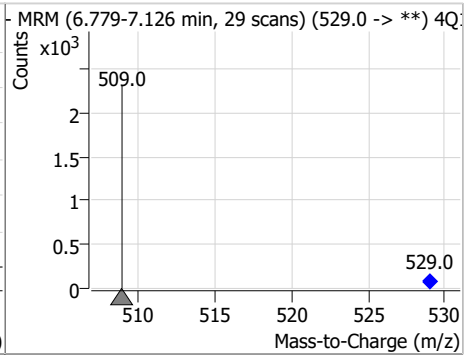




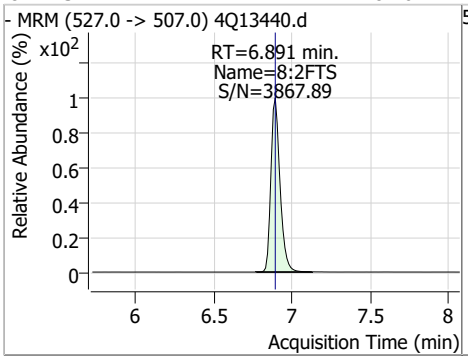
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	20.90	6.89	0.00	48712				

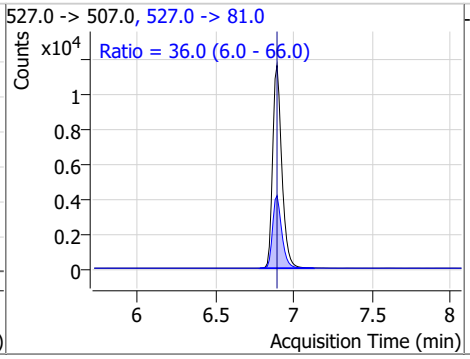


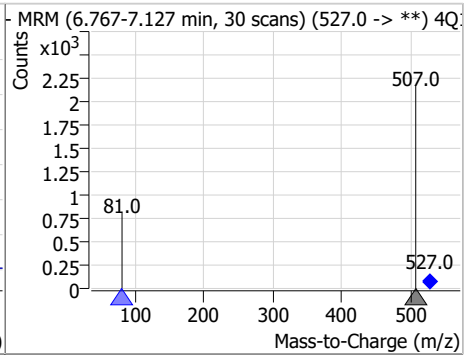




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	18.76	6.89	0.00	47258	527.0 -> 81.0	36.0	6.0	66.0

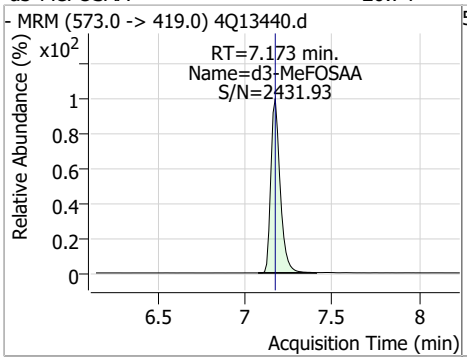


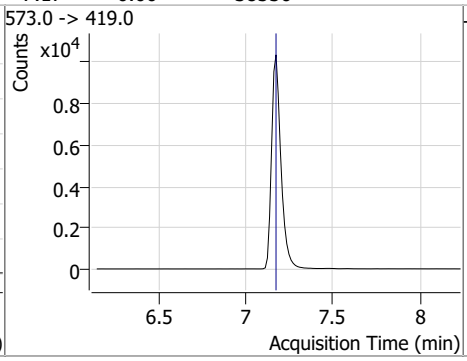


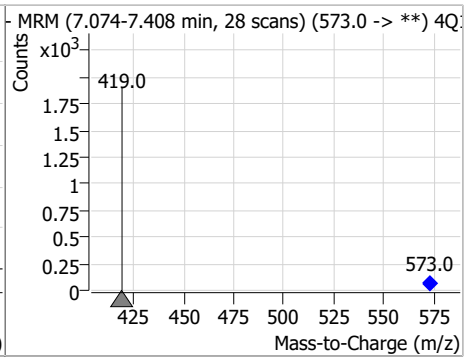


Perfluorinated Compounds by LC/MS/MS

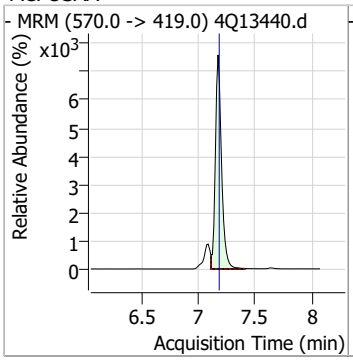
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.74	7.17	0.00	38556				

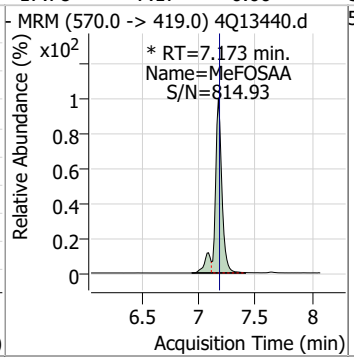


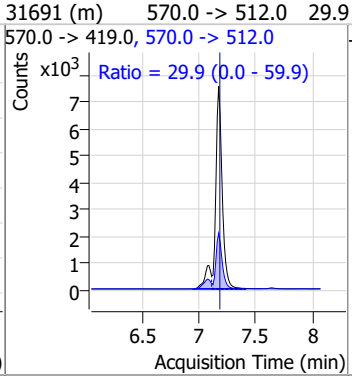


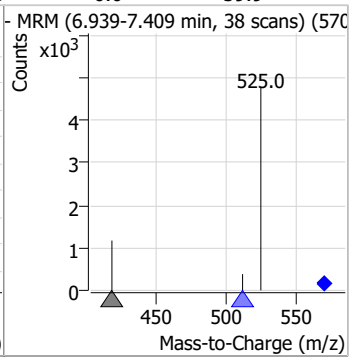


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	17.78	7.17	0.00	31691 (m)	570.0 -> 512.0	29.9	0.0	59.9

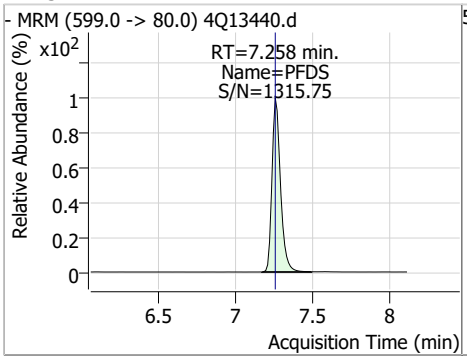


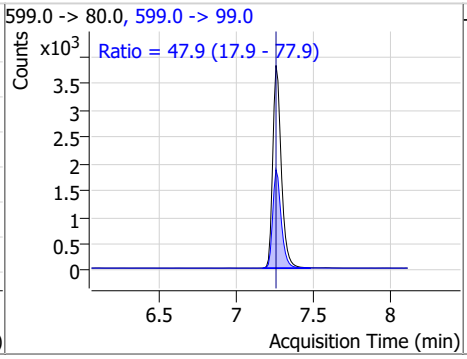


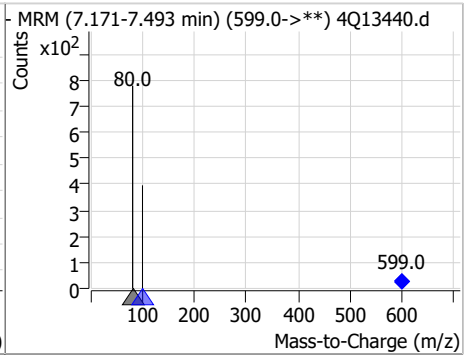




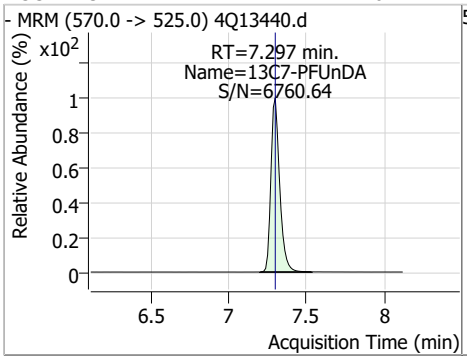
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	17.72	7.26	0.00	14690	599.0 -> 99.0	47.9	17.9	77.9

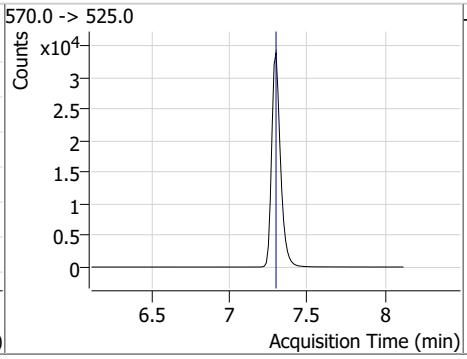


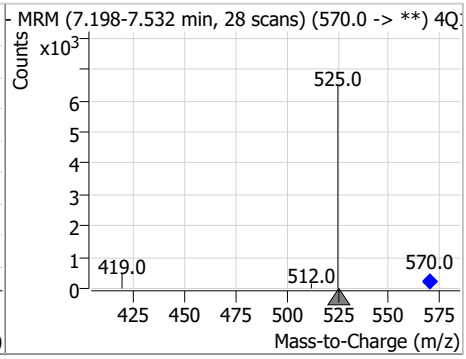




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.41	7.30	0.00	133736				

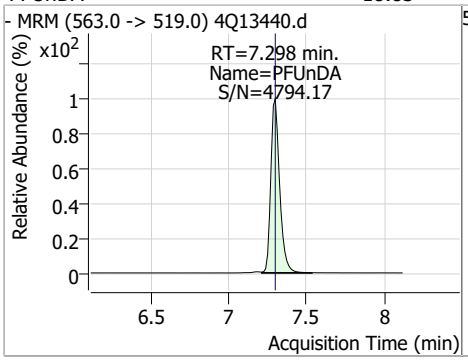


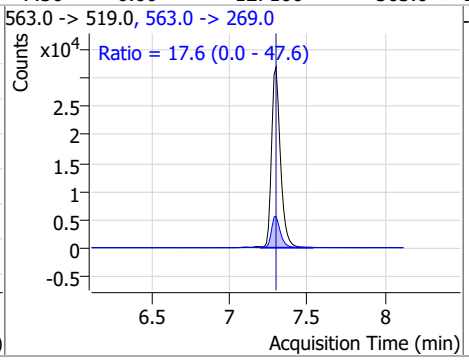


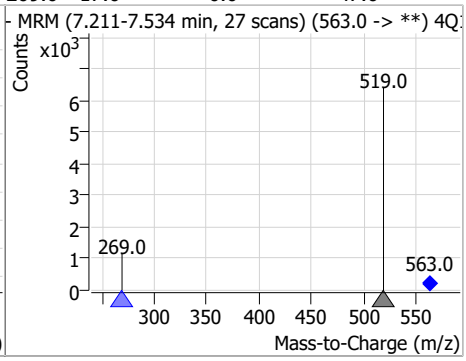


Perfluorinated Compounds by LC/MS/MS

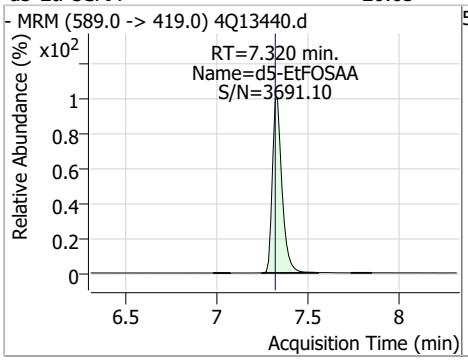
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	18.83	7.30	0.00	127160	563.0 -> 269.0	17.6	0.0	47.6

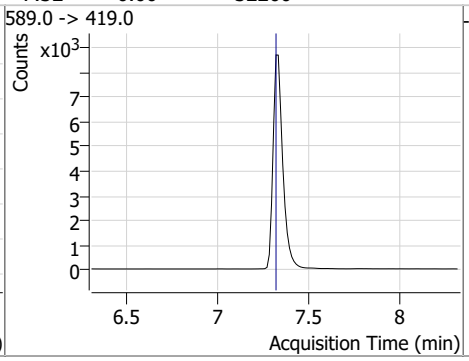


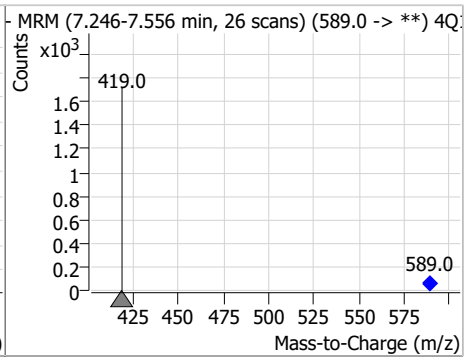




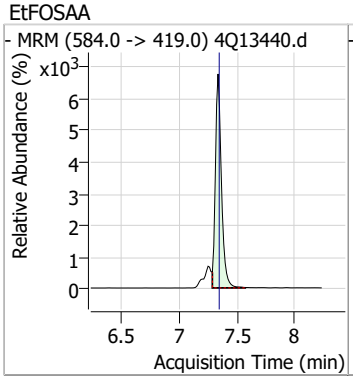
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.65	7.32	0.00	32260				

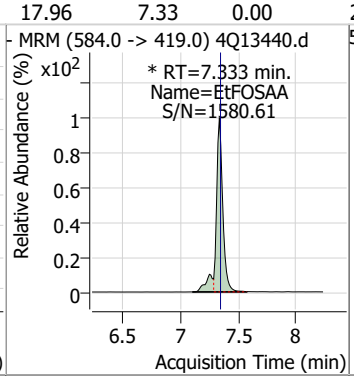


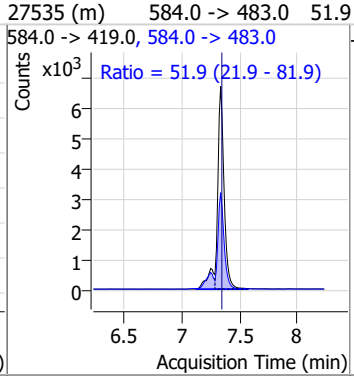


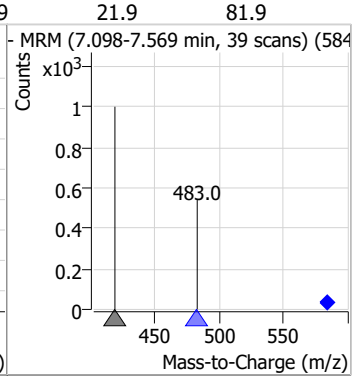


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	17.96	7.33	0.00	27535 (m)	584.0 -> 483.0	51.9	21.9	81.9

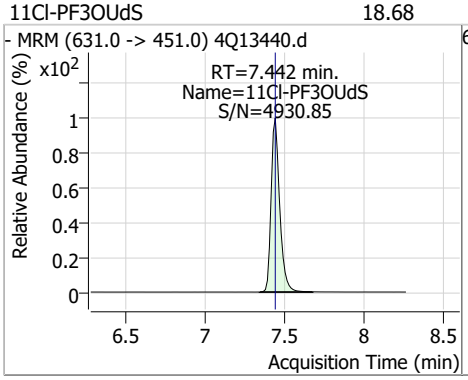


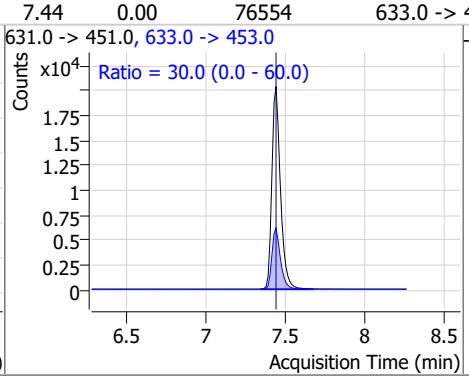


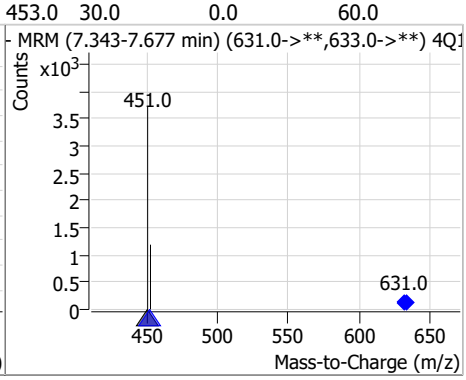




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	18.68	7.44	0.00	76554	633.0 -> 453.0	30.0	0.0	60.0

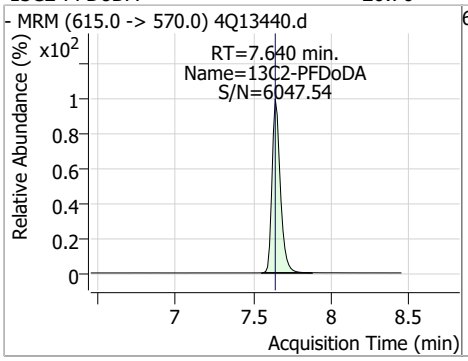


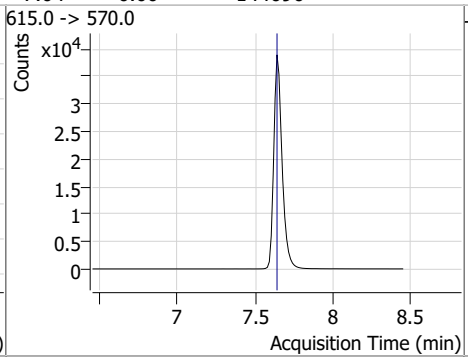


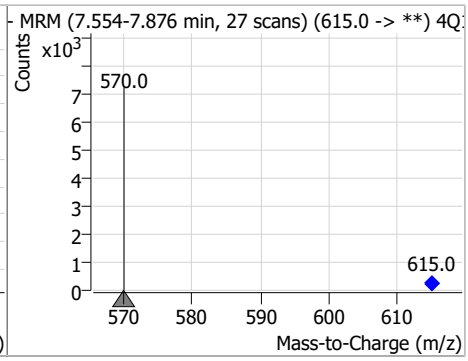


Perfluorinated Compounds by LC/MS/MS

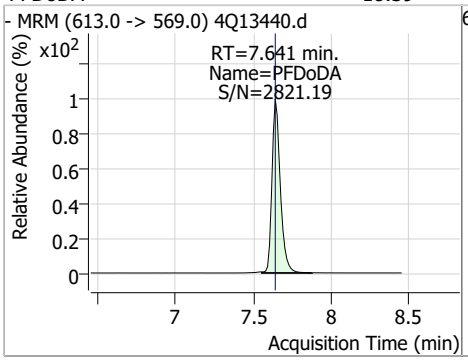
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.70	7.64	0.00	144696				

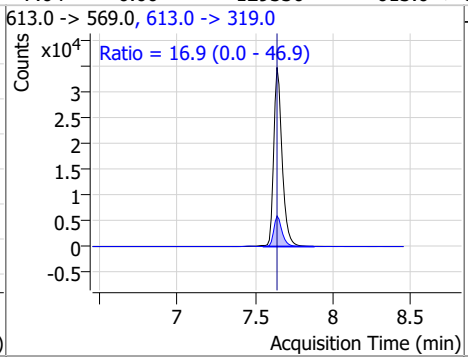


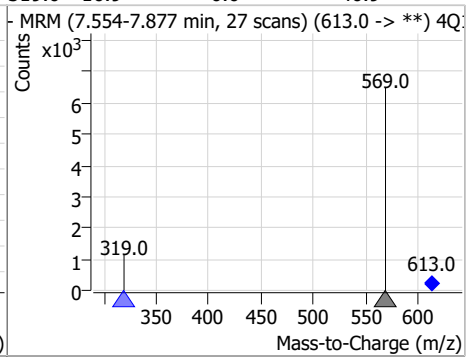




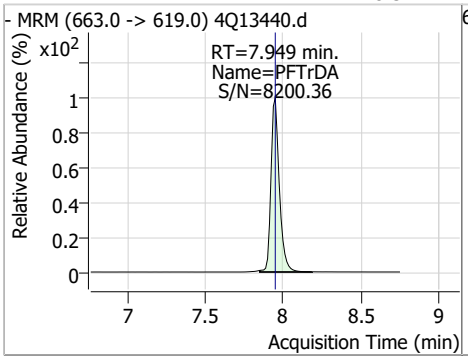
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	18.39	7.64	0.00	129330	613.0 -> 319.0	16.9	0.0	46.9

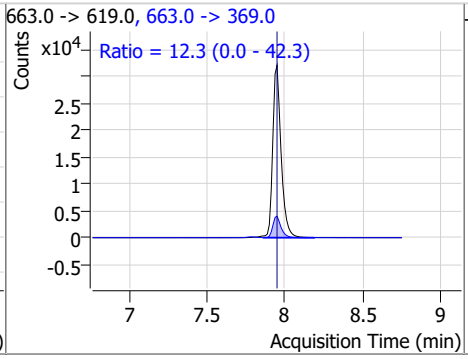


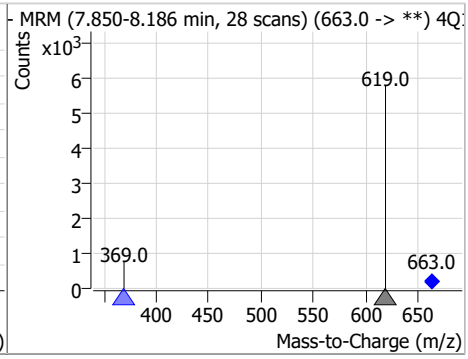




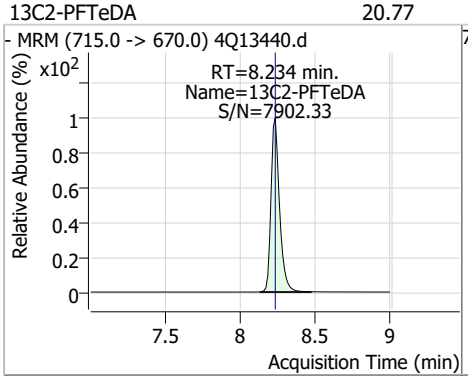
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	18.37	7.95	0.00	119878	663.0 -> 369.0	12.3	0.0	42.3

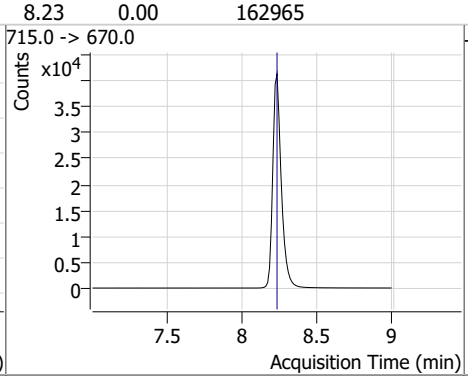


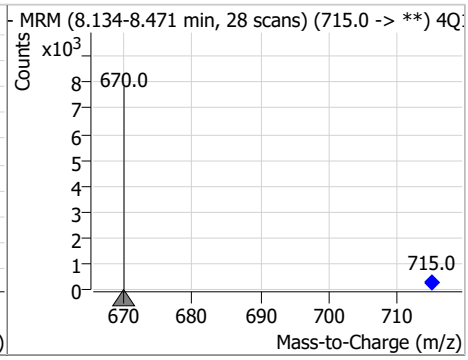




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.77	8.23	0.00	162965				

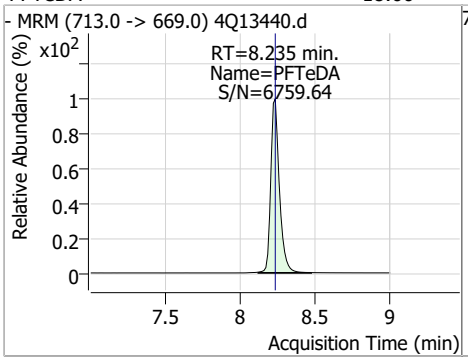


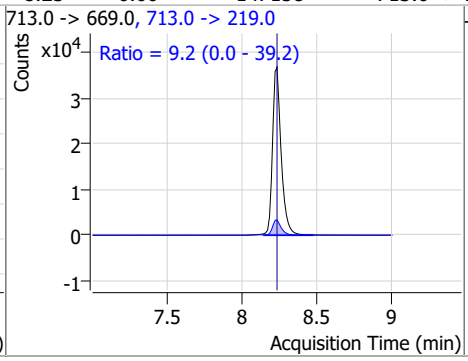


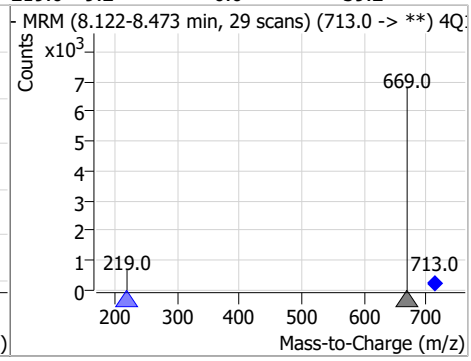


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	18.66	8.23	0.00	147158	713.0 -> 219.0	9.2	0.0	39.2







Manual Integration Approval Summary

Sample Number: S4Q189-ICC189
Lab FileID: 4Q13440.D
Injection Time: 04/18/21 15:58
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/19/21 07:57 Nancy Saunders
Supervisor approved: 04/19/21 15:40 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.21	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.37	Split peak
MeFOSAA	2355-31-9		7.17	Split peak
EtFOSAA	2991-50-6		7.33	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 04/19/21 15:40

Perfluorinated Compounds by LC/MS/MS

Data File : 4Q13441.d
Operator : natashag
Acq. Method : 537_ID.m
Acq. Date-Time : 4/18/2021 4:13:23 PM
Sample Name : ic189-50
Vial : P1-A8
DA Method File : BR_LN_041821_S4Q189.quantmethod.xml
Batch Name : s4q189.batch.bin
Sample Information : op84918,S4Q189,250,,,1,1,water

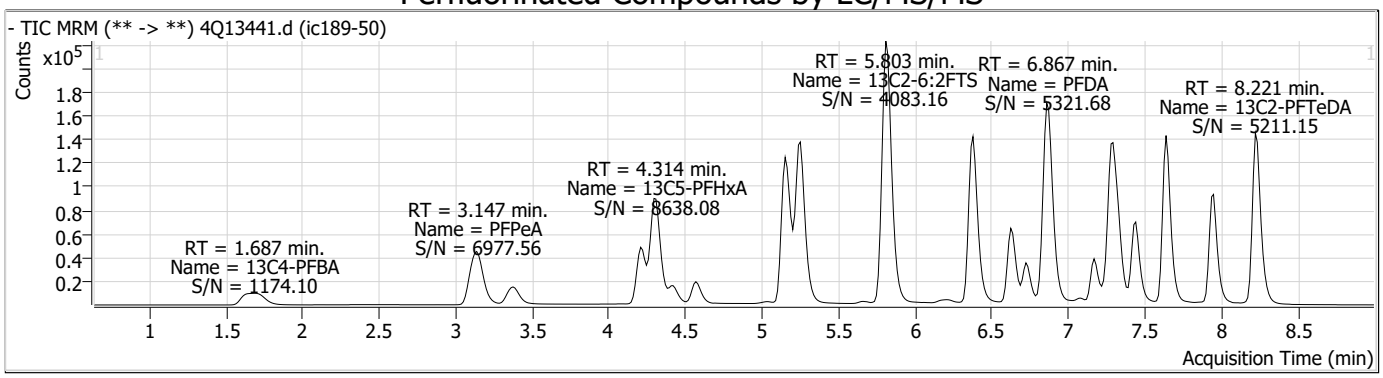
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.687	217.0 -> 172.0	48598	20.00	µg/L	0.000
M5-PFPeA	3.145	268.0 -> 223.0	88335	20.00	µg/L	0.000
M5-PFHxA	4.314	318.0 -> 273.0	120561	20.00	µg/L	0.000
M4-PFHpA	5.157	367.0 -> 322.0	105741	20.00	µg/L	0.000
M8-PFOA	5.816	421.0 -> 376.0	145257	20.00	µg/L	-0.012
M9-PFNA	6.386	472.0 -> 427.0	154789	20.00	µg/L	0.000
M6-PFDA	6.867	519.0 -> 474.0	91187	20.00	µg/L	0.000
M7-PFUnDA	7.297	570.0 -> 525.0	126473	20.00	µg/L	0.000
M2-PFDoDA	7.640	615.0 -> 570.0	138024	20.00	µg/L	0.000
M2-PFTeDA	8.221	715.0 -> 670.0	154508	20.00	µg/L	-0.013
M8-FOSA	6.732	506.0 -> 78.0	34316	20.00	µg/L	0.000
M3-PFBS	3.381	302.0 -> 99.0	6749	20.00	µg/L	0.000
M3-PFHxS	5.204	402.0 -> 99.0	6351	20.00	µg/L	0.000
M8-PFOS	6.372	507.0 -> 99.0	8572	20.00	µg/L	0.000
M2-4:2FTS	4.212	329.0 -> 309.0	47758	20.00	µg/L	0.000
M2-6:2FTS	5.803	429.0 -> 409.0	62757	20.00	µg/L	0.000
M2-8:2FTS	6.891	529.0 -> 509.0	47866	20.00	µg/L	0.000
M3-MeFOSAA	7.173	573.0 -> 419.0	37149	20.00	µg/L	0.000
M3-HFPO-DA	4.578	287.0 -> 169.0	6871	20.00	µg/L	0.000
M5-EtFOSAA	7.332	589.0 -> 419.0	30522	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.212	329.0 -> 309.0	47758	21.02	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.1%		
13C2-6:2FTS	5.803	429.0 -> 409.0	62757	20.98	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.9%		
13C2-8:2FTS	6.891	529.0 -> 509.0	47866	20.54	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.7%		
13C2-PFDoDA	7.640	615.0 -> 570.0	138024	19.74	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%		
13C2-PFTeDA	8.221	715.0 -> 670.0	154508	19.69	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.5%		
13C3-PFBS	3.381	302.0 -> 99.0	6749	19.79	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.0%		
13C3-PFHxS	5.204	402.0 -> 99.0	6351	19.71	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.6%		
13C4-PFBA	1.687	217.0 -> 172.0	48598	19.68	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%		
13C4-PFHpA	5.157	367.0 -> 322.0	105741	19.83	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%		
13C5-PFHxA	4.314	318.0 -> 273.0	120561	19.77	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.9%		
13C5-PFPeA	3.145	268.0 -> 223.0	88335	19.88	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.4%		
13C6-PFDA	6.867	519.0 -> 474.0	91187	19.05	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.3%		

Perfluorinated Compounds by LC/MS/MS

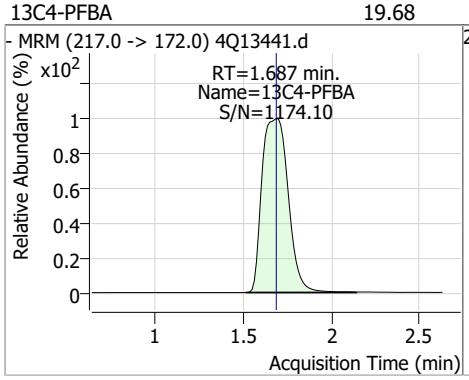
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	7.297	570.0 -> 525.0	126473	19.30	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.5%			
13C8-FOSA	6.732	506.0 -> 78.0	34316	18.49	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.4%			
13C8-PFOA	5.816	421.0 -> 376.0	145257	19.78	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.9%			
13C8-PFOS	6.372	507.0 -> 99.0	8572	20.13	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.7%			
13C9-PFNA	6.386	472.0 -> 427.0	154789	19.84	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%			
d3-MeFOSAA	7.173	573.0 -> 419.0	37149	19.99	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.9%			
13C3-HFPO-DA	4.578	287.0 -> 169.0	6871	19.69	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.5%			
d5-EtFOSAA	7.332	589.0 -> 419.0	30475	19.50	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.5%			
Target Compounds							QValue
4:2FTS	4.214	327.0 -> 307.0	121554	47.61	µg/L		100
6:2FTS	5.803	427.0 -> 407.0	156233	47.29	µg/L		100
8:2FTS	6.879	527.0 -> 507.0	118930	48.05	µg/L		99
EtFOSAA	7.333	584.0 -> 419.0	73216	50.52	µg/L	m	99
FOSA	6.734	498.0 -> 78.0	81808	50.90	µg/L		100
MeFOSAA	7.173	570.0 -> 419.0	85816	49.97	µg/L	m	98
PFBA	1.694	213.0 -> 169.0	53527	50.46	µg/L		100
PFBS	3.383	299.0 -> 80.0	55782	50.60	µg/L		100
PFDA	6.867	513.0 -> 469.0	353989	50.02	µg/L		99
PFDoDA	7.641	613.0 -> 569.0	334388	49.86	µg/L		99
PFDS	7.258	599.0 -> 80.0	38943	49.67	µg/L		100
PFHpA	5.157	363.0 -> 319.0	341016	49.37	µg/L		100
PFHpS	5.840	449.0 -> 80.0	39329	49.95	µg/L		99
PFHxA	4.315	313.0 -> 269.0	275193	49.98	µg/L		100
PFHxS	5.193	399.0 -> 80.0	41911	52.00	µg/L	m	99
PFNA	6.386	463.0 -> 419.0	313871	49.14	µg/L		99
PFNS	6.840	549.0 -> 80.0	37084	50.46	µg/L		100
PFOA	5.829	413.0 -> 369.0	432870	50.77	µg/L		100
PFOS	6.373	499.0 -> 80.0	45200	49.44	µg/L	m	96
PFPeA	3.147	263.0 -> 219.0	193625	50.76	µg/L		100
PFPeS	4.423	349.0 -> 80.0	40680	50.75	µg/L		100
PFTeDA	8.222	713.0 -> 669.0	380789	50.92	µg/L		100
PFTrDA	7.949	663.0 -> 619.0	311114	50.27	µg/L		100
PFUnDA	7.285	563.0 -> 519.0	316196	49.52	µg/L		98
11Cl-PF3OUdS	7.442	631.0 -> 451.0	196721	50.34	µg/L		98
9Cl-PF3ONS	6.629	531.0 -> 351.0	192353	51.16	µg/L		100
ADONA	5.257	377.0 -> 251.0	422482	52.00	µg/L		100
HFPO-DA	4.574	329.0 -> 169.0	55623	50.45	µg/L		100
br-PFOS	6.211	499.0 -> 80.0	14965	12.17	µg/L		99
LN-PFOS	6.373	499.0 -> 80.0	30235	37.42	µg/L		94
br-PFHxS	5.043	399.0 -> 80.0	5855	6.13	µg/L		98
LN-PFHxS	5.193	399.0 -> 80.0	36056	45.90	µg/L		99
br-PFOA	5.829	413.0 -> 369.0	432870	50.77	µg/L		100
LN-PFOA	5.829	413.0 -> 369.0	432870	50.77	µg/L		100
br-PFNA	6.386	463.0 -> 419.0	313871	49.14	µg/L		99
LN-PFNA	6.386	463.0 -> 419.0	313871	49.14	µg/L		99

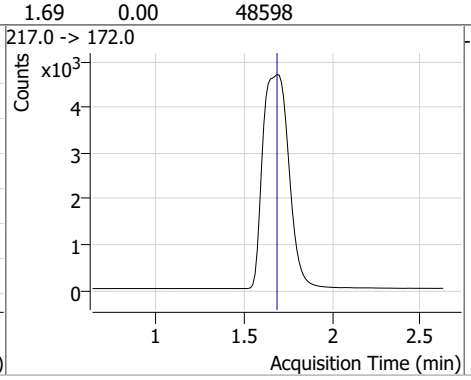
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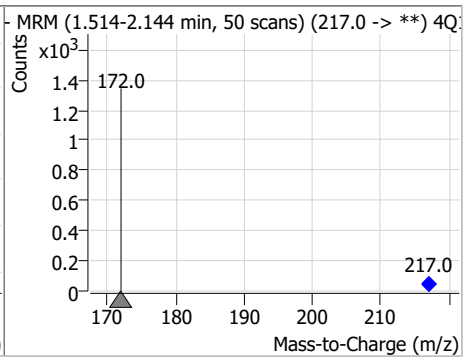
Perfluorinated Compounds by LC/MS/MS



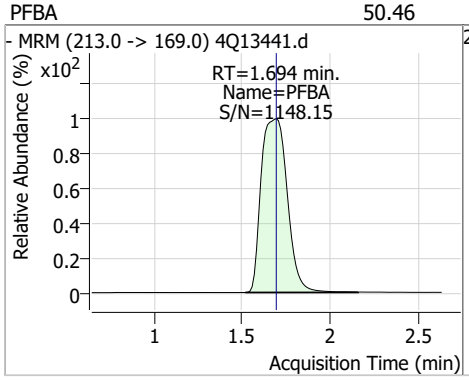
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.68	1.69	0.00	48598				

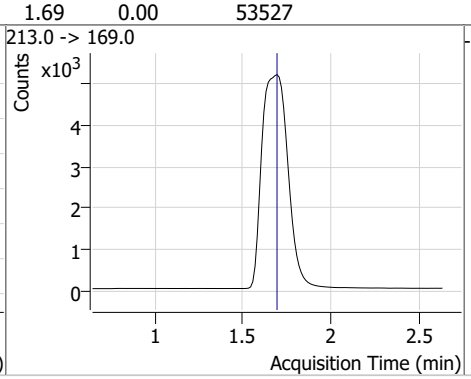


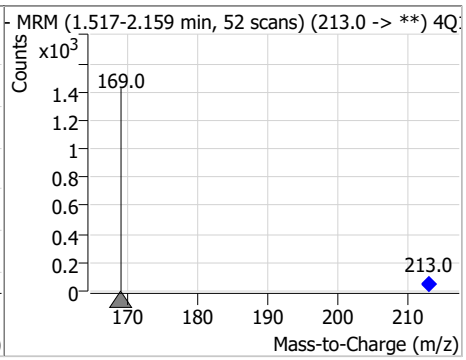




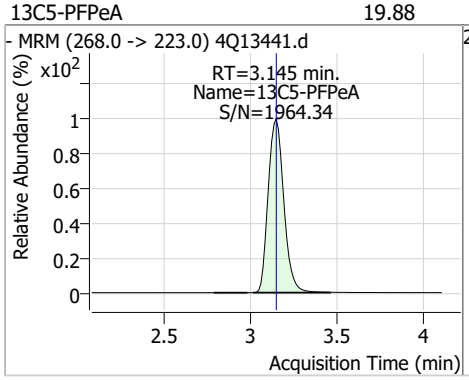
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	50.46	1.69	0.00	53527				

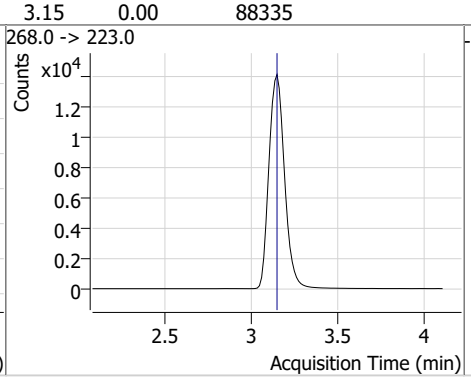


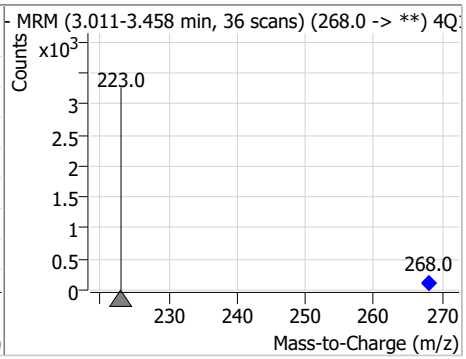




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.88	3.15	0.00	88335				





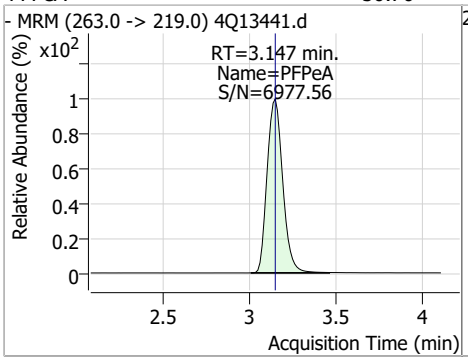


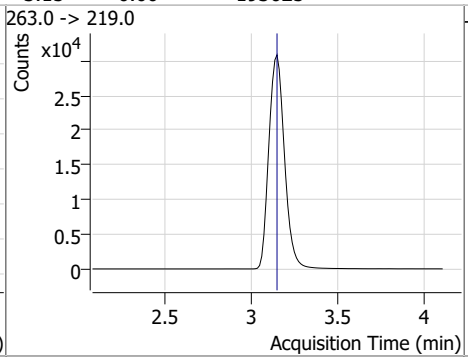
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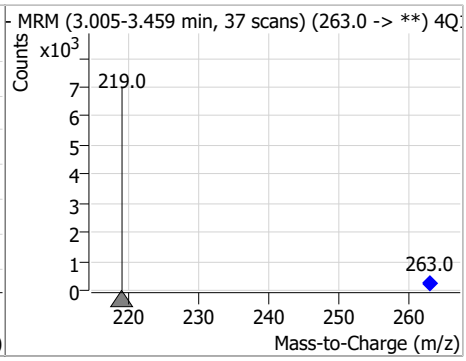
11

Perfluorinated Compounds by LC/MS/MS

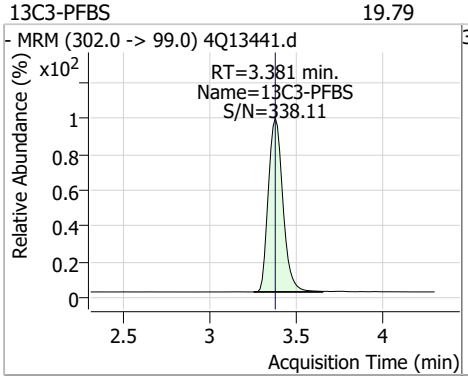
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	50.76	3.15	0.00	193625				

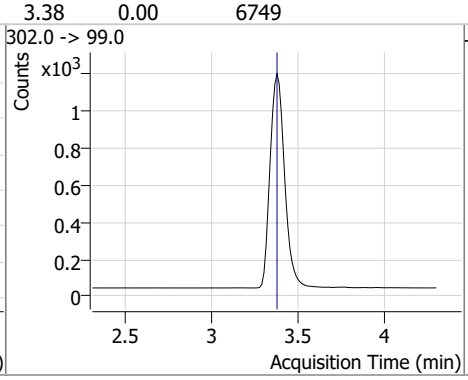


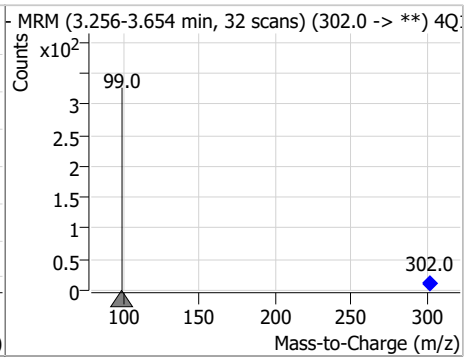




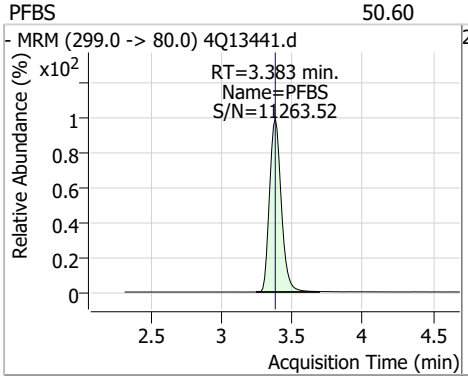
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.79	3.38	0.00	6749				

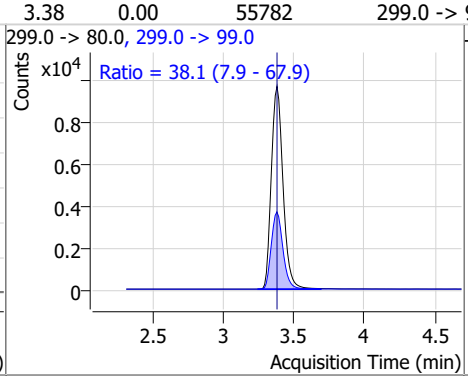


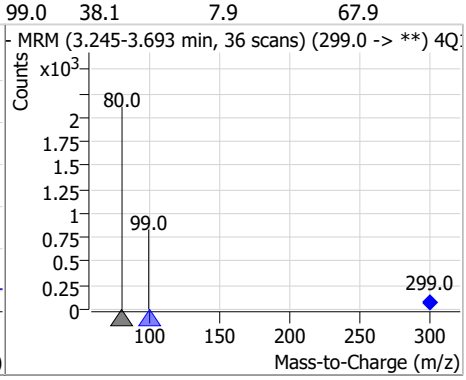




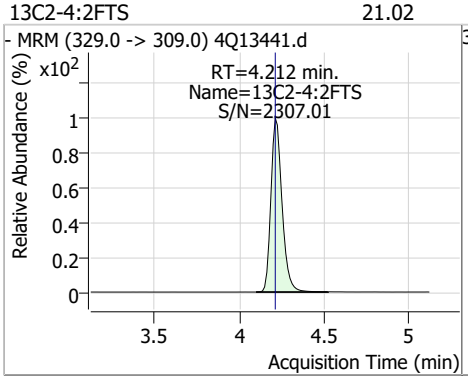
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	50.60	3.38	0.00	55782	299.0 -> 99.0	38.1	7.9	67.9

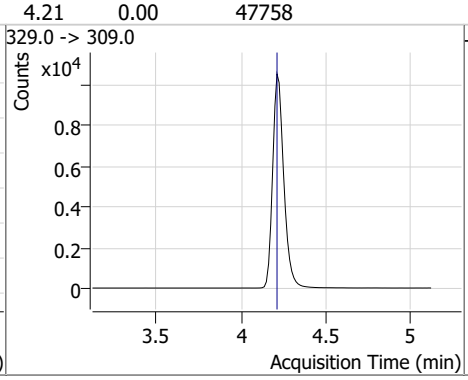


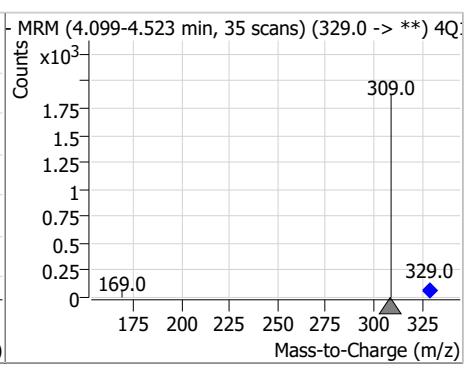




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	21.02	4.21	0.00	47758				

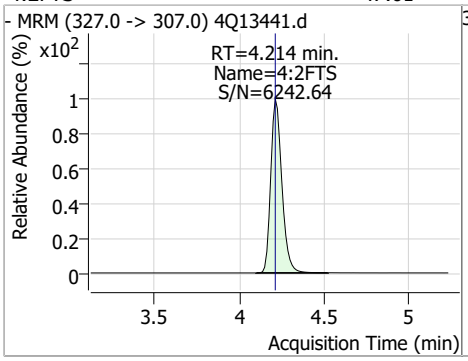


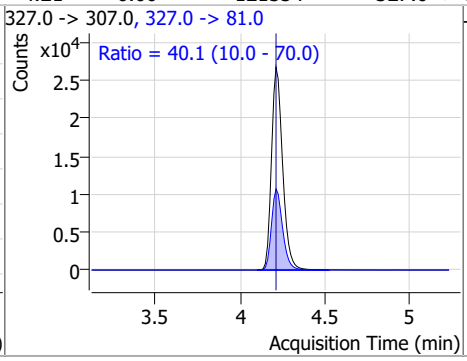


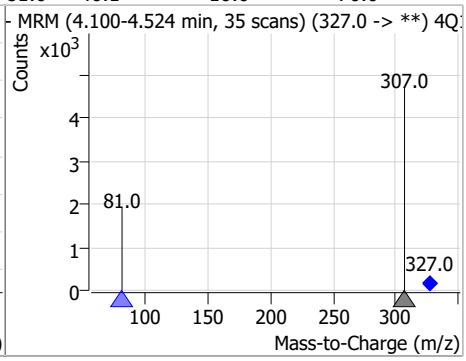


Perfluorinated Compounds by LC/MS/MS

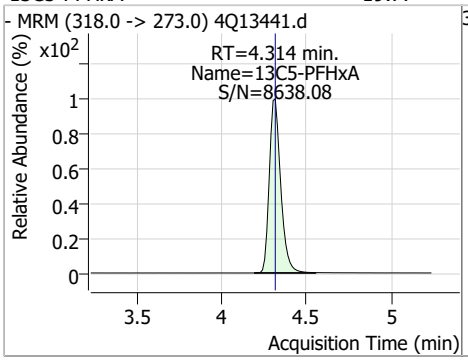
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	47.61	4.21	0.00	121554	327.0 -> 81.0	40.1	10.0	70.0

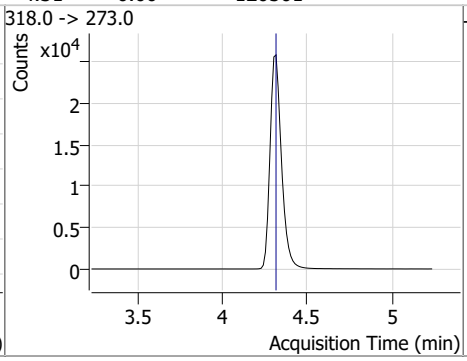


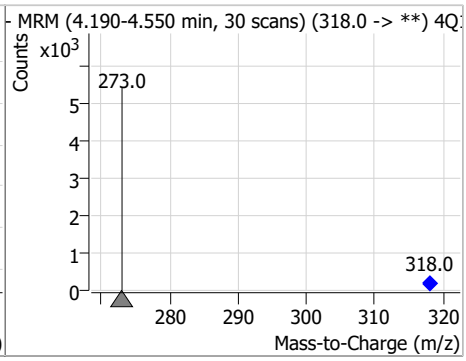




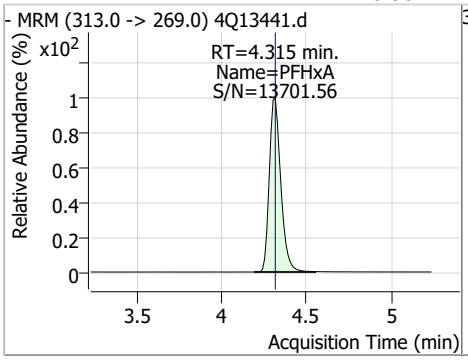
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.77	4.31	0.00	120561				

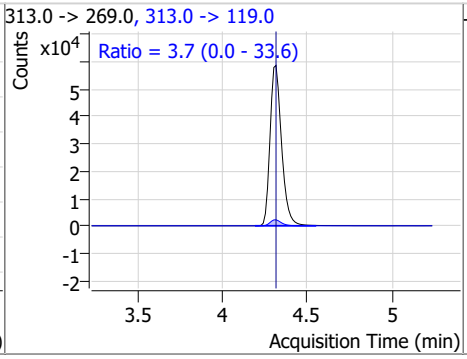


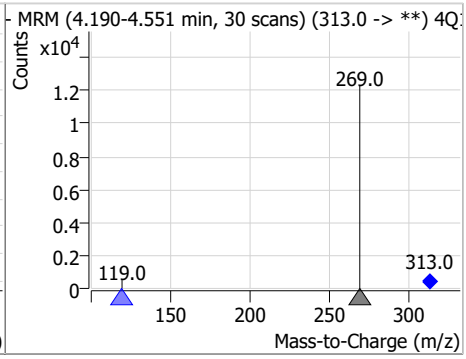




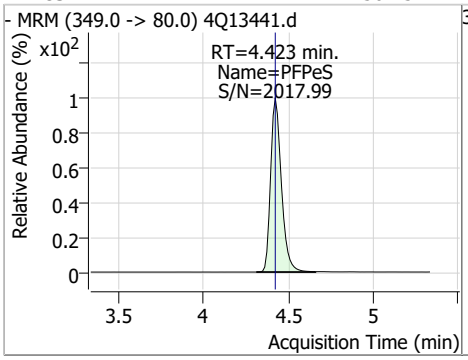
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	49.98	4.32	0.00	275193	313.0 -> 119.0	3.7	0.0	33.6

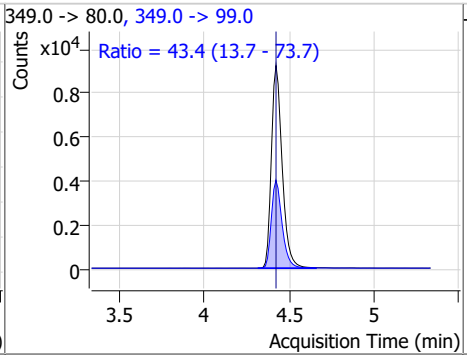


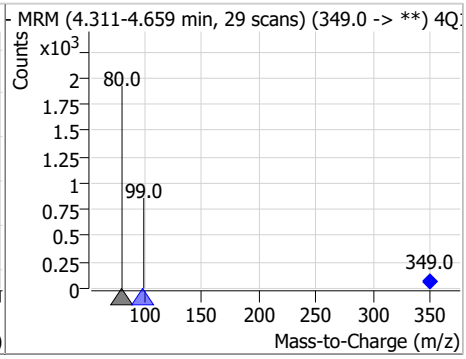




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	50.75	4.42	0.00	40680	349.0 -> 99.0	43.4	13.7	73.7

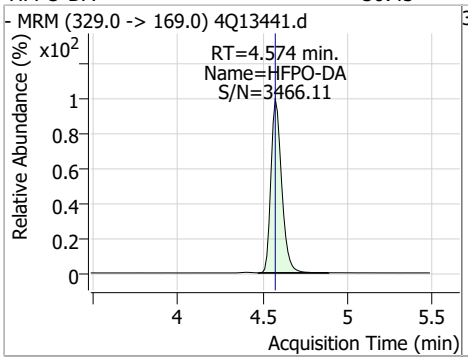


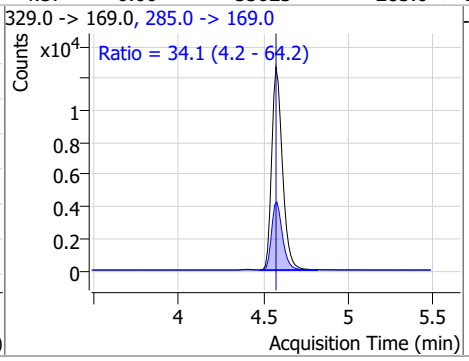


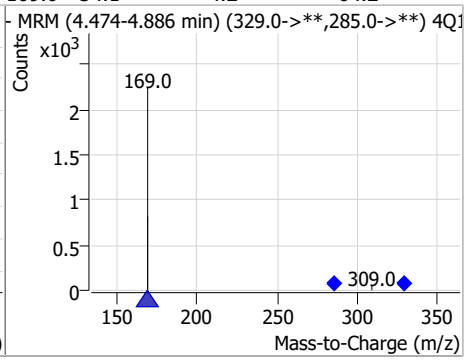


Perfluorinated Compounds by LC/MS/MS

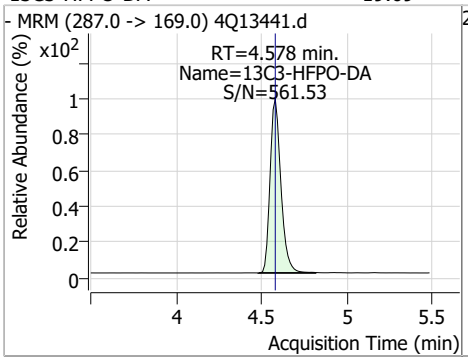
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	50.45	4.57	0.00	55623	285.0 -> 169.0	34.1	4.2	64.2

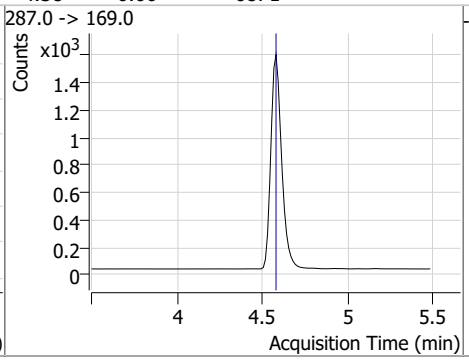


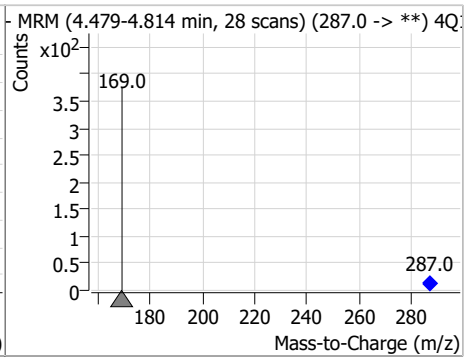




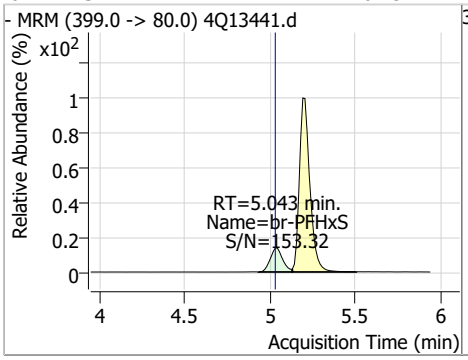
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.69	4.58	0.00	6871				

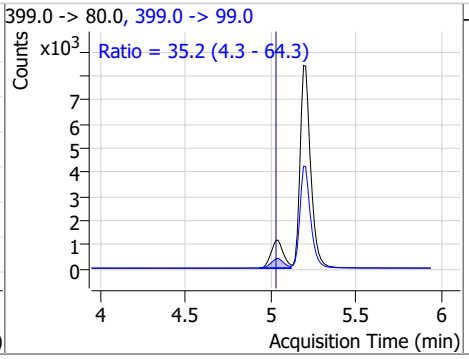


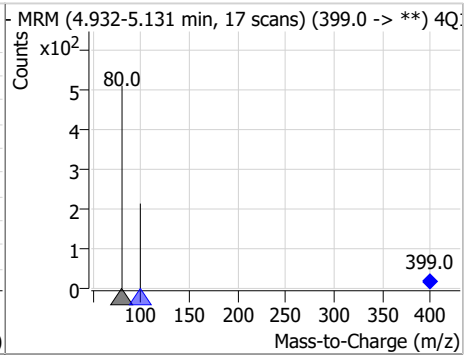




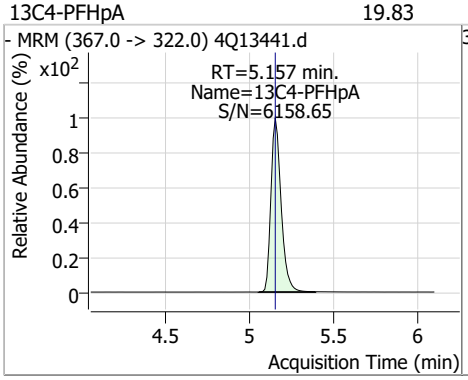
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	6.13	5.04	0.01	5855	399.0 -> 99.0	35.2	4.3	64.3

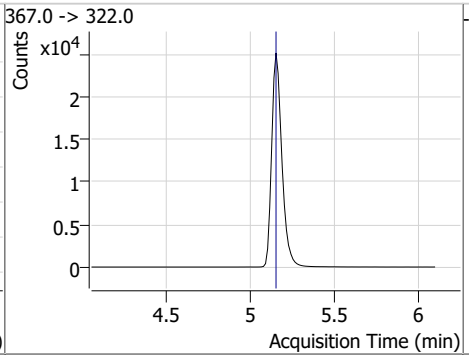


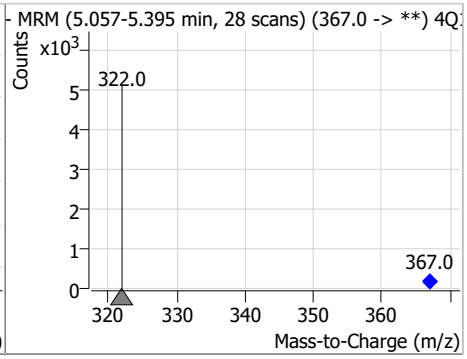




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.83	5.16	0.00	105741				

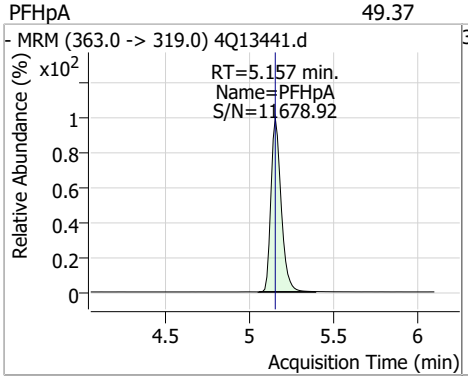


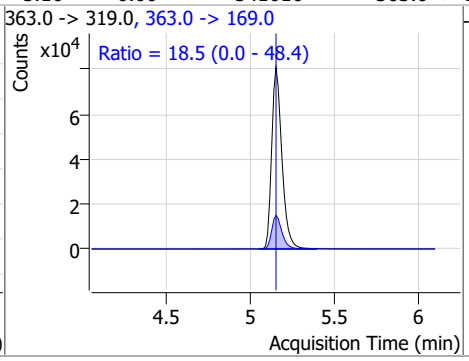


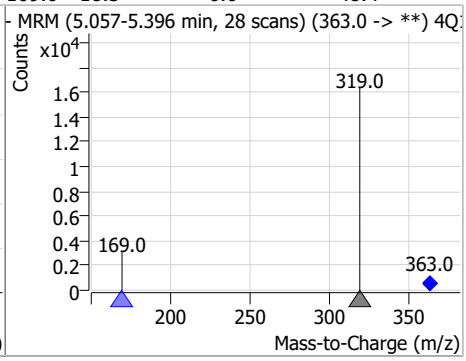


Perfluorinated Compounds by LC/MS/MS

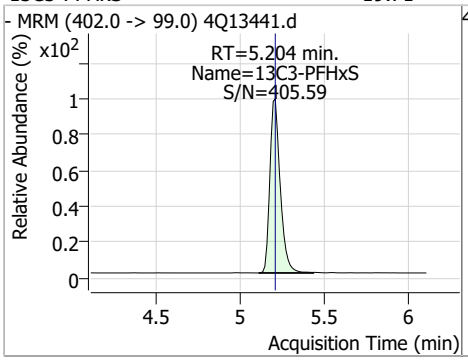
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	49.37	5.16	0.00	341016	363.0 -> 169.0	18.5	0.0	48.4

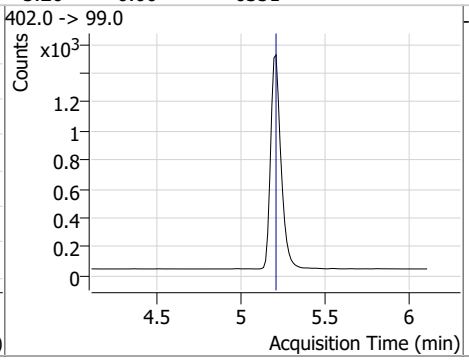


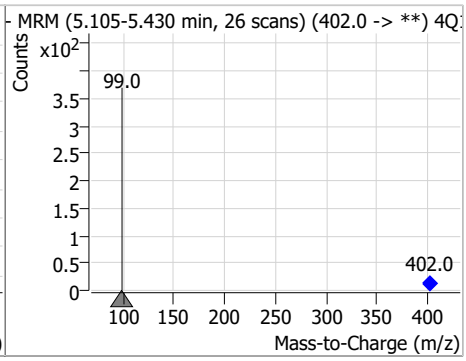




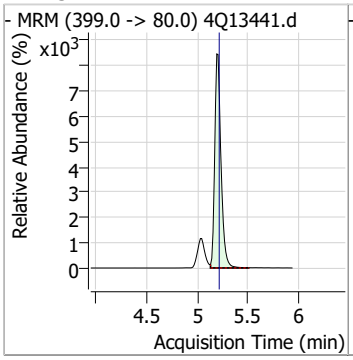
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.71	5.20	0.00	6351				

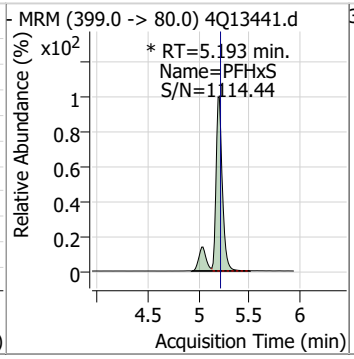


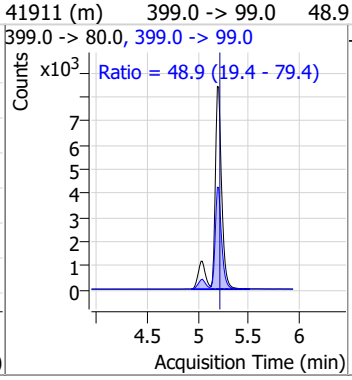


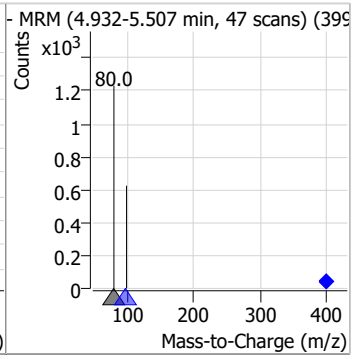


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	52.00	5.19	-0.01	41911 (m)	399.0 -> 99.0	48.9	19.4	79.4

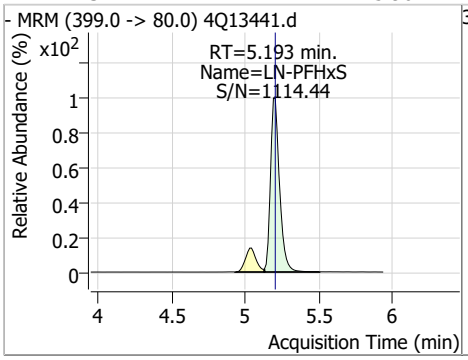


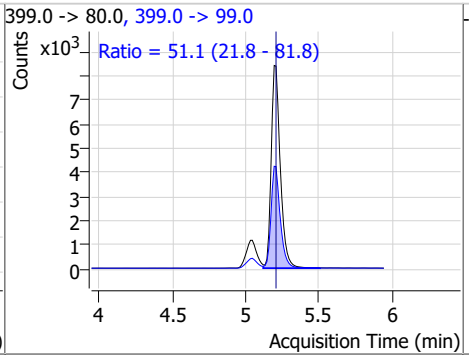


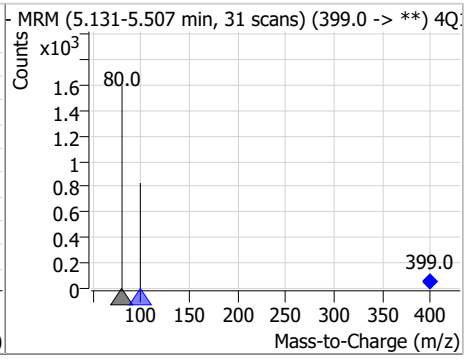




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	45.90	5.19	-0.01	36056	399.0 -> 99.0	51.1	21.8	81.8

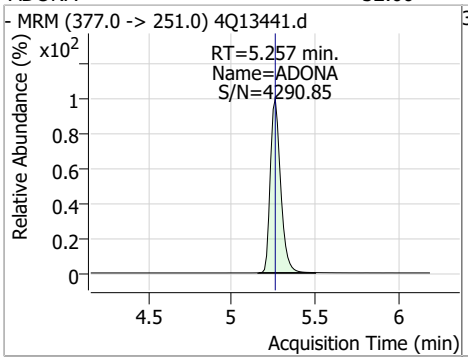


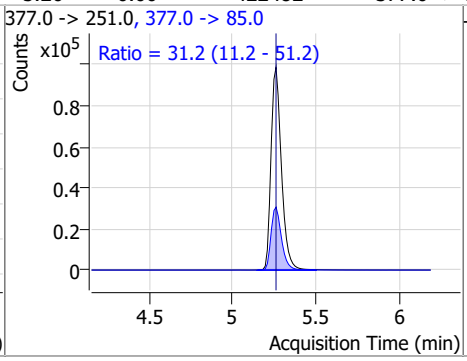


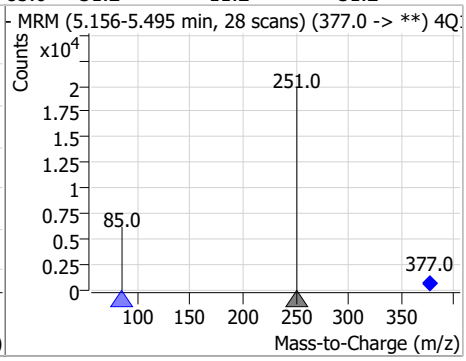


Perfluorinated Compounds by LC/MS/MS

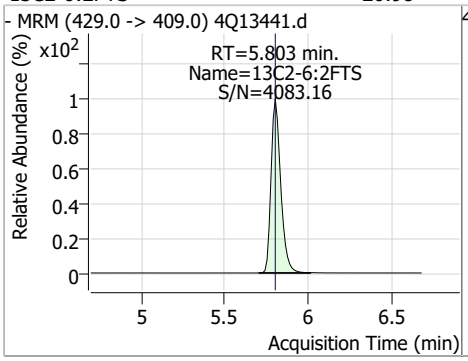
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	52.00	5.26	0.00	422482	377.0 -> 85.0	31.2	11.2	51.2

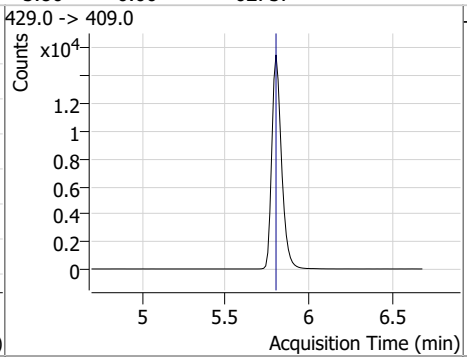


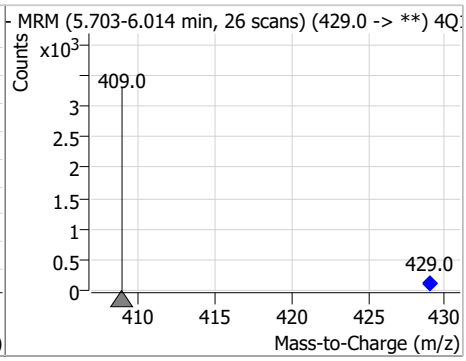




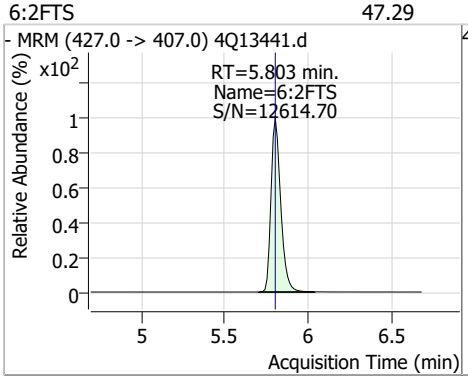
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.98	5.80	0.00	62757				

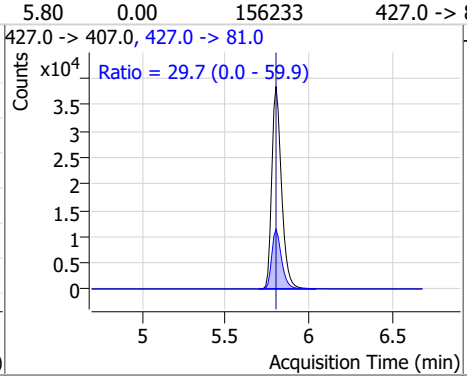


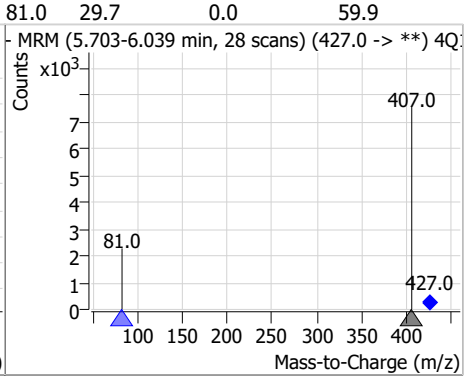




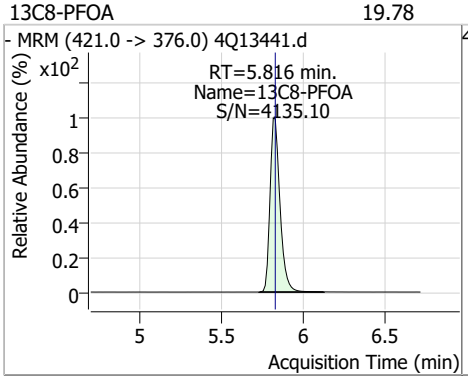
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	47.29	5.80	0.00	156233	427.0 -> 81.0	29.7	0.0	59.9

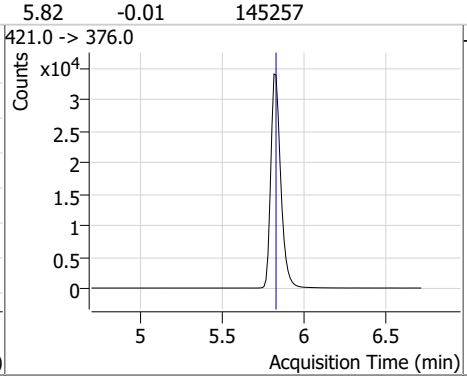


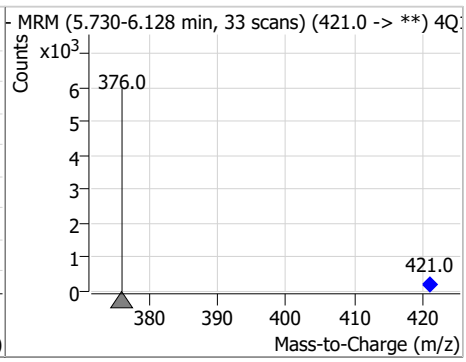




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.78	5.82	-0.01	145257				

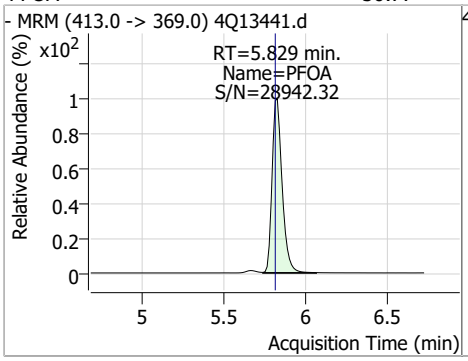


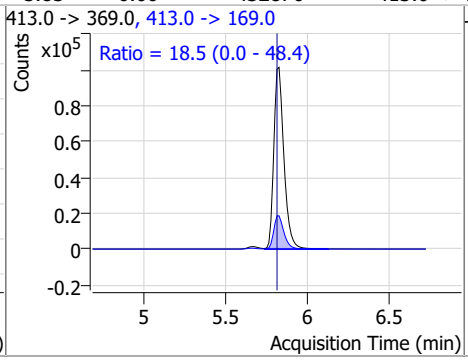


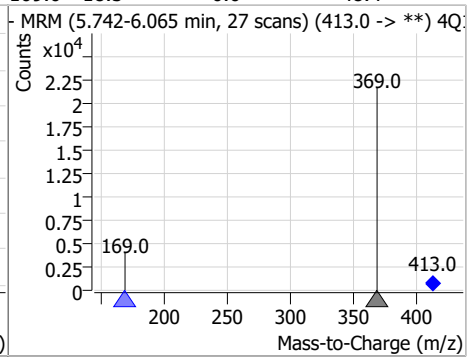


Perfluorinated Compounds by LC/MS/MS

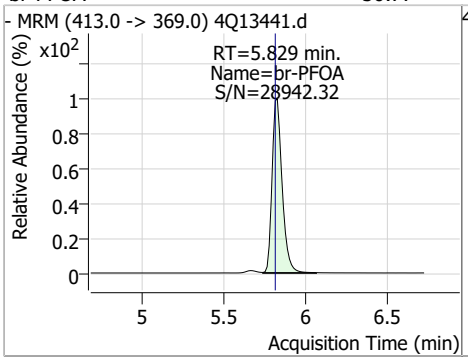
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	50.77	5.83	0.00	432870	413.0 -> 169.0	18.5	0.0	48.4

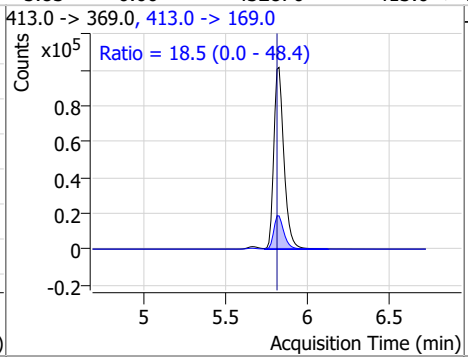


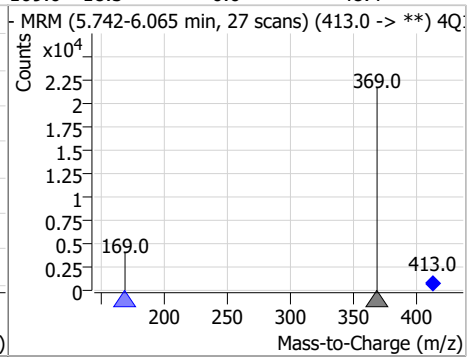




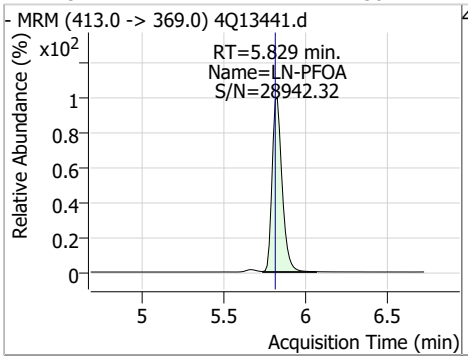
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	50.77	5.83	0.00	432870	413.0 -> 169.0	18.5	0.0	48.4

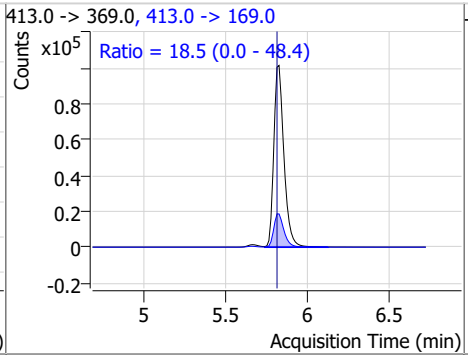


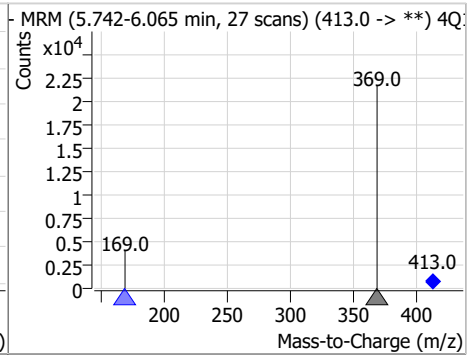




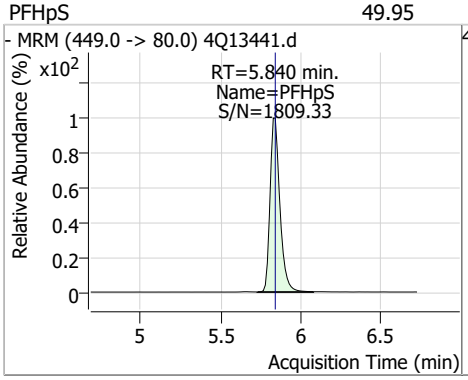
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	50.77	5.83	0.00	432870	413.0 -> 169.0	18.5	0.0	48.4

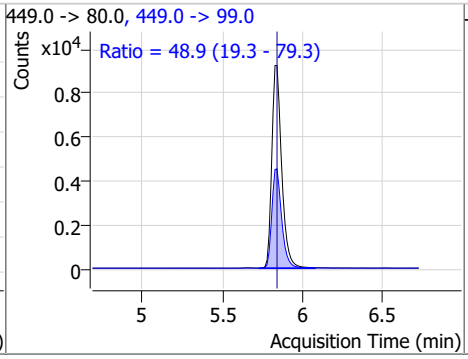


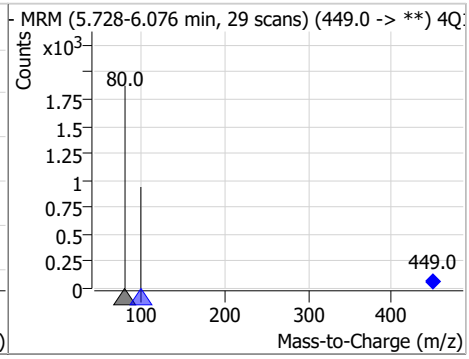




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	49.95	5.84	0.00	39329	449.0 -> 99.0	48.9	19.3	79.3

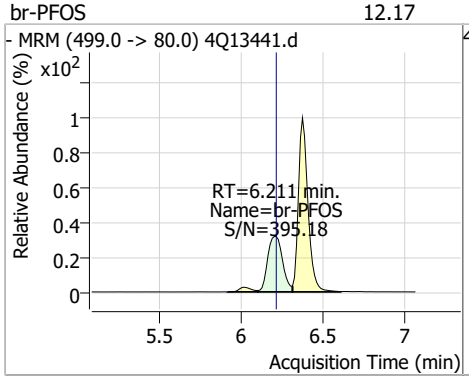


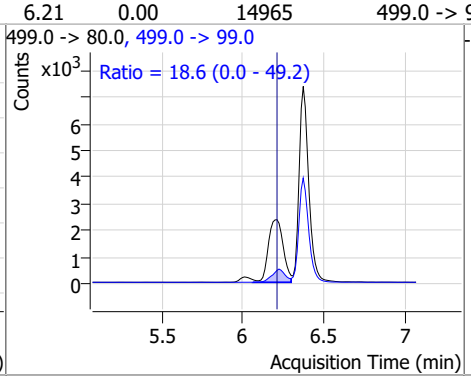


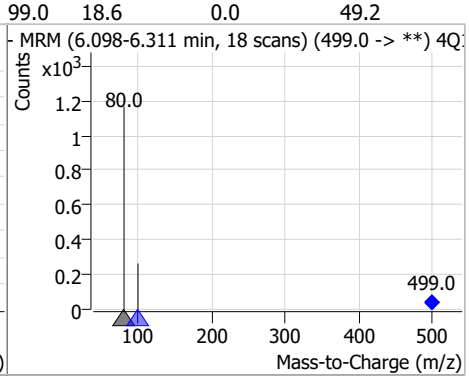


Perfluorinated Compounds by LC/MS/MS

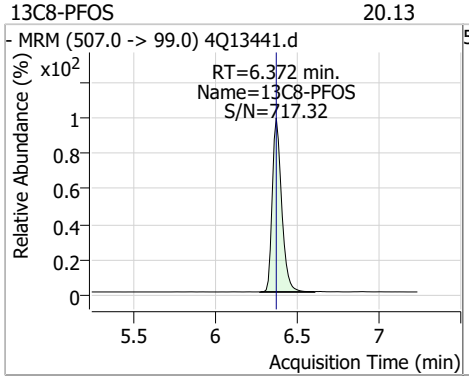
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	12.17	6.21	0.00	14965	499.0 -> 99.0	18.6	0.0	49.2

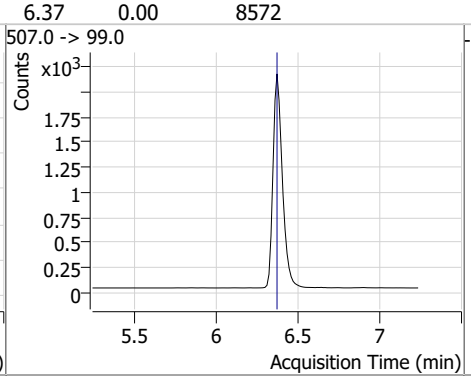


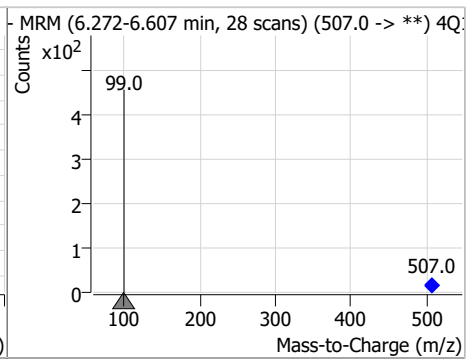




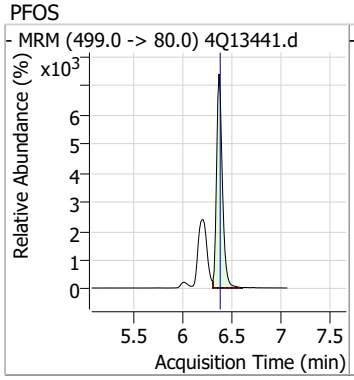
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.13	6.37	0.00	8572				

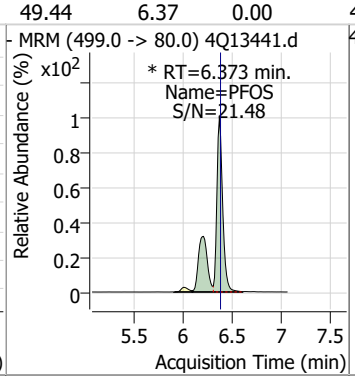


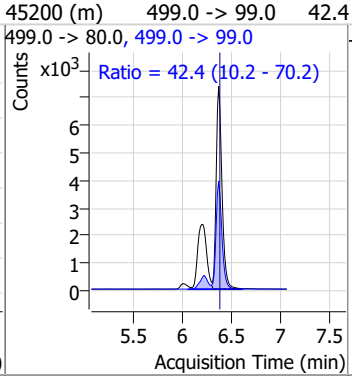


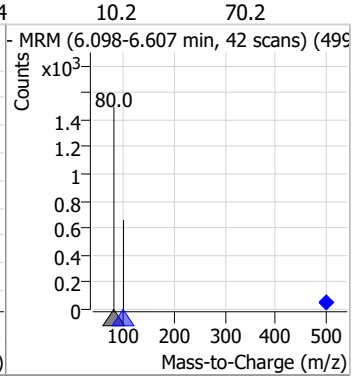


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	49.44	6.37	0.00	45200 (m)	499.0 -> 99.0	42.4	10.2	70.2

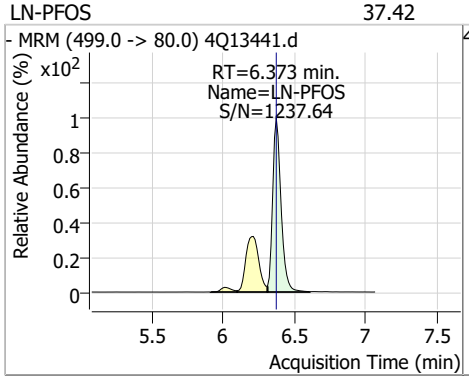


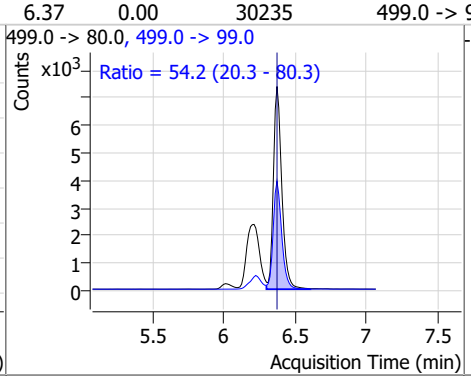


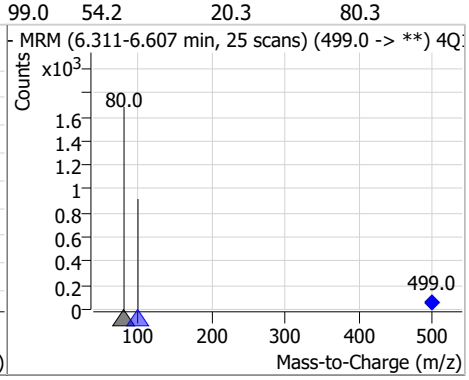




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	37.42	6.37	0.00	30235	499.0 -> 99.0	54.2	20.3	80.3

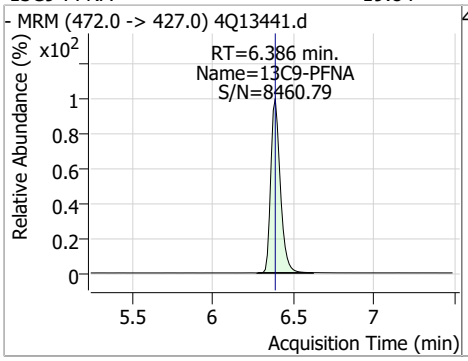


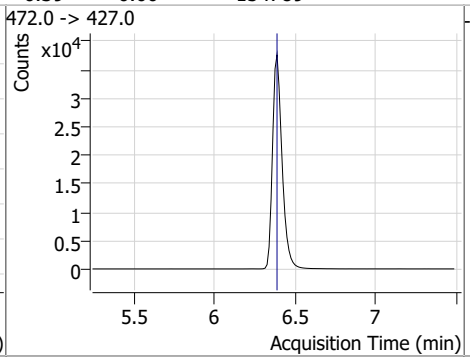


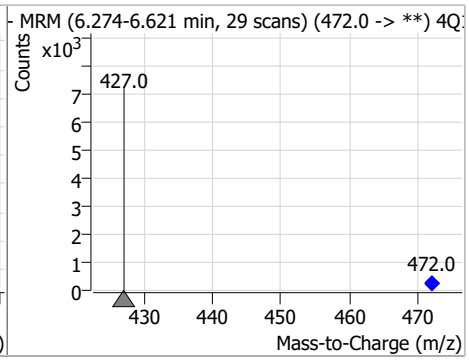


Perfluorinated Compounds by LC/MS/MS

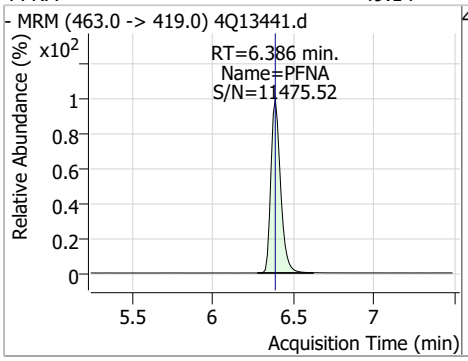
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.84	6.39	0.00	154789				

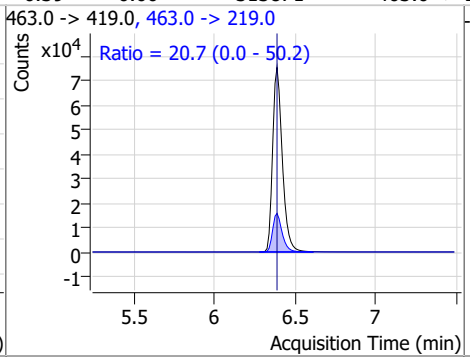


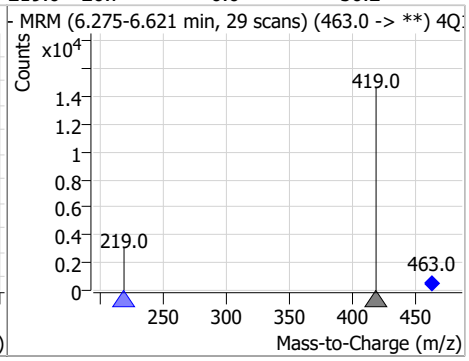




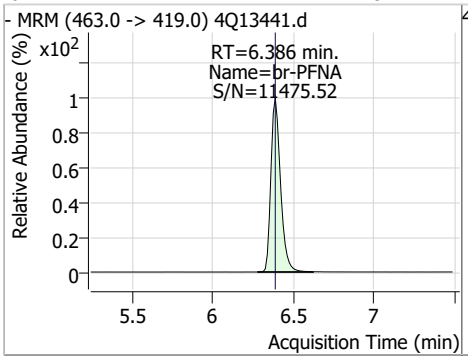
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	49.14	6.39	0.00	313871	463.0 -> 219.0	20.7	0.0	50.2

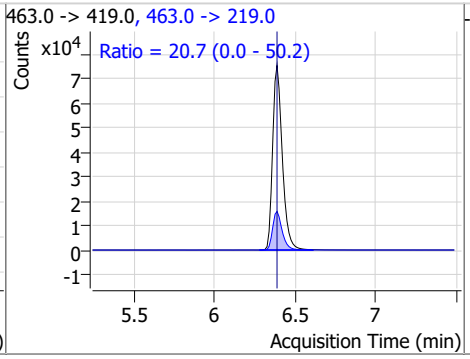


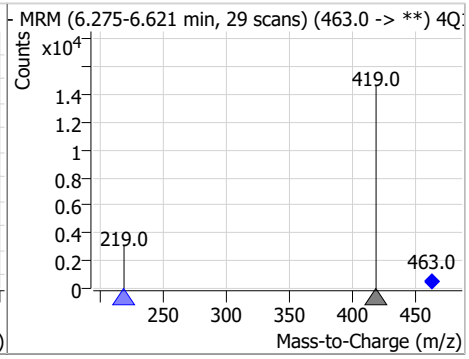




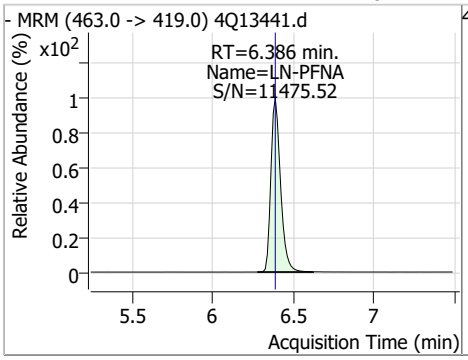
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFNA	49.14	6.39	0.00	313871	463.0 -> 219.0	20.7	0.0	50.2

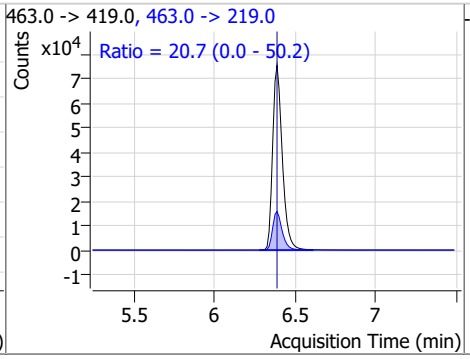


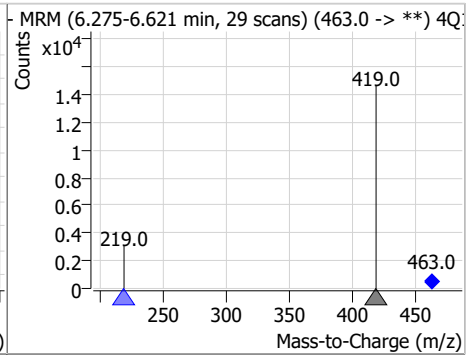




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	49.14	6.39	0.00	313871	463.0 -> 219.0	20.7	0.0	50.2

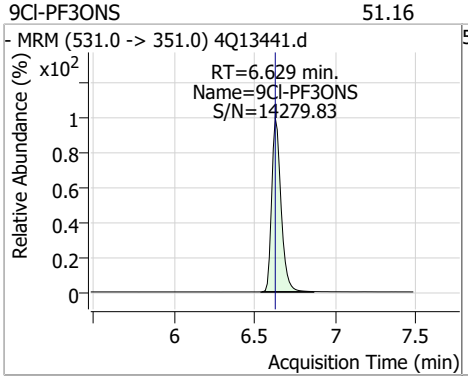


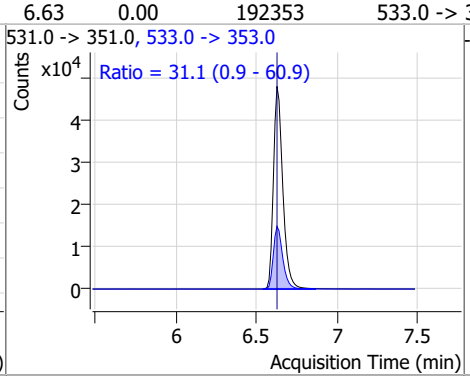


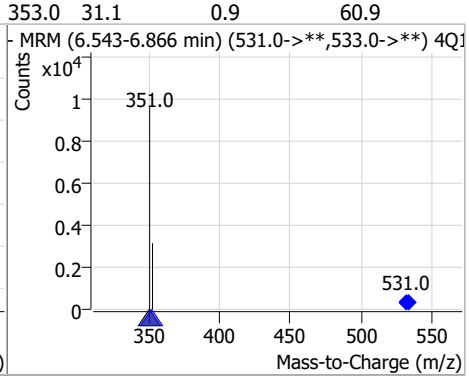


Perfluorinated Compounds by LC/MS/MS

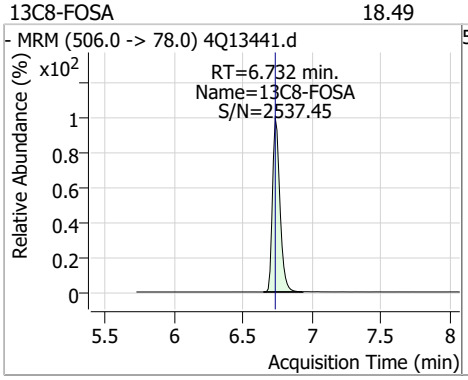
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	51.16	6.63	0.00	192353	533.0 -> 353.0	31.1	0.9	60.9

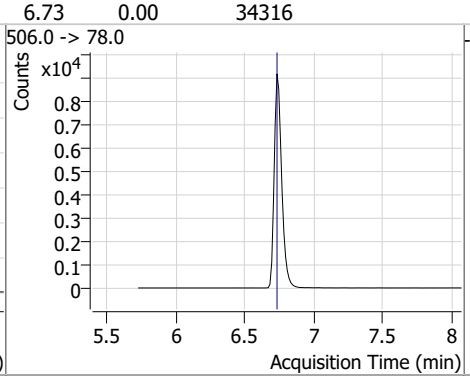


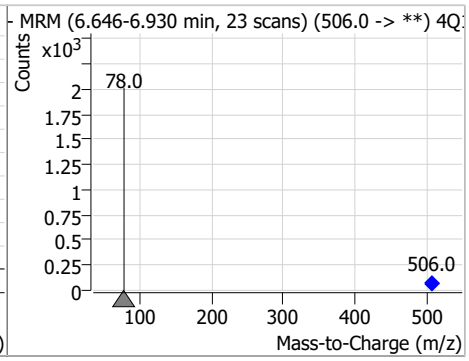




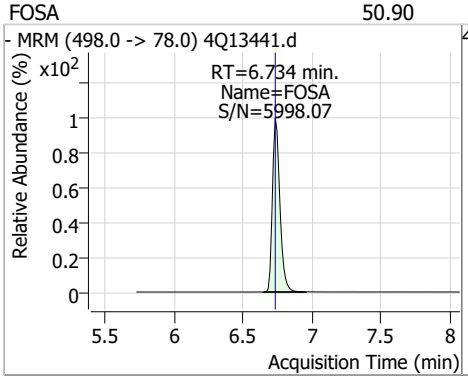
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	18.49	6.73	0.00	34316				

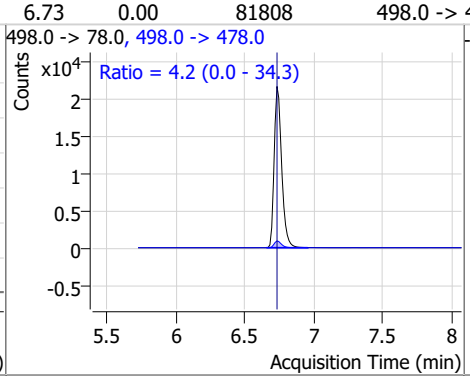


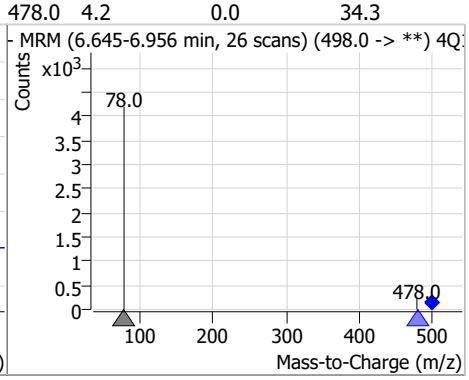




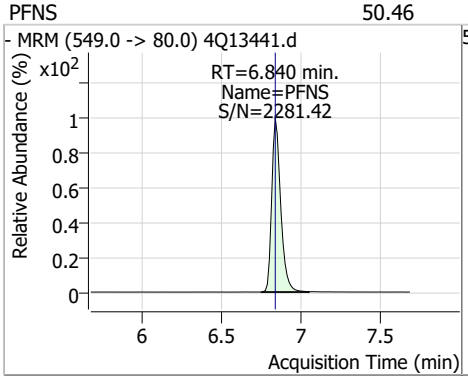
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	50.90	6.73	0.00	81808	498.0 -> 478.0	4.2	0.0	34.3

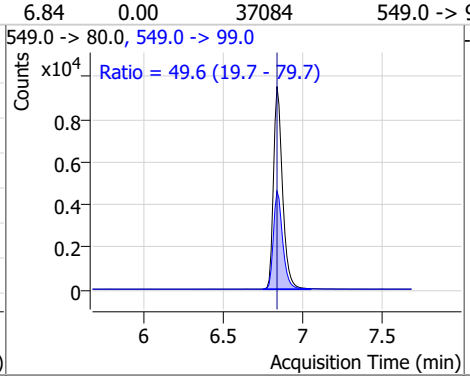


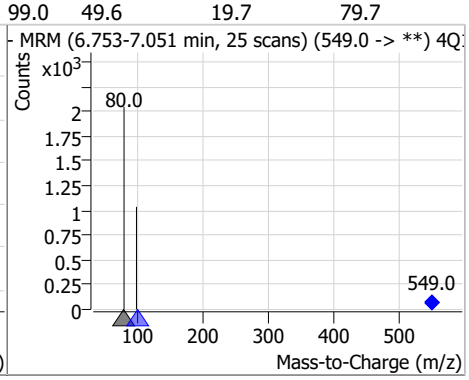




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	50.46	6.84	0.00	37084	549.0 -> 99.0	49.6	19.7	79.7

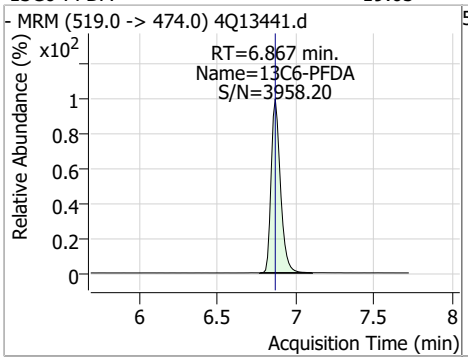


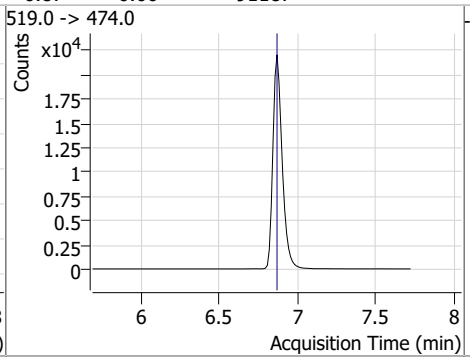


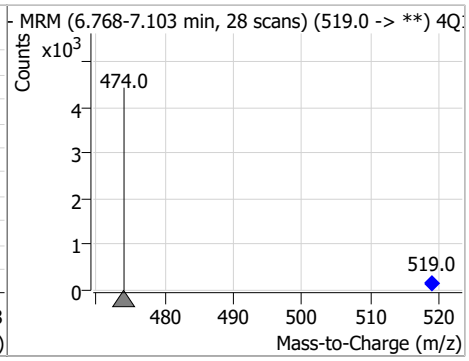


Perfluorinated Compounds by LC/MS/MS

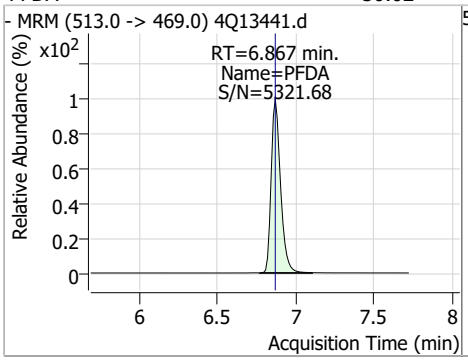
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.05	6.87	0.00	91187				

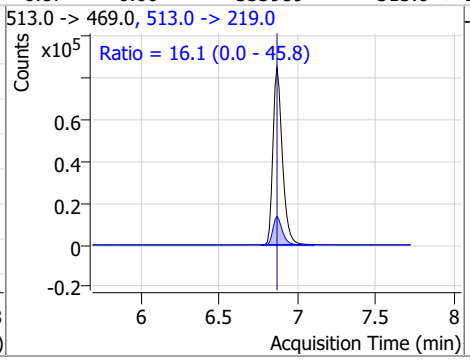


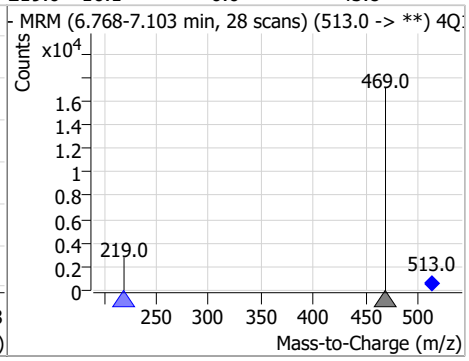




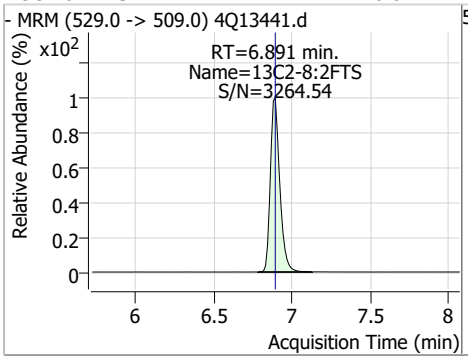
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	50.02	6.87	0.00	353989	513.0 -> 219.0	16.1	0.0	45.8

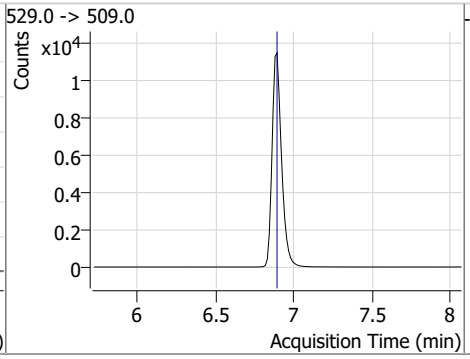


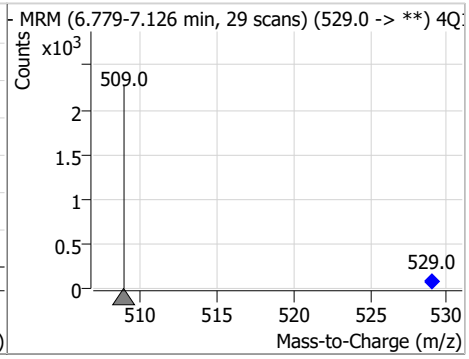




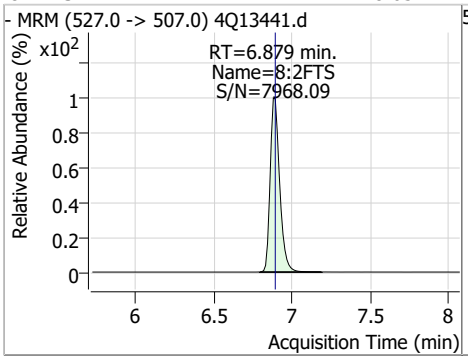
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	20.54	6.89	0.00	47866				

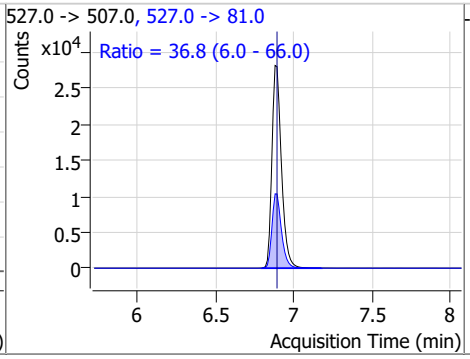


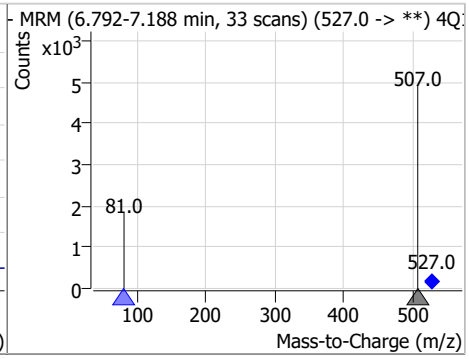




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	48.05	6.88	-0.01	118930	527.0 -> 81.0	36.8	6.0	66.0

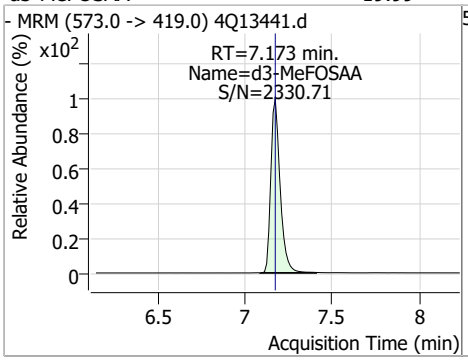


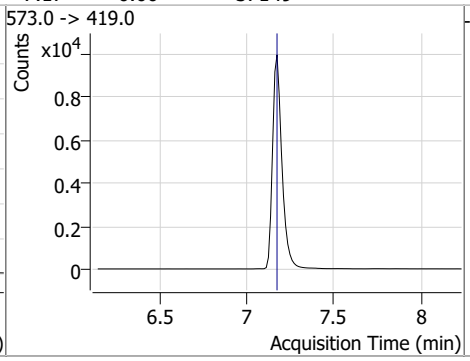


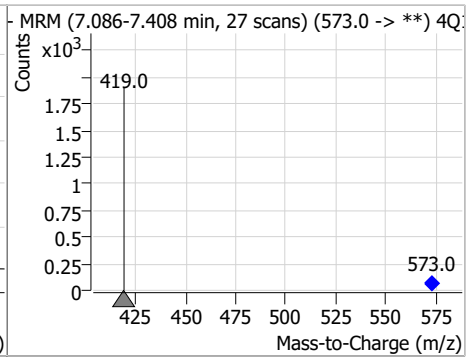


Perfluorinated Compounds by LC/MS/MS

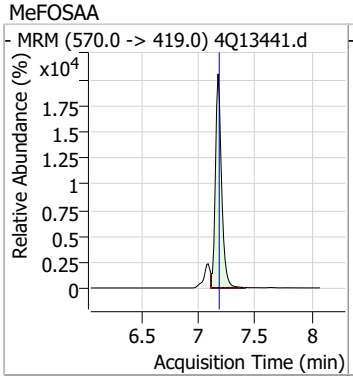
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.99	7.17	0.00	37149				

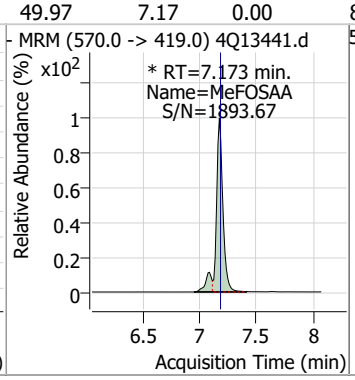


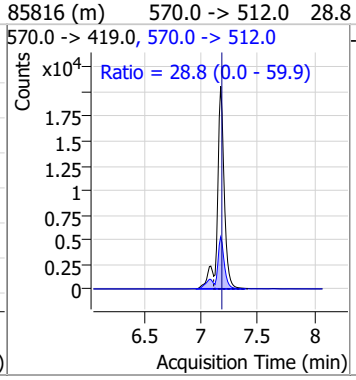


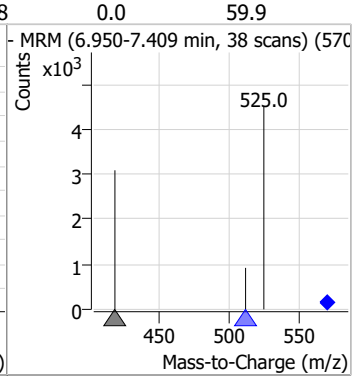


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	49.97	7.17	0.00	85816 (m)	570.0 -> 512.0	28.8	0.0	59.9

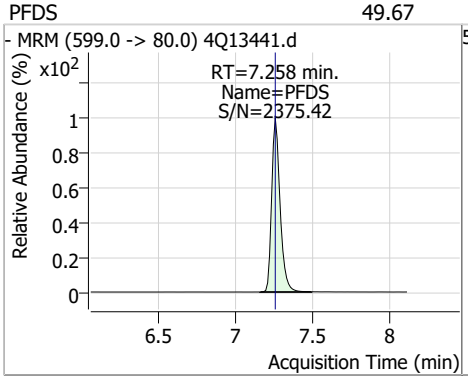


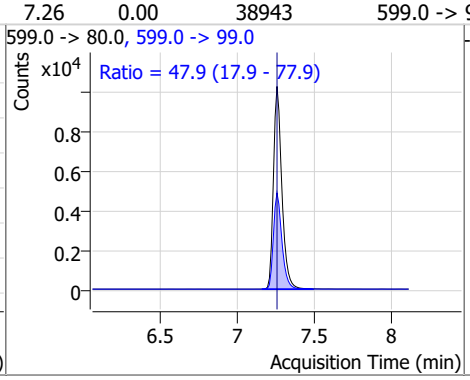


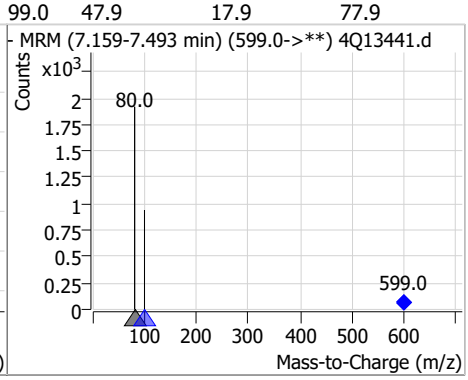




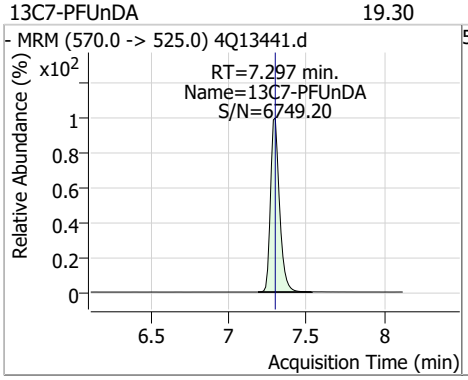
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	49.67	7.26	0.00	38943	599.0 -> 99.0	47.9	17.9	77.9

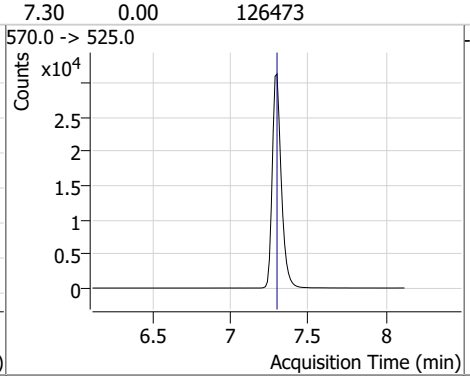


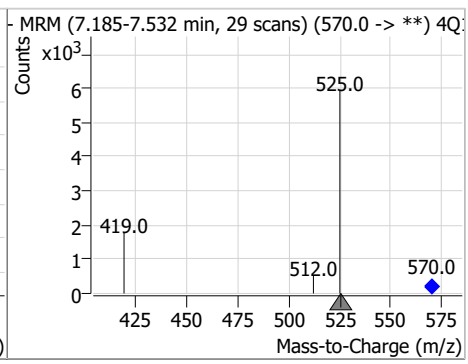




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.30	7.30	0.00	126473				

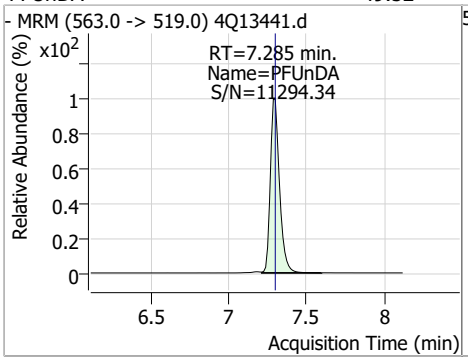


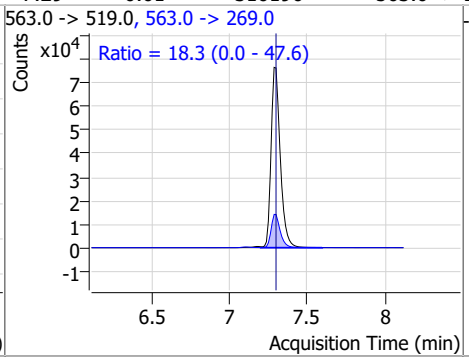


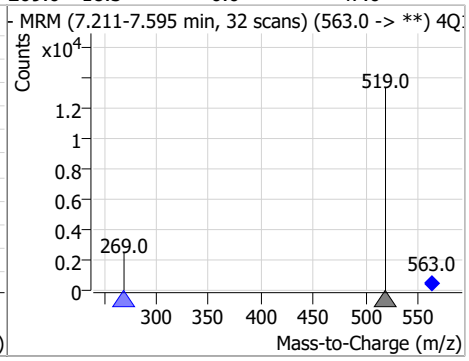


Perfluorinated Compounds by LC/MS/MS

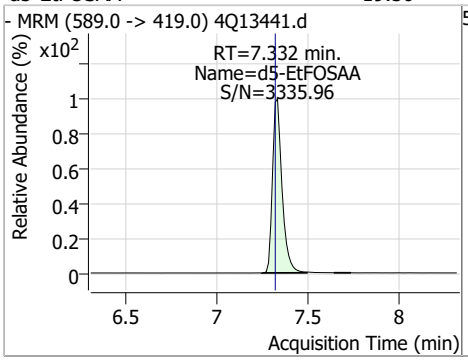
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	49.52	7.29	-0.01	316196	563.0 -> 269.0	18.3	0.0	47.6

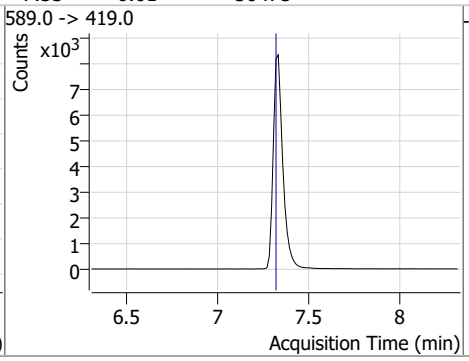


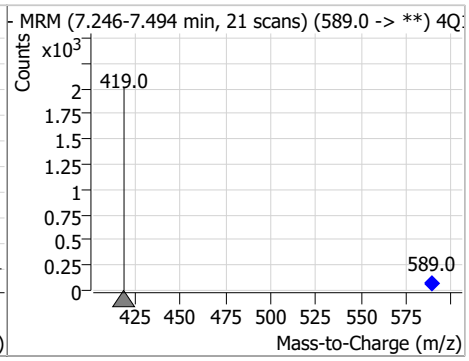




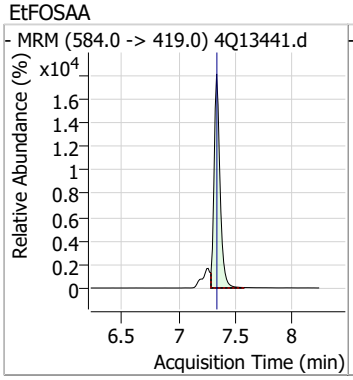
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.50	7.33	0.01	30475				

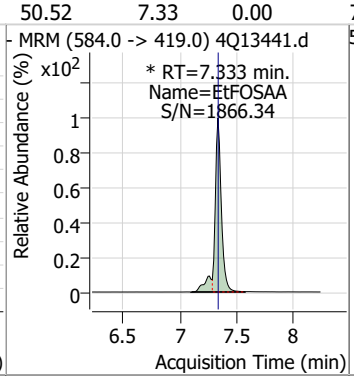


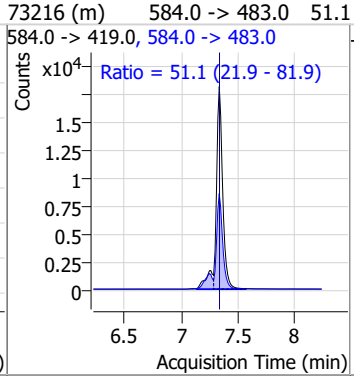


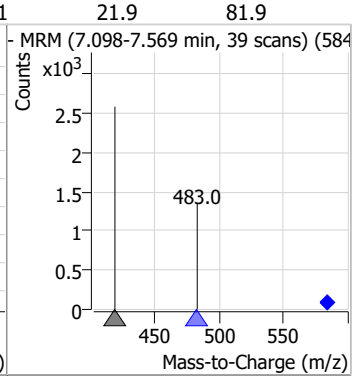


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	50.52	7.33	0.00	73216 (m)	584.0 -> 483.0	51.1	21.9	81.9

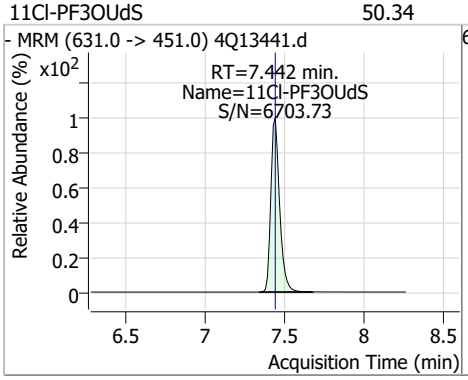


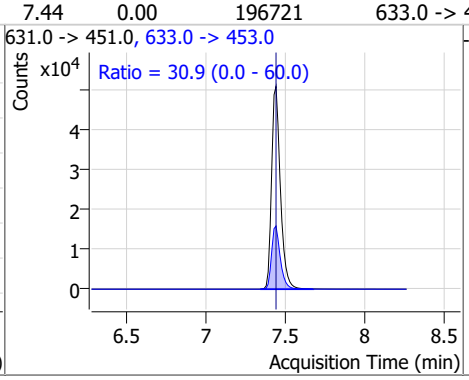


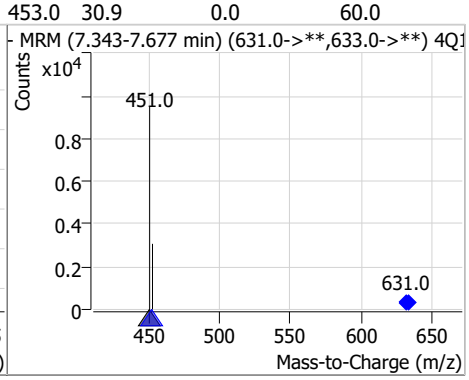




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	50.34	7.44	0.00	196721	633.0 -> 453.0	30.9	0.0	60.0

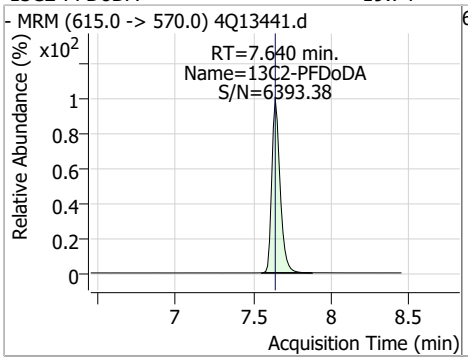


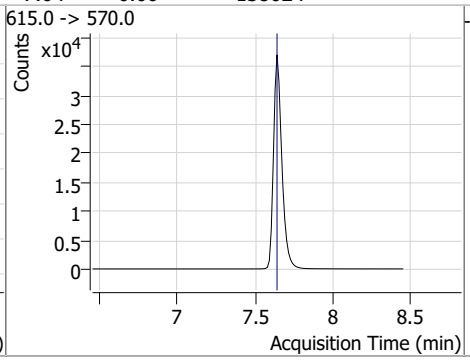


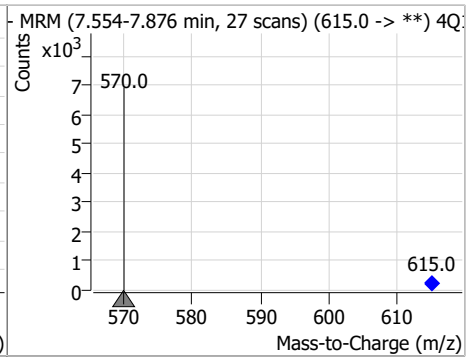


Perfluorinated Compounds by LC/MS/MS

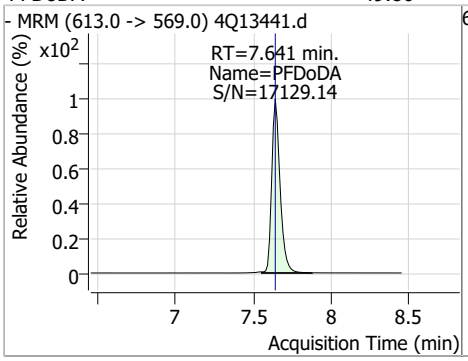
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.74	7.64	0.00	138024				

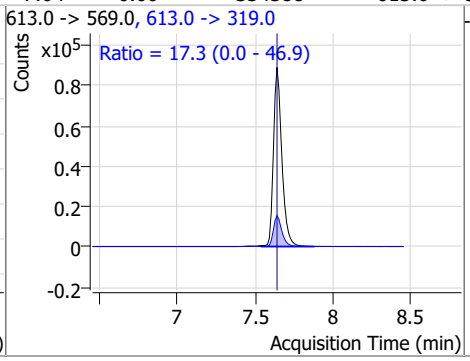


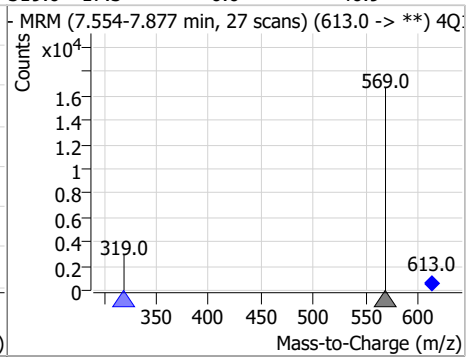




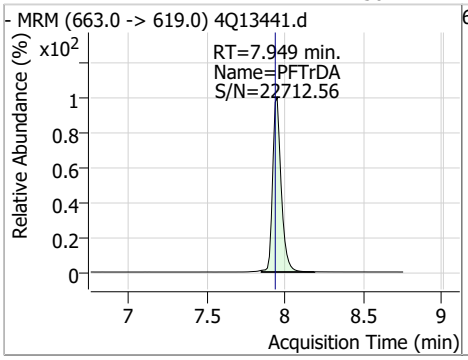
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	49.86	7.64	0.00	334388	613.0 -> 319.0	17.3	0.0	46.9

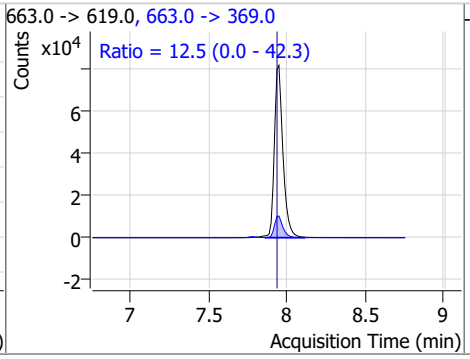


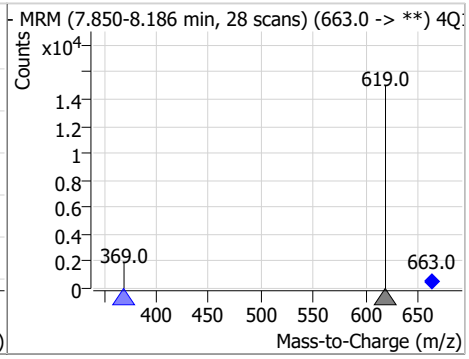




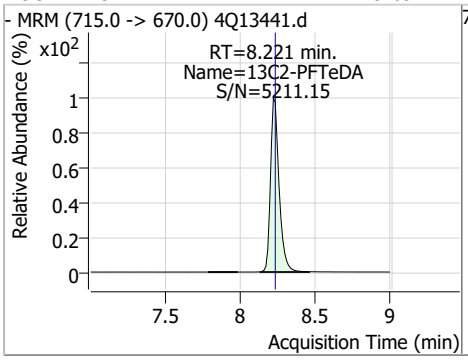
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	50.27	7.95	0.00	311114	663.0 -> 369.0	12.5	0.0	42.3

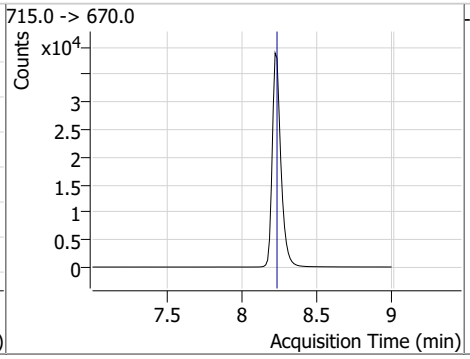


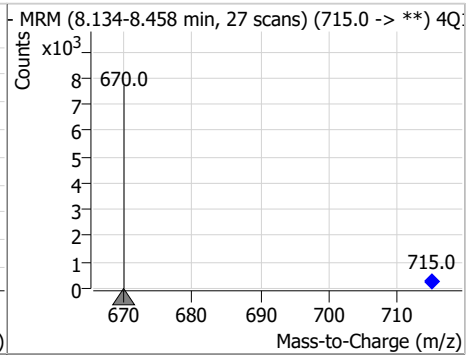




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.69	8.22	-0.01	154508				

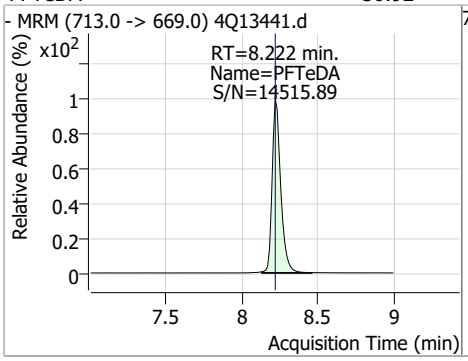


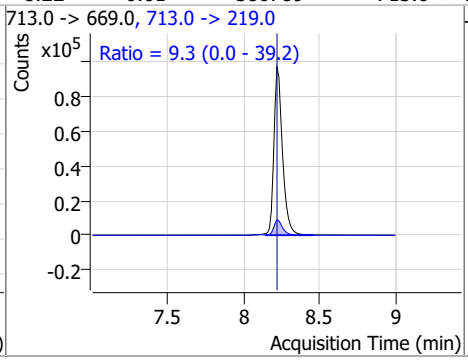


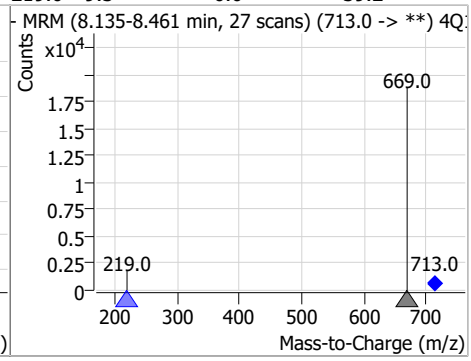


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	50.92	8.22	-0.01	380789	713.0 -> 219.0	9.3	0.0	39.2







Manual Integration Approval Summary

Sample Number: S4Q189-IC189
Lab FileID: 4Q13441.D
Injection Time: 04/18/21 16:13
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/19/21 07:57 Nancy Saunders
Supervisor approved: 04/19/21 15:40 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.19	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.37	Split peak
MeFOSAA	2355-31-9		7.17	Split peak
EtFOSAA	2991-50-6		7.33	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:40

Perfluorinated Compounds by LC/MS/MS

Data File : 4Q13442.d
Operator : natashag
Acq. Method : 537_ID.m
Acq. Date-Time : 4/18/2021 4:28:19 PM
Sample Name : ic189-100
Vial : P1-A9
DA Method File : BR_LN_041821_S4Q189.quantmethod.xml
Batch Name : s4q189.batch.bin
Sample Information : op84918,S4Q189,250,,,1,1,water

