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

e-Hardcopy 2.0
Automated Report

Technical Report for

Tetra Tech

Red Hill AFFF; HI

SGS Job Number: FC1302

Sampling Date: 12/07/22

Report to:

Tetra Tech
737 Bishop St Suite 2340
Honolulu, HI 96813

Total number of pages in report: **893**

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.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

Sections: 1 2 3 4 5 6 7

Table of Contents

SGS North America Inc.

Sample Summary

Tetra Tech

Job No: FC1302

Red Hill AFFF; HI

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							
FC1302-1	12/07/22	14:30	EG	12/14/22	SO	Soil	DU-3
FC1302-1A	12/07/22	14:30	EG	12/14/22	SO	Soil	DU-3
FC1302-1B	12/07/22	14:30	EG	12/14/22	SO	Soil	DU-3

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

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech **Job No:** FC1302

Site: Red Hill AFFF; HI **Report Date:** 1/4/2023 4:10:21 PM

On 12/14/2022, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 4 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC1302 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 QSM5.3 B-15

Matrix: SO **Batch ID:** OP94649

Sample(s) FC1170-8MS, FC1170-8MSD were used as the QC samples indicated.

Sample(s) FC1302-1, FC1302-1A, FC1302-1B have surrogates outside control limits.

FC1302-1 for 13C2-6:2FTS: Outside control limits.

FC1302-1 for 13C6-PFDA: Outside control limits.

FC1302-1: Dilution required (ID recovery standard failure).

FC1302-1A for 13C2-6:2FTS: Outside control limits.

FC1302-1A for 13C6-PFDA: Outside control limits.

FC1302-1A: Dilution required (ID recovery standard failure).

FC1302-1B for 13C2-6:2FTS: Outside control limits.

FC1302-1B for 13C6-PFDA: Outside control limits.

FC1302-1B: Dilution required (ID recovery standard failure).

SGS North America Inc. - Orlando 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.- Orlando 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: FC1302
Account: Tetra Tech
Project: Red Hill AFFF; HI
Collected: 12/07/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FC1302-1	**DU-3**					
Perfluorobutanoic acid		6.7 J	10	3.8	ug/kg	EPA 537M QSM5.3 B-15
Perfluoropentanoic acid		2.7 J	10	2.5	ug/kg	EPA 537M QSM5.3 B-15
Perfluorohexanoic acid		17.1	10	2.5	ug/kg	EPA 537M QSM5.3 B-15
Perfluorooctanoic acid		6.4 J	10	2.5	ug/kg	EPA 537M QSM5.3 B-15
Perfluorooctanesulfonic acid		3.2 J	10	2.5	ug/kg	EPA 537M QSM5.3 B-15
6:2 Fluorotelomer sulfonate [a]		267	100	25	ug/kg	EPA 537M QSM5.3 B-15
FC1302-1A	**DU-3**					
Perfluorobutanoic acid		5.5 J	9.9	3.7	ug/kg	EPA 537M QSM5.3 B-15
Perfluorohexanoic acid		14.0	9.9	2.5	ug/kg	EPA 537M QSM5.3 B-15
Perfluorooctanoic acid		9.6 J	9.9	2.5	ug/kg	EPA 537M QSM5.3 B-15
Perfluorooctanesulfonic acid		4.8 J	9.9	2.5	ug/kg	EPA 537M QSM5.3 B-15
6:2 Fluorotelomer sulfonate [a]		109	39	9.9	ug/kg	EPA 537M QSM5.3 B-15
FC1302-1B	**DU-3**					
Perfluorobutanoic acid		7.4 J	10	3.8	ug/kg	EPA 537M QSM5.3 B-15
Perfluoropentanoic acid		3.0 J	10	2.5	ug/kg	EPA 537M QSM5.3 B-15
Perfluorohexanoic acid		19.4	10	2.5	ug/kg	EPA 537M QSM5.3 B-15
Perfluorooctanoic acid		3.8 J	10	2.5	ug/kg	EPA 537M QSM5.3 B-15
6:2 Fluorotelomer sulfonate [a]		306	100	25	ug/kg	EPA 537M QSM5.3 B-15

(a) Dilution required (ID recovery standard failure).

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	DU-3		
Lab Sample ID:	FC1302-1	**Date Sampled:**	12/07/22
Matrix:	SO - Soil	**Date Received:**	12/14/22
Method:	EPA 537M QSM5.3 B-15 IN HOUSE	**Percent Solids:**	n/a [a]
Project:	Red Hill AFFF; HI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q9082.D	10	12/29/22 00:25	LR	12/21/22 09:00	OP94649	S5Q134
Run #2 [b]	5Q9096.D	40	12/29/22 12:22	LR	12/21/22 09:00	OP94649	S5Q135
Run #3 [b]	5Q9246.D	100	01/03/23 18:51	LR	12/21/22 09:00	OP94649	S5Q137

	Initial Weight	Final Volume
Run #1	2.00 g	1.0 ml
Run #2	2.00 g	1.0 ml
Run #3	2.00 g	1.0 ml

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	6.7	10	3.8	ug/kg	J
2706-90-3	Perfluoropentanoic acid	2.7	10	2.5	ug/kg	J
307-24-4	Perfluorohexanoic acid	17.1	10	2.5	ug/kg	
375-85-9	Perfluoroheptanoic acid	ND	10	2.5	ug/kg	
335-67-1	Perfluorooctanoic acid	6.4	10	2.5	ug/kg	J
375-95-1	Perfluorononanoic acid	ND	10	2.5	ug/kg	
335-76-2	Perfluorodecanoic acid	ND [c]	40	10	ug/kg	
2058-94-8	Perfluoroundecanoic acid	ND	10	2.5	ug/kg	
307-55-1	Perfluorododecanoic acid	ND	10	2.5	ug/kg	
72629-94-8	Perfluorotridecanoic acid	ND	10	2.7	ug/kg	
376-06-7	Perfluorotetradecanoic acid	ND	10	2.5	ug/kg	
PERFLUOROALKYLSULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	ND	10	2.5	ug/kg	
2706-91-4	Perfluoropentanesulfonic acid	ND	10	2.5	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	ND	10	2.5	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	ND	10	2.5	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	3.2	10	2.5	ug/kg	J
68259-12-1	Perfluorononanesulfonic acid	ND	10	2.5	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	ND	10	2.5	ug/kg	
PERFLUOROOCTANESULFONAMIDES						
754-91-6	PFOSA	ND	10	2.5	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	10	2.5	ug/kg	
2991-50-6	EtFOSAA	ND	10	2.5	ug/kg	
FLUOROTELOMER SULFONATES						

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

Report of Analysis

Client Sample ID:	DU-3		
Lab Sample ID:	FC1302-1	**Date Sampled:**	12/07/22
Matrix:	SO - Soil	**Date Received:**	12/14/22
Method:	EPA 537M QSM5.3 B-15 IN HOUSE	**Percent Solids:**	n/a [a]
Project:	Red Hill AFFF; HI		

CAS No.	Compound	Result	RL	MDL	Units	Q
757124-72-4	4:2 Fluorotelomer sulfonate	ND	10	2.5	ug/kg	
27619-97-2	6:2 Fluorotelomer sulfonate	267 [d]	100	25	ug/kg	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	10	2.5	ug/kg	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Run# 3	Limits
	13C4-PFBA	79%	62%	93%	50-150%
	13C5-PFPeA	75%	63%	97%	50-150%
	13C5-PFHxA	76%	61%	96%	50-150%
	13C4-PFHpA	77%	63%	99%	50-150%
	13C8-PFOA	70%	59%	95%	50-150%
	13C9-PFNA	83%	62%	96%	50-150%
	13C6-PFDA	35% [e]	52%	89%	50-150%
	13C7-PFUnDA	83%	58%	96%	50-150%
	13C2-PFDoDA	82%	55%	96%	50-150%
	13C2-PFTeDA	84%	47% [e]	99%	50-150%
	13C3-PFBS	80%	75%	95%	50-150%
	13C3-PFHxS	77%	71%	97%	50-150%
	13C8-PFOS	82%	71%	94%	50-150%
	13C8-FOSA	86%	55%	94%	50-150%
	d3-MeFOSAA	101%	41% [e]	88%	50-150%
	d5-EtFOSAA	92%	50%	88%	50-150%
	13C2-4:2FTS	70%	55%	88%	50-150%
	13C2-6:2FTS	203% [e]	163% [e]	91%	50-150%
	13C2-8:2FTS	51%	54%	85%	50-150%

(a) Sample was dried prior to analysis.
(b) Dilution required (ID recovery standard failure).
(c) Result is from Run# 2
(d) Result is from Run# 3
(e) Outside control limits.

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

SGS North America Inc.

Report of Analysis

Client Sample ID:	DU-3		
Lab Sample ID:	FC1302-1A	**Date Sampled:**	12/07/22
Matrix:	SO - Soil	**Date Received:**	12/14/22
Method:	EPA 537M QSM5.3 B-15 IN HOUSE	**Percent Solids:**	n/a [a]
Project:	Red Hill AFFF; HI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q9083.D	10	12/29/22 00:42	LR	12/21/22 09:00	OP94649	S5Q134
Run #2 [b]	5Q9098.D	40	12/29/22 12:56	LR	12/21/22 09:00	OP94649	S5Q135

	Initial Weight	Final Volume
Run #1	2.03 g	1.0 ml
Run #2	2.03 g	1.0 ml

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	5.5	9.9	3.7	ug/kg	J
2706-90-3	Perfluoropentanoic acid	ND	9.9	2.5	ug/kg	
307-24-4	Perfluorohexanoic acid	14.0	9.9	2.5	ug/kg	
375-85-9	Perfluoroheptanoic acid	ND	9.9	2.5	ug/kg	
335-67-1	Perfluorooctanoic acid	9.6	9.9	2.5	ug/kg	J
375-95-1	Perfluorononanoic acid	ND	9.9	2.5	ug/kg	
335-76-2	Perfluorodecanoic acid	ND [c]	39	9.9	ug/kg	
2058-94-8	Perfluoroundecanoic acid	ND	9.9	2.5	ug/kg	
307-55-1	Perfluorododecanoic acid	ND	9.9	2.5	ug/kg	
72629-94-8	Perfluorotridecanoic acid	ND	9.9	2.6	ug/kg	
376-06-7	Perfluorotetradecanoic acid	ND	9.9	2.5	ug/kg	
PERFLUOROALKYLSULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	ND	9.9	2.5	ug/kg	
2706-91-4	Perfluoropentanesulfonic acid	ND	9.9	2.5	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	ND	9.9	2.5	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	ND	9.9	2.5	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	4.8	9.9	2.5	ug/kg	J
68259-12-1	Perfluorononanesulfonic acid	ND	9.9	2.5	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	ND	9.9	2.5	ug/kg	
PERFLUOROOCTANESULFONAMIDES						
754-91-6	PFOSA	ND	9.9	2.5	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	9.9	2.5	ug/kg	
2991-50-6	EtFOSAA	ND	9.9	2.5	ug/kg	
FLUOROTELOMER SULFONATES						
757124-72-4	4:2 Fluorotelomer sulfonate	ND	9.9	2.5	ug/kg	
27619-97-2	6:2 Fluorotelomer sulfonate	109 [c]	39	9.9	ug/kg	

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

Report of Analysis

Client Sample ID: DU-3
Lab Sample ID: FC1302-1A
Matrix: SO - Soil
Method: EPA 537M QSM5.3 B-15 IN HOUSE
Project: Red Hill AFFF; HI

Date Sampled: 12/07/22
Date Received: 12/14/22
Percent Solids: n/a [a]

CAS No.	Compound	Result	RL	MDL	Units	Q
39108-34-4	8:2 Fluorotelomer sulfonate	ND	9.9	2.5	ug/kg	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	80%	62%	50-150%
	13C5-PFPeA	77%	63%	50-150%
	13C5-PFHxA	76%	63%	50-150%
	13C4-PFHpA	80%	63%	50-150%
	13C8-PFOA	70%	58%	50-150%
	13C9-PFNA	83%	61%	50-150%
	13C6-PFDA	39% [d]	53%	50-150%
	13C7-PFUnDA	83%	53%	50-150%
	13C2-PFDoDA	88%	51%	50-150%
	13C2-PFTeDA	76%	46% [d]	50-150%
	13C3-PFBS	80%	77%	50-150%
	13C3-PFHxS	79%	69%	50-150%
	13C8-PFOS	81%	72%	50-150%
	13C8-FOSA	88%	59%	50-150%
	d3-MeFOSAA	98%	48% [d]	50-150%
	d5-EtFOSAA	87%	55%	50-150%
	13C2-4:2FTS	71%	66%	50-150%
	13C2-6:2FTS	181% [d]	150%	50-150%
	13C2-8:2FTS	51%	63%	50-150%

(a) Sample was dried prior to analysis.
(b) Dilution required (ID recovery standard failure).
(c) Result is from Run# 2
(d) Outside control limits.

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

SGS North America Inc.

Report of Analysis

Client Sample ID:	DU-3		
Lab Sample ID:	FC1302-1B	**Date Sampled:**	12/07/22
Matrix:	SO - Soil	**Date Received:**	12/14/22
Method:	EPA 537M QSM5.3 B-15 IN HOUSE	**Percent Solids:**	n/a [a]
Project:	Red Hill AFFF; HI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q9084.D	10	12/29/22 00:59	LR	12/21/22 09:00	OP94649	S5Q134
Run #2 [b]	5Q9100.D	40	12/29/22 13:30	LR	12/21/22 09:00	OP94649	S5Q135
Run #3 [b]	5Q9247.D	100	01/03/23 19:06	LR	12/21/22 09:00	OP94649	S5Q137

	Initial Weight	Final Volume
Run #1	2.01 g	1.0 ml
Run #2	2.01 g	1.0 ml
Run #3	2.01 g	1.0 ml

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	7.4	10	3.8	ug/kg	J
2706-90-3	Perfluoropentanoic acid	3.0	10	2.5	ug/kg	J
307-24-4	Perfluorohexanoic acid	19.4	10	2.5	ug/kg	
375-85-9	Perfluoroheptanoic acid	ND	10	2.5	ug/kg	
335-67-1	Perfluorooctanoic acid	3.8	10	2.5	ug/kg	J
375-95-1	Perfluorononanoic acid	ND	10	2.5	ug/kg	
335-76-2	Perfluorodecanoic acid	ND [c]	40	10	ug/kg	
2058-94-8	Perfluoroundecanoic acid	ND	10	2.5	ug/kg	
307-55-1	Perfluorododecanoic acid	ND	10	2.5	ug/kg	
72629-94-8	Perfluorotridecanoic acid	ND	10	2.6	ug/kg	
376-06-7	Perfluorotetradecanoic acid	ND	10	2.5	ug/kg	
PERFLUOROALKYLSULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	ND	10	2.5	ug/kg	
2706-91-4	Perfluoropentanesulfonic acid	ND	10	2.5	ug/kg	
355-46-4	Perfluorohexanesulfonic acid	ND	10	2.5	ug/kg	
375-92-8	Perfluoroheptanesulfonic acid	ND	10	2.5	ug/kg	
1763-23-1	Perfluorooctanesulfonic acid	ND	10	2.5	ug/kg	
68259-12-1	Perfluorononanesulfonic acid	ND	10	2.5	ug/kg	
335-77-3	Perfluorodecanesulfonic acid	ND	10	2.5	ug/kg	
PERFLUOROOCTANESULFONAMIDES						
754-91-6	PFOSA	ND	10	2.5	ug/kg	
PERFLUOROOCTANESULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	10	2.5	ug/kg	
2991-50-6	EtFOSAA	ND	10	2.5	ug/kg	
FLUOROTELOMER SULFONATES						

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:	DU-3		
Lab Sample ID:	FC1302-1B	**Date Sampled:**	12/07/22
Matrix:	SO - Soil	**Date Received:**	12/14/22
Method:	EPA 537M QSM5.3 B-15 IN HOUSE	**Percent Solids:**	n/a [a]
Project:	Red Hill AFFF; HI		

CAS No.	Compound	Result	RL	MDL	Units	Q
757124-72-4	4:2 Fluorotelomer sulfonate	ND	10	2.5	ug/kg	
27619-97-2	6:2 Fluorotelomer sulfonate	306 [d]	100	25	ug/kg	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	10	2.5	ug/kg	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Run# 3	Limits
	13C4-PFBA	84%	64%	90%	50-150%
	13C5-PFPeA	79%	64%	93%	50-150%
	13C5-PFHxA	81%	64%	93%	50-150%
	13C4-PFHpA	81%	65%	93%	50-150%
	13C8-PFOA	68%	58%	92%	50-150%
	13C9-PFNA	83%	64%	93%	50-150%
	13C6-PFDA	36% [e]	51%	87%	50-150%
	13C7-PFUnDA	87%	58%	92%	50-150%
	13C2-PFDoDA	86%	56%	93%	50-150%
	13C2-PFTeDA	89%	54%	96%	50-150%
	13C3-PFBS	82%	78%	91%	50-150%
	13C3-PFHxS	80%	74%	93%	50-150%
	13C8-PFOS	81%	78%	91%	50-150%
	13C8-FOSA	91%	64%	93%	50-150%
	d3-MeFOSAA	106%	47% [e]	89%	50-150%
	d5-EtFOSAA	91%	54%	90%	50-150%
	13C2-4:2FTS	73%	65%	87%	50-150%
	13C2-6:2FTS	222% [e]	188% [e]	87%	50-150%
	13C2-8:2FTS	55%	60%	80%	50-150%

(a) Sample was dried prior to analysis.
(b) Dilution required (ID recovery standard failure).
(c) Result is from Run# 2
(d) Result is from Run# 3
(e) Outside control limits.

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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits

FC1302

Chain of Custody Record

INVOICE TO:
TETRA TECH
ATTN ERIC JENSEN @ tetratech.com
PROJECT # 200-23121

TO : SGS Axys, 4405 Vineland Rd, Suite C-15, Orlando (FL)
Zip: 32811 ; Contact : 407-425-6700

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Roger Brewer	Site Contact: Roger Brewer	Date: ~~12/07/2022~~ 12/12/22	COC No: TO-23121
Hawai'i Dept. of Health, HEER	Tel/Fax: 1-808-586-4249	Lab Contact:	Carrier: FEDEX	1 of X COCs
2385 Waimano Home Road #100	Analysis Turnaround Time			Sampler:
Pearl City, HI 96782	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone : (808) 586-4249	TAT if different from Below ____			Walk-in Client:
Fax: (808) 586-7537	☑ 2 weeks			Lab Sampling:
Project Name: AFFF Release- Nov 2022	☐ 1 week			
Site: Red Hill	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (MI= Multi Increment)	Matrix	# of Cont.	PFAS 537 modified (Table B-15)	QSM 5.4 B-15 compliant	Sample Specific Notes:
1 RH DU- 3	12/7/2022	(1430) 02:30pm	MI	Solid/ soil	1	X		

INITIAL ASSESSMENT

LABEL VERIFICATION

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments: ROGER BREWER, ROGER.BREWER@doh.hawaii.gov
-Multi Increment sample processing required; Test 10 gm subsample required. Call Roger Brewer (Hawaii Dept of Health, 808-737-4050) to confirm MI processing, and analysis upon receipt. AS
REPORT TO: LIZ GALVEZ : elizabeth.galvez@doh.hawaii.gov

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Elizabeth. Galvez	DOH-HEER	12/7/22/(1813)	Anay Shende (ASlwdy)	DOH-SHWB	12/7/22/(1813) HST
Relinquished by: Anay Shende (ASlwdy)	Company: DOH-SHWB	Date/Time: 12/8/22 (1600)	Received by:	Company: 12/08/22 1600	Date/Time:
Relinquished by: EM Jensen	Company: Tetra Tech	Date/Time: 12/12/22 1400 FedEx	Received in Laboratory by:	Company:	Date/Time: 12/14/22 1030

Form No. CA-C-WI-002, Rev. 4.2, dated 04/02/2013

FC1302: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FC1302 **Client:** TETRA TECH **Project:** HAWAI'I DEPT OF HEALTH, HEER

Date / Time Received: 12/14/2022 10:30:00 AM **Delivery Method:** FX **Airbill #'s:**

Therm ID: IR 1; **Therm CF:** 0.2; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.8);

Cooler Temps (Corrected) °C: Cooler 1: (4.0);

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: NATHANS Date: 12/14/2022 10:30:00 Reviewer: _____ Date: _____

QC Evaluation: DOD QSM5.x Limits

Job Number: FC1302
Account: Tetra Tech
Project: Red Hill AFFF; HI
Collected: 12/07/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP94649	EPA 537M QSM5.3 B-15						
OP94649-BS	375-22-4	Perfluorobutanoic acid	BSP	REC	115	%	71-135
OP94649-BS	2706-90-3	Perfluoropentanoic acid	BSP	REC	106	%	69-132
OP94649-BS	307-24-4	Perfluorohexanoic acid	BSP	REC	110	%	70-132
OP94649-BS	375-85-9	Perfluoroheptanoic acid	BSP	REC	110	%	71-131
OP94649-BS	335-67-1	Perfluorooctanoic acid	BSP	REC	108	%	69-133
OP94649-BS	375-95-1	Perfluorononanoic acid	BSP	REC	110	%	72-129
OP94649-BS	335-76-2	Perfluorodecanoic acid	BSP	REC	109	%	69-133
OP94649-BS	2058-94-8	Perfluoroundecanoic acid	BSP	REC	105	%	64-136
OP94649-BS	307-55-1	Perfluorododecanoic acid	BSP	REC	115	%	69-135
OP94649-BS	72629-94-8	Perfluorotridecanoic acid	BSP	REC	114	%	66-139
OP94649-BS	376-06-7	Perfluorotetradecanoic acid	BSP	REC	97	%	69-133
OP94649-BS	375-73-5	Perfluorobutanesulfonic acid	BSP	REC	111	%	72-128
OP94649-BS	2706-91-4	Perfluoropentanesulfonic acid	BSP	REC	107	%	73-123
OP94649-BS	355-46-4	Perfluorohexanesulfonic acid	BSP	REC	116	%	67-130
OP94649-BS	375-92-8	Perfluoroheptanesulfonic acid	BSP	REC	109	%	70-132
OP94649-BS	1763-23-1	Perfluorooctanesulfonic acid	BSP	REC	113	%	68-136
OP94649-BS	68259-12-1	Perfluorononanesulfonic acid	BSP	REC	111	%	69-125
OP94649-BS	335-77-3	Perfluorodecanesulfonic acid	BSP	REC	101	%	59-134
OP94649-BS	754-91-6	PFOSA	BSP	REC	108	%	67-137
OP94649-BS	2355-31-9	MeFOSAA	BSP	REC	111	%	63-144
OP94649-BS	2991-50-6	EtFOSAA	BSP	REC	121	%	61-139
OP94649-BS	757124-72-4	4:2 Fluorotelomer sulfonate	BSP	REC	111	%	62-145
OP94649-BS	27619-97-2	6:2 Fluorotelomer sulfonate	BSP	REC	118	%	64-140
OP94649-BS	39108-34-4	8:2 Fluorotelomer sulfonate	BSP	REC	114	%	65-137
OP94649-MS*	375-22-4	Perfluorobutanoic acid	MS	REC	92	%	71-135
OP94649-MS*	2706-90-3	Perfluoropentanoic acid	MS	REC	85	%	69-132
OP94649-MS*	307-24-4	Perfluorohexanoic acid	MS	REC	88	%	70-132
OP94649-MS*	375-85-9	Perfluoroheptanoic acid	MS	REC	88	%	71-131
OP94649-MS*	335-67-1	Perfluorooctanoic acid	MS	REC	89	%	69-133
OP94649-MS*	375-95-1	Perfluorononanoic acid	MS	REC	88	%	72-129
OP94649-MS*	335-76-2	Perfluorodecanoic acid	MS	REC	90	%	69-133
OP94649-MS*	2058-94-8	Perfluoroundecanoic acid	MS	REC	94	%	64-136
OP94649-MS*	307-55-1	Perfluorododecanoic acid	MS	REC	90	%	69-135
OP94649-MS*	72629-94-8	Perfluorotridecanoic acid	MS	REC	84	%	66-139
OP94649-MS*	376-06-7	Perfluorotetradecanoic acid	MS	REC	82	%	69-133
OP94649-MS*	375-73-5	Perfluorobutanesulfonic acid	MS	REC	93	%	72-128
OP94649-MS*	2706-91-4	Perfluoropentanesulfonic acid	MS	REC	87	%	73-123
OP94649-MS*	355-46-4	Perfluorohexanesulfonic acid	MS	REC	93	%	67-130
OP94649-MS*	375-92-8	Perfluoroheptanesulfonic acid	MS	REC	92	%	70-132
OP94649-MS*	1763-23-1	Perfluorooctanesulfonic acid	MS	REC	97	%	68-136
OP94649-MS*	68259-12-1	Perfluorononanesulfonic acid	MS	REC	91	%	69-125
OP94649-MS*	335-77-3	Perfluorodecanesulfonic acid	MS	REC	85	%	59-134

* Sample used for QC is not from job FC1302

QC Evaluation: DOD QSM5.x Limits

Job Number: FC1302
Account: Tetra Tech
Project: Red Hill AFFF; HI
Collected: 12/07/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP94649-MS*	754-91-6	PFOSA	MS	REC	90	%	67-137
OP94649-MS*	2355-31-9	MeFOSAA	MS	REC	84	%	63-144
OP94649-MS*	2991-50-6	EtFOSAA	MS	REC	95	%	61-139
OP94649-MS*	757124-72-4	4:2 Fluorotelomer sulfonate	MS	REC	88	%	62-145
OP94649-MS*	27619-97-2	6:2 Fluorotelomer sulfonate	MS	REC	95	%	64-140
OP94649-MS*	39108-34-4	8:2 Fluorotelomer sulfonate	MS	REC	91	%	65-137
OP94649-MSD*	375-22-4	Perfluorobutanoic acid	MSD	REC	96	%	71-135
OP94649-MSD*	375-22-4	Perfluorobutanoic acid	MSD	RPD	5	%	30
OP94649-MSD*	2706-90-3	Perfluoropentanoic acid	MSD	REC	89	%	69-132
OP94649-MSD*	2706-90-3	Perfluoropentanoic acid	MSD	RPD	6	%	30
OP94649-MSD*	307-24-4	Perfluorohexanoic acid	MSD	REC	92	%	70-132
OP94649-MSD*	307-24-4	Perfluorohexanoic acid	MSD	RPD	6	%	30
OP94649-MSD*	375-85-9	Perfluoroheptanoic acid	MSD	REC	92	%	71-131
OP94649-MSD*	375-85-9	Perfluoroheptanoic acid	MSD	RPD	6	%	30
OP94649-MSD*	335-67-1	Perfluorooctanoic acid	MSD	REC	92	%	69-133
OP94649-MSD*	335-67-1	Perfluorooctanoic acid	MSD	RPD	4	%	30
OP94649-MSD*	375-95-1	Perfluorononanoic acid	MSD	REC	92	%	72-129
OP94649-MSD*	375-95-1	Perfluorononanoic acid	MSD	RPD	5	%	30
OP94649-MSD*	335-76-2	Perfluorodecanoic acid	MSD	REC	96	%	69-133
OP94649-MSD*	335-76-2	Perfluorodecanoic acid	MSD	RPD	7	%	30
OP94649-MSD*	2058-94-8	Perfluoroundecanoic acid	MSD	REC	98	%	64-136
OP94649-MSD*	2058-94-8	Perfluoroundecanoic acid	MSD	RPD	5	%	30
OP94649-MSD*	307-55-1	Perfluorododecanoic acid	MSD	REC	99	%	69-135
OP94649-MSD*	307-55-1	Perfluorododecanoic acid	MSD	RPD	10	%	30
OP94649-MSD*	72629-94-8	Perfluorotridecanoic acid	MSD	REC	93	%	66-139
OP94649-MSD*	72629-94-8	Perfluorotridecanoic acid	MSD	RPD	12	%	30
OP94649-MSD*	376-06-7	Perfluorotetradecanoic acid	MSD	REC	84	%	69-133
OP94649-MSD*	376-06-7	Perfluorotetradecanoic acid	MSD	RPD	4	%	30
OP94649-MSD*	375-73-5	Perfluorobutanesulfonic acid	MSD	REC	96	%	72-128
OP94649-MSD*	375-73-5	Perfluorobutanesulfonic acid	MSD	RPD	5	%	30
OP94649-MSD*	2706-91-4	Perfluoropentanesulfonic acid	MSD	REC	91	%	73-123
OP94649-MSD*	2706-91-4	Perfluoropentanesulfonic acid	MSD	RPD	6	%	30
OP94649-MSD*	355-46-4	Perfluorohexanesulfonic acid	MSD	REC	96	%	67-130
OP94649-MSD*	355-46-4	Perfluorohexanesulfonic acid	MSD	RPD	5	%	30
OP94649-MSD*	375-92-8	Perfluoroheptanesulfonic acid	MSD	REC	95	%	70-132
OP94649-MSD*	375-92-8	Perfluoroheptanesulfonic acid	MSD	RPD	4	%	30
OP94649-MSD*	1763-23-1	Perfluorooctanesulfonic acid	MSD	REC	101	%	68-136
OP94649-MSD*	1763-23-1	Perfluorooctanesulfonic acid	MSD	RPD	4	%	30
OP94649-MSD*	68259-12-1	Perfluorononanesulfonic acid	MSD	REC	95	%	69-125
OP94649-MSD*	68259-12-1	Perfluorononanesulfonic acid	MSD	RPD	5	%	30
OP94649-MSD*	335-77-3	Perfluorodecanesulfonic acid	MSD	REC	86	%	59-134
OP94649-MSD*	335-77-3	Perfluorodecanesulfonic acid	MSD	RPD	2	%	30
OP94649-MSD*	754-91-6	PFOSA	MSD	REC	93	%	67-137
OP94649-MSD*	754-91-6	PFOSA	MSD	RPD	4	%	30
OP94649-MSD*	2355-31-9	MeFOSAA	MSD	REC	91	%	63-144

* Sample used for QC is not from job FC1302

QC Evaluation: DOD QSM5.x Limits

Job Number: FC1302
Account: Tetra Tech
Project: Red Hill AFFF; HI
Collected: 12/07/22

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP94649-MSD*	2355-31-9	MeFOSAA	MSD	RPD	9	%	30
OP94649-MSD*	2991-50-6	EtFOSAA	MSD	REC	97	%	61-139
OP94649-MSD*	2991-50-6	EtFOSAA	MSD	RPD	3	%	30
OP94649-MSD*	757124-72-4	4:2 Fluorotelomer sulfonate	MSD	REC	93	%	62-145
OP94649-MSD*	757124-72-4	4:2 Fluorotelomer sulfonate	MSD	RPD	6	%	30
OP94649-MSD*	27619-97-2	6:2 Fluorotelomer sulfonate	MSD	REC	98	%	64-140
OP94649-MSD*	27619-97-2	6:2 Fluorotelomer sulfonate	MSD	RPD	4	%	30
OP94649-MSD*	39108-34-4	8:2 Fluorotelomer sulfonate	MSD	REC	96	%	65-137
OP94649-MSD*	39108-34-4	8:2 Fluorotelomer sulfonate	MSD	RPD	6	%	30

* Sample used for QC is not from job FC1302

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Ion Ratio Summaries
- Isotope Dilution Standard Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Instrument Blank

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S5Q134-IBLK	5Q9047.D	1	12/28/22	LR	n/a	n/a	S5Q134

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.3 B-15

FC1302-1, FC1302-1A, FC1302-1B

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	
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	
2706-91-4	Perfluoropentanesulfonic 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	
68259-12-1	Perfluorononanesulfonic 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	
757124-72-4	4:2 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	92%	50-150%
	13C5-PFPeA	92%	50-150%
	13C5-PFHxA	92%	50-150%
	13C4-PFHpA	92%	50-150%
	13C8-PFOA	92%	50-150%
	13C9-PFNA	92%	50-150%
	13C6-PFDA	93%	50-150%
	13C7-PFUnDA	87%	50-150%
	13C2-PFDoDA	92%	50-150%
	13C2-PFTeDA	88%	50-150%

Instrument Blank

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S5Q134-IBLK	5Q9047.D	1	12/28/22	LR	n/a	n/a	S5Q134

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.3 B-15

FC1302-1, FC1302-1A, FC1302-1B

CAS No.	ID Standard Recoveries		Limits
	13C3-PFBS	93%	50-150%
	13C3-PFHxS	92%	50-150%
	13C8-PFOS	93%	50-150%
	13C8-FOSA	91%	50-150%
	d3-MeFOSAA	87%	50-150%
	d5-EtFOSAA	92%	50-150%
	13C2-4:2FTS	85%	50-150%
	13C2-6:2FTS	87%	50-150%
	13C2-8:2FTS	88%	50-150%

Instrument Blank

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S5Q135-IBLK	5Q9091.D	1	12/29/22	LR	n/a	n/a	S5Q135

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.3 B-15

FC1302-1, FC1302-1A, FC1302-1B

CAS No.	Compound	Result	RL	MDL	Units	Q
335-76-2	Perfluorodecanoic acid	ND	1.0	0.25	ug/kg	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	1.0	0.25	ug/kg	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	95%	50-150%
	13C5-PFPeA	93%	50-150%
	13C5-PFHxA	94%	50-150%
	13C4-PFHpA	95%	50-150%
	13C8-PFOA	96%	50-150%
	13C9-PFNA	94%	50-150%
	13C6-PFDA	96%	50-150%
	13C7-PFUnDA	90%	50-150%
	13C2-PFDoDA	99%	50-150%
	13C2-PFTeDA	96%	50-150%
	13C3-PFBS	92%	50-150%
	13C3-PFHxS	92%	50-150%
	13C8-PFOS	93%	50-150%
	13C8-FOSA	92%	50-150%
	d3-MeFOSAA	104%	50-150%
	d5-EtFOSAA	105%	50-150%
	13C2-4:2FTS	86%	50-150%
	13C2-6:2FTS	87%	50-150%
	13C2-8:2FTS	91%	50-150%

Instrument Blank

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S5Q137-IBLK	5Q9240.D	1	01/03/23	LR	n/a	n/a	S5Q137

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.3 B-15

FC1302-1, FC1302-1B

CAS No.	Compound	Result	RL	MDL	Units	Q
27619-97-2	6:2 Fluorotelomer sulfonate	ND	1.0	0.25	ug/kg	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	93%	50-150%
	13C5-PFPeA	97%	50-150%
	13C5-PFHxA	97%	50-150%
	13C4-PFHpA	95%	50-150%
	13C8-PFOA	95%	50-150%
	13C9-PFNA	95%	50-150%
	13C6-PFDA	93%	50-150%
	13C7-PFUnDA	93%	50-150%
	13C2-PFDoDA	93%	50-150%
	13C2-PFTeDA	91%	50-150%
	13C3-PFBS	96%	50-150%
	13C3-PFHxS	97%	50-150%
	13C8-PFOS	93%	50-150%
	13C8-FOSA	88%	50-150%
	d3-MeFOSA	90%	50-150%
	d3-MeFOSAA	76%	50-150%
	d5-EtFOSAA	75%	50-150%
	13C2-4:2FTS	89%	50-150%
	13C2-6:2FTS	89%	50-150%
	13C2-8:2FTS	88%	50-150%
	13C3-HFPO-DA	93%	50-150%

Method Blank Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94649-MB	5Q9061.D	1	12/28/22	LR	12/21/22	OP94649	S5Q134

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.3 B-15

FC1302-1, FC1302-1A, FC1302-1B

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	
2706-91-4	Perfluoropentanesulfonic 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	
68259-12-1	Perfluorononanesulfonic 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	
757124-72-4	4:2 Fluorotelomer sulfonate	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	81%	50-150%
	13C5-PFPeA	81%	50-150%
	13C5-PFHxA	83%	50-150%
	13C4-PFHpA	86%	50-150%
	13C8-PFOA	88%	50-150%
	13C9-PFNA	88%	50-150%
	13C6-PFDA	90%	50-150%
	13C7-PFUnDA	92%	50-150%

Method Blank Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94649-MB	5Q9061.D	1	12/28/22	LR	12/21/22	OP94649	S5Q134

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.3 B-15

FC1302-1, FC1302-1A, FC1302-1B

CAS No.	ID Standard Recoveries		Limits
	13C2-PFDoDA	86%	50-150%
	13C2-PFTeDA	92%	50-150%
	13C3-PFBS	85%	50-150%
	13C3-PFHxS	83%	50-150%
	13C8-PFOS	86%	50-150%
	13C8-FOSA	72%	50-150%
	d3-MeFOSAA	101%	50-150%
	d5-EtFOSAA	93%	50-150%
	13C2-4:2FTS	80%	50-150%
	13C2-6:2FTS	82%	50-150%
	13C2-8:2FTS	87%	50-150%
	13C3-HFPO-DA	77%	50-150%

Blank Spike Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94649-BS	5Q9060.D	1	12/28/22	LR	12/21/22	OP94649	S5Q134

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.3 B-15

FC1302-1, FC1302-1A, FC1302-1B

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
375-22-4	Perfluorobutanoic acid	10	11.5	115	71-135
2706-90-3	Perfluoropentanoic acid	10	10.6	106	69-132
307-24-4	Perfluorohexanoic acid	10	11.0	110	70-132
375-85-9	Perfluoroheptanoic acid	10	11.0	110	71-131
335-67-1	Perfluorooctanoic acid	10	10.8	108	69-133
375-95-1	Perfluorononanoic acid	10	11.0	110	72-129
335-76-2	Perfluorodecanoic acid	10	10.9	109	69-133
2058-94-8	Perfluoroundecanoic acid	10	10.5	105	64-136
307-55-1	Perfluorododecanoic acid	10	11.5	115	69-135
72629-94-8	Perfluorotridecanoic acid	10	11.4	114	66-139
376-06-7	Perfluorotetradecanoic acid	10	9.7	97	69-133
375-73-5	Perfluorobutanesulfonic acid	10	11.1	111	72-128
2706-91-4	Perfluoropentanesulfonic acid	10	10.7	107	73-123
355-46-4	Perfluorohexanesulfonic acid	10	11.6	116	67-130
375-92-8	Perfluoroheptanesulfonic acid	10	10.9	109	70-132
1763-23-1	Perfluorooctanesulfonic acid	10	11.3	113	68-136
68259-12-1	Perfluorononanesulfonic acid	10	11.1	111	69-125
335-77-3	Perfluorodecanesulfonic acid	10	10.1	101	59-134
754-91-6	PFOSA	10	10.8	108	67-137
2355-31-9	MeFOSAA	10	11.1	111	63-144
2991-50-6	EtFOSAA	10	12.1	121	61-139
757124-72-4	4:2 Fluorotelomer sulfonate	10	11.1	111	62-145
27619-97-2	6:2 Fluorotelomer sulfonate	10	11.8	118	64-140
39108-34-4	8:2 Fluorotelomer sulfonate	10	11.4	114	65-137

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	88%	50-150%
	13C5-PFPeA	86%	50-150%
	13C5-PFHxA	88%	50-150%
	13C4-PFHpA	89%	50-150%
	13C8-PFOA	91%	50-150%
	13C9-PFNA	91%	50-150%
	13C6-PFDA	92%	50-150%
	13C7-PFUnDA	95%	50-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94649-BS	5Q9060.D	1	12/28/22	LR	12/21/22	OP94649	S5Q134

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.3 B-15

FC1302-1, FC1302-1A, FC1302-1B

CAS No.	ID Standard Recoveries	BSP	Limits
	13C2-PFDoDA	90%	50-150%
	13C2-PFTeDA	96%	50-150%
	13C3-PFBS	87%	50-150%
	13C3-PFHxS	85%	50-150%
	13C8-PFOS	89%	50-150%
	13C8-FOSA	78%	50-150%
	d3-MeFOSAA	105%	50-150%
	d5-EtFOSAA	97%	50-150%
	13C2-4:2FTS	88%	50-150%
	13C2-6:2FTS	90%	50-150%
	13C2-8:2FTS	99%	50-150%
	13C3-HFPO-DA	82%	50-150%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94649-MS	5Q9072.D	1	12/28/22	LR	12/21/22	OP94649	S5Q134
OP94649-MSD	5Q9073.D	1	12/28/22	LR	12/21/22	OP94649	S5Q134
FC1170-8	5Q9071.D	1	12/28/22	LR	12/21/22	OP94649	S5Q134

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.3 B-15

FC1302-1, FC1302-1A, FC1302-1B

CAS No.	Compound	FC1170-8 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	1.2 U		12.2	11.2	92	12.3	11.8	96	5	71-135/30
2706-90-3	Perfluoropentanoic acid	1.2 U		12.2	10.4	85	12.3	11.0	89	6	69-132/30
307-24-4	Perfluorohexanoic acid	1.2 U		12.2	10.7	88	12.3	11.4	92	6	70-132/30
375-85-9	Perfluoroheptanoic acid	1.2 U		12.2	10.7	88	12.3	11.4	92	6	71-131/30
335-67-1	Perfluorooctanoic acid	1.2 U		12.2	10.9	89	12.3	11.4	92	4	69-133/30
375-95-1	Perfluorononanoic acid	1.2 U		12.2	10.7	88	12.3	11.3	92	5	72-129/30
335-76-2	Perfluorodecanoic acid	1.2 U		12.2	11.0	90	12.3	11.8	96	7	69-133/30
2058-94-8	Perfluoroundecanoic acid	1.2 U		12.2	11.5	94	12.3	12.1	98	5	64-136/30
307-55-1	Perfluorododecanoic acid	1.2 U		12.2	11.0	90	12.3	12.2	99	10	69-135/30
72629-94-8	Perfluorotridecanoic acid	1.2 U		12.2	10.2	84	12.3	11.5	93	12	66-139/30
376-06-7	Perfluorotetradecanoic acid	1.2 U		12.2	10	82	12.3	10.4	84	4	69-133/30
375-73-5	Perfluorobutanesulfonic acid	1.2 U		12.2	11.3	93	12.3	11.9	96	5	72-128/30
2706-91-4	Perfluoropentanesulfonic acid	1.2 U		12.2	10.6	87	12.3	11.2	91	6	73-123/30
355-46-4	Perfluorohexanesulfonic acid	1.2 U		12.2	11.3	93	12.3	11.9	96	5	67-130/30
375-92-8	Perfluoroheptanesulfonic acid	1.2 U		12.2	11.2	92	12.3	11.7	95	4	70-132/30
1763-23-1	Perfluorooctanesulfonic acid	1.2 U		12.2	11.9	97	12.3	12.4	101	4	68-136/30
68259-12-1	Perfluorononanesulfonic acid	1.2 U		12.2	11.1	91	12.3	11.7	95	5	69-125/30
335-77-3	Perfluorodecanesulfonic acid	0.51	J	12.2	10.9	85	12.3	11.1	86	2	59-134/30
754-91-6	PFOSA	1.2 U		12.2	11.0	90	12.3	11.5	93	4	67-137/30
2355-31-9	MeFOSAA	1.2 U		12.2	10.2	84	12.3	11.2	91	9	63-144/30
2991-50-6	EtFOSAA	1.2 U		12.2	11.6	95	12.3	12.0	97	3	61-139/30
757124-72-4	4:2 Fluorotelomer sulfonate	1.2 U		12.2	10.8	88	12.3	11.5	93	6	62-145/30
27619-97-2	6:2 Fluorotelomer sulfonate	1.2 U		12.2	11.6	95	12.3	12.1	98	4	64-140/30
39108-34-4	8:2 Fluorotelomer sulfonate	1.2 U		12.2	11.1	91	12.3	11.8	96	6	65-137/30

CAS No.	ID Standard Recoveries	MS	MSD	FC1170-8	Limits
	13C4-PFBA	82%	78%	83%	50-150%
	13C5-PFPeA	79%	76%	80%	50-150%
	13C5-PFHxA	80%	77%	81%	50-150%
	13C4-PFHpA	82%	79%	84%	50-150%
	13C8-PFOA	82%	79%	84%	50-150%
	13C9-PFNA	84%	80%	86%	50-150%
	13C6-PFDA	84%	81%	86%	50-150%
	13C7-PFUnDA	82%	80%	90%	50-150%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94649-MS	5Q9072.D	1	12/28/22	LR	12/21/22	OP94649	S5Q134
OP94649-MSD	5Q9073.D	1	12/28/22	LR	12/21/22	OP94649	S5Q134
FC1170-8	5Q9071.D	1	12/28/22	LR	12/21/22	OP94649	S5Q134

The QC reported here applies to the following samples: **Method:** EPA 537M QSM5.3 B-15

FC1302-1, FC1302-1A, FC1302-1B

CAS No.	ID Standard Recoveries	MS	MSD	FC1170-8	Limits
	13C2-PFDoDA	90%	82%	87%	50-150%
	13C2-PFTeDA	88%	85%	89%	50-150%
	13C3-PFBS	79%	76%	82%	50-150%
	13C3-PFHxS	80%	78%	81%	50-150%
	13C8-PFOS	80%	77%	82%	50-150%
	13C8-FOSA	84%	79%	85%	50-150%
	d3-MeFOSAA	97%	92%	97%	50-150%
	d5-EtFOSAA	93%	93%	97%	50-150%
	13C2-4:2FTS	75%	72%	73%	50-150%
	13C2-6:2FTS	78%	75%	76%	50-150%
	13C2-8:2FTS	82%	83%	80%	50-150%
	13C3-HFPO-DA	80%	77%	80%	50-150%

* = Outside of Control Limits.

Ion Ratio Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Run ID: S5Q134 **Method:** EPA 537M QSM5.3 B-15

Lab Sample ID	Lab File ID	Ion Ratios PFBA	PFPeA	PFHxA	PFOA	PFOS
S5Q134-ICC134	5Q9044.D	0	0	4.6	26.7	47.8
FC1302-1	5Q9082.D	0	0	4.6	27.4	44.5
FC1302-1A	5Q9083.D	0		4.7	28	49.6
FC1302-1B	5Q9084.D	0	0	4.7	26.1	

Ion Ratio Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Run ID: S5Q135 **Method:** EPA 537M QSM5.3 B-15

Lab Sample ID	Lab File ID	Ion Ratios 6:2FTS
S5Q134-ICC134	5Q9044.D	42.8
FC1302-1	5Q9096.D	
FC1302-1A	5Q9098.D	43
FC1302-1B	5Q9100.D	

Ion Ratio Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Run ID: S5Q137 **Method:** EPA 537M QSM5.3 B-15

Lab Sample ID	Lab File ID	Ion Ratios 6:2FTS
S5Q137-ICC137	5Q9237.D	44.4
FC1302-1	5Q9246.D	45
FC1302-1B	5Q9247.D	45.2

Isotope Dilution Standard Recovery Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Method: EPA 537M QSM5.3 B-15 **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
FC1302-1	5Q9246.D	93	97	96	99	95	96	89	96
FC1302-1	5Q9096.D	62	63	61	63	59	62	52	58
FC1302-1	5Q9082.D	79	75	76	77	70	83	35* [a]	83
FC1302-1A	5Q9098.D	62	63	63	63	58	61	53	53
FC1302-1A	5Q9083.D	80	77	76	80	70	83	39* [a]	83
FC1302-1B	5Q9084.D	84	79	81	81	68	83	36* [a]	87
FC1302-1B	5Q9100.D	64	64	64	65	58	64	51	58
FC1302-1B	5Q9247.D	90	93	93	93	92	93	87	92
OP94649-BS	5Q9060.D	88	86	88	89	91	91	92	95
OP94649-MB	5Q9061.D	81	81	83	86	88	88	90	92
OP94649-MS	5Q9072.D	82	79	80	82	82	84	84	82
OP94649-MSD	5Q9073.D	78	76	77	79	79	80	81	80
S5Q134-IBLK	5Q9047.D	92	92	92	92	92	92	93	87
S5Q135-IBLK	5Q9091.D	95	93	94	95	96	94	96	90
S5Q137-IBLK	5Q9240.D	93	97	97	95	95	95	93	93

Isotope Dilution Standards	Recovery Limits
S1 = 13C4-PFBA	50-150%
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	50-150%

(a) Outside control limits.

Isotope Dilution Standard Recovery Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Method: EPA 537M QSM5.3 B-15 **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
FC1302-1	5Q9246.D	96	99	95	97	94	94	88	88
FC1302-1	5Q9096.D	55	47* [a]	75	71	71	55	41* [a]	50
FC1302-1	5Q9082.D	82	84	80	77	82	86	101	92
FC1302-1A	5Q9098.D	51	46* [a]	77	69	72	59	48* [a]	55
FC1302-1A	5Q9083.D	88	76	80	79	81	88	98	87
FC1302-1B	5Q9084.D	86	89	82	80	81	91	106	91
FC1302-1B	5Q9100.D	56	54	78	74	78	64	47* [a]	54
FC1302-1B	5Q9247.D	93	96	91	93	91	93	89	90
OP94649-BS	5Q9060.D	90	96	87	85	89	78	105	97
OP94649-MB	5Q9061.D	86	92	85	83	86	72	101	93
OP94649-MS	5Q9072.D	90	88	79	80	80	84	97	93
OP94649-MSD	5Q9073.D	82	85	76	78	77	79	92	93
S5Q134-IBLK	5Q9047.D	92	88	93	92	93	91	87	92
S5Q135-IBLK	5Q9091.D	99	96	92	92	93	92	104	105
S5Q137-IBLK	5Q9240.D	93	91	96	97	93	88	76	75

Isotope Dilution Standards	Recovery Limits
S9 = 13C2-PFDoDA	50-150%
S10 = 13C2-PFTeDA	50-150%
S11 = 13C3-PFBS	50-150%
S12 = 13C3-PFHxS	50-150%
S13 = 13C8-PFOS	50-150%
S14 = 13C8-FOSA	50-150%
S15 = d3-MeFOSAA	50-150%
S16 = d5-EtFOSAA	50-150%

(a) Outside control limits.

Isotope Dilution Standard Recovery Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Method: EPA 537M QSM5.3 B-15 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S17	S18	S19
FC1302-1	5Q9246.D	88	91	85
FC1302-1	5Q9096.D	55	163* [a]	54
FC1302-1	5Q9082.D	70	203* [a]	51
FC1302-1A	5Q9098.D	66	150	63
FC1302-1A	5Q9083.D	71	181* [a]	51
FC1302-1B	5Q9084.D	73	222* [a]	55
FC1302-1B	5Q9100.D	65	188* [a]	60
FC1302-1B	5Q9247.D	87	87	80
OP94649-BS	5Q9060.D	88	90	99
OP94649-MB	5Q9061.D	80	82	87
OP94649-MS	5Q9072.D	75	78	82
OP94649-MSD	5Q9073.D	72	75	83
S5Q134-IBLK	5Q9047.D	85	87	88
S5Q135-IBLK	5Q9091.D	86	87	91
S5Q137-IBLK	5Q9240.D	89	89	88

Isotope Dilution Standards	Recovery Limits
S17 = 13C2-4:2FTS	50-150%
S18 = 13C2-6:2FTS	50-150%
S19 = 13C2-8:2FTS	50-150%

(a) Outside control limits.

Initial Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-ICC134
Lab FileID: 5Q9044.D

Initial Calibration Report

Method Path	D:\MassHunter\Methods
Method File	ID_122822_S5Q134.quantmethod.xml
Batch Name	D:\MassHunter\Data\122822_ID_S5Q134\QuantResults\s5q134.batch.bin
Last Calib Update	12/29/2022 9:21:17 AM

Level Name	Calibration Files	Acq. Date-Time	Level Last Update Time
1	D:\MassHunter\Data\122822_ID_S5Q134\5Q9039.d	12/28/2022 12:28:21 PM	12/29/2022 9:21:17 AM
2	D:\MassHunter\Data\122822_ID_S5Q134\5Q9040.d	12/28/2022 12:45:23 PM	12/29/2022 9:21:17 AM
3	D:\MassHunter\Data\122822_ID_S5Q134\5Q9041.d	12/28/2022 1:02:27 PM	12/29/2022 9:21:17 AM
4	D:\MassHunter\Data\122822_ID_S5Q134\5Q9042.d	12/28/2022 1:19:29 PM	12/29/2022 9:21:17 AM
5	D:\MassHunter\Data\122822_ID_S5Q134\5Q9043.d	12/28/2022 1:36:35 PM	12/29/2022 9:21:17 AM
6	D:\MassHunter\Data\122822_ID_S5Q134\5Q9044.d	12/28/2022 1:53:38 PM	12/29/2022 9:21:17 AM
7	D:\MassHunter\Data\122822_ID_S5Q134\5Q9045.d	12/28/2022 2:10:41 PM	12/29/2022 9:21:17 AM
8	D:\MassHunter\Data\122822_ID_S5Q134\5Q9046.d	12/28/2022 2:28:14 PM	12/29/2022 9:21:17 AM

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
S 13C4-PFBA	Linear	5294	5329	5399	5183	4929	5070	5230	5188	5203	2.878
S 13C5-PFPeA	Linear	10579	10667	10916	10436	9985	10339	10498	10501	10490	2.553
S 13C3-PFBS	Linear	1325	1349	1335	1295	1232	1291	1305	1265	1300	2.954
S 13C2-4:2FTS	Linear	4525	4561	4707	4490	4396	4694	5193	5953	4815	10.798
S 13C5-PFHxA	Linear	15255	15425	15708	15002	14354	14712	15050	14841	15043	2.820
S 13C3-HFPO-DA	Linear	3340	3387	3458	3283	3141	3202	3320	3333	3308	3.030
S 13C4-PFHpA	Linear	15807	15851	16325	15513	14867	15073	15136	14424	15374	3.998
S 13C3-PFHxS	Linear	1823	1844	1857	1787	1732	1735	1755	1785	1790	2.687
S 13C2-6:2FTS	Linear	7389	7416	7733	7308	7114	7431	8134	8806	7667	7.228
S 13C8-PFOA	Linear	20833	21186	21330	20457	19405	19669	19582	18749	20151	4.633
S 13C8-FOSA	Linear	4991	5034	5104	4843	4677	4703	4751	4532	4829	4.126
S 13C8-PFOS	Linear	2418	2480	2507	2354	2281	2316	2360	2359	2384	3.285
S 13C9-PFNA	Linear	21685	21967	22421	21244	20128	20496	20416	19920	21035	4.399
S d3-MeFOSA	Linear	1558	1570	1578	1512	1511	1503	1485	1402	1515	3.769
S d3-MeFOSAA	Linear	1821	1896	1877	1795	1668	1755	1731	1672	1777	4.853
S d5-EtFOSAA	Linear	1884	1923	2014	1847	1731	1802	1818	1735	1844	5.180
S 13C6-PFDA	Linear	24338	24594	25475	23544	22060	22474	22412	21071	23246	6.401
S 13C2-8:2FTS	Linear	6942	7029	7330	6862	6627	6916	7608	8456	7221	8.069
S 13C7-PFUnDA	Linear	28730	31686	30274	30741	28751	29130	26629	28163	29263	5.448
S 13C2-PFDoDA	Linear	24018	24108	23301	21672	20304	22289	22399	21795	22486	5.722
S 13C2-PFTeDA	Linear	20610	20621	21054	19649	18618	19210	19536	17344	19580	6.221
I M4-PFBA				---------- ISTD ----------							
T PFBA	Linear	0.8801	0.9804	1.0313	1.0429	1.1290	1.0429	1.0791	1.0934	1.0349	7.423
I M5-PFPeA				---------- ISTD ----------							
T PFPeA	Linear	0.9632	1.0853	1.1196	1.1286	1.2284	1.1357	1.1748	1.1768	1.1266	7.017
I M5-PFHxA				---------- ISTD ----------							
T FBSA	Linear	0.3336	0.3991	0.4062	0.4077	0.4401	0.4055	0.4140	0.4154	0.4027	7.579
T PFHxA	Linear	0.7962	0.9028	0.9763	0.9817	1.0618	0.9898	1.0082	1.0184	0.9669	8.513

Generated at 9:22 AM on 12/29/2022

Initial Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-ICC134
Lab FileID: 5Q9044.D

Initial Calibration Report

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
I M4-PFHpA						ISTD					
T PFHpA	Linear	0.9736	1.1654	1.1967	1.2109	1.2971	1.2075	1.2481	1.2531	1.1940	8.187
I M8-PFOA						ISTD					
T FHxSA	Linear	0.2239	0.2678	0.2788	0.2758	0.2993	0.2778	0.2926	0.2996	0.2770	8.792
T 4-PFECHS	Linear	0.4608	0.5193	0.5522	0.5628	0.6155	0.5894	0.6244	0.6429	0.5709	10.587
T PFOA	Linear	0.9620	1.0477	1.0971	1.0998	1.2046	1.1235	1.1503	1.1437	1.1036	6.644
I M9-PFNA						ISTD					
T PFNA	Linear	0.8919	0.9667	0.9824	1.0140	1.0778	1.0042	1.0517	1.0345	1.0029	5.736
I M6-PFDA						ISTD					
T 9Cl-PF3ONS	Linear	0.6243	0.7142	0.7637	0.7845	0.8720	0.8168	0.8611	0.8926	0.7911	11.399
T PFDA	Linear	0.8458	0.9705	0.9931	1.0211	1.1029	1.0391	1.0641	1.0658	1.0128	7.862
I M7-PFUnDA						ISTD					
T PFDS	Linear	0.1541	0.1543	0.1723	0.1637	0.1653	0.1533	0.1771	0.1813	0.1652	6.631
T PFUnDA	Linear	0.8840	0.8657	1.0199	0.9642	1.0434	0.9715	1.1044	1.0121	0.9832	8.121
I M2-PFDoDA						ISTD					
T 11Cl-PF3OUdS	Quadratic	0.6560	0.8083	0.8118	0.8686	1.0561	0.9192	0.9481	0.9756	0.8805	14.005
T PFDoDA	Linear	0.7382	0.8395	0.9287	0.9323	1.0024	0.8784	0.9111	0.9134	0.8930	8.731
T PFTrDA	Linear	0.6737	0.8131	0.8350	0.8633	1.0137	0.8253	0.8914	0.8671	0.8478	11.121
I M2-PFTeDA						ISTD					
T PFTeDA	Linear	0.7604	0.9617	0.8805	0.8916	0.9946	0.9269	0.9598	1.0606	0.9295	9.607
I M8-FOSA						ISTD					
T FOSA	Linear	0.8410	0.9096	0.9595	1.0017	1.0708	0.9923	1.0181	1.0311	0.9780	7.492
I M3-PFBS						ISTD					
T PFBS	Linear	2.4903	3.0283	3.1767	3.1267	3.4013	3.1349	3.2242	3.2634	3.1057	8.753
T PFPeS	Linear	1.7903	1.9091	2.0187	2.0251	2.1555	1.9802	2.0735	2.1495	2.0127	6.063
I M3-PFHxS						ISTD					
T PFHxS	Linear	1.6550	1.9438	1.9318	1.9821	2.0786	1.9832	2.0732	2.0209	1.9586	6.841
T ADONA	Linear	11.10	12.79	13.46	13.51	14.49	13.82	14.04	13.33	13.32	7.721
I M8-PFOS						ISTD					
T PFHpS	Linear	1.3269	1.4013	1.4724	1.5125	1.5992	1.4936	1.5465	1.5250	1.4847	5.771
T PFOS	Linear	1.7063	1.6021	1.6082	1.8500	1.9421	1.7675	1.8497	1.8461	1.7715	6.965
T PFNS	Linear	1.1201	1.2676	1.3126	1.3938	1.4724	1.3829	1.3929	1.3646	1.3384	7.988
I M2-4:2FTS						ISTD					
T 4:2FTS	Avg RF	0.9986	1.1130	1.1278	1.1686	1.2318	1.1119	1.0690	0.9362	1.0946	8.528
I M2-6:2FTS						ISTD					
T 6:2FTS	Avg RF	0.8882	1.0509	1.0645	1.1005	1.1560	1.0589	1.0018	0.8911	1.0265	9.272

Generated at 9:22 AM on 12/29/2022

Initial Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-ICC134
Lab FileID: 5Q9044.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	0.9270	1.0082	1.0780	1.0907	1.1599	1.0543	0.9889	0.8659	1.0216	9.257
I M3-MeFOSAA						ISTD					
T MeFOSAA	Linear	0.6449	0.7059	0.8150	0.8091	0.8747	0.7724	0.8161	0.8115	0.7812	9.324
I M3-HFPO-DA						ISTD					
T HFPO-DA	Linear	1.2786	1.5050	1.5412	1.5490	1.6660	1.5772	1.5944	1.5990	1.5388	7.504
I M3-MeFOSA						ISTD					
T MeFOSA	Linear	0.9285	0.9600	1.2756	1.2029	1.2336	1.1416	1.1625	1.1899	1.1368	11.084
I M5-EtFOSAA						ISTD					
T EtFOSAA	Linear	0.5474	0.7306	0.6930	0.6844	0.7071	0.6436	0.6539	0.6717	0.6664	8.349

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-ICC134
Lab FileID: 5Q9044.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 = 5202.794203 * x	0.000000
T PFBA	Linear	y = 1.089281 * x	0.999850
S 13C5-PFPeA	Linear	y = 10490.128961 * x	0.000000
T PFPeA	Linear	y = 1.175448 * x	0.999915
S 13C3-PFBS	Linear	y = 1299.628801 * x	0.000000
T PFBS	Linear	y = 3.252641 * x	0.999874
T FBSA	Linear	y = 0.414987 * x	0.999928
S 13C2-4:2FTS	Linear	y = 4814.883962 * x	0.000000
S 13C5-PFHxA	Linear	y = 15043.245921 * x	0.000000
T PFHxA	Linear	y = 1.015814 * x	0.999915
T PFPeS	Linear	y = 2.129458 * x	0.999462
S 13C3-HFPO-DA	Linear	y = 3307.924333 * x	0.000000
T HFPO-DA	Linear	y = 1.597854 * x	0.999964
S 13C4-PFHpA	Linear	y = 15374.428280 * x	0.000000
T PFHpA	Linear	y = 1.250943 * x	0.999918
S 13C3-PFHxS	Linear	y = 1789.631492 * x	0.000000
T PFHxS	Linear	y = 2.030084 * x	0.999809
T ADONA	Linear	y = 13.490565 * x	0.999256
T FHxSA	Linear	y = 0.297502 * x	0.999643
T 4-PFECHS	Linear	y = 0.637312 * x	0.999468
T PFHpS	Linear	y = 1.528651 * x	0.999902
S 13C2-6:2FTS	Linear	y = 7666.512931 * x	0.000000
S 13C8-PFOA	Linear	y = 20151.331483 * x	0.000000
T PFOA	Linear	y = 1.144730 * x	0.999938
S 13C8-FOSA	Linear	y = 4829.274174 * x	0.000000
T FOSA	Linear	y = 1.027619 * x	0.999880
S 13C8-PFOS	Linear	y = 2384.478107 * x	0.000000
T PFOS	Linear	y = 1.845027 * x	0.999874
S 13C9-PFNA	Linear	y = 21034.733909 * x	0.000000
T PFNA	Linear	y = 1.037165 * x	0.999867
S d3-MeFOSA	Linear	y = 1514.995762 * x	0.000000
T MeFOSA	Linear	y = 1.183566 * x	0.999787
S d3-MeFOSAA	Linear	y = 1776.716926 * x	0.000000
T MeFOSAA	Linear	y = 0.811611 * x	0.999809
T 9Cl-PF3ONS	Linear	y = 0.883795 * x	0.999381
S d5-EtFOSAA	Linear	y = 1844.370741 * x	0.000000
T EtFOSAA	Linear	y = 0.667739 * x	0.999728
T PFNS	Linear	y = 1.371431 * x	0.999829
S 13C6-PFDA	Linear	y = 23246.041873 * x	0.000000
T PFDA	Linear	y = 1.064780 * x	0.999948
S 13C2-8:2FTS	Linear	y = 7221.397510 * x	0.000000
T PFDS	Linear	y = 0.179499 * x	0.998761
S 13C7-PFUnDA	Linear	y = 29262.906647 * x	0.000000

Initial Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-ICC134
Lab FileID: 5Q9044.D

Initial Calibration Report

T PFUnDA	Linear	y = 1.028683 * x	0.997958
T 11Cl-PF3OUdS	Quadratic	y = 0.009682 * x ^ 2 + 0.926791 * x	0.999770
S 13C2-PFDoDA	Linear	y = 22485.788491 * x	0.000000
T PFDoDA	Linear	y = 0.912608 * x	0.999817
T PFTrDA	Linear	y = 0.871567 * x	0.999372
S 13C2-PFTeDA	Linear	y = 19580.076722 * x	0.000000
T PFTeDA	Linear	y = 1.036233 * x	0.997250

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Verification

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-ICV134
Lab FileID: 5Q9048.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\122822_ID_S5Q134\s5q134.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\122822_ID_S5Q134\5Q9039.d
2:D:\MassHunter\Data\122822_ID_S5Q134\5Q9040.d
3:D:\MassHunter\Data\122822_ID_S5Q134\5Q9041.d
4:D:\MassHunter\Data\122822_ID_S5Q134\5Q9042.d
5:D:\MassHunter\Data\122822_ID_S5Q134\5Q9043.d
6:D:\MassHunter\Data\122822_ID_S5Q134\5Q9044.d
7:D:\MassHunter\Data\122822_ID_S5Q134\5Q9045.d
8:D:\MassHunter\Data\122822_ID_S5Q134\5Q9046.d

Data File: 5Q9048
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	18.557	-7.2	92.8
13C2-6:2FTS	20.000	18.404	-8.0	92.0
13C2-8:2FTS	20.000	18.341	-8.3	91.7
13C2-PFDoDA	20.000	17.498	-12.5	87.5
13C2-PFTeDA	20.000	18.475	-7.6	92.4
13C3-PFBS	20.000	19.022	-4.9	95.1
13C3-PFHxS	20.000	18.584	-7.1	92.9
13C4-PFBA	20.000	18.627	-6.9	93.1
13C4-PFHpA	20.000	18.739	-6.3	93.7
13C5-PFHxA	20.000	18.815	-5.9	94.1
13C5-PFPeA	20.000	18.748	-6.3	93.7
13C6-PFDA	20.000	18.444	-7.8	92.2
13C7-PFUnDA	20.000	18.863	-5.7	94.3
13C8-FOSA	20.000	18.524	-7.4	92.6
13C8-PFOA	20.000	18.530	-7.3	92.7
13C8-PFOS	20.000	19.286	-3.6	96.4
13C9-PFNA	20.000	18.608	-7.0	93.0
4:2FTS	20.000	19.560	-2.2	97.8
6:2FTS	20.000	20.813	4.1	104.1
8:2FTS	20.000	21.057	5.3	105.3
d3-MeFOSAA	20.000	17.790	-11.0	89.0
EtFOSAA	20.000	19.837	-0.8	99.2
FOSA	20.000	20.131	0.7	100.7
MeFOSAA	20.000	20.547	2.7	102.7
PFBA	20.000	21.472	7.4	107.4
PFBS	20.000	17.688	-11.6	88.4
PFDA	20.000	20.344	1.7	101.7
PFDoDA	20.000	25.464	27.3	127.3
PFDS	20.000	17.863	-10.7	89.3
PFHpA	20.000	20.751	3.8	103.8
PFHpS	20.000	19.110	-4.5	95.5
PFHxA	20.000	20.069	0.3	100.3
PFHxS	20.000	17.957	-10.2	89.8
PFNA	20.000	19.772	-1.1	98.9
PFNS	20.000	19.630	-1.8	98.2
PFOA	20.000	21.113	5.6	105.6
PFOS	20.000	21.831	9.2	109.2

Initial Calibration Verification

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-ICV134
Lab FileID: 5Q9048.D

PFPeA	20.000	19.705	-1.5	98.5
PFPeS	20.000	18.364	-8.2	91.8
PFTeDA	20.000	17.600	-12.0	88.0
PFTrDA	20.000	25.587	27.9	127.9
PFUnDA	20.000	21.216	6.1	106.1
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	21.193	6.0	106.0
13C3-HFPO-DA	20.000	18.729	-6.4	93.6
9Cl-PF3ONS	20.000	18.909	-5.5	94.5
ADONA	20.000	21.048	5.2	105.2
HFPO-DA	20.000	21.858	9.3	109.3
M3-HFPO-DA	---	--ISTD--		
d3-MeFOSA	20.000	19.423	-2.9	97.1
MeFOSA	20.000	0.000	# -100.0	0.0
M3-MeFOSA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	18.292	-8.5	91.5
4-PFECHS	20.000	0.000	# -100.0	0.0
FBSA	20.000	19.840	-0.8	99.2
FHxSA	20.000	20.728	3.6	103.6

CC Criteria: +/- 30%

Initial Calibration Verification

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-ICV134
Lab FileID: 5Q9049.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\122822_ID_S5Q134\s5q134.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\122822_ID_S5Q134\5Q9039.d
2:D:\MassHunter\Data\122822_ID_S5Q134\5Q9040.d
3:D:\MassHunter\Data\122822_ID_S5Q134\5Q9041.d
4:D:\MassHunter\Data\122822_ID_S5Q134\5Q9042.d
5:D:\MassHunter\Data\122822_ID_S5Q134\5Q9043.d
6:D:\MassHunter\Data\122822_ID_S5Q134\5Q9044.d
7:D:\MassHunter\Data\122822_ID_S5Q134\5Q9045.d
8:D:\MassHunter\Data\122822_ID_S5Q134\5Q9046.d

Data File: 5Q9049
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	19.568	-2.2	97.8
13C2-6:2FTS	20.000	19.742	-1.3	98.7
13C2-8:2FTS	20.000	19.757	-1.2	98.8
13C2-PFDoDA	20.000	18.345	-8.3	91.7
13C2-PFTeDA	20.000	17.288	-13.6	86.4
13C3-PFBS	20.000	20.080	0.4	100.4
13C3-PFHxS	20.000	20.212	1.1	101.1
13C4-PFBA	20.000	19.825	-0.9	99.1
13C4-PFHpA	20.000	19.849	-0.8	99.2
13C5-PFHxA	20.000	19.873	-0.6	99.4
13C5-PFPeA	20.000	19.933	-0.3	99.7
13C6-PFDA	20.000	19.680	-1.6	98.4
13C7-PFUnDA	20.000	18.415	-7.9	92.1
13C8-FOSA	20.000	20.032	0.2	100.2
13C8-PFOA	20.000	19.673	-1.6	98.4
13C8-PFOS	20.000	20.430	2.1	102.1
13C9-PFNA	20.000	19.793	-1.0	99.0
4:2FTS	20.000	19.908	-0.5	99.5
6:2FTS	20.000	19.769	-1.2	98.8
8:2FTS	20.000	19.977	-0.1	99.9
d3-MeFOSAA	20.000	19.276	-3.6	96.4
EtFOSAA	20.000	16.761	-16.2	83.8
FOSA	20.000	17.289	-13.6	86.4
MeFOSAA	20.000	17.105	-14.5	85.5
PFBA	20.000	19.175	-4.1	95.9
PFBS	20.000	17.891	-10.5	89.5
PFDA	20.000	18.374	-8.1	91.9
PFDoDA	20.000	23.412	17.1	117.1
PFDS	20.000	19.043	-4.8	95.2
PFHpA	20.000	17.160	-14.2	85.8
PFHpS	20.000	18.624	-6.9	93.1
PFHxA	20.000	18.342	-8.3	91.7
PFHxS	20.000	18.572	-7.1	92.9
PFNA	20.000	18.405	-8.0	92.0
PFNS	20.000	0.000	# -100.0	0.0
PFOA	20.000	18.858	-5.7	94.3
PFOS	20.000	21.093	5.5	105.5

Initial Calibration Verification

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-ICV134
Lab FileID: 5Q9049.D

PFPeA	20.000	17.857	-10.7	89.3
PFPeS	20.000	18.122	-9.4	90.6
PFTeDA	20.000	18.730	-6.3	93.7
PFTrDA	20.000	23.916	19.6	119.6
PFUnDA	20.000	22.457	12.3	112.3
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	0.000	# -100.0	0.0
13C3-HFPO-DA	20.000	19.971	-0.1	99.9
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--		
d3-MeFOSA	20.000	20.214	1.1	101.1
MeFOSA	20.000	19.378	-3.1	96.9
M3-MeFOSA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	19.035	-4.8	95.2
4-PFECHS	20.000	0.000	# -100.0	0.0
FBSA	20.000	0.000	# -100.0	0.0
FHxSA	20.000	0.000	# -100.0	0.0

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-CC134
Lab FileID: 5Q9051.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\122822_ID_S5Q134\s5q134.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\122822_ID_S5Q134\5Q9039.d
2:D:\MassHunter\Data\122822_ID_S5Q134\5Q9040.d
3:D:\MassHunter\Data\122822_ID_S5Q134\5Q9041.d
4:D:\MassHunter\Data\122822_ID_S5Q134\5Q9042.d
5:D:\MassHunter\Data\122822_ID_S5Q134\5Q9043.d
6:D:\MassHunter\Data\122822_ID_S5Q134\5Q9044.d
7:D:\MassHunter\Data\122822_ID_S5Q134\5Q9045.d
8:D:\MassHunter\Data\122822_ID_S5Q134\5Q9046.d

Data File: 5Q9051
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	18.809	-6.0	94.0
13C2-6:2FTS	20.000	18.790	-6.1	93.9
13C2-8:2FTS	20.000	18.556	-7.2	92.8
13C2-PFDoDA	20.000	18.495	-7.5	92.5
13C2-PFTeDA	20.000	18.347	-8.3	91.7
13C3-PFBS	20.000	19.345	-3.3	96.7
13C3-PFHxS	20.000	18.859	-5.7	94.3
13C4-PFBA	20.000	18.879	-5.6	94.4
13C4-PFHpA	20.000	18.965	-5.2	94.8
13C5-PFHxA	20.000	19.053	-4.7	95.3
13C5-PFPeA	20.000	18.917	-5.4	94.6
13C6-PFDA	20.000	18.438	-7.8	92.2
13C7-PFUnDA	20.000	17.533	-12.3	87.7
13C8-FOSA	20.000	18.376	-8.1	91.9
13C8-PFOA	20.000	19.021	-4.9	95.1
13C8-PFOS	20.000	19.177	-4.1	95.9
13C9-PFNA	20.000	18.736	-6.3	93.7
4:2FTS	20.000	20.398	2.0	102.0
6:2FTS	20.000	20.735	3.7	103.7
8:2FTS	20.000	20.085	0.4	100.4
d3-MeFOSAA	20.000	17.896	-10.5	89.5
EtFOSAA	20.000	18.173	-9.1	90.9
FOSA	20.000	19.205	-4.0	96.0
MeFOSAA	20.000	19.359	-3.2	96.8
PFBA	20.000	19.218	-3.9	96.1
PFBS	20.000	19.117	-4.4	95.6
PFDA	20.000	19.476	-2.6	97.4
PFDoDA	20.000	18.386	-8.1	91.9
PFDS	20.000	20.926	4.6	104.6
PFHpA	20.000	19.319	-3.4	96.6
PFHpS	20.000	19.712	-1.4	98.6
PFHxA	20.000	19.293	-3.5	96.5
PFHxS	20.000	19.613	-1.9	98.1
PFNA	20.000	19.317	-3.4	96.6
PFNS	20.000	19.726	-1.4	98.6
PFOA	20.000	19.588	-2.1	97.9
PFOS	20.000	19.196	-4.0	96.0

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-CC134
Lab FileID: 5Q9051.D

PFPeA	20.000	19.337	-3.3	96.7
PFPeS	20.000	18.533	-7.3	92.7
PFTeDA	20.000	17.691	-11.5	88.5
PFTrDA	20.000	18.916	-5.4	94.6
PFUnDA	20.000	20.594	3.0	103.0
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	18.753	-6.2	93.8
13C3-HFPO-DA	20.000	19.235	-3.8	96.2
9Cl-PF3ONS	20.000	19.058	-4.7	95.3
ADONA	20.000	20.282	1.4	101.4
HFPO-DA	20.000	19.390	-3.1	96.9
M3-HFPO-DA	---	--ISTD--		
d3-MeFOSA	20.000	19.529	-2.4	97.6
MeFOSA	20.000	19.161	-4.2	95.8
M3-MeFOSA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	18.813	-5.9	94.1
4-PFECHS	20.000	18.416	-7.9	92.1
FBSA	20.000	19.169	-4.2	95.8
FHxSA	20.000	18.537	-7.3	92.7

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-CC134
Lab FileID: 5Q9052.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\122822_ID_S5Q134\s5q134.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\122822_ID_S5Q134\5Q9039.d
2:D:\MassHunter\Data\122822_ID_S5Q134\5Q9040.d
3:D:\MassHunter\Data\122822_ID_S5Q134\5Q9041.d
4:D:\MassHunter\Data\122822_ID_S5Q134\5Q9042.d
5:D:\MassHunter\Data\122822_ID_S5Q134\5Q9043.d
6:D:\MassHunter\Data\122822_ID_S5Q134\5Q9044.d
7:D:\MassHunter\Data\122822_ID_S5Q134\5Q9045.d
8:D:\MassHunter\Data\122822_ID_S5Q134\5Q9046.d

Data File: 5Q9052
Type : QC
Level : 2

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	17.971	-10.1	89.9
13C2-6:2FTS	20.000	18.553	-7.2	92.8
13C2-8:2FTS	20.000	18.327	-8.4	91.6
13C2-PFDoDA	20.000	19.019	-4.9	95.1
13C2-PFTeDA	20.000	18.749	-6.3	93.7
13C3-PFBS	20.000	19.918	-0.4	99.6
13C3-PFHxS	20.000	19.554	-2.2	97.8
13C4-PFBA	20.000	19.345	-3.3	96.7
13C4-PFHpA	20.000	19.528	-2.4	97.6
13C5-PFHxA	20.000	19.575	-2.1	97.9
13C5-PFPeA	20.000	19.628	-1.9	98.1
13C6-PFDA	20.000	19.484	-2.6	97.4
13C7-PFUnDA	20.000	19.541	-2.3	97.7
13C8-FOSA	20.000	18.872	-5.6	94.4
13C8-PFOA	20.000	19.603	-2.0	98.0
13C8-PFOS	20.000	19.652	-1.7	98.3
13C9-PFNA	20.000	19.649	-1.8	98.2
4:2FTS	1.000	1.053	5.3	105.3
6:2FTS	1.000	0.997	-0.3	99.7
8:2FTS	1.000	1.007	0.7	100.7
d3-MeFOSAA	20.000	17.731	-11.3	88.7
EtFOSAA	1.000	0.928	-7.2	92.8
FOSA	1.000	0.933	-6.7	93.3
MeFOSAA	1.000	1.014	1.4	101.4
PFBA	1.000	0.910	-9.0	91.0
PFBS	1.000	0.925	-7.5	92.5
PFDA	1.000	0.894	-10.6	89.4
PFDoDA	1.000	0.912	-8.8	91.2
PFDS	1.000	0.858	-14.2	85.8
PFHpA	1.000	0.898	-10.2	89.8
PFHpS	1.000	0.968	-3.2	96.8
PFHxA	1.000	0.897	-10.3	89.7
PFHxS	1.000	0.936	-6.4	93.6
PFNA	1.000	0.862	-13.8	86.2
PFNS	1.000	1.005	0.5	100.5
PFOA	1.000	0.940	-6.0	94.0
PFOS	1.000	0.934	-6.6	93.4

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-CC134
Lab FileID: 5Q9052.D

PFPeA	1.000	0.911	-8.9	91.1
PFPeS	1.000	0.895	-10.5	89.5
PFTeDA	1.000	0.826	-17.4	82.6
PFTrDA	1.000	0.929	-7.1	92.9
PFUnDA	1.000	0.882	-11.8	88.2
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	0.880	-12.0	88.0
13C3-HFPO-DA	20.000	19.691	-1.5	98.5
9Cl-PF3ONS	1.000	0.871	-12.9	87.1
ADONA	1.000	0.936	-6.4	93.6
HFPO-DA	1.000	0.958	-4.2	95.8
M3-HFPO-DA	---	--ISTD--		
d3-MeFOSA	20.000	20.170	0.8	100.8
MeFOSA	1.000	0.970	-3.0	97.0
M3-MeFOSA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	18.420	-7.9	92.1
4-PFECHS	1.000	0.883	-11.7	88.3
FBSA	1.000	0.872	-12.8	87.2
FHxSA	1.000	0.871	-12.9	87.1

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-CC134
Lab FileID: 5Q9058.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\122822_ID_S5Q134\s5q134.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\122822_ID_S5Q134\5Q9039.d
2:D:\MassHunter\Data\122822_ID_S5Q134\5Q9040.d
3:D:\MassHunter\Data\122822_ID_S5Q134\5Q9041.d
4:D:\MassHunter\Data\122822_ID_S5Q134\5Q9042.d
5:D:\MassHunter\Data\122822_ID_S5Q134\5Q9043.d
6:D:\MassHunter\Data\122822_ID_S5Q134\5Q9044.d
7:D:\MassHunter\Data\122822_ID_S5Q134\5Q9045.d
8:D:\MassHunter\Data\122822_ID_S5Q134\5Q9046.d

Data File: 5Q9058
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	19.335	-3.3	96.7
13C2-6:2FTS	20.000	20.164	0.8	100.8
13C2-8:2FTS	20.000	19.638	-1.8	98.2
13C2-PFDoDA	20.000	20.632	3.2	103.2
13C2-PFTeDA	20.000	18.572	-7.1	92.9
13C3-PFBS	20.000	19.444	-2.8	97.2
13C3-PFHxS	20.000	19.292	-3.5	96.5
13C4-PFBA	20.000	19.692	-1.5	98.5
13C4-PFHpA	20.000	19.740	-1.3	98.7
13C5-PFHxA	20.000	19.596	-2.0	98.0
13C5-PFPeA	20.000	19.453	-2.7	97.3
13C6-PFDA	20.000	19.835	-0.8	99.2
13C7-PFUnDA	20.000	20.640	3.2	103.2
13C8-FOSA	20.000	20.782	3.9	103.9
13C8-PFOA	20.000	20.063	0.3	100.3
13C8-PFOS	20.000	19.479	-2.6	97.4
13C9-PFNA	20.000	20.108	0.5	100.5
4:2FTS	20.000	20.433	2.2	102.2
6:2FTS	20.000	20.154	0.8	100.8
8:2FTS	20.000	20.250	1.3	101.3
d3-MeFOSAA	20.000	22.158	10.8	110.8
EtFOSAA	20.000	20.834	4.2	104.2
FOSA	20.000	18.972	-5.1	94.9
MeFOSAA	20.000	19.558	-2.2	97.8
PFBA	20.000	19.200	-4.0	96.0
PFBS	20.000	19.182	-4.1	95.9
PFDA	20.000	19.312	-3.4	96.6
PFDoDA	20.000	18.374	-8.1	91.9
PFDS	20.000	18.170	-9.1	90.9
PFHpA	20.000	19.387	-3.1	96.9
PFHpS	20.000	19.340	-3.3	96.7
PFHxA	20.000	19.313	-3.4	96.6
PFHxS	20.000	19.450	-2.8	97.2
PFNA	20.000	19.430	-2.8	97.2
PFNS	20.000	19.892	-0.5	99.5
PFOA	20.000	19.476	-2.6	97.4
PFOS	20.000	19.244	-3.8	96.2

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-CC134
Lab FileID: 5Q9058.D

PFPeA	20.000	19.337	-3.3	96.7
PFPeS	20.000	18.960	-5.2	94.8
PFTeDA	20.000	21.730	8.6	108.6
PFTrDA	20.000	18.777	-6.1	93.9
PFUnDA	20.000	18.926	-5.4	94.6
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	18.839	-5.8	94.2
13C3-HFPO-DA	20.000	18.907	-5.5	94.5
9Cl-PF3ONS	20.000	17.897	-10.5	89.5
ADONA	20.000	20.678	3.4	103.4
HFPO-DA	20.000	19.499	-2.5	97.5
M3-HFPO-DA	---	--ISTD--		
d3-MeFOSA	20.000	20.448	2.2	102.2
MeFOSA	20.000	19.222	-3.9	96.1
M3-MeFOSA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	21.272	6.4	106.4
4-PFECHS	20.000	17.748	-11.3	88.7
FBSA	20.000	20.368	1.8	101.8
FHxSA	20.000	19.474	-2.6	97.4

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-CC134
Lab FileID: 5Q9069.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\122822_ID_S5Q134\s5q134.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\122822_ID_S5Q134\5Q9039.d
2:D:\MassHunter\Data\122822_ID_S5Q134\5Q9040.d
3:D:\MassHunter\Data\122822_ID_S5Q134\5Q9041.d
4:D:\MassHunter\Data\122822_ID_S5Q134\5Q9042.d
5:D:\MassHunter\Data\122822_ID_S5Q134\5Q9043.d
6:D:\MassHunter\Data\122822_ID_S5Q134\5Q9044.d
7:D:\MassHunter\Data\122822_ID_S5Q134\5Q9045.d
8:D:\MassHunter\Data\122822_ID_S5Q134\5Q9046.d

Data File: 5Q9069
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	19.675	-1.6	98.4
13C2-6:2FTS	20.000	20.297	1.5	101.5
13C2-8:2FTS	20.000	20.077	0.4	100.4
13C2-PFDoDA	20.000	20.935	4.7	104.7
13C2-PFTeDA	20.000	19.439	-2.8	97.2
13C3-PFBS	20.000	19.737	-1.3	98.7
13C3-PFHxS	20.000	19.657	-1.7	98.3
13C4-PFBA	20.000	20.625	3.1	103.1
13C4-PFHpA	20.000	20.355	1.8	101.8
13C5-PFHxA	20.000	19.997	0.0	100.0
13C5-PFPeA	20.000	19.856	-0.7	99.3
13C6-PFDA	20.000	20.301	1.5	101.5
13C7-PFUnDA	20.000	21.674	8.4	108.4
13C8-FOSA	20.000	21.625	8.1	108.1
13C8-PFOA	20.000	20.468	2.3	102.3
13C8-PFOS	20.000	19.560	-2.2	97.8
13C9-PFNA	20.000	20.640	3.2	103.2
4:2FTS	20.000	20.398	2.0	102.0
6:2FTS	20.000	20.327	1.6	101.6
8:2FTS	20.000	20.345	1.7	101.7
d3-MeFOSAA	20.000	23.619	18.1	118.1
EtFOSAA	20.000	20.894	4.5	104.5
FOSA	20.000	19.310	-3.4	96.6
MeFOSAA	20.000	19.878	-0.6	99.4
PFBA	20.000	19.061	-4.7	95.3
PFBS	20.000	19.218	-3.9	96.1
PFDA	20.000	19.516	-2.4	97.6
PFDoDA	20.000	20.625	3.1	103.1
PFDS	20.000	17.510	-12.5	87.5
PFHpA	20.000	19.243	-3.8	96.2
PFHpS	20.000	19.426	-2.9	97.1
PFHxA	20.000	19.167	-4.2	95.8
PFHxS	20.000	19.469	-2.7	97.3
PFNA	20.000	19.476	-2.6	97.4
PFNS	20.000	19.527	-2.4	97.6
PFOA	20.000	19.440	-2.8	97.2
PFOS	20.000	19.528	-2.4	97.6

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-CC134
Lab FileID: 5Q9069.D

PFPeA	20.000	19.487	-2.6	97.4
PFPeS	20.000	18.809	-6.0	94.0
PFTeDA	20.000	20.334	1.7	101.7
PFTrDA	20.000	19.470	-2.6	97.4
PFUnDA	20.000	18.799	-6.0	94.0
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	18.378	-8.1	91.9
13C3-HFPO-DA	20.000	19.028	-4.9	95.1
9Cl-PF3ONS	20.000	17.445	-12.8	87.2
ADONA	20.000	21.082	5.4	105.4
HFPO-DA	20.000	19.415	-2.9	97.1
M3-HFPO-DA	---	--ISTD--		
d3-MeFOSA	20.000	21.164	5.8	105.8
MeFOSA	20.000	19.586	-2.1	97.9
M3-MeFOSA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	22.930	14.7	114.7
4-PFECHS	20.000	17.597	-12.0	88.0
FBSA	20.000	21.046	5.2	105.2
FHxSA	20.000	20.371	1.9	101.9

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-CC134
Lab FileID: 5Q9080.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\122822_ID_S5Q134\s5q134.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\122822_ID_S5Q134\5Q9039.d
2:D:\MassHunter\Data\122822_ID_S5Q134\5Q9040.d
3:D:\MassHunter\Data\122822_ID_S5Q134\5Q9041.d
4:D:\MassHunter\Data\122822_ID_S5Q134\5Q9042.d
5:D:\MassHunter\Data\122822_ID_S5Q134\5Q9043.d
6:D:\MassHunter\Data\122822_ID_S5Q134\5Q9044.d
7:D:\MassHunter\Data\122822_ID_S5Q134\5Q9045.d
8:D:\MassHunter\Data\122822_ID_S5Q134\5Q9046.d

Data File: 5Q9080
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	19.597	-2.0	98.0
13C2-6:2FTS	20.000	20.087	0.4	100.4
13C2-8:2FTS	20.000	20.801	4.0	104.0
13C2-PFDoDA	20.000	22.426	12.1	112.1
13C2-PFTeDA	20.000	19.731	-1.3	98.7
13C3-PFBS	20.000	19.733	-1.3	98.7
13C3-PFHxS	20.000	19.557	-2.2	97.8
13C4-PFBA	20.000	20.697	3.5	103.5
13C4-PFHpA	20.000	20.566	2.8	102.8
13C5-PFHxA	20.000	20.107	0.5	100.5
13C5-PFPeA	20.000	19.821	-0.9	99.1
13C6-PFDA	20.000	20.950	4.7	104.7
13C7-PFUnDA	20.000	22.195	11.0	111.0
13C8-FOSA	20.000	22.349	11.7	111.7
13C8-PFOA	20.000	20.566	2.8	102.8
13C8-PFOS	20.000	19.933	-0.3	99.7
13C9-PFNA	20.000	20.814	4.1	104.1
4:2FTS	20.000	20.564	2.8	102.8
6:2FTS	20.000	20.823	4.1	104.1
8:2FTS	20.000	20.385	1.9	101.9
d3-MeFOSAA	20.000	24.788	23.9	123.9
EtFOSAA	20.000	21.340	6.7	106.7
FOSA	20.000	19.348	-3.3	96.7
MeFOSAA	20.000	20.381	1.9	101.9
PFBA	20.000	19.044	-4.8	95.2
PFBS	20.000	19.293	-3.5	96.5
PFDA	20.000	19.350	-3.3	96.7
PFDoDA	20.000	18.374	-8.1	91.9
PFDS	20.000	15.748	-21.3	78.7
PFHpA	20.000	19.106	-4.5	95.5
PFHpS	20.000	19.341	-3.3	96.7
PFHxA	20.000	19.447	-2.8	97.2
PFHxS	20.000	19.484	-2.6	97.4
PFNA	20.000	19.508	-2.5	97.5
PFNS	20.000	19.719	-1.4	98.6
PFOA	20.000	19.636	-1.8	98.2
PFOS	20.000	19.064	-4.7	95.3

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-CC134
Lab FileID: 5Q9080.D

PFPeA	20.000	19.323	-3.4	96.6
PFPeS	20.000	18.918	-5.4	94.6
PFTeDA	20.000	20.177	0.9	100.9
PFTrDA	20.000	18.544	-7.3	92.7
PFUnDA	20.000	18.870	-5.7	94.3
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	17.319	-13.4	86.6
13C3-HFPO-DA	20.000	19.216	-3.9	96.1
9Cl-PF3ONS	20.000	16.854	-15.7	84.3
ADONA	20.000	21.187	5.9	105.9
HFPO-DA	20.000	19.300	-3.5	96.5
M3-HFPO-DA	---	--ISTD--		
d3-MeFOSA	20.000	22.064	10.3	110.3
MeFOSA	20.000	19.331	-3.3	96.7
M3-MeFOSA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	23.942	19.7	119.7
4-PFECHS	20.000	17.347	-13.3	86.7
FBSA	20.000	21.212	6.1	106.1
FHxSA	20.000	20.593	3.0	103.0

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-CC134
Lab FileID: 5Q9081.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\122822_ID_S5Q134\s5q134.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\122822_ID_S5Q134\5Q9039.d
2:D:\MassHunter\Data\122822_ID_S5Q134\5Q9040.d
3:D:\MassHunter\Data\122822_ID_S5Q134\5Q9041.d
4:D:\MassHunter\Data\122822_ID_S5Q134\5Q9042.d
5:D:\MassHunter\Data\122822_ID_S5Q134\5Q9043.d
6:D:\MassHunter\Data\122822_ID_S5Q134\5Q9044.d
7:D:\MassHunter\Data\122822_ID_S5Q134\5Q9045.d
8:D:\MassHunter\Data\122822_ID_S5Q134\5Q9046.d

Data File: 5Q9081
Type : QC
Level : 2

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	19.478	-2.6	97.4
13C2-6:2FTS	20.000	20.160	0.8	100.8
13C2-8:2FTS	20.000	20.506	2.5	102.5
13C2-PFDoDA	20.000	21.899	9.5	109.5
13C2-PFTeDA	20.000	20.674	3.4	103.4
13C3-PFBS	20.000	20.362	1.8	101.8
13C3-PFHxS	20.000	20.354	1.8	101.8
13C4-PFBA	20.000	21.456	7.3	107.3
13C4-PFHpA	20.000	21.527	7.6	107.6
13C5-PFHxA	20.000	20.914	4.6	104.6
13C5-PFPeA	20.000	20.561	2.8	102.8
13C6-PFDA	20.000	21.900	9.5	109.5
13C7-PFUnDA	20.000	23.203	16.0	116.0
13C8-FOSA	20.000	23.858	19.3	119.3
13C8-PFOA	20.000	21.654	8.3	108.3
13C8-PFOS	20.000	20.705	3.5	103.5
13C9-PFNA	20.000	21.724	8.6	108.6
4:2FTS	1.000	1.004	0.4	100.4
6:2FTS	1.000	1.025	2.5	102.5
8:2FTS	1.000	1.019	1.9	101.9
d3-MeFOSAA	20.000	25.724	28.6	128.6
EtFOSAA	1.000	1.032	3.2	103.2
FOSA	1.000	0.920	-8.0	92.0
MeFOSAA	1.000	0.990	-1.0	99.0
PFBA	1.000	0.902	-9.8	90.2
PFBS	1.000	0.936	-6.4	93.6
PFDA	1.000	0.903	-9.7	90.3
PFDoDA	1.000	0.988	-1.2	98.8
PFDS	1.000	0.741	-25.9	74.1
PFHpA	1.000	0.895	-10.5	89.5
PFHpS	1.000	0.938	-6.2	93.8
PFHxA	1.000	0.921	-7.9	92.1
PFHxS	1.000	0.913	-8.7	91.3
PFNA	1.000	0.940	-6.0	94.0
PFNS	1.000	0.989	-1.1	98.9
PFOA	1.000	0.927	-7.3	92.7
PFOS	1.000	0.840	-16.0	84.0

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-CC134
Lab FileID: 5Q9081.D

PFPeA	1.000	0.926	-7.4	92.6
PFPeS	1.000	0.910	-9.0	91.0
PFTeDA	1.000	1.023	2.3	102.3
PFTrDA	1.000	0.977	-2.3	97.7
PFUnDA	1.000	0.890	-11.0	89.0
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	0.863	-13.7	86.3
13C3-HFPO-DA	20.000	19.835	-0.8	99.2
9Cl-PF3ONS	1.000	0.786	-21.4	78.6
ADONA	1.000	0.986	-1.4	98.6
HFPO-DA	1.000	0.865	-13.5	86.5
M3-HFPO-DA	---	--ISTD--		
d3-MeFOSA	20.000	22.848	14.2	114.2
MeFOSA	1.000	0.992	-0.8	99.2
M3-MeFOSA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	24.781	23.9	123.9
4-PFECHS	1.000	0.792	-20.8	79.2
FBSA	1.000	1.037	3.7	103.7
FHxSA	1.000	0.961	-3.9	96.1

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-ECC134
Lab FileID: 5Q9085.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\122822_ID_S5Q134\s5q134.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\122822_ID_S5Q134\5Q9039.d
2:D:\MassHunter\Data\122822_ID_S5Q134\5Q9040.d
3:D:\MassHunter\Data\122822_ID_S5Q134\5Q9041.d
4:D:\MassHunter\Data\122822_ID_S5Q134\5Q9042.d
5:D:\MassHunter\Data\122822_ID_S5Q134\5Q9043.d
6:D:\MassHunter\Data\122822_ID_S5Q134\5Q9044.d
7:D:\MassHunter\Data\122822_ID_S5Q134\5Q9045.d
8:D:\MassHunter\Data\122822_ID_S5Q134\5Q9046.d

Data File: 5Q9085
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	19.841	-0.8	99.2
13C2-6:2FTS	20.000	20.396	2.0	102.0
13C2-8:2FTS	20.000	20.959	4.8	104.8
13C2-PFDoDA	20.000	21.394	7.0	107.0
13C2-PFTeDA	20.000	20.707	3.5	103.5
13C3-PFBS	20.000	19.597	-2.0	98.0
13C3-PFHxS	20.000	19.752	-1.2	98.8
13C4-PFBA	20.000	20.827	4.1	104.1
13C4-PFHpA	20.000	20.654	3.3	103.3
13C5-PFHxA	20.000	20.199	1.0	101.0
13C5-PFPeA	20.000	19.877	-0.6	99.4
13C6-PFDA	20.000	20.918	4.6	104.6
13C7-PFUnDA	20.000	22.420	12.1	112.1
13C8-FOSA	20.000	22.050	10.2	110.2
13C8-PFOA	20.000	20.739	3.7	103.7
13C8-PFOS	20.000	19.540	-2.3	97.7
13C9-PFNA	20.000	20.719	3.6	103.6
4:2FTS	20.000	20.474	2.4	102.4
6:2FTS	20.000	20.438	2.2	102.2
8:2FTS	20.000	20.375	1.9	101.9
d3-MeFOSAA	20.000	25.020	25.1	125.1
EtFOSAA	20.000	21.421	7.1	107.1
FOSA	20.000	19.485	-2.6	97.4
MeFOSAA	20.000	19.631	-1.8	98.2
PFBA	20.000	19.064	-4.7	95.3
PFBS	20.000	19.422	-2.9	97.1
PFDA	20.000	19.279	-3.6	96.4
PFDoDA	20.000	19.693	-1.5	98.5
PFDS	20.000	17.068	-14.7	85.3
PFHpA	20.000	19.131	-4.3	95.7
PFHpS	20.000	19.754	-1.2	98.8
PFHxA	20.000	19.267	-3.7	96.3
PFHxS	20.000	19.160	-4.2	95.8
PFNA	20.000	19.435	-2.8	97.2
PFNS	20.000	20.126	0.6	100.6
PFOA	20.000	19.490	-2.6	97.4
PFOS	20.000	19.385	-3.1	96.9

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q134-ECC134
Lab FileID: 5Q9085.D

PFPeA	20.000	19.422	-2.9	97.1
PFPeS	20.000	18.946	-5.3	94.7
PFTeDA	20.000	21.589	7.9	107.9
PFTrDA	20.000	19.863	-0.7	99.3
PFUnDA	20.000	18.909	-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	20.000	18.158	-9.2	90.8
13C3-HFPO-DA	20.000	19.267	-3.7	96.3
9Cl-PF3ONS	20.000	16.976	-15.1	84.9
ADONA	20.000	20.960	4.8	104.8
HFPO-DA	20.000	19.404	-3.0	97.0
M3-HFPO-DA	---	--ISTD--		
d3-MeFOSA	20.000	21.892	9.5	109.5
MeFOSA	20.000	19.329	-3.4	96.6
M3-MeFOSA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	24.437	22.2	122.2
4-PFECHS	20.000	17.253	-13.7	86.3
FBSA	20.000	21.229	6.1	106.1
FHxSA	20.000	20.428	2.1	102.1

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q135-CC134
Lab FileID: 5Q9093.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\122922_ID_S5Q135\s5q135.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\122822_ID_S5Q134\5Q9039.d
2:D:\MassHunter\Data\122822_ID_S5Q134\5Q9040.d
3:D:\MassHunter\Data\122822_ID_S5Q134\5Q9041.d
4:D:\MassHunter\Data\122822_ID_S5Q134\5Q9042.d
5:D:\MassHunter\Data\122822_ID_S5Q134\5Q9043.d
6:D:\MassHunter\Data\122822_ID_S5Q134\5Q9044.d
7:D:\MassHunter\Data\122822_ID_S5Q134\5Q9045.d
8:D:\MassHunter\Data\122822_ID_S5Q134\5Q9046.d

Data File: 5Q9093
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	18.718	-6.4	93.6
13C2-6:2FTS	20.000	18.515	-7.4	92.6
13C2-8:2FTS	20.000	18.215	-8.9	91.1
13C2-PFDoDA	20.000	16.535	-17.3	82.7
13C2-PFTeDA	20.000	17.878	-10.6	89.4
13C3-PFBS	20.000	18.958	-5.2	94.8
13C3-PFHxS	20.000	18.561	-7.2	92.8
13C4-PFBA	20.000	18.894	-5.5	94.5
13C4-PFHpA	20.000	18.838	-5.8	94.2
13C5-PFHxA	20.000	18.905	-5.5	94.5
13C5-PFPeA	20.000	18.960	-5.2	94.8
13C6-PFDA	20.000	18.080	-9.6	90.4
13C7-PFUnDA	20.000	16.355	-18.2	81.8
13C8-FOSA	20.000	17.869	-10.7	89.3
13C8-PFOA	20.000	18.696	-6.5	93.5
13C8-PFOS	20.000	18.994	-5.0	95.0
13C9-PFNA	20.000	18.414	-7.9	92.1
4:2FTS	20.000	20.354	1.8	101.8
6:2FTS	20.000	20.530	2.7	102.7
8:2FTS	20.000	20.383	1.9	101.9
d3-MeFOSAA	20.000	17.134	-14.3	85.7
EtFOSAA	20.000	19.552	-2.2	97.8
FOSA	20.000	19.397	-3.0	97.0
MeFOSAA	20.000	20.017	0.1	100.1
PFBA	20.000	19.150	-4.2	95.8
PFBS	20.000	19.561	-2.2	97.8
PFDA	20.000	19.385	-3.1	96.9
PFDoDA	20.000	19.679	-1.6	98.4
PFDS	20.000	19.167	-4.2	95.8
PFHpA	20.000	19.259	-3.7	96.3
PFHpS	20.000	19.330	-3.3	96.7
PFHxA	20.000	19.320	-3.4	96.6
PFHxS	20.000	19.589	-2.1	97.9
PFNA	20.000	19.495	-2.5	97.5
PFNS	20.000	19.755	-1.2	98.8
PFOA	20.000	19.538	-2.3	97.7
PFOS	20.000	19.063	-4.7	95.3

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q135-CC134
Lab FileID: 5Q9093.D

PFPeA	20.000	19.405	-3.0	97.0
PFPeS	20.000	19.029	-4.9	95.1
PFTeDA	20.000	17.260	-13.7	86.3
PFTrDA	20.000	22.284	11.4	111.4
PFUnDA	20.000	21.308	6.5	106.5
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	19.918	-0.4	99.6
13C3-HFPO-DA	20.000	21.146	5.7	105.7
9Cl-PF3ONS	20.000	18.918	-5.4	94.6
ADONA	20.000	20.478	2.4	102.4
HFPO-DA	20.000	19.181	-4.1	95.9
M3-HFPO-DA	---	--ISTD--		
d3-MeFOSA	20.000	18.026	-9.9	90.1
MeFOSA	20.000	19.609	-2.0	98.0
M3-MeFOSA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	17.776	-11.1	88.9
4-PFECHS	20.000	18.281	-8.6	91.4
FBSA	20.000	19.473	-2.6	97.4
FHxSA	20.000	18.452	-7.7	92.3

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q135-CC134
Lab FileID: 5Q9094.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\122922_ID_S5Q135\s5q135.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\122822_ID_S5Q134\5Q9039.d
2:D:\MassHunter\Data\122822_ID_S5Q134\5Q9040.d
3:D:\MassHunter\Data\122822_ID_S5Q134\5Q9041.d
4:D:\MassHunter\Data\122822_ID_S5Q134\5Q9042.d
5:D:\MassHunter\Data\122822_ID_S5Q134\5Q9043.d
6:D:\MassHunter\Data\122822_ID_S5Q134\5Q9044.d
7:D:\MassHunter\Data\122822_ID_S5Q134\5Q9045.d
8:D:\MassHunter\Data\122822_ID_S5Q134\5Q9046.d

Data File: 5Q9094
Type : QC
Level : 2

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	17.612	-11.9	88.1
13C2-6:2FTS	20.000	17.608	-12.0	88.0
13C2-8:2FTS	20.000	17.076	-14.6	85.4
13C2-PFDoDA	20.000	17.229	-13.9	86.1
13C2-PFTeDA	20.000	14.597	-27.0	73.0
13C3-PFBS	20.000	19.685	-1.6	98.4
13C3-PFHxS	20.000	19.144	-4.3	95.7
13C4-PFBA	20.000	18.672	-6.6	93.4
13C4-PFHpA	20.000	18.711	-6.4	93.6
13C5-PFHxA	20.000	18.655	-6.7	93.3
13C5-PFPeA	20.000	18.939	-5.3	94.7
13C6-PFDA	20.000	18.051	-9.7	90.3
13C7-PFUnDA	20.000	15.887	-20.6	79.4
13C8-FOSA	20.000	17.422	-12.9	87.1
13C8-PFOA	20.000	18.539	-7.3	92.7
13C8-PFOS	20.000	19.385	-3.1	96.9
13C9-PFNA	20.000	18.019	-9.9	90.1
4:2FTS	1.000	1.030	3.0	103.0
6:2FTS	1.000	0.978	-2.2	97.8
8:2FTS	1.000	1.022	2.2	102.2
d3-MeFOSAA	20.000	16.010	-20.0	80.0
EtFOSAA	1.000	0.960	-4.0	96.0
FOSA	1.000	0.906	-9.4	90.6
MeFOSAA	1.000	0.891	-10.9	89.1
PFBA	1.000	0.916	-8.4	91.6
PFBS	1.000	0.945	-5.5	94.5
PFDA	1.000	0.912	-8.8	91.2
PFDoDA	1.000	0.855	-14.5	85.5
PFDS	1.000	0.984	-1.6	98.4
PFHpA	1.000	0.887	-11.3	88.7
PFHpS	1.000	0.948	-5.2	94.8
PFHxA	1.000	0.920	-8.0	92.0
PFHxS	1.000	0.946	-5.4	94.6
PFNA	1.000	0.910	-9.0	91.0
PFNS	1.000	0.931	-6.9	93.1
PFOA	1.000	0.934	-6.6	93.4
PFOS	1.000	0.935	-6.5	93.5

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q135-CC134
Lab FileID: 5Q9094.D

PFPeA	1.000	0.918	-8.2	91.8
PFPeS	1.000	0.873	-12.7	87.3
PFTeDA	1.000	1.099	9.9	109.9
PFTrDA	1.000	0.874	-12.6	87.4
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	1.014	1.4	101.4
13C3-HFPO-DA	20.000	21.310	6.5	106.5
9Cl-PF3ONS	1.000	0.909	-9.1	90.9
ADONA	1.000	0.900	-10.0	90.0
HFPO-DA	1.000	0.896	-10.4	89.6
M3-HFPO-DA	---	--ISTD--		
d3-MeFOSA	20.000	18.083	-9.6	90.4
MeFOSA	1.000	0.881	-11.9	88.1
M3-MeFOSA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	17.402	-13.0	87.0
4-PFECHS	1.000	0.862	-13.8	86.2
FBSA	1.000	0.906	-9.4	90.6
FHxSA	1.000	0.837	-16.3	83.7

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q135-CC134
Lab FileID: 5Q9101.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\122922_ID_S5Q135\s5q135.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\122822_ID_S5Q134\5Q9039.d
2:D:\MassHunter\Data\122822_ID_S5Q134\5Q9040.d
3:D:\MassHunter\Data\122822_ID_S5Q134\5Q9041.d
4:D:\MassHunter\Data\122822_ID_S5Q134\5Q9042.d
5:D:\MassHunter\Data\122822_ID_S5Q134\5Q9043.d
6:D:\MassHunter\Data\122822_ID_S5Q134\5Q9044.d
7:D:\MassHunter\Data\122822_ID_S5Q134\5Q9045.d
8:D:\MassHunter\Data\122822_ID_S5Q134\5Q9046.d

Data File: 5Q9101
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	17.292	-13.5	86.5
13C2-6:2FTS	20.000	17.140	-14.3	85.7
13C2-8:2FTS	20.000	16.696	-16.5	83.5
13C2-PFDoDA	20.000	14.218	-28.9	71.1
13C2-PFTeDA	20.000	13.757	# -31.2	68.8
13C3-PFBS	20.000	19.465	-2.7	97.3
13C3-PFHxS	20.000	18.999	-5.0	95.0
13C4-PFBA	20.000	16.406	-18.0	82.0
13C4-PFHpA	20.000	16.037	-19.8	80.2
13C5-PFHxA	20.000	16.386	-18.1	81.9
13C5-PFPeA	20.000	16.757	-16.2	83.8
13C6-PFDA	20.000	15.510	-22.5	77.5
13C7-PFUnDA	20.000	15.233	-23.8	76.2
13C8-FOSA	20.000	15.081	-24.6	75.4
13C8-PFOA	20.000	15.612	-21.9	78.1
13C8-PFOS	20.000	19.164	-4.2	95.8
13C9-PFNA	20.000	15.851	-20.7	79.3
4:2FTS	20.000	20.528	2.6	102.6
6:2FTS	20.000	20.431	2.2	102.2
8:2FTS	20.000	20.656	3.3	103.3
d3-MeFOSAA	20.000	12.306	# -38.5	61.5
EtFOSAA	20.000	14.320	-28.4	71.6
FOSA	20.000	19.481	-2.6	97.4
MeFOSAA	20.000	18.301	-8.5	91.5
PFBA	20.000	19.122	-4.4	95.6
PFBS	20.000	19.234	-3.8	96.2
PFDA	20.000	19.441	-2.8	97.2
PFDoDA	20.000	17.960	-10.2	89.8
PFDS	20.000	22.901	14.5	114.5
PFHpA	20.000	19.102	-4.5	95.5
PFHpS	20.000	19.255	-3.7	96.3
PFHxA	20.000	19.260	-3.7	96.3
PFHxS	20.000	19.393	-3.0	97.0
PFNA	20.000	19.068	-4.7	95.3
PFNS	20.000	19.747	-1.3	98.7
PFOA	20.000	19.776	-1.1	98.9
PFOS	20.000	19.372	-3.1	96.9

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q135-CC134
Lab FileID: 5Q9101.D

PFPeA	20.000	19.381	-3.1	96.9
PFPeS	20.000	18.584	-7.1	92.9
PFTeDA	20.000	17.218	-13.9	86.1
PFTrDA	20.000	18.533	-7.3	92.7
PFUnDA	20.000	18.742	-6.3	93.7
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	25.004	25.0	125.0
13C3-HFPO-DA	20.000	19.098	-4.5	95.5
9Cl-PF3ONS	20.000	22.307	11.5	111.5
ADONA	20.000	16.575	-17.1	82.9
HFPO-DA	20.000	18.925	-5.4	94.6
M3-HFPO-DA	---	--ISTD--		
d3-MeFOSA	20.000	16.555	-17.2	82.8
MeFOSA	20.000	19.687	-1.6	98.4
M3-MeFOSA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	15.225	-23.9	76.1
4-PFECHS	20.000	22.248	11.2	111.2
FBSA	20.000	17.314	-13.4	86.6
FHxSA	20.000	17.183	-14.1	85.9

CC Criteria: +/- 30%

Initial Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q137-ICC137
Lab FileID: 5Q9237.D

Initial Calibration Report

Method Path	D:\MassHunter\Methods
Method File	ID_010323_S5Q137.quantmethod.xml
Batch Name	D:\MassHunter\Data\010323_ID_S5Q137\QuantResults\s5q137.batch.bin
Last Calib Update	1/4/2023 10:13:06 AM

Level Name	Calibration Files	Acq. Date-Time	Level Last Update Time
1	D:\MassHunter\Data\010323_ID_S5Q137\5Q9232.d	1/3/2023 3:04:04 PM	1/4/2023 10:13:06 AM
2	D:\MassHunter\Data\010323_ID_S5Q137\5Q9233.d	1/3/2023 3:19:36 PM	1/4/2023 10:13:06 AM
3	D:\MassHunter\Data\010323_ID_S5Q137\5Q9234.d	1/3/2023 3:39:24 PM	1/4/2023 10:13:06 AM
4	D:\MassHunter\Data\010323_ID_S5Q137\5Q9235.d	1/3/2023 3:54:57 PM	1/4/2023 10:13:06 AM
5	D:\MassHunter\Data\010323_ID_S5Q137\5Q9236.d	1/3/2023 4:15:56 PM	1/4/2023 10:13:06 AM
6	D:\MassHunter\Data\010323_ID_S5Q137\5Q9237.d	1/3/2023 4:31:29 PM	1/4/2023 10:13:06 AM
7	D:\MassHunter\Data\010323_ID_S5Q137\5Q9238.d	1/3/2023 4:47:02 PM	1/4/2023 10:13:06 AM
8	D:\MassHunter\Data\010323_ID_S5Q137\5Q9239.d	1/3/2023 5:02:35 PM	1/4/2023 10:13:06 AM

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
S 13C4-PFBA	Linear	5711	5926	5854	5953	5487	5738	5582	5613	5733	2.938
S 13C5-PFPeA	Linear	10213	10562	10516	10528	10176	10503	10265	10351	10389	1.508
S 13C3-PFBS	Linear	1232	1322	1310	1303	1266	1298	1264	1262	1282	2.402
S 13C2-4:2FTS	Linear	4388	4556	4557	4599	4483	4776	4966	5513	4730	7.695
S 13C5-PFHxA	Linear	14426	14817	14797	14874	14646	14855	14520	14573	14688	1.159
S 13C3-HFPO-DA	Linear	3550	3471	3378	3390	3231	3287	3214	3312	3354	3.471
S 13C4-PFHpA	Linear	14824	15104	15244	15105	14616	14777	14126	13748	14693	3.534
S 13C3-PFHxS	Linear	1581	1640	1649	1643	1581	1570	1522	1522	1589	3.249
S 13C2-6:2FTS	Linear	6901	7042	7005	6980	6833	7118	7223	7859	7120	4.524
S 13C8-PFOA	Linear	19213	19399	19426	19319	18656	19112	18082	17488	18837	3.773
S 13C8-PFOS	Linear	1890	1988	1922	1951	1858	1932	1872	1835	1906	2.689
S 13C9-PFNA	Linear	18795	19539	19532	19330	18715	19036	18195	17898	18880	3.199
S 13C2-8:2FTS	Linear	6027	6050	6122	6053	5837	6103	6147	6784	6140	4.511
S 13C6-PFDA	Linear	19264	19245	19073	19046	18199	18811	17538	17129	18538	4.443
S 13C8-FOSA	Linear	6531	6762	6554	6444	5849	5689	5239	4891	5995	11.447
S 13C7-PFUnDA	Linear	19130	19383	19494	19576	18636	18653	18084	17959	18865	3.333
S d3-MeFOSAA	Linear	3301	3191	3155	3024	2684	2540	2318	2209	2803	15.042
S 13C2-PFDoDA	Linear	19163	19390	19336	18901	18468	18337	17304	17174	18509	4.704
S d3-MeFOSA	Linear	1869	1948	1846	1825	1697	1699	1534	1376	1724	11.053
S d5-EtFOSAA	Linear	3197	3213	3091	2908	2732	2526	2305	2209	2773	14.250
S 13C2-PFTeDA	Linear	19748	20184	20302	19935	19541	19470	18697	18560	19555	3.275
I M4-PFBA				---------- ISTD ----------							
T PFBA	Linear	0.7655	0.7816	0.7958	0.7454	0.9709	0.9424	0.9553	0.9326	0.8612	11.254
I M5-PFPeA				---------- ISTD ----------							
T PFPeA	Linear	0.8218	0.8566	0.8579	0.8262	1.0516	1.0313	1.0407	1.0319	0.9398	11.375
I M5-PFHxA				---------- ISTD ----------							
T PFHxA	Linear	0.6889	0.7321	0.7694	0.7153	0.9019	0.8984	0.9007	0.8889	0.8119	11.594
T FBSA	Linear	0.3790	0.4217	0.4396	0.4162	0.4659	0.4525	0.4548	0.4313	0.4326	6.365

Initial Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q137-ICC137
Lab FileID: 5Q9237.D

Initial Calibration Report

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
I M4-PFHpA						ISTD					
T PFHpA	Linear	0.8956	0.8911	0.8969	0.8832	1.1200	1.0957	1.1000	1.0851	0.9959	11.237
I M8-PFOA						ISTD					
T 4-PFECHS	Quadratic	0.3376	0.3692	0.3846	0.3662	0.4852	0.4856	0.4954	0.5047	0.4286	16.346
T PFOA	Linear	0.7867	0.8210	0.8456	0.8096	1.0225	0.9912	0.9959	0.9891	0.9077	11.033
T FHxSA	Linear	0.2753	0.2978	0.3127	0.2939	0.3487	0.3284	0.3214	0.3112	0.3112	7.260
I M9-PFNA						ISTD					
T PFNA	Linear	0.6820	0.7545	0.7422	0.7194	0.9118	0.8984	0.9083	0.8941	0.8138	12.029
I M6-PFDA						ISTD					
T 9Cl-PF3ONS	Quadratic	0.5144	0.5836	0.6051	0.5834	0.7654	0.7352	0.7660	0.7556	0.6636	15.384
T PFDA	Linear	0.7586	0.7779	0.7839	0.7404	0.9673	0.9404	0.9568	0.9377	0.8579	11.695
I M7-PFUnDA						ISTD					
T PFDS	Avg RF	0.0833	0.1013	0.1104	0.1098	0.1352	0.1361	0.1371	0.1360	0.1187	17.200
T PFUnDA	Linear	0.6882	0.7198	0.7352	0.7018	0.9069	0.9091	0.8993	0.8783	0.8048	12.595
I M2-PFDoDA						ISTD					
T 11Cl-PF3OUdS	Quadratic	0.3842	0.4350	0.4431	0.4525	0.5752	0.5851	0.6034		0.4969	17.750
T PFDoDA	Linear	0.6503	0.6624	0.6424	0.6471	0.8230	0.8139	0.8223	0.8051	0.7333	12.114
T PFTrDA	Linear	0.6598	0.6746	0.6937	0.6721	0.8749	0.8641	0.8831	0.8713	0.7742	13.759
I M2-PFTeDA						ISTD					
T PFTeDA	Linear	0.7634	0.7569	0.7649	0.7507	0.9585	0.9255	0.9377	0.9192	0.8471	11.213
I M8-FOSA						ISTD					
T FOSA	Linear	0.7354	0.7342	0.7634	0.7314	0.9219	0.9117	0.8968	0.8959	0.8238	10.849
I M3-PFBS						ISTD					
T PFBS	Linear	2.2306	2.2983	2.4529	2.3591	2.9378	2.8901	2.8923	2.8647	2.6157	11.729
T PFPeS	Linear	1.4086	1.3761	1.4455	1.4214	1.7664	1.7293	1.7433	1.7455	1.5795	11.358
I M3-PFHxS						ISTD					
T PFHxS	Linear	1.3522	1.4923	1.5854	1.4438	1.8113	1.8608	1.8488	1.8194	1.6517	12.511
T ADONA	Linear	10.23	10.79	10.90	10.62	13.65	13.87	14.02	13.61	12.21	13.940
I M8-PFOS						ISTD					
T PFHpS	Linear	1.1950	1.2100	1.2279	1.1722	1.5273	1.4522	1.4670	1.4451	1.3371	11.072
T PFOS	Linear	1.4643	1.4743	1.4064	1.4334	1.8019	1.7037	1.7259	1.7335	1.5929	10.184
T PFNS	Linear	0.8569	0.9461	1.0795	0.9736	1.2827	1.2079	1.1989	1.1871	1.0916	13.894
I M2-4:2FTS						ISTD					
T 4:2FTS	Avg RF	0.8090	0.8332	0.9149	0.8358	1.0746	1.0119	0.9543	0.8518	0.9107	10.536
I M2-6:2FTS						ISTD					
T 6:2FTS	Avg RF	0.8041	0.8280	0.8333	0.8008	1.0095	0.9634	0.9073	0.8017	0.8685	9.382

Initial Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q137-ICC137
Lab FileID: 5Q9237.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	0.7867	0.7618	0.8318	0.7650	1.0134	0.9696	0.9201	0.7882	0.8546	11.612
I M3-MeFOSAA						ISTD					
T MeFOSAA	Linear	0.6354	0.6601	0.5813	0.6060	0.7463	0.7779	0.7626	0.7345	0.6880	11.108
I M3-HFPO-DA						ISTD					
T HFPO-DA	Linear	1.0219	1.2374	1.1981	1.1705	1.4892	1.4852	1.4996	1.4335	1.3169	13.880
I M3-MeFOSA						ISTD					
T MeFOSA	Linear	1.0126	1.0752	1.0242	1.0393	1.0824	1.0403	1.0635	1.0324	1.0462	2.380
I M5-EtFOSAA						ISTD					
T EtFOSAA	Linear	0.5753	0.6113	0.5699	0.5459	0.6730	0.6826	0.6893	0.6608	0.6260	9.154

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q137-ICC137
Lab FileID: 5Q9237.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 = 5733.123727 * x	0.000000
T PFBA	Linear	y = 0.937131 * x	0.999712
S 13C5-PFPeA	Linear	y = 10389.341284 * x	0.000000
T PFPeA	Linear	y = 1.033219 * x	0.999845
S 13C3-PFBS	Linear	y = 1282.038118 * x	0.000000
T PFBS	Linear	y = 2.870149 * x	0.999862
S 13C2-4:2FTS	Linear	y = 4729.795799 * x	0.000000
S 13C5-PFHxA	Linear	y = 14688.367614 * x	0.000000
T PFHxA	Linear	y = 0.891147 * x	0.999828
T PFPeS	Linear	y = 1.743991 * x	0.999875
S 13C3-HFPO-DA	Linear	y = 3354.115791 * x	0.000000
T HFPO-DA	Linear	y = 1.447609 * x	0.999348
T FBSA	Linear	y = 0.436688 * x	0.999195
S 13C4-PFHpA	Linear	y = 14692.973727 * x	0.000000
T PFHpA	Linear	y = 1.088093 * x	0.999823
S 13C3-PFHxS	Linear	y = 1588.507076 * x	0.000000
T PFHxS	Linear	y = 1.825431 * x	0.999782
T ADONA	Linear	y = 13.693459 * x	0.999615
T 4-PFECHS	Quadratic	y = 0.004843 * x ^ 2 + 0.480831 * x	0.999815
S 13C2-6:2FTS	Linear	y = 7120.182297 * x	0.000000
T PFHpS	Linear	y = 1.449547 * x	0.999792
S 13C8-PFOA	Linear	y = 18836.929155 * x	0.000000
T PFOA	Linear	y = 0.990358 * x	0.999866
T FHxSA	Linear	y = 0.313916 * x	0.999489
S 13C8-PFOS	Linear	y = 1905.950454 * x	0.000000
T PFOS	Linear	y = 1.730947 * x	0.999859
S 13C9-PFNA	Linear	y = 18879.935335 * x	0.000000
T PFNA	Linear	y = 0.896690 * x	0.999807
T 9Cl-PF3ONS	Quadratic	y = 0.010432 * x ^ 2 + 0.711089 * x	0.997368
T PFNS	Linear	y = 1.190260 * x	0.999788
S 13C2-8:2FTS	Linear	y = 6140.308932 * x	0.000000
S 13C6-PFDA	Linear	y = 18538.100112 * x	0.000000
T PFDA	Linear	y = 0.941262 * x	0.999746
T FOSA	Linear	y = 0.896392 * x	0.999864
S 13C8-FOSA	Linear	y = 5994.818094 * x	0.000000
S 13C7-PFUnDA	Linear	y = 18864.542057 * x	0.000000
T PFUnDA	Linear	y = 0.883136 * x	0.999679
T 11Cl-PF3OUdS	Quadratic	y = 0.035394 * x ^ 2 + 0.520215 * x	0.996582
S d3-MeFOSAA	Linear	y = 2802.775133 * x	0.000000
T MeFOSAA	Linear	y = 0.740992 * x	0.999425
S 13C2-PFDoDA	Linear	y = 18509.042912 * x	0.000000
T PFDoDA	Linear	y = 0.808432 * x	0.999749
S d3-MeFOSA	Linear	y = 1724.185978 * x	0.000000

Generated at 10:14 AM on 1/4/2023

Initial Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q137-ICC137
Lab FileID: 5Q9237.D

Initial Calibration Report

T MeFOSA	Linear	y = 1.038988 * x	0.999769
S d5-EtFOSAA	Linear	y = 2772.569562 * x	0.000000
T EtFOSAA	Linear	y = 0.666804 * x	0.999440
T PFTrDA	Linear	y = 0.872906 * x	0.999772
T PFTeDA	Linear	y = 0.922878 * x	0.999771
S 13C2-PFTeDA	Linear	y = 19554.576080 * x	0.000000

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Verification

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q137-ICV137
Lab FileID: 5Q9241.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\010323_ID_S5Q137\s5q137.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\010323_ID_S5Q137\5Q9232.d
2:D:\MassHunter\Data\010323_ID_S5Q137\5Q9233.d
3:D:\MassHunter\Data\010323_ID_S5Q137\5Q9234.d
4:D:\MassHunter\Data\010323_ID_S5Q137\5Q9235.d
5:D:\MassHunter\Data\010323_ID_S5Q137\5Q9236.d
6:D:\MassHunter\Data\010323_ID_S5Q137\5Q9237.d
7:D:\MassHunter\Data\010323_ID_S5Q137\5Q9238.d
8:D:\MassHunter\Data\010323_ID_S5Q137\5Q9239.d

Data File: 5Q9241
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	18.566	-7.2	92.8
13C2-6:2FTS	20.000	18.710	-6.4	93.6
13C2-8:2FTS	20.000	18.165	-9.2	90.8
13C2-PFDoDA	20.000	18.475	-7.6	92.4
13C2-PFTeDA	20.000	18.496	-7.5	92.5
13C3-PFBS	20.000	19.359	-3.2	96.8
13C3-PFHxS	20.000	19.482	-2.6	97.4
13C4-PFBA	20.000	18.752	-6.2	93.8
13C4-PFHpA	20.000	18.971	-5.1	94.9
13C5-PFHxA	20.000	19.452	-2.7	97.3
13C5-PFPeA	20.000	19.579	-2.1	97.9
13C6-PFDA	20.000	18.852	-5.7	94.3
13C7-PFUnDA	20.000	18.713	-6.4	93.6
13C8-FOSA	20.000	17.445	-12.8	87.2
13C8-PFOA	20.000	18.987	-5.1	94.9
13C8-PFOS	20.000	18.668	-6.7	93.3
13C9-PFNA	20.000	18.930	-5.4	94.6
4:2FTS	20.000	18.099	-9.5	90.5
6:2FTS	20.000	18.505	-7.5	92.5
8:2FTS	20.000	19.269	-3.7	96.3
d3-MeFOSAA	20.000	14.801	-26.0	74.0
EtFOSAA	20.000	16.515	-17.4	82.6
FOSA	20.000	17.091	-14.5	85.5
MeFOSAA	20.000	17.939	-10.3	89.7
PFBA	20.000	18.716	-6.4	93.6
PFBS	20.000	15.256	-23.7	76.3
PFDA	20.000	17.235	-13.8	86.2
PFDoDA	20.000	20.174	0.9	100.9
PFDS	20.000	19.600	-2.0	98.0
PFHpA	20.000	17.968	-10.2	89.8
PFHpS	20.000	17.259	-13.7	86.3
PFHxA	20.000	17.242	-13.8	86.2
PFHxS	20.000	15.044	-24.8	75.2
PFNA	20.000	16.843	-15.8	84.2
PFNS	20.000	17.418	-12.9	87.1
PFOA	20.000	18.109	-9.5	90.5
PFOS	20.000	19.470	-2.7	97.3

Initial Calibration Verification

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q137-ICV137
Lab FileID: 5Q9241.D

PFPeA	20.000	16.677	-16.6	83.4
PFPeS	20.000	15.850	-20.7	79.3
PFTeDA	20.000	16.504	-17.5	82.5
PFTrDA	20.000	19.066	-4.7	95.3
PFUnDA	20.000	18.641	-6.8	93.2
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	17.521	-12.4	87.6
13C3-HFPO-DA	20.000	18.672	-6.6	93.4
9Cl-PF3ONS	20.000	17.118	-14.4	85.6
ADONA	20.000	17.161	-14.2	85.8
HFPO-DA	20.000	19.127	-4.4	95.6
M3-HFPO-DA	---	--ISTD--		
d3-MeFOSA	20.000	18.538	-7.3	92.7
MeFOSA	20.000	0.000	# -100.0	0.0
M3-MeFOSA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	15.224	-23.9	76.1
4-PFECHS	20.000	0.000	# -100.0	0.0
FBSA	20.000	17.096	-14.5	85.5
FHxSA	20.000	18.353	-8.2	91.8

CC Criteria: +/- 30%

Initial Calibration Verification

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q137-ICV137
Lab FileID: 5Q9242.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\010323_ID_S5Q137\s5q137.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\010323_ID_S5Q137\5Q9232.d
2:D:\MassHunter\Data\010323_ID_S5Q137\5Q9233.d
3:D:\MassHunter\Data\010323_ID_S5Q137\5Q9234.d
4:D:\MassHunter\Data\010323_ID_S5Q137\5Q9235.d
5:D:\MassHunter\Data\010323_ID_S5Q137\5Q9236.d
6:D:\MassHunter\Data\010323_ID_S5Q137\5Q9237.d
7:D:\MassHunter\Data\010323_ID_S5Q137\5Q9238.d
8:D:\MassHunter\Data\010323_ID_S5Q137\5Q9239.d

Data File: 5Q9242
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	18.492	-7.5	92.5
13C2-6:2FTS	20.000	18.317	-8.4	91.6
13C2-8:2FTS	20.000	17.877	-10.6	89.4
13C2-PFDoDA	20.000	17.918	-10.4	89.6
13C2-PFTeDA	20.000	18.420	-7.9	92.1
13C3-PFBS	20.000	19.277	-3.6	96.4
13C3-PFHxS	20.000	19.332	-3.3	96.7
13C4-PFBA	20.000	18.464	-7.7	92.3
13C4-PFHpA	20.000	18.933	-5.3	94.7
13C5-PFHxA	20.000	19.235	-3.8	96.2
13C5-PFPeA	20.000	19.413	-2.9	97.1
13C6-PFDA	20.000	18.558	-7.2	92.8
13C7-PFUnDA	20.000	18.580	-7.1	92.9
13C8-FOSA	20.000	17.273	-13.6	86.4
13C8-PFOA	20.000	18.885	-5.6	94.4
13C8-PFOS	20.000	18.766	-6.2	93.8
13C9-PFNA	20.000	18.553	-7.2	92.8
4:2FTS	20.000	21.826	9.1	109.1
6:2FTS	20.000	21.342	6.7	106.7
8:2FTS	20.000	22.155	10.8	110.8
d3-MeFOSAA	20.000	14.798	-26.0	74.0
EtFOSAA	20.000	15.722	-21.4	78.6
FOSA	20.000	18.688	-6.6	93.4
MeFOSAA	20.000	17.812	-10.9	89.1
PFBA	20.000	20.481	2.4	102.4
PFBS	20.000	18.309	-8.5	91.5
PFDA	20.000	18.983	-5.1	94.9
PFDoDA	20.000	22.698	13.5	113.5
PFDS	20.000	23.116	15.6	115.6
PFHpA	20.000	17.508	-12.5	87.5
PFHpS	20.000	20.080	0.4	100.4
PFHxA	20.000	18.836	-5.8	94.2
PFHxS	20.000	18.906	-5.5	94.5
PFNA	20.000	19.151	-4.2	95.8
PFNS	20.000	0.000	# -100.0	0.0
PFOA	20.000	19.250	-3.7	96.3
PFOS	20.000	21.751	8.8	108.8

Initial Calibration Verification

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q137-ICV137
Lab FileID: 5Q9242.D

PFPeA	20.000	18.159	-9.2	90.8
PFPeS	20.000	19.013	-4.9	95.1
PFTeDA	20.000	18.399	-8.0	92.0
PFTrDA	20.000	22.853	14.3	114.3
PFUnDA	20.000	21.640	8.2	108.2
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	0.000	# -100.0	0.0
13C3-HFPO-DA	20.000	18.434	-7.8	92.2
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--		
d3-MeFOSA	20.000	17.738	-11.3	88.7
MeFOSA	20.000	20.482	2.4	102.4
M3-MeFOSA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	15.170	-24.1	75.9
4-PFECHS	20.000	0.000	# -100.0	0.0
FBSA	20.000	0.000	# -100.0	0.0
FHxSA	20.000	0.000	# -100.0	0.0

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q137-CC137
Lab FileID: 5Q9244.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\010323_ID_S5Q137\s5q137.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\010323_ID_S5Q137\5Q9232.d
2:D:\MassHunter\Data\010323_ID_S5Q137\5Q9233.d
3:D:\MassHunter\Data\010323_ID_S5Q137\5Q9234.d
4:D:\MassHunter\Data\010323_ID_S5Q137\5Q9235.d
5:D:\MassHunter\Data\010323_ID_S5Q137\5Q9236.d
6:D:\MassHunter\Data\010323_ID_S5Q137\5Q9237.d
7:D:\MassHunter\Data\010323_ID_S5Q137\5Q9238.d
8:D:\MassHunter\Data\010323_ID_S5Q137\5Q9239.d

Data File: 5Q9244
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	20.150	0.8	100.8
13C2-6:2FTS	20.000	20.175	0.9	100.9
13C2-8:2FTS	20.000	20.492	2.5	102.5
13C2-PFDoDA	20.000	20.368	1.8	101.8
13C2-PFTeDA	20.000	20.266	1.3	101.3
13C3-PFBS	20.000	20.286	1.4	101.4
13C3-PFHxS	20.000	20.757	3.8	103.8
13C4-PFBA	20.000	20.096	0.5	100.5
13C4-PFHpA	20.000	20.521	2.6	102.6
13C5-PFHxA	20.000	20.654	3.3	103.3
13C5-PFPeA	20.000	20.684	3.4	103.4
13C6-PFDA	20.000	20.292	1.5	101.5
13C7-PFUnDA	20.000	20.272	1.4	101.4
13C8-FOSA	20.000	19.018	-4.9	95.1
13C8-PFOA	20.000	20.175	0.9	100.9
13C8-PFOS	20.000	20.381	1.9	101.9
13C9-PFNA	20.000	20.490	2.5	102.5
4:2FTS	20.000	22.687	13.4	113.4
6:2FTS	20.000	21.845	9.2	109.2
8:2FTS	20.000	22.042	10.2	110.2
d3-MeFOSAA	20.000	17.204	-14.0	86.0
EtFOSAA	20.000	20.105	0.5	100.5
FOSA	20.000	19.784	-1.1	98.9
MeFOSAA	20.000	20.001	0.0	100.0
PFBA	20.000	19.832	-0.8	99.2
PFBS	20.000	20.414	2.1	102.1
PFDA	20.000	20.190	1.0	101.0
PFDoDA	20.000	20.013	0.1	100.1
PFDS	20.000	22.808	14.0	114.0
PFHpA	20.000	20.196	1.0	101.0
PFHpS	20.000	20.560	2.8	102.8
PFHxA	20.000	20.123	0.6	100.6
PFHxS	20.000	20.216	1.1	101.1
PFNA	20.000	20.056	0.3	100.3
PFNS	20.000	19.963	-0.2	99.8
PFOA	20.000	20.347	1.7	101.7
PFOS	20.000	19.773	-1.1	98.9

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q137-CC137
Lab FileID: 5Q9244.D

PFPeA	20.000	19.947	-0.3	99.7
PFPeS	20.000	20.059	0.3	100.3
PFTeDA	20.000	20.260	1.3	101.3
PFTrDA	20.000	19.392	-3.0	97.0
PFUnDA	20.000	20.103	0.5	100.5
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	20.671	3.4	103.4
13C3-HFPO-DA	20.000	19.573	-2.1	97.9
9Cl-PF3ONS	20.000	20.911	4.6	104.6
ADONA	20.000	19.856	-0.7	99.3
HFPO-DA	20.000	20.229	1.1	101.1
M3-HFPO-DA	---	--ISTD--		
d3-MeFOSA	20.000	19.684	-1.6	98.4
MeFOSA	20.000	19.722	-1.4	98.6
M3-MeFOSA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	16.631	-16.8	83.2
4-PFECHS	20.000	20.441	2.2	102.2
FBSA	20.000	19.769	-1.2	98.8
FHxSA	20.000	20.114	0.6	100.6

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q137-CC137
Lab FileID: 5Q9245.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\010323_ID_S5Q137\s5q137.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\010323_ID_S5Q137\5Q9232.d
2:D:\MassHunter\Data\010323_ID_S5Q137\5Q9233.d
3:D:\MassHunter\Data\010323_ID_S5Q137\5Q9234.d
4:D:\MassHunter\Data\010323_ID_S5Q137\5Q9235.d
5:D:\MassHunter\Data\010323_ID_S5Q137\5Q9236.d
6:D:\MassHunter\Data\010323_ID_S5Q137\5Q9237.d
7:D:\MassHunter\Data\010323_ID_S5Q137\5Q9238.d
8:D:\MassHunter\Data\010323_ID_S5Q137\5Q9239.d

Data File: 5Q9245
Type : QC
Level : 2

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	19.317	-3.4	96.6
13C2-6:2FTS	20.000	19.715	-1.4	98.6
13C2-8:2FTS	20.000	19.836	-0.8	99.2
13C2-PFDoDA	20.000	20.940	4.7	104.7
13C2-PFTeDA	20.000	20.928	4.6	104.6
13C3-PFBS	20.000	20.574	2.9	102.9
13C3-PFHxS	20.000	20.930	4.6	104.6
13C4-PFBA	20.000	20.024	0.1	100.1
13C4-PFHpA	20.000	20.975	4.9	104.9
13C5-PFHxA	20.000	20.884	4.4	104.4
13C5-PFPeA	20.000	20.882	4.4	104.4
13C6-PFDA	20.000	20.557	2.8	102.8
13C7-PFUnDA	20.000	20.480	2.4	102.4
13C8-FOSA	20.000	19.823	-0.9	99.1
13C8-PFOA	20.000	20.764	3.8	103.8
13C8-PFOS	20.000	20.551	2.8	102.8
13C9-PFNA	20.000	20.777	3.9	103.9
4:2FTS	1.000	0.952	-4.8	95.2
6:2FTS	1.000	0.913	-8.7	91.3
8:2FTS	1.000	0.917	-8.3	91.7
d3-MeFOSAA	20.000	18.370	-8.2	91.8
EtFOSAA	1.000	0.727	-27.3	72.7
FOSA	1.000	0.849	-15.1	84.9
MeFOSAA	1.000	0.781	-21.9	78.1
PFBA	1.000	0.839	-16.1	83.9
PFBS	1.000	0.831	-16.9	83.1
PFDA	1.000	0.837	-16.3	83.7
PFDoDA	1.000	0.808	-19.2	80.8
PFDS	1.000	0.945	-5.5	94.5
PFHpA	1.000	0.813	-18.7	81.3
PFHpS	1.000	0.833	-16.7	83.3
PFHxA	1.000	0.806	-19.4	80.6
PFHxS	1.000	0.785	-21.5	78.5
PFNA	1.000	0.807	-19.3	80.7
PFNS	1.000	0.745	-25.5	74.5
PFOA	1.000	0.851	-14.9	85.1
PFOS	1.000	0.842	-15.8	84.2

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q137-CC137
Lab FileID: 5Q9245.D

PFPeA	1.000	0.816	-18.4	81.6
PFPeS	1.000	0.811	-18.9	81.1
PFTeDA	1.000	0.830	-17.0	83.0
PFTrDA	1.000	0.790	-21.0	79.0
PFUnDA	1.000	0.804	-19.6	80.4
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	1.000	0.860	-14.0	86.0
13C3-HFPO-DA	20.000	19.281	-3.6	96.4
9Cl-PF3ONS	1.000	0.834	-16.6	83.4
ADONA	1.000	0.809	-19.1	80.9
HFPO-DA	1.000	0.849	-15.1	84.9
M3-HFPO-DA	---	--ISTD--		
d3-MeFOSA	20.000	20.471	2.4	102.4
MeFOSA	1.000	1.046	4.6	104.6
M3-MeFOSA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	18.146	-9.3	90.7
4-PFECHS	1.000	0.813	-18.7	81.3
FBSA	1.000	0.880	-12.0	88.0
FHxSA	1.000	0.887	-11.3	88.7

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q137-CC137
Lab FileID: 5Q9254.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\010323_ID_S5Q137\s5q137.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\010323_ID_S5Q137\5Q9232.d
2:D:\MassHunter\Data\010323_ID_S5Q137\5Q9233.d
3:D:\MassHunter\Data\010323_ID_S5Q137\5Q9234.d
4:D:\MassHunter\Data\010323_ID_S5Q137\5Q9235.d
5:D:\MassHunter\Data\010323_ID_S5Q137\5Q9236.d
6:D:\MassHunter\Data\010323_ID_S5Q137\5Q9237.d
7:D:\MassHunter\Data\010323_ID_S5Q137\5Q9238.d
8:D:\MassHunter\Data\010323_ID_S5Q137\5Q9239.d

Data File: 5Q9254
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	22.280	11.4	111.4
13C2-6:2FTS	20.000	22.212	11.1	111.1
13C2-8:2FTS	20.000	22.347	11.7	111.7
13C2-PFDoDA	20.000	22.330	11.6	111.6
13C2-PFTeDA	20.000	23.171	15.9	115.9
13C3-PFBS	20.000	21.724	8.6	108.6
13C3-PFHxS	20.000	22.139	10.7	110.7
13C4-PFBA	20.000	22.876	14.4	114.4
13C4-PFHpA	20.000	22.239	11.2	111.2
13C5-PFHxA	20.000	22.063	10.3	110.3
13C5-PFPeA	20.000	22.404	12.0	112.0
13C6-PFDA	20.000	22.623	13.1	113.1
13C7-PFUnDA	20.000	21.697	8.5	108.5
13C8-FOSA	20.000	23.019	15.1	115.1
13C8-PFOA	20.000	22.429	12.1	112.1
13C8-PFOS	20.000	22.323	11.6	111.6
13C9-PFNA	20.000	22.276	11.4	111.4
4:2FTS	20.000	22.456	12.3	112.3
6:2FTS	20.000	22.611	13.1	113.1
8:2FTS	20.000	22.837	14.2	114.2
d3-MeFOSAA	20.000	23.713	18.6	118.6
EtFOSAA	20.000	21.869	9.3	109.3
FOSA	20.000	20.060	0.3	100.3
MeFOSAA	20.000	19.869	-0.7	99.3
PFBA	20.000	19.939	-0.3	99.7
PFBS	20.000	20.330	1.7	101.7
PFDA	20.000	19.857	-0.7	99.3
PFDoDA	20.000	20.518	2.6	102.6
PFDS	20.000	22.783	13.9	113.9
PFHpA	20.000	20.066	0.3	100.3
PFHpS	20.000	20.145	0.7	100.7
PFHxA	20.000	20.281	1.4	101.4
PFHxS	20.000	20.048	0.2	100.2
PFNA	20.000	20.357	1.8	101.8
PFNS	20.000	19.628	-1.9	98.1
PFOA	20.000	19.993	0.0	100.0
PFOS	20.000	19.708	-1.5	98.5

Continuing Calibration Summary

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Sample: S5Q137-CC137
Lab FileID: 5Q9254.D

PFPeA	20.000	20.000	0.0	100.0
PFPeS	20.000	20.037	0.2	100.2
PFTeDA	20.000	20.193	1.0	101.0
PFTrDA	20.000	20.191	1.0	101.0
PFUnDA	20.000	20.154	0.8	100.8
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	20.326	1.6	101.6
13C3-HFPO-DA	20.000	20.700	3.5	103.5
9Cl-PF3ONS	20.000	19.919	-0.4	99.6
ADONA	20.000	19.722	-1.4	98.6
HFPO-DA	20.000	20.134	0.7	100.7
M3-HFPO-DA	---	--ISTD--		
d3-MeFOSA	20.000	22.429	12.1	112.1
MeFOSA	20.000	19.631	-1.8	98.2
M3-MeFOSA	---	--ISTD--		
M5-EtFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	22.549	12.7	112.7
4-PFECHS	20.000	19.578	-2.1	97.9
FBSA	20.000	21.897	9.5	109.5
FHxSA	20.000	22.282	11.4	111.4

CC Criteria: +/- 30%

Run Sequence Report

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Run ID: S5Q134 **Method:** EPA 537M QSM5.3 B-1 **Instrument ID:** GCMS5Q

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S5Q134-IC134	5Q9038.D	12/28/22 12:11	n/a	Mass Calibration Verification
S5Q134-IC134	5Q9039.D	12/28/22 12:28	n/a	Initial cal 0.5
S5Q134-IC134	5Q9040.D	12/28/22 12:45	n/a	Initial cal 1
S5Q134-IC134	5Q9041.D	12/28/22 13:02	n/a	Initial cal 2
S5Q134-IC134	5Q9042.D	12/28/22 13:19	n/a	Initial cal 5
S5Q134-IC134	5Q9043.D	12/28/22 13:36	n/a	Initial cal 10
S5Q134-ICC134	5Q9044.D	12/28/22 13:53	n/a	Initial cal 20
S5Q134-IC134	5Q9045.D	12/28/22 14:10	n/a	Initial cal 50
S5Q134-IC134	5Q9046.D	12/28/22 14:28	n/a	Initial cal 100
S5Q134-IBLK	5Q9047.D	12/28/22 14:45	n/a	Instrument Blank
S5Q134-IBLK	5Q9047.D	12/28/22 14:45	n/a	Instrument Blank
S5Q134-ICV134	5Q9048.D	12/28/22 15:02	n/a	Initial cal verification 20
S5Q134-ICV134	5Q9049.D	12/28/22 15:19	n/a	Initial cal verification 20
S5Q134-RT	5Q9050.D	12/28/22 15:36	n/a	Retention Time Marker
S5Q134-CC134	5Q9051.D	12/28/22 15:53	n/a	Continuing cal 20
S5Q134-CC134	5Q9052.D	12/28/22 16:10	n/a	Continuing cal 1.0LL
OP94692-BS	5Q9053.D	12/28/22 16:27	OP94692	Blank Spike
OP94692-MB	5Q9054.D	12/28/22 16:44	OP94692	Method Blank
ZZZZZZ	5Q9055.D	12/28/22 17:01	OP94692	(unrelated sample)
ZZZZZZ	5Q9056.D	12/28/22 17:18	OP94692	(unrelated sample)
ZZZZZZ	5Q9057.D	12/28/22 17:35	OP94692	(unrelated sample)
S5Q134-CC134	5Q9058.D	12/28/22 17:52	n/a	Continuing cal 20
OP94649-BS	5Q9060.D	12/28/22 18:09	OP94649	Blank Spike
OP94649-MB	5Q9061.D	12/28/22 18:26	OP94649	Method Blank
ZZZZZZ	5Q9062.D	12/28/22 18:44	OP94649	(unrelated sample)
ZZZZZZ	5Q9063.D	12/28/22 19:01	OP94649	(unrelated sample)
ZZZZZZ	5Q9064.D	12/28/22 19:18	OP94649	(unrelated sample)
ZZZZZZ	5Q9065.D	12/28/22 19:35	OP94649	(unrelated sample)
ZZZZZZ	5Q9066.D	12/28/22 19:52	OP94649	(unrelated sample)
ZZZZZZ	5Q9067.D	12/28/22 20:09	OP94649	(unrelated sample)
ZZZZZZ	5Q9068.D	12/28/22 20:26	OP94649	(unrelated sample)
S5Q134-CC134	5Q9069.D	12/28/22 20:43	n/a	Continuing cal 20
FC1170-8	5Q9071.D	12/28/22 21:17	OP94649	(used for QC only; not part of job FC1302)
OP94649-MS	5Q9072.D	12/28/22 21:34	OP94649	Matrix Spike
OP94649-MSD	5Q9073.D	12/28/22 21:51	OP94649	Matrix Spike Duplicate
ZZZZZZ	5Q9074.D	12/28/22 22:08	OP94649	(unrelated sample)
ZZZZZZ	5Q9075.D	12/28/22 22:25	OP94649	(unrelated sample)
ZZZZZZ	5Q9076.D	12/28/22 22:42	OP94649	(unrelated sample)
ZZZZZZ	5Q9077.D	12/28/22 22:59	OP94649	(unrelated sample)
ZZZZZZ	5Q9078.D	12/28/22 23:16	OP94649	(unrelated sample)
ZZZZZZ	5Q9079.D	12/28/22 23:34	OP94649	(unrelated sample)
S5Q134-CC134	5Q9080.D	12/28/22 23:51	n/a	Continuing cal 20
S5Q134-CC134	5Q9081.D	12/29/22 00:08	n/a	Continuing cal 1.0LL
FC1302-1	5Q9082.D	12/29/22 00:25	OP94649	DU-3
FC1302-1A	5Q9083.D	12/29/22 00:42	OP94649	DU-3
FC1302-1B	5Q9084.D	12/29/22 00:59	OP94649	DU-3

Run Sequence Report

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Run ID: S5Q134	**Method:** EPA 537M QSM5.3 B-1	**Instrument ID:** GCMS5Q

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S5Q134-ECC134	5Q9085.D	12/29/22 01:16	n/a	Ending cal 20

Run Sequence Report

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Run ID: S5Q135 **Method:** EPA 537M QSM5.3 B-1 **Instrument ID:** GCMS5Q

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S5Q135-IBLK	5Q9091.D	12/29/22 10:56	n/a	Instrument Blank
S5Q135-IBLK	5Q9091.D	12/29/22 10:56	n/a	Instrument Blank
S5Q135-RT	5Q9092.D	12/29/22 11:13	n/a	Retention Time Marker
S5Q135-CC134	5Q9093.D	12/29/22 11:30	n/a	Continuing cal 20
S5Q135-CC134	5Q9094.D	12/29/22 11:47	n/a	Continuing cal 1.0LL
FC1302-1	5Q9096.D	12/29/22 12:22	OP94649	DU-3
FC1302-1A	5Q9098.D	12/29/22 12:56	OP94649	DU-3
FC1302-1B	5Q9100.D	12/29/22 13:30	OP94649	DU-3
S5Q135-CC134	5Q9101.D	12/29/22 13:48	n/a	Continuing cal 20
OP94702-BS	5Q9103.D	12/29/22 14:22	OP94702	Blank Spike
OP94702-MB	5Q9104.D	12/29/22 14:40	OP94702	Method Blank
FC1504-30	5Q9105.D	12/29/22 14:57	OP94702	(used for QC only; not part of job FC1302)
OP94702-MS	5Q9106.D	12/29/22 15:14	OP94702	Matrix Spike
OP94702-MSD	5Q9107.D	12/29/22 15:31	OP94702	Matrix Spike Duplicate
FC1504-41	5Q9108.D	12/29/22 15:48	OP94702	(used for QC only; not part of job FC1302)
OP94702-MS2	5Q9109.D	12/29/22 16:05	OP94702	Matrix Spike
OP94702-MSD2	5Q9110.D	12/29/22 16:22	OP94702	Matrix Spike Duplicate
ZZZZZZ	5Q9111.D	12/29/22 16:39	OP94702	(unrelated sample)
ZZZZZZ	5Q9112.D	12/29/22 16:56	OP94702	(unrelated sample)
S5Q135-CC134	5Q9113.D	12/29/22 17:13	n/a	Continuing cal 20
S5Q135-CC134	5Q9114.D	12/29/22 17:30	n/a	Continuing cal 1.0LL
ZZZZZZ	5Q9115.D	12/29/22 17:47	OP94702	(unrelated sample)
ZZZZZZ	5Q9116.D	12/29/22 18:04	OP94702	(unrelated sample)
ZZZZZZ	5Q9117.D	12/29/22 18:21	OP94702	(unrelated sample)
ZZZZZZ	5Q9118.D	12/29/22 18:38	OP94702	(unrelated sample)
ZZZZZZ	5Q9119.D	12/29/22 18:55	OP94702	(unrelated sample)
ZZZZZZ	5Q9120.D	12/29/22 19:12	OP94702	(unrelated sample)
ZZZZZZ	5Q9121.D	12/29/22 19:29	OP94702	(unrelated sample)
ZZZZZZ	5Q9122.D	12/29/22 19:46	OP94702	(unrelated sample)
ZZZZZZ	5Q9123.D	12/29/22 20:03	OP94702	(unrelated sample)
ZZZZZZ	5Q9124.D	12/29/22 20:21	OP94702	(unrelated sample)
S5Q135-CC134	5Q9125.D	12/29/22 20:38	n/a	Continuing cal 20
ZZZZZZ	5Q9127.D	12/29/22 21:12	OP94702	(unrelated sample)
ZZZZZZ	5Q9128.D	12/29/22 21:29	OP94702	(unrelated sample)
OP94652-BS	5Q9129.D	12/29/22 21:46	OP94652	Blank Spike
OP94652-MB	5Q9130.D	12/29/22 22:03	OP94652	Method Blank
FC1411-1	5Q9131.D	12/29/22 22:20	OP94652	(used for QC only; not part of job FC1302)
OP94652-MS	5Q9132.D	12/29/22 22:37	OP94652	Matrix Spike
FC1411-2	5Q9133.D	12/29/22 22:54	OP94652	(used for QC only; not part of job FC1302)
OP94652-DUP	5Q9134.D	12/29/22 23:11	OP94652	Duplicate
ZZZZZZ	5Q9135.D	12/29/22 23:28	OP94652	(unrelated sample)
ZZZZZZ	5Q9136.D	12/29/22 23:45	OP94652	(unrelated sample)
S5Q135-CC134	5Q9137.D	12/30/22 00:02	n/a	Continuing cal 20
S5Q135-CC134	5Q9138.D	12/30/22 00:19	n/a	Continuing cal 1.0LL
ZZZZZZ	5Q9139.D	12/30/22 00:36	OP94652	(unrelated sample)
ZZZZZZ	5Q9140.D	12/30/22 00:53	OP94652	(unrelated sample)

Run Sequence Report

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Run ID: S5Q135 **Method:** EPA 537M QSM5.3 B-1 **Instrument ID:** GCMS5Q

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
ZZZZZZ	5Q9141.D	12/30/22 01:10	OP94652	(unrelated sample)
ZZZZZZ	5Q9142.D	12/30/22 01:27	OP94652	(unrelated sample)
ZZZZZZ	5Q9143.D	12/30/22 01:44	OP94652	(unrelated sample)
ZZZZZZ	5Q9144.D	12/30/22 02:02	OP94652	(unrelated sample)
ZZZZZZ	5Q9145.D	12/30/22 02:19	OP94652	(unrelated sample)
ZZZZZZ	5Q9146.D	12/30/22 02:36	OP94652	(unrelated sample)
ZZZZZZ	5Q9147.D	12/30/22 02:53	OP94652	(unrelated sample)
ZZZZZZ	5Q9148.D	12/30/22 03:10	OP94652	(unrelated sample)
S5Q135-CC134	5Q9149.D	12/30/22 03:27	n/a	Continuing cal 20
ZZZZZZ	5Q9151.D	12/30/22 04:01	OP94652	(unrelated sample)
ZZZZZZ	5Q9152.D	12/30/22 04:18	OP94652	(unrelated sample)
ZZZZZZ	5Q9153.D	12/30/22 04:35	OP94652	(unrelated sample)
ZZZZZZ	5Q9154.D	12/30/22 04:52	OP94652	(unrelated sample)
ZZZZZZ	5Q9155.D	12/30/22 05:09	OP94652	(unrelated sample)
ZZZZZZ	5Q9156.D	12/30/22 05:26	OP94652	(unrelated sample)
ZZZZZZ	5Q9157.D	12/30/22 05:43	OP94617	(unrelated sample)
ZZZZZZ	5Q9158.D	12/30/22 06:00	OP94515	(unrelated sample)
S5Q135-ECC134	5Q9159.D	12/30/22 06:17	n/a	Ending cal 20

Run Sequence Report

Job Number: FC1302
Account: TETRHIH Tetra Tech
Project: Red Hill AFFF; HI

Run ID: S5Q137 **Method:** EPA 537M QSM5.3 B-1 **Instrument ID:** GCMS5Q

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S5Q137-IC137	5Q9231.D	01/03/23 14:48	n/a	Mass Calibration Verification
S5Q137-IC137	5Q9232.D	01/03/23 15:04	n/a	Initial cal 0.5
S5Q137-IC137	5Q9233.D	01/03/23 15:19	n/a	Initial cal 1
S5Q137-IC137	5Q9234.D	01/03/23 15:39	n/a	Initial cal 2
S5Q137-IC137	5Q9235.D	01/03/23 15:54	n/a	Initial cal 5
S5Q137-IC137	5Q9236.D	01/03/23 16:15	n/a	Initial cal 10
S5Q137-ICC137	5Q9237.D	01/03/23 16:31	n/a	Initial cal 20
S5Q137-IC137	5Q9238.D	01/03/23 16:47	n/a	Initial cal 50
S5Q137-IC137	5Q9239.D	01/03/23 17:02	n/a	Initial cal 100
S5Q137-IBLK	5Q9240.D	01/03/23 17:18	n/a	Instrument Blank
S5Q137-IBLK	5Q9240.D	01/03/23 17:18	n/a	Instrument Blank
S5Q137-ICV137	5Q9241.D	01/03/23 17:33	n/a	Initial cal verification 20
S5Q137-ICV137	5Q9242.D	01/03/23 17:49	n/a	Initial cal verification 20
S5Q137-RT	5Q9243.D	01/03/23 18:04	n/a	Retention Time Marker
S5Q137-CC137	5Q9244.D	01/03/23 18:20	n/a	Continuing cal 20
S5Q137-CC137	5Q9245.D	01/03/23 18:35	n/a	Continuing cal 1.0LL
FC1302-1	5Q9246.D	01/03/23 18:51	OP94649	DU-3
FC1302-1B	5Q9247.D	01/03/23 19:06	OP94649	DU-3
ZZZZZZ	5Q9248.D	01/03/23 19:22	OP94702	(unrelated sample)
ZZZZZZ	5Q9249.D	01/03/23 19:38	OP94702	(unrelated sample)
ZZZZZZ	5Q9250.D	01/03/23 19:53	OP94652	(unrelated sample)
ZZZZZZ	5Q9251.D	01/03/23 20:09	OP94652	(unrelated sample)
ZZZZZZ	5Q9252.D	01/03/23 20:24	OP94652	(unrelated sample)
ZZZZZZ	5Q9253.D	01/03/23 20:40	OP94652	(unrelated sample)
S5Q137-CC137	5Q9254.D	01/03/23 20:55	n/a	Continuing cal 20
OP94793-BS	5Q9256.D	01/03/23 21:26	OP94793	Blank Spike
OP94793-MB	5Q9257.D	01/03/23 21:42	OP94793	Method Blank
ZZZZZZ	5Q9258.D	01/03/23 21:57	OP94793	(unrelated sample)
OP94791-BS	5Q9260.D	01/03/23 22:29	OP94791	Blank Spike
OP94791-MB	5Q9261.D	01/03/23 22:44	OP94791	Method Blank
ZZZZZZ	5Q9262.D	01/03/23 23:00	OP94791	(unrelated sample)
ZZZZZZ	5Q9264.D	01/03/23 23:31	OP94791	(unrelated sample)
S5Q137-CC137	5Q9266.D	01/04/23 00:02	n/a	Continuing cal 20
ZZZZZZ	5Q9268.D	01/04/23 00:33	OP94791	(unrelated sample)
ZZZZZZ	5Q9270.D	01/04/23 01:04	OP94791	(unrelated sample)
ZZZZZZ	5Q9271.D	01/04/23 01:20	OP94791	(unrelated sample)
ZZZZZZ	5Q9273.D	01/04/23 01:51	OP94791	(unrelated sample)
S5Q137-ECC137	5Q9274.D	01/04/23 02:06	n/a	Ending cal 20

MS Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Natasha Gumtie 01/04/23 15:07

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9082.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/29/2022 12:25:09 AM
Sample Name : fc1302-1
Vial : P2-C6
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94649,S5Q134,2.00,,,1.0,10,soil

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.387	217.0 -> 172.0	8223	2.00	µg/L	-0.013
M5-PFPeA	3.919	268.0 -> 223.0	15678	2.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	22876	2.00	µg/L	0.000
M4-PFHpA	5.726	367.0 -> 322.0	23792	2.00	µg/L	0.000
M8-PFOA	6.348	421.0 -> 376.0	28221	2.00	µg/L	-0.014
M9-PFNA	6.918	472.0 -> 427.0	34739	2.00	µg/L	0.000
M6-PFDA	7.325	519.0 -> 474.0	16340	2.00	µg/L	-0.112
M7-PFUnDA	8.307	570.0 -> 525.0	48736	2.00	µg/L	-0.012
M2-PFDoDA	9.375	615.0 -> 570.0	36867	2.00	µg/L	-0.013
M2-PFTeDA	10.887	715.0 -> 670.0	32811	2.00	µg/L	-0.013
M8-FOSA	6.605	506.0 -> 78.0	8325	2.00	µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	2074	2.00	µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	2760	2.00	µg/L	0.000
M8-PFOS	6.879	507.0 -> 99.0	3925	2.00	µg/L	0.000
M2-4:2FTS	4.886	329.0 -> 309.0	6767	2.00	µg/L	0.000
M2-6:2FTS	6.346	429.0 -> 409.0	31137	2.00	µg/L	-0.014
M2-8:2FTS	7.410	529.0 -> 509.0	7297	2.00	µg/L	-0.102
M3-MeFOSAA	7.047	573.0 -> 419.0	3584	2.00	µg/L	0.012
M3-HFPO-DA	5.182	287.0 -> 169.0	4955	2.00	µg/L	0.000
M3-MeFOSA	6.964	515.0 -> 169.0	2264	2.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	3385	2.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	6767	1.41	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.0%		
13C2-6:2FTS	6.346	429.0 -> 409.0	31137	4.06	µg/L	-0.014
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 20.3%		
13C2-8:2FTS	7.410	529.0 -> 509.0	7297	1.01	µg/L	-0.102
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 5.1%		
13C2-PFDoDA	9.375	615.0 -> 570.0	36867	1.64	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.2%		
13C2-PFTeDA	10.887	715.0 -> 670.0	32811	1.68	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.4%		
13C3-PFBS	4.124	302.0 -> 99.0	2074	1.60	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.0%		
13C3-PFHxS	5.733	402.0 -> 99.0	2760	1.54	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.7%		
13C4-PFBA	2.387	217.0 -> 172.0	8223	1.58	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.9%		
13C4-PFHpA	5.726	367.0 -> 322.0	23792	1.55	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.7%		
13C5-PFHxA	4.965	318.0 -> 273.0	22876	1.52	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.6%		
13C5-PFPeA	3.919	268.0 -> 223.0	15678	1.49	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.5%		
13C6-PFDA	7.325	519.0 -> 474.0	16340	0.70	µg/L	-0.112

Perfluorinated Compounds by LC/MS/MS

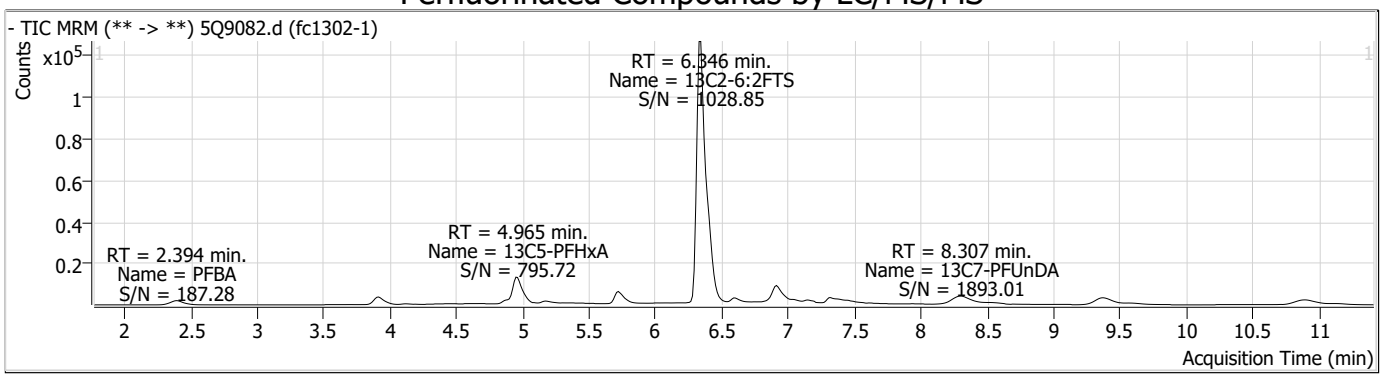
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 3.5%		
13C7-PFUnDA	8.307	570.0 -> 525.0	48736	1.67 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.3%		
13C8-FOSA	6.605	506.0 -> 78.0	8325	1.72 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.6%		
13C8-PFOA	6.348	421.0 -> 376.0	28221	1.40 µg/L		-0.014
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.0%		
13C8-PFOS	6.879	507.0 -> 99.0	3925	1.65 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.2%		
13C9-PFNA	6.918	472.0 -> 427.0	34739	1.65 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.3%		
d3-MeFOSAA	7.047	573.0 -> 419.0	3584	2.02 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 10.1%		
13C3-HFPO-DA	5.182	287.0 -> 169.0	4955	1.50 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.5%		
d3-MeFOSA	6.964	515.0 -> 169.0	2264	1.49 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.5%		
d5-EtFOSAA	7.157	589.0 -> 419.0	3385	1.84 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 9.2%		
Target Compounds						QValue
4:2FTS	4.888	327.0 -> 307.0	1545	0.42 µg/L		100
		327.0 -> 81.0	911			
6:2FTS	6.347	427.0 -> 407.0	388610	24.32 µg/L		100
		427.0 -> 81.0	167099			
8:2FTS	-	527.0 -> 507.0	-	N.D.		
		527.0 -> 81.0				
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
		584.0 -> 483.0				
FOSA	-	498.0 -> 78.0	-	N.D.		
		498.0 -> 478.0				
MeFOSAA	-	570.0 -> 419.0	-	N.D.		
		570.0 -> 512.0				
PFBA	2.394	213.0 -> 169.0	6004	1.34 µg/L		100
PFBS	-	299.0 -> 80.0	-	N.D.		
		299.0 -> 99.0				
PFDA	-	513.0 -> 469.0	-	N.D.		
		513.0 -> 219.0				
PFDoDA	-	613.0 -> 569.0	-	N.D.		
		613.0 -> 319.0				
PFDS	-	599.0 -> 80.0	-	N.D.		
		599.0 -> 99.0				
PFHpA	-	363.0 -> 319.0	-	N.D.		
		363.0 -> 169.0				
PFHpS	-	449.0 -> 80.0	-	N.D.		
		449.0 -> 99.0				
PFHxA	4.966	313.0 -> 269.0	39836	3.43 µg/L		100
		313.0 -> 119.0	1839			
PFHxS	-	399.0 -> 80.0	-	N.D.		
		399.0 -> 99.0				
PFNA	-	463.0 -> 419.0	-	N.D.		
		463.0 -> 219.0				
PFNS	-	549.0 -> 80.0	-	N.D.		
		549.0 -> 99.0				
PFOA	6.348	413.0 -> 369.0	20744	1.28 µg/L		99
		413.0 -> 169.0	5680			
PFOS	6.880	499.0 -> 80.0	2290	0.63 µg/L	m	95

Perfluorinated Compounds by LC/MS/MS

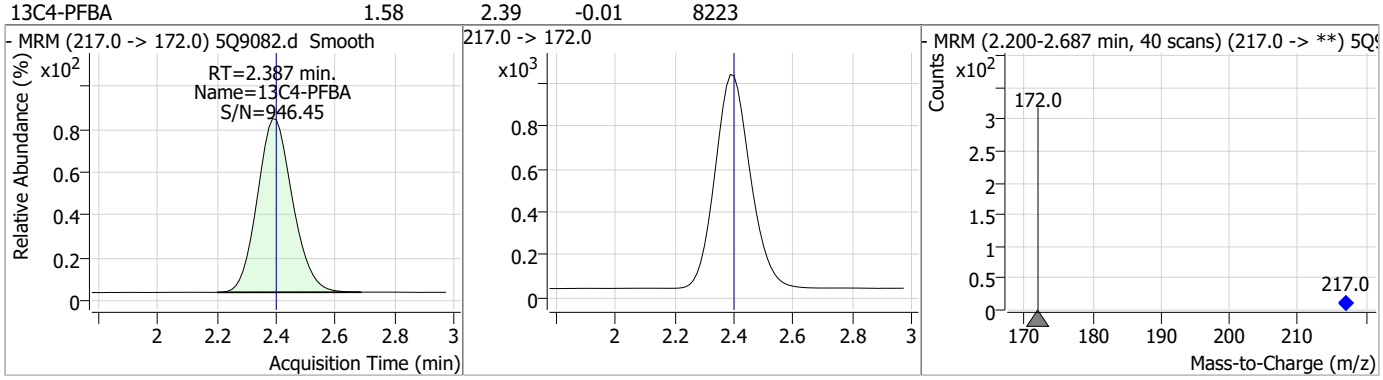
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	1019			
PFPeA	3.922	263.0 -> 219.0	5031	0.55	µg/L	100
PFPeS	-	349.0 -> 80.0	-	N.D.		
		349.0 -> 99.0				
PFTeDA	-	713.0 -> 669.0	-	N.D.		
		713.0 -> 219.0				
PFTrDA	-	663.0 -> 619.0	-	N.D.		
		663.0 -> 369.0				
PFUnDA	-	563.0 -> 519.0	-	N.D.		
		563.0 -> 269.0				
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
		633.0 -> 453.0				
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
		533.0 -> 353.0				
ADONA	-	377.0 -> 251.0	-	N.D.		
		377.0 -> 85.0				
HFPO-DA	-	329.0 -> 169.0	-	N.D.		
		285.0 -> 169.0				
MeFOSA	-	512.0 -> 169.0	-	N.D.		
		512.0 -> 219.0				
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	-	298.0 -> 78.0	-	N.D.		
		298.0 -> 64.0				
FHxSA	-	398.0 -> 78.0	-	N.D.		
		398.0 -> 64.0				

 # = Qualifier out of range, m = manually integrated, + = Area summed

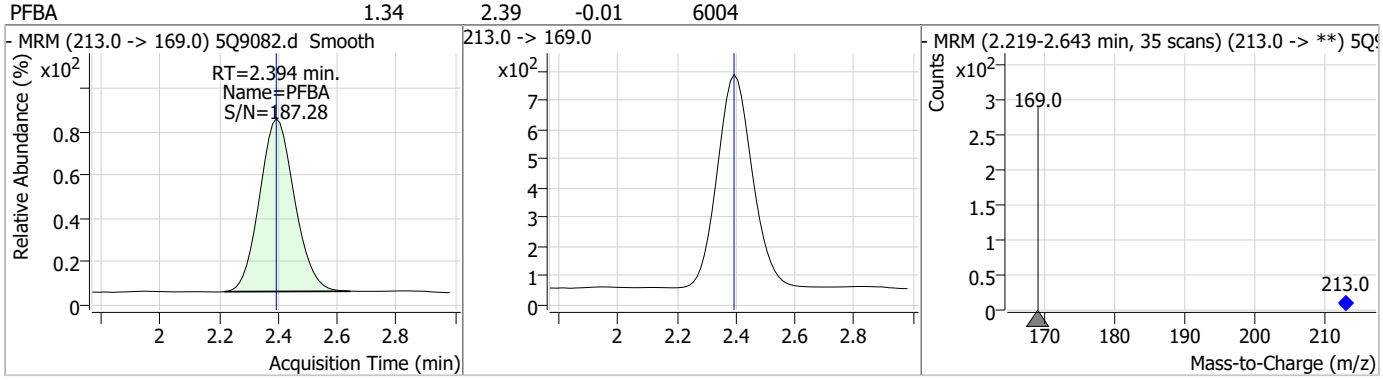
Perfluorinated Compounds by LC/MS/MS



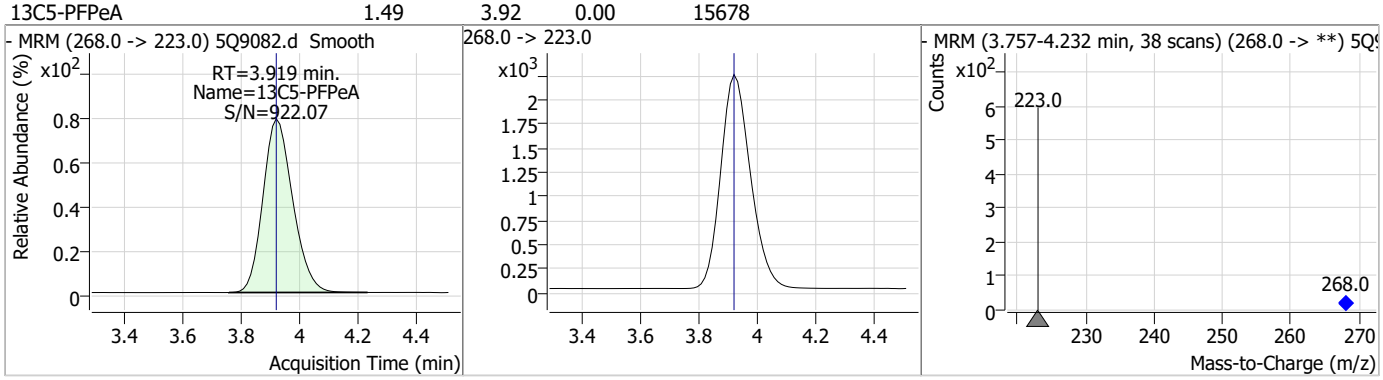
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	1.58	2.39	-0.01	8223				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	1.34	2.39	-0.01	6004				

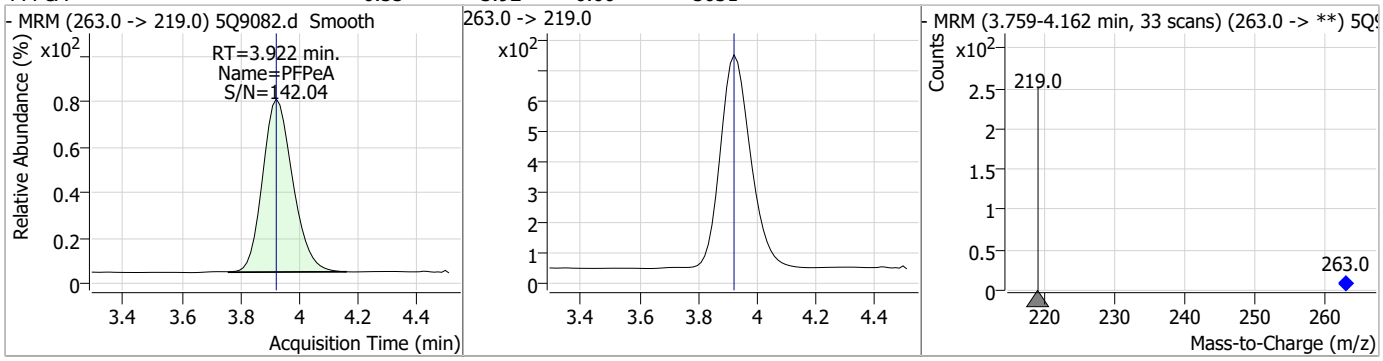


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	1.49	3.92	0.00	15678				

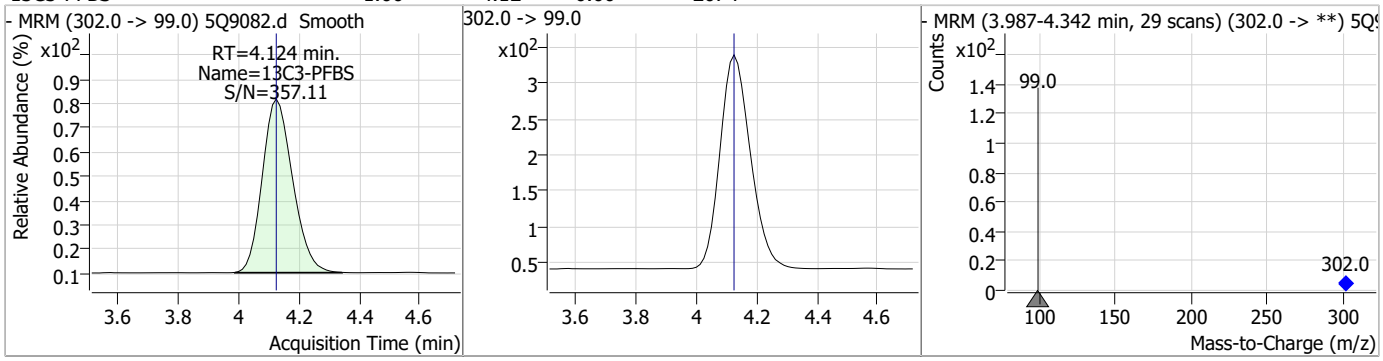


Perfluorinated Compounds by LC/MS/MS

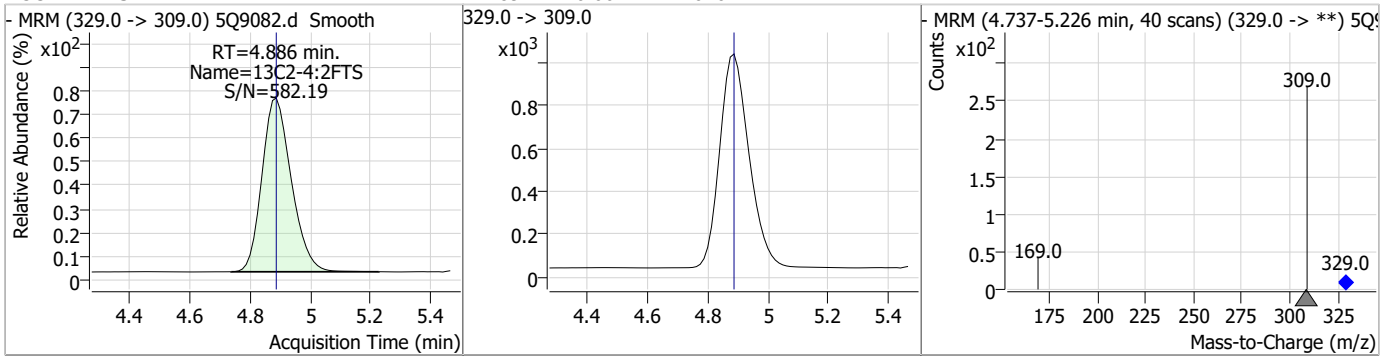
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.55	3.92	0.00	5031				



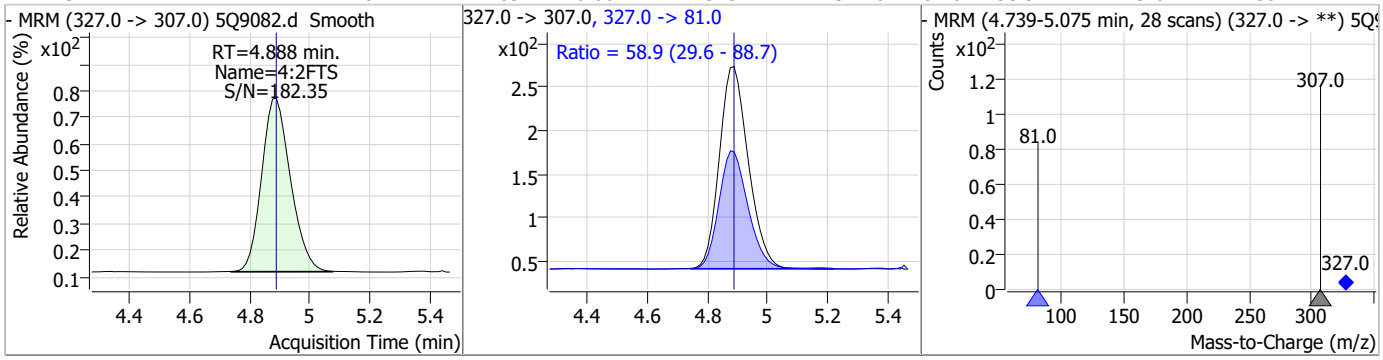
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	1.60	4.12	0.00	2074				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	1.41	4.89	0.00	6767				

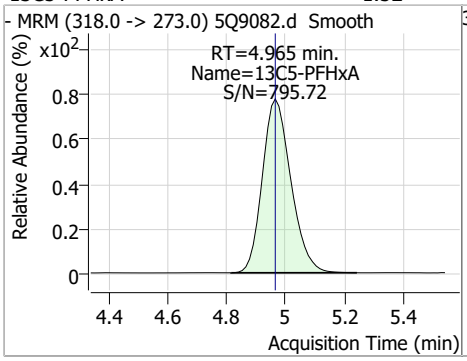


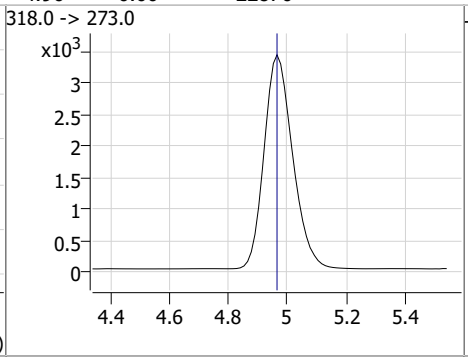
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	0.42	4.89	0.00	1545	327.0 -> 81.0	58.9	29.6	88.7

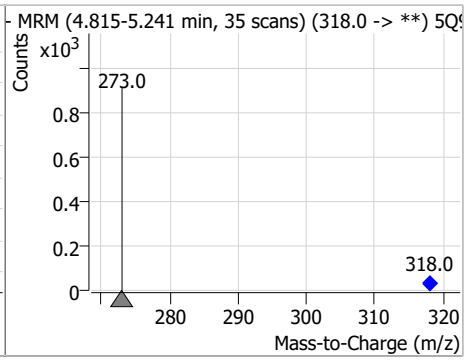


Perfluorinated Compounds by LC/MS/MS

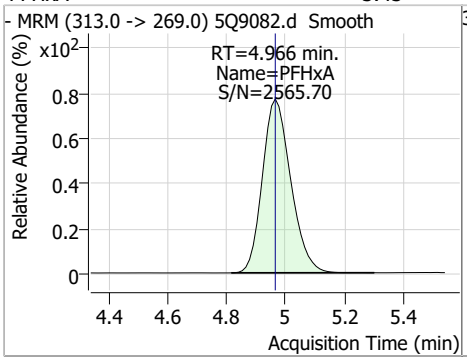
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	1.52	4.96	0.00	22876				

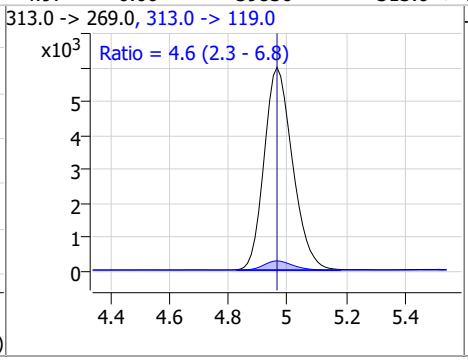


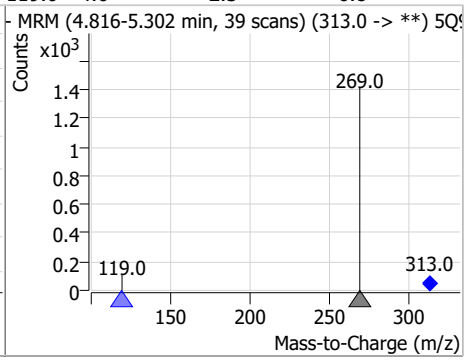




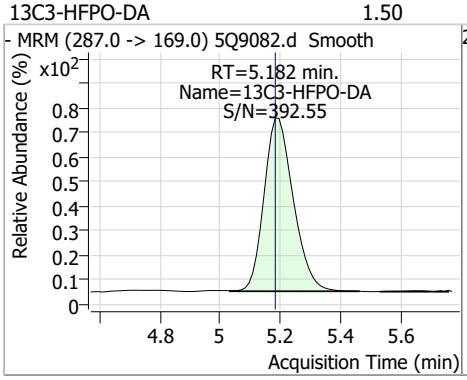
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	3.43	4.97	0.00	39836	313.0 -> 119.0	4.6	2.3	6.8

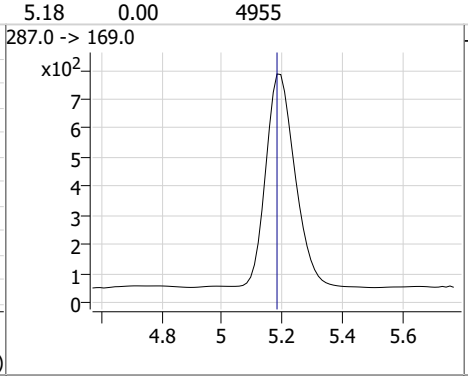


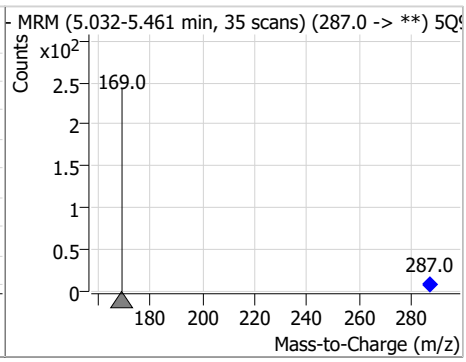




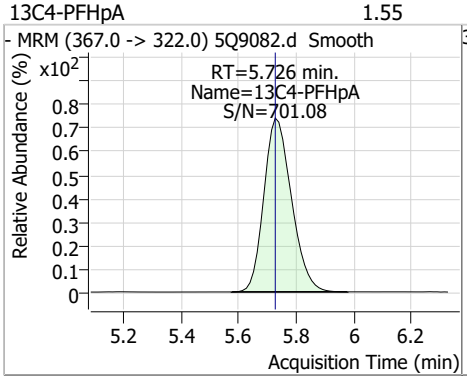
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	1.50	5.18	0.00	4955				

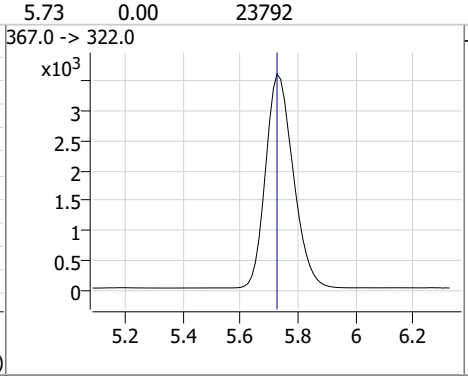


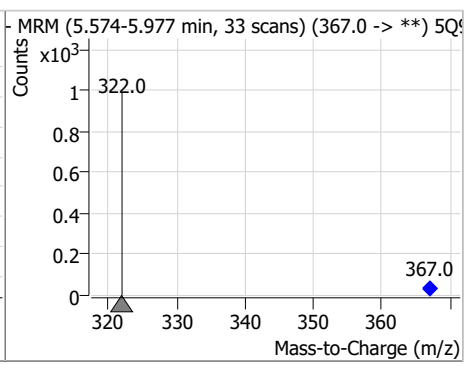




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	1.55	5.73	0.00	23792				

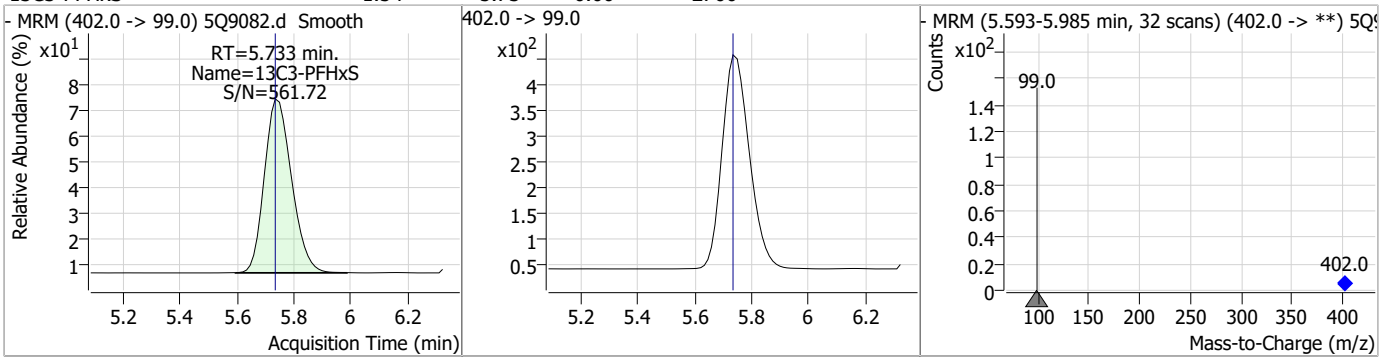




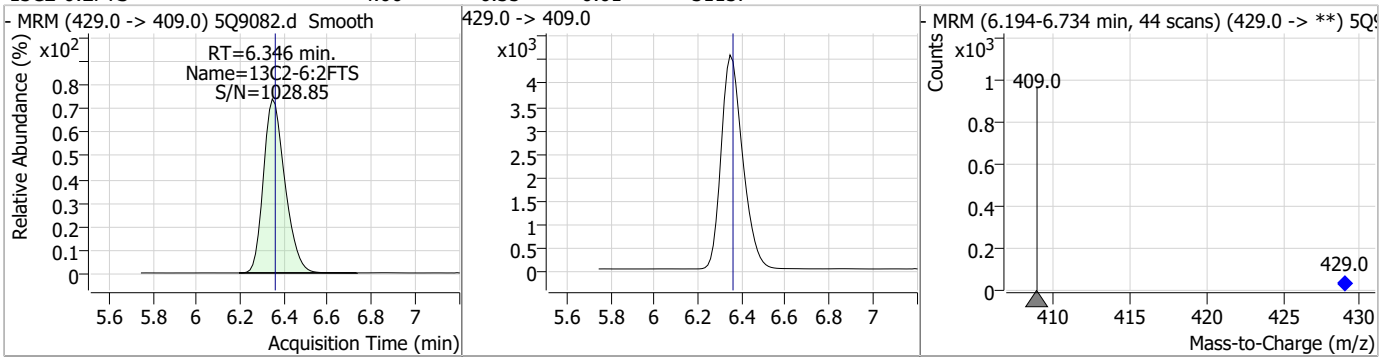


Perfluorinated Compounds by LC/MS/MS

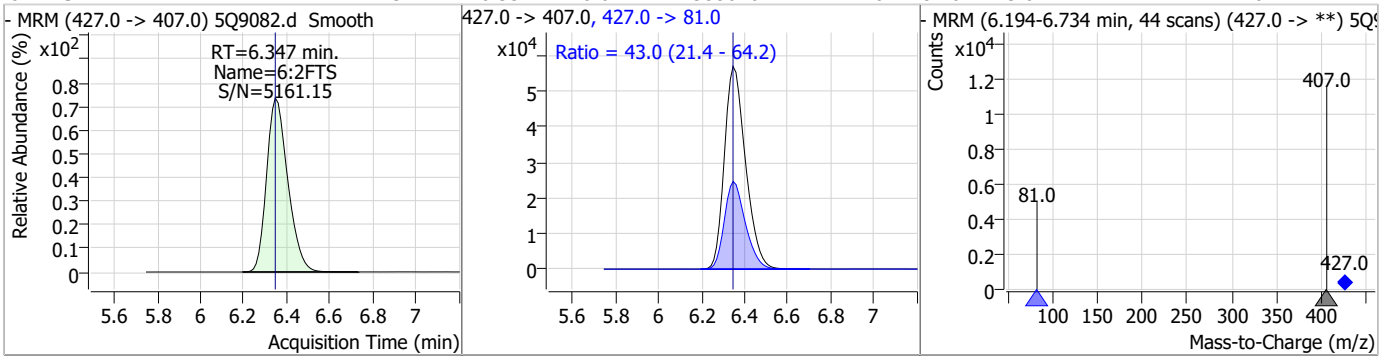
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	1.54	5.73	0.00	2760				



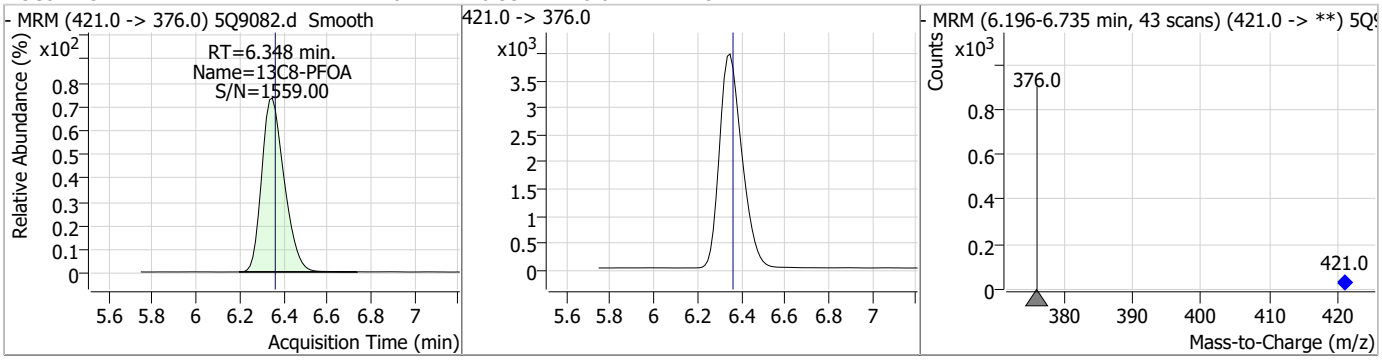
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	4.06	6.35	-0.01	31137				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	24.32	6.35	-0.01	388610	427.0 -> 81.0	43.0	21.4	64.2

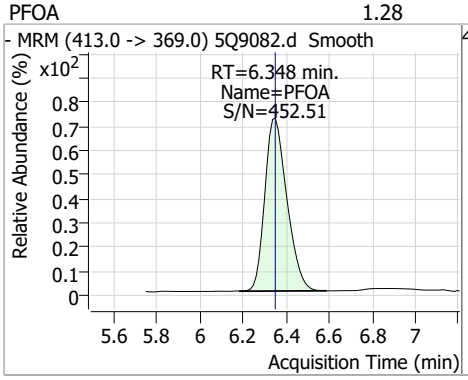


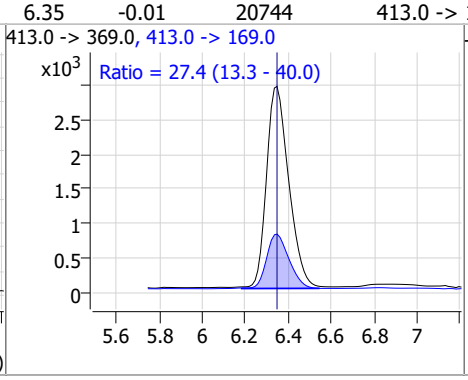
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	1.40	6.35	-0.01	28221				

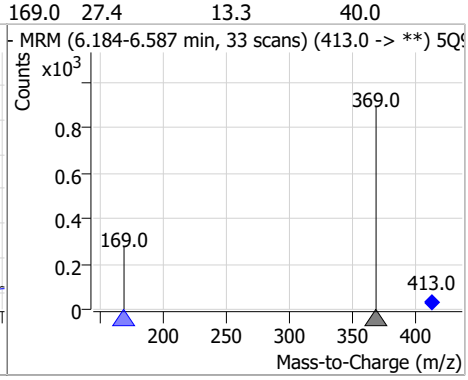


Perfluorinated Compounds by LC/MS/MS

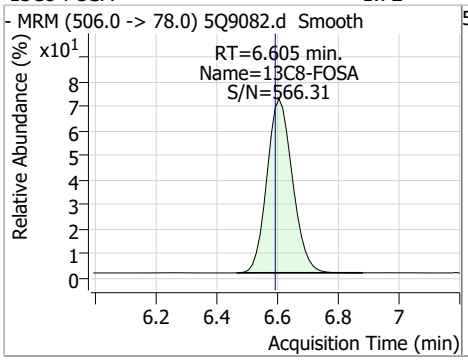
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	1.28	6.35	-0.01	20744	413.0 -> 169.0	27.4	13.3	40.0

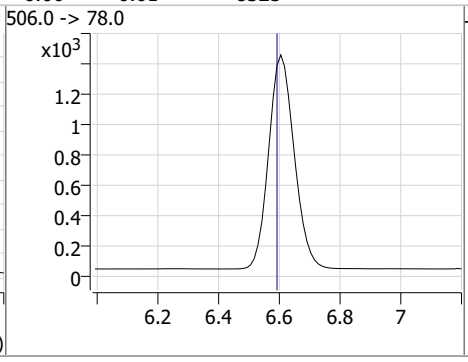


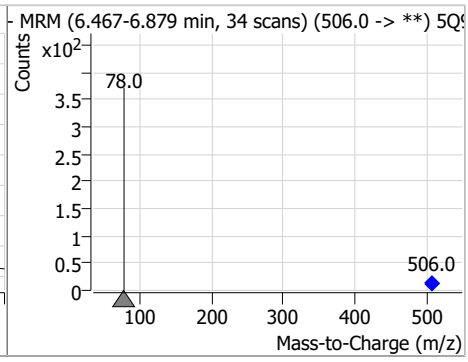




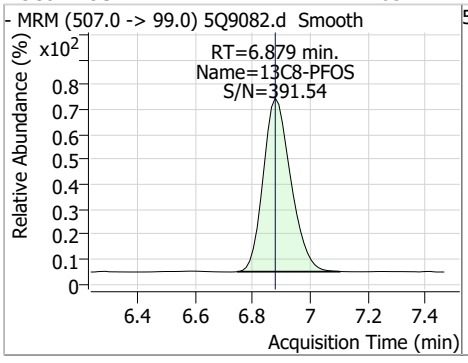
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	1.72	6.60	0.01	8325				

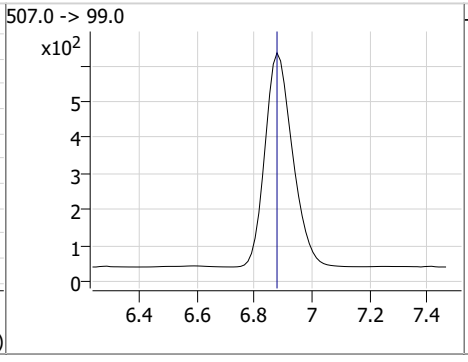


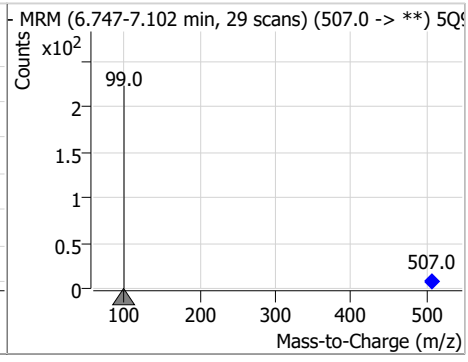




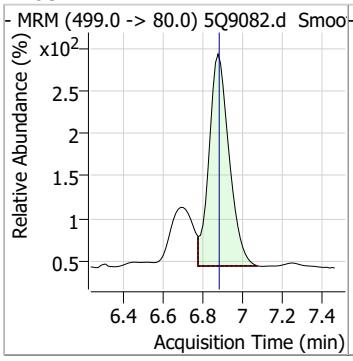
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	1.65	6.88	0.00	3925				

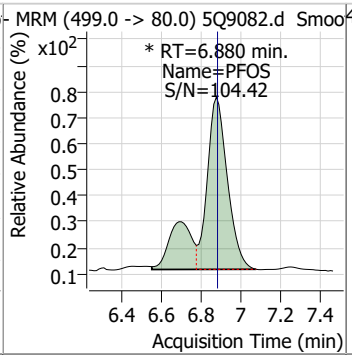


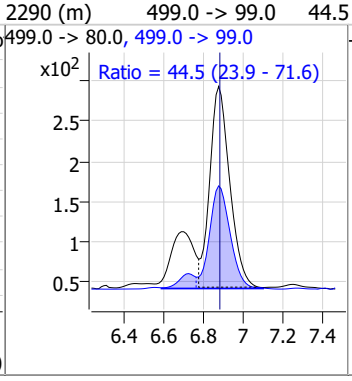


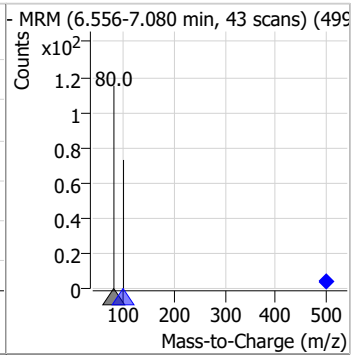


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.63	6.88	0.00	2290 (m)	499.0 -> 99.0	44.5	23.9	71.6



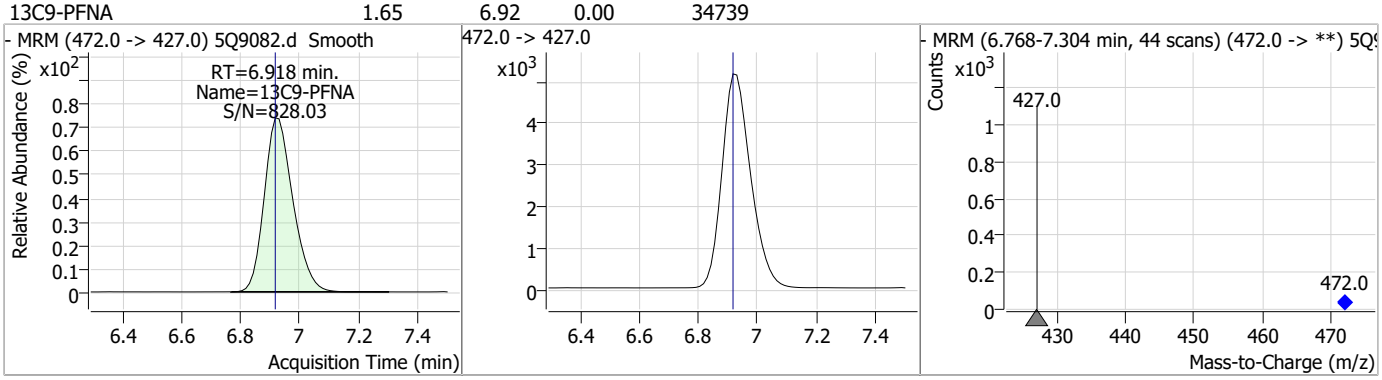




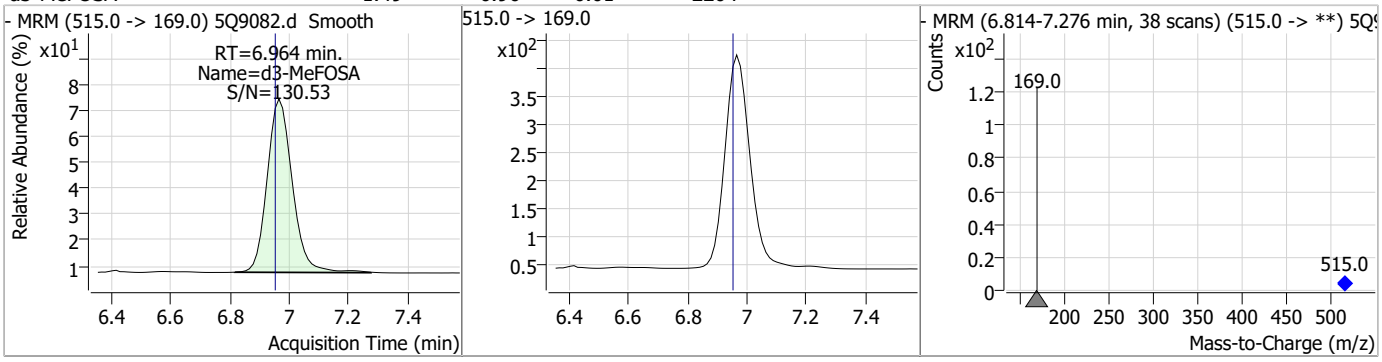


Perfluorinated Compounds by LC/MS/MS

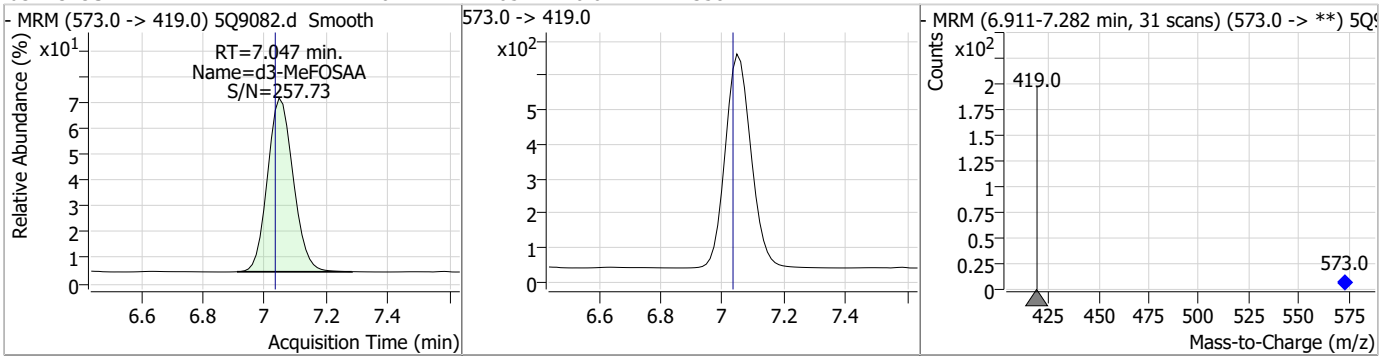
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	1.65	6.92	0.00	34739				



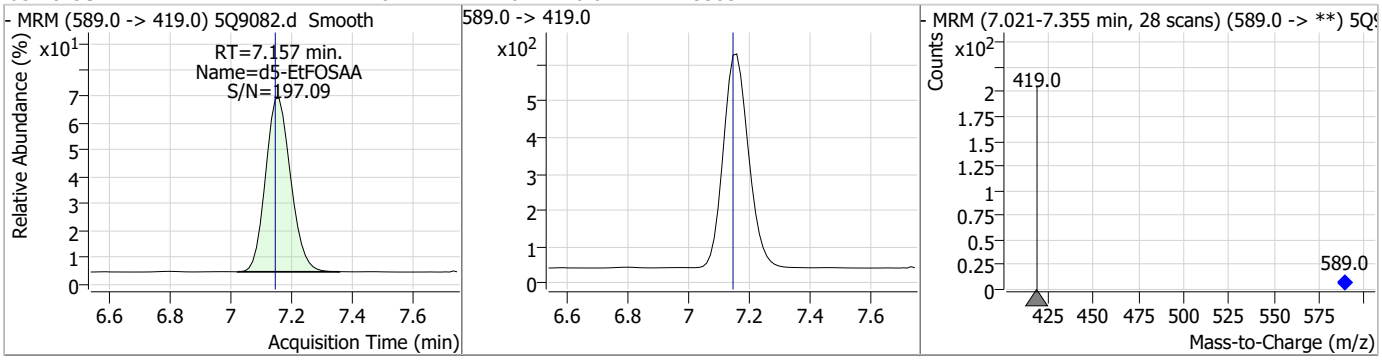
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	1.49	6.96	0.01	2264				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	2.02	7.05	0.01	3584				

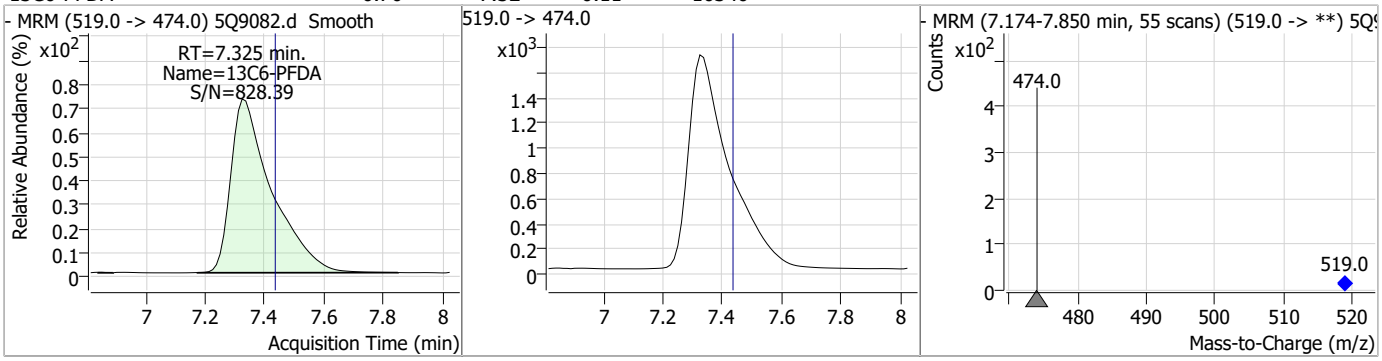


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	1.84	7.16	0.01	3385				

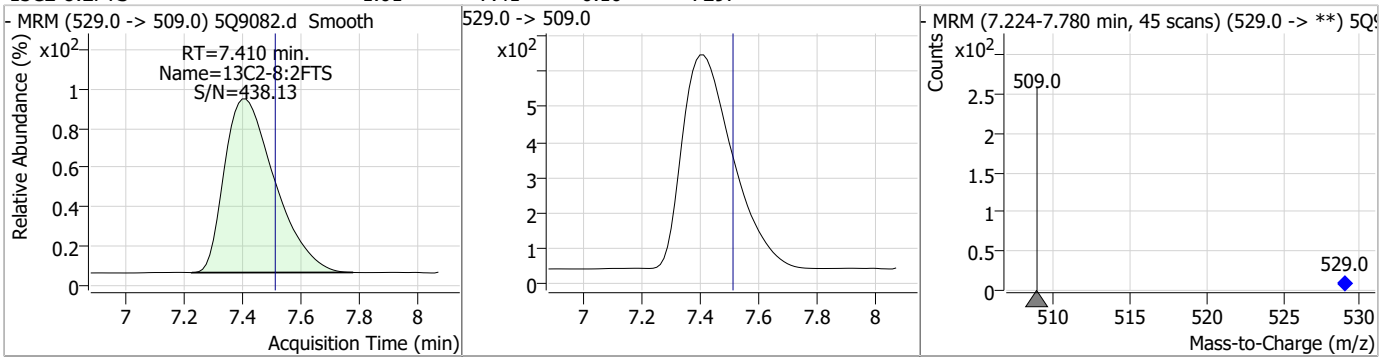


Perfluorinated Compounds by LC/MS/MS

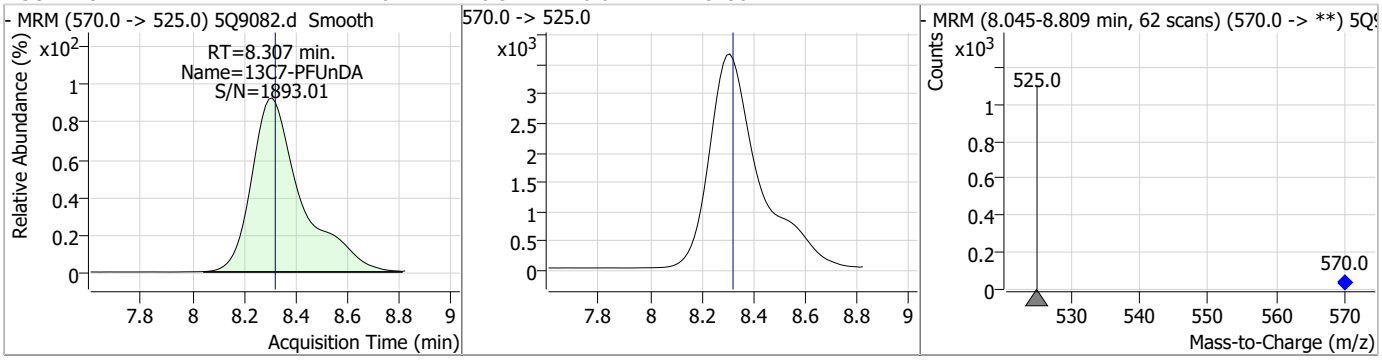
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	0.70	7.32	-0.11	16340				



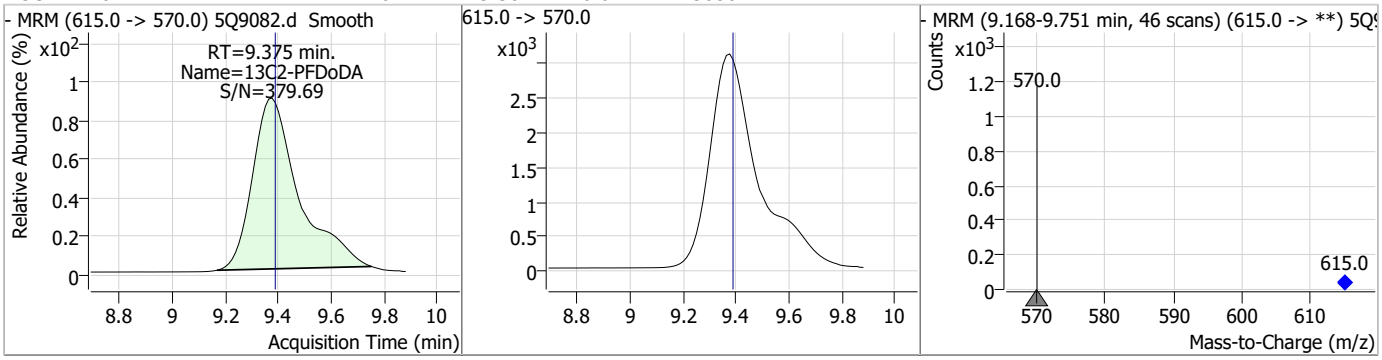
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	1.01	7.41	-0.10	7297				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	1.67	8.31	-0.01	48736				

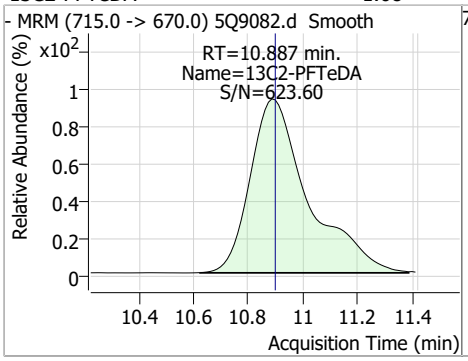


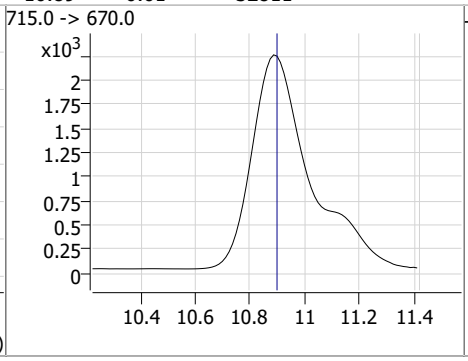
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	1.64	9.38	-0.01	36867				

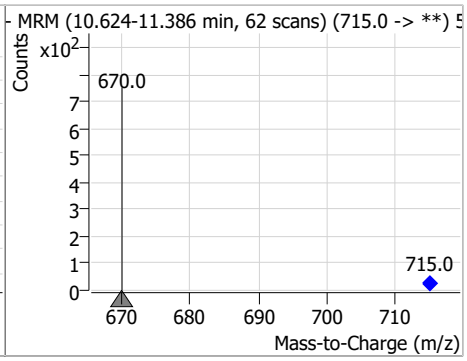


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	1.68	10.89	-0.01	32811				







Manual Integration Approval Summary

Sample Number: FC1302-1
Lab FileID: 5Q9082.D
Injection Time: 12/29/22 00:25
Method: EPA 537M QSM5.3 B-15
Analyst approved: 01/04/23 11:40 Lindsay Ritner
Supervisor approved: 01/04/23 15:07 Natasha Gumtie

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanesulfonic acid	1763-23-1		6.88	Split peak

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9096.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/29/2022 12:22:26 PM
Sample Name : fc1302-1
Vial : P2-D2
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q135.batch.bin
Sample Information : OP94649,S5Q135,2.00,,,1.0,40,soil

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
Internal Standards					
M4-PFBA	2.400	217.0 -> 172.0	1625	0.50 µg/L	0.000
M5-PFPeA	3.932	268.0 -> 223.0	3302	0.50 µg/L	0.012
M5-PFHxA	4.965	318.0 -> 273.0	4618	0.50 µg/L	0.000
M4-PFHpA	5.738	367.0 -> 322.0	4840	0.50 µg/L	0.012
M8-PFOA	6.374	421.0 -> 376.0	5896	0.50 µg/L	0.012
M9-PFNA	6.931	472.0 -> 427.0	6554	0.50 µg/L	0.013
M6-PFDA	7.424	519.0 -> 474.0	6063	0.50 µg/L	-0.012
M7-PFUnDA	8.332	570.0 -> 525.0	8462	0.50 µg/L	0.012
M2-PFDoDA	9.400	615.0 -> 570.0	6140	0.50 µg/L	0.012
M2-PFTeDA	10.924	715.0 -> 670.0	4555	0.50 µg/L	0.025
M8-FOSA	6.605	506.0 -> 78.0	1333	0.50 µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	490	0.50 µg/L	0.000
M3-PFHxS	5.748	402.0 -> 99.0	635	0.50 µg/L	0.015
M8-PFOS	6.891	507.0 -> 99.0	852	0.50 µg/L	0.012
M2-4:2FTS	4.886	329.0 -> 309.0	1330	0.50 µg/L	0.000
M2-6:2FTS	6.372	429.0 -> 409.0	6266	0.50 µg/L	0.012
M2-8:2FTS	7.473	529.0 -> 509.0	1953	0.50 µg/L	-0.038
M3-MeFOSAA	7.047	573.0 -> 419.0	368	0.50 µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	1759	0.50 µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	436	0.50 µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	462	0.50 µg/L	0.012
System Monitoring Compounds					
13C2-4:2FTS	4.886	329.0 -> 309.0	1330	0.28 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.4%	
13C2-6:2FTS	6.372	429.0 -> 409.0	6266	0.82 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 4.1%	
13C2-8:2FTS	7.473	529.0 -> 509.0	1953	0.27 µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.4%	
13C2-PFDoDA	9.400	615.0 -> 570.0	6140	0.27 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.4%	
13C2-PFTeDA	10.924	715.0 -> 670.0	4555	0.23 µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.2%	
13C3-PFBS	4.124	302.0 -> 99.0	490	0.38 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.9%	
13C3-PFHxS	5.748	402.0 -> 99.0	635	0.35 µg/L	0.015
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.8%	
13C4-PFBA	2.400	217.0 -> 172.0	1625	0.31 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.6%	
13C4-PFHpA	5.738	367.0 -> 322.0	4840	0.31 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.6%	
13C5-PFHxA	4.965	318.0 -> 273.0	4618	0.31 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.5%	
13C5-PFPeA	3.932	268.0 -> 223.0	3302	0.31 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.6%	
13C6-PFDA	7.424	519.0 -> 474.0	6063	0.26 µg/L	-0.012

Perfluorinated Compounds by LC/MS/MS

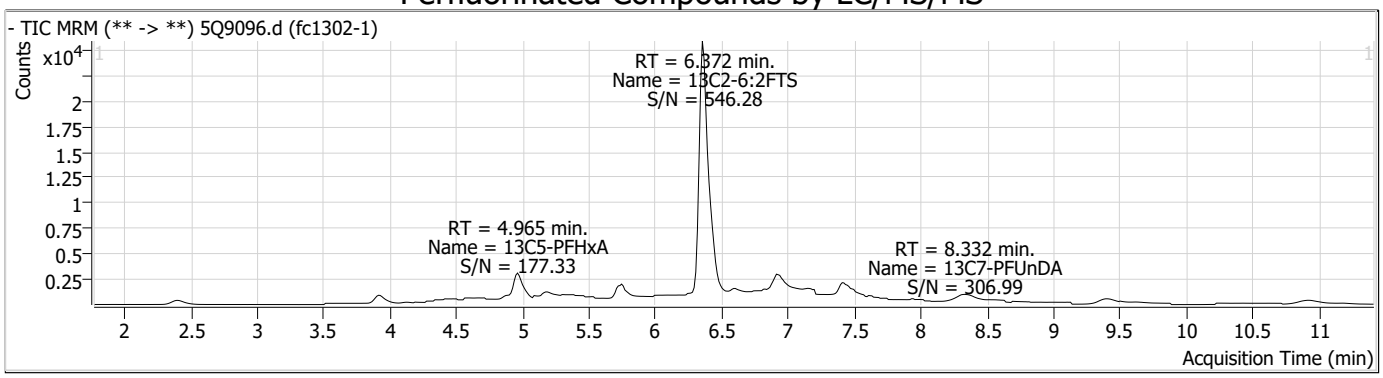
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.3%	
13C7-PFUnDA	8.332	570.0 -> 525.0	8462	0.29 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.4%	
13C8-FOSA	6.605	506.0 -> 78.0	1333	0.28 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.4%	
13C8-PFOA	6.374	421.0 -> 376.0	5896	0.29 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.5%	
13C8-PFOS	6.891	507.0 -> 99.0	852	0.36 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.8%	
13C9-PFNA	6.931	472.0 -> 427.0	6554	0.31 µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.6%	
d3-MeFOSAA	7.047	573.0 -> 419.0	368	0.21 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.0%	
13C3-HFPO-DA	5.194	287.0 -> 169.0	1759	0.53 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 2.7%	
d3-MeFOSA	6.964	515.0 -> 169.0	436	0.29 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.4%	
d5-EtFOSAA	7.157	589.0 -> 419.0	462	0.25 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.3%	
Target Compounds					QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.	
		327.0 -> 81.0			
6:2FTS	6.373	427.0 -> 407.0	76254	5.93 µg/L	99
		427.0 -> 81.0	33195		
8:2FTS	-	527.0 -> 507.0	-	N.D.	
		527.0 -> 81.0			
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
		584.0 -> 483.0			
FOSA	-	498.0 -> 78.0	-	N.D.	
		498.0 -> 478.0			
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
		570.0 -> 512.0			
PFBA	2.406	213.0 -> 169.0	1192	0.34 µg/L	100
PFBS	-	299.0 -> 80.0	-	N.D.	
		299.0 -> 99.0			
PFDA	-	513.0 -> 469.0	-	N.D.	
		513.0 -> 219.0			
PFDoDA	-	613.0 -> 569.0	-	N.D.	
		613.0 -> 319.0			
PFDS	-	599.0 -> 80.0	-	N.D.	
		599.0 -> 99.0			
PFHpA	-	363.0 -> 319.0	-	N.D.	
		363.0 -> 169.0			
PFHpS	-	449.0 -> 80.0	-	N.D.	
		449.0 -> 99.0			
PFHxA	4.966	313.0 -> 269.0	7530	0.80 µg/L	99
		313.0 -> 119.0	363		
PFHxS	-	399.0 -> 80.0	-	N.D.	
		399.0 -> 99.0			
PFNA	-	463.0 -> 419.0	-	N.D.	
		463.0 -> 219.0			
PFNS	-	549.0 -> 80.0	-	N.D.	
		549.0 -> 99.0			
PFOA	-	413.0 -> 369.0	-	N.D.	
		413.0 -> 169.0			
PFOS	-	499.0 -> 80.0	-	N.D.	

Perfluorinated Compounds by LC/MS/MS

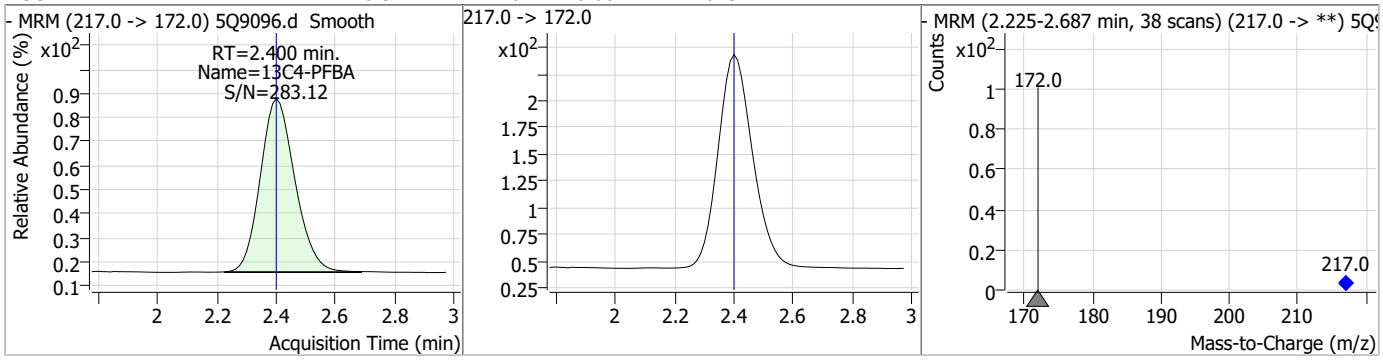
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0				
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFPeS	-	349.0 -> 80.0	-	N.D.		
		349.0 -> 99.0				
PFTeDA	-	713.0 -> 669.0	-	N.D.		
		713.0 -> 219.0				
PFTrDA	-	663.0 -> 619.0	-	N.D.		
		663.0 -> 369.0				
PFUnDA	-	563.0 -> 519.0	-	N.D.		
		563.0 -> 269.0				
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
		633.0 -> 453.0				
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
		533.0 -> 353.0				
ADONA	-	377.0 -> 251.0	-	N.D.		
		377.0 -> 85.0				
HFPO-DA	-	329.0 -> 169.0	-	N.D.		
		285.0 -> 169.0				
MeFOSA	-	512.0 -> 169.0	-	N.D.		
		512.0 -> 219.0				
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	-	298.0 -> 78.0	-	N.D.		
		298.0 -> 64.0				
FHxSA	-	398.0 -> 78.0	-	N.D.		
		398.0 -> 64.0				

 # = Qualifier out of range, m = manually integrated, + = Area summed

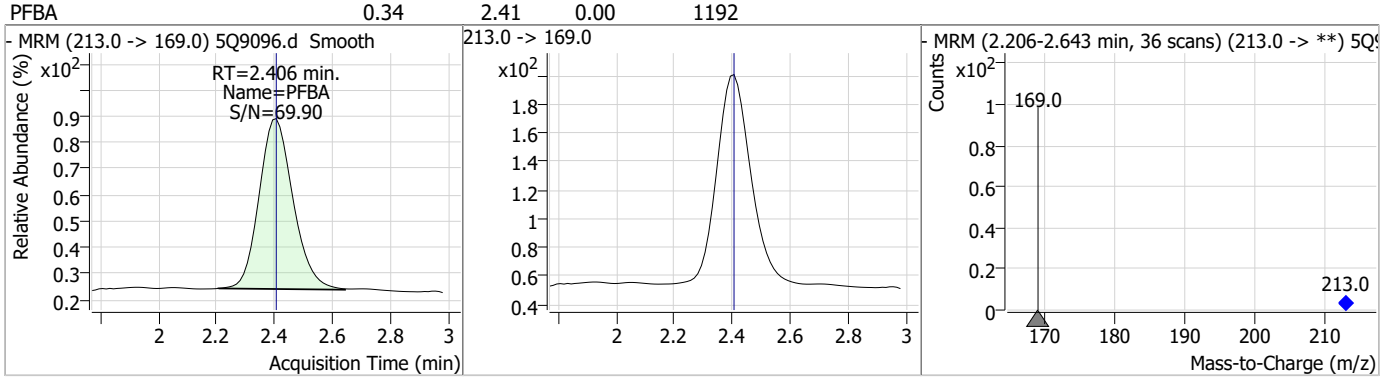
Perfluorinated Compounds by LC/MS/MS



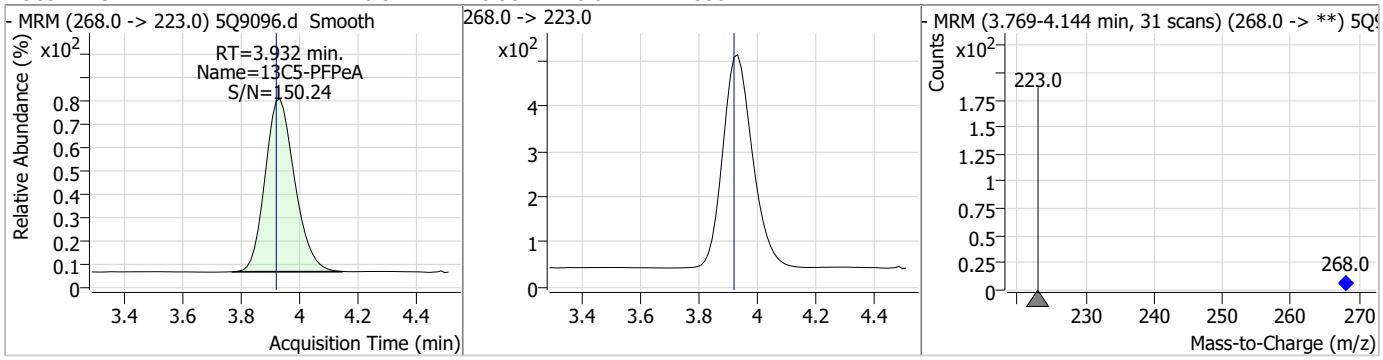
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	0.31	2.40	0.00	1625				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.34	2.41	0.00	1192				

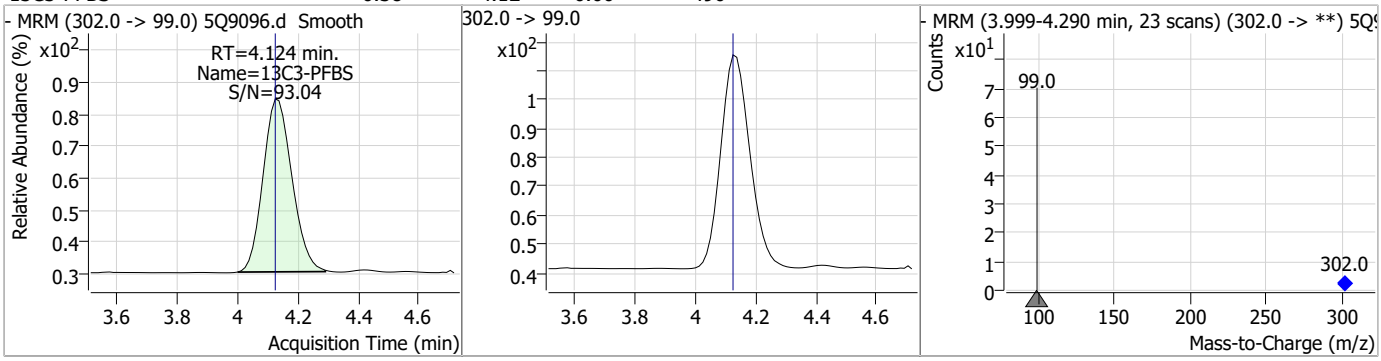


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	0.31	3.93	0.01	3302				

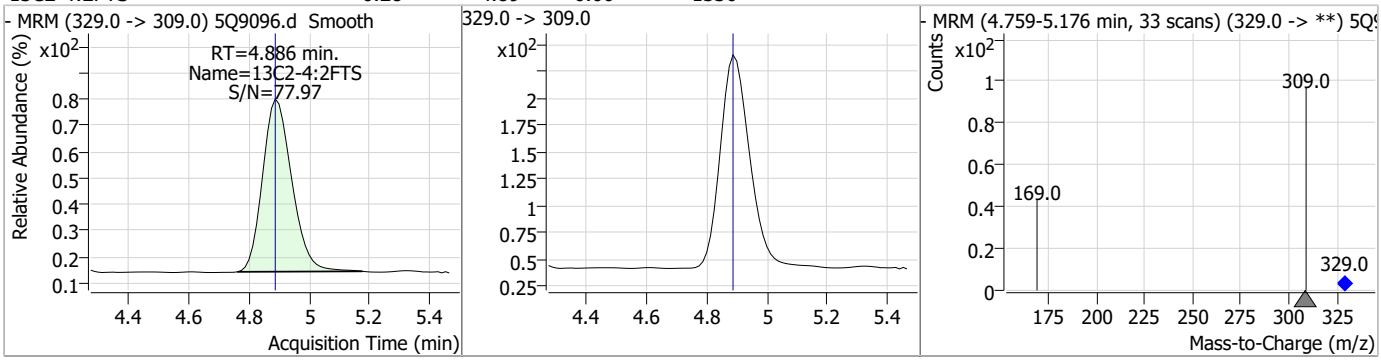


Perfluorinated Compounds by LC/MS/MS

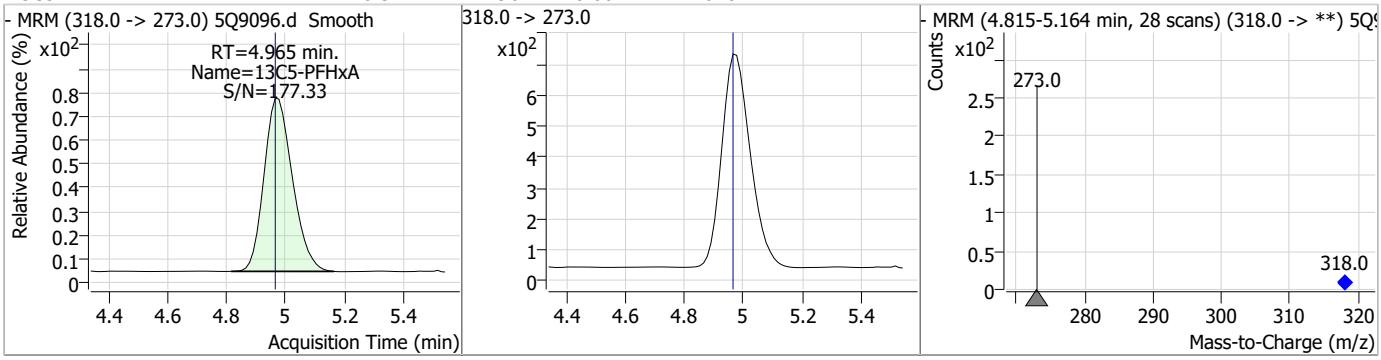
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	0.38	4.12	0.00	490				



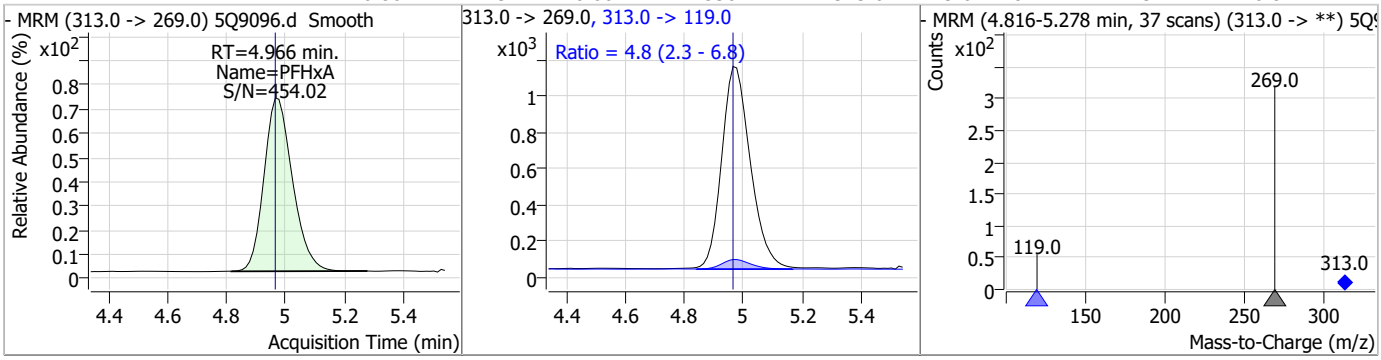
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	0.28	4.89	0.00	1330				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	0.31	4.96	0.00	4618				

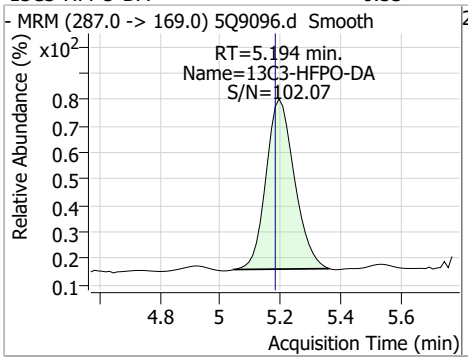


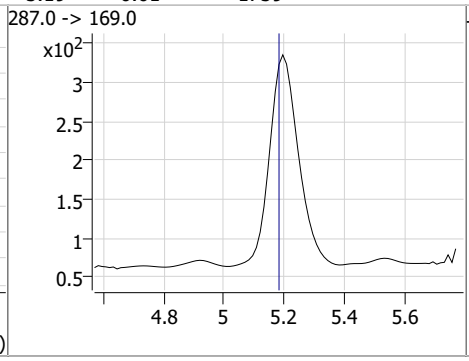
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.80	4.97	0.00	7530	313.0 -> 119.0	4.8	2.3	6.8

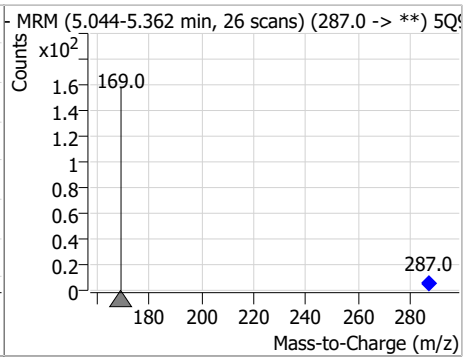


Perfluorinated Compounds by LC/MS/MS

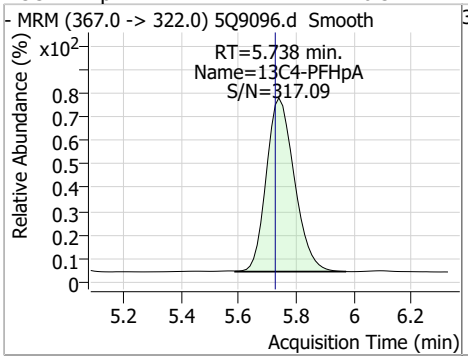
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	0.53	5.19	0.01	1759				

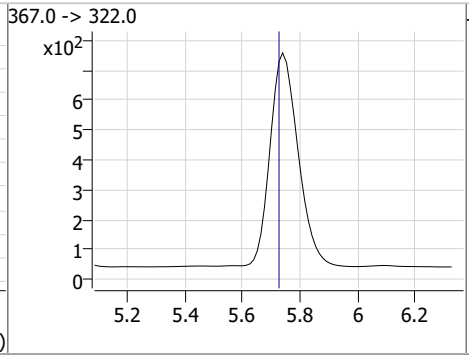


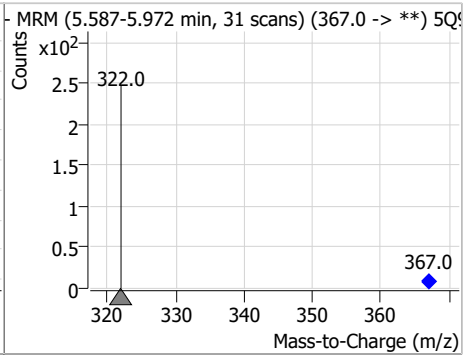




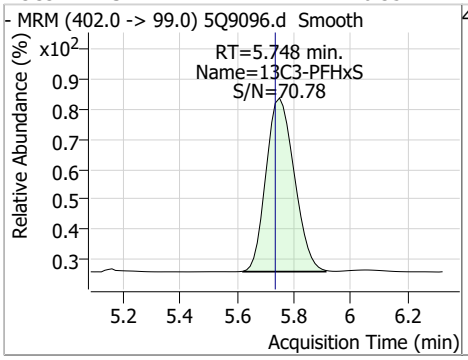
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	0.31	5.74	0.01	4840				

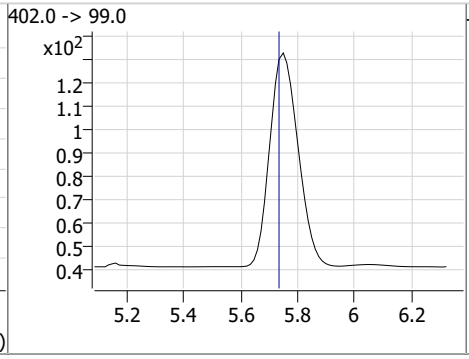


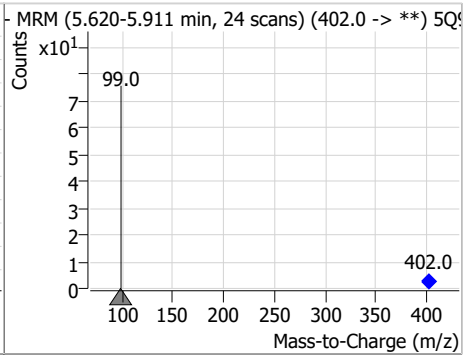




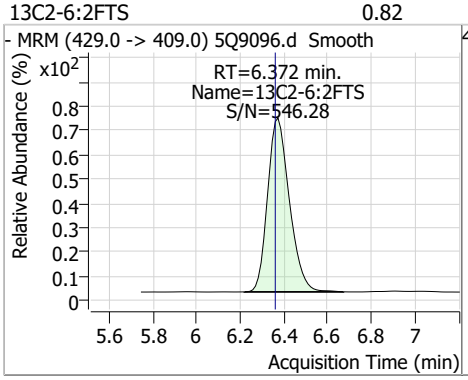
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	0.35	5.75	0.01	635				

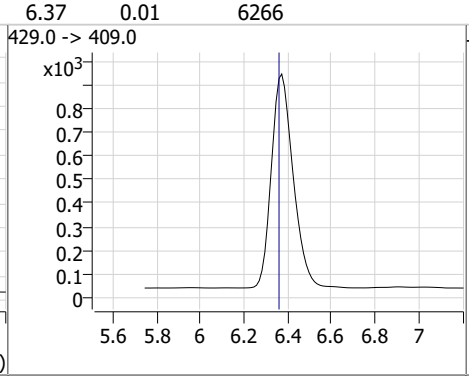


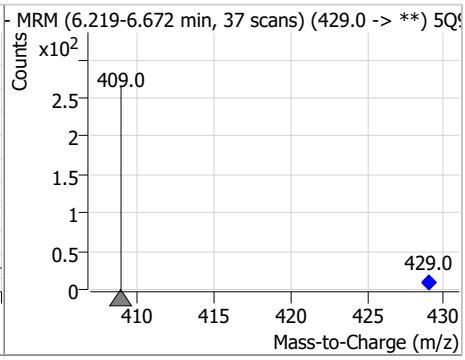




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	0.82	6.37	0.01	6266				

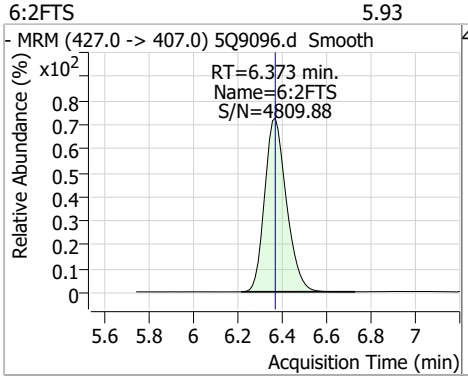


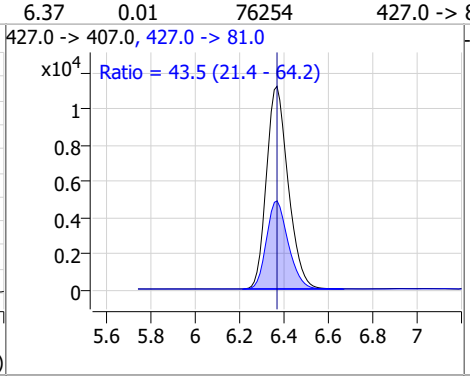


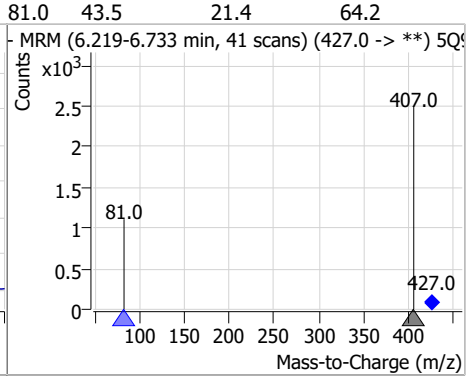


Perfluorinated Compounds by LC/MS/MS

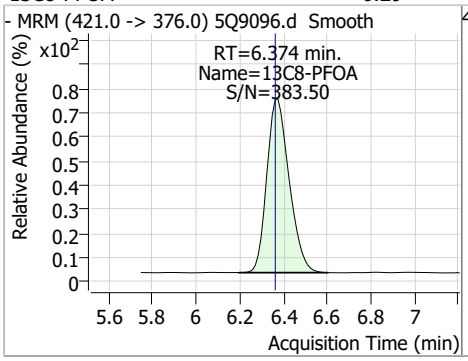
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	5.93	6.37	0.01	76254	427.0 -> 81.0	43.5	21.4	64.2

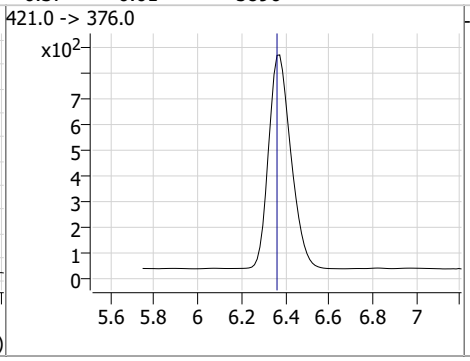


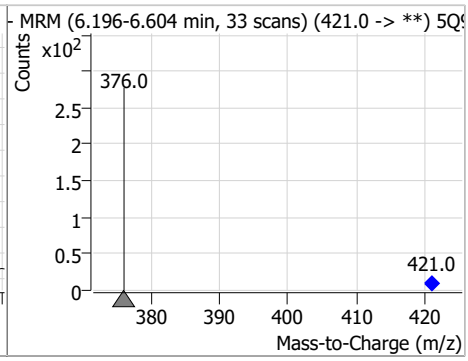




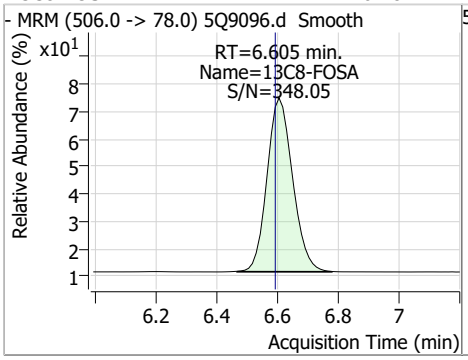
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	0.29	6.37	0.01	5896				

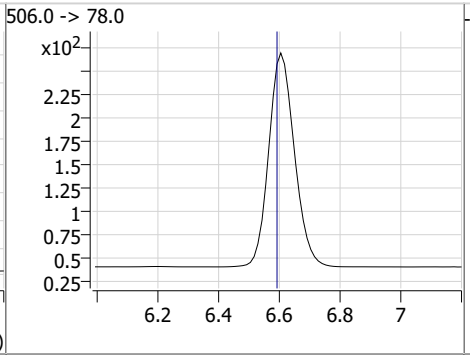


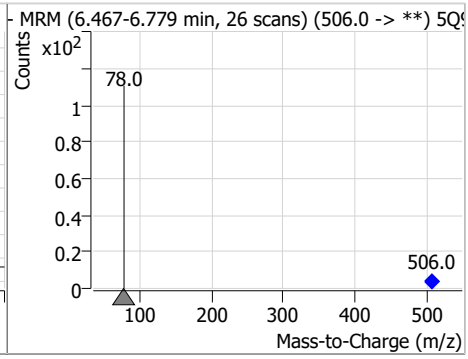




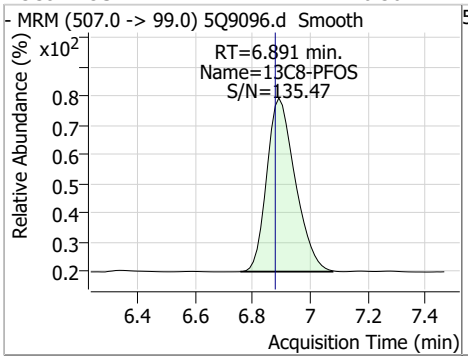
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	0.28	6.60	0.01	1333				

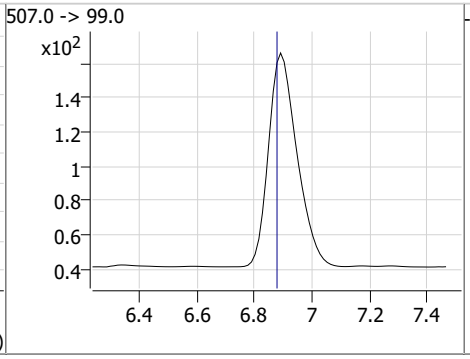


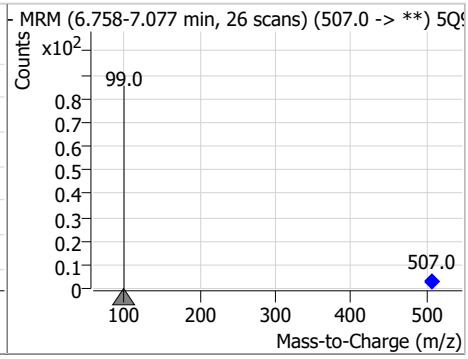




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	0.36	6.89	0.01	852				

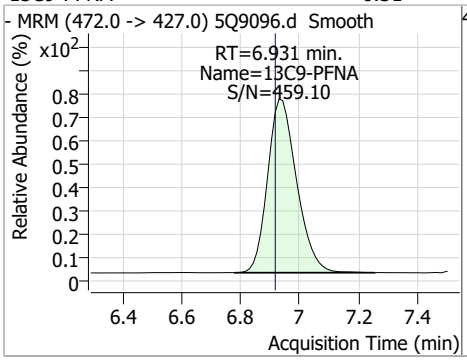


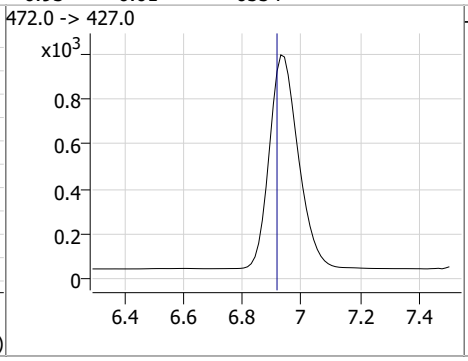


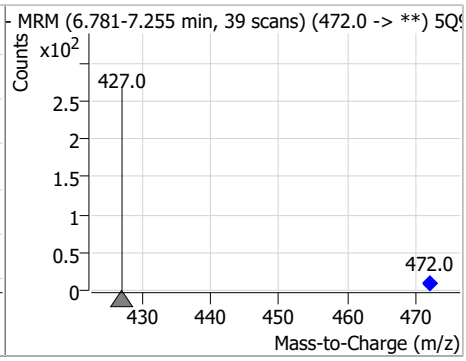


Perfluorinated Compounds by LC/MS/MS

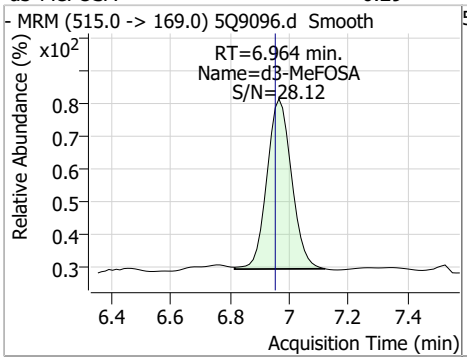
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	0.31	6.93	0.01	6554				

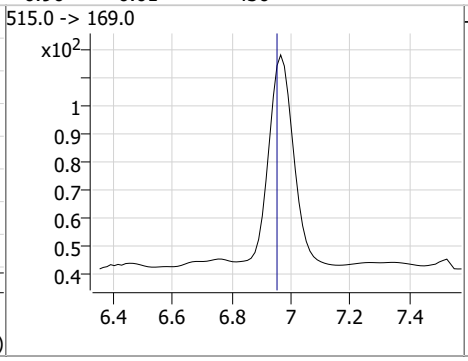


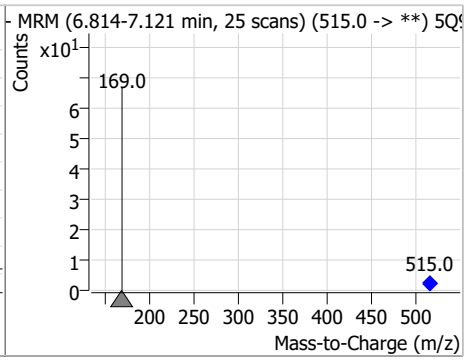




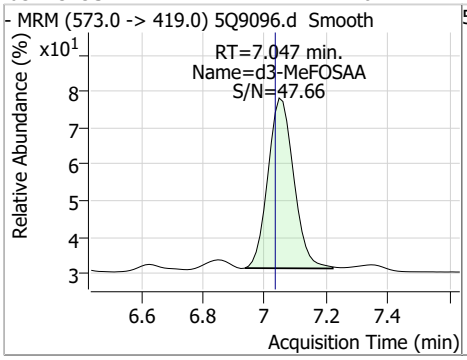
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	0.29	6.96	0.01	436				

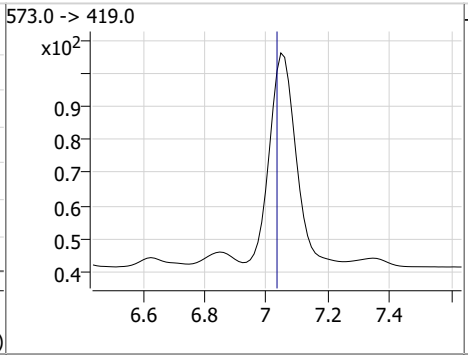


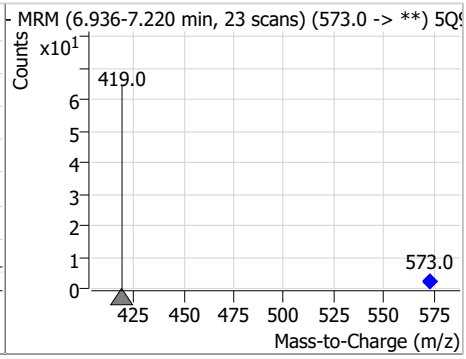




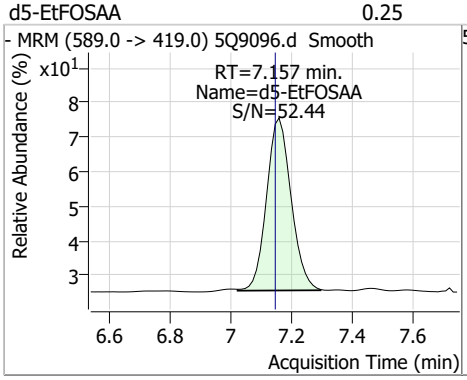
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	0.21	7.05	0.01	368				

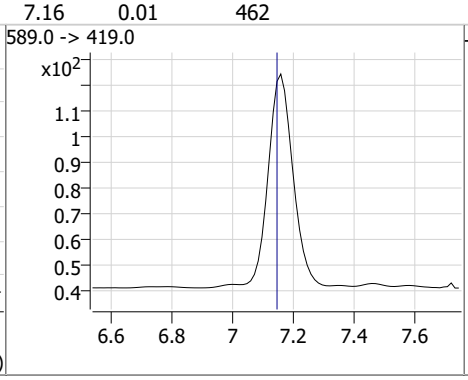


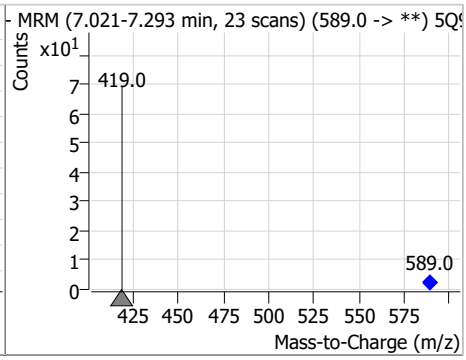




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	0.25	7.16	0.01	462				

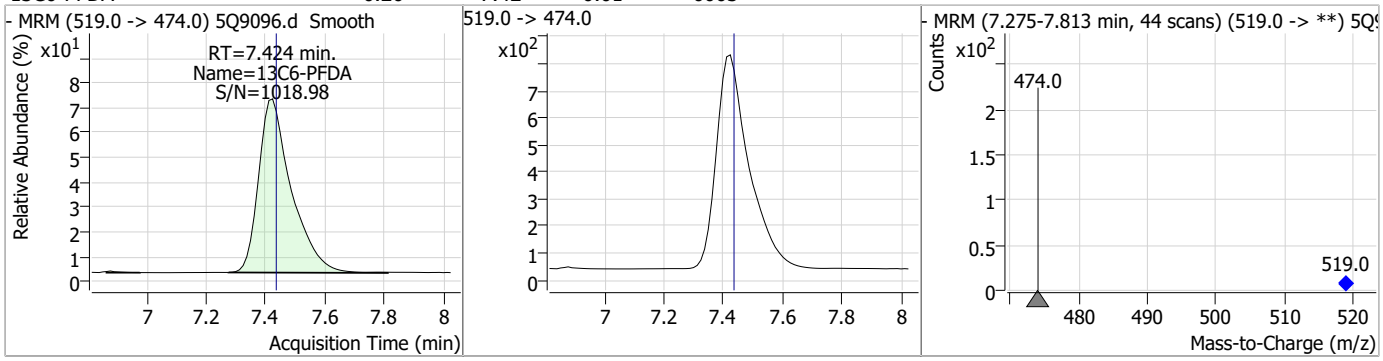




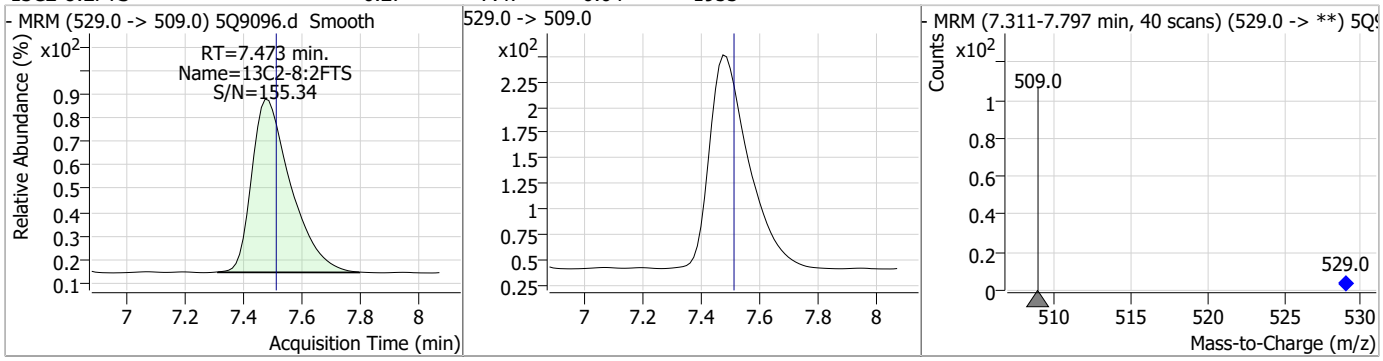


Perfluorinated Compounds by LC/MS/MS

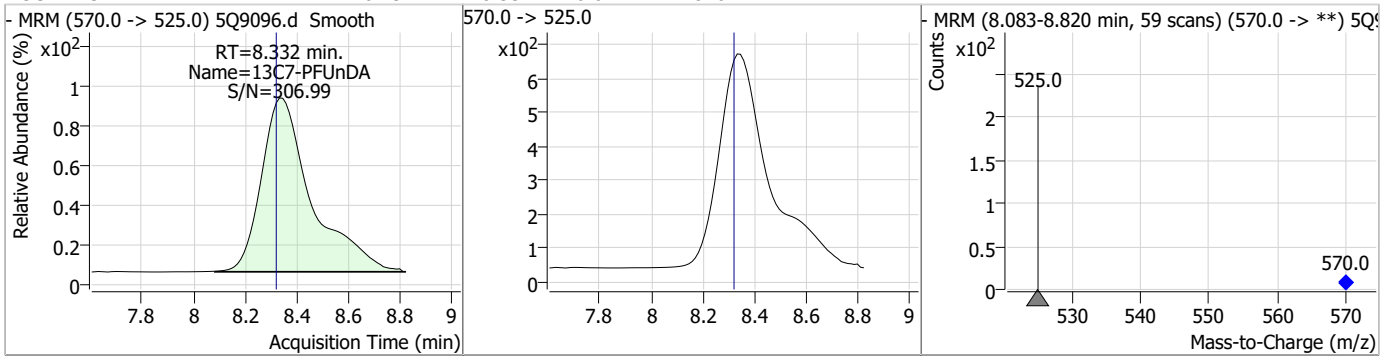
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	0.26	7.42	-0.01	6063				



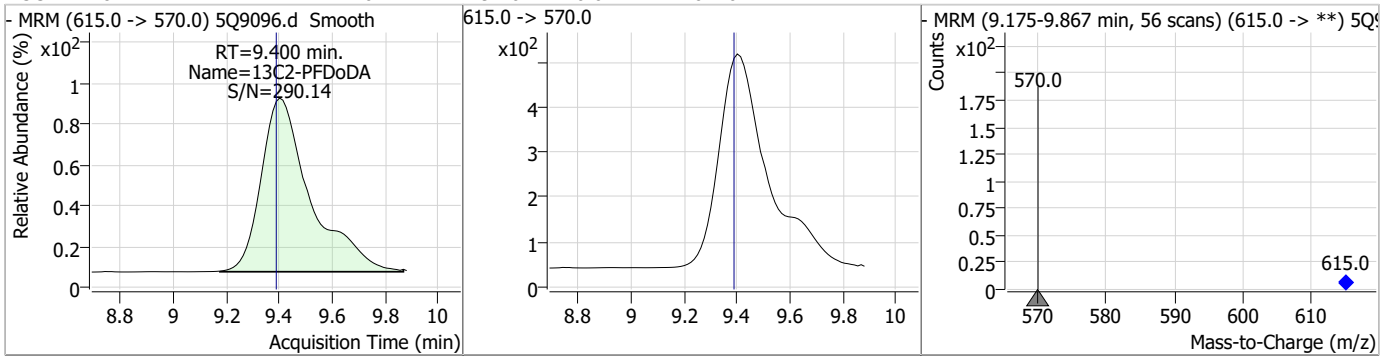
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	0.27	7.47	-0.04	1953				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	0.29	8.33	0.01	8462				

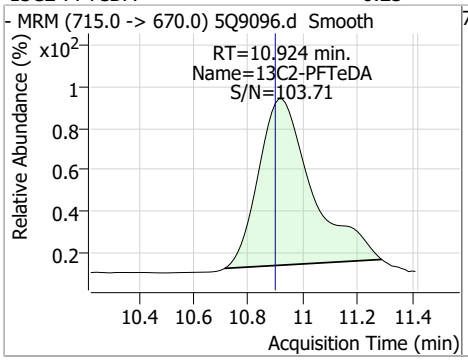


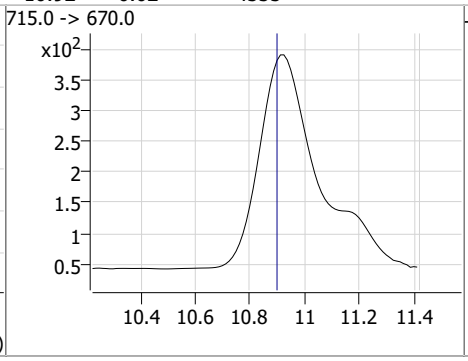
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	0.27	9.40	0.01	6140				

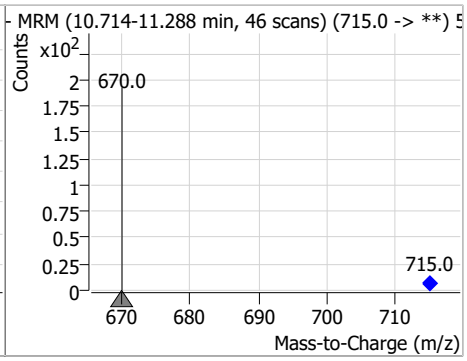


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	0.23	10.92	0.02	4555				







Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9246.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 1/3/2023 6:51:26 PM
Sample Name : fc1302-1
Vial : P3-D1
DA Method File : ID_010323_S5Q137.quantmethod.xml
Batch Name : s5q137.batch.bin
Sample Information : OP94649,S5Q137,2.00,,,1.0,100,soil

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.050	217.0 -> 172.0	106419	20.00	µg/L	0.075
M5-PFPeA	3.544	268.0 -> 223.0	201604	20.00	µg/L	0.075
M5-PFHxA	4.517	318.0 -> 273.0	281006	20.00	µg/L	0.062
M4-PFHpA	5.189	367.0 -> 322.0	289854	20.00	µg/L	0.076
M8-PFOA	5.699	421.0 -> 376.0	359502	20.00	µg/L	0.077
M9-PFNA	6.119	472.0 -> 427.0	363950	20.00	µg/L	0.076
M6-PFDA	6.489	519.0 -> 474.0	330578	20.00	µg/L	0.087
M7-PFUnDA	6.809	570.0 -> 525.0	360465	20.00	µg/L	0.087
M2-PFDoDA	7.066	615.0 -> 570.0	355577	20.00	µg/L	0.087
M2-PFTeDA	7.474	715.0 -> 670.0	388163	20.00	µg/L	0.087
M8-FOSA	6.666	506.0 -> 78.0	112844	20.00	µg/L	0.025
M3-PFBS	3.756	302.0 -> 99.0	24373	20.00	µg/L	0.077
M3-PFHxS	5.198	402.0 -> 99.0	30820	20.00	µg/L	0.075
M8-PFOS	6.091	507.0 -> 99.0	35978	20.00	µg/L	0.076
M2-4:2FTS	4.427	329.0 -> 309.0	83183	20.00	µg/L	0.079
M2-6:2FTS	5.671	429.0 -> 409.0	129253	20.00	µg/L	0.077
M2-8:2FTS	6.475	529.0 -> 509.0	103905	20.00	µg/L	0.075
M3-MeFOSAA	6.995	573.0 -> 419.0	49275	20.00	µg/L	0.037
M3-HFPO-DA	4.719	287.0 -> 169.0	59098	20.00	µg/L	0.075
M3-MeFOSA	7.023	515.0 -> 169.0	33451	20.00	µg/L	0.037
M5-EtFOSAA	7.118	589.0 -> 419.0	48567	20.00	µg/L	0.037
System Monitoring Compounds						
13C2-4:2FTS	4.427	329.0 -> 309.0	83183	17.59	µg/L	0.079
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.9%		
13C2-6:2FTS	5.671	429.0 -> 409.0	129253	18.15	µg/L	0.077
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.8%		
13C2-8:2FTS	6.475	529.0 -> 509.0	103905	16.92	µg/L	0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.6%		
13C2-PFDoDA	7.066	615.0 -> 570.0	355577	19.21	µg/L	0.087
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.1%		
13C2-PFTeDA	7.474	715.0 -> 670.0	388163	19.85	µg/L	0.087
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%		
13C3-PFBS	3.756	302.0 -> 99.0	24373	19.01	µg/L	0.077
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.1%		
13C3-PFHxS	5.198	402.0 -> 99.0	30820	19.40	µg/L	0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.0%		
13C4-PFBA	2.050	217.0 -> 172.0	106419	18.56	µg/L	0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%		
13C4-PFHpA	5.189	367.0 -> 322.0	289854	19.73	µg/L	0.076
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.6%		
13C5-PFHxA	4.517	318.0 -> 273.0	281006	19.13	µg/L	0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.7%		
13C5-PFPeA	3.544	268.0 -> 223.0	201604	19.40	µg/L	0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.0%		
13C6-PFDA	6.489	519.0 -> 474.0	330578	17.83	µg/L	0.087

Perfluorinated Compounds by LC/MS/MS

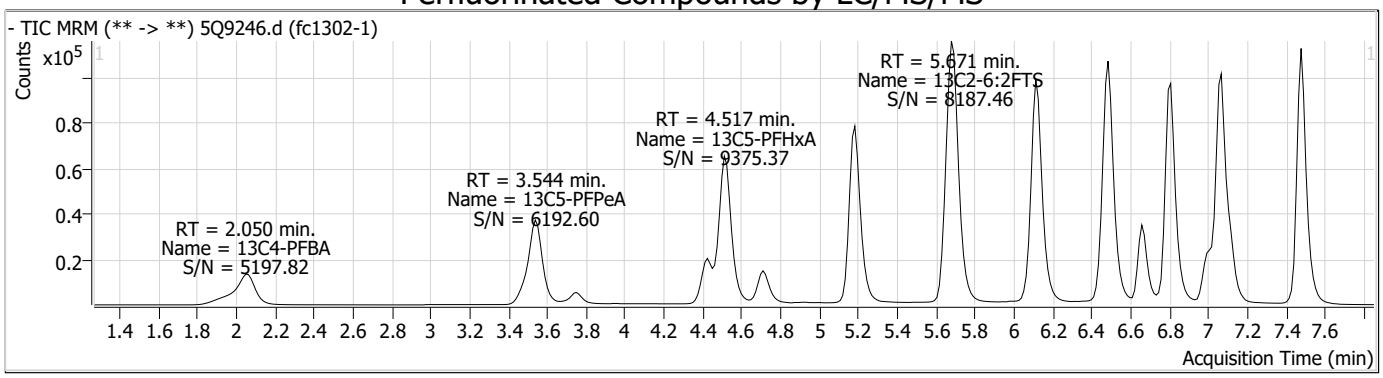
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.2%	
13C7-PFUnDA	6.809	570.0 -> 525.0	360465	19.11 µg/L	0.087
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.5%	
13C8-FOSA	6.666	506.0 -> 78.0	112844	18.82 µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.1%	
13C8-PFOA	5.699	421.0 -> 376.0	359502	19.08 µg/L	0.077
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.4%	
13C8-PFOS	6.091	507.0 -> 99.0	35978	18.88 µg/L	0.076
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.4%	
13C9-PFNA	6.119	472.0 -> 427.0	363950	19.28 µg/L	0.076
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.4%	
d3-MeFOSAA	6.995	573.0 -> 419.0	49275	17.58 µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.9%	
13C3-HFPO-DA	4.719	287.0 -> 169.0	59098	17.62 µg/L	0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.1%	
d3-MeFOSA	7.023	515.0 -> 169.0	33451	19.40 µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.0%	
d5-EtFOSAA	7.118	589.0 -> 419.0	48567	17.52 µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.6%	
Target Compounds					QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.	
		327.0 -> 81.0			
6:2FTS	5.672	427.0 -> 407.0	29987	5.34 µg/L	99
		427.0 -> 81.0	13493		
8:2FTS	-	527.0 -> 507.0	-	N.D.	
		527.0 -> 81.0			
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
		584.0 -> 483.0			
FOSA	-	498.0 -> 78.0	-	N.D.	
		498.0 -> 478.0			
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
		570.0 -> 512.0			
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0	-	N.D.	
		299.0 -> 99.0			
PFDA	-	513.0 -> 469.0	-	N.D.	
		513.0 -> 219.0			
PFDoDA	-	613.0 -> 569.0	-	N.D.	
		613.0 -> 319.0			
PFDS	-	599.0 -> 80.0	-	N.D.	
		599.0 -> 99.0			
PFHpA	-	363.0 -> 319.0	-	N.D.	
		363.0 -> 169.0			
PFHpS	-	449.0 -> 80.0	-	N.D.	
		449.0 -> 99.0			
PFHxA	4.517	313.0 -> 269.0	3391	0.27 µg/L	99
		313.0 -> 119.0	152		
PFHxS	-	399.0 -> 80.0	-	N.D.	
		399.0 -> 99.0			
PFNA	-	463.0 -> 419.0	-	N.D.	
		463.0 -> 219.0			
PFNS	-	549.0 -> 80.0	-	N.D.	
		549.0 -> 99.0			
PFOA	-	413.0 -> 369.0	-	N.D.	
		413.0 -> 169.0			
PFOS	-	499.0 -> 80.0	-	N.D.	