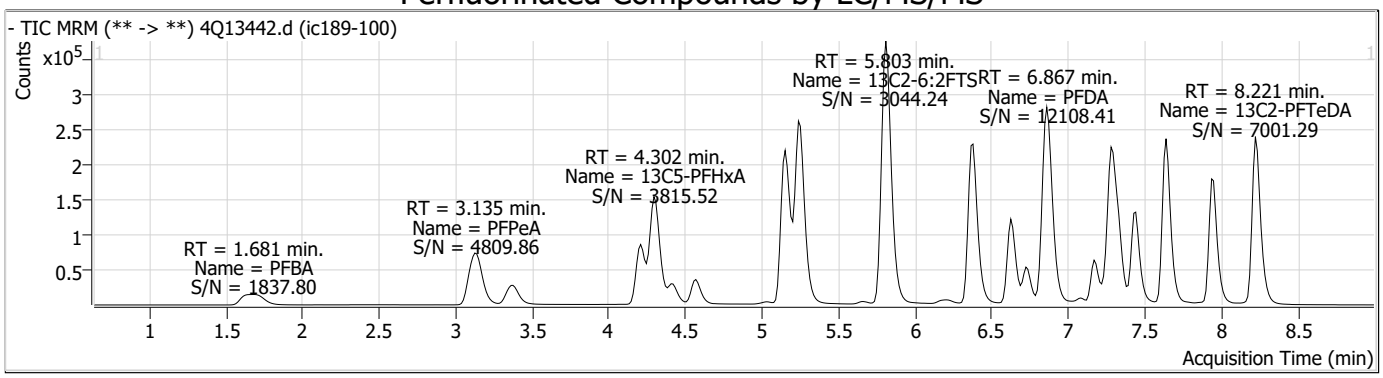
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.687	217.0 -> 172.0	48486	20.00	µg/L	0.000
M5-PFPeA	3.133	268.0 -> 223.0	88261	20.00	µg/L	-0.012
M5-PFHxA	4.302	318.0 -> 273.0	120557	20.00	µg/L	-0.013
M4-PFHpA	5.157	367.0 -> 322.0	103928	20.00	µg/L	0.000
M8-PFOA	5.816	421.0 -> 376.0	142277	20.00	µg/L	-0.012
M9-PFNA	6.386	472.0 -> 427.0	148468	20.00	µg/L	0.000
M6-PFDA	6.867	519.0 -> 474.0	85792	20.00	µg/L	0.000
M7-PFUnDA	7.284	570.0 -> 525.0	119333	20.00	µg/L	-0.012
M2-PFDoDA	7.640	615.0 -> 570.0	135187	20.00	µg/L	0.000
M2-PFTeDA	8.221	715.0 -> 670.0	152447	20.00	µg/L	-0.012
M8-FOSA	6.732	506.0 -> 78.0	31998	20.00	µg/L	0.000
M3-PFBS	3.381	302.0 -> 99.0	6736	20.00	µg/L	0.000
M3-PFHxS	5.192	402.0 -> 99.0	6508	20.00	µg/L	-0.012
M8-PFOS	6.372	507.0 -> 99.0	8339	20.00	µg/L	0.000
M2-4:2FTS	4.212	329.0 -> 309.0	54791	20.00	µg/L	0.000
M2-6:2FTS	5.803	429.0 -> 409.0	67596	20.00	µg/L	0.000
M2-8:2FTS	6.878	529.0 -> 509.0	51316	20.00	µg/L	-0.012
M3-MeFOSAA	7.173	573.0 -> 419.0	36178	20.00	µg/L	0.000
M3-HFPO-DA	4.578	287.0 -> 169.0	6879	20.00	µg/L	0.000
M5-EtFOSAA	7.332	589.0 -> 419.0	30047	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.212	329.0 -> 309.0	54791	24.12	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 120.6%		
13C2-6:2FTS	5.803	429.0 -> 409.0	67596	22.60	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 113.0%		
13C2-8:2FTS	6.878	529.0 -> 509.0	51316	22.02	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.1%		
13C2-PFDoDA	7.640	615.0 -> 570.0	135187	19.34	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.7%		
13C2-PFTeDA	8.221	715.0 -> 670.0	152447	19.43	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.1%		
13C3-PFBS	3.381	302.0 -> 99.0	6736	19.76	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.8%		
13C3-PFHxS	5.192	402.0 -> 99.0	6508	20.20	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.0%		
13C4-PFBA	1.687	217.0 -> 172.0	48486	19.63	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%		
13C4-PFHpA	5.157	367.0 -> 322.0	103928	19.49	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.5%		
13C5-PFHxA	4.302	318.0 -> 273.0	120557	19.77	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.9%		
13C5-PFPeA	3.133	268.0 -> 223.0	88261	19.87	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%		
13C6-PFDA	6.867	519.0 -> 474.0	85792	17.92	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.6%		

Perfluorinated Compounds by LC/MS/MS

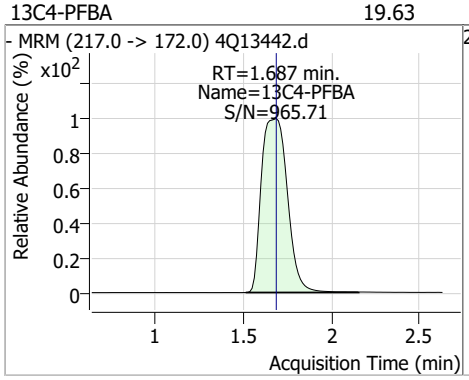
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	7.284	570.0 -> 525.0	119333	18.21	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.1%			
13C8-FOSA	6.732	506.0 -> 78.0	31998	17.24	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.2%			
13C8-PFOA	5.816	421.0 -> 376.0	142277	19.37	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.9%			
13C8-PFOS	6.372	507.0 -> 99.0	8339	19.59	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.9%			
13C9-PFNA	6.386	472.0 -> 427.0	148468	19.03	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.1%			
d3-MeFOSAA	7.173	573.0 -> 419.0	36178	19.47	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.3%			
13C3-HFPO-DA	4.578	287.0 -> 169.0	6876	19.71	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.6%			
d5-EtFOSAA	7.332	589.0 -> 419.0	30001	19.20	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.0%			
Target Compounds							**QValue**
4:2FTS	4.214	327.0 -> 307.0	242053	82.63	µg/L		99
6:2FTS	5.803	427.0 -> 407.0	291250	81.85	µg/L		98
8:2FTS	6.879	527.0 -> 507.0	220167	82.97	µg/L		99
EtFOSAA	7.333	584.0 -> 419.0	142908	100.18	µg/L	m	99
FOSA	6.734	498.0 -> 78.0	149707	99.90	µg/L		99
MeFOSAA	7.173	570.0 -> 419.0	168023	100.47	µg/L	m	99
PFBA	1.681	213.0 -> 169.0	105899	100.07	µg/L		100
PFBS	3.383	299.0 -> 80.0	110050	100.02	µg/L		99
PFDA	6.867	513.0 -> 469.0	668082	100.33	µg/L		100
PFDoDA	7.641	613.0 -> 569.0	659478	100.40	µg/L		99
PFDS	7.258	599.0 -> 80.0	74485	100.68	µg/L		100
PFHpA	5.157	363.0 -> 319.0	683589	100.69	µg/L		100
PFHpS	5.827	449.0 -> 80.0	76823	100.28	µg/L		99
PFHxA	4.302	313.0 -> 269.0	552224	100.29	µg/L		100
PFHxS	5.193	399.0 -> 80.0	81920	99.21	µg/L	m	100
PFNA	6.386	463.0 -> 419.0	617649	100.81	µg/L		100
PFNS	6.840	549.0 -> 80.0	71390	99.85	µg/L		100
PFOA	5.817	413.0 -> 369.0	834409	99.92	µg/L		100
PFOS	6.373	499.0 -> 80.0	89525	100.65	µg/L	m	98
PFPeA	3.135	263.0 -> 219.0	380966	99.95	µg/L		100
PFPeS	4.423	349.0 -> 80.0	80041	100.05	µg/L		99
PFTeDA	8.222	713.0 -> 669.0	736399	99.80	µg/L		100
PFTrDA	7.937	663.0 -> 619.0	611785	100.20	µg/L		99
PFUnDA	7.285	563.0 -> 519.0	605428	100.48	µg/L		99
11Cl-PF3OUdS	7.442	631.0 -> 451.0	383053	100.07	µg/L		98
9Cl-PF3ONS	6.629	531.0 -> 351.0	366391	99.80	µg/L		98
ADONA	5.245	377.0 -> 251.0	826328	99.25	µg/L		99
HFPO-DA	4.574	329.0 -> 169.0	110601	100.20	µg/L		99
br-PFOS	6.199	499.0 -> 80.0	29342	23.97	µg/L		100
LN-PFOS	6.373	499.0 -> 80.0	60183	76.56	µg/L		97
br-PFHxS	5.031	399.0 -> 80.0	11717	11.96	µg/L		97
LN-PFHxS	5.193	399.0 -> 80.0	70203	87.23	µg/L		100
br-PFOA	5.817	413.0 -> 369.0	834409	99.92	µg/L		100
LN-PFOA	5.817	413.0 -> 369.0	834409	99.92	µg/L		100
br-PFNA	6.386	463.0 -> 419.0	617649	100.81	µg/L		100
LN-PFNA	6.386	463.0 -> 419.0	617649	100.81	µg/L		100

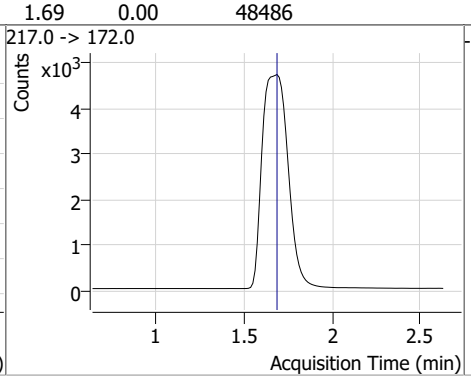
 # = Qualifier out of range, m = manually integrated, + = Area summed

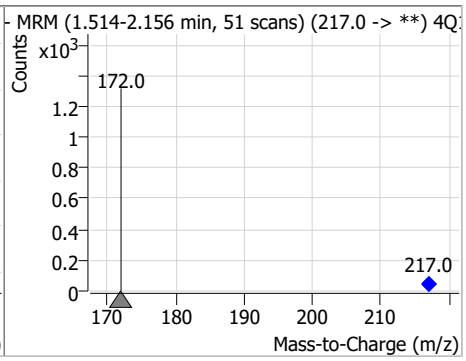
Perfluorinated Compounds by LC/MS/MS



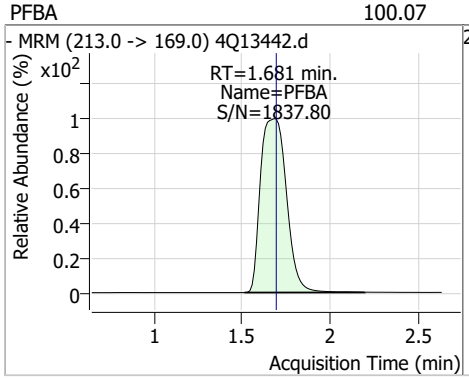
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.63	1.69	0.00	48486				

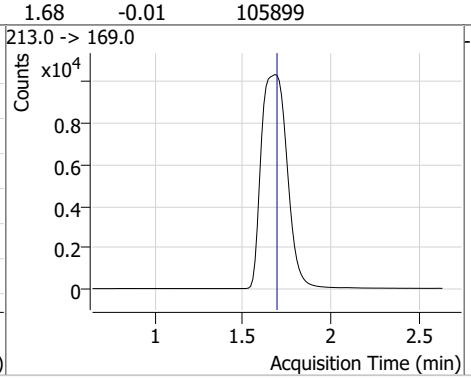


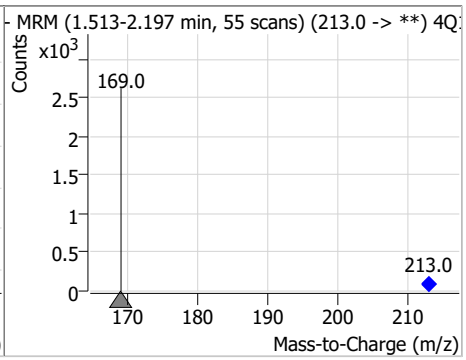




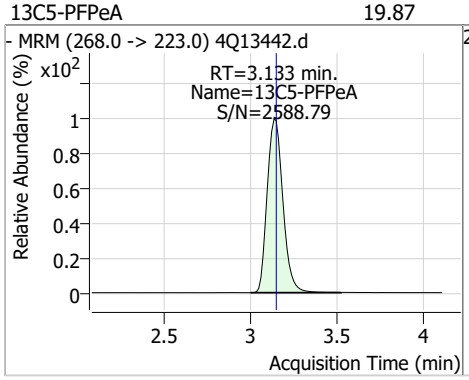
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	100.07	1.68	-0.01	105899				

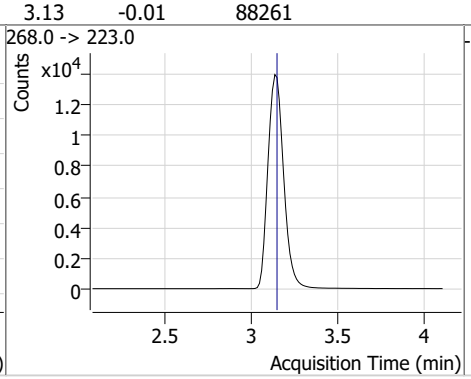


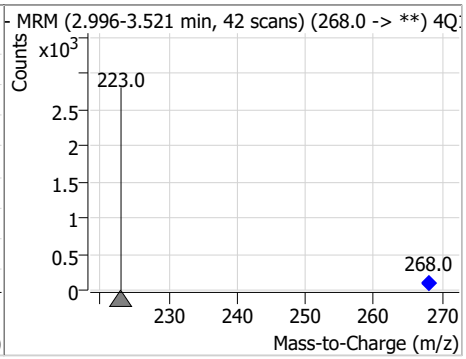




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.87	3.13	-0.01	88261				

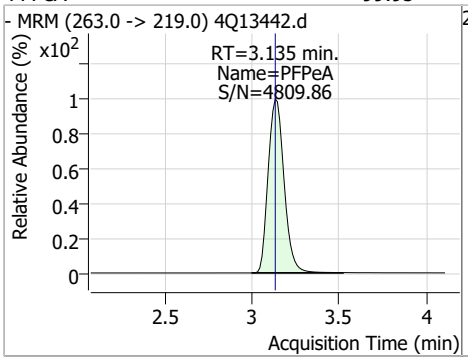


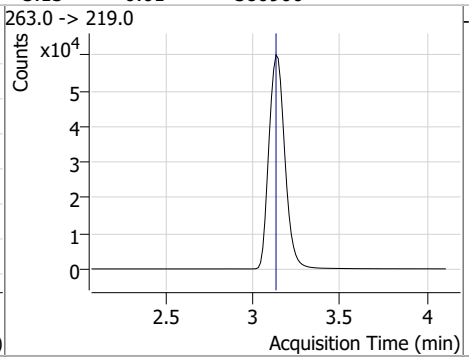


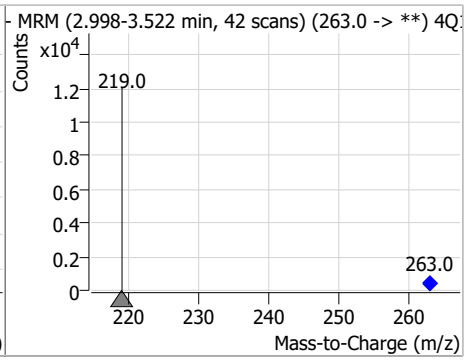


Perfluorinated Compounds by LC/MS/MS

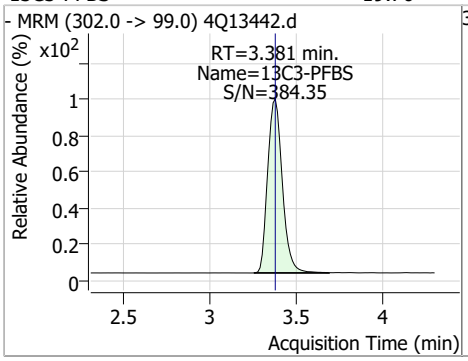
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	99.95	3.13	-0.01	380966				

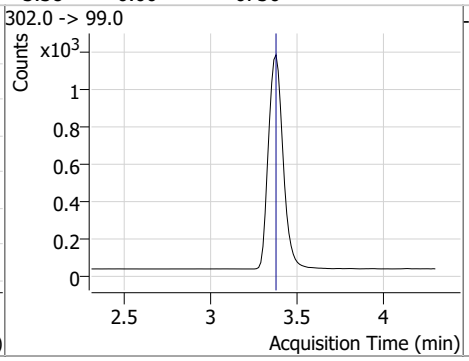


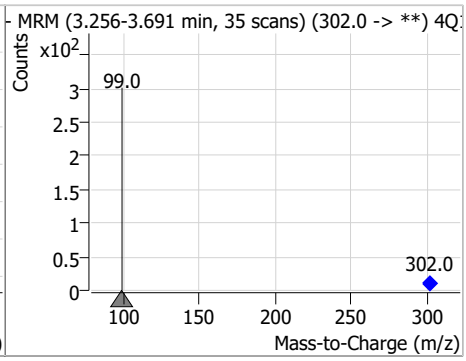




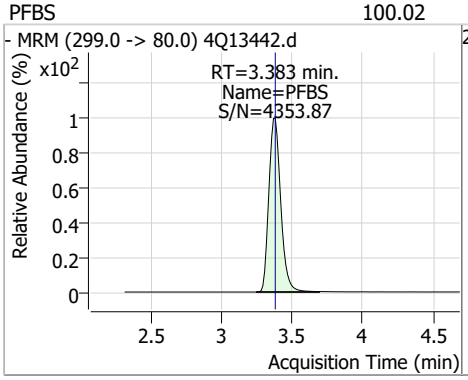
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.76	3.38	0.00	6736				

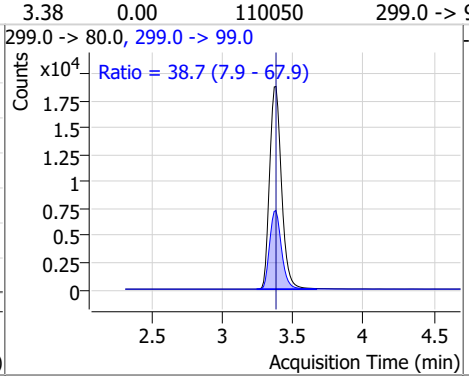


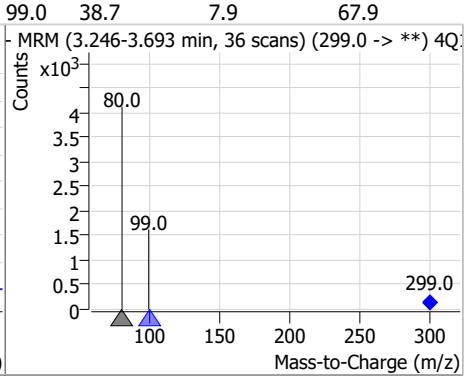




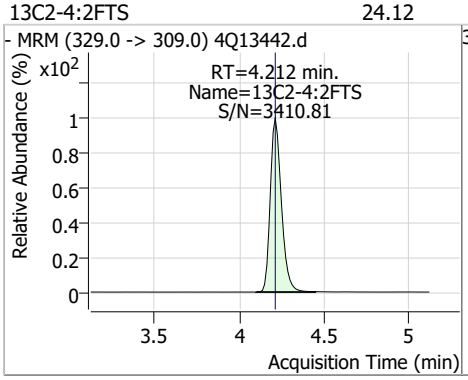
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	100.02	3.38	0.00	110050	299.0 -> 99.0	38.7	7.9	67.9

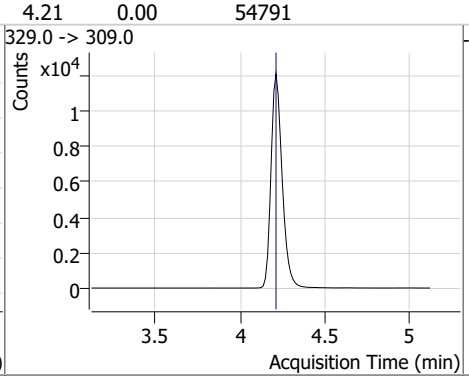


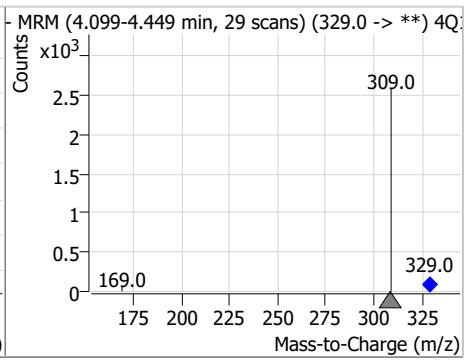




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	24.12	4.21	0.00	54791				

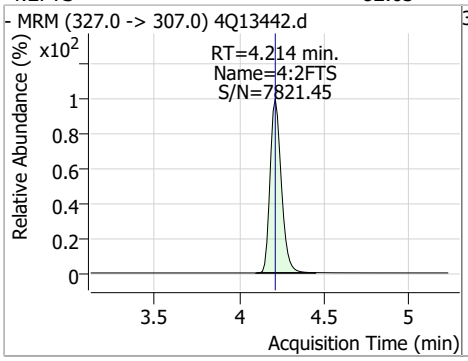


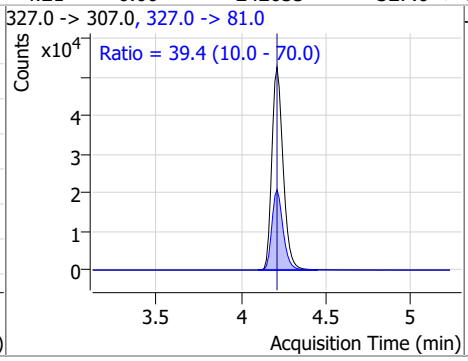


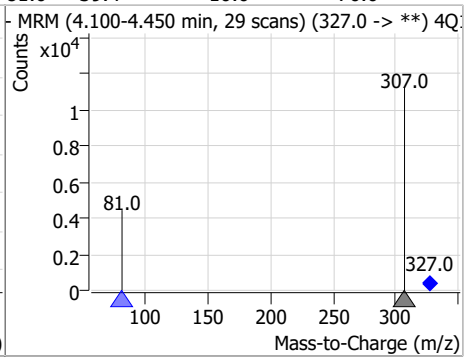


Perfluorinated Compounds by LC/MS/MS

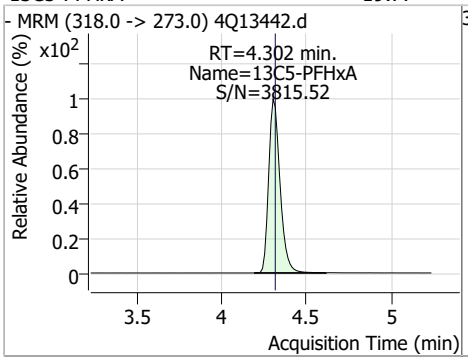
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	82.63	4.21	0.00	242053	327.0 -> 81.0	39.4	10.0	70.0

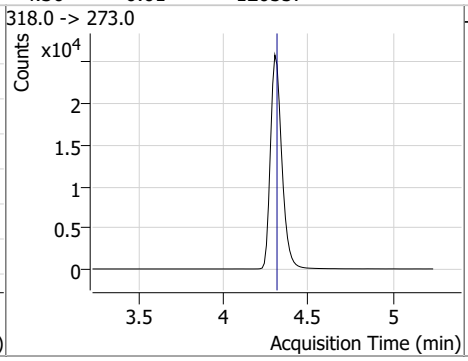


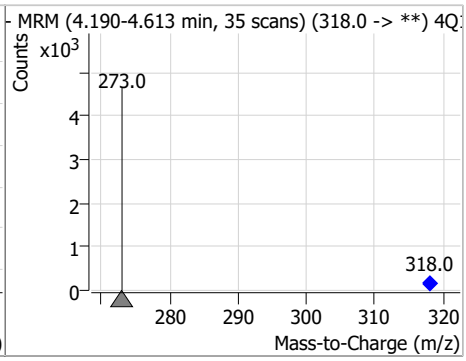




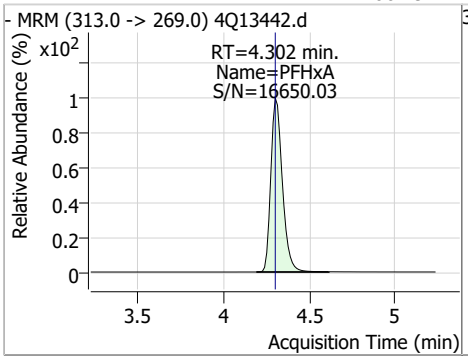
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.77	4.30	-0.01	120557				

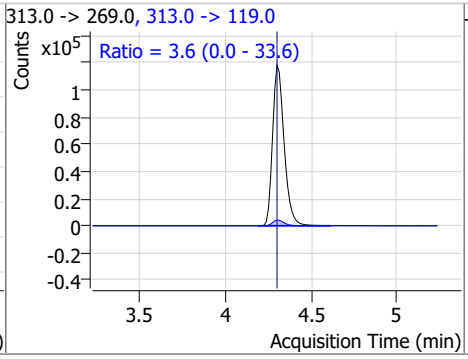


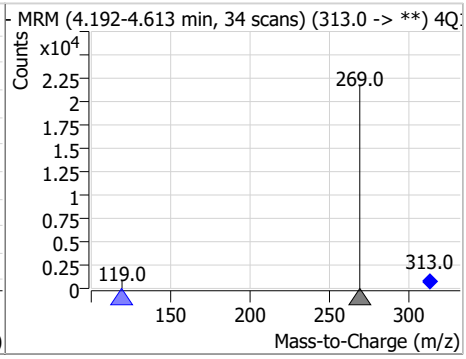




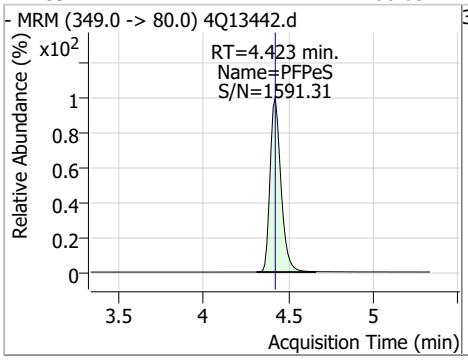
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	100.29	4.30	-0.01	552224	313.0 -> 119.0	3.6	0.0	33.6

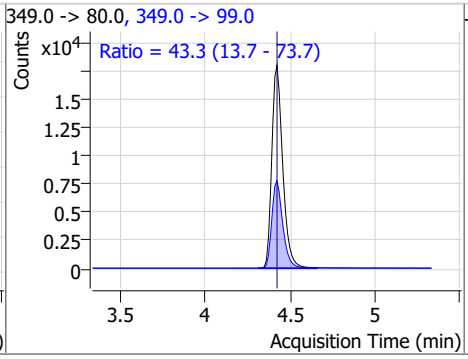


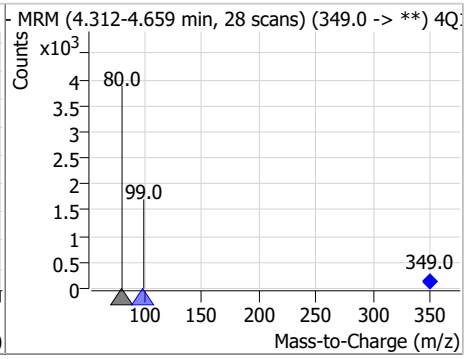




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	100.05	4.42	0.00	80041	349.0 -> 99.0	43.3	13.7	73.7

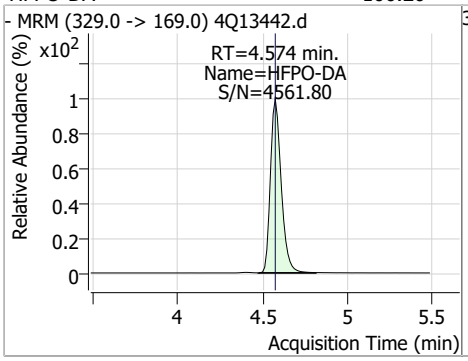


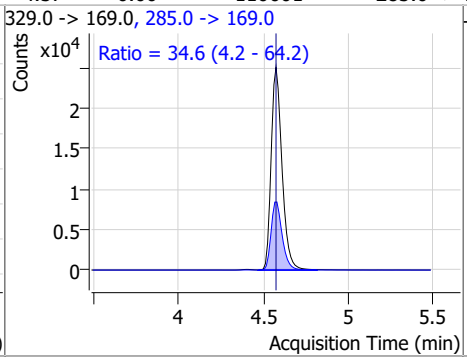


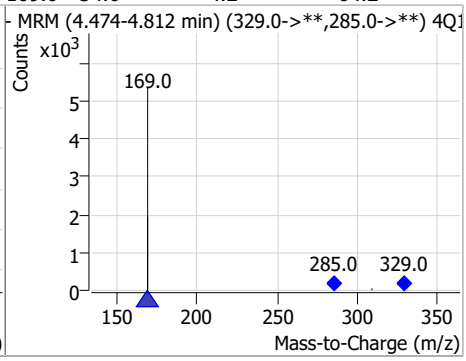


Perfluorinated Compounds by LC/MS/MS

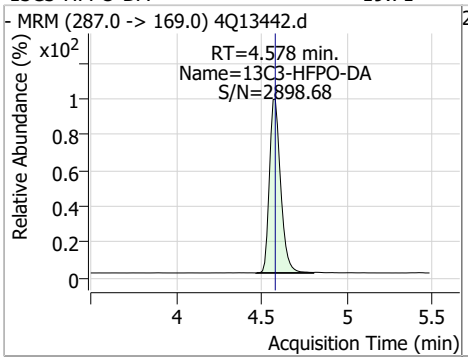
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	100.20	4.57	0.00	110601	285.0 -> 169.0	34.6	4.2	64.2

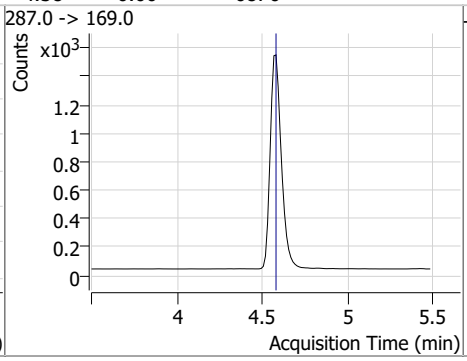


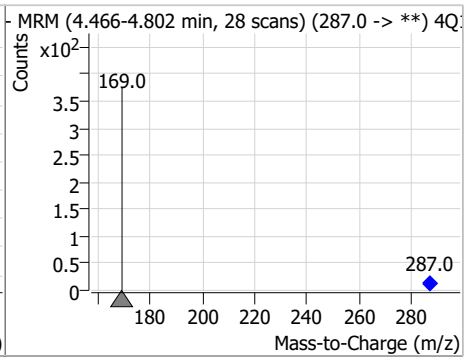




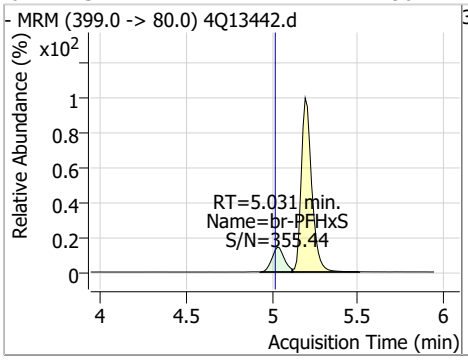
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.71	4.58	0.00	6876				

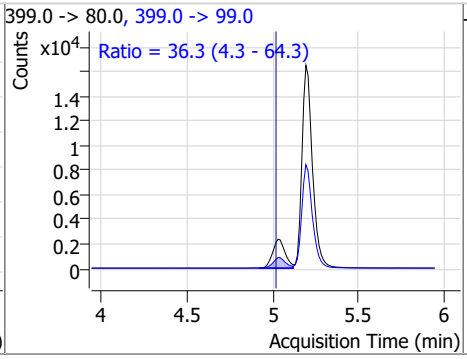


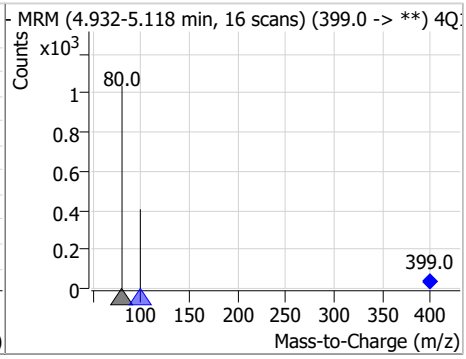




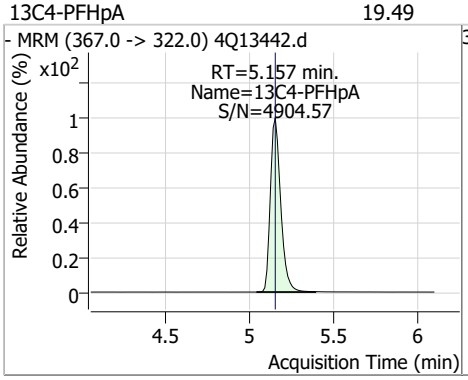
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	11.96	5.03	0.00	11717	399.0 -> 99.0	36.3	4.3	64.3

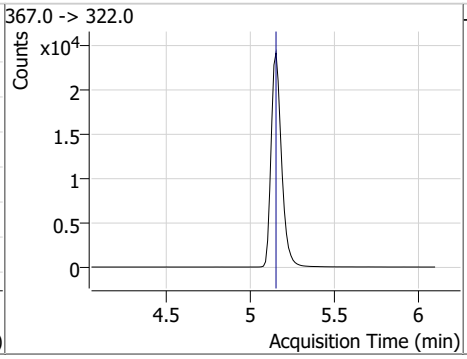


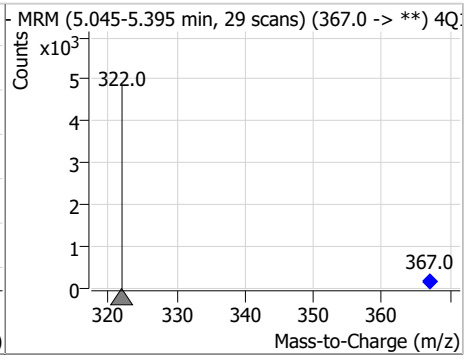




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.49	5.16	0.00	103928				

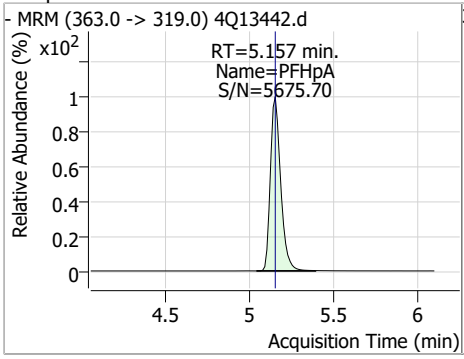


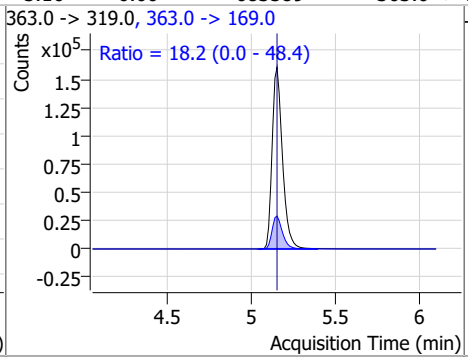


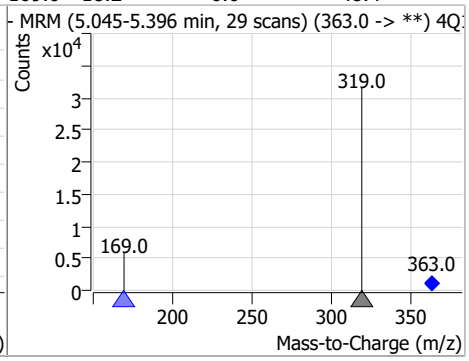


Perfluorinated Compounds by LC/MS/MS

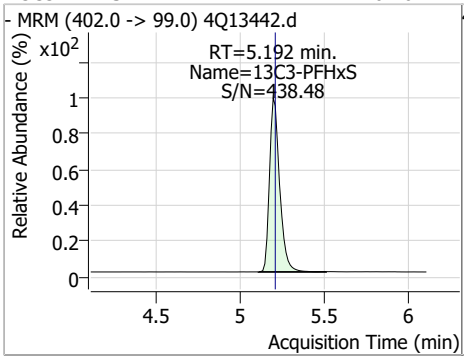
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	100.69	5.16	0.00	683589	363.0 -> 169.0	18.2	0.0	48.4

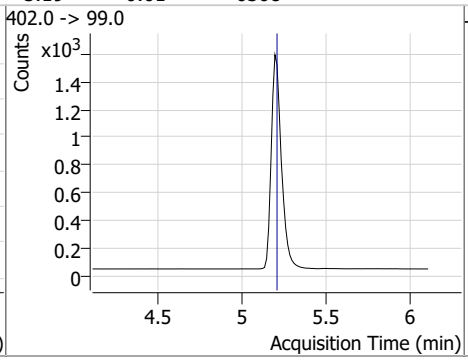


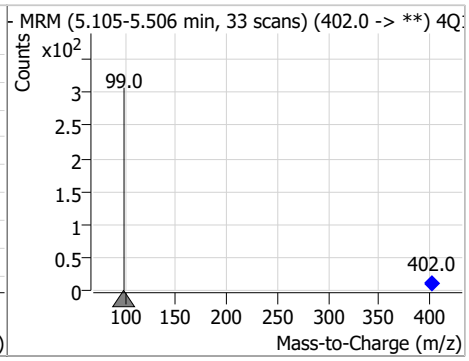




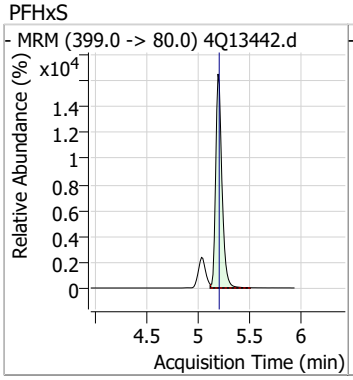
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.20	5.19	-0.01	6508				

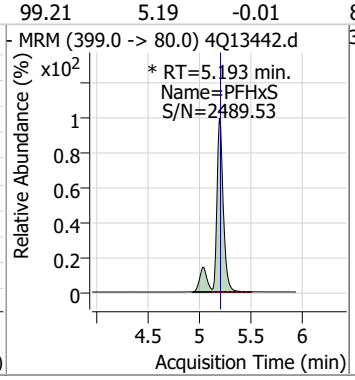


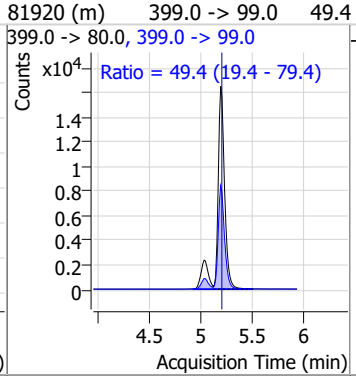


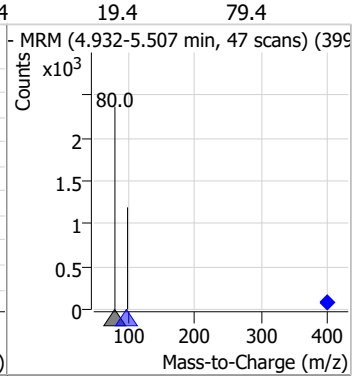


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	99.21	5.19	-0.01	81920 (m)	399.0 -> 99.0	49.4	19.4	79.4

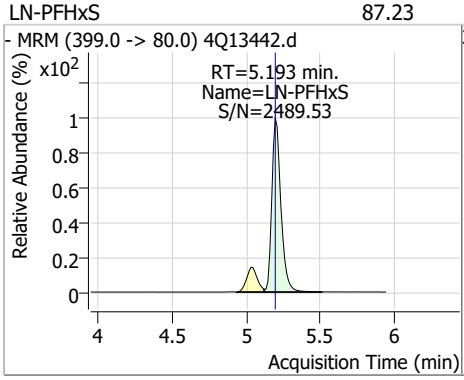


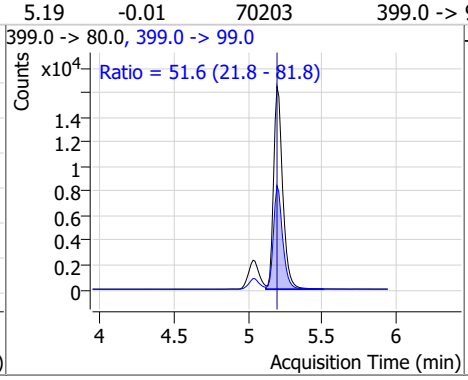


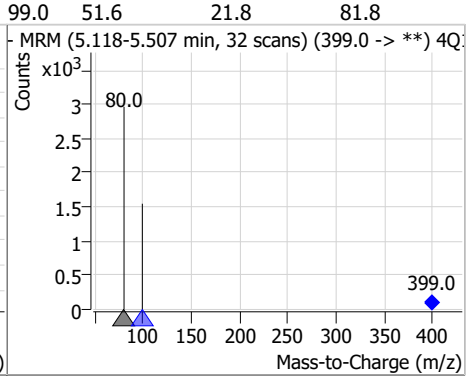




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	87.23	5.19	-0.01	70203	399.0 -> 99.0	51.6	21.8	81.8

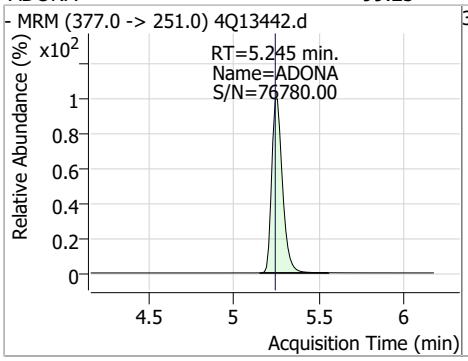


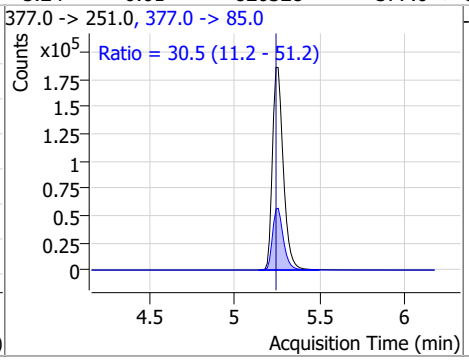


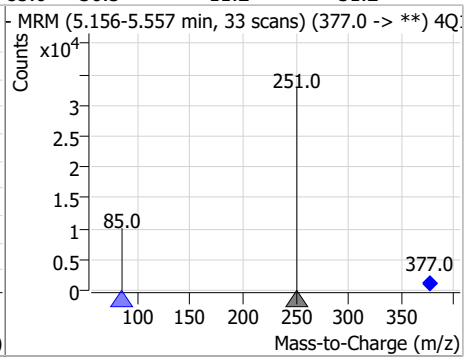


Perfluorinated Compounds by LC/MS/MS

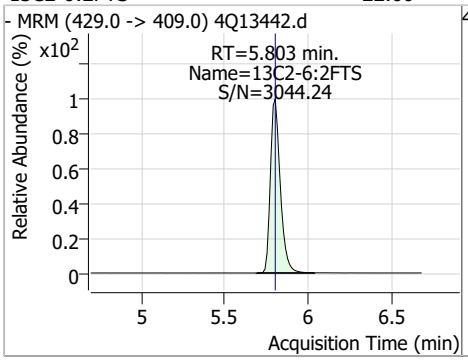
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	99.25	5.24	-0.01	826328	377.0 -> 85.0	30.5	11.2	51.2

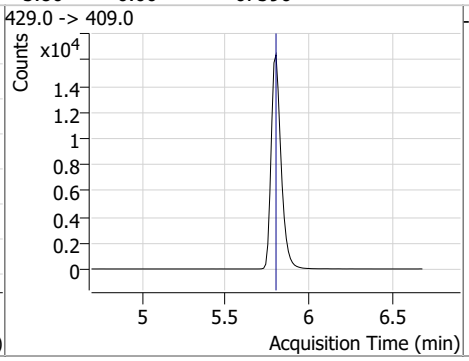


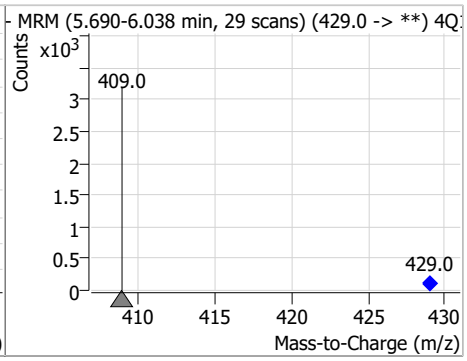




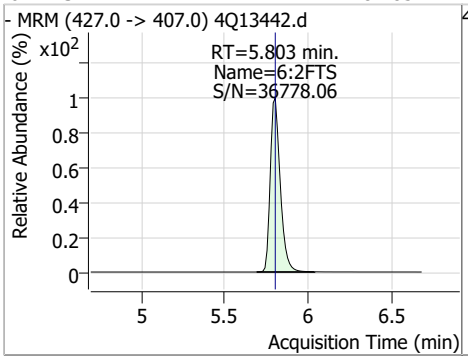
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	22.60	5.80	0.00	67596				

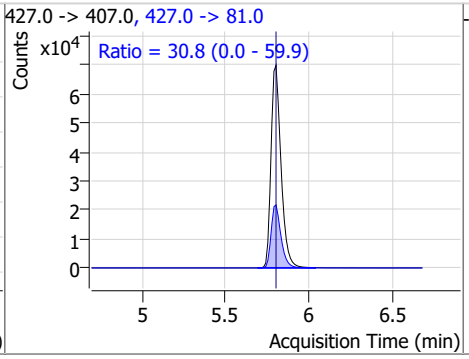


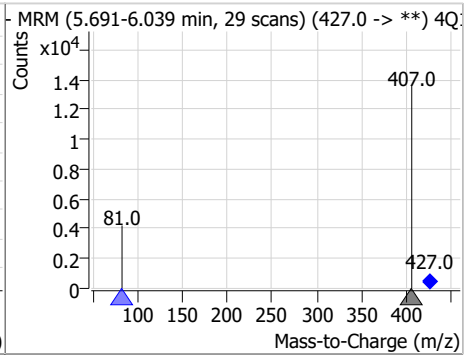




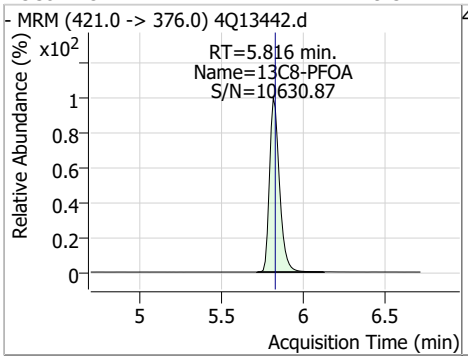
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	81.85	5.80	0.00	291250	427.0 -> 81.0	30.8	0.0	59.9

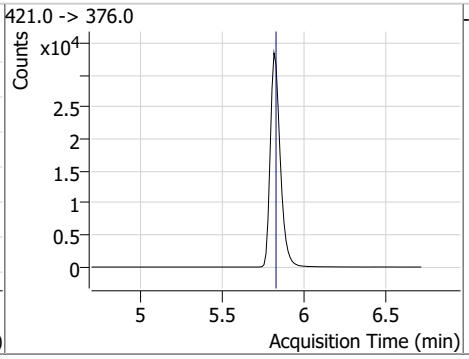


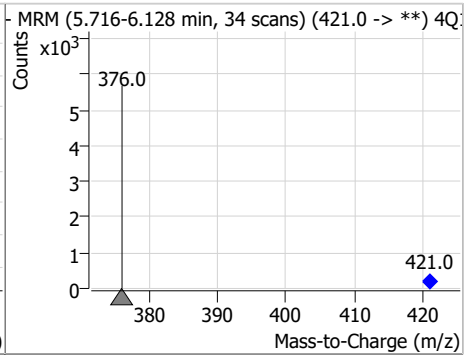




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.37	5.82	-0.01	142277				

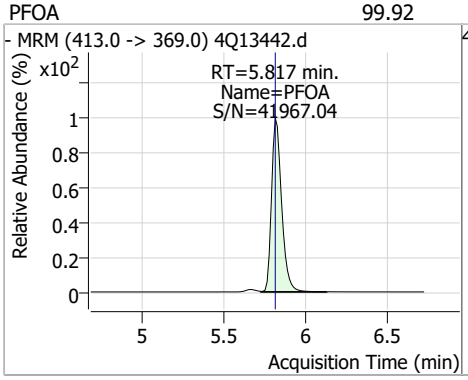


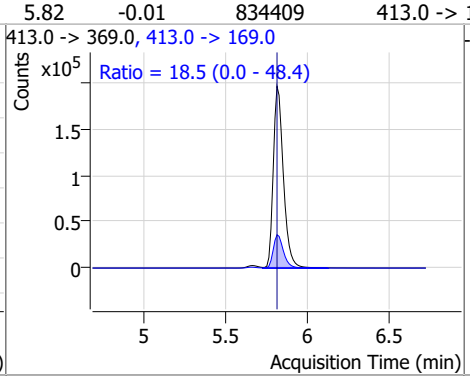


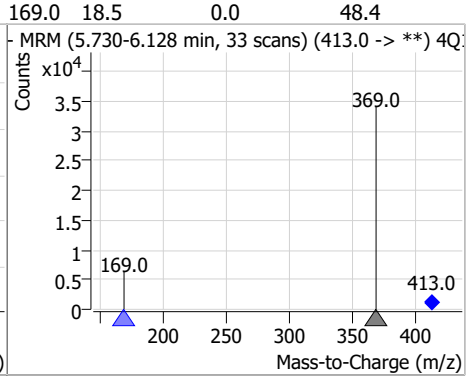


Perfluorinated Compounds by LC/MS/MS

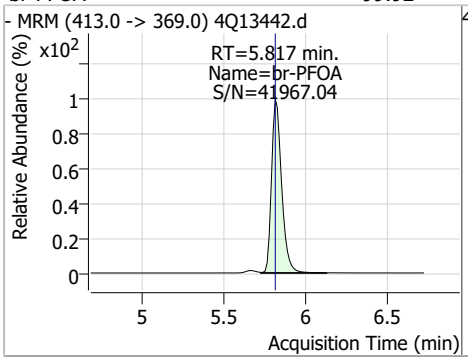
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	99.92	5.82	-0.01	834409	413.0 -> 169.0	18.5	0.0	48.4

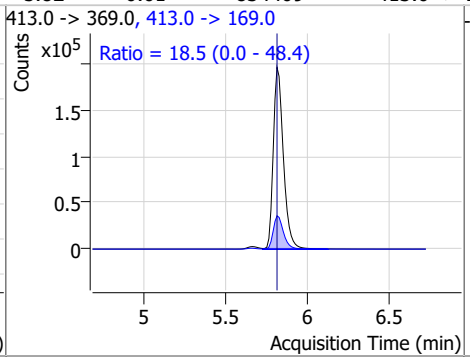


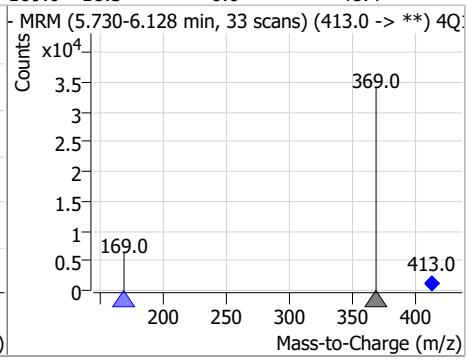




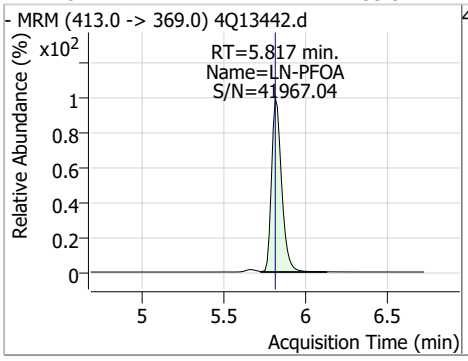
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	99.92	5.82	-0.01	834409	413.0 -> 169.0	18.5	0.0	48.4

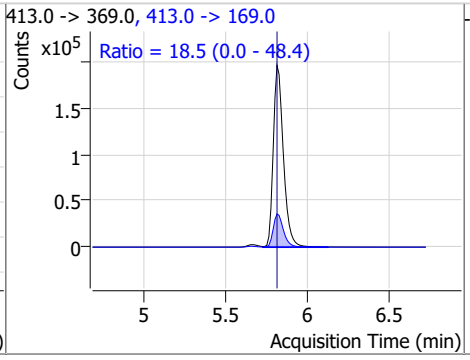


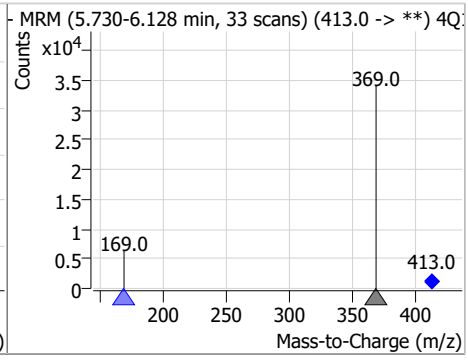




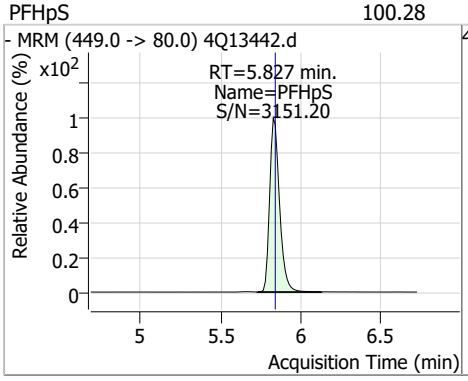
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	99.92	5.82	-0.01	834409	413.0 -> 169.0	18.5	0.0	48.4

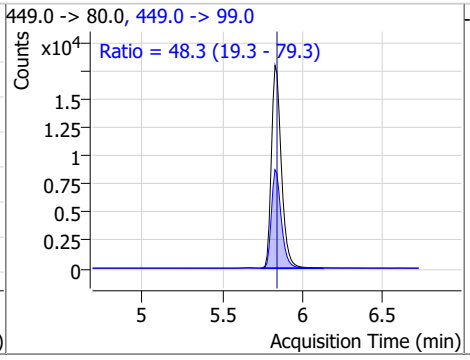


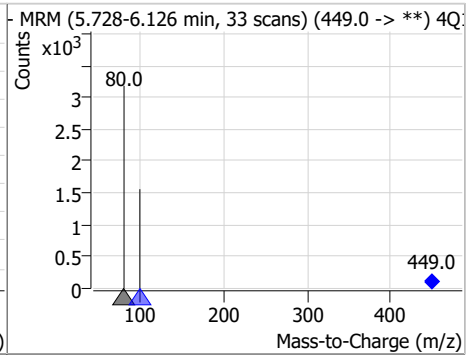




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	100.28	5.83	-0.01	76823	449.0 -> 99.0	48.3	19.3	79.3

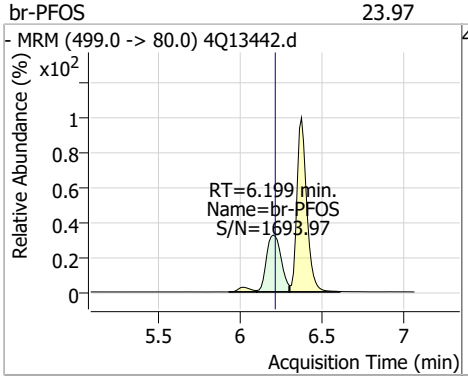


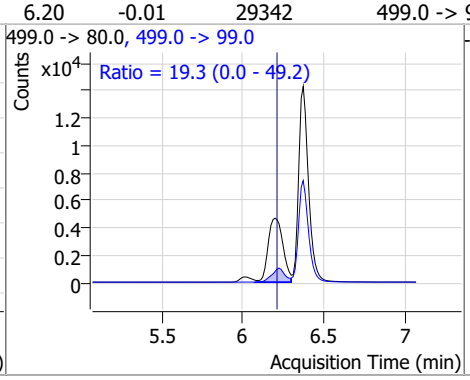


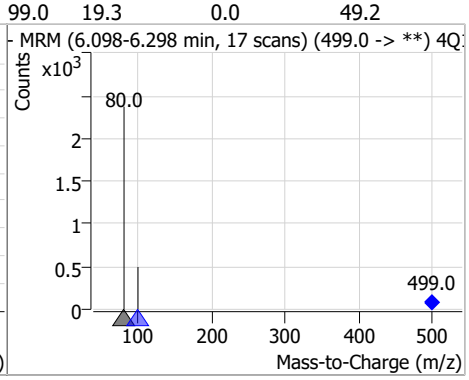


Perfluorinated Compounds by LC/MS/MS

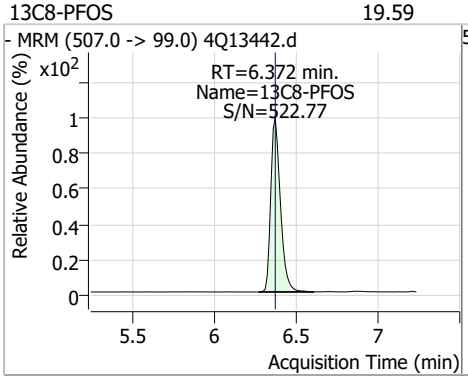
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	23.97	6.20	-0.01	29342	499.0 -> 99.0	19.3	0.0	49.2

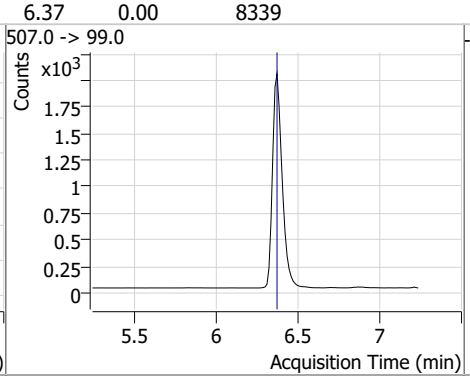


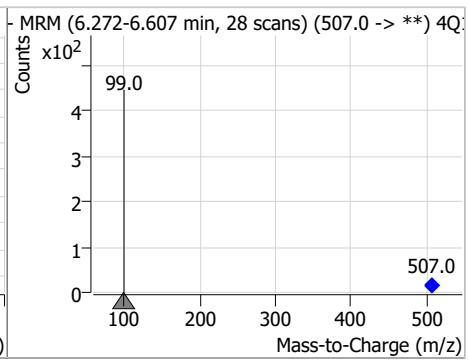




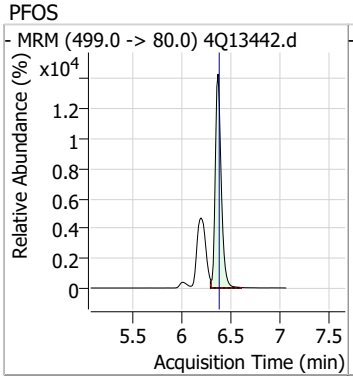
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.59	6.37	0.00	8339				

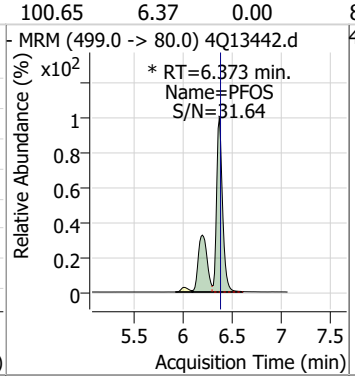


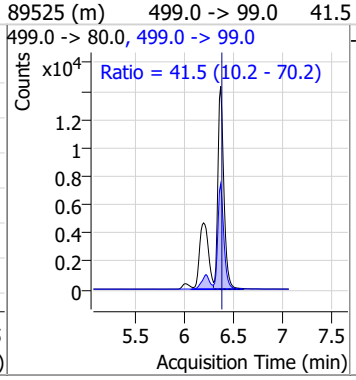


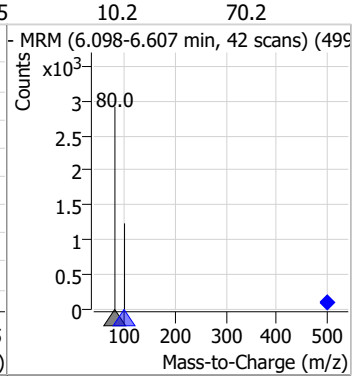


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	100.65	6.37	0.00	89525 (m)	499.0 -> 99.0	41.5	10.2	70.2

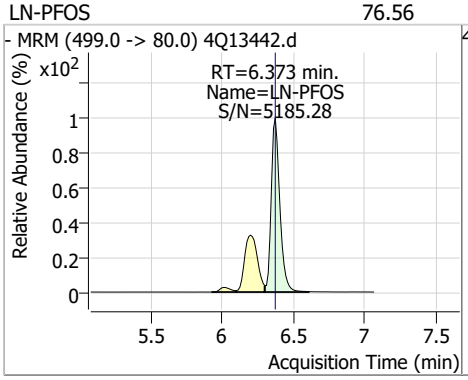


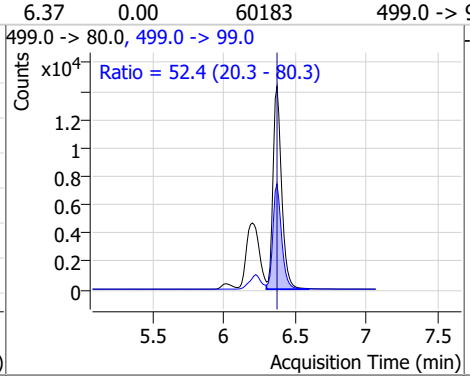


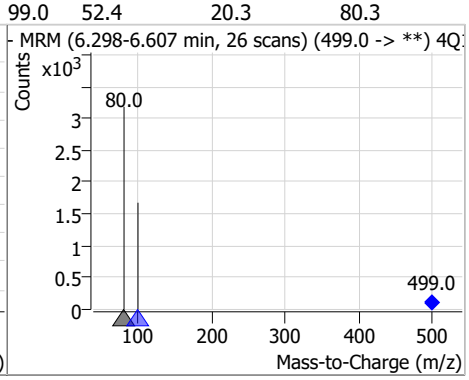




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	76.56	6.37	0.00	60183	499.0 -> 99.0	52.4	20.3	80.3

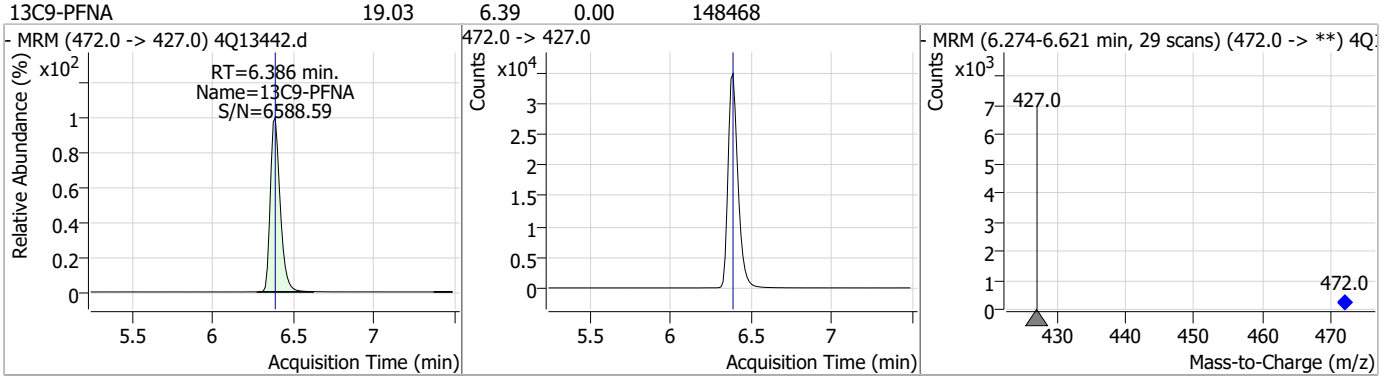




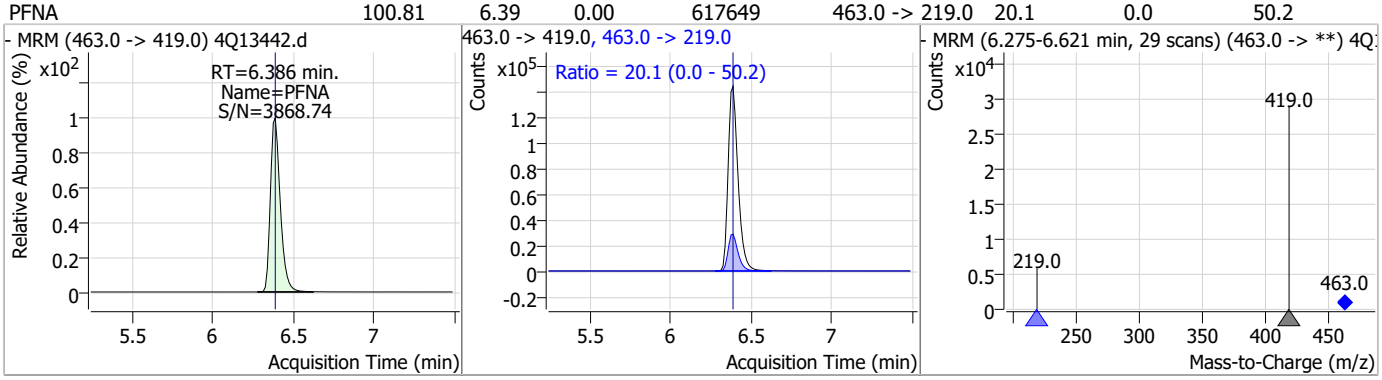


Perfluorinated Compounds by LC/MS/MS

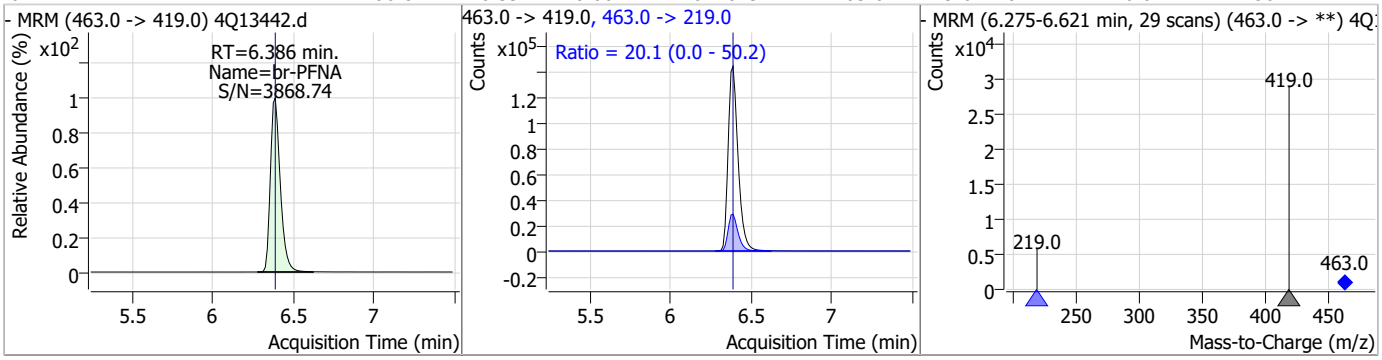
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.03	6.39	0.00	148468				



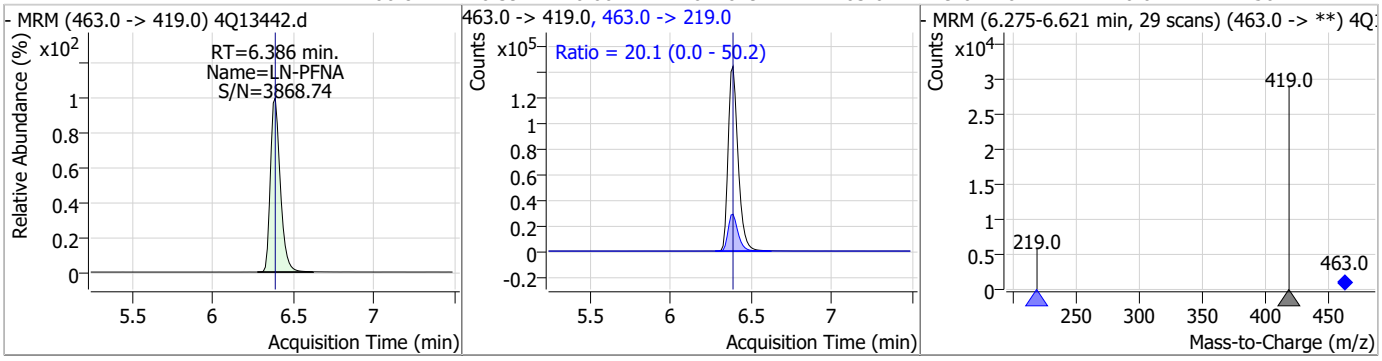
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	100.81	6.39	0.00	617649	463.0 -> 219.0	20.1	0.0	50.2



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFNA	100.81	6.39	0.00	617649	463.0 -> 219.0	20.1	0.0	50.2



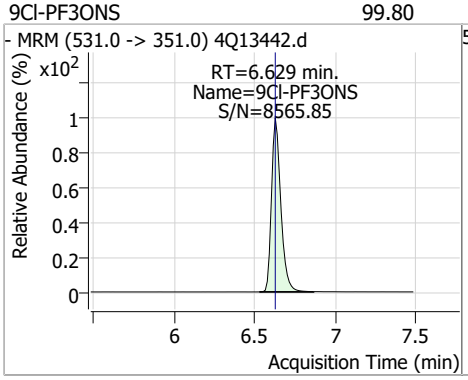
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	100.81	6.39	0.00	617649	463.0 -> 219.0	20.1	0.0	50.2

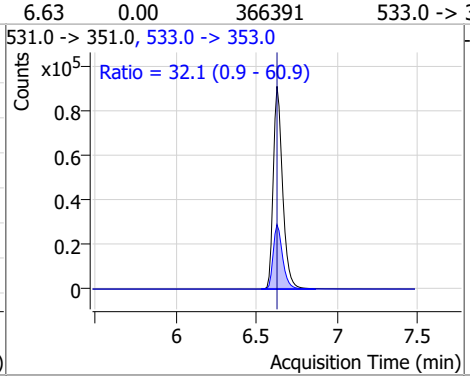


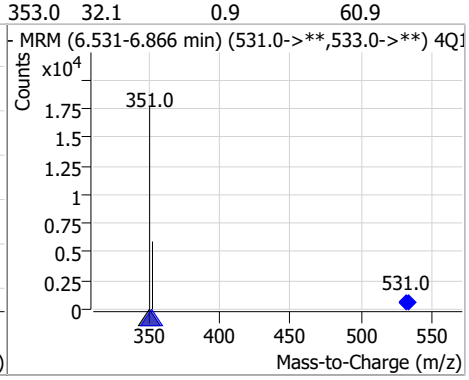
11.6.39 11

Perfluorinated Compounds by LC/MS/MS

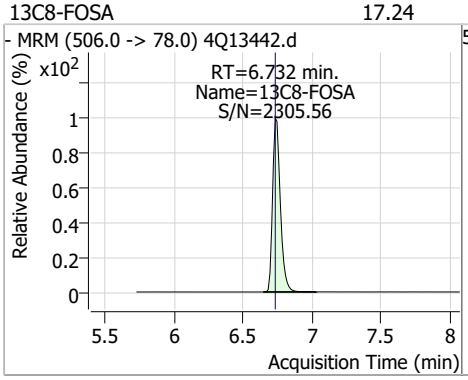
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	99.80	6.63	0.00	366391	533.0 -> 353.0	32.1	0.9	60.9

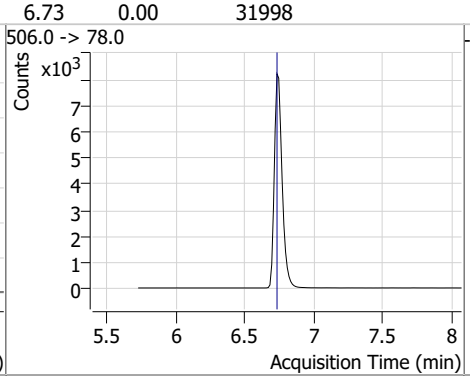


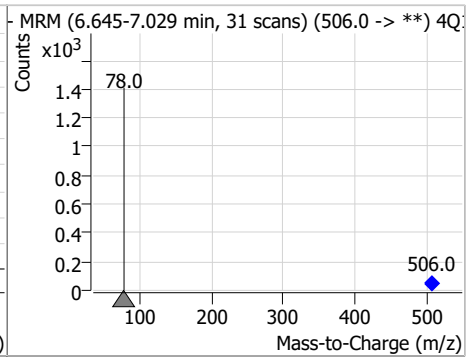




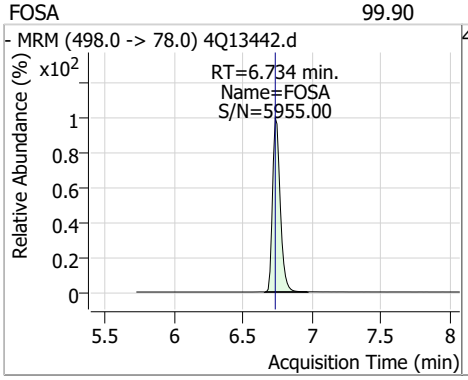
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	17.24	6.73	0.00	31998				

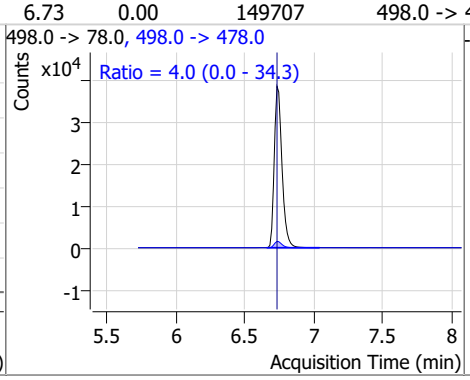


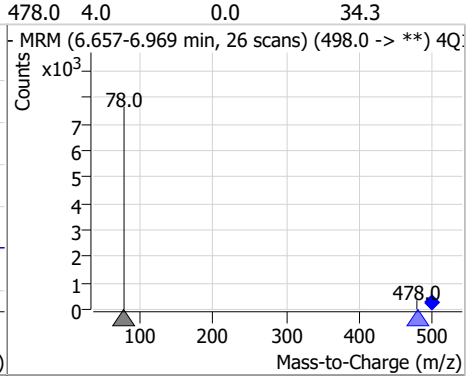




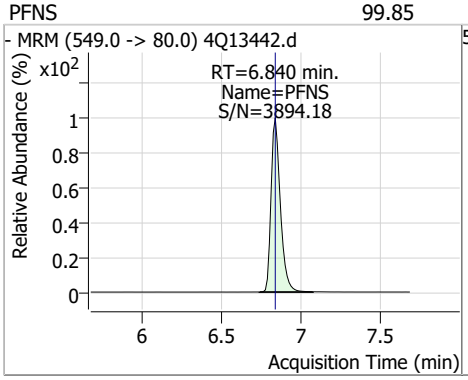
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	99.90	6.73	0.00	149707	498.0 -> 478.0	4.0	0.0	34.3

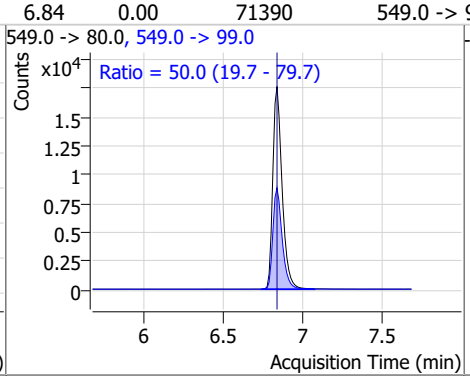


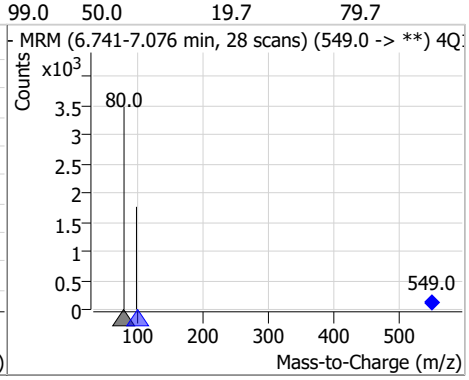




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	99.85	6.84	0.00	71390	549.0 -> 99.0	50.0	19.7	79.7

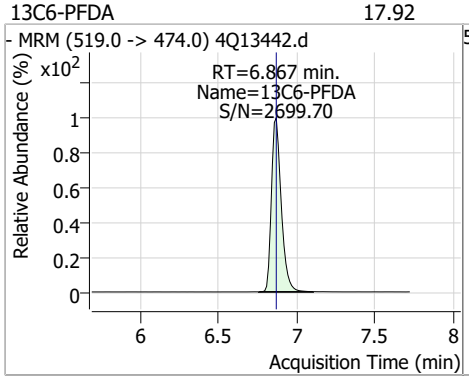


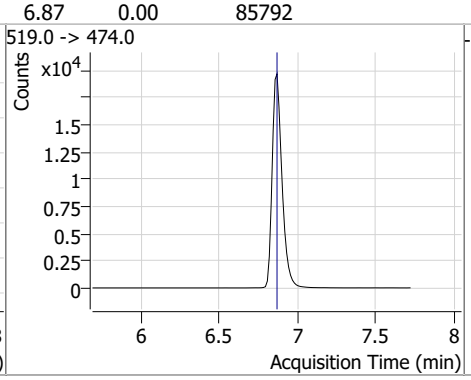


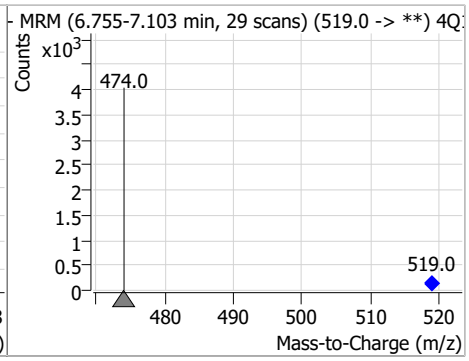


Perfluorinated Compounds by LC/MS/MS

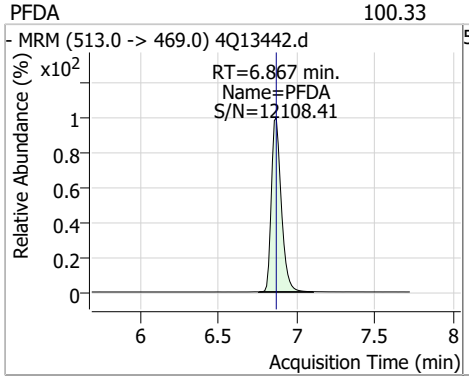
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	17.92	6.87	0.00	85792				

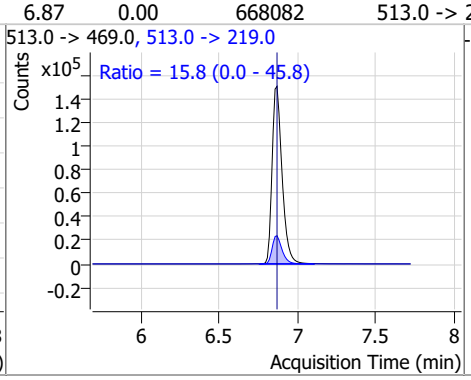


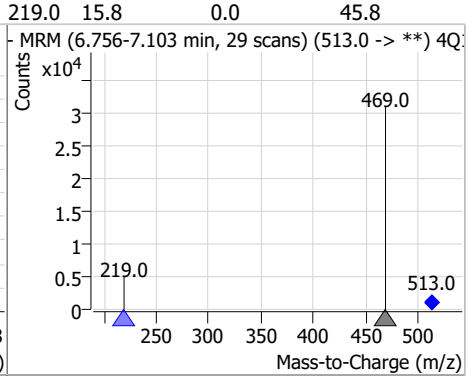




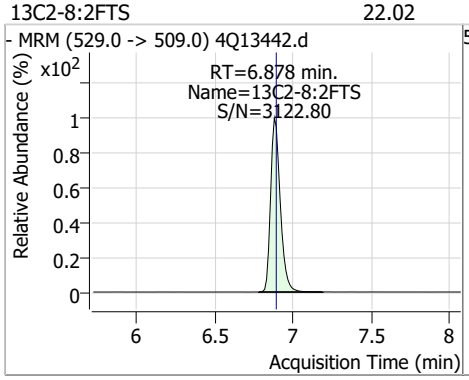
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	100.33	6.87	0.00	668082	513.0 -> 219.0	15.8	0.0	45.8

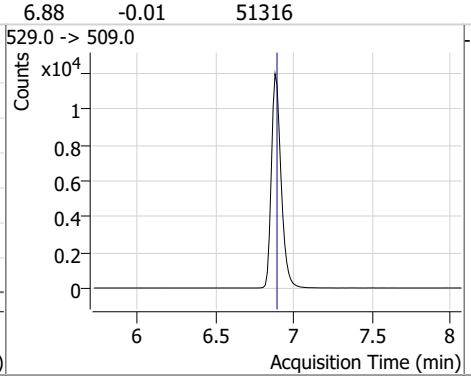


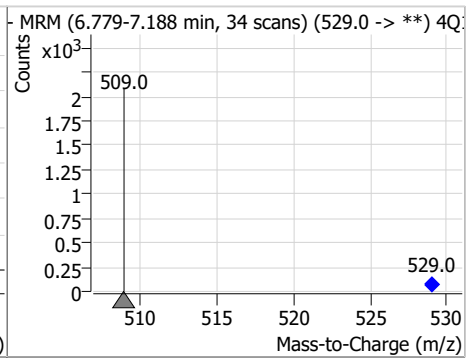




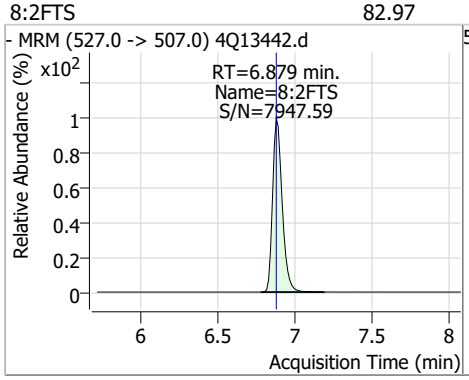
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	22.02	6.88	-0.01	51316				

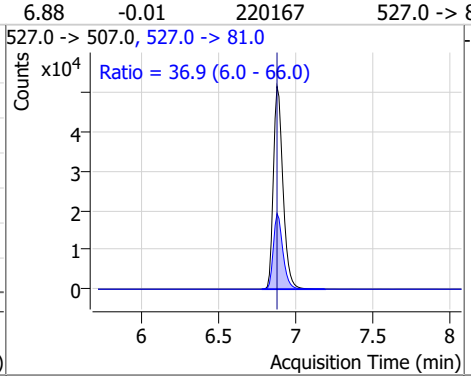


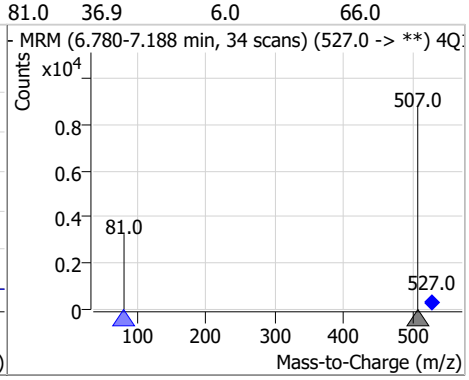




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	82.97	6.88	-0.01	220167	527.0 -> 81.0	36.9	6.0	66.0

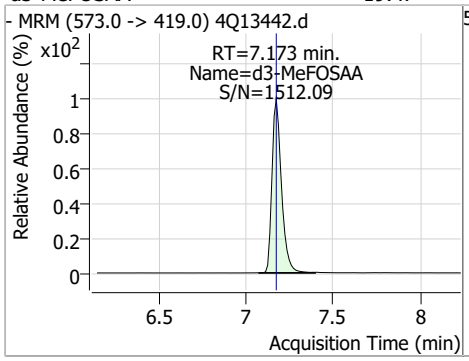


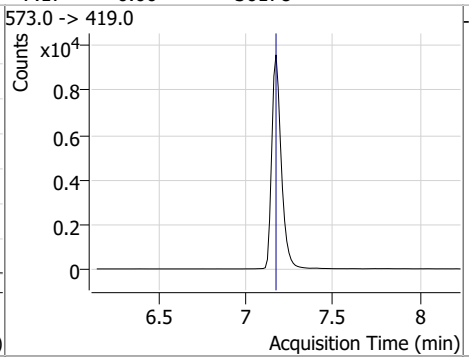


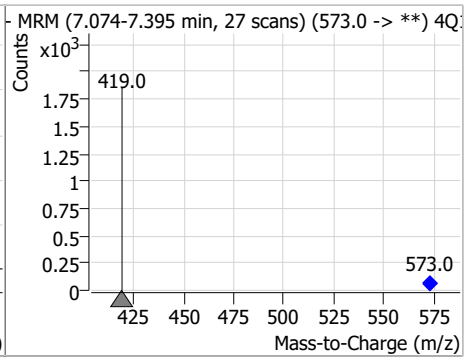


Perfluorinated Compounds by LC/MS/MS

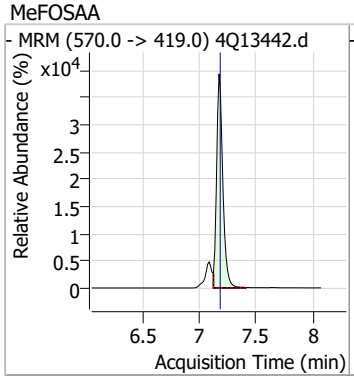
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.47	7.17	0.00	36178				

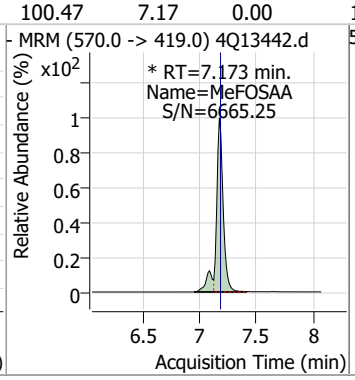


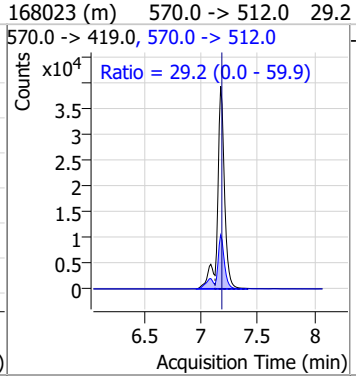


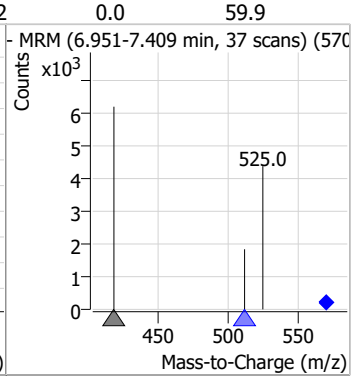


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	100.47	7.17	0.00	168023 (m)	570.0 -> 512.0	29.2	0.0	59.9

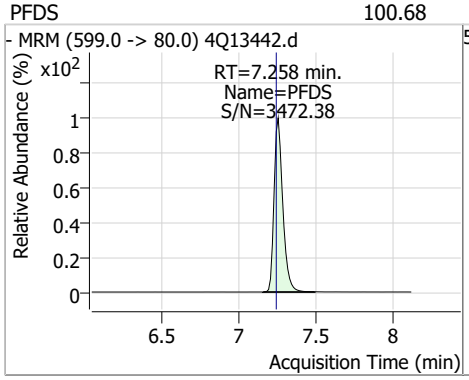


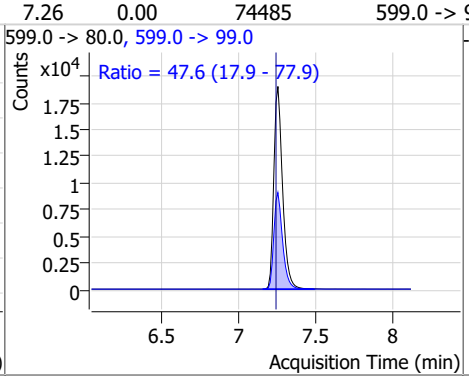


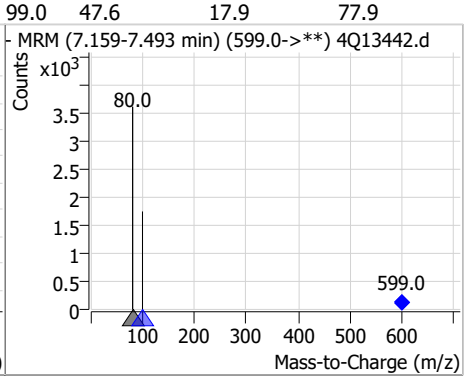




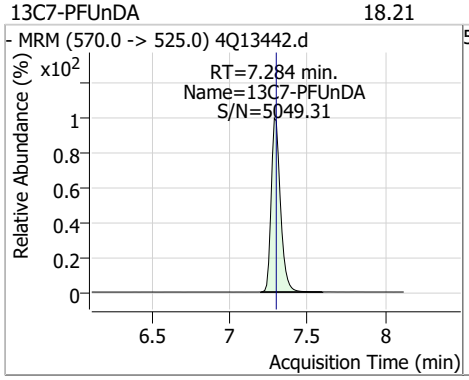
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	100.68	7.26	0.00	74485	599.0 -> 99.0	47.6	17.9	77.9

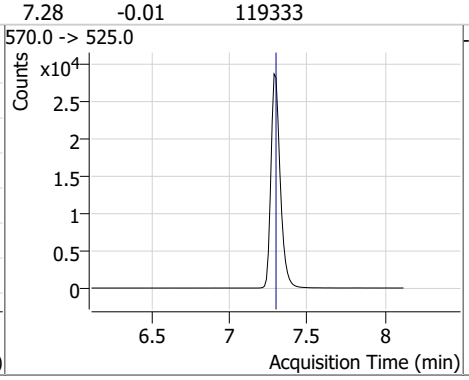


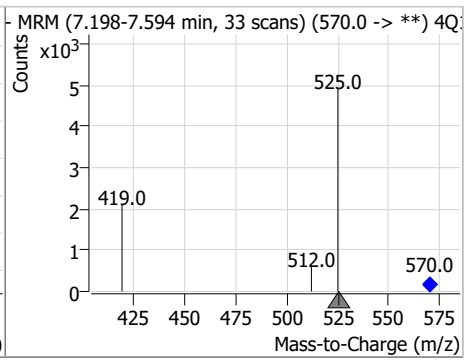




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	18.21	7.28	-0.01	119333				

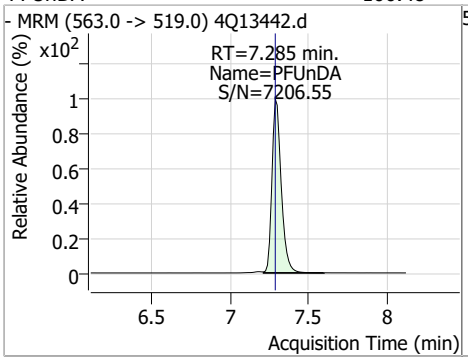


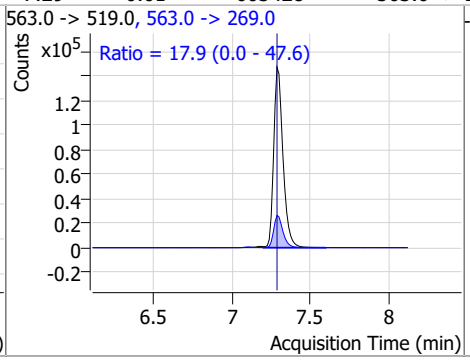


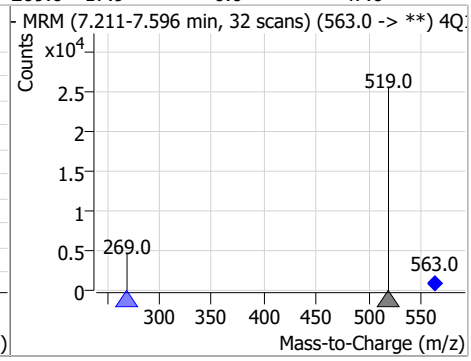


Perfluorinated Compounds by LC/MS/MS

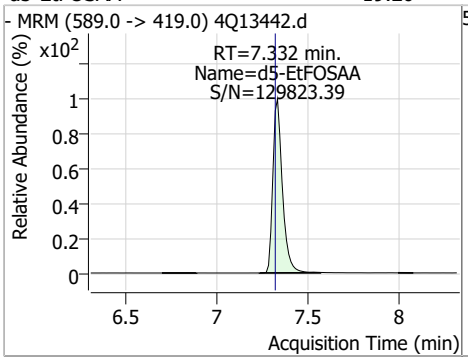
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	100.48	7.29	-0.01	605428	563.0 -> 269.0	17.9	0.0	47.6

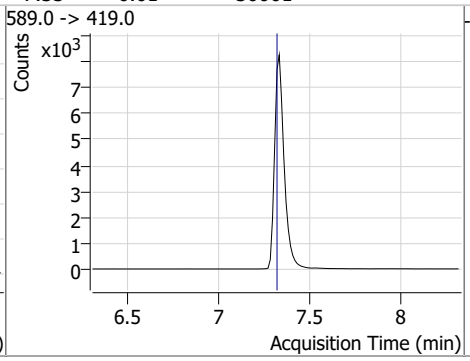


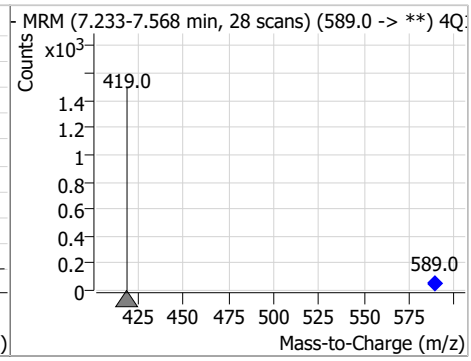




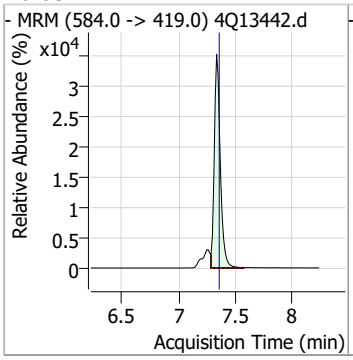
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.20	7.33	0.01	30001				

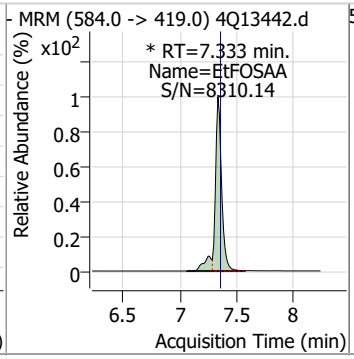


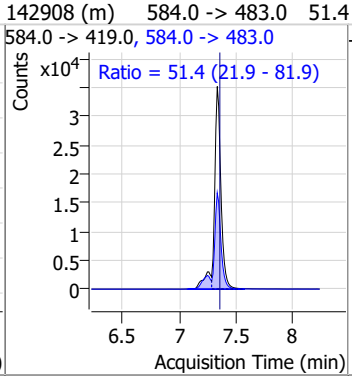


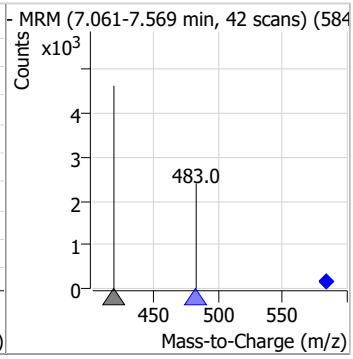


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	100.18	7.33	0.00	142908 (m)	584.0 -> 483.0	51.4	21.9	81.9

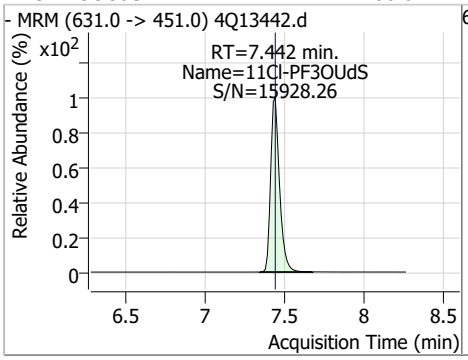


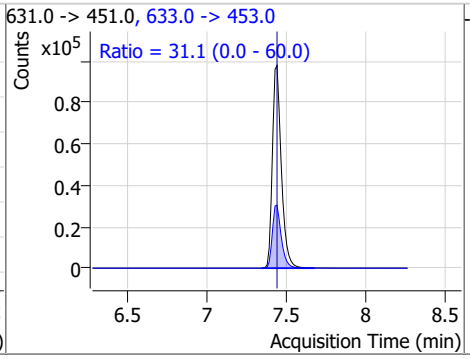


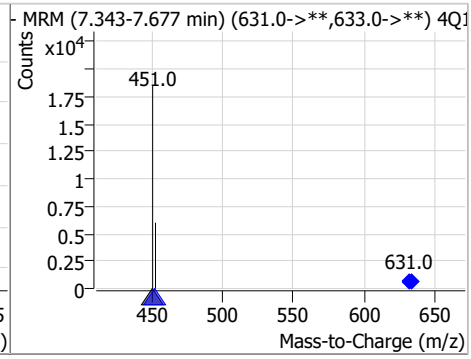




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	100.07	7.44	0.00	383053	633.0 -> 453.0	31.1	0.0	60.0

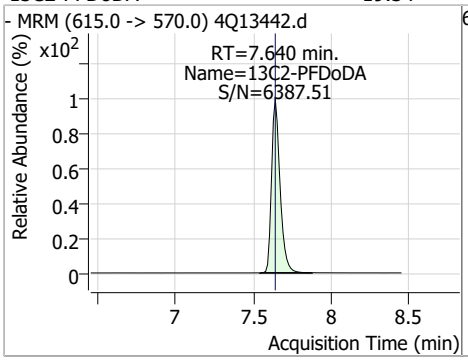


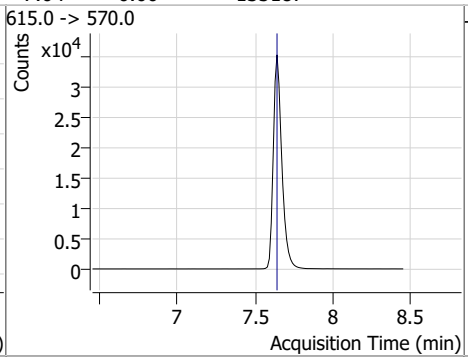


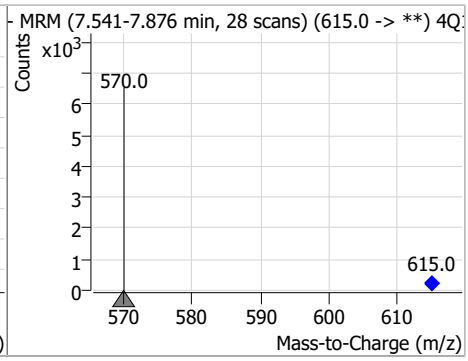


Perfluorinated Compounds by LC/MS/MS

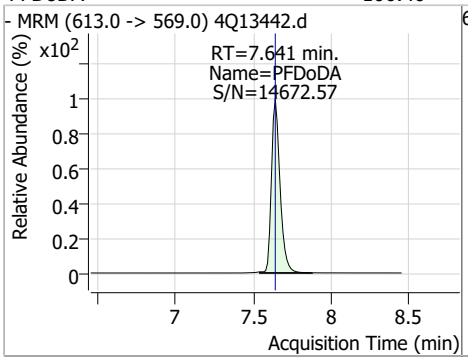
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.34	7.64	0.00	135187				

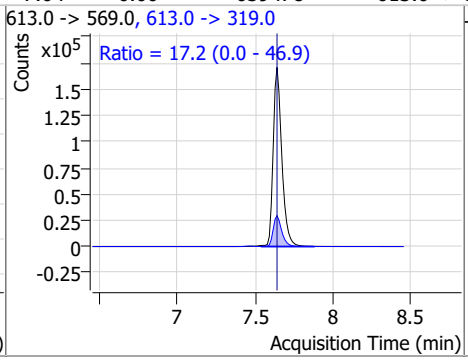


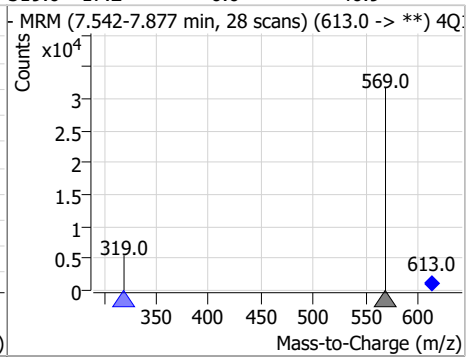




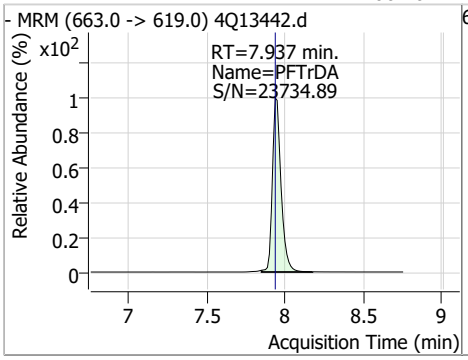
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	100.40	7.64	0.00	659478	613.0 -> 319.0	17.2	0.0	46.9

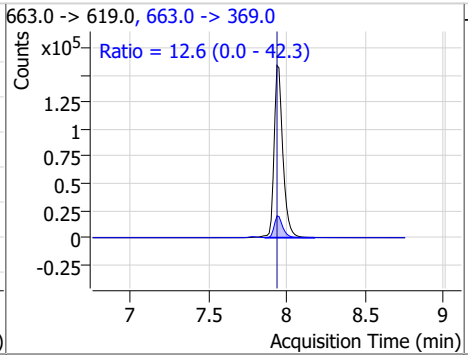


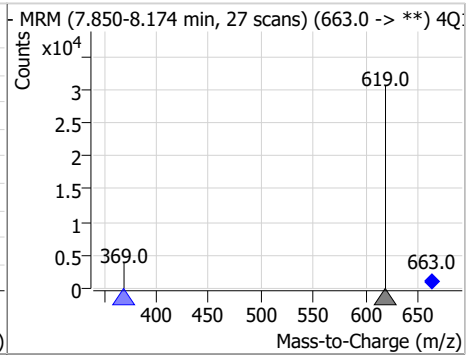




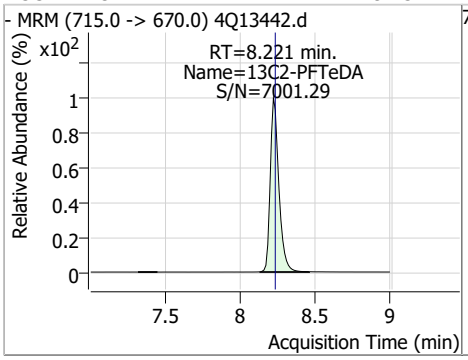
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	100.20	7.94	-0.01	611785	663.0 -> 369.0	12.6	0.0	42.3

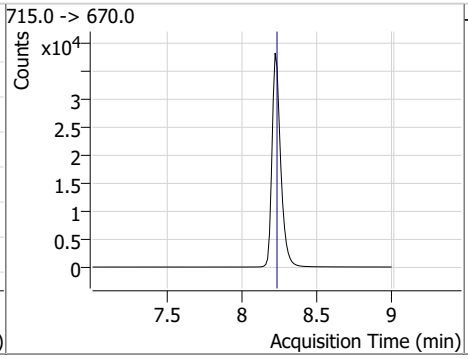


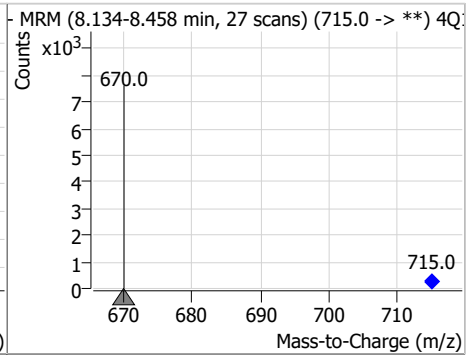




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.43	8.22	-0.01	152447				

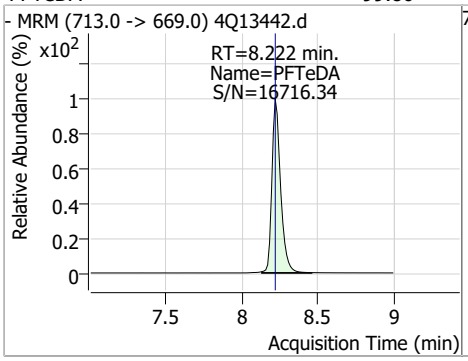


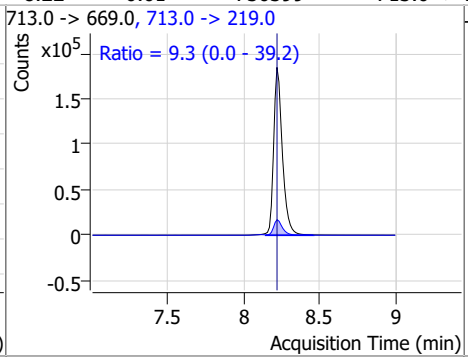


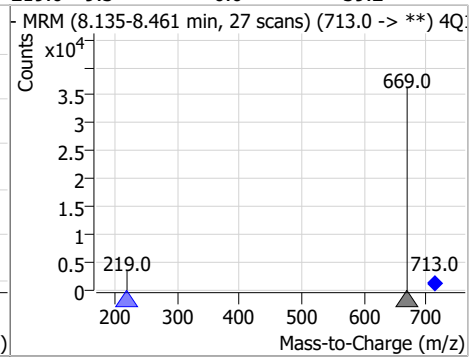


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	99.80	8.22	-0.01	736399	713.0 -> 219.0	9.3	0.0	39.2







Manual Integration Approval Summary

Sample Number: S4Q189-IC189
Lab FileID: 4Q13442.D
Injection Time: 04/18/21 16:28
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/19/21 07:57 Nancy Saunders
Supervisor approved: 04/19/21 15:40 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.19	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.37	Split peak
MeFOSAA	2355-31-9		7.17	Split peak
EtFOSAA	2991-50-6		7.33	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:40

Perfluorinated Compounds by LC/MS/MS

Data File : 4Q13444.d
Operator : natashag
Acq. Method : 537_ID.m
Acq. Date-Time : 4/18/2021 4:58:11 PM
Sample Name : icv189-20
Vial : P1-B1
DA Method File : BR_LN_041821_S4Q189.quantmethod.xml
Batch Name : s4q189.batch.bin
Sample Information : op84918,S4Q189,250,,,1,1,water

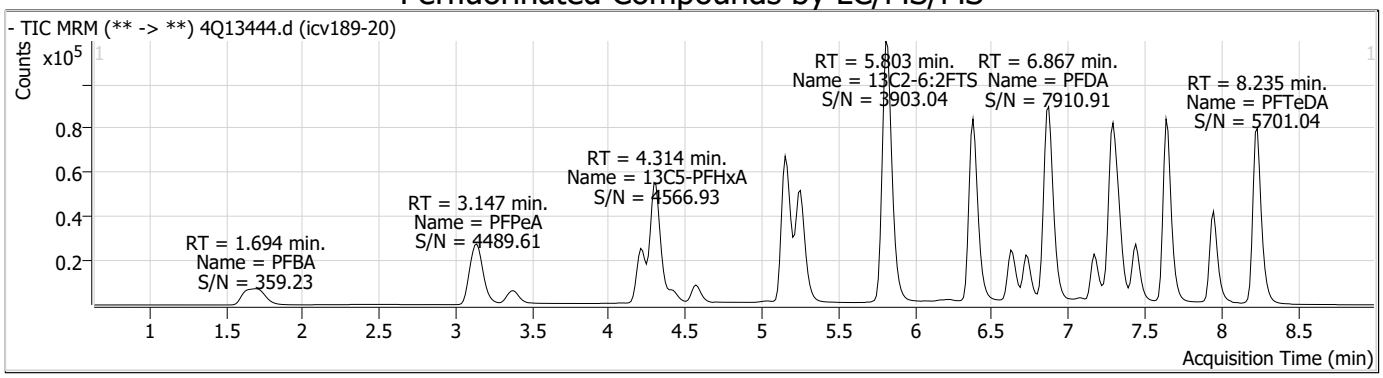
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.700	217.0 -> 172.0	54439	20.00	µg/L	0.013
M5-PFPeA	3.145	268.0 -> 223.0	98238	20.00	µg/L	0.000
M5-PFHxA	4.314	318.0 -> 273.0	133681	20.00	µg/L	0.000
M4-PFHpA	5.157	367.0 -> 322.0	116845	20.00	µg/L	0.000
M8-PFOA	5.829	421.0 -> 376.0	161910	20.00	µg/L	0.000
M9-PFNA	6.386	472.0 -> 427.0	172759	20.00	µg/L	0.000
M6-PFDA	6.867	519.0 -> 474.0	104497	20.00	µg/L	0.000
M7-PFUnDA	7.297	570.0 -> 525.0	143199	20.00	µg/L	0.000
M2-PFDoDA	7.640	615.0 -> 570.0	153565	20.00	µg/L	0.000
M2-PFTeDA	8.234	715.0 -> 670.0	170713	20.00	µg/L	0.000
M8-FOSA	6.732	506.0 -> 78.0	41101	20.00	µg/L	0.000
M3-PFBS	3.381	302.0 -> 99.0	7569	20.00	µg/L	0.000
M3-PFHxS	5.204	402.0 -> 99.0	7027	20.00	µg/L	0.000
M8-PFOS	6.372	507.0 -> 99.0	9211	20.00	µg/L	0.000
M2-4:2FTS	4.212	329.0 -> 309.0	48951	20.00	µg/L	0.000
M2-6:2FTS	5.803	429.0 -> 409.0	64756	20.00	µg/L	0.000
M2-8:2FTS	6.891	529.0 -> 509.0	51645	20.00	µg/L	0.000
M3-MeFOSAA	7.173	573.0 -> 419.0	41838	20.00	µg/L	0.000
M3-HFPO-DA	4.578	287.0 -> 169.0	7518	20.00	µg/L	0.000
M5-EtFOSAA	7.332	589.0 -> 419.0	35060	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.212	329.0 -> 309.0	48951	21.55	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.7%		
13C2-6:2FTS	5.803	429.0 -> 409.0	64756	21.65	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.3%		
13C2-8:2FTS	6.891	529.0 -> 509.0	51645	22.16	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.8%		
13C2-PFDoDA	7.640	615.0 -> 570.0	153565	21.97	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.8%		
13C2-PFTeDA	8.234	715.0 -> 670.0	170713	21.76	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.8%		
13C3-PFBS	3.381	302.0 -> 99.0	7569	22.20	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 111.0%		
13C3-PFHxS	5.204	402.0 -> 99.0	7027	21.81	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.0%		
13C4-PFBA	1.700	217.0 -> 172.0	54439	22.04	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.2%		
13C4-PFHpA	5.157	367.0 -> 322.0	116845	21.92	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.6%		
13C5-PFHxA	4.314	318.0 -> 273.0	133681	21.92	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.6%		
13C5-PFPeA	3.145	268.0 -> 223.0	98238	22.11	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.6%		
13C6-PFDA	6.867	519.0 -> 474.0	104497	21.83	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.2%		

Perfluorinated Compounds by LC/MS/MS

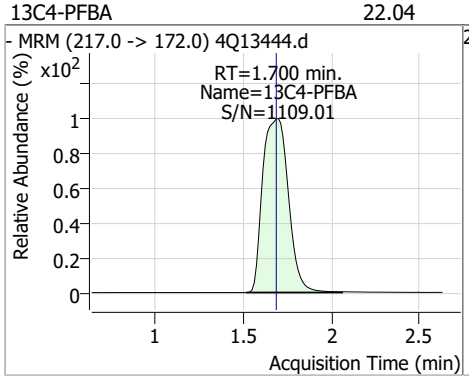
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	7.297	570.0 -> 525.0	143199	21.86	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.3%			
13C8-FOSA	6.732	506.0 -> 78.0	41101	22.14	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.7%			
13C8-PFOA	5.829	421.0 -> 376.0	161910	22.05	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.2%			
13C8-PFOS	6.372	507.0 -> 99.0	9211	21.63	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.2%			
13C9-PFNA	6.386	472.0 -> 427.0	172759	22.14	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.7%			
d3-MeFOSAA	7.173	573.0 -> 419.0	41838	22.51	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 112.6%			
13C3-HFPO-DA	4.578	287.0 -> 169.0	7497	21.49	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.4%			
d5-EtFOSAA	7.332	589.0 -> 419.0	35064	22.44	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 112.2%			
Target Compounds							**QValue**
4:2FTS	4.214	327.0 -> 307.0	45790	17.50	µg/L		100
6:2FTS	5.803	427.0 -> 407.0	56988	16.72	µg/L		99
8:2FTS	6.891	527.0 -> 507.0	46050	17.24	µg/L		100
EtFOSAA	7.333	584.0 -> 419.0	29185	17.53	µg/L	m	100
FOSA	6.734	498.0 -> 78.0	34113	17.72	µg/L		99
MeFOSAA	7.173	570.0 -> 419.0	32821	16.97	µg/L	m	99
PFBA	1.694	213.0 -> 169.0	20528	17.28	µg/L		100
PFBS	3.383	299.0 -> 80.0	18824	15.23	µg/L		98
PFDA	6.867	513.0 -> 469.0	133776	16.49	µg/L		99
PFDoDA	7.641	613.0 -> 569.0	134789	18.06	µg/L		99
PFDS	7.258	599.0 -> 80.0	14275	16.08	µg/L		100
PFHpA	5.157	363.0 -> 319.0	134028	17.56	µg/L		99
PFHpS	5.840	449.0 -> 80.0	14436	17.06	µg/L		100
PFHxA	4.315	313.0 -> 269.0	108062	17.70	µg/L		100
PFHxS	5.205	399.0 -> 80.0	14408	16.16	µg/L	m	96
PFNA	6.386	463.0 -> 419.0	116197	16.30	µg/L		100
PFNS	6.840	549.0 -> 80.0	14007	17.74	µg/L		99
PFOA	5.829	413.0 -> 369.0	169961	17.88	µg/L		99
PFOS	6.373	499.0 -> 80.0	17273	17.58	µg/L	m	95
PFPeA	3.147	263.0 -> 219.0	73817	17.40	µg/L		100
PFPeS	4.423	349.0 -> 80.0	13858	15.42	µg/L		100
PFTeDA	8.235	713.0 -> 669.0	133210	16.12	µg/L		99
PFTrDA	7.949	663.0 -> 619.0	134711	19.70	µg/L		99
PFUnDA	7.298	563.0 -> 519.0	131076	18.13	µg/L		99
11Cl-PF3OUdS	7.442	631.0 -> 451.0	71504	16.44	µg/L		100
9Cl-PF3ONS	6.629	531.0 -> 351.0	69802	16.65	µg/L		100
ADONA	5.257	377.0 -> 251.0	152343	16.95	µg/L		99
HFPO-DA	4.574	329.0 -> 169.0	20902	17.33	µg/L		98
br-PFOS	6.224	499.0 -> 80.0	4527	3.49	µg/L		97
LN-PFOS	6.373	499.0 -> 80.0	12746	14.68	µg/L		98
br-PFHxS	5.031	399.0 -> 80.0	2468	2.33	µg/L		97
LN-PFHxS	5.205	399.0 -> 80.0	11940	13.74	µg/L		95
br-PFOA	5.829	413.0 -> 369.0	0		µg/L	m	1
LN-PFOA	5.829	413.0 -> 369.0	169961	17.88	µg/L		99
br-PFNA	6.386	463.0 -> 419.0	0		µg/L	m	1
LN-PFNA	6.386	463.0 -> 419.0	116197	16.30	µg/L		100

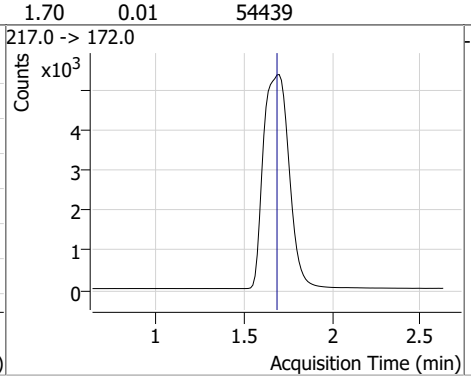
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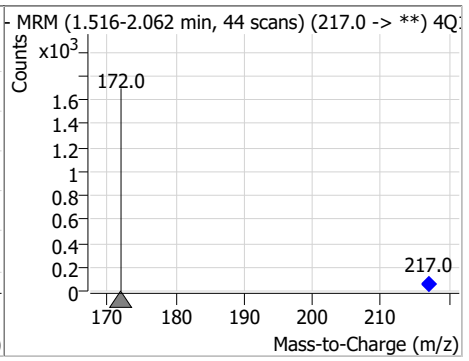
Perfluorinated Compounds by LC/MS/MS



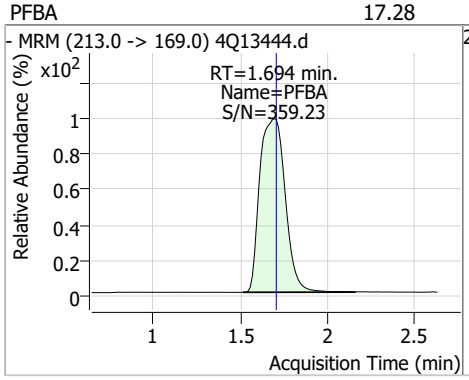
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	22.04	1.70	0.01	54439				

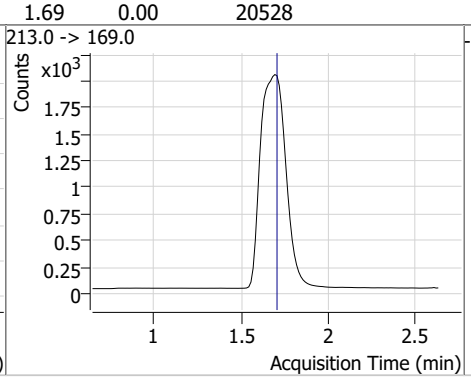


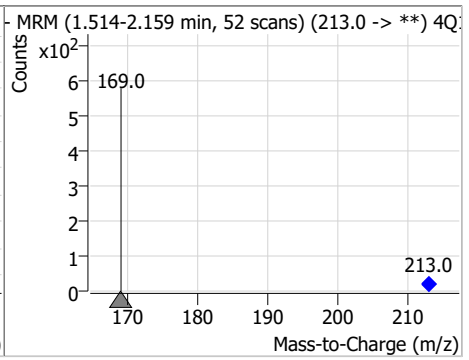




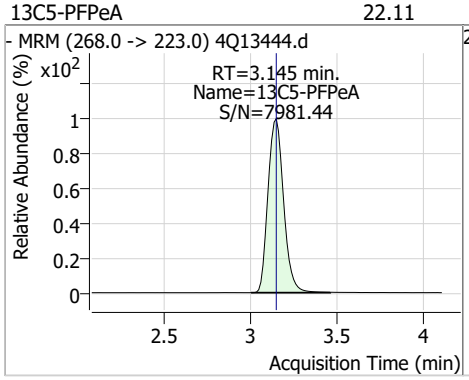
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	17.28	1.69	0.00	20528				

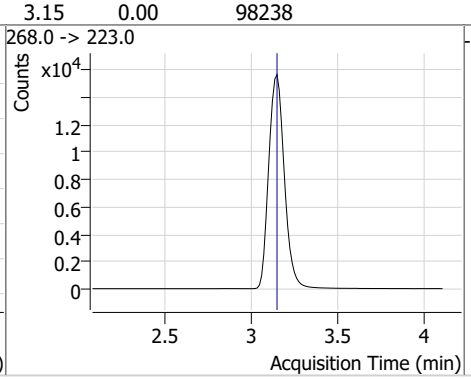


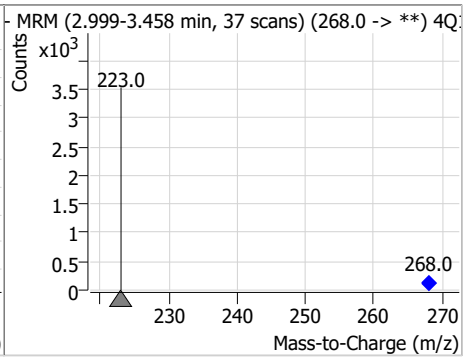




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	22.11	3.15	0.00	98238				

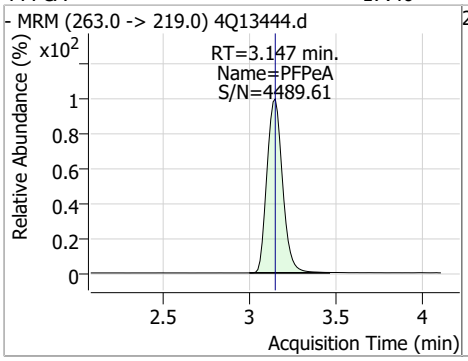


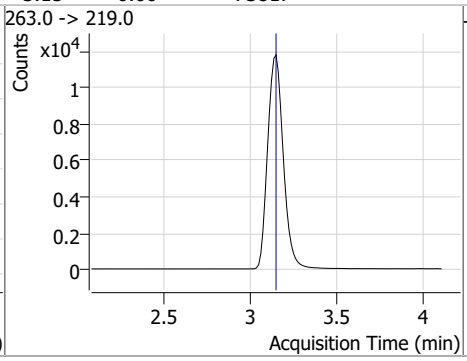


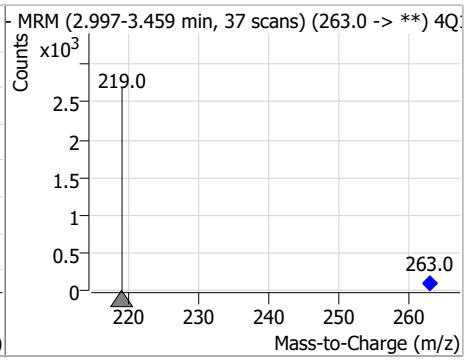


Perfluorinated Compounds by LC/MS/MS

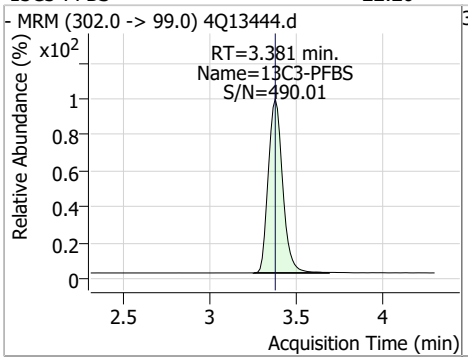
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	17.40	3.15	0.00	73817				

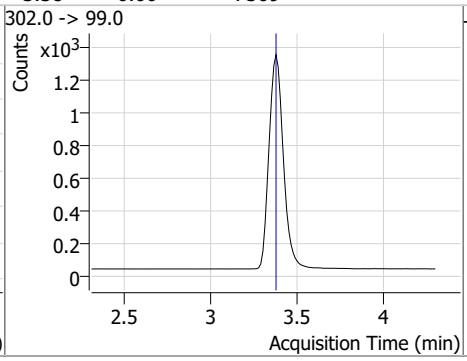


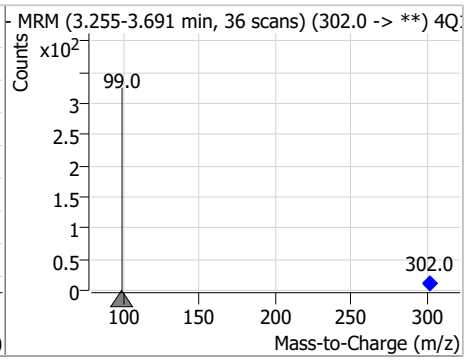




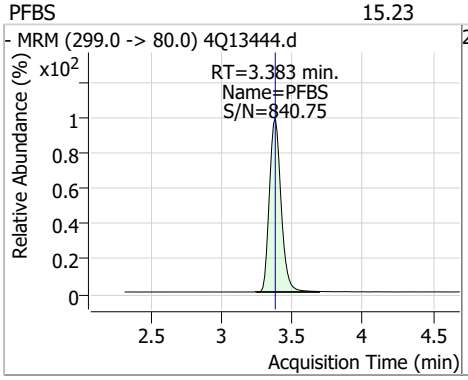
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	22.20	3.38	0.00	7569				

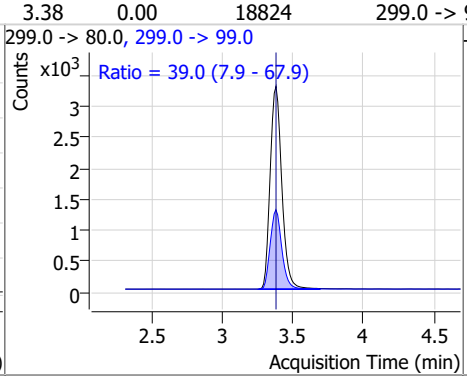


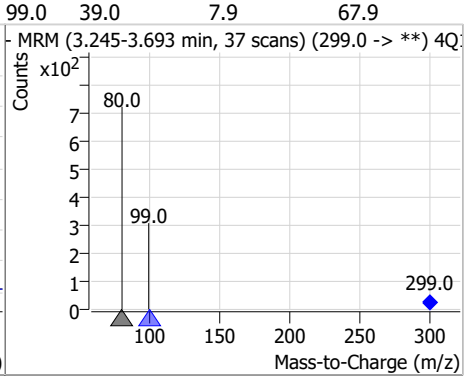




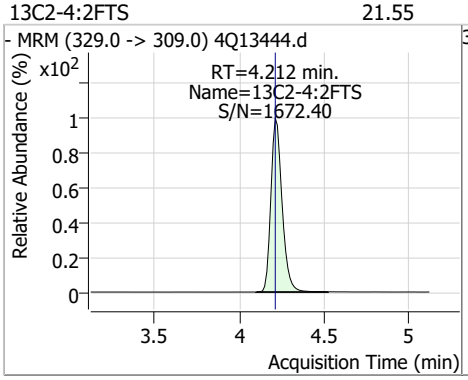
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	15.23	3.38	0.00	18824	299.0 -> 99.0	39.0	7.9	67.9

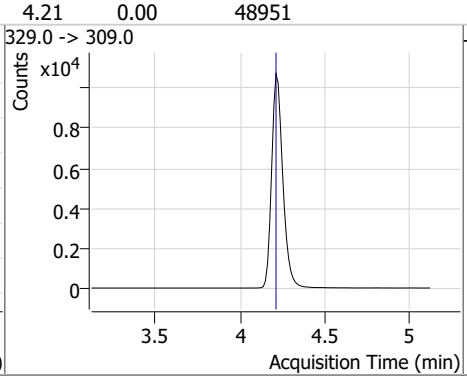


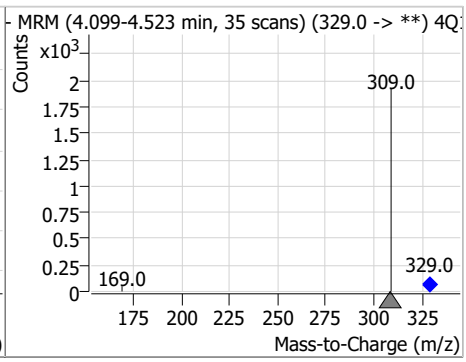




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	21.55	4.21	0.00	48951				



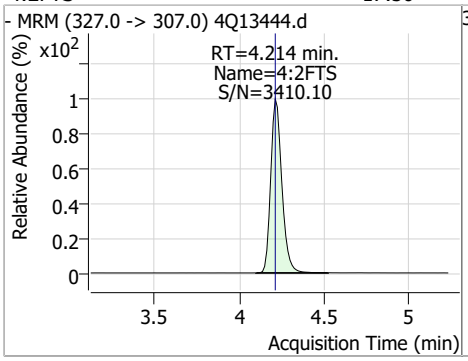


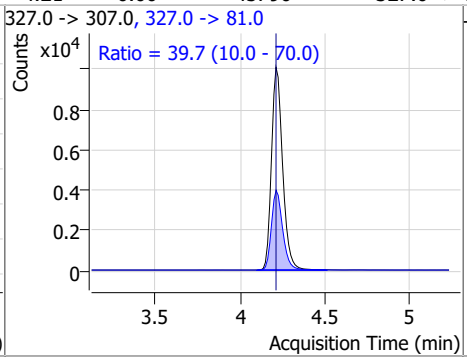


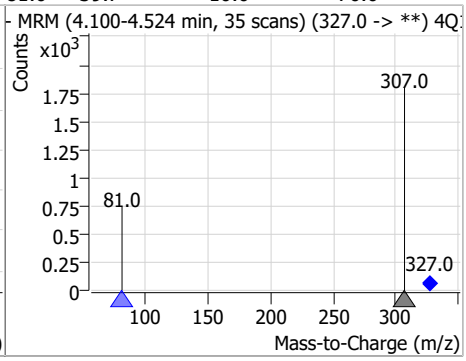
11.6.40 11

Perfluorinated Compounds by LC/MS/MS

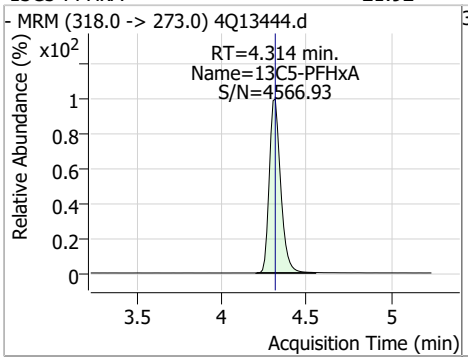
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	17.50	4.21	0.00	45790	327.0 -> 81.0	39.7	10.0	70.0

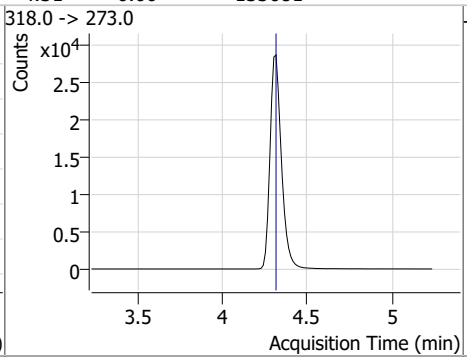


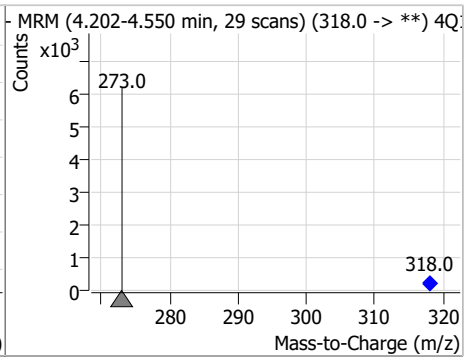




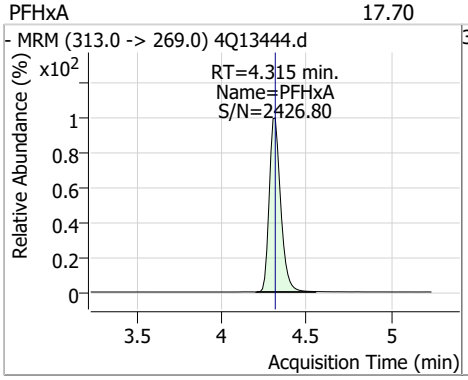
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	21.92	4.31	0.00	133681				

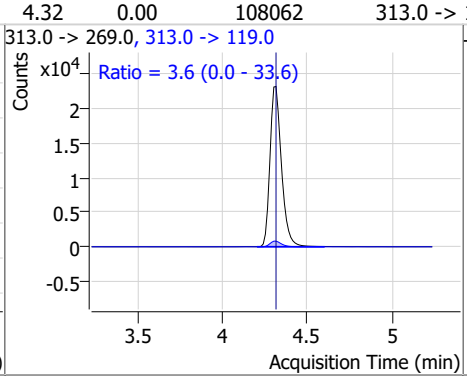


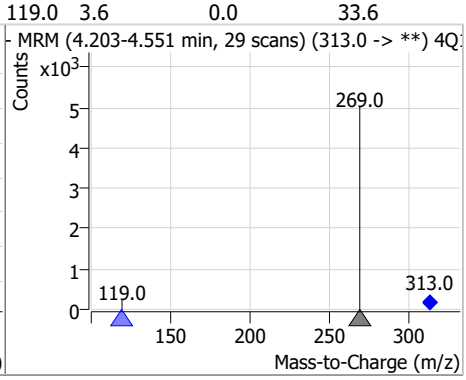




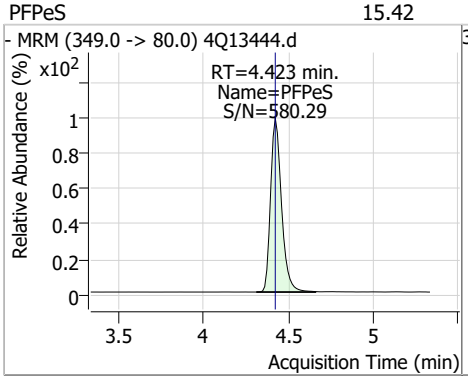
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	17.70	4.32	0.00	108062	313.0 -> 119.0	3.6	0.0	33.6

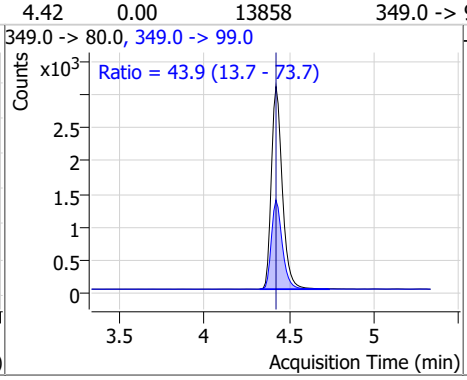


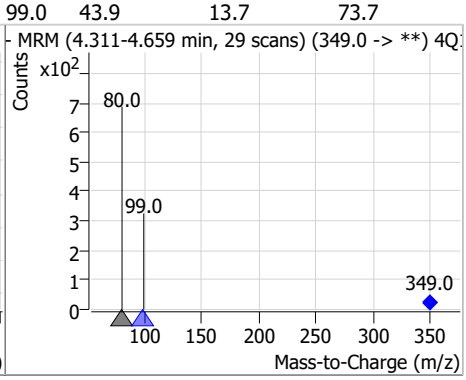




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	15.42	4.42	0.00	13858	349.0 -> 99.0	43.9	13.7	73.7

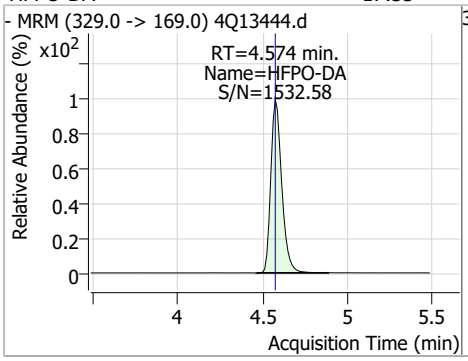


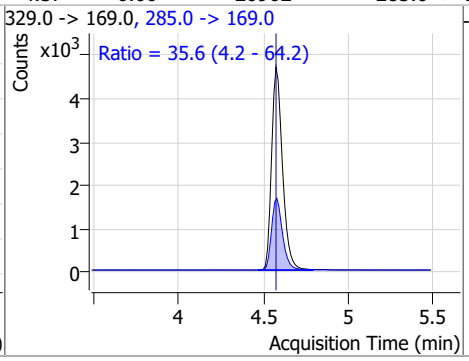


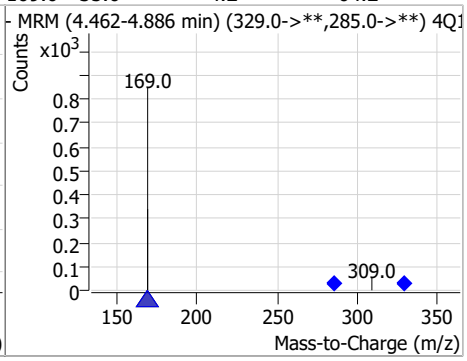


Perfluorinated Compounds by LC/MS/MS

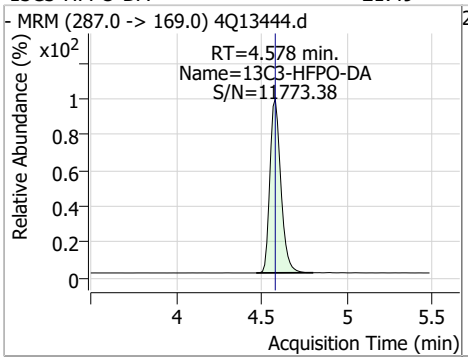
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	17.33	4.57	0.00	20902	285.0 -> 169.0	35.6	4.2	64.2

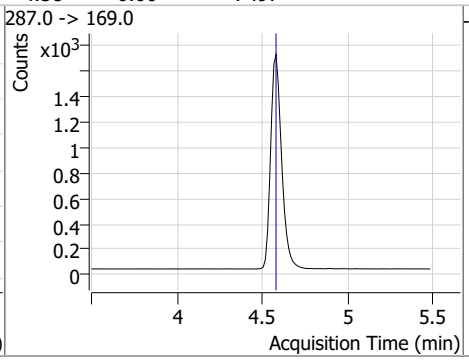


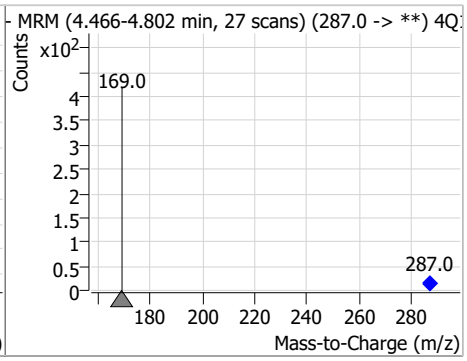




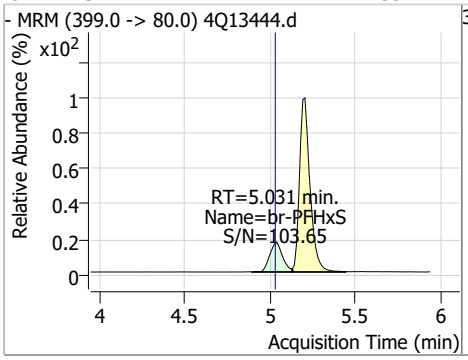
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	21.49	4.58	0.00	7497				

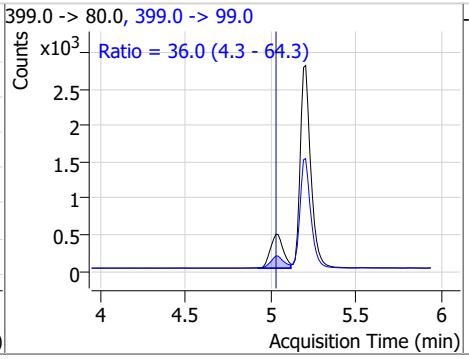


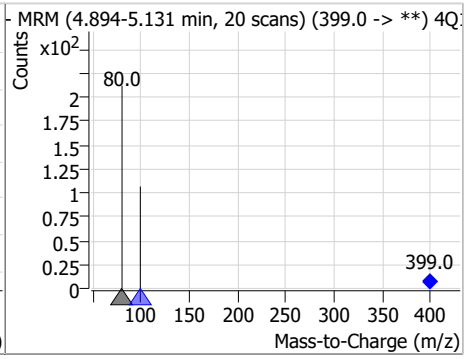




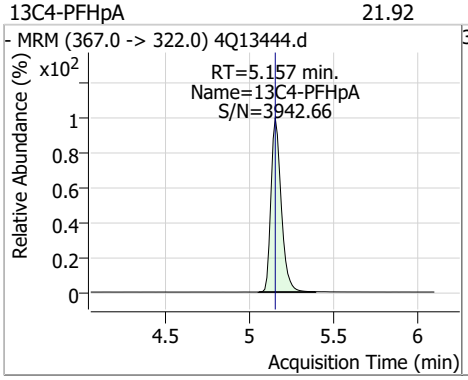
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFHxS	2.33	5.03	0.00	2468	399.0 -> 99.0	36.0	4.3	64.3

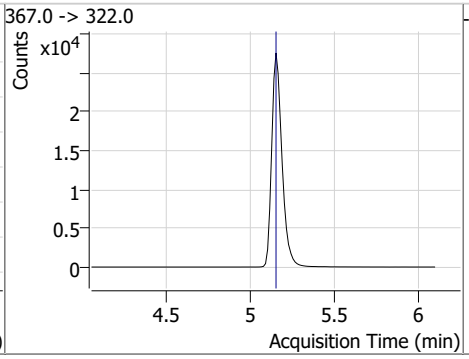


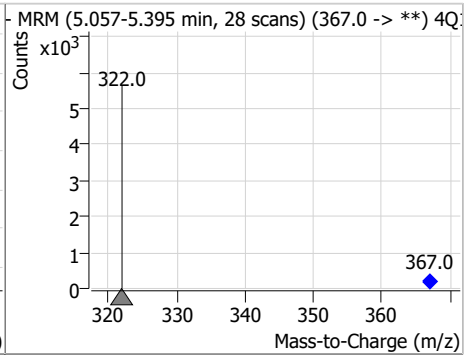




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	21.92	5.16	0.00	116845				

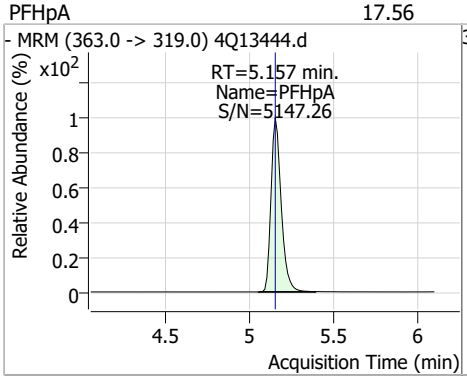


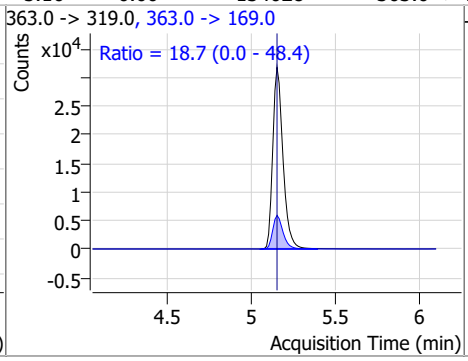


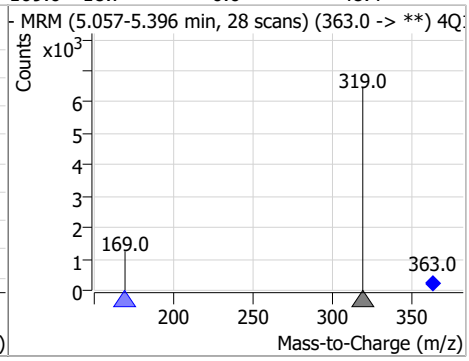


Perfluorinated Compounds by LC/MS/MS

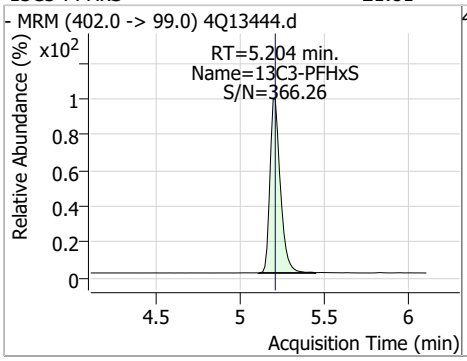
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	17.56	5.16	0.00	134028	363.0 -> 169.0	18.7	0.0	48.4

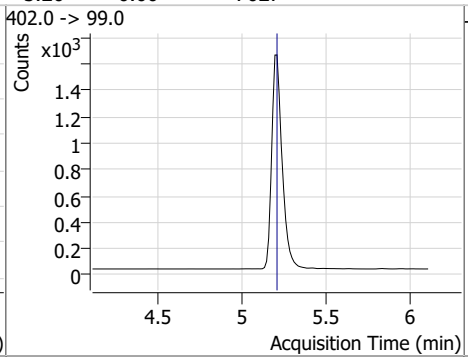


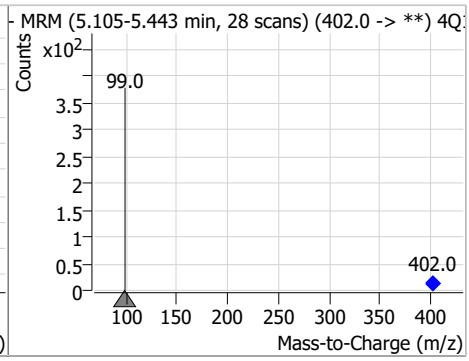




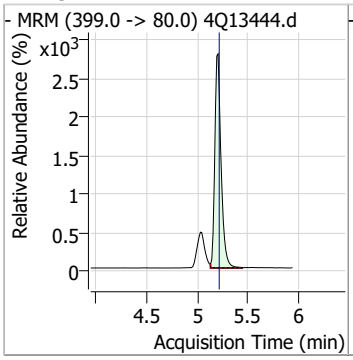
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	21.81	5.20	0.00	7027				

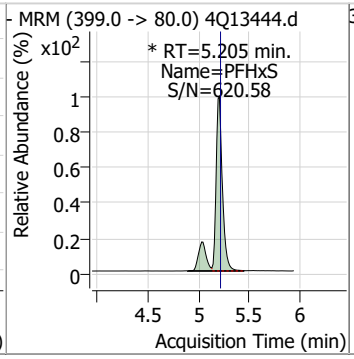


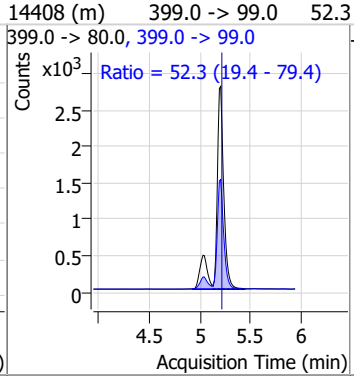


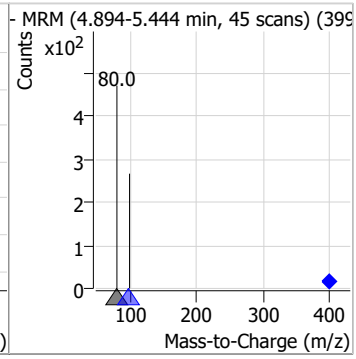


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	16.16	5.21	0.00	14408 (m)	399.0 -> 99.0	52.3	19.4	79.4

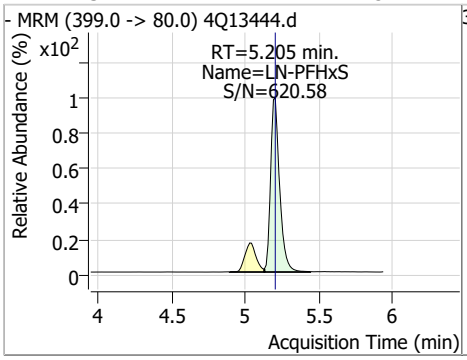


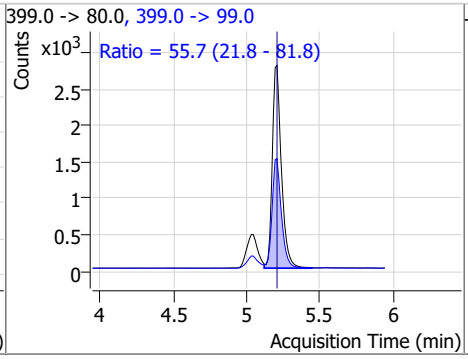


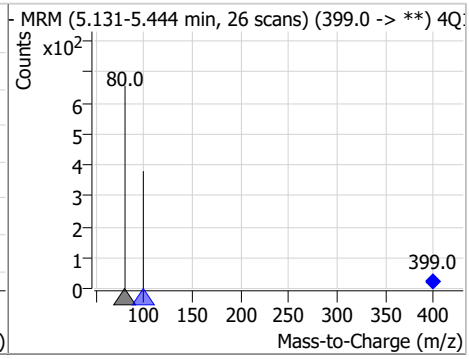




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFHxS	13.74	5.21	0.00	11940	399.0 -> 99.0	55.7	21.8	81.8

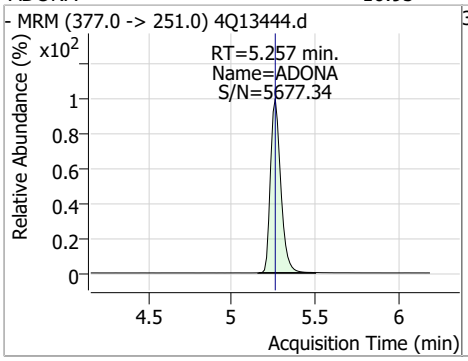


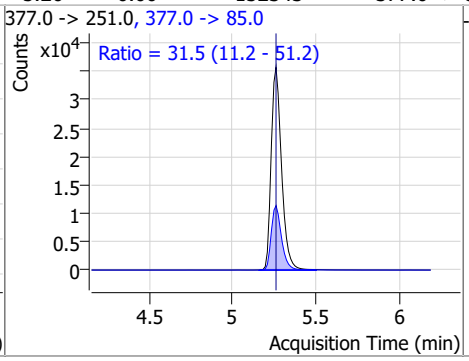


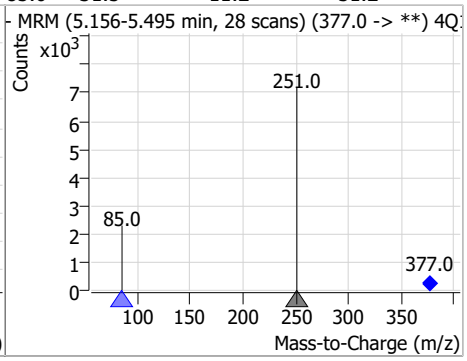


Perfluorinated Compounds by LC/MS/MS

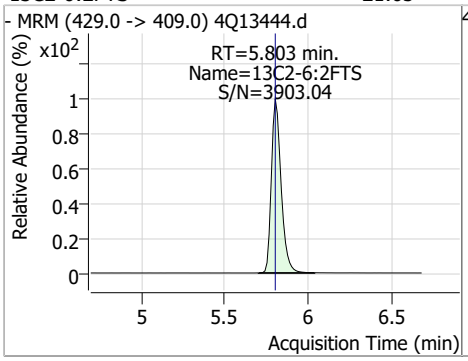
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	16.95	5.26	0.00	152343	377.0 -> 85.0	31.5	11.2	51.2

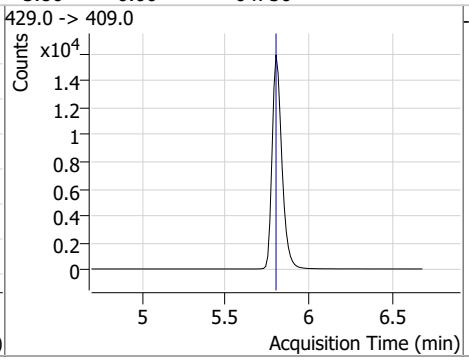


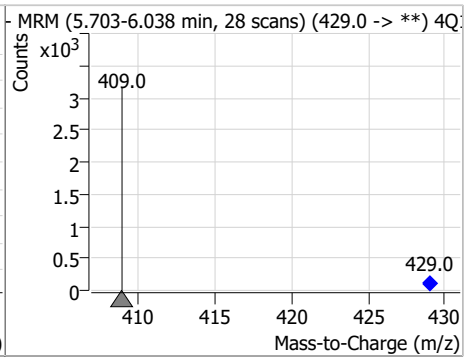




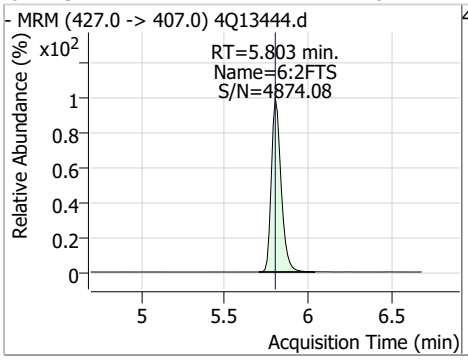
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	21.65	5.80	0.00	64756				

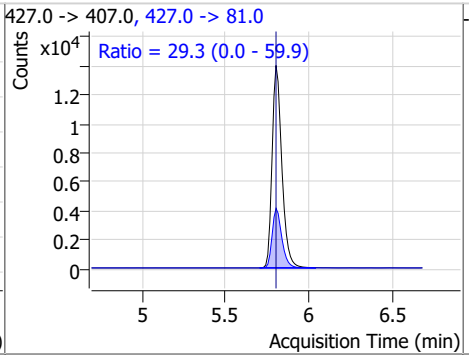


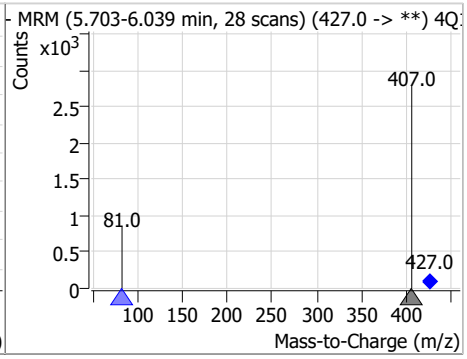




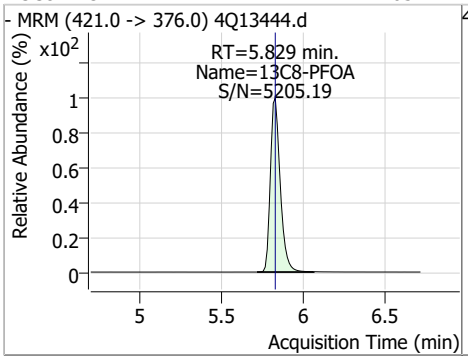
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	16.72	5.80	0.00	56988	427.0 -> 81.0	29.3	0.0	59.9

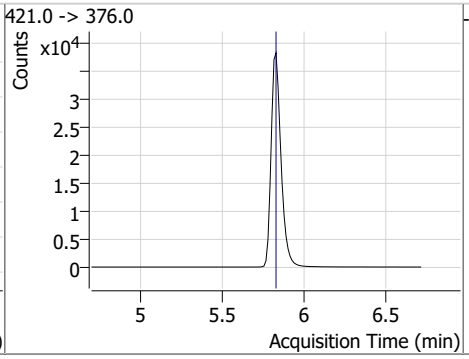


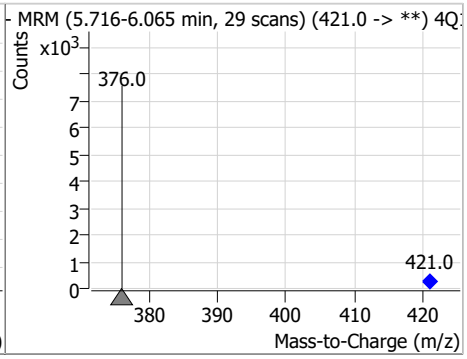




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	22.05	5.83	0.00	161910				

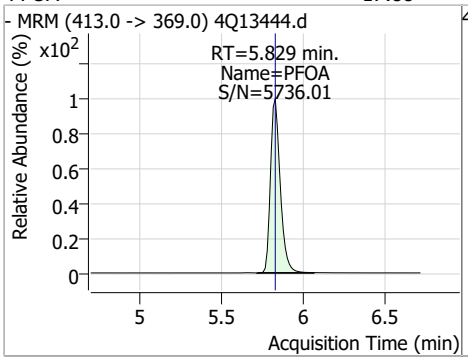


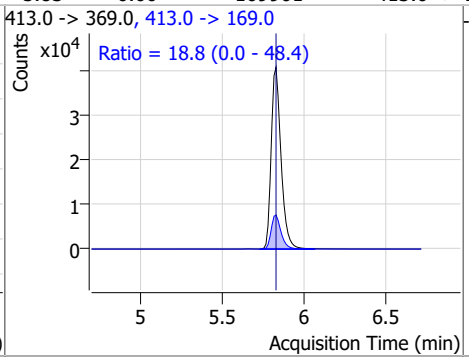


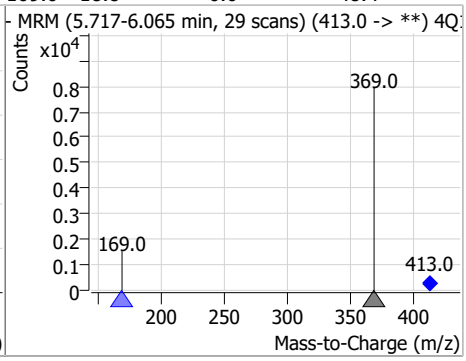


Perfluorinated Compounds by LC/MS/MS

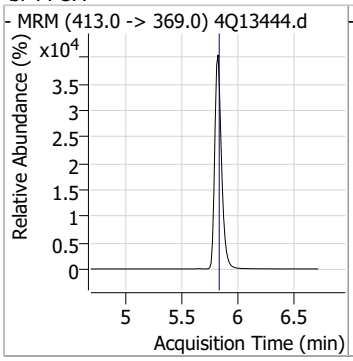
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	17.88	5.83	0.00	169961	413.0 -> 169.0	18.8	0.0	48.4

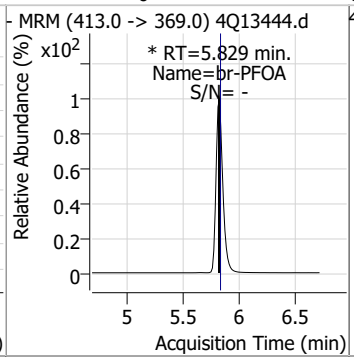


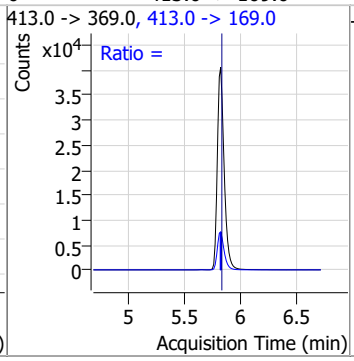


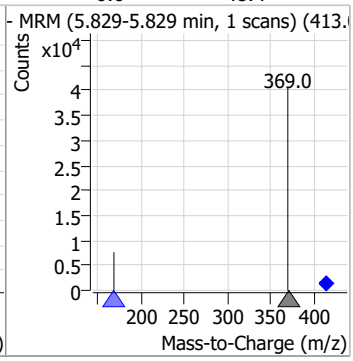


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA		0		0	413.0 -> 169.0		0.0	48.4

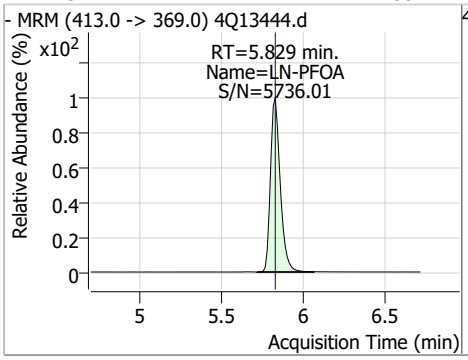


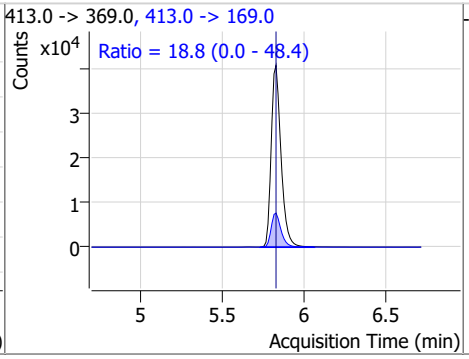


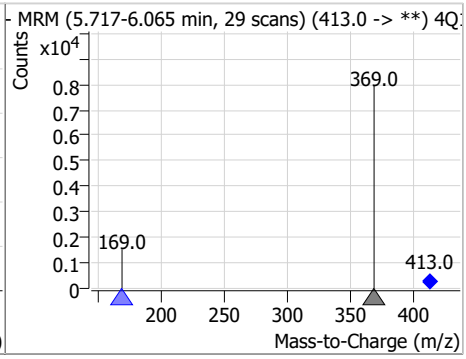




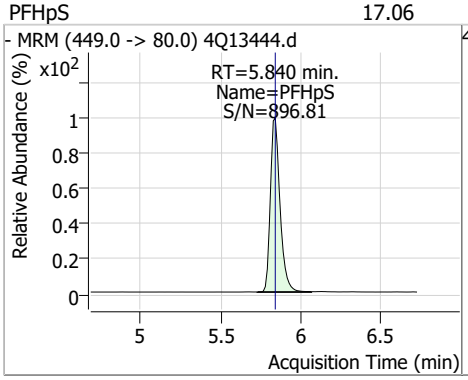
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	17.88	5.83	0.00	169961	413.0 -> 169.0	18.8	0.0	48.4

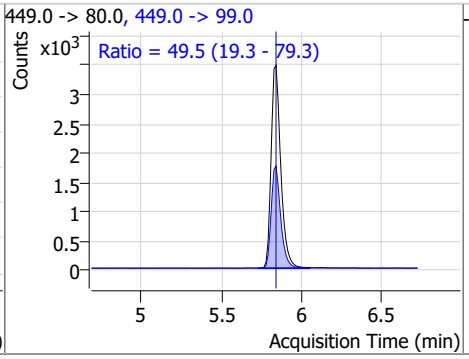


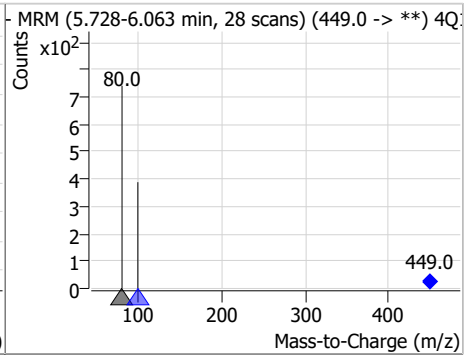




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	17.06	5.84	0.00	14436	449.0 -> 99.0	49.5	19.3	79.3

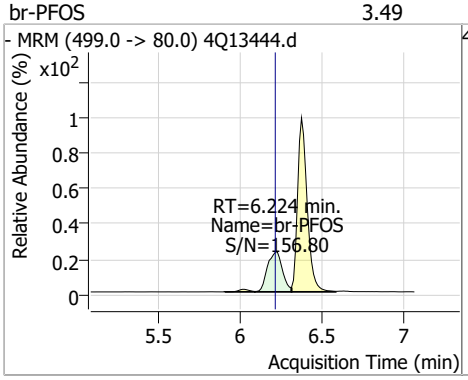


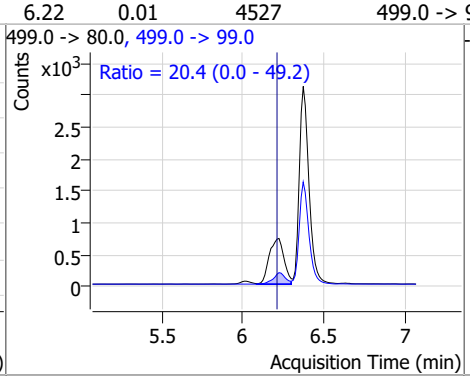


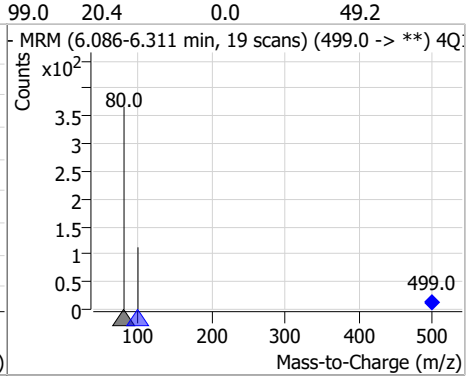


Perfluorinated Compounds by LC/MS/MS

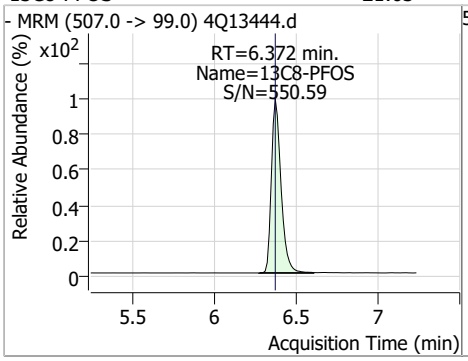
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS	3.49	6.22	0.01	4527	499.0 -> 99.0	20.4	0.0	49.2

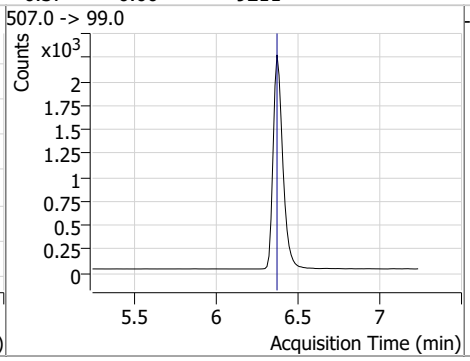


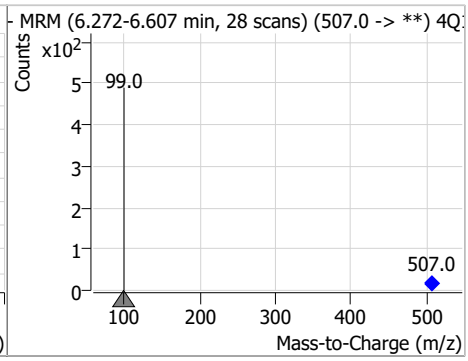




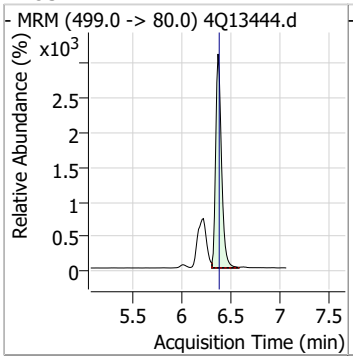
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	21.63	6.37	0.00	9211				

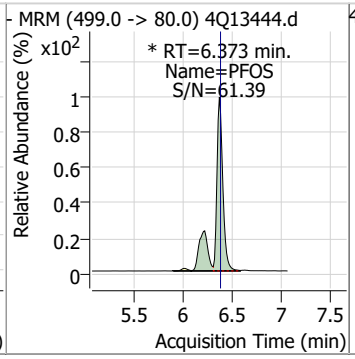


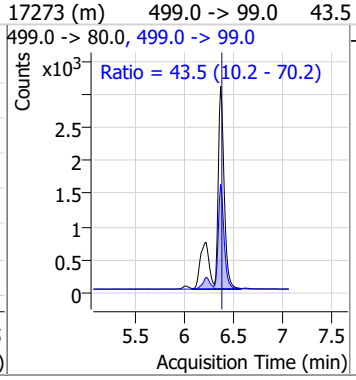


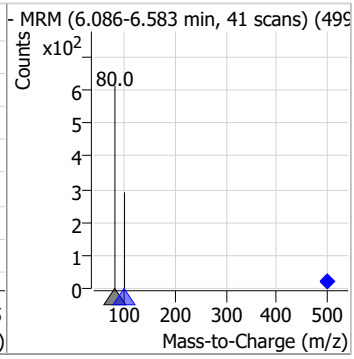


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	17.58	6.37	0.00	17273 (m)	499.0 -> 99.0	43.5	10.2	70.2

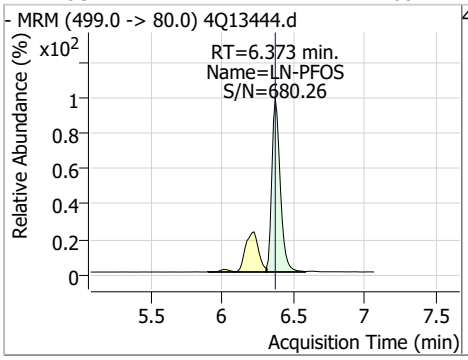


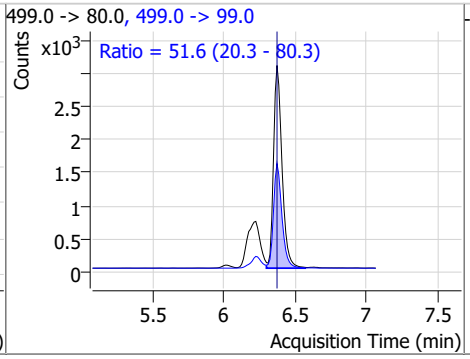


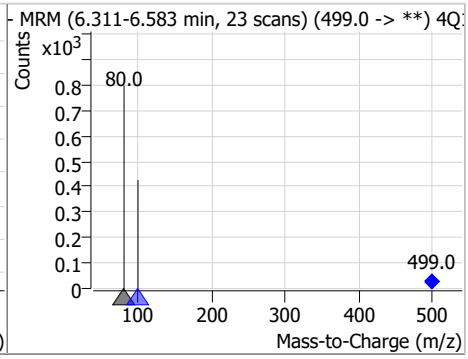




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOS	14.68	6.37	0.00	12746	499.0 -> 99.0	51.6	20.3	80.3

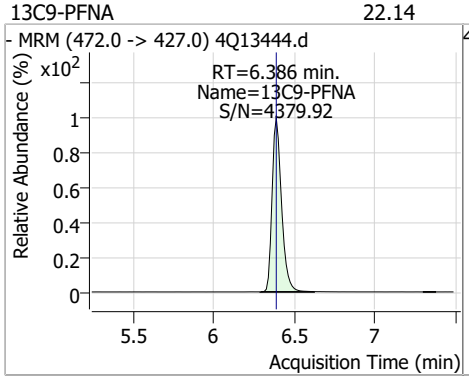


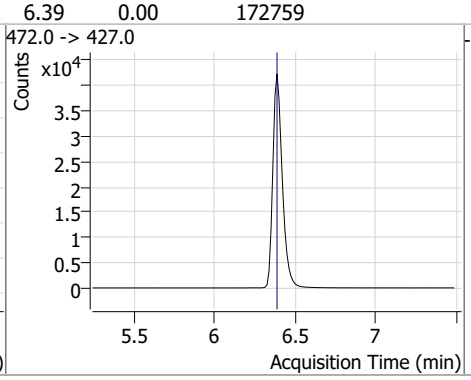


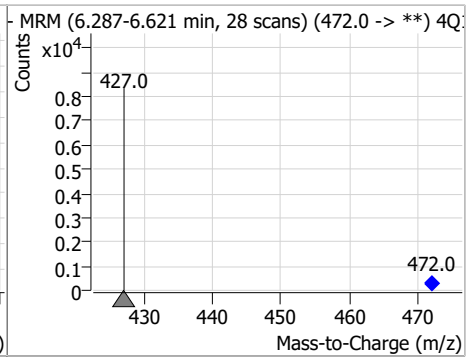


Perfluorinated Compounds by LC/MS/MS

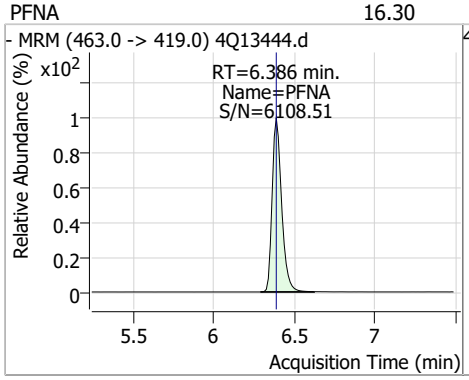
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	22.14	6.39	0.00	172759				

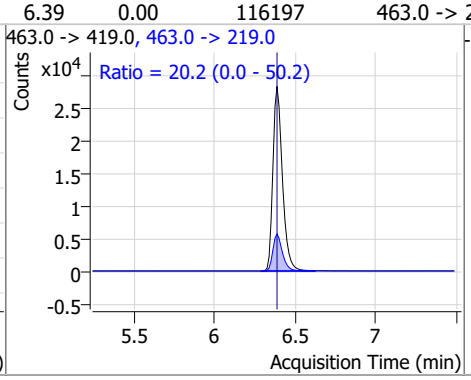


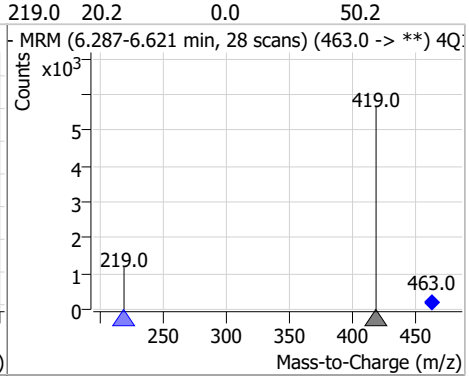




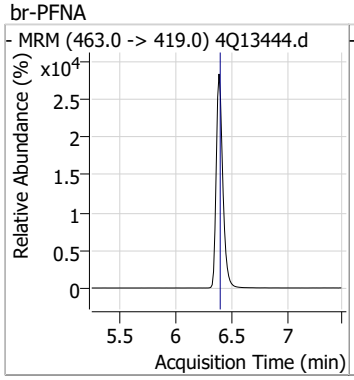
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	16.30	6.39	0.00	116197	463.0 -> 219.0	20.2	0.0	50.2

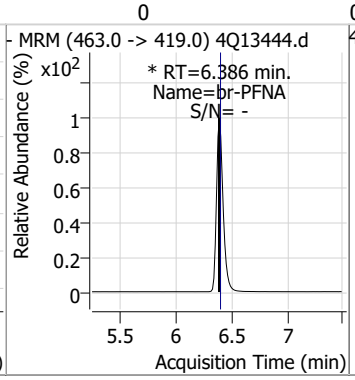


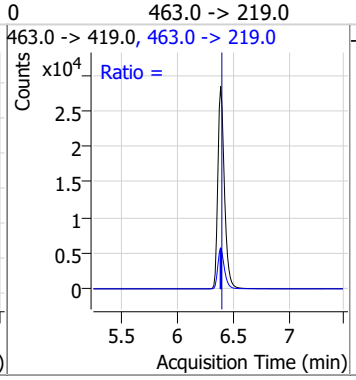


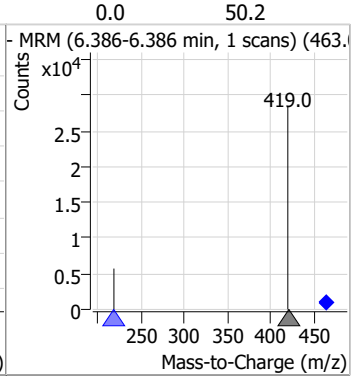


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFNA		0		0	463.0 -> 219.0		0.0	50.2

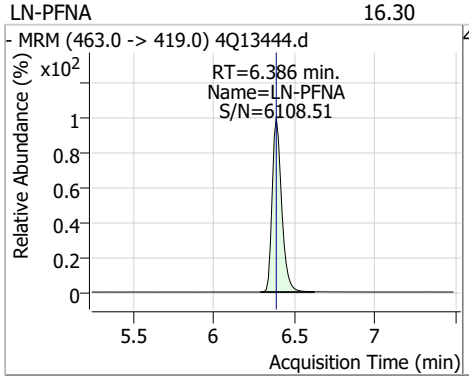


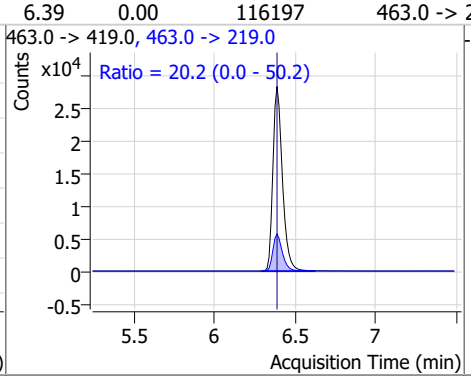


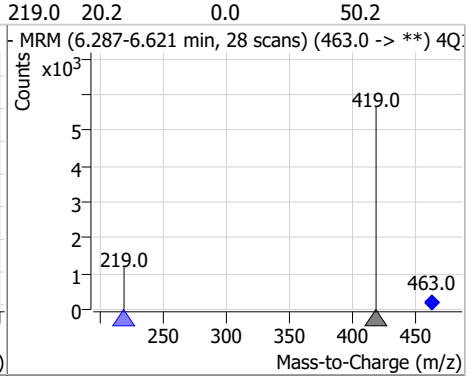




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFNA	16.30	6.39	0.00	116197	463.0 -> 219.0	20.2	0.0	50.2

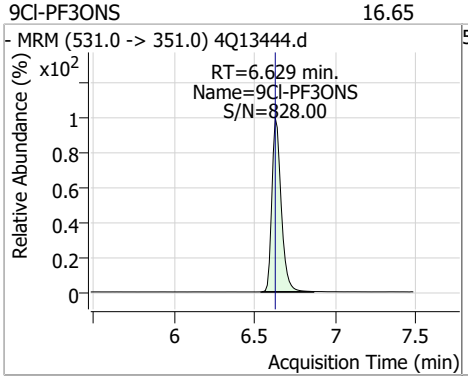


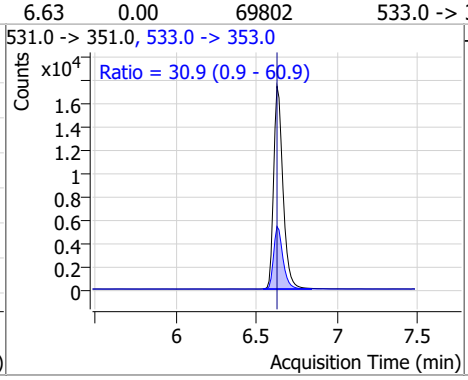


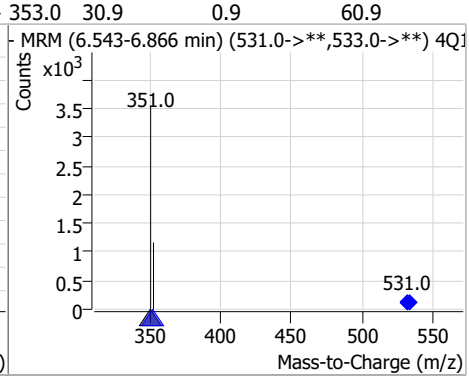


Perfluorinated Compounds by LC/MS/MS

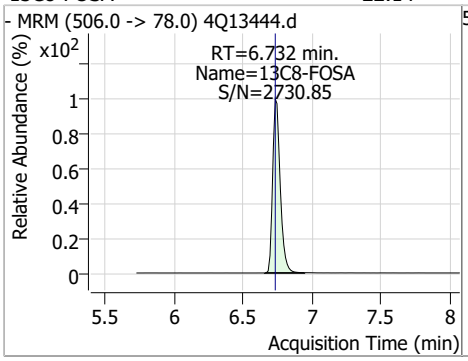
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	16.65	6.63	0.00	69802	533.0 -> 353.0	30.9	0.9	60.9

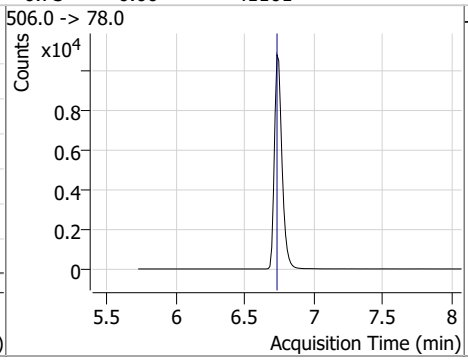


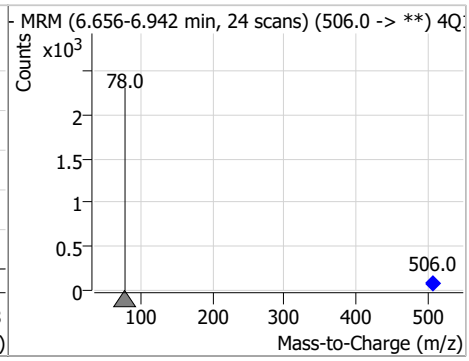




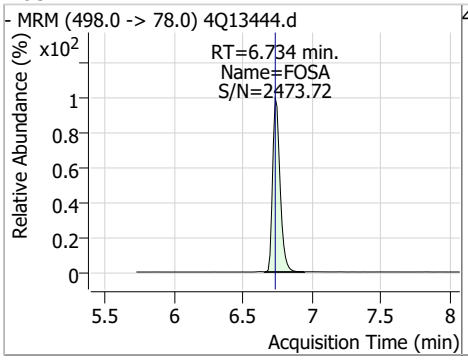
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	22.14	6.73	0.00	41101				

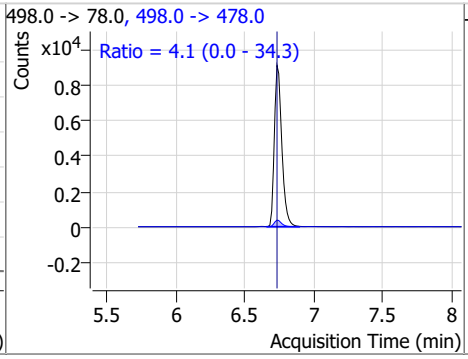


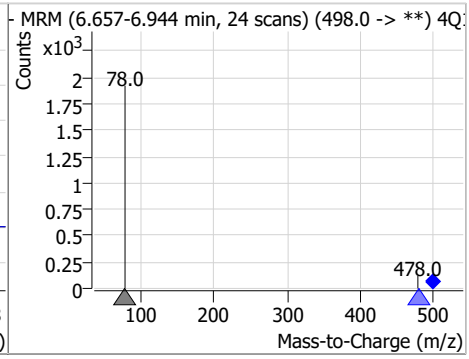




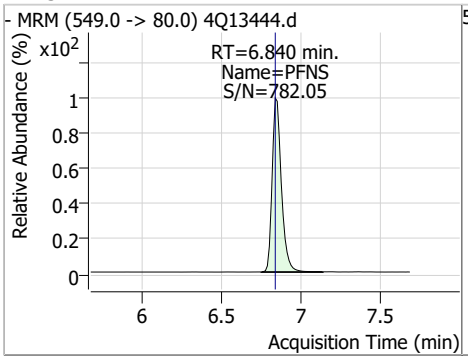
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	17.72	6.73	0.00	34113	498.0 -> 478.0	4.1	0.0	34.3

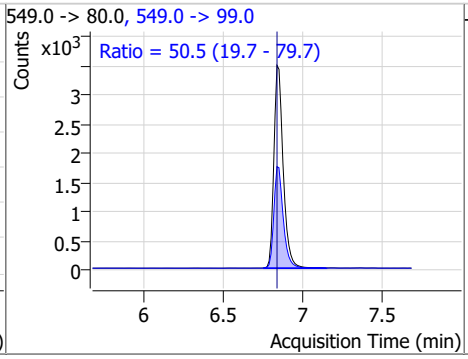


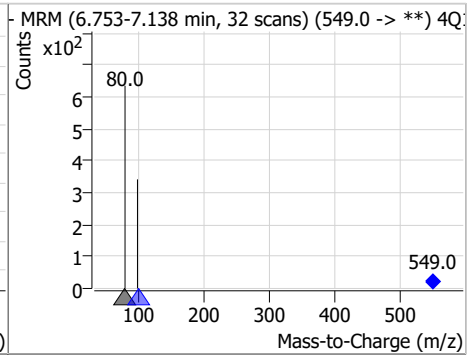




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	17.74	6.84	0.00	14007	549.0 -> 99.0	50.5	19.7	79.7

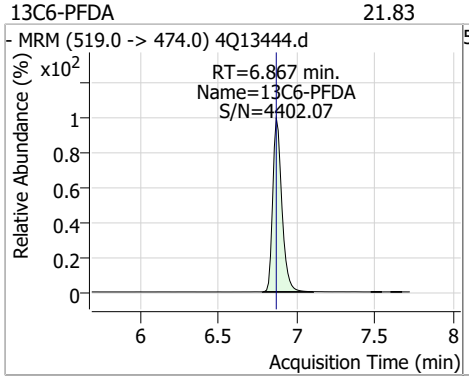


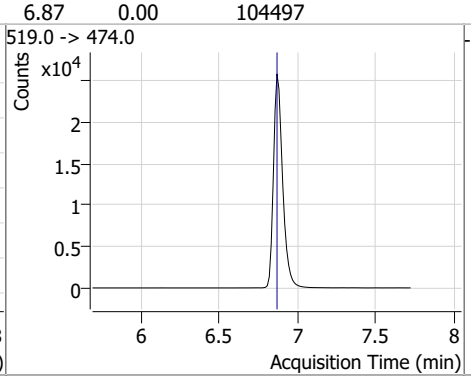


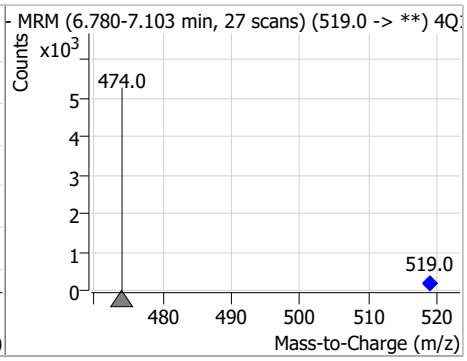


Perfluorinated Compounds by LC/MS/MS

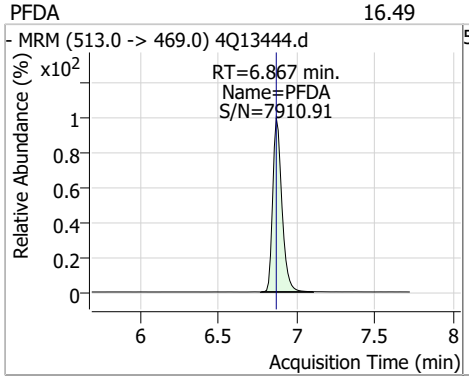
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	21.83	6.87	0.00	104497				

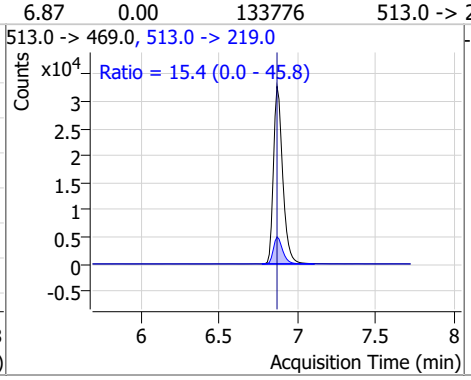


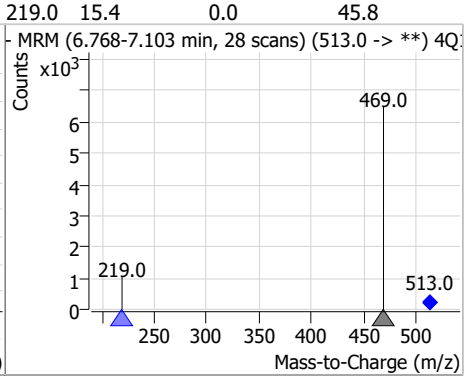




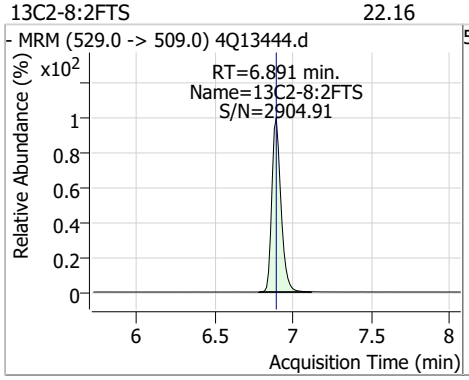
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	16.49	6.87	0.00	133776	513.0 -> 219.0	15.4	0.0	45.8

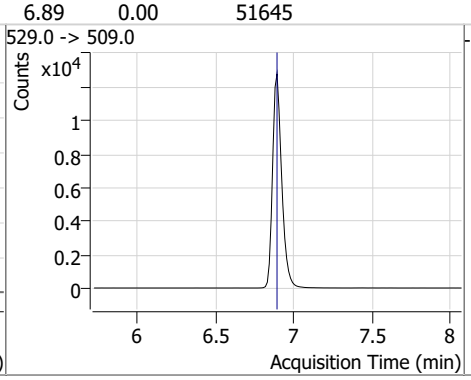


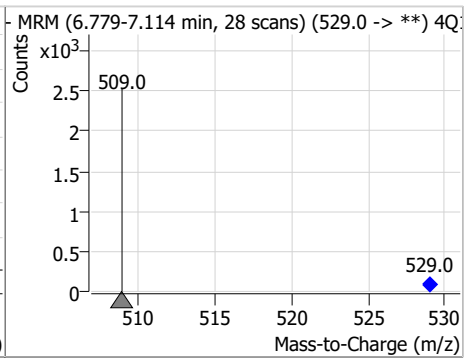




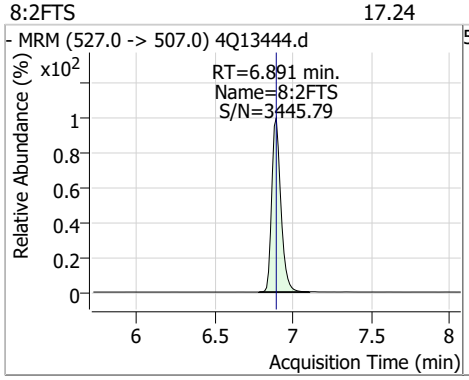
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	22.16	6.89	0.00	51645				

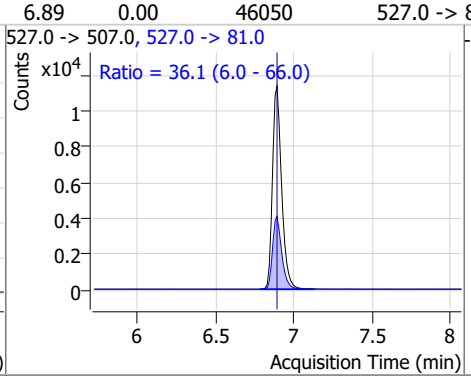


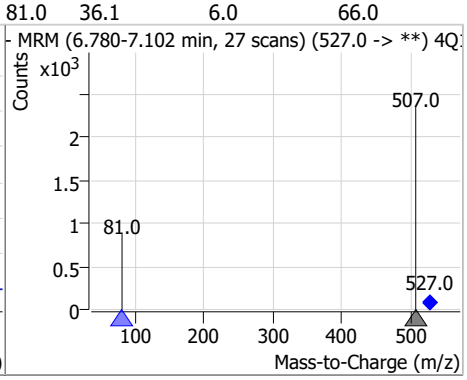




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	17.24	6.89	0.00	46050	527.0 -> 81.0	36.1	6.0	66.0

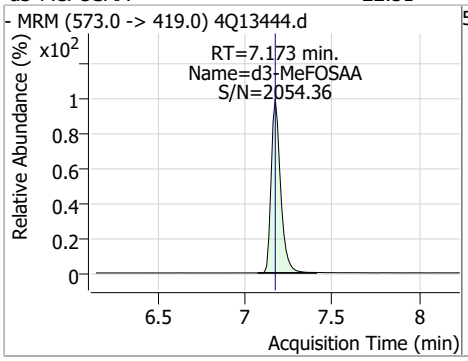


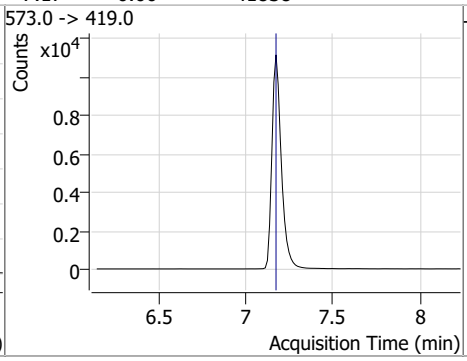


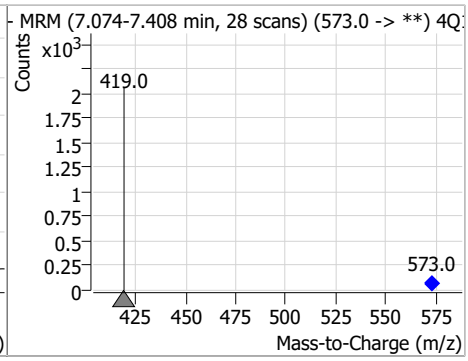


Perfluorinated Compounds by LC/MS/MS

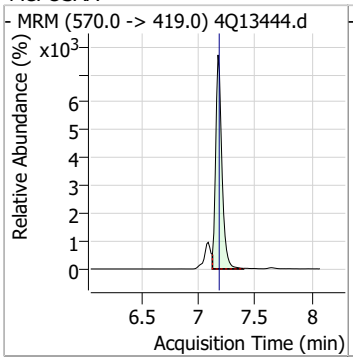
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	22.51	7.17	0.00	41838				

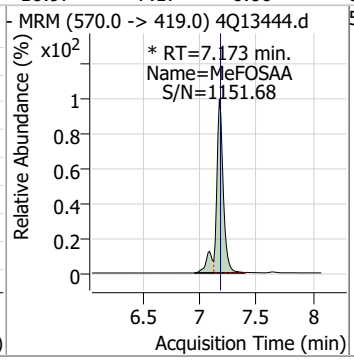


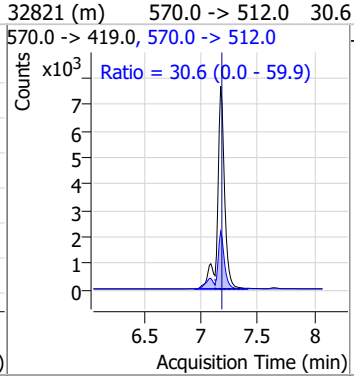


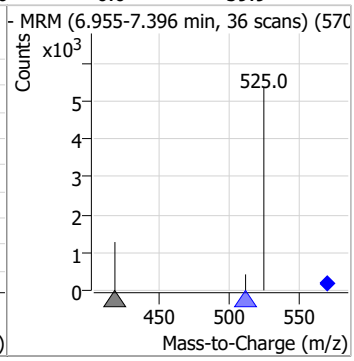


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	16.97	7.17	0.00	32821 (m)	570.0 -> 512.0	30.6	0.0	59.9

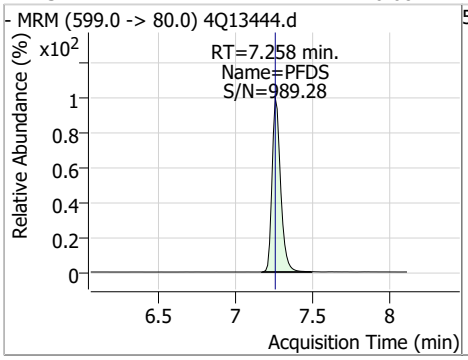


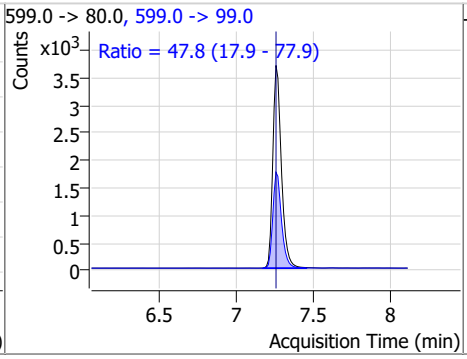


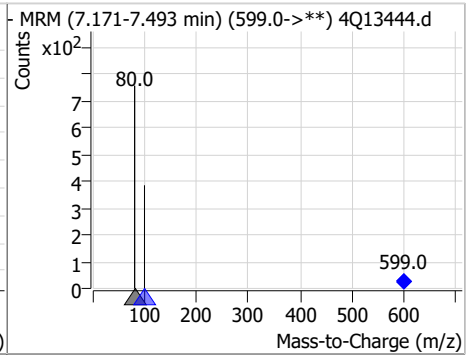




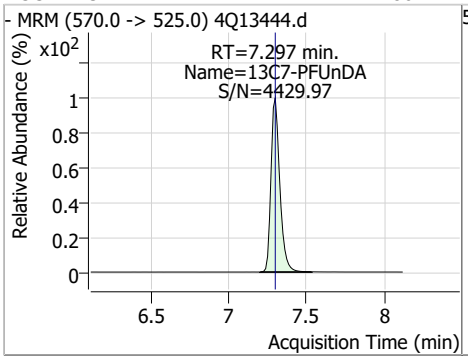
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	16.08	7.26	0.00	14275	599.0 -> 99.0	47.8	17.9	77.9

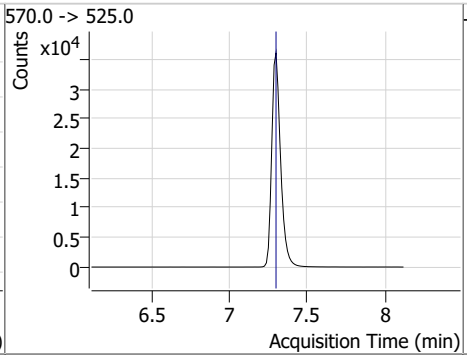


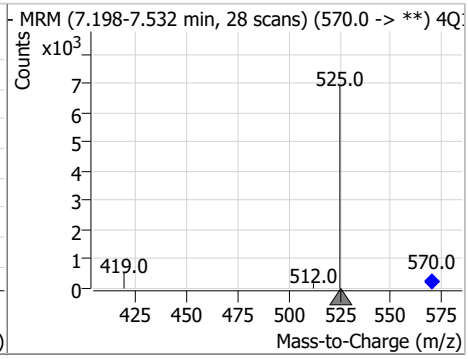




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	21.86	7.30	0.00	143199				

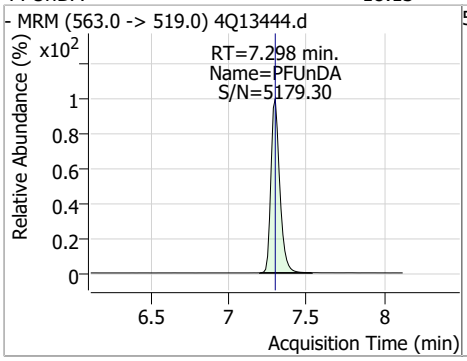


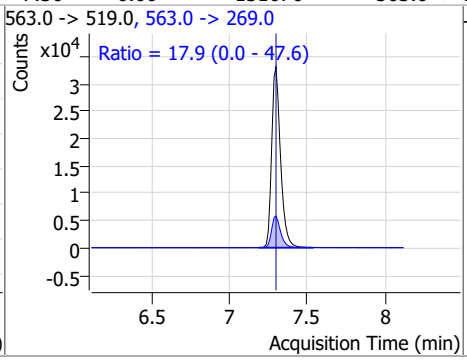


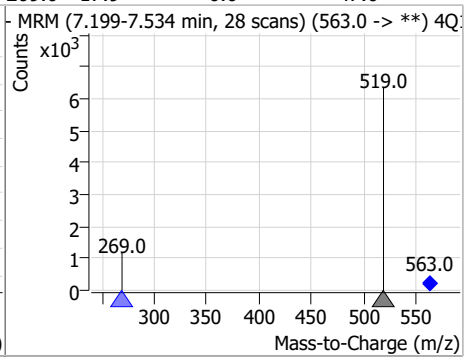


Perfluorinated Compounds by LC/MS/MS

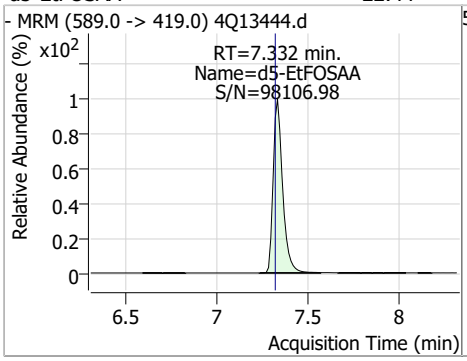
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	18.13	7.30	0.00	131076	563.0 -> 269.0	17.9	0.0	47.6

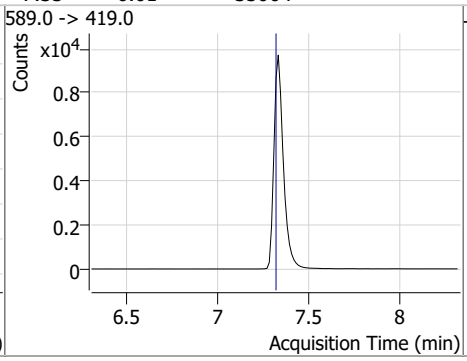


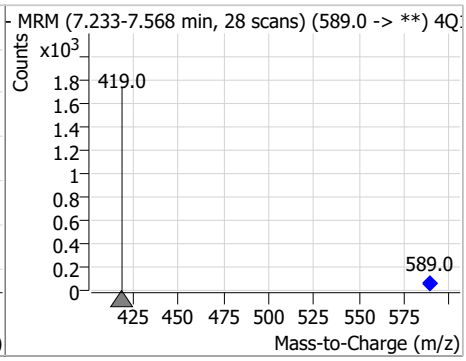




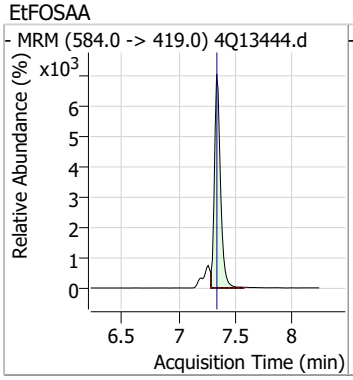
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	22.44	7.33	0.01	35064				

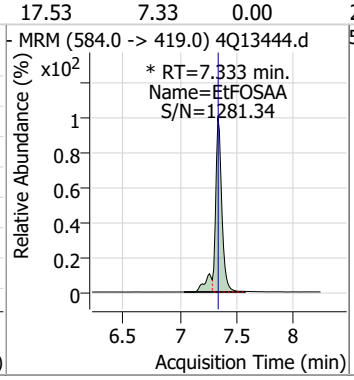


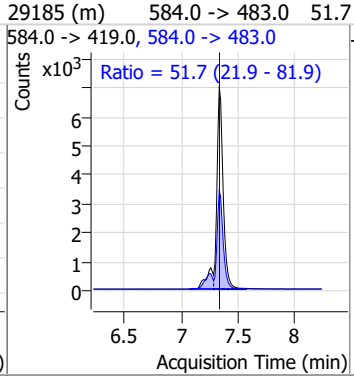


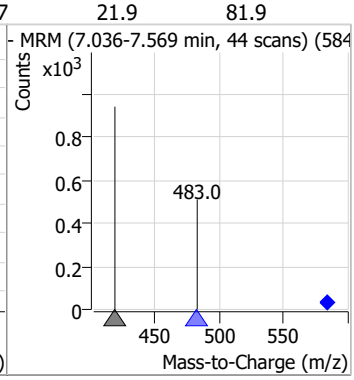


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	17.53	7.33	0.00	29185 (m)	584.0 -> 483.0	51.7	21.9	81.9

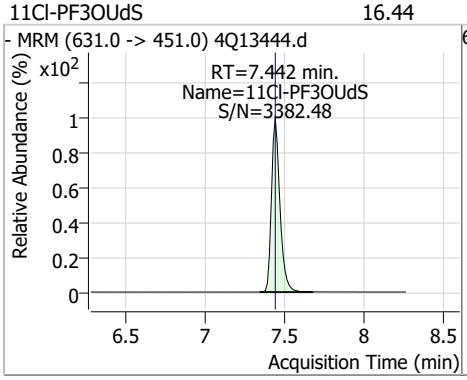


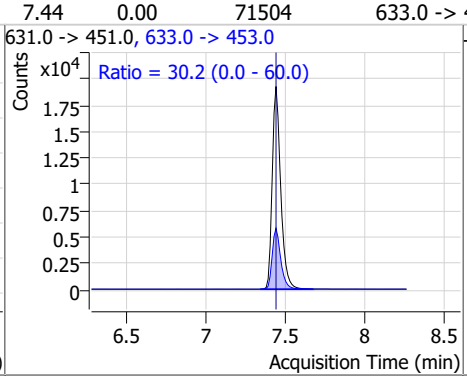


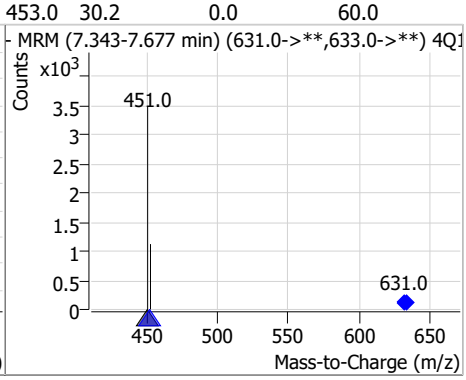




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	16.44	7.44	0.00	71504	633.0 -> 453.0	30.2	0.0	60.0

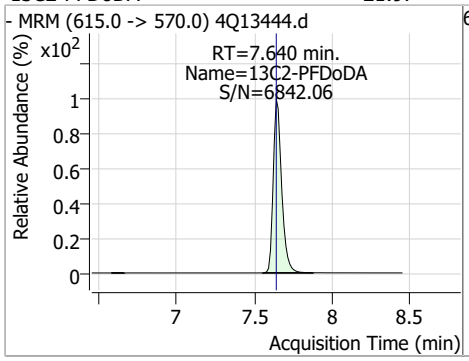


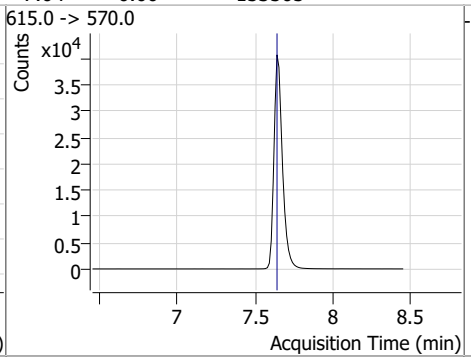


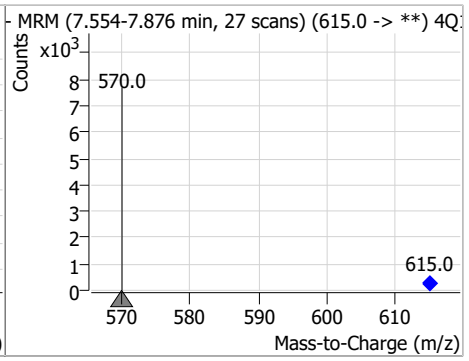


Perfluorinated Compounds by LC/MS/MS

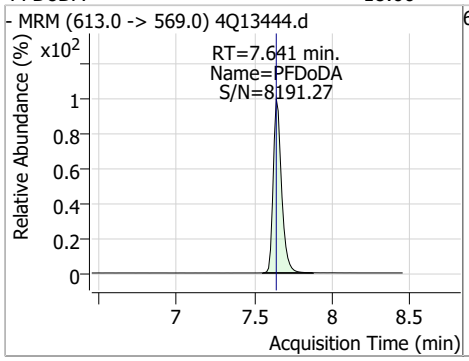
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	21.97	7.64	0.00	153565				

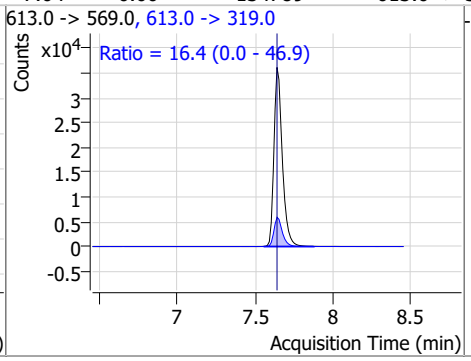


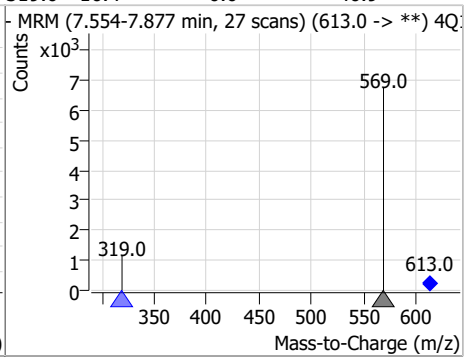




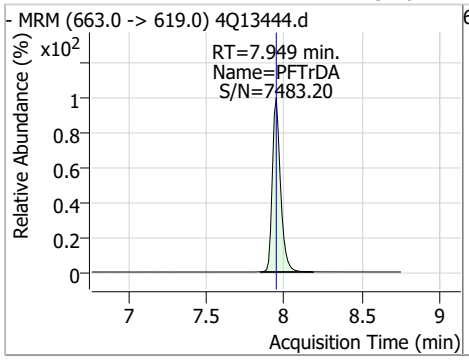
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	18.06	7.64	0.00	134789	613.0 -> 319.0	16.4	0.0	46.9

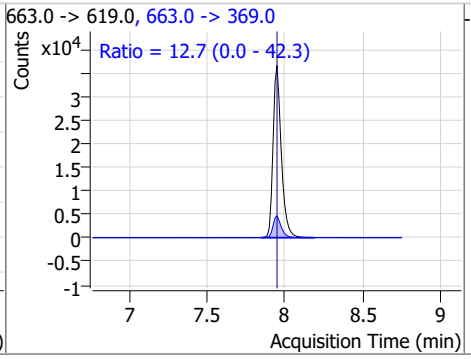


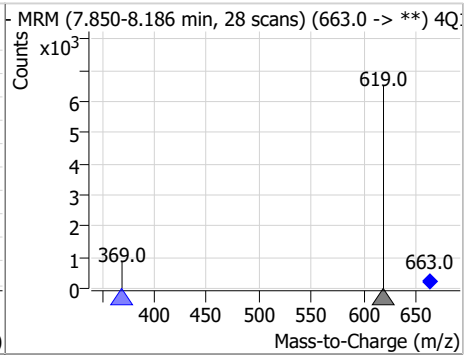




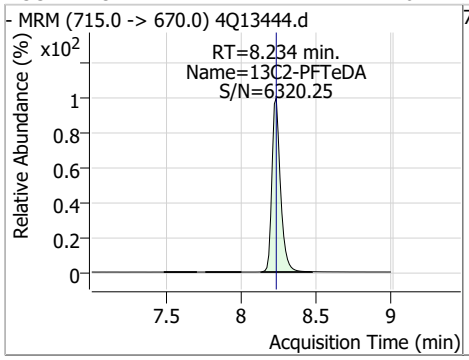
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	19.70	7.95	0.00	134711	663.0 -> 369.0	12.7	0.0	42.3

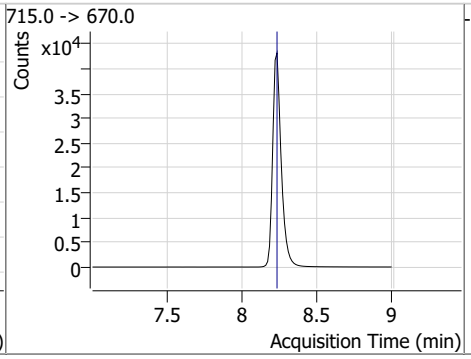


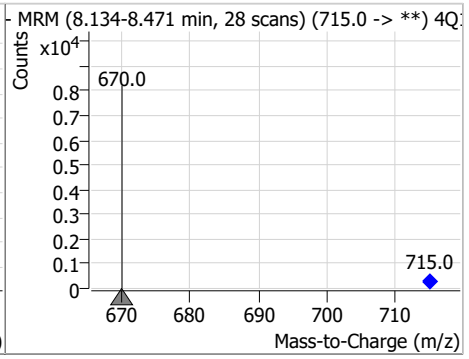




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	21.76	8.23	0.00	170713				

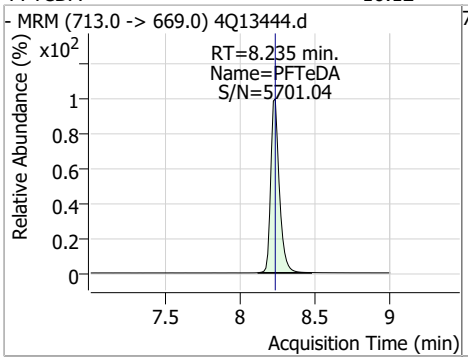


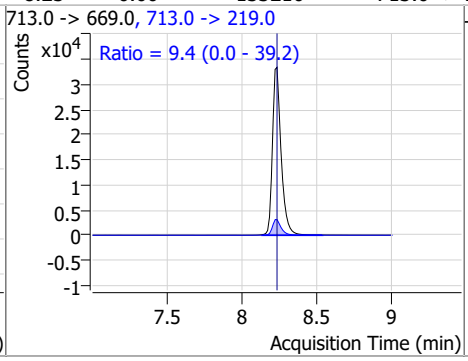


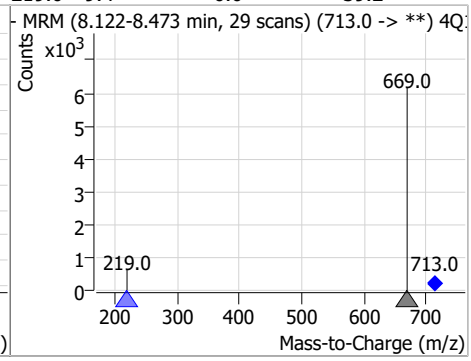


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	16.12	8.23	0.00	133210	713.0 -> 219.0	9.4	0.0	39.2







Manual Integration Approval Summary

Sample Number: S4Q189-ICV189
Lab FileID: 4Q13444.D
Injection Time: 04/18/21 16:58
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/19/21 07:57 Nancy Saunders
Supervisor approved: 04/19/21 15:40 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.21	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.37	Split peak
MeFOSAA	2355-31-9		7.17	Split peak
EtFOSAA	2991-50-6		7.33	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:40

Perfluorinated Compounds by LC/MS/MS

Data File : 4Q13445.d
Operator : natashag
Acq. Method : 537_ID.m
Acq. Date-Time : 4/18/2021 5:13:06 PM
Sample Name : icv189-20 t-pfoa
Vial : P1-B2
DA Method File : BR_LN_041821_S4Q189.quantmethod.xml
Batch Name : s4q189.batch.bin
Sample Information : op84918,S4Q189,250,,,1,1,water

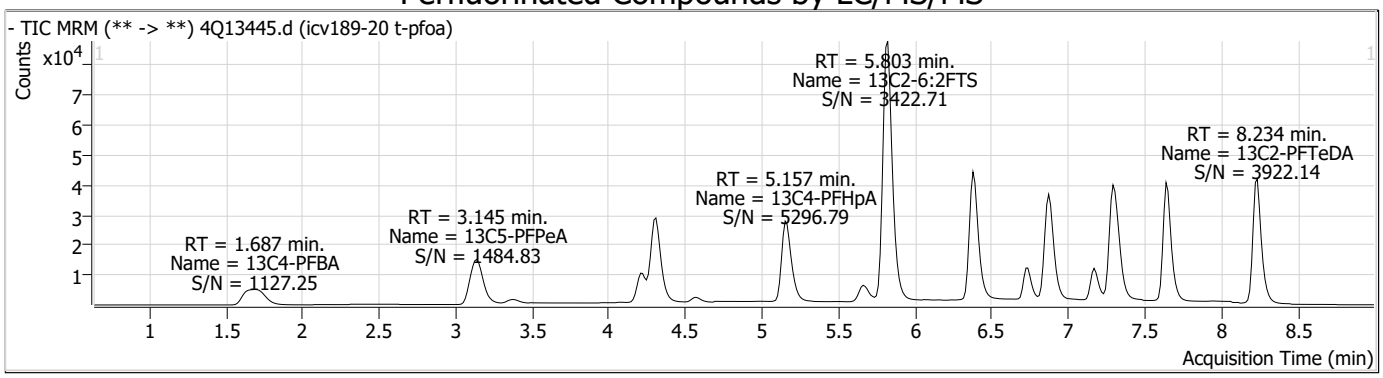
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.687	217.0 -> 172.0	51512	20.00	µg/L	0.000
M5-PFPeA	3.145	268.0 -> 223.0	92154	20.00	µg/L	0.000
M5-PFHxA	4.314	318.0 -> 273.0	126834	20.00	µg/L	0.000
M4-PFHpA	5.157	367.0 -> 322.0	111602	20.00	µg/L	0.000
M8-PFOA	5.829	421.0 -> 376.0	151647	20.00	µg/L	0.000
M9-PFNA	6.386	472.0 -> 427.0	165432	20.00	µg/L	0.000
M6-PFDA	6.867	519.0 -> 474.0	103634	20.00	µg/L	0.000
M7-PFUnDA	7.297	570.0 -> 525.0	140265	20.00	µg/L	0.000
M2-PFDoDA	7.640	615.0 -> 570.0	146036	20.00	µg/L	0.000
M2-PFTeDA	8.234	715.0 -> 670.0	163320	20.00	µg/L	0.000
M8-FOSA	6.744	506.0 -> 78.0	40982	20.00	µg/L	0.012
M3-PFBS	3.381	302.0 -> 99.0	7083	20.00	µg/L	0.000
M3-PFHxS	5.204	402.0 -> 99.0	6685	20.00	µg/L	0.000
M8-PFOS	6.372	507.0 -> 99.0	8876	20.00	µg/L	0.000
M2-4:2FTS	4.212	329.0 -> 309.0	44327	20.00	µg/L	0.000
M2-6:2FTS	5.803	429.0 -> 409.0	58757	20.00	µg/L	0.000
M2-8:2FTS	6.891	529.0 -> 509.0	46089	20.00	µg/L	0.000
M3-MeFOSAA	7.173	573.0 -> 419.0	39104	20.00	µg/L	0.000
M3-HFPO-DA	4.578	287.0 -> 169.0	7122	20.00	µg/L	0.000
M5-EtFOSAA	7.332	589.0 -> 419.0	33000	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.212	329.0 -> 309.0	44327	19.51	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.6%		
13C2-6:2FTS	5.803	429.0 -> 409.0	58757	19.65	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%		
13C2-8:2FTS	6.891	529.0 -> 509.0	46089	19.77	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.9%		
13C2-PFDoDA	7.640	615.0 -> 570.0	146036	20.89	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.5%		
13C2-PFTeDA	8.234	715.0 -> 670.0	163320	20.81	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.1%		
13C3-PFBS	3.381	302.0 -> 99.0	7083	20.77	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.9%		
13C3-PFHxS	5.204	402.0 -> 99.0	6685	20.75	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.7%		
13C4-PFBA	1.687	217.0 -> 172.0	51512	20.86	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.3%		
13C4-PFHpA	5.157	367.0 -> 322.0	111602	20.93	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.7%		
13C5-PFHxA	4.314	318.0 -> 273.0	126834	20.80	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.0%		
13C5-PFPeA	3.145	268.0 -> 223.0	92154	20.74	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.7%		
13C6-PFDA	6.867	519.0 -> 474.0	103634	21.65	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.3%		

Perfluorinated Compounds by LC/MS/MS

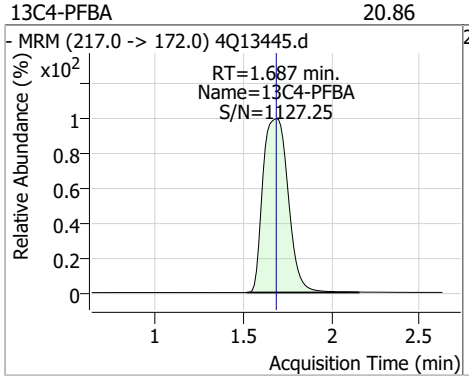
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	7.297	570.0 -> 525.0	140265	21.41	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.0%			
13C8-FOSA	6.744	506.0 -> 78.0	40982	22.08	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.4%			
13C8-PFOA	5.829	421.0 -> 376.0	151647	20.65	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.2%			
13C8-PFOS	6.372	507.0 -> 99.0	8876	20.85	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.2%			
13C9-PFNA	6.386	472.0 -> 427.0	165432	21.20	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.0%			
d3-MeFOSAA	7.173	573.0 -> 419.0	39104	21.04	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.2%			
13C3-HFPO-DA	4.578	287.0 -> 169.0	7121	20.41	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.1%			
d5-EtFOSAA	7.332	589.0 -> 419.0	32939	21.08	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.4%			
Target Compounds							QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.			
6:2FTS	-	427.0 -> 407.0	-	N.D.			
8:2FTS	-	527.0 -> 507.0	-	N.D.			
EtFOSAA	7.345	584.0 -> 419.0	0		µg/L	m	1
FOSA	-	498.0 -> 78.0	-	N.D.			
MeFOSAA	7.173	570.0 -> 419.0	0		µg/L	m	1
PFBA	-	213.0 -> 169.0	-	N.D.			
PFBS	-	299.0 -> 80.0	-	N.D.			
PFDA	-	513.0 -> 469.0	-	N.D.			
PFDoDA	-	613.0 -> 569.0	-	N.D.			
PFDS	-	599.0 -> 80.0	-	N.D.			
PFHpA	5.157	363.0 -> 319.0	0		µg/L	m	1
PFHpS	-	449.0 -> 80.0	-	N.D.			
PFHxA	-	313.0 -> 269.0	-	N.D.			
PFHxS	-	399.0 -> 80.0	-	N.D.			
PFNA	-	463.0 -> 419.0	-	N.D.			
PFNS	-	549.0 -> 80.0	-	N.D.			
PFOA	5.829	413.0 -> 369.0	160530	18.04	µg/L	m	97
PFOS	-	499.0 -> 80.0	-	N.D.			
PFPeA	-	263.0 -> 219.0	-	N.D.			
PFPeS	-	349.0 -> 80.0	-	N.D.			
PFTeDA	-	713.0 -> 669.0	-	N.D.			
PFTrDA	-	663.0 -> 619.0	-	N.D.			
PFUnDA	-	563.0 -> 519.0	-	N.D.			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.			
ADONA	-	377.0 -> 251.0	-	N.D.			
HFPO-DA	-	329.0 -> 169.0	-	N.D.			
br-PFOS	6.397	499.0 -> 80.0	0		µg/L	m	1
LN-PFOS	-	499.0 -> 80.0	-	N.D.			
br-PFHxS	-	399.0 -> 80.0	-	N.D.			
LN-PFHxS	-	399.0 -> 80.0	-	N.D.			
br-PFOA	5.666	413.0 -> 369.0	20143	2.26	µg/L	m	79
LN-PFOA	5.829	413.0 -> 369.0	140387	15.77	µg/L		100
br-PFNA	-	463.0 -> 419.0	-	N.D.			
LN-PFNA	-	463.0 -> 419.0	-	N.D.			

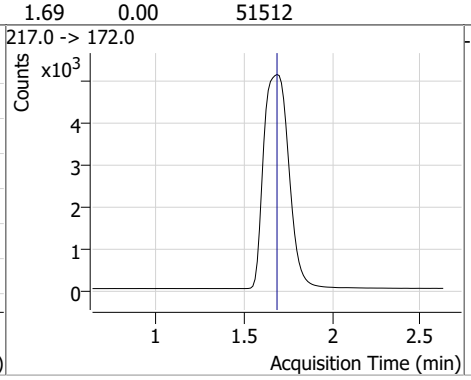
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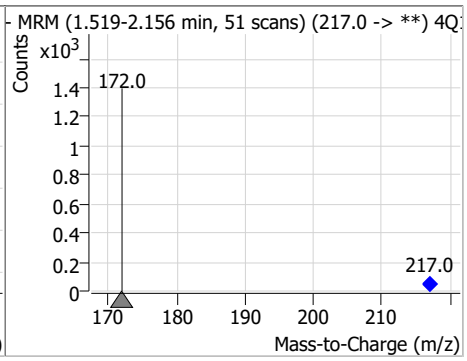
Perfluorinated Compounds by LC/MS/MS



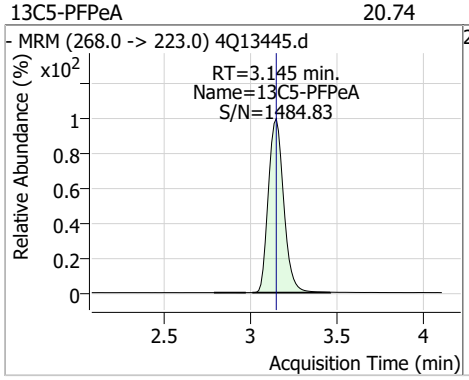
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.86	1.69	0.00	51512				

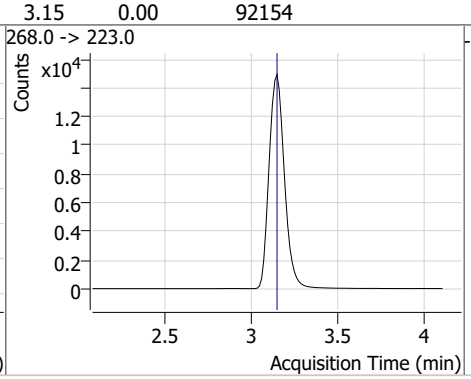


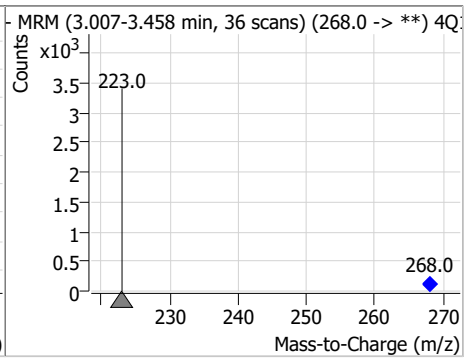




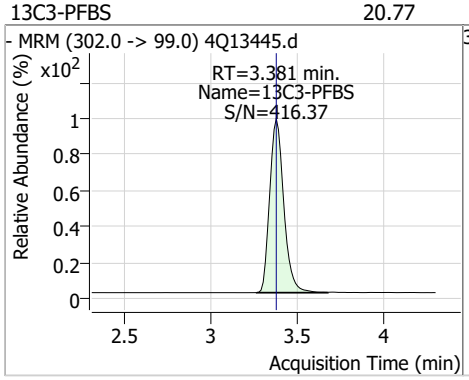
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.74	3.15	0.00	92154				

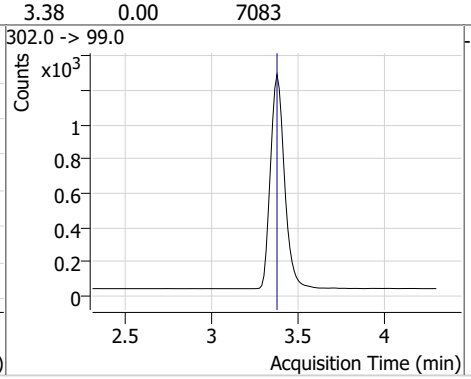


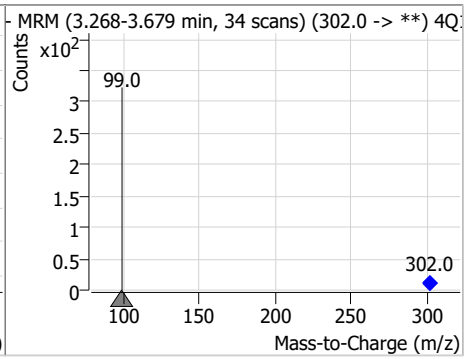




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.77	3.38	0.00	7083				

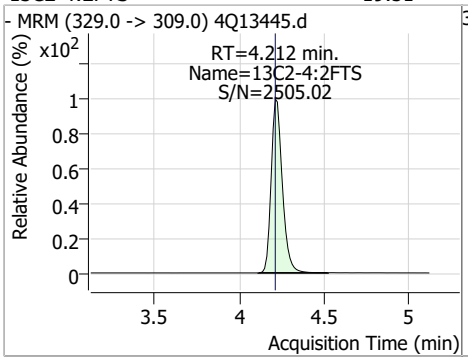


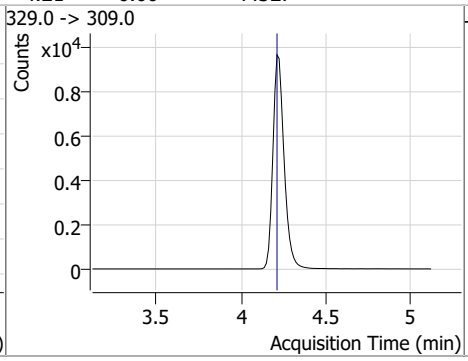


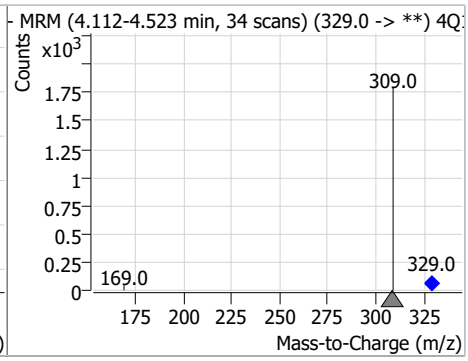


Perfluorinated Compounds by LC/MS/MS

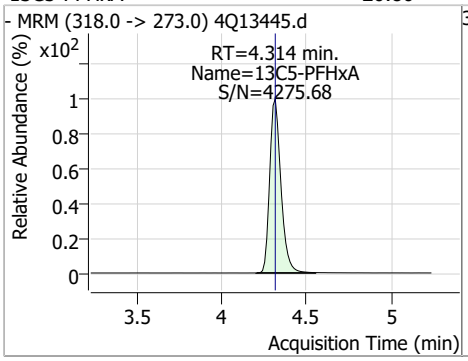
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.51	4.21	0.00	44327				

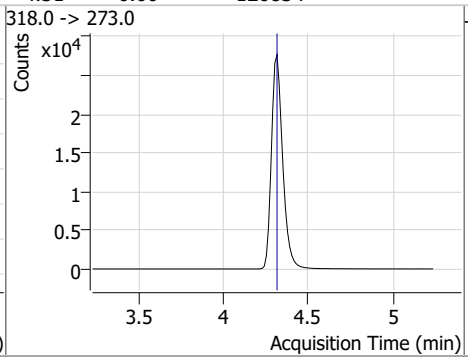


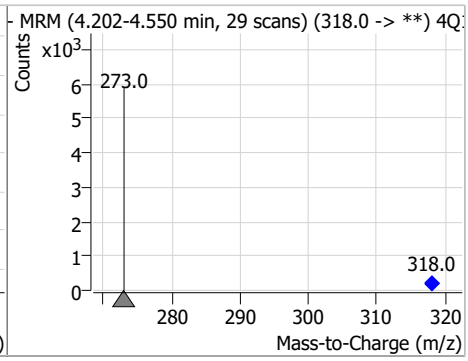




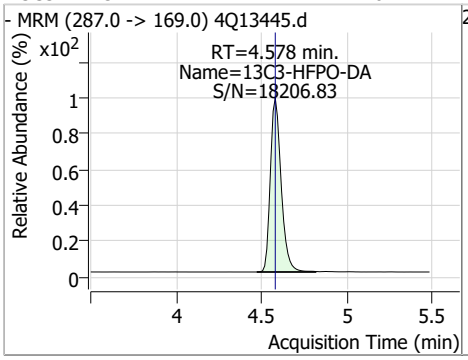
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.80	4.31	0.00	126834				

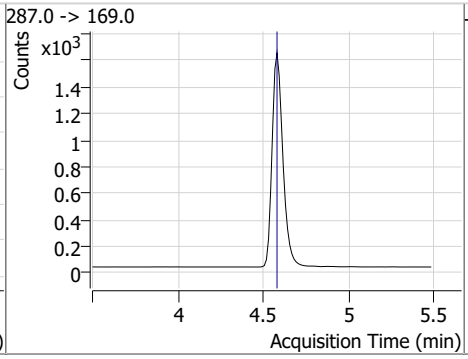


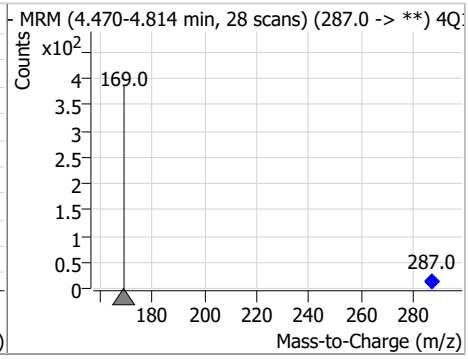




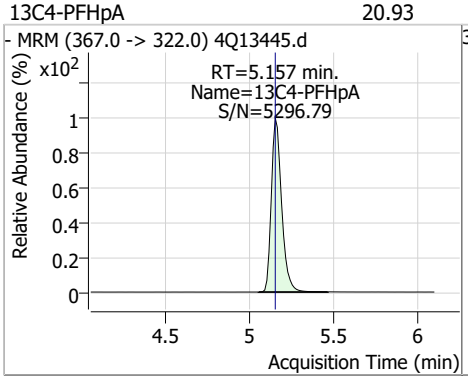
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.41	4.58	0.00	7121				

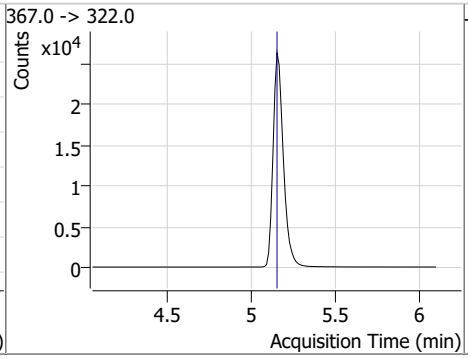


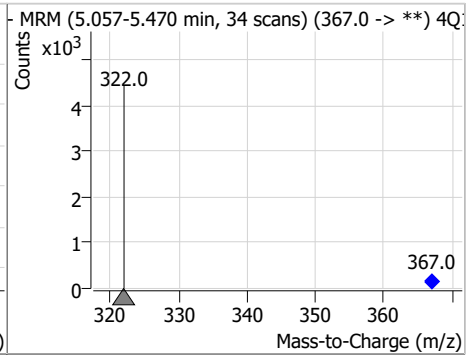




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.93	5.16	0.00	111602				

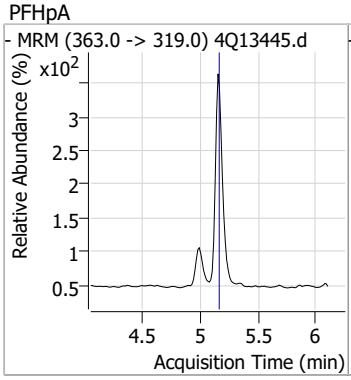


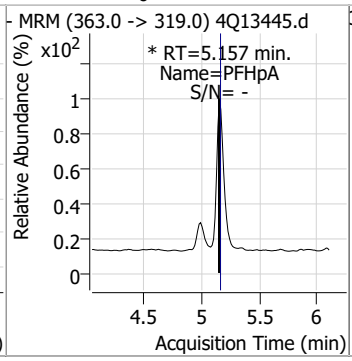


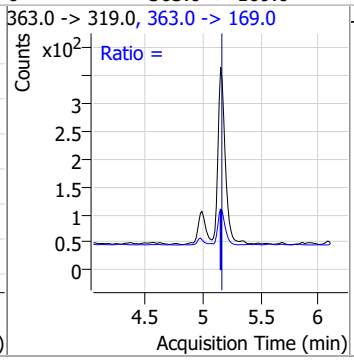


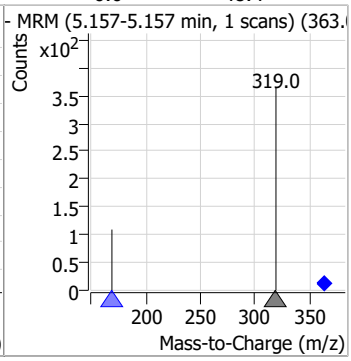
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA		0		0	363.0 -> 169.0		0.0	48.4

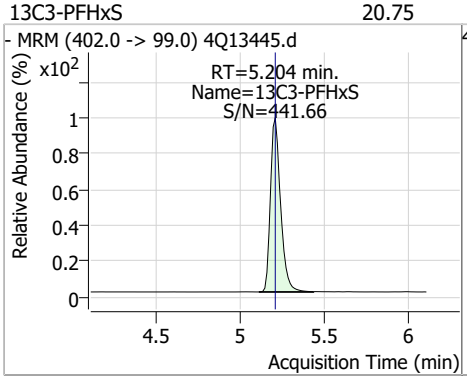


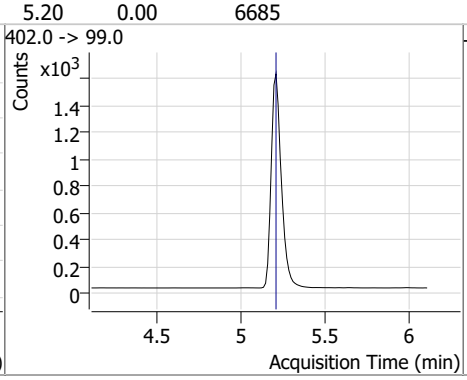


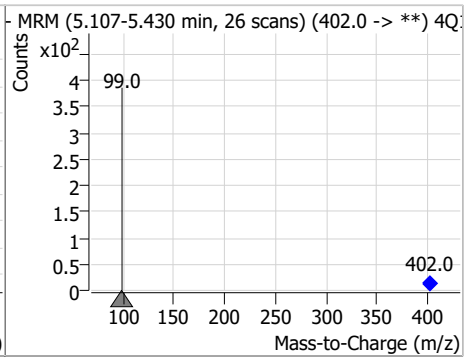




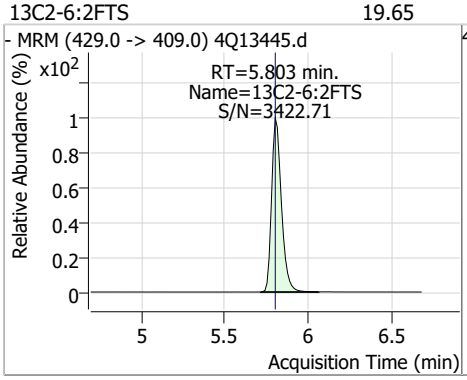
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.75	5.20	0.00	6685				

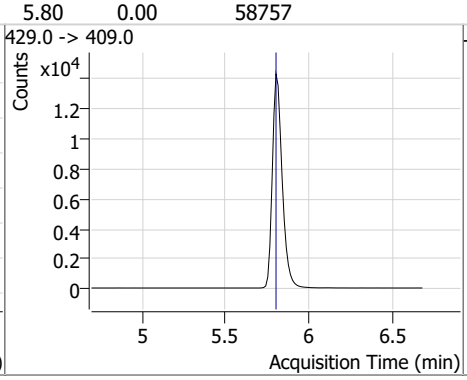


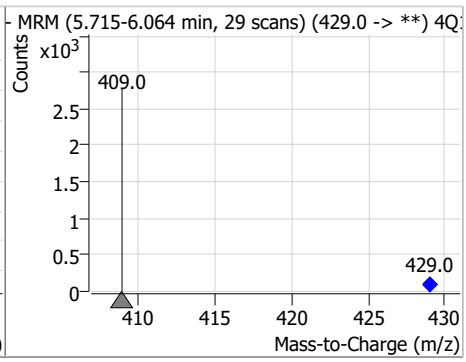




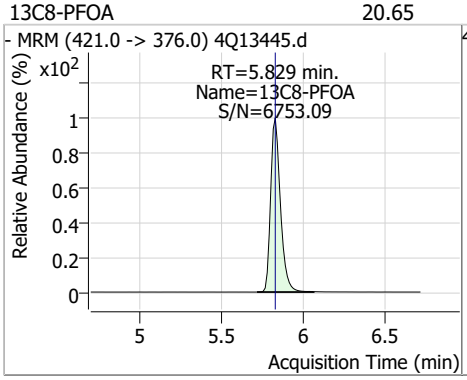
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.65	5.80	0.00	58757				

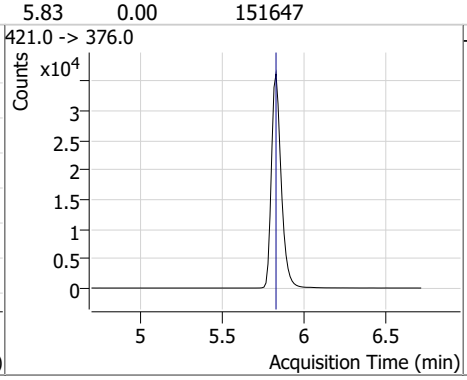


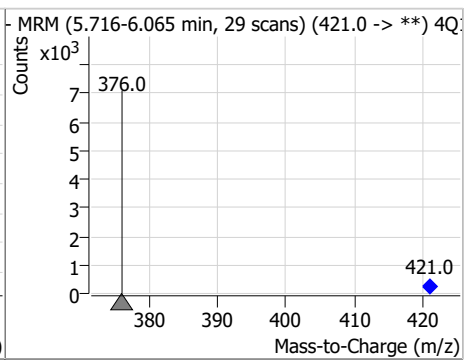




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.65	5.83	0.00	151647				

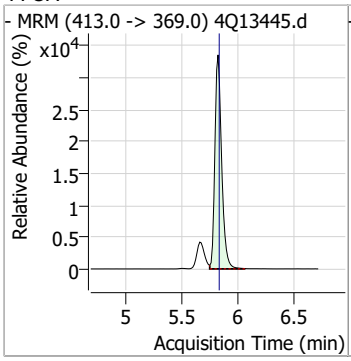


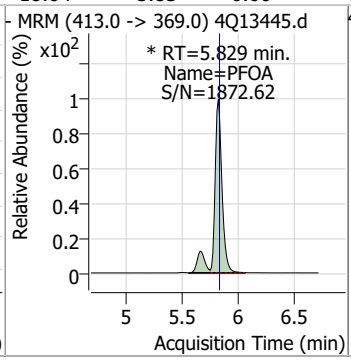


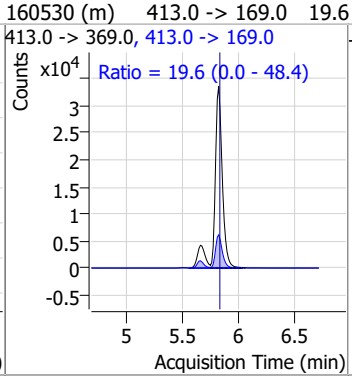


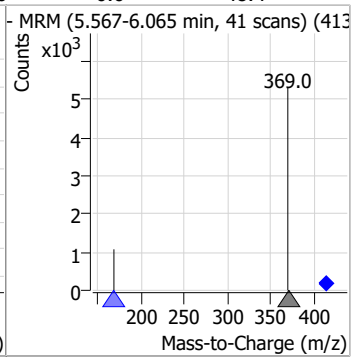
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	18.04	5.83	0.00	160530 (m)	413.0 -> 169.0	19.6	0.0	48.4

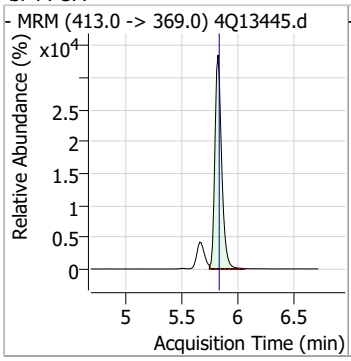


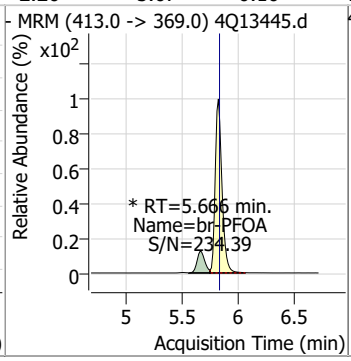


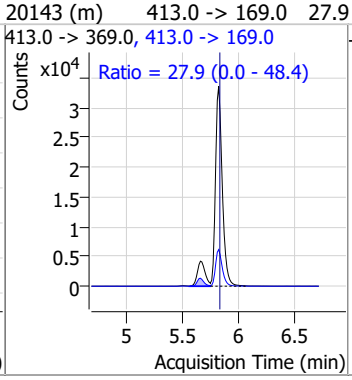


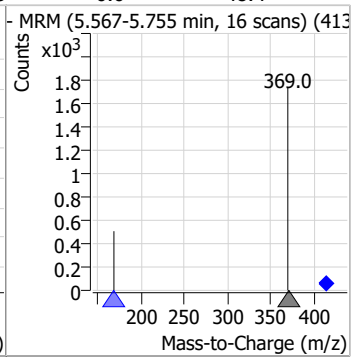


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOA	2.26	5.67	-0.16	20143 (m)	413.0 -> 169.0	27.9	0.0	48.4

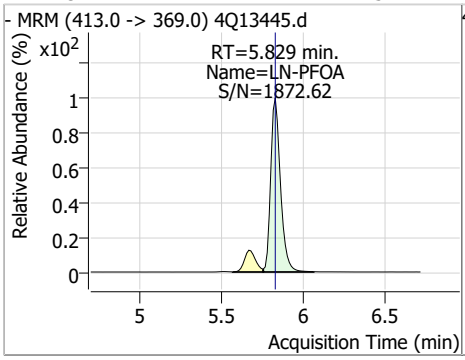


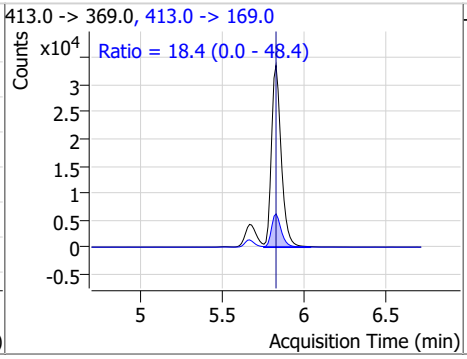


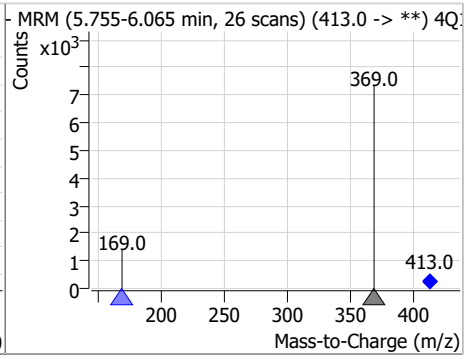




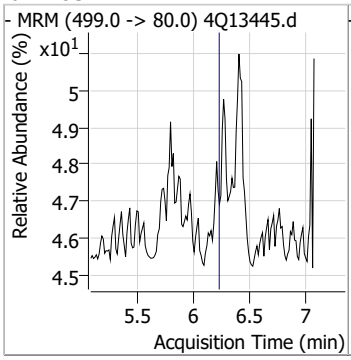
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
LN-PFOA	15.77	5.83	0.00	140387	413.0 -> 169.0	18.4	0.0	48.4

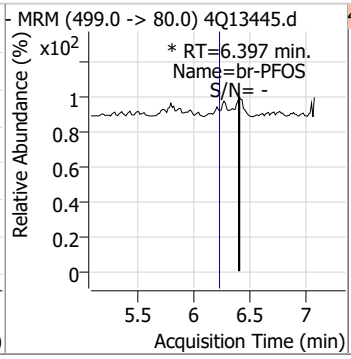


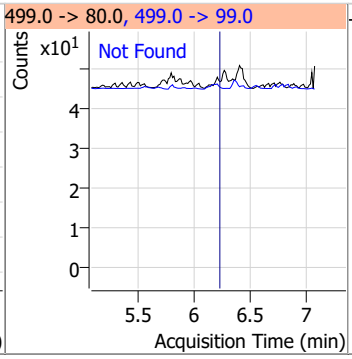


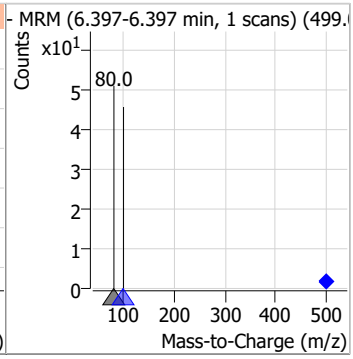


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
br-PFOS		0		0	499.0 -> 99.0		0.0	49.2



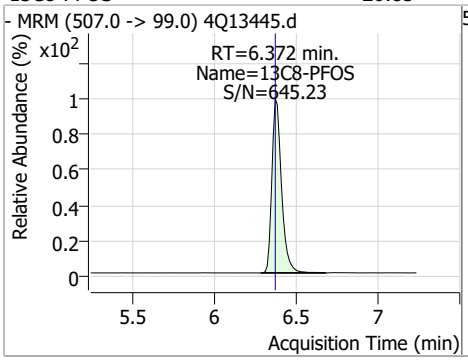


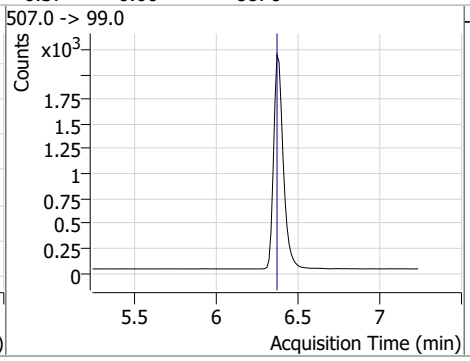


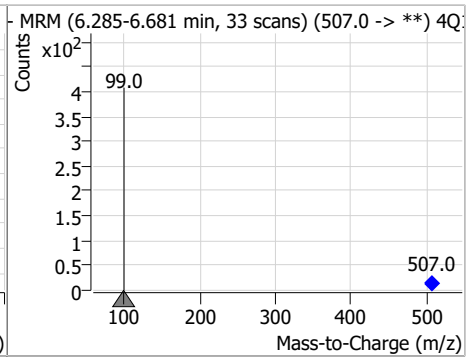


Perfluorinated Compounds by LC/MS/MS

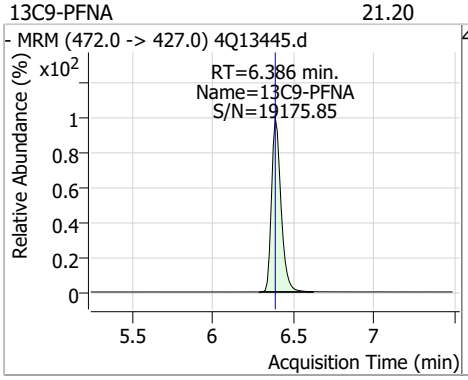
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.85	6.37	0.00	8876				

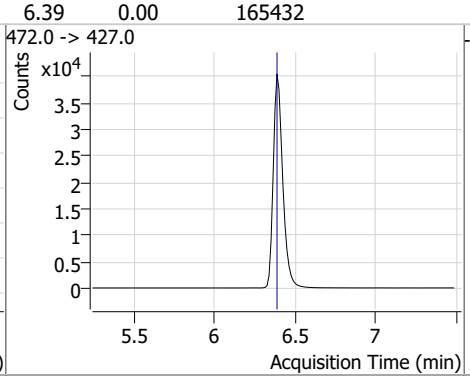


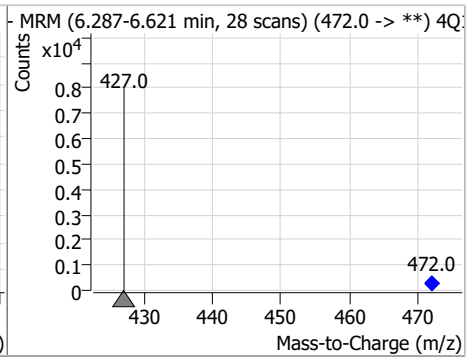




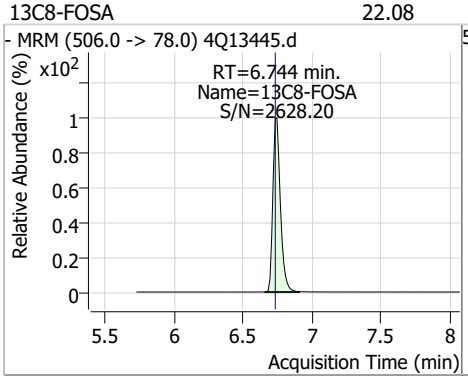
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	21.20	6.39	0.00	165432				

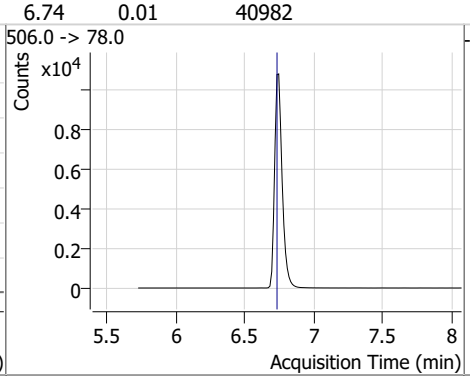


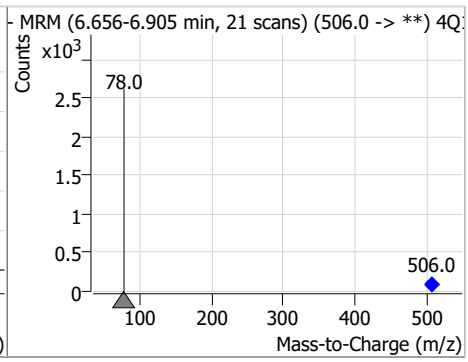




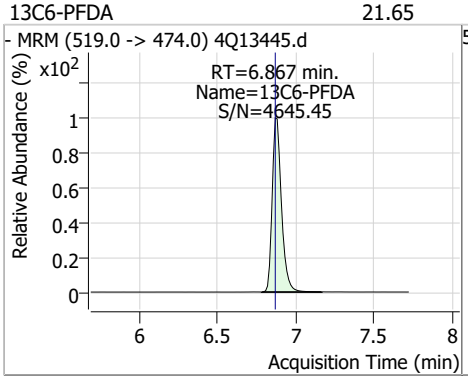
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	22.08	6.74	0.01	40982				

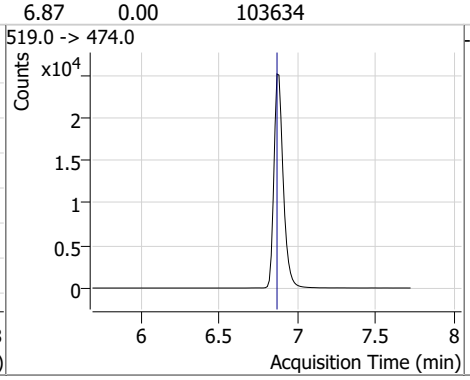


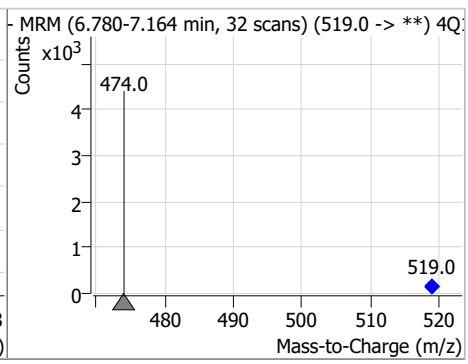




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	21.65	6.87	0.00	103634				

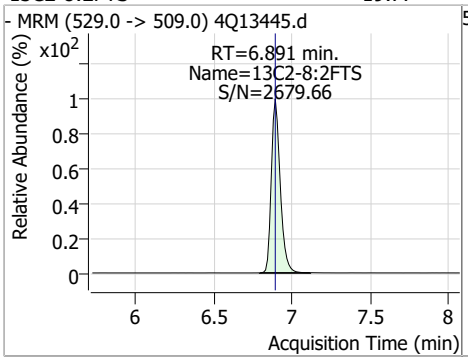


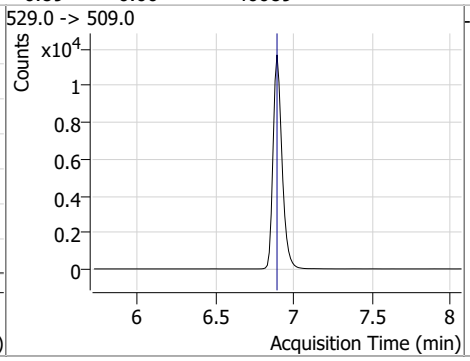


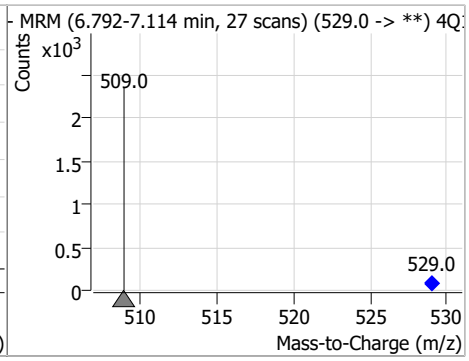


Perfluorinated Compounds by LC/MS/MS

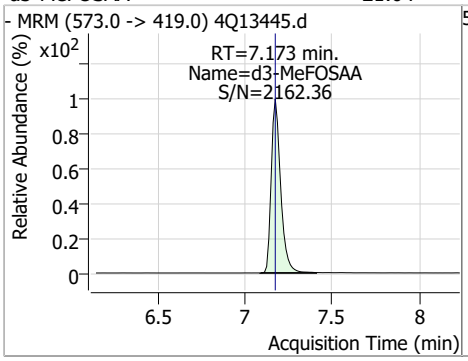
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.77	6.89	0.00	46089				

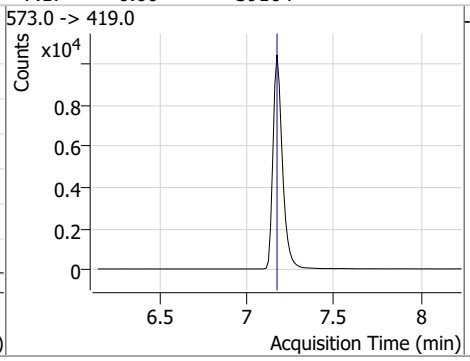


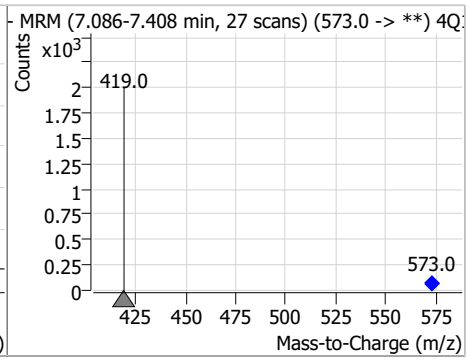




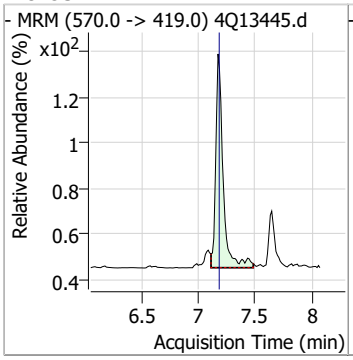
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	21.04	7.17	0.00	39104				

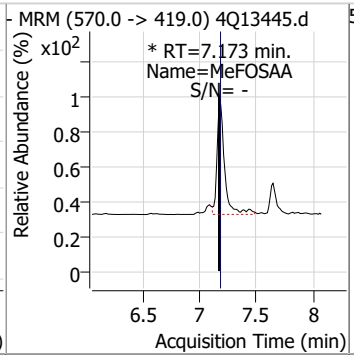


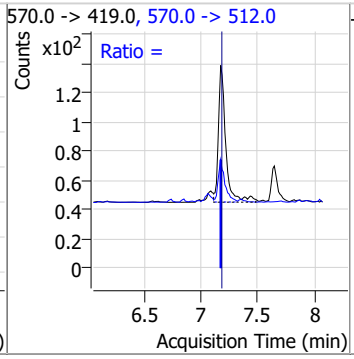


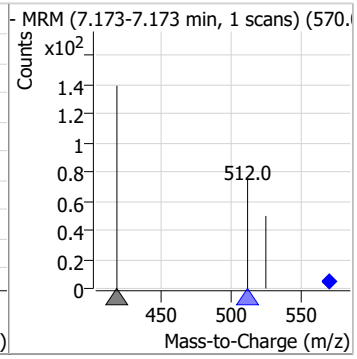


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA		0		0	570.0 -> 512.0		0.0	59.9

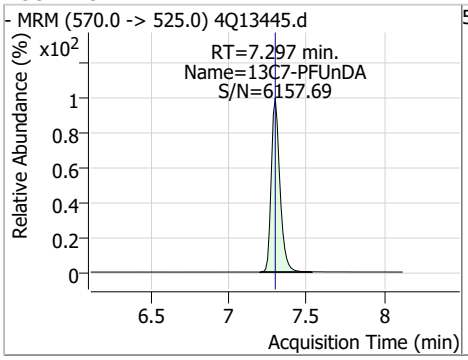


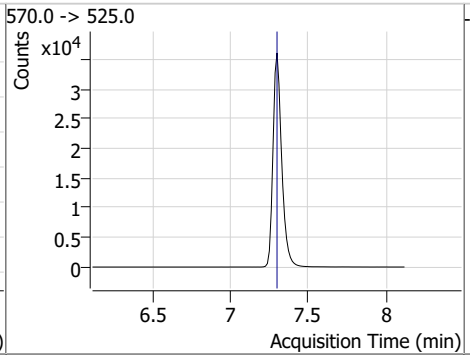


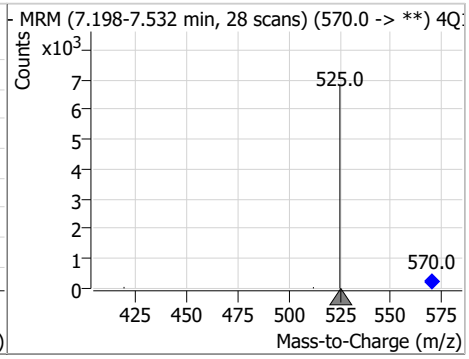




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	21.41	7.30	0.00	140265				

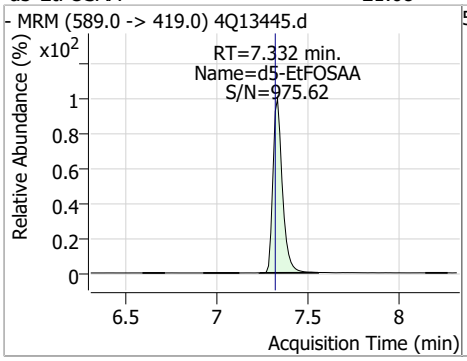


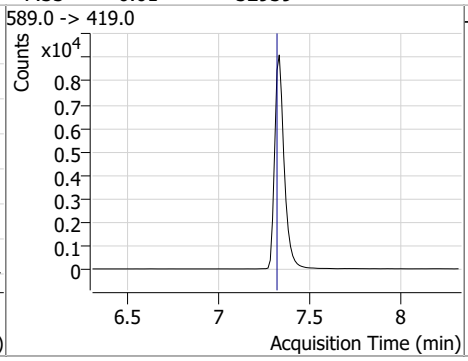


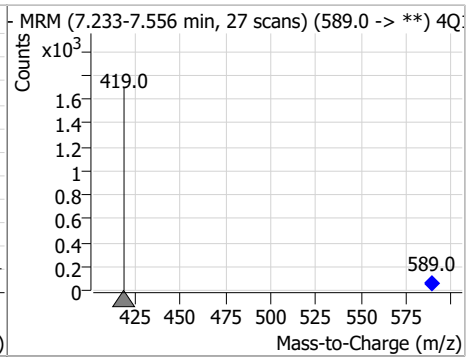


Perfluorinated Compounds by LC/MS/MS

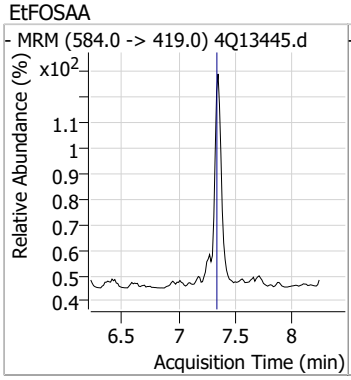
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	21.08	7.33	0.01	32939				

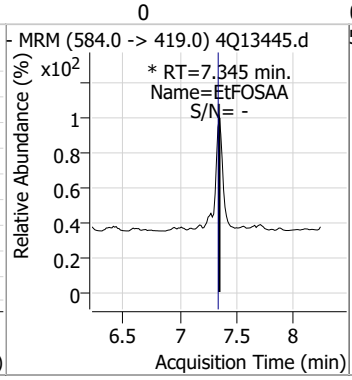


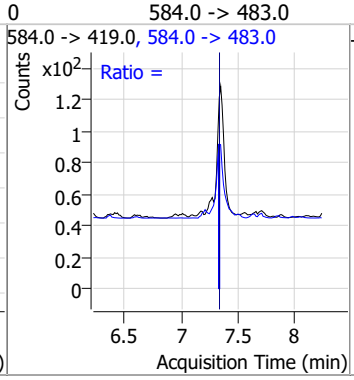


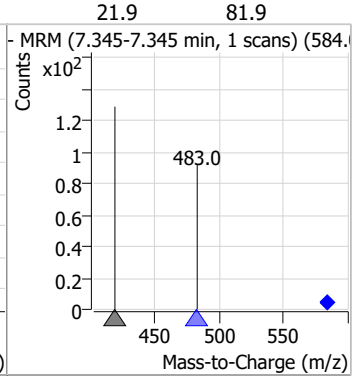


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA		0		0	584.0 -> 483.0		21.9	81.9

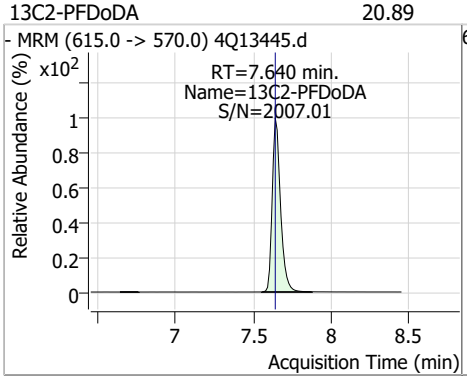


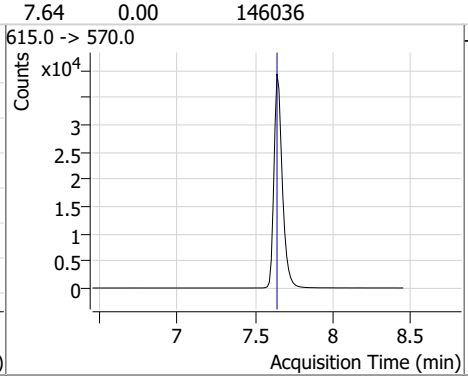


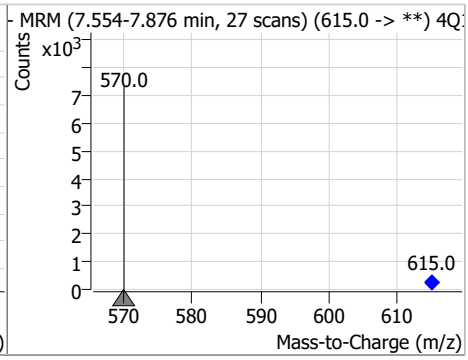




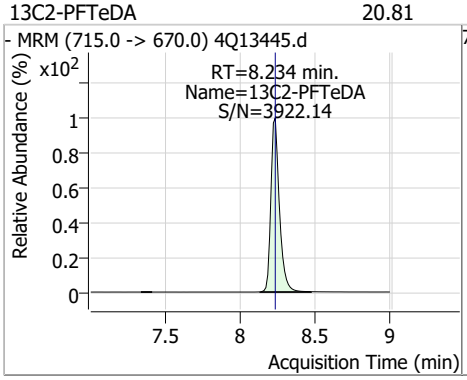
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.89	7.64	0.00	146036				

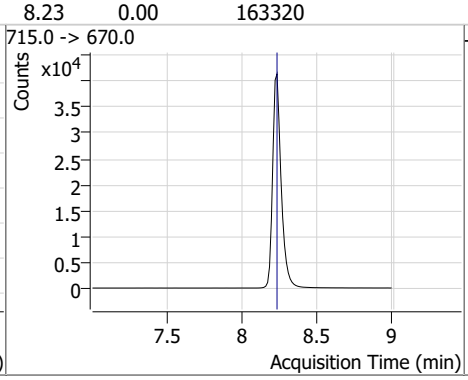


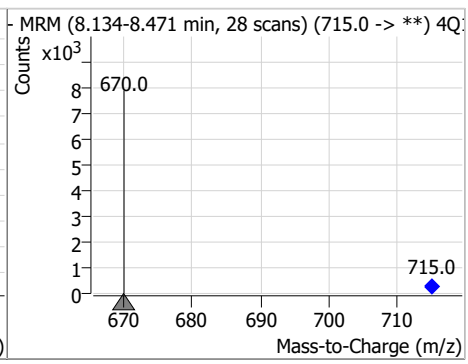




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.81	8.23	0.00	163320				







Manual Integration Approval Summary

Sample Number: S4Q189-ICV189
Lab FileID: 4Q13445.D
Injection Time: 04/18/21 17:13
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/19/21 07:57 Nancy Saunders
Supervisor approved: 04/19/21 15:40 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
PFOA (Branched Isomers)			5.67	Split peak
Perfluorooctanoic acid	335-67-1		5.83	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:40