Perfluorinated Compounds by LC/MS/MS

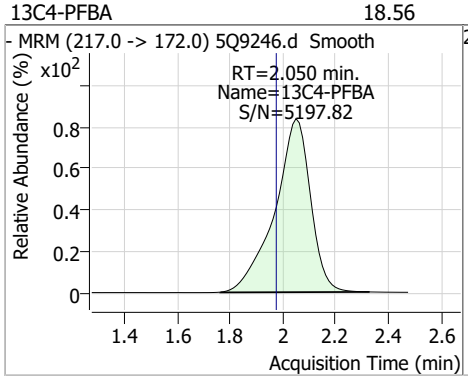
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0				
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFPeS	-	349.0 -> 80.0	-	N.D.		
		349.0 -> 99.0				
PFTeDA	-	713.0 -> 669.0	-	N.D.		
		713.0 -> 219.0				
PFTrDA	-	663.0 -> 619.0	-	N.D.		
		663.0 -> 369.0				
PFUnDA	-	563.0 -> 519.0	-	N.D.		
		563.0 -> 269.0				
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
		633.0 -> 453.0				
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
		533.0 -> 353.0				
ADONA	-	377.0 -> 251.0	-	N.D.		
		377.0 -> 85.0				
HFPO-DA	-	329.0 -> 169.0	-	N.D.		
		285.0 -> 169.0				
MeFOSA	-	512.0 -> 169.0	-	N.D.		
		512.0 -> 219.0				
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	-	298.0 -> 78.0	-	N.D.		
		298.0 -> 64.0				
FHxSA	-	398.0 -> 78.0	-	N.D.		
		398.0 -> 64.0				

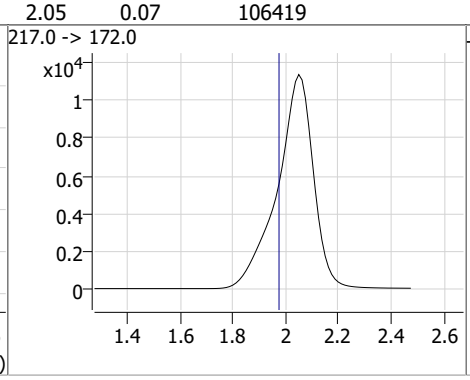
 # = Qualifier out of range, m = manually integrated, + = Area summed

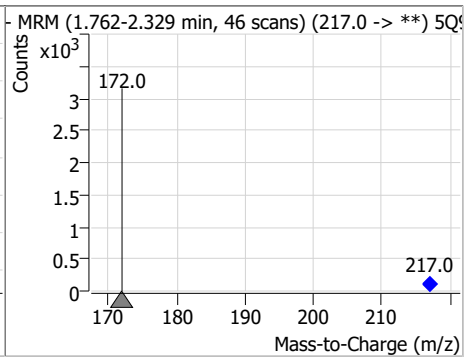
Perfluorinated Compounds by LC/MS/MS



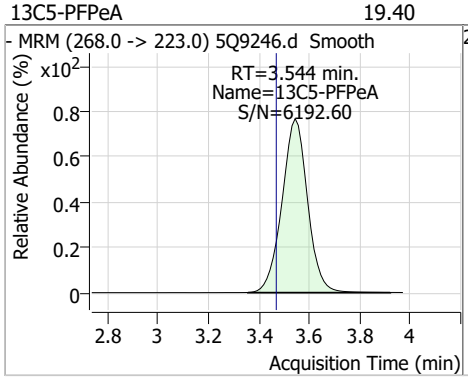
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.56	2.05	0.07	106419				

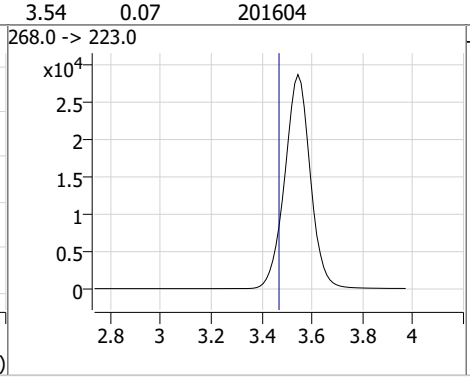


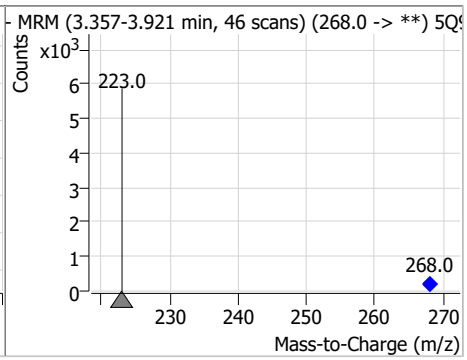




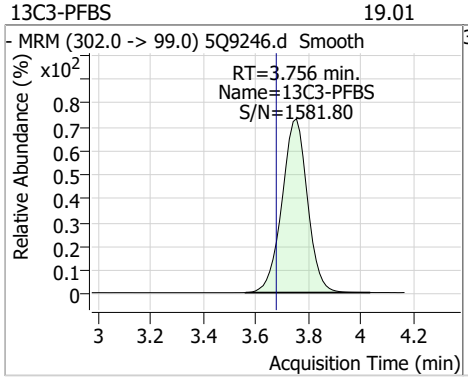
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.40	3.54	0.07	201604				

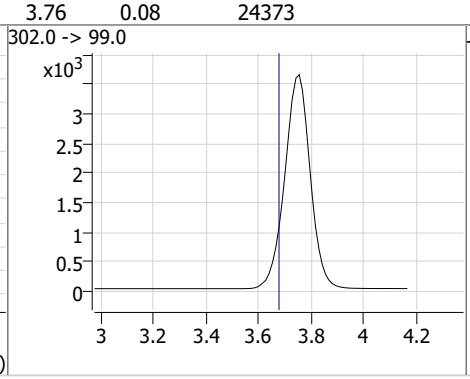


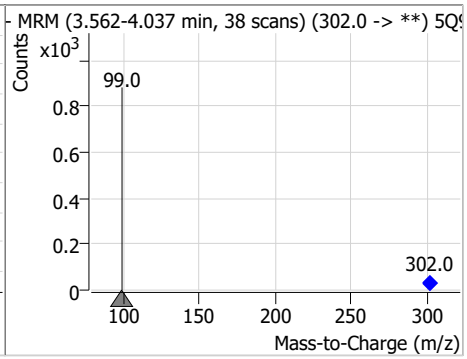




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.01	3.76	0.08	24373				

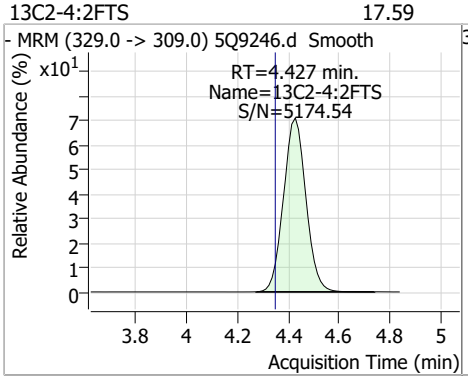


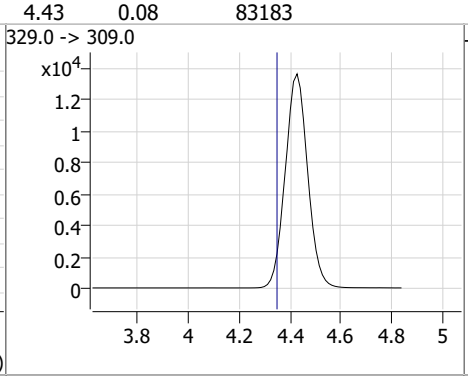


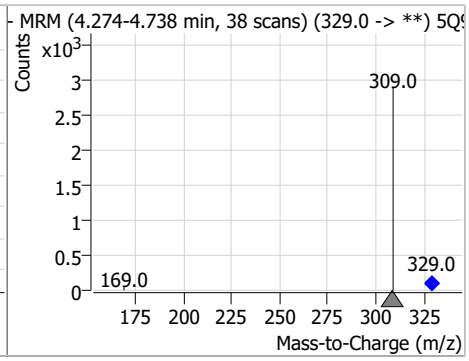


Perfluorinated Compounds by LC/MS/MS

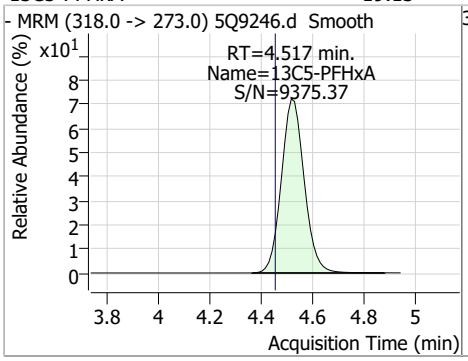
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	17.59	4.43	0.08	83183				

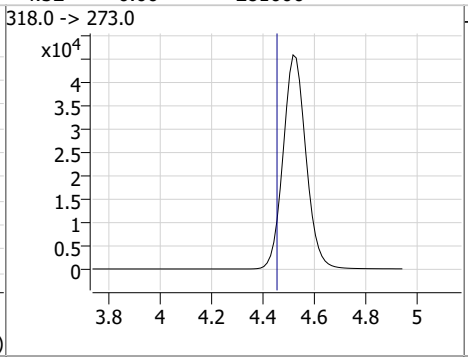


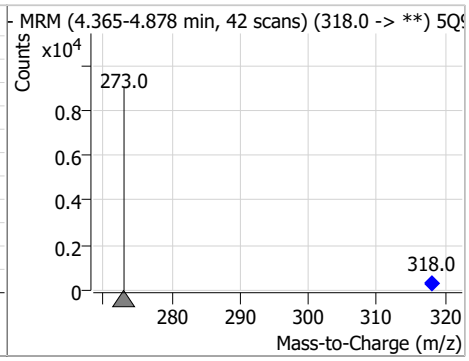




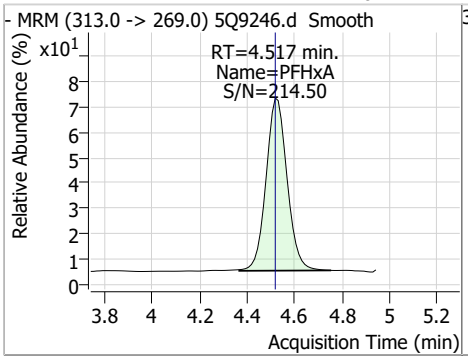
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.13	4.52	0.06	281006				

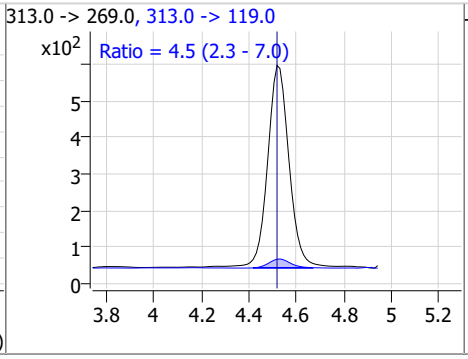


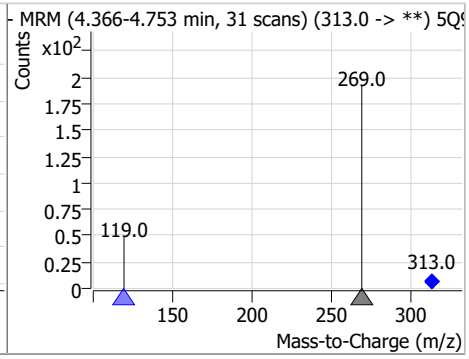




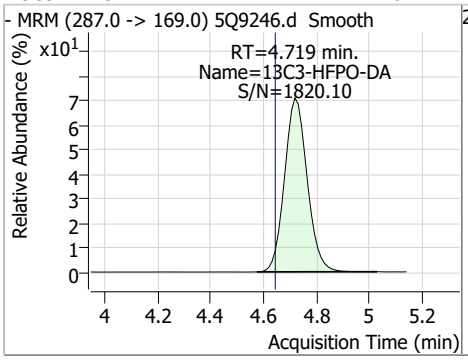
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.27	4.52	0.06	3391	313.0 -> 119.0	4.5	2.3	7.0

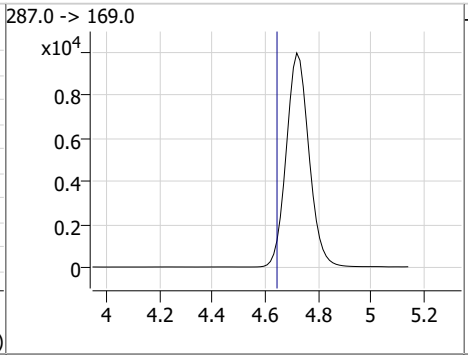


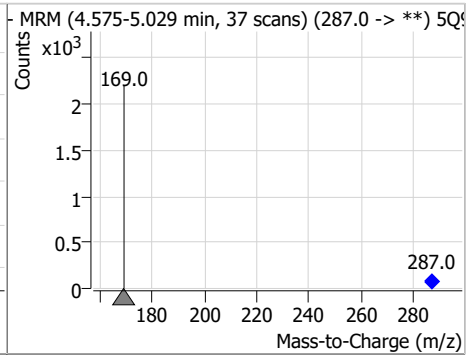




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	17.62	4.72	0.07	59098				

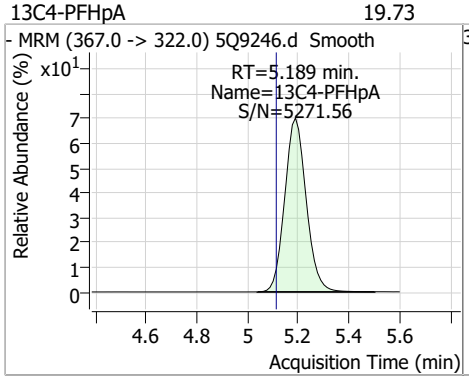


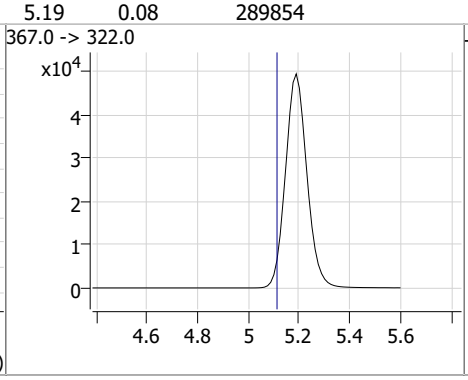


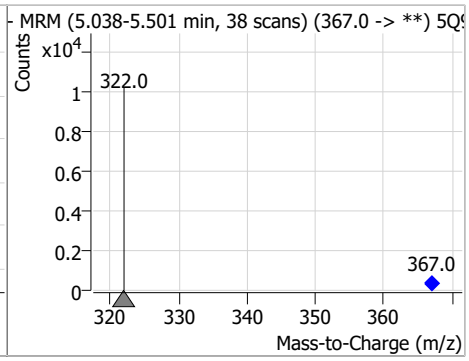


Perfluorinated Compounds by LC/MS/MS

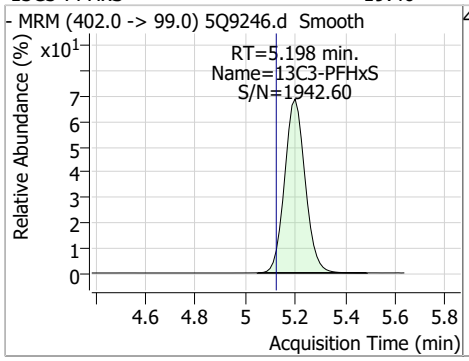
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.73	5.19	0.08	289854				

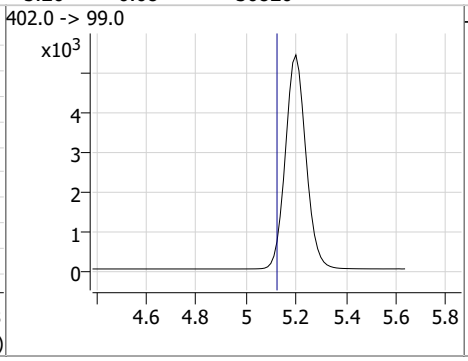


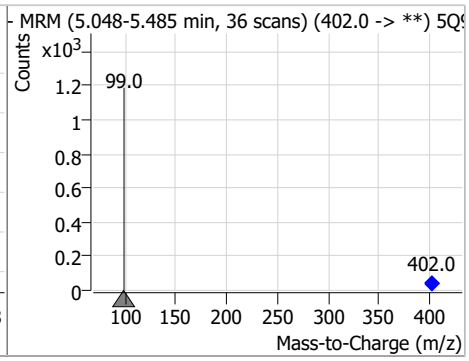




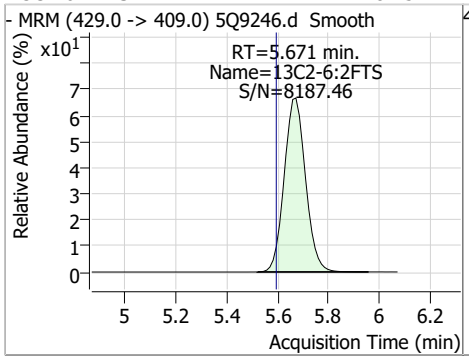
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.40	5.20	0.08	30820				

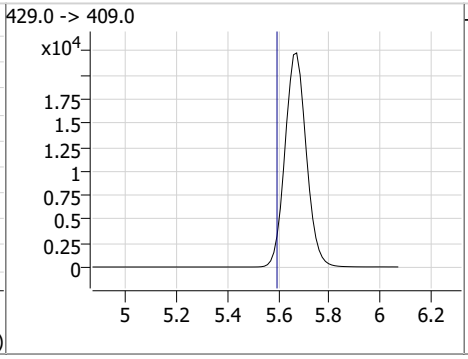


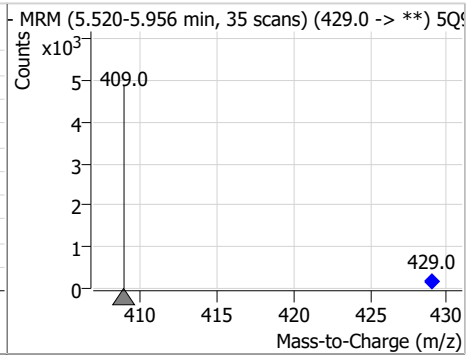




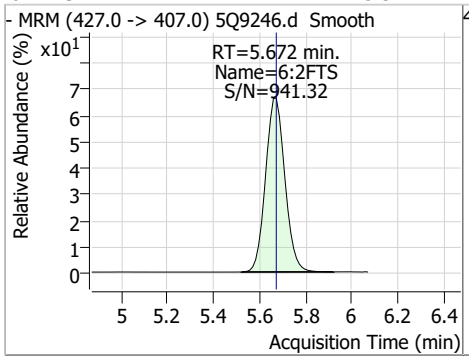
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.15	5.67	0.08	129253				

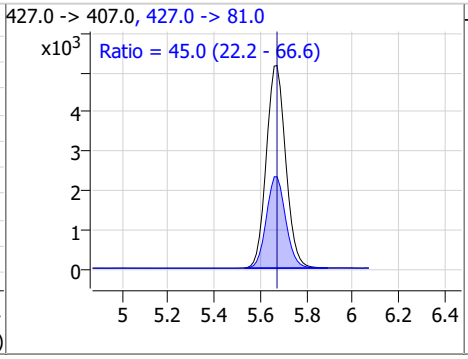


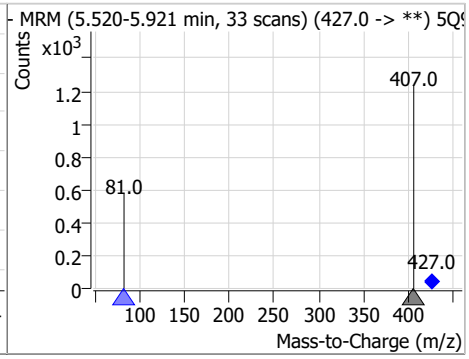




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	5.34	5.67	0.08	29987	427.0 -> 81.0	45.0	22.2	66.6

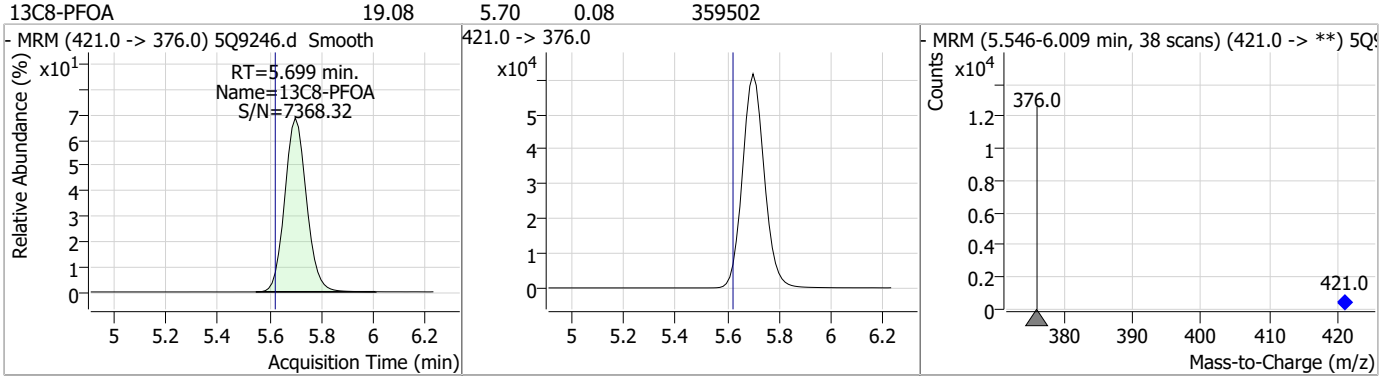




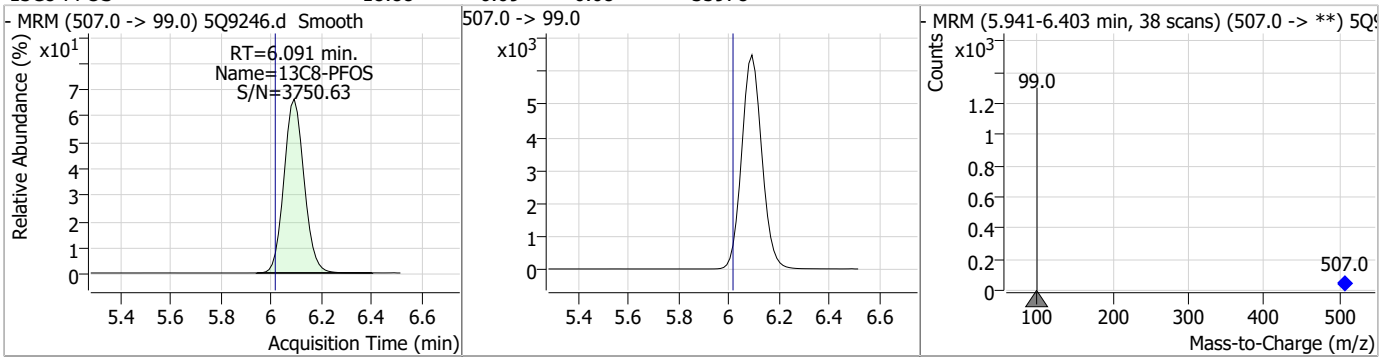


Perfluorinated Compounds by LC/MS/MS

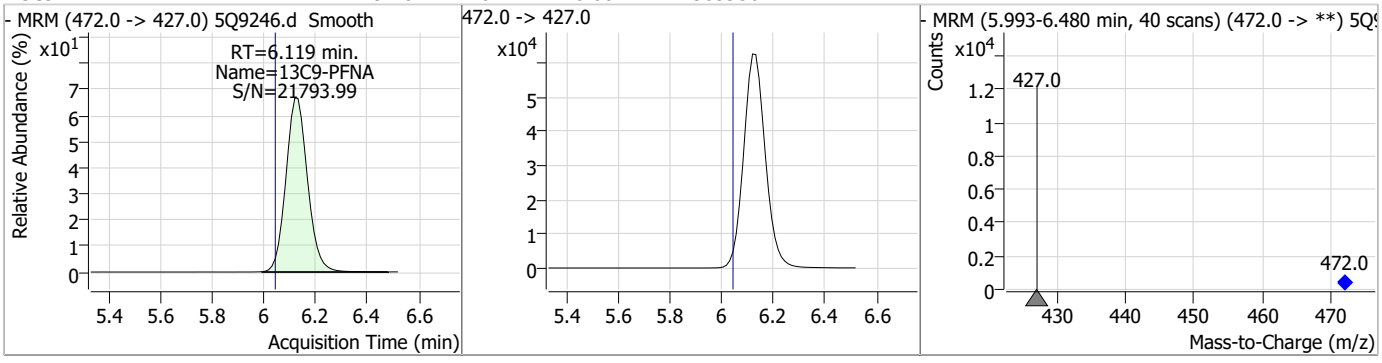
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.08	5.70	0.08	359502				



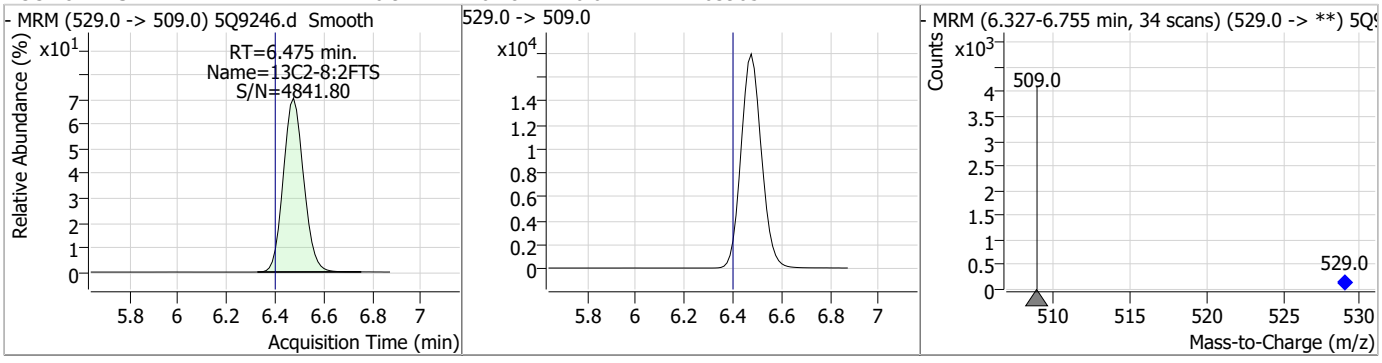
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	18.88	6.09	0.08	35978				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.28	6.12	0.08	363950				

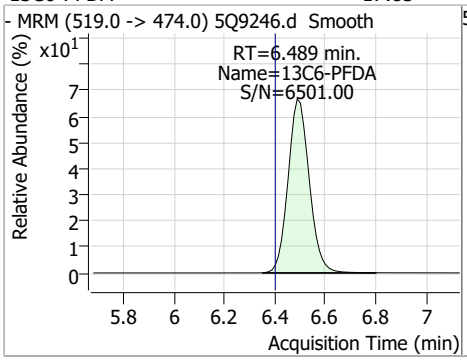


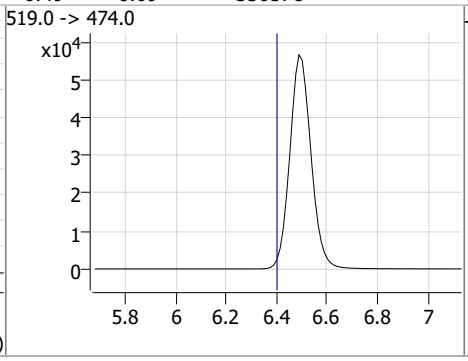
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	16.92	6.48	0.07	103905				

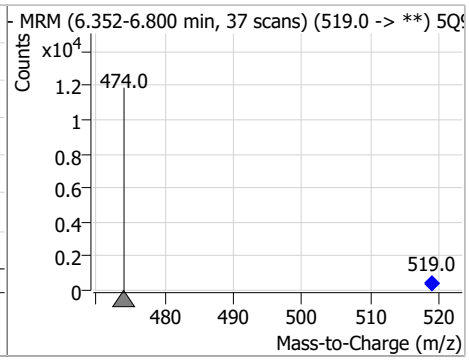


Perfluorinated Compounds by LC/MS/MS

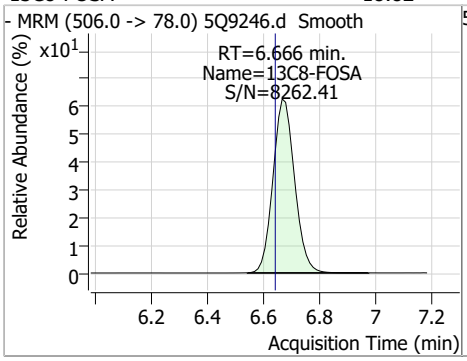
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	17.83	6.49	0.09	330578				

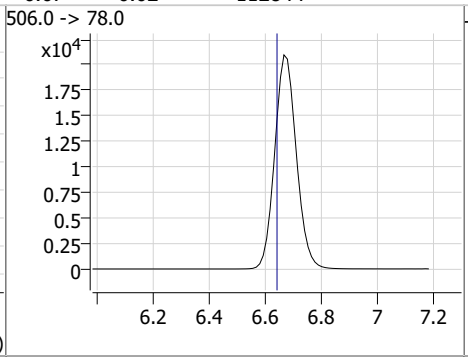


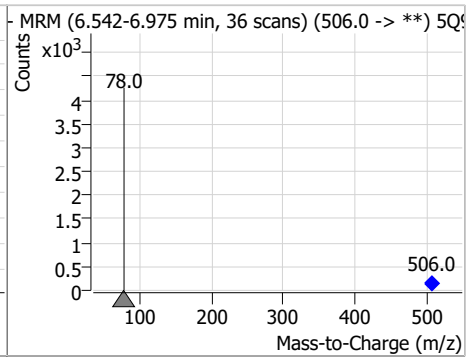




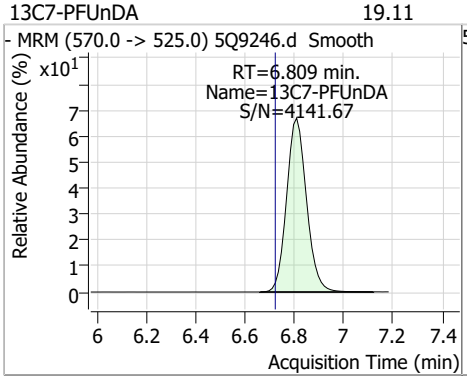
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	18.82	6.67	0.02	112844				

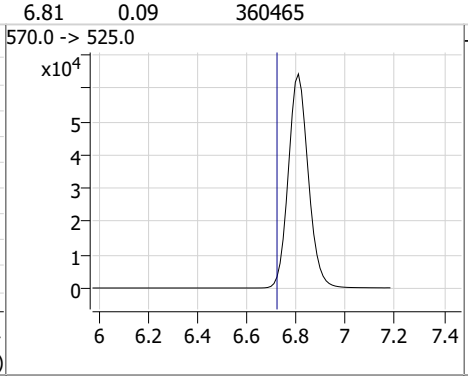


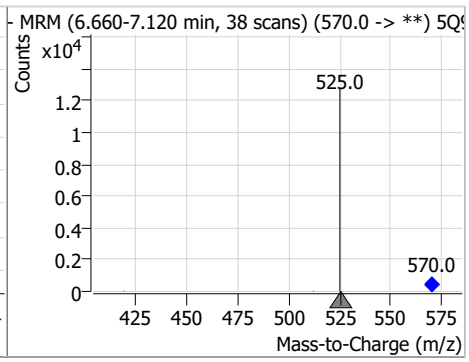




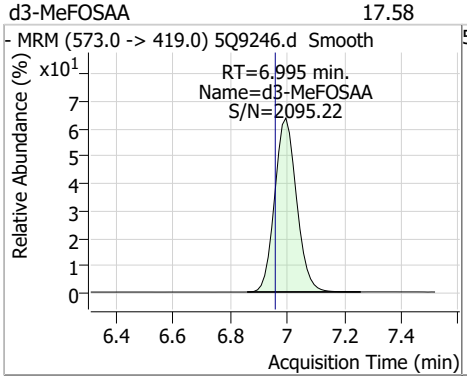
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.11	6.81	0.09	360465				

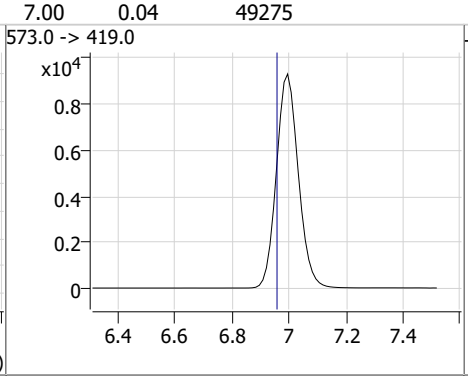


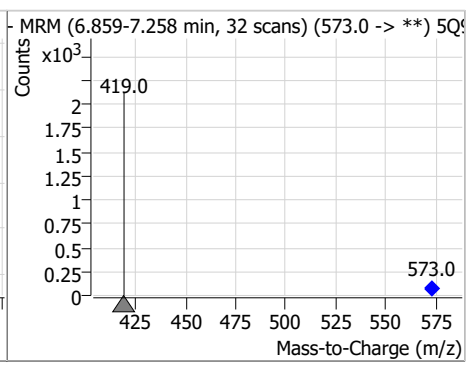




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	17.58	7.00	0.04	49275				

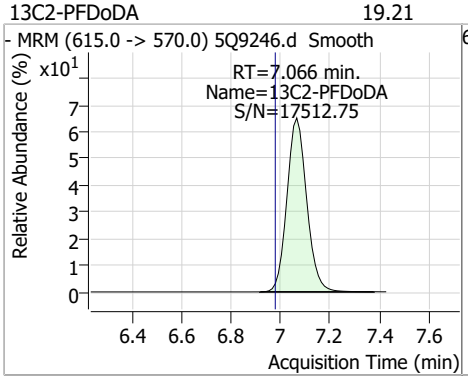


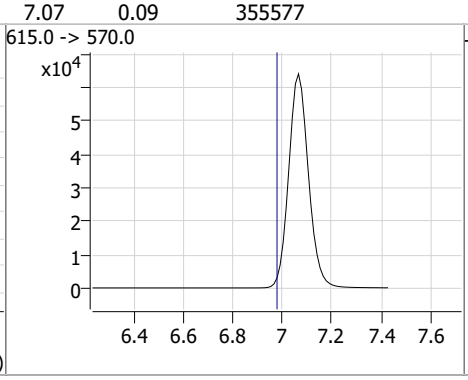


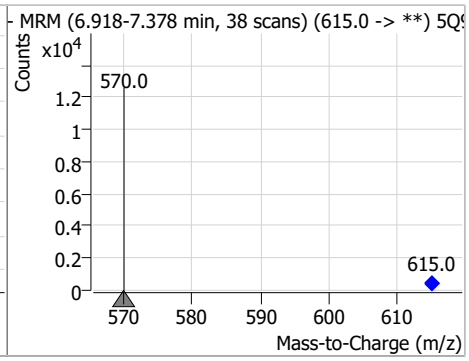


Perfluorinated Compounds by LC/MS/MS

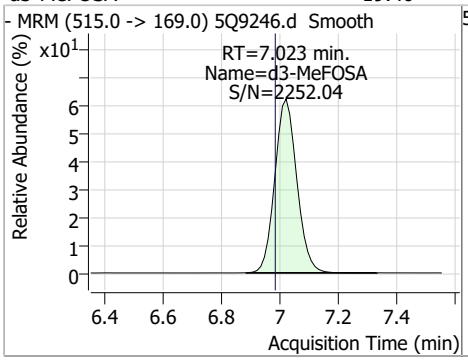
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.21	7.07	0.09	355577				

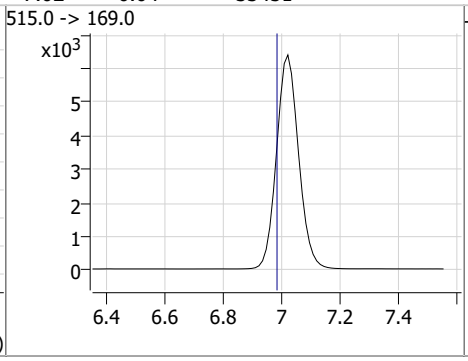


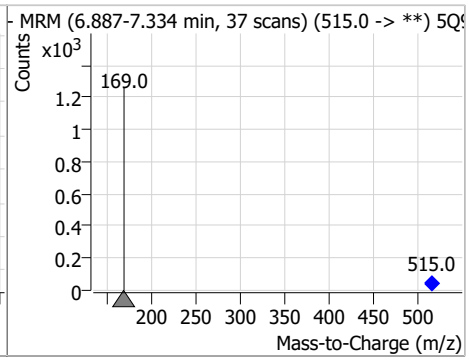




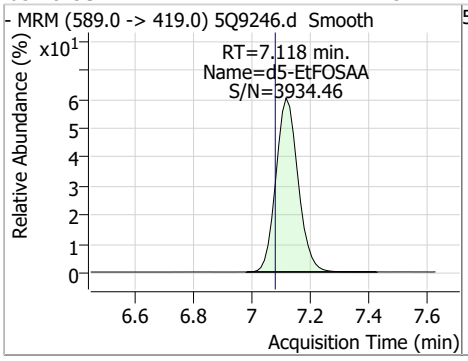
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	19.40	7.02	0.04	33451				

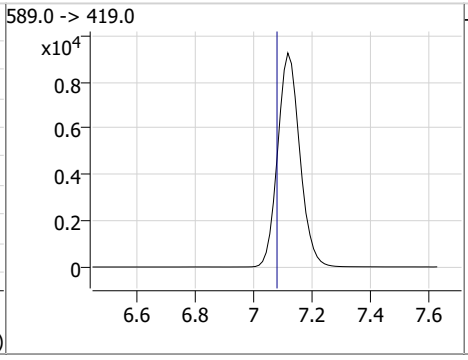


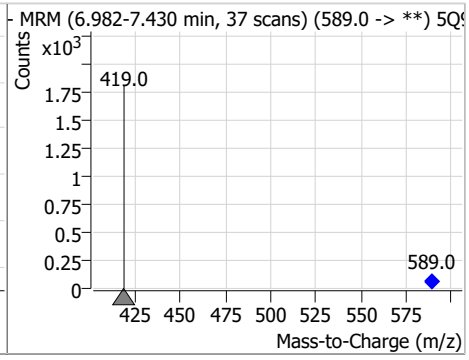




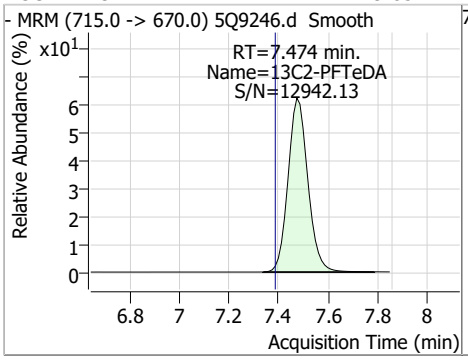
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	17.52	7.12	0.04	48567				

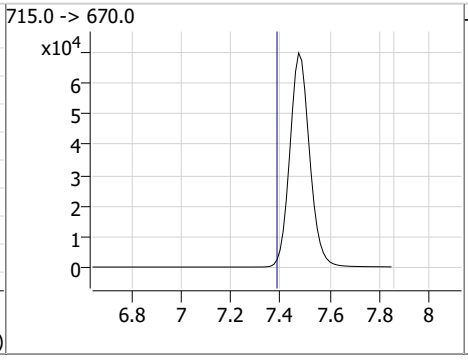


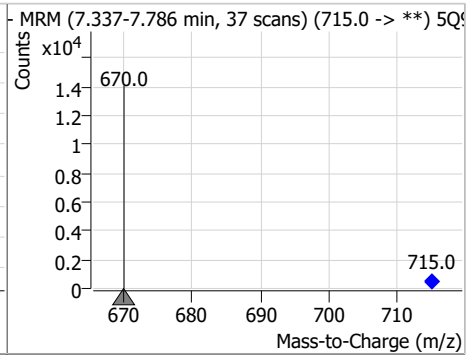




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.85	7.47	0.09	388163				







Manual Integrations APPROVED (compounds with "m" flag)
Norman Farmer 12/31/22 16:14

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9083.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/29/2022 12:42:12 AM
Sample Name : fc1302-1a
Vial : P2-C7
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94649,S5Q134,2.03,,,1.0,10,soil

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	8297	2.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	16084	2.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	22975	2.00	µg/L	0.000
M4-PFHpA	5.726	367.0 -> 322.0	24571	2.00	µg/L	0.000
M8-PFOA	6.348	421.0 -> 376.0	28115	2.00	µg/L	-0.014
M9-PFNA	6.918	472.0 -> 427.0	35070	2.00	µg/L	0.000
M6-PFDA	7.337	519.0 -> 474.0	18189	2.00	µg/L	-0.099
M7-PFUnDA	8.307	570.0 -> 525.0	48846	2.00	µg/L	-0.012
M2-PFDoDA	9.375	615.0 -> 570.0	39418	2.00	µg/L	-0.013
M2-PFTeDA	10.899	715.0 -> 670.0	29713	2.00	µg/L	0.000
M8-FOSA	6.605	506.0 -> 78.0	8524	2.00	µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	2075	2.00	µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	2821	2.00	µg/L	0.000
M8-PFOS	6.879	507.0 -> 99.0	3868	2.00	µg/L	0.000
M2-4:2FTS	4.886	329.0 -> 309.0	6881	2.00	µg/L	0.000
M2-6:2FTS	6.346	429.0 -> 409.0	27733	2.00	µg/L	-0.014
M2-8:2FTS	7.398	529.0 -> 509.0	7319	2.00	µg/L	-0.114
M3-MeFOSAA	7.047	573.0 -> 419.0	3479	2.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	4920	2.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	2143	2.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	3198	2.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	6881	1.43	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.1%		
13C2-6:2FTS	6.346	429.0 -> 409.0	27733	3.62	µg/L	-0.014
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 18.1%		
13C2-8:2FTS	7.398	529.0 -> 509.0	7319	1.01	µg/L	-0.114
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 5.1%		
13C2-PFDoDA	9.375	615.0 -> 570.0	39418	1.75	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.8%		
13C2-PFTeDA	10.899	715.0 -> 670.0	29713	1.52	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.6%		
13C3-PFBS	4.124	302.0 -> 99.0	2075	1.60	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.0%		
13C3-PFHxS	5.733	402.0 -> 99.0	2821	1.58	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.9%		
13C4-PFBA	2.400	217.0 -> 172.0	8297	1.59	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.0%		
13C4-PFHpA	5.726	367.0 -> 322.0	24571	1.60	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.0%		
13C5-PFHxA	4.965	318.0 -> 273.0	22975	1.53	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.6%		
13C5-PFPeA	3.919	268.0 -> 223.0	16084	1.53	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.7%		
13C6-PFDA	7.337	519.0 -> 474.0	18189	0.78	µg/L	-0.099

Perfluorinated Compounds by LC/MS/MS

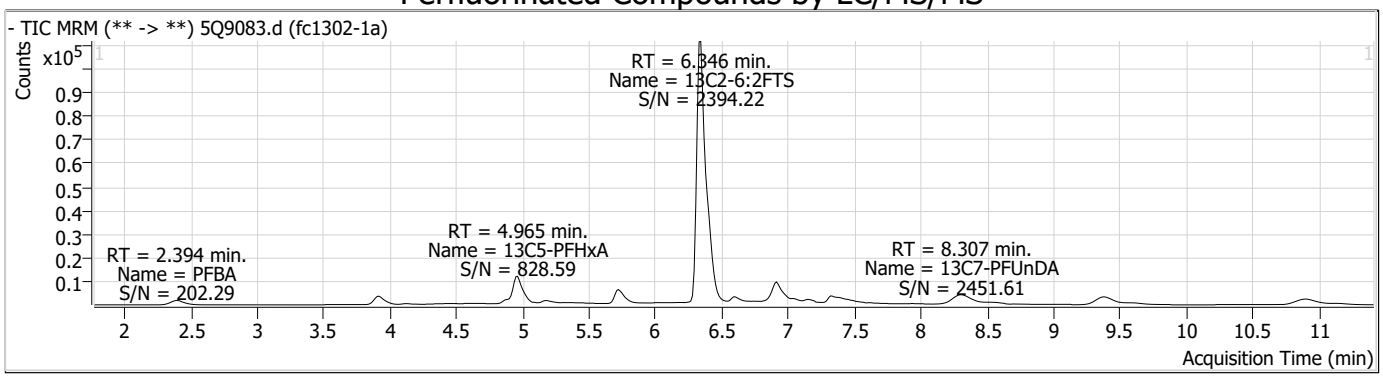
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 3.9%		
13C7-PFUnDA	8.307	570.0 -> 525.0	48846	1.67 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.3%		
13C8-FOSA	6.605	506.0 -> 78.0	8524	1.77 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.8%		
13C8-PFOA	6.348	421.0 -> 376.0	28115	1.40 µg/L		-0.014
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.0%		
13C8-PFOS	6.879	507.0 -> 99.0	3868	1.62 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.1%		
13C9-PFNA	6.918	472.0 -> 427.0	35070	1.67 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.3%		
d3-MeFOSAA	7.047	573.0 -> 419.0	3479	1.96 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 9.8%		
13C3-HFPO-DA	5.194	287.0 -> 169.0	4920	1.49 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.4%		
d3-MeFOSA	6.964	515.0 -> 169.0	2143	1.41 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.1%		
d5-EtFOSAA	7.157	589.0 -> 419.0	3198	1.73 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.7%		
Target Compounds						QValue
4:2FTS	4.888	327.0 -> 307.0	1265	0.34 µg/L		100
		327.0 -> 81.0	749			
6:2FTS	6.347	427.0 -> 407.0	327805	23.03 µg/L		100
		427.0 -> 81.0	139465			
8:2FTS	-	527.0 -> 507.0	-	N.D.		
		527.0 -> 81.0				
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
		584.0 -> 483.0				
FOSA	-	498.0 -> 78.0	-	N.D.		
		498.0 -> 478.0				
MeFOSAA	-	570.0 -> 419.0	-	N.D.		
		570.0 -> 512.0				
PFBA	2.394	213.0 -> 169.0	5024	1.11 µg/L		100
PFBS	-	299.0 -> 80.0	-	N.D.		
		299.0 -> 99.0				
PFDA	-	513.0 -> 469.0	-	N.D.		
		513.0 -> 219.0				
PFDoDA	-	613.0 -> 569.0	-	N.D.		
		613.0 -> 319.0				
PFDS	-	599.0 -> 80.0	-	N.D.		
		599.0 -> 99.0				
PFHpA	-	363.0 -> 319.0	-	N.D.		
		363.0 -> 169.0				
PFHpS	-	449.0 -> 80.0	-	N.D.		
		449.0 -> 99.0				
PFHxA	4.966	313.0 -> 269.0	33082	2.83 µg/L		100
		313.0 -> 119.0	1559			
PFHxS	-	399.0 -> 80.0	-	N.D.		
		399.0 -> 99.0				
PFNA	-	463.0 -> 419.0	-	N.D.		
		463.0 -> 219.0				
PFNS	-	549.0 -> 80.0	-	N.D.		
		549.0 -> 99.0				
PFOA	6.348	413.0 -> 369.0	31281	1.94 µg/L		98
		413.0 -> 169.0	8746			
PFOS	6.880	499.0 -> 80.0	3492	0.98 µg/L	m	97

Perfluorinated Compounds by LC/MS/MS

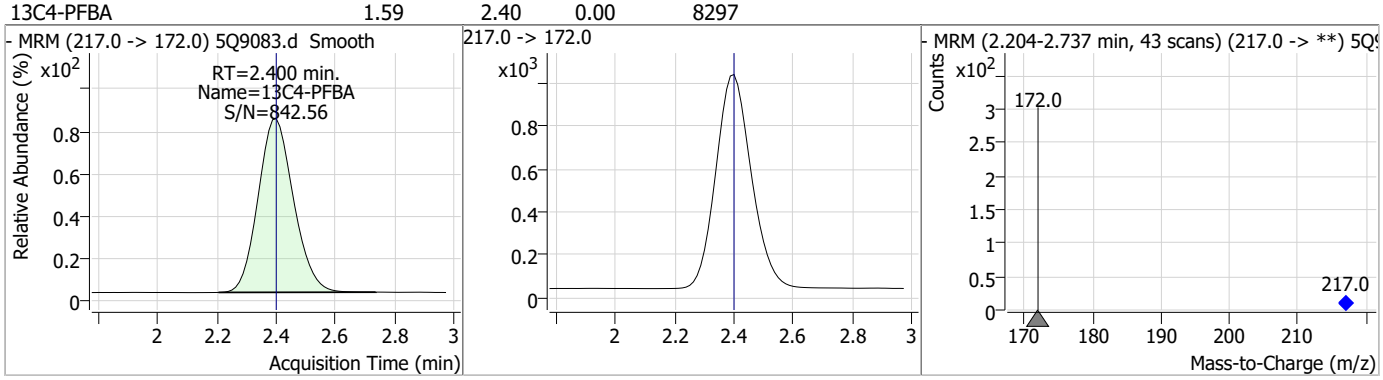
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	1732			
PFPeA	3.922	263.0 -> 219.0	4026	0.43	µg/L	100
PFPeS	-	349.0 -> 80.0	-	N.D.		
		349.0 -> 99.0				
PFTeDA	-	713.0 -> 669.0	-	N.D.		
		713.0 -> 219.0				
PFTrDA	-	663.0 -> 619.0	-	N.D.		
		663.0 -> 369.0				
PFUnDA	-	563.0 -> 519.0	-	N.D.		
		563.0 -> 269.0				
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
		633.0 -> 453.0				
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
		533.0 -> 353.0				
ADONA	-	377.0 -> 251.0	-	N.D.		
		377.0 -> 85.0				
HFPO-DA	-	329.0 -> 169.0	-	N.D.		
		285.0 -> 169.0				
MeFOSA	-	512.0 -> 169.0	-	N.D.		
		512.0 -> 219.0				
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	-	298.0 -> 78.0	-	N.D.		
		298.0 -> 64.0				
FHxSA	-	398.0 -> 78.0	-	N.D.		
		398.0 -> 64.0				

 # = Qualifier out of range, m = manually integrated, + = Area summed

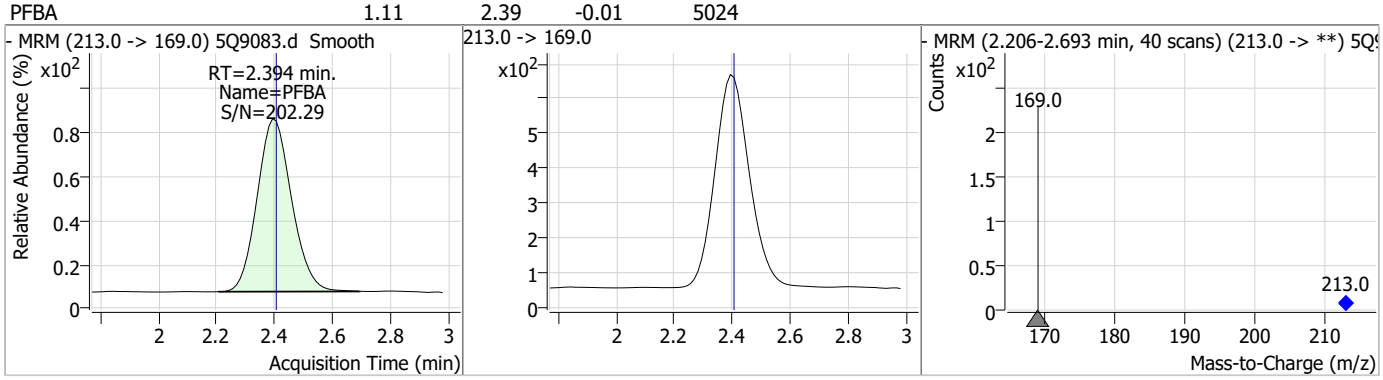
Perfluorinated Compounds by LC/MS/MS



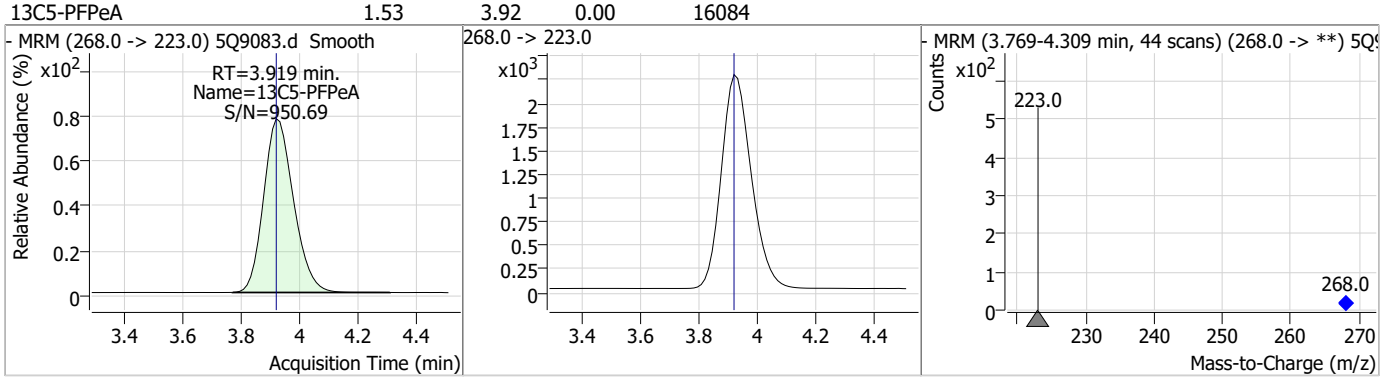
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	1.59	2.40	0.00	8297				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	1.11	2.39	-0.01	5024				

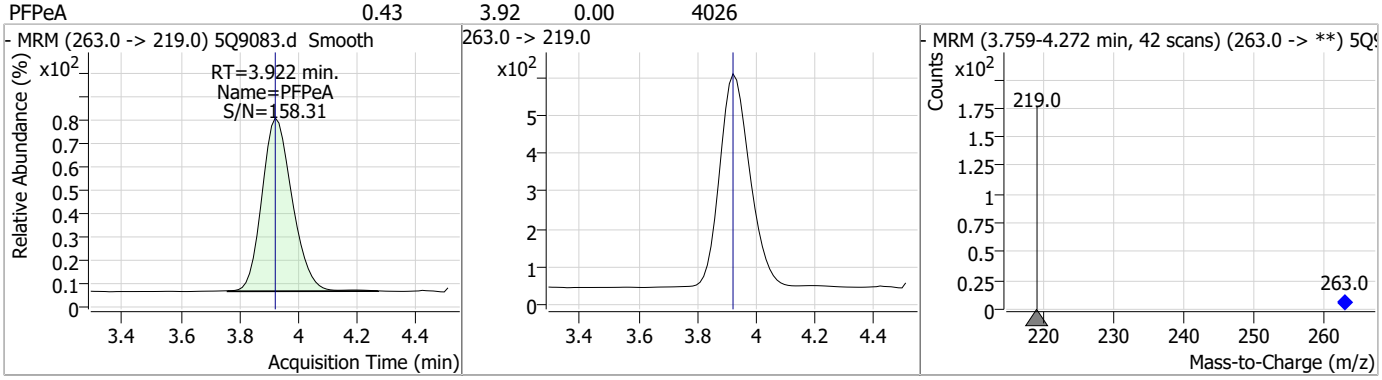


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	1.53	3.92	0.00	16084				

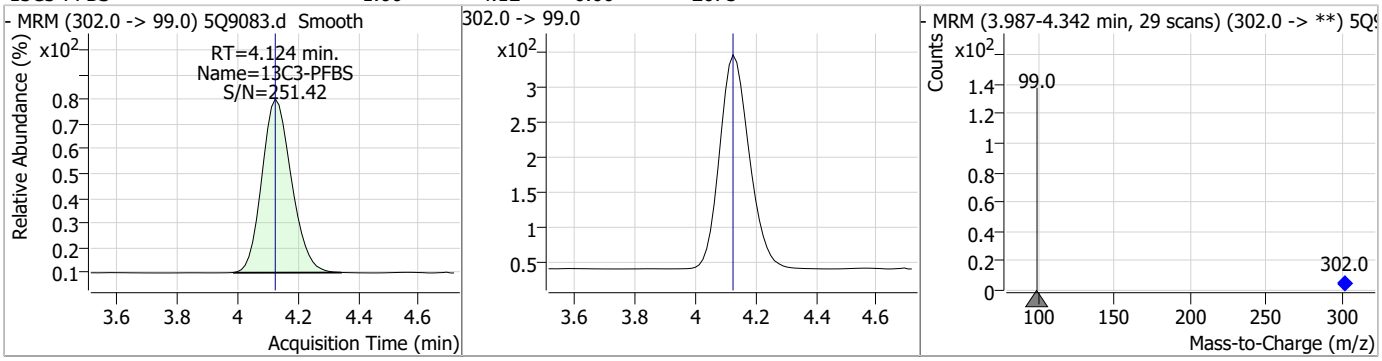


Perfluorinated Compounds by LC/MS/MS

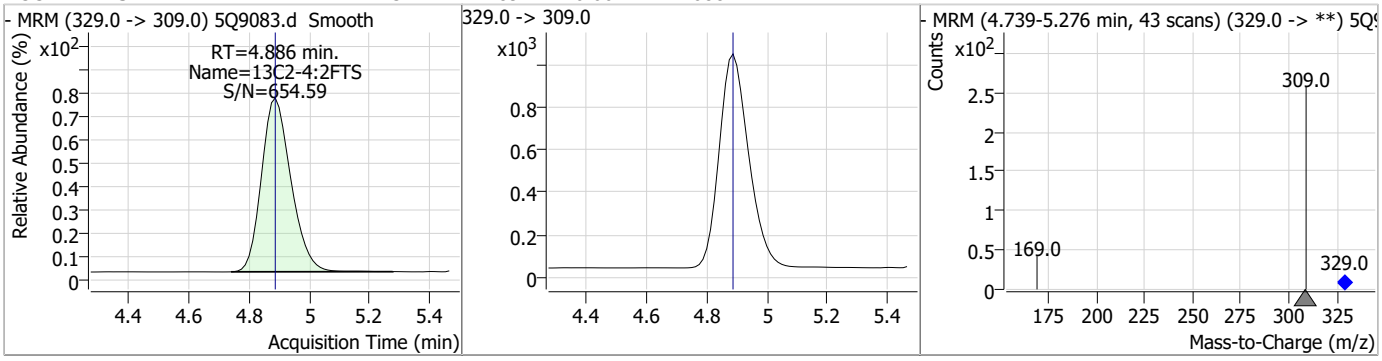
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.43	3.92	0.00	4026				



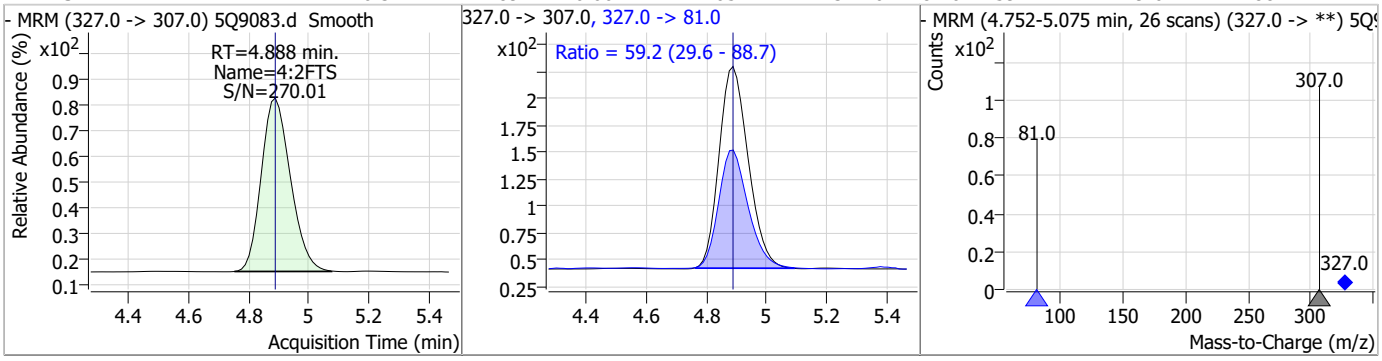
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	1.60	4.12	0.00	2075				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	1.43	4.89	0.00	6881				

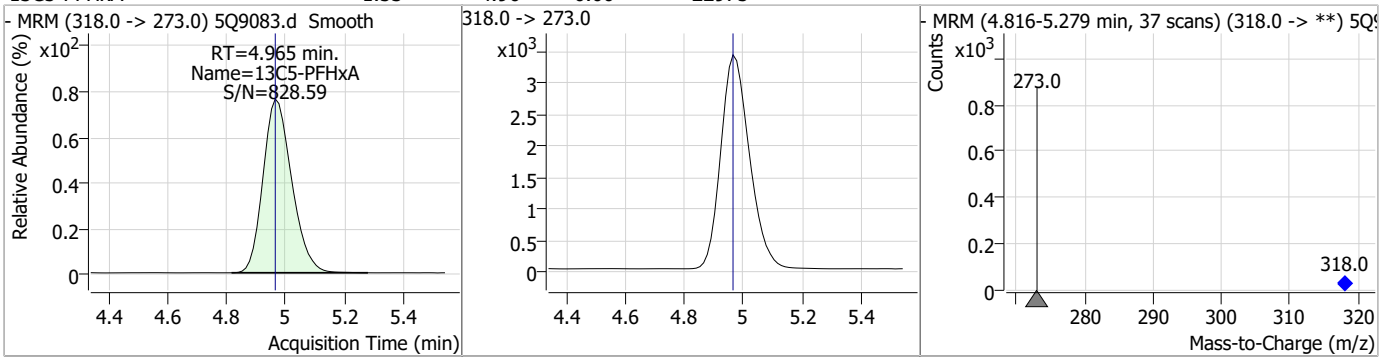


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	0.34	4.89	0.00	1265	327.0 -> 81.0	59.2	29.6	88.7

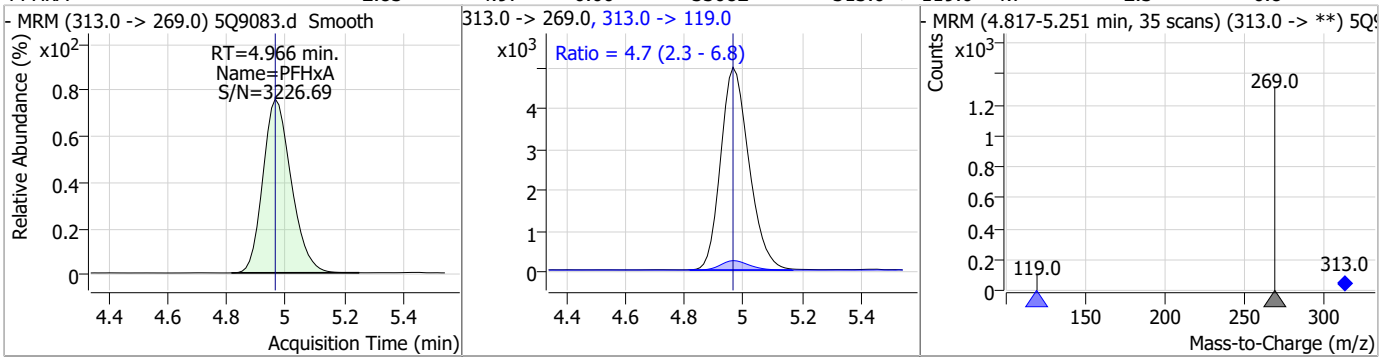


Perfluorinated Compounds by LC/MS/MS

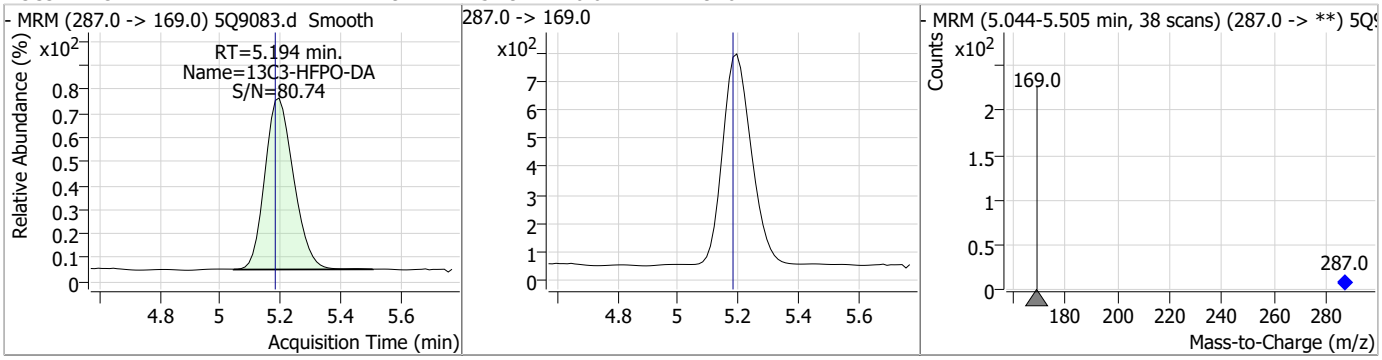
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	1.53	4.96	0.00	22975				



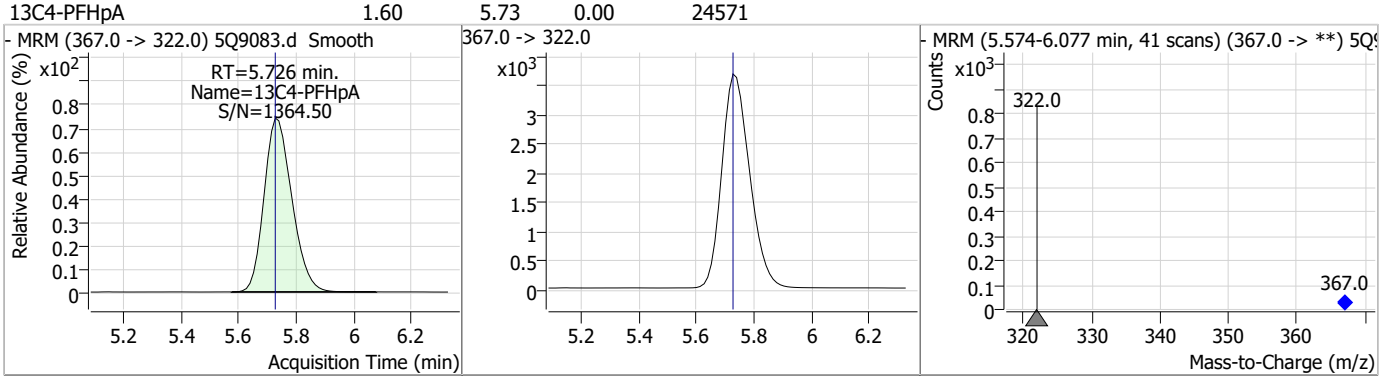
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	2.83	4.97	0.00	33082	313.0 -> 119.0	4.7	2.3	6.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	1.49	5.19	0.01	4920				

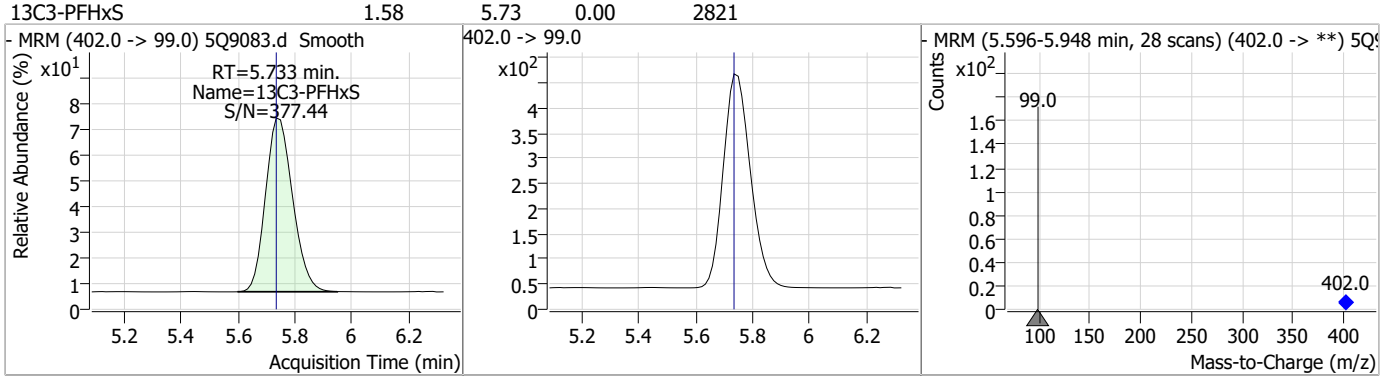


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	1.60	5.73	0.00	24571				

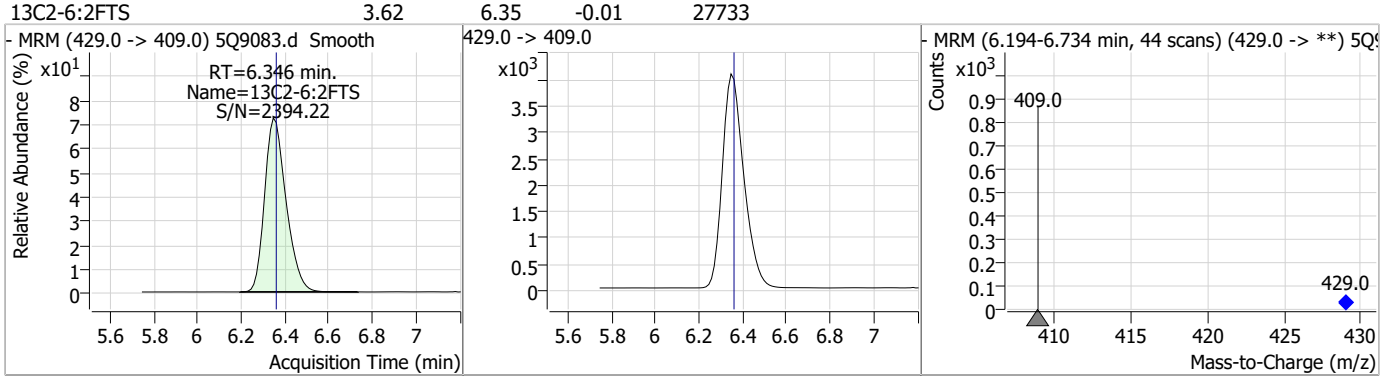


Perfluorinated Compounds by LC/MS/MS

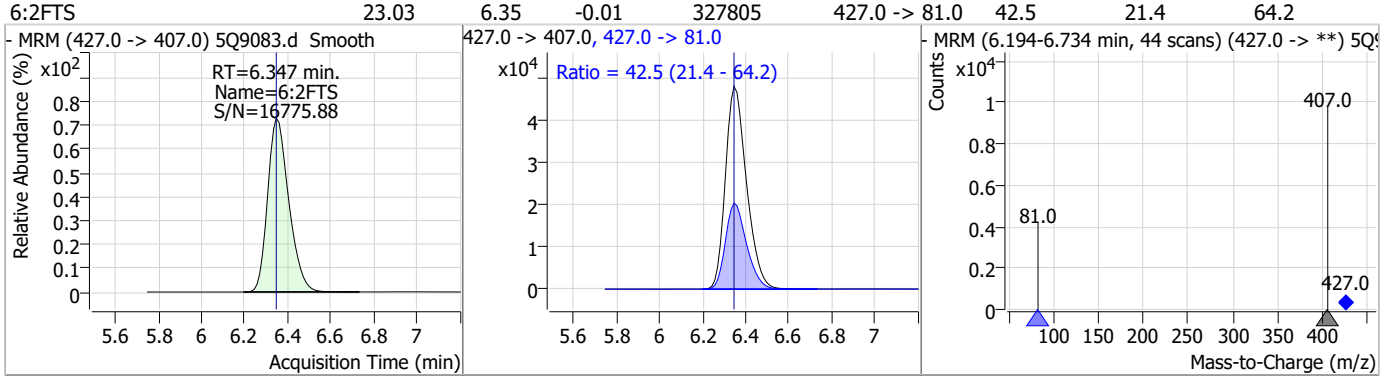
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	1.58	5.73	0.00	2821				



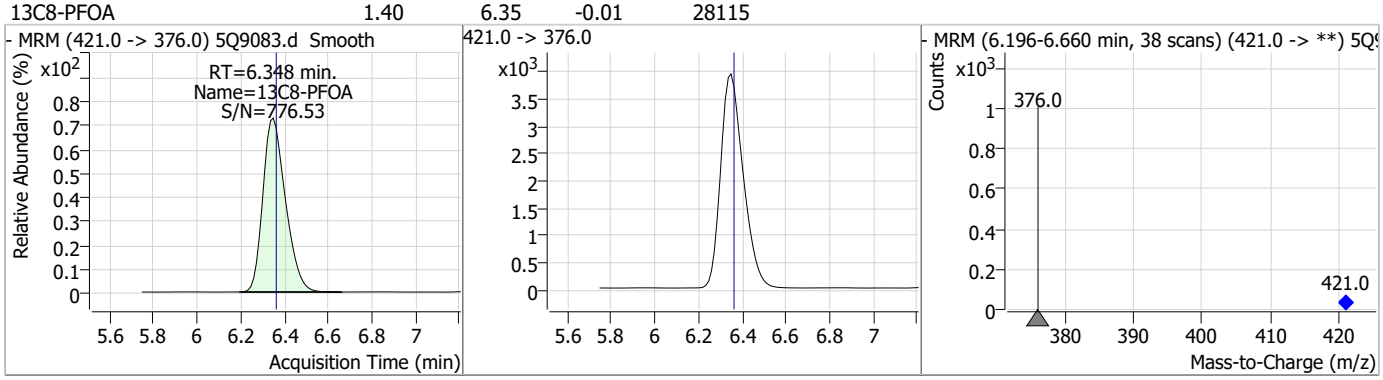
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	3.62	6.35	-0.01	27733				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	23.03	6.35	-0.01	327805	427.0 -> 81.0	42.5	21.4	64.2

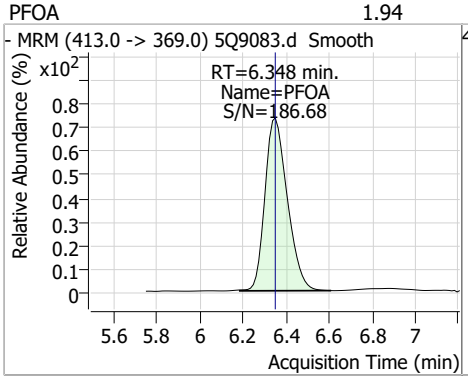


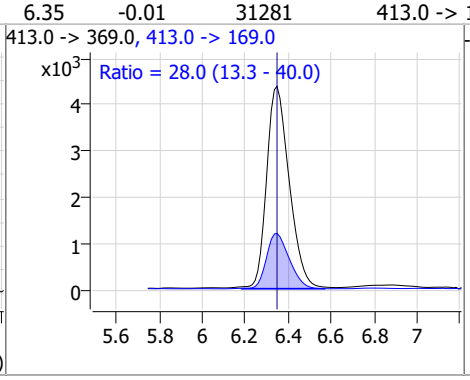
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	1.40	6.35	-0.01	28115				

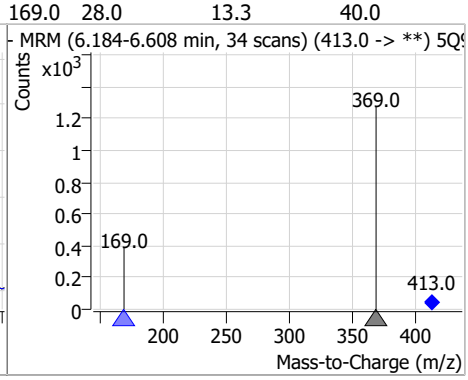


Perfluorinated Compounds by LC/MS/MS

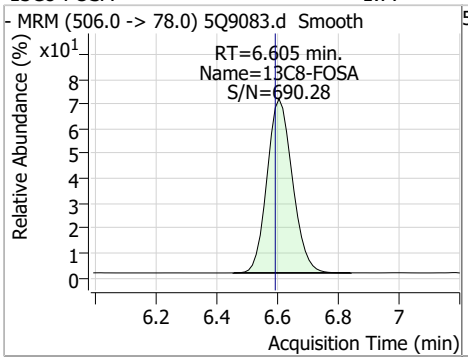
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	1.94	6.35	-0.01	31281	413.0 -> 169.0	28.0	13.3	40.0

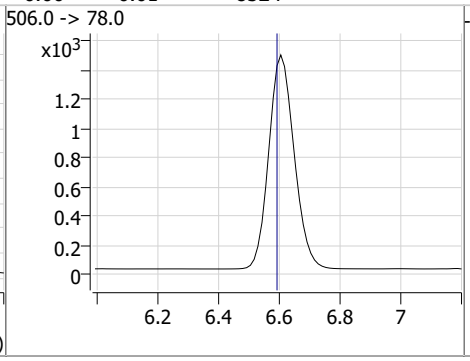


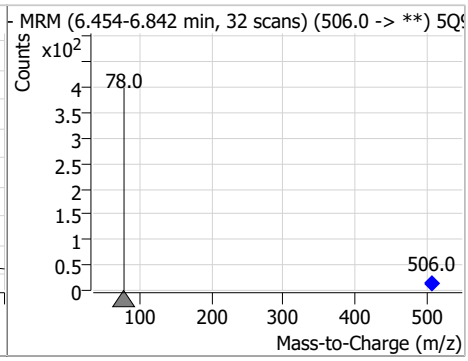




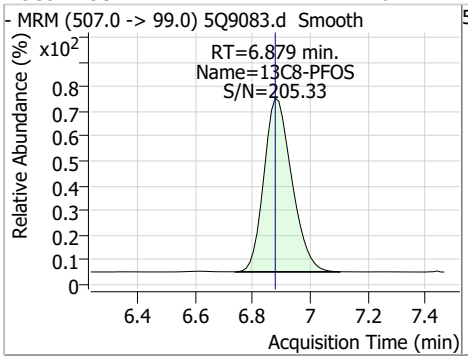
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	1.77	6.60	0.01	8524				

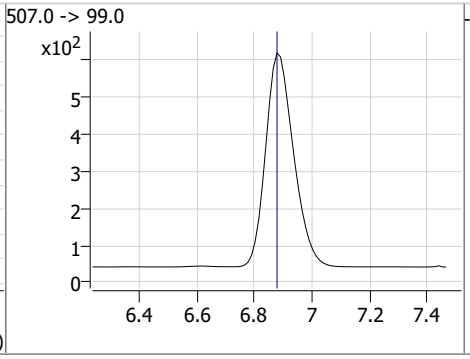


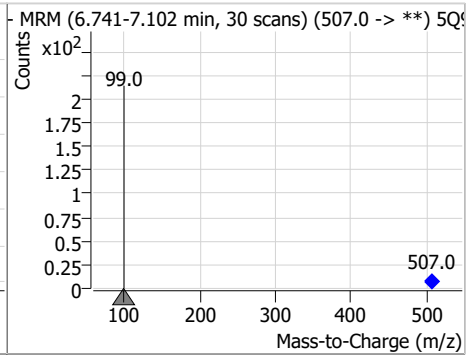




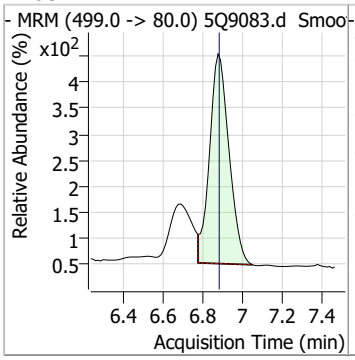
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	1.62	6.88	0.00	3868				

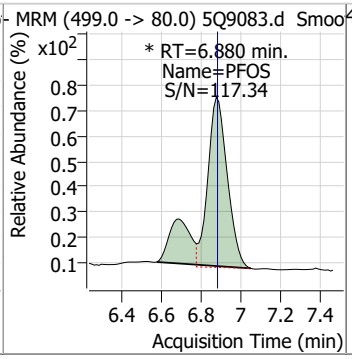


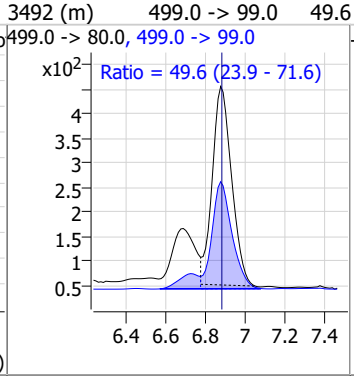


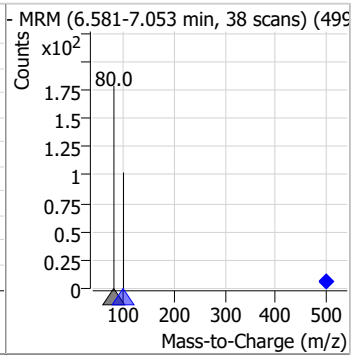


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.98	6.88	0.00	3492 (m)	499.0 -> 99.0	49.6	23.9	71.6



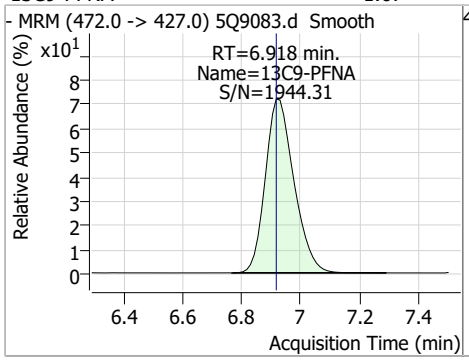


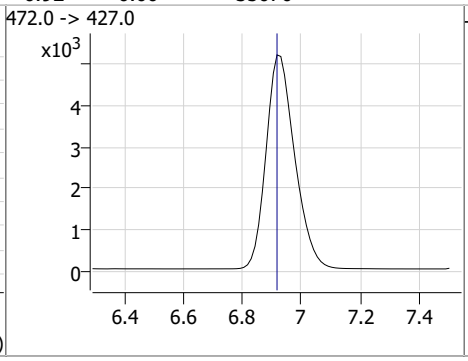


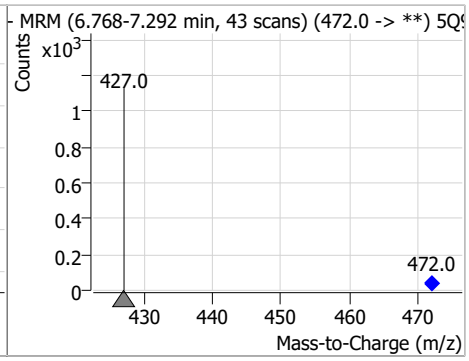


Perfluorinated Compounds by LC/MS/MS

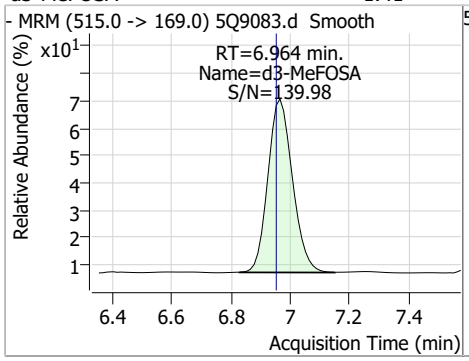
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	1.67	6.92	0.00	35070				

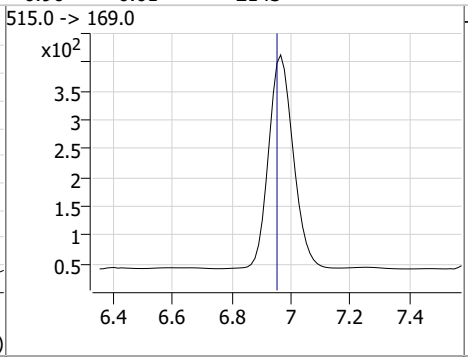


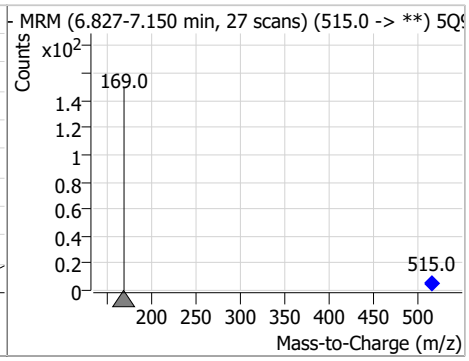




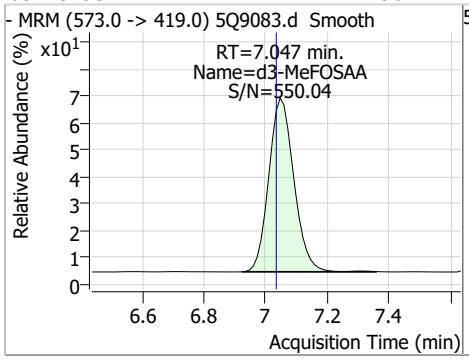
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	1.41	6.96	0.01	2143				

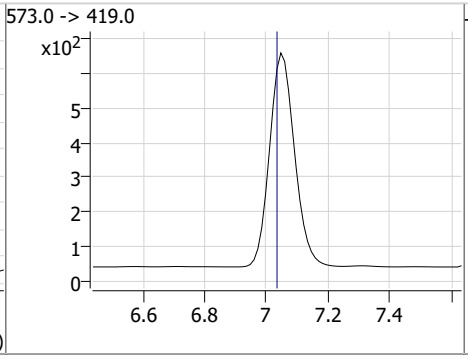


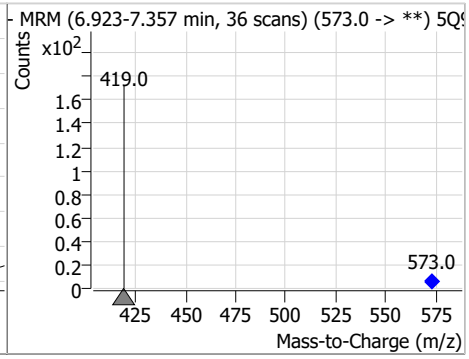




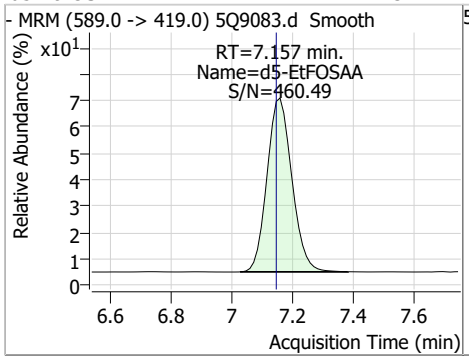
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	1.96	7.05	0.01	3479				

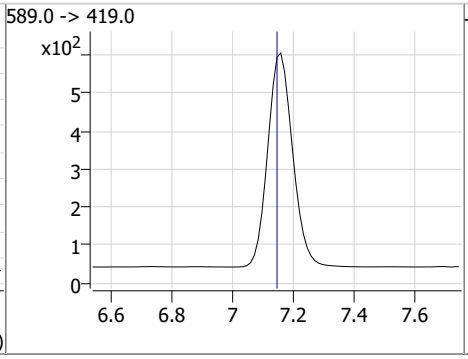


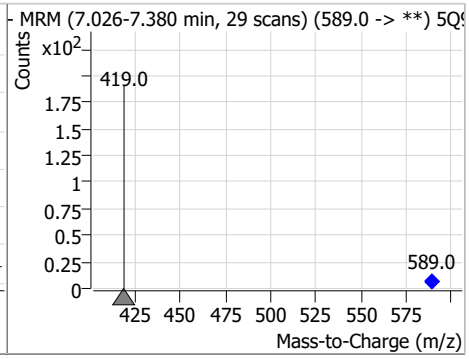




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	1.73	7.16	0.01	3198				

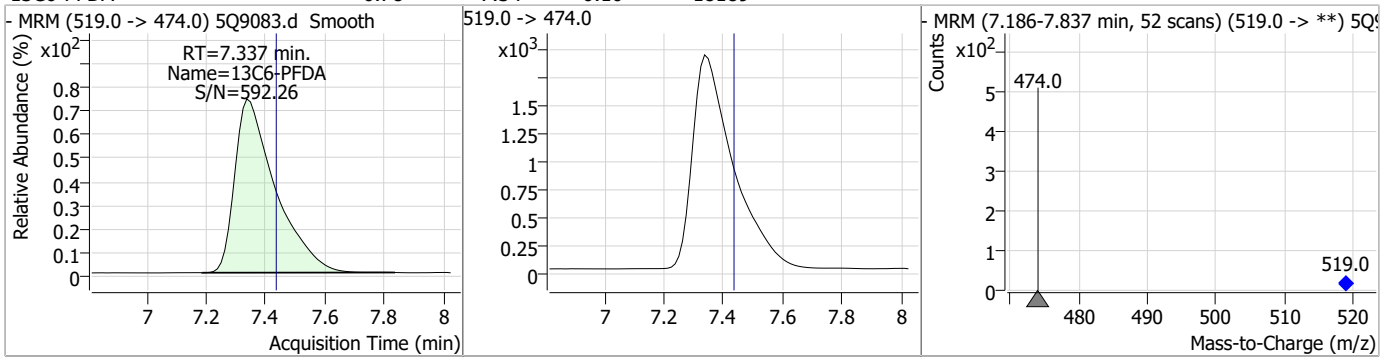




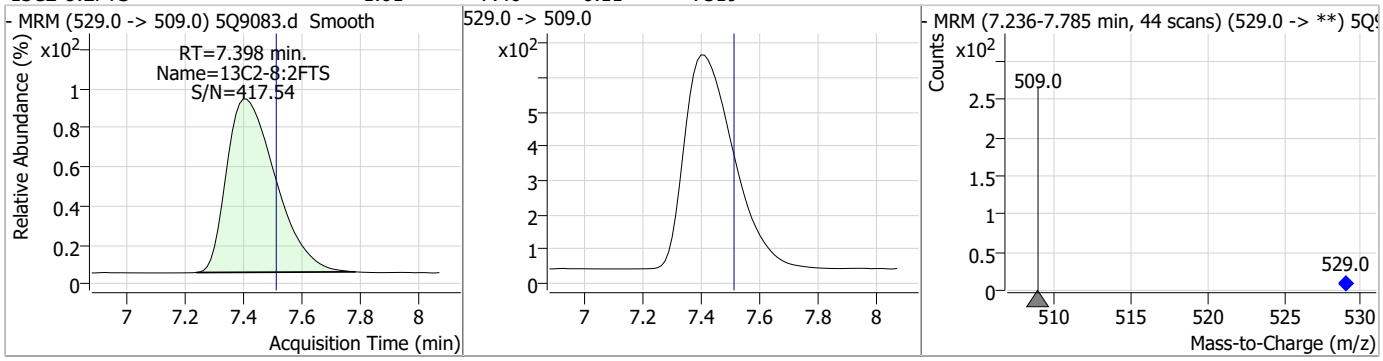


Perfluorinated Compounds by LC/MS/MS

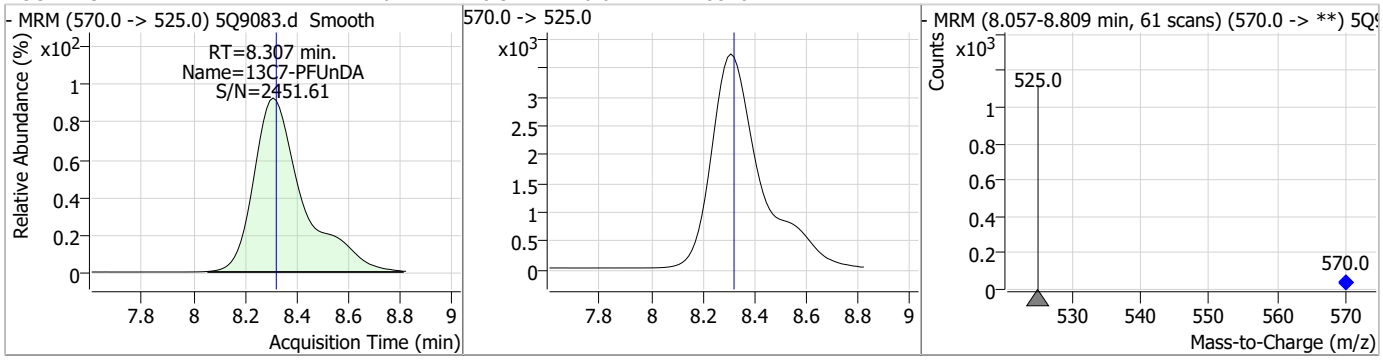
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	0.78	7.34	-0.10	18189				



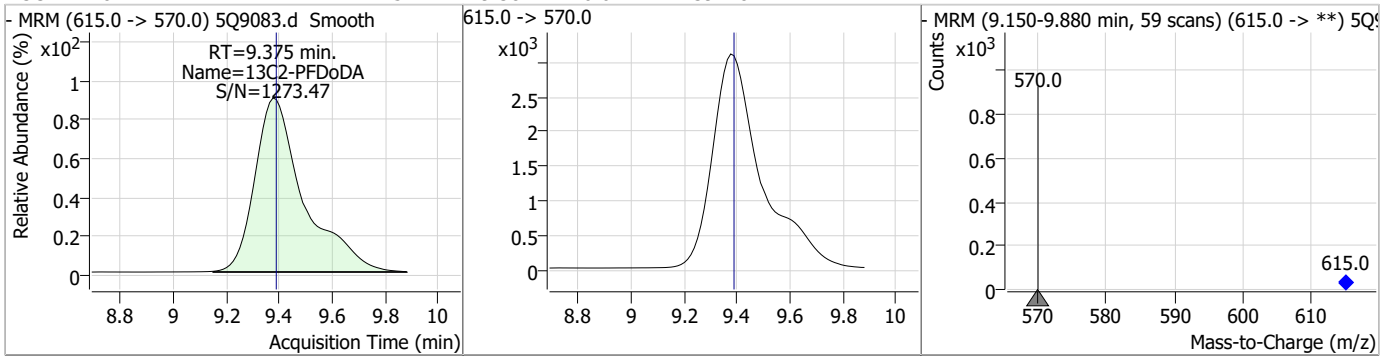
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	1.01	7.40	-0.11	7319				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	1.67	8.31	-0.01	48846				

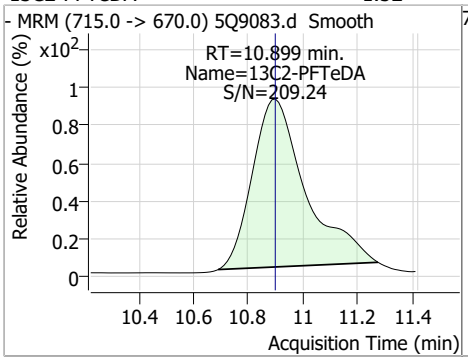


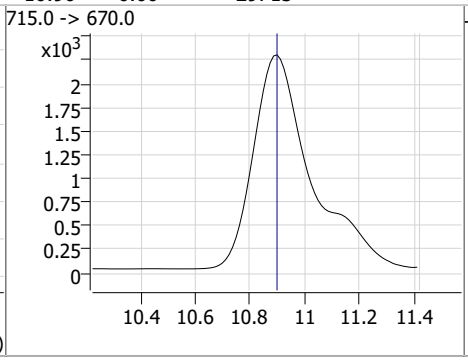
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	1.75	9.38	-0.01	39418				

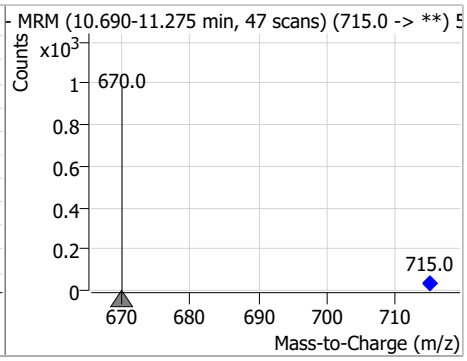


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	1.52	10.90	0.00	29713				







7.1.4

Manual Integration Approval Summary

Sample Number: FC1302-1A
Lab FileID: 5Q9083.D
Injection Time: 12/29/22 00:42

Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/30/22 11:54 Lindsay Ritner
Supervisor approved: 12/31/22 16:14 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanesulfonic acid	1763-23-1		6.88	Split peak

Perfluorinated Compounds by LC/MS/MS

Data File	:	5Q9098.d
Operator	:	lindsayr
Acq. Method	:	537_ID.m
Acq. Date-Time	:	12/29/2022 12:56:32 PM
Sample Name	:	fc1302-1a
Vial	:	P2-D4
DA Method File	:	ID_122822_S5Q134.quantmethod.xml
Batch Name	:	s5q135.batch.bin
Sample Information	:	OP94649,S5Q135,2.03,,,1.0,40,soil

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
Internal Standards					
M4-PFBA	2.400	217.0 -> 172.0	1616	0.50 µg/L	0.000
M5-PFPeA	3.932	268.0 -> 223.0	3308	0.50 µg/L	0.012
M5-PFHxA	4.965	318.0 -> 273.0	4706	0.50 µg/L	0.000
M4-PFHpA	5.738	367.0 -> 322.0	4828	0.50 µg/L	0.012
M8-PFOA	6.361	421.0 -> 376.0	5819	0.50 µg/L	0.000
M9-PFNA	6.931	472.0 -> 427.0	6425	0.50 µg/L	0.013
M6-PFDA	7.424	519.0 -> 474.0	6146	0.50 µg/L	-0.012
M7-PFUnDA	8.332	570.0 -> 525.0	7683	0.50 µg/L	0.012
M2-PFDoDA	9.400	615.0 -> 570.0	5768	0.50 µg/L	0.012
M2-PFTeDA	10.924	715.0 -> 670.0	4512	0.50 µg/L	0.025
M8-FOSA	6.605	506.0 -> 78.0	1413	0.50 µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	500	0.50 µg/L	0.000
M3-PFHxS	5.748	402.0 -> 99.0	614	0.50 µg/L	0.015
M8-PFOS	6.891	507.0 -> 99.0	860	0.50 µg/L	0.012
M2-4:2FTS	4.886	329.0 -> 309.0	1577	0.50 µg/L	0.000
M2-6:2FTS	6.360	429.0 -> 409.0	5757	0.50 µg/L	0.000
M2-8:2FTS	7.486	529.0 -> 509.0	2268	0.50 µg/L	-0.026
M3-MeFOSAA	7.047	573.0 -> 419.0	427	0.50 µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	1623	0.50 µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	506	0.50 µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	510	0.50 µg/L	0.012
System Monitoring Compounds					
13C2-4:2FTS	4.886	329.0 -> 309.0	1577	0.33 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.6%	
13C2-6:2FTS	6.360	429.0 -> 409.0	5757	0.75 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 3.8%	
13C2-8:2FTS	7.486	529.0 -> 509.0	2268	0.31 µg/L	-0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.6%	
13C2-PFDoDA	9.400	615.0 -> 570.0	5768	0.26 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.3%	
13C2-PFTeDA	10.924	715.0 -> 670.0	4512	0.23 µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.2%	
13C3-PFBS	4.124	302.0 -> 99.0	500	0.39 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.9%	
13C3-PFHxS	5.748	402.0 -> 99.0	614	0.34 µg/L	0.015
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.7%	
13C4-PFBA	2.400	217.0 -> 172.0	1616	0.31 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.6%	
13C4-PFHpA	5.738	367.0 -> 322.0	4828	0.31 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.6%	
13C5-PFHxA	4.965	318.0 -> 273.0	4706	0.31 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.6%	
13C5-PFPeA	3.932	268.0 -> 223.0	3308	0.32 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.6%	
13C6-PFDA	7.424	519.0 -> 474.0	6146	0.26 µg/L	-0.012

Perfluorinated Compounds by LC/MS/MS

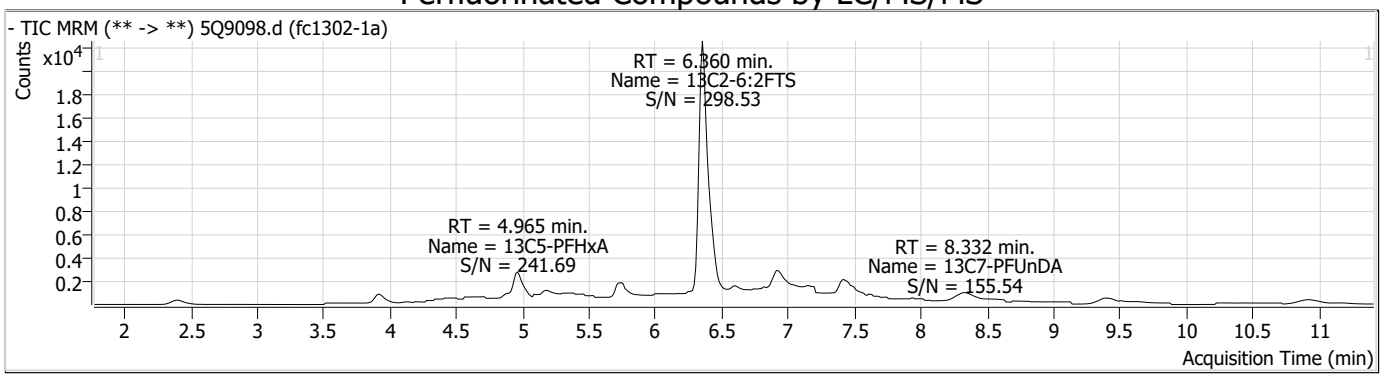
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.3%	
13C7-PFUnDA	8.332	570.0 -> 525.0	7683	0.26 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.3%	
13C8-FOSA	6.605	506.0 -> 78.0	1413	0.29 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.5%	
13C8-PFOA	6.361	421.0 -> 376.0	5819	0.29 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.4%	
13C8-PFOS	6.891	507.0 -> 99.0	860	0.36 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.8%	
13C9-PFNA	6.931	472.0 -> 427.0	6425	0.31 µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.5%	
d3-MeFOSAA	7.047	573.0 -> 419.0	427	0.24 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.2%	
13C3-HFPO-DA	5.194	287.0 -> 169.0	1623	0.49 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 2.5%	
d3-MeFOSA	6.964	515.0 -> 169.0	506	0.33 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.7%	
d5-EtFOSAA	7.157	589.0 -> 419.0	510	0.28 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.4%	
Target Compounds					QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.	
		327.0 -> 81.0			
6:2FTS	6.373	427.0 -> 407.0	65524	5.54 µg/L	100
		427.0 -> 81.0	28203		
8:2FTS	-	527.0 -> 507.0	-	N.D.	
		527.0 -> 81.0			
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
		584.0 -> 483.0			
FOSA	-	498.0 -> 78.0	-	N.D.	
		498.0 -> 478.0			
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
		570.0 -> 512.0			
PFBA	2.406	213.0 -> 169.0	955	0.27 µg/L	100
PFBS	-	299.0 -> 80.0	-	N.D.	
		299.0 -> 99.0			
PFDA	-	513.0 -> 469.0	-	N.D.	
		513.0 -> 219.0			
PFDoDA	-	613.0 -> 569.0	-	N.D.	
		613.0 -> 319.0			
PFDS	-	599.0 -> 80.0	-	N.D.	
		599.0 -> 99.0			
PFHpA	-	363.0 -> 319.0	-	N.D.	
		363.0 -> 169.0			
PFHpS	-	449.0 -> 80.0	-	N.D.	
		449.0 -> 99.0			
PFHxA	4.966	313.0 -> 269.0	6074	0.64 µg/L	98
		313.0 -> 119.0	310		
PFHxS	-	399.0 -> 80.0	-	N.D.	
		399.0 -> 99.0			
PFNA	-	463.0 -> 419.0	-	N.D.	
		463.0 -> 219.0			
PFNS	-	549.0 -> 80.0	-	N.D.	
		549.0 -> 99.0			
PFOA	-	413.0 -> 369.0	-	N.D.	
		413.0 -> 169.0			
PFOS	-	499.0 -> 80.0	-	N.D.	

Perfluorinated Compounds by LC/MS/MS

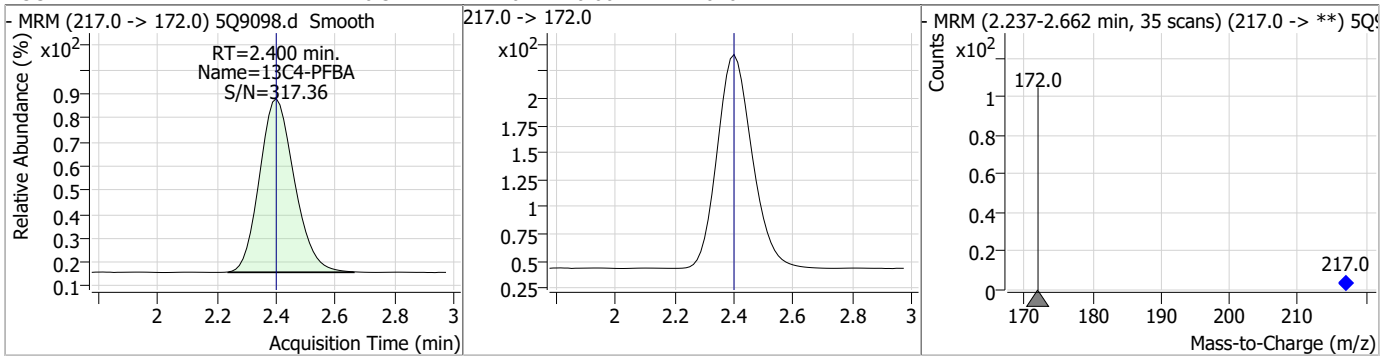
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0				
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFPeS	-	349.0 -> 80.0	-	N.D.		
		349.0 -> 99.0				
PFTeDA	-	713.0 -> 669.0	-	N.D.		
		713.0 -> 219.0				
PFTrDA	-	663.0 -> 619.0	-	N.D.		
		663.0 -> 369.0				
PFUnDA	-	563.0 -> 519.0	-	N.D.		
		563.0 -> 269.0				
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
		633.0 -> 453.0				
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
		533.0 -> 353.0				
ADONA	-	377.0 -> 251.0	-	N.D.		
		377.0 -> 85.0				
HFPO-DA	-	329.0 -> 169.0	-	N.D.		
		285.0 -> 169.0				
MeFOSA	-	512.0 -> 169.0	-	N.D.		
		512.0 -> 219.0				
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	-	298.0 -> 78.0	-	N.D.		
		298.0 -> 64.0				
FHxSA	-	398.0 -> 78.0	-	N.D.		
		398.0 -> 64.0				

 # = Qualifier out of range, m = manually integrated, + = Area summed

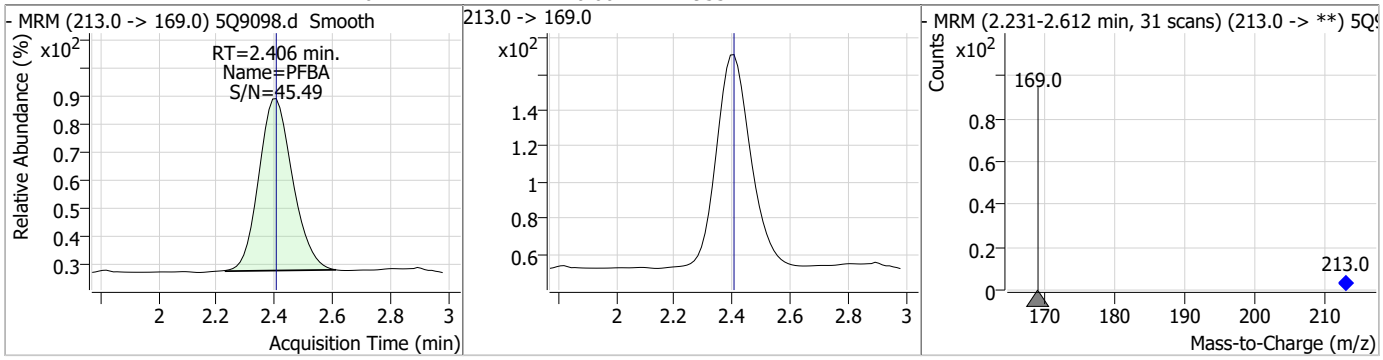
Perfluorinated Compounds by LC/MS/MS



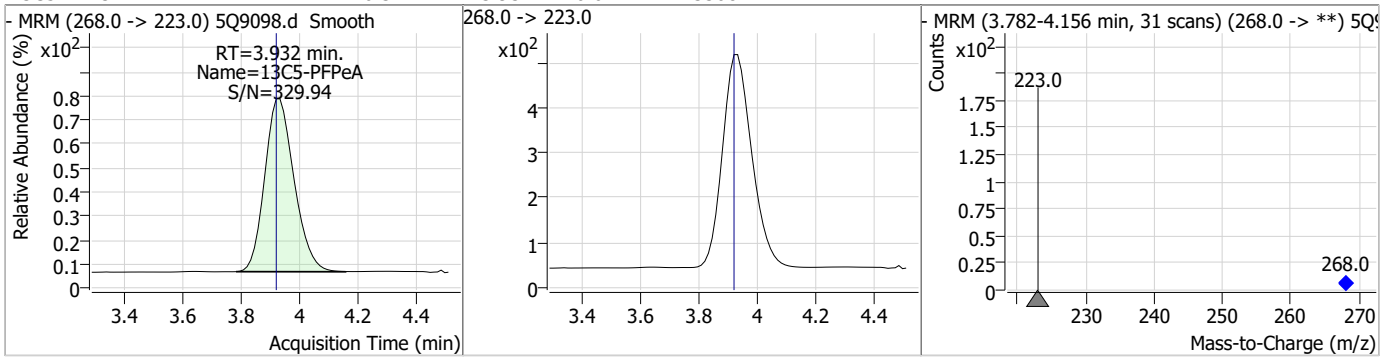
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	0.31	2.40	0.00	1616				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.27	2.41	0.00	955				

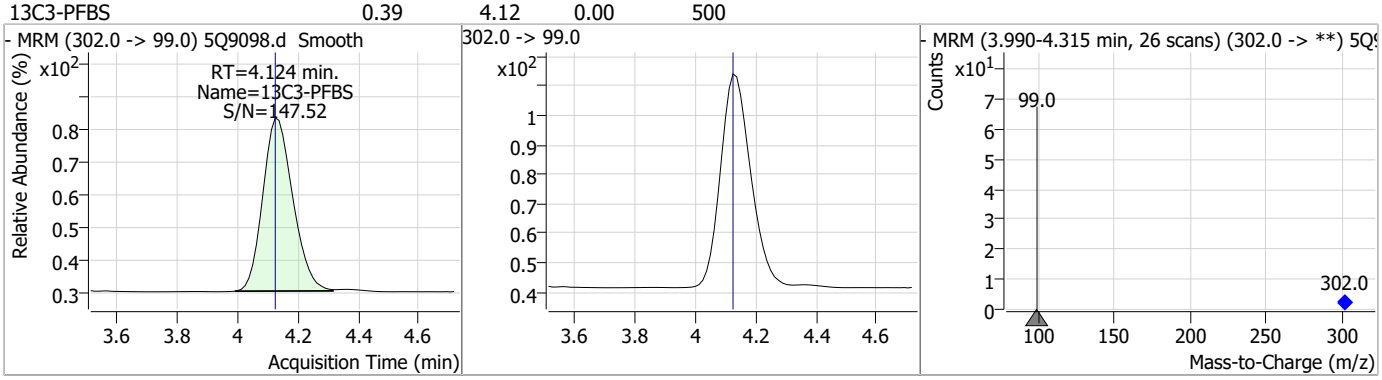


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	0.32	3.93	0.01	3308				

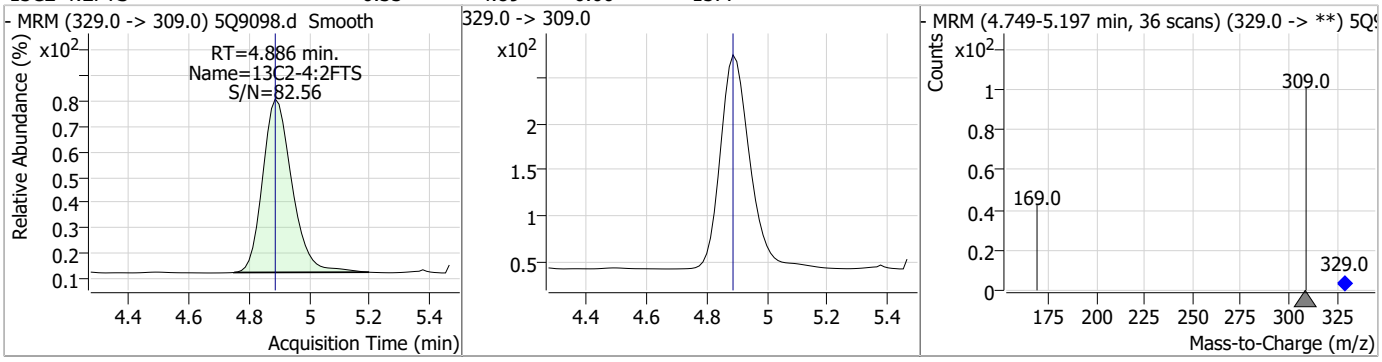


Perfluorinated Compounds by LC/MS/MS

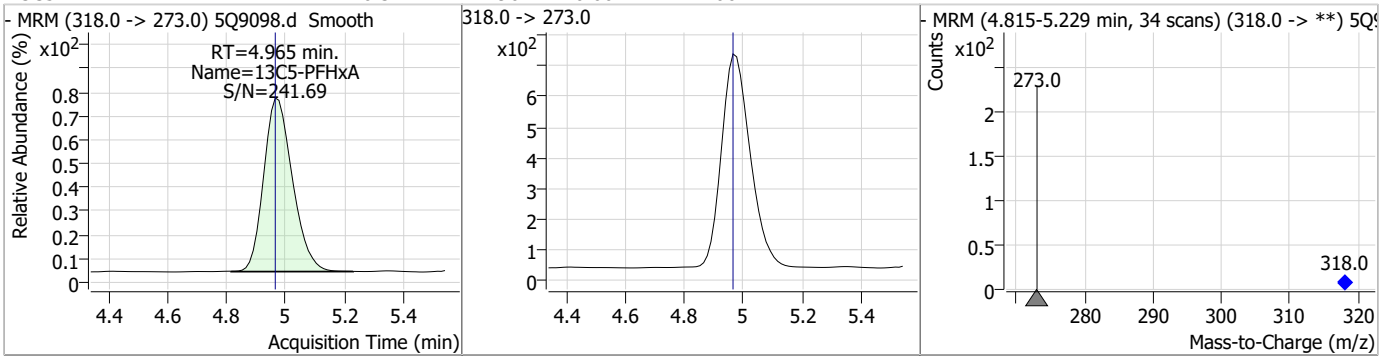
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	0.39	4.12	0.00	500				



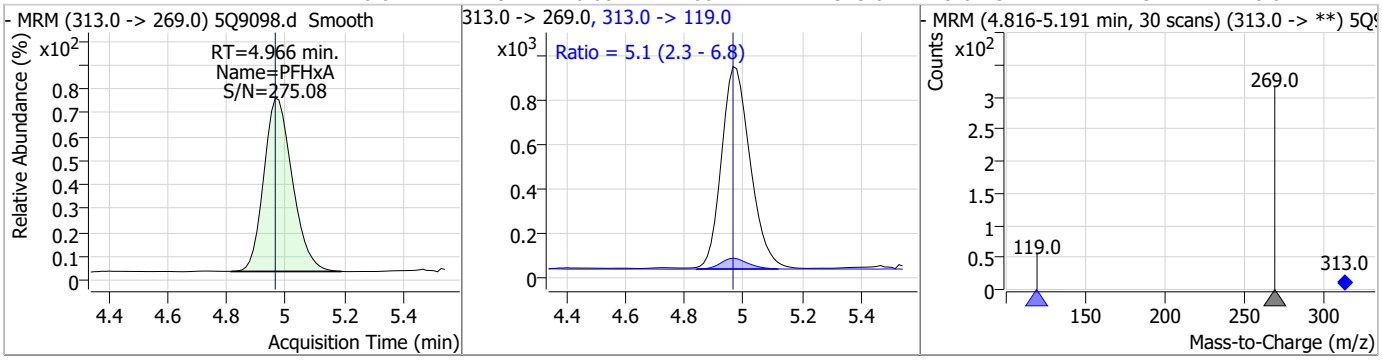
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	0.33	4.89	0.00	1577				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	0.31	4.96	0.00	4706				

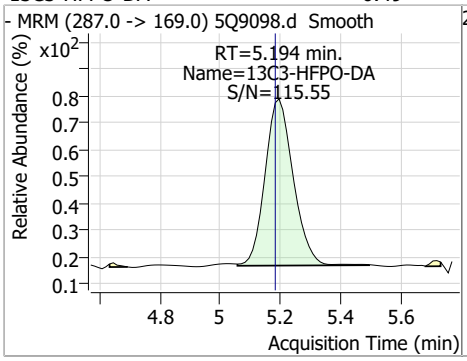


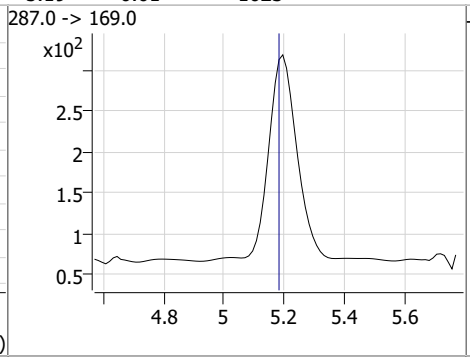
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.64	4.97	0.00	6074	313.0 -> 119.0	5.1	2.3	6.8

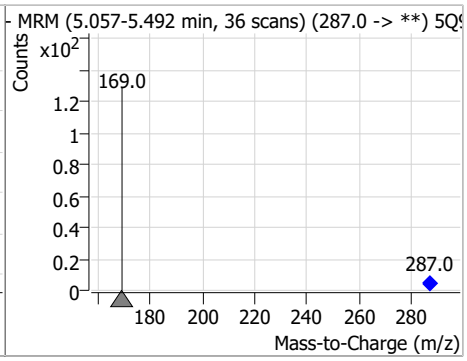


Perfluorinated Compounds by LC/MS/MS

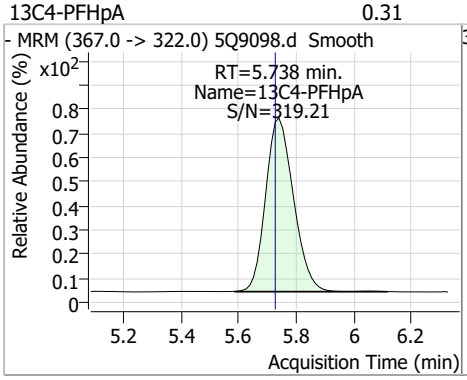
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	0.49	5.19	0.01	1623				

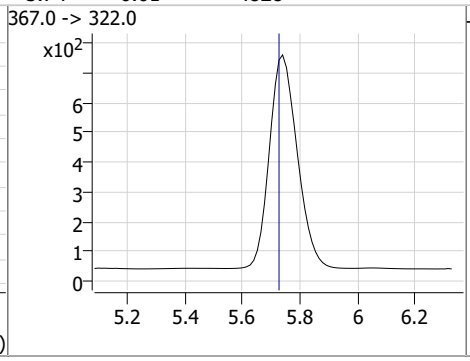


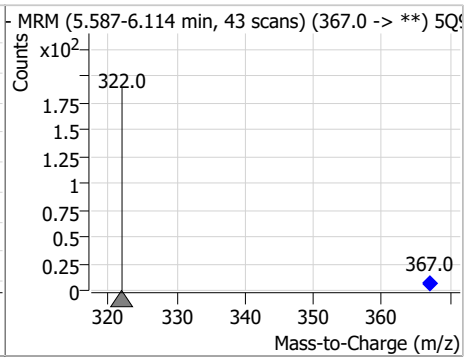




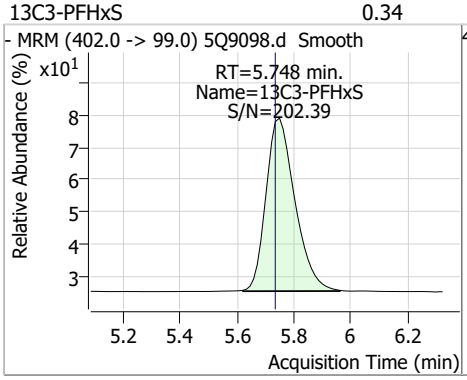
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	0.31	5.74	0.01	4828				

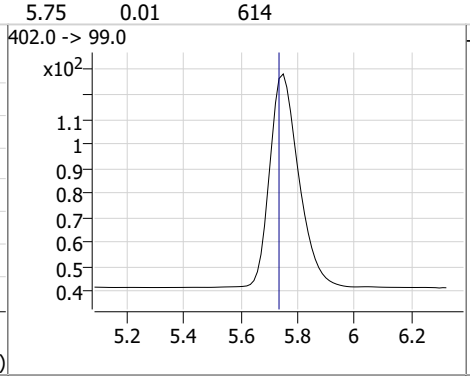


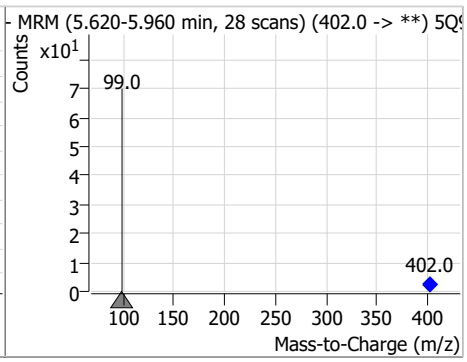




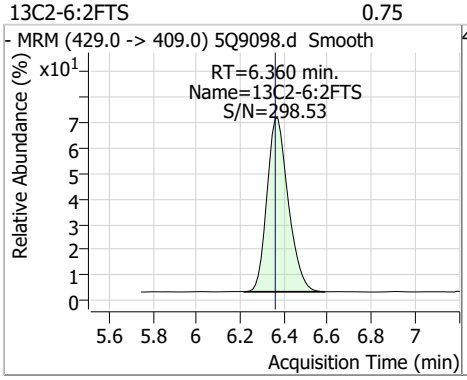
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	0.34	5.75	0.01	614				

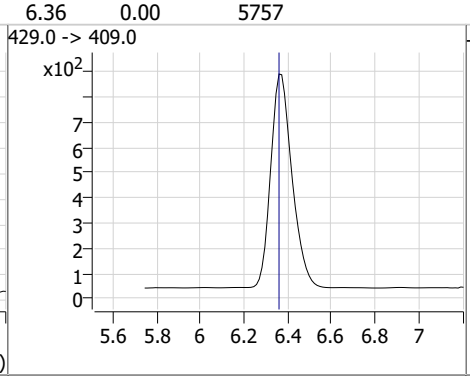


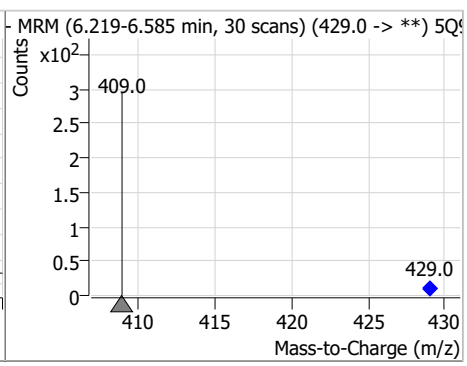




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	0.75	6.36	0.00	5757				

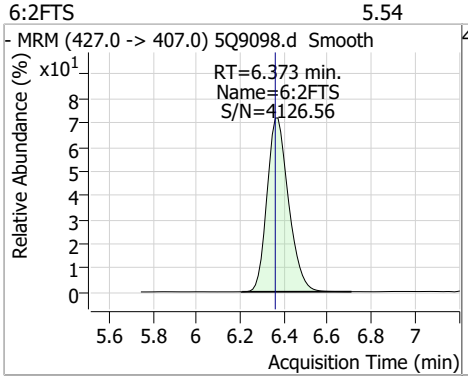


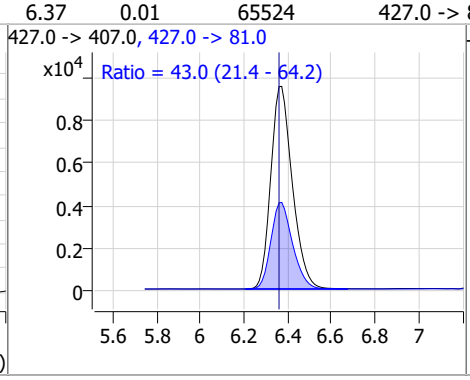


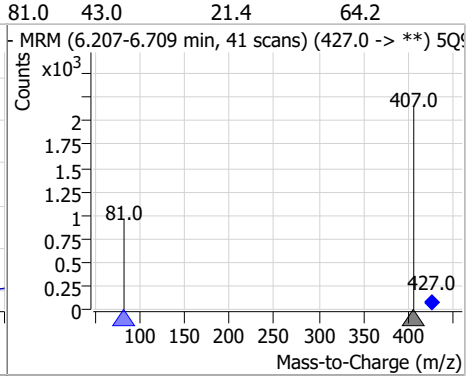


Perfluorinated Compounds by LC/MS/MS

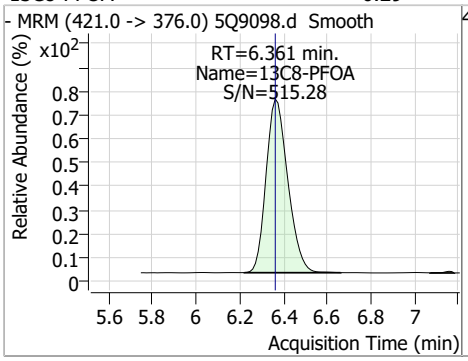
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	5.54	6.37	0.01	65524	427.0 -> 81.0	43.0	21.4	64.2

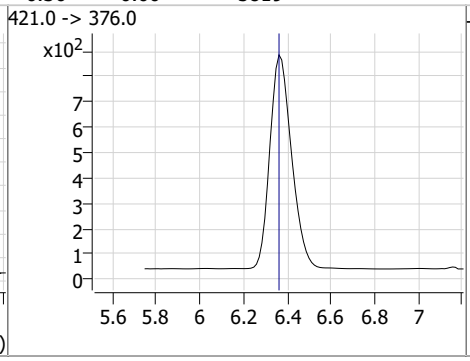


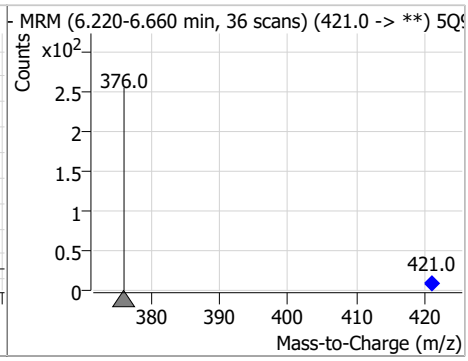




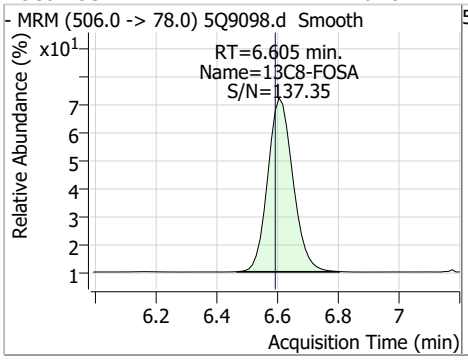
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	0.29	6.36	0.00	5819				

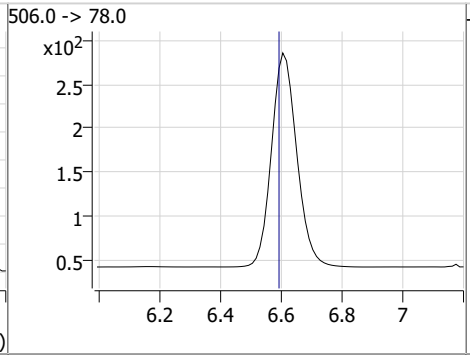


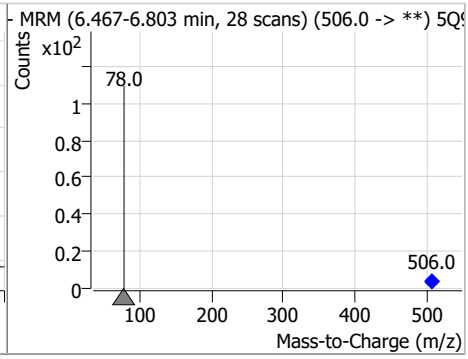




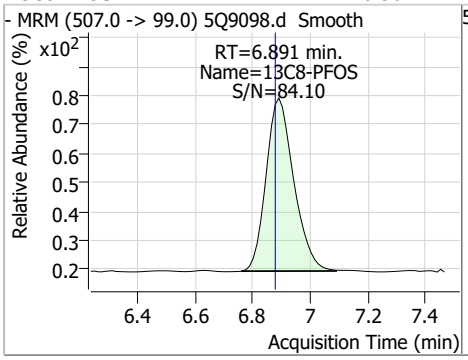
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	0.29	6.60	0.01	1413				

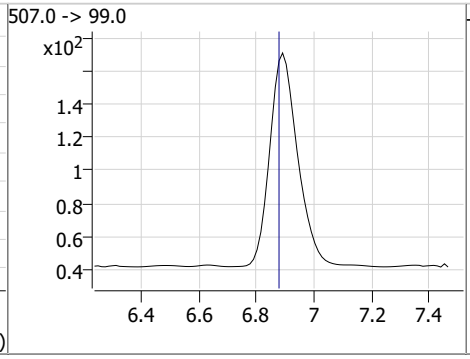


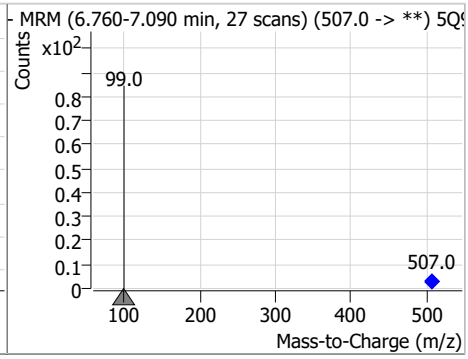




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	0.36	6.89	0.01	860				

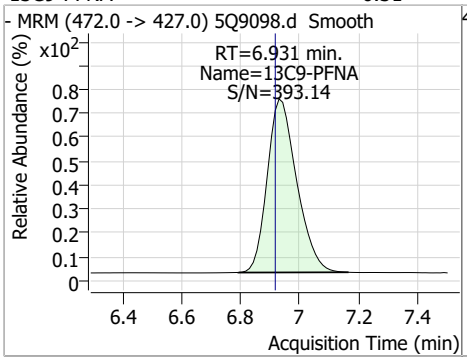


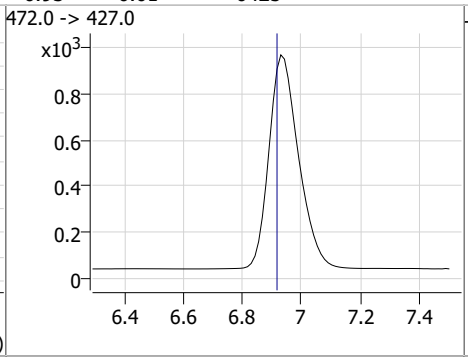


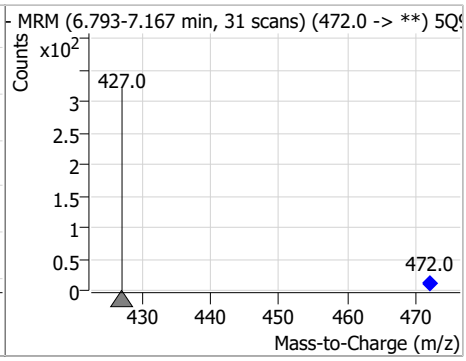


Perfluorinated Compounds by LC/MS/MS

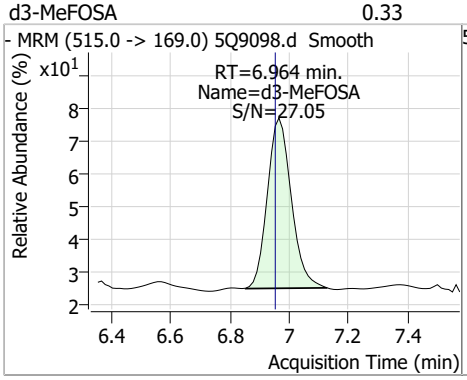
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	0.31	6.93	0.01	6425				

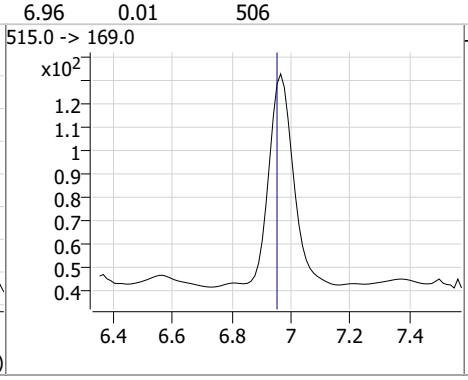


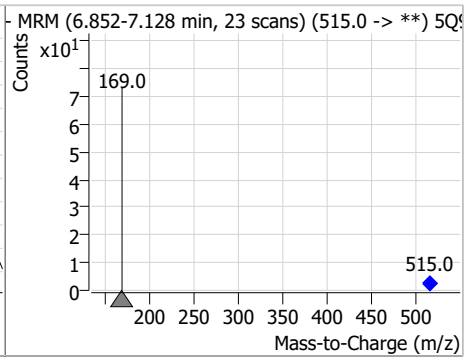




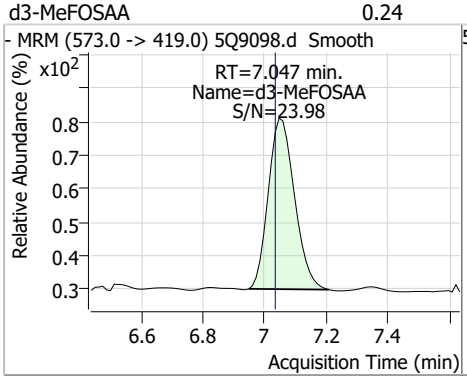
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	0.33	6.96	0.01	506				

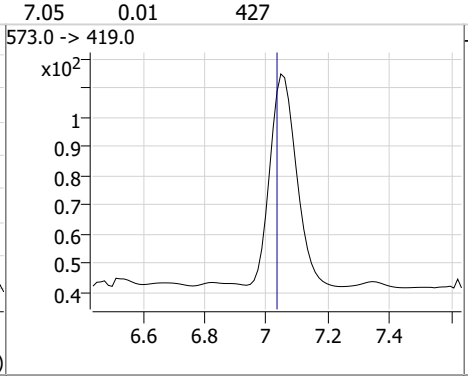


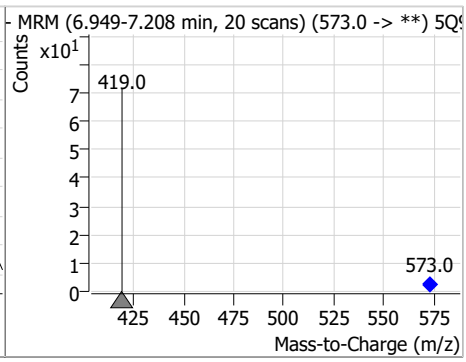




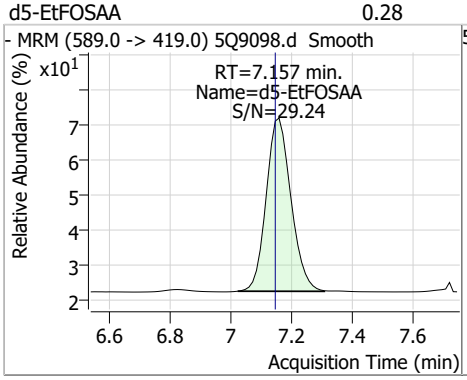
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	0.24	7.05	0.01	427				

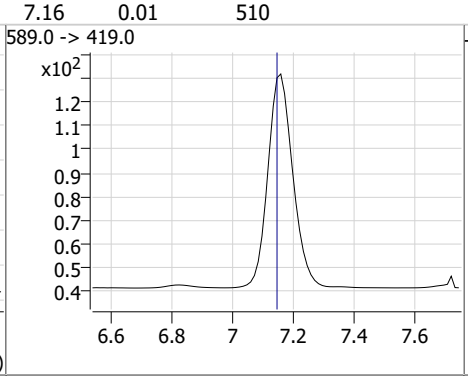


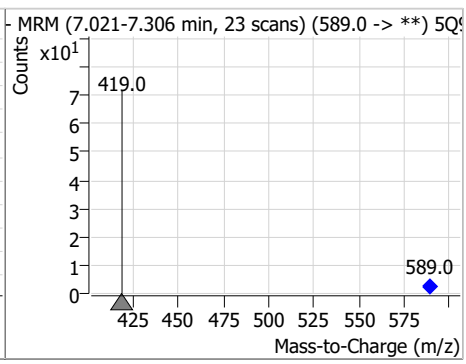




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	0.28	7.16	0.01	510				

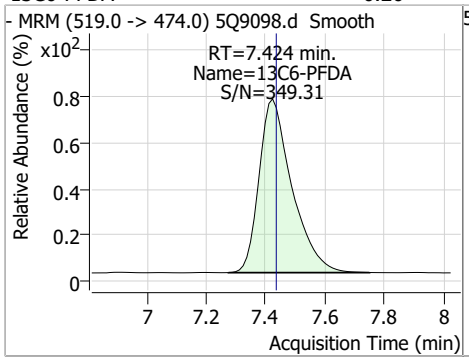


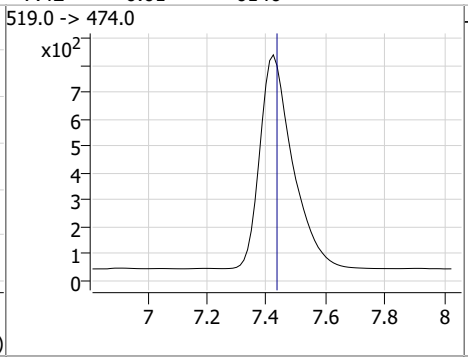


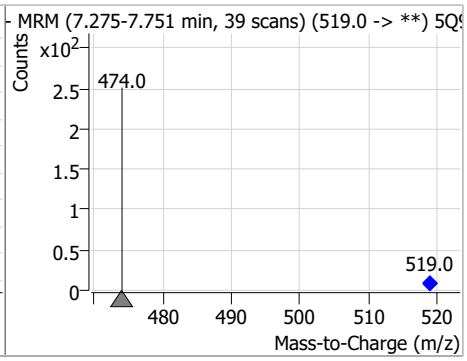


Perfluorinated Compounds by LC/MS/MS

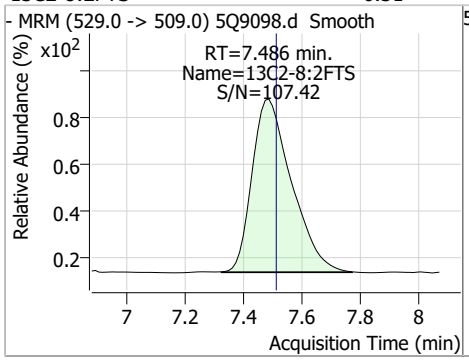
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	0.26	7.42	-0.01	6146				

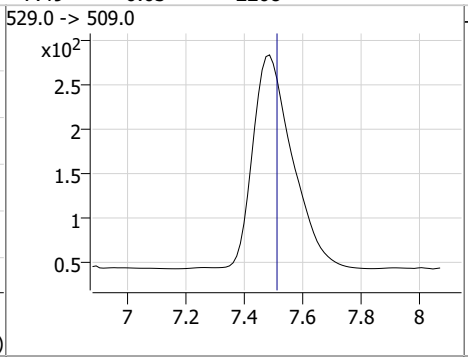


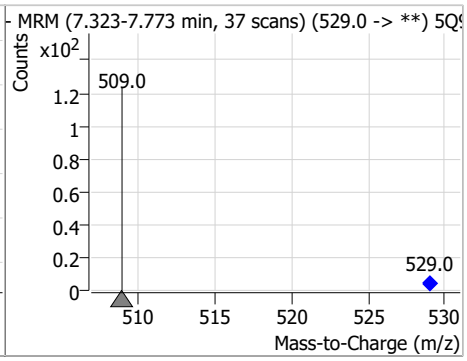




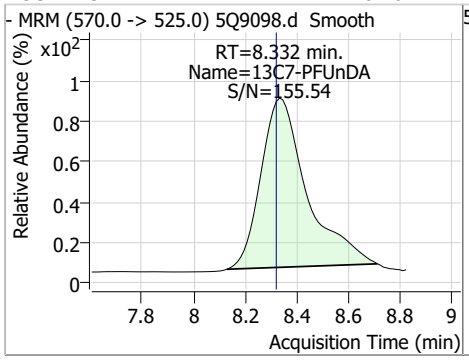
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	0.31	7.49	-0.03	2268				

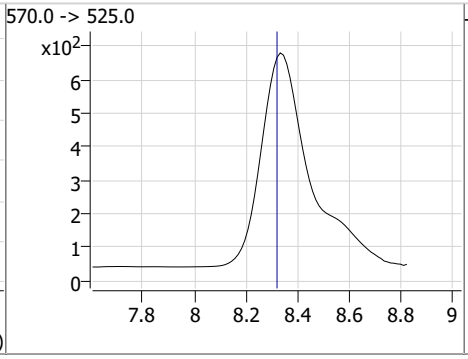


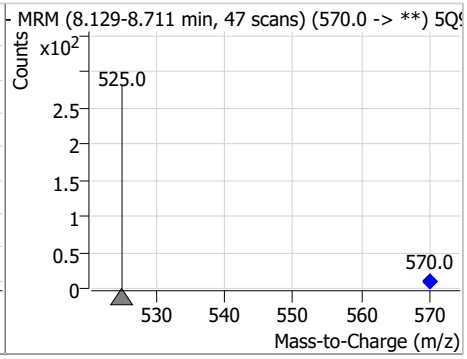




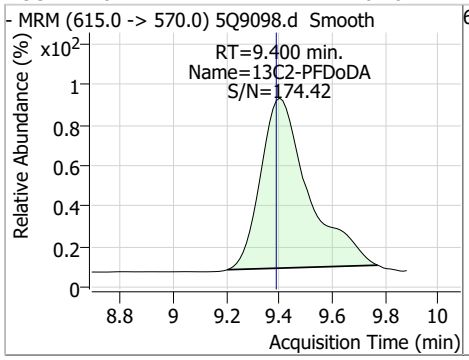
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	0.26	8.33	0.01	7683				

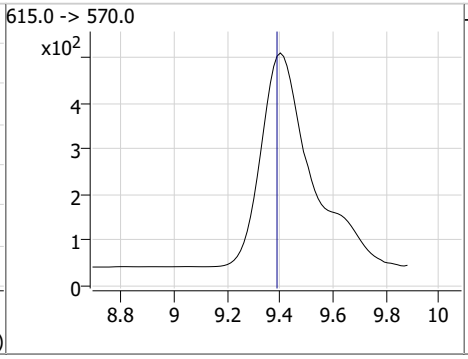


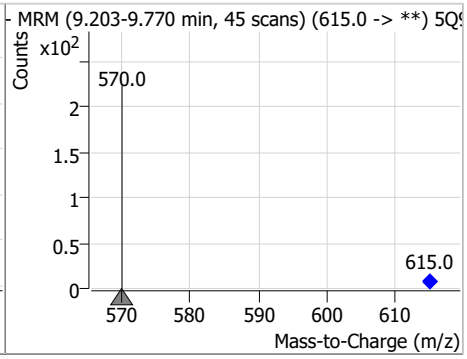




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	0.26	9.40	0.01	5768				

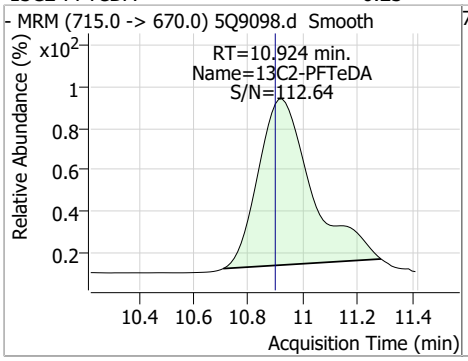


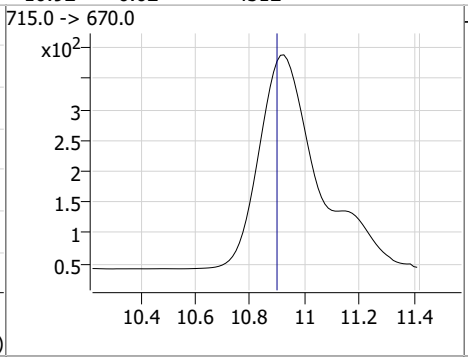


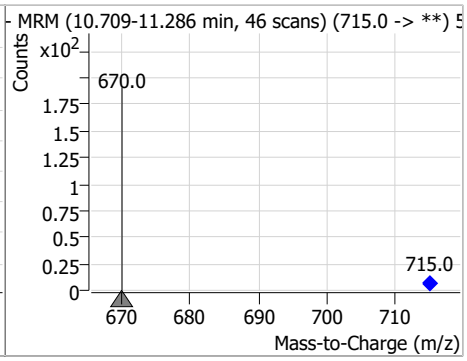


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	0.23	10.92	0.02	4512				







Manual Integrations APPROVED (compounds with "m" flag)
Natasha Gumtie 01/04/23 15:08

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9084.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/29/2022 12:59:18 AM
Sample Name : fc1302-1b
Vial : P2-C8
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94649,S5Q134,2.01,,,1.0,10,soil

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	8754	2.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	16609	2.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	24268	2.00	µg/L	0.000
M4-PFHpA	5.726	367.0 -> 322.0	25046	2.00	µg/L	0.000
M8-PFOA	6.335	421.0 -> 376.0	27425	2.00	µg/L	-0.026
M9-PFNA	6.918	472.0 -> 427.0	34778	2.00	µg/L	0.000
M6-PFDA	7.325	519.0 -> 474.0	16906	2.00	µg/L	-0.112
M7-PFUnDA	8.307	570.0 -> 525.0	50697	2.00	µg/L	-0.012
M2-PFDoDA	9.375	615.0 -> 570.0	38669	2.00	µg/L	-0.013
M2-PFTeDA	10.899	715.0 -> 670.0	34744	2.00	µg/L	0.000
M8-FOSA	6.605	506.0 -> 78.0	8762	2.00	µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	2127	2.00	µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	2872	2.00	µg/L	0.000
M8-PFOS	6.879	507.0 -> 99.0	3863	2.00	µg/L	0.000
M2-4:2FTS	4.886	329.0 -> 309.0	7036	2.00	µg/L	0.000
M2-6:2FTS	6.334	429.0 -> 409.0	34113	2.00	µg/L	-0.026
M2-8:2FTS	7.398	529.0 -> 509.0	7955	2.00	µg/L	-0.114
M3-MeFOSAA	7.047	573.0 -> 419.0	3782	2.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	5027	2.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	2556	2.00	µg/L	0.012
M5-EtFOSAA	7.145	589.0 -> 419.0	3372	2.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	7036	1.46	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.3%		
13C2-6:2FTS	6.334	429.0 -> 409.0	34113	4.45	µg/L	-0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 22.2%		
13C2-8:2FTS	7.398	529.0 -> 509.0	7955	1.10	µg/L	-0.114
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 5.5%		
13C2-PFDoDA	9.375	615.0 -> 570.0	38669	1.72	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.6%		
13C2-PFTeDA	10.899	715.0 -> 670.0	34744	1.77	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.9%		
13C3-PFBS	4.124	302.0 -> 99.0	2127	1.64	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.2%		
13C3-PFHxS	5.733	402.0 -> 99.0	2872	1.60	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.0%		
13C4-PFBA	2.400	217.0 -> 172.0	8754	1.68	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.4%		
13C4-PFHpA	5.726	367.0 -> 322.0	25046	1.63	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.1%		
13C5-PFHxA	4.965	318.0 -> 273.0	24268	1.61	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.1%		
13C5-PFPeA	3.919	268.0 -> 223.0	16609	1.58	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.9%		
13C6-PFDA	7.325	519.0 -> 474.0	16906	0.73	µg/L	-0.112

Perfluorinated Compounds by LC/MS/MS

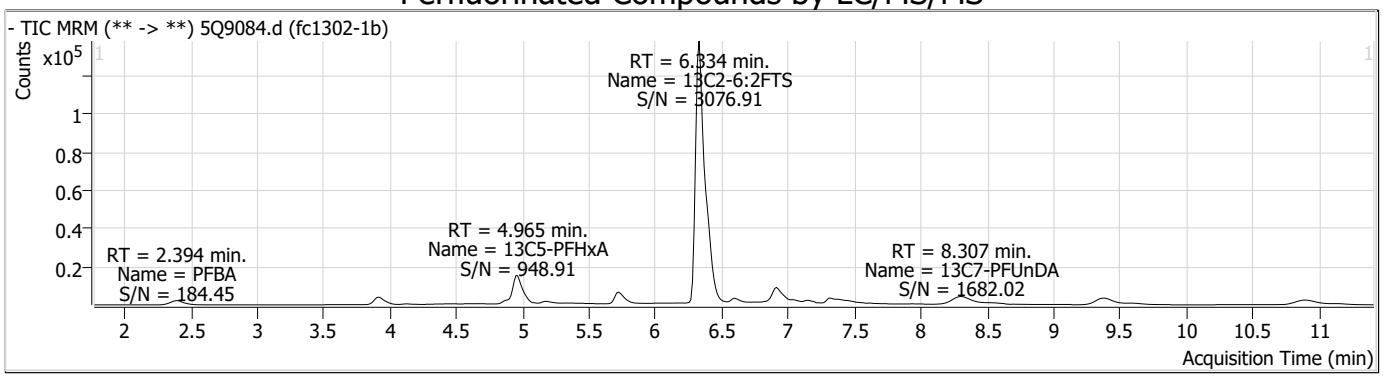
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 3.6%		
13C7-PFUnDA	8.307	570.0 -> 525.0	50697	1.73 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.7%		
13C8-FOSA	6.605	506.0 -> 78.0	8762	1.81 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 9.1%		
13C8-PFOA	6.335	421.0 -> 376.0	27425	1.36 µg/L		-0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 6.8%		
13C8-PFOS	6.879	507.0 -> 99.0	3863	1.62 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.1%		
13C9-PFNA	6.918	472.0 -> 427.0	34778	1.65 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.3%		
d3-MeFOSAA	7.047	573.0 -> 419.0	3782	2.13 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 10.6%		
13C3-HFPO-DA	5.194	287.0 -> 169.0	5027	1.52 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 7.6%		
d3-MeFOSA	6.964	515.0 -> 169.0	2556	1.69 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 8.4%		
d5-EtFOSAA	7.145	589.0 -> 419.0	3372	1.83 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 9.1%		
Target Compounds						QValue
4:2FTS	4.888	327.0 -> 307.0	1836	0.48 µg/L		97
		327.0 -> 81.0	1130			
6:2FTS	6.334	427.0 -> 407.0	438184	25.03 µg/L		100
		427.0 -> 81.0	188397			
8:2FTS	-	527.0 -> 507.0	-	N.D.		
		527.0 -> 81.0				
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
		584.0 -> 483.0				
FOSA	-	498.0 -> 78.0	-	N.D.		
		498.0 -> 478.0				
MeFOSAA	-	570.0 -> 419.0	-	N.D.		
		570.0 -> 512.0				
PFBA	2.394	213.0 -> 169.0	7126	1.49 µg/L		100
PFBS	-	299.0 -> 80.0	-	N.D.		
		299.0 -> 99.0				
PFDA	-	513.0 -> 469.0	-	N.D.		
		513.0 -> 219.0				
PFDoDA	-	613.0 -> 569.0	-	N.D.		
		613.0 -> 319.0				
PFDS	-	599.0 -> 80.0	-	N.D.		
		599.0 -> 99.0				
PFHpA	5.727	363.0 -> 319.0	2055	0.13 µg/L		96
		363.0 -> 169.0	422			
PFHpS	-	449.0 -> 80.0	-	N.D.		
		449.0 -> 99.0				
PFHxA	4.966	313.0 -> 269.0	48079	3.90 µg/L		100
		313.0 -> 119.0	2263			
PFHxS	-	399.0 -> 80.0	-	N.D.		
		399.0 -> 99.0				
PFNA	-	463.0 -> 419.0	-	N.D.		
		463.0 -> 219.0				
PFNS	-	549.0 -> 80.0	-	N.D.		
		549.0 -> 99.0				
PFOA	6.336	413.0 -> 369.0	12050	0.77 µg/L		99
		413.0 -> 169.0	3146			
PFOS	6.880	499.0 -> 80.0	1100	0.31 µg/L	m	98

Perfluorinated Compounds by LC/MS/MS

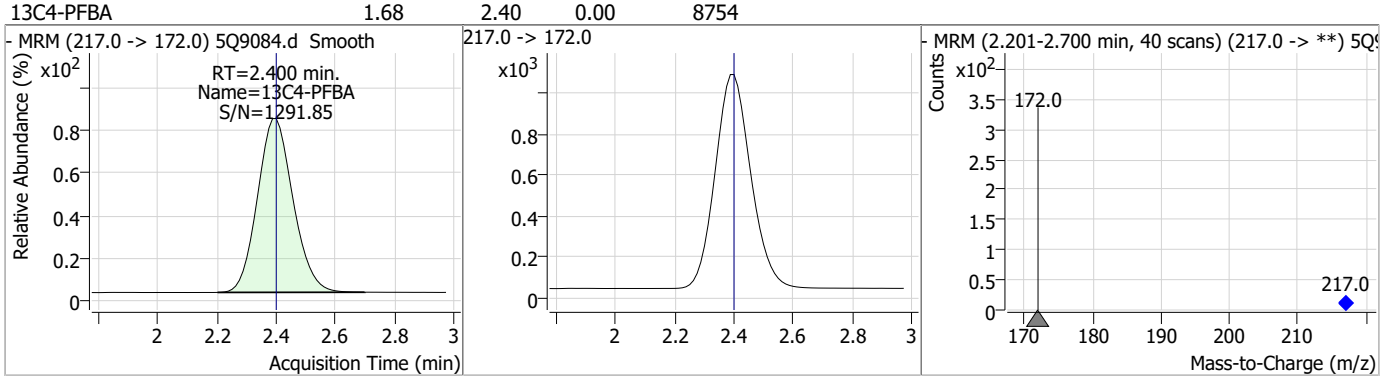
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	510			
PFPeA	3.922	263.0 -> 219.0	5921	0.61	µg/L	100
PFPeS	-	349.0 -> 80.0	-	N.D.		
		349.0 -> 99.0				
PFTeDA	-	713.0 -> 669.0	-	N.D.		
		713.0 -> 219.0				
PFTrDA	-	663.0 -> 619.0	-	N.D.		
		663.0 -> 369.0				
PFUnDA	-	563.0 -> 519.0	-	N.D.		
		563.0 -> 269.0				
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
		633.0 -> 453.0				
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
		533.0 -> 353.0				
ADONA	-	377.0 -> 251.0	-	N.D.		
		377.0 -> 85.0				
HFPO-DA	-	329.0 -> 169.0	-	N.D.		
		285.0 -> 169.0				
MeFOSA	-	512.0 -> 169.0	-	N.D.		
		512.0 -> 219.0				
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	-	298.0 -> 78.0	-	N.D.		
		298.0 -> 64.0				
FHxSA	-	398.0 -> 78.0	-	N.D.		
		398.0 -> 64.0				

 # = Qualifier out of range, m = manually integrated, + = Area summed

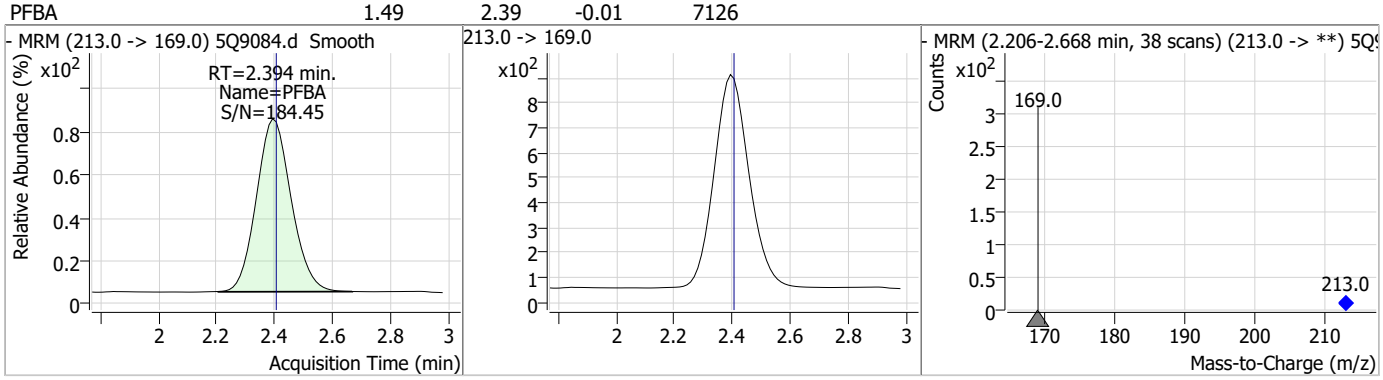
Perfluorinated Compounds by LC/MS/MS



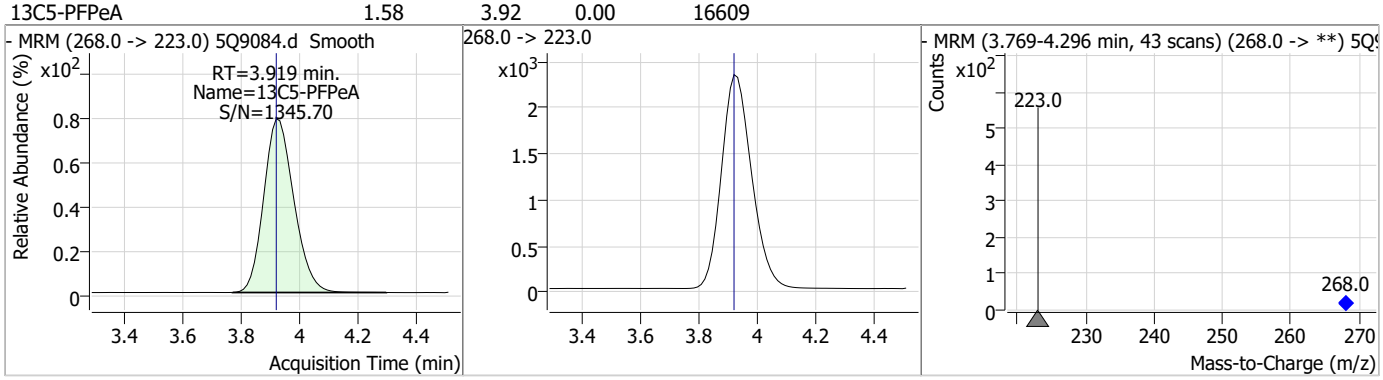
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	1.68	2.40	0.00	8754				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	1.49	2.39	-0.01	7126				

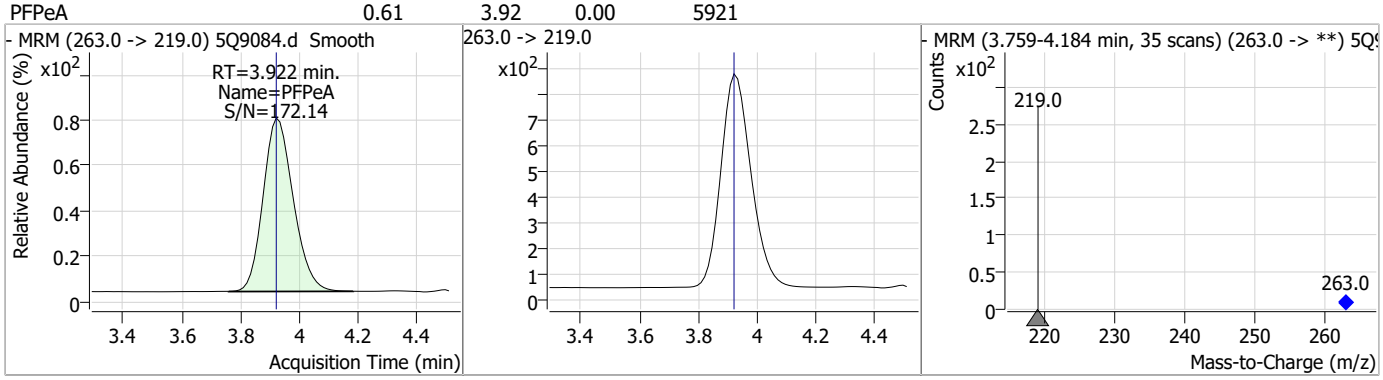


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	1.58	3.92	0.00	16609				

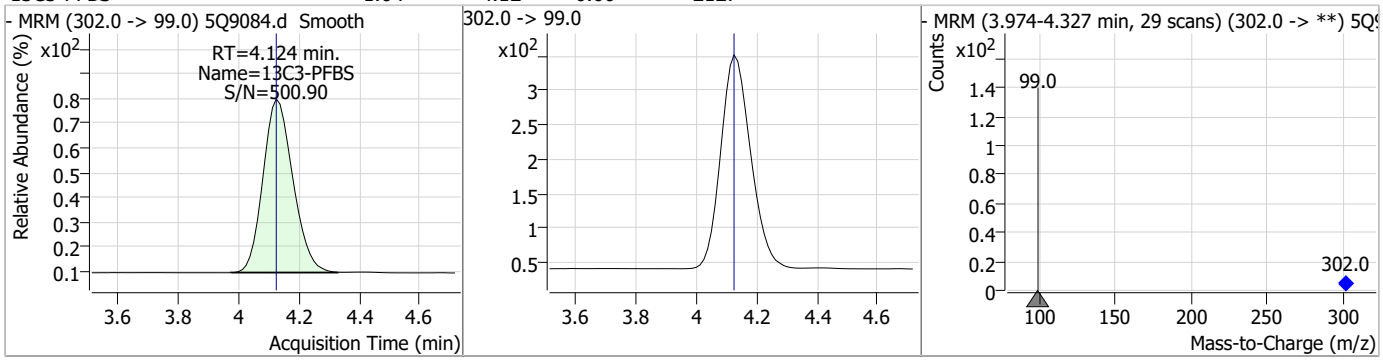


Perfluorinated Compounds by LC/MS/MS

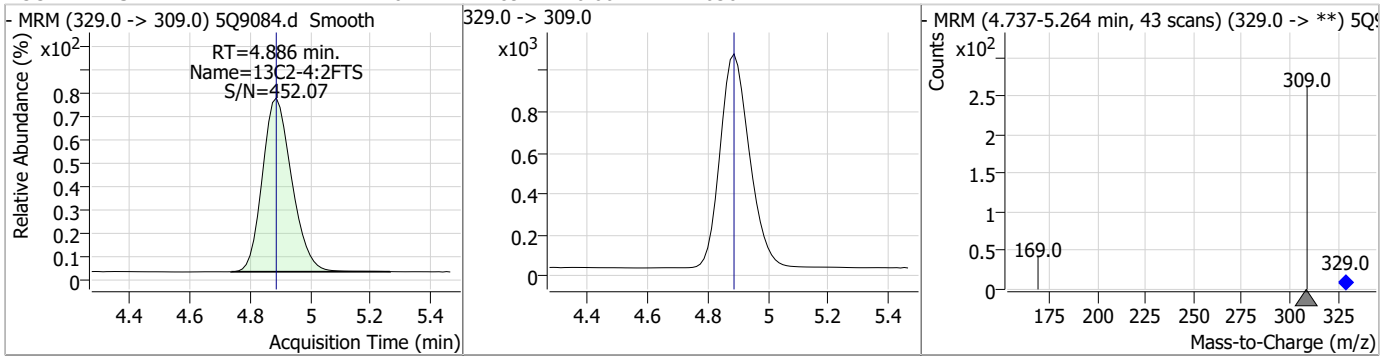
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.61	3.92	0.00	5921				



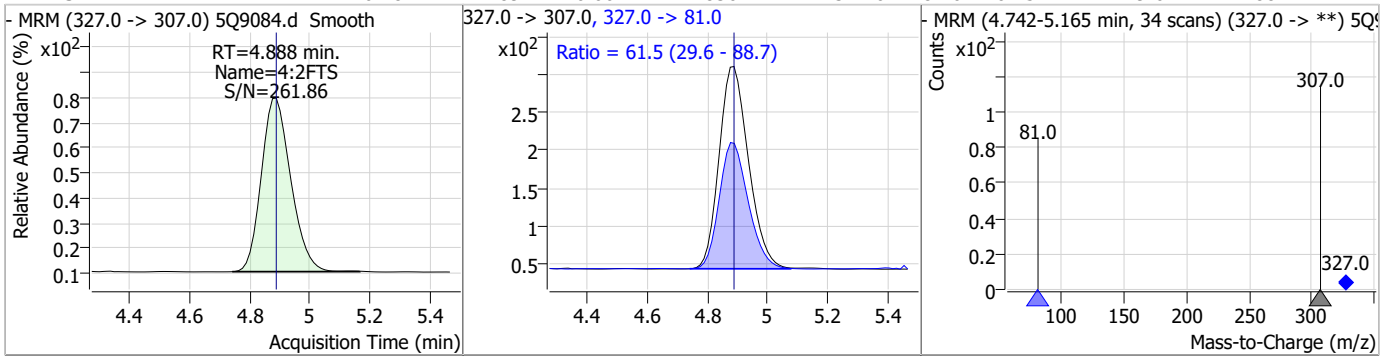
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	1.64	4.12	0.00	2127				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	1.46	4.89	0.00	7036				

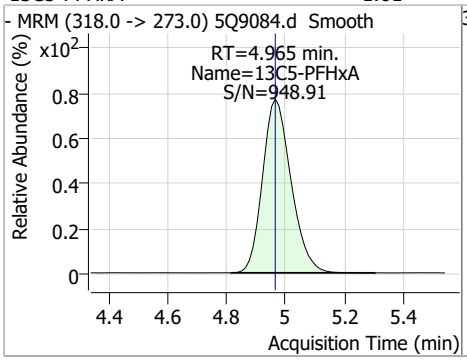


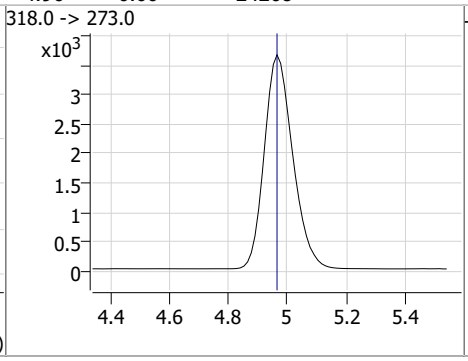
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	0.48	4.89	0.00	1836	327.0 -> 81.0	61.5	29.6	88.7

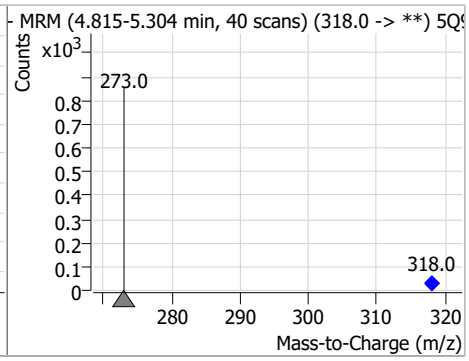


Perfluorinated Compounds by LC/MS/MS

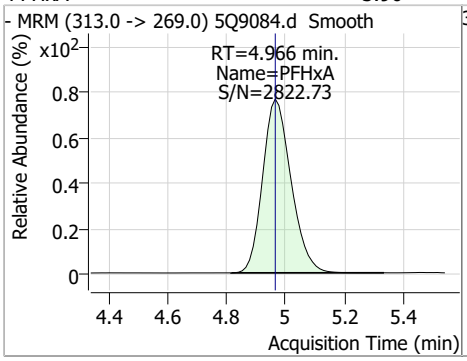
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	1.61	4.96	0.00	24268				

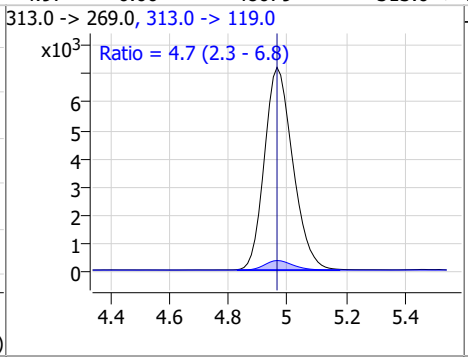


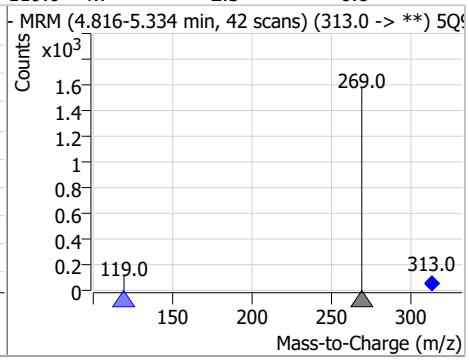




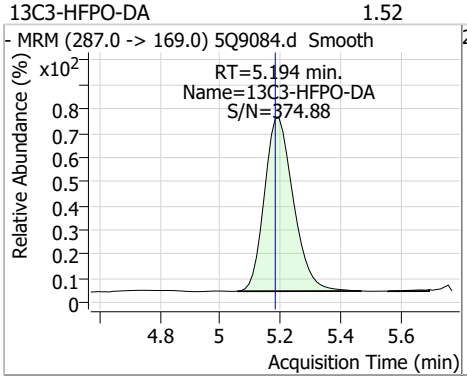
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	3.90	4.97	0.00	48079	313.0 -> 119.0	4.7	2.3	6.8

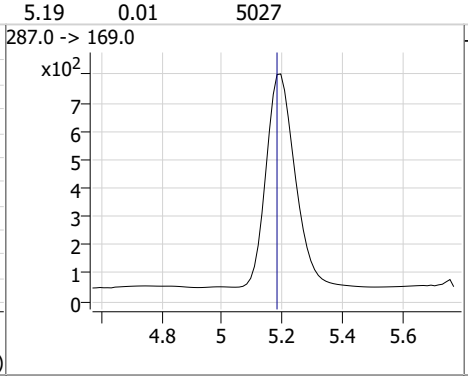


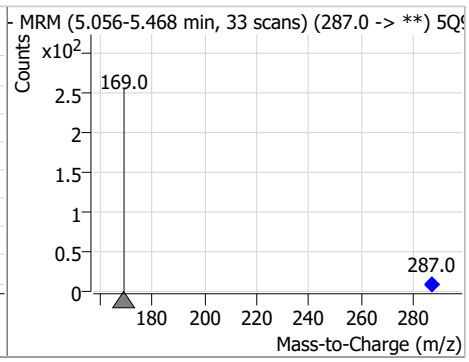




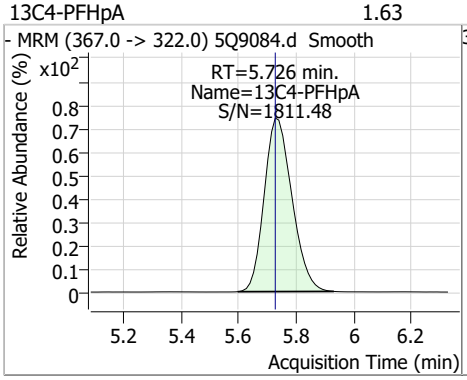
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	1.52	5.19	0.01	5027				

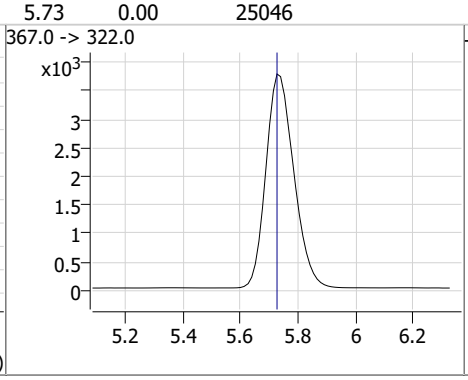


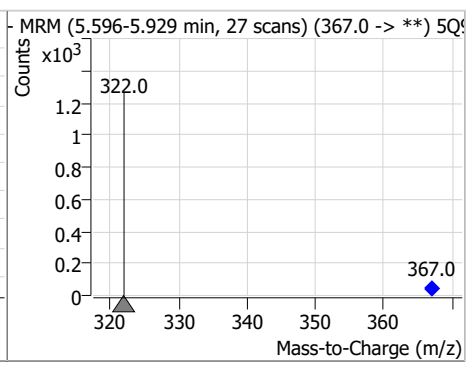




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	1.63	5.73	0.00	25046				

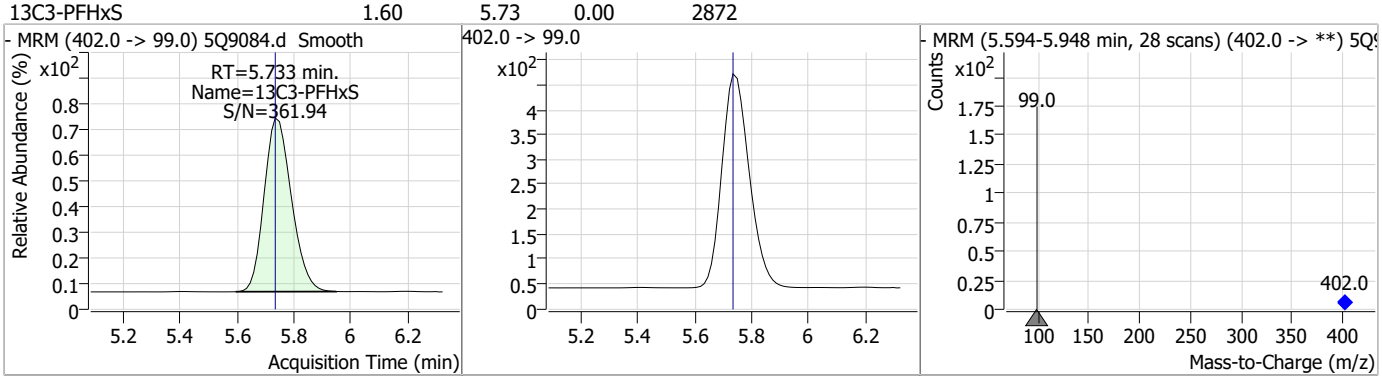




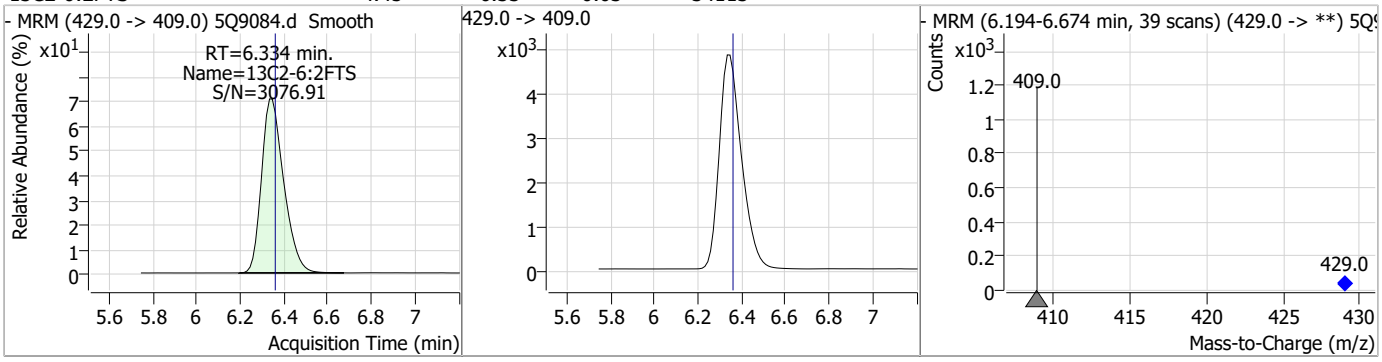


Perfluorinated Compounds by LC/MS/MS

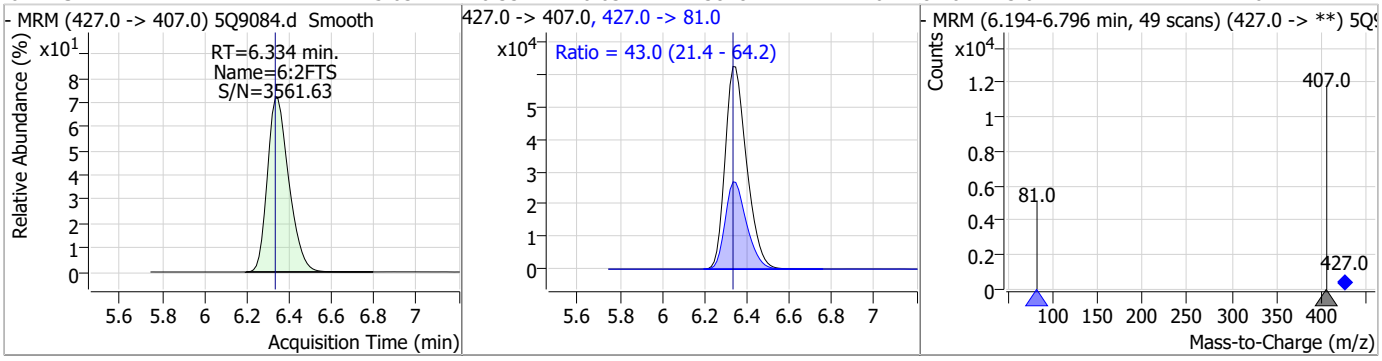
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	1.60	5.73	0.00	2872				



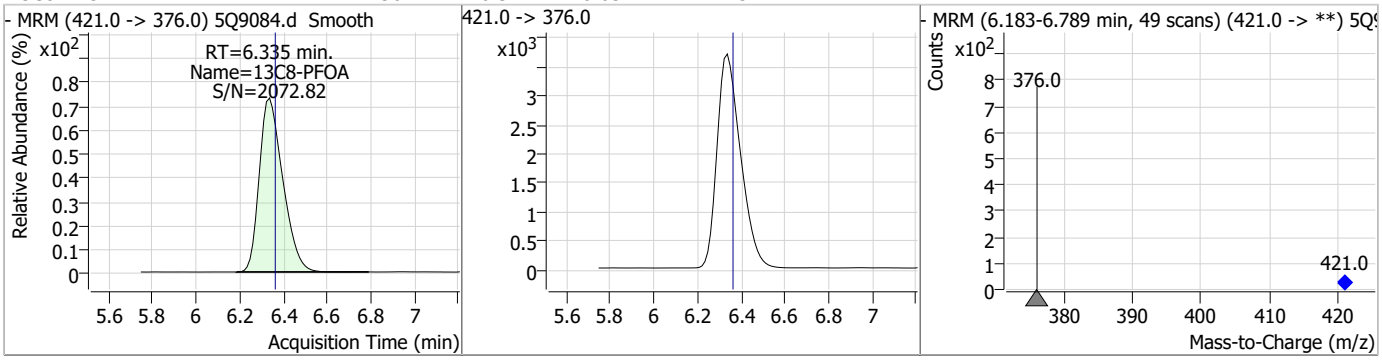
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	4.45	6.33	-0.03	34113				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	25.03	6.33	-0.03	438184	427.0 -> 81.0	43.0	21.4	64.2

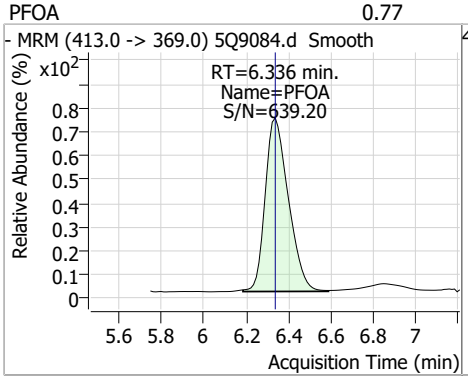


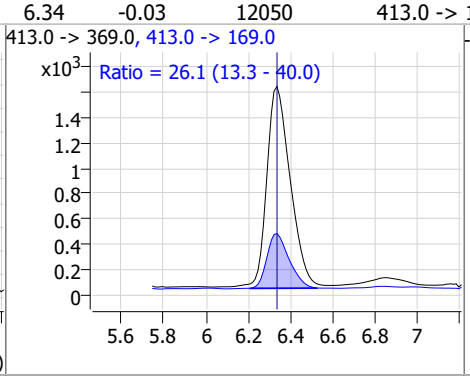
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	1.36	6.34	-0.03	27425				

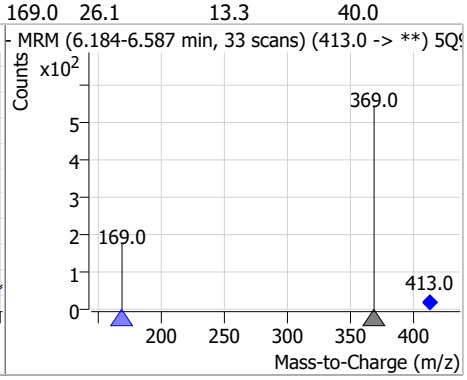


Perfluorinated Compounds by LC/MS/MS

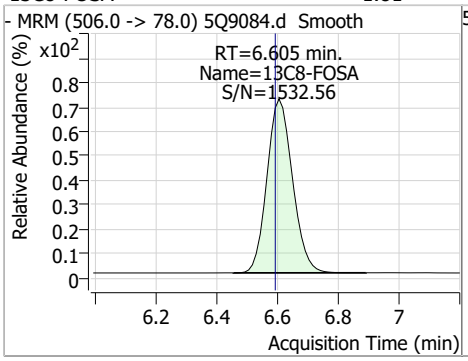
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.77	6.34	-0.03	12050	413.0 -> 169.0	26.1	13.3	40.0

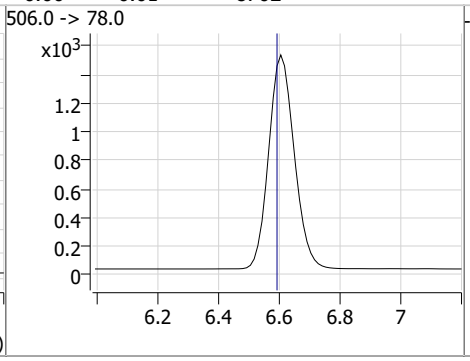


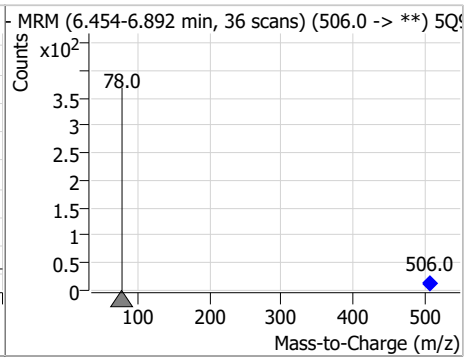




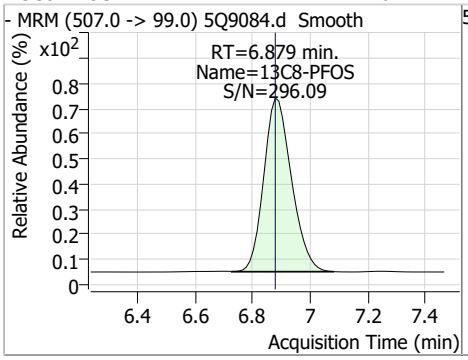
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	1.81	6.60	0.01	8762				

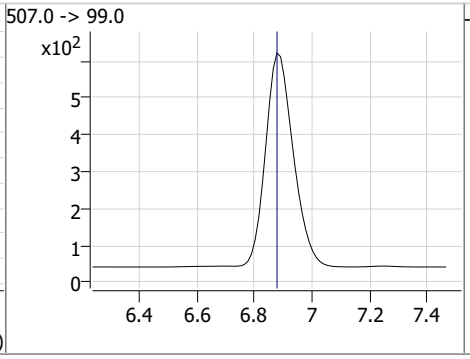


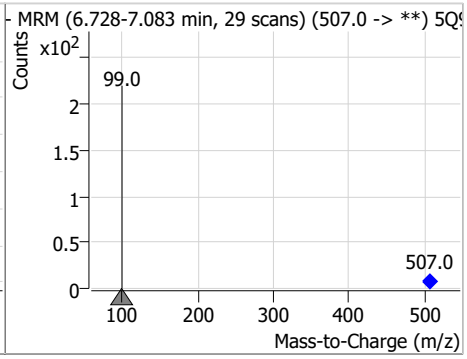




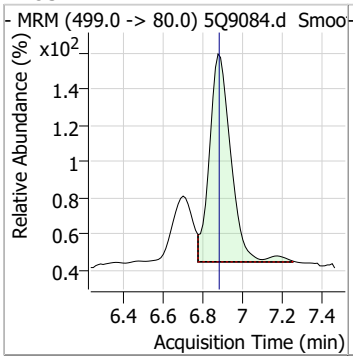
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	1.62	6.88	0.00	3863				

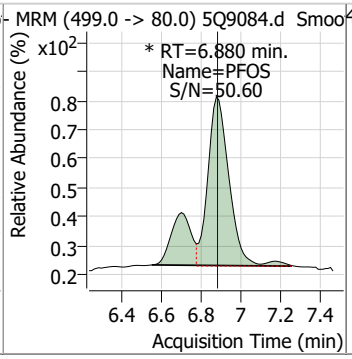


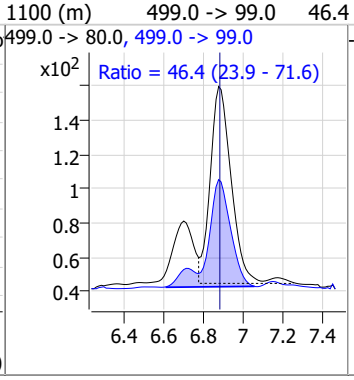


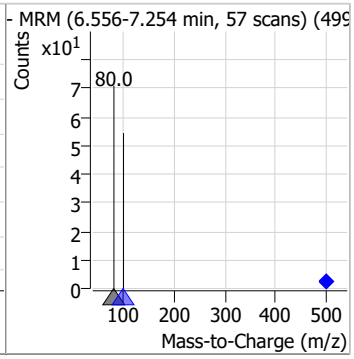


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.31	6.88	0.00	1100 (m)	499.0 -> 99.0	46.4	23.9	71.6



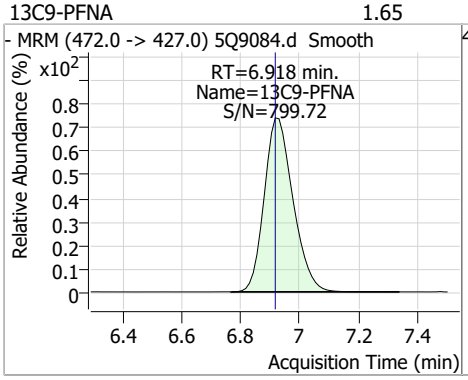


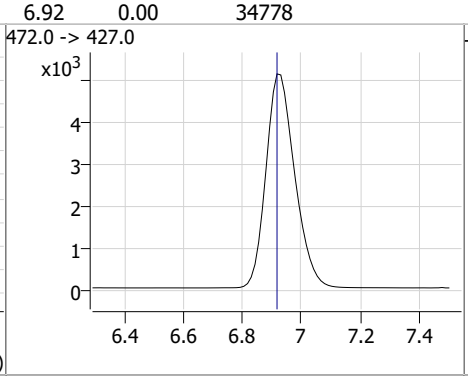


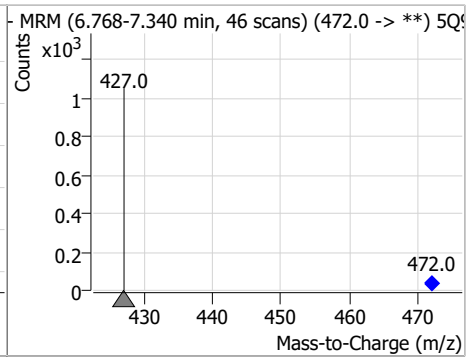


Perfluorinated Compounds by LC/MS/MS

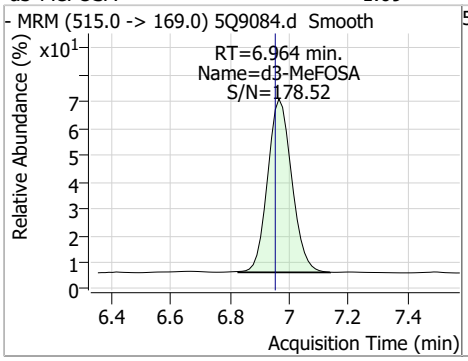
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	1.65	6.92	0.00	34778				

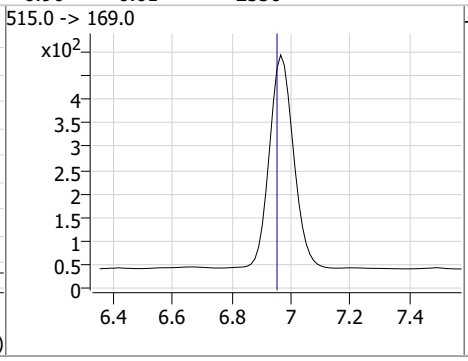


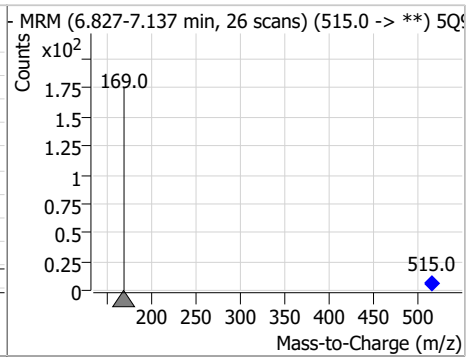




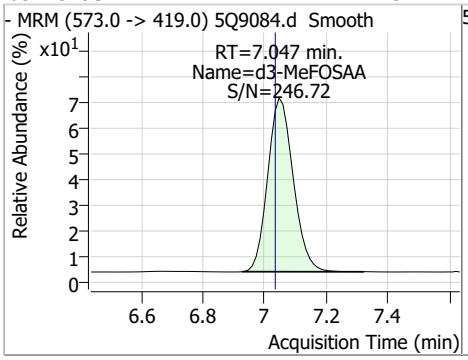
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	1.69	6.96	0.01	2556				

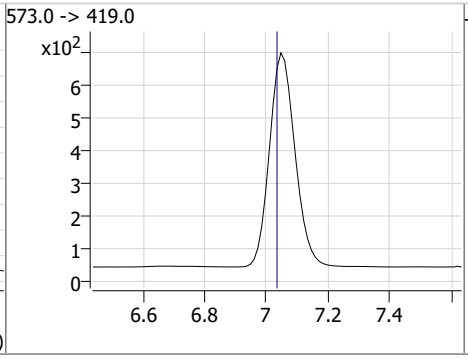


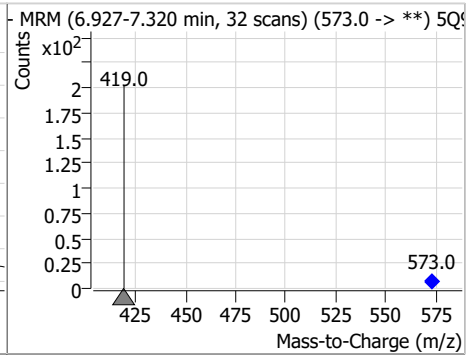




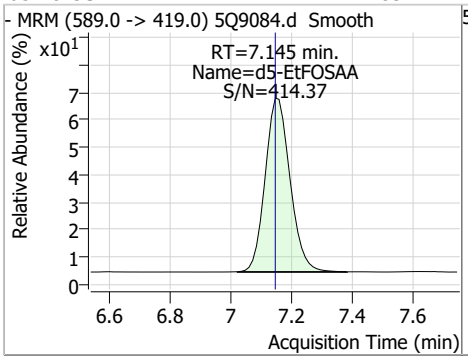
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	2.13	7.05	0.01	3782				

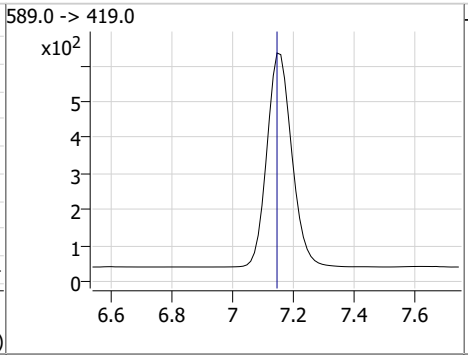


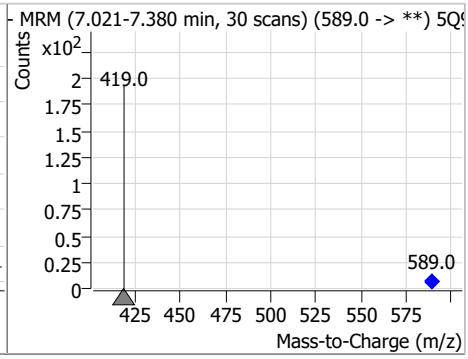




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	1.83	7.14	0.00	3372				

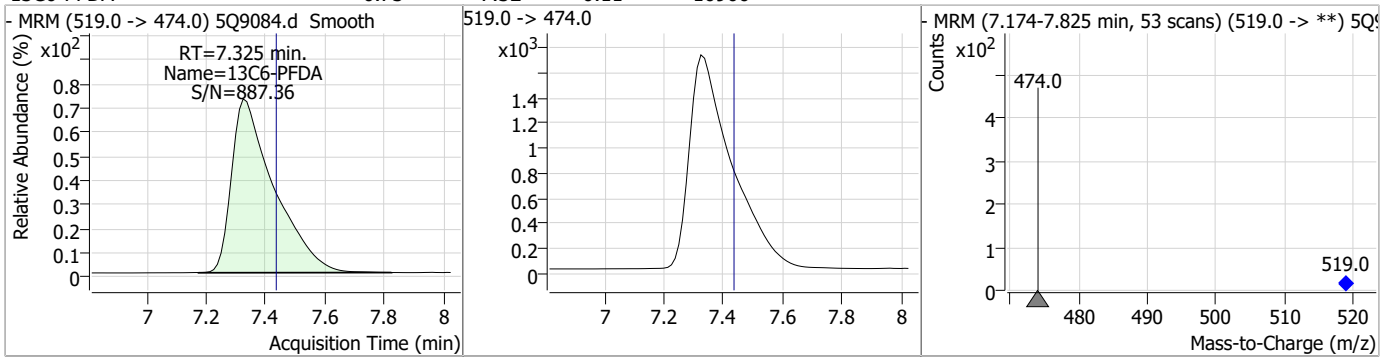




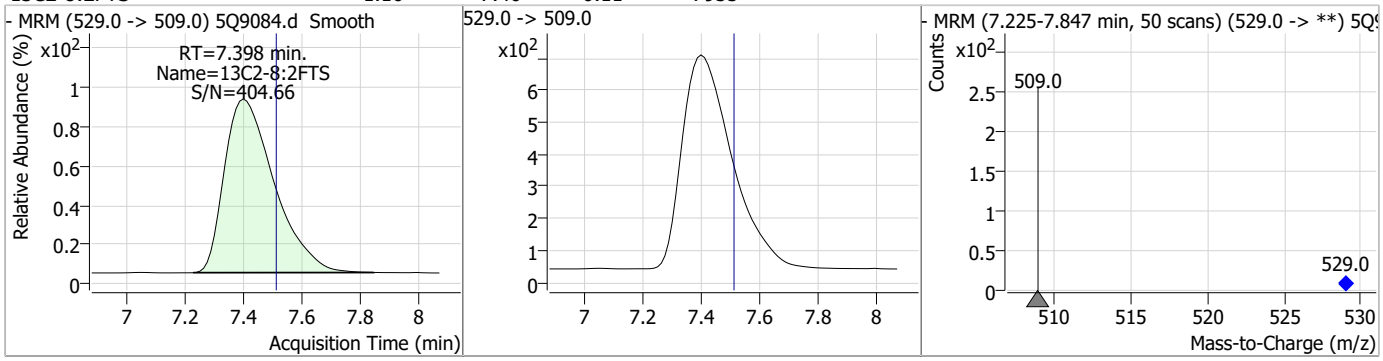


Perfluorinated Compounds by LC/MS/MS

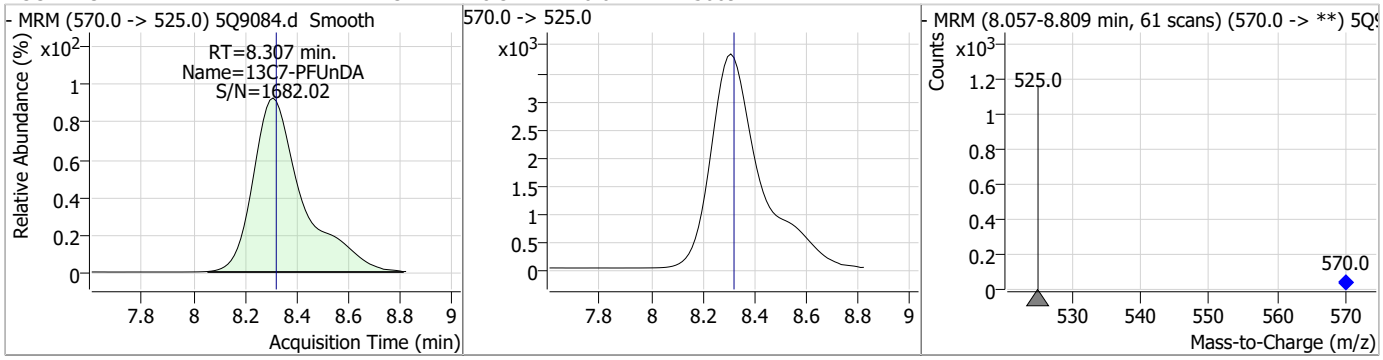
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	0.73	7.32	-0.11	16906				



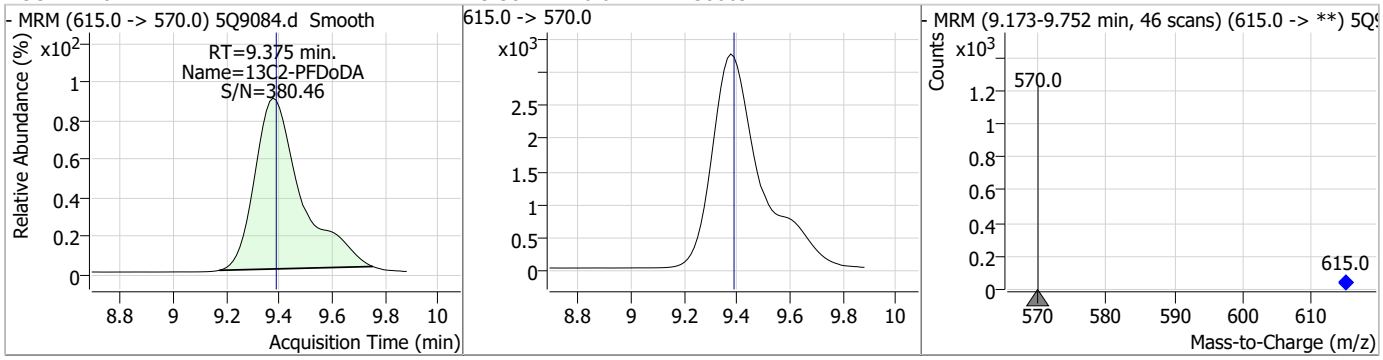
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	1.10	7.40	-0.11	7955				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	1.73	8.31	-0.01	50697				

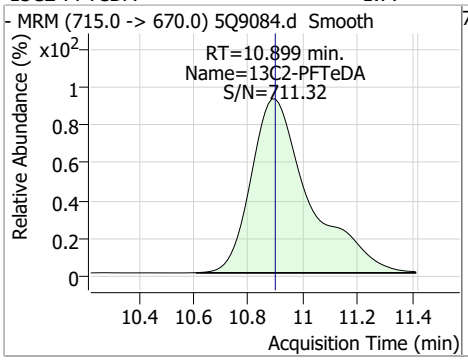


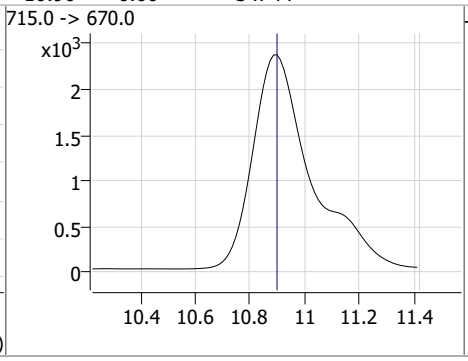
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	1.72	9.38	-0.01	38669				

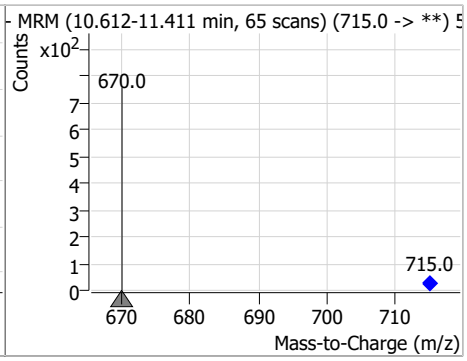


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	1.77	10.90	0.00	34744				







Manual Integration Approval Summary

Sample Number: FC1302-1B
Lab FileID: 5Q9084.D
Injection Time: 12/29/22 00:59

Method: EPA 537M QSM5.3 B-15
Analyst approved: 01/04/23 11:41 Lindsay Ritner
Supervisor approved: 01/04/23 15:08 Natasha Gumtie

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanesulfonic acid	1763-23-1		6.88	Split peak

Perfluorinated Compounds by LC/MS/MS

Data File	:	5Q9100.d
Operator	:	lindsayr
Acq. Method	:	537_ID.m
Acq. Date-Time	:	12/29/2022 1:30:37 PM
Sample Name	:	fc1302-1b
Vial	:	P2-D6
DA Method File	:	ID_122822_S5Q134.quantmethod.xml
Batch Name	:	s5q135.batch.bin
Sample Information	:	OP94649,S5Q135,2.01,,,1.0,40,soil

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
Internal Standards					
M4-PFBA	2.400	217.0 -> 172.0	1670	0.50 µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	3379	0.50 µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	4807	0.50 µg/L	0.000
M4-PFHpA	5.738	367.0 -> 322.0	5002	0.50 µg/L	0.012
M8-PFOA	6.361	421.0 -> 376.0	5821	0.50 µg/L	0.000
M9-PFNA	6.931	472.0 -> 427.0	6713	0.50 µg/L	0.013
M6-PFDA	7.412	519.0 -> 474.0	5909	0.50 µg/L	-0.025
M7-PFUnDA	8.332	570.0 -> 525.0	8501	0.50 µg/L	0.012
M2-PFDoDA	9.400	615.0 -> 570.0	6274	0.50 µg/L	0.012
M2-PFTeDA	10.912	715.0 -> 670.0	5319	0.50 µg/L	0.012
M8-FOSA	6.605	506.0 -> 78.0	1545	0.50 µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	508	0.50 µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	661	0.50 µg/L	0.000
M8-PFOS	6.891	507.0 -> 99.0	931	0.50 µg/L	0.012
M2-4:2FTS	4.886	329.0 -> 309.0	1571	0.50 µg/L	0.000
M2-6:2FTS	6.360	429.0 -> 409.0	7199	0.50 µg/L	0.000
M2-8:2FTS	7.473	529.0 -> 509.0	2172	0.50 µg/L	-0.038
M3-MeFOSAA	7.059	573.0 -> 419.0	417	0.50 µg/L	0.025
M3-HFPO-DA	5.194	287.0 -> 169.0	1660	0.50 µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	528	0.50 µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	502	0.50 µg/L	0.012
System Monitoring Compounds					
13C2-4:2FTS	4.886	329.0 -> 309.0	1571	0.33 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.6%	
13C2-6:2FTS	6.360	429.0 -> 409.0	7199	0.94 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 4.7%	
13C2-8:2FTS	7.473	529.0 -> 509.0	2172	0.30 µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.5%	
13C2-PFDoDA	9.400	615.0 -> 570.0	6274	0.28 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.4%	
13C2-PFTeDA	10.912	715.0 -> 670.0	5319	0.27 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.4%	
13C3-PFBS	4.124	302.0 -> 99.0	508	0.39 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 2.0%	
13C3-PFHxS	5.733	402.0 -> 99.0	661	0.37 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.8%	
13C4-PFBA	2.400	217.0 -> 172.0	1670	0.32 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.6%	
13C4-PFHpA	5.738	367.0 -> 322.0	5002	0.33 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.6%	
13C5-PFHxA	4.965	318.0 -> 273.0	4807	0.32 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.6%	
13C5-PFPeA	3.919	268.0 -> 223.0	3379	0.32 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.6%	
13C6-PFDA	7.412	519.0 -> 474.0	5909	0.25 µg/L	-0.025

Perfluorinated Compounds by LC/MS/MS

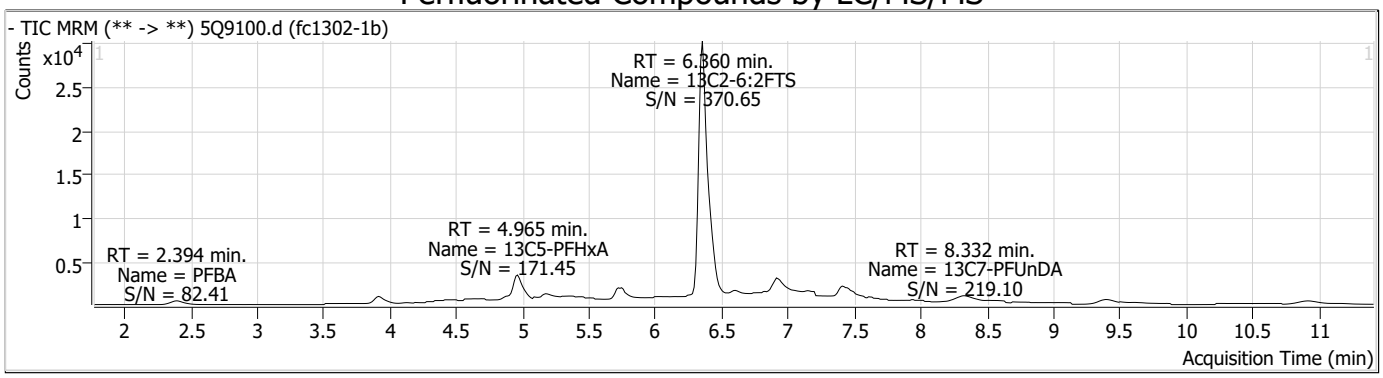
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.3%	
13C7-PFUnDA	8.332	570.0 -> 525.0	8501	0.29 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.5%	
13C8-FOSA	6.605	506.0 -> 78.0	1545	0.32 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.6%	
13C8-PFOA	6.361	421.0 -> 376.0	5821	0.29 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.4%	
13C8-PFOS	6.891	507.0 -> 99.0	931	0.39 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 2.0%	
13C9-PFNA	6.931	472.0 -> 427.0	6713	0.32 µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.6%	
d3-MeFOSAA	7.059	573.0 -> 419.0	417	0.23 µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.2%	
13C3-HFPO-DA	5.194	287.0 -> 169.0	1660	0.50 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 2.5%	
d3-MeFOSA	6.964	515.0 -> 169.0	528	0.35 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.7%	
d5-EtFOSAA	7.157	589.0 -> 419.0	502	0.27 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 1.4%	
Target Compounds					QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.	
		327.0 -> 81.0			
6:2FTS	6.360	427.0 -> 407.0	90661	6.13 µg/L	100
		427.0 -> 81.0	38933		
8:2FTS	-	527.0 -> 507.0	-	N.D.	
		527.0 -> 81.0			
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
		584.0 -> 483.0			
FOSA	-	498.0 -> 78.0	-	N.D.	
		498.0 -> 478.0			
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
		570.0 -> 512.0			
PFBA	2.394	213.0 -> 169.0	1316	0.36 µg/L	100
PFBS	-	299.0 -> 80.0	-	N.D.	
		299.0 -> 99.0			
PFDA	-	513.0 -> 469.0	-	N.D.	
		513.0 -> 219.0			
PFDoDA	-	613.0 -> 569.0	-	N.D.	
		613.0 -> 319.0			
PFDS	-	599.0 -> 80.0	-	N.D.	
		599.0 -> 99.0			
PFHpA	-	363.0 -> 319.0	-	N.D.	
		363.0 -> 169.0			
PFHpS	-	449.0 -> 80.0	-	N.D.	
		449.0 -> 99.0			
PFHxA	4.966	313.0 -> 269.0	9003	0.92 µg/L	100
		313.0 -> 119.0	415		
PFHxS	-	399.0 -> 80.0	-	N.D.	
		399.0 -> 99.0			
PFNA	-	463.0 -> 419.0	-	N.D.	
		463.0 -> 219.0			
PFNS	-	549.0 -> 80.0	-	N.D.	
		549.0 -> 99.0			
PFOA	-	413.0 -> 369.0	-	N.D.	
		413.0 -> 169.0			
PFOS	-	499.0 -> 80.0	-	N.D.	

Perfluorinated Compounds by LC/MS/MS

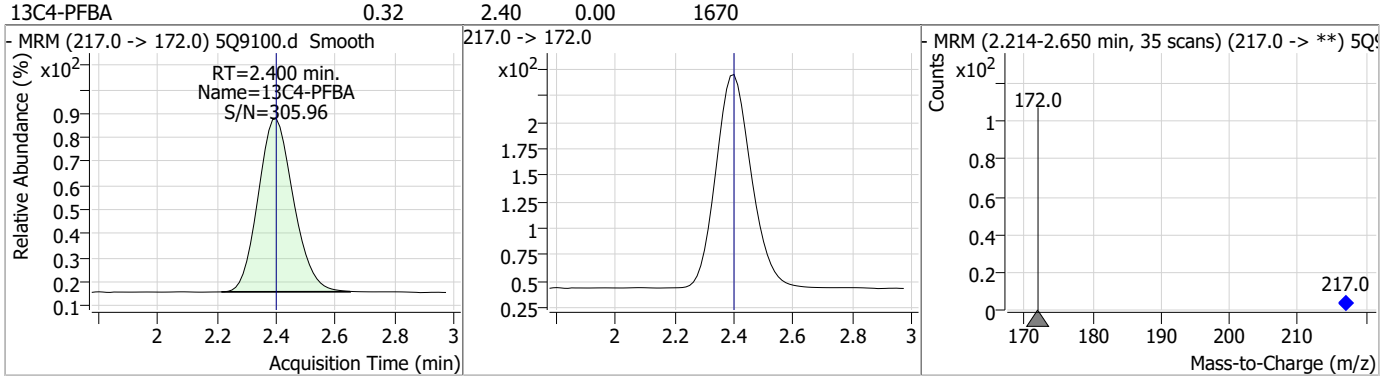
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0				
PFPeA	3.922	263.0 -> 219.0	1160	0.15	µg/L	100
PFPeS	-	349.0 -> 80.0	-	N.D.		
		349.0 -> 99.0				
PFTeDA	-	713.0 -> 669.0	-	N.D.		
		713.0 -> 219.0				
PFTrDA	-	663.0 -> 619.0	-	N.D.		
		663.0 -> 369.0				
PFUnDA	-	563.0 -> 519.0	-	N.D.		
		563.0 -> 269.0				
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
		633.0 -> 453.0				
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
		533.0 -> 353.0				
ADONA	-	377.0 -> 251.0	-	N.D.		
		377.0 -> 85.0				
HFPO-DA	-	329.0 -> 169.0	-	N.D.		
		285.0 -> 169.0				
MeFOSA	-	512.0 -> 169.0	-	N.D.		
		512.0 -> 219.0				
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	-	298.0 -> 78.0	-	N.D.		
		298.0 -> 64.0				
FHxSA	-	398.0 -> 78.0	-	N.D.		
		398.0 -> 64.0				

 # = Qualifier out of range, m = manually integrated, + = Area summed

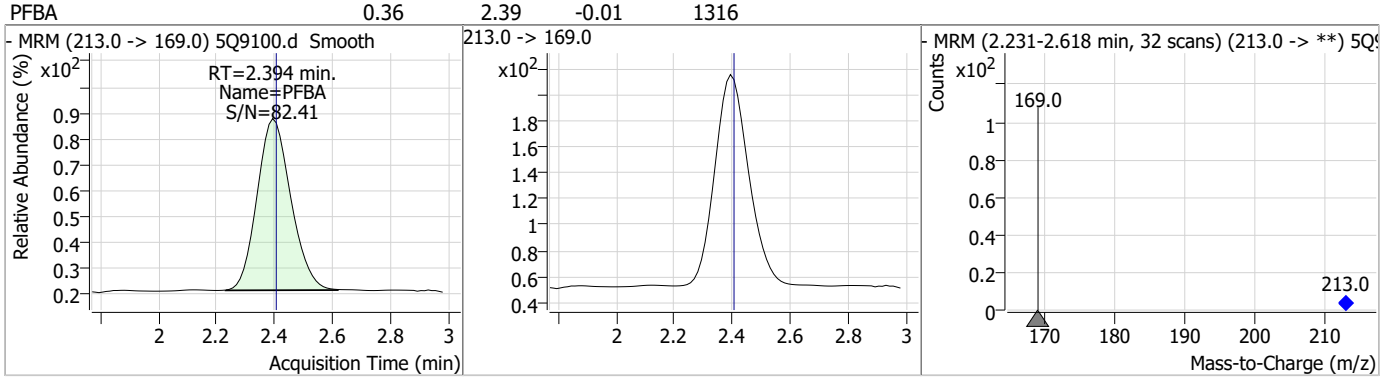
Perfluorinated Compounds by LC/MS/MS



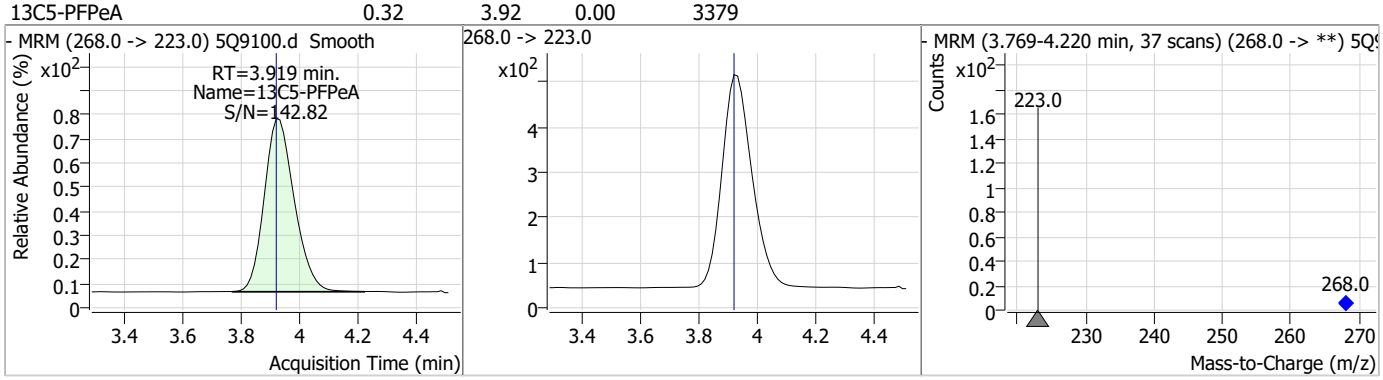
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	0.32	2.40	0.00	1670				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.36	2.39	-0.01	1316				

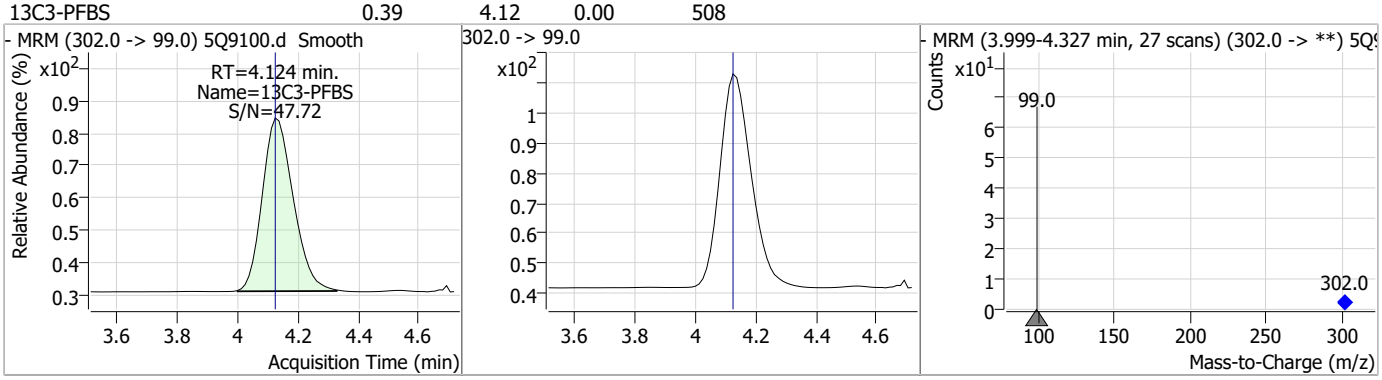


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	0.32	3.92	0.00	3379				

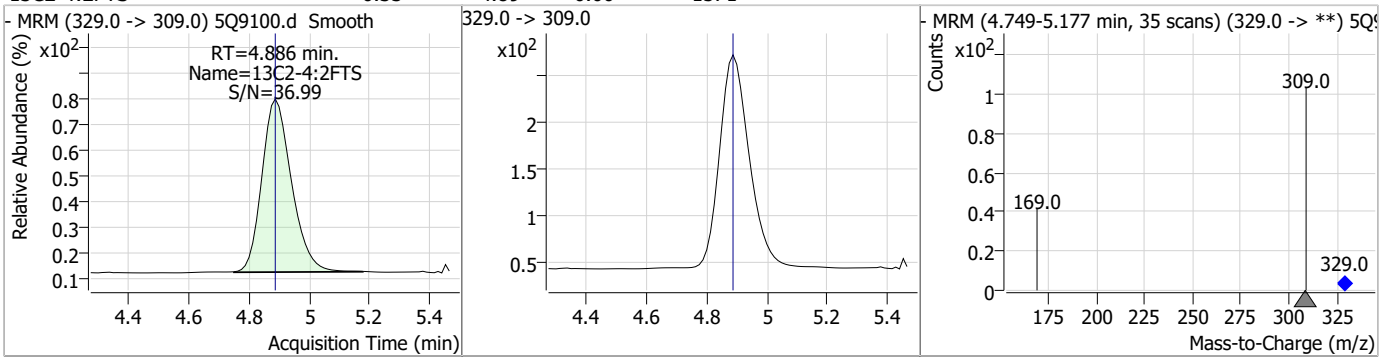


Perfluorinated Compounds by LC/MS/MS

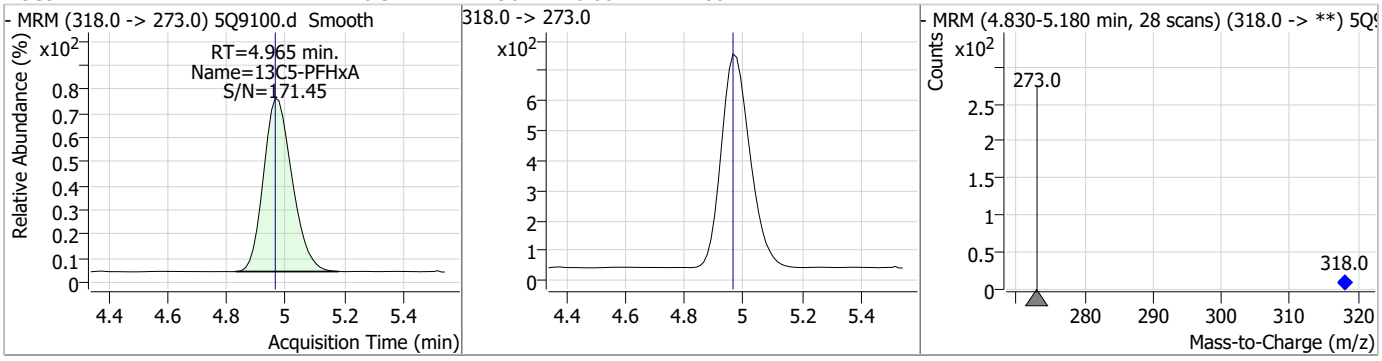
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	0.39	4.12	0.00	508				



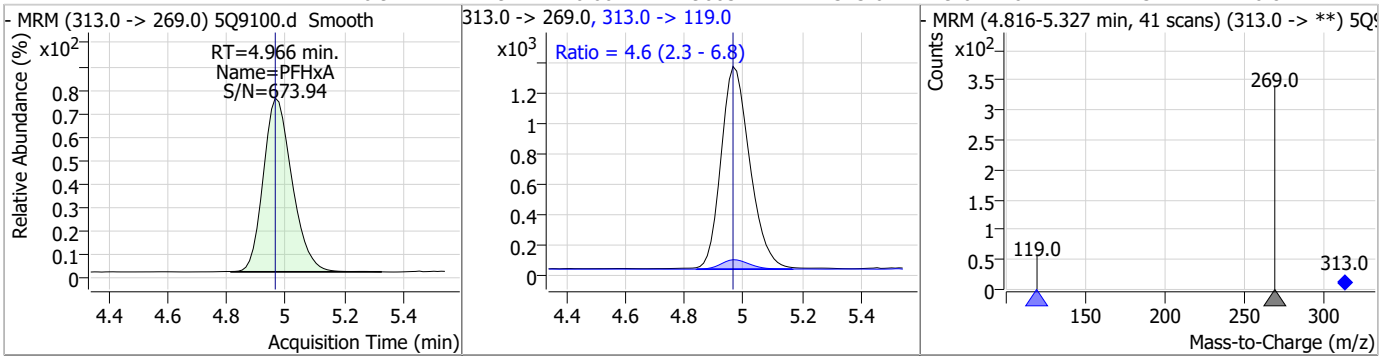
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	0.33	4.89	0.00	1571				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	0.32	4.96	0.00	4807				

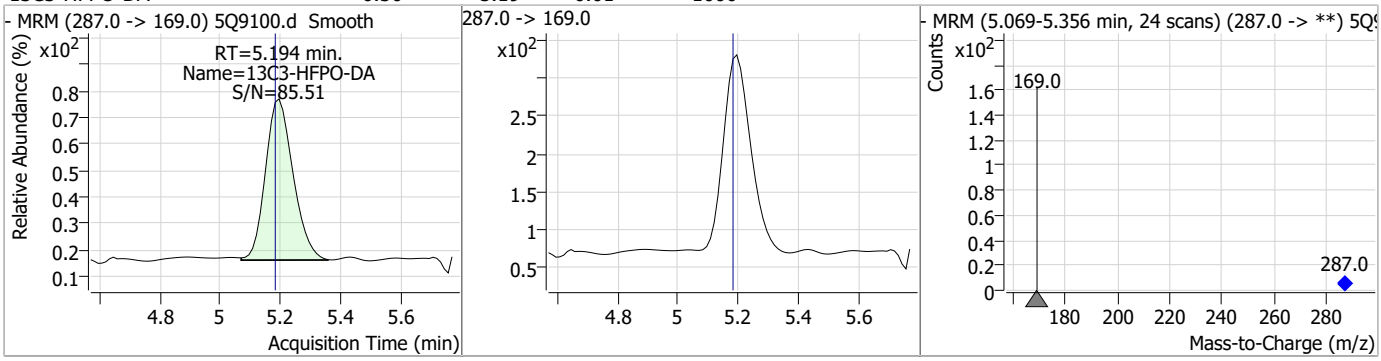


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.92	4.97	0.00	9003	313.0 -> 119.0	4.6	2.3	6.8

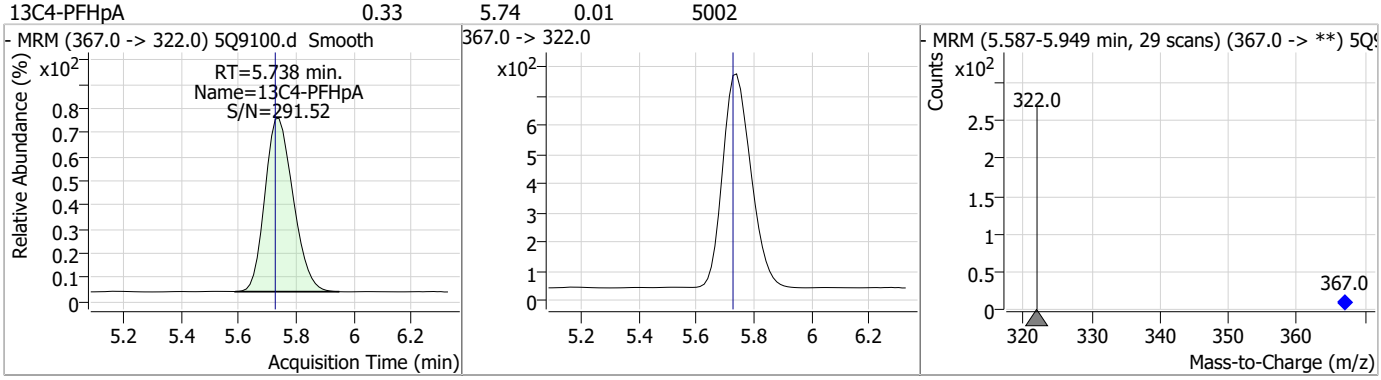


Perfluorinated Compounds by LC/MS/MS

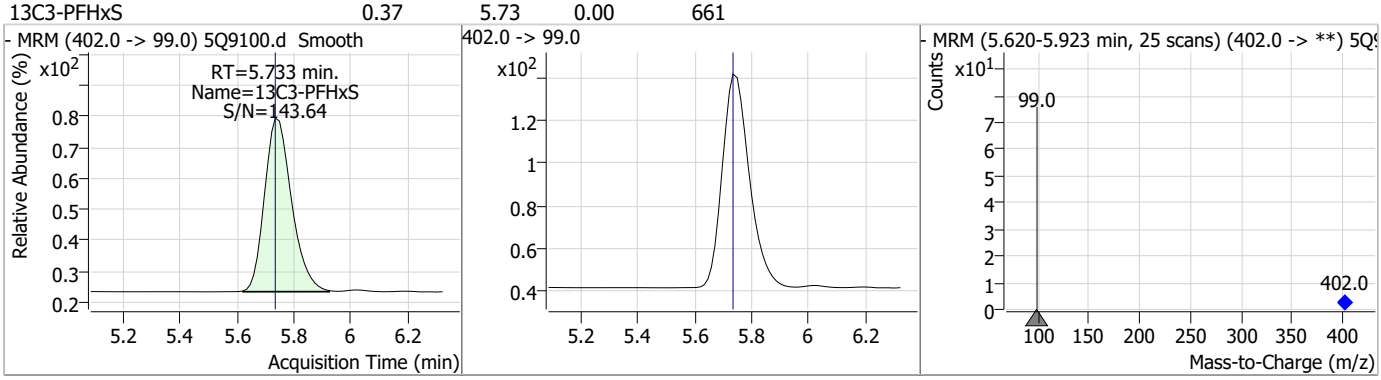
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	0.50	5.19	0.01	1660				



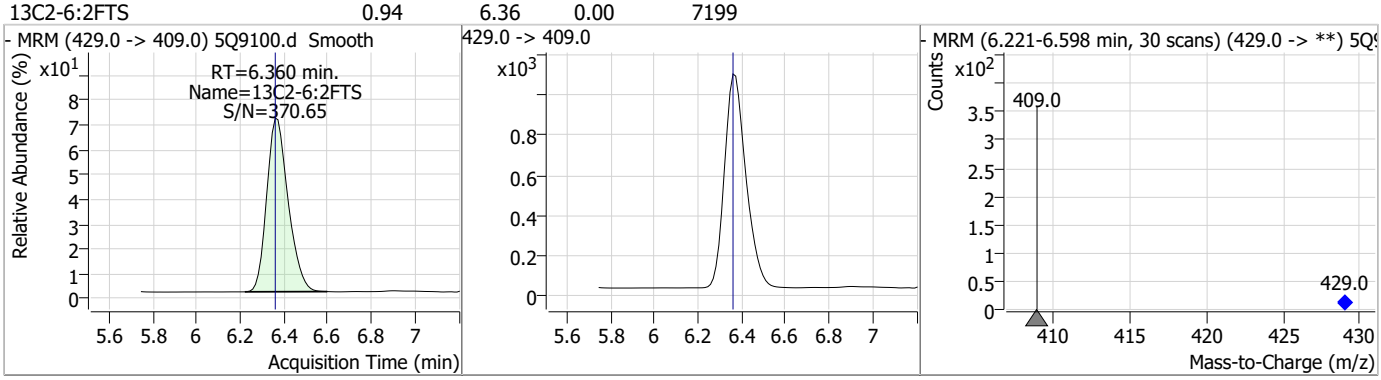
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	0.33	5.74	0.01	5002				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	0.37	5.73	0.00	661				

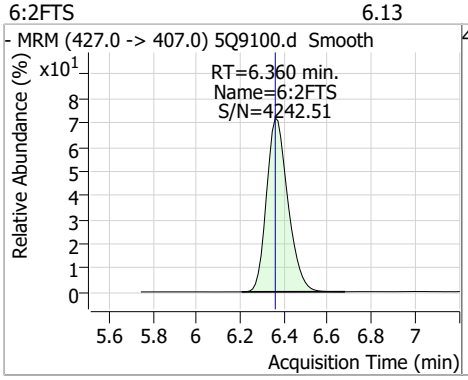


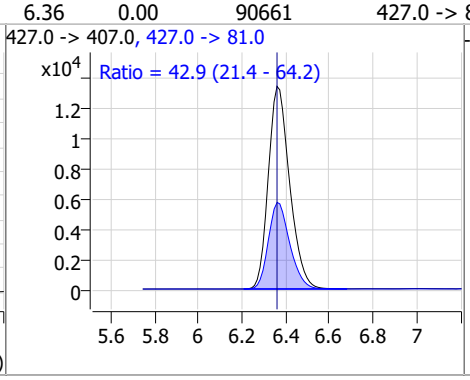
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	0.94	6.36	0.00	7199				

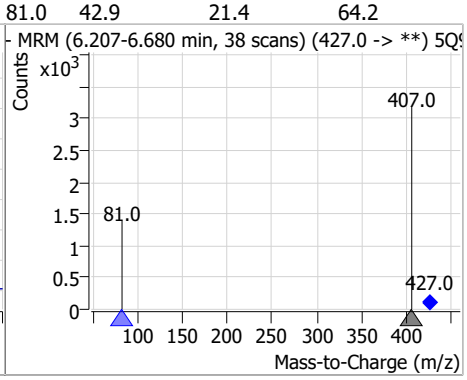


Perfluorinated Compounds by LC/MS/MS

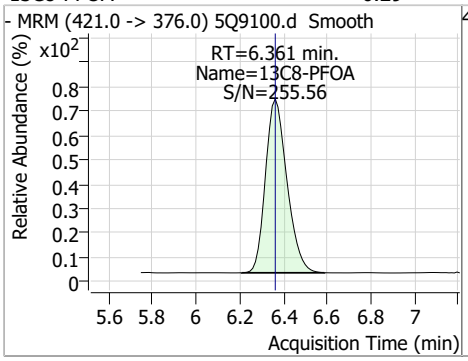
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	6.13	6.36	0.00	90661	427.0 -> 81.0	42.9	21.4	64.2

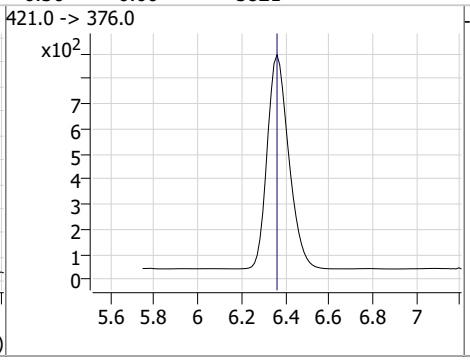


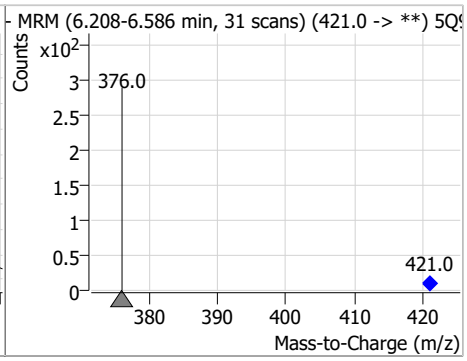




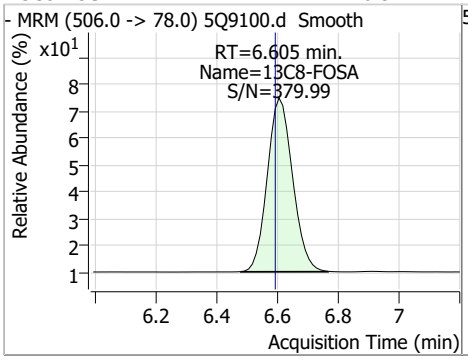
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	0.29	6.36	0.00	5821				

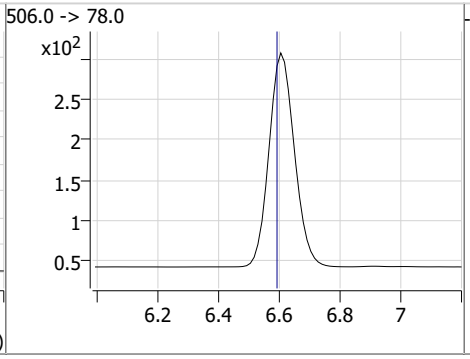


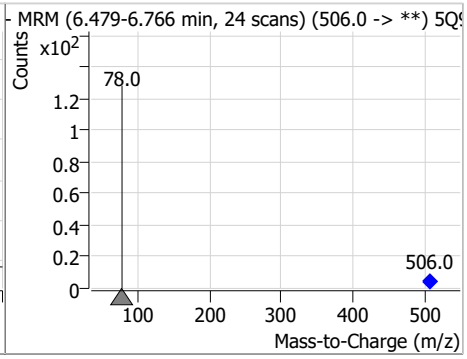




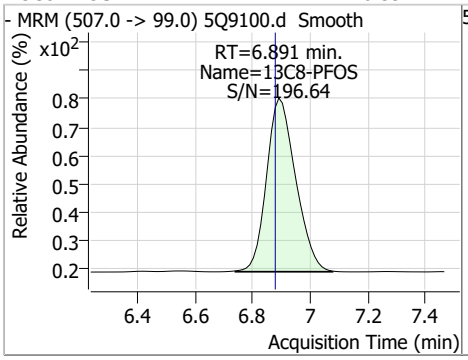
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	0.32	6.60	0.01	1545				

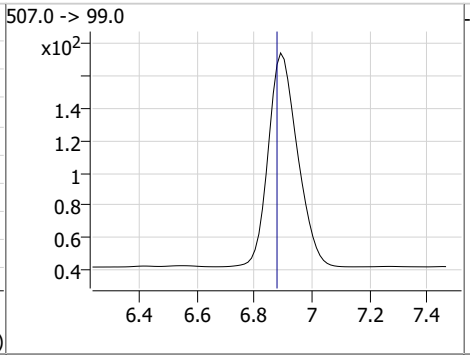


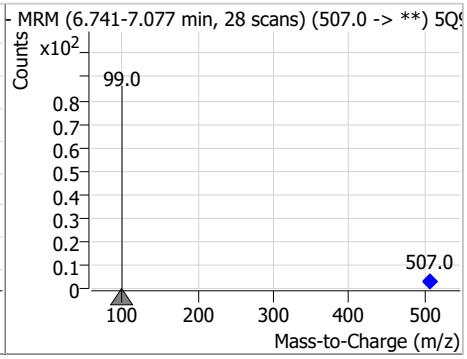




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	0.39	6.89	0.01	931				

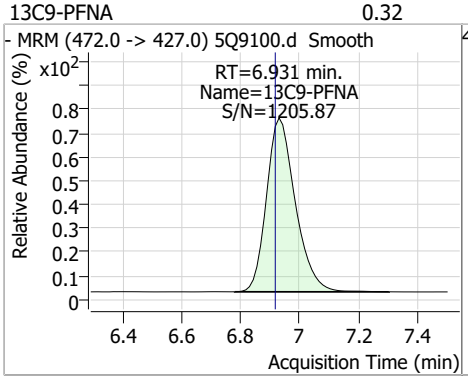


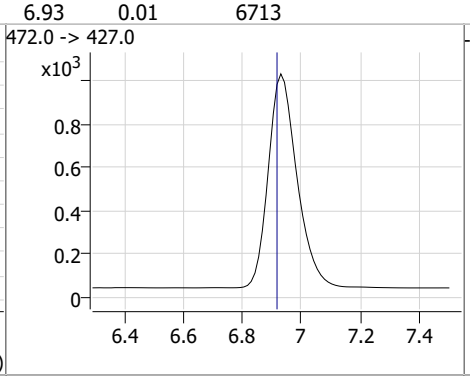


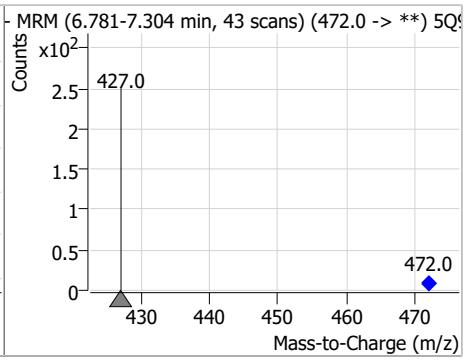


Perfluorinated Compounds by LC/MS/MS

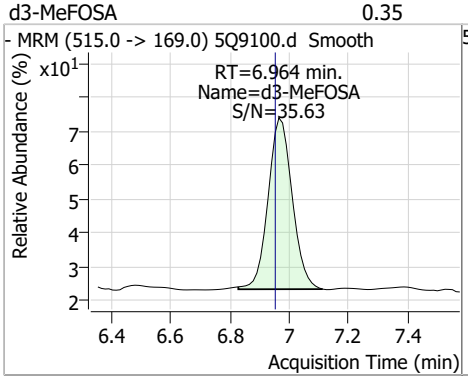
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	0.32	6.93	0.01	6713				

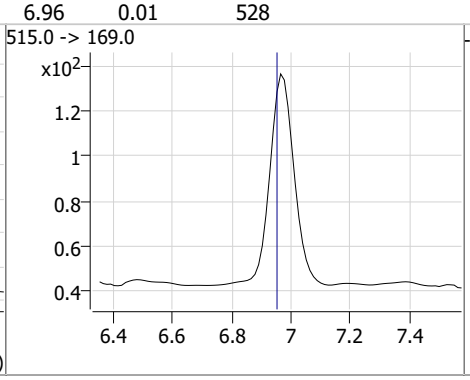


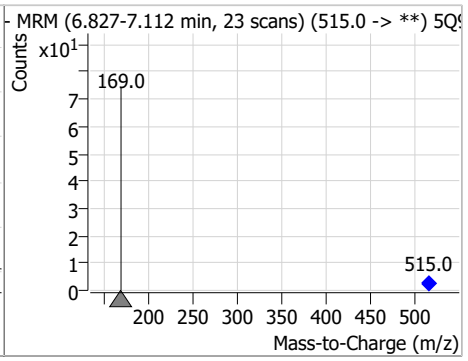




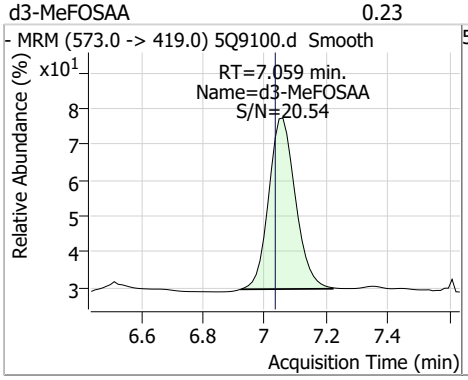
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	0.35	6.96	0.01	528				

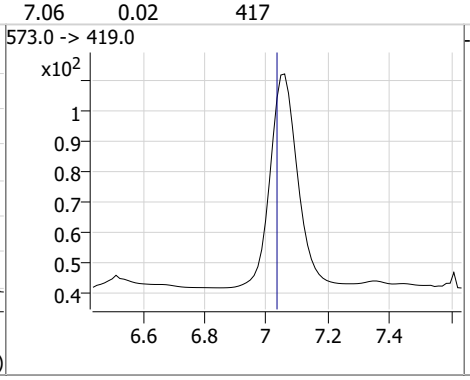


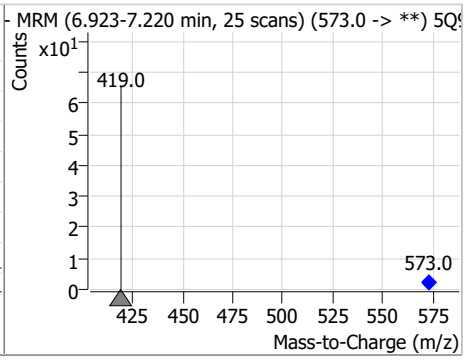




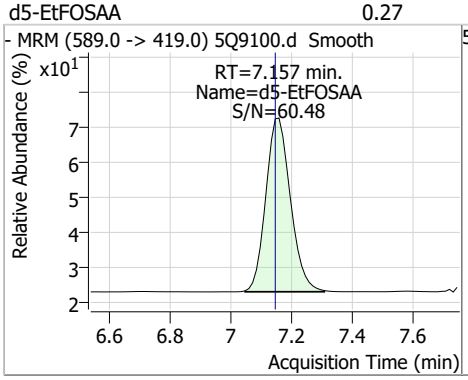
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	0.23	7.06	0.02	417				

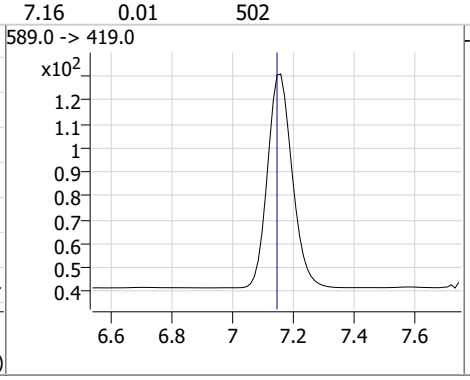


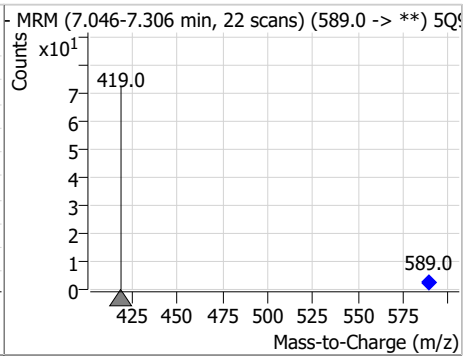




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	0.27	7.16	0.01	502				

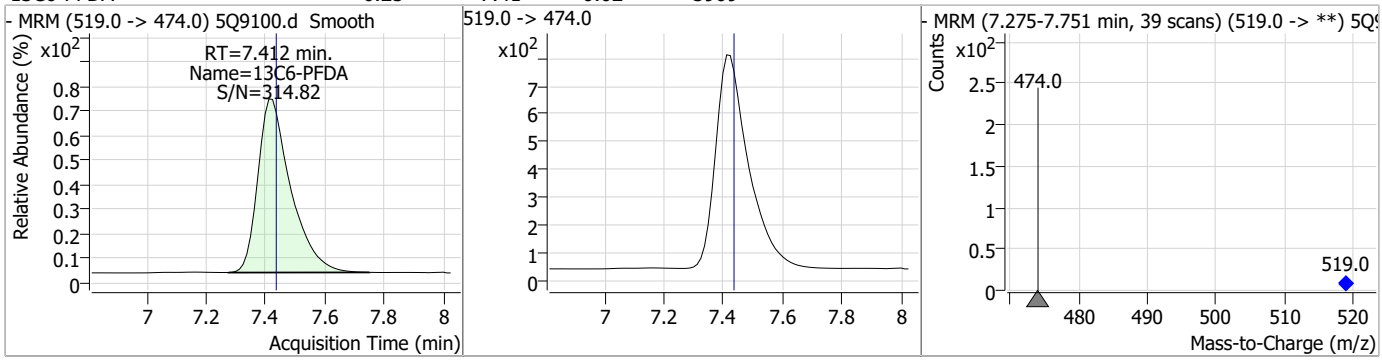




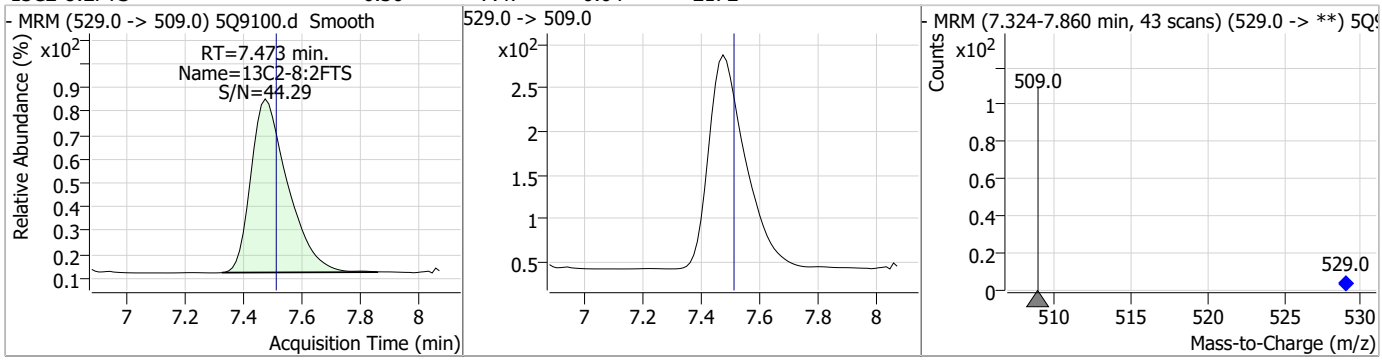


Perfluorinated Compounds by LC/MS/MS

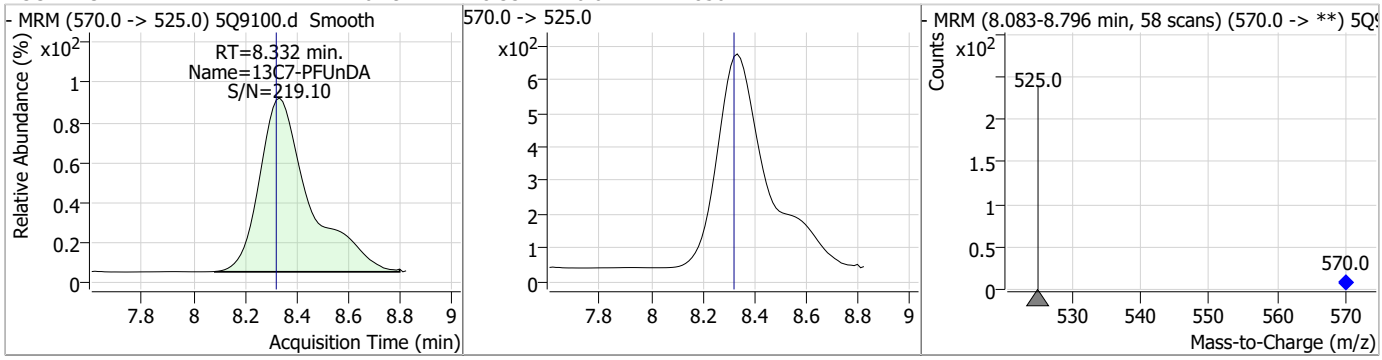
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	0.25	7.41	-0.02	5909				



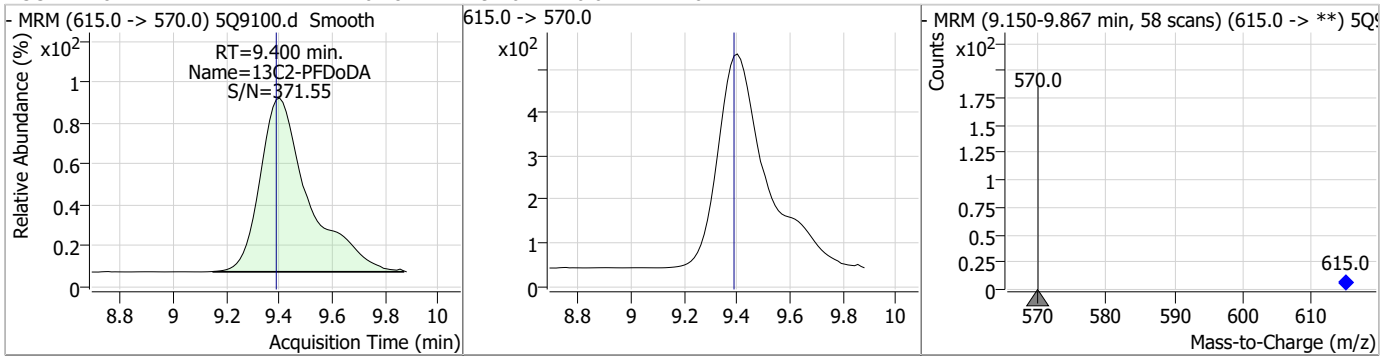
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	0.30	7.47	-0.04	2172				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	0.29	8.33	0.01	8501				

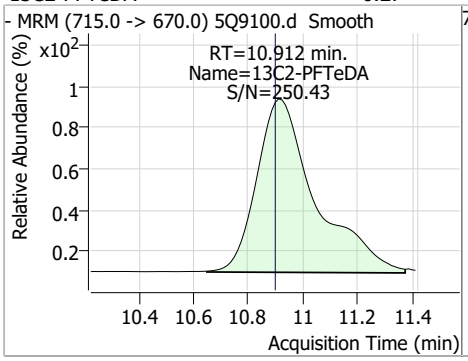


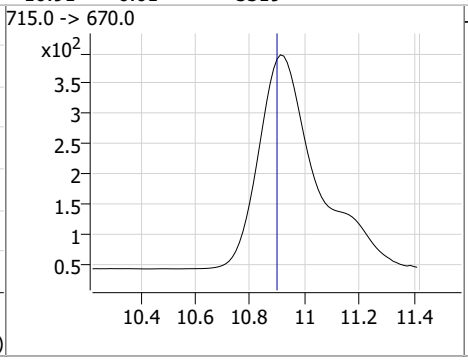
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	0.28	9.40	0.01	6274				

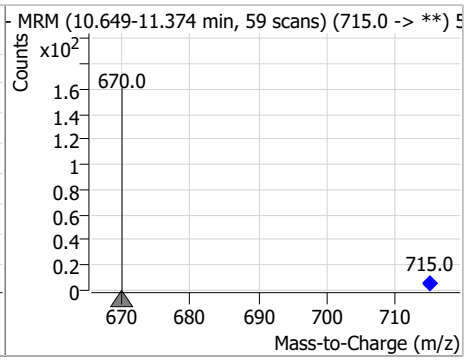


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	0.27	10.91	0.01	5319				







Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9247.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 1/3/2023 7:06:58 PM
Sample Name : fc1302-1b
Vial : P3-D2
DA Method File : ID_010323_S5Q137.quantmethod.xml
Batch Name : s5q137.batch.bin
Sample Information : OP94649,S5Q137,2.01,,,1.0,100,soil

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.062	217.0 -> 172.0	103749	20.00	µg/L	0.087
M5-PFPeA	3.557	268.0 -> 223.0	193460	20.00	µg/L	0.087
M5-PFHxA	4.529	318.0 -> 273.0	272002	20.00	µg/L	0.075
M4-PFHpA	5.189	367.0 -> 322.0	274537	20.00	µg/L	0.076
M8-PFOA	5.699	421.0 -> 376.0	345735	20.00	µg/L	0.077
M9-PFNA	6.131	472.0 -> 427.0	352931	20.00	µg/L	0.088
M6-PFDA	6.501	519.0 -> 474.0	322298	20.00	µg/L	0.100
M7-PFUnDA	6.809	570.0 -> 525.0	348513	20.00	µg/L	0.087
M2-PFDoDA	7.066	615.0 -> 570.0	343900	20.00	µg/L	0.087
M2-PFTeDA	7.486	715.0 -> 670.0	376422	20.00	µg/L	0.100
M8-FOSA	6.666	506.0 -> 78.0	111092	20.00	µg/L	0.025
M3-PFBS	3.756	302.0 -> 99.0	23437	20.00	µg/L	0.077
M3-PFHxS	5.198	402.0 -> 99.0	29574	20.00	µg/L	0.075
M8-PFOS	6.091	507.0 -> 99.0	34712	20.00	µg/L	0.076
M2-4:2FTS	4.427	329.0 -> 309.0	82753	20.00	µg/L	0.079
M2-6:2FTS	5.671	429.0 -> 409.0	124198	20.00	µg/L	0.077
M2-8:2FTS	6.475	529.0 -> 509.0	98778	20.00	µg/L	0.075
M3-MeFOSAA	6.995	573.0 -> 419.0	50141	20.00	µg/L	0.037
M3-HFPO-DA	4.731	287.0 -> 169.0	57795	20.00	µg/L	0.087
M3-MeFOSA	7.023	515.0 -> 169.0	31681	20.00	µg/L	0.037
M5-EtFOSAA	7.118	589.0 -> 419.0	50023	20.00	µg/L	0.037
System Monitoring Compounds						
13C2-4:2FTS	4.427	329.0 -> 309.0	82753	17.50	µg/L	0.079
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.5%		
13C2-6:2FTS	5.671	429.0 -> 409.0	124198	17.44	µg/L	0.077
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.2%		
13C2-8:2FTS	6.475	529.0 -> 509.0	98778	16.09	µg/L	0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 80.4%		
13C2-PFDoDA	7.066	615.0 -> 570.0	343900	18.58	µg/L	0.087
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.9%		
13C2-PFTeDA	7.486	715.0 -> 670.0	376422	19.25	µg/L	0.100
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.2%		
13C3-PFBS	3.756	302.0 -> 99.0	23437	18.28	µg/L	0.077
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.4%		
13C3-PFHxS	5.198	402.0 -> 99.0	29574	18.62	µg/L	0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.1%		
13C4-PFBA	2.062	217.0 -> 172.0	103749	18.10	µg/L	0.087
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.5%		
13C4-PFHpA	5.189	367.0 -> 322.0	274537	18.68	µg/L	0.076
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.4%		
13C5-PFHxA	4.529	318.0 -> 273.0	272002	18.52	µg/L	0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.6%		
13C5-PFPeA	3.557	268.0 -> 223.0	193460	18.62	µg/L	0.087
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.1%		
13C6-PFDA	6.501	519.0 -> 474.0	322298	17.39	µg/L	0.100

Perfluorinated Compounds by LC/MS/MS

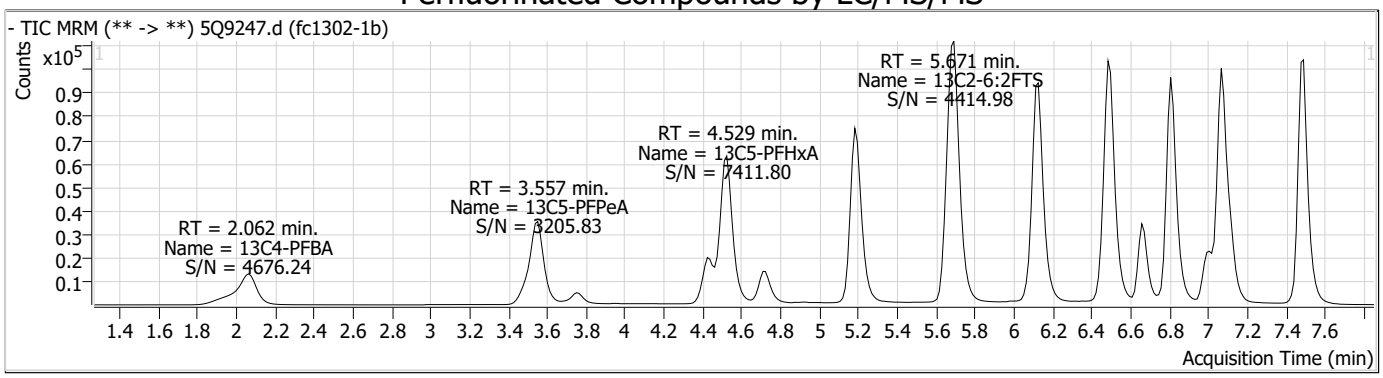
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.9%	
13C7-PFUnDA	6.809	570.0 -> 525.0	348513	18.47 µg/L	0.087
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.4%	
13C8-FOSA	6.666	506.0 -> 78.0	111092	18.53 µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.7%	
13C8-PFOA	5.699	421.0 -> 376.0	345735	18.35 µg/L	0.077
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.8%	
13C8-PFOS	6.091	507.0 -> 99.0	34712	18.21 µg/L	0.076
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.1%	
13C9-PFNA	6.131	472.0 -> 427.0	352931	18.69 µg/L	0.088
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.5%	
d3-MeFOSAA	6.995	573.0 -> 419.0	50141	17.89 µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.4%	
13C3-HFPO-DA	4.731	287.0 -> 169.0	57795	17.23 µg/L	0.087
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.2%	
d3-MeFOSA	7.023	515.0 -> 169.0	31681	18.37 µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.9%	
d5-EtFOSAA	7.118	589.0 -> 419.0	50023	18.04 µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.2%	
Target Compounds					QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.	
		327.0 -> 81.0			
6:2FTS	5.672	427.0 -> 407.0	33150	6.15 µg/L	99
		427.0 -> 81.0	14990		
8:2FTS	-	527.0 -> 507.0	-	N.D.	
		527.0 -> 81.0			
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
		584.0 -> 483.0			
FOSA	-	498.0 -> 78.0	-	N.D.	
		498.0 -> 478.0			
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
		570.0 -> 512.0			
PFBA	2.056	213.0 -> 169.0	589	0.12 µg/L	100
PFBS	-	299.0 -> 80.0	-	N.D.	
		299.0 -> 99.0			
PFDA	-	513.0 -> 469.0	-	N.D.	
		513.0 -> 219.0			
PFDoDA	-	613.0 -> 569.0	-	N.D.	
		613.0 -> 319.0			
PFDS	-	599.0 -> 80.0	-	N.D.	
		599.0 -> 99.0			
PFHpA	-	363.0 -> 319.0	-	N.D.	
		363.0 -> 169.0			
PFHpS	-	449.0 -> 80.0	-	N.D.	
		449.0 -> 99.0			
PFHxA	4.530	313.0 -> 269.0	3728	0.31 µg/L	100
		313.0 -> 119.0	179		
PFHxS	-	399.0 -> 80.0	-	N.D.	
		399.0 -> 99.0			
PFNA	-	463.0 -> 419.0	-	N.D.	
		463.0 -> 219.0			
PFNS	-	549.0 -> 80.0	-	N.D.	
		549.0 -> 99.0			
PFOA	-	413.0 -> 369.0	-	N.D.	
		413.0 -> 169.0			
PFOS	-	499.0 -> 80.0	-	N.D.	

Perfluorinated Compounds by LC/MS/MS

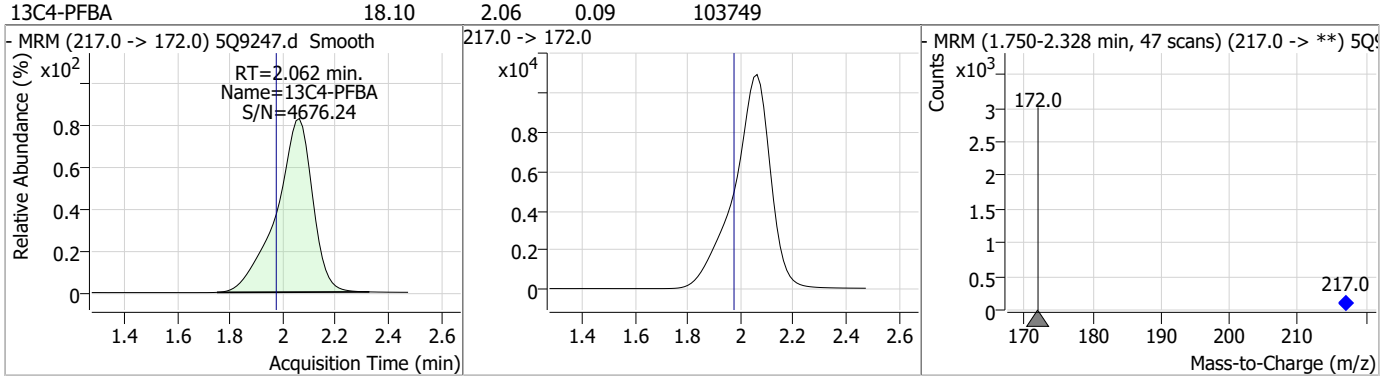
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0				
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFPeS	-	349.0 -> 80.0	-	N.D.		
		349.0 -> 99.0				
PFTeDA	-	713.0 -> 669.0	-	N.D.		
		713.0 -> 219.0				
PFTrDA	-	663.0 -> 619.0	-	N.D.		
		663.0 -> 369.0				
PFUnDA	-	563.0 -> 519.0	-	N.D.		
		563.0 -> 269.0				
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
		633.0 -> 453.0				
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
		533.0 -> 353.0				
ADONA	-	377.0 -> 251.0	-	N.D.		
		377.0 -> 85.0				
HFPO-DA	-	329.0 -> 169.0	-	N.D.		
		285.0 -> 169.0				
MeFOSA	-	512.0 -> 169.0	-	N.D.		
		512.0 -> 219.0				
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	-	298.0 -> 78.0	-	N.D.		
		298.0 -> 64.0				
FHxSA	-	398.0 -> 78.0	-	N.D.		
		398.0 -> 64.0				

 # = Qualifier out of range, m = manually integrated, + = Area summed

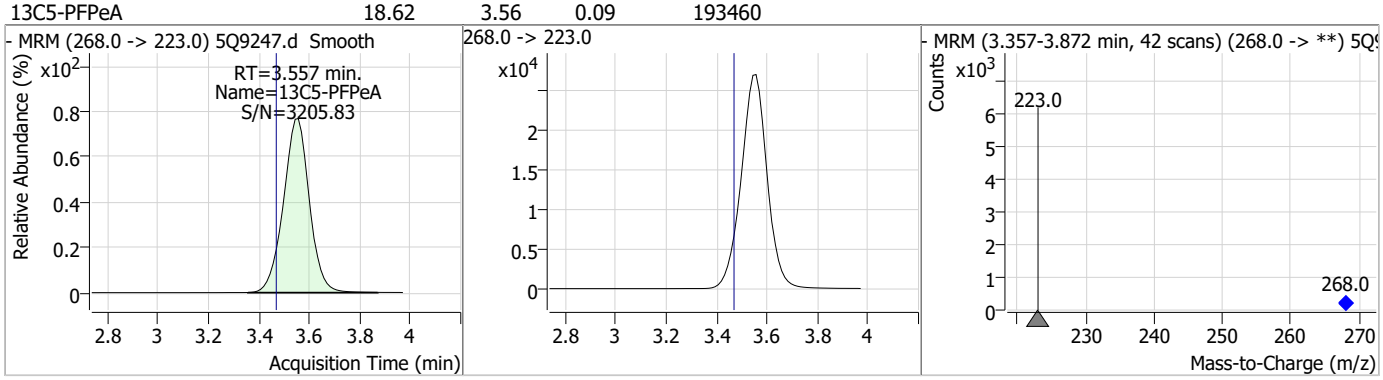
Perfluorinated Compounds by LC/MS/MS



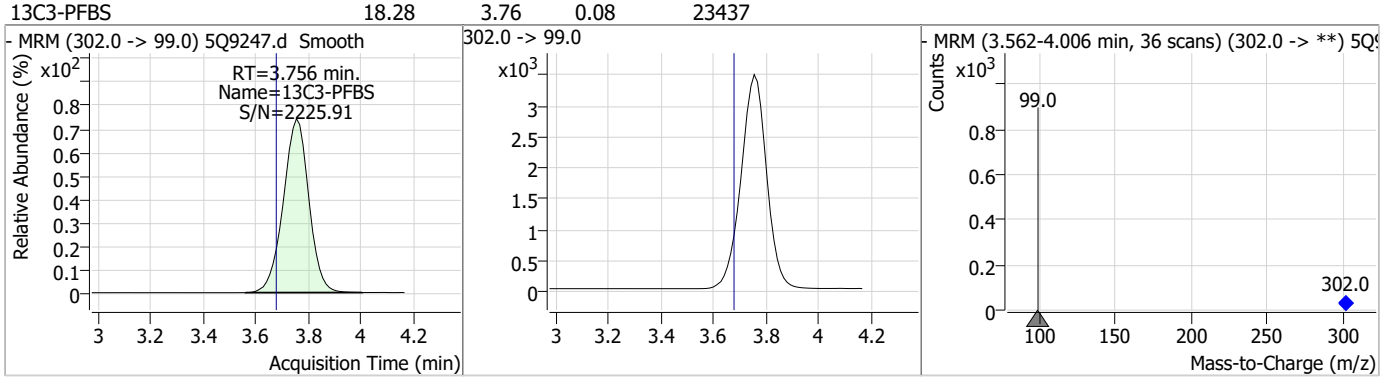
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.10	2.06	0.09	103749				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	18.62	3.56	0.09	193460				

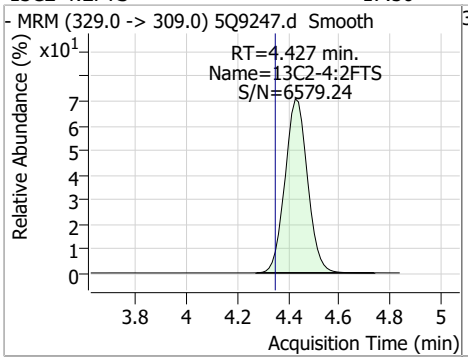


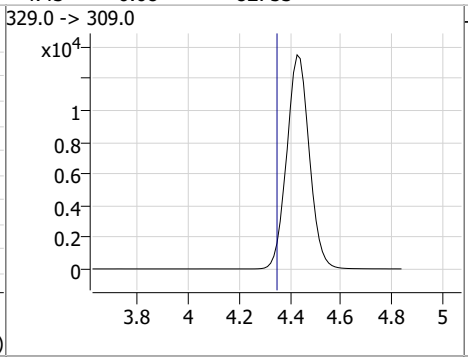
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	18.28	3.76	0.08	23437				

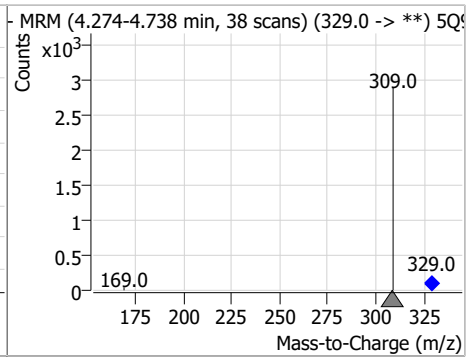


Perfluorinated Compounds by LC/MS/MS

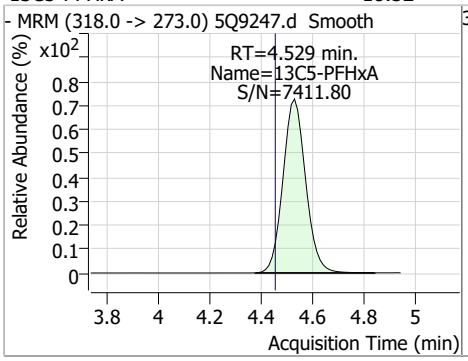
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	17.50	4.43	0.08	82753				

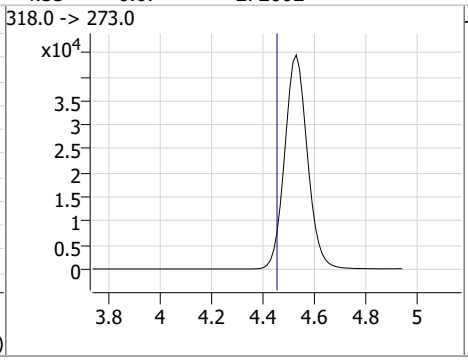


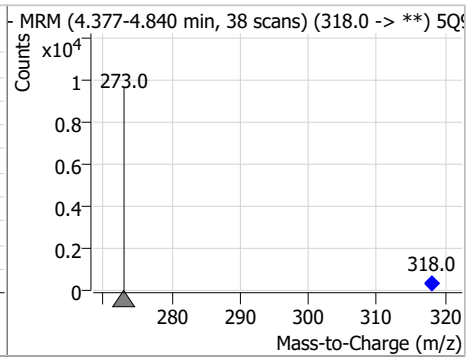




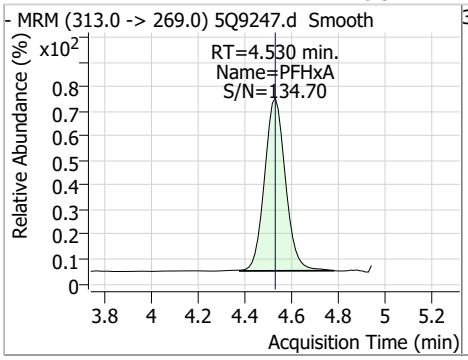
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	18.52	4.53	0.07	272002				

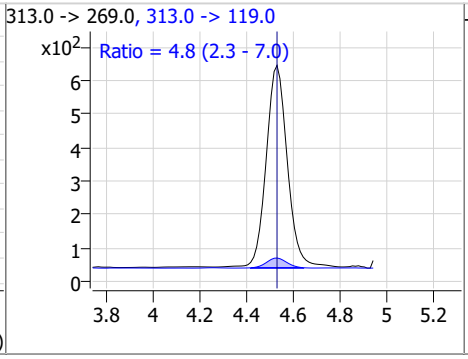


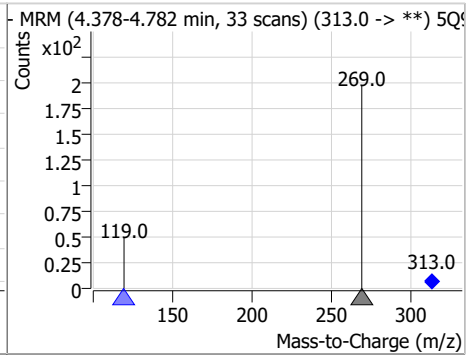




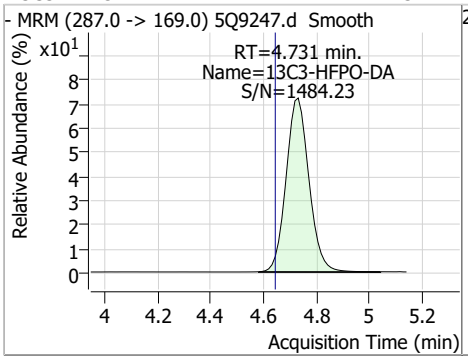
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.31	4.53	0.07	3728	313.0 -> 119.0	4.8	2.3	7.0

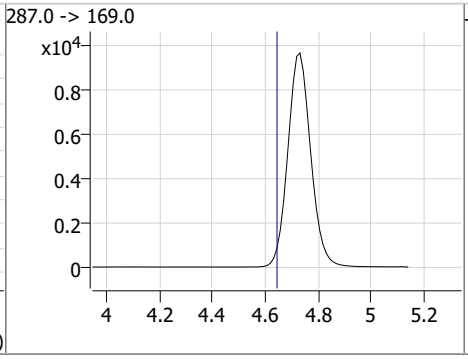


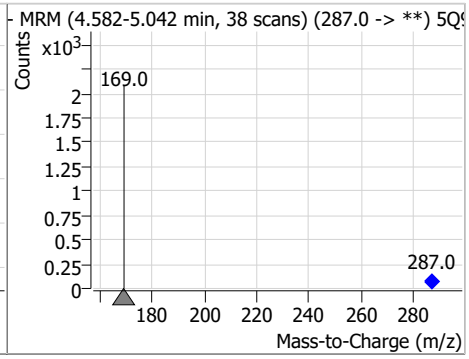




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	17.23	4.73	0.09	57795				

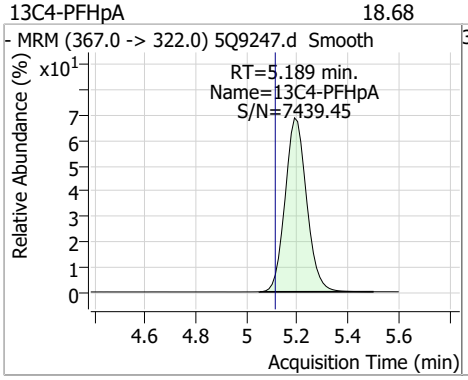


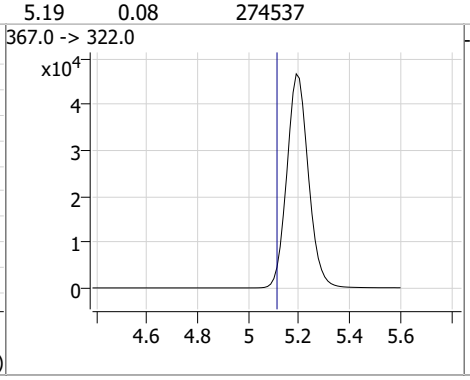


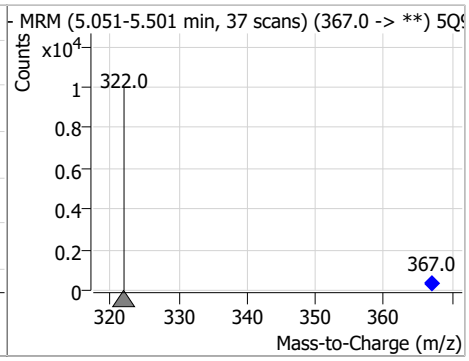


Perfluorinated Compounds by LC/MS/MS

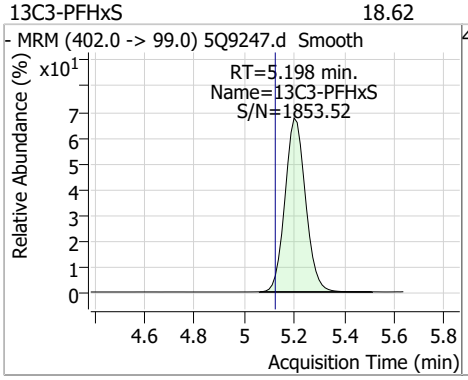
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	18.68	5.19	0.08	274537				

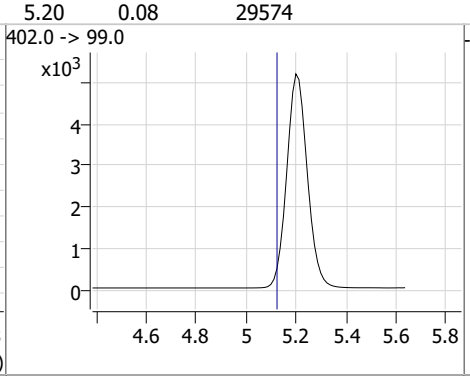


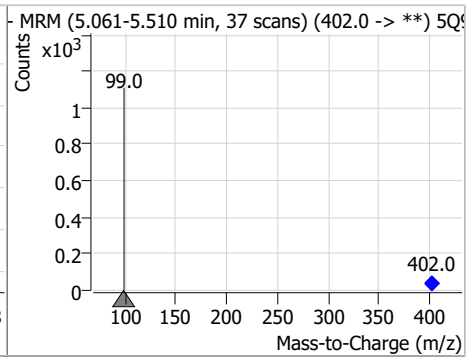




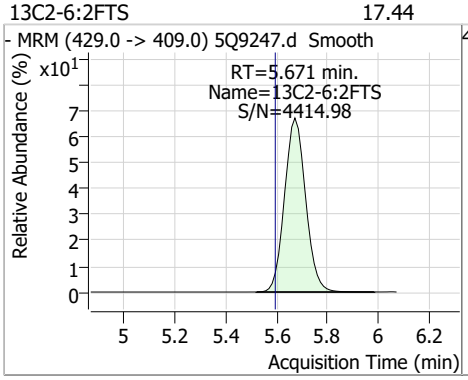
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	18.62	5.20	0.08	29574				

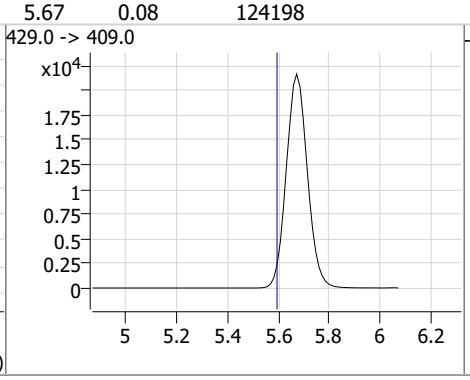


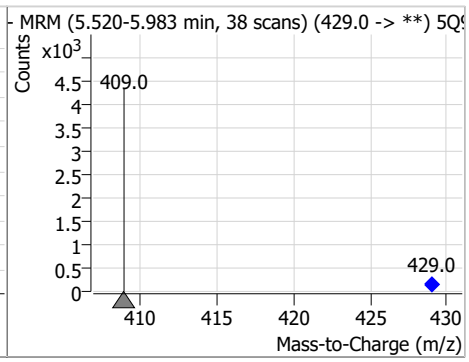




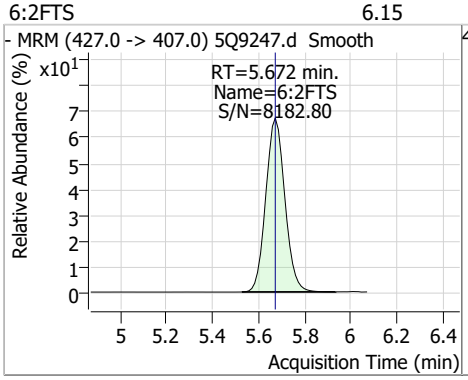
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	17.44	5.67	0.08	124198				

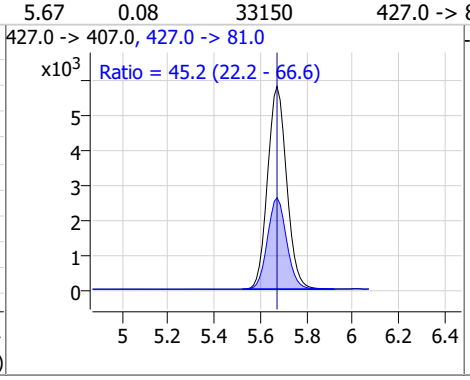


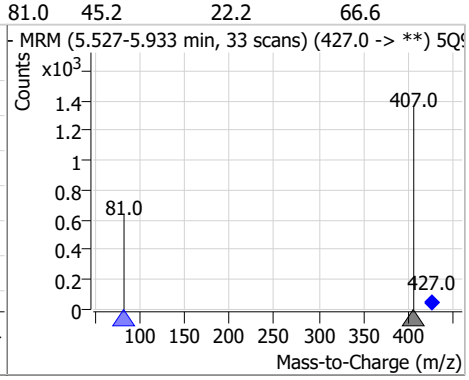




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	6.15	5.67	0.08	33150	427.0 -> 81.0	45.2	22.2	66.6

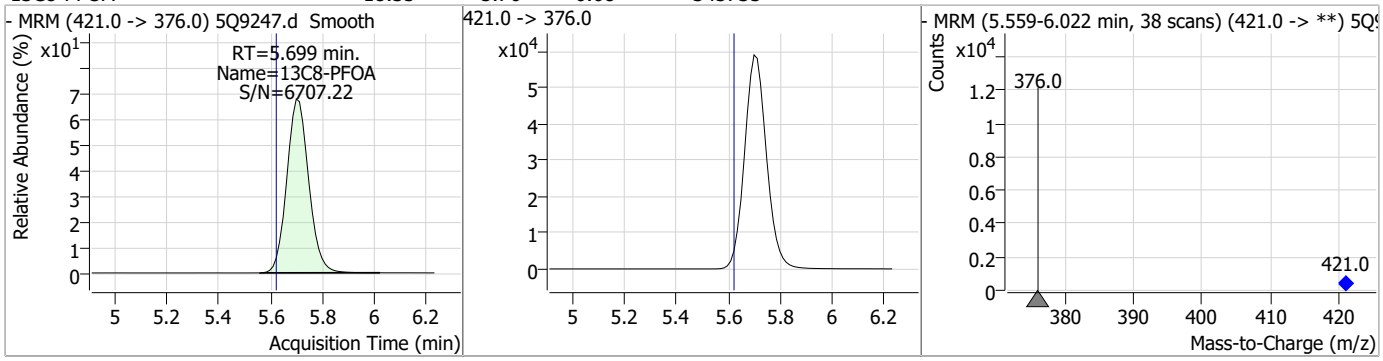




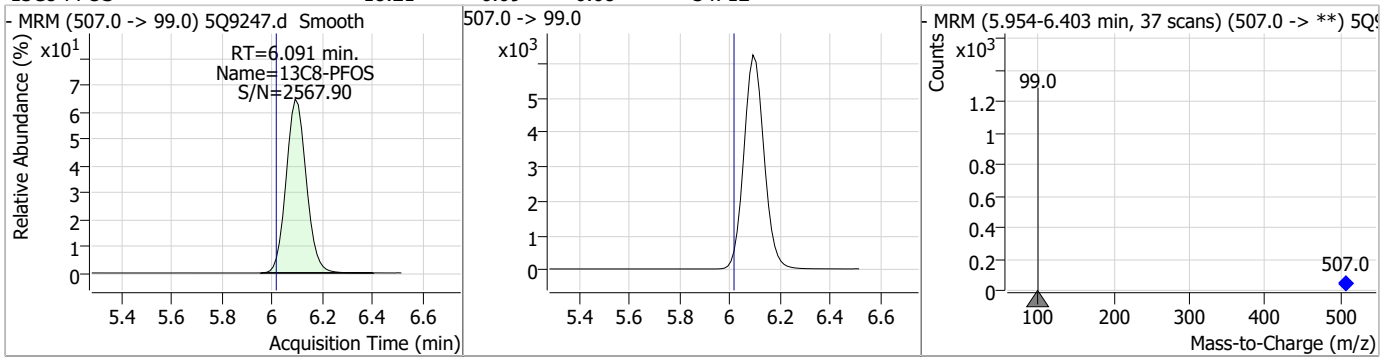


Perfluorinated Compounds by LC/MS/MS

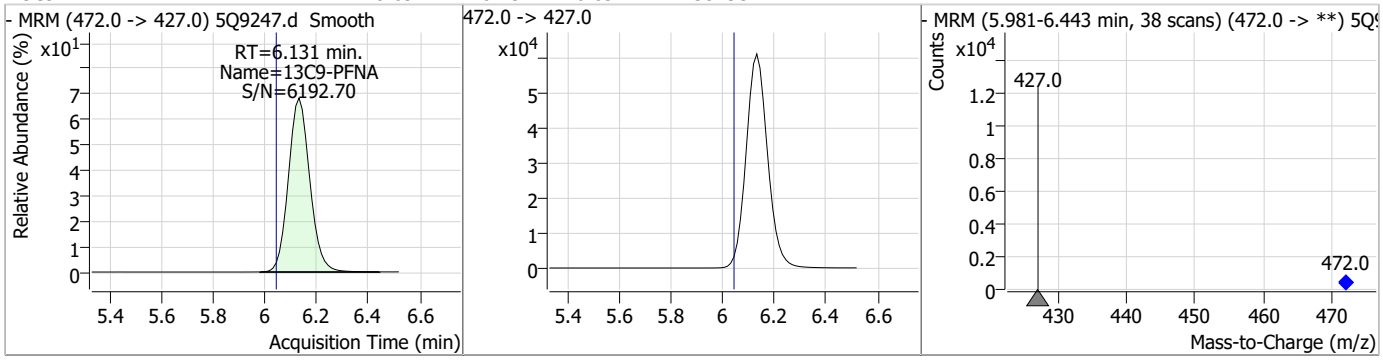
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	18.35	5.70	0.08	345735				



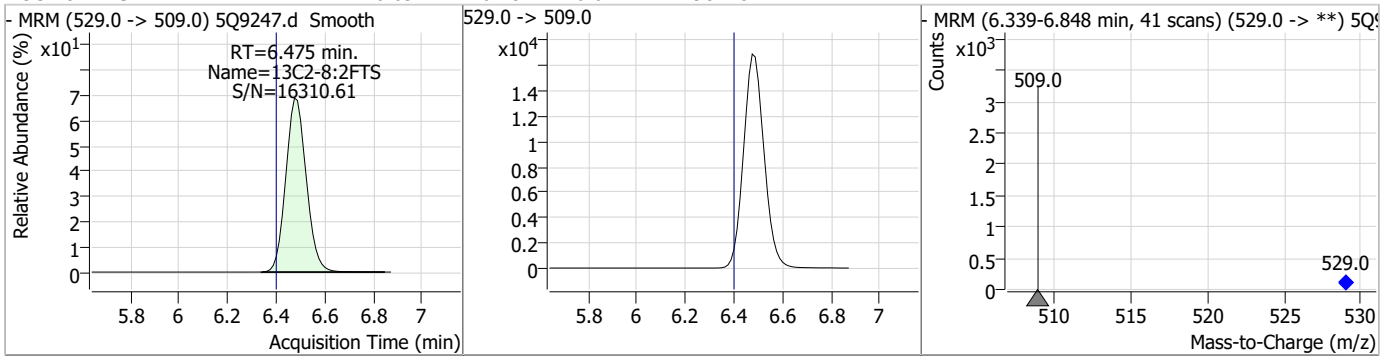
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	18.21	6.09	0.08	34712				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.69	6.13	0.09	352931				

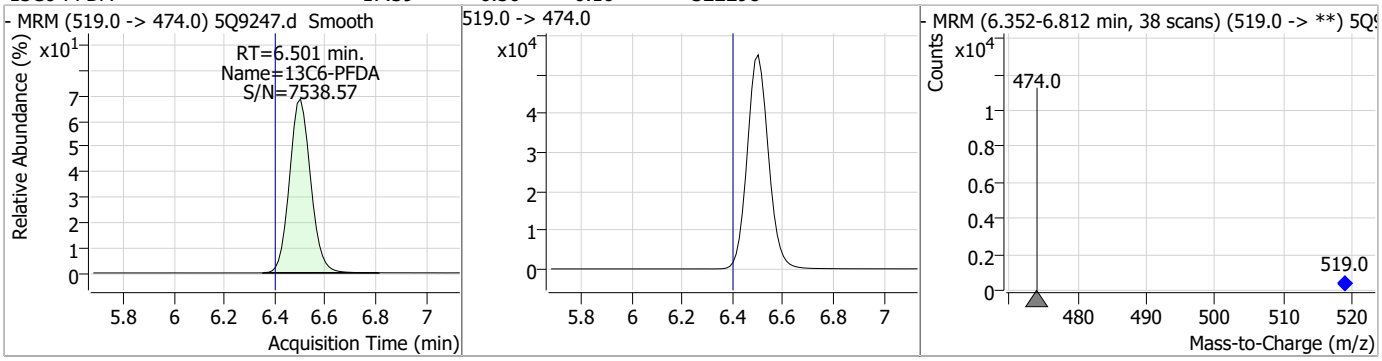


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	16.09	6.48	0.07	98778				

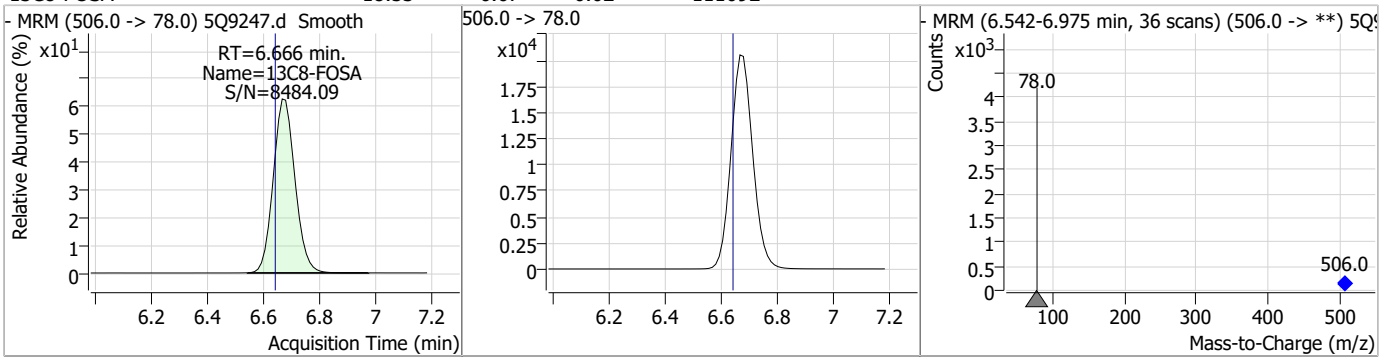


Perfluorinated Compounds by LC/MS/MS

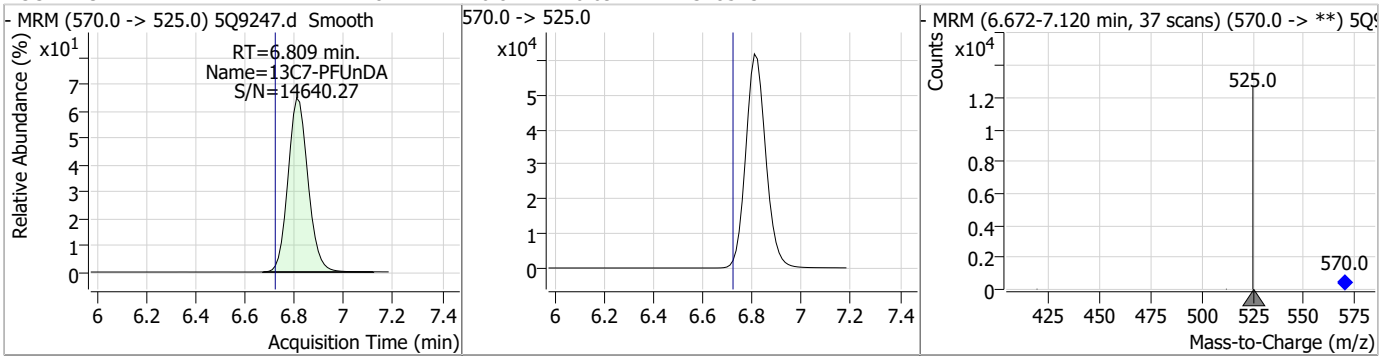
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	17.39	6.50	0.10	322298				



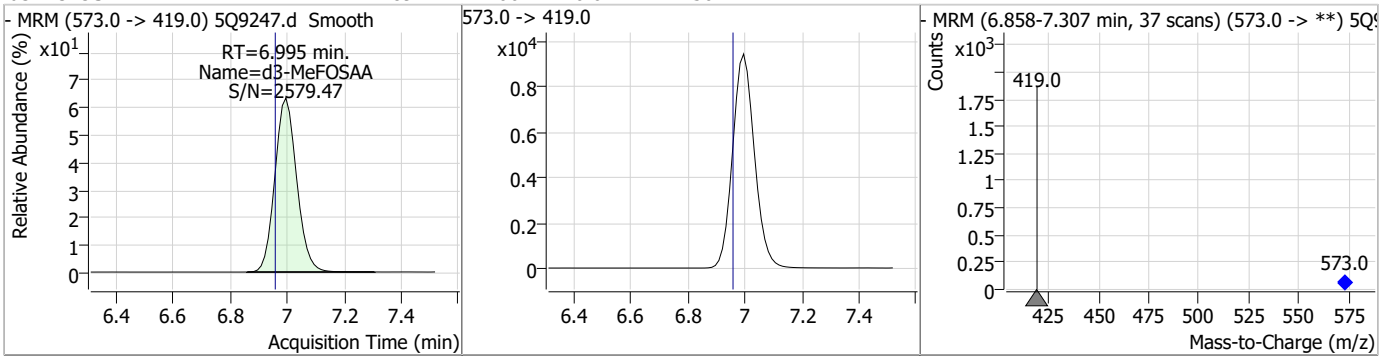
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	18.53	6.67	0.02	111092				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	18.47	6.81	0.09	348513				

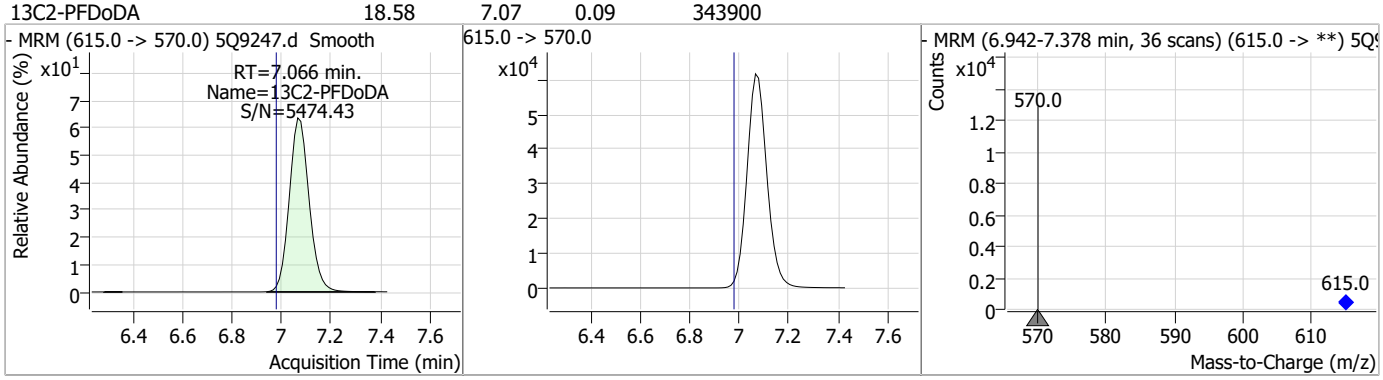


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	17.89	7.00	0.04	50141				

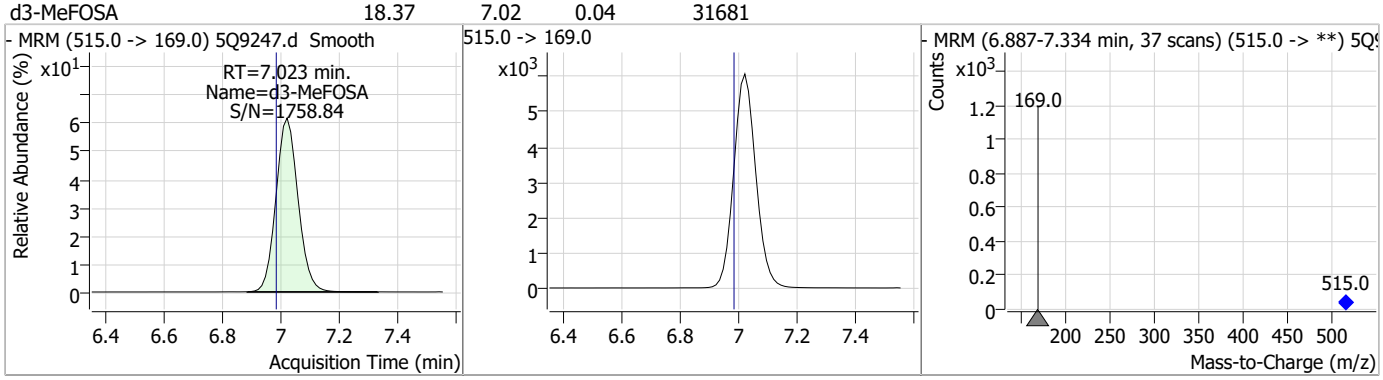


Perfluorinated Compounds by LC/MS/MS

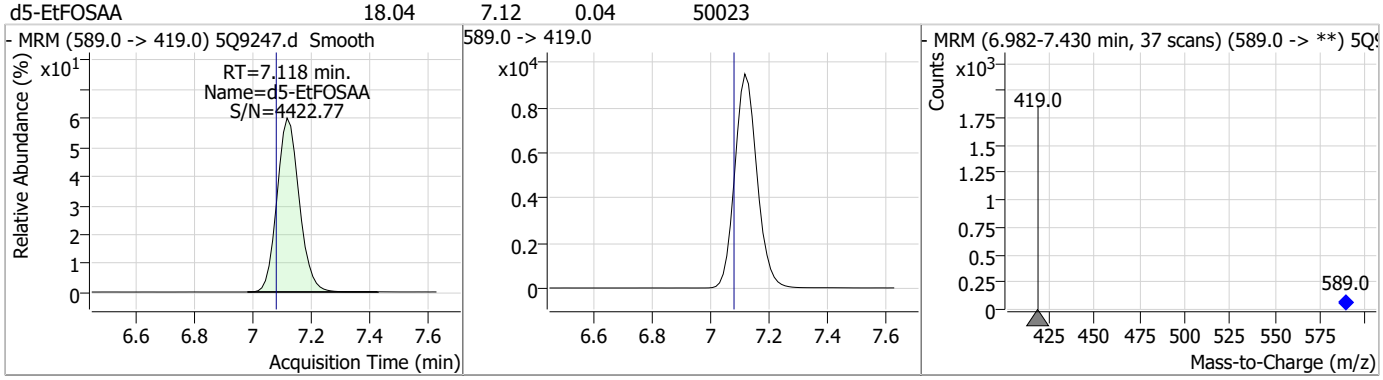
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	18.58	7.07	0.09	343900				



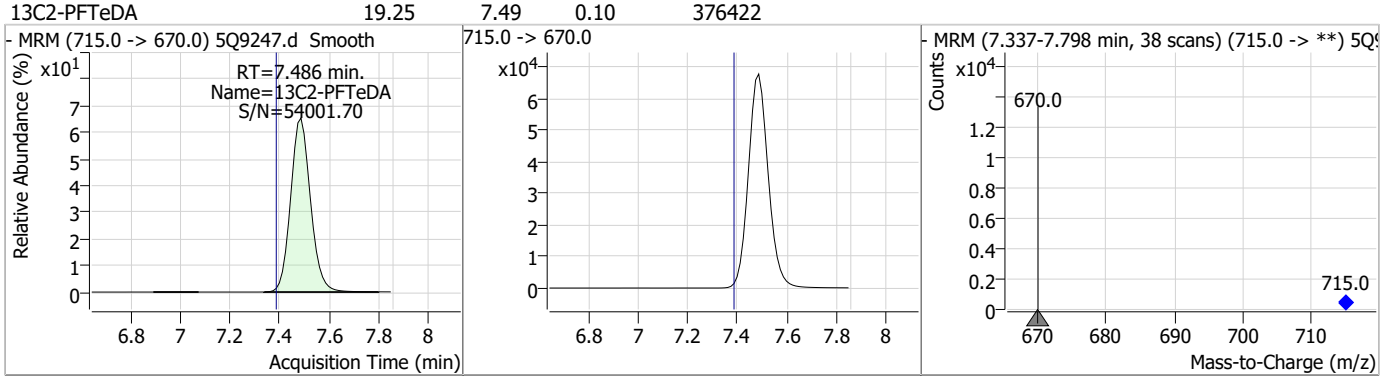
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	18.37	7.02	0.04	31681				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.04	7.12	0.04	50023				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.25	7.49	0.10	376422				



Perfluorinated Compounds by LC/MS/MS

Data File	:	5Q9061.d
Operator	:	lindsayr
Acq. Method	:	537_ID.m
Acq. Date-Time	:	12/28/2022 6:26:57 PM
Sample Name	:	op94649-mb
Vial	:	P2-A7
DA Method File	:	ID_122822_S5Q134.quantmethod.xml
Batch Name	:	s5q134.batch.bin
Sample Information	:	OP94649,S5Q134,2.00,,,1.0,1,soil

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	84802	20.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	170356	20.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	250997	20.00	µg/L	0.000
M4-PFHpA	5.738	367.0 -> 322.0	265449	20.00	µg/L	0.012
M8-PFOA	6.361	421.0 -> 376.0	353112	20.00	µg/L	0.000
M9-PFNA	6.931	472.0 -> 427.0	371310	20.00	µg/L	0.013
M6-PFDA	7.449	519.0 -> 474.0	416180	20.00	µg/L	0.013
M7-PFUnDA	8.320	570.0 -> 525.0	538998	20.00	µg/L	0.000
M2-PFDoDA	9.388	615.0 -> 570.0	384598	20.00	µg/L	0.000
M2-PFTeDA	10.912	715.0 -> 670.0	359097	20.00	µg/L	0.012
M8-FOSA	6.605	506.0 -> 78.0	69138	20.00	µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	22114	20.00	µg/L	0.000
M3-PFHxS	5.748	402.0 -> 99.0	29728	20.00	µg/L	0.015
M8-PFOS	6.891	507.0 -> 99.0	41205	20.00	µg/L	0.012
M2-4:2FTS	4.886	329.0 -> 309.0	76866	20.00	µg/L	0.000
M2-6:2FTS	6.372	429.0 -> 409.0	125102	20.00	µg/L	0.012
M2-8:2FTS	7.512	529.0 -> 509.0	125725	20.00	µg/L	0.000
M3-MeFOSAA	7.047	573.0 -> 419.0	35777	20.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	51104	20.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	20429	20.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	34347	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	76866	15.96	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 79.8%		
13C2-6:2FTS	6.372	429.0 -> 409.0	125102	16.32	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.6%		
13C2-8:2FTS	7.512	529.0 -> 509.0	125725	17.41	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.1%		
13C2-PFDoDA	9.388	615.0 -> 570.0	384598	17.10	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.5%		
13C2-PFTeDA	10.912	715.0 -> 670.0	359097	18.34	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.7%		
13C3-PFBS	4.124	302.0 -> 99.0	22114	17.02	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.1%		
13C3-PFHxS	5.748	402.0 -> 99.0	29728	16.61	µg/L	0.015
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.1%		
13C4-PFBA	2.400	217.0 -> 172.0	84802	16.30	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.5%		
13C4-PFHpA	5.738	367.0 -> 322.0	265449	17.27	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.3%		
13C5-PFHxA	4.965	318.0 -> 273.0	250997	16.69	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.4%		
13C5-PFPeA	3.919	268.0 -> 223.0	170356	16.24	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.2%		
13C6-PFDA	7.449	519.0 -> 474.0	416180	17.90	µg/L	0.013

Perfluorinated Compounds by LC/MS/MS

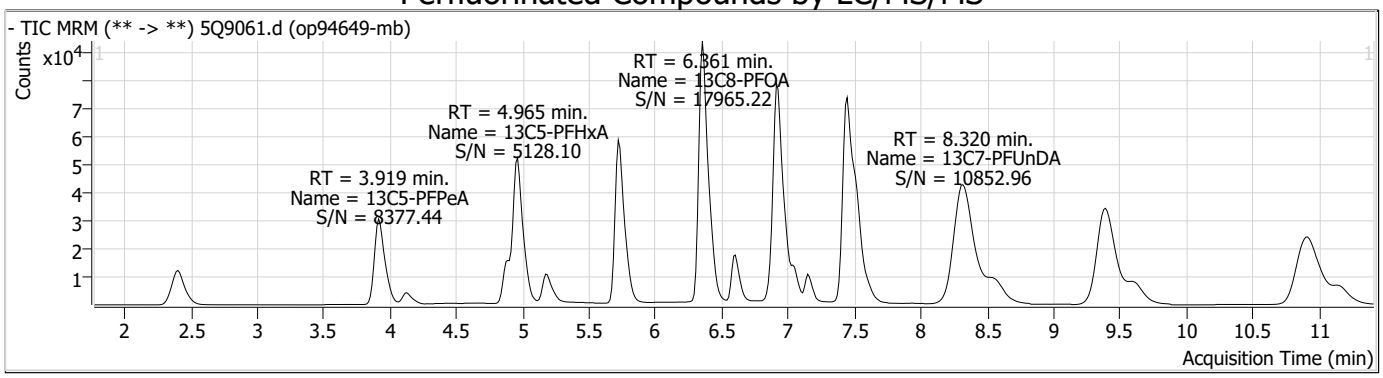
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.5%	
13C7-PFUnDA	8.320	570.0 -> 525.0	538998	18.42 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.1%	
13C8-FOSA	6.605	506.0 -> 78.0	69138	14.32 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 71.6%	
13C8-PFOA	6.361	421.0 -> 376.0	353112	17.52 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.6%	
13C8-PFOS	6.891	507.0 -> 99.0	41205	17.28 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.4%	
13C9-PFNA	6.931	472.0 -> 427.0	371310	17.65 µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.3%	
d3-MeFOSAA	7.047	573.0 -> 419.0	35777	20.14 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.7%	
13C3-HFPO-DA	5.194	287.0 -> 169.0	51104	15.45 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 77.2%	
d3-MeFOSA	6.964	515.0 -> 169.0	20429	13.48 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 67.4%	
d5-EtFOSAA	7.157	589.0 -> 419.0	34347	18.62 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.1%	
Target Compounds					QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.	
		327.0 -> 81.0			
6:2FTS	-	427.0 -> 407.0	-	N.D.	
		427.0 -> 81.0			
8:2FTS	-	527.0 -> 507.0	-	N.D.	
		527.0 -> 81.0			
EtFOSAA	7.158	584.0 -> 419.0	76	0.07 µg/L	97
		584.0 -> 483.0	47		
FOSA	-	498.0 -> 78.0	-	N.D.	
		498.0 -> 478.0			
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
		570.0 -> 512.0			
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0	-	N.D.	
		299.0 -> 99.0			
PFDA	-	513.0 -> 469.0	-	N.D.	
		513.0 -> 219.0			
PFDoDA	-	613.0 -> 569.0	-	N.D.	
		613.0 -> 319.0			
PFDS	-	599.0 -> 80.0	-	N.D.	
		599.0 -> 99.0			
PFHpA	-	363.0 -> 319.0	-	N.D.	
		363.0 -> 169.0			
PFHpS	-	449.0 -> 80.0	-	N.D.	
		449.0 -> 99.0			
PFHxA	-	313.0 -> 269.0	-	N.D.	
		313.0 -> 119.0			
PFHxS	-	399.0 -> 80.0	-	N.D.	
		399.0 -> 99.0			
PFNA	-	463.0 -> 419.0	-	N.D.	
		463.0 -> 219.0			
PFNS	-	549.0 -> 80.0	-	N.D.	
		549.0 -> 99.0			
PFOA	-	413.0 -> 369.0	-	N.D.	
		413.0 -> 169.0			
PFOS	-	499.0 -> 80.0	-	N.D.	

Perfluorinated Compounds by LC/MS/MS

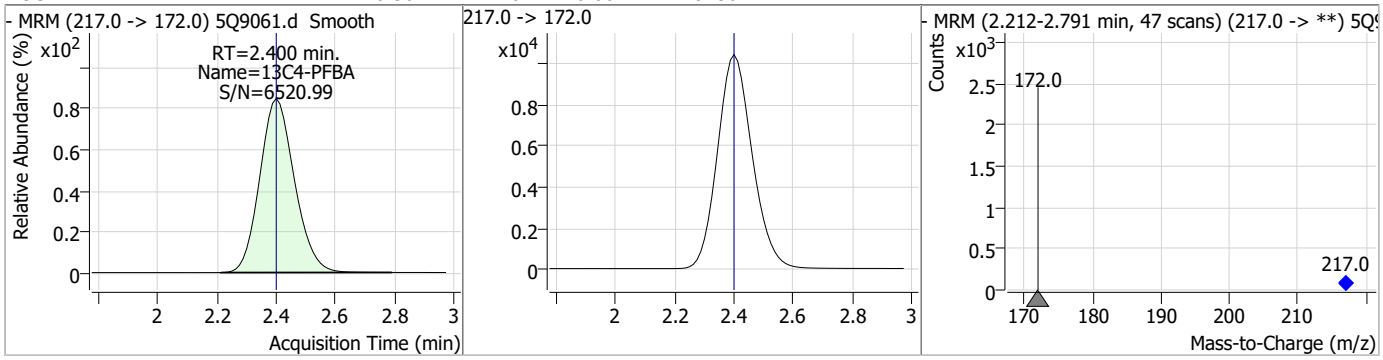
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0				
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFPeS	-	349.0 -> 80.0	-	N.D.		
		349.0 -> 99.0				
PFTeDA	-	713.0 -> 669.0	-	N.D.		
		713.0 -> 219.0				
PFTrDA	-	663.0 -> 619.0	-	N.D.		
		663.0 -> 369.0				
PFUnDA	-	563.0 -> 519.0	-	N.D.		
		563.0 -> 269.0				
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
		633.0 -> 453.0				
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
		533.0 -> 353.0				
ADONA	-	377.0 -> 251.0	-	N.D.		
		377.0 -> 85.0				
HFPO-DA	-	329.0 -> 169.0	-	N.D.		
		285.0 -> 169.0				
MeFOSA	-	512.0 -> 169.0	-	N.D.		
		512.0 -> 219.0				
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	-	298.0 -> 78.0	-	N.D.		
		298.0 -> 64.0				
FHxSA	-	398.0 -> 78.0	-	N.D.		
		398.0 -> 64.0				

 # = Qualifier out of range, m = manually integrated, + = Area summed

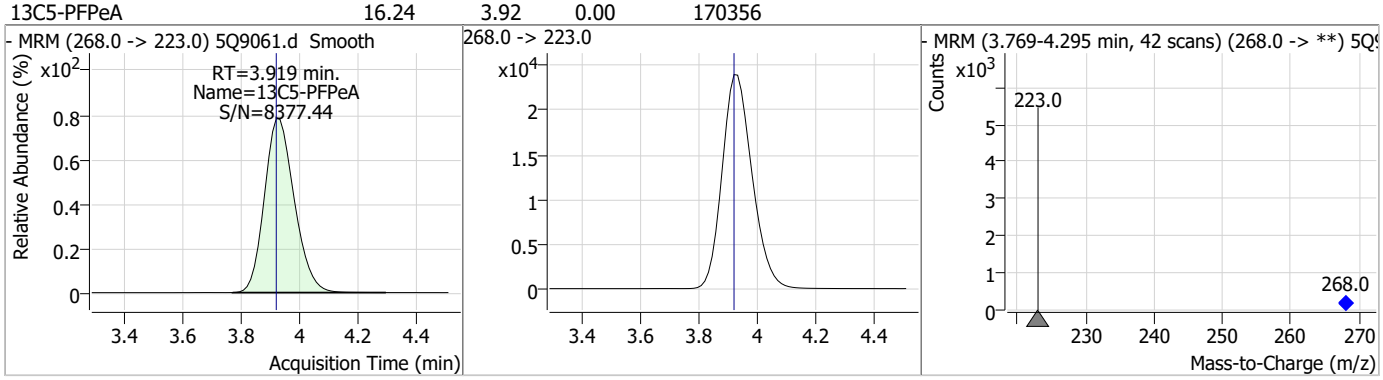
Perfluorinated Compounds by LC/MS/MS



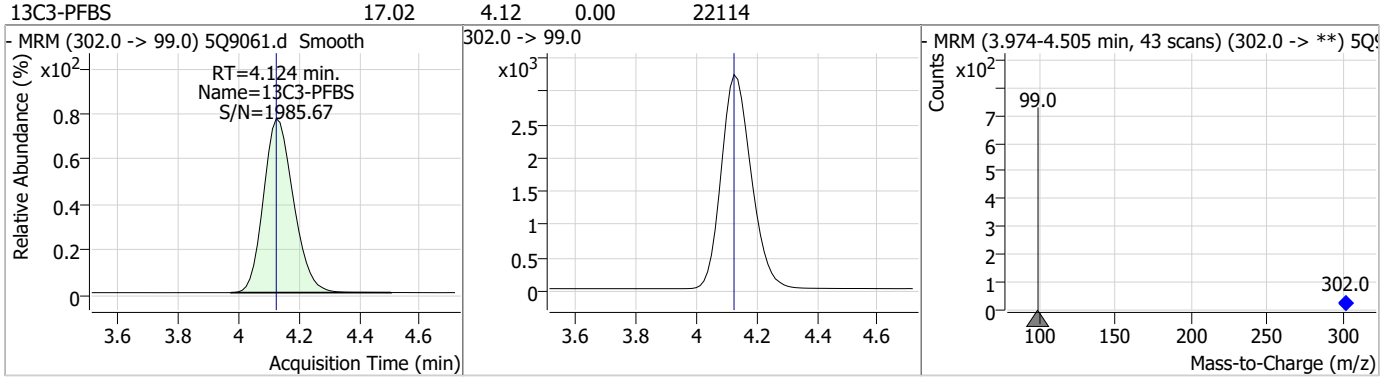
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	16.30	2.40	0.00	84802				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	16.24	3.92	0.00	170356				

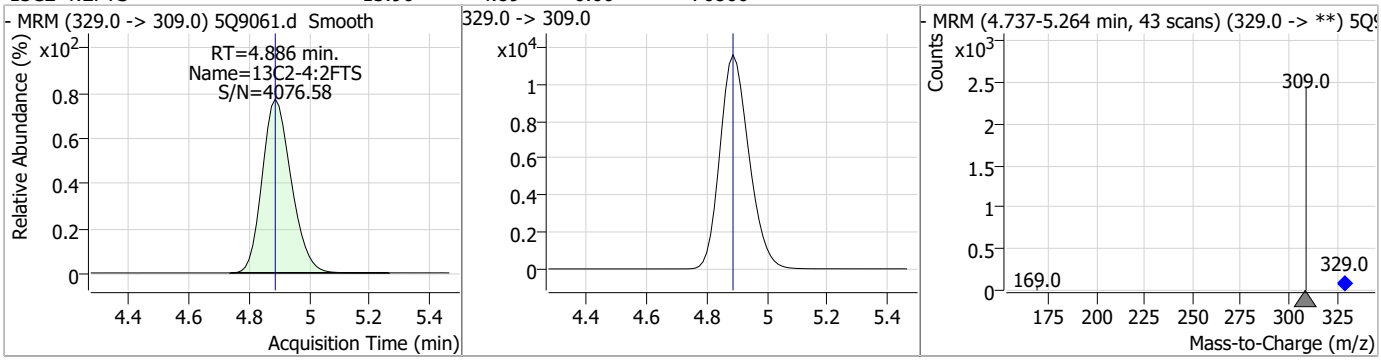


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	17.02	4.12	0.00	22114				

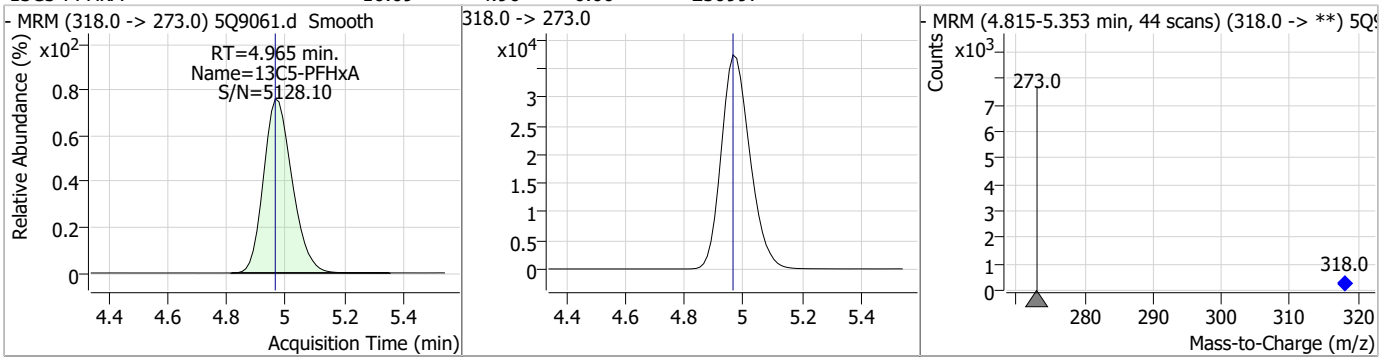


Perfluorinated Compounds by LC/MS/MS

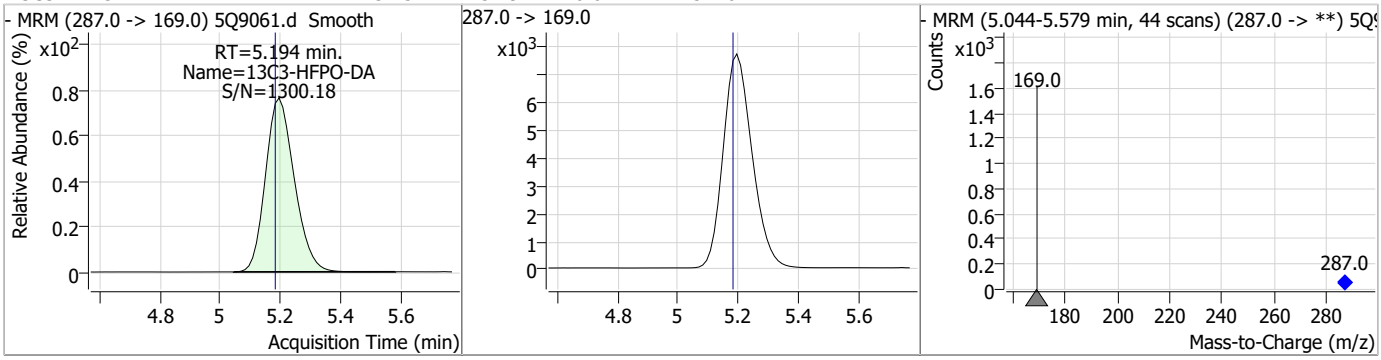
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	15.96	4.89	0.00	76866				



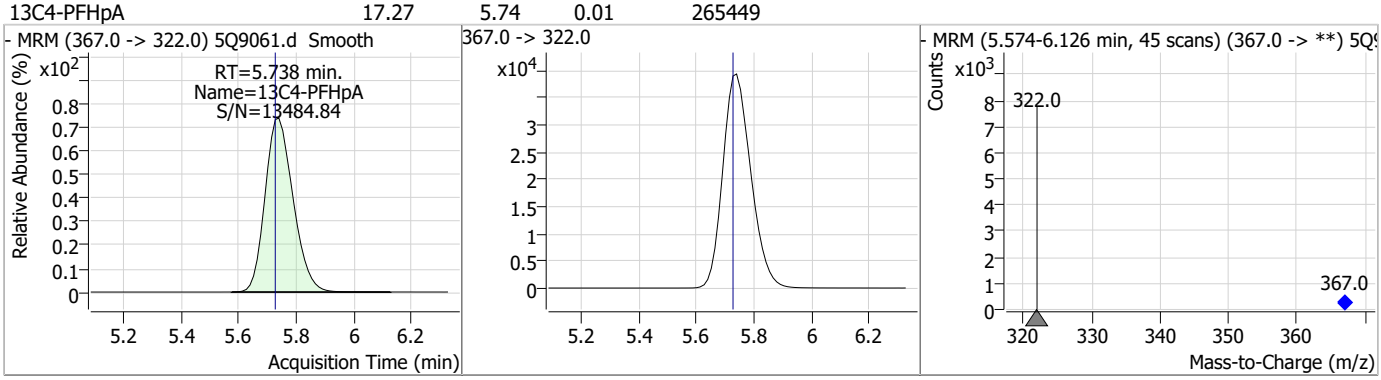
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	16.69	4.96	0.00	250997				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	15.45	5.19	0.01	51104				

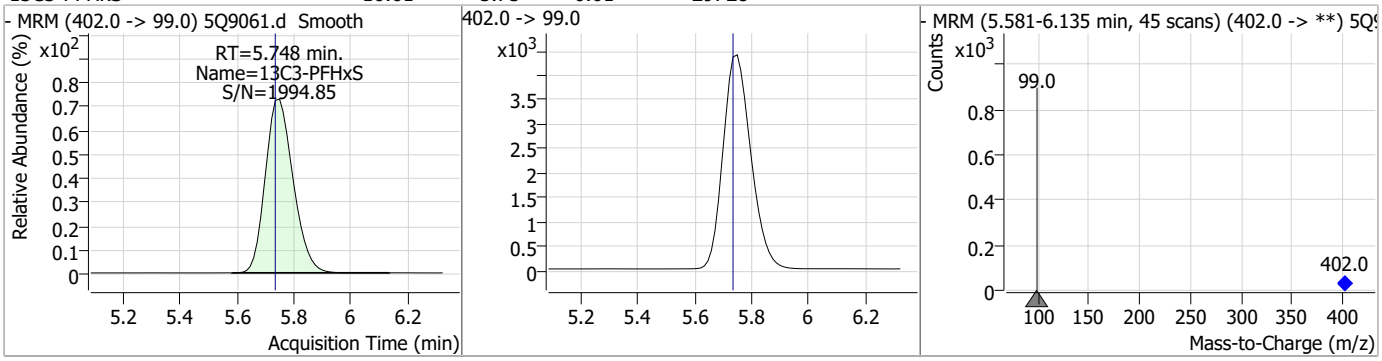


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	17.27	5.74	0.01	265449				

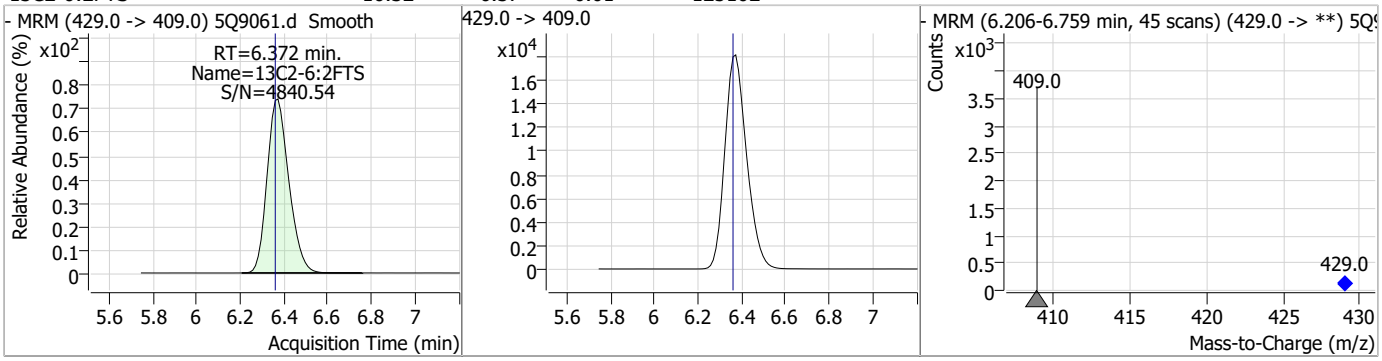


Perfluorinated Compounds by LC/MS/MS

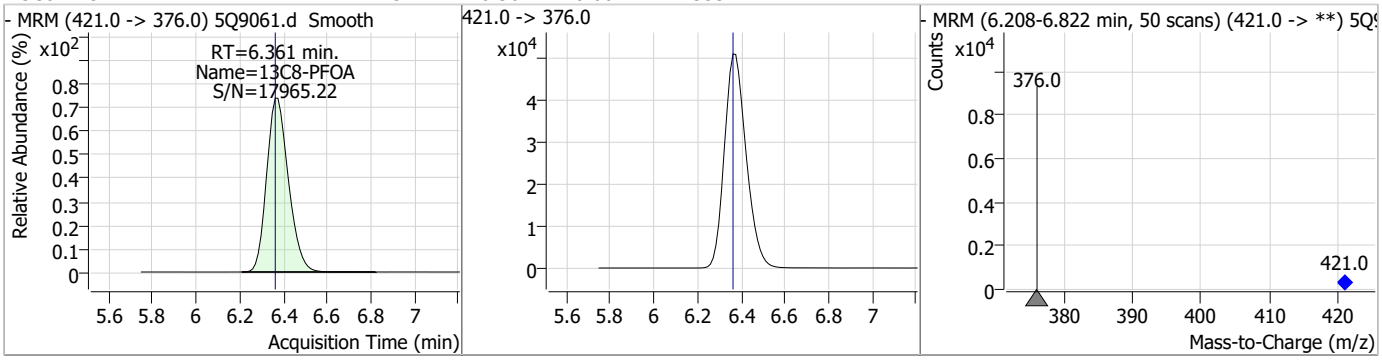
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	16.61	5.75	0.01	29728				



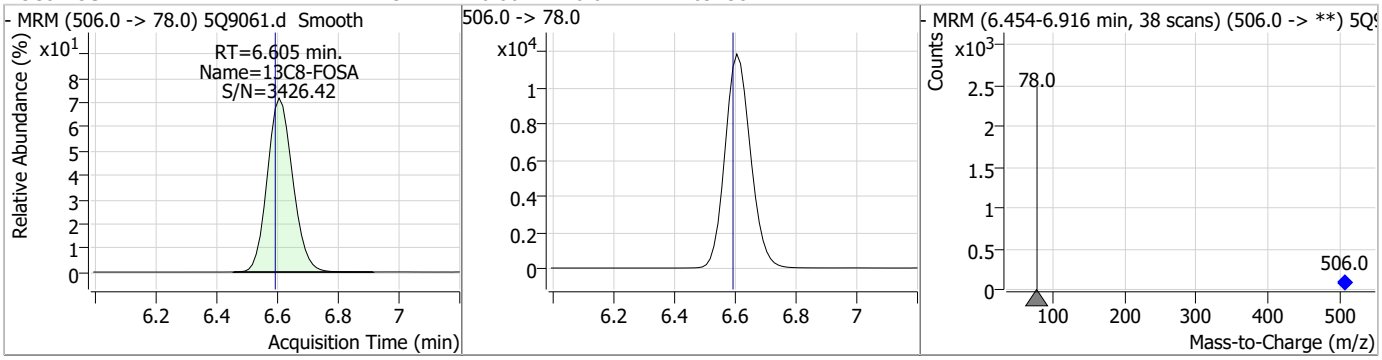
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	16.32	6.37	0.01	125102				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	17.52	6.36	0.00	353112				

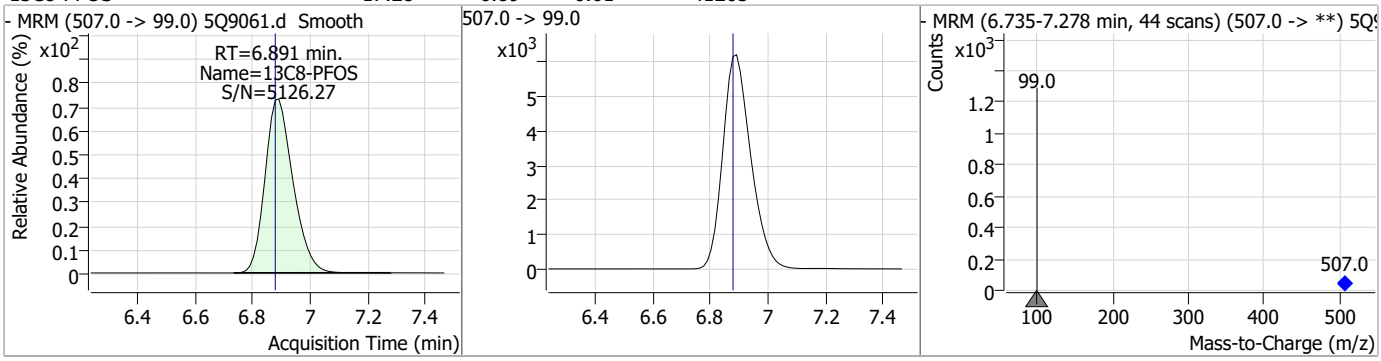


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	14.32	6.60	0.01	69138				

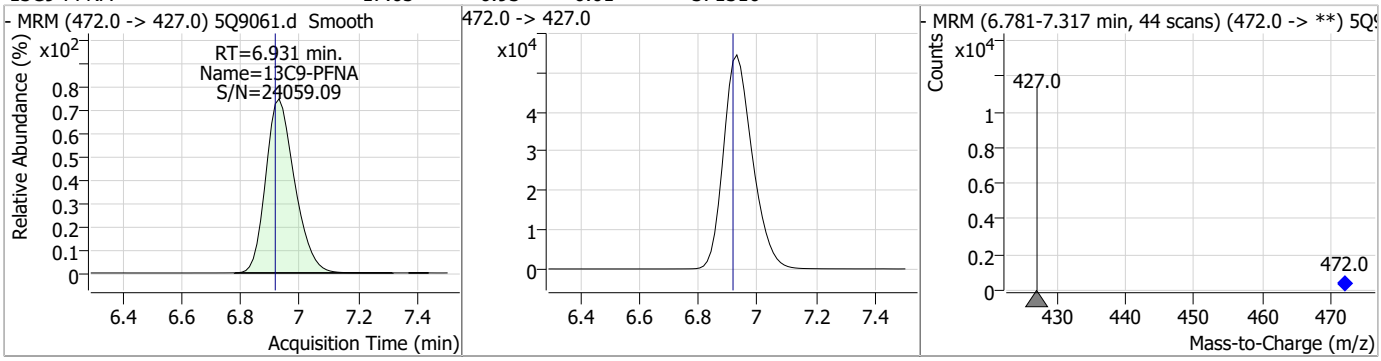


Perfluorinated Compounds by LC/MS/MS

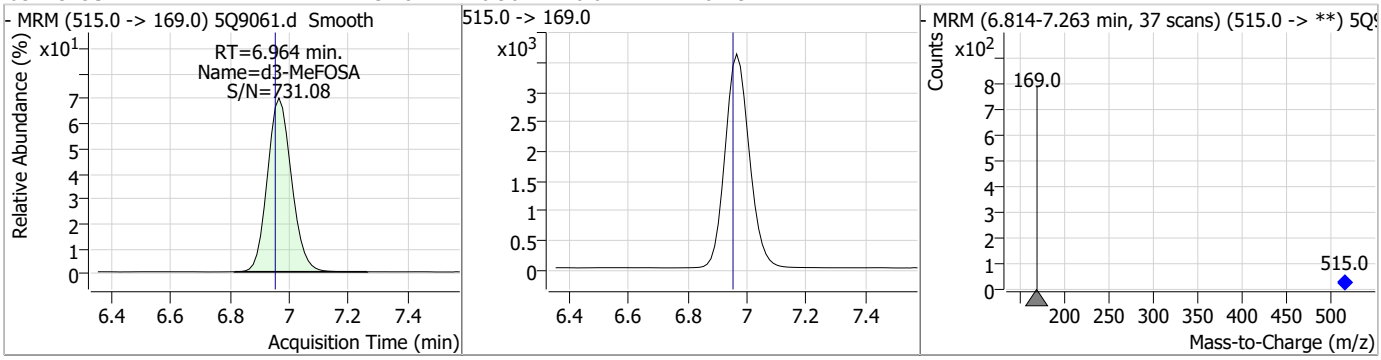
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	17.28	6.89	0.01	41205				



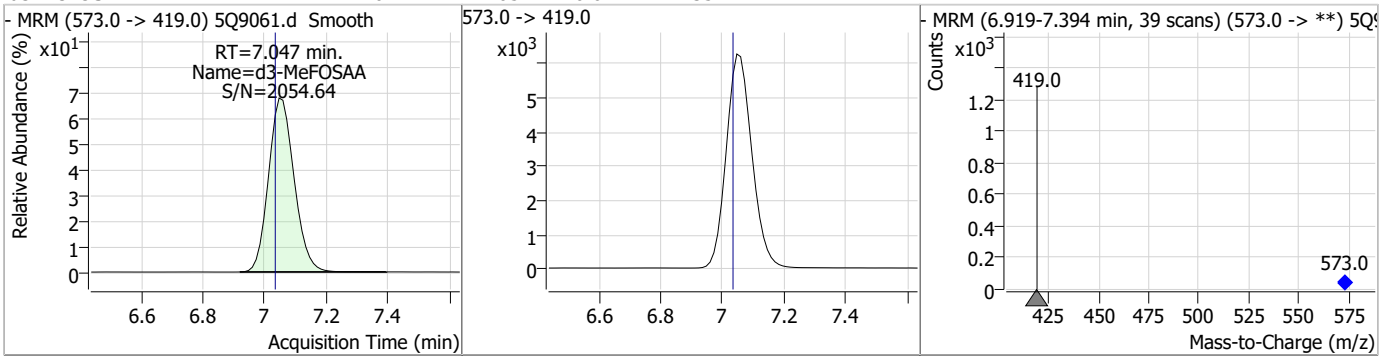
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	17.65	6.93	0.01	371310				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	13.48	6.96	0.01	20429				

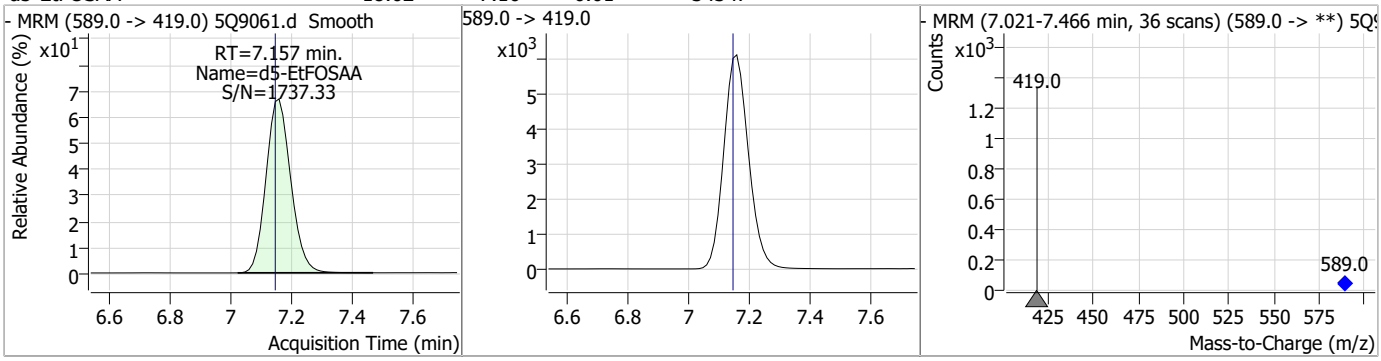


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.14	7.05	0.01	35777				

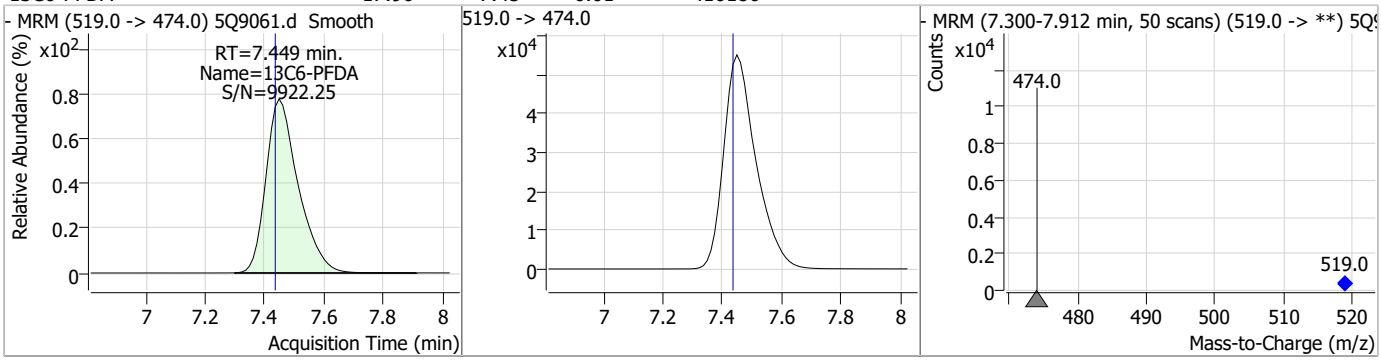


Perfluorinated Compounds by LC/MS/MS

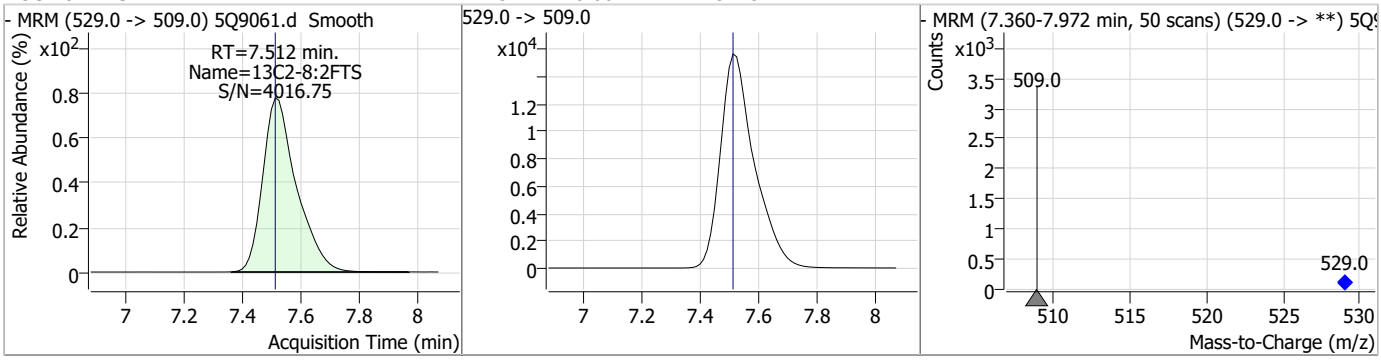
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.62	7.16	0.01	34347				



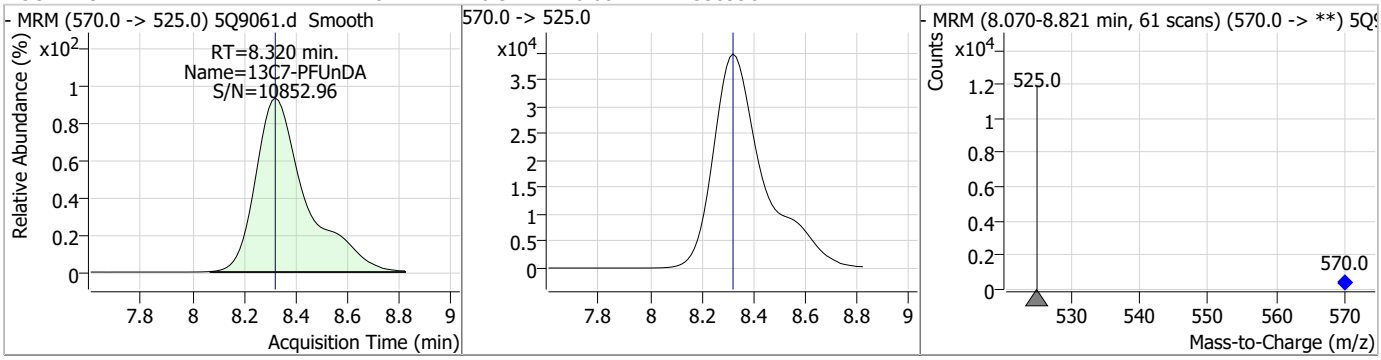
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	17.90	7.45	0.01	416180				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	17.41	7.51	0.00	125725				

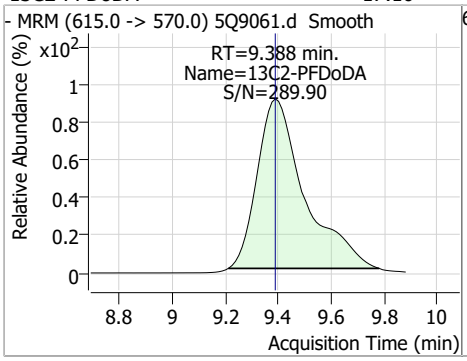


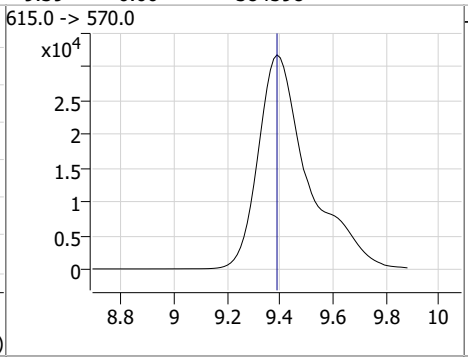
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	18.42	8.32	0.00	538998				

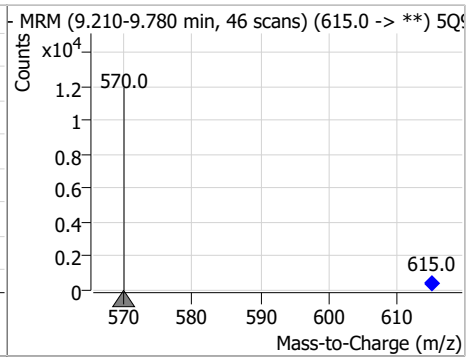


Perfluorinated Compounds by LC/MS/MS

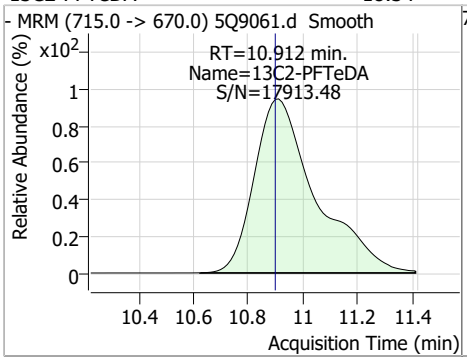
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	17.10	9.39	0.00	384598				

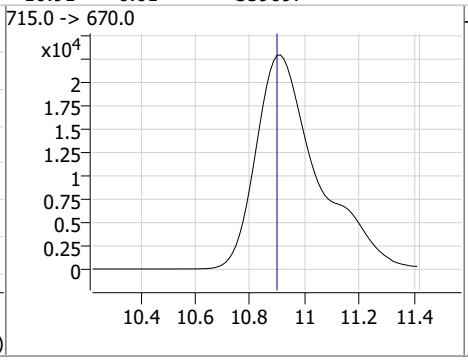


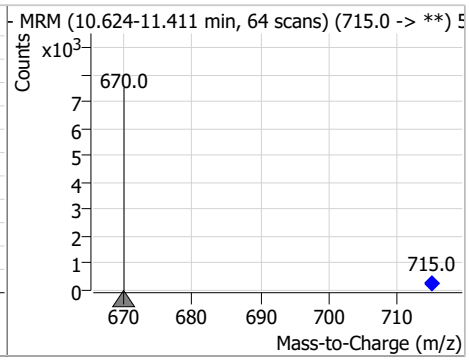




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	18.34	10.91	0.01	359097				







Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9047.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 2:45:17 PM
Sample Name : iblk
Vial : P1-A1
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	95337	20.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	192981	20.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	276523	20.00	µg/L	0.000
M4-PFHpA	5.726	367.0 -> 322.0	283134	20.00	µg/L	0.000
M8-PFOA	6.348	421.0 -> 376.0	372236	20.00	µg/L	-0.014
M9-PFNA	6.918	472.0 -> 427.0	384970	20.00	µg/L	0.000
M6-PFDA	7.436	519.0 -> 474.0	431933	20.00	µg/L	0.000
M7-PFUnDA	8.320	570.0 -> 525.0	509235	20.00	µg/L	0.000
M2-PFDoDA	9.388	615.0 -> 570.0	414447	20.00	µg/L	0.000
M2-PFTeDA	10.912	715.0 -> 670.0	346506	20.00	µg/L	0.012
M8-FOSA	6.580	506.0 -> 78.0	88028	20.00	µg/L	-0.012
M3-PFBS	4.124	302.0 -> 99.0	24216	20.00	µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	32932	20.00	µg/L	0.000
M8-PFOS	6.866	507.0 -> 99.0	44306	20.00	µg/L	-0.013
M2-4:2FTS	4.874	329.0 -> 309.0	81948	20.00	µg/L	-0.012
M2-6:2FTS	6.346	429.0 -> 409.0	133802	20.00	µg/L	-0.014
M2-8:2FTS	7.498	529.0 -> 509.0	127240	20.00	µg/L	-0.013
M3-MeFOSAA	7.034	573.0 -> 419.0	31047	20.00	µg/L	0.000
M3-HFPO-DA	5.182	287.0 -> 169.0	59558	20.00	µg/L	0.000
M3-MeFOSA	6.939	515.0 -> 169.0	28354	20.00	µg/L	-0.012
M5-EtFOSAA	7.132	589.0 -> 419.0	33797	20.00	µg/L	-0.012
System Monitoring Compounds						
13C2-4:2FTS	4.874	329.0 -> 309.0	81948	17.02	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.1%		
13C2-6:2FTS	6.346	429.0 -> 409.0	133802	17.45	µg/L	-0.014
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.3%		
13C2-8:2FTS	7.498	529.0 -> 509.0	127240	17.62	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.1%		
13C2-PFDoDA	9.388	615.0 -> 570.0	414447	18.43	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.2%		
13C2-PFTeDA	10.912	715.0 -> 670.0	346506	17.70	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.5%		
13C3-PFBS	4.124	302.0 -> 99.0	24216	18.63	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.2%		
13C3-PFHxS	5.733	402.0 -> 99.0	32932	18.40	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.0%		
13C4-PFBA	2.400	217.0 -> 172.0	95337	18.32	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.6%		
13C4-PFHpA	5.726	367.0 -> 322.0	283134	18.42	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.1%		
13C5-PFHxA	4.965	318.0 -> 273.0	276523	18.38	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.9%		
13C5-PFPeA	3.919	268.0 -> 223.0	192981	18.40	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.0%		
13C6-PFDA	7.436	519.0 -> 474.0	431933	18.58	µg/L	0.000

Perfluorinated Compounds by LC/MS/MS

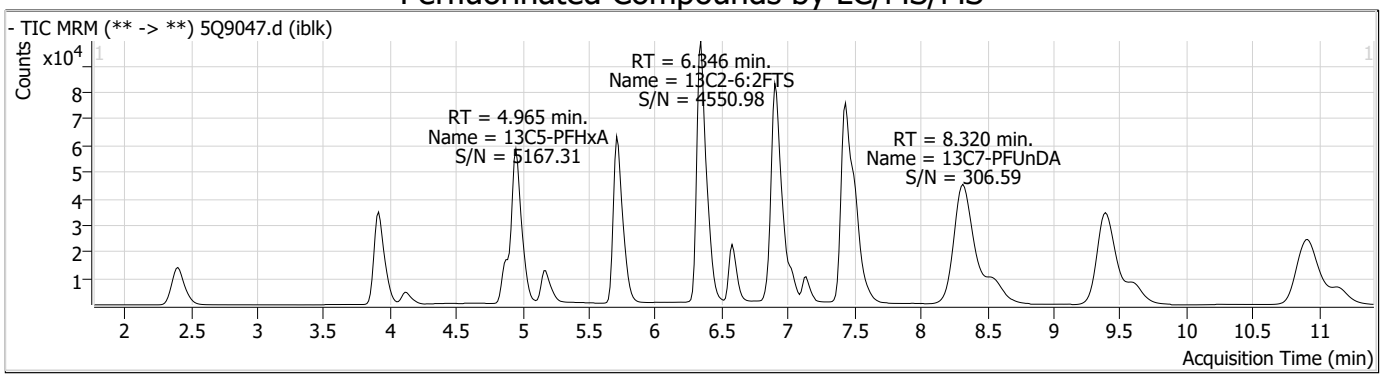
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.9%			
13C7-PFUnDA	8.320	570.0 -> 525.0	509235	17.40	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.0%			
13C8-FOSA	6.580	506.0 -> 78.0	88028	18.23	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.1%			
13C8-PFOA	6.348	421.0 -> 376.0	372236	18.47	µg/L		-0.014
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.4%			
13C8-PFOS	6.866	507.0 -> 99.0	44306	18.58	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.9%			
13C9-PFNA	6.918	472.0 -> 427.0	384970	18.30	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.5%			
d3-MeFOSAA	7.034	573.0 -> 419.0	31047	17.47	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.4%			
13C3-HFPO-DA	5.182	287.0 -> 169.0	59558	18.00	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.0%			
d3-MeFOSA	6.939	515.0 -> 169.0	28354	18.72	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.6%			
d5-EtFOSAA	7.132	589.0 -> 419.0	33797	18.32	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.6%			
Target Compounds							QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.			
		327.0 -> 81.0					
6:2FTS	-	427.0 -> 407.0	-	N.D.			
		427.0 -> 81.0					
8:2FTS	-	527.0 -> 507.0	-	N.D.			
		527.0 -> 81.0					
EtFOSAA	7.145	584.0 -> 419.0	224	0.20	µg/L	m	74
		584.0 -> 483.0	97				
FOSA	-	498.0 -> 78.0	-	N.D.			
		498.0 -> 478.0					
MeFOSAA	7.035	570.0 -> 419.0	249	0.20	µg/L		94
		570.0 -> 512.0	93				
PFBA	-	213.0 -> 169.0	-	N.D.			
PFBS	-	299.0 -> 80.0	-	N.D.			
		299.0 -> 99.0					
PFDA	-	513.0 -> 469.0	-	N.D.			
		513.0 -> 219.0					
PFDoDA	-	613.0 -> 569.0	-	N.D.			
		613.0 -> 319.0					
PFDS	-	599.0 -> 80.0	-	N.D.			
		599.0 -> 99.0					
PFHpA	-	363.0 -> 319.0	-	N.D.			
		363.0 -> 169.0					
PFHpS	-	449.0 -> 80.0	-	N.D.			
		449.0 -> 99.0					
PFHxA	-	313.0 -> 269.0	-	N.D.			
		313.0 -> 119.0					
PFHxS	-	399.0 -> 80.0	-	N.D.			
		399.0 -> 99.0					
PFNA	-	463.0 -> 419.0	-	N.D.			
		463.0 -> 219.0					
PFNS	-	549.0 -> 80.0	-	N.D.			
		549.0 -> 99.0					
PFOA	-	413.0 -> 369.0	-	N.D.			
		413.0 -> 169.0					
PFOS	-	499.0 -> 80.0	-	N.D.			

Perfluorinated Compounds by LC/MS/MS

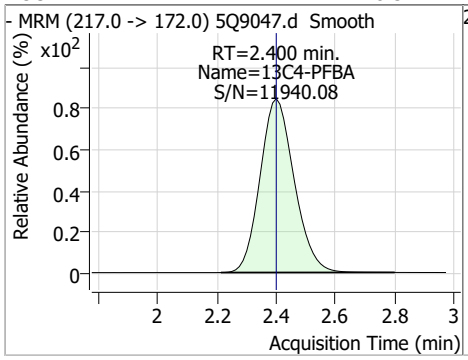
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0				
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFPeS	-	349.0 -> 80.0	-	N.D.		
		349.0 -> 99.0				
PFTeDA	-	713.0 -> 669.0	-	N.D.		
		713.0 -> 219.0				
PFTrDA	-	663.0 -> 619.0	-	N.D.		
		663.0 -> 369.0				
PFUnDA	-	563.0 -> 519.0	-	N.D.		
		563.0 -> 269.0				
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
		633.0 -> 453.0				
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
		533.0 -> 353.0				
ADONA	-	377.0 -> 251.0	-	N.D.		
		377.0 -> 85.0				
HFPO-DA	-	329.0 -> 169.0	-	N.D.		
		285.0 -> 169.0				
MeFOSA	-	512.0 -> 169.0	-	N.D.		
		512.0 -> 219.0				
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	-	298.0 -> 78.0	-	N.D.		
		298.0 -> 64.0				
FHxSA	-	398.0 -> 78.0	-	N.D.		
		398.0 -> 64.0				

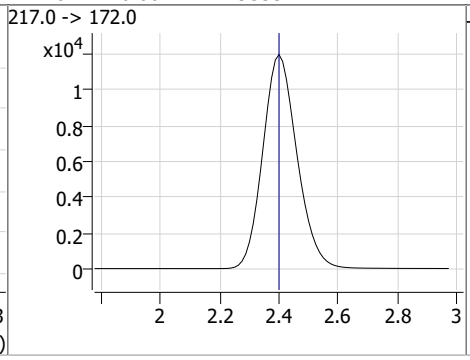
 # = Qualifier out of range, m = manually integrated, + = Area summed

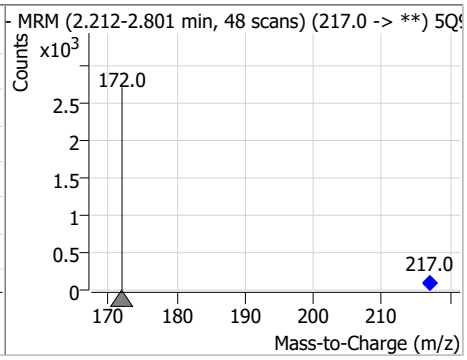
Perfluorinated Compounds by LC/MS/MS



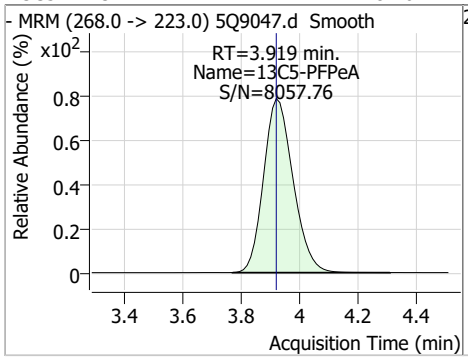
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.32	2.40	0.00	95337				

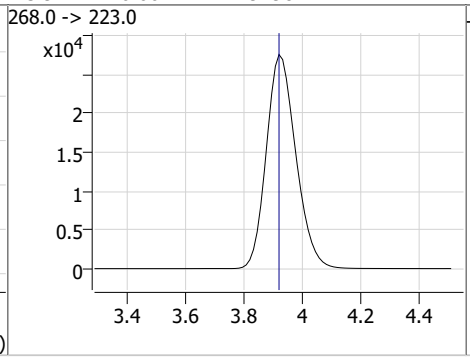


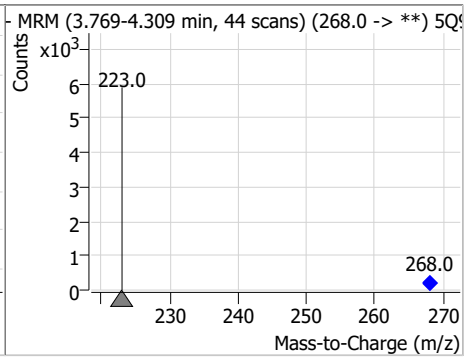




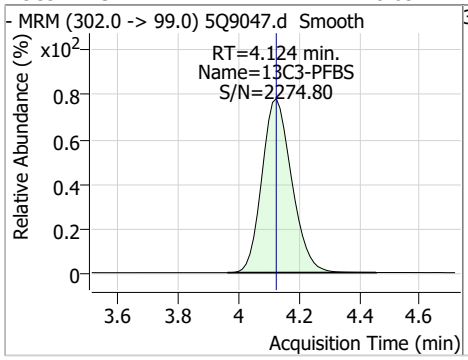
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	18.40	3.92	0.00	192981				

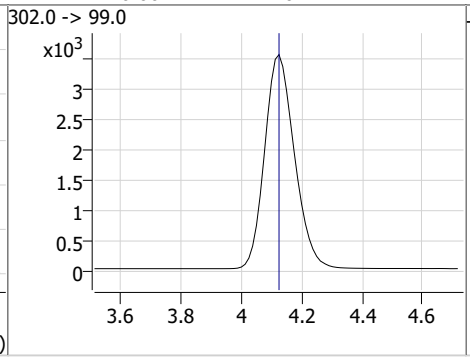


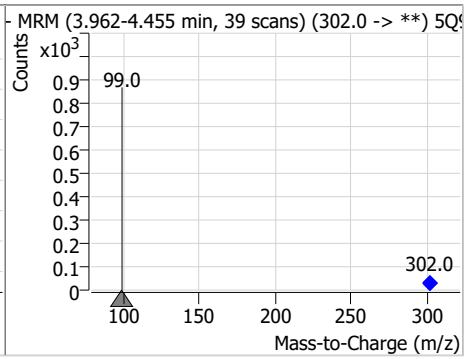




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	18.63	4.12	0.00	24216				

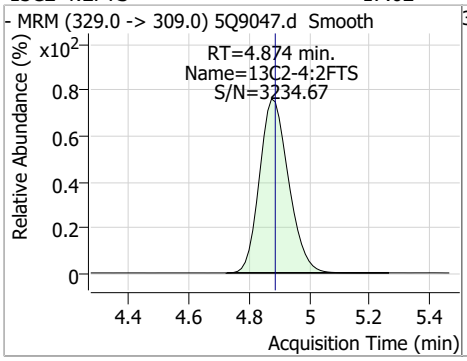


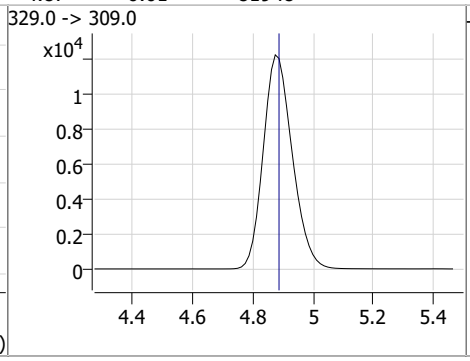


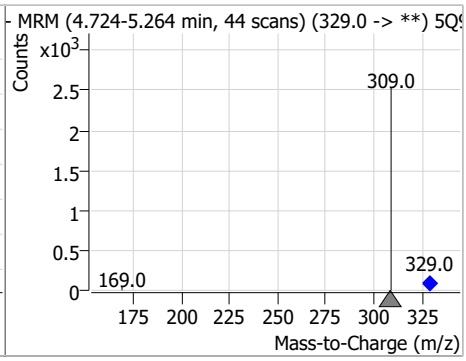


Perfluorinated Compounds by LC/MS/MS

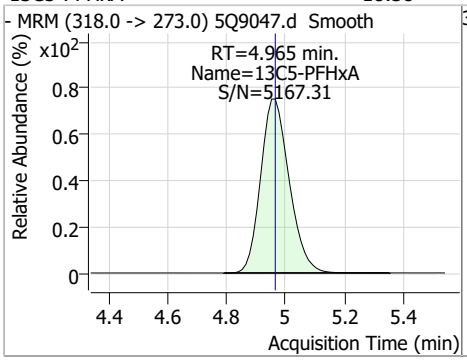
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	17.02	4.87	-0.01	81948				

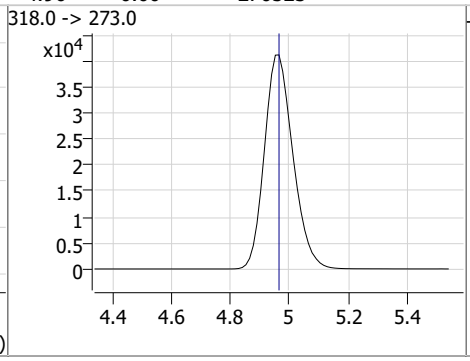


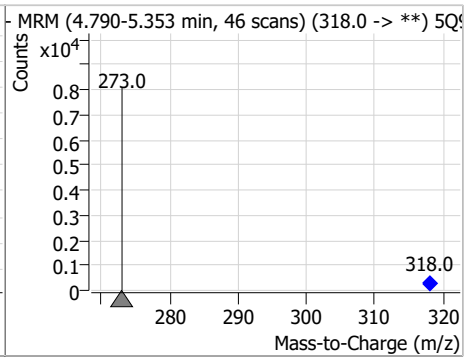




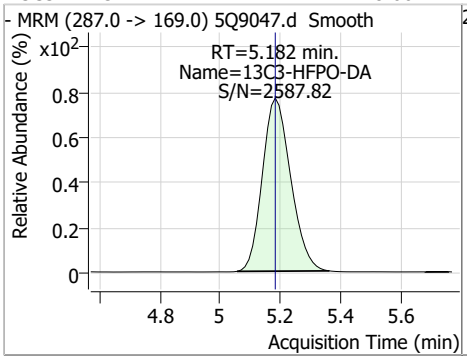
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	18.38	4.96	0.00	276523				

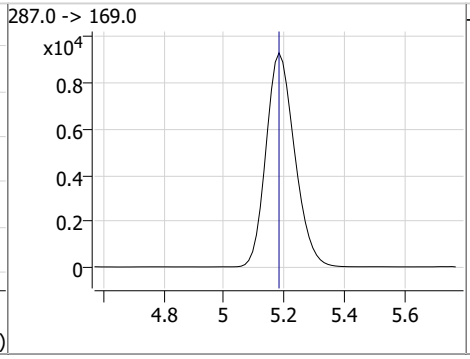


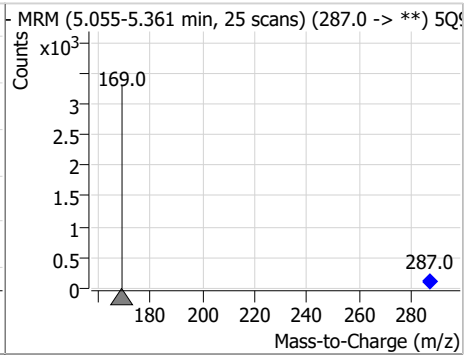




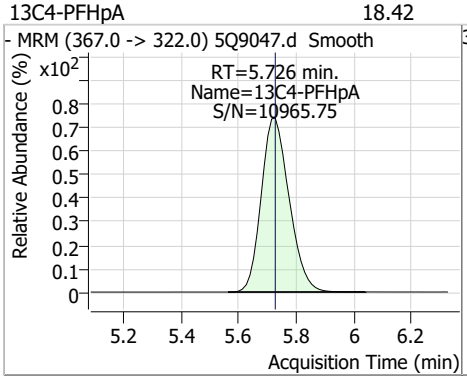
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	18.00	5.18	0.00	59558				

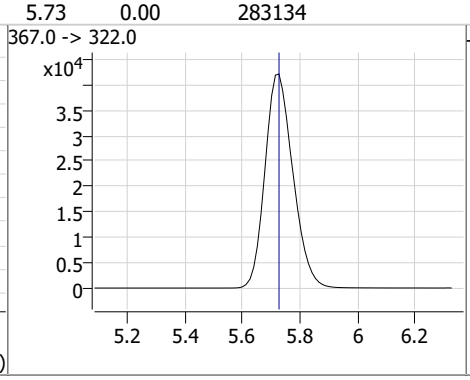


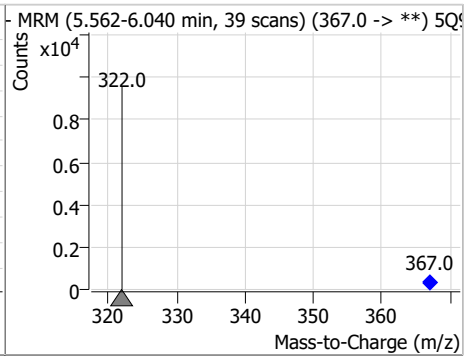




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	18.42	5.73	0.00	283134				

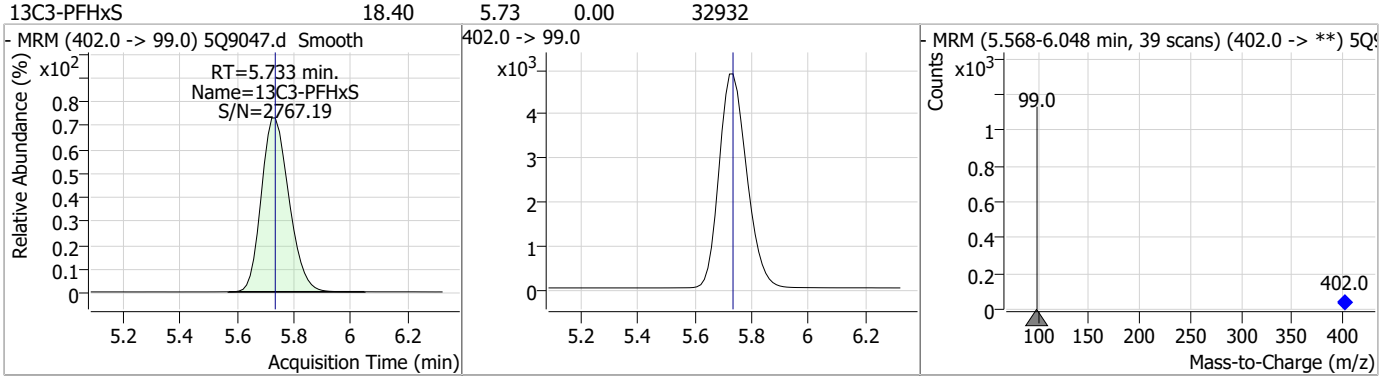




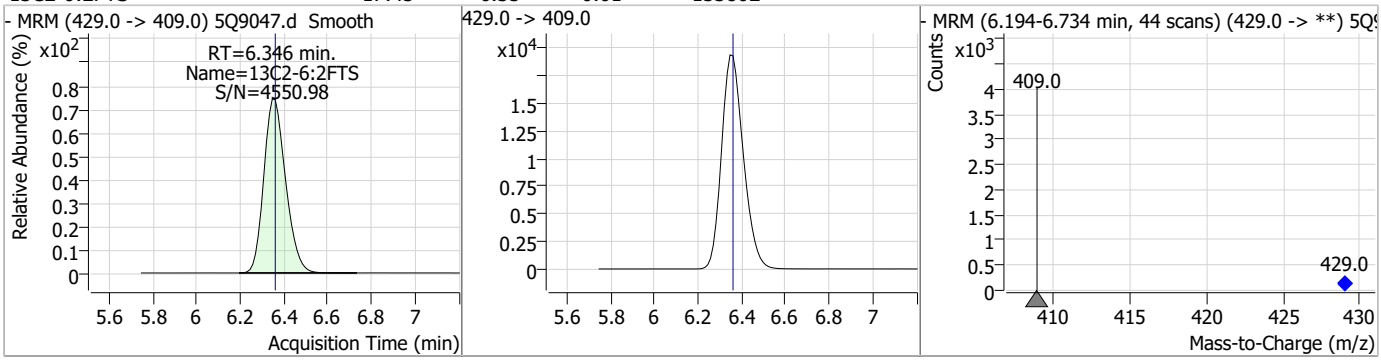


Perfluorinated Compounds by LC/MS/MS

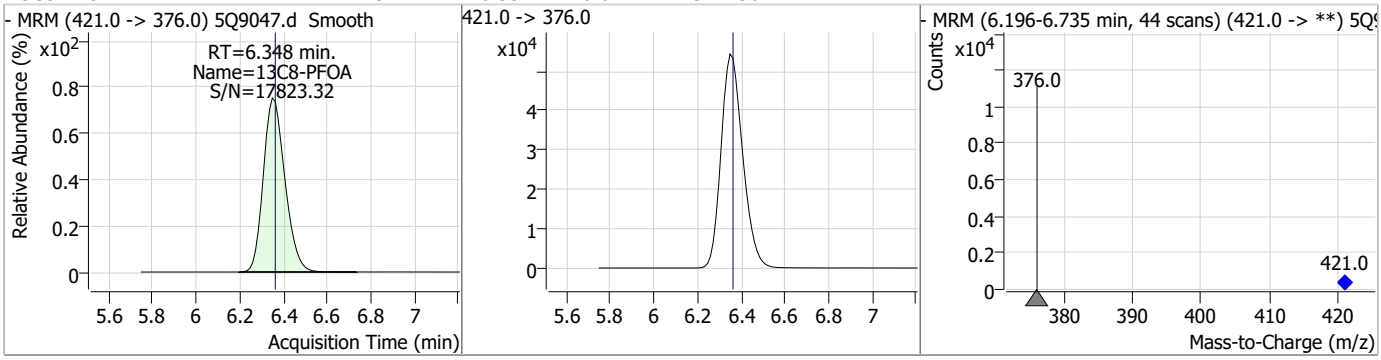
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	18.40	5.73	0.00	32932				



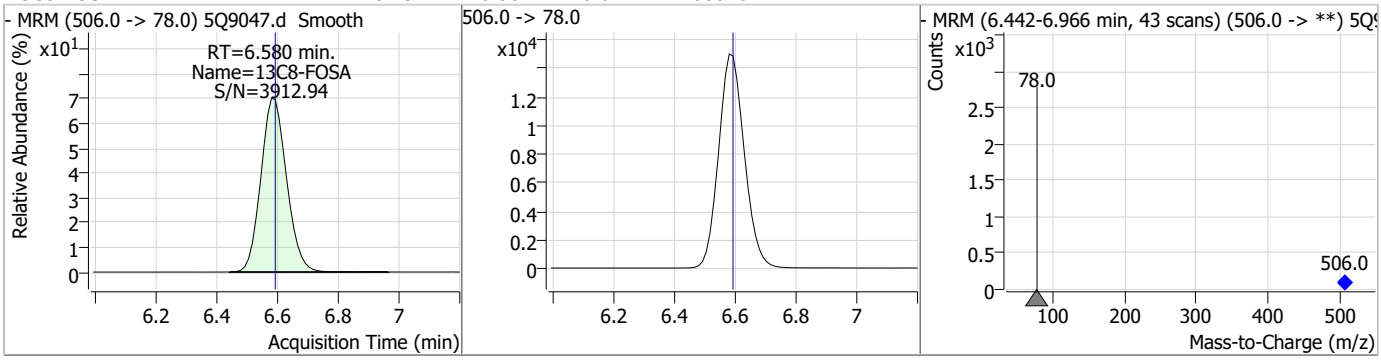
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	17.45	6.35	-0.01	133802				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	18.47	6.35	-0.01	372236				

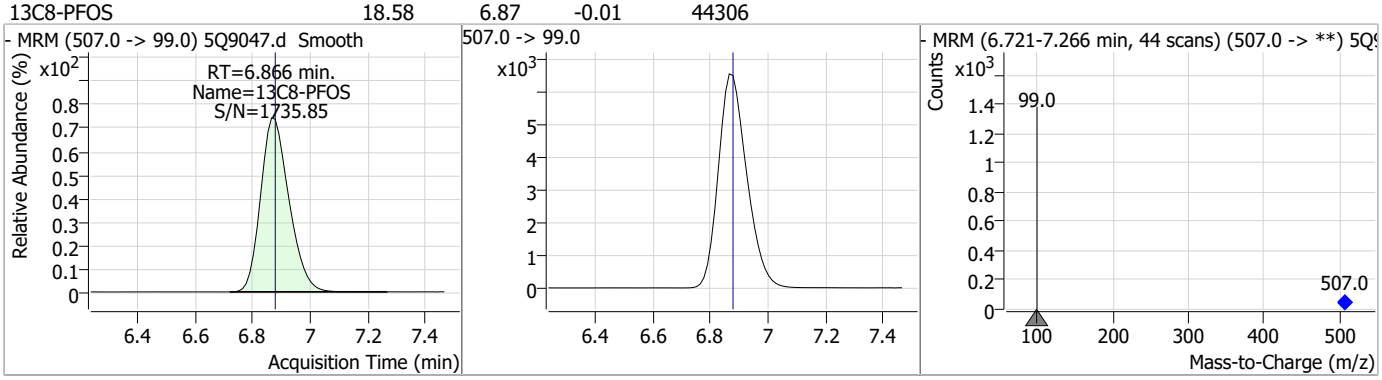


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	18.23	6.58	-0.01	88028				

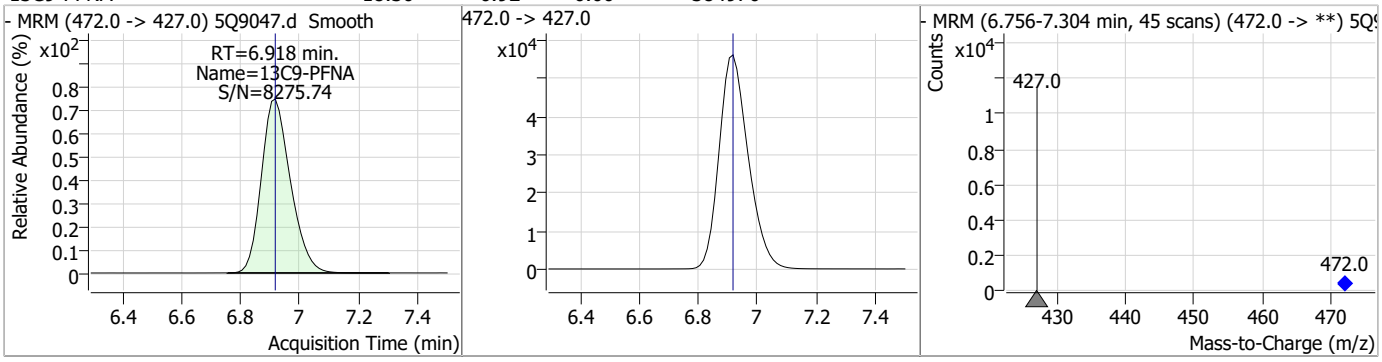


Perfluorinated Compounds by LC/MS/MS

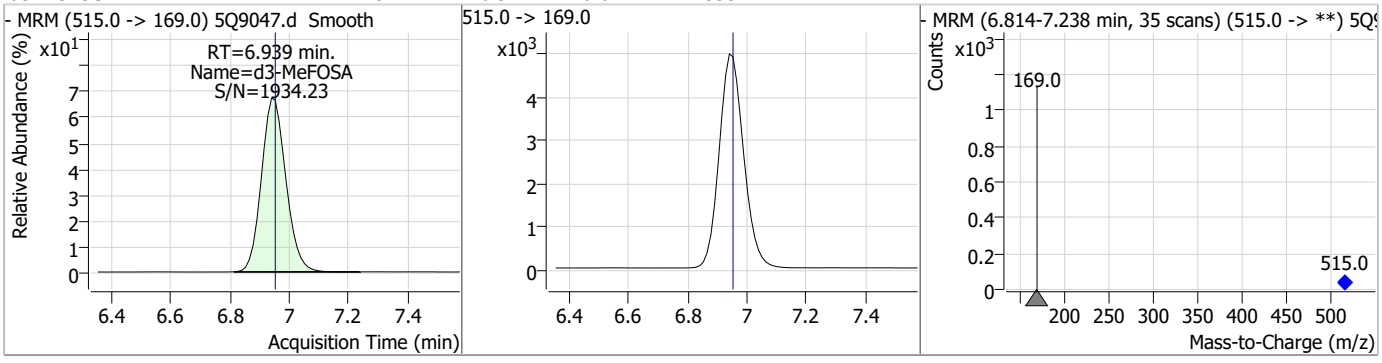
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	18.58	6.87	-0.01	44306				



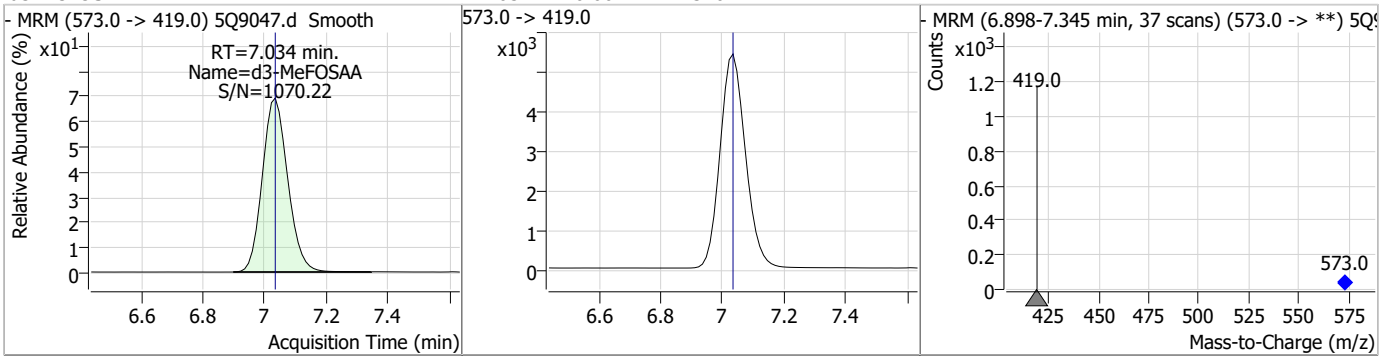
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.30	6.92	0.00	384970				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	18.72	6.94	-0.01	28354				

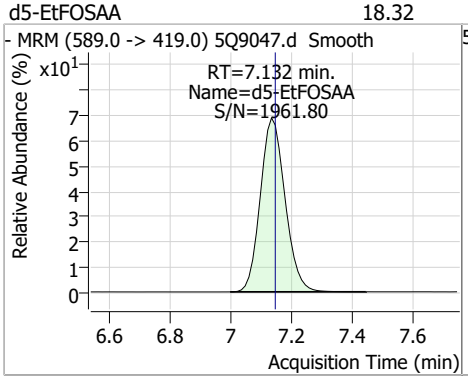


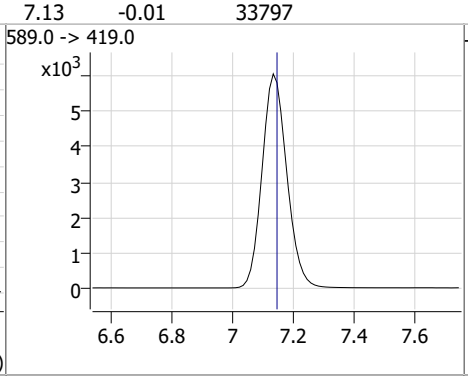
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	17.47	7.03	0.00	31047				

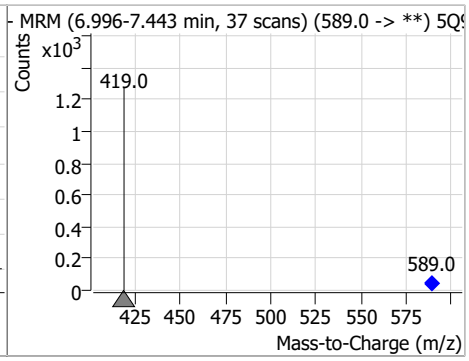


Perfluorinated Compounds by LC/MS/MS

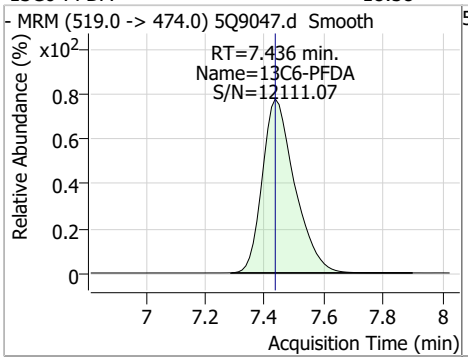
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.32	7.13	-0.01	33797				

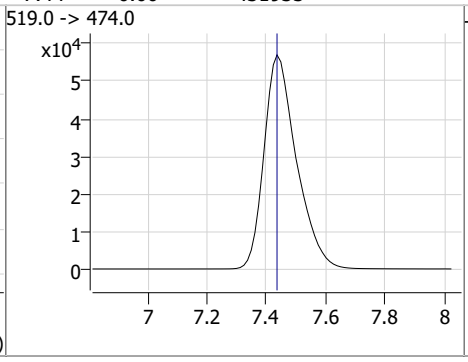


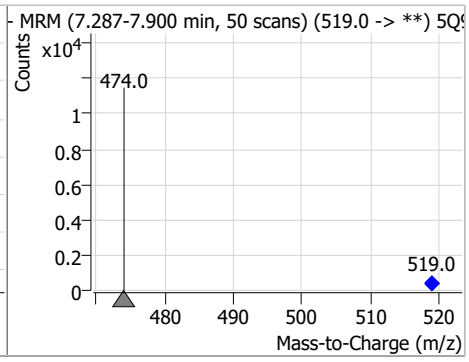




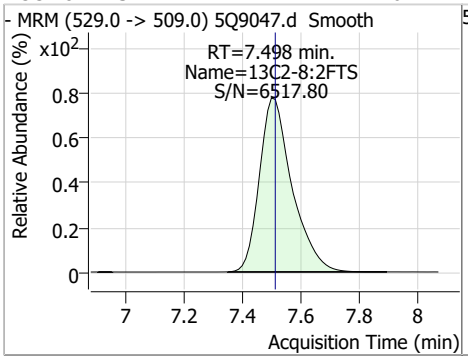
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.58	7.44	0.00	431933				

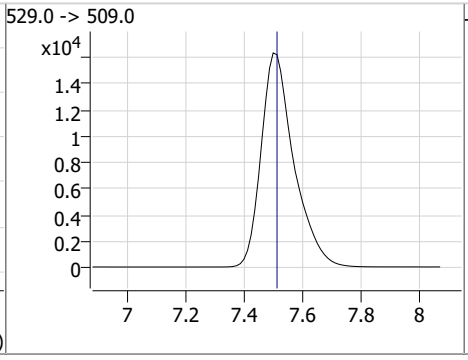


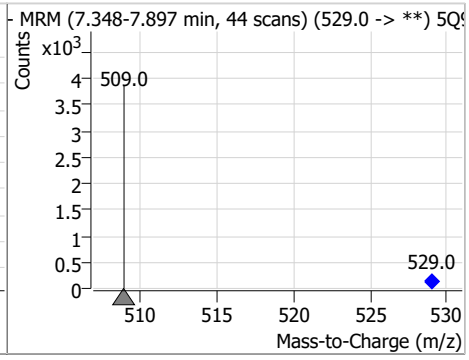




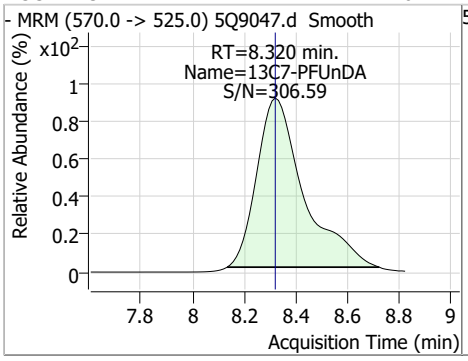
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	17.62	7.50	-0.01	127240				

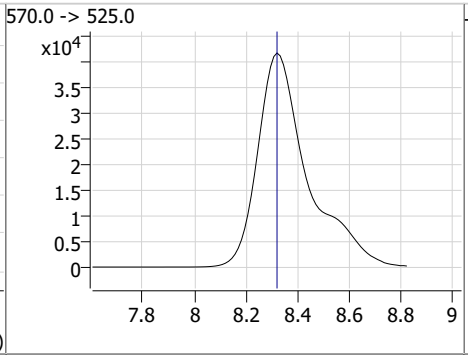


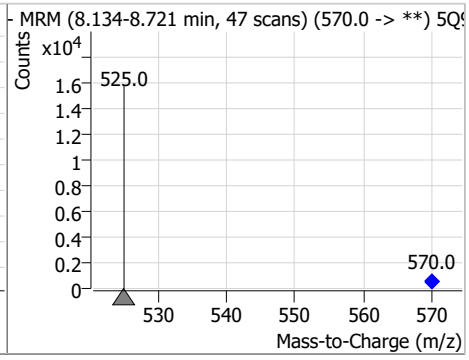




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	17.40	8.32	0.00	509235				

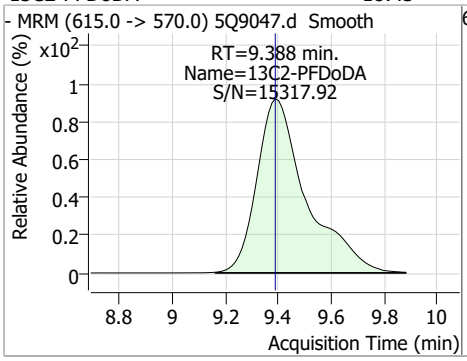


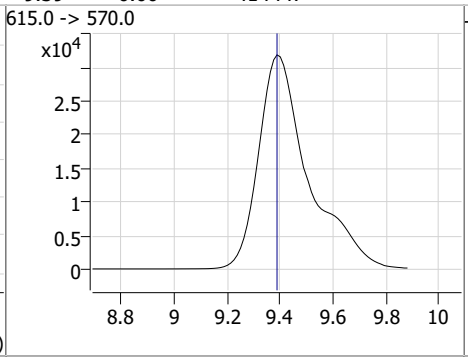


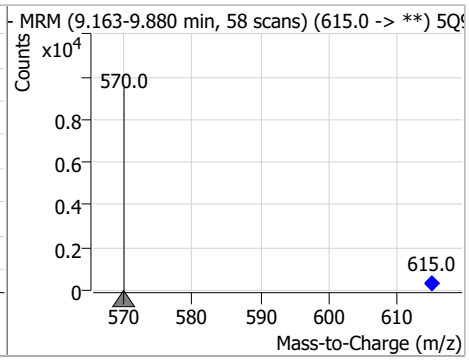


Perfluorinated Compounds by LC/MS/MS

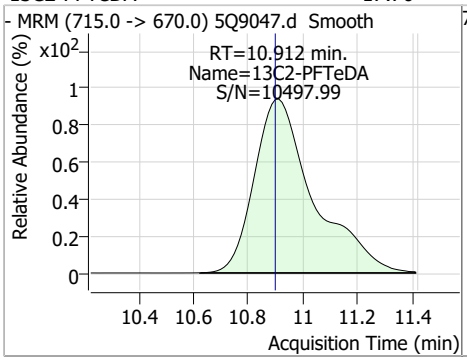
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	18.43	9.39	0.00	414447				

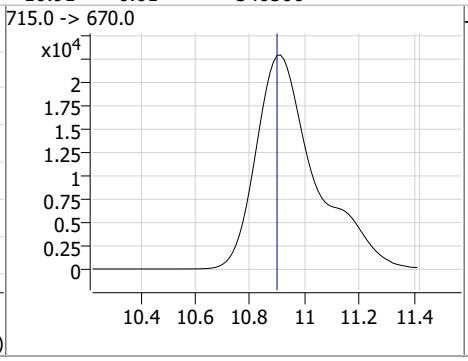


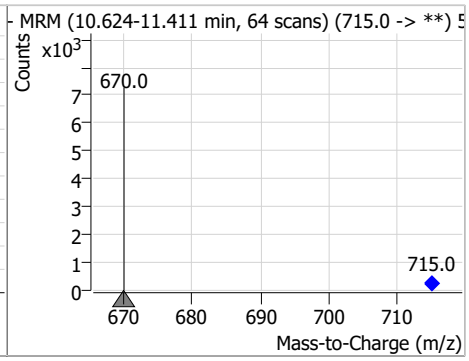




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	17.70	10.91	0.01	346506				







Manual Integration Approval Summary

Sample Number: S5Q134-IBLK
Lab FileID: 5Q9047.D
Injection Time: 12/28/22 14:45
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
EtFOSAA	2991-50-6		7.14	Poor instrument integration

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9091.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/29/2022 10:56:16 AM
Sample Name : iblk
Vial : P1-A1
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q135.batch.bin
Sample Information : OP94373,S5Q135,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	99247	20.00	µg/L	0.000
M5-PFPeA	3.932	268.0 -> 223.0	194385	20.00	µg/L	0.012
M5-PFHxA	4.977	318.0 -> 273.0	281458	20.00	µg/L	0.012
M4-PFHpA	5.738	367.0 -> 322.0	292189	20.00	µg/L	0.012
M8-PFOA	6.374	421.0 -> 376.0	384905	20.00	µg/L	0.012
M9-PFNA	6.931	472.0 -> 427.0	395866	20.00	µg/L	0.013
M6-PFDA	7.462	519.0 -> 474.0	446318	20.00	µg/L	0.025
M7-PFUnDA	8.332	570.0 -> 525.0	527278	20.00	µg/L	0.012
M2-PFDoDA	9.400	615.0 -> 570.0	446611	20.00	µg/L	0.012
M2-PFTeDA	10.912	715.0 -> 670.0	376313	20.00	µg/L	0.012
M8-FOSA	6.605	506.0 -> 78.0	88988	20.00	µg/L	0.012
M3-PFBS	4.136	302.0 -> 99.0	23881	20.00	µg/L	0.012
M3-PFHxS	5.748	402.0 -> 99.0	32804	20.00	µg/L	0.015
M8-PFOS	6.891	507.0 -> 99.0	44171	20.00	µg/L	0.012
M2-4:2FTS	4.886	329.0 -> 309.0	83208	20.00	µg/L	0.000
M2-6:2FTS	6.372	429.0 -> 409.0	134091	20.00	µg/L	0.012
M2-8:2FTS	7.524	529.0 -> 509.0	130802	20.00	µg/L	0.012
M3-MeFOSAA	7.047	573.0 -> 419.0	36897	20.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	68417	20.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	28723	20.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	38671	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	83208	17.28	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.4%		
13C2-6:2FTS	6.372	429.0 -> 409.0	134091	17.49	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.5%		
13C2-8:2FTS	7.524	529.0 -> 509.0	130802	18.11	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.6%		
13C2-PFDoDA	9.400	615.0 -> 570.0	446611	19.86	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%		
13C2-PFTeDA	10.912	715.0 -> 670.0	376313	19.22	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.1%		
13C3-PFBS	4.136	302.0 -> 99.0	23881	18.38	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.9%		
13C3-PFHxS	5.748	402.0 -> 99.0	32804	18.33	µg/L	0.015
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.6%		
13C4-PFBA	2.400	217.0 -> 172.0	99247	19.08	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.4%		
13C4-PFHpA	5.738	367.0 -> 322.0	292189	19.00	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.0%		
13C5-PFHxA	4.977	318.0 -> 273.0	281458	18.71	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.5%		
13C5-PFPeA	3.932	268.0 -> 223.0	194385	18.53	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.7%		
13C6-PFDA	7.462	519.0 -> 474.0	446318	19.20	µg/L	0.025

Perfluorinated Compounds by LC/MS/MS

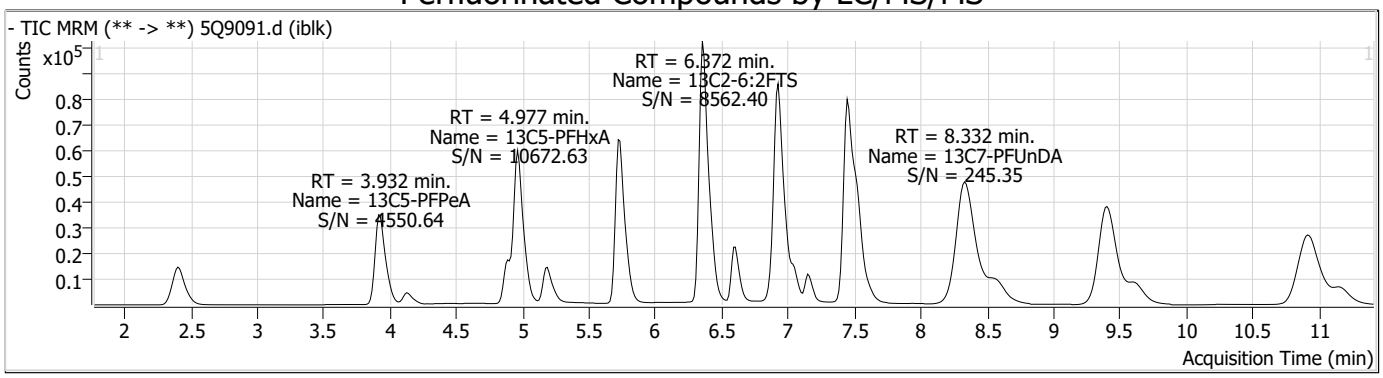
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.0%	
13C7-PFUnDA	8.332	570.0 -> 525.0	527278	18.02 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.1%	
13C8-FOSA	6.605	506.0 -> 78.0	88988	18.43 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.1%	
13C8-PFOA	6.374	421.0 -> 376.0	384905	19.10 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.5%	
13C8-PFOS	6.891	507.0 -> 99.0	44171	18.52 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.6%	
13C9-PFNA	6.931	472.0 -> 427.0	395866	18.82 µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.1%	
d3-MeFOSAA	7.047	573.0 -> 419.0	36897	20.77 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.8%	
13C3-HFPO-DA	5.194	287.0 -> 169.0	68417	20.68 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.4%	
d3-MeFOSA	6.964	515.0 -> 169.0	28723	18.96 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.8%	
d5-EtFOSAA	7.157	589.0 -> 419.0	38671	20.97 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.8%	
Target Compounds					QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.	
		327.0 -> 81.0			
6:2FTS	-	427.0 -> 407.0	-	N.D.	
		427.0 -> 81.0			
8:2FTS	-	527.0 -> 507.0	-	N.D.	
		527.0 -> 81.0			
EtFOSAA	7.158	584.0 -> 419.0	322	0.25 µg/L	81
		584.0 -> 483.0	158		
FOSA	-	498.0 -> 78.0	-	N.D.	
		498.0 -> 478.0			
MeFOSAA	7.060	570.0 -> 419.0	318	0.21 µg/L	68
		570.0 -> 512.0	195		
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0	-	N.D.	
		299.0 -> 99.0			
PFDA	-	513.0 -> 469.0	-	N.D.	
		513.0 -> 219.0			
PFDoDA	-	613.0 -> 569.0	-	N.D.	
		613.0 -> 319.0			
PFDS	-	599.0 -> 80.0	-	N.D.	
		599.0 -> 99.0			
PFHpA	-	363.0 -> 319.0	-	N.D.	
		363.0 -> 169.0			
PFHpS	-	449.0 -> 80.0	-	N.D.	
		449.0 -> 99.0			
PFHxA	-	313.0 -> 269.0	-	N.D.	
		313.0 -> 119.0			
PFHxS	-	399.0 -> 80.0	-	N.D.	
		399.0 -> 99.0			
PFNA	-	463.0 -> 419.0	-	N.D.	
		463.0 -> 219.0			
PFNS	-	549.0 -> 80.0	-	N.D.	
		549.0 -> 99.0			
PFOA	-	413.0 -> 369.0	-	N.D.	
		413.0 -> 169.0			
PFOS	-	499.0 -> 80.0	-	N.D.	

Perfluorinated Compounds by LC/MS/MS

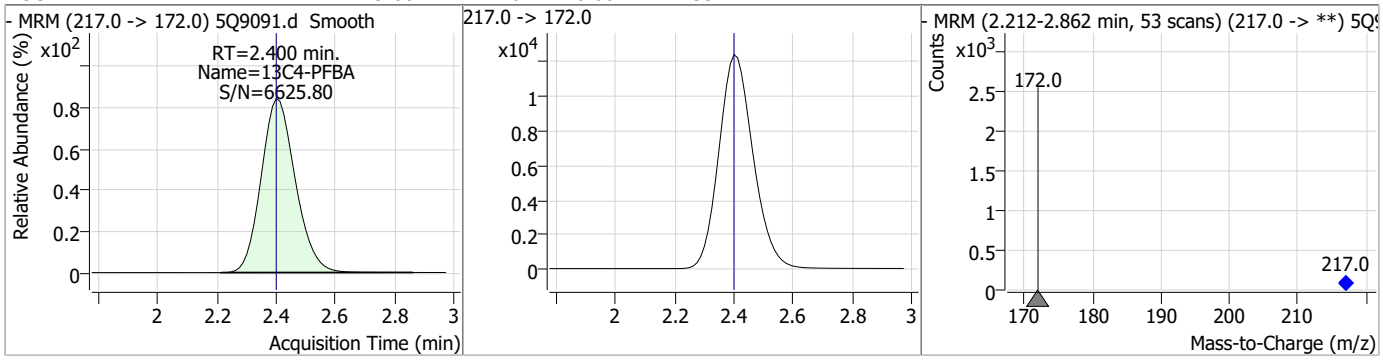
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0				
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFPeS	-	349.0 -> 80.0	-	N.D.		
		349.0 -> 99.0				
PFTeDA	-	713.0 -> 669.0	-	N.D.		
		713.0 -> 219.0				
PFTrDA	-	663.0 -> 619.0	-	N.D.		
		663.0 -> 369.0				
PFUnDA	-	563.0 -> 519.0	-	N.D.		
		563.0 -> 269.0				
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
		633.0 -> 453.0				
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
		533.0 -> 353.0				
ADONA	-	377.0 -> 251.0	-	N.D.		
		377.0 -> 85.0				
HFPO-DA	-	329.0 -> 169.0	-	N.D.		
		285.0 -> 169.0				
MeFOSA	-	512.0 -> 169.0	-	N.D.		
		512.0 -> 219.0				
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	-	298.0 -> 78.0	-	N.D.		
		298.0 -> 64.0				
FHxSA	-	398.0 -> 78.0	-	N.D.		
		398.0 -> 64.0				

 # = Qualifier out of range, m = manually integrated, + = Area summed

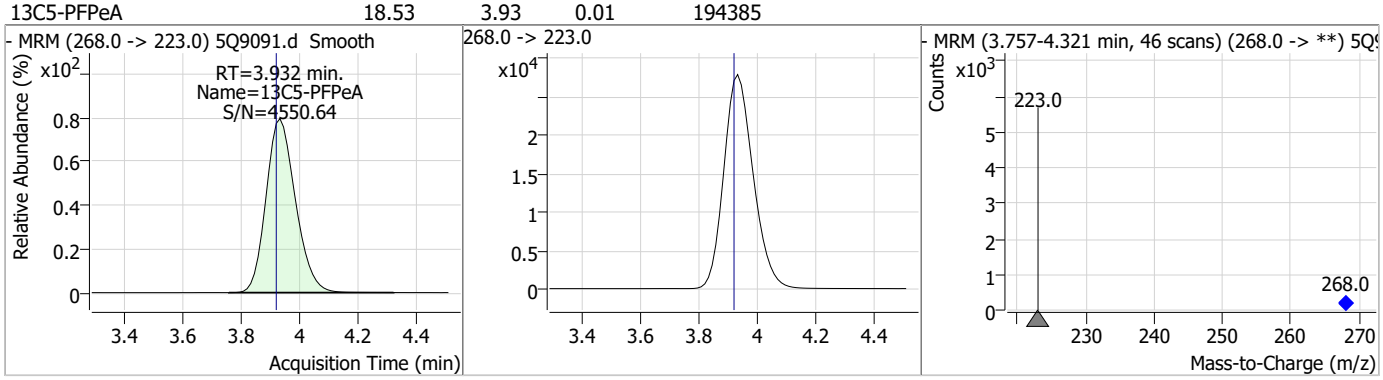
Perfluorinated Compounds by LC/MS/MS



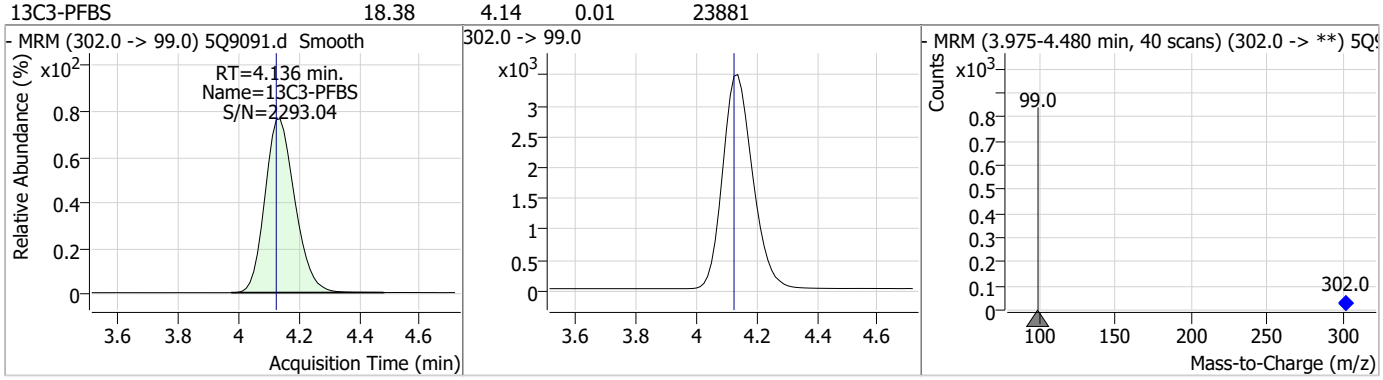
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.08	2.40	0.00	99247				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	18.53	3.93	0.01	194385				

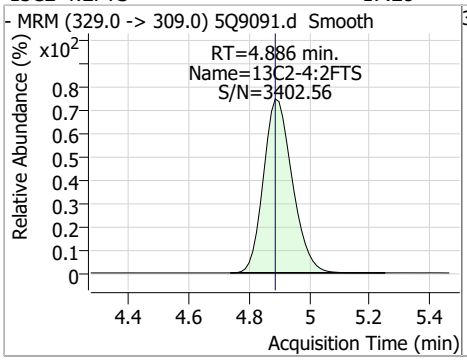


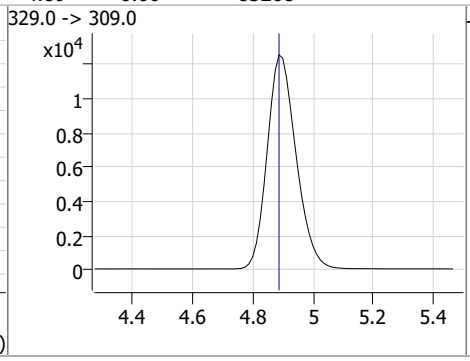
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	18.38	4.14	0.01	23881				

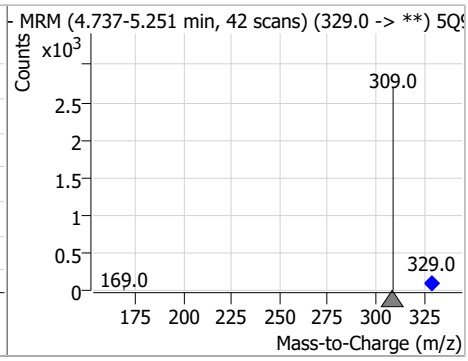


Perfluorinated Compounds by LC/MS/MS

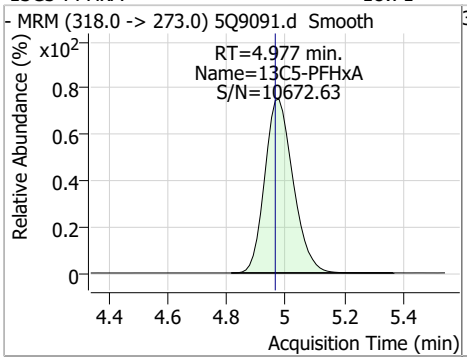
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	17.28	4.89	0.00	83208				

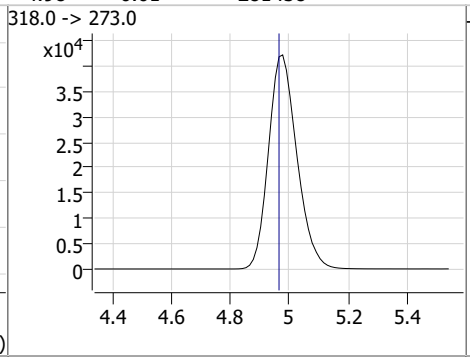


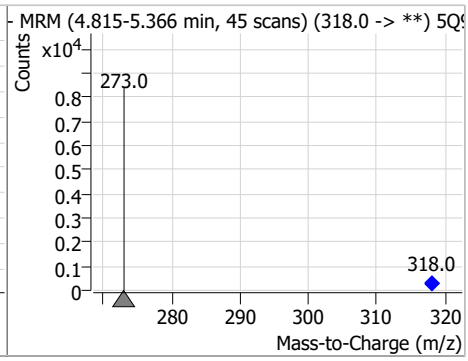




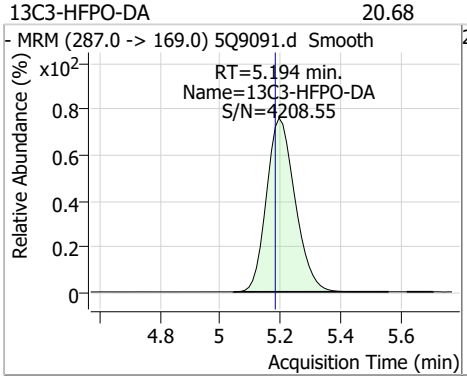
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	18.71	4.98	0.01	281458				

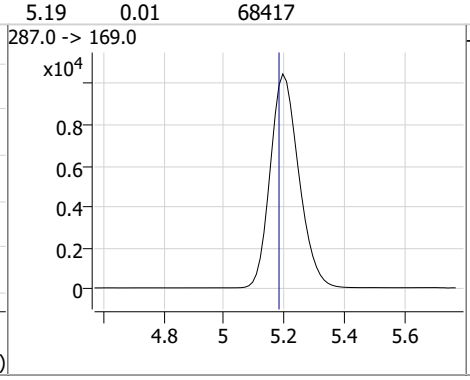


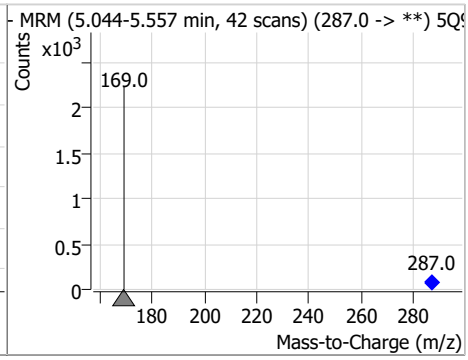




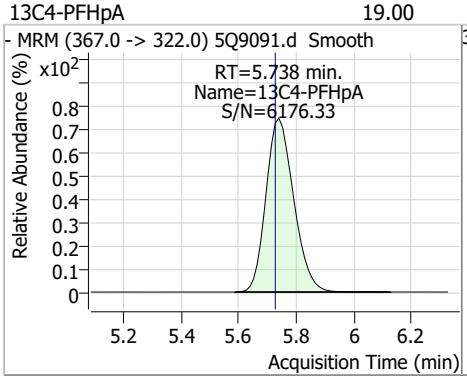
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.68	5.19	0.01	68417				

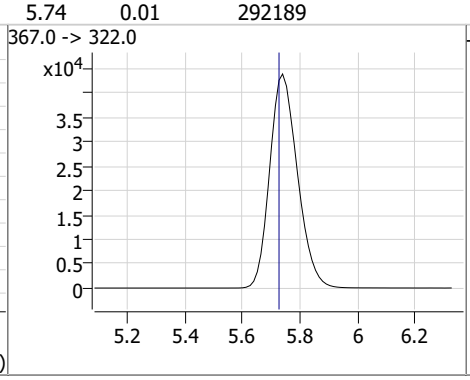


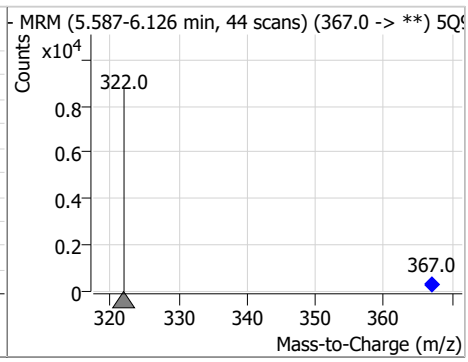




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.00	5.74	0.01	292189				

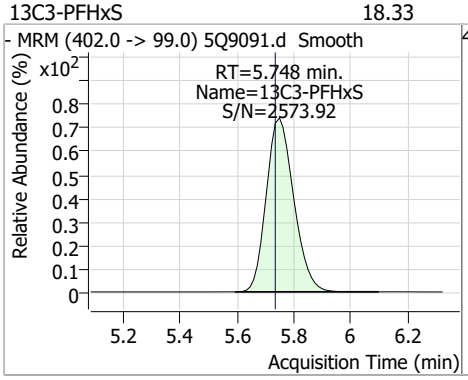


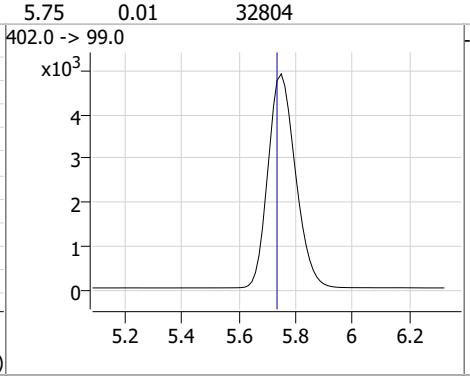


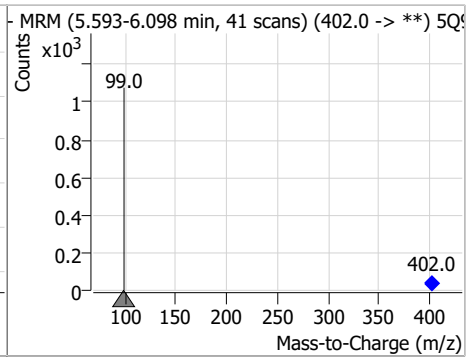


Perfluorinated Compounds by LC/MS/MS

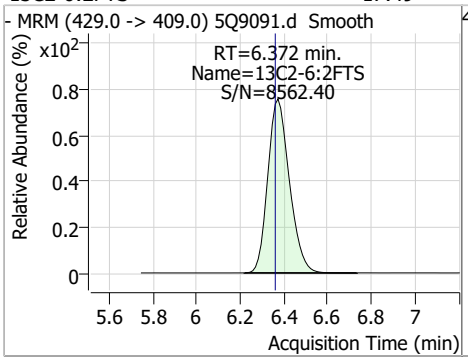
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	18.33	5.75	0.01	32804				

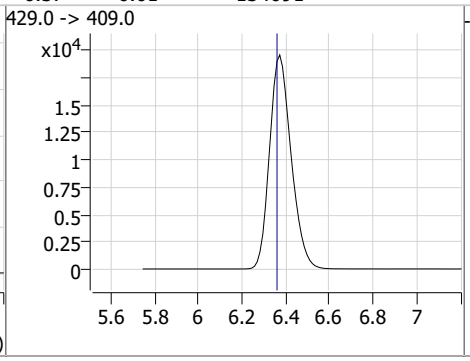


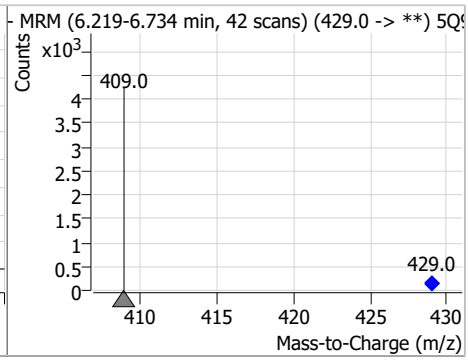




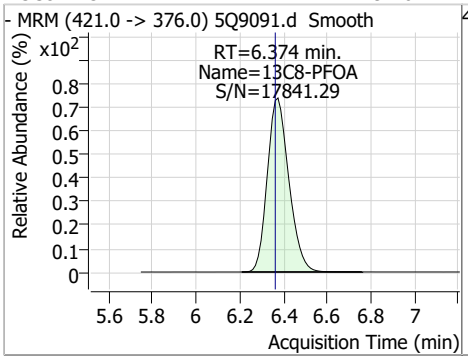
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	17.49	6.37	0.01	134091				

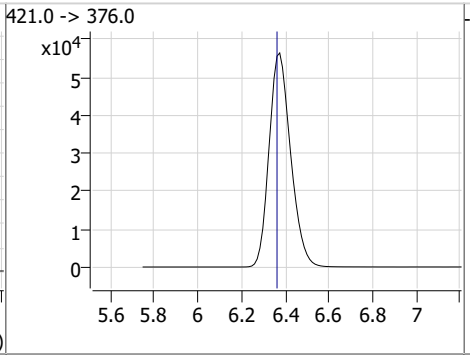


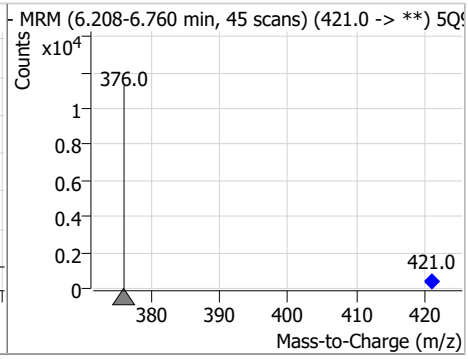




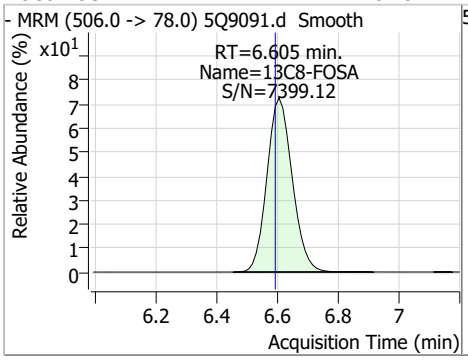
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.10	6.37	0.01	384905				

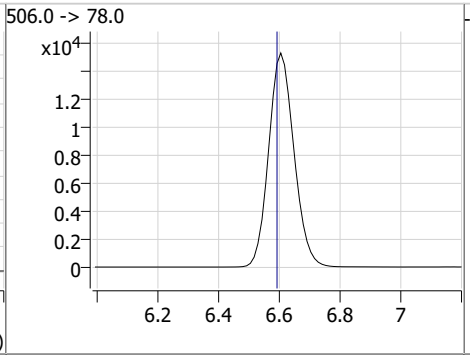


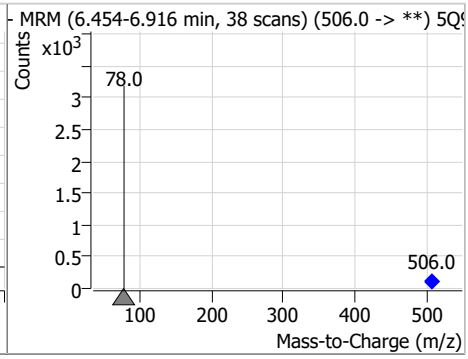




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	18.43	6.60	0.01	88988				

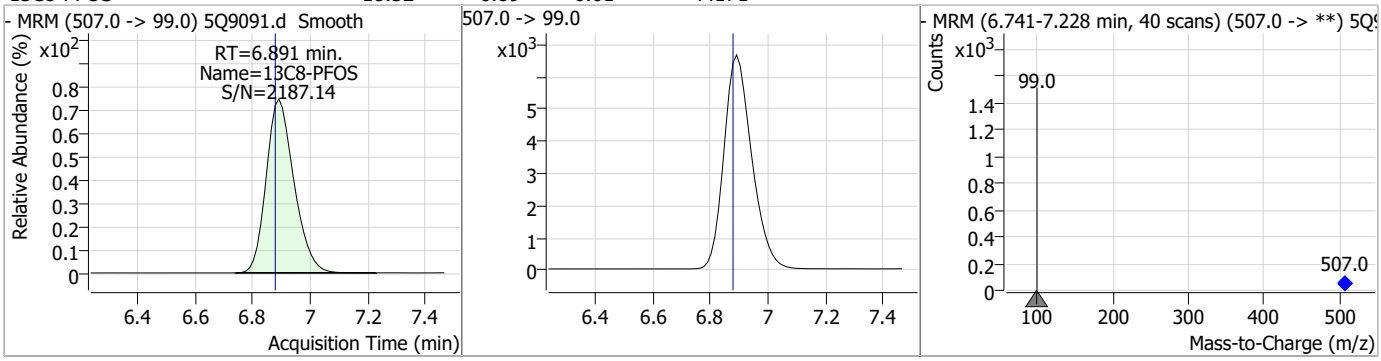




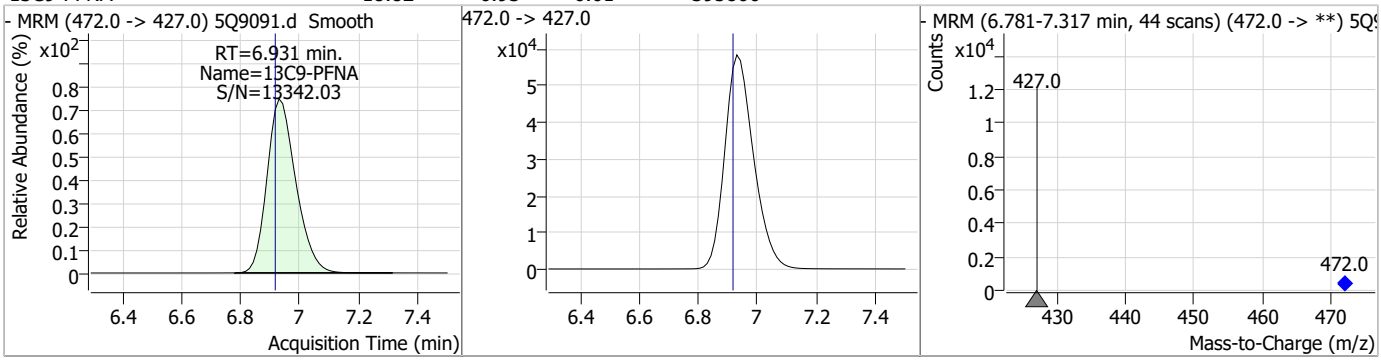


Perfluorinated Compounds by LC/MS/MS

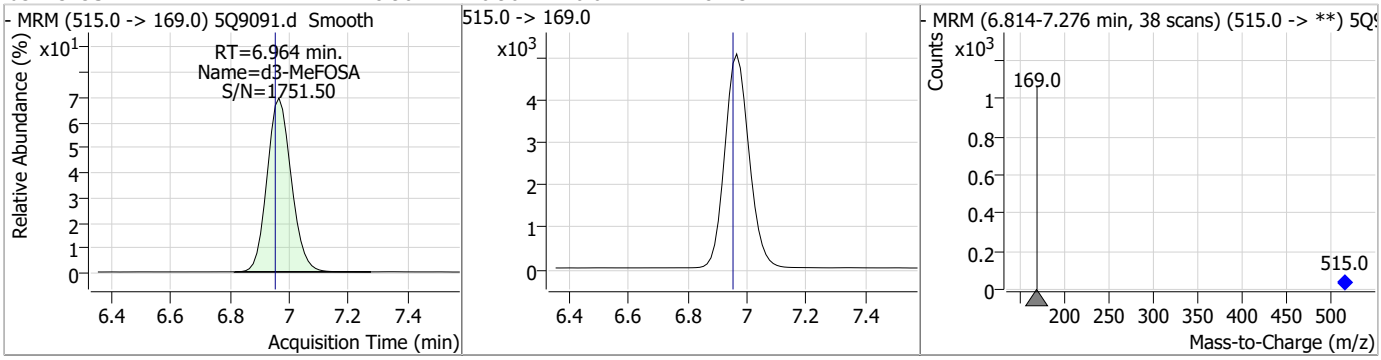
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	18.52	6.89	0.01	44171				



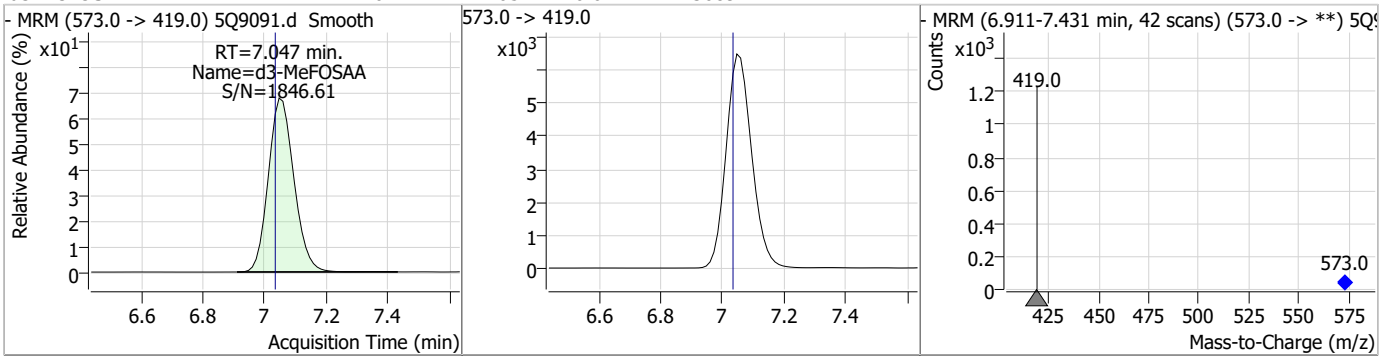
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.82	6.93	0.01	395866				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	18.96	6.96	0.01	28723				

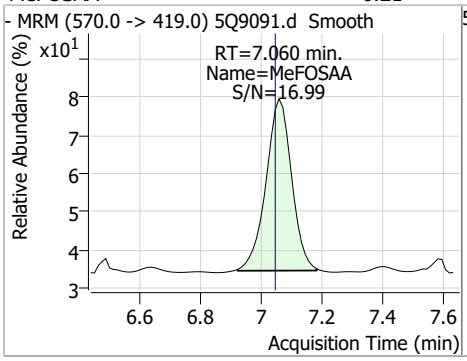


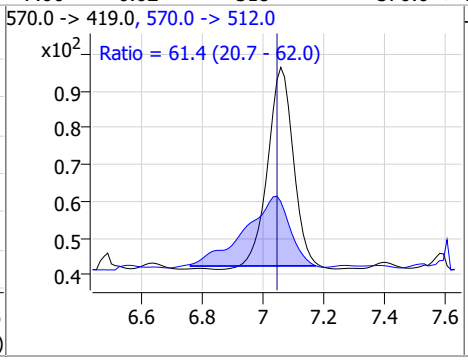
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.77	7.05	0.01	36897				

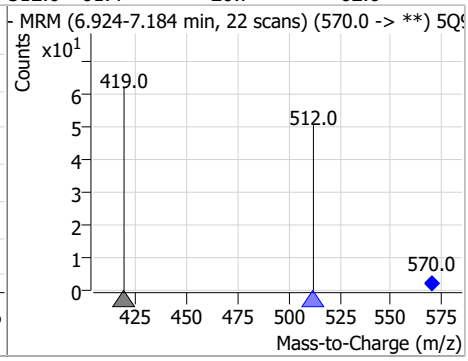


Perfluorinated Compounds by LC/MS/MS

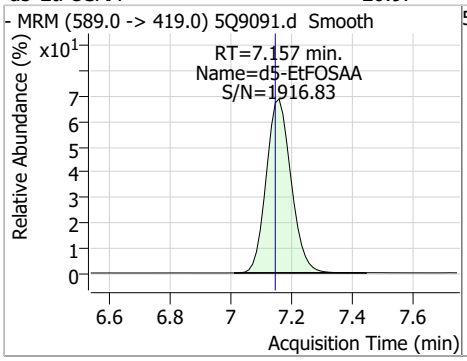
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.21	7.06	0.02	318	570.0 -> 512.0	61.4	20.7	62.0

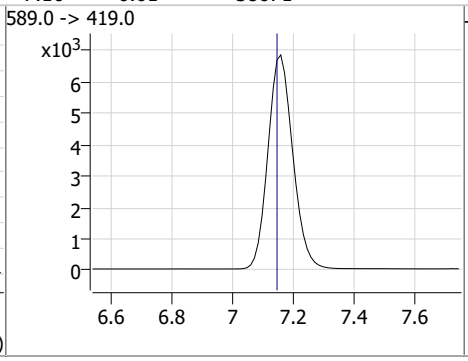


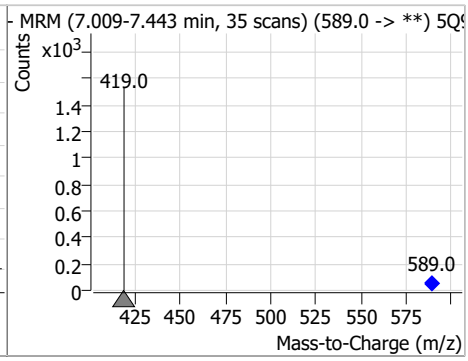




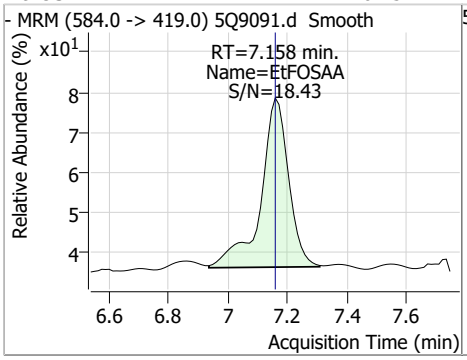
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.97	7.16	0.01	38671				

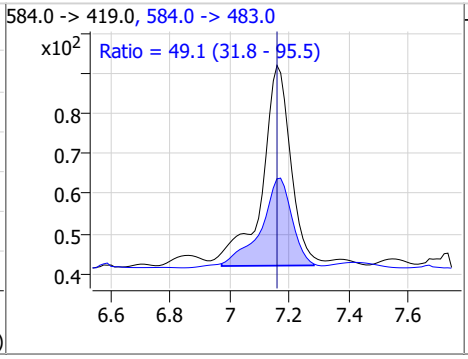


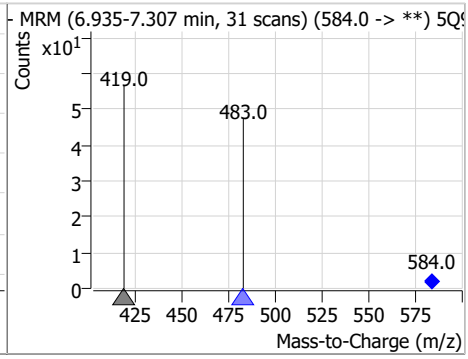




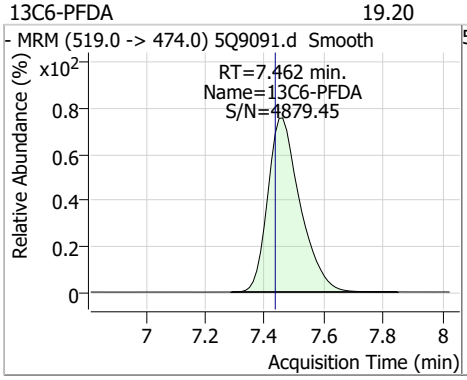
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	0.25	7.16	0.01	322	584.0 -> 483.0	49.1	31.8	95.5

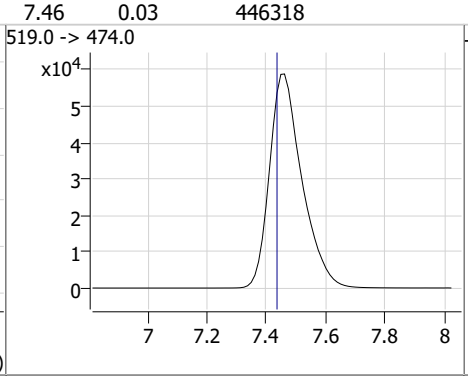


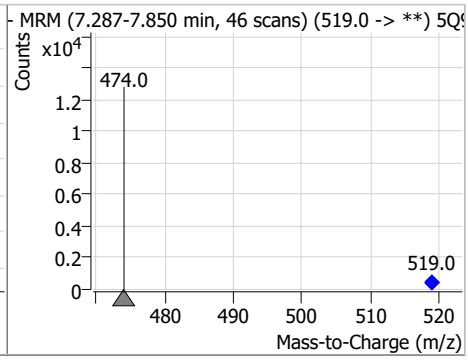




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.20	7.46	0.03	446318				

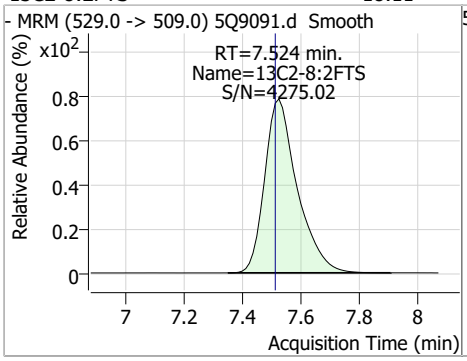


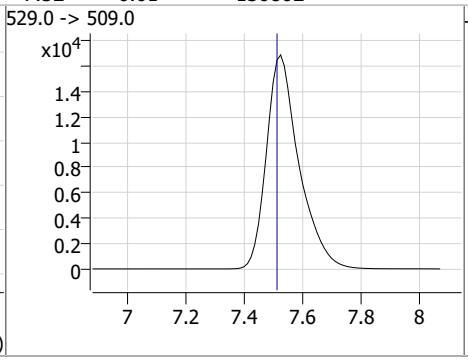


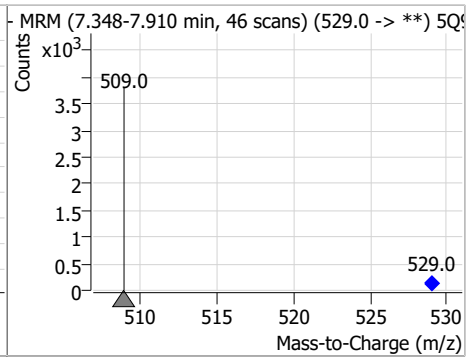


Perfluorinated Compounds by LC/MS/MS

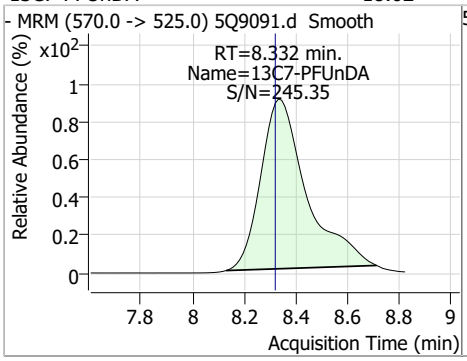
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.11	7.52	0.01	130802				

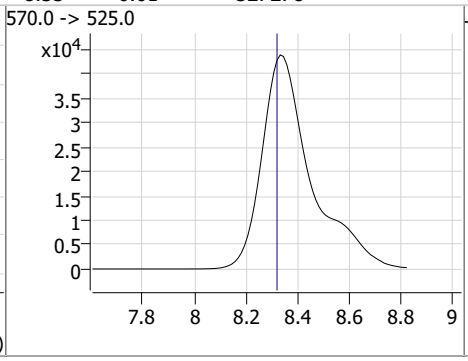


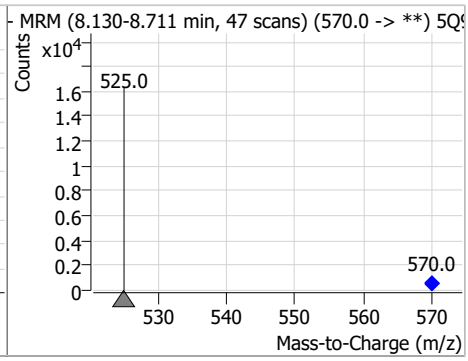




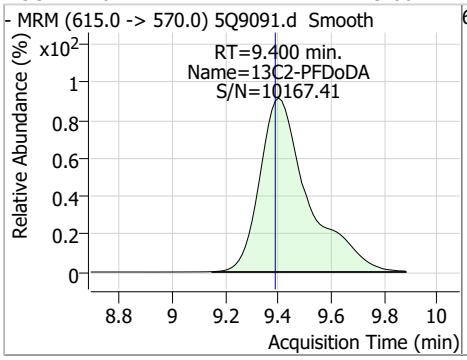
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	18.02	8.33	0.01	527278				

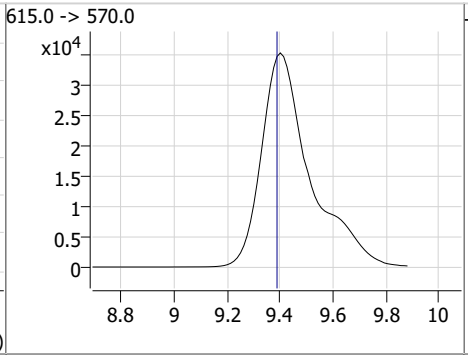


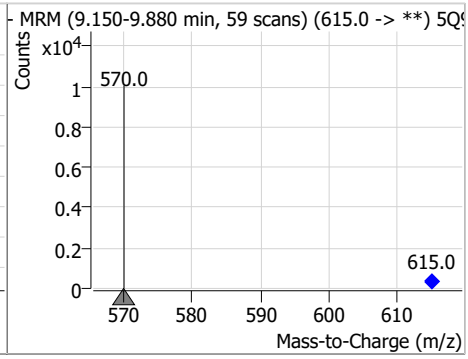




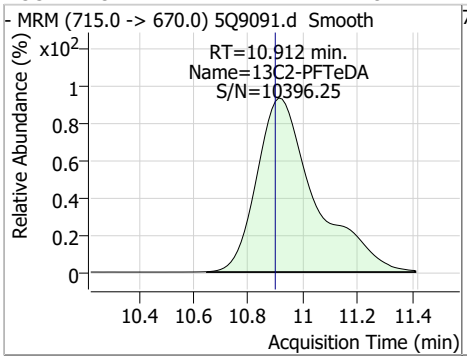
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.86	9.40	0.01	446611				

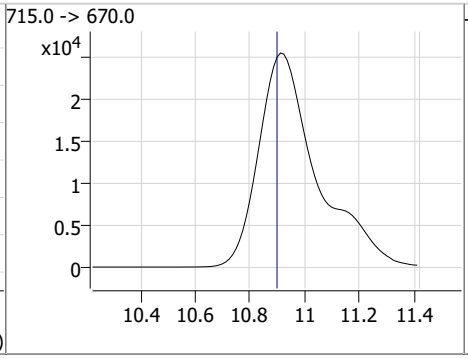


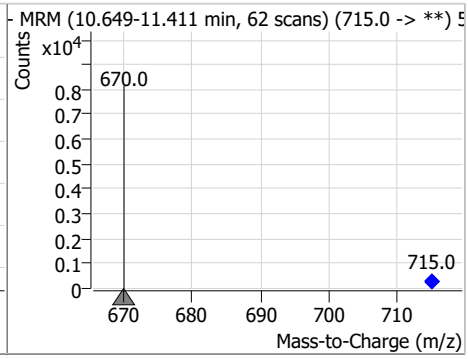




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.22	10.91	0.01	376313				







Perfluorinated Compounds by LC/MS/MS

Data File	:	5Q9240.d
Operator	:	lindsayr
Acq. Method	:	537_ID.m
Acq. Date-Time	:	1/3/2023 5:18:07 PM
Sample Name	:	iblk
Vial	:	P1-A1
DA Method File	:	ID_010323_S5Q137.quantmethod.xml
Batch Name	:	s5q137.batch.bin
Sample Information	:	OP94373,S5Q137,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.012	217.0 -> 172.0	106954	20.00	µg/L	0.038
M5-PFPeA	3.494	268.0 -> 223.0	200816	20.00	µg/L	0.025
M5-PFHxA	4.480	318.0 -> 273.0	284610	20.00	µg/L	0.025
M4-PFHpA	5.138	367.0 -> 322.0	279991	20.00	µg/L	0.025
M8-PFOA	5.648	421.0 -> 376.0	358213	20.00	µg/L	0.027
M9-PFNA	6.081	472.0 -> 427.0	357140	20.00	µg/L	0.038
M6-PFDA	6.439	519.0 -> 474.0	345462	20.00	µg/L	0.037
M7-PFUnDA	6.759	570.0 -> 525.0	351572	20.00	µg/L	0.037
M2-PFDoDA	7.017	615.0 -> 570.0	342944	20.00	µg/L	0.037
M2-PFTeDA	7.411	715.0 -> 670.0	356354	20.00	µg/L	0.025
M8-FOSA	6.654	506.0 -> 78.0	105720	20.00	µg/L	0.013
M3-PFBS	3.704	302.0 -> 99.0	24595	20.00	µg/L	0.025
M3-PFHxS	5.148	402.0 -> 99.0	30704	20.00	µg/L	0.026
M8-PFOS	6.041	507.0 -> 99.0	35566	20.00	µg/L	0.025
M2-4:2FTS	4.374	329.0 -> 309.0	83795	20.00	µg/L	0.025
M2-6:2FTS	5.620	429.0 -> 409.0	127340	20.00	µg/L	0.025
M2-8:2FTS	6.425	529.0 -> 509.0	108058	20.00	µg/L	0.025
M3-MeFOSAA	6.970	573.0 -> 419.0	42881	20.00	µg/L	0.012
M3-HFPO-DA	4.681	287.0 -> 169.0	62434	20.00	µg/L	0.037
M3-MeFOSA	6.998	515.0 -> 169.0	31202	20.00	µg/L	0.012
M5-EtFOSAA	7.093	589.0 -> 419.0	41553	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.374	329.0 -> 309.0	83795	17.72	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.6%		
13C2-6:2FTS	5.620	429.0 -> 409.0	127340	17.88	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.4%		
13C2-8:2FTS	6.425	529.0 -> 509.0	108058	17.60	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.0%		
13C2-PFDoDA	7.017	615.0 -> 570.0	342944	18.53	µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.6%		
13C2-PFTeDA	7.411	715.0 -> 670.0	356354	18.22	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.1%		
13C3-PFBS	3.704	302.0 -> 99.0	24595	19.18	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.9%		
13C3-PFHxS	5.148	402.0 -> 99.0	30704	19.33	µg/L	0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.6%		
13C4-PFBA	2.012	217.0 -> 172.0	106954	18.66	µg/L	0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.3%		
13C4-PFHpA	5.138	367.0 -> 322.0	279991	19.06	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.3%		
13C5-PFHxA	4.480	318.0 -> 273.0	284610	19.38	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.9%		
13C5-PFPeA	3.494	268.0 -> 223.0	200816	19.33	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.6%		
13C6-PFDA	6.439	519.0 -> 474.0	345462	18.64	µg/L	0.037

Perfluorinated Compounds by LC/MS/MS

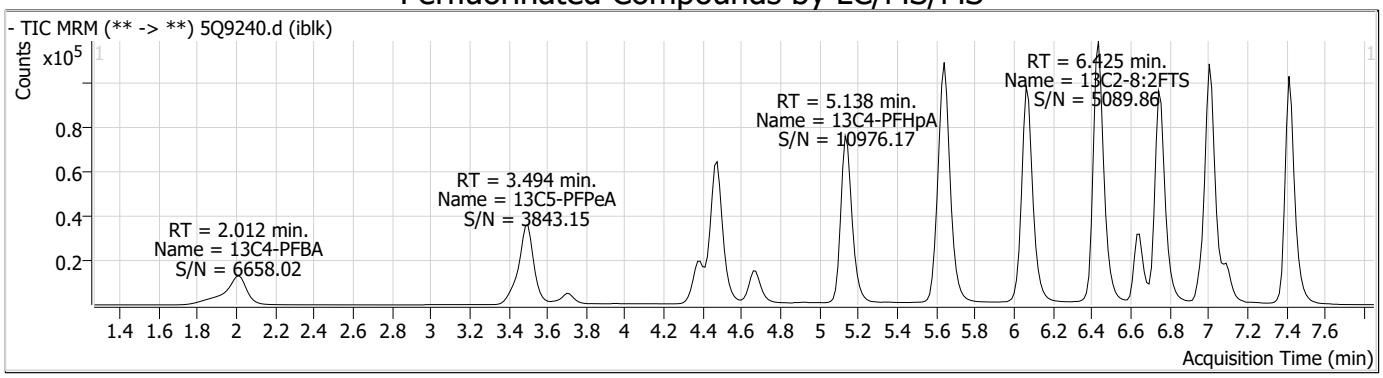
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.2%	
13C7-PFUnDA	6.759	570.0 -> 525.0	351572	18.64 µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.2%	
13C8-FOSA	6.654	506.0 -> 78.0	105720	17.64 µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.2%	
13C8-PFOA	5.648	421.0 -> 376.0	358213	19.02 µg/L	0.027
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.1%	
13C8-PFOS	6.041	507.0 -> 99.0	35566	18.66 µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.3%	
13C9-PFNA	6.081	472.0 -> 427.0	357140	18.92 µg/L	0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.6%	
d3-MeFOSAA	6.970	573.0 -> 419.0	42881	15.30 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 76.5%	
13C3-HFPO-DA	4.681	287.0 -> 169.0	62434	18.61 µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.1%	
d3-MeFOSA	6.998	515.0 -> 169.0	31202	18.10 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.5%	
d5-EtFOSAA	7.093	589.0 -> 419.0	41553	14.99 µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 74.9%	
Target Compounds					QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.	
		327.0 -> 81.0			
6:2FTS	-	427.0 -> 407.0	-	N.D.	
		427.0 -> 81.0			
8:2FTS	-	527.0 -> 507.0	-	N.D.	
		527.0 -> 81.0			
EtFOSAA	7.106	584.0 -> 419.0	165	0.12 µg/L	94
		584.0 -> 483.0	91		
FOSA	-	498.0 -> 78.0	-	N.D.	
		498.0 -> 478.0			
MeFOSAA	6.984	570.0 -> 419.0	190	0.12 µg/L	76
		570.0 -> 512.0	44		
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0	-	N.D.	
		299.0 -> 99.0			
PFDA	-	513.0 -> 469.0	-	N.D.	
		513.0 -> 219.0			
PFDoDA	-	613.0 -> 569.0	-	N.D.	
		613.0 -> 319.0			
PFDS	-	599.0 -> 80.0	-	N.D.	
		599.0 -> 99.0			
PFHpA	-	363.0 -> 319.0	-	N.D.	
		363.0 -> 169.0			
PFHpS	-	449.0 -> 80.0	-	N.D.	
		449.0 -> 99.0			
PFHxA	-	313.0 -> 269.0	-	N.D.	
		313.0 -> 119.0			
PFHxS	-	399.0 -> 80.0	-	N.D.	
		399.0 -> 99.0			
PFNA	-	463.0 -> 419.0	-	N.D.	
		463.0 -> 219.0			
PFNS	-	549.0 -> 80.0	-	N.D.	
		549.0 -> 99.0			
PFOA	-	413.0 -> 369.0	-	N.D.	
		413.0 -> 169.0			
PFOS	-	499.0 -> 80.0	-	N.D.	

Perfluorinated Compounds by LC/MS/MS

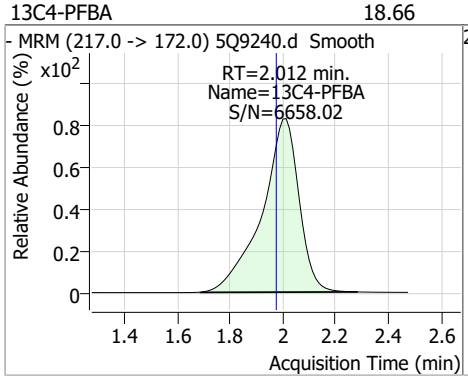
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0				
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFPeS	-	349.0 -> 80.0	-	N.D.		
		349.0 -> 99.0				
PFTeDA	-	713.0 -> 669.0	-	N.D.		
		713.0 -> 219.0				
PFTrDA	-	663.0 -> 619.0	-	N.D.		
		663.0 -> 369.0				
PFUnDA	-	563.0 -> 519.0	-	N.D.		
		563.0 -> 269.0				
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
		633.0 -> 453.0				
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
		533.0 -> 353.0				
ADONA	-	377.0 -> 251.0	-	N.D.		
		377.0 -> 85.0				
HFPO-DA	-	329.0 -> 169.0	-	N.D.		
		285.0 -> 169.0				
MeFOSA	-	512.0 -> 169.0	-	N.D.		
		512.0 -> 219.0				
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	-	298.0 -> 78.0	-	N.D.		
		298.0 -> 64.0				
FHxSA	-	398.0 -> 78.0	-	N.D.		
		398.0 -> 64.0				

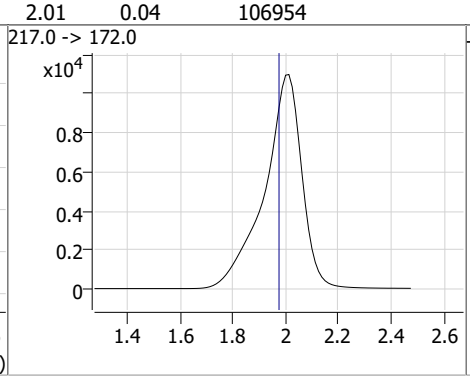
 # = Qualifier out of range, m = manually integrated, + = Area summed

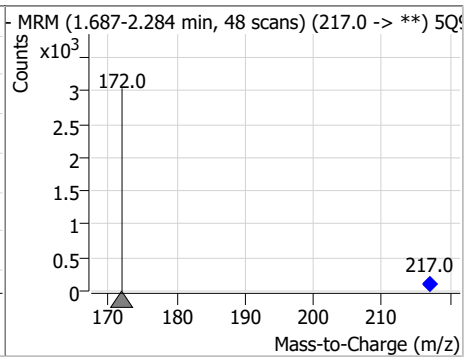
Perfluorinated Compounds by LC/MS/MS



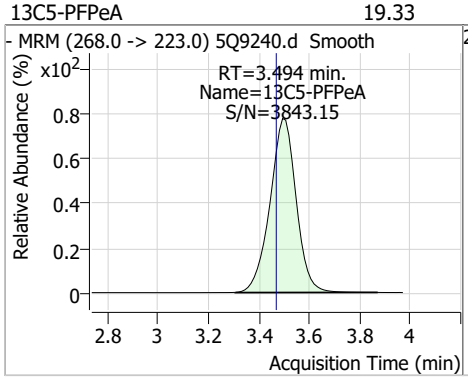
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.66	2.01	0.04	106954				

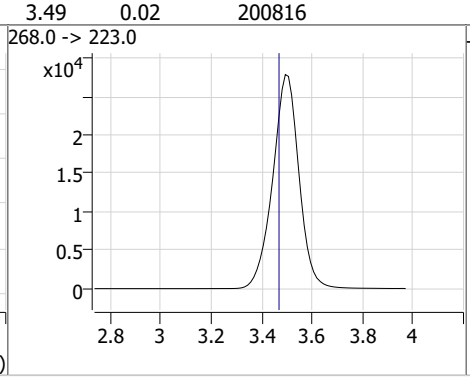


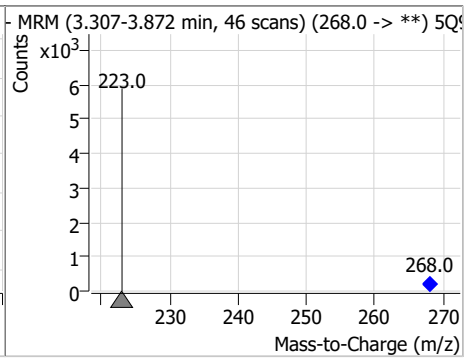




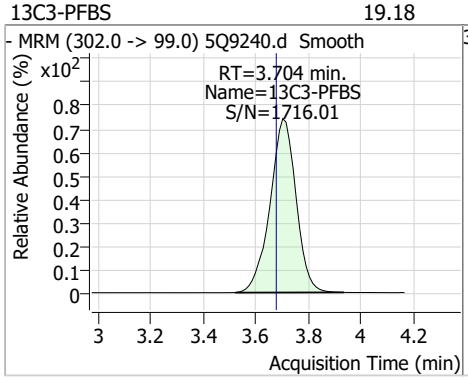
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.33	3.49	0.02	200816				

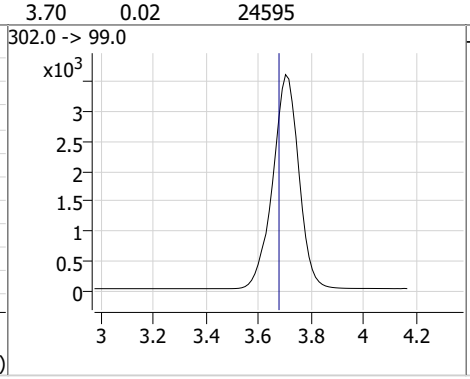


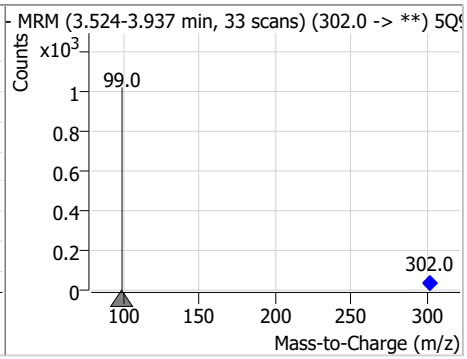




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.18	3.70	0.02	24595				

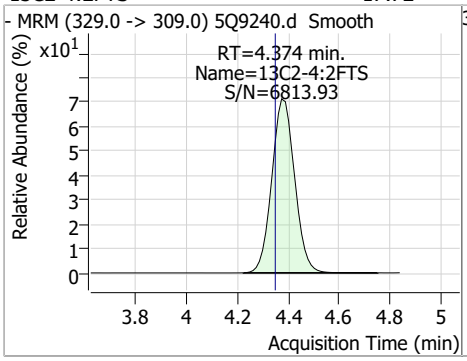


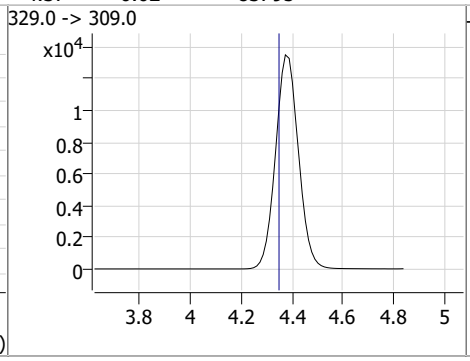


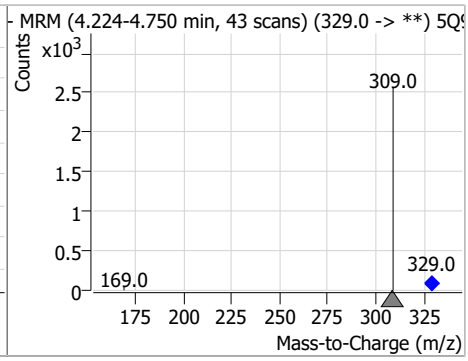


Perfluorinated Compounds by LC/MS/MS

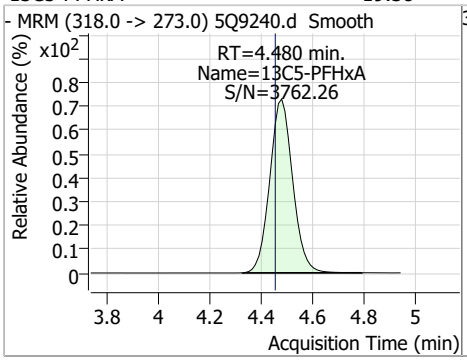
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	17.72	4.37	0.02	83795				

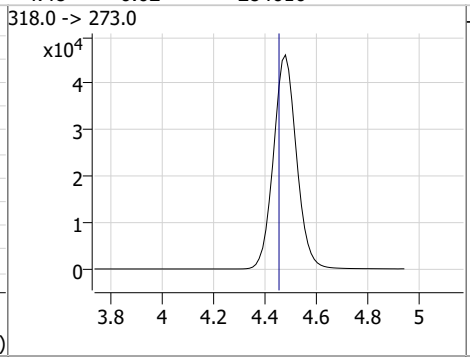


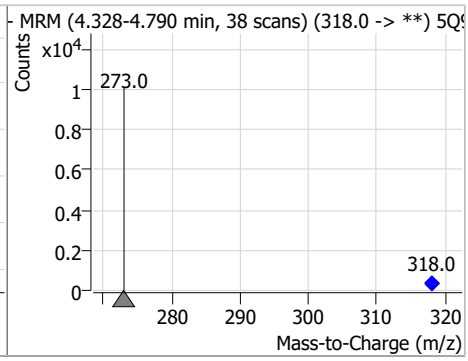




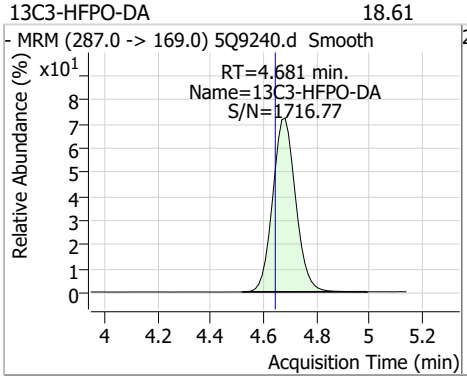
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.38	4.48	0.02	284610				

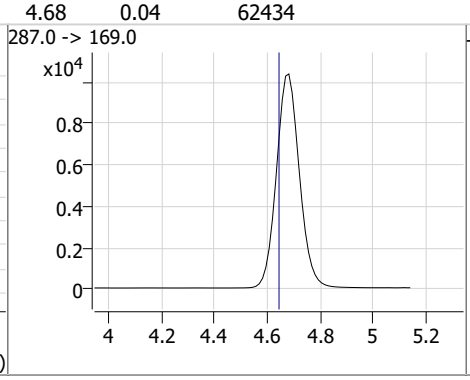


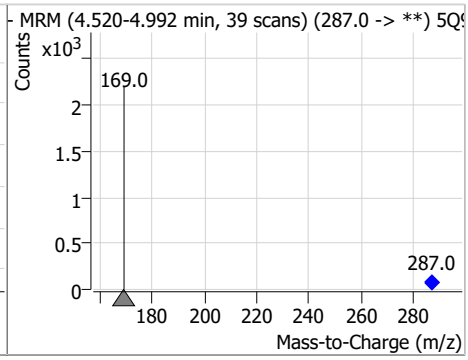




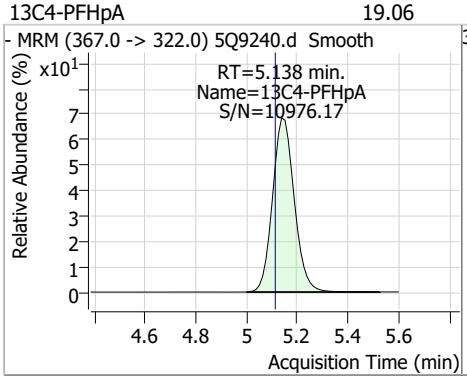
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	18.61	4.68	0.04	62434				

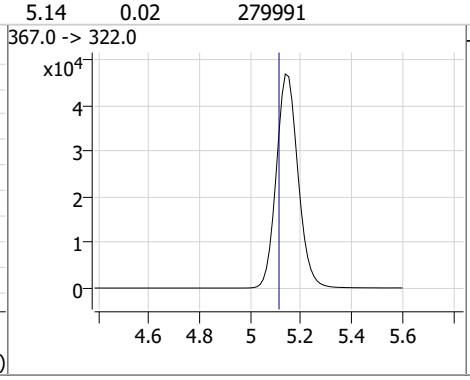


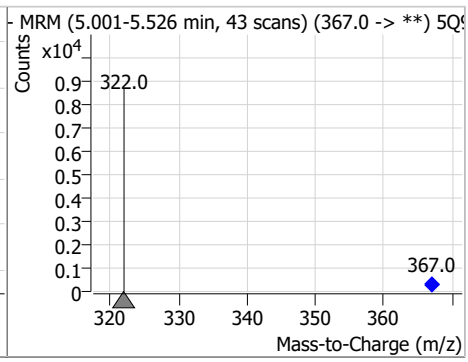




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.06	5.14	0.02	279991				

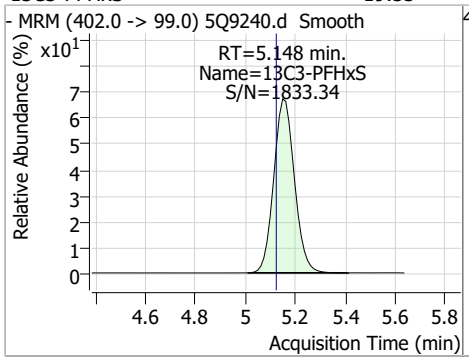


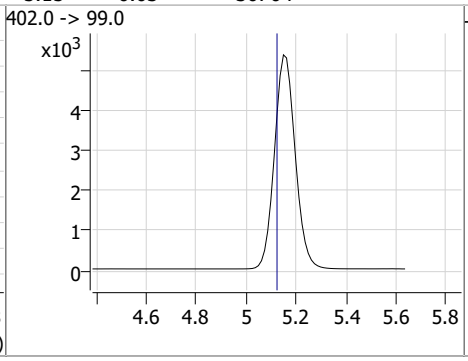


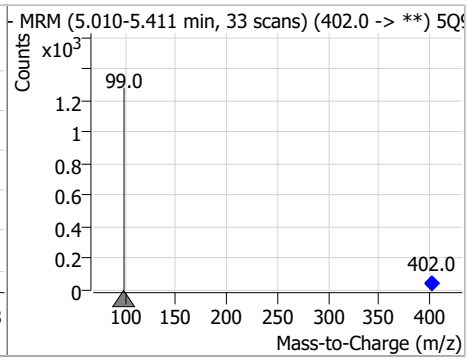


Perfluorinated Compounds by LC/MS/MS

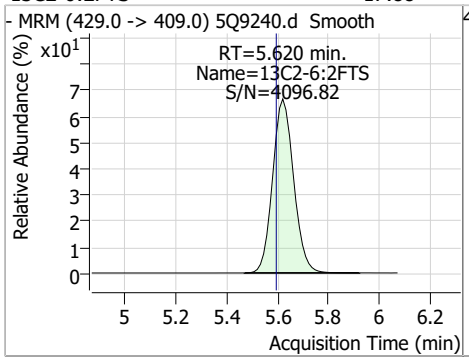
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.33	5.15	0.03	30704				

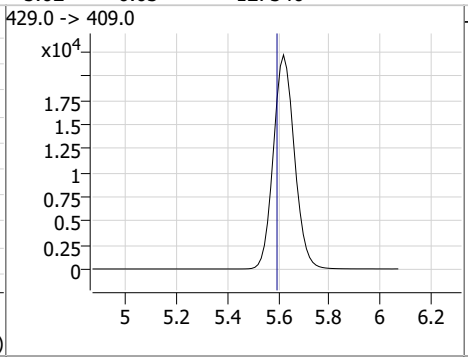


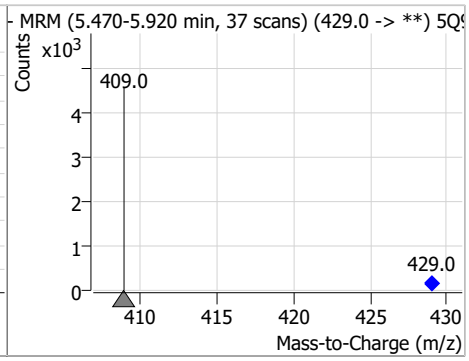




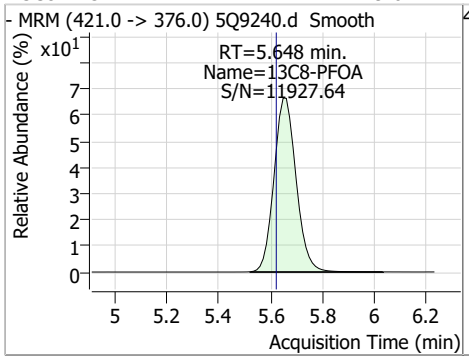
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	17.88	5.62	0.03	127340				

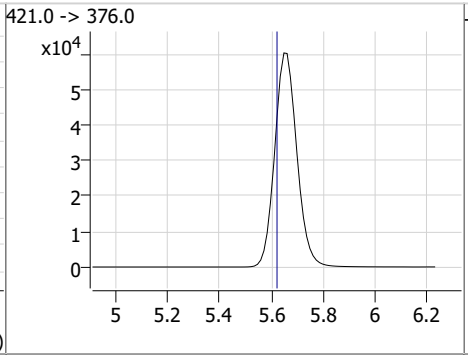


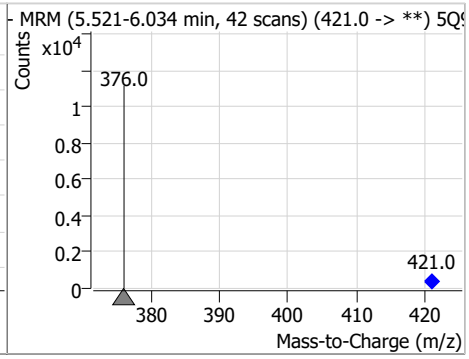




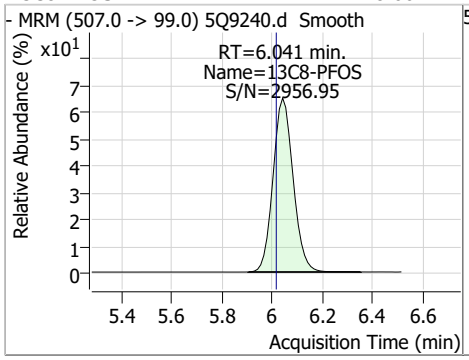
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.02	5.65	0.03	358213				

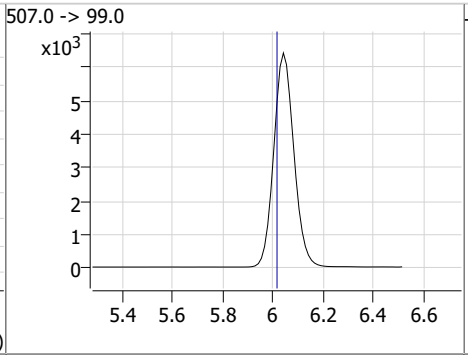


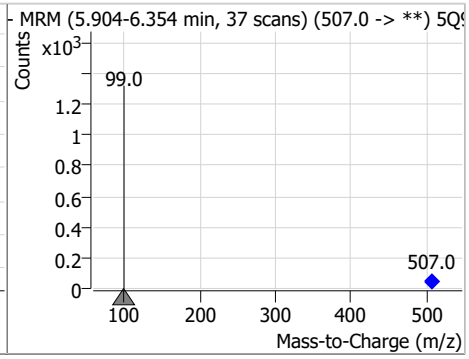




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	18.66	6.04	0.03	35566				

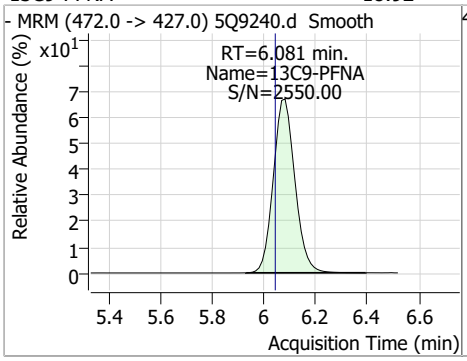


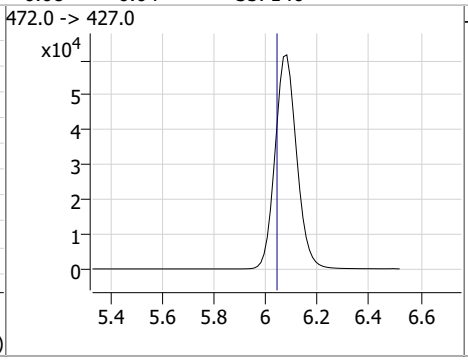


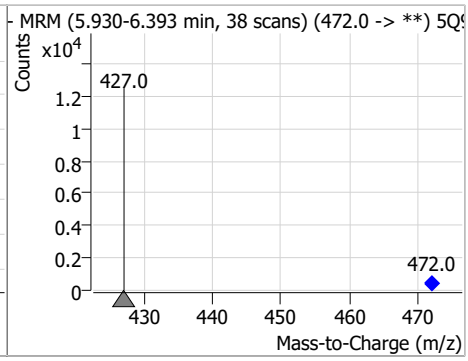


Perfluorinated Compounds by LC/MS/MS

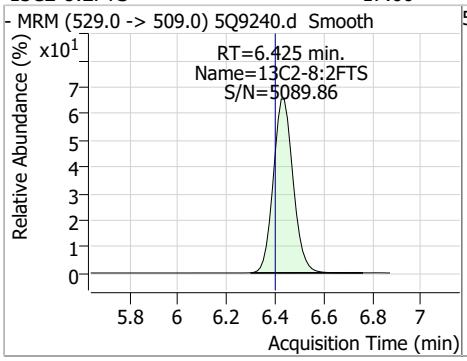
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.92	6.08	0.04	357140				

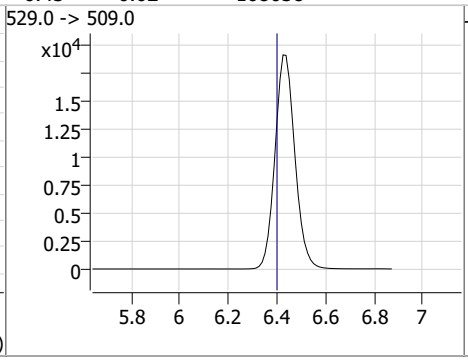


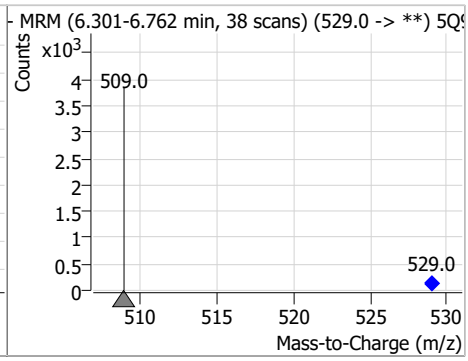




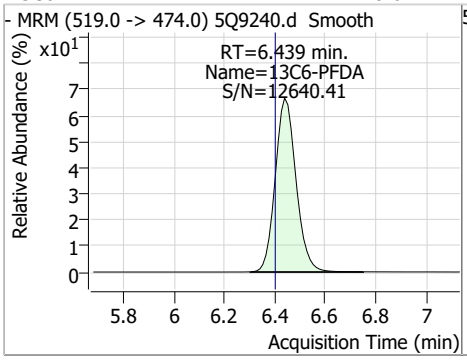
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	17.60	6.43	0.02	108058				

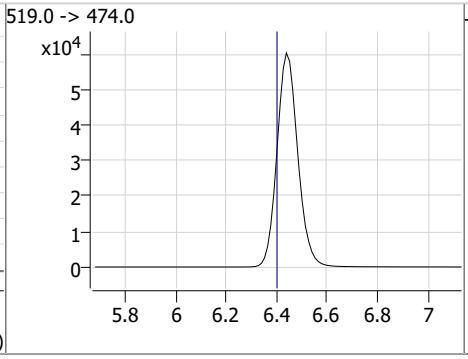


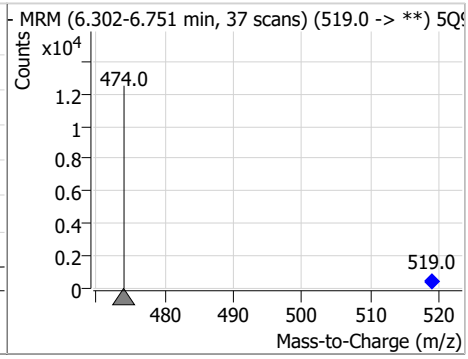




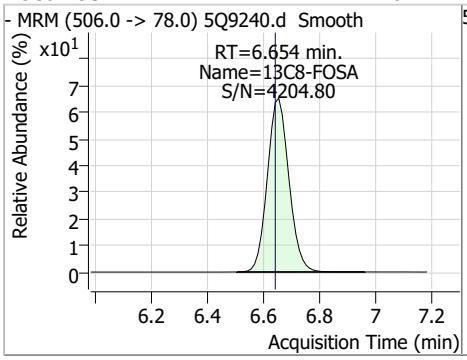
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.64	6.44	0.04	345462				

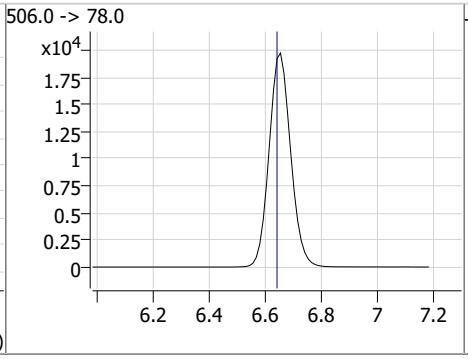


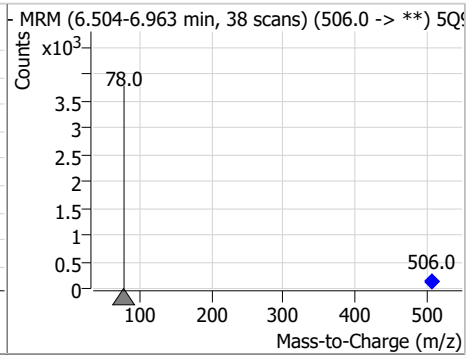




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	17.64	6.65	0.01	105720				

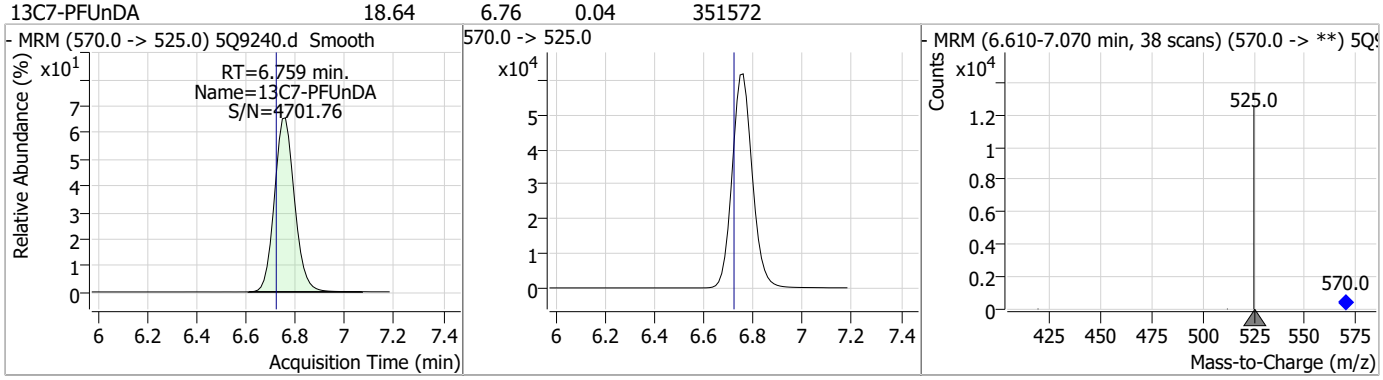




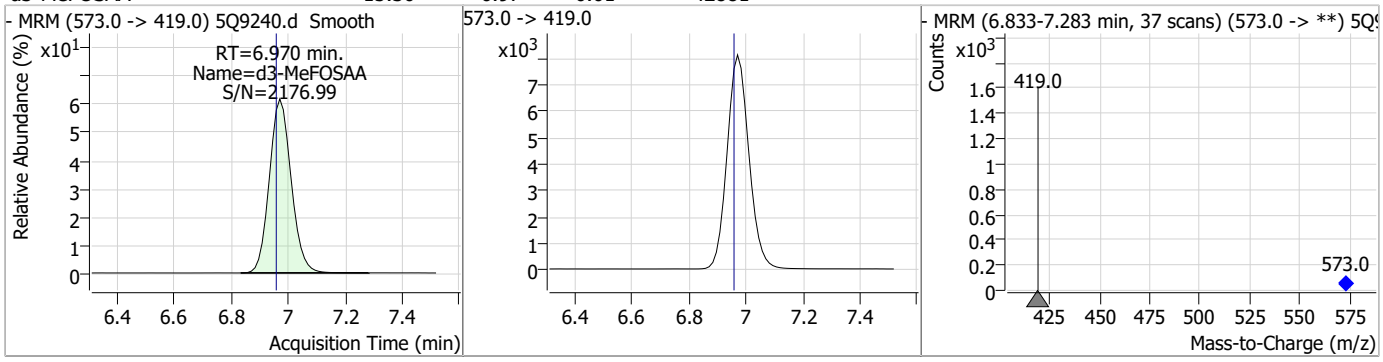


Perfluorinated Compounds by LC/MS/MS

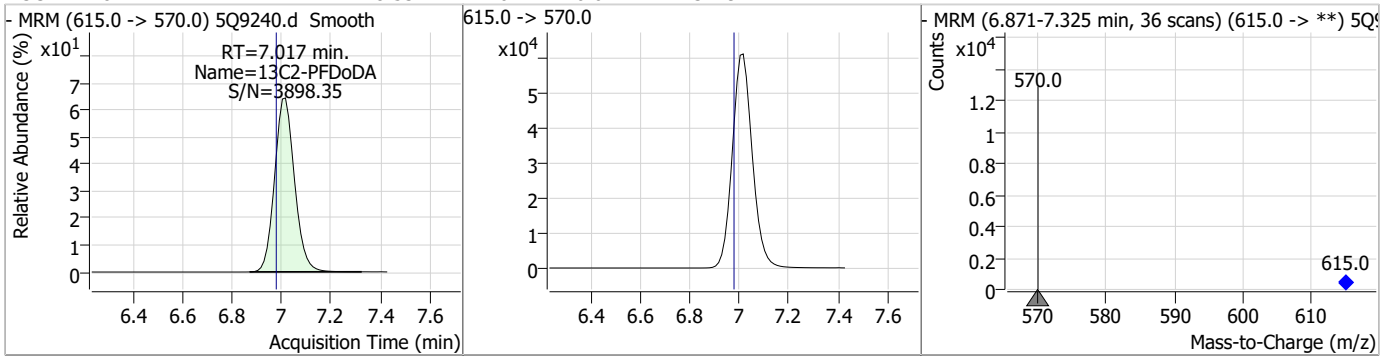
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	18.64	6.76	0.04	351572				



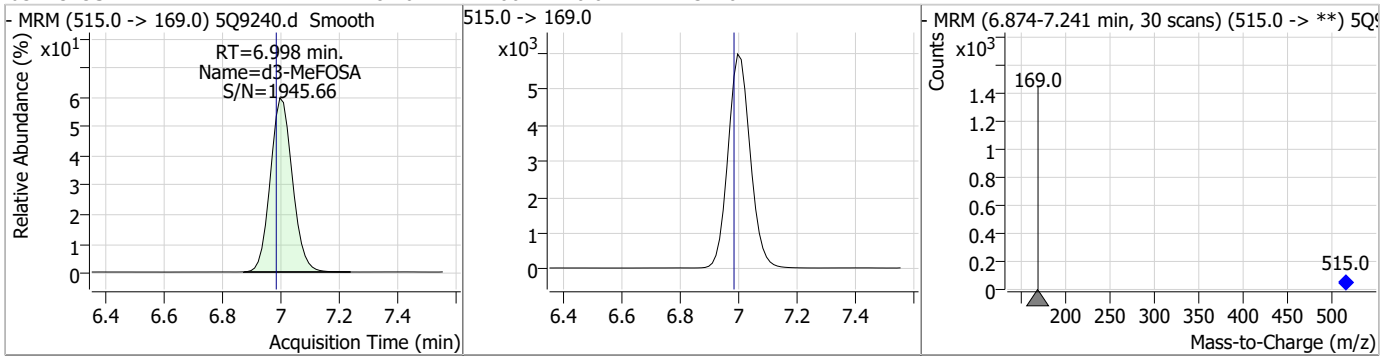
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	15.30	6.97	0.01	42881				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	18.53	7.02	0.04	342944				

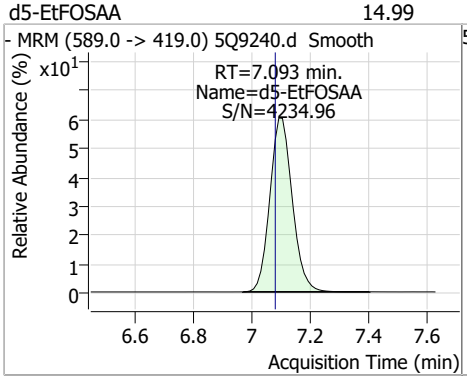


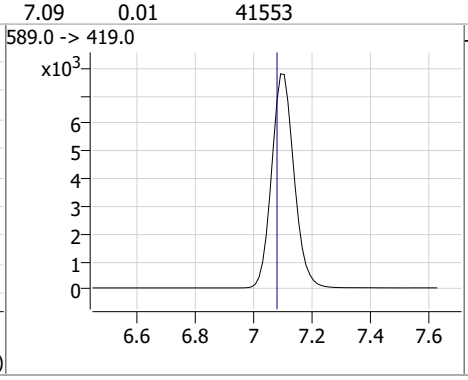
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	18.10	7.00	0.01	31202				

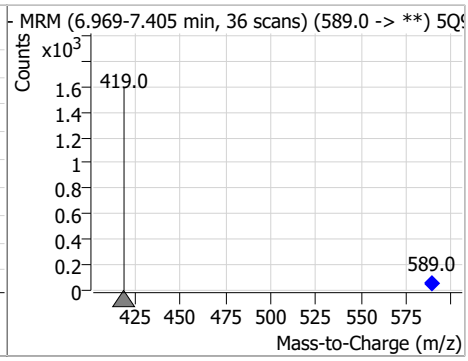


Perfluorinated Compounds by LC/MS/MS

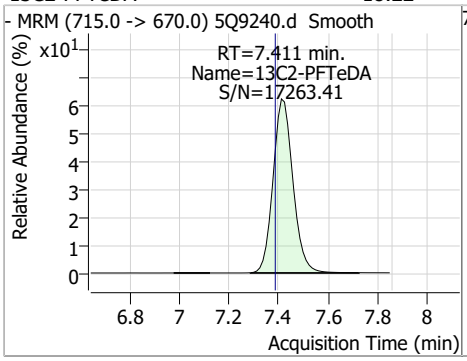
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	14.99	7.09	0.01	41553				

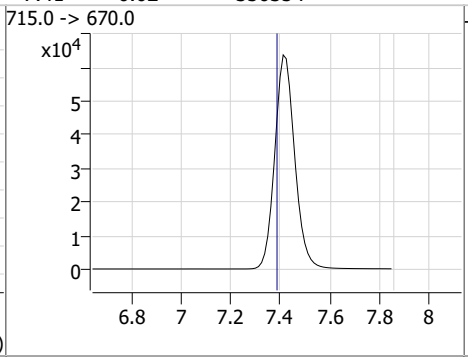


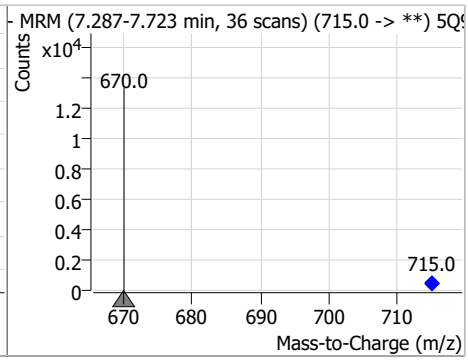




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	18.22	7.41	0.02	356354				







Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9060.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 6:09:55 PM
Sample Name : op94649-bs
Vial : P2-A6
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94649,S5Q134,2.00,,,1.0,1,soil

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	91201	20.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	180779	20.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	263332	20.00	µg/L	0.000
M4-PFHpA	5.738	367.0 -> 322.0	272338	20.00	µg/L	0.012
M8-PFOA	6.361	421.0 -> 376.0	366969	20.00	µg/L	0.000
M9-PFNA	6.931	472.0 -> 427.0	381668	20.00	µg/L	0.013
M6-PFDA	7.449	519.0 -> 474.0	428290	20.00	µg/L	0.013
M7-PFUnDA	8.320	570.0 -> 525.0	557730	20.00	µg/L	0.000
M2-PFDoDA	9.388	615.0 -> 570.0	403985	20.00	µg/L	0.000
M2-PFTeDA	10.899	715.0 -> 670.0	376326	20.00	µg/L	0.000
M8-FOSA	6.605	506.0 -> 78.0	75261	20.00	µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	22661	20.00	µg/L	0.000
M3-PFHxS	5.748	402.0 -> 99.0	30436	20.00	µg/L	0.015
M8-PFOS	6.891	507.0 -> 99.0	42395	20.00	µg/L	0.012
M2-4:2FTS	4.886	329.0 -> 309.0	85170	20.00	µg/L	0.000
M2-6:2FTS	6.372	429.0 -> 409.0	138309	20.00	µg/L	0.012
M2-8:2FTS	7.512	529.0 -> 509.0	142385	20.00	µg/L	0.000
M3-MeFOSAA	7.047	573.0 -> 419.0	37440	20.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	53954	20.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	22476	20.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	35906	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	85170	17.69	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.4%		
13C2-6:2FTS	6.372	429.0 -> 409.0	138309	18.04	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.2%		
13C2-8:2FTS	7.512	529.0 -> 509.0	142385	19.72	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.6%		
13C2-PFDoDA	9.388	615.0 -> 570.0	403985	17.97	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.8%		
13C2-PFTeDA	10.899	715.0 -> 670.0	376326	19.22	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.1%		
13C3-PFBS	4.124	302.0 -> 99.0	22661	17.44	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.2%		
13C3-PFHxS	5.748	402.0 -> 99.0	30436	17.01	µg/L	0.015
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.0%		
13C4-PFBA	2.400	217.0 -> 172.0	91201	17.53	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.6%		
13C4-PFHpA	5.738	367.0 -> 322.0	272338	17.71	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.6%		
13C5-PFHxA	4.965	318.0 -> 273.0	263332	17.51	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.5%		
13C5-PFPeA	3.919	268.0 -> 223.0	180779	17.23	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.2%		
13C6-PFDA	7.449	519.0 -> 474.0	428290	18.42	µg/L	0.013

Perfluorinated Compounds by LC/MS/MS

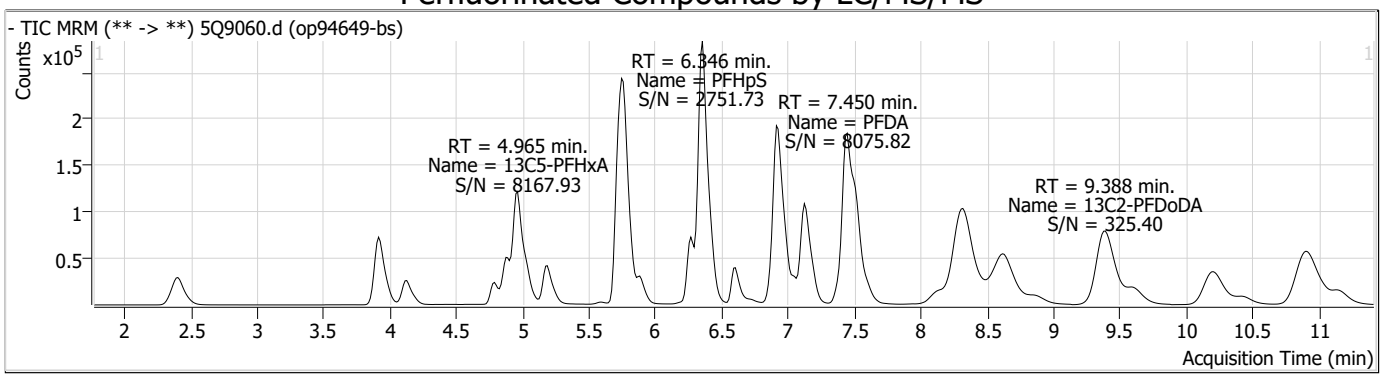
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.1%		
13C7-PFUnDA	8.320	570.0 -> 525.0	557730	19.06 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.3%		
13C8-FOSA	6.605	506.0 -> 78.0	75261	15.58 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 77.9%		
13C8-PFOA	6.361	421.0 -> 376.0	366969	18.21 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.1%		
13C8-PFOS	6.891	507.0 -> 99.0	42395	17.78 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.9%		
13C9-PFNA	6.931	472.0 -> 427.0	381668	18.14 µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.7%		
d3-MeFOSAA	7.047	573.0 -> 419.0	37440	21.07 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.4%		
13C3-HFPO-DA	5.194	287.0 -> 169.0	53954	16.31 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.6%		
d3-MeFOSA	6.964	515.0 -> 169.0	22476	14.84 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 74.2%		
d5-EtFOSAA	7.157	589.0 -> 419.0	35906	19.47 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.3%		
Target Compounds						QValue
4:2FTS	4.888	327.0 -> 307.0	103422	22.19 µg/L		100
		327.0 -> 81.0	61067			
6:2FTS	6.373	427.0 -> 407.0	167606	23.61 µg/L		100
		427.0 -> 81.0	72207			
8:2FTS	7.512	527.0 -> 507.0	165886	22.81 µg/L		98
		527.0 -> 81.0	82645			
EtFOSAA	7.158	584.0 -> 419.0	28911	24.12 µg/L		97
		584.0 -> 483.0	17711			
FOSA	6.606	498.0 -> 78.0	83398	21.57 µg/L		100
		498.0 -> 478.0	2698			
MeFOSAA	7.047	570.0 -> 419.0	33825	22.26 µg/L		97
		570.0 -> 512.0	13283			
PFBA	2.406	213.0 -> 169.0	113787	22.91 µg/L		100
PFBS	4.129	299.0 -> 80.0	82181	22.30 µg/L		100
		299.0 -> 99.0	35062			
PFDA	7.450	513.0 -> 469.0	498311	21.85 µg/L		100
		513.0 -> 219.0	88999			
PFDoDA	9.392	613.0 -> 569.0	425428	23.08 µg/L		99
		613.0 -> 319.0	73958			
PFDS	8.131	599.0 -> 80.0	100935	20.16 µg/L		100
		599.0 -> 99.0	60736			
PFHpA	5.739	363.0 -> 319.0	374756	22.00 µg/L		100
		363.0 -> 169.0	83446			
PFHpS	6.346	449.0 -> 80.0	70778	21.84 µg/L		98
		449.0 -> 99.0	37913			
PFHxA	4.966	313.0 -> 269.0	295193	22.07 µg/L		100
		313.0 -> 119.0	13445			
PFHxS	5.749	399.0 -> 80.0	71592	23.17 µg/L	m	98
		399.0 -> 99.0	41002			
PFNA	6.931	463.0 -> 419.0	433573	21.91 µg/L		99
		463.0 -> 219.0	92518			
PFNS	7.384	549.0 -> 80.0	64434	22.16 µg/L		99
		549.0 -> 99.0	38182			
PFOA	6.362	413.0 -> 369.0	452203	21.53 µg/L		99
		413.0 -> 169.0	122242			
PFOS	6.892	499.0 -> 80.0	88376	22.60 µg/L	m	99

Perfluorinated Compounds by LC/MS/MS

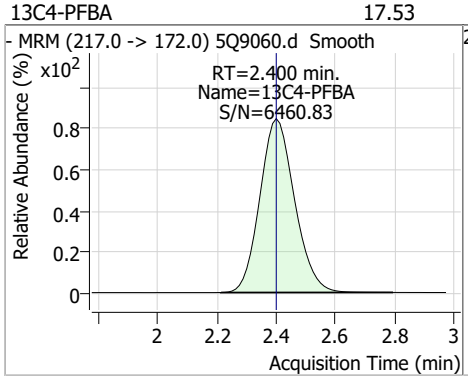
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	41851			
PFPeA	3.922	263.0 -> 219.0	224247	21.11	µg/L	100
PFPeS	5.047	349.0 -> 80.0	51455	21.33	µg/L	100
		349.0 -> 99.0	26137			
PFTeDA	10.903	713.0 -> 669.0	379757	19.48	µg/L	95
		713.0 -> 219.0	45544			
PFTrDA	10.200	663.0 -> 619.0	402966	22.89	µg/L	100
		663.0 -> 369.0	44081			
PFUnDA	8.321	563.0 -> 519.0	604314	21.07	µg/L	100
		563.0 -> 269.0	102788			
11Cl-PF3OUdS	8.628	631.0 -> 451.0	409422	21.63	µg/L	95
		633.0 -> 453.0	127700			
9Cl-PF3ONS	7.123	531.0 -> 351.0	374948	19.81	µg/L	99
		533.0 -> 353.0	117987			
ADONA	5.777	377.0 -> 251.0	493961	24.06	µg/L	99
		377.0 -> 85.0	186314			
HFPO-DA	5.190	329.0 -> 169.0	97740	22.67	µg/L	100
		285.0 -> 169.0	58021			
MeFOSA	6.966	512.0 -> 169.0	29958	22.52	µg/L	95
		512.0 -> 219.0	21956			
4-PFECHS	6.268	461.0 -> 381.0	232518	19.88	µg/L	100
		461.0 -> 99.0	124678			
FBSA	4.793	298.0 -> 78.0	102754	18.81	µg/L	100
		298.0 -> 64.0	9372			
FHxSA	5.900	398.0 -> 78.0	95609	17.52	µg/L	99
		398.0 -> 64.0	9481			

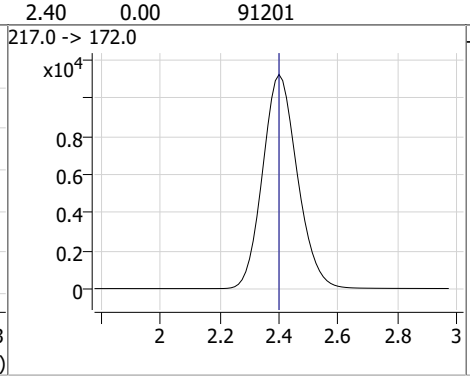
 # = Qualifier out of range, m = manually integrated, + = Area summed

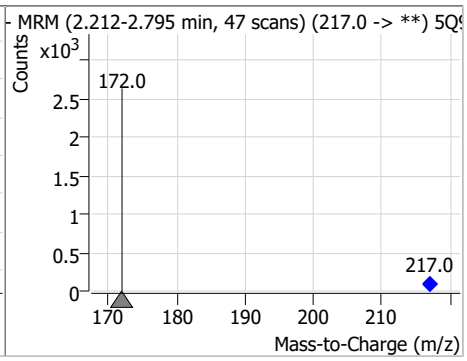
Perfluorinated Compounds by LC/MS/MS



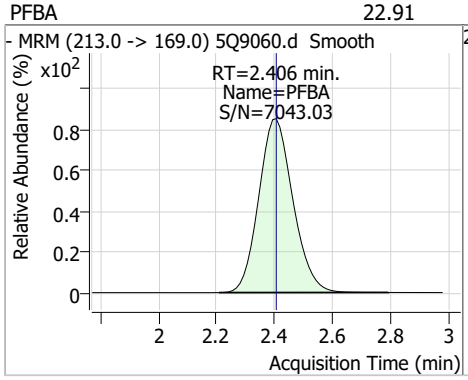
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	17.53	2.40	0.00	91201				

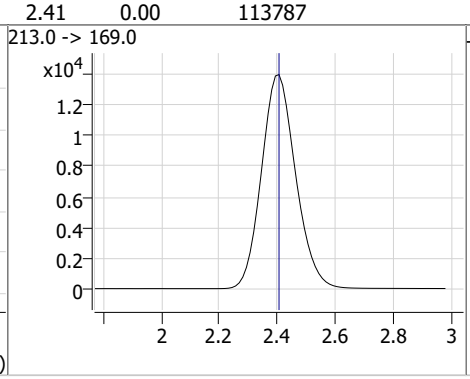


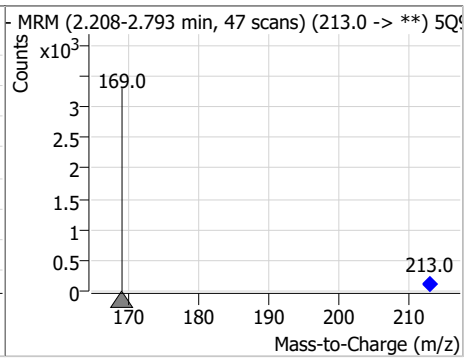




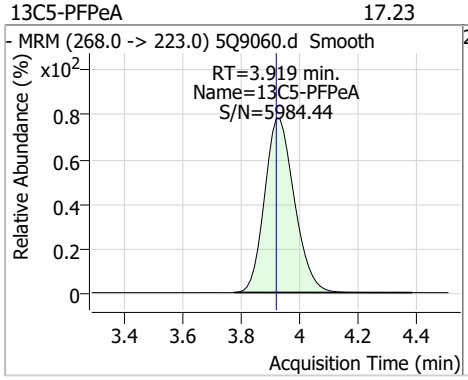
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	22.91	2.41	0.00	113787				

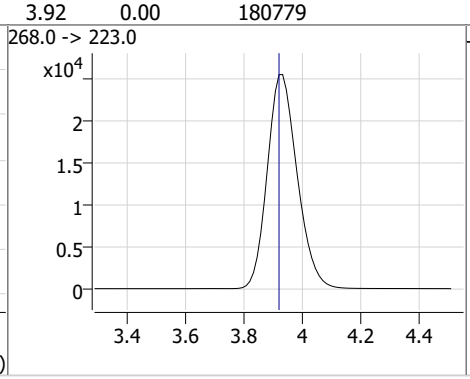


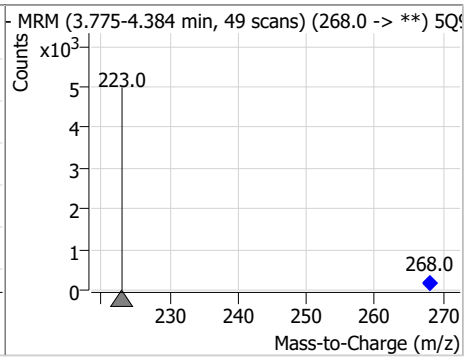




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	17.23	3.92	0.00	180779				

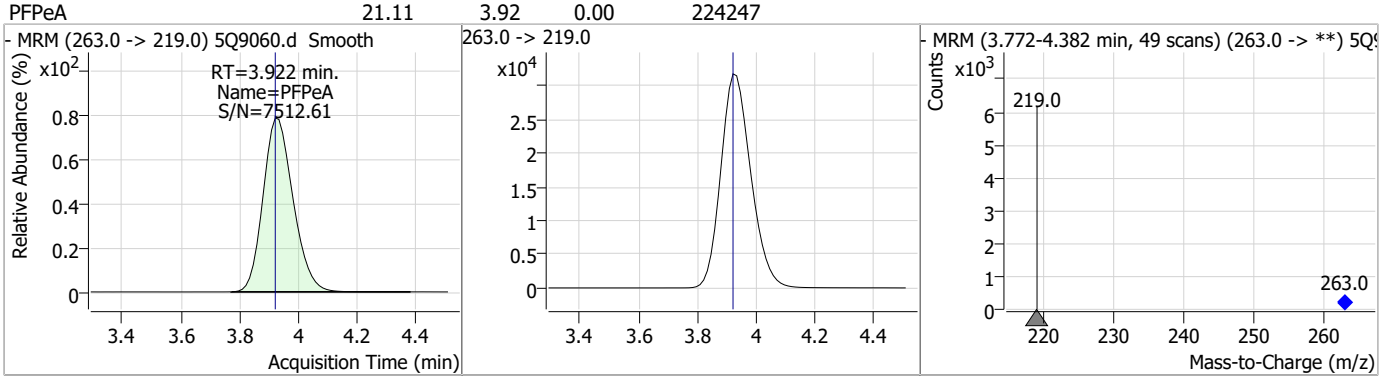




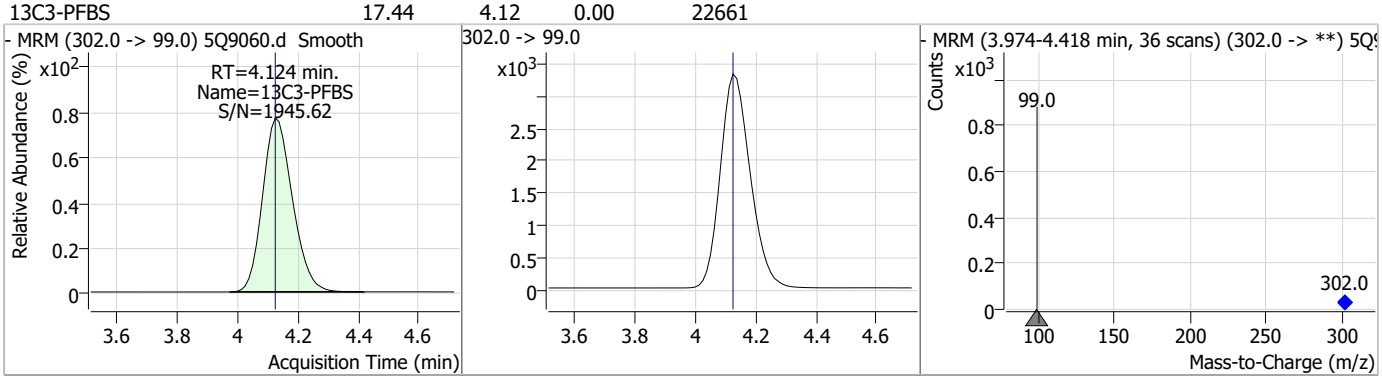


Perfluorinated Compounds by LC/MS/MS

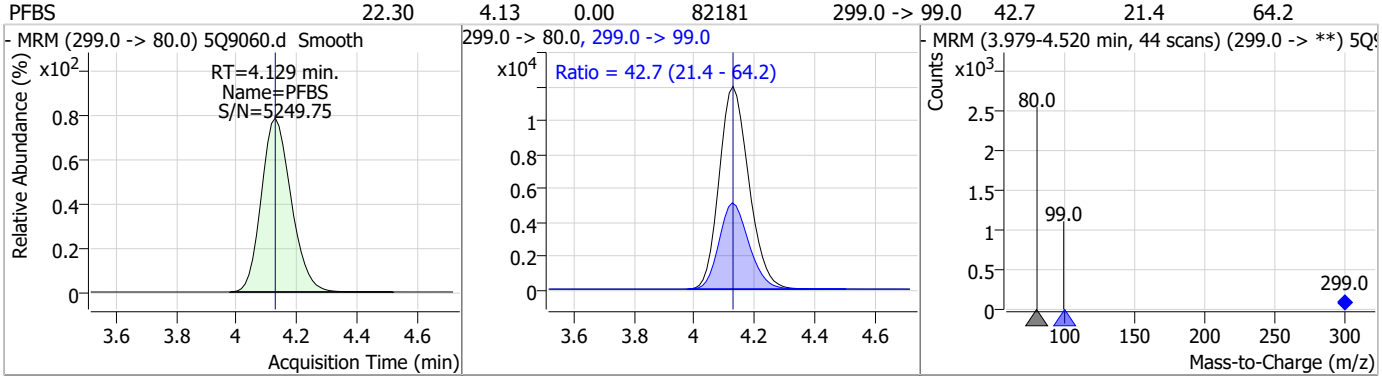
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	21.11	3.92	0.00	224247				



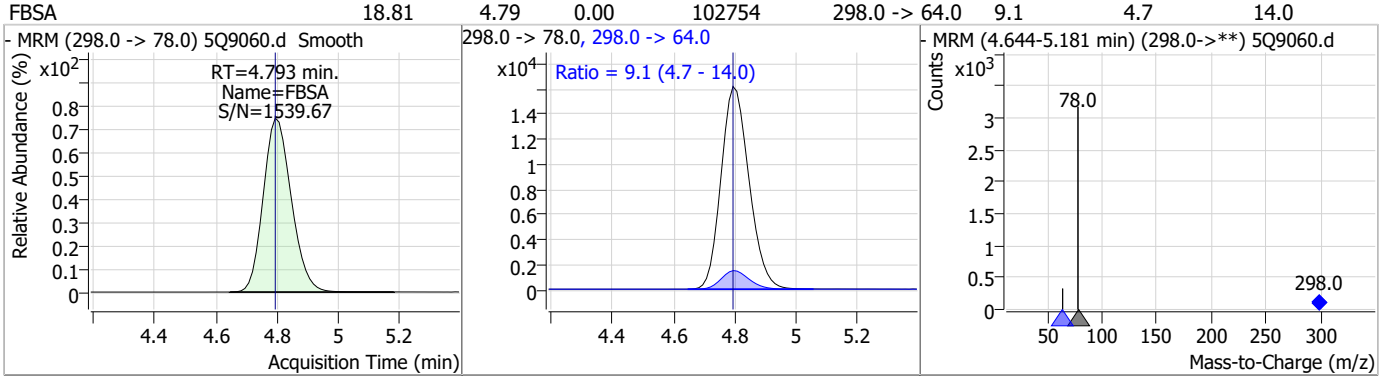
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	17.44	4.12	0.00	22661				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	22.30	4.13	0.00	82181	299.0 -> 99.0	42.7	21.4	64.2

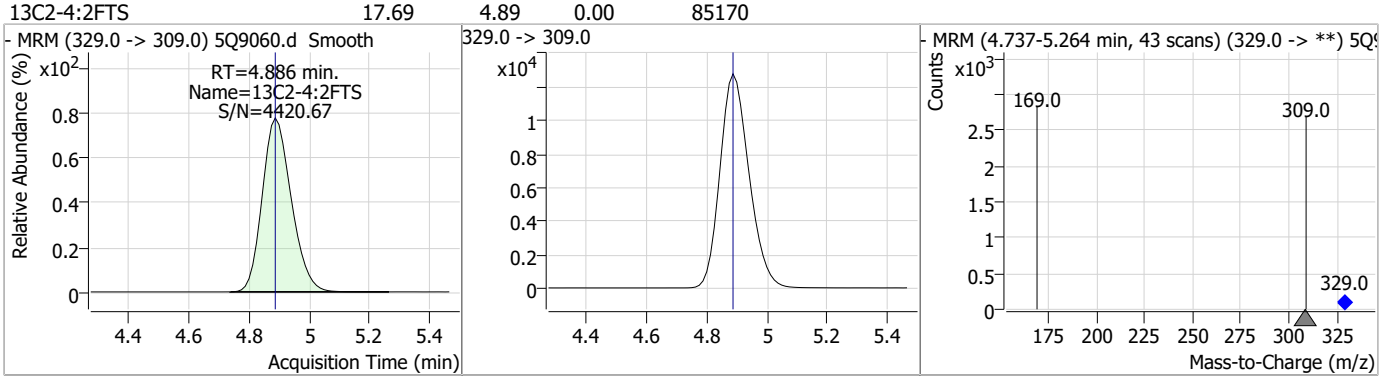


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	18.81	4.79	0.00	102754	298.0 -> 64.0	9.1	4.7	14.0

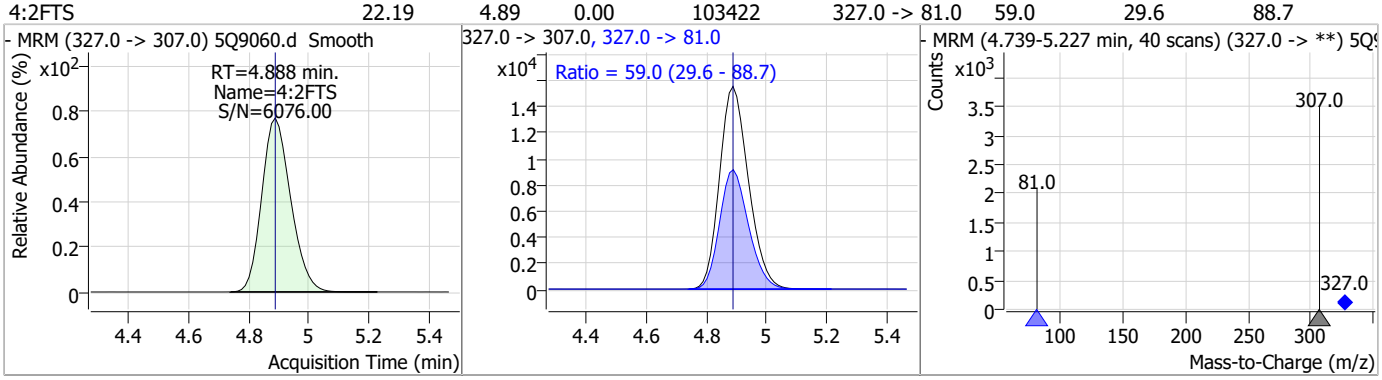


Perfluorinated Compounds by LC/MS/MS

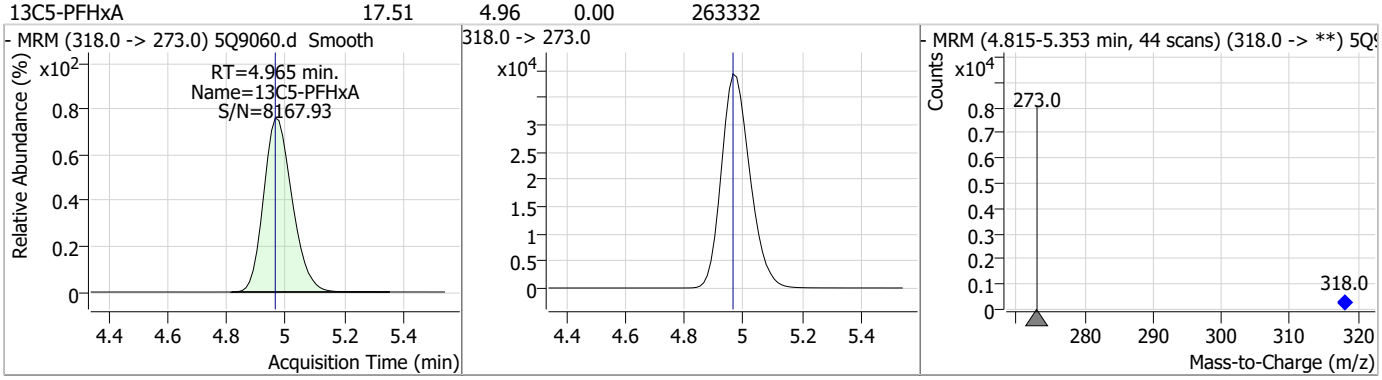
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	17.69	4.89	0.00	85170				



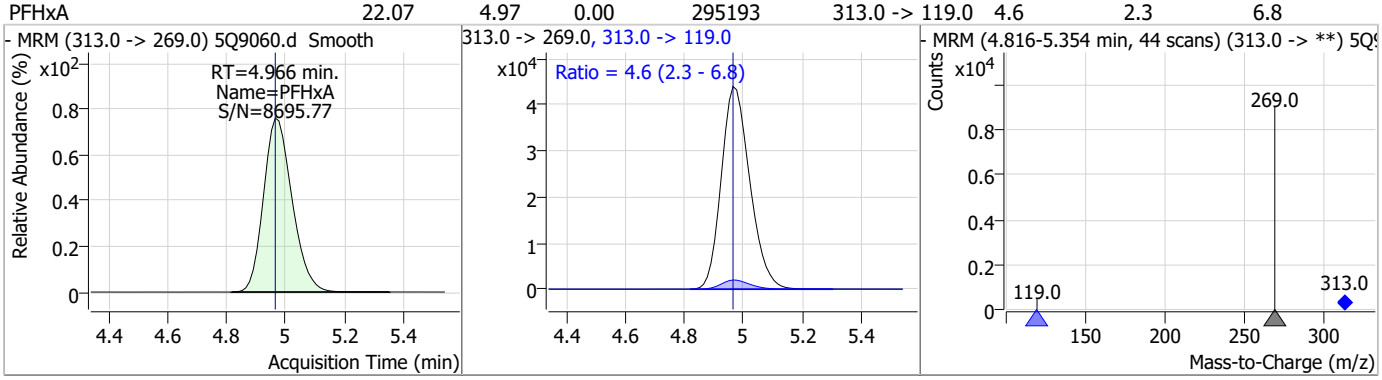
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	22.19	4.89	0.00	103422	327.0 -> 81.0	59.0	29.6	88.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	17.51	4.96	0.00	263332				

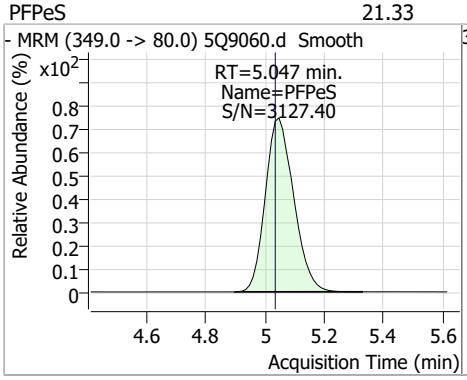


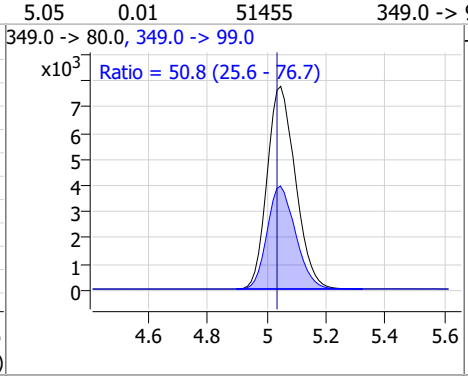
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	22.07	4.97	0.00	295193	313.0 -> 119.0	4.6	2.3	6.8

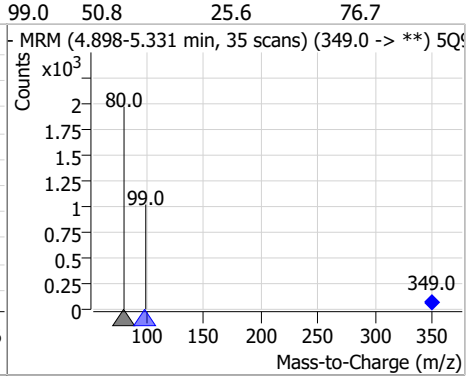


Perfluorinated Compounds by LC/MS/MS

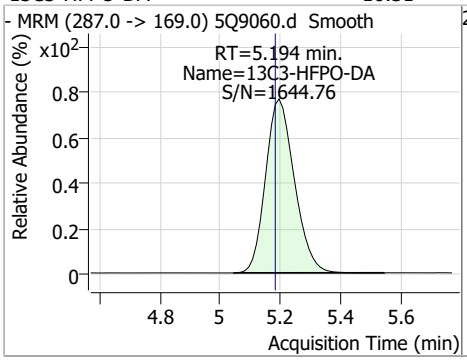
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	21.33	5.05	0.01	51455	349.0 -> 99.0	50.8	25.6	76.7

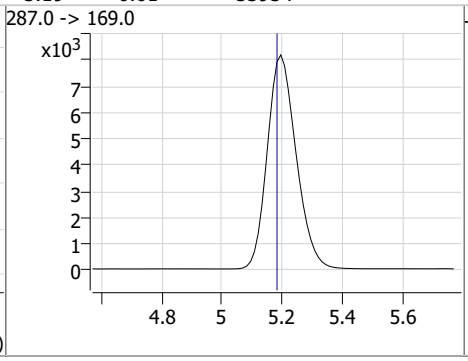


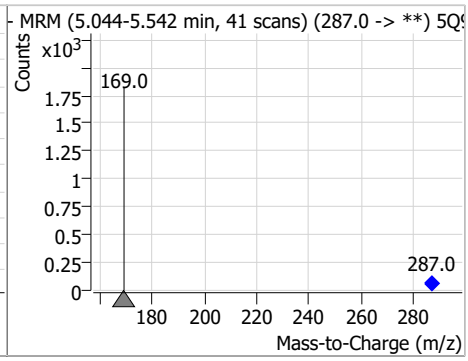




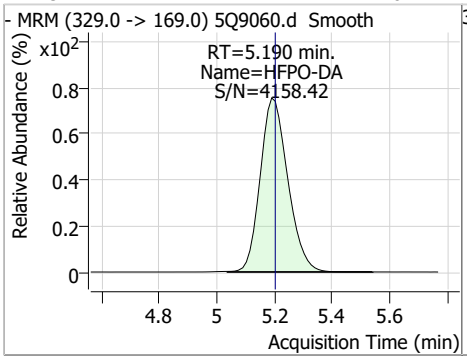
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	16.31	5.19	0.01	53954				

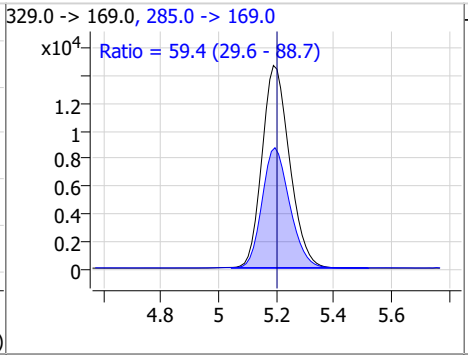


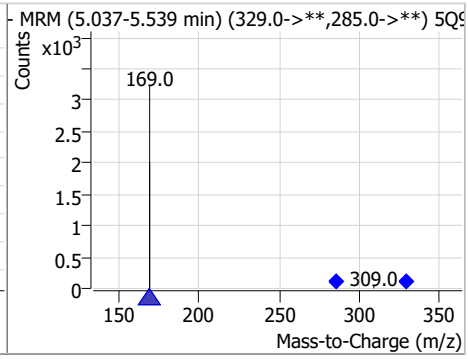




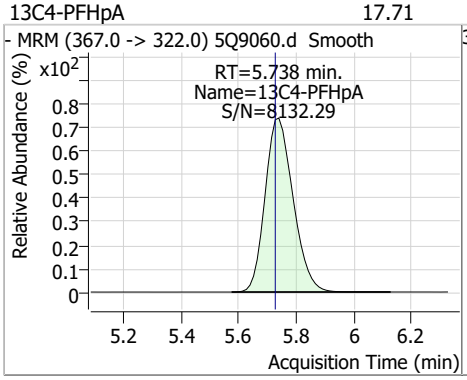
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	22.67	5.19	0.00	97740	285.0 -> 169.0	59.4	29.6	88.7

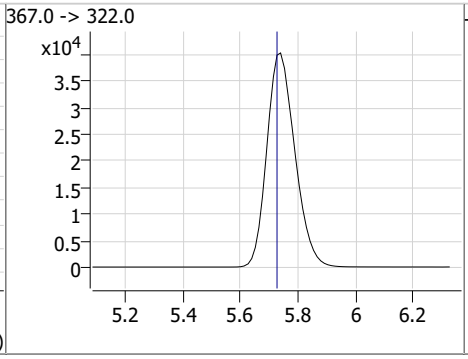


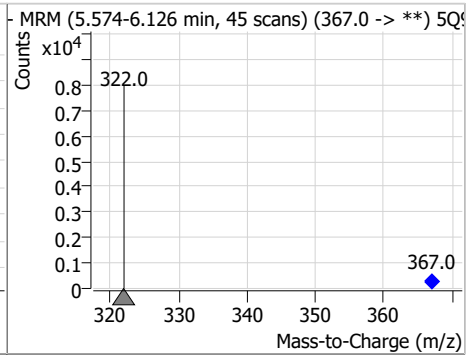




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	17.71	5.74	0.01	272338				

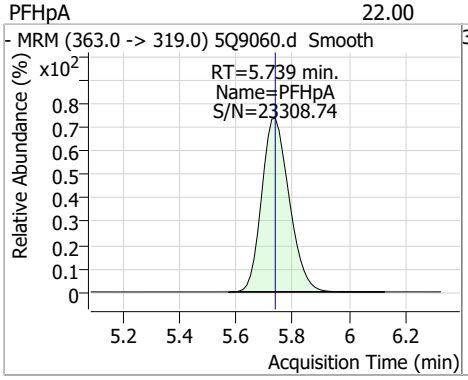


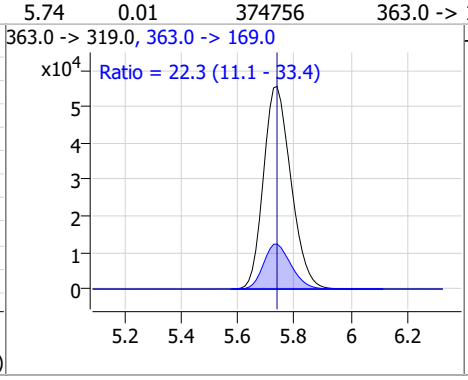


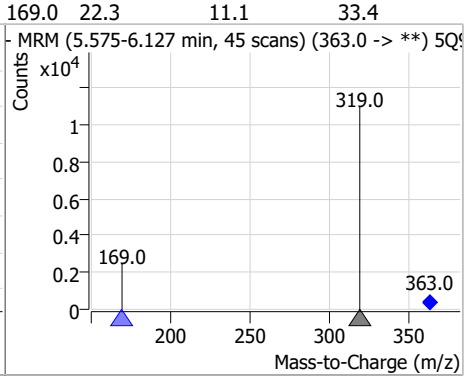


Perfluorinated Compounds by LC/MS/MS

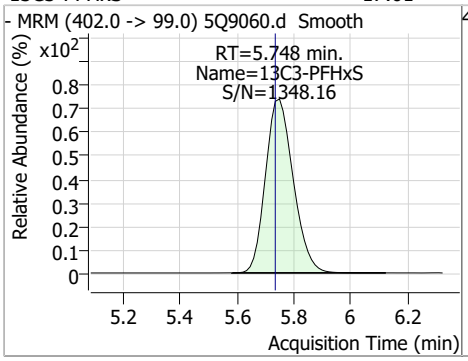
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	22.00	5.74	0.01	374756	363.0 -> 169.0	22.3	11.1	33.4

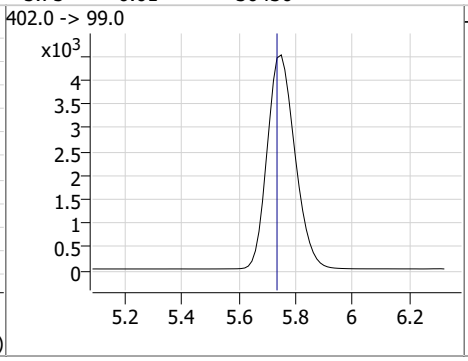


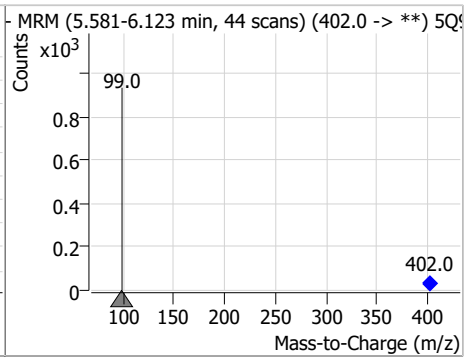




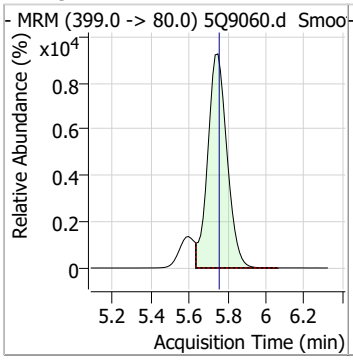
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	17.01	5.75	0.01	30436				

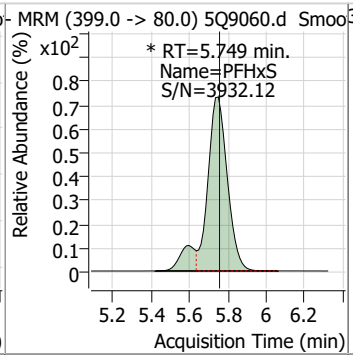


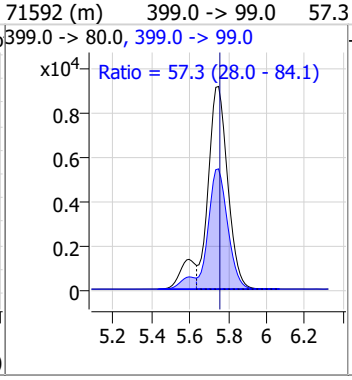


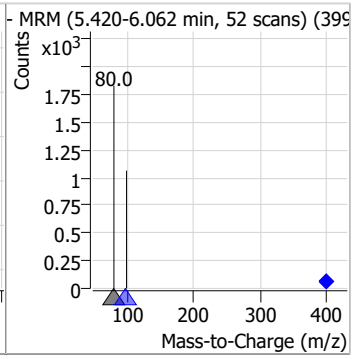


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	23.17	5.75	0.01	71592 (m)	399.0 -> 99.0	57.3	28.0	84.1

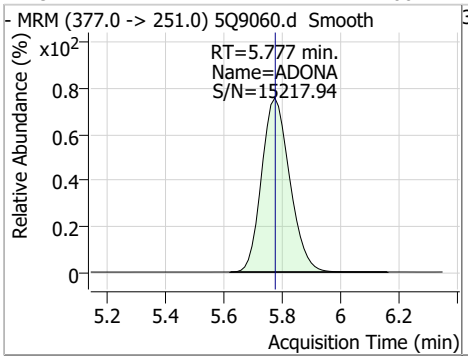


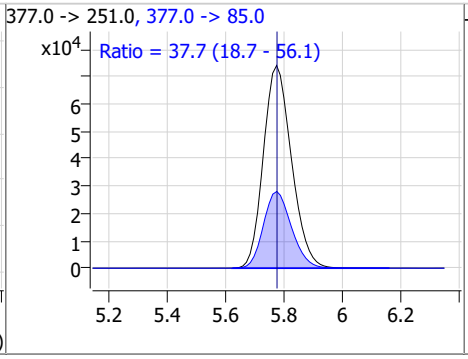


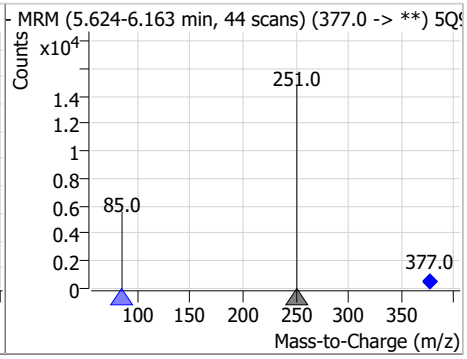




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	24.06	5.78	0.01	493961	377.0 -> 85.0	37.7	18.7	56.1

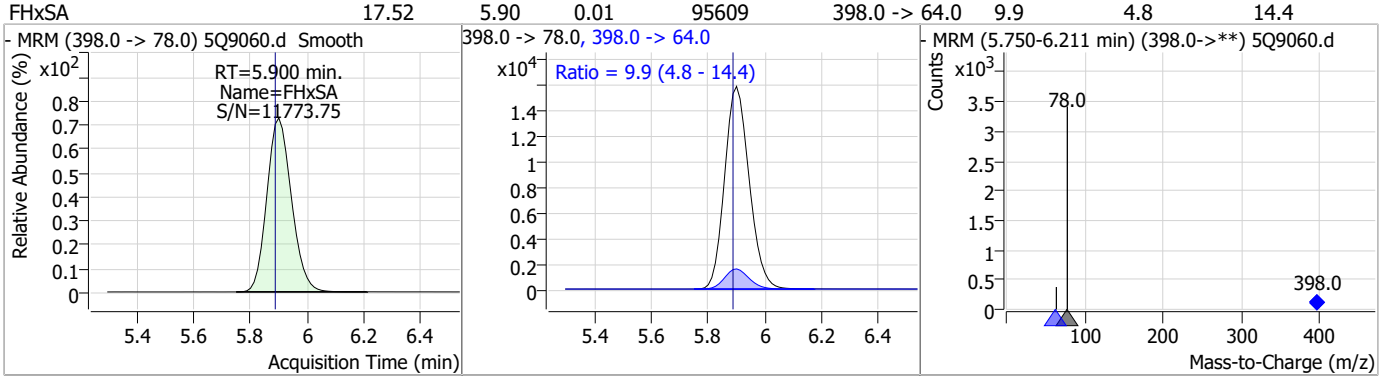




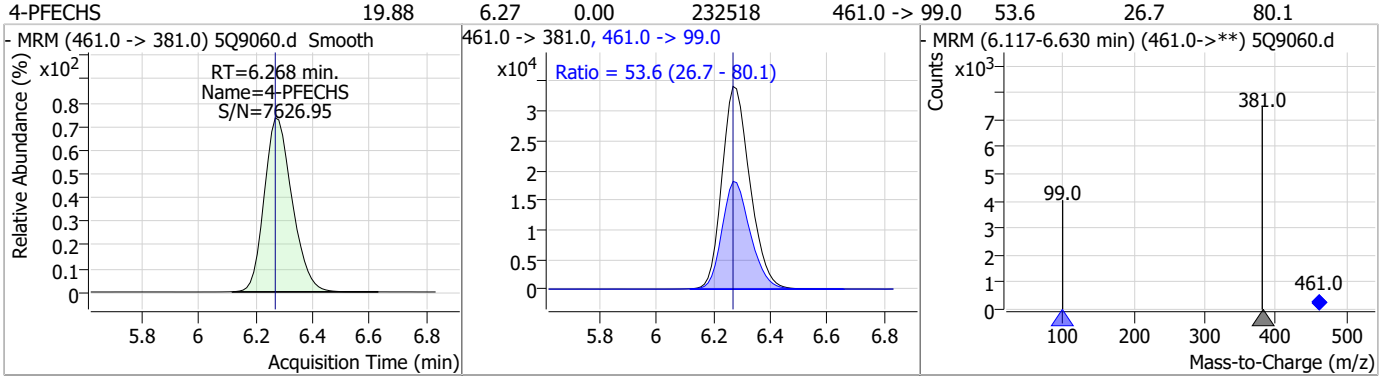


Perfluorinated Compounds by LC/MS/MS

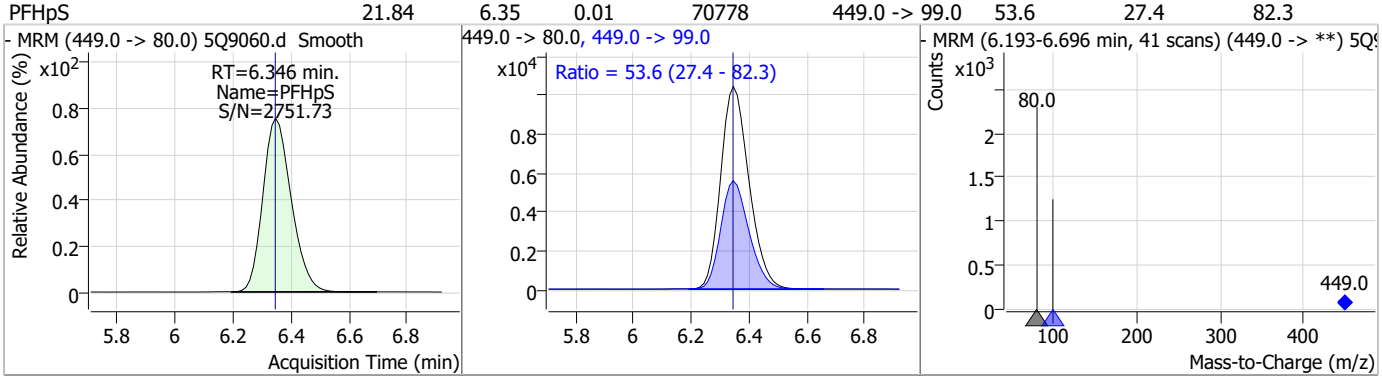
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	17.52	5.90	0.01	95609	398.0 -> 64.0	9.9	4.8	14.4



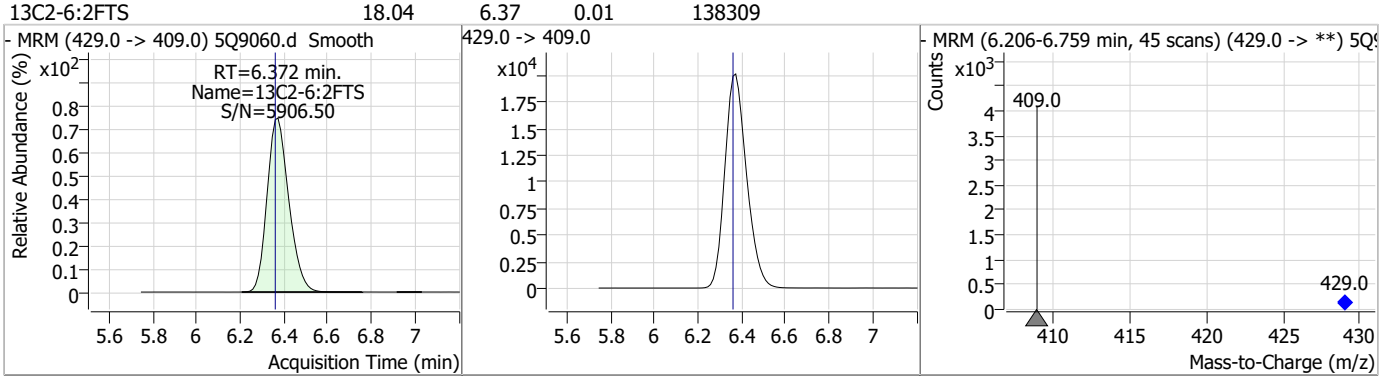
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	19.88	6.27	0.00	232518	461.0 -> 99.0	53.6	26.7	80.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	21.84	6.35	0.01	70778	449.0 -> 99.0	53.6	27.4	82.3

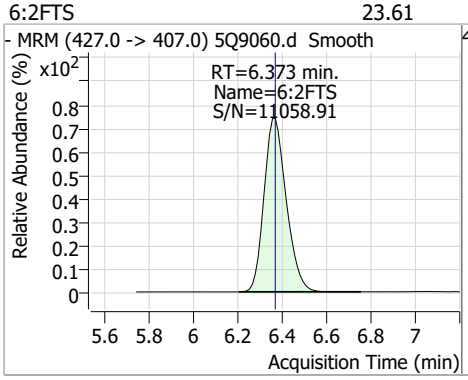


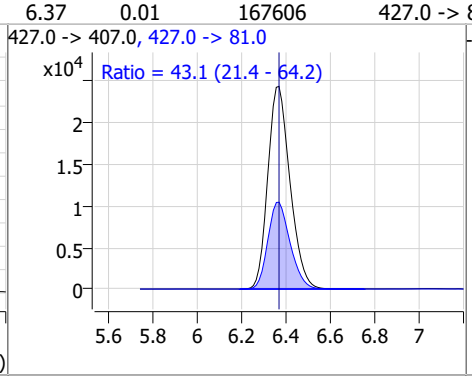
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.04	6.37	0.01	138309				

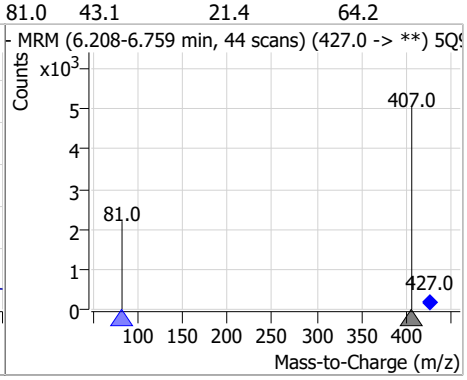


Perfluorinated Compounds by LC/MS/MS

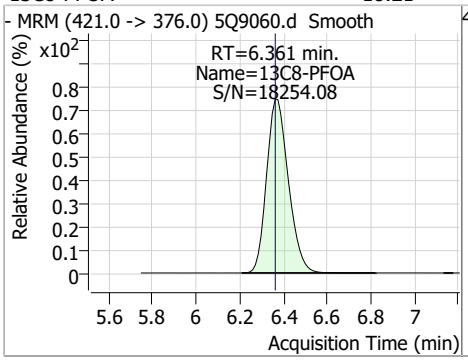
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	23.61	6.37	0.01	167606	427.0 -> 81.0	43.1	21.4	64.2

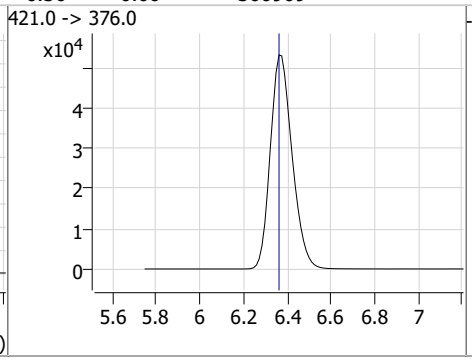


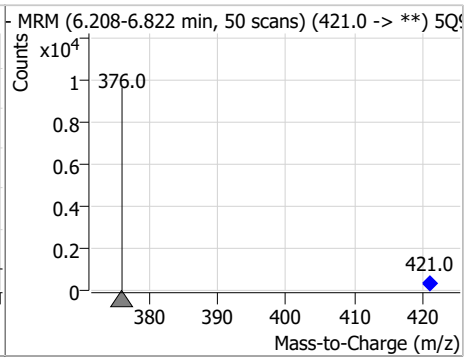




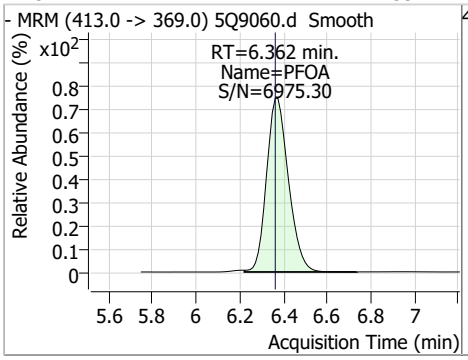
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	18.21	6.36	0.00	366969				

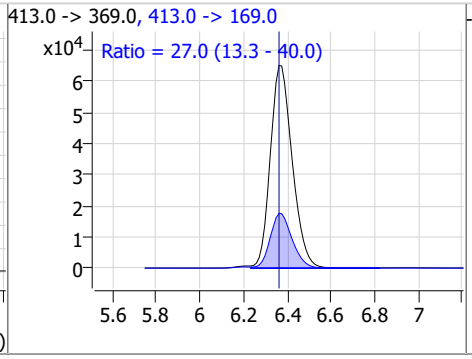


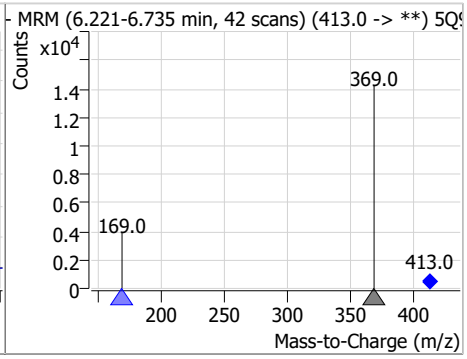




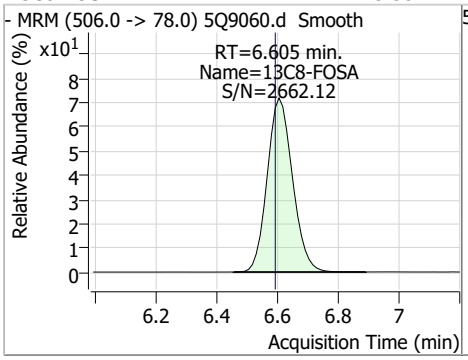
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	21.53	6.36	0.00	452203	413.0 -> 169.0	27.0	13.3	40.0

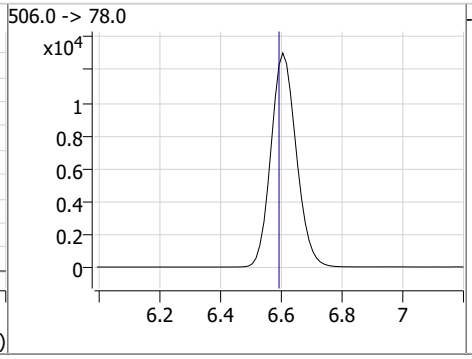


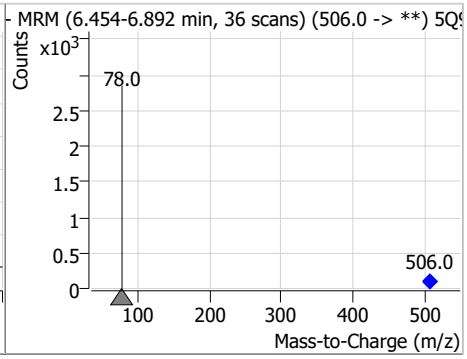




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	15.58	6.60	0.01	75261				

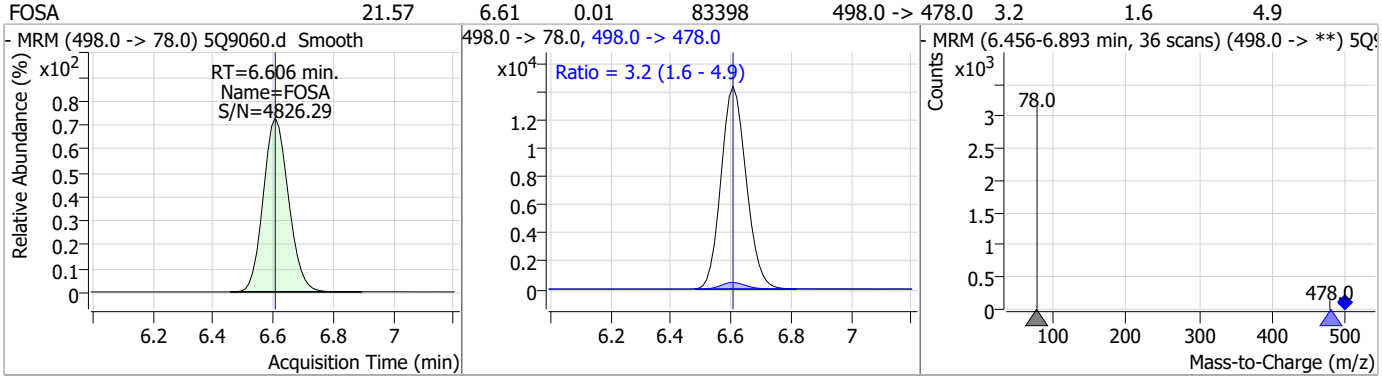




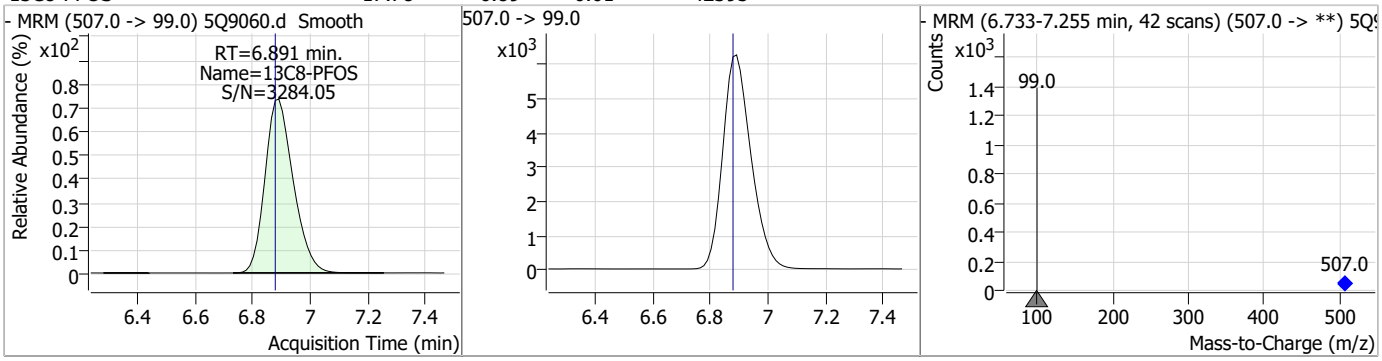


Perfluorinated Compounds by LC/MS/MS

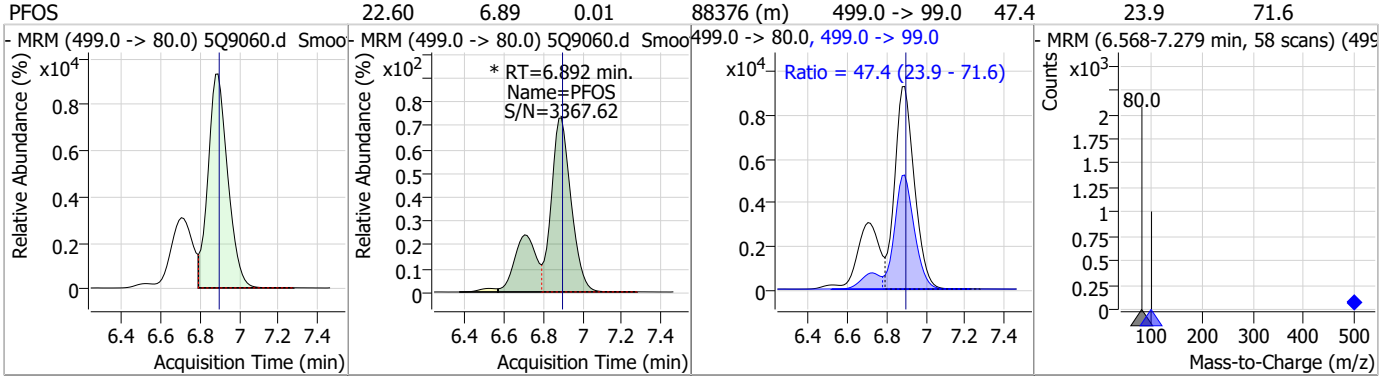
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	21.57	6.61	0.01	83398	498.0 -> 478.0	3.2	1.6	4.9



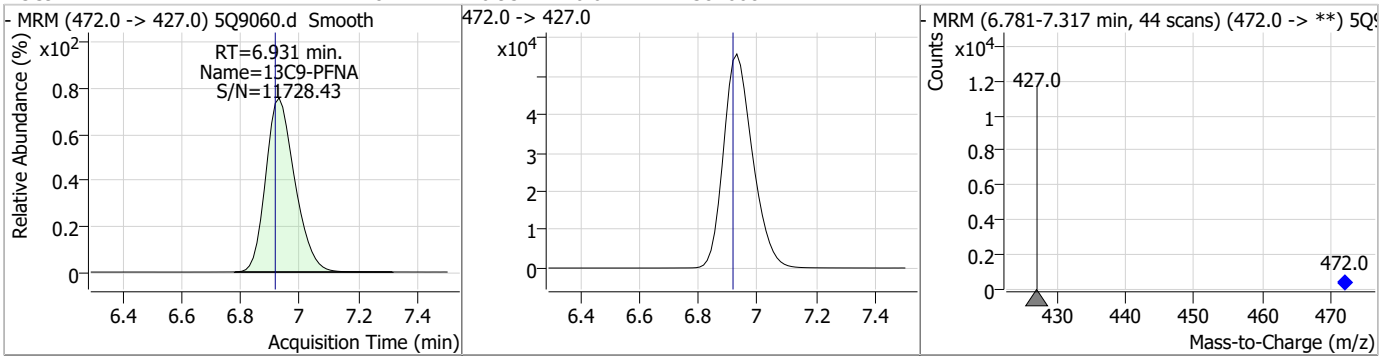
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	17.78	6.89	0.01	42395				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	22.60	6.89	0.01	88376 (m)	499.0 -> 99.0	47.4	23.9	71.6

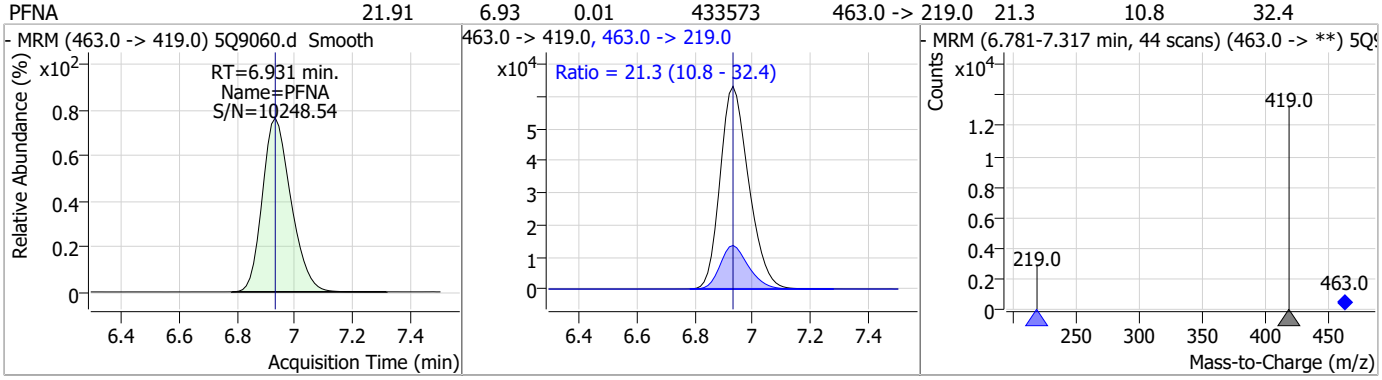


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.14	6.93	0.01	381668				

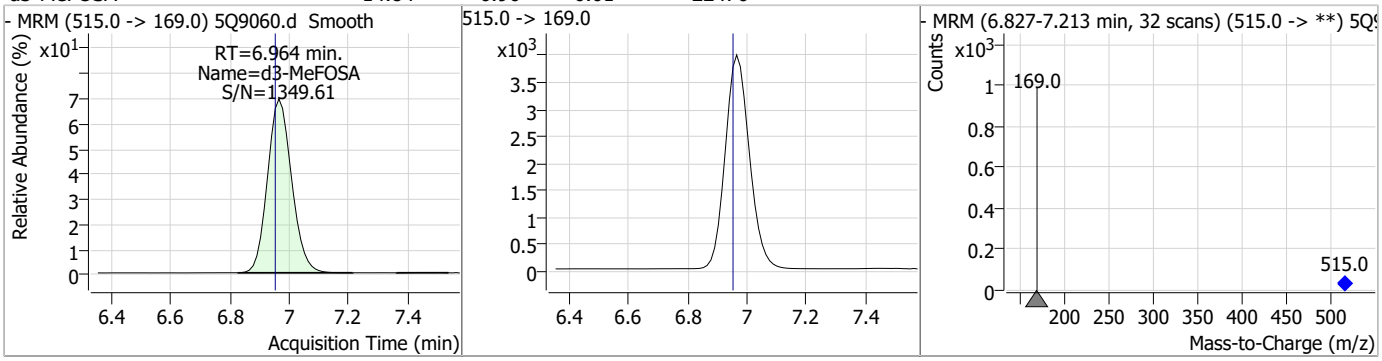


Perfluorinated Compounds by LC/MS/MS

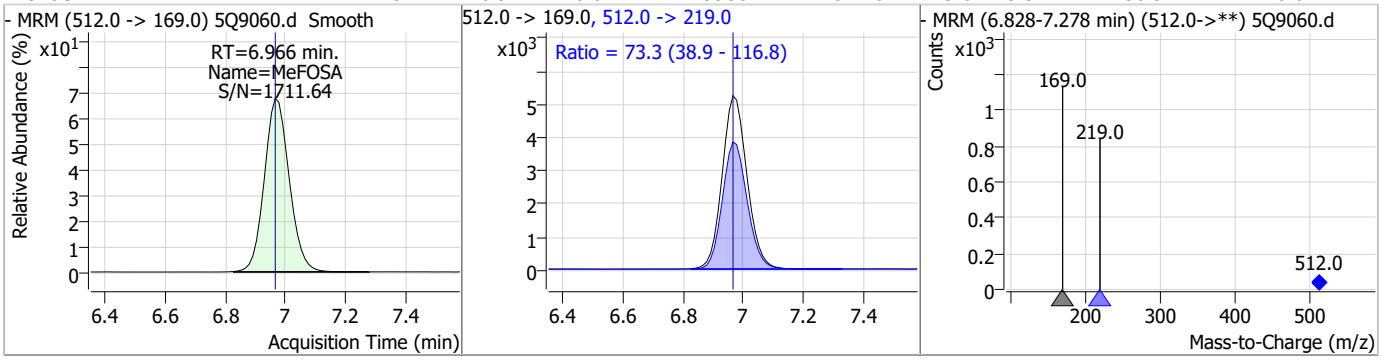
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	21.91	6.93	0.01	433573	463.0 -> 219.0	21.3	10.8	32.4



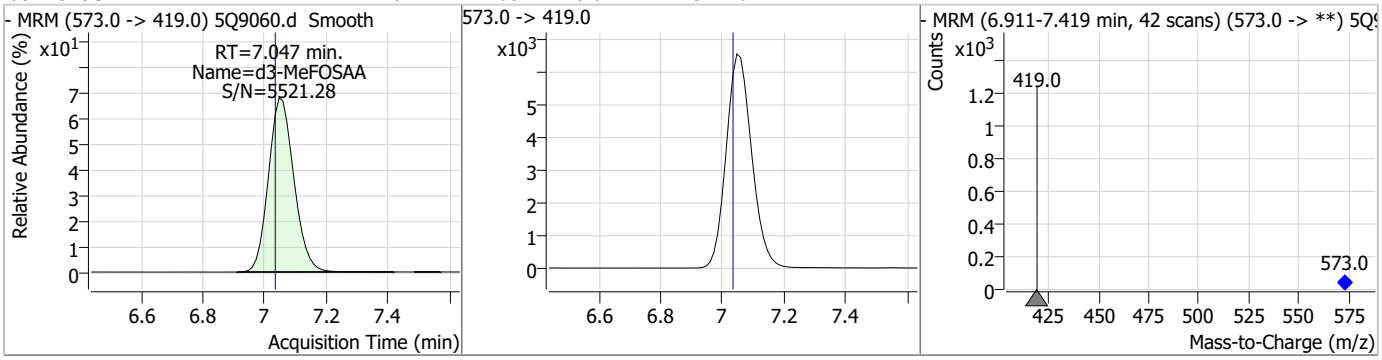
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	14.84	6.96	0.01	22476				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	22.52	6.97	0.01	29958	512.0 -> 219.0	73.3	38.9	116.8

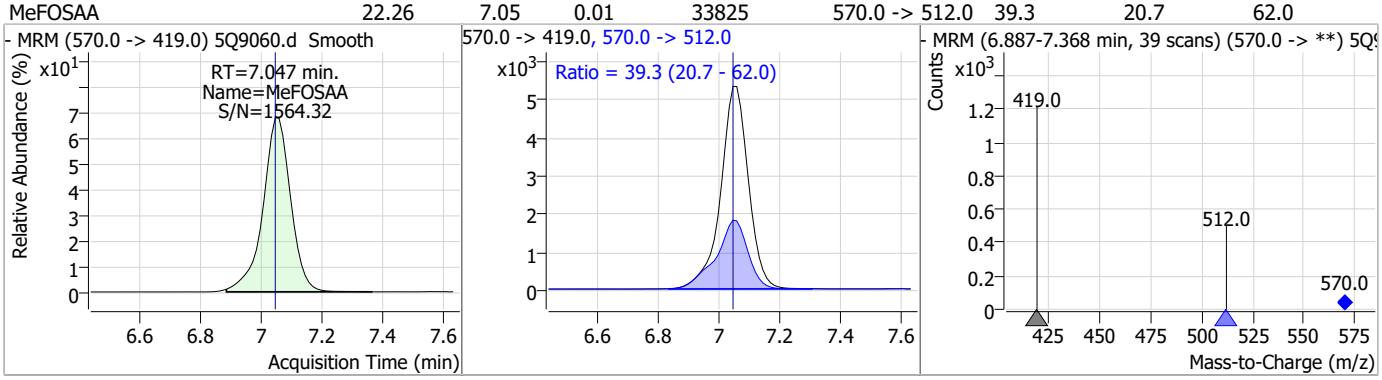


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	21.07	7.05	0.01	37440				

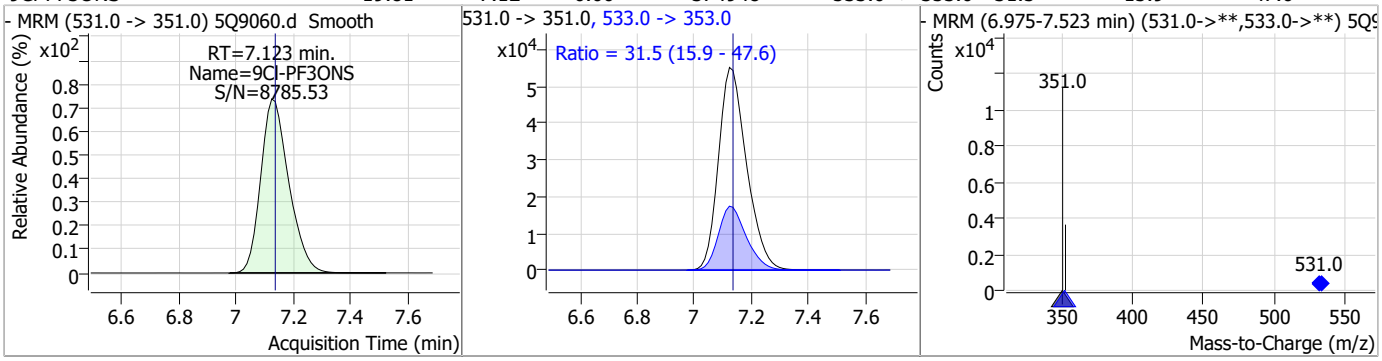


Perfluorinated Compounds by LC/MS/MS

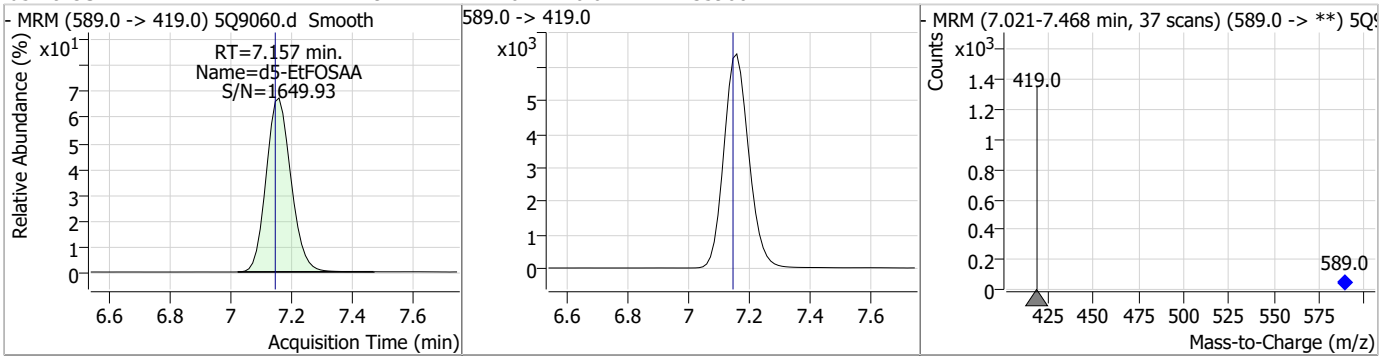
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	22.26	7.05	0.01	33825	570.0 -> 512.0	39.3	20.7	62.0



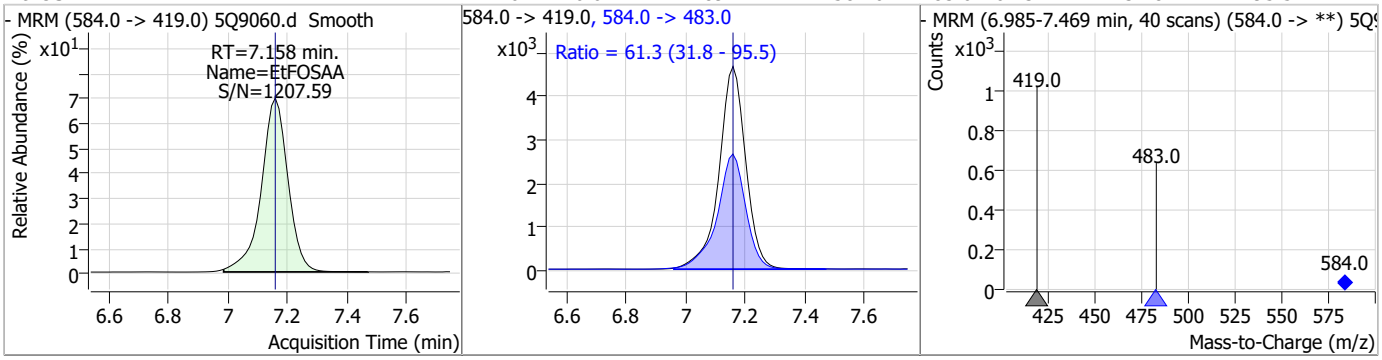
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	19.81	7.12	0.00	374948	533.0 -> 353.0	31.5	15.9	47.6



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.47	7.16	0.01	35906				

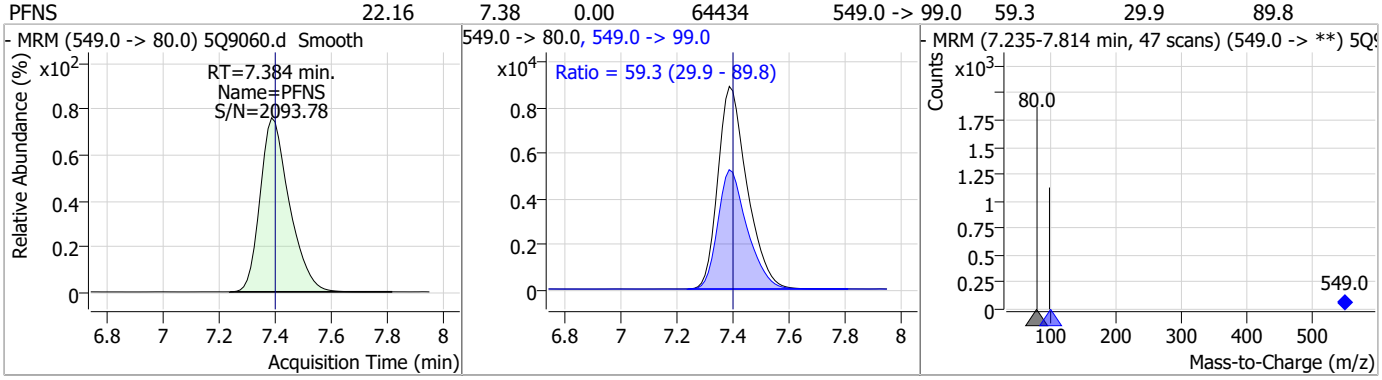


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	24.12	7.16	0.01	28911	584.0 -> 483.0	61.3	31.8	95.5

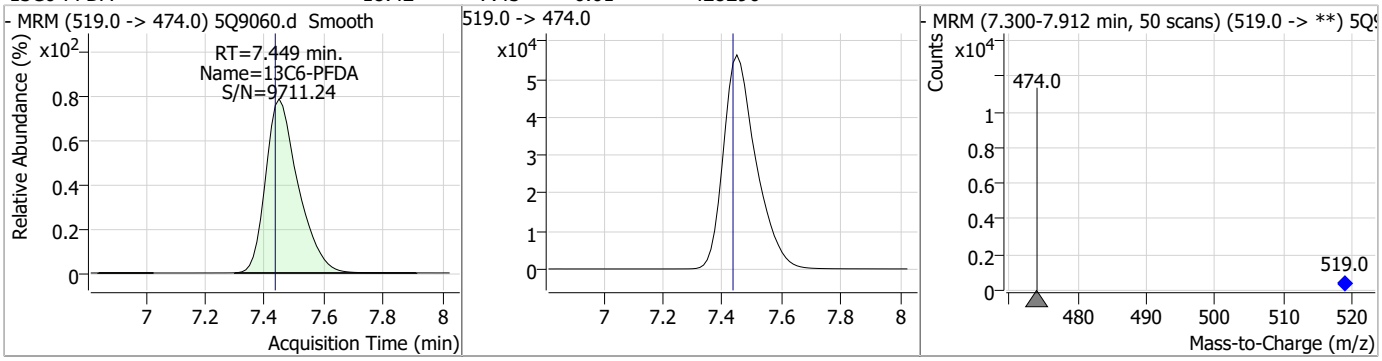


Perfluorinated Compounds by LC/MS/MS

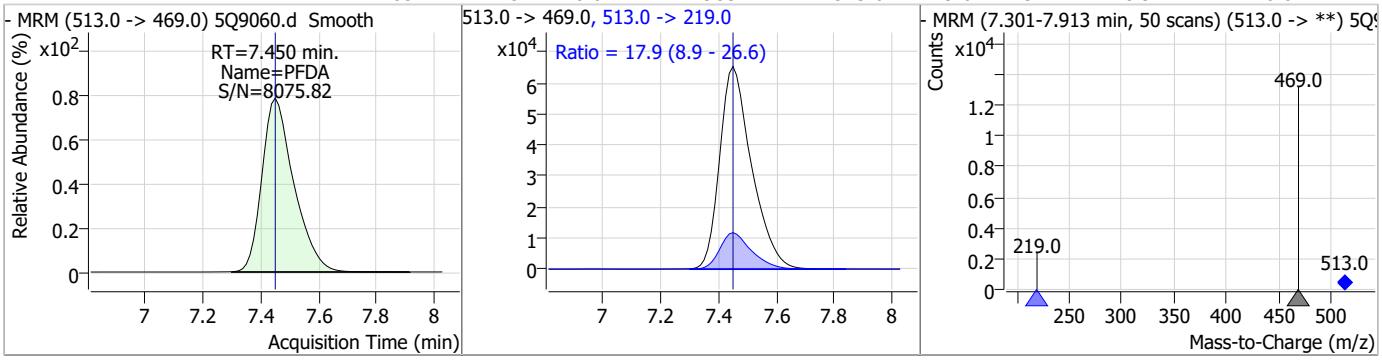
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	22.16	7.38	0.00	64434	549.0 -> 99.0	59.3	29.9	89.8



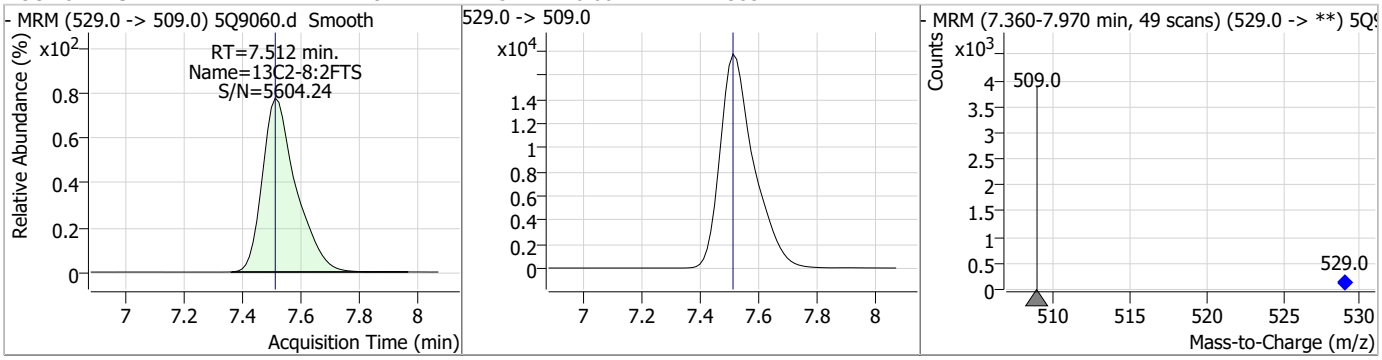
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.42	7.45	0.01	428290				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	21.85	7.45	0.01	498311	513.0 -> 219.0	17.9	8.9	26.6

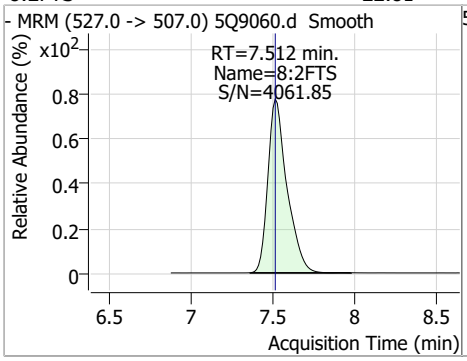


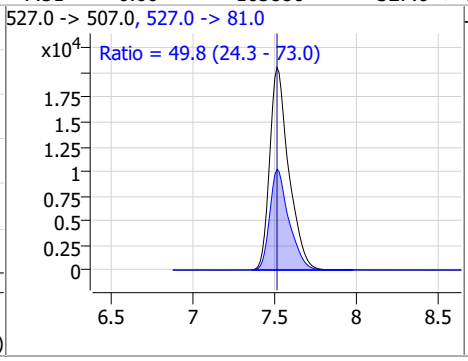
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.72	7.51	0.00	142385				

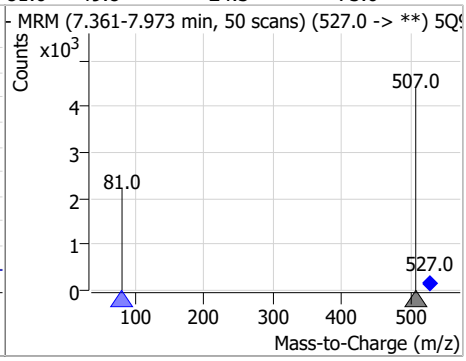


Perfluorinated Compounds by LC/MS/MS

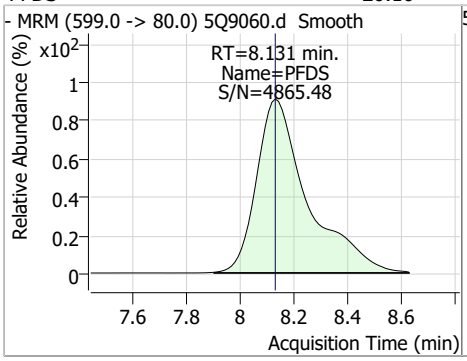
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	22.81	7.51	0.00	165886	527.0 -> 81.0	49.8	24.3	73.0

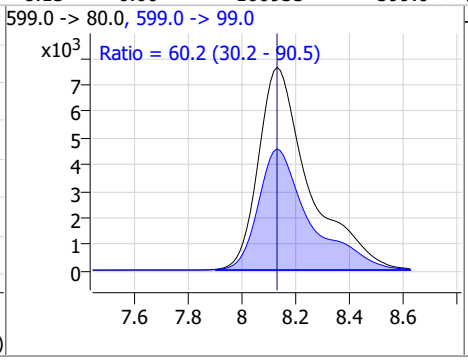


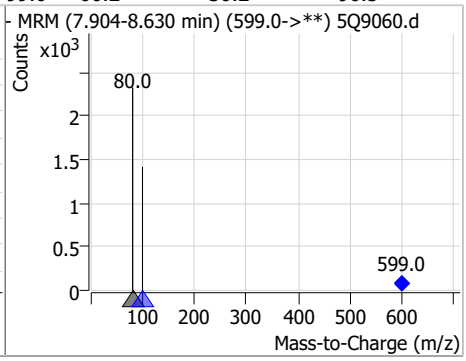




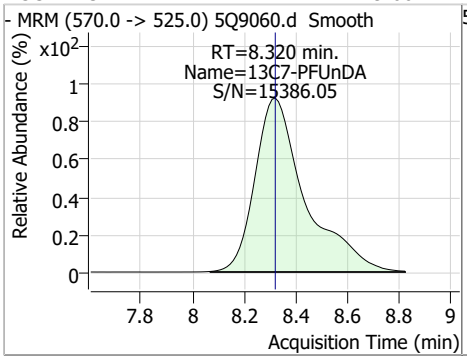
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	20.16	8.13	0.00	100935	599.0 -> 99.0	60.2	30.2	90.5

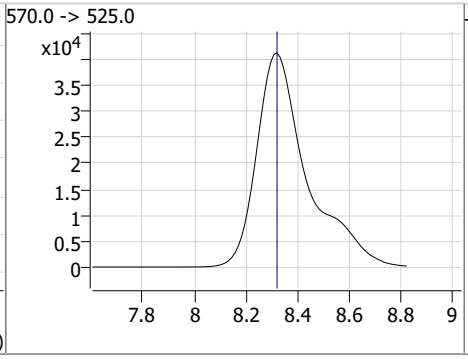


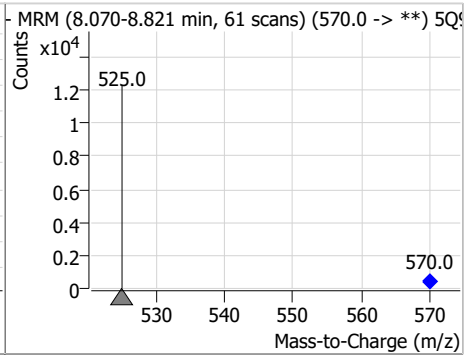




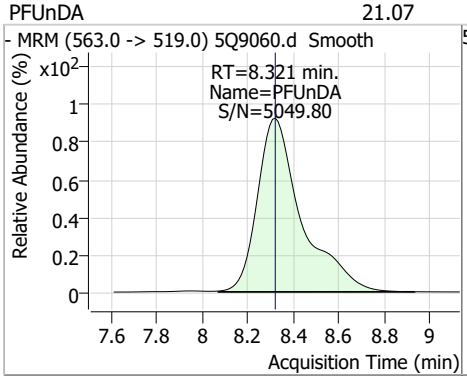
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.06	8.32	0.00	557730				

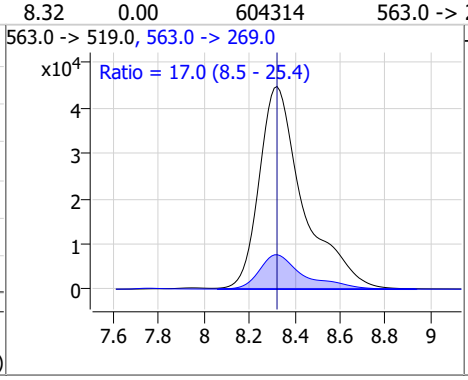


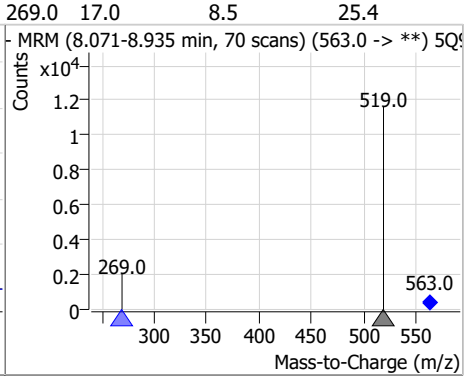




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	21.07	8.32	0.00	604314	563.0 -> 269.0	17.0	8.5	25.4

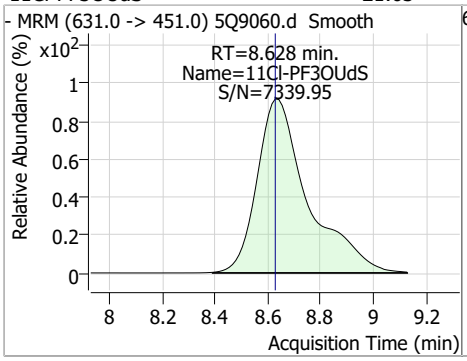


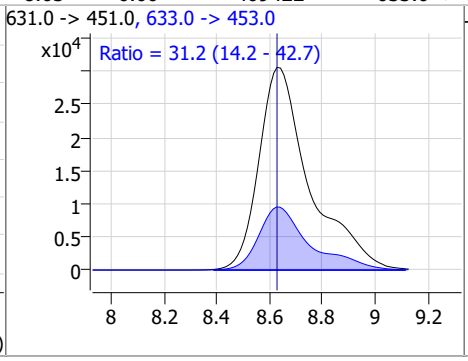


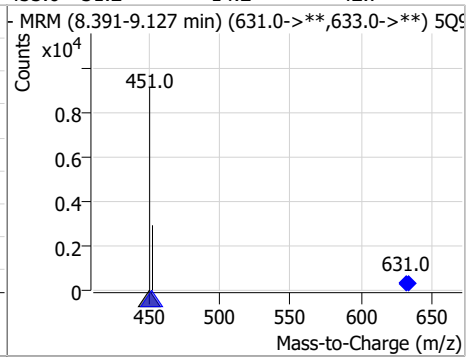


Perfluorinated Compounds by LC/MS/MS

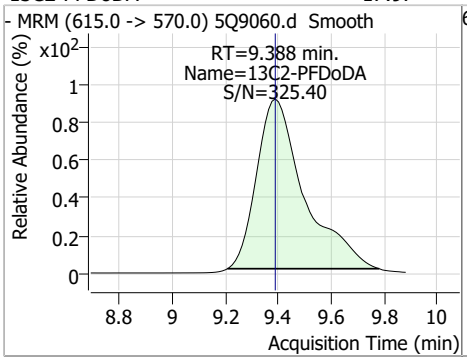
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	21.63	8.63	0.00	409422	633.0 -> 453.0	31.2	14.2	42.7

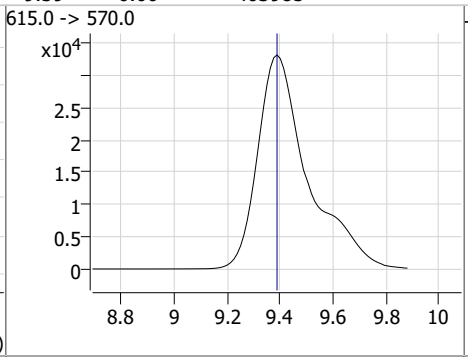


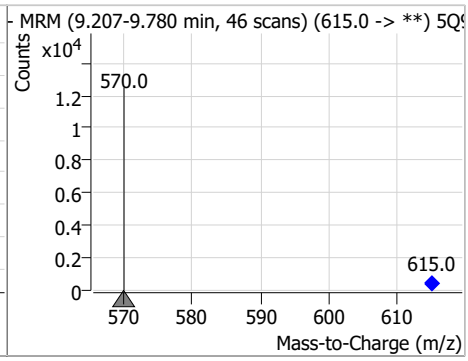




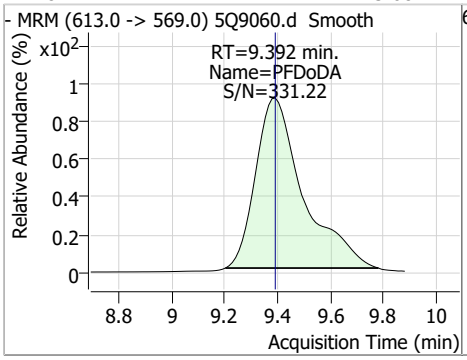
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	17.97	9.39	0.00	403985				

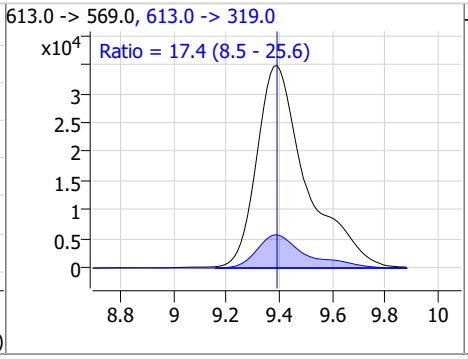


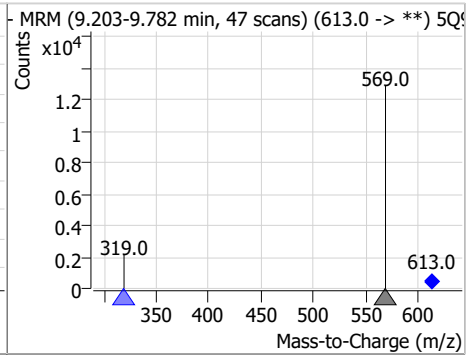




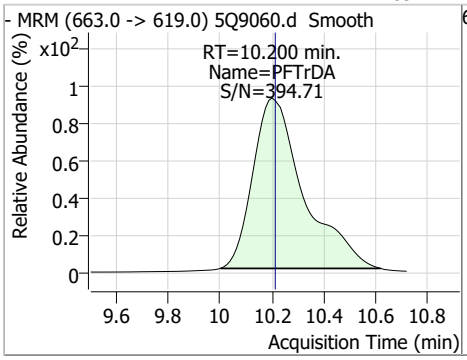
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	23.08	9.39	0.00	425428	613.0 -> 319.0	17.4	8.5	25.6

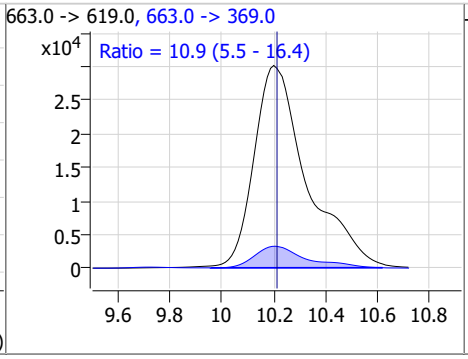


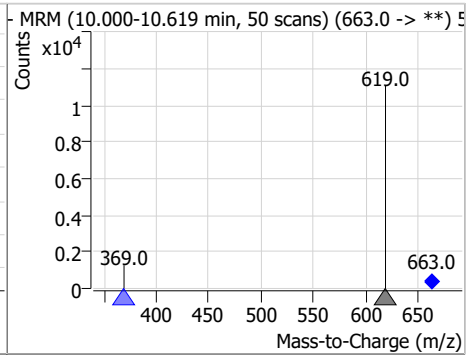




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	22.89	10.20	-0.01	402966	663.0 -> 369.0	10.9	5.5	16.4

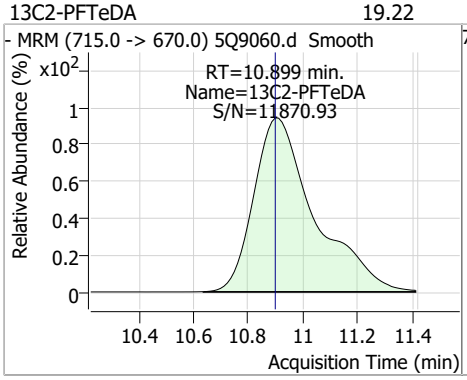


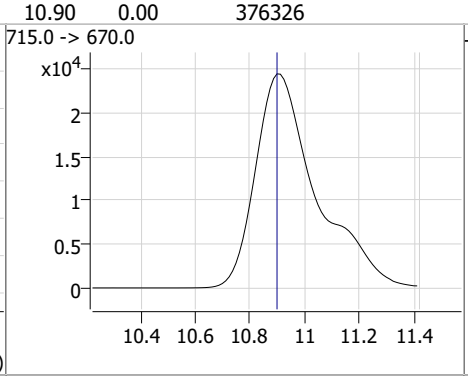


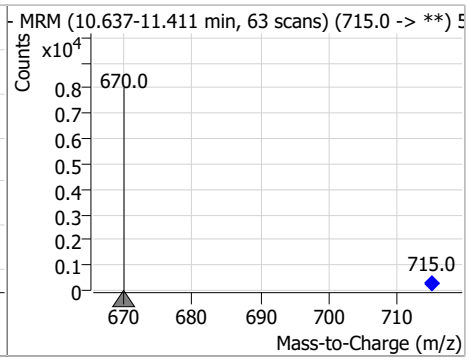


Perfluorinated Compounds by LC/MS/MS

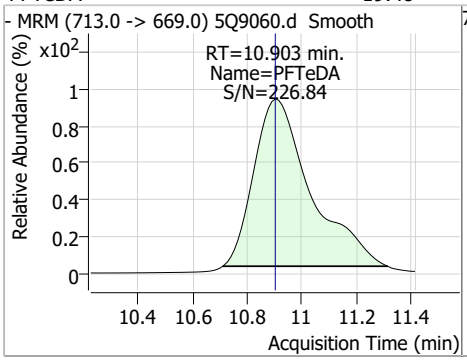
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.22	10.90	0.00	376326				

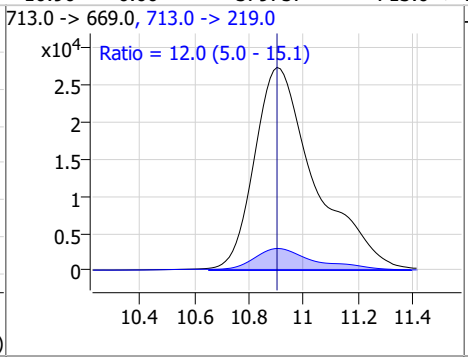


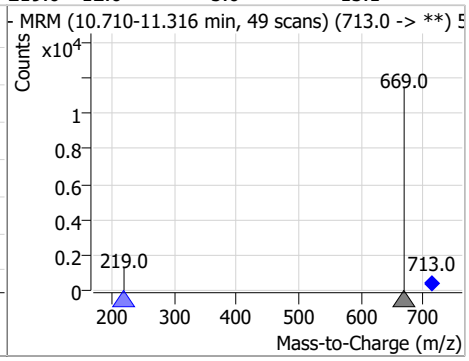




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	19.48	10.90	0.00	379757	713.0 -> 219.0	12.0	5.0	15.1







Manual Integration Approval Summary

Sample Number: OP94649-BS
Lab FileID: 5Q9060.D
Injection Time: 12/28/22 18:09
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.75	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.89	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9072.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 9:34:34 PM
Sample Name : op94649-ms
Vial : P2-B7
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94649,S5Q134,2.00,,,1.0,1,soil

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	85039	20.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	165619	20.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	242125	20.00	µg/L	0.000
M4-PFHpA	5.726	367.0 -> 322.0	253067	20.00	µg/L	0.000
M8-PFOA	6.361	421.0 -> 376.0	332472	20.00	µg/L	0.000
M9-PFNA	6.918	472.0 -> 427.0	354766	20.00	µg/L	0.000
M6-PFDA	7.449	519.0 -> 474.0	392370	20.00	µg/L	0.013
M7-PFUnDA	8.307	570.0 -> 525.0	478165	20.00	µg/L	-0.012
M2-PFDoDA	9.375	615.0 -> 570.0	403678	20.00	µg/L	-0.013
M2-PFTeDA	10.887	715.0 -> 670.0	344102	20.00	µg/L	-0.013
M8-FOSA	6.605	506.0 -> 78.0	81228	20.00	µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	20643	20.00	µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	28720	20.00	µg/L	0.000
M8-PFOS	6.879	507.0 -> 99.0	37981	20.00	µg/L	0.000
M2-4:2FTS	4.886	329.0 -> 309.0	72199	20.00	µg/L	0.000
M2-6:2FTS	6.360	429.0 -> 409.0	119332	20.00	µg/L	0.000
M2-8:2FTS	7.512	529.0 -> 509.0	118597	20.00	µg/L	0.000
M3-MeFOSAA	7.047	573.0 -> 419.0	34399	20.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	53074	20.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	19646	20.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	34173	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	72199	14.99	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 75.0%		
13C2-6:2FTS	6.360	429.0 -> 409.0	119332	15.57	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 77.8%		
13C2-8:2FTS	7.512	529.0 -> 509.0	118597	16.42	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 82.1%		
13C2-PFDoDA	9.375	615.0 -> 570.0	403678	17.95	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.8%		
13C2-PFTeDA	10.887	715.0 -> 670.0	344102	17.57	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.9%		
13C3-PFBS	4.124	302.0 -> 99.0	20643	15.88	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 79.4%		
13C3-PFHxS	5.733	402.0 -> 99.0	28720	16.05	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 80.2%		
13C4-PFBA	2.400	217.0 -> 172.0	85039	16.34	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.7%		
13C4-PFHpA	5.726	367.0 -> 322.0	253067	16.46	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 82.3%		
13C5-PFHxA	4.965	318.0 -> 273.0	242125	16.10	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 80.5%		
13C5-PFPeA	3.919	268.0 -> 223.0	165619	15.79	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 78.9%		
13C6-PFDA	7.449	519.0 -> 474.0	392370	16.88	µg/L	0.013