Perfluorinated Compounds by LC/MS/MS

Data File : 4Q13456.d
Operator : natashag
Acq. Method : 537_ID.m
Acq. Date-Time : 4/18/2021 7:57:21 PM
Sample Name : cc189-20
Vial : P1-A7
DA Method File : ID_041821_S4Q189.quantmethod.xml
Batch Name : s4q189a.batch.bin
Sample Information : op84918,S4Q189,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.700	217.0 -> 172.0	52738	20.00	µg/L	0.013
M5-PFPeA	3.145	268.0 -> 223.0	94592	20.00	µg/L	0.000
M5-PFHxA	4.314	318.0 -> 273.0	129798	20.00	µg/L	0.000
M4-PFHpA	5.157	367.0 -> 322.0	113044	20.00	µg/L	0.000
M8-PFOA	5.816	421.0 -> 376.0	156735	20.00	µg/L	-0.012
M9-PFNA	6.386	472.0 -> 427.0	164518	20.00	µg/L	0.000
M6-PFDA	6.867	519.0 -> 474.0	102527	20.00	µg/L	0.000
M7-PFUnDA	7.284	570.0 -> 525.0	141395	20.00	µg/L	-0.012
M2-PFDoDA	7.640	615.0 -> 570.0	146258	20.00	µg/L	0.000
M2-PFTeDA	8.221	715.0 -> 670.0	161988	20.00	µg/L	-0.012
M8-FOSA	6.732	506.0 -> 78.0	40069	20.00	µg/L	0.000
M3-PFBS	3.381	302.0 -> 99.0	7195	20.00	µg/L	0.000
M3-PFHxS	5.204	402.0 -> 99.0	6733	20.00	µg/L	0.000
M8-PFOS	6.372	507.0 -> 99.0	9153	20.00	µg/L	0.000
M2-4:2FTS	4.212	329.0 -> 309.0	46920	20.00	µg/L	0.000
M2-6:2FTS	5.803	429.0 -> 409.0	62424	20.00	µg/L	0.000
M2-8:2FTS	6.878	529.0 -> 509.0	49728	20.00	µg/L	-0.012
M3-MeFOSAA	7.173	573.0 -> 419.0	38964	20.00	µg/L	0.000
M3-HFPO-DA	4.578	287.0 -> 169.0	7382	20.00	µg/L	0.000
M5-EtFOSAA	7.332	589.0 -> 419.0	32892	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.212	329.0 -> 309.0	46920	20.65	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.3%		
13C2-6:2FTS	5.803	429.0 -> 409.0	62424	20.87	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.4%		
13C2-8:2FTS	6.878	529.0 -> 509.0	49728	21.34	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.7%		
13C2-PFDoDA	7.640	615.0 -> 570.0	146258	20.92	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.6%		
13C2-PFTeDA	8.221	715.0 -> 670.0	161988	20.64	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.2%		
13C3-PFBS	3.381	302.0 -> 99.0	7195	21.10	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.5%		
13C3-PFHxS	5.204	402.0 -> 99.0	6733	20.90	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.5%		
13C4-PFBA	1.700	217.0 -> 172.0	52738	21.35	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.8%		
13C4-PFHpA	5.157	367.0 -> 322.0	113044	21.20	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.0%		
13C5-PFHxA	4.314	318.0 -> 273.0	129798	21.29	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.4%		
13C5-PFPeA	3.145	268.0 -> 223.0	94592	21.29	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.5%		
13C6-PFDA	6.867	519.0 -> 474.0	102527	21.42	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.1%		

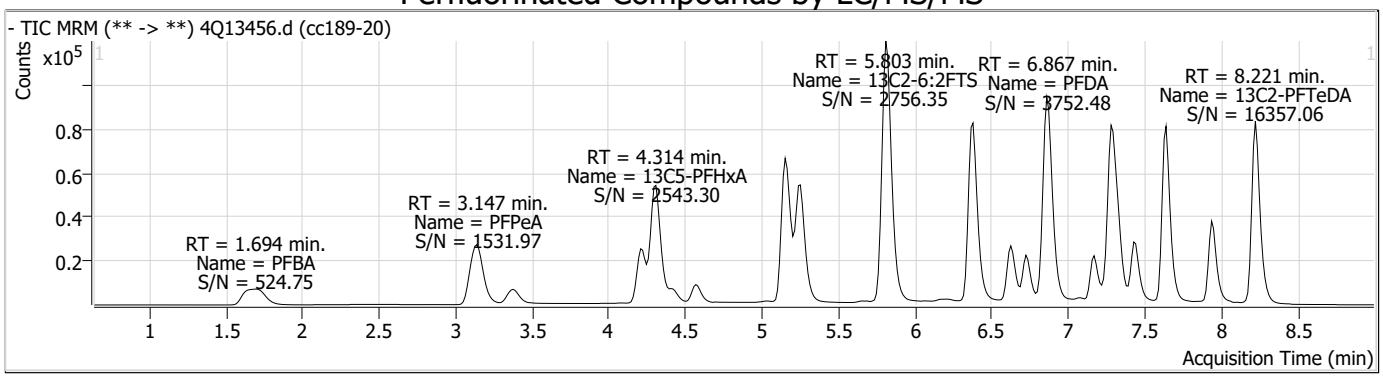
11.6.42
11

Perfluorinated Compounds by LC/MS/MS

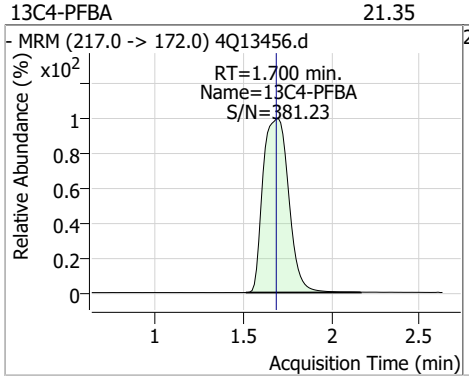
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	7.284	570.0 -> 525.0	141395	21.58	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.9%			
13C8-FOSA	6.732	506.0 -> 78.0	40069	21.59	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.9%			
13C8-PFOA	5.816	421.0 -> 376.0	156735	21.34	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.7%			
13C8-PFOS	6.372	507.0 -> 99.0	9153	21.50	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.5%			
13C9-PFNA	6.386	472.0 -> 427.0	164518	21.09	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.4%			
d3-MeFOSAA	7.173	573.0 -> 419.0	38964	20.96	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.8%			
13C3-HFPO-DA	4.578	287.0 -> 169.0	7386	21.17	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.9%			
d5-EtFOSAA	7.332	589.0 -> 419.0	32879	21.04	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.2%			
Target Compounds							QValue
4:2FTS	4.214	327.0 -> 307.0	47426	18.91	µg/L		99
6:2FTS	5.803	427.0 -> 407.0	61118	18.60	µg/L		100
8:2FTS	6.879	527.0 -> 507.0	47609	18.51	µg/L		100
EtFOSAA	7.333	584.0 -> 419.0	28219	18.07	µg/L	m	98
FOSA	6.734	498.0 -> 78.0	34302	18.28	µg/L		99
MeFOSAA	7.173	570.0 -> 419.0	32840	18.23	µg/L	m	98
PFBA	1.694	213.0 -> 169.0	20732	18.01	µg/L		100
PFBS	3.383	299.0 -> 80.0	21483	18.28	µg/L		98
PFDA	6.867	513.0 -> 469.0	146790	18.45	µg/L		100
PFDoDA	7.641	613.0 -> 569.0	130907	18.42	µg/L		99
PFDS	7.258	599.0 -> 80.0	15004	17.12	µg/L		98
PFHpA	5.157	363.0 -> 319.0	134691	18.24	µg/L		99
PFHpS	5.827	449.0 -> 80.0	15626	18.58	µg/L		97
PFHxA	4.315	313.0 -> 269.0	108170	18.25	µg/L		100
PFHxS	5.193	399.0 -> 80.0	15819	18.52	µg/L	m	97
PFNA	6.386	463.0 -> 419.0	124201	18.29	µg/L		99
PFNS	6.840	549.0 -> 80.0	14675	18.70	µg/L		98
PFOA	5.817	413.0 -> 369.0	168916	18.36	µg/L		100
PFOS	6.373	499.0 -> 80.0	17652	18.08	µg/L	m	96
PFPeA	3.147	263.0 -> 219.0	74977	18.35	µg/L		100
PFPeS	4.423	349.0 -> 80.0	15242	17.84	µg/L		99
PFTeDA	8.222	713.0 -> 669.0	145595	18.57	µg/L		100
PFTrDA	7.937	663.0 -> 619.0	120360	18.55	µg/L		99
PFUnDA	7.285	563.0 -> 519.0	130652	18.30	µg/L		100
11Cl-PF3OUdS	7.429	631.0 -> 451.0	75716	18.28	µg/L		98
9Cl-PF3ONS	6.629	531.0 -> 351.0	75102	18.23	µg/L		98
ADONA	5.257	377.0 -> 251.0	161760	18.78	µg/L		100
HFPO-DA	4.574	329.0 -> 169.0	21593	18.23	µg/L		99

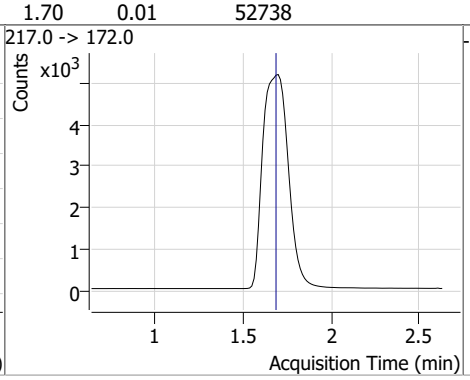
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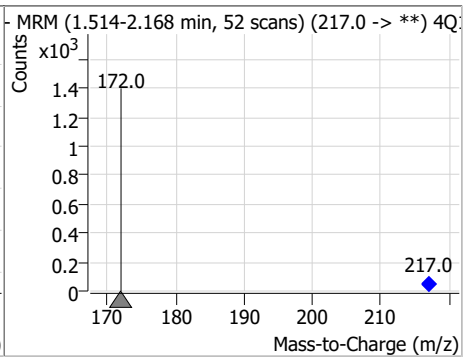
Perfluorinated Compounds by LC/MS/MS



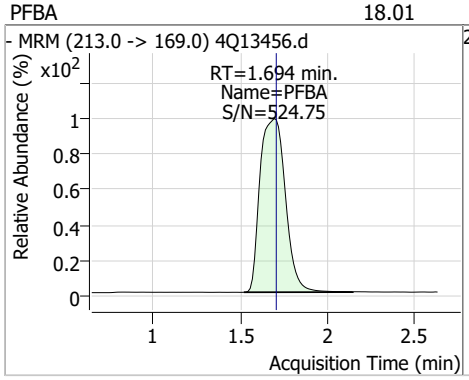
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	21.35	1.70	0.01	52738				

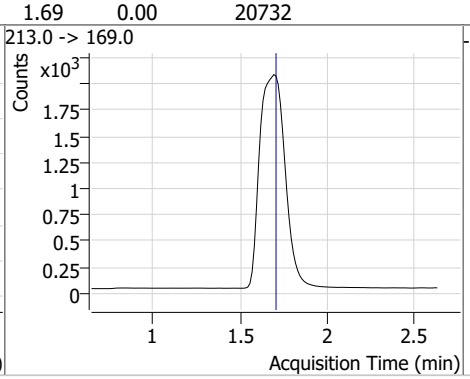


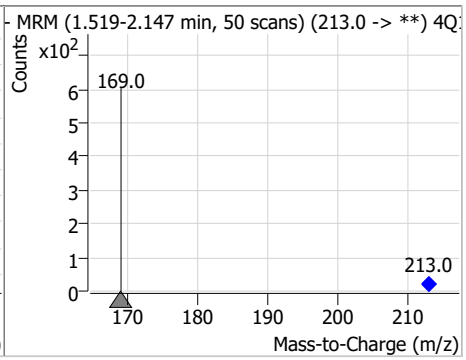




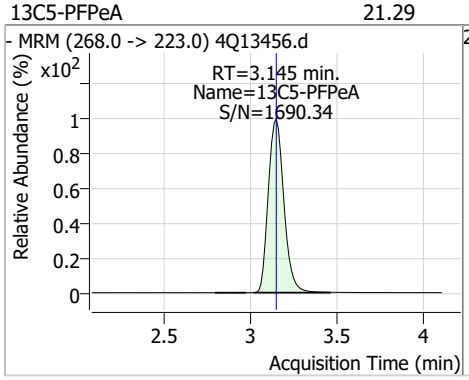
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	18.01	1.69	0.00	20732				

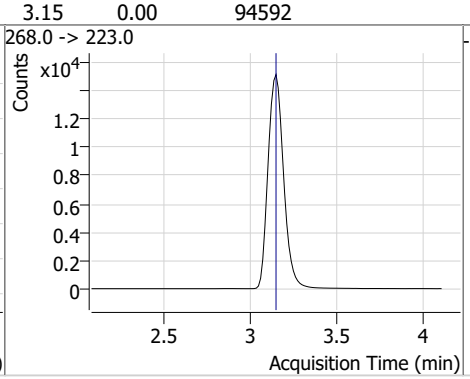


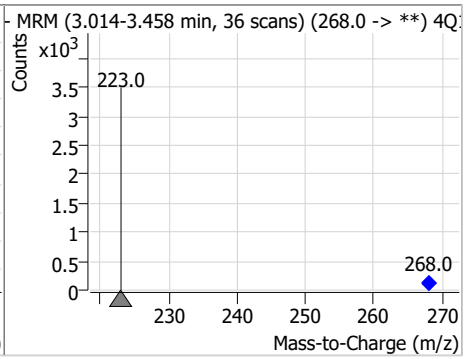




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	21.29	3.15	0.00	94592				

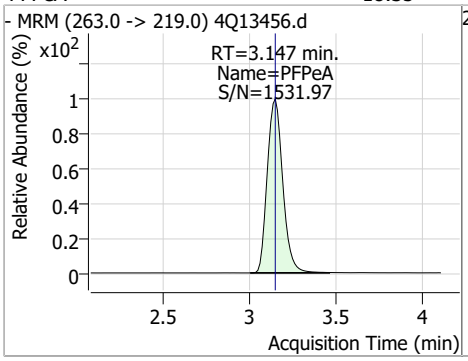


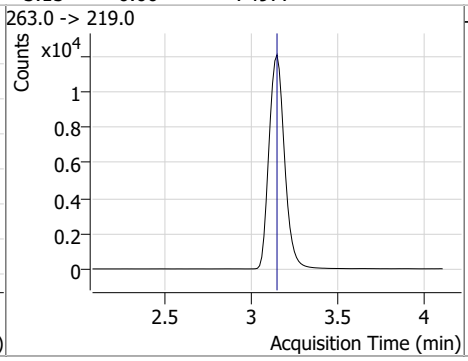


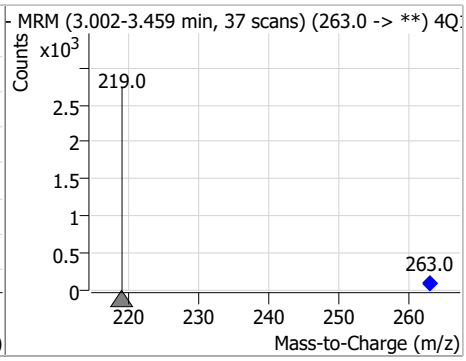


Perfluorinated Compounds by LC/MS/MS

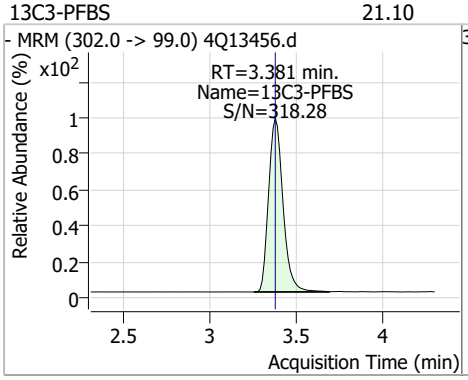
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	18.35	3.15	0.00	74977				

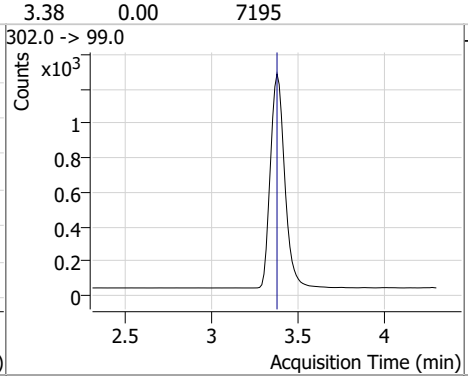


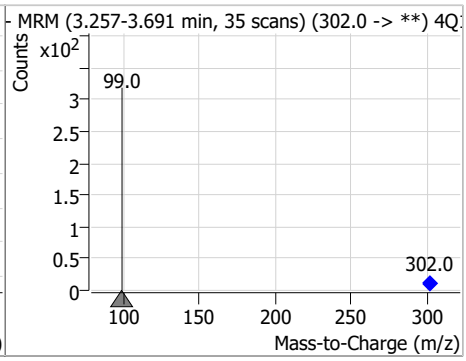




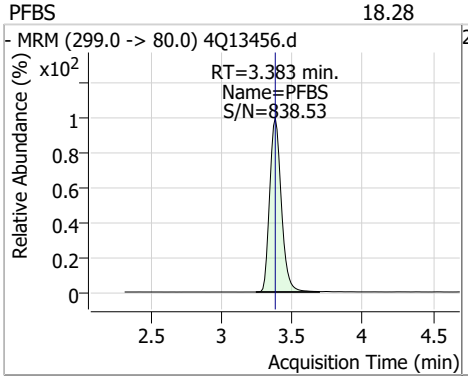
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	21.10	3.38	0.00	7195				

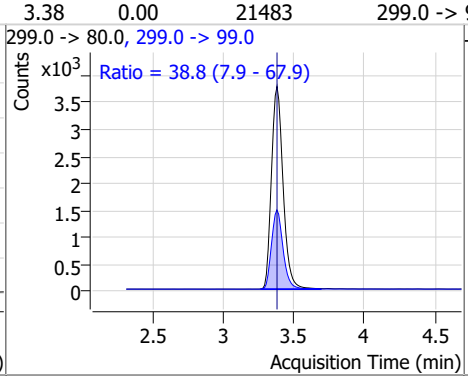


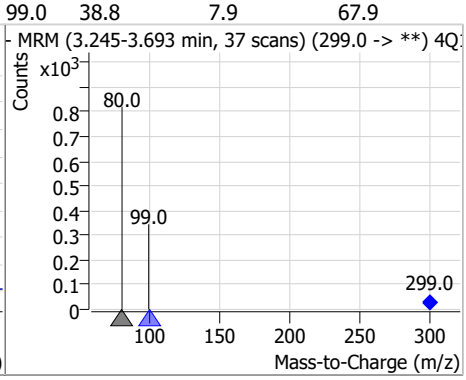




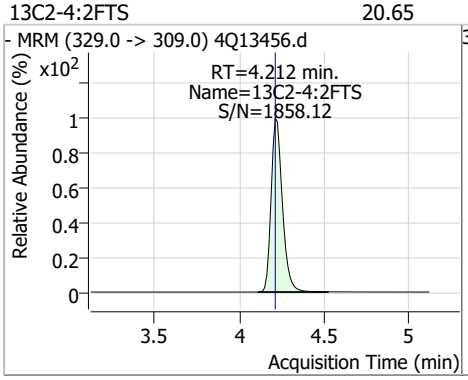
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	18.28	3.38	0.00	21483	299.0 -> 99.0	38.8	7.9	67.9

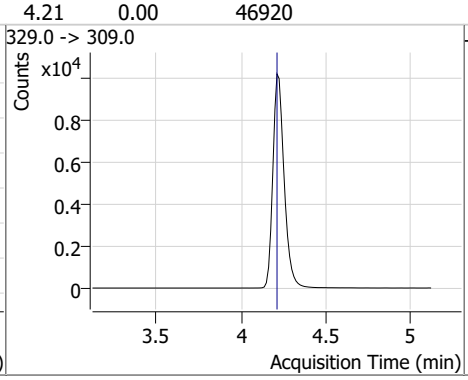


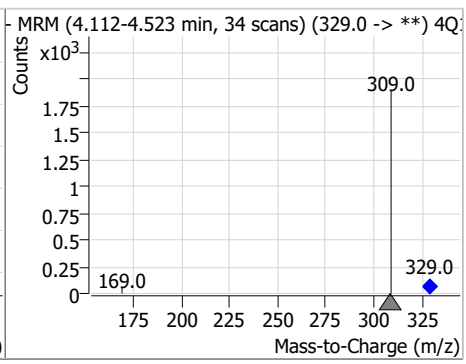




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	20.65	4.21	0.00	46920				

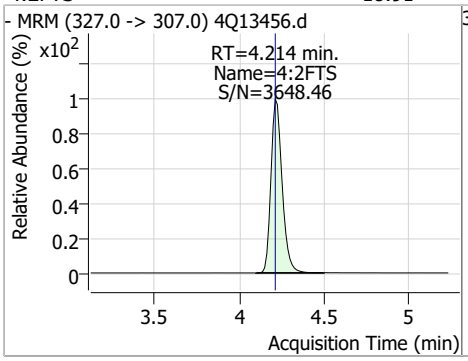


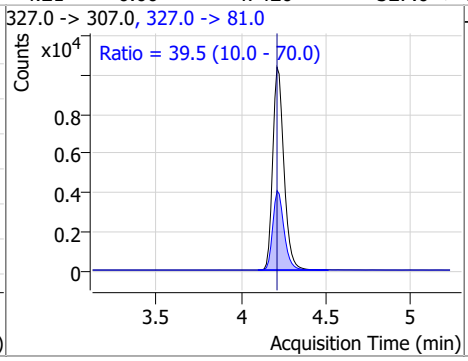


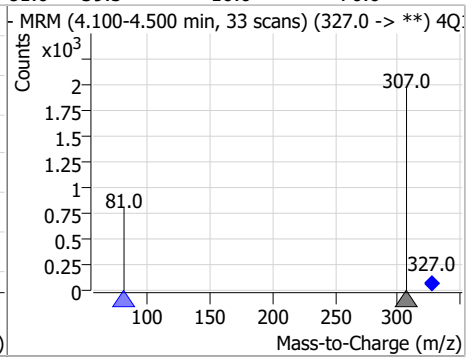


Perfluorinated Compounds by LC/MS/MS

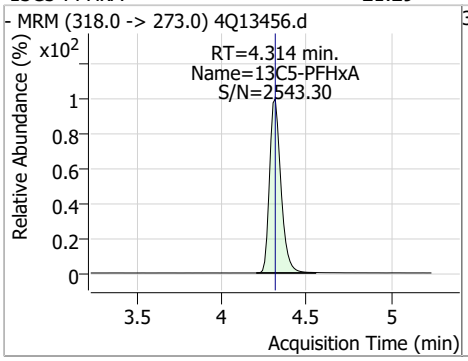
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	18.91	4.21	0.00	47426	327.0 -> 81.0	39.5	10.0	70.0

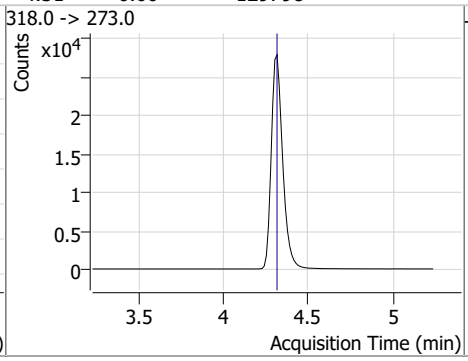


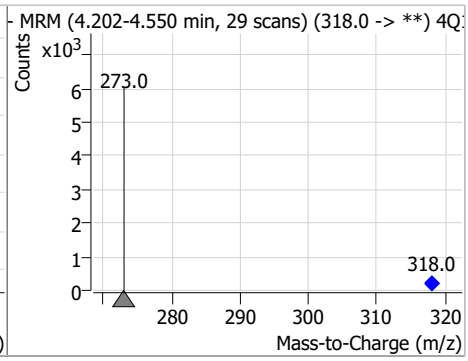




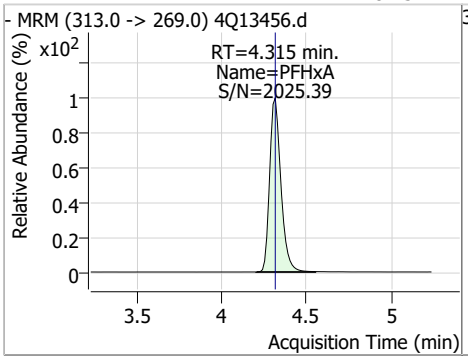
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	21.29	4.31	0.00	129798				

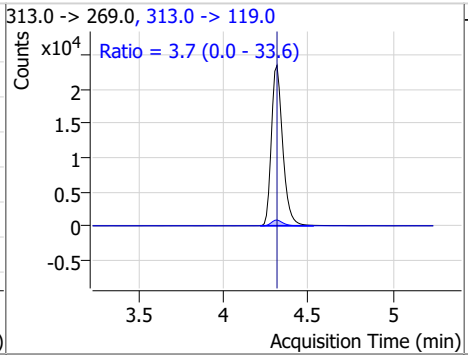


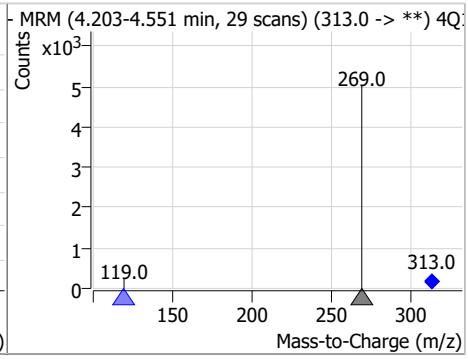




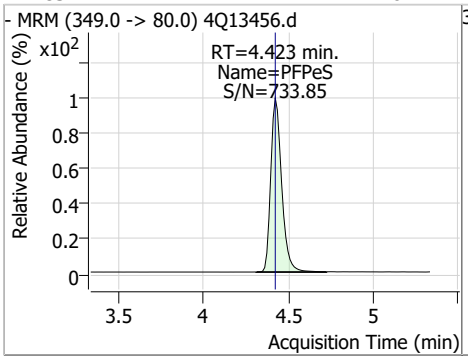
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	18.25	4.32	0.00	108170	313.0 -> 119.0	3.7	0.0	33.6

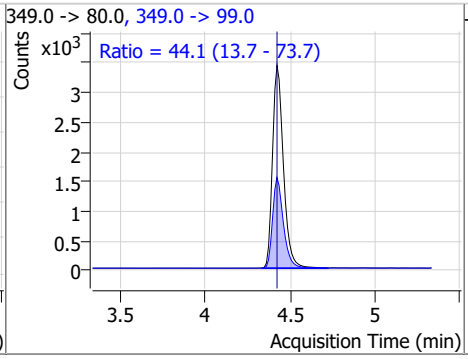


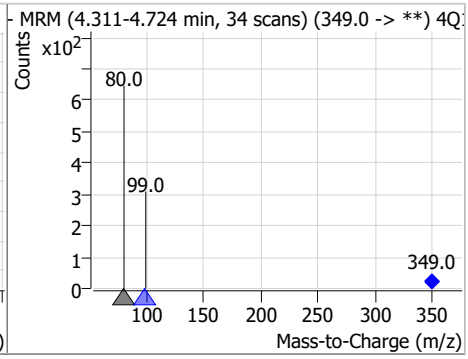




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	17.84	4.42	0.00	15242	349.0 -> 99.0	44.1	13.7	73.7

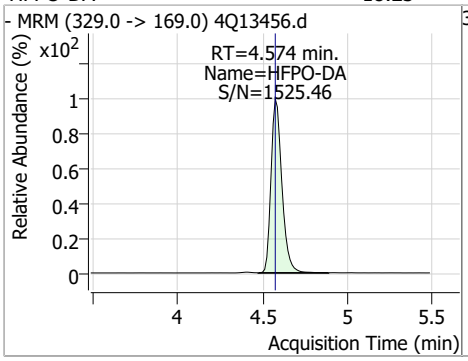


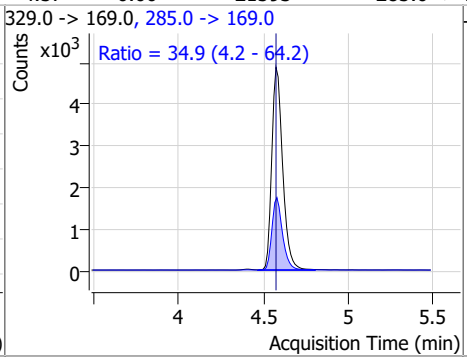


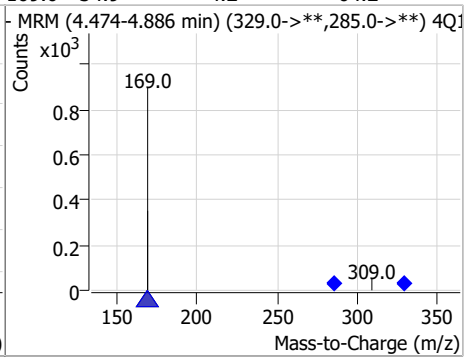


Perfluorinated Compounds by LC/MS/MS

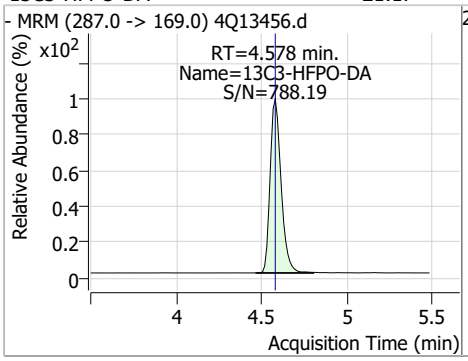
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	18.23	4.57	0.00	21593	285.0 -> 169.0	34.9	4.2	64.2

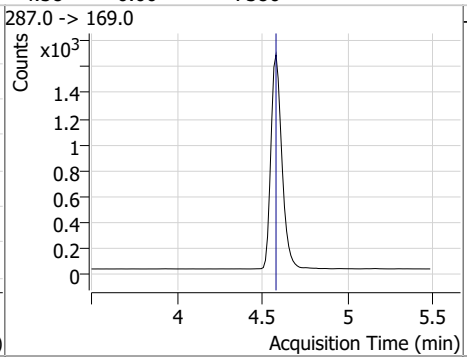


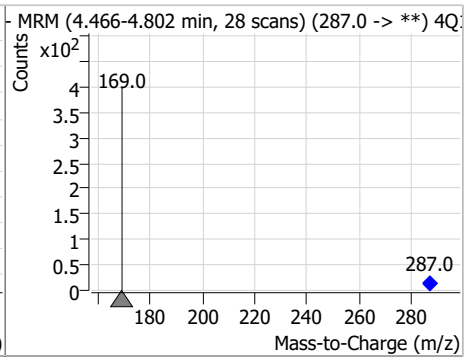




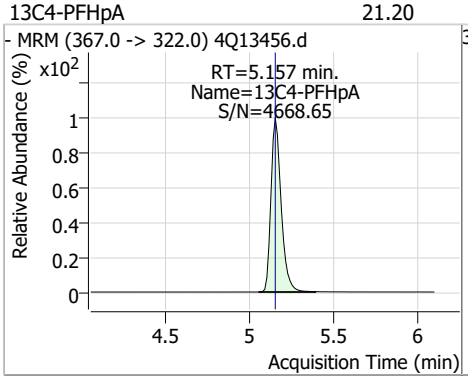
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	21.17	4.58	0.00	7386				

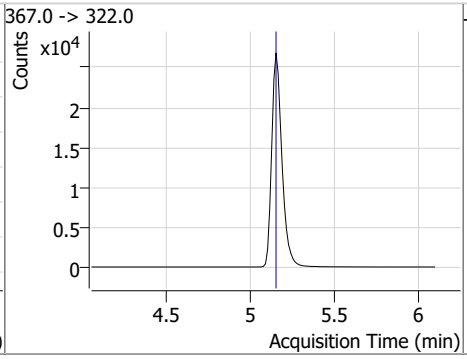


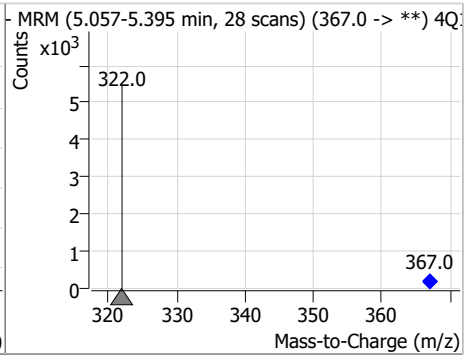




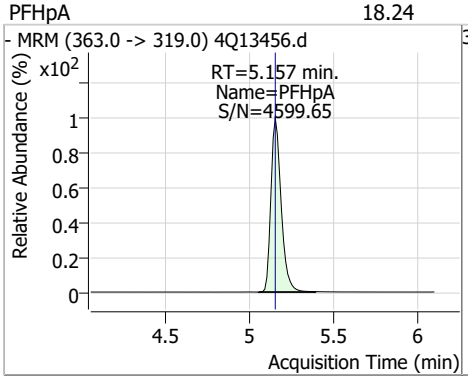
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	21.20	5.16	0.00	113044				

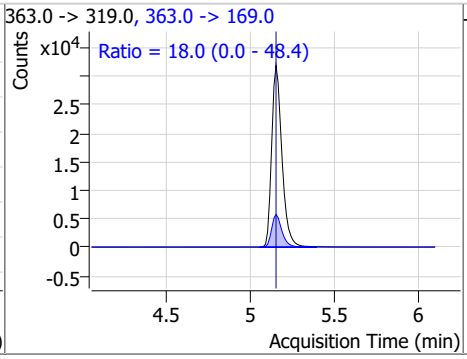


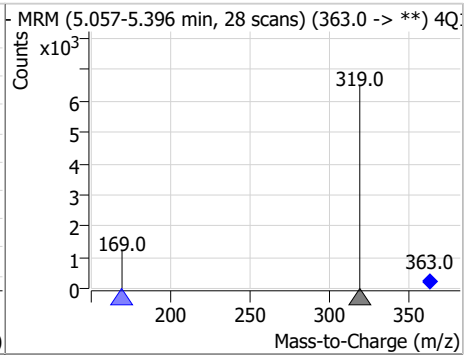




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	18.24	5.16	0.00	134691	363.0 -> 169.0	18.0	0.0	48.4

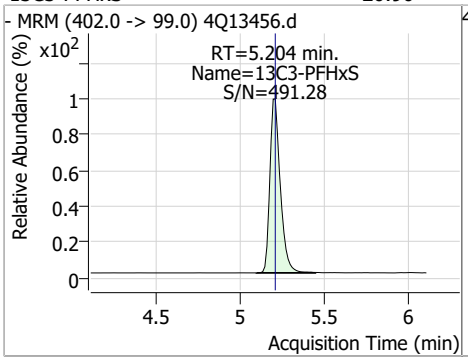


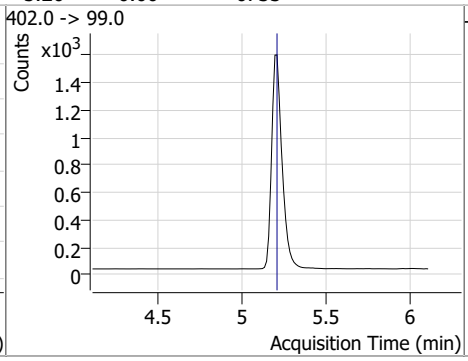


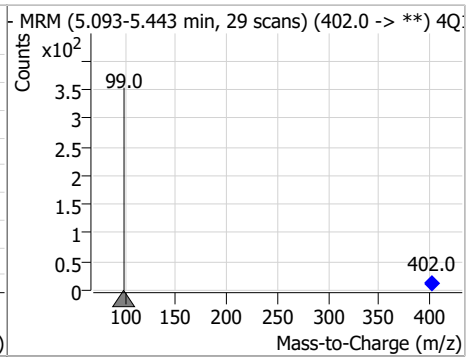


Perfluorinated Compounds by LC/MS/MS

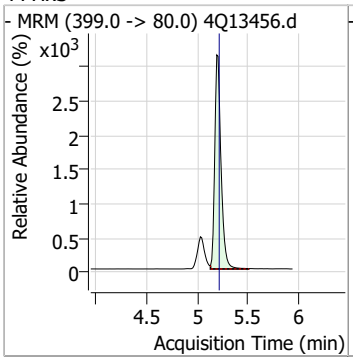
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.90	5.20	0.00	6733				

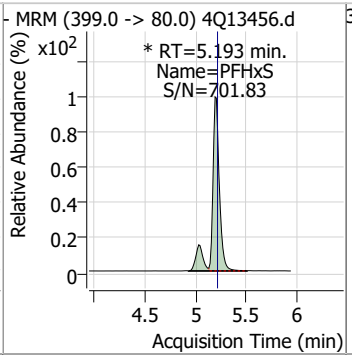


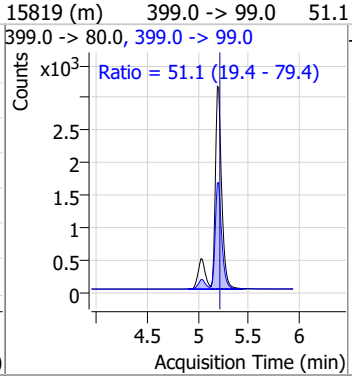


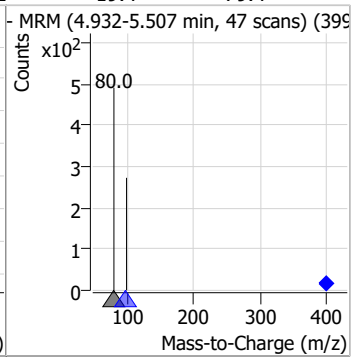


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	18.52	5.19	-0.01	15819 (m)	399.0 -> 99.0	51.1	19.4	79.4

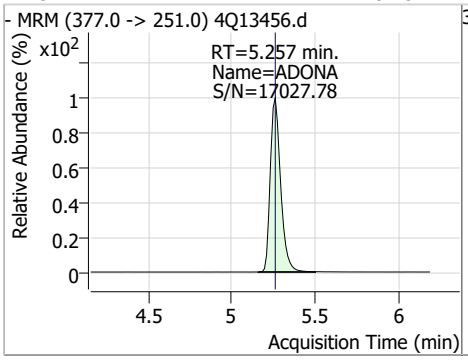


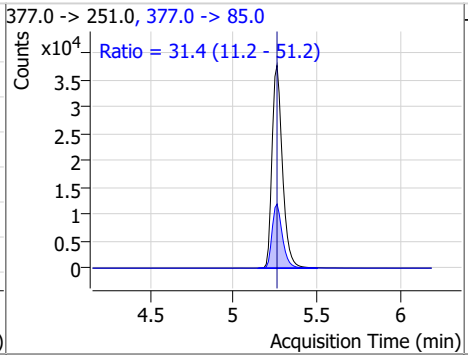


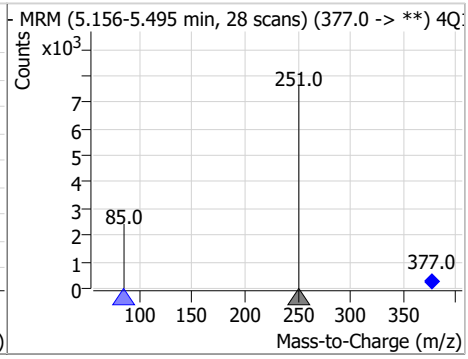




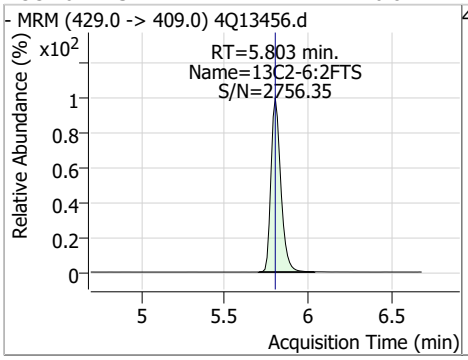
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	18.78	5.26	0.00	161760	377.0 -> 85.0	31.4	11.2	51.2

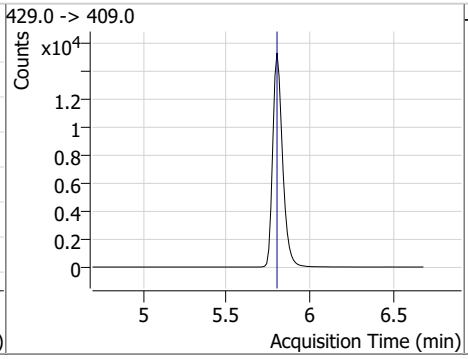


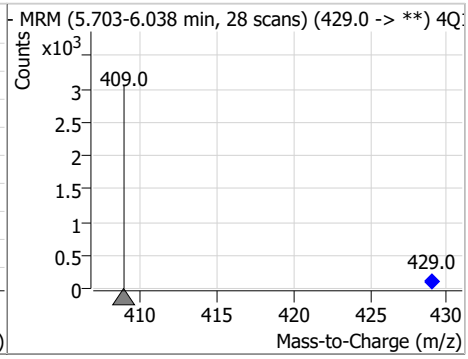




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.87	5.80	0.00	62424				

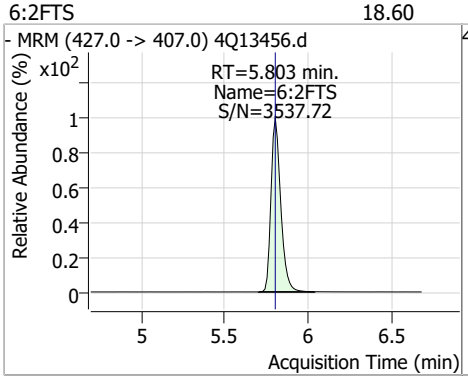


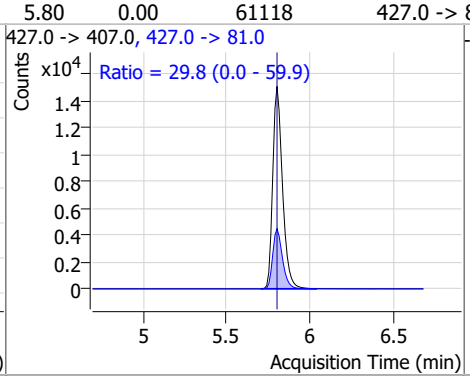


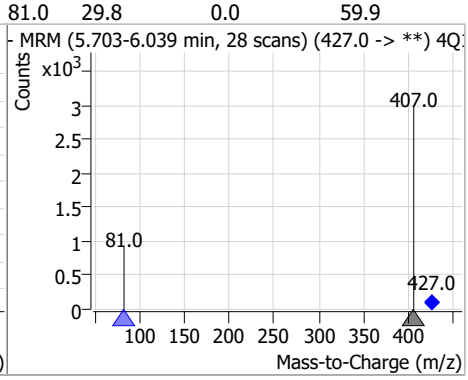


Perfluorinated Compounds by LC/MS/MS

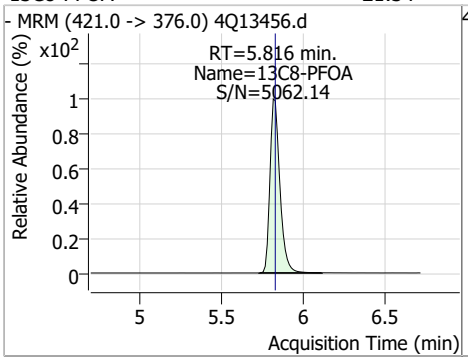
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	18.60	5.80	0.00	61118	427.0 -> 81.0	29.8	0.0	59.9

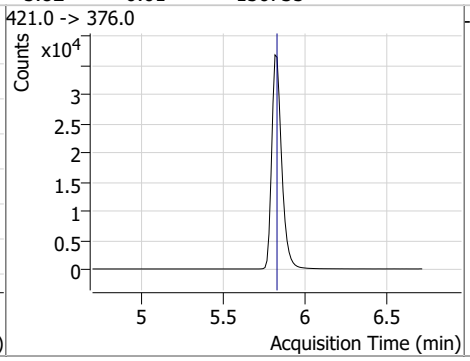


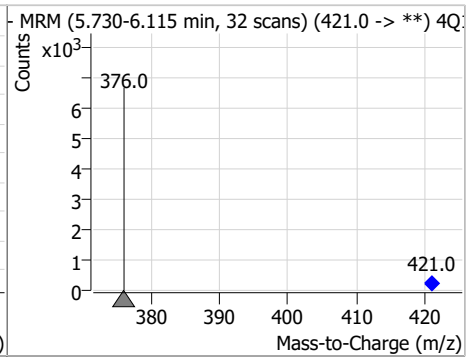




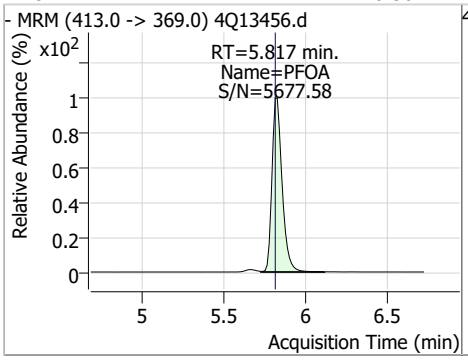
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	21.34	5.82	-0.01	156735				

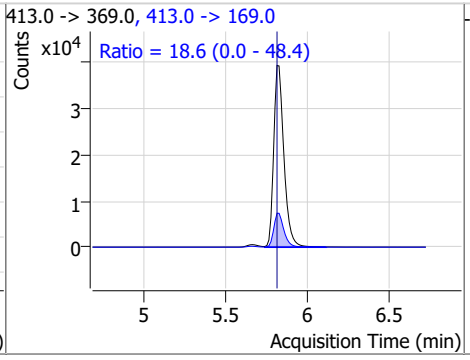


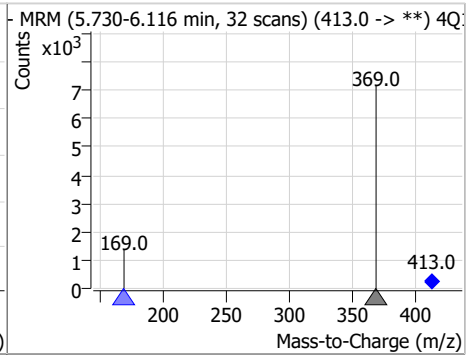




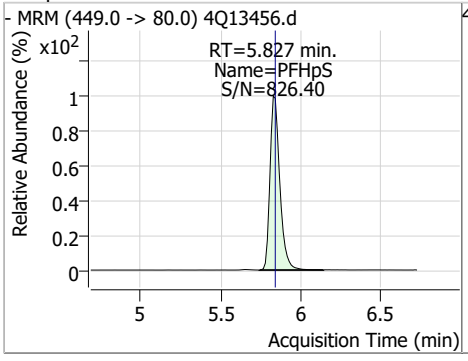
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	18.36	5.82	-0.01	168916	413.0 -> 169.0	18.6	0.0	48.4

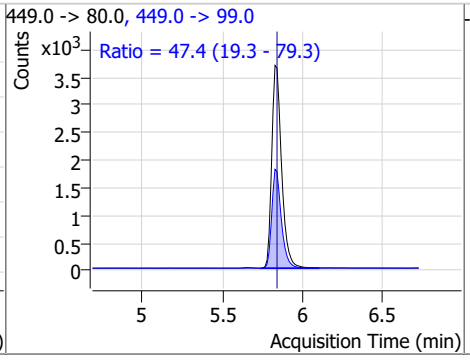


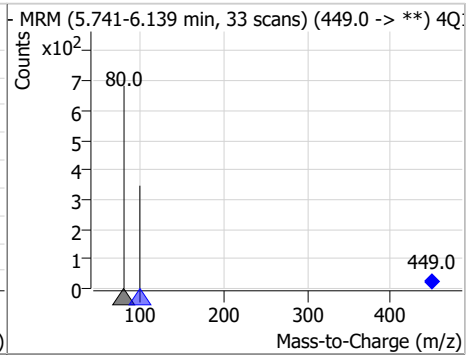




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	18.58	5.83	-0.01	15626	449.0 -> 99.0	47.4	19.3	79.3

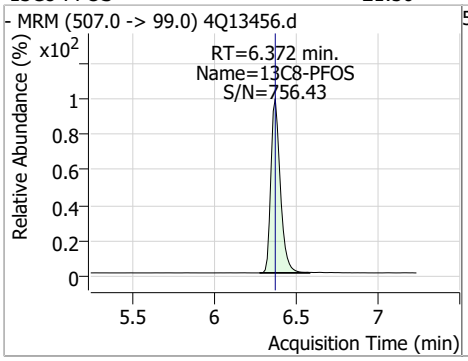


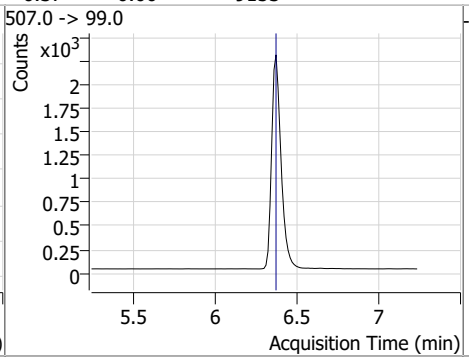


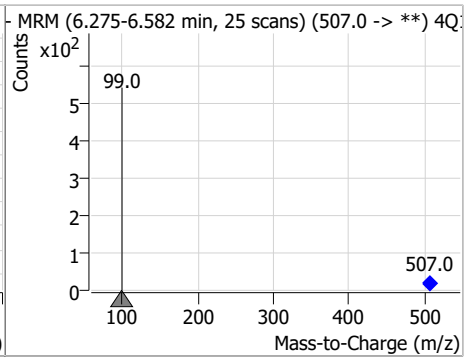


Perfluorinated Compounds by LC/MS/MS

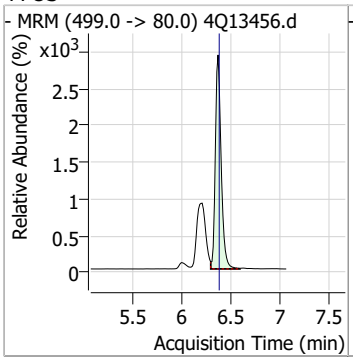
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	21.50	6.37	0.00	9153				

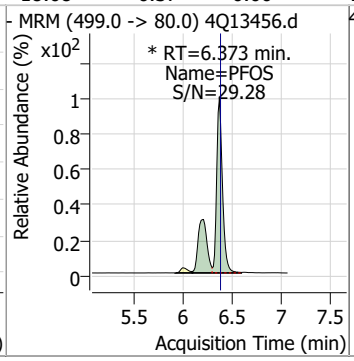


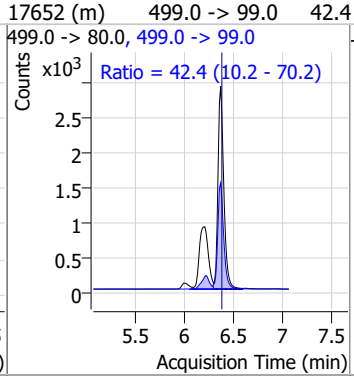


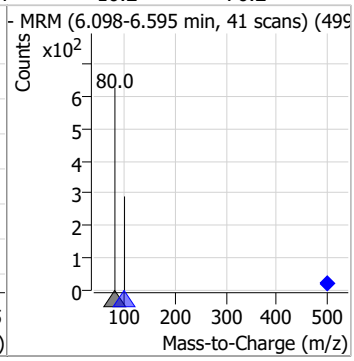


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	18.08	6.37	0.00	17652 (m)	499.0 -> 99.0	42.4	10.2	70.2

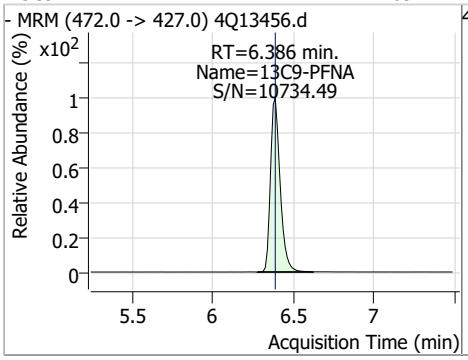


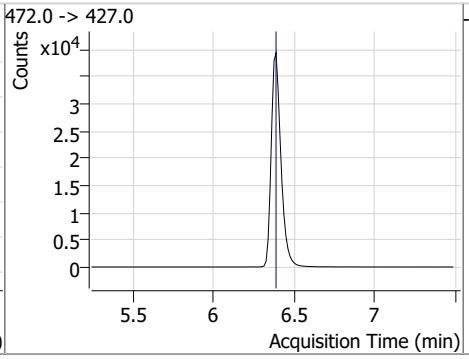


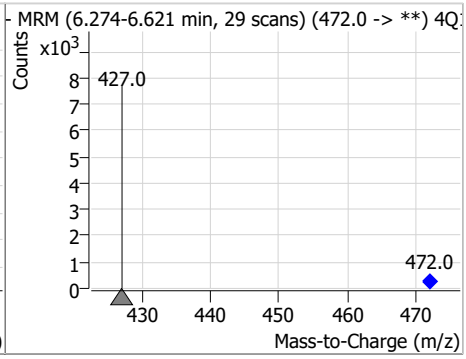




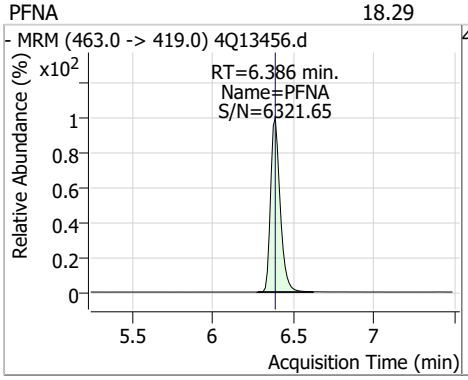
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	21.09	6.39	0.00	164518				

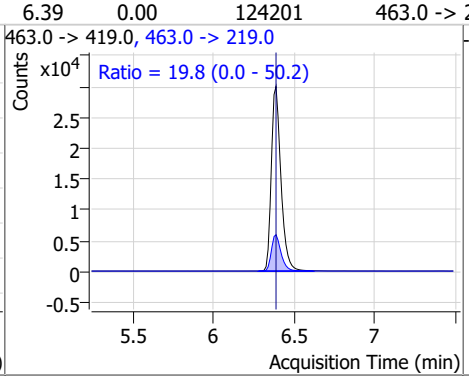


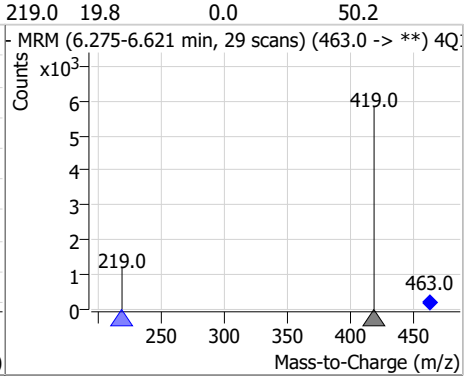




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	18.29	6.39	0.00	124201	463.0 -> 219.0	19.8	0.0	50.2

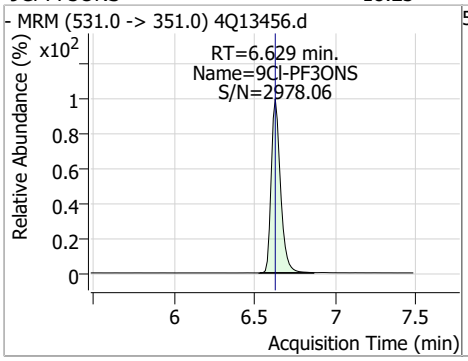


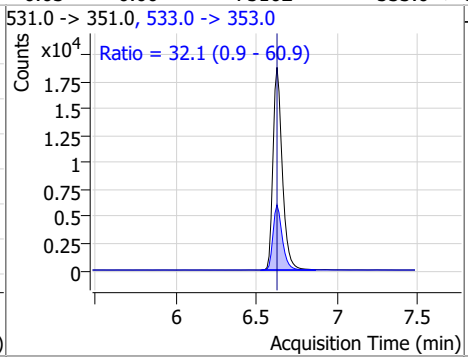


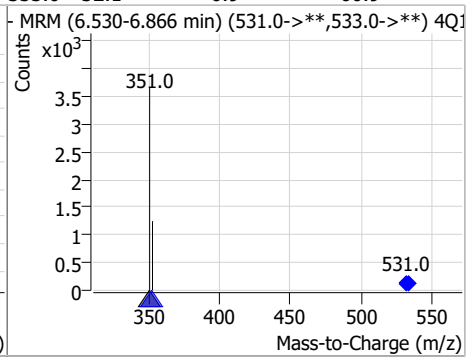


Perfluorinated Compounds by LC/MS/MS

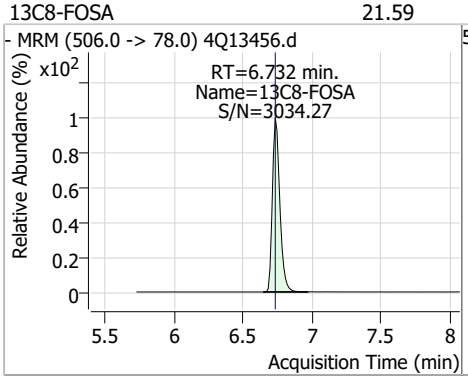
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	18.23	6.63	0.00	75102	533.0 -> 353.0	32.1	0.9	60.9

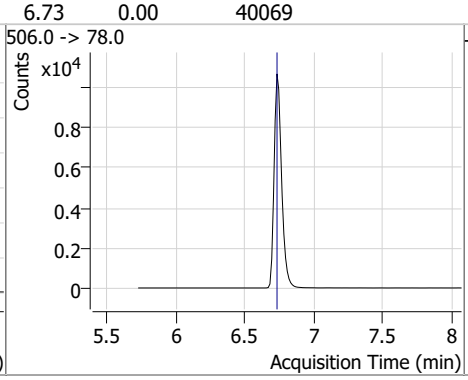


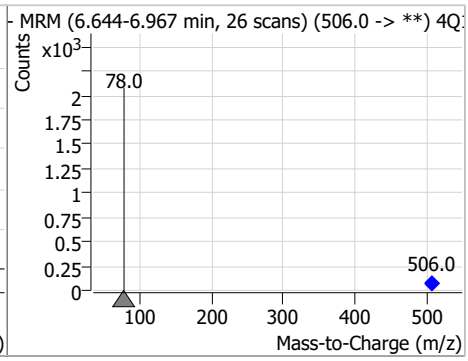




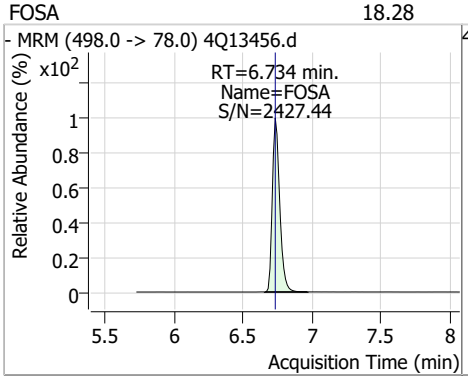
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	21.59	6.73	0.00	40069				

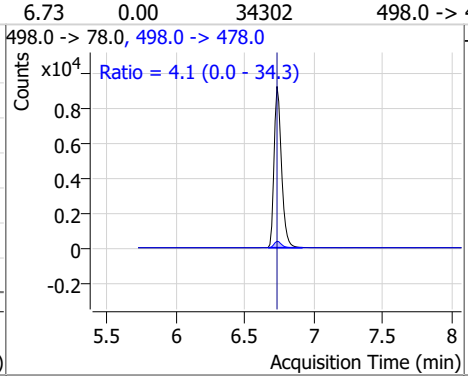


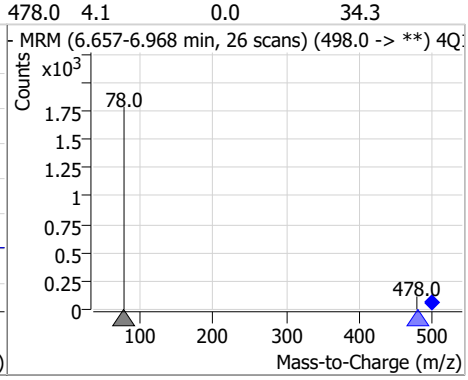




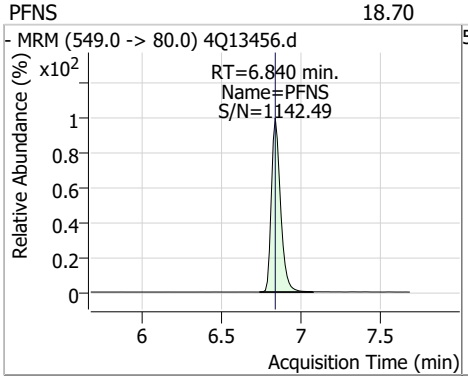
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	18.28	6.73	0.00	34302	498.0 -> 478.0	4.1	0.0	34.3

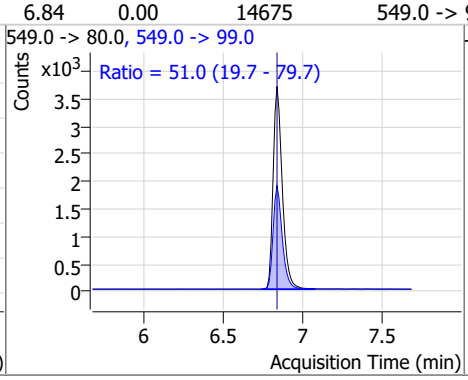


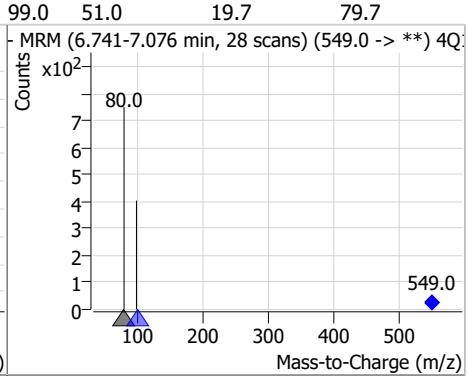




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	18.70	6.84	0.00	14675	549.0 -> 99.0	51.0	19.7	79.7

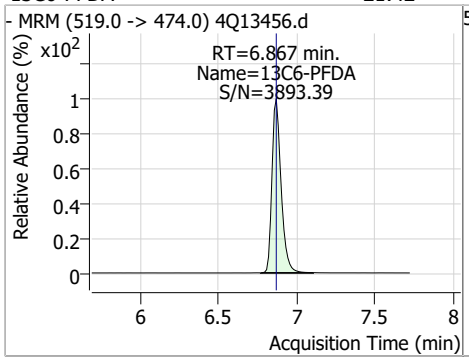


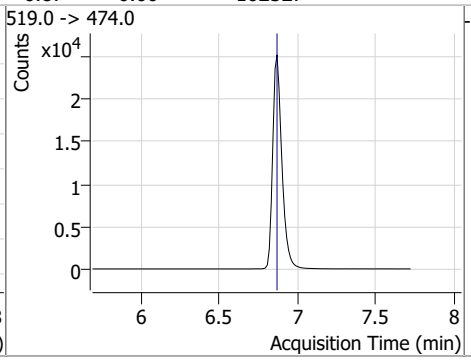


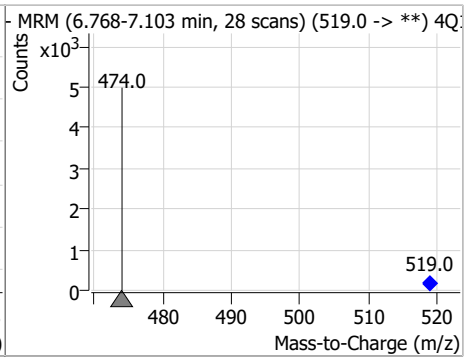


Perfluorinated Compounds by LC/MS/MS

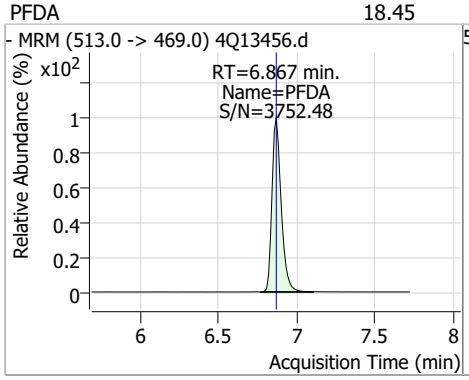
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	21.42	6.87	0.00	102527				

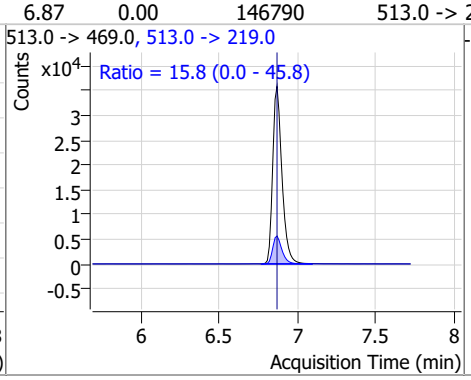


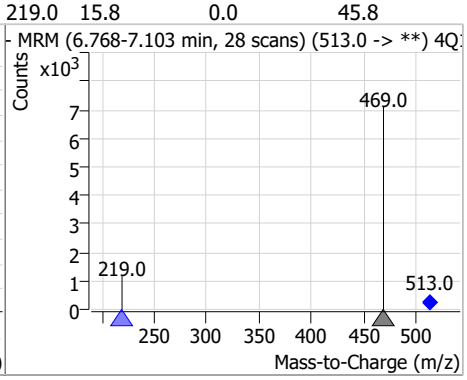




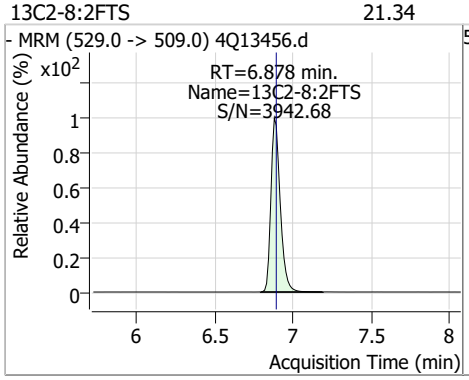
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	18.45	6.87	0.00	146790	513.0 -> 219.0	15.8	0.0	45.8

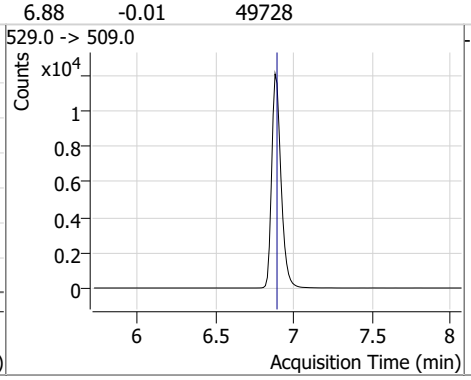


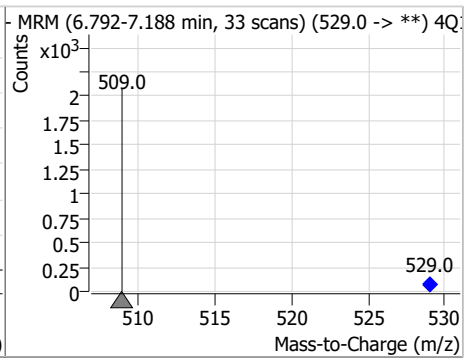




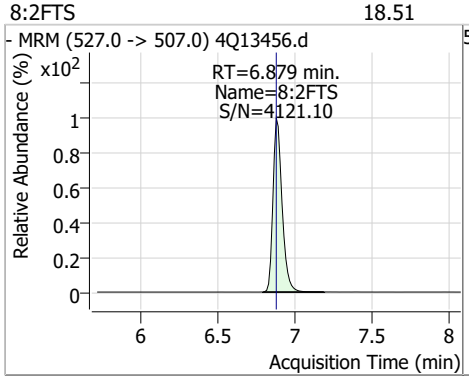
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	21.34	6.88	-0.01	49728				

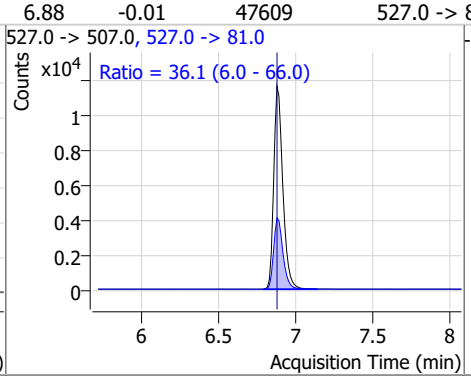


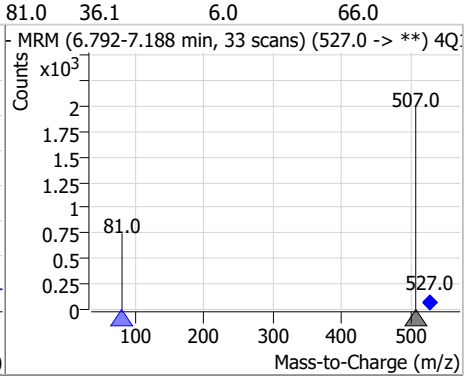




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	18.51	6.88	-0.01	47609	527.0 -> 81.0	36.1	6.0	66.0

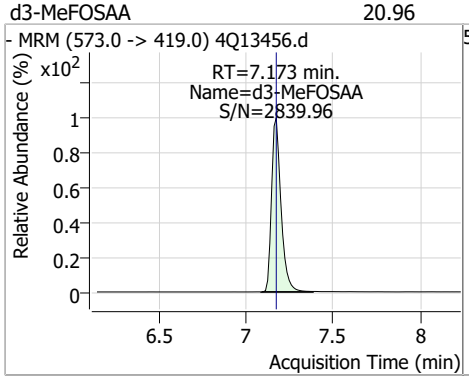


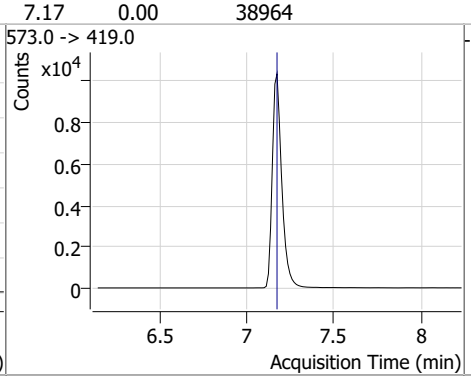


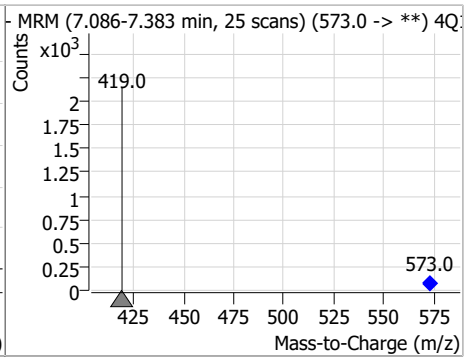


Perfluorinated Compounds by LC/MS/MS

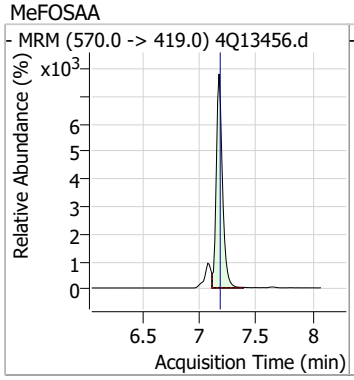
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.96	7.17	0.00	38964				

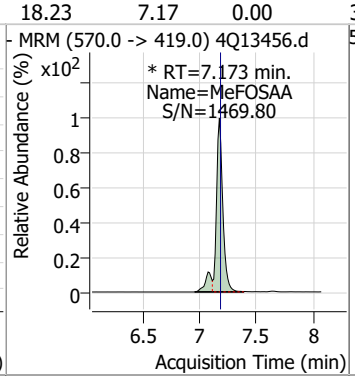


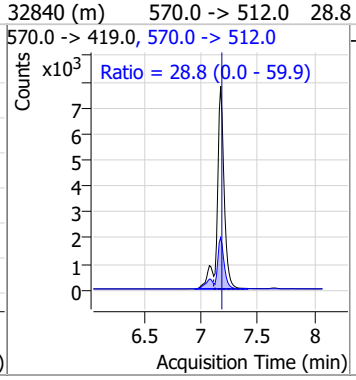


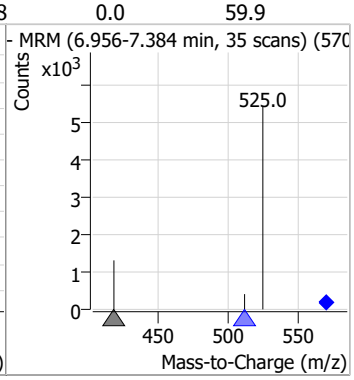


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	18.23	7.17	0.00	32840 (m)	570.0 -> 512.0	28.8	0.0	59.9

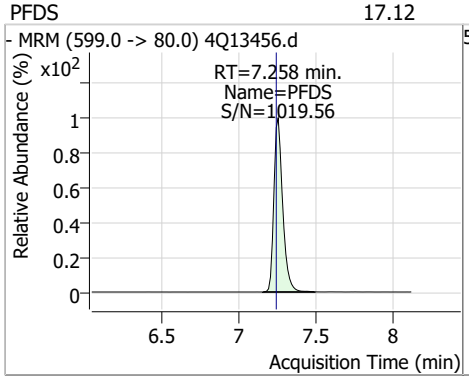


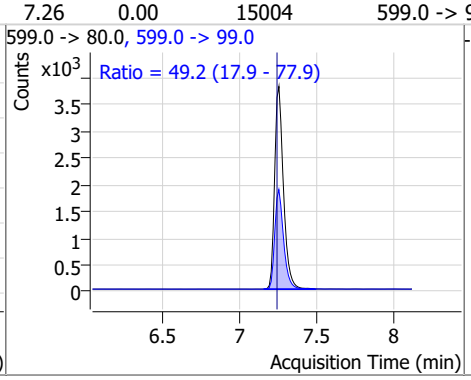


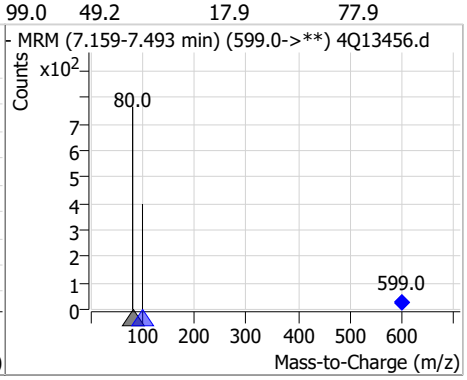




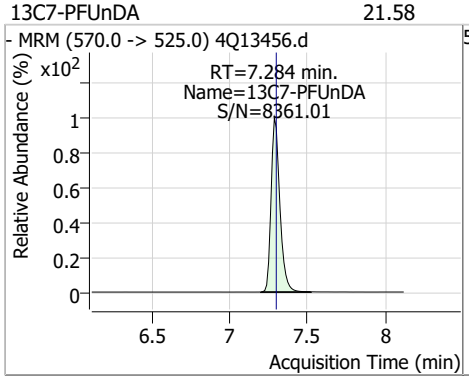
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	17.12	7.26	0.00	15004	599.0 -> 99.0	49.2	17.9	77.9

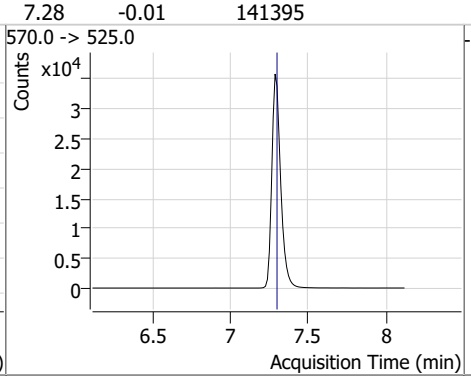


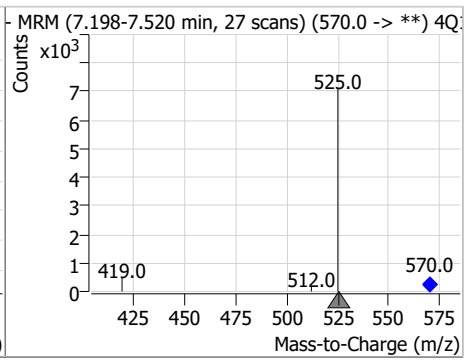




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	21.58	7.28	-0.01	141395				

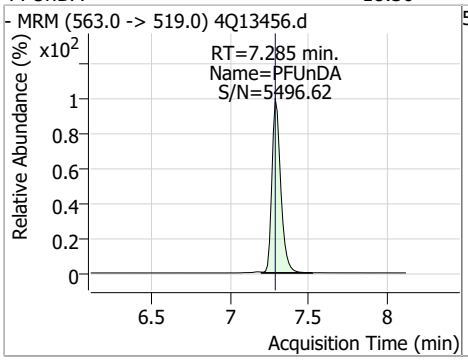


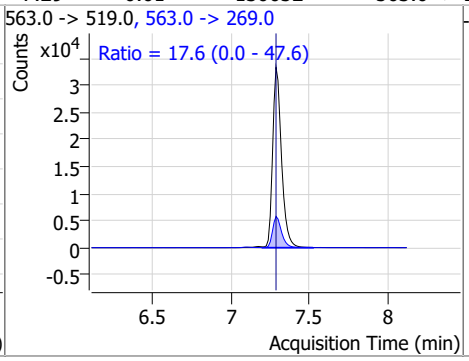


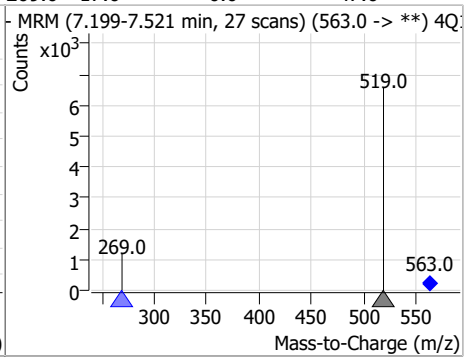


Perfluorinated Compounds by LC/MS/MS

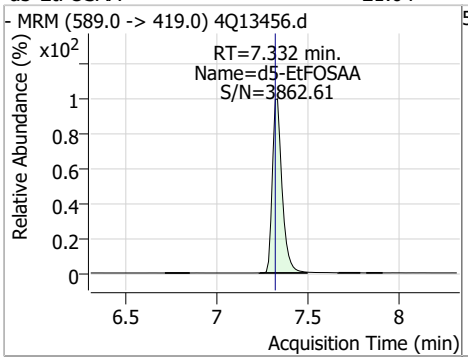
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	18.30	7.29	-0.01	130652	563.0 -> 269.0	17.6	0.0	47.6

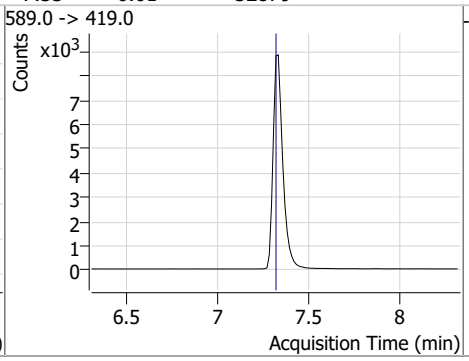


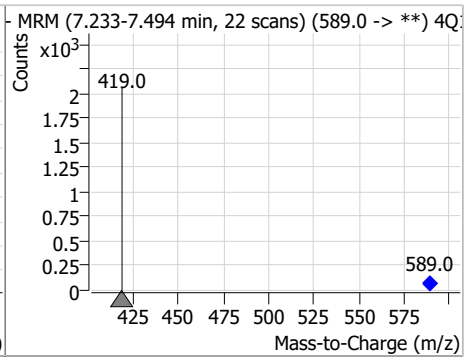




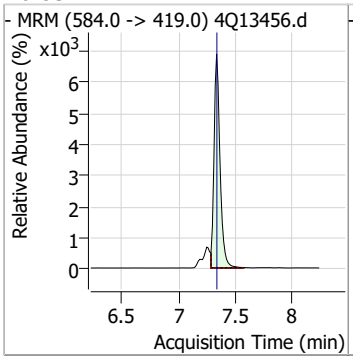
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	21.04	7.33	0.01	32879				

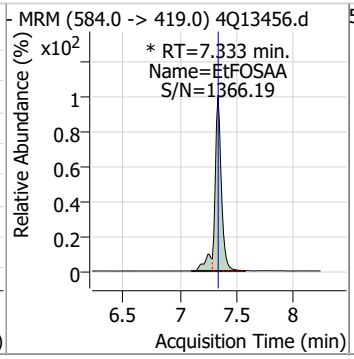


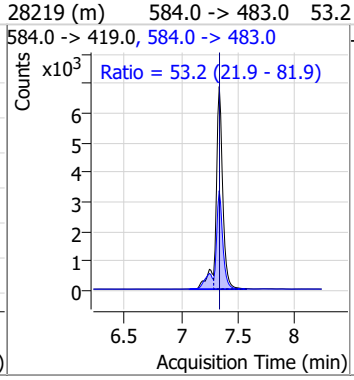


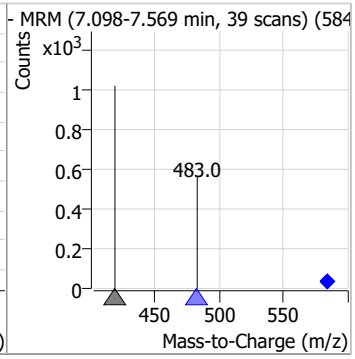


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	18.07	7.33	0.00	28219 (m)	584.0 -> 483.0	53.2	21.9	81.9

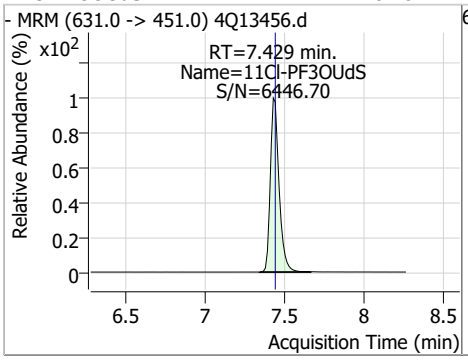


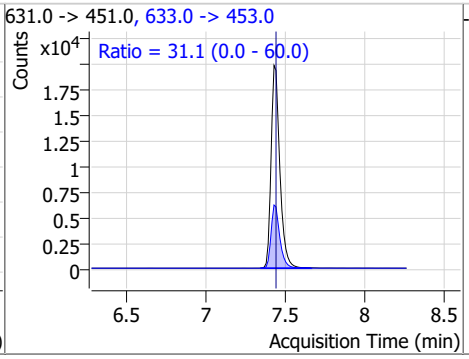


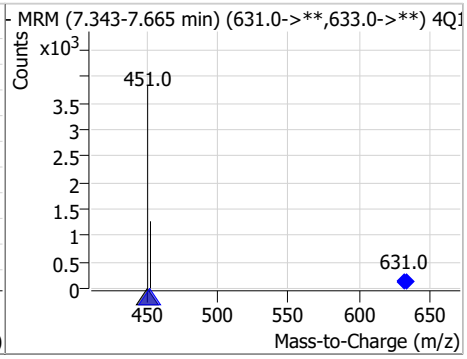




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	18.28	7.43	-0.01	75716	633.0 -> 453.0	31.1	0.0	60.0

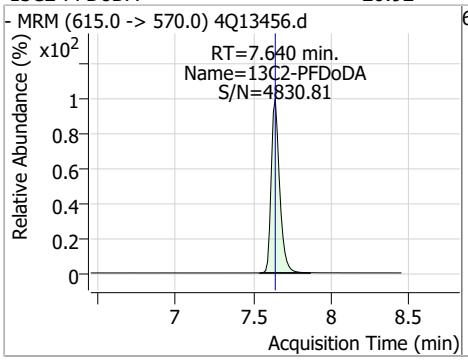


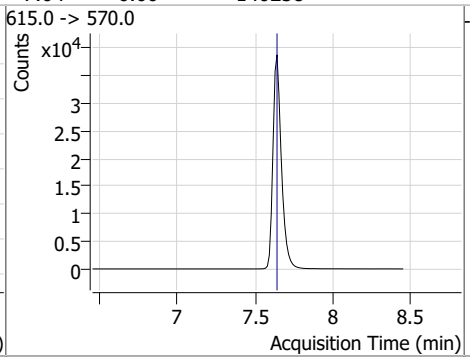


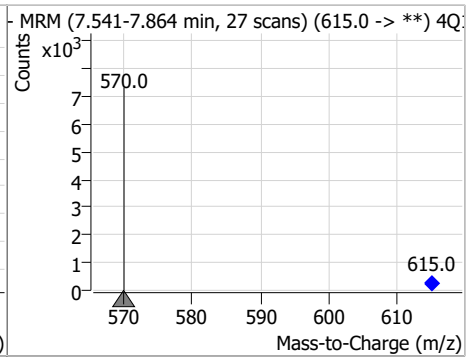


Perfluorinated Compounds by LC/MS/MS

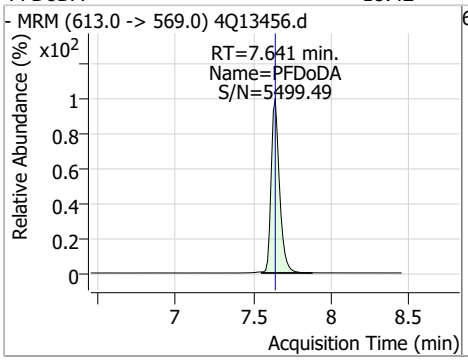
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.92	7.64	0.00	146258				

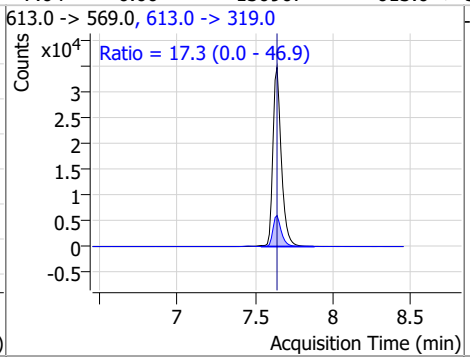


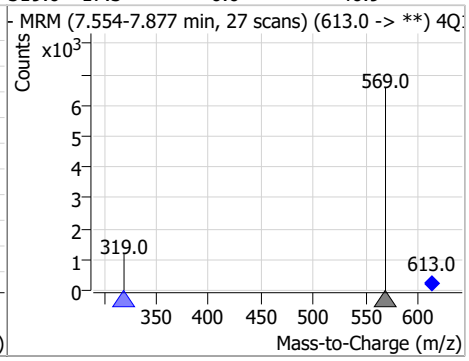




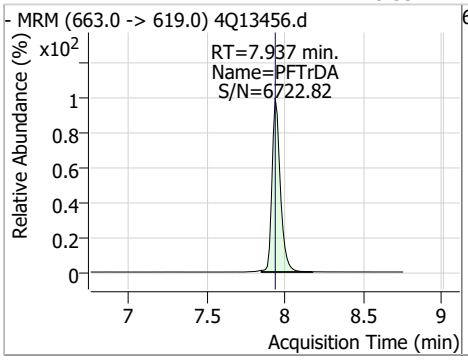
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	18.42	7.64	0.00	130907	613.0 -> 319.0	17.3	0.0	46.9

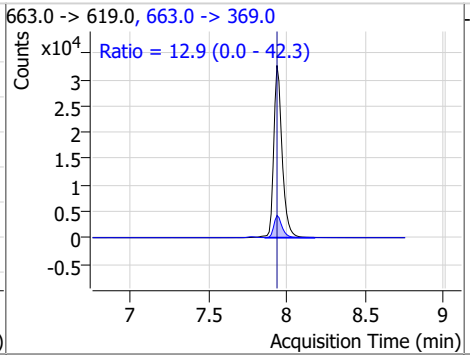


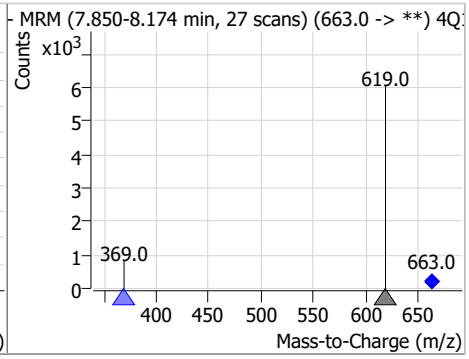




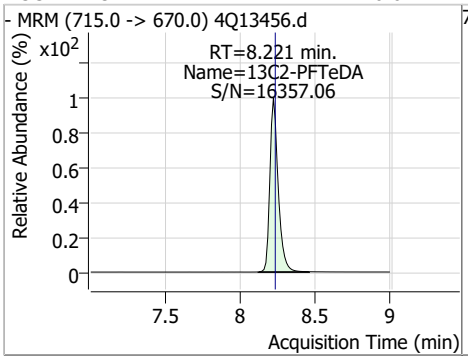
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	18.55	7.94	-0.01	120360	663.0 -> 369.0	12.9	0.0	42.3

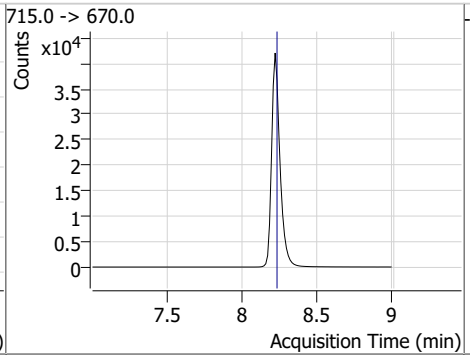


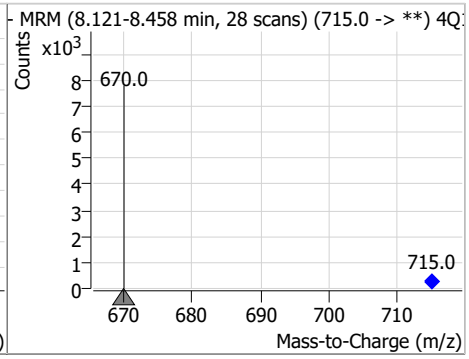




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.64	8.22	-0.01	161988				

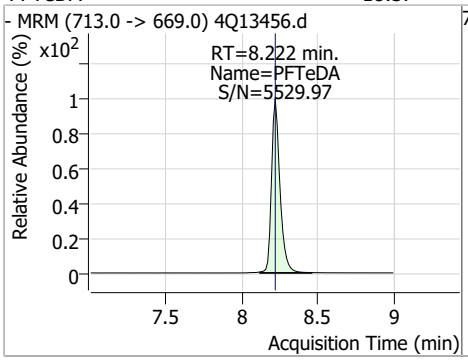


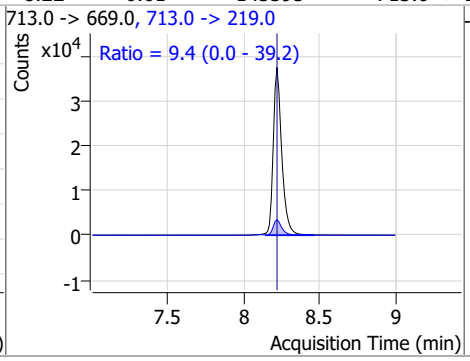


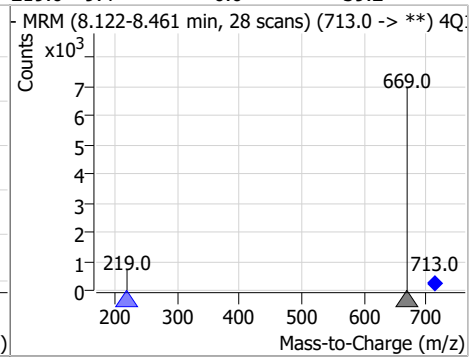


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	18.57	8.22	-0.01	145595	713.0 -> 219.0	9.4	0.0	39.2







Manual Integration Approval Summary

Sample Number: S4Q189-CC189
Lab FileID: 4Q13456.D
Injection Time: 04/18/21 19:57
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/19/21 09:46 Nancy Saunders
Supervisor approved: 04/19/21 15:40 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.19	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.37	Split peak
MeFOSAA	2355-31-9		7.17	Split peak
EtFOSAA	2991-50-6		7.33	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:40

Perfluorinated Compounds by LC/MS/MS

Data File : 4Q13466.d
Operator : natashag
Acq. Method : 537_ID.m
Acq. Date-Time : 4/18/2021 10:26:44 PM
Sample Name : cc189-20
Vial : P1-A7
DA Method File : ID_041821_S4Q189.quantmethod.xml
Batch Name : s4q189a.batch.bin
Sample Information : op84918,S4Q189,250,,,1,1,water

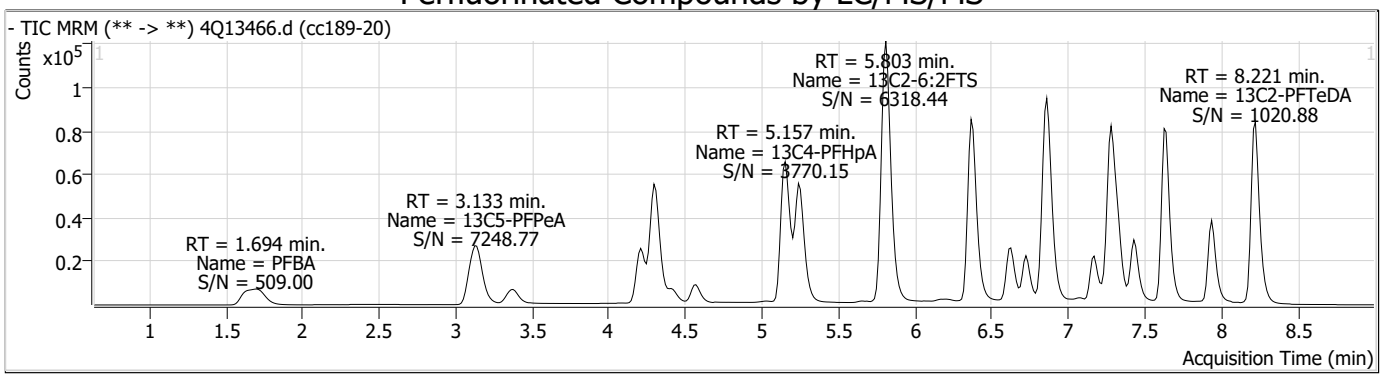
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.700	217.0 -> 172.0	53183	20.00	µg/L	0.013
M5-PFPeA	3.133	268.0 -> 223.0	95475	20.00	µg/L	-0.012
M5-PFHxA	4.302	318.0 -> 273.0	131399	20.00	µg/L	-0.013
M4-PFHpA	5.157	367.0 -> 322.0	113052	20.00	µg/L	0.000
M8-PFOA	5.816	421.0 -> 376.0	158107	20.00	µg/L	-0.012
M9-PFNA	6.373	472.0 -> 427.0	167553	20.00	µg/L	-0.012
M6-PFDA	6.855	519.0 -> 474.0	104197	20.00	µg/L	-0.012
M7-PFUnDA	7.284	570.0 -> 525.0	141649	20.00	µg/L	-0.012
M2-PFDoDA	7.628	615.0 -> 570.0	148331	20.00	µg/L	-0.012
M2-PFTeDA	8.221	715.0 -> 670.0	167006	20.00	µg/L	-0.013
M8-FOSA	6.732	506.0 -> 78.0	40118	20.00	µg/L	0.000
M3-PFBS	3.381	302.0 -> 99.0	7290	20.00	µg/L	0.000
M3-PFHxS	5.192	402.0 -> 99.0	6913	20.00	µg/L	-0.012
M8-PFOS	6.359	507.0 -> 99.0	9359	20.00	µg/L	-0.012
M2-4:2FTS	4.212	329.0 -> 309.0	48019	20.00	µg/L	0.000
M2-6:2FTS	5.803	429.0 -> 409.0	63398	20.00	µg/L	0.000
M2-8:2FTS	6.878	529.0 -> 509.0	49412	20.00	µg/L	-0.012
M3-MeFOSAA	7.172	573.0 -> 419.0	39794	20.00	µg/L	0.000
M3-HFPO-DA	4.566	287.0 -> 169.0	7808	20.00	µg/L	-0.012
M5-EtFOSAA	7.320	589.0 -> 419.0	34132	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.212	329.0 -> 309.0	48019	21.14	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.7%		
13C2-6:2FTS	5.803	429.0 -> 409.0	63398	21.20	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.0%		
13C2-8:2FTS	6.878	529.0 -> 509.0	49412	21.20	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.0%		
13C2-PFDoDA	7.628	615.0 -> 570.0	148331	21.22	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.1%		
13C2-PFTeDA	8.221	715.0 -> 670.0	167006	21.28	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.4%		
13C3-PFBS	3.381	302.0 -> 99.0	7290	21.38	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.9%		
13C3-PFHxS	5.192	402.0 -> 99.0	6913	21.46	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.3%		
13C4-PFBA	1.700	217.0 -> 172.0	53183	21.53	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.7%		
13C4-PFHpA	5.157	367.0 -> 322.0	113052	21.21	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.0%		
13C5-PFHxA	4.302	318.0 -> 273.0	131399	21.55	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.7%		
13C5-PFPeA	3.133	268.0 -> 223.0	95475	21.49	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.4%		
13C6-PFDA	6.855	519.0 -> 474.0	104197	21.77	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.8%		

Perfluorinated Compounds by LC/MS/MS

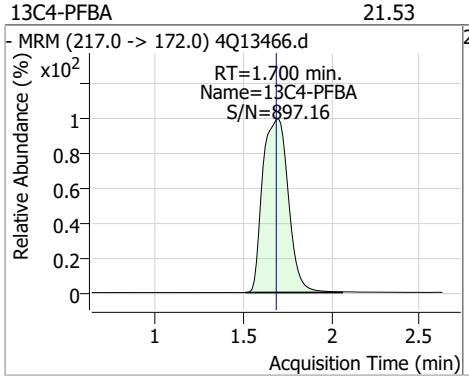
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	7.284	570.0 -> 525.0	141649	21.62	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.1%			
13C8-FOSA	6.732	506.0 -> 78.0	40118	21.61	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.1%			
13C8-PFOA	5.816	421.0 -> 376.0	158107	21.53	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.6%			
13C8-PFOS	6.359	507.0 -> 99.0	9359	21.98	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.9%			
13C9-PFNA	6.373	472.0 -> 427.0	167553	21.48	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.4%			
d3-MeFOSAA	7.172	573.0 -> 419.0	39794	21.41	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.1%			
13C3-HFPO-DA	4.566	287.0 -> 169.0	7747	22.21	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 111.0%			
d5-EtFOSAA	7.320	589.0 -> 419.0	34076	21.81	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.0%			
Target Compounds							QValue
4:2FTS	4.214	327.0 -> 307.0	47646	18.56	µg/L		99
6:2FTS	5.803	427.0 -> 407.0	62696	18.79	µg/L		99
8:2FTS	6.879	527.0 -> 507.0	48354	18.92	µg/L		97
EtFOSAA	7.333	584.0 -> 419.0	29230	18.04	µg/L	m	99
FOSA	6.734	498.0 -> 78.0	34288	18.25	µg/L		99
MeFOSAA	7.173	570.0 -> 419.0	33201	18.05	µg/L	m	99
PFBA	1.694	213.0 -> 169.0	21041	18.13	µg/L		100
PFBS	3.383	299.0 -> 80.0	21983	18.46	µg/L		99
PFDA	6.855	513.0 -> 469.0	148137	18.32	µg/L		100
PFDoDA	7.628	613.0 -> 569.0	134071	18.60	µg/L		100
PFDS	7.245	599.0 -> 80.0	14881	16.95	µg/L		99
PFHpA	5.157	363.0 -> 319.0	134548	18.22	µg/L		99
PFHpS	5.827	449.0 -> 80.0	15711	18.27	µg/L		99
PFHxA	4.302	313.0 -> 269.0	108921	18.15	µg/L		100
PFHxS	5.193	399.0 -> 80.0	16085	18.34	µg/L	m	97
PFNA	6.374	463.0 -> 419.0	126243	18.26	µg/L		99
PFNS	6.840	549.0 -> 80.0	14729	18.36	µg/L		97
PFOA	5.817	413.0 -> 369.0	170804	18.41	µg/L		100
PFOS	6.360	499.0 -> 80.0	18175	18.21	µg/L	m	98
PFPeA	3.135	263.0 -> 219.0	75422	18.29	µg/L		100
PFPeS	4.423	349.0 -> 80.0	15858	18.32	µg/L		100
PFTeDA	8.222	713.0 -> 669.0	150367	18.60	µg/L		100
PFTrDA	7.937	663.0 -> 619.0	123338	18.44	µg/L		100
PFUnDA	7.285	563.0 -> 519.0	133715	18.70	µg/L		99
11Cl-PF3OUdS	7.429	631.0 -> 451.0	77768	18.52	µg/L		98
9Cl-PF3ONS	6.629	531.0 -> 351.0	75434	18.02	µg/L		99
ADONA	5.245	377.0 -> 251.0	163776	18.52	µg/L		100
HFPO-DA	4.574	329.0 -> 169.0	21625	17.26	µg/L		97

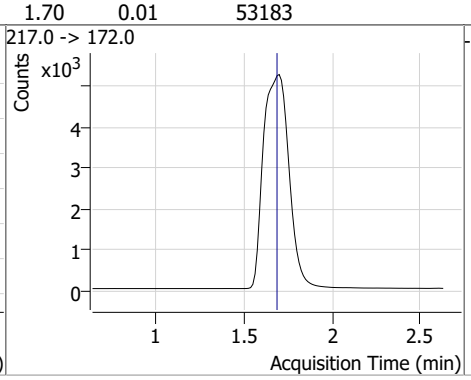
 # = Qualifier out of range, m = manually integrated, + = Area summed

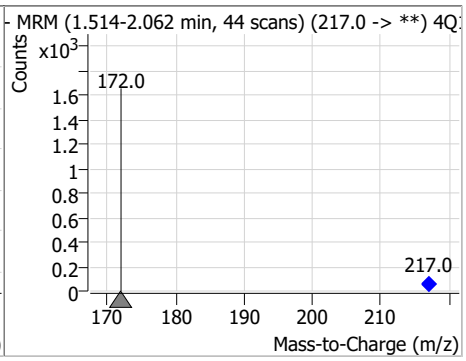
Perfluorinated Compounds by LC/MS/MS



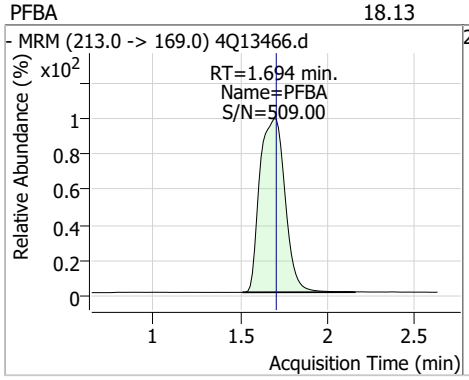
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	21.53	1.70	0.01	53183				

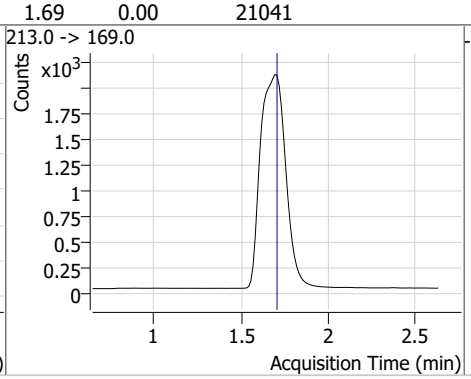


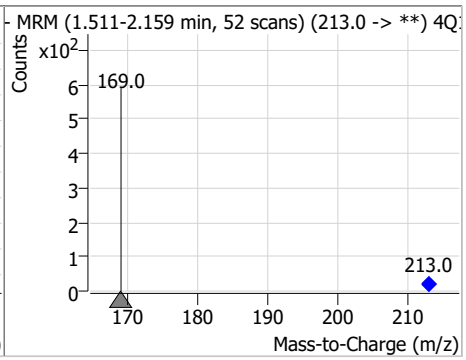




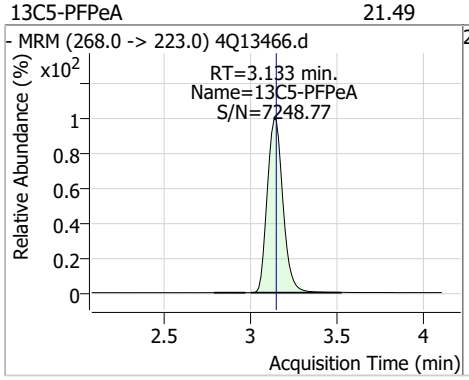
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	18.13	1.69	0.00	21041				

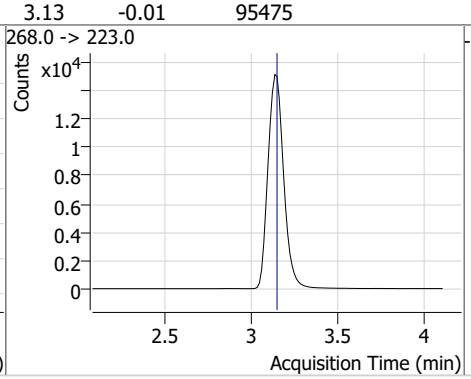


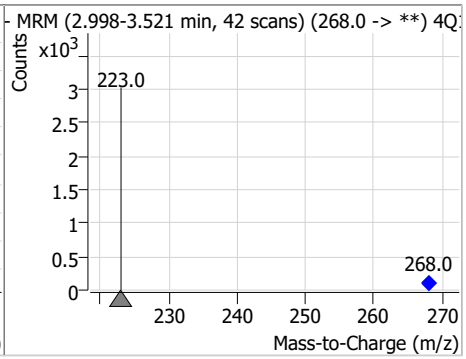




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	21.49	3.13	-0.01	95475				

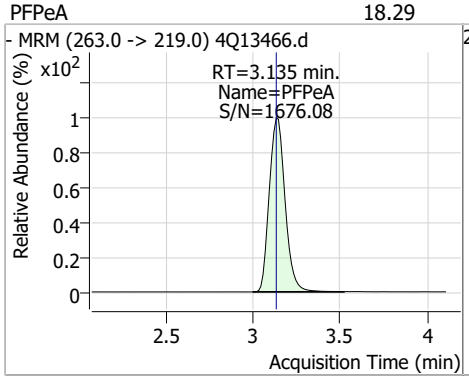


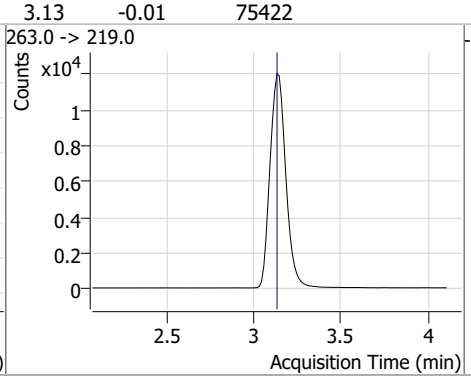


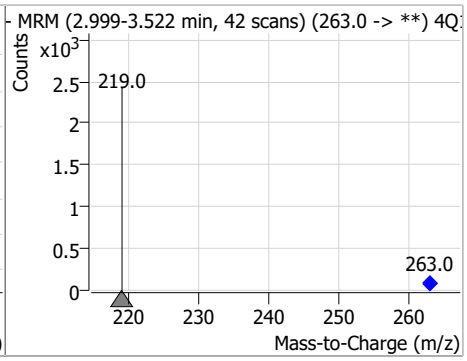


Perfluorinated Compounds by LC/MS/MS

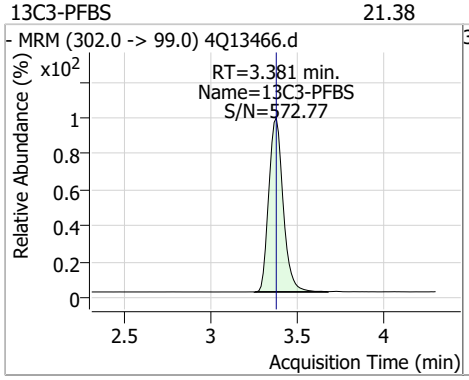
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	18.29	3.13	-0.01	75422				

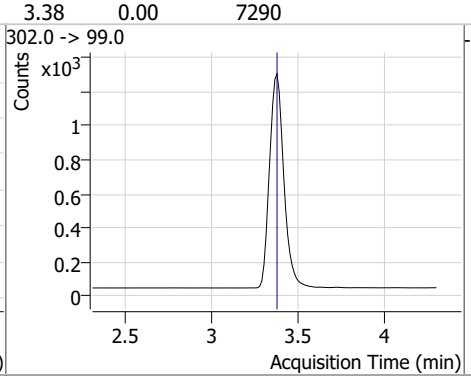


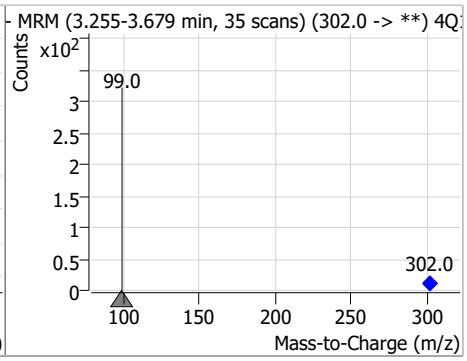




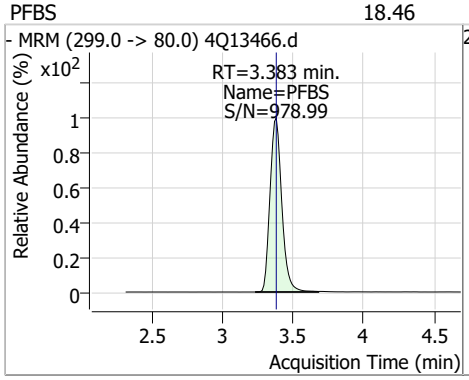
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	21.38	3.38	0.00	7290				

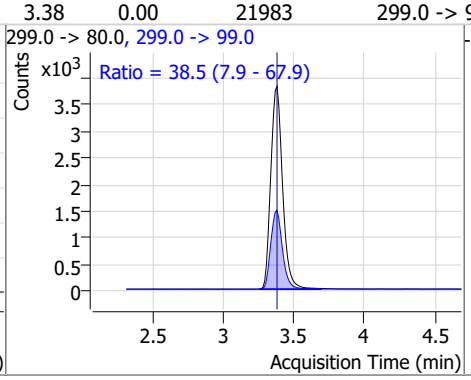


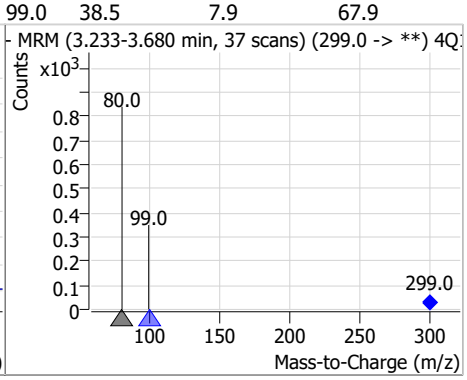




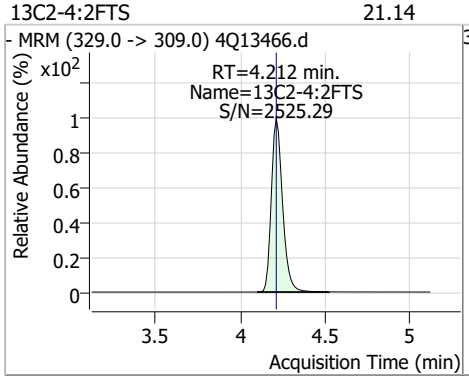
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	18.46	3.38	0.00	21983	299.0 -> 99.0	38.5	7.9	67.9

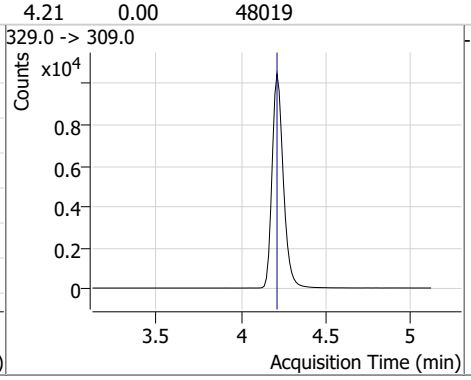


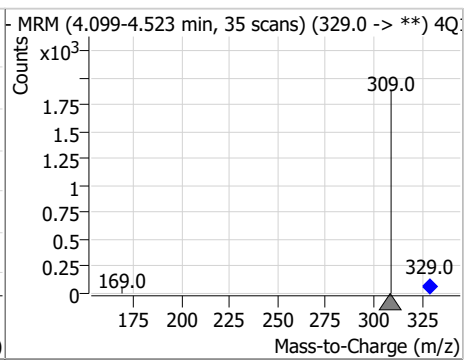




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	21.14	4.21	0.00	48019				

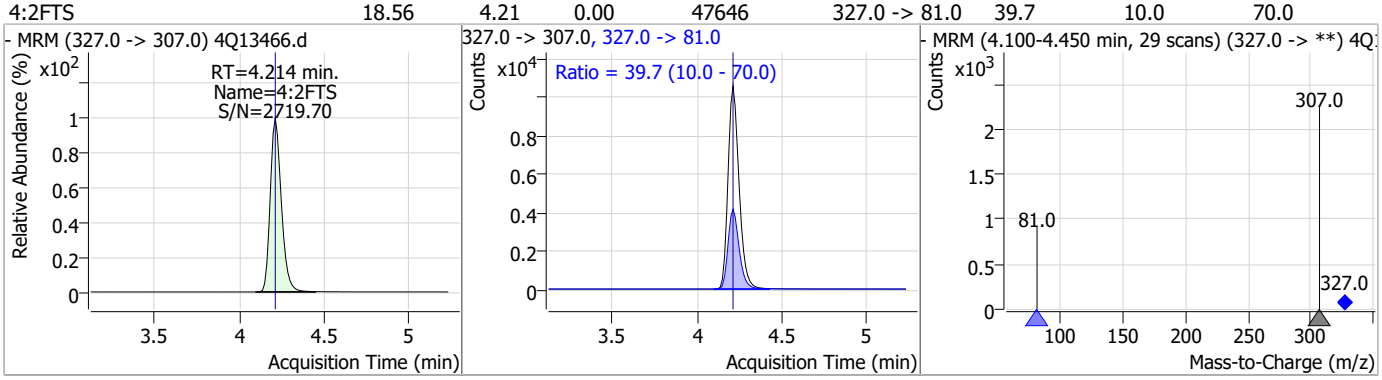




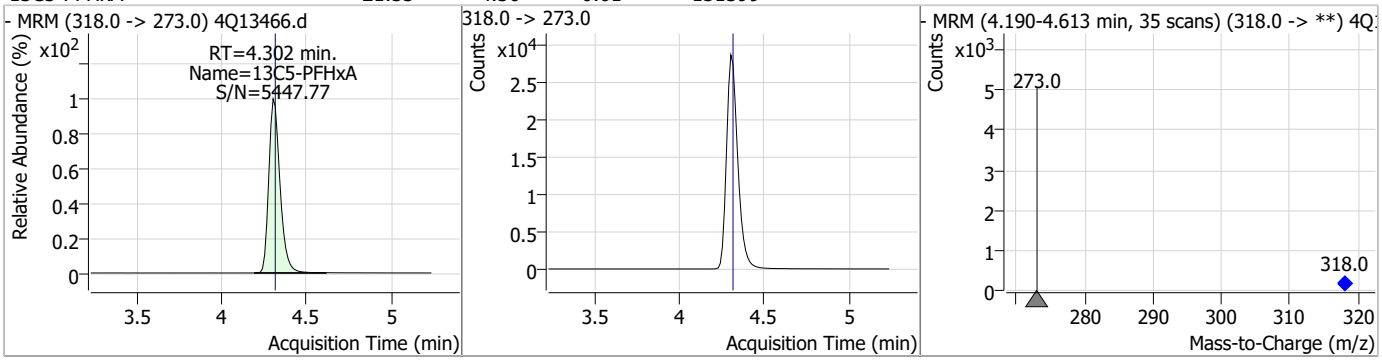


Perfluorinated Compounds by LC/MS/MS

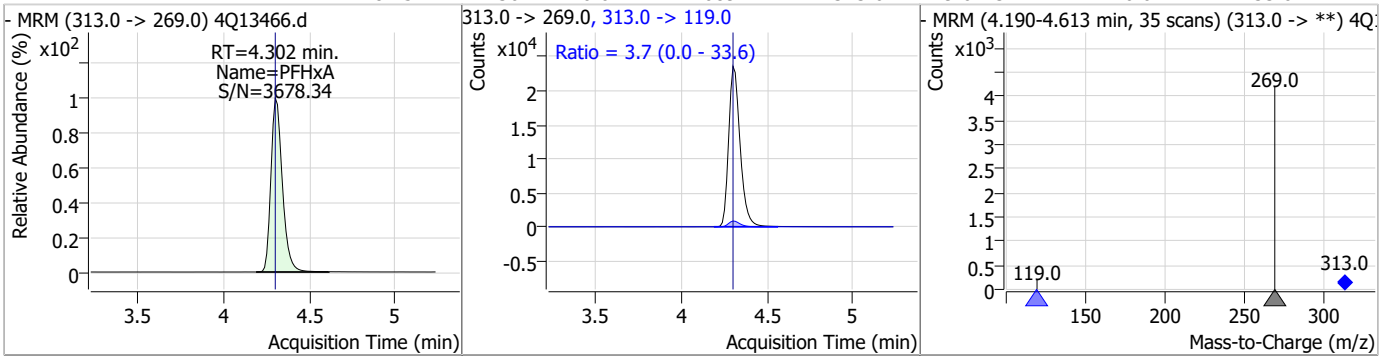
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	18.56	4.21	0.00	47646	327.0 -> 81.0	39.7	10.0	70.0



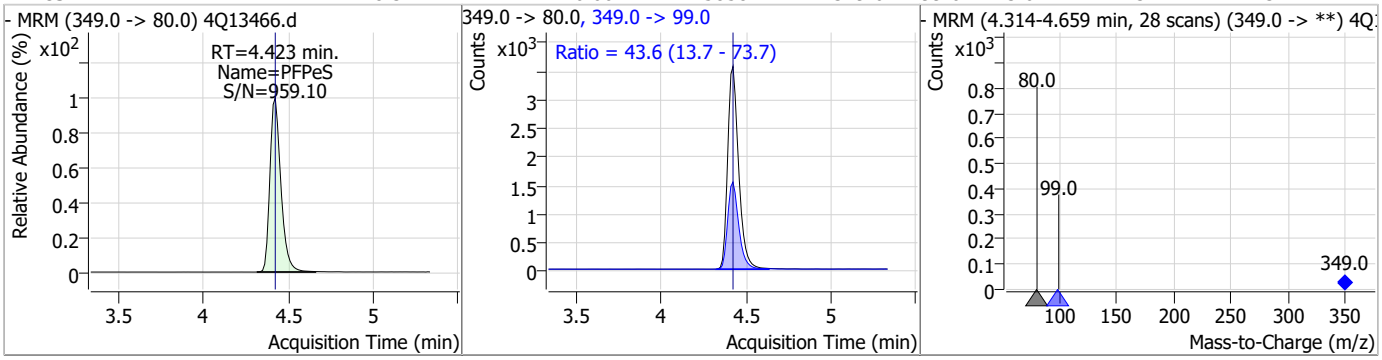
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	21.55	4.30	-0.01	131399				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	18.15	4.30	-0.01	108921	313.0 -> 119.0	3.7	0.0	33.6

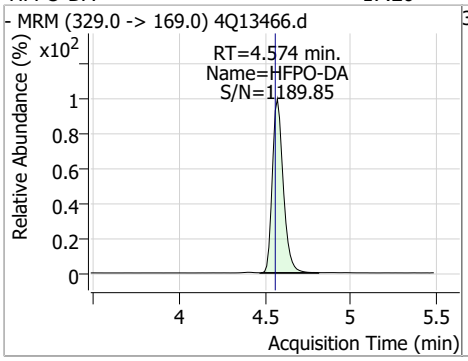


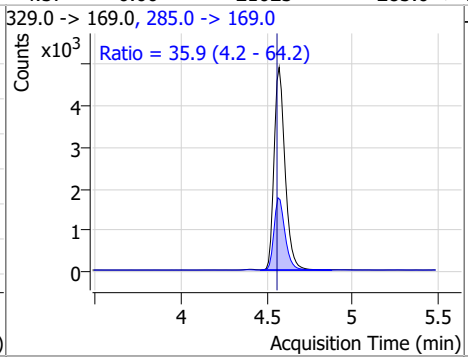
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	18.32	4.42	0.00	15858	349.0 -> 99.0	43.6	13.7	73.7

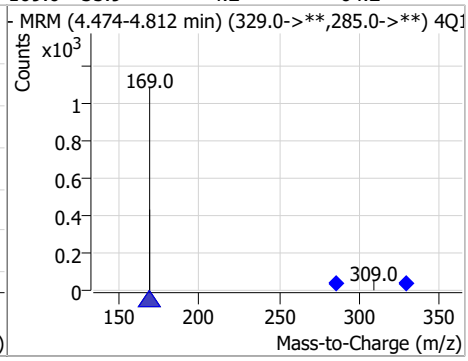


Perfluorinated Compounds by LC/MS/MS

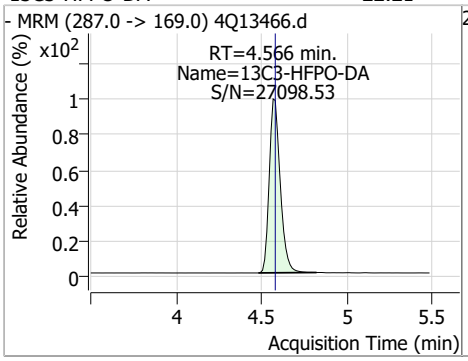
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	17.26	4.57	0.00	21625	285.0 -> 169.0	35.9	4.2	64.2

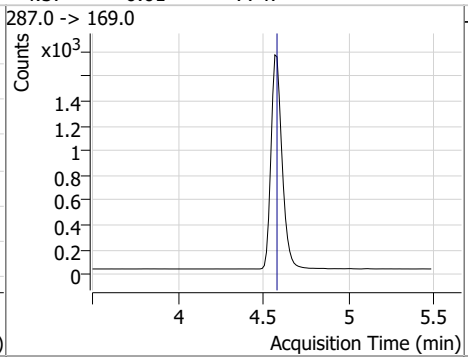


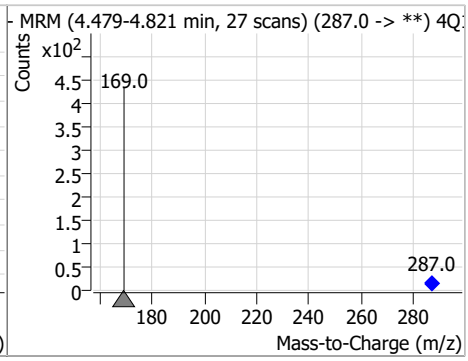




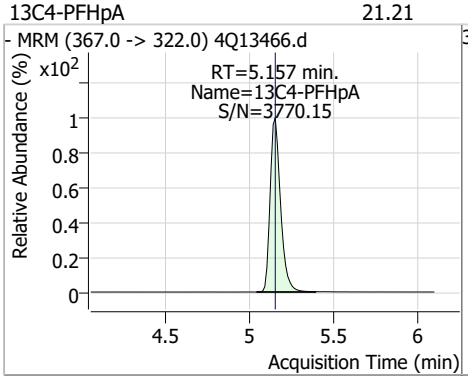
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	22.21	4.57	-0.01	7747				

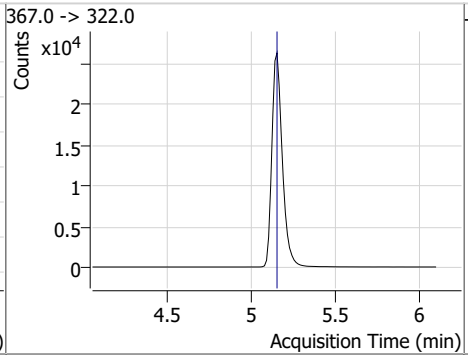


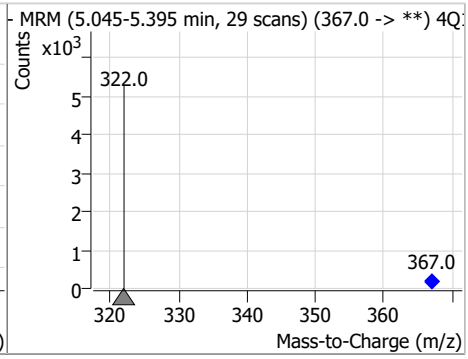




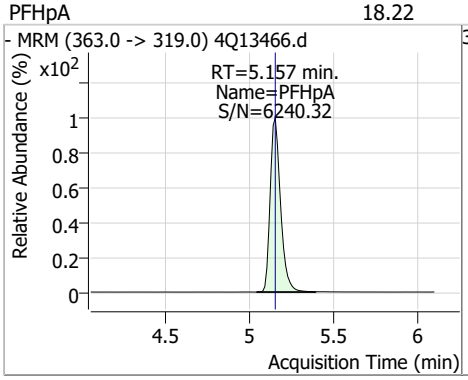
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	21.21	5.16	0.00	113052				

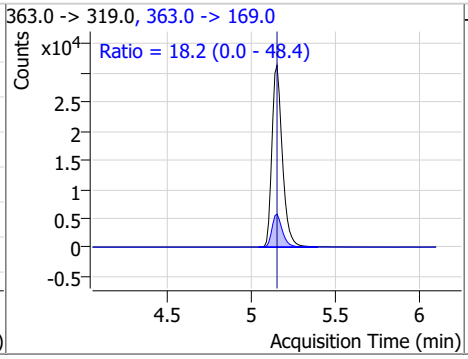


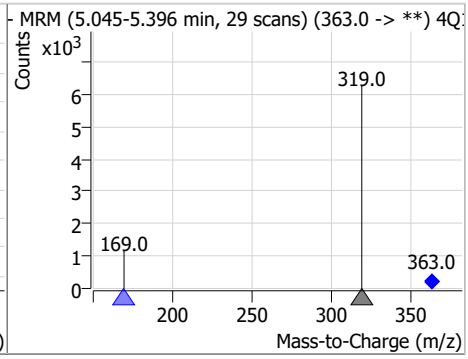




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	18.22	5.16	0.00	134548	363.0 -> 169.0	18.2	0.0	48.4

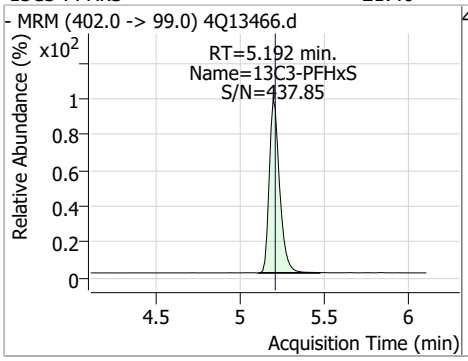


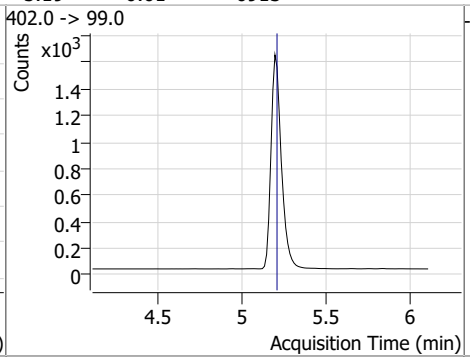


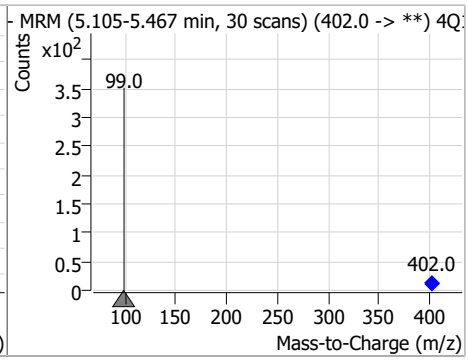


Perfluorinated Compounds by LC/MS/MS

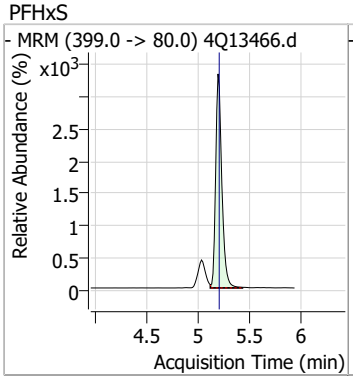
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	21.46	5.19	-0.01	6913				

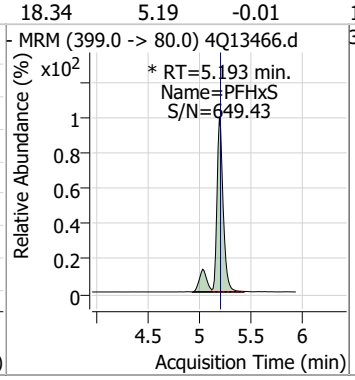


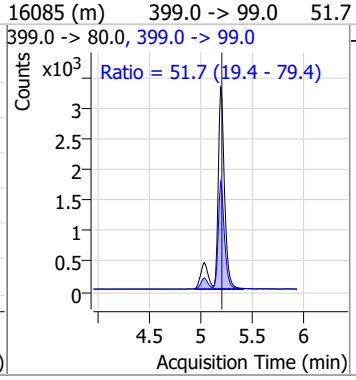


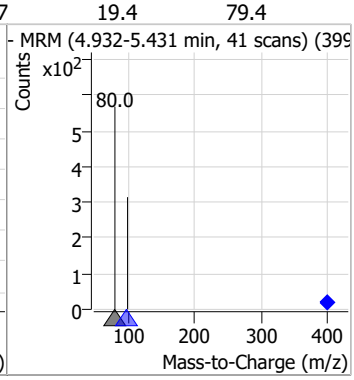


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	18.34	5.19	-0.01	16085 (m)	399.0 -> 99.0	51.7	19.4	79.4

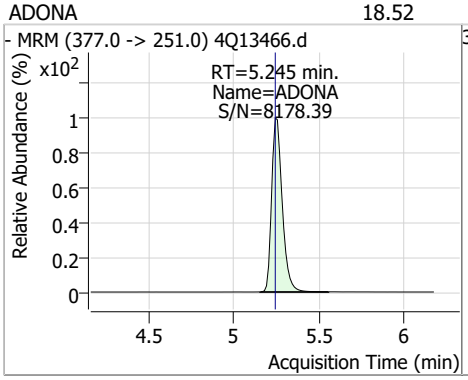


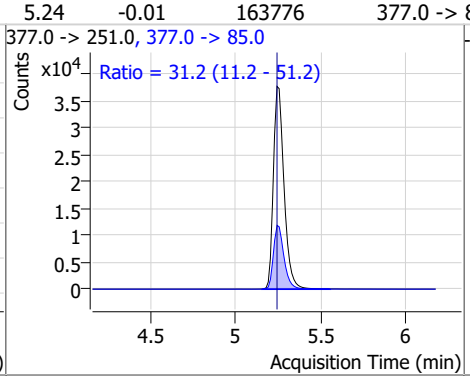


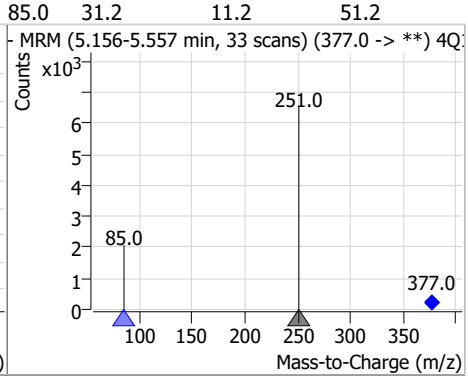




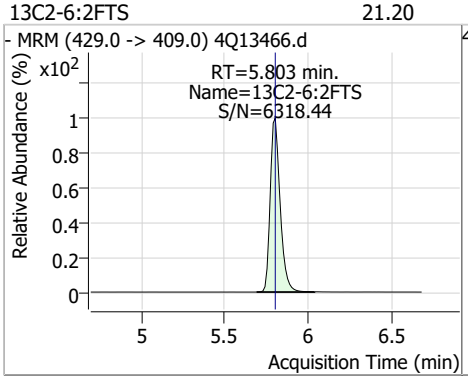
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	18.52	5.24	-0.01	163776	377.0 -> 85.0	31.2	11.2	51.2