Perfluorinated Compounds by LC/MS/MS

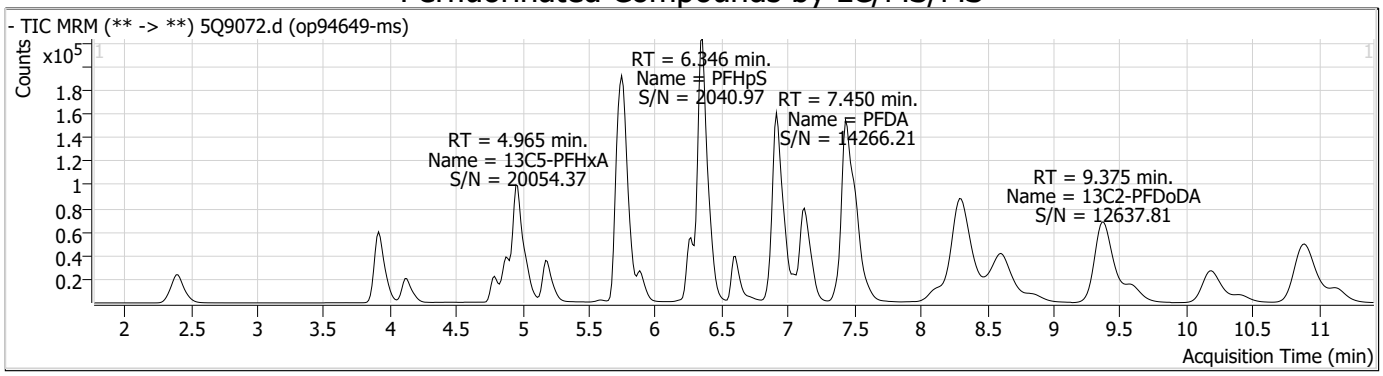
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.4%			
13C7-PFUnDA	8.307	570.0 -> 525.0	478165	16.34	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.7%			
13C8-FOSA	6.605	506.0 -> 78.0	81228	16.82	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.1%			
13C8-PFOA	6.361	421.0 -> 376.0	332472	16.50	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 82.5%			
13C8-PFOS	6.879	507.0 -> 99.0	37981	15.93	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 79.6%			
13C9-PFNA	6.918	472.0 -> 427.0	354766	16.87	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.3%			
d3-MeFOSAA	7.047	573.0 -> 419.0	34399	19.36	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.8%			
13C3-HFPO-DA	5.194	287.0 -> 169.0	53074	16.04	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 80.2%			
d3-MeFOSA	6.964	515.0 -> 169.0	19646	12.97	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 64.8%			
d5-EtFOSAA	7.157	589.0 -> 419.0	34173	18.53	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.6%			
Target Compounds							QValue
4:2FTS	4.888	327.0 -> 307.0	70226	17.77	µg/L		100
		327.0 -> 81.0	41473				
6:2FTS	6.360	427.0 -> 407.0	116111	18.96	µg/L		100
		427.0 -> 81.0	50012				
8:2FTS	7.512	527.0 -> 507.0	110469	18.24	µg/L		97
		527.0 -> 81.0	56030				
EtFOSAA	7.158	584.0 -> 419.0	21622	18.95	µg/L		100
		584.0 -> 483.0	13843				
FOSA	6.606	498.0 -> 78.0	75285	18.04	µg/L		100
		498.0 -> 478.0	2551				
MeFOSAA	7.047	570.0 -> 419.0	23336	16.72	µg/L		98
		570.0 -> 512.0	9276				
PFBA	2.394	213.0 -> 169.0	84668	18.28	µg/L		100
PFBS	4.129	299.0 -> 80.0	62141	18.51	µg/L		100
		299.0 -> 99.0	26638				
PFDA	7.450	513.0 -> 469.0	377563	18.07	µg/L		100
		513.0 -> 219.0	66636				
PFDoDA	9.379	613.0 -> 569.0	332124	18.03	µg/L		100
		613.0 -> 319.0	56272				
PFDS	8.119	599.0 -> 80.0	76515	17.83	µg/L		99
		599.0 -> 99.0	46737				
PFHpA	5.727	363.0 -> 319.0	277439	17.53	µg/L		100
		363.0 -> 169.0	62270				
PFHpS	6.346	449.0 -> 80.0	53271	18.35	µg/L		98
		449.0 -> 99.0	28396				
PFHxA	4.966	313.0 -> 269.0	216402	17.60	µg/L		100
		313.0 -> 119.0	9963				
PFHxS	5.735	399.0 -> 80.0	54015	18.53	µg/L	m	99
		399.0 -> 99.0	30529				
PFNA	6.931	463.0 -> 419.0	321261	17.46	µg/L		99
		463.0 -> 219.0	67706				
PFNS	7.384	549.0 -> 80.0	47414	18.21	µg/L		98
		549.0 -> 99.0	27661				
PFOA	6.362	413.0 -> 369.0	338989	17.81	µg/L		100
		413.0 -> 169.0	91232				
PFOS	6.880	499.0 -> 80.0	68155	19.45	µg/L	m	99

Perfluorinated Compounds by LC/MS/MS

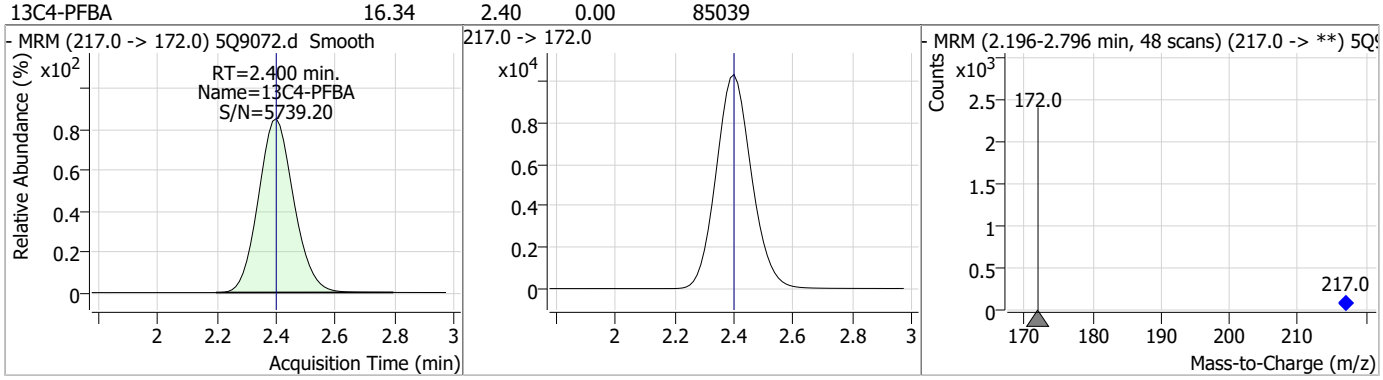
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	32872			
PFPeA	3.922	263.0 -> 219.0	166004	17.05	µg/L	100
PFPeS	5.047	349.0 -> 80.0	38180	17.37	µg/L	100
		349.0 -> 99.0	19493			
PFTeDA	10.891	713.0 -> 669.0	291186	16.33	µg/L	98
		713.0 -> 219.0	31942			
PFTrDA	10.187	663.0 -> 619.0	292848	16.65	µg/L	99
		663.0 -> 369.0	32489			
PFUnDA	8.309	563.0 -> 519.0	462808	18.82	µg/L	100
		563.0 -> 269.0	78254			
11Cl-PF3OUdS	8.615	631.0 -> 451.0	299918	15.90	µg/L	95
		633.0 -> 453.0	93410			
9Cl-PF3ONS	7.123	531.0 -> 351.0	276406	15.94	µg/L	99
		533.0 -> 353.0	86259			
ADONA	5.777	377.0 -> 251.0	370622	19.13	µg/L	100
		377.0 -> 85.0	139142			
HFPO-DA	5.190	329.0 -> 169.0	75540	17.82	µg/L	97
		285.0 -> 169.0	46219			
MeFOSA	6.966	512.0 -> 169.0	21859	18.80	µg/L	93
		512.0 -> 219.0	15669			
4-PFECHS	6.268	461.0 -> 381.0	175061	16.52	µg/L	99
		461.0 -> 99.0	94925			
FBSA	4.793	298.0 -> 78.0	93595	18.63	µg/L	99
		298.0 -> 64.0	8509			
FHxSA	5.900	398.0 -> 78.0	88095	17.81	µg/L	100
		398.0 -> 64.0	8482			

 # = Qualifier out of range, m = manually integrated, + = Area summed

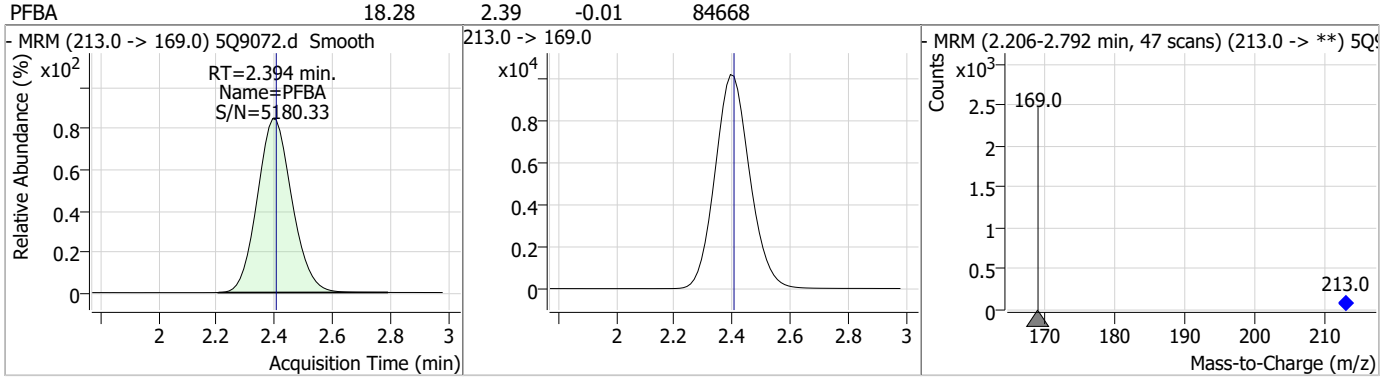
Perfluorinated Compounds by LC/MS/MS



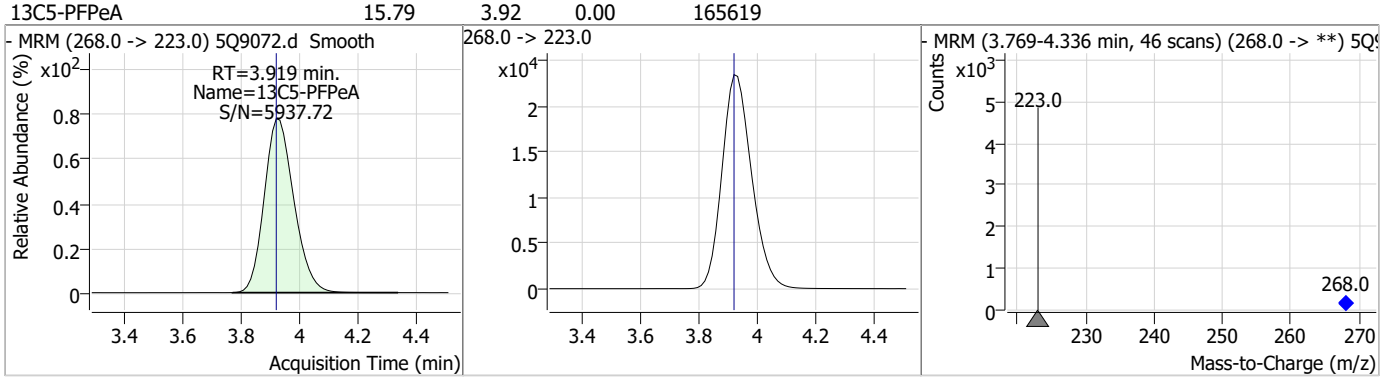
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	16.34	2.40	0.00	85039				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	18.28	2.39	-0.01	84668				

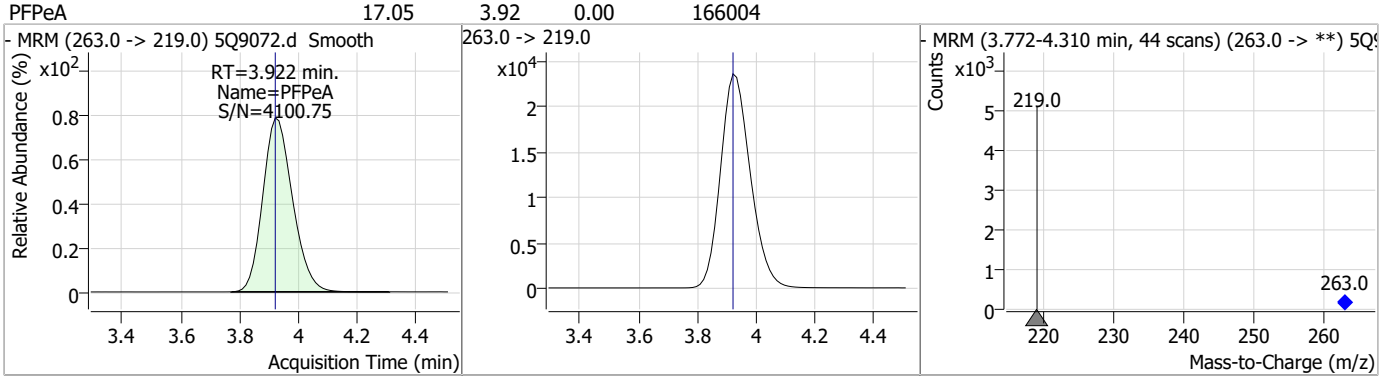


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	15.79	3.92	0.00	165619				

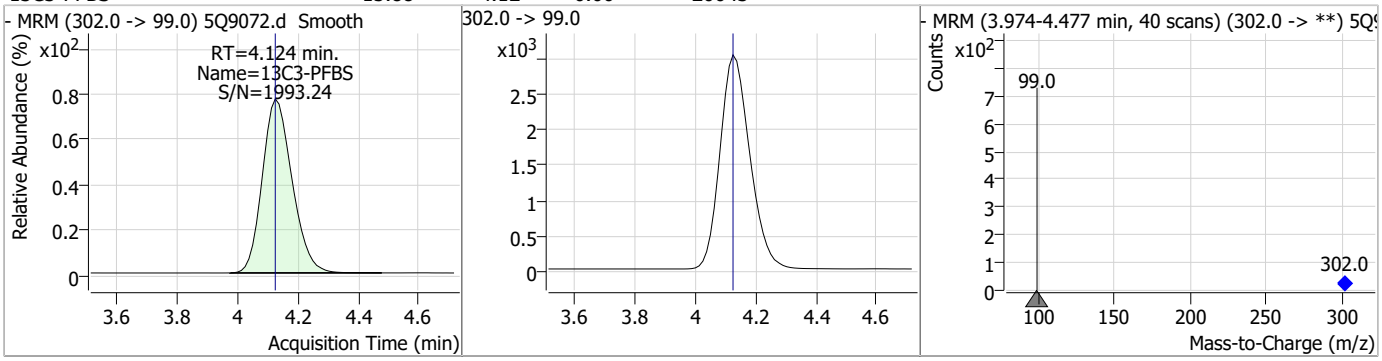


Perfluorinated Compounds by LC/MS/MS

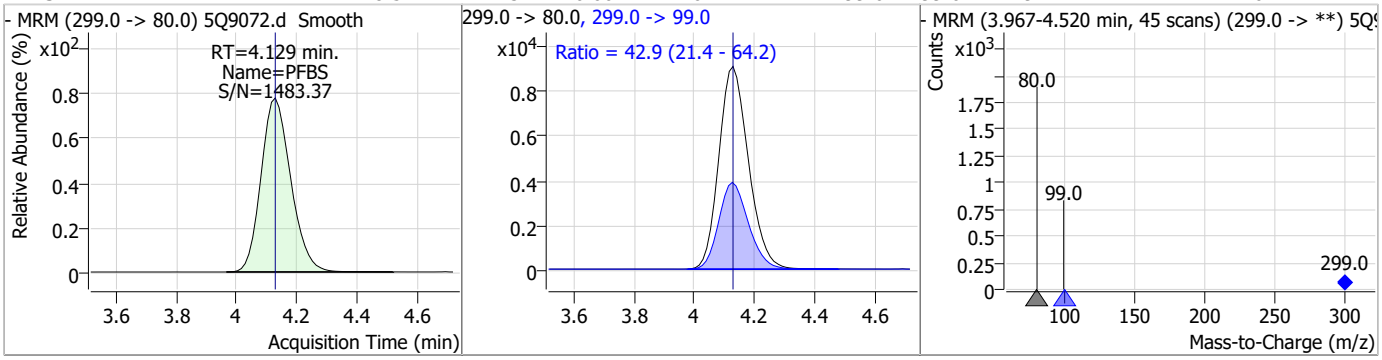
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	17.05	3.92	0.00	166004				



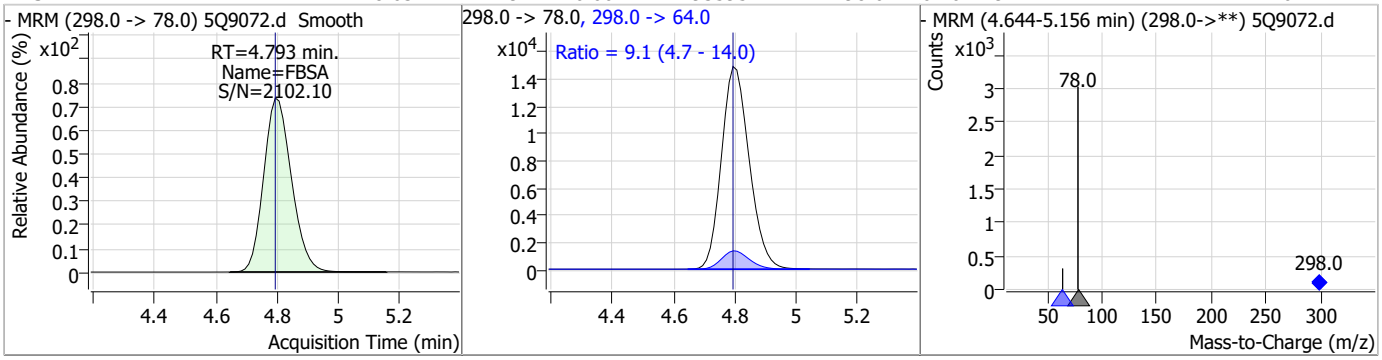
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	15.88	4.12	0.00	20643				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	18.51	4.13	0.00	62141	299.0 -> 99.0	42.9	21.4	64.2

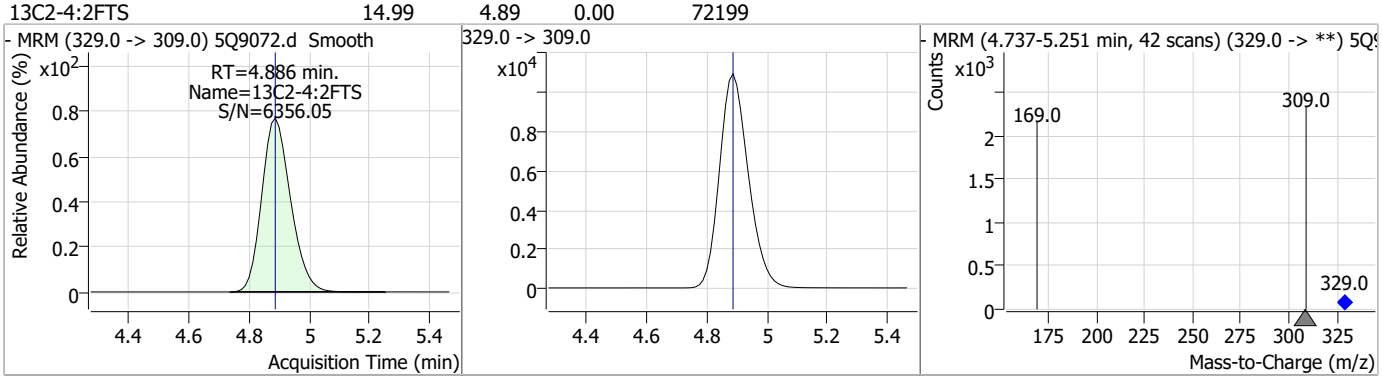


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	18.63	4.79	0.00	93595	298.0 -> 64.0	9.1	4.7	14.0

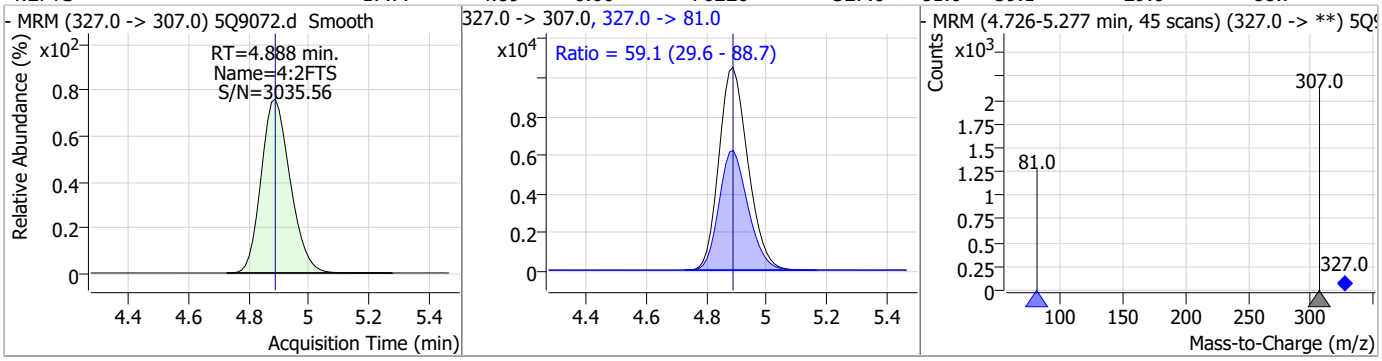


Perfluorinated Compounds by LC/MS/MS

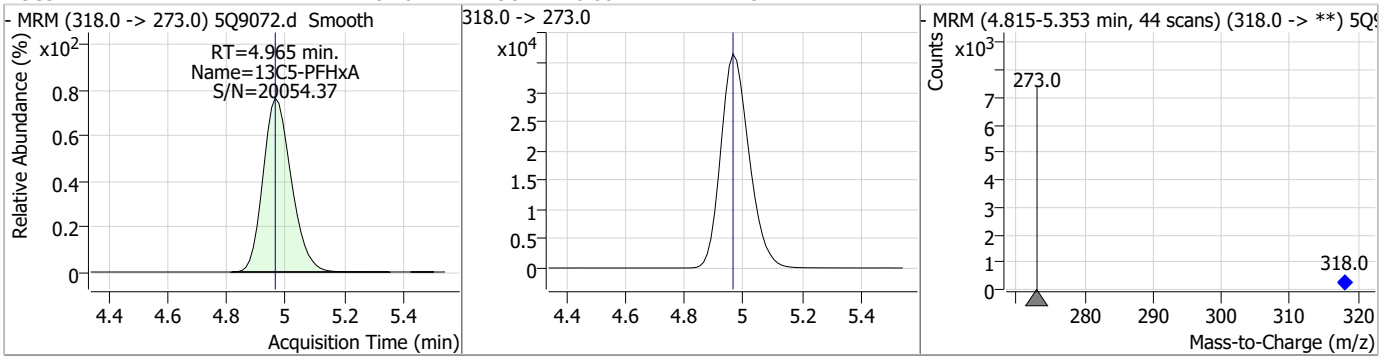
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	14.99	4.89	0.00	72199				



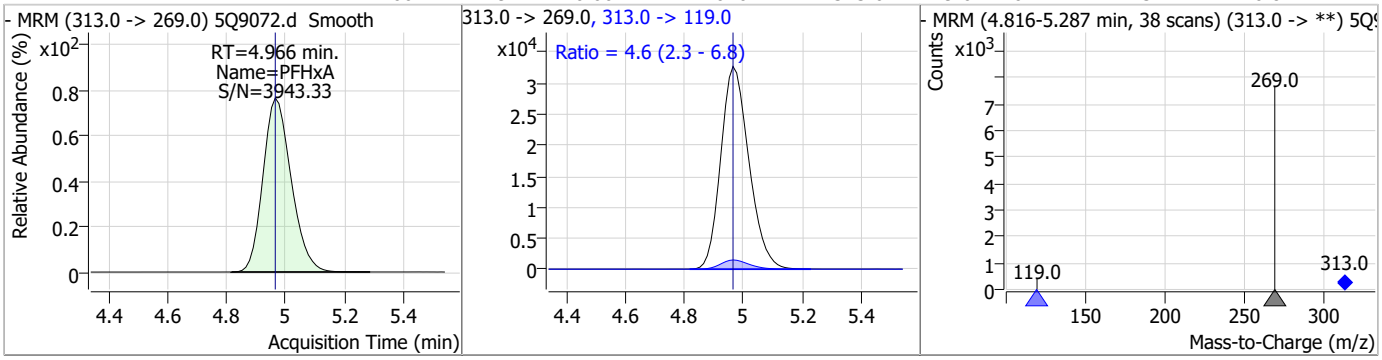
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	17.77	4.89	0.00	70226	327.0 -> 81.0	59.1	29.6	88.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	16.10	4.96	0.00	242125				

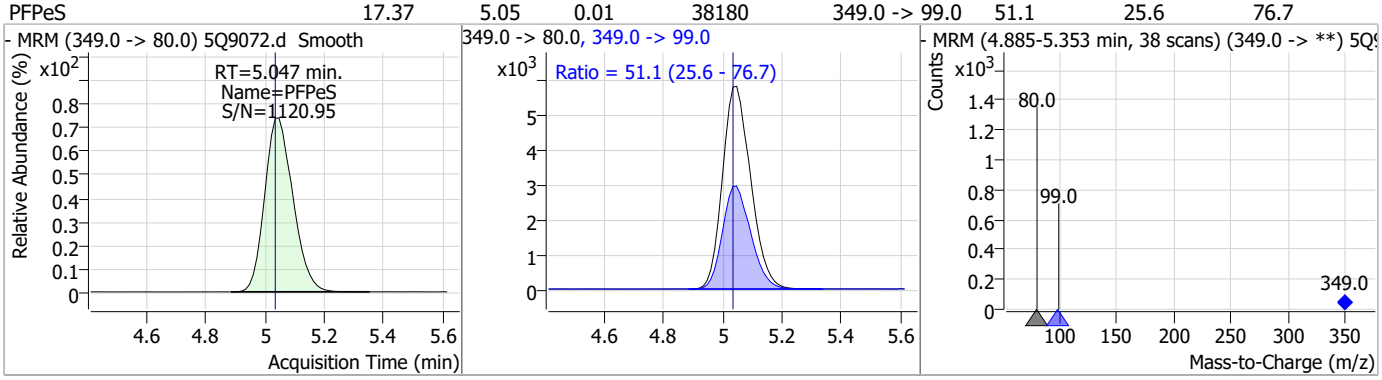


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	17.60	4.97	0.00	216402	313.0 -> 119.0	4.6	2.3	6.8

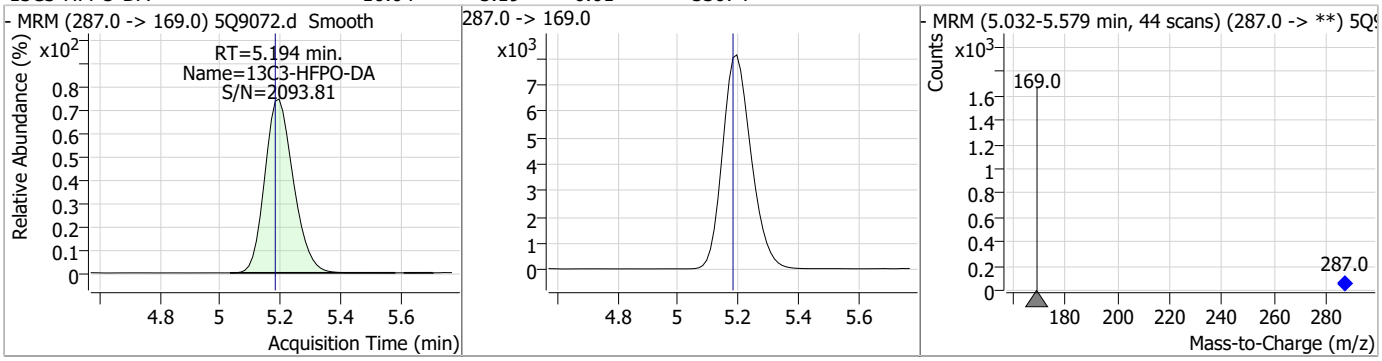


Perfluorinated Compounds by LC/MS/MS

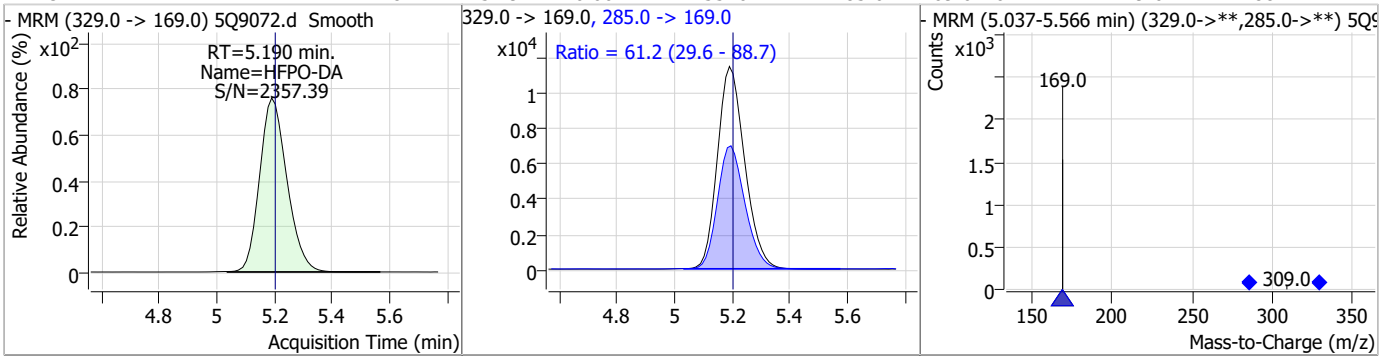
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	17.37	5.05	0.01	38180	349.0 -> 99.0	51.1	25.6	76.7



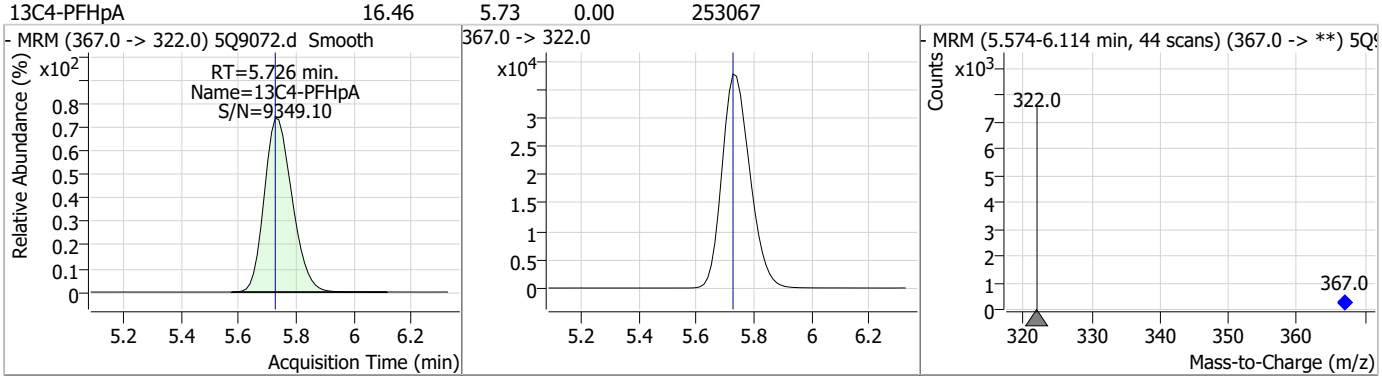
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	16.04	5.19	0.01	53074				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	17.82	5.19	0.00	75540	285.0 -> 169.0	61.2	29.6	88.7

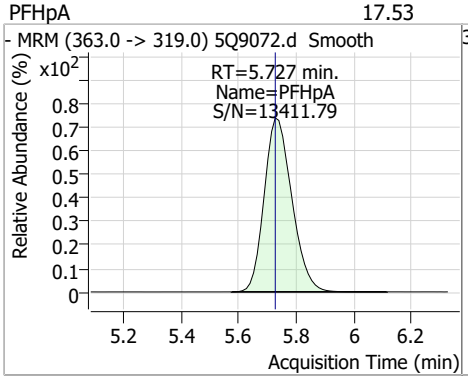


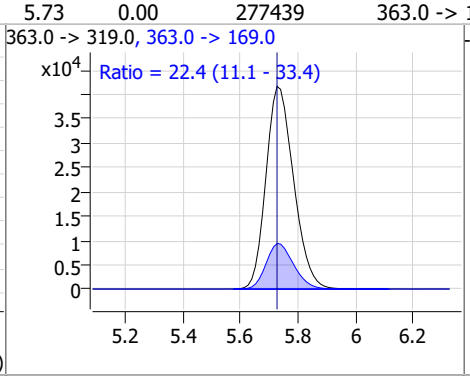
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	16.46	5.73	0.00	253067				

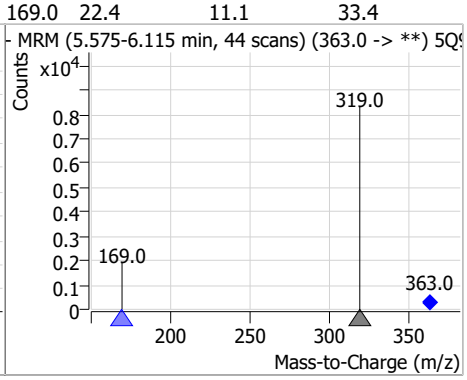


Perfluorinated Compounds by LC/MS/MS

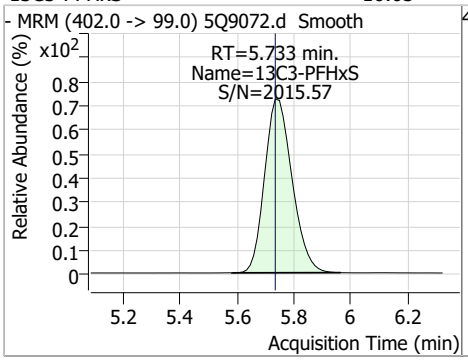
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	17.53	5.73	0.00	277439	363.0 -> 169.0	22.4	11.1	33.4

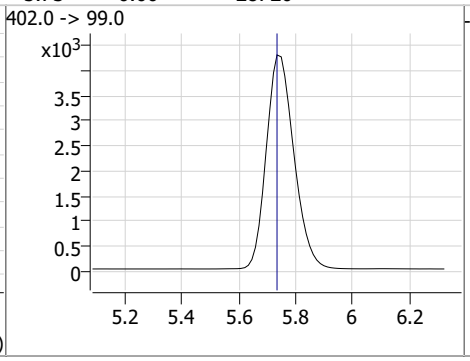


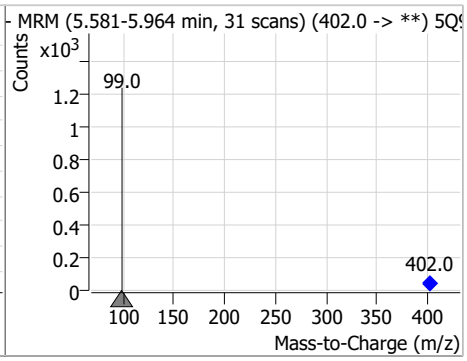




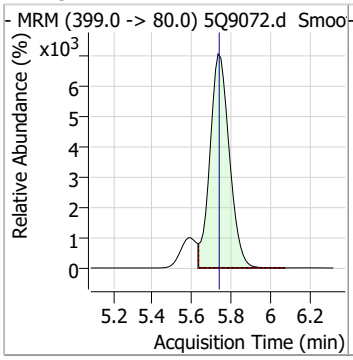
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	16.05	5.73	0.00	28720				

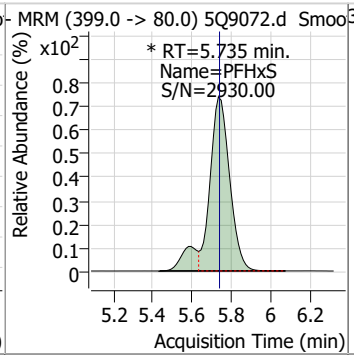


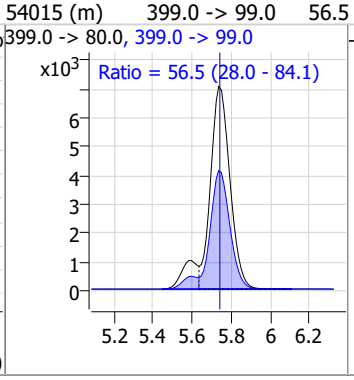


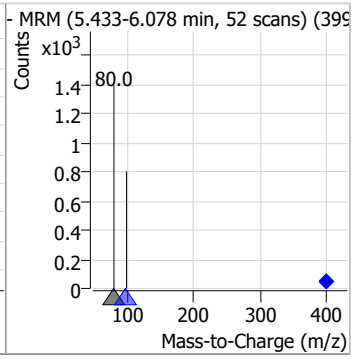


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	18.53	5.73	0.00	54015 (m)	399.0 -> 99.0	56.5	28.0	84.1

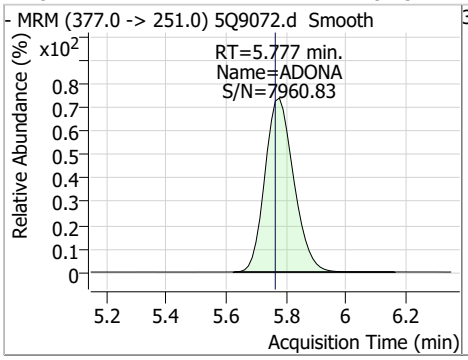


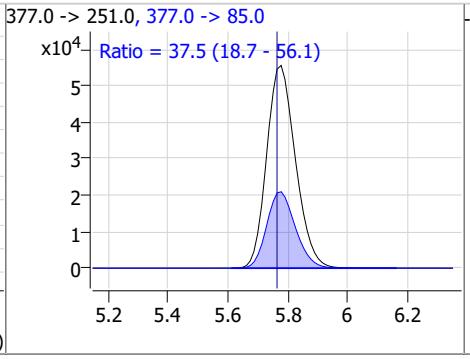


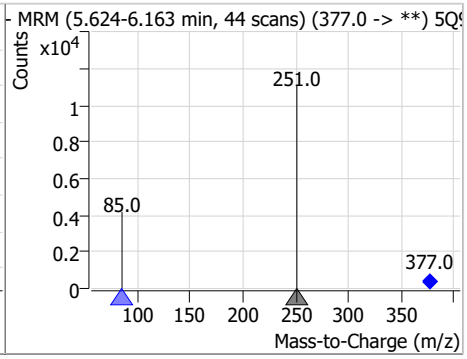




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	19.13	5.78	0.01	370622	377.0 -> 85.0	37.5	18.7	56.1

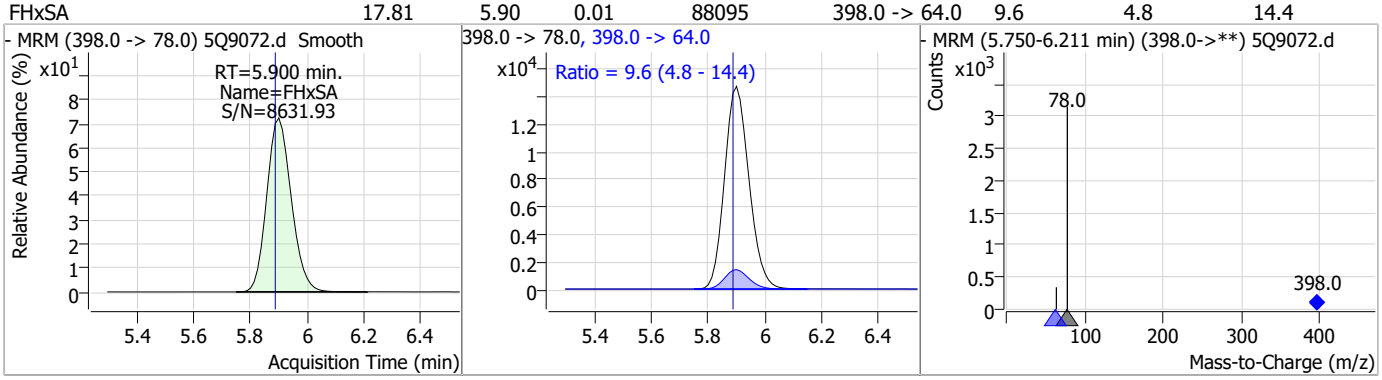




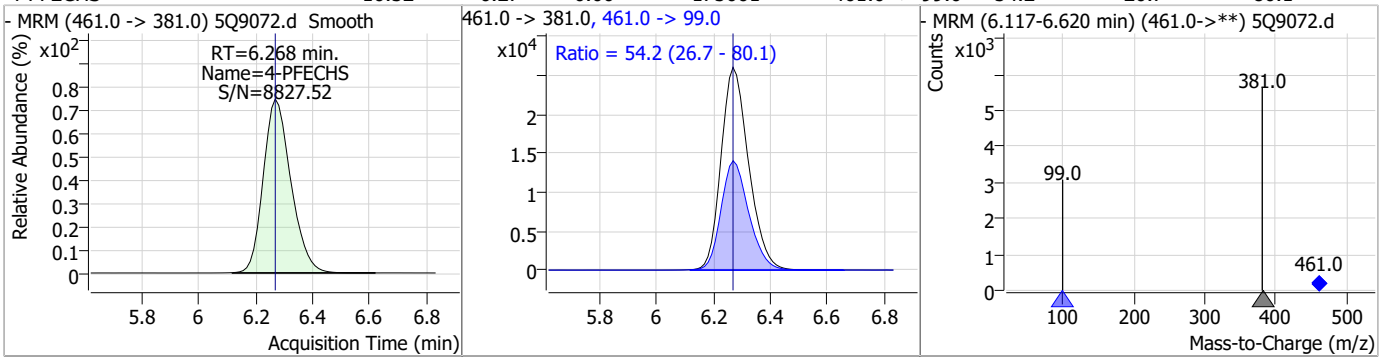


Perfluorinated Compounds by LC/MS/MS

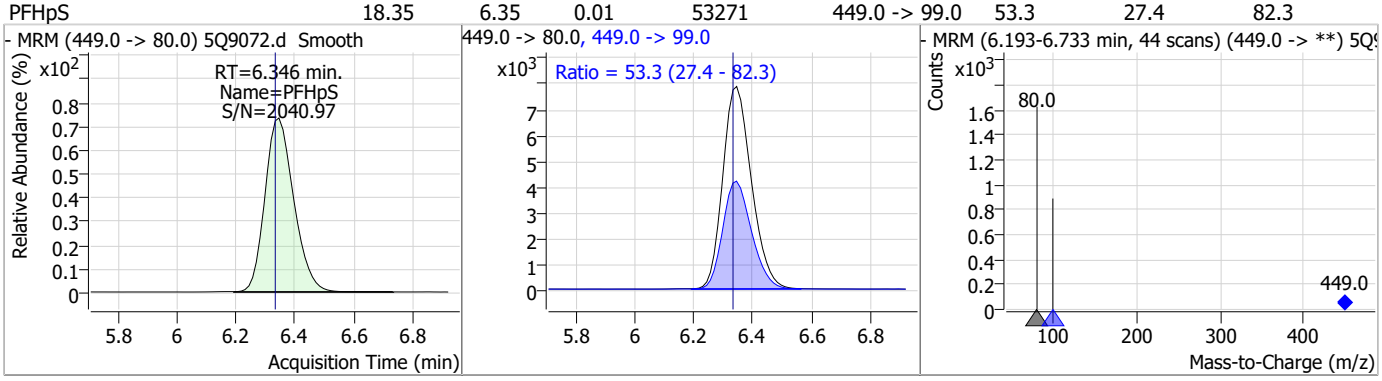
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	17.81	5.90	0.01	88095	398.0 -> 64.0	9.6	4.8	14.4



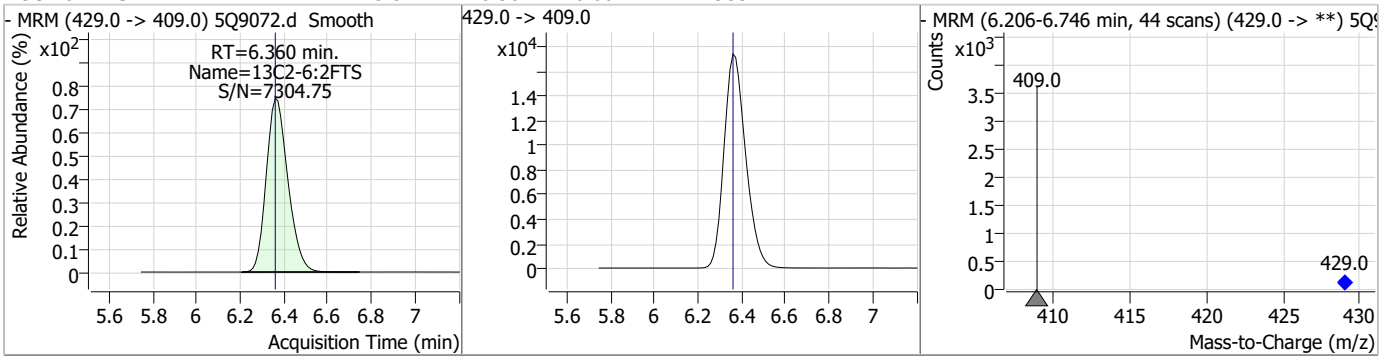
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	16.52	6.27	0.00	175061	461.0 -> 99.0	54.2	26.7	80.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	18.35	6.35	0.01	53271	449.0 -> 99.0	53.3	27.4	82.3

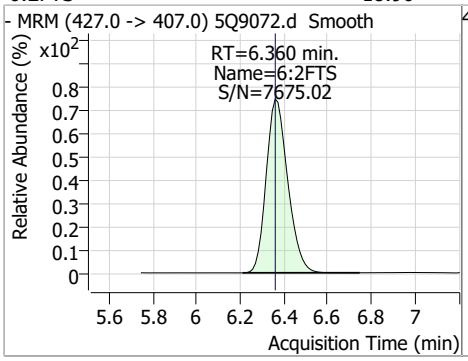


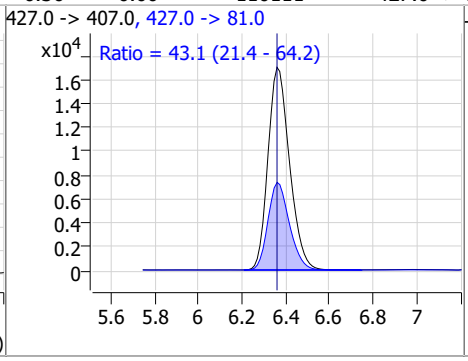
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	15.57	6.36	0.00	119332				

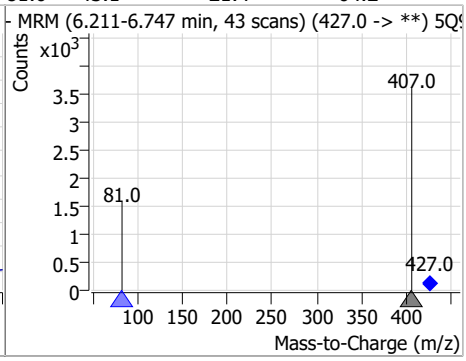


Perfluorinated Compounds by LC/MS/MS

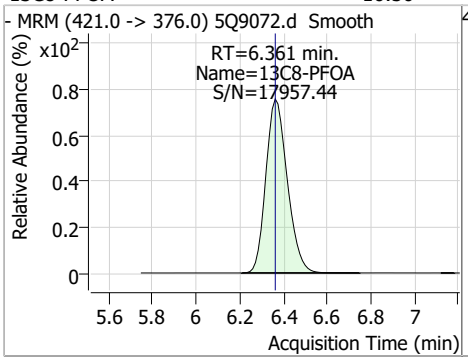
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	18.96	6.36	0.00	116111	427.0 -> 81.0	43.1	21.4	64.2

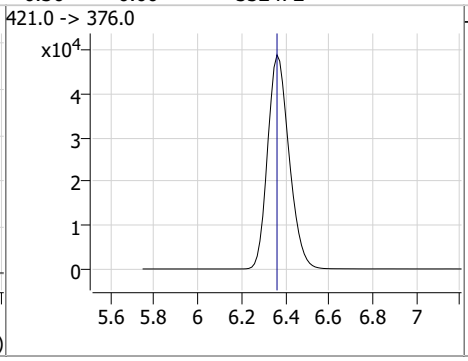


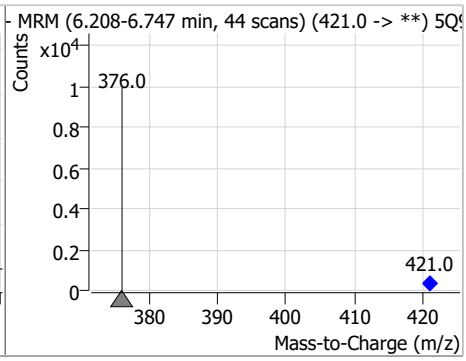




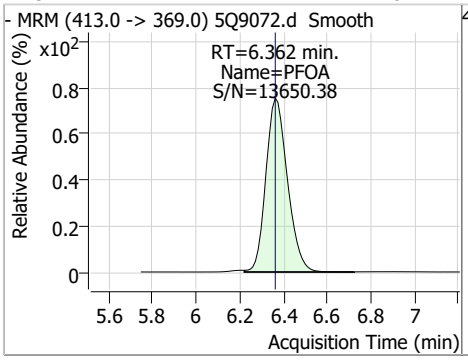
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	16.50	6.36	0.00	332472				

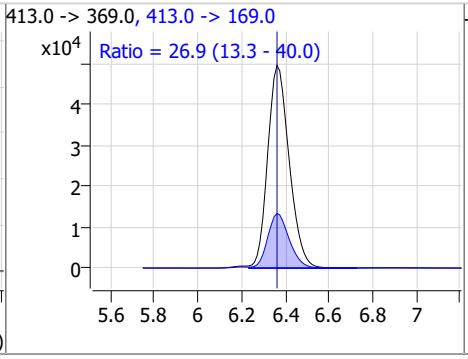


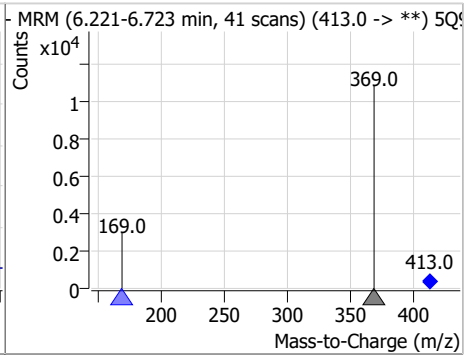




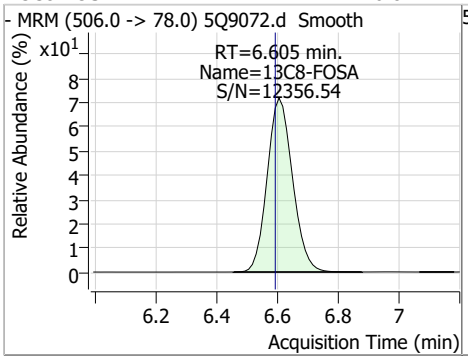
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	17.81	6.36	0.00	338989	413.0 -> 169.0	26.9	13.3	40.0

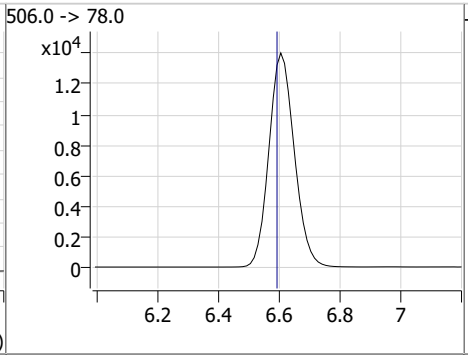


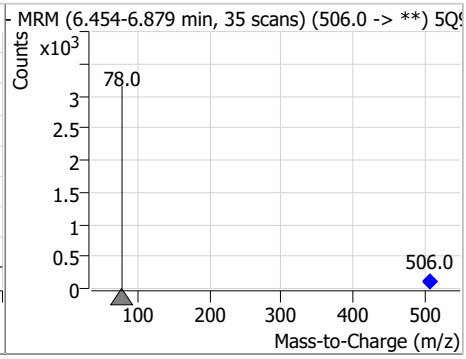




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	16.82	6.60	0.01	81228				

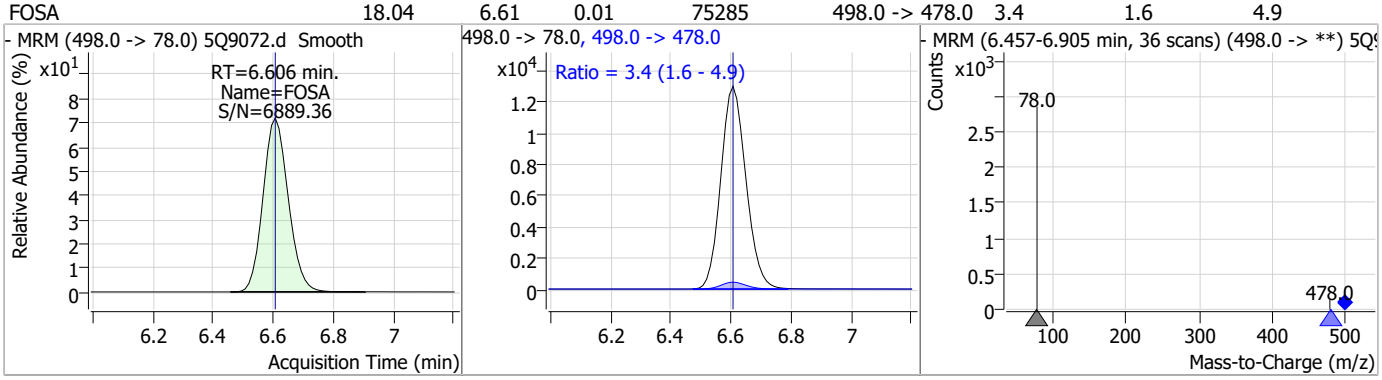




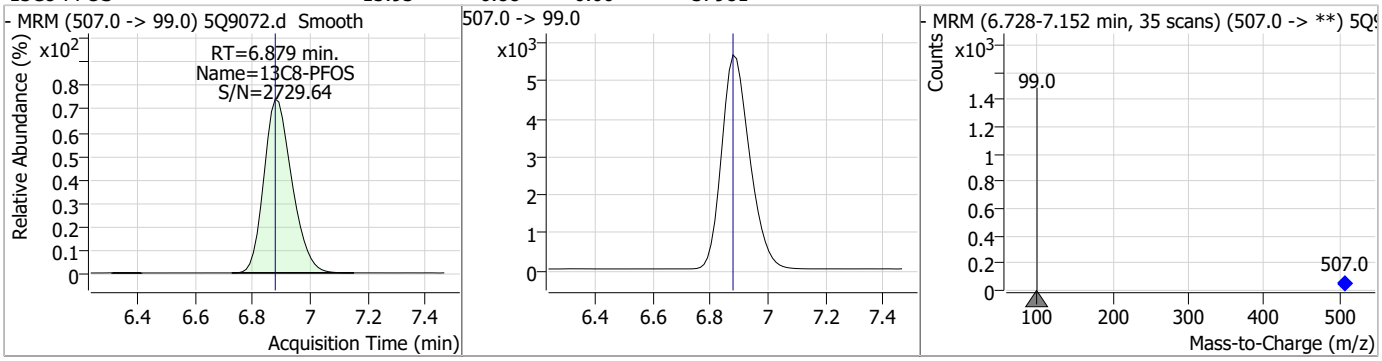


Perfluorinated Compounds by LC/MS/MS

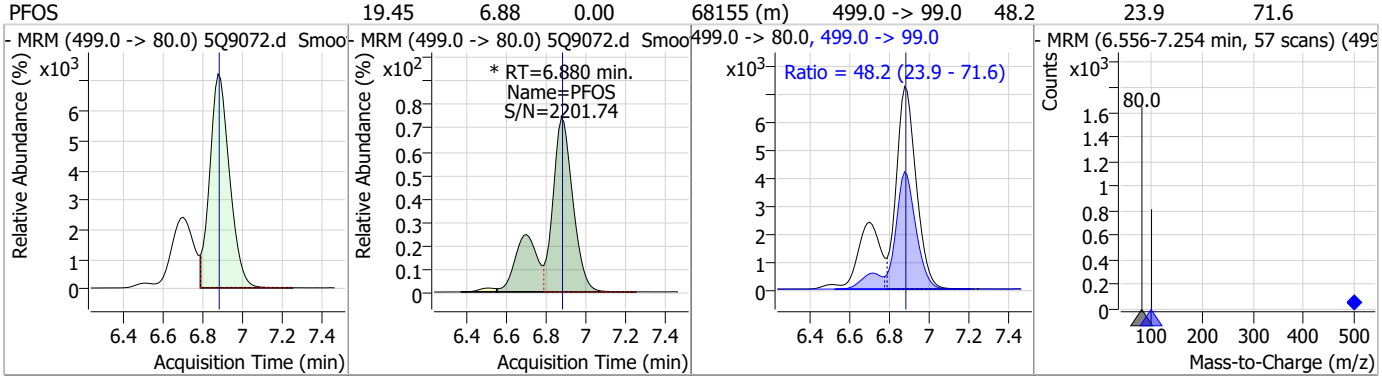
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	18.04	6.61	0.01	75285	498.0 -> 478.0	3.4	1.6	4.9



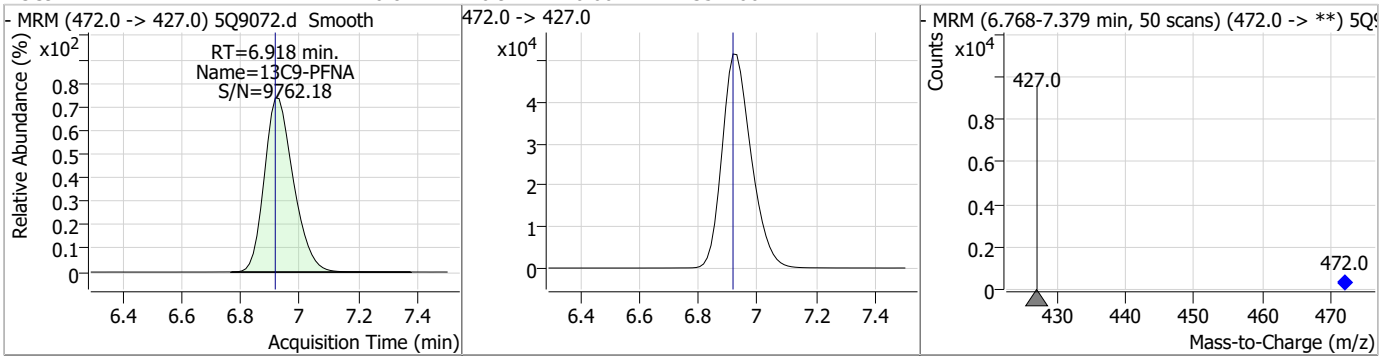
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	15.93	6.88	0.00	37981				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.45	6.88	0.00	68155 (m)	499.0 -> 99.0	48.2	23.9	71.6

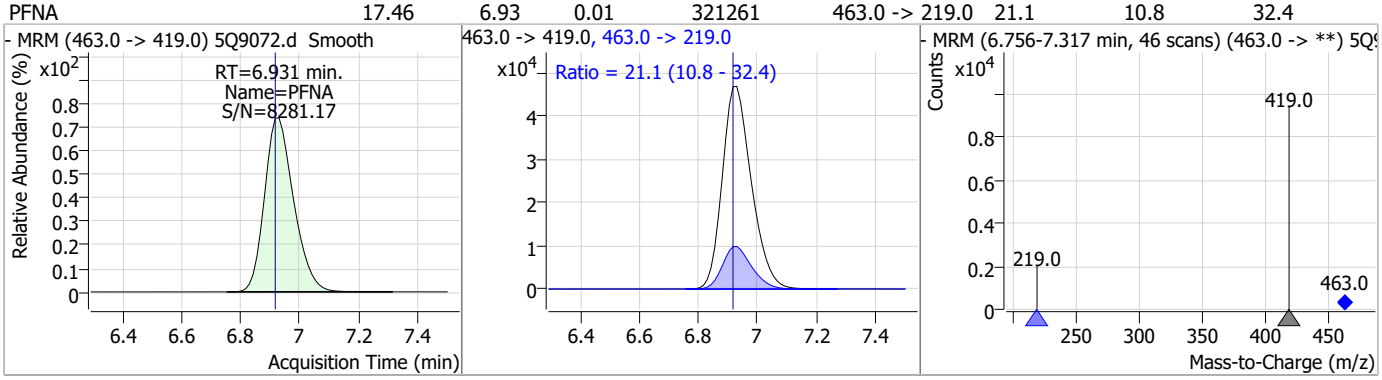


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	16.87	6.92	0.00	354766				

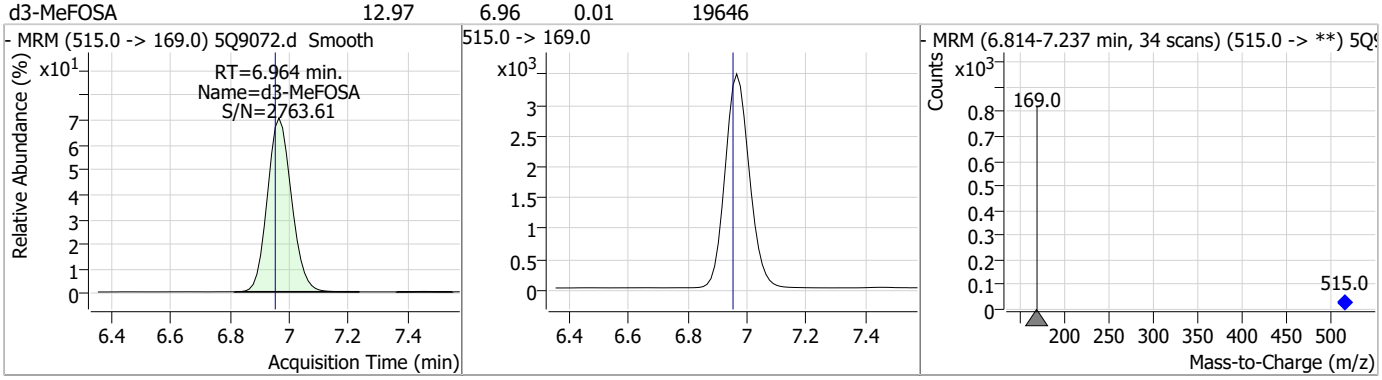


Perfluorinated Compounds by LC/MS/MS

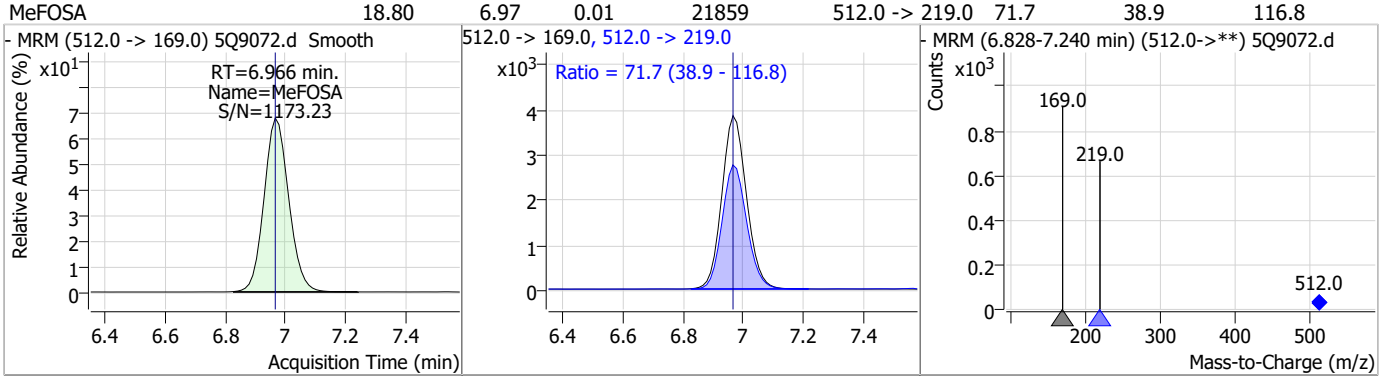
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	17.46	6.93	0.01	321261	463.0 -> 219.0	21.1	10.8	32.4



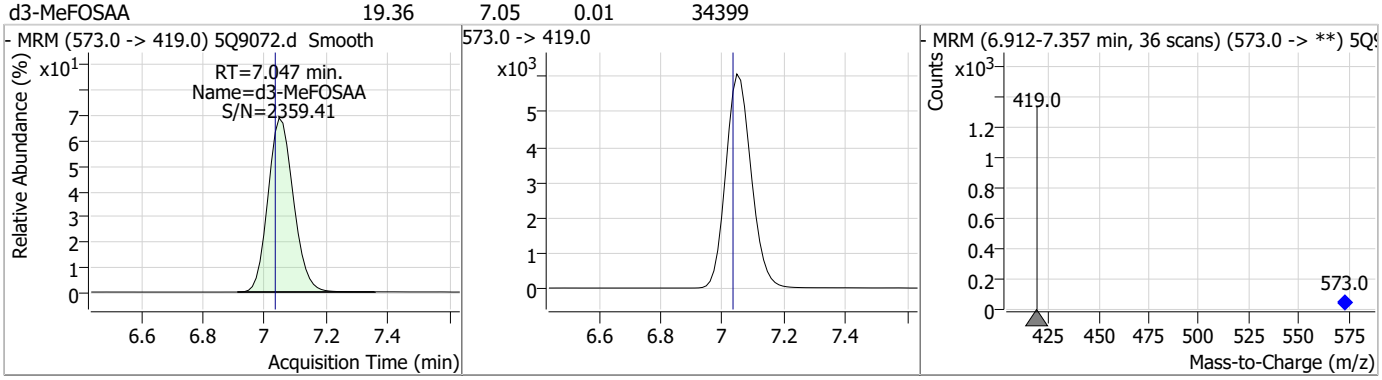
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	12.97	6.96	0.01	19646				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	18.80	6.97	0.01	21859	512.0 -> 219.0	71.7	38.9	116.8

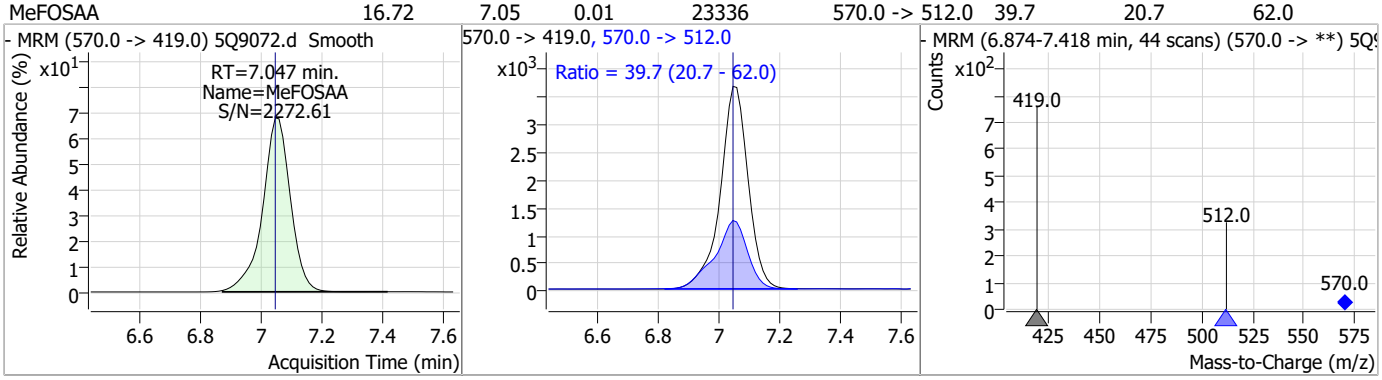


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.36	7.05	0.01	34399				

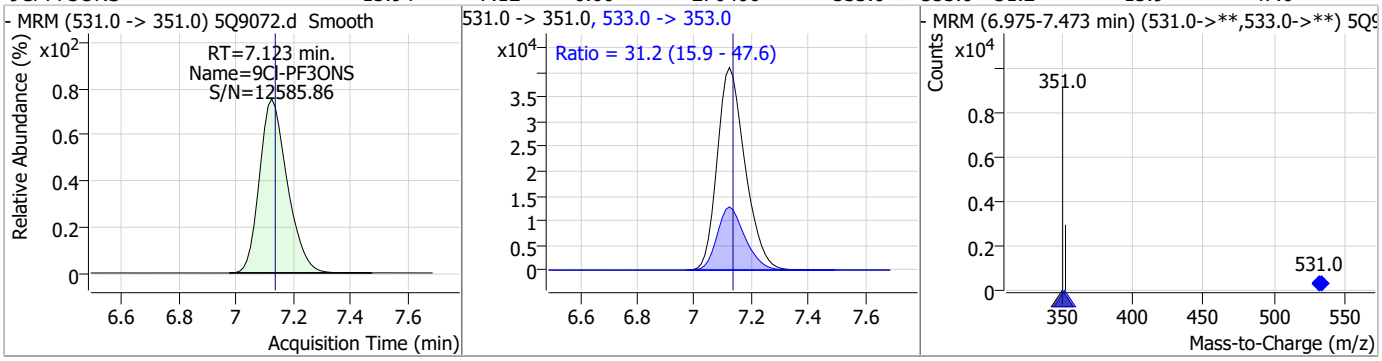


Perfluorinated Compounds by LC/MS/MS

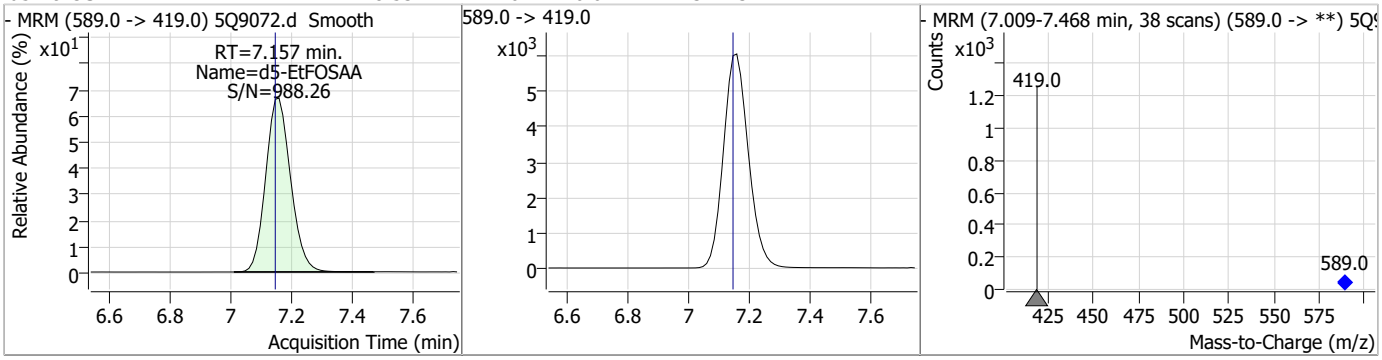
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	16.72	7.05	0.01	23336	570.0 -> 512.0	39.7	20.7	62.0



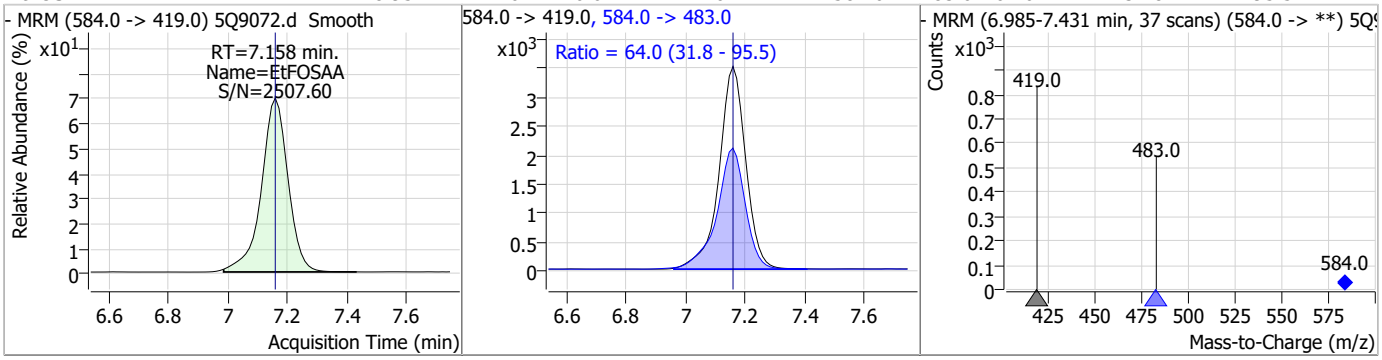
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	15.94	7.12	0.00	276406	533.0 -> 353.0	31.2	15.9	47.6



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.53	7.16	0.01	34173				

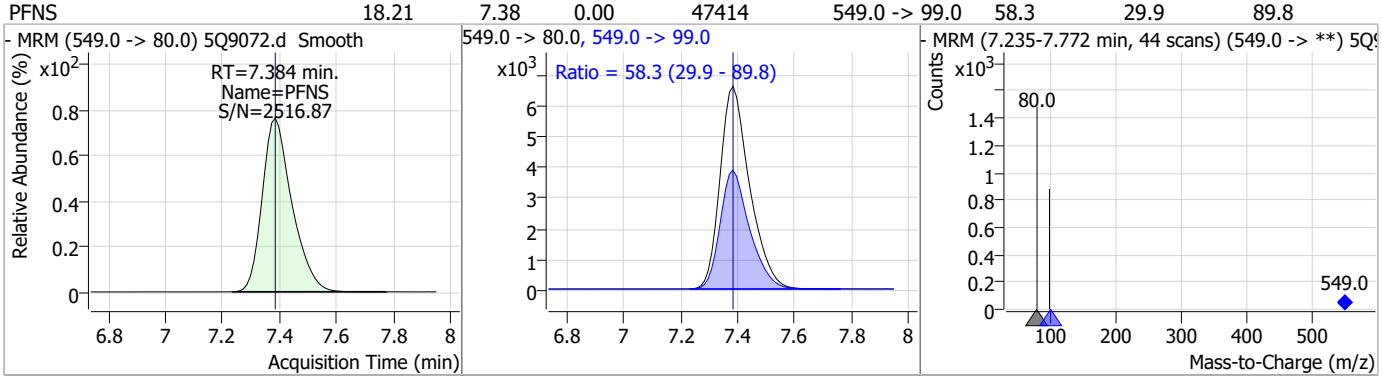


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	18.95	7.16	0.01	21622	584.0 -> 483.0	64.0	31.8	95.5

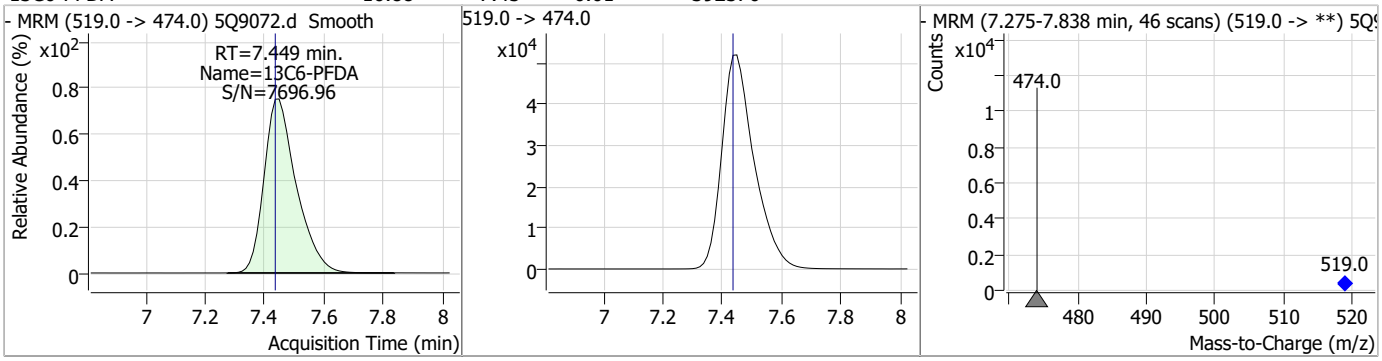


Perfluorinated Compounds by LC/MS/MS

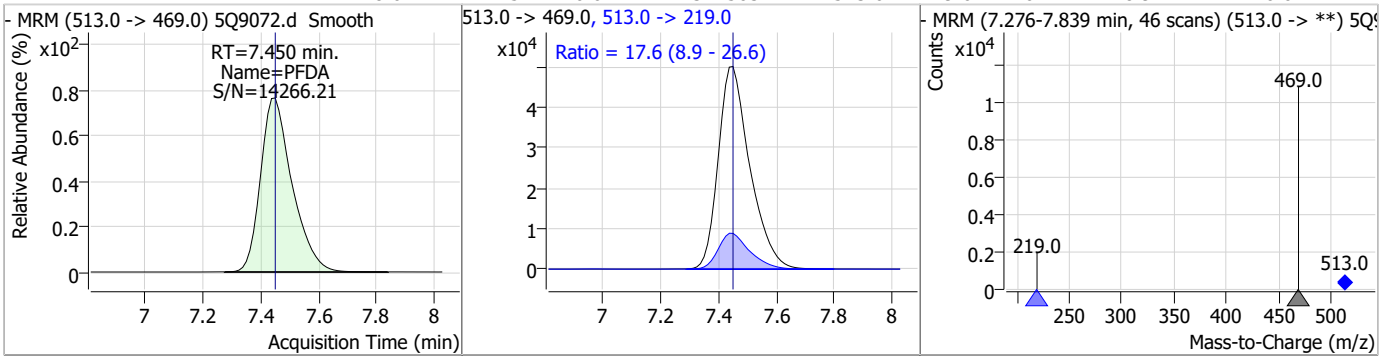
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	18.21	7.38	0.00	47414	549.0 -> 99.0	58.3	29.9	89.8



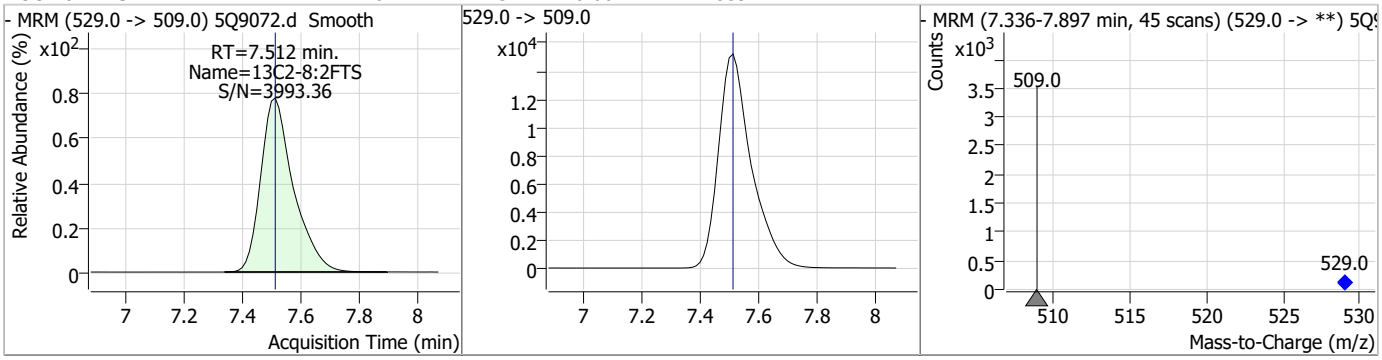
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	16.88	7.45	0.01	392370				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	18.07	7.45	0.01	377563	513.0 -> 219.0	17.6	8.9	26.6

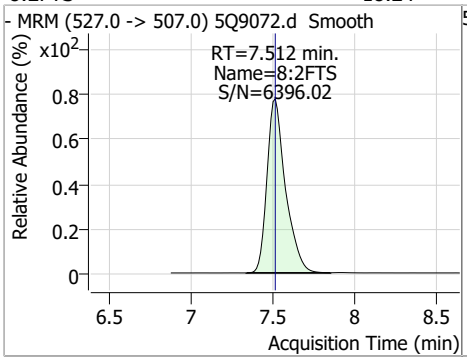


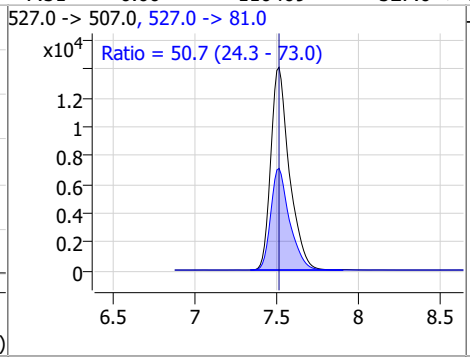
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	16.42	7.51	0.00	118597				

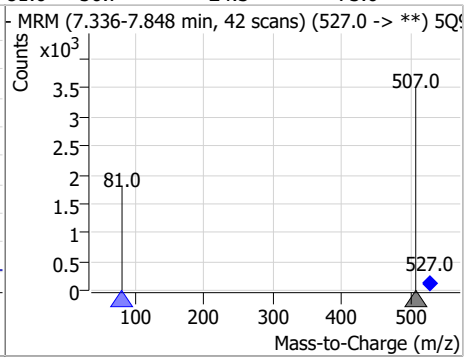


Perfluorinated Compounds by LC/MS/MS

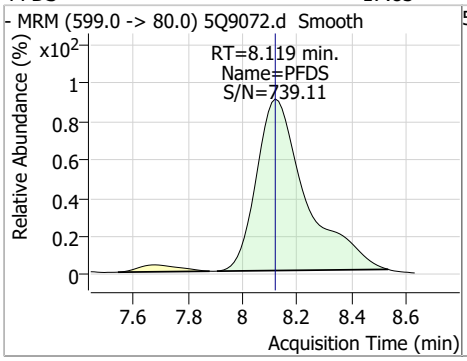
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	18.24	7.51	0.00	110469	527.0 -> 81.0	50.7	24.3	73.0

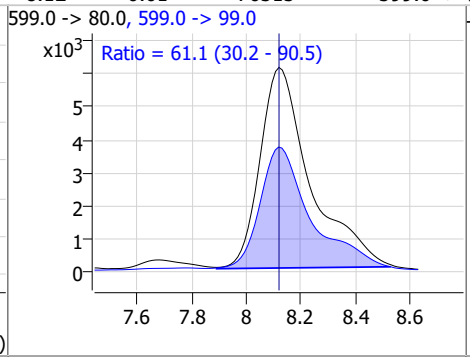


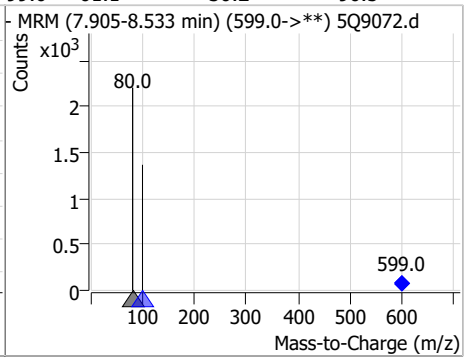




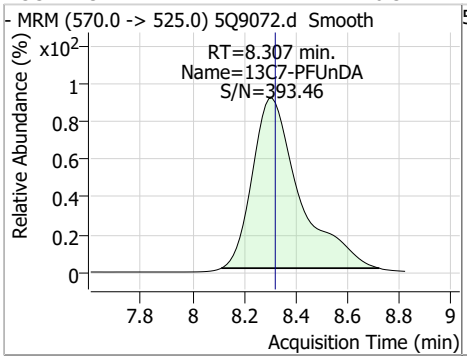
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	17.83	8.12	-0.01	76515	599.0 -> 99.0	61.1	30.2	90.5

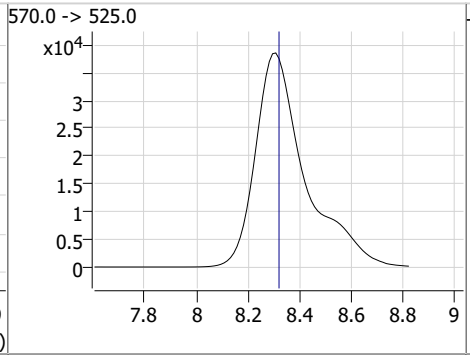


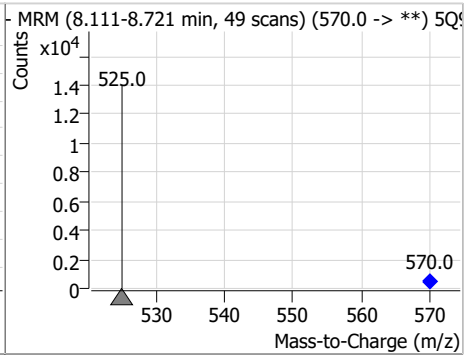




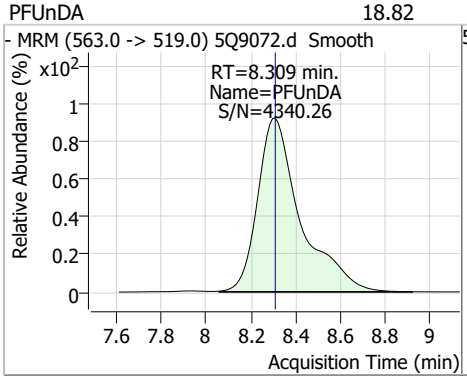
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	16.34	8.31	-0.01	478165				

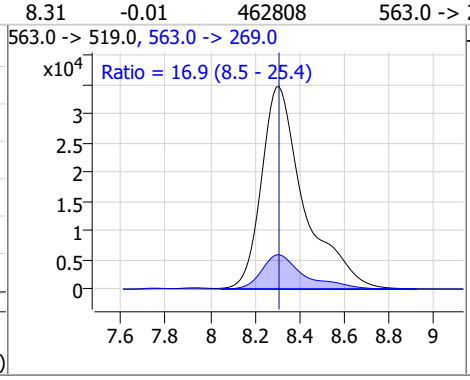


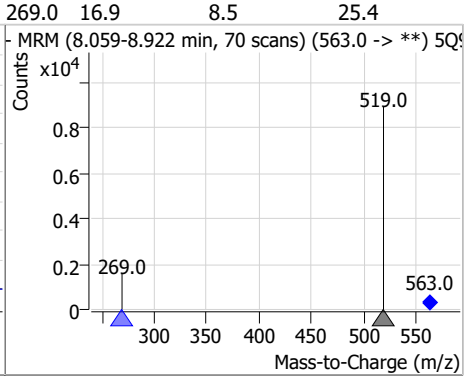




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	18.82	8.31	-0.01	462808	563.0 -> 269.0	16.9	8.5	25.4

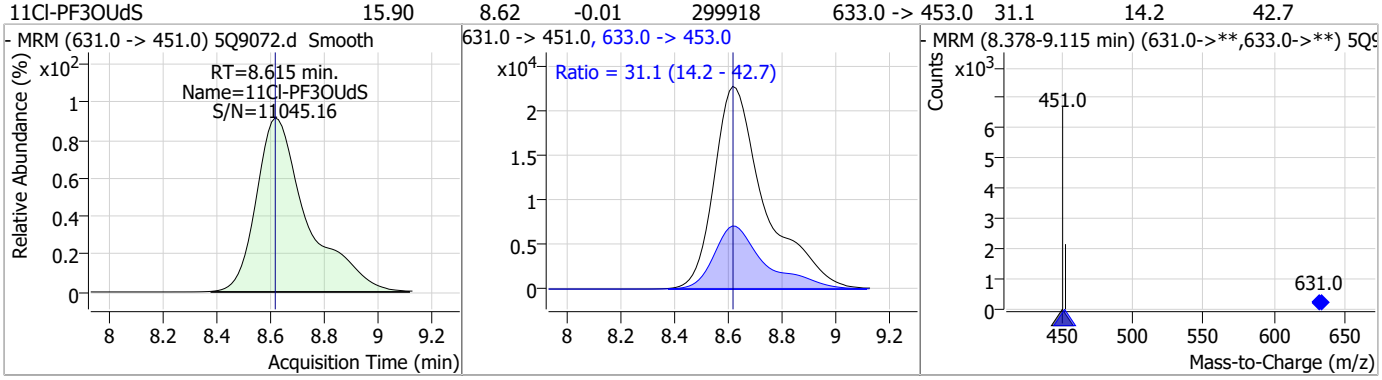




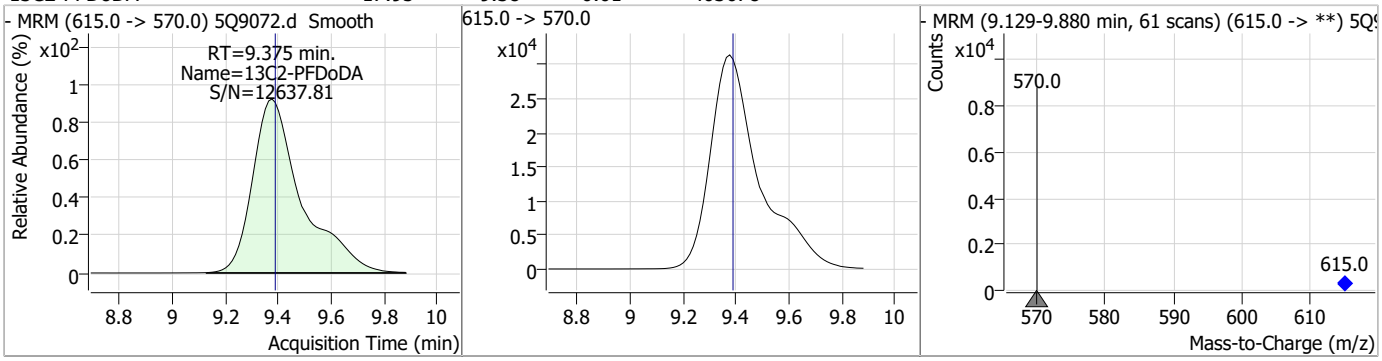


Perfluorinated Compounds by LC/MS/MS

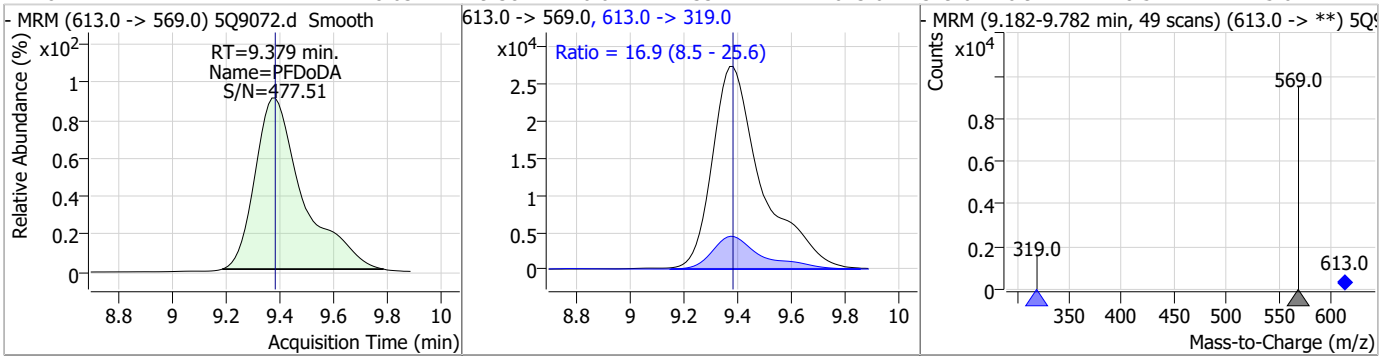
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	15.90	8.62	-0.01	299918	633.0 -> 453.0	31.1	14.2	42.7



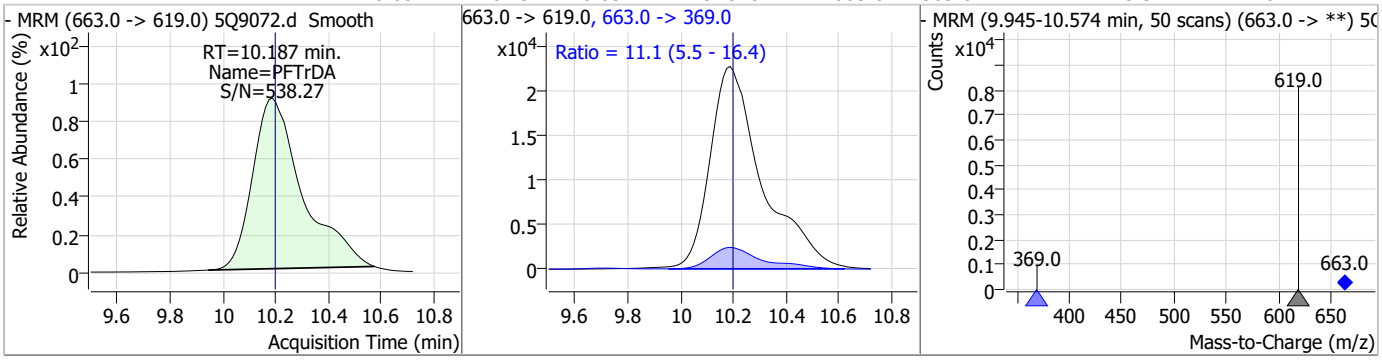
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	17.95	9.38	-0.01	403678				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	18.03	9.38	-0.01	332124	613.0 -> 319.0	16.9	8.5	25.6

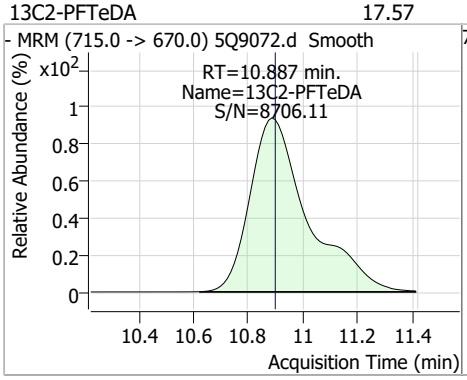


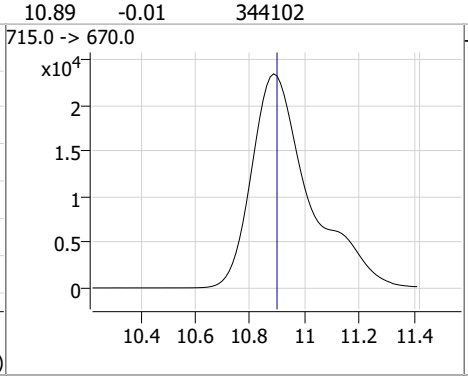
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	16.65	10.19	-0.03	292848	663.0 -> 369.0	11.1	5.5	16.4

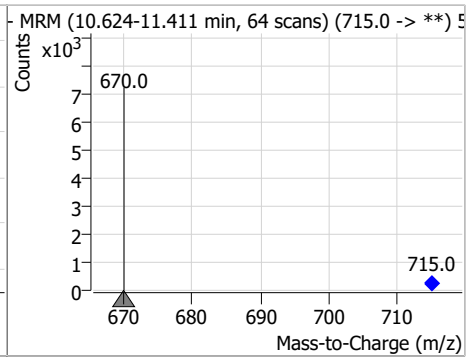


Perfluorinated Compounds by LC/MS/MS

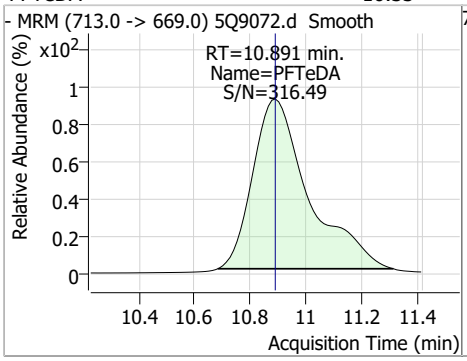
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	17.57	10.89	-0.01	344102				

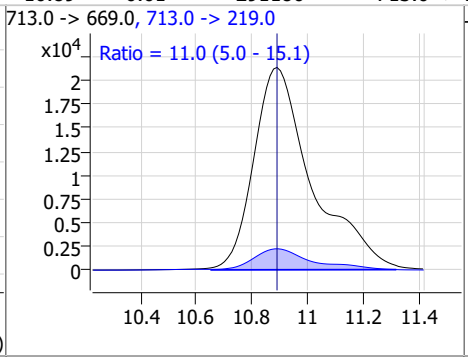


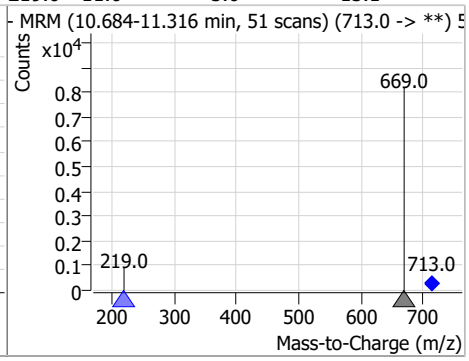




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	16.33	10.89	-0.01	291186	713.0 -> 219.0	11.0	5.0	15.1







Manual Integration Approval Summary

Sample Number: OP94649-MS
Lab FileID: 5Q9072.D
Injection Time: 12/28/22 21:34
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 11:05 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.74	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.88	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9073.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 9:51:38 PM
Sample Name : op94649-msd
Vial : P2-B8
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94649,S5Q134,1.98,,,1.0,1,soil

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	81463	20.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	158553	20.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	231430	20.00	µg/L	0.000
M4-PFHpA	5.726	367.0 -> 322.0	241759	20.00	µg/L	0.000
M8-PFOA	6.361	421.0 -> 376.0	317951	20.00	µg/L	0.000
M9-PFNA	6.918	472.0 -> 427.0	336796	20.00	µg/L	0.000
M6-PFDA	7.449	519.0 -> 474.0	374908	20.00	µg/L	0.013
M7-PFUnDA	8.307	570.0 -> 525.0	465438	20.00	µg/L	-0.012
M2-PFDoDA	9.375	615.0 -> 570.0	367914	20.00	µg/L	-0.013
M2-PFTeDA	10.887	715.0 -> 670.0	331362	20.00	µg/L	-0.013
M8-FOSA	6.605	506.0 -> 78.0	76093	20.00	µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	19769	20.00	µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	27768	20.00	µg/L	0.000
M8-PFOS	6.879	507.0 -> 99.0	36818	20.00	µg/L	0.000
M2-4:2FTS	4.886	329.0 -> 309.0	69000	20.00	µg/L	0.000
M2-6:2FTS	6.360	429.0 -> 409.0	115435	20.00	µg/L	0.000
M2-8:2FTS	7.512	529.0 -> 509.0	119519	20.00	µg/L	0.000
M3-MeFOSAA	7.047	573.0 -> 419.0	32779	20.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	50827	20.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	21063	20.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	34417	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	69000	14.33	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 71.7%		
13C2-6:2FTS	6.360	429.0 -> 409.0	115435	15.06	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 75.3%		
13C2-8:2FTS	7.512	529.0 -> 509.0	119519	16.55	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 82.8%		
13C2-PFDoDA	9.375	615.0 -> 570.0	367914	16.36	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.8%		
13C2-PFTeDA	10.887	715.0 -> 670.0	331362	16.92	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 84.6%		
13C3-PFBS	4.124	302.0 -> 99.0	19769	15.21	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 76.1%		
13C3-PFHxS	5.733	402.0 -> 99.0	27768	15.52	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 77.6%		
13C4-PFBA	2.400	217.0 -> 172.0	81463	15.66	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 78.3%		
13C4-PFHpA	5.726	367.0 -> 322.0	241759	15.72	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 78.6%		
13C5-PFHxA	4.965	318.0 -> 273.0	231430	15.38	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 76.9%		
13C5-PFPeA	3.919	268.0 -> 223.0	158553	15.11	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 75.6%		
13C6-PFDA	7.449	519.0 -> 474.0	374908	16.13	µg/L	0.013

Perfluorinated Compounds by LC/MS/MS

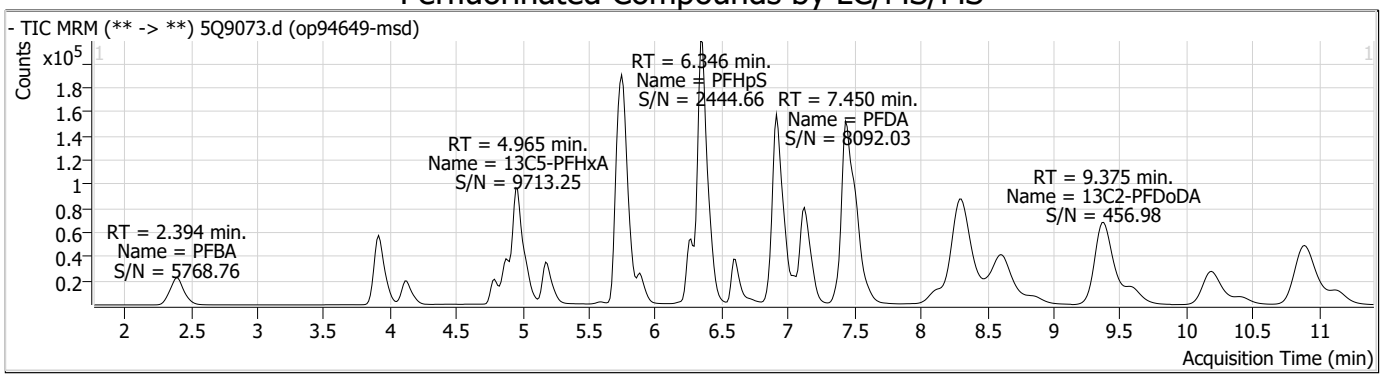
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 80.6%			
13C7-PFUnDA	8.307	570.0 -> 525.0	465438	15.91	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 79.5%			
13C8-FOSA	6.605	506.0 -> 78.0	76093	15.76	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 78.8%			
13C8-PFOA	6.361	421.0 -> 376.0	317951	15.78	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 78.9%			
13C8-PFOS	6.879	507.0 -> 99.0	36818	15.44	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 77.2%			
13C9-PFNA	6.918	472.0 -> 427.0	336796	16.01	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 80.1%			
d3-MeFOSAA	7.047	573.0 -> 419.0	32779	18.45	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.2%			
13C3-HFPO-DA	5.194	287.0 -> 169.0	50827	15.37	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 76.8%			
d3-MeFOSA	6.964	515.0 -> 169.0	21063	13.90	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 69.5%			
d5-EtFOSAA	7.157	589.0 -> 419.0	34417	18.66	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.3%			
Target Compounds							QValue
4:2FTS	4.888	327.0 -> 307.0	70247	18.60	µg/L		99
		327.0 -> 81.0	41892				
6:2FTS	6.360	427.0 -> 407.0	116174	19.61	µg/L		100
		427.0 -> 81.0	49628				
8:2FTS	7.512	527.0 -> 507.0	116369	19.06	µg/L		98
		527.0 -> 81.0	57929				
EtFOSAA	7.158	584.0 -> 419.0	22359	19.46	µg/L		95
		584.0 -> 483.0	13330				
FOSA	6.606	498.0 -> 78.0	73163	18.71	µg/L		100
		498.0 -> 478.0	2396				
MeFOSAA	7.047	570.0 -> 419.0	24119	18.13	µg/L		95
		570.0 -> 512.0	9198				
PFBA	2.394	213.0 -> 169.0	84791	19.11	µg/L		100
PFBS	4.129	299.0 -> 80.0	62041	19.30	µg/L		100
		299.0 -> 99.0	26394				
PFDA	7.450	513.0 -> 469.0	382285	19.15	µg/L		99
		513.0 -> 219.0	67084				
PFDoDA	9.379	613.0 -> 569.0	332688	19.82	µg/L		100
		613.0 -> 319.0	56874				
PFDS	8.119	599.0 -> 80.0	75327	18.03	µg/L		98
		599.0 -> 99.0	46337				
PFHpA	5.727	363.0 -> 319.0	279739	18.50	µg/L		100
		363.0 -> 169.0	62798				
PFHpS	6.346	449.0 -> 80.0	53388	18.97	µg/L		97
		449.0 -> 99.0	28213				
PFHxA	4.966	313.0 -> 269.0	216493	18.42	µg/L		100
		313.0 -> 119.0	9971				
PFHxS	5.735	399.0 -> 80.0	54498	19.34	µg/L	m	100
		399.0 -> 99.0	30414				
PFNA	6.931	463.0 -> 419.0	320814	18.37	µg/L		100
		463.0 -> 219.0	69861				
PFNS	7.384	549.0 -> 80.0	47706	18.90	µg/L		97
		549.0 -> 99.0	27466				
PFOA	6.362	413.0 -> 369.0	335203	18.42	µg/L		99
		413.0 -> 169.0	90944				
PFOS	6.880	499.0 -> 80.0	68521	20.17	µg/L	m	98

Perfluorinated Compounds by LC/MS/MS

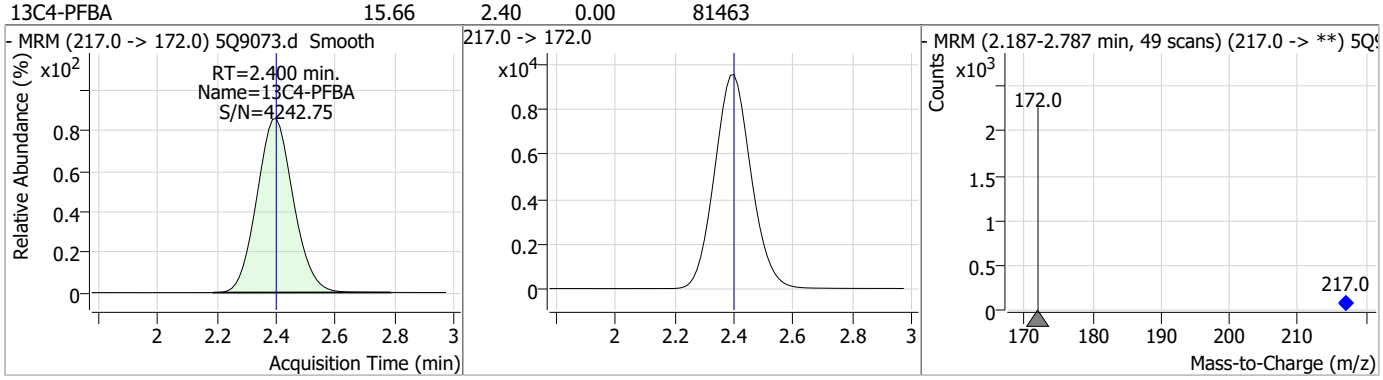
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	31959			
PFPeA	3.922	263.0 -> 219.0	166049	17.82	µg/L	100
PFPeS	5.035	349.0 -> 80.0	38190	18.14	µg/L	100
		349.0 -> 99.0	19577			
PFTeDA	10.891	713.0 -> 669.0	290176	16.90	µg/L	97
		713.0 -> 219.0	32106			
PFTrDA	10.187	663.0 -> 619.0	298428	18.61	µg/L	100
		663.0 -> 369.0	32912			
PFUnDA	8.309	563.0 -> 519.0	468256	19.56	µg/L	100
		563.0 -> 269.0	79497			
11Cl-PF3OUdS	8.615	631.0 -> 451.0	281046	16.35	µg/L	91
		633.0 -> 453.0	93333			
9Cl-PF3ONS	7.123	531.0 -> 351.0	278084	16.79	µg/L	98
		533.0 -> 353.0	85235			
ADONA	5.777	377.0 -> 251.0	372217	19.87	µg/L	100
		377.0 -> 85.0	139428			
HFPO-DA	5.190	329.0 -> 169.0	75279	18.54	µg/L	96
		285.0 -> 169.0	46474			
MeFOSA	6.966	512.0 -> 169.0	24264	19.47	µg/L	97
		512.0 -> 219.0	18207			
4-PFECHS	6.268	461.0 -> 381.0	174135	17.19	µg/L	99
		461.0 -> 99.0	94612			
FBSA	4.793	298.0 -> 78.0	89737	18.69	µg/L	98
		298.0 -> 64.0	7787			
FHxSA	5.900	398.0 -> 78.0	84619	17.89	µg/L	100
		398.0 -> 64.0	8044			

 # = Qualifier out of range, m = manually integrated, + = Area summed

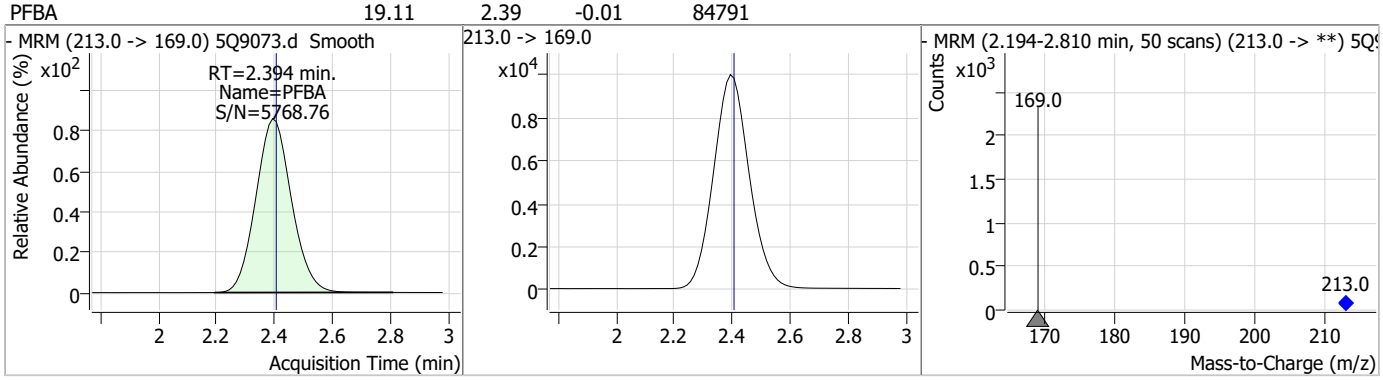
Perfluorinated Compounds by LC/MS/MS



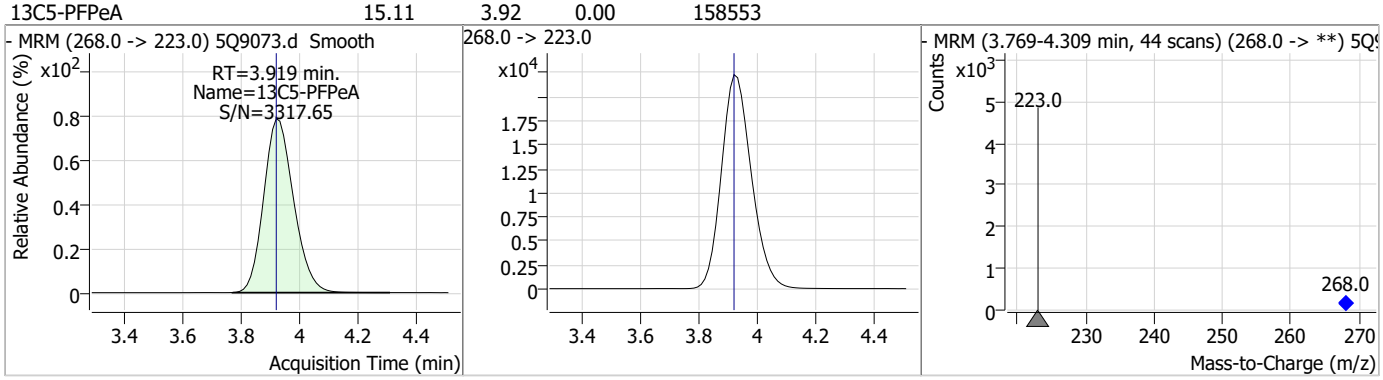
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	15.66	2.40	0.00	81463				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.11	2.39	-0.01	84791				

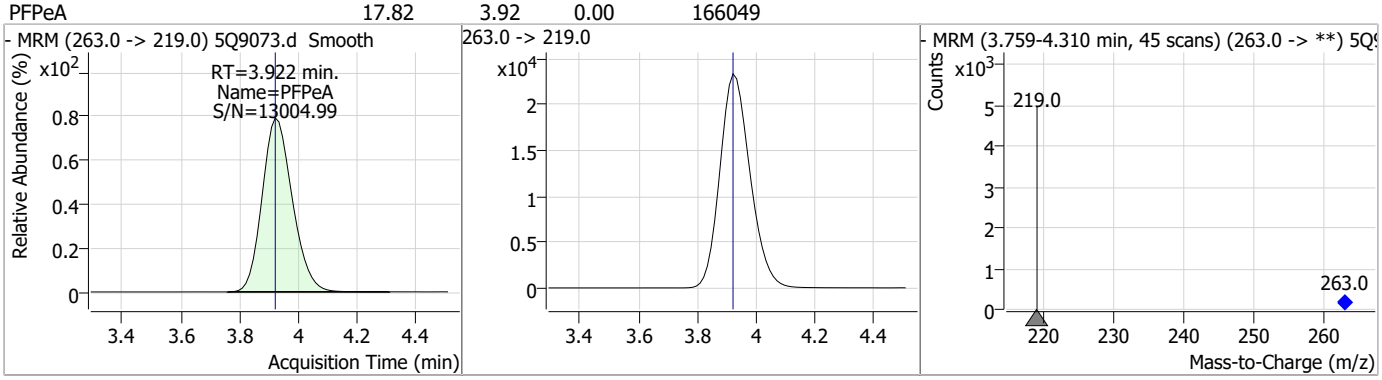


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	15.11	3.92	0.00	158553				

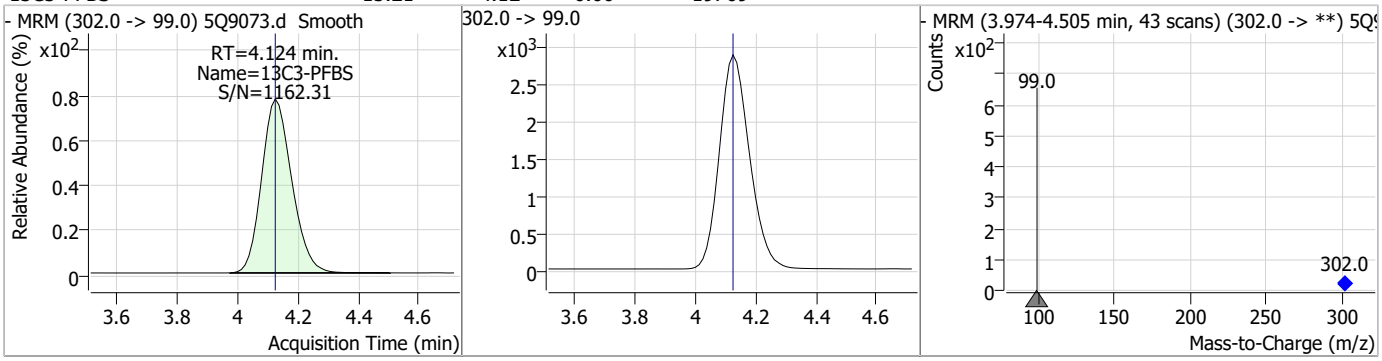


Perfluorinated Compounds by LC/MS/MS

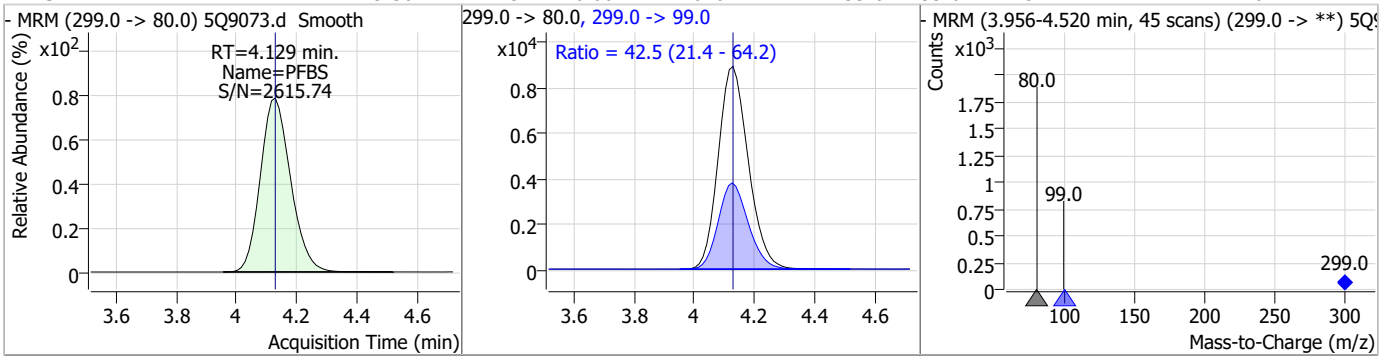
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	17.82	3.92	0.00	166049				



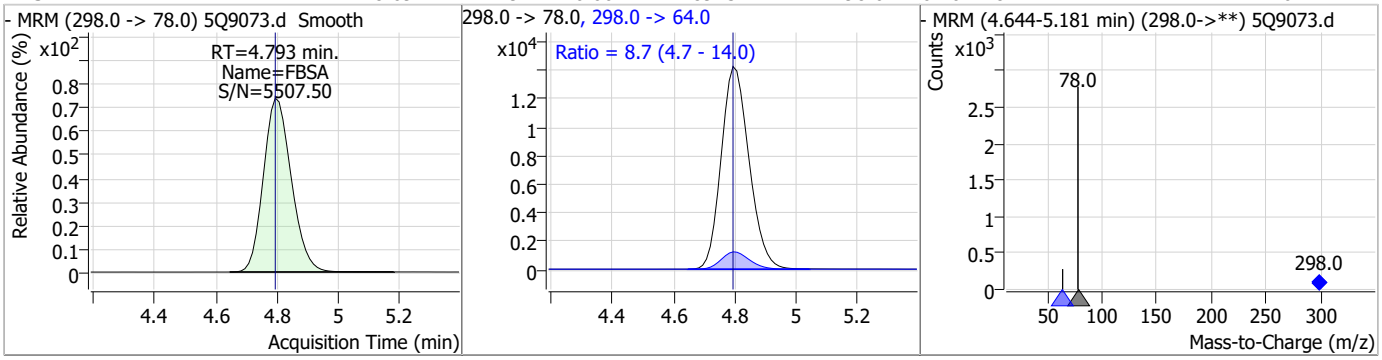
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	15.21	4.12	0.00	19769				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.30	4.13	0.00	62041	299.0 -> 99.0	42.5	21.4	64.2

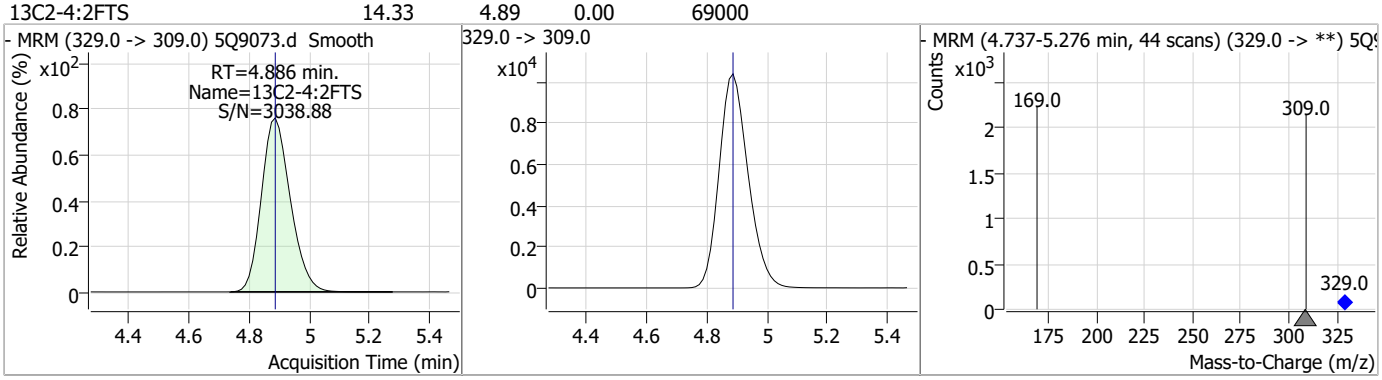


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	18.69	4.79	0.00	89737	298.0 -> 64.0	8.7	4.7	14.0

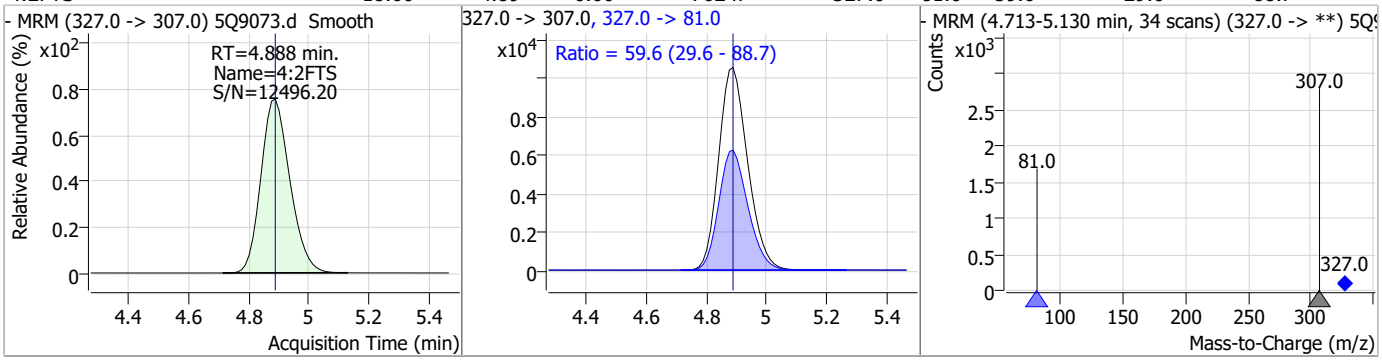


Perfluorinated Compounds by LC/MS/MS

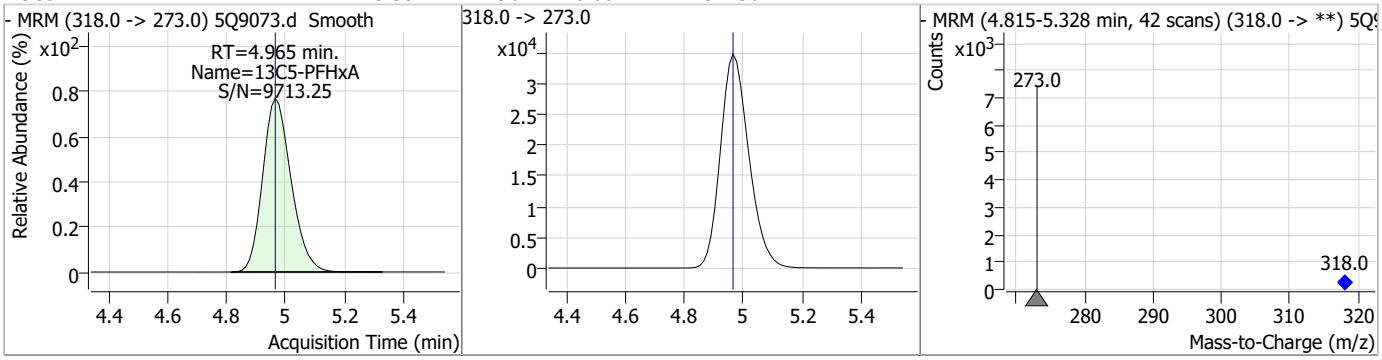
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	14.33	4.89	0.00	69000				



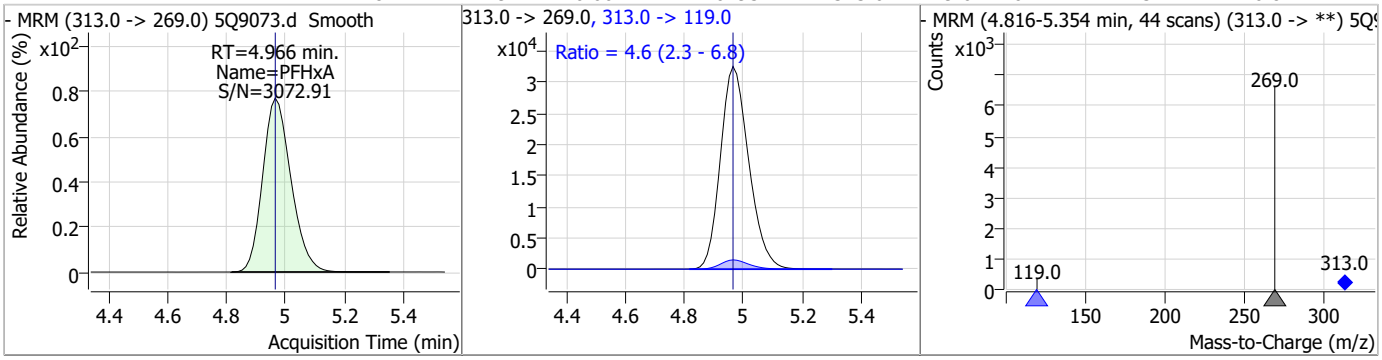
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	18.60	4.89	0.00	70247	327.0 -> 81.0	59.6	29.6	88.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	15.38	4.96	0.00	231430				

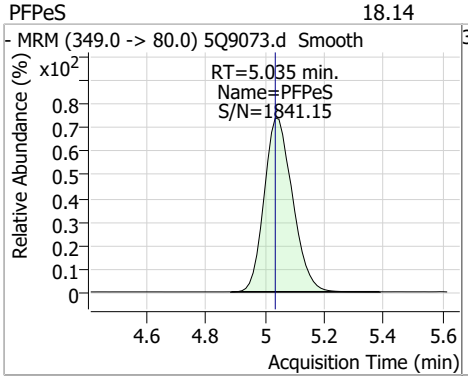


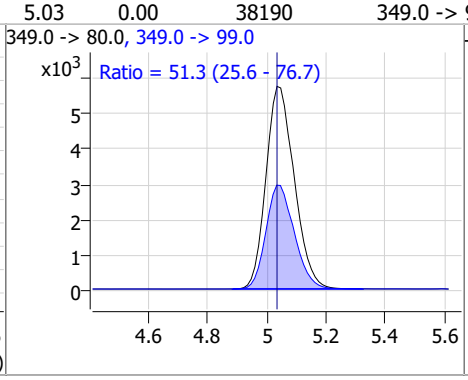
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	18.42	4.97	0.00	216493	313.0 -> 119.0	4.6	2.3	6.8

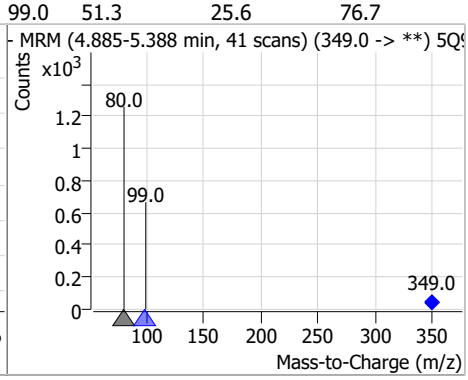


Perfluorinated Compounds by LC/MS/MS

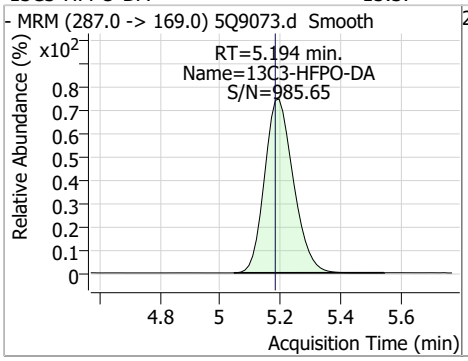
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	18.14	5.03	0.00	38190	349.0 -> 99.0	51.3	25.6	76.7

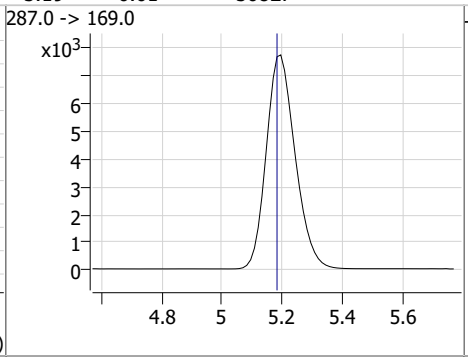


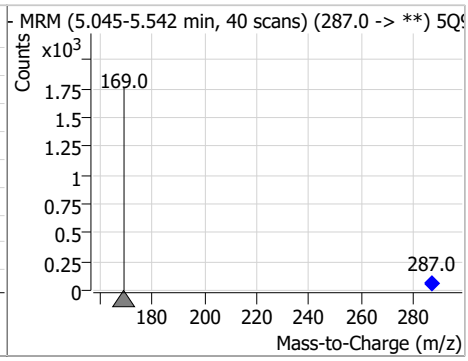




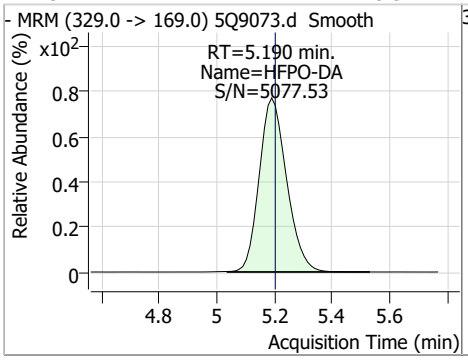
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	15.37	5.19	0.01	50827				

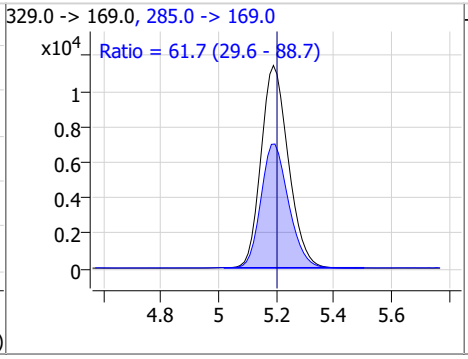


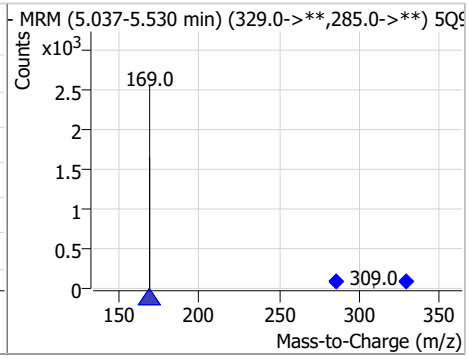




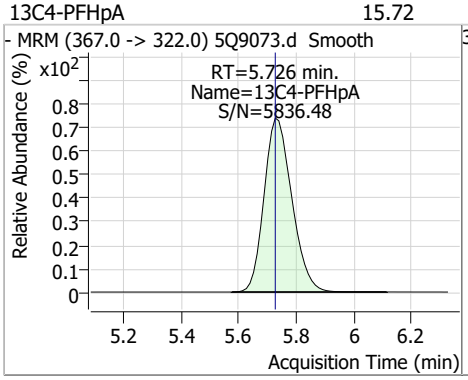
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	18.54	5.19	0.00	75279	285.0 -> 169.0	61.7	29.6	88.7

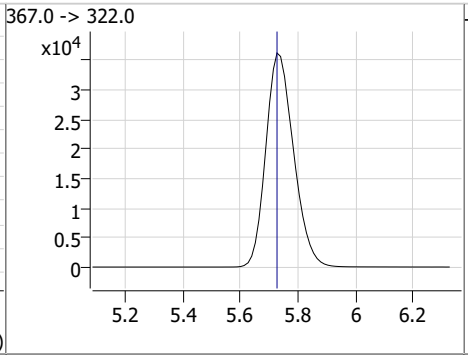


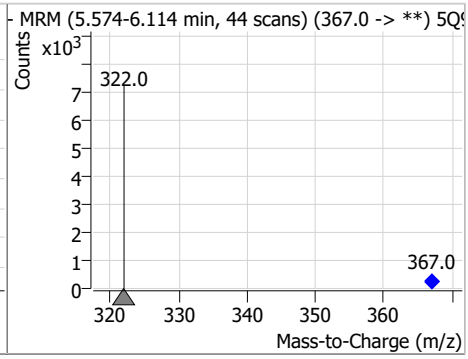




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	15.72	5.73	0.00	241759				

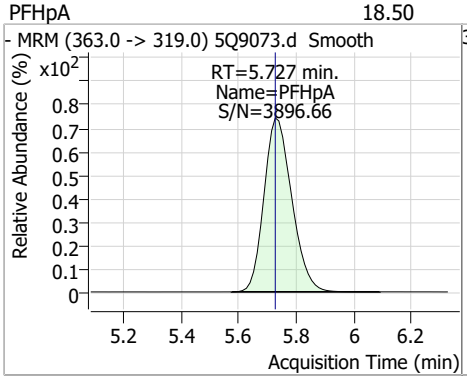


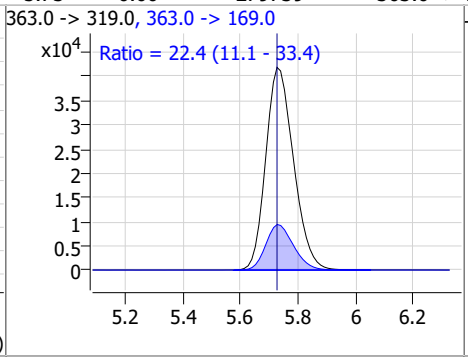


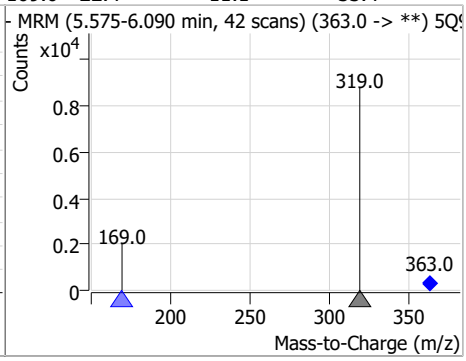


Perfluorinated Compounds by LC/MS/MS

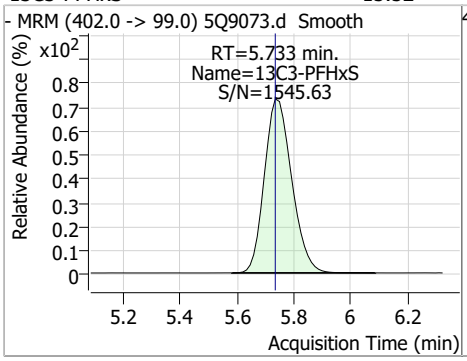
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	18.50	5.73	0.00	279739	363.0 -> 169.0	22.4	11.1	33.4

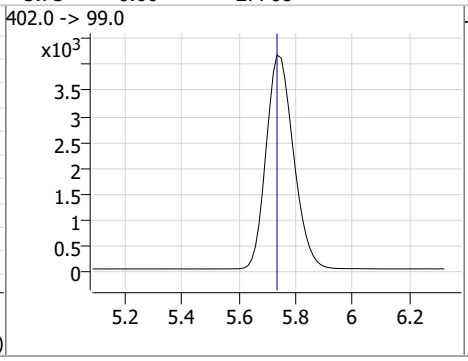


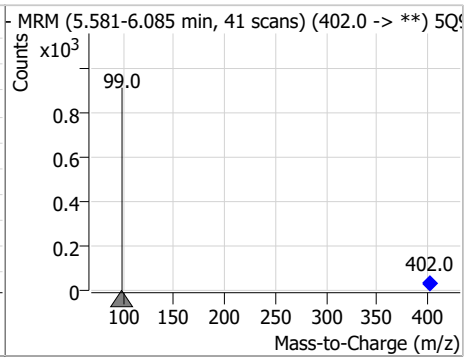




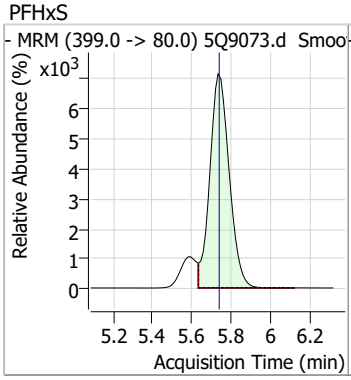
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	15.52	5.73	0.00	27768				

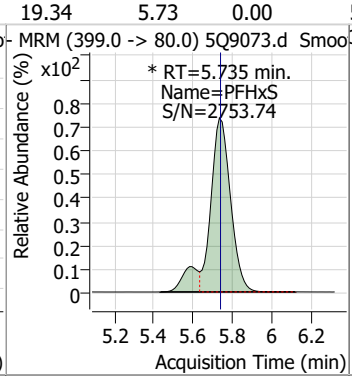


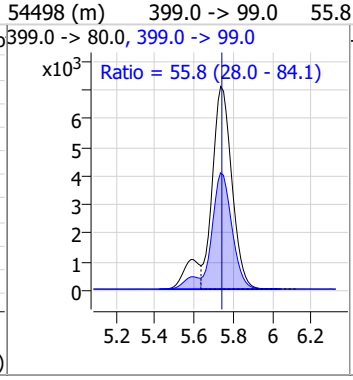


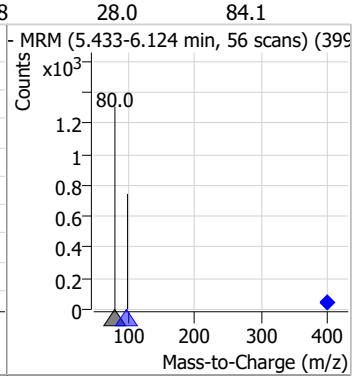


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	19.34	5.73	0.00	54498 (m)	399.0 -> 99.0	55.8	28.0	84.1

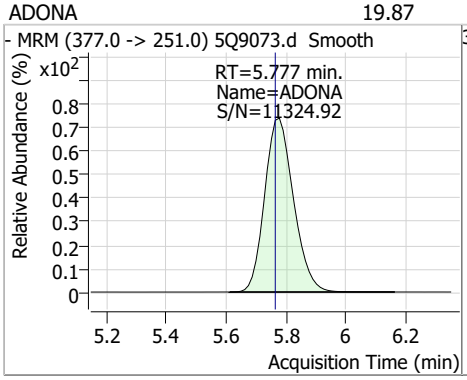


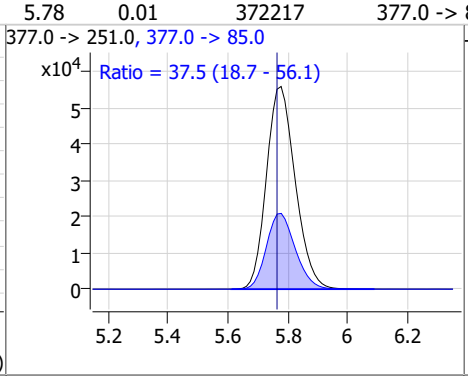


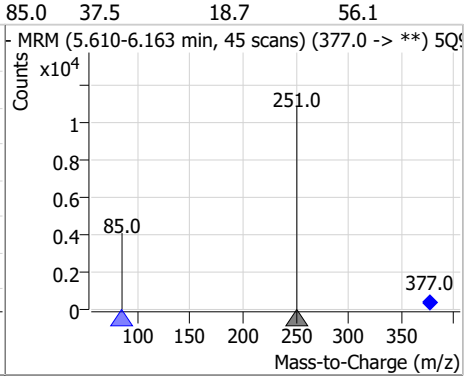




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	19.87	5.78	0.01	372217	377.0 -> 85.0	37.5	18.7	56.1

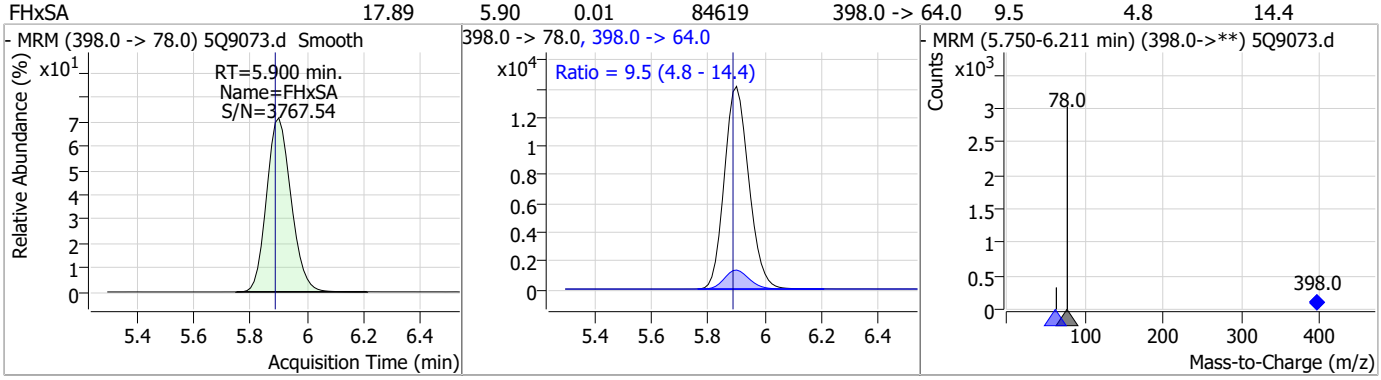




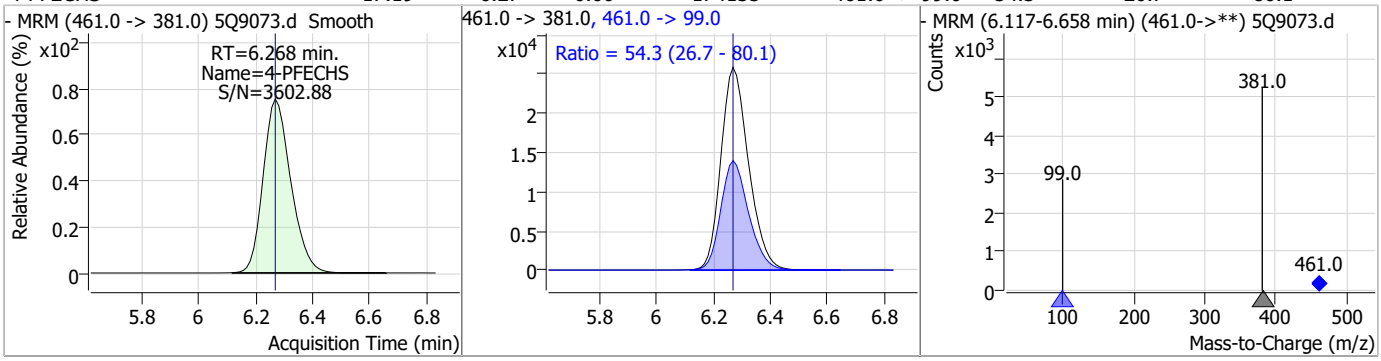


Perfluorinated Compounds by LC/MS/MS

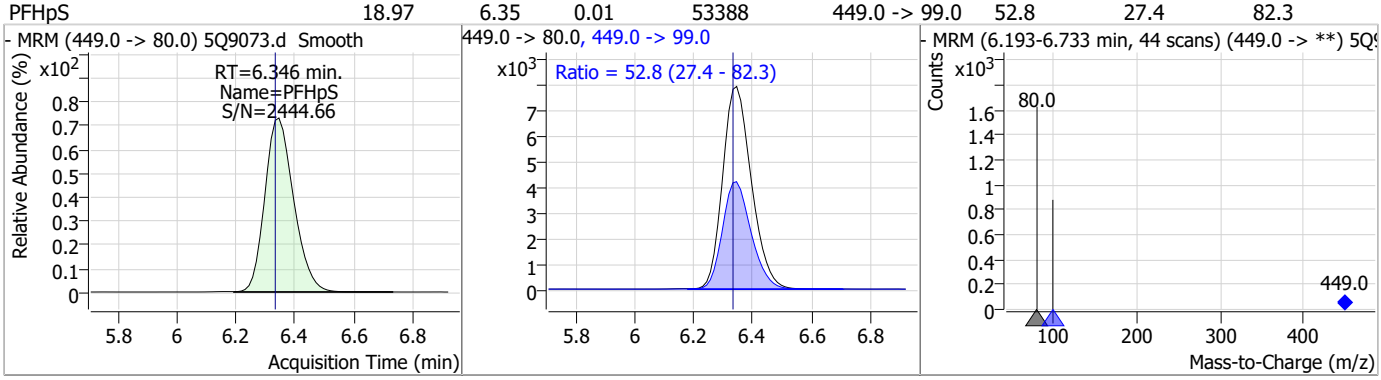
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	17.89	5.90	0.01	84619	398.0 -> 64.0	9.5	4.8	14.4



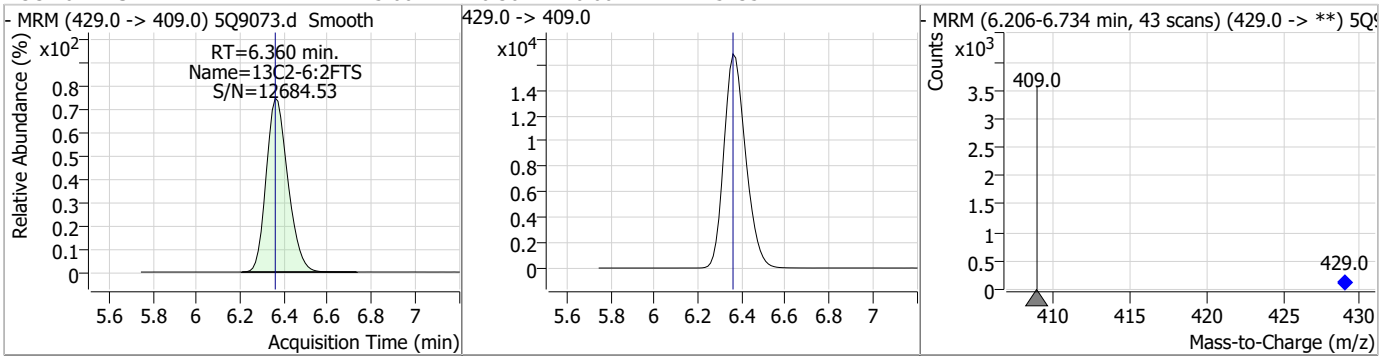
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	17.19	6.27	0.00	174135	461.0 -> 99.0	54.3	26.7	80.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	18.97	6.35	0.01	53388	449.0 -> 99.0	52.8	27.4	82.3

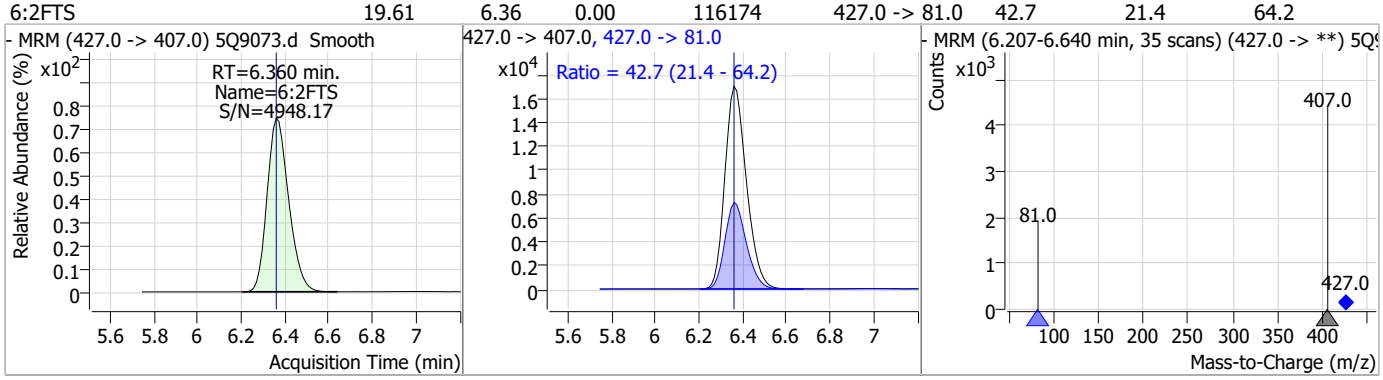


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	15.06	6.36	0.00	115435				

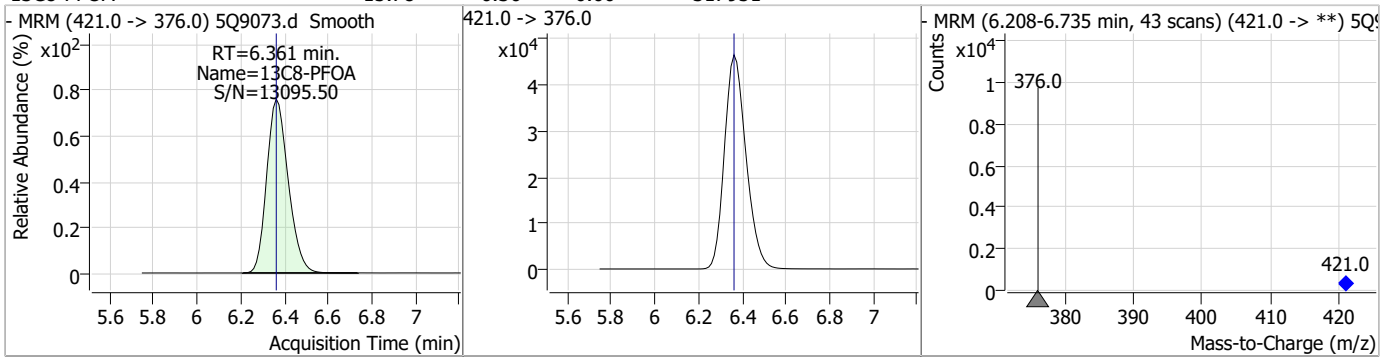


Perfluorinated Compounds by LC/MS/MS

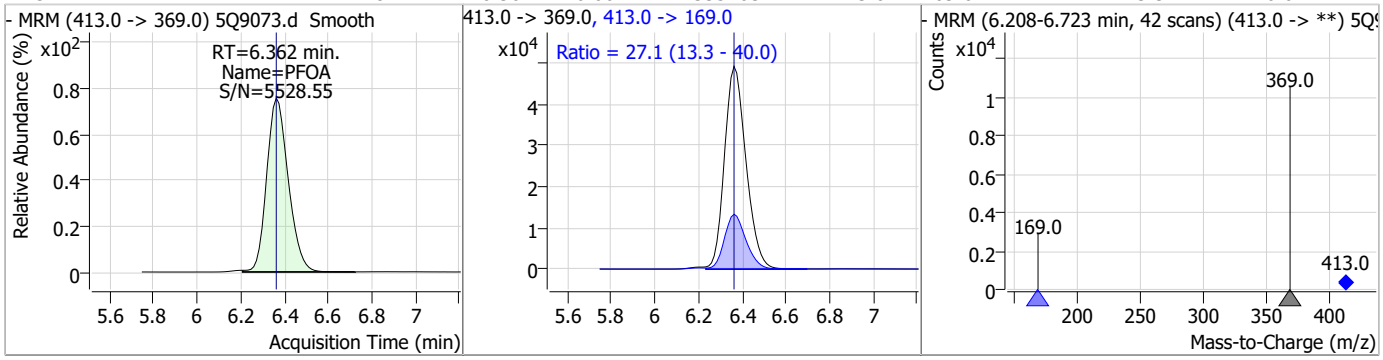
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	19.61	6.36	0.00	116174	427.0 -> 81.0	42.7	21.4	64.2



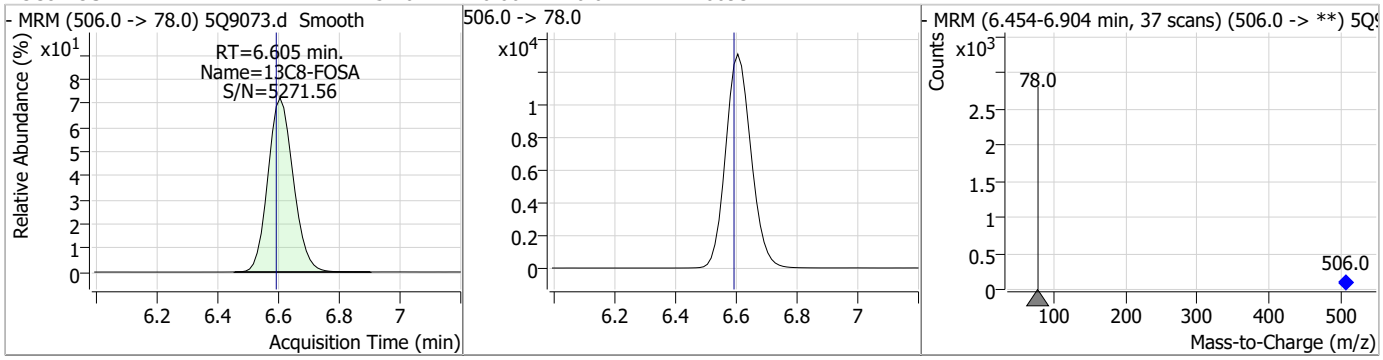
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	15.78	6.36	0.00	317951				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	18.42	6.36	0.00	335203	413.0 -> 169.0	27.1	13.3	40.0

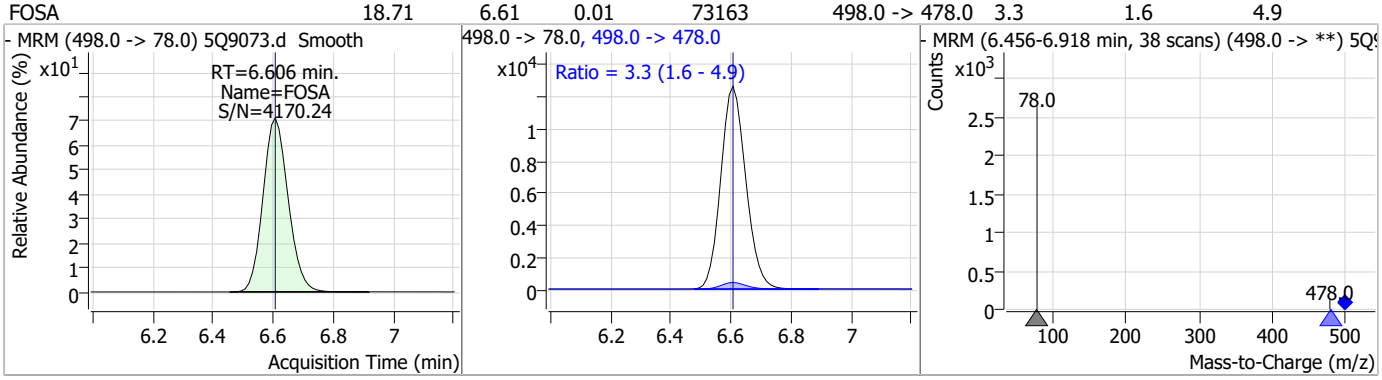


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	15.76	6.60	0.01	76093				

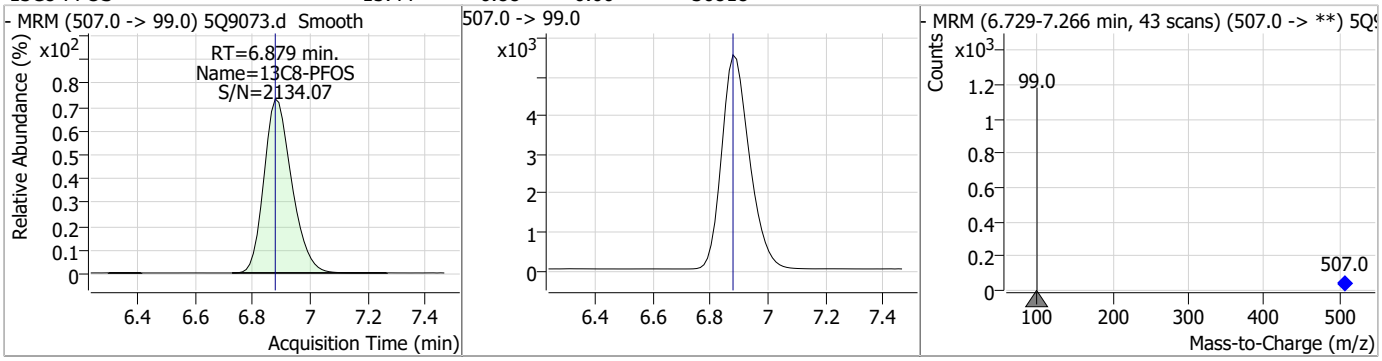


Perfluorinated Compounds by LC/MS/MS

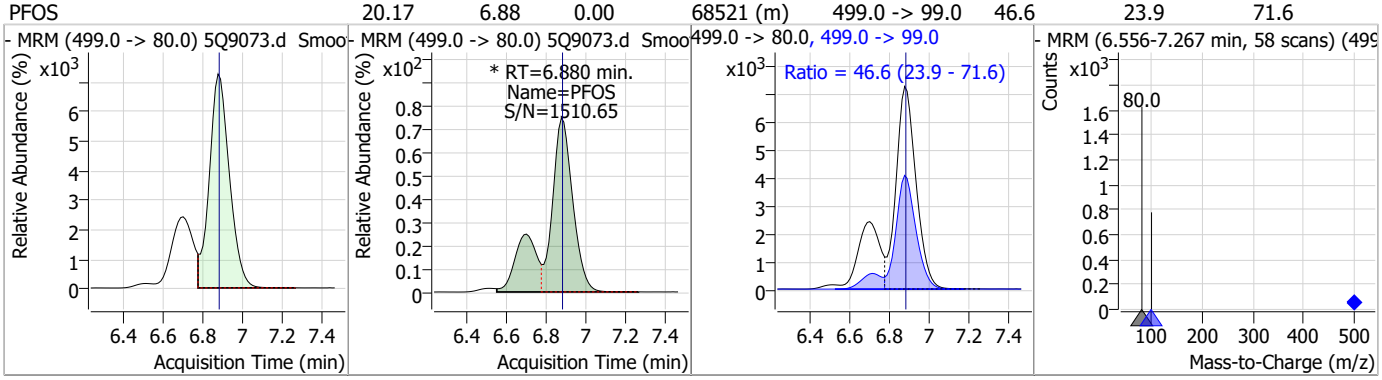
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	18.71	6.61	0.01	73163	498.0 -> 478.0	3.3	1.6	4.9



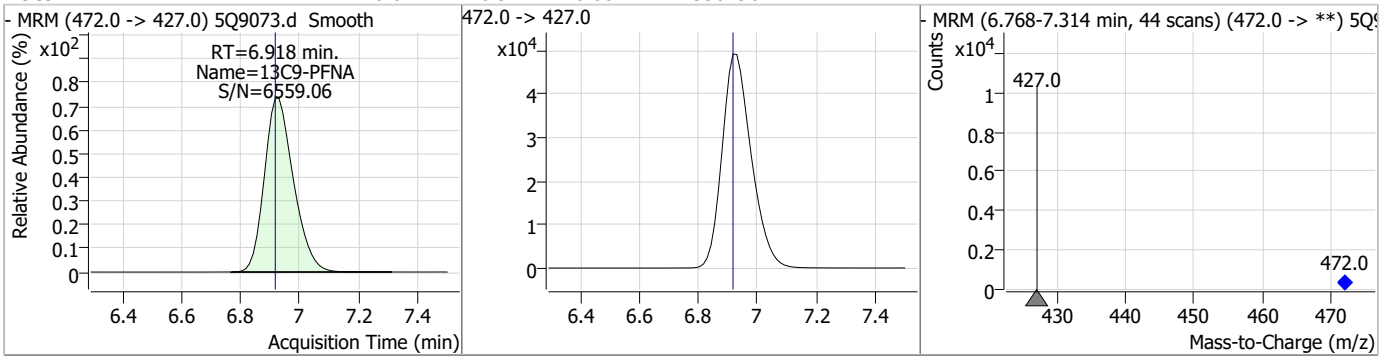
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	15.44	6.88	0.00	36818				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	20.17	6.88	0.00	68521 (m)	499.0 -> 99.0	46.6	23.9	71.6

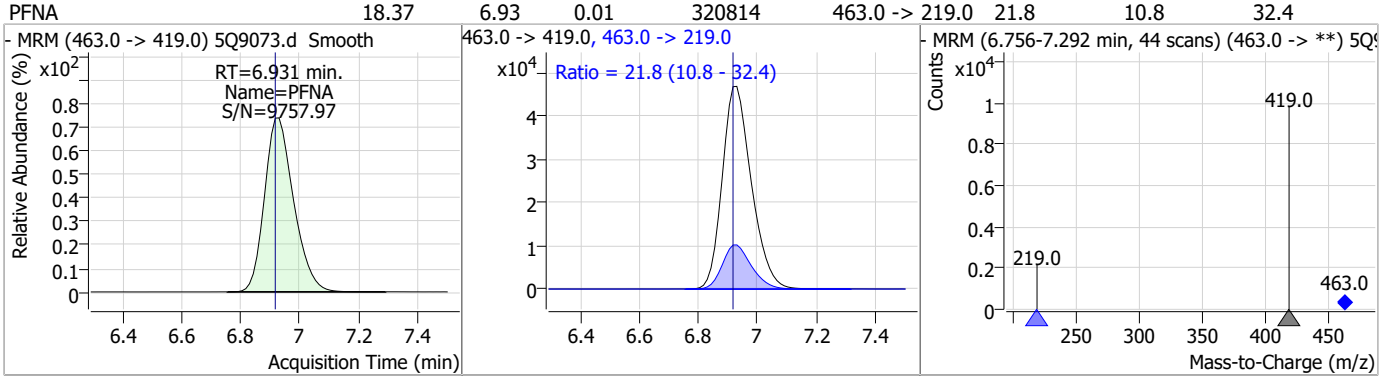


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	16.01	6.92	0.00	336796				

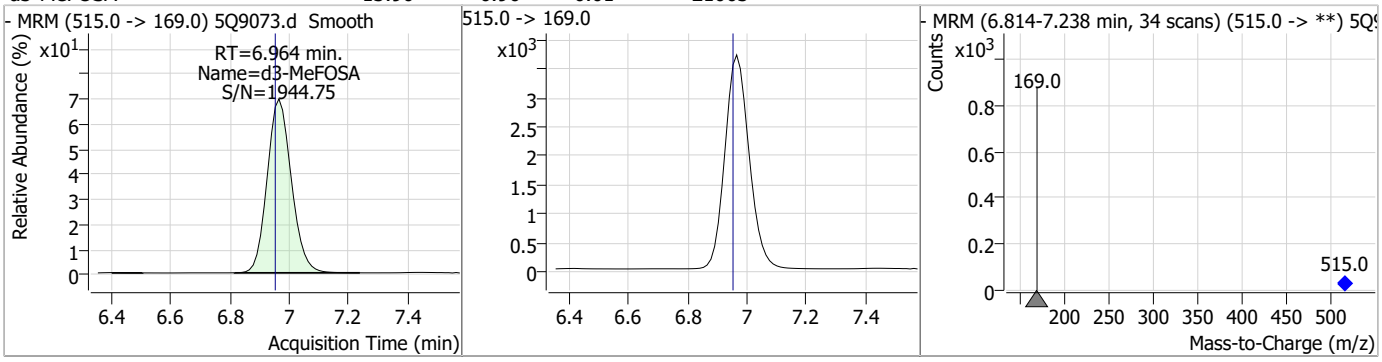


Perfluorinated Compounds by LC/MS/MS

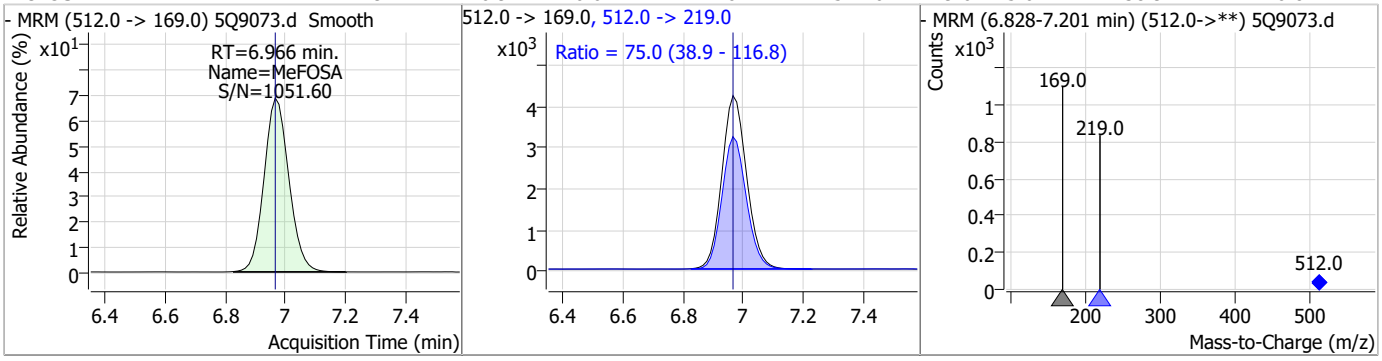
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	18.37	6.93	0.01	320814	463.0 -> 219.0	21.8	10.8	32.4



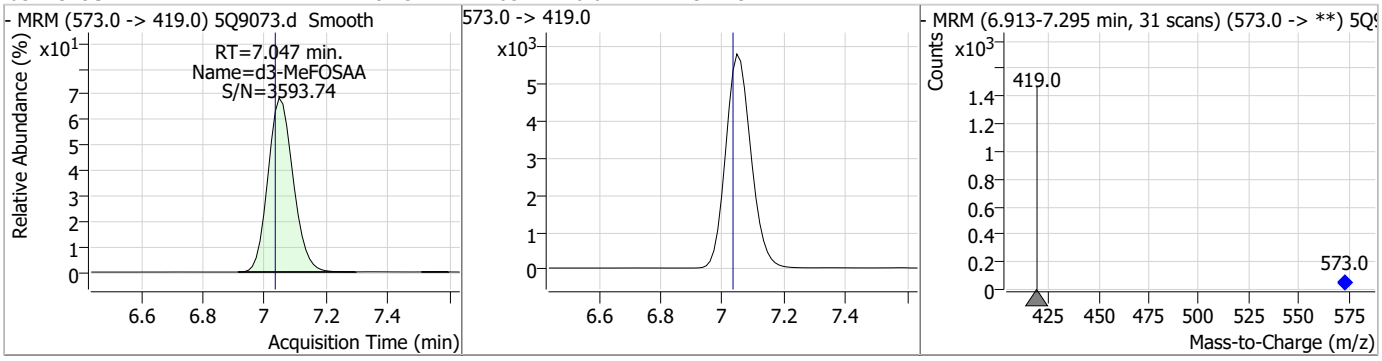
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	13.90	6.96	0.01	21063				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	19.47	6.97	0.01	24264	512.0 -> 219.0	75.0	38.9	116.8

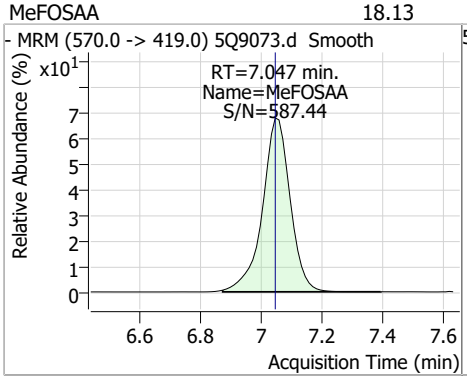


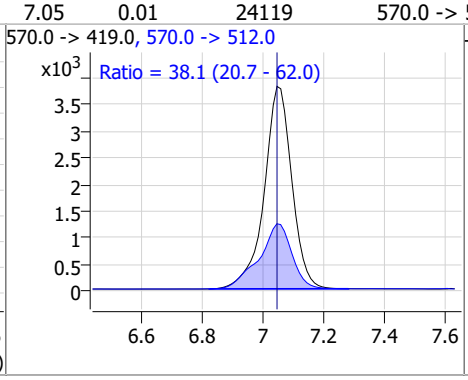
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	18.45	7.05	0.01	32779				

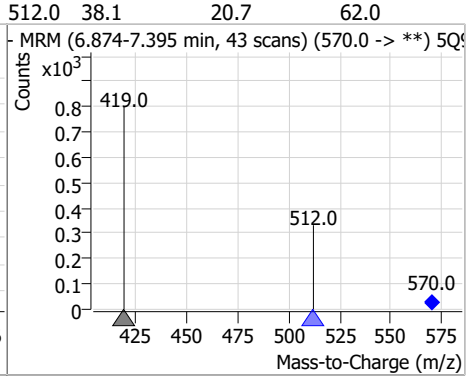


Perfluorinated Compounds by LC/MS/MS

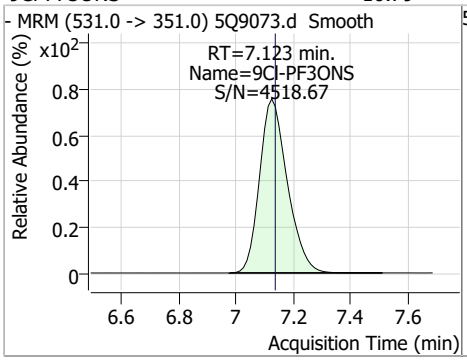
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	18.13	7.05	0.01	24119	570.0 -> 512.0	38.1	20.7	62.0

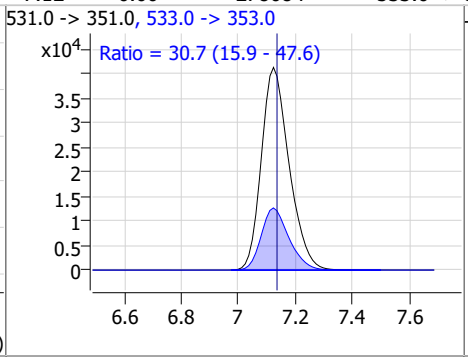


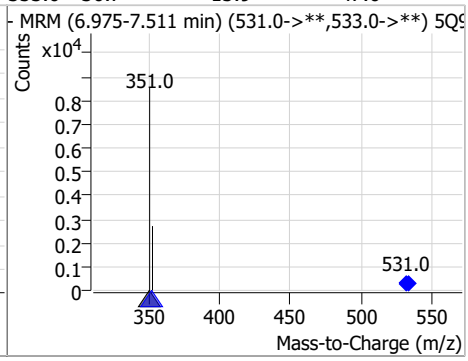




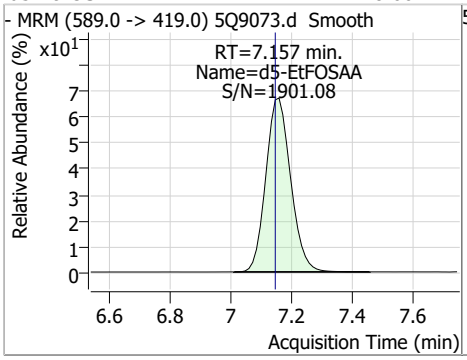
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	16.79	7.12	0.00	278084	533.0 -> 353.0	30.7	15.9	47.6

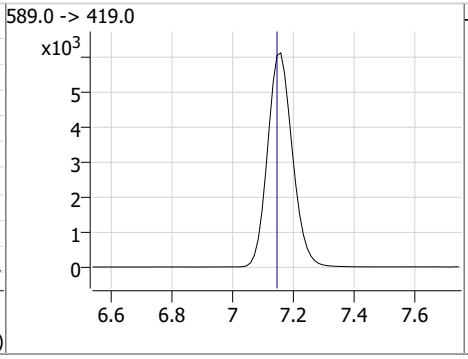


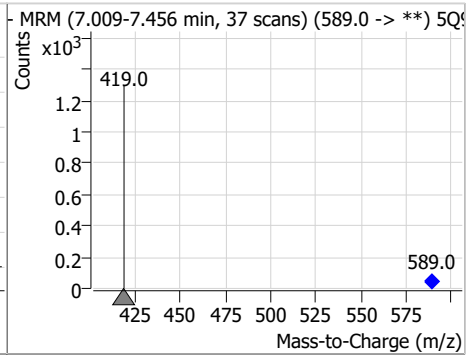




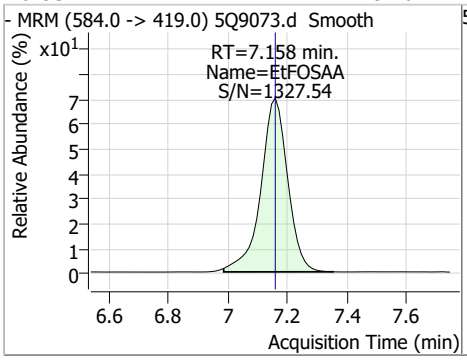
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.66	7.16	0.01	34417				

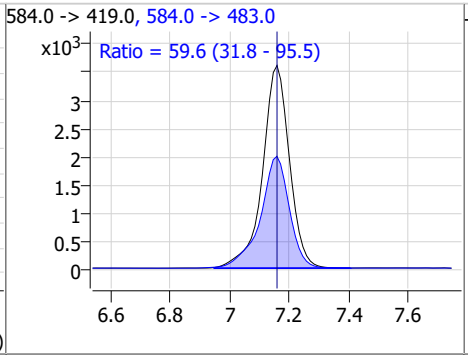


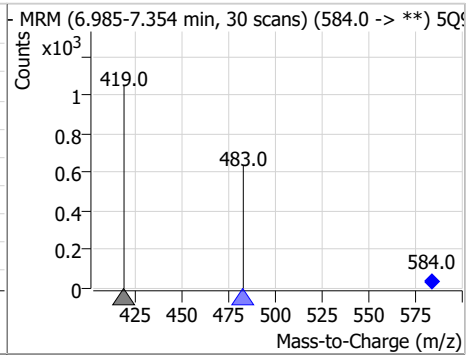




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	19.46	7.16	0.01	22359	584.0 -> 483.0	59.6	31.8	95.5

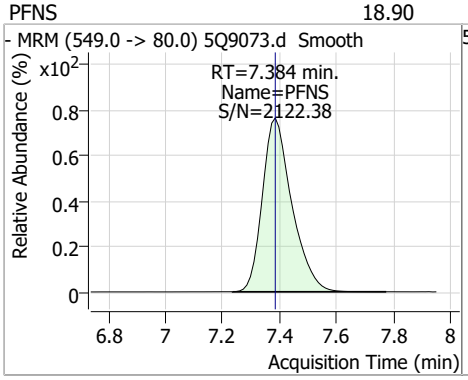


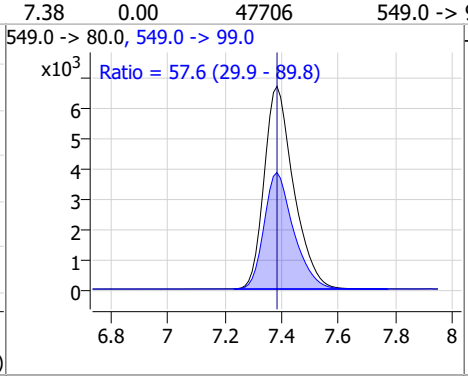


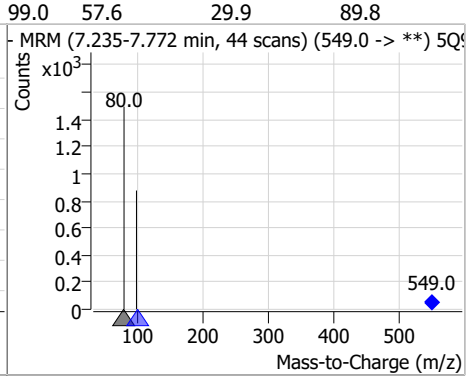


Perfluorinated Compounds by LC/MS/MS

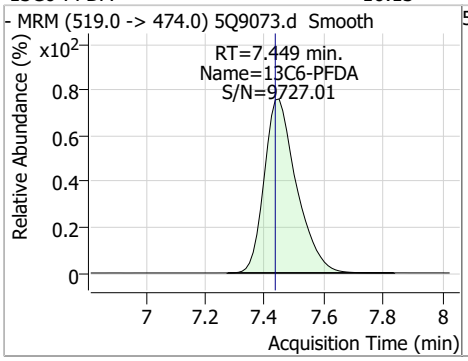
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	18.90	7.38	0.00	47706	549.0 -> 99.0	57.6	29.9	89.8

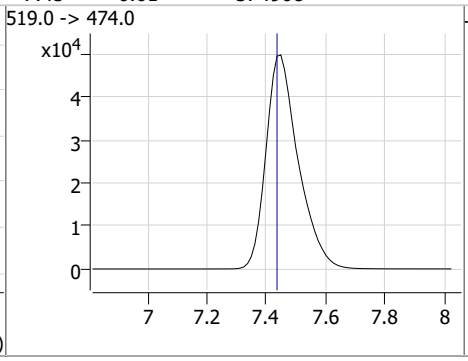


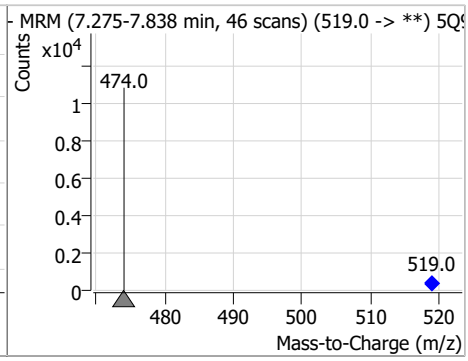




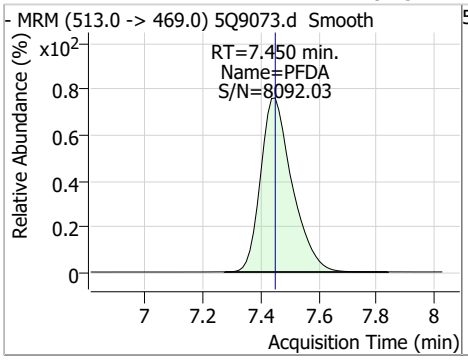
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	16.13	7.45	0.01	374908				

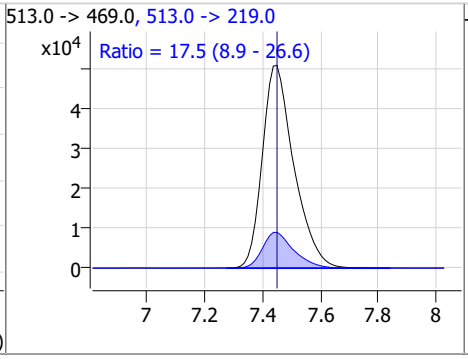


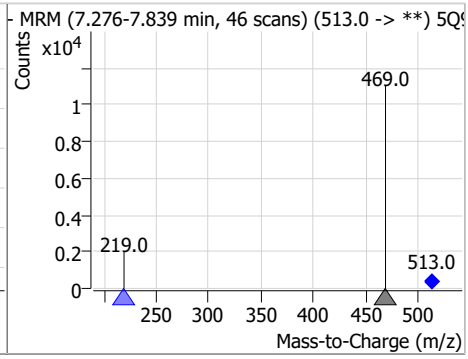




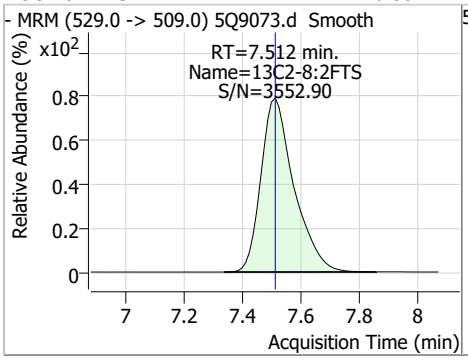
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.15	7.45	0.01	382285	513.0 -> 219.0	17.5	8.9	26.6

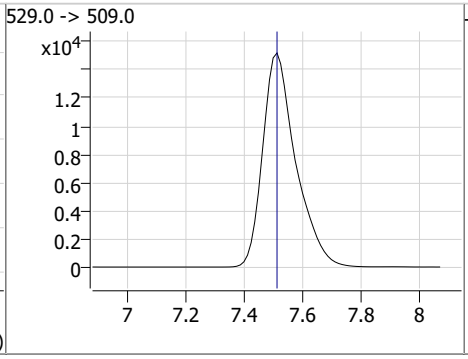


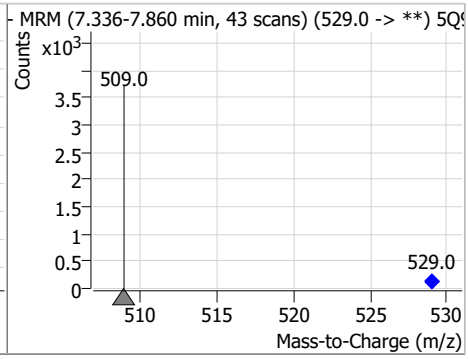




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	16.55	7.51	0.00	119519				

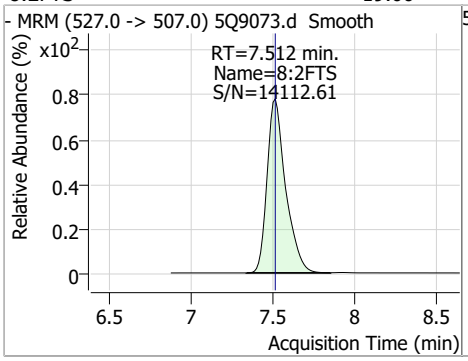


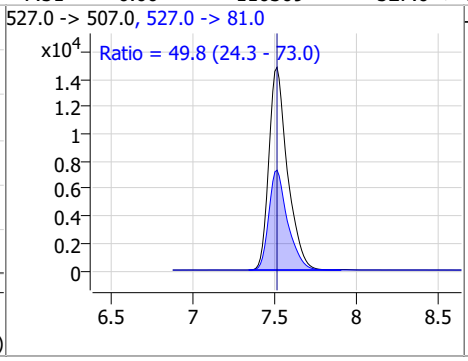


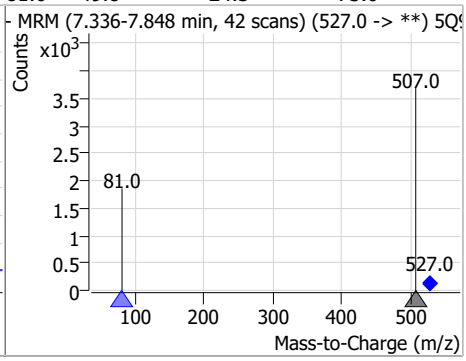


Perfluorinated Compounds by LC/MS/MS

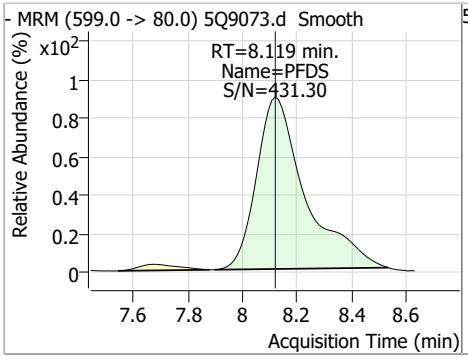
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	19.06	7.51	0.00	116369	527.0 -> 81.0	49.8	24.3	73.0

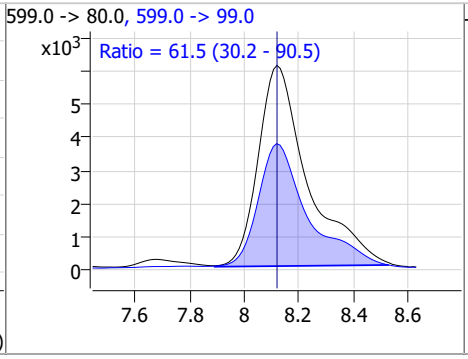


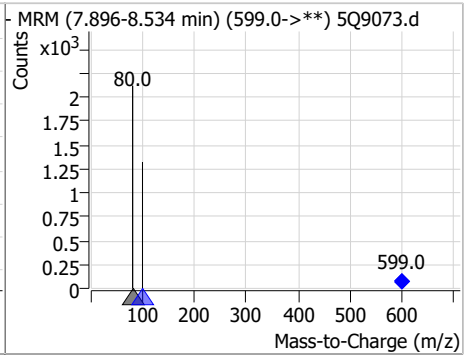




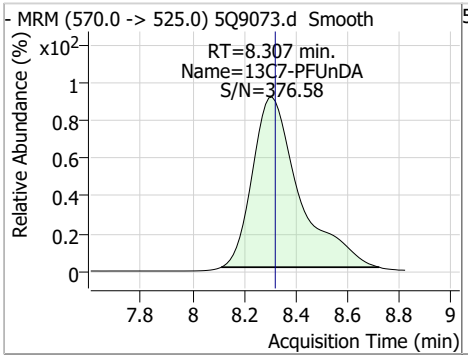
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	18.03	8.12	-0.01	75327	599.0 -> 99.0	61.5	30.2	90.5

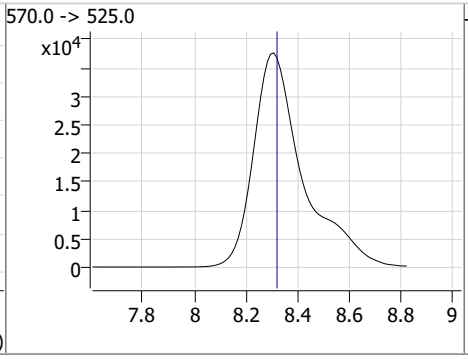


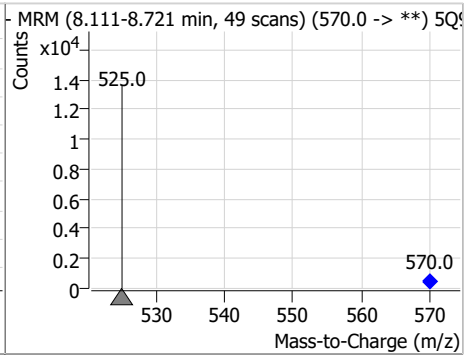




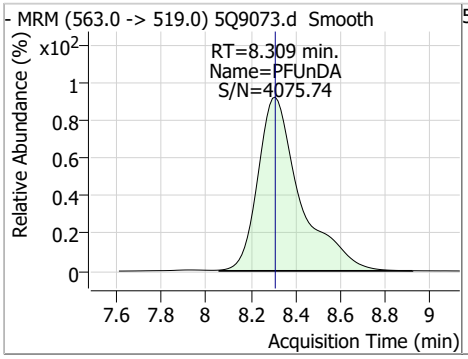
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	15.91	8.31	-0.01	465438				

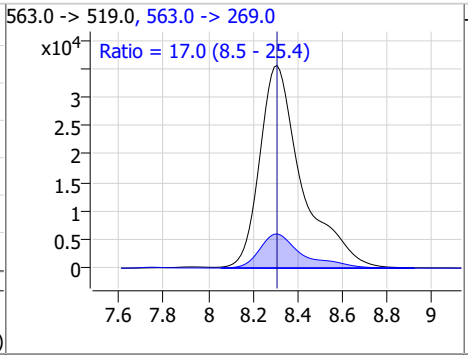


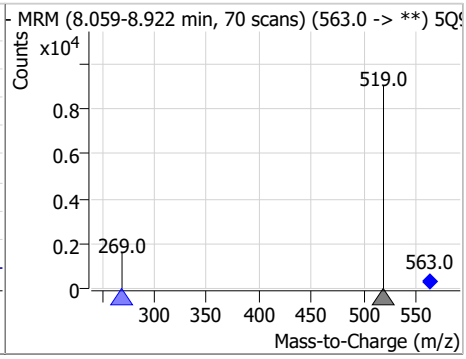




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	19.56	8.31	-0.01	468256	563.0 -> 269.0	17.0	8.5	25.4

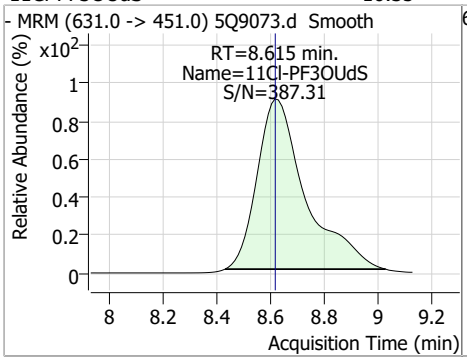


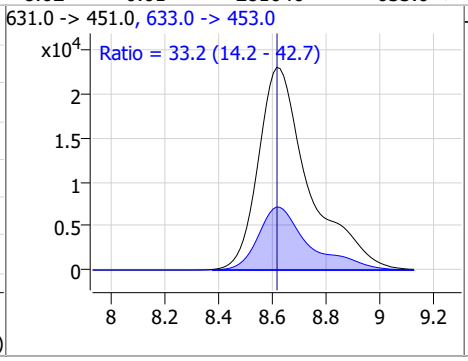


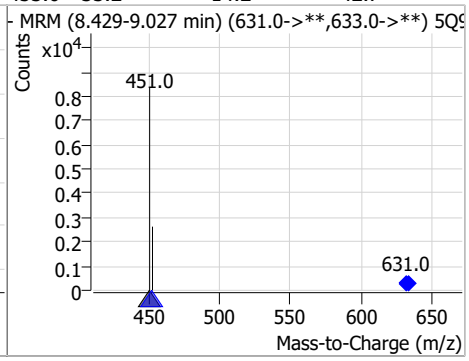


Perfluorinated Compounds by LC/MS/MS

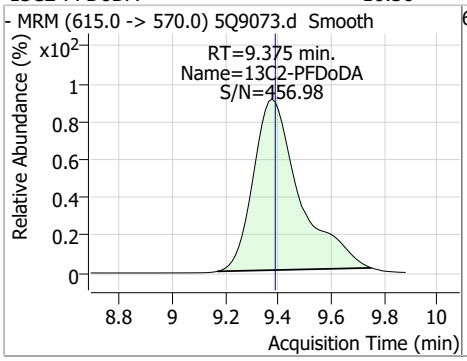
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	16.35	8.62	-0.01	281046	633.0 -> 453.0	33.2	14.2	42.7

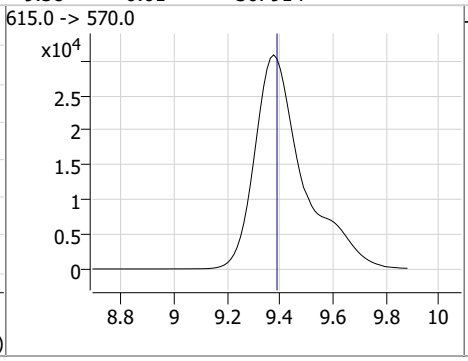


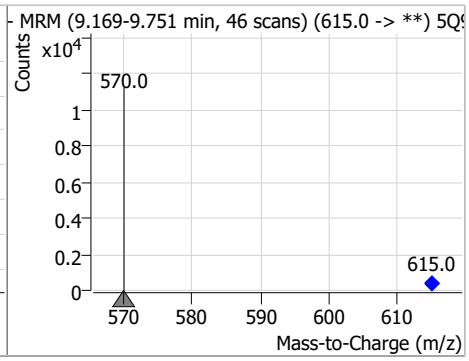




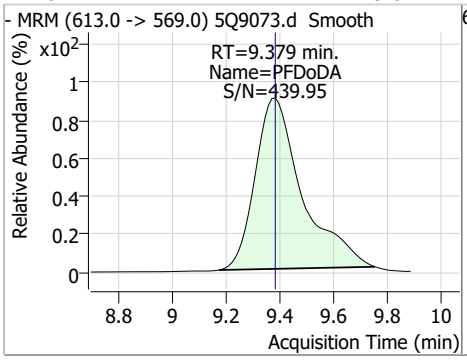
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	16.36	9.38	-0.01	367914				

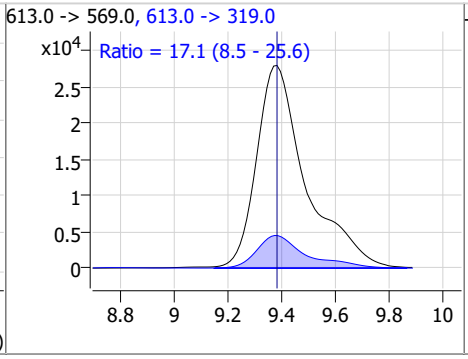


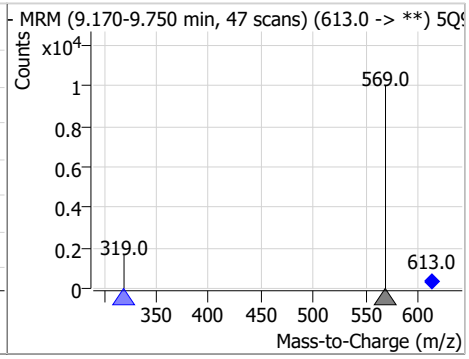




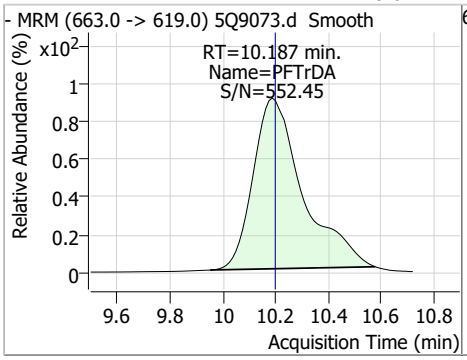
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	19.82	9.38	-0.01	332688	613.0 -> 319.0	17.1	8.5	25.6

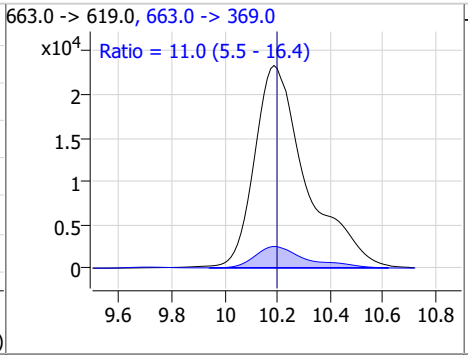


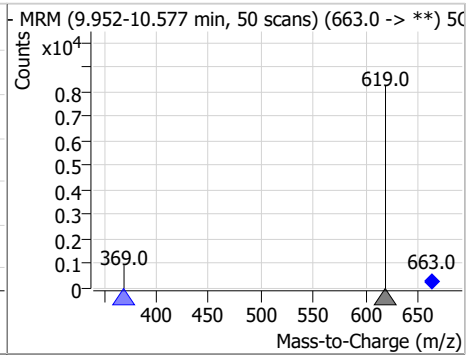




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	18.61	10.19	-0.03	298428	663.0 -> 369.0	11.0	5.5	16.4

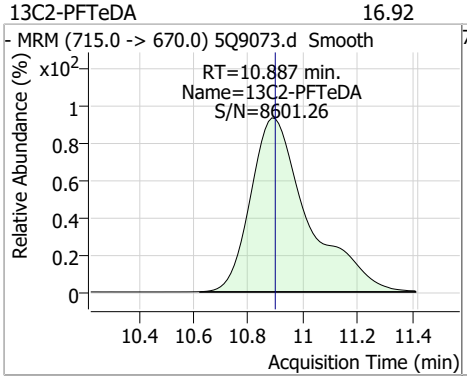


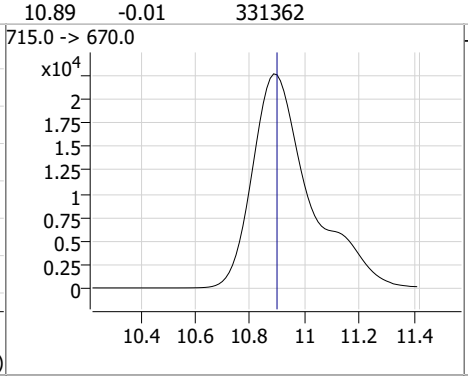


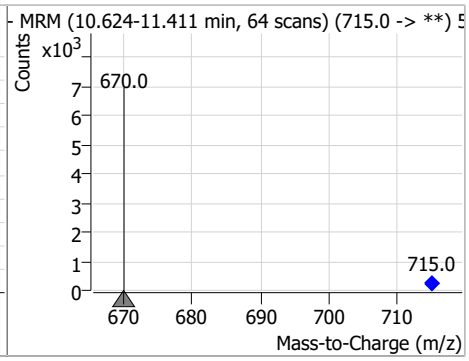


Perfluorinated Compounds by LC/MS/MS

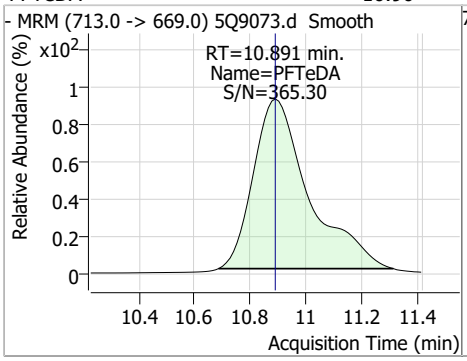
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	16.92	10.89	-0.01	331362				

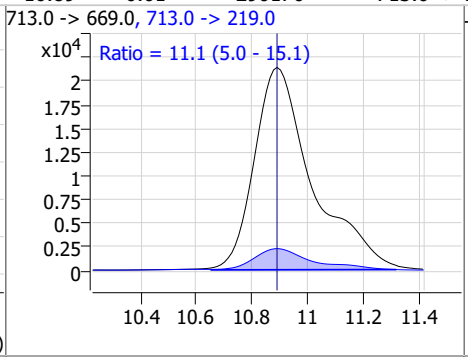


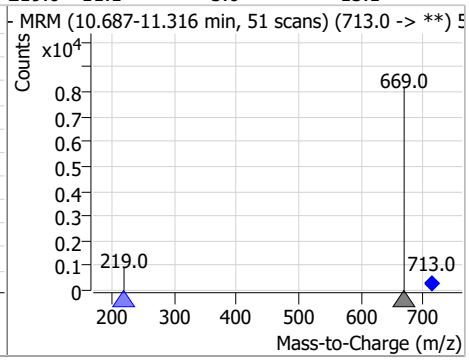




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	16.90	10.89	-0.01	290176	713.0 -> 219.0	11.1	5.0	15.1







Manual Integration Approval Summary

Sample Number: OP94649-MSD
Lab FileID: 5Q9073.D
Injection Time: 12/28/22 21:51
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 11:05 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.74	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.88	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9050.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 3:36:25 PM
Sample Name : rt
Vial : P1-B3
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	95182	20.00	µg/L	0.000
M5-PFPeA	3.932	268.0 -> 223.0	192133	20.00	µg/L	0.012
M5-PFHxA	4.977	318.0 -> 273.0	276650	20.00	µg/L	0.012
M4-PFHpA	5.738	367.0 -> 322.0	284031	20.00	µg/L	0.012
M8-PFOA	6.374	421.0 -> 376.0	371811	20.00	µg/L	0.012
M9-PFNA	6.931	472.0 -> 427.0	384394	20.00	µg/L	0.013
M6-PFDA	7.449	519.0 -> 474.0	429637	20.00	µg/L	0.013
M7-PFUnDA	8.320	570.0 -> 525.0	511755	20.00	µg/L	0.000
M2-PFDoDA	9.388	615.0 -> 570.0	383891	20.00	µg/L	0.000
M2-PFTeDA	10.912	715.0 -> 670.0	308318	20.00	µg/L	0.012
M8-FOSA	6.605	506.0 -> 78.0	89102	20.00	µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	24147	20.00	µg/L	0.000
M3-PFHxS	5.748	402.0 -> 99.0	32595	20.00	µg/L	0.015
M8-PFOS	6.891	507.0 -> 99.0	44312	20.00	µg/L	0.012
M2-4:2FTS	4.886	329.0 -> 309.0	82229	20.00	µg/L	0.000
M2-6:2FTS	6.372	429.0 -> 409.0	133411	20.00	µg/L	0.012
M2-8:2FTS	7.512	529.0 -> 509.0	130119	20.00	µg/L	0.000
M3-MeFOSAA	7.047	573.0 -> 419.0	30821	20.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	59530	20.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	28539	20.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	34189	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	82229	17.08	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.4%		
13C2-6:2FTS	6.372	429.0 -> 409.0	133411	17.40	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.0%		
13C2-8:2FTS	7.512	529.0 -> 509.0	130119	18.02	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.1%		
13C2-PFDoDA	9.388	615.0 -> 570.0	383891	17.07	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.4%		
13C2-PFTeDA	10.912	715.0 -> 670.0	308318	15.75	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 78.7%		
13C3-PFBS	4.124	302.0 -> 99.0	24147	18.58	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.9%		
13C3-PFHxS	5.748	402.0 -> 99.0	32595	18.21	µg/L	0.015
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.1%		
13C4-PFBA	2.400	217.0 -> 172.0	95182	18.29	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.5%		
13C4-PFHpA	5.738	367.0 -> 322.0	284031	18.47	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.4%		
13C5-PFHxA	4.977	318.0 -> 273.0	276650	18.39	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.0%		
13C5-PFPeA	3.932	268.0 -> 223.0	192133	18.32	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.6%		
13C6-PFDA	7.449	519.0 -> 474.0	429637	18.48	µg/L	0.013

Perfluorinated Compounds by LC/MS/MS

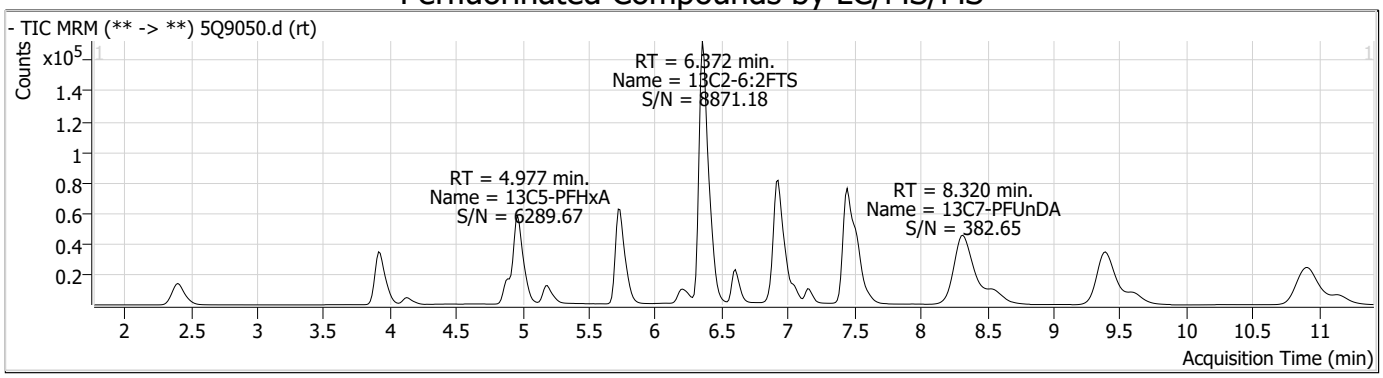
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.4%			
13C7-PFUnDA	8.320	570.0 -> 525.0	511755	17.49	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.4%			
13C8-FOSA	6.605	506.0 -> 78.0	89102	18.45	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.3%			
13C8-PFOA	6.374	421.0 -> 376.0	371811	18.45	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.3%			
13C8-PFOS	6.891	507.0 -> 99.0	44312	18.58	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.9%			
13C9-PFNA	6.931	472.0 -> 427.0	384394	18.27	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.4%			
d3-MeFOSAA	7.047	573.0 -> 419.0	30821	17.35	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.7%			
13C3-HFPO-DA	5.194	287.0 -> 169.0	59530	18.00	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.0%			
d3-MeFOSA	6.964	515.0 -> 169.0	28539	18.84	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.2%			
d5-EtFOSAA	7.157	589.0 -> 419.0	34189	18.54	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.7%			
Target Compounds							QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.			
		327.0 -> 81.0					
6:2FTS	-	427.0 -> 407.0	-	N.D.			
		427.0 -> 81.0					
8:2FTS	-	527.0 -> 507.0	-	N.D.			
		527.0 -> 81.0					
EtFOSAA	7.158	584.0 -> 419.0	0		µg/L	m	1
		584.0 -> 483.0	0				
FOSA	-	498.0 -> 78.0	-	N.D.			
		498.0 -> 478.0					
MeFOSAA	-	570.0 -> 419.0	-	N.D.			
		570.0 -> 512.0					
PFBA	-	213.0 -> 169.0	-	N.D.			
PFBS	-	299.0 -> 80.0	-	N.D.			
		299.0 -> 99.0					
PFDA	-	513.0 -> 469.0	-	N.D.			
		513.0 -> 219.0					
PFDoDA	-	613.0 -> 569.0	-	N.D.			
		613.0 -> 319.0					
PFDS	-	599.0 -> 80.0	-	N.D.			
		599.0 -> 99.0					
PFHpA	5.739	363.0 -> 319.0	0		µg/L	m	1
		363.0 -> 169.0	0				
PFHpS	-	449.0 -> 80.0	-	N.D.			
		449.0 -> 99.0					
PFHxA	-	313.0 -> 269.0	-	N.D.			
		313.0 -> 119.0					
PFHxS	-	399.0 -> 80.0	-	N.D.			
		399.0 -> 99.0					
PFNA	-	463.0 -> 419.0	-	N.D.			
		463.0 -> 219.0					
PFNS	-	549.0 -> 80.0	-	N.D.			
		549.0 -> 99.0					
PFOA	6.374	413.0 -> 369.0	338656	15.91	µg/L	m	96
		413.0 -> 169.0	96719				
PFOS	-	499.0 -> 80.0	-	N.D.			

Perfluorinated Compounds by LC/MS/MS

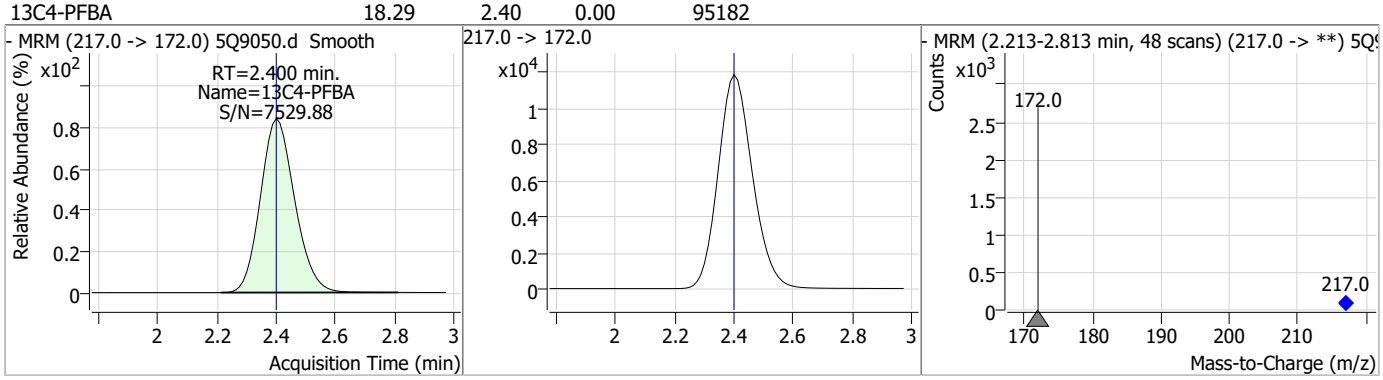
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0				
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFPeS	-	349.0 -> 80.0	-	N.D.		
		349.0 -> 99.0				
PFTeDA	-	713.0 -> 669.0	-	N.D.		
		713.0 -> 219.0				
PFTrDA	-	663.0 -> 619.0	-	N.D.		
		663.0 -> 369.0				
PFUnDA	-	563.0 -> 519.0	-	N.D.		
		563.0 -> 269.0				
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
		633.0 -> 453.0				
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
		533.0 -> 353.0				
ADONA	-	377.0 -> 251.0	-	N.D.		
		377.0 -> 85.0				
HFPO-DA	-	329.0 -> 169.0	-	N.D.		
		285.0 -> 169.0				
MeFOSA	-	512.0 -> 169.0	-	N.D.		
		512.0 -> 219.0				
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	-	298.0 -> 78.0	-	N.D.		
		298.0 -> 64.0				
FHxSA	-	398.0 -> 78.0	-	N.D.		
		398.0 -> 64.0				

 # = Qualifier out of range, m = manually integrated, + = Area summed

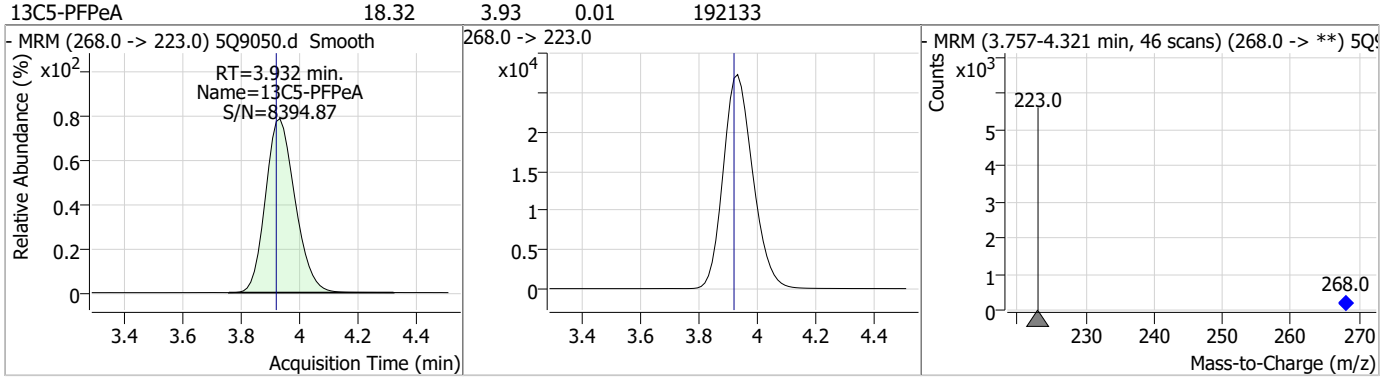
Perfluorinated Compounds by LC/MS/MS



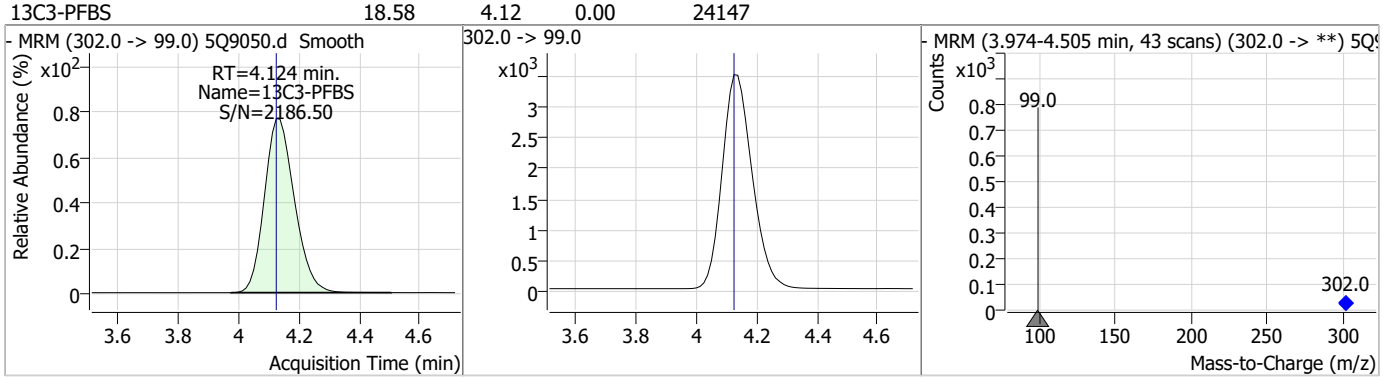
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.29	2.40	0.00	95182				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	18.32	3.93	0.01	192133				

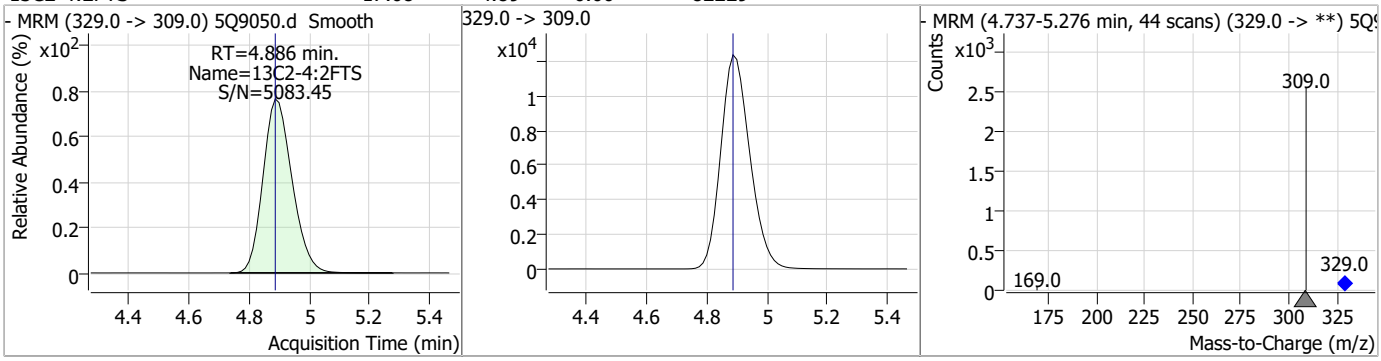


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	18.58	4.12	0.00	24147				

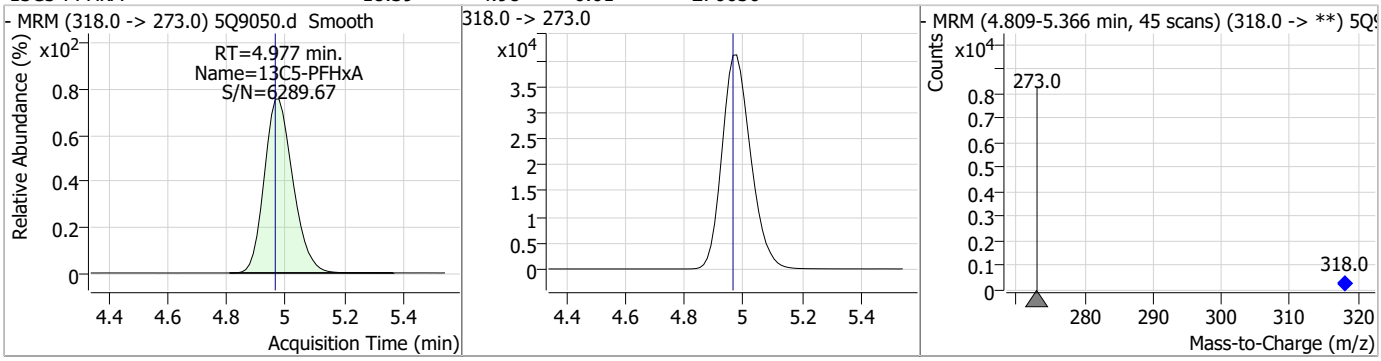


Perfluorinated Compounds by LC/MS/MS

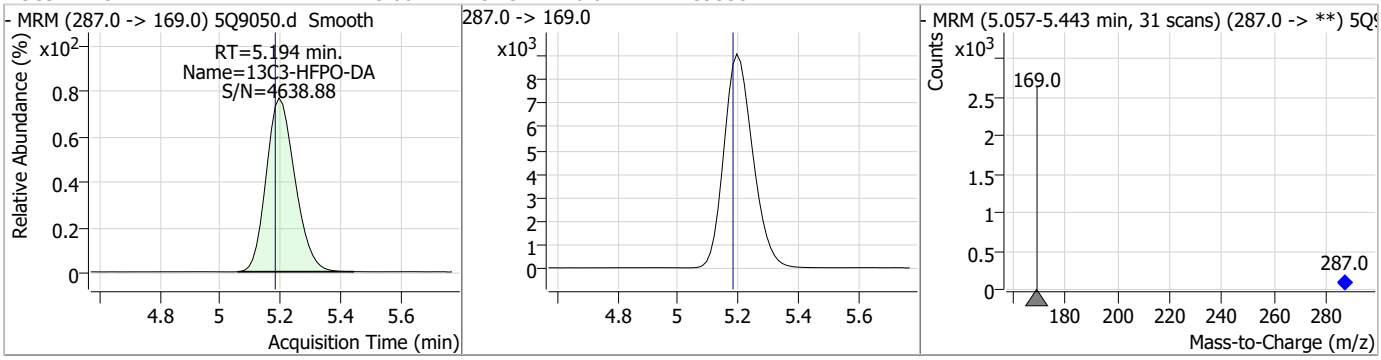
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	17.08	4.89	0.00	82229				



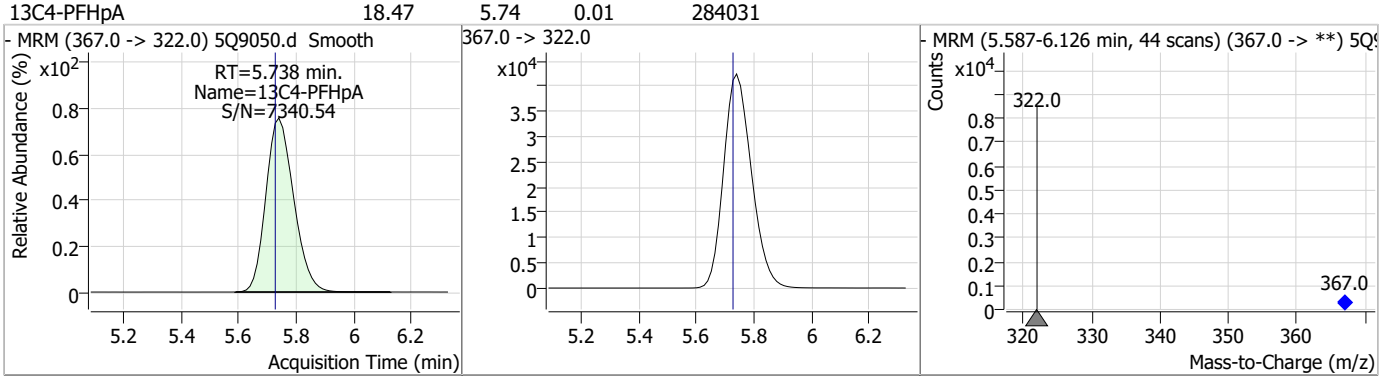
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	18.39	4.98	0.01	276650				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	18.00	5.19	0.01	59530				

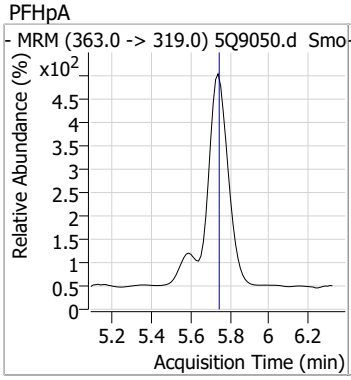


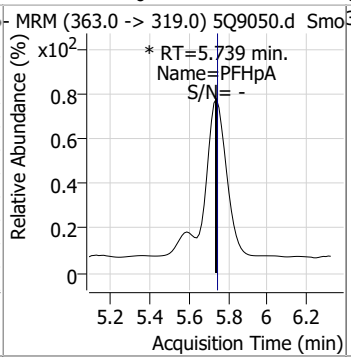
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	18.47	5.74	0.01	284031				

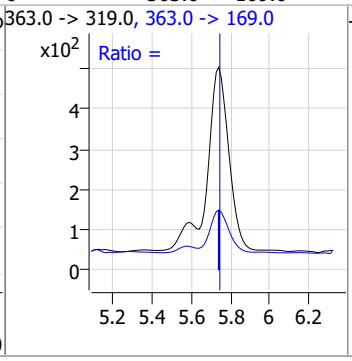


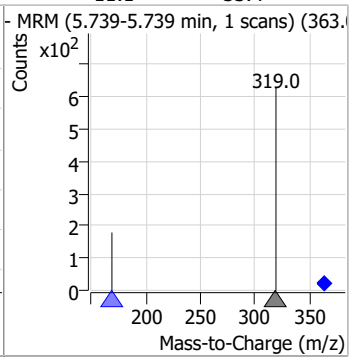
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA		0		0	363.0 -> 169.0		11.1	33.4

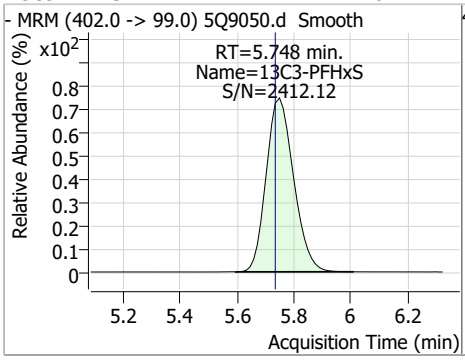


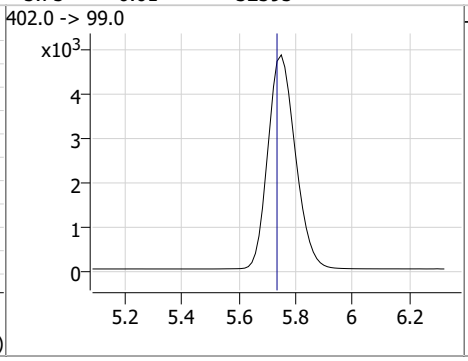


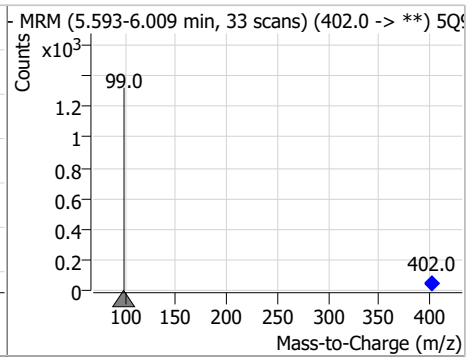




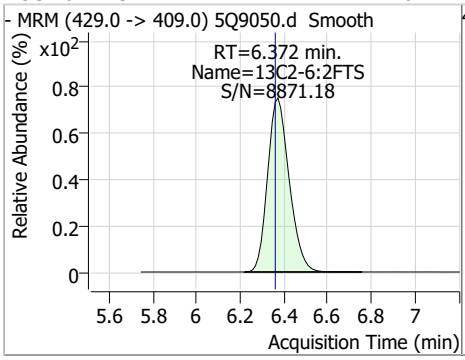
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	18.21	5.75	0.01	32595				

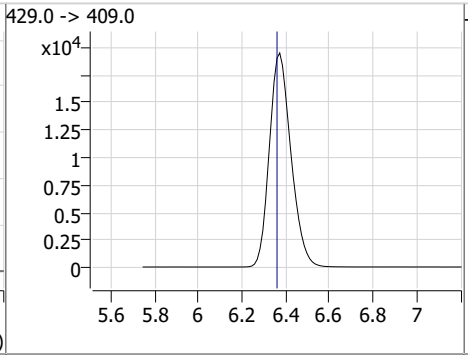


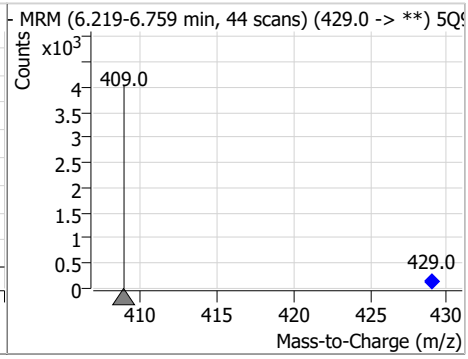




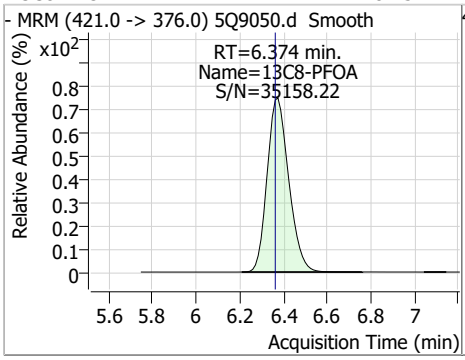
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	17.40	6.37	0.01	133411				

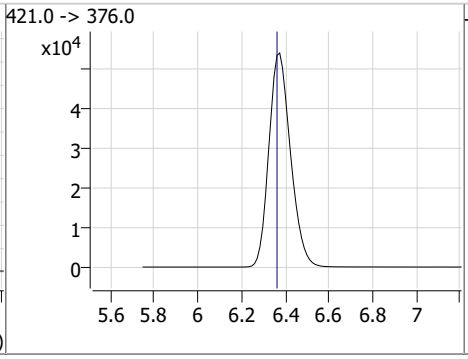


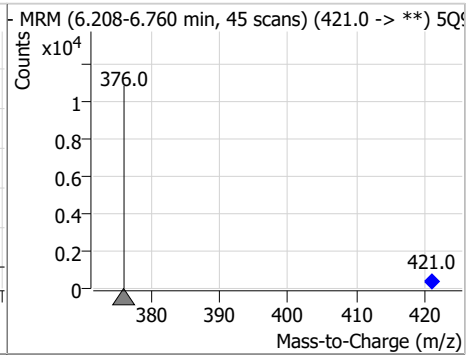




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	18.45	6.37	0.01	371811				

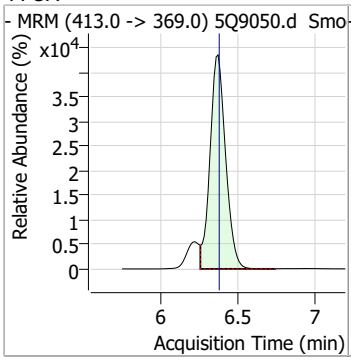


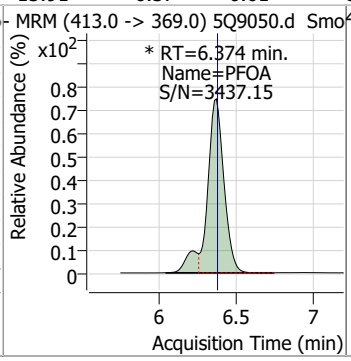


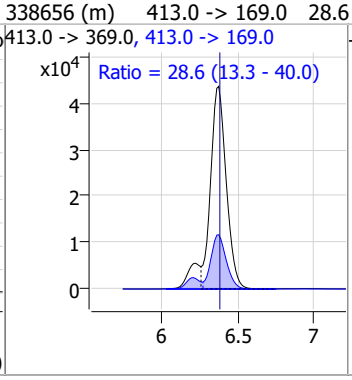


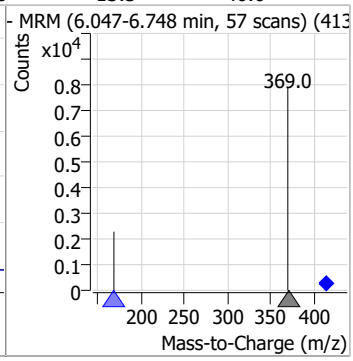
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	15.91	6.37	0.01	338656 (m)	413.0 -> 169.0	28.6	13.3	40.0

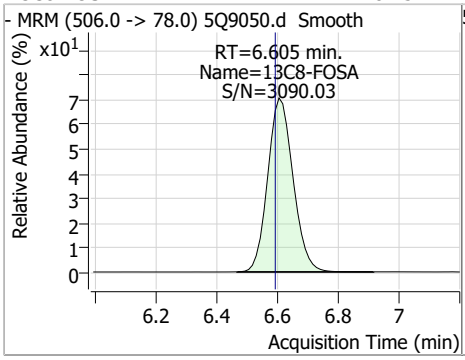


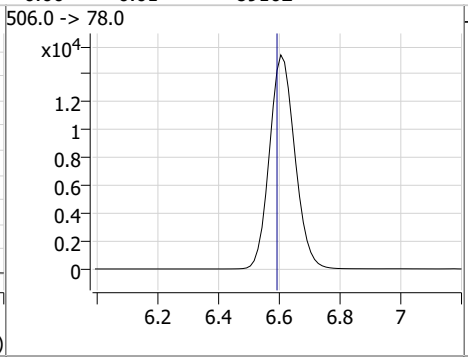


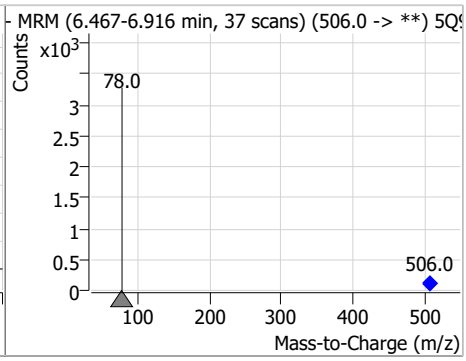




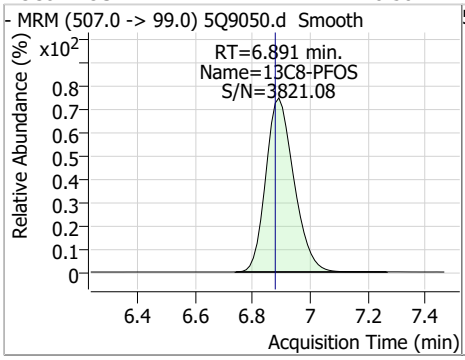
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	18.45	6.60	0.01	89102				

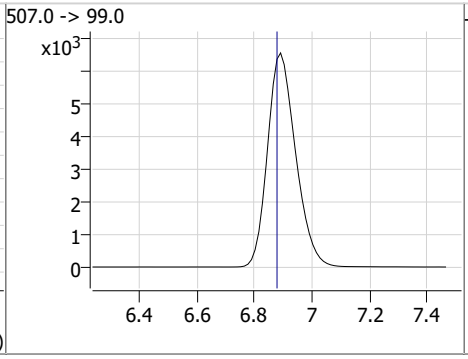


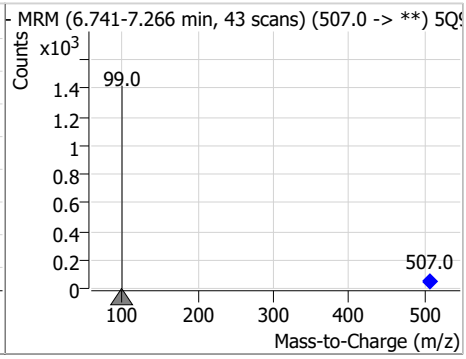




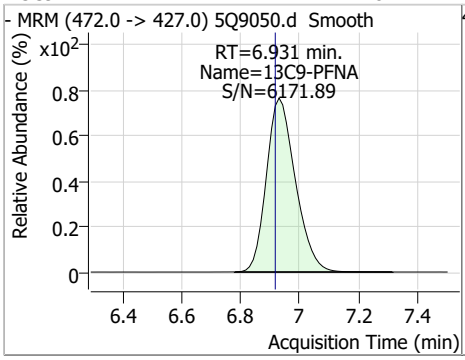
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	18.58	6.89	0.01	44312				

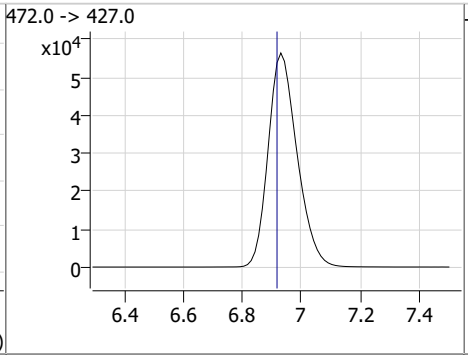


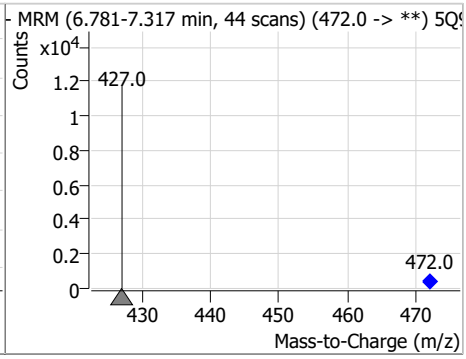




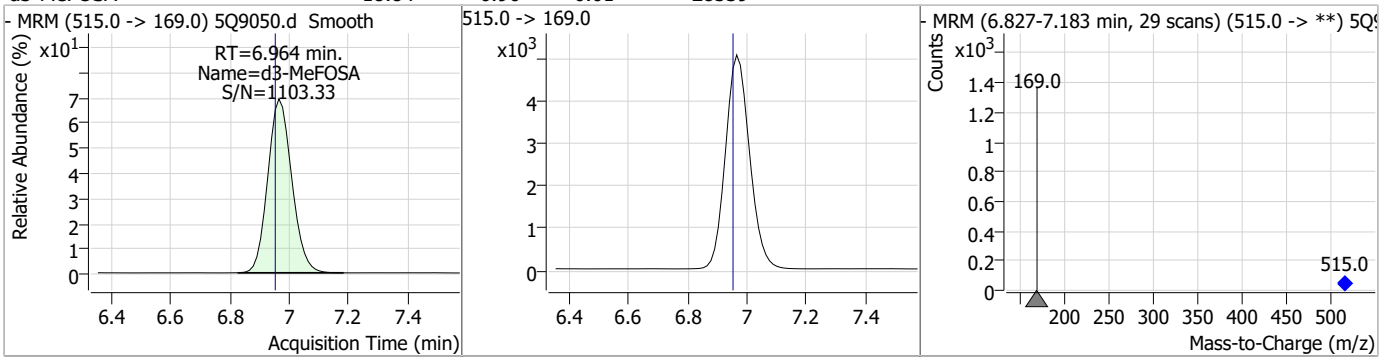
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.27	6.93	0.01	384394				



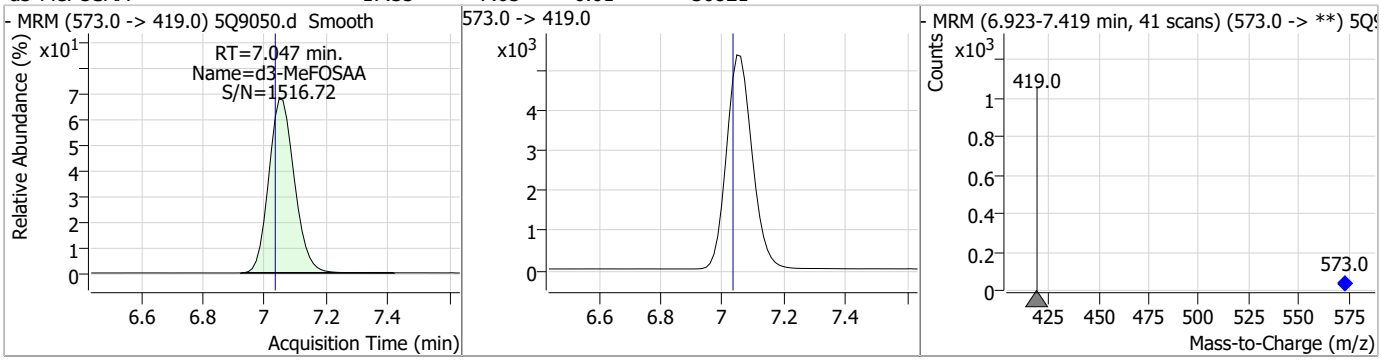




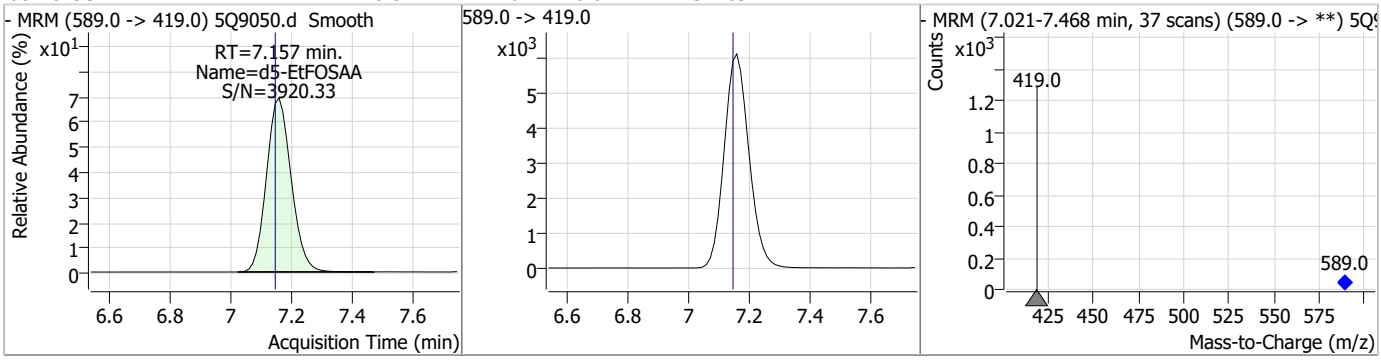
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	18.84	6.96	0.01	28539				



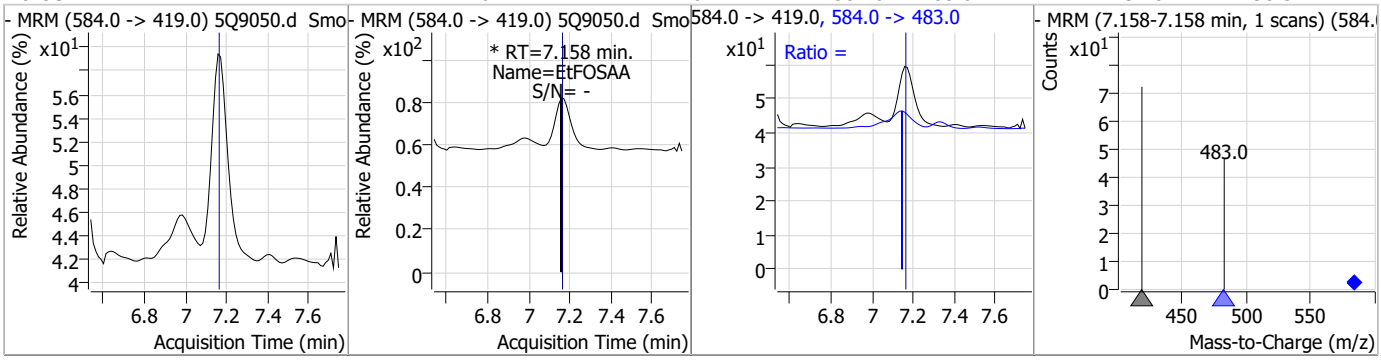
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	17.35	7.05	0.01	30821				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.54	7.16	0.01	34189				

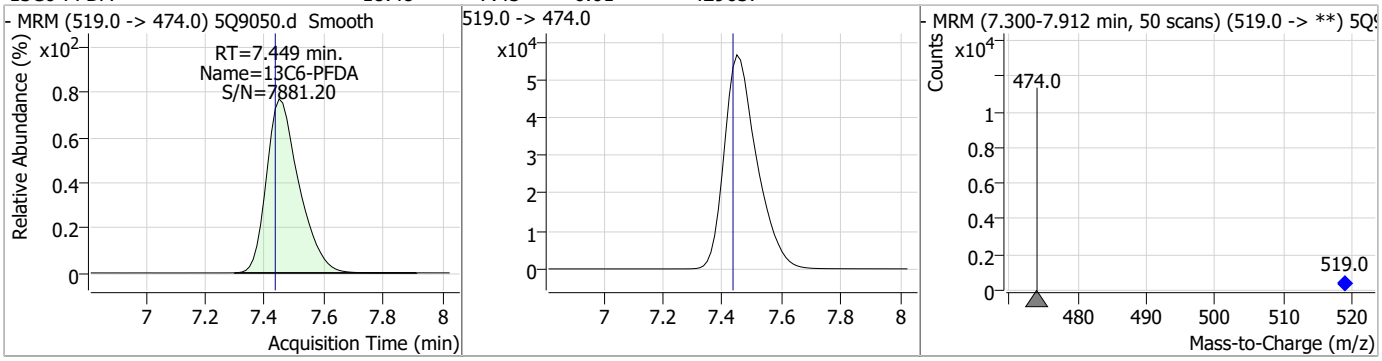


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA		0		0	584.0 -> 483.0		31.8	95.5

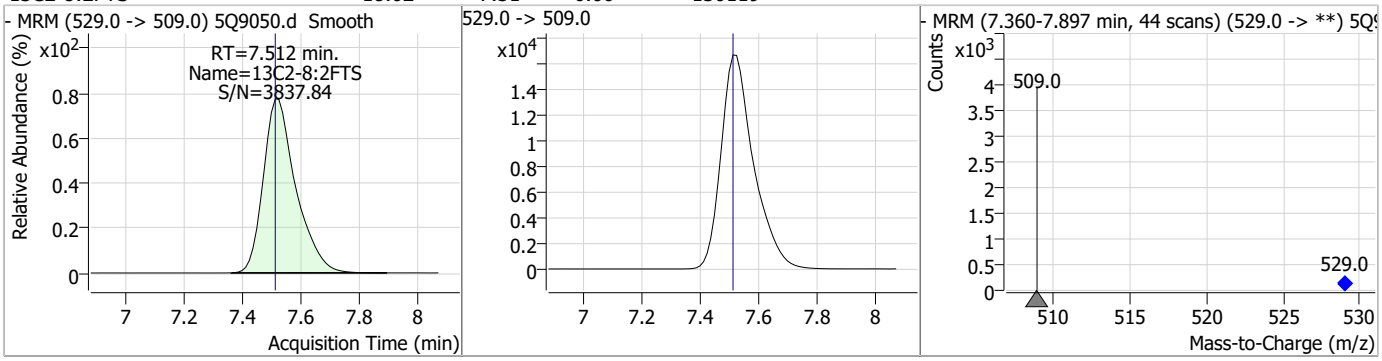


Perfluorinated Compounds by LC/MS/MS

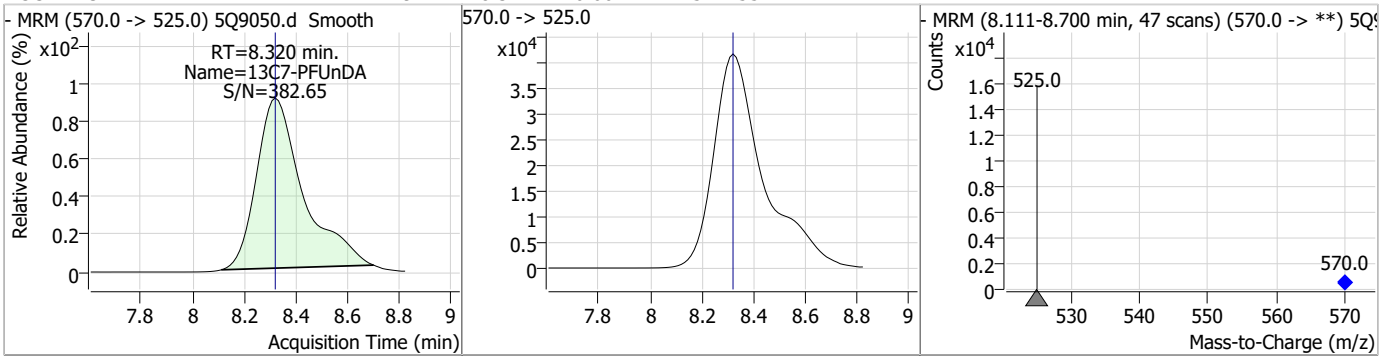
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.48	7.45	0.01	429637				



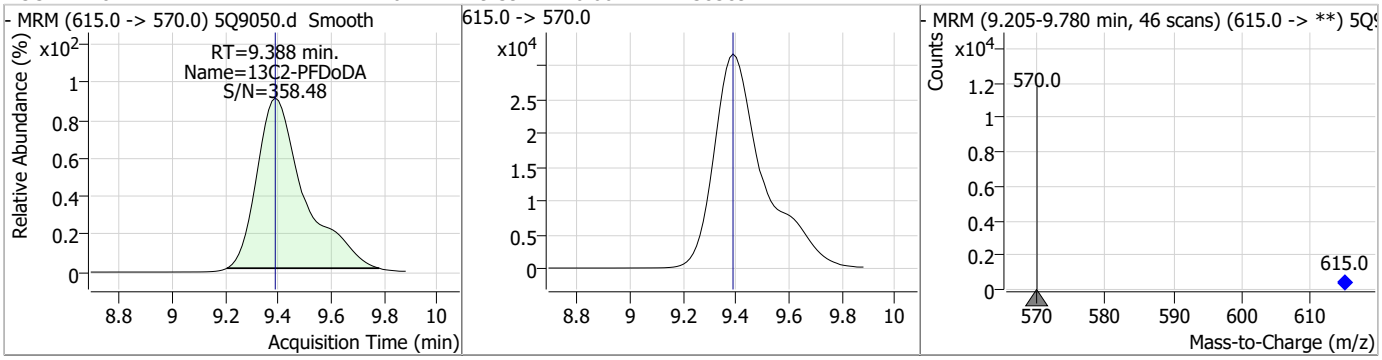
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.02	7.51	0.00	130119				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	17.49	8.32	0.00	511755				

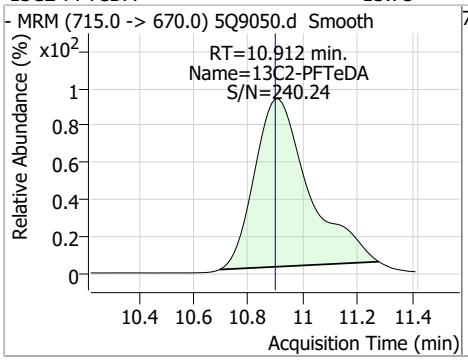


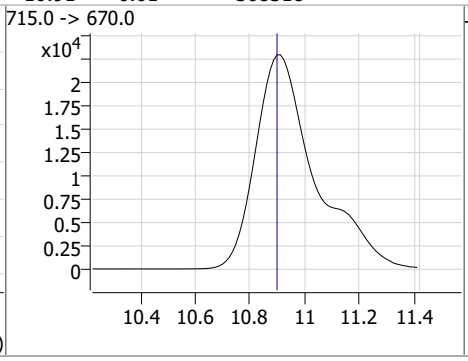
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	17.07	9.39	0.00	383891				

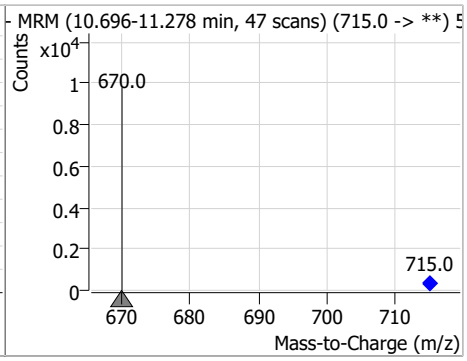


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	15.75	10.91	0.01	308318				







Manual Integration Approval Summary

Sample Number: S5Q134-RT
Lab FileID: 5Q9050.D
Injection Time: 12/28/22 15:36

Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanoic acid	335-67-1		6.37	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Norman Farmer 12/31/22 16:37

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9092.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/29/2022 11:13:19 AM
Sample Name : rt
Vial : P1-B3
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q135.batch.bin
Sample Information : OP94373,S5Q135,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	99267	20.00	µg/L	0.000
M5-PFPeA	3.932	268.0 -> 223.0	197339	20.00	µg/L	0.012
M5-PFHxA	4.977	318.0 -> 273.0	284559	20.00	µg/L	0.012
M4-PFHpA	5.738	367.0 -> 322.0	294978	20.00	µg/L	0.012
M8-PFOA	6.374	421.0 -> 376.0	384388	20.00	µg/L	0.012
M9-PFNA	6.931	472.0 -> 427.0	397350	20.00	µg/L	0.013
M6-PFDA	7.462	519.0 -> 474.0	442927	20.00	µg/L	0.025
M7-PFUnDA	8.332	570.0 -> 525.0	574753	20.00	µg/L	0.012
M2-PFDoDA	9.400	615.0 -> 570.0	435506	20.00	µg/L	0.012
M2-PFTeDA	10.924	715.0 -> 670.0	364816	20.00	µg/L	0.025
M8-FOSA	6.605	506.0 -> 78.0	90136	20.00	µg/L	0.012
M3-PFBS	4.136	302.0 -> 99.0	24419	20.00	µg/L	0.012
M3-PFHxS	5.748	402.0 -> 99.0	33251	20.00	µg/L	0.015
M8-PFOS	6.891	507.0 -> 99.0	44731	20.00	µg/L	0.012
M2-4:2FTS	4.886	329.0 -> 309.0	83513	20.00	µg/L	0.000
M2-6:2FTS	6.372	429.0 -> 409.0	135304	20.00	µg/L	0.012
M2-8:2FTS	7.524	529.0 -> 509.0	136738	20.00	µg/L	0.012
M3-MeFOSAA	7.047	573.0 -> 419.0	33992	20.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	69143	20.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	28106	20.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	36315	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	83513	17.34	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.7%		
13C2-6:2FTS	6.372	429.0 -> 409.0	135304	17.65	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.2%		
13C2-8:2FTS	7.524	529.0 -> 509.0	136738	18.94	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.7%		
13C2-PFDoDA	9.400	615.0 -> 570.0	435506	19.37	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.8%		
13C2-PFTeDA	10.924	715.0 -> 670.0	364816	18.63	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.2%		
13C3-PFBS	4.136	302.0 -> 99.0	24419	18.79	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.9%		
13C3-PFHxS	5.748	402.0 -> 99.0	33251	18.58	µg/L	0.015
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.9%		
13C4-PFBA	2.400	217.0 -> 172.0	99267	19.08	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.4%		
13C4-PFHpA	5.738	367.0 -> 322.0	294978	19.19	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.9%		
13C5-PFHxA	4.977	318.0 -> 273.0	284559	18.92	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.6%		
13C5-PFPeA	3.932	268.0 -> 223.0	197339	18.81	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.1%		
13C6-PFDA	7.462	519.0 -> 474.0	442927	19.05	µg/L	0.025

Perfluorinated Compounds by LC/MS/MS

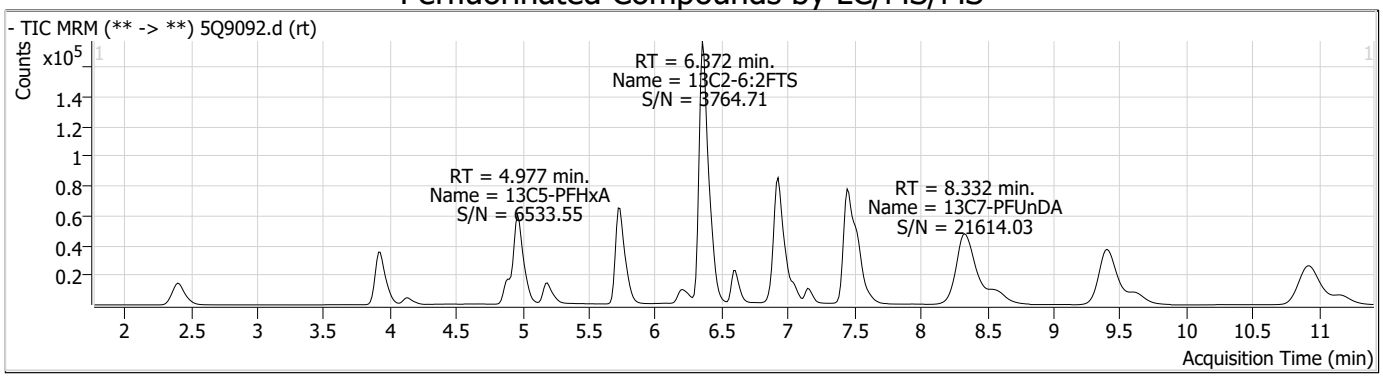
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.3%			
13C7-PFUnDA	8.332	570.0 -> 525.0	574753	19.64	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%			
13C8-FOSA	6.605	506.0 -> 78.0	90136	18.66	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.3%			
13C8-PFOA	6.374	421.0 -> 376.0	384388	19.08	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.4%			
13C8-PFOS	6.891	507.0 -> 99.0	44731	18.76	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.8%			
13C9-PFNA	6.931	472.0 -> 427.0	397350	18.89	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.5%			
d3-MeFOSAA	7.047	573.0 -> 419.0	33992	19.13	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.7%			
13C3-HFPO-DA	5.194	287.0 -> 169.0	69143	20.90	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.5%			
d3-MeFOSA	6.964	515.0 -> 169.0	28106	18.55	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%			
d5-EtFOSAA	7.157	589.0 -> 419.0	36315	19.69	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%			
Target Compounds							QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.			
		327.0 -> 81.0					
6:2FTS	-	427.0 -> 407.0	-	N.D.			
		427.0 -> 81.0					
8:2FTS	-	527.0 -> 507.0	-	N.D.			
		527.0 -> 81.0					
EtFOSAA	7.158	584.0 -> 419.0	0		µg/L	m	1
		584.0 -> 483.0	0				
FOSA	-	498.0 -> 78.0	-	N.D.			
		498.0 -> 478.0					
MeFOSAA	-	570.0 -> 419.0	-	N.D.			
		570.0 -> 512.0					
PFBA	-	213.0 -> 169.0	-	N.D.			
PFBS	-	299.0 -> 80.0	-	N.D.			
		299.0 -> 99.0					
PFDA	-	513.0 -> 469.0	-	N.D.			
		513.0 -> 219.0					
PFDoDA	-	613.0 -> 569.0	-	N.D.			
		613.0 -> 319.0					
PFDS	-	599.0 -> 80.0	-	N.D.			
		599.0 -> 99.0					
PFHpA	6.326	363.0 -> 319.0	0		µg/L	m	1
		363.0 -> 169.0					
PFHpS	-	449.0 -> 80.0	-	N.D.			
		449.0 -> 99.0					
PFHxA	-	313.0 -> 269.0	-	N.D.			
		313.0 -> 119.0					
PFHxS	-	399.0 -> 80.0	-	N.D.			
		399.0 -> 99.0					
PFNA	-	463.0 -> 419.0	-	N.D.			
		463.0 -> 219.0					
PFNS	-	549.0 -> 80.0	-	N.D.			
		549.0 -> 99.0					
PFOA	6.374	413.0 -> 369.0	343259	15.60	µg/L	m	96
		413.0 -> 169.0	99322				
PFOS	-	499.0 -> 80.0	-	N.D.			

Perfluorinated Compounds by LC/MS/MS

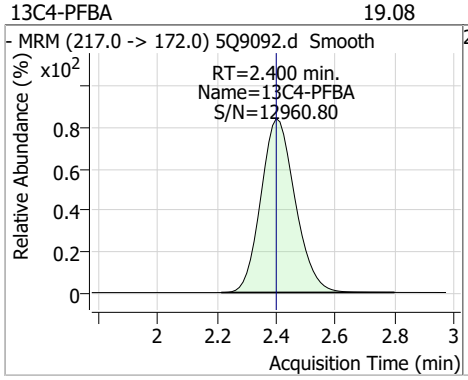
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0				
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFPeS	-	349.0 -> 80.0	-	N.D.		
		349.0 -> 99.0				
PFTeDA	-	713.0 -> 669.0	-	N.D.		
		713.0 -> 219.0				
PFTrDA	-	663.0 -> 619.0	-	N.D.		
		663.0 -> 369.0				
PFUnDA	-	563.0 -> 519.0	-	N.D.		
		563.0 -> 269.0				
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
		633.0 -> 453.0				
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
		533.0 -> 353.0				
ADONA	-	377.0 -> 251.0	-	N.D.		
		377.0 -> 85.0				
HFPO-DA	-	329.0 -> 169.0	-	N.D.		
		285.0 -> 169.0				
MeFOSA	-	512.0 -> 169.0	-	N.D.		
		512.0 -> 219.0				
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	-	298.0 -> 78.0	-	N.D.		
		298.0 -> 64.0				
FHxSA	-	398.0 -> 78.0	-	N.D.		
		398.0 -> 64.0				

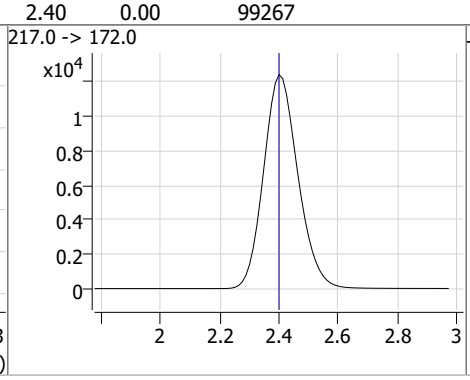
 # = Qualifier out of range, m = manually integrated, + = Area summed

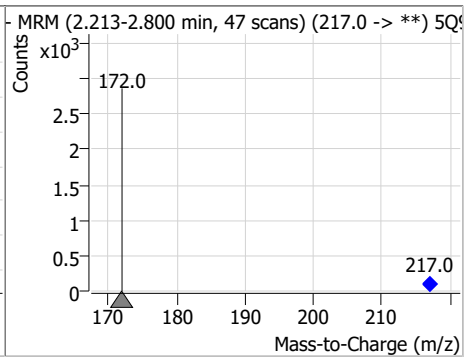
Perfluorinated Compounds by LC/MS/MS



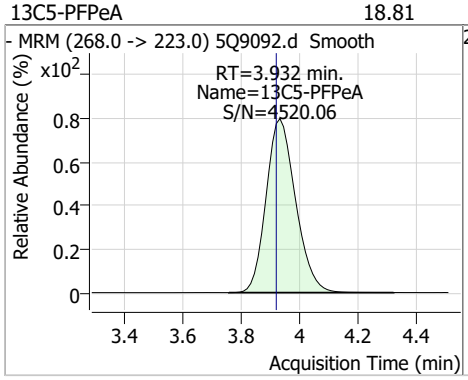
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.08	2.40	0.00	99267				

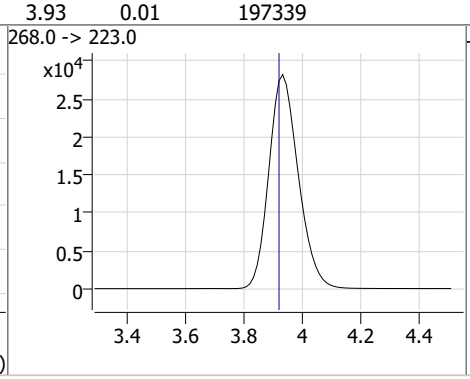


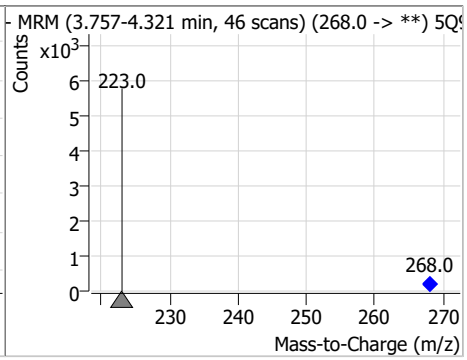




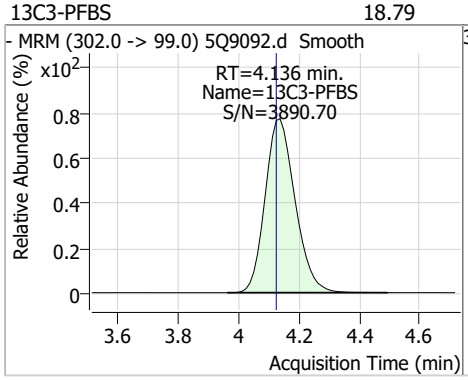
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	18.81	3.93	0.01	197339				

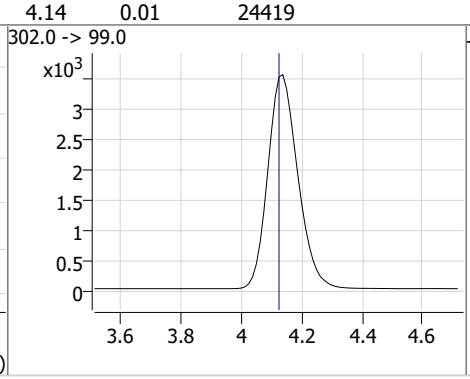


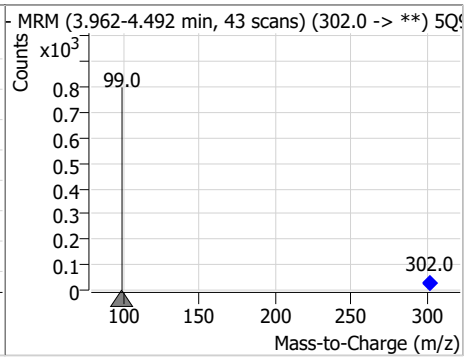




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	18.79	4.14	0.01	24419				

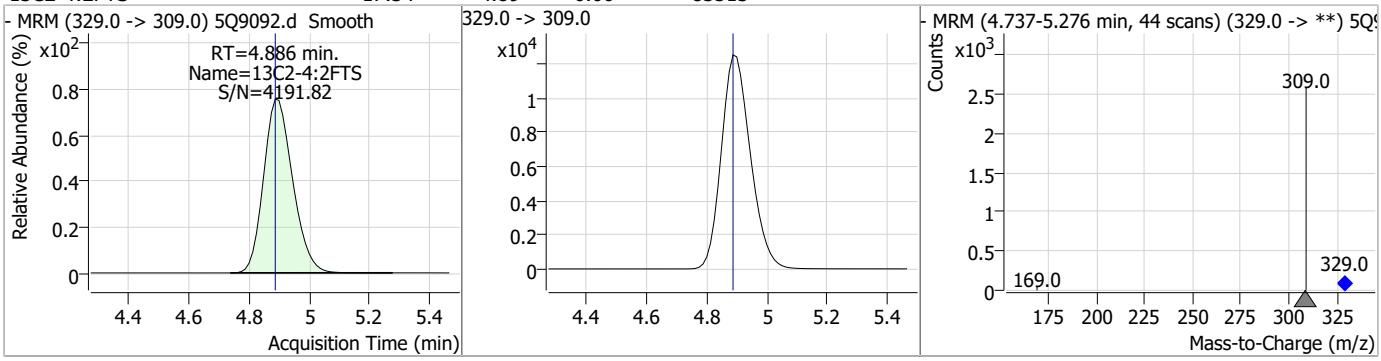




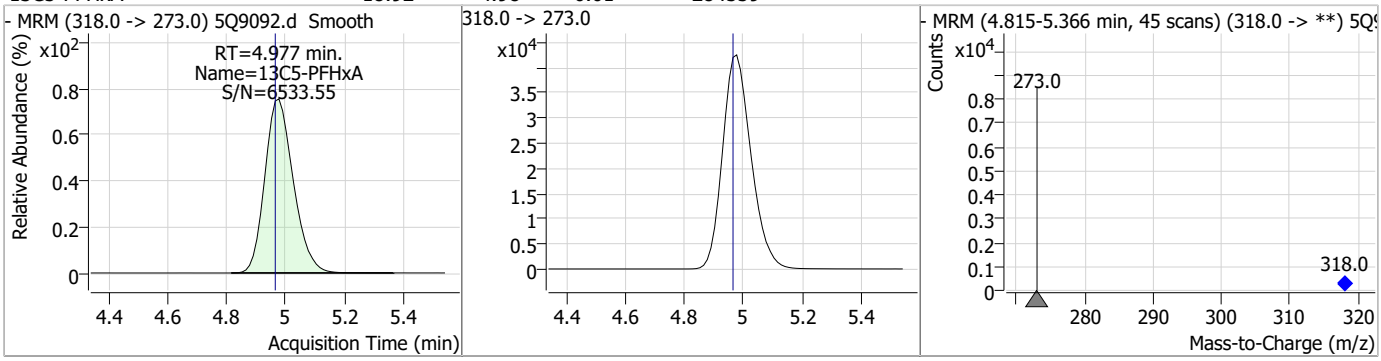


Perfluorinated Compounds by LC/MS/MS

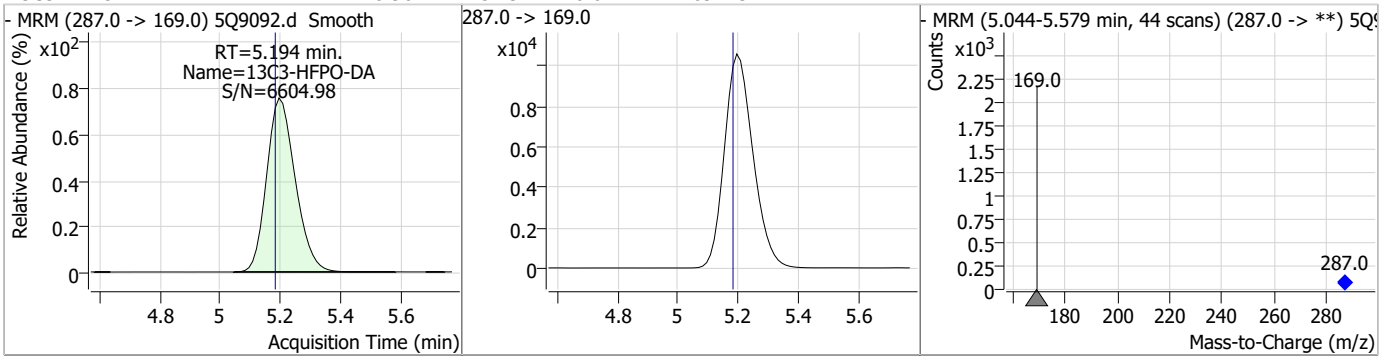
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	17.34	4.89	0.00	83513				



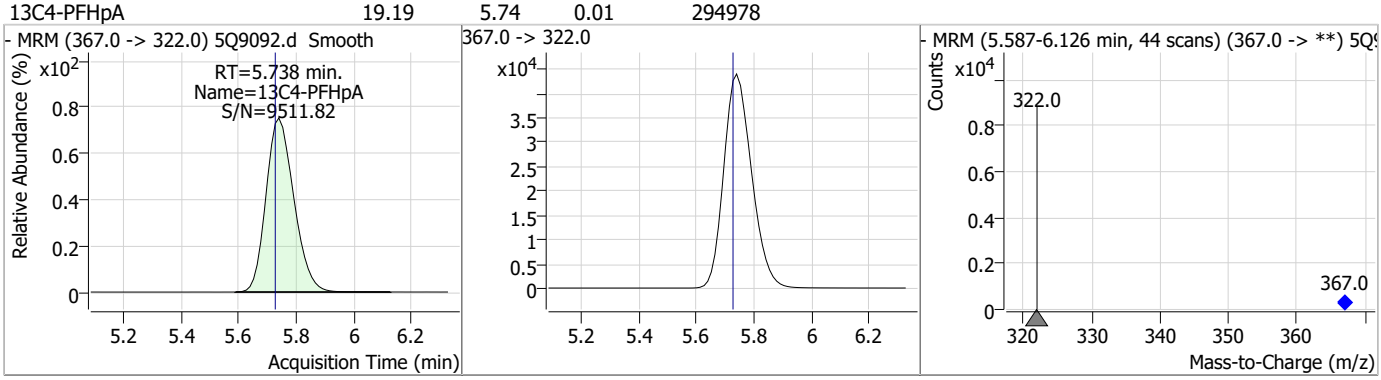
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	18.92	4.98	0.01	284559				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.90	5.19	0.01	69143				

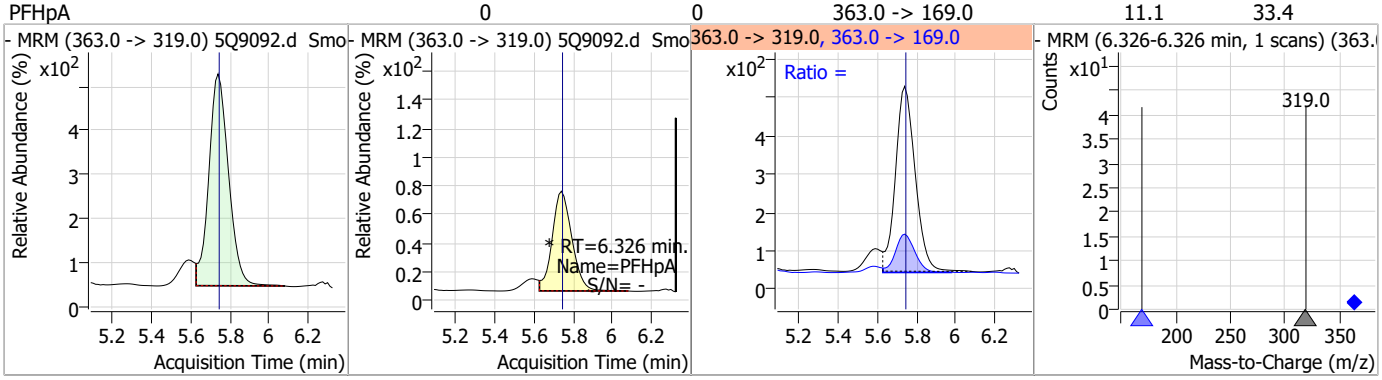


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.19	5.74	0.01	294978				

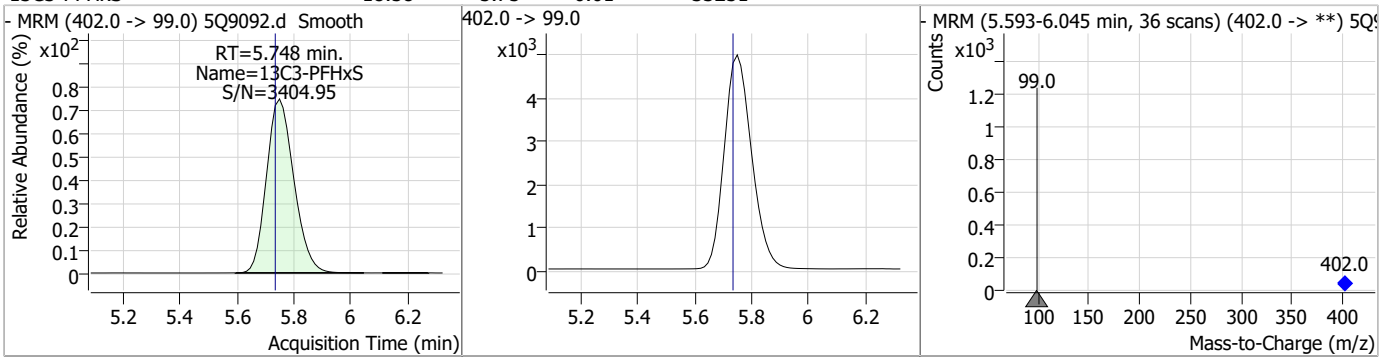


Perfluorinated Compounds by LC/MS/MS

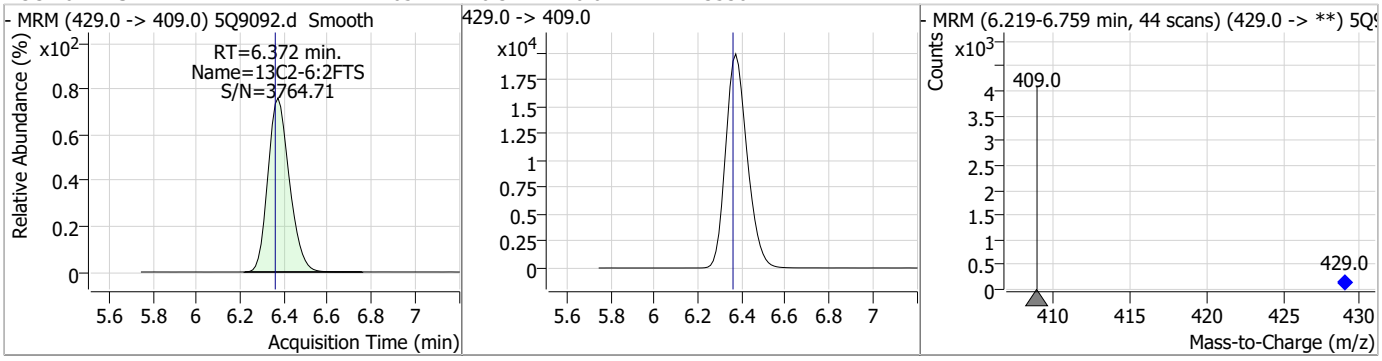
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA		0		0	363.0 -> 169.0		11.1	33.4



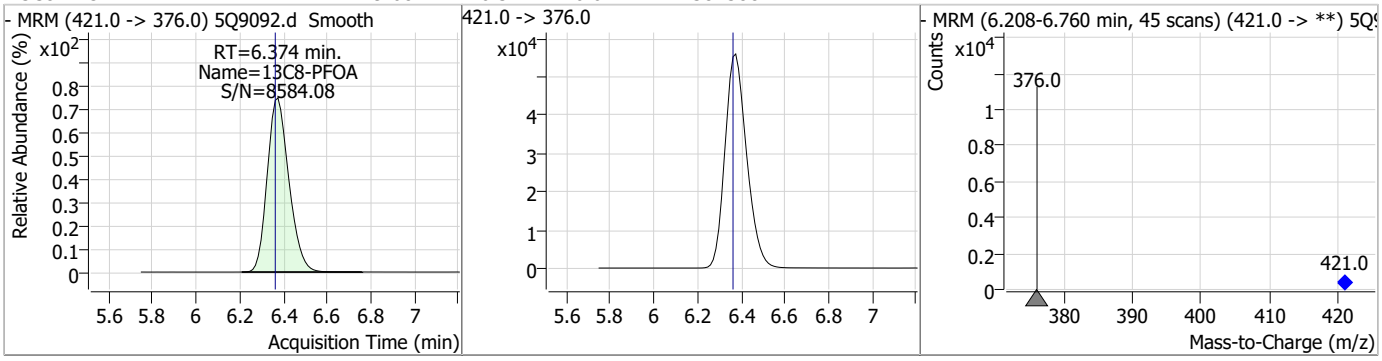
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	18.58	5.75	0.01	33251				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	17.65	6.37	0.01	135304				

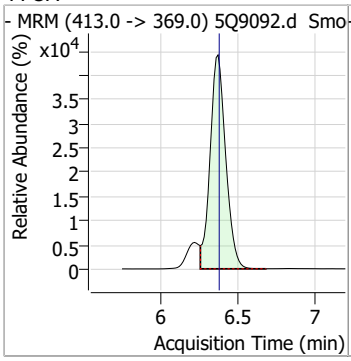


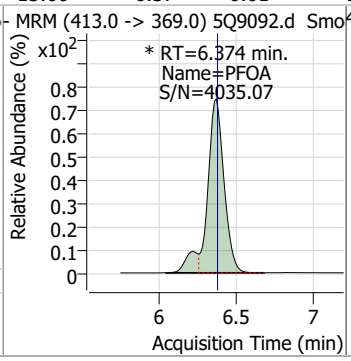
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.08	6.37	0.01	384388				

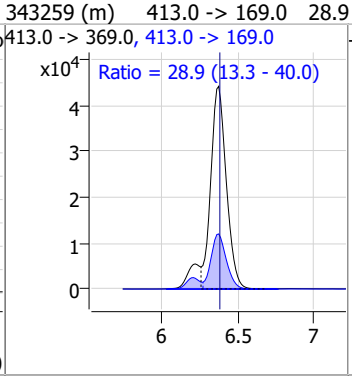


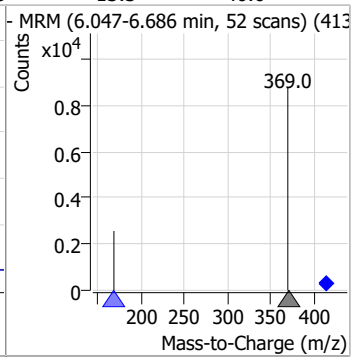
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	15.60	6.37	0.01	343259 (m)	413.0 -> 169.0	28.9	13.3	40.0

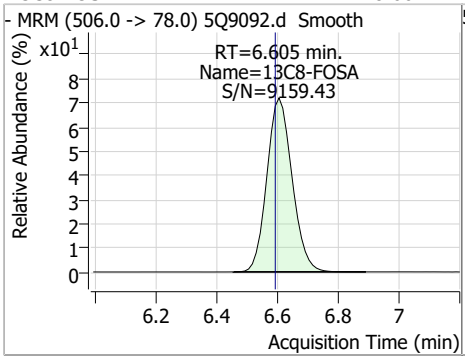


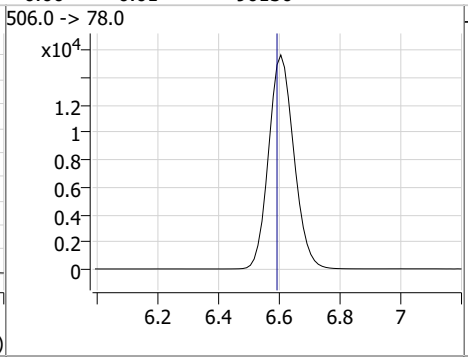


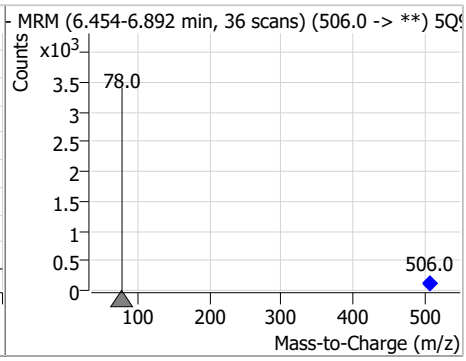




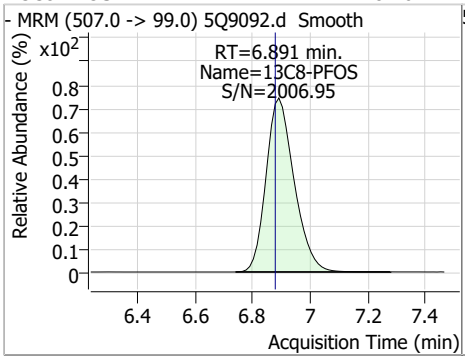
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	18.66	6.60	0.01	90136				

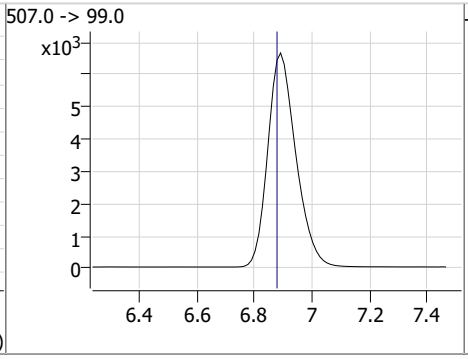


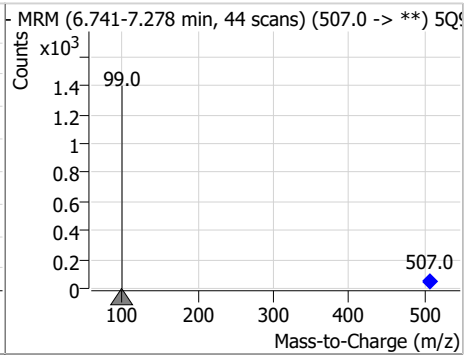




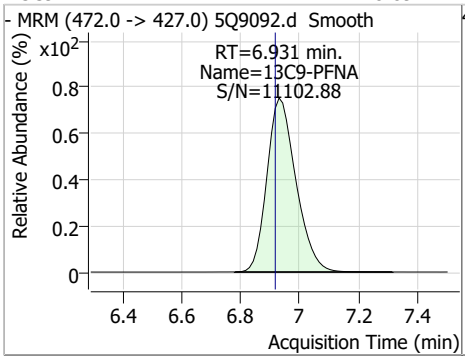
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	18.76	6.89	0.01	44731				

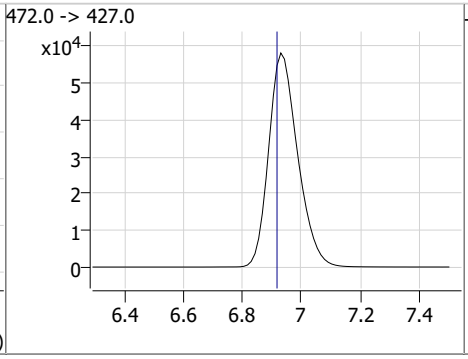


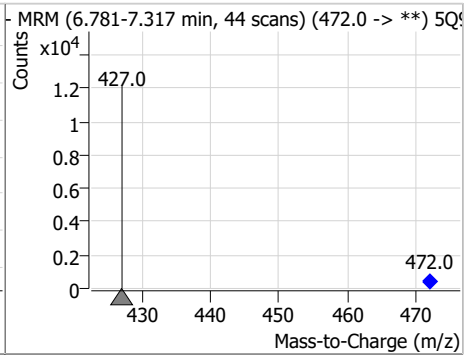




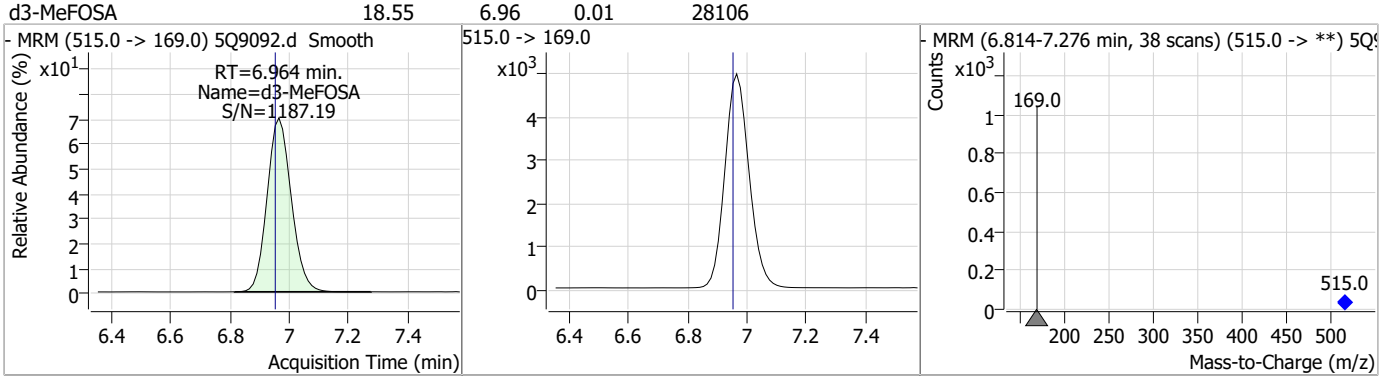
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.89	6.93	0.01	397350				



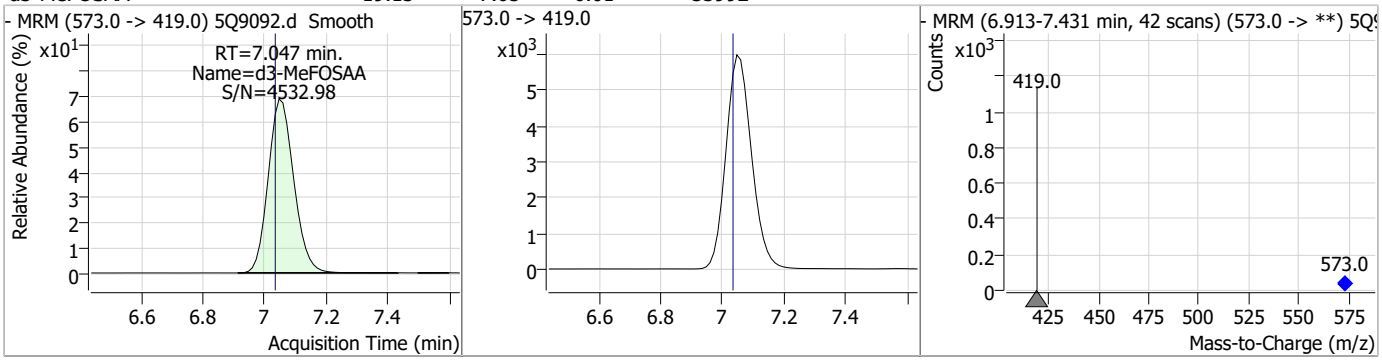




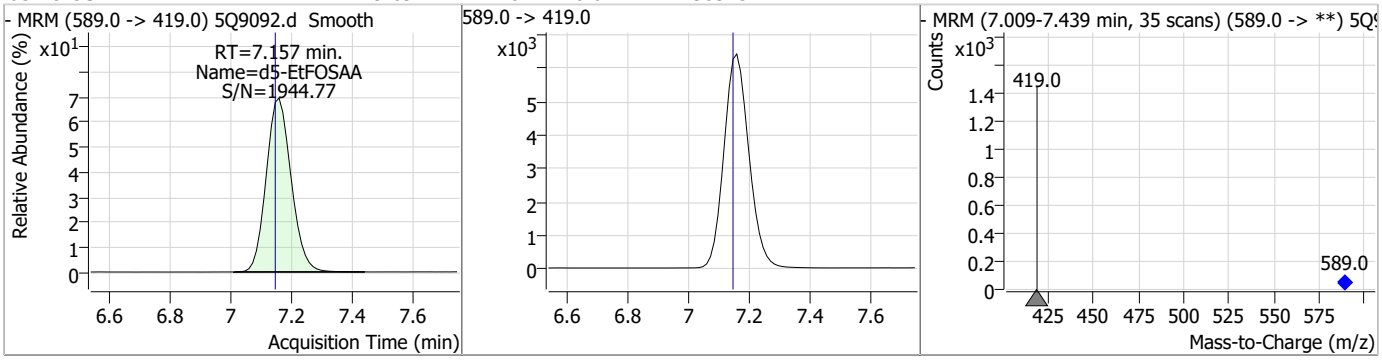
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	18.55	6.96	0.01	28106				



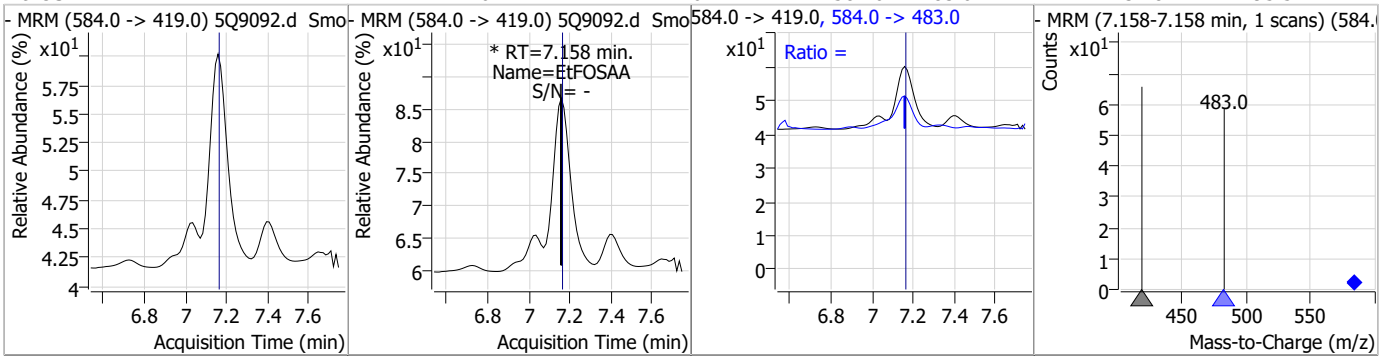
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.13	7.05	0.01	33992				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.69	7.16	0.01	36315				

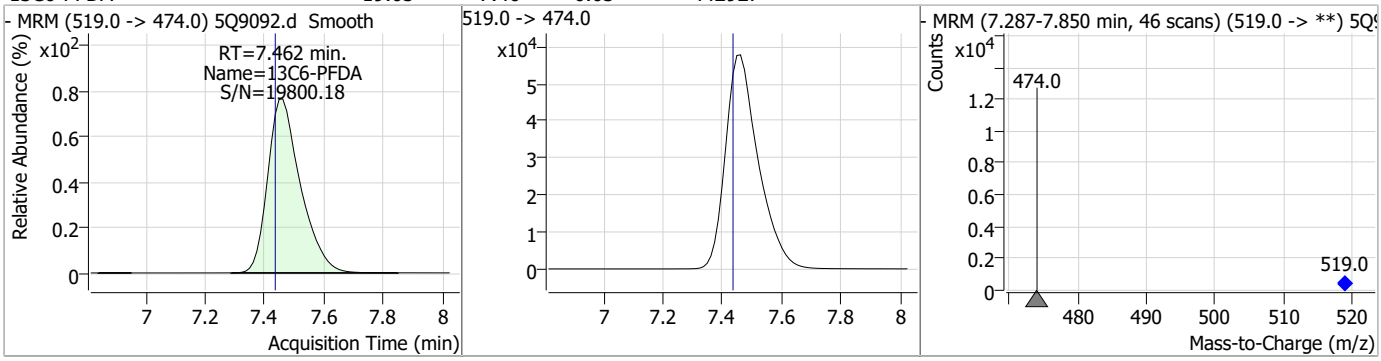


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA		0		0	584.0 -> 483.0		31.8	95.5

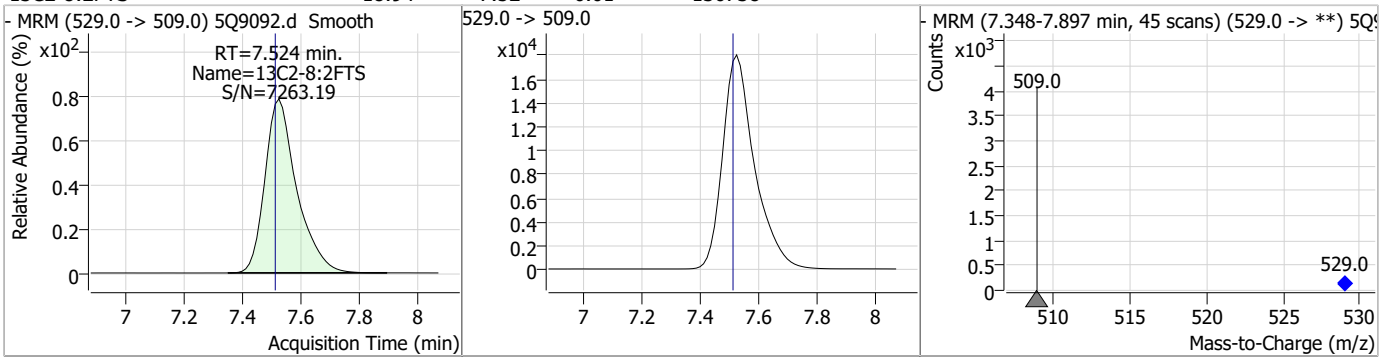


Perfluorinated Compounds by LC/MS/MS

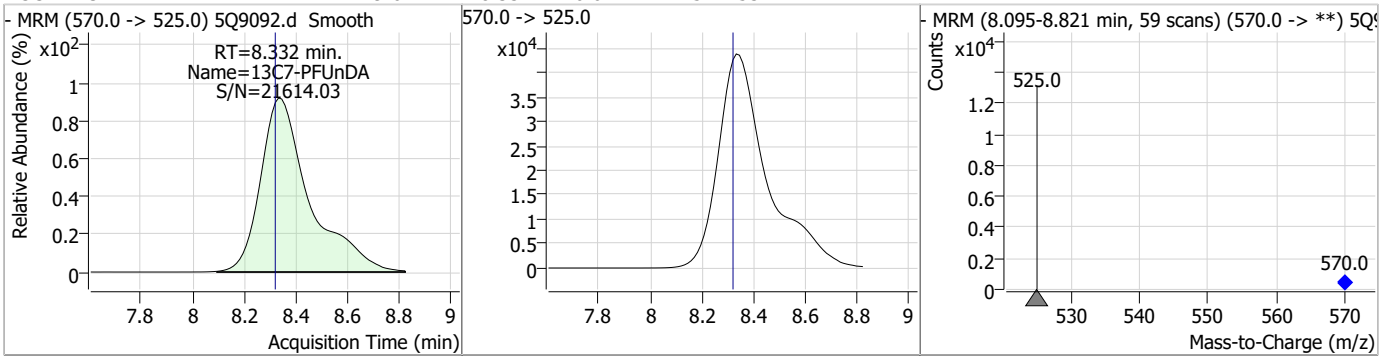
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.05	7.46	0.03	442927				



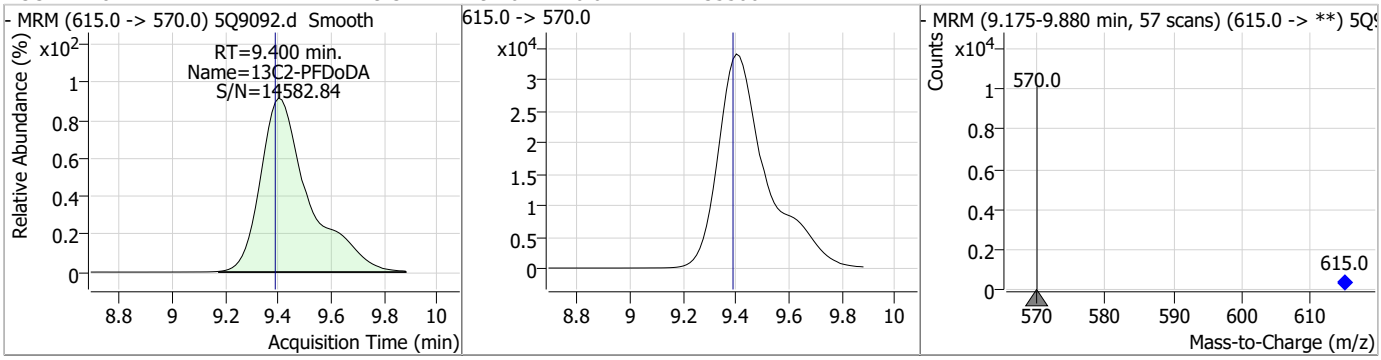
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.94	7.52	0.01	136738				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.64	8.33	0.01	574753				

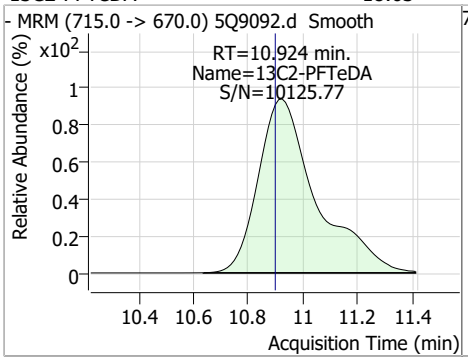


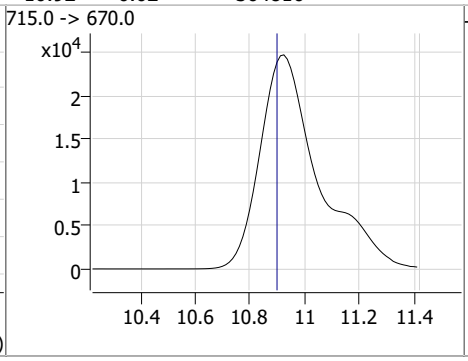
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.37	9.40	0.01	435506				

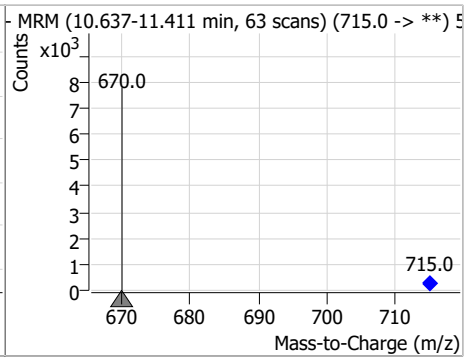


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	18.63	10.92	0.02	364816				







Manual Integration Approval Summary

Sample Number: S5Q135-RT
Lab FileID: 5Q9092.D
Injection Time: 12/29/22 11:13
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/30/22 11:46 Lindsay Ritner
Supervisor approved: 12/31/22 16:37 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanoic acid	335-67-1		6.37	Split peak

Perfluorinated Compounds by LC/MS/MS

Data File	:	5Q9243.d
Operator	:	lindsayr
Acq. Method	:	537_ID.m
Acq. Date-Time	:	1/3/2023 6:04:45 PM
Sample Name	:	rt
Vial	:	P1-B3
DA Method File	:	ID_010323_S5Q137.quantmethod.xml
Batch Name	:	s5q137.batch.bin
Sample Information	:	OP94373,S5Q137,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
Internal Standards					
M4-PFBA	2.037	217.0 -> 172.0	107255	20.00 µg/L	0.062
M5-PFPeA	3.519	268.0 -> 223.0	203070	20.00 µg/L	0.050
M5-PFHxA	4.504	318.0 -> 273.0	283748	20.00 µg/L	0.050
M4-PFHpA	5.164	367.0 -> 322.0	283280	20.00 µg/L	0.051
M8-PFOA	5.673	421.0 -> 376.0	361222	20.00 µg/L	0.051
M9-PFNA	6.106	472.0 -> 427.0	362561	20.00 µg/L	0.063
M6-PFDA	6.464	519.0 -> 474.0	358376	20.00 µg/L	0.063
M7-PFUnDA	6.784	570.0 -> 525.0	356511	20.00 µg/L	0.062
M2-PFDoDA	7.042	615.0 -> 570.0	350006	20.00 µg/L	0.062
M2-PFTeDA	7.449	715.0 -> 670.0	365981	20.00 µg/L	0.062
M8-FOSA	6.666	506.0 -> 78.0	106501	20.00 µg/L	0.025
M3-PFBS	3.729	302.0 -> 99.0	24407	20.00 µg/L	0.050
M3-PFHxS	5.173	402.0 -> 99.0	30922	20.00 µg/L	0.051
M8-PFOS	6.066	507.0 -> 99.0	35818	20.00 µg/L	0.050
M2-4:2FTS	4.401	329.0 -> 309.0	83821	20.00 µg/L	0.052
M2-6:2FTS	5.647	429.0 -> 409.0	126630	20.00 µg/L	0.052
M2-8:2FTS	6.463	529.0 -> 509.0	107853	20.00 µg/L	0.063
M3-MeFOSAA	6.983	573.0 -> 419.0	42515	20.00 µg/L	0.025
M3-HFPO-DA	4.694	287.0 -> 169.0	61936	20.00 µg/L	0.050
M3-MeFOSA	7.011	515.0 -> 169.0	32506	20.00 µg/L	0.025
M5-EtFOSAA	7.106	589.0 -> 419.0	41438	20.00 µg/L	0.025
System Monitoring Compounds					
13C2-4:2FTS	4.401	329.0 -> 309.0	83821	17.72 µg/L	0.052
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.6%	
13C2-6:2FTS	5.647	429.0 -> 409.0	126630	17.78 µg/L	0.052
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.9%	
13C2-8:2FTS	6.463	529.0 -> 509.0	107853	17.56 µg/L	0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.8%	
13C2-PFDoDA	7.042	615.0 -> 570.0	350006	18.91 µg/L	0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.6%	
13C2-PFTeDA	7.449	715.0 -> 670.0	365981	18.72 µg/L	0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.6%	
13C3-PFBS	3.729	302.0 -> 99.0	24407	19.04 µg/L	0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.2%	
13C3-PFHxS	5.173	402.0 -> 99.0	30922	19.47 µg/L	0.051
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.3%	
13C4-PFBA	2.037	217.0 -> 172.0	107255	18.71 µg/L	0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.5%	
13C4-PFHpA	5.164	367.0 -> 322.0	283280	19.28 µg/L	0.051
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.4%	
13C5-PFHxA	4.504	318.0 -> 273.0	283748	19.32 µg/L	0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.6%	
13C5-PFPeA	3.519	268.0 -> 223.0	203070	19.55 µg/L	0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.7%	
13C6-PFDA	6.464	519.0 -> 474.0	358376	19.33 µg/L	0.063

Perfluorinated Compounds by LC/MS/MS

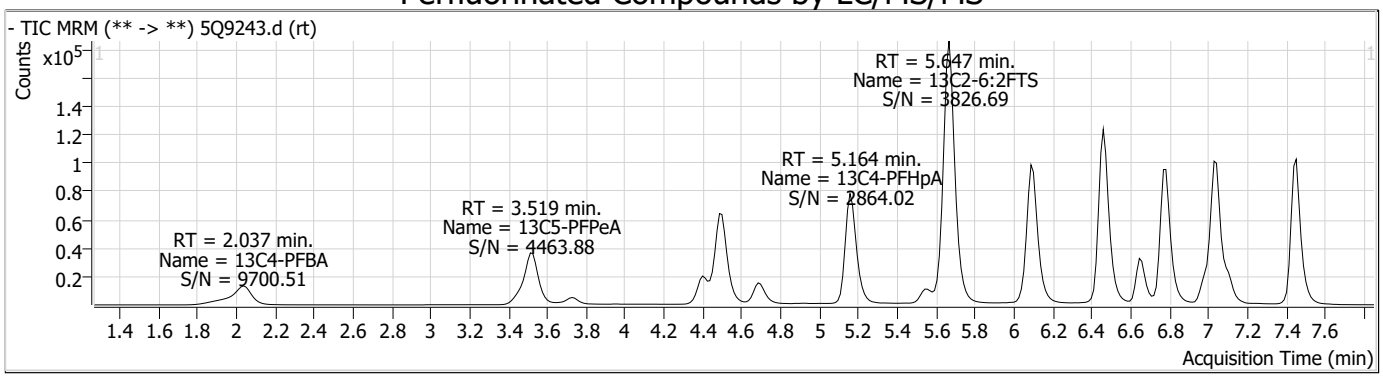
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.7%			
13C7-PFUnDA	6.784	570.0 -> 525.0	356511	18.90	µg/L		0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.5%			
13C8-FOSA	6.666	506.0 -> 78.0	106501	17.77	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.8%			
13C8-PFOA	5.673	421.0 -> 376.0	361222	19.18	µg/L		0.051
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.9%			
13C8-PFOS	6.066	507.0 -> 99.0	35818	18.79	µg/L		0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.0%			
13C9-PFNA	6.106	472.0 -> 427.0	362561	19.20	µg/L		0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.0%			
d3-MeFOSAA	6.983	573.0 -> 419.0	42515	15.17	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 75.8%			
13C3-HFPO-DA	4.694	287.0 -> 169.0	61936	18.47	µg/L		0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.3%			
d3-MeFOSA	7.011	515.0 -> 169.0	32506	18.85	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.3%			
d5-EtFOSAA	7.106	589.0 -> 419.0	41438	14.95	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 74.7%			
Target Compounds							QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.			
		327.0 -> 81.0					
6:2FTS	-	427.0 -> 407.0	-	N.D.			
		427.0 -> 81.0					
8:2FTS	-	527.0 -> 507.0	-	N.D.			
		527.0 -> 81.0					
EtFOSAA	7.106	584.0 -> 419.0	0		µg/L	m	1
		584.0 -> 483.0	0				
FOSA	-	498.0 -> 78.0	-	N.D.			
		498.0 -> 478.0					
MeFOSAA	6.996	570.0 -> 419.0	0		µg/L	m	1
		570.0 -> 512.0	0				
PFBA	2.031	213.0 -> 169.0	0		µg/L	m	1
PFBS	-	299.0 -> 80.0	-	N.D.			
		299.0 -> 99.0					
PFDA	-	513.0 -> 469.0	-	N.D.			
		513.0 -> 219.0					
PFDoDA	-	613.0 -> 569.0	-	N.D.			
		613.0 -> 319.0					
PFDS	-	599.0 -> 80.0	-	N.D.			
		599.0 -> 99.0					
PFHpA	5.165	363.0 -> 319.0	0		µg/L	m	1
		363.0 -> 169.0	0				
PFHpS	-	449.0 -> 80.0	-	N.D.			
		449.0 -> 99.0					
PFHxA	-	313.0 -> 269.0	-	N.D.			
		313.0 -> 119.0					
PFHxS	-	399.0 -> 80.0	-	N.D.			
		399.0 -> 99.0					
PFNA	-	463.0 -> 419.0	-	N.D.			
		463.0 -> 219.0					
PFNS	-	549.0 -> 80.0	-	N.D.			
		549.0 -> 99.0					
PFOA	5.673	413.0 -> 369.0	272044	15.21	µg/L		98
		413.0 -> 169.0	77746				
PFOS	-	499.0 -> 80.0	-	N.D.			

Perfluorinated Compounds by LC/MS/MS

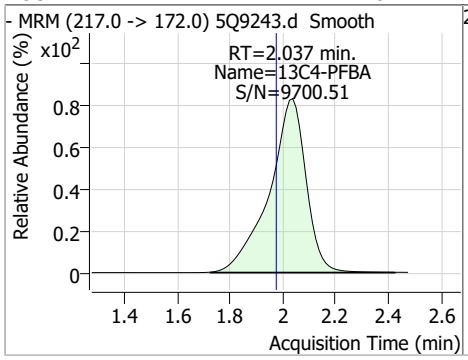
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0				
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFPeS	-	349.0 -> 80.0	-	N.D.		
		349.0 -> 99.0				
PFTeDA	-	713.0 -> 669.0	-	N.D.		
		713.0 -> 219.0				
PFTrDA	-	663.0 -> 619.0	-	N.D.		
		663.0 -> 369.0				
PFUnDA	-	563.0 -> 519.0	-	N.D.		
		563.0 -> 269.0				
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
		633.0 -> 453.0				
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
		533.0 -> 353.0				
ADONA	-	377.0 -> 251.0	-	N.D.		
		377.0 -> 85.0				
HFPO-DA	-	329.0 -> 169.0	-	N.D.		
		285.0 -> 169.0				
MeFOSA	-	512.0 -> 169.0	-	N.D.		
		512.0 -> 219.0				
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	-	298.0 -> 78.0	-	N.D.		
		298.0 -> 64.0				
FHxSA	-	398.0 -> 78.0	-	N.D.		
		398.0 -> 64.0				

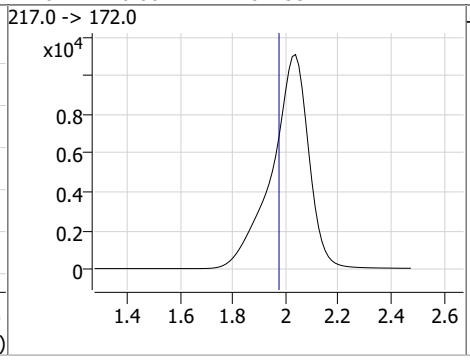
 # = Qualifier out of range, m = manually integrated, + = Area summed

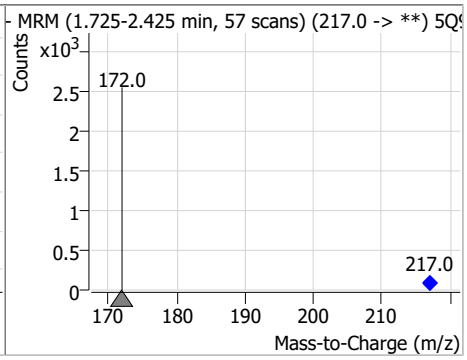
Perfluorinated Compounds by LC/MS/MS



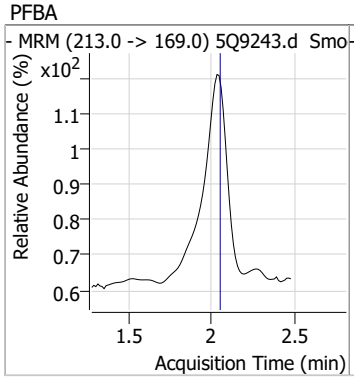
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.71	2.04	0.06	107255				

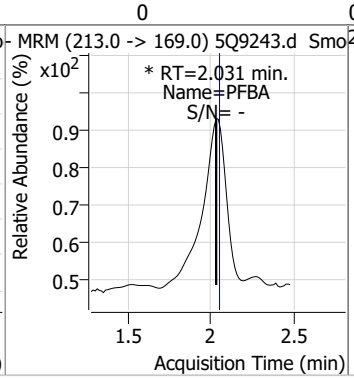


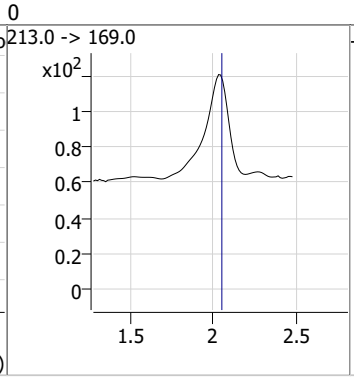


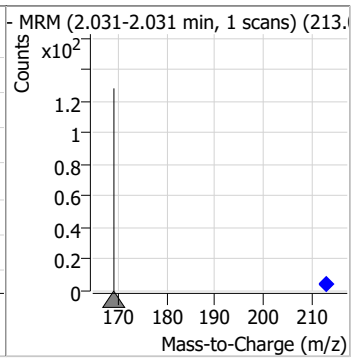


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA		0		0				

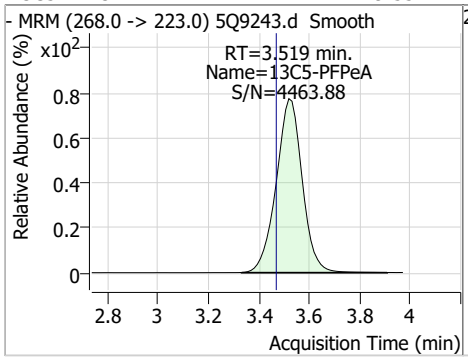


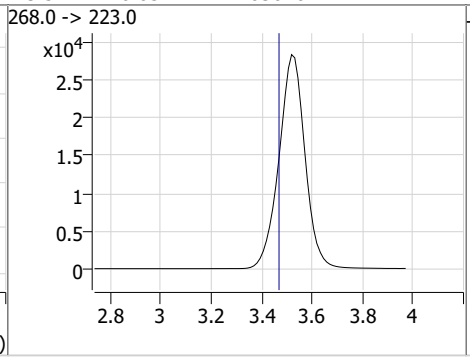


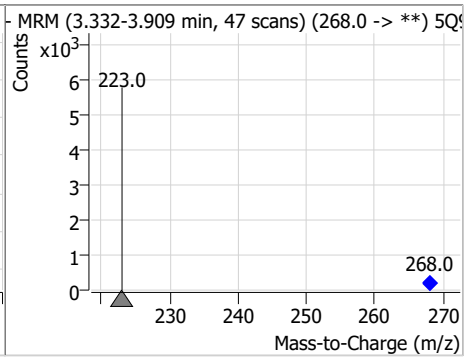




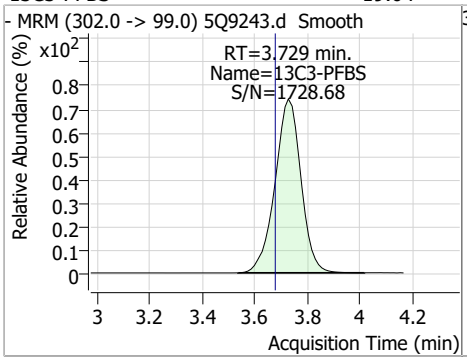
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.55	3.52	0.05	203070				

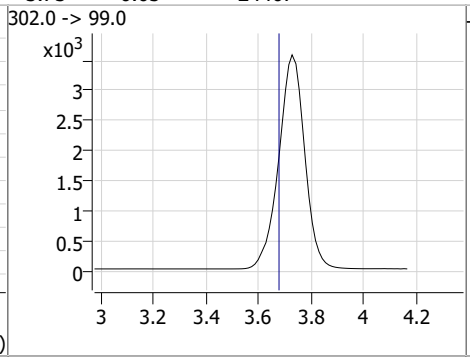


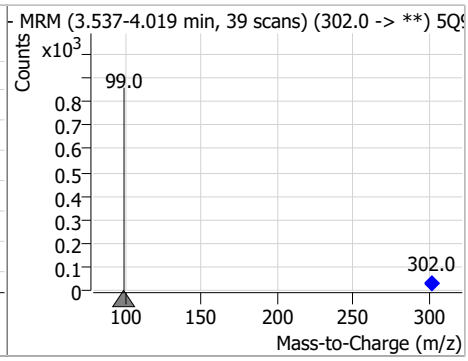




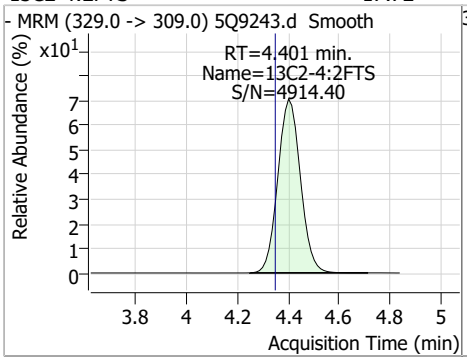
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.04	3.73	0.05	24407				

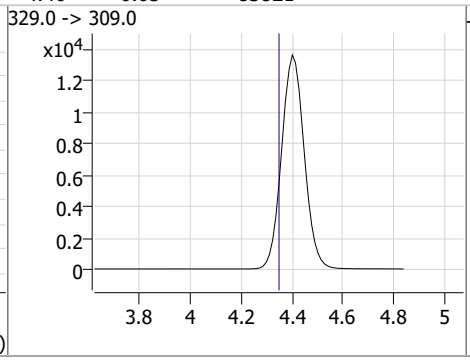


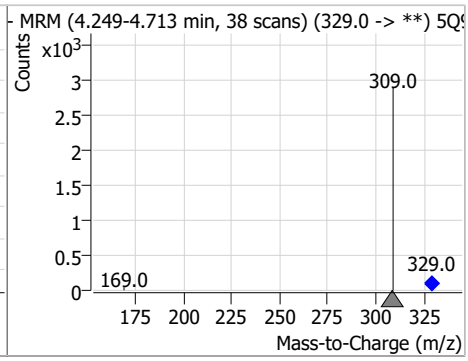




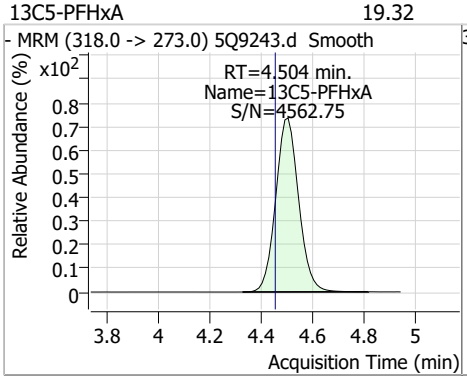
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	17.72	4.40	0.05	83821				

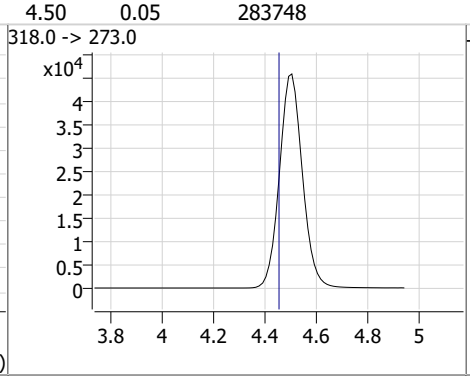


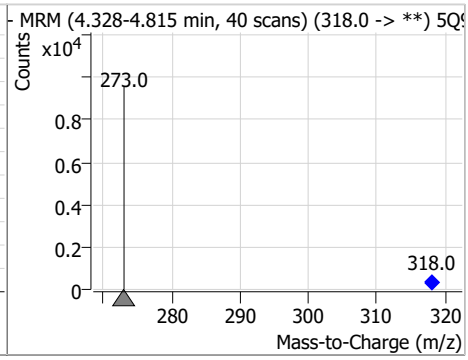




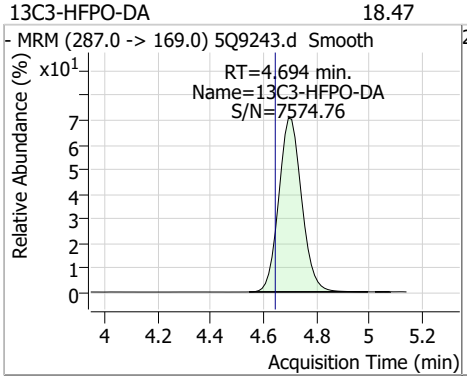
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.32	4.50	0.05	283748				

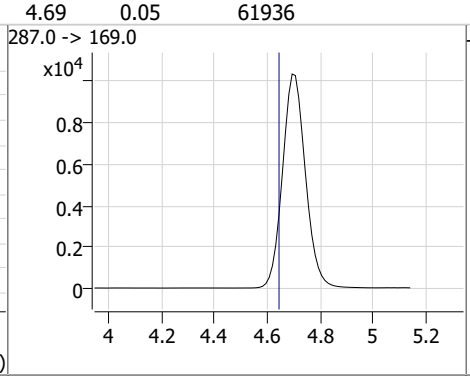


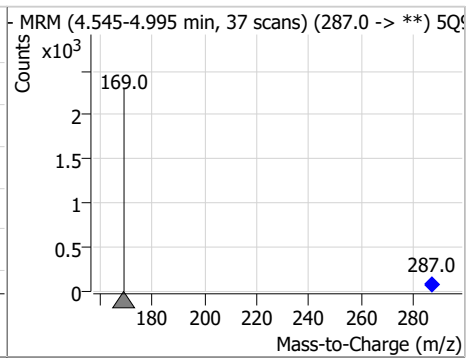




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	18.47	4.69	0.05	61936				

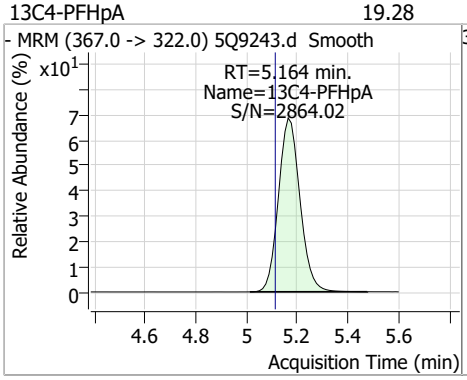


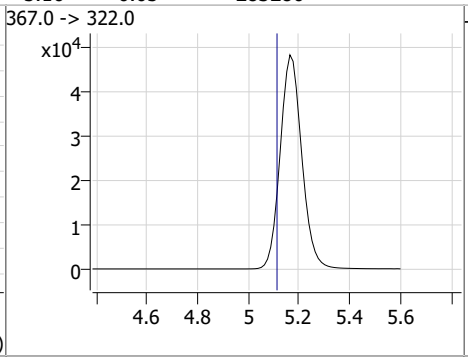


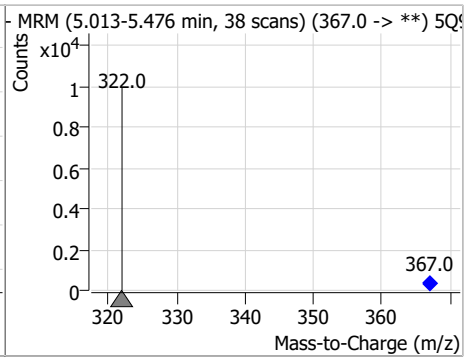


Perfluorinated Compounds by LC/MS/MS

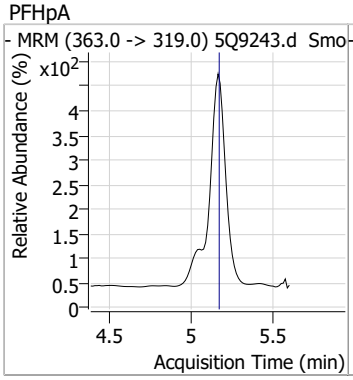
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.28	5.16	0.05	283280				

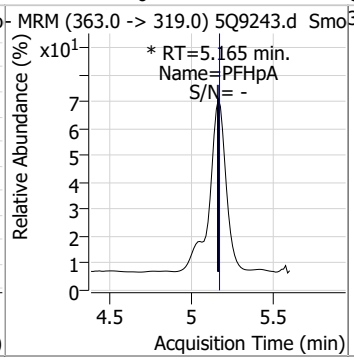


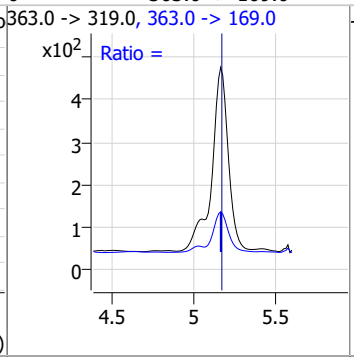


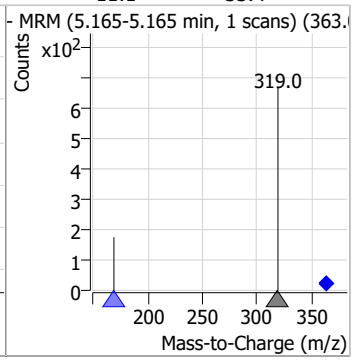


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA		0		0	363.0 -> 169.0		11.1	33.4

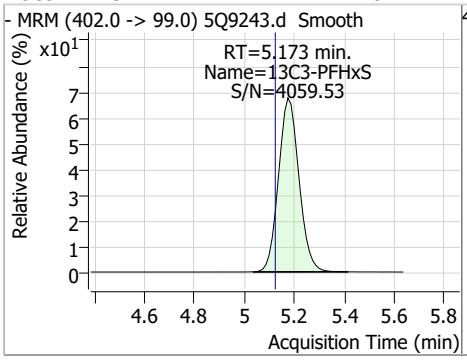


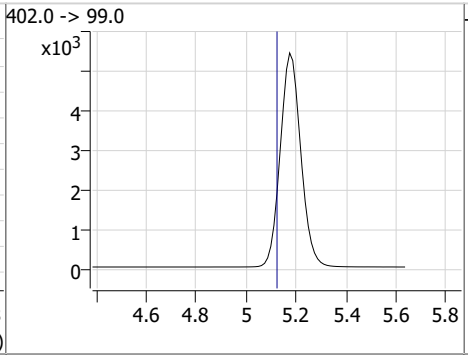


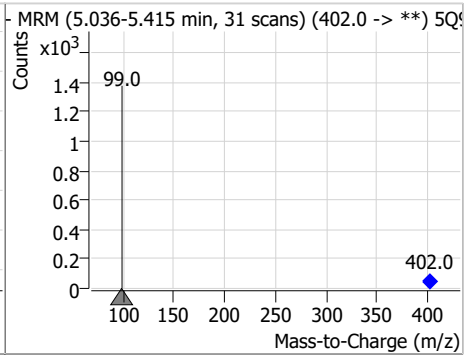




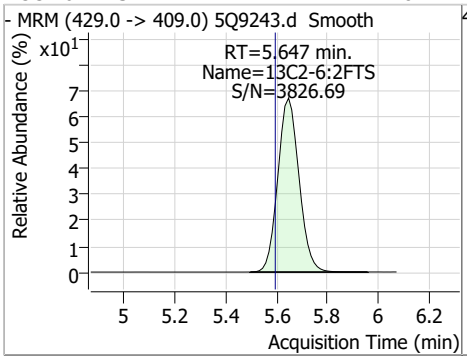
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.47	5.17	0.05	30922				

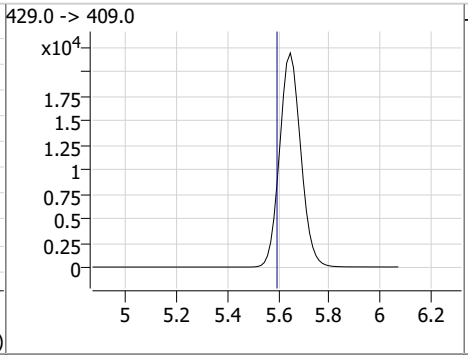


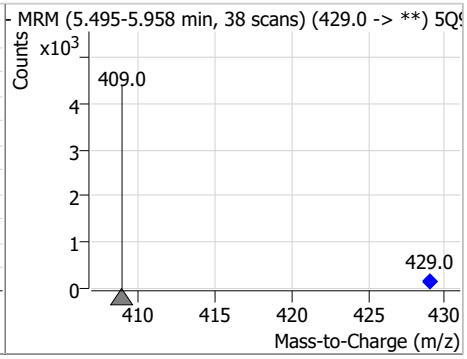




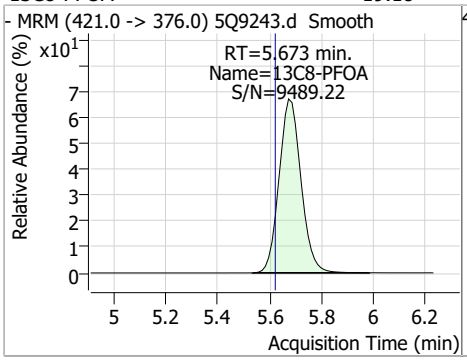
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	17.78	5.65	0.05	126630				

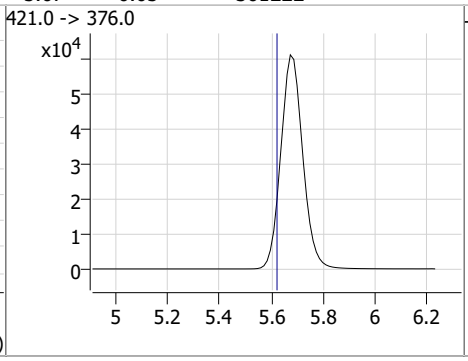


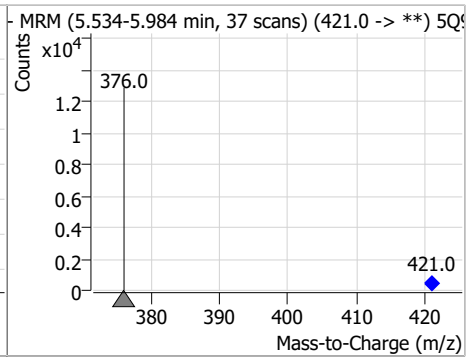




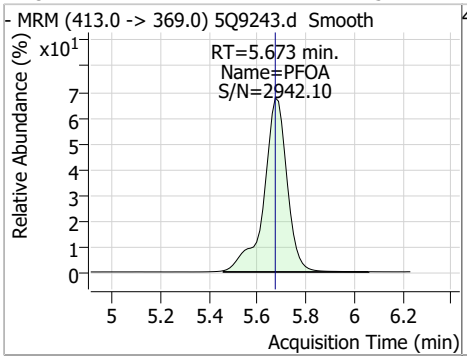
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.18	5.67	0.05	361222				

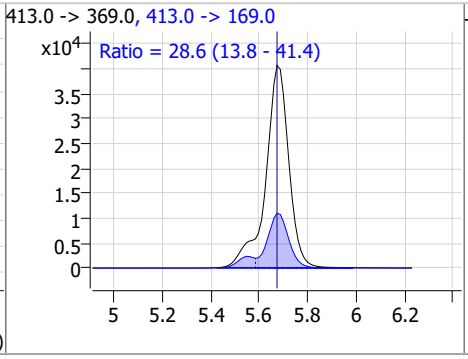


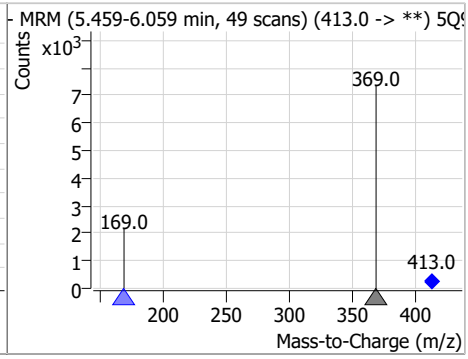




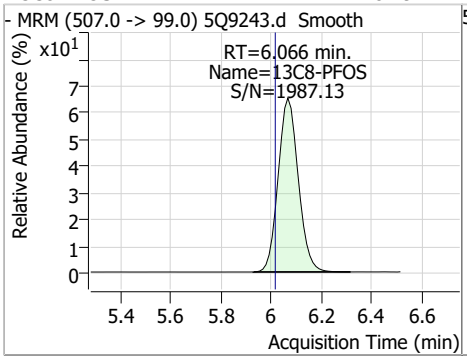
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	15.21	5.67	0.05	272044	413.0 -> 169.0	28.6	13.8	41.4

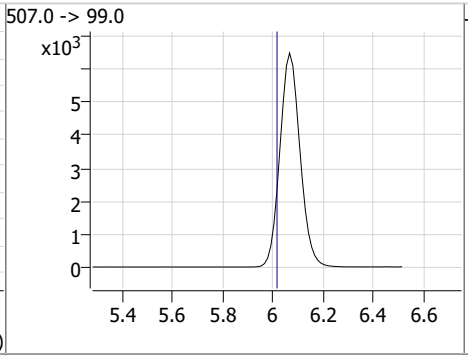


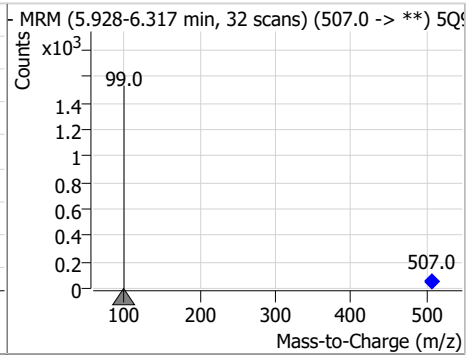




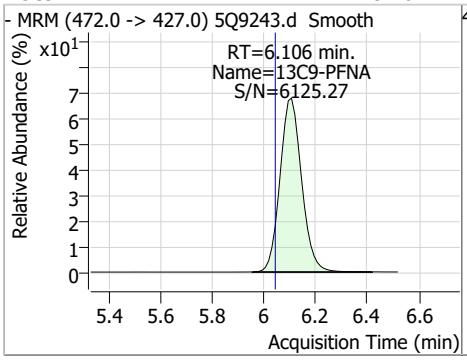
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	18.79	6.07	0.05	35818				

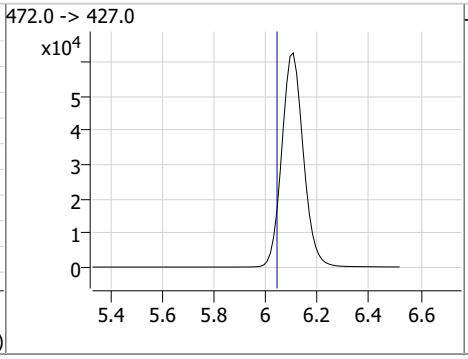


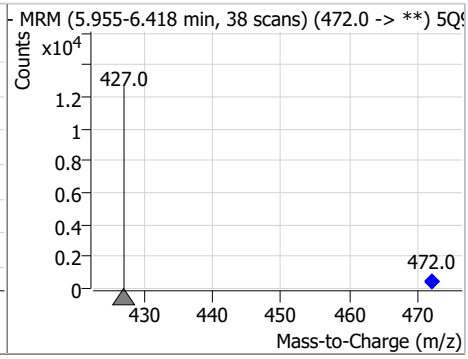




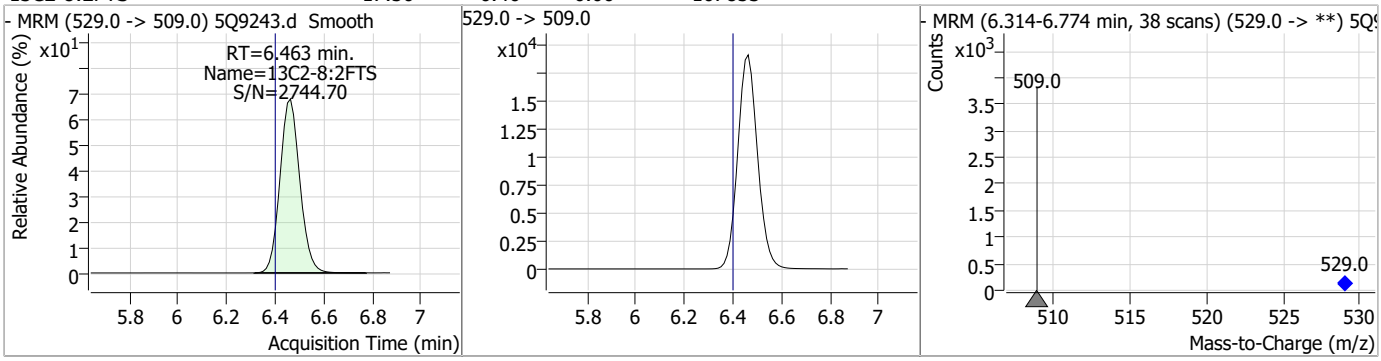
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.20	6.11	0.06	362561				



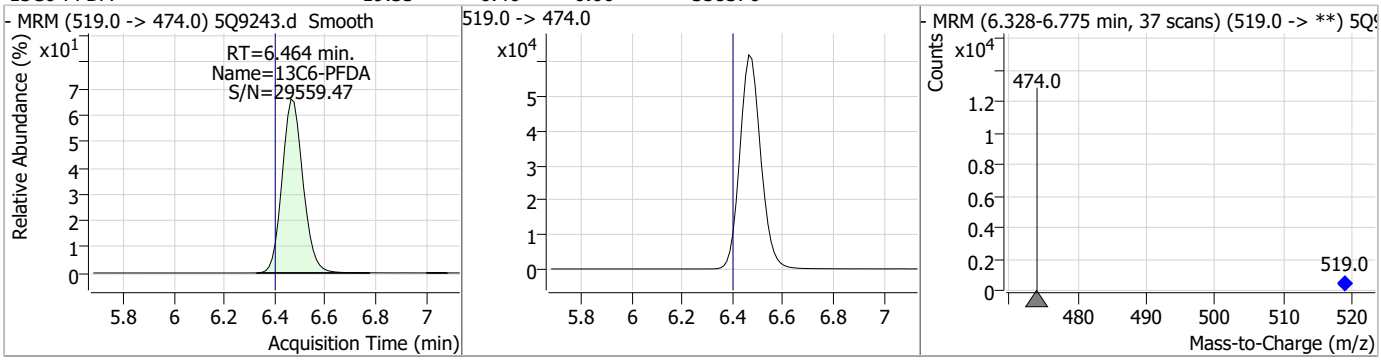




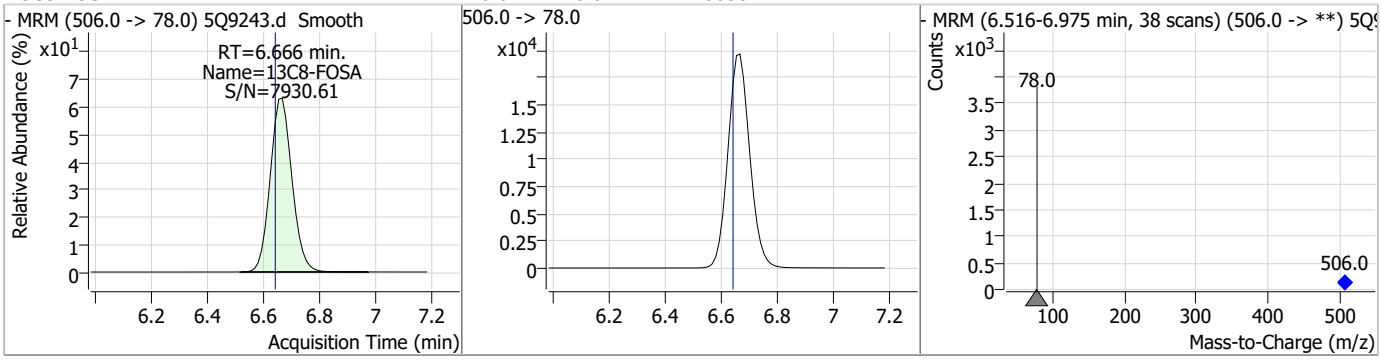
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	17.56	6.46	0.06	107853				



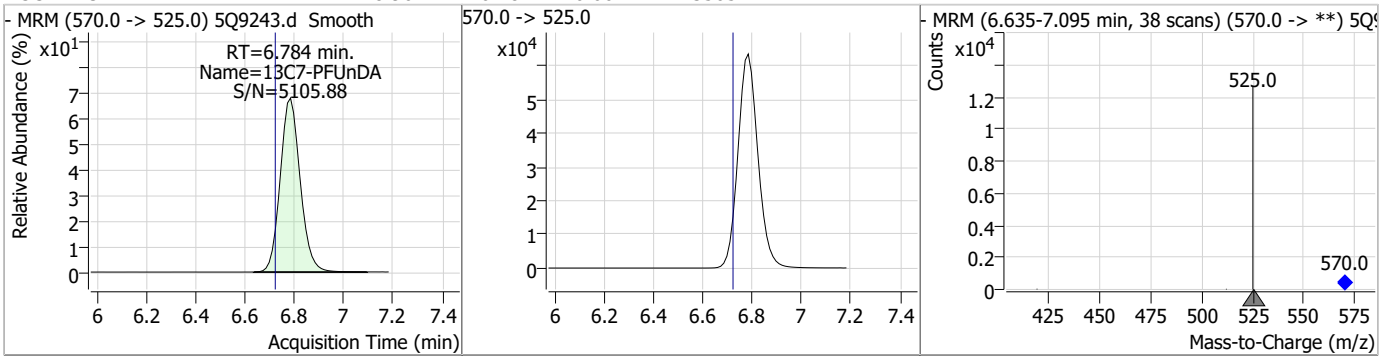
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.33	6.46	0.06	358376				



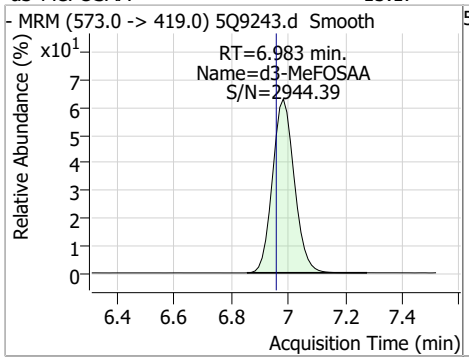
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	17.77	6.67	0.02	106501				

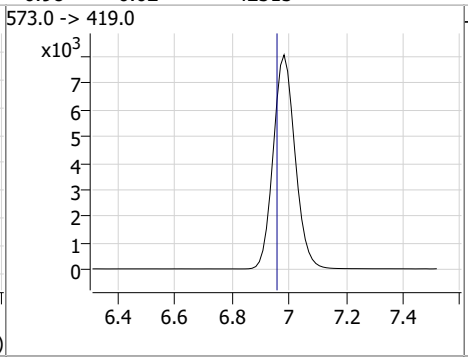


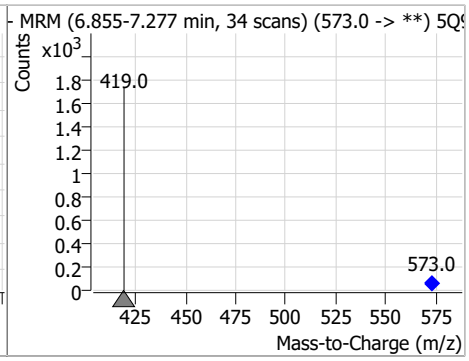
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	18.90	6.78	0.06	356511				



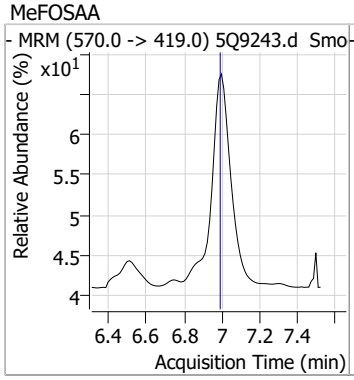
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	15.17	6.98	0.02	42515				

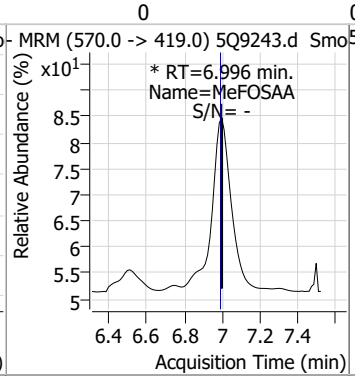


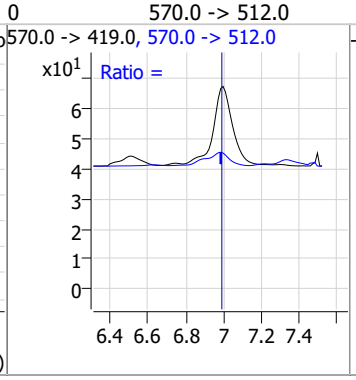


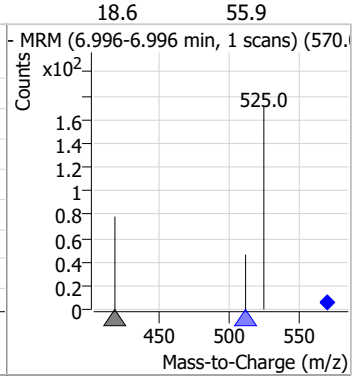


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA		0		0	570.0 -> 512.0		18.6	55.9

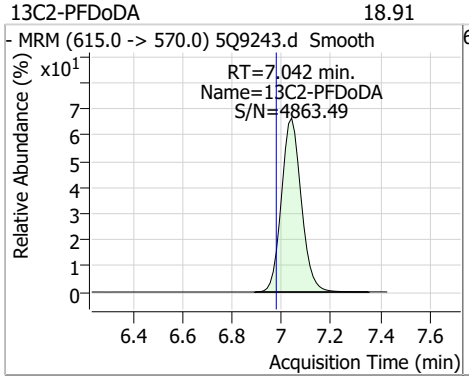


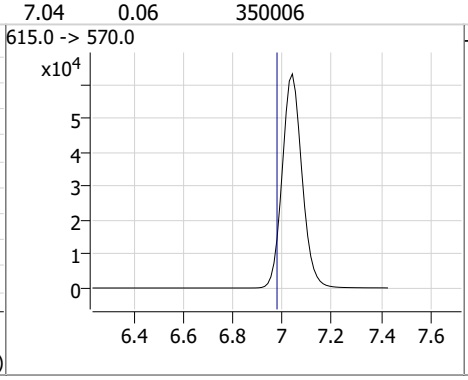


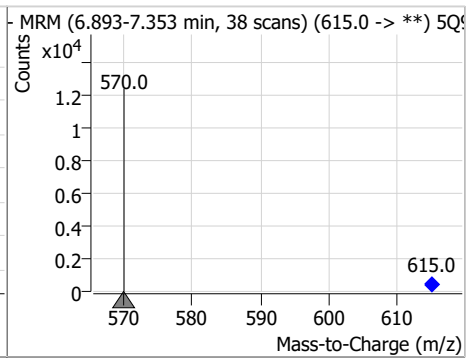




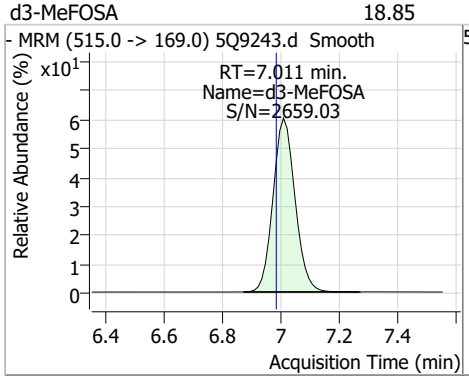
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	18.91	7.04	0.06	350006				

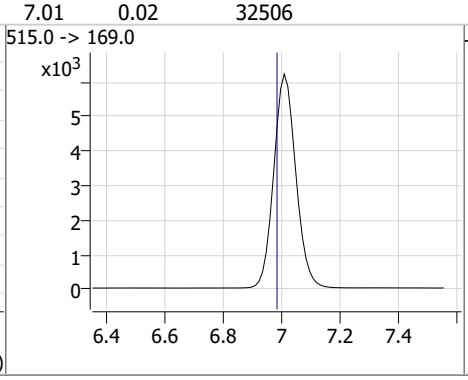


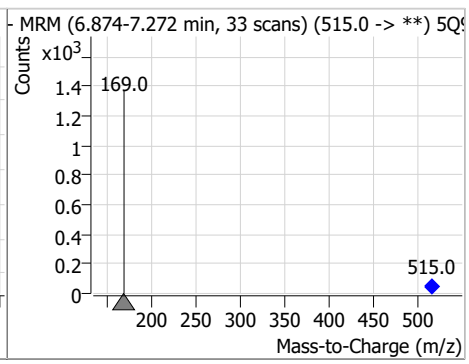




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	18.85	7.01	0.02	32506				

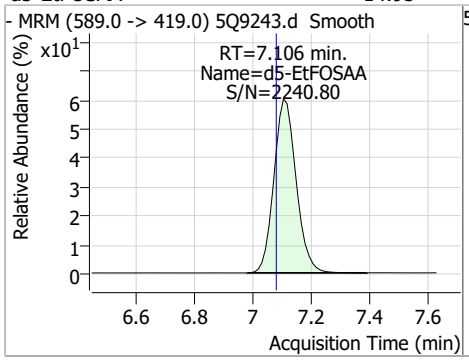


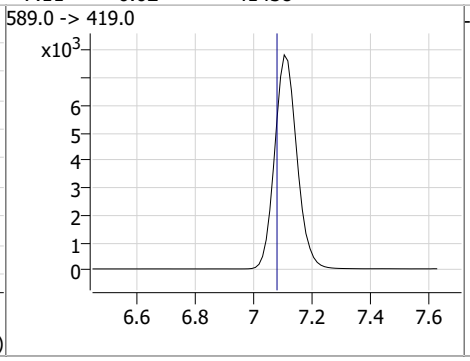


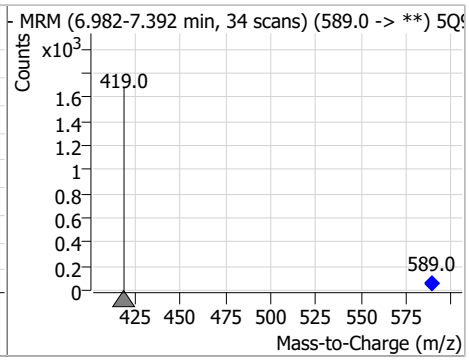


Perfluorinated Compounds by LC/MS/MS

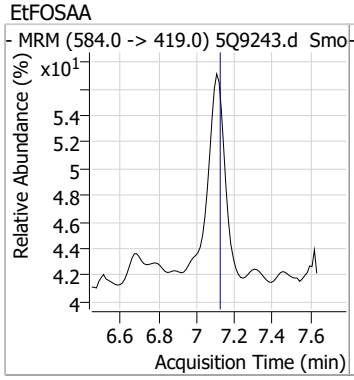
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	14.95	7.11	0.02	41438				

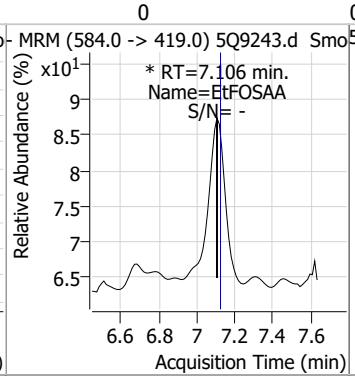


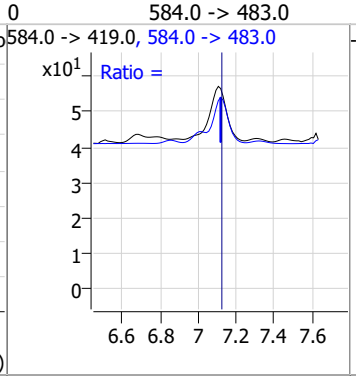


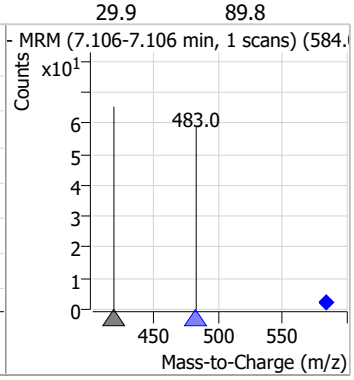


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA		0		0	584.0 -> 483.0		29.9	89.8

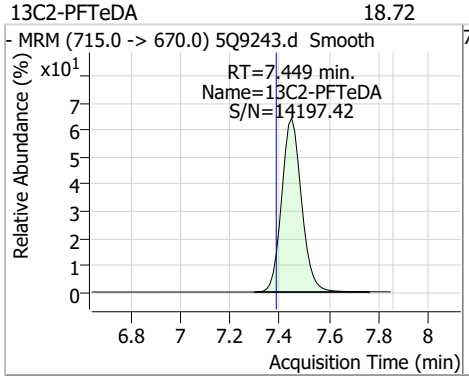


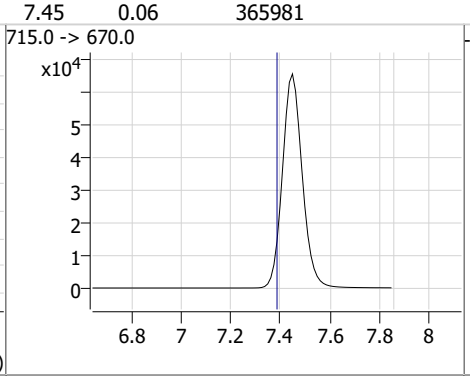


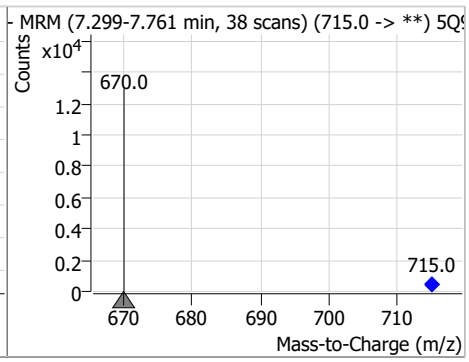




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	18.72	7.45	0.06	365981				







Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
12/30/22 13:18

QQQ Check Tune Report

Instrument Name	LCMS5Q
MS Model	G6470B
MS Instrument Serial	SG2221G211
Software_Firmware Version	10.1.67, FW: A.00.08.112
Tune Date & Time	27 December 2022 10:03:47
File Path	D:\MassHunter\Tune\QQQ\G6470B\atunes.TUNE.XML
Ion Source	AJS ESI
Ionization Mode	AJS ESI
Tuned Resolution	All
Vacuum Pressure	1.41E+0 [R] (Torr); 4.51E-5 [H] (Torr)

Source Parameters

Parameter	Negative
Gas Temp (°C)	300
Gas Flow (l/min)	8
Nebulizer (psi)	15
Capillary (V)	3500
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	112.94	-0.05	Pass	0.70	0.74	0.04	Pass	626005
302.00	301.92	-0.08	Pass	0.70	0.78	0.08	Pass	298519
601.98	601.88	-0.10	Pass	0.70	0.74	0.04	Pass	633006
1033.99	1033.86	-0.13	Pass	0.70	0.72	0.02	Pass	949239
1633.95	1633.72	-0.23	Adjust	0.70	0.73	0.03	Pass	2075981
2233.91	2233.62	-0.29	Pass	0.70	0.76	0.06	Pass	1222977

Analyzer: MS2 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.06	0.06	Pass	0.70	0.60	-0.10	Pass	113945
112.99	112.98	-0.01	Pass	0.70	0.69	-0.01	Pass	352776
302.00	301.95	-0.05	Pass	0.70	0.72	0.02	Pass	187613
601.98	601.86	-0.12	Pass	0.70	0.76	0.06	Pass	282619
1033.99	1033.81	-0.18	Pass	0.70	0.79	0.09	Pass	338781
1633.95	1633.75	-0.20	Pass	0.70	0.78	0.08	Pass	712129
2233.91	2233.67	-0.24	Pass	0.70	0.78	0.08	Pass	417392

Analyzer: MS1 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.94	-0.05	Pass	1.20	1.23	0.03	Pass	775341
302.00	301.89	-0.11	Pass	1.20	1.49	0.29	Pass	376119
601.98	601.85	-0.13	Pass	1.20	1.56	0.36	Pass	884175
1033.99	1033.82	-0.17	Pass	1.20	1.51	0.31	Pass	1765089
1633.95	1633.69	-0.26	Pass	1.20	1.39	0.19	Pass	4015916
2233.91	2233.52	-0.39	Pass	1.20	1.18	-0.02	Pass	2420578

Analyzer: MS2 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.06	0.06	Pass	1.20	1.17	-0.03	Pass	155038
112.99	112.96	-0.03	Pass	1.20	1.21	0.01	Pass	568033
302.00	301.94	-0.06	Pass	1.20	1.33	0.13	Pass	278767
601.98	601.85	-0.13	Pass	1.20	1.44	0.24	Pass	557937
1033.99	1033.79	-0.20	Pass	1.20	1.46	0.26	Pass	930551
1633.95	1633.69	-0.26	Pass	1.20	1.44	0.24	Pass	2142608
2233.91	2233.67	-0.24	Pass	1.20	1.36	0.16	Pass	1121012

Analyzer: MS1 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.95	-0.04	Pass	2.50	2.49	-0.01	Pass	977114
302.00	301.86	-0.14	Pass	2.50	2.74	0.24	Pass	464881
601.98	601.83	-0.15	Pass	2.50	2.89	0.39	Pass	1170470
1033.99	1033.83	-0.16	Pass	2.50	2.87	0.37	Pass	2976641
1633.95	1633.66	-0.29	Pass	2.50	2.90	0.40	Pass	7818006
2233.91	2233.53	-0.38	Pass	2.50	2.78	0.28	Pass	6534558

Analyzer: MS2 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.04	0.04	Pass	2.50	2.39	-0.11	Pass	202534
112.99	112.97	-0.02	Pass	2.50	2.50	0.00	Pass	783070
302.00	301.97	-0.03	Pass	2.50	2.52	0.02	Pass	382016
601.98	601.88	-0.10	Pass	2.50	2.61	0.11	Pass	861518
1033.99	1033.79	-0.20	Pass	2.50	2.57	0.07	Pass	1776923
1633.95	1633.70	-0.25	Pass	2.50	2.55	0.05	Pass	5047847
2233.91	2233.55	-0.36	Pass	2.50	2.48	-0.02	Pass	3496810

Manual Integration Approval Summary

Sample Number:	S5Q134-IC134	**Method:**	EPA 537M QSM5.3 B-15
Lab FileID:	5Q9038.D	**Analyst approved:**	12/29/22 10:50 Lindsay Ritner
Injection Time:	12/28/22 12:11	**Supervisor approved:**	12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
EtFOSAA	2991-50-6		7.13	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9039.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 12:28:21 PM
Sample Name : ic134-0.5
Vial : P1-A2
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	105882	20.00	µg/L	0.000
M5-PFPeA	3.932	268.0 -> 223.0	211581	20.00	µg/L	0.012
M5-PFHxA	4.965	318.0 -> 273.0	305097	20.00	µg/L	0.000
M4-PFHpA	5.726	367.0 -> 322.0	316141	20.00	µg/L	0.000
M8-PFOA	6.361	421.0 -> 376.0	416664	20.00	µg/L	0.000
M9-PFNA	6.918	472.0 -> 427.0	433701	20.00	µg/L	0.000
M6-PFDA	7.449	519.0 -> 474.0	486760	20.00	µg/L	0.013
M7-PFUnDA	8.332	570.0 -> 525.0	574603	20.00	µg/L	0.012
M2-PFDoDA	9.388	615.0 -> 570.0	480359	20.00	µg/L	0.000
M2-PFTeDA	10.912	715.0 -> 670.0	412201	20.00	µg/L	0.012
M8-FOSA	6.592	506.0 -> 78.0	99824	20.00	µg/L	0.000
M3-PFBS	4.124	302.0 -> 99.0	26503	20.00	µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	36463	20.00	µg/L	0.000
M8-PFOS	6.879	507.0 -> 99.0	48365	20.00	µg/L	0.000
M2-4:2FTS	4.886	329.0 -> 309.0	90510	20.00	µg/L	0.000
M2-6:2FTS	6.360	429.0 -> 409.0	147784	20.00	µg/L	0.000
M2-8:2FTS	7.512	529.0 -> 509.0	138839	20.00	µg/L	0.000
M3-MeFOSAA	7.034	573.0 -> 419.0	36426	20.00	µg/L	0.000
M3-HFPO-DA	5.194	287.0 -> 169.0	66804	20.00	µg/L	0.012
M3-MeFOSA	6.952	515.0 -> 169.0	31166	20.00	µg/L	0.000
M5-EtFOSAA	7.145	589.0 -> 419.0	37679	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	90510	18.80	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.0%		
13C2-6:2FTS	6.360	429.0 -> 409.0	147784	19.28	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.4%		
13C2-8:2FTS	7.512	529.0 -> 509.0	138839	19.23	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.1%		
13C2-PFDoDA	9.388	615.0 -> 570.0	480359	21.36	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.8%		
13C2-PFTeDA	10.912	715.0 -> 670.0	412201	21.05	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.3%		
13C3-PFBS	4.124	302.0 -> 99.0	26503	20.39	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.0%		
13C3-PFHxS	5.733	402.0 -> 99.0	36463	20.37	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.9%		
13C4-PFBA	2.400	217.0 -> 172.0	105882	20.35	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.8%		
13C4-PFHpA	5.726	367.0 -> 322.0	316141	20.56	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.8%		
13C5-PFHxA	4.965	318.0 -> 273.0	305097	20.28	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.4%		
13C5-PFPeA	3.932	268.0 -> 223.0	211581	20.17	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.8%		
13C6-PFDA	7.449	519.0 -> 474.0	486760	20.94	µg/L	0.013

Perfluorinated Compounds by LC/MS/MS

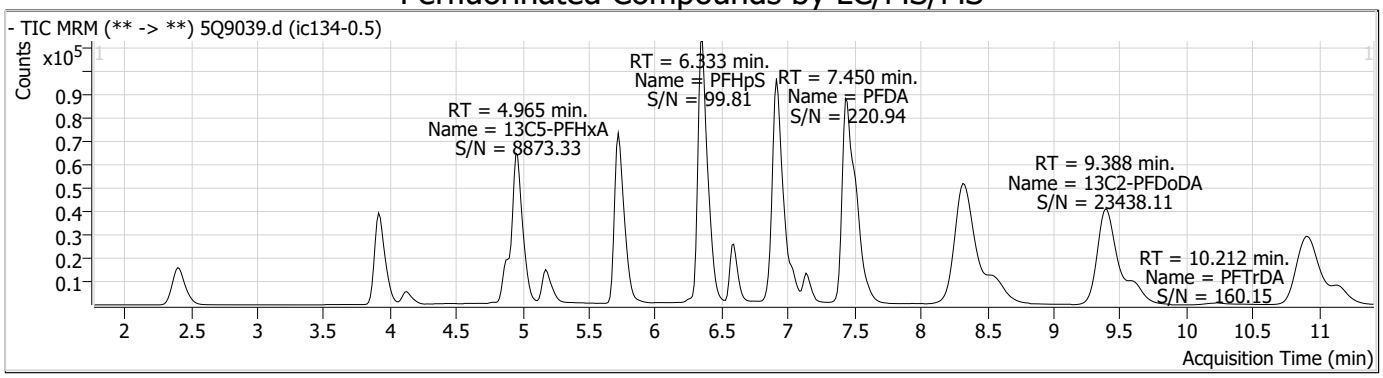
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.7%		
13C7-PFUnDA	8.332	570.0 -> 525.0	574603	19.64 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%		
13C8-FOSA	6.592	506.0 -> 78.0	99824	20.67 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.4%		
13C8-PFOA	6.361	421.0 -> 376.0	416664	20.68 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.4%		
13C8-PFOS	6.879	507.0 -> 99.0	48365	20.28 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.4%		
13C9-PFNA	6.918	472.0 -> 427.0	433701	20.62 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.1%		
d3-MeFOSAA	7.034	573.0 -> 419.0	36426	20.50 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.5%		
13C3-HFPO-DA	5.194	287.0 -> 169.0	66804	20.20 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.0%		
d3-MeFOSA	6.952	515.0 -> 169.0	31166	20.57 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.9%		
d5-EtFOSAA	7.145	589.0 -> 419.0	37679	20.43 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.1%		
Target Compounds						QValue
4:2FTS	4.888	327.0 -> 307.0	2260	0.46 µg/L		90
		327.0 -> 81.0	1510			
6:2FTS	6.360	427.0 -> 407.0	3282	0.43 µg/L		94
		427.0 -> 81.0	1522			
8:2FTS	7.512	527.0 -> 507.0	3218	0.45 µg/L		99
		527.0 -> 81.0	1547			
EtFOSAA	7.145	584.0 -> 419.0	516	0.41 µg/L		90
		584.0 -> 483.0	288			
FOSA	6.594	498.0 -> 78.0	2099	0.41 µg/L		99
		498.0 -> 478.0	63			
MeFOSAA	7.047	570.0 -> 419.0	587	0.40 µg/L		91
		570.0 -> 512.0	276			
PFBA	2.406	213.0 -> 169.0	2330	0.40 µg/L		100
PFBS	4.129	299.0 -> 80.0	1650	0.38 µg/L		95
		299.0 -> 99.0	757			
PFDA	7.450	513.0 -> 469.0	10292	0.40 µg/L		94
		513.0 -> 219.0	2096			
PFDoDA	9.392	613.0 -> 569.0	8866	0.40 µg/L		96
		613.0 -> 319.0	1368			
PFDS	8.144	599.0 -> 80.0	2213	0.43 µg/L		91
		599.0 -> 99.0	1176			
PFHpA	5.727	363.0 -> 319.0	7695	0.39 µg/L		96
		363.0 -> 169.0	1846			
PFHpS	6.333	449.0 -> 80.0	1604	0.43 µg/L		98
		449.0 -> 99.0	854			
PFHxA	4.966	313.0 -> 269.0	6073	0.39 µg/L		99
		313.0 -> 119.0	297			
PFHxS	5.735	399.0 -> 80.0	1509	0.41 µg/L	m	88
		399.0 -> 99.0	980			
PFNA	6.918	463.0 -> 419.0	9671	0.43 µg/L		100
		463.0 -> 219.0	2088			
PFNS	7.384	549.0 -> 80.0	1354	0.41 µg/L		99
		549.0 -> 99.0	822			
PFOA	6.362	413.0 -> 369.0	10020	0.42 µg/L		98
		413.0 -> 169.0	2586			
PFOS	6.880	499.0 -> 80.0	2063	0.46 µg/L	m	87

Perfluorinated Compounds by LC/MS/MS

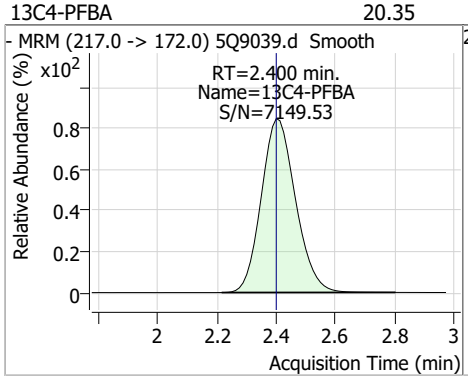
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	800			
PFPeA	3.922	263.0 -> 219.0	5095	0.41	µg/L	100
PFPeS	5.035	349.0 -> 80.0	1186	0.42	µg/L	89
		349.0 -> 99.0	514			
PFTeDA	10.903	713.0 -> 669.0	7836	0.37	µg/L	98
		713.0 -> 219.0	842			
PFTrDA	10.212	663.0 -> 619.0	8090	0.39	µg/L	100
		663.0 -> 369.0	896			
PFUnDA	8.334	563.0 -> 519.0	12699	0.43	µg/L	100
		563.0 -> 269.0	2153			
11Cl-PF3OUdS	8.641	631.0 -> 451.0	7878	0.35	µg/L	89
		633.0 -> 453.0	2718			
9Cl-PF3ONS	7.123	531.0 -> 351.0	7597	0.35	µg/L	99
		533.0 -> 353.0	2362			
ADONA	5.777	377.0 -> 251.0	10118	0.41	µg/L	99
		377.0 -> 85.0	3843			
HFPO-DA	5.190	329.0 -> 169.0	2135	0.40	µg/L	98
		285.0 -> 169.0	1237			
MeFOSA	6.953	512.0 -> 169.0	723	0.39	µg/L	99
		512.0 -> 219.0	571			
4-PFECHS	6.268	461.0 -> 381.0	4800	0.36	µg/L	99
		461.0 -> 99.0	2526			
FBSA	4.793	298.0 -> 78.0	2544	0.40	µg/L	99
		298.0 -> 64.0	244			
FHxSA	5.888	398.0 -> 78.0	2333	0.38	µg/L	99
		398.0 -> 64.0	235			

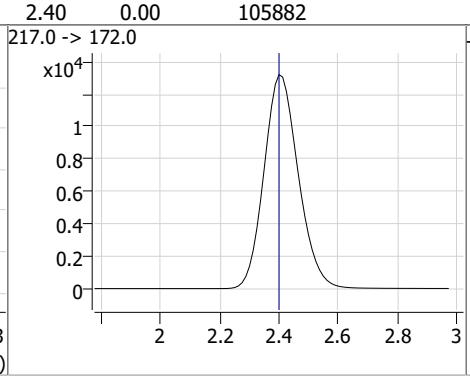
 # = Qualifier out of range, m = manually integrated, + = Area summed

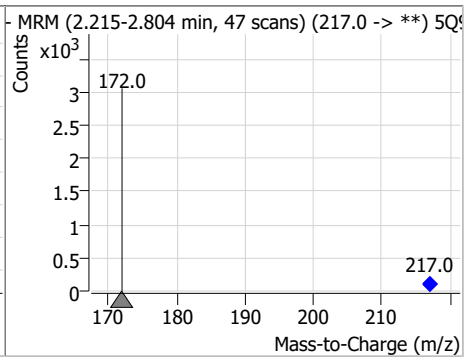
Perfluorinated Compounds by LC/MS/MS



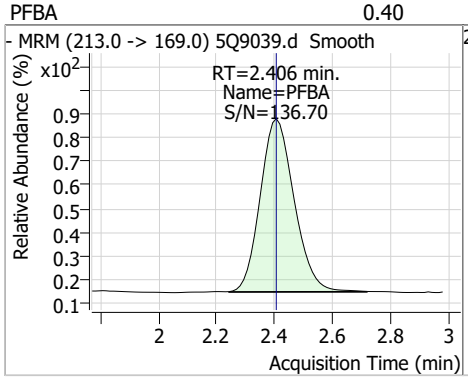
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.35	2.40	0.00	105882				

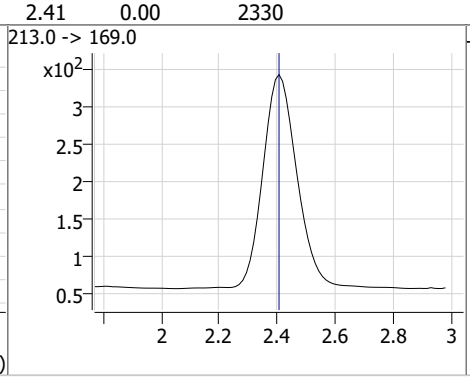


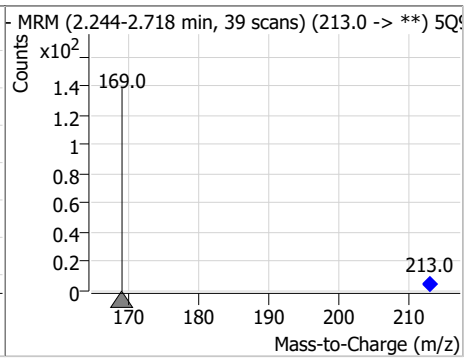




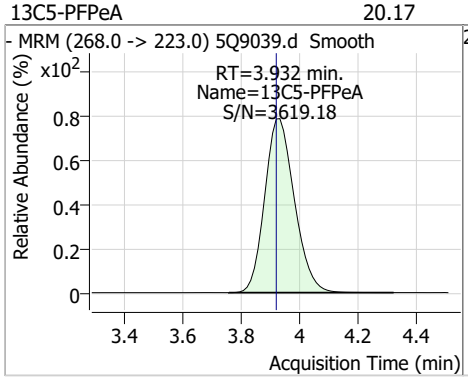
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.40	2.41	0.00	2330				

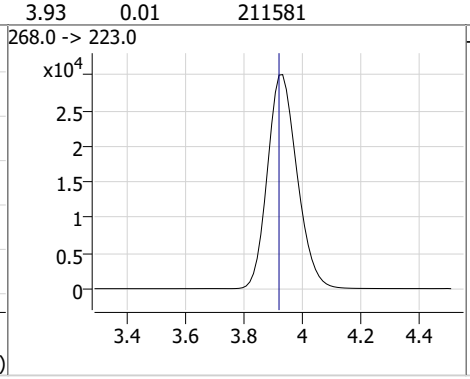


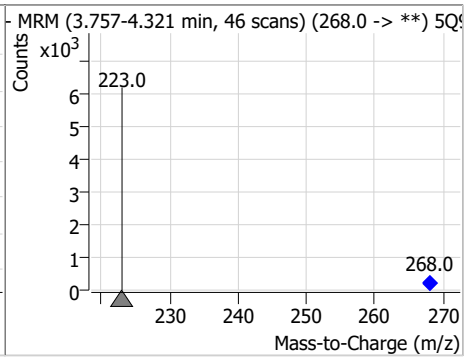




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.17	3.93	0.01	211581				

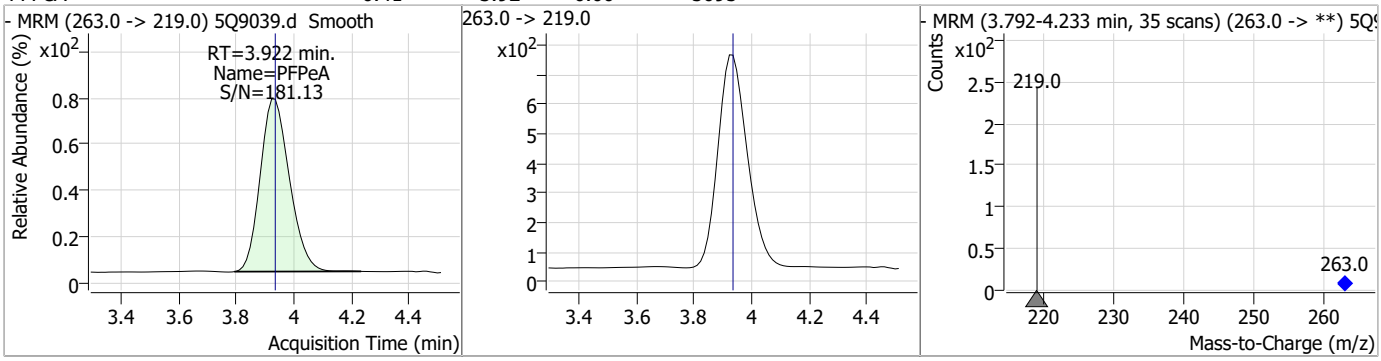




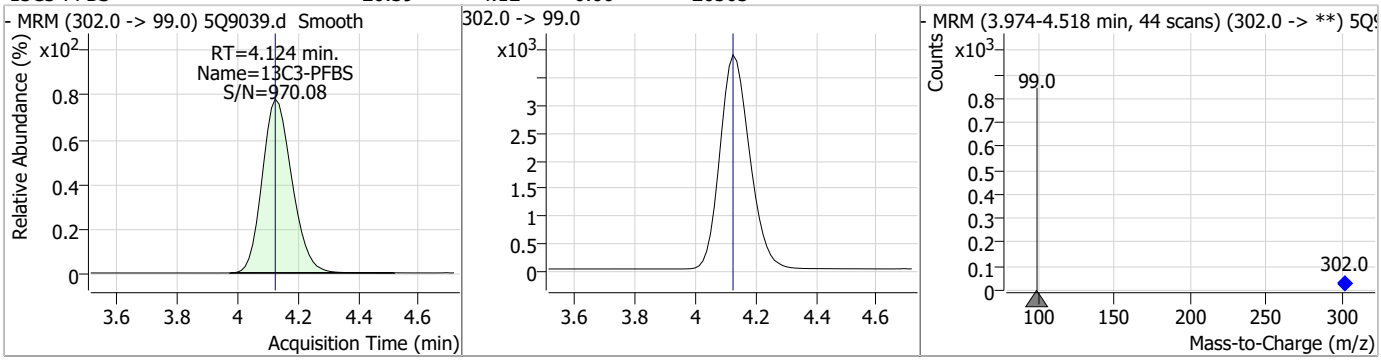


Perfluorinated Compounds by LC/MS/MS

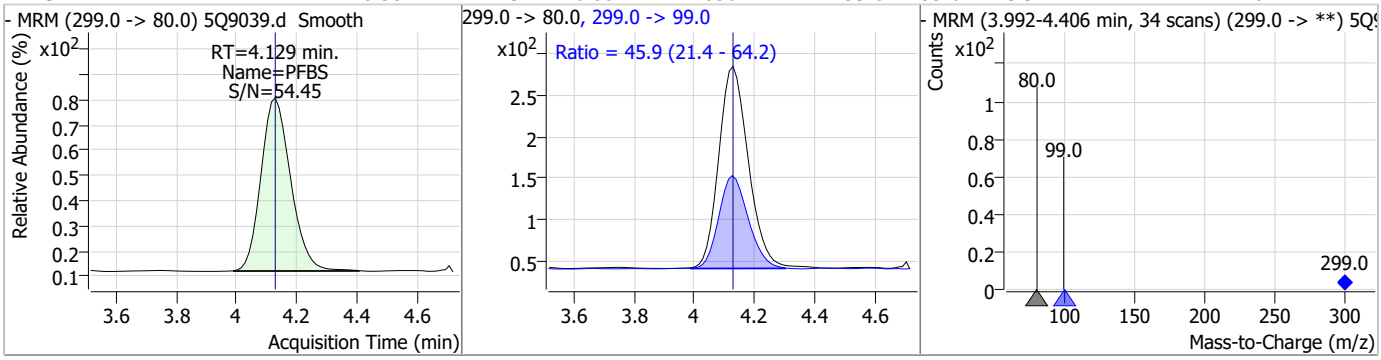
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.41	3.92	0.00	5095				



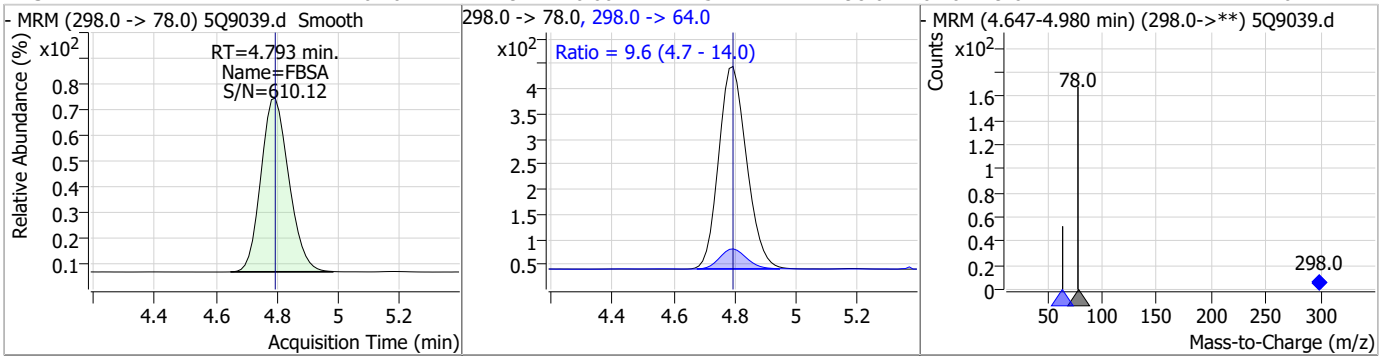
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.39	4.12	0.00	26503				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.38	4.13	0.00	1650	299.0 -> 99.0	45.9	21.4	64.2

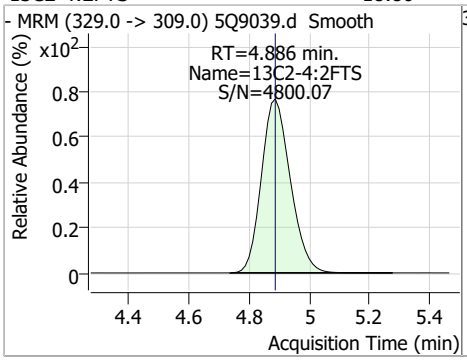


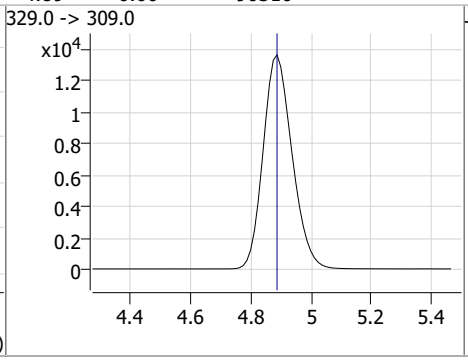
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	0.40	4.79	0.00	2544	298.0 -> 64.0	9.6	4.7	14.0

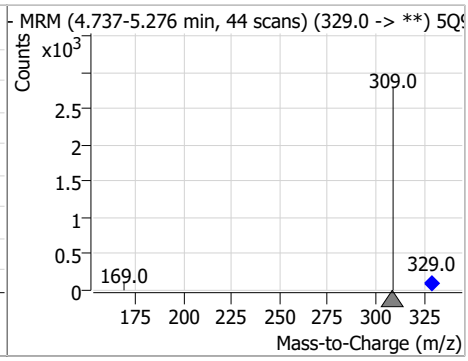


Perfluorinated Compounds by LC/MS/MS

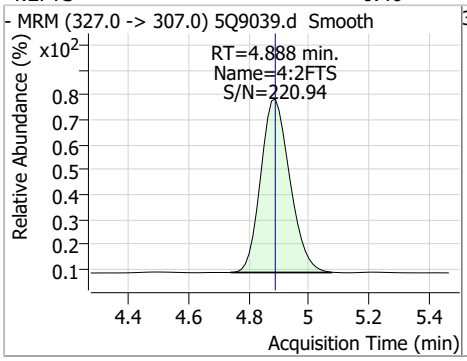
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.80	4.89	0.00	90510				

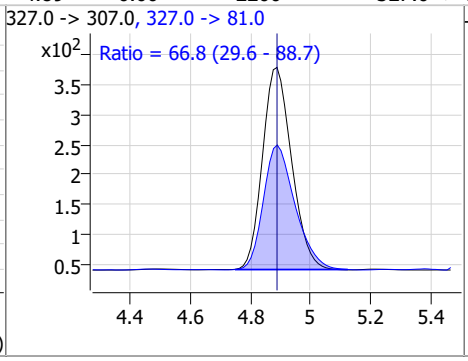


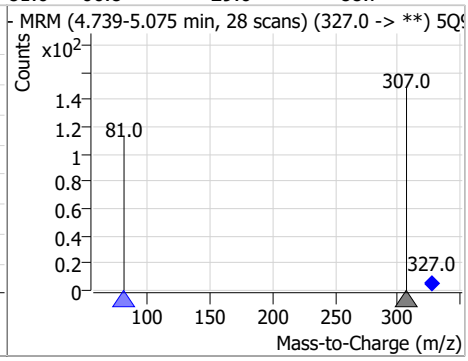




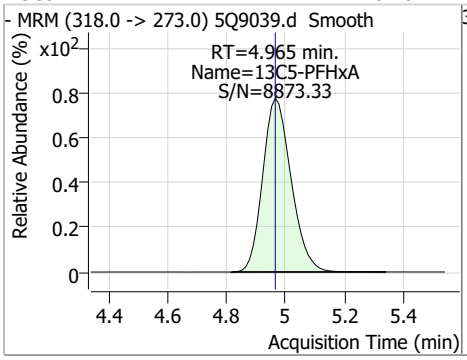
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	0.46	4.89	0.00	2260	327.0 -> 81.0	66.8	29.6	88.7

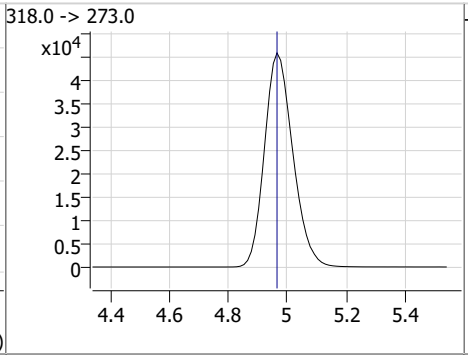


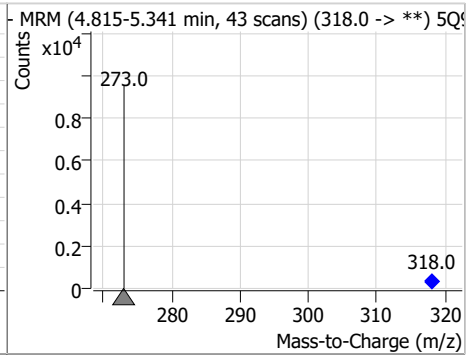




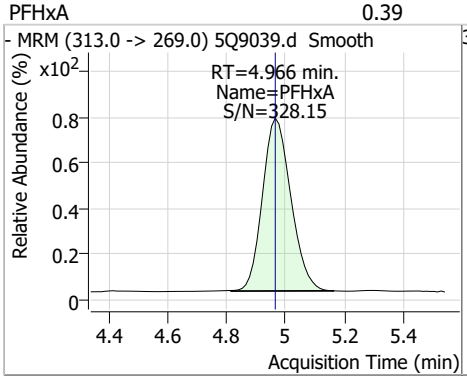
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.28	4.96	0.00	305097				

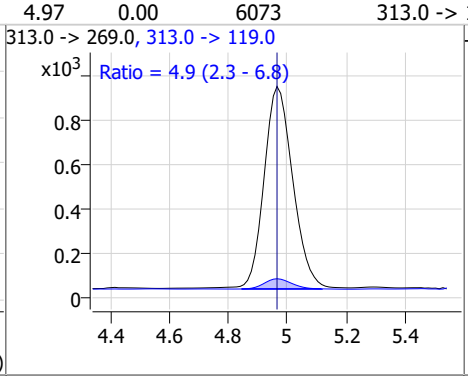


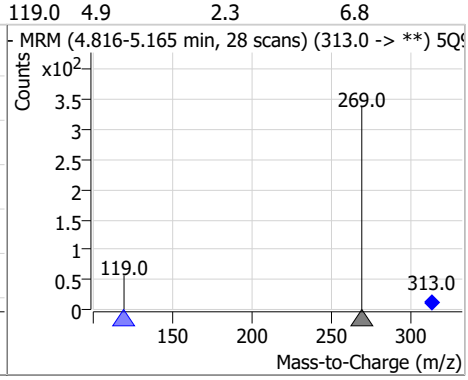




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.39	4.97	0.00	6073	313.0 -> 119.0	4.9	2.3	6.8

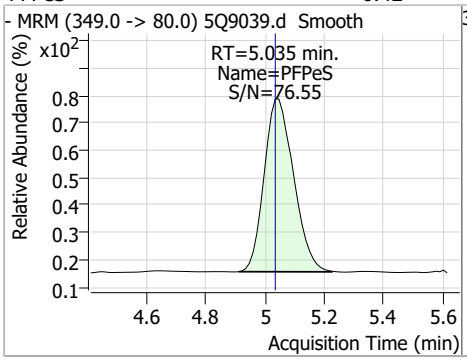


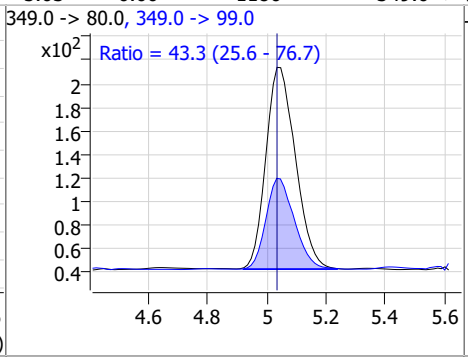


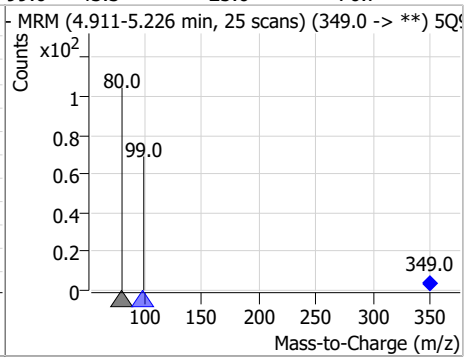


Perfluorinated Compounds by LC/MS/MS

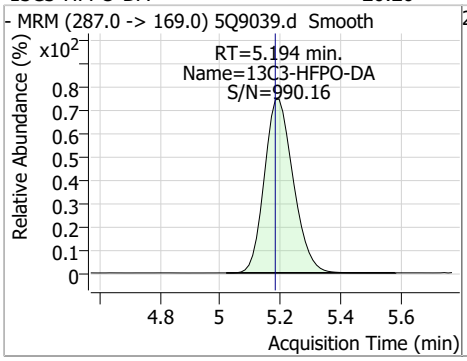
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	0.42	5.03	0.00	1186	349.0 -> 99.0	43.3	25.6	76.7

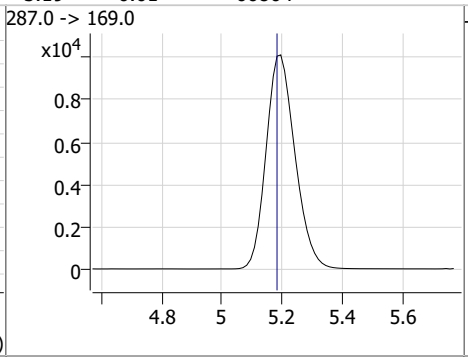


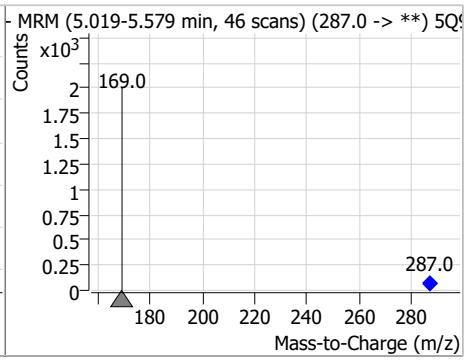




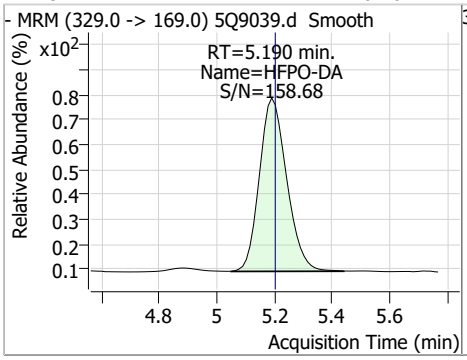
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.20	5.19	0.01	66804				

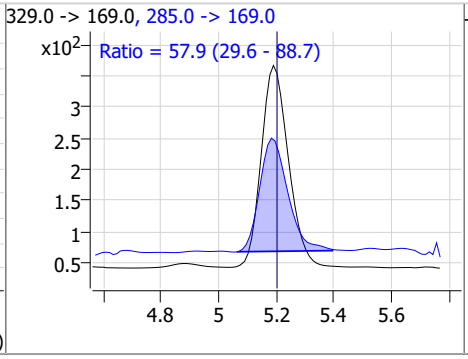


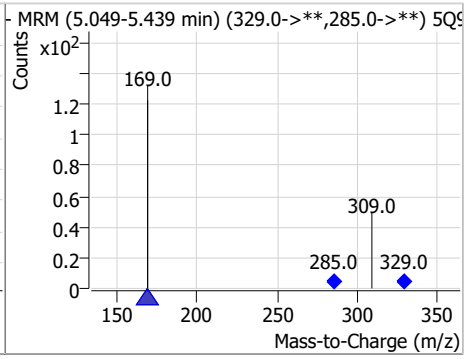




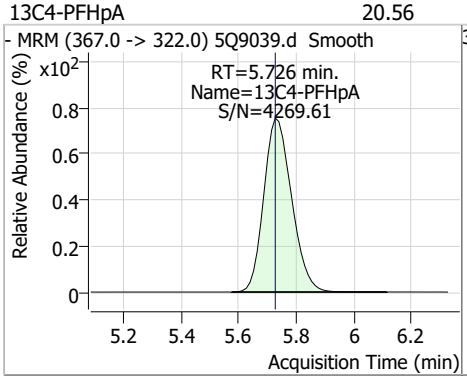
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.40	5.19	0.00	2135	285.0 -> 169.0	57.9	29.6	88.7

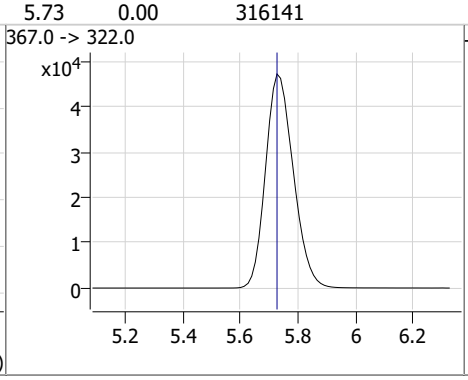


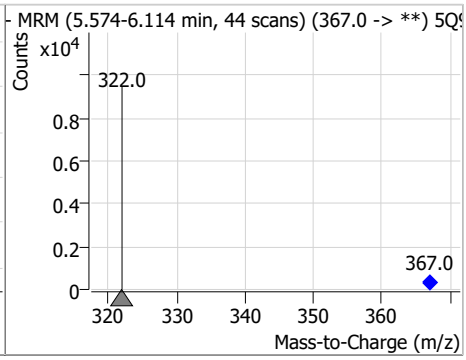




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.56	5.73	0.00	316141				

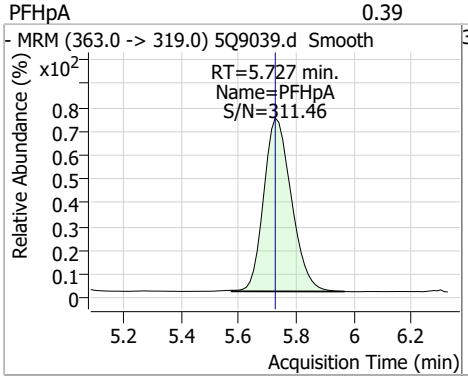


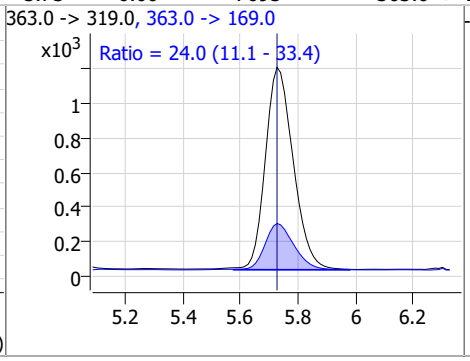


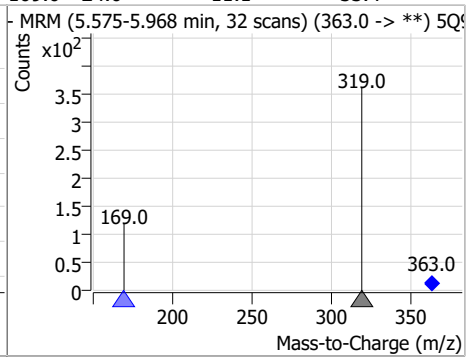


Perfluorinated Compounds by LC/MS/MS

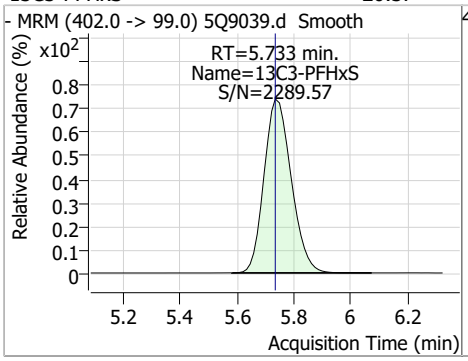
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.39	5.73	0.00	7695	363.0 -> 169.0	24.0	11.1	33.4

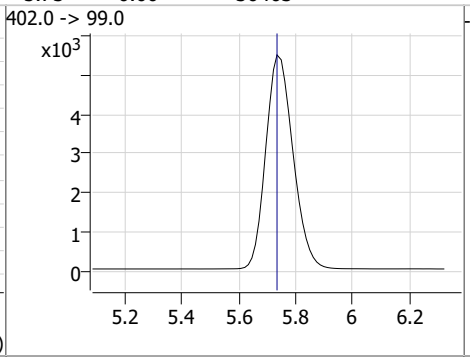


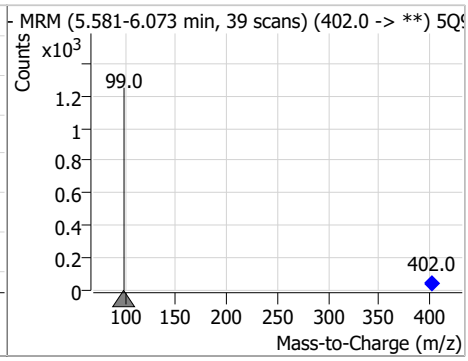




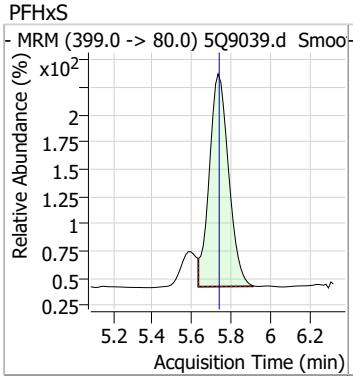
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.37	5.73	0.00	36463				

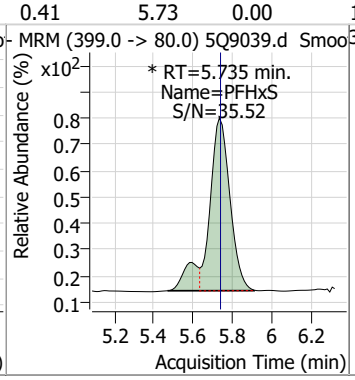


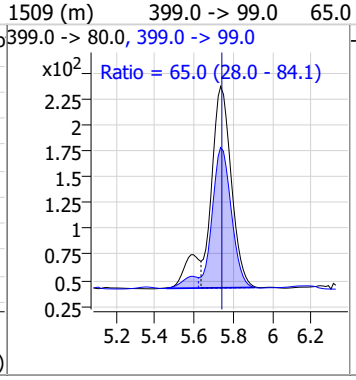


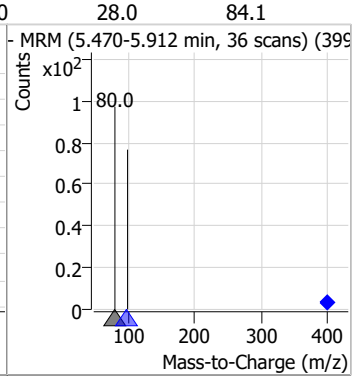


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.41	5.73	0.00	1509 (m)	399.0 -> 99.0	65.0	28.0	84.1

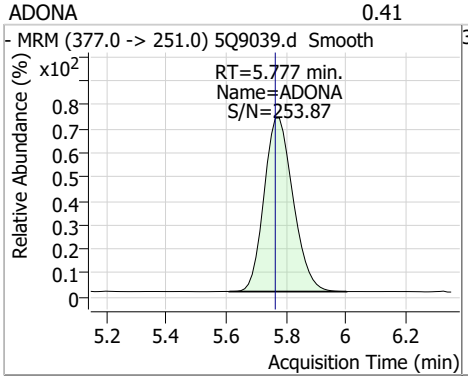


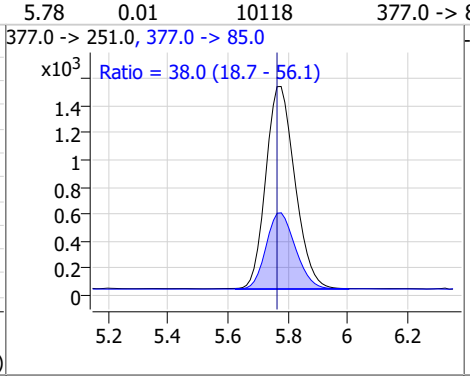


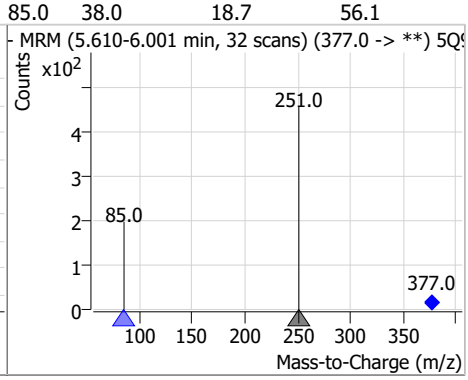




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.41	5.78	0.01	10118	377.0 -> 85.0	38.0	18.7	56.1

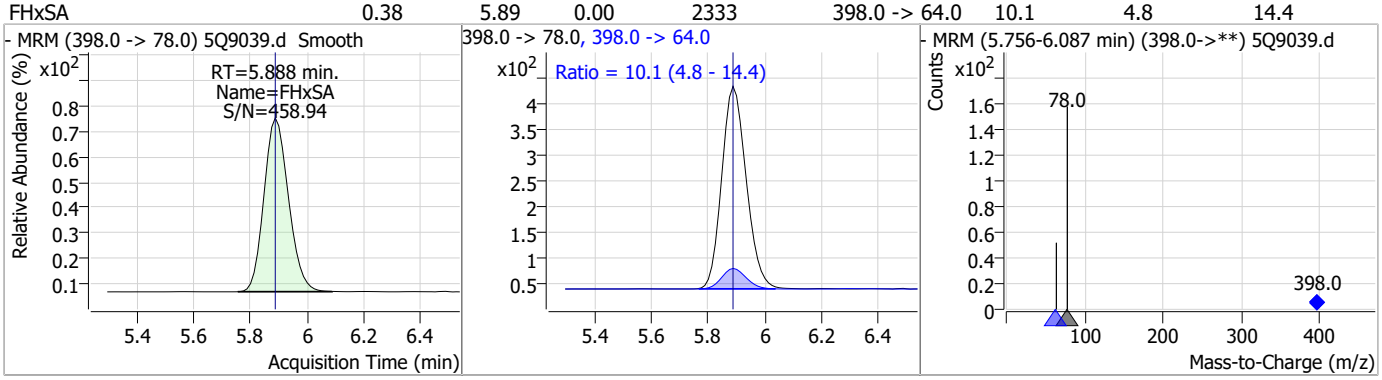




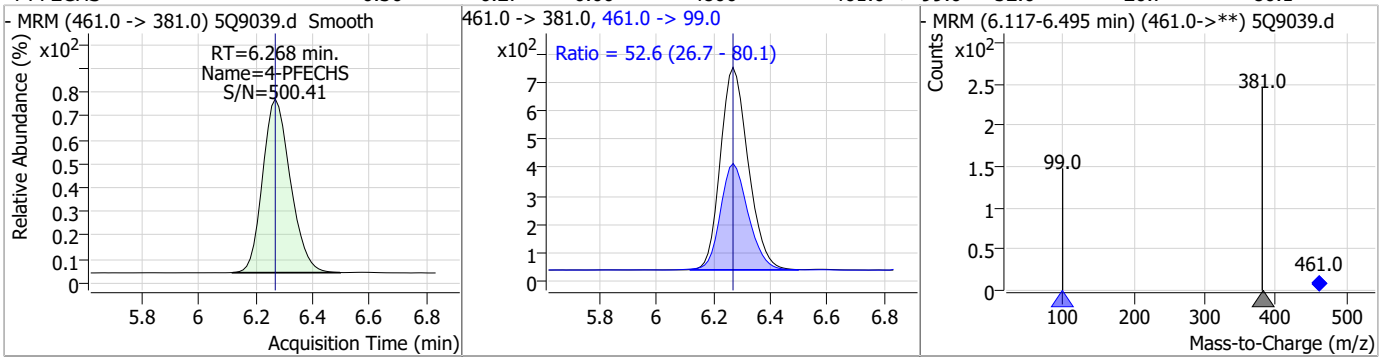


Perfluorinated Compounds by LC/MS/MS

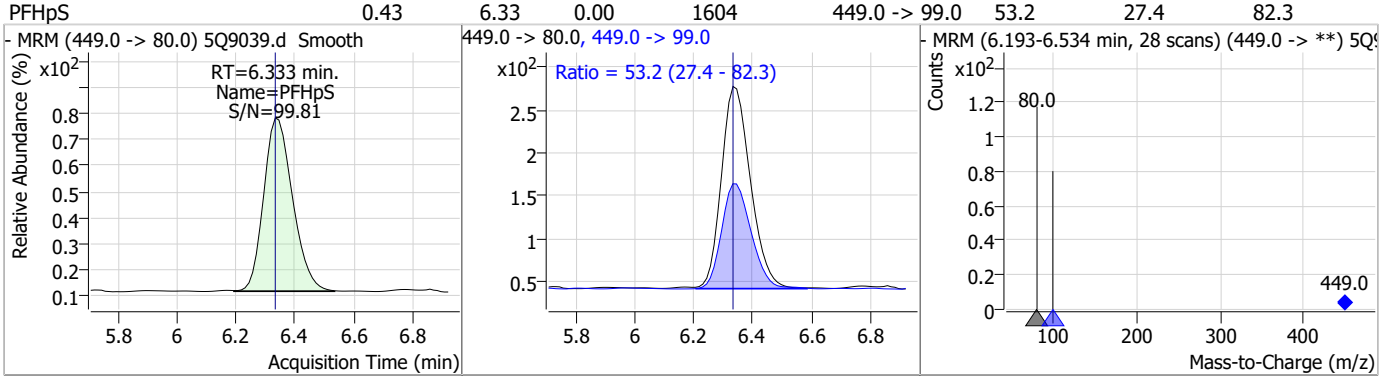
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	0.38	5.89	0.00	2333	398.0 -> 64.0	10.1	4.8	14.4



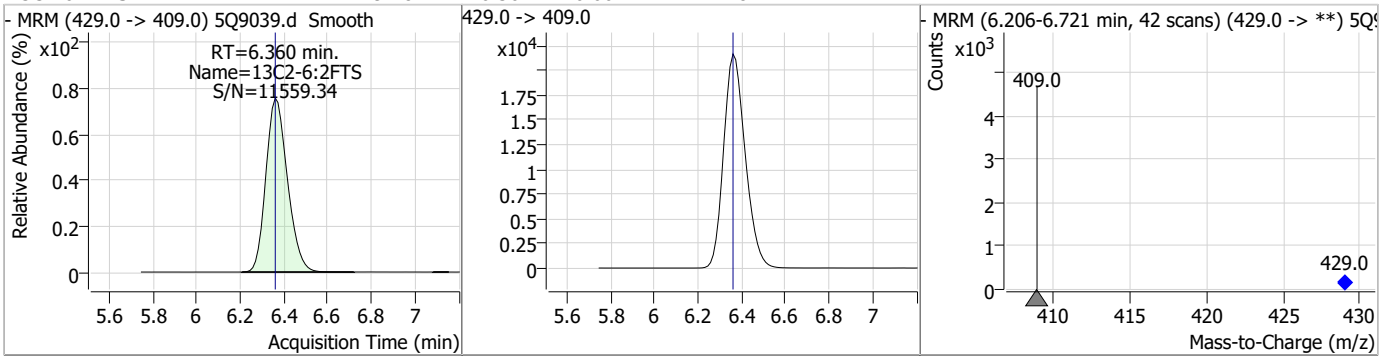
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	0.36	6.27	0.00	4800	461.0 -> 99.0	52.6	26.7	80.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	0.43	6.33	0.00	1604	449.0 -> 99.0	53.2	27.4	82.3

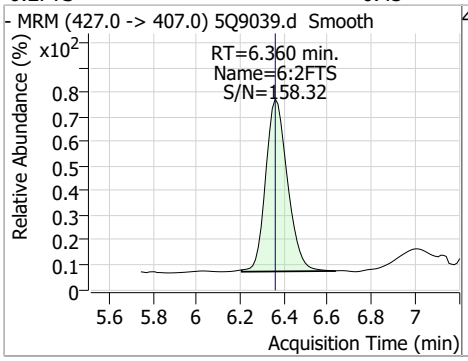


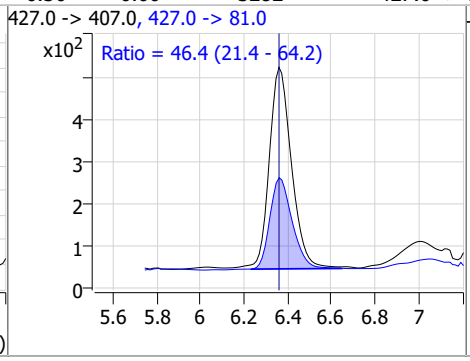
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.28	6.36	0.00	147784				

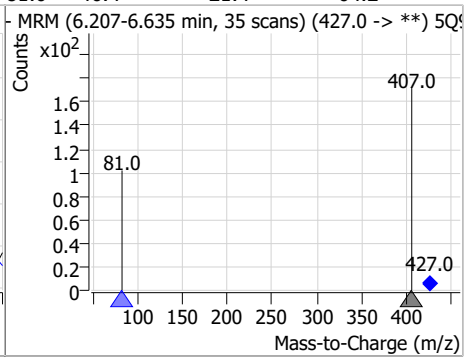


Perfluorinated Compounds by LC/MS/MS

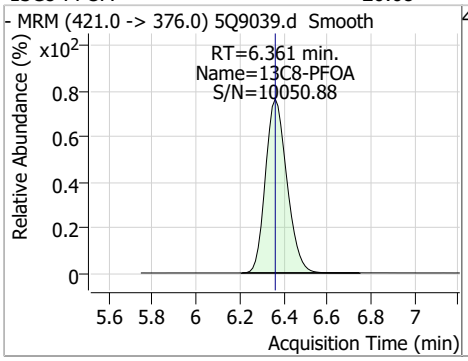
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	0.43	6.36	0.00	3282	427.0 -> 81.0	46.4	21.4	64.2

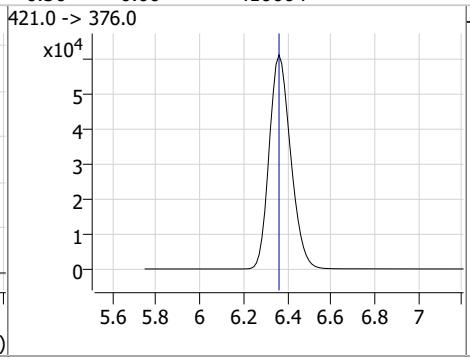


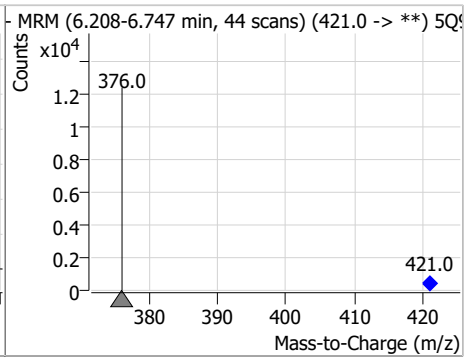




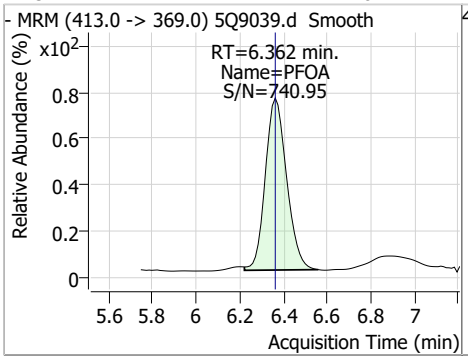
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.68	6.36	0.00	416664				

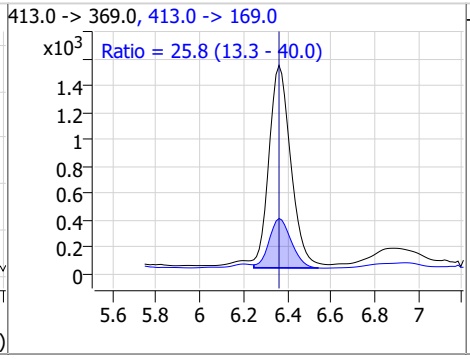


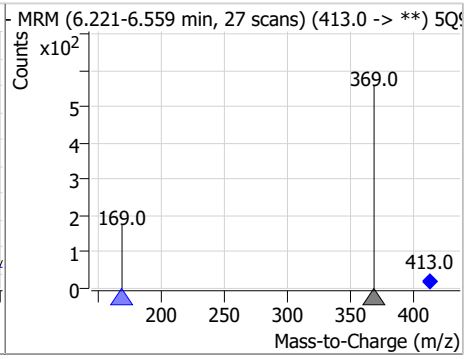




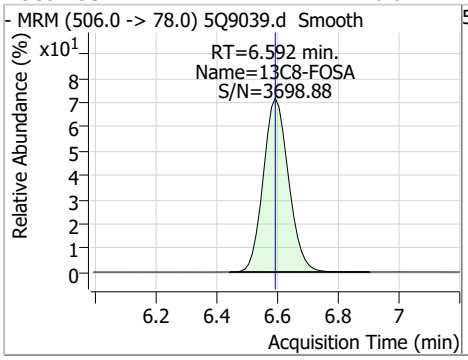
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.42	6.36	0.00	10020	413.0 -> 169.0	25.8	13.3	40.0

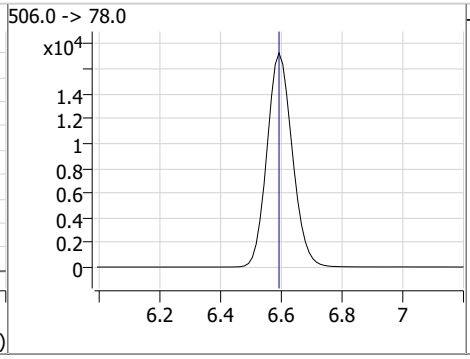


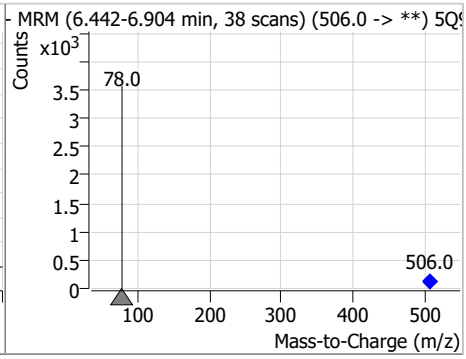




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.67	6.59	0.00	99824				

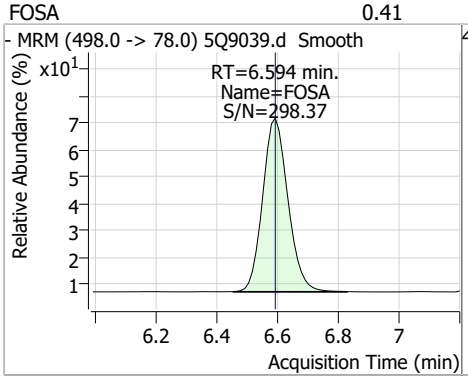


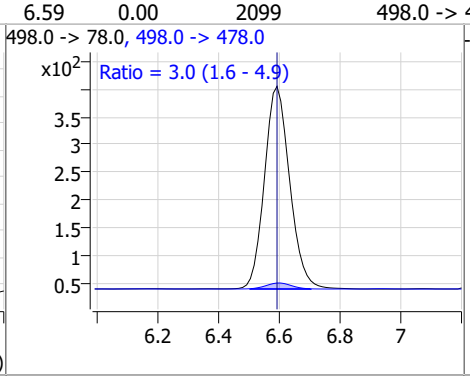


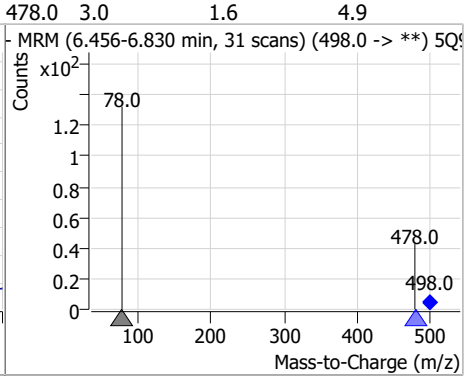


Perfluorinated Compounds by LC/MS/MS

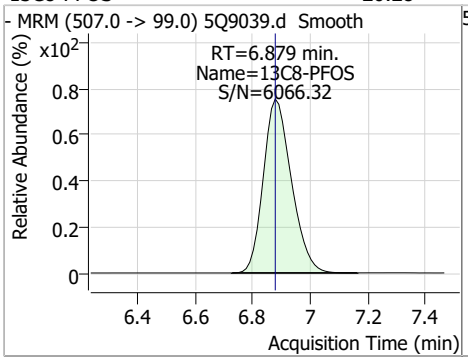
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	0.41	6.59	0.00	2099	498.0 -> 478.0	3.0	1.6	4.9

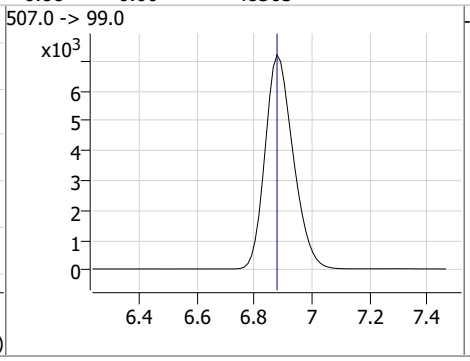


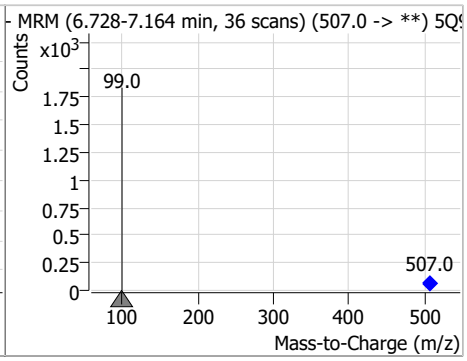




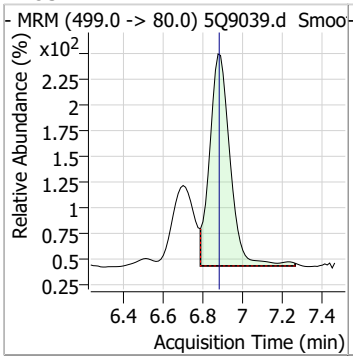
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.28	6.88	0.00	48365				

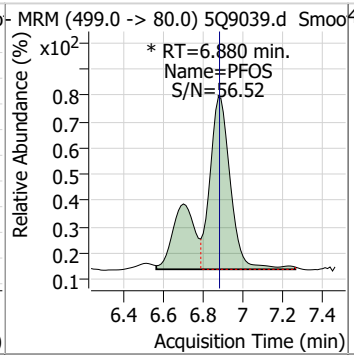


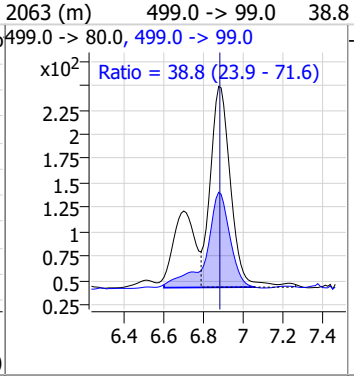


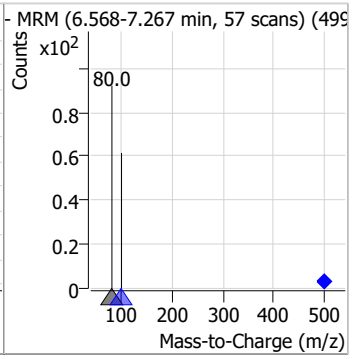


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.46	6.88	0.00	2063 (m)	499.0 -> 99.0	38.8	23.9	71.6

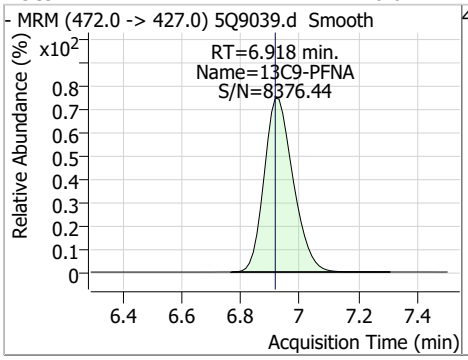


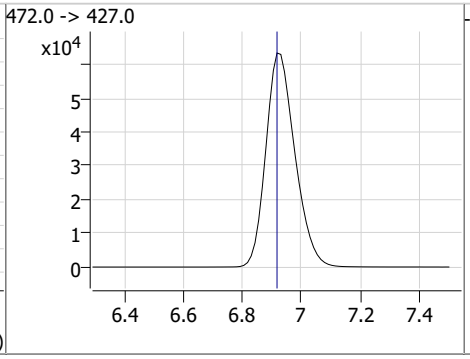


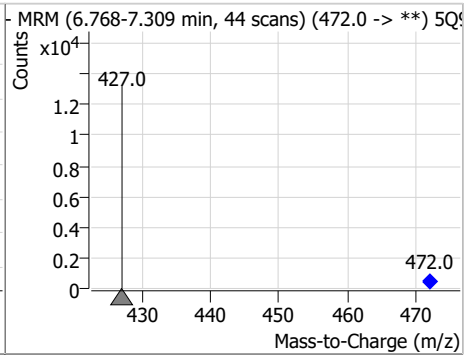




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.62	6.92	0.00	433701				

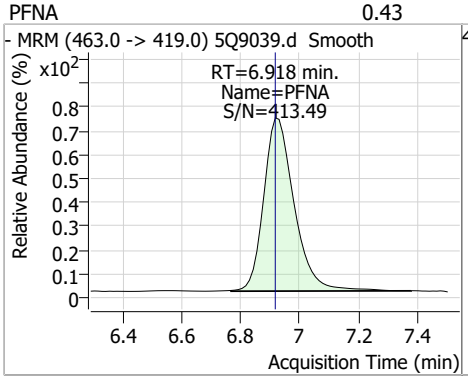


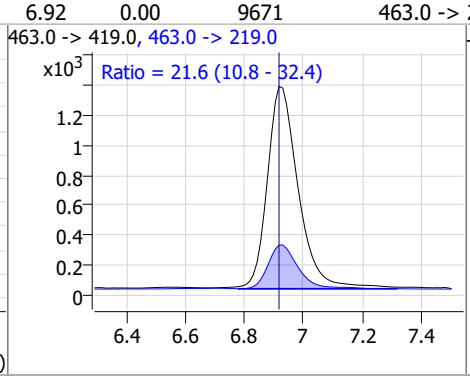


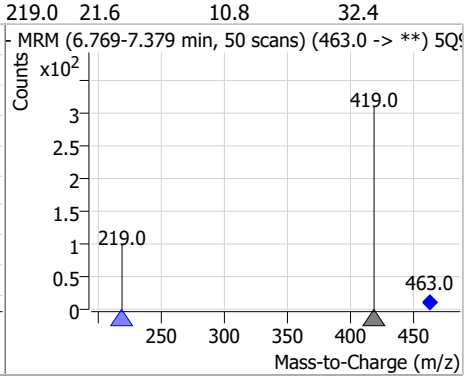


Perfluorinated Compounds by LC/MS/MS

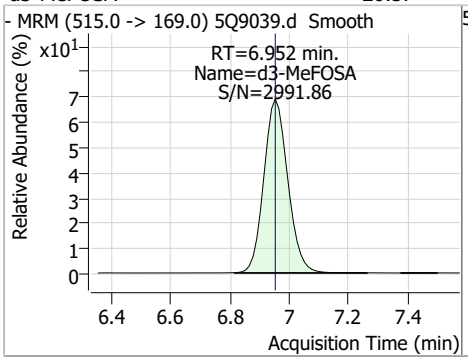
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.43	6.92	0.00	9671	463.0 -> 219.0	21.6	10.8	32.4

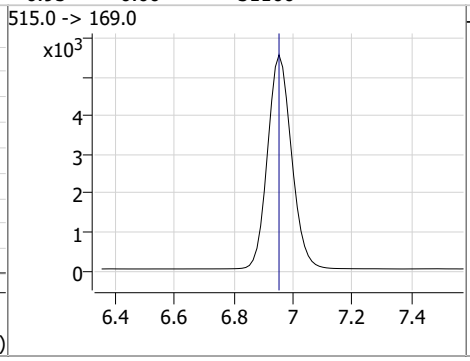


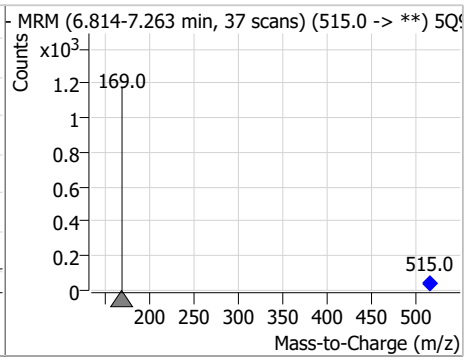




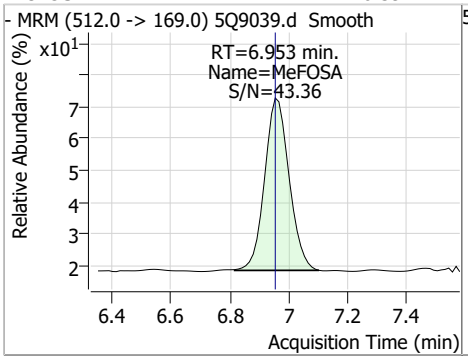
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	20.57	6.95	0.00	31166				

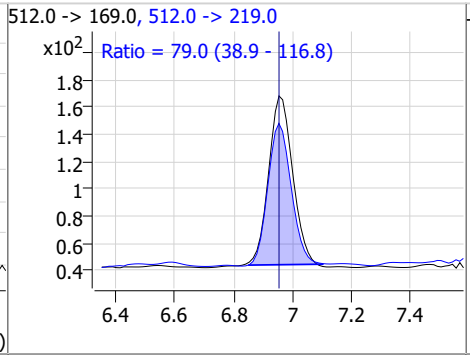


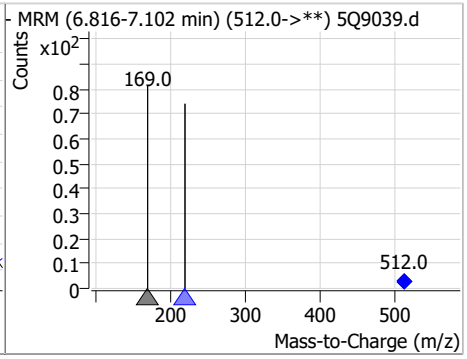




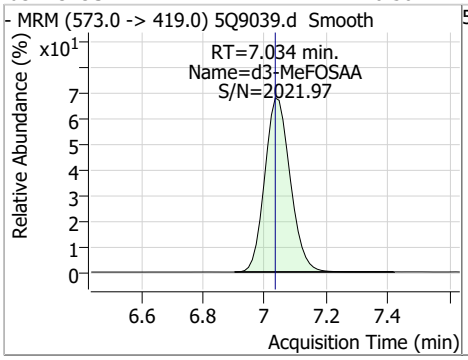
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	0.39	6.95	0.00	723	512.0 -> 219.0	79.0	38.9	116.8

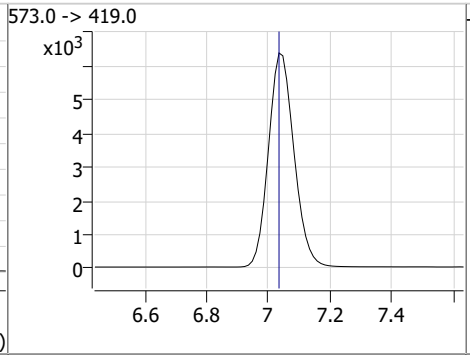


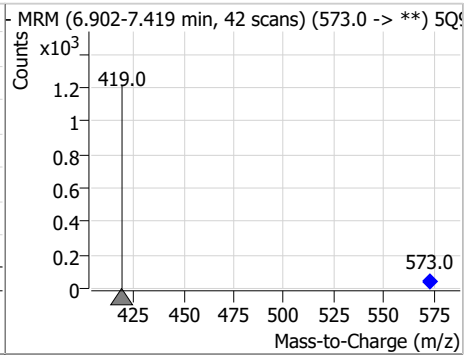




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.50	7.03	0.00	36426				

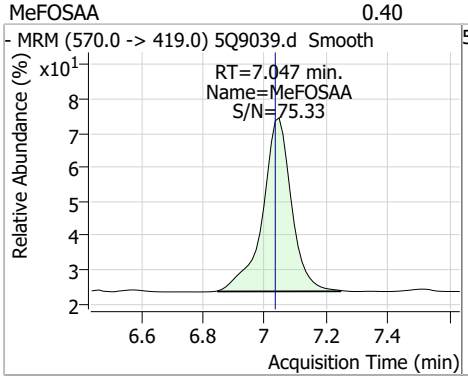


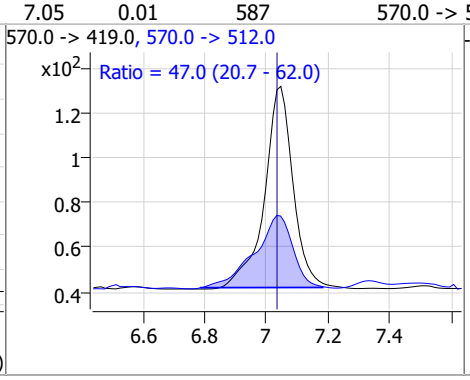


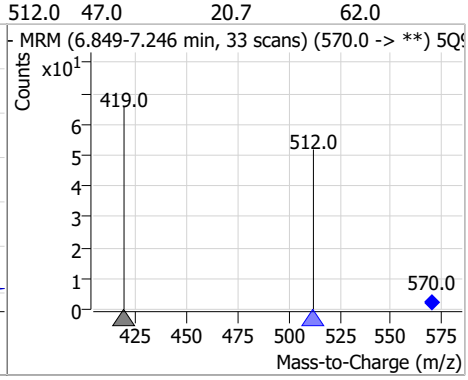


Perfluorinated Compounds by LC/MS/MS

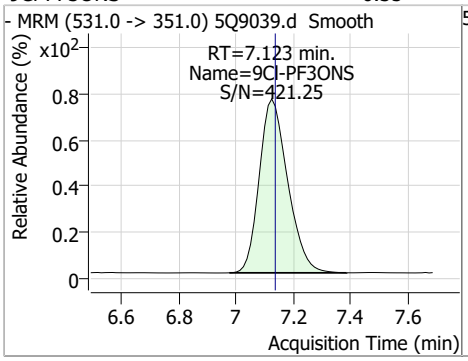
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.40	7.05	0.01	587	570.0 -> 512.0	47.0	20.7	62.0

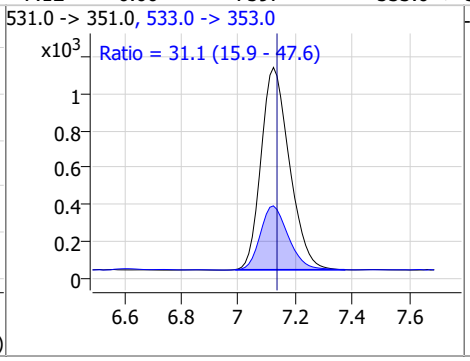


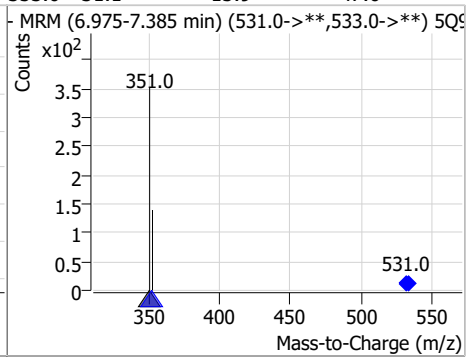




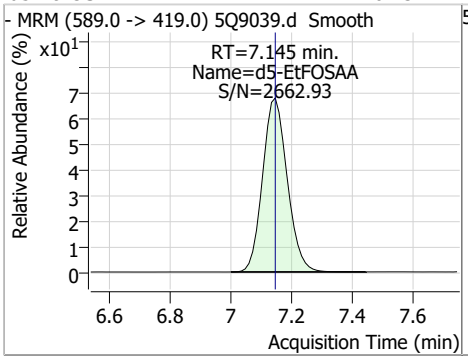
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.35	7.12	0.00	7597	533.0 -> 353.0	31.1	15.9	47.6

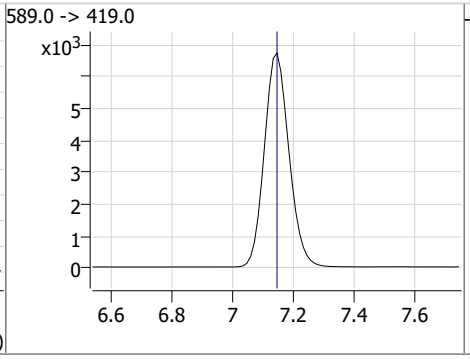


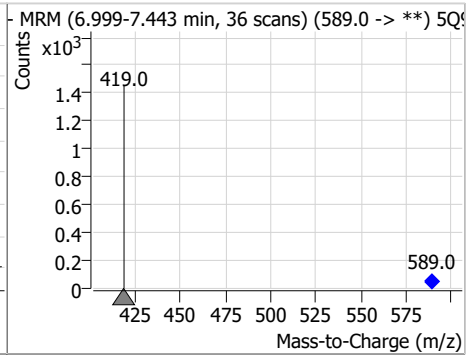




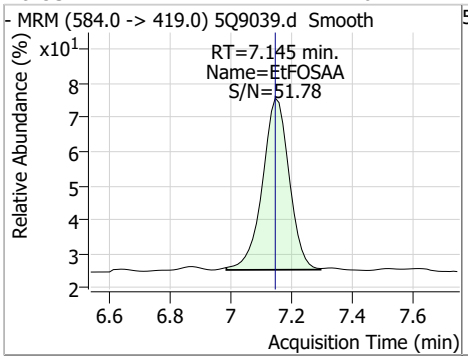
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.43	7.14	0.00	37679				

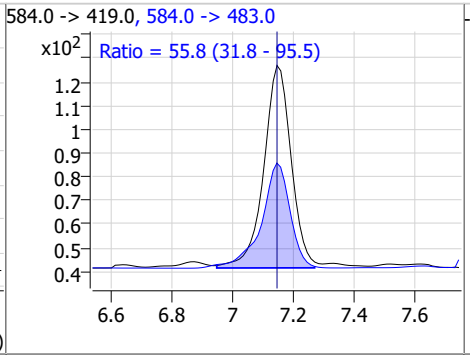


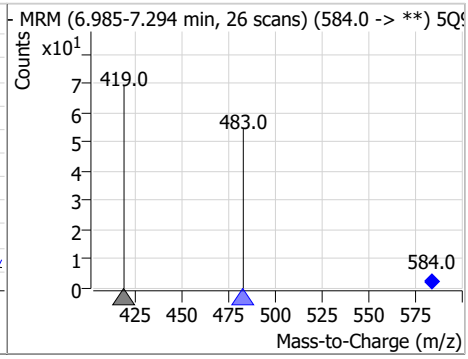




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	0.41	7.15	0.00	516	584.0 -> 483.0	55.8	31.8	95.5

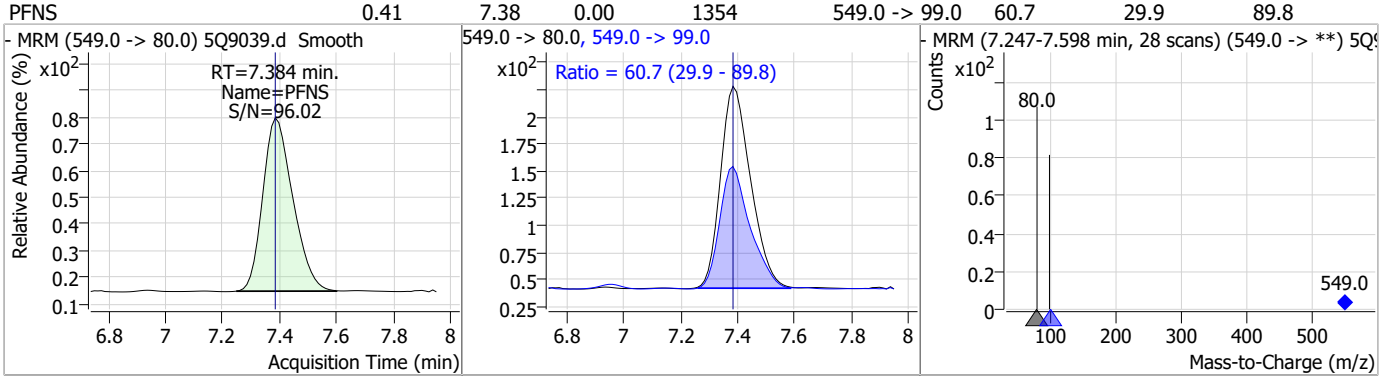




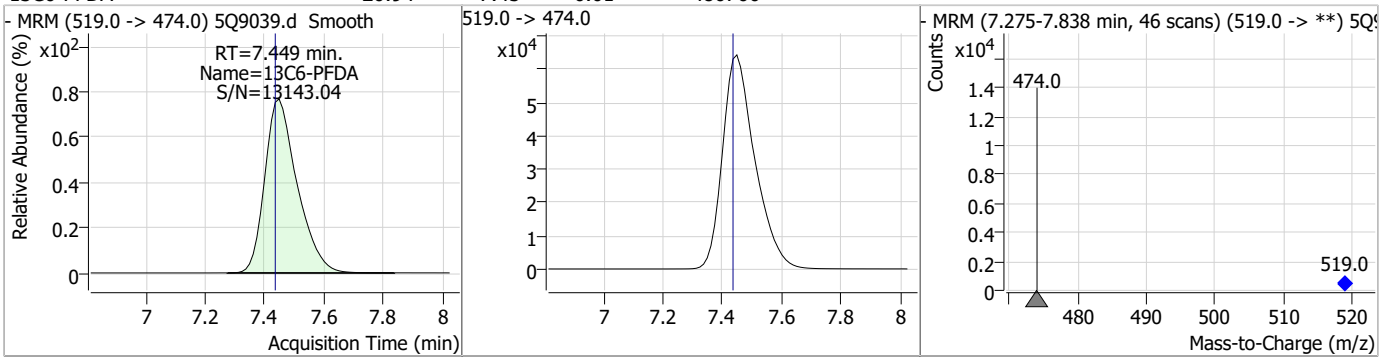


Perfluorinated Compounds by LC/MS/MS

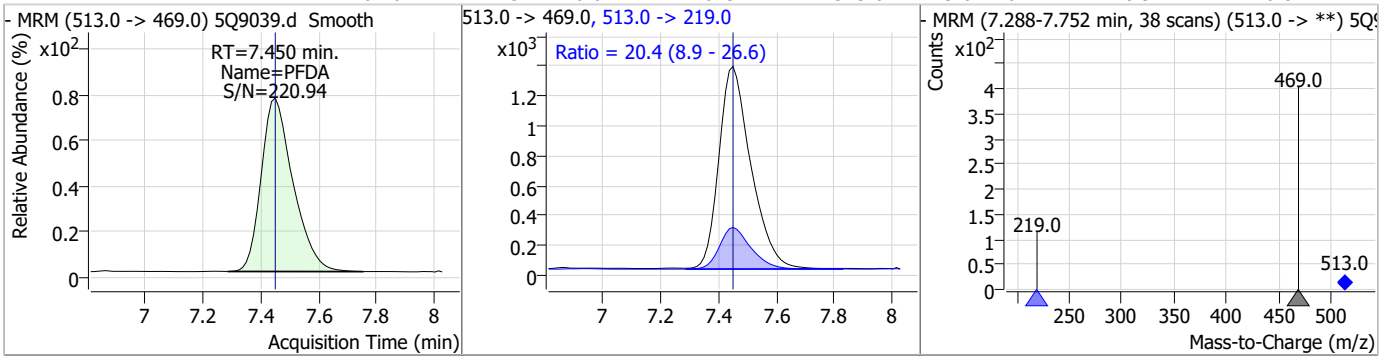
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	0.41	7.38	0.00	1354	549.0 -> 99.0	60.7	29.9	89.8



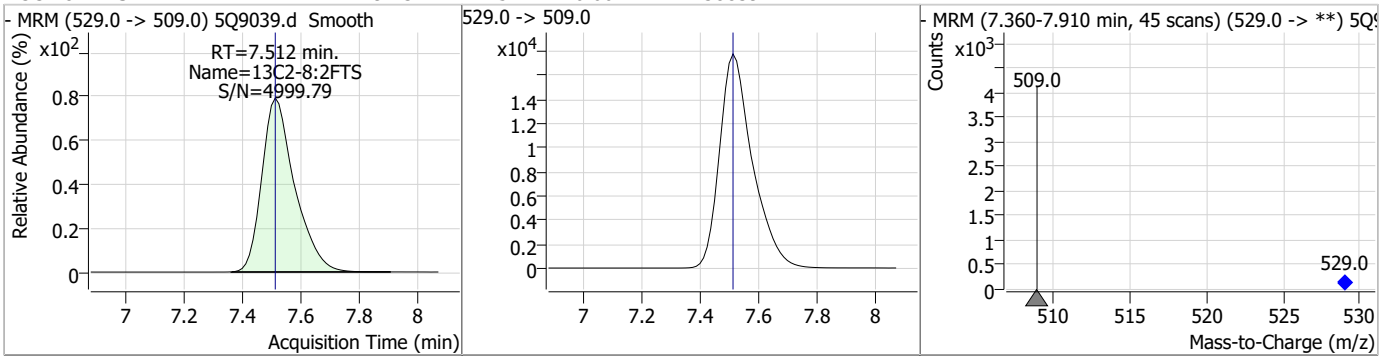
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.94	7.45	0.01	486760				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.40	7.45	0.01	10292	513.0 -> 219.0	20.4	8.9	26.6

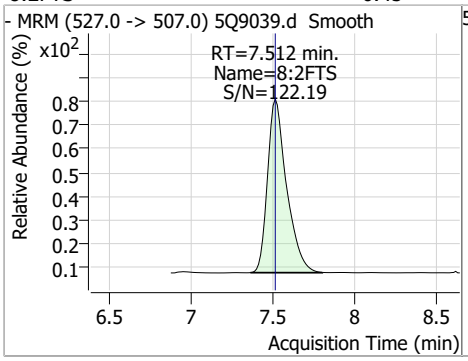


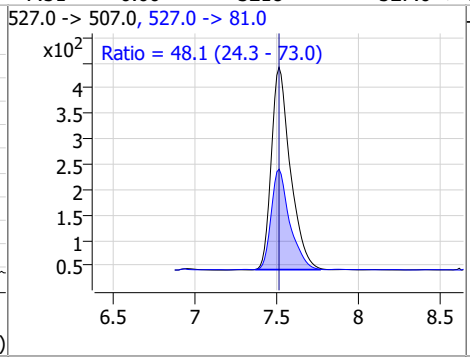
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.23	7.51	0.00	138839				

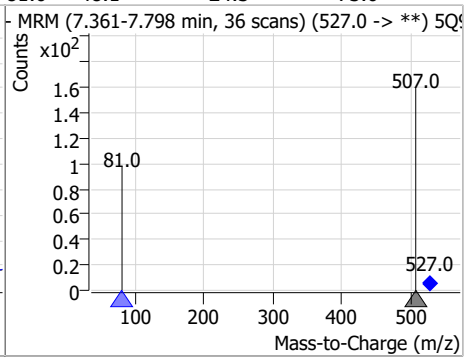


Perfluorinated Compounds by LC/MS/MS

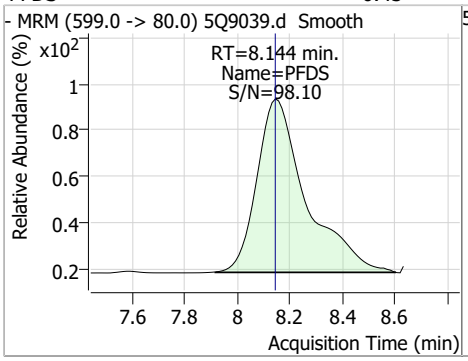
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	0.45	7.51	0.00	3218	527.0 -> 81.0	48.1	24.3	73.0

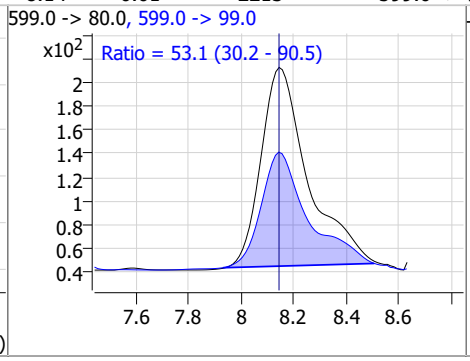


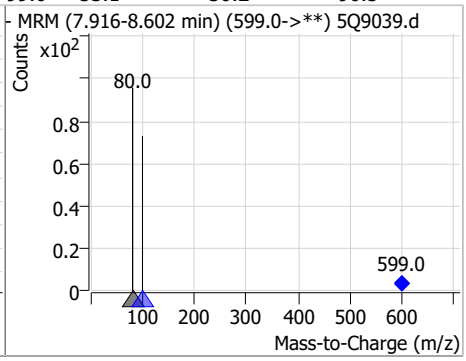




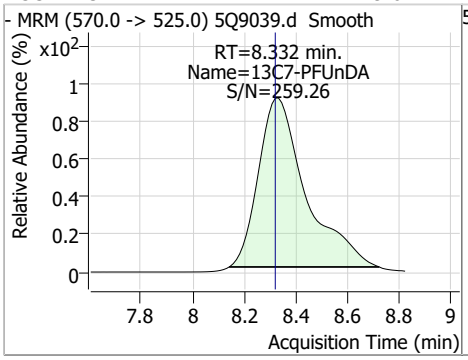
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	0.43	8.14	0.01	2213	599.0 -> 99.0	53.1	30.2	90.5

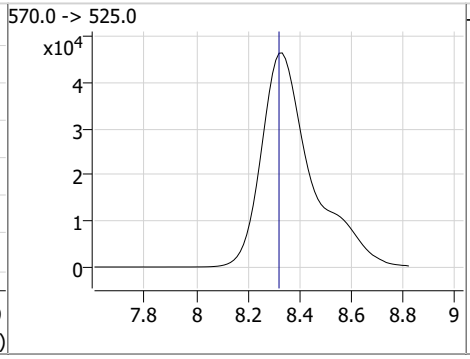


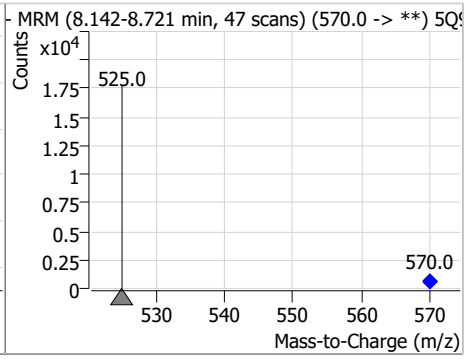




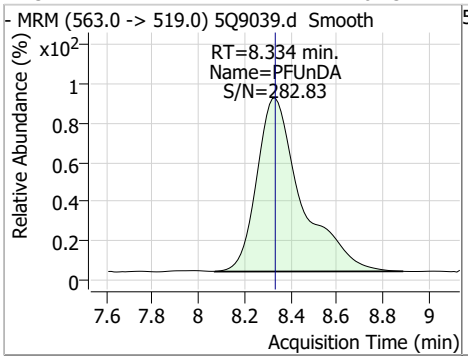
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.64	8.33	0.01	574603				

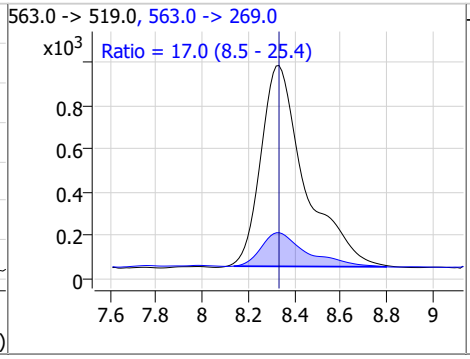


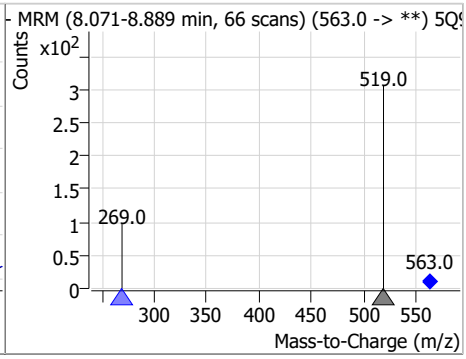




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.43	8.33	0.01	12699	563.0 -> 269.0	17.0	8.5	25.4

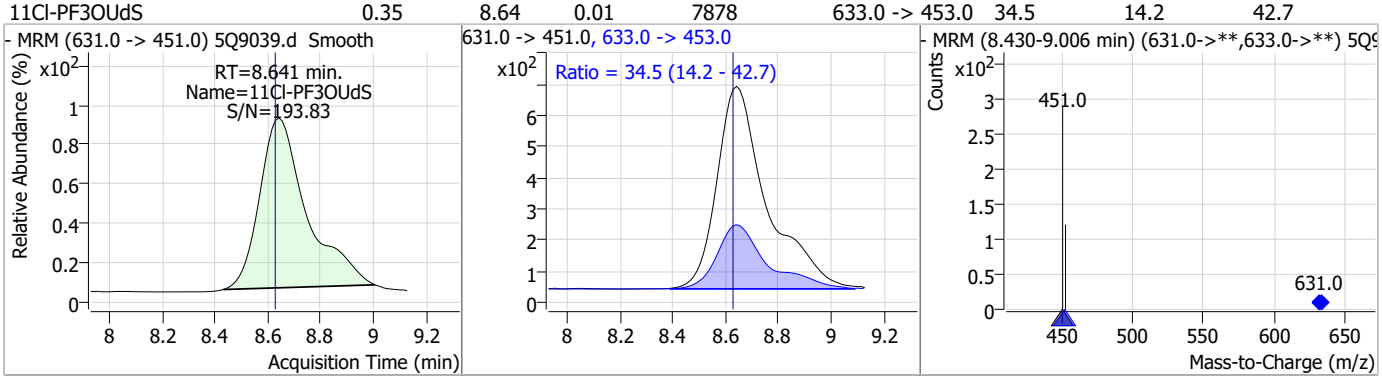




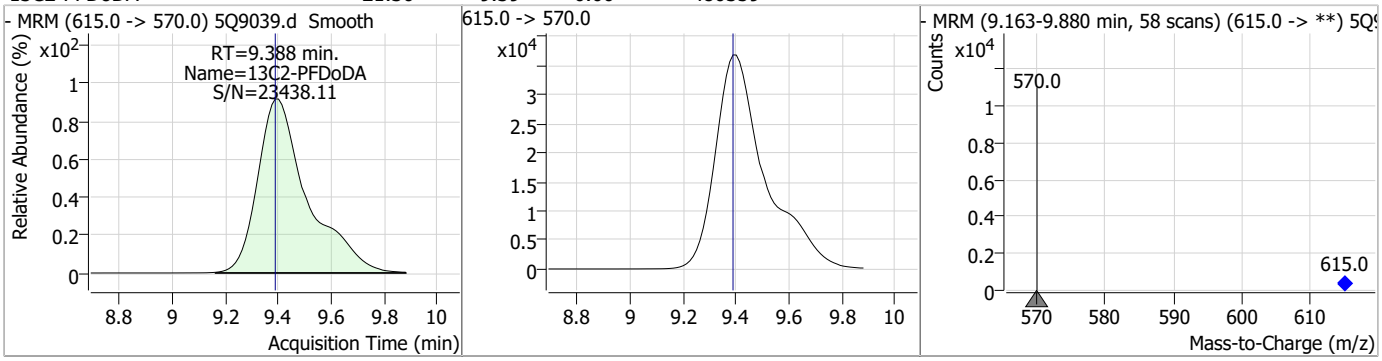


Perfluorinated Compounds by LC/MS/MS

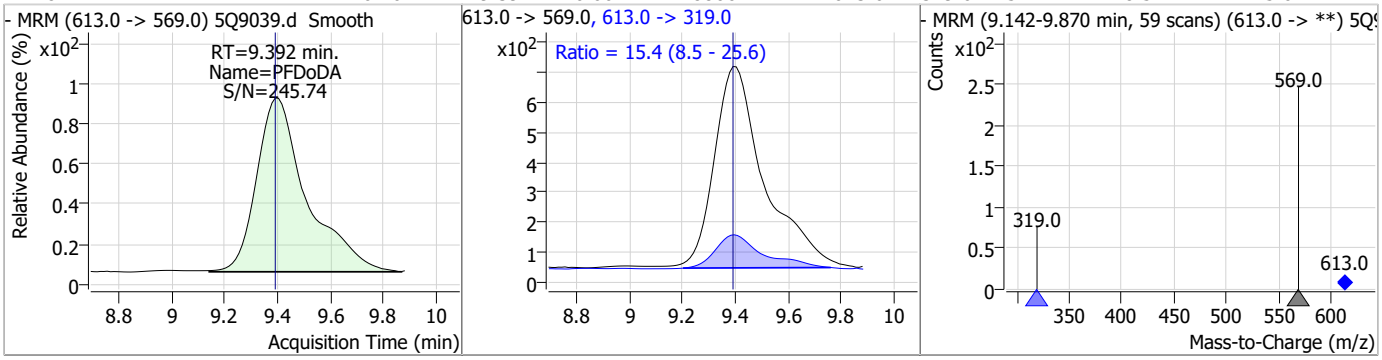
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.35	8.64	0.01	7878	633.0 -> 453.0	34.5	14.2	42.7



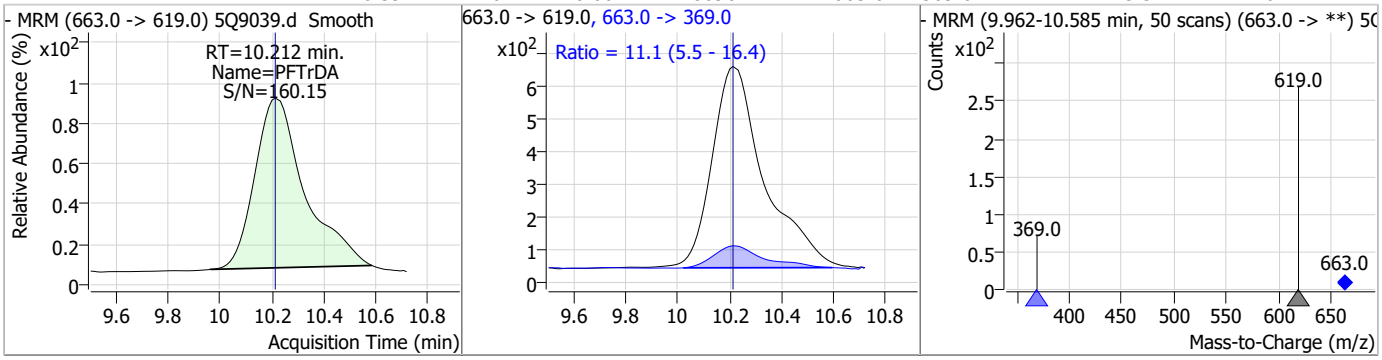
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	21.36	9.39	0.00	480359				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.40	9.39	0.00	8866	613.0 -> 319.0	15.4	8.5	25.6

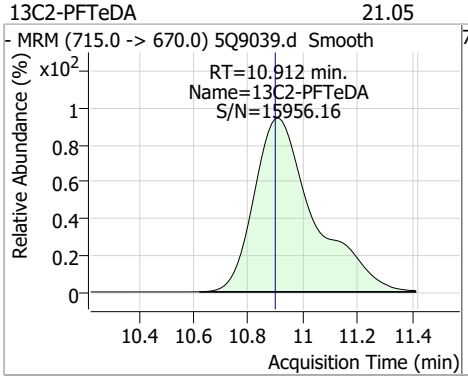


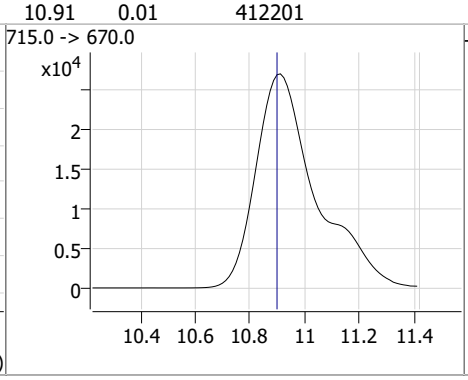
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.39	10.21	0.00	8090	663.0 -> 369.0	11.1	5.5	16.4

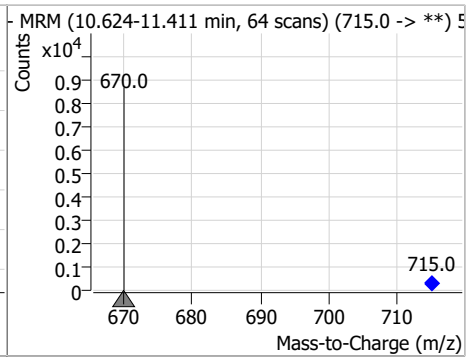


Perfluorinated Compounds by LC/MS/MS

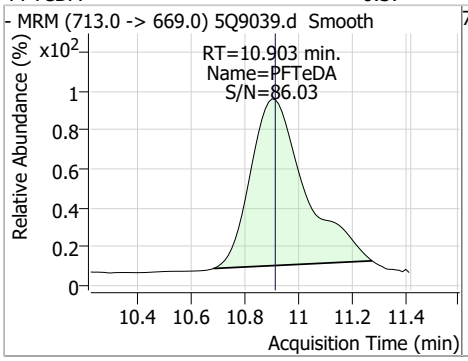
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	21.05	10.91	0.01	412201				

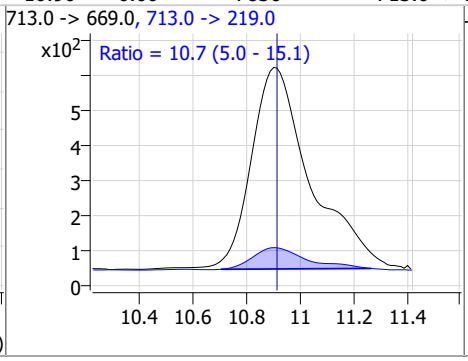


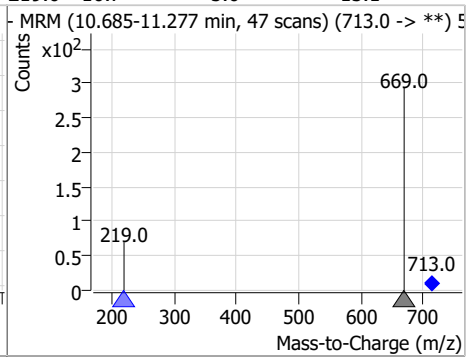




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.37	10.90	0.00	7836	713.0 -> 219.0	10.7	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q134-IC134
Lab FileID: 5Q9039.D
Injection Time: 12/28/22 12:28

Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.74	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.88	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9040.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 12:45:23 PM
Sample Name : ic134-1
Vial : P1-A3
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	106572	20.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	213337	20.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	308496	20.00	µg/L	0.000
M4-PFHpA	5.726	367.0 -> 322.0	317019	20.00	µg/L	0.000
M8-PFOA	6.361	421.0 -> 376.0	423728	20.00	µg/L	0.000
M9-PFNA	6.918	472.0 -> 427.0	439343	20.00	µg/L	0.000
M6-PFDA	7.449	519.0 -> 474.0	491879	20.00	µg/L	0.013
M7-PFUnDA	8.320	570.0 -> 525.0	633729	20.00	µg/L	0.000
M2-PFDoDA	9.388	615.0 -> 570.0	482164	20.00	µg/L	0.000
M2-PFTeDA	10.899	715.0 -> 670.0	412412	20.00	µg/L	0.000
M8-FOSA	6.592	506.0 -> 78.0	100690	20.00	µg/L	0.000
M3-PFBS	4.124	302.0 -> 99.0	26990	20.00	µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	36871	20.00	µg/L	0.000
M8-PFOS	6.879	507.0 -> 99.0	49605	20.00	µg/L	0.000
M2-4:2FTS	4.886	329.0 -> 309.0	91218	20.00	µg/L	0.000
M2-6:2FTS	6.360	429.0 -> 409.0	148327	20.00	µg/L	0.000
M2-8:2FTS	7.512	529.0 -> 509.0	140585	20.00	µg/L	0.000
M3-MeFOSAA	7.047	573.0 -> 419.0	37921	20.00	µg/L	0.012
M3-HFPO-DA	5.182	287.0 -> 169.0	67745	20.00	µg/L	0.000
M3-MeFOSA	6.952	515.0 -> 169.0	31405	20.00	µg/L	0.000
M5-EtFOSAA	7.145	589.0 -> 419.0	38470	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	91218	18.94	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.7%		
13C2-6:2FTS	6.360	429.0 -> 409.0	148327	19.35	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.7%		
13C2-8:2FTS	7.512	529.0 -> 509.0	140585	19.47	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.3%		
13C2-PFDoDA	9.388	615.0 -> 570.0	482164	21.44	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.2%		
13C2-PFTeDA	10.899	715.0 -> 670.0	412412	21.06	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.3%		
13C3-PFBS	4.124	302.0 -> 99.0	26990	20.77	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.8%		
13C3-PFHxS	5.733	402.0 -> 99.0	36871	20.60	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.0%		
13C4-PFBA	2.400	217.0 -> 172.0	106572	20.48	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.4%		
13C4-PFHpA	5.726	367.0 -> 322.0	317019	20.62	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.1%		
13C5-PFHxA	4.965	318.0 -> 273.0	308496	20.51	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.5%		
13C5-PFPeA	3.919	268.0 -> 223.0	213337	20.34	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.7%		
13C6-PFDA	7.449	519.0 -> 474.0	491879	21.16	µg/L	0.013

Perfluorinated Compounds by LC/MS/MS

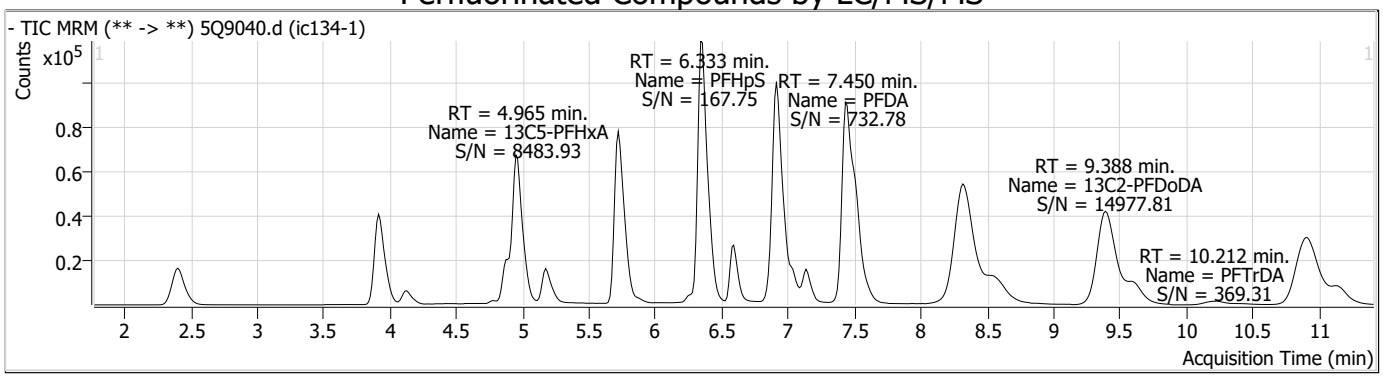
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.8%		
13C7-PFUnDA	8.320	570.0 -> 525.0	633729	21.66 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.3%		
13C8-FOSA	6.592	506.0 -> 78.0	100690	20.85 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.2%		
13C8-PFOA	6.361	421.0 -> 376.0	423728	21.03 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.1%		
13C8-PFOS	6.879	507.0 -> 99.0	49605	20.80 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.0%		
13C9-PFNA	6.918	472.0 -> 427.0	439343	20.89 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.4%		
d3-MeFOSAA	7.047	573.0 -> 419.0	37921	21.34 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.7%		
13C3-HFPO-DA	5.182	287.0 -> 169.0	67745	20.48 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.4%		
d3-MeFOSA	6.952	515.0 -> 169.0	31405	20.73 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.6%		
d5-EtFOSAA	7.145	589.0 -> 419.0	38470	20.86 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.3%		
Target Compounds						QValue
4:2FTS	4.888	327.0 -> 307.0	5076	1.02 µg/L		95
		327.0 -> 81.0	3207			
6:2FTS	6.360	427.0 -> 407.0	7794	1.02 µg/L		99
		427.0 -> 81.0	3293			
8:2FTS	7.512	527.0 -> 507.0	7087	0.99 µg/L		97
		527.0 -> 81.0	3620			
EtFOSAA	7.145	584.0 -> 419.0	1405	1.09 µg/L		91
		584.0 -> 483.0	796			
FOSA	6.594	498.0 -> 78.0	4579	0.89 µg/L		99
		498.0 -> 478.0	130			
MeFOSAA	7.047	570.0 -> 419.0	1338	0.87 µg/L		96
		570.0 -> 512.0	584			
PFBA	2.406	213.0 -> 169.0	5224	0.90 µg/L		100
PFBS	4.129	299.0 -> 80.0	4087	0.93 µg/L		100
		299.0 -> 99.0	1749			
PFDA	7.450	513.0 -> 469.0	23868	0.91 µg/L		100
		513.0 -> 219.0	4262			
PFDoDA	9.392	613.0 -> 569.0	20240	0.92 µg/L		99
		613.0 -> 319.0	3509			
PFDS	8.144	599.0 -> 80.0	4889	0.86 µg/L		95
		599.0 -> 99.0	2773			
PFHpA	5.727	363.0 -> 319.0	18472	0.93 µg/L		99
		363.0 -> 169.0	4212			
PFHpS	6.333	449.0 -> 80.0	3476	0.92 µg/L		100
		449.0 -> 99.0	1919			
PFHxA	4.966	313.0 -> 269.0	13926	0.89 µg/L		100
		313.0 -> 119.0	648			
PFHxS	5.735	399.0 -> 80.0	3584	0.96 µg/L	m	97
		399.0 -> 99.0	1944			
PFNA	6.918	463.0 -> 419.0	21236	0.93 µg/L		99
		463.0 -> 219.0	4733			
PFNS	7.384	549.0 -> 80.0	3144	0.92 µg/L		98
		549.0 -> 99.0	1926			
PFOA	6.362	413.0 -> 369.0	22197	0.92 µg/L		99
		413.0 -> 169.0	6066			
PFOS	6.880	499.0 -> 80.0	3974	0.87 µg/L	m	92

Perfluorinated Compounds by LC/MS/MS

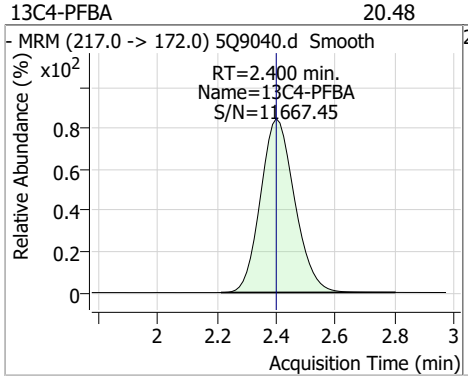
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	2108			
PFPeA	3.922	263.0 -> 219.0	11577	0.92	µg/L	100
PFPeS	5.035	349.0 -> 80.0	2576	0.90	µg/L	100
		349.0 -> 99.0	1318			
PFTeDA	10.903	713.0 -> 669.0	19830	0.93	µg/L	99
		713.0 -> 219.0	2083			
PFTrDA	10.212	663.0 -> 619.0	19602	0.93	µg/L	99
		663.0 -> 369.0	2042			
PFUnDA	8.321	563.0 -> 519.0	27432	0.84	µg/L	97
		563.0 -> 269.0	4960			
11Cl-PF3OUdS	8.641	631.0 -> 451.0	19486	0.87	µg/L	99
		633.0 -> 453.0	5610			
9Cl-PF3ONS	7.123	531.0 -> 351.0	17565	0.81	µg/L	99
		533.0 -> 353.0	5640			
ADONA	5.777	377.0 -> 251.0	23573	0.95	µg/L	99
		377.0 -> 85.0	8995			
HFPO-DA	5.190	329.0 -> 169.0	5098	0.94	µg/L	95
		285.0 -> 169.0	3207			
MeFOSA	6.953	512.0 -> 169.0	1507	0.81	µg/L	96
		512.0 -> 219.0	1228			
4-PFECHS	6.268	461.0 -> 381.0	11003	0.81	µg/L	98
		461.0 -> 99.0	6024			
FBSA	4.793	298.0 -> 78.0	6157	0.96	µg/L	99
		298.0 -> 64.0	560			
FHxSA	5.888	398.0 -> 78.0	5674	0.90	µg/L	99
		398.0 -> 64.0	568			

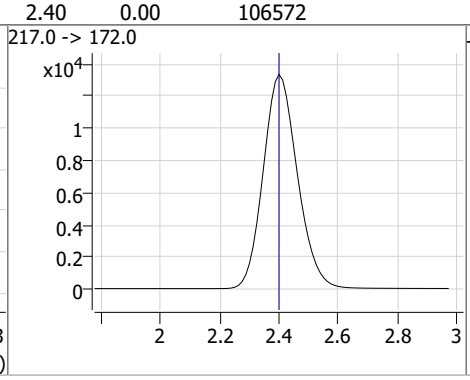
 # = Qualifier out of range, m = manually integrated, + = Area summed

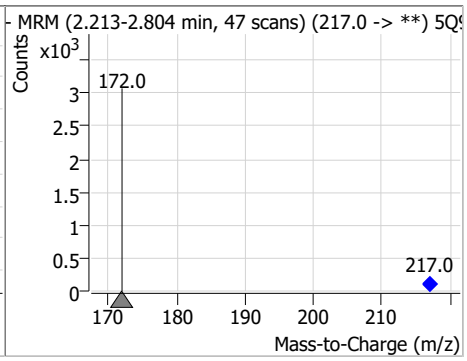
Perfluorinated Compounds by LC/MS/MS



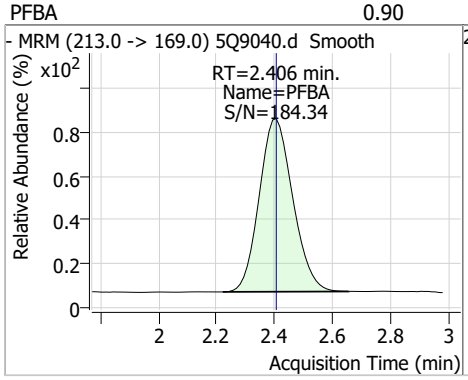
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.48	2.40	0.00	106572				

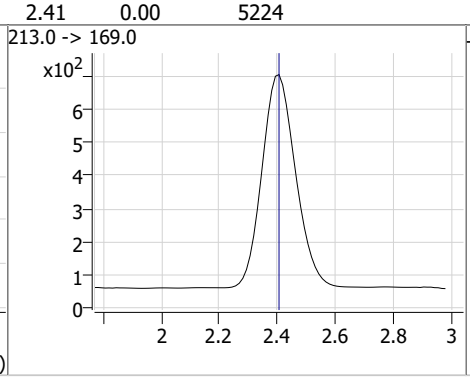


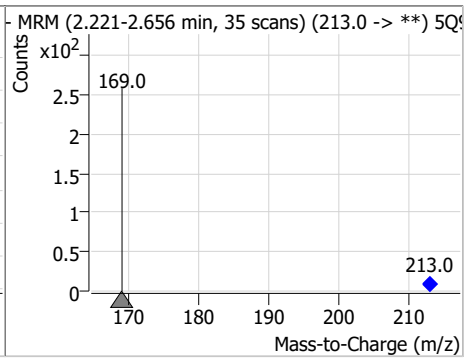




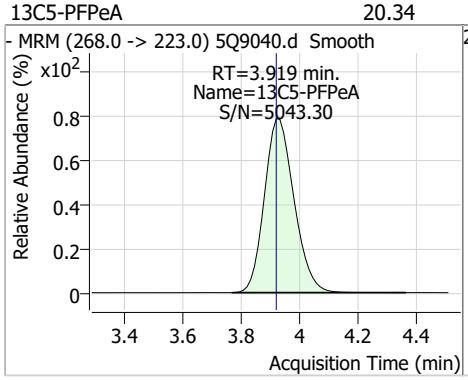
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.90	2.41	0.00	5224				

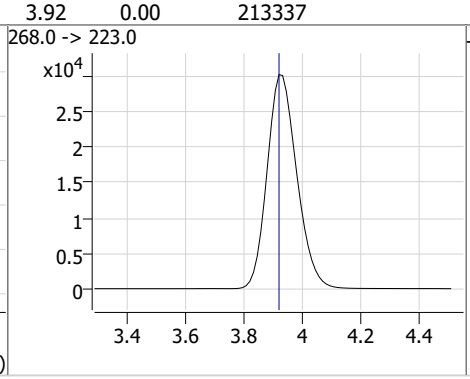


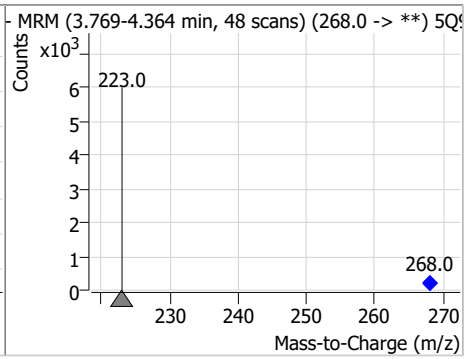




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.34	3.92	0.00	213337				

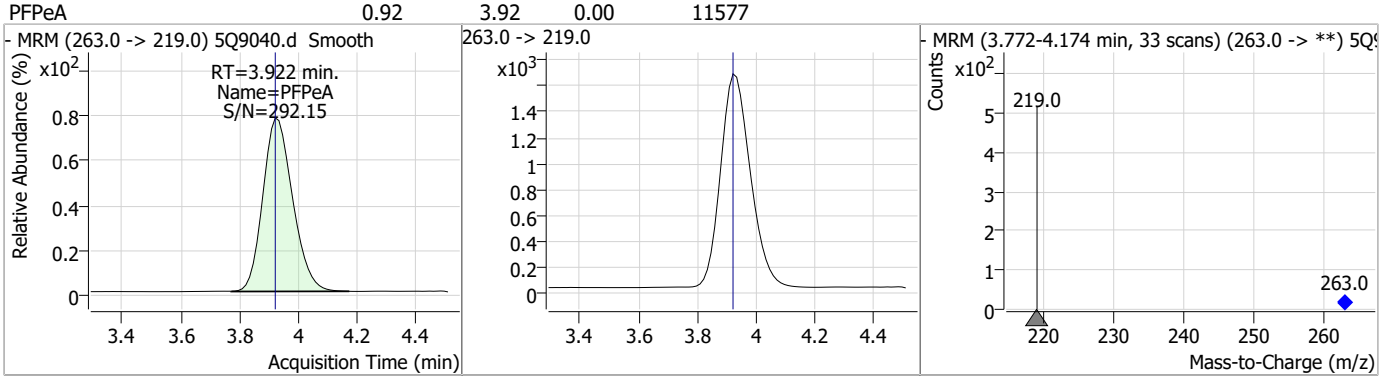




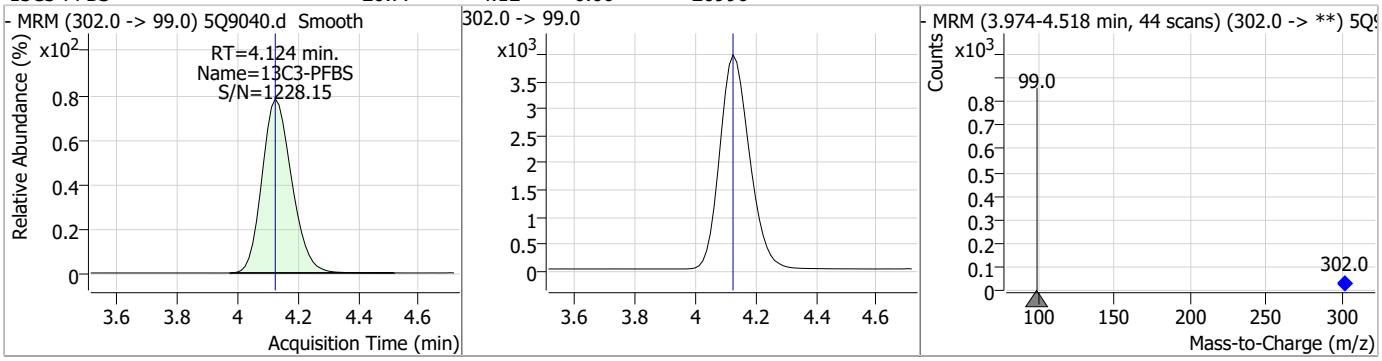


Perfluorinated Compounds by LC/MS/MS

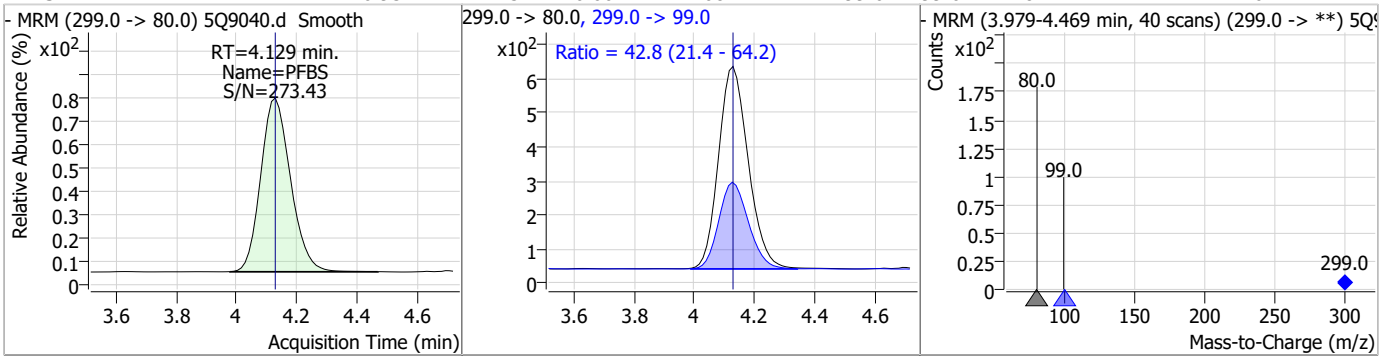
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.92	3.92	0.00	11577				



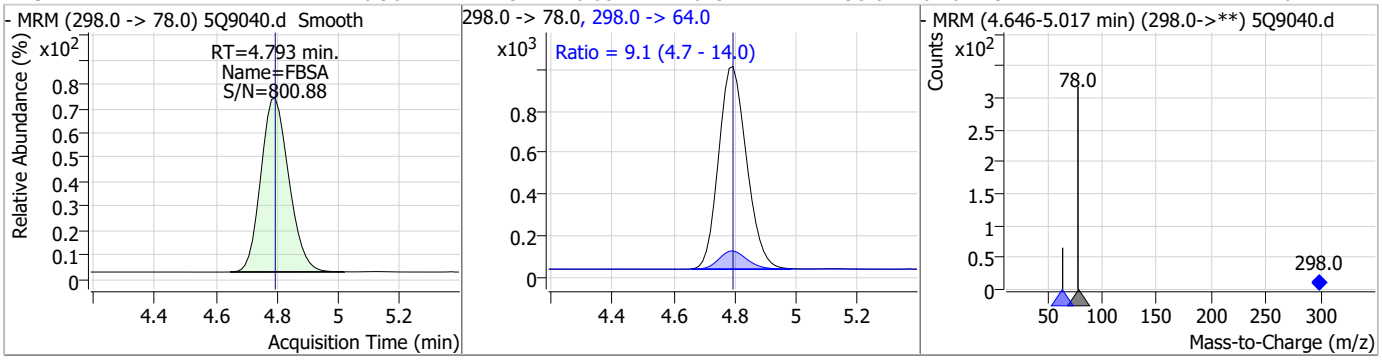
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.77	4.12	0.00	26990				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.93	4.13	0.00	4087	299.0 -> 99.0	42.8	21.4	64.2

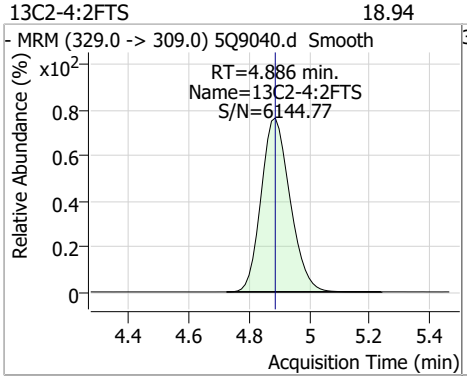


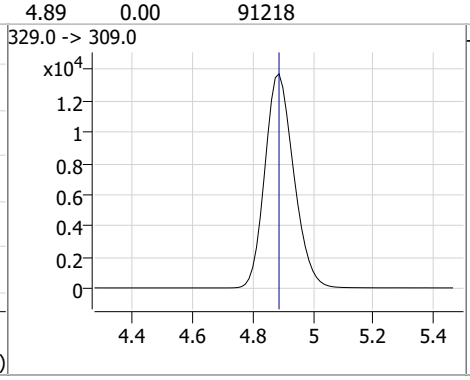
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	0.96	4.79	0.00	6157	298.0 -> 64.0	9.1	4.7	14.0

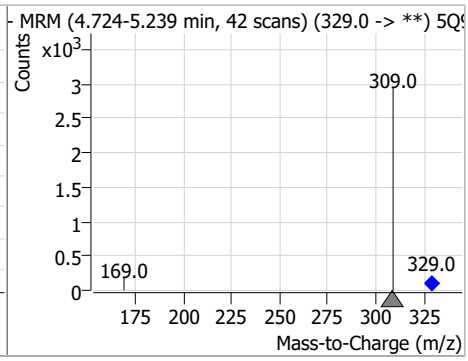


Perfluorinated Compounds by LC/MS/MS

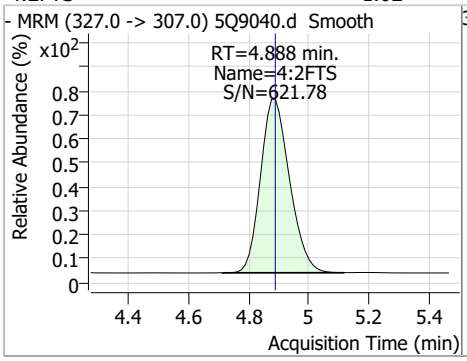
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.94	4.89	0.00	91218				

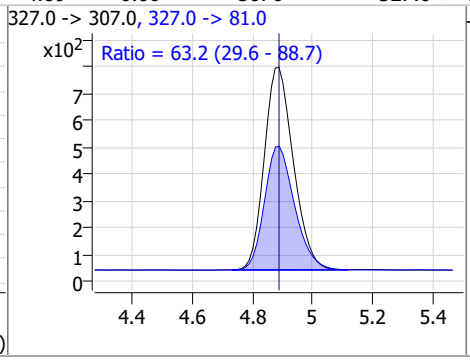


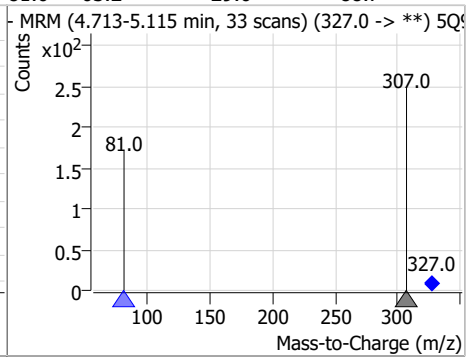




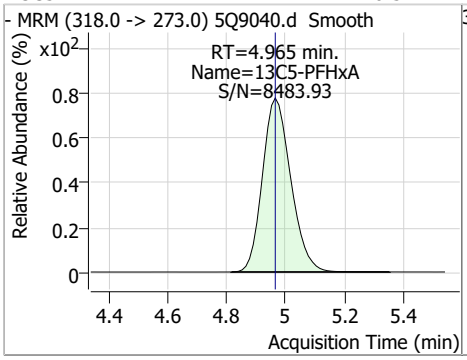
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	1.02	4.89	0.00	5076	327.0 -> 81.0	63.2	29.6	88.7

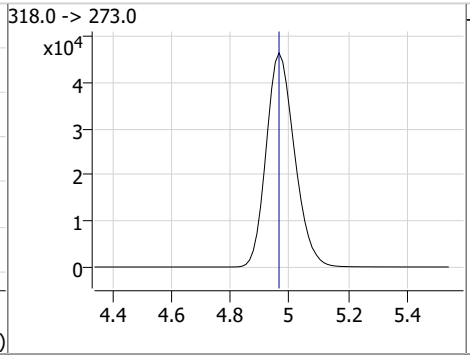


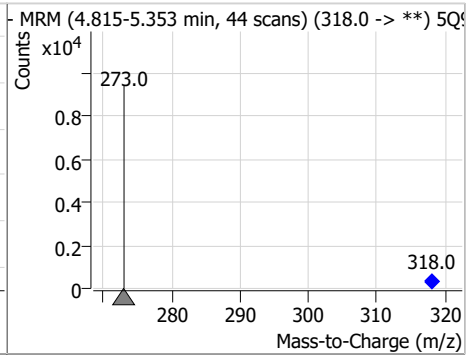




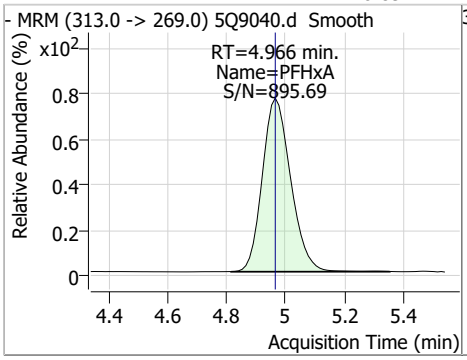
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.51	4.96	0.00	308496				

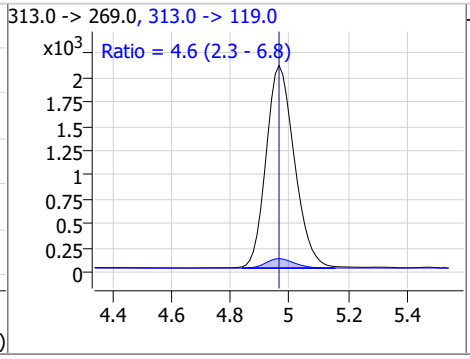


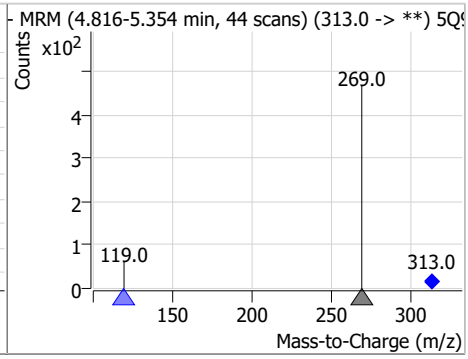




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.89	4.97	0.00	13926	313.0 -> 119.0	4.6	2.3	6.8

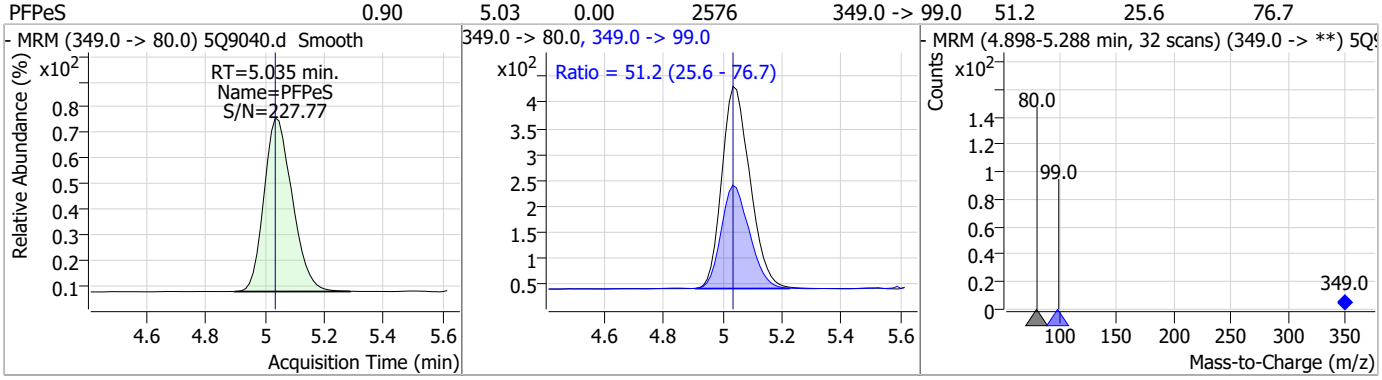




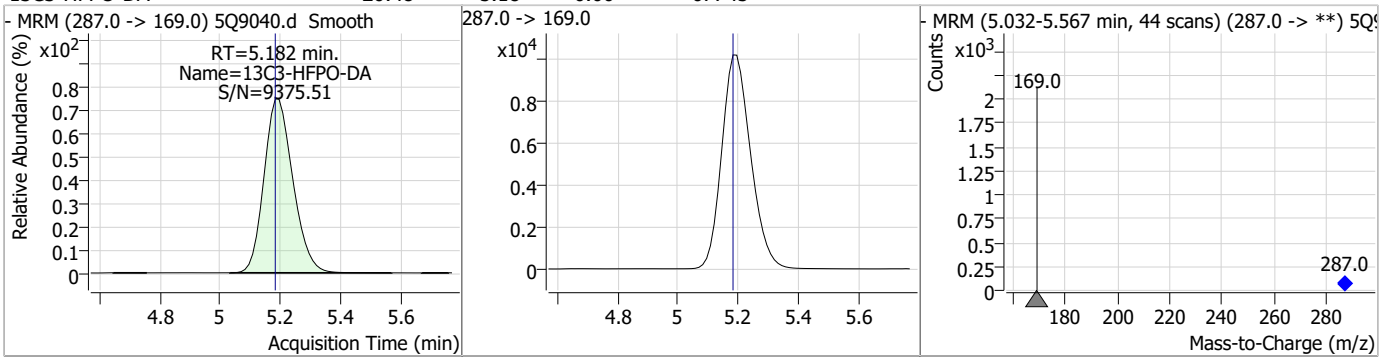


Perfluorinated Compounds by LC/MS/MS

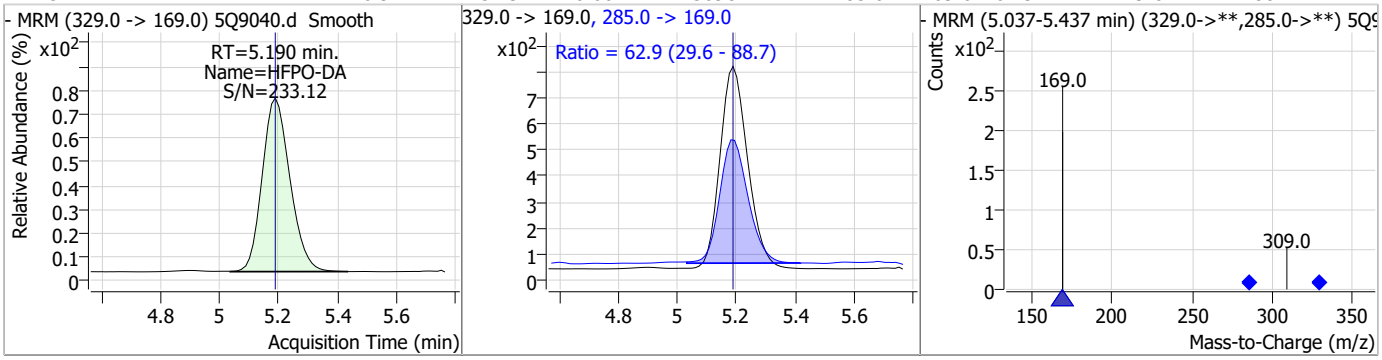
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	0.90	5.03	0.00	2576	349.0 -> 99.0	51.2	25.6	76.7



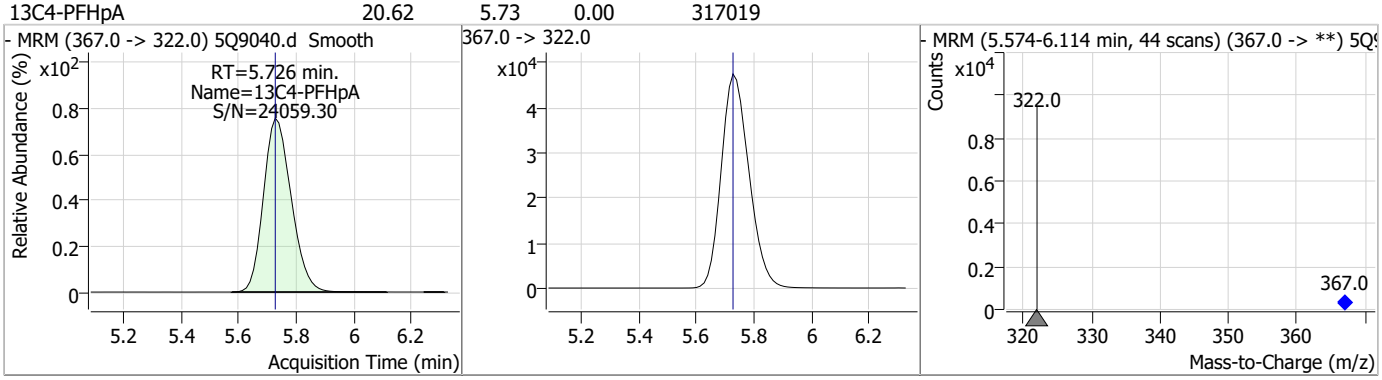
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.48	5.18	0.00	67745				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.94	5.19	0.00	5098	285.0 -> 169.0	62.9	29.6	88.7

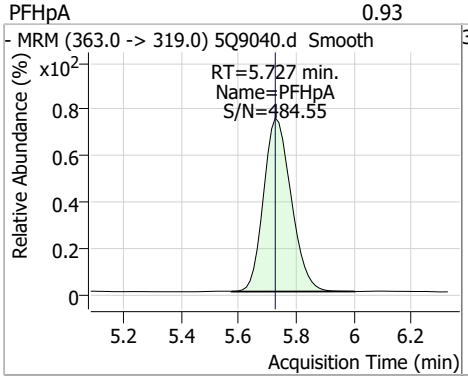


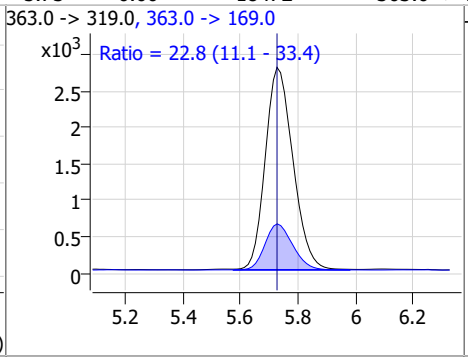
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.62	5.73	0.00	317019				

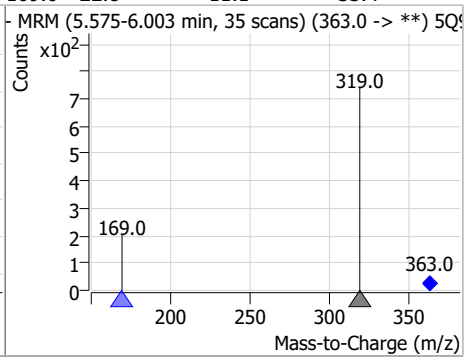


Perfluorinated Compounds by LC/MS/MS

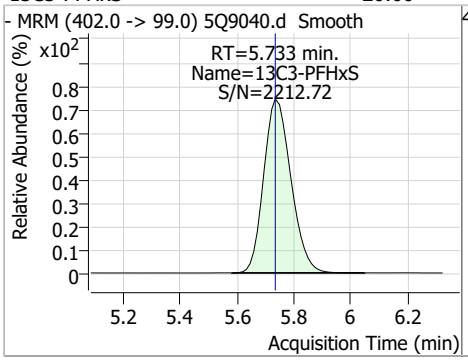
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.93	5.73	0.00	18472	363.0 -> 169.0	22.8	11.1	33.4

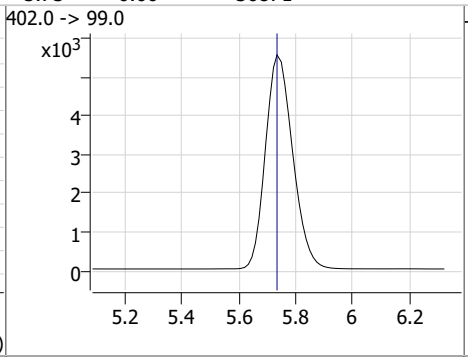


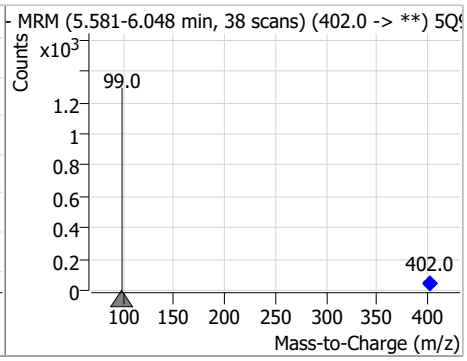




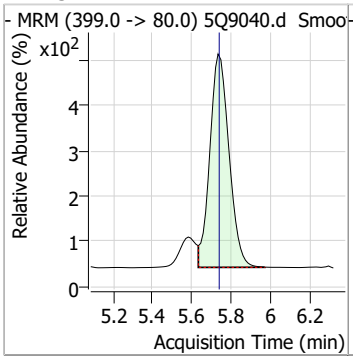
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.60	5.73	0.00	36871				

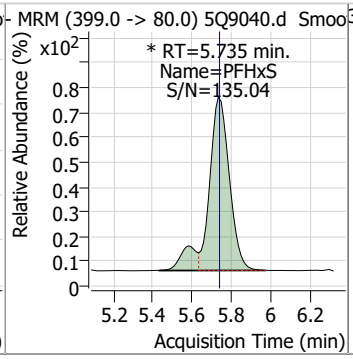


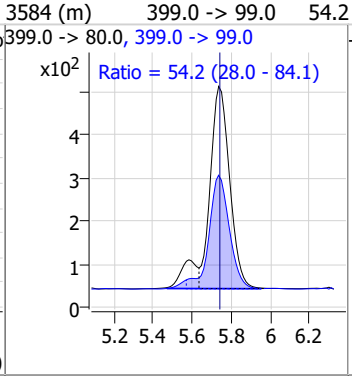


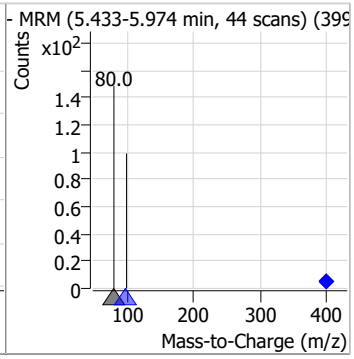


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.96	5.73	0.00	3584 (m)	399.0 -> 99.0	54.2	28.0	84.1

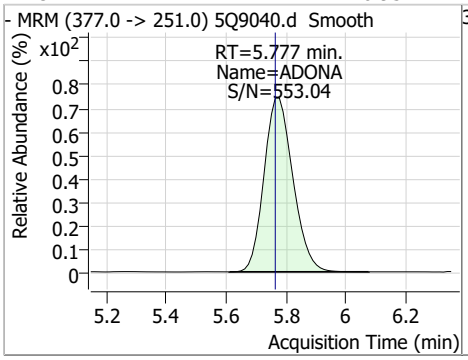


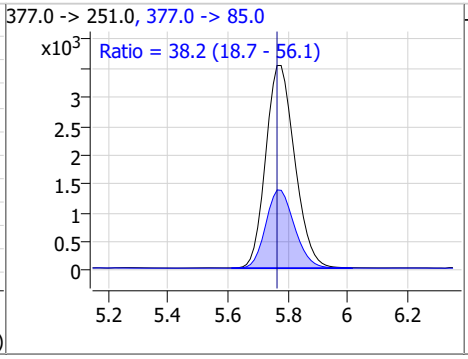


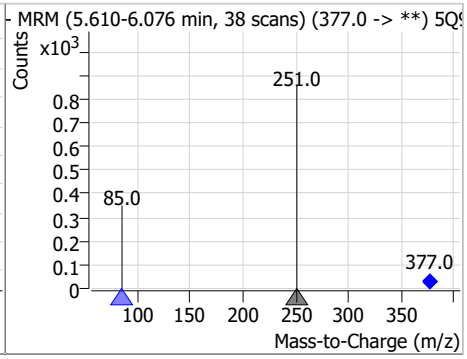




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.95	5.78	0.01	23573	377.0 -> 85.0	38.2	18.7	56.1

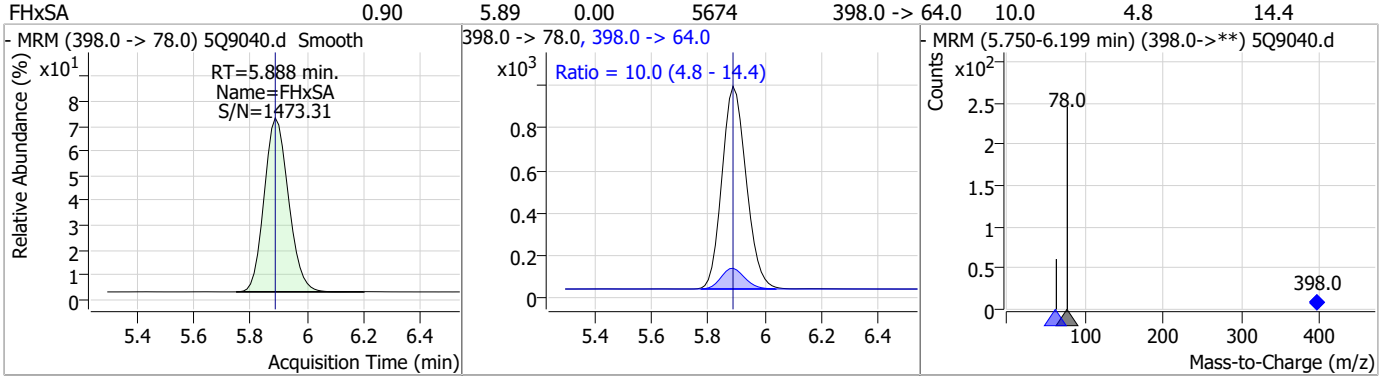




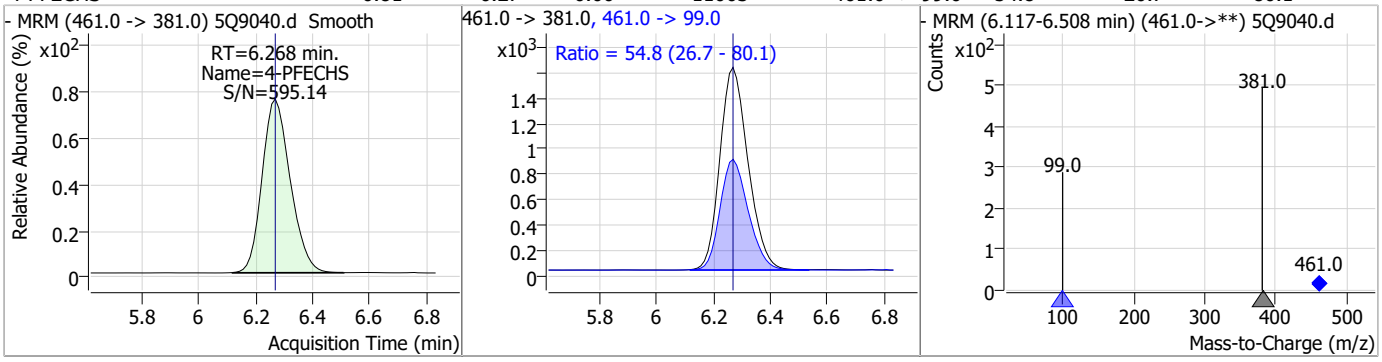


Perfluorinated Compounds by LC/MS/MS

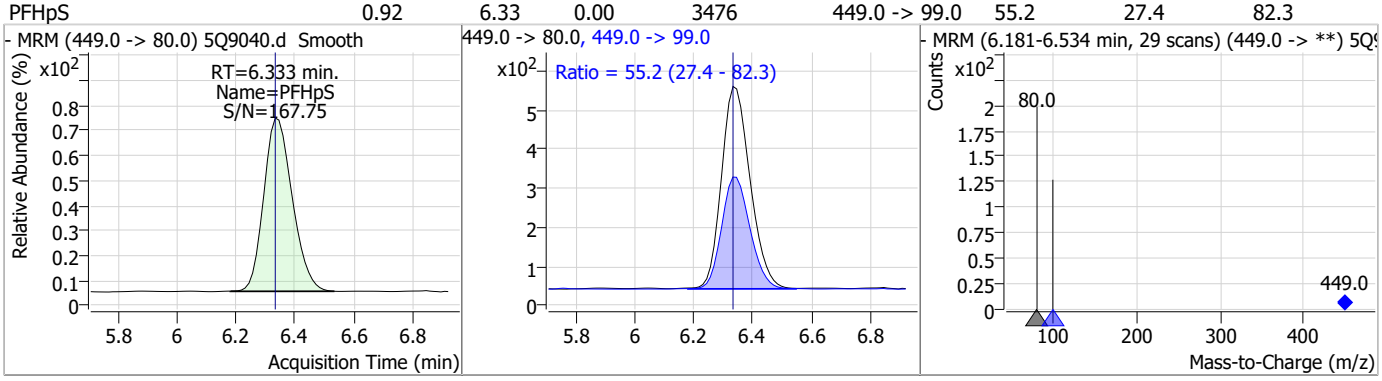
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	0.90	5.89	0.00	5674	398.0 -> 64.0	10.0	4.8	14.4



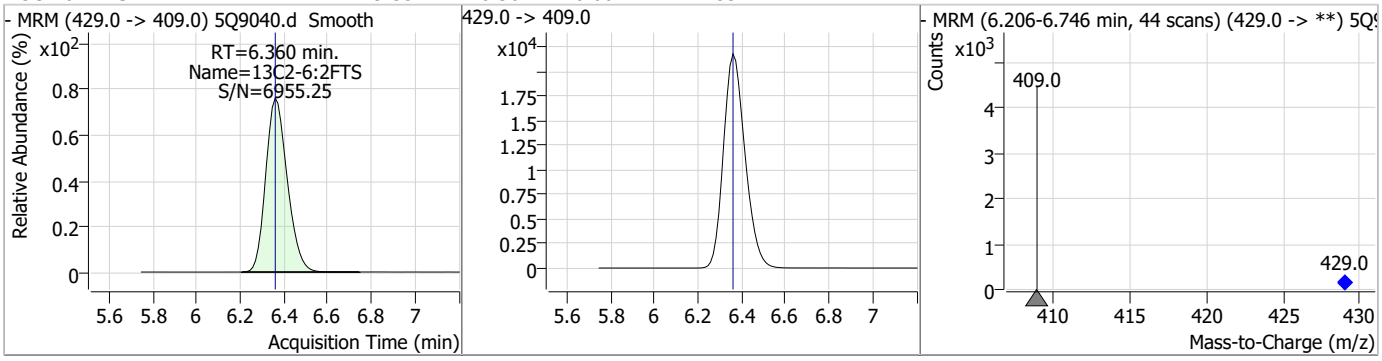
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	0.81	6.27	0.00	11003	461.0 -> 99.0	54.8	26.7	80.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	0.92	6.33	0.00	3476	449.0 -> 99.0	55.2	27.4	82.3

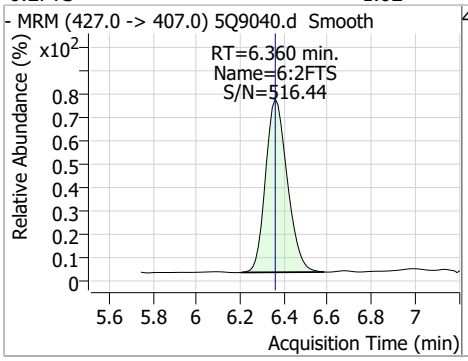


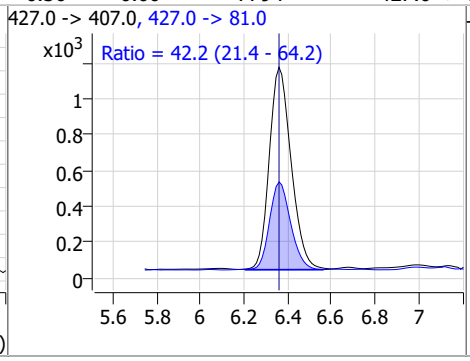
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.35	6.36	0.00	148327				

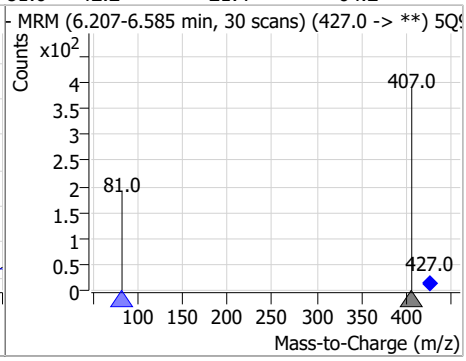


Perfluorinated Compounds by LC/MS/MS

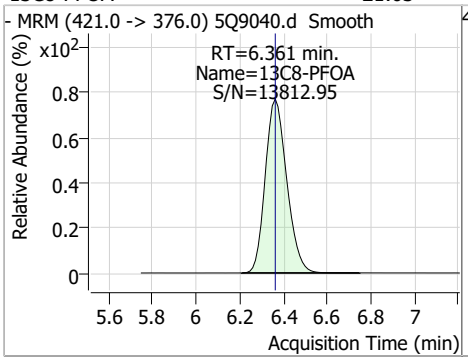
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	1.02	6.36	0.00	7794	427.0 -> 81.0	42.2	21.4	64.2

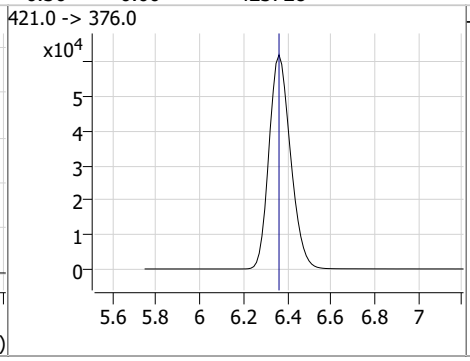


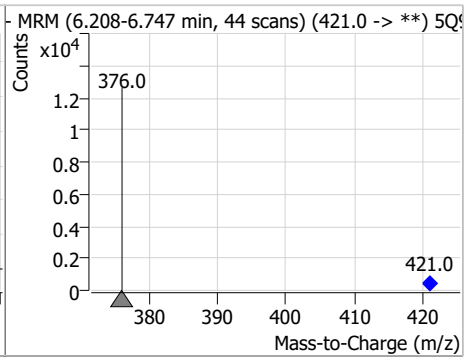




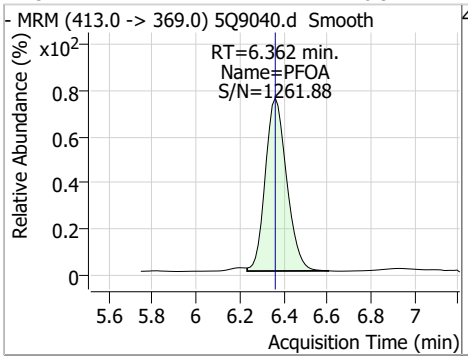
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	21.03	6.36	0.00	423728				

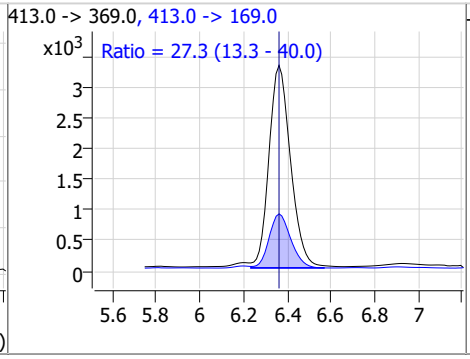


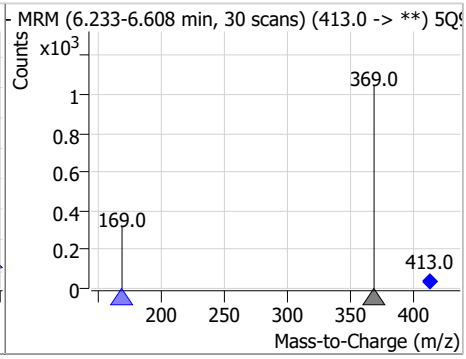




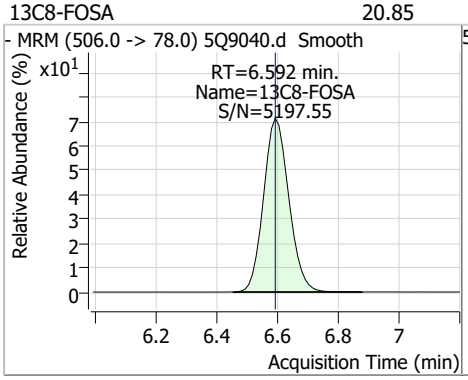
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.92	6.36	0.00	22197	413.0 -> 169.0	27.3	13.3	40.0

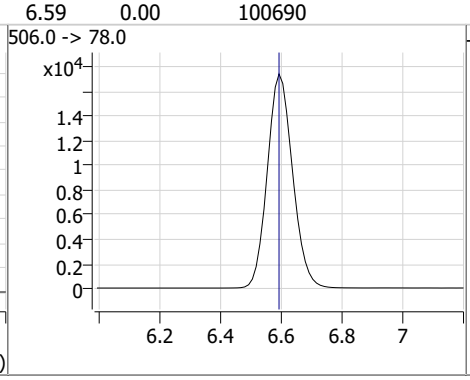


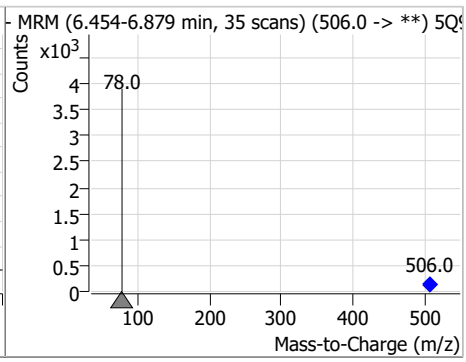




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.85	6.59	0.00	100690				

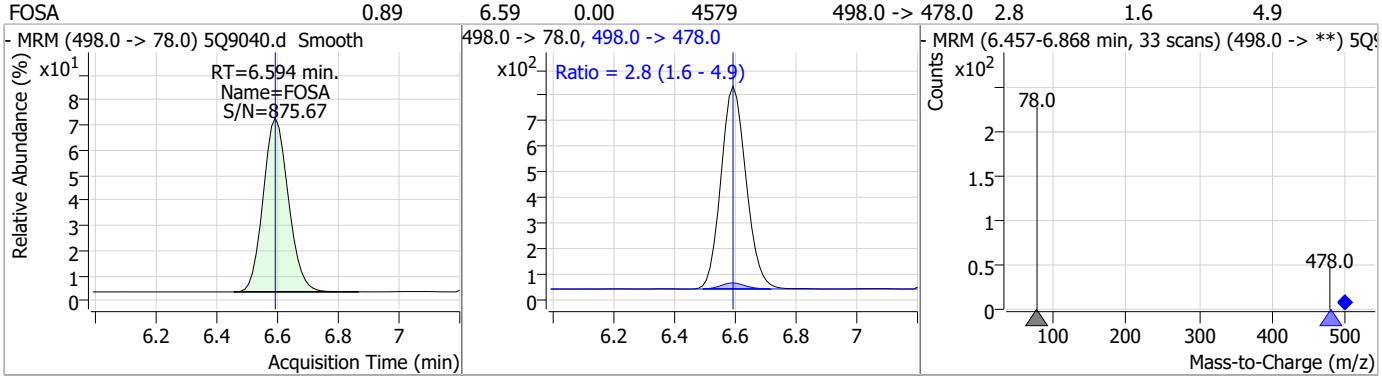




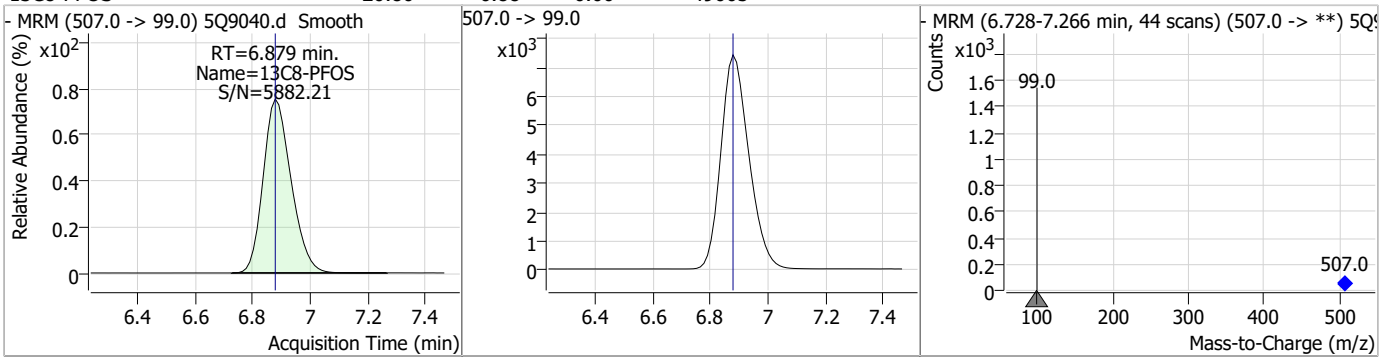


Perfluorinated Compounds by LC/MS/MS

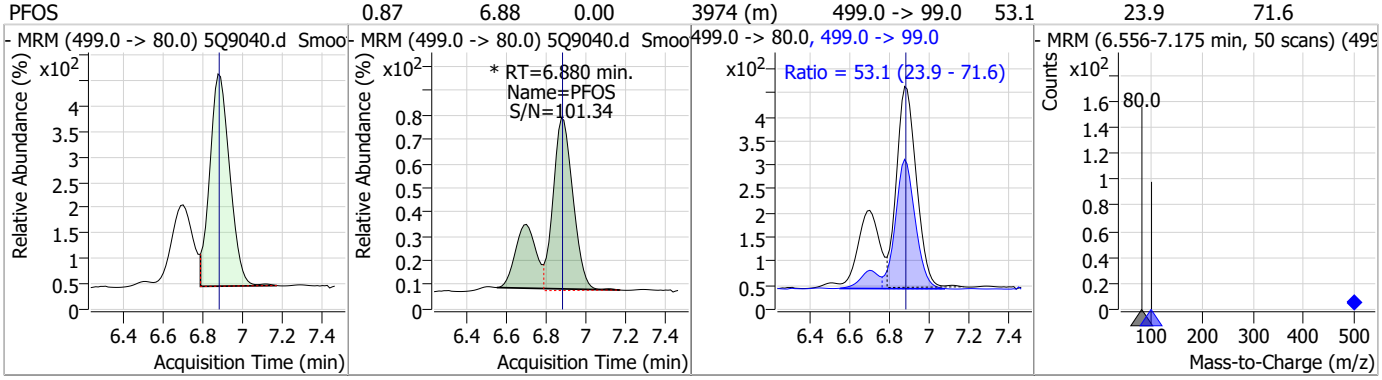
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	0.89	6.59	0.00	4579	498.0 -> 478.0	2.8	1.6	4.9



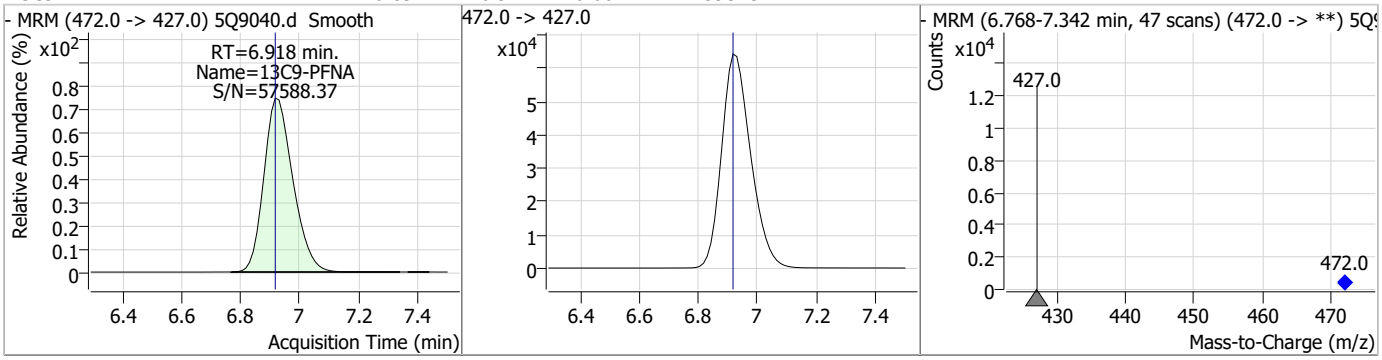
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.80	6.88	0.00	49605				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.87	6.88	0.00	3974 (m)	499.0 -> 99.0	53.1	23.9	71.6

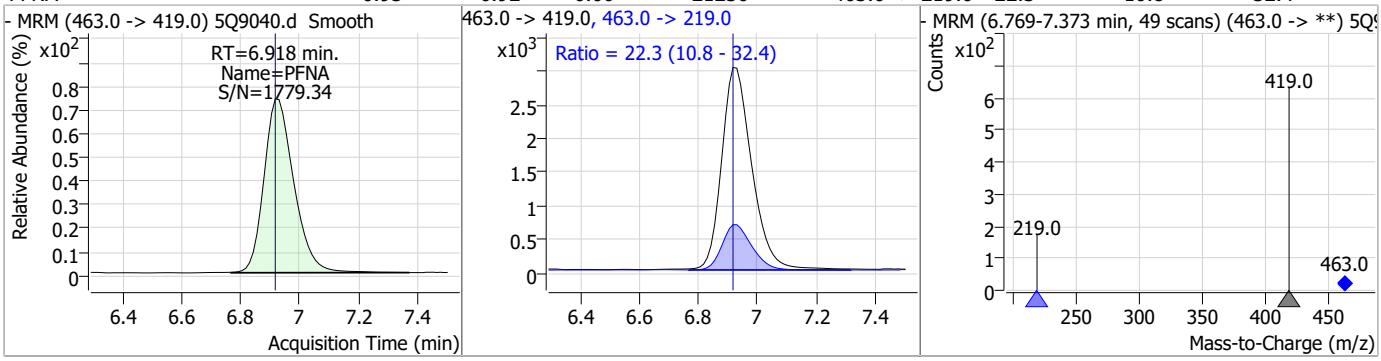


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.89	6.92	0.00	439343				

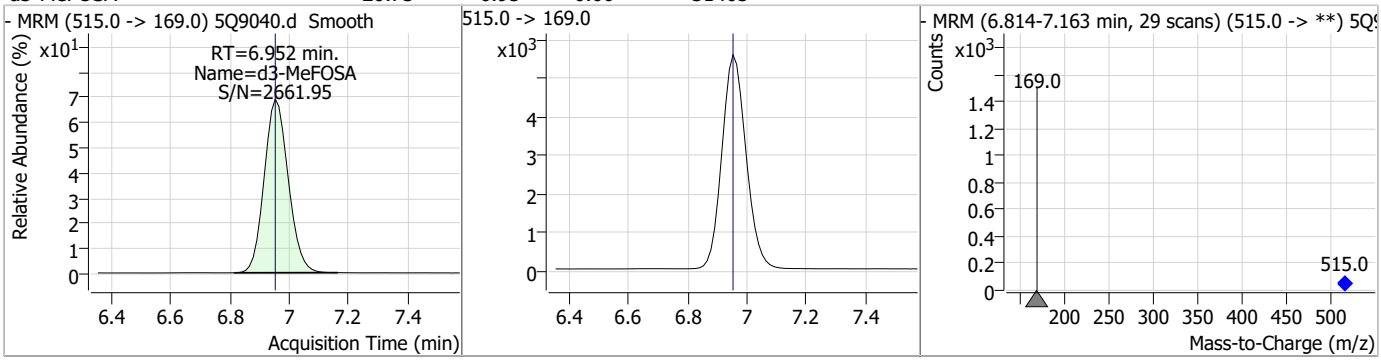


Perfluorinated Compounds by LC/MS/MS

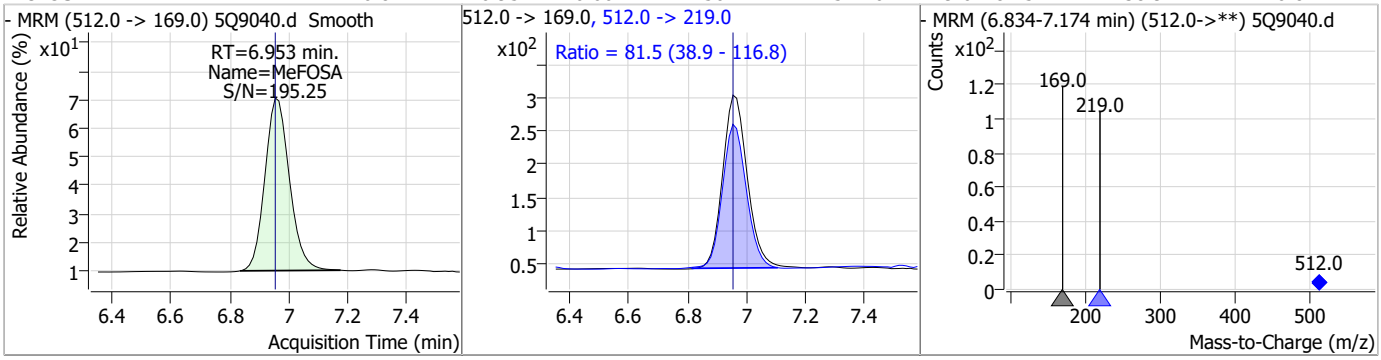
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.93	6.92	0.00	21236	463.0 -> 219.0	22.3	10.8	32.4



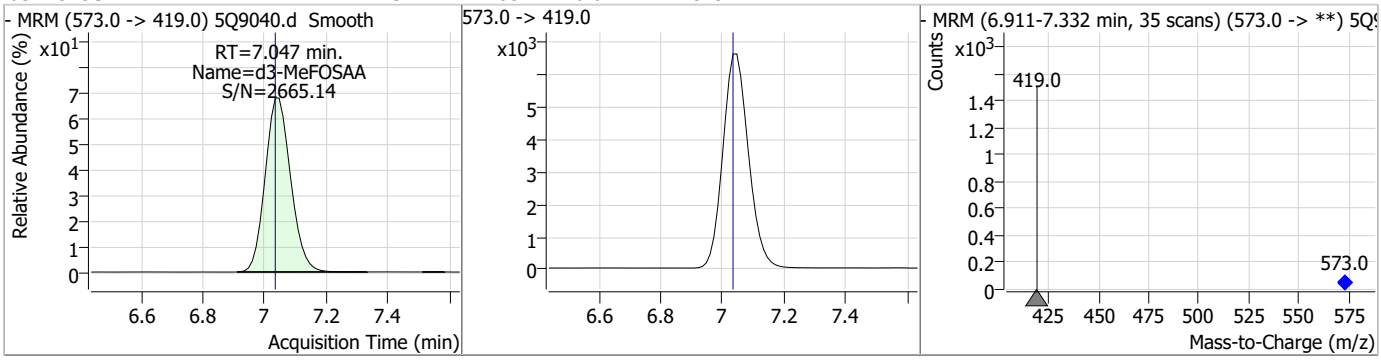
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	20.73	6.95	0.00	31405				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	0.81	6.95	0.00	1507	512.0 -> 219.0	81.5	38.9	116.8

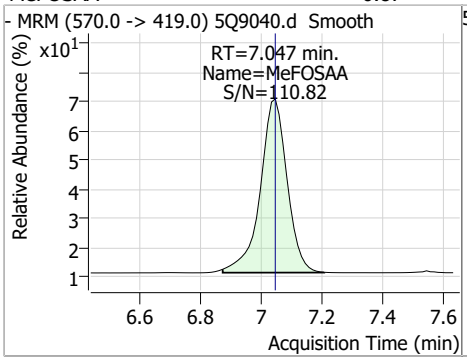


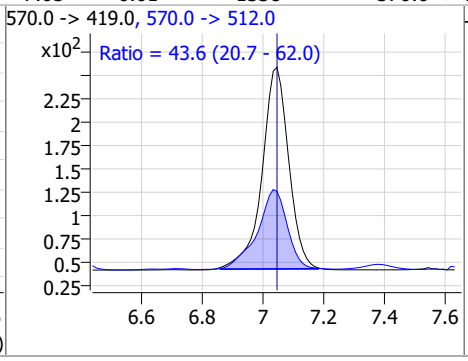
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	21.34	7.05	0.01	37921				

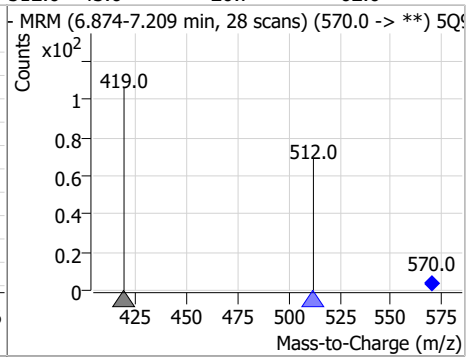


Perfluorinated Compounds by LC/MS/MS

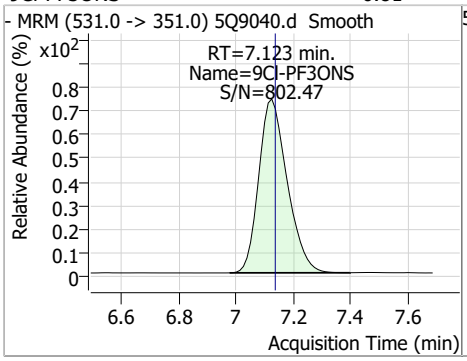
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.87	7.05	0.01	1338	570.0 -> 512.0	43.6	20.7	62.0

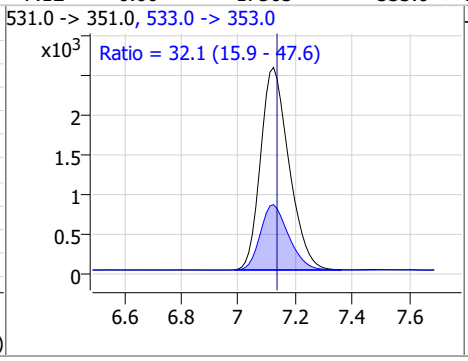


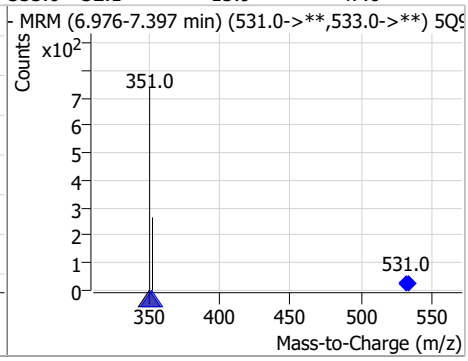




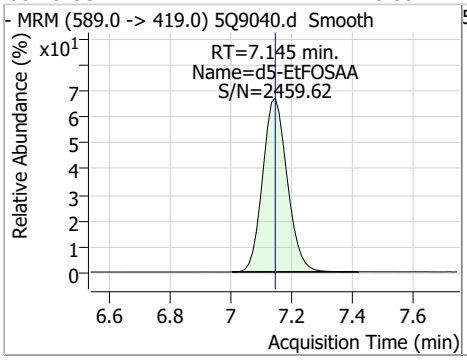
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.81	7.12	0.00	17565	533.0 -> 353.0	32.1	15.9	47.6

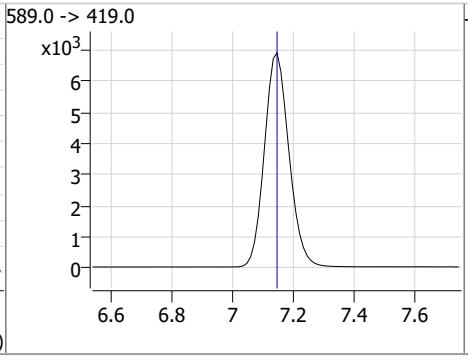


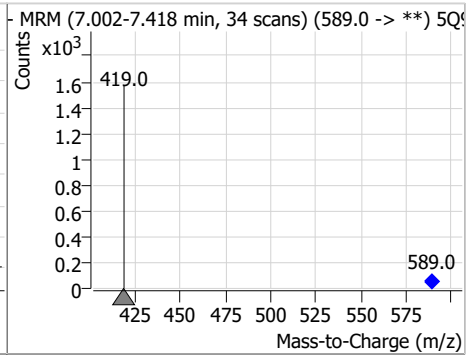




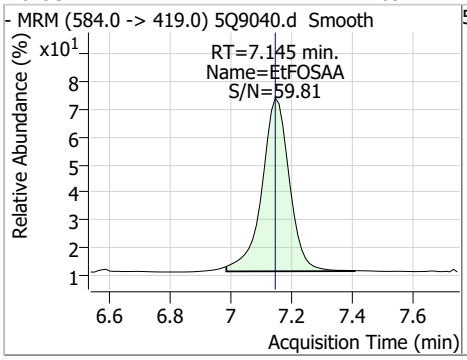
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.86	7.14	0.00	38470				

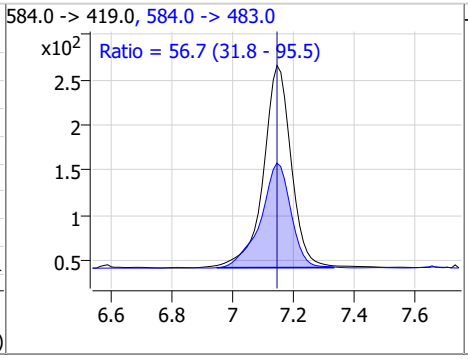


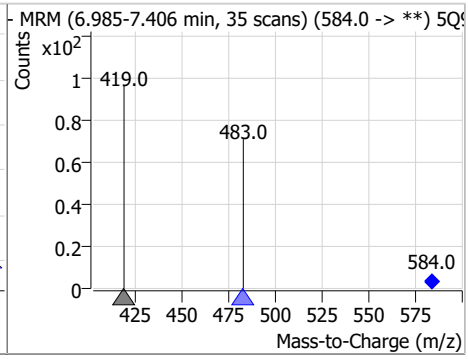




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	1.09	7.15	0.00	1405	584.0 -> 483.0	56.7	31.8	95.5

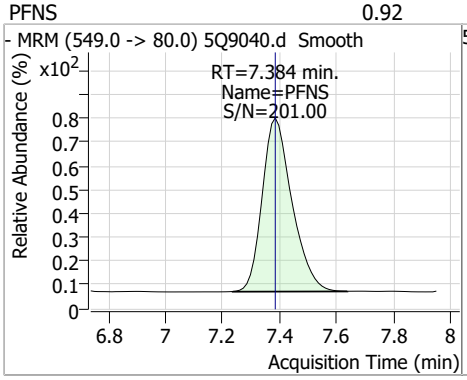


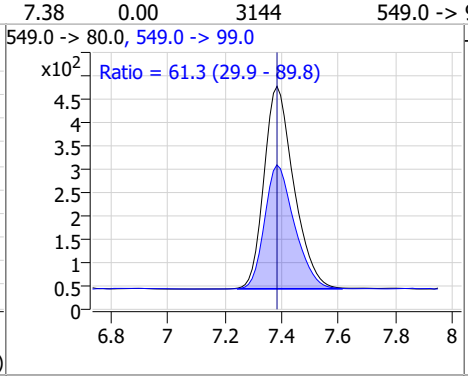


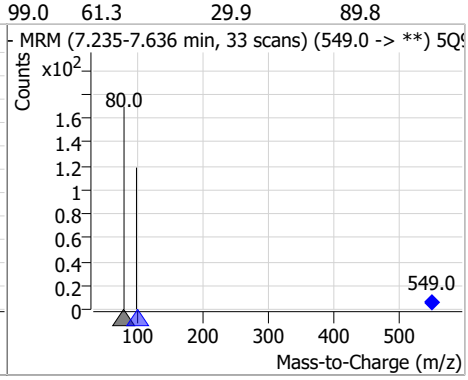


Perfluorinated Compounds by LC/MS/MS

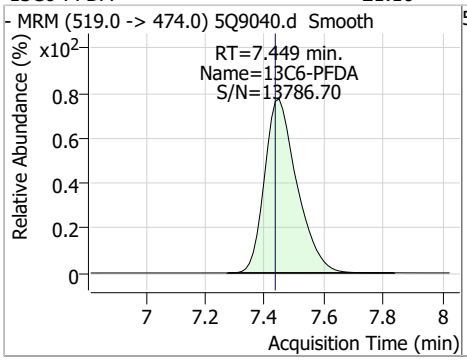
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	0.92	7.38	0.00	3144	549.0 -> 99.0	61.3	29.9	89.8

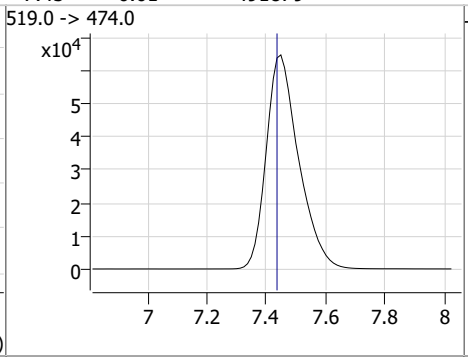


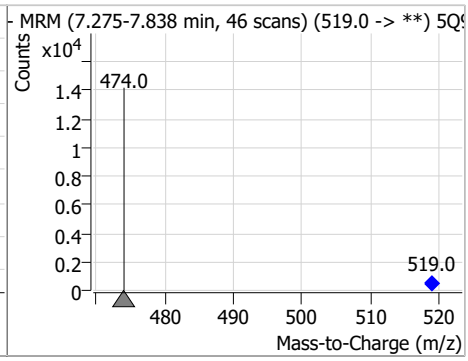




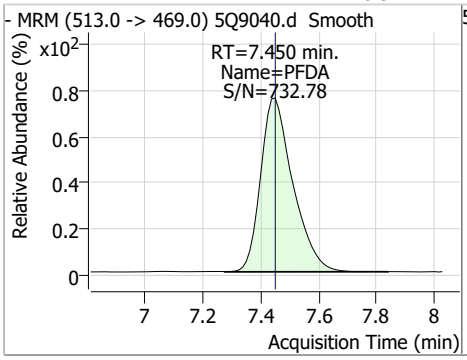
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	21.16	7.45	0.01	491879				

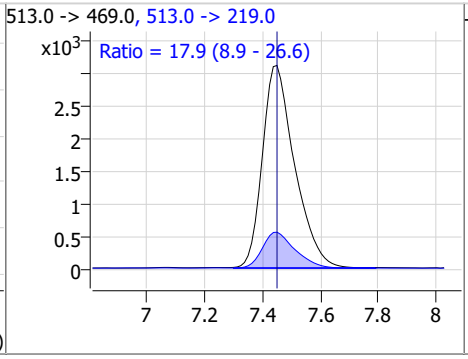


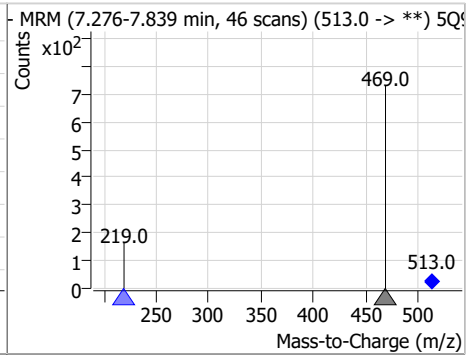




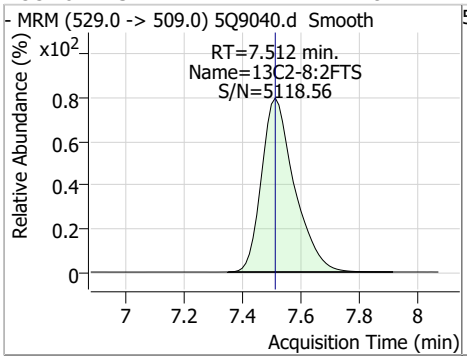
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.91	7.45	0.01	23868	513.0 -> 219.0	17.9	8.9	26.6

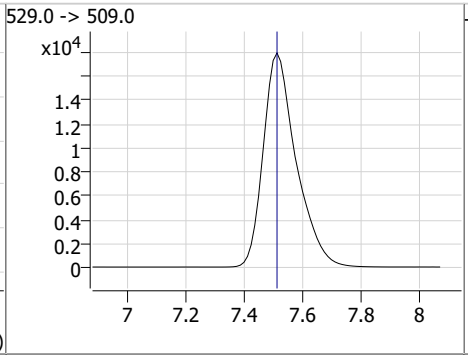


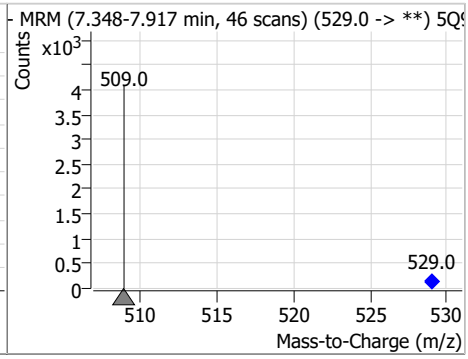




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.47	7.51	0.00	140585				

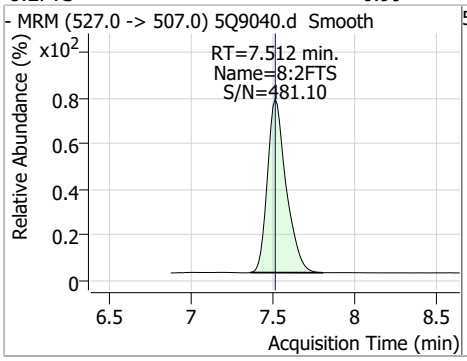


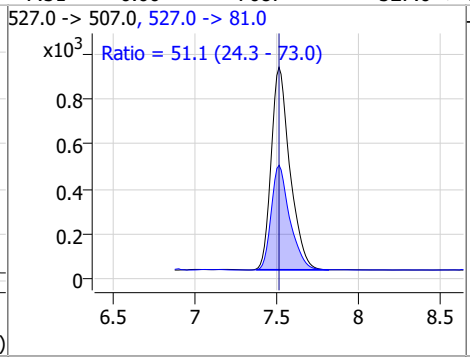


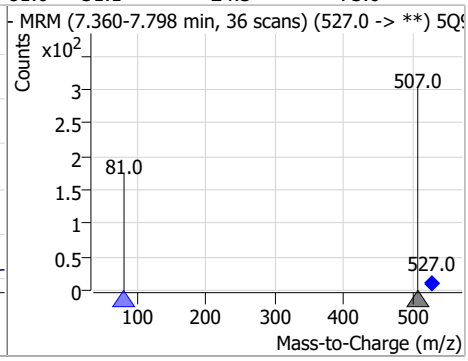


Perfluorinated Compounds by LC/MS/MS

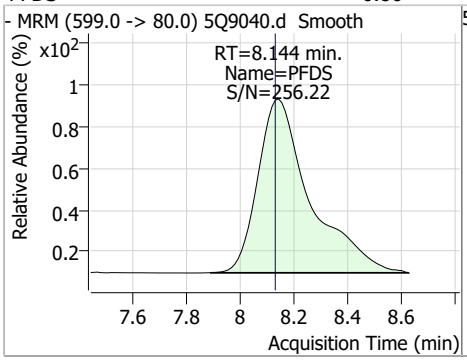
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	0.99	7.51	0.00	7087	527.0 -> 81.0	51.1	24.3	73.0

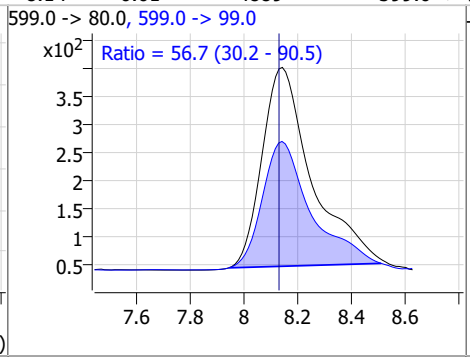


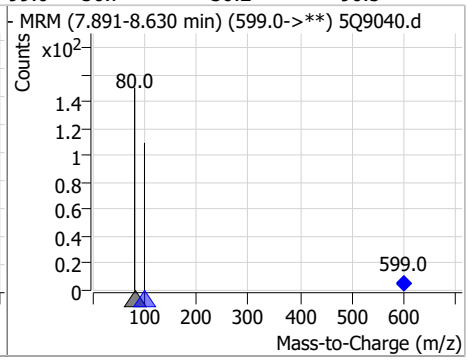




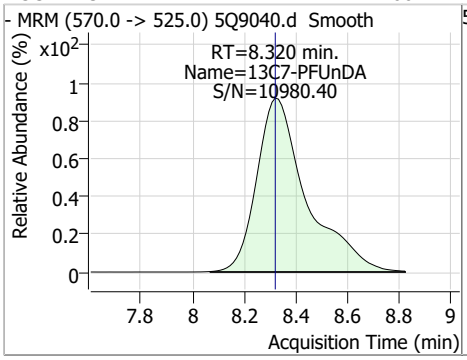
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	0.86	8.14	0.01	4889	599.0 -> 99.0	56.7	30.2	90.5

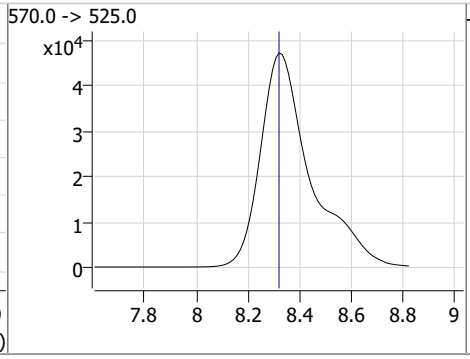


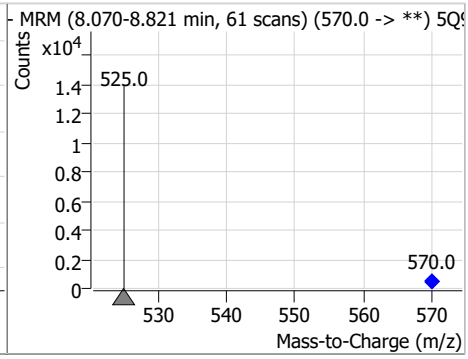




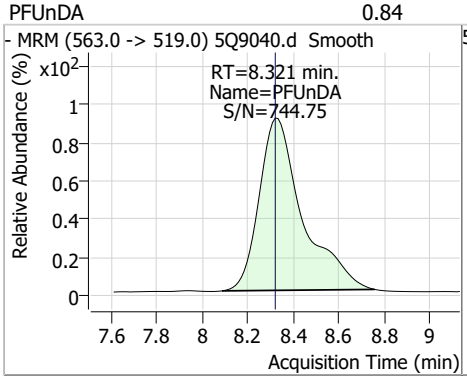
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	21.66	8.32	0.00	633729				

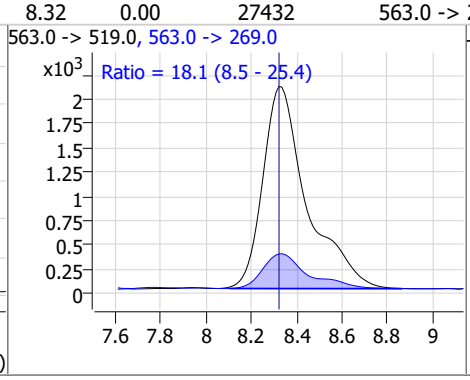


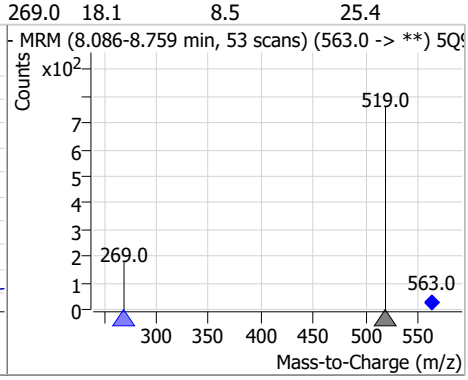




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.84	8.32	0.00	27432	563.0 -> 269.0	18.1	8.5	25.4

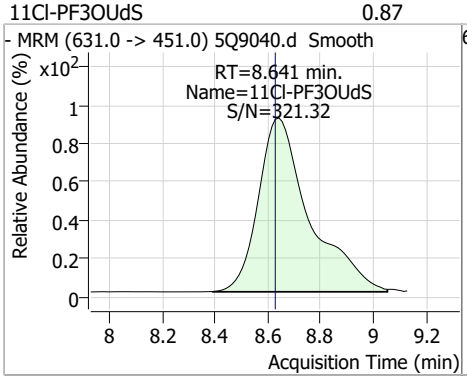


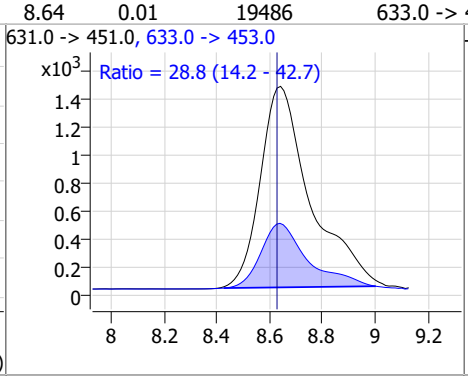


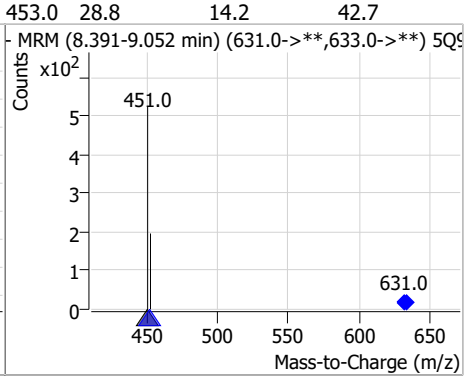


Perfluorinated Compounds by LC/MS/MS

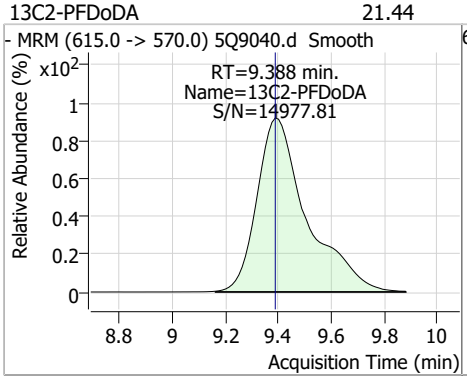
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.87	8.64	0.01	19486	633.0 -> 453.0	28.8	14.2	42.7

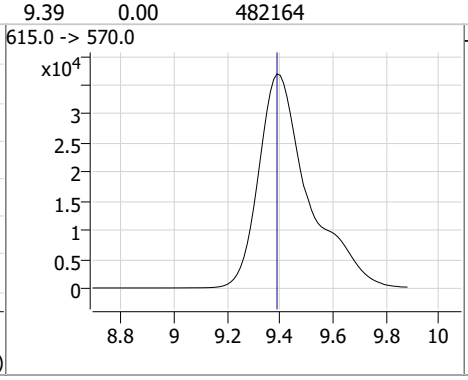


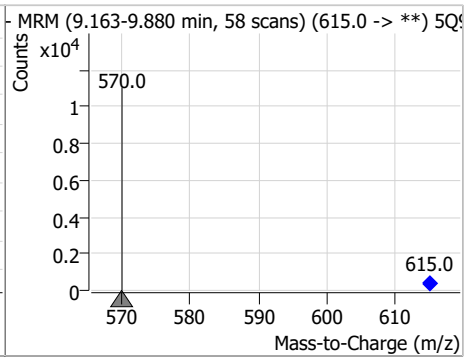




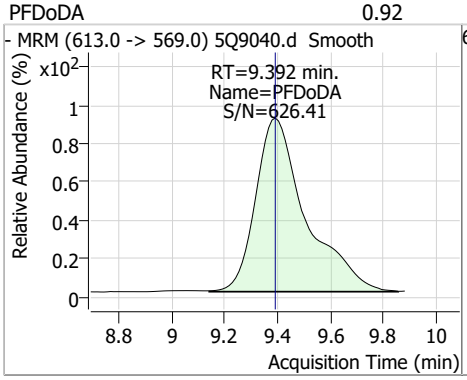
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	21.44	9.39	0.00	482164				

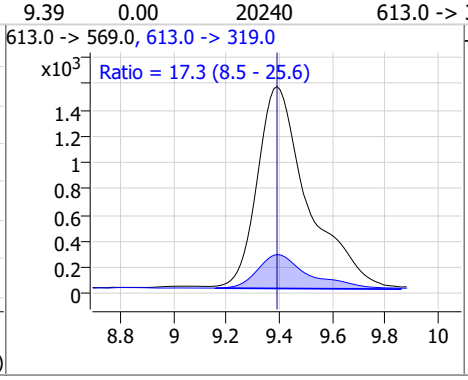


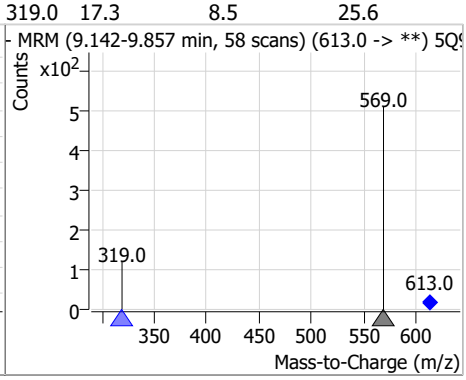




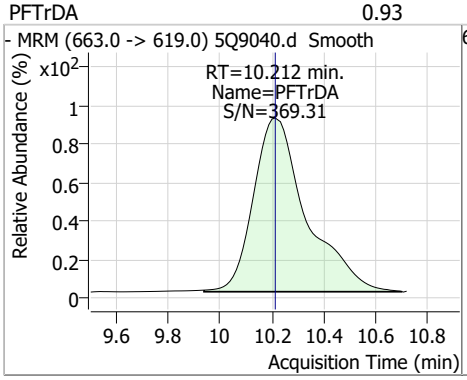
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.92	9.39	0.00	20240	613.0 -> 319.0	17.3	8.5	25.6

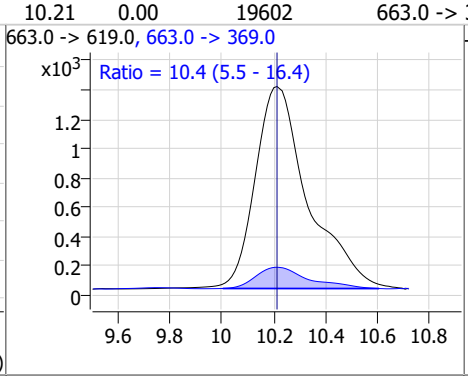


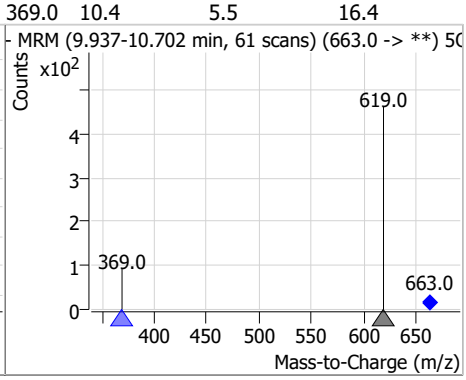




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.93	10.21	0.00	19602	663.0 -> 369.0	10.4	5.5	16.4

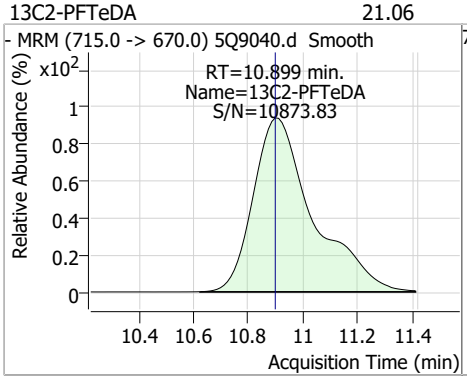


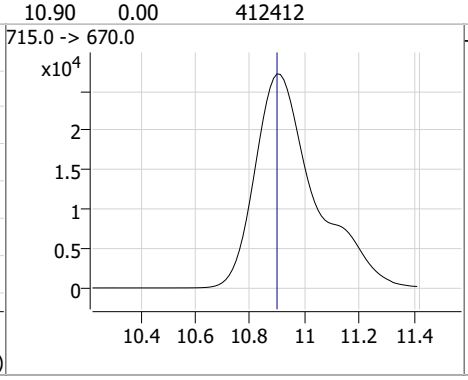


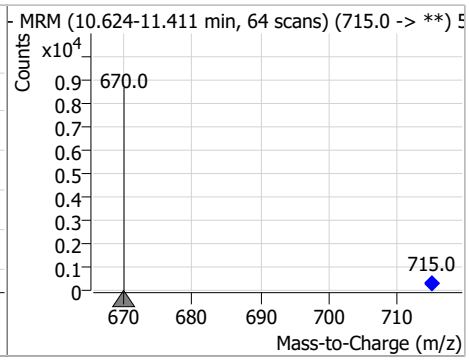


Perfluorinated Compounds by LC/MS/MS

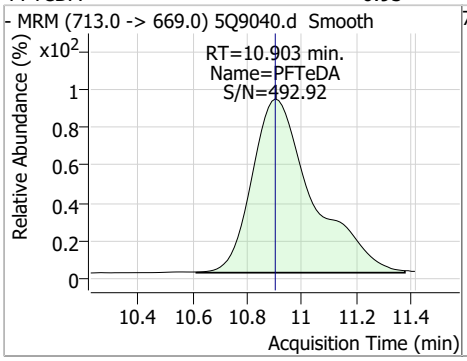
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	21.06	10.90	0.00	412412				

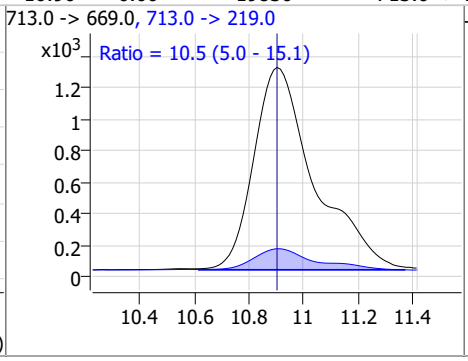


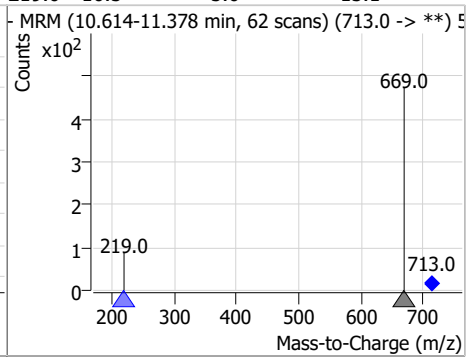




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.93	10.90	0.00	19830	713.0 -> 219.0	10.5	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q134-IC134
Lab FileID: 5Q9040.D
Injection Time: 12/28/22 12:45
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.74	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.88	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9041.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 1:02:27 PM
Sample Name : ic134-2
Vial : P1-A4
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	107987	20.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	218324	20.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	314157	20.00	µg/L	0.000
M4-PFHpA	5.726	367.0 -> 322.0	326492	20.00	µg/L	0.000
M8-PFOA	6.361	421.0 -> 376.0	426594	20.00	µg/L	0.000
M9-PFNA	6.918	472.0 -> 427.0	448417	20.00	µg/L	0.000
M6-PFDA	7.436	519.0 -> 474.0	509508	20.00	µg/L	0.000
M7-PFUnDA	8.320	570.0 -> 525.0	605472	20.00	µg/L	0.000
M2-PFDoDA	9.388	615.0 -> 570.0	466020	20.00	µg/L	0.000
M2-PFTeDA	10.899	715.0 -> 670.0	421075	20.00	µg/L	0.000
M8-FOSA	6.592	506.0 -> 78.0	102072	20.00	µg/L	0.000
M3-PFBS	4.124	302.0 -> 99.0	26702	20.00	µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	37145	20.00	µg/L	0.000
M8-PFOS	6.879	507.0 -> 99.0	50143	20.00	µg/L	0.000
M2-4:2FTS	4.886	329.0 -> 309.0	94150	20.00	µg/L	0.000
M2-6:2FTS	6.360	429.0 -> 409.0	154670	20.00	µg/L	0.000
M2-8:2FTS	7.512	529.0 -> 509.0	146610	20.00	µg/L	0.000
M3-MeFOSAA	7.034	573.0 -> 419.0	37537	20.00	µg/L	0.000
M3-HFPO-DA	5.182	287.0 -> 169.0	69151	20.00	µg/L	0.000
M3-MeFOSA	6.952	515.0 -> 169.0	31568	20.00	µg/L	0.000
M5-EtFOSAA	7.145	589.0 -> 419.0	40280	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	94150	19.55	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.8%		
13C2-6:2FTS	6.360	429.0 -> 409.0	154670	20.17	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.9%		
13C2-8:2FTS	7.512	529.0 -> 509.0	146610	20.30	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.5%		
13C2-PFDoDA	9.388	615.0 -> 570.0	466020	20.73	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.6%		
13C2-PFTeDA	10.899	715.0 -> 670.0	421075	21.51	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.5%		
13C3-PFBS	4.124	302.0 -> 99.0	26702	20.55	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.7%		
13C3-PFHxS	5.733	402.0 -> 99.0	37145	20.76	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.8%		
13C4-PFBA	2.400	217.0 -> 172.0	107987	20.76	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.8%		
13C4-PFHpA	5.726	367.0 -> 322.0	326492	21.24	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.2%		
13C5-PFHxA	4.965	318.0 -> 273.0	314157	20.88	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.4%		
13C5-PFPeA	3.919	268.0 -> 223.0	218324	20.81	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.1%		
13C6-PFDA	7.436	519.0 -> 474.0	509508	21.92	µg/L	0.000

Perfluorinated Compounds by LC/MS/MS

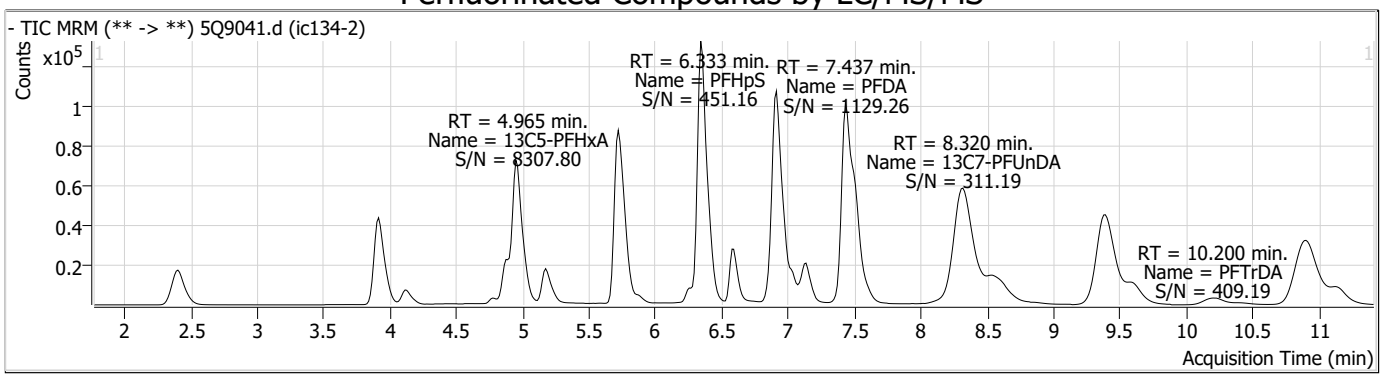
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.6%		
13C7-PFUnDA	8.320	570.0 -> 525.0	605472	20.69 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.5%		
13C8-FOSA	6.592	506.0 -> 78.0	102072	21.14 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.7%		
13C8-PFOA	6.361	421.0 -> 376.0	426594	21.17 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.8%		
13C8-PFOS	6.879	507.0 -> 99.0	50143	21.03 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.1%		
13C9-PFNA	6.918	472.0 -> 427.0	448417	21.32 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.6%		
d3-MeFOSAA	7.034	573.0 -> 419.0	37537	21.13 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.6%		
13C3-HFPO-DA	5.182	287.0 -> 169.0	69151	20.90 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.5%		
d3-MeFOSA	6.952	515.0 -> 169.0	31568	20.84 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.2%		
d5-EtFOSAA	7.145	589.0 -> 419.0	40280	21.84 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.2%		
Target Compounds						QValue
4:2FTS	4.876	327.0 -> 307.0	10618	2.06 µg/L		95
		327.0 -> 81.0	6637			
6:2FTS	6.360	427.0 -> 407.0	16464	2.07 µg/L		100
		427.0 -> 81.0	7055			
8:2FTS	7.512	527.0 -> 507.0	15805	2.11 µg/L		97
		527.0 -> 81.0	8071			
EtFOSAA	7.145	584.0 -> 419.0	2791	2.08 µg/L		96
		584.0 -> 483.0	1694			
FOSA	6.594	498.0 -> 78.0	9794	1.87 µg/L		100
		498.0 -> 478.0	337			
MeFOSAA	7.035	570.0 -> 419.0	3059	2.01 µg/L		96
		570.0 -> 512.0	1343			
PFBA	2.406	213.0 -> 169.0	11137	1.89 µg/L		100
PFBS	4.129	299.0 -> 80.0	8482	1.95 µg/L		99
		299.0 -> 99.0	3676			
PFDA	7.437	513.0 -> 469.0	50597	1.87 µg/L		99
		513.0 -> 219.0	9289			
PFDoDA	9.392	613.0 -> 569.0	43281	2.04 µg/L		99
		613.0 -> 319.0	7168			
PFDS	8.131	599.0 -> 80.0	10434	1.92 µg/L		94
		599.0 -> 99.0	5780			
PFHpA	5.727	363.0 -> 319.0	39070	1.91 µg/L		100
		363.0 -> 169.0	8703			
PFHpS	6.333	449.0 -> 80.0	7383	1.93 µg/L		96
		449.0 -> 99.0	3843			
PFHxA	4.966	313.0 -> 269.0	30670	1.92 µg/L		100
		313.0 -> 119.0	1378			
PFHxS	5.735	399.0 -> 80.0	7176	1.90 µg/L	m	97
		399.0 -> 99.0	4166			
PFNA	6.918	463.0 -> 419.0	44052	1.89 µg/L		98
		463.0 -> 219.0	9098			
PFNS	7.384	549.0 -> 80.0	6582	1.91 µg/L		98
		549.0 -> 99.0	4028			
PFOA	6.362	413.0 -> 369.0	46801	1.92 µg/L		100
		413.0 -> 169.0	12474			
PFOS	6.880	499.0 -> 80.0	8064	1.74 µg/L	m	92

Perfluorinated Compounds by LC/MS/MS

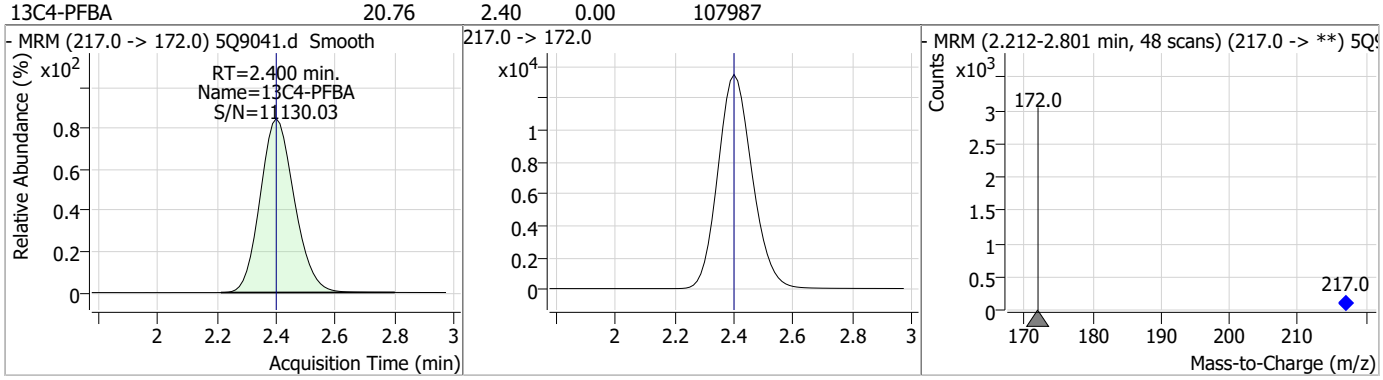
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	4310			
PFPeA	3.922	263.0 -> 219.0	24443	1.90	µg/L	100
PFPeS	5.035	349.0 -> 80.0	5390	1.90	µg/L	98
		349.0 -> 99.0	2670			
PFTeDA	10.891	713.0 -> 669.0	37075	1.70	µg/L	95
		713.0 -> 219.0	4474			
PFTrDA	10.200	663.0 -> 619.0	38914	1.92	µg/L	99
		663.0 -> 369.0	4433			
PFUnDA	8.321	563.0 -> 519.0	61750	1.98	µg/L	100
		563.0 -> 269.0	10356			
11Cl-PF3OUdS	8.628	631.0 -> 451.0	37831	1.75	µg/L	94
		633.0 -> 453.0	11974			
9Cl-PF3ONS	7.123	531.0 -> 351.0	38910	1.73	µg/L	99
		533.0 -> 353.0	12519			
ADONA	5.763	377.0 -> 251.0	49979	1.99	µg/L	99
		377.0 -> 85.0	19069			
HFPO-DA	5.190	329.0 -> 169.0	10657	1.93	µg/L	99
		285.0 -> 169.0	6248			
MeFOSA	6.953	512.0 -> 169.0	4027	2.16	µg/L	89
		512.0 -> 219.0	2766			
4-PFECHS	6.268	461.0 -> 381.0	23559	1.73	µg/L	96
		461.0 -> 99.0	13323			
FBSA	4.793	298.0 -> 78.0	12763	1.96	µg/L	100
		298.0 -> 64.0	1206			
FHxSA	5.888	398.0 -> 78.0	11895	1.87	µg/L	99
		398.0 -> 64.0	1172			