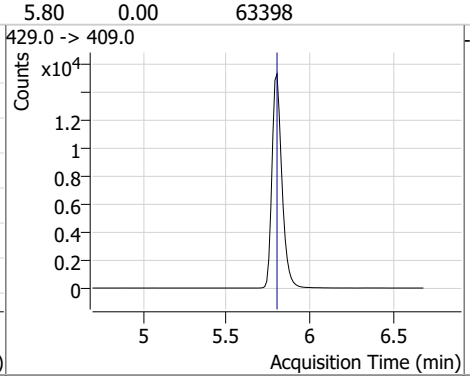


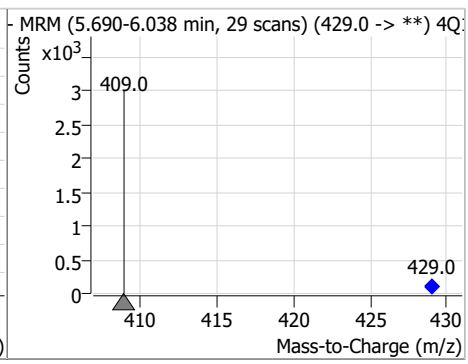




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	21.20	5.80	0.00	63398				

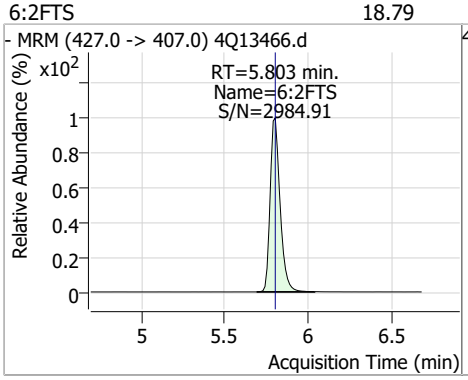


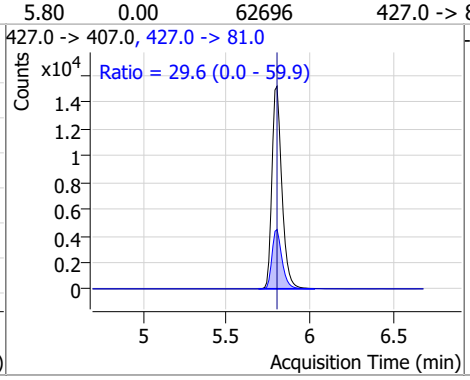


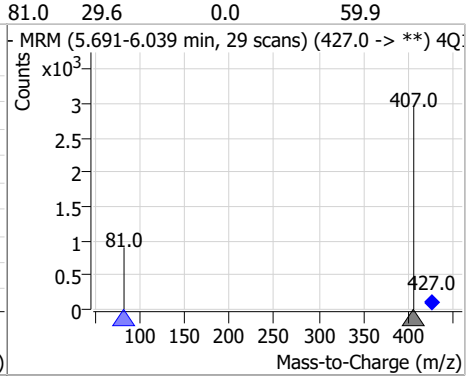


Perfluorinated Compounds by LC/MS/MS

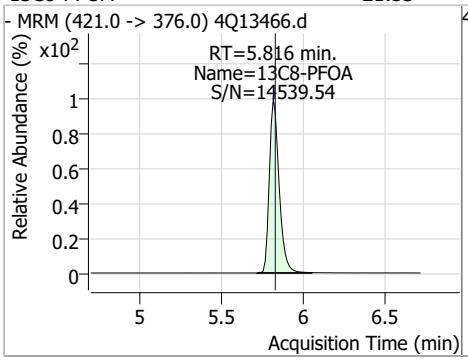
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	18.79	5.80	0.00	62696	427.0 -> 81.0	29.6	0.0	59.9

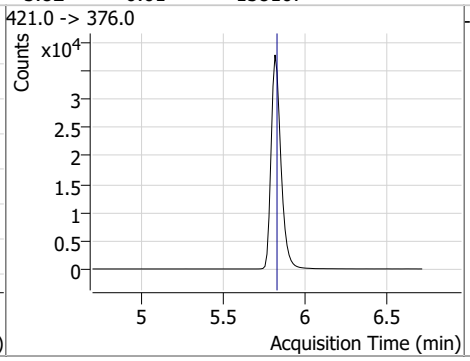


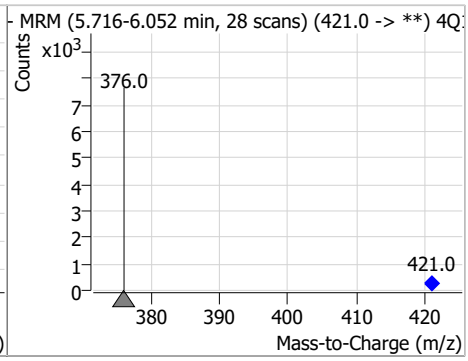




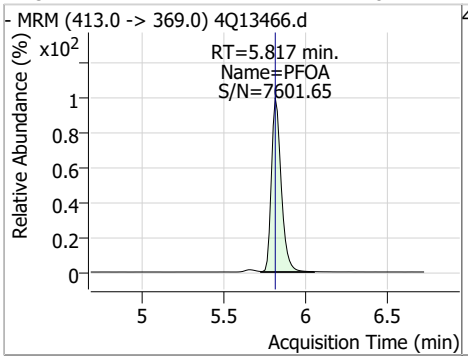
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	21.53	5.82	-0.01	158107				

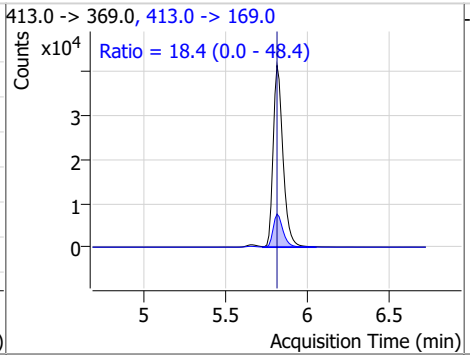


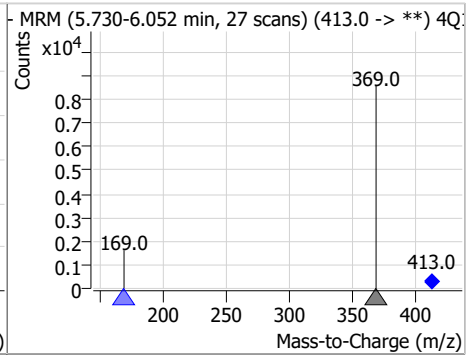




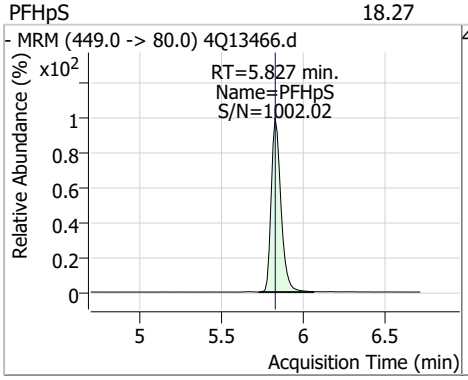
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	18.41	5.82	-0.01	170804	413.0 -> 169.0	18.4	0.0	48.4

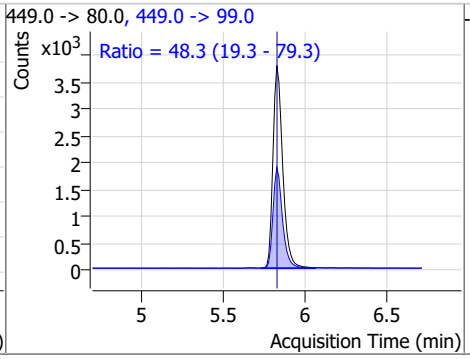


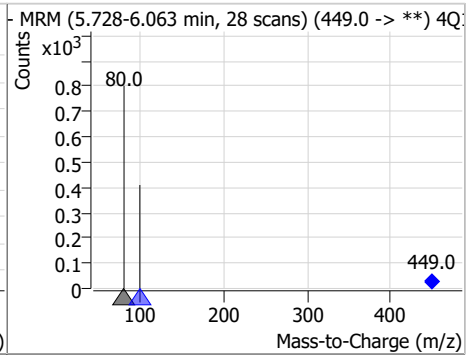




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	18.27	5.83	-0.01	15711	449.0 -> 99.0	48.3	19.3	79.3

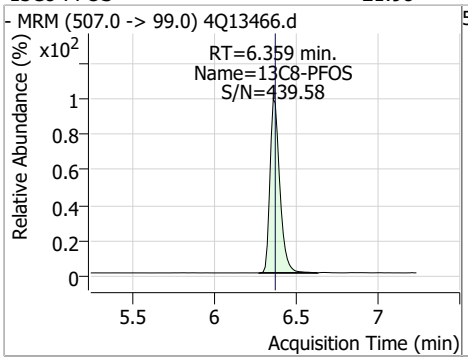


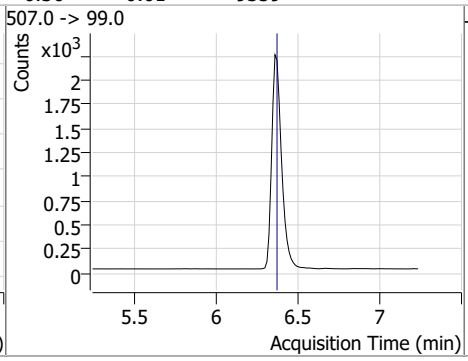


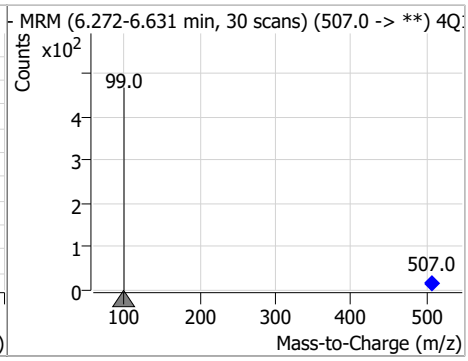


Perfluorinated Compounds by LC/MS/MS

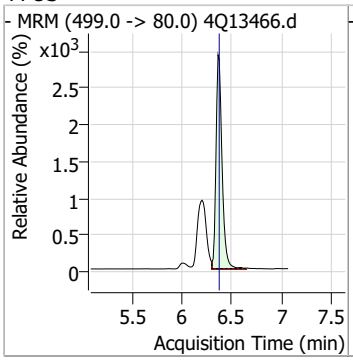
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	21.98	6.36	-0.01	9359				

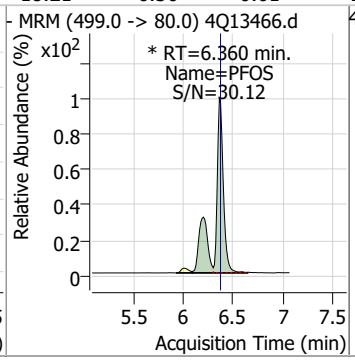


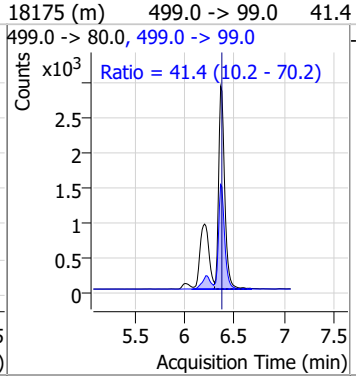


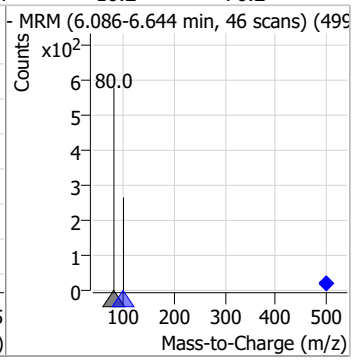


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	18.21	6.36	-0.01	18175 (m)	499.0 -> 99.0	41.4	10.2	70.2

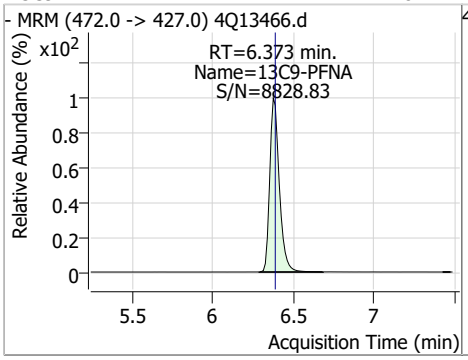


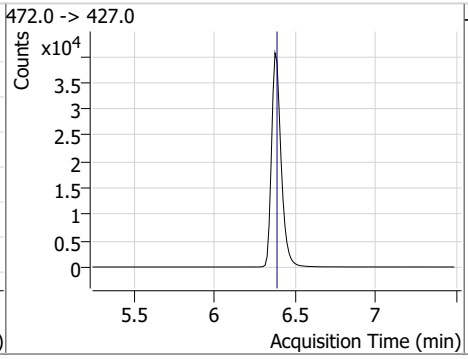


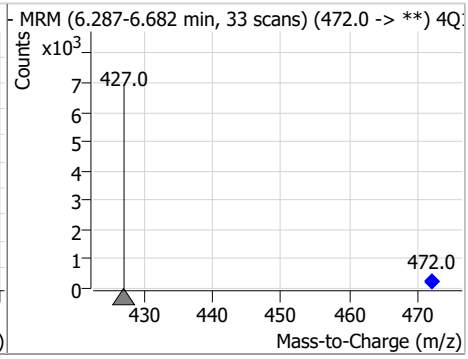




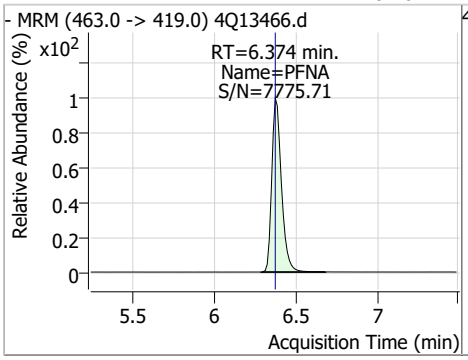
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	21.48	6.37	-0.01	167553				

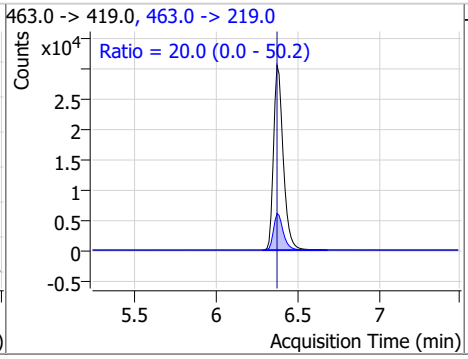


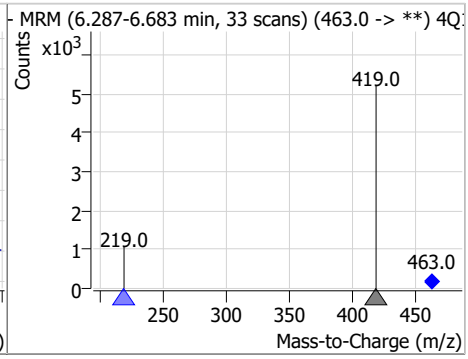




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	18.26	6.37	-0.01	126243	463.0 -> 219.0	20.0	0.0	50.2

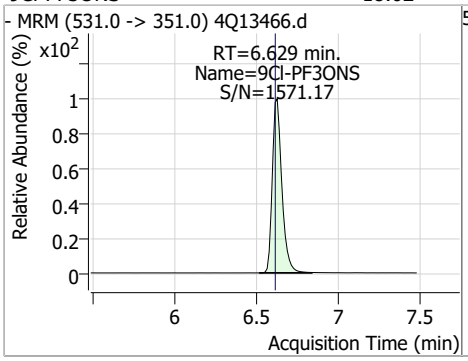


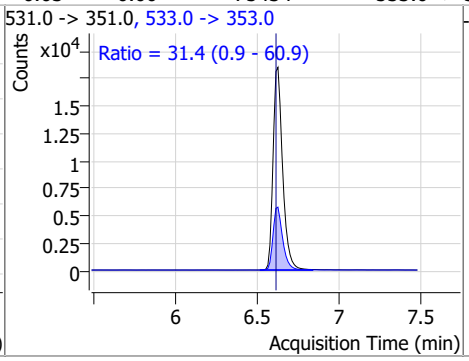


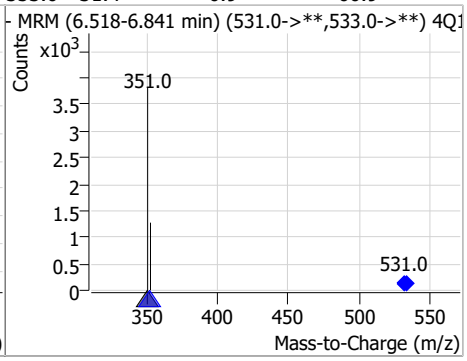


Perfluorinated Compounds by LC/MS/MS

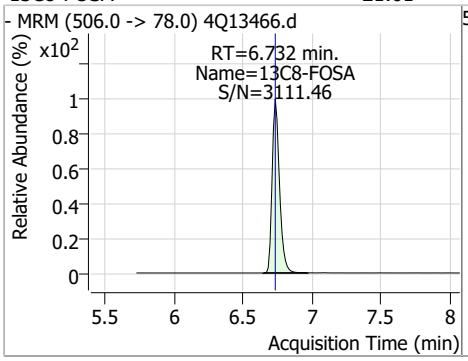
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	18.02	6.63	0.00	75434	533.0 -> 353.0	31.4	0.9	60.9

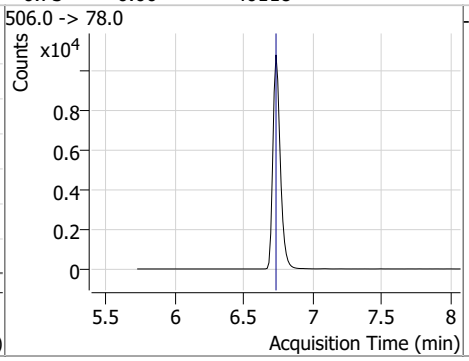


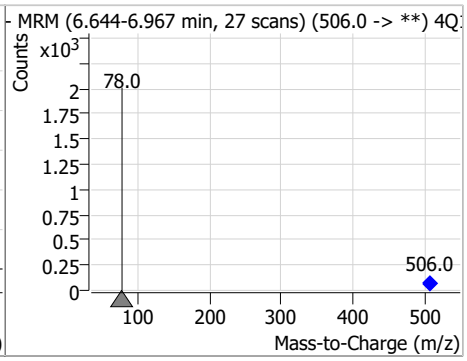




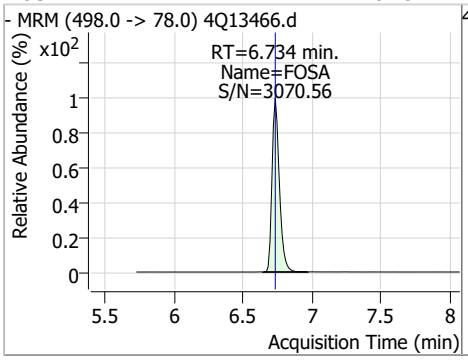
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	21.61	6.73	0.00	40118				

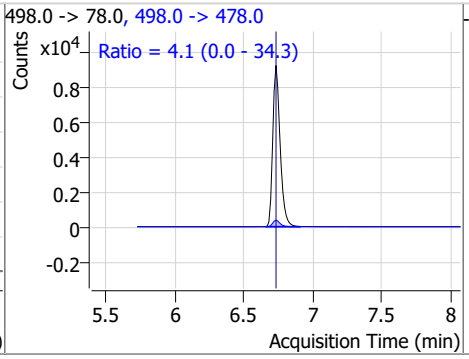


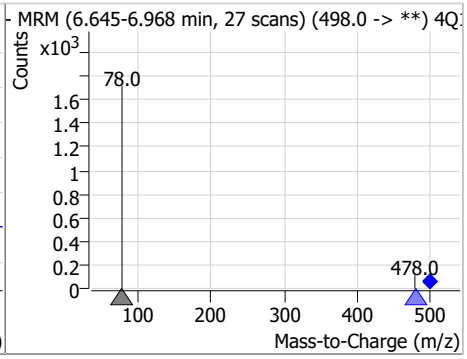




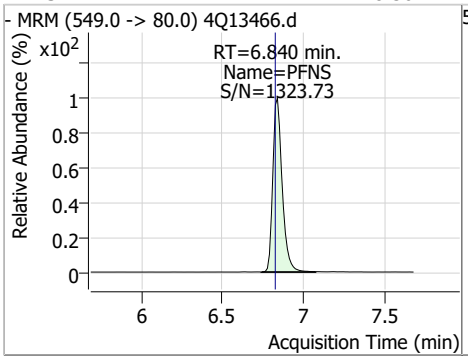
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	18.25	6.73	0.00	34288	498.0 -> 478.0	4.1	0.0	34.3

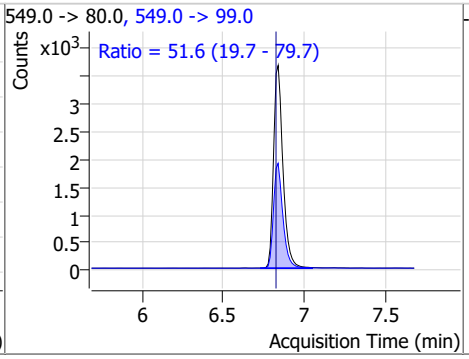


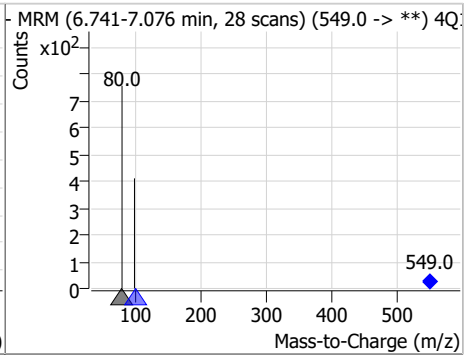




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	18.36	6.84	0.00	14729	549.0 -> 99.0	51.6	19.7	79.7

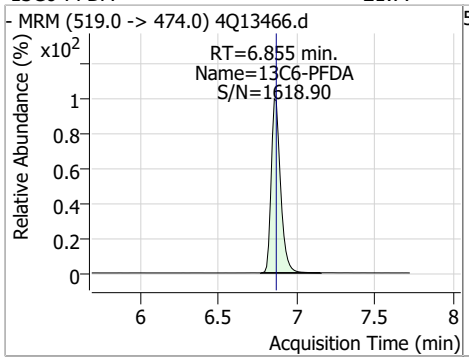


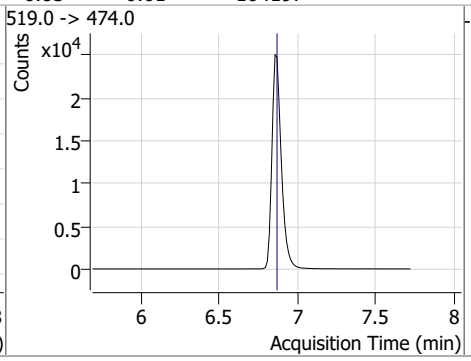


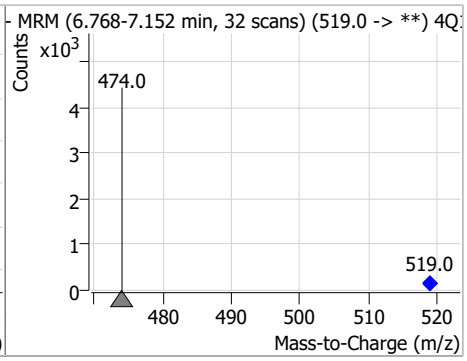


Perfluorinated Compounds by LC/MS/MS

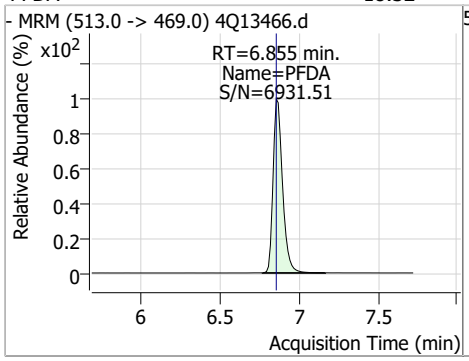
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	21.77	6.85	-0.01	104197				

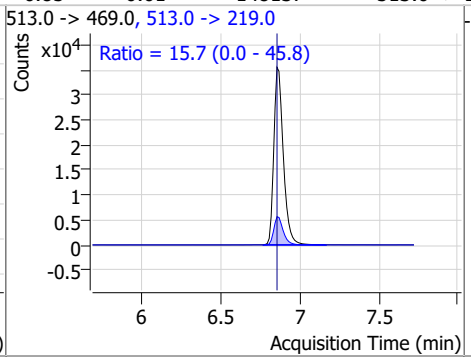


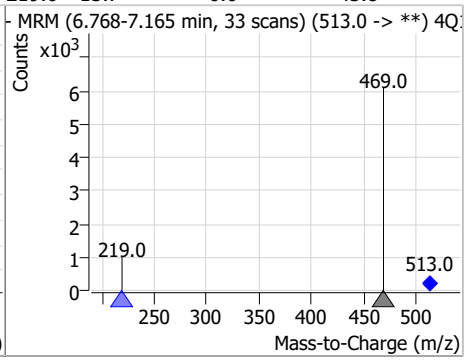




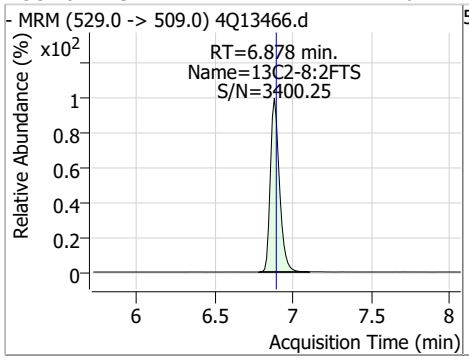
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	18.32	6.85	-0.01	148137	513.0 -> 219.0	15.7	0.0	45.8

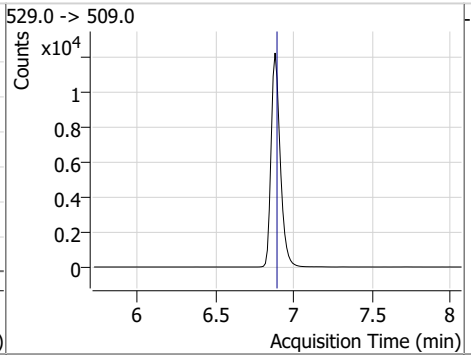


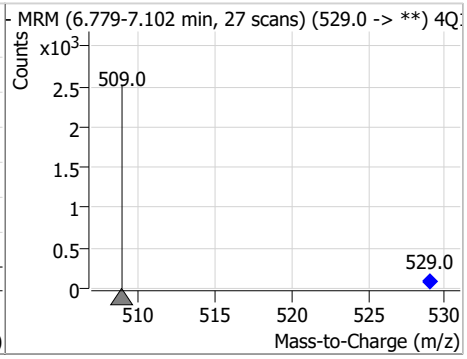




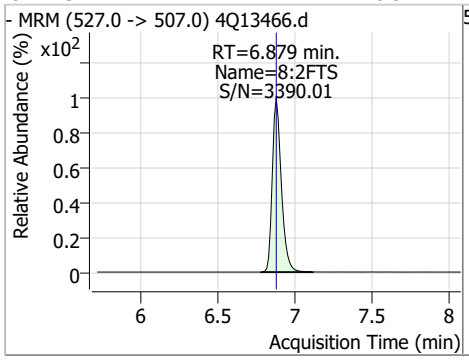
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	21.20	6.88	-0.01	49412				

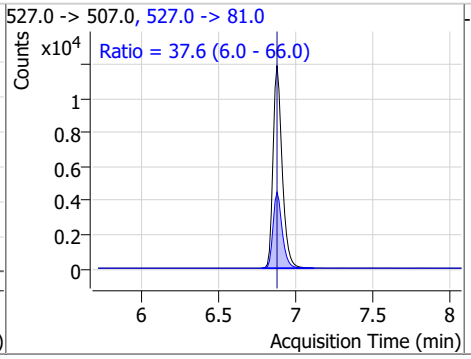


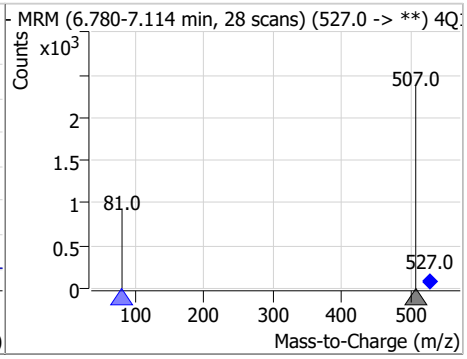




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	18.92	6.88	-0.01	48354	527.0 -> 81.0	37.6	6.0	66.0

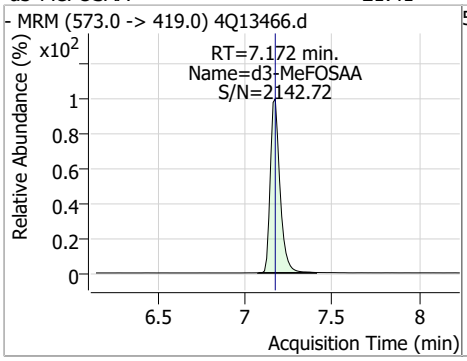


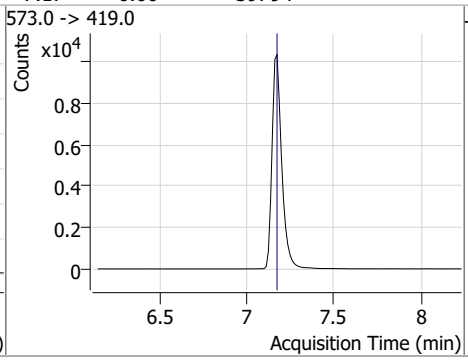


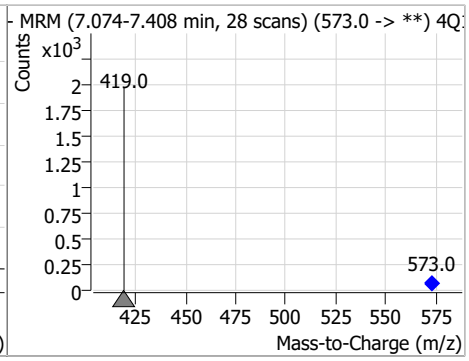


Perfluorinated Compounds by LC/MS/MS

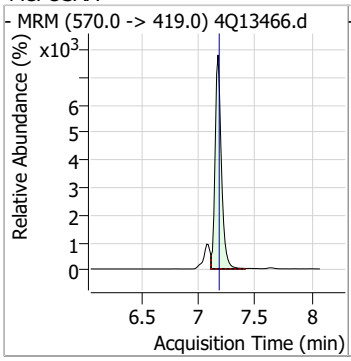
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	21.41	7.17	0.00	39794				

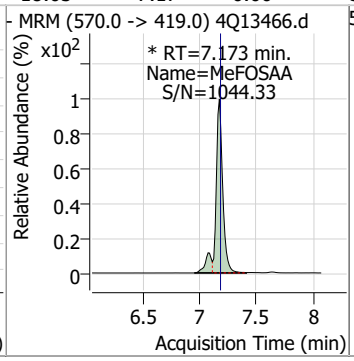


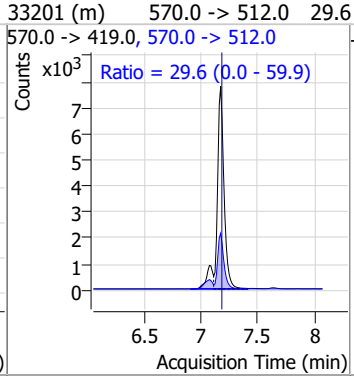


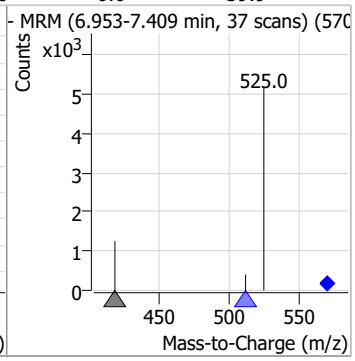


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	18.05	7.17	0.00	33201 (m)	570.0 -> 512.0	29.6	0.0	59.9

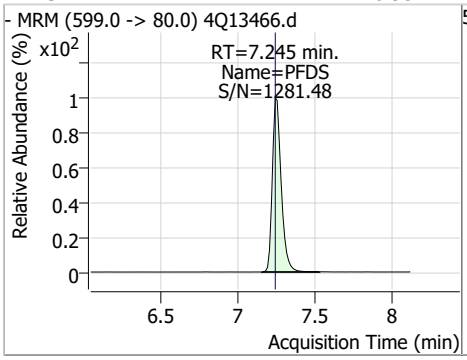


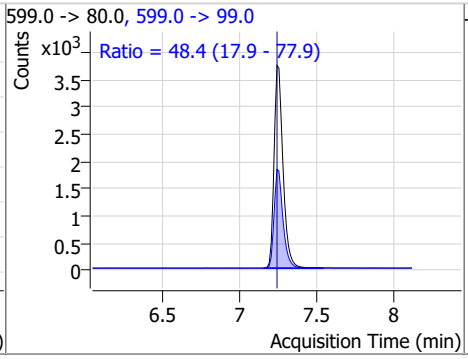


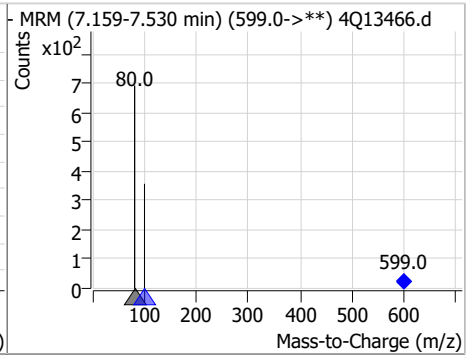




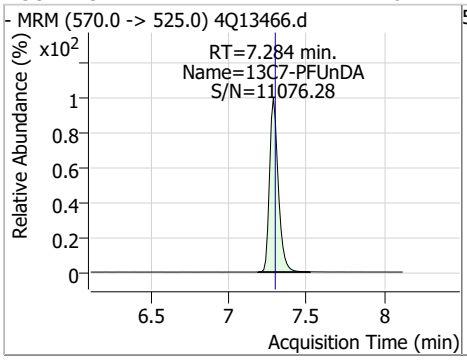
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	16.95	7.25	-0.01	14881	599.0 -> 99.0	48.4	17.9	77.9

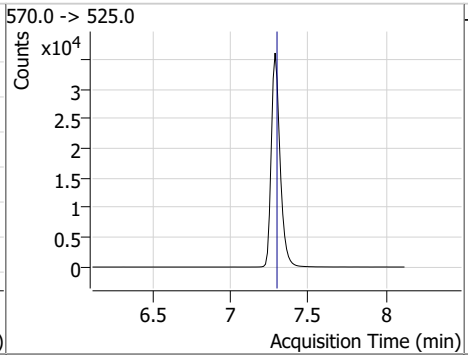


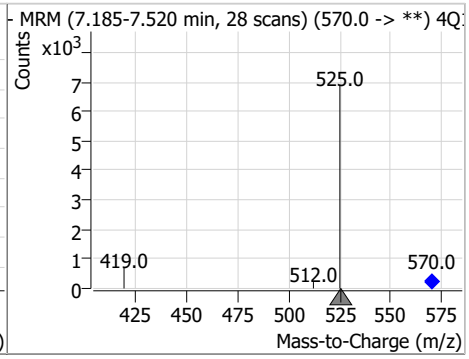




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	21.62	7.28	-0.01	141649				

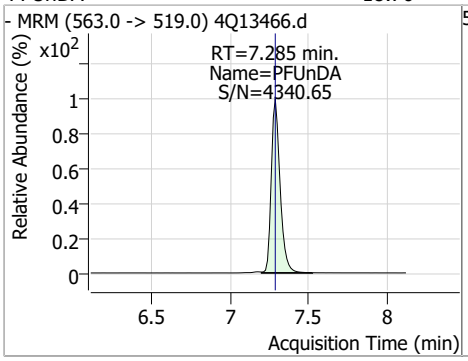


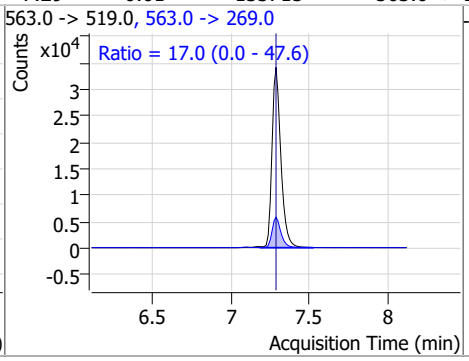


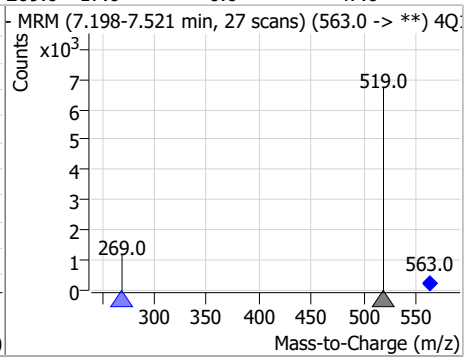


Perfluorinated Compounds by LC/MS/MS

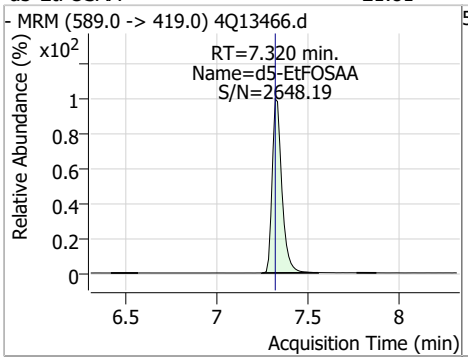
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	18.70	7.29	-0.01	133715	563.0 -> 269.0	17.0	0.0	47.6

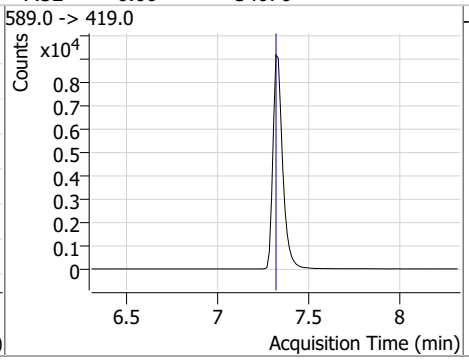


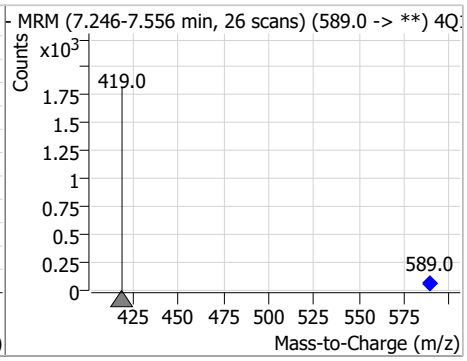




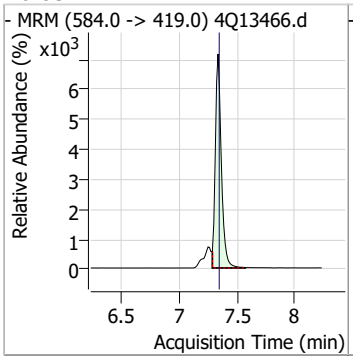
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	21.81	7.32	0.00	34076				

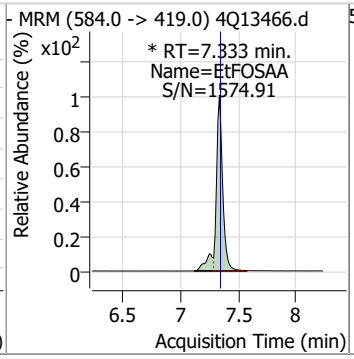


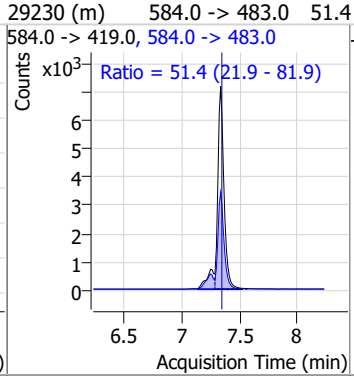


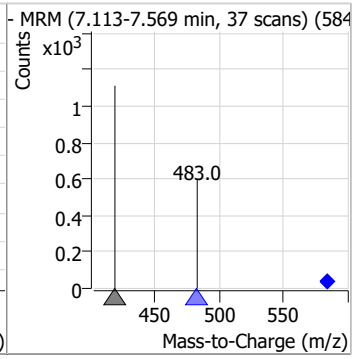


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	18.04	7.33	0.00	29230 (m)	584.0 -> 483.0	51.4	21.9	81.9

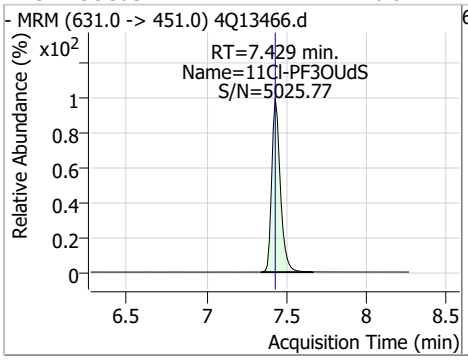


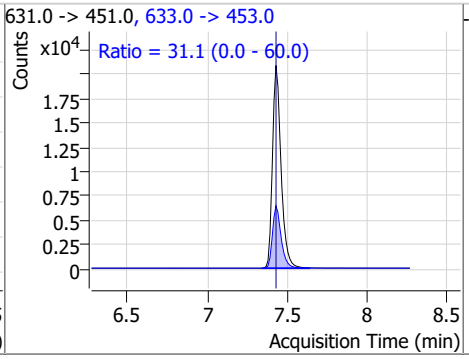


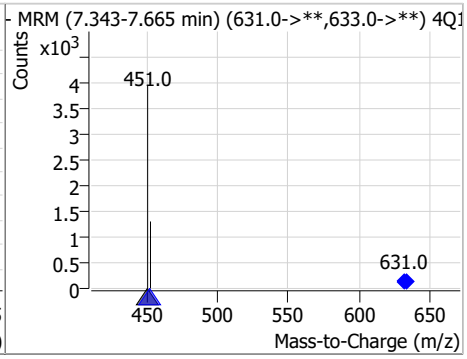




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	18.52	7.43	-0.01	77768	633.0 -> 453.0	31.1	0.0	60.0

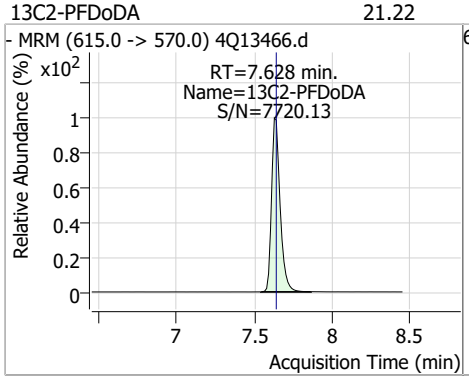


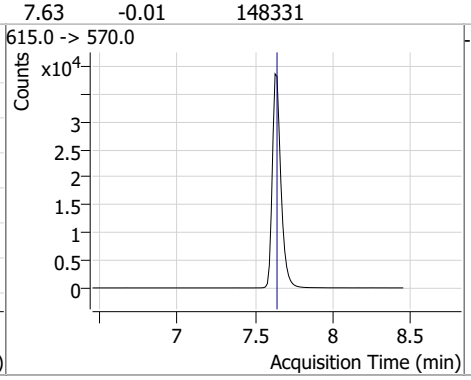


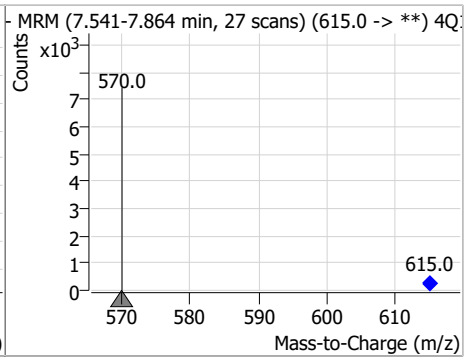


Perfluorinated Compounds by LC/MS/MS

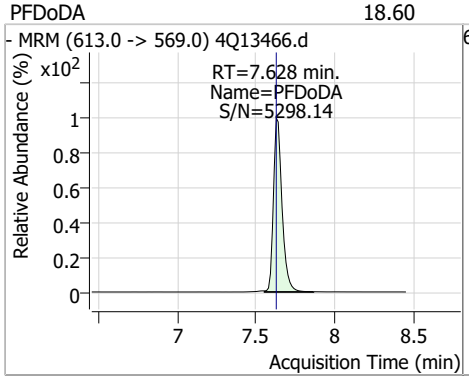
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	21.22	7.63	-0.01	148331				

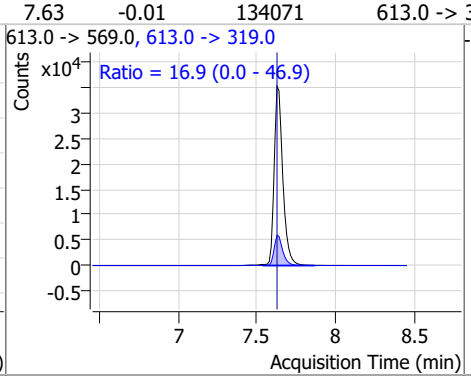


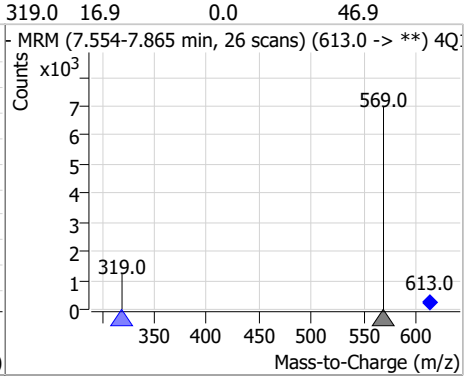




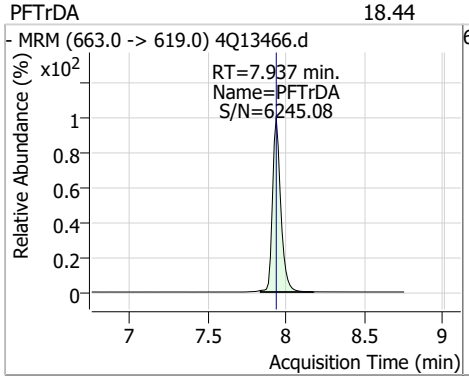
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	18.60	7.63	-0.01	134071	613.0 -> 319.0	16.9	0.0	46.9

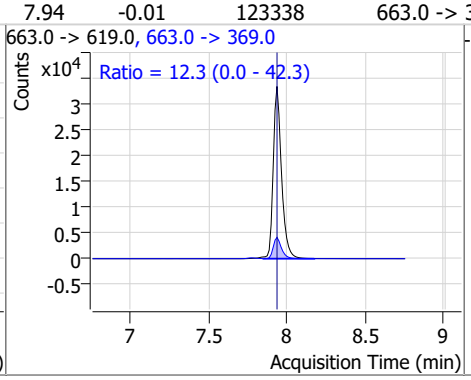


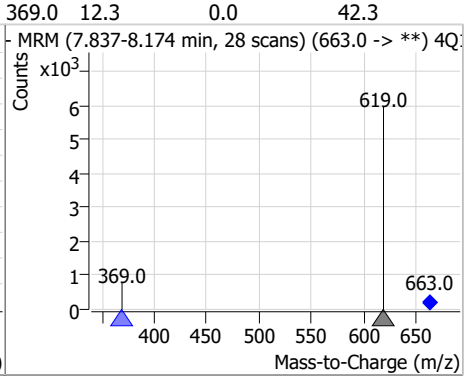




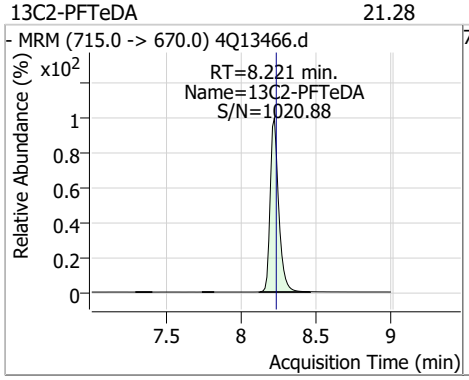
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	18.44	7.94	-0.01	123338	663.0 -> 369.0	12.3	0.0	42.3

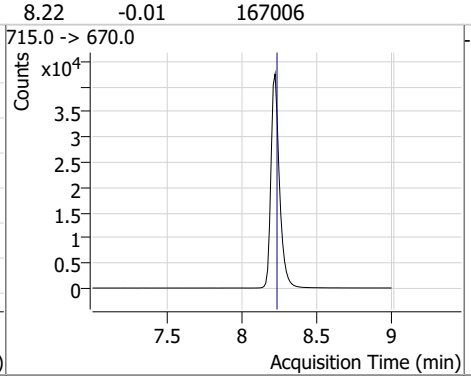


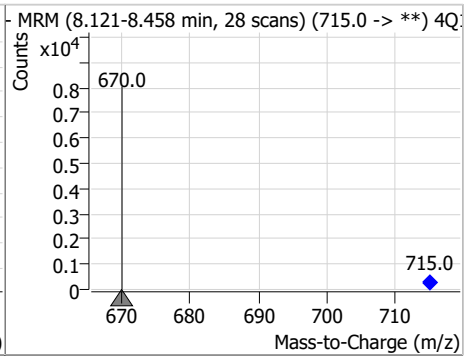




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	21.28	8.22	-0.01	167006				

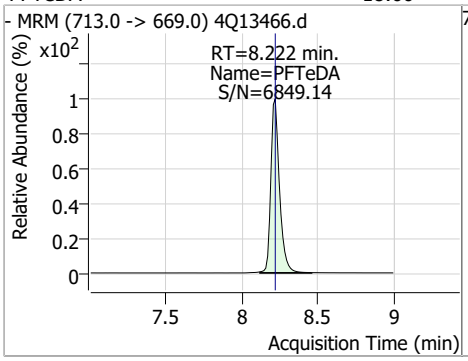


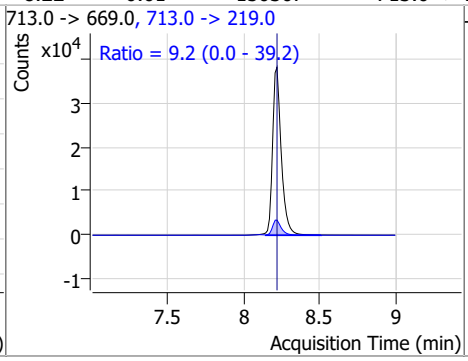


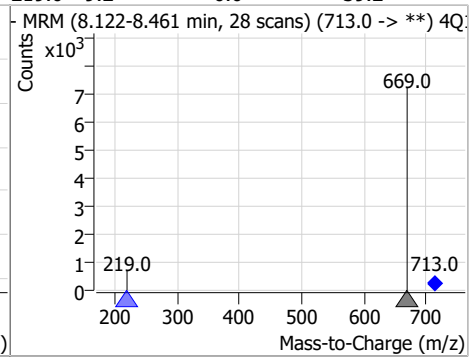


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	18.60	8.22	-0.01	150367	713.0 -> 219.0	9.2	0.0	39.2







Manual Integration Approval Summary

Sample Number: S4Q189-CC189
Lab FileID: 4Q13466.D
Injection Time: 04/18/21 22:26
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/19/21 09:46 Nancy Saunders
Supervisor approved: 04/19/21 15:40 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.19	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.36	Split peak
MeFOSAA	2355-31-9		7.17	Split peak
EtFOSAA	2991-50-6		7.33	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/19/21 15:40

Perfluorinated Compounds by LC/MS/MS

Data File : 4Q13468.d
Operator : natashag
Acq. Method : 537_ID.m
Acq. Date-Time : 4/18/2021 10:56:42 PM
Sample Name : cc189-1.0LL
Vial : P1-A3
DA Method File : ID_041821_S4Q189.quantmethod.xml
Batch Name : s4q189a.batch.bin
Sample Information : op84918,S4Q189,250,,,1,1,water

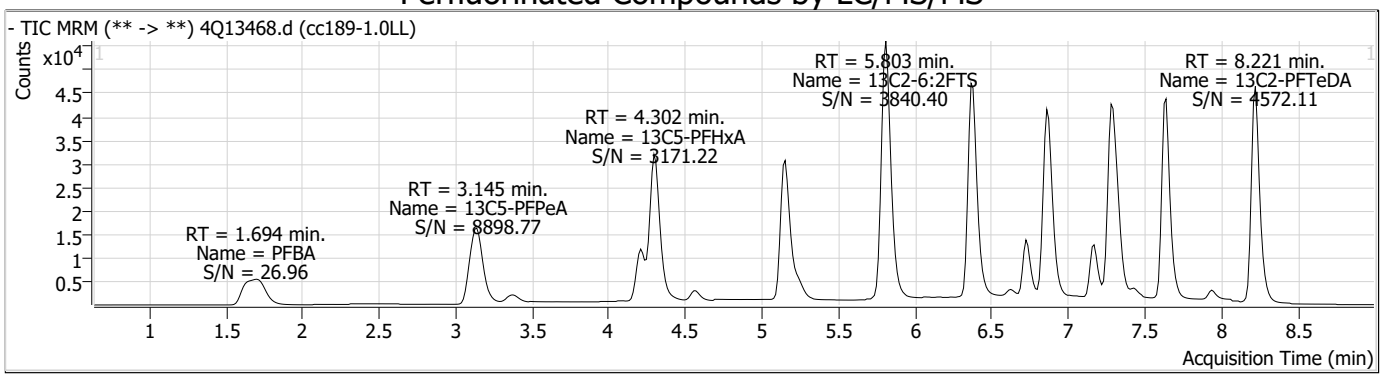
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.700	217.0 -> 172.0	54516	20.00	µg/L	0.013
M5-PFPeA	3.145	268.0 -> 223.0	97045	20.00	µg/L	0.000
M5-PFHxA	4.302	318.0 -> 273.0	133484	20.00	µg/L	-0.013
M4-PFHpA	5.157	367.0 -> 322.0	116650	20.00	µg/L	0.000
M8-PFOA	5.816	421.0 -> 376.0	160433	20.00	µg/L	-0.012
M9-PFNA	6.374	472.0 -> 427.0	170374	20.00	µg/L	-0.012
M6-PFDA	6.867	519.0 -> 474.0	109255	20.00	µg/L	0.000
M7-PFUnDA	7.284	570.0 -> 525.0	147285	20.00	µg/L	-0.012
M2-PFDoDA	7.640	615.0 -> 570.0	153498	20.00	µg/L	0.000
M2-PFTeDA	8.221	715.0 -> 670.0	170150	20.00	µg/L	-0.013
M8-FOSA	6.732	506.0 -> 78.0	43164	20.00	µg/L	0.000
M3-PFBS	3.381	302.0 -> 99.0	7380	20.00	µg/L	0.000
M3-PFHxS	5.192	402.0 -> 99.0	7042	20.00	µg/L	-0.012
M8-PFOS	6.372	507.0 -> 99.0	9507	20.00	µg/L	0.000
M2-4:2FTS	4.212	329.0 -> 309.0	46129	20.00	µg/L	0.000
M2-6:2FTS	5.803	429.0 -> 409.0	61617	20.00	µg/L	0.000
M2-8:2FTS	6.878	529.0 -> 509.0	49215	20.00	µg/L	-0.012
M3-MeFOSAA	7.173	573.0 -> 419.0	40146	20.00	µg/L	0.000
M3-HFPO-DA	4.566	287.0 -> 169.0	7702	20.00	µg/L	-0.012
M5-EtFOSAA	7.320	589.0 -> 419.0	34800	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.212	329.0 -> 309.0	46129	20.30	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.5%		
13C2-6:2FTS	5.803	429.0 -> 409.0	61617	20.60	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.0%		
13C2-8:2FTS	6.878	529.0 -> 509.0	49215	21.12	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.6%		
13C2-PFDoDA	7.640	615.0 -> 570.0	153498	21.96	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.8%		
13C2-PFTeDA	8.221	715.0 -> 670.0	170150	21.68	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.4%		
13C3-PFBS	3.381	302.0 -> 99.0	7380	21.65	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.2%		
13C3-PFHxS	5.192	402.0 -> 99.0	7042	21.86	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.3%		
13C4-PFBA	1.700	217.0 -> 172.0	54516	22.07	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.4%		
13C4-PFHpA	5.157	367.0 -> 322.0	116650	21.88	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.4%		
13C5-PFHxA	4.302	318.0 -> 273.0	133484	21.89	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.5%		
13C5-PFPeA	3.145	268.0 -> 223.0	97045	21.84	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.2%		
13C6-PFDA	6.867	519.0 -> 474.0	109255	22.82	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 114.1%		

Perfluorinated Compounds by LC/MS/MS

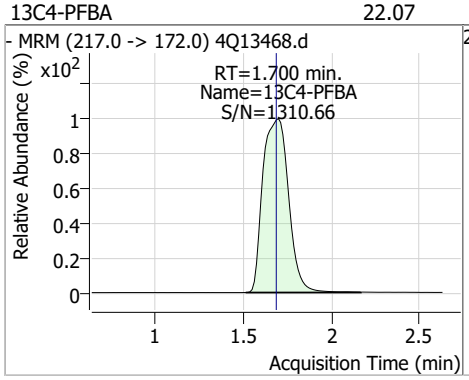
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
13C7-PFUnDA	7.284	570.0 -> 525.0	147285	22.48	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 112.4%			
13C8-FOSA	6.732	506.0 -> 78.0	43164	23.25	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 116.3%			
13C8-PFOA	5.816	421.0 -> 376.0	160433	21.84	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.2%			
13C8-PFOS	6.372	507.0 -> 99.0	9507	22.33	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 111.7%			
13C9-PFNA	6.374	472.0 -> 427.0	170374	21.84	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.2%			
d3-MeFOSAA	7.173	573.0 -> 419.0	40146	21.60	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.0%			
13C3-HFPO-DA	4.566	287.0 -> 169.0	7691	22.05	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.2%			
d5-EtFOSAA	7.320	589.0 -> 419.0	34784	22.26	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 111.3%			
Target Compounds							QValue
4:2FTS	4.214	327.0 -> 307.0	2512	1.02	µg/L		97
6:2FTS	5.803	427.0 -> 407.0	3502	1.08	µg/L		99
8:2FTS	6.879	527.0 -> 507.0	2541	1.00	µg/L		89
EtFOSAA	7.333	584.0 -> 419.0	1500	0.91	µg/L	m	95
FOSA	6.734	498.0 -> 78.0	1932	0.96	µg/L		100
MeFOSAA	7.173	570.0 -> 419.0	1794	0.97	µg/L	m	100
PFBA	1.694	213.0 -> 169.0	1122	0.94	µg/L		100
PFBS	3.370	299.0 -> 80.0	1164	0.97	µg/L		97
PFDA	6.867	513.0 -> 469.0	7817	0.92	µg/L		97
PFDoDA	7.641	613.0 -> 569.0	7093	0.95	µg/L		99
PFDS	7.258	599.0 -> 80.0	809	0.89	µg/L		90
PFHpA	5.157	363.0 -> 319.0	7157	0.94	µg/L		99
PFHpS	5.827	449.0 -> 80.0	893	1.02	µg/L		96
PFHxA	4.302	313.0 -> 269.0	5731	0.94	µg/L		97
PFHxS	5.193	399.0 -> 80.0	875	0.98	µg/L	m	99
PFNA	6.386	463.0 -> 419.0	6653	0.95	µg/L		98
PFNS	6.840	549.0 -> 80.0	881	1.08	µg/L		100
PFOA	5.817	413.0 -> 369.0	9185	0.98	µg/L		100
PFOS	6.373	499.0 -> 80.0	1043	1.03	µg/L	m	97
PFPeA	3.147	263.0 -> 219.0	4091	0.98	µg/L		100
PFPeS	4.423	349.0 -> 80.0	802	0.91	µg/L		94
PFTeDA	8.222	713.0 -> 669.0	8012	0.97	µg/L		100
PFTrDA	7.937	663.0 -> 619.0	6341	0.93	µg/L		99
PFUnDA	7.285	563.0 -> 519.0	7030	0.95	µg/L		99
11Cl-PF3OUdS	7.429	631.0 -> 451.0	4180	0.96	µg/L		94
9Cl-PF3ONS	6.629	531.0 -> 351.0	4058	0.94	µg/L		97
ADONA	5.245	377.0 -> 251.0	8551	0.95	µg/L		98
HFPO-DA	4.574	329.0 -> 169.0	1178	0.95	µg/L		93

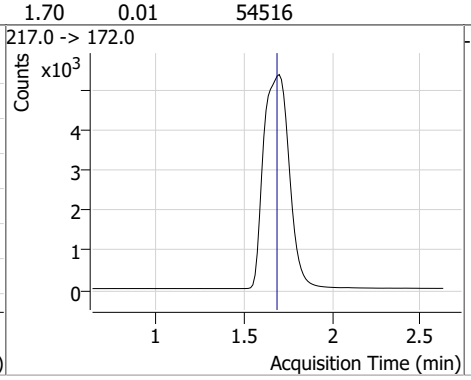
 # = Qualifier out of range, m = manually integrated, + = Area summed

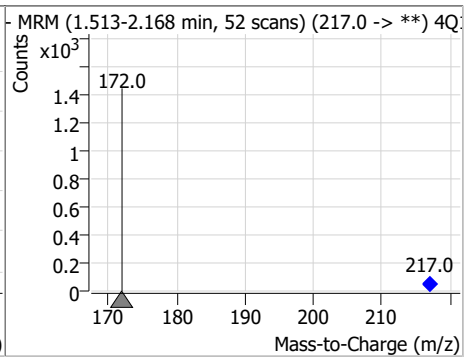
Perfluorinated Compounds by LC/MS/MS



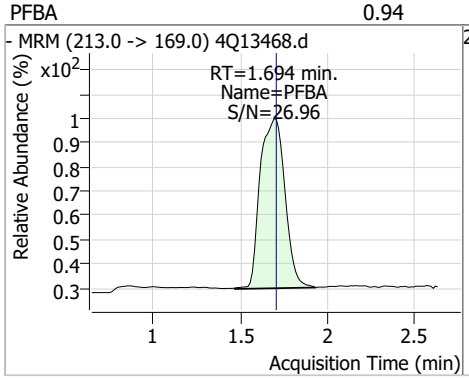
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	22.07	1.70	0.01	54516				

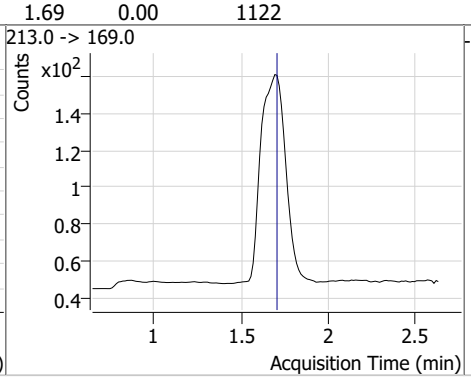


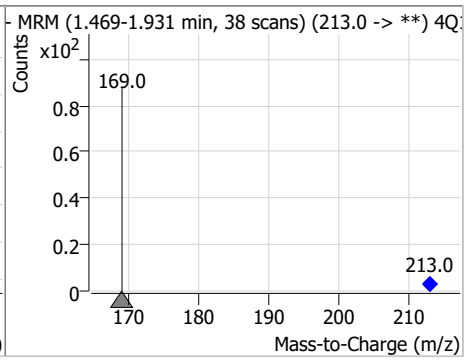




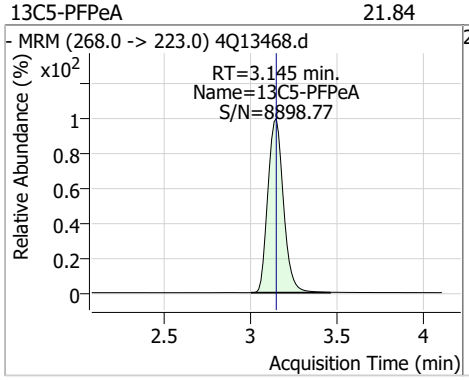
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.94	1.69	0.00	1122				

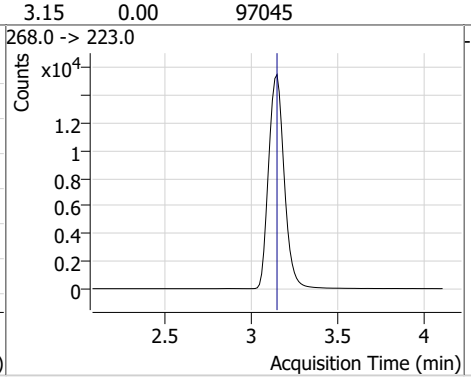


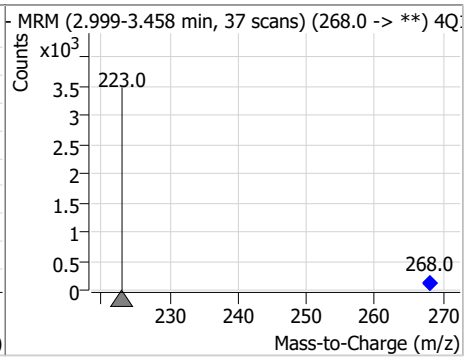




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	21.84	3.15	0.00	97045				

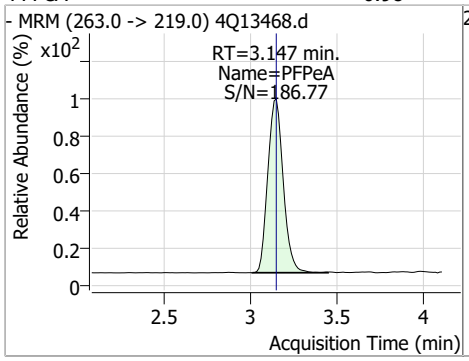


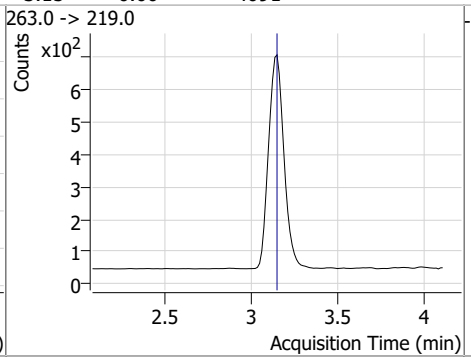


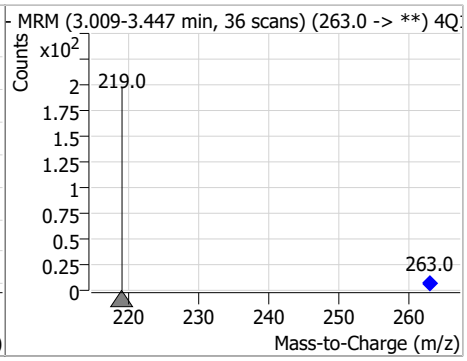


Perfluorinated Compounds by LC/MS/MS

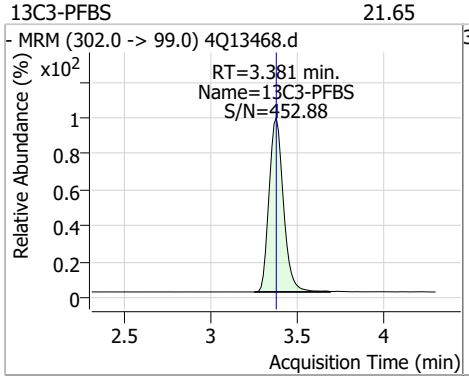
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.98	3.15	0.00	4091				

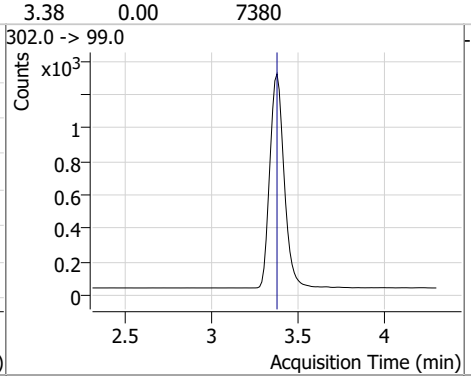


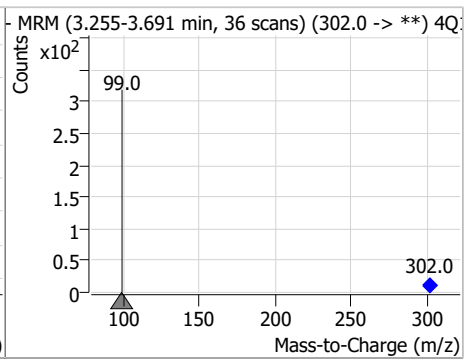




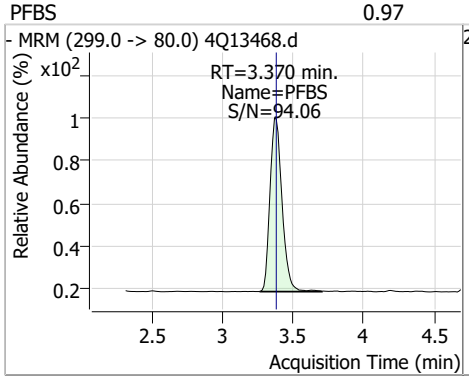
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	21.65	3.38	0.00	7380				

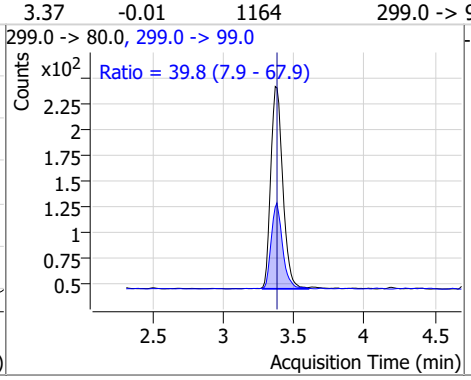


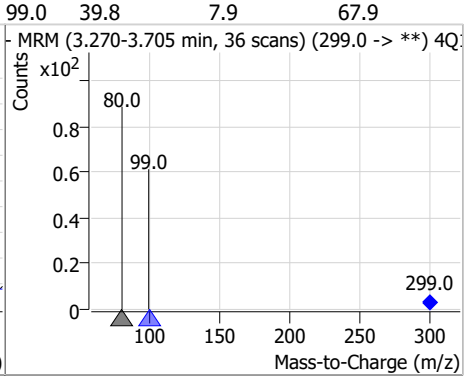




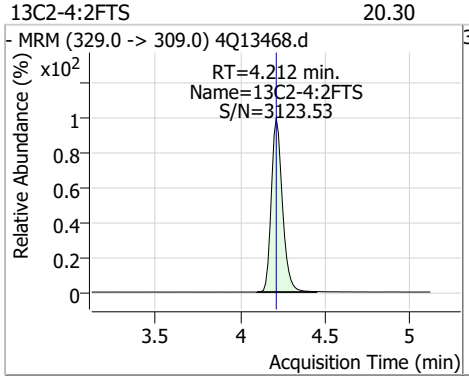
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.97	3.37	-0.01	1164	299.0 -> 99.0	39.8	7.9	67.9

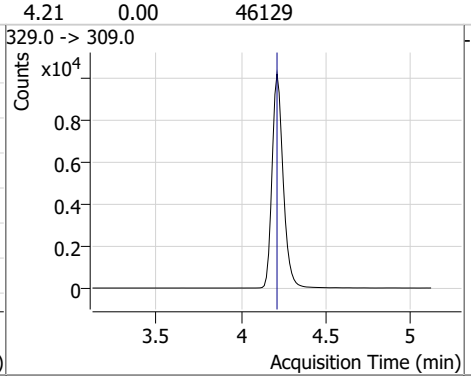


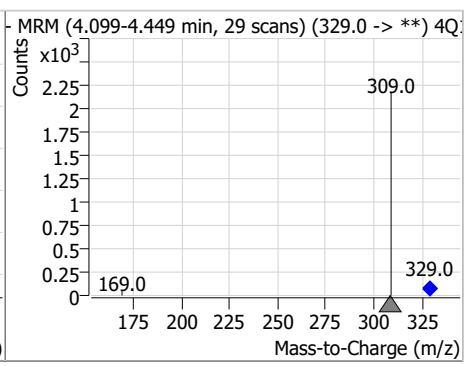




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	20.30	4.21	0.00	46129				

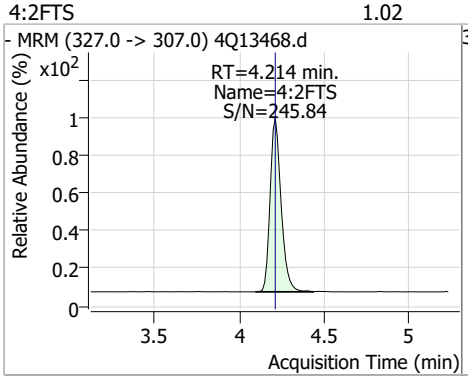


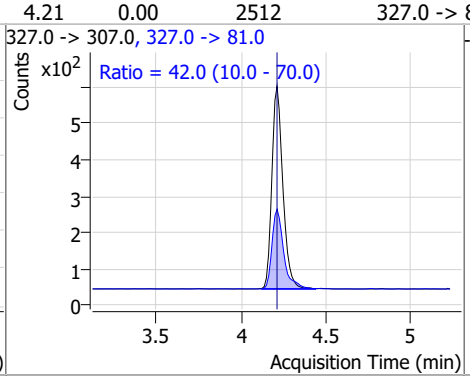


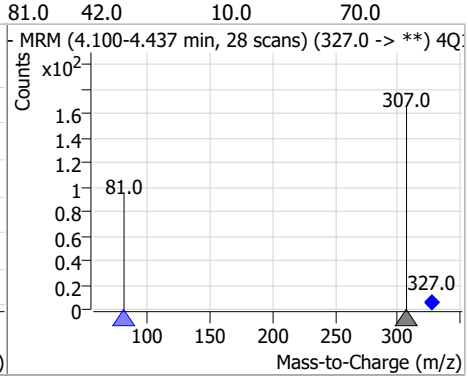


Perfluorinated Compounds by LC/MS/MS

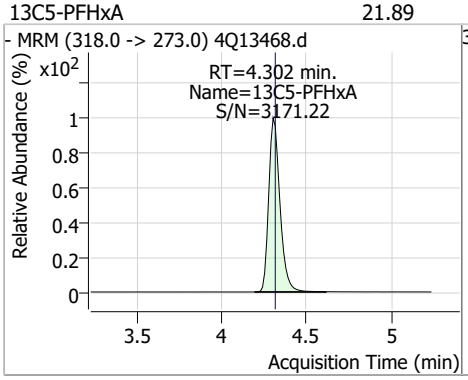
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	1.02	4.21	0.00	2512	327.0 -> 81.0	42.0	10.0	70.0

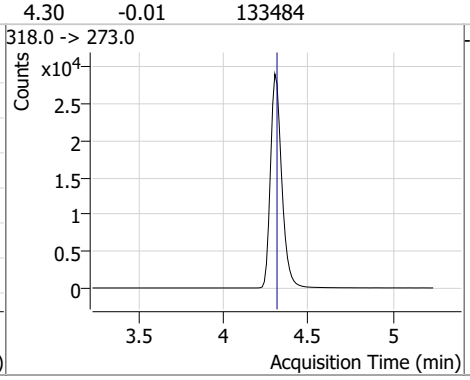


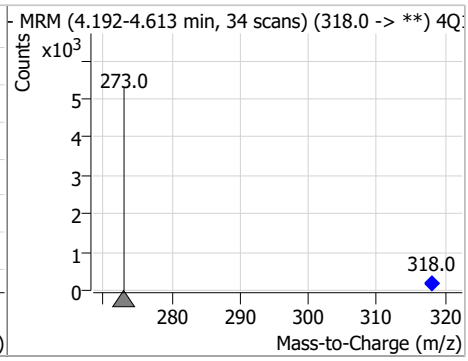




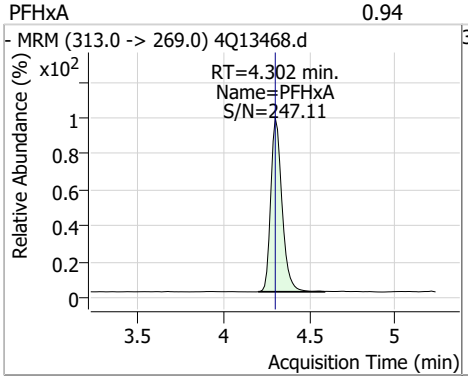
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	21.89	4.30	-0.01	133484				

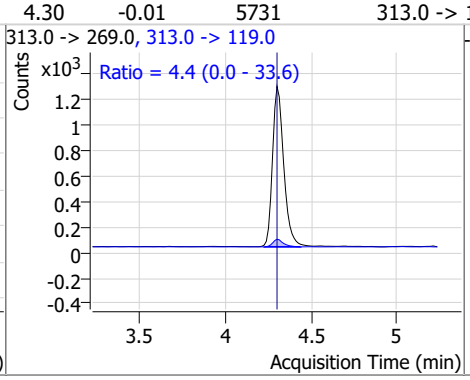


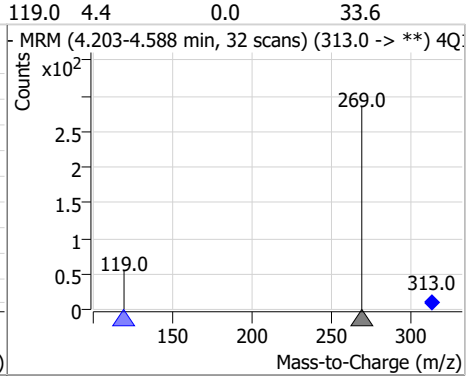




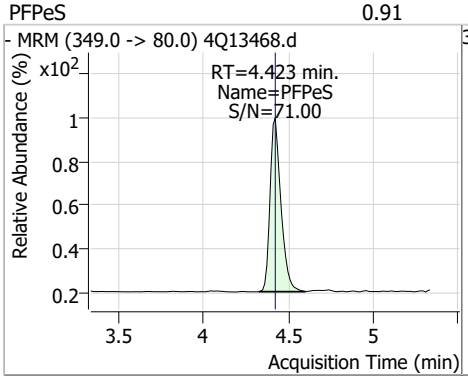
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.94	4.30	-0.01	5731	313.0 -> 119.0	4.4	0.0	33.6

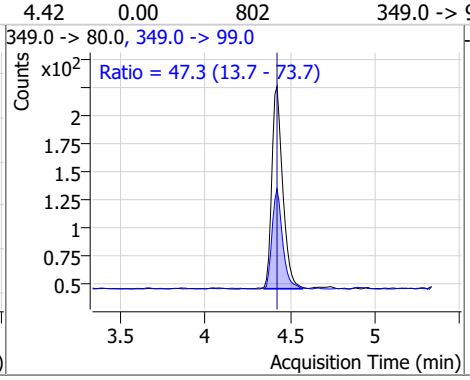


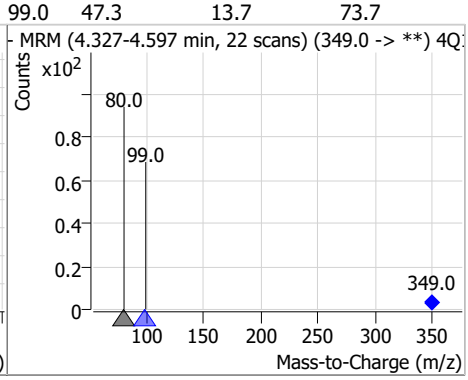




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	0.91	4.42	0.00	802	349.0 -> 99.0	47.3	13.7	73.7

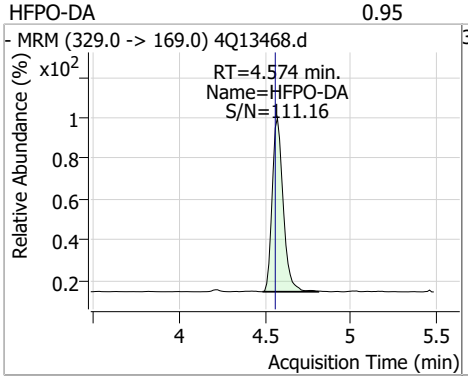


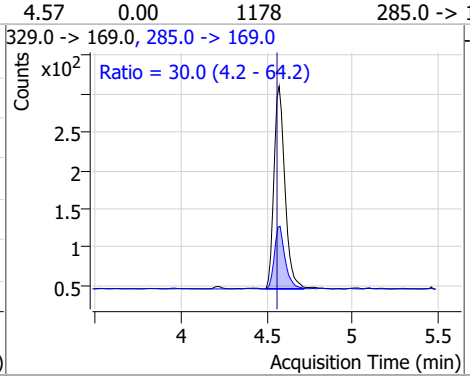


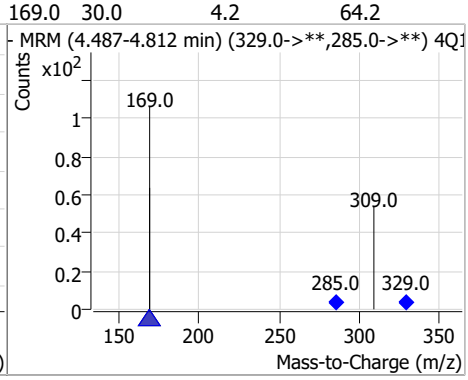


Perfluorinated Compounds by LC/MS/MS

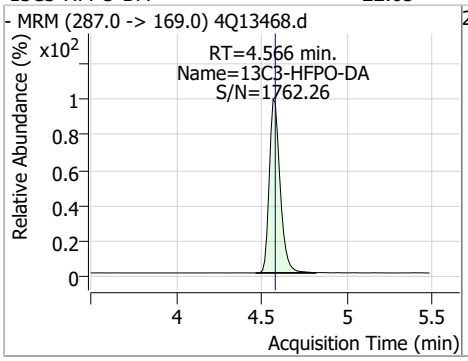
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.95	4.57	0.00	1178	285.0 -> 169.0	30.0	4.2	64.2

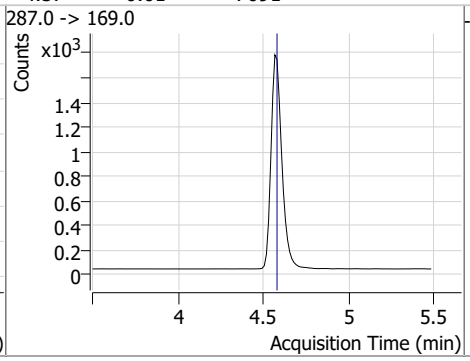


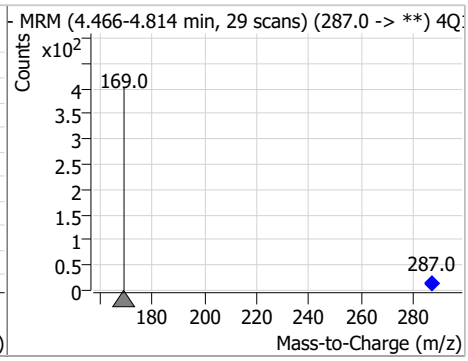




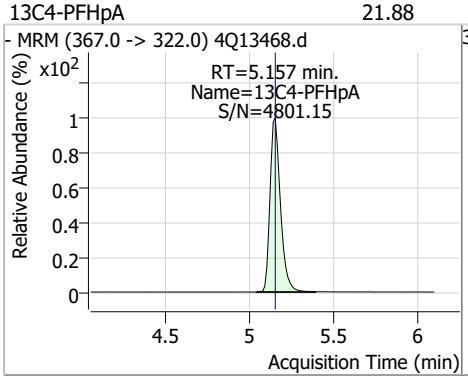
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	22.05	4.57	-0.01	7691				

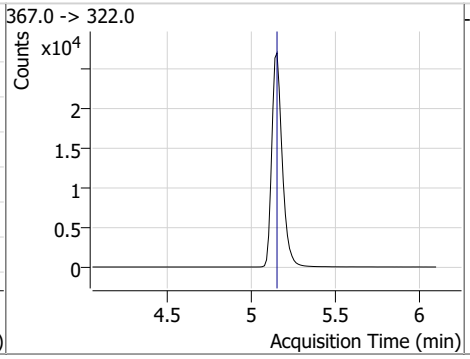


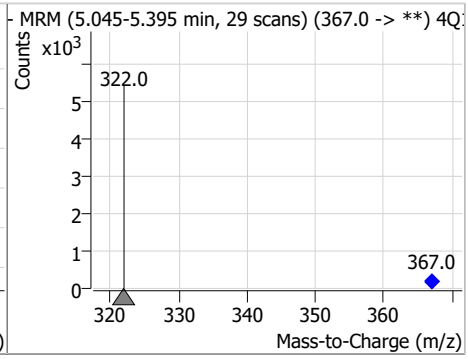




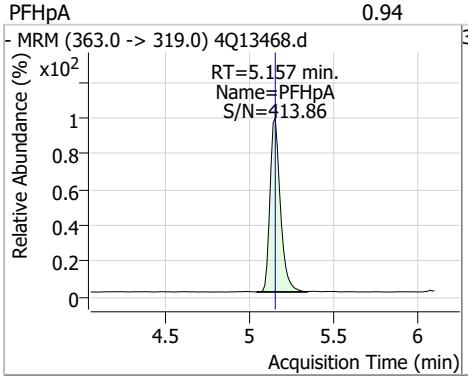
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	21.88	5.16	0.00	116650				

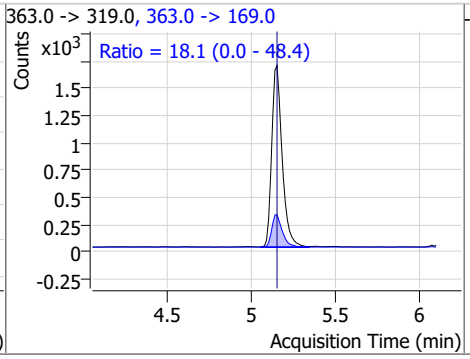


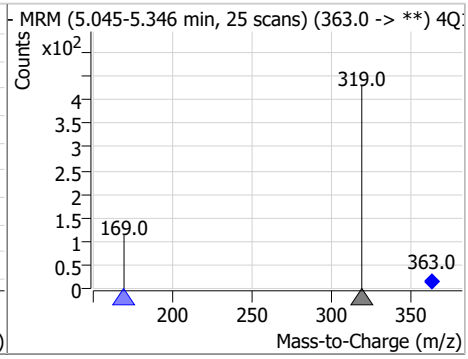




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.94	5.16	0.00	7157	363.0 -> 169.0	18.1	0.0	48.4

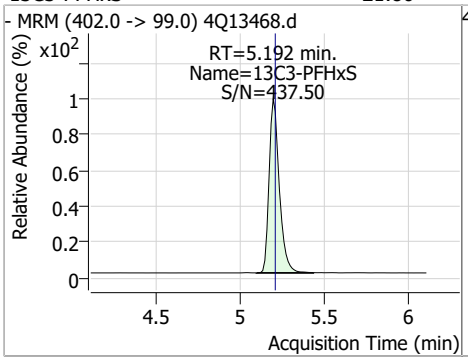


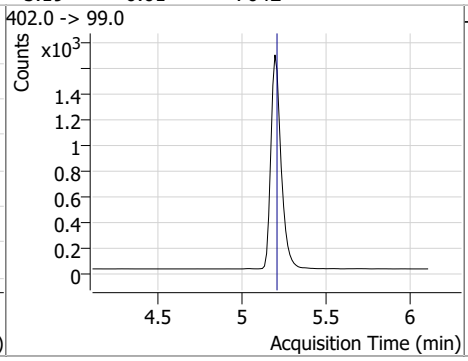


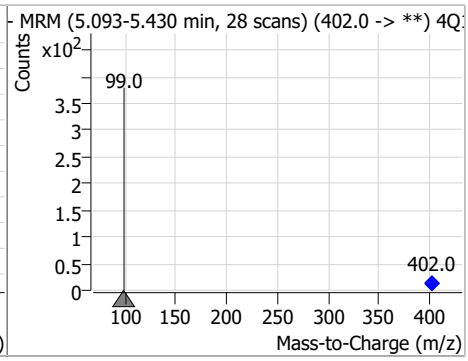


Perfluorinated Compounds by LC/MS/MS

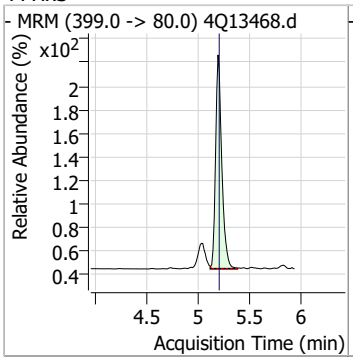
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	21.86	5.19	-0.01	7042				

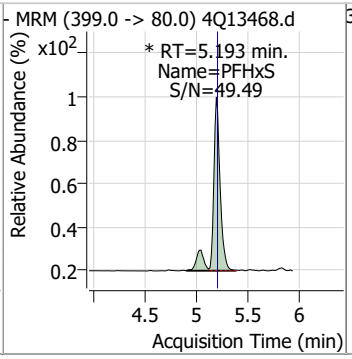


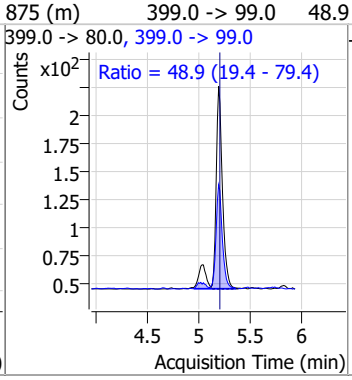


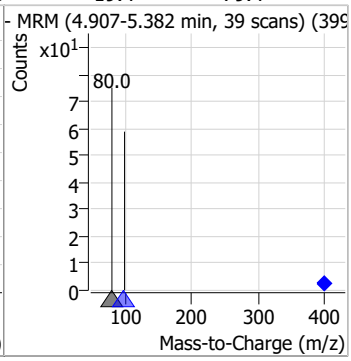


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.98	5.19	-0.01	875 (m)	399.0 -> 99.0	48.9	19.4	79.4

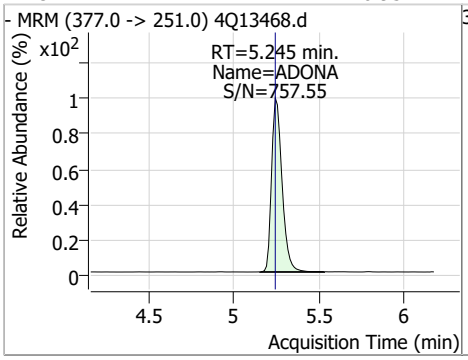


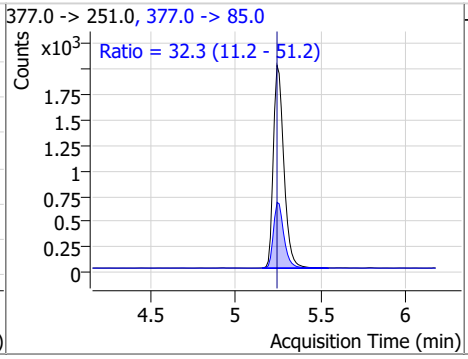


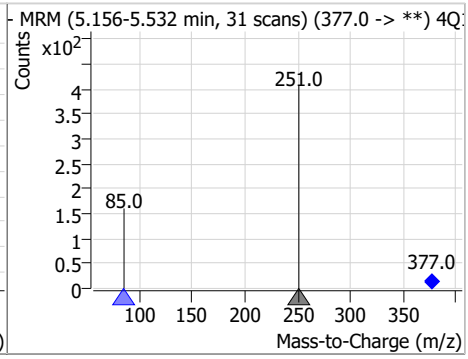




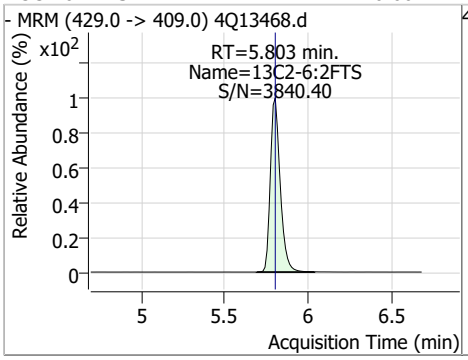
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.95	5.24	-0.01	8551	377.0 -> 85.0	32.3	11.2	51.2

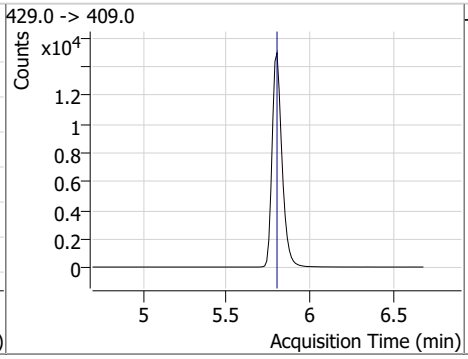


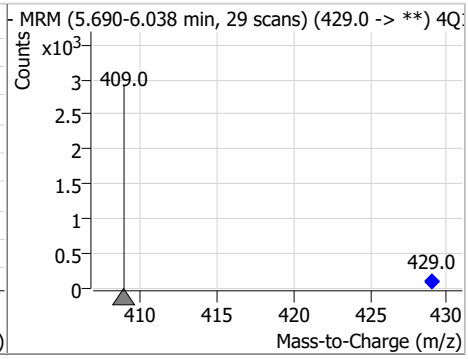




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.60	5.80	0.00	61617				

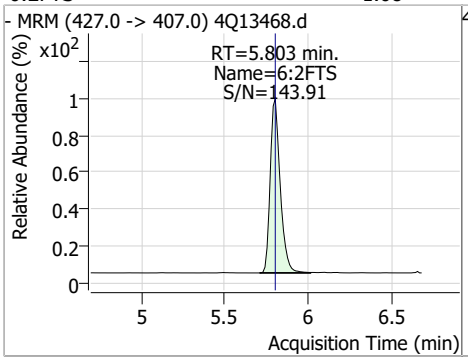


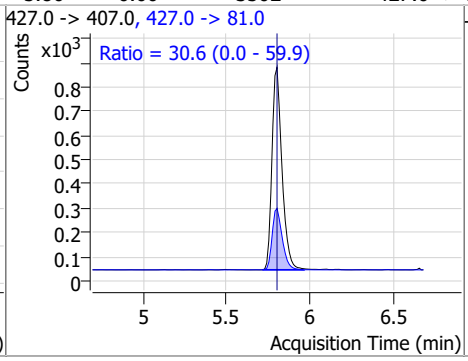


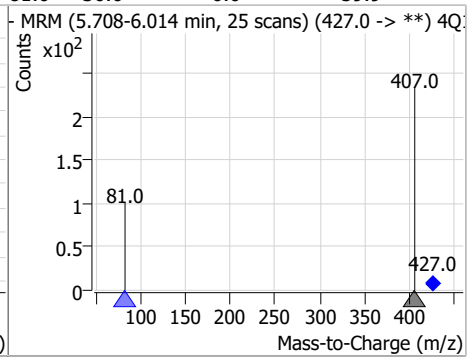


Perfluorinated Compounds by LC/MS/MS

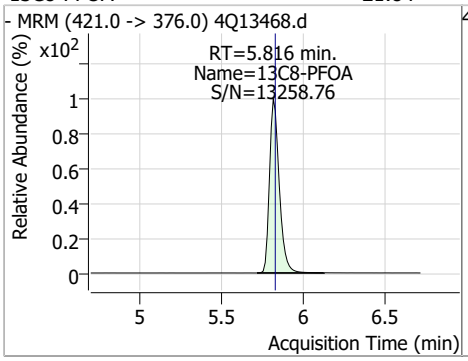
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	1.08	5.80	0.00	3502	427.0 -> 81.0	30.6	0.0	59.9

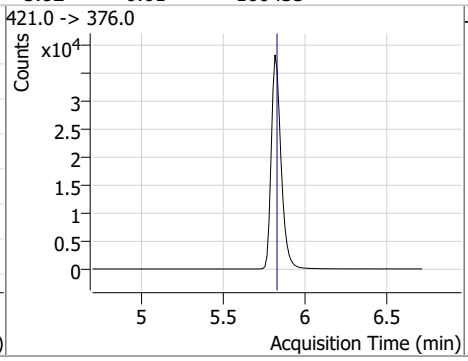


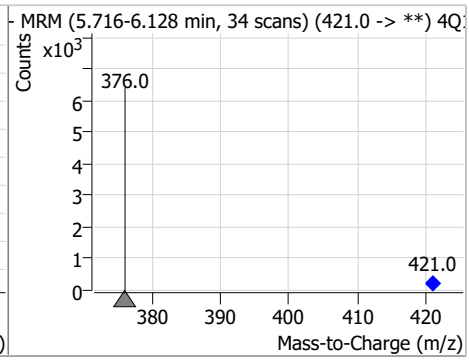




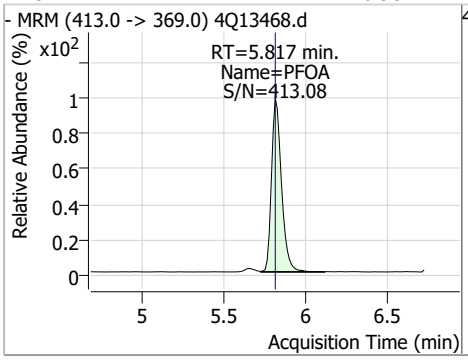
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	21.84	5.82	-0.01	160433				

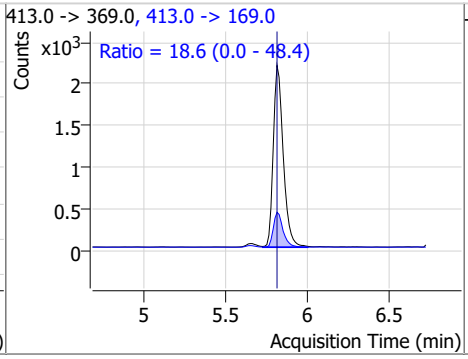


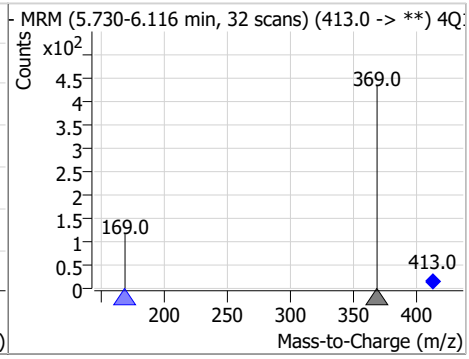




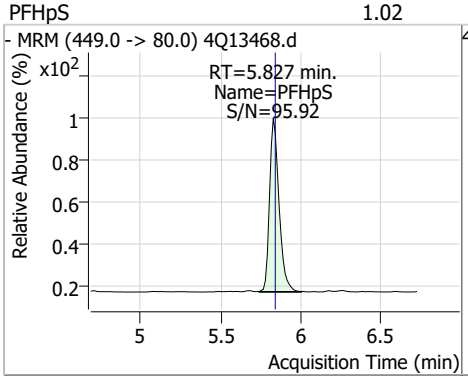
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.98	5.82	-0.01	9185	413.0 -> 169.0	18.6	0.0	48.4

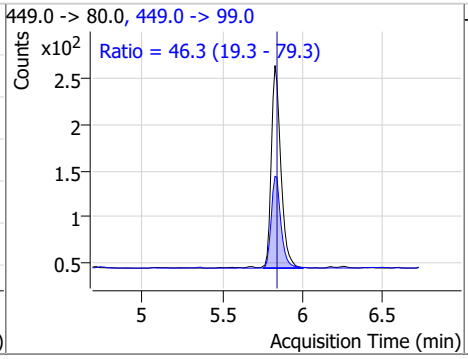


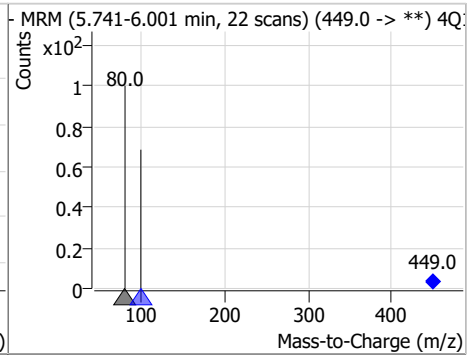




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	1.02	5.83	-0.01	893	449.0 -> 99.0	46.3	19.3	79.3

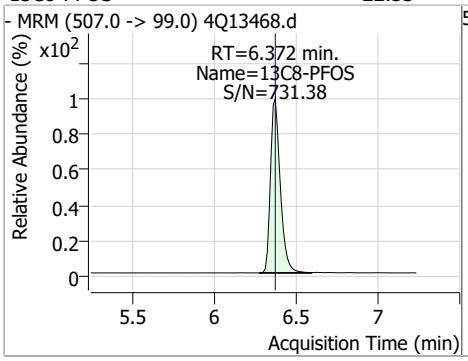


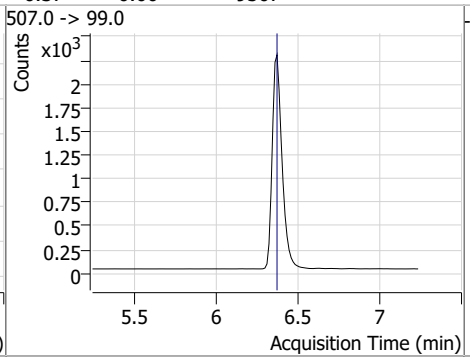


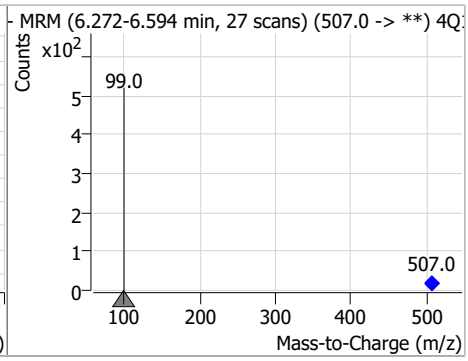


Perfluorinated Compounds by LC/MS/MS

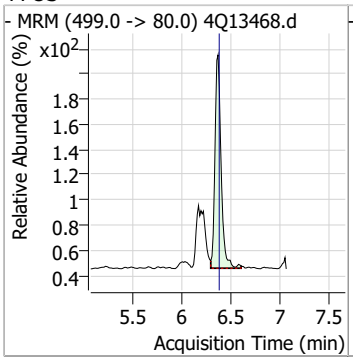
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	22.33	6.37	0.00	9507				

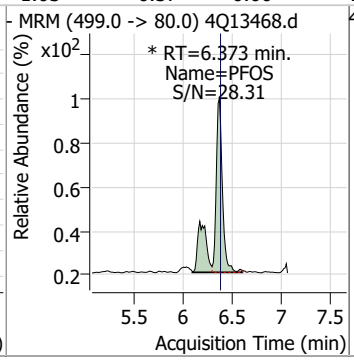


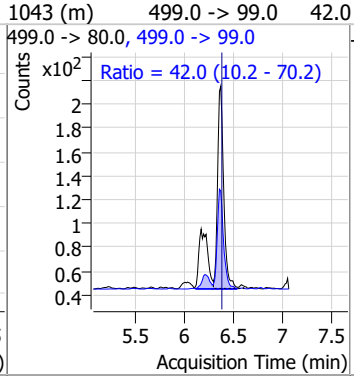


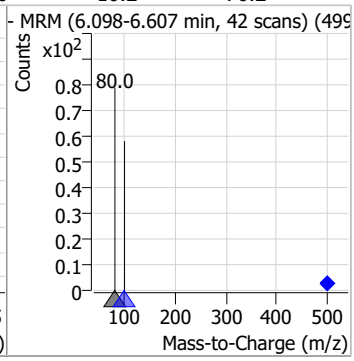


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	1.03	6.37	0.00	1043 (m)	499.0 -> 99.0	42.0	10.2	70.2

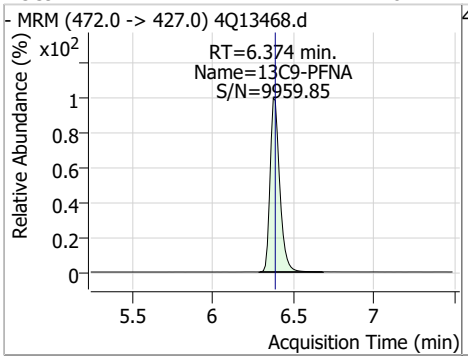


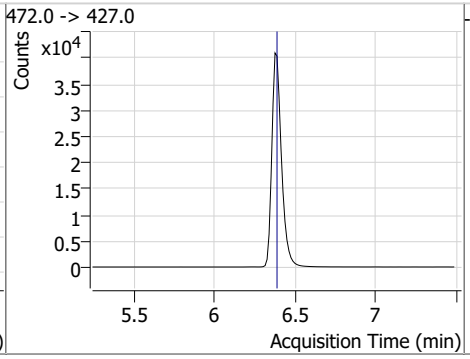


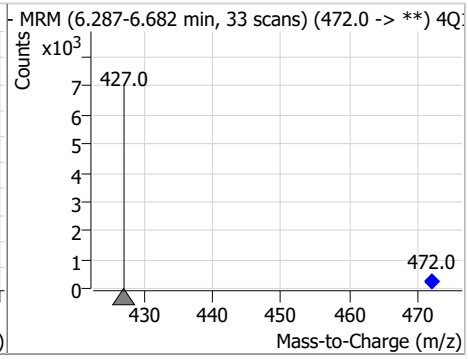




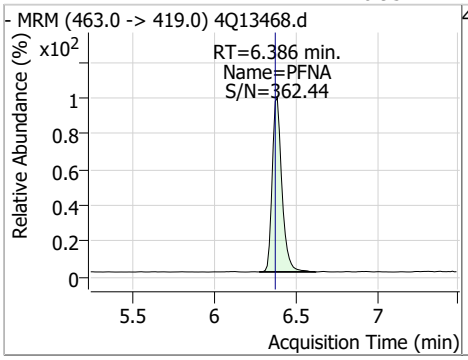
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	21.84	6.37	-0.01	170374				

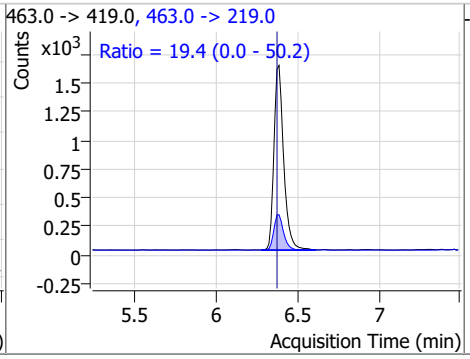


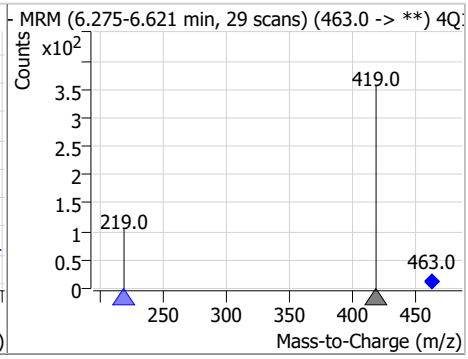




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.95	6.39	0.00	6653	463.0 -> 219.0	19.4	0.0	50.2

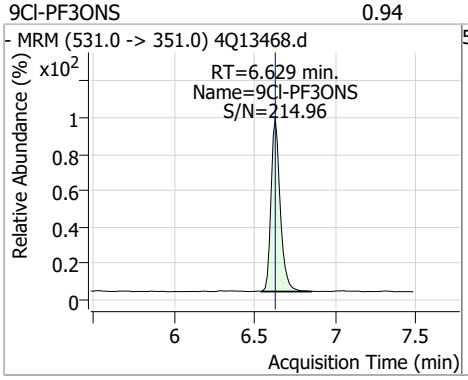


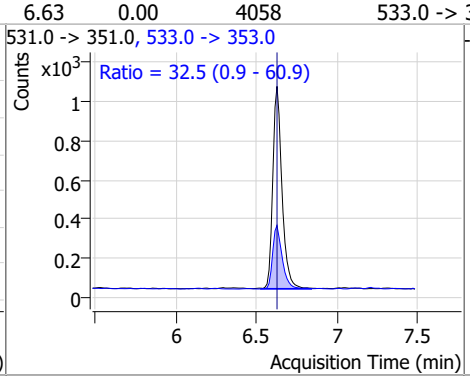


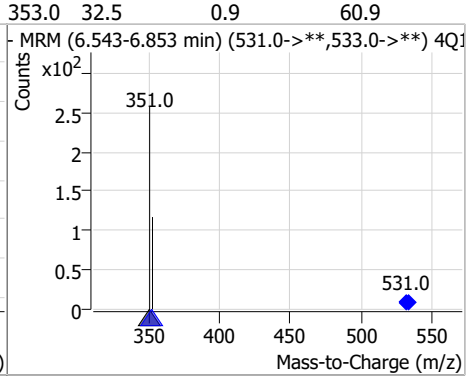


Perfluorinated Compounds by LC/MS/MS

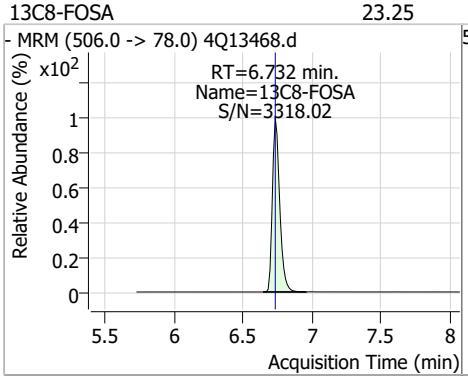
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.94	6.63	0.00	4058	533.0 -> 353.0	32.5	0.9	60.9

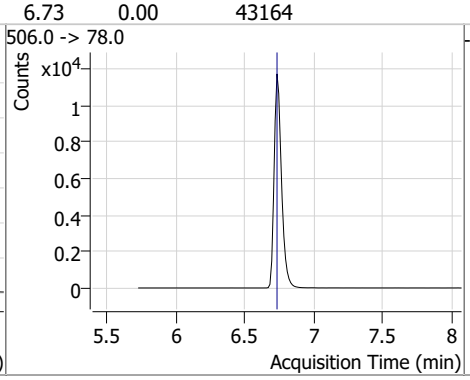


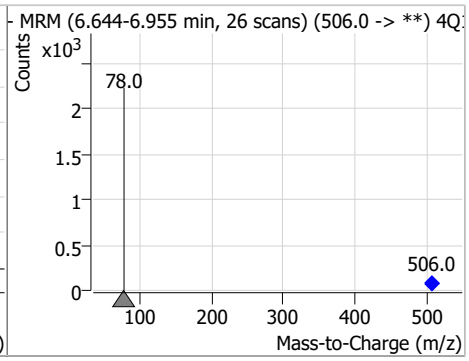




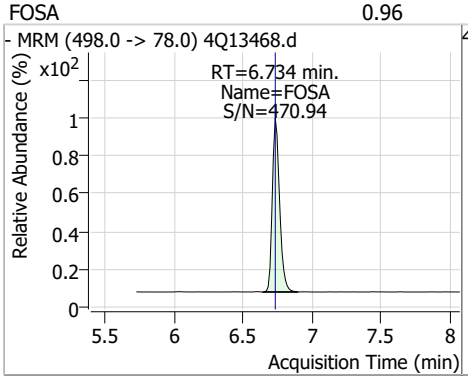
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	23.25	6.73	0.00	43164				

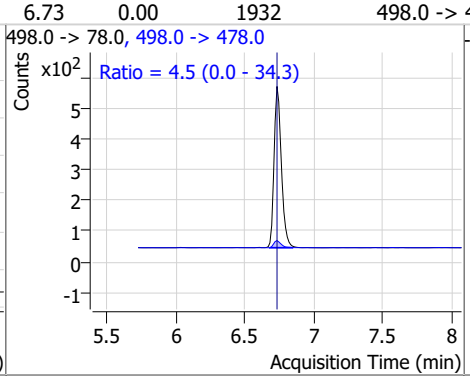


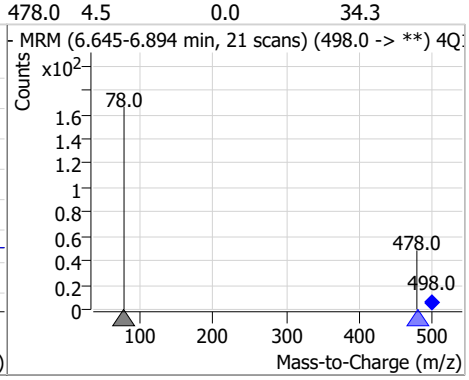




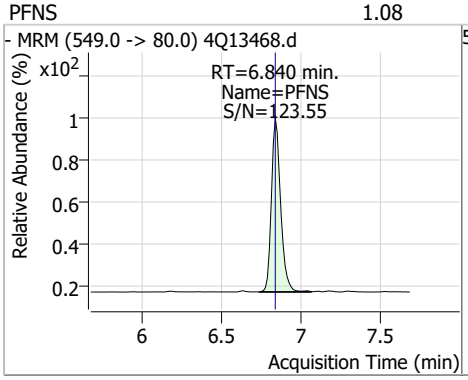
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	0.96	6.73	0.00	1932	498.0 -> 478.0	4.5	0.0	34.3

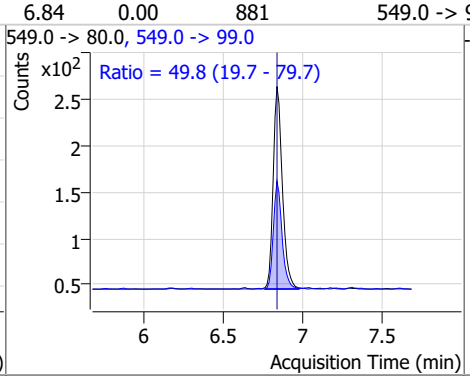


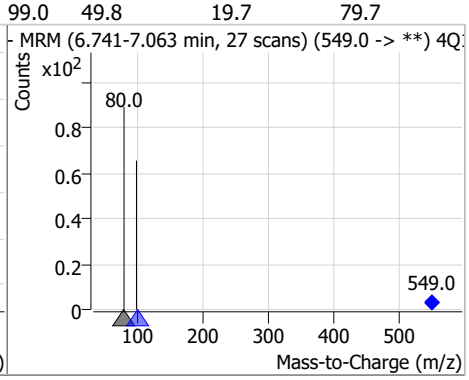




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	1.08	6.84	0.00	881	549.0 -> 99.0	49.8	19.7	79.7

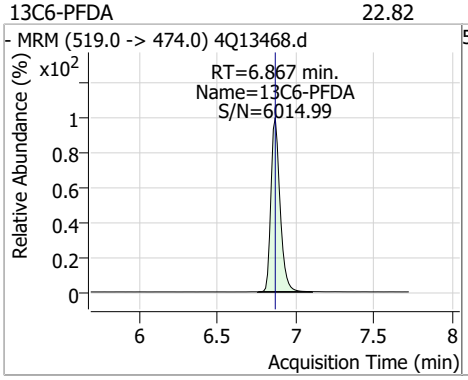


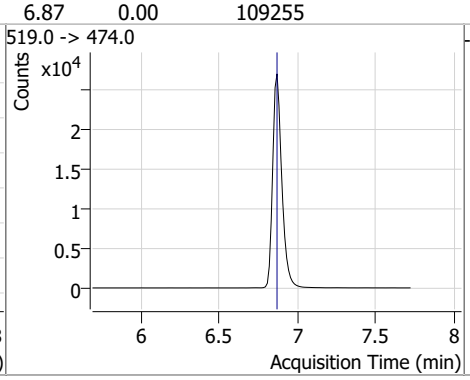


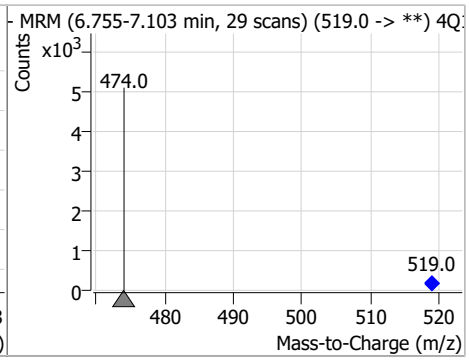


Perfluorinated Compounds by LC/MS/MS

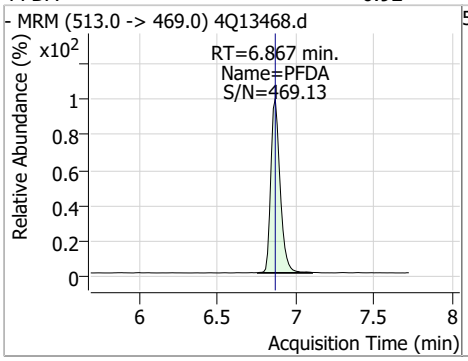
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	22.82	6.87	0.00	109255				

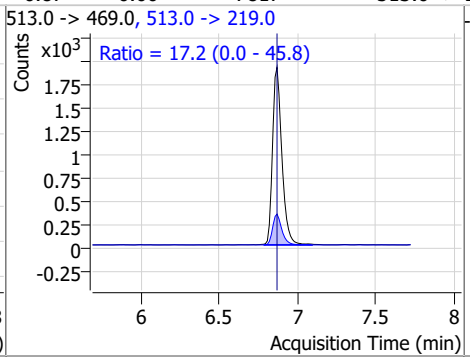


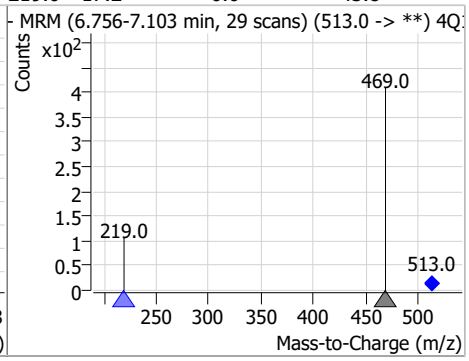




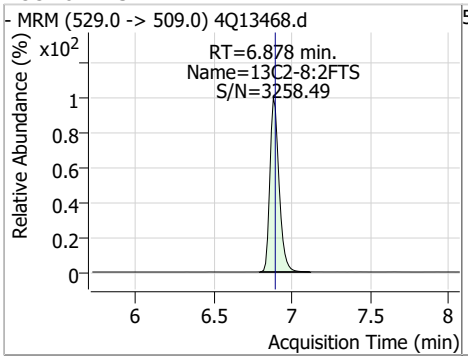
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.92	6.87	0.00	7817	513.0 -> 219.0	17.2	0.0	45.8

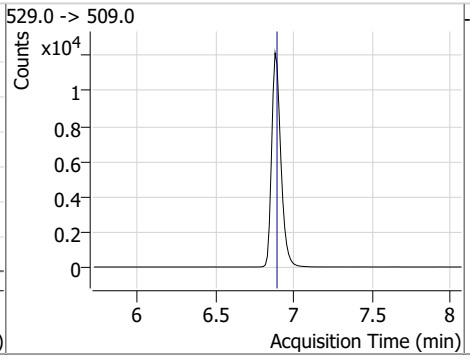


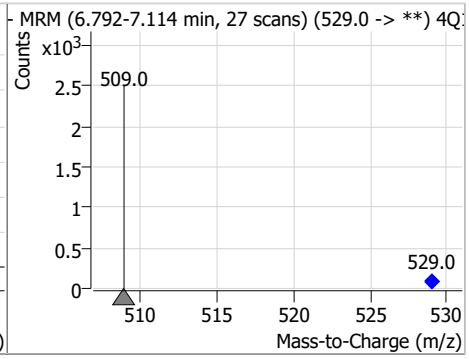




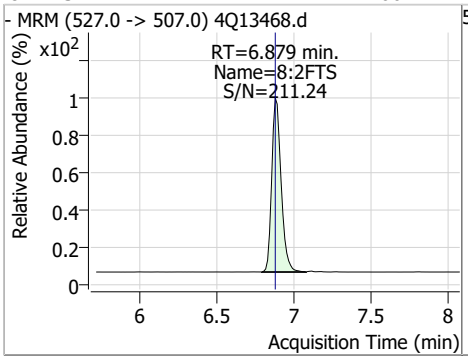
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	21.12	6.88	-0.01	49215				

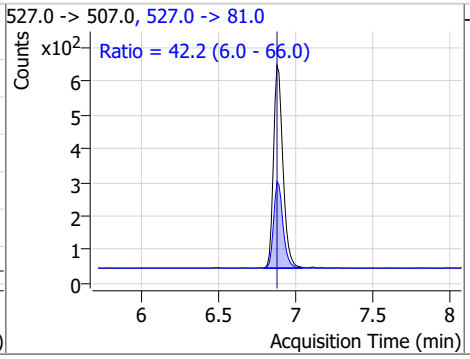


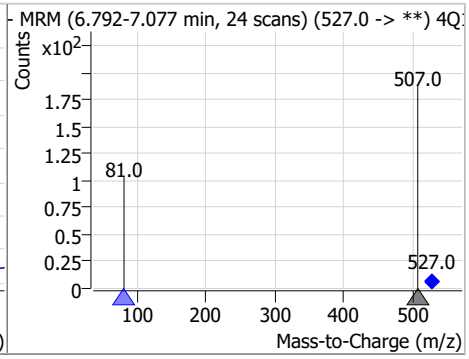




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	1.00	6.88	-0.01	2541	527.0 -> 81.0	42.2	6.0	66.0

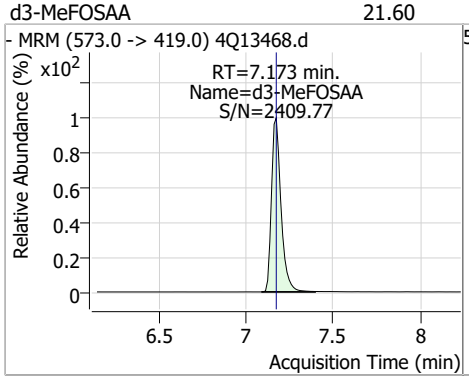


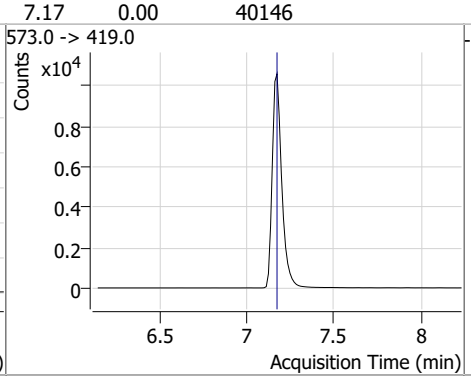


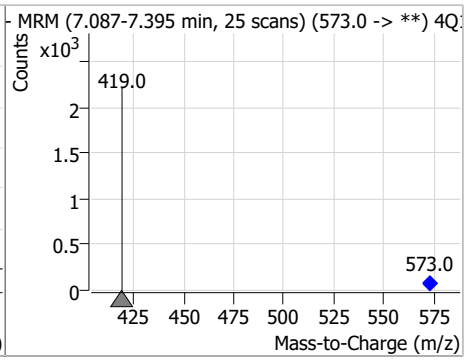


Perfluorinated Compounds by LC/MS/MS

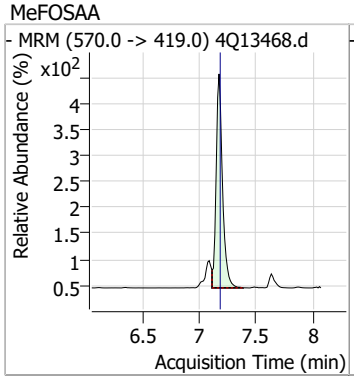
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	21.60	7.17	0.00	40146				

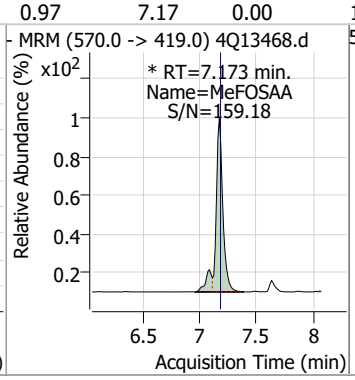


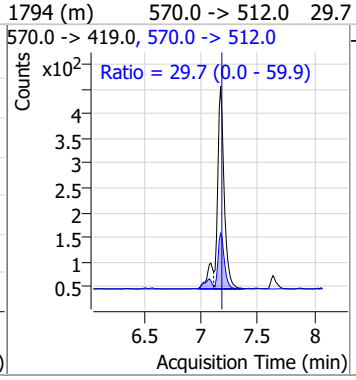


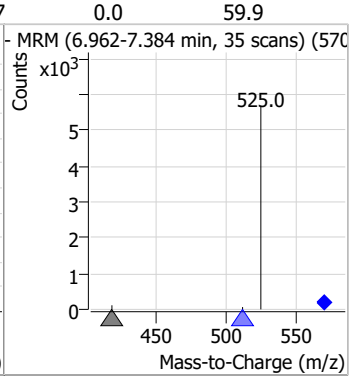


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.97	7.17	0.00	1794 (m)	570.0 -> 512.0	29.7	0.0	59.9

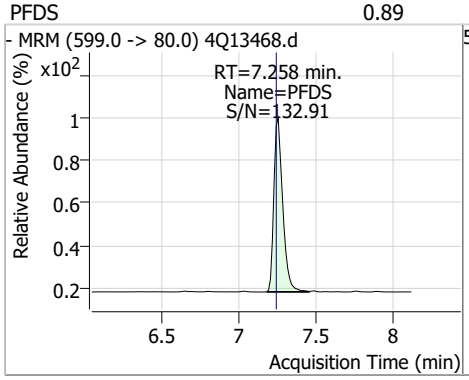


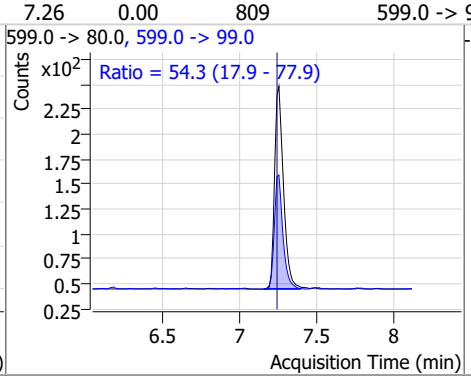


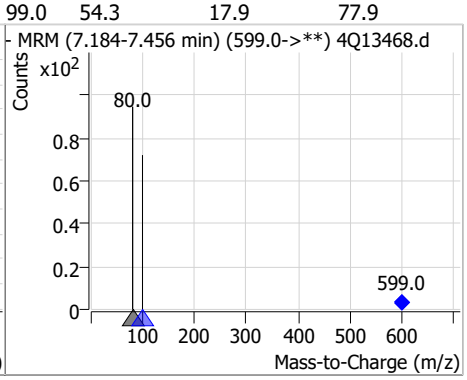




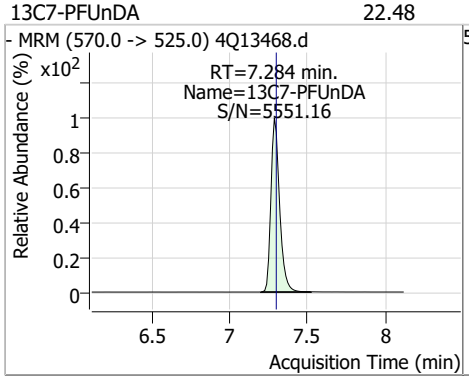
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	0.89	7.26	0.00	809	599.0 -> 99.0	54.3	17.9	77.9

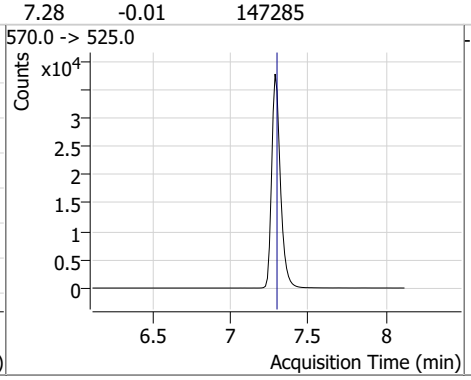


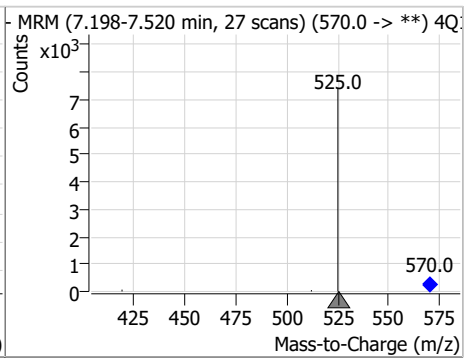




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	22.48	7.28	-0.01	147285				

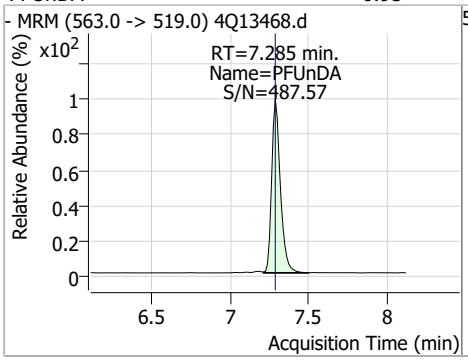


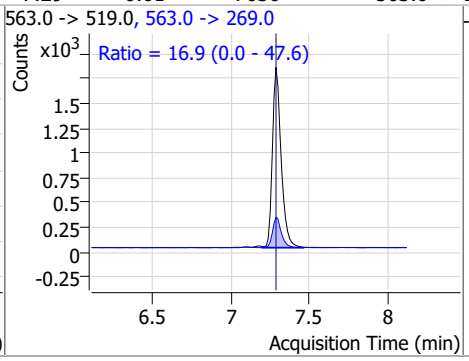


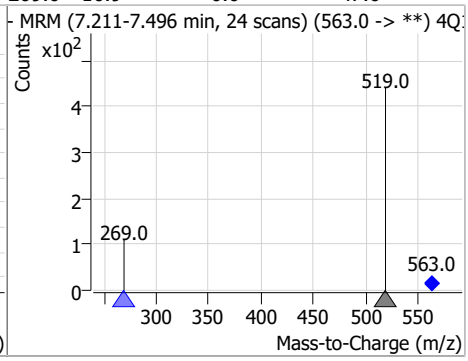


Perfluorinated Compounds by LC/MS/MS

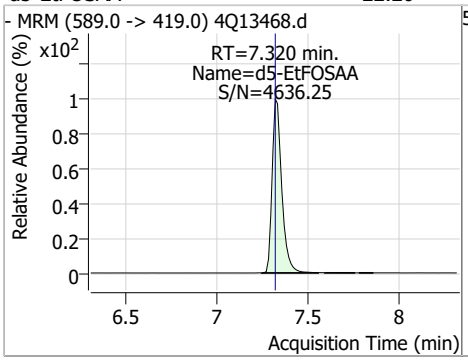
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.95	7.29	-0.01	7030	563.0 -> 269.0	16.9	0.0	47.6

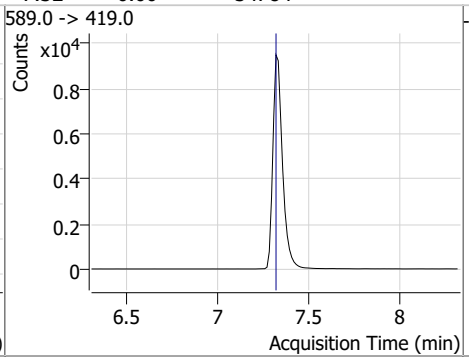


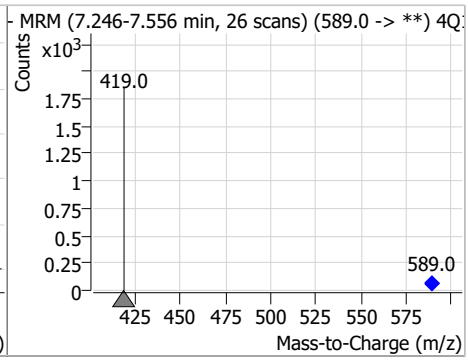




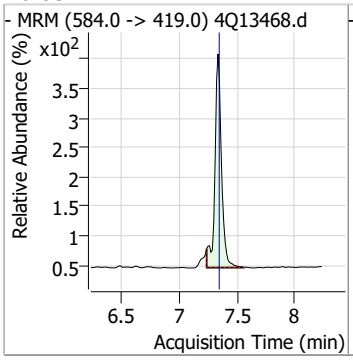
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	22.26	7.32	0.00	34784				

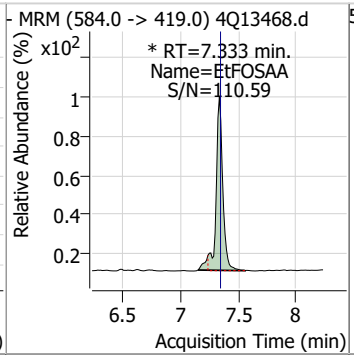


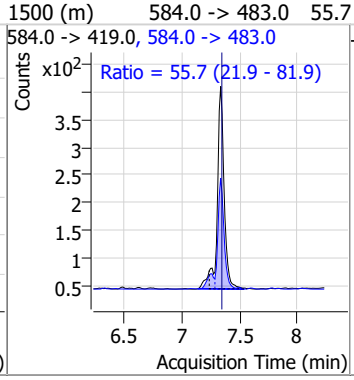


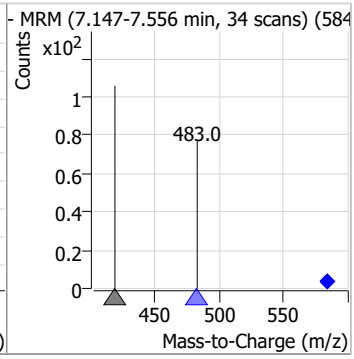


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	0.91	7.33	0.00	1500 (m)	584.0 -> 483.0	55.7	21.9	81.9