 # = Qualifier out of range, m = manually integrated, + = Area summed

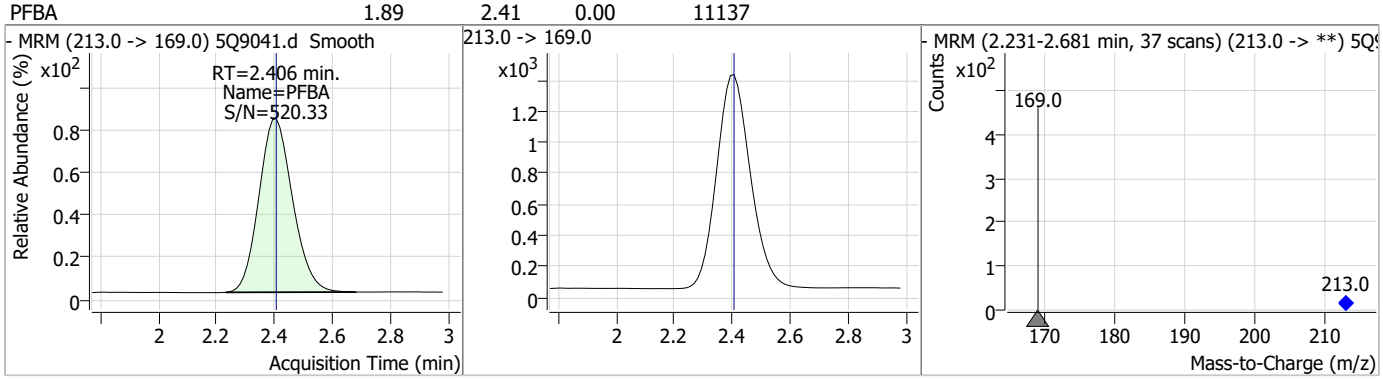
Perfluorinated Compounds by LC/MS/MS



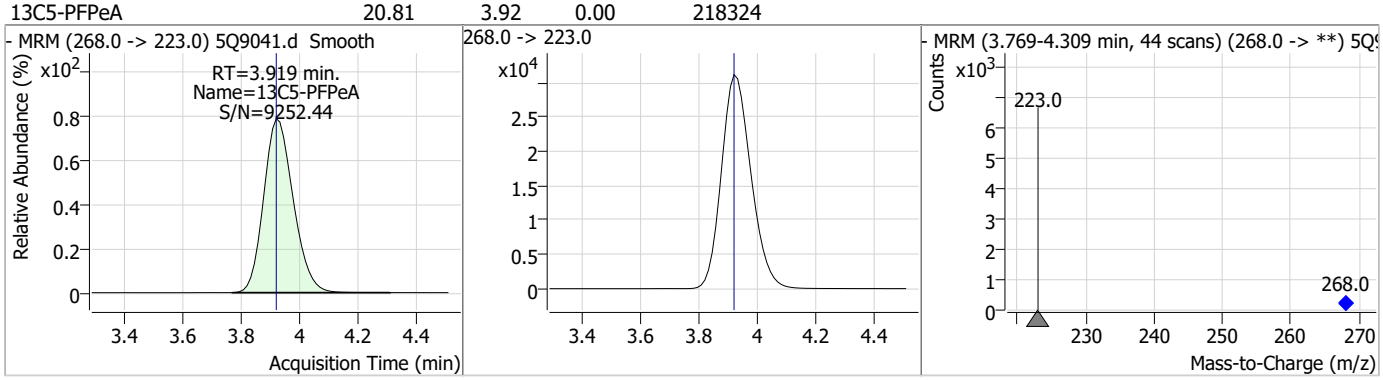
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.76	2.40	0.00	107987				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	1.89	2.41	0.00	11137				

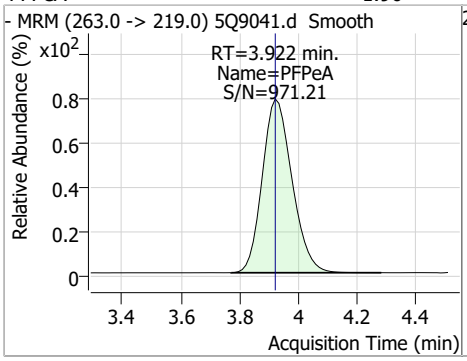


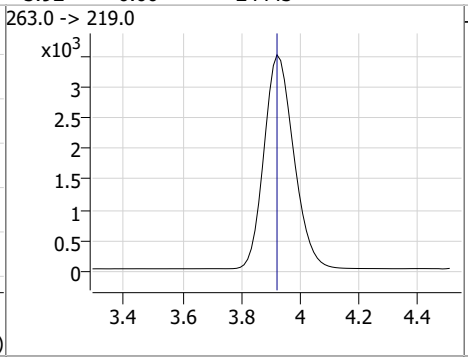
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.81	3.92	0.00	218324				

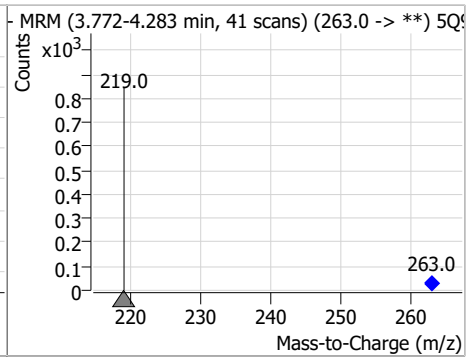


Perfluorinated Compounds by LC/MS/MS

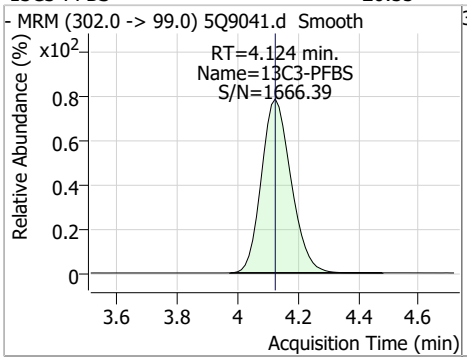
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	1.90	3.92	0.00	24443				

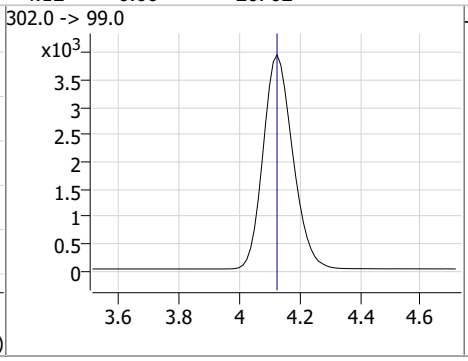


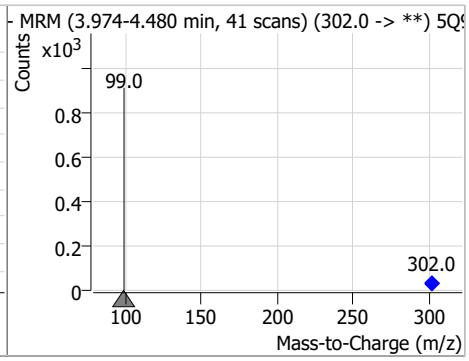




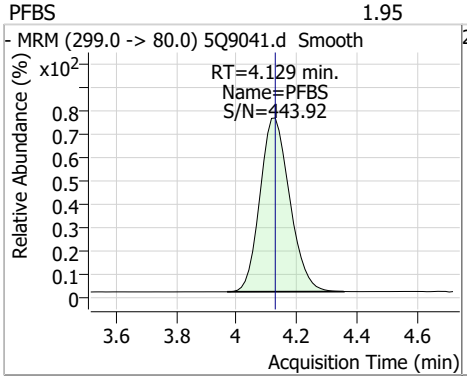
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.55	4.12	0.00	26702				

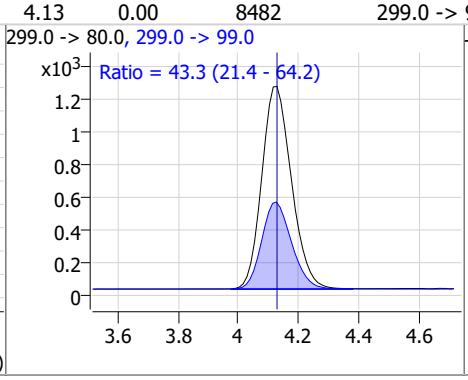


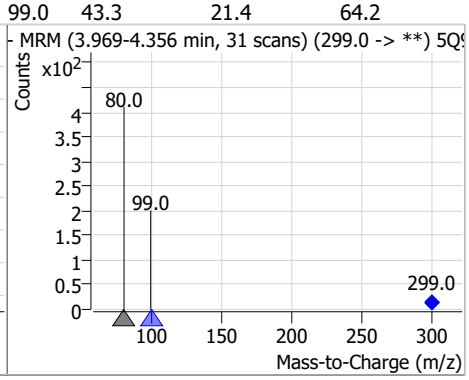




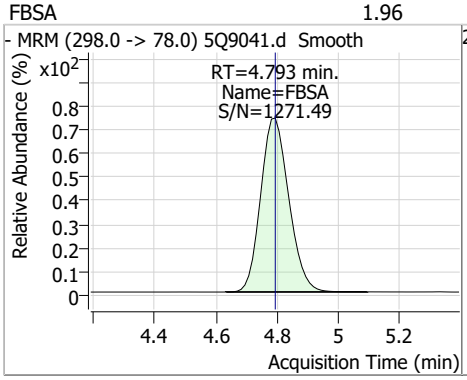
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	1.95	4.13	0.00	8482	299.0 -> 99.0	43.3	21.4	64.2

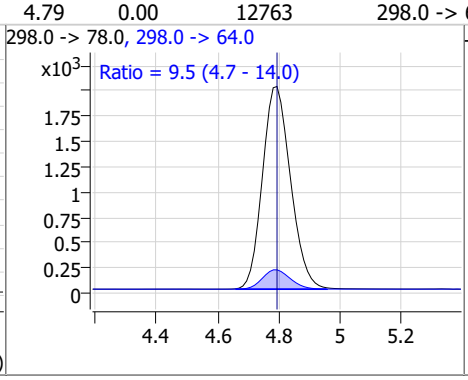


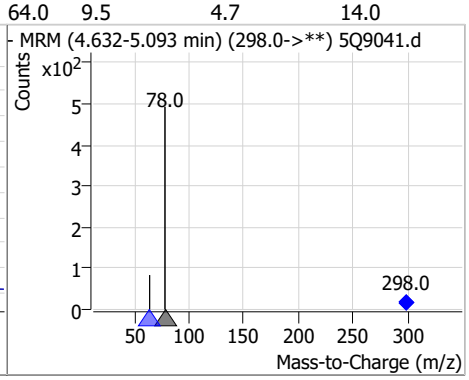




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	1.96	4.79	0.00	12763	298.0 -> 64.0	9.5	4.7	14.0

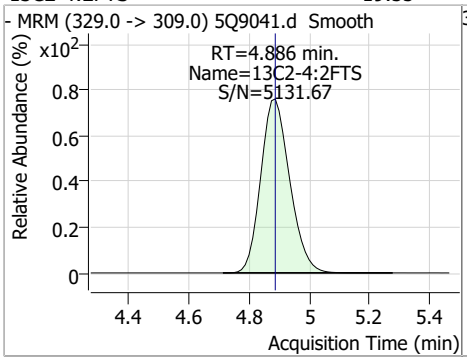


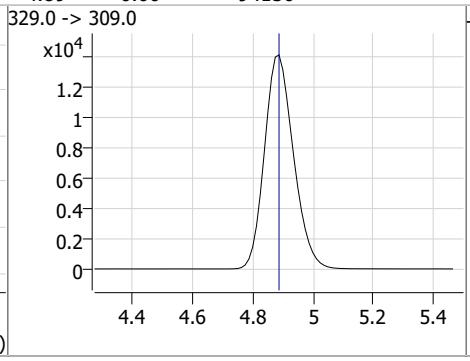


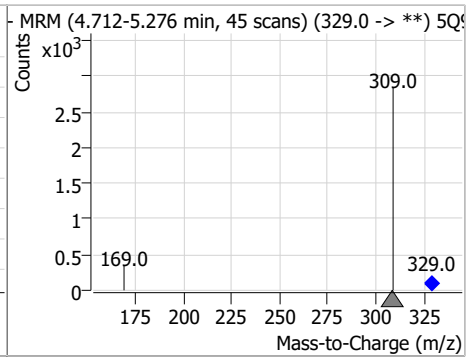


Perfluorinated Compounds by LC/MS/MS

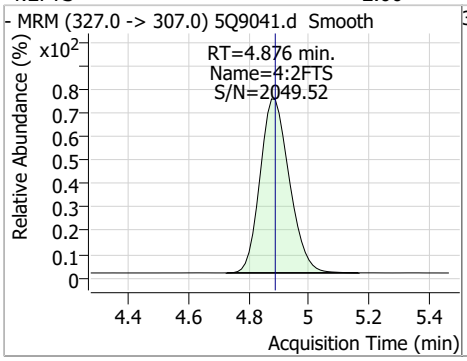
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.55	4.89	0.00	94150				

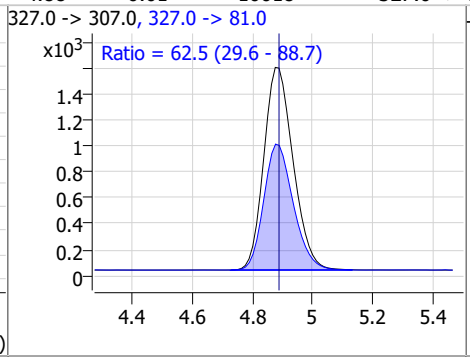


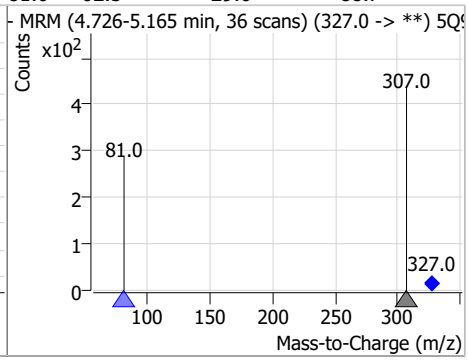




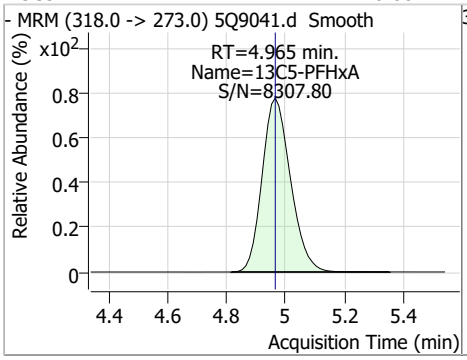
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	2.06	4.88	-0.01	10618	327.0 -> 81.0	62.5	29.6	88.7

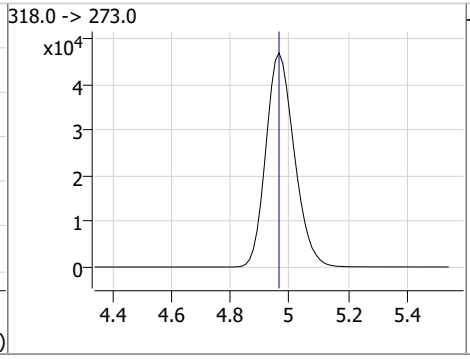


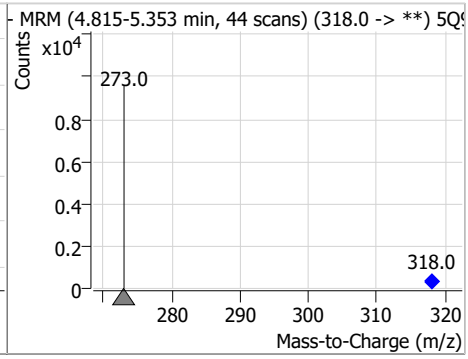




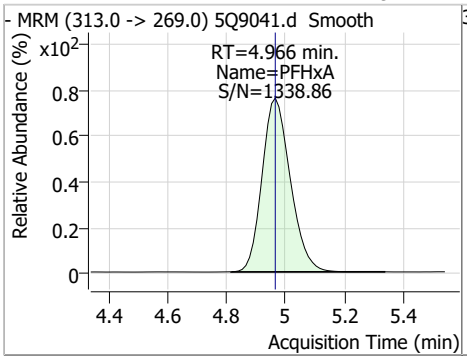
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.88	4.96	0.00	314157				

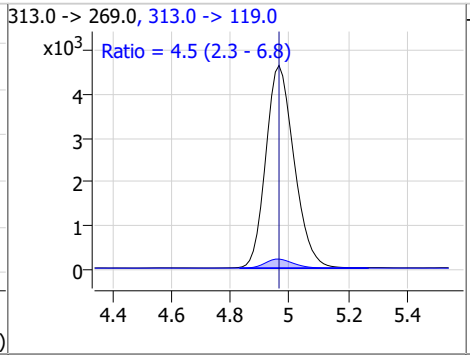


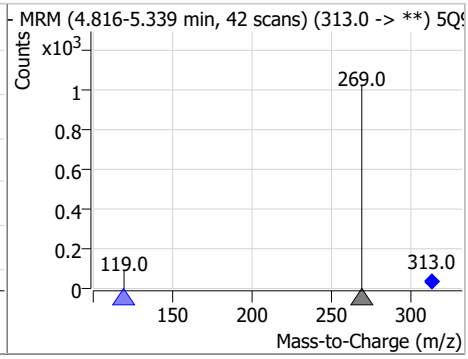




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	1.92	4.97	0.00	30670	313.0 -> 119.0	4.5	2.3	6.8

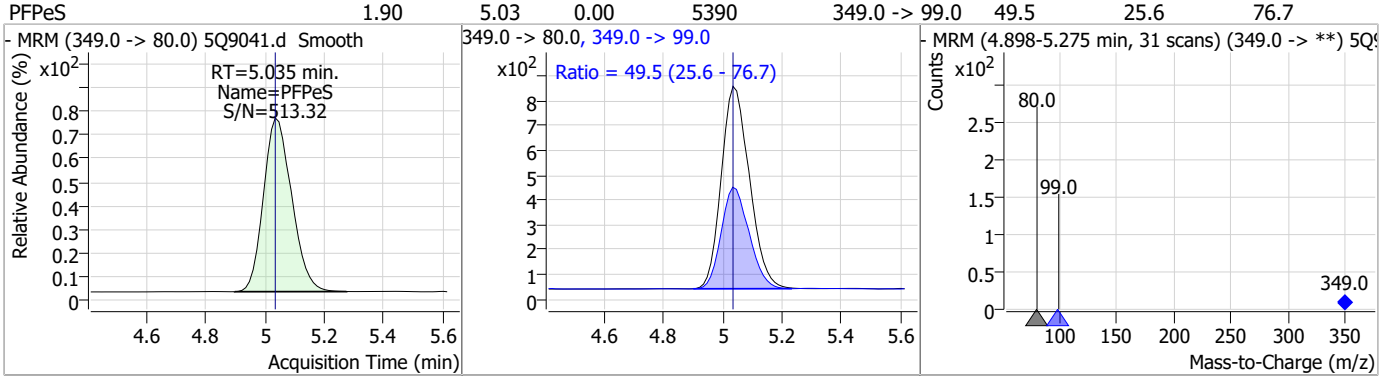




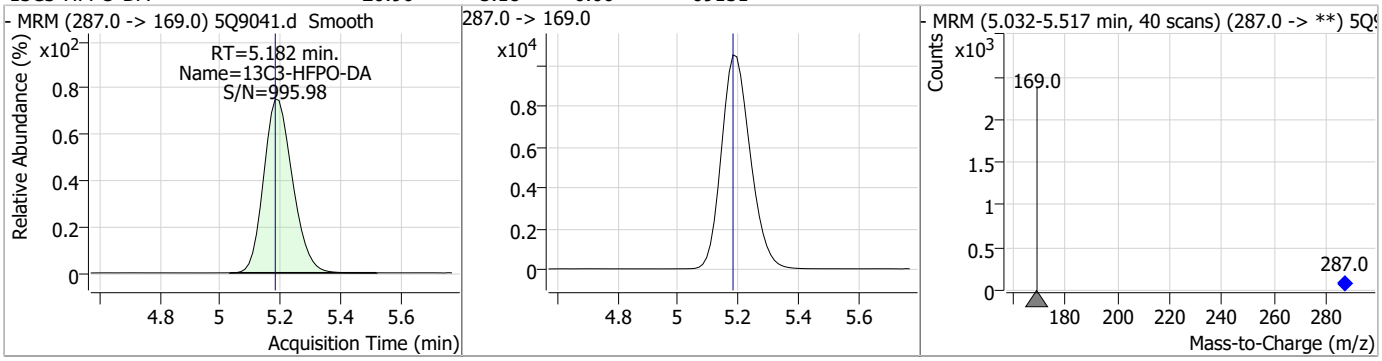


Perfluorinated Compounds by LC/MS/MS

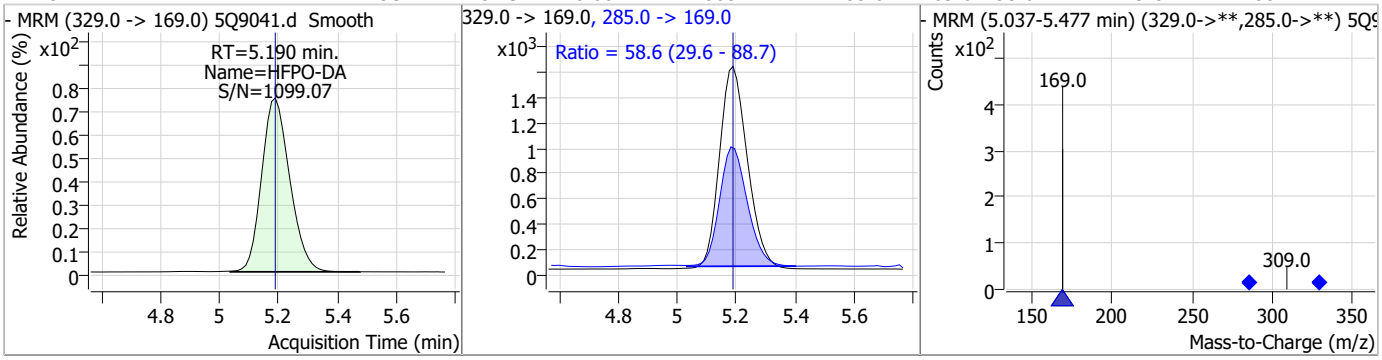
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	1.90	5.03	0.00	5390	349.0 -> 99.0	49.5	25.6	76.7



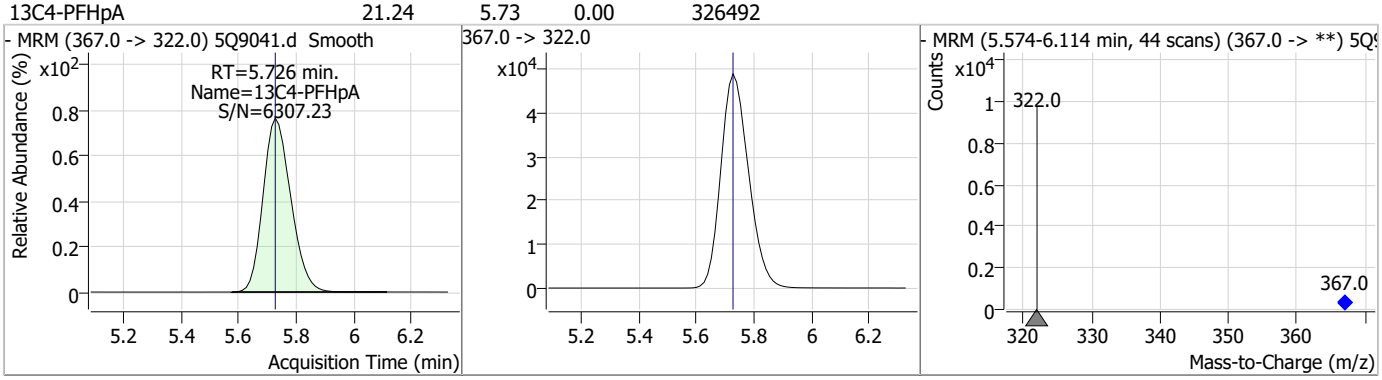
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.90	5.18	0.00	69151				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	1.93	5.19	0.00	10657	285.0 -> 169.0	58.6	29.6	88.7

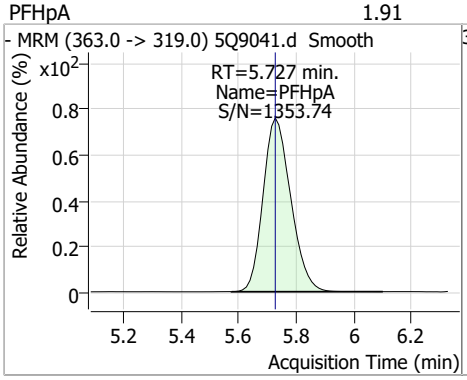


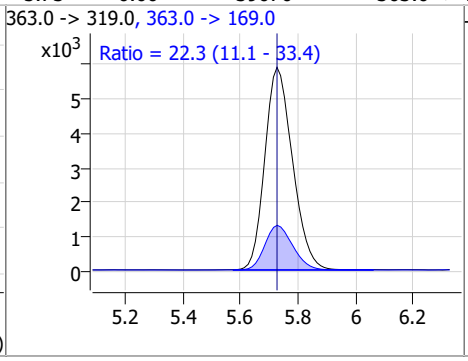
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	21.24	5.73	0.00	326492				

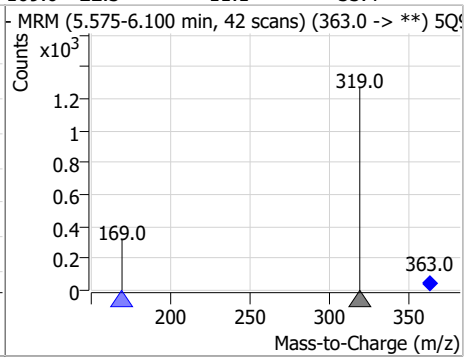


Perfluorinated Compounds by LC/MS/MS

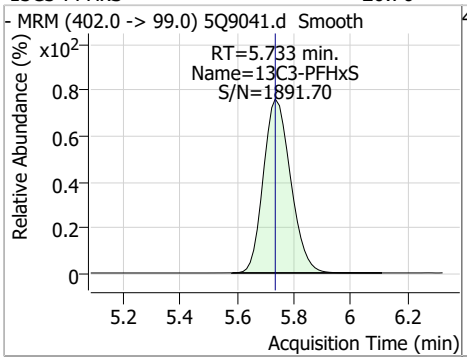
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	1.91	5.73	0.00	39070	363.0 -> 169.0	22.3	11.1	33.4

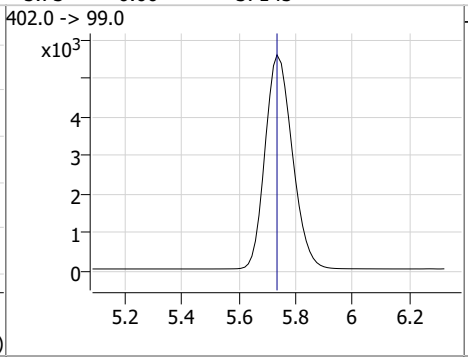


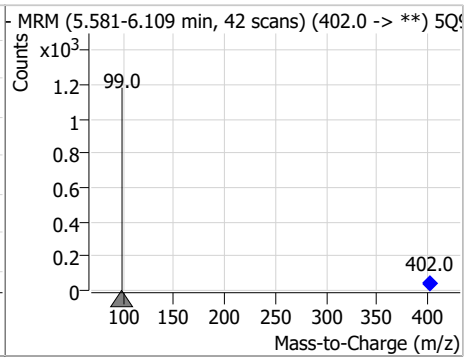




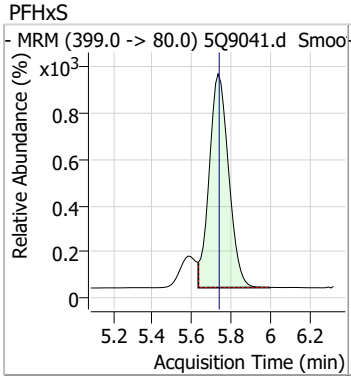
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.76	5.73	0.00	37145				

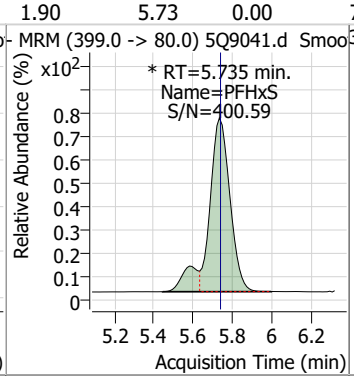


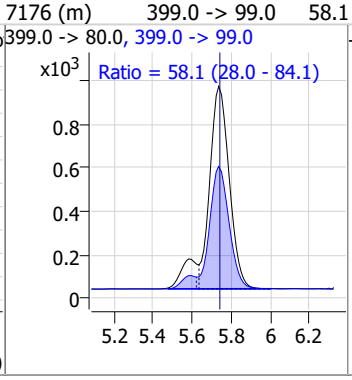


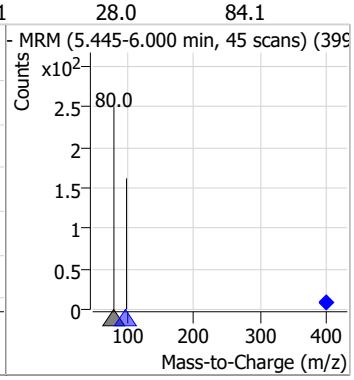


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	1.90	5.73	0.00	7176 (m)	399.0 -> 99.0	58.1	28.0	84.1

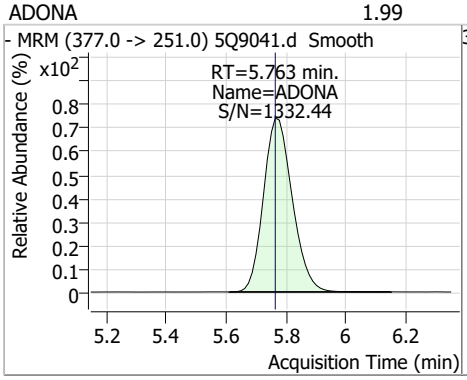


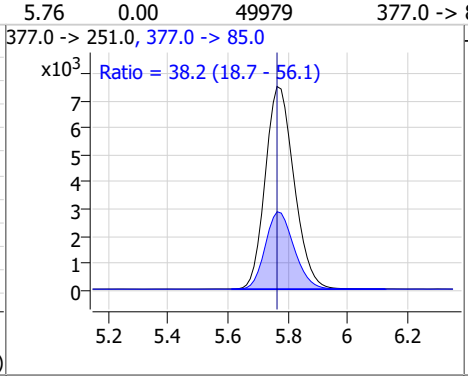


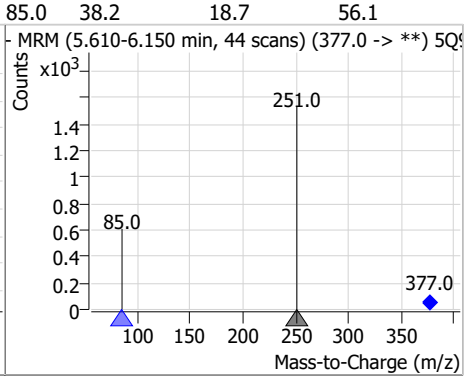




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	1.99	5.76	0.00	49979	377.0 -> 85.0	38.2	18.7	56.1

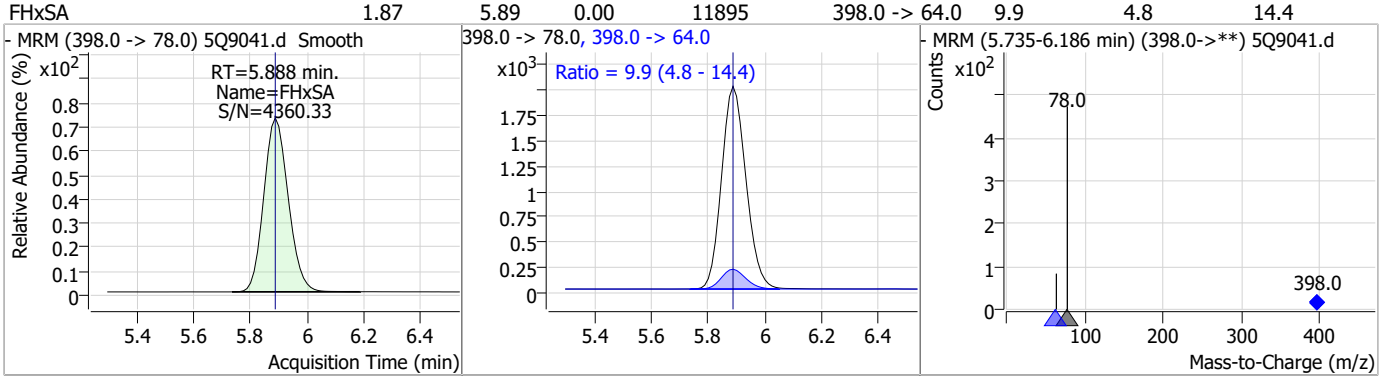




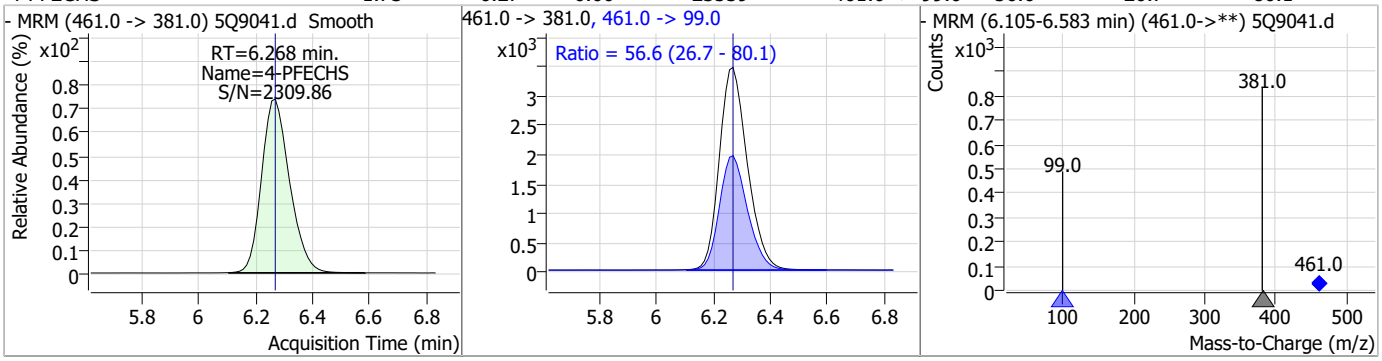


Perfluorinated Compounds by LC/MS/MS

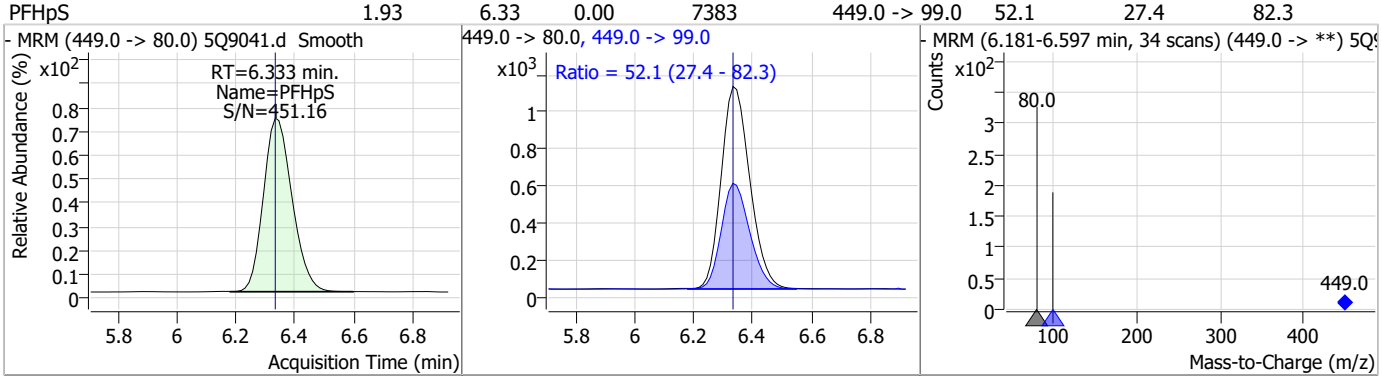
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	1.87	5.89	0.00	11895	398.0 -> 64.0	9.9	4.8	14.4



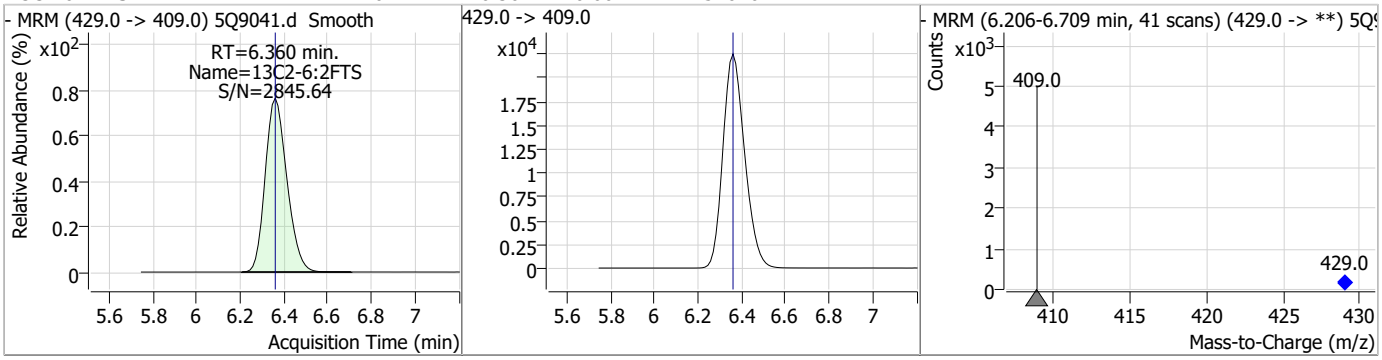
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	1.73	6.27	0.00	23559	461.0 -> 99.0	56.6	26.7	80.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	1.93	6.33	0.00	7383	449.0 -> 99.0	52.1	27.4	82.3

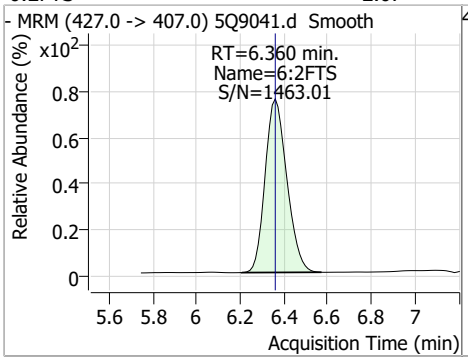


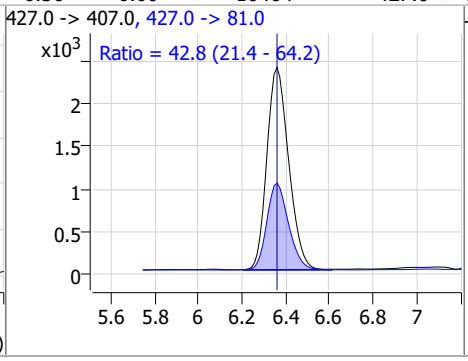
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.17	6.36	0.00	154670				

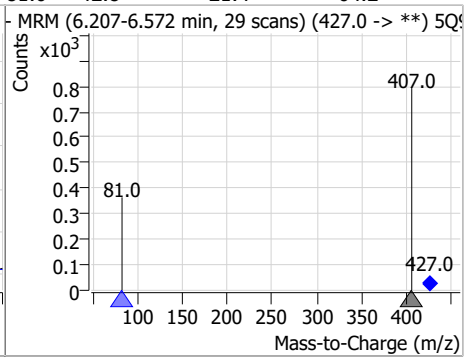


Perfluorinated Compounds by LC/MS/MS

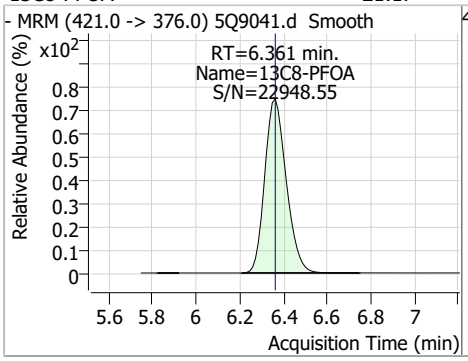
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	2.07	6.36	0.00	16464	427.0 -> 81.0	42.8	21.4	64.2

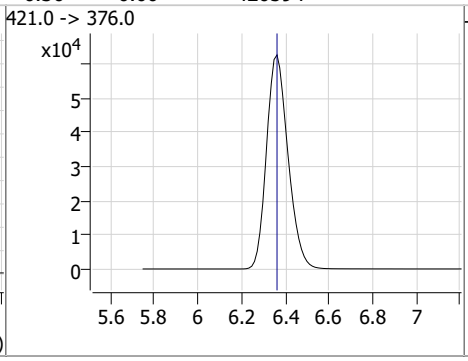


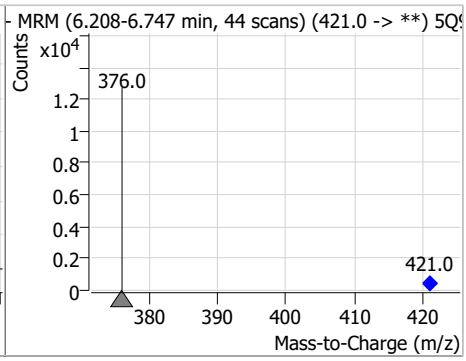




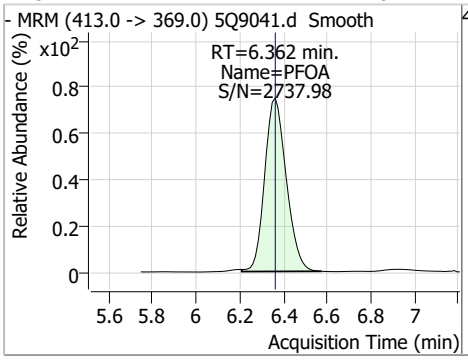
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	21.17	6.36	0.00	426594				

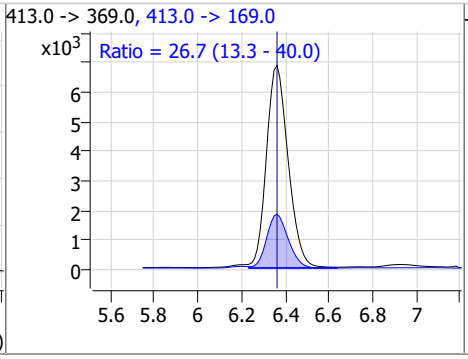


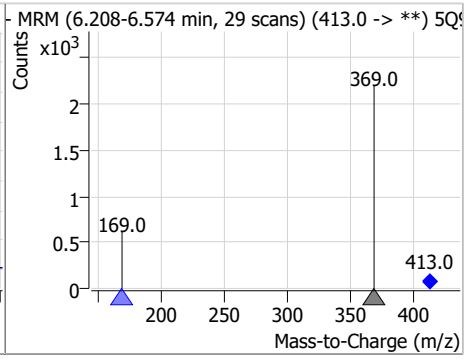




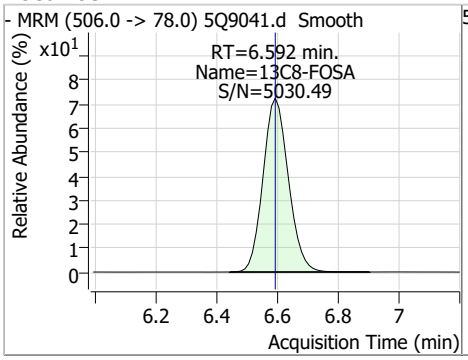
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	1.92	6.36	0.00	46801	413.0 -> 169.0	26.7	13.3	40.0

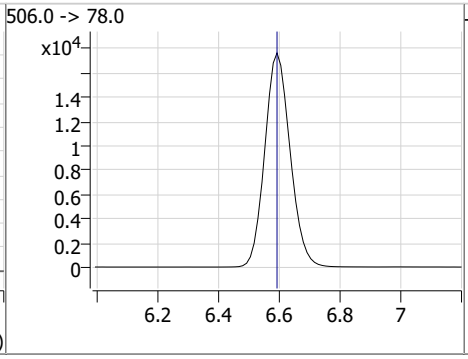


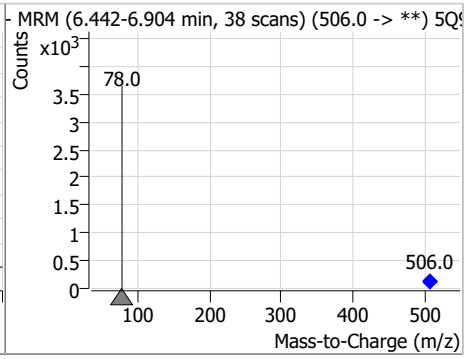




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	21.14	6.59	0.00	102072				

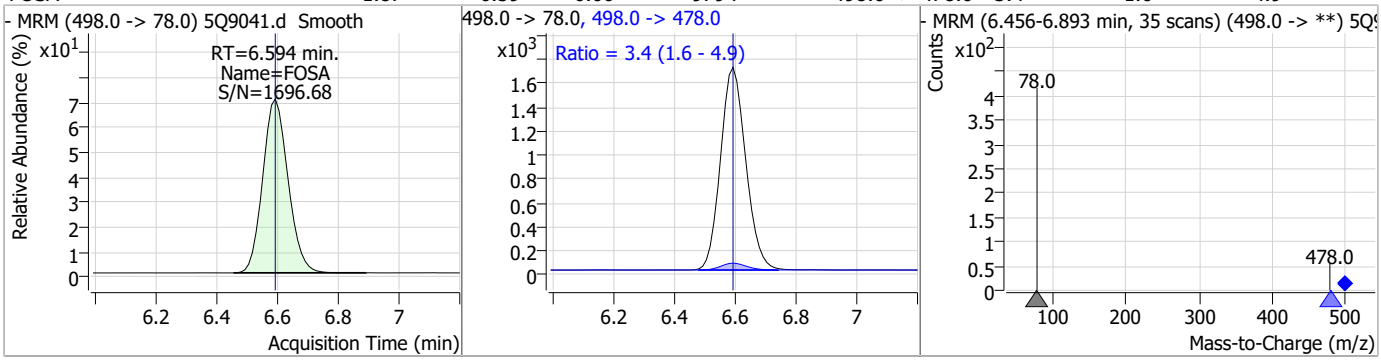




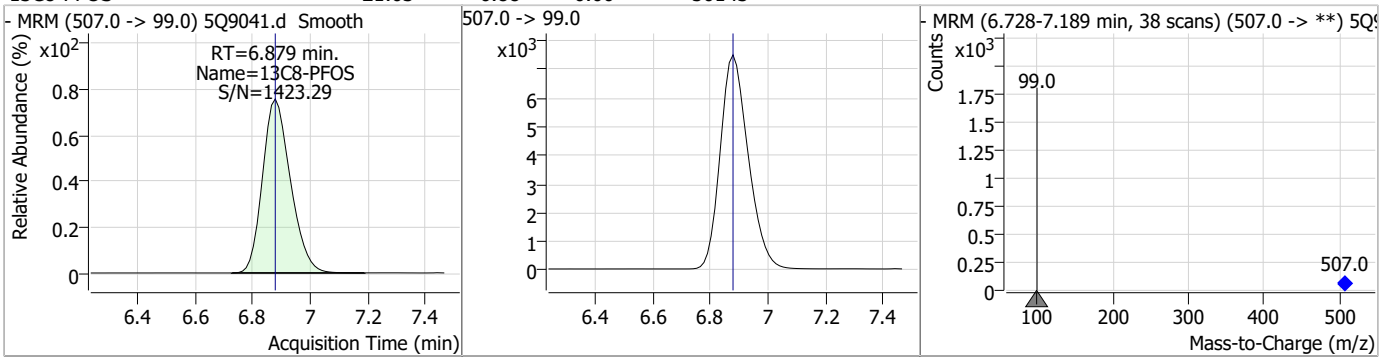


Perfluorinated Compounds by LC/MS/MS

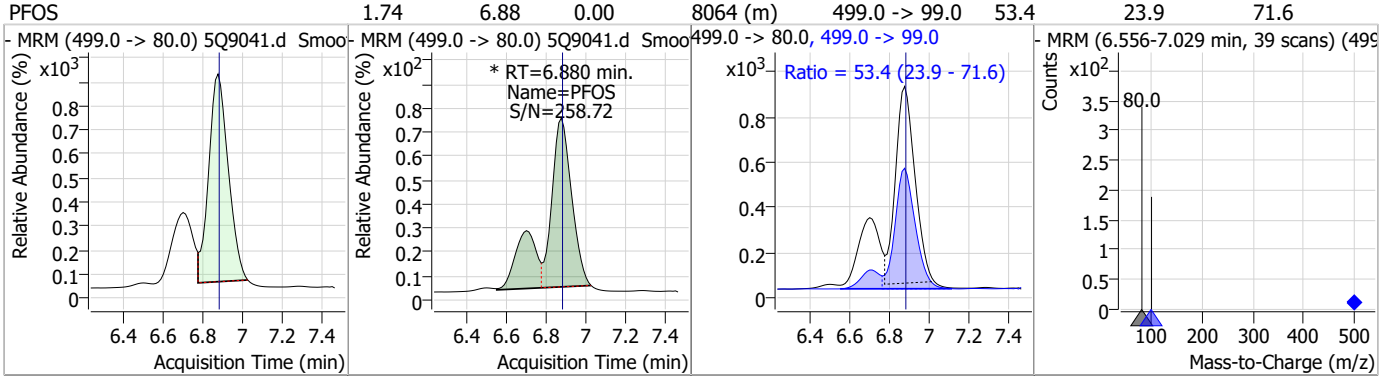
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	1.87	6.59	0.00	9794	498.0 -> 478.0	3.4	1.6	4.9



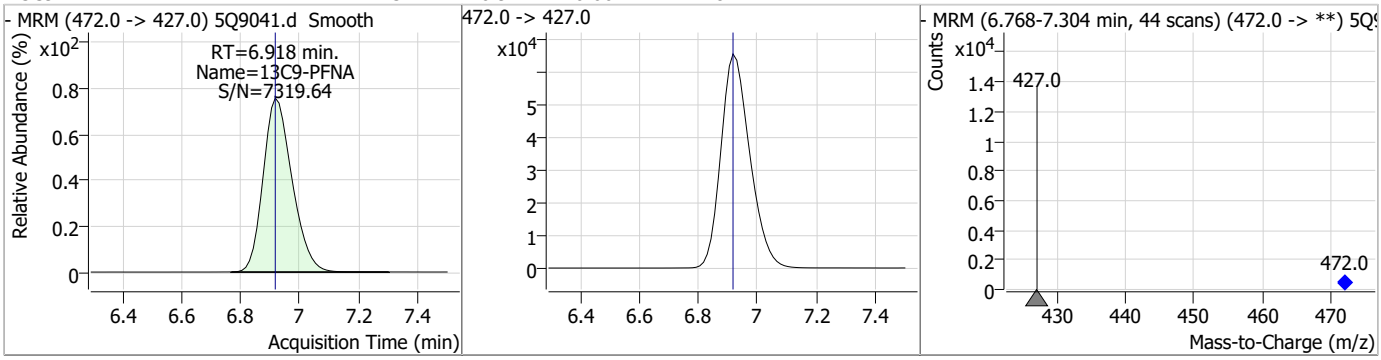
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	21.03	6.88	0.00	50143				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	1.74	6.88	0.00	8064 (m)	499.0 -> 99.0	53.4	23.9	71.6

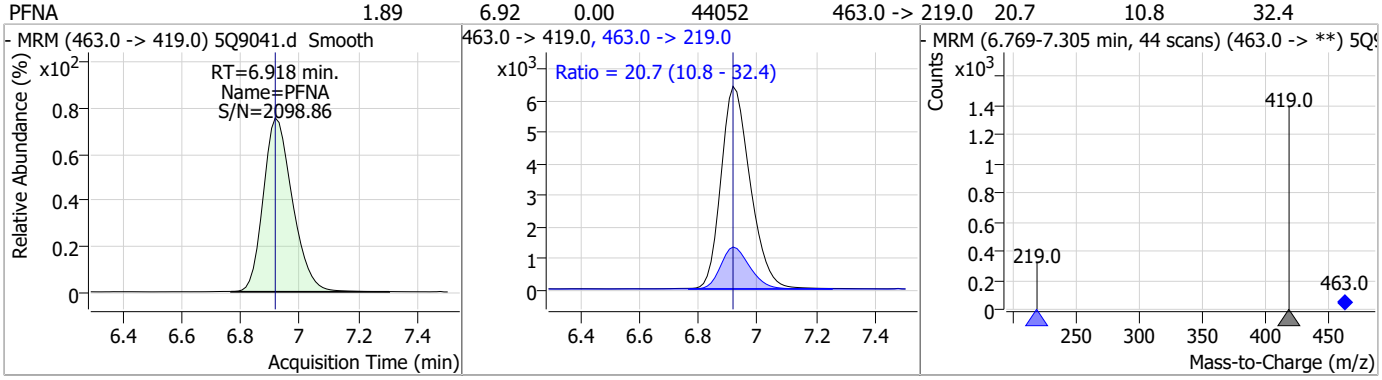


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	21.32	6.92	0.00	448417				

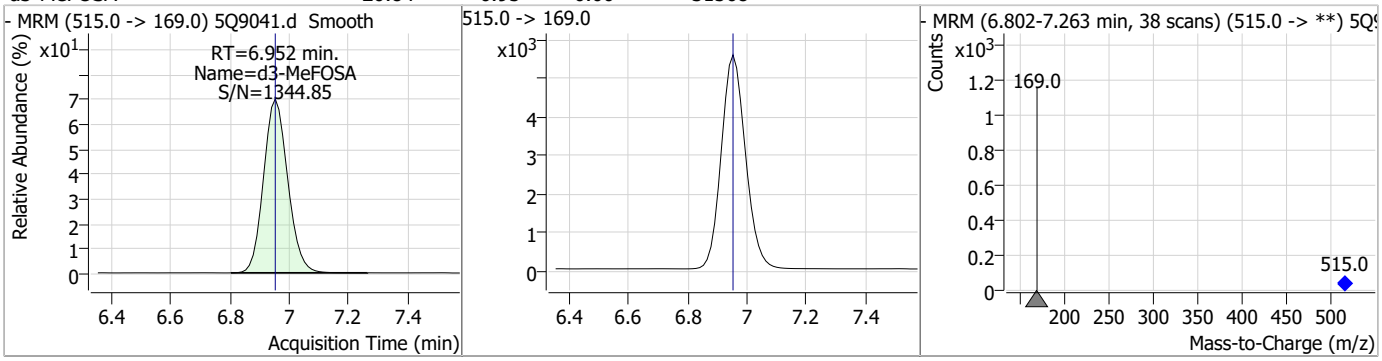


Perfluorinated Compounds by LC/MS/MS

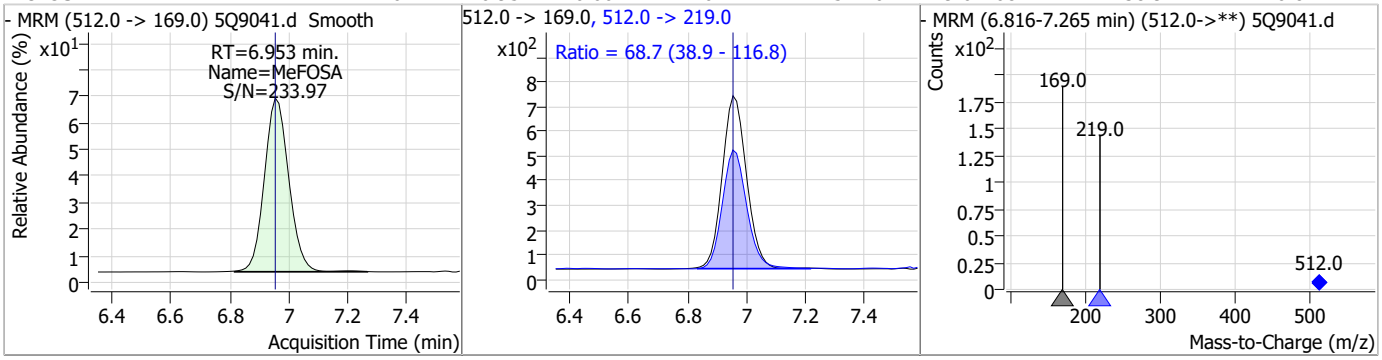
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	1.89	6.92	0.00	44052	463.0 -> 219.0	20.7	10.8	32.4



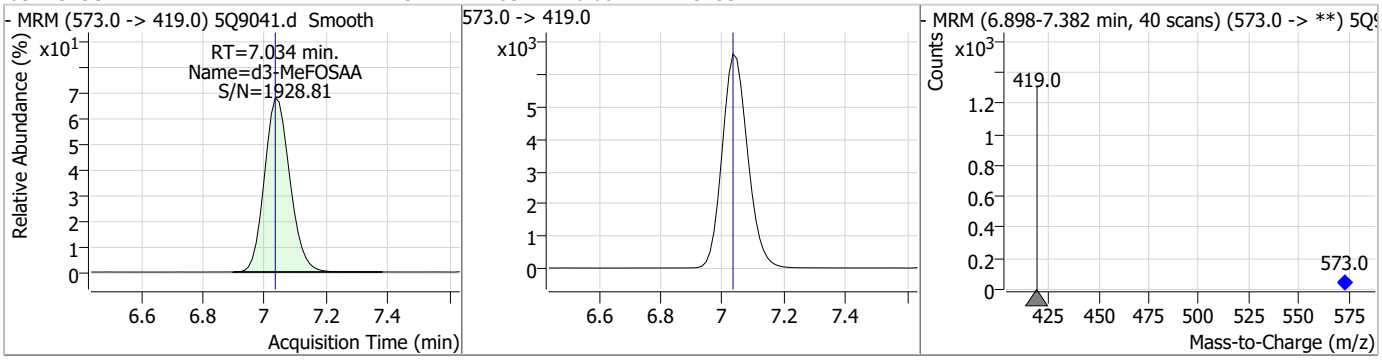
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	20.84	6.95	0.00	31568				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	2.16	6.95	0.00	4027	512.0 -> 219.0	68.7	38.9	116.8

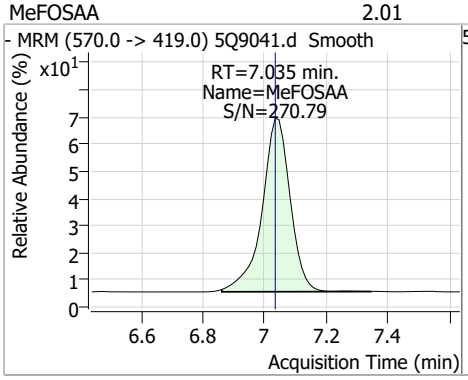


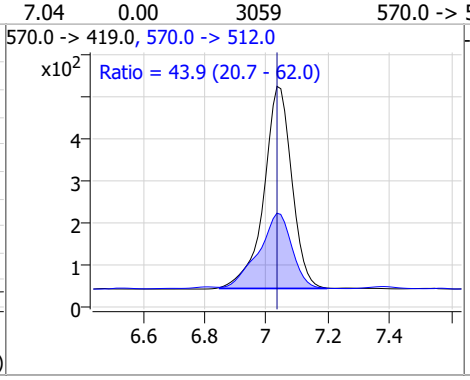
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	21.13	7.03	0.00	37537				

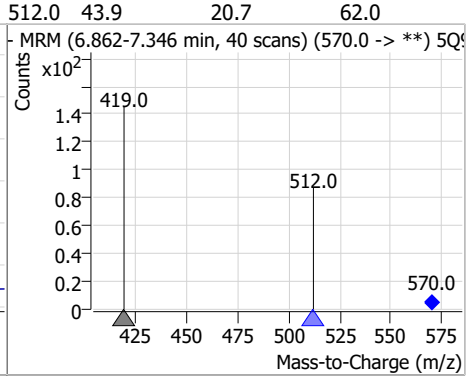


Perfluorinated Compounds by LC/MS/MS

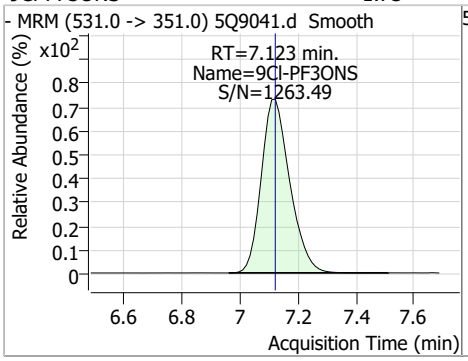
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	2.01	7.04	0.00	3059	570.0 -> 512.0	43.9	20.7	62.0

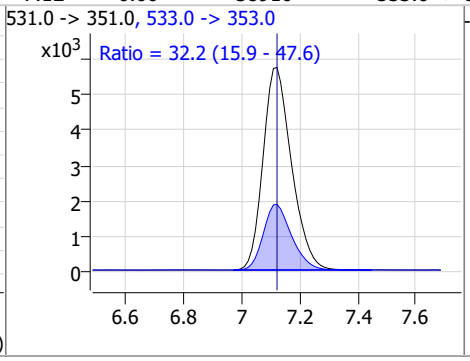


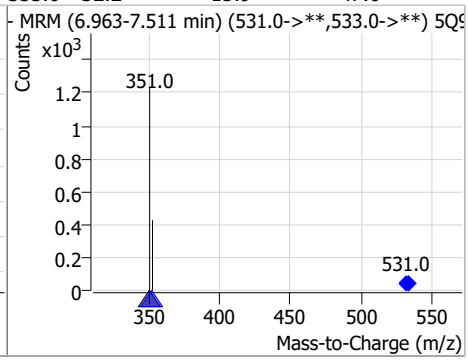




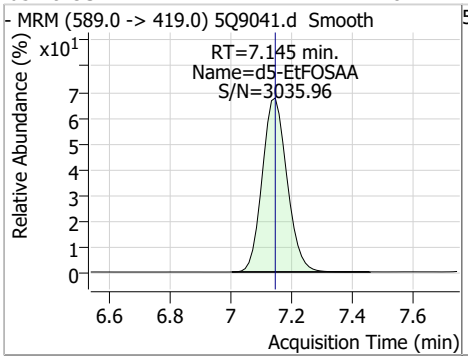
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	1.73	7.12	0.00	38910	533.0 -> 353.0	32.2	15.9	47.6

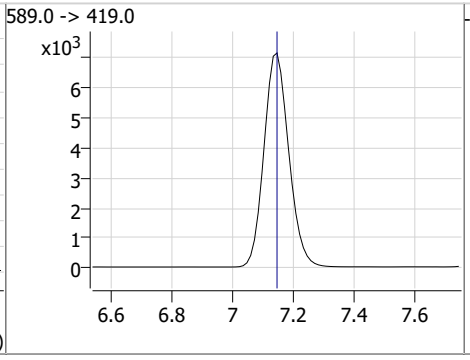


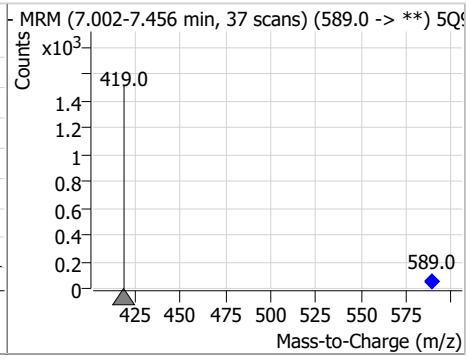




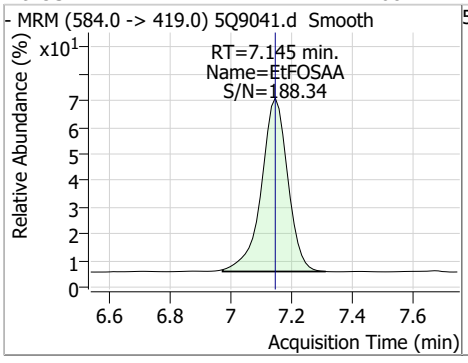
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	21.84	7.14	0.00	40280				

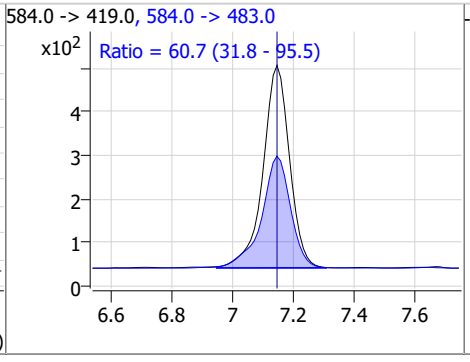


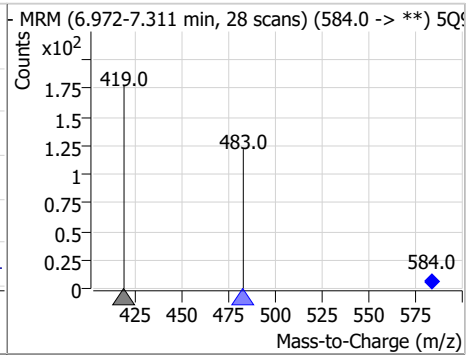




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	2.08	7.15	0.00	2791	584.0 -> 483.0	60.7	31.8	95.5

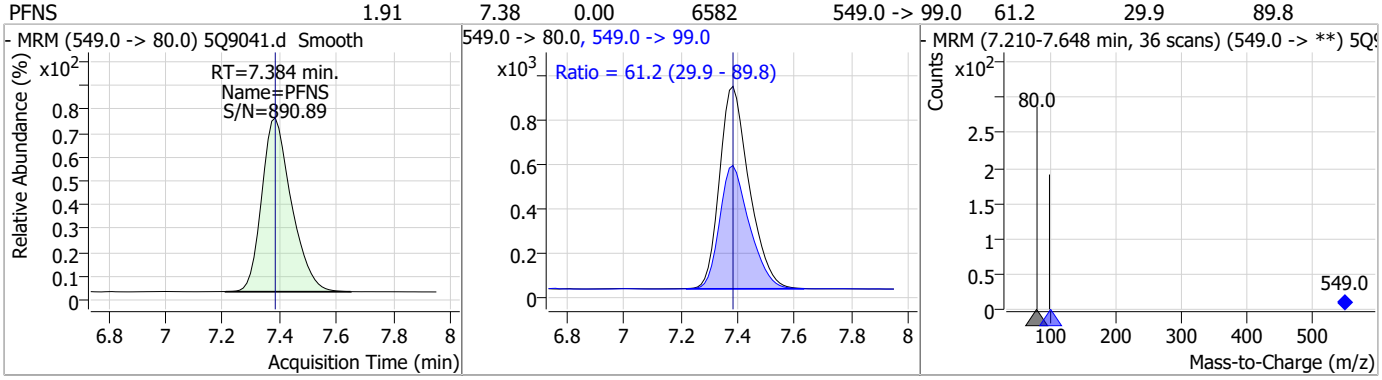




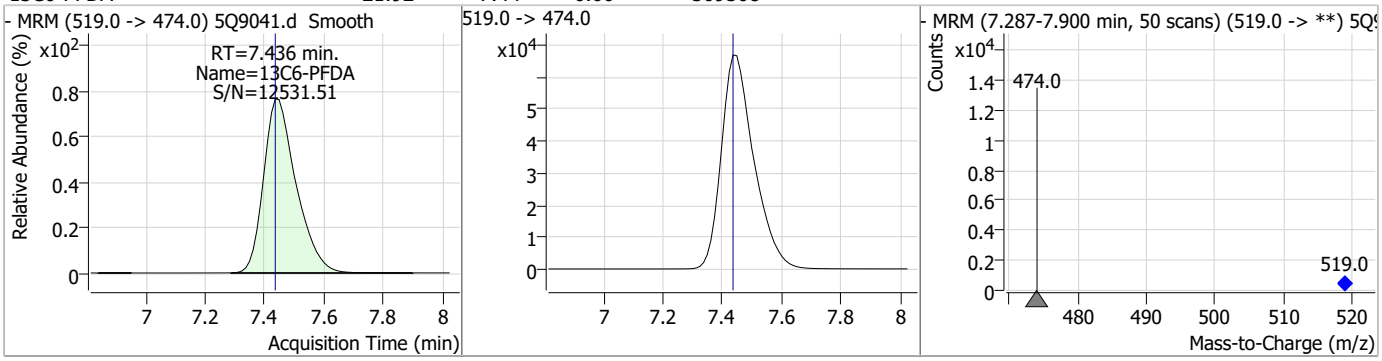


Perfluorinated Compounds by LC/MS/MS

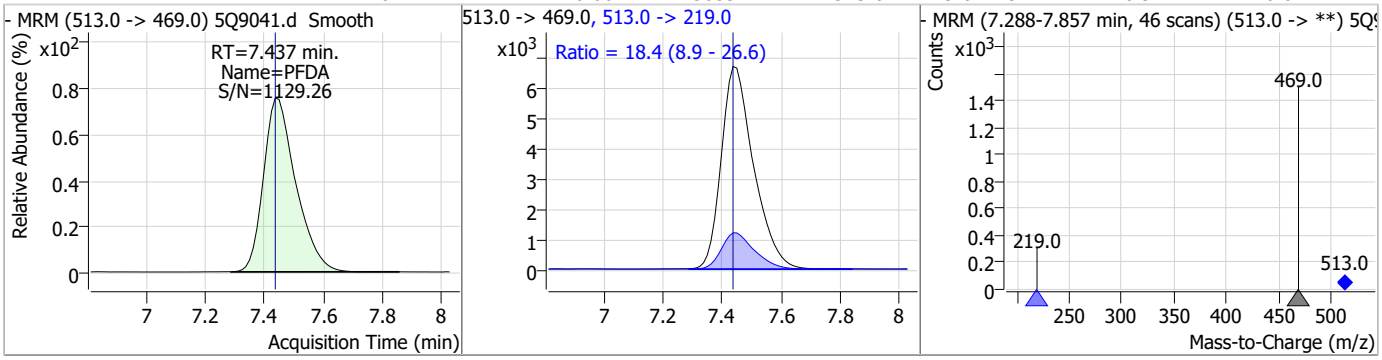
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	1.91	7.38	0.00	6582	549.0 -> 99.0	61.2	29.9	89.8



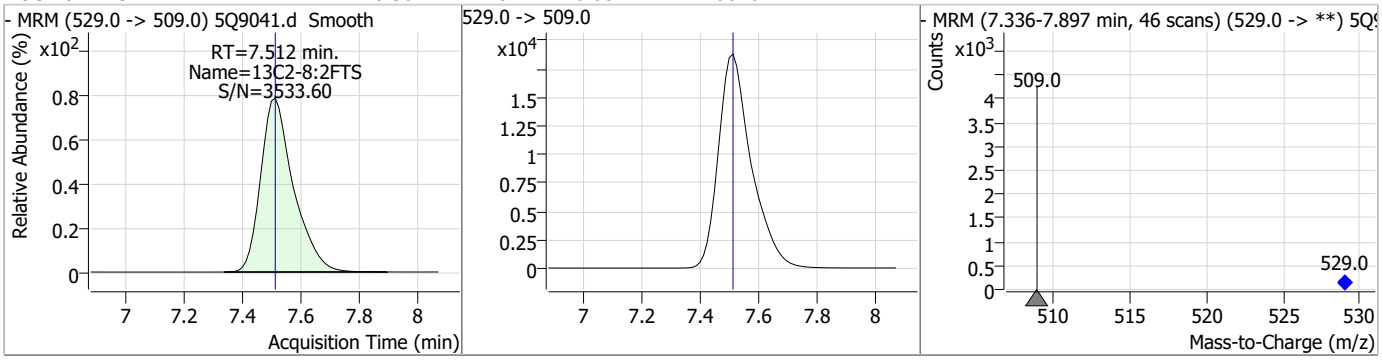
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	21.92	7.44	0.00	509508				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	1.87	7.44	0.00	50597	513.0 -> 219.0	18.4	8.9	26.6

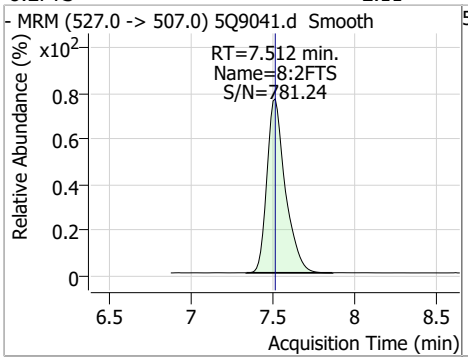


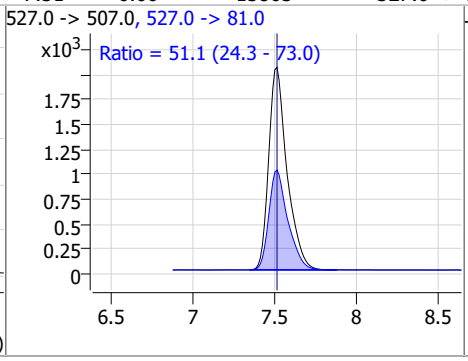
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	20.30	7.51	0.00	146610				

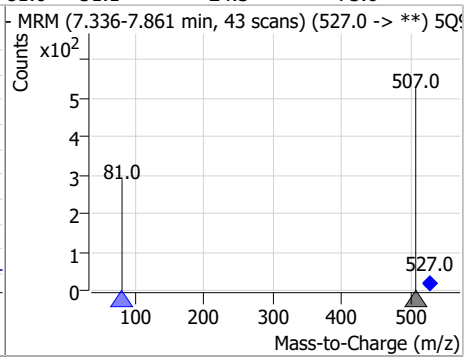


Perfluorinated Compounds by LC/MS/MS

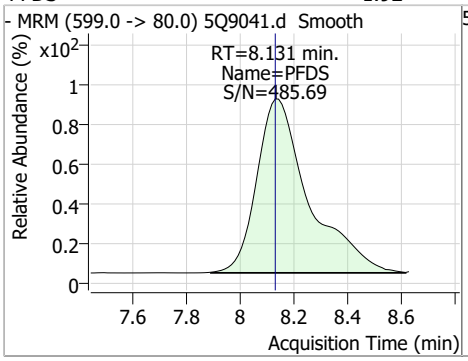
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	2.11	7.51	0.00	15805	527.0 -> 81.0	51.1	24.3	73.0

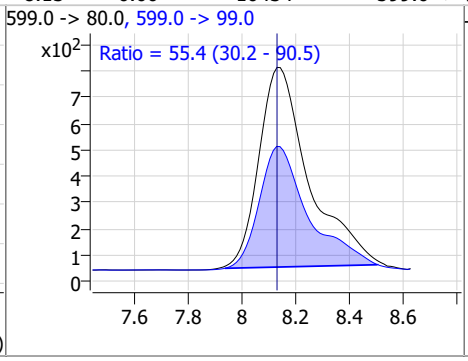


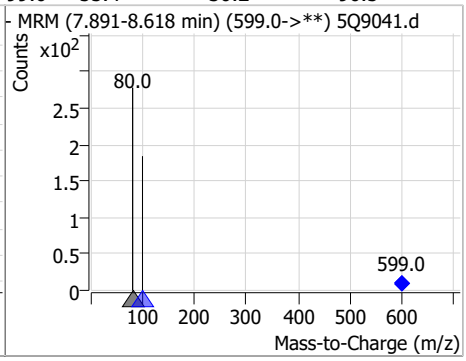




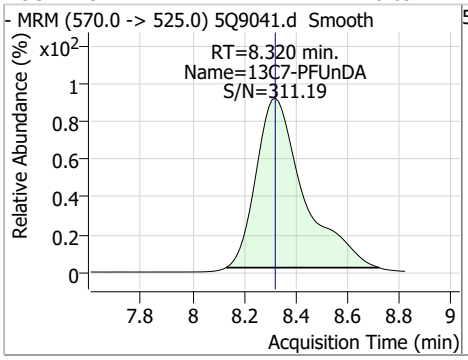
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	1.92	8.13	0.00	10434	599.0 -> 99.0	55.4	30.2	90.5

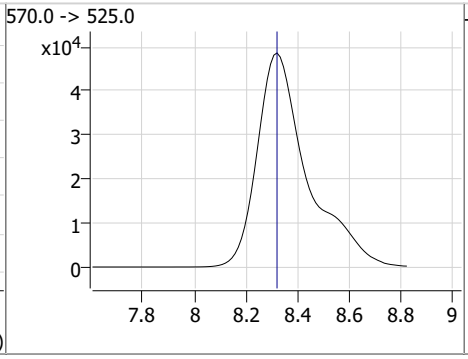


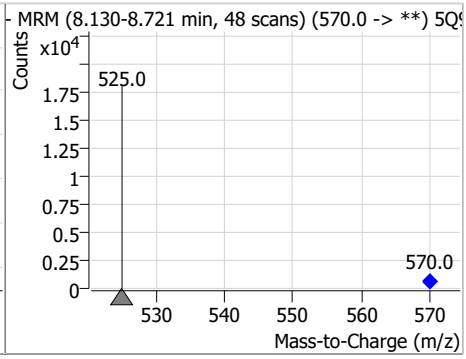




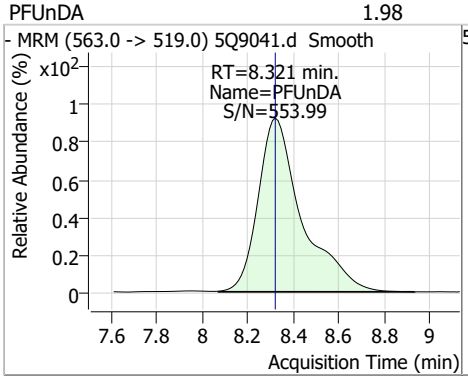
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.69	8.32	0.00	605472				

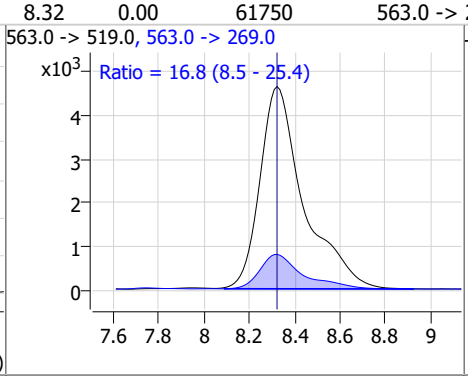


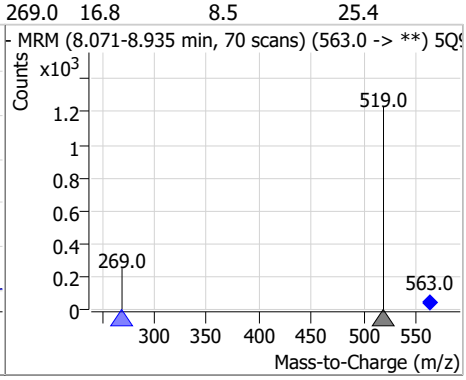




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	1.98	8.32	0.00	61750	563.0 -> 269.0	16.8	8.5	25.4

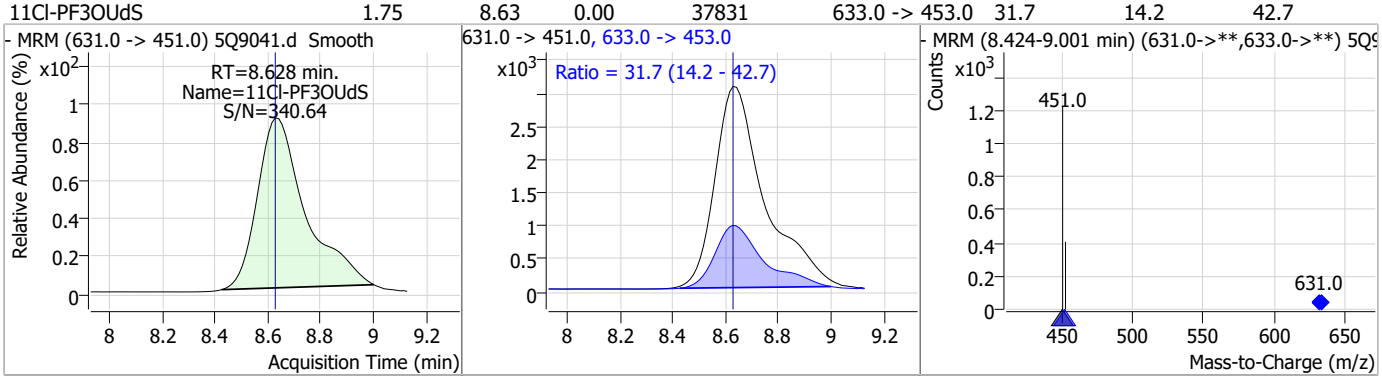




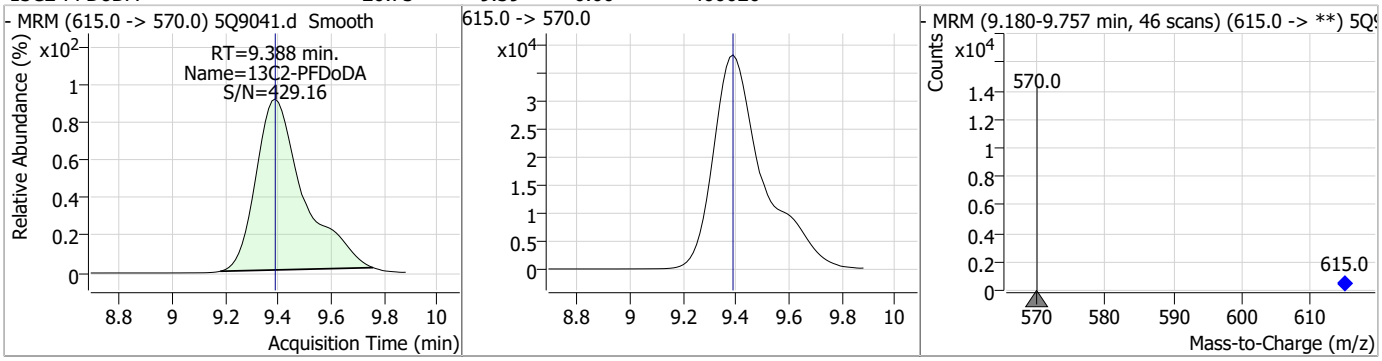


Perfluorinated Compounds by LC/MS/MS

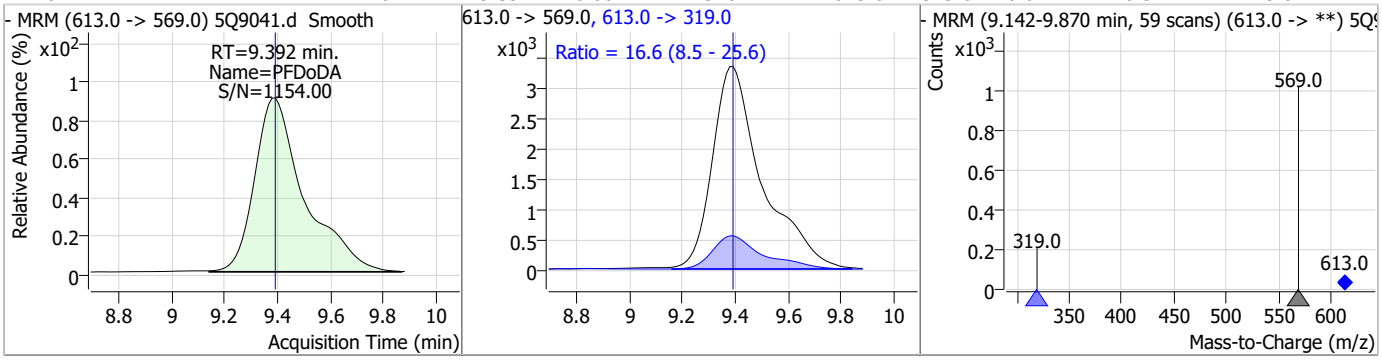
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	1.75	8.63	0.00	37831	633.0 -> 453.0	31.7	14.2	42.7



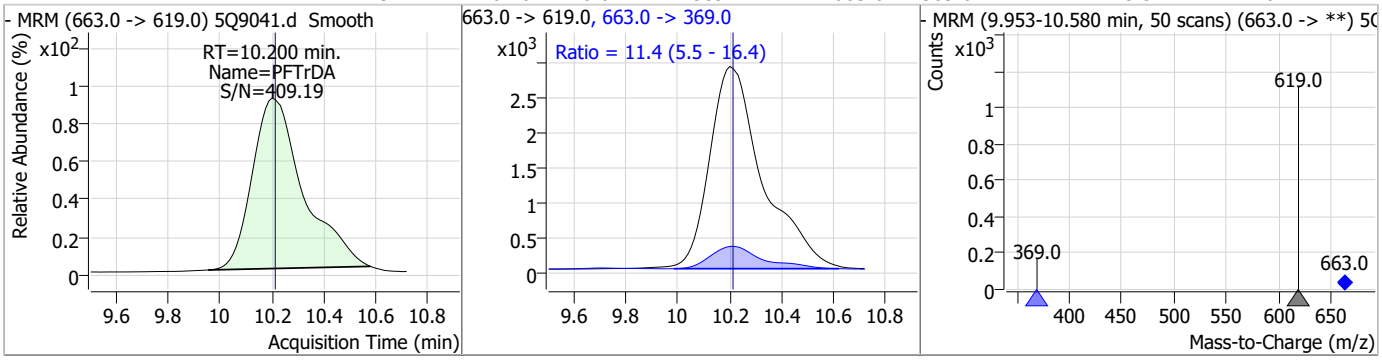
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.73	9.39	0.00	466020				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	2.04	9.39	0.00	43281	613.0 -> 319.0	16.6	8.5	25.6

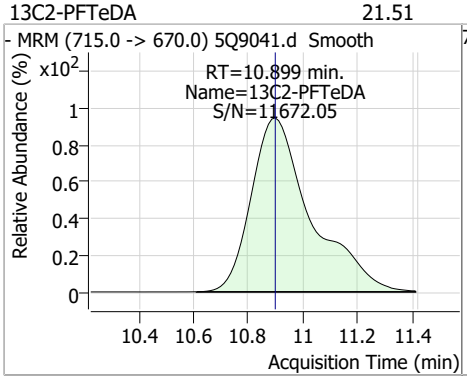


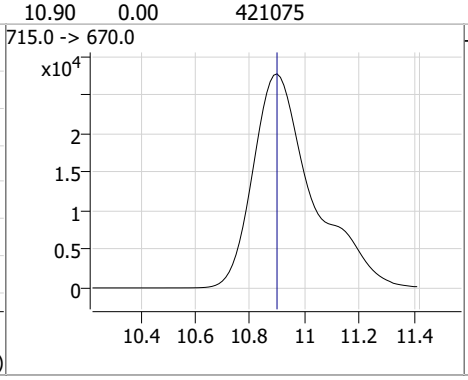
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	1.92	10.20	-0.01	38914	663.0 -> 369.0	11.4	5.5	16.4

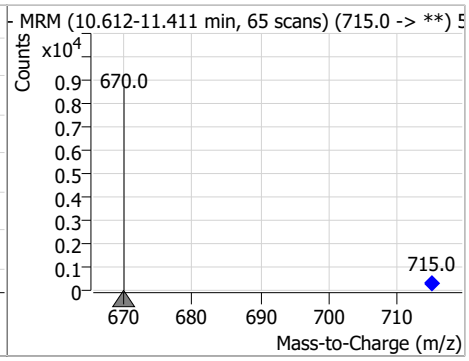


Perfluorinated Compounds by LC/MS/MS

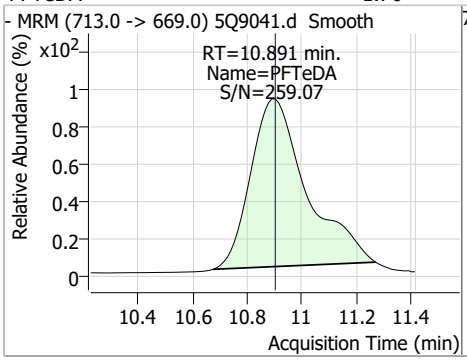
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	21.51	10.90	0.00	421075				

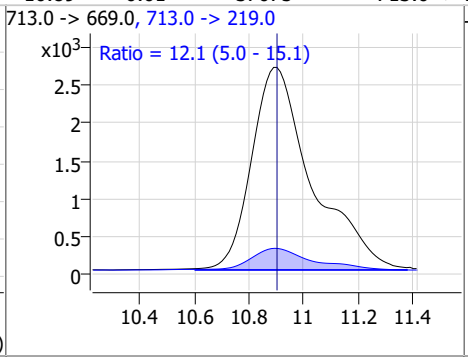


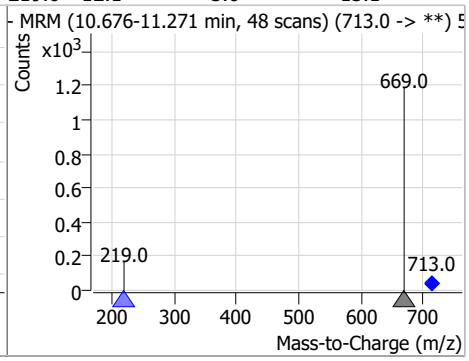




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	1.70	10.89	-0.01	37075	713.0 -> 219.0	12.1	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q134-IC134
Lab FileID: 5Q9041.D
Injection Time: 12/28/22 13:02
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.74	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.88	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9042.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 1:19:29 PM
Sample Name : ic134-5
Vial : P1-A5
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	103665	20.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	208729	20.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	300039	20.00	µg/L	0.000
M4-PFHpA	5.726	367.0 -> 322.0	310256	20.00	µg/L	0.000
M8-PFOA	6.361	421.0 -> 376.0	409147	20.00	µg/L	0.000
M9-PFNA	6.918	472.0 -> 427.0	424881	20.00	µg/L	0.000
M6-PFDA	7.436	519.0 -> 474.0	470881	20.00	µg/L	0.000
M7-PFUnDA	8.320	570.0 -> 525.0	614811	20.00	µg/L	0.000
M2-PFDoDA	9.388	615.0 -> 570.0	433431	20.00	µg/L	0.000
M2-PFTeDA	10.912	715.0 -> 670.0	392977	20.00	µg/L	0.012
M8-FOSA	6.592	506.0 -> 78.0	96863	20.00	µg/L	0.000
M3-PFBS	4.124	302.0 -> 99.0	25895	20.00	µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	35738	20.00	µg/L	0.000
M8-PFOS	6.879	507.0 -> 99.0	47088	20.00	µg/L	0.000
M2-4:2FTS	4.886	329.0 -> 309.0	89798	20.00	µg/L	0.000
M2-6:2FTS	6.360	429.0 -> 409.0	146158	20.00	µg/L	0.000
M2-8:2FTS	7.512	529.0 -> 509.0	137235	20.00	µg/L	0.000
M3-MeFOSAA	7.034	573.0 -> 419.0	35891	20.00	µg/L	0.000
M3-HFPO-DA	5.182	287.0 -> 169.0	65657	20.00	µg/L	0.000
M3-MeFOSA	6.952	515.0 -> 169.0	30248	20.00	µg/L	0.000
M5-EtFOSAA	7.145	589.0 -> 419.0	36942	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	89798	18.65	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.3%		
13C2-6:2FTS	6.360	429.0 -> 409.0	146158	19.06	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.3%		
13C2-8:2FTS	7.512	529.0 -> 509.0	137235	19.00	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.0%		
13C2-PFDoDA	9.388	615.0 -> 570.0	433431	19.28	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.4%		
13C2-PFTeDA	10.912	715.0 -> 670.0	392977	20.07	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.4%		
13C3-PFBS	4.124	302.0 -> 99.0	25895	19.93	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.6%		
13C3-PFHxS	5.733	402.0 -> 99.0	35738	19.97	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.8%		
13C4-PFBA	2.400	217.0 -> 172.0	103665	19.92	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.6%		
13C4-PFHpA	5.726	367.0 -> 322.0	310256	20.18	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.9%		
13C5-PFHxA	4.965	318.0 -> 273.0	300039	19.95	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.7%		
13C5-PFPeA	3.919	268.0 -> 223.0	208729	19.90	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.5%		
13C6-PFDA	7.436	519.0 -> 474.0	470881	20.26	µg/L	0.000

Perfluorinated Compounds by LC/MS/MS

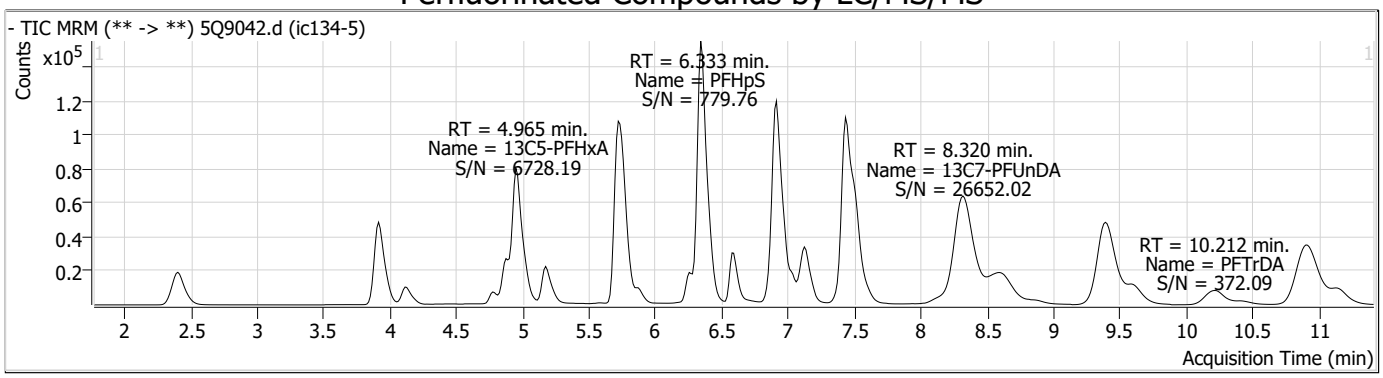
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%		
13C7-PFUnDA	8.320	570.0 -> 525.0	614811	21.01 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.0%		
13C8-FOSA	6.592	506.0 -> 78.0	96863	20.06 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.3%		
13C8-PFOA	6.361	421.0 -> 376.0	409147	20.30 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.5%		
13C8-PFOS	6.879	507.0 -> 99.0	47088	19.75 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%		
13C9-PFNA	6.918	472.0 -> 427.0	424881	20.20 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.0%		
d3-MeFOSAA	7.034	573.0 -> 419.0	35891	20.20 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.0%		
13C3-HFPO-DA	5.182	287.0 -> 169.0	65657	19.85 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%		
d3-MeFOSA	6.952	515.0 -> 169.0	30248	19.97 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.8%		
d5-EtFOSAA	7.145	589.0 -> 419.0	36942	20.03 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.1%		
Target Compounds						**QValue**
4:2FTS	4.876	327.0 -> 307.0	26235	5.34 µg/L		98
		327.0 -> 81.0	15940			
6:2FTS	6.360	427.0 -> 407.0	40212	5.36 µg/L		100
		427.0 -> 81.0	17278			
8:2FTS	7.512	527.0 -> 507.0	37419	5.34 µg/L		97
		527.0 -> 81.0	18986			
EtFOSAA	7.145	584.0 -> 419.0	6321	5.12 µg/L		96
		584.0 -> 483.0	3836			
FOSA	6.594	498.0 -> 78.0	24256	4.87 µg/L		100
		498.0 -> 478.0	800			
MeFOSAA	7.047	570.0 -> 419.0	7260	4.98 µg/L		96
		570.0 -> 512.0	2796			
PFBA	2.406	213.0 -> 169.0	27027	4.79 µg/L		100
PFBS	4.129	299.0 -> 80.0	20242	4.81 µg/L		99
		299.0 -> 99.0	8781			
PFDA	7.437	513.0 -> 469.0	120208	4.80 µg/L		100
		513.0 -> 219.0	21159			
PFDoDA	9.392	613.0 -> 569.0	101022	5.11 µg/L	m	99
		613.0 -> 319.0	16524			
PFDS	8.144	599.0 -> 80.0	25156	4.56 µg/L		98
		599.0 -> 99.0	15478			
PFHpA	5.727	363.0 -> 319.0	93919	4.84 µg/L		100
		363.0 -> 169.0	21001			
PFHpS	6.333	449.0 -> 80.0	17806	4.95 µg/L		100
		449.0 -> 99.0	9814			
PFHxA	4.966	313.0 -> 269.0	73637	4.83 µg/L		100
		313.0 -> 119.0	3484			
PFHxS	5.735	399.0 -> 80.0	17709	4.88 µg/L	m	99
		399.0 -> 99.0	10025			
PFNA	6.918	463.0 -> 419.0	107710	4.89 µg/L		100
		463.0 -> 219.0	23038			
PFNS	7.384	549.0 -> 80.0	16408	5.08 µg/L		98
		549.0 -> 99.0	9622			
PFOA	6.362	413.0 -> 369.0	112491	4.80 µg/L		100
		413.0 -> 169.0	30318			
PFOS	6.880	499.0 -> 80.0	21778	5.01 µg/L	m	99

Perfluorinated Compounds by LC/MS/MS

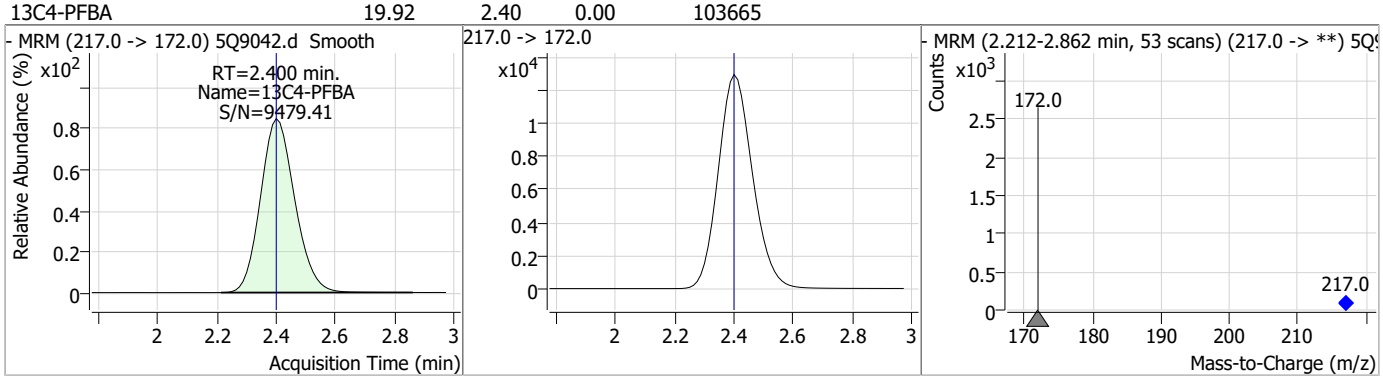
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	10495			
PFPeA	3.922	263.0 -> 219.0	58896	4.80	µg/L	100
PFPeS	5.035	349.0 -> 80.0	13110	4.75	µg/L	99
		349.0 -> 99.0	6581			
PFTeDA	10.903	713.0 -> 669.0	87598	4.30	µg/L	94
		713.0 -> 219.0	10763			
PFTrDA	10.212	663.0 -> 619.0	93550	4.95	µg/L	99
		663.0 -> 369.0	10630			
PFUnDA	8.321	563.0 -> 519.0	148207	4.69	µg/L	100
		563.0 -> 269.0	25049			
11Cl-PF3OUdS	8.641	631.0 -> 451.0	94125	4.67	µg/L	95
		633.0 -> 453.0	29394			
9Cl-PF3ONS	7.123	531.0 -> 351.0	92356	4.44	µg/L	99
		533.0 -> 353.0	29906			
ADONA	5.763	377.0 -> 251.0	120664	5.01	µg/L	99
		377.0 -> 85.0	45663			
HFPO-DA	5.190	329.0 -> 169.0	25426	4.85	µg/L	96
		285.0 -> 169.0	15778			
MeFOSA	6.953	512.0 -> 169.0	9096	5.08	µg/L	95
		512.0 -> 219.0	6697			
4-PFECHS	6.268	461.0 -> 381.0	57571	4.42	µg/L	98
		461.0 -> 99.0	31693			
FBSA	4.793	298.0 -> 78.0	30585	4.91	µg/L	100
		298.0 -> 64.0	2861			
FHxSA	5.888	398.0 -> 78.0	28207	4.63	µg/L	100
		398.0 -> 64.0	2745			

 # = Qualifier out of range, m = manually integrated, + = Area summed

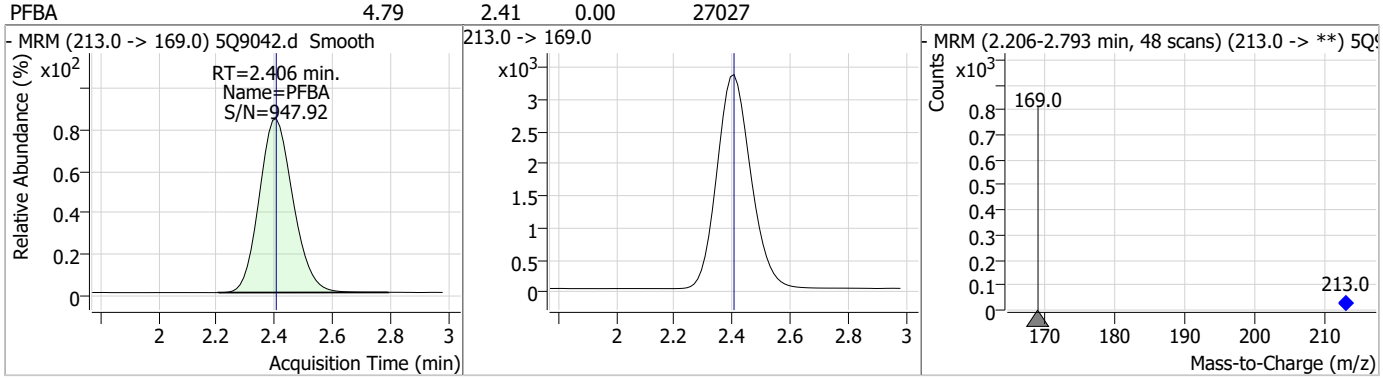
Perfluorinated Compounds by LC/MS/MS



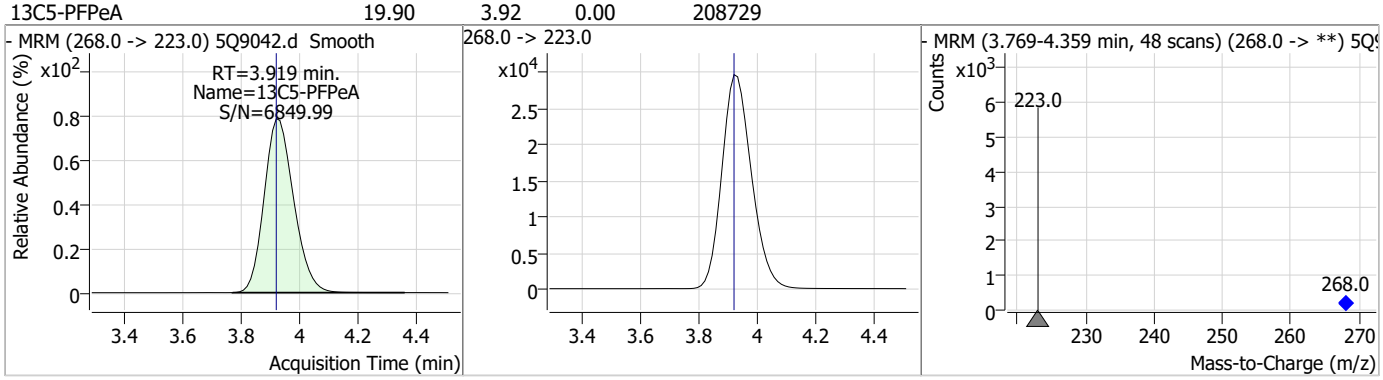
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.92	2.40	0.00	103665				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	4.79	2.41	0.00	27027				

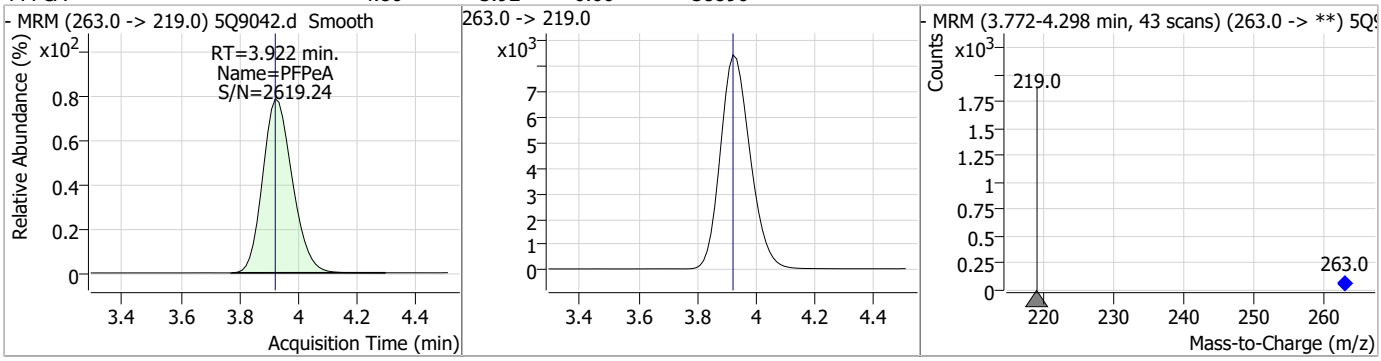


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.90	3.92	0.00	208729				

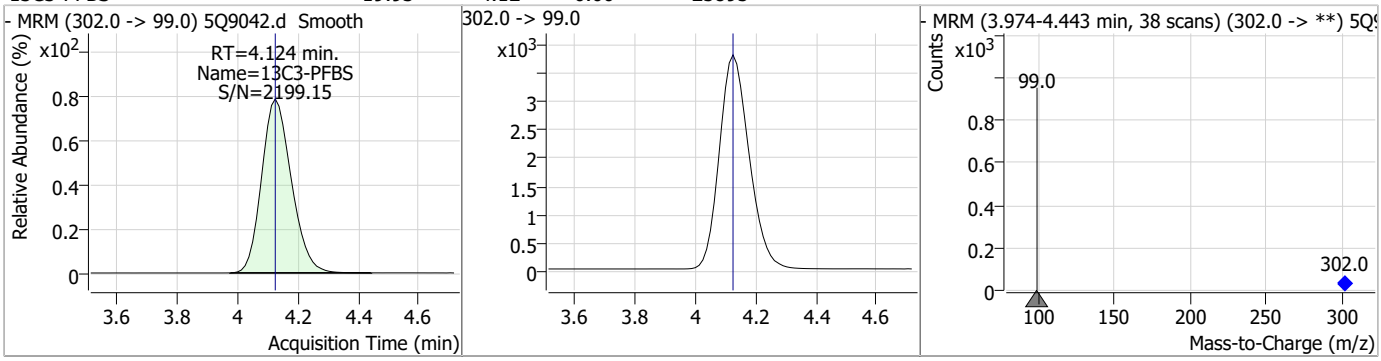


Perfluorinated Compounds by LC/MS/MS

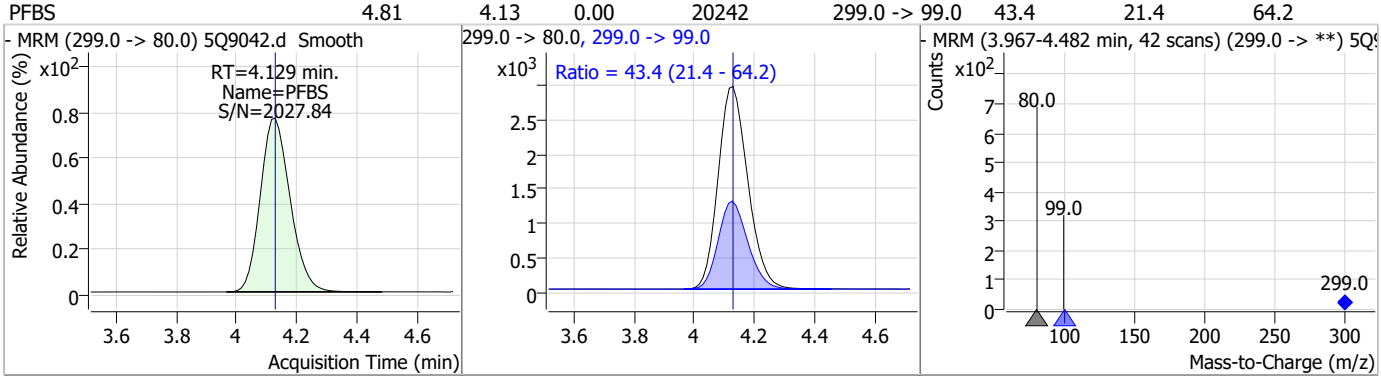
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	4.80	3.92	0.00	58896				



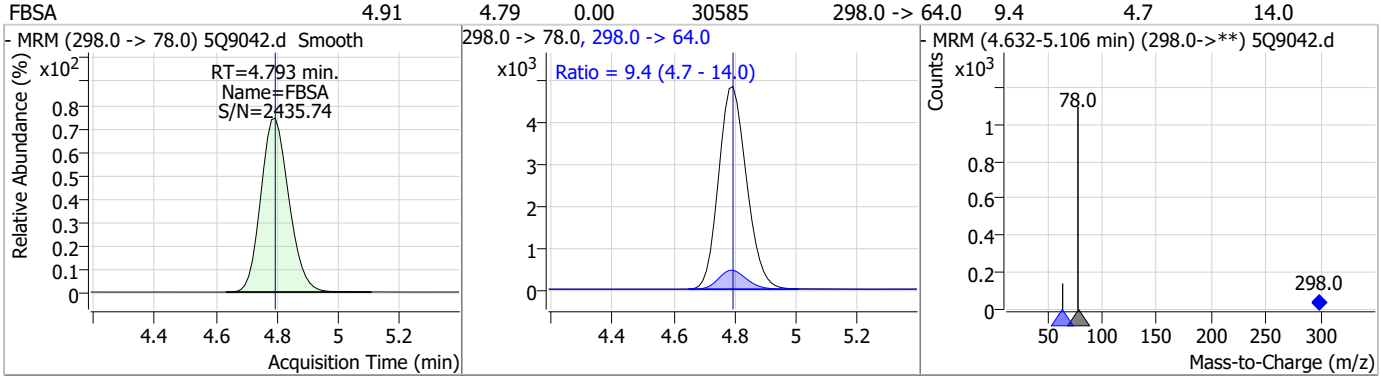
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.93	4.12	0.00	25895				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	4.81	4.13	0.00	20242	299.0 -> 99.0	43.4	21.4	64.2

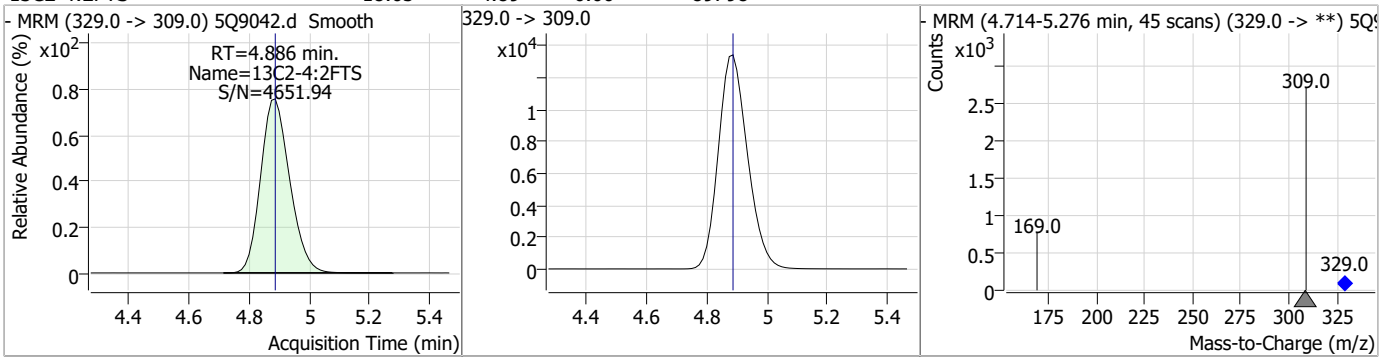


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	4.91	4.79	0.00	30585	298.0 -> 64.0	9.4	4.7	14.0

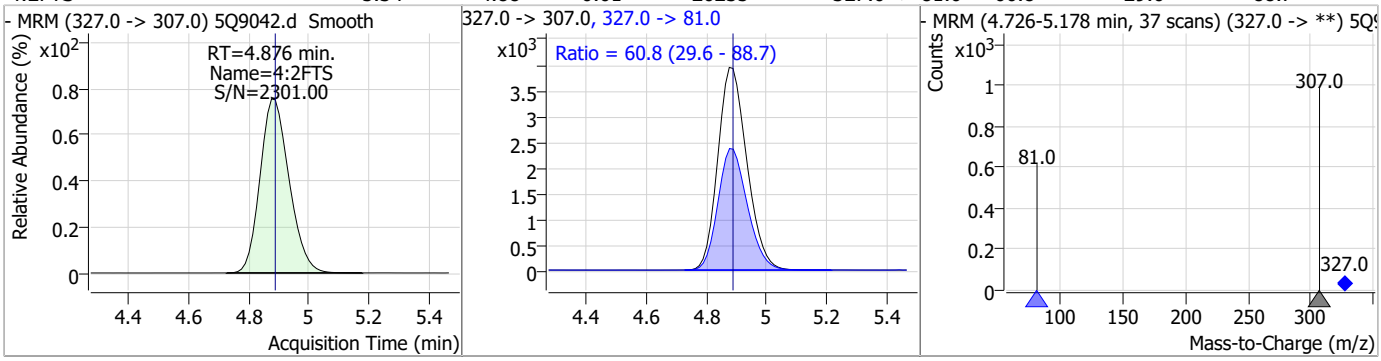


Perfluorinated Compounds by LC/MS/MS

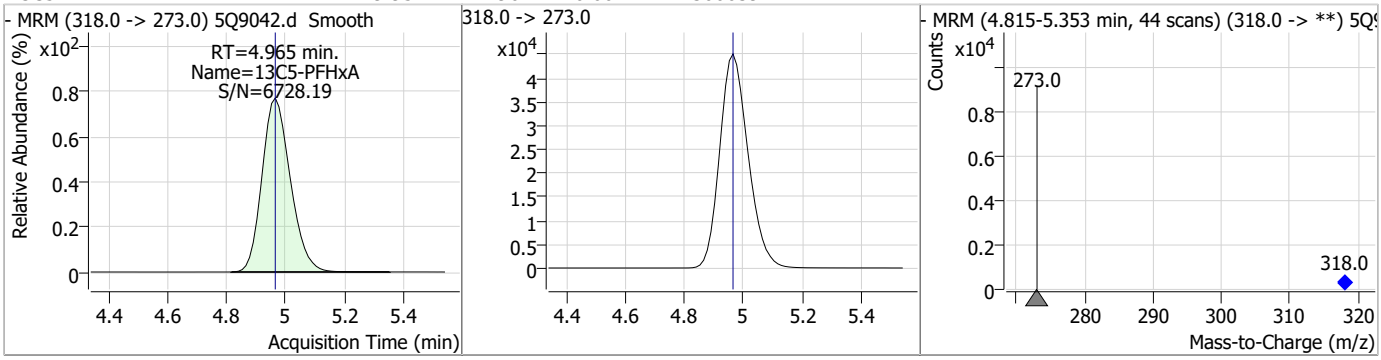
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.65	4.89	0.00	89798				



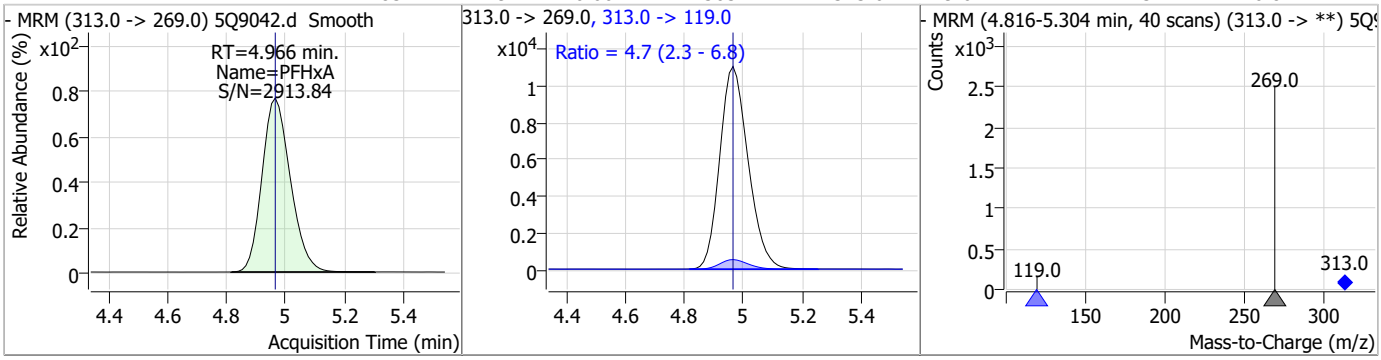
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	5.34	4.88	-0.01	26235	327.0 -> 81.0	60.8	29.6	88.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.95	4.96	0.00	300039				

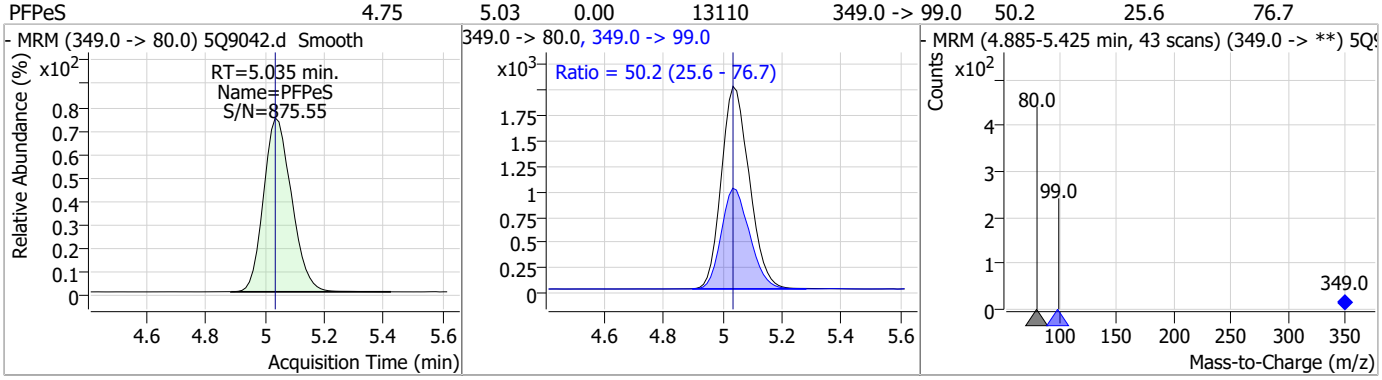


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	4.83	4.97	0.00	73637	313.0 -> 119.0	4.7	2.3	6.8

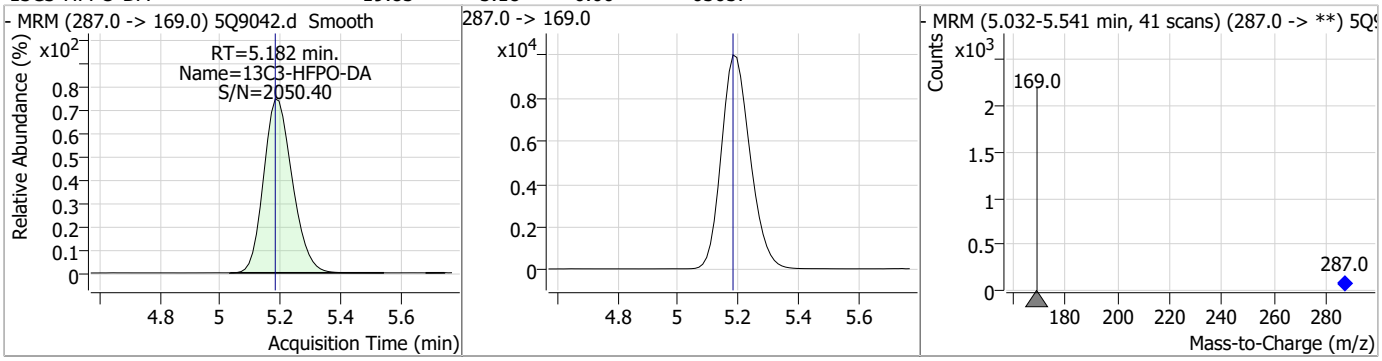


Perfluorinated Compounds by LC/MS/MS

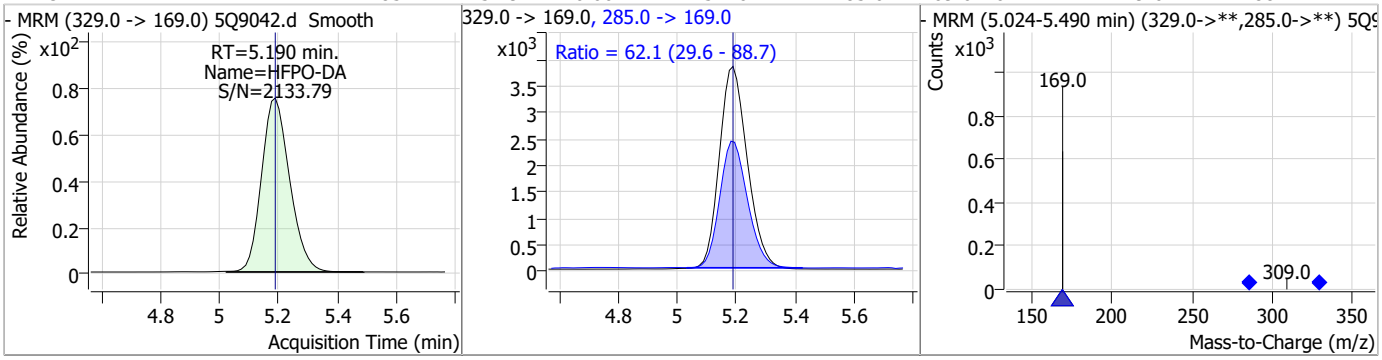
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	4.75	5.03	0.00	13110	349.0 -> 99.0	50.2	25.6	76.7



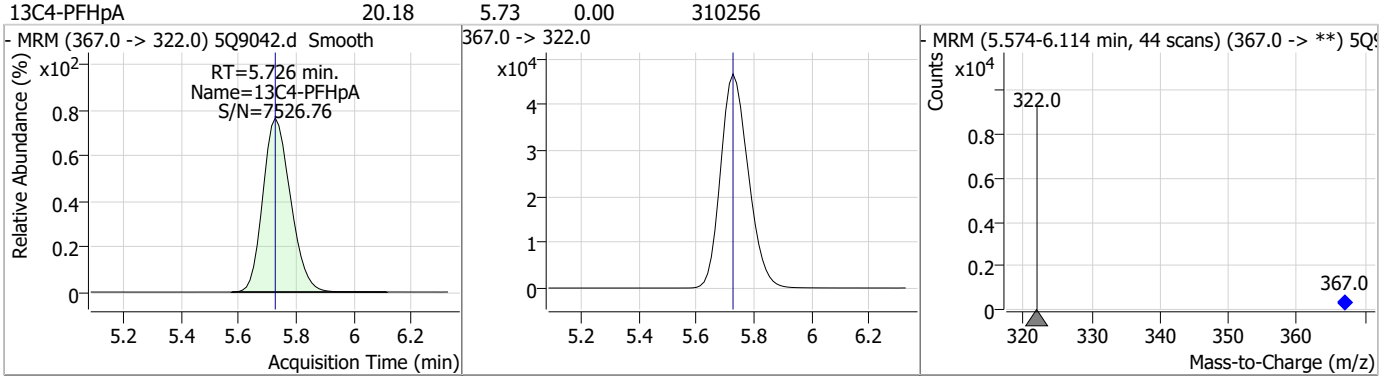
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.85	5.18	0.00	65657				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	4.85	5.19	0.00	25426	285.0 -> 169.0	62.1	29.6	88.7

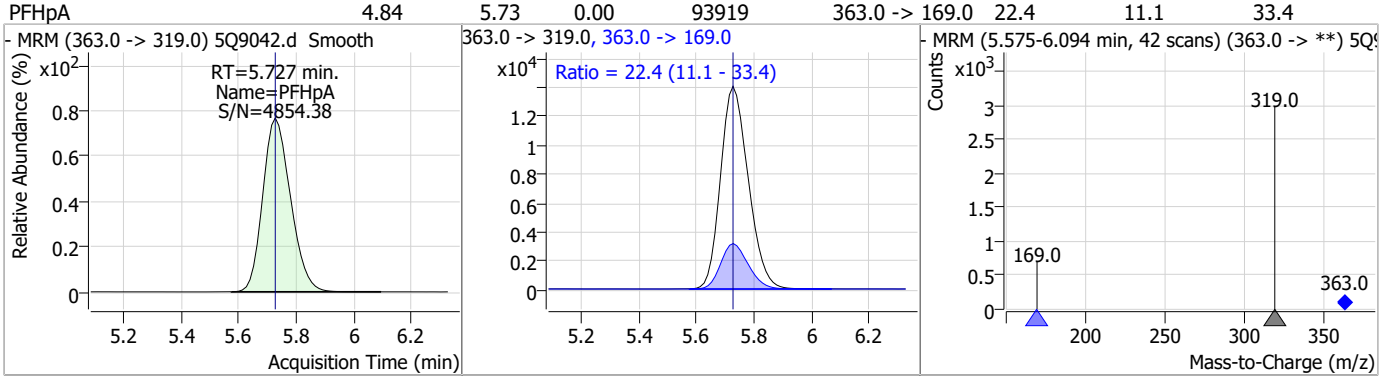


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.18	5.73	0.00	310256				

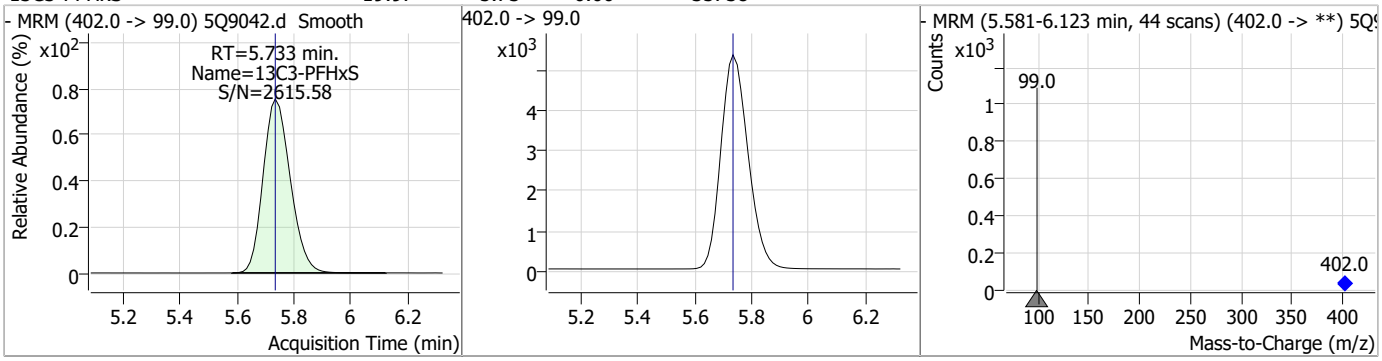


Perfluorinated Compounds by LC/MS/MS

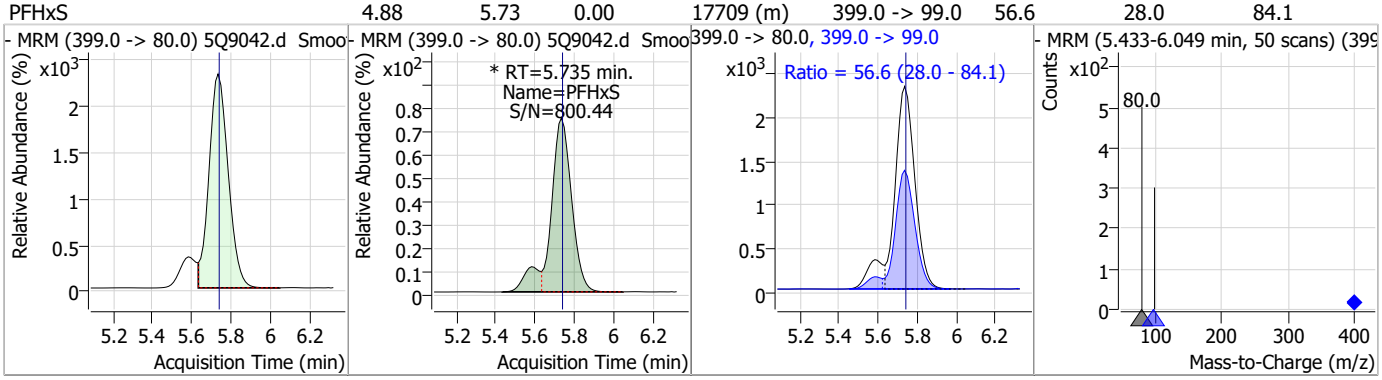
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	4.84	5.73	0.00	93919	363.0 -> 169.0	22.4	11.1	33.4



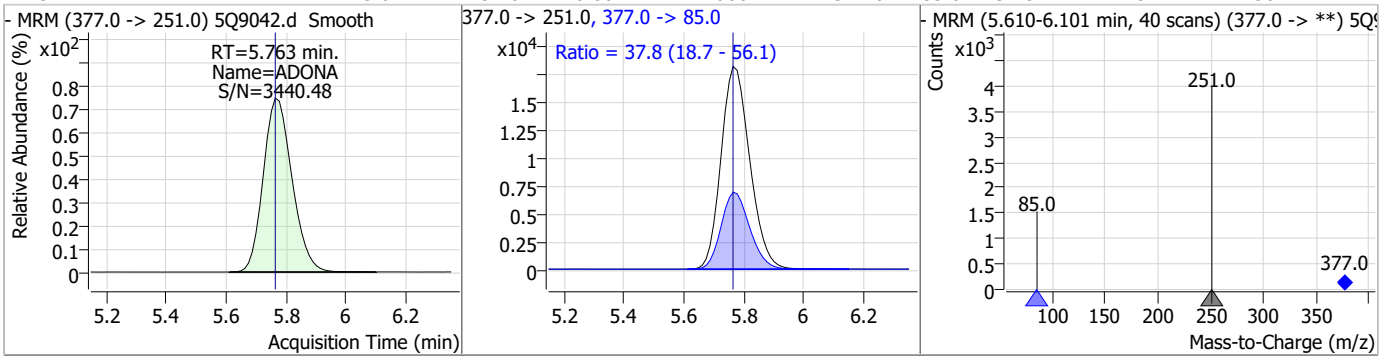
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.97	5.73	0.00	35738				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	4.88	5.73	0.00	17709 (m)	399.0 -> 99.0	56.6	28.0	84.1

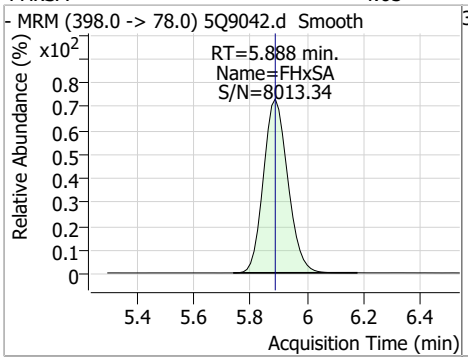


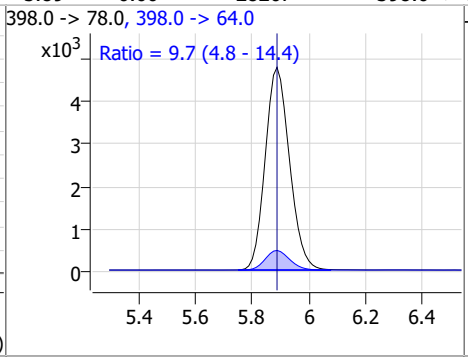
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	5.01	5.76	0.00	120664	377.0 -> 85.0	37.8	18.7	56.1

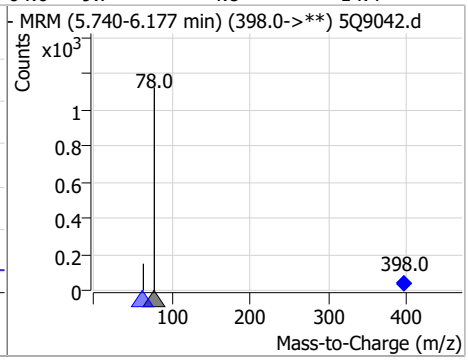


Perfluorinated Compounds by LC/MS/MS

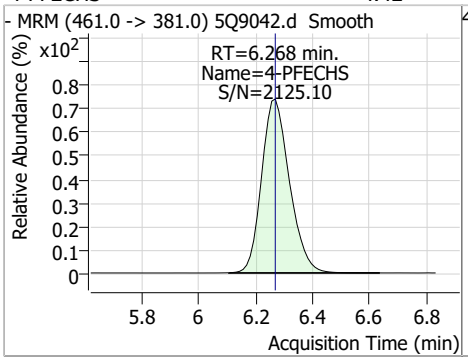
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	4.63	5.89	0.00	28207	398.0 -> 64.0	9.7	4.8	14.4

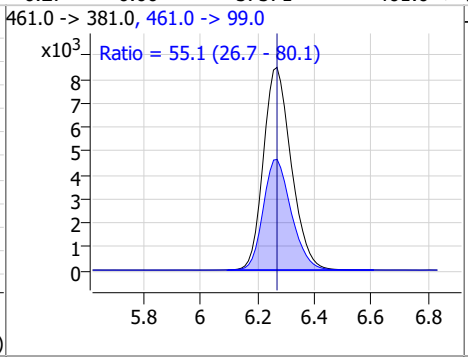


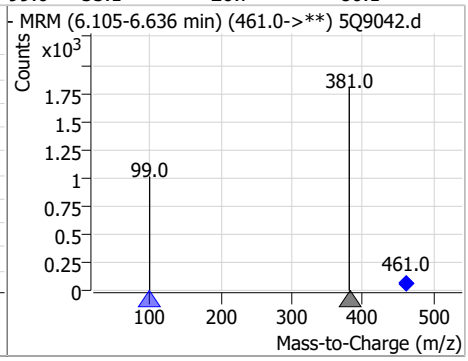




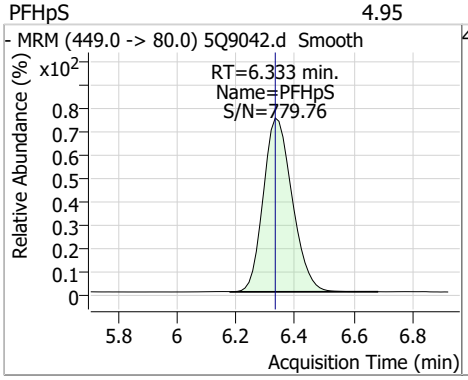
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	4.42	6.27	0.00	57571	461.0 -> 99.0	55.1	26.7	80.1

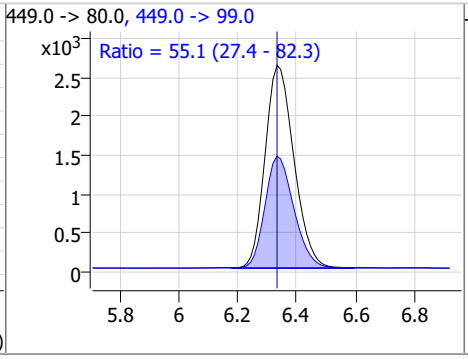


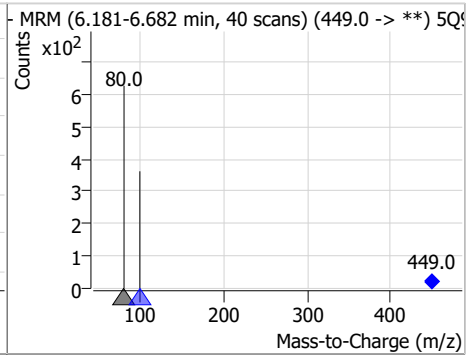




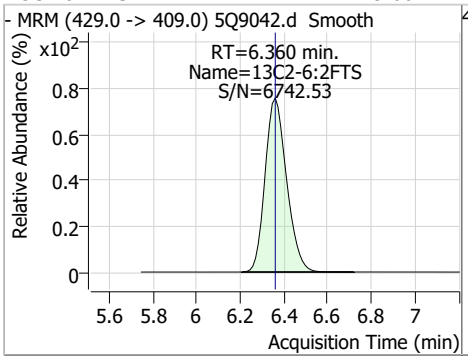
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	4.95	6.33	0.00	17806	449.0 -> 99.0	55.1	27.4	82.3

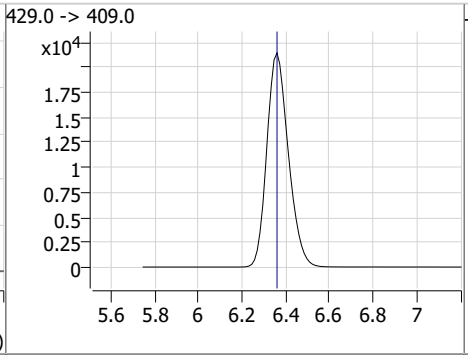


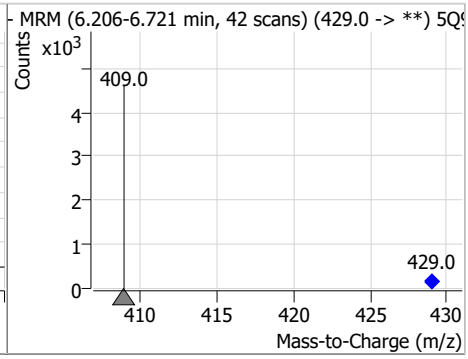




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.06	6.36	0.00	146158				

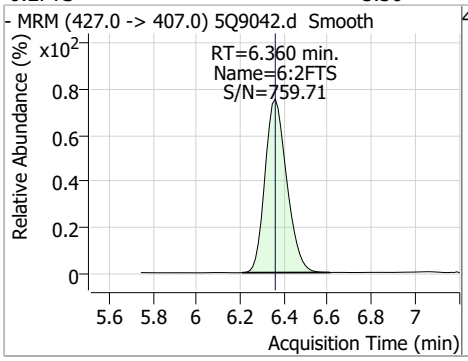


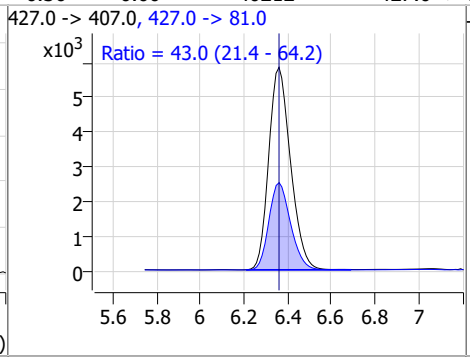


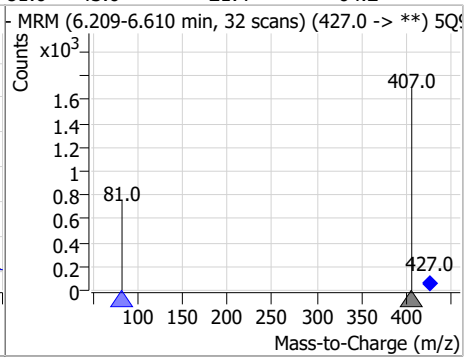


Perfluorinated Compounds by LC/MS/MS

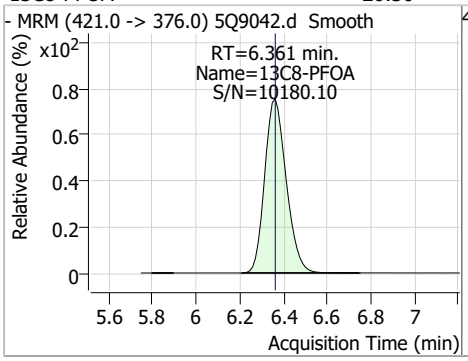
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	5.36	6.36	0.00	40212	427.0 -> 81.0	43.0	21.4	64.2

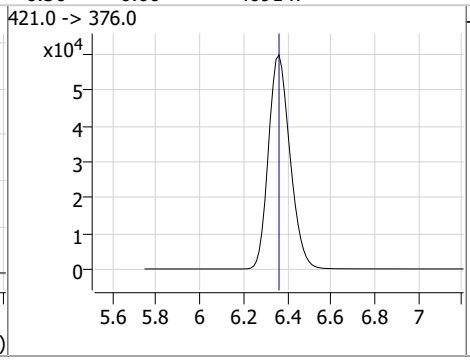


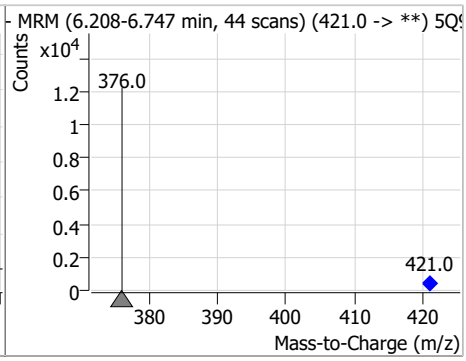




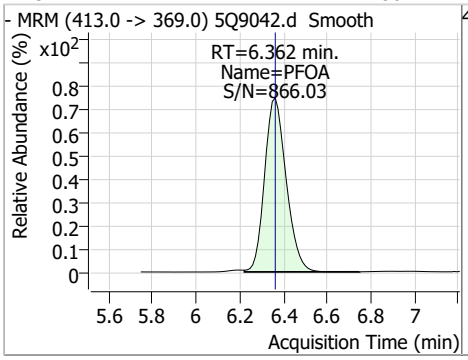
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.30	6.36	0.00	409147				

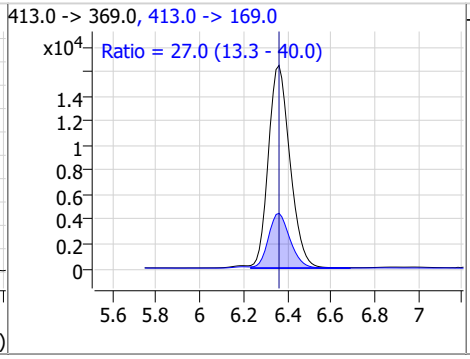


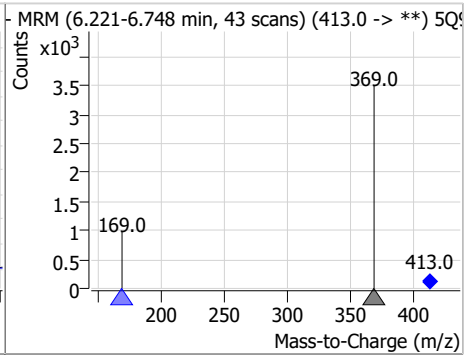




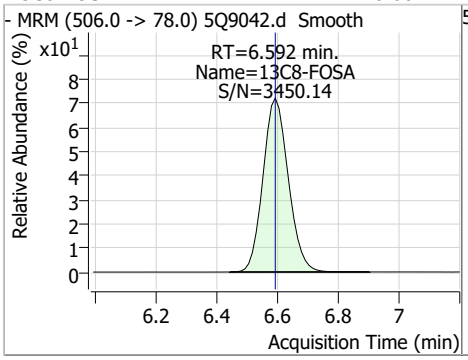
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	4.80	6.36	0.00	112491	413.0 -> 169.0	27.0	13.3	40.0

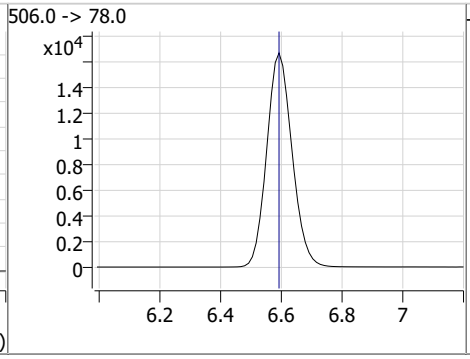


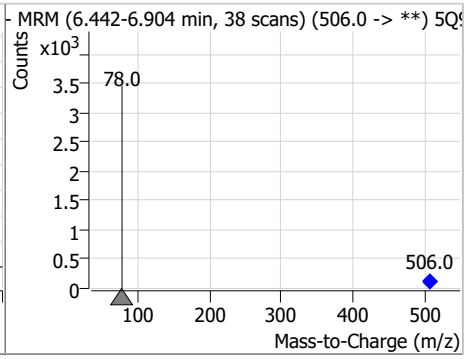




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.06	6.59	0.00	96863				

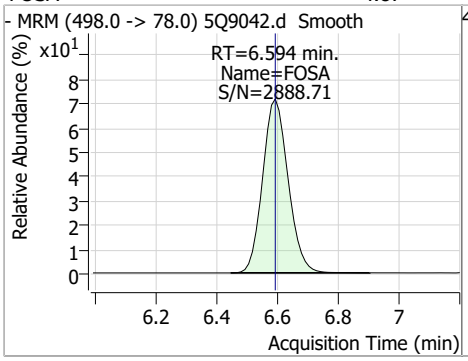


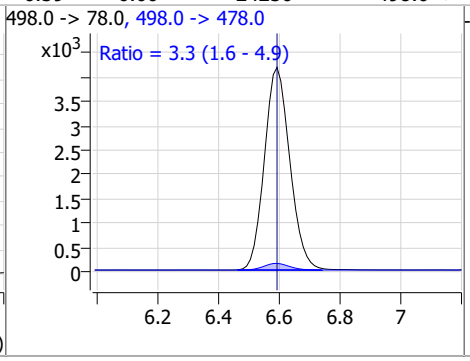


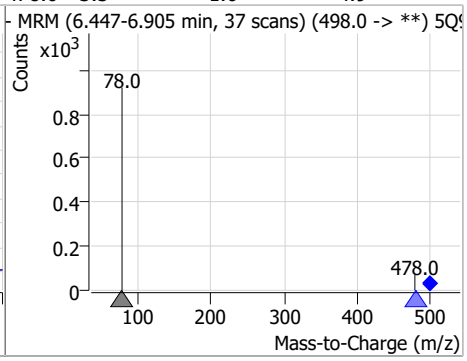


Perfluorinated Compounds by LC/MS/MS

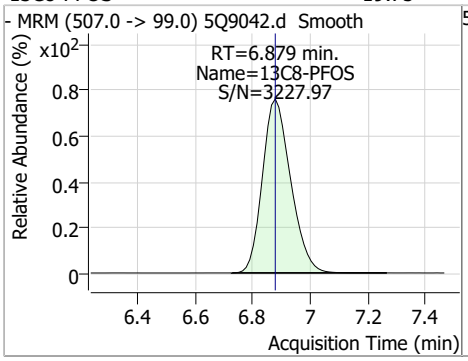
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	4.87	6.59	0.00	24256	498.0 -> 478.0	3.3	1.6	4.9

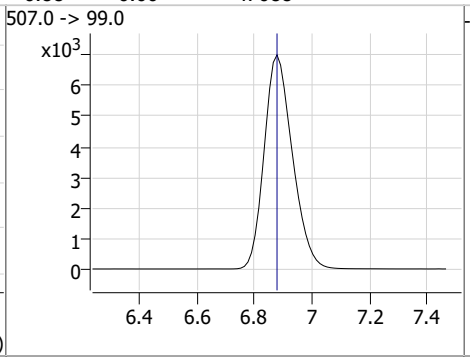


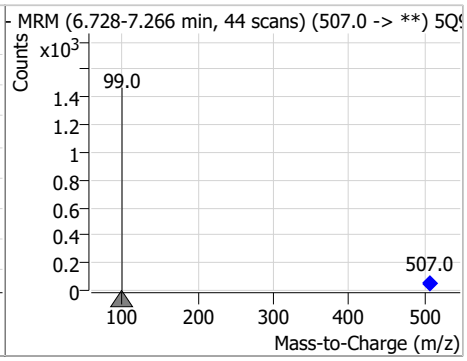




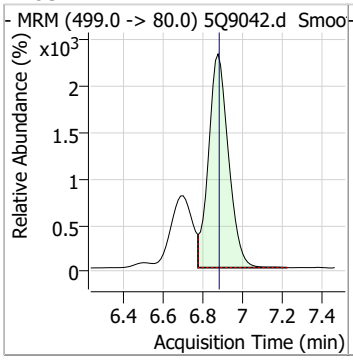
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.75	6.88	0.00	47088				

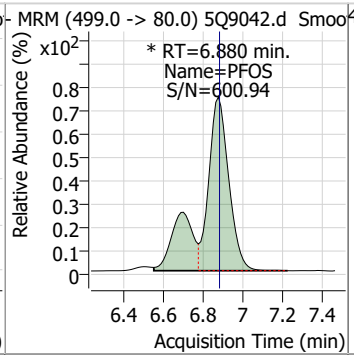


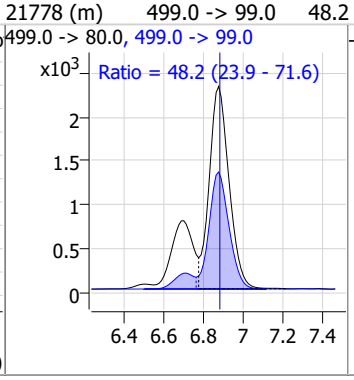


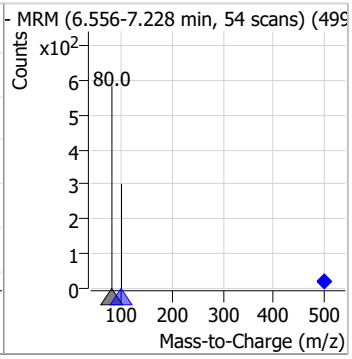


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	5.01	6.88	0.00	21778 (m)	499.0 -> 99.0	48.2	23.9	71.6

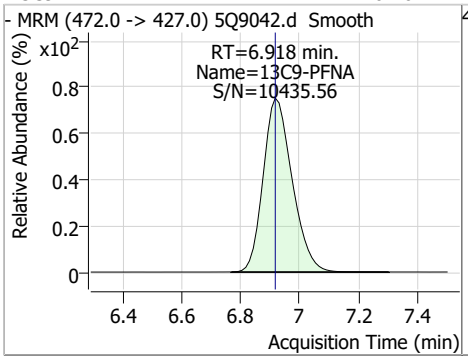


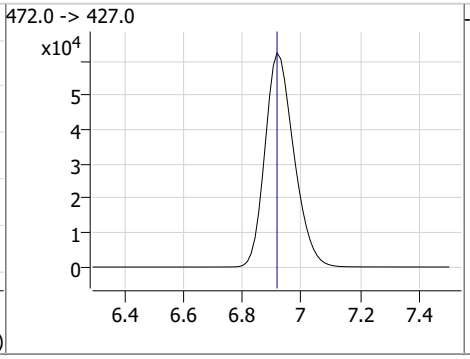


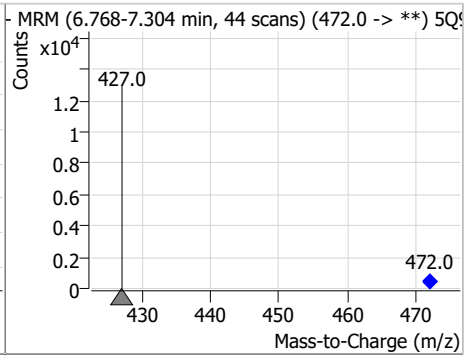




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.20	6.92	0.00	424881				

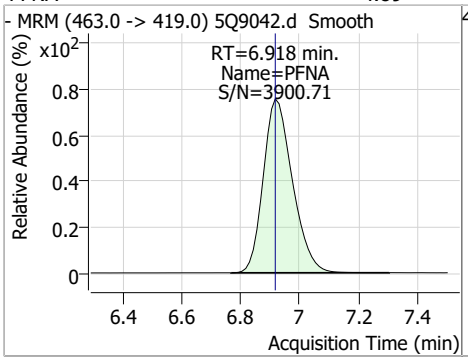


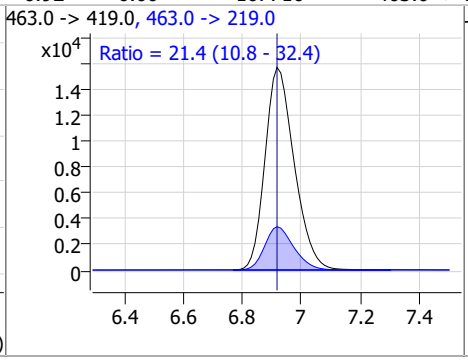


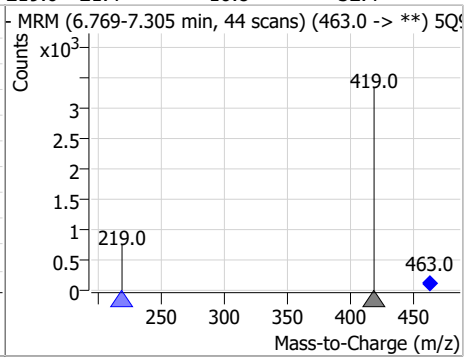


Perfluorinated Compounds by LC/MS/MS

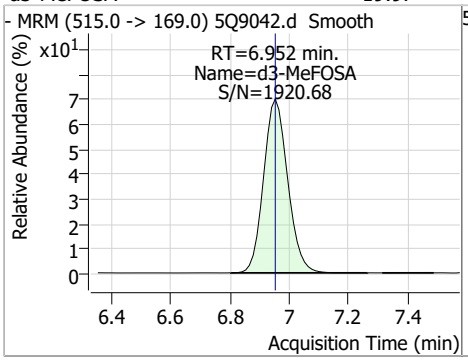
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	4.89	6.92	0.00	107710	463.0 -> 219.0	21.4	10.8	32.4

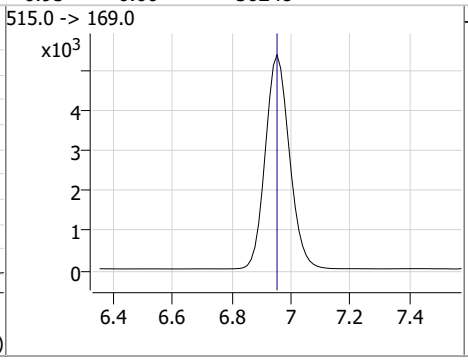


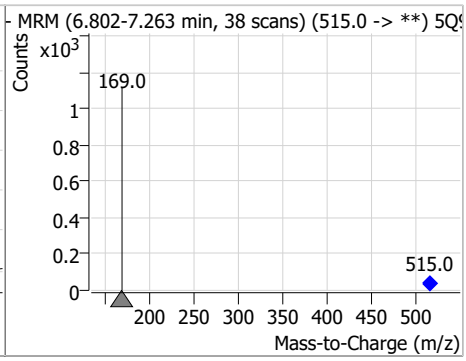




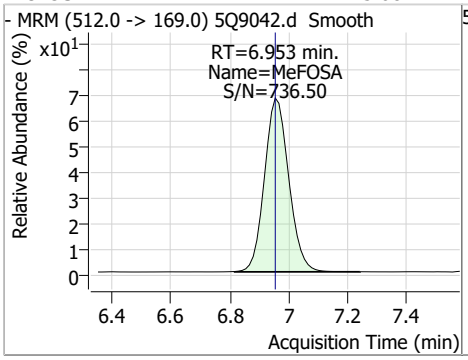
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	19.97	6.95	0.00	30248				

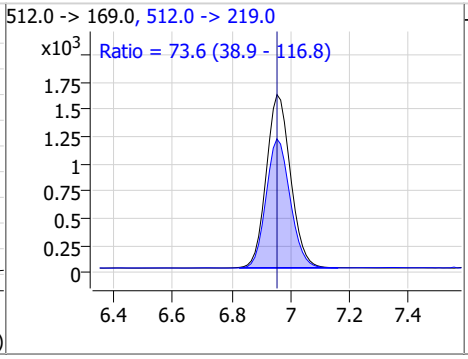


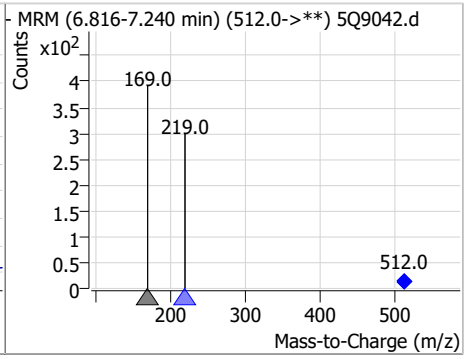




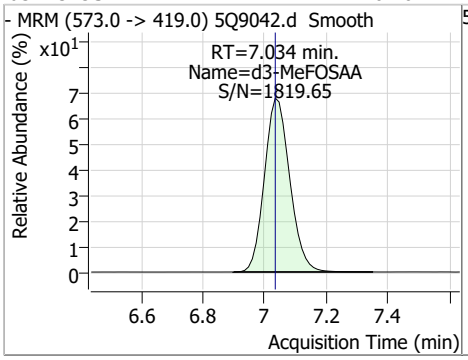
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	5.08	6.95	0.00	9096	512.0 -> 219.0	73.6	38.9	116.8

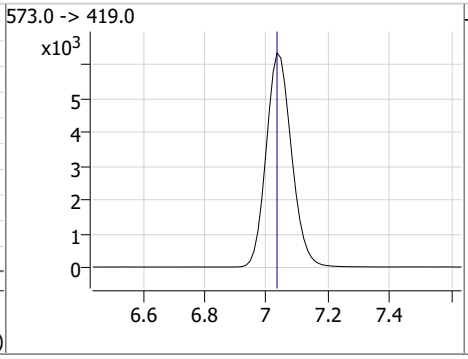


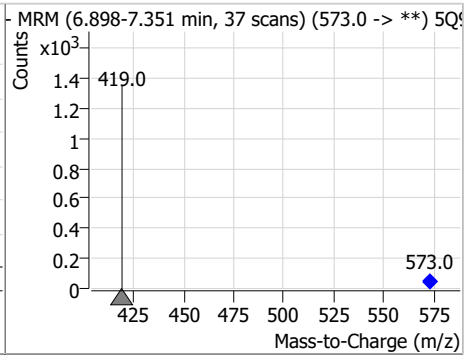




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	20.20	7.03	0.00	35891				

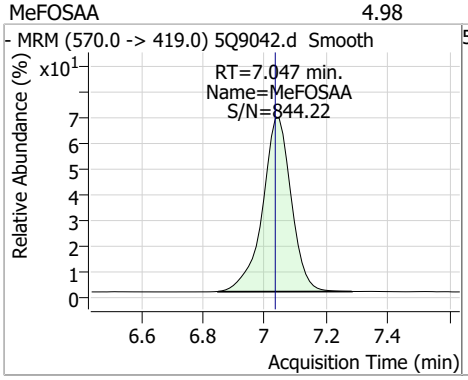


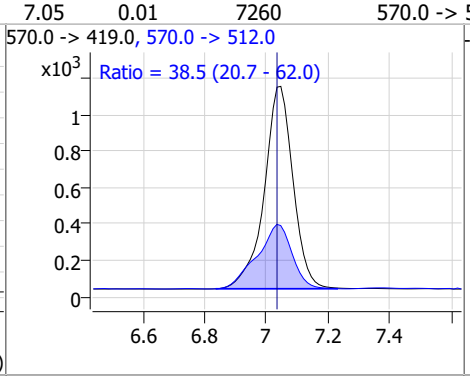


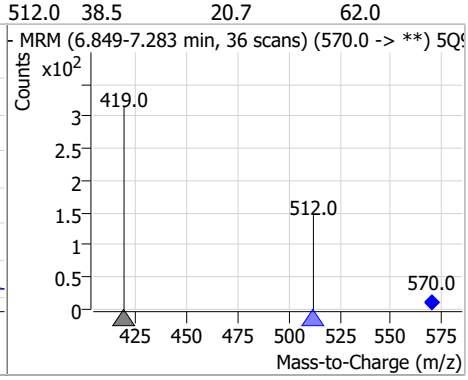


Perfluorinated Compounds by LC/MS/MS

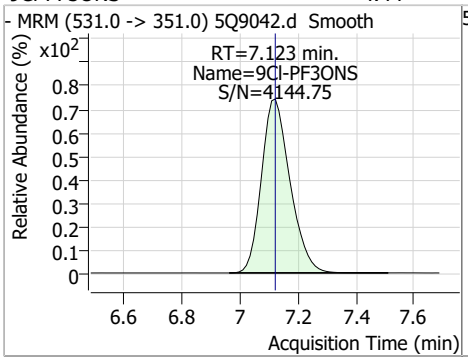
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	4.98	7.05	0.01	7260	570.0 -> 512.0	38.5	20.7	62.0

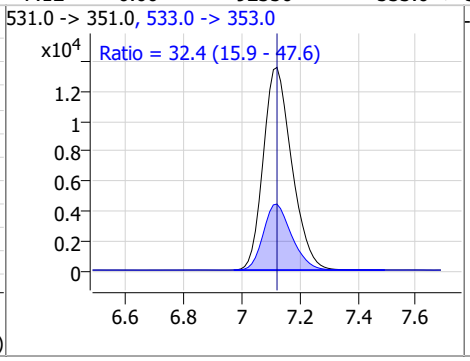


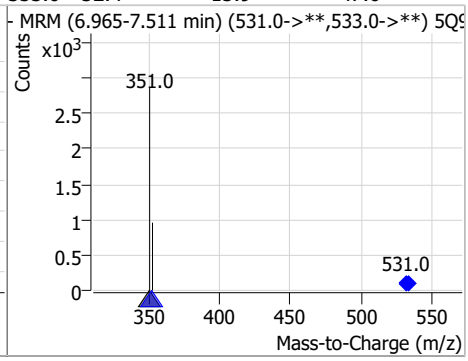




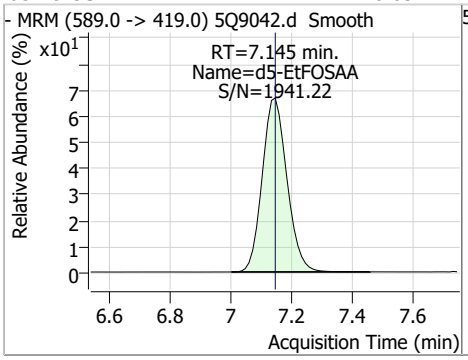
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	4.44	7.12	0.00	92356	533.0 -> 353.0	32.4	15.9	47.6

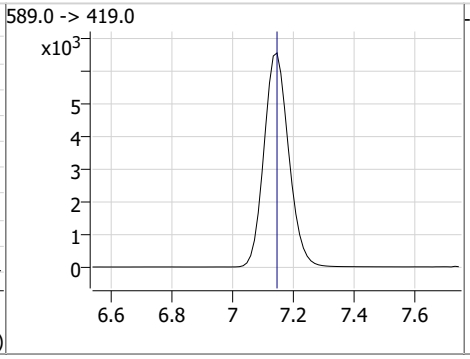


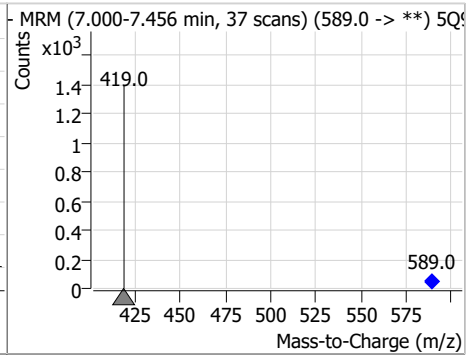




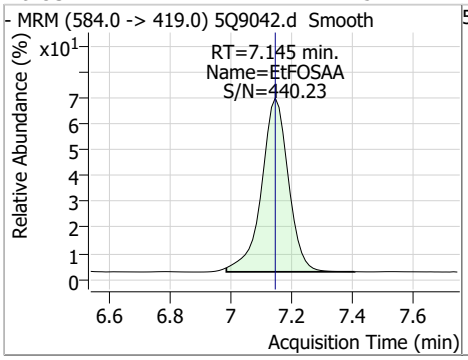
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.03	7.14	0.00	36942				

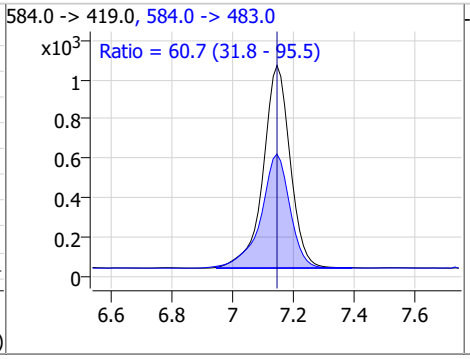


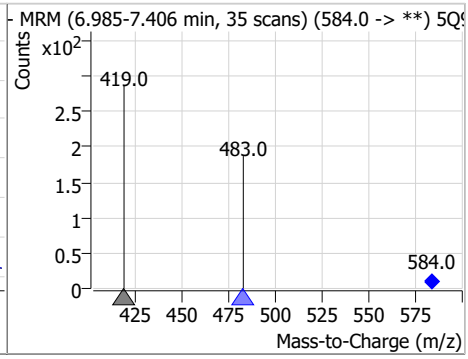




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	5.12	7.15	0.00	6321	584.0 -> 483.0	60.7	31.8	95.5

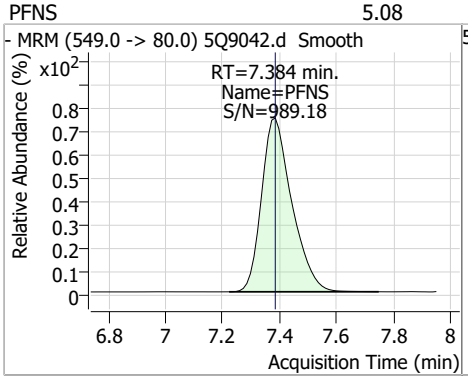


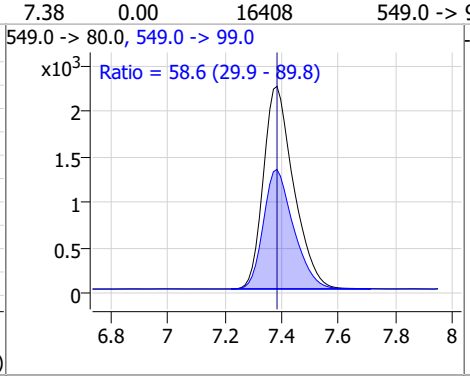


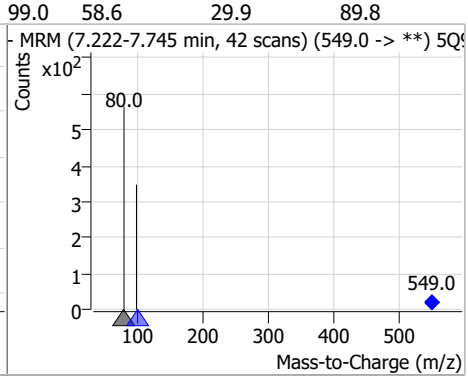


Perfluorinated Compounds by LC/MS/MS

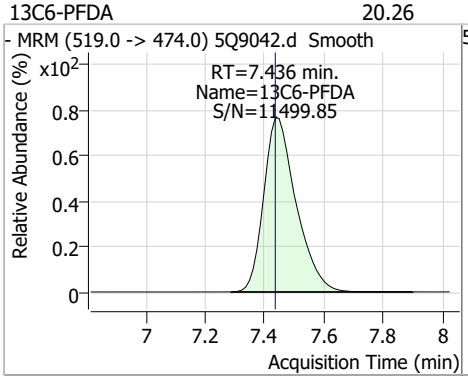
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	5.08	7.38	0.00	16408	549.0 -> 99.0	58.6	29.9	89.8

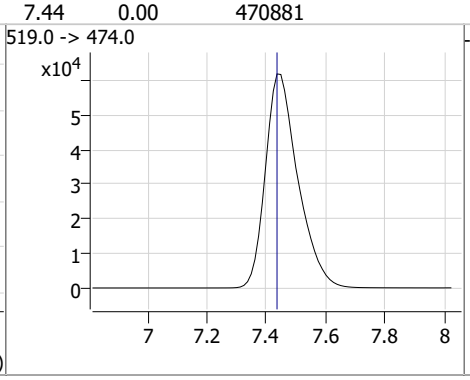


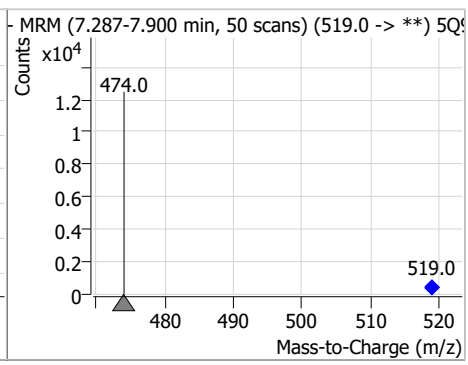




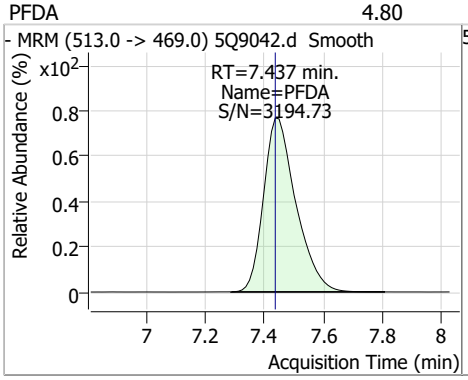
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.26	7.44	0.00	470881				

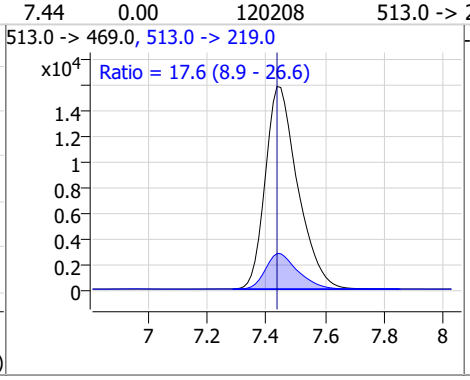


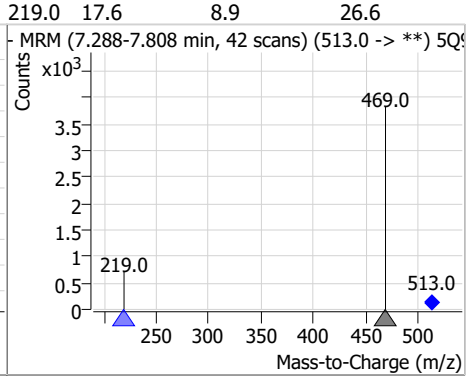




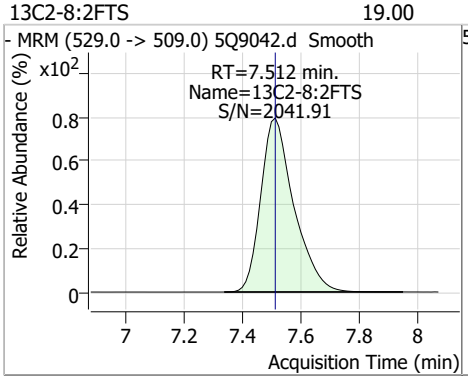
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	4.80	7.44	0.00	120208	513.0 -> 219.0	17.6	8.9	26.6

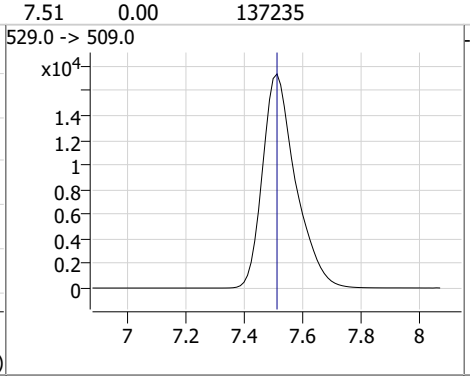


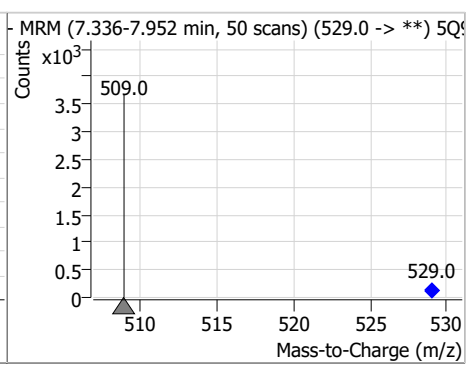




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.00	7.51	0.00	137235				

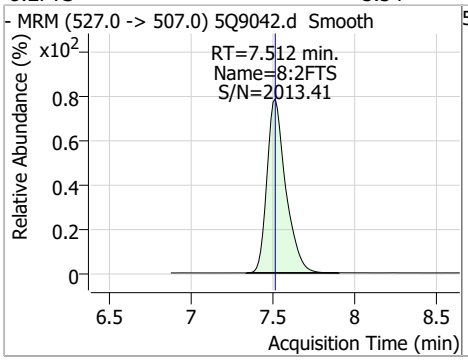


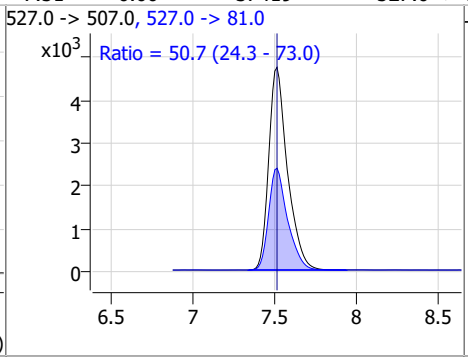


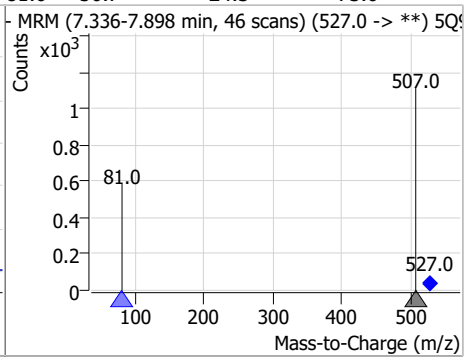


Perfluorinated Compounds by LC/MS/MS

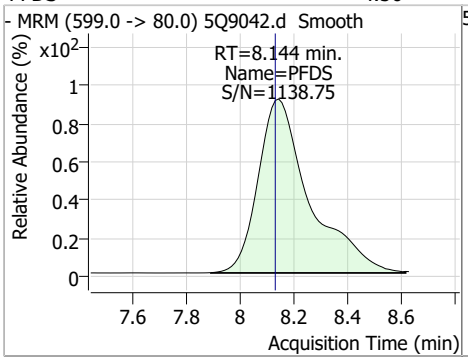
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	5.34	7.51	0.00	37419	527.0 -> 81.0	50.7	24.3	73.0

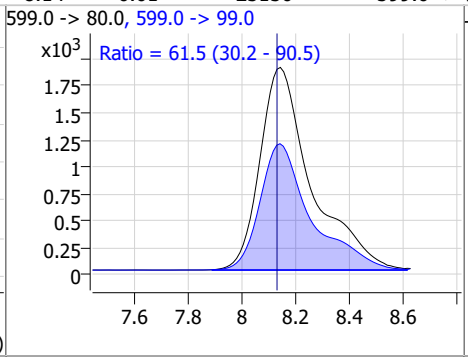


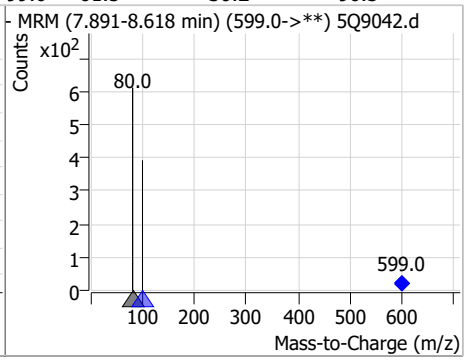




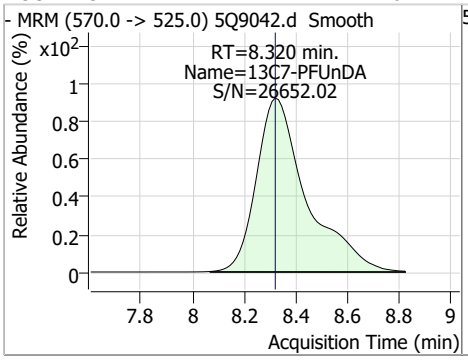
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	4.56	8.14	0.01	25156	599.0 -> 99.0	61.5	30.2	90.5

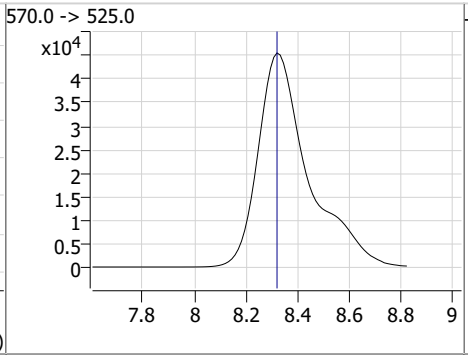


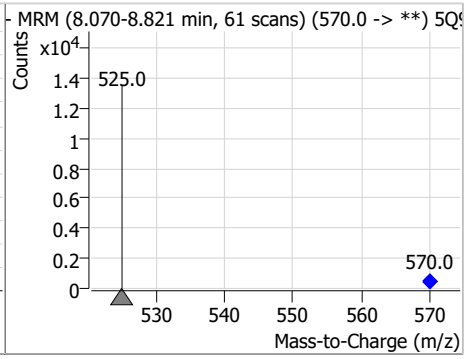




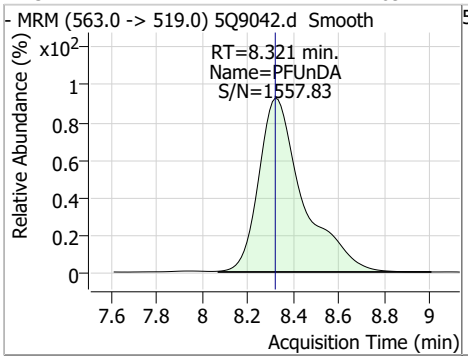
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	21.01	8.32	0.00	614811				

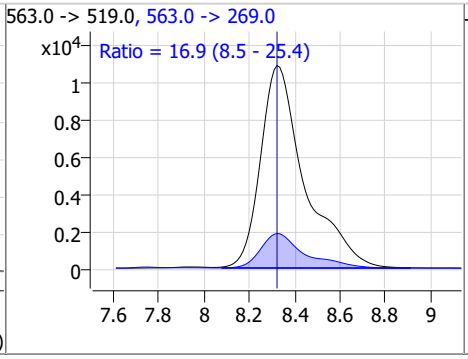


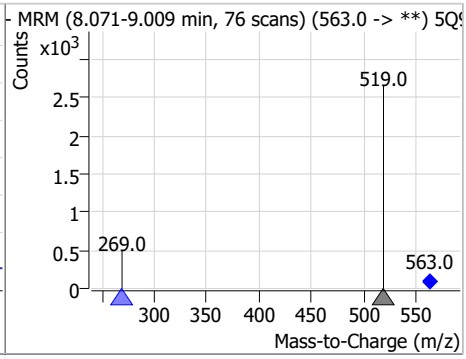




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	4.69	8.32	0.00	148207	563.0 -> 269.0	16.9	8.5	25.4

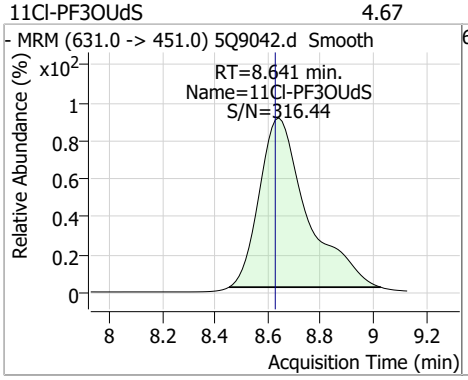


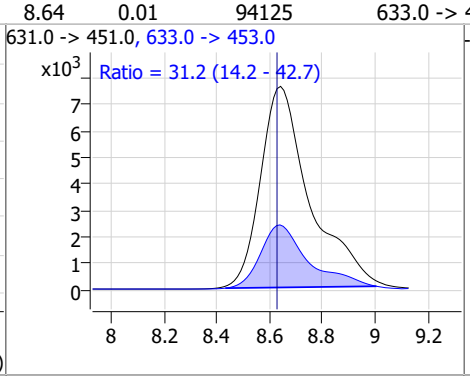


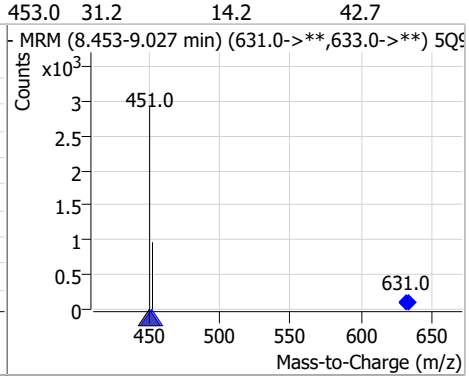


Perfluorinated Compounds by LC/MS/MS

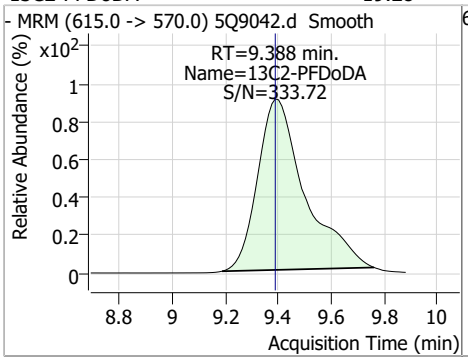
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	4.67	8.64	0.01	94125	633.0 -> 453.0	31.2	14.2	42.7

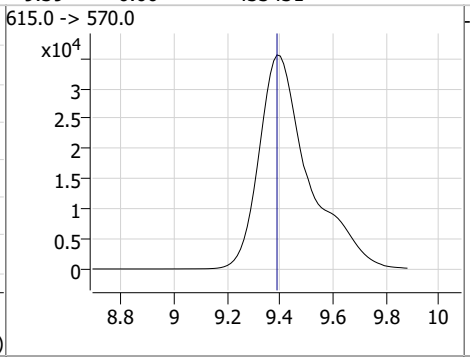


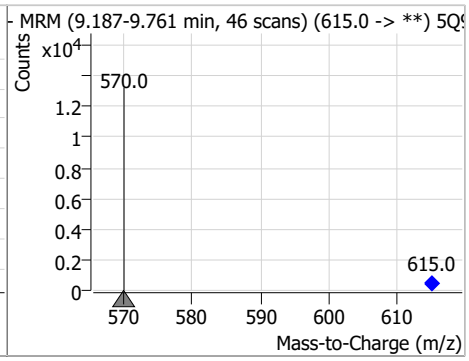




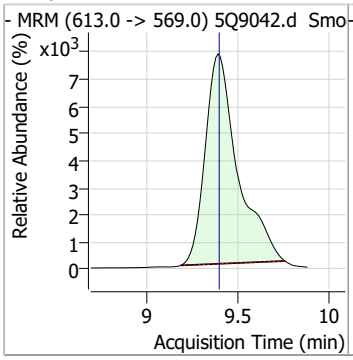
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.28	9.39	0.00	433431				

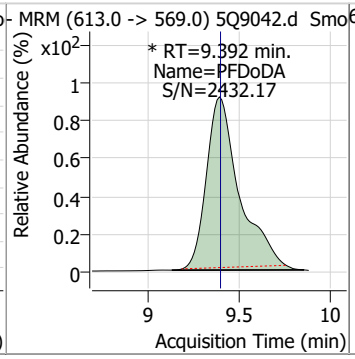


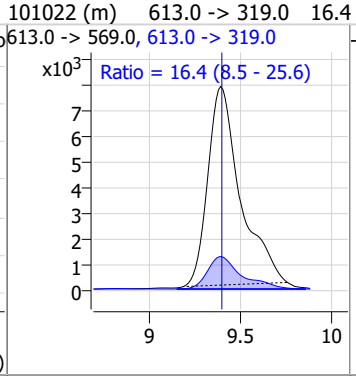


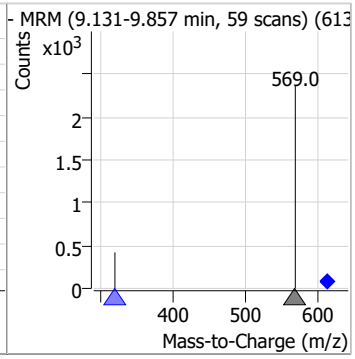


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	5.11	9.39	0.00	101022 (m)	613.0 -> 319.0	16.4	8.5	25.6

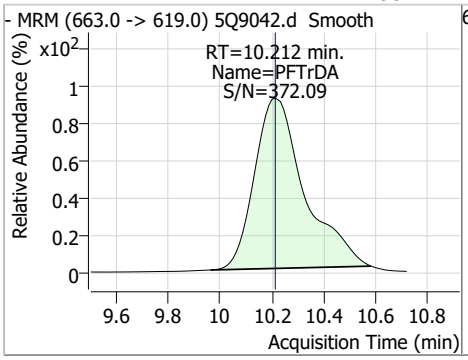


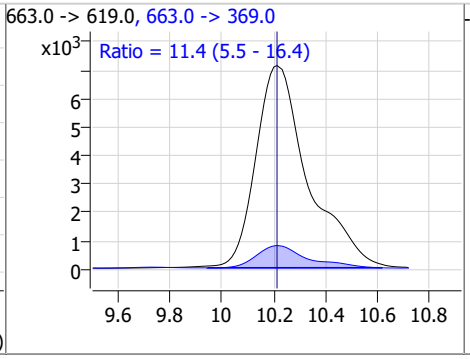


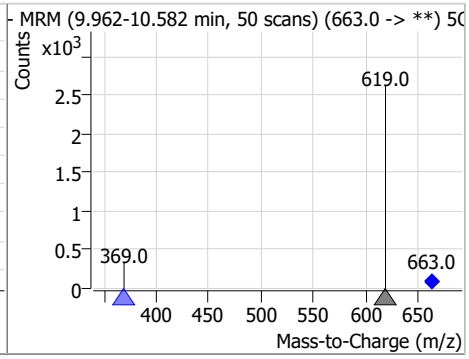




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	4.95	10.21	0.00	93550	663.0 -> 369.0	11.4	5.5	16.4

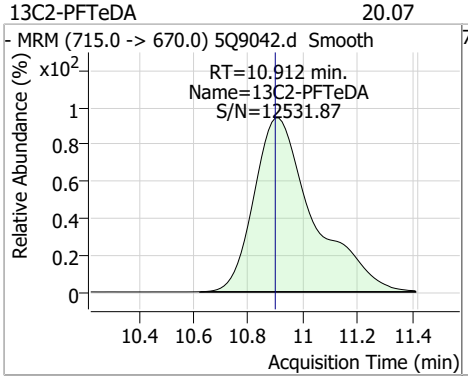


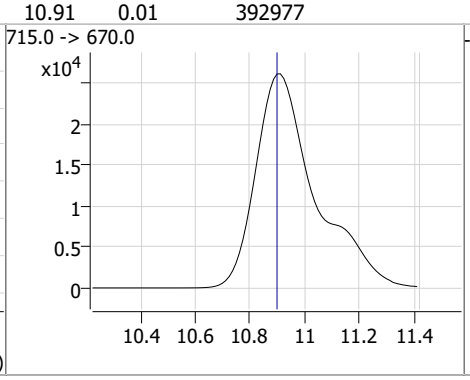


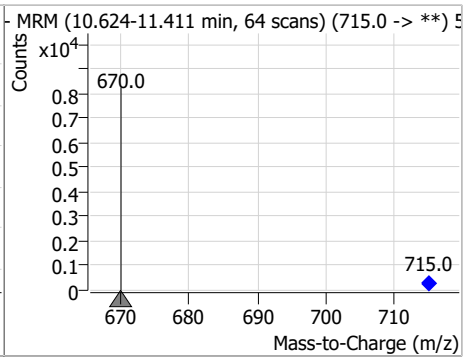


Perfluorinated Compounds by LC/MS/MS

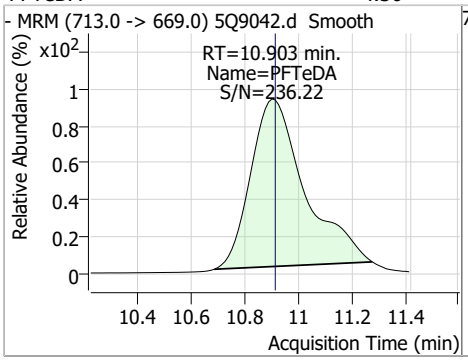
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.07	10.91	0.01	392977				

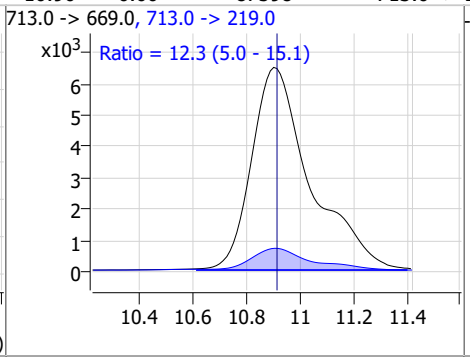


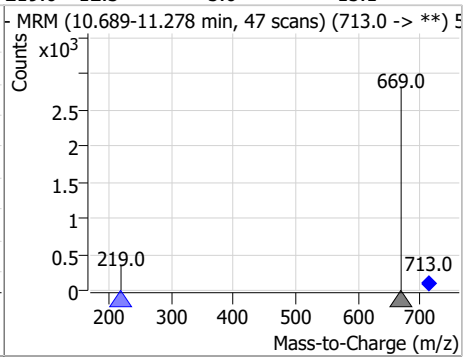




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	4.30	10.90	0.00	87598	713.0 -> 219.0	12.3	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q134-IC134
Lab FileID: 5Q9042.D
Injection Time: 12/28/22 13:19
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.74	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.88	Split peak
Perfluorododecanoic acid	307-55-1		9.39	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9043.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 1:36:35 PM
Sample Name : ic134-10
Vial : P1-A6
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	98572	20.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	199695	20.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	287083	20.00	µg/L	0.000
M4-PFHpA	5.726	367.0 -> 322.0	297332	20.00	µg/L	0.000
M8-PFOA	6.361	421.0 -> 376.0	388093	20.00	µg/L	0.000
M9-PFNA	6.918	472.0 -> 427.0	402560	20.00	µg/L	0.000
M6-PFDA	7.436	519.0 -> 474.0	441196	20.00	µg/L	0.000
M7-PFUnDA	8.320	570.0 -> 525.0	575028	20.00	µg/L	0.000
M2-PFDoDA	9.388	615.0 -> 570.0	406086	20.00	µg/L	0.000
M2-PFTeDA	10.912	715.0 -> 670.0	372359	20.00	µg/L	0.012
M8-FOSA	6.592	506.0 -> 78.0	93543	20.00	µg/L	0.000
M3-PFBS	4.124	302.0 -> 99.0	24636	20.00	µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	34638	20.00	µg/L	0.000
M8-PFOS	6.879	507.0 -> 99.0	45613	20.00	µg/L	0.000
M2-4:2FTS	4.886	329.0 -> 309.0	87930	20.00	µg/L	0.000
M2-6:2FTS	6.360	429.0 -> 409.0	142283	20.00	µg/L	0.000
M2-8:2FTS	7.512	529.0 -> 509.0	132549	20.00	µg/L	0.000
M3-MeFOSAA	7.034	573.0 -> 419.0	33357	20.00	µg/L	0.000
M3-HFPO-DA	5.182	287.0 -> 169.0	62812	20.00	µg/L	0.000
M3-MeFOSA	6.952	515.0 -> 169.0	30218	20.00	µg/L	0.000
M5-EtFOSAA	7.145	589.0 -> 419.0	34625	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	87930	18.26	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.3%		
13C2-6:2FTS	6.360	429.0 -> 409.0	142283	18.56	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%		
13C2-8:2FTS	7.512	529.0 -> 509.0	132549	18.35	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.8%		
13C2-PFDoDA	9.388	615.0 -> 570.0	406086	18.06	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.3%		
13C2-PFTeDA	10.912	715.0 -> 670.0	372359	19.02	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.1%		
13C3-PFBS	4.124	302.0 -> 99.0	24636	18.96	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.8%		
13C3-PFHxS	5.733	402.0 -> 99.0	34638	19.36	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.8%		
13C4-PFBA	2.400	217.0 -> 172.0	98572	18.95	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.7%		
13C4-PFHpA	5.726	367.0 -> 322.0	297332	19.34	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.7%		
13C5-PFHxA	4.965	318.0 -> 273.0	287083	19.08	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.4%		
13C5-PFPeA	3.919	268.0 -> 223.0	199695	19.04	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.2%		
13C6-PFDA	7.436	519.0 -> 474.0	441196	18.98	µg/L	0.000

Perfluorinated Compounds by LC/MS/MS

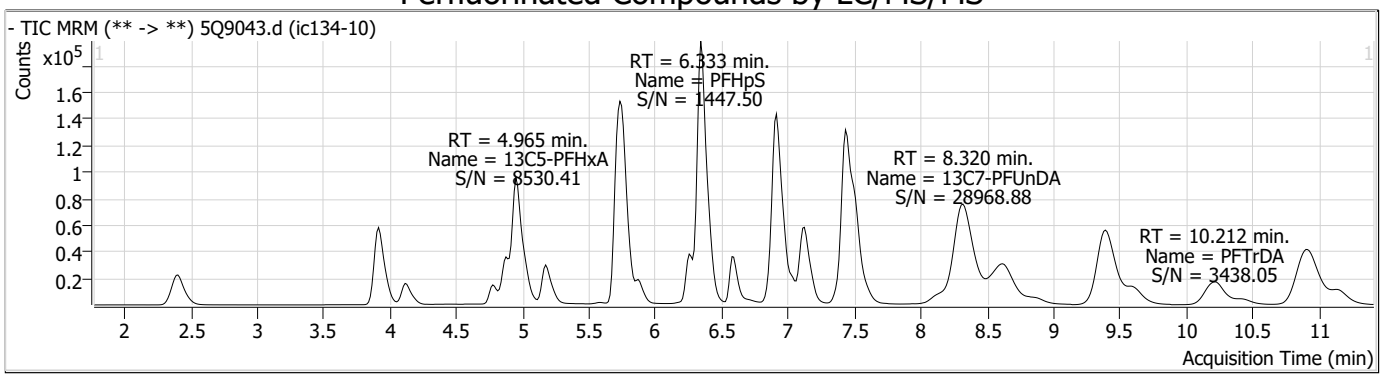
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.9%			
13C7-PFUnDA	8.320	570.0 -> 525.0	575028	19.65	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.3%			
13C8-FOSA	6.592	506.0 -> 78.0	93543	19.37	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.8%			
13C8-PFOA	6.361	421.0 -> 376.0	388093	19.26	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.3%			
13C8-PFOS	6.879	507.0 -> 99.0	45613	19.13	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.6%			
13C9-PFNA	6.918	472.0 -> 427.0	402560	19.14	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.7%			
d3-MeFOSAA	7.034	573.0 -> 419.0	33357	18.77	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.9%			
13C3-HFPO-DA	5.182	287.0 -> 169.0	62812	18.99	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.9%			
d3-MeFOSA	6.952	515.0 -> 169.0	30218	19.95	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.7%			
d5-EtFOSAA	7.145	589.0 -> 419.0	34625	18.77	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.9%			
Target Compounds							QValue
4:2FTS	4.876	327.0 -> 307.0	54155	11.25	µg/L		99
		327.0 -> 81.0	32360				
6:2FTS	6.360	427.0 -> 407.0	82239	11.26	µg/L		99
		427.0 -> 81.0	35542				
8:2FTS	7.512	527.0 -> 507.0	76872	11.35	µg/L		99
		527.0 -> 81.0	38202				
EtFOSAA	7.145	584.0 -> 419.0	12241	10.59	µg/L		97
		584.0 -> 483.0	7482				
FOSA	6.594	498.0 -> 78.0	50083	10.42	µg/L		99
		498.0 -> 478.0	1504				
MeFOSAA	7.047	570.0 -> 419.0	14588	10.78	µg/L		100
		570.0 -> 512.0	6038				
PFBA	2.406	213.0 -> 169.0	55645	10.36	µg/L		100
PFBS	4.129	299.0 -> 80.0	41898	10.46	µg/L		100
		299.0 -> 99.0	17902				
PFDA	7.437	513.0 -> 469.0	243289	10.36	µg/L		99
		513.0 -> 219.0	44096				
PFDoDA	9.392	613.0 -> 569.0	203530	10.98	µg/L	m	99
		613.0 -> 319.0	33650				
PFDS	8.144	599.0 -> 80.0	47528	9.21	µg/L		100
		599.0 -> 99.0	28618				
PFHpA	5.727	363.0 -> 319.0	192830	10.37	µg/L		100
		363.0 -> 169.0	42978				
PFHpS	6.333	449.0 -> 80.0	36472	10.46	µg/L		100
		449.0 -> 99.0	20053				
PFHxA	4.966	313.0 -> 269.0	152410	10.45	µg/L		100
		313.0 -> 119.0	6996				
PFHxS	5.735	399.0 -> 80.0	35999	10.24	µg/L	m	98
		399.0 -> 99.0	20668				
PFNA	6.918	463.0 -> 419.0	216939	10.39	µg/L		100
		463.0 -> 219.0	47286				
PFNS	7.384	549.0 -> 80.0	33580	10.74	µg/L		98
		549.0 -> 99.0	19606				
PFOA	6.362	413.0 -> 369.0	233752	10.52	µg/L		100
		413.0 -> 169.0	62257				
PFOS	6.880	499.0 -> 80.0	44294	10.53	µg/L	m	99

Perfluorinated Compounds by LC/MS/MS

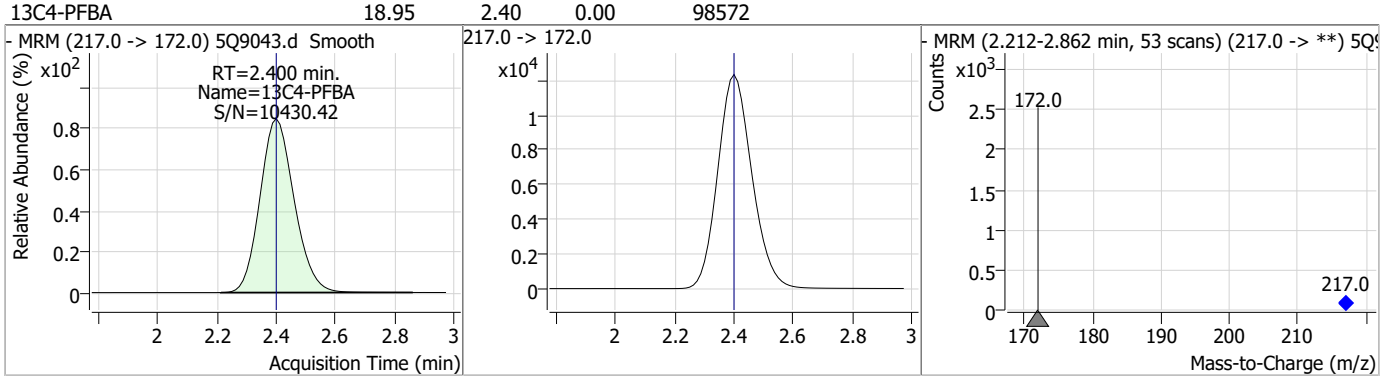
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	21607			
PFPeA	3.922	263.0 -> 219.0	122652	10.45	µg/L	100
PFPeS	5.035	349.0 -> 80.0	26551	10.12	µg/L	100
		349.0 -> 99.0	13569			
PFTeDA	10.903	713.0 -> 669.0	185175	9.60	µg/L	100
		713.0 -> 219.0	18958			
PFTrDA	10.212	663.0 -> 619.0	205817	11.63	µg/L	98
		663.0 -> 369.0	21181			
PFUnDA	8.321	563.0 -> 519.0	300002	10.14	µg/L	100
		563.0 -> 269.0	50861			
11Cl-PF3OUdS	8.641	631.0 -> 451.0	214443	11.33	µg/L	95
		633.0 -> 453.0	66489			
9Cl-PF3ONS	7.123	531.0 -> 351.0	192361	9.87	µg/L	99
		533.0 -> 353.0	59634			
ADONA	5.763	377.0 -> 251.0	250938	10.74	µg/L	100
		377.0 -> 85.0	94089			
HFPO-DA	5.190	329.0 -> 169.0	52322	10.43	µg/L	99
		285.0 -> 169.0	31233			
MeFOSA	6.953	512.0 -> 169.0	18638	10.42	µg/L	97
		512.0 -> 219.0	13992			
4-PFECHS	6.268	461.0 -> 381.0	119443	9.66	µg/L	98
		461.0 -> 99.0	65814			
FBSA	4.793	298.0 -> 78.0	63171	10.60	µg/L	100
		298.0 -> 64.0	5980			
FHxSA	5.888	398.0 -> 78.0	58069	10.06	µg/L	100
		398.0 -> 64.0	5611			

 # = Qualifier out of range, m = manually integrated, + = Area summed

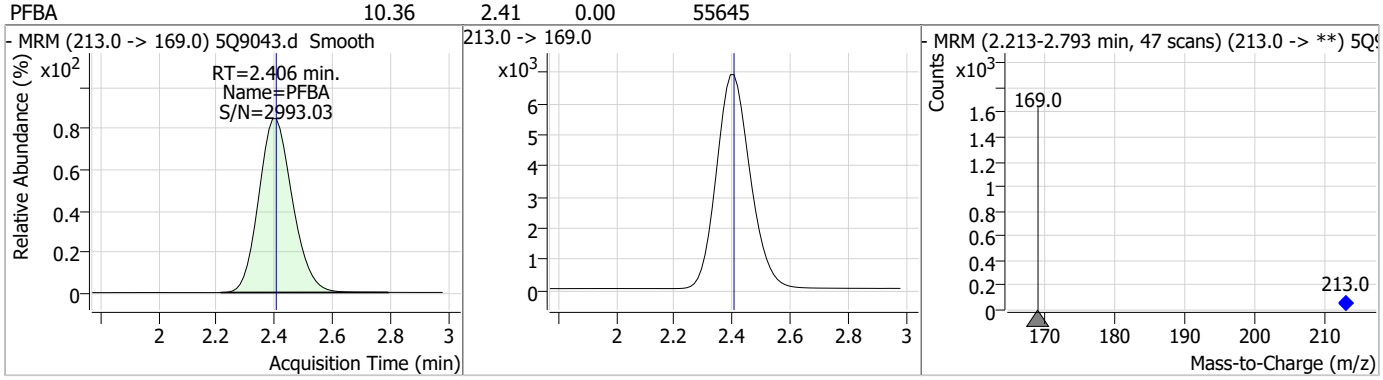
Perfluorinated Compounds by LC/MS/MS



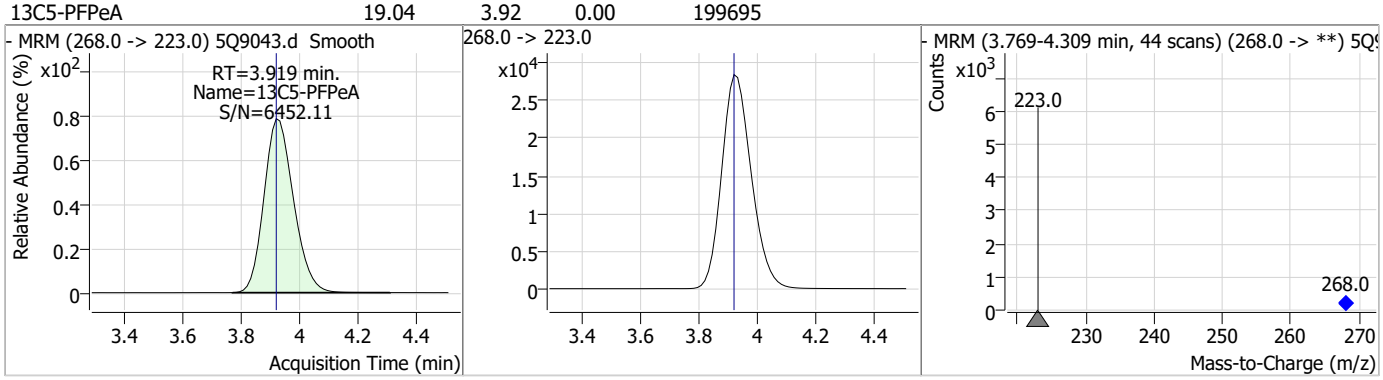
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.95	2.40	0.00	98572				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	10.36	2.41	0.00	55645				

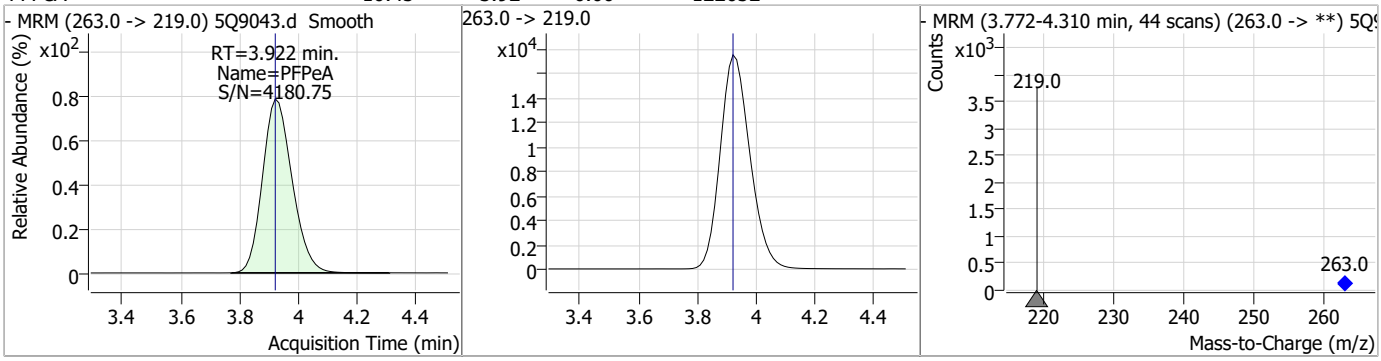


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.04	3.92	0.00	199695				

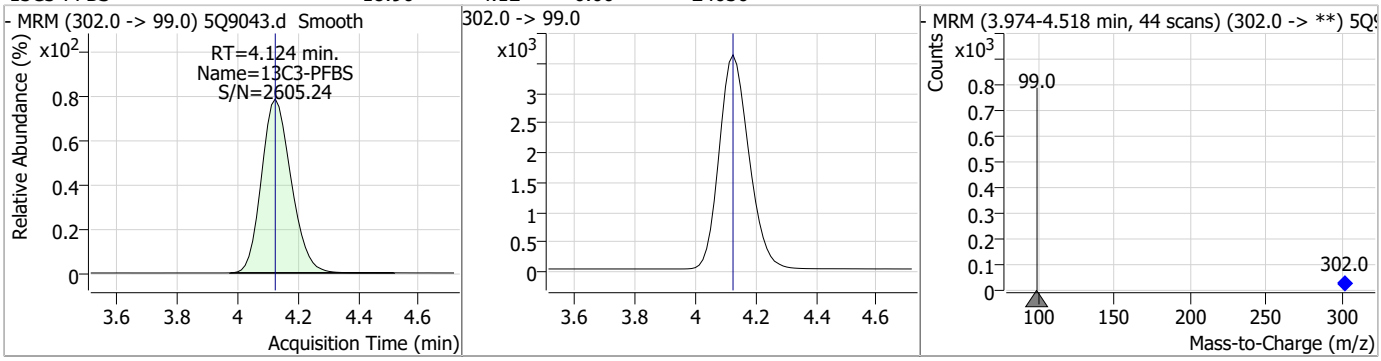


Perfluorinated Compounds by LC/MS/MS

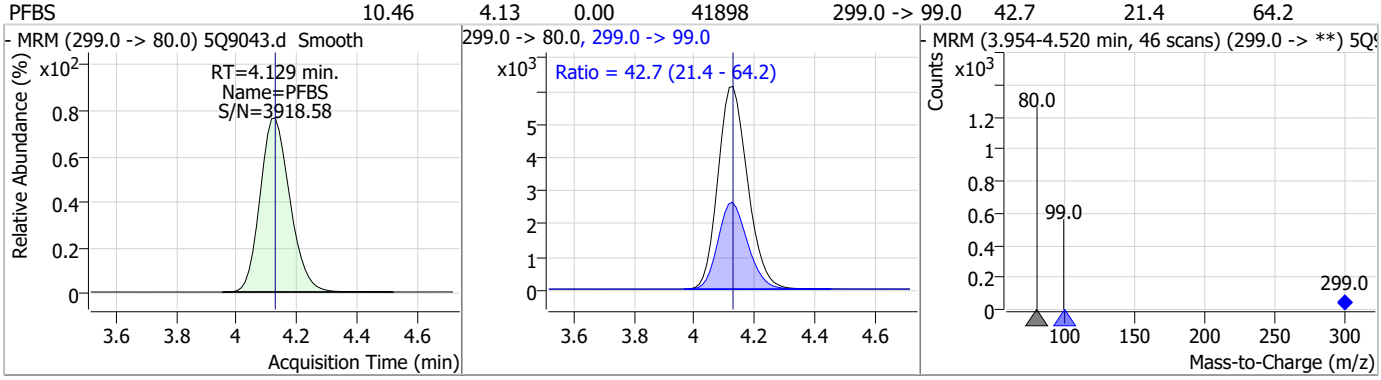
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	10.45	3.92	0.00	122652				



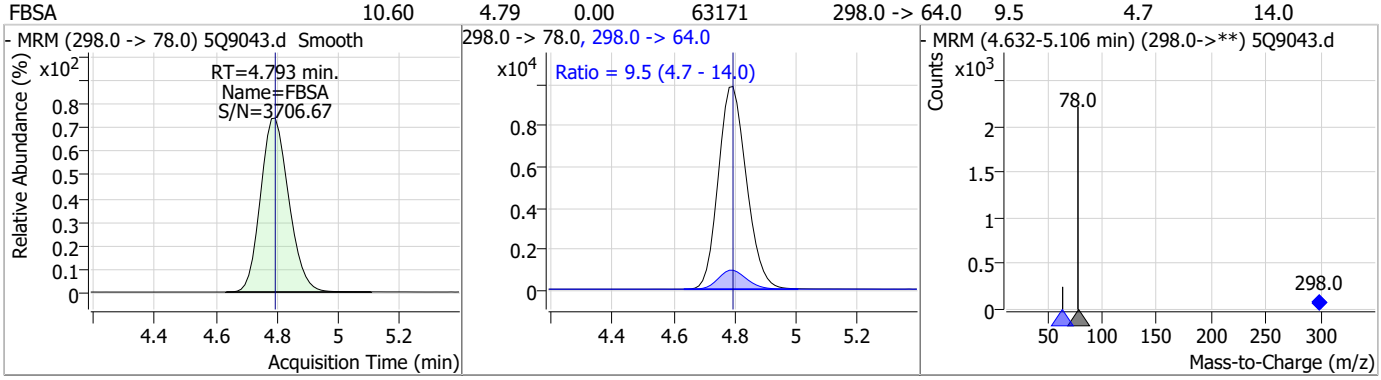
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	18.96	4.12	0.00	24636				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	10.46	4.13	0.00	41898	299.0 -> 99.0	42.7	21.4	64.2

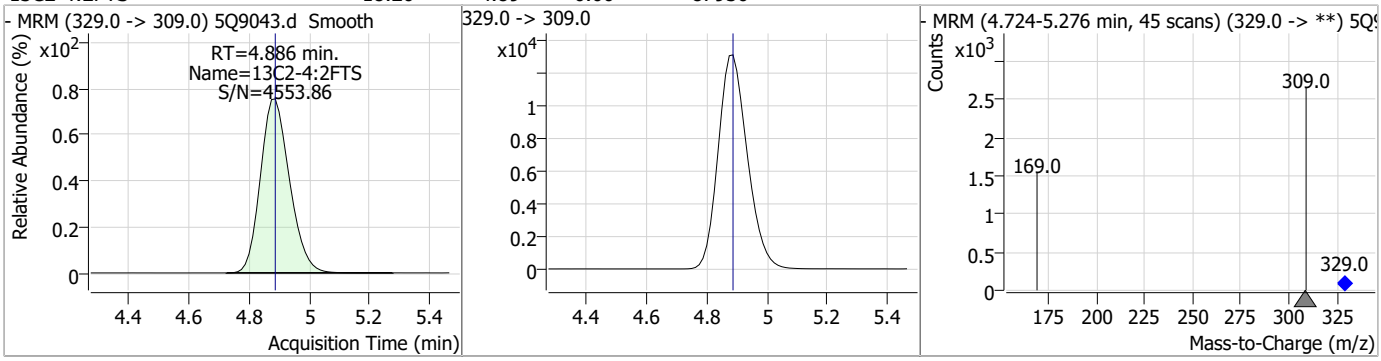


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	10.60	4.79	0.00	63171	298.0 -> 64.0	9.5	4.7	14.0

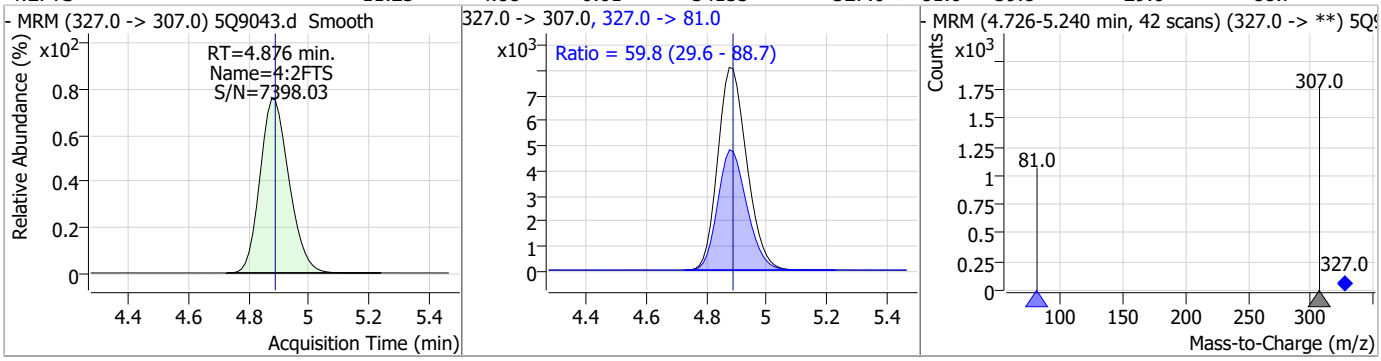


Perfluorinated Compounds by LC/MS/MS

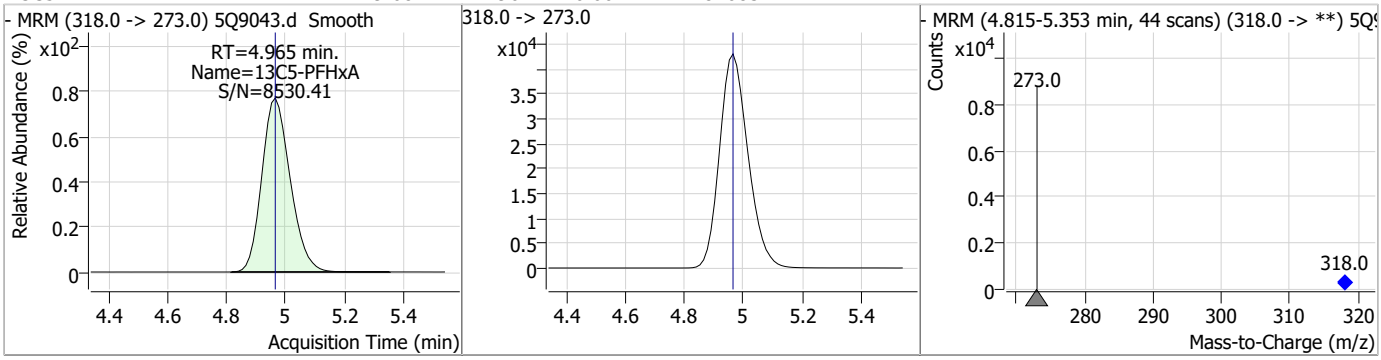
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.26	4.89	0.00	87930				



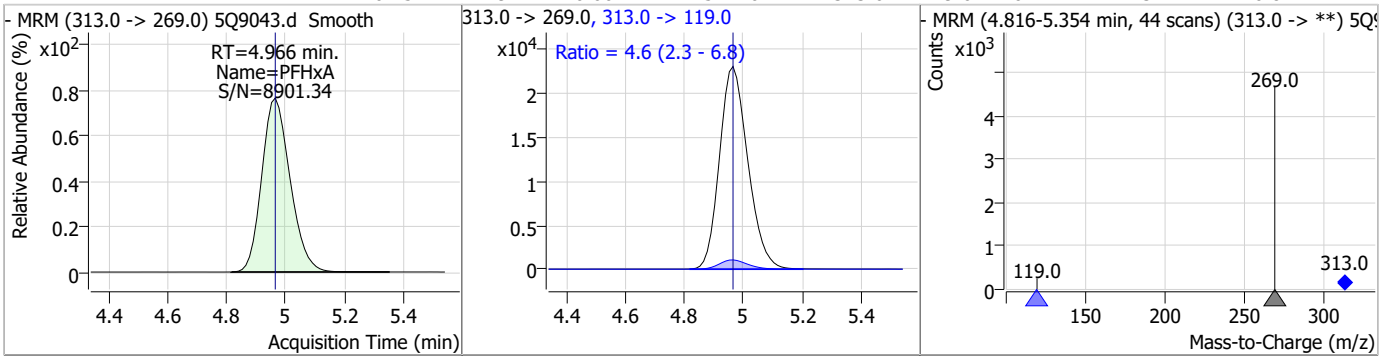
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	11.25	4.88	-0.01	54155	327.0 -> 81.0	59.8	29.6	88.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.08	4.96	0.00	287083				

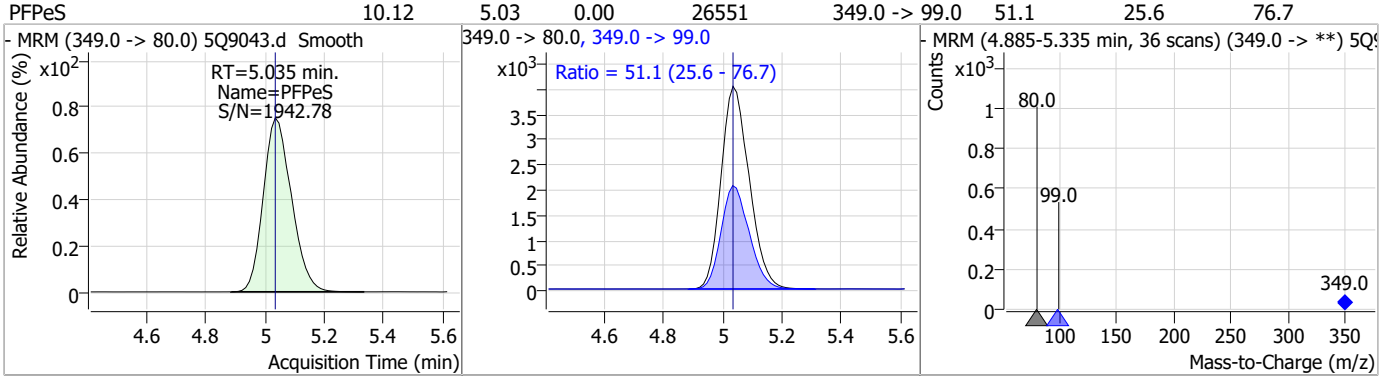


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	10.45	4.97	0.00	152410	313.0 -> 119.0	4.6	2.3	6.8

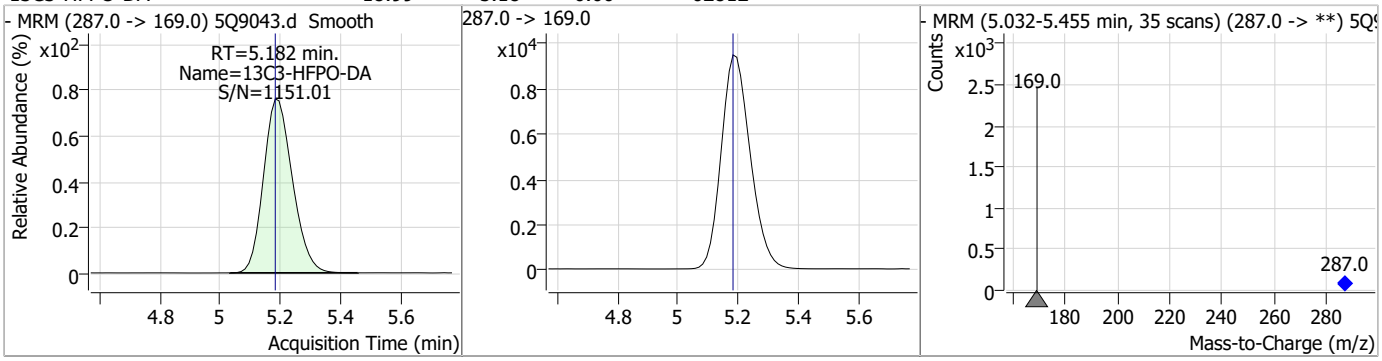


Perfluorinated Compounds by LC/MS/MS

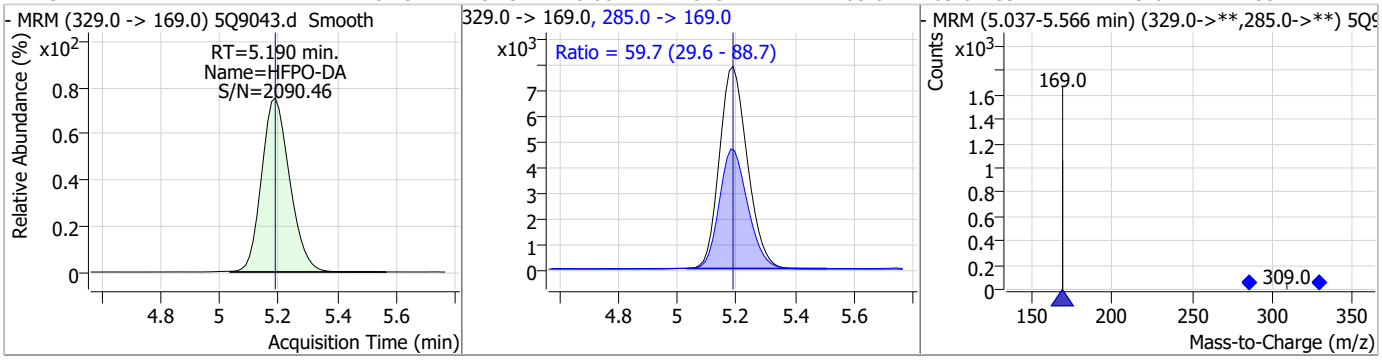
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	10.12	5.03	0.00	26551	349.0 -> 99.0	51.1	25.6	76.7



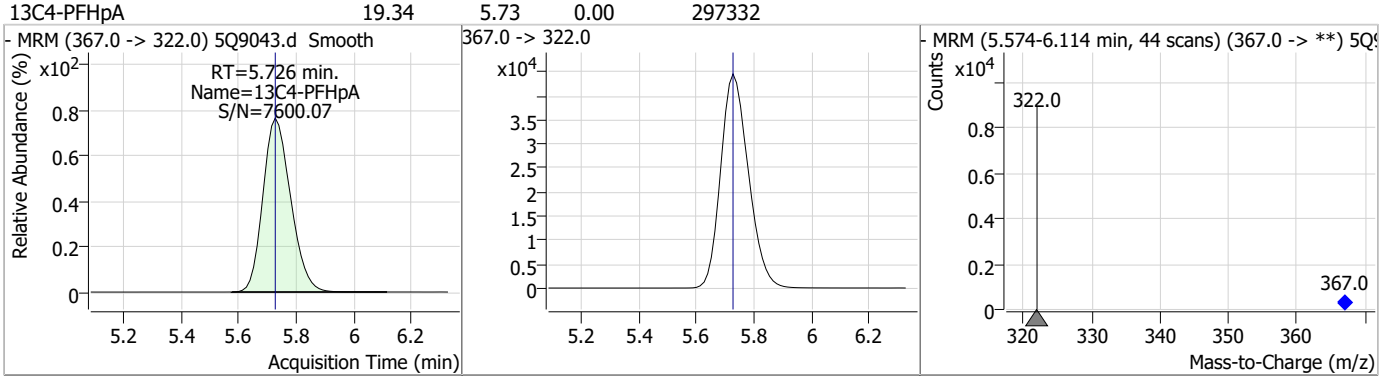
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	18.99	5.18	0.00	62812				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	10.43	5.19	0.00	52322	285.0 -> 169.0	59.7	29.6	88.7

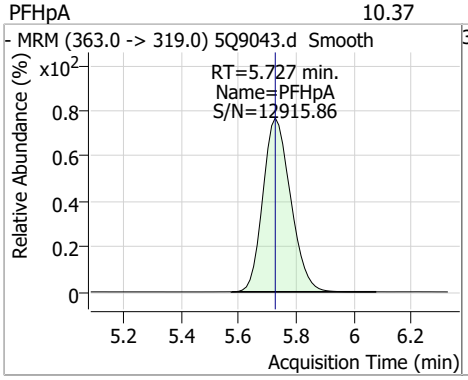


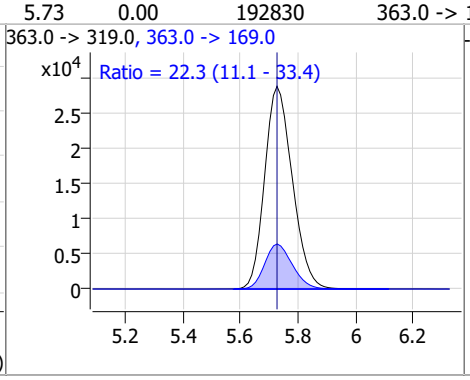
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.34	5.73	0.00	297332				

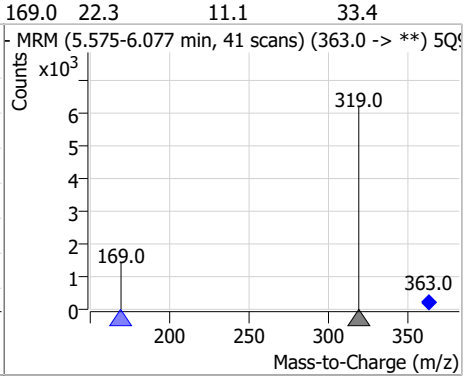


Perfluorinated Compounds by LC/MS/MS

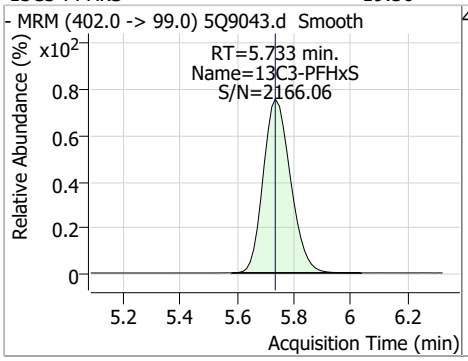
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	10.37	5.73	0.00	192830	363.0 -> 169.0	22.3	11.1	33.4

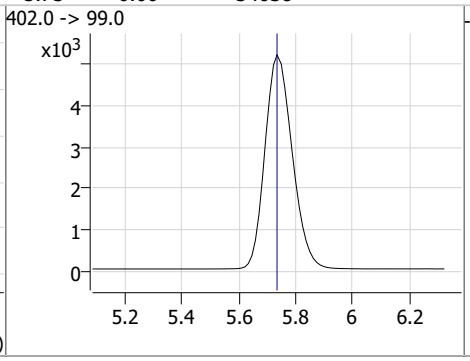


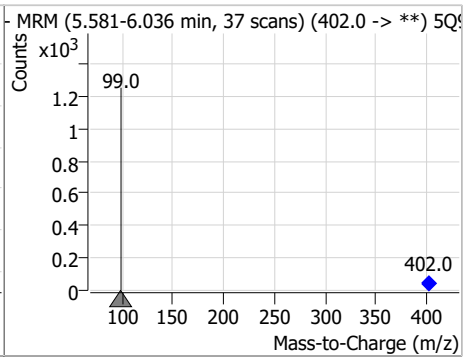




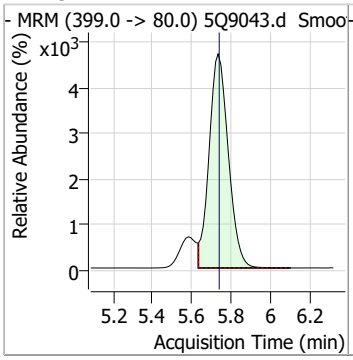
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.36	5.73	0.00	34638				

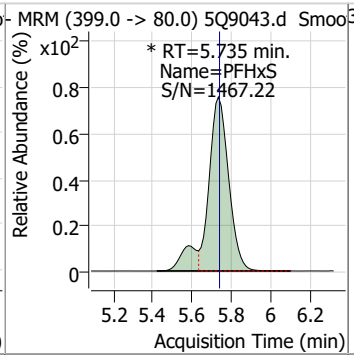


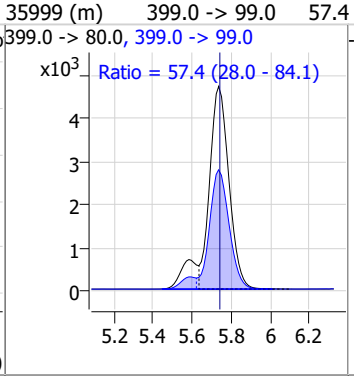


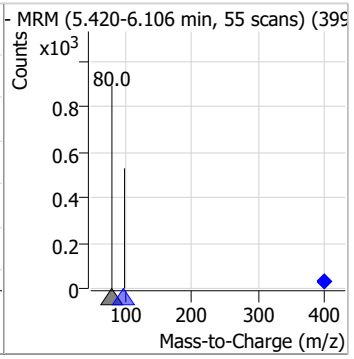


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	10.24	5.73	0.00	35999 (m)	399.0 -> 99.0	57.4	28.0	84.1

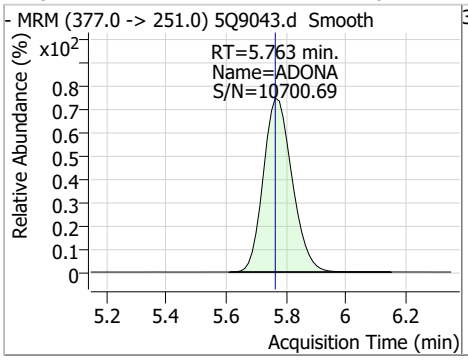


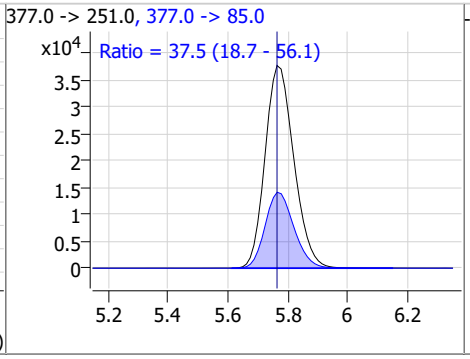


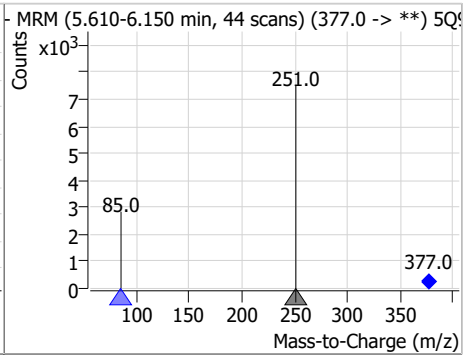




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	10.74	5.76	0.00	250938	377.0 -> 85.0	37.5	18.7	56.1

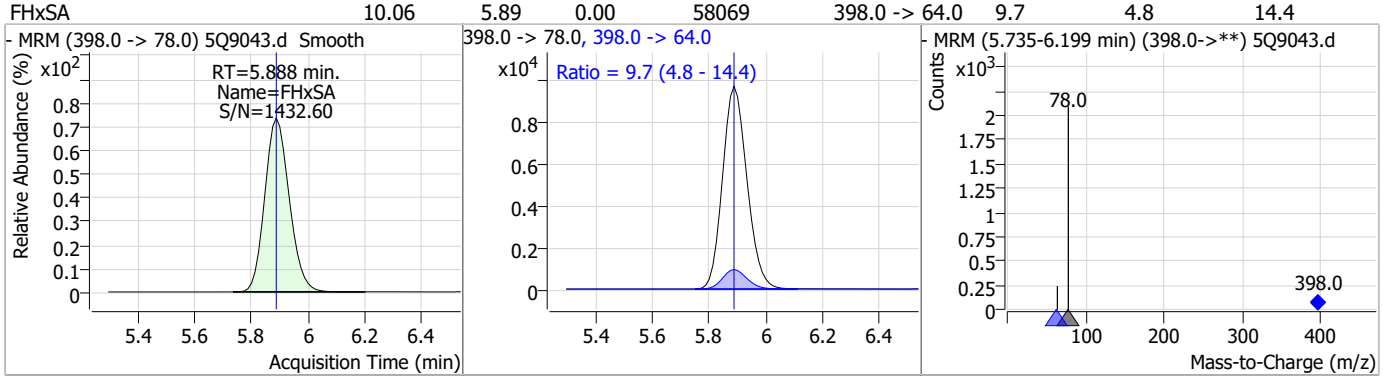




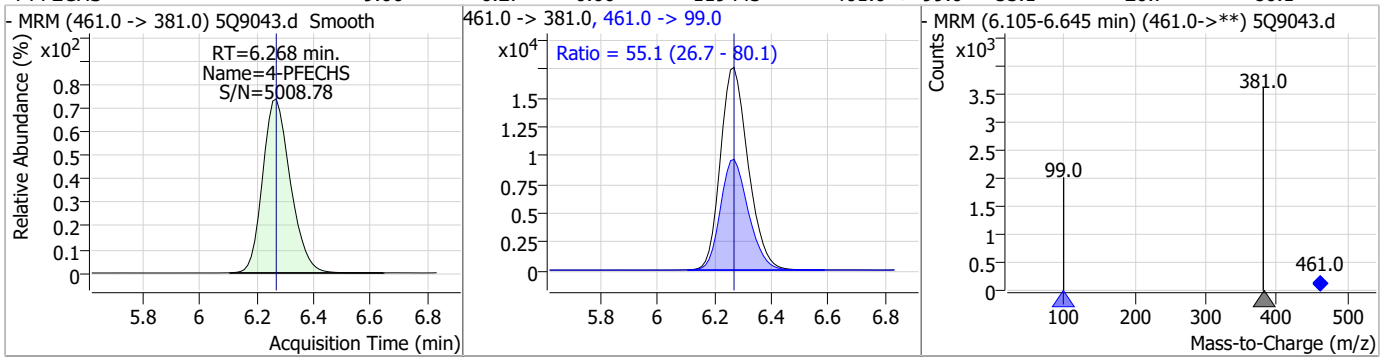


Perfluorinated Compounds by LC/MS/MS

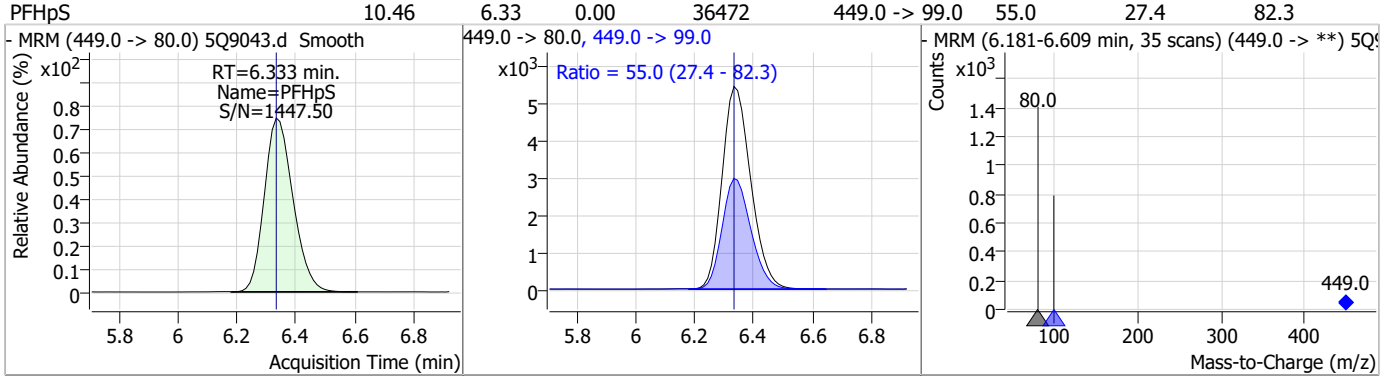
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	10.06	5.89	0.00	58069	398.0 -> 64.0	9.7	4.8	14.4



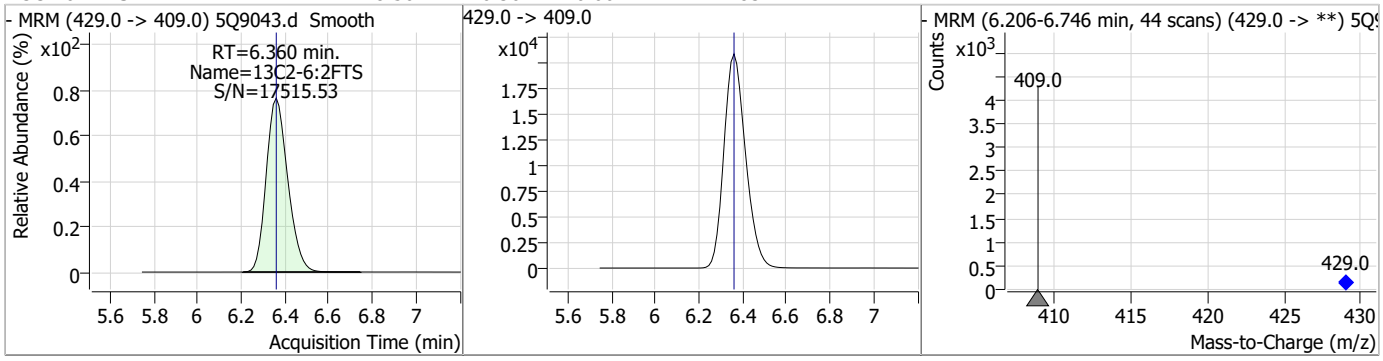
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	9.66	6.27	0.00	119443	461.0 -> 99.0	55.1	26.7	80.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	10.46	6.33	0.00	36472	449.0 -> 99.0	55.0	27.4	82.3

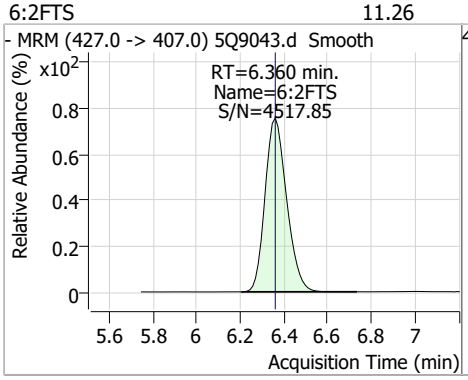


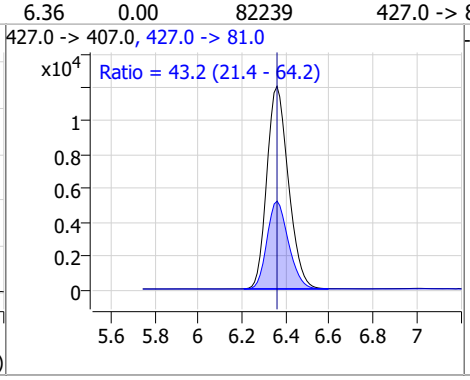
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.56	6.36	0.00	142283				

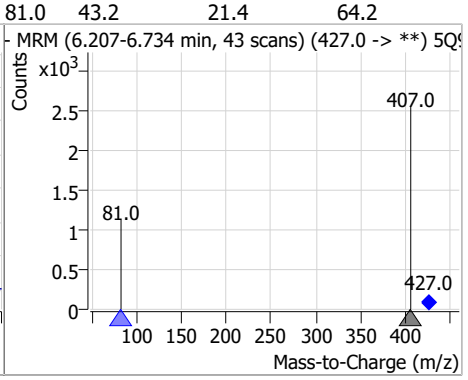


Perfluorinated Compounds by LC/MS/MS

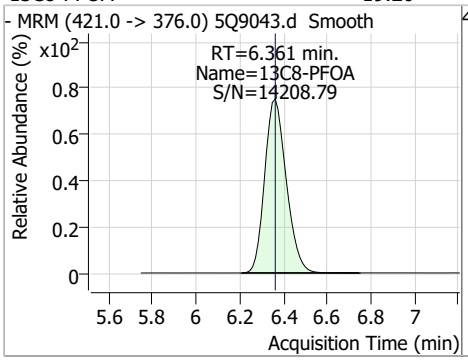
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	11.26	6.36	0.00	82239	427.0 -> 81.0	43.2	21.4	64.2

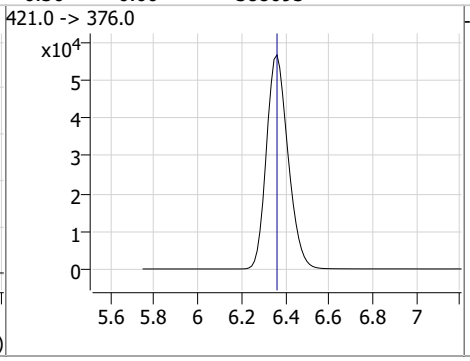


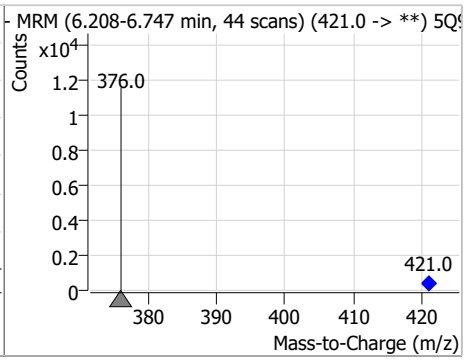




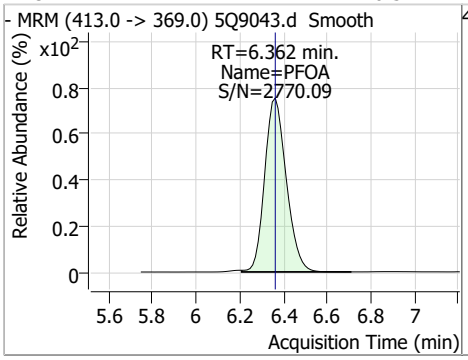
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.26	6.36	0.00	388093				

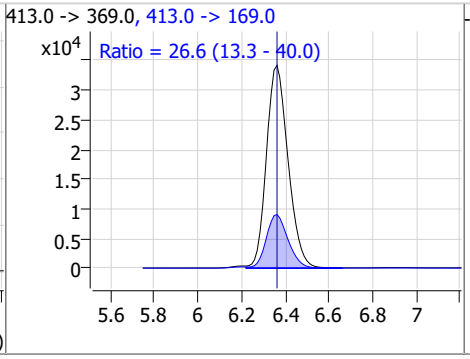


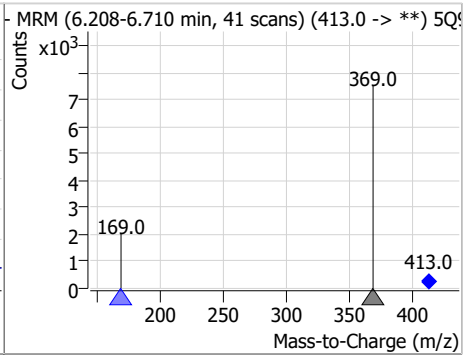




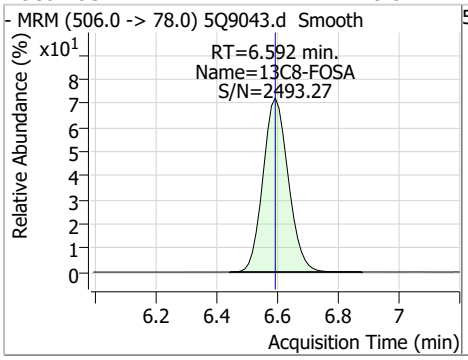
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	10.52	6.36	0.00	233752	413.0 -> 169.0	26.6	13.3	40.0

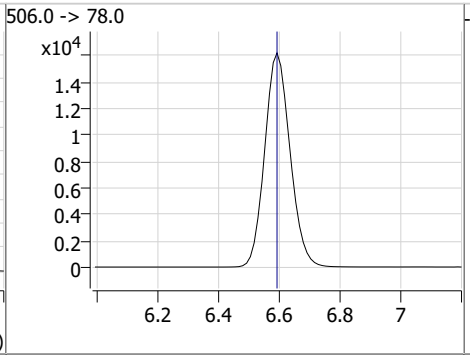


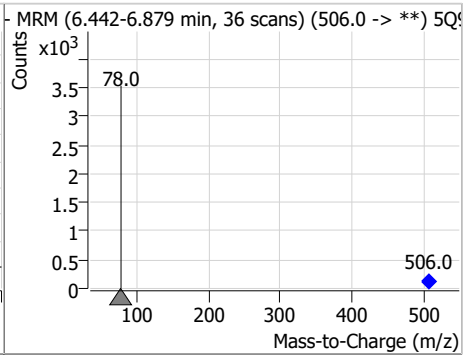




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	19.37	6.59	0.00	93543				

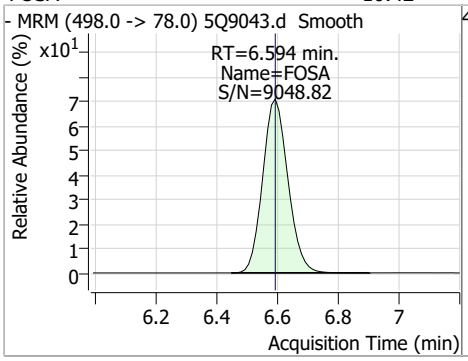


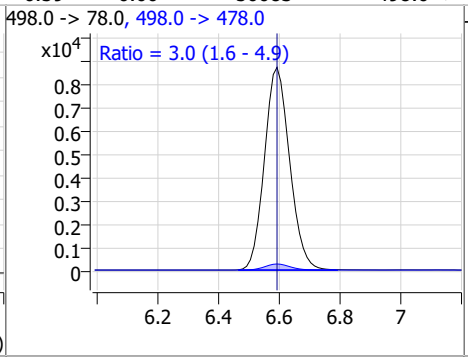


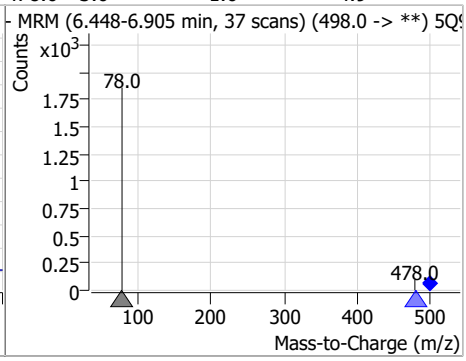


Perfluorinated Compounds by LC/MS/MS

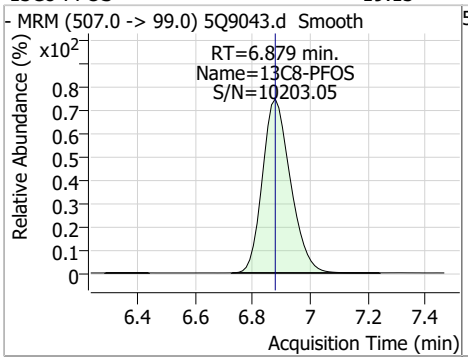
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	10.42	6.59	0.00	50083	498.0 -> 478.0	3.0	1.6	4.9

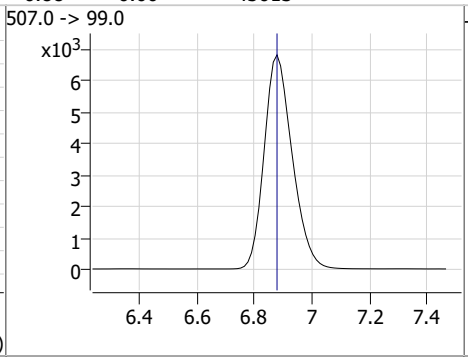


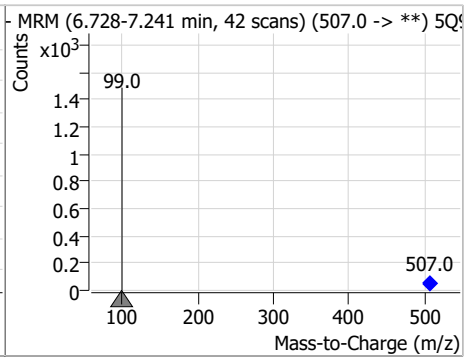




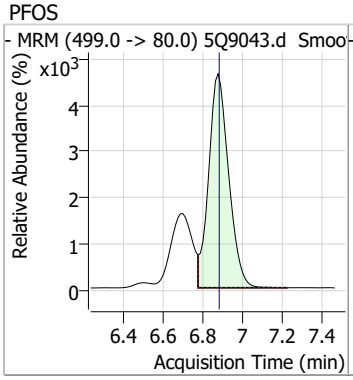
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.13	6.88	0.00	45613				

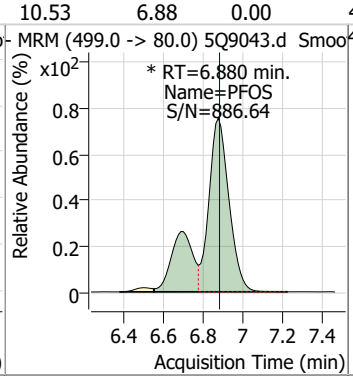


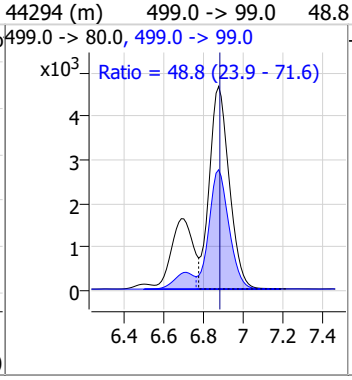


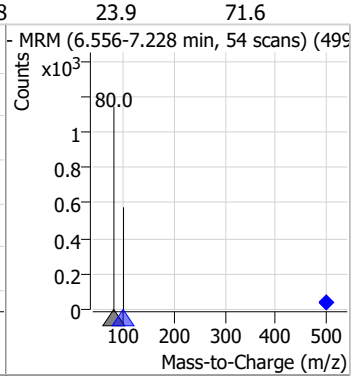


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	10.53	6.88	0.00	44294 (m)	499.0 -> 99.0	48.8	23.9	71.6

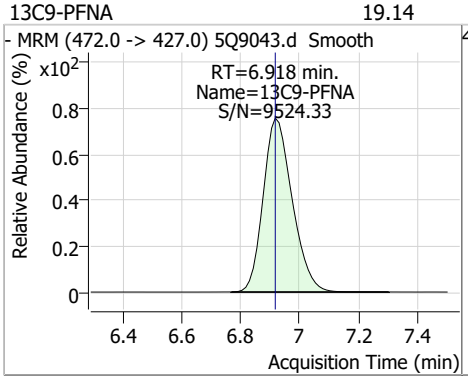


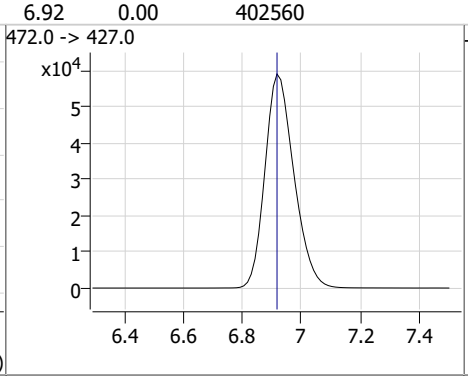


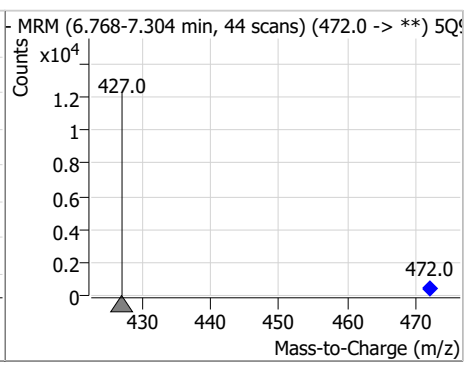




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.14	6.92	0.00	402560				

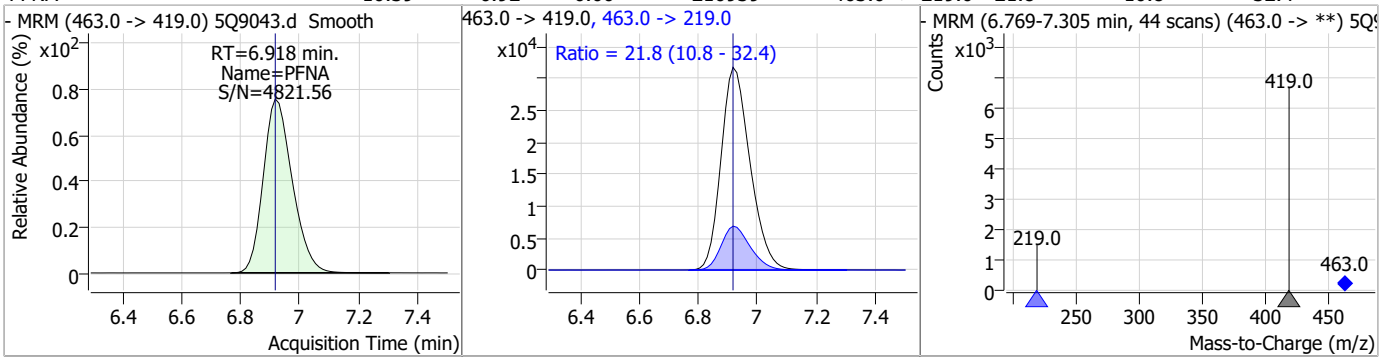




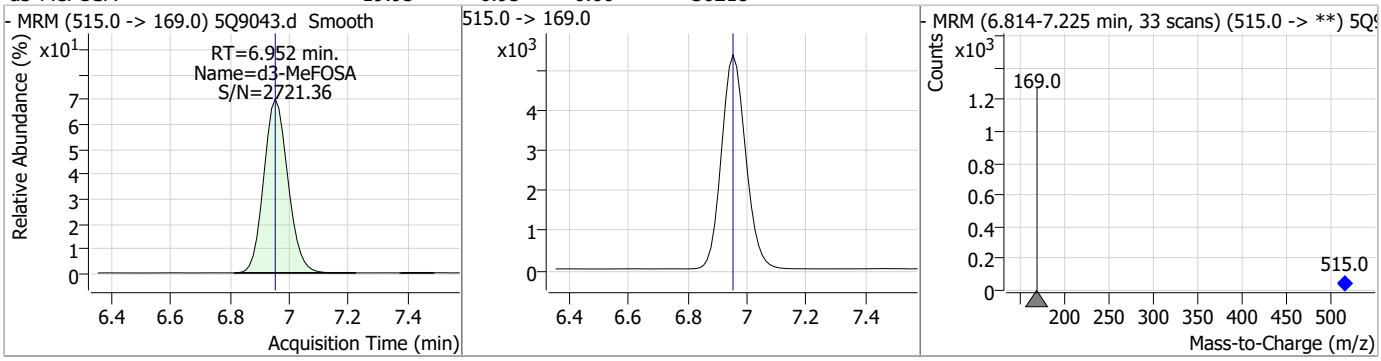


Perfluorinated Compounds by LC/MS/MS

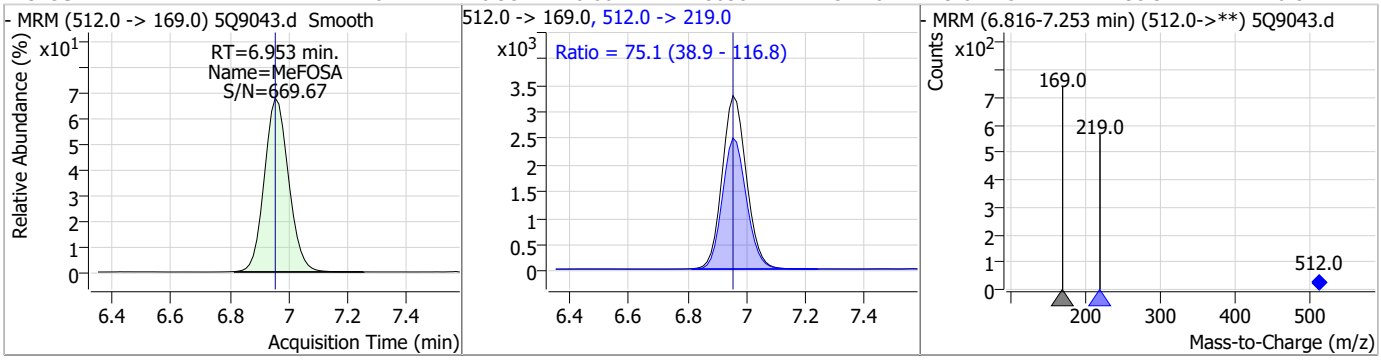
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	10.39	6.92	0.00	216939	463.0 -> 219.0	21.8	10.8	32.4



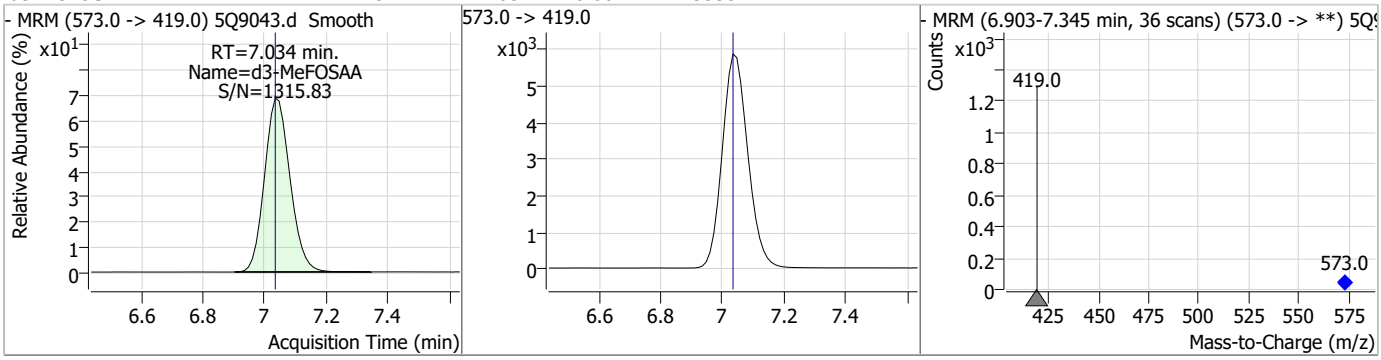
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	19.95	6.95	0.00	30218				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	10.42	6.95	0.00	18638	512.0 -> 219.0	75.1	38.9	116.8

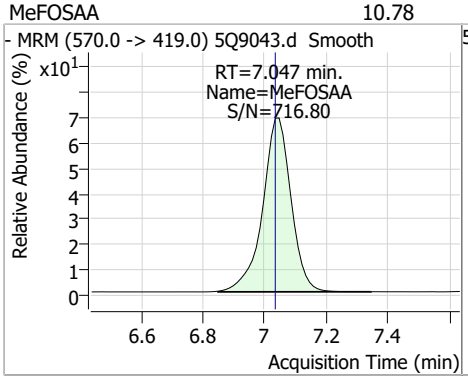


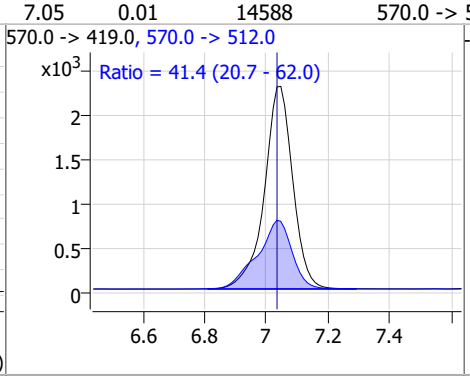
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	18.77	7.03	0.00	33357				

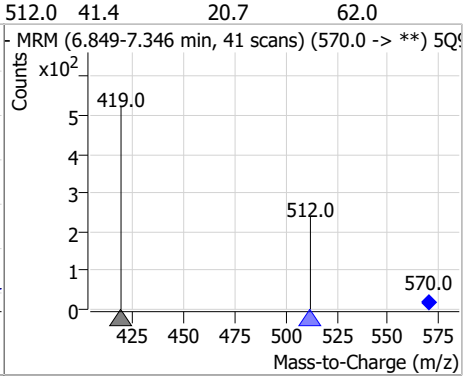


Perfluorinated Compounds by LC/MS/MS

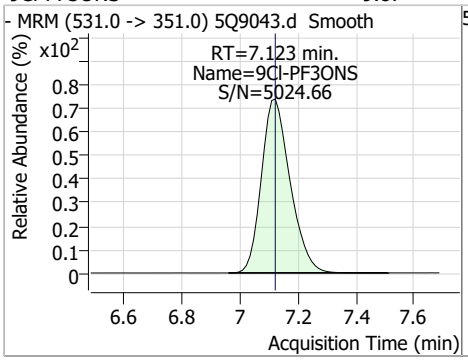
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	10.78	7.05	0.01	14588	570.0 -> 512.0	41.4	20.7	62.0

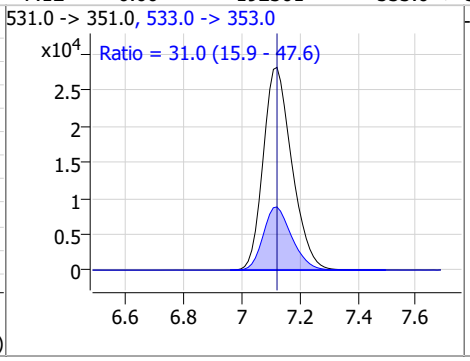


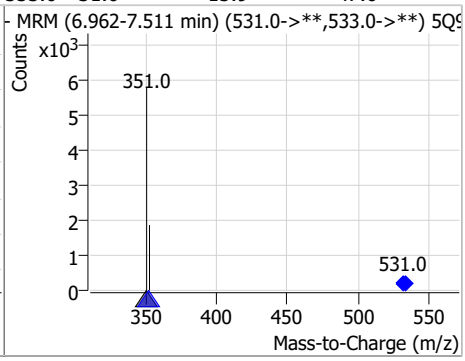




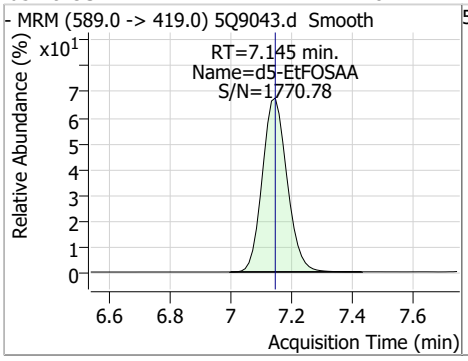
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	9.87	7.12	0.00	192361	533.0 -> 353.0	31.0	15.9	47.6

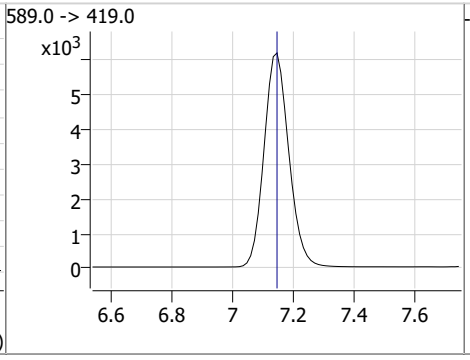


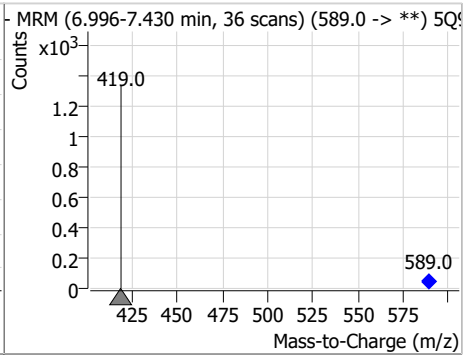




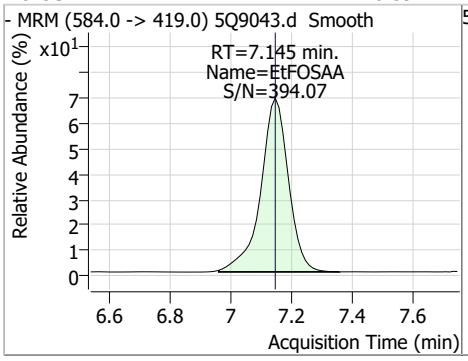
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.77	7.14	0.00	34625				

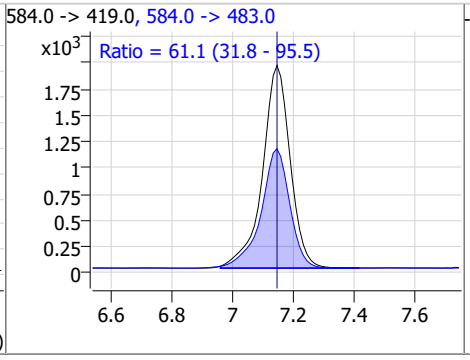


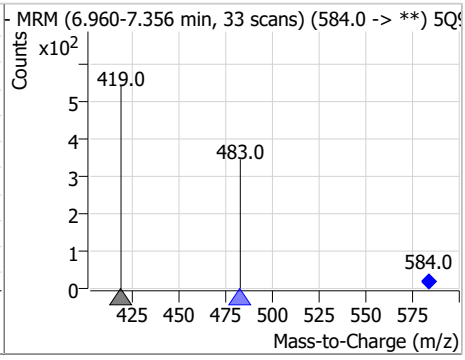




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	10.59	7.15	0.00	12241	584.0 -> 483.0	61.1	31.8	95.5

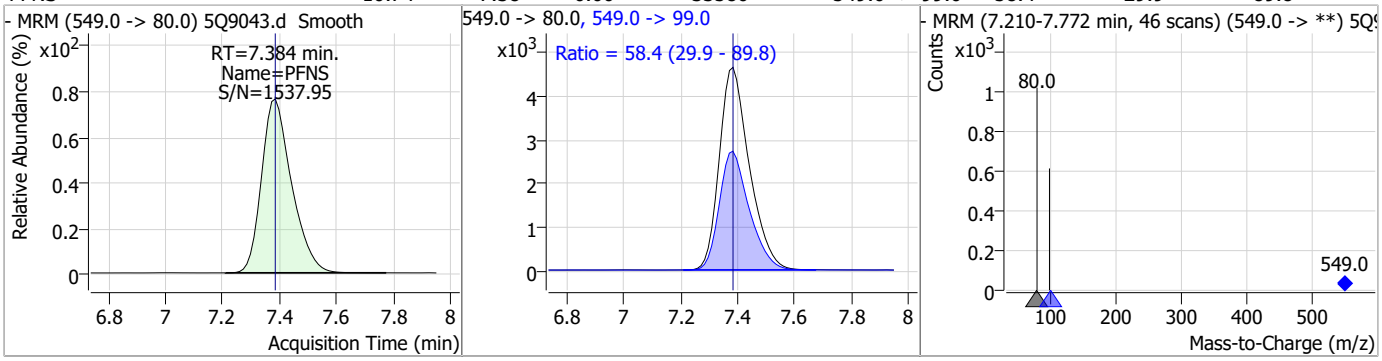




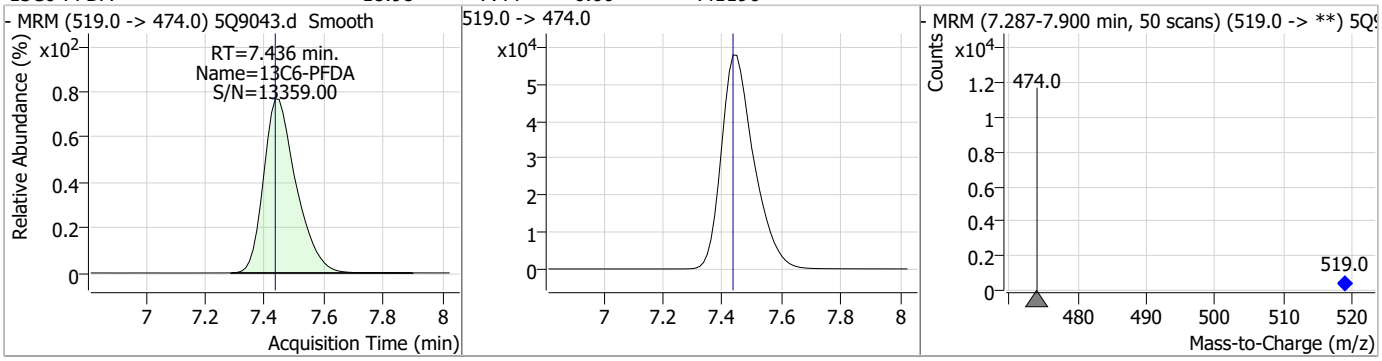


Perfluorinated Compounds by LC/MS/MS

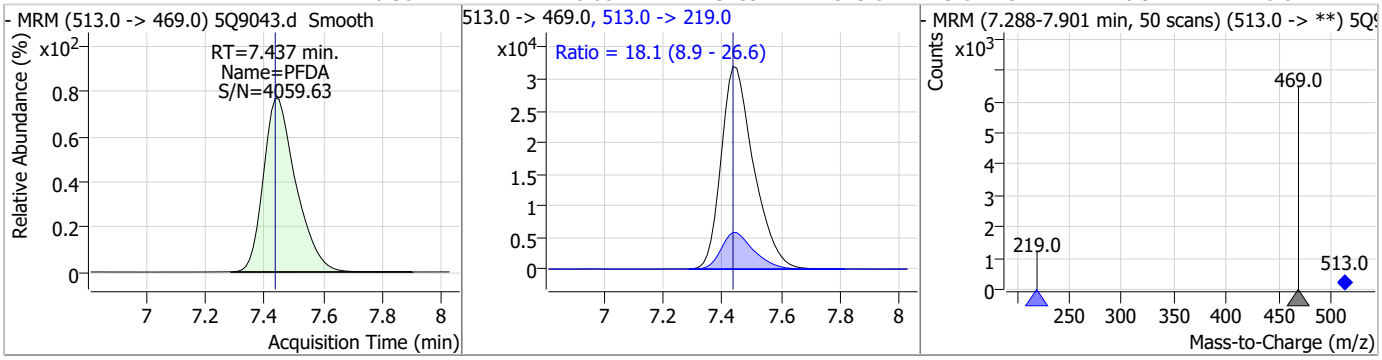
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	10.74	7.38	0.00	33580	549.0 -> 99.0	58.4	29.9	89.8



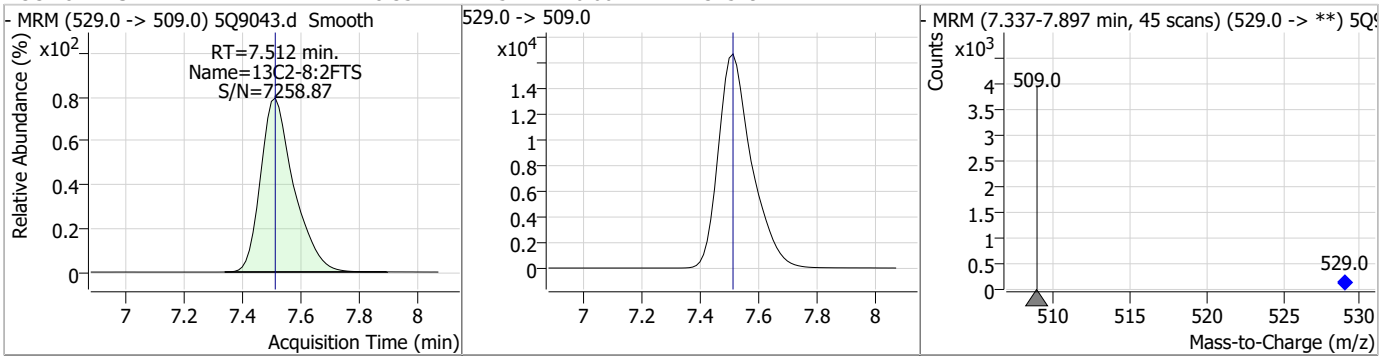
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.98	7.44	0.00	441196				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	10.36	7.44	0.00	243289	513.0 -> 219.0	18.1	8.9	26.6

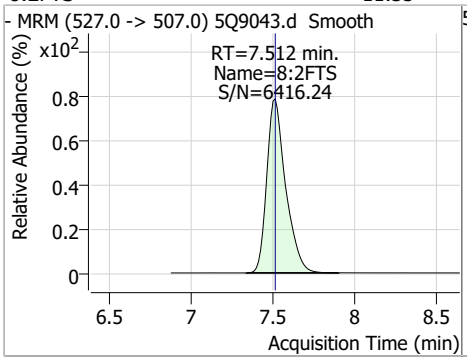


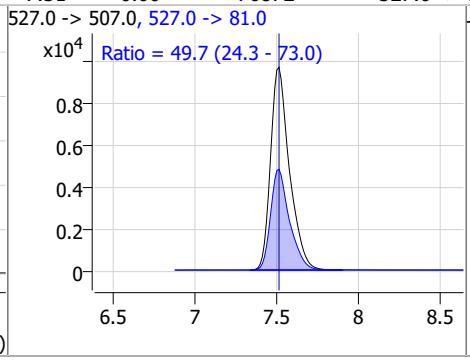
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.35	7.51	0.00	132549				

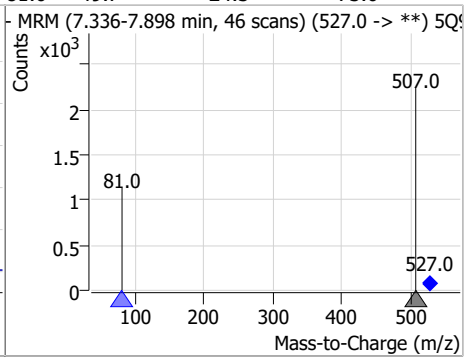


Perfluorinated Compounds by LC/MS/MS

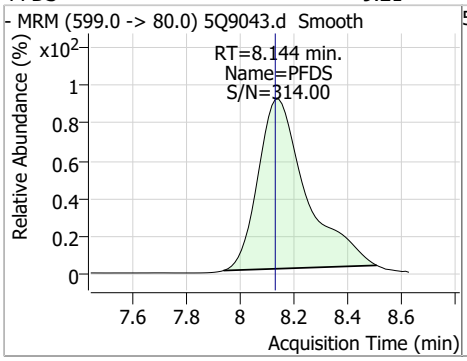
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	11.35	7.51	0.00	76872	527.0 -> 81.0	49.7	24.3	73.0

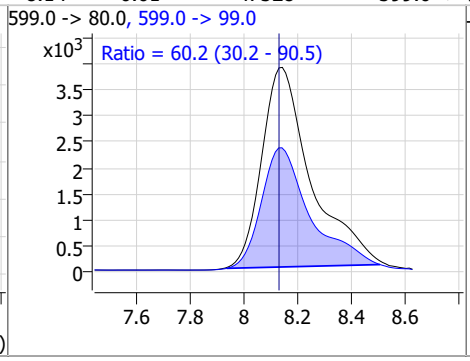


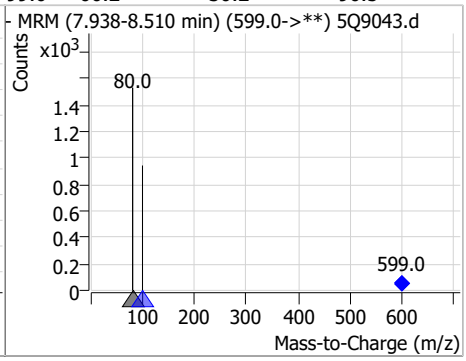




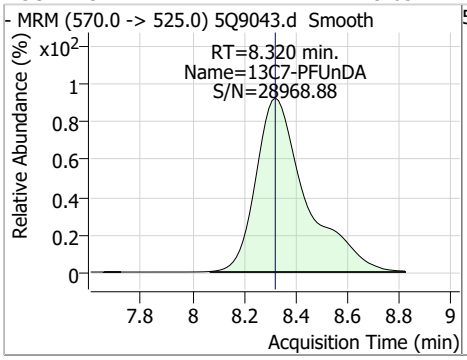
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	9.21	8.14	0.01	47528	599.0 -> 99.0	60.2	30.2	90.5

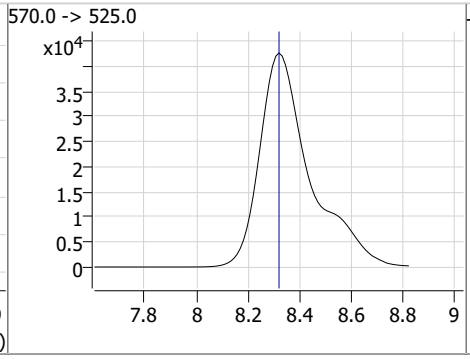


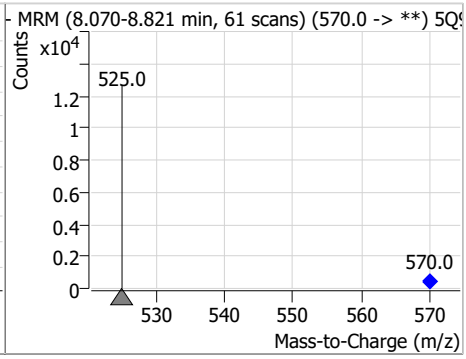




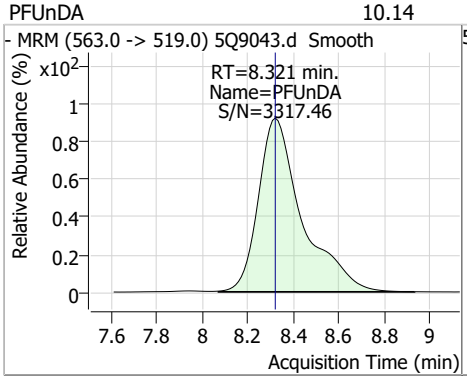
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.65	8.32	0.00	575028				

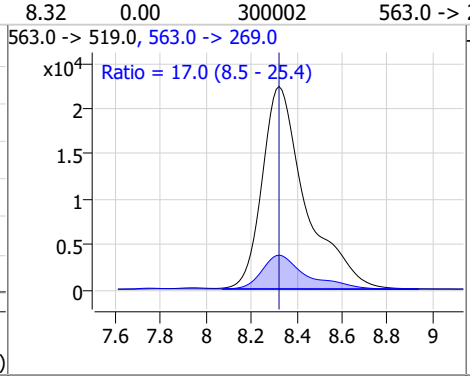


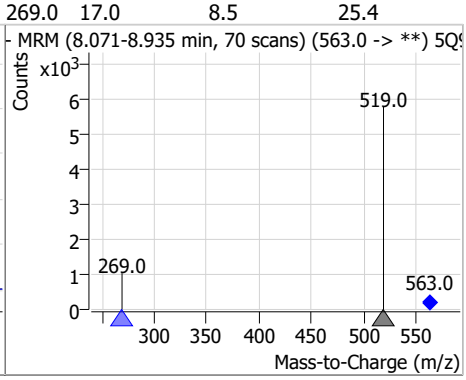




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	10.14	8.32	0.00	300002	563.0 -> 269.0	17.0	8.5	25.4

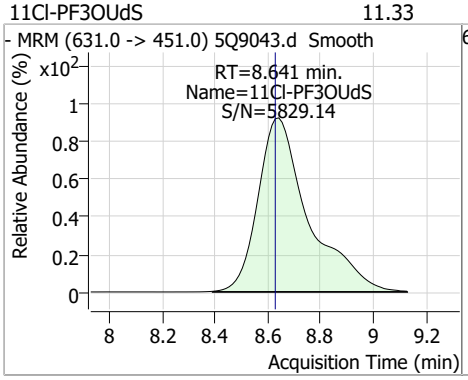


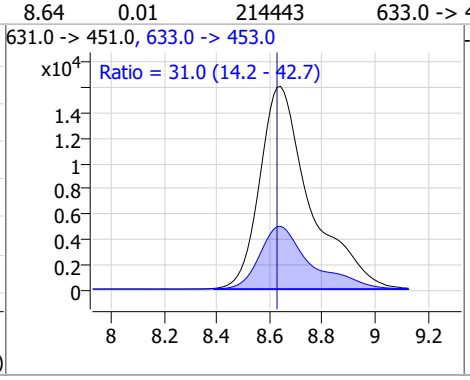


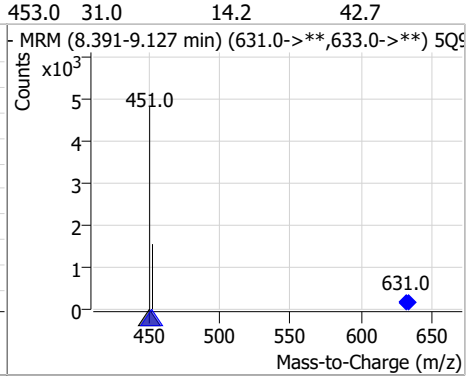


Perfluorinated Compounds by LC/MS/MS

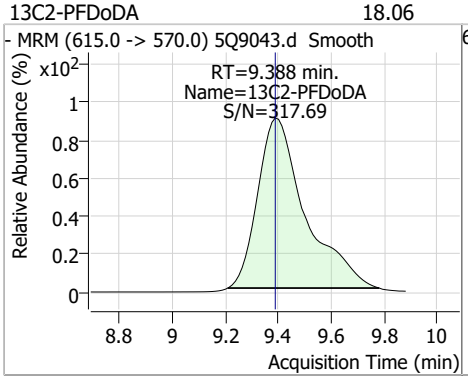
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	11.33	8.64	0.01	214443	633.0 -> 453.0	31.0	14.2	42.7

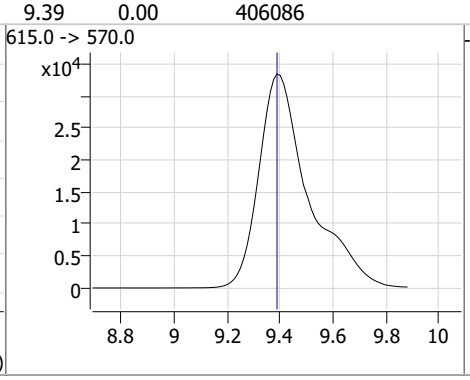


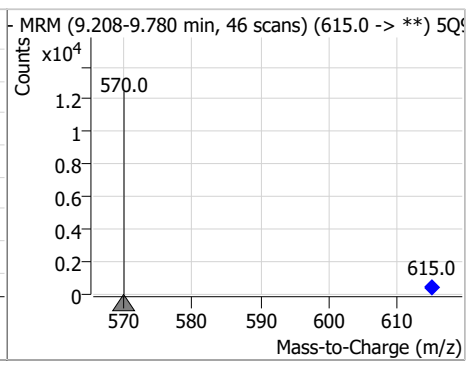




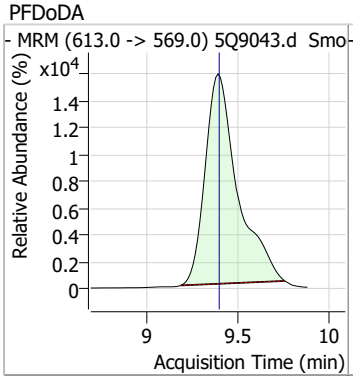
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	18.06	9.39	0.00	406086				

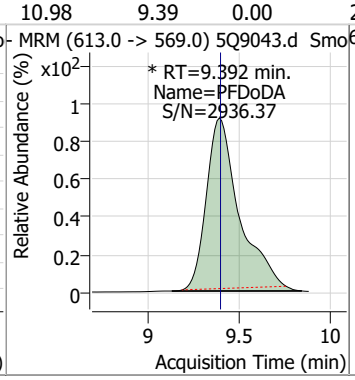


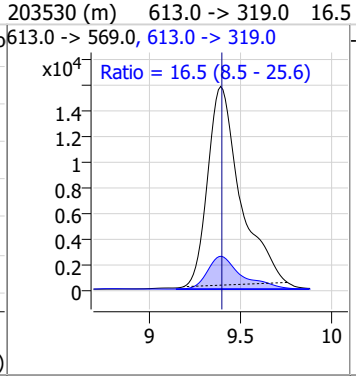


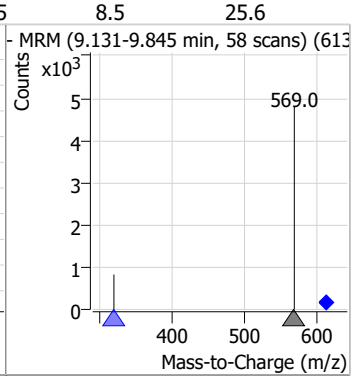


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	10.98	9.39	0.00	203530 (m)	613.0 -> 319.0	16.5	8.5	25.6