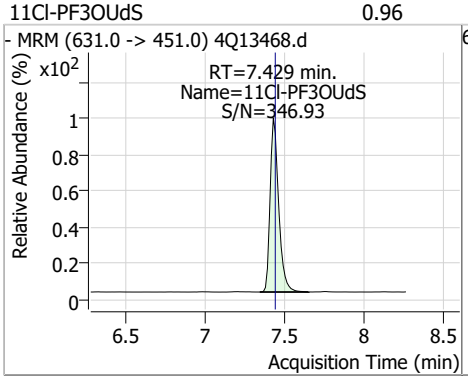


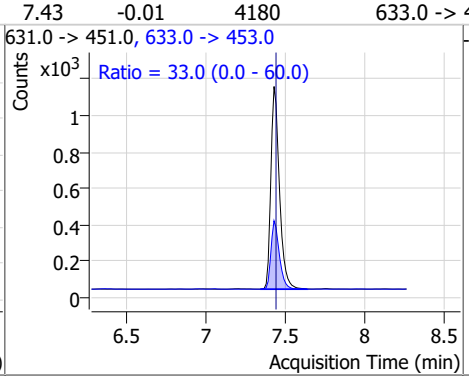


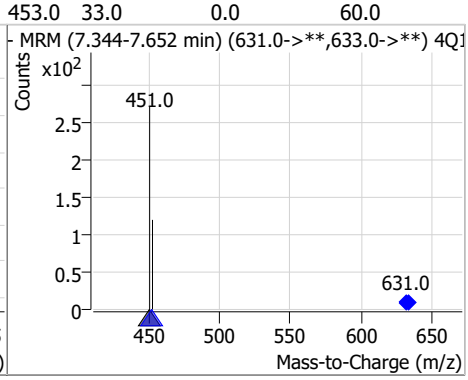




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.96	7.43	-0.01	4180	633.0 -> 453.0	33.0	0.0	60.0

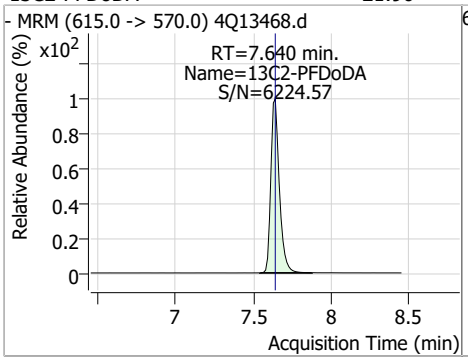


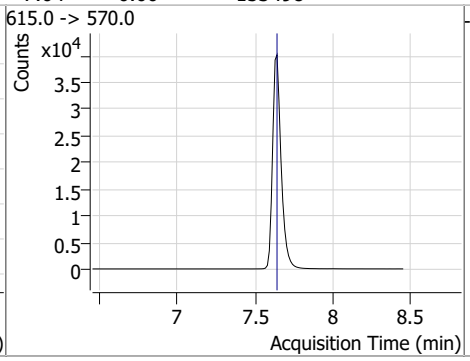


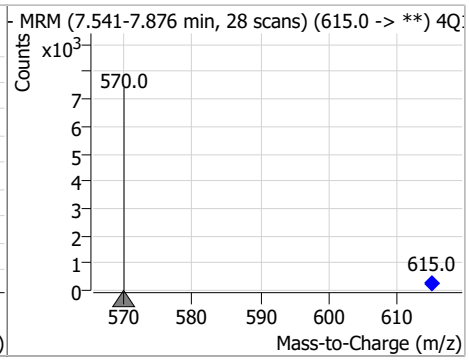


Perfluorinated Compounds by LC/MS/MS

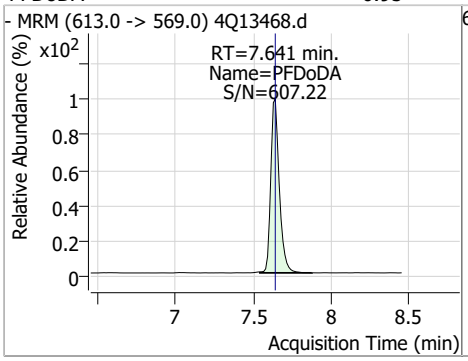
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	21.96	7.64	0.00	153498				

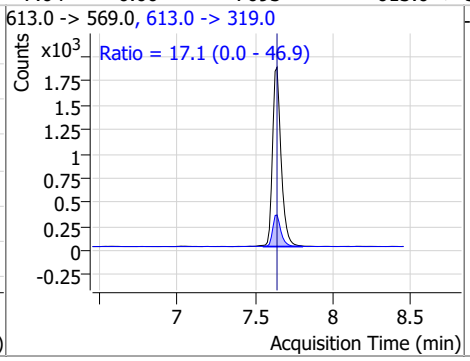


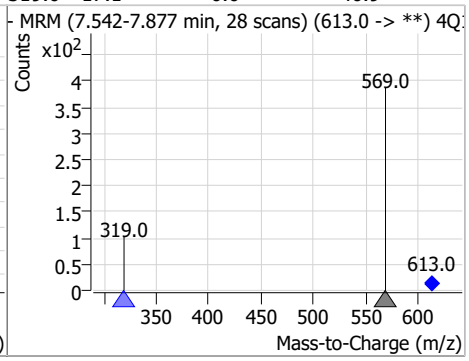




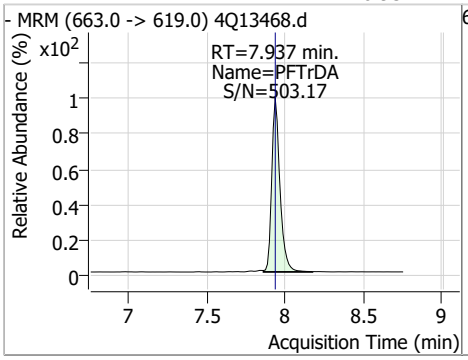
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.95	7.64	0.00	7093	613.0 -> 319.0	17.1	0.0	46.9

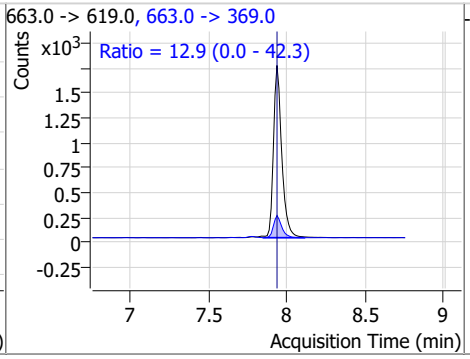


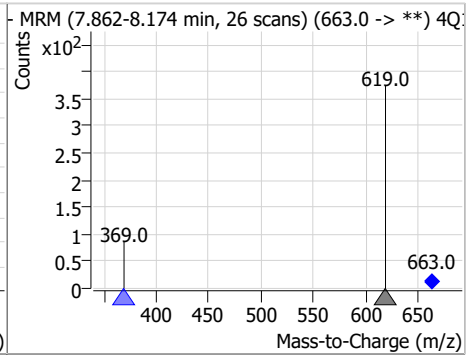




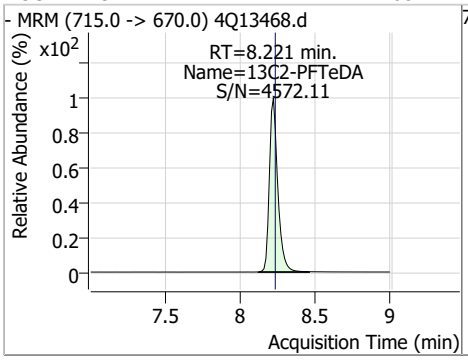
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.93	7.94	-0.01	6341	663.0 -> 369.0	12.9	0.0	42.3

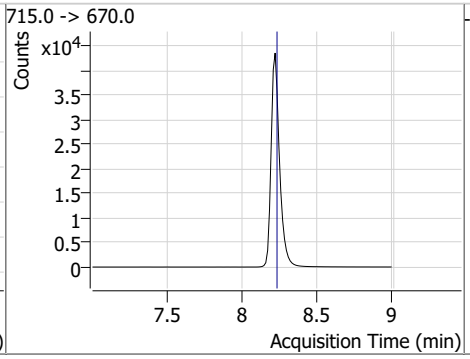


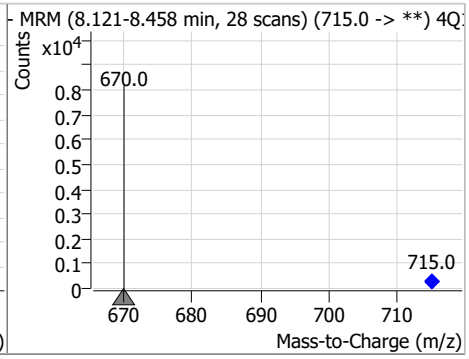




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	21.68	8.22	-0.01	170150				

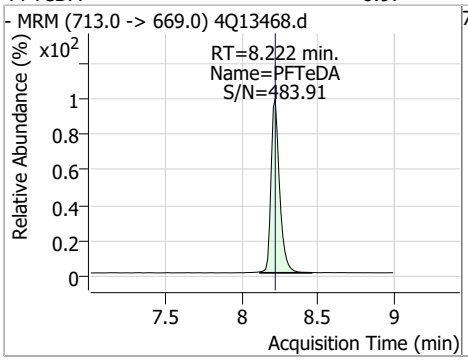


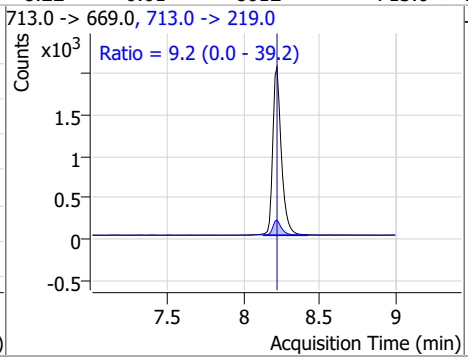


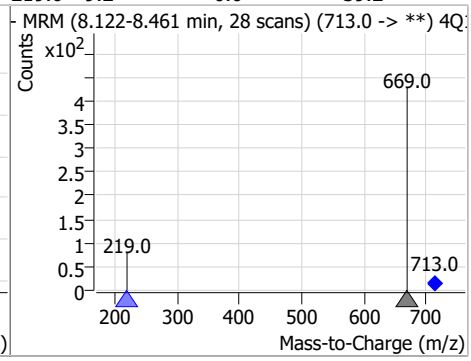


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.97	8.22	-0.01	8012	713.0 -> 219.0	9.2	0.0	39.2







Manual Integration Approval Summary

Sample Number: S4Q189-CC189
Lab FileID: 4Q13468.D
Injection Time: 04/18/21 22:56
Method: EPA 537M QSM5.3 B-15
Analyst approved: 04/19/21 09:46 Nancy Saunders
Supervisor approved: 04/19/21 15:40 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.19	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.37	Split peak
MeFOSAA	2355-31-9		7.17	Split peak
EtFOSAA	2991-50-6		7.33	Split peak

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LCMS2-2Q ANALYSIS LOG

DATE:	04/08/21
COLUMN TYPE:	Poroshell EC18
AMOUNT INJ:	4 ul
INSTRUMENT:	LCMS2-2Q

METHODS:	537MOD MS014 MS019
PROC. METH:	ID_040821_S2Q956
CAL DATE:	04/08/21
ANALYST:	NAS NG
RUN BATCH:	S2Q956

ELUENT A LOT #:	206870 w/ 0.1% AA
ELUENT B LOT #:	207103 w/0.1% AA
IC/CC STD LOT #:	LCMS 1643
ICV STD LOT #:	10221A
ISTD/ID STD LOT #:	LCMS1644

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	2q65757.d	P1-A1	ccb	537_ID.m	Sample		op84308,S2Q956,250,,,1.0,1,water	ND
2	2q65758.d	P1-A1	ic956-0	537_ID.m	Sample		op84308,S2Q956,250,,,1.0,1,water	Check Tune File
3	2q65759.d	P1-A2	ic956-0.5	537_ID.m	Calibration	2.5/500	op84308,S2Q956,250,,,1.0,1,water	Updated
4	2q65760.d	P1-A3	ic956-1.0	537_ID.m	Calibration	5/500	op84308,S2Q956,250,,,1.0,1,water	Updated
5	2q65761.d	P1-A4	ic956-2.0	537_ID.m	Calibration	10/500	op84308,S2Q956,250,,,1.0,1,water	Updated
6	2q65762.d	P1-A5	ic956-5.0	537_ID.m	Calibration	25/500	op84308,S2Q956,250,,,1.0,1,water	Updated
7	2q65763.d	P1-A6	ic956-10	537_ID.m	Calibration	50/500	op84308,S2Q956,250,,,1.0,1,water	Updated
8	2q65764.d	P1-A7	icc956-20	537_ID.m	Calibration	100/500	op84308,S2Q956,250,,,1.0,1,water	Updated
9	2q65765.d	P1-A8	ic956-50	537_ID.m	Calibration	250/500	op84308,S2Q956,250,,,1.0,1,water	Updated
10	2q65766.d	P1-A9	ic956-100	537_ID.m	Calibration	1x	op84308,S2Q956,250,,,1.0,1,water	Updated
11	2q65767.d	P1-A1	iblk	537_ID.m	Sample		op84308,S2Q956,250,,,1.0,1,water	ND
12	2q65768.d	P1-B1	icv956-20	537_ID.m	QC	10/500	op84308,S2Q956,250,,,1.0,1,water	PASS
13	2q65769.d	P1-B2	icv956-20 t-pfoa	537_ID.m	QC	100/500	op84308,S2Q956,250,,,1.0,1,water	PASS
14	2q65770.d	P4-A4	op84820-bs	537_ID.m	Sample		op84820,S2Q956,250,,,1.0,1,water	BS PASS
15	2q65771.d	P4-A5	op84820-mb	537_ID.m	Sample		op84820,S2Q956,250,,,1.0,1,water	ND
16	2q65772.d	P4-A6	fa84219-5	537_ID.m	Sample		op84820,S2Q956,125,,,1.0,1,water	✓
17	2q65773.d	P4-A7	fa84221-5	537_ID.m	Sample		op84820,S2Q956,125,,,1.0,1,water	✓
18	2q65774.d	P4-A8	fa84221-23	537_ID.m	Sample		op84820,S2Q956,125,,,1.0,1,water	✓
19	2q65775.d	P1-A7	cc956-20	537_ID.m	QC	100/500	op84308,S2Q956,250,,,1.0,1,water	PASS
20	2q65776.d	P1-A1	ccb	537_ID.m	Sample		op84308,S2Q956,250,,,1.0,1,water	ND
21	2q65777.d	P1-A3	cc956-1.0LL	537_ID.m	QC	5/500	op84308,S2Q956,250,,,1.0,1,water	PASS
22	2q65778.d	P4-A9	op84825-bs	537_ID.m	Sample		op84825,S2Q956,250,,,1.0,1,water	BS PASS
23	2q65779.d	P4-B1	op84825-mb	537_ID.m	Sample		op84825,S2Q956,250,,,1.0,1,water	HxA <1/2 RL
24	2q65780.d	P4-B9	fa84319-8	537_ID.m	Sample		op84825,S2Q956,280,,,1.0,1,water	FB has hits, redo
25	2q65781.d	P4-B2	fa84319-1	537_ID.m	Sample		op84825,S2Q956,280,,,1.0,1,water	rr 5x, low istds
26	2q65782.d	P4-B3	fa84319-2	537_ID.m	Sample		op84825,S2Q956,270,,,1.0,1,water	rr 5x, low istds
27	2q65783.d	P4-B4	fa84319-3	537_ID.m	Sample		op84825,S2Q956,280,,,1.0,1,water	rr 5x, low istds
28	2q65784.d	P4-B5	fa84319-4	537_ID.m	Sample		op84825,S2Q956,250,,,1.0,1,water	rr 5x, low istds
29	2q65785.d	P4-B6	fa84319-5	537_ID.m	Sample		op84825,S2Q956,250,,,1.0,1,water	rr 5x, low istds
30	2q65786.d	P4-B7	fa84319-6	537_ID.m	Sample		op84825,S2Q956,280,,,1.0,1,water	rr 5x, pfos hit, low istds
31	2q65787.d	P4-B8	fa84319-7	537_ID.m	Sample		op84825,S2Q956,250,,,1.0,1,water	rr 5x, low istds
32	2q65788.d	P1-A7	cc956-20	537_ID.m	QC	100/500	op84308,S2Q956,250,,,1.0,1,water	PASS
33	2q65789.d	P1-A1	ccb	537_ID.m	Sample		op84308,S2Q956,250,,,1.0,1,water	ND
34	2q65790.d	P4-C4	fa84320-4	537_ID.m	Sample		op84825,S2Q956,270,,,1.0,1,water	✓

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SGS ORLANDO LCMS2-2Q ANALYSIS LOG

35	2q65791.d	P4-C1	fa84320-1	537_ID.m	Sample		op84825,S2Q956,260,,,1.0,1,water	✓
36	2q65792.d	P4-C2	fa84320-2	537_ID.m	Sample		op84825,S2Q956,280,,,1.0,1,water	teda low rr 5x
37	2q65793.d	P4-C3	fa84320-3	537_ID.m	Sample		op84825,S2Q956,280,,,1.0,1,water	✓
38	2q65794.d	P4-C5	fa84332-3	537_ID.m	Sample		op84825,S2Q956,125,,,1.0,1,water	✓
39	2q65795.d	P4-C6	fa84332-4	537_ID.m	Sample		op84825,S2Q956,125,,,1.0,1,water	✓
40	2q65796.d	P4-C7	fa84332-5	537_ID.m	Sample		op84825,S2Q956,125,,,1.0,1,water	✓
41	2q65797.d	P4-C8	op84825-ms	537_ID.m	Sample		op84825,S2Q956,125,,,1.0,1,water	✓
42	2q65798.d	P4-C9	op84825-msd	537_ID.m	Sample		op84825,S2Q956,125,,,1.0,1,water	✓
43	2q65799.d	P4-D1	fa84340-7	537_ID.m	Sample		op84825,S2Q956,270,,,1.0,1,water	✓
44	2q65800.d	P1-A7	ecc956-20	537_ID.m	QC	100/500	op84308,S2Q956,250,,,1.0,1,water	PASS
45	2q65801.d	P1-A1	ccb	537_ID.m	Sample		op84308,S2Q956,250,,,1.0,1,water	ND

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LCMS2-2Q ANALYSIS LOG

DATE:	04/16/21
COLUMN TYPE:	Poroshell EC18
AMOUNT INJ:	4 ul
INSTRUMENT:	LCMS2-2Q

METHODS:	537MOD MS014 MS019
PROC. METH:	ID_040821_S2Q956
CAL DATE:	04/08/21
ANALYST:	NAS NG
RUN BATCH:	S2Q963

ELUENT A LOT #:	206870 w/ 0.1% AA
ELUENT B LOT #:	207103 w/0.1% AA
IC/CC STD LOT #:	LCMS 1643
ICV STD LOT #:	10221A
ISTD/ID STD LOT #:	LCMS1644

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	2q66173.d	P1-A1	ccb	537_ID.m	Sample		op84308,S2Q963,250,,,1.0,1,water	✓
2	2q66174.d	P1-A1	ccb	537_ID.m	Sample		op84308,S2Q963,250,,,1.0,1,water	✓
3	2q66175.d	P1-B2	t-pfoa	537_ID.m	Sample		op84308,S2Q963,250,,,1.0,1,water	✓
4	2q66176.d	P1-A9	high std	537_ID.m	Sample		op84308,S2Q963,250,,,1.0,1,water	✓
5	2q66177.d	P1-A1	iblk	537_ID.m	Sample		op84308,S2Q963,250,,,1.0,1,water	bdl
6	2q66178.d	P1-A3	cc956-1.0LL	537_ID.m	QC	5/500	op84308,S2Q963,250,,,1.0,1,water	pass
7	2q66179.d	P1-A7	cc956-20	537_ID.m	QC	100/500	op84308,S2Q963,250,,,1.0,1,water	pass
8	2q66180.d	P3-A1	op84918-bs	537_ID.m	Sample		op84918,S2Q963,125,,,1.0,1,water	✓
9	2q66181.d	P3-A2	op84918-mb	537_ID.m	Sample		op84918,S2Q963,125,,,1.0,1,water	✓
10	2q66182.d	P3-A3	fa84479-1	537_ID.m	Sample		op84918,S2Q963,125,,,1.0,1,water	✓
11	2q66183.d	P3-A4	fa84479-2	537_ID.m	Sample		op84918,S2Q963,125,,,1.0,1,water	✓
12	2q66184.d	P3-A5	fa84479-3	537_ID.m	Sample		op84918,S2Q963,125,,,1.0,1,water	✓
13	2q66185.d	P3-A6	fa84479-4	537_ID.m	Sample		op84918,S2Q963,125,,,1.0,1,water	✓
14	2q66186.d	P3-A7	fa84479-5	537_ID.m	Sample		op84918,S2Q963,125,,,1.0,1,water	✓
15	2q66187.d	P3-A8	fa84479-6	537_ID.m	Sample		op84918,S2Q963,125,,,1.0,1,water	✓
16	2q66188.d	P3-A9	fa84479-7	537_ID.m	Sample		op84918,S2Q963,125,,,1.0,1,water	✓
17	2q66189.d	P3-B1	fa84479-8	537_ID.m	Sample		op84918,S2Q963,125,,,1.0,1,water	✓
18	2q66190.d	P1-A7	cc956-20	537_ID.m	QC	100/500	op84308,S2Q963,250,,,1.0,1,water	pass
19	2q66191.d	P1-A1	ccb	537_ID.m	Sample		op84308,S2Q963,250,,,1.0,1,water	bdl
20	2q66192.d	P3-B2	fa84479-9	537_ID.m	Sample		op84918,S2Q963,125,,,1.0,1,water	✓ 5x
21	2q66193.d	P3-B3	op84918-ms	537_ID.m	Sample		op84918,S2Q963,120,,,1.0,1,water	✓ 5x
22	2q66194.d	P3-B4	op84918-msd	537_ID.m	Sample		op84918,S2Q963,120,,,1.0,1,water	✓ 5x
23	2q66195.d	P3-B5	fa84479-10	537_ID.m	Sample		op84918,S2Q963,120,,,1.0,1,water	✓ rr co
24	2q66196.d	P3-B6	fa84479-11	537_ID.m	Sample		op84918,S2Q963,120,,,1.0,1,water	✓
25	2q66197.d	P3-B7	fa84479-12	537_ID.m	Sample		op84918,S2Q963,125,,,1.0,1,water	✓
26	2q66198.d	P3-B8	fa84479-13	537_ID.m	Sample		op84918,S2Q963,120,,,1.0,1,water	✓
27	2q66199.d	P3-B9	fa84479-14	537_ID.m	Sample		op84918,S2Q963,125,,,1.0,1,water	✓
28	2q66200.d	P3-C1	fa84479-15	537_ID.m	Sample		op84918,S2Q963,120,,,1.0,1,water	✓
29	2q66201.d	P3-C2	fa84479-16	537_ID.m	Sample		op84918,S2Q963,120,,,1.0,1,water	✓
30	2q66202.d	P1-A7	cc956-20	537_ID.m	QC	100/500	op84308,S2Q963,250,,,1.0,1,water	pass
31	2q66203.d	P1-A1	ccb	537_ID.m	Sample		op84308,S2Q963,250,,,1.0,1,water	bdl
32	2q66204.d	P3-C3	fa84479-17	537_ID.m	Sample		op84918,S2Q963,120,,,1.0,1,water	✓
33	2q66205.d	P3-C4	fa84479-18	537_ID.m	Sample		op84918,S2Q963,120,,,1.0,1,water	✓ 5x
34	2q66206.d	P3-C5	fa84479-19	537_ID.m	Sample		op84918,S2Q963,120,,,1.0,1,water	✓1x 5x hit do te low

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SGS ORLANDO LCMS2-2Q ANALYSIS LOG

35	2q66207.d	P3-C6	fa84479-20	537_ID.m	Sample		op84918,S2Q963,120,,,1.0,1,water	✓
36	2q66208.d	P1-A3	cc956-1.0LL	537_ID.m	QC	5/500	op84308,S2Q963,250,,,1.0,1,water	pass
37	2q66209.d	P1-A1	ccb	537_ID.m	Sample		op84308,S2Q963,250,,,1.0,1,water	bdl
38	2q66210.d	P3-C7	fa84441-13	537_ID.m	Sample		op84901,S2Q963,125,,,1.0,5000,water	✓ 25,000 x
39	2q66211.d	P3-C8	fa84488-1	537_ID.m	Sample		op84920,S2Q963,280,,,1.0,5,water	✓ id low redo
40	2q66212.d	P3-C9	fa84488-2	537_ID.m	Sample		op84920,S2Q963,280,,,1.0,5,water	✓ report te low report only
41	2q66213.d	P3-D1	fa84488-5	537_ID.m	Sample		op84920,S2Q963,280,,,1.0,5,water	✓ id low redo
42	2q66214.d	P3-D2	fa84486-3	537_ID.m	Sample		op84920,S2Q963,280,,,1.0,10,water	✓
43	2q66215.d	P1-A7	cc956-20	537_ID.m	QC	100/500	op84308,S2Q963,250,,,1.0,1,water	pass
44	2q66216.d	P1-A1	ccb	537_ID.m	Sample		op84308,S2Q963,250,,,1.0,1,water	bdl
45	2q66217.d	P3-D3	op84942-bs	537_ID.m	Sample		op84942,S2Q963,2.00,,,1.0,1,soil	✓
46	2q66218.d	P3-D4	op84942-mb	537_ID.m	Sample		op84942,S2Q963,2.00,,,1.0,1,soil	✓
47	2q66219.d	P3-D5	fa84377-1	537_ID.m	Sample		op84942,S2Q963,2.04,,,1.0,1,soil	✓
48	2q66220.d	P3-D6	fa84377-2	537_ID.m	Sample		op84942,S2Q963,2.11,,,1.0,1,soil	✓
49	2q66221.d	P3-D7	fa84377-3	537_ID.m	Sample		op84942,S2Q963,2.09,,,1.0,1,soil	✓
50	2q66222.d	P3-D8	op84942-ms	537_ID.m	Sample		op84942,S2Q963,2.11,,,1.0,1,soil	✓
51	2q66223.d	P3-D9	op84942-msd	537_ID.m	Sample		op84942,S2Q963,2.03,,,1.0,1,soil	✓
52	2q66224.d	P3-E1	fa84377-4	537_ID.m	Sample		op84942,S2Q963,2.15,,,1.0,1,soil	✓
53	2q66225.d	P3-E2	fa84377-5	537_ID.m	Sample		op84942,S2Q963,2.05,,,1.0,1,soil	✓
54	2q66226.d	P3-E3	fa84377-6	537_ID.m	Sample		op84942,S2Q963,1.99,,,1.0,1,soil	✓
55	2q66227.d	P1-A7	cc956-20	537_ID.m	QC	100/500	op84308,S2Q963,250,,,1.0,1,water	pass
56	2q66228.d	P1-A1	ccb	537_ID.m	Sample		op84308,S2Q963,250,,,1.0,1,water	bdl
57	2q66229.d	P3-E4	fa84377-7	537_ID.m	Sample		op84942,S2Q963,2.01,,,1.0,1,soil	✓ 5x id low
58	2q66230.d	P3-E5	fa84377-8	537_ID.m	Sample		op84942,S2Q963,2.03,,,1.0,1,soil	✓ 5x id low
59	2q66231.d	P3-E6	fa84377-9	537_ID.m	Sample		op84942,S2Q963,1.99,,,1.0,1,soil	✓
60	2q66232.d	P3-E7	fa84377-10	537_ID.m	Sample		op84942,S2Q963,2.10,,,1.0,1,soil	✓
61	2q66233.d	P3-E8	fa84377-11	537_ID.m	Sample		op84942,S2Q963,2.15,,,1.0,1,soil	✓
62	2q66234.d	P3-E9	fa84377-12	537_ID.m	Sample		op84942,S2Q963,2.04,,,1.0,1,soil	✓ 5x id low
63	2q66235.d	P3-F1	fa84377-13	537_ID.m	Sample		op84942,S2Q963,1.99,,,1.0,1,soil	✓ 5x id low
64	2q66236.d	P3-F2	fa84377-14	537_ID.m	Sample		op84942,S2Q963,2.04,,,1.0,1,soil	✓
65	2q66237.d	P3-F3	fa84377-15	537_ID.m	Sample		op84942,S2Q963,1.99,,,1.0,1,soil	✓
66	2q66238.d	P1-A3	cc956-1.0LL	537_ID.m	QC	5/500	op84308,S2Q963,250,,,1.0,1,water	pass
67	2q66239.d	P1-A1	ccb	537_ID.m	Sample		op84308,S2Q963,250,,,1.0,1,water	bdl
68	2q66240.d	P3-F4	op84941-bs	537_ID.m	Sample		op84941,S2Q963,2.00,,,1.0,1,soil	✓
69	2q66241.d	P3-F5	op84941-mb	537_ID.m	Sample		op84941,S2Q963,2.00,,,1.0,1,soil	✓ ba hit
70	2q66242.d	P3-F6	fa84183-1	537_ID.m	Sample		op84941,S2Q963,2.01,,,1.0,1,soil	was reported,but wanted to conf
71	2q66243.d	P3-F7	fa84183-2	537_ID.m	Sample		op84941,S2Q963,2.11,,,1.0,1,soil	was reported,but wanted to conf
72	2q66244.d	P3-F8	fa84414-4	537_ID.m	Sample		op84941,S2Q963,0.85,,,1.0,1,soil	✓ 10x 100x 1000x
73	2q66245.d	P3-F9	jd22888-2A	537_ID.m	Sample		op84941,S2Q963,2.10,,,1.0,1,soil	✓ rr co
74	2q66246.d	P4-A1	op84941-ms	537_ID.m	Sample		op84941,S2Q963,2.00,,,1.0,1,soil	✓
75	2q66247.d	P4-A2	op84941-msd	537_ID.m	Sample		op84941,S2Q963,2.01,,,1.0,1,soil	✓

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SGS ORLANDO LCMS2-2Q ANALYSIS LOG

76	2q66248.d	P4-A3	jd22888-3A	537_ID.m	Sample		op84941,S2Q963,2.01,,,1.0,1,soil	✓
77	2q66249.d	P4-A4	jd22888-4A	537_ID.m	Sample		op84941,S2Q963,2.09,,,1.0,1,soil	✓
78	2q66250.d	P1-A7	cc956-20	537_ID.m	QC	100/500	op84308,S2Q963,250,,,1.0,1,water	pass
79	2q66251.d	P1-A1	ccb	537_ID.m	Sample		op84308,S2Q963,250,,,1.0,1,water	bdl
80	2q66252.d	P4-A5	jd22888-5A	537_ID.m	Sample		op84941,S2Q963,2.15,,,1.0,1,soil	✓
81	2q66253.d	P4-A6	jd22888-6A	537_ID.m	Sample		op84941,S2Q963,2.02,,,1.0,1,soil	✓
82	2q66254.d	P4-A7	jd22962-1	537_ID.m	Sample		op84941,S2Q963,2.04,,,1.0,1,soil	✓
83	2q66255.d	P4-A8	jd22962-2	537_ID.m	Sample		op84941,S2Q963,2.11,,,1.0,1,soil	✓
84	2q66256.d	P4-A9	jd22962-3	537_ID.m	Sample		op84941,S2Q963,2.11,,,1.0,1,soil	✓
85	2q66257.d	P4-B1	jd22962-4	537_ID.m	Sample		op84941,S2Q963,2.04,,,1.0,1,soil	✓
86	2q66258.d	P1-A7	ecc956-20	537_ID.m	QC	100/500	op84308,S2Q963,250,,,1.0,1,water	pass
87	2q66259.d	P1-A1	ccb	537_ID.m	Sample		op84308,S2Q963,250,,,1.0,1,water	bdl

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LCMS3-3Q ANALYSIS LOG

DATE:	04/13/21
COLUMN TYPE:	Poroshell EC18
AMOUNT INJ:	4 ul
INSTRUMENT:	LCMS3-3Q

METHODS:	537MOD MS014 MS019
PROC. METH:	BR_LN_041321_S3Q537
CAL DATE:	04/13/21
ANALYST:	M.Valls
RUN BATCH:	S3Q537

ELUENT A LOT #:	206870 W/0.1% AA 194003
ELUENT B LOT #:	207103 W/0.1% AA 194003
IC/CC STD LOT #:	LCMS1643
ICV STD LOT #:	10221A
ISTD/ID STD LOT #:	LCMS1645A

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	3q36521.d	P1-A1	ccb	537_ID.m	Sample		op84308,S3Q537,250,,,1,1,water	✓
2	3q36522.d	P1-A1	ccb	537_ID.m	Sample		op84308,S3Q537,250,,,1,1,water	✓
3	3q36523.d	P1-A1	ccb	537_ID.m	Sample		op84308,S3Q537,250,,,1,1,water	✓
4	3q36524.d	P1-B2	t-pfoa	537_ID.m	Sample	6	op84308,S3Q537,250,,,1,1,water	✓
5	3q36525.d	P1-A9	High Std	537_ID.m	Sample	8	op84308,S3Q537,250,,,1,1,water	✓
6	3q36526.d	P1-A1	IBLK	537_ID.m	Sample		op84308,S3Q537,250,,,1,1,water	✓
7	3q36527.d	P1-A3	cc533-1.0LL	537_ID.m	QC	2	op84308,S3Q537,250,,,1,1,water	Fail, rr
8	3q36528.d	P1-A7	cc533-20	537_ID.m	QC	6	op84308,S3Q537,250,,,1,1,water	Low, re-calibrate
9	3q36529.d	P2-B1	JD22648-2	537_ID.m	Sample		op84826,S3Q537,280,,,1,50,water	rr
10	3q36530.d	P1-A1	ccb	537_ID.m	Sample		op84308,S3Q537,250,,,1,1,water	✓
11	3q36531.d	P1-A1	ccb	537_ID.m	Sample		op84308,S3Q537,250,,,1,1,water	✓
12	3q36532.d	P1-A1	ic537-0	537_ID.m	Sample		op84308,S3Q537,250,,,1,1,water	✓
13	3q36533.d	P1-A2	ic537-0.5	537_ID.m	Calibration	2.5/500	op84308,S3Q537,250,,,1,1,water	Curve Pass
14	3q36534.d	P1-A3	ic537-1	537_ID.m	Calibration	5/500	op84308,S3Q537,250,,,1,1,water	Curve Pass
15	3q36535.d	P1-A4	ic537-2	537_ID.m	Calibration	10/500	op84308,S3Q537,250,,,1,1,water	Curve Pass
16	3q36536.d	P1-A5	ic537-5	537_ID.m	Calibration	25/500	op84308,S3Q537,250,,,1,1,water	Curve Pass
17	3q36537.d	P1-A6	ic537-10	537_ID.m	Calibration	50/500	op84308,S3Q537,250,,,1,1,water	Curve Pass
18	3q36538.d	P1-A7	ic537-20	537_ID.m	Calibration	100/500	op84308,S3Q537,250,,,1,1,water	Curve Pass
19	3q36539.d	P1-A8	ic537-50	537_ID.m	Calibration	250/500	op84308,S3Q537,250,,,1,1,water	Curve Pass
20	3q36540.d	P1-A9	ic537-100	537_ID.m	Calibration	500	op84308,S3Q537,250,,,1,1,water	Curve Pass
21	3q36541.d	P1-A1	IBLK	537_ID.m	Sample		op84308,S3Q537,250,,,1,1,water	✓
22	3q36542.d	P1-B1	icv537-20 t-pfoa	537_ID.m	QC	100/500	op84308,S3Q537,250,,,1,1,water	✓
23	3q36543.d	P1-B2	icv537-20	537_ID.m	QC	10/500	op84308,S3Q537,250,,,1,1,water	✓
24	3q36544.d	P2-A1	JD22648-2	537_ID.m	Sample		op84826,S3Q537,280,,,1,50,water	✓, data proc. With ID method
25	3q36545.d	P2-A2	JD22648-2	537_ID.m	Sample		op84826,S3Q537,280,,,1,100,water	not use
26	3q36546.d	P2-A3	fa84399-17	537_ID.m	Sample		op84870,S3Q537,120,,,1,2,water	✓
27	3q36547.d	P2-A4	fa84399-8	537_ID.m	Sample		op84870,S3Q537,125,,,1,1,water	✓
28	3q36548.d	P2-A5	fa84399-12	537_ID.m	Sample		op84870,S3Q537,125,,,1,1,water	✓
29	3q36549.d	P2-A6	fa84399-15	537_ID.m	Sample		op84870,S3Q537,125,,,1,1,water	✓
30	3q36550.d	P1-A3	cc537-1.0LL	537_ID.m	QC	5/500	op84308,S3Q537,250,,,1,1,water	Pass
31	3q36551.d	P1-A1	ccb	537_ID.m	Sample		op84308,S3Q537,250,,,1,1,water	ND
32	3q36552.d	P2-B1	op84892-bs	537_ID.m	Sample		op84892,S3Q537,125,,,1,1,water	✓
33	3q36553.d	P2-B2	op84892-mb	537_ID.m	Sample		op84892,S3Q537,125,,,1,1,water	✓
34	3q36554.d	P2-B3	fa84398-34	537_ID.m	Sample		op84892,S3Q537,115,,,1,1,water	✓
35	3q36555.d	P2-B4	fa84398-35	537_ID.m	Sample		op84892,S3Q537,110,,,1,1,water	✓

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SGS ORLANDO LCMS3-3Q ANALYSIS LOG

36	3q36556.d	P2-B5	fa84398-36	537_ID.m	Sample		op84892,S3Q537,120,,,1,1,water	✓
37	3q36557.d	P2-B6	fa84398-37	537_ID.m	Sample		op84892,S3Q537,120,,,1,1,water	✓
38	3q36558.d	P2-B7	fa84398-38	537_ID.m	Sample		op84892,S3Q537,110,,,1,1,water	✓
39	3q36559.d	P2-B8	fa84398-39	537_ID.m	Sample		op84892,S3Q537,120,,,1,1,water	✓
40	3q36560.d	P2-B9	op84892-ms	537_ID.m	Sample		op84892,S3Q537,120,,,1,1,water	✓
41	3q36561.d	P2-C1	op84892-msd	537_ID.m	Sample		op84892,S3Q537,120,,,1,1,water	✓
42	3q36562.d	P1-A7	cc537-20	537_ID.m	QC	100/500	op84308,S3Q537,250,,,1,1,water	Pass
43	3q36563.d	P1-A1	ccb	537_ID.m	Sample		op84308,S3Q537,250,,,1,1,water	ND
44	3q36564.d	P2-C2	fa84399-21	537_ID.m	Sample		op84892,S3Q537,110,,,1,1,water	✓ + rr2x
45	3q36565.d	P2-C3	fa84399-22	537_ID.m	Sample		op84892,S3Q537,120,,,1,1,water	✓
46	3q36566.d	P2-C4	fa84399-23	537_ID.m	Sample		op84892,S3Q537,125,,,1,1,water	✓
47	3q36567.d	P2-C5	fa84399-24	537_ID.m	Sample		op84892,S3Q537,125,,,1,1,water	✓
48	3q36568.d	P2-C6	fa84399-25	537_ID.m	Sample		op84892,S3Q537,120,,,1,1,water	✓
49	3q36569.d	P2-C7	fa84399-26	537_ID.m	Sample		op84892,S3Q537,125,,,1,1,water	✓
50	3q36570.d	P2-C8	fa84399-27	537_ID.m	Sample		op84892,S3Q537,125,,,1,1,water	✓
51	3q36571.d	P2-C9	fa84399-28	537_ID.m	Sample		op84892,S3Q537,115,,,1,1,water	✓
52	3q36572.d	P2-D1	fa84399-29	537_ID.m	Sample		op84892,S3Q537,125,,,1,1,water	✓
53	3q36573.d	P2-D2	fa84399-30	537_ID.m	Sample		op84892,S3Q537,125,,,1,1,water	✓
54	3q36574.d	P1-A7	cc537-20	537_ID.m	QC	100/500	op84308,S3Q537,250,,,1,1,water	Pass
55	3q36575.d	P1-A1	ccb	537_ID.m	Sample		op84308,S3Q537,250,,,1,1,water	ND
56	3q36576.d	P2-D3	fa84399-31	537_ID.m	Sample		op84892,S3Q537,115,,,1,1,water	rr due to ecc.
57	3q36577.d	P2-D4	fa84399-32	537_ID.m	Sample		op84892,S3Q537,125,,,1,1,water	rr due to ecc.
58	3q36578.d	P2-D5	fa84399-33	537_ID.m	Sample		op84892,S3Q537,125,,,1,1,water	rr due to ecc.
59	3q36579.d	P1-A7	ecc537-20	537_ID.m	QC	100/500	op84308,S3Q537,250,,,1,1,water	RT outside window, rr samples before.
60	3q36580.d	P1-A1	ccb	537_ID.m	Sample		op84308,S3Q537,250,,,1,1,water	ND

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LCMS3-3Q ANALYSIS LOG

DATE:	04/14/21
COLUMN TYPE:	Poroshell EC18
AMOUNT INJ:	4 ul
INSTRUMENT:	LCMS3-3Q

METHODS:	537MOD MS014 MS019
PROC. METH:	BR_LN_041321_S3Q537
CAL DATE:	04/13/21
ANALYST:	M.Valls
RUN BATCH:	S3Q538

ELUENT A LOT #:	206870 W/0.1% AA 194003
ELUENT B LOT #:	207103 W/0.1% AA 194003
IC/CC STD LOT #:	LCMS1643
ICV STD LOT #:	10221A
ISTD/ID STD LOT #:	LCMS1645A

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	3q36581.d	P1-A1	ccb	537_ID.m	Sample		op84892,S3Q538,250,,,1,1,water	✓
2	3q36582.d	P1-A1	ccb	537_ID.m	Sample		op84892,S3Q538,250,,,1,1,water	✓
3	3q36583.d	P1-A1	ccb	537_ID.m	Sample		op84892,S3Q538,250,,,1,1,water	✓
4	3q36584.d	P1-B2	t-pfoa	537_ID.m	Sample	6	op84892,S3Q538,250,,,1,1,water	rr, wrong vial.
5	3q36585.d	P1-A9	High Std	537_ID.m	Sample	8	op84892,S3Q538,250,,,1,1,water	✓
6	3q36586.d	P1-A1	IBLK	537_ID.m	Sample		op84892,S3Q538,250,,,1,1,water	✓
7	3q36587.d	P1-A3	cc537-1.0LL	537_ID.m	QC	5/500	op84892,S3Q538,250,,,1,1,water	✓
8	3q36588.d	P1-A7	cc537-20	537_ID.m	QC	100/500	op84892,S3Q538,250,,,1,1,water	✓
9	3q36589.d	P1-B2	t-pfoa	537_ID.m	Sample	6	op84892,S3Q538,250,,,1,1,water	✓
10	3q36590.d	P2-A1	fa84399-21	537_ID.m	Sample		op84892,S3Q538,110,,,1,2,water	✓
11	3q36591.d	P2-A2	fa84399-31	537_ID.m	Sample		op84892,S3Q538,115,,,1,1,water	✓
12	3q36592.d	P2-A3	fa84399-32	537_ID.m	Sample		op84892,S3Q538,125,,,1,1,water	✓
13	3q36593.d	P2-A4	fa84399-33	537_ID.m	Sample		op84892,S3Q538,125,,,1,1,water	✓
14	3q36594.d	P2-A5	op84898-bs	537_ID.m	Sample		op84898,S3Q538,250,,,1,1,water	✓
15	3q36595.d	P2-A6	op84898-mb	537_ID.m	Sample		op84898,S3Q538,250,,,1,1,water	✓
16	3q36596.d	P2-A7	fa84319-3	537_ID.m	Sample		op84898,S3Q538,280,,,1,1,water	✓
17	3q36597.d	P2-A8	fa84319-8	537_ID.m	Sample		op84898,S3Q538,270,,,1,1,water	✓
18	3q36598.d	P2-A9	fa84401-1	537_ID.m	Sample		op84898,S3Q538,125,,,1,1,water	✓
19	3q36599.d	P2-B1	fa84401-1	537_ID.m	Sample		op84898,S3Q538,125,,,1,5,water	✓
20	3q36600.d	P1-A7	cc537-20	537_ID.m	QC	100/500	op84892,S3Q538,250,,,1,1,water	Pass
21	3q36601.d	P1-A1	ccb	537_ID.m	Sample		op84892,S3Q538,250,,,1,1,water	ND
22	3q36602.d	P2-B2	fa84401-2	537_ID.m	Sample		op84898,S3Q538,125,,,1,1,water	✓
23	3q36603.d	P2-B3	fa84401-2	537_ID.m	Sample		op84898,S3Q538,125,,,1,10,water	✓
24	3q36604.d	P2-B4	op84898-ms	537_ID.m	Sample		op84898,S3Q538,125,,,1,1,water	✓
25	3q36605.d	P2-B5	op84898-ms	537_ID.m	Sample		op84898,S3Q538,125,,,1,10,water	✓
26	3q36606.d	P2-B6	fa84401-3	537_ID.m	Sample		op84898,S3Q538,125,,,1,1,water	✓
27	3q36607.d	P2-B7	fa84401-4	537_ID.m	Sample		op84898,S3Q538,125,,,1,1,water	✓
28	3q36608.d	P2-B8	fa84401-4	537_ID.m	Sample		op84898,S3Q538,125,,,1,20,water	✓
29	3q36609.d	P2-B9	fa84401-5	537_ID.m	Sample		op84898,S3Q538,125,,,1,1,water	✓
30	3q36610.d	P2-C1	fa84401-5	537_ID.m	Sample		op84898,S3Q538,125,,,1,20,water	✓
31	3q36611.d	P1-A7	cc537-20	537_ID.m	QC	100/500	op84892,S3Q538,250,,,1,1,water	Pass
32	3q36612.d	P1-A1	ccb	537_ID.m	Sample		op84892,S3Q538,250,,,1,1,water	ND
33	3q36613.d	P1-A3	cc537-1.0LL	537_ID.m	QC	5/500	op84892,S3Q538,250,,,1,1,water	✓
34	3q36614.d	P2-C2	fa84401-6	537_ID.m	Sample		op84898,S3Q538,125,,,1,1,water	✓
35	3q36615.d	P2-C3	op84898-dup	537_ID.m	Sample		op84898,S3Q538,125,,,1,1,water	✓

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SGS ORLANDO LCMS3-3Q ANALYSIS LOG

36	3q36616.d	P2-C4	fa84401-7	537_ID.m	Sample		op84898,S3Q538,125,,,1,1,water	✓
37	3q36617.d	P2-C5	op84900-bs	537_ID.m	Sample		op84900,S3Q538,250,,,1,1,water	✓
38	3q36618.d	P2-C6	op84900-mb	537_ID.m	Sample		op84900,S3Q538,250,,,1,1,water	✓
39	3q36619.d	P2-C7	JD22823-1A	537_ID.m	Sample		op84900,S3Q538,280,,,1,1,water	✓
40	3q36620.d	P2-C8	op84900-ms	537_ID.m	Sample		op84900,S3Q538,280,,,1,1,water	✓
41	3q36621.d	P2-C9	JD22823-2A	537_ID.m	Sample		op84900,S3Q538,280,,,1,1,water	✓
42	3q36622.d	P2-D1	op84900-dup	537_ID.m	Sample		op84900,S3Q538,280,,,1,1,water	✓
43	3q36623.d	P2-D2	JD22823-3A	537_ID.m	Sample		op84900,S3Q538,280,,,1,1,water	✓
44	3q36624.d	P1-A7	cc537-20	537_ID.m	QC	100/500	op84892,S3Q538,250,,,1,1,water	Pass
45	3q36625.d	P1-A1	ccb	537_ID.m	Sample		op84892,S3Q538,250,,,1,1,water	ND
46	3q36626.d	P2-D3	JD22823-4A	537_ID.m	Sample		op84900,S3Q538,280,,,1,1,water	✓
47	3q36627.d	P2-D4	JD22823-5A	537_ID.m	Sample		op84900,S3Q538,280,,,1,1,water	✓
48	3q36628.d	P2-D5	JD22823-6A	537_ID.m	Sample		op84900,S3Q538,280,,,1,1,water	✓
49	3q36629.d	P2-D6	JD22823-7A	537_ID.m	Sample		op84900,S3Q538,270,,,1,1,water	✓
50	3q36630.d	P2-D7	JD22823-8A	537_ID.m	Sample		op84900,S3Q538,280,,,1,1,water	✓
51	3q36631.d	P2-D8	JD22823-9A	537_ID.m	Sample		op84900,S3Q538,270,,,1,1,water	✓
52	3q36632.d	P2-D9	JD22823-10A	537_ID.m	Sample		op84900,S3Q538,280,,,1,1,water	✓
53	3q36633.d	P2-E1	JD22823-11A	537_ID.m	Sample		op84900,S3Q538,280,,,1,1,water	✓
54	3q36634.d	P2-E2	JD22823-12A	537_ID.m	Sample		op84900,S3Q538,280,,,1,1,water	✓
55	3q36635.d	P2-E3	JD22888-1	537_ID.m	Sample		op84900,S3Q538,280,,,1,1,water	✓
56	3q36636.d	P1-A7	cc537-20	537_ID.m	QC	100/500	op84892,S3Q538,250,,,1,1,water	Pass
57	3q36637.d	P1-A1	ccb	537_ID.m	Sample		op84892,S3Q538,250,,,1,1,water	ND
58	3q36638.d	P2-E4	JD22888-7A	537_ID.m	Sample		op84900,S3Q538,260,,,1,1,water	✓
59	3q36639.d	P1-A7	ecc537-20	537_ID.m	QC	100/500	op84892,S3Q538,250,,,1,1,water	Pass
60	3q36640.d	P1-A1	ccb	537_ID.m	Sample		op84892,S3Q538,250,,,1,1,water	ND

SGS ORLANDO

LCMS4-4Q ANALYSIS LOG

DATE:	04/18/21
COLUMN TYPE:	Poroshell EC18
AMOUNT INJ:	4 ul
INSTRUMENT:	LCMS4-4Q

METHODS:	537MOD MS014 MS019
PROC. METH:	ID_041821_S4Q188
CAL DATE:	04/18/21
ANALYST:	NAS
RUN BATCH:	S4Q189

ELUENT A LOT #:	206870 W/0.1%AA 194003
ELUENT B LOT #:	207103 W/0.1%AA 194003
IC/CC STD LOT #:	LCMS 1643
ICV STD LOT #:	10221A
ISTD/ID STD LOT #:	LCMS 1645A

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	4Q13430.d	P1-A1	ccb	537_ID.m	Sample		op84918,S4Q189,250,,,1,1,water	✓
2	4Q13431.d	P1-A1	ccb	537_ID.m	Sample		op84918,S4Q189,250,,,1,1,water	✓
3	4Q13432.d	P1-A1	ccb	537_ID.m	Sample		op84918,S4Q189,250,,,1,1,water	✓
4	4Q13433.d	P1-A1	ccb	537_ID.m	Sample		op84918,S4Q189,250,,,1,1,water	✓
5	4Q13434.d	P1-A1	ic189-0	537_ID.m	Sample		op84918,S4Q189,250,,,1,1,water	✓
6	4Q13435.d	P1-A2	ic189-0.5	537_ID.m	Calibration	2.5/500	op84918,S4Q189,250,,,1,1,water	✓
7	4Q13436.d	P1-A3	ic189-1.0	537_ID.m	Calibration	5/500	op84918,S4Q189,250,,,1,1,water	✓
8	4Q13437.d	P1-A4	ic189-2.0	537_ID.m	Calibration	10/500	op84918,S4Q189,250,,,1,1,water	✓
9	4Q13438.d	P1-A5	ic189-5.0	537_ID.m	Calibration	25/500	op84918,S4Q189,250,,,1,1,water	✓
10	4Q13439.d	P1-A6	ic189-10	537_ID.m	Calibration	50/500	op84918,S4Q189,250,,,1,1,water	✓
11	4Q13440.d	P1-A7	icc189-20	537_ID.m	Calibration	100/500	op84918,S4Q189,250,,,1,1,water	✓
12	4Q13441.d	P1-A8	ic189-50	537_ID.m	Calibration	250/500	op84918,S4Q189,250,,,1,1,water	✓
13	4Q13442.d	P1-A9	ic189-100	537_ID.m	Calibration	1X	op84918,S4Q189,250,,,1,1,water	✓
14	4Q13443.d	P1-A1	iblk	537_ID.m	Sample		op84918,S4Q189,250,,,1,1,water	et me less than half the RL
15	4Q13444.d	P1-B1	icv189-20	537_ID.m	QC	10/500	op84918,S4Q189,250,,,1,1,water	PASS
16	4Q13445.d	P1-B2	icv189-20 t-pfoa	537_ID.m	QC	100/500	op84918,S4Q189,250,,,1,1,water	✓
17	4Q13446.d	P1-B3	fa84479-9	537_ID.m	Sample		op84918,S4Q189,125,,,1,5,water	✓
18	4Q13447.d	P1-B4	op84918-ms	537_ID.m	Sample		op84918,S4Q189,120,,,1,5,water	✓
19	4Q13448.d	P1-B5	op84918-msd	537_ID.m	Sample		op84918,S4Q189,120,,,1,5,water	✓
20	4Q13449.d	P1-B6	fa84479-10	537_ID.m	Sample		op84918,S4Q189,120,,,1,1,water	✓
21	4Q13450.d	P1-B7	fa84479-18	537_ID.m	Sample		op84918,S4Q189,120,,,1,5,water	✓
22	4Q13451.d	P1-B8	fa84479-19	537_ID.m	Sample		op84918,S4Q189,120,,,1,1,water	✓
23	4Q13452.d	P1-B9	fa84479-19	537_ID.m	Sample		op84918,S4Q189,120,,,1,5,water	✓
24	4Q13453.d	P1-C1	fa84441-13	537_ID.m	Sample		op84901,S4Q189,125,,,1,25000,water	✓
25	4Q13454.d	P1-C2	fa84488-2	537_ID.m	Sample		op84920,S4Q189,280,,,1,1,water	✓ Te low run 5x
26	4Q13455.d	P1-C3	fa84488-2	537_ID.m	Sample		op84920,S4Q189,280,,,1,5,water	✓ CF for te
27	4Q13456.d	P1-A7	cc189-20	537_ID.m	QC	100/500	op84918,S4Q189,250,,,1,1,water	PASS
28	4Q13457.d	P1-A1	ccb	537_ID.m	Sample		op84918,S4Q189,250,,,1,1,water	BDL
29	4Q13458.d	P1-C4	fa84377-7	537_ID.m	Sample		op84942,S4Q189,2.01,,,1,5,soil	✓ me low CF
30	4Q13459.d	P1-C5	fa84377-8	537_ID.m	Sample		op84942,S4Q189,2.03,,,1,5,soil	✓ me et low CF
31	4Q13460.d	P1-C6	fa84377-12	537_ID.m	Sample		op84942,S4Q189,2.04,,,1,5,soil	✓ re-elute id low
32	4Q13461.d	P1-C7	fa84377-13	537_ID.m	Sample		op84942,S4Q189,1.99,,,1,5,soil	✓ re-elute id low
33	4Q13462.d	P1-C8	jd22888-2a	537_ID.m	Sample		op84941,S4Q189,2.10,,,1,soil	✓
34	4Q13463.d	P1-C9	fa84414-4	537_ID.m	Sample		op84941,S4Q189,0.85,,,10,soil	✓
35	4Q13464.d	P1-D1	fa84414-4	537_ID.m	Sample		op84941,S4Q189,0.85,,,100,soil	✓

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SGS ORLANDO LCMS4-4Q ANALYSIS LOG

36	4Q13465.d	P1-D2	fa84414-4	537_ID.m	Sample		op84941,S4Q189,0.85,,,1000,soil	✓
37	4Q13466.d	P1-A7	cc189-20	537_ID.m	QC	100/500	op84918,S4Q189,250,,,1,1,water	PASS
38	4Q13467.d	P1-A1	ccb	537_ID.m	Sample		op84918,S4Q189,250,,,1,1,water	BDL
39	4Q13468.d	P1-A3	cc189-1.0LL	537_ID.m	QC	5/500	op84918,S4Q189,250,,,1,1,water	PASS
40	4Q13469.d	P1-D3	op84958-bs	537_ID.m	Sample		op84958,S4Q189,2.00,,,1,1,soil	✓
41	4Q13470.d	P1-D4	op84958-mb	537_ID.m	Sample		op84958,S4Q189,2.00,,,1,1,soil	✓
42	4Q13471.d	P1-D5	fa84429-1	537_ID.m	Sample		op84958,S4Q189,2.01,,,1,1,soil	✓
43	4Q13472.d	P1-D6	fa84429-1	537_ID.m	Sample		op84958,S4Q189,2.01,,,1,10,soil	not needed
44	4Q13473.d	P1-D7	fa84429-2	537_ID.m	Sample		op84958,S4Q189,2.04,,,1,1,soil	✓
45	4Q13474.d	P1-D8	fa84429-2	537_ID.m	Sample		op84958,S4Q189,2.04,,,1,10,soil	not needed
46	4Q13475.d	P1-D9	fa84429-3	537_ID.m	Sample		op84958,S4Q189,2.08,,,1,1,soil	✓
47	4Q13476.d	P1-E1	fa84429-3	537_ID.m	Sample		op84958,S4Q189,2.08,,,1,10,soil	not needed
48	4Q13477.d	P1-E2	op84958-ms	537_ID.m	Sample		op84958,S4Q189,2.05,,,1,1,soil	✓
49	4Q13478.d	P1-E3	op84958-ms	537_ID.m	Sample		op84958,S4Q189,2.05,,,1,10,soil	not needed
50	4Q13479.d	P1-A7	cc189-20	537_ID.m	QC	100/500	op84918,S4Q189,250,,,1,1,water	PASS
51	4Q13480.d	P1-A1	ccb	537_ID.m	Sample		op84918,S4Q189,250,,,1,1,water	BDL
52	4Q13481.d	P1-E4	op84958-msd	537_ID.m	Sample		op84958,S4Q189,1.97,,,1,1,soil	✓
53	4Q13482.d	P1-E5	op84958-msd	537_ID.m	Sample		op84958,S4Q189,1.97,,,1,10,soil	not needed
54	4Q13483.d	P1-E6	fa84429-4	537_ID.m	Sample		op84958,S4Q189,2.13,,,1,1,soil	✓
55	4Q13484.d	P1-E7	fa84429-4	537_ID.m	Sample		op84958,S4Q189,2.13,,,1,10,soil	not needed
56	4Q13485.d	P1-E8	fa84429-5	537_ID.m	Sample		op84958,S4Q189,2.05,,,1,1,soil	✓
57	4Q13486.d	P1-E9	fa84429-5	537_ID.m	Sample		op84958,S4Q189,2.05,,,1,10,soil	✓
58	4Q13487.d	P1-F1	fa84429-6	537_ID.m	Sample		op84958,S4Q189,2.01,,,1,1,soil	✓
59	4Q13488.d	P1-F2	fa84429-6	537_ID.m	Sample		op84958,S4Q189,2.01,,,1,10,soil	not needed
60	4Q13489.d	P1-A7	cc189-20	537_ID.m	QC	100/500	op84918,S4Q189,250,,,1,1,water	PASS
61	4Q13490.d	P1-A1	ccb	537_ID.m	Sample		op84918,S4Q189,250,,,1,1,water	BDL
62	4Q13491.d	P1-F3	op84953-lbs	537_ID.m	Sample		op84953,S4Q189,250,,,1,1,water	✓ 13c2-te low tri high NT
63	4Q13492.d	P1-F4	op84953-lb	537_ID.m	Sample		op84953,S4Q189,250,,,1,1,water	✓ pea ba hxa hits NT
64	4Q13493.d	P1-F5	fa84466-1	537_ID.m	Sample		op84953,S4Q189,250,,,1,1,water	✓
65	4Q13494.d	P1-F6	op84953-ms	537_ID.m	Sample		op84953,S4Q189,250,,,1,1,water	✓
66	4Q13495.d	P1-A7	cc189-20	537_ID.m	QC	100/500	op84918,S4Q189,250,,,1,1,water	PASS
67	4Q13496.d	P1-A1	ccb	537_ID.m	Sample		op84918,S4Q189,250,,,1,1,water	BDL
68	4Q13497.d	P1-F7	op84946-bs	537_ID.m	Sample		op84946,S4Q189,250,,,1,1,water	✓
69	4Q13498.d	P1-F8	op84946-mb	537_ID.m	Sample		op84946,S4Q189,250,,,1,1,water	✓
70	4Q13499.d	P1-F9	fa84531-1	537_ID.m	Sample		op84946,S4Q189,250,,,1,1,water	✓
71	4Q13500.d	P2-A1	fa84531-2	537_ID.m	Sample		op84946,S4Q189,250,,,1,1,water	✓
72	4Q13501.d	P2-A2	fa84531-3	537_ID.m	Sample		op84946,S4Q189,250,,,1,1,water	✓
73	4Q13502.d	P2-A3	fa84531-4	537_ID.m	Sample		op84946,S4Q189,250,,,1,1,water	✓
74	4Q13503.d	P2-A4	fa84531-5	537_ID.m	Sample		op84946,S4Q189,250,,,1,1,water	✓
75	4Q13504.d	P2-A5	fa84531-6	537_ID.m	Sample		op84946,S4Q189,250,,,1,1,water	✓
76	4Q13505.d	P2-B5	spike test	537_ID.m	Sample		op84918,S4Q189,250,,,1,1,water	✓
77	4Q13506.d	P1-A7	cc189-20	537_ID.m	QC	100/500	op84918,S4Q189,250,,,1,1,water	PASS
78	4Q13507.d	P1-A1	ccb	537_ID.m	Sample		op84918,S4Q189,250,,,1,1,water	BDL

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SGS ORLANDO LCMS4-4Q ANALYSIS LOG

79	4Q13508.d	P2-A6	fa84541-1	537_ID.m	Sample		op84946,S4Q189,125,,,1,1,water	✓
80	4Q13509.d	P2-A7	op84946-ms	537_ID.m	Sample		op84946,S4Q189,125,,,1,1,water	✓
81	4Q13510.d	P2-A8	op84946-msd	537_ID.m	Sample		op84946,S4Q189,125,,,1,1,water	✓
82	4Q13511.d	P2-A9	fa84541-2	537_ID.m	Sample		op84946,S4Q189,125,,,1,1,water	✓
83	4Q13512.d	P2-B1	fa84541-3	537_ID.m	Sample		op84946,S4Q189,125,,,1,1,water	✓
84	4Q13513.d	P2-B2	fa84547-1	537_ID.m	Sample		op84946,S4Q189,125,,,1,1,water	✓
85	4Q13514.d	P2-B3	fa84547-2	537_ID.m	Sample		op84946,S4Q189,125,,,1,1,water	✓
86	4Q13515.d	P2-B4	jd23102-1a	537_ID.m	Sample		op84946,S4Q189,280,,,1,1,water	✓
87	4Q13516.d	P1-A7	ecc189-20	537_ID.m	QC	100/500	op84918,S4Q189,250,,,1,1,water	PASS
88	4Q13517.d	P1-A1	ccb	537_ID.m	Sample		op84918,S4Q189,250,,,1,1,water	BDL

SGS - ORLANDO

SPE LIQUID SAMPLE PREP REPORT

Date/Time: 04/13/21 09:00 Started {mm/dd/yy 24:00}

Date/Time: 4/14/21 10:30 Finished {mm/dd/yy 24:00}

Prep Method: 3535A or 537 or 537MOD (circle)

Analytical Method: LC537(1.0)

Batch#: OP84900 Ext. By: GH Conc. By: DC Vialed By:

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Manifold ID	Comments
OP 84900 MB		250	7	N/A	20		1ml	E	
OP 84900 BS		250	7			50			
JD22823-1A	1	280-30	7						Orange residue
2A	1	280-30	7						Orange residue
3A	1	280	7						
4A	1	280	7						
5A	1	280-20	7						orange residue
6A	1	280-10	6						orange
7A	1	270-20	7						orange
8A	1	280-30	7					E	orange
9A	1	270	7					F	
10A	1	280	7						
11A	1	280-30	7						orange residue
12A	1	280	7						
JD22888-1	1	280	7						
-1A	1	260	7	N/A	20		1	F	
JD22823-1A MS	2	280-30	7	N/A	20	50	1ml	E	Orange residue
MSD									
JD22823-2A DUP	2	280-30	7	N/A	20		1ml	E	Orange residue

Comments:

Surr.1 ID: LCMS1647B Conc: 1.0 PPM Exp. Date: 10/09/21 Inj. By: GH Ver. By GAF

Spk.1 ID: LCMS 1641 Conc: 400 PPB Exp. Date: 09/26/21 Inj. By: GH Ver. By GAF

Spk.2 ID: Conc: Exp. Date: Inj. By: Ver. By

Spk.3 ID: Conc: Exp. Date: Inj. By: Ver. By

TurboVap Temp (Therm ID): #TV1N

Observed Temp °C: 45 Corr. Temp °C: -

N-Evap Temp (Therm ID):

Observed Temp °C: Corr. Temp °C:

Methanol Lot# 206410

Acetonitrile Lot #

Water Lot# OP84892

Solvent#

SPE Lot # 6578332-01

Syringe filter Lot #

Pre-filter Lot#

Carbon Lot#

pH Paper # 222420

Reagent # 205046 (3%) NH4OH

Reagent # 204513 MeOH

Other

Relinquished By: Gvelasquez Date: 4/14/21

Accepted By: Date: 04-14-21

ORLD-EXT-0001-3-08-FORM-extwater_spe.xls 032718

SGS - ORLANDO

EXP/PFC SAMPLE PREP REPORT

Prep Method: 8330A, 8332, 8330B, 537MOD (PFC) or Other_____ (circle) ID

Date/Time: 04/15/21 07:30 Started {mm/dd/yy 24:00}

Date/Time: 04/16/2021 1130 Finished {mm/dd/yy 24:00}

Therm. ID: 90152772 Corr. Factor (±°C): -1.0

Bath Temp. (High) °C: 12° / 11 {obs/corr

Ultrasonic Bath ID (8330A or 8332): UB1

Shaker Table ID (8330B): _____

Batch#: OP 84941 Ext. By: GT-MS (Trainee Trained) Conc. By: MB Vialed By: GT Balance ID: METTLER 1

Sample ID	Bottle Number	Amount Extracted (g)	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 84941 MB		2.00	20ul		1ml	
OP 84941 BS		2.00		50ul		
FA84183-1	1	2.01				
-2	1	2.11				
FA84414-4	1	0.85				sludge/3dwx sample
JD22888-2A	1	2.10				
-3A	1	2.01				
-4A	1	2.09				
-5A	1	2.15				
-6A	1	2.02				
JD22962-1	1	2.04				sludge
-2	1	2.11				sludge
-3	1	2.11				sludge
-4	1	2.04				sludge
JD22888-2AMS	1	2.00	20ul	50ul	1ml	
-2A MSD	1	2.01				
DUP						
TRP						

Comments:

Surr. ID: LCMS1647-G Conc: 1ppm Exp. Date: 10/07/21 Inj. By: MB Ver. By GT

Spk.1 ID: LCMS1646 Conc: 400ppb Exp. Date: 10/08/21 Inj. By: MB Ver. By GT

Spk.2 ID: — Conc: — Exp. Date: — Inj. By: — Ver. By —

Spk.3 ID: — Conc: — Exp. Date: — Inj. By: — Ver. By —

TurboVap Temp (Therm ID): YCBL VAP 1

Observed Temp °C: 45°C Corr. Temp °C: —

N-Evap Temp (Therm ID): —

Observed Temp °C: — Corr. Temp °C: —

Acetonitrile Lot #: —

Methanol Lot #: 207103

Water Lot#: 20333556

Syringe Filter Lot#: —

Reagent #: —

Reagent #: 194003 0.1% Acetic Acid

Solvent#: _____

Carbon Lot#: —

Other: Methanol 207103 95%

Relinquished By: _____ Date: 04/16/2021

Accepted By: _____ Date: _____

Copy of ORLD-EXT-0002-3-09-FORM-extsolid_exp,pfc.xls 040418

11.8.2 11

April 28, 2021 Service Request No:R2103156

Mandy Klaben
O'Brien & Gere Engineers, Incorporated
333 West Washington Street
Syracuse, NY 13221

Laboratory Results for: Portfolio Materials Characterization-Clean Soil

Dear Mandy,

Enclosed are the results of the sample(s) submitted to our laboratory April 05, 2021
For your reference, these analyses have been assigned our service request number **R2103156.**

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Janice Jaeger
Project Manager

CC: Reagan Cuddy

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp.
dba ALS Environmental

Narrative Documents

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Environmental

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil **Date Received:** 04/05/2021
Sample Matrix: Soil, Water

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Nine soil, water samples were received for analysis at ALS Environmental on 04/05/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270D, 04/12/2021: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8270D, 04/12/2021: The lower control limit for the spike recovery of the Laboratory Control Sample (LCS) was exceeded for one or more analyte. There were no detections of the analyte(s) in the associated field samples. The discrepancy associated with reduced recovery equates to a potential low bias. Samples will be re-extracted. The analytes affected are flagged in the LCS Summary.

Method 8270D, 04/14/2021: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8270D, 04/14/2021: The control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.

Method 8270D, 04/14/2021: The lower control limit for the spike recovery of the Laboratory Control Sample Duplicate (LCSD) was exceeded for one or more analyte. There were no detections of the analyte(s) in the associated field samples. The LCS is within limits for all analytes. These samples are re-extracts for failed QC. The analytes affected are flagged in the LCS Summary.

Semivoa GC:

Method 8081B, 04/13/2021: The control limits were exceeded for analytes in the Continuing Calibration Verification (CCV). The QC failure was most likely due to the composition of the sample(s) immediately preceding the failing CCV. In order to protect the integrity of the instrument, no further corrective action was taken. Results should be considered estimated. Samples ran 2x with the same result to the closing ccv.

Method 8081B, 04/13/2021: The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Method 8151A, 04/27/2021: The control limits were exceeded for analytes in the Continuing Calibration Verification (CCV). The QC failure was most likely due to the composition of the sample(s) immediately preceding the failing CCV. In order to protect the integrity of the instrument, no further corrective action was taken. Results should be considered estimated.

Metals:

Approved by _____ Date 04/28/2021

Method 6010C, 04/09/2021: The Continuing Calibration Blank (CCB) contained a low level of Thallium above the Method Reporting Limit (MRL). Since there were no detections of the analyte(s) in the associated field samples above the reporting level, there is no significant impact on the data.
Method 6010C, 04/09/2021: The Continuing Calibration Blank (CCB) contained a low level of Cobalt above the Method Reporting Limit (MRL). The associated field samples are not affected by the failed CCB, there is no significant impact on the data.

General Chemistry:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

Method 8260C, 04/13/2021: The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Method 8260C, 04/13/2021: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 04/13/2021: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 04/08/2021: The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Method 8260C, 04/08/2021: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 04/08/2021: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Approved by _____ Date 04/28/2021

SAMPLE DETECTION SUMMARY

CLIENT ID: PMC-040521A-01			Lab ID: R2103156-001			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Total Solids	81.4				Percent	ALS SOP
Acetone	5.4	J	5.4	5.7	ug/Kg	8260C

CLIENT ID: PMC-040521A-02			Lab ID: R2103156-002			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Chromium, Trivalent	10.6			1.0	mg/Kg	Calculation
Cyanide, Total	0.21	J	0.17	0.28	mg/Kg	9012B
pH	6.67				pH Units	9045D
Total Solids	77.2				Percent	ALS SOP
Carbon, Total Organic (TOC)	28000		900	2300	mg/Kg	EPA LKahn 7-27-1988
Aluminum, Total	8310		16	25	mg/Kg	6010C
Arsenic, Total	8.7		0.9	1.3	mg/Kg	6010C
Barium, Total	116		2.0	2.5	mg/Kg	6010C
Beryllium, Total	0.50		0.04	0.38	mg/Kg	6010C
Cadmium, Total	0.51	J	0.31	0.63	mg/Kg	6010C
Calcium, Total	2910		50	130	mg/Kg	6010C
Chromium, Total	10.6		0.5	1.3	mg/Kg	6010C
Cobalt, Total	8.1		0.6	6.3	mg/Kg	6010C
Copper, Total	17.9		0.9	2.5	mg/Kg	6010C
Iron, Total	24900		170	250	mg/Kg	6010C
Lead, Total	18.4		0.6	6.3	mg/Kg	6010C
Magnesium, Total	1550		20	130	mg/Kg	6010C
Manganese, Total	1530		20	25	mg/Kg	6010C
Mercury, Total	0.071		0.016	0.039	mg/Kg	7471B
Nickel, Total	11.1		0.9	5.1	mg/Kg	6010C
Potassium, Total	930		70	250	mg/Kg	6010C
Selenium, Total	1.2	J	0.7	1.3	mg/Kg	6010C
Vanadium, Total	20.4		1.0	6.3	mg/Kg	6010C
Zinc, Total	47.4		1.8	2.5	mg/Kg	6010C

CLIENT ID: PMC-040521A-03			Lab ID: R2103156-003			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Total Solids	74.4				Percent	ALS SOP

CLIENT ID: PMC-040521A-04			Lab ID: R2103156-004			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Chromium, Trivalent	10.8			1.0	mg/Kg	Calculation
Cyanide, Total	0.31	J	0.22	0.38	mg/Kg	9012B
pH	6.79				pH Units	9045D
Total Solids	73.8				Percent	ALS SOP
Carbon, Total Organic (TOC)	29900		500	1300	mg/Kg	EPA LKahn 7-27-1988
Aluminum, Total	8120		16	26	mg/Kg	6010C
Arsenic, Total	4.8		1.0	1.3	mg/Kg	6010C

SAMPLE DETECTION SUMMARY

CLIENT ID: PMC-040521A-04			Lab ID: R2103156-004			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Barium, Total	55.8		2.0	2.6	mg/Kg	6010C
Beryllium, Total	0.42		0.04	0.39	mg/Kg	6010C
Cadmium, Total	0.36	J	0.32	0.65	mg/Kg	6010C
Calcium, Total	3530		50	130	mg/Kg	6010C
Chromium, Total	10.8		0.5	1.3	mg/Kg	6010C
Cobalt, Total	4.3	J	0.6	6.5	mg/Kg	6010C
Copper, Total	13.4		0.9	2.6	mg/Kg	6010C
Iron, Total	17100		170	260	mg/Kg	6010C
Lead, Total	10.9		0.6	6.5	mg/Kg	6010C
Magnesium, Total	1610		20	130	mg/Kg	6010C
Manganese, Total	472		2.0	2.6	mg/Kg	6010C
Mercury, Total	0.061		0.018	0.044	mg/Kg	7471B
Nickel, Total	8.0		0.9	5.2	mg/Kg	6010C
Potassium, Total	800		70	260	mg/Kg	6010C
Vanadium, Total	17.8		1.0	6.5	mg/Kg	6010C
Zinc, Total	38.1		1.9	2.6	mg/Kg	6010C

CLIENT ID: PMC-040521A-05			Lab ID: R2103156-005			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Total Solids	78.7				Percent	ALS SOP

CLIENT ID: PMC-040521A-06			Lab ID: R2103156-006			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Chromium, Trivalent	10.1			1.0	mg/Kg	Calculation
Cyanide, Total	0.26	J	0.19	0.32	mg/Kg	9012B
pH	6.47				pH Units	9045D
Total Solids	78.4				Percent	ALS SOP
Carbon, Total Organic (TOC)	24900		700	1900	mg/Kg	EPA LKahn 7-27-1988
Aluminum, Total	7960		15	24	mg/Kg	6010C
Arsenic, Total	4.9		0.9	1.2	mg/Kg	6010C
Barium, Total	57.0		1.8	2.4	mg/Kg	6010C
Beryllium, Total	0.40		0.04	0.35	mg/Kg	6010C
Cadmium, Total	0.33	J	0.29	0.59	mg/Kg	6010C
Calcium, Total	2660		40	120	mg/Kg	6010C
Chromium, Total	10.1		0.5	1.2	mg/Kg	6010C
Cobalt, Total	4.3	J	0.6	5.9	mg/Kg	6010C
Copper, Total	12.7		0.8	2.4	mg/Kg	6010C
Iron, Total	16000		160	240	mg/Kg	6010C
Lead, Total	10.5		0.5	5.9	mg/Kg	6010C
Magnesium, Total	1550		20	120	mg/Kg	6010C
Manganese, Total	465		1.8	2.4	mg/Kg	6010C
Mercury, Total	0.063		0.016	0.040	mg/Kg	7471B

SAMPLE DETECTION SUMMARY

CLIENT ID: PMC-040521A-06			Lab ID: R2103156-006			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Nickel, Total	8.0		0.8	4.7	mg/Kg	6010C
Potassium, Total	730		60	240	mg/Kg	6010C
Vanadium, Total	17.0		0.9	5.9	mg/Kg	6010C
Zinc, Total	35.1		1.7	2.4	mg/Kg	6010C
Endrin Aldehyde	1.7	J	1.1	2.2	ug/Kg	8081B

CLIENT ID: PMC-040521A-07			Lab ID: R2103156-007			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Total Solids	82.4				Percent	ALS SOP

CLIENT ID: PMC-040521A-08			Lab ID: R2103156-008			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Chromium, Trivalent	9.5			1.0	mg/Kg	Calculation
Cyanide, Total	0.31	J	0.21	0.36	mg/Kg	9012B
pH	6.00				pH Units	9045D
Total Solids	82.4				Percent	ALS SOP
Carbon, Total Organic (TOC)	20500		700	1900	mg/Kg	EPA LKahn 7-27-1988
Aluminum, Total	7380		15	24	mg/Kg	6010C
Arsenic, Total	5.9		0.9	1.2	mg/Kg	6010C
Barium, Total	63.0		1.8	2.4	mg/Kg	6010C
Beryllium, Total	0.42		0.04	0.36	mg/Kg	6010C
Cadmium, Total	0.37	J	0.29	0.59	mg/Kg	6010C
Calcium, Total	2010		40	120	mg/Kg	6010C
Chromium, Total	9.5		0.5	1.2	mg/Kg	6010C
Cobalt, Total	5.2	J	0.6	5.9	mg/Kg	6010C
Copper, Total	15.1		0.8	2.4	mg/Kg	6010C
Iron, Total	19500		160	240	mg/Kg	6010C
Lead, Total	16.6		0.5	5.9	mg/Kg	6010C
Magnesium, Total	1400		20	120	mg/Kg	6010C
Manganese, Total	758		1.8	2.4	mg/Kg	6010C
Mercury, Total	0.061		0.015	0.037	mg/Kg	7471B
Nickel, Total	9.4		0.8	4.8	mg/Kg	6010C
Potassium, Total	1080		60	240	mg/Kg	6010C
Selenium, Total	1.0	J	0.7	1.2	mg/Kg	6010C
Vanadium, Total	16.6		0.9	5.9	mg/Kg	6010C
Zinc, Total	39.6		1.7	2.4	mg/Kg	6010C
Pentachlorophenol (PCP)	20		7.8	12	ug/Kg	8151A

Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

SAMPLE CROSS-REFERENCE

R2103156-001	PMC-040521A-01	4/5/2021	1100
R2103156-002	PMC-040521A-02	4/5/2021	1102
R2103156-003	PMC-040521A-03	4/5/2021	1126
R2103156-004	PMC-040521A-04	4/5/2021	1130
R2103156-005	PMC-040521A-05	4/5/2021	1156
R2103156-006	PMC-040521A-06	4/5/2021	1200
R2103156-007	PMC-040521A-07	4/5/2021	1220
R2103156-008	PMC-040521A-08	4/5/2021	1232
R2103156-009	PMC-040521A-09	4/5/2021	

ALS Environmental
1565 Jefferson Road, Building 300, Suite 360
Rochester, New York 14623
(P) (585) 288-5380

Chain Of Custody/Analysis Request
Project Name: Portfolio Material Characterization - Clean Soil Sampling
Lab Project Name: Portfolio Material Characterization

AESI Ref: 38609.59845
COC # : PMC-040521A
Lab Use Only
Lab Proj #
Lab ID

Privileged & Confidential
CDD To: Charles Sharpe, Chris Hoy, Ronnie Held
Sampler: AK, NP
Sampling Company: Ramboll
P O # A000308996

Facility Name: Syracuse - LCP-OU-1
Location of Site: Syracuse, NY
Site Code: R30925

Client Contact: (name, co., address)
Stephen.Miller@Honeywell.com
Honeywell International
301 Plainfield Road, Suite 330
Syracuse, New York 13212

Hardcopy Report To: Hardcopy report only if requested
Invoice To: Steve Miller

Analysis Turnaround Time:
Standard - Y
Rush Charges Authorized for - N
Turn Around Time Required - 2-week

Job No.

	Sample Identification				Sample Date	Sample Time	Matrix Code	Medium Code	Sample Type	# of Cont.	Composite (Yes/No)	Filter Type (Yes=Filtered, No=Unfiltered)	TCLP VOCs	TCLP SVOCs	TCLP Pesticides and Herbicides	TCLP Metals (including 7470 Hg)	Reactive Sulfide and Reactive Cyanide/ignitability/ flash point	pH/Corrosivity	Part 375 VOCs	Part 375 SVOCs	Part 375 Pesticides	Part 375 Herbicides (2,4,5-TP)	Part 375 PCBs	Part 375 Metals including Hexavalent Chromium and Mercury	TOC	Total Cyanide	Total Phosphorous	
	Sys_Loc_Code	Start Depth (ft)	End Depth (ft)	Sys_Sample_Code							Units																	Lab Sample Numbers
1	PMC-HENCLETS-01	—	—	PMC-040521A-01	4/5/2021	1100	Soil	Soil	Reg	4	No	No							X									
2	PMC-HENCLETS-01	—	—	PMC-040521A-02	4/5/2021	1102	Soil	Soil	Reg	3	Yes	No						X		X	X	X	X	X	X	X		
3	PMC-HENCLETS-02	—	—	PMC-040521A-03	4/5/2021	1120	Soil	Soil	Reg	4	No	No							X									
4	PMC-HENCLETS-02	—	—	PMC-040521A-04	4/5/2021	1130	Soil	Soil	Reg	3	Yes	No						X		X	X	X	X	X	X	X		
5	PMC-HENCLETS-03	—	—	PMC-040521A-05	4/5/2021	1156	Soil	Soil	Reg	4	No	No							X									
6	PMC-HENCLETS-03	—	—	PMC-040521A-06	4/5/2021	1200	Soil	Soil	Reg	3	Yes	No						X		X	X	X	X	X	X	X		
7	PMC-HENCLETS-04	—	—	PMC-040521A-07	4/5/2021	1220	Soil	Soil	Reg	4	No	No							X									
8	PMC-HENCLETS-04	—	—	PMC-040521A-08	4/5/2021	1232	Soil	Soil	Reg	3	Yes	No						X		X	X	X	X	X	X	X		
9	PMC-TB-040521	—	—	PMC-040521A-09	4/5/2021	—	WQ	Water	TB	3	No	No							X									
10																												
11																												
12																												
13																												
14																												
15																												

Special Instructions:

FOR INTERNAL USE ONLY:
PMC-HENCLETS = Riccelli Hencle Blvd Top Soil

Relinquished by Amanda Klaben	Company	Ramboll	Received by	Company		Condition	Custody Seals Intact
	Date/Time	4/5 15:24		Date/Time		Cooler Temp.	
Relinquished by	Company		Received by	Company	4/6/21 1624	Condition	Custody Seals Intact

Relinq: AES Environmental 4-5-21 1650

Red Rec'd 4/15/21 1650

R2103156 5
O'Brien & Gere Engineers, Incorporated
Portfolio Materials Characterization-Clean Soil

Cooler Receipt and Preservation Check Form

R2103156 5
O'Brien & Gere Engineers, Incorporated
Portfolio Materials Characterization-Clean Soil

Project/Client Rumball Folder Number

Cooler received on 4/15/21 by: dhw

COURIER: (ALS) UPS FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y (N) NA
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	ALS/ROC CLIENT
4	Circle: ~~Wet Ice~~ **Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as:	Bulk Encore 5035set NA

8. Temperature Readings Date: 4/15/21 Time: 1650 ID: IR#7 (IR#11) From: Temp Blank (Sample Bottle)

Observed Temp (°C)	0.0	0.3°					
Within 0-6°C?	(Y) N	(Y) N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by dhw on 4/15/21 at 1650
5035 samples placed in storage location: R-FRZ by ↓ on ↓ at ↓ within 48 hours of sampling? (Y) N

Cooler Breakdown/Preservation Check**: Date: 4/15/21 Time: 2055 by: dhw

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
10. Did all bottle labels and tags agree with custody papers? (YES) NO
11. Were correct containers used for the tests indicated? (YES) NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? (YES) NO N/A
13. Air Samples: Cassettes / Tubes Intact Y / N with MS Y / N Canisters Pressurized Tedlar® Bags Inflated (N/A)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-						
		HCl	**	**	411810					

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 080320-ITW
Explain all Discrepancies/ Other Comments:

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: dhw
PC Secondary Review: dhw 4/16/21

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Miscellaneous Forms

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the ñNotesò column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an ñimmediateò hold time criteria.

Spike was diluted out.

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (Ó100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

[1] Analyses were performed according to our laboratoryôs NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1

Non-Certified Analytes

Certifying Agency: New York Department of Health

Method	Matrix	Analyte
ALS SOP	Soil	Total Solids
Calculation	Soil	Chromium, Trivalent

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1		

Sample Name:	PMC-040521A-01	**Date Collected:**	04/5/21
Lab Code:	R2103156-001	**Date Received:**	04/5/21
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
8260C		FNAEGLER
ALS SOP		KAWONG

Sample Name:	PMC-040521A-02	**Date Collected:**	04/5/21
Lab Code:	R2103156-002	**Date Received:**	04/5/21
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
6010C	AKONZEL	KMCLAEN
7199	CWOODS	CWOODS
7471B	AKONZEL	AKONZEL
8081B	KSERCU	BALLGEIER
8082A	KSERCU	JMISIUREWICZ
8151A	KSERCU	BALLGEIER
8270D	KSERCU	JMISIUREWICZ
9012B	MROGERSON	MROGERSON
9045D		STALARICO
ALS SOP		KAWONG
EPA LKahn 7-27-1988		NSMITH

Sample Name:	PMC-040521A-02	**Date Collected:**	04/5/21
Lab Code:	R2103156-002.R01	**Date Received:**	04/5/21
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
8270D	KSERCU	JMISIUREWICZ

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1		

Sample Name:	PMC-040521A-03	**Date Collected:**	04/5/21
Lab Code:	R2103156-003	**Date Received:**	04/5/21
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
8260C		FNAEGLER
ALS SOP		KAWONG

Sample Name:	PMC-040521A-04	**Date Collected:**	04/5/21
Lab Code:	R2103156-004	**Date Received:**	04/5/21
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
6010C	AKONZEL	KMCLAEN
7199	CWOODS	CWOODS
7471B	AKONZEL	AKONZEL
8081B	KSERCU	BALLGEIER
8082A	KSERCU	JMISIUREWICZ
8151A	KSERCU	BALLGEIER
8270D	KSERCU	JMISIUREWICZ
9012B	MROGERSON	MROGERSON
9045D		STALARICO
ALS SOP		KAWONG
EPA LKahn 7-27-1988		NSMITH

Sample Name:	PMC-040521A-04	**Date Collected:**	04/5/21
Lab Code:	R2103156-004.R01	**Date Received:**	04/5/21
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
8270D	KSERCU	JMISIUREWICZ

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1		

Sample Name:	PMC-040521A-05	**Date Collected:**	04/5/21
Lab Code:	R2103156-005	**Date Received:**	04/5/21
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
8260C		FNAEGLER
ALS SOP		KAWONG

Sample Name:	PMC-040521A-06	**Date Collected:**	04/5/21
Lab Code:	R2103156-006	**Date Received:**	04/5/21
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
6010C	AKONZEL	KMCLAEN
7199	CWOODS	CWOODS
7471B	AKONZEL	AKONZEL
8081B	KSERCU	BALLGEIER
8082A	KSERCU	JMISIUREWICZ
8151A	KSERCU	BALLGEIER
8270D	KSERCU	JMISIUREWICZ
9012B	MROGERSON	MROGERSON
9045D		STALARICO
ALS SOP		KAWONG
EPA LKahn 7-27-1988		NSMITH

Sample Name:	PMC-040521A-06	**Date Collected:**	04/5/21
Lab Code:	R2103156-006.R01	**Date Received:**	04/5/21
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
8270D	KSERCU	JMISIUREWICZ

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1		

Sample Name:	PMC-040521A-07	**Date Collected:**	04/5/21
Lab Code:	R2103156-007	**Date Received:**	04/5/21
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
8260C		FNAEGLER
ALS SOP		KAWONG

Sample Name:	PMC-040521A-08	**Date Collected:**	04/5/21
Lab Code:	R2103156-008	**Date Received:**	04/5/21
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
6010C	AKONZEL	KMCLAEN
7199	CWOODS	CWOODS
7471B	AKONZEL	AKONZEL
8081B	KSERCU	BALLGEIER
8082A	KSERCU	JMISIUREWICZ
8151A	KSERCU	AFELSER
8270D	KSERCU	JMISIUREWICZ
9012B	MROGERSON	MROGERSON
9045D		STALARICO
ALS SOP		KAWONG
EPA LKahn 7-27-1988		NSMITH

Sample Name:	PMC-040521A-08	**Date Collected:**	04/5/21
Lab Code:	R2103156-008.R01	**Date Received:**	04/5/21
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
8270D	KSERCU	JMISIUREWICZ

Analyst Summary report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1		

Sample Name:	PMC-040521A-09	**Date Collected:**	04/5/21
Lab Code:	R2103156-009	**Date Received:**	04/5/21
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
8260C		FNAEGLER

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	

Sample Results

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:00
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-01	**Units:**	ug/Kg
Lab Code:	R2103156-001	**Basis:**	Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.7 U	5.7	0.23	.93	04/13/21 12:48	
1,1,2,2-Tetrachloroethane	5.7 U	5.7	0.51	.93	04/13/21 12:48	
1,1,2-Trichloroethane	5.7 U	5.7	0.23	.93	04/13/21 12:48	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.7 U	5.7	0.23	.93	04/13/21 12:48	
1,1-Dichloroethane (1,1-DCA)	5.7 U	5.7	0.23	.93	04/13/21 12:48	
1,1-Dichloroethene (1,1-DCE)	5.7 U	5.7	0.34	.93	04/13/21 12:48	
1,2,3-Trichlorobenzene	5.7 U	5.7	0.60	.93	04/13/21 12:48	
1,2,4-Trichlorobenzene	5.7 U	5.7	0.48	.93	04/13/21 12:48	
1,2,4-Trimethylbenzene	5.7 U	5.7	0.23	.93	04/13/21 12:48	
1,2-Dibromo-3-chloropropane (DBCP)	5.7 U	5.7	0.86	.93	04/13/21 12:48	
1,2-Dibromoethane	5.7 U	5.7	0.23	.93	04/13/21 12:48	
1,2-Dichlorobenzene	5.7 U	5.7	0.23	.93	04/13/21 12:48	
1,2-Dichloroethane	5.7 U	5.7	0.23	.93	04/13/21 12:48	
1,2-Dichloropropane	5.7 U	5.7	0.23	.93	04/13/21 12:48	
1,3,5-Trimethylbenzene	5.7 U	5.7	0.23	.93	04/13/21 12:48	
1,3-Dichlorobenzene	5.7 U	5.7	0.23	.93	04/13/21 12:48	
1,4-Dichlorobenzene	5.7 U	5.7	0.26	.93	04/13/21 12:48	
1,4-Dioxane	110 U	110	23	.93	04/13/21 12:48	
2-Butanone (MEK)	5.7 U	5.7	2.3	.93	04/13/21 12:48	
2-Hexanone	5.7 U	5.7	0.42	.93	04/13/21 12:48	
4-Methyl-2-pentanone	5.7 U	5.7	0.27	.93	04/13/21 12:48	
Acetone	**5.4 J**	5.7	5.4	.93	04/13/21 12:48	
Benzene	5.7 U	5.7	0.23	.93	04/13/21 12:48	
Bromochloromethane	5.7 U	5.7	0.23	.93	04/13/21 12:48	
Bromodichloromethane	5.7 U	5.7	0.23	.93	04/13/21 12:48	
Bromoform	5.7 U	5.7	0.58	.93	04/13/21 12:48	
Bromomethane	5.7 U	5.7	2.4	.93	04/13/21 12:48	
Carbon Disulfide	5.7 U	5.7	0.34	.93	04/13/21 12:48	
Carbon Tetrachloride	5.7 U	5.7	0.30	.93	04/13/21 12:48	
Chlorobenzene	5.7 U	5.7	0.23	.93	04/13/21 12:48	
Chloroethane	5.7 U	5.7	0.47	.93	04/13/21 12:48	
Chloroform	5.7 U	5.7	0.23	.93	04/13/21 12:48	
Chloromethane	5.7 U	5.7	1.6	.93	04/13/21 12:48	
Cyclohexane	5.7 U	5.7	0.30	.93	04/13/21 12:48	
Dibromochloromethane	5.7 U	5.7	0.23	.93	04/13/21 12:48	
Dichlorodifluoromethane (CFC 12)	5.7 U	5.7	0.38	.93	04/13/21 12:48	
Dichloromethane	5.7 U	5.7	3.2	.93	04/13/21 12:48	
Ethylbenzene	5.7 U	5.7	0.23	.93	04/13/21 12:48	
Isopropylbenzene (Cumene)	5.7 U	5.7	0.23	.93	04/13/21 12:48	
Methyl Acetate	5.7 U	5.7	0.96	.93	04/13/21 12:48	
Methyl tert-Butyl Ether	5.7 U	5.7	0.23	.93	04/13/21 12:48	
Methylcyclohexane	5.7 U	5.7	0.36	.93	04/13/21 12:48	
Styrene	5.7 U	5.7	0.23	.93	04/13/21 12:48	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:00
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-01	**Units:**	ug/Kg
Lab Code:	R2103156-001	**Basis:**	Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.7 U	5.7	0.27	.93	04/13/21 12:48	
Toluene	5.7 U	5.7	0.23	.93	04/13/21 12:48	
Trichloroethene (TCE)	5.7 U	5.7	0.26	.93	04/13/21 12:48	
Trichlorofluoromethane (CFC 11)	5.7 U	5.7	0.30	.93	04/13/21 12:48	
Vinyl Chloride	5.7 U	5.7	0.53	.93	04/13/21 12:48	
cis-1,2-Dichloroethene	5.7 U	5.7	0.23	.93	04/13/21 12:48	
cis-1,3-Dichloropropene	5.7 U	5.7	0.23	.93	04/13/21 12:48	
m,p-Xylenes	11 U	11	0.43	.93	04/13/21 12:48	
n-Butylbenzene	5.7 U	5.7	0.23	.93	04/13/21 12:48	
n-Propylbenzene	5.7 U	5.7	0.23	.93	04/13/21 12:48	
o-Xylene	5.7 U	5.7	0.23	.93	04/13/21 12:48	
sec-Butylbenzene	5.7 U	5.7	0.23	.93	04/13/21 12:48	
tert-Butylbenzene	5.7 U	5.7	0.23	.93	04/13/21 12:48	
trans-1,2-Dichloroethene	5.7 U	5.7	0.23	.93	04/13/21 12:48	
trans-1,3-Dichloropropene	5.7 U	5.7	0.23	.93	04/13/21 12:48	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	83	31 - 154	04/13/21 12:48	
Dibromofluoromethane	97	63 - 138	04/13/21 12:48	
Toluene-d8	104	66 - 138	04/13/21 12:48	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:26
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-03	**Units:**	ug/Kg
Lab Code:	R2103156-003	**Basis:**	Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.9 U	5.9	0.24	.88	04/13/21 13:11	
1,1,2,2-Tetrachloroethane	5.9 U	5.9	0.53	.88	04/13/21 13:11	
1,1,2-Trichloroethane	5.9 U	5.9	0.24	.88	04/13/21 13:11	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.9 U	5.9	0.24	.88	04/13/21 13:11	
1,1-Dichloroethane (1,1-DCA)	5.9 U	5.9	0.24	.88	04/13/21 13:11	
1,1-Dichloroethene (1,1-DCE)	5.9 U	5.9	0.35	.88	04/13/21 13:11	
1,2,3-Trichlorobenzene	5.9 U	5.9	0.62	.88	04/13/21 13:11	
1,2,4-Trichlorobenzene	5.9 U	5.9	0.50	.88	04/13/21 13:11	
1,2,4-Trimethylbenzene	5.9 U	5.9	0.24	.88	04/13/21 13:11	
1,2-Dibromo-3-chloropropane (DBCP)	5.9 U	5.9	0.89	.88	04/13/21 13:11	
1,2-Dibromoethane	5.9 U	5.9	0.24	.88	04/13/21 13:11	
1,2-Dichlorobenzene	5.9 U	5.9	0.24	.88	04/13/21 13:11	
1,2-Dichloroethane	5.9 U	5.9	0.24	.88	04/13/21 13:11	
1,2-Dichloropropane	5.9 U	5.9	0.24	.88	04/13/21 13:11	
1,3,5-Trimethylbenzene	5.9 U	5.9	0.24	.88	04/13/21 13:11	
1,3-Dichlorobenzene	5.9 U	5.9	0.24	.88	04/13/21 13:11	
1,4-Dichlorobenzene	5.9 U	5.9	0.27	.88	04/13/21 13:11	
1,4-Dioxane	120 U	120	24	.88	04/13/21 13:11	
2-Butanone (MEK)	5.9 U	5.9	2.4	.88	04/13/21 13:11	
2-Hexanone	5.9 U	5.9	0.43	.88	04/13/21 13:11	
4-Methyl-2-pentanone	5.9 U	5.9	0.28	.88	04/13/21 13:11	
Acetone	5.9 U	5.9	5.6	.88	04/13/21 13:11	
Benzene	5.9 U	5.9	0.24	.88	04/13/21 13:11	
Bromochloromethane	5.9 U	5.9	0.24	.88	04/13/21 13:11	
Bromodichloromethane	5.9 U	5.9	0.24	.88	04/13/21 13:11	
Bromoform	5.9 U	5.9	0.60	.88	04/13/21 13:11	
Bromomethane	5.9 U	5.9	2.5	.88	04/13/21 13:11	
Carbon Disulfide	5.9 U	5.9	0.35	.88	04/13/21 13:11	
Carbon Tetrachloride	5.9 U	5.9	0.31	.88	04/13/21 13:11	
Chlorobenzene	5.9 U	5.9	0.24	.88	04/13/21 13:11	
Chloroethane	5.9 U	5.9	0.49	.88	04/13/21 13:11	
Chloroform	5.9 U	5.9	0.24	.88	04/13/21 13:11	
Chloromethane	5.9 U	5.9	1.7	.88	04/13/21 13:11	
Cyclohexane	5.9 U	5.9	0.31	.88	04/13/21 13:11	
Dibromochloromethane	5.9 U	5.9	0.24	.88	04/13/21 13:11	
Dichlorodifluoromethane (CFC 12)	5.9 U	5.9	0.40	.88	04/13/21 13:11	
Dichloromethane	5.9 U	5.9	3.4	.88	04/13/21 13:11	
Ethylbenzene	5.9 U	5.9	0.24	.88	04/13/21 13:11	
Isopropylbenzene (Cumene)	5.9 U	5.9	0.24	.88	04/13/21 13:11	
Methyl Acetate	5.9 U	5.9	1.0	.88	04/13/21 13:11	
Methyl tert-Butyl Ether	5.9 U	5.9	0.24	.88	04/13/21 13:11	
Methylcyclohexane	5.9 U	5.9	0.37	.88	04/13/21 13:11	
Styrene	5.9 U	5.9	0.24	.88	04/13/21 13:11	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:26
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-03	**Units:**	ug/Kg
Lab Code:	R2103156-003	**Basis:**	Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.9 U	5.9	0.28	.88	04/13/21 13:11	
Toluene	5.9 U	5.9	0.24	.88	04/13/21 13:11	
Trichloroethene (TCE)	5.9 U	5.9	0.27	.88	04/13/21 13:11	
Trichlorofluoromethane (CFC 11)	5.9 U	5.9	0.31	.88	04/13/21 13:11	
Vinyl Chloride	5.9 U	5.9	0.55	.88	04/13/21 13:11	
cis-1,2-Dichloroethene	5.9 U	5.9	0.24	.88	04/13/21 13:11	
cis-1,3-Dichloropropene	5.9 U	5.9	0.24	.88	04/13/21 13:11	
m,p-Xylenes	12 U	12	0.44	.88	04/13/21 13:11	
n-Butylbenzene	5.9 U	5.9	0.24	.88	04/13/21 13:11	
n-Propylbenzene	5.9 U	5.9	0.24	.88	04/13/21 13:11	
o-Xylene	5.9 U	5.9	0.24	.88	04/13/21 13:11	
sec-Butylbenzene	5.9 U	5.9	0.24	.88	04/13/21 13:11	
tert-Butylbenzene	5.9 U	5.9	0.24	.88	04/13/21 13:11	
trans-1,2-Dichloroethene	5.9 U	5.9	0.24	.88	04/13/21 13:11	
trans-1,3-Dichloropropene	5.9 U	5.9	0.24	.88	04/13/21 13:11	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	31 - 154	04/13/21 13:11	
Dibromofluoromethane	95	63 - 138	04/13/21 13:11	
Toluene-d8	104	66 - 138	04/13/21 13:11	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:56
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-05	**Units:**	ug/Kg
Lab Code:	R2103156-005	**Basis:**	Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.7 U	5.7	0.23	.89	04/13/21 13:35	
1,1,2,2-Tetrachloroethane	5.7 U	5.7	0.50	.89	04/13/21 13:35	
1,1,2-Trichloroethane	5.7 U	5.7	0.23	.89	04/13/21 13:35	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.7 U	5.7	0.23	.89	04/13/21 13:35	
1,1-Dichloroethane (1,1-DCA)	5.7 U	5.7	0.23	.89	04/13/21 13:35	
1,1-Dichloroethene (1,1-DCE)	5.7 U	5.7	0.33	.89	04/13/21 13:35	
1,2,3-Trichlorobenzene	5.7 U	5.7	0.59	.89	04/13/21 13:35	
1,2,4-Trichlorobenzene	5.7 U	5.7	0.48	.89	04/13/21 13:35	
1,2,4-Trimethylbenzene	5.7 U	5.7	0.23	.89	04/13/21 13:35	
1,2-Dibromo-3-chloropropane (DBCP)	5.7 U	5.7	0.85	.89	04/13/21 13:35	
1,2-Dibromoethane	5.7 U	5.7	0.23	.89	04/13/21 13:35	
1,2-Dichlorobenzene	5.7 U	5.7	0.23	.89	04/13/21 13:35	
1,2-Dichloroethane	5.7 U	5.7	0.23	.89	04/13/21 13:35	
1,2-Dichloropropane	5.7 U	5.7	0.23	.89	04/13/21 13:35	
1,3,5-Trimethylbenzene	5.7 U	5.7	0.23	.89	04/13/21 13:35	
1,3-Dichlorobenzene	5.7 U	5.7	0.23	.89	04/13/21 13:35	
1,4-Dichlorobenzene	5.7 U	5.7	0.25	.89	04/13/21 13:35	
1,4-Dioxane	110 U	110	23	.89	04/13/21 13:35	
2-Butanone (MEK)	5.7 U	5.7	2.3	.89	04/13/21 13:35	
2-Hexanone	5.7 U	5.7	0.41	.89	04/13/21 13:35	
4-Methyl-2-pentanone	5.7 U	5.7	0.27	.89	04/13/21 13:35	
Acetone	5.7 U	5.7	5.4	.89	04/13/21 13:35	
Benzene	5.7 U	5.7	0.23	.89	04/13/21 13:35	
Bromochloromethane	5.7 U	5.7	0.23	.89	04/13/21 13:35	
Bromodichloromethane	5.7 U	5.7	0.23	.89	04/13/21 13:35	
Bromoform	5.7 U	5.7	0.57	.89	04/13/21 13:35	
Bromomethane	5.7 U	5.7	2.4	.89	04/13/21 13:35	
Carbon Disulfide	5.7 U	5.7	0.33	.89	04/13/21 13:35	
Carbon Tetrachloride	5.7 U	5.7	0.30	.89	04/13/21 13:35	
Chlorobenzene	5.7 U	5.7	0.23	.89	04/13/21 13:35	
Chloroethane	5.7 U	5.7	0.47	.89	04/13/21 13:35	
Chloroform	5.7 U	5.7	0.23	.89	04/13/21 13:35	
Chloromethane	5.7 U	5.7	1.6	.89	04/13/21 13:35	
Cyclohexane	5.7 U	5.7	0.30	.89	04/13/21 13:35	
Dibromochloromethane	5.7 U	5.7	0.23	.89	04/13/21 13:35	
Dichlorodifluoromethane (CFC 12)	5.7 U	5.7	0.38	.89	04/13/21 13:35	
Dichloromethane	5.7 U	5.7	3.2	.89	04/13/21 13:35	
Ethylbenzene	5.7 U	5.7	0.23	.89	04/13/21 13:35	
Isopropylbenzene (Cumene)	5.7 U	5.7	0.23	.89	04/13/21 13:35	
Methyl Acetate	5.7 U	5.7	0.95	.89	04/13/21 13:35	
Methyl tert-Butyl Ether	5.7 U	5.7	0.23	.89	04/13/21 13:35	
Methylcyclohexane	5.7 U	5.7	0.36	.89	04/13/21 13:35	
Styrene	5.7 U	5.7	0.23	.89	04/13/21 13:35	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:56
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-05	**Units:**	ug/Kg
Lab Code:	R2103156-005	**Basis:**	Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.7 U	5.7	0.27	.89	04/13/21 13:35	
Toluene	5.7 U	5.7	0.23	.89	04/13/21 13:35	
Trichloroethene (TCE)	5.7 U	5.7	0.25	.89	04/13/21 13:35	
Trichlorofluoromethane (CFC 11)	5.7 U	5.7	0.30	.89	04/13/21 13:35	
Vinyl Chloride	5.7 U	5.7	0.53	.89	04/13/21 13:35	
cis-1,2-Dichloroethene	5.7 U	5.7	0.23	.89	04/13/21 13:35	
cis-1,3-Dichloropropene	5.7 U	5.7	0.23	.89	04/13/21 13:35	
m,p-Xylenes	11 U	11	0.42	.89	04/13/21 13:35	
n-Butylbenzene	5.7 U	5.7	0.23	.89	04/13/21 13:35	
n-Propylbenzene	5.7 U	5.7	0.23	.89	04/13/21 13:35	
o-Xylene	5.7 U	5.7	0.23	.89	04/13/21 13:35	
sec-Butylbenzene	5.7 U	5.7	0.23	.89	04/13/21 13:35	
tert-Butylbenzene	5.7 U	5.7	0.23	.89	04/13/21 13:35	
trans-1,2-Dichloroethene	5.7 U	5.7	0.23	.89	04/13/21 13:35	
trans-1,3-Dichloropropene	5.7 U	5.7	0.23	.89	04/13/21 13:35	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	31 - 154	04/13/21 13:35	
Dibromofluoromethane	94	63 - 138	04/13/21 13:35	
Toluene-d8	102	66 - 138	04/13/21 13:35	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:20
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-07	**Units:**	ug/Kg
Lab Code:	R2103156-007	**Basis:**	Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
1,1,2,2-Tetrachloroethane	7.2 U	7.2	0.64	1.19	04/13/21 13:58	
1,1,2-Trichloroethane	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
1,1,2-Trichloro-1,2,2-trifluoroethane	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
1,1-Dichloroethane (1,1-DCA)	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
1,1-Dichloroethene (1,1-DCE)	7.2 U	7.2	0.42	1.19	04/13/21 13:58	
1,2,3-Trichlorobenzene	7.2 U	7.2	0.76	1.19	04/13/21 13:58	
1,2,4-Trichlorobenzene	7.2 U	7.2	0.61	1.19	04/13/21 13:58	
1,2,4-Trimethylbenzene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
1,2-Dibromo-3-chloropropane (DBCP)	7.2 U	7.2	1.1	1.19	04/13/21 13:58	
1,2-Dibromoethane	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
1,2-Dichlorobenzene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
1,2-Dichloroethane	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
1,2-Dichloropropane	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
1,3,5-Trimethylbenzene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
1,3-Dichlorobenzene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
1,4-Dichlorobenzene	7.2 U	7.2	0.32	1.19	04/13/21 13:58	
1,4-Dioxane	140 U	140	29	1.19	04/13/21 13:58	
2-Butanone (MEK)	7.2 U	7.2	2.9	1.19	04/13/21 13:58	
2-Hexanone	7.2 U	7.2	0.52	1.19	04/13/21 13:58	
4-Methyl-2-pentanone	7.2 U	7.2	0.34	1.19	04/13/21 13:58	
Acetone	7.2 U	7.2	6.8	1.19	04/13/21 13:58	
Benzene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
Bromochloromethane	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
Bromodichloromethane	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
Bromoform	7.2 U	7.2	0.73	1.19	04/13/21 13:58	
Bromomethane	7.2 U	7.2	3.1	1.19	04/13/21 13:58	
Carbon Disulfide	7.2 U	7.2	0.42	1.19	04/13/21 13:58	
Carbon Tetrachloride	7.2 U	7.2	0.38	1.19	04/13/21 13:58	
Chlorobenzene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
Chloroethane	7.2 U	7.2	0.60	1.19	04/13/21 13:58	
Chloroform	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
Chloromethane	7.2 U	7.2	2.1	1.19	04/13/21 13:58	
Cyclohexane	7.2 U	7.2	0.38	1.19	04/13/21 13:58	
Dibromochloromethane	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
Dichlorodifluoromethane (CFC 12)	7.2 U	7.2	0.48	1.19	04/13/21 13:58	
Dichloromethane	7.2 U	7.2	4.1	1.19	04/13/21 13:58	
Ethylbenzene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
Isopropylbenzene (Cumene)	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
Methyl Acetate	7.2 U	7.2	1.3	1.19	04/13/21 13:58	
Methyl tert-Butyl Ether	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
Methylcyclohexane	7.2 U	7.2	0.45	1.19	04/13/21 13:58	
Styrene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:20
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-07	**Units:**	ug/Kg
Lab Code:	R2103156-007	**Basis:**	Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	7.2 U	7.2	0.34	1.19	04/13/21 13:58	
Toluene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
Trichloroethene (TCE)	7.2 U	7.2	0.32	1.19	04/13/21 13:58	
Trichlorofluoromethane (CFC 11)	7.2 U	7.2	0.38	1.19	04/13/21 13:58	
Vinyl Chloride	7.2 U	7.2	0.67	1.19	04/13/21 13:58	
cis-1,2-Dichloroethene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
cis-1,3-Dichloropropene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
m,p-Xylenes	14 U	14	0.54	1.19	04/13/21 13:58	
n-Butylbenzene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
n-Propylbenzene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
o-Xylene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
sec-Butylbenzene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
tert-Butylbenzene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
trans-1,2-Dichloroethene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	
trans-1,3-Dichloropropene	7.2 U	7.2	0.29	1.19	04/13/21 13:58	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	86	31 - 154	04/13/21 13:58	
Dibromofluoromethane	93	63 - 138	04/13/21 13:58	
Toluene-d8	102	66 - 138	04/13/21 13:58	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21
Sample Matrix:	Water	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-09	**Units:**	ug/L
Lab Code:	R2103156-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	04/08/21 17:03	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	04/08/21 17:03	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	04/08/21 17:03	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0 U	1.0	0.20	1	04/08/21 17:03	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	04/08/21 17:03	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	04/08/21 17:03	
1,2,3-Trichlorobenzene	1.0 U	1.0	0.25	1	04/08/21 17:03	
1,2,4-Trichlorobenzene	1.0 U	1.0	0.34	1	04/08/21 17:03	
1,2,4-Trimethylbenzene	1.0 U	1.0	0.20	1	04/08/21 17:03	
1,2-Dibromo-3-chloropropane (DBCP)	2.0 U	2.0	0.45	1	04/08/21 17:03	
1,2-Dibromoethane	1.0 U	1.0	0.20	1	04/08/21 17:03	
1,2-Dichlorobenzene	1.0 U	1.0	0.20	1	04/08/21 17:03	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	04/08/21 17:03	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	04/08/21 17:03	
1,3,5-Trimethylbenzene	1.0 U	1.0	0.20	1	04/08/21 17:03	
1,3-Dichlorobenzene	1.0 U	1.0	0.20	1	04/08/21 17:03	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	04/08/21 17:03	
1,4-Dioxane	40 U	40	13	1	04/08/21 17:03	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	04/08/21 17:03	
2-Hexanone	5.0 U	5.0	0.20	1	04/08/21 17:03	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	04/08/21 17:03	
Acetone	5.0 U	5.0	5.0	1	04/08/21 17:03	
Benzene	1.0 U	1.0	0.20	1	04/08/21 17:03	
Bromochloromethane	1.0 U	1.0	0.20	1	04/08/21 17:03	
Bromodichloromethane	1.0 U	1.0	0.20	1	04/08/21 17:03	
Bromoform	1.0 U	1.0	0.25	1	04/08/21 17:03	
Bromomethane	1.0 U	1.0	0.70	1	04/08/21 17:03	
Carbon Disulfide	1.0 U	1.0	0.42	1	04/08/21 17:03	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	04/08/21 17:03	
Chlorobenzene	1.0 U	1.0	0.20	1	04/08/21 17:03	
Chloroethane	1.0 U	1.0	0.23	1	04/08/21 17:03	
Chloroform	1.0 U	1.0	0.24	1	04/08/21 17:03	
Chloromethane	1.0 U	1.0	0.28	1	04/08/21 17:03	
Cyclohexane	1.0 U	1.0	0.26	1	04/08/21 17:03	
Dibromochloromethane	1.0 U	1.0	0.20	1	04/08/21 17:03	
Dichlorodifluoromethane (CFC 12)	1.0 U	1.0	0.21	1	04/08/21 17:03	
Dichloromethane	1.0 U	1.0	0.65	1	04/08/21 17:03	
Ethylbenzene	1.0 U	1.0	0.20	1	04/08/21 17:03	
Isopropylbenzene (Cumene)	1.0 U	1.0	0.20	1	04/08/21 17:03	
Methyl Acetate	2.0 U	2.0	0.33	1	04/08/21 17:03	
Methyl tert-Butyl Ether	1.0 U	1.0	0.20	1	04/08/21 17:03	
Methylcyclohexane	1.0 U	1.0	0.20	1	04/08/21 17:03	
Styrene	1.0 U	1.0	0.20	1	04/08/21 17:03	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21
Sample Matrix:	Water	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-09	**Units:**	ug/L
Lab Code:	R2103156-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	04/08/21 17:03	
Toluene	1.0 U	1.0	0.20	1	04/08/21 17:03	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	04/08/21 17:03	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.24	1	04/08/21 17:03	
Vinyl Chloride	1.0 U	1.0	0.20	1	04/08/21 17:03	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	04/08/21 17:03	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	04/08/21 17:03	
m,p-Xylenes	2.0 U	2.0	0.20	1	04/08/21 17:03	
n-Butylbenzene	1.0 U	1.0	0.20	1	04/08/21 17:03	
n-Propylbenzene	1.0 U	1.0	0.20	1	04/08/21 17:03	
o-Xylene	1.0 U	1.0	0.20	1	04/08/21 17:03	
sec-Butylbenzene	1.0 U	1.0	0.20	1	04/08/21 17:03	
tert-Butylbenzene	1.0 U	1.0	0.20	1	04/08/21 17:03	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	04/08/21 17:03	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	04/08/21 17:03	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	85 - 122	04/08/21 17:03	
Dibromofluoromethane	89	80 - 116	04/08/21 17:03	
Toluene-d8	100	87 - 121	04/08/21 17:03	

Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:02
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-02	**Units:**	ug/Kg
Lab Code:	R2103156-002	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	420 U	420	94	1	04/12/21 17:55	4/7/21	
2,3,4,6-Tetrachlorophenol	420 U	420	150	1	04/12/21 17:55	4/7/21	
2,4,5-Trichlorophenol	420 U	420	110	1	04/12/21 17:55	4/7/21	
2,4,6-Trichlorophenol	420 U	420	95	1	04/12/21 17:55	4/7/21	
2,4-Dichlorophenol	420 U	420	82	1	04/12/21 17:55	4/7/21	
2,4-Dimethylphenol	420 U	420	76	1	04/12/21 17:55	4/7/21	
2,4-Dinitrophenol	2200 U	2200	720	1	04/12/21 17:55	4/7/21	
2,4-Dinitrotoluene	420 U	420	170	1	04/12/21 17:55	4/7/21	
2,6-Dinitrotoluene	420 U	420	93	1	04/12/21 17:55	4/7/21	
2-Chloronaphthalene	420 U	420	85	1	04/12/21 17:55	4/7/21	
2-Chlorophenol	420 U	420	71	1	04/12/21 17:55	4/7/21	
2-Methylnaphthalene	420 U	420	70	1	04/12/21 17:55	4/7/21	
2-Methylphenol	420 U	420	88	1	04/12/21 17:55	4/7/21	
2-Nitroaniline	2200 U	2200	110	1	04/12/21 17:55	4/7/21	
2-Nitrophenol	420 U	420	99	1	04/12/21 17:55	4/7/21	
3,3'-Dichlorobenzidine	420 U	420	48	1	04/12/21 17:55	4/7/21	
3- and 4-Methylphenol Coelution	420 U	420	81	1	04/12/21 17:55	4/7/21	
3-Nitroaniline	2200 U	2200	85	1	04/12/21 17:55	4/7/21	
4,6-Dinitro-2-methylphenol	2200 U	2200	240	1	04/12/21 17:55	4/7/21	
4-Bromophenyl Phenyl Ether	420 U	420	120	1	04/12/21 17:55	4/7/21	
4-Chloro-3-methylphenol	420 U	420	86	1	04/12/21 17:55	4/7/21	
4-Chloroaniline	420 U	420	72	1	04/12/21 17:55	4/7/21	
4-Chlorophenyl Phenyl Ether	420 U	420	91	1	04/12/21 17:55	4/7/21	
4-Nitroaniline	2200 U	2200	43	1	04/12/21 17:55	4/7/21	
4-Nitrophenol	2200 U	2200	85	1	04/12/21 17:55	4/7/21	
Acenaphthene	420 U	420	80	1	04/12/21 17:55	4/7/21	
Acenaphthylene	420 U	420	86	1	04/12/21 17:55	4/7/21	
Acetophenone	420 U	420	130	1	04/12/21 17:55	4/7/21	
Anthracene	420 U	420	71	1	04/12/21 17:55	4/7/21	
Atrazine	420 U	420	60	1	04/12/21 17:55	4/7/21	
Benz(a)anthracene	420 U	420	63	1	04/12/21 17:55	4/7/21	
Benzaldehyde	2200 U	2200	110	1	04/12/21 17:55	4/7/21	
Benzo(a)pyrene	420 U	420	120	1	04/12/21 17:55	4/7/21	
Benzo(b)fluoranthene	420 U	420	71	1	04/12/21 17:55	4/7/21	
Benzo(g,h,i)perylene	420 U	420	98	1	04/12/21 17:55	4/7/21	
Benzo(k)fluoranthene	420 U	420	69	1	04/12/21 17:55	4/7/21	
Biphenyl	420 U	420	130	1	04/12/21 17:55	4/7/21	
2,2'-Oxybis(1-chloropropane)	420 U	420	87	1	04/12/21 17:55	4/7/21	
Bis(2-chloroethoxy)methane	420 U	420	110	1	04/12/21 17:55	4/7/21	
Bis(2-chloroethyl) Ether	420 U	420	84	1	04/12/21 17:55	4/7/21	
Bis(2-ethylhexyl) Phthalate	640 U	640	78	1	04/12/21 17:55	4/7/21	
Butyl Benzyl Phthalate	420 U	420	51	1	04/12/21 17:55	4/7/21	
Caprolactam	420 U	420	94	1	04/12/21 17:55	4/7/21	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:02
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-02	**Units:**	ug/Kg
Lab Code:	R2103156-002	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	420 U	420	69	1	04/12/21 17:55	4/7/21	
Chrysene	420 U	420	63	1	04/12/21 17:55	4/7/21	
Di-n-butyl Phthalate	420 U	420	69	1	04/12/21 17:55	4/7/21	
Di-n-octyl Phthalate	420 U	420	150	1	04/12/21 17:55	4/7/21	
Dibenz(a,h)anthracene	420 U	420	92	1	04/12/21 17:55	4/7/21	
Dibenzofuran	420 U	420	78	1	04/12/21 17:55	4/7/21	
Diethyl Phthalate	420 U	420	76	1	04/12/21 17:55	4/7/21	
Dimethyl Phthalate	420 U	420	81	1	04/12/21 17:55	4/7/21	
Fluoranthene	420 U	420	110	1	04/12/21 17:55	4/7/21	
Fluorene	420 U	420	80	1	04/12/21 17:55	4/7/21	
Hexachlorobenzene	420 U	420	110	1	04/12/21 17:55	4/7/21	
Hexachlorobutadiene	420 U	420	73	1	04/12/21 17:55	4/7/21	
Hexachlorocyclopentadiene	420 U	420	140	1	04/12/21 17:55	4/7/21	
Hexachloroethane	420 U	420	80	1	04/12/21 17:55	4/7/21	
Indeno(1,2,3-cd)pyrene	420 U	420	140	1	04/12/21 17:55	4/7/21	
Isophorone	420 U	420	89	1	04/12/21 17:55	4/7/21	
N-Nitrosodi-n-propylamine	420 U	420	130	1	04/12/21 17:55	4/7/21	
N-Nitrosodiphenylamine	420 U	420	270	1	04/12/21 17:55	4/7/21	
Naphthalene	420 U	420	80	1	04/12/21 17:55	4/7/21	
Nitrobenzene	420 U	420	76	1	04/12/21 17:55	4/7/21	
Pentachlorophenol (PCP)	2200 U	2200	420	1	04/12/21 17:55	4/7/21	
Phenanthrene	420 U	420	60	1	04/12/21 17:55	4/7/21	
Phenol	420 U	420	86	1	04/12/21 17:55	4/7/21	
Pyrene	420 U	420	71	1	04/12/21 17:55	4/7/21	
Pyridine	2200 U	2200	57	1	04/12/21 17:55	4/7/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	36	10 - 109	04/12/21 17:55	
2-Fluorobiphenyl	32	10 - 102	04/12/21 17:55	
2-Fluorophenol	26	10 - 88	04/12/21 17:55	
Nitrobenzene-d5	24	10 - 95	04/12/21 17:55	
Phenol-d6	25	10 - 145	04/12/21 17:55	
Terphenyl-d14	47	10 - 106	04/12/21 17:55	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:02
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-02	**Units:**	ug/Kg
Lab Code:	R2103156-002	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	430 U	430	96	1	04/15/21 00:11	4/13/21	
2,3,4,6-Tetrachlorophenol	430 U	430	150	1	04/15/21 00:11	4/13/21	
2,4,5-Trichlorophenol	430 U	430	110	1	04/15/21 00:11	4/13/21	
2,4,6-Trichlorophenol	430 U	430	96	1	04/15/21 00:11	4/13/21	
2,4-Dichlorophenol	430 U	430	83	1	04/15/21 00:11	4/13/21	
2,4-Dimethylphenol	430 U	430	78	1	04/15/21 00:11	4/13/21	
2,4-Dinitrophenol	2200 U	2200	740	1	04/15/21 00:11	4/13/21	
2,4-Dinitrotoluene	430 U	430	170	1	04/15/21 00:11	4/13/21	
2,6-Dinitrotoluene	430 U	430	94	1	04/15/21 00:11	4/13/21	
2-Chloronaphthalene	430 U	430	87	1	04/15/21 00:11	4/13/21	
2-Chlorophenol	430 U	430	72	1	04/15/21 00:11	4/13/21	
2-Methylnaphthalene	430 U	430	72	1	04/15/21 00:11	4/13/21	
2-Methylphenol	430 U	430	90	1	04/15/21 00:11	4/13/21	
2-Nitroaniline	2200 U	2200	110	1	04/15/21 00:11	4/13/21	
2-Nitrophenol	430 U	430	100	1	04/15/21 00:11	4/13/21	
3,3'-Dichlorobenzidine	430 U	430	49	1	04/15/21 00:11	4/13/21	
3- and 4-Methylphenol Coelution	430 U	430	83	1	04/15/21 00:11	4/13/21	
3-Nitroaniline	2200 U	2200	87	1	04/15/21 00:11	4/13/21	
4,6-Dinitro-2-methylphenol	2200 U	2200	250	1	04/15/21 00:11	4/13/21	
4-Bromophenyl Phenyl Ether	430 U	430	120	1	04/15/21 00:11	4/13/21	
4-Chloro-3-methylphenol	430 U	430	87	1	04/15/21 00:11	4/13/21	
4-Chloroaniline	430 U	430	73	1	04/15/21 00:11	4/13/21	
4-Chlorophenyl Phenyl Ether	430 U	430	92	1	04/15/21 00:11	4/13/21	
4-Nitroaniline	2200 U	2200	44	1	04/15/21 00:11	4/13/21	
4-Nitrophenol	2200 U	2200	87	1	04/15/21 00:11	4/13/21	
Acenaphthene	430 U	430	82	1	04/15/21 00:11	4/13/21	
Acenaphthylene	430 U	430	87	1	04/15/21 00:11	4/13/21	
Acetophenone	430 U	430	130	1	04/15/21 00:11	4/13/21	
Anthracene	430 U	430	72	1	04/15/21 00:11	4/13/21	
Atrazine	430 U	430	60	1	04/15/21 00:11	4/13/21	
Benz(a)anthracene	430 U	430	64	1	04/15/21 00:11	4/13/21	
Benzaldehyde	2200 U	2200	110	1	04/15/21 00:11	4/13/21	
Benzo(a)pyrene	430 U	430	120	1	04/15/21 00:11	4/13/21	
Benzo(b)fluoranthene	430 U	430	72	1	04/15/21 00:11	4/13/21	
Benzo(g,h,i)perylene	430 U	430	99	1	04/15/21 00:11	4/13/21	
Benzo(k)fluoranthene	430 U	430	70	1	04/15/21 00:11	4/13/21	
Biphenyl	430 U	430	130	1	04/15/21 00:11	4/13/21	
2,2'-Oxybis(1-chloropropane)	430 U	430	89	1	04/15/21 00:11	4/13/21	
Bis(2-chloroethoxy)methane	430 U	430	110	1	04/15/21 00:11	4/13/21	
Bis(2-chloroethyl) Ether	430 U	430	85	1	04/15/21 00:11	4/13/21	
Bis(2-ethylhexyl) Phthalate	650 U	650	79	1	04/15/21 00:11	4/13/21	
Butyl Benzyl Phthalate	430 U	430	52	1	04/15/21 00:11	4/13/21	
Caprolactam	430 U	430	95	1	04/15/21 00:11	4/13/21	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:02
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-02	**Units:**	ug/Kg
Lab Code:	R2103156-002	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	430 U	430	70	1	04/15/21 00:11	4/13/21	
Chrysene	430 U	430	64	1	04/15/21 00:11	4/13/21	
Di-n-butyl Phthalate	430 U	430	70	1	04/15/21 00:11	4/13/21	
Di-n-octyl Phthalate	430 U	430	160	1	04/15/21 00:11	4/13/21	
Dibenz(a,h)anthracene	430 U	430	94	1	04/15/21 00:11	4/13/21	
Dibenzofuran	430 U	430	79	1	04/15/21 00:11	4/13/21	
Diethyl Phthalate	430 U	430	77	1	04/15/21 00:11	4/13/21	
Dimethyl Phthalate	430 U	430	82	1	04/15/21 00:11	4/13/21	
Fluoranthene	430 U	430	110	1	04/15/21 00:11	4/13/21	
Fluorene	430 U	430	81	1	04/15/21 00:11	4/13/21	
Hexachlorobenzene	430 U	430	110	1	04/15/21 00:11	4/13/21	
Hexachlorobutadiene	430 U	430	74	1	04/15/21 00:11	4/13/21	
Hexachlorocyclopentadiene	430 U	430	140	1	04/15/21 00:11	4/13/21	
Hexachloroethane	430 U	430	81	1	04/15/21 00:11	4/13/21	
Indeno(1,2,3-cd)pyrene	430 U	430	140	1	04/15/21 00:11	4/13/21	
Isophorone	430 U	430	90	1	04/15/21 00:11	4/13/21	
N-Nitrosodi-n-propylamine	430 U	430	140	1	04/15/21 00:11	4/13/21	
N-Nitrosodiphenylamine	430 U	430	270	1	04/15/21 00:11	4/13/21	
Naphthalene	430 U	430	81	1	04/15/21 00:11	4/13/21	
Nitrobenzene	430 U	430	77	1	04/15/21 00:11	4/13/21	
Pentachlorophenol (PCP)	2200 U	2200	430	1	04/15/21 00:11	4/13/21	
Phenanthrene	430 U	430	61	1	04/15/21 00:11	4/13/21	
Phenol	430 U	430	87	1	04/15/21 00:11	4/13/21	
Pyrene	430 U	430	72	1	04/15/21 00:11	4/13/21	
Pyridine	2200 U	2200	58	1	04/15/21 00:11	4/13/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	19	10 - 109	04/15/21 00:11	
2-Fluorobiphenyl	26	10 - 102	04/15/21 00:11	
2-Fluorophenol	24	10 - 88	04/15/21 00:11	
Nitrobenzene-d5	20	10 - 95	04/15/21 00:11	
Phenol-d6	24	10 - 145	04/15/21 00:11	
Terphenyl-d14	43	10 - 106	04/15/21 00:11	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:30
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-04	**Units:**	ug/Kg
Lab Code:	R2103156-004	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	440 U	440	98	1	04/12/21 18:24	4/7/21	
2,3,4,6-Tetrachlorophenol	440 U	440	160	1	04/12/21 18:24	4/7/21	
2,4,5-Trichlorophenol	440 U	440	110	1	04/12/21 18:24	4/7/21	
2,4,6-Trichlorophenol	440 U	440	98	1	04/12/21 18:24	4/7/21	
2,4-Dichlorophenol	440 U	440	85	1	04/12/21 18:24	4/7/21	
2,4-Dimethylphenol	440 U	440	79	1	04/12/21 18:24	4/7/21	
2,4-Dinitrophenol	2300 U	2300	750	1	04/12/21 18:24	4/7/21	
2,4-Dinitrotoluene	440 U	440	170	1	04/12/21 18:24	4/7/21	
2,6-Dinitrotoluene	440 U	440	96	1	04/12/21 18:24	4/7/21	
2-Chloronaphthalene	440 U	440	88	1	04/12/21 18:24	4/7/21	
2-Chlorophenol	440 U	440	74	1	04/12/21 18:24	4/7/21	
2-Methylnaphthalene	440 U	440	73	1	04/12/21 18:24	4/7/21	
2-Methylphenol	440 U	440	91	1	04/12/21 18:24	4/7/21	
2-Nitroaniline	2300 U	2300	110	1	04/12/21 18:24	4/7/21	
2-Nitrophenol	440 U	440	110	1	04/12/21 18:24	4/7/21	
3,3'-Dichlorobenzidine	440 U	440	50	1	04/12/21 18:24	4/7/21	
3- and 4-Methylphenol Coelution	440 U	440	84	1	04/12/21 18:24	4/7/21	
3-Nitroaniline	2300 U	2300	89	1	04/12/21 18:24	4/7/21	
4,6-Dinitro-2-methylphenol	2300 U	2300	250	1	04/12/21 18:24	4/7/21	
4-Bromophenyl Phenyl Ether	440 U	440	120	1	04/12/21 18:24	4/7/21	
4-Chloro-3-methylphenol	440 U	440	89	1	04/12/21 18:24	4/7/21	
4-Chloroaniline	440 U	440	75	1	04/12/21 18:24	4/7/21	
4-Chlorophenyl Phenyl Ether	440 U	440	94	1	04/12/21 18:24	4/7/21	
4-Nitroaniline	2300 U	2300	45	1	04/12/21 18:24	4/7/21	
4-Nitrophenol	2300 U	2300	89	1	04/12/21 18:24	4/7/21	
Acenaphthene	440 U	440	83	1	04/12/21 18:24	4/7/21	
Acenaphthylene	440 U	440	89	1	04/12/21 18:24	4/7/21	
Acetophenone	440 U	440	130	1	04/12/21 18:24	4/7/21	
Anthracene	440 U	440	74	1	04/12/21 18:24	4/7/21	
Atrazine	440 U	440	62	1	04/12/21 18:24	4/7/21	
Benz(a)anthracene	440 U	440	66	1	04/12/21 18:24	4/7/21	
Benzaldehyde	2300 U	2300	110	1	04/12/21 18:24	4/7/21	
Benzo(a)pyrene	440 U	440	120	1	04/12/21 18:24	4/7/21	
Benzo(b)fluoranthene	440 U	440	74	1	04/12/21 18:24	4/7/21	
Benzo(g,h,i)perylene	440 U	440	110	1	04/12/21 18:24	4/7/21	
Benzo(k)fluoranthene	440 U	440	71	1	04/12/21 18:24	4/7/21	
Biphenyl	440 U	440	130	1	04/12/21 18:24	4/7/21	
2,2'-Oxybis(1-chloropropane)	440 U	440	90	1	04/12/21 18:24	4/7/21	
Bis(2-chloroethoxy)methane	440 U	440	110	1	04/12/21 18:24	4/7/21	
Bis(2-chloroethyl) Ether	440 U	440	87	1	04/12/21 18:24	4/7/21	
Bis(2-ethylhexyl) Phthalate	670 U	670	81	1	04/12/21 18:24	4/7/21	
Butyl Benzyl Phthalate	440 U	440	53	1	04/12/21 18:24	4/7/21	
Caprolactam	440 U	440	97	1	04/12/21 18:24	4/7/21	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:30
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-04	**Units:**	ug/Kg
Lab Code:	R2103156-004	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	440 U	440	72	1	04/12/21 18:24	4/7/21	
Chrysene	440 U	440	65	1	04/12/21 18:24	4/7/21	
Di-n-butyl Phthalate	440 U	440	71	1	04/12/21 18:24	4/7/21	
Di-n-octyl Phthalate	440 U	440	160	1	04/12/21 18:24	4/7/21	
Dibenz(a,h)anthracene	440 U	440	96	1	04/12/21 18:24	4/7/21	
Dibenzofuran	440 U	440	80	1	04/12/21 18:24	4/7/21	
Diethyl Phthalate	440 U	440	78	1	04/12/21 18:24	4/7/21	
Dimethyl Phthalate	440 U	440	84	1	04/12/21 18:24	4/7/21	
Fluoranthene	440 U	440	120	1	04/12/21 18:24	4/7/21	
Fluorene	440 U	440	83	1	04/12/21 18:24	4/7/21	
Hexachlorobenzene	440 U	440	110	1	04/12/21 18:24	4/7/21	
Hexachlorobutadiene	440 U	440	76	1	04/12/21 18:24	4/7/21	
Hexachlorocyclopentadiene	440 U	440	140	1	04/12/21 18:24	4/7/21	
Hexachloroethane	440 U	440	83	1	04/12/21 18:24	4/7/21	
Indeno(1,2,3-cd)pyrene	440 U	440	150	1	04/12/21 18:24	4/7/21	
Isophorone	440 U	440	92	1	04/12/21 18:24	4/7/21	
N-Nitrosodi-n-propylamine	440 U	440	140	1	04/12/21 18:24	4/7/21	
N-Nitrosodiphenylamine	440 U	440	280	1	04/12/21 18:24	4/7/21	
Naphthalene	440 U	440	83	1	04/12/21 18:24	4/7/21	
Nitrobenzene	440 U	440	79	1	04/12/21 18:24	4/7/21	
Pentachlorophenol (PCP)	2300 U	2300	440	1	04/12/21 18:24	4/7/21	
Phenanthrene	440 U	440	63	1	04/12/21 18:24	4/7/21	
Phenol	440 U	440	89	1	04/12/21 18:24	4/7/21	
Pyrene	440 U	440	73	1	04/12/21 18:24	4/7/21	
Pyridine	2300 U	2300	59	1	04/12/21 18:24	4/7/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	40	10 - 109	04/12/21 18:24	
2-Fluorobiphenyl	34	10 - 102	04/12/21 18:24	
2-Fluorophenol	29	10 - 88	04/12/21 18:24	
Nitrobenzene-d5	26	10 - 95	04/12/21 18:24	
Phenol-d6	27	10 - 145	04/12/21 18:24	
Terphenyl-d14	48	10 - 106	04/12/21 18:24	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:30
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-04	**Units:**	ug/Kg
Lab Code:	R2103156-004	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	460 U	460	110	1	04/15/21 00:40	4/13/21	
2,3,4,6-Tetrachlorophenol	460 U	460	170	1	04/15/21 00:40	4/13/21	
2,4,5-Trichlorophenol	460 U	460	120	1	04/15/21 00:40	4/13/21	
2,4,6-Trichlorophenol	460 U	460	110	1	04/15/21 00:40	4/13/21	
2,4-Dichlorophenol	460 U	460	89	1	04/15/21 00:40	4/13/21	
2,4-Dimethylphenol	460 U	460	83	1	04/15/21 00:40	4/13/21	
2,4-Dinitrophenol	2400 U	2400	790	1	04/15/21 00:40	4/13/21	
2,4-Dinitrotoluene	460 U	460	180	1	04/15/21 00:40	4/13/21	
2,6-Dinitrotoluene	460 U	460	110	1	04/15/21 00:40	4/13/21	
2-Chloronaphthalene	460 U	460	93	1	04/15/21 00:40	4/13/21	
2-Chlorophenol	460 U	460	77	1	04/15/21 00:40	4/13/21	
2-Methylnaphthalene	460 U	460	77	1	04/15/21 00:40	4/13/21	
2-Methylphenol	460 U	460	96	1	04/15/21 00:40	4/13/21	
2-Nitroaniline	2400 U	2400	110	1	04/15/21 00:40	4/13/21	
2-Nitrophenol	460 U	460	110	1	04/15/21 00:40	4/13/21	
3,3'-Dichlorobenzidine	460 U	460	52	1	04/15/21 00:40	4/13/21	
3- and 4-Methylphenol Coelution	460 U	460	89	1	04/15/21 00:40	4/13/21	
3-Nitroaniline	2400 U	2400	93	1	04/15/21 00:40	4/13/21	
4,6-Dinitro-2-methylphenol	2400 U	2400	270	1	04/15/21 00:40	4/13/21	
4-Bromophenyl Phenyl Ether	460 U	460	130	1	04/15/21 00:40	4/13/21	
4-Chloro-3-methylphenol	460 U	460	93	1	04/15/21 00:40	4/13/21	
4-Chloroaniline	460 U	460	78	1	04/15/21 00:40	4/13/21	
4-Chlorophenyl Phenyl Ether	460 U	460	99	1	04/15/21 00:40	4/13/21	
4-Nitroaniline	2400 U	2400	47	1	04/15/21 00:40	4/13/21	
4-Nitrophenol	2400 U	2400	93	1	04/15/21 00:40	4/13/21	
Acenaphthene	460 U	460	88	1	04/15/21 00:40	4/13/21	
Acenaphthylene	460 U	460	94	1	04/15/21 00:40	4/13/21	
Acetophenone	460 U	460	140	1	04/15/21 00:40	4/13/21	
Anthracene	460 U	460	78	1	04/15/21 00:40	4/13/21	
Atrazine	460 U	460	65	1	04/15/21 00:40	4/13/21	
Benz(a)anthracene	460 U	460	69	1	04/15/21 00:40	4/13/21	
Benzaldehyde	2400 U	2400	120	1	04/15/21 00:40	4/13/21	
Benzo(a)pyrene	460 U	460	130	1	04/15/21 00:40	4/13/21	
Benzo(b)fluoranthene	460 U	460	77	1	04/15/21 00:40	4/13/21	
Benzo(g,h,i)perylene	460 U	460	110	1	04/15/21 00:40	4/13/21	
Benzo(k)fluoranthene	460 U	460	75	1	04/15/21 00:40	4/13/21	
Biphenyl	460 U	460	140	1	04/15/21 00:40	4/13/21	
2,2'-Oxybis(1-chloropropane)	460 U	460	95	1	04/15/21 00:40	4/13/21	
Bis(2-chloroethoxy)methane	460 U	460	120	1	04/15/21 00:40	4/13/21	
Bis(2-chloroethyl) Ether	460 U	460	91	1	04/15/21 00:40	4/13/21	
Bis(2-ethylhexyl) Phthalate	700 U	700	85	1	04/15/21 00:40	4/13/21	
Butyl Benzyl Phthalate	460 U	460	56	1	04/15/21 00:40	4/13/21	
Caprolactam	460 U	460	110	1	04/15/21 00:40	4/13/21	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:30
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-04	**Units:**	ug/Kg
Lab Code:	R2103156-004	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	460 U	460	75	1	04/15/21 00:40	4/13/21	
Chrysene	460 U	460	68	1	04/15/21 00:40	4/13/21	
Di-n-butyl Phthalate	460 U	460	75	1	04/15/21 00:40	4/13/21	
Di-n-octyl Phthalate	460 U	460	170	1	04/15/21 00:40	4/13/21	
Dibenz(a,h)anthracene	460 U	460	110	1	04/15/21 00:40	4/13/21	
Dibenzofuran	460 U	460	84	1	04/15/21 00:40	4/13/21	
Diethyl Phthalate	460 U	460	82	1	04/15/21 00:40	4/13/21	
Dimethyl Phthalate	460 U	460	88	1	04/15/21 00:40	4/13/21	
Fluoranthene	460 U	460	120	1	04/15/21 00:40	4/13/21	
Fluorene	460 U	460	87	1	04/15/21 00:40	4/13/21	
Hexachlorobenzene	460 U	460	120	1	04/15/21 00:40	4/13/21	
Hexachlorobutadiene	460 U	460	79	1	04/15/21 00:40	4/13/21	
Hexachlorocyclopentadiene	460 U	460	150	1	04/15/21 00:40	4/13/21	
Hexachloroethane	460 U	460	87	1	04/15/21 00:40	4/13/21	
Indeno(1,2,3-cd)pyrene	460 U	460	150	1	04/15/21 00:40	4/13/21	
Isophorone	460 U	460	97	1	04/15/21 00:40	4/13/21	
N-Nitrosodi-n-propylamine	460 U	460	150	1	04/15/21 00:40	4/13/21	
N-Nitrosodiphenylamine	460 U	460	290	1	04/15/21 00:40	4/13/21	
Naphthalene	460 U	460	87	1	04/15/21 00:40	4/13/21	
Nitrobenzene	460 U	460	83	1	04/15/21 00:40	4/13/21	
Pentachlorophenol (PCP)	2400 U	2400	460	1	04/15/21 00:40	4/13/21	
Phenanthrene	460 U	460	66	1	04/15/21 00:40	4/13/21	
Phenol	460 U	460	93	1	04/15/21 00:40	4/13/21	
Pyrene	460 U	460	77	1	04/15/21 00:40	4/13/21	
Pyridine	2400 U	2400	62	1	04/15/21 00:40	4/13/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	26	10 - 109	04/15/21 00:40	
2-Fluorobiphenyl	31	10 - 102	04/15/21 00:40	
2-Fluorophenol	31	10 - 88	04/15/21 00:40	
Nitrobenzene-d5	25	10 - 95	04/15/21 00:40	
Phenol-d6	31	10 - 145	04/15/21 00:40	
Terphenyl-d14	54	10 - 106	04/15/21 00:40	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:00
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-06	**Units:**	ug/Kg
Lab Code:	R2103156-006	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	420 U	420	94	1	04/12/21 18:52	4/7/21	
2,3,4,6-Tetrachlorophenol	420 U	420	150	1	04/12/21 18:52	4/7/21	
2,4,5-Trichlorophenol	420 U	420	110	1	04/12/21 18:52	4/7/21	
2,4,6-Trichlorophenol	420 U	420	95	1	04/12/21 18:52	4/7/21	
2,4-Dichlorophenol	420 U	420	82	1	04/12/21 18:52	4/7/21	
2,4-Dimethylphenol	420 U	420	76	1	04/12/21 18:52	4/7/21	
2,4-Dinitrophenol	2200 U	2200	720	1	04/12/21 18:52	4/7/21	
2,4-Dinitrotoluene	420 U	420	170	1	04/12/21 18:52	4/7/21	
2,6-Dinitrotoluene	420 U	420	93	1	04/12/21 18:52	4/7/21	
2-Chloronaphthalene	420 U	420	85	1	04/12/21 18:52	4/7/21	
2-Chlorophenol	420 U	420	71	1	04/12/21 18:52	4/7/21	
2-Methylnaphthalene	420 U	420	70	1	04/12/21 18:52	4/7/21	
2-Methylphenol	420 U	420	88	1	04/12/21 18:52	4/7/21	
2-Nitroaniline	2200 U	2200	100	1	04/12/21 18:52	4/7/21	
2-Nitrophenol	420 U	420	99	1	04/12/21 18:52	4/7/21	
3,3'-Dichlorobenzidine	420 U	420	48	1	04/12/21 18:52	4/7/21	
3- and 4-Methylphenol Coelution	420 U	420	81	1	04/12/21 18:52	4/7/21	
3-Nitroaniline	2200 U	2200	85	1	04/12/21 18:52	4/7/21	
4,6-Dinitro-2-methylphenol	2200 U	2200	240	1	04/12/21 18:52	4/7/21	
4-Bromophenyl Phenyl Ether	420 U	420	120	1	04/12/21 18:52	4/7/21	
4-Chloro-3-methylphenol	420 U	420	86	1	04/12/21 18:52	4/7/21	
4-Chloroaniline	420 U	420	72	1	04/12/21 18:52	4/7/21	
4-Chlorophenyl Phenyl Ether	420 U	420	91	1	04/12/21 18:52	4/7/21	
4-Nitroaniline	2200 U	2200	43	1	04/12/21 18:52	4/7/21	
4-Nitrophenol	2200 U	2200	85	1	04/12/21 18:52	4/7/21	
Acenaphthene	420 U	420	80	1	04/12/21 18:52	4/7/21	
Acenaphthylene	420 U	420	86	1	04/12/21 18:52	4/7/21	
Acetophenone	420 U	420	130	1	04/12/21 18:52	4/7/21	
Anthracene	420 U	420	71	1	04/12/21 18:52	4/7/21	
Atrazine	420 U	420	59	1	04/12/21 18:52	4/7/21	
Benz(a)anthracene	420 U	420	63	1	04/12/21 18:52	4/7/21	
Benzaldehyde	2200 U	2200	110	1	04/12/21 18:52	4/7/21	
Benzo(a)pyrene	420 U	420	120	1	04/12/21 18:52	4/7/21	
Benzo(b)fluoranthene	420 U	420	71	1	04/12/21 18:52	4/7/21	
Benzo(g,h,i)perylene	420 U	420	98	1	04/12/21 18:52	4/7/21	
Benzo(k)fluoranthene	420 U	420	69	1	04/12/21 18:52	4/7/21	
Biphenyl	420 U	420	130	1	04/12/21 18:52	4/7/21	
2,2'-Oxybis(1-chloropropane)	420 U	420	87	1	04/12/21 18:52	4/7/21	
Bis(2-chloroethoxy)methane	420 U	420	110	1	04/12/21 18:52	4/7/21	
Bis(2-chloroethyl) Ether	420 U	420	84	1	04/12/21 18:52	4/7/21	
Bis(2-ethylhexyl) Phthalate	640 U	640	78	1	04/12/21 18:52	4/7/21	
Butyl Benzyl Phthalate	420 U	420	51	1	04/12/21 18:52	4/7/21	
Caprolactam	420 U	420	94	1	04/12/21 18:52	4/7/21	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:00
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-06	**Units:**	ug/Kg
Lab Code:	R2103156-006	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	420 U	420	69	1	04/12/21 18:52	4/7/21	
Chrysene	420 U	420	63	1	04/12/21 18:52	4/7/21	
Di-n-butyl Phthalate	420 U	420	69	1	04/12/21 18:52	4/7/21	
Di-n-octyl Phthalate	420 U	420	150	1	04/12/21 18:52	4/7/21	
Dibenz(a,h)anthracene	420 U	420	92	1	04/12/21 18:52	4/7/21	
Dibenzofuran	420 U	420	77	1	04/12/21 18:52	4/7/21	
Diethyl Phthalate	420 U	420	76	1	04/12/21 18:52	4/7/21	
Dimethyl Phthalate	420 U	420	81	1	04/12/21 18:52	4/7/21	
Fluoranthene	420 U	420	110	1	04/12/21 18:52	4/7/21	
Fluorene	420 U	420	80	1	04/12/21 18:52	4/7/21	
Hexachlorobenzene	420 U	420	110	1	04/12/21 18:52	4/7/21	
Hexachlorobutadiene	420 U	420	73	1	04/12/21 18:52	4/7/21	
Hexachlorocyclopentadiene	420 U	420	140	1	04/12/21 18:52	4/7/21	
Hexachloroethane	420 U	420	80	1	04/12/21 18:52	4/7/21	
Indeno(1,2,3-cd)pyrene	420 U	420	140	1	04/12/21 18:52	4/7/21	
Isophorone	420 U	420	89	1	04/12/21 18:52	4/7/21	
N-Nitrosodi-n-propylamine	420 U	420	130	1	04/12/21 18:52	4/7/21	
N-Nitrosodiphenylamine	420 U	420	270	1	04/12/21 18:52	4/7/21	
Naphthalene	420 U	420	80	1	04/12/21 18:52	4/7/21	
Nitrobenzene	420 U	420	76	1	04/12/21 18:52	4/7/21	
Pentachlorophenol (PCP)	2200 U	2200	420	1	04/12/21 18:52	4/7/21	
Phenanthrene	420 U	420	60	1	04/12/21 18:52	4/7/21	
Phenol	420 U	420	86	1	04/12/21 18:52	4/7/21	
Pyrene	420 U	420	71	1	04/12/21 18:52	4/7/21	
Pyridine	2200 U	2200	57	1	04/12/21 18:52	4/7/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	37	10 - 109	04/12/21 18:52	
2-Fluorobiphenyl	33	10 - 102	04/12/21 18:52	
2-Fluorophenol	28	10 - 88	04/12/21 18:52	
Nitrobenzene-d5	25	10 - 95	04/12/21 18:52	
Phenol-d6	25	10 - 145	04/12/21 18:52	
Terphenyl-d14	47	10 - 106	04/12/21 18:52	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:00
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-06	**Units:**	ug/Kg
Lab Code:	R2103156-006	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	420 U	420	93	1	04/15/21 01:08	4/13/21	
2,3,4,6-Tetrachlorophenol	420 U	420	150	1	04/15/21 01:08	4/13/21	
2,4,5-Trichlorophenol	420 U	420	110	1	04/15/21 01:08	4/13/21	
2,4,6-Trichlorophenol	420 U	420	93	1	04/15/21 01:08	4/13/21	
2,4-Dichlorophenol	420 U	420	81	1	04/15/21 01:08	4/13/21	
2,4-Dimethylphenol	420 U	420	75	1	04/15/21 01:08	4/13/21	
2,4-Dinitrophenol	2200 U	2200	710	1	04/15/21 01:08	4/13/21	
2,4-Dinitrotoluene	420 U	420	170	1	04/15/21 01:08	4/13/21	
2,6-Dinitrotoluene	420 U	420	92	1	04/15/21 01:08	4/13/21	
2-Chloronaphthalene	420 U	420	84	1	04/15/21 01:08	4/13/21	
2-Chlorophenol	420 U	420	70	1	04/15/21 01:08	4/13/21	
2-Methylnaphthalene	420 U	420	70	1	04/15/21 01:08	4/13/21	
2-Methylphenol	420 U	420	87	1	04/15/21 01:08	4/13/21	
2-Nitroaniline	2200 U	2200	99	1	04/15/21 01:08	4/13/21	
2-Nitrophenol	420 U	420	97	1	04/15/21 01:08	4/13/21	
3,3'-Dichlorobenzidine	420 U	420	47	1	04/15/21 01:08	4/13/21	
3- and 4-Methylphenol Coelution	420 U	420	80	1	04/15/21 01:08	4/13/21	
3-Nitroaniline	2200 U	2200	84	1	04/15/21 01:08	4/13/21	
4,6-Dinitro-2-methylphenol	2200 U	2200	240	1	04/15/21 01:08	4/13/21	
4-Bromophenyl Phenyl Ether	420 U	420	110	1	04/15/21 01:08	4/13/21	
4-Chloro-3-methylphenol	420 U	420	85	1	04/15/21 01:08	4/13/21	
4-Chloroaniline	420 U	420	71	1	04/15/21 01:08	4/13/21	
4-Chlorophenyl Phenyl Ether	420 U	420	90	1	04/15/21 01:08	4/13/21	
4-Nitroaniline	2200 U	2200	43	1	04/15/21 01:08	4/13/21	
4-Nitrophenol	2200 U	2200	84	1	04/15/21 01:08	4/13/21	
Acenaphthene	420 U	420	79	1	04/15/21 01:08	4/13/21	
Acenaphthylene	420 U	420	85	1	04/15/21 01:08	4/13/21	
Acetophenone	420 U	420	130	1	04/15/21 01:08	4/13/21	
Anthracene	420 U	420	70	1	04/15/21 01:08	4/13/21	
Atrazine	420 U	420	59	1	04/15/21 01:08	4/13/21	
Benz(a)anthracene	420 U	420	63	1	04/15/21 01:08	4/13/21	
Benzaldehyde	2200 U	2200	110	1	04/15/21 01:08	4/13/21	
Benzo(a)pyrene	420 U	420	120	1	04/15/21 01:08	4/13/21	
Benzo(b)fluoranthene	420 U	420	70	1	04/15/21 01:08	4/13/21	
Benzo(g,h,i)perylene	420 U	420	96	1	04/15/21 01:08	4/13/21	
Benzo(k)fluoranthene	420 U	420	68	1	04/15/21 01:08	4/13/21	
Biphenyl	420 U	420	130	1	04/15/21 01:08	4/13/21	
2,2'-Oxybis(1-chloropropane)	420 U	420	86	1	04/15/21 01:08	4/13/21	
Bis(2-chloroethoxy)methane	420 U	420	110	1	04/15/21 01:08	4/13/21	
Bis(2-chloroethyl) Ether	420 U	420	83	1	04/15/21 01:08	4/13/21	
Bis(2-ethylhexyl) Phthalate	630 U	630	77	1	04/15/21 01:08	4/13/21	
Butyl Benzyl Phthalate	420 U	420	51	1	04/15/21 01:08	4/13/21	
Caprolactam	420 U	420	92	1	04/15/21 01:08	4/13/21	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:00
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-06	**Units:**	ug/Kg
Lab Code:	R2103156-006	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	420 U	420	68	1	04/15/21 01:08	4/13/21	
Chrysene	420 U	420	62	1	04/15/21 01:08	4/13/21	
Di-n-butyl Phthalate	420 U	420	68	1	04/15/21 01:08	4/13/21	
Di-n-octyl Phthalate	420 U	420	150	1	04/15/21 01:08	4/13/21	
Dibenz(a,h)anthracene	420 U	420	91	1	04/15/21 01:08	4/13/21	
Dibenzofuran	420 U	420	77	1	04/15/21 01:08	4/13/21	
Diethyl Phthalate	420 U	420	75	1	04/15/21 01:08	4/13/21	
Dimethyl Phthalate	420 U	420	80	1	04/15/21 01:08	4/13/21	
Fluoranthene	420 U	420	110	1	04/15/21 01:08	4/13/21	
Fluorene	420 U	420	79	1	04/15/21 01:08	4/13/21	
Hexachlorobenzene	420 U	420	110	1	04/15/21 01:08	4/13/21	
Hexachlorobutadiene	420 U	420	72	1	04/15/21 01:08	4/13/21	
Hexachlorocyclopentadiene	420 U	420	140	1	04/15/21 01:08	4/13/21	
Hexachloroethane	420 U	420	79	1	04/15/21 01:08	4/13/21	
Indeno(1,2,3-cd)pyrene	420 U	420	140	1	04/15/21 01:08	4/13/21	
Isophorone	420 U	420	88	1	04/15/21 01:08	4/13/21	
N-Nitrosodi-n-propylamine	420 U	420	130	1	04/15/21 01:08	4/13/21	
N-Nitrosodiphenylamine	420 U	420	270	1	04/15/21 01:08	4/13/21	
Naphthalene	420 U	420	79	1	04/15/21 01:08	4/13/21	
Nitrobenzene	420 U	420	75	1	04/15/21 01:08	4/13/21	
Pentachlorophenol (PCP)	2200 U	2200	420	1	04/15/21 01:08	4/13/21	
Phenanthrene	420 U	420	60	1	04/15/21 01:08	4/13/21	
Phenol	420 U	420	85	1	04/15/21 01:08	4/13/21	
Pyrene	420 U	420	70	1	04/15/21 01:08	4/13/21	
Pyridine	2200 U	2200	57	1	04/15/21 01:08	4/13/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	20	10 - 109	04/15/21 01:08	
2-Fluorobiphenyl	24	10 - 102	04/15/21 01:08	
2-Fluorophenol	24	10 - 88	04/15/21 01:08	
Nitrobenzene-d5	19	10 - 95	04/15/21 01:08	
Phenol-d6	24	10 - 145	04/15/21 01:08	
Terphenyl-d14	43	10 - 106	04/15/21 01:08	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:32
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-08	**Units:**	ug/Kg
Lab Code:	R2103156-008	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	410 U	410	92	1	04/12/21 19:20	4/7/21	
2,3,4,6-Tetrachlorophenol	410 U	410	150	1	04/12/21 19:20	4/7/21	
2,4,5-Trichlorophenol	410 U	410	110	1	04/12/21 19:20	4/7/21	
2,4,6-Trichlorophenol	410 U	410	92	1	04/12/21 19:20	4/7/21	
2,4-Dichlorophenol	410 U	410	80	1	04/12/21 19:20	4/7/21	
2,4-Dimethylphenol	410 U	410	74	1	04/12/21 19:20	4/7/21	
2,4-Dinitrophenol	2100 U	2100	710	1	04/12/21 19:20	4/7/21	
2,4-Dinitrotoluene	410 U	410	160	1	04/12/21 19:20	4/7/21	
2,6-Dinitrotoluene	410 U	410	90	1	04/12/21 19:20	4/7/21	
2-Chloronaphthalene	410 U	410	83	1	04/12/21 19:20	4/7/21	
2-Chlorophenol	410 U	410	69	1	04/12/21 19:20	4/7/21	
2-Methylnaphthalene	410 U	410	69	1	04/12/21 19:20	4/7/21	
2-Methylphenol	410 U	410	86	1	04/12/21 19:20	4/7/21	
2-Nitroaniline	2100 U	2100	98	1	04/12/21 19:20	4/7/21	
2-Nitrophenol	410 U	410	96	1	04/12/21 19:20	4/7/21	
3,3'-Dichlorobenzidine	410 U	410	47	1	04/12/21 19:20	4/7/21	
3- and 4-Methylphenol Coelution	410 U	410	79	1	04/12/21 19:20	4/7/21	
3-Nitroaniline	2100 U	2100	83	1	04/12/21 19:20	4/7/21	
4,6-Dinitro-2-methylphenol	2100 U	2100	240	1	04/12/21 19:20	4/7/21	
4-Bromophenyl Phenyl Ether	410 U	410	110	1	04/12/21 19:20	4/7/21	
4-Chloro-3-methylphenol	410 U	410	84	1	04/12/21 19:20	4/7/21	
4-Chloroaniline	410 U	410	70	1	04/12/21 19:20	4/7/21	
4-Chlorophenyl Phenyl Ether	410 U	410	89	1	04/12/21 19:20	4/7/21	
4-Nitroaniline	2100 U	2100	42	1	04/12/21 19:20	4/7/21	
4-Nitrophenol	2100 U	2100	83	1	04/12/21 19:20	4/7/21	
Acenaphthene	410 U	410	78	1	04/12/21 19:20	4/7/21	
Acenaphthylene	410 U	410	84	1	04/12/21 19:20	4/7/21	
Acetophenone	410 U	410	120	1	04/12/21 19:20	4/7/21	
Anthracene	410 U	410	69	1	04/12/21 19:20	4/7/21	
Atrazine	410 U	410	58	1	04/12/21 19:20	4/7/21	
Benz(a)anthracene	410 U	410	62	1	04/12/21 19:20	4/7/21	
Benzaldehyde	2100 U	2100	100	1	04/12/21 19:20	4/7/21	
Benzo(a)pyrene	410 U	410	110	1	04/12/21 19:20	4/7/21	
Benzo(b)fluoranthene	410 U	410	69	1	04/12/21 19:20	4/7/21	
Benzo(g,h,i)perylene	410 U	410	95	1	04/12/21 19:20	4/7/21	
Benzo(k)fluoranthene	410 U	410	67	1	04/12/21 19:20	4/7/21	
Biphenyl	410 U	410	130	1	04/12/21 19:20	4/7/21	
2,2'-Oxybis(1-chloropropane)	410 U	410	85	1	04/12/21 19:20	4/7/21	
Bis(2-chloroethoxy)methane	410 U	410	110	1	04/12/21 19:20	4/7/21	
Bis(2-chloroethyl) Ether	410 U	410	82	1	04/12/21 19:20	4/7/21	
Bis(2-ethylhexyl) Phthalate	630 U	630	76	1	04/12/21 19:20	4/7/21	
Butyl Benzyl Phthalate	410 U	410	50	1	04/12/21 19:20	4/7/21	
Caprolactam	410 U	410	91	1	04/12/21 19:20	4/7/21	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:32
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-08	**Units:**	ug/Kg
Lab Code:	R2103156-008	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	410 U	410	67	1	04/12/21 19:20	4/7/21	
Chrysene	410 U	410	61	1	04/12/21 19:20	4/7/21	
Di-n-butyl Phthalate	410 U	410	67	1	04/12/21 19:20	4/7/21	
Di-n-octyl Phthalate	410 U	410	150	1	04/12/21 19:20	4/7/21	
Dibenz(a,h)anthracene	410 U	410	90	1	04/12/21 19:20	4/7/21	
Dibenzofuran	410 U	410	76	1	04/12/21 19:20	4/7/21	
Diethyl Phthalate	410 U	410	74	1	04/12/21 19:20	4/7/21	
Dimethyl Phthalate	410 U	410	79	1	04/12/21 19:20	4/7/21	
Fluoranthene	410 U	410	110	1	04/12/21 19:20	4/7/21	
Fluorene	410 U	410	78	1	04/12/21 19:20	4/7/21	
Hexachlorobenzene	410 U	410	99	1	04/12/21 19:20	4/7/21	
Hexachlorobutadiene	410 U	410	71	1	04/12/21 19:20	4/7/21	
Hexachlorocyclopentadiene	410 U	410	140	1	04/12/21 19:20	4/7/21	
Hexachloroethane	410 U	410	78	1	04/12/21 19:20	4/7/21	
Indeno(1,2,3-cd)pyrene	410 U	410	140	1	04/12/21 19:20	4/7/21	
Isophorone	410 U	410	86	1	04/12/21 19:20	4/7/21	
N-Nitrosodi-n-propylamine	410 U	410	130	1	04/12/21 19:20	4/7/21	
N-Nitrosodiphenylamine	410 U	410	260	1	04/12/21 19:20	4/7/21	
Naphthalene	410 U	410	78	1	04/12/21 19:20	4/7/21	
Nitrobenzene	410 U	410	74	1	04/12/21 19:20	4/7/21	
Pentachlorophenol (PCP)	2100 U	2100	410	1	04/12/21 19:20	4/7/21	
Phenanthrene	410 U	410	59	1	04/12/21 19:20	4/7/21	
Phenol	410 U	410	83	1	04/12/21 19:20	4/7/21	
Pyrene	410 U	410	69	1	04/12/21 19:20	4/7/21	
Pyridine	2100 U	2100	56	1	04/12/21 19:20	4/7/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	41	10 - 109	04/12/21 19:20	
2-Fluorobiphenyl	40	10 - 102	04/12/21 19:20	
2-Fluorophenol	32	10 - 88	04/12/21 19:20	
Nitrobenzene-d5	31	10 - 95	04/12/21 19:20	
Phenol-d6	30	10 - 145	04/12/21 19:20	
Terphenyl-d14	55	10 - 106	04/12/21 19:20	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:32
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-08	**Units:**	ug/Kg
Lab Code:	R2103156-008	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	400 U	400	89	1	04/15/21 01:36	4/13/21	
2,3,4,6-Tetrachlorophenol	400 U	400	140	1	04/15/21 01:36	4/13/21	
2,4,5-Trichlorophenol	400 U	400	99	1	04/15/21 01:36	4/13/21	
2,4,6-Trichlorophenol	400 U	400	89	1	04/15/21 01:36	4/13/21	
2,4-Dichlorophenol	400 U	400	77	1	04/15/21 01:36	4/13/21	
2,4-Dimethylphenol	400 U	400	72	1	04/15/21 01:36	4/13/21	
2,4-Dinitrophenol	2100 U	2100	680	1	04/15/21 01:36	4/13/21	
2,4-Dinitrotoluene	400 U	400	160	1	04/15/21 01:36	4/13/21	
2,6-Dinitrotoluene	400 U	400	88	1	04/15/21 01:36	4/13/21	
2-Chloronaphthalene	400 U	400	80	1	04/15/21 01:36	4/13/21	
2-Chlorophenol	400 U	400	67	1	04/15/21 01:36	4/13/21	
2-Methylnaphthalene	400 U	400	66	1	04/15/21 01:36	4/13/21	
2-Methylphenol	400 U	400	83	1	04/15/21 01:36	4/13/21	
2-Nitroaniline	2100 U	2100	95	1	04/15/21 01:36	4/13/21	
2-Nitrophenol	400 U	400	93	1	04/15/21 01:36	4/13/21	
3,3'-Dichlorobenzidine	400 U	400	45	1	04/15/21 01:36	4/13/21	
3- and 4-Methylphenol Coelution	400 U	400	77	1	04/15/21 01:36	4/13/21	
3-Nitroaniline	2100 U	2100	81	1	04/15/21 01:36	4/13/21	
4,6-Dinitro-2-methylphenol	2100 U	2100	230	1	04/15/21 01:36	4/13/21	
4-Bromophenyl Phenyl Ether	400 U	400	110	1	04/15/21 01:36	4/13/21	
4-Chloro-3-methylphenol	400 U	400	81	1	04/15/21 01:36	4/13/21	
4-Chloroaniline	400 U	400	68	1	04/15/21 01:36	4/13/21	
4-Chlorophenyl Phenyl Ether	400 U	400	86	1	04/15/21 01:36	4/13/21	
4-Nitroaniline	2100 U	2100	41	1	04/15/21 01:36	4/13/21	
4-Nitrophenol	2100 U	2100	81	1	04/15/21 01:36	4/13/21	
Acenaphthene	400 U	400	76	1	04/15/21 01:36	4/13/21	
Acenaphthylene	400 U	400	81	1	04/15/21 01:36	4/13/21	
Acetophenone	400 U	400	120	1	04/15/21 01:36	4/13/21	
Anthracene	400 U	400	67	1	04/15/21 01:36	4/13/21	
Atrazine	400 U	400	56	1	04/15/21 01:36	4/13/21	
Benz(a)anthracene	400 U	400	60	1	04/15/21 01:36	4/13/21	
Benzaldehyde	2100 U	2100	97	1	04/15/21 01:36	4/13/21	
Benzo(a)pyrene	400 U	400	110	1	04/15/21 01:36	4/13/21	
Benzo(b)fluoranthene	400 U	400	67	1	04/15/21 01:36	4/13/21	
Benzo(g,h,i)perylene	400 U	400	92	1	04/15/21 01:36	4/13/21	
Benzo(k)fluoranthene	400 U	400	65	1	04/15/21 01:36	4/13/21	
Biphenyl	400 U	400	120	1	04/15/21 01:36	4/13/21	
2,2'-Oxybis(1-chloropropane)	400 U	400	82	1	04/15/21 01:36	4/13/21	
Bis(2-chloroethoxy)methane	400 U	400	98	1	04/15/21 01:36	4/13/21	
Bis(2-chloroethyl) Ether	400 U	400	79	1	04/15/21 01:36	4/13/21	
Bis(2-ethylhexyl) Phthalate	610 U	610	73	1	04/15/21 01:36	4/13/21	
Butyl Benzyl Phthalate	400 U	400	48	1	04/15/21 01:36	4/13/21	
Caprolactam	400 U	400	88	1	04/15/21 01:36	4/13/21	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:32
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-08	**Units:**	ug/Kg
Lab Code:	R2103156-008	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	400 U	400	65	1	04/15/21 01:36	4/13/21	
Chrysene	400 U	400	59	1	04/15/21 01:36	4/13/21	
Di-n-butyl Phthalate	400 U	400	65	1	04/15/21 01:36	4/13/21	
Di-n-octyl Phthalate	400 U	400	140	1	04/15/21 01:36	4/13/21	
Dibenz(a,h)anthracene	400 U	400	87	1	04/15/21 01:36	4/13/21	
Dibenzofuran	400 U	400	73	1	04/15/21 01:36	4/13/21	
Diethyl Phthalate	400 U	400	71	1	04/15/21 01:36	4/13/21	
Dimethyl Phthalate	400 U	400	76	1	04/15/21 01:36	4/13/21	
Fluoranthene	400 U	400	110	1	04/15/21 01:36	4/13/21	
Fluorene	400 U	400	75	1	04/15/21 01:36	4/13/21	
Hexachlorobenzene	400 U	400	96	1	04/15/21 01:36	4/13/21	
Hexachlorobutadiene	400 U	400	69	1	04/15/21 01:36	4/13/21	
Hexachlorocyclopentadiene	400 U	400	130	1	04/15/21 01:36	4/13/21	
Hexachloroethane	400 U	400	75	1	04/15/21 01:36	4/13/21	
Indeno(1,2,3-cd)pyrene	400 U	400	130	1	04/15/21 01:36	4/13/21	
Isophorone	400 U	400	84	1	04/15/21 01:36	4/13/21	
N-Nitrosodi-n-propylamine	400 U	400	130	1	04/15/21 01:36	4/13/21	
N-Nitrosodiphenylamine	400 U	400	250	1	04/15/21 01:36	4/13/21	
Naphthalene	400 U	400	75	1	04/15/21 01:36	4/13/21	
Nitrobenzene	400 U	400	72	1	04/15/21 01:36	4/13/21	
Pentachlorophenol (PCP)	2100 U	2100	400	1	04/15/21 01:36	4/13/21	
Phenanthrene	400 U	400	57	1	04/15/21 01:36	4/13/21	
Phenol	400 U	400	81	1	04/15/21 01:36	4/13/21	
Pyrene	400 U	400	67	1	04/15/21 01:36	4/13/21	
Pyridine	2100 U	2100	54	1	04/15/21 01:36	4/13/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	18	10 - 109	04/15/21 01:36	
2-Fluorobiphenyl	24	10 - 102	04/15/21 01:36	
2-Fluorophenol	24	10 - 88	04/15/21 01:36	
Nitrobenzene-d5	19	10 - 95	04/15/21 01:36	
Phenol-d6	24	10 - 145	04/15/21 01:36	
Terphenyl-d14	42	10 - 106	04/15/21 01:36	

Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:02
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-02	**Units:**	ug/Kg
Lab Code:	R2103156-002	**Basis:**	Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
4,4'-DDE	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
4,4'-DDT	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
Aldrin	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
Dieldrin	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
Endosulfan I	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
Endosulfan II	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
Endosulfan Sulfate	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
Endrin	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
Endrin Aldehyde	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
Endrin Ketone	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
Heptachlor	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
Heptachlor Epoxide	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
Methoxychlor	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
Toxaphene	42 U	42	24	1	04/13/21 19:31	4/6/21	
alpha-BHC	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
alpha-Chlordane	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
beta-BHC	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
delta-BHC	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
gamma-BHC (Lindane)	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	
gamma-Chlordane	2.1 U	2.1	1.1	1	04/13/21 19:31	4/6/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	103	10 - 145	04/13/21 19:31	
Tetrachloro-m-xylene	74	10 - 123	04/13/21 19:31	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:30
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-04	**Units:**	ug/Kg
Lab Code:	R2103156-004	**Basis:**	Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
4,4'-DDE	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
4,4'-DDT	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
Aldrin	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
Dieldrin	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
Endosulfan I	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
Endosulfan II	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
Endosulfan Sulfate	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
Endrin	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
Endrin Aldehyde	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
Endrin Ketone	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
Heptachlor	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
Heptachlor Epoxide	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
Methoxychlor	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
Toxaphene	45 U	45	27	1	04/13/21 19:52	4/6/21	
alpha-BHC	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
alpha-Chlordane	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
beta-BHC	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
delta-BHC	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
gamma-BHC (Lindane)	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	
gamma-Chlordane	2.3 U	2.3	1.2	1	04/13/21 19:52	4/6/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	73	10 - 145	04/13/21 19:52	
Tetrachloro-m-xylene	71	10 - 123	04/13/21 19:52	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:00
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-06	**Units:**	ug/Kg
Lab Code:	R2103156-006	**Basis:**	Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
4,4'-DDE	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
4,4'-DDT	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
Aldrin	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
Dieldrin	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
Endosulfan I	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
Endosulfan II	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
Endosulfan Sulfate	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
Endrin	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
Endrin Aldehyde	**1.7 J**	2.2	1.1	1	04/13/21 20:52	4/6/21	
Endrin Ketone	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
Heptachlor	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
Heptachlor Epoxide	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
Methoxychlor	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
Toxaphene	43 U	43	25	1	04/13/21 20:52	4/6/21	
alpha-BHC	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
alpha-Chlordane	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
beta-BHC	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
delta-BHC	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
gamma-BHC (Lindane)	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	
gamma-Chlordane	2.2 U	2.2	1.1	1	04/13/21 20:52	4/6/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	69	10 - 145	04/13/21 20:52	
Tetrachloro-m-xylene	61	10 - 123	04/13/21 20:52	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:32
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-08	**Units:**	ug/Kg
Lab Code:	R2103156-008	**Basis:**	Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
4,4'-DDE	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
4,4'-DDT	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
Aldrin	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
Dieldrin	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
Endosulfan I	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
Endosulfan II	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
Endosulfan Sulfate	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
Endrin	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
Endrin Aldehyde	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
Endrin Ketone	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
Heptachlor	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
Heptachlor Epoxide	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
Methoxychlor	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
Toxaphene	41 U	41	24	1	04/13/21 21:11	4/6/21	
alpha-BHC	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
alpha-Chlordane	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
beta-BHC	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
delta-BHC	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
gamma-BHC (Lindane)	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	
gamma-Chlordane	2.1 U	2.1	1.1	1	04/13/21 21:11	4/6/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	76	10 - 145	04/13/21 21:11	
Tetrachloro-m-xylene	61	10 - 123	04/13/21 21:11	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:02
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-02	**Units:**	ug/Kg
Lab Code:	R2103156-002	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	42 U	42	22	1	04/07/21 17:02	4/6/21	
Aroclor 1221	84 U	84	22	1	04/07/21 17:02	4/6/21	
Aroclor 1232	42 U	42	22	1	04/07/21 17:02	4/6/21	
Aroclor 1242	42 U	42	22	1	04/07/21 17:02	4/6/21	
Aroclor 1248	42 U	42	22	1	04/07/21 17:02	4/6/21	
Aroclor 1254	42 U	42	22	1	04/07/21 17:02	4/6/21	
Aroclor 1260	42 U	42	22	1	04/07/21 17:02	4/6/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	77	22 - 128	04/07/21 17:02	
Tetrachloro-m-xylene	59	14 - 119	04/07/21 17:02	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:30
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-04	**Units:**	ug/Kg
Lab Code:	R2103156-004	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	45 U	45	24	1	04/07/21 17:21	4/6/21	
Aroclor 1221	92 U	92	24	1	04/07/21 17:21	4/6/21	
Aroclor 1232	45 U	45	24	1	04/07/21 17:21	4/6/21	
Aroclor 1242	45 U	45	24	1	04/07/21 17:21	4/6/21	
Aroclor 1248	45 U	45	24	1	04/07/21 17:21	4/6/21	
Aroclor 1254	45 U	45	24	1	04/07/21 17:21	4/6/21	
Aroclor 1260	45 U	45	24	1	04/07/21 17:21	4/6/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	73	22 - 128	04/07/21 17:21	
Tetrachloro-m-xylene	53	14 - 119	04/07/21 17:21	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:00
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-06	**Units:**	ug/Kg
Lab Code:	R2103156-006	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	43 U	43	23	1	04/07/21 17:41	4/6/21	
Aroclor 1221	87 U	87	23	1	04/07/21 17:41	4/6/21	
Aroclor 1232	43 U	43	23	1	04/07/21 17:41	4/6/21	
Aroclor 1242	43 U	43	23	1	04/07/21 17:41	4/6/21	
Aroclor 1248	43 U	43	23	1	04/07/21 17:41	4/6/21	
Aroclor 1254	43 U	43	23	1	04/07/21 17:41	4/6/21	
Aroclor 1260	43 U	43	23	1	04/07/21 17:41	4/6/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	69	22 - 128	04/07/21 17:41	
Tetrachloro-m-xylene	48	14 - 119	04/07/21 17:41	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:32
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-08	**Units:**	ug/Kg
Lab Code:	R2103156-008	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	41 U	41	22	1	04/07/21 18:00	4/6/21	
Aroclor 1221	83 U	83	22	1	04/07/21 18:00	4/6/21	
Aroclor 1232	41 U	41	22	1	04/07/21 18:00	4/6/21	
Aroclor 1242	41 U	41	22	1	04/07/21 18:00	4/6/21	
Aroclor 1248	41 U	41	22	1	04/07/21 18:00	4/6/21	
Aroclor 1254	41 U	41	22	1	04/07/21 18:00	4/6/21	
Aroclor 1260	41 U	41	22	1	04/07/21 18:00	4/6/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	72	22 - 128	04/07/21 18:00	
Tetrachloro-m-xylene	47	14 - 119	04/07/21 18:00	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:02
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-02	**Units:**	ug/Kg
Lab Code:	R2103156-002	**Basis:**	Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-TP	13 U	13	5.9	1	04/12/21 11:55	4/8/21	
Pentachlorophenol (PCP)	13 U	13	8.2	1	04/12/21 11:55	4/8/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	84	10 - 151	04/12/21 11:55	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:30
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-04	**Units:**	ug/Kg
Lab Code:	R2103156-004	**Basis:**	Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-TP	13 U	13	6.1	1	04/12/21 12:15	4/8/21	
Pentachlorophenol (PCP)	13 U	13	8.5	1	04/12/21 12:15	4/8/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	90	10 - 151	04/12/21 12:15	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:00
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-06	**Units:**	ug/Kg
Lab Code:	R2103156-006	**Basis:**	Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-TP	13 U	13	5.8	1	04/12/21 12:35	4/8/21	
Pentachlorophenol (PCP)	13 U	13	8.1	1	04/12/21 12:35	4/8/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	82	10 - 151	04/12/21 12:35	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:32
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-08	**Units:**	ug/Kg
Lab Code:	R2103156-008	**Basis:**	Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-TP	12 U	12	5.6	1	04/27/21 20:20	4/8/21	
Pentachlorophenol (PCP)	**20**	12	7.8	1	04/27/21 20:20	4/8/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	84	10 - 151	04/27/21 20:20	

Metals

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:02
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-02	**Basis:**	Dry
Lab Code:	R2103156-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010C	**8310**	mg/Kg	25	16	1	04/09/21 19:11	04/08/21	
Antimony, Total	6010C	7.6 U	mg/Kg	7.6	0.7	1	04/09/21 19:11	04/08/21	
Arsenic, Total	6010C	**8.7**	mg/Kg	1.3	0.9	1	04/09/21 19:11	04/08/21	
Barium, Total	6010C	**116**	mg/Kg	2.5	2.0	1	04/09/21 19:11	04/08/21	
Beryllium, Total	6010C	**0.50**	mg/Kg	0.38	0.04	1	04/09/21 19:11	04/08/21	
Cadmium, Total	6010C	**0.51 J**	mg/Kg	0.63	0.31	1	04/09/21 19:11	04/08/21	
Calcium, Total	6010C	**2910**	mg/Kg	130	50	1	04/09/21 19:11	04/08/21	
Chromium, Total	6010C	**10.6**	mg/Kg	1.3	0.5	1	04/09/21 19:11	04/08/21	
Cobalt, Total	6010C	**8.1**	mg/Kg	6.3	0.6	1	04/09/21 19:11	04/08/21	
Copper, Total	6010C	**17.9**	mg/Kg	2.5	0.9	1	04/09/21 19:11	04/08/21	
Iron, Total	6010C	**24900**	mg/Kg	250	170	10	04/09/21 20:26	04/08/21	
Lead, Total	6010C	**18.4**	mg/Kg	6.3	0.6	1	04/09/21 19:11	04/08/21	
Magnesium, Total	6010C	**1550**	mg/Kg	130	20	1	04/09/21 19:11	04/08/21	
Manganese, Total	6010C	**1530**	mg/Kg	25	20	10	04/09/21 20:26	04/08/21	
Mercury, Total	7471B	**0.071**	mg/Kg	0.039	0.016	1	04/14/21 12:12	04/13/21	
Nickel, Total	6010C	**11.1**	mg/Kg	5.1	0.9	1	04/09/21 19:11	04/08/21	
Potassium, Total	6010C	**930**	mg/Kg	250	70	1	04/09/21 19:11	04/08/21	
Selenium, Total	6010C	**1.2 J**	mg/Kg	1.3	0.7	1	04/09/21 19:11	04/08/21	
Silver, Total	6010C	1.3 U	mg/Kg	1.3	0.2	1	04/09/21 19:11	04/08/21	
Sodium, Total	6010C	130 U	mg/Kg	130	70	1	04/09/21 19:11	04/08/21	
Thallium, Total	6010C	1.3 U	mg/Kg	1.3	0.9	1	04/09/21 19:11	04/08/21	
Vanadium, Total	6010C	**20.4**	mg/Kg	6.3	1.0	1	04/09/21 19:11	04/08/21	
Zinc, Total	6010C	**47.4**	mg/Kg	2.5	1.8	1	04/09/21 19:11	04/08/21	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:30
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-04	**Basis:**	Dry
Lab Code:	R2103156-004		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010C	**8120**	mg/Kg	26	16	1	04/09/21 19:14	04/08/21	
Antimony, Total	6010C	7.8 U	mg/Kg	7.8	0.8	1	04/09/21 19:14	04/08/21	
Arsenic, Total	6010C	**4.8**	mg/Kg	1.3	1.0	1	04/09/21 19:14	04/08/21	
Barium, Total	6010C	**55.8**	mg/Kg	2.6	2.0	1	04/09/21 19:14	04/08/21	
Beryllium, Total	6010C	**0.42**	mg/Kg	0.39	0.04	1	04/09/21 19:14	04/08/21	
Cadmium, Total	6010C	**0.36 J**	mg/Kg	0.65	0.32	1	04/09/21 19:14	04/08/21	
Calcium, Total	6010C	**3530**	mg/Kg	130	50	1	04/09/21 19:14	04/08/21	
Chromium, Total	6010C	**10.8**	mg/Kg	1.3	0.5	1	04/09/21 19:14	04/08/21	
Cobalt, Total	6010C	**4.3 J**	mg/Kg	6.5	0.6	1	04/09/21 19:14	04/08/21	
Copper, Total	6010C	**13.4**	mg/Kg	2.6	0.9	1	04/09/21 19:14	04/08/21	
Iron, Total	6010C	**17100**	mg/Kg	260	170	10	04/09/21 20:29	04/08/21	
Lead, Total	6010C	**10.9**	mg/Kg	6.5	0.6	1	04/09/21 19:14	04/08/21	
Magnesium, Total	6010C	**1610**	mg/Kg	130	20	1	04/09/21 19:14	04/08/21	
Manganese, Total	6010C	**472**	mg/Kg	2.6	2.0	1	04/09/21 19:14	04/08/21	
Mercury, Total	7471B	**0.061**	mg/Kg	0.044	0.018	1	04/14/21 12:20	04/13/21	
Nickel, Total	6010C	**8.0**	mg/Kg	5.2	0.9	1	04/09/21 19:14	04/08/21	
Potassium, Total	6010C	**800**	mg/Kg	260	70	1	04/09/21 19:14	04/08/21	
Selenium, Total	6010C	1.3 U	mg/Kg	1.3	0.8	1	04/09/21 19:14	04/08/21	
Silver, Total	6010C	1.3 U	mg/Kg	1.3	0.2	1	04/09/21 19:14	04/08/21	
Sodium, Total	6010C	130 U	mg/Kg	130	70	1	04/09/21 19:14	04/08/21	
Thallium, Total	6010C	1.3 U	mg/Kg	1.3	0.9	1	04/09/21 19:14	04/08/21	
Vanadium, Total	6010C	**17.8**	mg/Kg	6.5	1.0	1	04/09/21 19:14	04/08/21	
Zinc, Total	6010C	**38.1**	mg/Kg	2.6	1.9	1	04/09/21 19:14	04/08/21	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:00
		Date Received:	04/05/21 16:50
Sample Matrix:	Soil		
Sample Name:	PMC-040521A-06	**Basis:**	Dry
Lab Code:	R2103156-006		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010C	**7960**	mg/Kg	24	15	1	04/09/21 19:17	04/08/21	
Antimony, Total	6010C	7.1 U	mg/Kg	7.1	0.7	1	04/09/21 19:17	04/08/21	
Arsenic, Total	6010C	**4.9**	mg/Kg	1.2	0.9	1	04/09/21 19:17	04/08/21	
Barium, Total	6010C	**57.0**	mg/Kg	2.4	1.8	1	04/09/21 19:17	04/08/21	
Beryllium, Total	6010C	**0.40**	mg/Kg	0.35	0.04	1	04/09/21 19:17	04/08/21	
Cadmium, Total	6010C	**0.33 J**	mg/Kg	0.59	0.29	1	04/09/21 19:17	04/08/21	
Calcium, Total	6010C	**2660**	mg/Kg	120	40	1	04/09/21 19:17	04/08/21	
Chromium, Total	6010C	**10.1**	mg/Kg	1.2	0.5	1	04/09/21 19:17	04/08/21	
Cobalt, Total	6010C	**4.3 J**	mg/Kg	5.9	0.6	1	04/09/21 19:17	04/08/21	
Copper, Total	6010C	**12.7**	mg/Kg	2.4	0.8	1	04/09/21 19:17	04/08/21	
Iron, Total	6010C	**16000**	mg/Kg	240	160	10	04/09/21 20:32	04/08/21	
Lead, Total	6010C	**10.5**	mg/Kg	5.9	0.5	1	04/09/21 19:17	04/08/21	
Magnesium, Total	6010C	**1550**	mg/Kg	120	20	1	04/09/21 19:17	04/08/21	
Manganese, Total	6010C	**465**	mg/Kg	2.4	1.8	1	04/09/21 19:17	04/08/21	
Mercury, Total	7471B	**0.063**	mg/Kg	0.040	0.016	1	04/14/21 12:22	04/13/21	
Nickel, Total	6010C	**8.0**	mg/Kg	4.7	0.8	1	04/09/21 19:17	04/08/21	
Potassium, Total	6010C	**730**	mg/Kg	240	60	1	04/09/21 19:17	04/08/21	
Selenium, Total	6010C	12 U	mg/Kg	12	7	10	04/09/21 20:32	04/08/21	
Silver, Total	6010C	1.2 U	mg/Kg	1.2	0.2	1	04/09/21 19:17	04/08/21	
Sodium, Total	6010C	120 U	mg/Kg	120	70	1	04/09/21 19:17	04/08/21	
Thallium, Total	6010C	1.2 U	mg/Kg	1.2	0.8	1	04/09/21 19:17	04/08/21	
Vanadium, Total	6010C	**17.0**	mg/Kg	5.9	0.9	1	04/09/21 19:17	04/08/21	
Zinc, Total	6010C	**35.1**	mg/Kg	2.4	1.7	1	04/09/21 19:17	04/08/21	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:32
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-08	**Basis:**	Dry
Lab Code:	R2103156-008		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010C	**7380**	mg/Kg	24	15	1	04/09/21 19:21	04/08/21	
Antimony, Total	6010C	7.1 U	mg/Kg	7.1	0.7	1	04/09/21 19:21	04/08/21	
Arsenic, Total	6010C	**5.9**	mg/Kg	1.2	0.9	1	04/09/21 19:21	04/08/21	
Barium, Total	6010C	**63.0**	mg/Kg	2.4	1.8	1	04/09/21 19:21	04/08/21	
Beryllium, Total	6010C	**0.42**	mg/Kg	0.36	0.04	1	04/09/21 19:21	04/08/21	
Cadmium, Total	6010C	**0.37 J**	mg/Kg	0.59	0.29	1	04/09/21 19:21	04/08/21	
Calcium, Total	6010C	**2010**	mg/Kg	120	40	1	04/09/21 19:21	04/08/21	
Chromium, Total	6010C	**9.5**	mg/Kg	1.2	0.5	1	04/09/21 19:21	04/08/21	
Cobalt, Total	6010C	**5.2 J**	mg/Kg	5.9	0.6	1	04/09/21 19:21	04/08/21	
Copper, Total	6010C	**15.1**	mg/Kg	2.4	0.8	1	04/09/21 19:21	04/08/21	
Iron, Total	6010C	**19500**	mg/Kg	240	160	10	04/09/21 20:35	04/08/21	
Lead, Total	6010C	**16.6**	mg/Kg	5.9	0.5	1	04/09/21 19:21	04/08/21	
Magnesium, Total	6010C	**1400**	mg/Kg	120	20	1	04/09/21 19:21	04/08/21	
Manganese, Total	6010C	**758**	mg/Kg	2.4	1.8	1	04/09/21 19:21	04/08/21	
Mercury, Total	7471B	**0.061**	mg/Kg	0.037	0.015	1	04/14/21 12:25	04/13/21	
Nickel, Total	6010C	**9.4**	mg/Kg	4.8	0.8	1	04/09/21 19:21	04/08/21	
Potassium, Total	6010C	**1080**	mg/Kg	240	60	1	04/09/21 19:21	04/08/21	
Selenium, Total	6010C	**1.0 J**	mg/Kg	1.2	0.7	1	04/09/21 19:21	04/08/21	
Silver, Total	6010C	1.2 U	mg/Kg	1.2	0.2	1	04/09/21 19:21	04/08/21	
Sodium, Total	6010C	120 U	mg/Kg	120	70	1	04/09/21 19:21	04/08/21	
Thallium, Total	6010C	1.2 U	mg/Kg	1.2	0.8	1	04/09/21 19:21	04/08/21	
Vanadium, Total	6010C	**16.6**	mg/Kg	5.9	0.9	1	04/09/21 19:21	04/08/21	
Zinc, Total	6010C	**39.6**	mg/Kg	2.4	1.7	1	04/09/21 19:21	04/08/21	

General Chemistry

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:00
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-01	**Basis:**	As Received
Lab Code:	R2103156-001		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	**81.4**	Percent	-	-	1	04/10/21 08:00	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:02
		Date Received:	04/05/21 16:50
Sample Matrix:	Soil		
Sample Name:	PMC-040521A-02	**Basis:**	Dry, per Method
Lab Code:	R2103156-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	EPA LKahn 7-27-1988	**28000**	mg/Kg	2300	900	1	04/13/21 14:50	NA	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:02
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-02	**Basis:**	Dry
Lab Code:	R2103156-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chromium, Hexavalent	7199	0.51 U	mg/Kg	0.51	0.06	1	04/19/21 13:24	04/18/21	
Chromium, Trivalent	Calculation	**10.6**	mg/Kg	1.0	-	1	NA	NA	
Cyanide, Total	9012B	**0.21 J**	mg/Kg	0.28	0.17	1	04/08/21 23:16	04/07/21	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:02
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-02	**Basis:**	As Received
Lab Code:	R2103156-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
pH	9045D	**6.67**	pH Units	-	-	1	04/08/21 13:51	NA	H
Total Solids	ALS SOP	**77.2**	Percent	-	-	1	04/10/21 08:00	NA	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:26
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-03	**Basis:**	As Received
Lab Code:	R2103156-003		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	**74.4**	Percent	-	-	1	04/10/21 08:00	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:30
		Date Received:	04/05/21 16:50
Sample Matrix:	Soil		
Sample Name:	PMC-040521A-04	**Basis:**	Dry, per Method
Lab Code:	R2103156-004		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	EPA LKahn 7-27-1988	**29900**	mg/Kg	1300	500	1	04/13/21 14:59	NA	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:30
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-04	**Basis:**	Dry
Lab Code:	R2103156-004		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chromium, Hexavalent	7199	0.53 U	mg/Kg	0.53	0.06	1	04/19/21 13:41	04/18/21	
Chromium, Trivalent	Calculation	**10.8**	mg/Kg	1.0	-	1	NA	NA	
Cyanide, Total	9012B	**0.31 J**	mg/Kg	0.38	0.22	1	04/08/21 23:17	04/07/21	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:30
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-04	**Basis:**	As Received
Lab Code:	R2103156-004		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
pH	9045D	**6.79**	pH Units	-	-	1	04/08/21 13:51	NA	H
Total Solids	ALS SOP	**73.8**	Percent	-	-	1	04/10/21 08:00	NA	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 11:56
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-05	**Basis:**	As Received
Lab Code:	R2103156-005		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	**78.7**	Percent	-	-	1	04/10/21 08:00	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:00
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-06	**Basis:**	Dry, per Method
Lab Code:	R2103156-006		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	EPA LKahn 7-27-1988	**24900**	mg/Kg	1900	700	1	04/13/21 15:06	NA	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:00
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-06	**Basis:**	Dry
Lab Code:	R2103156-006		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chromium, Hexavalent	7199	0.50 U	mg/Kg	0.50	0.06	1	04/19/21 13:58	04/18/21	
Chromium, Trivalent	Calculation	**10.1**	mg/Kg	1.0	-	1	NA	NA	
Cyanide, Total	9012B	**0.26 J**	mg/Kg	0.32	0.19	1	04/08/21 23:17	04/07/21	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:00
		Date Received:	04/05/21 16:50
Sample Matrix:	Soil		
Sample Name:	PMC-040521A-06	**Basis:**	As Received
Lab Code:	R2103156-006		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
pH	9045D	**6.47**	pH Units	-	-	1	04/08/21 13:51	NA	H
Total Solids	ALS SOP	**78.4**	Percent	-	-	1	04/10/21 08:00	NA	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:20
		Date Received:	04/05/21 16:50
Sample Matrix:	Soil		
Sample Name:	PMC-040521A-07	**Basis:**	As Received
Lab Code:	R2103156-007		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	**82.4**	Percent	-	-	1	04/10/21 08:00	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:32
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-08	**Basis:**	Dry, per Method
Lab Code:	R2103156-008		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	EPA LKahn 7-27-1988	**20500**	mg/Kg	1900	700	1	04/13/21 15:12	NA	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:32
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-08	**Basis:**	Dry
Lab Code:	R2103156-008		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Q	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chromium, Hexavalent	7199	0.47	U	mg/Kg	0.47	0.05	1	04/19/21 14:37	04/18/21	
Chromium, Trivalent	Calculation	**9.5**		mg/Kg	1.0	-	1	NA	NA	
Cyanide, Total	9012B	**0.31**	**J**	mg/Kg	0.36	0.21	1	04/08/21 23:18	04/07/21	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21 12:32
Sample Matrix:	Soil	**Date Received:**	04/05/21 16:50
Sample Name:	PMC-040521A-08	**Basis:**	As Received
Lab Code:	R2103156-008		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
pH	9045D	**6.00**	pH Units	-	-	1	04/08/21 13:51	NA	H
Total Solids	ALS SOP	**82.4**	Percent	-	-	1	04/10/21 08:00	NA	

QC Summary Forms

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
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Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5035A

Sample Name	Lab Code	4-Bromofluorobenzene 31-154	Dibromofluoromethane 63-138	Toluene-d8 66-138
PMC-040521A-01	R2103156-001	83	97	104
PMC-040521A-03	R2103156-003	90	95	104
PMC-040521A-05	R2103156-005	90	94	102
PMC-040521A-07	R2103156-007	86	93	102
Method Blank	RQ2103850-04	95	93	101
Lab Control Sample	RQ2103850-03	102	100	104

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5035A

Sample Name	Lab Code	4-Bromofluorobenzene 31-154	Dibromofluoromethane 63-138	Toluene-d8 66-138
PMC-040521A-09	R2103156-009	93	89	100
Method Blank	RQ2103651-04	93	91	100
Lab Control Sample	RQ2103651-03	99	97	101

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ2103651-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	04/08/21 12:35	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	04/08/21 12:35	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	04/08/21 12:35	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0 U	1.0	0.20	1	04/08/21 12:35	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	04/08/21 12:35	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	04/08/21 12:35	
1,2,3-Trichlorobenzene	1.0 U	1.0	0.25	1	04/08/21 12:35	
1,2,4-Trichlorobenzene	1.0 U	1.0	0.34	1	04/08/21 12:35	
1,2,4-Trimethylbenzene	1.0 U	1.0	0.20	1	04/08/21 12:35	
1,2-Dibromo-3-chloropropane (DBCP)	2.0 U	2.0	0.45	1	04/08/21 12:35	
1,2-Dibromoethane	1.0 U	1.0	0.20	1	04/08/21 12:35	
1,2-Dichlorobenzene	1.0 U	1.0	0.20	1	04/08/21 12:35	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	04/08/21 12:35	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	04/08/21 12:35	
1,3,5-Trimethylbenzene	1.0 U	1.0	0.20	1	04/08/21 12:35	
1,3-Dichlorobenzene	1.0 U	1.0	0.20	1	04/08/21 12:35	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	04/08/21 12:35	
1,4-Dioxane	40 U	40	13	1	04/08/21 12:35	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	04/08/21 12:35	
2-Hexanone	5.0 U	5.0	0.20	1	04/08/21 12:35	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	04/08/21 12:35	
Acetone	5.0 U	5.0	5.0	1	04/08/21 12:35	
Benzene	1.0 U	1.0	0.20	1	04/08/21 12:35	
Bromochloromethane	1.0 U	1.0	0.20	1	04/08/21 12:35	
Bromodichloromethane	1.0 U	1.0	0.20	1	04/08/21 12:35	
Bromoform	1.0 U	1.0	0.25	1	04/08/21 12:35	
Bromomethane	1.0 U	1.0	0.70	1	04/08/21 12:35	
Carbon Disulfide	1.0 U	1.0	0.42	1	04/08/21 12:35	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	04/08/21 12:35	
Chlorobenzene	1.0 U	1.0	0.20	1	04/08/21 12:35	
Chloroethane	1.0 U	1.0	0.23	1	04/08/21 12:35	
Chloroform	1.0 U	1.0	0.24	1	04/08/21 12:35	
Chloromethane	1.0 U	1.0	0.28	1	04/08/21 12:35	
Cyclohexane	1.0 U	1.0	0.26	1	04/08/21 12:35	
Dibromochloromethane	1.0 U	1.0	0.20	1	04/08/21 12:35	
Dichlorodifluoromethane (CFC 12)	1.0 U	1.0	0.21	1	04/08/21 12:35	
Dichloromethane	1.0 U	1.0	0.65	1	04/08/21 12:35	
Ethylbenzene	1.0 U	1.0	0.20	1	04/08/21 12:35	
Isopropylbenzene (Cumene)	1.0 U	1.0	0.20	1	04/08/21 12:35	
Methyl Acetate	2.0 U	2.0	0.33	1	04/08/21 12:35	
Methyl tert-Butyl Ether	1.0 U	1.0	0.20	1	04/08/21 12:35	
Methylcyclohexane	1.0 U	1.0	0.20	1	04/08/21 12:35	
Styrene	1.0 U	1.0	0.20	1	04/08/21 12:35	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ2103651-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	04/08/21 12:35	
Toluene	1.0 U	1.0	0.20	1	04/08/21 12:35	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	04/08/21 12:35	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.24	1	04/08/21 12:35	
Vinyl Chloride	1.0 U	1.0	0.20	1	04/08/21 12:35	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	04/08/21 12:35	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	04/08/21 12:35	
m,p-Xylenes	2.0 U	2.0	0.20	1	04/08/21 12:35	
n-Butylbenzene	1.0 U	1.0	0.20	1	04/08/21 12:35	
n-Propylbenzene	1.0 U	1.0	0.20	1	04/08/21 12:35	
o-Xylene	1.0 U	1.0	0.20	1	04/08/21 12:35	
sec-Butylbenzene	1.0 U	1.0	0.20	1	04/08/21 12:35	
tert-Butylbenzene	1.0 U	1.0	0.20	1	04/08/21 12:35	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	04/08/21 12:35	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	04/08/21 12:35	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	85 - 122	04/08/21 12:35	
Dibromofluoromethane	91	80 - 116	04/08/21 12:35	
Toluene-d8	100	87 - 121	04/08/21 12:35	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	RQ2103850-04	**Basis:**	Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.0 U	5.0	0.20	1	04/13/21 11:43	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	0.44	1	04/13/21 11:43	
1,1,2-Trichloroethane	5.0 U	5.0	0.20	1	04/13/21 11:43	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0 U	5.0	0.20	1	04/13/21 11:43	
1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	0.20	1	04/13/21 11:43	
1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	0.29	1	04/13/21 11:43	
1,2,3-Trichlorobenzene	5.0 U	5.0	0.52	1	04/13/21 11:43	
1,2,4-Trichlorobenzene	5.0 U	5.0	0.42	1	04/13/21 11:43	
1,2,4-Trimethylbenzene	5.0 U	5.0	0.20	1	04/13/21 11:43	
1,2-Dibromo-3-chloropropane (DBCP)	5.0 U	5.0	0.75	1	04/13/21 11:43	
1,2-Dibromoethane	5.0 U	5.0	0.20	1	04/13/21 11:43	
1,2-Dichlorobenzene	5.0 U	5.0	0.20	1	04/13/21 11:43	
1,2-Dichloroethane	5.0 U	5.0	0.20	1	04/13/21 11:43	
1,2-Dichloropropane	5.0 U	5.0	0.20	1	04/13/21 11:43	
1,3,5-Trimethylbenzene	5.0 U	5.0	0.20	1	04/13/21 11:43	
1,3-Dichlorobenzene	5.0 U	5.0	0.20	1	04/13/21 11:43	
1,4-Dichlorobenzene	5.0 U	5.0	0.22	1	04/13/21 11:43	
1,4-Dioxane	100 U	100	20	1	04/13/21 11:43	
2-Butanone (MEK)	5.0 U	5.0	2.0	1	04/13/21 11:43	
2-Hexanone	5.0 U	5.0	0.36	1	04/13/21 11:43	
4-Methyl-2-pentanone	5.0 U	5.0	0.23	1	04/13/21 11:43	
Acetone	5.0 U	5.0	4.7	1	04/13/21 11:43	
Benzene	5.0 U	5.0	0.20	1	04/13/21 11:43	
Bromochloromethane	5.0 U	5.0	0.20	1	04/13/21 11:43	
Bromodichloromethane	5.0 U	5.0	0.20	1	04/13/21 11:43	
Bromoform	5.0 U	5.0	0.50	1	04/13/21 11:43	
Bromomethane	5.0 U	5.0	2.1	1	04/13/21 11:43	
Carbon Disulfide	5.0 U	5.0	0.29	1	04/13/21 11:43	
Carbon Tetrachloride	5.0 U	5.0	0.26	1	04/13/21 11:43	
Chlorobenzene	5.0 U	5.0	0.20	1	04/13/21 11:43	
Chloroethane	5.0 U	5.0	0.41	1	04/13/21 11:43	
Chloroform	5.0 U	5.0	0.20	1	04/13/21 11:43	
Chloromethane	5.0 U	5.0	1.4	1	04/13/21 11:43	
Cyclohexane	5.0 U	5.0	0.26	1	04/13/21 11:43	
Dibromochloromethane	5.0 U	5.0	0.20	1	04/13/21 11:43	
Dichlorodifluoromethane (CFC 12)	5.0 U	5.0	0.33	1	04/13/21 11:43	
Dichloromethane	5.0 U	5.0	2.8	1	04/13/21 11:43	
Ethylbenzene	5.0 U	5.0	0.20	1	04/13/21 11:43	
Isopropylbenzene (Cumene)	5.0 U	5.0	0.20	1	04/13/21 11:43	
Methyl Acetate	5.0 U	5.0	0.84	1	04/13/21 11:43	
Methyl tert-Butyl Ether	5.0 U	5.0	0.20	1	04/13/21 11:43	
Methylcyclohexane	5.0 U	5.0	0.31	1	04/13/21 11:43	
Styrene	5.0 U	5.0	0.20	1	04/13/21 11:43	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	RQ2103850-04	**Basis:**	Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.0 U	5.0	0.23	1	04/13/21 11:43	
Toluene	5.0 U	5.0	0.20	1	04/13/21 11:43	
Trichloroethene (TCE)	5.0 U	5.0	0.22	1	04/13/21 11:43	
Trichlorofluoromethane (CFC 11)	5.0 U	5.0	0.26	1	04/13/21 11:43	
Vinyl Chloride	5.0 U	5.0	0.46	1	04/13/21 11:43	
cis-1,2-Dichloroethene	5.0 U	5.0	0.20	1	04/13/21 11:43	
cis-1,3-Dichloropropene	5.0 U	5.0	0.20	1	04/13/21 11:43	
m,p-Xylenes	10 U	10	0.37	1	04/13/21 11:43	
n-Butylbenzene	5.0 U	5.0	0.20	1	04/13/21 11:43	
n-Propylbenzene	5.0 U	5.0	0.20	1	04/13/21 11:43	
o-Xylene	5.0 U	5.0	0.20	1	04/13/21 11:43	
sec-Butylbenzene	5.0 U	5.0	0.20	1	04/13/21 11:43	
tert-Butylbenzene	5.0 U	5.0	0.20	1	04/13/21 11:43	
trans-1,2-Dichloroethene	5.0 U	5.0	0.20	1	04/13/21 11:43	
trans-1,3-Dichloropropene	5.0 U	5.0	0.20	1	04/13/21 11:43	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	31 - 154	04/13/21 11:43	
Dibromofluoromethane	93	63 - 138	04/13/21 11:43	
Toluene-d8	101	66 - 138	04/13/21 11:43	

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1 **Date Analyzed:** 04/08/21
Sample Matrix: Water

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2103651-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	19.2	20.0	96	75-125
1,1,2,2-Tetrachloroethane	8260C	21.6	20.0	108	78-126
1,1,2-Trichloroethane	8260C	20.1	20.0	100	82-121
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	20.9	20.0	104	67-124
1,1-Dichloroethane (1,1-DCA)	8260C	21.3	20.0	107	80-124
1,1-Dichloroethene (1,1-DCE)	8260C	25.7	20.0	128 *	71-118
1,2,3-Trichlorobenzene	8260C	18.2	20.0	91	67-136
1,2,4-Trichlorobenzene	8260C	19.2	20.0	96	75-132
1,2,4-Trimethylbenzene	8260C	20.5	20.0	103	81-126
1,2-Dibromo-3-chloropropane (DBCP)	8260C	14.3	20.0	72	55-136
1,2-Dibromoethane	8260C	19.8	20.0	99	82-127
1,2-Dichlorobenzene	8260C	19.5	20.0	97	80-119
1,2-Dichloroethane	8260C	20.0	20.0	100	71-127
1,2-Dichloropropane	8260C	21.2	20.0	106	80-119
1,3,5-Trimethylbenzene	8260C	20.7	20.0	103	81-128
1,3-Dichlorobenzene	8260C	19.7	20.0	99	83-121
1,4-Dichlorobenzene	8260C	19.5	20.0	98	79-119
1,4-Dioxane	8260C	364	400	91	44-154
2-Butanone (MEK)	8260C	18.1	20.0	90	61-137
2-Hexanone	8260C	17.0	20.0	85	63-124
4-Methyl-2-pentanone	8260C	17.2	20.0	86	66-124
Acetone	8260C	17.6	20.0	88	40-161
Benzene	8260C	20.1	20.0	100	79-119
Bromochloromethane	8260C	20.4	20.0	102	81-126
Bromodichloromethane	8260C	16.9	20.0	84	81-123
Bromoform	8260C	13.7	20.0	69	65-146
Bromomethane	8260C	21.0	20.0	105	42-166
Carbon Disulfide	8260C	17.8	20.0	89	66-128
Carbon Tetrachloride	8260C	15.9	20.0	80	70-127
Chlorobenzene	8260C	20.2	20.0	101	80-121
Chloroethane	8260C	20.6	20.0	103	62-131
Chloroform	8260C	21.3	20.0	107	79-120
Chloromethane	8260C	25.2	20.0	126	65-135

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1 **Date Analyzed:** 04/08/21
Sample Matrix: Water

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2103651-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyclohexane	8260C	19.5	20.0	98	69-120
Dibromochloromethane	8260C	16.5	20.0	83	72-128
Dichlorodifluoromethane (CFC 12)	8260C	23.3	20.0	116	59-155
Dichloromethane	8260C	21.5	20.0	107	73-122
Ethylbenzene	8260C	20.2	20.0	101	76-120
Isopropylbenzene (Cumene)	8260C	20.5	20.0	103	77-128
Methyl Acetate	8260C	16.7	20.0	83	61-133
Methyl tert-Butyl Ether	8260C	20.5	20.0	102	75-118
Methylcyclohexane	8260C	21.0	20.0	105	51-129
Styrene	8260C	19.8	20.0	99	80-124
Tetrachloroethene (PCE)	8260C	18.8	20.0	94	72-125
Toluene	8260C	20.2	20.0	101	79-119
Trichloroethene (TCE)	8260C	18.5	20.0	92	74-122
Trichlorofluoromethane (CFC 11)	8260C	20.0	20.0	100	71-136
Vinyl Chloride	8260C	23.0	20.0	115	74-159
cis-1,2-Dichloroethene	8260C	22.4	20.0	112	80-121
cis-1,3-Dichloropropene	8260C	17.4	20.0	87	77-122
m,p-Xylenes	8260C	40.6	40.0	101	80-126
n-Butylbenzene	8260C	21.2	20.0	106	78-133
n-Propylbenzene	8260C	21.5	20.0	108	78-131
o-Xylene	8260C	20.6	20.0	103	79-123
sec-Butylbenzene	8260C	21.3	20.0	107	75-129
tert-Butylbenzene	8260C	20.5	20.0	103	76-126
trans-1,2-Dichloroethene	8260C	23.5	20.0	117	73-118
trans-1,3-Dichloropropene	8260C	15.9	20.0	79	71-133

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1 **Date Analyzed:** 04/13/21
Sample Matrix: Soil

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis: Dry

Lab Control Sample
RQ2103850-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	19.8	20.0	99	68-123
1,1,2,2-Tetrachloroethane	8260C	18.7	20.0	94	78-121
1,1,2-Trichloroethane	8260C	19.5	20.0	97	84-117
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	23.4	20.0	117	54-121
1,1-Dichloroethane (1,1-DCA)	8260C	21.9	20.0	109	76-123
1,1-Dichloroethene (1,1-DCE)	8260C	29.4	20.0	147 *	65-115
1,2,3-Trichlorobenzene	8260C	17.4	20.0	87	60-128
1,2,4-Trichlorobenzene	8260C	17.9	20.0	89	62-130
1,2,4-Trimethylbenzene	8260C	19.6	20.0	98	67-121
1,2-Dibromo-3-chloropropane (DBCP)	8260C	13.0	20.0	65	54-135
1,2-Dibromoethane	8260C	18.5	20.0	93	77-117
1,2-Dichlorobenzene	8260C	18.3	20.0	92	75-116
1,2-Dichloroethane	8260C	20.1	20.0	100	74-116
1,2-Dichloropropane	8260C	19.8	20.0	99	79-112
1,3,5-Trimethylbenzene	8260C	20.2	20.0	101	66-122
1,3-Dichlorobenzene	8260C	18.6	20.0	93	72-118
1,4-Dichlorobenzene	8260C	18.4	20.0	92	72-117
1,4-Dioxane	8260C	457	400	114	59-147
2-Butanone (MEK)	8260C	20.6	20.0	103	67-129
2-Hexanone	8260C	18.5	20.0	92	68-118
4-Methyl-2-pentanone	8260C	18.4	20.0	92	64-123
Acetone	8260C	21.5	20.0	108	32-154
Benzene	8260C	20.3	20.0	102	77-114
Bromochloromethane	8260C	19.9	20.0	99	78-117
Bromodichloromethane	8260C	16.7	20.0	83	72-118
Bromoform	8260C	12.2	20.0	61	55-134
Bromomethane	8260C	22.7	20.0	113	10-150
Carbon Disulfide	8260C	21.2	20.0	106	44-139
Carbon Tetrachloride	8260C	16.0	20.0	80	51-123
Chlorobenzene	8260C	19.0	20.0	95	79-115
Chloroethane	8260C	26.6	20.0	133	10-140
Chloroform	8260C	21.6	20.0	108	76-115
Chloromethane	8260C	25.1	20.0	126	10-131

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1 **Date Analyzed:** 04/13/21
Sample Matrix: Soil

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis: Dry

Lab Control Sample
RQ2103850-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyclohexane	8260C	20.1	20.0	101	67-122
Dibromochloromethane	8260C	14.4	20.0	72	68-121
Dichlorodifluoromethane (CFC 12)	8260C	25.9	20.0	130	51-144
Dichloromethane	8260C	21.4	20.0	107	72-118
Ethylbenzene	8260C	19.6	20.0	98	64-118
Isopropylbenzene (Cumene)	8260C	19.1	20.0	95	60-123
Methyl Acetate	8260C	17.0	20.0	85	31-122
Methyl tert-Butyl Ether	8260C	20.3	20.0	102	76-118
Methylcyclohexane	8260C	21.4	20.0	107	70-124
Styrene	8260C	18.7	20.0	94	74-117
Tetrachloroethene (PCE)	8260C	18.5	20.0	92	58-124
Toluene	8260C	19.5	20.0	97	72-116
Trichloroethene (TCE)	8260C	19.8	20.0	99	69-118
Trichlorofluoromethane (CFC 11)	8260C	22.3	20.0	111	52-127
Vinyl Chloride	8260C	24.2	20.0	121	59-153
cis-1,2-Dichloroethene	8260C	22.6	20.0	113	79-113
cis-1,3-Dichloropropene	8260C	17.3	20.0	87	66-117
m,p-Xylenes	8260C	39.0	40.0	97	68-118
n-Butylbenzene	8260C	21.1	20.0	106	54-131
n-Propylbenzene	8260C	21.1	20.0	106	59-126
o-Xylene	8260C	19.2	20.0	96	71-116
sec-Butylbenzene	8260C	20.5	20.0	102	54-128
tert-Butylbenzene	8260C	19.9	20.0	99	58-123
trans-1,2-Dichloroethene	8260C	24.7	20.0	123 *	73-114
trans-1,3-Dichloropropene	8260C	16.0	20.0	80	57-135

Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Extraction Method: EPA 3546

		2,4,6-Tribromophenol	2-Fluorobiphenyl	2-Fluorophenol
Sample Name	**Lab Code**	**10-109**	**10-102**	**10-88**
PMC-040521A-02	R2103156-002	36	32	26
PMC-040521A-02 RE	R2103156-002	19	26	24
PMC-040521A-04	R2103156-004	40	34	29
PMC-040521A-04 RE	R2103156-004	26	31	31
PMC-040521A-06	R2103156-006	37	33	28
PMC-040521A-06 RE	R2103156-006	20	24	24
PMC-040521A-08	R2103156-008	41	40	32
PMC-040521A-08 RE	R2103156-008	18	24	24
Method Blank	RQ2103580-01	65	61	53
Method Blank	RQ2103831-01	51	62	60
Lab Control Sample	RQ2103580-02	67	53	41
Duplicate Lab Control Sample	RQ2103580-03	70	57	47
Lab Control Sample	RQ2103831-02	51	61	58
Duplicate Lab Control Sample	RQ2103831-03	51	56	48

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Extraction Method: EPA 3546

		Nitrobenzene-d5	Phenol-d6	Terphenyl-d14
Sample Name	**Lab Code**	**10-95**	**10-145**	**10-106**
PMC-040521A-02	R2103156-002	24	25	47
PMC-040521A-02 RE	R2103156-002	20	24	43
PMC-040521A-04	R2103156-004	26	27	48
PMC-040521A-04 RE	R2103156-004	25	31	54
PMC-040521A-06	R2103156-006	25	25	47
PMC-040521A-06 RE	R2103156-006	19	24	43
PMC-040521A-08	R2103156-008	31	30	55
PMC-040521A-08 RE	R2103156-008	19	24	42
Method Blank	RQ2103580-01	55	49	82
Method Blank	RQ2103831-01	58	56	90
Lab Control Sample	RQ2103580-02	39	40	85
Duplicate Lab Control Sample	RQ2103580-03	46	45	87
Lab Control Sample	RQ2103831-02	56	56	81
Duplicate Lab Control Sample	RQ2103831-03	47	47	85

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	RQ2103580-01	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	330 U	330	74	1	04/08/21 15:24	4/7/21	
2,3,4,6-Tetrachlorophenol	330 U	330	120	1	04/08/21 15:24	4/7/21	
2,4,5-Trichlorophenol	330 U	330	82	1	04/08/21 15:24	4/7/21	
2,4,6-Trichlorophenol	330 U	330	74	1	04/08/21 15:24	4/7/21	
2,4-Dichlorophenol	330 U	330	64	1	04/08/21 15:24	4/7/21	
2,4-Dimethylphenol	330 U	330	59	1	04/08/21 15:24	4/7/21	
2,4-Dinitrophenol	1700 U	1700	560	1	04/08/21 15:24	4/7/21	
2,4-Dinitrotoluene	330 U	330	130	1	04/08/21 15:24	4/7/21	
2,6-Dinitrotoluene	330 U	330	72	1	04/08/21 15:24	4/7/21	
2-Chloronaphthalene	330 U	330	66	1	04/08/21 15:24	4/7/21	
2-Chlorophenol	330 U	330	55	1	04/08/21 15:24	4/7/21	
2-Methylnaphthalene	330 U	330	55	1	04/08/21 15:24	4/7/21	
2-Methylphenol	330 U	330	69	1	04/08/21 15:24	4/7/21	
2-Nitroaniline	1700 U	1700	78	1	04/08/21 15:24	4/7/21	
2-Nitrophenol	330 U	330	77	1	04/08/21 15:24	4/7/21	
3,3'-Dichlorobenzidine	330 U	330	37	1	04/08/21 15:24	4/7/21	
3- and 4-Methylphenol Coelution	330 U	330	63	1	04/08/21 15:24	4/7/21	
3-Nitroaniline	1700 U	1700	67	1	04/08/21 15:24	4/7/21	
4,6-Dinitro-2-methylphenol	1700 U	1700	190	1	04/08/21 15:24	4/7/21	
4-Bromophenyl Phenyl Ether	330 U	330	87	1	04/08/21 15:24	4/7/21	
4-Chloro-3-methylphenol	330 U	330	67	1	04/08/21 15:24	4/7/21	
4-Chloroaniline	330 U	330	56	1	04/08/21 15:24	4/7/21	
4-Chlorophenyl Phenyl Ether	330 U	330	71	1	04/08/21 15:24	4/7/21	
4-Nitroaniline	1700 U	1700	34	1	04/08/21 15:24	4/7/21	
4-Nitrophenol	1700 U	1700	67	1	04/08/21 15:24	4/7/21	
Acenaphthene	330 U	330	63	1	04/08/21 15:24	4/7/21	
Acenaphthylene	330 U	330	67	1	04/08/21 15:24	4/7/21	
Acetophenone	330 U	330	95	1	04/08/21 15:24	4/7/21	
Anthracene	330 U	330	55	1	04/08/21 15:24	4/7/21	
Atrazine	330 U	330	46	1	04/08/21 15:24	4/7/21	
Benz(a)anthracene	330 U	330	49	1	04/08/21 15:24	4/7/21	
Benzaldehyde	1700 U	1700	80	1	04/08/21 15:24	4/7/21	
Benzo(a)pyrene	330 U	330	88	1	04/08/21 15:24	4/7/21	
Benzo(b)fluoranthene	330 U	330	55	1	04/08/21 15:24	4/7/21	
Benzo(g,h,i)perylene	330 U	330	76	1	04/08/21 15:24	4/7/21	
Benzo(k)fluoranthene	330 U	330	54	1	04/08/21 15:24	4/7/21	
Biphenyl	330 U	330	98	1	04/08/21 15:24	4/7/21	
2,2'-Oxybis(1-chloropropane)	330 U	330	68	1	04/08/21 15:24	4/7/21	
Bis(2-chloroethoxy)methane	330 U	330	81	1	04/08/21 15:24	4/7/21	
Bis(2-chloroethyl) Ether	330 U	330	65	1	04/08/21 15:24	4/7/21	
Bis(2-ethylhexyl) Phthalate	500 U	500	61	1	04/08/21 15:24	4/7/21	
Butyl Benzyl Phthalate	330 U	330	40	1	04/08/21 15:24	4/7/21	
Caprolactam	330 U	330	73	1	04/08/21 15:24	4/7/21	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	RQ2103580-01	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	330 U	330	54	1	04/08/21 15:24	4/7/21	
Chrysene	330 U	330	49	1	04/08/21 15:24	4/7/21	
Di-n-butyl Phthalate	330 U	330	54	1	04/08/21 15:24	4/7/21	
Di-n-octyl Phthalate	330 U	330	120	1	04/08/21 15:24	4/7/21	
Dibenz(a,h)anthracene	330 U	330	72	1	04/08/21 15:24	4/7/21	
Dibenzofuran	330 U	330	60	1	04/08/21 15:24	4/7/21	
Diethyl Phthalate	330 U	330	59	1	04/08/21 15:24	4/7/21	
Dimethyl Phthalate	330 U	330	63	1	04/08/21 15:24	4/7/21	
Fluoranthene	330 U	330	83	1	04/08/21 15:24	4/7/21	
Fluorene	330 U	330	62	1	04/08/21 15:24	4/7/21	
Hexachlorobenzene	330 U	330	79	1	04/08/21 15:24	4/7/21	
Hexachlorobutadiene	330 U	330	57	1	04/08/21 15:24	4/7/21	
Hexachlorocyclopentadiene	330 U	330	110	1	04/08/21 15:24	4/7/21	
Hexachloroethane	330 U	330	62	1	04/08/21 15:24	4/7/21	
Indeno(1,2,3-cd)pyrene	330 U	330	110	1	04/08/21 15:24	4/7/21	
Isophorone	330 U	330	69	1	04/08/21 15:24	4/7/21	
N-Nitrosodi-n-propylamine	330 U	330	110	1	04/08/21 15:24	4/7/21	
N-Nitrosodiphenylamine	330 U	330	210	1	04/08/21 15:24	4/7/21	
Naphthalene	330 U	330	62	1	04/08/21 15:24	4/7/21	
Nitrobenzene	330 U	330	59	1	04/08/21 15:24	4/7/21	
Pentachlorophenol (PCP)	1700 U	1700	330	1	04/08/21 15:24	4/7/21	
Phenanthrene	330 U	330	47	1	04/08/21 15:24	4/7/21	
Phenol	330 U	330	67	1	04/08/21 15:24	4/7/21	
Pyrene	330 U	330	55	1	04/08/21 15:24	4/7/21	
Pyridine	1700 U	1700	45	1	04/08/21 15:24	4/7/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	65	10 - 109	04/08/21 15:24	
2-Fluorobiphenyl	61	10 - 102	04/08/21 15:24	
2-Fluorophenol	53	10 - 88	04/08/21 15:24	
Nitrobenzene-d5	55	10 - 95	04/08/21 15:24	
Phenol-d6	49	10 - 145	04/08/21 15:24	
Terphenyl-d14	82	10 - 106	04/08/21 15:24	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	RQ2103831-01	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	330 U	330	74	1	04/14/21 15:23	4/13/21	
2,3,4,6-Tetrachlorophenol	330 U	330	120	1	04/14/21 15:23	4/13/21	
2,4,5-Trichlorophenol	330 U	330	82	1	04/14/21 15:23	4/13/21	
2,4,6-Trichlorophenol	330 U	330	74	1	04/14/21 15:23	4/13/21	
2,4-Dichlorophenol	330 U	330	64	1	04/14/21 15:23	4/13/21	
2,4-Dimethylphenol	330 U	330	59	1	04/14/21 15:23	4/13/21	
2,4-Dinitrophenol	1700 U	1700	560	1	04/14/21 15:23	4/13/21	
2,4-Dinitrotoluene	330 U	330	130	1	04/14/21 15:23	4/13/21	
2,6-Dinitrotoluene	330 U	330	72	1	04/14/21 15:23	4/13/21	
2-Chloronaphthalene	330 U	330	66	1	04/14/21 15:23	4/13/21	
2-Chlorophenol	330 U	330	55	1	04/14/21 15:23	4/13/21	
2-Methylnaphthalene	330 U	330	55	1	04/14/21 15:23	4/13/21	
2-Methylphenol	330 U	330	69	1	04/14/21 15:23	4/13/21	
2-Nitroaniline	1700 U	1700	78	1	04/14/21 15:23	4/13/21	
2-Nitrophenol	330 U	330	77	1	04/14/21 15:23	4/13/21	
3,3'-Dichlorobenzidine	330 U	330	37	1	04/14/21 15:23	4/13/21	
3- and 4-Methylphenol Coelution	330 U	330	63	1	04/14/21 15:23	4/13/21	
3-Nitroaniline	1700 U	1700	67	1	04/14/21 15:23	4/13/21	
4,6-Dinitro-2-methylphenol	1700 U	1700	190	1	04/14/21 15:23	4/13/21	
4-Bromophenyl Phenyl Ether	330 U	330	87	1	04/14/21 15:23	4/13/21	
4-Chloro-3-methylphenol	330 U	330	67	1	04/14/21 15:23	4/13/21	
4-Chloroaniline	330 U	330	56	1	04/14/21 15:23	4/13/21	
4-Chlorophenyl Phenyl Ether	330 U	330	71	1	04/14/21 15:23	4/13/21	
4-Nitroaniline	1700 U	1700	34	1	04/14/21 15:23	4/13/21	
4-Nitrophenol	1700 U	1700	67	1	04/14/21 15:23	4/13/21	
Acenaphthene	330 U	330	63	1	04/14/21 15:23	4/13/21	
Acenaphthylene	330 U	330	67	1	04/14/21 15:23	4/13/21	
Acetophenone	330 U	330	95	1	04/14/21 15:23	4/13/21	
Anthracene	330 U	330	55	1	04/14/21 15:23	4/13/21	
Atrazine	330 U	330	46	1	04/14/21 15:23	4/13/21	
Benz(a)anthracene	330 U	330	49	1	04/14/21 15:23	4/13/21	
Benzaldehyde	1700 U	1700	80	1	04/14/21 15:23	4/13/21	
Benzo(a)pyrene	330 U	330	88	1	04/14/21 15:23	4/13/21	
Benzo(b)fluoranthene	330 U	330	55	1	04/14/21 15:23	4/13/21	
Benzo(g,h,i)perylene	330 U	330	76	1	04/14/21 15:23	4/13/21	
Benzo(k)fluoranthene	330 U	330	54	1	04/14/21 15:23	4/13/21	
Biphenyl	330 U	330	98	1	04/14/21 15:23	4/13/21	
2,2'-Oxybis(1-chloropropane)	330 U	330	68	1	04/14/21 15:23	4/13/21	
Bis(2-chloroethoxy)methane	330 U	330	81	1	04/14/21 15:23	4/13/21	
Bis(2-chloroethyl) Ether	330 U	330	65	1	04/14/21 15:23	4/13/21	
Bis(2-ethylhexyl) Phthalate	500 U	500	61	1	04/14/21 15:23	4/13/21	
Butyl Benzyl Phthalate	330 U	330	40	1	04/14/21 15:23	4/13/21	
Caprolactam	330 U	330	73	1	04/14/21 15:23	4/13/21	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	RQ2103831-01	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	330 U	330	54	1	04/14/21 15:23	4/13/21	
Chrysene	330 U	330	49	1	04/14/21 15:23	4/13/21	
Di-n-butyl Phthalate	330 U	330	54	1	04/14/21 15:23	4/13/21	
Di-n-octyl Phthalate	330 U	330	120	1	04/14/21 15:23	4/13/21	
Dibenz(a,h)anthracene	330 U	330	72	1	04/14/21 15:23	4/13/21	
Dibenzofuran	330 U	330	60	1	04/14/21 15:23	4/13/21	
Diethyl Phthalate	330 U	330	59	1	04/14/21 15:23	4/13/21	
Dimethyl Phthalate	330 U	330	63	1	04/14/21 15:23	4/13/21	
Fluoranthene	330 U	330	83	1	04/14/21 15:23	4/13/21	
Fluorene	330 U	330	62	1	04/14/21 15:23	4/13/21	
Hexachlorobenzene	330 U	330	79	1	04/14/21 15:23	4/13/21	
Hexachlorobutadiene	330 U	330	57	1	04/14/21 15:23	4/13/21	
Hexachlorocyclopentadiene	330 U	330	110	1	04/14/21 15:23	4/13/21	
Hexachloroethane	330 U	330	62	1	04/14/21 15:23	4/13/21	
Indeno(1,2,3-cd)pyrene	330 U	330	110	1	04/14/21 15:23	4/13/21	
Isophorone	330 U	330	69	1	04/14/21 15:23	4/13/21	
N-Nitrosodi-n-propylamine	330 U	330	110	1	04/14/21 15:23	4/13/21	
N-Nitrosodiphenylamine	330 U	330	210	1	04/14/21 15:23	4/13/21	
Naphthalene	330 U	330	62	1	04/14/21 15:23	4/13/21	
Nitrobenzene	330 U	330	59	1	04/14/21 15:23	4/13/21	
Pentachlorophenol (PCP)	1700 U	1700	330	1	04/14/21 15:23	4/13/21	
Phenanthrene	330 U	330	47	1	04/14/21 15:23	4/13/21	
Phenol	330 U	330	67	1	04/14/21 15:23	4/13/21	
Pyrene	330 U	330	55	1	04/14/21 15:23	4/13/21	
Pyridine	1700 U	1700	45	1	04/14/21 15:23	4/13/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	51	10 - 109	04/14/21 15:23	
2-Fluorobiphenyl	62	10 - 102	04/14/21 15:23	
2-Fluorophenol	60	10 - 88	04/14/21 15:23	
Nitrobenzene-d5	58	10 - 95	04/14/21 15:23	
Phenol-d6	56	10 - 145	04/14/21 15:23	
Terphenyl-d14	90	10 - 106	04/14/21 15:23	

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1 **Date Analyzed:** 04/09/21
Sample Matrix: Soil

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Units:ug/Kg
Basis: Dry

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ2103580-02			RQ2103580-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,2,4,5-Tetrachlorobenzene	8270D	1810	3320	55	2000	3320	60	13-145	10	30
2,3,4,6-Tetrachlorophenol	8270D	2090	3320	63	2270	3310	69	55-98	8	30
2,4,5-Trichlorophenol	8270D	1810	3320	55	1990	3310	60	52-93	10	30
2,4,6-Trichlorophenol	8270D	1690	3320	51	1890	3310	57	50-89	11	30
2,4-Dichlorophenol	8270D	1450	3320	44 *	1760	3310	53	50-84	19	30
2,4-Dimethylphenol	8270D	1490	3320	45 *	1750	3310	53	50-86	16	30
2,4-Dinitrophenol	8270D	1840	3320	56	1980	3310	60	20-101	7	30
2,4-Dinitrotoluene	8270D	2340	3320	71	2480	3310	75	60-106	6	30
2,6-Dinitrotoluene	8270D	2080	3320	63	2240	3310	68	57-100	8	30
2-Chloronaphthalene	8270D	1710	3320	52	1910	3310	58	51-91	11	30
2-Chlorophenol	8270D	1300	3320	39 *	1480	3310	45	45-83	13	30
2-Methylnaphthalene	8270D	1470	3320	44 *	1770	3310	53	50-86	19	30
2-Methylphenol	8270D	1450	3320	44 *	1640	3310	50	47-90	12	30
2-Nitroaniline	8270D	1870	3320	56	2080	3310	63	50-101	11	30
2-Nitrophenol	8270D	1300	3320	39 *	1560	3310	47 *	48-83	18	30
3- and 4-Methylphenol Coelution	8270D	1340	3320	41 *	1520	3310	46 *	47-90	12	30
3-Nitroaniline	8270D	1980	3320	60	2110	3310	64	42-85	7	30
4,6-Dinitro-2-methylphenol	8270D	2090	3320	63	2210	3310	67	42-98	5	30
4-Bromophenyl Phenyl Ether	8270D	2120	3320	64	2280	3310	69	54-94	7	30
4-Chloro-3-methylphenol	8270D	1630	3320	49 *	1870	3310	57	51-89	14	30
4-Chloroaniline	8270D	1450	3320	44	1740	3310	52	32-77	18	30
4-Chlorophenyl Phenyl Ether	8270D	1970	3320	59	2170	3310	66	53-93	10	30
4-Nitroaniline	8270D	2350	3320	71	2460	3310	74	55-100	4	30
4-Nitrophenol	8270D	1650 J	3320	50	1620 J	3310	49	44-102	2	30
Acenaphthene	8270D	1810	3320	55	2000	3310	60	52-91	10	30
Acenaphthylene	8270D	1950	3320	59	2140	3310	64	53-97	9	30
Acetophenone	8270D	2480	6630	37 *	2830	6630	43	38-80	13	30
Anthracene	8270D	2340	3320	71	2510	3310	76	63-98	7	30
Benz(a)anthracene	8270D	2510	3320	76	2590	3310	78	59-99	3	30
Benzo(a)pyrene	8270D	3080	3320	93	3200	3310	97	71-129	4	30
Benzo(b)fluoranthene	8270D	2460	3320	74	2630	3310	79	59-101	7	30
Benzo(g,h,i)perylene	8270D	3090	3320	93	3220	3310	97	67-113	4	30
Benzo(k)fluoranthene	8270D	2710	3320	82	2790	3310	84	64-107	3	30

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1 **Date Analyzed:** 04/09/21
Sample Matrix: Soil

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Units:ug/Kg
Basis: Dry

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ2103580-02			RQ2103580-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Biphenyl	8270D	1730	3320	52	1900	3310	57	43-88	10	30
2,2'-Oxybis(1-chloropropane)	8270D	1230	3320	37 *	1420	3310	43 *	45-85	14	30
Bis(2-chloroethoxy)methane	8270D	1440	3320	43 *	1720	3310	52	51-91	18	30
Bis(2-chloroethyl) Ether	8270D	1300	3320	39 *	1490	3310	45 *	46-87	14	30
Bis(2-ethylhexyl) Phthalate	8270D	2660	3320	80	2820	3310	85	67-108	6	30
Butyl Benzyl Phthalate	8270D	2570	3320	77	2690	3310	81	67-107	5	30
Caprolactam	8270D	1930	3320	58	2170	3310	65	50-91	12	30
Carbazole	8270D	2680	3320	81	2850	3310	86	62-109	6	30
Chrysene	8270D	2570	3320	77	2670	3310	81	62-103	4	30
Di-n-butyl Phthalate	8270D	2720	3320	82	2860	3310	86	66-109	5	30
Di-n-octyl Phthalate	8270D	2590	3320	78	2730	3310	82	65-114	5	30
Dibenz(a,h)anthracene	8270D	2790	3320	84	2910	3310	88	58-119	4	30
Dibenzofuran	8270D	1870	3320	56	2070	3310	62	52-93	10	30
Diethyl Phthalate	8270D	2140	3320	65	2300	3310	69	56-96	7	30
Dimethyl Phthalate	8270D	2030	3320	61	2240	3310	68	55-94	10	30
Fluoranthene	8270D	2520	3320	76	2630	3310	79	59-104	4	30
Fluorene	8270D	1980	3320	60	2180	3310	66	54-93	9	30
Hexachlorobenzene	8270D	2210	3320	67	2330	3310	70	55-97	5	30
Hexachlorobutadiene	8270D	1350	3320	41 *	1640	3310	49	47-87	19	30
Hexachlorocyclopentadiene	8270D	1010	3320	31	1090	3310	33	10-125	7	30
Hexachloroethane	8270D	1150	3320	35 *	1340	3310	40 *	41-77	15	30
Indeno(1,2,3-cd)pyrene	8270D	2720	3320	82	2850	3310	86	64-114	4	30
Isophorone	8270D	1300	3320	39 *	1550	3310	47	40-81	17	30
N-Nitrosodi-n-propylamine	8270D	1370	3320	41 *	1550	3310	47	43-89	12	30
N-Nitrosodiphenylamine	8270D	2380	3320	72	2600	3310	78	53-107	9	30
Naphthalene	8270D	1340	3320	40 *	1600	3310	48	48-85	17	30
Nitrobenzene	8270D	1270	3320	38 *	1530	3310	46	46-84	19	30
Pentachlorophenol (PCP)	8270D	2470	3320	75	2660	3310	80	34-118	7	30
Phenanthrene	8270D	2210	3320	67	2390	3310	72	60-95	8	30
Phenol	8270D	1300	3320	39 *	1520	3310	46	44-90	15	30
Pyrene	8270D	2580	3320	78	2680	3310	81	65-107	4	30
Pyridine	8270D	1010 J	3320	30 *	1160 J	3310	35	32-67	14	30

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1 **Date Analyzed:** 04/14/21
Sample Matrix: Soil

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Units:ug/Kg
Basis: Dry

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ2103831-02			RQ2103831-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,2,4,5-Tetrachlorobenzene	8270D	1960	3230	61	1840	3260	56	13-145	6	30
2,3,4,6-Tetrachlorophenol	8270D	1790	3230	55	1810	3260	55	55-98	1	30
2,4,5-Trichlorophenol	8270D	1820	3230	56	1710	3260	52	52-93	6	30
2,4,6-Trichlorophenol	8270D	1740	3230	54	1650	3260	50	50-89	6	30
2,4-Dichlorophenol	8270D	1750	3230	54	1610	3260	49 *	50-84	8	30
2,4-Dimethylphenol	8270D	1840	3230	57	1720	3260	53	50-86	7	30
2,4-Dinitrophenol	8270D	1490 J	3230	46	1500 J	3260	46	20-101	<1	30
2,4-Dinitrotoluene	8270D	2120	3230	66	2210	3260	68	60-106	4	30
2,6-Dinitrotoluene	8270D	2120	3230	65	2050	3260	63	57-100	3	30
2-Chloronaphthalene	8270D	1920	3230	59	1800	3260	55	51-91	7	30
2-Chlorophenol	8270D	1720	3230	53	1480	3260	45	45-83	15	30
2-Methylnaphthalene	8270D	1810	3230	56	1630	3260	50	50-86	10	30
2-Methylphenol	8270D	1860	3230	58	1660	3260	51	47-90	12	30
2-Nitroaniline	8270D	2020	3230	62	2010	3260	62	50-101	<1	30
2-Nitrophenol	8270D	1680	3230	52	1450	3260	44 *	48-83	15	30
3- and 4-Methylphenol Coelution	8270D	1850	3230	57	1660	3260	51	47-90	11	30
3-Nitroaniline	8270D	1770	3230	55	1910	3260	59	42-85	8	30
4,6-Dinitro-2-methylphenol	8270D	1690	3230	52	1720	3260	53	42-98	2	30
4-Bromophenyl Phenyl Ether	8270D	1890	3230	58	1910	3260	58	54-94	<1	30
4-Chloro-3-methylphenol	8270D	1870	3230	58	1780	3260	55	51-89	5	30
4-Chloroaniline	8270D	1580	3230	49	1650	3260	51	32-77	4	30
4-Chlorophenyl Phenyl Ether	8270D	1890	3230	58	1840	3260	56	53-93	3	30
4-Nitroaniline	8270D	2090	3230	65	2210	3260	68	55-100	6	30
4-Nitrophenol	8270D	1700	3230	53	1750	3260	54	44-102	2	30
Acenaphthene	8270D	1920	3230	59	1840	3260	56	52-91	4	30
Acenaphthylene	8270D	2080	3230	64	2010	3260	62	53-97	3	30
Acetophenone	8270D	3240	6460	50	2830	6520	43	38-80	13	30
Anthracene	8270D	2270	3230	70	2390	3260	73	63-98	5	30
Benz(a)anthracene	8270D	2280	3230	70	2380	3260	73	59-99	4	30
Benzo(a)pyrene	8270D	2850	3230	88	2970	3260	91	71-129	4	30
Benzo(b)fluoranthene	8270D	2270	3230	70	2390	3260	73	59-101	5	30
Benzo(g,h,i)perylene	8270D	2530	3230	78	2660	3260	82	67-113	5	30
Benzo(k)fluoranthene	8270D	2490	3230	77	2620	3260	80	64-107	5	30

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1 **Date Analyzed:** 04/14/21
Sample Matrix: Soil

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Units:ug/Kg
Basis: Dry

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ2103831-02			RQ2103831-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Biphenyl	8270D	1900	3230	59	1830	3260	56	43-88	4	30
2,2'-Oxybis(1-chloropropane)	8270D	1940	3230	60	1650	3260	51	45-85	16	30
Bis(2-chloroethoxy)methane	8270D	1930	3230	60	1730	3260	53	51-91	11	30
Bis(2-chloroethyl) Ether	8270D	1840	3230	57	1600	3260	49	46-87	14	30
Bis(2-ethylhexyl) Phthalate	8270D	2580	3230	80	2670	3260	82	67-108	4	30
Butyl Benzyl Phthalate	8270D	2450	3230	76	2520	3260	77	67-107	3	30
Caprolactam	8270D	1980	3230	61	2050	3260	63	50-91	4	30
Carbazole	8270D	2510	3230	78	2640	3260	81	62-109	5	30
Chrysene	8270D	2390	3230	74	2480	3260	76	62-103	4	30
Di-n-butyl Phthalate	8270D	2670	3230	83	2840	3260	87	66-109	6	30
Di-n-octyl Phthalate	8270D	2840	3230	88	2970	3260	91	65-114	4	30
Dibenz(a,h)anthracene	8270D	2290	3230	71	2390	3260	73	58-119	5	30
Dibenzofuran	8270D	1930	3230	60	1870	3260	57	52-93	3	30
Diethyl Phthalate	8270D	2020	3230	62	2020	3260	62	56-96	<1	30
Dimethyl Phthalate	8270D	1950	3230	60	1930	3260	59	55-94	<1	30
Fluoranthene	8270D	2350	3230	73	2490	3260	76	59-104	6	30
Fluorene	8270D	1970	3230	61	1920	3260	59	54-93	3	30
Hexachlorobenzene	8270D	1910	3230	59	1960	3260	60	55-97	3	30
Hexachlorobutadiene	8270D	1670	3230	52	1450	3260	44 *	47-87	14	30
Hexachlorocyclopentadiene	8270D	1290	3230	40	1150	3260	35	10-125	12	30
Hexachloroethane	8270D	1610	3230	50	1380	3260	42	41-77	15	30
Indeno(1,2,3-cd)pyrene	8270D	2120	3230	65	2260	3260	69	64-114	7	30
Isophorone	8270D	1820	3230	56	1670	3260	51	40-81	9	30
N-Nitrosodi-n-propylamine	8270D	1860	3230	58	1640	3260	50	43-89	13	30
N-Nitrosodiphenylamine	8270D	2300	3230	71	2340	3260	72	53-107	2	30
Naphthalene	8270D	1790	3230	55	1560	3260	48	48-85	14	30
Nitrobenzene	8270D	1780	3230	55	1540	3260	47	46-84	15	30
Pentachlorophenol (PCP)	8270D	1880	3230	58	1960	3260	60	34-118	4	30
Phenanthrene	8270D	2160	3230	67	2230	3260	68	60-95	3	30
Phenol	8270D	1770	3230	55	1560	3260	48	44-90	13	30
Pyrene	8270D	2450	3230	76	2550	3260	78	65-107	4	30
Pyridine	8270D	1420 J	3230	44	1270 J	3260	39	32-67	11	30

Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Extraction Method: EPA 3541

Sample Name	Lab Code	Decachlorobiphenyl 10-145	Tetrachloro-m-xylene 10-123
PMC-040521A-02	R2103156-002	103	74
PMC-040521A-04	R2103156-004	73	71
PMC-040521A-06	R2103156-006	69	61
PMC-040521A-08	R2103156-008	76	61
Method Blank	RQ2103523-01	80	78
Lab Control Sample	RQ2103523-02	100	84
Duplicate Lab Control Sample	RQ2103523-03	93	82
PMC-040521A-02 MS	RQ2103523-06	73	67
PMC-040521A-02 DMS	RQ2103523-07	75	71

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21
Sample Matrix:	Soil	**Date Received:**	04/05/21
		Date Analyzed:	04/13/21
		Date Extracted:	04/6/21

Duplicate Matrix Spike Summary
Organochlorine Pesticides by Gas Chromatography

Sample Name:	PMC-040521A-02	**Units:**	ug/Kg
Lab Code:	R2103156-002	**Basis:**	Dry
Analysis Method:	8081B		
Prep Method:	EPA 3541		

		Matrix Spike			Duplicate Matrix Spike					
		RQ2103523-06			RQ2103523-07					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
4,4'-DDD	2.2 U	8.87	8.59	103	9.11	8.75	104	10-165	3	30
4,4'-DDE	2.2 U	7.63	8.59	89	8.98	8.75	103	10-200	16	30
4,4'-DDT	2.2 U	5.48	8.59	64	3.86	8.75	44	10-200	35*	30
Aldrin	2.2 U	6.68	8.59	78	6.92	8.75	79	10-171	3	30
Dieldrin	2.2 U	7.33	8.59	85	7.60	8.75	87	10-200	4	30
Endosulfan I	2.2 U	6.52	8.59	76	6.79	8.75	78	10-174	4	30
Endosulfan II	2.2 U	6.08	8.59	71	6.21	8.75	71	10-185	2	30
Endosulfan Sulfate	2.2 U	8.46	8.59	98	7.80	8.75	89	10-155	8	30
Endrin	2.2 U	7.44	8.59	87	7.23	8.75	83	10-200	3	30
Endrin Aldehyde	2.2 U	7.85	8.59	91	7.01	8.75	80	10-148	11	30
Endrin Ketone	2.2 U	6.15	8.59	72	5.96	8.75	68	10-197	3	30
Heptachlor	2.2 U	6.53	8.59	76	6.35	8.75	73	12-160	3	30
Heptachlor Epoxide	2.2 U	6.95	8.59	81	6.97	8.75	80	10-180	<1	30
Methoxychlor	2.2 U	5.42	8.59	63	4.87	8.75	56	10-200	11	30
alpha-BHC	2.2 U	6.24	8.59	73	6.06	8.75	69	10-149	3	30
alpha-Chlordane	2.2 U	6.65	8.59	77	7.08	8.75	81	10-175	6	30
beta-BHC	2.2 U	6.91	8.59	80	7.01	8.75	80	10-162	1	30
delta-BHC	2.2 U	7.40	8.59	86	7.74	8.75	88	10-157	4	30
gamma-BHC (Lindane)	2.2 U	6.34	8.59	74	6.16	8.75	70	10-170	3	30
gamma-Chlordane	2.2 U	6.36	8.59	74	6.71	8.75	77	10-176	5	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	RQ2103523-01	**Basis:**	Dry

Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
4,4'-DDE	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
4,4'-DDT	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
Aldrin	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
Dieldrin	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
Endosulfan I	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
Endosulfan II	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
Endosulfan Sulfate	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
Endrin	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
Endrin Aldehyde	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
Endrin Ketone	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
Heptachlor	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
Heptachlor Epoxide	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
Methoxychlor	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
Toxaphene	33 U	33	19	1	04/13/21 14:11	4/6/21	
alpha-BHC	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
alpha-Chlordane	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
beta-BHC	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
delta-BHC	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
gamma-BHC (Lindane)	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	
gamma-Chlordane	1.7 U	1.7	0.84	1	04/13/21 14:11	4/6/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	80	10 - 145	04/13/21 14:11	
Tetrachloro-m-xylene	78	10 - 123	04/13/21 14:11	

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1 **Date Analyzed:** 04/13/21
Sample Matrix: Soil

Duplicate Lab Control Sample Summary
Organochlorine Pesticides by Gas Chromatography

Units:ug/Kg
Basis: Dry

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ2103523-02			RQ2103523-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
4,4'-DDD	8081B	7.35	6.74	109	6.77	6.65	102	33-149	8	30
4,4'-DDE	8081B	7.77	6.74	115	7.16	6.65	108	38-147	8	30
4,4'-DDT	8081B	7.65	6.74	113	7.06	6.65	106	37-146	8	30
Aldrin	8081B	7.12	6.74	106	6.66	6.65	100	25-146	7	30
Dieldrin	8081B	7.22	6.74	107	6.63	6.65	100	40-140	9	30
Endosulfan I	8081B	7.08	6.74	105	6.55	6.65	99	35-116	8	30
Endosulfan II	8081B	7.35	6.74	109	6.79	6.65	102	39-122	8	30
Endosulfan Sulfate	8081B	7.71	6.74	114	7.06	6.65	106	31-132	9	30
Endrin	8081B	7.69	6.74	114	7.07	6.65	106	40-144	8	30
Endrin Aldehyde	8081B	8.18	6.74	121 *	7.54	6.65	113 *	10-109	8	30
Endrin Ketone	8081B	7.43	6.74	110	6.95	6.65	104	38-122	7	30
Heptachlor	8081B	6.33	6.74	94	5.75	6.65	86	34-142	10	30
Heptachlor Epoxide	8081B	7.03	6.74	104	6.61	6.65	99	37-113	6	30
Methoxychlor	8081B	7.46	6.74	111	7.01	6.65	105	41-152	6	30
alpha-BHC	8081B	6.84	6.74	101	6.42	6.65	97	28-145	6	30
alpha-Chlordane	8081B	7.08	6.74	105	6.57	6.65	99	37-114	7	30
beta-BHC	8081B	6.73	6.74	100	6.26	6.65	94	38-144	7	30
delta-BHC	8081B	7.36	6.74	109	6.76	6.65	102	30-153	8	30
gamma-BHC (Lindane)	8081B	7.06	6.74	105	6.57	6.65	99	32-145	7	30
gamma-Chlordane	8081B	7.31	6.74	108	6.53	6.65	98	34-123	11	30

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Extraction Method: EPA 3541

Sample Name	Lab Code	Decachlorobiphenyl 22-128	Tetrachloro-m-xylene 14-119
PMC-040521A-02	R2103156-002	77	59
PMC-040521A-04	R2103156-004	73	53
PMC-040521A-06	R2103156-006	69	48
PMC-040521A-08	R2103156-008	72	47
Method Blank	RQ2103523-01	68	67
Lab Control Sample	RQ2103523-04	79	75
Duplicate Lab Control Sample	RQ2103523-05	75	70
PMC-040521A-08 MS	RQ2103523-08	70	58
PMC-040521A-08 DMS	RQ2103523-09	77	60

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21
Sample Matrix:	Soil	**Date Received:**	04/05/21
		Date Analyzed:	04/7/21
		Date Extracted:	04/6/21

Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs) by GC

Sample Name:	PMC-040521A-08	**Units:**	ug/Kg
Lab Code:	R2103156-008	**Basis:**	Dry
Analysis Method:	8082A		
Prep Method:	EPA 3541		

		Matrix Spike RQ2103523-08			Duplicate Matrix Spike RQ2103523-09					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	40 U	140	201	70	150	203	74	26-137	7	30
Aroclor 1260	40 U	145	201	72	153	203	75	30-156	5	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	RQ2103523-01	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	33 U	33	17	1	04/07/21 16:03	4/6/21	
Aroclor 1221	66 U	66	17	1	04/07/21 16:03	4/6/21	
Aroclor 1232	33 U	33	17	1	04/07/21 16:03	4/6/21	
Aroclor 1242	33 U	33	17	1	04/07/21 16:03	4/6/21	
Aroclor 1248	33 U	33	17	1	04/07/21 16:03	4/6/21	
Aroclor 1254	33 U	33	17	1	04/07/21 16:03	4/6/21	
Aroclor 1260	33 U	33	17	1	04/07/21 16:03	4/6/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	68	22 - 128	04/07/21 16:03	
Tetrachloro-m-xylene	67	14 - 119	04/07/21 16:03	

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1 **Date Analyzed:** 04/07/21
Sample Matrix: Soil

Duplicate Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC

Units:ug/Kg
Basis: Dry

			Lab Control Sample			Duplicate Lab Control Sample				
			RQ2103523-04			RQ2103523-05				
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	8082A	136	162	84	126	164	77	41-127	7	30
Aroclor 1260	8082A	135	162	83	126	164	77	37-127	7	30

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	DCAA 10-151
PMC-040521A-02	R2103156-002	84
PMC-040521A-04	R2103156-004	90
PMC-040521A-06	R2103156-006	82
PMC-040521A-08	R2103156-008	84
Method Blank	RQ2103626-01	64
Lab Control Sample	RQ2103626-02	101
Duplicate Lab Control Sample	RQ2103626-03	91

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	RQ2103626-01	**Basis:**	Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-TP	10 U	10	4.6	1	04/12/21 13:15	4/8/21	
Pentachlorophenol (PCP)	10 U	10	6.4	1	04/12/21 13:15	4/8/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	64	10 - 151	04/12/21 13:15	

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1 **Date Analyzed:** 04/12/21
Sample Matrix: Soil

Duplicate Lab Control Sample Summary
Chlorinated Herbicides by GC

Units:ug/Kg
Basis: Dry

			Lab Control Sample			Duplicate Lab Control Sample				
			RQ2103626-02			RQ2103626-03				
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
2,4,5-TP	8151A	34.0	50.0	68	34.4	50.0	69	18-122	1	30
Pentachlorophenol (PCP)	8151A	15.3	50.2	30	16.4	50.1	33	10-103	7	30

Metals

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	NA
		Date Received:	NA
Sample Matrix:	Soil		
Sample Name:	Method Blank	**Basis:**	Dry
Lab Code:	R2103156-MB		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010C	20 U	mg/Kg	20	12	1	04/09/21 19:01	04/08/21	
Antimony, Total	6010C	6.0 U	mg/Kg	6.0	0.6	1	04/09/21 19:01	04/08/21	
Arsenic, Total	6010C	1.0 U	mg/Kg	1.0	0.7	1	04/09/21 19:01	04/08/21	
Barium, Total	6010C	2.0 U	mg/Kg	2.0	1.5	1	04/09/21 19:01	04/08/21	
Beryllium, Total	6010C	0.30 U	mg/Kg	0.30	0.03	1	04/09/21 19:01	04/08/21	
Cadmium, Total	6010C	0.50 U	mg/Kg	0.50	0.24	1	04/09/21 19:01	04/08/21	
Calcium, Total	6010C	100 U	mg/Kg	100	40	1	04/09/21 19:01	04/08/21	
Chromium, Total	6010C	1.0 U	mg/Kg	1.0	0.4	1	04/09/21 19:01	04/08/21	
Cobalt, Total	6010C	5.0 U	mg/Kg	5.0	0.5	1	04/09/21 19:01	04/08/21	
Copper, Total	6010C	2.0 U	mg/Kg	2.0	0.7	1	04/09/21 19:01	04/08/21	
Iron, Total	6010C	20 U	mg/Kg	20	13	1	04/09/21 19:01	04/08/21	
Lead, Total	6010C	5.0 U	mg/Kg	5.0	0.4	1	04/09/21 19:01	04/08/21	
Magnesium, Total	6010C	100 U	mg/Kg	100	20	1	04/09/21 19:01	04/08/21	
Manganese, Total	6010C	2.0 U	mg/Kg	2.0	1.5	1	04/09/21 19:01	04/08/21	
Mercury, Total	7471B	0.033 U	mg/Kg	0.033	0.013	1	04/14/21 12:07	04/13/21	
Nickel, Total	6010C	4.0 U	mg/Kg	4.0	0.7	1	04/09/21 19:01	04/08/21	
Potassium, Total	6010C	200 U	mg/Kg	200	50	1	04/09/21 19:01	04/08/21	
Selenium, Total	6010C	1.0 U	mg/Kg	1.0	0.6	1	04/09/21 19:01	04/08/21	
Silver, Total	6010C	1.0 U	mg/Kg	1.0	0.09	1	04/09/21 19:01	04/08/21	
Sodium, Total	6010C	100 U	mg/Kg	100	60	1	04/09/21 19:01	04/08/21	
Thallium, Total	6010C	1.0 U	mg/Kg	1.0	0.7	1	04/09/21 19:01	04/08/21	
Vanadium, Total	6010C	5.0 U	mg/Kg	5.0	0.8	1	04/09/21 19:01	04/08/21	
Zinc, Total	6010C	2.0 U	mg/Kg	2.0	1.4	1	04/09/21 19:01	04/08/21	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	04/05/21
Sample Matrix:	Soil	**Date Received:**	04/05/21
		Date Analyzed:	04/14/21
		Date Extracted:	04/13/21

Duplicate Matrix Spike Summary
Inorganic Parameters

Sample Name:	PMC-040521A-02	**Units:**	mg/Kg
Lab Code:	R2103156-002	**Basis:**	Dry
Analysis Method:	7471B		
Prep Method:	Method		

		Matrix Spike			**Duplicate Matrix Spike**					
		R2103156-002MS			R2103156-002DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Mercury, Total	0.071	0.288	0.209	104	0.295	0.216	104	80-120	3	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1 **Date Analyzed:** 04/09/21 - 04/14/21
Sample Matrix: Soil

Lab Control Sample Summary
Inorganic Parameters

Units:mg/Kg
Basis: Dry

Lab Control Sample
R2103156-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Aluminum, Total	6010C	200	200	100	80-120
Antimony, Total	6010C	48.1	50.0	96	80-120
Arsenic, Total	6010C	4.13	4.0	103	80-120
Barium, Total	6010C	210	200	105	80-120
Beryllium, Total	6010C	5.05	5.00	101	80-120
Cadmium, Total	6010C	5.21	5.00	104	80-120
Calcium, Total	6010C	210	200	105	80-120
Chromium, Total	6010C	21.4	20.0	107	80-120
Cobalt, Total	6010C	52.1	50.0	104	80-120
Copper, Total	6010C	25.8	25.0	103	80-120
Iron, Total	6010C	104	100	104	80-120
Lead, Total	6010C	51.2	50.0	102	80-120
Magnesium, Total	6010C	200	200	101	80-120
Manganese, Total	6010C	51.5	50.0	103	80-120
Mercury, Total	7471B	0.170	0.167	102	80-120
Nickel, Total	6010C	52.2	50.0	104	80-120
Potassium, Total	6010C	1940	2000	97	80-120
Selenium, Total	6010C	87.7	101	87	80-120
Silver, Total	6010C	4.98	5.0	100	80-120
Sodium, Total	6010C	2030	2000	102	80-120
Thallium, Total	6010C	187	200	94	80-120
Vanadium, Total	6010C	51.7	50.0	103	80-120
Zinc, Total	6010C	51.2	50.0	102	80-120

General Chemistry

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	NA
		Date Received:	NA
Sample Matrix:	Soil		
Sample Name:	Method Blank	**Basis:**	Dry, per Method
Lab Code:	R2103156-MB		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	EPA LKahn 7-27-1988	300	U	mg/Kg	300	110	1	04/13/21 14:37	NA	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2103156
Project:	Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1	**Date Collected:**	NA
		Date Received:	NA
Sample Matrix:	Soil		
Sample Name:	Method Blank	**Basis:**	Dry
Lab Code:	R2103156-MB		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chromium, Hexavalent	7199	0.40	U	mg/Kg	0.40	0.05	1	04/19/21 12:43	04/18/21	
Cyanide, Total	9012B	0.30	U	mg/Kg	0.30	0.17	1	04/08/21 23:11	04/07/21	

Client: Ramboll US Corp (Syracuse)
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1
Sample Matrix: Soil

Service Request: R2103156
Date Analyzed: 04/08/21 - 04/19/21

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/Kg
Basis: Dry, per Method

Lab Control Sample
R2103156-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic (TOC)	EPA LKahn 7-27-1988	2170	2000	109	75-127
Chromium, Hexavalent	7199	652	656	99	80-120
Cyanide, Total	9012B	2.93	3.00	98	85-115

Client: Ramboll US Corp (Syracuse) **Service Request:** R2103156
Project: Portfolio Materials Characterization-Clean Soil/Syracuse - LCP-OU-1 **Date Analyzed:** 04/08/21
Sample Matrix: Soil

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/Kg
Basis: Dry

Lab Control Sample
R2103156-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	9012B	17.6	18.0	98	85-115

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Honeywell International Inc.

OBGNYS: Mathews Ave ELT, NY

SGS Job Number: JD31360

Sampling Date: 09/10/21



Report to:

O'Brien & Gere Engineers, Inc

Charles.sharpe@ramboll.com

ATTN: Chuck Sharpe

Total number of pages in report: **28**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Mike Earp
General Manager

Client Service contact: Kristin Degraw 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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Sample Summary

Honeywell International Inc.

OBGNYS: Mathews Ave ELT, NY

Job No: JD31360

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
This report contains results reported as ND = Not detected. The following applies: Organics ND = Not detected above the MDL							
JD31360-1	09/10/21	09:50	MS/SM	09/11/21	AQ	Field Blank Soil	MAE-091021-01
JD31360-2	09/10/21	10:00	MS/SM	09/11/21	SO	Soil	MAE-091021-02
JD31360-2A	09/10/21	10:00	MS/SM	09/11/21	SO	Soil	MAE-091021-02
JD31360-2AD	09/10/21	10:00	MS/SM	09/11/21	SO	Soil Dup/MSD	MAE-091021-05
JD31360-2AS	09/10/21	10:00	MS/SM	09/11/21	SO	Soil Matrix Spike	MAE-091021-04
JD31360-2D	09/10/21	10:00	MS/SM	09/11/21	SO	Soil Dup/MSD	MAE-091021-05
JD31360-2S	09/10/21	10:00	MS/SM	09/11/21	SO	Soil Matrix Spike	MAE-091021-04
JD31360-3	09/10/21	00:00	MS/SM	09/11/21	SO	Soil	MAE-091021-03
JD31360-3A	09/10/21	00:00	MS/SM	09/11/21	SO	Soil	MAE-091021-03
JD31360-4	09/10/21	10:20	MS/SM	09/11/21	SO	Soil	MAE-091021-06
JD31360-4A	09/10/21	10:20	MS/SM	09/11/21	SO	Soil	MAE-091021-06
JD31360-5	09/10/21	10:35	MS/SM	09/11/21	AQ	Equipment Blank	MAE-091021-07

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Summary
(continued)

Honeywell International Inc.

Job No: JD31360

OBGNYS: Mathews Ave ELT, NY

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD31360-5A	09/10/21	10:35	MS/SM	09/11/21	AQ	Equipment Blank	MAE-091021-07

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Honeywell International Inc. **Job No:** JD31360

Site: OBGNYS: Mathews Ave ELT, NY **Report Date** 9/29/2021 4:45:54 PM

On 09/11/2021, 4 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 2.9 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD31360 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Semi-volatiles By Method EPA 537M BY ID

Matrix: AQ **Batch ID:** F:OP87375

- The data for EPA 537M BY ID meets quality control requirements.
- JD31360-1: Analysis performed at SGS Orlando, FL.
- JD31360-5A: Analysis performed at SGS Orlando, FL.
- JD31360-1 for EtFOSAA: Outside control limits. Confirmed by reanalysis. Insufficient sample for re-extraction.

Matrix: SO **Batch ID:** F:OP87352

- The data for EPA 537M BY ID meets quality control requirements.
- JD31360-2A: Analysis performed at SGS Orlando, FL.
- JD31360-3A: Analysis performed at SGS Orlando, FL.
- JD31360-4A: Analysis performed at SGS Orlando, FL.

MS Semi-volatiles By Method SW846 8270E BY SIM

Matrix: AQ **Batch ID:** OP35392A

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Matrix: SO **Batch ID:** OP35397A

- All samples were extracted within the recommended method holding time.
- Sample(s) JD31360-2MS, JD31360-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for 1,4-Dioxane are outside control limits. Outside control limits due to matrix interference.

General Chemistry By Method SM2540 G 18TH ED MOD

Matrix: SO **Batch ID:** GN21747

- Sample(s) JD31360-2DUP were used as the QC samples for Solids, Percent.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: SGS Dayton, NJ **Job No:** JD31360

Site: HWINJM: OBGNYS:Mathews Ave ELT **Report Date:** 9/29/2021 2:31:10

On 09/14/2021, 4 Sample(s) were received at SGS North America Inc. at a maximum corrected temperature of 3.8 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD31360 was Assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Semi-volatiles By Method EPA 537M BY ID

Matrix: AQ **Batch ID:** OP87375

Sample(s) FA88919-22MS, FA88919-22MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Perfluorodecanesulfonic acid, Perfluorotridecanoic acid are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Perfluorotridecanoic acid are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for Perfluorodecanesulfonic acid, Perfluorotridecanoic acid are outside control limits for sample OP87375-MSD. Probable cause is due to sample non-homogeneity.

JD31360-1: Confirmation run.

JD31360-1 for MeFOSAA: Outside control limits. Confirmed by reanalysis. Insufficient sample for re-extraction.

JD31360-1 for EtFOSAA: Outside control limits. Confirmed by reanalysis. Insufficient sample for re-extraction.

JD31360-1 for Perfluorododecanoic acid: Outside control limits. Confirmed by reanalysis. Insufficient sample for re-extraction.

JD31360-1 for Perfluorotetradecanoic acid: Outside control limits. Confirmed by reanalysis. Insufficient sample for re-extraction.

JD31360-1 for Perfluorotridecanoic acid: Outside control limits. Confirmed by reanalysis. Insufficient sample for re-extraction.

JD31360-1 for Perfluoroundecanoic acid: Outside control limits. Confirmed by reanalysis. Insufficient sample for re-extraction.

Matrix: SO **Batch ID:** OP87352

Sample(s) JD31360-2AMS, JD31360-2AMSD were used as the QC samples indicated.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Kim Benham, Client Services *(Signature on File)*

Summary of Hits

Job Number: JD31360
Account: Honeywell International Inc.
Project: OBGNYS: Mathews Ave ELT, NY
Collected: 09/10/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD31360-1	**MAE-091021-01**					
Perfluoroundecanoic acid [a]		0.99 J	1.8	0.89	ng/l	EPA 537M BY ID
Perfluorododecanoic acid [a]		1.3 J	1.8	0.89	ng/l	EPA 537M BY ID
Perfluorotridecanoic acid [a]		1.3 J	1.8	0.89	ng/l	EPA 537M BY ID
Perfluorotetradecanoic acid [a]		1.4 J	1.8	0.89	ng/l	EPA 537M BY ID
MeFOSAA [a]		1.9 J	3.6	1.8	ng/l	EPA 537M BY ID
EtFOSAA [a]		2.7 J	3.6	1.8	ng/l	EPA 537M BY ID
JD31360-2	**MAE-091021-02**					
No hits reported in this sample.						
JD31360-2A	**MAE-091021-02**					
No hits reported in this sample.						
JD31360-3	**MAE-091021-03**					
No hits reported in this sample.						
JD31360-3A	**MAE-091021-03**					
No hits reported in this sample.						
JD31360-4	**MAE-091021-06**					
No hits reported in this sample.						
JD31360-4A	**MAE-091021-06**					
No hits reported in this sample.						
JD31360-5	**MAE-091021-07**					
No hits reported in this sample.						
JD31360-5A	**MAE-091021-07**					
No hits reported in this sample.						