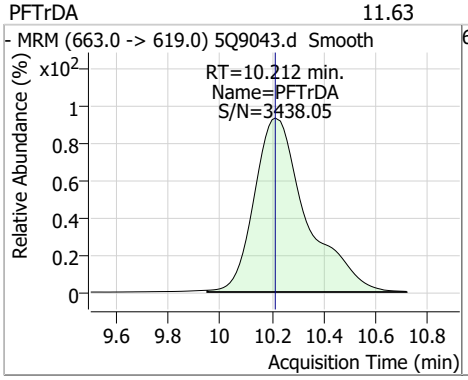


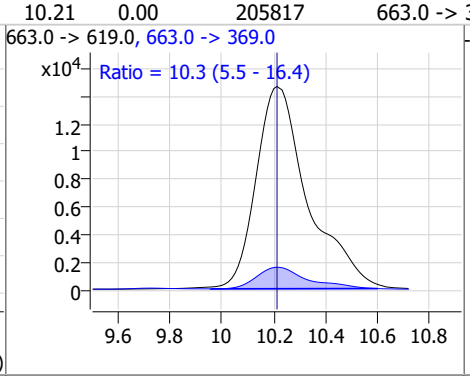


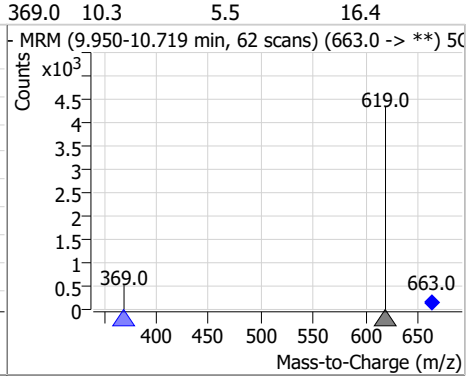




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	11.63	10.21	0.00	205817	663.0 -> 369.0	10.3	5.5	16.4

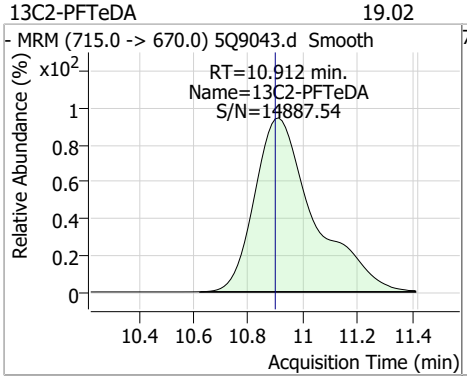


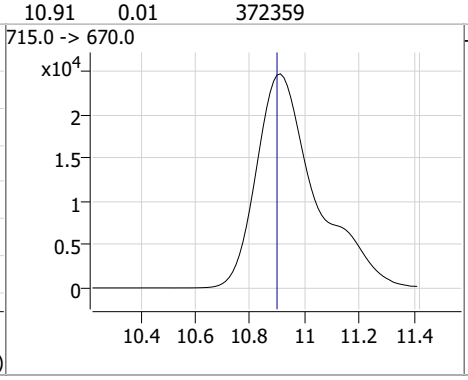


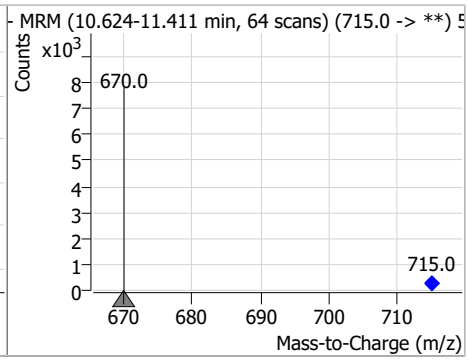


Perfluorinated Compounds by LC/MS/MS

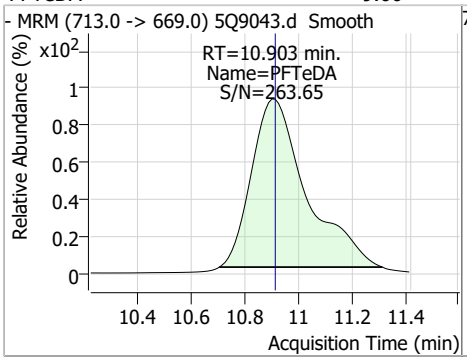
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.02	10.91	0.01	372359				

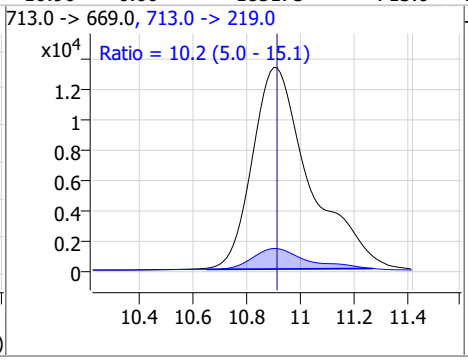


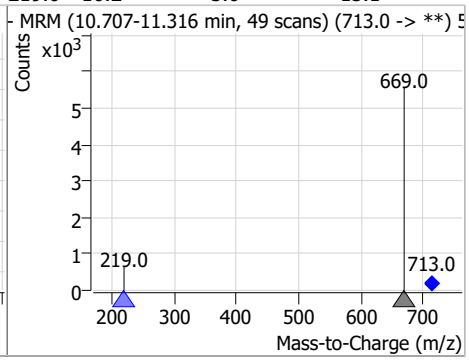




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	9.60	10.90	0.00	185175	713.0 -> 219.0	10.2	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q134-IC134
Lab FileID: 5Q9043.D
Injection Time: 12/28/22 13:36
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.74	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.88	Split peak
Perfluorododecanoic acid	307-55-1		9.39	Poor instrument integration

5Q9044.D

Manual Integrations APPROVED (compounds with "m" flag)

Mike Eger 12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File	:	5Q9044.d
Operator	:	lindsayr
Acq. Method	:	537_ID.m
Acq. Date-Time	:	12/28/2022 1:53:38 PM
Sample Name	:	icc134-20
Vial	:	P1-A7
DA Method File	:	ID_122822_S5Q134.quantmethod.xml
Batch Name	:	s5q134.batch.bin
Sample Information	:	OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	101397	20.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	206777	20.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	294230	20.00	µg/L	0.000
M4-PFHpA	5.726	367.0 -> 322.0	301455	20.00	µg/L	0.000
M8-PFOA	6.361	421.0 -> 376.0	393382	20.00	µg/L	0.000
M9-PFNA	6.918	472.0 -> 427.0	409919	20.00	µg/L	0.000
M6-PFDA	7.436	519.0 -> 474.0	449478	20.00	µg/L	0.000
M7-PFUnDA	8.320	570.0 -> 525.0	582595	20.00	µg/L	0.000
M2-PFDoDA	9.388	615.0 -> 570.0	445781	20.00	µg/L	0.000
M2-PFTeDA	10.899	715.0 -> 670.0	384201	20.00	µg/L	0.000
M8-FOSA	6.592	506.0 -> 78.0	94050	20.00	µg/L	0.000
M3-PFBS	4.124	302.0 -> 99.0	25822	20.00	µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	34690	20.00	µg/L	0.000
M8-PFOS	6.879	507.0 -> 99.0	46328	20.00	µg/L	0.000
M2-4:2FTS	4.886	329.0 -> 309.0	93873	20.00	µg/L	0.000
M2-6:2FTS	6.360	429.0 -> 409.0	148626	20.00	µg/L	0.000
M2-8:2FTS	7.512	529.0 -> 509.0	138320	20.00	µg/L	0.000
M3-MeFOSAA	7.034	573.0 -> 419.0	35093	20.00	µg/L	0.000
M3-HFPO-DA	5.182	287.0 -> 169.0	64041	20.00	µg/L	0.000
M3-MeFOSA	6.952	515.0 -> 169.0	30058	20.00	µg/L	0.000
M5-EtFOSAA	7.145	589.0 -> 419.0	36042	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	93873	19.50	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.5%		
13C2-6:2FTS	6.360	429.0 -> 409.0	148626	19.39	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.9%		
13C2-8:2FTS	7.512	529.0 -> 509.0	138320	19.15	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.8%		
13C2-PFDoDA	9.388	615.0 -> 570.0	445781	19.83	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.1%		
13C2-PFTeDA	10.899	715.0 -> 670.0	384201	19.62	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.1%		
13C3-PFBS	4.124	302.0 -> 99.0	25822	19.87	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%		
13C3-PFHxS	5.733	402.0 -> 99.0	34690	19.38	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.9%		
13C4-PFBA	2.400	217.0 -> 172.0	101397	19.49	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.4%		
13C4-PFHpA	5.726	367.0 -> 322.0	301455	19.61	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%		
13C5-PFHxA	4.965	318.0 -> 273.0	294230	19.56	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.8%		
13C5-PFPeA	3.919	268.0 -> 223.0	206777	19.71	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.6%		
13C6-PFDA	7.436	519.0 -> 474.0	449478	19.34	µg/L	0.000

Perfluorinated Compounds by LC/MS/MS

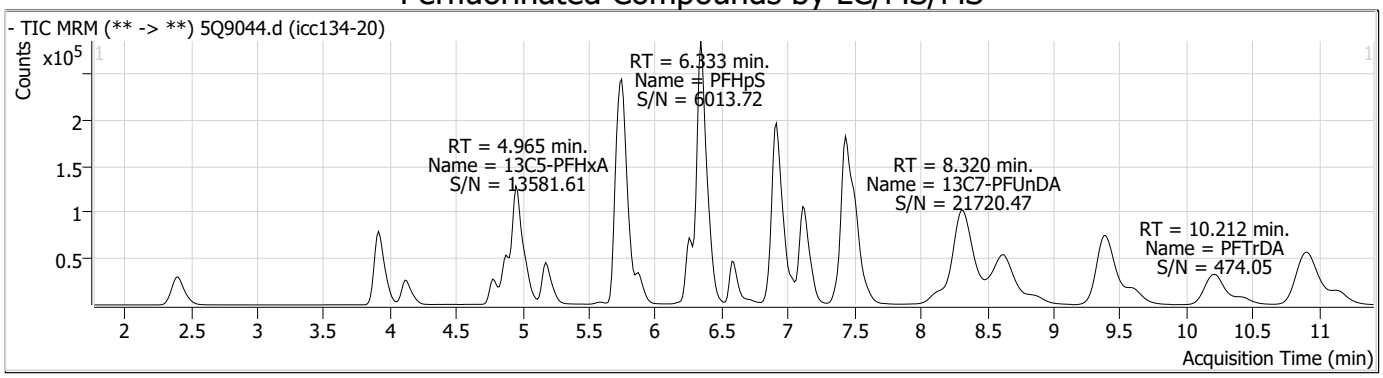
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.7%			
13C7-PFUnDA	8.320	570.0 -> 525.0	582595	19.91	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.5%			
13C8-FOSA	6.592	506.0 -> 78.0	94050	19.48	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.4%			
13C8-PFOA	6.361	421.0 -> 376.0	393382	19.52	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.6%			
13C8-PFOS	6.879	507.0 -> 99.0	46328	19.43	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.1%			
13C9-PFNA	6.918	472.0 -> 427.0	409919	19.49	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.4%			
d3-MeFOSAA	7.034	573.0 -> 419.0	35093	19.75	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.8%			
13C3-HFPO-DA	5.182	287.0 -> 169.0	64041	19.36	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.8%			
d3-MeFOSA	6.952	515.0 -> 169.0	30058	19.84	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%			
d5-EtFOSAA	7.145	589.0 -> 419.0	36042	19.54	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.7%			
Target Compounds							QValue
4:2FTS	4.888	327.0 -> 307.0	104376	20.32	µg/L		100
		327.0 -> 81.0	61706				
6:2FTS	6.360	427.0 -> 407.0	157382	20.63	µg/L		100
		427.0 -> 81.0	67373				
8:2FTS	7.512	527.0 -> 507.0	145834	20.64	µg/L		100
		527.0 -> 81.0	71007				
EtFOSAA	7.145	584.0 -> 419.0	23196	19.28	µg/L		100
		584.0 -> 483.0	14768				
FOSA	6.594	498.0 -> 78.0	93325	19.31	µg/L		100
		498.0 -> 478.0	3054				
MeFOSAA	7.035	570.0 -> 419.0	27105	19.03	µg/L		100
		570.0 -> 512.0	11201				
PFBA	2.406	213.0 -> 169.0	105743	19.15	µg/L		100
PFBS	4.129	299.0 -> 80.0	80951	19.28	µg/L		100
		299.0 -> 99.0	34638				
PFDA	7.437	513.0 -> 469.0	467030	19.52	µg/L		100
		513.0 -> 219.0	82908				
PFDoDA	9.392	613.0 -> 569.0	391569	19.25	µg/L	m	98
		613.0 -> 319.0	63673				
PFDS	8.131	599.0 -> 80.0	89300	17.08	µg/L		100
		599.0 -> 99.0	53885				
PFHpA	5.727	363.0 -> 319.0	364015	19.31	µg/L		100
		363.0 -> 169.0	81043				
PFHpS	6.333	449.0 -> 80.0	69194	19.54	µg/L		100
		449.0 -> 99.0	37967				
PFHxA	4.966	313.0 -> 269.0	291225	19.49	µg/L		100
		313.0 -> 119.0	13252				
PFHxS	5.735	399.0 -> 80.0	68797	19.54	µg/L	m	100
		399.0 -> 99.0	38564				
PFNA	6.918	463.0 -> 419.0	411642	19.36	µg/L		100
		463.0 -> 219.0	88840				
PFNS	7.384	549.0 -> 80.0	64067	20.17	µg/L		100
		549.0 -> 99.0	38334				
PFOA	6.362	413.0 -> 369.0	441959	19.63	µg/L		100
		413.0 -> 169.0	117895				
PFOS	6.880	499.0 -> 80.0	81884	19.16	µg/L	m	100

Perfluorinated Compounds by LC/MS/MS

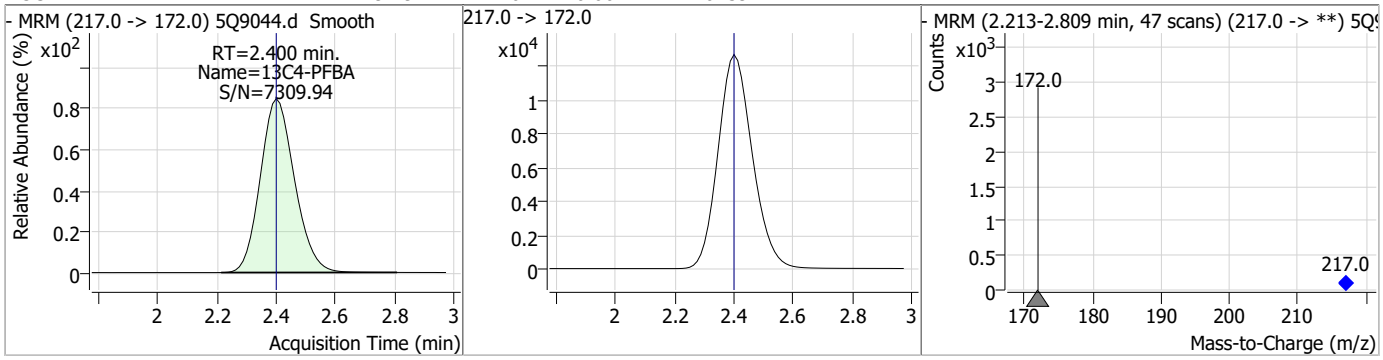
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	39109			
PFPeA	3.922	263.0 -> 219.0	234842	19.32	µg/L	100
PFPeS	5.035	349.0 -> 80.0	51134	18.60	µg/L	100
		349.0 -> 99.0	26146			
PFTeDA	10.903	713.0 -> 669.0	356128	17.89	µg/L	100
		713.0 -> 219.0	35852			
PFTrDA	10.212	663.0 -> 619.0	367911	18.94	µg/L	100
		663.0 -> 369.0	40236			
PFUnDA	8.321	563.0 -> 519.0	565978	18.89	µg/L	100
		563.0 -> 269.0	95739			
11Cl-PF3OUdS	8.628	631.0 -> 451.0	409765	19.63	µg/L	100
		633.0 -> 453.0	116647			
9Cl-PF3ONS	7.123	531.0 -> 351.0	367138	18.48	µg/L	100
		533.0 -> 353.0	116568			
ADONA	5.763	377.0 -> 251.0	479371	20.49	µg/L	100
		377.0 -> 85.0	179416			
HFPO-DA	5.190	329.0 -> 169.0	101009	19.74	µg/L	100
		285.0 -> 169.0	59710			
MeFOSA	6.953	512.0 -> 169.0	34316	19.29	µg/L	100
		512.0 -> 219.0	26727			
4-PFECHS	6.268	461.0 -> 381.0	231847	18.50	µg/L	100
		461.0 -> 99.0	123746			
FBSA	4.793	298.0 -> 78.0	119313	19.54	µg/L	100
		298.0 -> 64.0	11104			
FHxSA	5.888	398.0 -> 78.0	109294	18.68	µg/L	100
		398.0 -> 64.0	10514			

 # = Qualifier out of range, m = manually integrated, + = Area summed

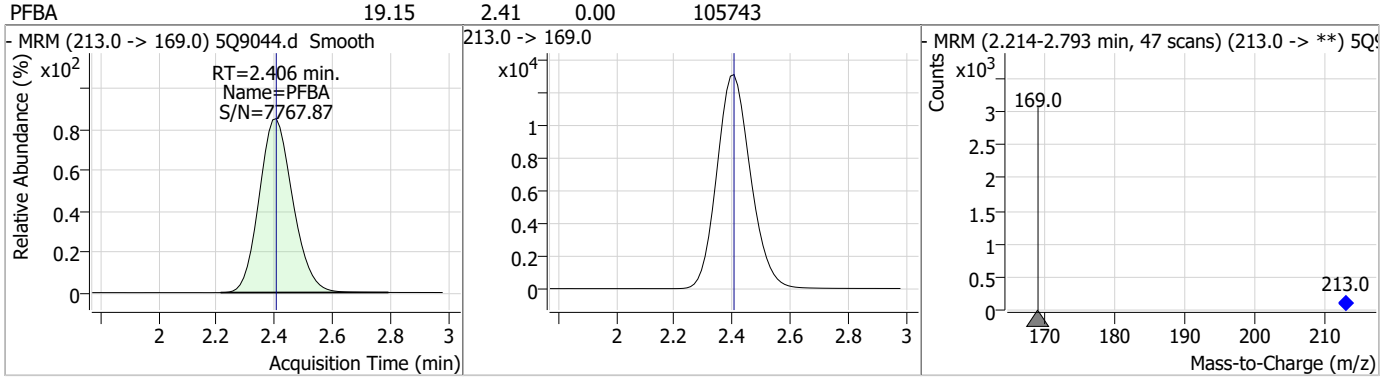
Perfluorinated Compounds by LC/MS/MS



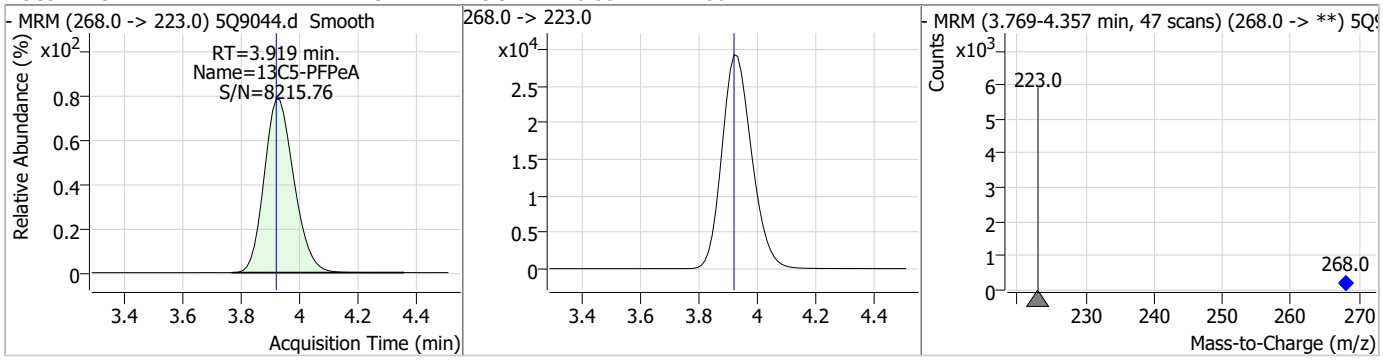
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.49	2.40	0.00	101397				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.15	2.41	0.00	105743				

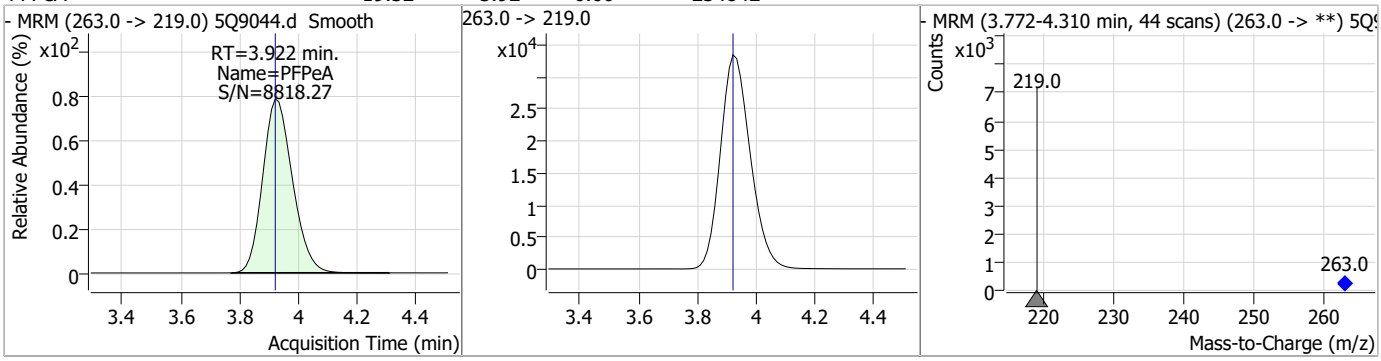


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.71	3.92	0.00	206777				

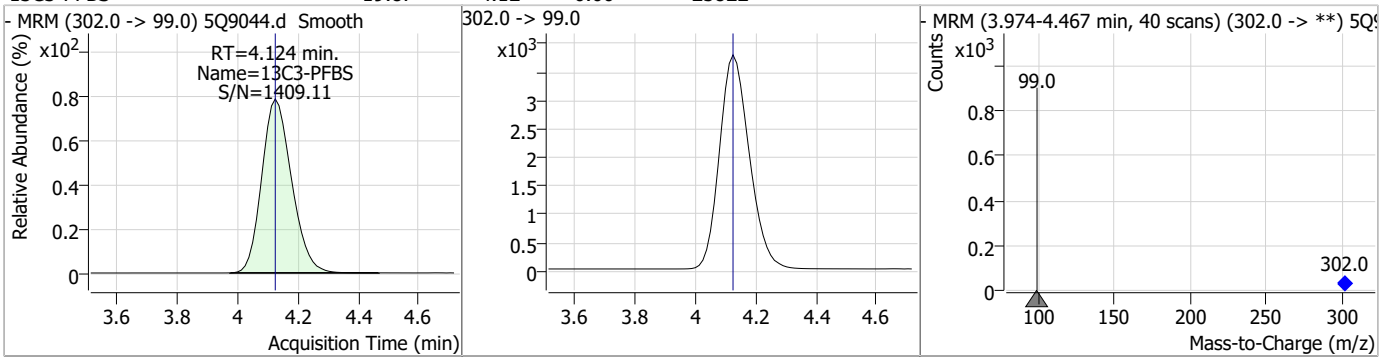


Perfluorinated Compounds by LC/MS/MS

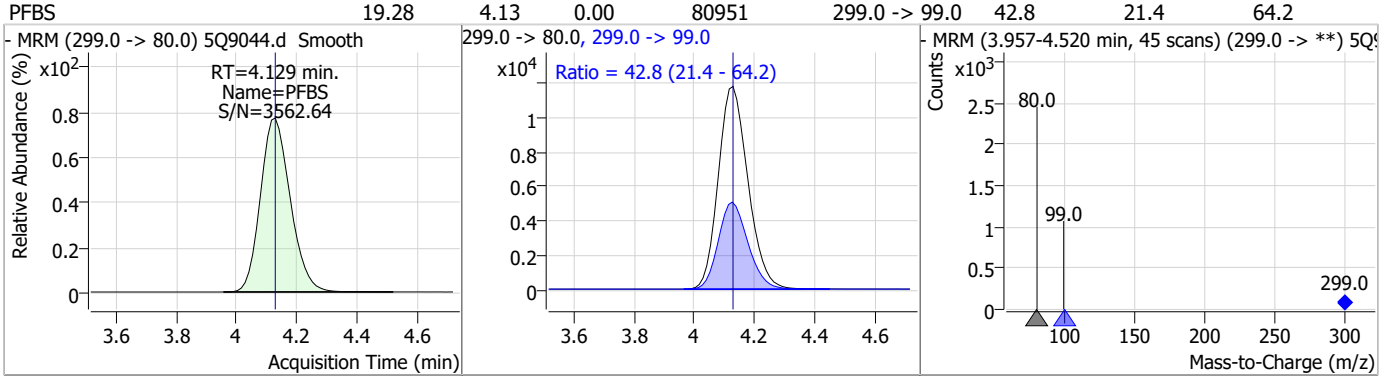
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.32	3.92	0.00	234842				



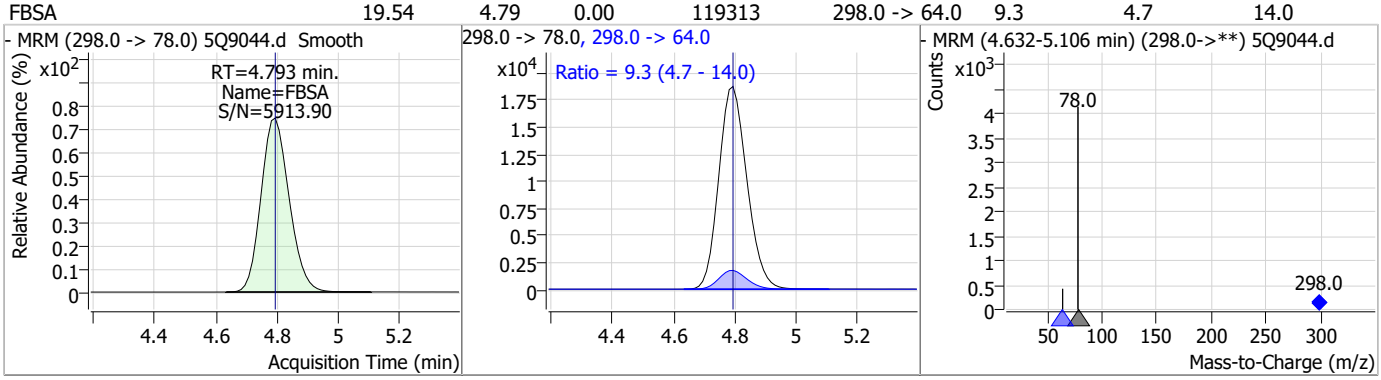
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.87	4.12	0.00	25822				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.28	4.13	0.00	80951	299.0 -> 99.0	42.8	21.4	64.2

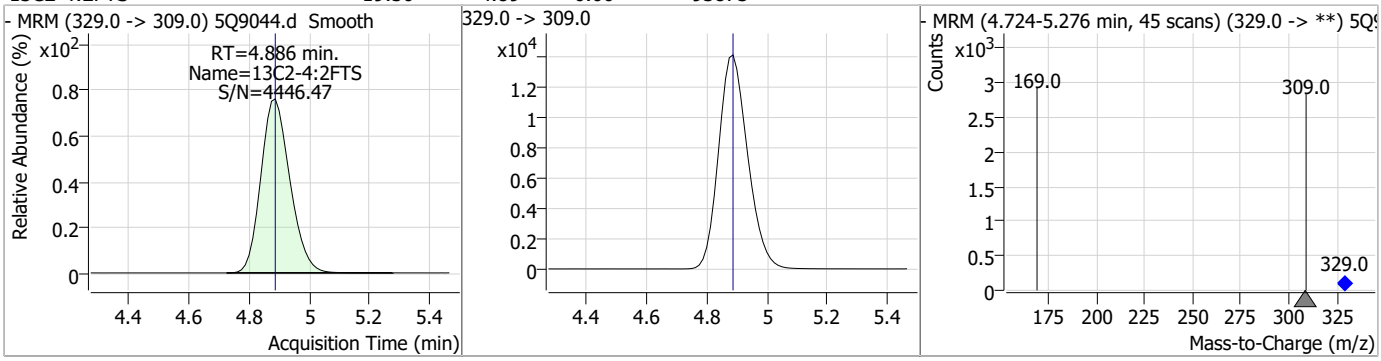


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	19.54	4.79	0.00	119313	298.0 -> 64.0	9.3	4.7	14.0

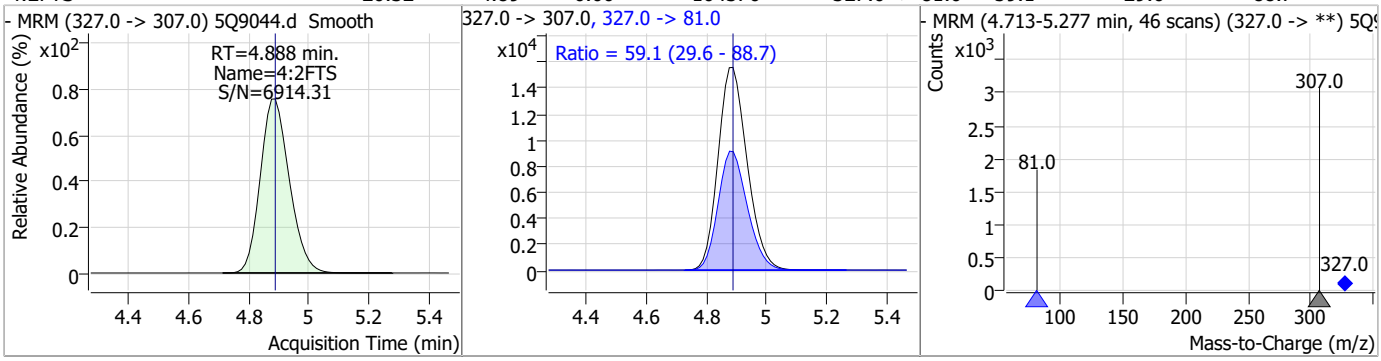


Perfluorinated Compounds by LC/MS/MS

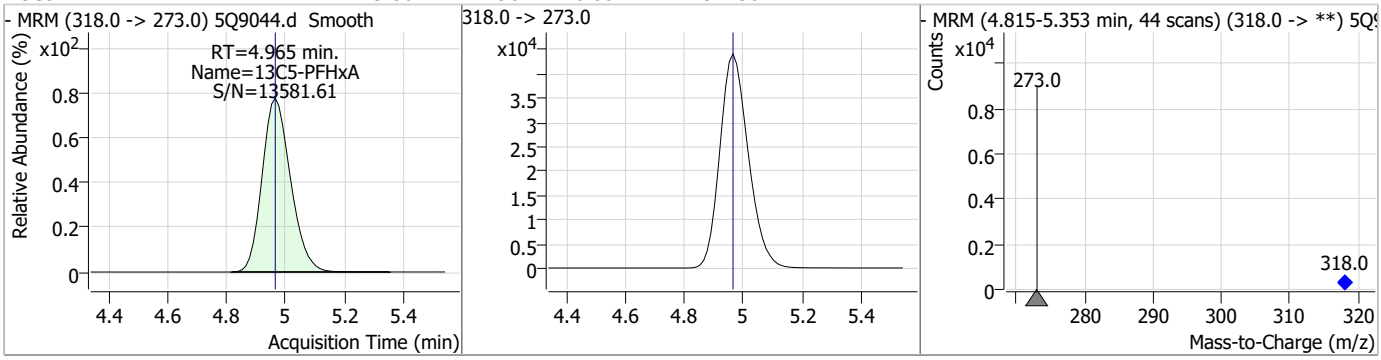
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.50	4.89	0.00	93873				



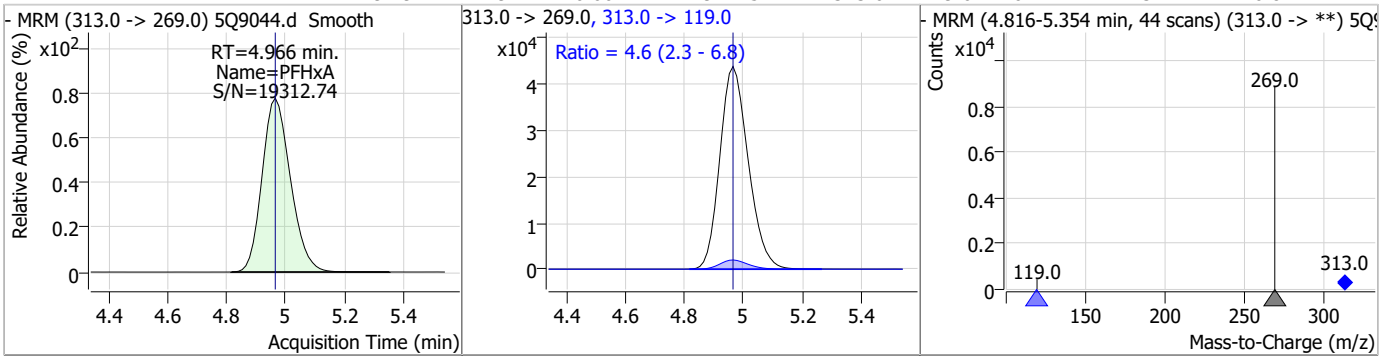
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.32	4.89	0.00	104376	327.0 -> 81.0	59.1	29.6	88.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.56	4.96	0.00	294230				

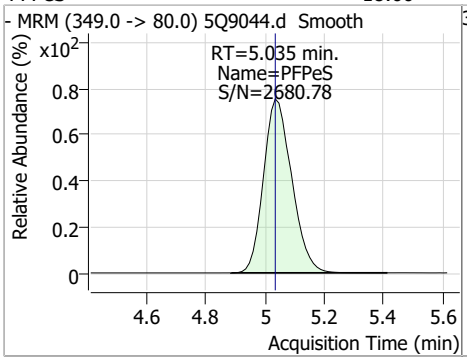


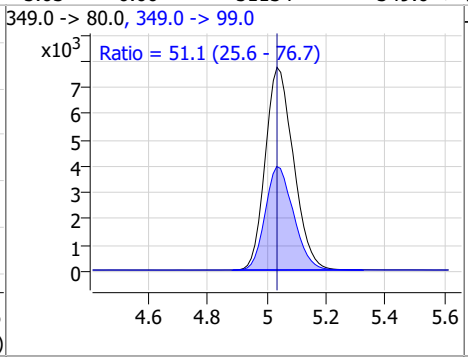
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.49	4.97	0.00	291225	313.0 -> 119.0	4.6	2.3	6.8

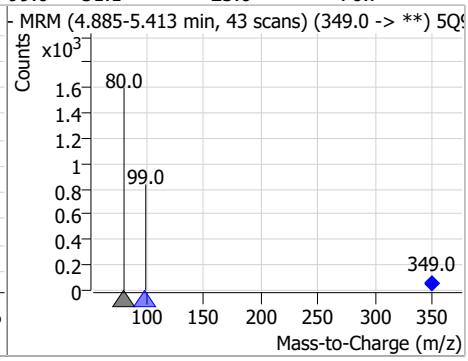


Perfluorinated Compounds by LC/MS/MS

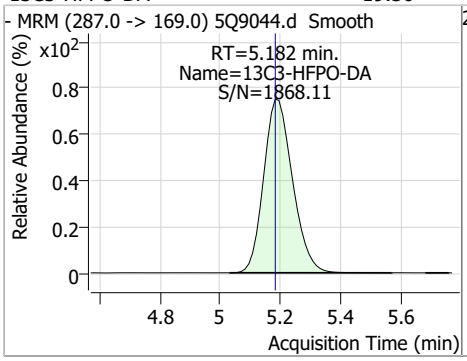
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	18.60	5.03	0.00	51134	349.0 -> 99.0	51.1	25.6	76.7

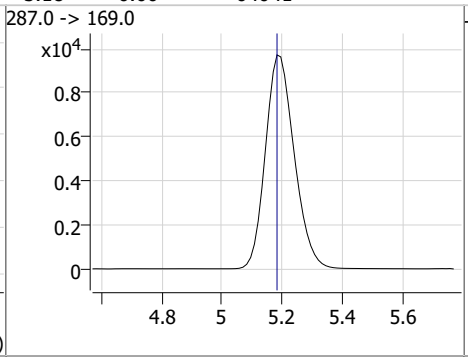


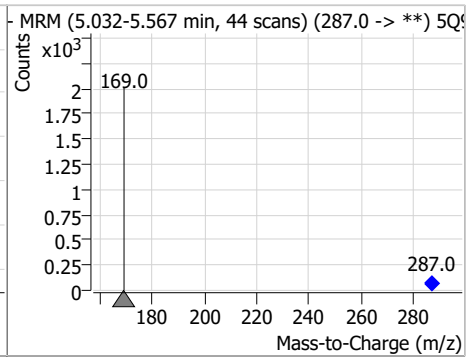




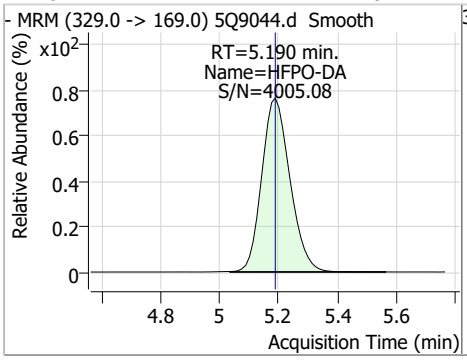
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.36	5.18	0.00	64041				

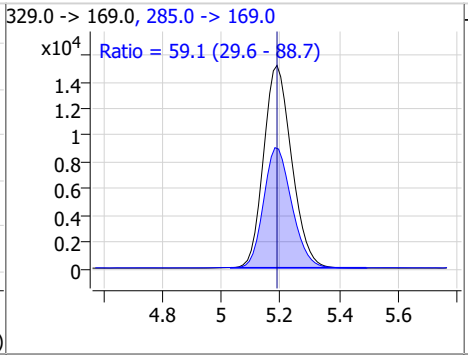


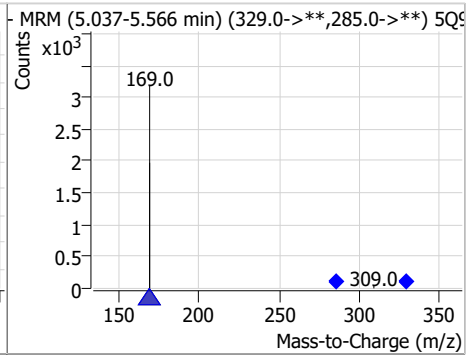




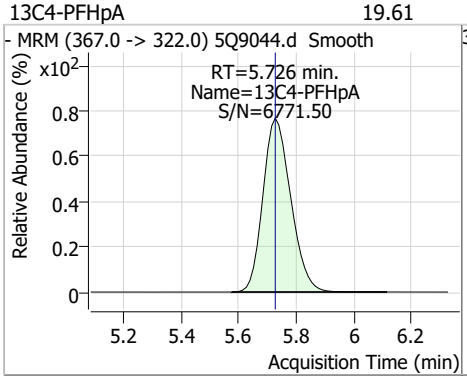
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	19.74	5.19	0.00	101009	285.0 -> 169.0	59.1	29.6	88.7

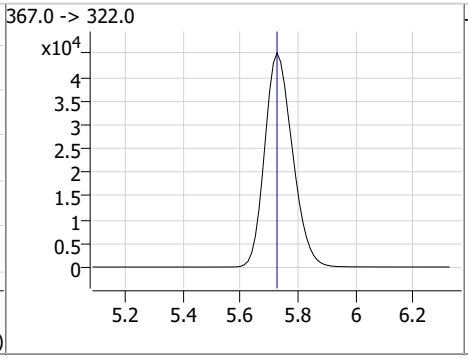


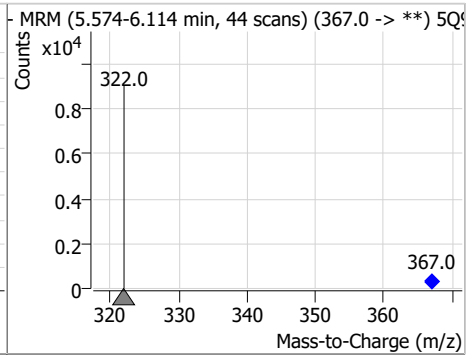




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.61	5.73	0.00	301455				

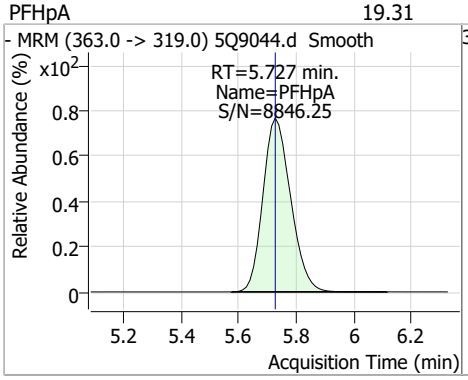


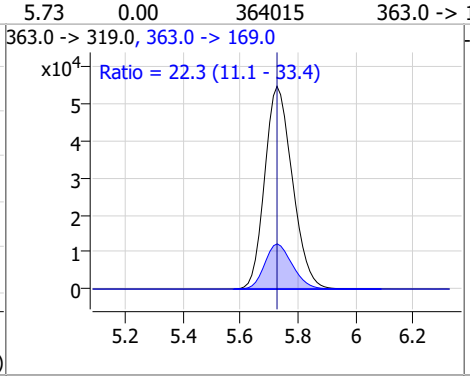


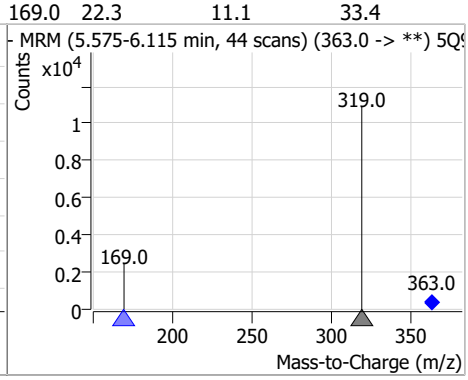


Perfluorinated Compounds by LC/MS/MS

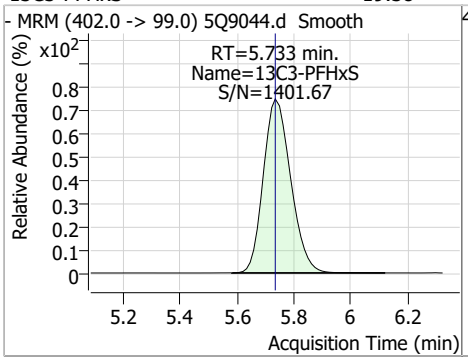
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	19.31	5.73	0.00	364015	363.0 -> 169.0	22.3	11.1	33.4

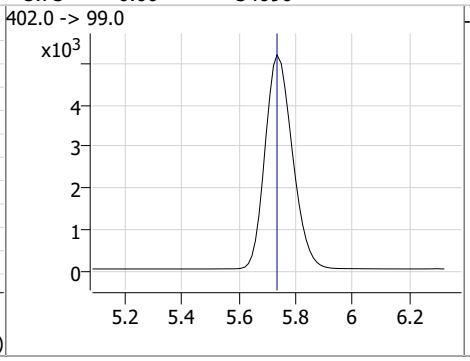


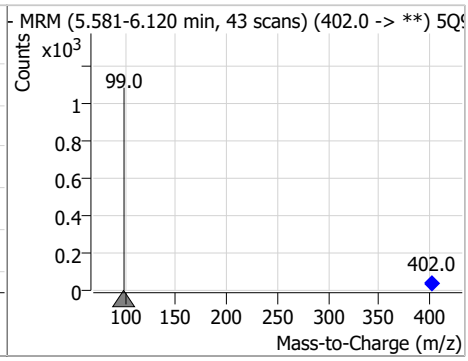




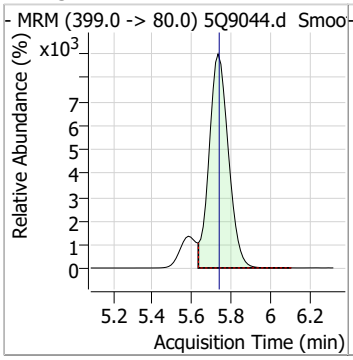
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.38	5.73	0.00	34690				

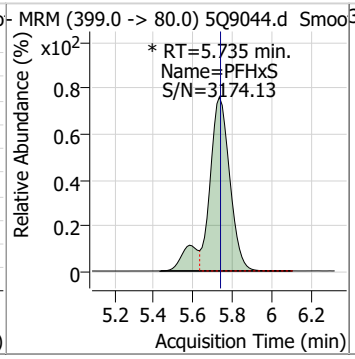


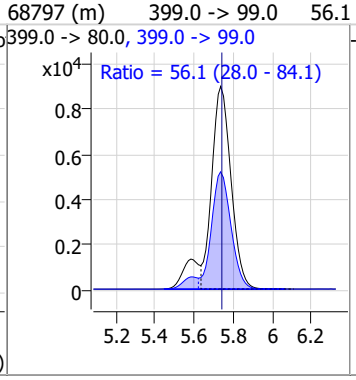


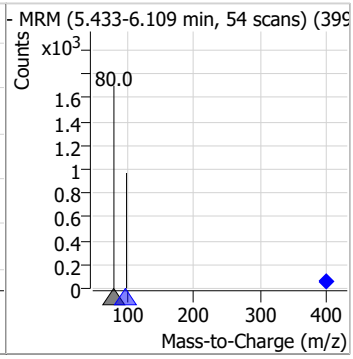


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	19.54	5.73	0.00	68797 (m)	399.0 -> 99.0	56.1	28.0	84.1

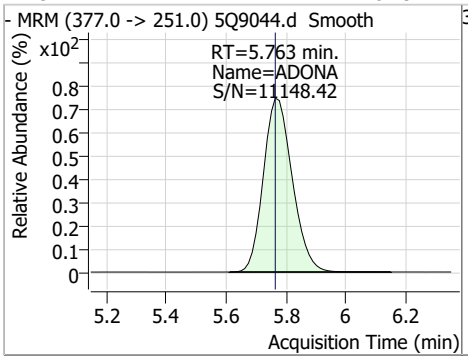


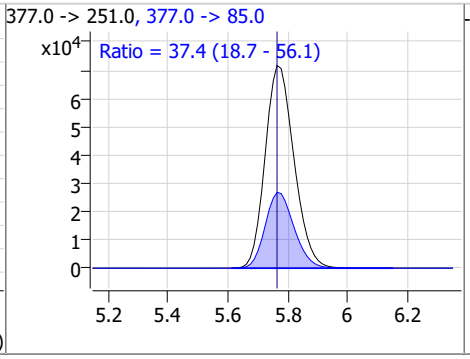


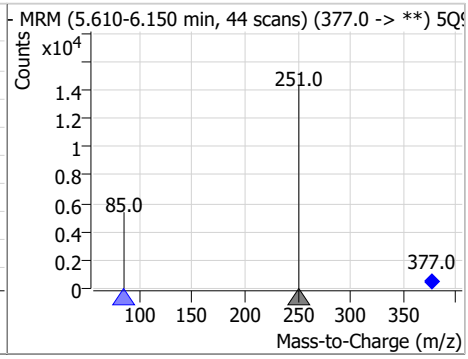




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	20.49	5.76	0.00	479371	377.0 -> 85.0	37.4	18.7	56.1

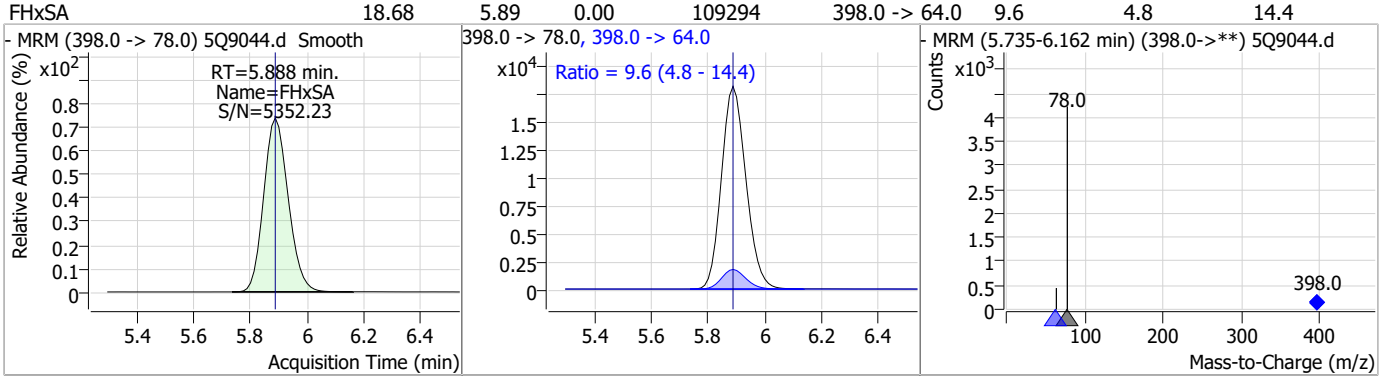




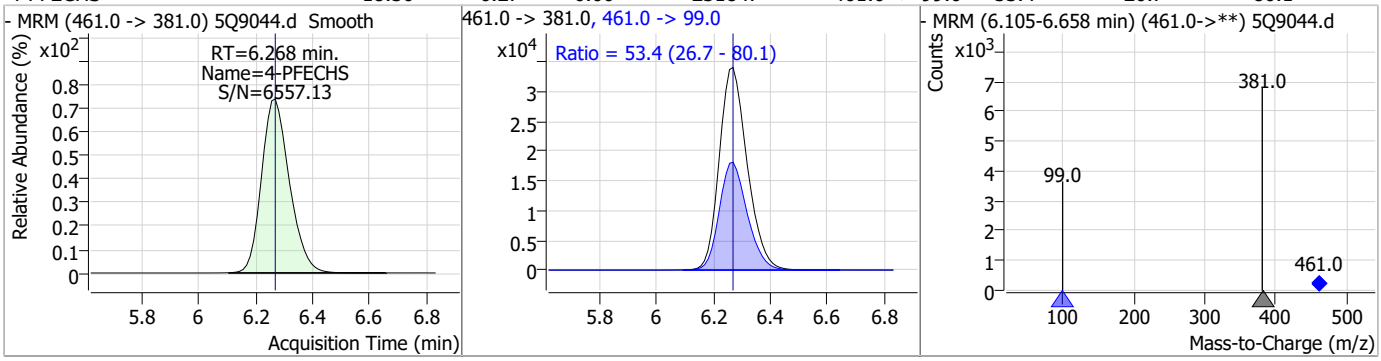


Perfluorinated Compounds by LC/MS/MS

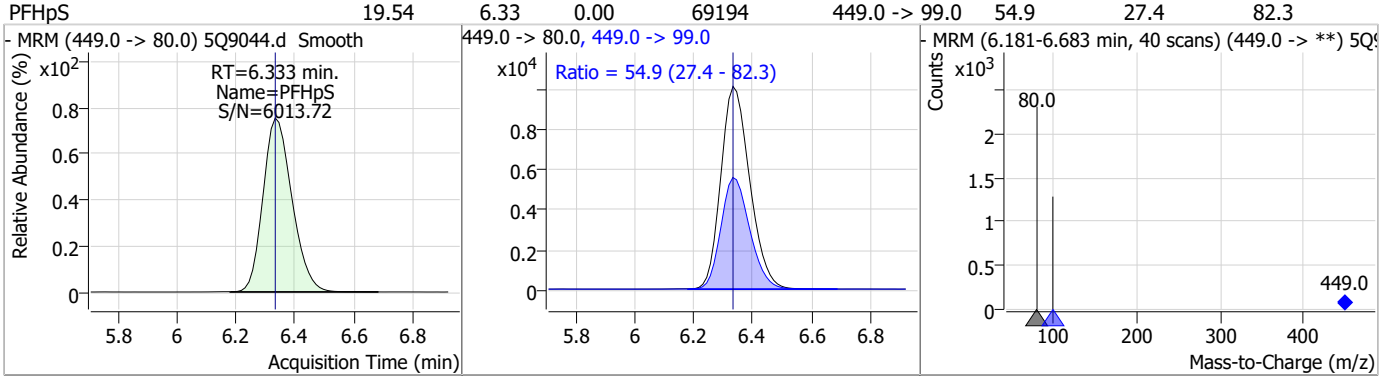
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	18.68	5.89	0.00	109294	398.0 -> 64.0	9.6	4.8	14.4



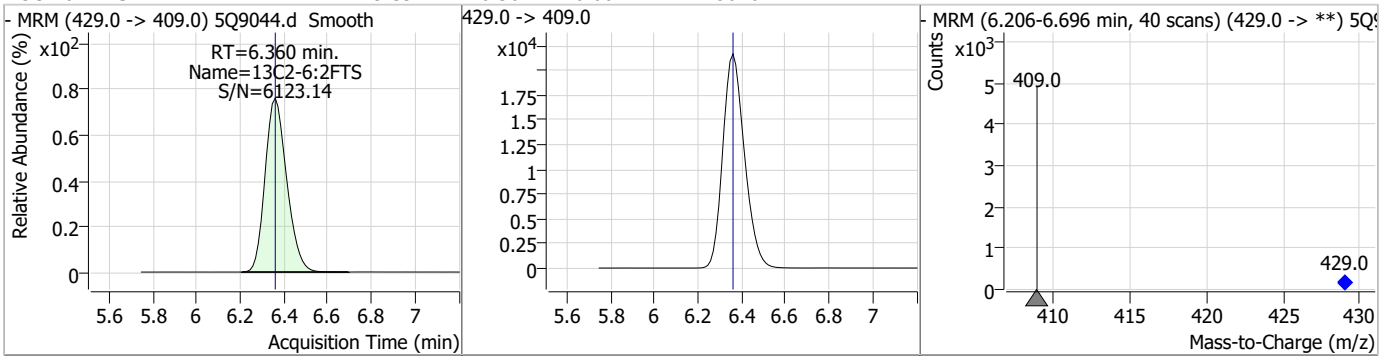
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	18.50	6.27	0.00	231847	461.0 -> 99.0	53.4	26.7	80.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	19.54	6.33	0.00	69194	449.0 -> 99.0	54.9	27.4	82.3

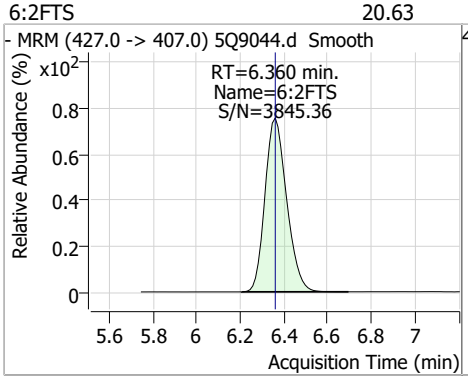


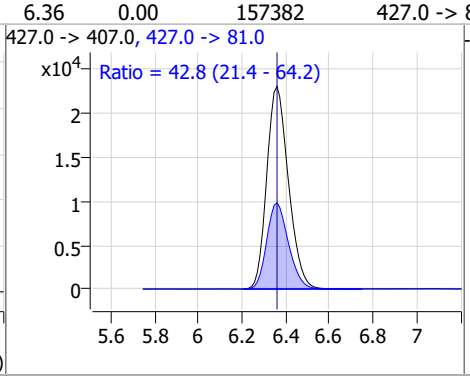
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.39	6.36	0.00	148626				

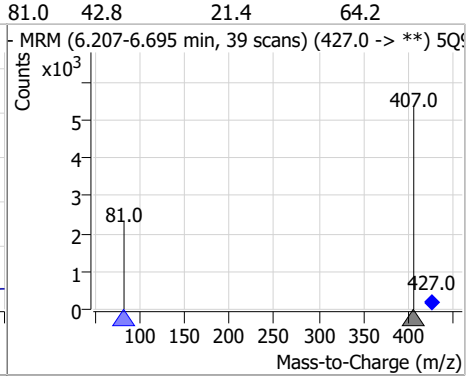


Perfluorinated Compounds by LC/MS/MS

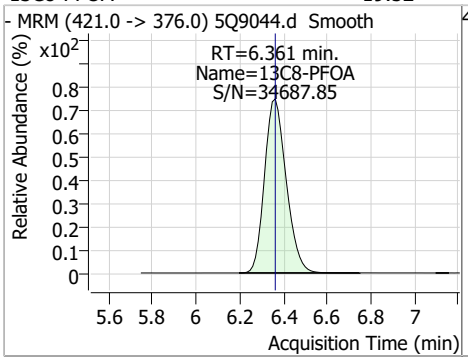
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	20.63	6.36	0.00	157382	427.0 -> 81.0	42.8	21.4	64.2

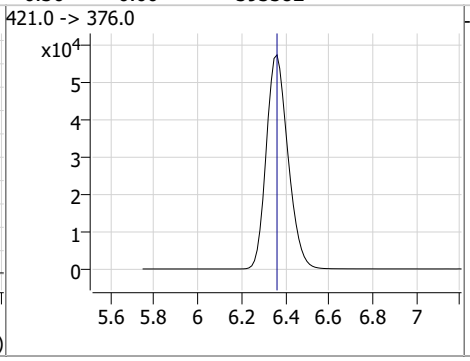


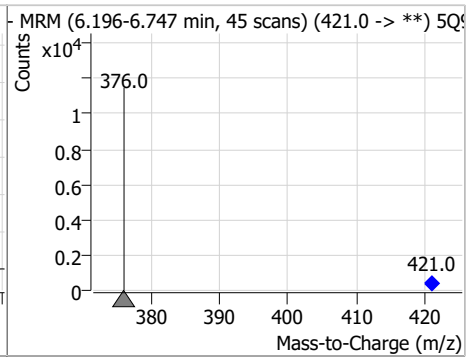




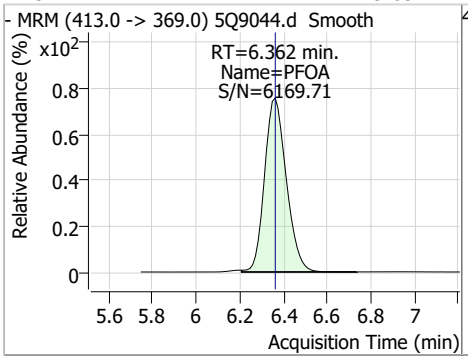
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.52	6.36	0.00	393382				

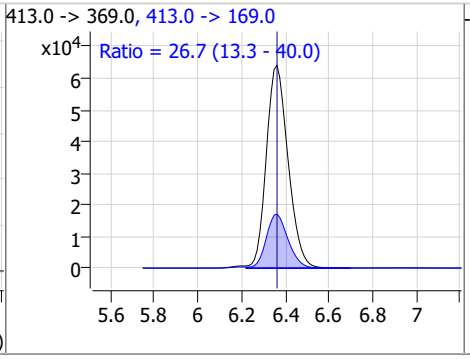


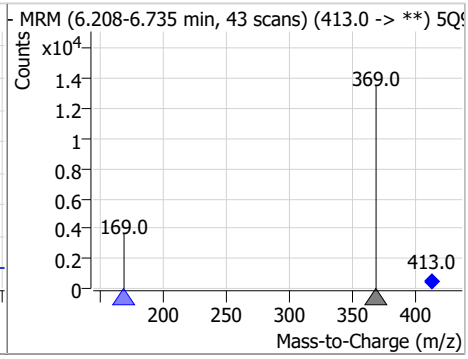




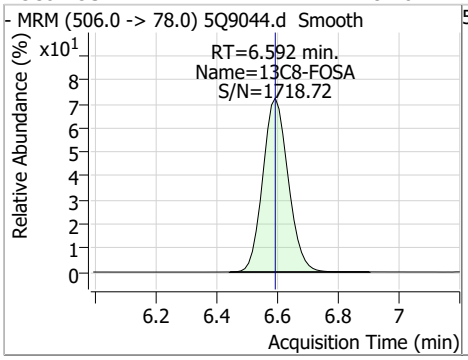
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.63	6.36	0.00	441959	413.0 -> 169.0	26.7	13.3	40.0

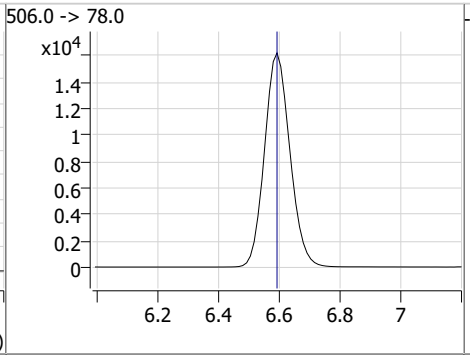


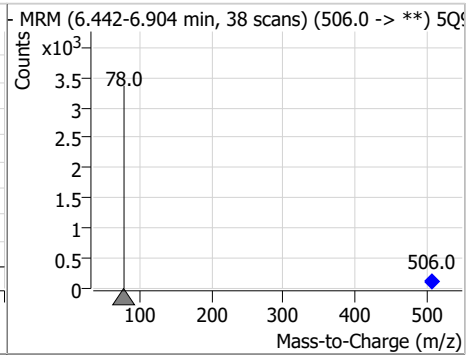




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	19.48	6.59	0.00	94050				

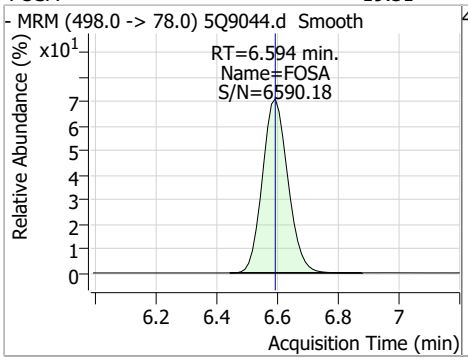


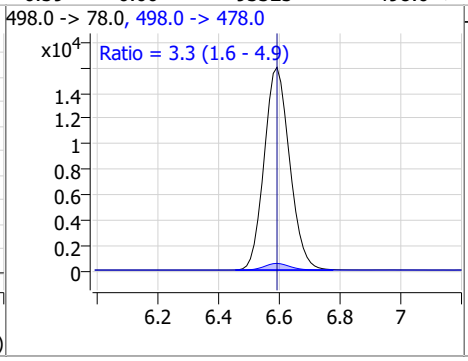


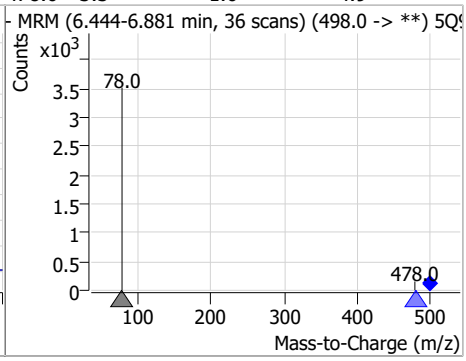


Perfluorinated Compounds by LC/MS/MS

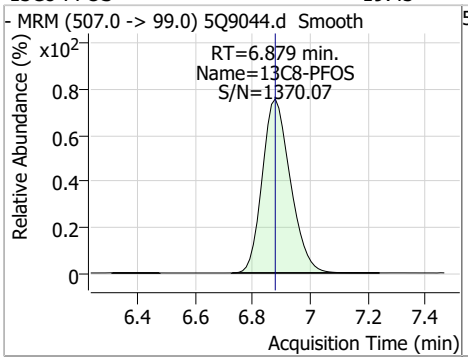
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	19.31	6.59	0.00	93325	498.0 -> 478.0	3.3	1.6	4.9

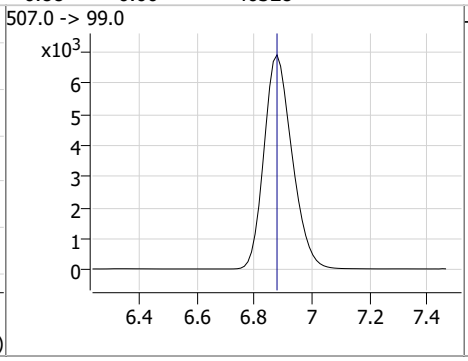


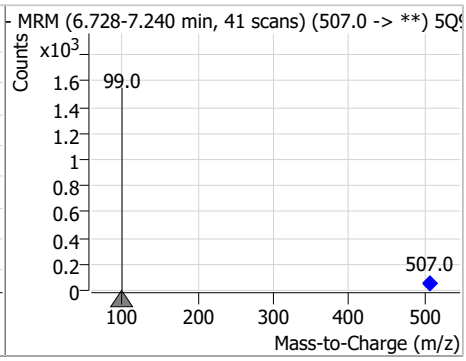




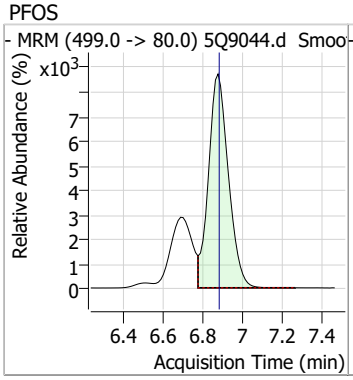
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.43	6.88	0.00	46328				

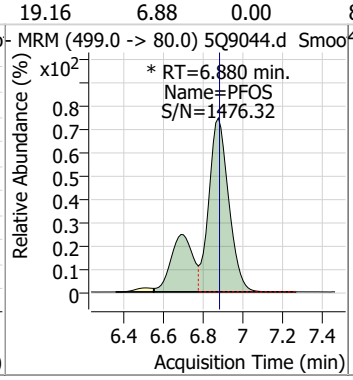


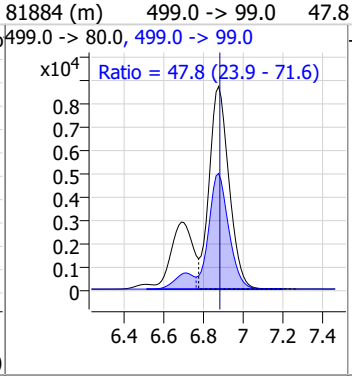


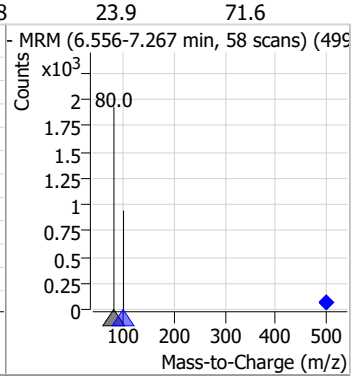


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.16	6.88	0.00	81884 (m)	499.0 -> 99.0	47.8	23.9	71.6

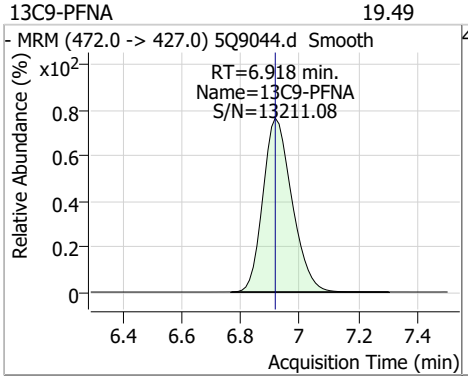


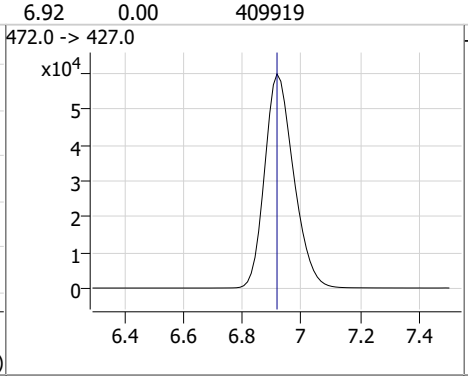


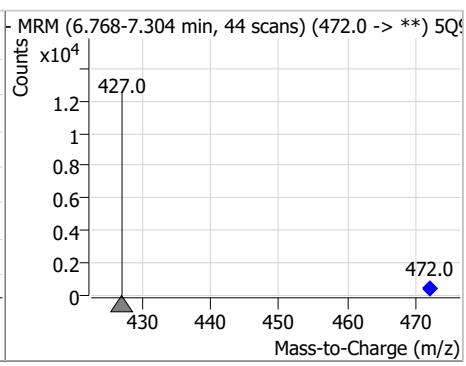




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.49	6.92	0.00	409919				

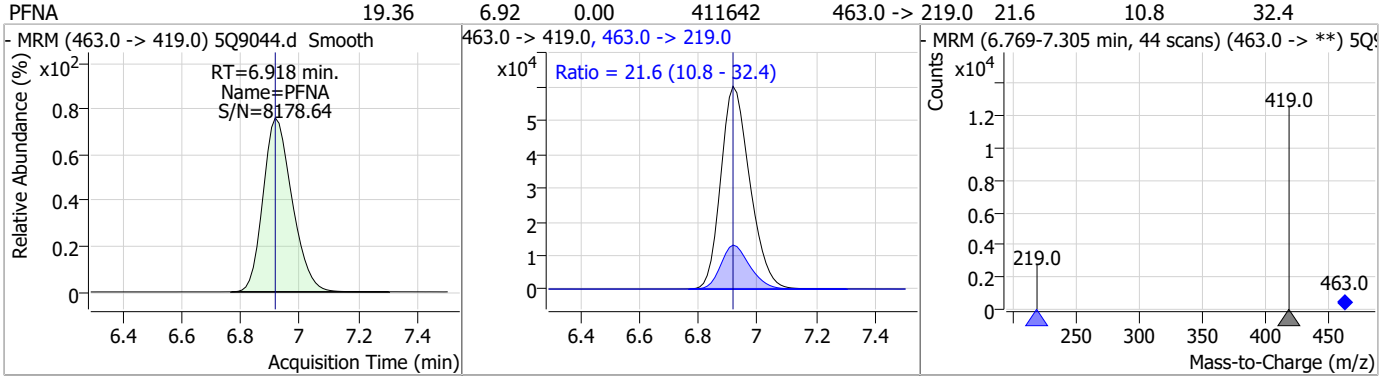




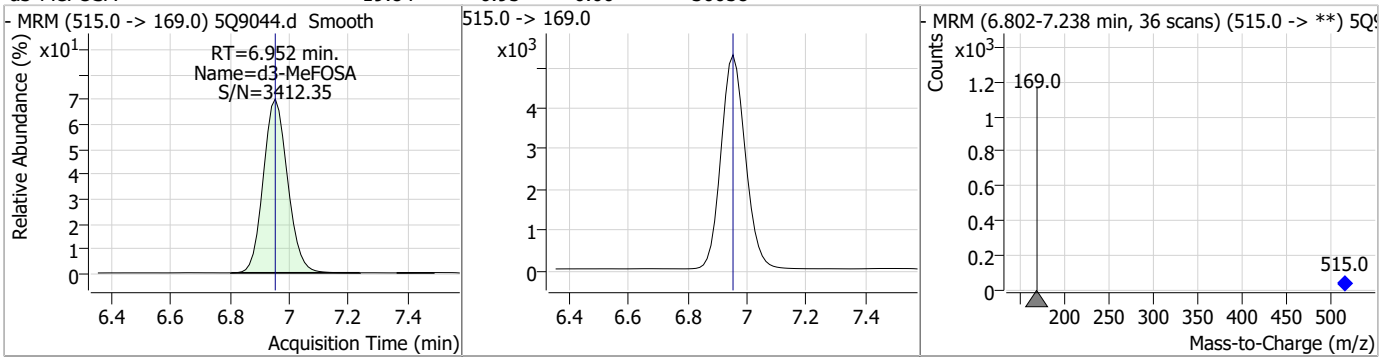


Perfluorinated Compounds by LC/MS/MS

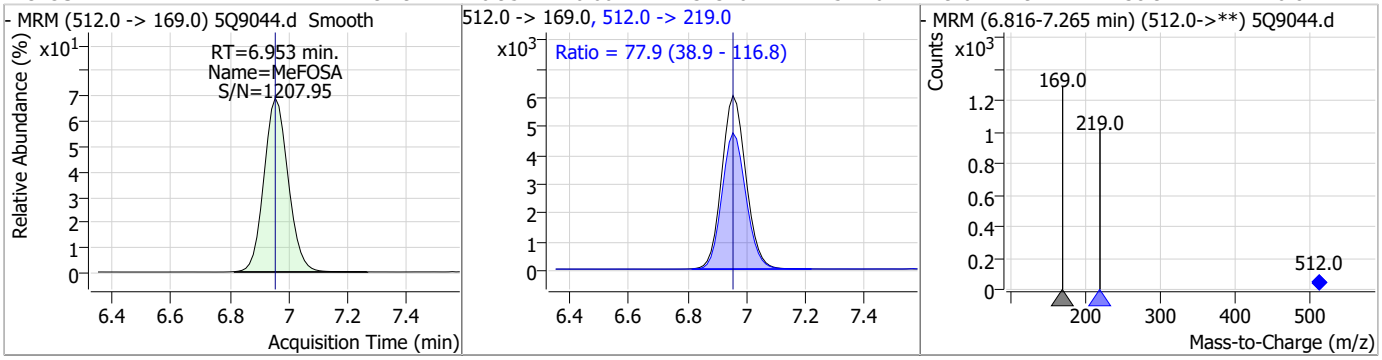
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.36	6.92	0.00	411642	463.0 -> 219.0	21.6	10.8	32.4



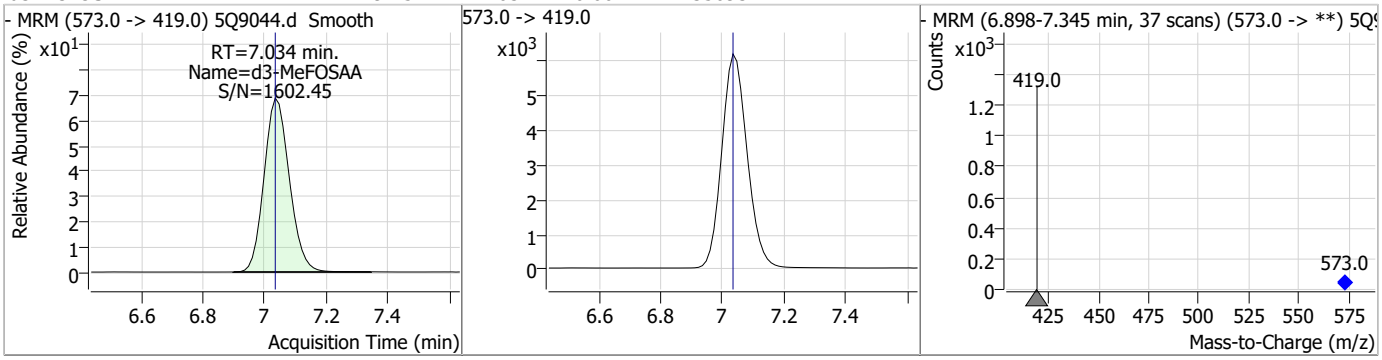
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	19.84	6.95	0.00	30058				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	19.29	6.95	0.00	34316	512.0 -> 219.0	77.9	38.9	116.8

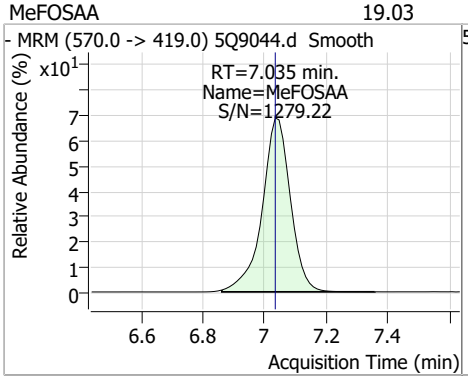


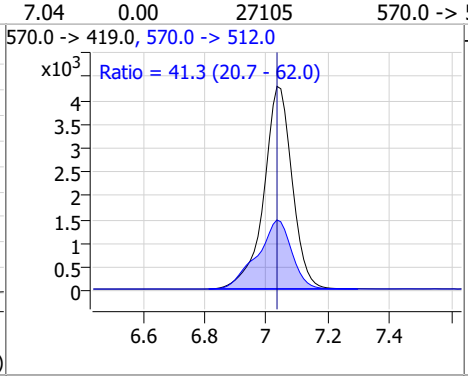
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.75	7.03	0.00	35093				

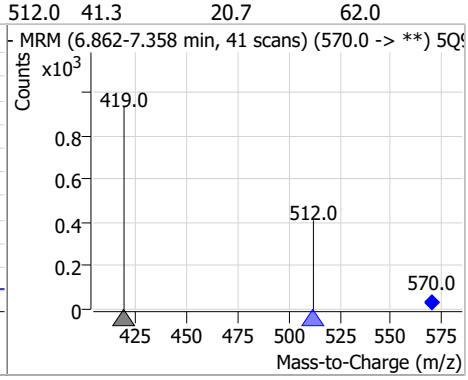


Perfluorinated Compounds by LC/MS/MS

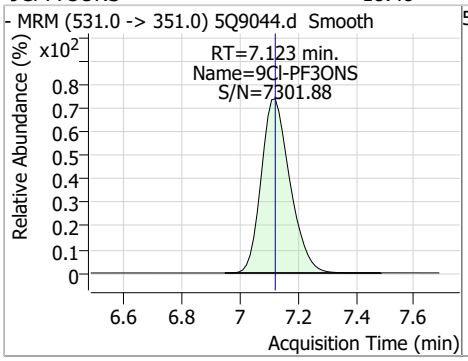
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	19.03	7.04	0.00	27105	570.0 -> 512.0	41.3	20.7	62.0

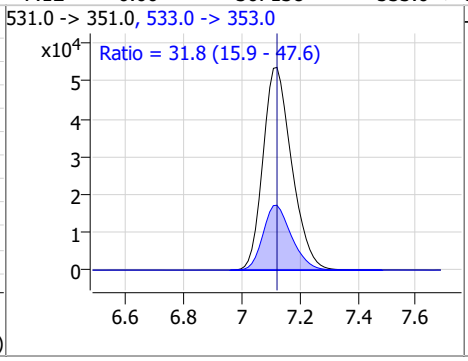


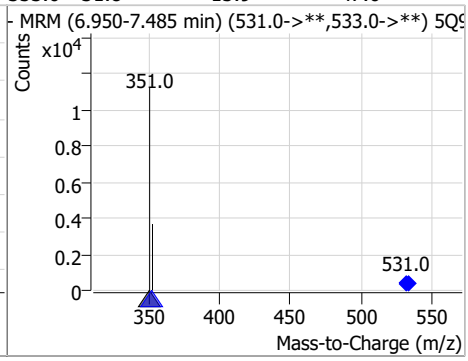




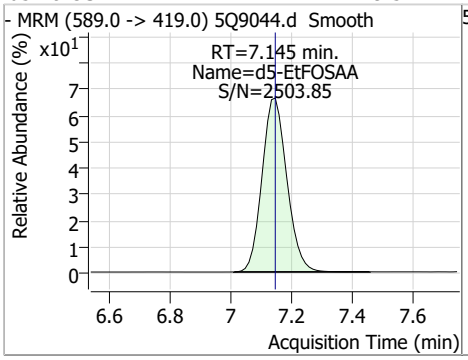
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	18.48	7.12	0.00	367138	533.0 -> 353.0	31.8	15.9	47.6

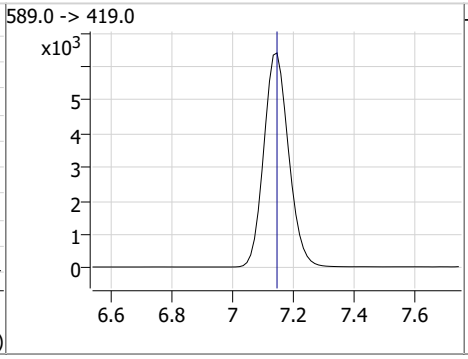


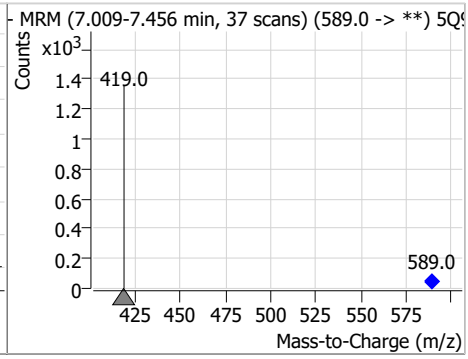




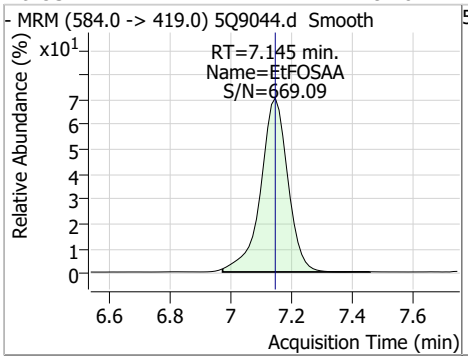
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.54	7.14	0.00	36042				

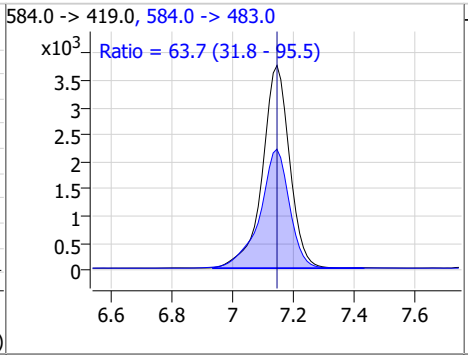


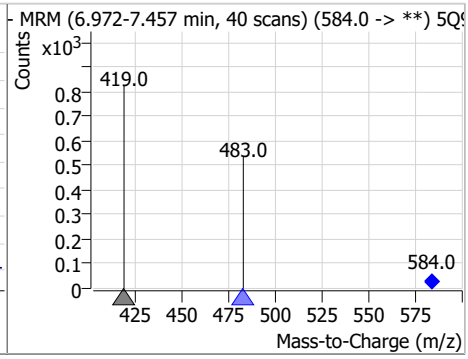




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	19.28	7.15	0.00	23196	584.0 -> 483.0	63.7	31.8	95.5

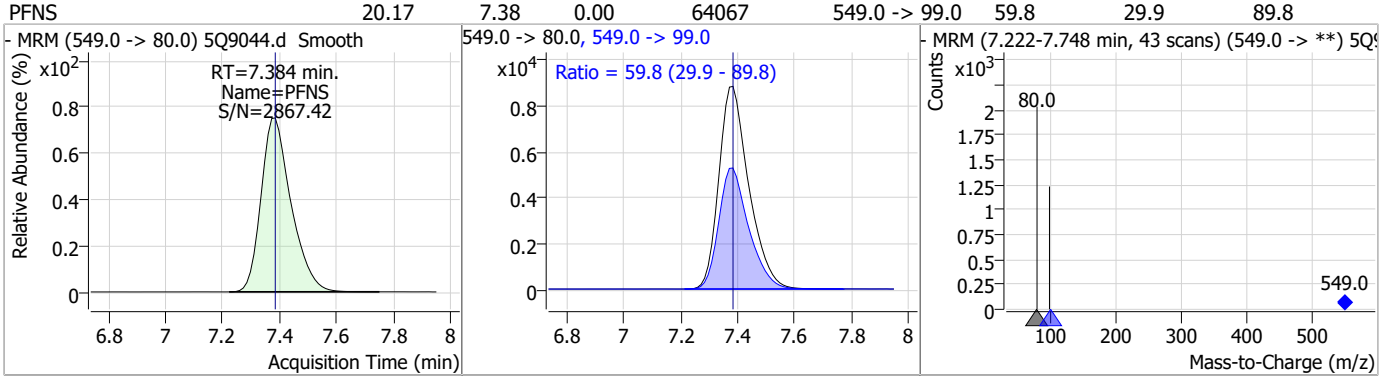




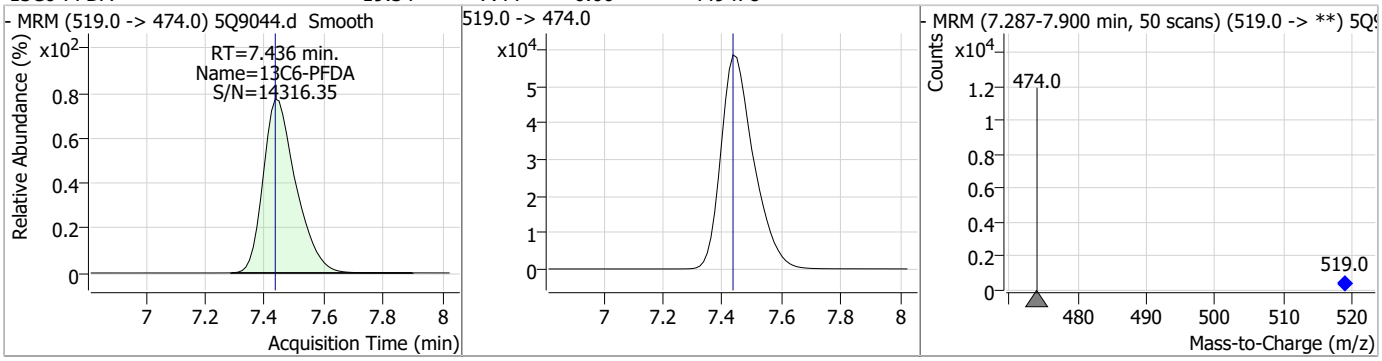


Perfluorinated Compounds by LC/MS/MS

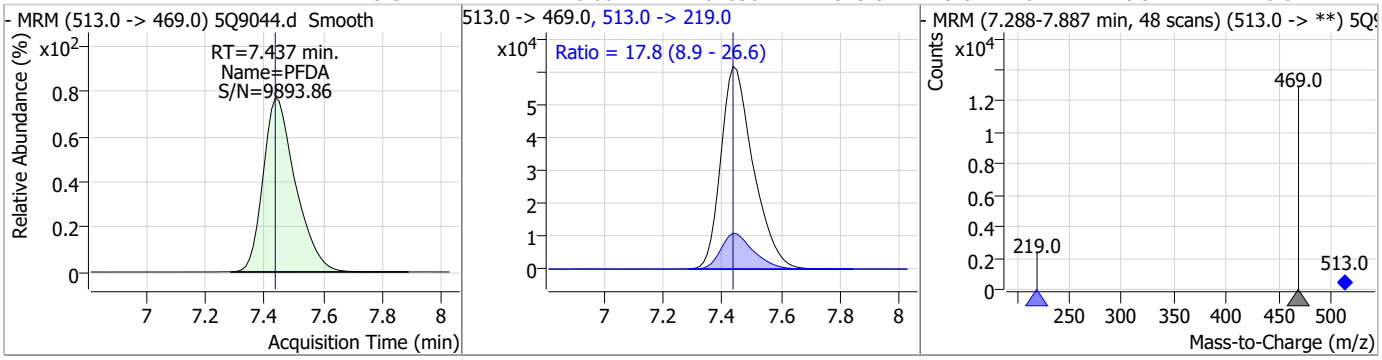
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	20.17	7.38	0.00	64067	549.0 -> 99.0	59.8	29.9	89.8



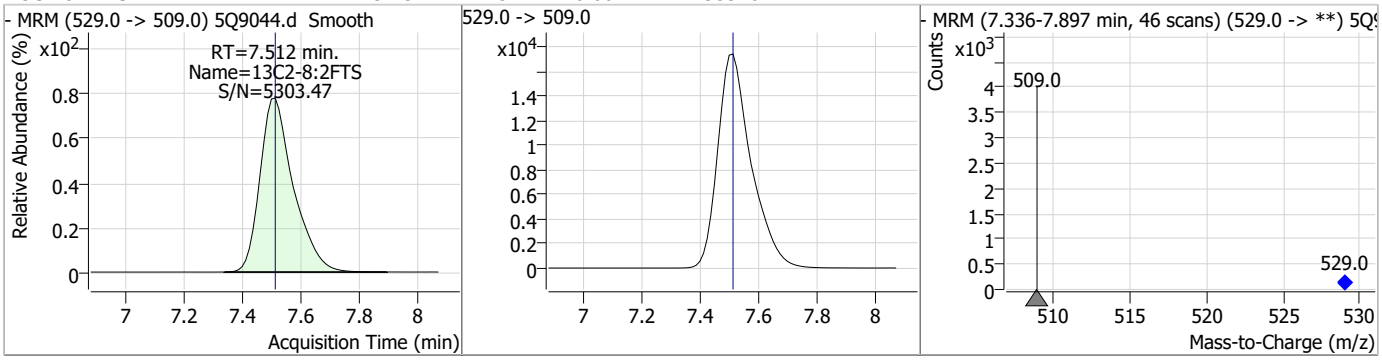
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.34	7.44	0.00	449478				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.52	7.44	0.00	467030	513.0 -> 219.0	17.8	8.9	26.6

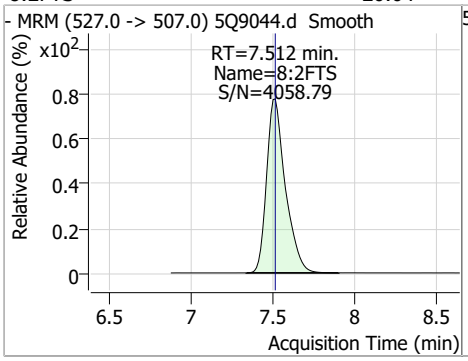


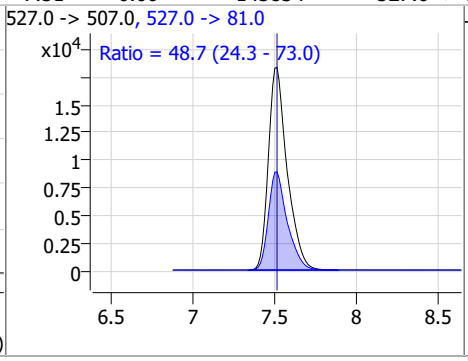
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.15	7.51	0.00	138320				

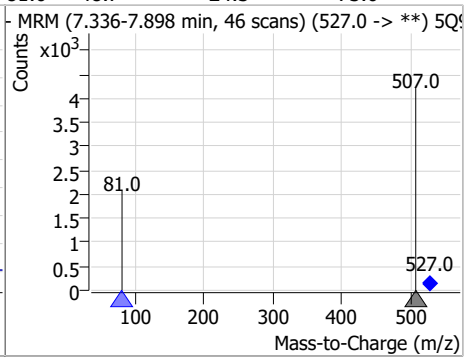


Perfluorinated Compounds by LC/MS/MS

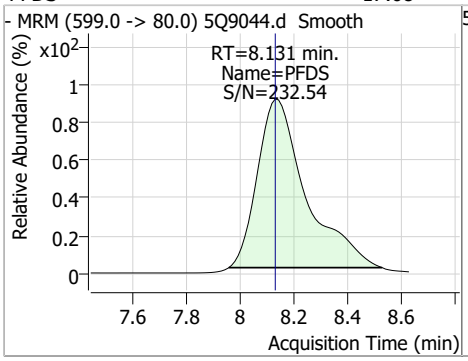
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.64	7.51	0.00	145834	527.0 -> 81.0	48.7	24.3	73.0

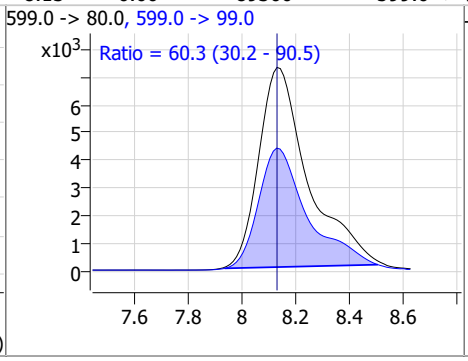


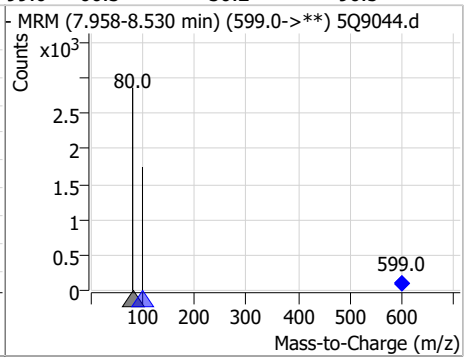




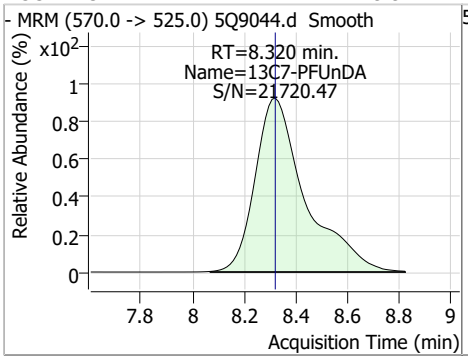
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	17.08	8.13	0.00	89300	599.0 -> 99.0	60.3	30.2	90.5

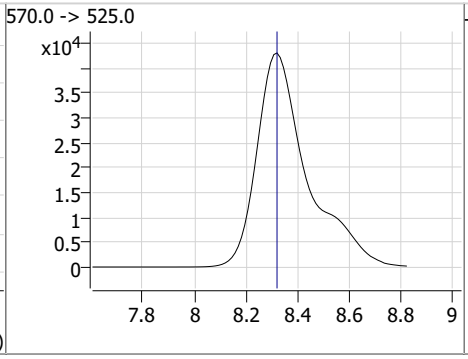


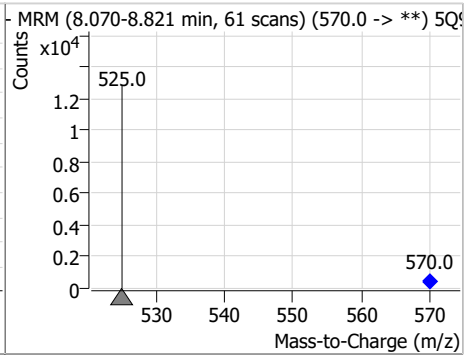




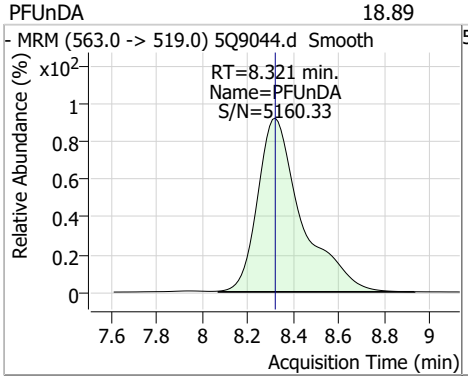
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.91	8.32	0.00	582595				

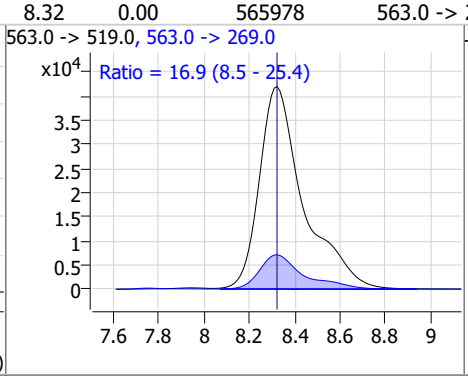


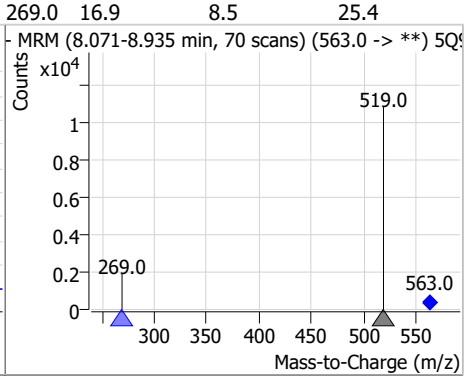




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	18.89	8.32	0.00	565978	563.0 -> 269.0	16.9	8.5	25.4

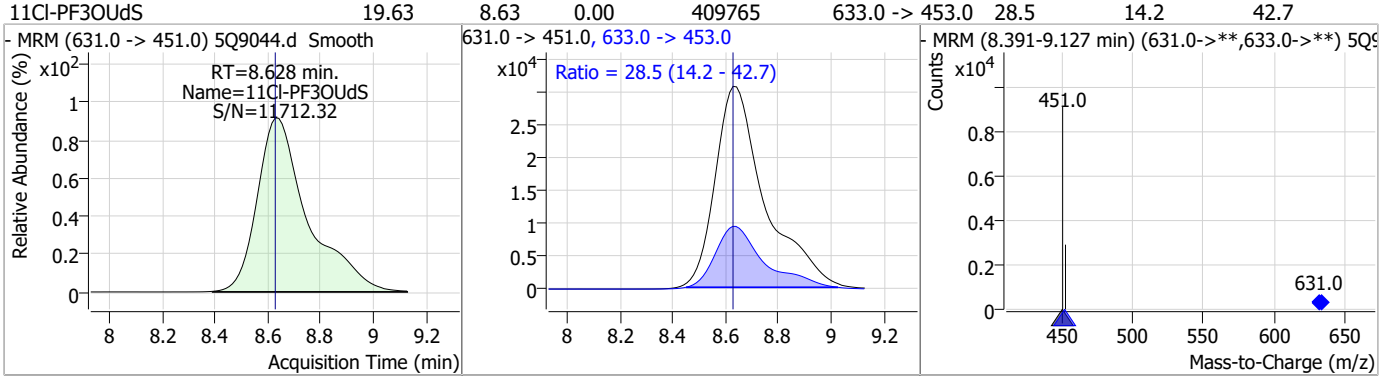




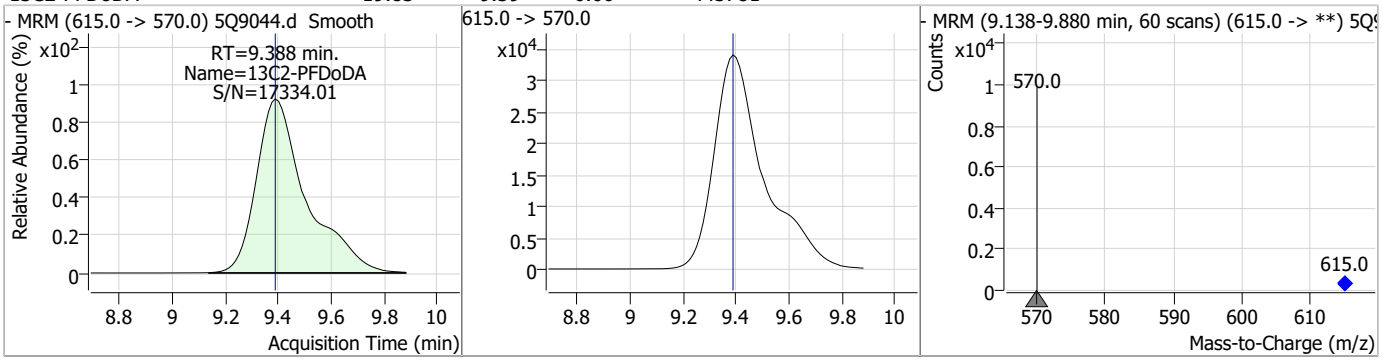


Perfluorinated Compounds by LC/MS/MS

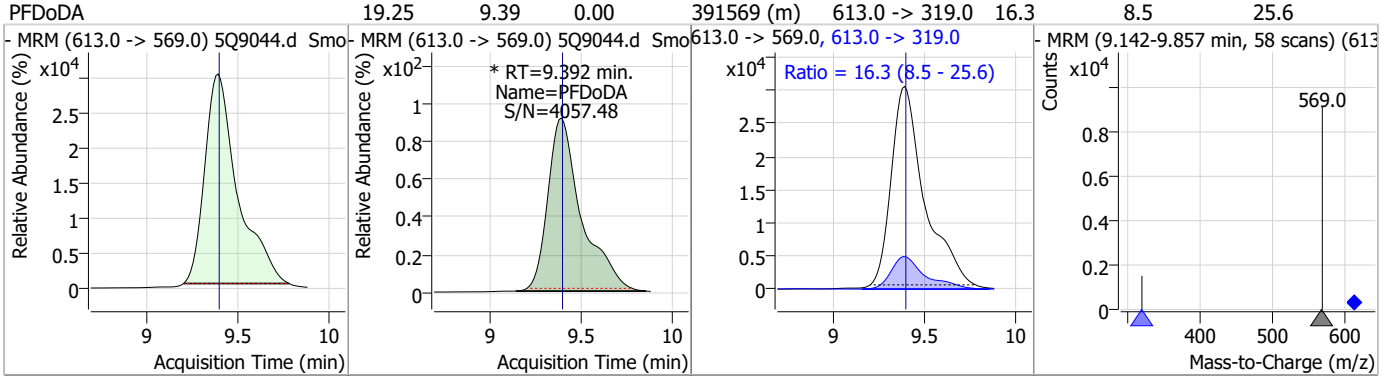
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	19.63	8.63	0.00	409765	633.0 -> 453.0	28.5	14.2	42.7



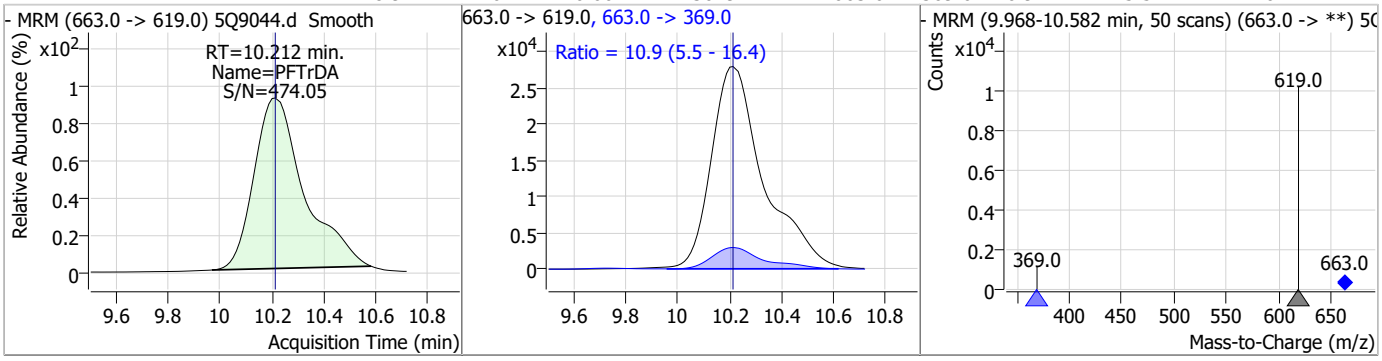
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.83	9.39	0.00	445781				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	19.25	9.39	0.00	391569 (m)	613.0 -> 319.0	16.3	8.5	25.6

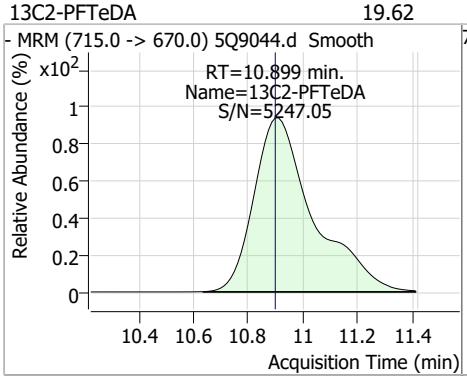


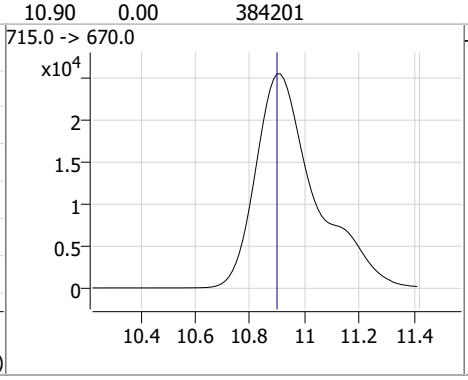
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	18.94	10.21	0.00	367911	663.0 -> 369.0	10.9	5.5	16.4

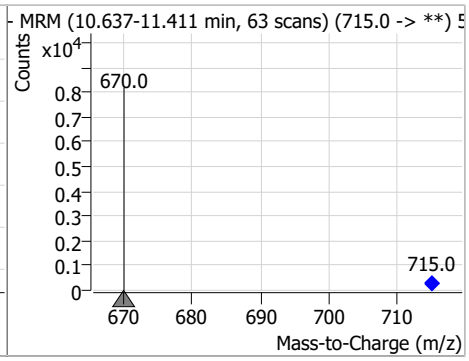


Perfluorinated Compounds by LC/MS/MS

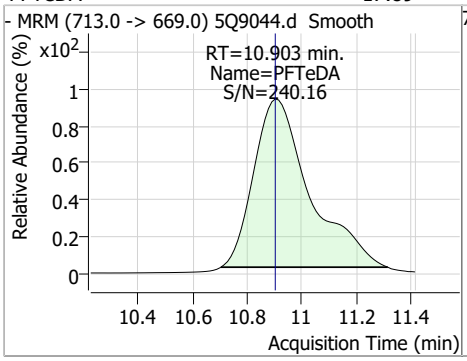
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.62	10.90	0.00	384201				

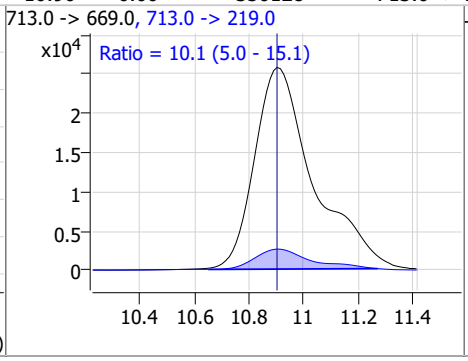


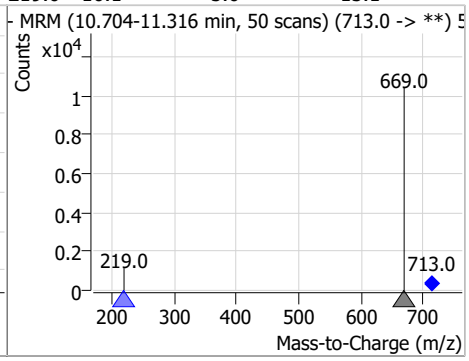




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	17.89	10.90	0.00	356128	713.0 -> 219.0	10.1	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q134-ICC134
Lab FileID: 5Q9044.D
Injection Time: 12/28/22 13:53
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.74	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.88	Split peak
Perfluorododecanoic acid	307-55-1		9.39	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9045.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 2:10:41 PM
Sample Name : ic134-50
Vial : P1-A8
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	104607	20.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	209955	20.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	300996	20.00	µg/L	0.000
M4-PFHpA	5.726	367.0 -> 322.0	302728	20.00	µg/L	0.000
M8-PFOA	6.348	421.0 -> 376.0	391632	20.00	µg/L	-0.014
M9-PFNA	6.918	472.0 -> 427.0	408327	20.00	µg/L	0.000
M6-PFDA	7.436	519.0 -> 474.0	448244	20.00	µg/L	0.000
M7-PFUnDA	8.307	570.0 -> 525.0	532577	20.00	µg/L	-0.012
M2-PFDoDA	9.388	615.0 -> 570.0	447982	20.00	µg/L	0.000
M2-PFTeDA	10.899	715.0 -> 670.0	390715	20.00	µg/L	0.000
M8-FOSA	6.592	506.0 -> 78.0	95012	20.00	µg/L	0.000
M3-PFBS	4.124	302.0 -> 99.0	26092	20.00	µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	35104	20.00	µg/L	0.000
M8-PFOS	6.879	507.0 -> 99.0	47200	20.00	µg/L	0.000
M2-4:2FTS	4.874	329.0 -> 309.0	103852	20.00	µg/L	-0.012
M2-6:2FTS	6.360	429.0 -> 409.0	162676	20.00	µg/L	0.000
M2-8:2FTS	7.498	529.0 -> 509.0	152161	20.00	µg/L	-0.013
M3-MeFOSAA	7.034	573.0 -> 419.0	34613	20.00	µg/L	0.000
M3-HFPO-DA	5.182	287.0 -> 169.0	66401	20.00	µg/L	0.000
M3-MeFOSA	6.952	515.0 -> 169.0	29700	20.00	µg/L	0.000
M5-EtFOSAA	7.132	589.0 -> 419.0	36369	20.00	µg/L	-0.012
System Monitoring Compounds						
13C2-4:2FTS	4.874	329.0 -> 309.0	103852	21.57	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.8%		
13C2-6:2FTS	6.360	429.0 -> 409.0	162676	21.22	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.1%		
13C2-8:2FTS	7.498	529.0 -> 509.0	152161	21.07	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.4%		
13C2-PFDoDA	9.388	615.0 -> 570.0	447982	19.92	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.6%		
13C2-PFTeDA	10.899	715.0 -> 670.0	390715	19.95	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.8%		
13C3-PFBS	4.124	302.0 -> 99.0	26092	20.08	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.4%		
13C3-PFHxS	5.733	402.0 -> 99.0	35104	19.62	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.1%		
13C4-PFBA	2.400	217.0 -> 172.0	104607	20.11	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.5%		
13C4-PFHpA	5.726	367.0 -> 322.0	302728	19.69	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.5%		
13C5-PFHxA	4.965	318.0 -> 273.0	300996	20.01	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.0%		
13C5-PFPeA	3.919	268.0 -> 223.0	209955	20.01	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.1%		
13C6-PFDA	7.436	519.0 -> 474.0	448244	19.28	µg/L	0.000

Perfluorinated Compounds by LC/MS/MS

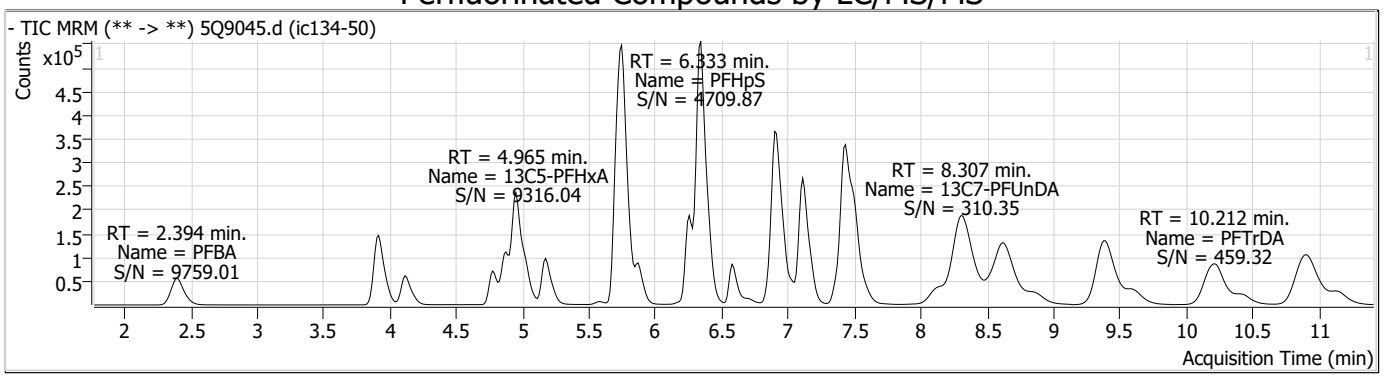
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.4%		
13C7-PFUnDA	8.307	570.0 -> 525.0	532577	18.20 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.0%		
13C8-FOSA	6.592	506.0 -> 78.0	95012	19.67 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%		
13C8-PFOA	6.348	421.0 -> 376.0	391632	19.43 µg/L		-0.014
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.2%		
13C8-PFOS	6.879	507.0 -> 99.0	47200	19.79 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.0%		
13C9-PFNA	6.918	472.0 -> 427.0	408327	19.41 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.1%		
d3-MeFOSAA	7.034	573.0 -> 419.0	34613	19.48 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.4%		
13C3-HFPO-DA	5.182	287.0 -> 169.0	66401	20.07 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.4%		
d3-MeFOSA	6.952	515.0 -> 169.0	29700	19.60 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%		
d5-EtFOSAA	7.132	589.0 -> 419.0	36369	19.72 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.6%		
Target Compounds						QValue
4:2FTS	4.876	327.0 -> 307.0	277538	48.83 µg/L		100
		327.0 -> 81.0	163024			
6:2FTS	6.360	427.0 -> 407.0	407429	48.80 µg/L		100
		427.0 -> 81.0	173617			
8:2FTS	7.499	527.0 -> 507.0	376172	48.40 µg/L		99
		527.0 -> 81.0	184968			
EtFOSAA	7.145	584.0 -> 419.0	59452	48.96 µg/L		99
		584.0 -> 483.0	37318			
FOSA	6.594	498.0 -> 78.0	241827	49.54 µg/L		99
		498.0 -> 478.0	7567			
MeFOSAA	7.035	570.0 -> 419.0	70617	50.27 µg/L		97
		570.0 -> 512.0	28029			
PFBA	2.394	213.0 -> 169.0	282216	49.53 µg/L		100
PFBS	4.117	299.0 -> 80.0	210315	49.56 µg/L		100
		299.0 -> 99.0	89618			
PFDA	7.437	513.0 -> 469.0	1192402	49.97 µg/L		100
		513.0 -> 219.0	212552			
PFDoDA	9.392	613.0 -> 569.0	1020338	49.91 µg/L	m	98
		613.0 -> 319.0	166544			
PFDS	8.131	599.0 -> 80.0	235764	49.32 µg/L		100
		599.0 -> 99.0	142167			
PFHpA	5.727	363.0 -> 319.0	944597	49.89 µg/L		100
		363.0 -> 169.0	209077			
PFHpS	6.333	449.0 -> 80.0	182484	50.58 µg/L		99
		449.0 -> 99.0	98602			
PFHxA	4.966	313.0 -> 269.0	758651	49.62 µg/L		100
		313.0 -> 119.0	34795			
PFHxS	5.735	399.0 -> 80.0	181945	51.06 µg/L	m	100
		399.0 -> 99.0	101765			
PFNA	6.918	463.0 -> 419.0	1073598	50.70 µg/L		100
		463.0 -> 219.0	230146			
PFNS	7.371	549.0 -> 80.0	164365	50.78 µg/L		100
		549.0 -> 99.0	98414			
PFOA	6.348	413.0 -> 369.0	1126224	50.24 µg/L		99
		413.0 -> 169.0	305752			
PFOS	6.880	499.0 -> 80.0	218262	50.13 µg/L	m	100

Perfluorinated Compounds by LC/MS/MS

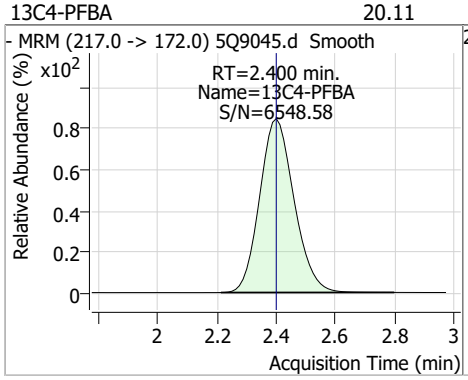
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	103788			
PFPeA	3.922	263.0 -> 219.0	616644	49.97	µg/L	100
PFPeS	5.035	349.0 -> 80.0	135257	48.69	µg/L	99
		349.0 -> 99.0	70042			
PFTeDA	10.903	713.0 -> 669.0	937513	46.31	µg/L	100
		713.0 -> 219.0	94375			
PFTrDA	10.212	663.0 -> 619.0	998340	51.14	µg/L	99
		663.0 -> 369.0	106240			
PFUnDA	8.309	563.0 -> 519.0	1470395	53.68	µg/L	100
		563.0 -> 269.0	248075			
11Cl-PF3OUdS	8.628	631.0 -> 451.0	1061844	49.85	µg/L	95
		633.0 -> 453.0	330095			
9Cl-PF3ONS	7.111	531.0 -> 351.0	964910	48.71	µg/L	99
		533.0 -> 353.0	302124			
ADONA	5.763	377.0 -> 251.0	1232024	52.03	µg/L	100
		377.0 -> 85.0	462029			
HFPO-DA	5.190	329.0 -> 169.0	264679	49.89	µg/L	98
		285.0 -> 169.0	159484			
MeFOSA	6.953	512.0 -> 169.0	86319	49.11	µg/L	97
		512.0 -> 219.0	65258			
4-PFECHS	6.255	461.0 -> 381.0	611307	48.98	µg/L	100
		461.0 -> 99.0	326719			
FBSA	4.781	298.0 -> 78.0	311529	49.88	µg/L	99
		298.0 -> 64.0	28268			
FHxSA	5.888	398.0 -> 78.0	286436	49.17	µg/L	100
		398.0 -> 64.0	27524			

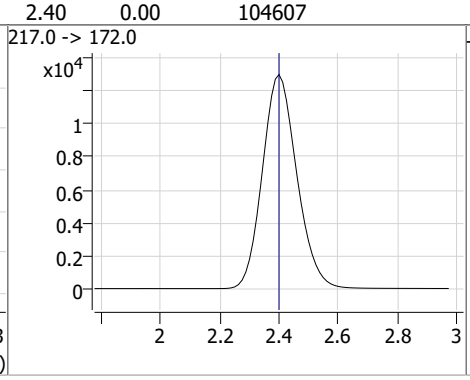
 # = Qualifier out of range, m = manually integrated, + = Area summed

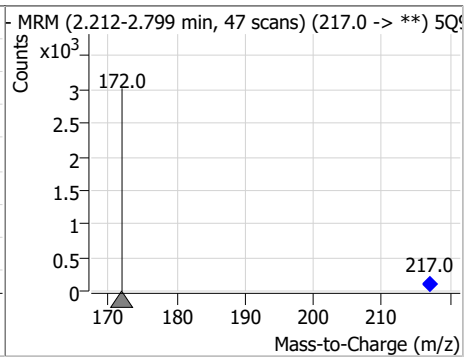
Perfluorinated Compounds by LC/MS/MS



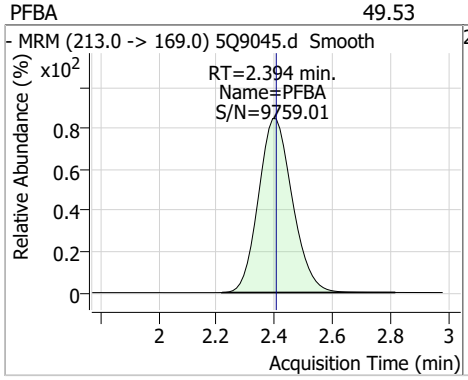
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.11	2.40	0.00	104607				

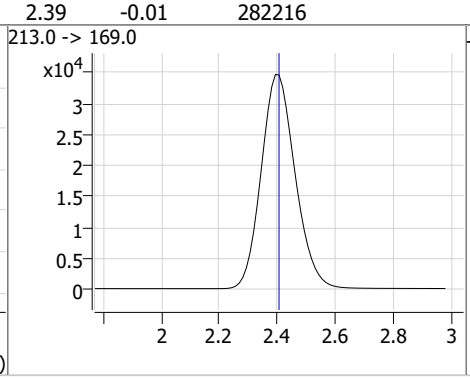


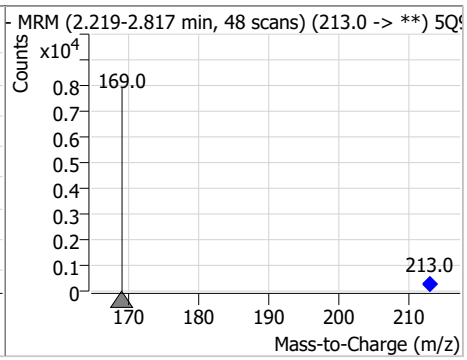




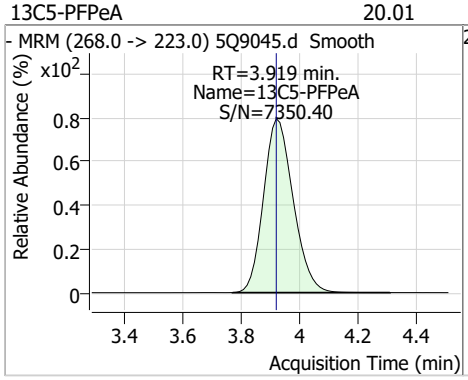
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	49.53	2.39	-0.01	282216				

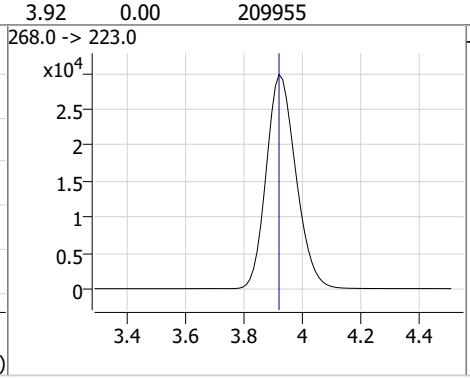


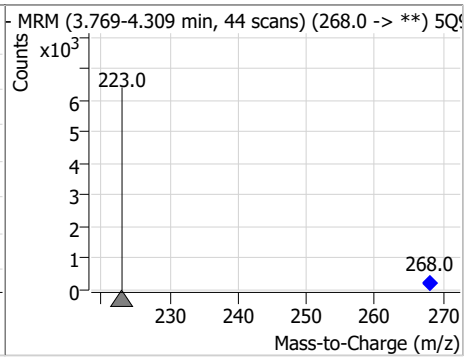




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.01	3.92	0.00	209955				

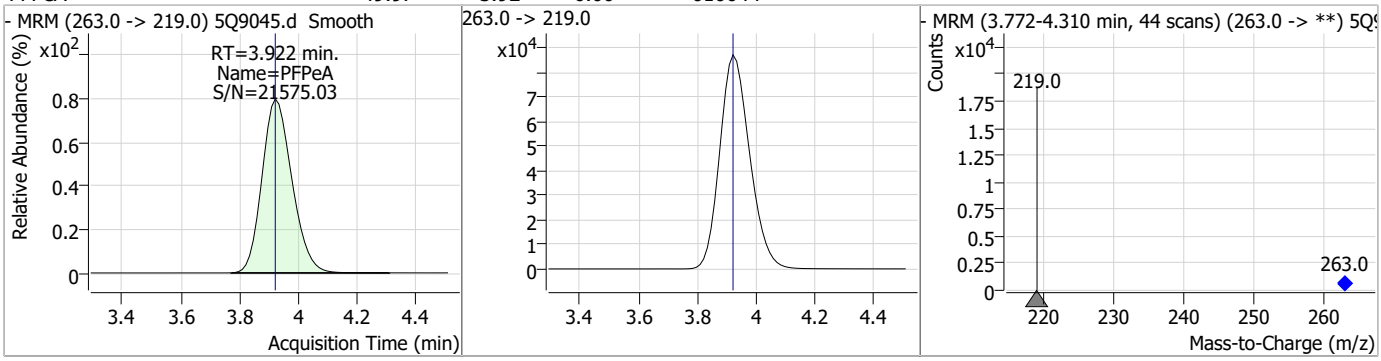




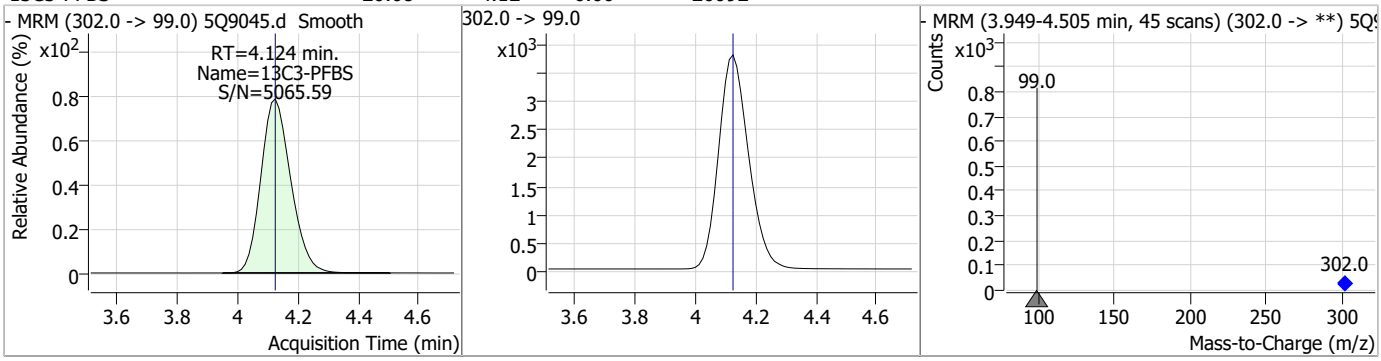


Perfluorinated Compounds by LC/MS/MS

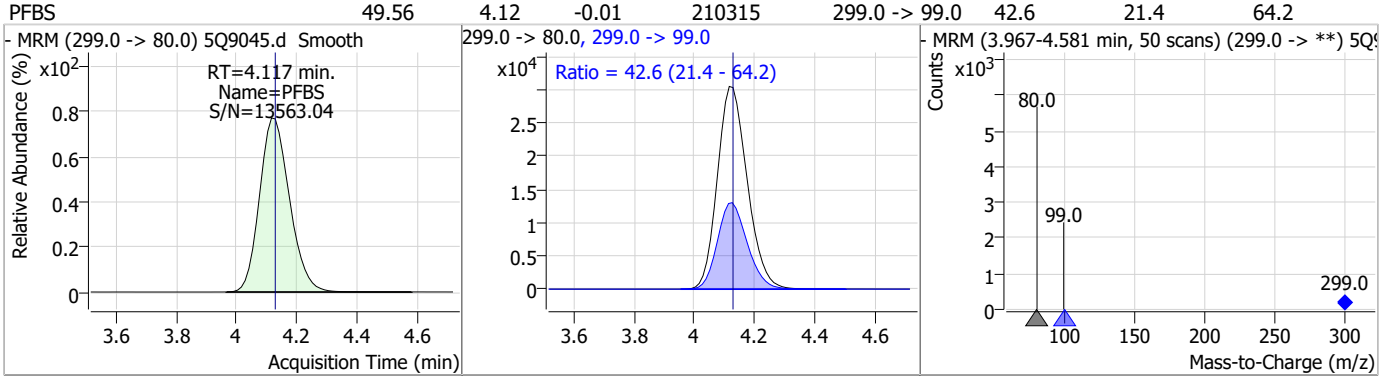
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	49.97	3.92	0.00	616644				



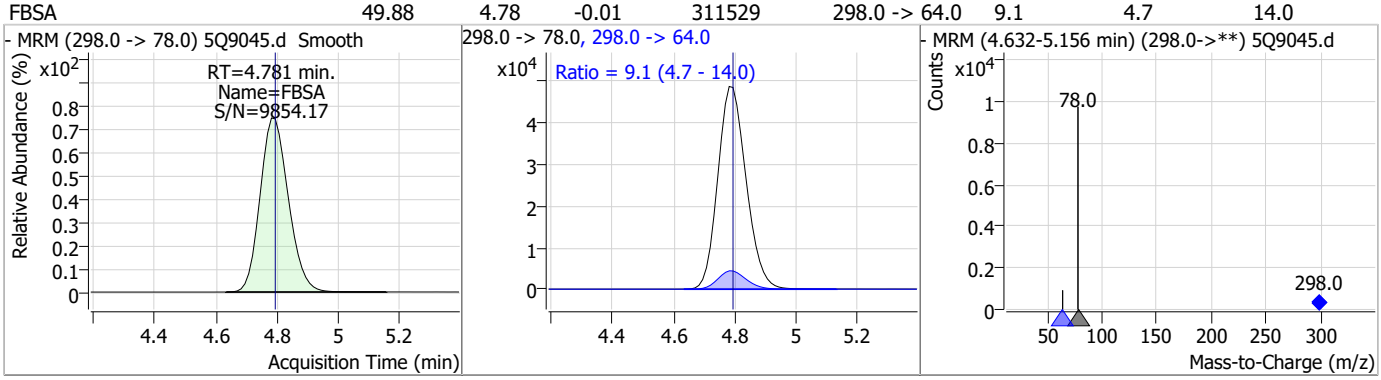
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.08	4.12	0.00	26092				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	49.56	4.12	-0.01	210315	299.0 -> 99.0	42.6	21.4	64.2

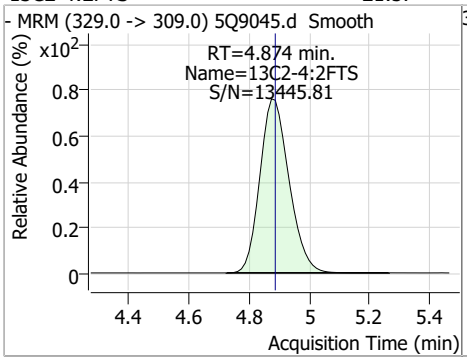


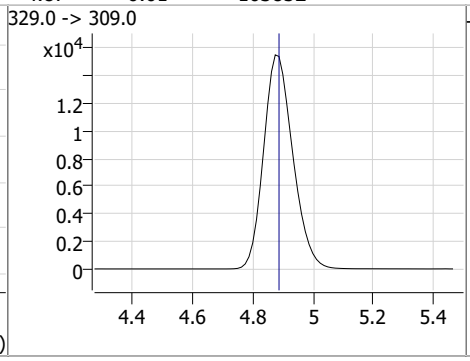
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	49.88	4.78	-0.01	311529	298.0 -> 64.0	9.1	4.7	14.0

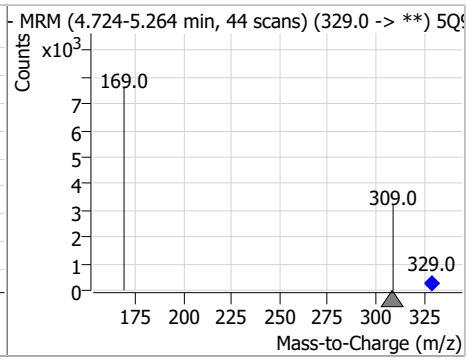


Perfluorinated Compounds by LC/MS/MS

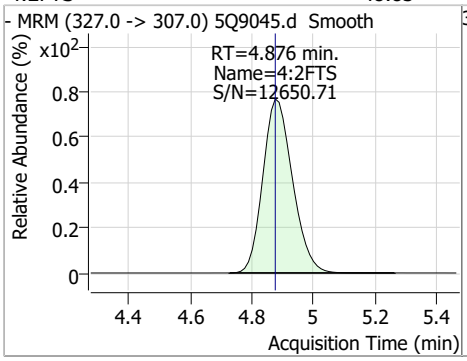
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	21.57	4.87	-0.01	103852				

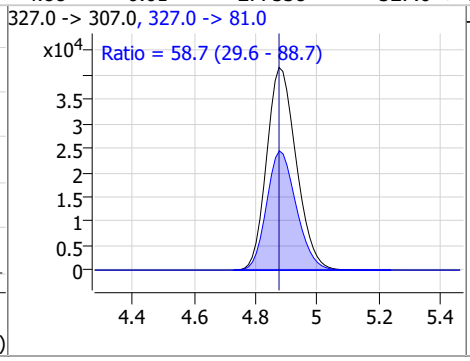


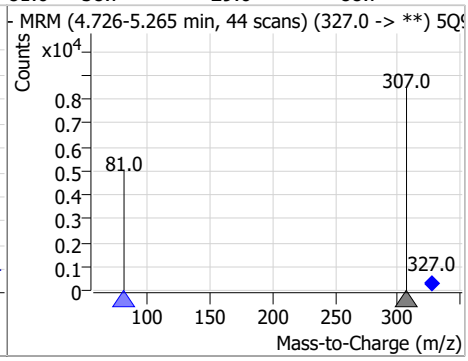




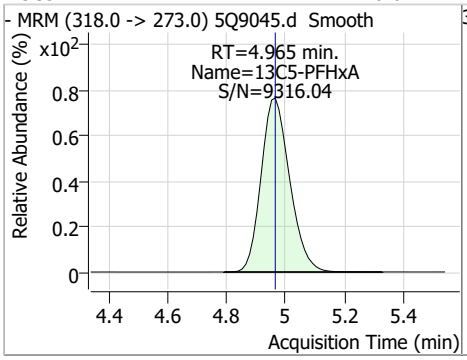
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	48.83	4.88	-0.01	277538	327.0 -> 81.0	58.7	29.6	88.7

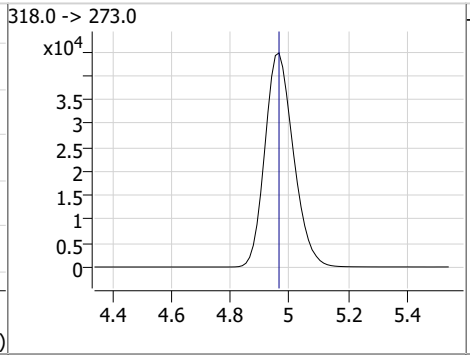


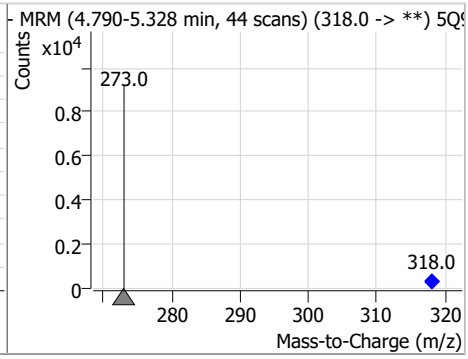




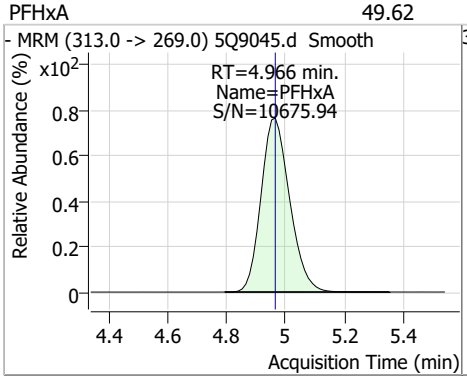
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.01	4.96	0.00	300996				

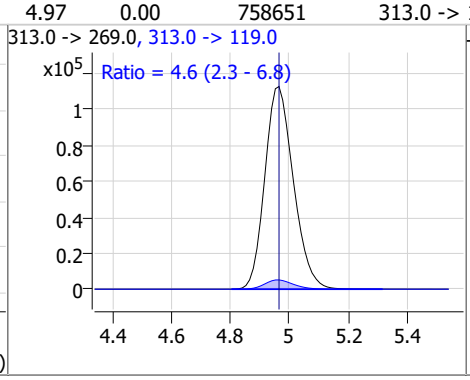


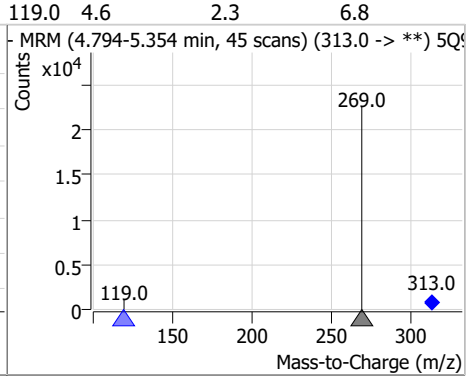




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	49.62	4.97	0.00	758651	313.0 -> 119.0	4.6	2.3	6.8

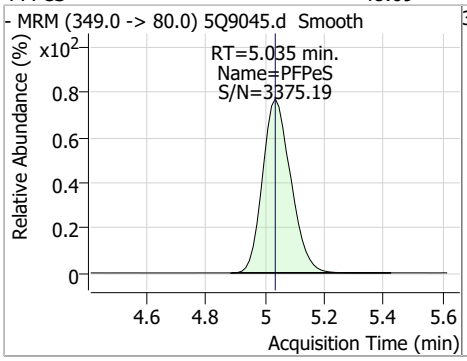


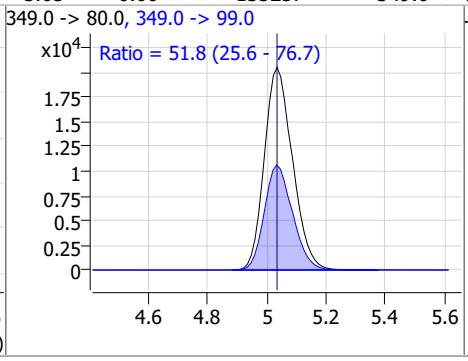


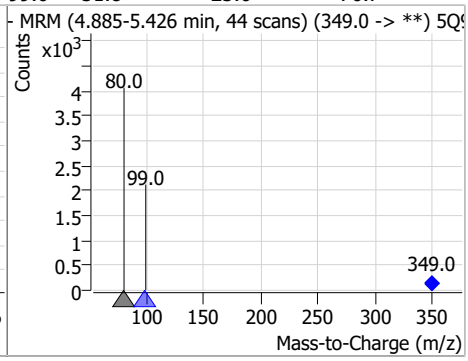


Perfluorinated Compounds by LC/MS/MS

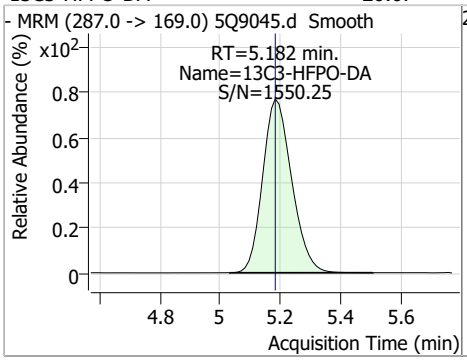
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	48.69	5.03	0.00	135257	349.0 -> 99.0	51.8	25.6	76.7

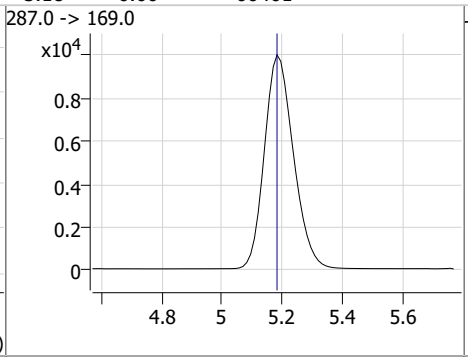


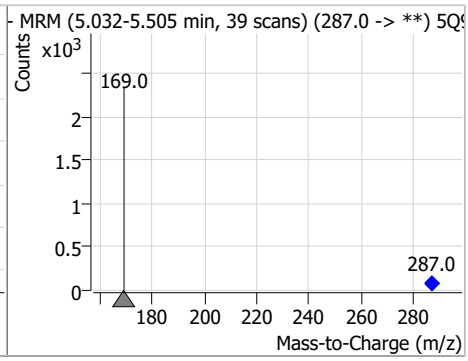




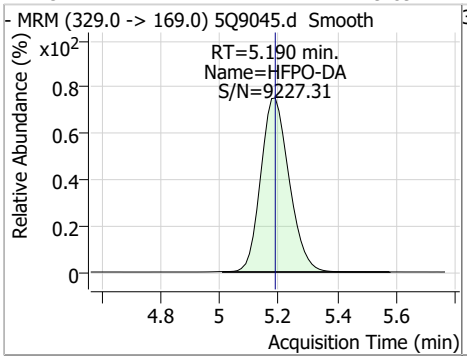
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.07	5.18	0.00	66401				

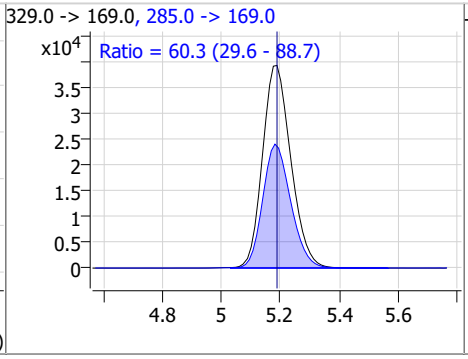


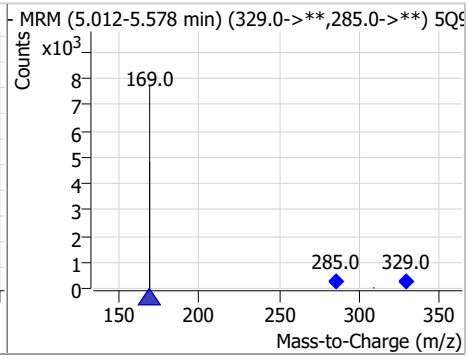




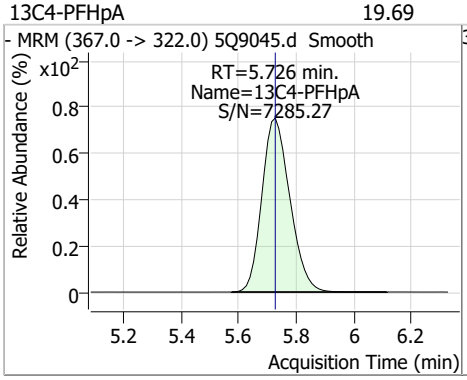
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	49.89	5.19	0.00	264679	285.0 -> 169.0	60.3	29.6	88.7

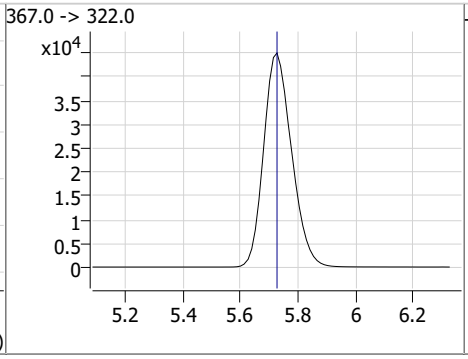


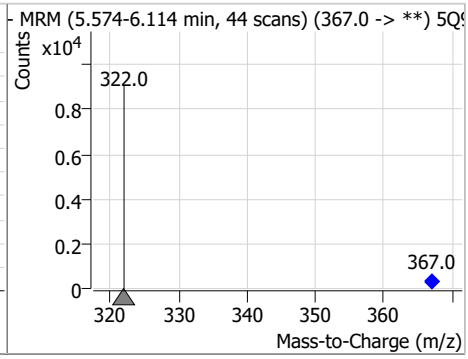




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.69	5.73	0.00	302728				

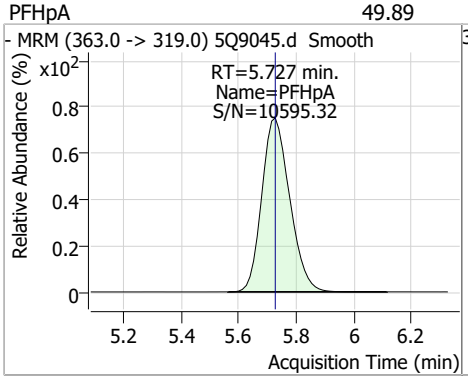


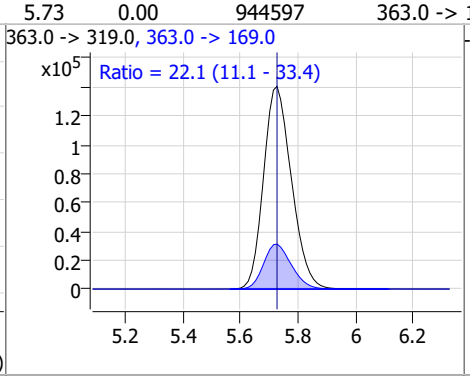


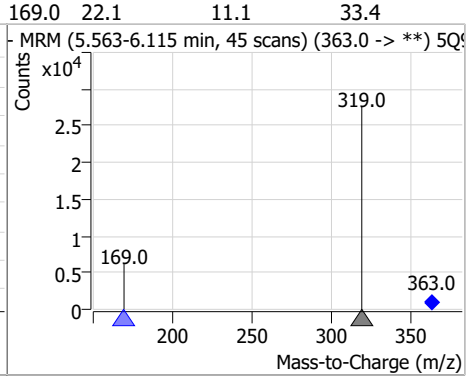


Perfluorinated Compounds by LC/MS/MS

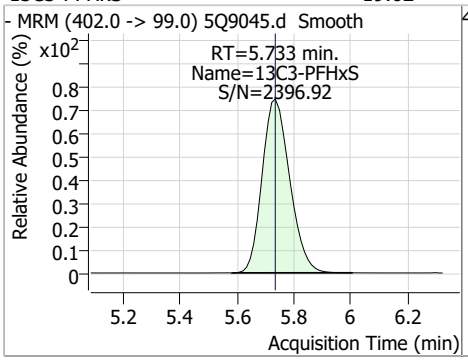
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	49.89	5.73	0.00	944597	363.0 -> 169.0	22.1	11.1	33.4

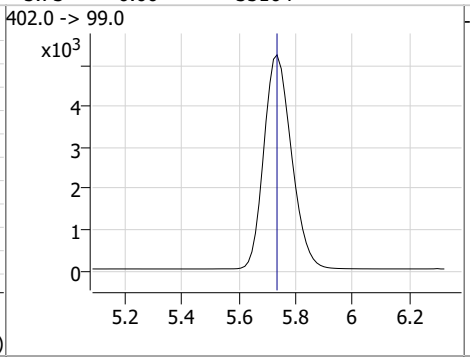


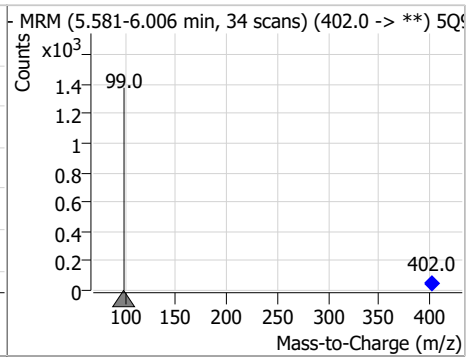




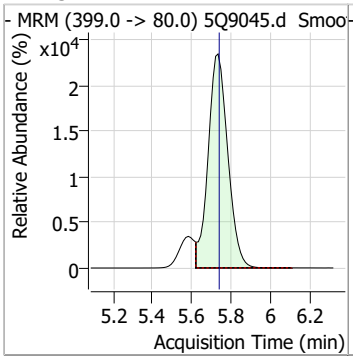
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.62	5.73	0.00	35104				

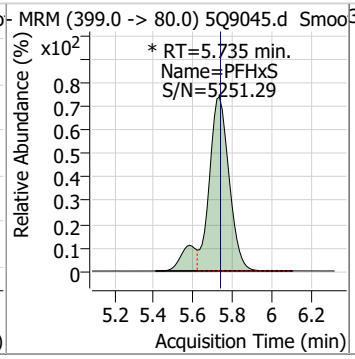


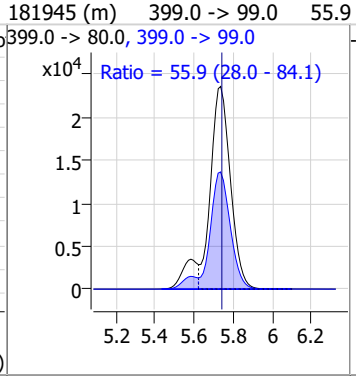


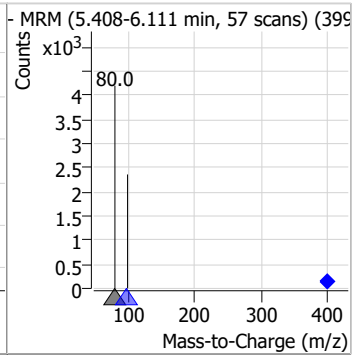


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	51.06	5.73	0.00	181945 (m)	399.0 -> 99.0	55.9	28.0	84.1

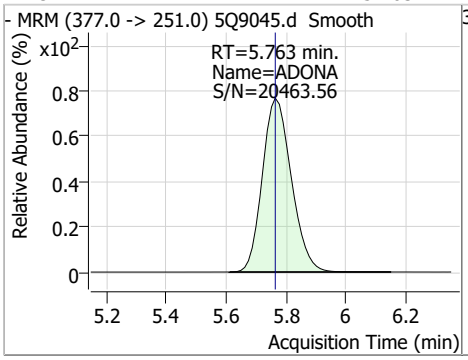


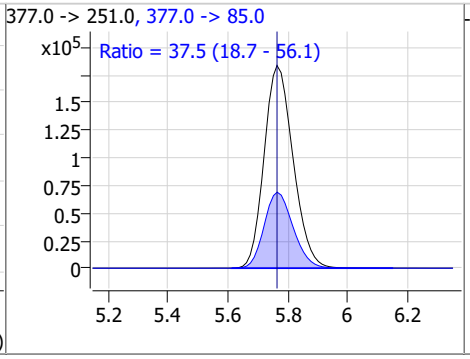


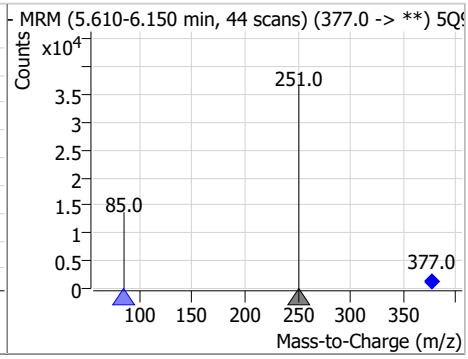




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	52.03	5.76	0.00	1232024	377.0 -> 85.0	37.5	18.7	56.1

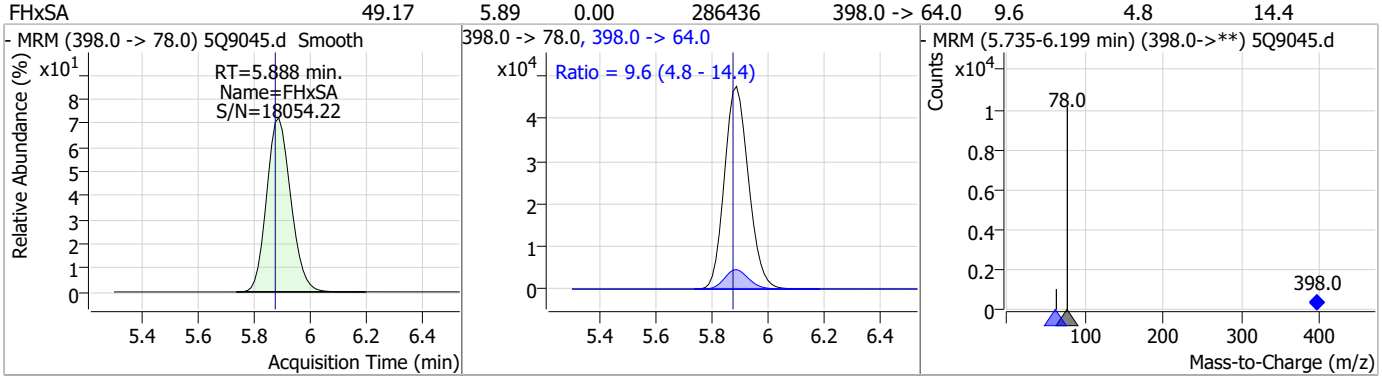




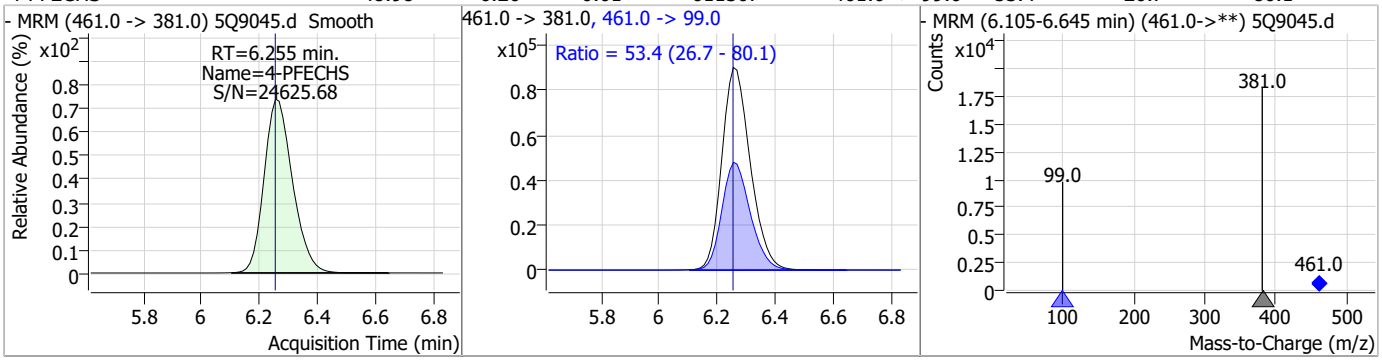


Perfluorinated Compounds by LC/MS/MS

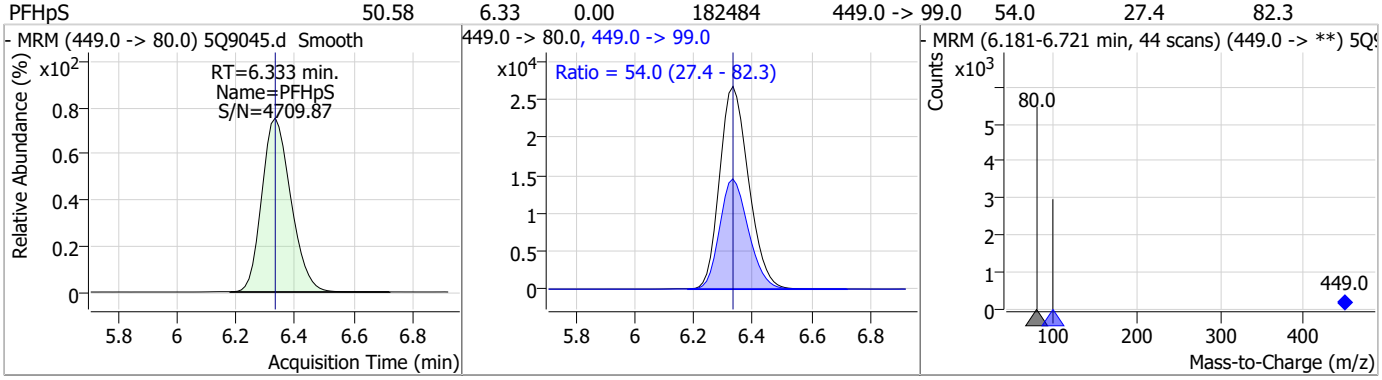
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	49.17	5.89	0.00	286436	398.0 -> 64.0	9.6	4.8	14.4



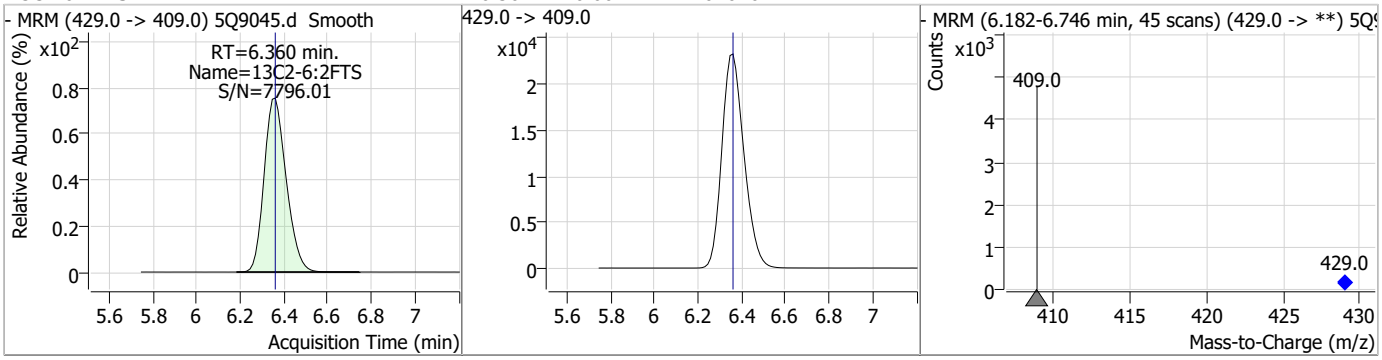
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	48.98	6.26	-0.01	611307	461.0 -> 99.0	53.4	26.7	80.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	50.58	6.33	0.00	182484	449.0 -> 99.0	54.0	27.4	82.3

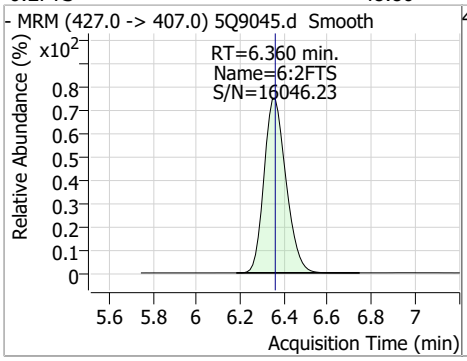


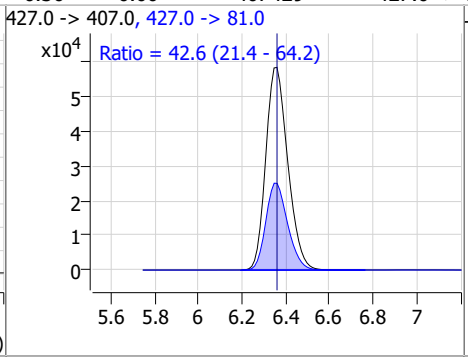
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	21.22	6.36	0.00	162676				

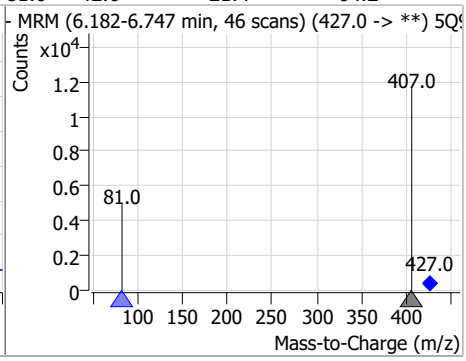


Perfluorinated Compounds by LC/MS/MS

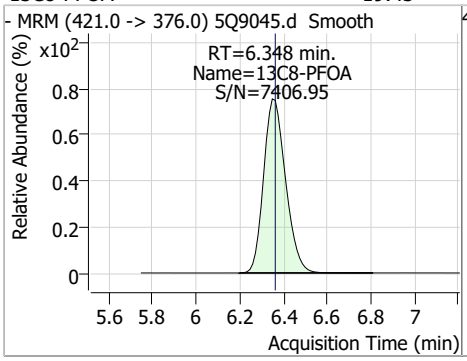
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	48.80	6.36	0.00	407429	427.0 -> 81.0	42.6	21.4	64.2

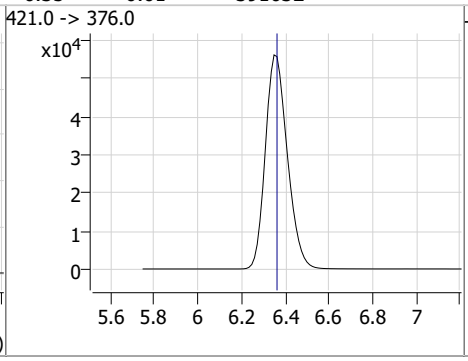


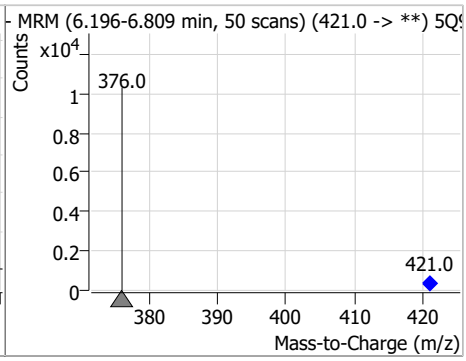




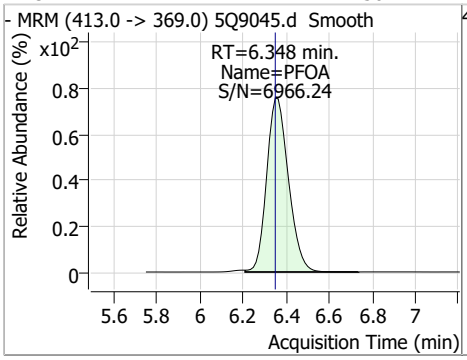
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.43	6.35	-0.01	391632				

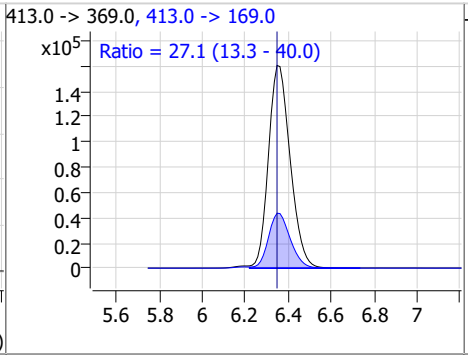


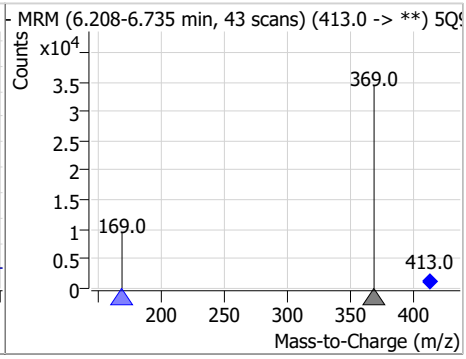




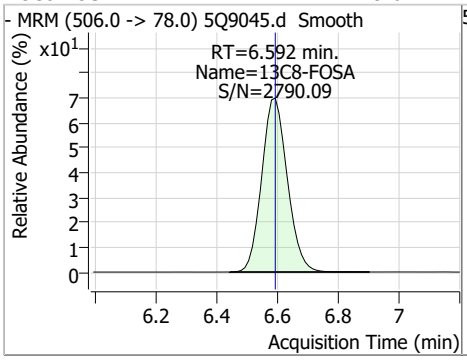
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	50.24	6.35	-0.01	1126224	413.0 -> 169.0	27.1	13.3	40.0

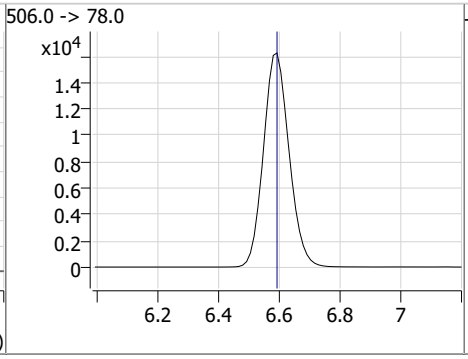


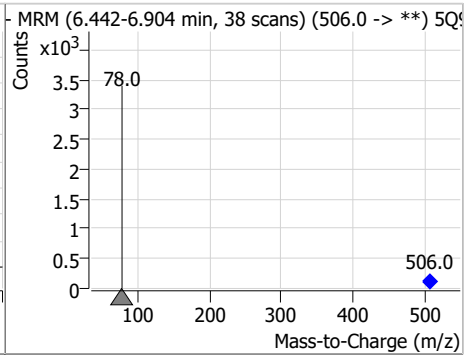




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	19.67	6.59	0.00	95012				

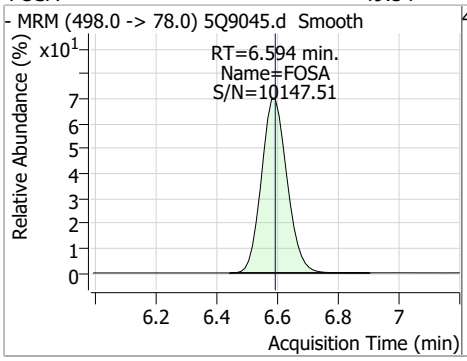


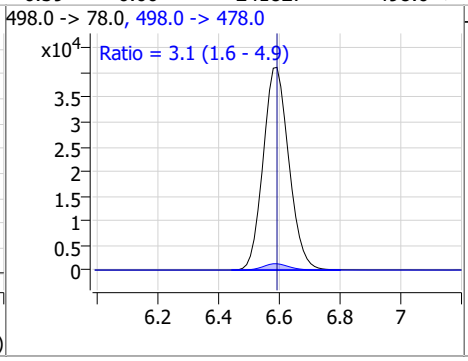


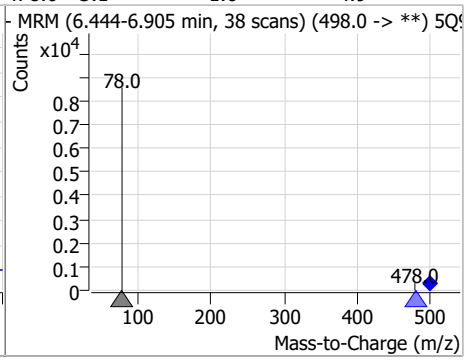


Perfluorinated Compounds by LC/MS/MS

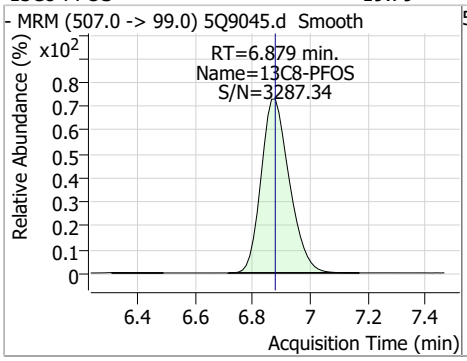
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	49.54	6.59	0.00	241827	498.0 -> 478.0	3.1	1.6	4.9

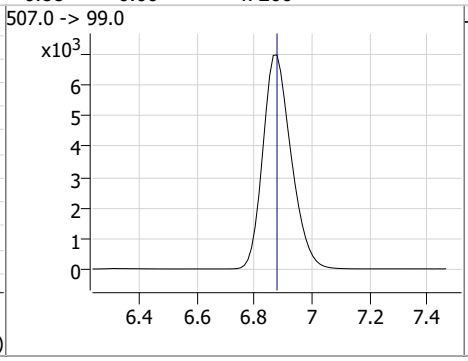


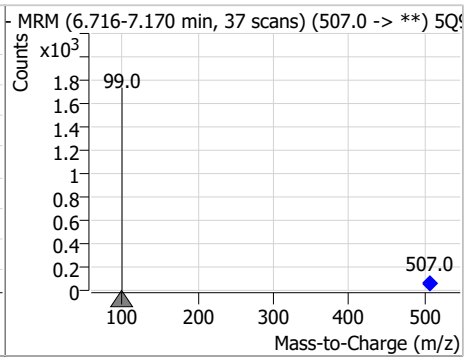




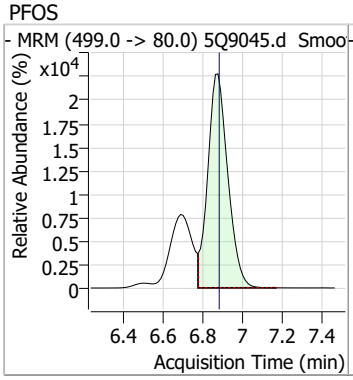
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.79	6.88	0.00	47200				

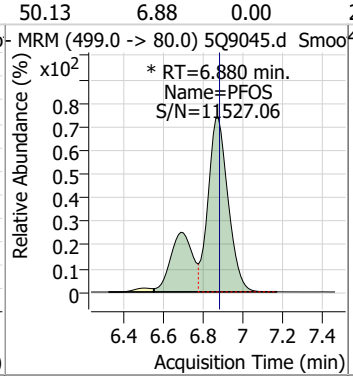


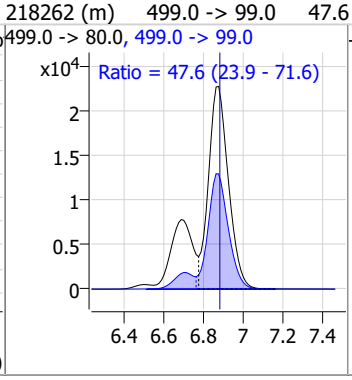


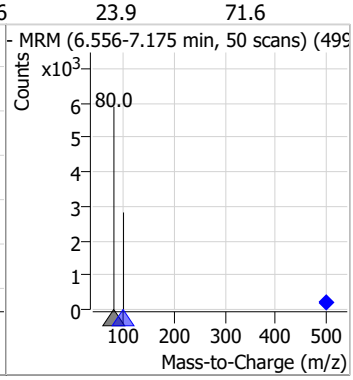


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	50.13	6.88	0.00	218262 (m)	499.0 -> 99.0	47.6	23.9	71.6

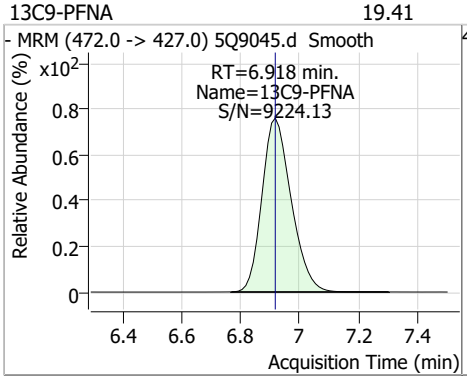


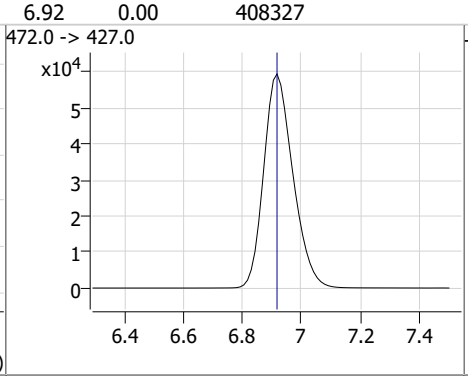


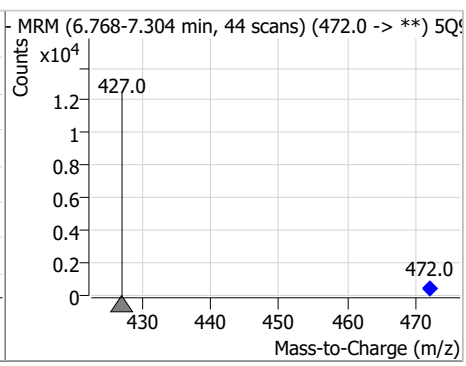




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.41	6.92	0.00	408327				

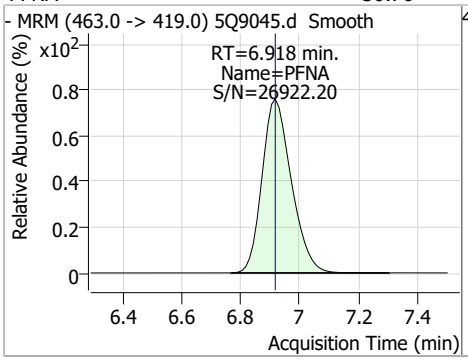


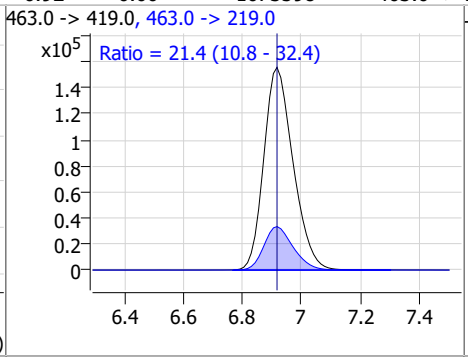


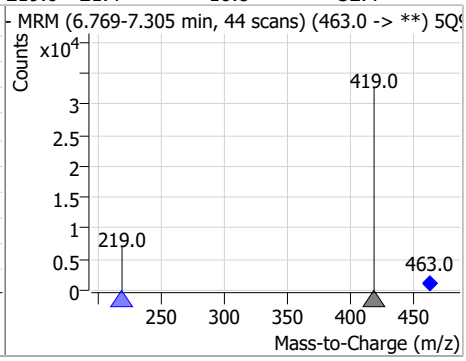


Perfluorinated Compounds by LC/MS/MS

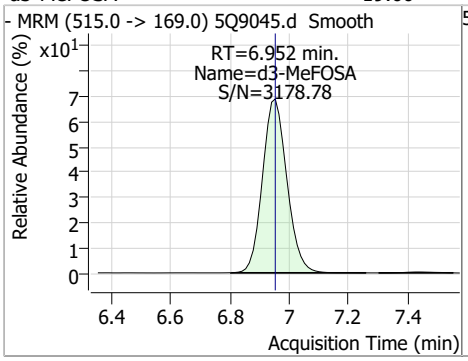
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	50.70	6.92	0.00	1073598	463.0 -> 219.0	21.4	10.8	32.4

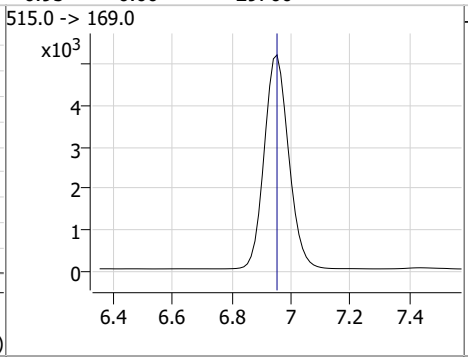


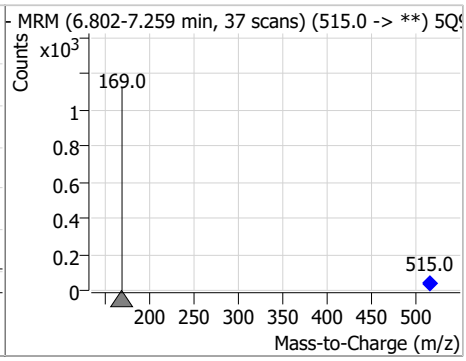




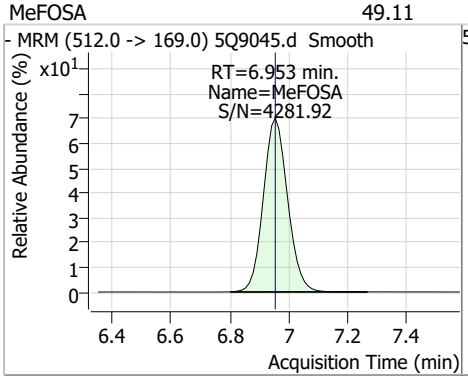
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	19.60	6.95	0.00	29700				

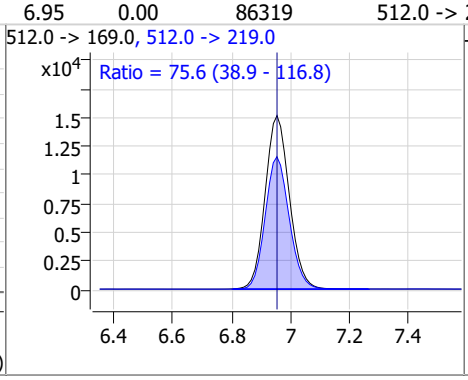


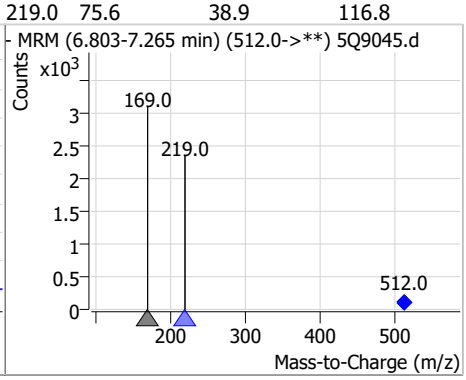




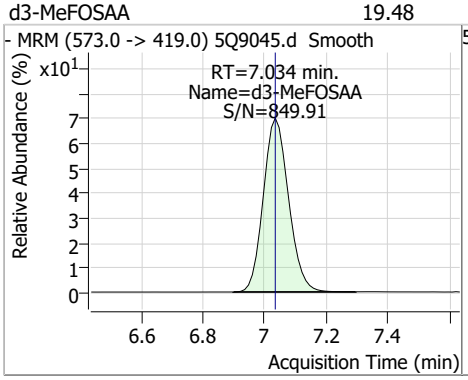
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	49.11	6.95	0.00	86319	512.0 -> 219.0	75.6	38.9	116.8

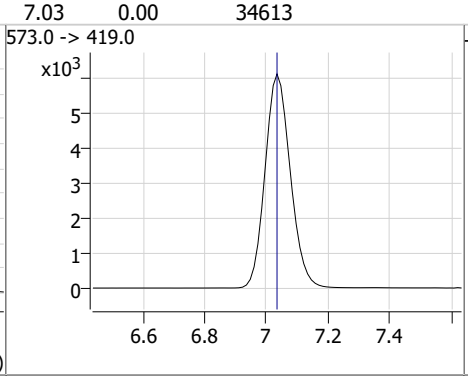


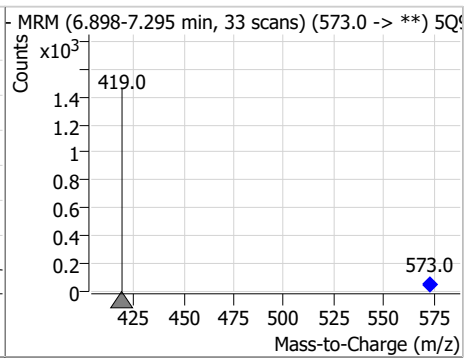




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.48	7.03	0.00	34613				

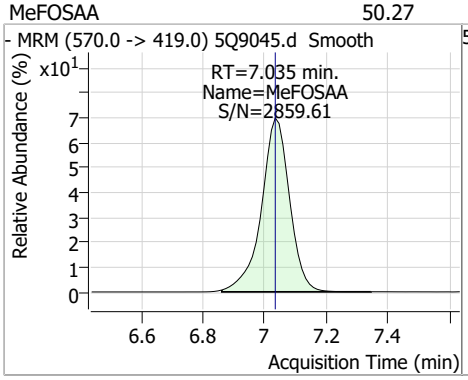


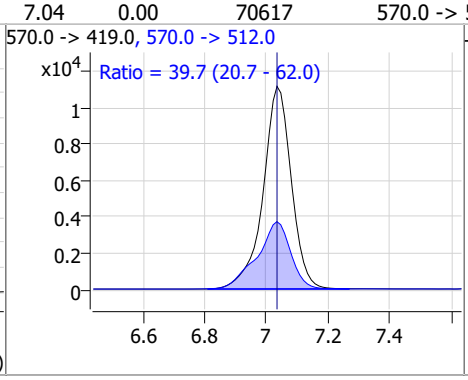


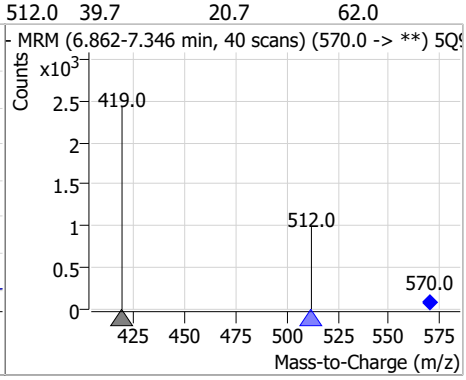


Perfluorinated Compounds by LC/MS/MS

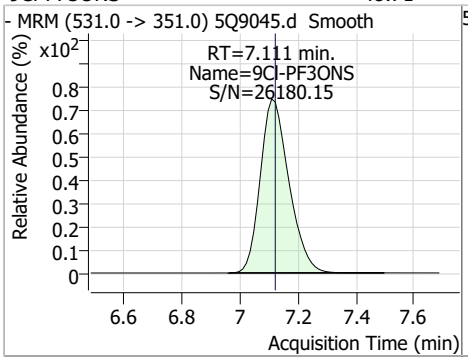
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	50.27	7.04	0.00	70617	570.0 -> 512.0	39.7	20.7	62.0

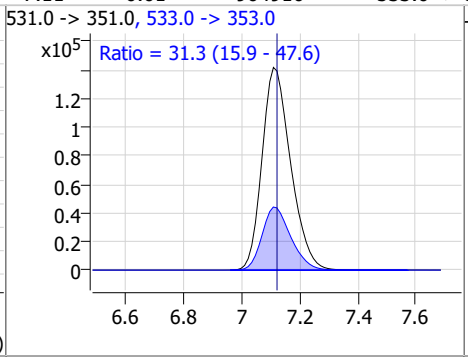


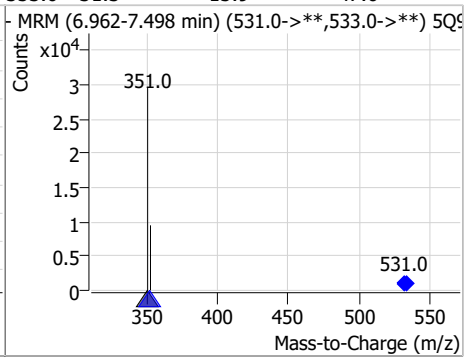




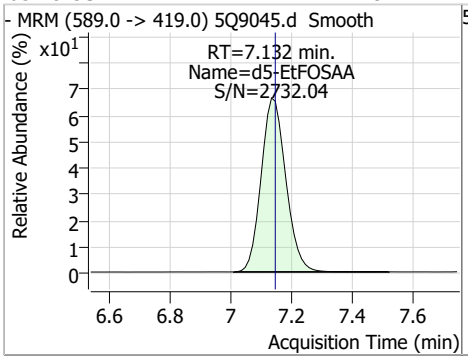
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	48.71	7.11	-0.01	964910	533.0 -> 353.0	31.3	15.9	47.6

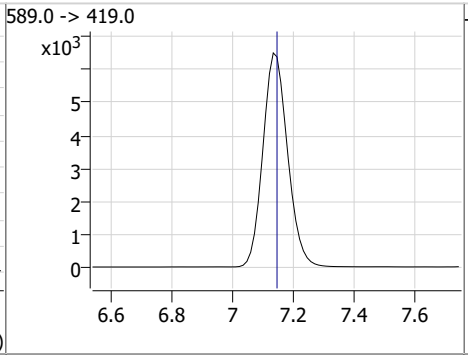


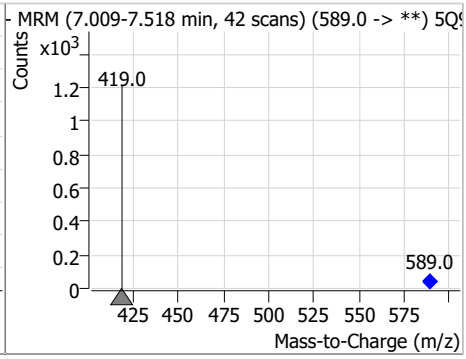




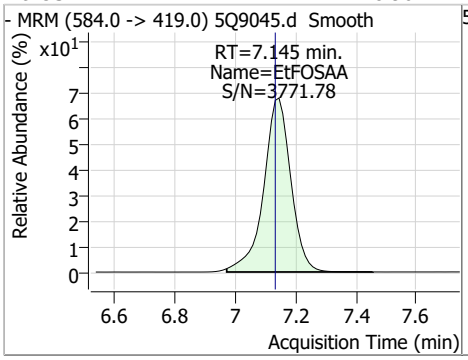
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.72	7.13	-0.01	36369				

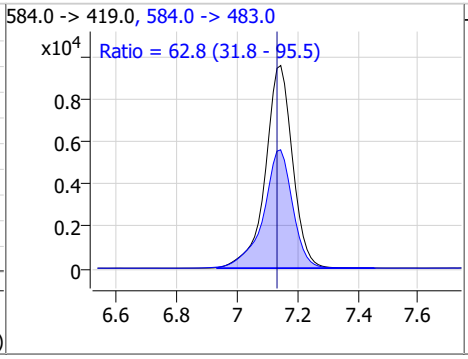


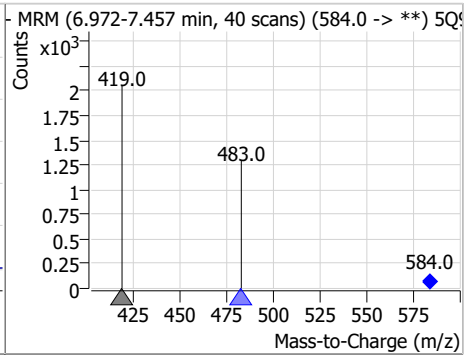




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	48.96	7.15	0.00	59452	584.0 -> 483.0	62.8	31.8	95.5

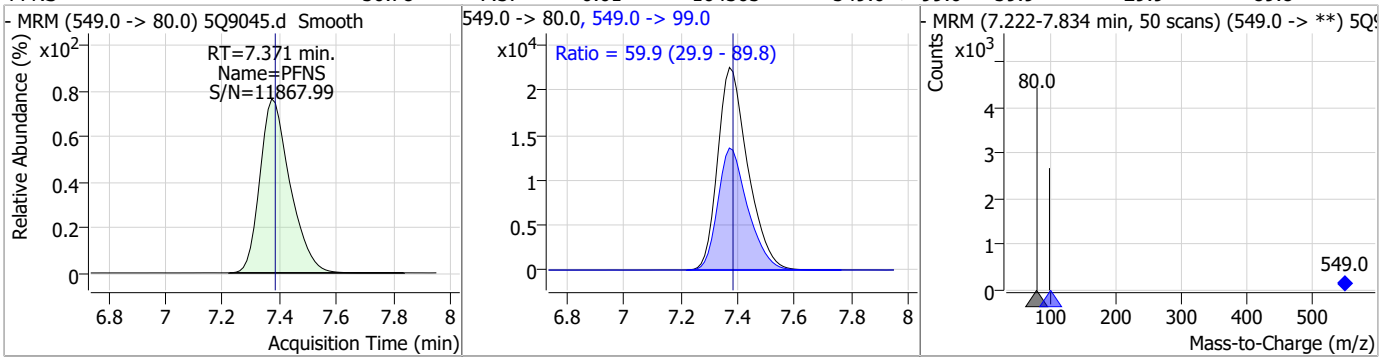




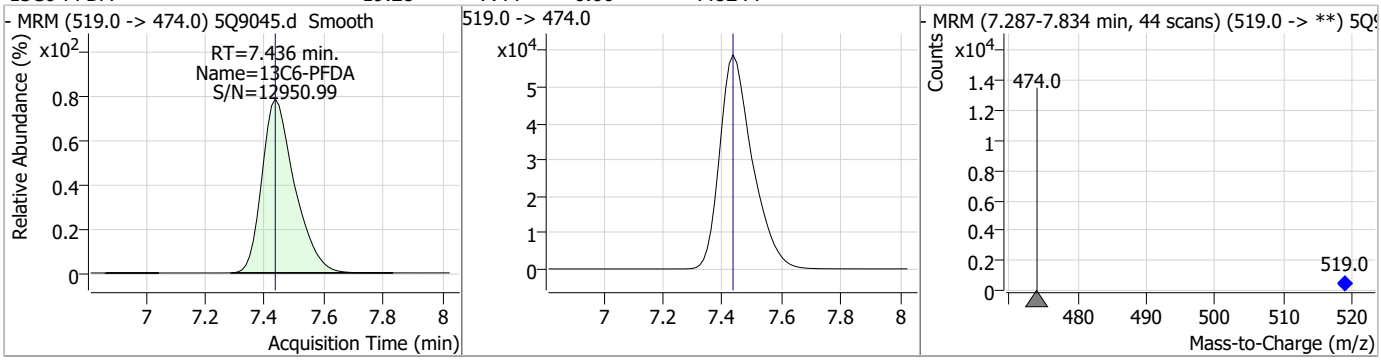


Perfluorinated Compounds by LC/MS/MS

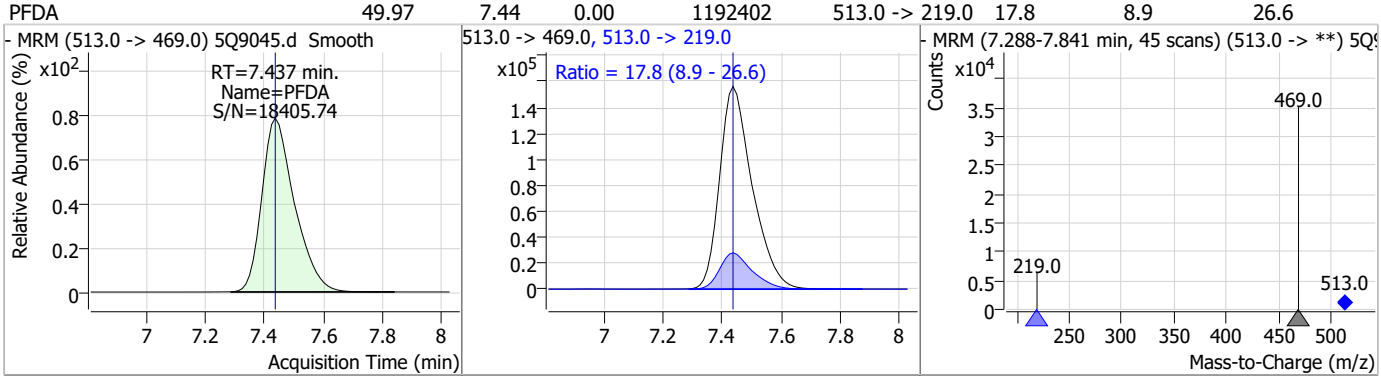
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	50.78	7.37	-0.01	164365	549.0 -> 99.0	59.9	29.9	89.8



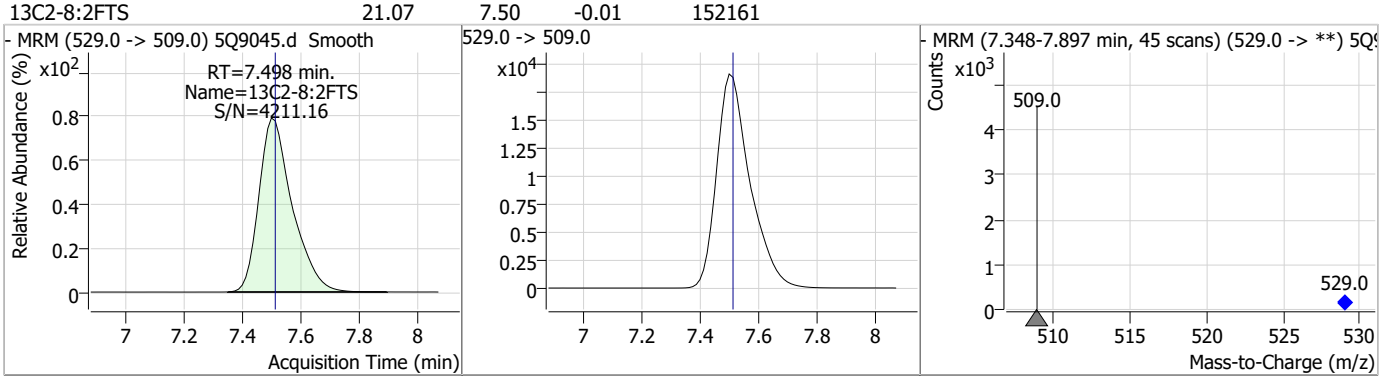
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.28	7.44	0.00	448244				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	49.97	7.44	0.00	1192402	513.0 -> 219.0	17.8	8.9	26.6

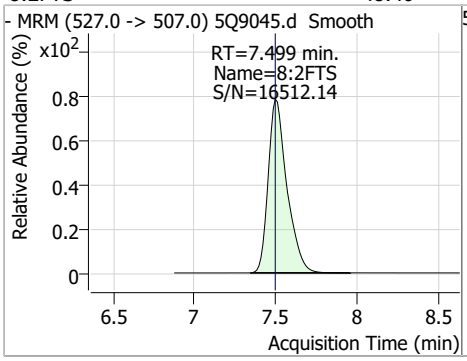


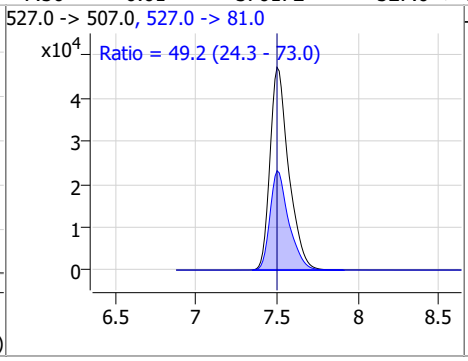
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	21.07	7.50	-0.01	152161				

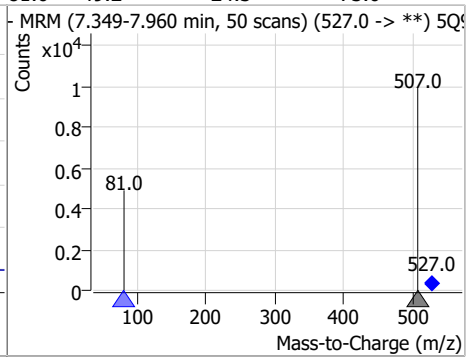


Perfluorinated Compounds by LC/MS/MS

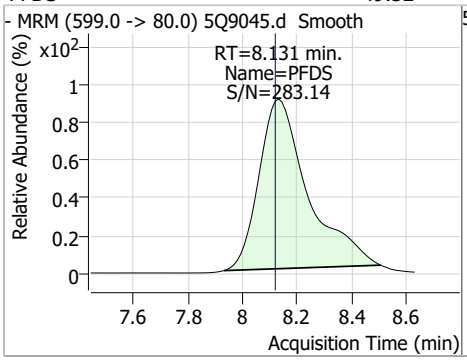
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	48.40	7.50	-0.01	376172	527.0 -> 81.0	49.2	24.3	73.0

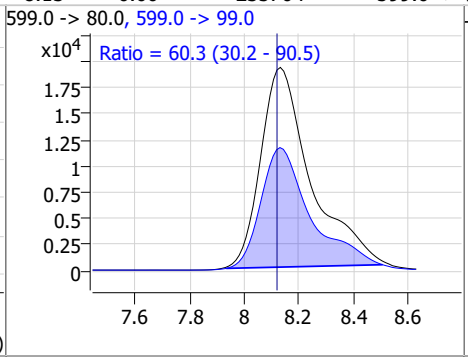


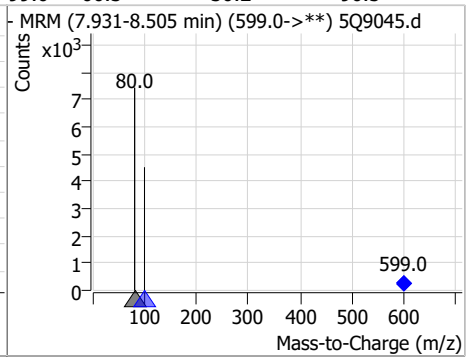




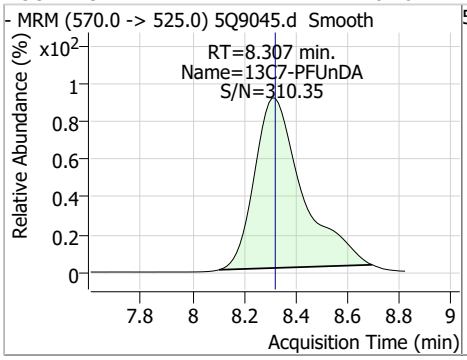
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	49.32	8.13	0.00	235764	599.0 -> 99.0	60.3	30.2	90.5

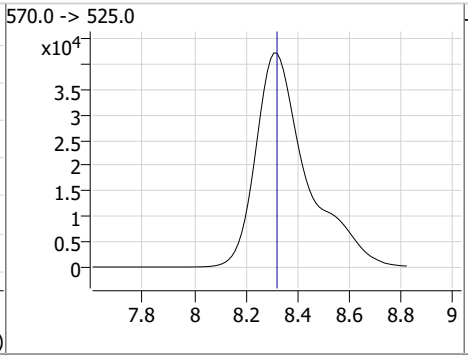


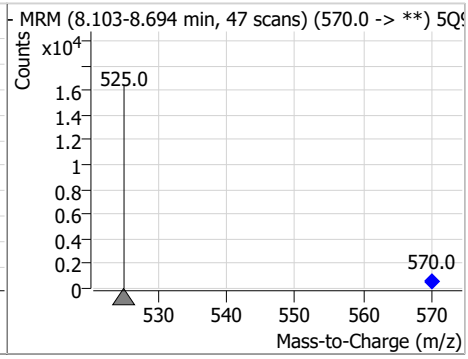




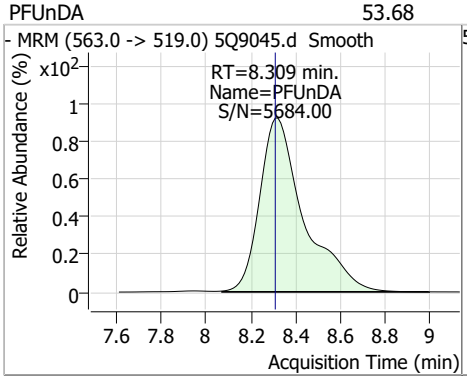
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	18.20	8.31	-0.01	532577				

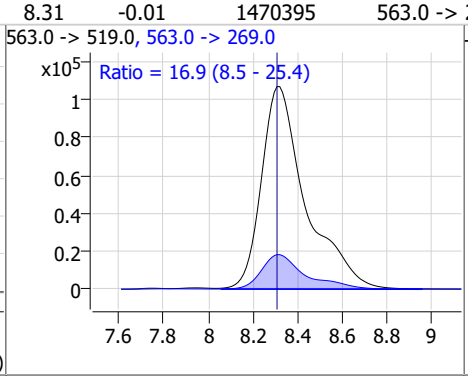


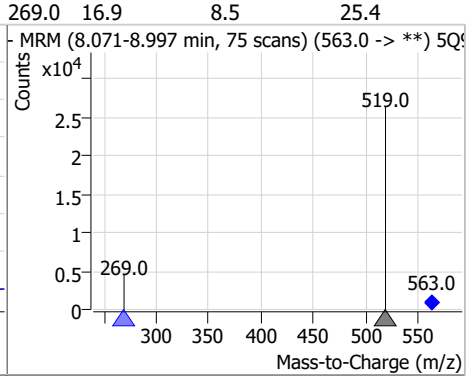




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	53.68	8.31	-0.01	1470395	563.0 -> 269.0	16.9	8.5	25.4

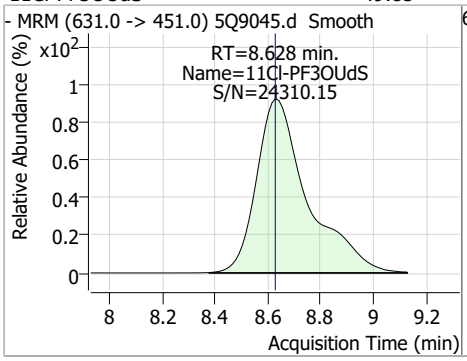


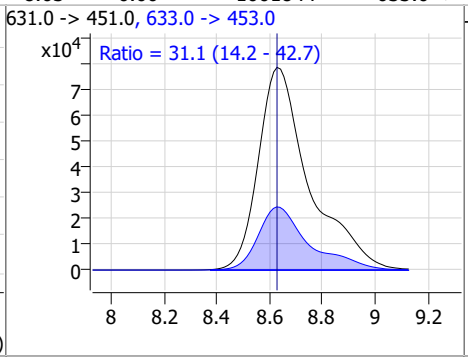


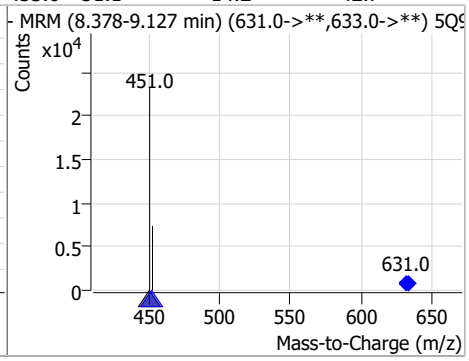


Perfluorinated Compounds by LC/MS/MS

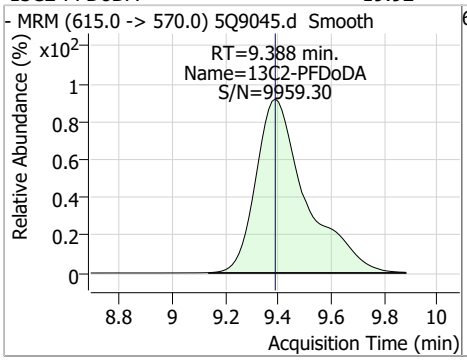
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	49.85	8.63	0.00	1061844	633.0 -> 453.0	31.1	14.2	42.7

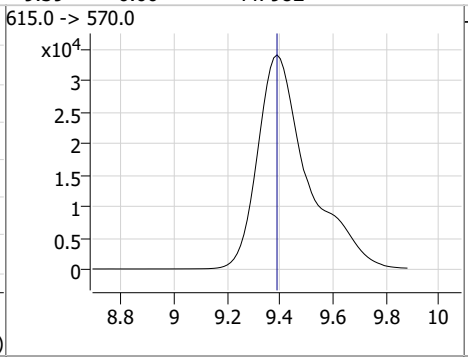


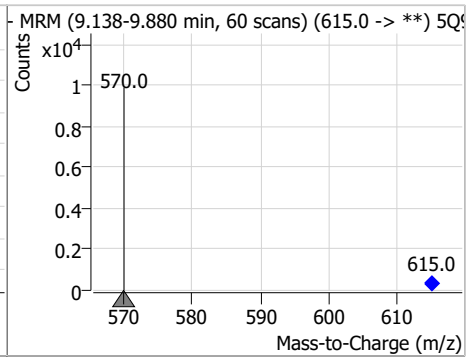




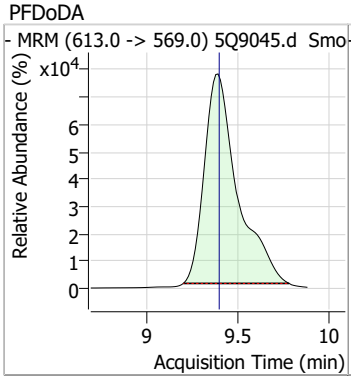
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.92	9.39	0.00	447982				

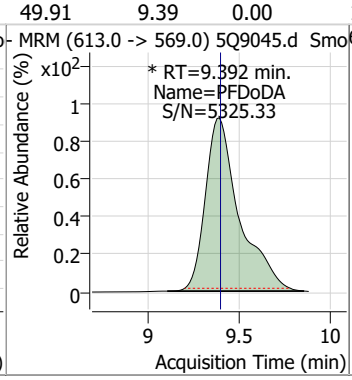


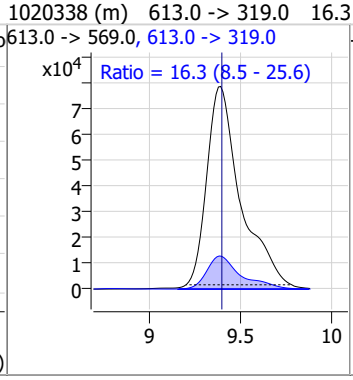


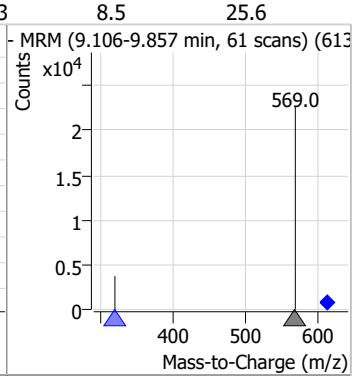


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	49.91	9.39	0.00	1020338 (m)	613.0 -> 319.0	16.3	8.5	25.6

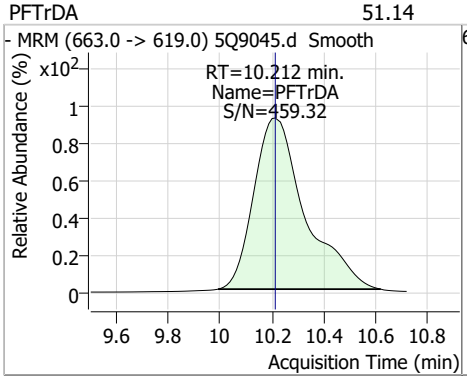


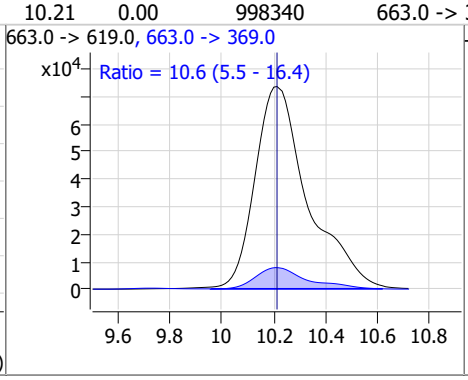


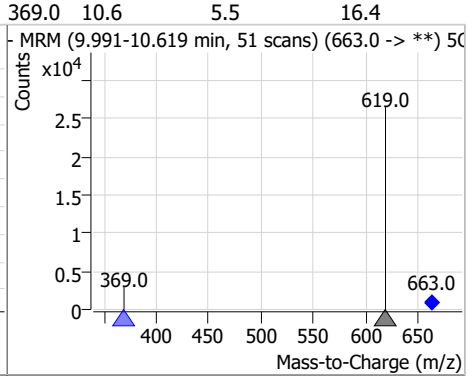




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	51.14	10.21	0.00	998340	663.0 -> 369.0	10.6	5.5	16.4

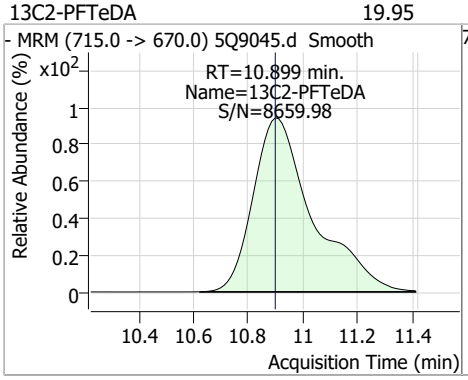


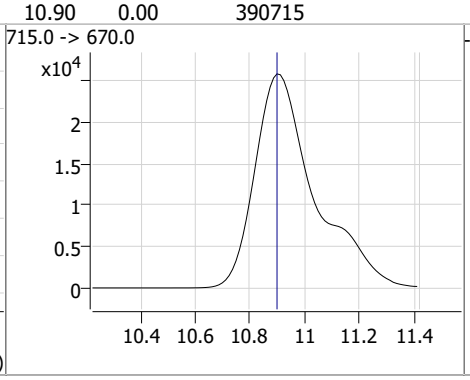


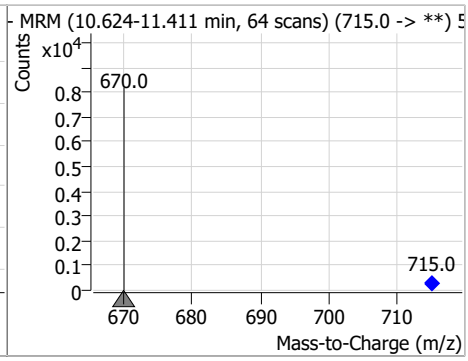


Perfluorinated Compounds by LC/MS/MS

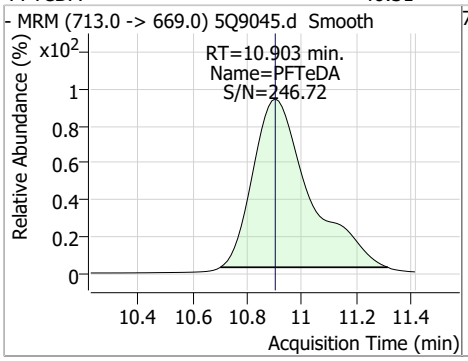
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.95	10.90	0.00	390715				

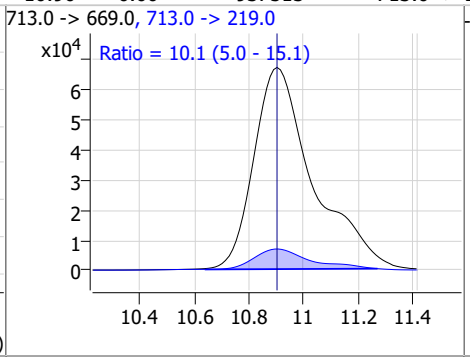


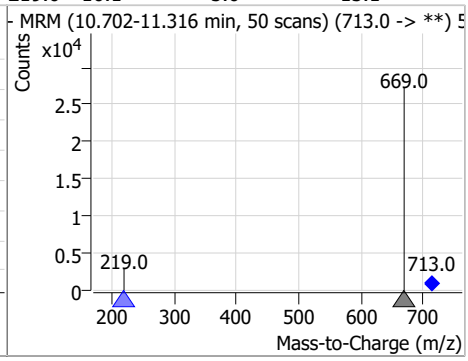




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	46.31	10.90	0.00	937513	713.0 -> 219.0	10.1	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q134-IC134
Lab FileID: 5Q9045.D
Injection Time: 12/28/22 14:10
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.74	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.88	Split peak
Perfluorododecanoic acid	307-55-1		9.39	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9046.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 2:28:14 PM
Sample Name : ic134-100
Vial : P1-A9
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.387	217.0 -> 172.0	103765	20.00	µg/L	-0.013
M5-PFPeA	3.919	268.0 -> 223.0	210022	20.00	µg/L	0.000
M5-PFHxA	4.952	318.0 -> 273.0	296821	20.00	µg/L	-0.012
M4-PFHpA	5.714	367.0 -> 322.0	288486	20.00	µg/L	-0.012
M8-PFOA	6.348	421.0 -> 376.0	374972	20.00	µg/L	-0.014
M9-PFNA	6.906	472.0 -> 427.0	398409	20.00	µg/L	-0.012
M6-PFDA	7.436	519.0 -> 474.0	421422	20.00	µg/L	0.000
M7-PFUnDA	8.307	570.0 -> 525.0	563250	20.00	µg/L	-0.012
M2-PFDoDA	9.375	615.0 -> 570.0	435904	20.00	µg/L	-0.013
M2-PFTeDA	10.899	715.0 -> 670.0	346872	20.00	µg/L	0.000
M8-FOSA	6.580	506.0 -> 78.0	90630	20.00	µg/L	-0.012
M3-PFBS	4.112	302.0 -> 99.0	25300	20.00	µg/L	-0.012
M3-PFHxS	5.721	402.0 -> 99.0	35692	20.00	µg/L	-0.012
M8-PFOS	6.866	507.0 -> 99.0	47172	20.00	µg/L	-0.013
M2-4:2FTS	4.874	329.0 -> 309.0	119051	20.00	µg/L	-0.012
M2-6:2FTS	6.346	429.0 -> 409.0	176118	20.00	µg/L	-0.014
M2-8:2FTS	7.498	529.0 -> 509.0	169127	20.00	µg/L	-0.013
M3-MeFOSAA	7.034	573.0 -> 419.0	33437	20.00	µg/L	0.000
M3-HFPO-DA	5.182	287.0 -> 169.0	66656	20.00	µg/L	0.000
M3-MeFOSA	6.939	515.0 -> 169.0	28037	20.00	µg/L	-0.012
M5-EtFOSAA	7.132	589.0 -> 419.0	34693	20.00	µg/L	-0.012
System Monitoring Compounds						
13C2-4:2FTS	4.874	329.0 -> 309.0	119051	24.73	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 123.6%		
13C2-6:2FTS	6.346	429.0 -> 409.0	176118	22.97	µg/L	-0.014
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 114.9%		
13C2-8:2FTS	7.498	529.0 -> 509.0	169127	23.42	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 117.1%		
13C2-PFDoDA	9.375	615.0 -> 570.0	435904	19.39	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.9%		
13C2-PFTeDA	10.899	715.0 -> 670.0	346872	17.72	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.6%		
13C3-PFBS	4.112	302.0 -> 99.0	25300	19.47	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.3%		
13C3-PFHxS	5.721	402.0 -> 99.0	35692	19.94	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.7%		
13C4-PFBA	2.387	217.0 -> 172.0	103765	19.94	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.7%		
13C4-PFHpA	5.714	367.0 -> 322.0	288486	18.76	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.8%		
13C5-PFHxA	4.952	318.0 -> 273.0	296821	19.73	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%		
13C5-PFPeA	3.919	268.0 -> 223.0	210022	20.02	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.1%		
13C6-PFDA	7.436	519.0 -> 474.0	421422	18.13	µg/L	0.000

Perfluorinated Compounds by LC/MS/MS

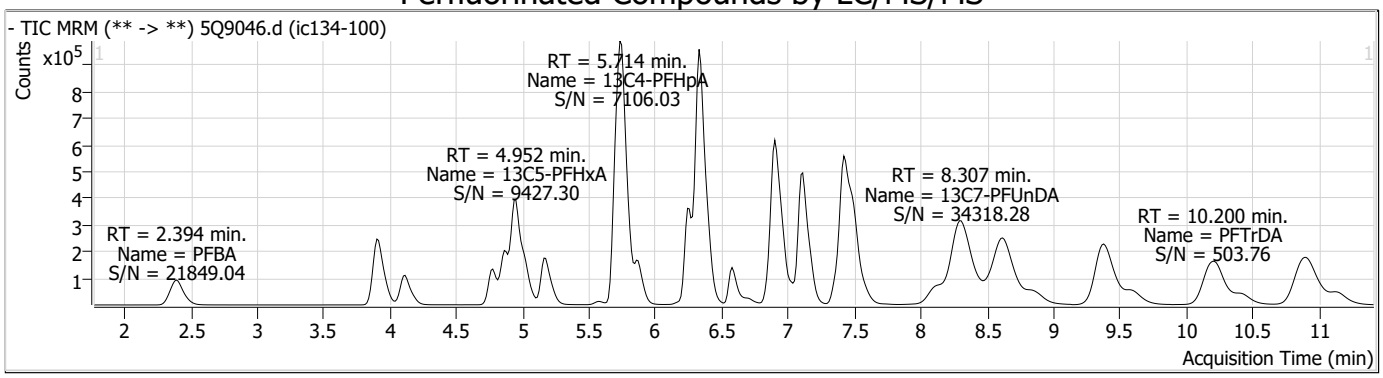
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.6%		
13C7-PFUnDA	8.307	570.0 -> 525.0	563250	19.25 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.2%		
13C8-FOSA	6.580	506.0 -> 78.0	90630	18.77 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.8%		
13C8-PFOA	6.348	421.0 -> 376.0	374972	18.61 µg/L		-0.014
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.0%		
13C8-PFOS	6.866	507.0 -> 99.0	47172	19.78 µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.9%		
13C9-PFNA	6.906	472.0 -> 427.0	398409	18.94 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.7%		
d3-MeFOSAA	7.034	573.0 -> 419.0	33437	18.82 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.1%		
13C3-HFPO-DA	5.182	287.0 -> 169.0	66656	20.15 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.8%		
d3-MeFOSA	6.939	515.0 -> 169.0	28037	18.51 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.5%		
d5-EtFOSAA	7.132	589.0 -> 419.0	34693	18.81 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.1%		
Target Compounds						QValue
4:2FTS	4.876	327.0 -> 307.0	557281	85.53 µg/L		99
		327.0 -> 81.0	325901			
6:2FTS	6.347	427.0 -> 407.0	784684	86.81 µg/L		100
		427.0 -> 81.0	336118			
8:2FTS	7.499	527.0 -> 507.0	732198	84.75 µg/L		99
		527.0 -> 81.0	361555			
EtFOSAA	7.133	584.0 -> 419.0	116522	100.60 µg/L		97
		584.0 -> 483.0	71523			
FOSA	6.582	498.0 -> 78.0	467239	100.34 µg/L		100
		498.0 -> 478.0	15025			
MeFOSAA	7.035	570.0 -> 419.0	135664	99.98 µg/L		98
		570.0 -> 512.0	54386			
PFBA	2.394	213.0 -> 169.0	567297	100.38 µg/L		100
PFBS	4.117	299.0 -> 80.0	412814	100.33 µg/L		100
		299.0 -> 99.0	177604			
PFDA	7.425	513.0 -> 469.0	2245674	100.09 µg/L		99
		513.0 -> 219.0	407416			
PFDoDA	9.379	613.0 -> 569.0	1990826	100.09 µg/L	m	99
		613.0 -> 319.0	327606			
PFDS	8.119	599.0 -> 80.0	510703	101.03 µg/L		100
		599.0 -> 99.0	308248			
PFHpA	5.714	363.0 -> 319.0	1807457	100.17 µg/L		100
		363.0 -> 169.0	404966			
PFHpS	6.319	449.0 -> 80.0	359685	99.76 µg/L		98
		449.0 -> 99.0	193303			
PFHxA	4.953	313.0 -> 269.0	1511441	100.26 µg/L		100
		313.0 -> 119.0	69193			
PFHxS	5.722	399.0 -> 80.0	360647	99.55 µg/L	m	100
		399.0 -> 99.0	202956			
PFNA	6.906	463.0 -> 419.0	2060839	99.75 µg/L		100
		463.0 -> 219.0	447637			
PFNS	7.371	549.0 -> 80.0	321853	99.50 µg/L		99
		549.0 -> 99.0	189940			
PFOA	6.348	413.0 -> 369.0	2144345	99.91 µg/L		99
		413.0 -> 169.0	578766			
PFOS	6.867	499.0 -> 80.0	435428	100.06 µg/L	m	100

Perfluorinated Compounds by LC/MS/MS

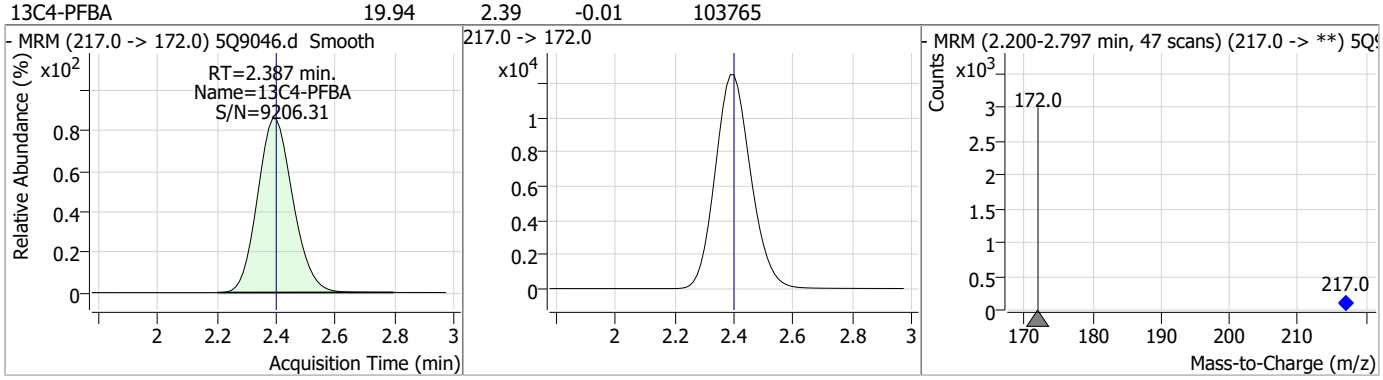
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	207586			
PFPeA	3.922	263.0 -> 219.0	1235790	100.12	µg/L	100
PFPeS	5.035	349.0 -> 80.0	271909	100.94	µg/L	100
		349.0 -> 99.0	138363			
PFTeDA	10.903	713.0 -> 669.0	1839411	102.35	µg/L	100
		713.0 -> 219.0	185056			
PFTrDA	10.200	663.0 -> 619.0	1889819	99.49	µg/L	100
		663.0 -> 369.0	207409			
PFUnDA	8.309	563.0 -> 519.0	2850295	98.39	µg/L	100
		563.0 -> 269.0	484867			
11Cl-PF3OUdS	8.628	631.0 -> 451.0	2126299	100.04	µg/L	99
		633.0 -> 453.0	615944			
9Cl-PF3ONS	7.111	531.0 -> 351.0	1880799	101.00	µg/L	99
		533.0 -> 353.0	590525			
ADONA	5.763	377.0 -> 251.0	2378988	98.81	µg/L	99
		377.0 -> 85.0	900219			
HFPO-DA	5.177	329.0 -> 169.0	532921	100.07	µg/L	99
		285.0 -> 169.0	318468			
MeFOSA	6.953	512.0 -> 169.0	166810	100.54	µg/L	99
		512.0 -> 219.0	127786			
4-PFECHS	6.255	461.0 -> 381.0	1205384	100.88	µg/L	99
		461.0 -> 99.0	648490			
FBSA	4.781	298.0 -> 78.0	616479	100.10	µg/L	100
		298.0 -> 64.0	56312			
FHxSA	5.875	398.0 -> 78.0	561659	100.70	µg/L	100
		398.0 -> 64.0	53679			

 # = Qualifier out of range, m = manually integrated, + = Area summed

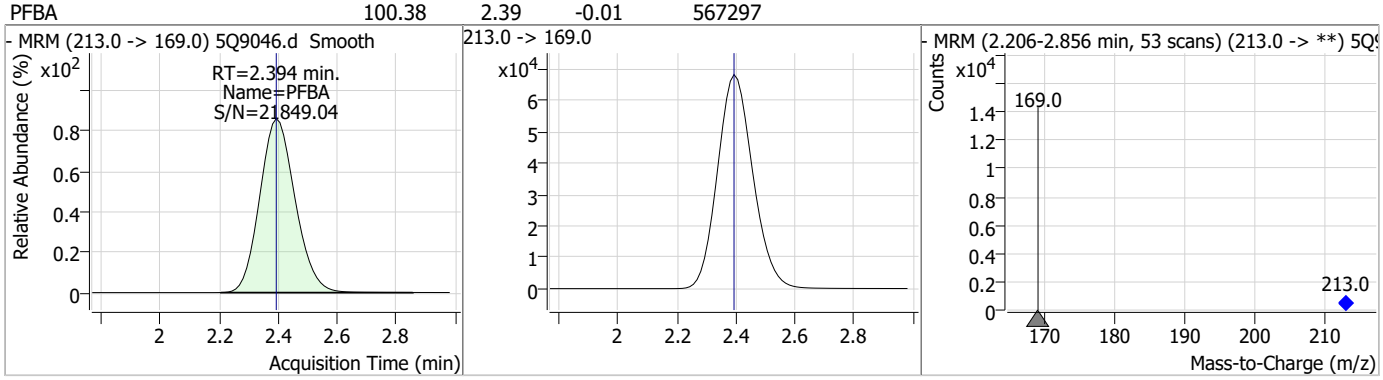
Perfluorinated Compounds by LC/MS/MS



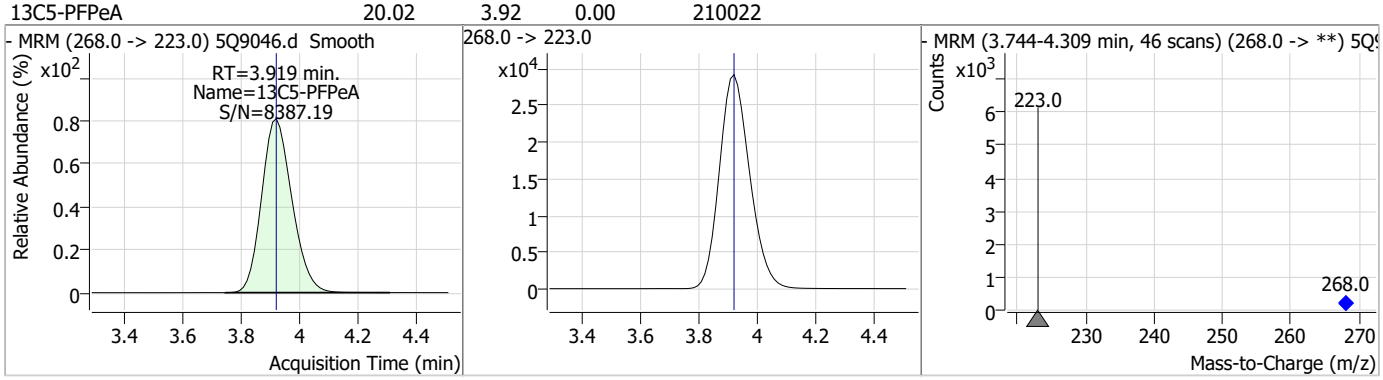
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.94	2.39	-0.01	103765				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	100.38	2.39	-0.01	567297				

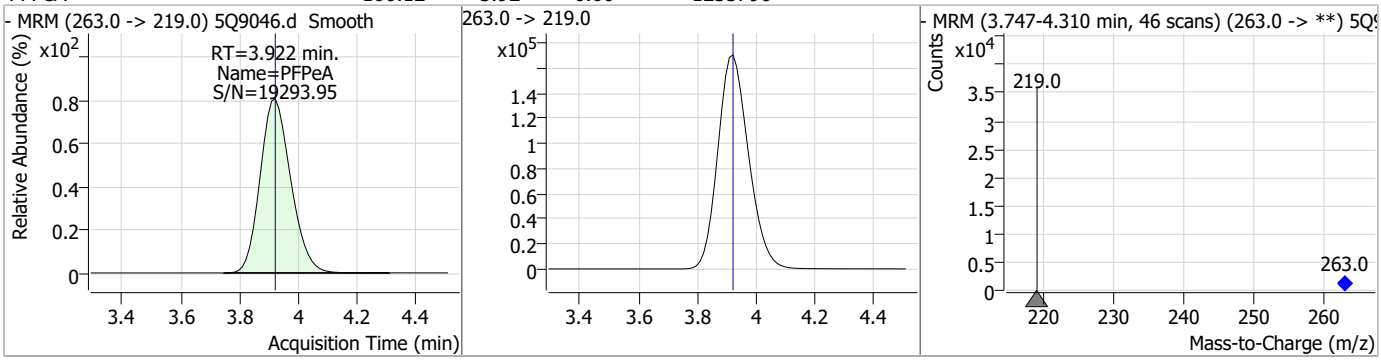


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.02	3.92	0.00	210022				

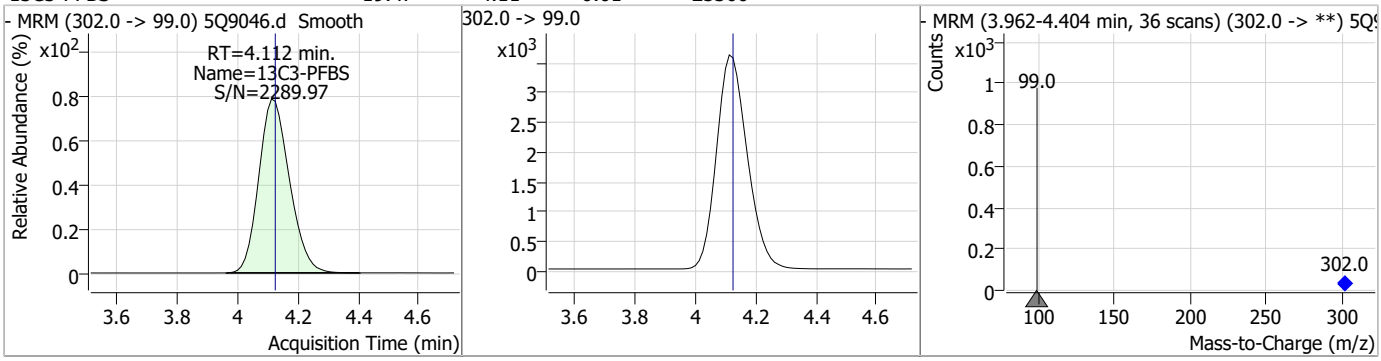


Perfluorinated Compounds by LC/MS/MS

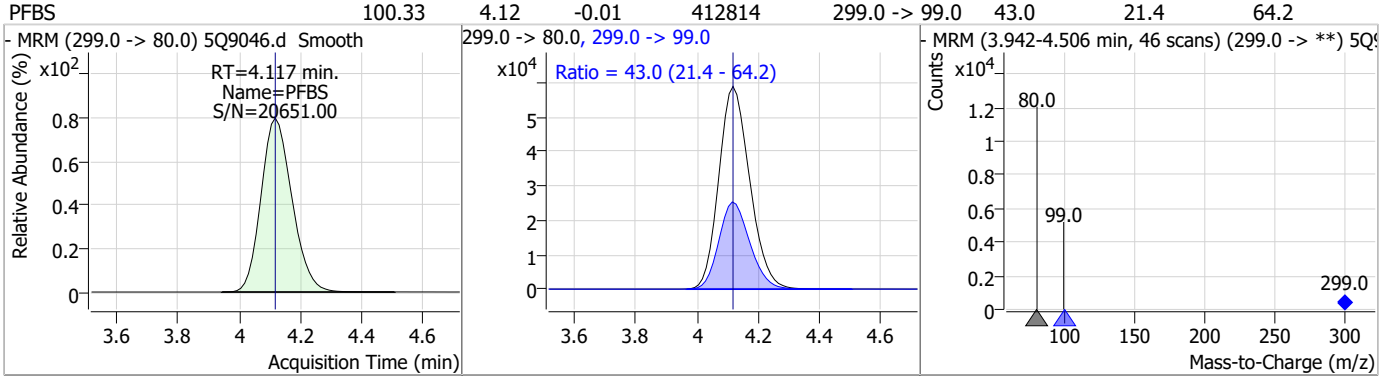
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	100.12	3.92	0.00	1235790				



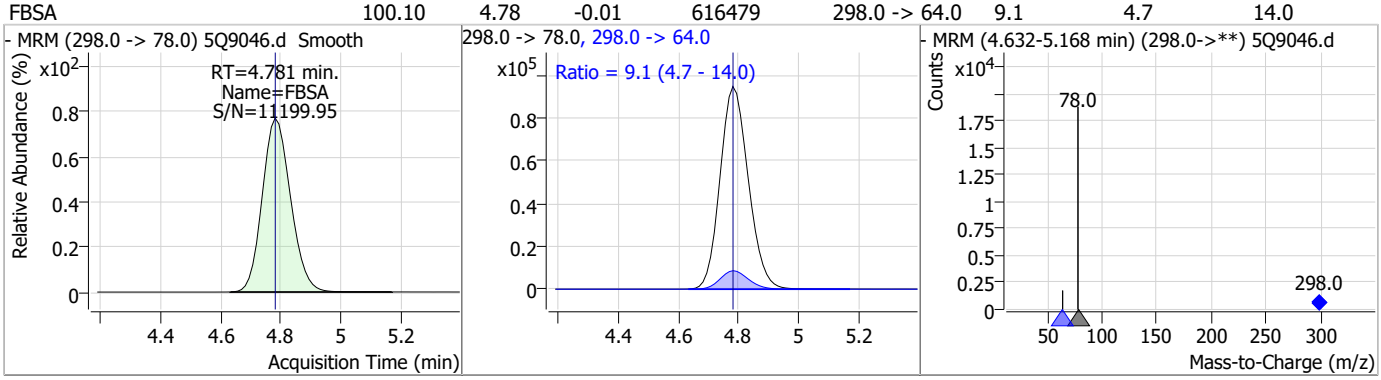
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.47	4.11	-0.01	25300				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	100.33	4.12	-0.01	412814	299.0 -> 99.0	43.0	21.4	64.2

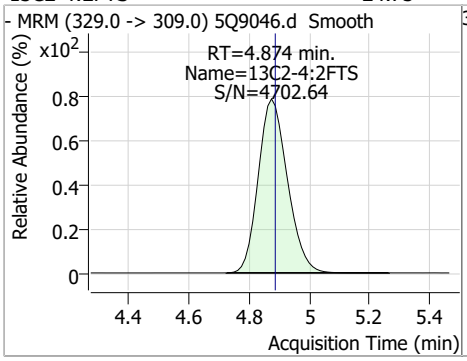


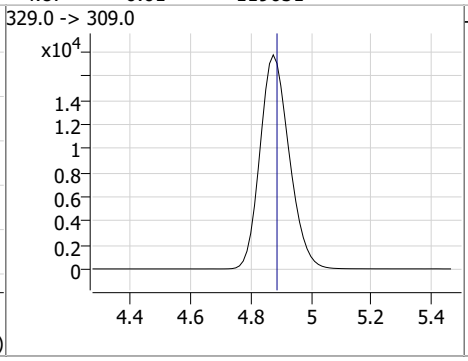
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	100.10	4.78	-0.01	616479	298.0 -> 64.0	9.1	4.7	14.0

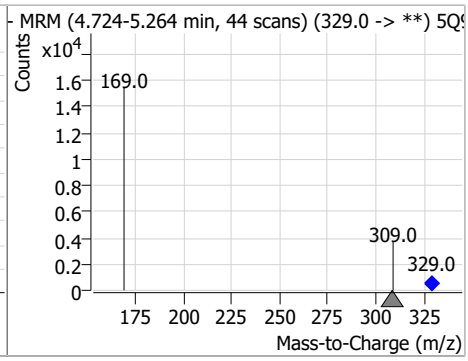


Perfluorinated Compounds by LC/MS/MS

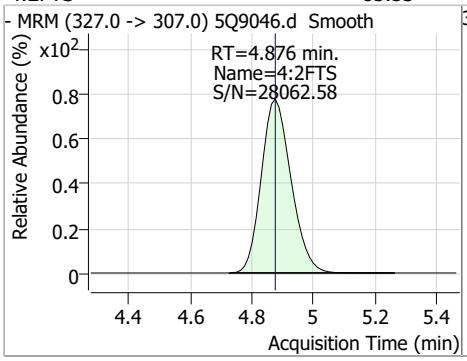
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	24.73	4.87	-0.01	119051				

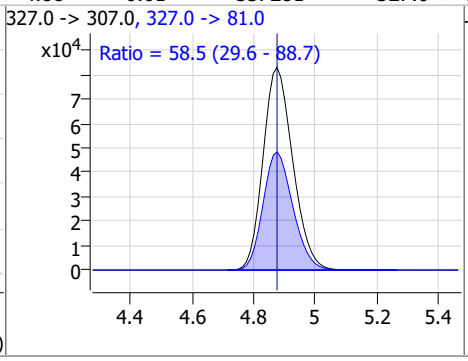


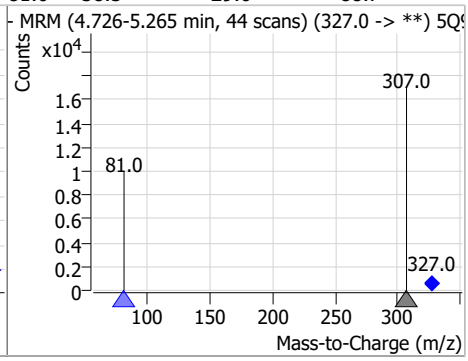




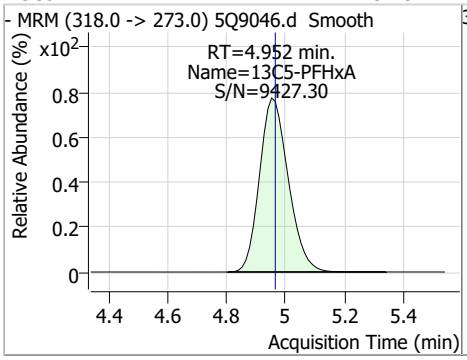
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	85.53	4.88	-0.01	557281	327.0 -> 81.0	58.5	29.6	88.7

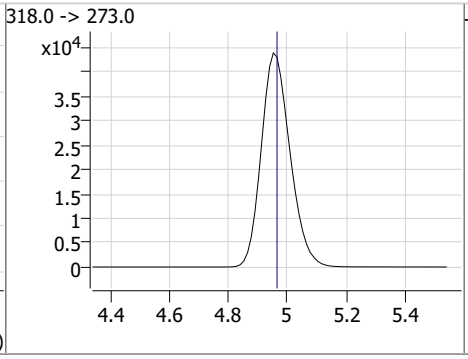


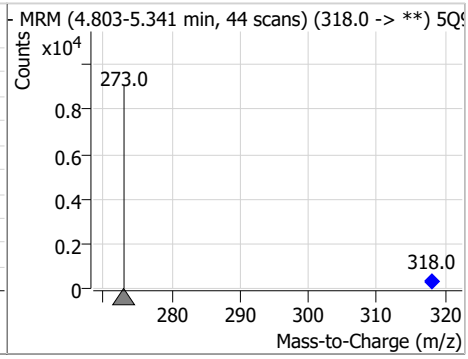




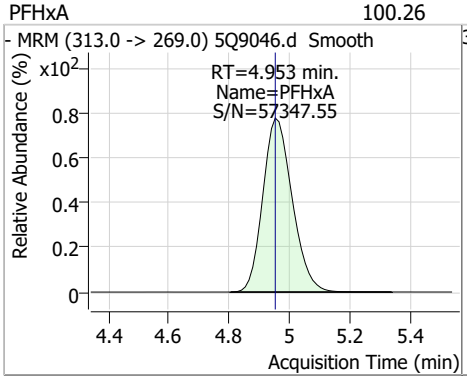
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.73	4.95	-0.01	296821				

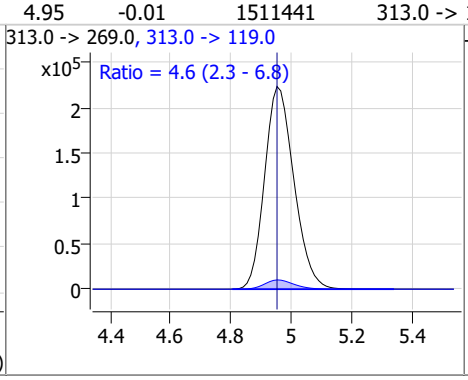


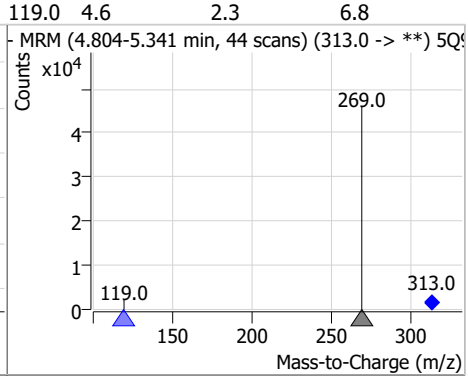




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	100.26	4.95	-0.01	1511441	313.0 -> 119.0	4.6	2.3	6.8

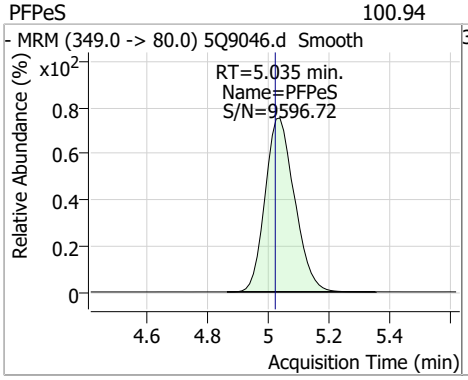


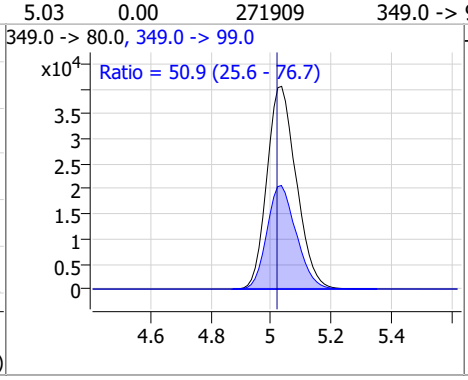


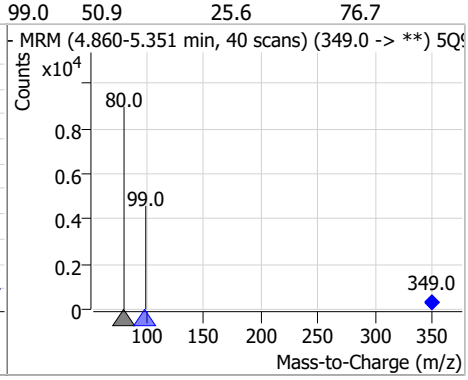


Perfluorinated Compounds by LC/MS/MS

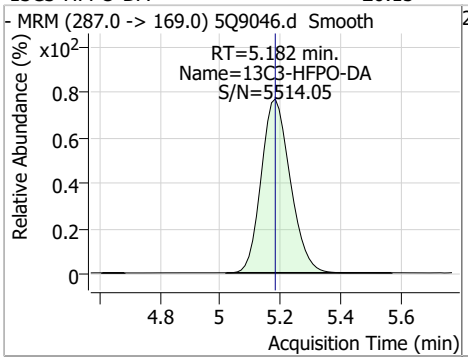
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	100.94	5.03	0.00	271909	349.0 -> 99.0	50.9	25.6	76.7

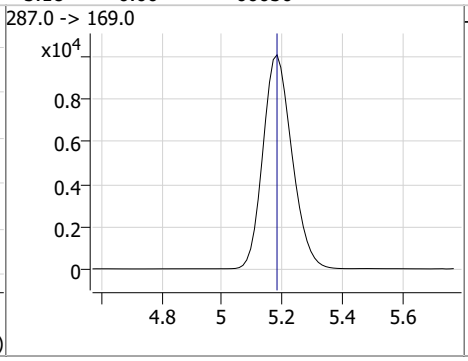


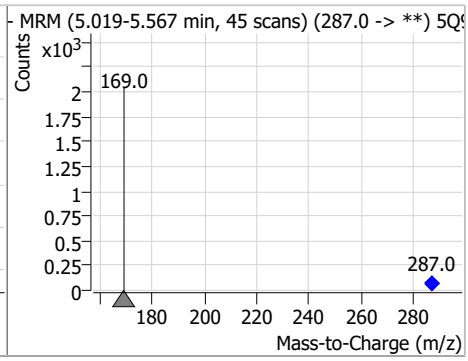




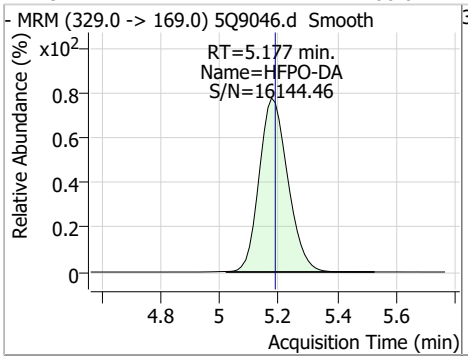
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.15	5.18	0.00	66656				

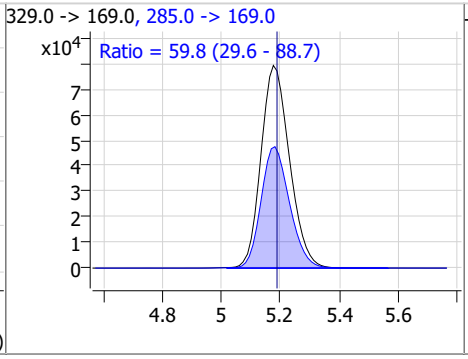


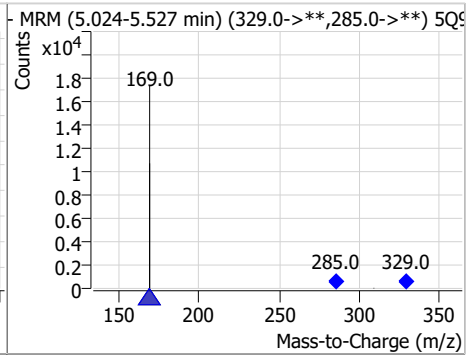




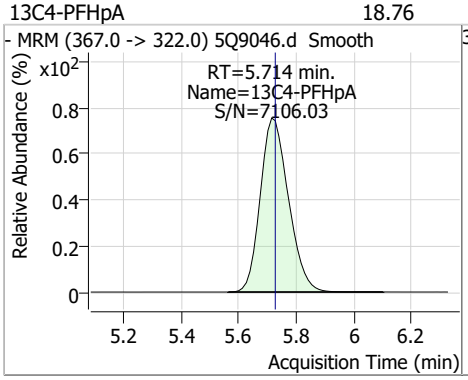
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	100.07	5.18	-0.01	532921	285.0 -> 169.0	59.8	29.6	88.7

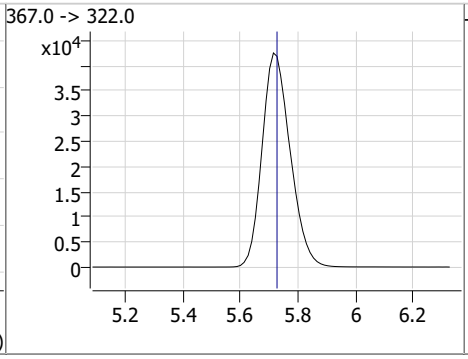


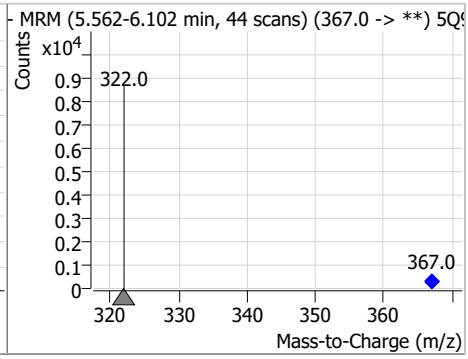




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	18.76	5.71	-0.01	288486				

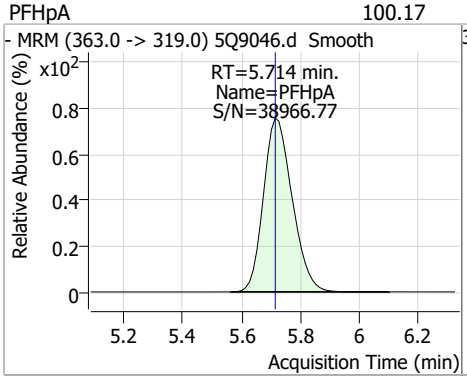


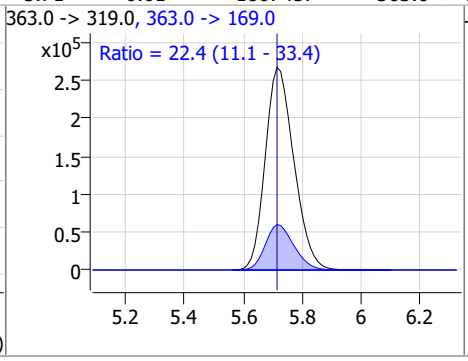


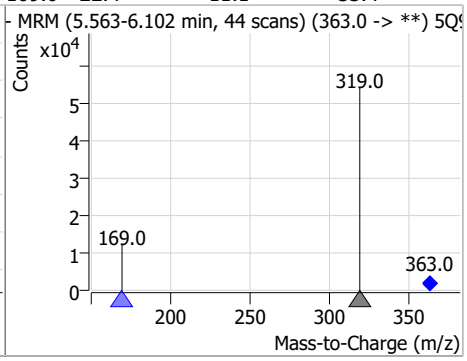


Perfluorinated Compounds by LC/MS/MS

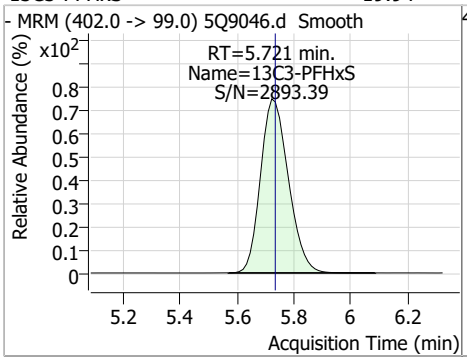
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	100.17	5.71	-0.01	1807457	363.0 -> 169.0	22.4	11.1	33.4

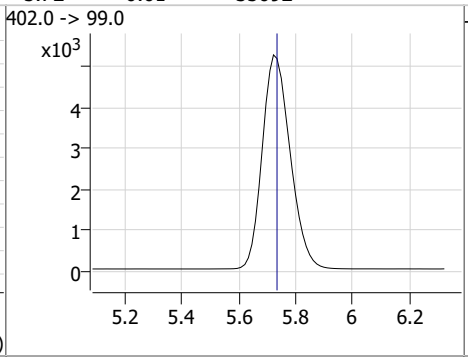


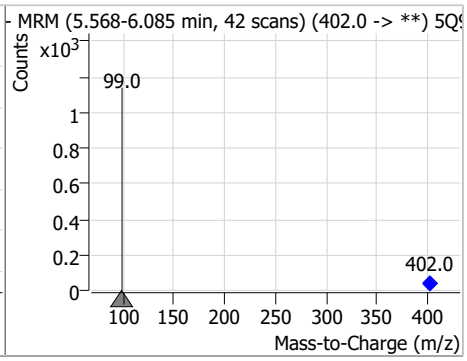




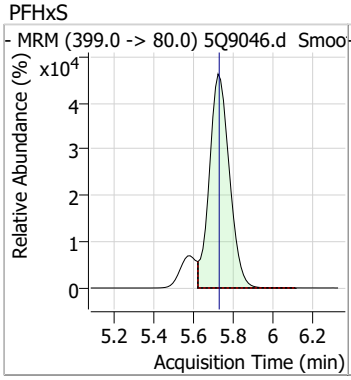
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.94	5.72	-0.01	35692				

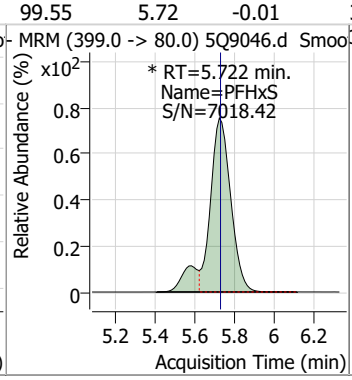


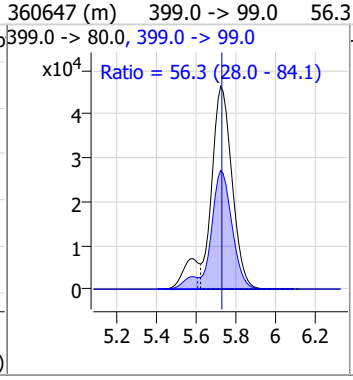


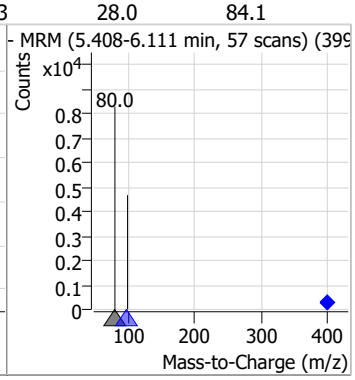


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	99.55	5.72	-0.01	360647 (m)	399.0 -> 99.0	56.3	28.0	84.1

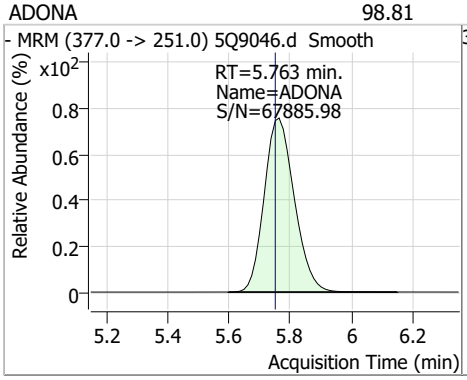


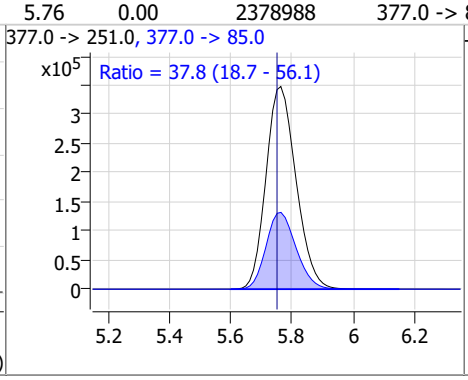


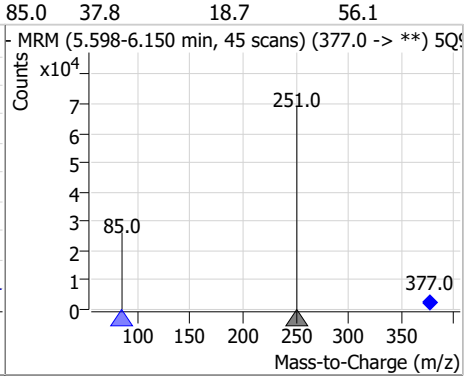




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	98.81	5.76	0.00	2378988	377.0 -> 85.0	37.8	18.7	56.1

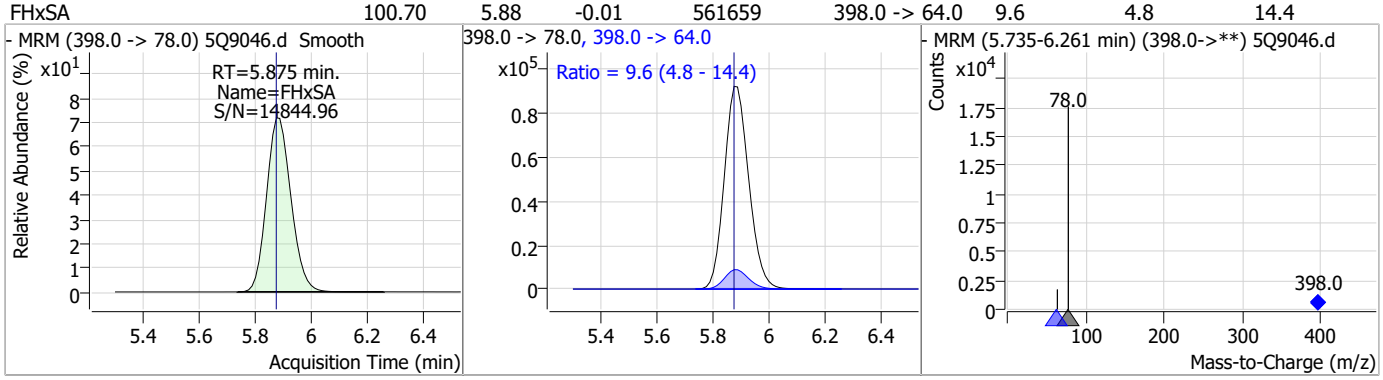




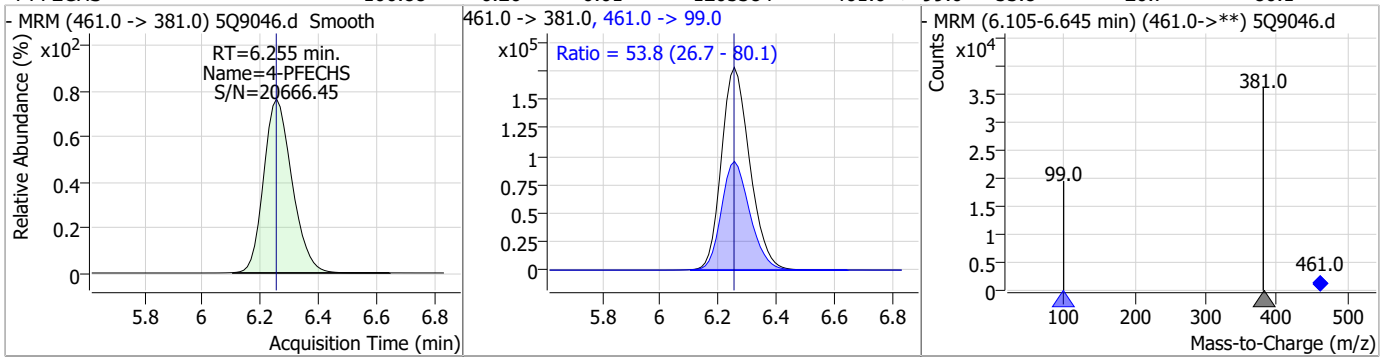


Perfluorinated Compounds by LC/MS/MS

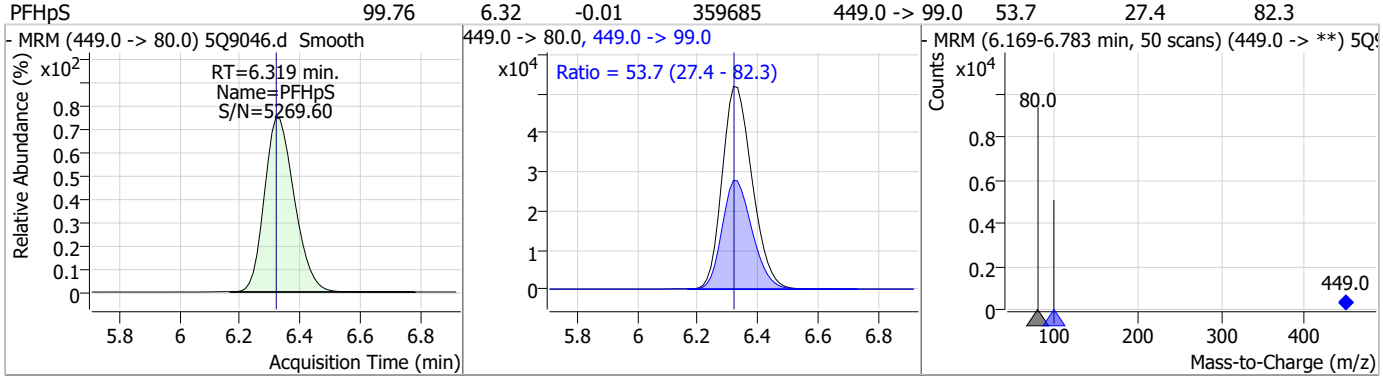
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	100.70	5.88	-0.01	561659	398.0 -> 64.0	9.6	4.8	14.4



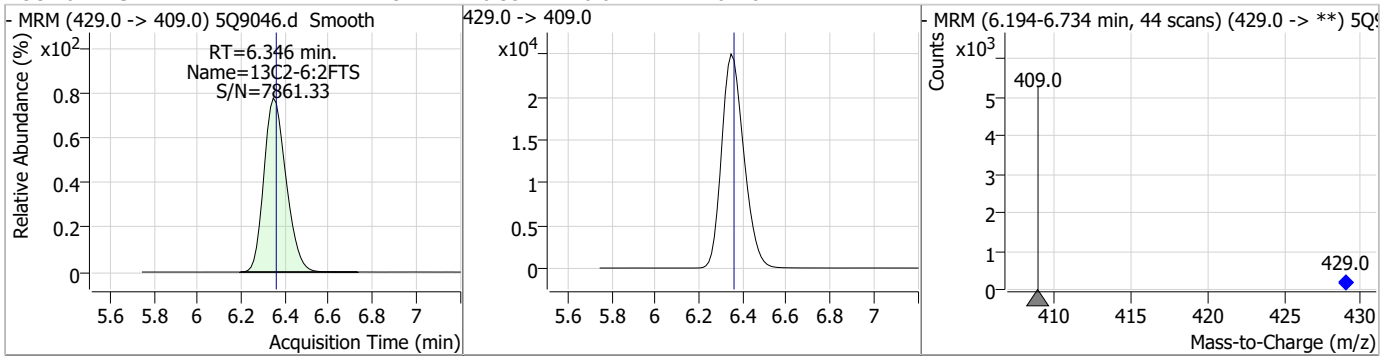
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	100.88	6.26	-0.01	1205384	461.0 -> 99.0	53.8	26.7	80.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	99.76	6.32	-0.01	359685	449.0 -> 99.0	53.7	27.4	82.3

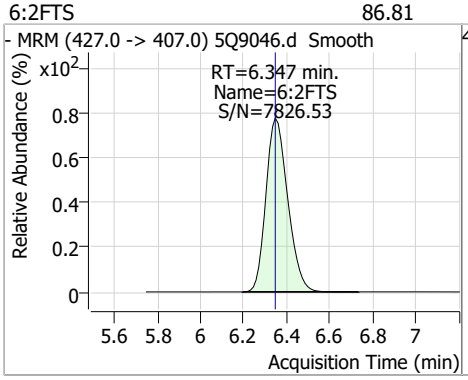


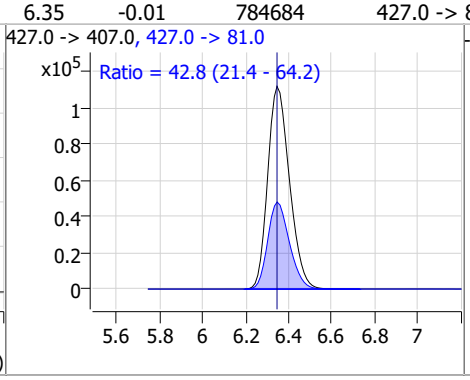
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	22.97	6.35	-0.01	176118				

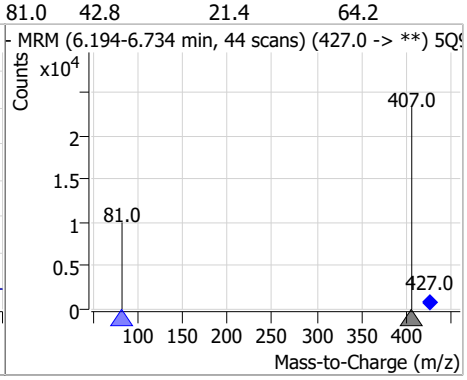


Perfluorinated Compounds by LC/MS/MS

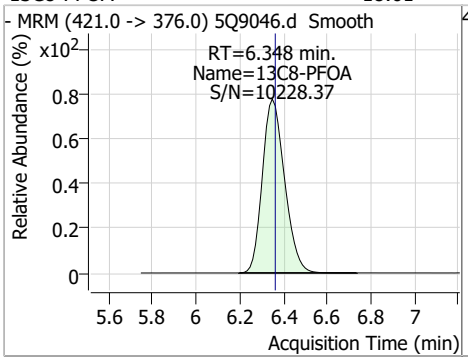
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	86.81	6.35	-0.01	784684	427.0 -> 81.0	42.8	21.4	64.2

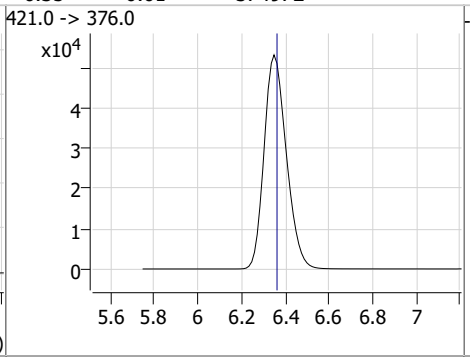


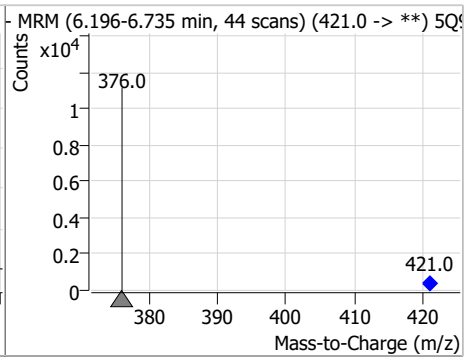




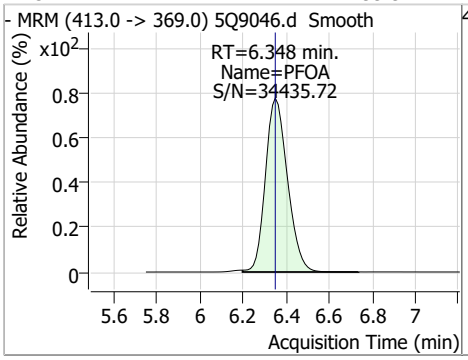
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	18.61	6.35	-0.01	374972				

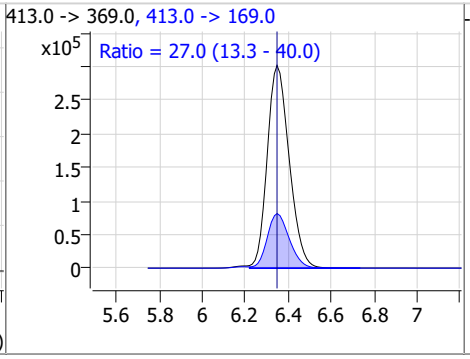


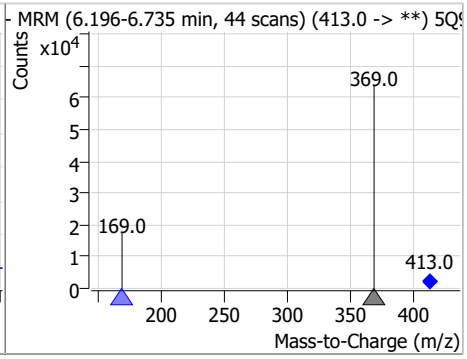




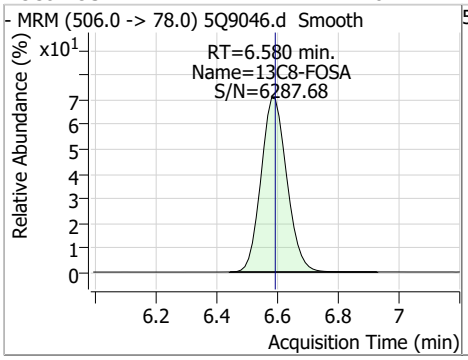
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	99.91	6.35	-0.01	2144345	413.0 -> 169.0	27.0	13.3	40.0

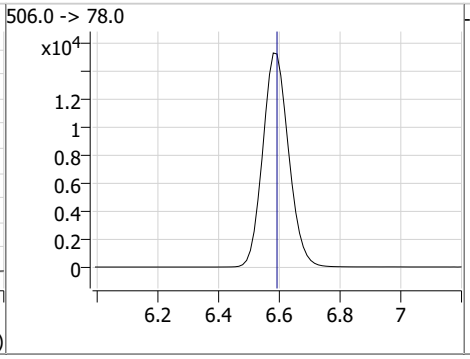


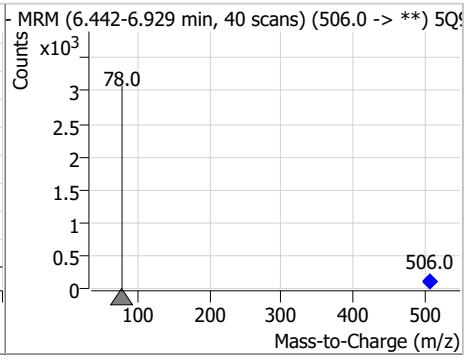




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	18.77	6.58	-0.01	90630				

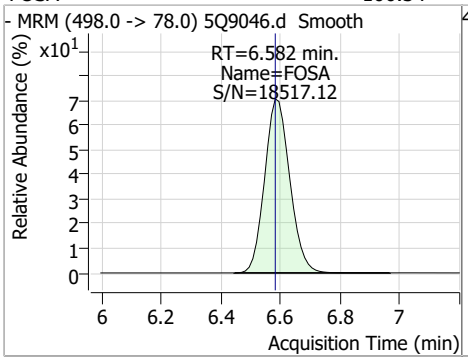


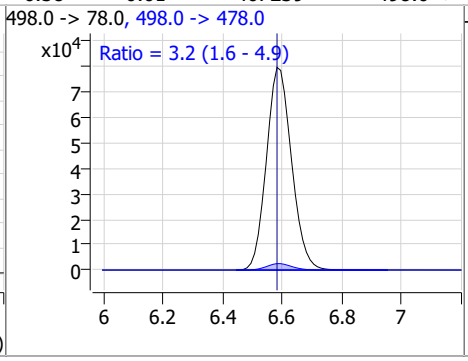


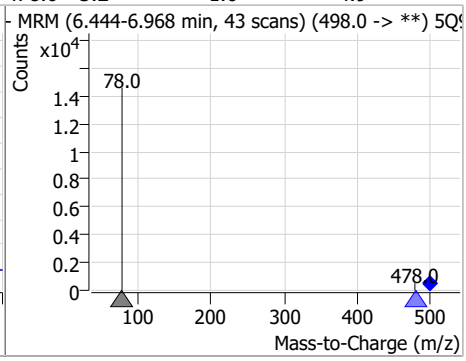


Perfluorinated Compounds by LC/MS/MS

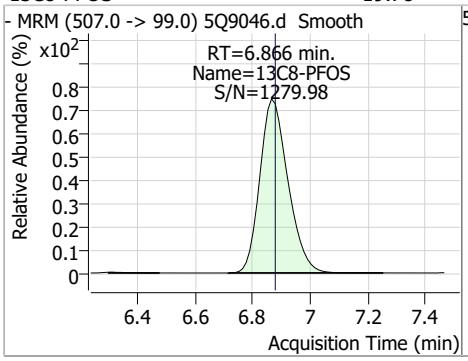
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	100.34	6.58	-0.01	467239	498.0 -> 478.0	3.2	1.6	4.9

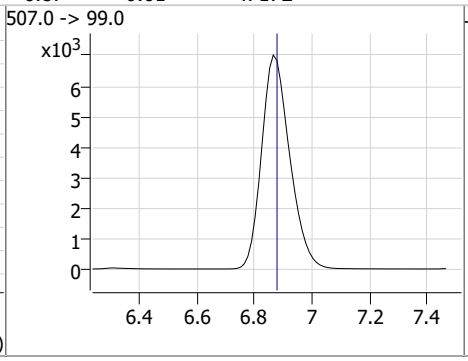


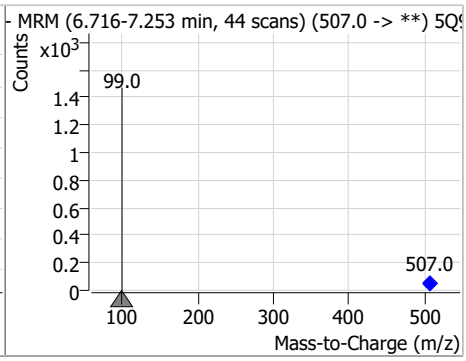




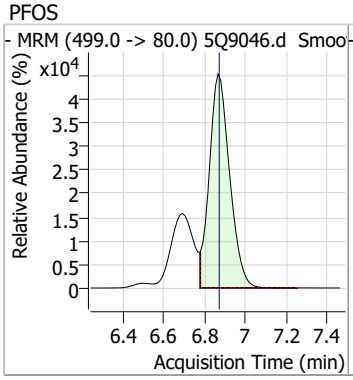
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.78	6.87	-0.01	47172				

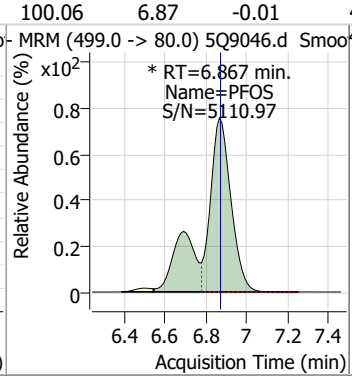


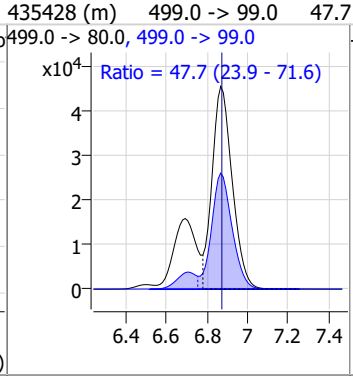


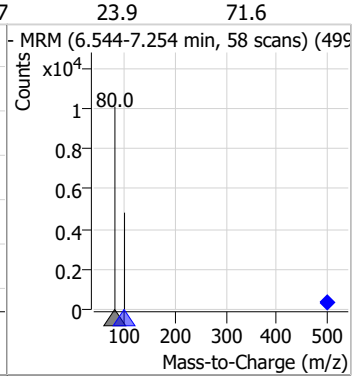


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	100.06	6.87	-0.01	435428 (m)	499.0 -> 99.0	47.7	23.9	71.6

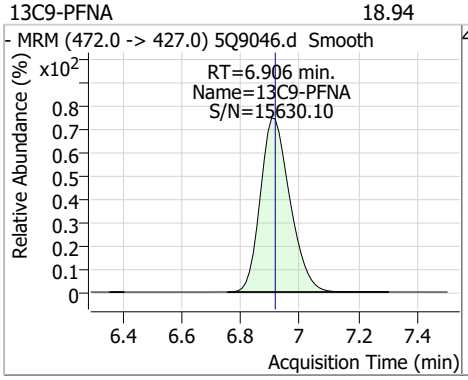


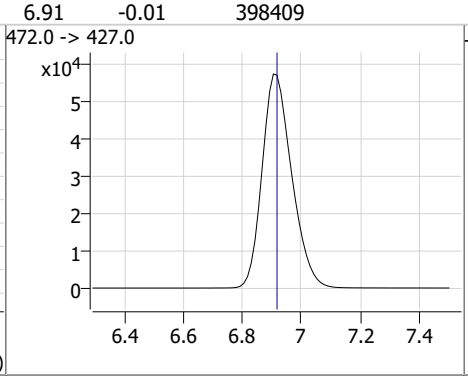


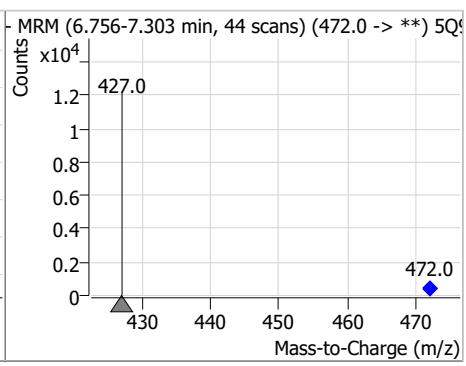




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.94	6.91	-0.01	398409				

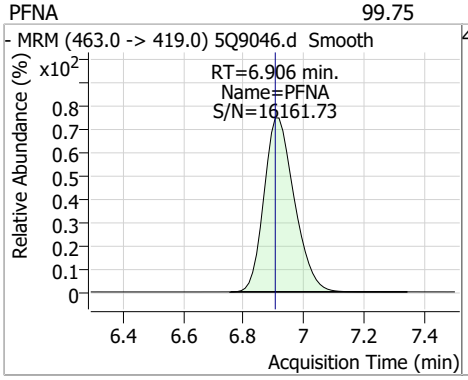


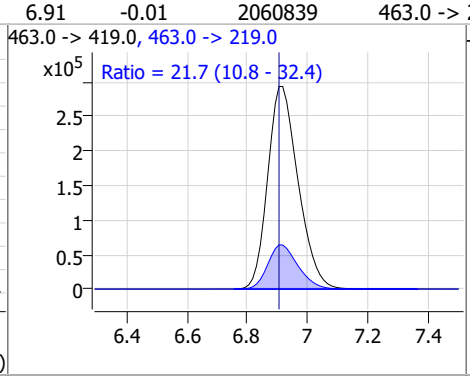


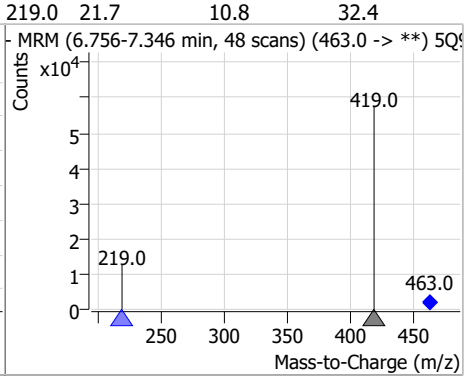


Perfluorinated Compounds by LC/MS/MS

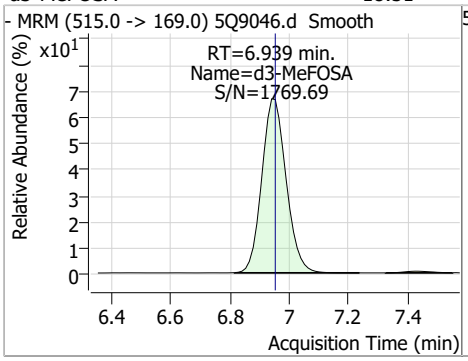
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	99.75	6.91	-0.01	2060839	463.0 -> 219.0	21.7	10.8	32.4

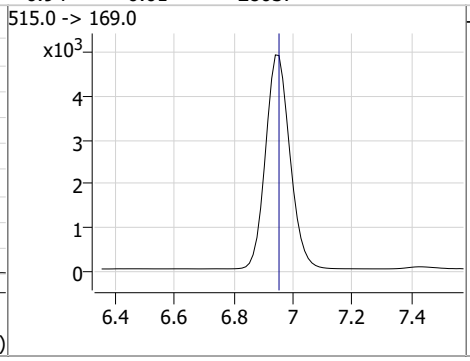


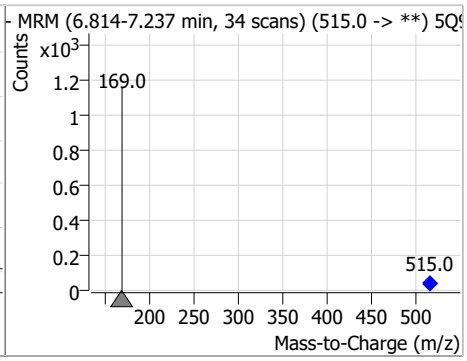




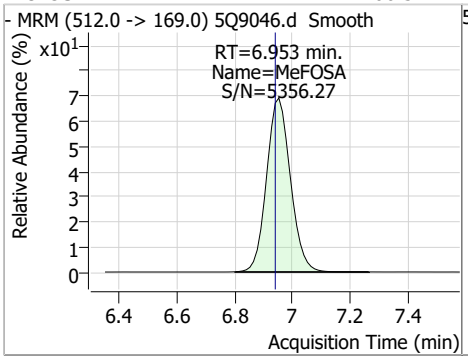
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	18.51	6.94	-0.01	28037				

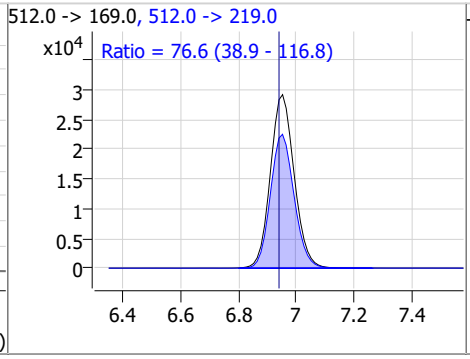


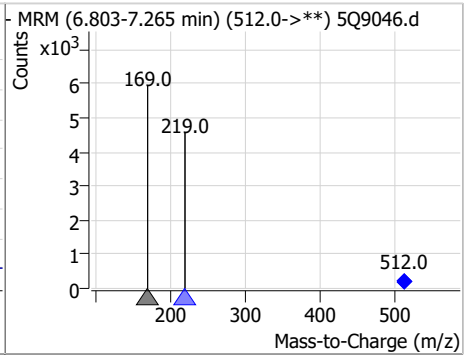




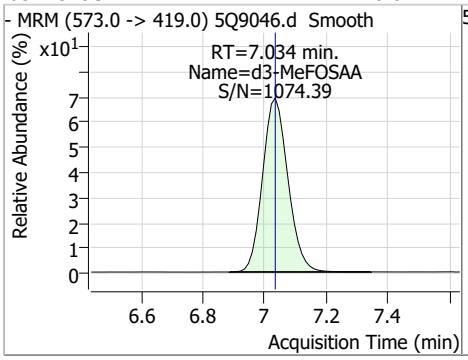
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	100.54	6.95	0.00	166810	512.0 -> 219.0	76.6	38.9	116.8

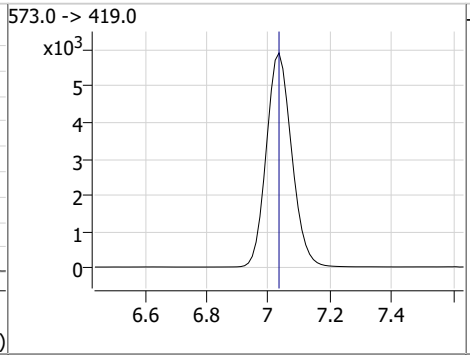


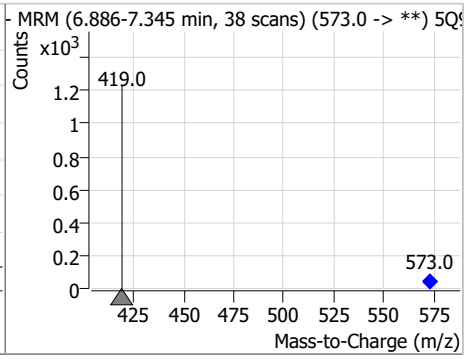




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	18.82	7.03	0.00	33437				

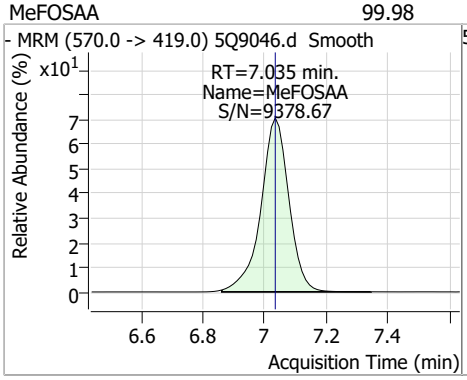


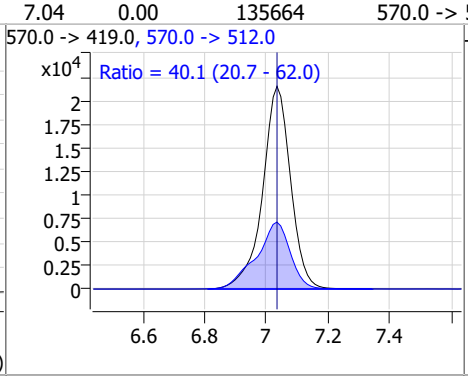


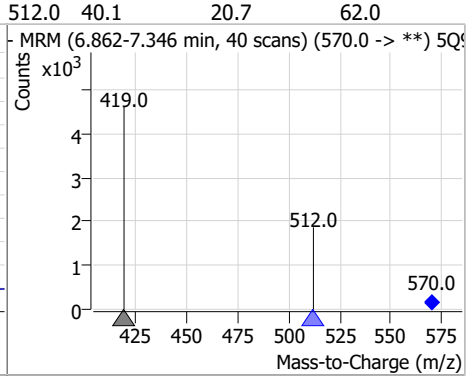


Perfluorinated Compounds by LC/MS/MS

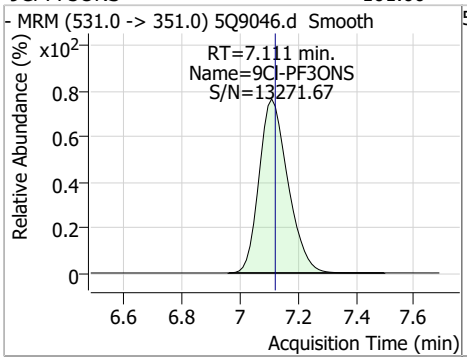
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	99.98	7.04	0.00	135664	570.0 -> 512.0	40.1	20.7	62.0

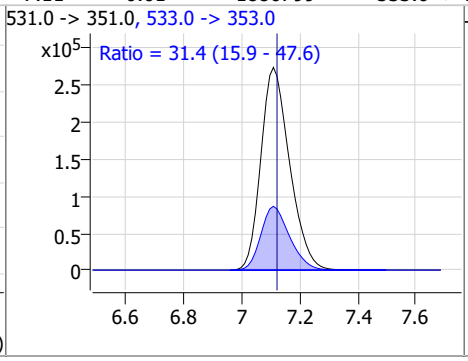


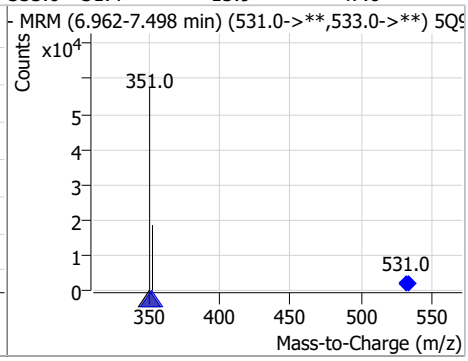




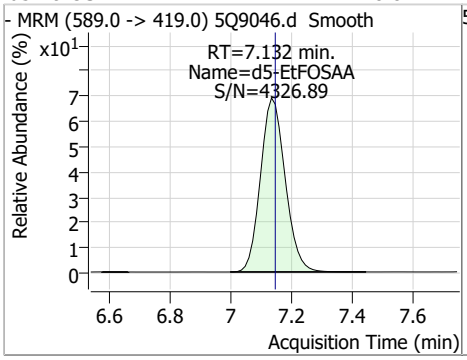
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	101.00	7.11	-0.01	1880799	533.0 -> 353.0	31.4	15.9	47.6

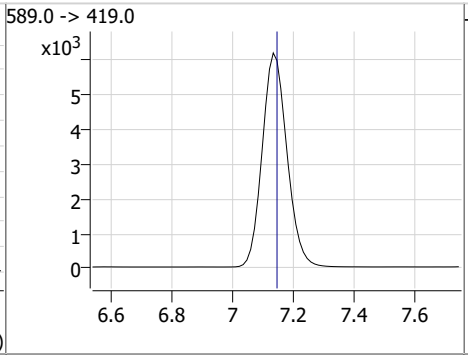


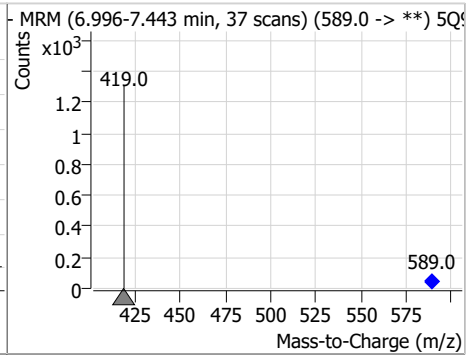




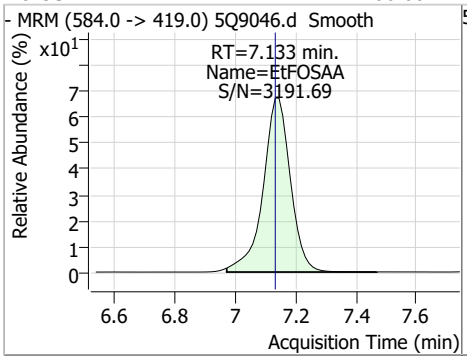
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.81	7.13	-0.01	34693				