(a) Analysis performed at SGS Orlando, FL. Outside control limits. Confirmed by reanalysis. Insufficient sample for re-extraction.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MAE-091021-01
Lab Sample ID: JD31360-1
Matrix: AQ - Field Blank Soil
Method: EPA 537M BY ID EPA 537 MOD
Project: OBGNYS: Mathews Ave ELT, NY

Date Sampled: 09/10/21
Date Received: 09/11/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2Q76784.D	1	09/25/21 09:41	AFL	09/20/21 10:00	F:OP87375	F:S2Q1089
Run #2 [b]	2Q76886.D	1	09/26/21 14:12	AFL	09/20/21 10:00	F:OP87375	F:S2Q1089

	Initial Volume	Final Volume
Run #1	280 ml	1.0 ml
Run #2	280 ml	1.0 ml

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	ND	3.6	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	ND	1.8	0.89	ng/l	
307-24-4	Perfluorohexanoic acid	ND	1.8	0.89	ng/l	
375-85-9	Perfluoroheptanoic acid	ND	1.8	0.89	ng/l	
335-67-1	Perfluorooctanoic acid	ND	1.8	0.89	ng/l	
375-95-1	Perfluorononanoic acid	ND	1.8	0.89	ng/l	
335-76-2	Perfluorodecanoic acid	ND	1.8	0.89	ng/l	
2058-94-8	Perfluoroundecanoic acid [c]	0.99	1.8	0.89	ng/l	J
307-55-1	Perfluorododecanoic acid [c]	1.3	1.8	0.89	ng/l	J
72629-94-8	Perfluorotridecanoic acid [c]	1.3	1.8	0.89	ng/l	J
376-06-7	Perfluorotetradecanoic acid [c]	1.4	1.8	0.89	ng/l	J
PERFLUOROALKYLSULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	ND	1.8	0.89	ng/l	
355-46-4	Perfluorohexanesulfonic acid	ND	1.8	0.89	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	1.8	0.89	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	1.8	0.89	ng/l	
335-77-3	Perfluorodecanesulfonic acid	ND	1.8	0.89	ng/l	
PERFLUOROOCTANESULFONAMIDES						
754-91-6	PFOSA	ND	3.6	1.8	ng/l	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA [c]	1.9	3.6	1.8	ng/l	J
2991-50-6	EtFOSAA [c]	2.7	3.6	1.8	ng/l	J
FLUOROTELOMER SULFONATES						
27619-97-2	6:2 Fluorotelomer sulfonate	ND	7.1	1.8	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	7.1	1.8	ng/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MAE-091021-01		
Lab Sample ID:	JD31360-1	**Date Sampled:**	09/10/21
Matrix:	AQ - Field Blank Soil	**Date Received:**	09/11/21
Method:	EPA 537M BY ID EPA 537 MOD	**Percent Solids:**	n/a
Project:	OBGNYS: Mathews Ave ELT, NY		

PFAS List

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	105%	109%	35-135%
	13C5-PFPeA	101%	104%	50-150%
	13C5-PFHxA	97%	102%	50-150%
	13C4-PFHpA	95%	101%	50-150%
	13C8-PFOA	94%	97%	50-150%
	13C9-PFNA	93%	98%	50-150%
	13C6-PFDA	93%	99%	50-150%
	13C7-PFUnDA	85%	89%	40-140%
	13C2-PFDoDA	83%	85%	40-140%
	13C2-PFTeDA	74%	73%	30-130%
	13C3-PFBS	100%	103%	50-150%
	13C3-PFHxS	94%	98%	50-150%
	13C8-PFOS	88%	91%	50-150%
	13C8-FOSA	84%	87%	30-130%
	d3-MeFOSAA	102%	108%	40-140%
	d5-EtFOSAA	106%	108%	40-140%
	13C2-6:2FTS	76%	80%	50-150%
	13C2-8:2FTS	86%	90%	50-150%

(a) Analysis performed at SGS Orlando, FL.
(b) Confirmation run. Analysis performed at SGS Orlando, FL.
(c) Outside control limits. Confirmed by reanalysis. Insufficient sample for re-extraction.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MAE-091021-02		
Lab Sample ID:	JD31360-2	**Date Sampled:**	09/10/21
Matrix:	SO - Soil	**Date Received:**	09/11/21
Method:	SW846 8270E BY SIM SW846 3546	**Percent Solids:**	76.4
Project:	OBGNYS: Mathews Ave ELT, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M102515.D	1	09/17/21 19:21	KLS	09/15/21 12:30	OP35397A	E4M4781
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	4.3	2.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	67%		39-90%
321-60-8	2-Fluorobiphenyl	58%		35-84%
1718-51-0	Terphenyl-d14	66%		42-95%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MAE-091021-02		
Lab Sample ID:	JD31360-2A	**Date Sampled:**	09/10/21
Matrix:	SO - Soil	**Date Received:**	09/11/21
Method:	EPA 537M BY ID IN HOUSE	**Percent Solids:**	76.4
Project:	OBGNYS: Mathews Ave ELT, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3Q45578.D	1	09/25/21 02:26	AFL	09/19/21 06:00	F:OP87352	F:S3Q657
Run #2							

	Initial Weight	Final Volume
Run #1	2.07 g	1.0 ml
Run #2		

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	ND	1.3	0.48	ug/kg	
2706-90-3	Perfluoropentanoic acid	ND	0.63	0.32	ug/kg	
307-24-4	Perfluorohexanoic acid	ND	0.63	0.32	ug/kg	
375-85-9	Perfluoroheptanoic acid	ND	0.63	0.32	ug/kg	
335-67-1	Perfluorooctanoic acid	ND	0.63	0.32	ug/kg	
375-95-1	Perfluorononanoic acid	ND	0.63	0.32	ug/kg	
335-76-2	Perfluorodecanoic acid	ND	0.63	0.32	ug/kg	
2058-94-8	Perfluoroundecanoic acid	ND	0.63	0.32	ug/kg	
307-55-1	Perfluorododecanoic acid	ND	0.63	0.32	ug/kg	
72629-94-8	Perfluorotridecanoic acid	ND	0.63	0.34	ug/kg	
376-06-7	Perfluorotetradecanoic acid	ND	0.63	0.32	ug/kg	
PERFLUOROALKYLSULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	ND	0.63	0.32	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	ND	0.63	0.32	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.63	0.32	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.63	0.32	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	ND	0.63	0.32	ug/kg	
PERFLUOROOCTANESULFONAMIDES						
754-91-6	PFOSA	ND	0.63	0.32	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	1.3	0.63	ug/kg	
2991-50-6	EtFOSAA	ND	1.3	0.63	ug/kg	
FLUOROTELOMER SULFONATES						
27619-97-2	6:2 Fluorotelomer sulfonate	ND	1.3	0.32	ug/kg	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	1.3	0.32	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MAE-091021-02		
Lab Sample ID:	JD31360-2A	**Date Sampled:**	09/10/21
Matrix:	SO - Soil	**Date Received:**	09/11/21
Method:	EPA 537M BY ID IN HOUSE	**Percent Solids:**	76.4
Project:	OBGNYS: Mathews Ave ELT, NY		

PFAS List

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	74%		40-140%
	13C5-PFPeA	80%		50-150%
	13C5-PFHxA	82%		50-150%
	13C4-PFHpA	77%		50-150%
	13C8-PFOA	78%		50-150%
	13C9-PFNA	85%		50-150%
	13C6-PFDA	92%		50-150%
	13C7-PFUnDA	89%		40-140%
	13C2-PFDoDA	89%		40-140%
	13C2-PFTeDA	81%		30-130%
	13C3-PFBS	94%		50-150%
	13C3-PFHxS	80%		50-150%
	13C8-PFOS	89%		50-150%
	13C8-FOSA	80%		30-130%
	d3-MeFOSAA	76%		40-140%
	d5-EtFOSAA	74%		40-140%
	13C2-6:2FTS	77%		50-150%
	13C2-8:2FTS	88%		50-150%

(a) Analysis performed at SGS Orlando, FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MAE-091021-03
Lab Sample ID: JD31360-3
Matrix: SO - Soil
Method: SW846 8270E BY SIM SW846 3546
Project: OBGNYS: Mathews Ave ELT, NY

Date Sampled: 09/10/21
Date Received: 09/11/21
Percent Solids: 81.9

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M102516.D	1	09/17/21 19:42	KLS	09/15/21 12:30	OP35397A	E4M4781
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	4.1	2.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	70%		39-90%
321-60-8	2-Fluorobiphenyl	61%		35-84%
1718-51-0	Terphenyl-d14	68%		42-95%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MAE-091021-03		
Lab Sample ID:	JD31360-3A	**Date Sampled:**	09/10/21
Matrix:	SO - Soil	**Date Received:**	09/11/21
Method:	EPA 537M BY ID IN HOUSE	**Percent Solids:**	81.9
Project:	OBGNYS: Mathews Ave ELT, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3Q45582.D	1	09/25/21 03:32	AFL	09/19/21 06:00	F:OP87352	F:S3Q657
Run #2							

	Initial Weight	Final Volume
Run #1	1.96 g	1.0 ml
Run #2		

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	ND	1.2	0.47	ug/kg	
2706-90-3	Perfluoropentanoic acid	ND	0.62	0.31	ug/kg	
307-24-4	Perfluorohexanoic acid	ND	0.62	0.31	ug/kg	
375-85-9	Perfluoroheptanoic acid	ND	0.62	0.31	ug/kg	
335-67-1	Perfluorooctanoic acid	ND	0.62	0.31	ug/kg	
375-95-1	Perfluorononanoic acid	ND	0.62	0.31	ug/kg	
335-76-2	Perfluorodecanoic acid	ND	0.62	0.31	ug/kg	
2058-94-8	Perfluoroundecanoic acid	ND	0.62	0.31	ug/kg	
307-55-1	Perfluorododecanoic acid	ND	0.62	0.31	ug/kg	
72629-94-8	Perfluorotridecanoic acid	ND	0.62	0.33	ug/kg	
376-06-7	Perfluorotetradecanoic acid	ND	0.62	0.31	ug/kg	
PERFLUOROALKYLSULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	ND	0.62	0.31	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	ND	0.62	0.31	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.62	0.31	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.62	0.31	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	ND	0.62	0.31	ug/kg	
PERFLUOROOCTANESULFONAMIDES						
754-91-6	PFOSA	ND	0.62	0.31	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	1.2	0.62	ug/kg	
2991-50-6	EtFOSAA	ND	1.2	0.62	ug/kg	
FLUOROTELOMER SULFONATES						
27619-97-2	6:2 Fluorotelomer sulfonate	ND	1.2	0.31	ug/kg	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	1.2	0.31	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MAE-091021-03		
Lab Sample ID:	JD31360-3A	**Date Sampled:**	09/10/21
Matrix:	SO - Soil	**Date Received:**	09/11/21
Method:	EPA 537M BY ID IN HOUSE	**Percent Solids:**	81.9
Project:	OBGNYS: Mathews Ave ELT, NY		

PFAS List

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	70%		40-140%
	13C5-PFPeA	74%		50-150%
	13C5-PFHxA	79%		50-150%
	13C4-PFHpA	75%		50-150%
	13C8-PFOA	73%		50-150%
	13C9-PFNA	81%		50-150%
	13C6-PFDA	88%		50-150%
	13C7-PFUnDA	87%		40-140%
	13C2-PFDoDA	85%		40-140%
	13C2-PFTeDA	81%		30-130%
	13C3-PFBS	96%		50-150%
	13C3-PFHxS	85%		50-150%
	13C8-PFOS	91%		50-150%
	13C8-FOSA	78%		30-130%
	d3-MeFOSAA	68%		40-140%
	d5-EtFOSAA	70%		40-140%
	13C2-6:2FTS	80%		50-150%
	13C2-8:2FTS	86%		50-150%

(a) Analysis performed at SGS Orlando, FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MAE-091021-06
Lab Sample ID: JD31360-4
Matrix: SO - Soil
Method: SW846 8270E BY SIM SW846 3546
Project: OBGNYS: Mathews Ave ELT, NY

Date Sampled: 09/10/21
Date Received: 09/11/21
Percent Solids: 86.6

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M102517.D	1	09/17/21 20:04	KLS	09/15/21 12:30	OP35397A	E4M4781
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	3.8	1.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	48%		39-90%
321-60-8	2-Fluorobiphenyl	43%		35-84%
1718-51-0	Terphenyl-d14	49%		42-95%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MAE-091021-06		
Lab Sample ID:	JD31360-4A	**Date Sampled:**	09/10/21
Matrix:	SO - Soil	**Date Received:**	09/11/21
Method:	EPA 537M BY ID IN HOUSE	**Percent Solids:**	86.6
Project:	OBGNYS: Mathews Ave ELT, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3Q45741.D	1	09/27/21 20:42	AFL	09/19/21 06:00	F:OP87352	F:S3Q658
Run #2							

	Initial Weight	Final Volume
Run #1	2.09 g	1.0 ml
Run #2		

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	ND	1.1	0.42	ug/kg	
2706-90-3	Perfluoropentanoic acid	ND	0.55	0.28	ug/kg	
307-24-4	Perfluorohexanoic acid	ND	0.55	0.28	ug/kg	
375-85-9	Perfluoroheptanoic acid	ND	0.55	0.28	ug/kg	
335-67-1	Perfluorooctanoic acid	ND	0.55	0.28	ug/kg	
375-95-1	Perfluorononanoic acid	ND	0.55	0.28	ug/kg	
335-76-2	Perfluorodecanoic acid	ND	0.55	0.28	ug/kg	
2058-94-8	Perfluoroundecanoic acid	ND	0.55	0.28	ug/kg	
307-55-1	Perfluorododecanoic acid	ND	0.55	0.28	ug/kg	
72629-94-8	Perfluorotridecanoic acid	ND	0.55	0.29	ug/kg	
376-06-7	Perfluorotetradecanoic acid	ND	0.55	0.28	ug/kg	
PERFLUOROALKYLSULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	ND	0.55	0.28	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	ND	0.55	0.28	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.55	0.28	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.55	0.28	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	ND	0.55	0.28	ug/kg	
PERFLUOROOCTANESULFONAMIDES						
754-91-6	PFOSA	ND	0.55	0.28	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	1.1	0.55	ug/kg	
2991-50-6	EtFOSAA	ND	1.1	0.55	ug/kg	
FLUOROTELOMER SULFONATES						
27619-97-2	6:2 Fluorotelomer sulfonate	ND	1.1	0.28	ug/kg	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	1.1	0.28	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MAE-091021-06		
Lab Sample ID:	JD31360-4A	**Date Sampled:**	09/10/21
Matrix:	SO - Soil	**Date Received:**	09/11/21
Method:	EPA 537M BY ID IN HOUSE	**Percent Solids:**	86.6
Project:	OBGNYS: Mathews Ave ELT, NY		

PFAS List

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	78%		40-140%
	13C5-PFPeA	77%		50-150%
	13C5-PFHxA	81%		50-150%
	13C4-PFHpA	83%		50-150%
	13C8-PFOA	84%		50-150%
	13C9-PFNA	86%		50-150%
	13C6-PFDA	87%		50-150%
	13C7-PFUnDA	89%		40-140%
	13C2-PFDoDA	88%		40-140%
	13C2-PFTeDA	80%		30-130%
	13C3-PFBS	86%		50-150%
	13C3-PFHxS	87%		50-150%
	13C8-PFOS	87%		50-150%
	13C8-FOSA	80%		30-130%
	d3-MeFOSAA	76%		40-140%
	d5-EtFOSAA	79%		40-140%
	13C2-6:2FTS	83%		50-150%
	13C2-8:2FTS	88%		50-150%

(a) Analysis performed at SGS Orlando, FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MAE-091021-07		
Lab Sample ID:	JD31360-5	**Date Sampled:**	09/10/21
Matrix:	AQ - Equipment Blank	**Date Received:**	09/11/21
Method:	SW846 8270E BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	OBGNYS: Mathews Ave ELT, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M102468.D	1	09/17/21 00:46	CS	09/16/21 08:40	OP35392A	E4M4780
Run #2							

	Initial Volume	Final Volume
Run #1	1010 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.099	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	75%		21-121%
321-60-8	2-Fluorobiphenyl	64%		27-107%
1718-51-0	Terphenyl-d14	72%		25-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MAE-091021-07		
Lab Sample ID:	JD31360-5A	**Date Sampled:**	09/10/21
Matrix:	AQ - Equipment Blank	**Date Received:**	09/11/21
Method:	EPA 537M BY ID EPA 537 MOD	**Percent Solids:**	n/a
Project:	OBGNYS: Mathews Ave ELT, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2Q76785.D	1	09/25/21 09:57	AFL	09/20/21 10:00	F:OP87375	F:S2Q1089
Run #2							

	Initial Volume	Final Volume
Run #1	280 ml	1.0 ml
Run #2		

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	ND	3.6	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	ND	1.8	0.89	ng/l	
307-24-4	Perfluorohexanoic acid	ND	1.8	0.89	ng/l	
375-85-9	Perfluoroheptanoic acid	ND	1.8	0.89	ng/l	
335-67-1	Perfluorooctanoic acid	ND	1.8	0.89	ng/l	
375-95-1	Perfluorononanoic acid	ND	1.8	0.89	ng/l	
335-76-2	Perfluorodecanoic acid	ND	1.8	0.89	ng/l	
2058-94-8	Perfluoroundecanoic acid	ND	1.8	0.89	ng/l	
307-55-1	Perfluorododecanoic acid	ND	1.8	0.89	ng/l	
72629-94-8	Perfluorotridecanoic acid	ND	1.8	0.89	ng/l	
376-06-7	Perfluorotetradecanoic acid	ND	1.8	0.89	ng/l	
PERFLUOROALKYLSULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	ND	1.8	0.89	ng/l	
355-46-4	Perfluorohexanesulfonic acid	ND	1.8	0.89	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	1.8	0.89	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	1.8	0.89	ng/l	
335-77-3	Perfluorodecanesulfonic acid	ND	1.8	0.89	ng/l	
PERFLUOROOCTANESULFONAMIDES						
754-91-6	PFOSA	ND	3.6	1.8	ng/l	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	3.6	1.8	ng/l	
2991-50-6	EtFOSAA	ND	3.6	1.8	ng/l	
FLUOROTELOMER SULFONATES						
27619-97-2	6:2 Fluorotelomer sulfonate	ND	7.1	1.8	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	7.1	1.8	ng/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MAE-091021-07		
Lab Sample ID:	JD31360-5A	**Date Sampled:**	09/10/21
Matrix:	AQ - Equipment Blank	**Date Received:**	09/11/21
Method:	EPA 537M BY ID EPA 537 MOD	**Percent Solids:**	n/a
Project:	OBGNYS: Mathews Ave ELT, NY		

PFAS List

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	99%		35-135%
	13C5-PFPeA	95%		50-150%
	13C5-PFHxA	93%		50-150%
	13C4-PFHpA	91%		50-150%
	13C8-PFOA	86%		50-150%
	13C9-PFNA	91%		50-150%
	13C6-PFDA	97%		50-150%
	13C7-PFUnDA	86%		40-140%
	13C2-PFDoDA	81%		40-140%
	13C2-PFTeDA	69%		30-130%
	13C3-PFBS	95%		50-150%
	13C3-PFHxS	90%		50-150%
	13C8-PFOS	85%		50-150%
	13C8-FOSA	81%		30-130%
	d3-MeFOSAA	107%		40-140%
	d5-EtFOSAA	108%		40-140%
	13C2-6:2FTS	69%		50-150%
	13C2-8:2FTS	91%		50-150%

(a) Analysis performed at SGS Orlando, FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Chain of Custody (SGS Orlando, FL)

SO
FB/EB

7747 7109 6915
SW-09721-163

JD 31360
JD 31359

SGS
2235 US Highway 130
Dayton, NJ 08810
(P) (732) 329 0200

Chain Of Custody/Analysis Request
Project Name: Mathews Ave ELT - Clean Soil Sampling
Lab Project Name: OBGNYS: Mathews Ave ELT - Clean Soil Sampling

AESI Ref: 38609
COC #: MAE-
Lab Use Only
Lab Proj #
Lab ID

Project Manager & Confidential
EDD To: Charles Sharpe, Chris Hoy, Ronnie Held
Sampler: MS, SM, JL
Sampling Company: Ramboll
P O #

Facility Name: Syracuse - LCP OU-1
Location of Site: Syracuse, NY
Site Code: R30925

Client Contact: (name, co., address)
Charles.Sharpe@Ramboll.com
Ramboll
333 W Washington Street
Syracuse, New York 13202

Hardcopy Report To: Hardcopy only if requested
Invoice To: Charles Sharpe

Analysis Turnaround Time:
Standard - Y
Rush Charges Authorized for - N
Turn Around Time Required - 2-week

Job No.

	Sample Identification	Depth (ft)	Depth (ft)	Sys_Sample_Code	Sample Date	Sample Time	Matrix Code	Medium Code	Sample Type	# of Cont.	Composite (Yes/No)	Filter Type (Yes=Filtered, No=Unfiltered)	Preservative: Modified Method 537	Preservative: SW8270SIM [1,4-Dioxane]	Preservative: SW1312 SPLP/Modified Method 537	Lab Sample Number
	Sys_Loc_Code										Units					
1	MAELT-FB-090921	---	---	MAE-091021-01	9/10/2021	950	WQ	Water	FB	2	No	No	X			1 E10971
2	MAELT-HENCLETS-05	---	---	MAE-091021-02	9/10/2021	1000	Soil	Soil	Reg	2	No	No	X	X	X	2 E25
3	MAELT-HENCLETS-05	---	---	MAE-091021-03	9/10/2021	--	SQ	Soil	FD	2	No	No	X	X	X	3 3 SUB
4	MAELT-HENCLETS-05	---	---	MAE-091021-04	9/10/2021	1000	SQ	Soil	MS	2	No	No	X	X	X	4
5	MAELT-HENCLETS-05	---	---	MAE-091021-05	9/10/2021	1000	SQ	Soil	MSD	2	No	No	X	X	X	2 5
6	MAELT-HENCLETS-06	---	---	MAE-091021-06	9/10/2021	1020	Soil	Soil	Reg	2	No	No	X	X	X	4 6
	MAELT-EB-091021	---	---	MAE-091021-07	9/10/2021	1030	WQ	Water	EB	4	No	No	X	X		5 7

Special Instructions: Hold SPLP until directed by Project Team

FOR INTERNAL USE ONLY:
TS = Top Soil ; HENCLE = Hencle Blvd & Route 48 Source
MAELT/MAE= Mathews Ave ELT

Relinquished by: Megan Steward	Company: Ramboll	Received by:	Company: 9-10-21	Condition:	Custody Seals Intact:
Megan Steward	Date/Time: 9/10/21 1450		Date/Time: 14:50	Cooler Temp.:	
Relinquished by: 9/10/21 15:50	Company:	Received by: FEDEX	Company:	Condition:	Custody Seals Intact:

3.8°C IP IR-5

Relinquished: FEDEX 9/11/21 0945 | Recd: Jeemit Patel

FEDEX # 7747 7109 6915

SGS Sample Receipt Summary

Job Number: JD31360 **Client:** O'BRIEN & GERE ENGINEERS, INC. **Project:** OBGNYS:MATHEWS AVE ELT

Date / Time Received: 9/11/2021 9:45:00 AM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (3.8);

Cooler Temps (Corrected) °C: Cooler 1: (2.9);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

CHAIN OF CUSTODY

SGS

2235 Route 130, Dayton, NJ 08810
TEL: 732-329-0200 FAX: 732-329-3499/3480

FED-EX Tracking #:
Bottle Order Control #:
SGS Quote #:
SGS Job #: JD31360

Client / Reporting Information

Company Name: SGS North America Inc.
Street Address: 2235 Route 130
City: Dayton State: NJ Zip: 08810
Project Contact: Shalini.Williams@sgs.com E-mail:
Phone #: 732-329-0200 Fax #:
Sampler(s) Name(s): MS/SM Phone:

Project Information

Project Name: OBGNYS:Mathews Ave ELT
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	LCID537NY21	LCID537NY21_LCID537SPLPXH_SPLPE_PFAS	LAB USE ONLY
1	MAE-091021-01		9/10/21	9:50:00 AM	MS/SM	AQ										X		
2A	MAE-091021-02		9/10/21	10:00:00 AM	MS/SM	SO											X	
2AD	MAE-091021-005		9/10/21	10:00:00 AM	MS/SM	SO											X	
2AS	MAE-091021-04		9/10/21	10:00:00 AM	MS/SM	SO											X	
3A	MAE-091021-03		9/10/21	12:00:00 AM	MS/SM	SO											X	
4A	MAE-091021-06		9/10/21	10:20:00 AM	MS/SM	SO											X	
5A	MAE-091021-07		9/10/21	10:35:00 AM	MS/SM	AQ										X		

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Turnaround Time (Business days)

Approved By (SGS PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other 14

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [X] Other FULT1

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

INITIAL ASSESSMENT

LABEL VERIFICATION

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: 1	Date Time: 9/13/21 19:00	Received By: 1 FedEx	Relinquished By: 2 FX	Date Time: 9/14/21 1000	Received By: 2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # ☐ Intact ☐ Not Intact	Preserved where applicable ☐	On Ice ☐ Cooler Temp 3.8 IR-4

JD31360: Chain of Custody
Page 1 of 2
SGS Orlando, FL

SGS Sample Receipt Summary

Job Number: JD31360 **Client:** SGS NJ **Project:** OBGNYS:MATTHEWS

Date / Time Received: 9/14/2021 10:00:00 AM **Delivery Method:** FX **Airbill #'s:** 9251 0906 2500

Therm ID: IR 1; **Therm CF:** 0.2; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.6);

Cooler Temps (Corrected) °C: Cooler 1: (3.8);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: PETERH Date: 9/14/2021 10:00:00 A Reviewer: _____ Date: _____

October 01, 2021 Service Request No:R2109364

Reagan Cuddy
O'Brien & Gere Engineers, Incorporated
333 West Washington Street
Syracuse, NY 13221

Laboratory Results for: Mathews Ave ELT - Clean Soil Sampling

Dear Reagan,

Enclosed are the results of the sample(s) submitted to our laboratory September 10, 2021
For your reference, these analyses have been assigned our service request number **R2109364.**

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

CC: Chuck Sharpe

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp.
dba ALS Environmental

Narrative Documents

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling **Date Received:** 09/10/2021
Sample Matrix: Soil, Water

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Five soil, water samples were received for analysis at ALS Environmental on 09/10/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270D, 09/17/2021: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8270D, 09/17/2021: The lower control limit for the spike recovery of the Laboratory Control Sample (LCS) was exceeded for one or more analyte. There were no detections of the analyte(s) in the associated field samples. The LCSD was within limits for all analytes. The analytes affected are flagged in the LCS Summary.

Method 8270D: The upper control limit was exceeded for one or more surrogates in the Method Blank. The elevated recovery equates to a high bias. Since no target analytes were detected in the sample(s), the quality of the sample data is not significantly affected. No further corrective action was appropriate.

Semivoa GC:

Method 8081B, 09/16/2021: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
Method 8151A, 09/23/2021: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

Method 8260C, 09/15/2021: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 09/15/2021: The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Approved by _____ Date 10/01/2021

Method 8260C, 09/15/2021: The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Approved by _____ Date 10/01/2021

SAMPLE DETECTION SUMMARY

CLIENT ID: MAE-091021A-01			Lab ID: R2109364-001			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Total Solids	86.1				Percent	ALS SOP
Carbon Disulfide	0.17	J	0.14	2.3	ug/Kg	8260C

CLIENT ID: MAE-091021A-02			Lab ID: R2109364-002			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Chromium, Trivalent	9.0			1.0	mg/Kg	Calculation
Cyanide, Total	0.18	J	0.17	0.28	mg/Kg	9012B
pH	7.11				pH Units	9045D
Total Solids	84.1				Percent	ALS SOP
Carbon, Total Organic (TOC)	10800		500	1100	mg/Kg	EPA LKahn 7-27-1988
Aluminum, Total	7510		14	23	mg/Kg	6010C
Arsenic, Total	6.1		0.9	1.1	mg/Kg	6010C
Barium, Total	59.6		1.8	2.3	mg/Kg	6010C
Beryllium, Total	0.38		0.04	0.34	mg/Kg	6010C
Cadmium, Total	0.37	J	0.10	0.57	mg/Kg	6010C
Calcium, Total	3150		40	110	mg/Kg	6010C
Chromium, Total	9.0		0.5	1.1	mg/Kg	6010C
Cobalt, Total	5.4	J	0.10	5.7	mg/Kg	6010C
Copper, Total	14.4		0.2	2.3	mg/Kg	6010C
Iron, Total	18400		150	230	mg/Kg	6010C
Lead, Total	10.4		0.5	5.7	mg/Kg	6010C
Magnesium, Total	1540		20	110	mg/Kg	6010C
Manganese, Total	639		0.2	2.3	mg/Kg	6010C
Mercury, Total	0.051		0.013	0.023	mg/Kg	7471B
Nickel, Total	8.7		0.8	4.6	mg/Kg	6010C
Potassium, Total	830		60	230	mg/Kg	6010C
Sodium, Total	40	J	30	110	mg/Kg	6010C
Vanadium, Total	15.8		0.9	5.7	mg/Kg	6010C
Zinc, Total	33.8		1.7	2.3	mg/Kg	6010C

CLIENT ID: MAE-091021A-03			Lab ID: R2109364-003			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Total Solids	88.6				Percent	ALS SOP

CLIENT ID: MAE-091021A-04			Lab ID: R2109364-004			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Chromium, Trivalent	9.5			1.0	mg/Kg	Calculation
pH	6.24				pH Units	9045D
Total Solids	87.9				Percent	ALS SOP
Carbon, Total Organic (TOC)	10000		600	1600	mg/Kg	EPA LKahn 7-27-1988
Aluminum, Total	8110		14	23	mg/Kg	6010C
Arsenic, Total	5.8		0.8	1.1	mg/Kg	6010C
Barium, Total	66.3		1.8	2.3	mg/Kg	6010C

SAMPLE DETECTION SUMMARY

CLIENT ID: MAE-091021A-04			Lab ID: R2109364-004			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Beryllium, Total	0.41		0.04	0.34	mg/Kg	6010C
Cadmium, Total	0.35	J	0.10	0.57	mg/Kg	6010C
Calcium, Total	2250		40	110	mg/Kg	6010C
Chromium, Total	9.5		0.4	1.1	mg/Kg	6010C
Cobalt, Total	5.4	J	0.10	5.7	mg/Kg	6010C
Copper, Total	14.7		0.2	2.3	mg/Kg	6010C
Iron, Total	19000		150	230	mg/Kg	6010C
Lead, Total	12.8		0.5	5.7	mg/Kg	6010C
Magnesium, Total	1530		20	110	mg/Kg	6010C
Manganese, Total	739		0.2	2.3	mg/Kg	6010C
Mercury, Total	0.052		0.013	0.022	mg/Kg	7471B
Nickel, Total	9.1		0.8	4.6	mg/Kg	6010C
Potassium, Total	910		60	230	mg/Kg	6010C
Sodium, Total	40	J	30	110	mg/Kg	6010C
Vanadium, Total	16.3		0.9	5.7	mg/Kg	6010C
Zinc, Total	33.6		1.6	2.3	mg/Kg	6010C
Pentachlorophenol (PCP)	14		7.2	11	ug/Kg	8151A

Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: Ramboll US Corp (Syracuse) **Service Request:**R2109364
Project: Mathews Ave ELT - Clean Soil Sampling

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R2109364-001	MAE-091021A-01	9/10/2021	1100
R2109364-002	MAE-091021A-02	9/10/2021	1100
R2109364-003	MAE-091021A-03	9/10/2021	1110
R2109364-004	MAE-091021A-04	9/10/2021	1110
R2109364-005	MAE-091021A-05	9/10/2021	

ALS Environmental
1565 Jefferson Road, Building 300, Suite 360
Rochester, New York 14623
(P) (585) 288-5380

Chain Of Custody/Analysis Request

Project Name: Mathews Ave ELT - Clean Soil Sampling
Lab Project Name: OBGNYS: Mathews ELT - Clean Soil Sampling

AESI Ref: 38609
COC #: MAE
Lab Use Only
Lab Proj #
Lab ID

Privileged & Confidential
EDD To: Charles Sharpe, Chris Hoy, Ronnie Held
Sampler: MS, SM, JL
Sampling Company: Ramboll
PO #: 1950003201

Facility Name: Syracuse - LCP OU-1
Location of Site: Syracuse, NY
Site Code: R30925
Preservative

Client Contact: (name, co., address)
Charles.Sharpe@Ramboll.com
Ramboll
333 W Washington Street
Syracuse, New York 13202

Hardcopy Report To: Hardcopy report only if requested
Invoice To: Charles Sharpe

Analysis Turnaround Time:
Standard - Y
Rush Charges Authorized for - N
Turn Around Time Required - 2-week

Job No.

	Sample Identification	Start Depth (ft)	End Depth (ft)	Sys_Sample_Code	Sample Date	Sample Time	Matrix Code	Medium Code	Sample Type	# of Cont.	Composite (Yes/No)	Filter Type (Yes=Filtered, No=Unfiltered)	TCLP VOCs	TCLP SVOCs	TCLP Pesticides and Herbicides	TCLP Metals (including 7470 Hg)	Reactive Sulfide and Reactive Cyanide/Ignitability/ flash point	pH/Corrosivity	Part 375 VOCs	Part 375 SVOCs	Part 375 Pesticides	Part 375 Herbicides (2,4,5-TP)	Part 375 PCBs	Part 375 Metals including Hexavalent Chromium and Mercury	TOC	Total Cyanide	Total Phosphorous	Lab Sample Number
	Sys_Loc_Code										Units																	
1	MAELT-HENCLETS-05	—	—	MAE-091021A-01	9/10/2021	1100	Soil	Soil	Reg	4	No	No							X									
2	MAELT-HENCLETS-05	—	—	MAE-091021A-02	9/10/2021	1100	Soil	Soil	Reg	5	Yes	No						X		X	X	X	X	X	X	X	X	
3	MAELT-HENCLETS-06	—	—	MAE-091021A-03	9/10/2021	1110	Soil	Soil	Reg	4	No	No							X									
4	MAELT-HENCLETS-06	—	—	MAE-091021A-04	9/10/2021	1110	Soil	Soil	Reg	5	Yes	No						X		X	X	X	X	X	X	X	X	
5	MAELT-TB-090921	—	—	MAE-091021A-05	9/10/2021	—	WQ	Water	TB	3	No	No							X									
6																												
7																												
8																												
9																												
10																												
11																												
12																												

R2109364 5
O'Brien & Gere Engineers, Incorporated
Mathews Ave ELT - Clean Soil Sampling

Special Instructions:

FOR INTERNAL USE ONLY:
TS = Top Soil; HENCLE = Hencle Blvd and Route 48 Source
MAELT/MAE= Mathews Ave ELT

Relinquished by Megan Steward	Company	Ramboll	Received by	Company		Condition	Custody Seals Intact
Megan Steward	Date/Time	9/10/21 1533		Date/Time		Cooler Temp.	
Relinquished by	Company		Received by	Company		Condition	Custody Seals Intact
	Date/Time 9-10-21 15:33	ALS		Date/Time		Cooler Temp.	

Preservatives: 0 = None; 1 = HCL; 2 = HNO3; 3 = H2SO4; 4 = NaOH; 5 = Zn. Acetate; 6 = MeOH; 7 = NaHSO4; 8 = Other (specify):

Page 1

17:05

ALS 9/10/21 17:05

R2109364 5
O'Brien & Gere Engineers, Incorporated
Mathews Ave ELT - Clean Soil Sampling

Cooler Receipt and Preservation Check Form

Project/Client Ramboll/Honeywell Folder Number _____

Cooler received on 9/10/21 by: MM COURIER: (ALS) UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y (N)	5a	Perchlorate samples have required headspace?	Y N (NA)	
2	Custody papers properly completed (ink, signed)?	Y (N)	5b	Did VOA vials, Alk,or Sulfide have sig* bubbles?	(Y) N NA	*
3	Did all bottles arrive in good condition (unbroken)?	(Y) N	6	Where did the bottles originate?	(ALS/ROC) CLIENT	
4	Circle: (Wet Ice) Dry Ice Gel packs present?	Y N	7	Soil VOA received as: Bulk Encore 5035set	(NA)	

8. Temperature Readings Date: 9/10/21 Time: 17:25 ID: IR#7 (IR#11) From: (Temp Blank) (Sample Bottle)

Observed Temp (°C)	3.4	3.0	5.6	2.9			
Within 0-6°C?	(Y) N	(Y) N	(Y) N	(Y) N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R402 by MM on 9/10/21 at 17:45
5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 9/13/21 Time: 1440 by: MC

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
10. Did all bottle labels and tags agree with custody papers? (YES) NO
11. Were correct containers used for the tests indicated? (YES) NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? (YES) NO N/A
13. Air Samples: Cassettes / Tubes Intact Y / N with MS Y / N Canisters Pressurized Tedlar® Bags Inflated (N/A)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-			**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).			
		HCl	**	**						

Bottle lot numbers: 053121-1TW, 2596

Explain all Discrepancies/ Other Comments:

* Trip Blank 3 vials. SCA-0360-01 alk, SCA-0359-01 alk, SCA-0359-03 alk sig head space.

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: MM

PC Secondary Review: MM 9/15/21

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Miscellaneous Forms

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Rochester Lab ID # for State Accreditations[1]

NELAP States
Florida ID # E87674
New Hampshire ID # 2941
New York ID # 10145
Pennsylvania ID# 68-786
Virginia #460167

Non-NELAP States
Connecticut ID #PH0556
Delaware Approved
Maine ID #NY01587
North Carolina #36701
North Carolina #676
Rhode Island LAO00333

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling

Non-Certified Analytes

Certifying Agency: New York Department of Health

Method	Matrix	Analyte
ALS SOP	Soil	Total Solids
Calculation	Soil	Chromium, Trivalent

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling/

Sample Name: MAE-091021A-01 **Date Collected:** 09/10/21
Lab Code: R2109364-001 **Date Received:** 09/10/21
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
8260C		FNAEGLER
ALS SOP		KAWONG

Sample Name: MAE-091021A-02 **Date Collected:** 09/10/21
Lab Code: R2109364-002 **Date Received:** 09/10/21
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
6010C	BDIAMOND	KMCLAEN
7199	CWOODS	CWOODS
7471B	NMANSEN	NMANSEN
8081B	KSERCU	AMOSES
8082A	KSERCU	AMOSES
8151A	KSERCU	AMOSES
8270D	KSERCU	JMISIUREWICZ
9012B	MROGERSON	MROGERSON
9045D		STALARICO
ALS SOP		KAWONG
EPA LKahn 7-27-1988		CWOODS

Sample Name: MAE-091021A-02 **Date Collected:** 09/10/21
Lab Code: R2109364-002.R01 **Date Received:** 09/10/21
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
7199	KWONG	KWONG

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling/

Sample Name: MAE-091021A-03 **Date Collected:** 09/10/21
Lab Code: R2109364-003 **Date Received:** 09/10/21
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
8260C		FNAEGLER
ALS SOP		KAWONG

Sample Name: MAE-091021A-04 **Date Collected:** 09/10/21
Lab Code: R2109364-004 **Date Received:** 09/10/21
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
6010C	BDIAMOND	KMCLAEN
7199	CWOODS	CWOODS
7471B	NMANSEN	NMANSEN
8081B	KSERCU	AMOSES
8082A	KSERCU	AMOSES
8151A	KSERCU	AMOSES
8270D	KSERCU	JMISIUREWICZ
9012B	MROGERSON	MROGERSON
9045D		STALARICO
ALS SOP		KAWONG
EPA LKahn 7-27-1988		CWOODS

Sample Name: MAE-091021A-04 **Date Collected:** 09/10/21
Lab Code: R2109364-004.R01 **Date Received:** 09/10/21
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
7199	KWONG	KWONG

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling/		

Sample Name:	MAE-091021A-05	**Date Collected:**	09/10/21
Lab Code:	R2109364-005	**Date Received:**	09/10/21
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	

Sample Results

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:00
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-01	**Units:**	ug/Kg
Lab Code:	R2109364-001	**Basis:**	Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	2.3 U	2.3	0.093	.4	09/15/21 16:12	
1,1,2,2-Tetrachloroethane	2.3 U	2.3	0.21	.4	09/15/21 16:12	
1,1,2-Trichloroethane	2.3 U	2.3	0.093	.4	09/15/21 16:12	
1,1,2-Trichloro-1,2,2-trifluoroethane	2.3 U	2.3	0.093	.4	09/15/21 16:12	
1,1-Dichloroethane (1,1-DCA)	2.3 U	2.3	0.093	.4	09/15/21 16:12	
1,1-Dichloroethene (1,1-DCE)	2.3 U	2.3	0.14	.4	09/15/21 16:12	
1,2,3-Trichlorobenzene	2.3 U	2.3	0.25	.4	09/15/21 16:12	
1,2,4-Trichlorobenzene	2.3 U	2.3	0.20	.4	09/15/21 16:12	
1,2,4-Trimethylbenzene	2.3 U	2.3	0.093	.4	09/15/21 16:12	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	2.3	0.35	.4	09/15/21 16:12	
1,2-Dibromoethane	2.3 U	2.3	0.093	.4	09/15/21 16:12	
1,2-Dichlorobenzene	2.3 U	2.3	0.093	.4	09/15/21 16:12	
1,2-Dichloroethane	2.3 U	2.3	0.093	.4	09/15/21 16:12	
1,2-Dichloropropane	2.3 U	2.3	0.093	.4	09/15/21 16:12	
1,3,5-Trimethylbenzene	2.3 U	2.3	0.093	.4	09/15/21 16:12	
1,3-Dichlorobenzene	2.3 U	2.3	0.093	.4	09/15/21 16:12	
1,4-Dichlorobenzene	2.3 U	2.3	0.11	.4	09/15/21 16:12	
1,4-Dioxane	46 U	46	9.3	.4	09/15/21 16:12	
2-Butanone (MEK)	2.3 U	2.3	0.93	.4	09/15/21 16:12	
2-Hexanone	2.3 U	2.3	0.17	.4	09/15/21 16:12	
4-Methyl-2-pentanone	2.3 U	2.3	0.11	.4	09/15/21 16:12	
Acetone	12 U	12	7.0	.4	09/15/21 16:12	
Benzene	2.3 U	2.3	0.093	.4	09/15/21 16:12	
Bromochloromethane	2.3 U	2.3	0.093	.4	09/15/21 16:12	
Bromodichloromethane	2.3 U	2.3	0.093	.4	09/15/21 16:12	
Bromoform	2.3 U	2.3	0.24	.4	09/15/21 16:12	
Bromomethane	2.3 U	2.3	0.98	.4	09/15/21 16:12	
Carbon Disulfide	**0.17 J**	2.3	0.14	.4	09/15/21 16:12	
Carbon Tetrachloride	2.3 U	2.3	0.13	.4	09/15/21 16:12	
Chlorobenzene	2.3 U	2.3	0.093	.4	09/15/21 16:12	
Chloroethane	2.3 U	2.3	0.20	.4	09/15/21 16:12	
Chloroform	2.3 U	2.3	0.093	.4	09/15/21 16:12	
Chloromethane	2.3 U	2.3	0.66	.4	09/15/21 16:12	
Cyclohexane	2.3 U	2.3	0.13	.4	09/15/21 16:12	
Dibromochloromethane	2.3 U	2.3	0.093	.4	09/15/21 16:12	
Dichlorodifluoromethane (CFC 12)	2.3 U	2.3	0.16	.4	09/15/21 16:12	
Dichloromethane	2.3 U	2.3	1.4	.4	09/15/21 16:12	
Ethylbenzene	2.3 U	2.3	0.47	.4	09/15/21 16:12	
Isopropylbenzene (Cumene)	2.3 U	2.3	0.093	.4	09/15/21 16:12	
Methyl Acetate	2.3 U	2.3	0.40	.4	09/15/21 16:12	
Methyl tert-Butyl Ether	2.3 U	2.3	0.093	.4	09/15/21 16:12	
Methylcyclohexane	2.3 U	2.3	0.15	.4	09/15/21 16:12	
Styrene	2.3 U	2.3	0.47	.4	09/15/21 16:12	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:00
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-01	**Units:**	ug/Kg
Lab Code:	R2109364-001	**Basis:**	Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	2.3 U	2.3	0.11	.4	09/15/21 16:12	
Toluene	2.3 U	2.3	0.93	.4	09/15/21 16:12	
Trichloroethene (TCE)	2.3 U	2.3	0.11	.4	09/15/21 16:12	
Trichlorofluoromethane (CFC 11)	2.3 U	2.3	0.13	.4	09/15/21 16:12	
Vinyl Chloride	2.3 U	2.3	0.22	.4	09/15/21 16:12	
cis-1,2-Dichloroethene	2.3 U	2.3	0.093	.4	09/15/21 16:12	
cis-1,3-Dichloropropene	2.3 U	2.3	0.093	.4	09/15/21 16:12	
m,p-Xylenes	4.6 U	4.6	0.93	.4	09/15/21 16:12	
n-Butylbenzene	2.3 U	2.3	0.093	.4	09/15/21 16:12	
n-Propylbenzene	2.3 U	2.3	0.093	.4	09/15/21 16:12	
o-Xylene	2.3 U	2.3	0.47	.4	09/15/21 16:12	
sec-Butylbenzene	2.3 U	2.3	0.093	.4	09/15/21 16:12	
tert-Butylbenzene	2.3 U	2.3	0.093	.4	09/15/21 16:12	
trans-1,2-Dichloroethene	2.3 U	2.3	0.093	.4	09/15/21 16:12	
trans-1,3-Dichloropropene	2.3 U	2.3	0.093	.4	09/15/21 16:12	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	31 - 154	09/15/21 16:12	
Dibromofluoromethane	112	63 - 138	09/15/21 16:12	
Toluene-d8	105	66 - 138	09/15/21 16:12	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:10
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-03	**Units:**	ug/Kg
Lab Code:	R2109364-003	**Basis:**	Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	2.7 U	2.7	0.11	.48	09/15/21 16:36	
1,1,2,2-Tetrachloroethane	2.7 U	2.7	0.24	.48	09/15/21 16:36	
1,1,2-Trichloroethane	2.7 U	2.7	0.11	.48	09/15/21 16:36	
1,1,2-Trichloro-1,2,2-trifluoroethane	2.7 U	2.7	0.11	.48	09/15/21 16:36	
1,1-Dichloroethane (1,1-DCA)	2.7 U	2.7	0.11	.48	09/15/21 16:36	
1,1-Dichloroethene (1,1-DCE)	2.7 U	2.7	0.16	.48	09/15/21 16:36	
1,2,3-Trichlorobenzene	2.7 U	2.7	0.29	.48	09/15/21 16:36	
1,2,4-Trichlorobenzene	2.7 U	2.7	0.23	.48	09/15/21 16:36	
1,2,4-Trimethylbenzene	2.7 U	2.7	0.11	.48	09/15/21 16:36	
1,2-Dibromo-3-chloropropane (DBCP)	2.7 U	2.7	0.41	.48	09/15/21 16:36	
1,2-Dibromoethane	2.7 U	2.7	0.11	.48	09/15/21 16:36	
1,2-Dichlorobenzene	2.7 U	2.7	0.11	.48	09/15/21 16:36	
1,2-Dichloroethane	2.7 U	2.7	0.11	.48	09/15/21 16:36	
1,2-Dichloropropane	2.7 U	2.7	0.11	.48	09/15/21 16:36	
1,3,5-Trimethylbenzene	2.7 U	2.7	0.11	.48	09/15/21 16:36	
1,3-Dichlorobenzene	2.7 U	2.7	0.11	.48	09/15/21 16:36	
1,4-Dichlorobenzene	2.7 U	2.7	0.12	.48	09/15/21 16:36	
1,4-Dioxane	54 U	54	11	.48	09/15/21 16:36	
2-Butanone (MEK)	2.7 U	2.7	1.1	.48	09/15/21 16:36	
2-Hexanone	2.7 U	2.7	0.20	.48	09/15/21 16:36	
4-Methyl-2-pentanone	2.7 U	2.7	0.13	.48	09/15/21 16:36	
Acetone	14 U	14	8.2	.48	09/15/21 16:36	
Benzene	2.7 U	2.7	0.11	.48	09/15/21 16:36	
Bromochloromethane	2.7 U	2.7	0.11	.48	09/15/21 16:36	
Bromodichloromethane	2.7 U	2.7	0.11	.48	09/15/21 16:36	
Bromoform	2.7 U	2.7	0.28	.48	09/15/21 16:36	
Bromomethane	2.7 U	2.7	1.2	.48	09/15/21 16:36	
Carbon Disulfide	2.7 U	2.7	0.16	.48	09/15/21 16:36	
Carbon Tetrachloride	2.7 U	2.7	0.15	.48	09/15/21 16:36	
Chlorobenzene	2.7 U	2.7	0.11	.48	09/15/21 16:36	
Chloroethane	2.7 U	2.7	0.23	.48	09/15/21 16:36	
Chloroform	2.7 U	2.7	0.11	.48	09/15/21 16:36	
Chloromethane	2.7 U	2.7	0.76	.48	09/15/21 16:36	
Cyclohexane	2.7 U	2.7	0.15	.48	09/15/21 16:36	
Dibromochloromethane	2.7 U	2.7	0.11	.48	09/15/21 16:36	
Dichlorodifluoromethane (CFC 12)	2.7 U	2.7	0.18	.48	09/15/21 16:36	
Dichloromethane	2.7 U	2.7	1.6	.48	09/15/21 16:36	
Ethylbenzene	2.7 U	2.7	0.55	.48	09/15/21 16:36	
Isopropylbenzene (Cumene)	2.7 U	2.7	0.11	.48	09/15/21 16:36	
Methyl Acetate	2.7 U	2.7	0.46	.48	09/15/21 16:36	
Methyl tert-Butyl Ether	2.7 U	2.7	0.11	.48	09/15/21 16:36	
Methylcyclohexane	2.7 U	2.7	0.17	.48	09/15/21 16:36	
Styrene	2.7 U	2.7	0.55	.48	09/15/21 16:36	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:10
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-03	**Units:**	ug/Kg
Lab Code:	R2109364-003	**Basis:**	Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	2.7 U	2.7	0.13	.48	09/15/21 16:36	
Toluene	2.7 U	2.7	1.1	.48	09/15/21 16:36	
Trichloroethene (TCE)	2.7 U	2.7	0.12	.48	09/15/21 16:36	
Trichlorofluoromethane (CFC 11)	2.7 U	2.7	0.15	.48	09/15/21 16:36	
Vinyl Chloride	2.7 U	2.7	0.25	.48	09/15/21 16:36	
cis-1,2-Dichloroethene	2.7 U	2.7	0.11	.48	09/15/21 16:36	
cis-1,3-Dichloropropene	2.7 U	2.7	0.11	.48	09/15/21 16:36	
m,p-Xylenes	5.4 U	5.4	1.1	.48	09/15/21 16:36	
n-Butylbenzene	2.7 U	2.7	0.11	.48	09/15/21 16:36	
n-Propylbenzene	2.7 U	2.7	0.11	.48	09/15/21 16:36	
o-Xylene	2.7 U	2.7	0.55	.48	09/15/21 16:36	
sec-Butylbenzene	2.7 U	2.7	0.11	.48	09/15/21 16:36	
tert-Butylbenzene	2.7 U	2.7	0.11	.48	09/15/21 16:36	
trans-1,2-Dichloroethene	2.7 U	2.7	0.11	.48	09/15/21 16:36	
trans-1,3-Dichloropropene	2.7 U	2.7	0.11	.48	09/15/21 16:36	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	31 - 154	09/15/21 16:36	
Dibromofluoromethane	111	63 - 138	09/15/21 16:36	
Toluene-d8	104	66 - 138	09/15/21 16:36	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21
Sample Matrix:	Water	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-05	**Units:**	ug/L
Lab Code:	R2109364-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	09/15/21 18:36	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	09/15/21 18:36	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	09/15/21 18:36	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0 U	1.0	0.20	1	09/15/21 18:36	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	09/15/21 18:36	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	09/15/21 18:36	
1,2,3-Trichlorobenzene	1.0 U	1.0	0.25	1	09/15/21 18:36	
1,2,4-Trichlorobenzene	1.0 U	1.0	0.34	1	09/15/21 18:36	
1,2,4-Trimethylbenzene	1.0 U	1.0	0.20	1	09/15/21 18:36	
1,2-Dibromo-3-chloropropane (DBCP)	2.0 U	2.0	0.45	1	09/15/21 18:36	
1,2-Dibromoethane	1.0 U	1.0	0.20	1	09/15/21 18:36	
1,2-Dichlorobenzene	1.0 U	1.0	0.20	1	09/15/21 18:36	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	09/15/21 18:36	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	09/15/21 18:36	
1,3,5-Trimethylbenzene	1.0 U	1.0	0.20	1	09/15/21 18:36	
1,3-Dichlorobenzene	1.0 U	1.0	0.20	1	09/15/21 18:36	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	09/15/21 18:36	
1,4-Dioxane	40 U	40	13	1	09/15/21 18:36	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	09/15/21 18:36	
2-Hexanone	5.0 U	5.0	0.20	1	09/15/21 18:36	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	09/15/21 18:36	
Acetone	5.0 U	5.0	5.0	1	09/15/21 18:36	
Benzene	1.0 U	1.0	0.20	1	09/15/21 18:36	
Bromochloromethane	1.0 U	1.0	0.20	1	09/15/21 18:36	
Bromodichloromethane	1.0 U	1.0	0.20	1	09/15/21 18:36	
Bromoform	1.0 U	1.0	0.25	1	09/15/21 18:36	
Bromomethane	1.0 U	1.0	0.70	1	09/15/21 18:36	
Carbon Disulfide	1.0 U	1.0	0.42	1	09/15/21 18:36	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	09/15/21 18:36	
Chlorobenzene	1.0 U	1.0	0.20	1	09/15/21 18:36	
Chloroethane	1.0 U	1.0	0.23	1	09/15/21 18:36	
Chloroform	1.0 U	1.0	0.24	1	09/15/21 18:36	
Chloromethane	1.0 U	1.0	0.28	1	09/15/21 18:36	
Cyclohexane	1.0 U	1.0	0.26	1	09/15/21 18:36	
Dibromochloromethane	1.0 U	1.0	0.20	1	09/15/21 18:36	
Dichlorodifluoromethane (CFC 12)	1.0 U	1.0	0.21	1	09/15/21 18:36	
Dichloromethane	1.0 U	1.0	0.65	1	09/15/21 18:36	
Ethylbenzene	1.0 U	1.0	0.20	1	09/15/21 18:36	
Isopropylbenzene (Cumene)	1.0 U	1.0	0.20	1	09/15/21 18:36	
Methyl Acetate	2.0 U	2.0	0.33	1	09/15/21 18:36	
Methyl tert-Butyl Ether	1.0 U	1.0	0.20	1	09/15/21 18:36	
Methylcyclohexane	1.0 U	1.0	0.20	1	09/15/21 18:36	
Styrene	1.0 U	1.0	0.20	1	09/15/21 18:36	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21
Sample Matrix:	Water	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-05	**Units:**	ug/L
Lab Code:	R2109364-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	09/15/21 18:36	
Toluene	1.0 U	1.0	0.20	1	09/15/21 18:36	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	09/15/21 18:36	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.24	1	09/15/21 18:36	
Vinyl Chloride	1.0 U	1.0	0.20	1	09/15/21 18:36	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	09/15/21 18:36	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	09/15/21 18:36	
m,p-Xylenes	2.0 U	2.0	0.20	1	09/15/21 18:36	
n-Butylbenzene	1.0 U	1.0	0.20	1	09/15/21 18:36	
n-Propylbenzene	1.0 U	1.0	0.20	1	09/15/21 18:36	
o-Xylene	1.0 U	1.0	0.20	1	09/15/21 18:36	
sec-Butylbenzene	1.0 U	1.0	0.20	1	09/15/21 18:36	
tert-Butylbenzene	1.0 U	1.0	0.20	1	09/15/21 18:36	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	09/15/21 18:36	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	09/15/21 18:36	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	85 - 122	09/15/21 18:36	
Dibromofluoromethane	104	80 - 116	09/15/21 18:36	
Toluene-d8	110	87 - 121	09/15/21 18:36	

Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:00
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-02	**Units:**	ug/Kg
Lab Code:	R2109364-002	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	410 U	410	91	1	09/17/21 20:19	9/15/21	
2,3,4,6-Tetrachlorophenol	410 U	410	150	1	09/17/21 20:19	9/15/21	
2,4,5-Trichlorophenol	410 U	410	110	1	09/17/21 20:19	9/15/21	
2,4,6-Trichlorophenol	410 U	410	91	1	09/17/21 20:19	9/15/21	
2,4-Dichlorophenol	410 U	410	79	1	09/17/21 20:19	9/15/21	
2,4-Dimethylphenol	410 U	410	73	1	09/17/21 20:19	9/15/21	
2,4-Dinitrophenol	2100 U	2100	700	1	09/17/21 20:19	9/15/21	
2,4-Dinitrotoluene	410 U	410	160	1	09/17/21 20:19	9/15/21	
2,6-Dinitrotoluene	410 U	410	89	1	09/17/21 20:19	9/15/21	
2-Chloronaphthalene	410 U	410	82	1	09/17/21 20:19	9/15/21	
2-Chlorophenol	410 U	410	68	1	09/17/21 20:19	9/15/21	
2-Methylnaphthalene	410 U	410	68	1	09/17/21 20:19	9/15/21	
2-Methylphenol	410 U	410	85	1	09/17/21 20:19	9/15/21	
2-Nitroaniline	2100 U	2100	97	1	09/17/21 20:19	9/15/21	
2-Nitrophenol	410 U	410	95	1	09/17/21 20:19	9/15/21	
3,3'-Dichlorobenzidine	410 U	410	46	1	09/17/21 20:19	9/15/21	
3- and 4-Methylphenol Coelution	410 U	410	78	1	09/17/21 20:19	9/15/21	
3-Nitroaniline	2100 U	2100	82	1	09/17/21 20:19	9/15/21	
4,6-Dinitro-2-methylphenol	2100 U	2100	230	1	09/17/21 20:19	9/15/21	
4-Bromophenyl Phenyl Ether	410 U	410	110	1	09/17/21 20:19	9/15/21	
4-Chloro-3-methylphenol	410 U	410	82	1	09/17/21 20:19	9/15/21	
4-Chloroaniline	410 U	410	69	1	09/17/21 20:19	9/15/21	
4-Chlorophenyl Phenyl Ether	410 U	410	87	1	09/17/21 20:19	9/15/21	
4-Nitroaniline	2100 U	2100	42	1	09/17/21 20:19	9/15/21	
4-Nitrophenol	2100 U	2100	82	1	09/17/21 20:19	9/15/21	
Acenaphthene	410 U	410	77	1	09/17/21 20:19	9/15/21	
Acenaphthylene	410 U	410	83	1	09/17/21 20:19	9/15/21	
Acetophenone	410 U	410	120	1	09/17/21 20:19	9/15/21	
Anthracene	410 U	410	68	1	09/17/21 20:19	9/15/21	
Atrazine	410 U	410	57	1	09/17/21 20:19	9/15/21	
Benz(a)anthracene	410 U	410	61	1	09/17/21 20:19	9/15/21	
Benzaldehyde	2100 U	2100	99	1	09/17/21 20:19	9/15/21	
Benzo(a)pyrene	410 U	410	110	1	09/17/21 20:19	9/15/21	
Benzo(b)fluoranthene	410 U	410	68	1	09/17/21 20:19	9/15/21	
Benzo(g,h,i)perylene	410 U	410	94	1	09/17/21 20:19	9/15/21	
Benzo(k)fluoranthene	410 U	410	66	1	09/17/21 20:19	9/15/21	
Biphenyl	410 U	410	130	1	09/17/21 20:19	9/15/21	
2,2'-Oxybis(1-chloropropane)	410 U	410	84	1	09/17/21 20:19	9/15/21	
Bis(2-chloroethoxy)methane	410 U	410	100	1	09/17/21 20:19	9/15/21	
Bis(2-chloroethyl) Ether	410 U	410	81	1	09/17/21 20:19	9/15/21	
Bis(2-ethylhexyl) Phthalate	620 U	620	75	1	09/17/21 20:19	9/15/21	
Butyl Benzyl Phthalate	410 U	410	49	1	09/17/21 20:19	9/15/21	
Caprolactam	410 U	410	90	1	09/17/21 20:19	9/15/21	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:00
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-02	**Units:**	ug/Kg
Lab Code:	R2109364-002	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	410 U	410	66	1	09/17/21 20:19	9/15/21	
Chrysene	410 U	410	60	1	09/17/21 20:19	9/15/21	
Di-n-butyl Phthalate	410 U	410	66	1	09/17/21 20:19	9/15/21	
Di-n-octyl Phthalate	410 U	410	150	1	09/17/21 20:19	9/15/21	
Dibenz(a,h)anthracene	410 U	410	89	1	09/17/21 20:19	9/15/21	
Dibenzofuran	410 U	410	75	1	09/17/21 20:19	9/15/21	
Diethyl Phthalate	410 U	410	73	1	09/17/21 20:19	9/15/21	
Dimethyl Phthalate	410 U	410	78	1	09/17/21 20:19	9/15/21	
Fluoranthene	410 U	410	110	1	09/17/21 20:19	9/15/21	
Fluorene	410 U	410	77	1	09/17/21 20:19	9/15/21	
Hexachlorobenzene	410 U	410	98	1	09/17/21 20:19	9/15/21	
Hexachlorobutadiene	410 U	410	70	1	09/17/21 20:19	9/15/21	
Hexachlorocyclopentadiene	410 U	410	130	1	09/17/21 20:19	9/15/21	
Hexachloroethane	410 U	410	77	1	09/17/21 20:19	9/15/21	
Indeno(1,2,3-cd)pyrene	410 U	410	140	1	09/17/21 20:19	9/15/21	
Isophorone	410 U	410	85	1	09/17/21 20:19	9/15/21	
N-Nitrosodi-n-propylamine	410 U	410	130	1	09/17/21 20:19	9/15/21	
N-Nitrosodiphenylamine	410 U	410	260	1	09/17/21 20:19	9/15/21	
Naphthalene	410 U	410	77	1	09/17/21 20:19	9/15/21	
Nitrobenzene	410 U	410	73	1	09/17/21 20:19	9/15/21	
Pentachlorophenol (PCP)	2100 U	2100	410	1	09/17/21 20:19	9/15/21	
Phenanthrene	410 U	410	58	1	09/17/21 20:19	9/15/21	
Phenol	410 U	410	82	1	09/17/21 20:19	9/15/21	
Pyrene	410 U	410	68	1	09/17/21 20:19	9/15/21	
Pyridine	2100 U	2100	55	1	09/17/21 20:19	9/15/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	59	10 - 109	09/17/21 20:19	
2-Fluorobiphenyl	59	10 - 102	09/17/21 20:19	
2-Fluorophenol	42	10 - 88	09/17/21 20:19	
Nitrobenzene-d5	50	10 - 95	09/17/21 20:19	
Phenol-d6	44	10 - 145	09/17/21 20:19	
Terphenyl-d14	81	10 - 106	09/17/21 20:19	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:10
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-04	**Units:**	ug/Kg
Lab Code:	R2109364-004	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	380 U	380	84	1	09/17/21 20:47	9/15/21	
2,3,4,6-Tetrachlorophenol	380 U	380	140	1	09/17/21 20:47	9/15/21	
2,4,5-Trichlorophenol	380 U	380	94	1	09/17/21 20:47	9/15/21	
2,4,6-Trichlorophenol	380 U	380	85	1	09/17/21 20:47	9/15/21	
2,4-Dichlorophenol	380 U	380	73	1	09/17/21 20:47	9/15/21	
2,4-Dimethylphenol	380 U	380	68	1	09/17/21 20:47	9/15/21	
2,4-Dinitrophenol	2000 U	2000	650	1	09/17/21 20:47	9/15/21	
2,4-Dinitrotoluene	380 U	380	150	1	09/17/21 20:47	9/15/21	
2,6-Dinitrotoluene	380 U	380	83	1	09/17/21 20:47	9/15/21	
2-Chloronaphthalene	380 U	380	76	1	09/17/21 20:47	9/15/21	
2-Chlorophenol	380 U	380	63	1	09/17/21 20:47	9/15/21	
2-Methylnaphthalene	380 U	380	63	1	09/17/21 20:47	9/15/21	
2-Methylphenol	380 U	380	79	1	09/17/21 20:47	9/15/21	
2-Nitroaniline	2000 U	2000	90	1	09/17/21 20:47	9/15/21	
2-Nitrophenol	380 U	380	88	1	09/17/21 20:47	9/15/21	
3,3'-Dichlorobenzidine	380 U	380	43	1	09/17/21 20:47	9/15/21	
3- and 4-Methylphenol Coelution	380 U	380	73	1	09/17/21 20:47	9/15/21	
3-Nitroaniline	2000 U	2000	76	1	09/17/21 20:47	9/15/21	
4,6-Dinitro-2-methylphenol	2000 U	2000	220	1	09/17/21 20:47	9/15/21	
4-Bromophenyl Phenyl Ether	380 U	380	100	1	09/17/21 20:47	9/15/21	
4-Chloro-3-methylphenol	380 U	380	77	1	09/17/21 20:47	9/15/21	
4-Chloroaniline	380 U	380	64	1	09/17/21 20:47	9/15/21	
4-Chlorophenyl Phenyl Ether	380 U	380	81	1	09/17/21 20:47	9/15/21	
4-Nitroaniline	2000 U	2000	39	1	09/17/21 20:47	9/15/21	
4-Nitrophenol	2000 U	2000	76	1	09/17/21 20:47	9/15/21	
Acenaphthene	380 U	380	72	1	09/17/21 20:47	9/15/21	
Acenaphthylene	380 U	380	77	1	09/17/21 20:47	9/15/21	
Acetophenone	380 U	380	110	1	09/17/21 20:47	9/15/21	
Anthracene	380 U	380	64	1	09/17/21 20:47	9/15/21	
Atrazine	380 U	380	53	1	09/17/21 20:47	9/15/21	
Benz(a)anthracene	380 U	380	57	1	09/17/21 20:47	9/15/21	
Benzaldehyde	2000 U	2000	92	1	09/17/21 20:47	9/15/21	
Benzo(a)pyrene	380 U	380	110	1	09/17/21 20:47	9/15/21	
Benzo(b)fluoranthene	380 U	380	63	1	09/17/21 20:47	9/15/21	
Benzo(g,h,i)perylene	380 U	380	87	1	09/17/21 20:47	9/15/21	
Benzo(k)fluoranthene	380 U	380	62	1	09/17/21 20:47	9/15/21	
Biphenyl	380 U	380	120	1	09/17/21 20:47	9/15/21	
2,2'-Oxybis(1-chloropropane)	380 U	380	78	1	09/17/21 20:47	9/15/21	
Bis(2-chloroethoxy)methane	380 U	380	93	1	09/17/21 20:47	9/15/21	
Bis(2-chloroethyl) Ether	380 U	380	75	1	09/17/21 20:47	9/15/21	
Bis(2-ethylhexyl) Phthalate	570 U	570	69	1	09/17/21 20:47	9/15/21	
Butyl Benzyl Phthalate	380 U	380	46	1	09/17/21 20:47	9/15/21	
Caprolactam	380 U	380	84	1	09/17/21 20:47	9/15/21	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:10
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-04	**Units:**	ug/Kg
Lab Code:	R2109364-004	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	380 U	380	62	1	09/17/21 20:47	9/15/21	
Chrysene	380 U	380	56	1	09/17/21 20:47	9/15/21	
Di-n-butyl Phthalate	380 U	380	62	1	09/17/21 20:47	9/15/21	
Di-n-octyl Phthalate	380 U	380	140	1	09/17/21 20:47	9/15/21	
Dibenz(a,h)anthracene	380 U	380	83	1	09/17/21 20:47	9/15/21	
Dibenzofuran	380 U	380	69	1	09/17/21 20:47	9/15/21	
Diethyl Phthalate	380 U	380	68	1	09/17/21 20:47	9/15/21	
Dimethyl Phthalate	380 U	380	72	1	09/17/21 20:47	9/15/21	
Fluoranthene	380 U	380	95	1	09/17/21 20:47	9/15/21	
Fluorene	380 U	380	71	1	09/17/21 20:47	9/15/21	
Hexachlorobenzene	380 U	380	91	1	09/17/21 20:47	9/15/21	
Hexachlorobutadiene	380 U	380	65	1	09/17/21 20:47	9/15/21	
Hexachlorocyclopentadiene	380 U	380	130	1	09/17/21 20:47	9/15/21	
Hexachloroethane	380 U	380	71	1	09/17/21 20:47	9/15/21	
Indeno(1,2,3-cd)pyrene	380 U	380	130	1	09/17/21 20:47	9/15/21	
Isophorone	380 U	380	79	1	09/17/21 20:47	9/15/21	
N-Nitrosodi-n-propylamine	380 U	380	120	1	09/17/21 20:47	9/15/21	
N-Nitrosodiphenylamine	380 U	380	240	1	09/17/21 20:47	9/15/21	
Naphthalene	380 U	380	71	1	09/17/21 20:47	9/15/21	
Nitrobenzene	380 U	380	68	1	09/17/21 20:47	9/15/21	
Pentachlorophenol (PCP)	2000 U	2000	380	1	09/17/21 20:47	9/15/21	
Phenanthrene	380 U	380	54	1	09/17/21 20:47	9/15/21	
Phenol	380 U	380	76	1	09/17/21 20:47	9/15/21	
Pyrene	380 U	380	63	1	09/17/21 20:47	9/15/21	
Pyridine	2000 U	2000	51	1	09/17/21 20:47	9/15/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	66	10 - 109	09/17/21 20:47	
2-Fluorobiphenyl	62	10 - 102	09/17/21 20:47	
2-Fluorophenol	53	10 - 88	09/17/21 20:47	
Nitrobenzene-d5	56	10 - 95	09/17/21 20:47	
Phenol-d6	53	10 - 145	09/17/21 20:47	
Terphenyl-d14	84	10 - 106	09/17/21 20:47	

Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:00
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-02	**Units:**	ug/Kg
Lab Code:	R2109364-002	**Basis:**	Dry

Organochlorine Pesticides by Gas Chromatography using Microwave Extraction

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
4,4'-DDE	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
4,4'-DDT	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
Aldrin	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
Dieldrin	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
Endosulfan I	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
Endosulfan II	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
Endosulfan Sulfate	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
Endrin	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
Endrin Aldehyde	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
Endrin Ketone	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
Heptachlor	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
Heptachlor Epoxide	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
Methoxychlor	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
Toxaphene	41 U	41	24	1	09/16/21 14:51	9/14/21	
alpha-BHC	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
alpha-Chlordane	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
beta-BHC	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
delta-BHC	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
gamma-BHC (Lindane)	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	
gamma-Chlordane	2.1 U	2.1	1.1	1	09/16/21 14:51	9/14/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	71	10 - 145	09/16/21 14:51	
Tetrachloro-m-xylene	66	10 - 123	09/16/21 14:51	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:10
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-04	**Units:**	ug/Kg
Lab Code:	R2109364-004	**Basis:**	Dry

Organochlorine Pesticides by Gas Chromatography using Microwave Extraction

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
4,4'-DDE	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
4,4'-DDT	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
Aldrin	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
Dieldrin	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
Endosulfan I	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
Endosulfan II	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
Endosulfan Sulfate	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
Endrin	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
Endrin Aldehyde	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
Endrin Ketone	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
Heptachlor	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
Heptachlor Epoxide	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
Methoxychlor	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
Toxaphene	39 U	39	23	1	09/16/21 15:51	9/14/21	
alpha-BHC	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
alpha-Chlordane	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
beta-BHC	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
delta-BHC	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
gamma-BHC (Lindane)	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	
gamma-Chlordane	2.0 U	2.0	0.99	1	09/16/21 15:51	9/14/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	58	10 - 145	09/16/21 15:51	
Tetrachloro-m-xylene	56	10 - 123	09/16/21 15:51	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:00
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-02	**Units:**	ug/Kg
Lab Code:	R2109364-002	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC using Microwave Extraction

Analysis Method: 8082A
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	41 U	41	22	1	09/16/21 00:42	9/14/21	
Aroclor 1221	84 U	84	33	1	09/16/21 00:42	9/14/21	
Aroclor 1232	41 U	41	24	1	09/16/21 00:42	9/14/21	
Aroclor 1242	41 U	41	22	1	09/16/21 00:42	9/14/21	
Aroclor 1248	41 U	41	23	1	09/16/21 00:42	9/14/21	
Aroclor 1254	41 U	41	22	1	09/16/21 00:42	9/14/21	
Aroclor 1260	41 U	41	22	1	09/16/21 00:42	9/14/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	74	22 - 128	09/16/21 00:42	
Tetrachloro-m-xylene	73	14 - 119	09/16/21 00:42	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:10
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-04	**Units:**	ug/Kg
Lab Code:	R2109364-004	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC using Microwave Extraction

Analysis Method: 8082A
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	39 U	39	20	1	09/16/21 01:02	9/14/21	
Aroclor 1221	78 U	78	31	1	09/16/21 01:02	9/14/21	
Aroclor 1232	39 U	39	23	1	09/16/21 01:02	9/14/21	
Aroclor 1242	39 U	39	20	1	09/16/21 01:02	9/14/21	
Aroclor 1248	39 U	39	22	1	09/16/21 01:02	9/14/21	
Aroclor 1254	39 U	39	20	1	09/16/21 01:02	9/14/21	
Aroclor 1260	39 U	39	20	1	09/16/21 01:02	9/14/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	62	22 - 128	09/16/21 01:02	
Tetrachloro-m-xylene	62	14 - 119	09/16/21 01:02	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:00
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-02	**Units:**	ug/Kg
Lab Code:	R2109364-002	**Basis:**	Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-TP	12 U	12	5.4	1	09/23/21 00:57	9/21/21	
Pentachlorophenol (PCP)	12 U	12	7.6	1	09/23/21 00:57	9/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	79	10 - 151	09/23/21 00:57	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:10
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-04	**Units:**	ug/Kg
Lab Code:	R2109364-004	**Basis:**	Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-TP	11 U	11	5.2	1	09/23/21 17:34	9/21/21	
Pentachlorophenol (PCP)	**14**	11	7.2	1	09/23/21 17:34	9/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	95	10 - 151	09/23/21 17:34	

Metals

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:00
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-02	**Basis:**	Dry
Lab Code:	R2109364-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010C	**7510**	mg/Kg	23	14	1	09/16/21 19:01	09/15/21	
Antimony, Total	6010C	6.9 U	mg/Kg	6.9	0.7	1	09/16/21 19:01	09/15/21	
Arsenic, Total	6010C	**6.1**	mg/Kg	1.1	0.9	1	09/16/21 19:01	09/15/21	
Barium, Total	6010C	**59.6**	mg/Kg	2.3	1.8	1	09/16/21 19:01	09/15/21	
Beryllium, Total	6010C	**0.38**	mg/Kg	0.34	0.04	1	09/16/21 19:01	09/15/21	
Cadmium, Total	6010C	**0.37 J**	mg/Kg	0.57	0.10	1	09/16/21 19:01	09/15/21	
Calcium, Total	6010C	**3150**	mg/Kg	110	40	1	09/16/21 19:01	09/15/21	
Chromium, Total	6010C	**9.0**	mg/Kg	1.1	0.5	1	09/16/21 19:01	09/15/21	
Cobalt, Total	6010C	**5.4 J**	mg/Kg	5.7	0.10	1	09/16/21 19:01	09/15/21	
Copper, Total	6010C	**14.4**	mg/Kg	2.3	0.2	1	09/16/21 19:01	09/15/21	
Iron, Total	6010C	**18400**	mg/Kg	230	150	10	09/16/21 20:06	09/15/21	
Lead, Total	6010C	**10.4**	mg/Kg	5.7	0.5	1	09/16/21 19:01	09/15/21	
Magnesium, Total	6010C	**1540**	mg/Kg	110	20	1	09/16/21 19:01	09/15/21	
Manganese, Total	6010C	**639**	mg/Kg	2.3	0.2	1	09/16/21 19:01	09/15/21	
Mercury, Total	7471B	**0.051**	mg/Kg	0.023	0.013	1	09/16/21 13:31	09/15/21	
Nickel, Total	6010C	**8.7**	mg/Kg	4.6	0.8	1	09/16/21 19:01	09/15/21	
Potassium, Total	6010C	**830**	mg/Kg	230	60	1	09/16/21 19:01	09/15/21	
Selenium, Total	6010C	1.1 U	mg/Kg	1.1	0.7	1	09/16/21 19:01	09/15/21	
Silver, Total	6010C	1.1 U	mg/Kg	1.1	0.2	1	09/16/21 19:01	09/15/21	
Sodium, Total	6010C	**40 J**	mg/Kg	110	30	1	09/16/21 19:01	09/15/21	
Thallium, Total	6010C	1.1 U	mg/Kg	1.1	0.8	1	09/16/21 19:01	09/15/21	
Vanadium, Total	6010C	**15.8**	mg/Kg	5.7	0.9	1	09/16/21 19:01	09/15/21	
Zinc, Total	6010C	**33.8**	mg/Kg	2.3	1.7	1	09/16/21 19:01	09/15/21	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:10
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-04	**Basis:**	Dry
Lab Code:	R2109364-004		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010C	**8110**	mg/Kg	23	14	1	09/16/21 19:04	09/15/21	
Antimony, Total	6010C	6.8 U	mg/Kg	6.8	0.7	1	09/16/21 19:04	09/15/21	
Arsenic, Total	6010C	**5.8**	mg/Kg	1.1	0.8	1	09/16/21 19:04	09/15/21	
Barium, Total	6010C	**66.3**	mg/Kg	2.3	1.8	1	09/16/21 19:04	09/15/21	
Beryllium, Total	6010C	**0.41**	mg/Kg	0.34	0.04	1	09/16/21 19:04	09/15/21	
Cadmium, Total	6010C	**0.35 J**	mg/Kg	0.57	0.10	1	09/16/21 19:04	09/15/21	
Calcium, Total	6010C	**2250**	mg/Kg	110	40	1	09/16/21 19:04	09/15/21	
Chromium, Total	6010C	**9.5**	mg/Kg	1.1	0.4	1	09/16/21 19:04	09/15/21	
Cobalt, Total	6010C	**5.4 J**	mg/Kg	5.7	0.10	1	09/16/21 19:04	09/15/21	
Copper, Total	6010C	**14.7**	mg/Kg	2.3	0.2	1	09/16/21 19:04	09/15/21	
Iron, Total	6010C	**19000**	mg/Kg	230	150	10	09/16/21 20:09	09/15/21	
Lead, Total	6010C	**12.8**	mg/Kg	5.7	0.5	1	09/16/21 19:04	09/15/21	
Magnesium, Total	6010C	**1530**	mg/Kg	110	20	1	09/16/21 19:04	09/15/21	
Manganese, Total	6010C	**739**	mg/Kg	2.3	0.2	1	09/16/21 19:04	09/15/21	
Mercury, Total	7471B	**0.052**	mg/Kg	0.022	0.013	1	09/16/21 13:44	09/15/21	
Nickel, Total	6010C	**9.1**	mg/Kg	4.6	0.8	1	09/16/21 19:04	09/15/21	
Potassium, Total	6010C	**910**	mg/Kg	230	60	1	09/16/21 19:04	09/15/21	
Selenium, Total	6010C	1.1 U	mg/Kg	1.1	0.7	1	09/16/21 19:04	09/15/21	
Silver, Total	6010C	1.1 U	mg/Kg	1.1	0.2	1	09/16/21 19:04	09/15/21	
Sodium, Total	6010C	**40 J**	mg/Kg	110	30	1	09/16/21 19:04	09/15/21	
Thallium, Total	6010C	1.1 U	mg/Kg	1.1	0.8	1	09/16/21 19:04	09/15/21	
Vanadium, Total	6010C	**16.3**	mg/Kg	5.7	0.9	1	09/16/21 19:04	09/15/21	
Zinc, Total	6010C	**33.6**	mg/Kg	2.3	1.6	1	09/16/21 19:04	09/15/21	

General Chemistry

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:00
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-01	**Basis:**	As Received
Lab Code:	R2109364-001		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	**86.1**	Percent	-	-	1	09/20/21 09:35	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:00
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-02	**Basis:**	Dry, per Method
Lab Code:	R2109364-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	EPA LKahn 7-27-1988	**10800**	mg/Kg	1100	500	1	09/24/21 19:21	NA	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:00
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-02	**Basis:**	Dry
Lab Code:	R2109364-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Q	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chromium, Hexavalent	7199	0.47	U	mg/Kg	0.47	0.05	1	09/23/21 16:51	09/22/21	
Chromium, Hexavalent	7199	0.48	U	mg/Kg	0.48	0.05	1	09/29/21 19:09	09/29/21	
Chromium, Trivalent	Calculation	**9.0**		mg/Kg	1.0	-	1	NA	NA	
Cyanide, Total	9012B	**0.18**	**J**	mg/Kg	0.28	0.17	1	09/15/21 22:24	09/15/21	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:00
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-02	**Basis:**	As Received
Lab Code:	R2109364-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
pH	9045D	**7.11**	pH Units	-	-	1	09/14/21 08:30	NA	H
Total Solids	ALS SOP	**84.1**	Percent	-	-	1	09/16/21 07:20	NA	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:10
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-03	**Basis:**	As Received
Lab Code:	R2109364-003		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	**88.6**	Percent	-	-	1	09/20/21 09:35	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:10
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-04	**Basis:**	Dry, per Method
Lab Code:	R2109364-004		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	EPA LKahn 7-27-1988	**10000**	mg/Kg	1600	600	1	09/24/21 19:27	NA	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:10
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-04	**Basis:**	Dry
Lab Code:	R2109364-004		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chromium, Hexavalent	7199	0.44	U	mg/Kg	0.44	0.05	1	09/23/21 17:07	09/22/21	
Chromium, Hexavalent	7199	0.46	U	mg/Kg	0.46	0.05	1	09/29/21 19:25	09/29/21	
Chromium, Trivalent	Calculation	**9.5**		mg/Kg	1.0	-	1	NA	NA	
Cyanide, Total	9012B	0.30	U	mg/Kg	0.30	0.17	1	09/15/21 22:25	09/15/21	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21 11:10
Sample Matrix:	Soil	**Date Received:**	09/10/21 17:05
Sample Name:	MAE-091021A-04	**Basis:**	As Received
Lab Code:	R2109364-004		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
pH	9045D	**6.24**	pH Units	-	-	1	09/14/21 08:30	NA	H
Total Solids	ALS SOP	**87.9**	Percent	-	-	1	09/16/21 07:20	NA	

QC Summary Forms

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5035A

Sample Name	Lab Code	4-Bromofluorobenzene 31-154	Dibromofluoromethane 63-138	Toluene-d8 66-138
MAE-091021A-01	R2109364-001	103	112	105
MAE-091021A-03	R2109364-003	101	111	104
Method Blank	RQ2111406-04	98	105	103
Lab Control Sample	RQ2111406-03	103	109	102

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5035A

Sample Name	Lab Code	4-Bromofluorobenzene 85-122	Dibromofluoromethane 80-116	Toluene-d8 87-121
MAE-091021A-05	R2109364-005	106	104	110
Method Blank	RQ2111405-04	105	104	109
Lab Control Sample	RQ2111405-03	106	106	107

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ2111405-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	09/15/21 10:58	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	09/15/21 10:58	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	09/15/21 10:58	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0 U	1.0	0.20	1	09/15/21 10:58	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	09/15/21 10:58	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	09/15/21 10:58	
1,2,3-Trichlorobenzene	1.0 U	1.0	0.25	1	09/15/21 10:58	
1,2,4-Trichlorobenzene	1.0 U	1.0	0.34	1	09/15/21 10:58	
1,2,4-Trimethylbenzene	1.0 U	1.0	0.20	1	09/15/21 10:58	
1,2-Dibromo-3-chloropropane (DBCP)	2.0 U	2.0	0.45	1	09/15/21 10:58	
1,2-Dibromoethane	1.0 U	1.0	0.20	1	09/15/21 10:58	
1,2-Dichlorobenzene	1.0 U	1.0	0.20	1	09/15/21 10:58	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	09/15/21 10:58	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	09/15/21 10:58	
1,3,5-Trimethylbenzene	1.0 U	1.0	0.20	1	09/15/21 10:58	
1,3-Dichlorobenzene	1.0 U	1.0	0.20	1	09/15/21 10:58	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	09/15/21 10:58	
1,4-Dioxane	40 U	40	13	1	09/15/21 10:58	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	09/15/21 10:58	
2-Hexanone	5.0 U	5.0	0.20	1	09/15/21 10:58	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	09/15/21 10:58	
Acetone	5.0 U	5.0	5.0	1	09/15/21 10:58	
Benzene	1.0 U	1.0	0.20	1	09/15/21 10:58	
Bromochloromethane	1.0 U	1.0	0.20	1	09/15/21 10:58	
Bromodichloromethane	1.0 U	1.0	0.20	1	09/15/21 10:58	
Bromoform	1.0 U	1.0	0.25	1	09/15/21 10:58	
Bromomethane	1.0 U	1.0	0.70	1	09/15/21 10:58	
Carbon Disulfide	1.0 U	1.0	0.42	1	09/15/21 10:58	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	09/15/21 10:58	
Chlorobenzene	1.0 U	1.0	0.20	1	09/15/21 10:58	
Chloroethane	1.0 U	1.0	0.23	1	09/15/21 10:58	
Chloroform	1.0 U	1.0	0.24	1	09/15/21 10:58	
Chloromethane	**0.41 J**	1.0	0.28	1	09/15/21 10:58	
Cyclohexane	1.0 U	1.0	0.26	1	09/15/21 10:58	
Dibromochloromethane	1.0 U	1.0	0.20	1	09/15/21 10:58	
Dichlorodifluoromethane (CFC 12)	1.0 U	1.0	0.21	1	09/15/21 10:58	
Dichloromethane	1.0 U	1.0	0.65	1	09/15/21 10:58	
Ethylbenzene	1.0 U	1.0	0.20	1	09/15/21 10:58	
Isopropylbenzene (Cumene)	1.0 U	1.0	0.20	1	09/15/21 10:58	
Methyl Acetate	2.0 U	2.0	0.33	1	09/15/21 10:58	
Methyl tert-Butyl Ether	1.0 U	1.0	0.20	1	09/15/21 10:58	
Methylcyclohexane	1.0 U	1.0	0.20	1	09/15/21 10:58	
Styrene	1.0 U	1.0	0.20	1	09/15/21 10:58	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ2111405-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	09/15/21 10:58	
Toluene	1.0 U	1.0	0.20	1	09/15/21 10:58	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	09/15/21 10:58	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.24	1	09/15/21 10:58	
Vinyl Chloride	1.0 U	1.0	0.20	1	09/15/21 10:58	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	09/15/21 10:58	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	09/15/21 10:58	
m,p-Xylenes	2.0 U	2.0	0.20	1	09/15/21 10:58	
n-Butylbenzene	1.0 U	1.0	0.20	1	09/15/21 10:58	
n-Propylbenzene	1.0 U	1.0	0.20	1	09/15/21 10:58	
o-Xylene	1.0 U	1.0	0.20	1	09/15/21 10:58	
sec-Butylbenzene	1.0 U	1.0	0.20	1	09/15/21 10:58	
tert-Butylbenzene	1.0 U	1.0	0.20	1	09/15/21 10:58	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	09/15/21 10:58	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	09/15/21 10:58	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	85 - 122	09/15/21 10:58	
Dibromofluoromethane	104	80 - 116	09/15/21 10:58	
Toluene-d8	109	87 - 121	09/15/21 10:58	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	RQ2111406-04	**Basis:**	Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	5.0 U	5.0	0.20	1	09/15/21 12:22	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	0.44	1	09/15/21 12:22	
1,1,2-Trichloroethane	5.0 U	5.0	0.20	1	09/15/21 12:22	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0 U	5.0	0.20	1	09/15/21 12:22	
1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	0.20	1	09/15/21 12:22	
1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	0.29	1	09/15/21 12:22	
1,2,3-Trichlorobenzene	5.0 U	5.0	0.52	1	09/15/21 12:22	
1,2,4-Trichlorobenzene	5.0 U	5.0	0.42	1	09/15/21 12:22	
1,2,4-Trimethylbenzene	5.0 U	5.0	0.20	1	09/15/21 12:22	
1,2-Dibromo-3-chloropropane (DBCP)	5.0 U	5.0	0.75	1	09/15/21 12:22	
1,2-Dibromoethane	5.0 U	5.0	0.20	1	09/15/21 12:22	
1,2-Dichlorobenzene	5.0 U	5.0	0.20	1	09/15/21 12:22	
1,2-Dichloroethane	5.0 U	5.0	0.20	1	09/15/21 12:22	
1,2-Dichloropropane	5.0 U	5.0	0.20	1	09/15/21 12:22	
1,3,5-Trimethylbenzene	5.0 U	5.0	0.20	1	09/15/21 12:22	
1,3-Dichlorobenzene	5.0 U	5.0	0.20	1	09/15/21 12:22	
1,4-Dichlorobenzene	5.0 U	5.0	0.22	1	09/15/21 12:22	
1,4-Dioxane	100 U	100	20	1	09/15/21 12:22	
2-Butanone (MEK)	5.0 U	5.0	2.0	1	09/15/21 12:22	
2-Hexanone	5.0 U	5.0	0.36	1	09/15/21 12:22	
4-Methyl-2-pentanone	5.0 U	5.0	0.23	1	09/15/21 12:22	
Acetone	25 U	25	15	1	09/15/21 12:22	
Benzene	5.0 U	5.0	0.20	1	09/15/21 12:22	
Bromochloromethane	5.0 U	5.0	0.20	1	09/15/21 12:22	
Bromodichloromethane	5.0 U	5.0	0.20	1	09/15/21 12:22	
Bromoform	5.0 U	5.0	0.50	1	09/15/21 12:22	
Bromomethane	5.0 U	5.0	2.1	1	09/15/21 12:22	
Carbon Disulfide	5.0 U	5.0	0.29	1	09/15/21 12:22	
Carbon Tetrachloride	5.0 U	5.0	0.26	1	09/15/21 12:22	
Chlorobenzene	5.0 U	5.0	0.20	1	09/15/21 12:22	
Chloroethane	5.0 U	5.0	0.41	1	09/15/21 12:22	
Chloroform	5.0 U	5.0	0.20	1	09/15/21 12:22	
Chloromethane	5.0 U	5.0	1.4	1	09/15/21 12:22	
Cyclohexane	5.0 U	5.0	0.26	1	09/15/21 12:22	
Dibromochloromethane	5.0 U	5.0	0.20	1	09/15/21 12:22	
Dichlorodifluoromethane (CFC 12)	5.0 U	5.0	0.33	1	09/15/21 12:22	
Dichloromethane	5.0 U	5.0	2.8	1	09/15/21 12:22	
Ethylbenzene	5.0 U	5.0	1.0	1	09/15/21 12:22	
Isopropylbenzene (Cumene)	5.0 U	5.0	0.20	1	09/15/21 12:22	
Methyl Acetate	5.0 U	5.0	0.84	1	09/15/21 12:22	
Methyl tert-Butyl Ether	5.0 U	5.0	0.20	1	09/15/21 12:22	
Methylcyclohexane	5.0 U	5.0	0.31	1	09/15/21 12:22	
Styrene	5.0 U	5.0	1.0	1	09/15/21 12:22	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	RQ2111406-04	**Basis:**	Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	5.0 U	5.0	0.23	1	09/15/21 12:22	
Toluene	5.0 U	5.0	2.0	1	09/15/21 12:22	
Trichloroethene (TCE)	5.0 U	5.0	0.22	1	09/15/21 12:22	
Trichlorofluoromethane (CFC 11)	5.0 U	5.0	0.26	1	09/15/21 12:22	
Vinyl Chloride	5.0 U	5.0	0.46	1	09/15/21 12:22	
cis-1,2-Dichloroethene	5.0 U	5.0	0.20	1	09/15/21 12:22	
cis-1,3-Dichloropropene	5.0 U	5.0	0.20	1	09/15/21 12:22	
m,p-Xylenes	10 U	10	2.0	1	09/15/21 12:22	
n-Butylbenzene	5.0 U	5.0	0.20	1	09/15/21 12:22	
n-Propylbenzene	5.0 U	5.0	0.20	1	09/15/21 12:22	
o-Xylene	5.0 U	5.0	1.0	1	09/15/21 12:22	
sec-Butylbenzene	5.0 U	5.0	0.20	1	09/15/21 12:22	
tert-Butylbenzene	5.0 U	5.0	0.20	1	09/15/21 12:22	
trans-1,2-Dichloroethene	5.0 U	5.0	0.20	1	09/15/21 12:22	
trans-1,3-Dichloropropene	5.0 U	5.0	0.20	1	09/15/21 12:22	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	31 - 154	09/15/21 12:22	
Dibromofluoromethane	105	63 - 138	09/15/21 12:22	
Toluene-d8	103	66 - 138	09/15/21 12:22	

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling **Date Analyzed:** 09/15/21
Sample Matrix: Water

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2111405-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	21.7	20.0	109	75-125
1,1,2,2-Tetrachloroethane	8260C	26.1	20.0	131 *	78-126
1,1,2-Trichloroethane	8260C	20.3	20.0	102	82-121
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	23.2	20.0	116	67-124
1,1-Dichloroethane (1,1-DCA)	8260C	22.6	20.0	113	80-124
1,1-Dichloroethene (1,1-DCE)	8260C	22.2	20.0	111	71-118
1,2,3-Trichlorobenzene	8260C	24.9	20.0	124	67-136
1,2,4-Trichlorobenzene	8260C	24.1	20.0	120	75-132
1,2,4-Trimethylbenzene	8260C	22.7	20.0	113	81-126
1,2-Dibromo-3-chloropropane (DBCP)	8260C	25.3	20.0	127	55-136
1,2-Dibromoethane	8260C	21.5	20.0	108	82-127
1,2-Dichlorobenzene	8260C	23.0	20.0	115	80-119
1,2-Dichloroethane	8260C	19.7	20.0	98	71-127
1,2-Dichloropropane	8260C	21.1	20.0	105	80-119
1,3,5-Trimethylbenzene	8260C	22.6	20.0	113	81-128
1,3-Dichlorobenzene	8260C	22.4	20.0	112	83-121
1,4-Dichlorobenzene	8260C	20.9	20.0	104	79-119
1,4-Dioxane	8260C	406	400	101	44-154
2-Butanone (MEK)	8260C	19.6	20.0	98	61-137
2-Hexanone	8260C	19.3	20.0	97	63-124
4-Methyl-2-pentanone	8260C	19.2	20.0	96	66-124
Acetone	8260C	19.3	20.0	96	40-161
Benzene	8260C	20.9	20.0	105	79-119
Bromochloromethane	8260C	20.5	20.0	102	81-126
Bromodichloromethane	8260C	19.9	20.0	100	81-123
Bromoform	8260C	23.2	20.0	116	65-146
Bromomethane	8260C	22.8	20.0	114	42-166
Carbon Disulfide	8260C	25.6	20.0	128	66-128
Carbon Tetrachloride	8260C	19.4	20.0	97	70-127
Chlorobenzene	8260C	21.3	20.0	107	80-121
Chloroethane	8260C	24.1	20.0	120	62-131
Chloroform	8260C	21.1	20.0	106	79-120
Chloromethane	8260C	28.3	20.0	142 *	65-135

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling **Date Analyzed:** 09/15/21
Sample Matrix: Water

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2111405-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyclohexane	8260C	17.5	20.0	88	69-120
Dibromochloromethane	8260C	21.8	20.0	109	72-128
Dichlorodifluoromethane (CFC 12)	8260C	24.6	20.0	123	59-155
Dichloromethane	8260C	20.7	20.0	103	73-122
Ethylbenzene	8260C	20.3	20.0	102	76-120
Isopropylbenzene (Cumene)	8260C	23.2	20.0	116	77-128
Methyl Acetate	8260C	25.5	20.0	127	61-133
Methyl tert-Butyl Ether	8260C	21.5	20.0	107	75-118
Methylcyclohexane	8260C	19.4	20.0	97	51-129
Styrene	8260C	21.7	20.0	108	80-124
Tetrachloroethene (PCE)	8260C	20.8	20.0	104	72-125
Toluene	8260C	21.7	20.0	109	79-119
Trichloroethene (TCE)	8260C	20.1	20.0	101	74-122
Trichlorofluoromethane (CFC 11)	8260C	20.9	20.0	104	71-136
Vinyl Chloride	8260C	25.0	20.0	125	74-159
cis-1,2-Dichloroethene	8260C	21.0	20.0	105	80-121
cis-1,3-Dichloropropene	8260C	21.9	20.0	109	77-122
m,p-Xylenes	8260C	44.1	40.0	110	80-126
n-Butylbenzene	8260C	22.8	20.0	114	78-133
n-Propylbenzene	8260C	24.0	20.0	120	78-131
o-Xylene	8260C	21.7	20.0	108	79-123
sec-Butylbenzene	8260C	23.4	20.0	117	75-129
tert-Butylbenzene	8260C	22.1	20.0	111	76-126
trans-1,2-Dichloroethene	8260C	21.7	20.0	109	73-118
trans-1,3-Dichloropropene	8260C	21.9	20.0	109	71-133

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling **Date Analyzed:** 09/15/21
Sample Matrix: Soil

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis: Dry

Lab Control Sample
RQ2111406-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	23.6	20.0	118	68-123
1,1,2,2-Tetrachloroethane	8260C	19.5	20.0	98	78-121
1,1,2-Trichloroethane	8260C	19.2	20.0	96	84-117
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	24.0	20.0	120	54-121
1,1-Dichloroethane (1,1-DCA)	8260C	22.4	20.0	112	76-123
1,1-Dichloroethene (1,1-DCE)	8260C	22.4	20.0	112	65-115
1,2,3-Trichlorobenzene	8260C	19.6	20.0	98	60-128
1,2,4-Trichlorobenzene	8260C	20.8	20.0	104	62-130
1,2,4-Trimethylbenzene	8260C	20.7	20.0	103	67-121
1,2-Dibromo-3-chloropropane (DBCP)	8260C	20.6	20.0	103	54-135
1,2-Dibromoethane	8260C	19.6	20.0	98	77-117
1,2-Dichlorobenzene	8260C	19.3	20.0	97	75-116
1,2-Dichloroethane	8260C	22.3	20.0	111	74-116
1,2-Dichloropropane	8260C	20.4	20.0	102	79-112
1,3,5-Trimethylbenzene	8260C	20.9	20.0	104	66-122
1,3-Dichlorobenzene	8260C	19.8	20.0	99	72-118
1,4-Dichlorobenzene	8260C	18.7	20.0	94	72-117
1,4-Dioxane	8260C	393	400	98	59-147
2-Butanone (MEK)	8260C	22.4	20.0	112	67-129
2-Hexanone	8260C	21.7	20.0	108	68-118
4-Methyl-2-pentanone	8260C	22.1	20.0	110	64-123
Acetone	8260C	23.4 J	20.0	117	32-154
Benzene	8260C	20.4	20.0	102	77-114
Bromochloromethane	8260C	19.0	20.0	95	78-117
Bromodichloromethane	8260C	21.6	20.0	108	72-118
Bromoform	8260C	21.0	20.0	105	55-134
Bromomethane	8260C	16.3	20.0	82	10-150
Carbon Disulfide	8260C	23.6	20.0	118	44-139
Carbon Tetrachloride	8260C	25.5	20.0	128 *	51-123
Chlorobenzene	8260C	19.6	20.0	98	79-115
Chloroethane	8260C	22.1	20.0	110	10-140
Chloroform	8260C	21.0	20.0	105	76-115
Chloromethane	8260C	28.6	20.0	143 *	10-131

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling **Date Analyzed:** 09/15/21
Sample Matrix: Soil

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/Kg
Basis: Dry

Lab Control Sample
RQ2111406-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyclohexane	8260C	23.8	20.0	119	67-122
Dibromochloromethane	8260C	21.1	20.0	105	68-121
Dichlorodifluoromethane (CFC 12)	8260C	27.0	20.0	135	51-144
Dichloromethane	8260C	18.9	20.0	94	72-118
Ethylbenzene	8260C	20.7	20.0	104	64-118
Isopropylbenzene (Cumene)	8260C	21.8	20.0	109	60-123
Methyl Acetate	8260C	27.6	20.0	138 *	31-122
Methyl tert-Butyl Ether	8260C	19.2	20.0	96	76-118
Methylcyclohexane	8260C	22.5	20.0	112	70-124
Styrene	8260C	19.1	20.0	96	74-117
Tetrachloroethene (PCE)	8260C	21.5	20.0	107	58-124
Toluene	8260C	20.4	20.0	102	72-116
Trichloroethene (TCE)	8260C	20.7	20.0	103	69-118
Trichlorofluoromethane (CFC 11)	8260C	23.6	20.0	118	52-127
Vinyl Chloride	8260C	26.2	20.0	131	59-153
cis-1,2-Dichloroethene	8260C	20.4	20.0	102	79-113
cis-1,3-Dichloropropene	8260C	21.8	20.0	109	66-117
m,p-Xylenes	8260C	40.8	40.0	102	68-118
n-Butylbenzene	8260C	23.4	20.0	117	54-131
n-Propylbenzene	8260C	22.4	20.0	112	59-126
o-Xylene	8260C	19.6	20.0	98	71-116
sec-Butylbenzene	8260C	23.0	20.0	115	54-128
tert-Butylbenzene	8260C	21.3	20.0	107	58-123
trans-1,2-Dichloroethene	8260C	21.3	20.0	106	73-114
trans-1,3-Dichloropropene	8260C	22.2	20.0	111	57-135

Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Extraction Method: EPA 3546

Sample Name	Lab Code	2,4,6-Tribromophenol 10-109	2-Fluorobiphenyl 10-102	2-Fluorophenol 10-88
MAE-091021A-02	R2109364-002	59	59	42
MAE-091021A-04	R2109364-004	66	62	53
Method Blank	RQ2111391-01	68	70	64
Lab Control Sample	RQ2111391-02	61	61	52
Duplicate Lab Control Sample	RQ2111391-03	61	60	53

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Extraction Method: EPA 3546

		Nitrobenzene-d5	Phenol-d6	Terphenyl-d14
Sample Name	**Lab Code**	**10-95**	**10-145**	**10-106**
MAE-091021A-02	R2109364-002	50	44	81
MAE-091021A-04	R2109364-004	56	53	84
Method Blank	RQ2111391-01	67	63	109*
Lab Control Sample	RQ2111391-02	49	53	87
Duplicate Lab Control Sample	RQ2111391-03	51	54	93

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	RQ2111391-01	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	330 U	330	74	1	09/17/21 15:38	9/15/21	
2,3,4,6-Tetrachlorophenol	330 U	330	120	1	09/17/21 15:38	9/15/21	
2,4,5-Trichlorophenol	330 U	330	82	1	09/17/21 15:38	9/15/21	
2,4,6-Trichlorophenol	330 U	330	74	1	09/17/21 15:38	9/15/21	
2,4-Dichlorophenol	330 U	330	64	1	09/17/21 15:38	9/15/21	
2,4-Dimethylphenol	330 U	330	60	1	09/17/21 15:38	9/15/21	
2,4-Dinitrophenol	1700 U	1700	570	1	09/17/21 15:38	9/15/21	
2,4-Dinitrotoluene	330 U	330	130	1	09/17/21 15:38	9/15/21	
2,6-Dinitrotoluene	330 U	330	73	1	09/17/21 15:38	9/15/21	
2-Chloronaphthalene	330 U	330	67	1	09/17/21 15:38	9/15/21	
2-Chlorophenol	330 U	330	56	1	09/17/21 15:38	9/15/21	
2-Methylnaphthalene	330 U	330	55	1	09/17/21 15:38	9/15/21	
2-Methylphenol	330 U	330	69	1	09/17/21 15:38	9/15/21	
2-Nitroaniline	1700 U	1700	79	1	09/17/21 15:38	9/15/21	
2-Nitrophenol	330 U	330	77	1	09/17/21 15:38	9/15/21	
3,3'-Dichlorobenzidine	330 U	330	38	1	09/17/21 15:38	9/15/21	
3- and 4-Methylphenol Coelution	330 U	330	64	1	09/17/21 15:38	9/15/21	
3-Nitroaniline	1700 U	1700	67	1	09/17/21 15:38	9/15/21	
4,6-Dinitro-2-methylphenol	1700 U	1700	190	1	09/17/21 15:38	9/15/21	
4-Bromophenyl Phenyl Ether	330 U	330	88	1	09/17/21 15:38	9/15/21	
4-Chloro-3-methylphenol	330 U	330	67	1	09/17/21 15:38	9/15/21	
4-Chloroaniline	330 U	330	56	1	09/17/21 15:38	9/15/21	
4-Chlorophenyl Phenyl Ether	330 U	330	71	1	09/17/21 15:38	9/15/21	
4-Nitroaniline	1700 U	1700	34	1	09/17/21 15:38	9/15/21	
4-Nitrophenol	1700 U	1700	67	1	09/17/21 15:38	9/15/21	
Acenaphthene	330 U	330	63	1	09/17/21 15:38	9/15/21	
Acenaphthylene	330 U	330	67	1	09/17/21 15:38	9/15/21	
Acetophenone	330 U	330	96	1	09/17/21 15:38	9/15/21	
Anthracene	330 U	330	56	1	09/17/21 15:38	9/15/21	
Atrazine	330 U	330	47	1	09/17/21 15:38	9/15/21	
Benz(a)anthracene	330 U	330	50	1	09/17/21 15:38	9/15/21	
Benzaldehyde	1700 U	1700	80	1	09/17/21 15:38	9/15/21	
Benzo(a)pyrene	330 U	330	89	1	09/17/21 15:38	9/15/21	
Benzo(b)fluoranthene	330 U	330	56	1	09/17/21 15:38	9/15/21	
Benzo(g,h,i)perylene	330 U	330	77	1	09/17/21 15:38	9/15/21	
Benzo(k)fluoranthene	330 U	330	54	1	09/17/21 15:38	9/15/21	
Biphenyl	330 U	330	98	1	09/17/21 15:38	9/15/21	
2,2'-Oxybis(1-chloropropane)	330 U	330	68	1	09/17/21 15:38	9/15/21	
Bis(2-chloroethoxy)methane	330 U	330	81	1	09/17/21 15:38	9/15/21	
Bis(2-chloroethyl) Ether	330 U	330	66	1	09/17/21 15:38	9/15/21	
Bis(2-ethylhexyl) Phthalate	500 U	500	61	1	09/17/21 15:38	9/15/21	
Butyl Benzyl Phthalate	330 U	330	40	1	09/17/21 15:38	9/15/21	
Caprolactam	330 U	330	73	1	09/17/21 15:38	9/15/21	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	RQ2111391-01	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	330 U	330	54	1	09/17/21 15:38	9/15/21	
Chrysene	330 U	330	49	1	09/17/21 15:38	9/15/21	
Di-n-butyl Phthalate	330 U	330	54	1	09/17/21 15:38	9/15/21	
Di-n-octyl Phthalate	330 U	330	120	1	09/17/21 15:38	9/15/21	
Dibenz(a,h)anthracene	330 U	330	72	1	09/17/21 15:38	9/15/21	
Dibenzofuran	330 U	330	61	1	09/17/21 15:38	9/15/21	
Diethyl Phthalate	330 U	330	59	1	09/17/21 15:38	9/15/21	
Dimethyl Phthalate	330 U	330	63	1	09/17/21 15:38	9/15/21	
Fluoranthene	330 U	330	84	1	09/17/21 15:38	9/15/21	
Fluorene	330 U	330	62	1	09/17/21 15:38	9/15/21	
Hexachlorobenzene	330 U	330	80	1	09/17/21 15:38	9/15/21	
Hexachlorobutadiene	330 U	330	57	1	09/17/21 15:38	9/15/21	
Hexachlorocyclopentadiene	330 U	330	110	1	09/17/21 15:38	9/15/21	
Hexachloroethane	330 U	330	62	1	09/17/21 15:38	9/15/21	
Indeno(1,2,3-cd)pyrene	330 U	330	110	1	09/17/21 15:38	9/15/21	
Isophorone	330 U	330	70	1	09/17/21 15:38	9/15/21	
N-Nitrosodi-n-propylamine	330 U	330	110	1	09/17/21 15:38	9/15/21	
N-Nitrosodiphenylamine	330 U	330	210	1	09/17/21 15:38	9/15/21	
Naphthalene	330 U	330	62	1	09/17/21 15:38	9/15/21	
Nitrobenzene	330 U	330	60	1	09/17/21 15:38	9/15/21	
Pentachlorophenol (PCP)	1700 U	1700	330	1	09/17/21 15:38	9/15/21	
Phenanthrene	330 U	330	47	1	09/17/21 15:38	9/15/21	
Phenol	330 U	330	67	1	09/17/21 15:38	9/15/21	
Pyrene	330 U	330	56	1	09/17/21 15:38	9/15/21	
Pyridine	1700 U	1700	45	1	09/17/21 15:38	9/15/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	68	10 - 109	09/17/21 15:38	
2-Fluorobiphenyl	70	10 - 102	09/17/21 15:38	
2-Fluorophenol	64	10 - 88	09/17/21 15:38	
Nitrobenzene-d5	67	10 - 95	09/17/21 15:38	
Phenol-d6	63	10 - 145	09/17/21 15:38	
Terphenyl-d14	109 *	10 - 106	09/17/21 15:38	*

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling **Date Analyzed:** 09/17/21
Sample Matrix: Soil

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Units:ug/Kg
Basis: Dry

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ2111391-02			RQ2111391-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,2,4,5-Tetrachlorobenzene	8270D	3910	3250	120	4040	3300	123	13-145	3	30
2,3,4,6-Tetrachlorophenol	8270D	2070	3250	64	2200	3290	67	55-98	6	30
2,4,5-Trichlorophenol	8270D	2100	3250	65	2170	3290	66	52-93	3	30
2,4,6-Trichlorophenol	8270D	1860	3250	57	1930	3290	59	50-89	4	30
2,4-Dichlorophenol	8270D	1700	3250	52	1750	3290	53	50-84	2	30
2,4-Dimethylphenol	8270D	1720	3250	53	1750	3290	53	50-86	2	30
2,4-Dinitrophenol	8270D	1030 J	3250	32	1100 J	3290	33	20-101	7	30
2,4-Dinitrotoluene	8270D	2460	3250	76	2600	3290	79	60-106	5	30
2,6-Dinitrotoluene	8270D	2230	3250	69	2240	3290	68	57-100	<1	30
2-Chloronaphthalene	8270D	1930	3250	59	1950	3290	59	51-91	<1	30
2-Chlorophenol	8270D	1600	3250	49	1710	3290	52	45-83	7	30
2-Methylnaphthalene	8270D	1760	3250	54	1780	3290	54	50-86	1	30
2-Methylphenol	8270D	1770	3250	54	1830	3290	55	47-90	3	30
2-Nitroaniline	8270D	2290	3250	71	2310	3290	70	50-101	<1	30
2-Nitrophenol	8270D	1470	3250	45 *	1580	3290	48	48-83	8	30
3- and 4-Methylphenol Coelution	8270D	1800	3250	55	1870	3290	57	47-90	4	30
3-Nitroaniline	8270D	2030	3250	63	2090	3290	63	42-85	3	30
4,6-Dinitro-2-methylphenol	8270D	1790	3250	55	1780	3290	54	42-98	<1	30
4-Bromophenyl Phenyl Ether	8270D	2120	3250	65	2110	3290	64	54-94	<1	30
4-Chloro-3-methylphenol	8270D	1880	3250	58	1920	3290	58	51-89	2	30
4-Chloroaniline	8270D	1770	3250	54	1800	3290	55	32-77	2	30
4-Chlorophenyl Phenyl Ether	8270D	2150	3250	66	2240	3290	68	53-93	4	30
4-Nitroaniline	8270D	2220	3250	68	2390	3290	72	55-100	7	30
4-Nitrophenol	8270D	2010	3250	62	2110	3290	64	44-102	5	30
Acenaphthene	8270D	2100	3250	65	2170	3290	66	52-91	3	30
Acenaphthylene	8270D	2240	3250	69	2270	3290	69	53-97	1	30
Acetophenone	8270D	3180	6490	49	3350	6590	51	38-80	5	30
Anthracene	8270D	2480	3250	76	2580	3290	78	63-98	4	30
Benz(a)anthracene	8270D	2390	3250	74	2590	3290	79	59-99	8	30
Benzo(a)pyrene	8270D	3080	3250	95	3330	3290	101	71-129	8	30
Benzo(b)fluoranthene	8270D	2500	3250	77	2720	3290	83	59-101	8	30
Benzo(g,h,i)perylene	8270D	2600	3250	80	2780	3290	84	67-113	7	30
Benzo(k)fluoranthene	8270D	2680	3250	82	2940	3290	89	64-107	9	30

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling **Date Analyzed:** 09/17/21
Sample Matrix: Soil

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Units:ug/Kg
Basis: Dry

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ2111391-02			RQ2111391-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Biphenyl	8270D	1980	3250	61	2030	3290	62	43-88	3	30
2,2'-Oxybis(1-chloropropane)	8270D	1740	3250	54	1810	3290	55	45-85	4	30
Bis(2-chloroethoxy)methane	8270D	2010	3250	62	2080	3290	63	51-91	4	30
Bis(2-chloroethyl) Ether	8270D	1600	3250	49	1690	3290	51	46-87	5	30
Bis(2-ethylhexyl) Phthalate	8270D	2380	3250	73	2580	3290	78	67-108	8	30
Butyl Benzyl Phthalate	8270D	2490	3250	77	2690	3290	82	67-107	8	30
Caprolactam	8270D	1920	3250	59	1990	3290	60	50-91	3	30
Carbazole	8270D	2670	3250	82	2820	3290	86	62-109	6	30
Chrysene	8270D	2540	3250	78	2760	3290	84	62-103	8	30
Di-n-butyl Phthalate	8270D	2790	3250	86	2980	3290	91	66-109	7	30
Di-n-octyl Phthalate	8270D	2500	3250	77	2720	3290	83	65-114	9	30
Dibenz(a,h)anthracene	8270D	2630	3250	81	2850	3290	86	58-119	8	30
Dibenzofuran	8270D	2160	3250	67	2180	3290	66	52-93	<1	30
Diethyl Phthalate	8270D	2270	3250	70	2400	3290	73	56-96	5	30
Dimethyl Phthalate	8270D	2090	3250	64	2180	3290	66	55-94	4	30
Fluoranthene	8270D	2590	3250	80	2720	3290	83	59-104	5	30
Fluorene	8270D	2180	3250	67	2210	3290	67	54-93	1	30
Hexachlorobenzene	8270D	2070	3250	64	2160	3290	66	55-97	5	30
Hexachlorobutadiene	8270D	1530	3250	47	1650	3290	50	47-87	8	30
Hexachlorocyclopentadiene	8270D	1190	3250	37	1290	3290	39	10-125	8	30
Hexachloroethane	8270D	1430	3250	44	1550	3290	47	41-77	8	30
Indeno(1,2,3-cd)pyrene	8270D	2520	3250	77	2750	3290	83	64-114	9	30
Isophorone	8270D	1800	3250	56	1840	3290	56	40-81	2	30
N-Nitrosodi-n-propylamine	8270D	1680	3250	52	1740	3290	53	43-89	3	30
N-Nitrosodiphenylamine	8270D	2390	3250	73	2440	3290	74	53-107	2	30
Naphthalene	8270D	1640	3250	51	1730	3290	53	48-85	5	30
Nitrobenzene	8270D	1690	3250	52	1760	3290	53	46-84	4	30
Pentachlorophenol (PCP)	8270D	2340	3250	72	2440	3290	74	34-118	4	30
Phenanthrene	8270D	2410	3250	74	2520	3290	77	60-95	5	30
Phenol	8270D	1680	3250	52	1770	3290	54	44-90	5	30
Pyrene	8270D	2710	3250	84	2920	3290	89	65-107	7	30
Pyridine	8270D	1330 J	3250	41	1460 J	3290	44	32-67	9	30

Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY

Organochlorine Pesticides by Gas Chromatography using Microwave Extraction

Analysis Method: 8081B
Extraction Method: EPA 3546

Sample Name	Lab Code	Decachlorobiphenyl 10-145	Tetrachloro-m-xylene 10-123
MAE-091021A-02	R2109364-002	71	66
MAE-091021A-04	R2109364-004	58	56
Method Blank	RQ2111323-01	86	71
Lab Control Sample	RQ2111323-02	71	61
Duplicate Lab Control Sample	RQ2111323-03	82	75
MAE-091021A-02 MS	RQ2111323-06	53	55
MAE-091021A-02 DMS	RQ2111323-07	70	73

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21
Sample Matrix:	Soil	**Date Received:**	09/10/21
		Date Analyzed:	09/16/21
		Date Extracted:	09/14/21

Duplicate Matrix Spike Summary
Organochlorine Pesticides by Gas Chromatography using Microwave Extraction

Sample Name:	MAE-091021A-02	**Units:**	ug/Kg
Lab Code:	R2109364-002	**Basis:**	Dry
Analysis Method:	8081B		
Prep Method:	EPA 3546		

		Matrix Spike RQ2111323-06			Duplicate Matrix Spike RQ2111323-07					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
4,4'-DDD	2.1 U	5.04	8.19	62	6.34	8.30	76	10-165	23	30
4,4'-DDE	2.1 U	5.32	8.19	65	6.45	8.30	78	10-200	19	30
4,4'-DDT	2.1 U	3.96	8.19	48	5.31	8.30	64	10-200	29	30
Aldrin	2.1 U	4.57	8.19	56	5.66	8.30	68	10-171	21	30
Dieldrin	2.1 U	4.75	8.19	58	5.66	8.30	68	10-200	18	30
Endosulfan I	2.1 U	4.52	8.19	55	5.35	8.30	65	10-174	17	30
Endosulfan II	2.1 U	4.01	8.19	49	5.10	8.30	62	10-185	24	30
Endosulfan Sulfate	2.1 U	2.92	8.19	36	4.53	8.30	55	10-155	43*	30
Endrin	2.1 U	4.86	8.19	59	6.01	8.30	72	10-200	21	30
Endrin Aldehyde	2.1 U	2.69	8.19	33	3.83	8.30	46	10-148	35*	30
Endrin Ketone	2.1 U	3.93	8.19	48	5.18	8.30	62	10-197	27	30
Heptachlor	2.1 U	4.46	8.19	54	5.58	8.30	67	12-160	22	30
Heptachlor Epoxide	2.1 U	4.83	8.19	59	5.00	8.30	60	10-180	3	30
Methoxychlor	2.1 U	3.95	8.19	48	5.22	8.30	63	10-200	28	30
alpha-BHC	2.1 U	4.00	8.19	49	5.01	8.30	60	10-149	22	30
alpha-Chlordane	2.1 U	4.80	8.19	59	5.62	8.30	68	10-175	16	30
beta-BHC	2.1 U	4.72	8.19	58	5.09	8.30	61	10-162	8	30
delta-BHC	2.1 U	4.08	8.19	50	5.40	8.30	65	10-157	28	30
gamma-BHC (Lindane)	2.1 U	3.61	8.19	44	4.76	8.30	57	10-170	28	30
gamma-Chlordane	2.1 U	5.13	8.19	63	5.06	8.30	61	10-176	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	RQ2111323-01	**Basis:**	Dry

Organochlorine Pesticides by Gas Chromatography using Microwave Extraction

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
4,4'-DDE	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
4,4'-DDT	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
Aldrin	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
Dieldrin	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
Endosulfan I	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
Endosulfan II	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
Endosulfan Sulfate	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
Endrin	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
Endrin Aldehyde	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
Endrin Ketone	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
Heptachlor	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
Heptachlor Epoxide	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
Methoxychlor	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
Toxaphene	33 U	33	20	1	09/16/21 13:31	9/14/21	
alpha-BHC	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
alpha-Chlordane	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
beta-BHC	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
delta-BHC	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
gamma-BHC (Lindane)	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	
gamma-Chlordane	1.7 U	1.7	0.86	1	09/16/21 13:31	9/14/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	86	10 - 145	09/16/21 13:31	
Tetrachloro-m-xylene	71	10 - 123	09/16/21 13:31	

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling **Date Analyzed:** 09/16/21
Sample Matrix: Soil

Duplicate Lab Control Sample Summary
Organochlorine Pesticides by Gas Chromatography using Microwave Extraction

Units:ug/Kg
Basis: Dry

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ2111323-02			RQ2111323-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
4,4'-DDD	8081B	5.96	6.61	90	6.54	6.84	96	33-149	9	30
4,4'-DDE	8081B	5.23	6.61	79	6.33	6.84	92	38-147	19	30
4,4'-DDT	8081B	6.12	6.61	93	6.67	6.84	97	37-146	9	30
Aldrin	8081B	4.71	6.61	71	5.55	6.84	81	25-146	16	30
Dieldrin	8081B	5.25	6.61	80	6.10	6.84	89	40-140	15	30
Endosulfan I	8081B	4.70	6.61	71	5.67	6.84	83	35-116	19	30
Endosulfan II	8081B	5.22	6.61	79	5.80	6.84	85	39-122	11	30
Endosulfan Sulfate	8081B	4.76	6.61	72	6.08	6.84	89	31-132	24	30
Endrin	8081B	5.47	6.61	83	6.45	6.84	94	40-144	16	30
Endrin Aldehyde	8081B	6.27	6.61	95	6.25	6.84	91	10-109	<1	30
Endrin Ketone	8081B	5.77	6.61	87	6.32	6.84	92	38-122	9	30
Heptachlor	8081B	4.67	6.61	71	5.44	6.84	80	34-142	15	30
Heptachlor Epoxide	8081B	5.18	6.61	78	6.22	6.84	91	37-113	18	30
Methoxychlor	8081B	6.31	6.61	96	6.86	6.84	100	41-152	8	30
alpha-BHC	8081B	4.68	6.61	71	5.55	6.84	81	28-145	17	30
alpha-Chlordane	8081B	5.06	6.61	77	6.07	6.84	89	37-114	18	30
beta-BHC	8081B	5.01	6.61	76	5.91	6.84	86	38-144	16	30
delta-BHC	8081B	4.85	6.61	73	5.85	6.84	86	30-153	19	30
gamma-BHC (Lindane)	8081B	4.80	6.61	73	5.58	6.84	82	32-145	15	30
gamma-Chlordane	8081B	4.69	6.61	71	6.14	6.84	90	34-123	27	30

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs) by GC using Microwave Extraction

Analysis Method: 8082A
Extraction Method: EPA 3546

Sample Name	Lab Code	Decachlorobiphenyl 22-128	Tetrachloro-m-xylene 14-119
MAE-091021A-02	R2109364-002	74	73
MAE-091021A-04	R2109364-004	62	62
Method Blank	RQ2111323-01	85	77
Lab Control Sample	RQ2111323-04	85	77
Duplicate Lab Control Sample	RQ2111323-05	91	84

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	RQ2111323-01	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC using Microwave Extraction

Analysis Method: 8082A
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	33 U	33	18	1	09/15/21 23:02	9/14/21	
Aroclor 1221	68 U	68	27	1	09/15/21 23:02	9/14/21	
Aroclor 1232	33 U	33	20	1	09/15/21 23:02	9/14/21	
Aroclor 1242	33 U	33	18	1	09/15/21 23:02	9/14/21	
Aroclor 1248	33 U	33	19	1	09/15/21 23:02	9/14/21	
Aroclor 1254	33 U	33	18	1	09/15/21 23:02	9/14/21	
Aroclor 1260	33 U	33	18	1	09/15/21 23:02	9/14/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	85	22 - 128	09/15/21 23:02	
Tetrachloro-m-xylene	77	14 - 119	09/15/21 23:02	

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling **Date Analyzed:** 09/15/21
Sample Matrix: Soil

Duplicate Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC using Microwave Extraction

Units:ug/Kg
Basis: Dry

			Lab Control Sample		Duplicate Lab Control Sample					
			RQ2111323-04		RQ2111323-05					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	8082A	166	176	94	168	164	102	41-127	1	30
Aroclor 1260	8082A	181	176	103	182	164	111	49-135	<1	30

Client: Ramboll US Corp (Syracuse) **Service Request:** R2109364
Project: Mathews Ave ELT - Clean Soil Sampling
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	DCAA 10-151
MAE-091021A-02	R2109364-002	79
MAE-091021A-04	R2109364-004	95
Method Blank	RQ2111612-01	75
Lab Control Sample	RQ2111612-02	81
Duplicate Lab Control Sample	RQ2111612-03	80

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	RQ2111612-01	**Basis:**	Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-TP	10 U	10	4.6	1	09/22/21 23:57	9/21/21	
Pentachlorophenol (PCP)	10 U	10	6.4	1	09/22/21 23:57	9/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	75	10 - 151	09/22/21 23:57	

Client: Ramboll US Corp (Syracuse)
Project: Mathews Ave ELT - Clean Soil Sampling
Sample Matrix: Soil

Service Request: R2109364
Date Analyzed: 09/23/21

Duplicate Lab Control Sample Summary
Chlorinated Herbicides by GC

Units:ug/Kg
Basis: Dry

			Lab Control Sample			Duplicate Lab Control Sample				
			RQ2111612-02			RQ2111612-03				
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
2,4,5-TP	8151A	31.1	50.0	62	32.4	50.2	65	18-122	4	30
Pentachlorophenol (PCP)	8151A	20.4	50.2	41	20.2	50.4	40	10-103	1	30

Metals

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	Dry
Lab Code:	R2109364-MB		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum, Total	6010C	20	U	mg/Kg	20	12	1	09/16/21 17:56	09/15/21	
Antimony, Total	6010C	6.0	U	mg/Kg	6.0	0.6	1	09/16/21 17:56	09/15/21	
Arsenic, Total	6010C	1.0	U	mg/Kg	1.0	0.7	1	09/16/21 17:56	09/15/21	
Barium, Total	6010C	2.0	U	mg/Kg	2.0	1.5	1	09/16/21 17:56	09/15/21	
Beryllium, Total	6010C	0.30	U	mg/Kg	0.30	0.03	1	09/16/21 17:56	09/15/21	
Cadmium, Total	6010C	0.50	U	mg/Kg	0.50	0.09	1	09/16/21 17:56	09/15/21	
Calcium, Total	6010C	100	U	mg/Kg	100	40	1	09/16/21 17:56	09/15/21	
Chromium, Total	6010C	1.0	U	mg/Kg	1.0	0.4	1	09/16/21 17:56	09/15/21	
Cobalt, Total	6010C	5.0	U	mg/Kg	5.0	0.09	1	09/16/21 17:56	09/15/21	
Copper, Total	6010C	2.0	U	mg/Kg	2.0	0.2	1	09/16/21 17:56	09/15/21	
Iron, Total	6010C	20	U	mg/Kg	20	13	1	09/16/21 17:56	09/15/21	
Lead, Total	6010C	5.0	U	mg/Kg	5.0	0.4	1	09/16/21 17:56	09/15/21	
Magnesium, Total	6010C	100	U	mg/Kg	100	20	1	09/16/21 17:56	09/15/21	
Manganese, Total	6010C	2.0	U	mg/Kg	2.0	0.2	1	09/16/21 17:56	09/15/21	
Mercury, Total	7471B	0.020	U	mg/Kg	0.020	0.013	1	09/16/21 13:16	09/15/21	
Nickel, Total	6010C	4.0	U	mg/Kg	4.0	0.7	1	09/16/21 17:56	09/15/21	
Potassium, Total	6010C	200	U	mg/Kg	200	50	1	09/16/21 17:56	09/15/21	
Selenium, Total	6010C	1.0	U	mg/Kg	1.0	0.6	1	09/16/21 17:56	09/15/21	
Silver, Total	6010C	1.0	U	mg/Kg	1.0	0.09	1	09/16/21 17:56	09/15/21	
Sodium, Total	6010C	100	U	mg/Kg	100	20	1	09/16/21 17:56	09/15/21	
Thallium, Total	6010C	1.0	U	mg/Kg	1.0	0.7	1	09/16/21 17:56	09/15/21	
Vanadium, Total	6010C	5.0	U	mg/Kg	5.0	0.8	1	09/16/21 17:56	09/15/21	
Zinc, Total	6010C	2.0	U	mg/Kg	2.0	1.4	1	09/16/21 17:56	09/15/21	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21
Sample Matrix:	Soil	**Date Received:**	09/10/21
		Date Analyzed:	09/16/21
		Date Extracted:	09/15/21

Duplicate Matrix Spike Summary
Inorganic Parameters

Sample Name:	MAE-091021A-02	**Units:**	mg/Kg
Lab Code:	R2109364-002	**Basis:**	Dry
Analysis Method:	7471B		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		R2109364-002MS			R2109364-002DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Mercury, Total	0.051	0.150	0.119	83	0.132	0.108	75 *	80-120	12	20

Results flagged with an asterisk (*) indicate values outside control criteria.

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Client: Ramboll US Corp (Syracuse)
Project: Mathews Ave ELT - Clean Soil Sampling
Sample Matrix: Soil

Service Request: R2109364
Date Analyzed: 09/16/21

Lab Control Sample Summary
Inorganic Parameters

Units:mg/Kg
Basis: Dry

Lab Control Sample
R2109364-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Aluminum, Total	6010C	196	200	98	80-120
Antimony, Total	6010C	46.2	50.0	92	80-120
Arsenic, Total	6010C	3.86	4.0	97	80-120
Barium, Total	6010C	200	200	100	80-120
Beryllium, Total	6010C	4.83	5.00	97	80-120
Cadmium, Total	6010C	4.89	5.00	98	80-120
Calcium, Total	6010C	205	200	102	80-120
Chromium, Total	6010C	20.1	20.0	101	80-120
Cobalt, Total	6010C	49.9	50.0	100	80-120
Copper, Total	6010C	24.7	25.0	99	80-120
Iron, Total	6010C	99	100	99	80-120
Lead, Total	6010C	47.9	50.0	96	80-120
Magnesium, Total	6010C	188	200	94	80-120
Manganese, Total	6010C	48.9	50.0	98	80-120
Mercury, Total	7471B	0.0968	0.100	97	80-120
Nickel, Total	6010C	48.9	50.0	98	80-120
Potassium, Total	6010C	1930	2000	97	80-120
Selenium, Total	6010C	84.1	101	83	80-120
Silver, Total	6010C	4.68	5.0	94	80-120
Sodium, Total	6010C	1970	2000	98	80-120
Thallium, Total	6010C	180	200	90	80-120
Vanadium, Total	6010C	49.1	50.0	98	80-120
Zinc, Total	6010C	47.1	50.0	94	80-120

General Chemistry

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	Dry, per Method
Lab Code:	R2109364-MB1		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	EPA LKahn 7-27-1988	300 U	mg/Kg	300	110	1	09/24/21 18:36	NA	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	Dry
Lab Code:	R2109364-MB1		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chromium, Hexavalent	7199	0.40	U	mg/Kg	0.40	0.05	1	09/23/21 14:29	09/22/21	
Cyanide, Total	9012B	0.30	U	mg/Kg	0.30	0.17	1	09/15/21 22:16	09/15/21	

Analytical Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	Dry
Lab Code:	R2109364-MB2		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chromium, Hexavalent	7199	0.40 U	mg/Kg	0.40	0.05	1	09/29/21 17:16	09/29/21	

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21
Sample Matrix:	Soil	**Date Received:**	09/10/21
		Date Analyzed:	09/23/21
		Date Extracted:	09/22/21

Matrix Spike Summary
Chromium, Hexavalent

Sample Name:	MAE-091021A-04	**Units:**	mg/Kg
Lab Code:	R2109364-004	**Basis:**	Dry
Analysis Method:	7199		
Prep Method:	EPA 3060A		

Matrix Spike
R2109364-004MS1

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent	8.9 U	329	717	46 *	75-125

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Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21
Sample Matrix:	Soil	**Date Received:**	09/10/21
		Date Analyzed:	09/23/21
		Date Extracted:	09/22/21

Matrix Spike Summary
Chromium, Hexavalent

Sample Name:	MAE-091021A-04	**Units:**	mg/Kg
Lab Code:	R2109364-004	**Basis:**	Dry
Analysis Method:	7199		
Prep Method:	EPA 3060A		

Matrix Spike
R2109364-004MS2

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent	0.89 U	26.9	44.4	61 *	75-125

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Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21
Sample Matrix:	Soil	**Date Received:**	09/10/21
		Date Analyzed:	09/29/21
		Date Extracted:	09/29/21

Matrix Spike Summary
Chromium, Hexavalent

Sample Name:	MAE-091021A-04	**Units:**	mg/Kg
Lab Code:	R2109364-004	**Basis:**	Dry
Analysis Method:	7199		
Prep Method:	EPA 3060A		

Matrix Spike
R2109364-004MS3

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent	0.90 U	29.6	45.0	66 *	75-125

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Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project:	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21
Sample Matrix:	Soil	**Date Received:**	09/10/21
		Date Analyzed:	09/29/21
		Date Extracted:	09/29/21

Matrix Spike Summary
Chromium, Hexavalent

Sample Name:	MAE-091021A-04	**Units:**	mg/Kg
Lab Code:	R2109364-004	**Basis:**	Dry
Analysis Method:	7199		
Prep Method:	EPA 3060A		

Matrix Spike
R2109364-004MS4

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent	8.8 U	365	742	49 *	75-125

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ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21
Sample Matrix:	Soil	**Date Received:**	09/10/21
		Date Analyzed:	09/23/21

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	MAE-091021A-04	**Units:**	mg/Kg
Lab Code:	R2109364-004	**Basis:**	Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample R2109364-004DUP1 Result	Average	RPD	RPD Limit
Chromium, Hexavalent	7199	0.45	0.05	0.45 U	0.45 U	NC	NC	20

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21
Sample Matrix:	Soil	**Date Received:**	09/10/21
		Date Analyzed:	09/16/21

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	MAE-091021A-04	**Units:**	Percent
Lab Code:	R2109364-004	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample R2109364-004DUP1 Result	Average	RPD	RPD Limit
Total Solids	ALS SOP	-	-	87.9	88.7	88.3	<1	20

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Ramboll US Corp (Syracuse)	**Service Request:**	R2109364
Project	Mathews Ave ELT - Clean Soil Sampling	**Date Collected:**	09/10/21
Sample Matrix:	Soil	**Date Received:**	09/10/21
		Date Analyzed:	09/29/21

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	MAE-091021A-04	**Units:**	mg/Kg
Lab Code:	R2109364-004	**Basis:**	Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample R2109364-004DUP2 Result	Average	RPD	RPD Limit
Chromium, Hexavalent	7199	0.44	0.05	0.44 U	0.44 U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Ramboll US Corp (Syracuse)
Project: Mathews Ave ELT - Clean Soil Sampling
Sample Matrix: Soil

Service Request: R2109364
Date Analyzed: 09/15/21 - 09/24/21

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/Kg
Basis: Dry, per Method

Lab Control Sample
R2109364-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic (TOC)	EPA LKahn 7-27-1988	2310	2000	116	75-127
Chromium, Hexavalent	7199	548	579	95	80-120
Cyanide, Total	9012B	3.00	3.00	100	85-115

Client: Ramboll US Corp (Syracuse)
Project: Mathews Ave ELT - Clean Soil Sampling
Sample Matrix: Soil

Service Request: R2109364
Date Analyzed: 09/15/21 - 09/29/21

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/Kg
Basis: Dry

Lab Control Sample
R2109364-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent	7199	640	656	98	80-120
Cyanide, Total	9012B	17.8	18.0	99	85-115