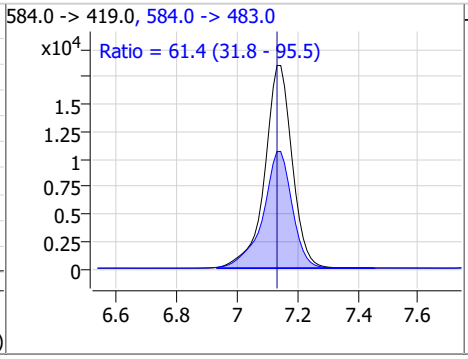


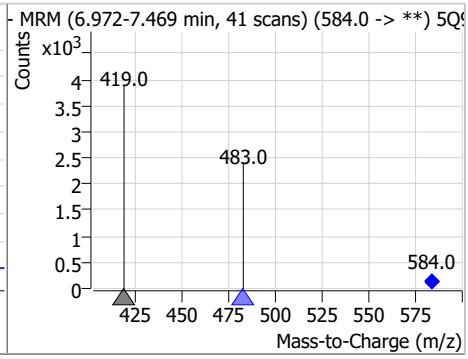




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	100.60	7.13	-0.01	116522	584.0 -> 483.0	61.4	31.8	95.5

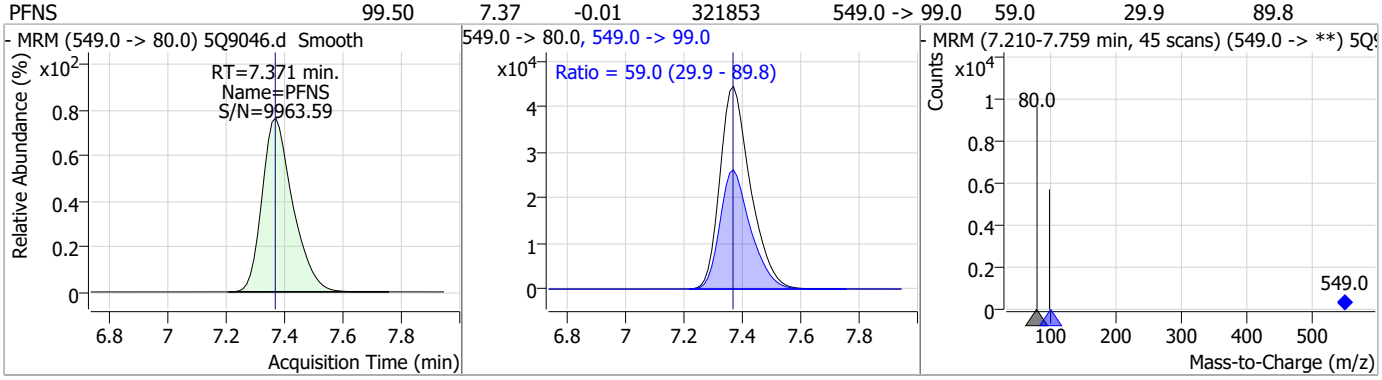




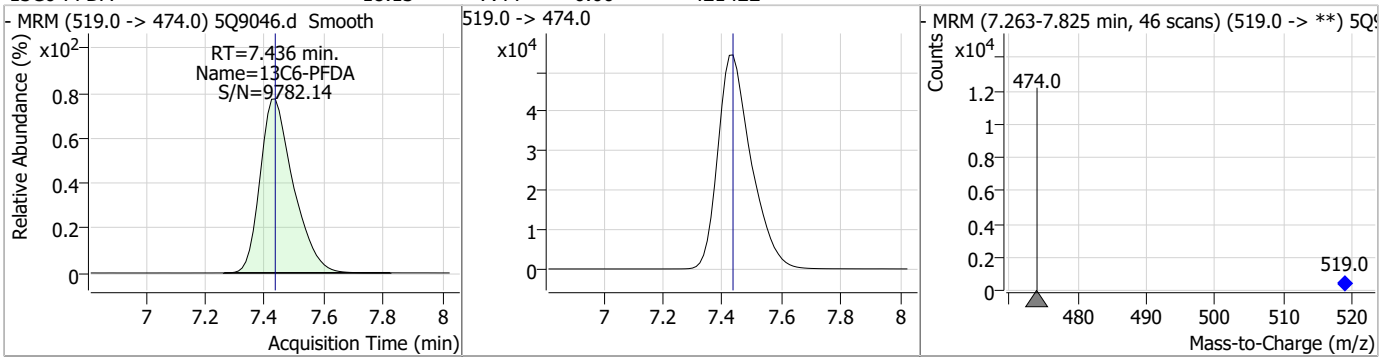


Perfluorinated Compounds by LC/MS/MS

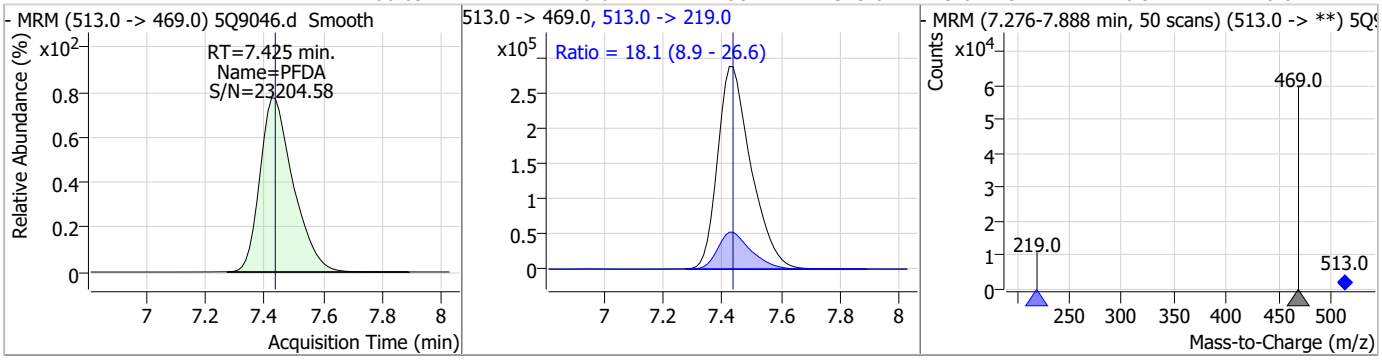
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	99.50	7.37	-0.01	321853	549.0 -> 99.0	59.0	29.9	89.8



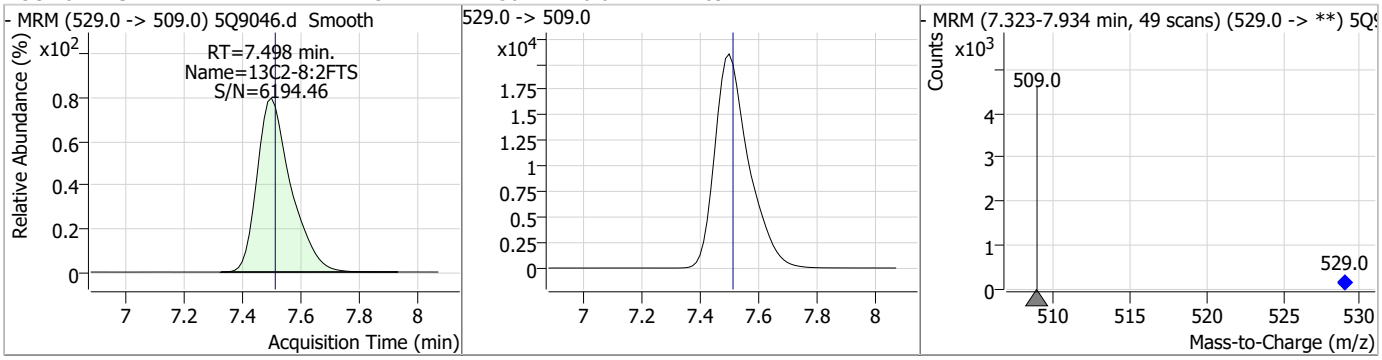
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.13	7.44	0.00	421422				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	100.09	7.42	-0.01	2245674	513.0 -> 219.0	18.1	8.9	26.6

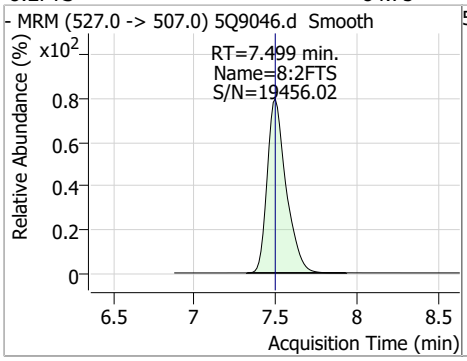


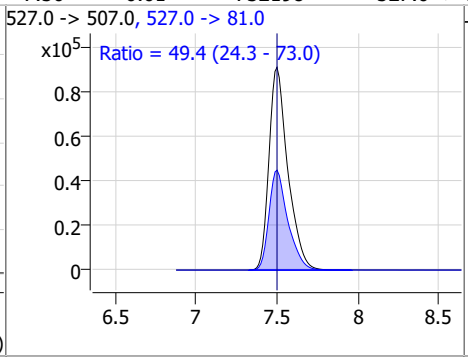
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	23.42	7.50	-0.01	169127				

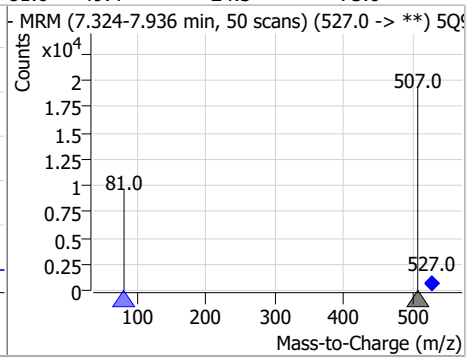


Perfluorinated Compounds by LC/MS/MS

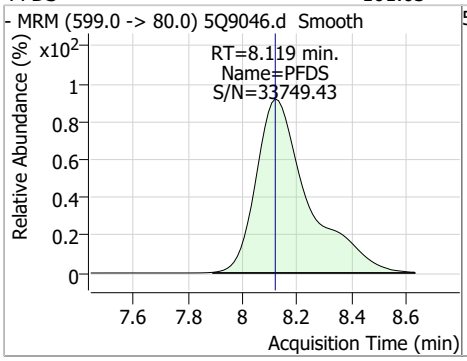
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	84.75	7.50	-0.01	732198	527.0 -> 81.0	49.4	24.3	73.0

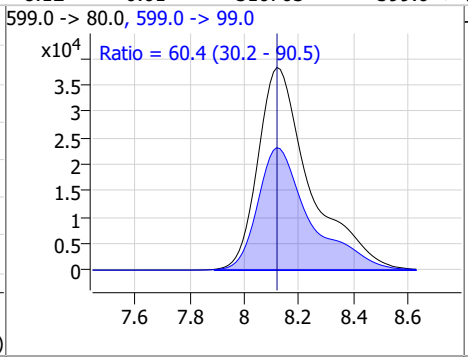


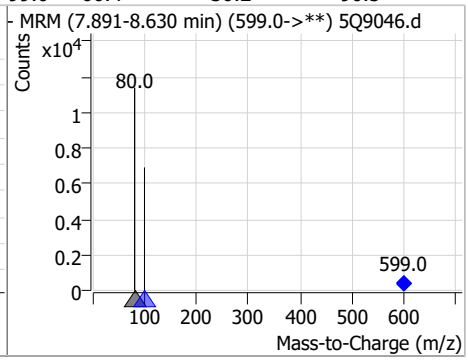




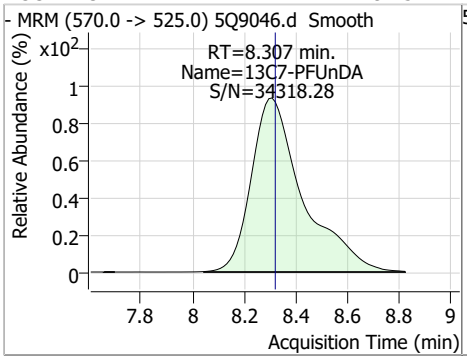
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	101.03	8.12	-0.01	510703	599.0 -> 99.0	60.4	30.2	90.5

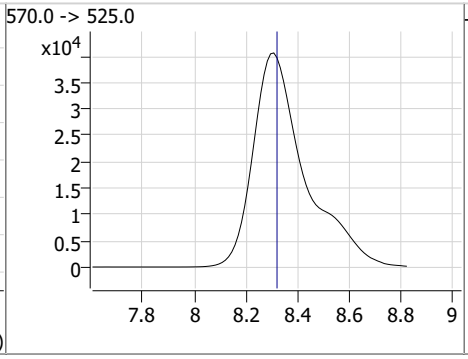


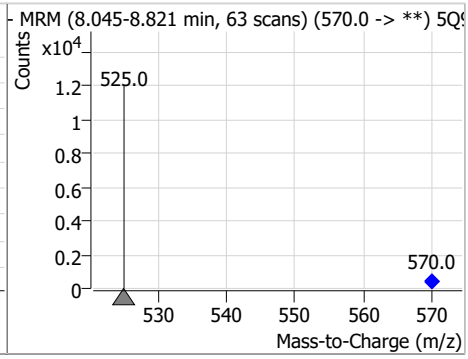




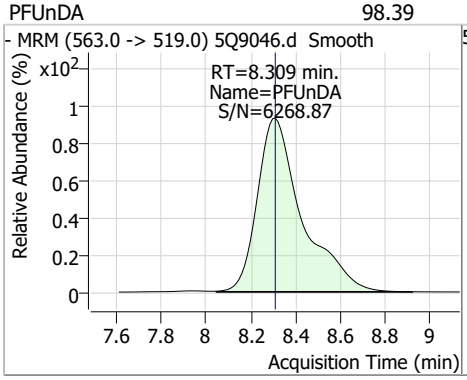
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.25	8.31	-0.01	563250				

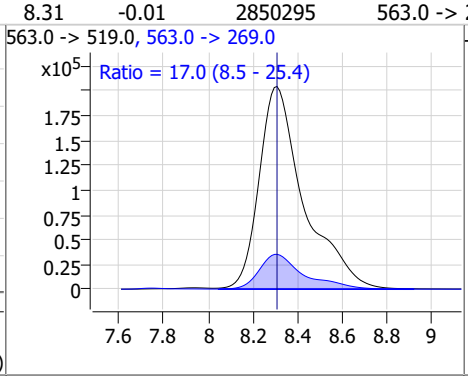


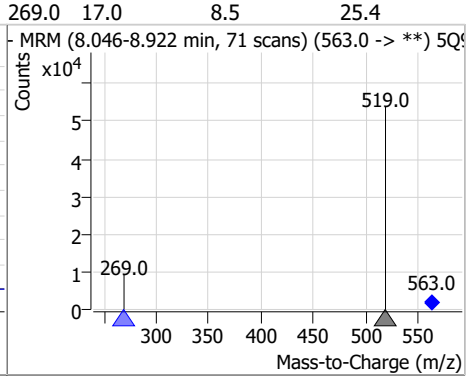




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	98.39	8.31	-0.01	2850295	563.0 -> 269.0	17.0	8.5	25.4

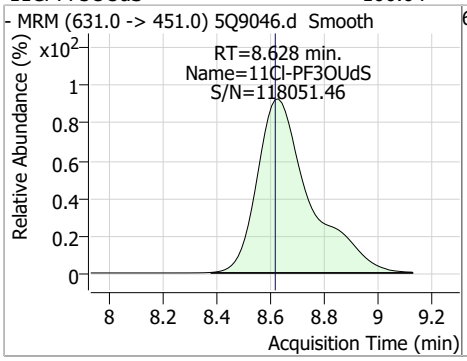


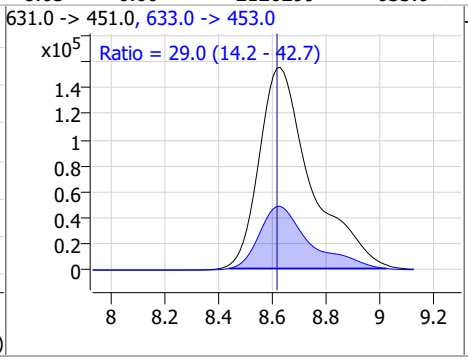


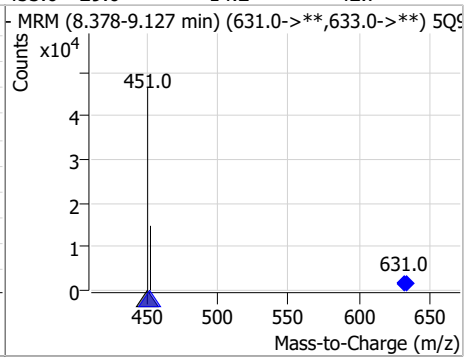


Perfluorinated Compounds by LC/MS/MS

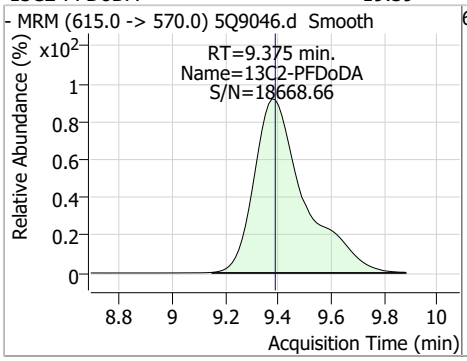
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	100.04	8.63	0.00	2126299	633.0 -> 453.0	29.0	14.2	42.7

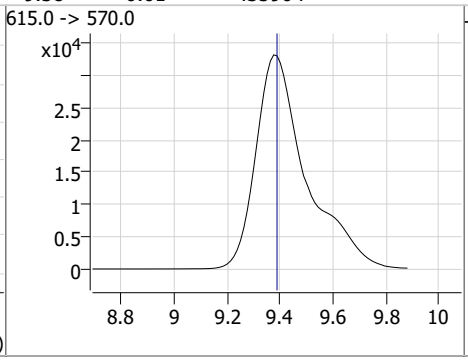


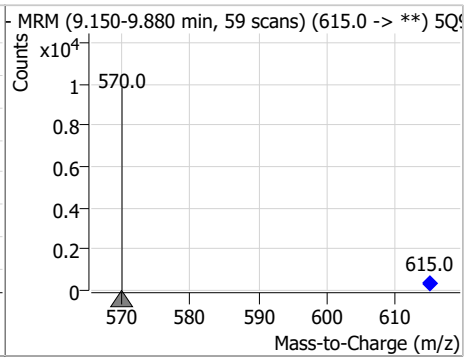




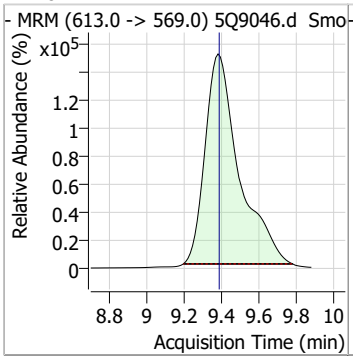
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.39	9.38	-0.01	435904				

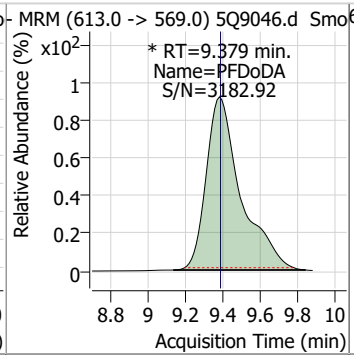


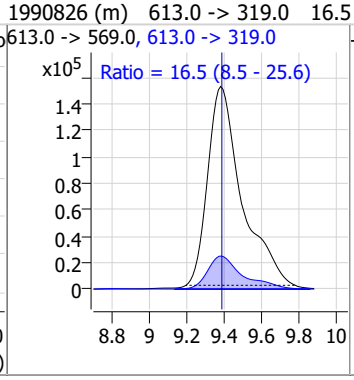


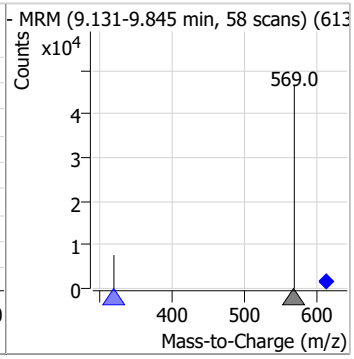


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	100.09	9.38	-0.01	1990826 (m)	613.0 -> 319.0	16.5	8.5	25.6

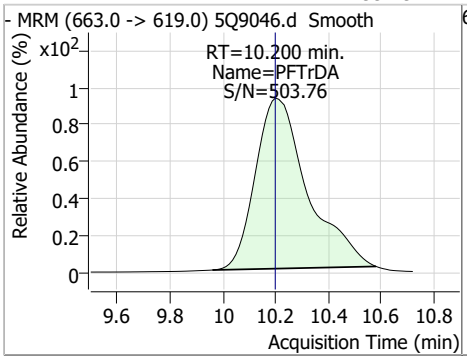


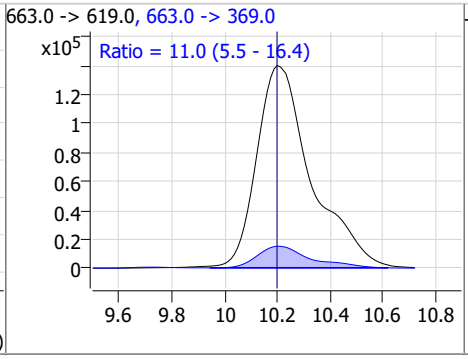


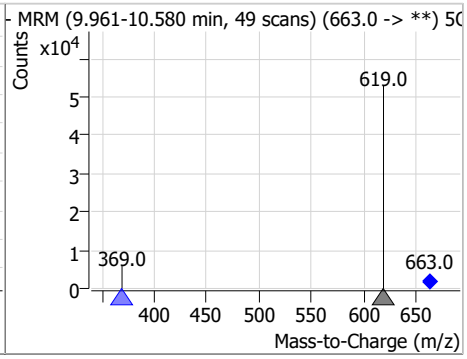




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	99.49	10.20	-0.01	1889819	663.0 -> 369.0	11.0	5.5	16.4

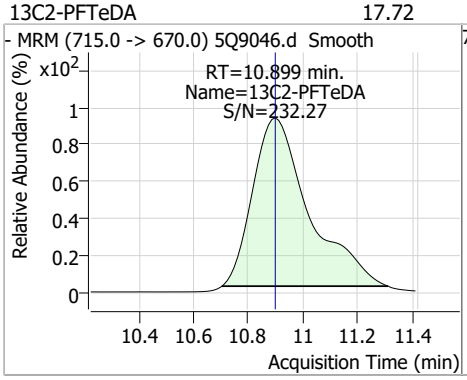


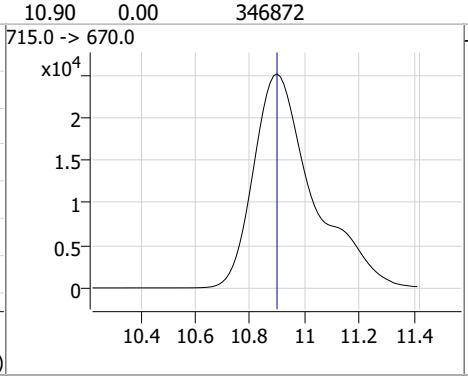


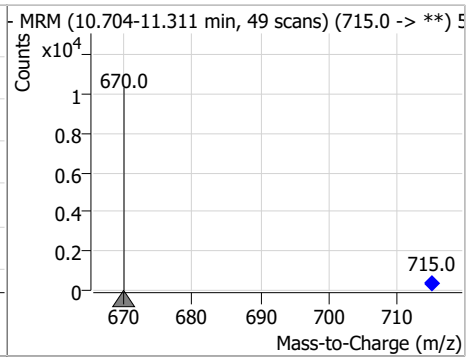


Perfluorinated Compounds by LC/MS/MS

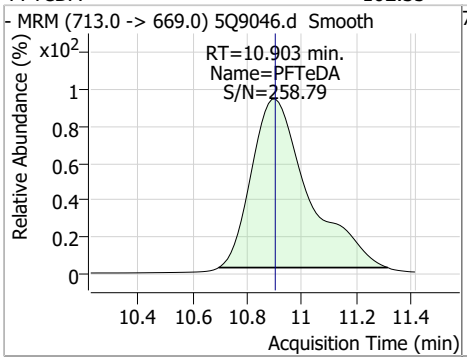
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	17.72	10.90	0.00	346872				

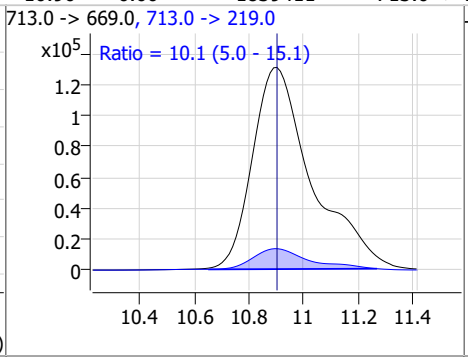


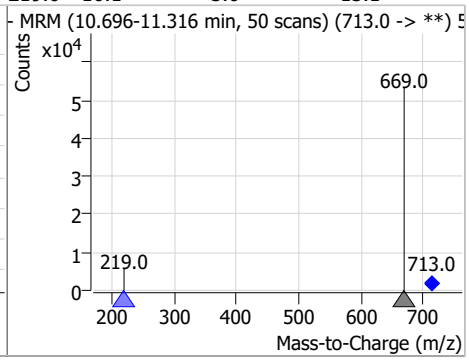




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	102.35	10.90	0.00	1839411	713.0 -> 219.0	10.1	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q134-IC134
Lab FileID: 5Q9046.D
Injection Time: 12/28/22 14:28
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.72	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.87	Split peak
Perfluorododecanoic acid	307-55-1		9.38	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9048.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 3:02:20 PM
Sample Name : icv134-20
Vial : P1-B1
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	96913	20.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	196664	20.00	µg/L	0.000
M5-PFHxA	4.952	318.0 -> 273.0	283046	20.00	µg/L	-0.012
M4-PFHpA	5.714	367.0 -> 322.0	288101	20.00	µg/L	-0.012
M8-PFOA	6.348	421.0 -> 376.0	373405	20.00	µg/L	-0.014
M9-PFNA	6.918	472.0 -> 427.0	391421	20.00	µg/L	0.000
M6-PFDA	7.436	519.0 -> 474.0	428750	20.00	µg/L	0.000
M7-PFUnDA	8.307	570.0 -> 525.0	551976	20.00	µg/L	-0.012
M2-PFDoDA	9.388	615.0 -> 570.0	393451	20.00	µg/L	0.000
M2-PFTeDA	10.899	715.0 -> 670.0	361741	20.00	µg/L	0.000
M8-FOSA	6.580	506.0 -> 78.0	89457	20.00	µg/L	-0.012
M3-PFBS	4.124	302.0 -> 99.0	24722	20.00	µg/L	0.000
M3-PFHxS	5.721	402.0 -> 99.0	33258	20.00	µg/L	-0.012
M8-PFOS	6.866	507.0 -> 99.0	45987	20.00	µg/L	-0.013
M2-4:2FTS	4.874	329.0 -> 309.0	89352	20.00	µg/L	-0.012
M2-6:2FTS	6.346	429.0 -> 409.0	141094	20.00	µg/L	-0.014
M2-8:2FTS	7.498	529.0 -> 509.0	132451	20.00	µg/L	-0.013
M3-MeFOSAA	7.034	573.0 -> 419.0	31608	20.00	µg/L	0.000
M3-HFPO-DA	5.182	287.0 -> 169.0	61953	20.00	µg/L	0.000
M3-MeFOSA	6.939	515.0 -> 169.0	29426	20.00	µg/L	-0.012
M5-EtFOSAA	7.132	589.0 -> 419.0	33737	20.00	µg/L	-0.012
System Monitoring Compounds						
13C2-4:2FTS	4.874	329.0 -> 309.0	89352	18.56	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%		
13C2-6:2FTS	6.346	429.0 -> 409.0	141094	18.40	µg/L	-0.014
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.0%		
13C2-8:2FTS	7.498	529.0 -> 509.0	132451	18.34	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.7%		
13C2-PFDoDA	9.388	615.0 -> 570.0	393451	17.50	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.5%		
13C2-PFTeDA	10.899	715.0 -> 670.0	361741	18.47	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.4%		
13C3-PFBS	4.124	302.0 -> 99.0	24722	19.02	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.1%		
13C3-PFHxS	5.721	402.0 -> 99.0	33258	18.58	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.9%		
13C4-PFBA	2.400	217.0 -> 172.0	96913	18.63	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.1%		
13C4-PFHpA	5.714	367.0 -> 322.0	288101	18.74	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.7%		
13C5-PFHxA	4.952	318.0 -> 273.0	283046	18.82	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.1%		
13C5-PFPeA	3.919	268.0 -> 223.0	196664	18.75	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.7%		
13C6-PFDA	7.436	519.0 -> 474.0	428750	18.44	µg/L	0.000

Perfluorinated Compounds by LC/MS/MS

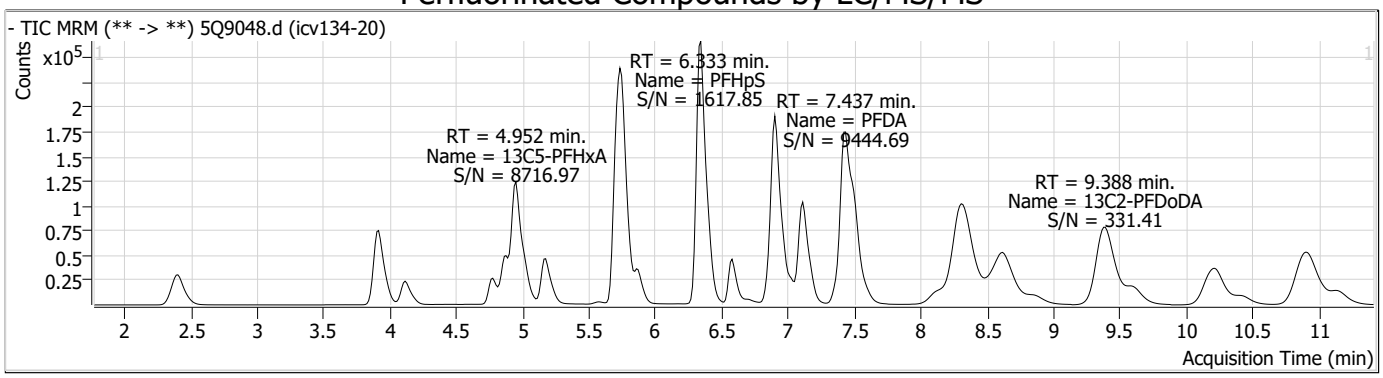
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.2%			
13C7-PFUnDA	8.307	570.0 -> 525.0	551976	18.86	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.3%			
13C8-FOSA	6.580	506.0 -> 78.0	89457	18.52	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.6%			
13C8-PFOA	6.348	421.0 -> 376.0	373405	18.53	µg/L		-0.014
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.7%			
13C8-PFOS	6.866	507.0 -> 99.0	45987	19.29	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.4%			
13C9-PFNA	6.918	472.0 -> 427.0	391421	18.61	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.0%			
d3-MeFOSAA	7.034	573.0 -> 419.0	31608	17.79	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.0%			
13C3-HFPO-DA	5.182	287.0 -> 169.0	61953	18.73	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.6%			
d3-MeFOSA	6.939	515.0 -> 169.0	29426	19.42	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.1%			
d5-EtFOSAA	7.132	589.0 -> 419.0	33737	18.29	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.5%			
Target Compounds							QValue
4:2FTS	4.876	327.0 -> 307.0	95654	19.56	µg/L		100
		327.0 -> 81.0	56879				
6:2FTS	6.347	427.0 -> 407.0	150719	20.81	µg/L		100
		427.0 -> 81.0	64728				
8:2FTS	7.499	527.0 -> 507.0	142461	21.06	µg/L		99
		527.0 -> 81.0	69920				
EtFOSAA	7.133	584.0 -> 419.0	22344	19.84	µg/L		97
		584.0 -> 483.0	13736				
FOSA	6.582	498.0 -> 78.0	92528	20.13	µg/L		100
		498.0 -> 478.0	3020				
MeFOSAA	7.035	570.0 -> 419.0	26355	20.55	µg/L		90
		570.0 -> 512.0	9280				
PFBA	2.406	213.0 -> 169.0	113333	21.47	µg/L		100
PFBS	4.117	299.0 -> 80.0	71115	17.69	µg/L		100
		299.0 -> 99.0	30444				
PFDA	7.437	513.0 -> 469.0	464382	20.34	µg/L		99
		513.0 -> 219.0	83875				
PFDoDA	9.392	613.0 -> 569.0	457165	25.46	µg/L		96
		613.0 -> 319.0	69022				
PFDS	8.131	599.0 -> 80.0	88492	17.86	µg/L		100
		599.0 -> 99.0	53331				
PFHpA	5.714	363.0 -> 319.0	373938	20.75	µg/L		100
		363.0 -> 169.0	84094				
PFHpS	6.333	449.0 -> 80.0	67169	19.11	µg/L		100
		449.0 -> 99.0	36636				
PFHxA	4.953	313.0 -> 269.0	288516	20.07	µg/L		100
		313.0 -> 119.0	13218				
PFHxS	5.722	399.0 -> 80.0	60621	17.96	µg/L	m	97
		399.0 -> 99.0	35145				
PFNA	6.918	463.0 -> 419.0	401344	19.77	µg/L		99
		463.0 -> 219.0	85645				
PFNS	7.371	549.0 -> 80.0	61903	19.63	µg/L		99
		549.0 -> 99.0	36591				
PFOA	6.348	413.0 -> 369.0	451230	21.11	µg/L		100
		413.0 -> 169.0	121371				
PFOS	6.867	499.0 -> 80.0	92616	21.83	µg/L	m	96

Perfluorinated Compounds by LC/MS/MS

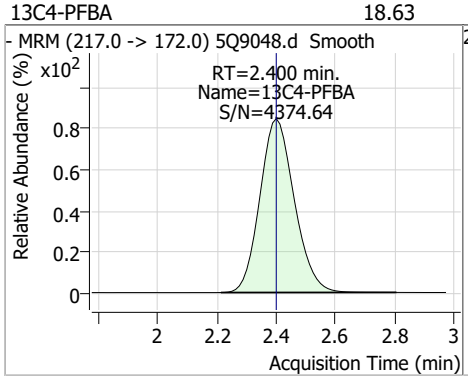
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	47058			
PFPeA	3.922	263.0 -> 219.0	227755	19.70	µg/L	100
PFPeS	5.035	349.0 -> 80.0	48339	18.36	µg/L	99
		349.0 -> 99.0	24528			
PFTeDA	10.903	713.0 -> 669.0	329864	17.60	µg/L	96
		713.0 -> 219.0	38582			
PFTrDA	10.212	663.0 -> 619.0	438716	25.59	µg/L	100
		663.0 -> 369.0	47341			
PFUnDA	8.309	563.0 -> 519.0	602320	21.22	µg/L	100
		563.0 -> 269.0	102727			
11Cl-PF3OUdS	8.628	631.0 -> 451.0	390679	21.19	µg/L	95
		633.0 -> 453.0	121962			
9Cl-PF3ONS	7.111	531.0 -> 351.0	358262	18.91	µg/L	100
		533.0 -> 353.0	113265			
ADONA	5.763	377.0 -> 251.0	472191	21.05	µg/L	100
		377.0 -> 85.0	177957			
HFPO-DA	5.177	329.0 -> 169.0	108189	21.86	µg/L	100
		285.0 -> 169.0	63748			
MeFOSA	-	512.0 -> 169.0	-	N.D.		
		512.0 -> 219.0				
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	4.781	298.0 -> 78.0	116523	19.84	µg/L	100
		298.0 -> 64.0	10798			
FHxSA	5.875	398.0 -> 78.0	115135	20.73	µg/L	100
		398.0 -> 64.0	11002			

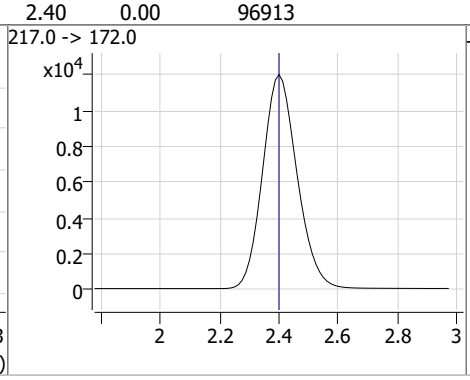
 # = Qualifier out of range, m = manually integrated, + = Area summed

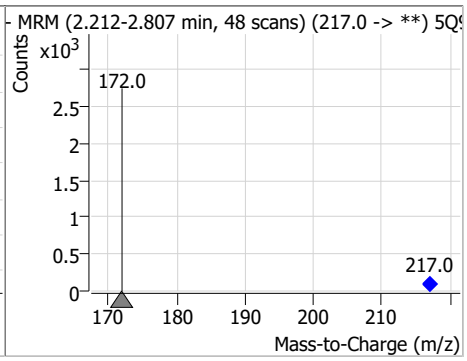
Perfluorinated Compounds by LC/MS/MS



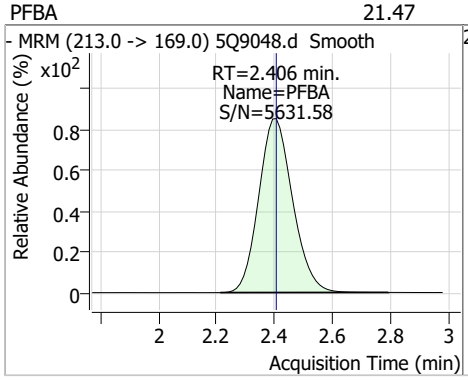
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.63	2.40	0.00	96913				

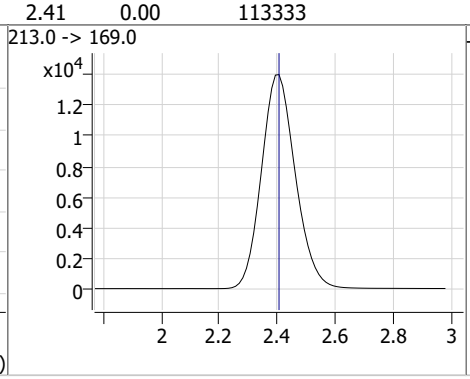


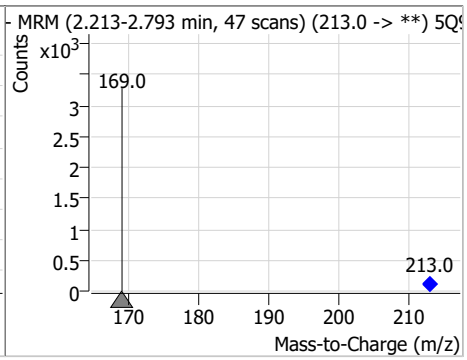




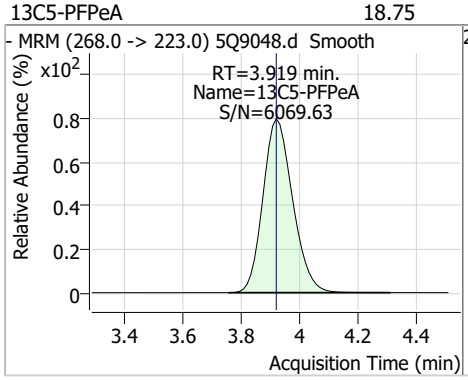
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	21.47	2.41	0.00	113333				

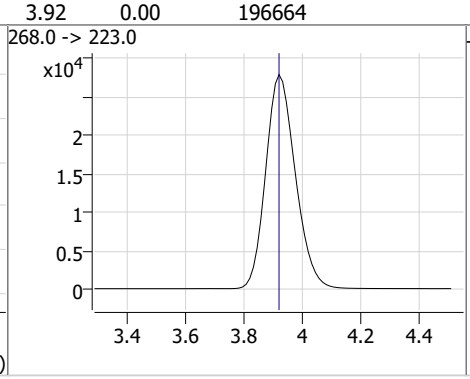


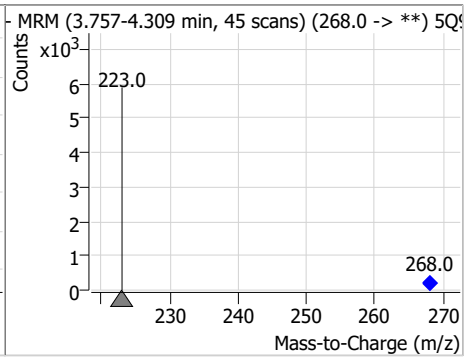




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	18.75	3.92	0.00	196664				

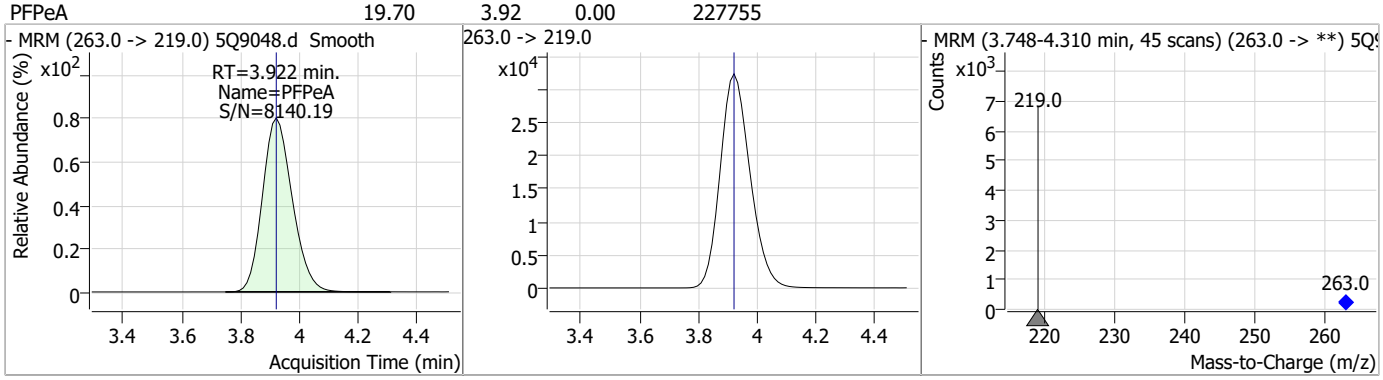




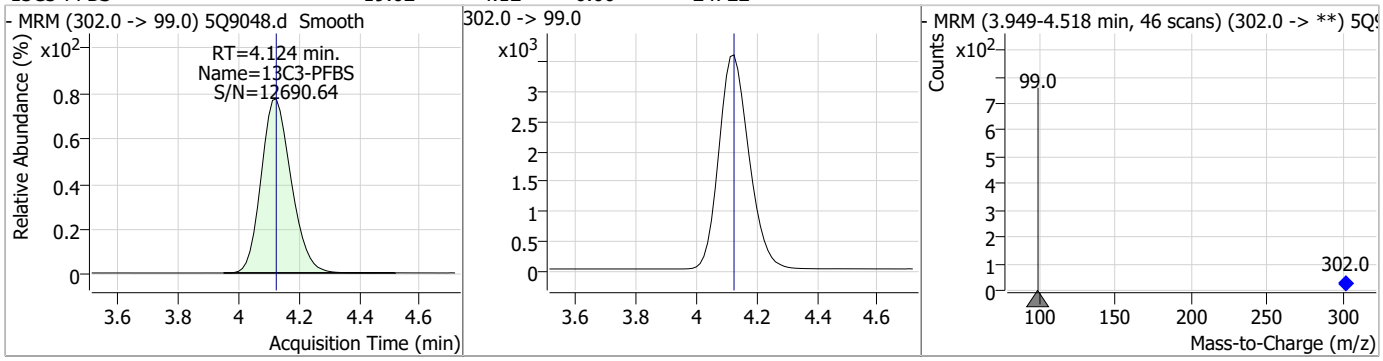


Perfluorinated Compounds by LC/MS/MS

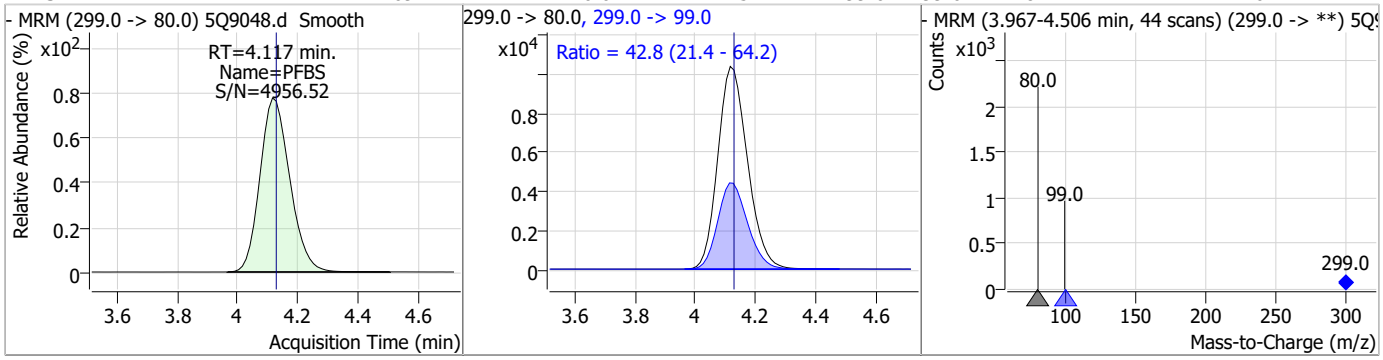
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.70	3.92	0.00	227755				



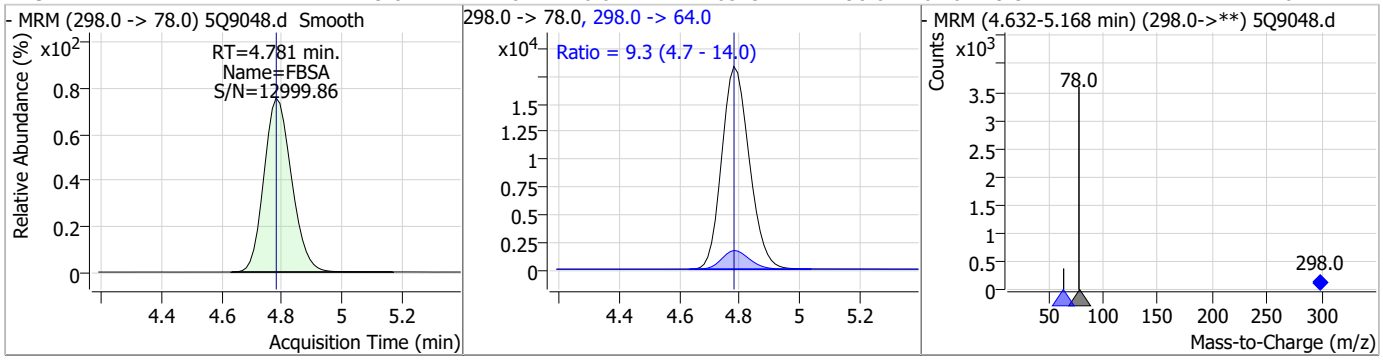
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.02	4.12	0.00	24722				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	17.69	4.12	-0.01	71115	299.0 -> 99.0	42.8	21.4	64.2

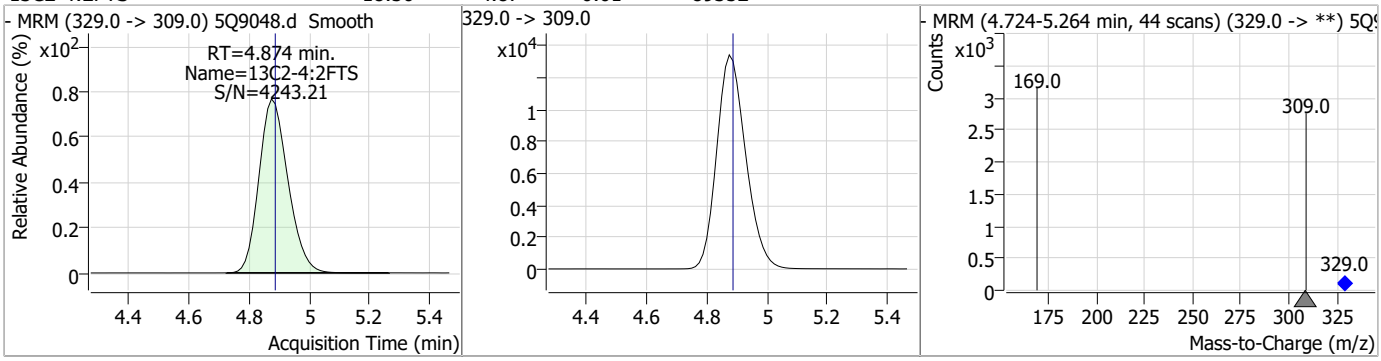


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	19.84	4.78	-0.01	116523	298.0 -> 64.0	9.3	4.7	14.0

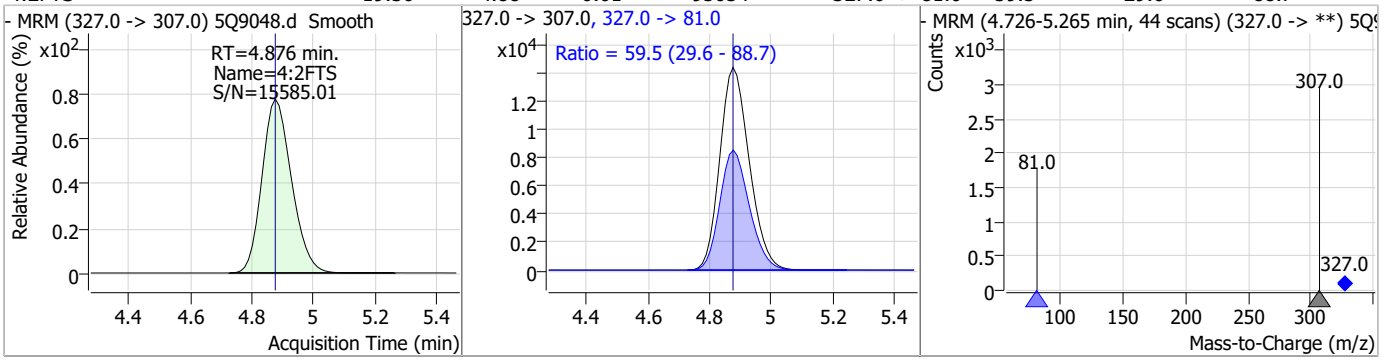


Perfluorinated Compounds by LC/MS/MS

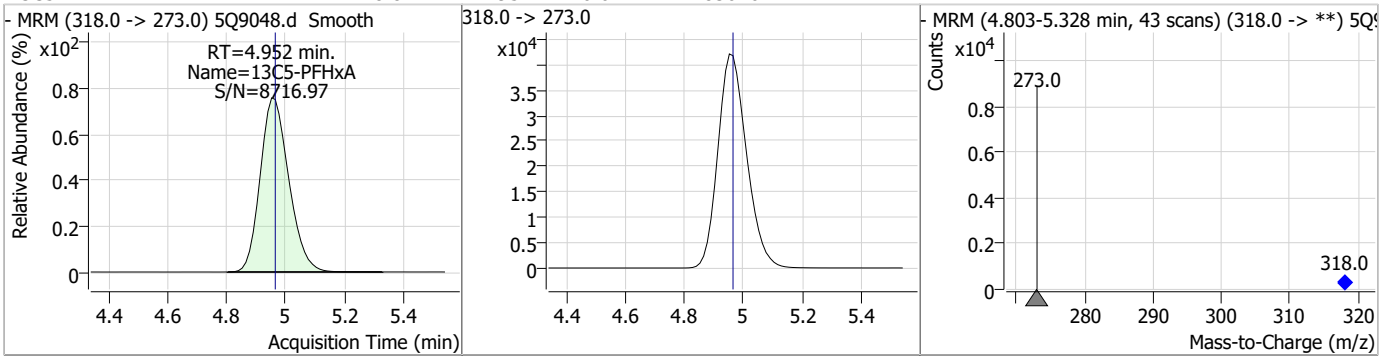
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.56	4.87	-0.01	89352				



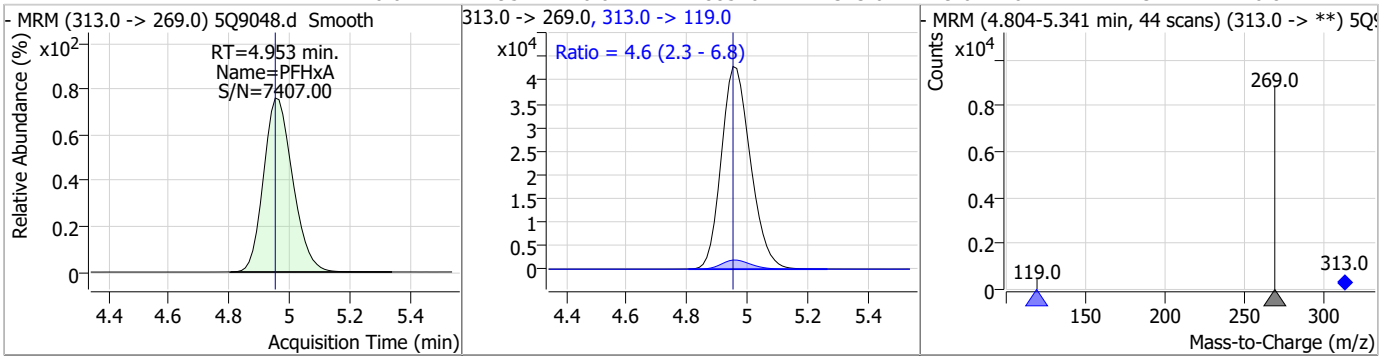
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	19.56	4.88	-0.01	95654	327.0 -> 81.0	59.5	29.6	88.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	18.82	4.95	-0.01	283046				

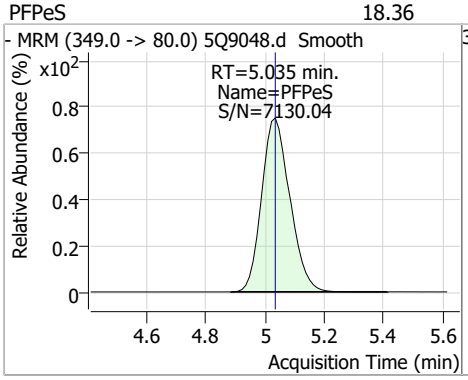


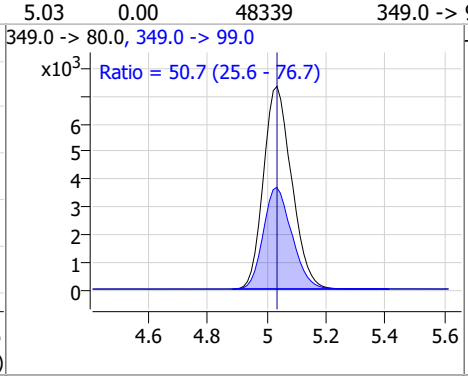
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	20.07	4.95	-0.01	288516	313.0 -> 119.0	4.6	2.3	6.8

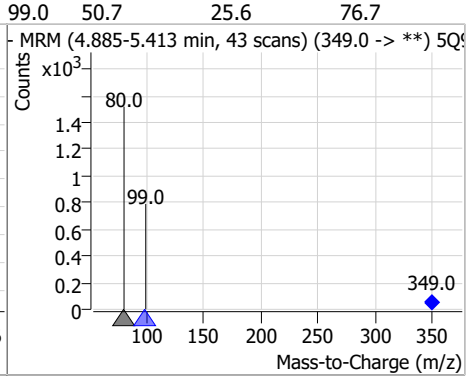


Perfluorinated Compounds by LC/MS/MS

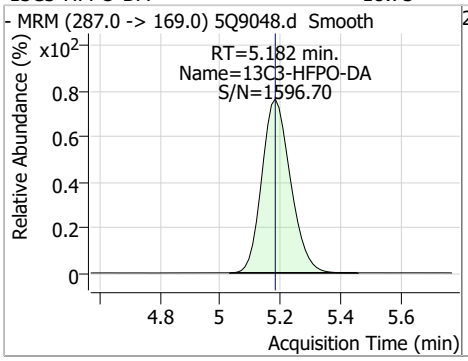
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	18.36	5.03	0.00	48339	349.0 -> 99.0	50.7	25.6	76.7

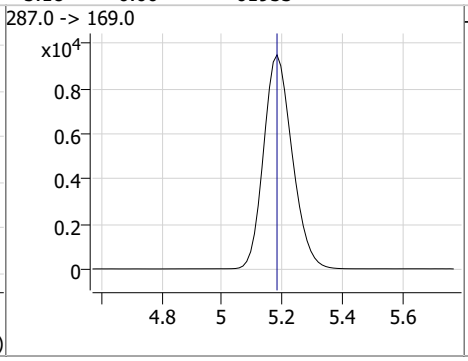


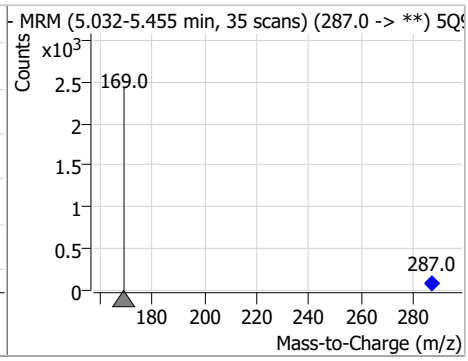




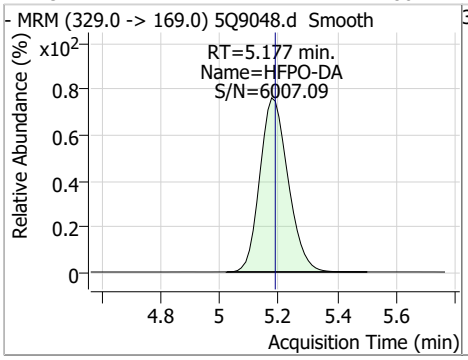
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	18.73	5.18	0.00	61953				

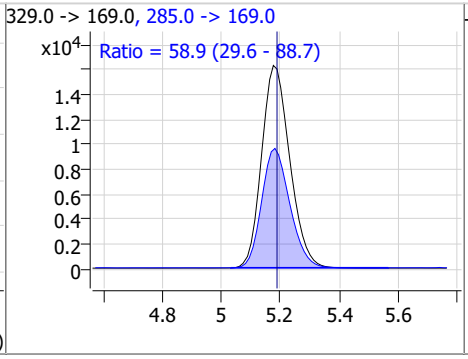


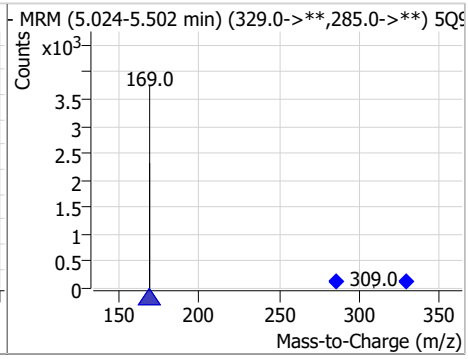




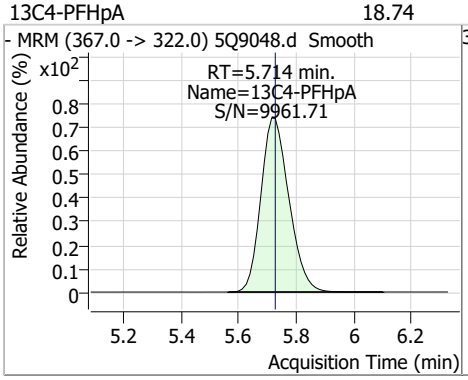
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	21.86	5.18	-0.01	108189	285.0 -> 169.0	58.9	29.6	88.7

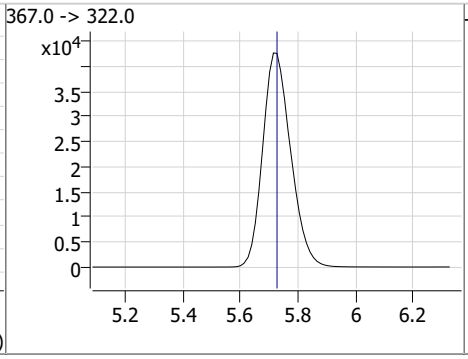


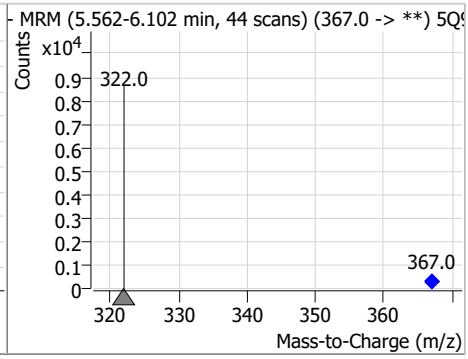




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	18.74	5.71	-0.01	288101				

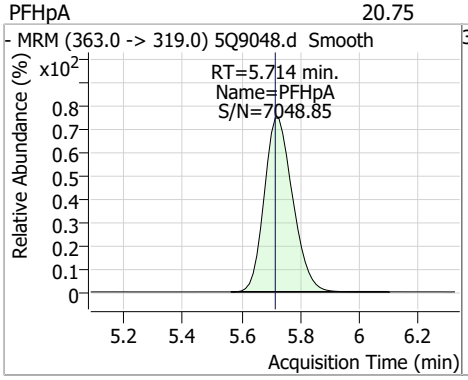


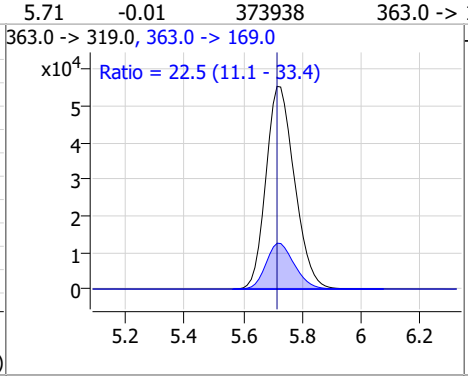


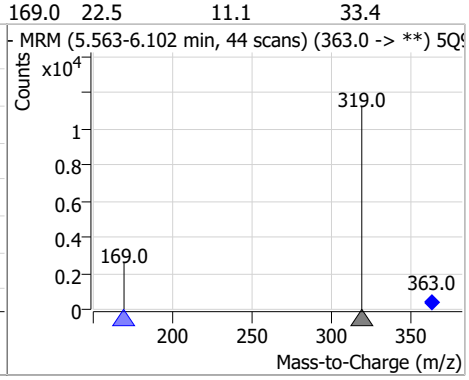


Perfluorinated Compounds by LC/MS/MS

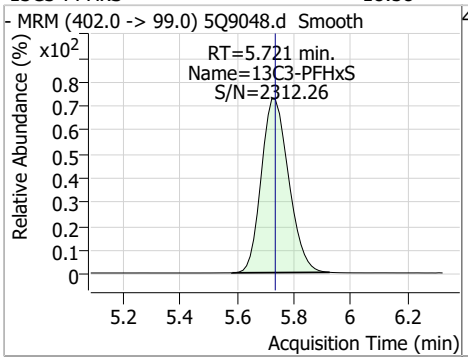
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	20.75	5.71	-0.01	373938	363.0 -> 169.0	22.5	11.1	33.4

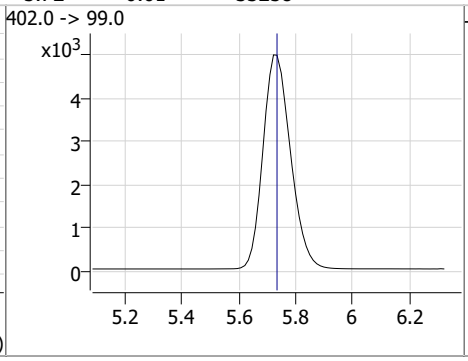


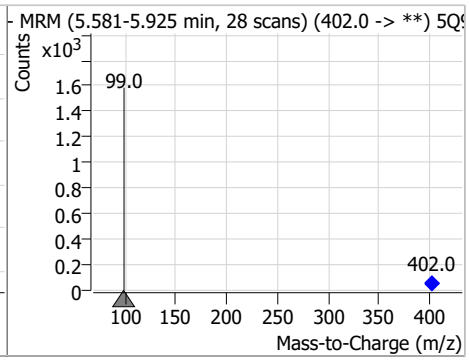




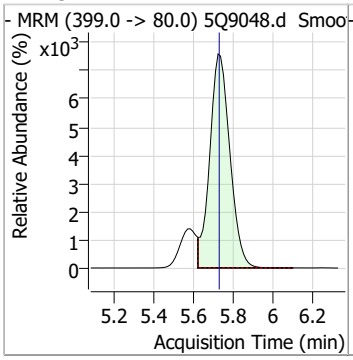
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	18.58	5.72	-0.01	33258				

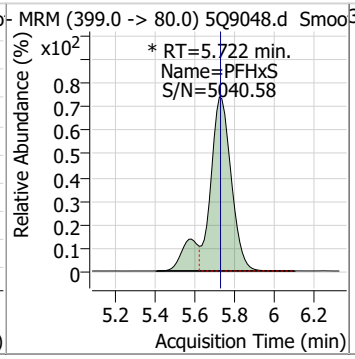


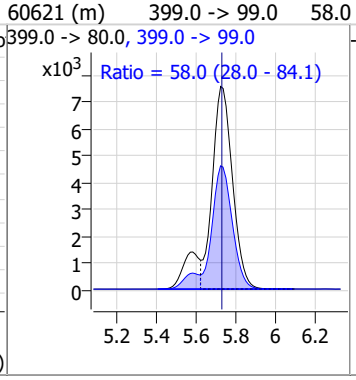


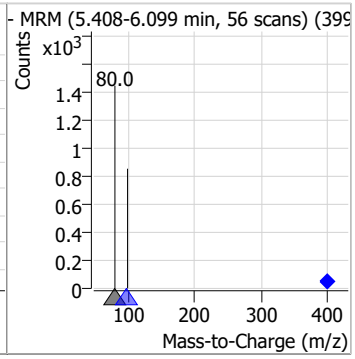


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	17.96	5.72	-0.01	60621 (m)	399.0 -> 99.0	58.0	28.0	84.1

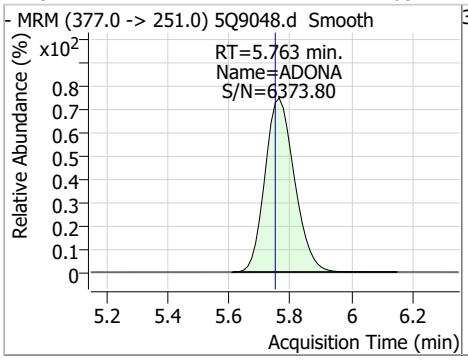


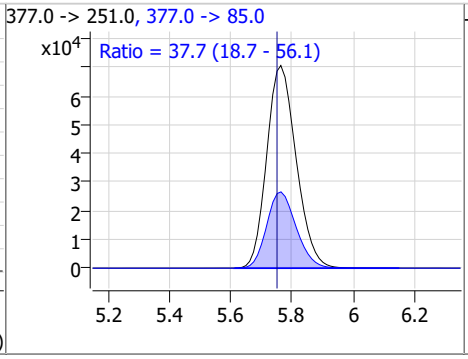


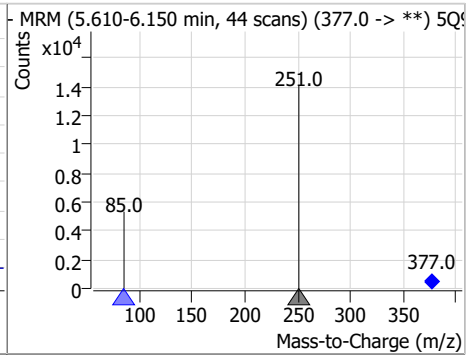




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	21.05	5.76	0.00	472191	377.0 -> 85.0	37.7	18.7	56.1

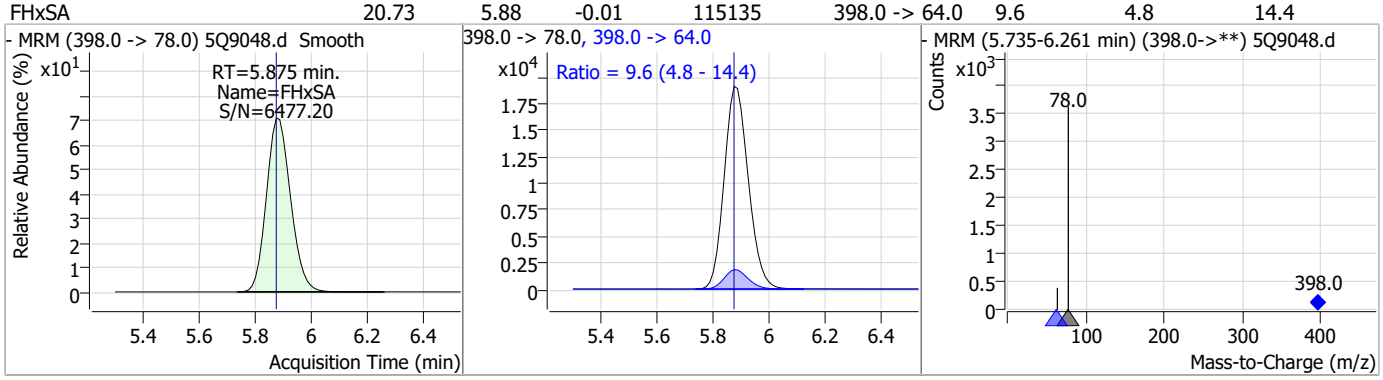




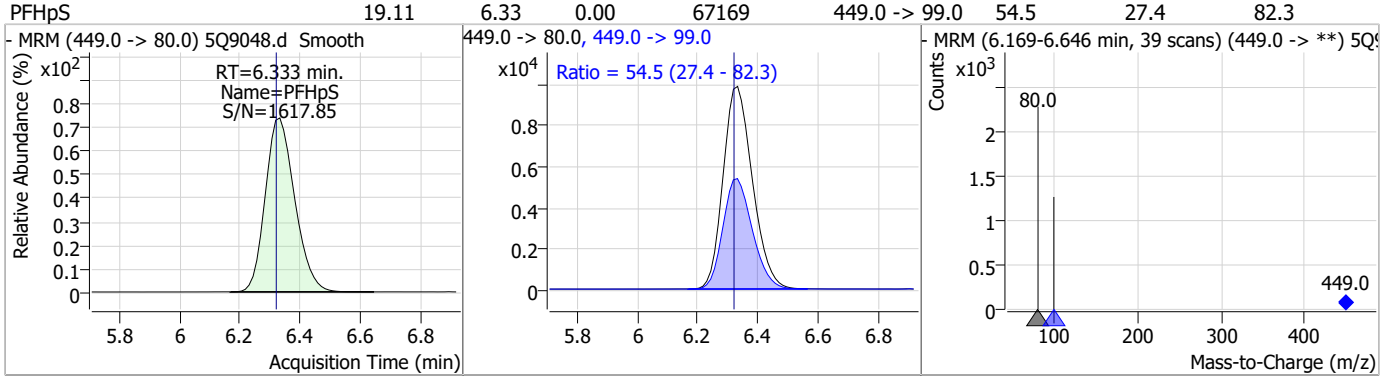


Perfluorinated Compounds by LC/MS/MS

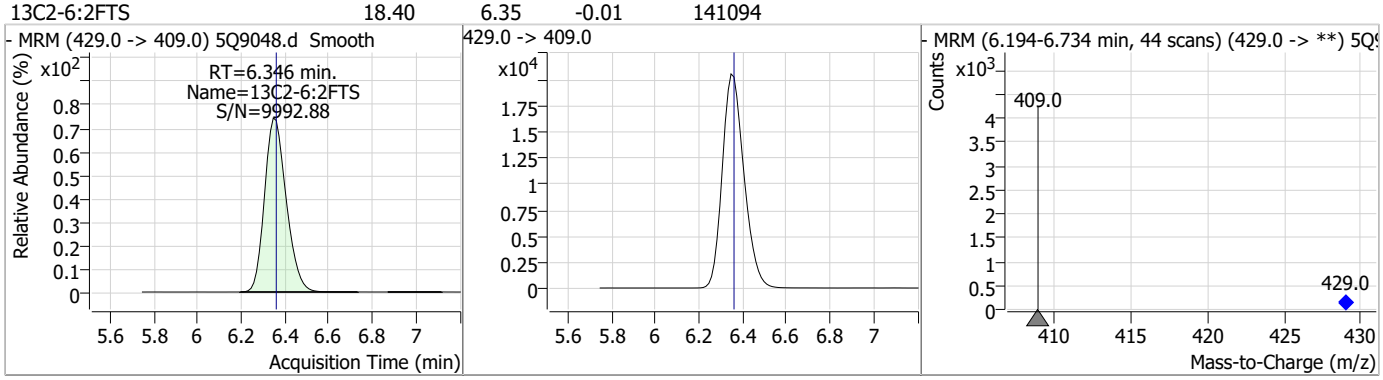
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	20.73	5.88	-0.01	115135	398.0 -> 64.0	9.6	4.8	14.4



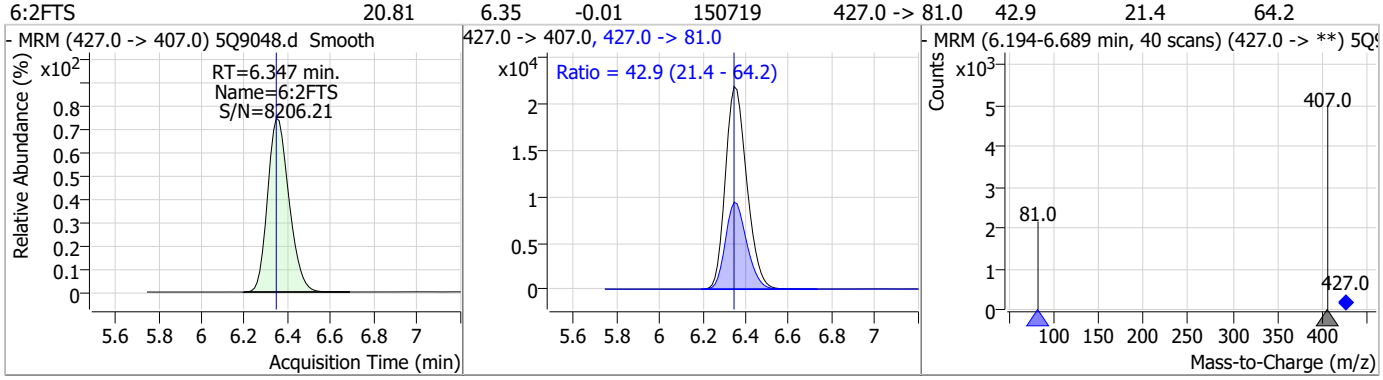
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	19.11	6.33	0.00	67169	449.0 -> 99.0	54.5	27.4	82.3



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.40	6.35	-0.01	141094				

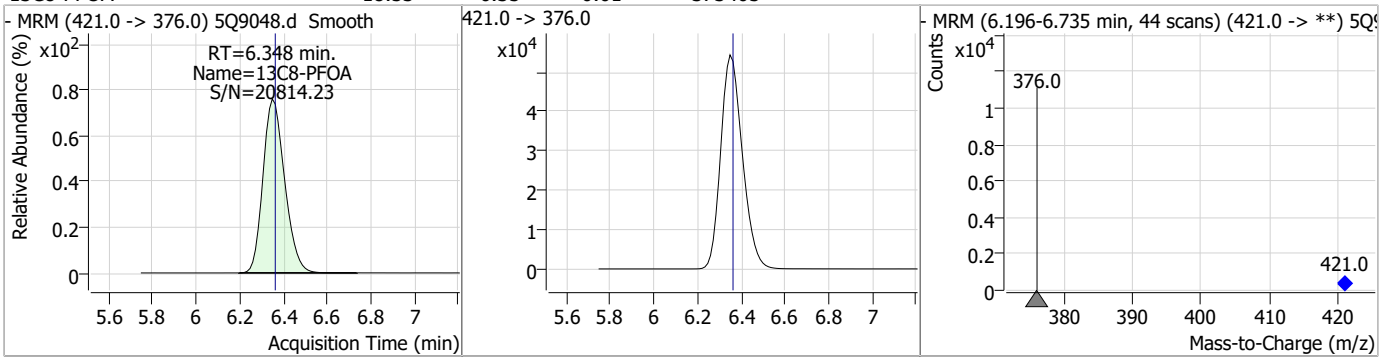


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	20.81	6.35	-0.01	150719	427.0 -> 81.0	42.9	21.4	64.2

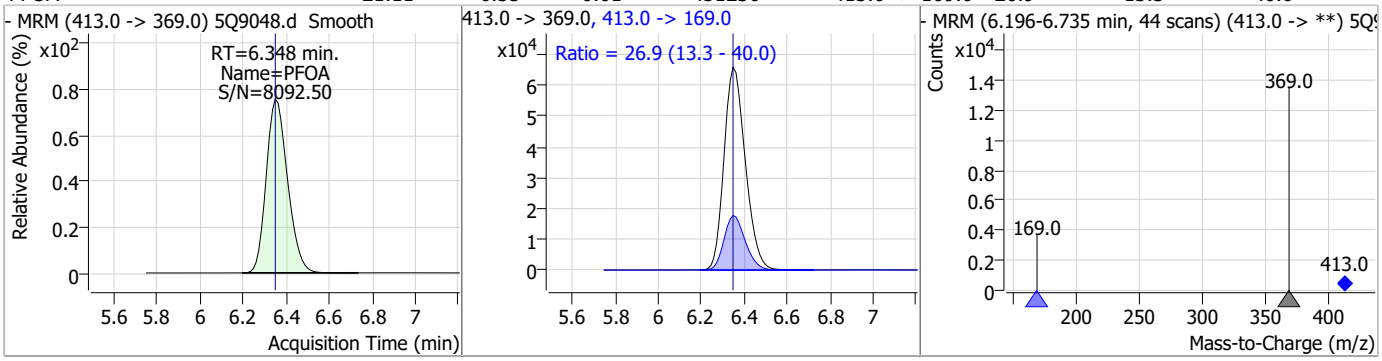


Perfluorinated Compounds by LC/MS/MS

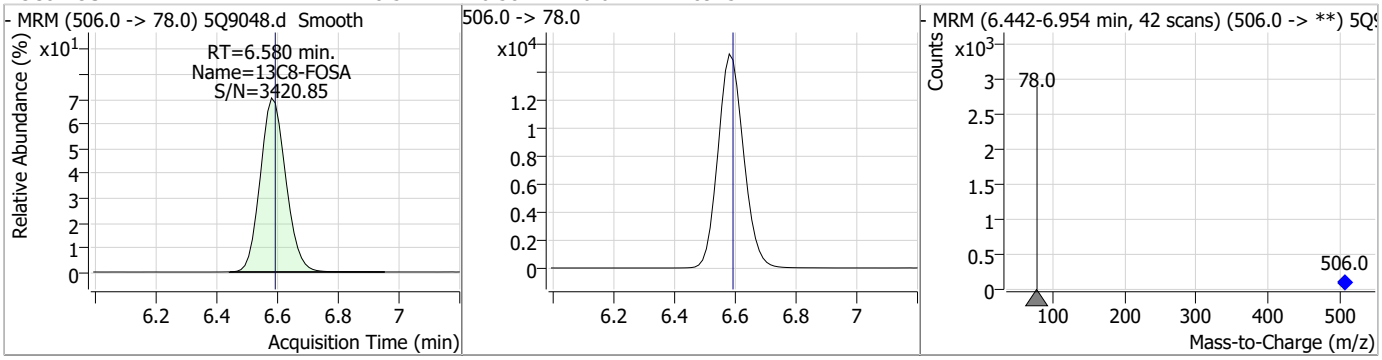
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	18.53	6.35	-0.01	373405				



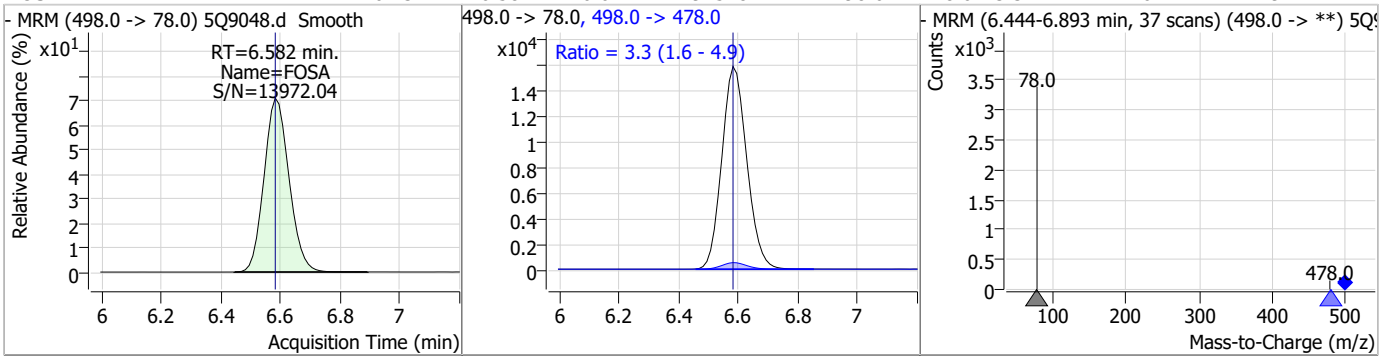
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	21.11	6.35	-0.01	451230	413.0 -> 169.0	26.9	13.3	40.0



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	18.52	6.58	-0.01	89457				

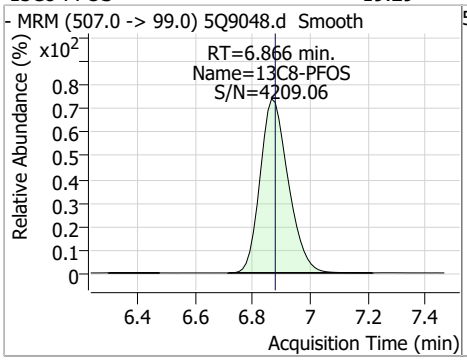


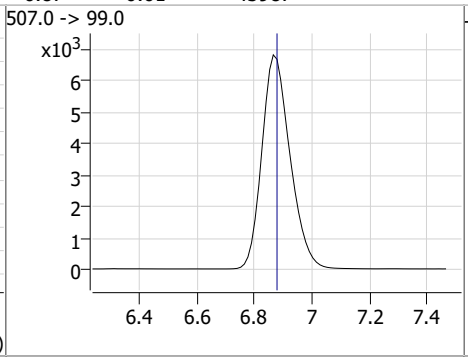
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	20.13	6.58	-0.01	92528	498.0 -> 478.0	3.3	1.6	4.9

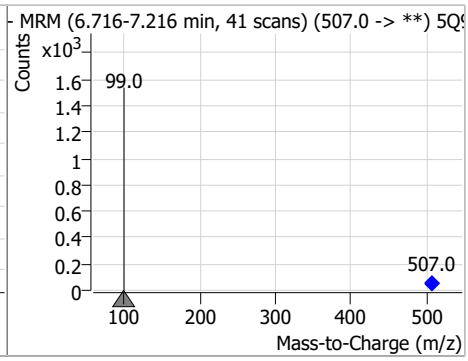


Perfluorinated Compounds by LC/MS/MS

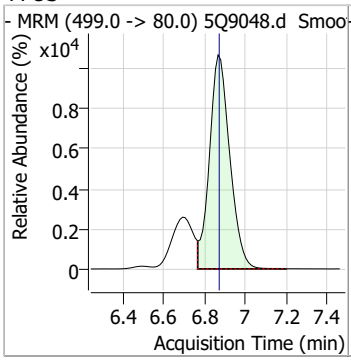
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.29	6.87	-0.01	45987				

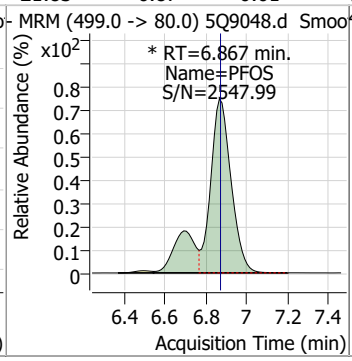


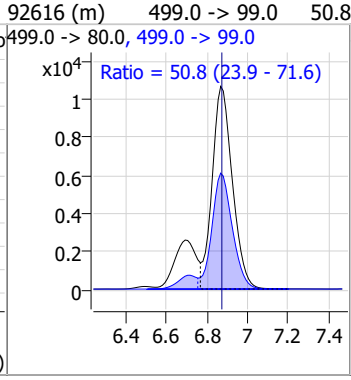


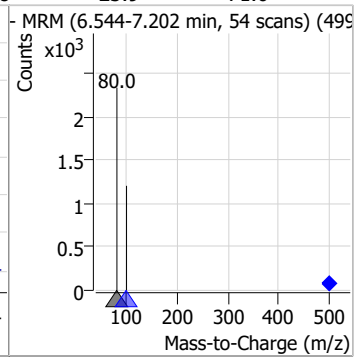


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	21.83	6.87	-0.01	92616 (m)	499.0 -> 99.0	50.8	23.9	71.6

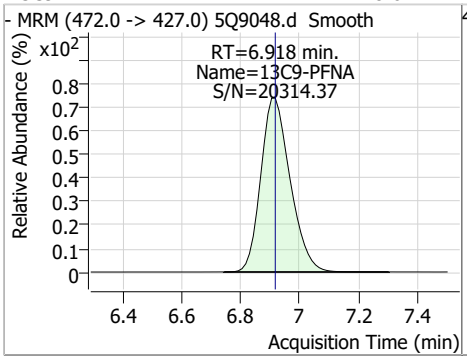


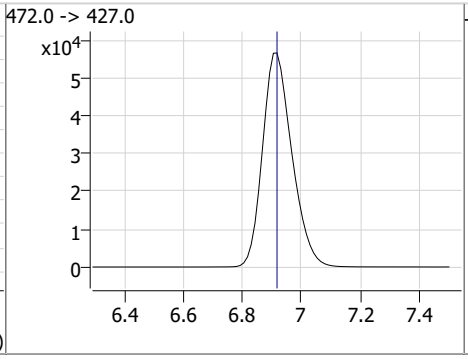


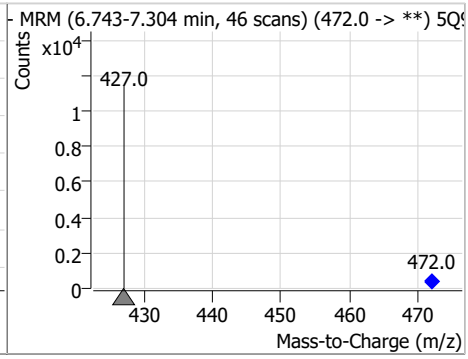




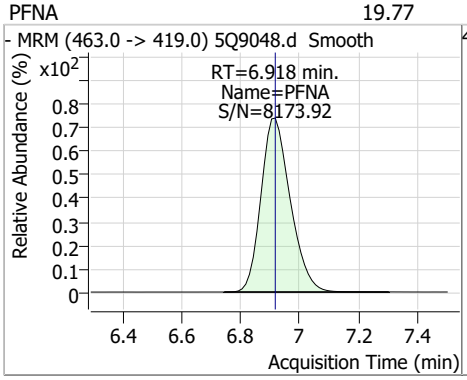
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.61	6.92	0.00	391421				

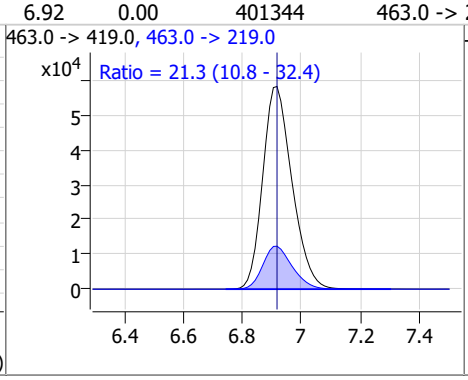


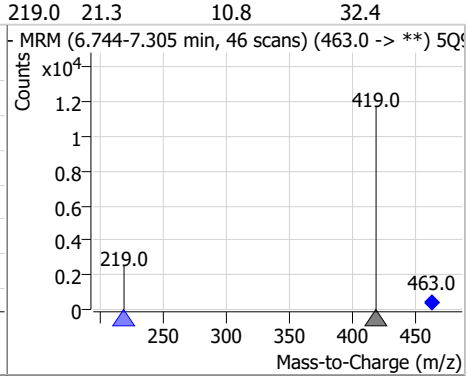




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.77	6.92	0.00	401344	463.0 -> 219.0	21.3	10.8	32.4

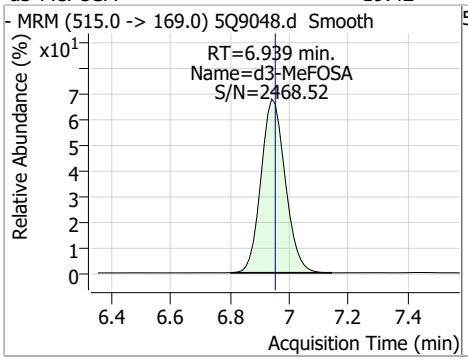


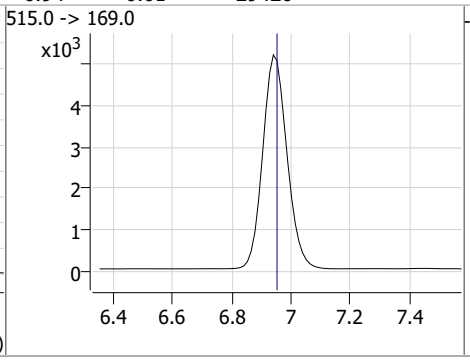


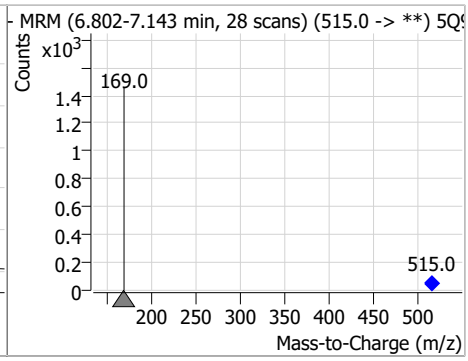


Perfluorinated Compounds by LC/MS/MS

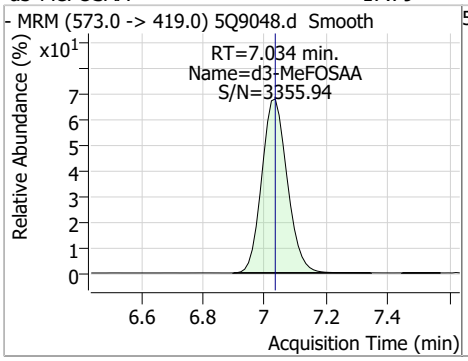
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	19.42	6.94	-0.01	29426				

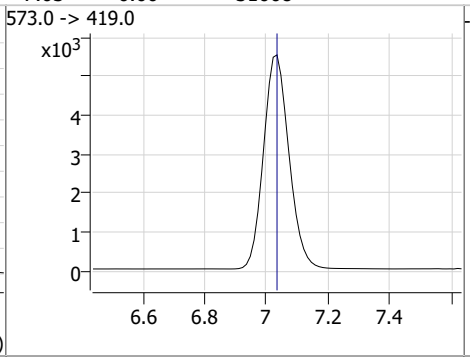


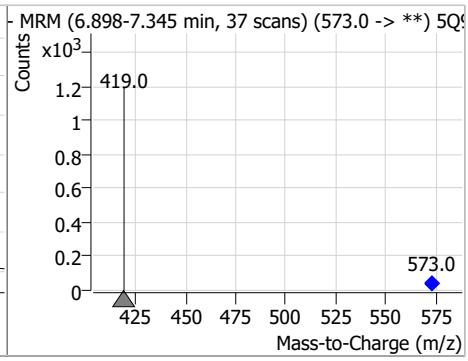




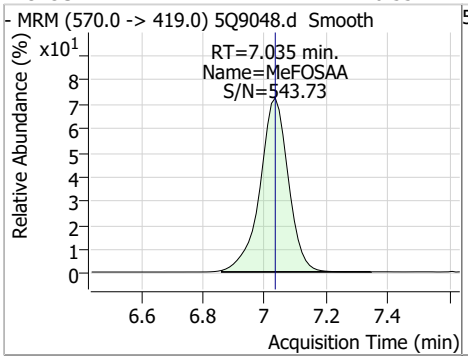
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	17.79	7.03	0.00	31608				

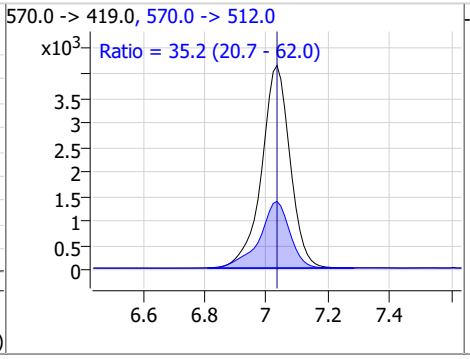


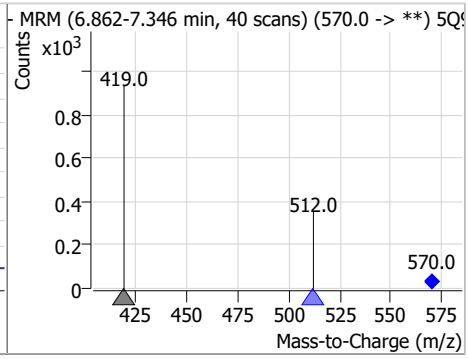




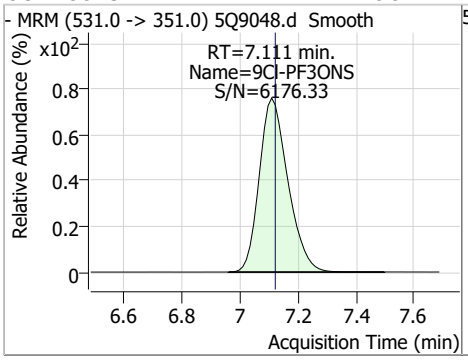
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	20.55	7.04	0.00	26355	570.0 -> 512.0	35.2	20.7	62.0

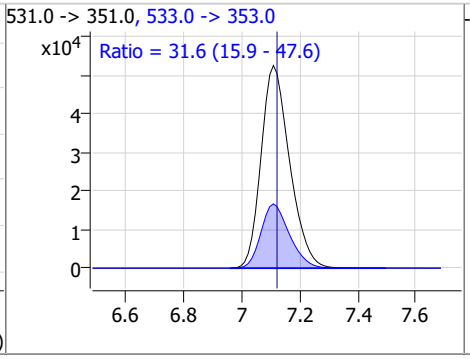


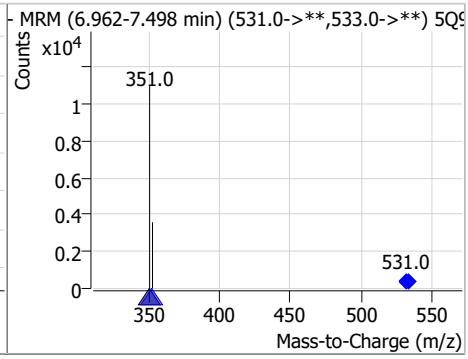




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	18.91	7.11	-0.01	358262	533.0 -> 353.0	31.6	15.9	47.6

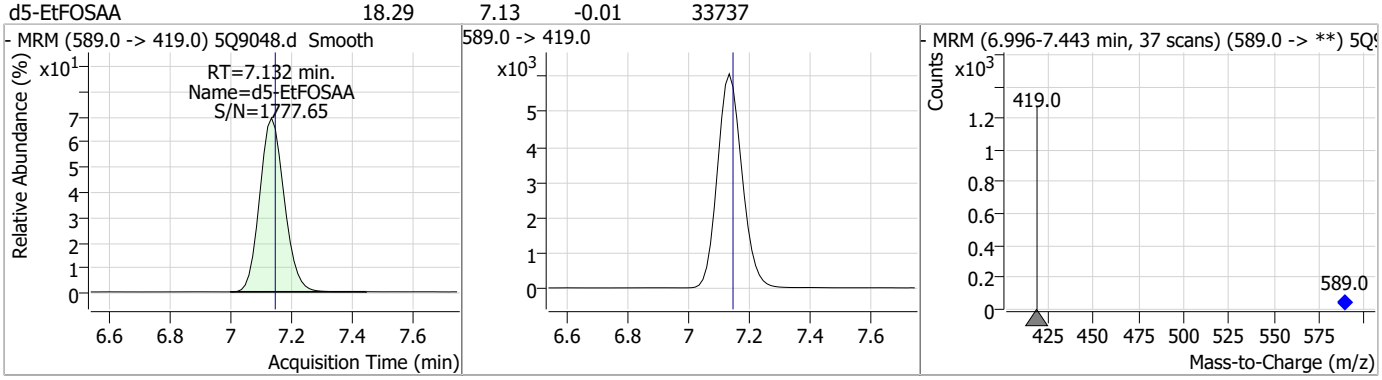




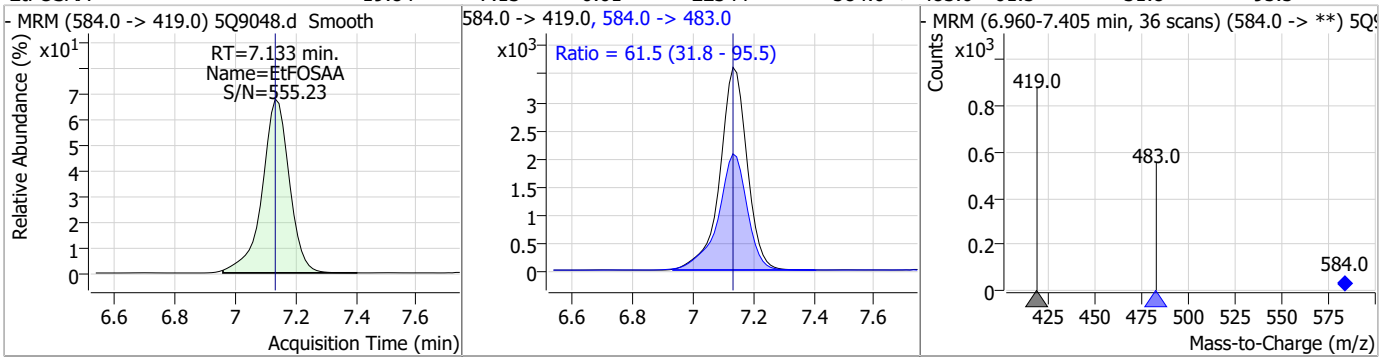


Perfluorinated Compounds by LC/MS/MS

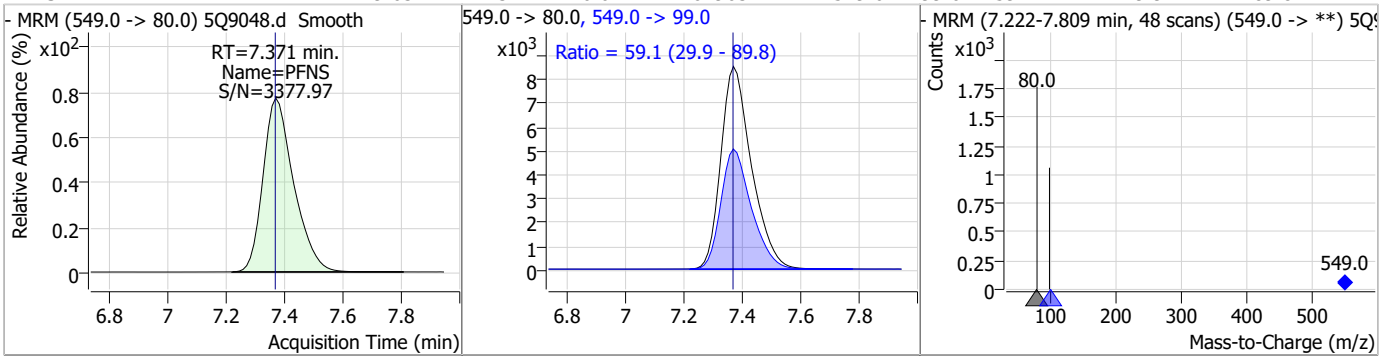
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.29	7.13	-0.01	33737				



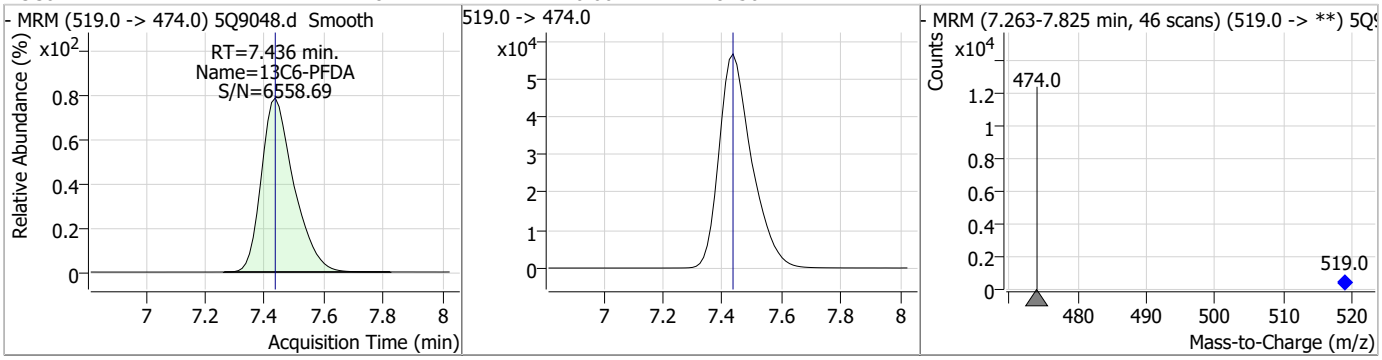
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	19.84	7.13	-0.01	22344	584.0 -> 483.0	61.5	31.8	95.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	19.63	7.37	-0.01	61903	549.0 -> 99.0	59.1	29.9	89.8

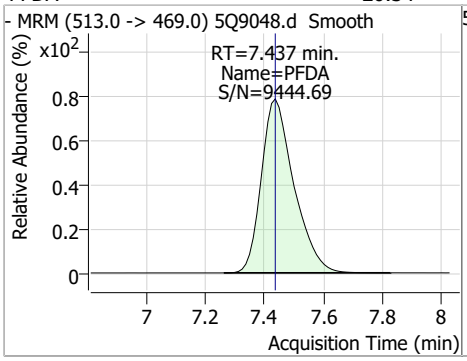


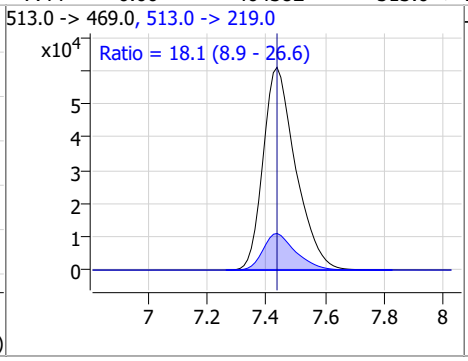
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.44	7.44	0.00	428750				

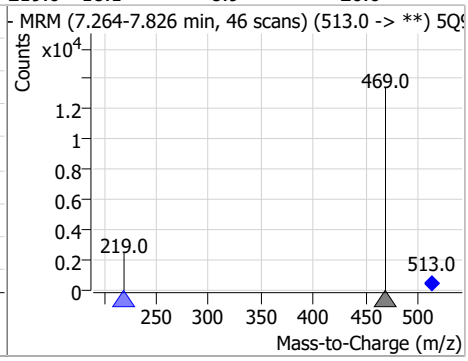


Perfluorinated Compounds by LC/MS/MS

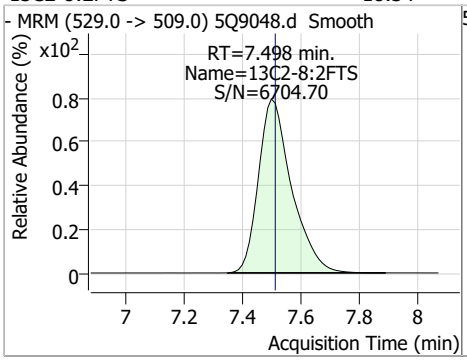
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	20.34	7.44	0.00	464382	513.0 -> 219.0	18.1	8.9	26.6

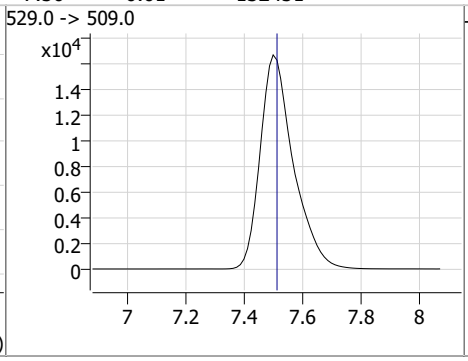


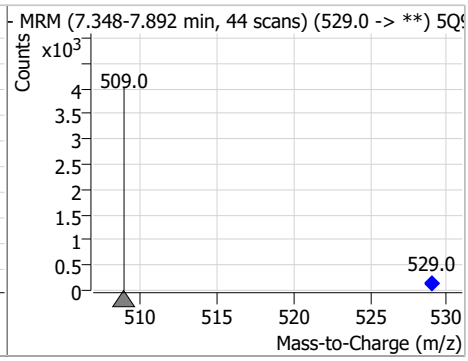




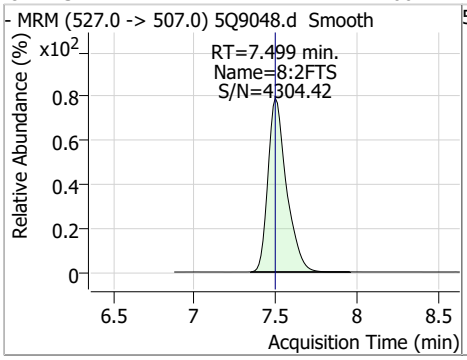
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.34	7.50	-0.01	132451				

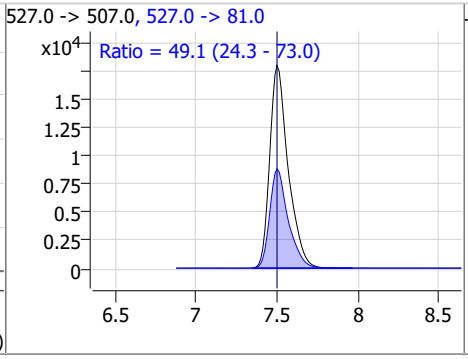


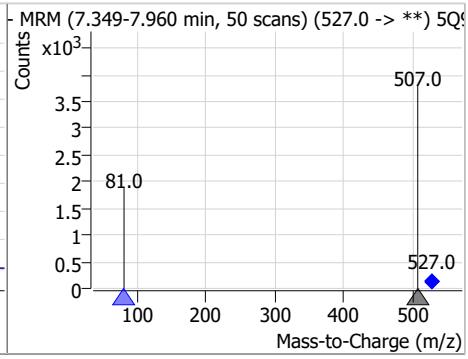




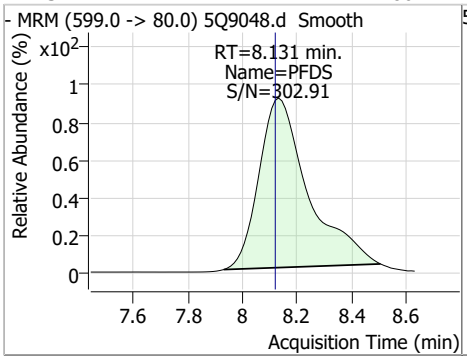
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	21.06	7.50	-0.01	142461	527.0 -> 81.0	49.1	24.3	73.0

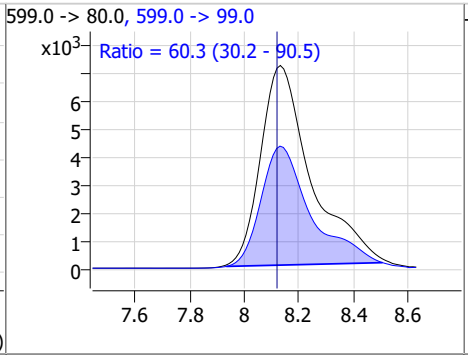


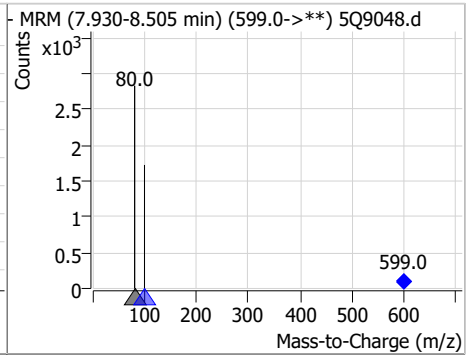




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	17.86	8.13	0.00	88492	599.0 -> 99.0	60.3	30.2	90.5

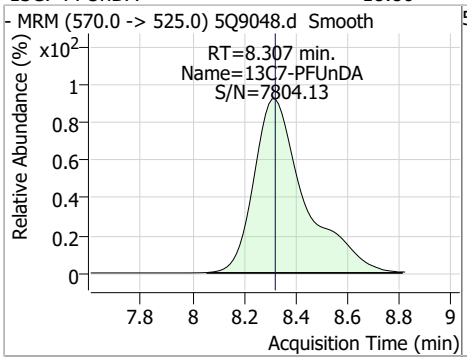


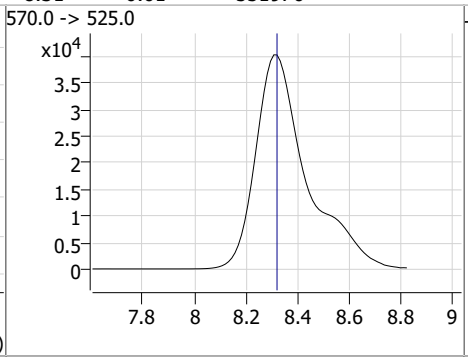


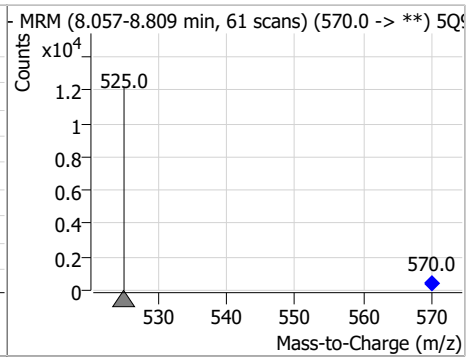


Perfluorinated Compounds by LC/MS/MS

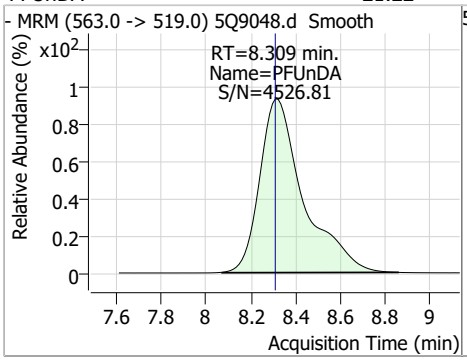
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	18.86	8.31	-0.01	551976				

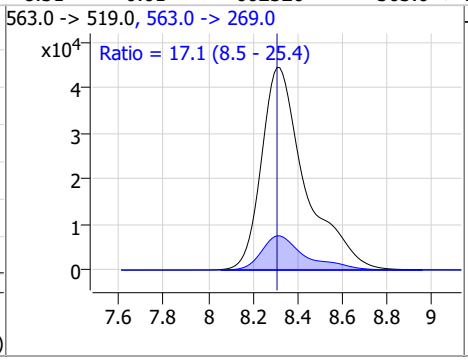


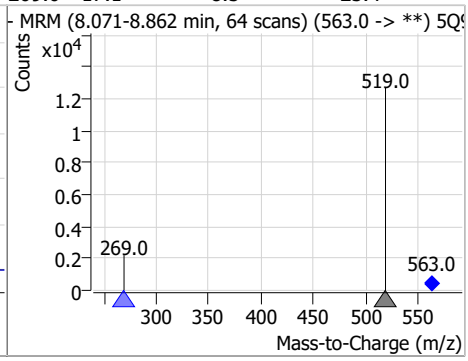




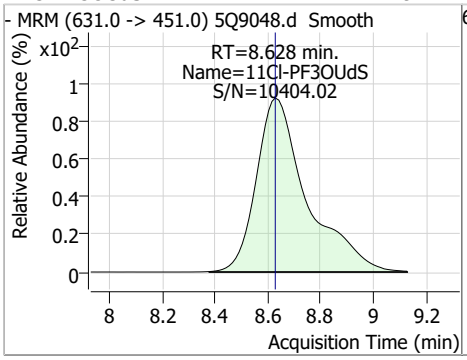
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	21.22	8.31	-0.01	602320	563.0 -> 269.0	17.1	8.5	25.4

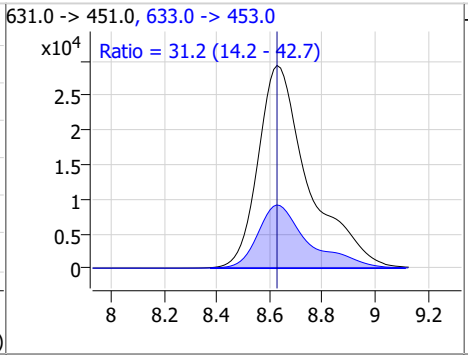


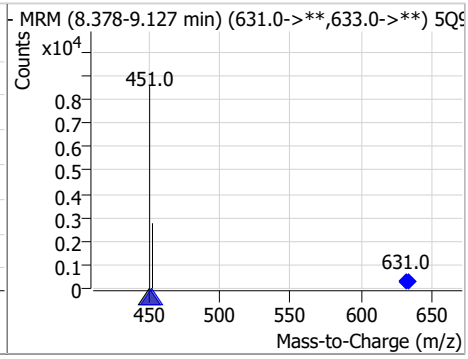




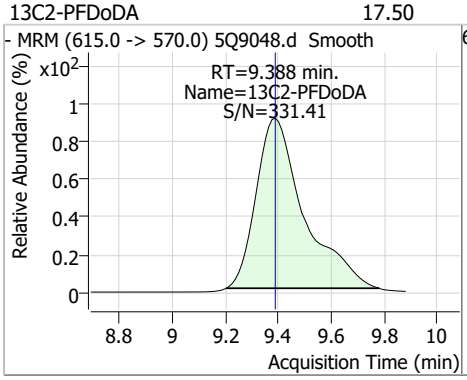
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	21.19	8.63	0.00	390679	633.0 -> 453.0	31.2	14.2	42.7

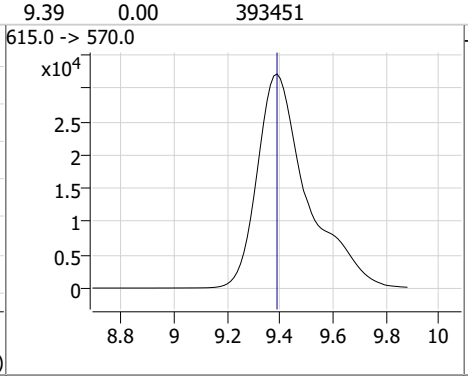


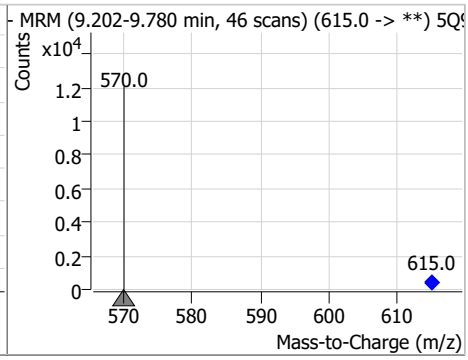




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	17.50	9.39	0.00	393451				

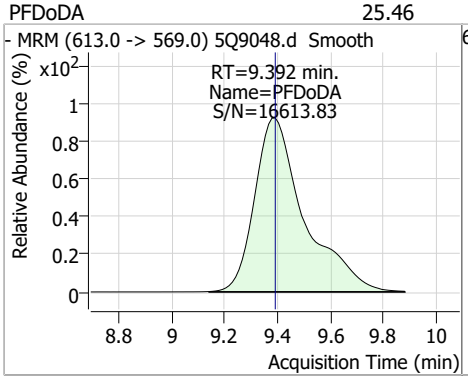


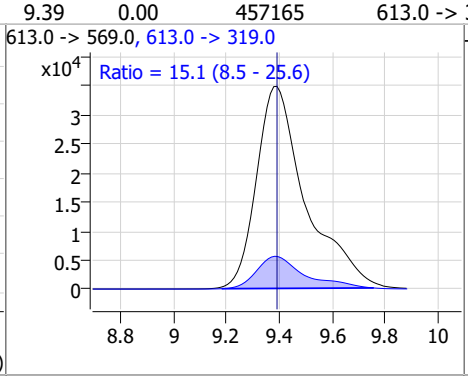


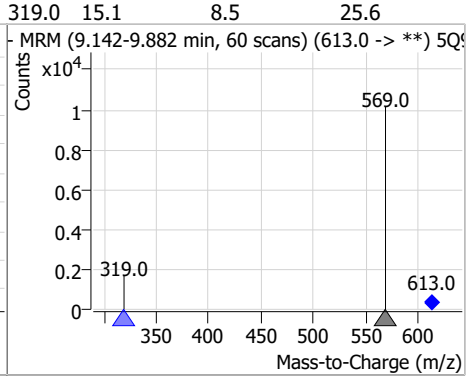


Perfluorinated Compounds by LC/MS/MS

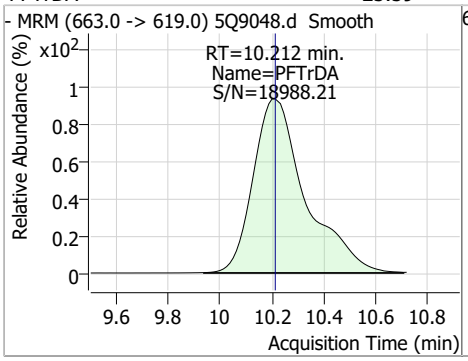
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	25.46	9.39	0.00	457165	613.0 -> 319.0	15.1	8.5	25.6

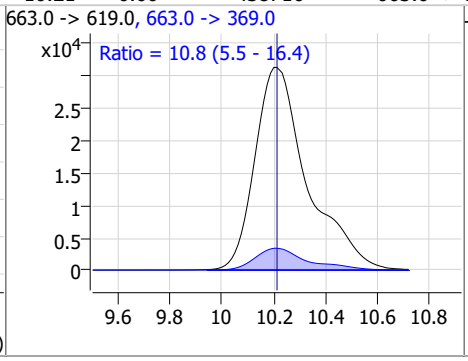


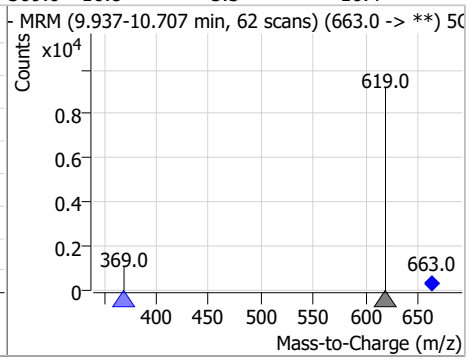




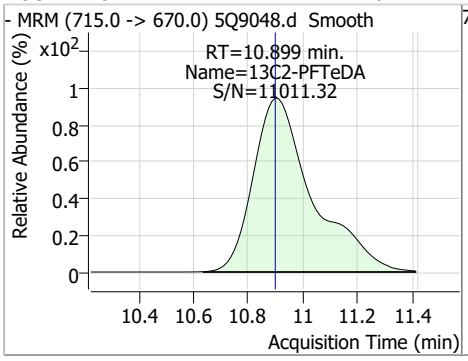
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	25.59	10.21	0.00	438716	663.0 -> 369.0	10.8	5.5	16.4

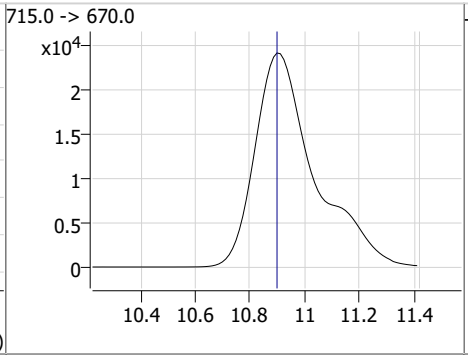


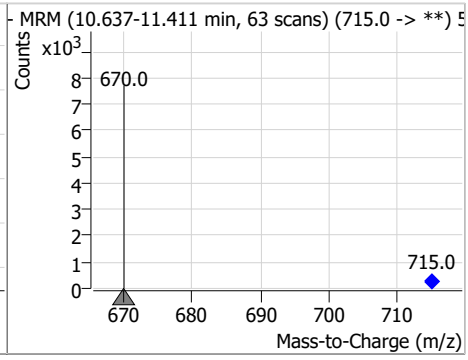




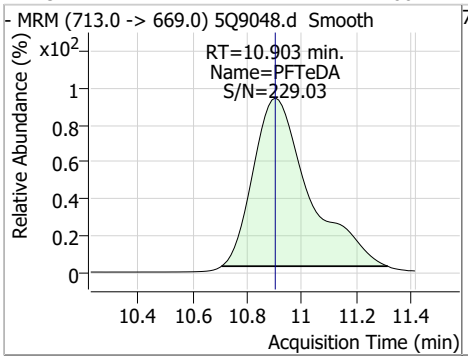
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	18.47	10.90	0.00	361741				

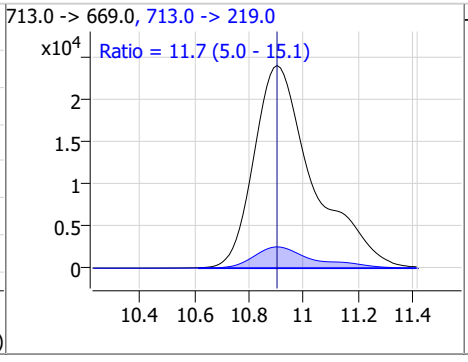


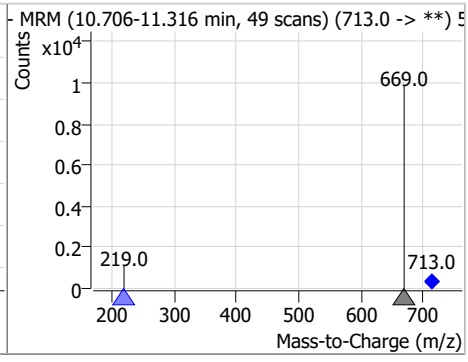




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	17.60	10.90	0.00	329864	713.0 -> 219.0	11.7	5.0	15.1







Manual Integration Approval Summary

Sample Number:	S5Q134-ICV134	**Method:**	EPA 537M QSM5.3 B-15
Lab FileID:	5Q9048.D	**Analyst approved:**	12/29/22 10:50 Lindsay Ritner
Injection Time:	12/28/22 15:02	**Supervisor approved:**	12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.72	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.87	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9049.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 3:19:22 PM
Sample Name : icv134-20
Vial : P1-B2
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	103144	20.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	209098	20.00	µg/L	0.000
M5-PFHxA	4.952	318.0 -> 273.0	298961	20.00	µg/L	-0.012
M4-PFHpA	5.714	367.0 -> 322.0	305170	20.00	µg/L	-0.012
M8-PFOA	6.348	421.0 -> 376.0	396427	20.00	µg/L	-0.014
M9-PFNA	6.906	472.0 -> 427.0	416342	20.00	µg/L	-0.012
M6-PFDA	7.436	519.0 -> 474.0	457493	20.00	µg/L	0.000
M7-PFUnDA	8.320	570.0 -> 525.0	538886	20.00	µg/L	0.000
M2-PFDoDA	9.388	615.0 -> 570.0	412499	20.00	µg/L	0.000
M2-PFTeDA	10.899	715.0 -> 670.0	338507	20.00	µg/L	0.000
M8-FOSA	6.580	506.0 -> 78.0	96742	20.00	µg/L	-0.012
M3-PFBS	4.124	302.0 -> 99.0	26097	20.00	µg/L	0.000
M3-PFHxS	5.721	402.0 -> 99.0	36172	20.00	µg/L	-0.012
M8-PFOS	6.866	507.0 -> 99.0	48714	20.00	µg/L	-0.013
M2-4:2FTS	4.874	329.0 -> 309.0	94219	20.00	µg/L	-0.012
M2-6:2FTS	6.346	429.0 -> 409.0	151349	20.00	µg/L	-0.014
M2-8:2FTS	7.498	529.0 -> 509.0	142673	20.00	µg/L	-0.013
M3-MeFOSAA	7.034	573.0 -> 419.0	34248	20.00	µg/L	0.000
M3-HFPO-DA	5.182	287.0 -> 169.0	66064	20.00	µg/L	0.000
M3-MeFOSA	6.939	515.0 -> 169.0	30624	20.00	µg/L	-0.012
M5-EtFOSAA	7.132	589.0 -> 419.0	35107	20.00	µg/L	-0.012
System Monitoring Compounds						
13C2-4:2FTS	4.874	329.0 -> 309.0	94219	19.57	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.8%		
13C2-6:2FTS	6.346	429.0 -> 409.0	151349	19.74	µg/L	-0.014
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%		
13C2-8:2FTS	7.498	529.0 -> 509.0	142673	19.76	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.8%		
13C2-PFDoDA	9.388	615.0 -> 570.0	412499	18.34	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.7%		
13C2-PFTeDA	10.899	715.0 -> 670.0	338507	17.29	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.4%		
13C3-PFBS	4.124	302.0 -> 99.0	26097	20.08	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.4%		
13C3-PFHxS	5.721	402.0 -> 99.0	36172	20.21	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.1%		
13C4-PFBA	2.400	217.0 -> 172.0	103144	19.82	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.1%		
13C4-PFHpA	5.714	367.0 -> 322.0	305170	19.85	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%		
13C5-PFHxA	4.952	318.0 -> 273.0	298961	19.87	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.4%		
13C5-PFPeA	3.919	268.0 -> 223.0	209098	19.93	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.7%		
13C6-PFDA	7.436	519.0 -> 474.0	457493	19.68	µg/L	0.000

Perfluorinated Compounds by LC/MS/MS

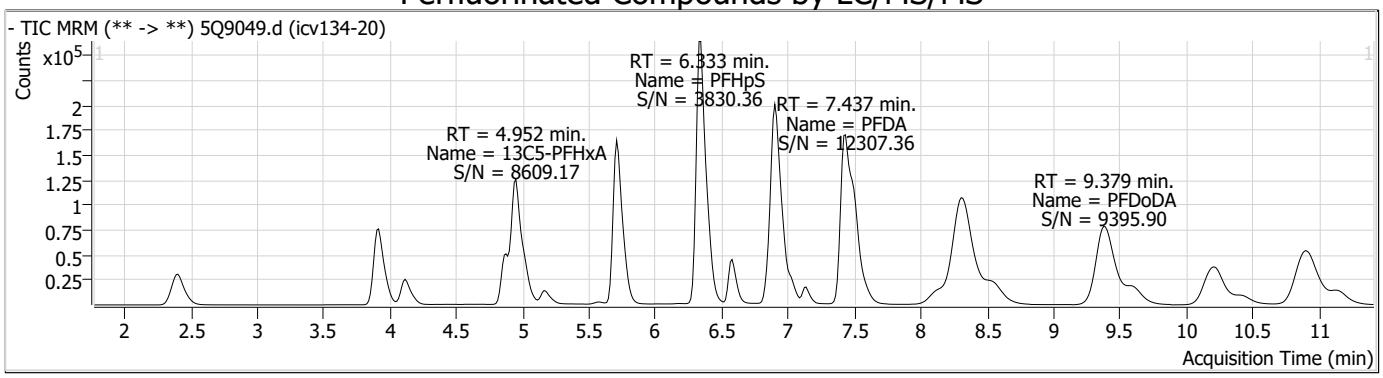
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%			
13C7-PFUnDA	8.320	570.0 -> 525.0	538886	18.42	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.1%			
13C8-FOSA	6.580	506.0 -> 78.0	96742	20.03	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.2%			
13C8-PFOA	6.348	421.0 -> 376.0	396427	19.67	µg/L		-0.014
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%			
13C8-PFOS	6.866	507.0 -> 99.0	48714	20.43	µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.1%			
13C9-PFNA	6.906	472.0 -> 427.0	416342	19.79	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.0%			
d3-MeFOSAA	7.034	573.0 -> 419.0	34248	19.28	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.4%			
13C3-HFPO-DA	5.182	287.0 -> 169.0	66064	19.97	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.9%			
d3-MeFOSA	6.939	515.0 -> 169.0	30624	20.21	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.1%			
d5-EtFOSAA	7.132	589.0 -> 419.0	35107	19.03	µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.2%			
Target Compounds							QValue
4:2FTS	4.876	327.0 -> 307.0	102657	19.91	µg/L		100
		327.0 -> 81.0	60789				
6:2FTS	6.347	427.0 -> 407.0	153564	19.77	µg/L		99
		427.0 -> 81.0	64959				
8:2FTS	7.499	527.0 -> 507.0	145590	19.98	µg/L		99
		527.0 -> 81.0	72008				
EtFOSAA	7.133	584.0 -> 419.0	19647	16.76	µg/L		100
		584.0 -> 483.0	12492				
FOSA	6.582	498.0 -> 78.0	85939	17.29	µg/L		100
		498.0 -> 478.0	2713				
MeFOSAA	7.035	570.0 -> 419.0	23772	17.10	µg/L		100
		570.0 -> 512.0	9844				
PFBA	2.406	213.0 -> 169.0	107717	19.17	µg/L		100
PFBS	4.117	299.0 -> 80.0	75934	17.89	µg/L		100
		299.0 -> 99.0	32386				
PFDA	7.437	513.0 -> 469.0	447523	18.37	µg/L		100
		513.0 -> 219.0	80515				
PFDoDA	9.379	613.0 -> 569.0	440665	23.41	µg/L		98
		613.0 -> 319.0	71863				
PFDS	8.131	599.0 -> 80.0	92099	19.04	µg/L		92
		599.0 -> 99.0	61009				
PFHpA	5.714	363.0 -> 319.0	327533	17.16	µg/L		100
		363.0 -> 169.0	72833				
PFHpS	6.333	449.0 -> 80.0	69341	18.62	µg/L		100
		449.0 -> 99.0	38033				
PFHxA	4.953	313.0 -> 269.0	278513	18.34	µg/L		100
		313.0 -> 119.0	12744				
PFHxS	5.722	399.0 -> 80.0	68190	18.57	µg/L	m	100
		399.0 -> 99.0	38443				
PFNA	6.906	463.0 -> 419.0	397386	18.41	µg/L		100
		463.0 -> 219.0	85439				
PFNS	-	549.0 -> 80.0	-	N.D.			
		549.0 -> 99.0					
PFOA	6.348	413.0 -> 369.0	427898	18.86	µg/L		100
		413.0 -> 169.0	114533				
PFOS	6.867	499.0 -> 80.0	94791	21.09	µg/L		88

Perfluorinated Compounds by LC/MS/MS

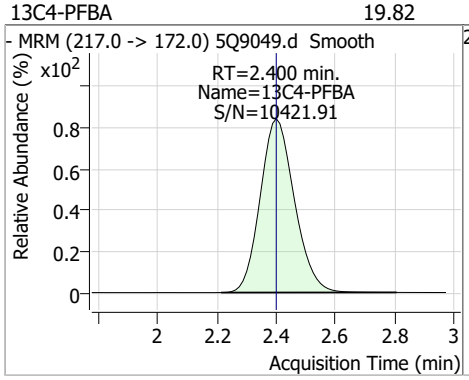
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	52735			
PFPeA	3.922	263.0 -> 219.0	219446	17.86	µg/L	100
PFPeS	5.035	349.0 -> 80.0	50355	18.12	µg/L	100
		349.0 -> 99.0	25842			
PFTeDA	10.903	713.0 -> 669.0	328499	18.73	µg/L	97
		713.0 -> 219.0	36930			
PFTrDA	10.200	663.0 -> 619.0	429920	23.92	µg/L	99
		663.0 -> 369.0	48536			
PFUnDA	8.309	563.0 -> 519.0	622456	22.46	µg/L	100
		563.0 -> 269.0	104989			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
		633.0 -> 453.0				
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
		533.0 -> 353.0				
ADONA	-	377.0 -> 251.0	-	N.D.		
		377.0 -> 85.0				
HFPO-DA	-	329.0 -> 169.0	-	N.D.		
		285.0 -> 169.0				
MeFOSA	6.941	512.0 -> 169.0	35119	19.38	µg/L	95
		512.0 -> 219.0	25868			
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	-	298.0 -> 78.0	-	N.D.		
		298.0 -> 64.0				
FHxSA	-	398.0 -> 78.0	-	N.D.		
		398.0 -> 64.0				

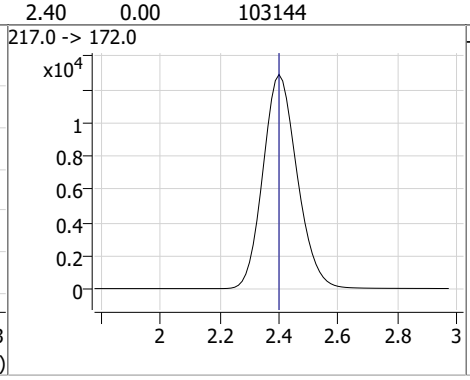
 # = Qualifier out of range, m = manually integrated, + = Area summed

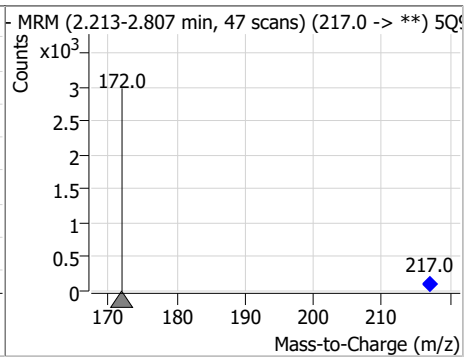
Perfluorinated Compounds by LC/MS/MS



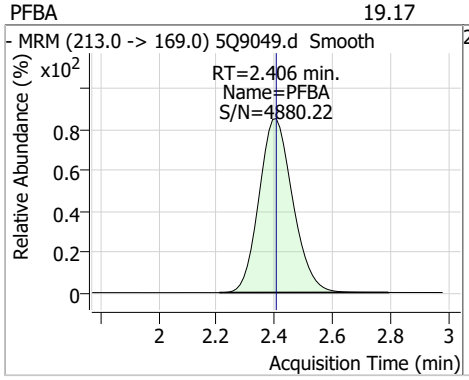
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.82	2.40	0.00	103144				

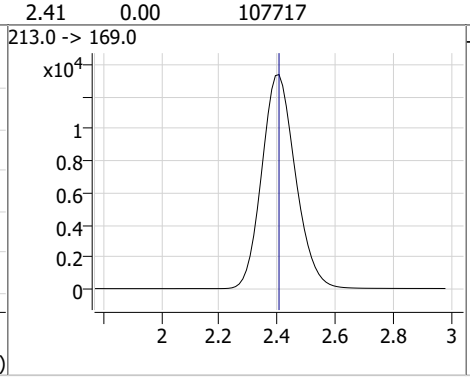


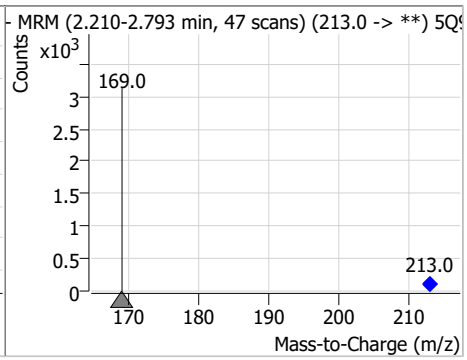




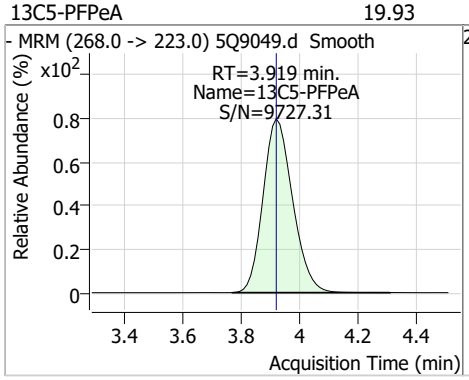
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.17	2.41	0.00	107717				

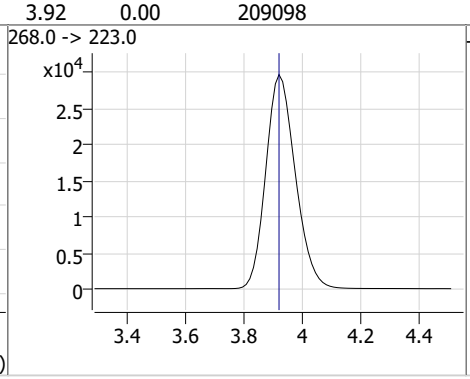


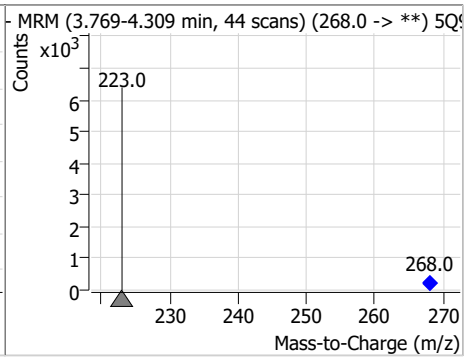




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.93	3.92	0.00	209098				

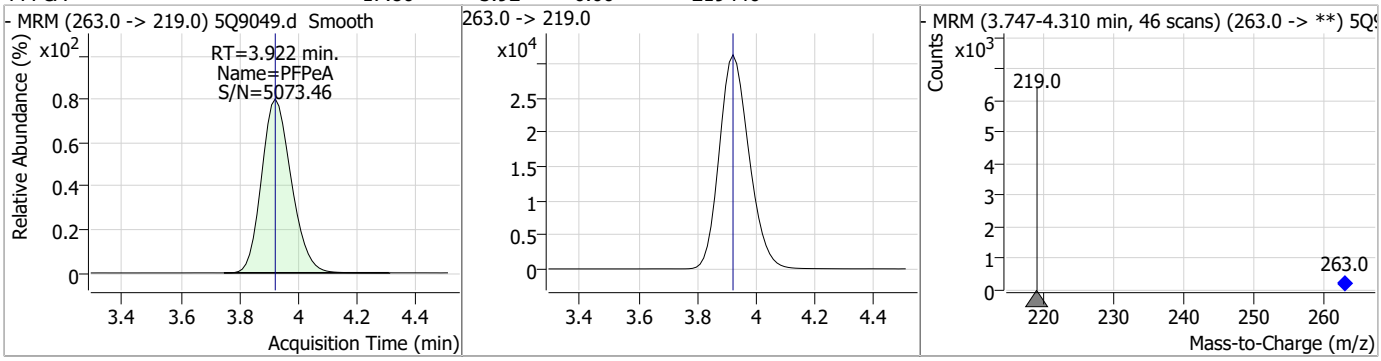




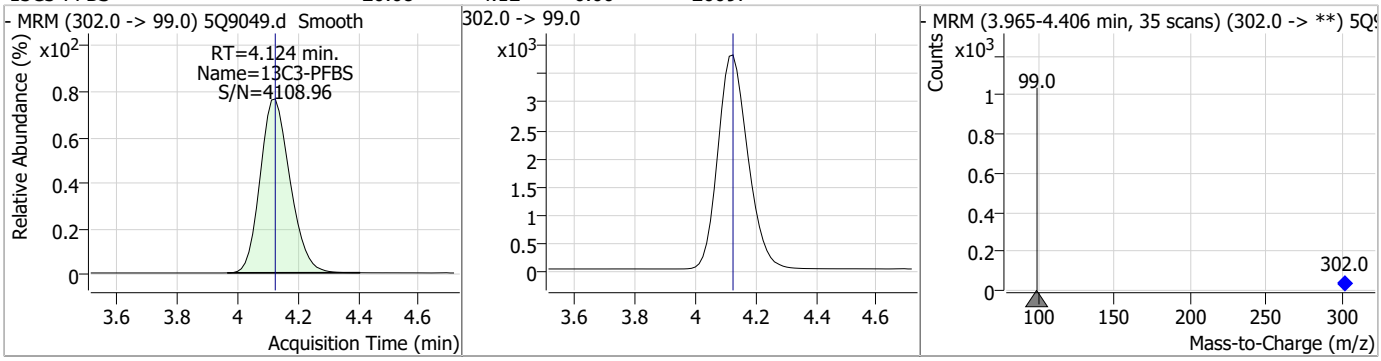


Perfluorinated Compounds by LC/MS/MS

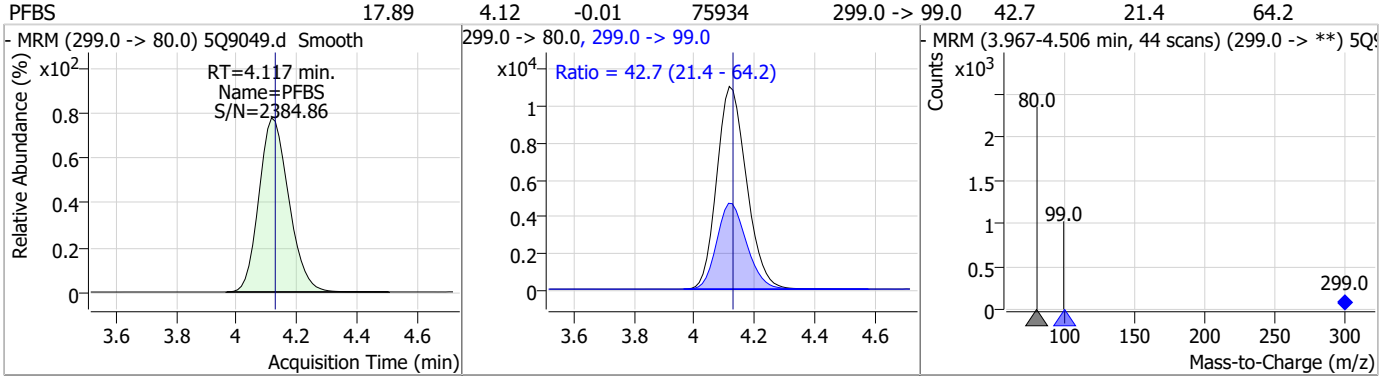
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	17.86	3.92	0.00	219446				



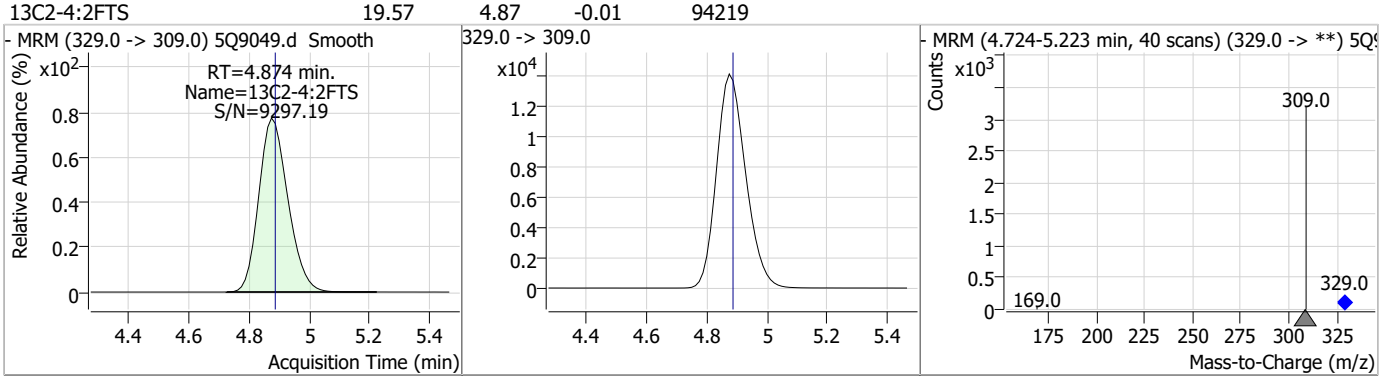
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.08	4.12	0.00	26097				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	17.89	4.12	-0.01	75934	299.0 -> 99.0	42.7	21.4	64.2

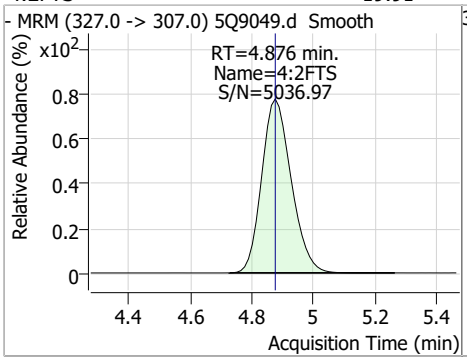


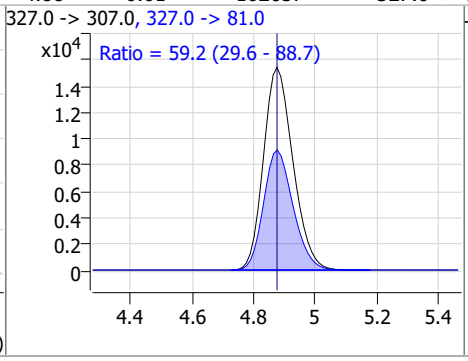
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.57	4.87	-0.01	94219				

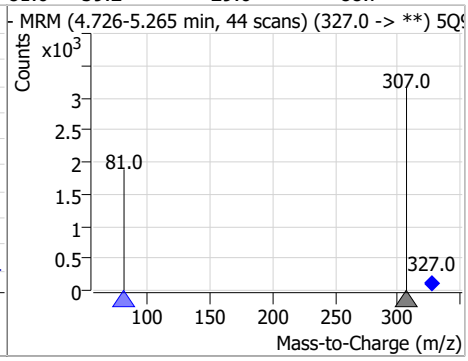


Perfluorinated Compounds by LC/MS/MS

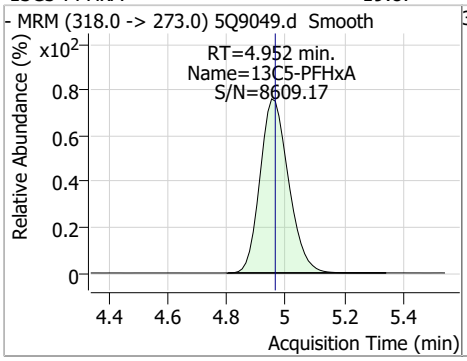
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	19.91	4.88	-0.01	102657	327.0 -> 81.0	59.2	29.6	88.7

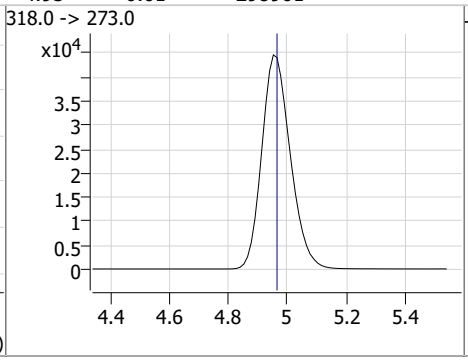


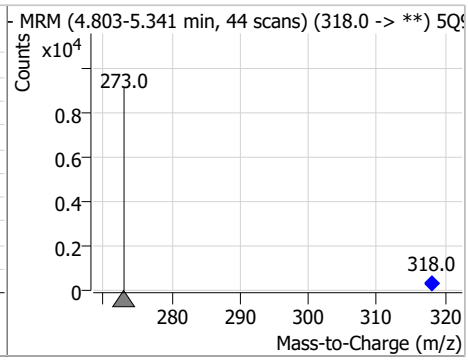




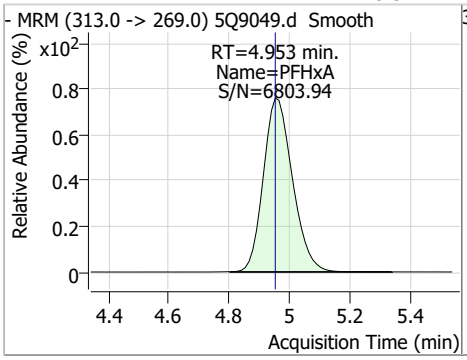
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.87	4.95	-0.01	298961				

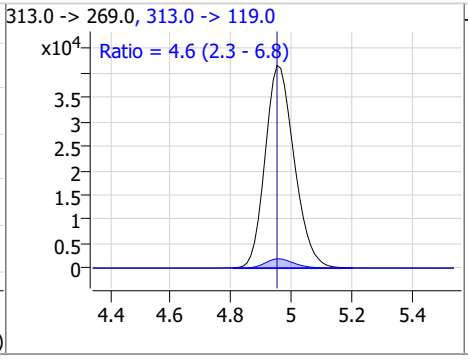


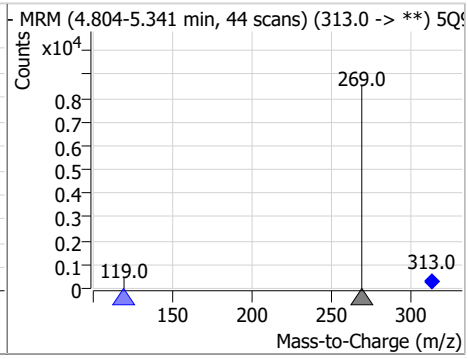




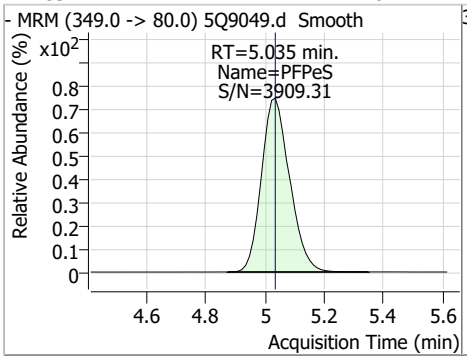
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	18.34	4.95	-0.01	278513	313.0 -> 119.0	4.6	2.3	6.8

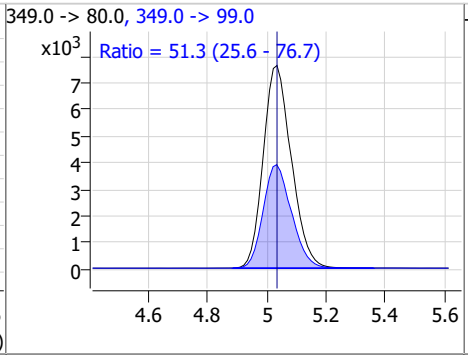


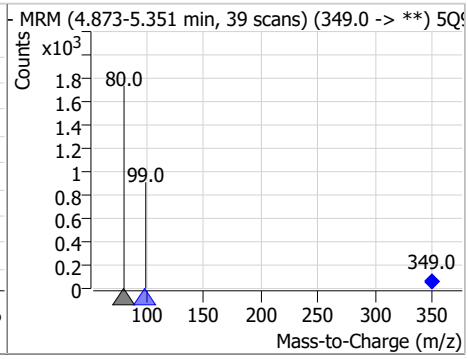




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	18.12	5.03	0.00	50355	349.0 -> 99.0	51.3	25.6	76.7

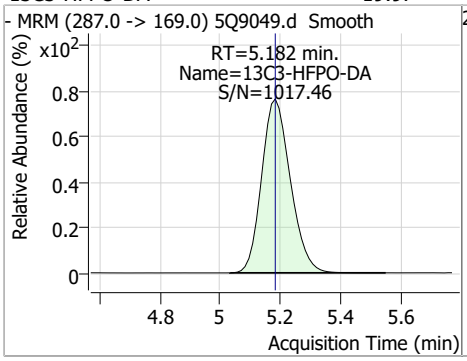


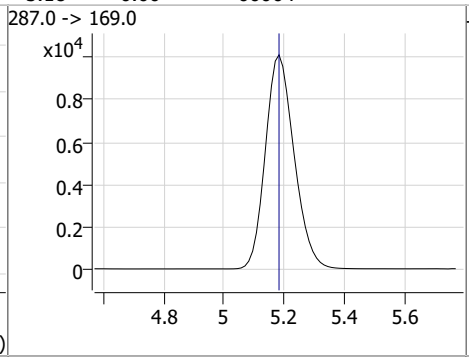


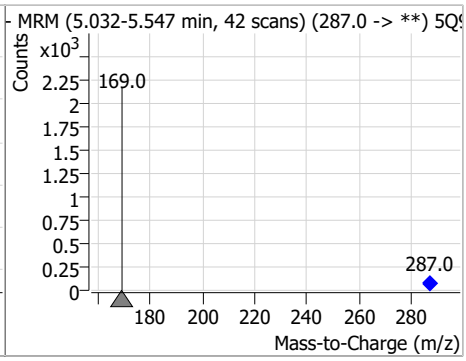


Perfluorinated Compounds by LC/MS/MS

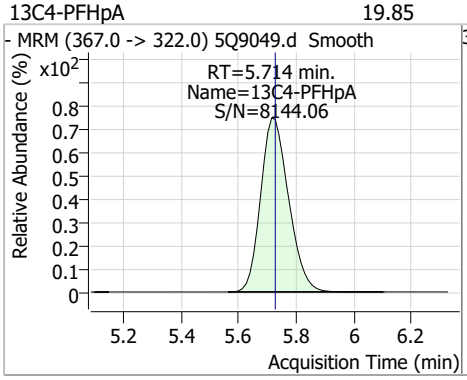
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.97	5.18	0.00	66064				

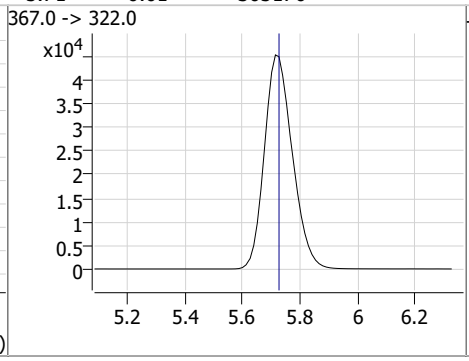


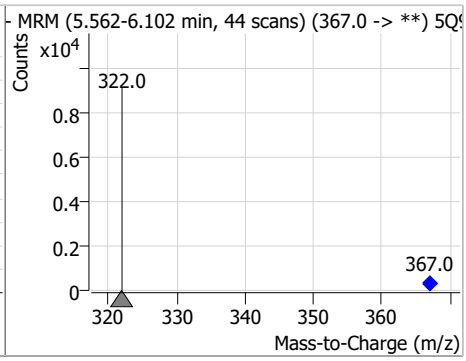




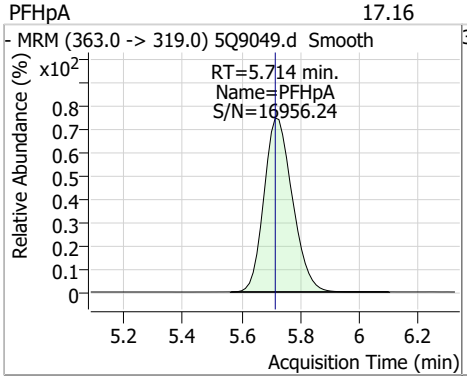
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.85	5.71	-0.01	305170				

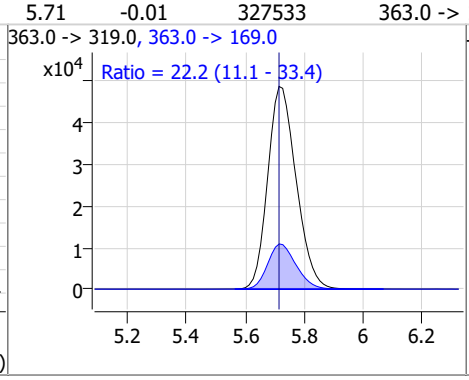


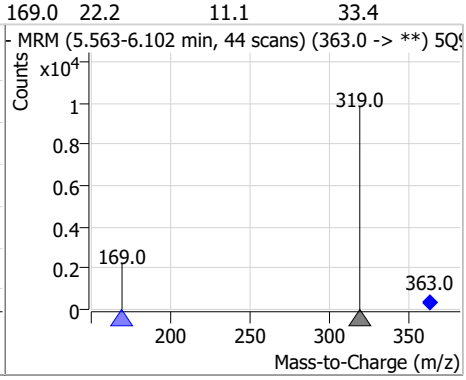




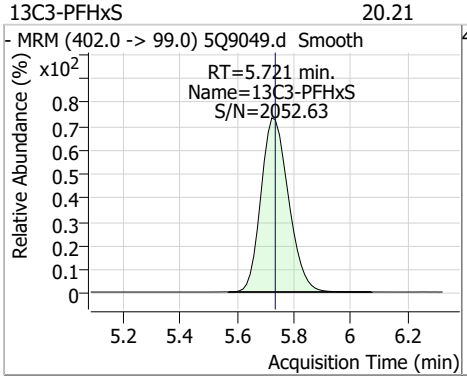
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	17.16	5.71	-0.01	327533	363.0 -> 169.0	22.2	11.1	33.4

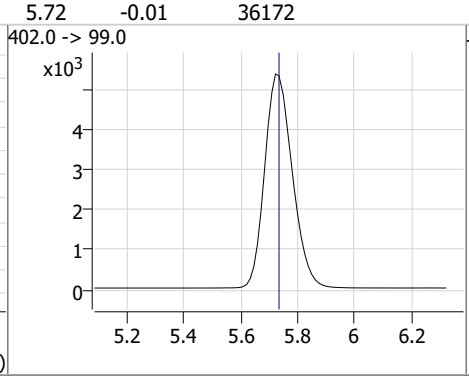


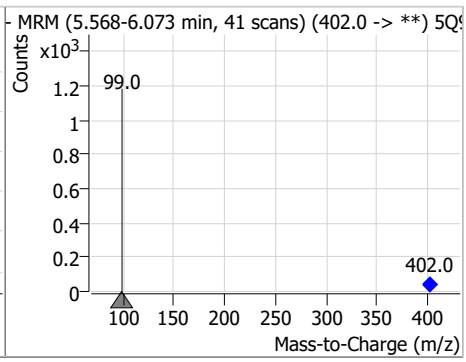




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.21	5.72	-0.01	36172				

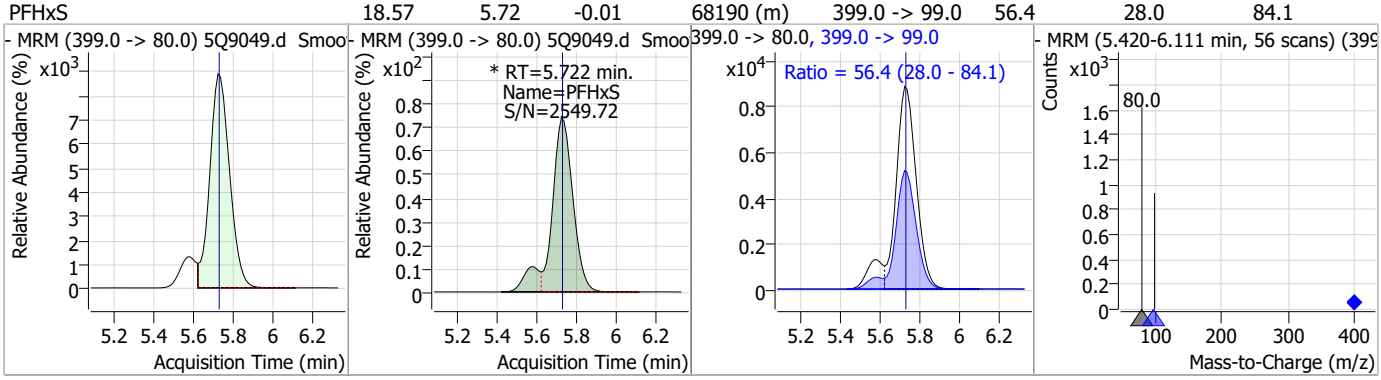




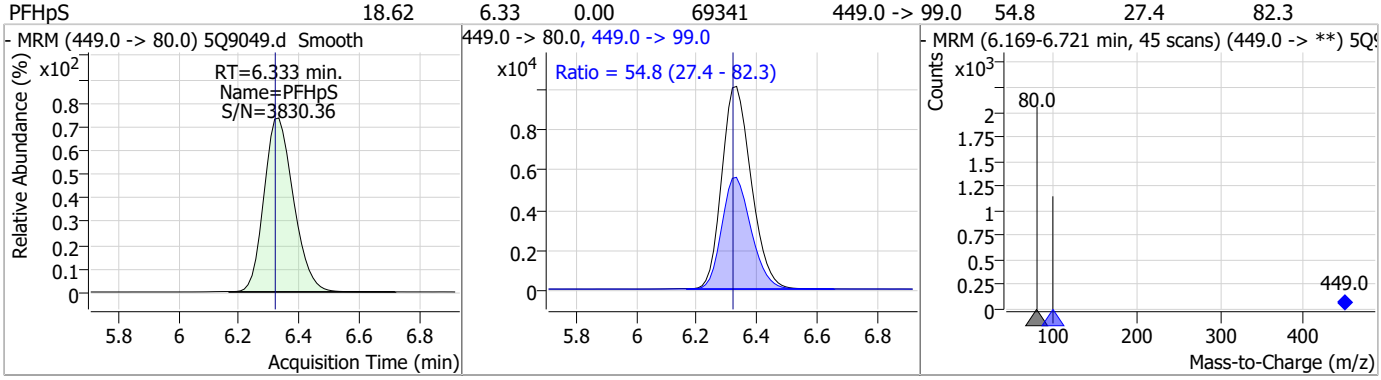


Perfluorinated Compounds by LC/MS/MS

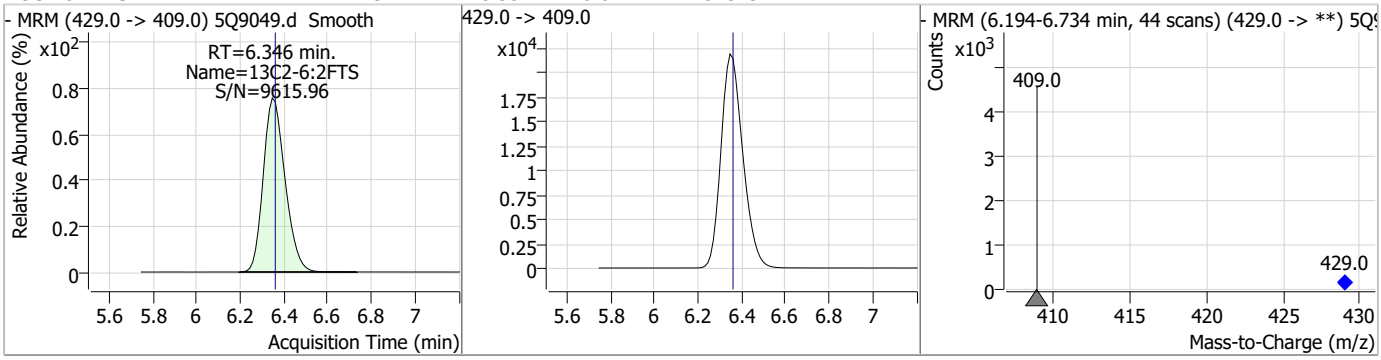
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	18.57	5.72	-0.01	68190 (m)	399.0 -> 99.0	56.4	28.0	84.1



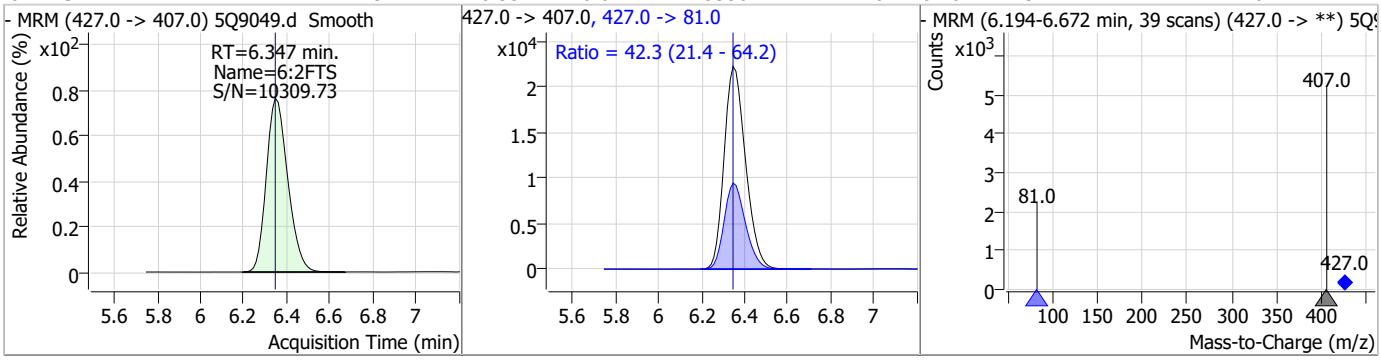
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	18.62	6.33	0.00	69341	449.0 -> 99.0	54.8	27.4	82.3



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.74	6.35	-0.01	151349				

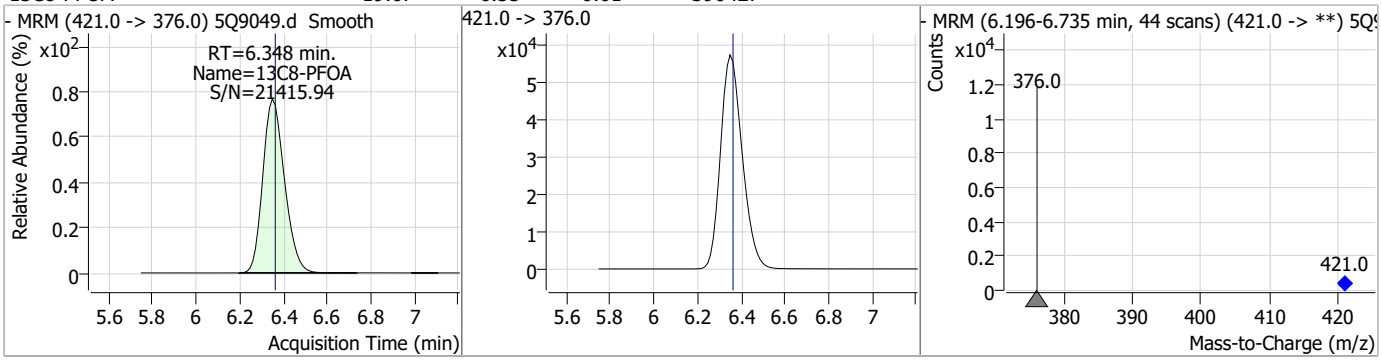


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	19.77	6.35	-0.01	153564	427.0 -> 81.0	42.3	21.4	64.2

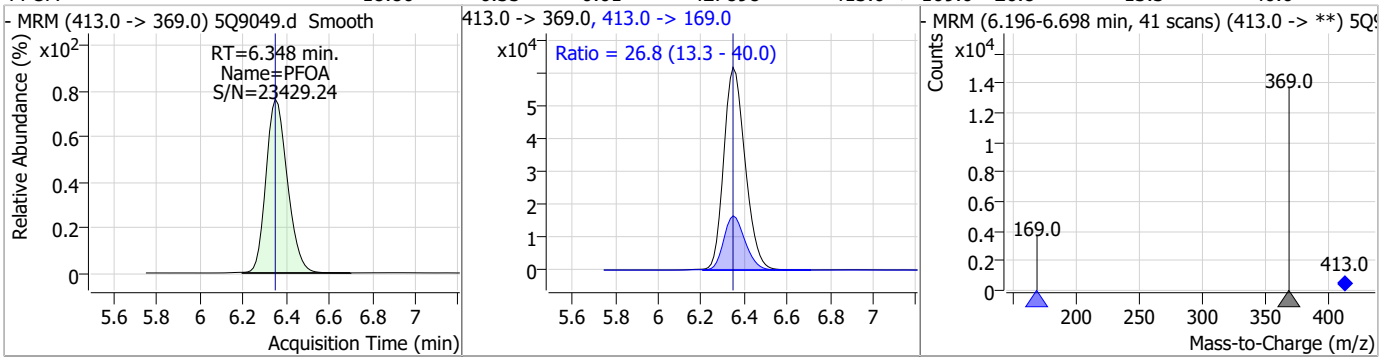


Perfluorinated Compounds by LC/MS/MS

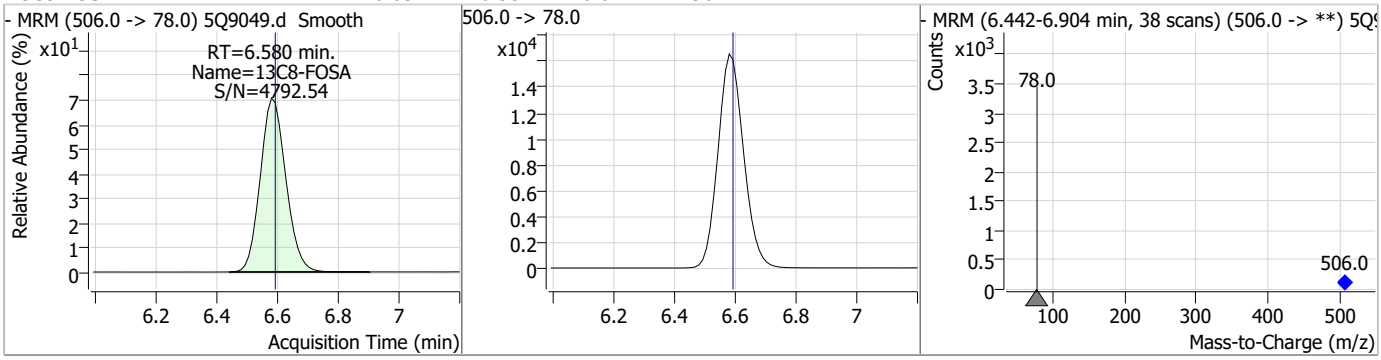
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.67	6.35	-0.01	396427				



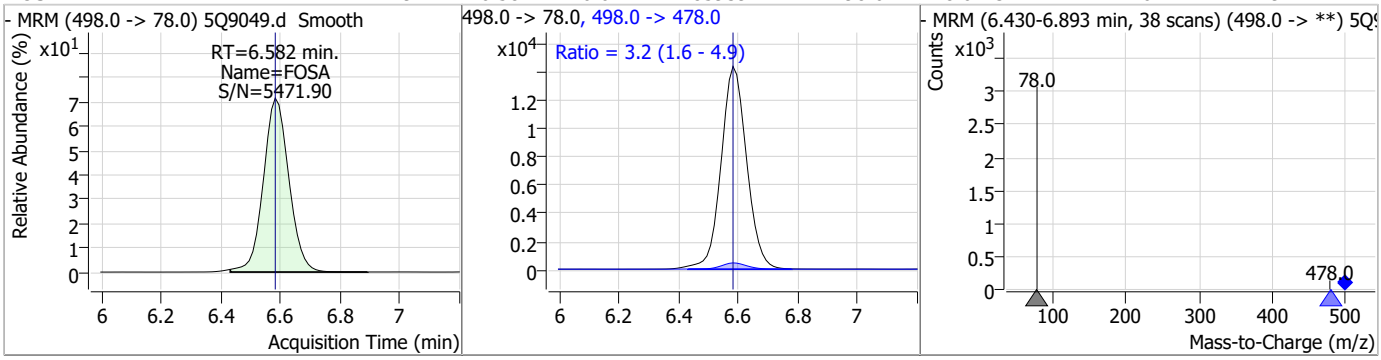
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	18.86	6.35	-0.01	427898	413.0 -> 169.0	26.8	13.3	40.0



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.03	6.58	-0.01	96742				

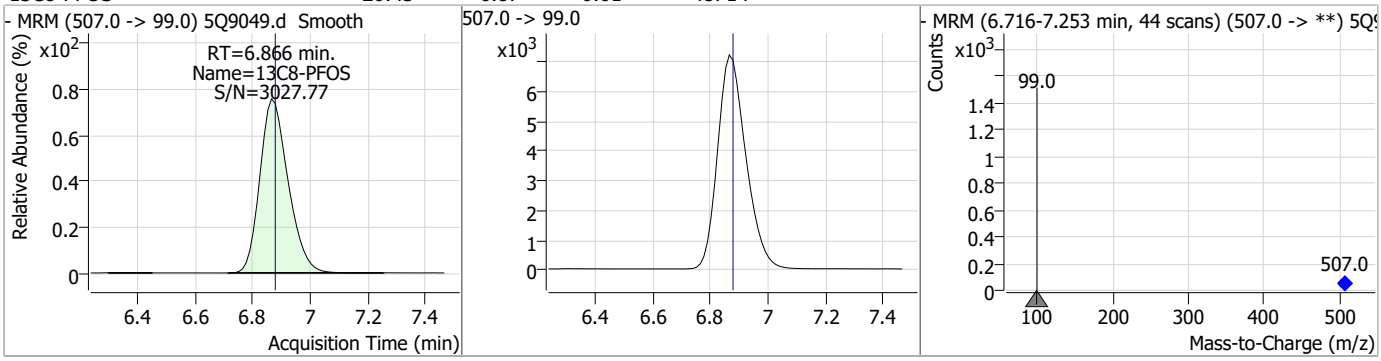


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	17.29	6.58	-0.01	85939	498.0 -> 478.0	3.2	1.6	4.9

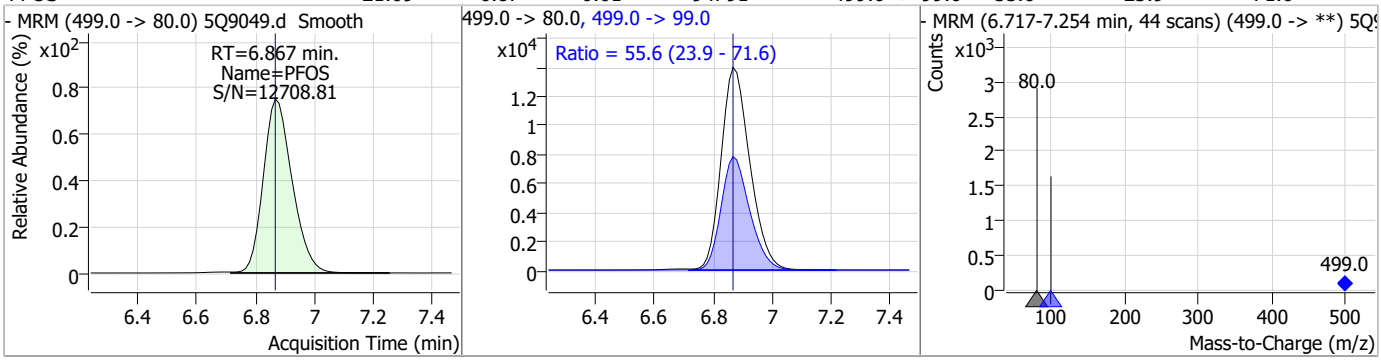


Perfluorinated Compounds by LC/MS/MS

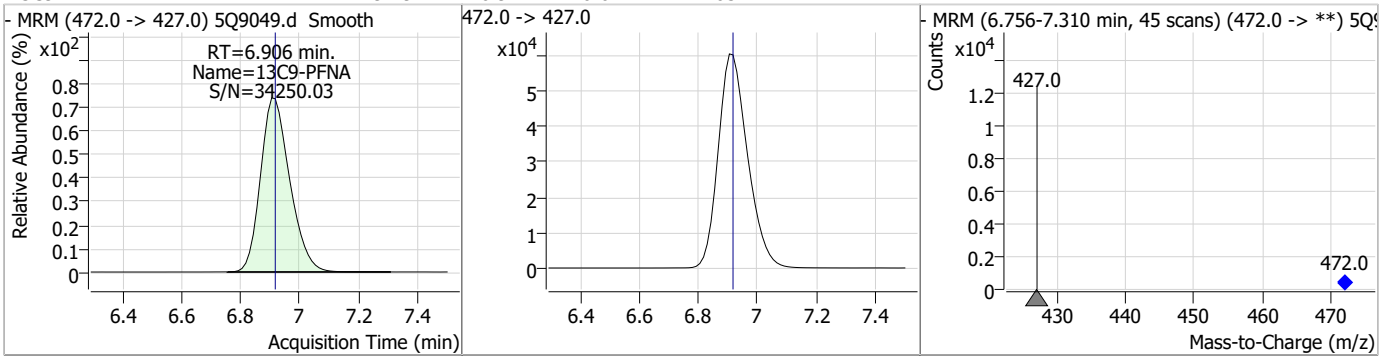
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.43	6.87	-0.01	48714				



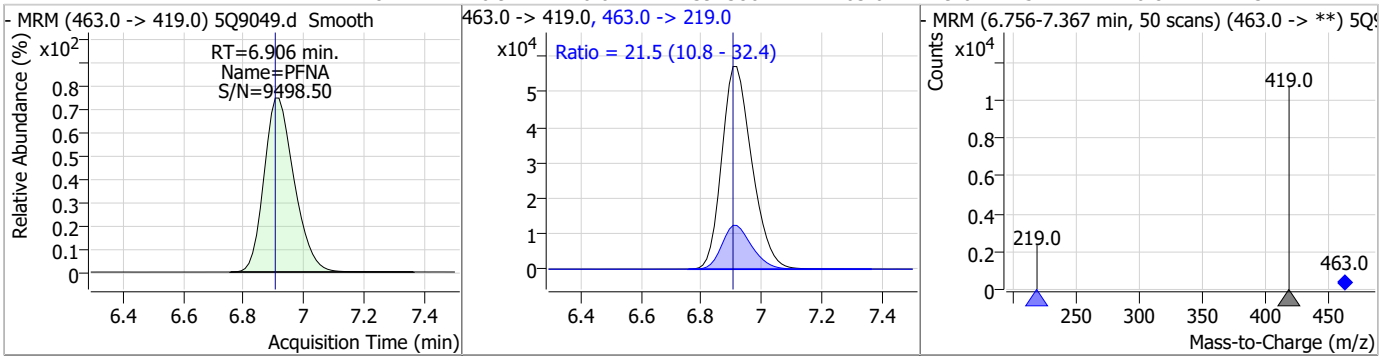
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	21.09	6.87	-0.01	94791	499.0 -> 99.0	55.6	23.9	71.6



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.79	6.91	-0.01	416342				

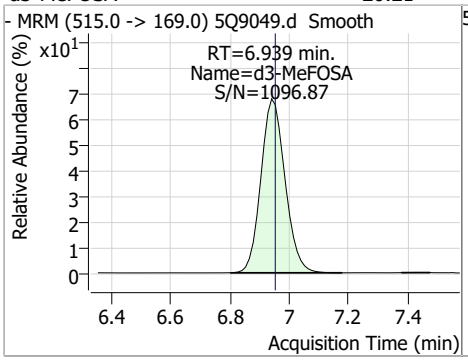


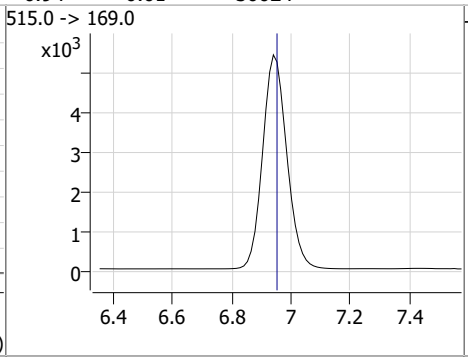
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	18.41	6.91	-0.01	397386	463.0 -> 219.0	21.5	10.8	32.4

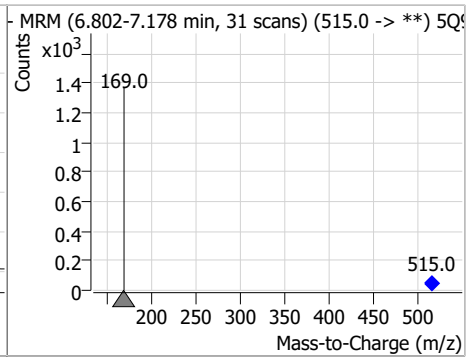


Perfluorinated Compounds by LC/MS/MS

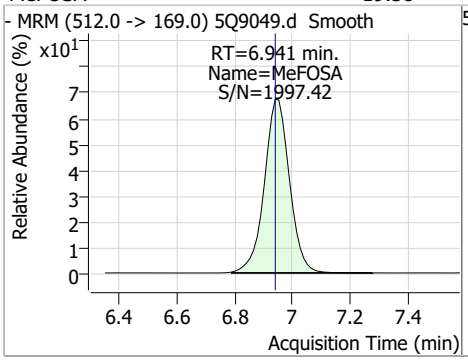
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	20.21	6.94	-0.01	30624				

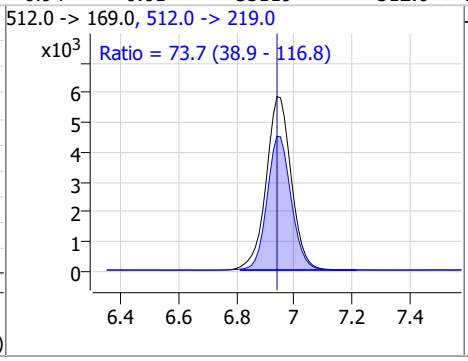


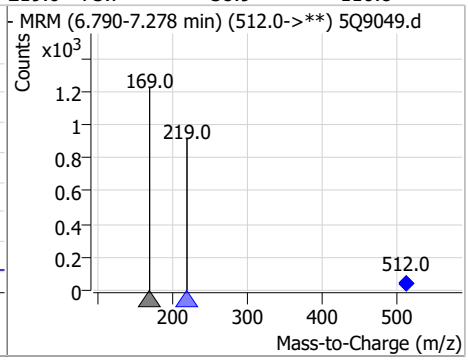




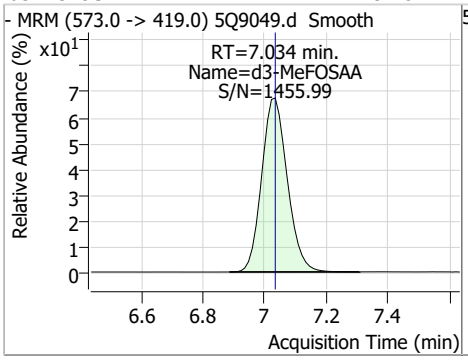
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	19.38	6.94	-0.01	35119	512.0 -> 219.0	73.7	38.9	116.8

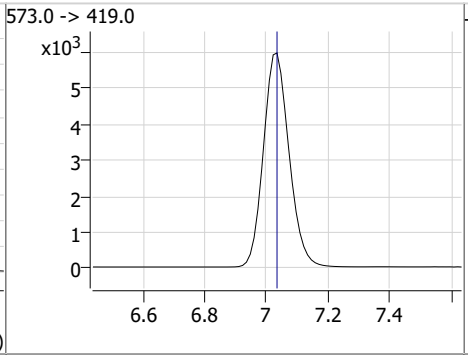


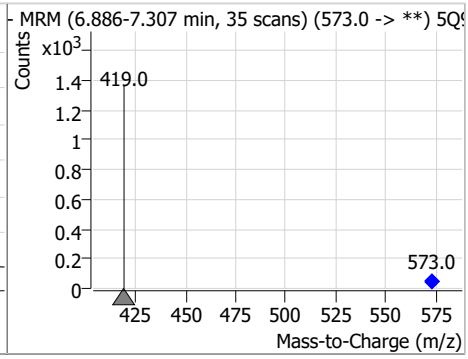




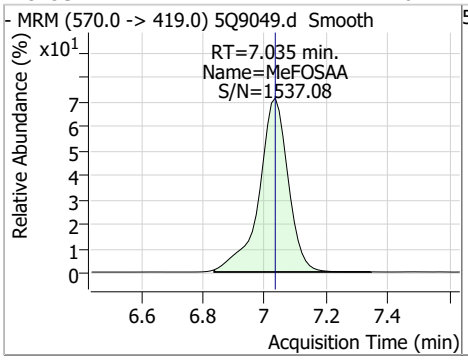
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.28	7.03	0.00	34248				

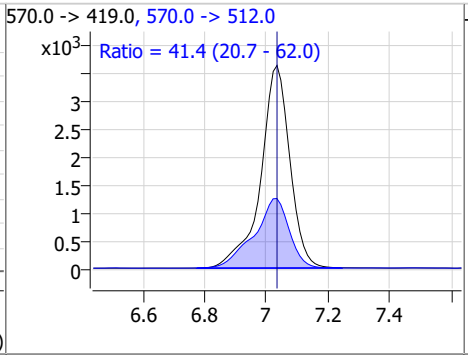


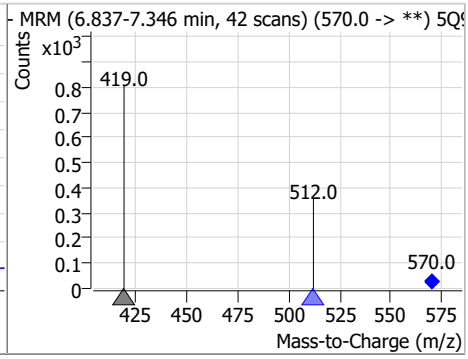




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	17.10	7.04	0.00	23772	570.0 -> 512.0	41.4	20.7	62.0

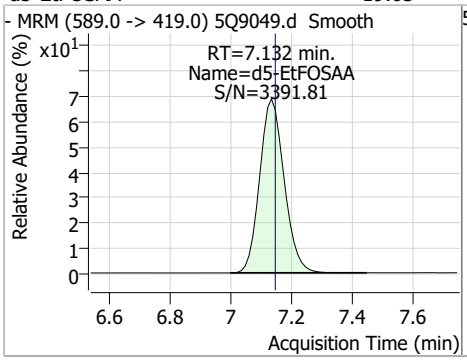


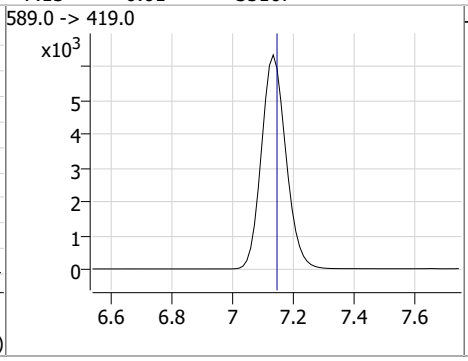


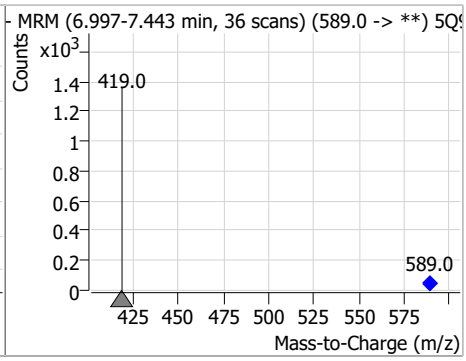


Perfluorinated Compounds by LC/MS/MS

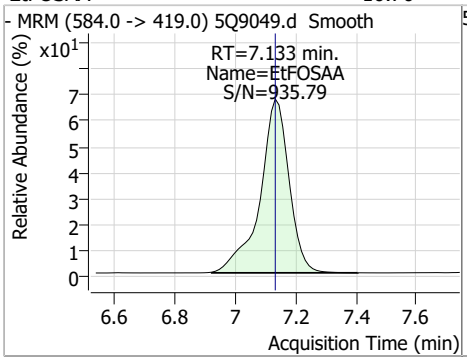
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.03	7.13	-0.01	35107				

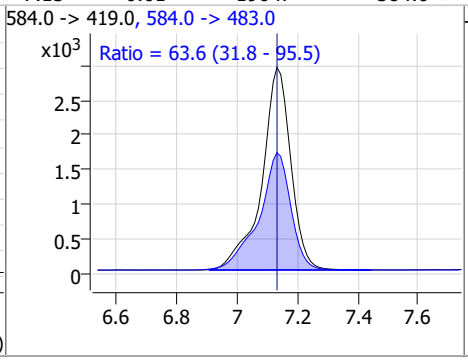


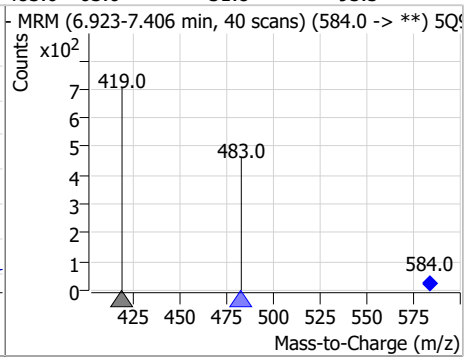




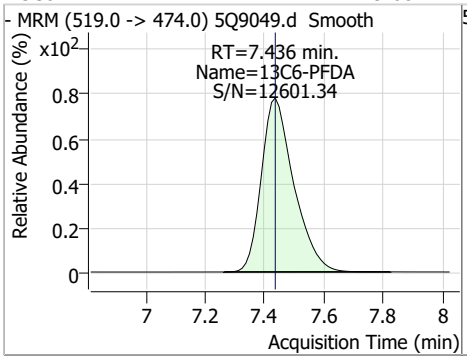
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	16.76	7.13	-0.01	19647	584.0 -> 483.0	63.6	31.8	95.5

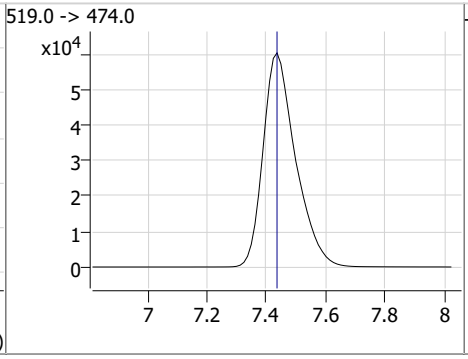


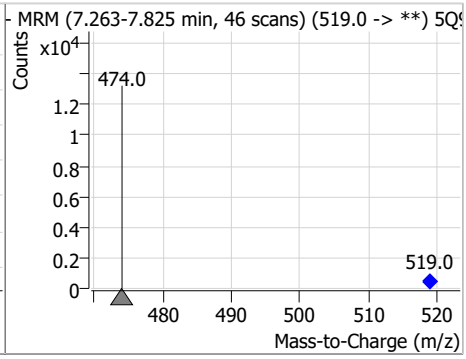




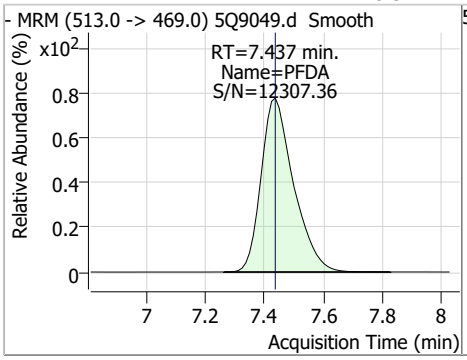
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.68	7.44	0.00	457493				

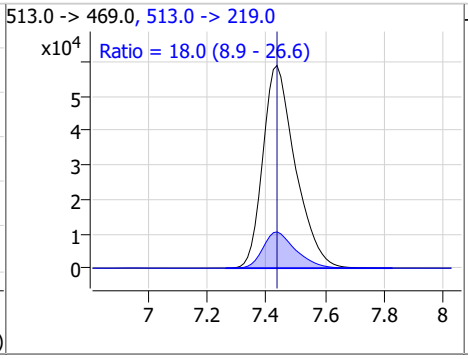


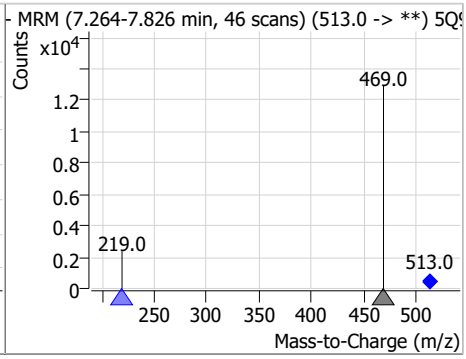




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	18.37	7.44	0.00	447523	513.0 -> 219.0	18.0	8.9	26.6

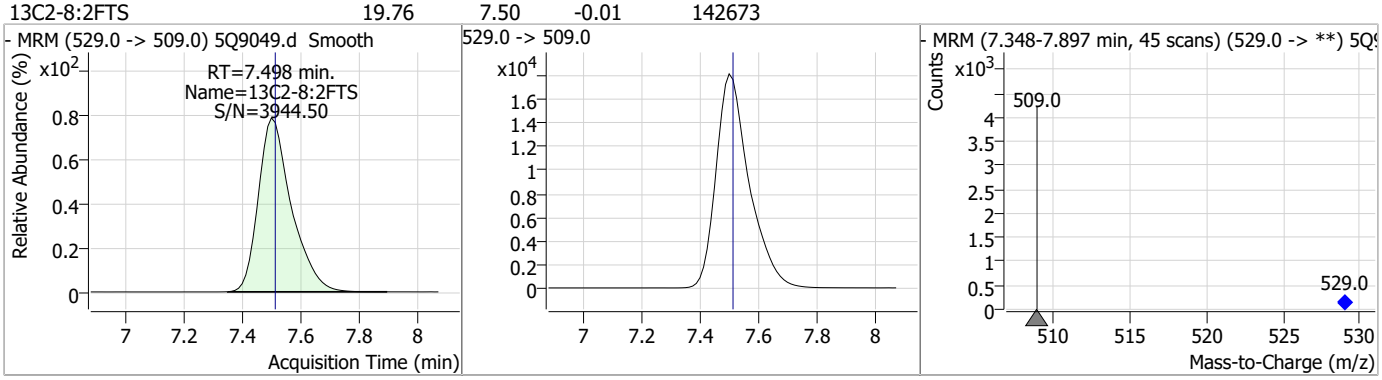




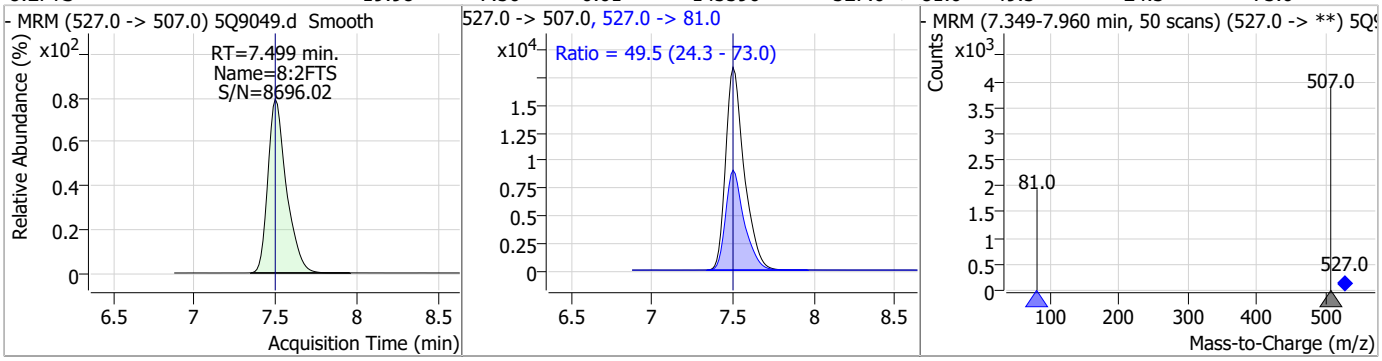


Perfluorinated Compounds by LC/MS/MS

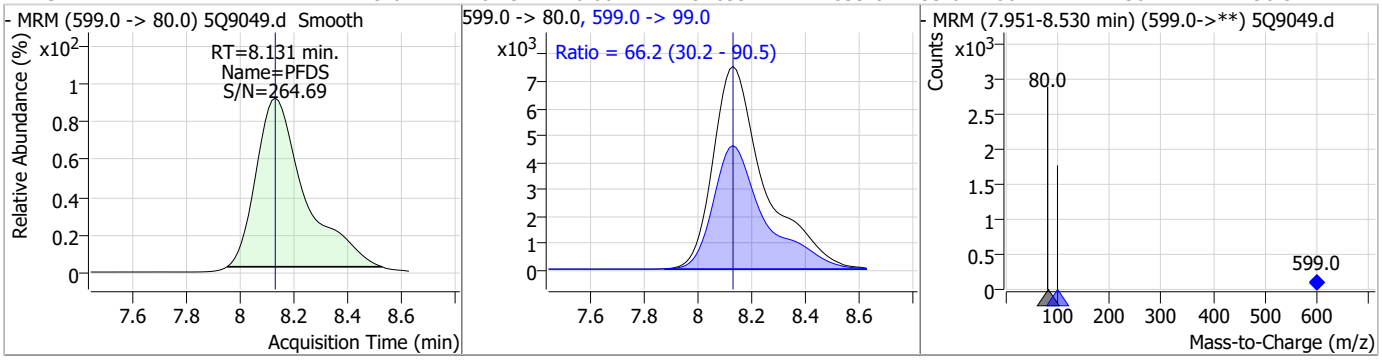
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.76	7.50	-0.01	142673				



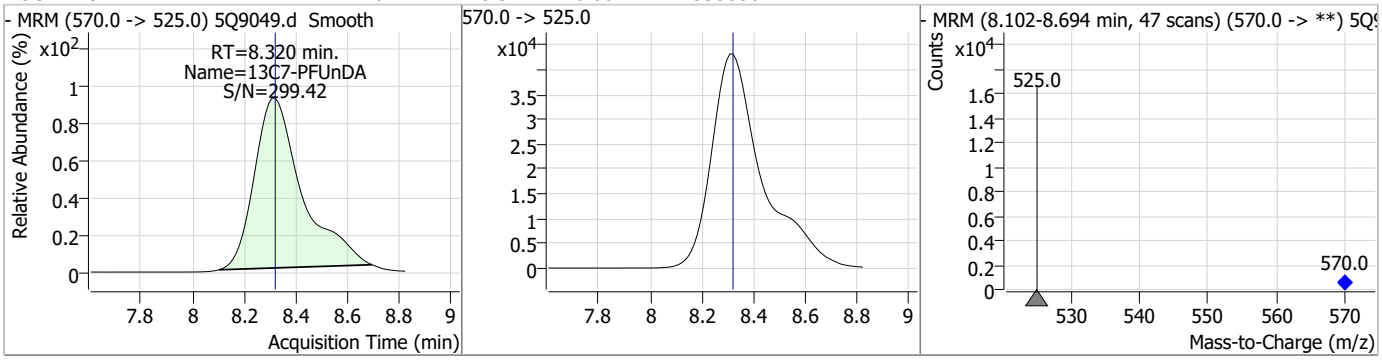
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	19.98	7.50	-0.01	145590	527.0 -> 81.0	49.5	24.3	73.0



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	19.04	8.13	0.00	92099	599.0 -> 99.0	66.2	30.2	90.5

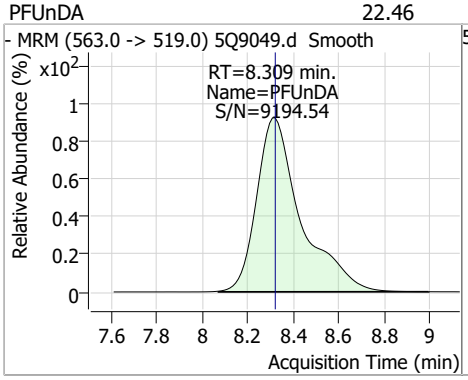


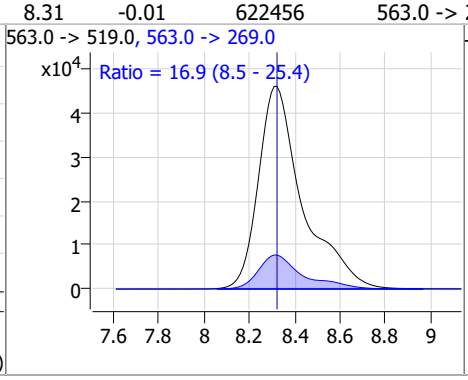
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	18.42	8.32	0.00	538886				

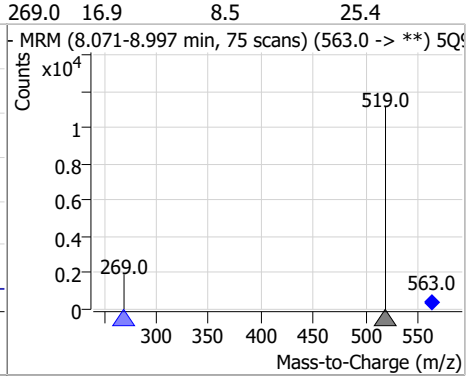


Perfluorinated Compounds by LC/MS/MS

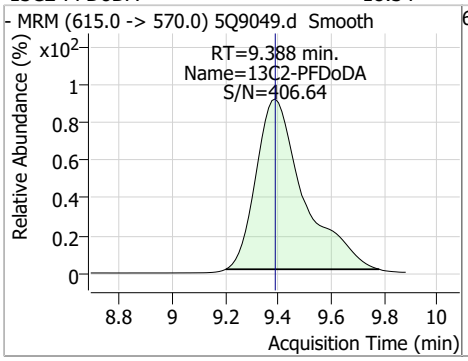
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	22.46	8.31	-0.01	622456	563.0 -> 269.0	16.9	8.5	25.4

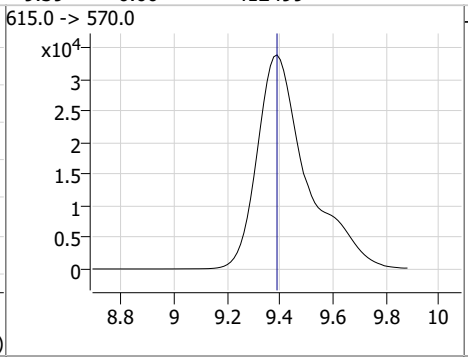


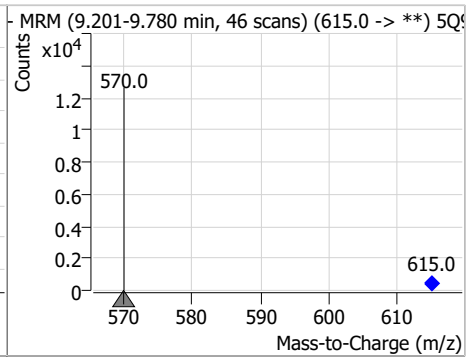




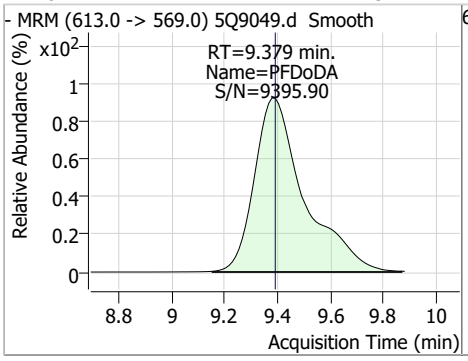
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	18.34	9.39	0.00	412499				

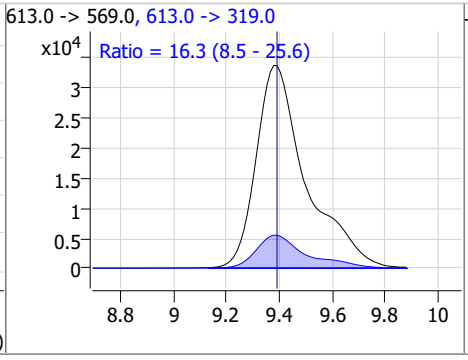


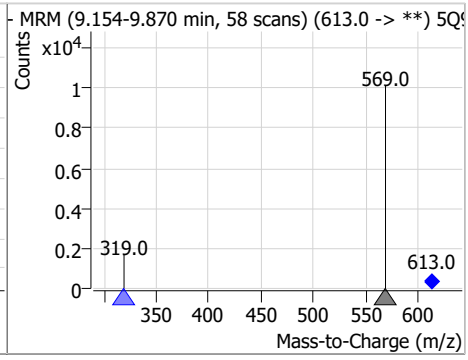




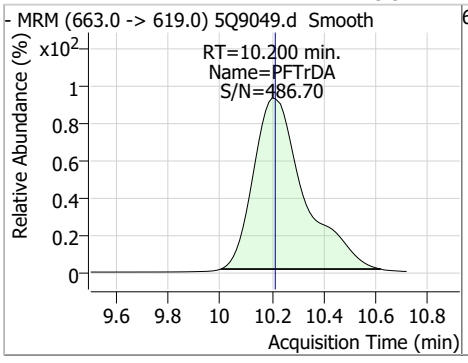
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	23.41	9.38	-0.01	440665	613.0 -> 319.0	16.3	8.5	25.6

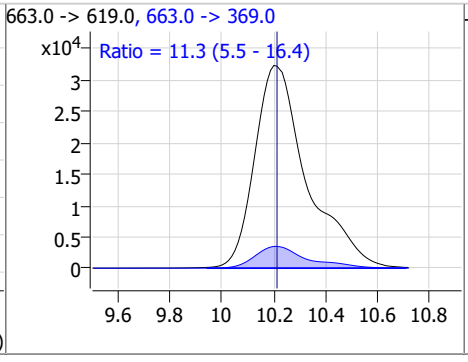


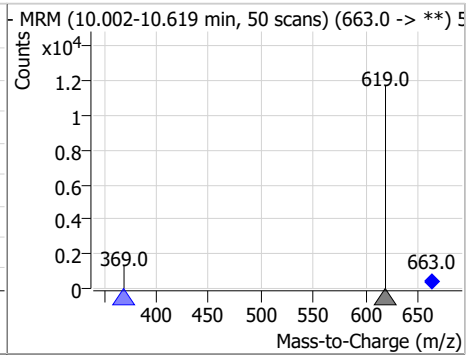




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	23.92	10.20	-0.01	429920	663.0 -> 369.0	11.3	5.5	16.4

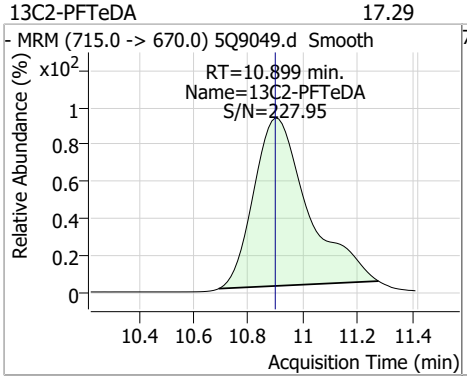


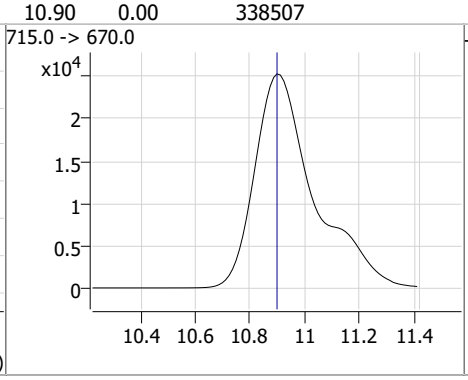


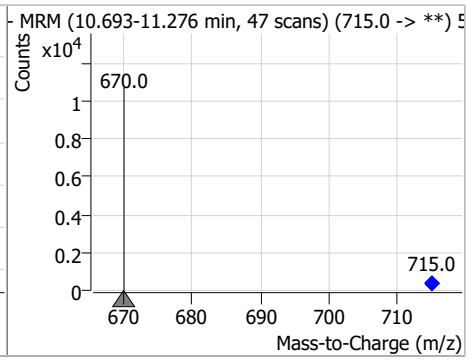


Perfluorinated Compounds by LC/MS/MS

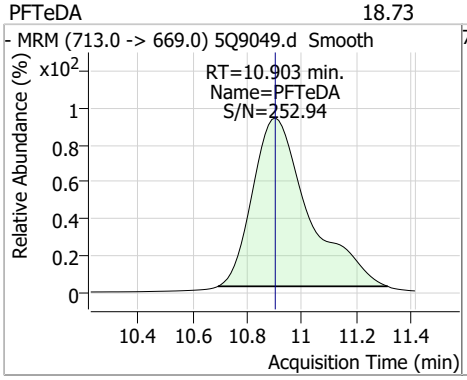
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	17.29	10.90	0.00	338507				

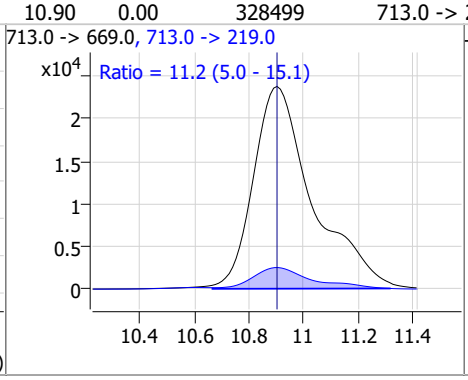


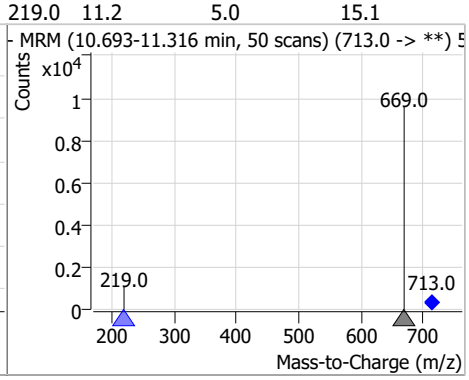




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	18.73	10.90	0.00	328499	713.0 -> 219.0	11.2	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q134-ICV134
Lab FileID: 5Q9049.D
Injection Time: 12/28/22 15:19

Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.72	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9051.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 3:53:27 PM
Sample Name : cc134-20
Vial : P1-A7
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	98225	20.00	µg/L	0.000
M5-PFPeA	3.932	268.0 -> 223.0	198439	20.00	µg/L	0.012
M5-PFHxA	4.965	318.0 -> 273.0	286620	20.00	µg/L	0.000
M4-PFHpA	5.738	367.0 -> 322.0	291571	20.00	µg/L	0.012
M8-PFOA	6.374	421.0 -> 376.0	383289	20.00	µg/L	0.012
M9-PFNA	6.931	472.0 -> 427.0	394111	20.00	µg/L	0.013
M6-PFDA	7.449	519.0 -> 474.0	428612	20.00	µg/L	0.013
M7-PFUnDA	8.320	570.0 -> 525.0	513080	20.00	µg/L	0.000
M2-PFDoDA	9.388	615.0 -> 570.0	415868	20.00	µg/L	0.000
M2-PFTeDA	10.912	715.0 -> 670.0	359239	20.00	µg/L	0.012
M8-FOSA	6.605	506.0 -> 78.0	88741	20.00	µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	25141	20.00	µg/L	0.000
M3-PFHxS	5.748	402.0 -> 99.0	33751	20.00	µg/L	0.015
M8-PFOS	6.891	507.0 -> 99.0	45727	20.00	µg/L	0.012
M2-4:2FTS	4.886	329.0 -> 309.0	90562	20.00	µg/L	0.000
M2-6:2FTS	6.372	429.0 -> 409.0	144050	20.00	µg/L	0.012
M2-8:2FTS	7.512	529.0 -> 509.0	134000	20.00	µg/L	0.000
M3-MeFOSAA	7.047	573.0 -> 419.0	31796	20.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	63627	20.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	29586	20.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	34698	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	90562	18.81	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.0%		
13C2-6:2FTS	6.372	429.0 -> 409.0	144050	18.79	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.9%		
13C2-8:2FTS	7.512	529.0 -> 509.0	134000	18.56	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%		
13C2-PFDoDA	9.388	615.0 -> 570.0	415868	18.49	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.5%		
13C2-PFTeDA	10.912	715.0 -> 670.0	359239	18.35	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.7%		
13C3-PFBS	4.124	302.0 -> 99.0	25141	19.34	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.7%		
13C3-PFHxS	5.748	402.0 -> 99.0	33751	18.86	µg/L	0.015
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.3%		
13C4-PFBA	2.400	217.0 -> 172.0	98225	18.88	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.4%		
13C4-PFHpA	5.738	367.0 -> 322.0	291571	18.96	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.8%		
13C5-PFHxA	4.965	318.0 -> 273.0	286620	19.05	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.3%		
13C5-PFPeA	3.932	268.0 -> 223.0	198439	18.92	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.6%		
13C6-PFDA	7.449	519.0 -> 474.0	428612	18.44	µg/L	0.013

Perfluorinated Compounds by LC/MS/MS

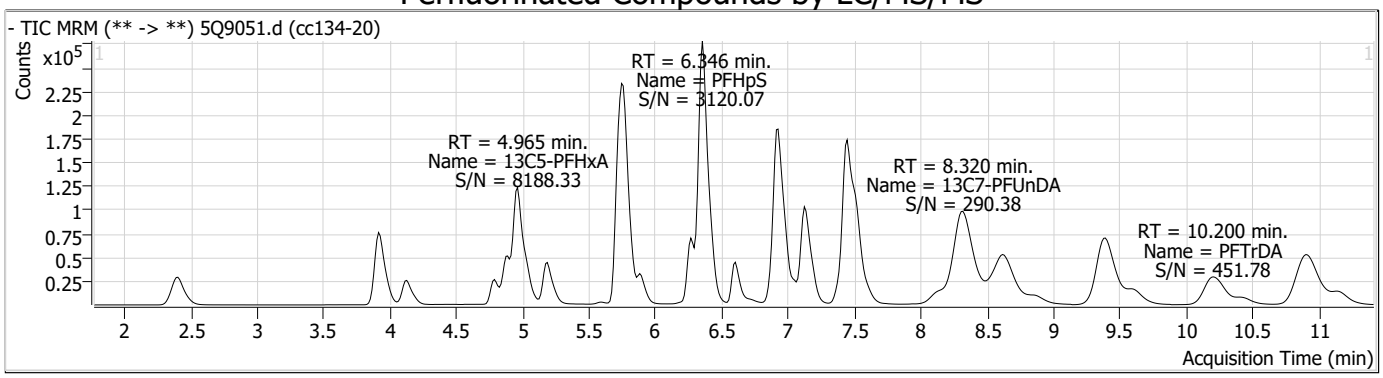
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.2%			
13C7-PFUnDA	8.320	570.0 -> 525.0	513080	17.53	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.7%			
13C8-FOSA	6.605	506.0 -> 78.0	88741	18.38	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.9%			
13C8-PFOA	6.374	421.0 -> 376.0	383289	19.02	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.1%			
13C8-PFOS	6.891	507.0 -> 99.0	45727	19.18	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.9%			
13C9-PFNA	6.931	472.0 -> 427.0	394111	18.74	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.7%			
d3-MeFOSAA	7.047	573.0 -> 419.0	31796	17.90	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.5%			
13C3-HFPO-DA	5.194	287.0 -> 169.0	63627	19.23	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.2%			
d3-MeFOSA	6.964	515.0 -> 169.0	29586	19.53	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.6%			
d5-EtFOSAA	7.157	589.0 -> 419.0	34698	18.81	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.1%			
Target Compounds							QValue
4:2FTS	4.888	327.0 -> 307.0	101102	20.40	µg/L		99
		327.0 -> 81.0	60314				
6:2FTS	6.373	427.0 -> 407.0	153301	20.74	µg/L		100
		427.0 -> 81.0	65341				
8:2FTS	7.512	527.0 -> 507.0	137476	20.08	µg/L		99
		527.0 -> 81.0	68243				
EtFOSAA	7.158	584.0 -> 419.0	21053	18.17	µg/L		99
		584.0 -> 483.0	13531				
FOSA	6.606	498.0 -> 78.0	87569	19.21	µg/L		100
		498.0 -> 478.0	2846				
MeFOSAA	7.060	570.0 -> 419.0	24979	19.36	µg/L		100
		570.0 -> 512.0	10266				
PFBA	2.406	213.0 -> 169.0	102809	19.22	µg/L		100
PFBS	4.129	299.0 -> 80.0	78167	19.12	µg/L		100
		299.0 -> 99.0	33578				
PFDA	7.450	513.0 -> 469.0	444421	19.48	µg/L		100
		513.0 -> 219.0	79631				
PFDoDA	9.392	613.0 -> 569.0	348892	18.39	µg/L		100
		613.0 -> 319.0	59868				
PFDS	8.131	599.0 -> 80.0	96360	20.93	µg/L		100
		599.0 -> 99.0	58307				
PFHpA	5.739	363.0 -> 319.0	352311	19.32	µg/L		100
		363.0 -> 169.0	78111				
PFHpS	6.346	449.0 -> 80.0	68894	19.71	µg/L		98
		449.0 -> 99.0	36767				
PFHxA	4.966	313.0 -> 269.0	280853	19.29	µg/L		100
		313.0 -> 119.0	12833				
PFHxS	5.749	399.0 -> 80.0	67190	19.61	µg/L	m	100
		399.0 -> 99.0	37648				
PFNA	6.931	463.0 -> 419.0	394798	19.32	µg/L		100
		463.0 -> 219.0	85363				
PFNS	7.384	549.0 -> 80.0	61852	19.73	µg/L		99
		549.0 -> 99.0	36418				
PFOA	6.374	413.0 -> 369.0	429719	19.59	µg/L		100
		413.0 -> 169.0	115484				
PFOS	6.892	499.0 -> 80.0	80978	19.20	µg/L	m	100

Perfluorinated Compounds by LC/MS/MS

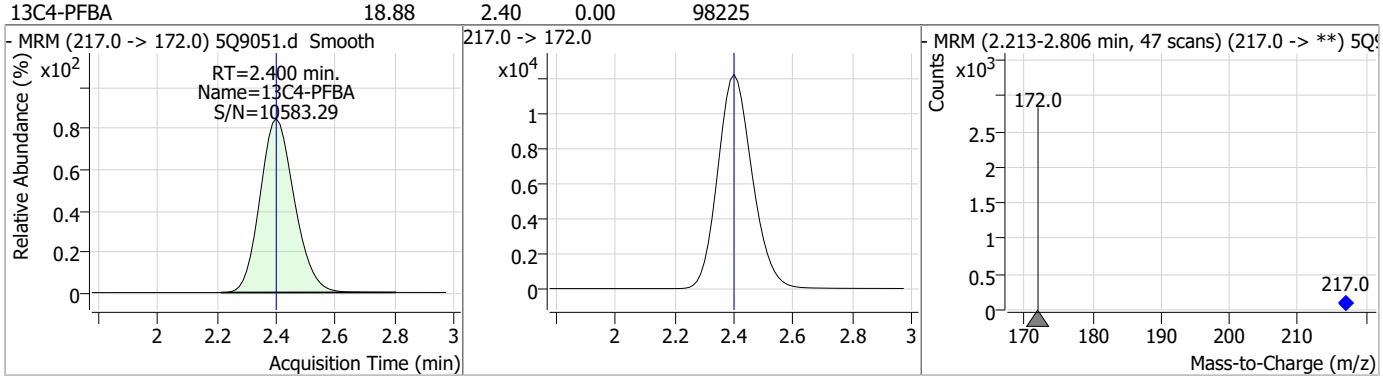
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	38670			
PFPeA	3.934	263.0 -> 219.0	225517	19.34	µg/L	100
PFPeS	5.047	349.0 -> 80.0	49609	18.53	µg/L	99
		349.0 -> 99.0	25164			
PFTeDA	10.903	713.0 -> 669.0	329286	17.69	µg/L	100
		713.0 -> 219.0	33528			
PFTrDA	10.200	663.0 -> 619.0	342805	18.92	µg/L	100
		663.0 -> 369.0	37204			
PFUnDA	8.321	563.0 -> 519.0	543474	20.59	µg/L	100
		563.0 -> 269.0	91107			
11Cl-PF3OUdS	8.628	631.0 -> 451.0	364940	18.75	µg/L	90
		633.0 -> 453.0	123102			
9Cl-PF3ONS	7.123	531.0 -> 351.0	360957	19.06	µg/L	99
		533.0 -> 353.0	113320			
ADONA	5.777	377.0 -> 251.0	461734	20.28	µg/L	99
		377.0 -> 85.0	175036			
HFPO-DA	5.190	329.0 -> 169.0	98563	19.39	µg/L	98
		285.0 -> 169.0	59479			
MeFOSA	6.966	512.0 -> 169.0	33548	19.16	µg/L	96
		512.0 -> 219.0	25026			
4-PFECHS	6.268	461.0 -> 381.0	224931	18.42	µg/L	98
		461.0 -> 99.0	122795			
FBSA	4.793	298.0 -> 78.0	113999	19.17	µg/L	100
		298.0 -> 64.0	10516			
FHxSA	5.900	398.0 -> 78.0	105690	18.54	µg/L	100
		398.0 -> 64.0	10097			

 # = Qualifier out of range, m = manually integrated, + = Area summed

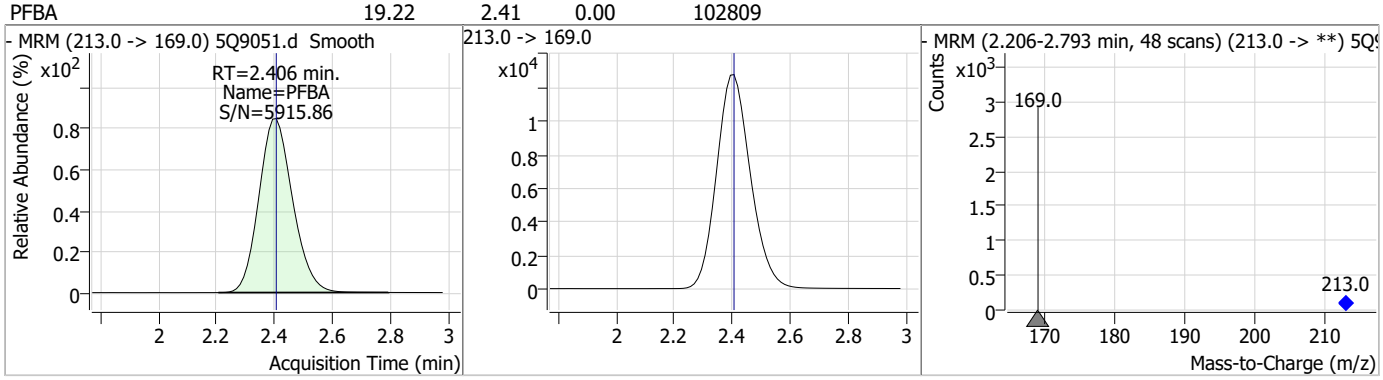
Perfluorinated Compounds by LC/MS/MS



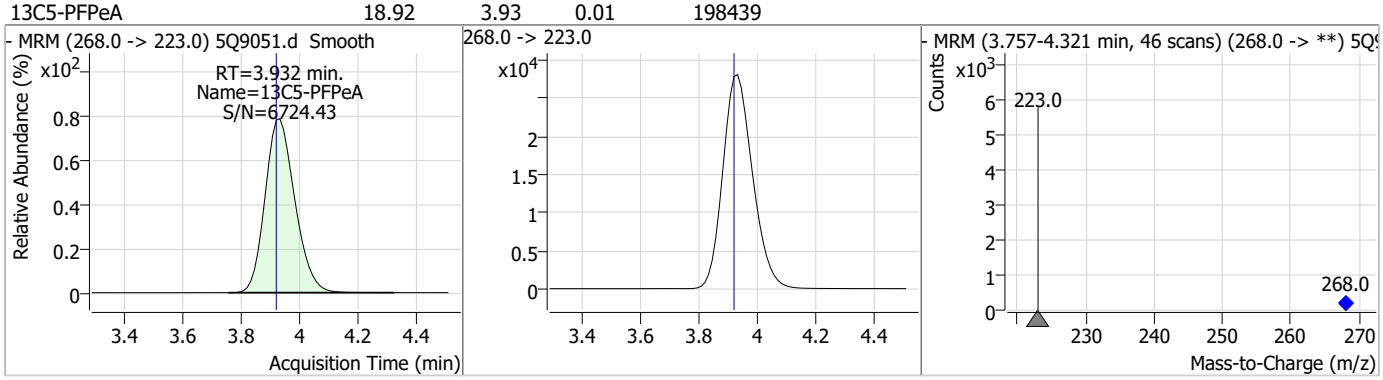
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.88	2.40	0.00	98225				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.22	2.41	0.00	102809				

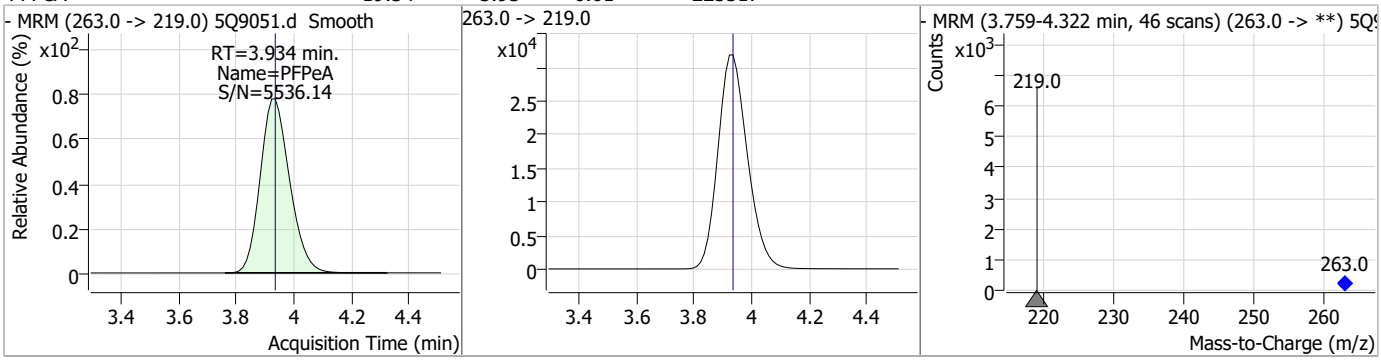


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	18.92	3.93	0.01	198439				

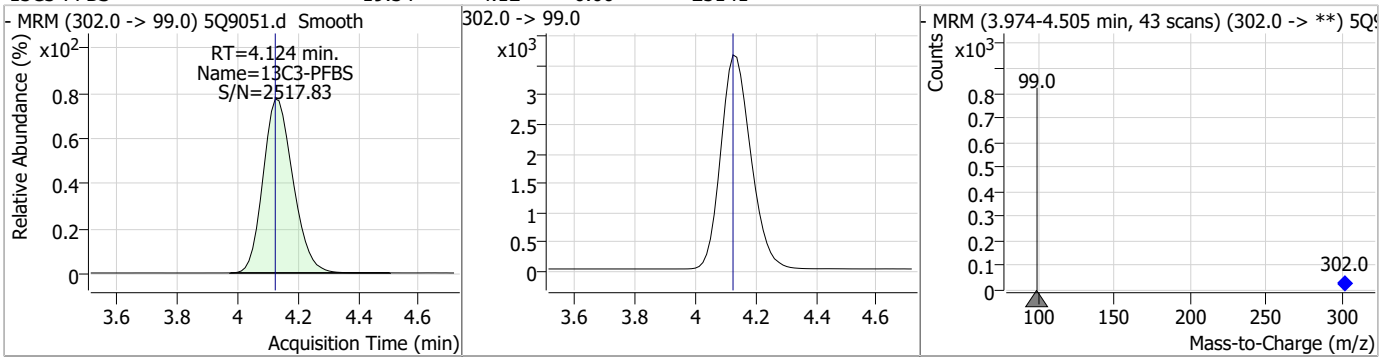


Perfluorinated Compounds by LC/MS/MS

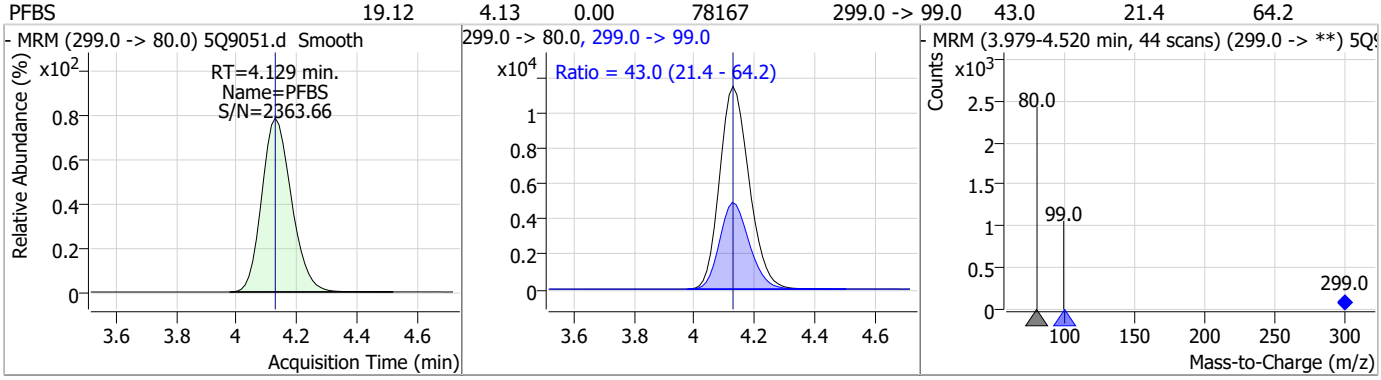
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.34	3.93	0.01	225517				



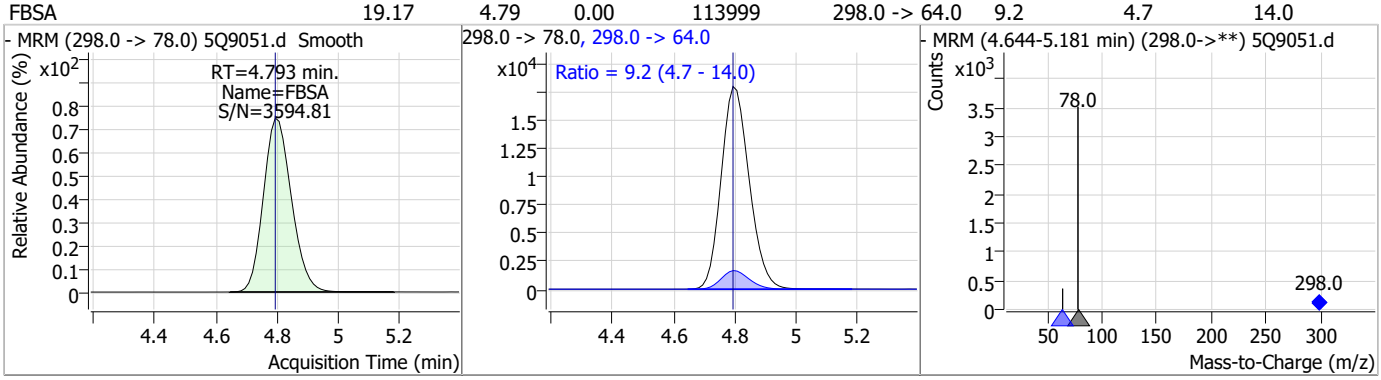
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.34	4.12	0.00	25141				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.12	4.13	0.00	78167	299.0 -> 99.0	43.0	21.4	64.2

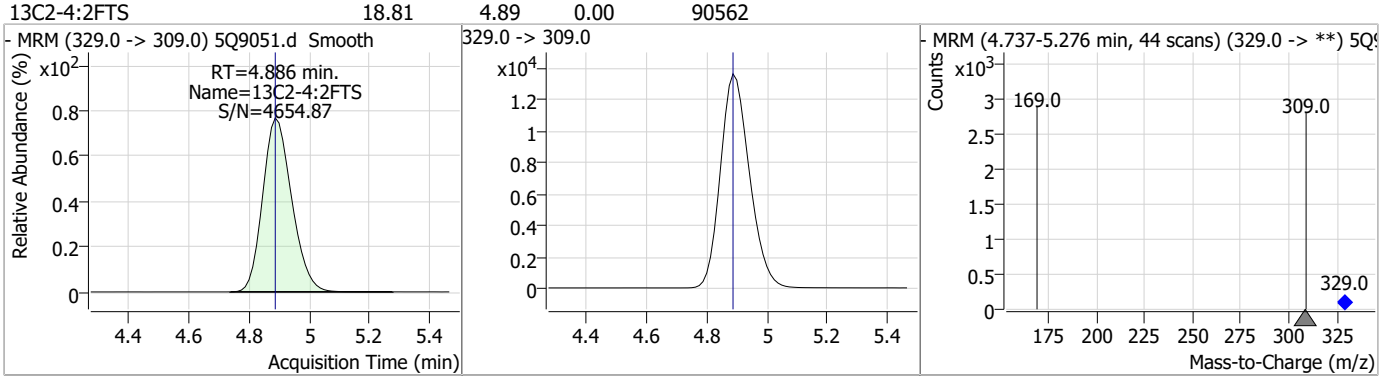


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	19.17	4.79	0.00	113999	298.0 -> 64.0	9.2	4.7	14.0

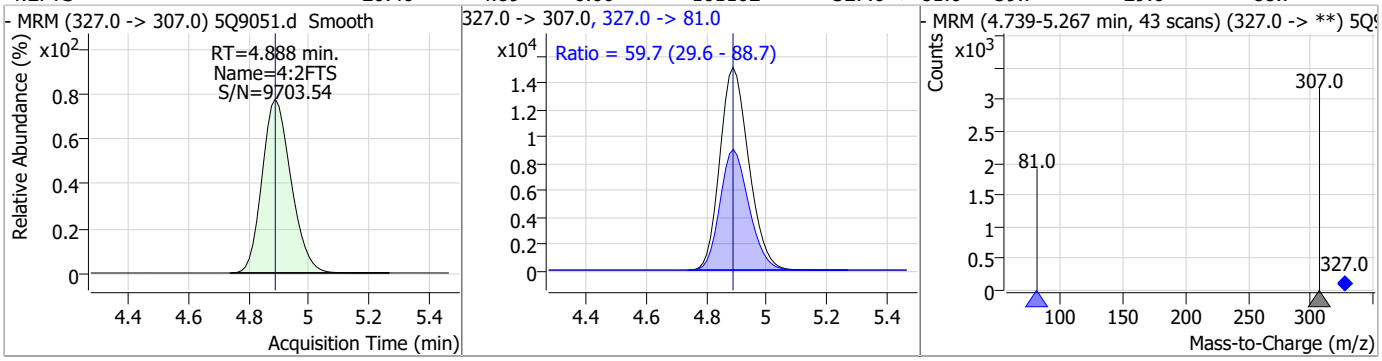


Perfluorinated Compounds by LC/MS/MS

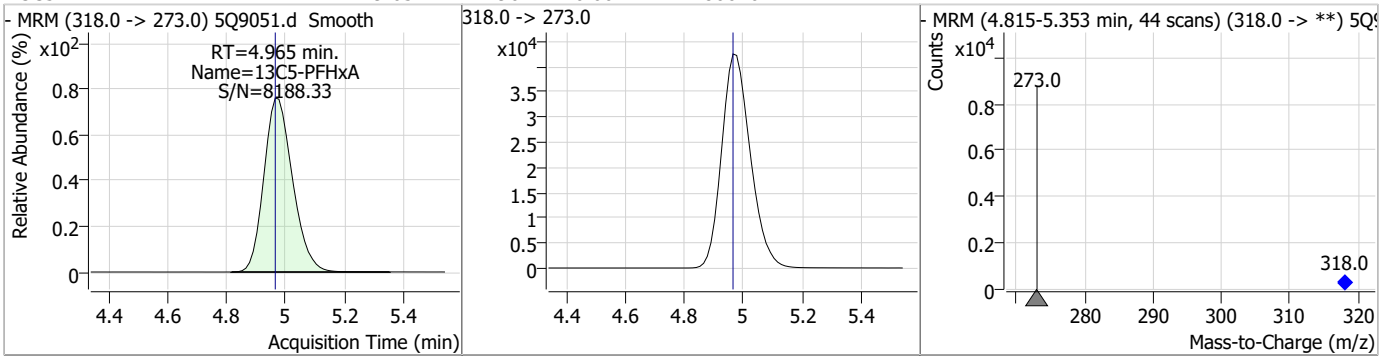
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.81	4.89	0.00	90562				



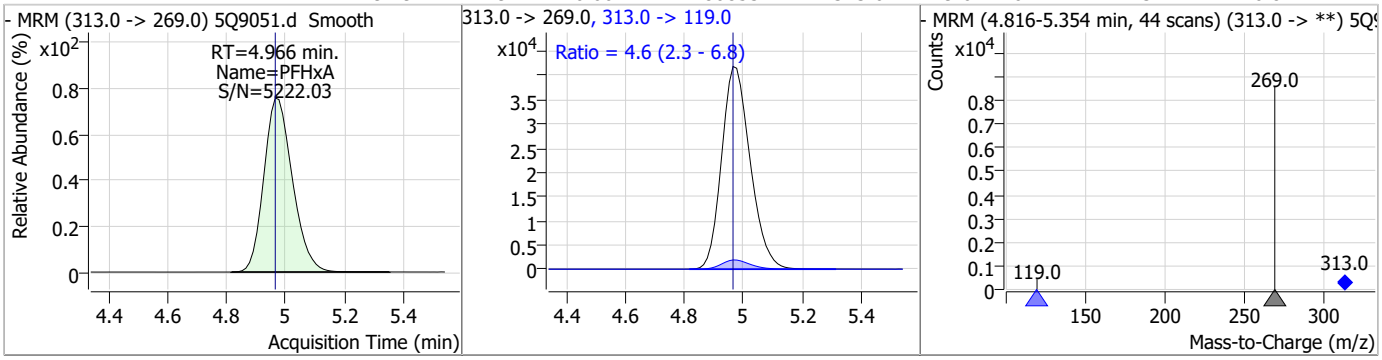
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.40	4.89	0.00	101102	327.0 -> 81.0	59.7	29.6	88.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.05	4.96	0.00	286620				

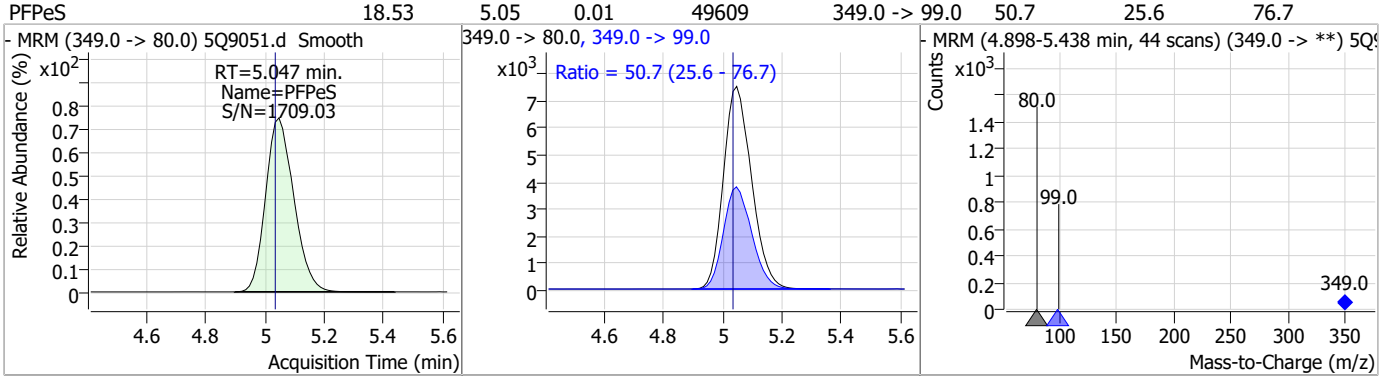


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.29	4.97	0.00	280853	313.0 -> 119.0	4.6	2.3	6.8

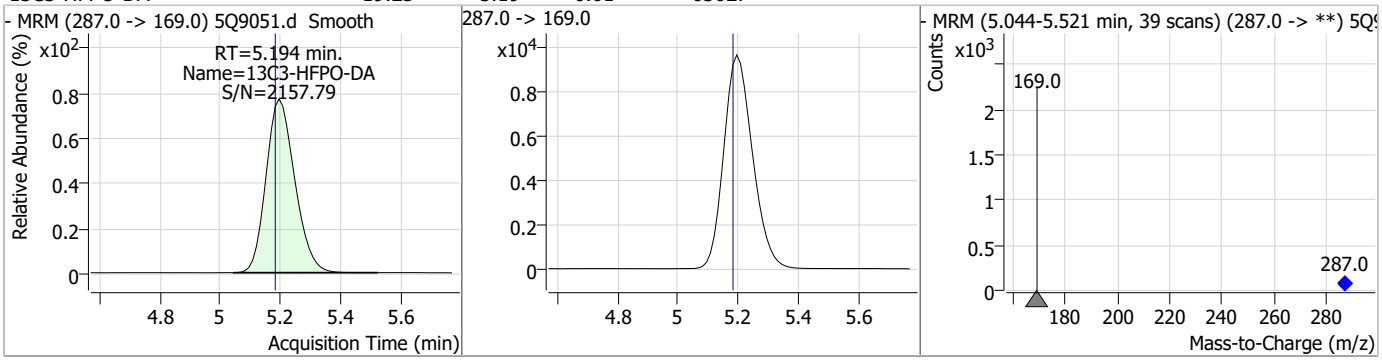


Perfluorinated Compounds by LC/MS/MS

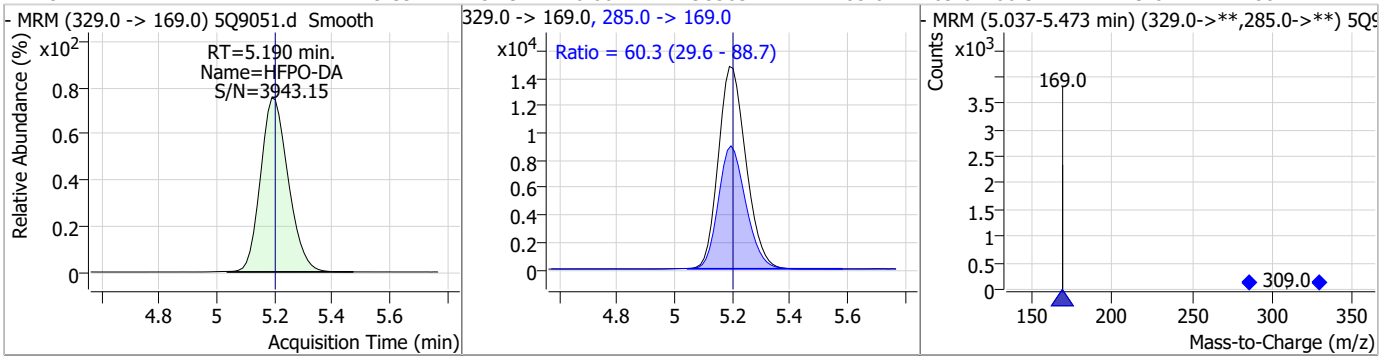
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	18.53	5.05	0.01	49609	349.0 -> 99.0	50.7	25.6	76.7



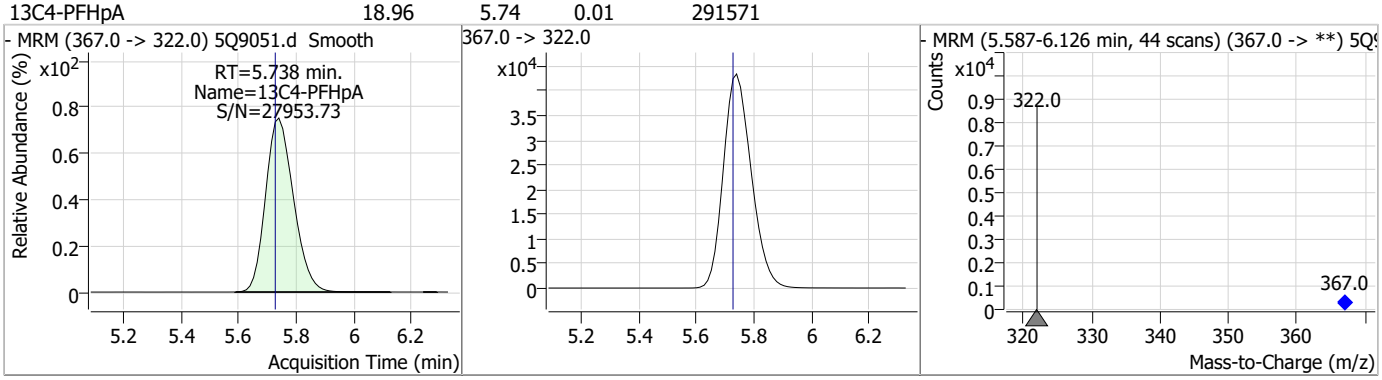
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.23	5.19	0.01	63627				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	19.39	5.19	0.00	98563	285.0 -> 169.0	60.3	29.6	88.7

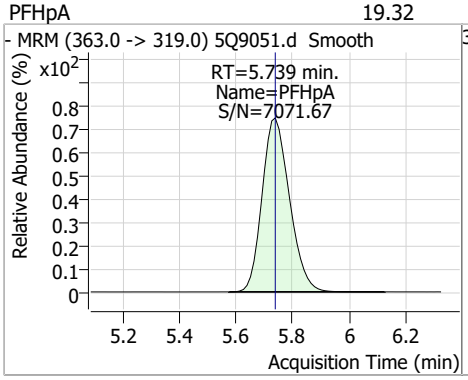


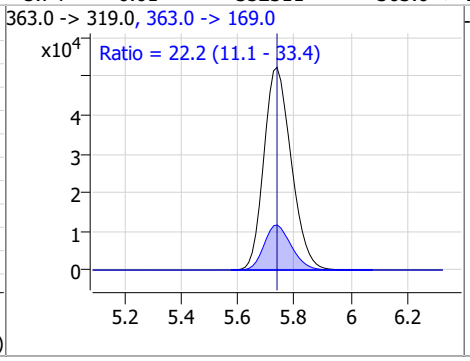
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	18.96	5.74	0.01	291571				

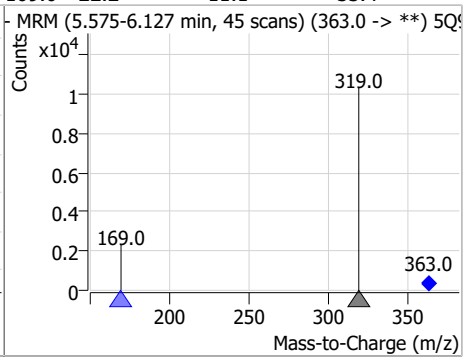


Perfluorinated Compounds by LC/MS/MS

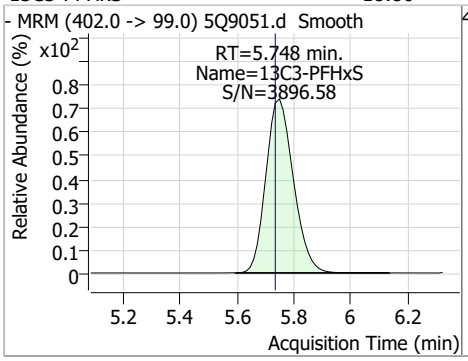
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	19.32	5.74	0.01	352311	363.0 -> 169.0	22.2	11.1	33.4

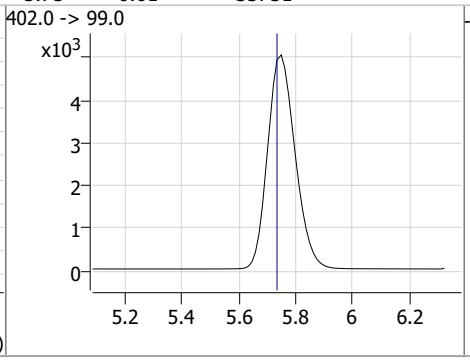


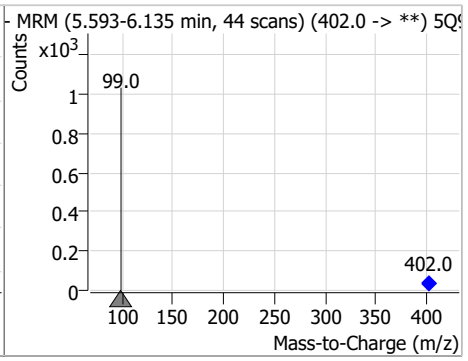




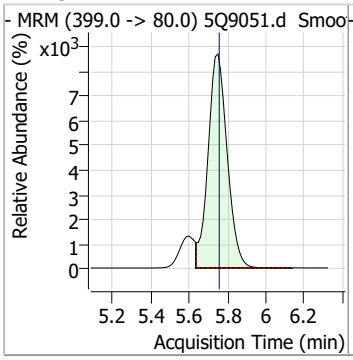
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	18.86	5.75	0.01	33751				

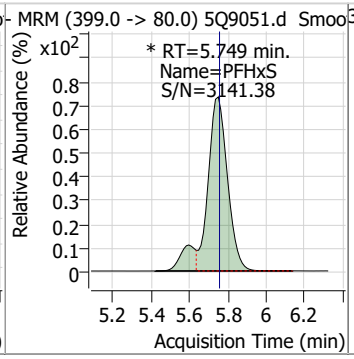


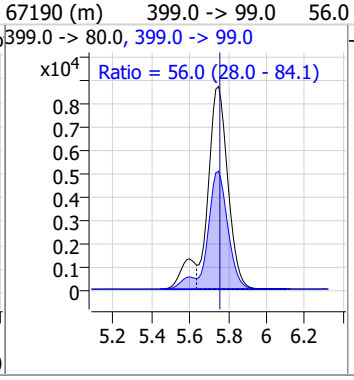


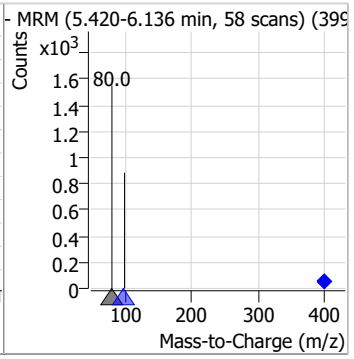


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	19.61	5.75	0.01	67190 (m)	399.0 -> 99.0	56.0	28.0	84.1

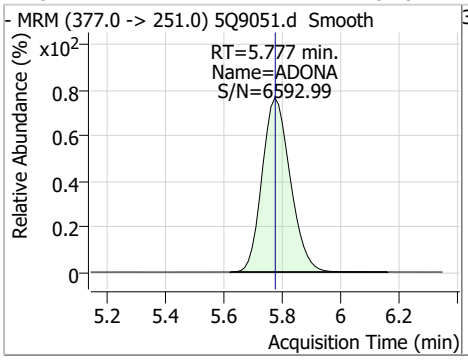


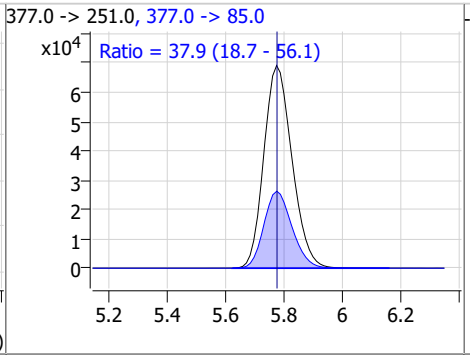


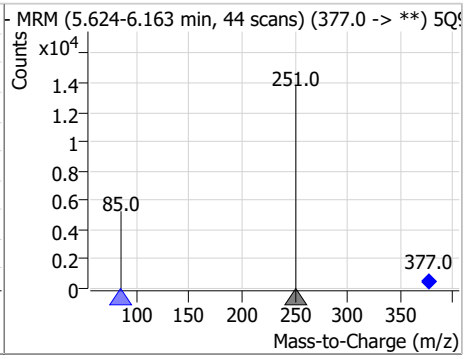




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	20.28	5.78	0.01	461734	377.0 -> 85.0	37.9	18.7	56.1

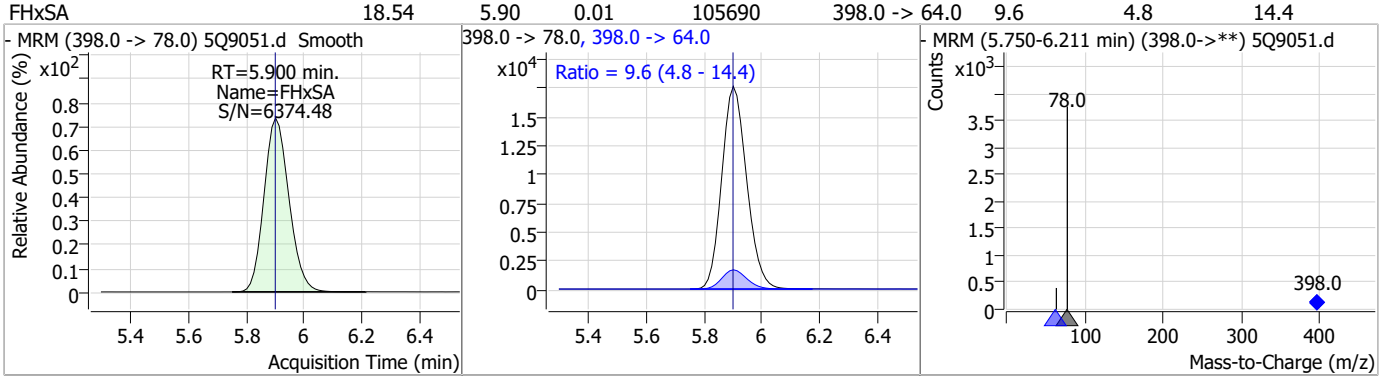




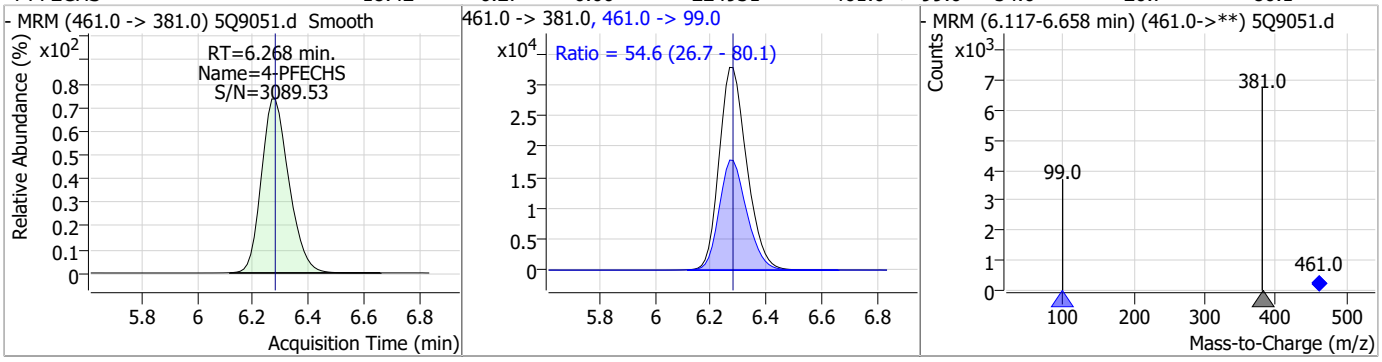


Perfluorinated Compounds by LC/MS/MS

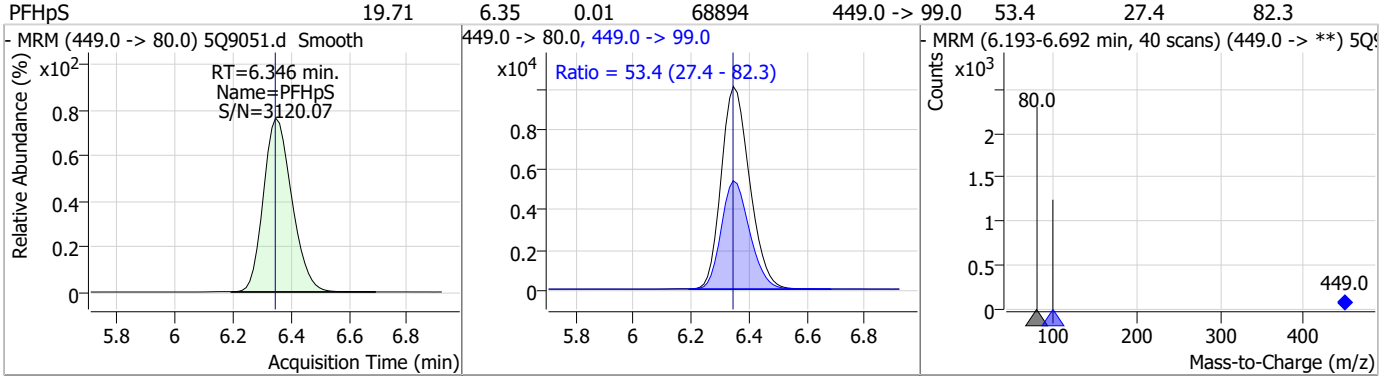
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	18.54	5.90	0.01	105690	398.0 -> 64.0	9.6	4.8	14.4



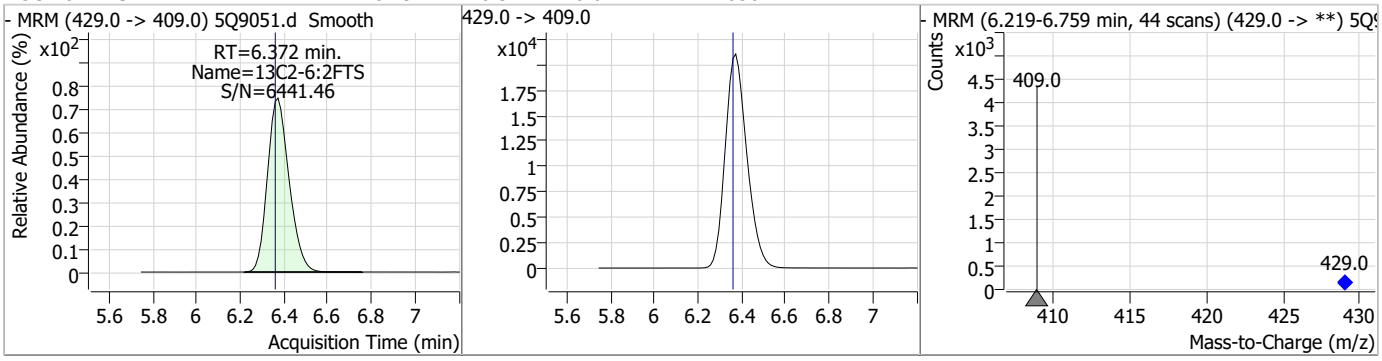
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	18.42	6.27	0.00	224931	461.0 -> 99.0	54.6	26.7	80.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	19.71	6.35	0.01	68894	449.0 -> 99.0	53.4	27.4	82.3

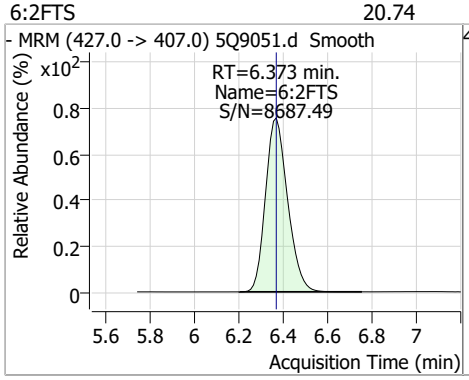


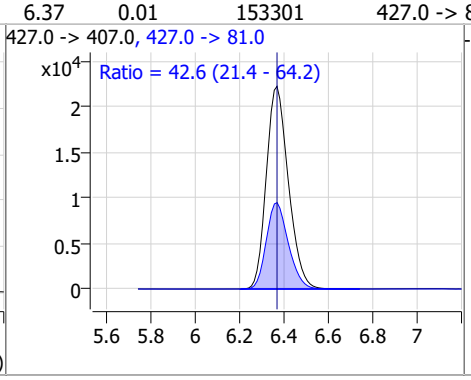
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.79	6.37	0.01	144050				

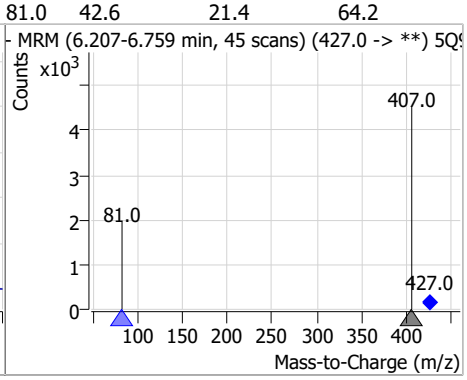


Perfluorinated Compounds by LC/MS/MS

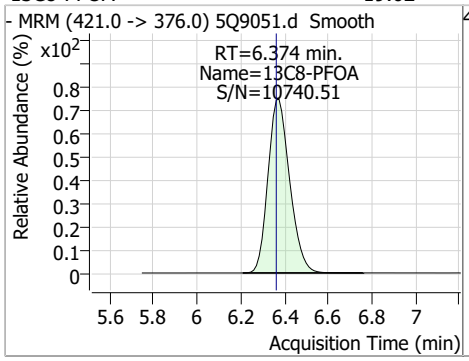
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	20.74	6.37	0.01	153301	427.0 -> 81.0	42.6	21.4	64.2

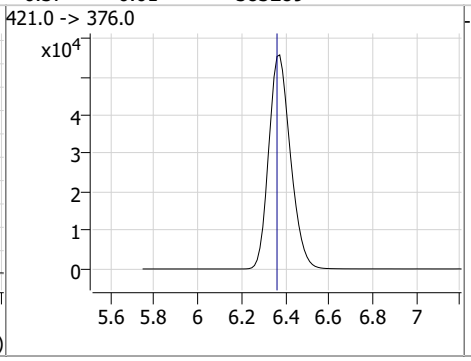


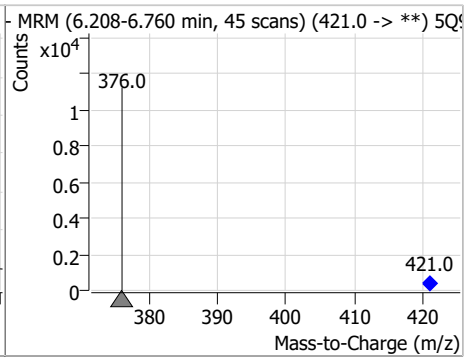




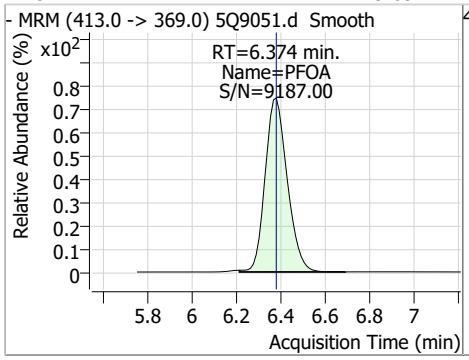
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.02	6.37	0.01	383289				

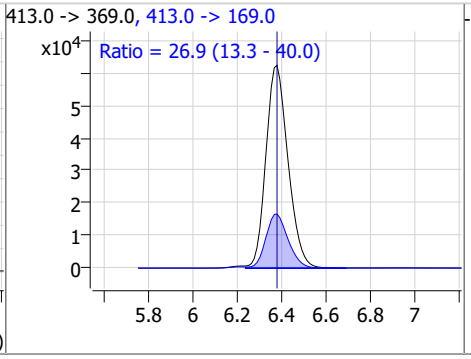


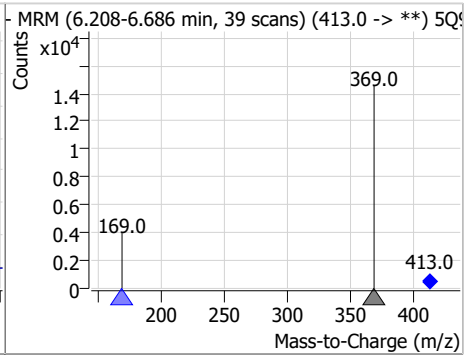




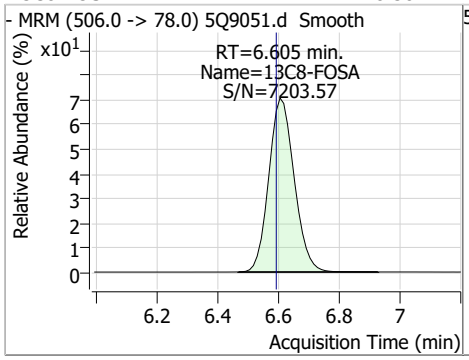
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.59	6.37	0.01	429719	413.0 -> 169.0	26.9	13.3	40.0

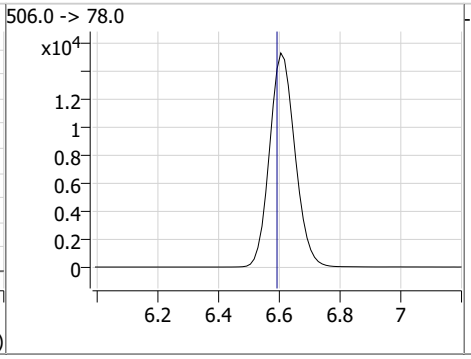


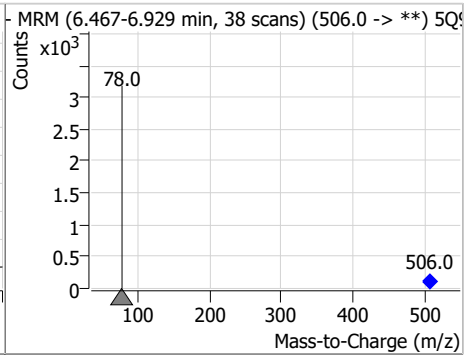




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	18.38	6.60	0.01	88741				

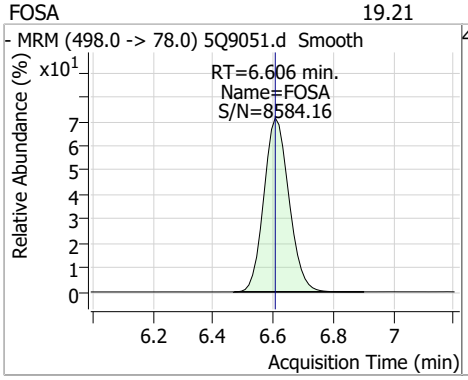


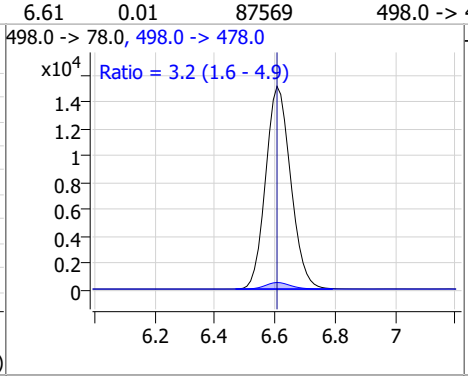


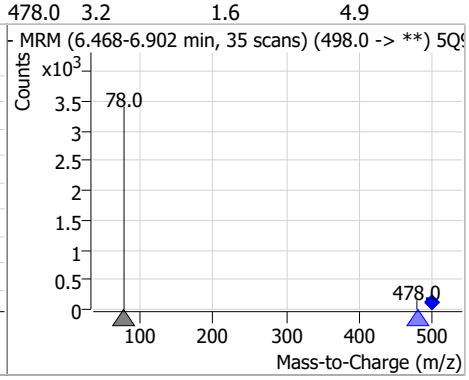


Perfluorinated Compounds by LC/MS/MS

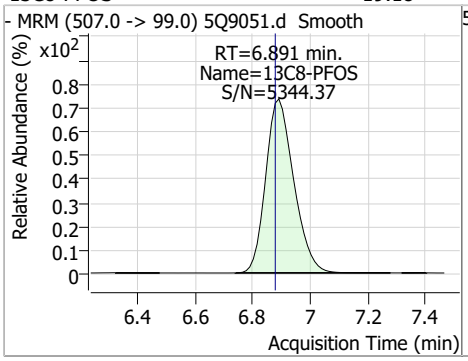
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	19.21	6.61	0.01	87569	498.0 -> 478.0	3.2	1.6	4.9

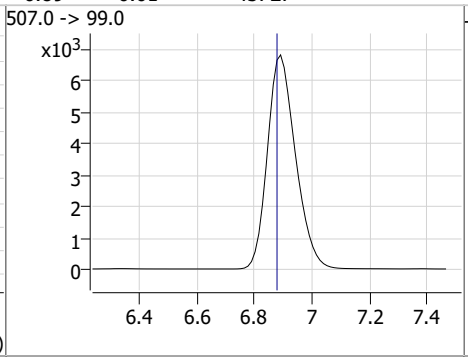


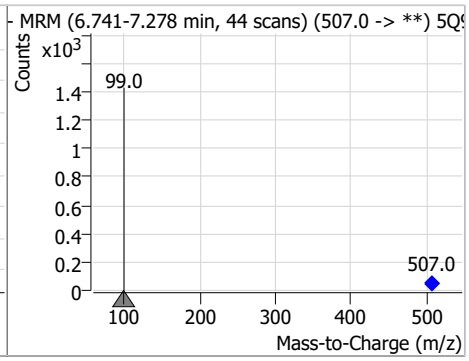




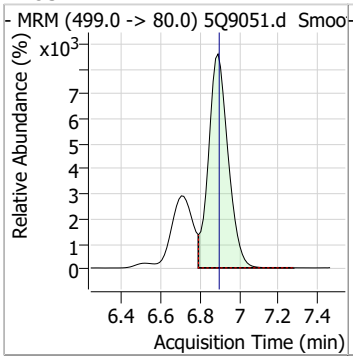
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.18	6.89	0.01	45727				

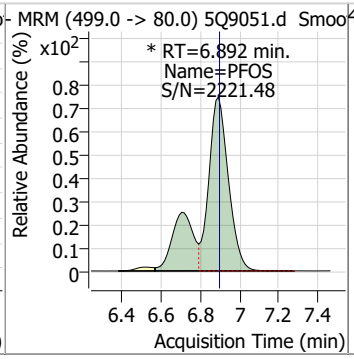


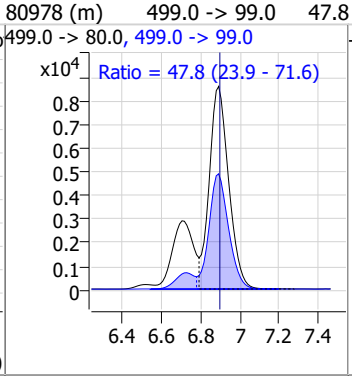


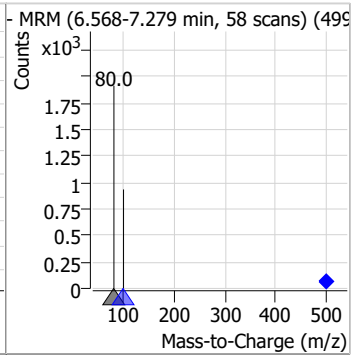


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.20	6.89	0.01	80978 (m)	499.0 -> 99.0	47.8	23.9	71.6

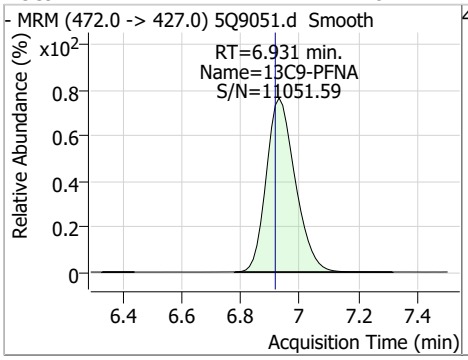


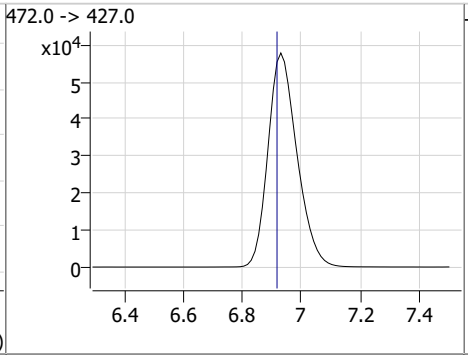


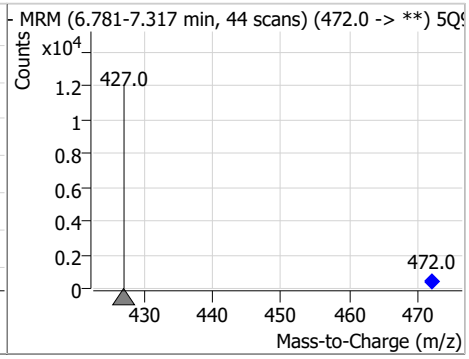




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.74	6.93	0.01	394111				

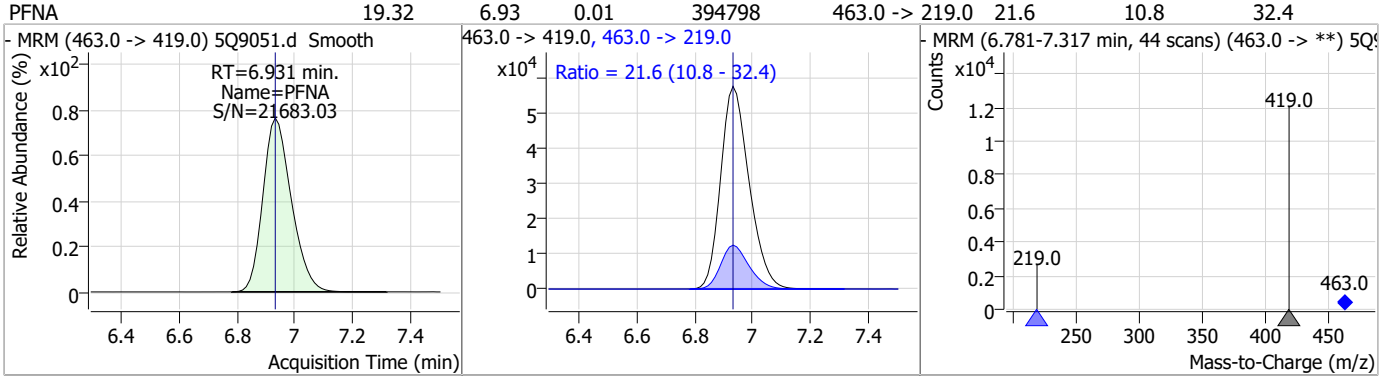




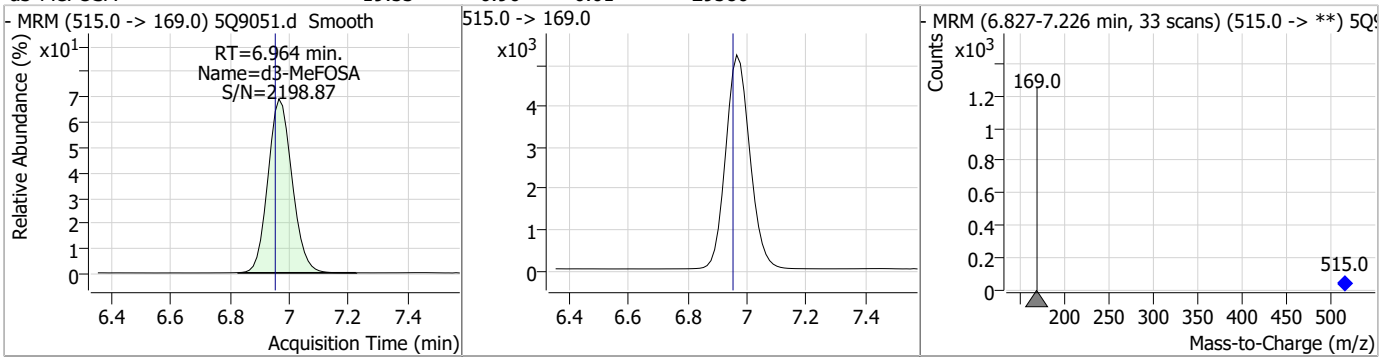


Perfluorinated Compounds by LC/MS/MS

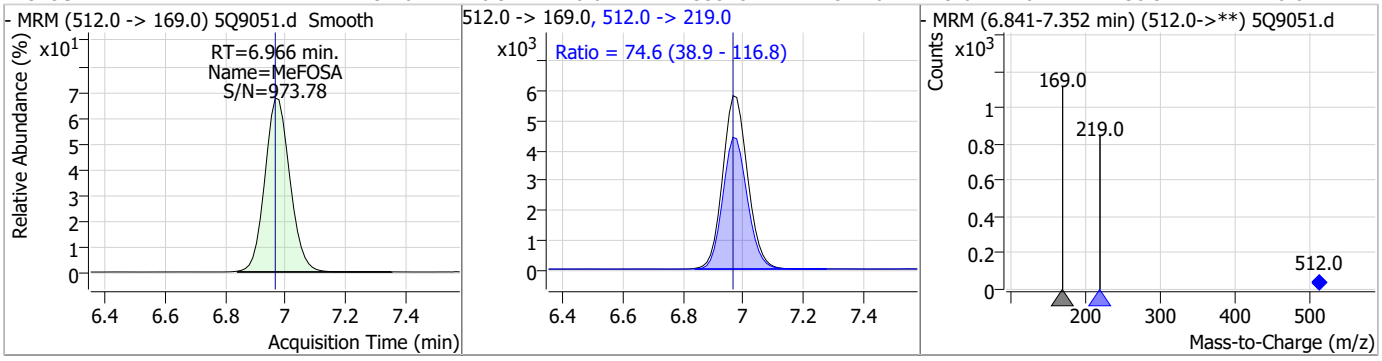
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.32	6.93	0.01	394798	463.0 -> 219.0	21.6	10.8	32.4



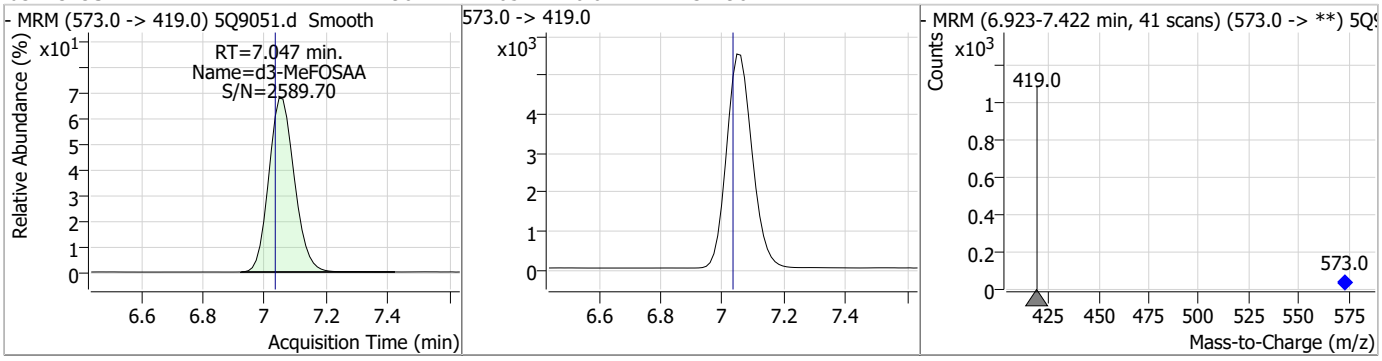
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	19.53	6.96	0.01	29586				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	19.16	6.97	0.01	33548	512.0 -> 219.0	74.6	38.9	116.8

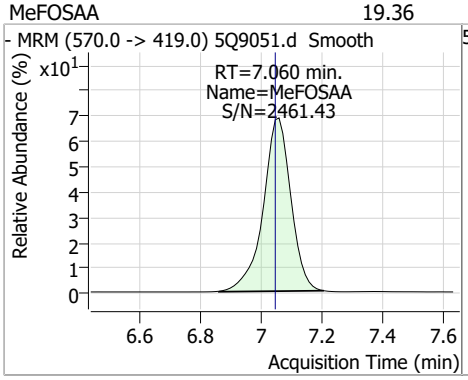


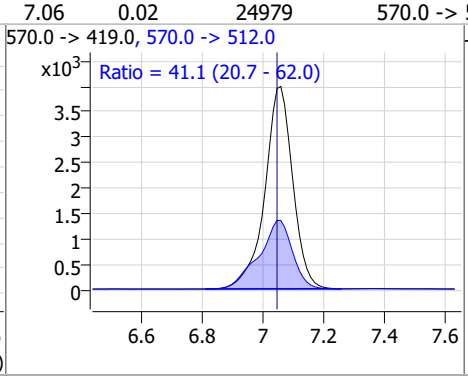
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	17.90	7.05	0.01	31796				

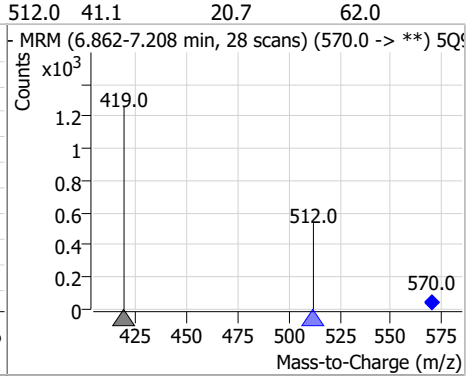


Perfluorinated Compounds by LC/MS/MS

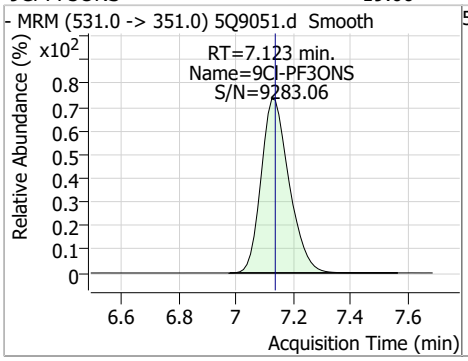
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	19.36	7.06	0.02	24979	570.0 -> 512.0	41.1	20.7	62.0

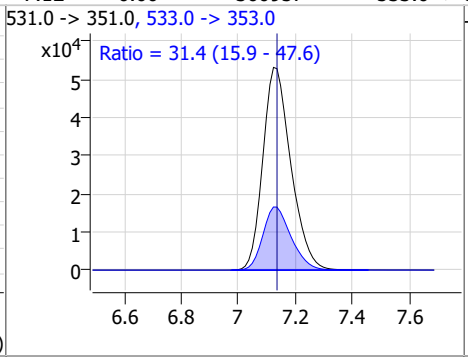


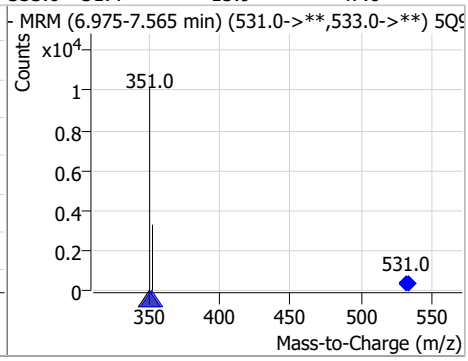




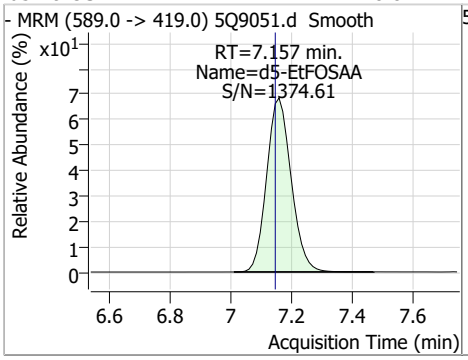
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	19.06	7.12	0.00	360957	533.0 -> 353.0	31.4	15.9	47.6

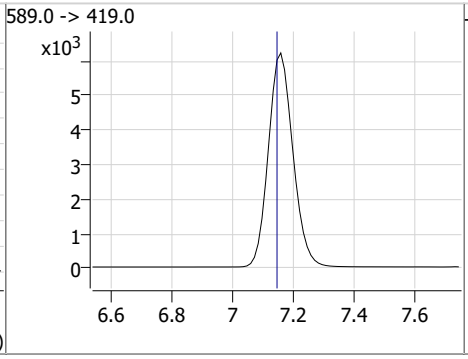


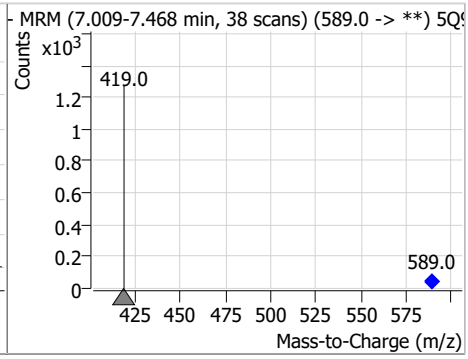




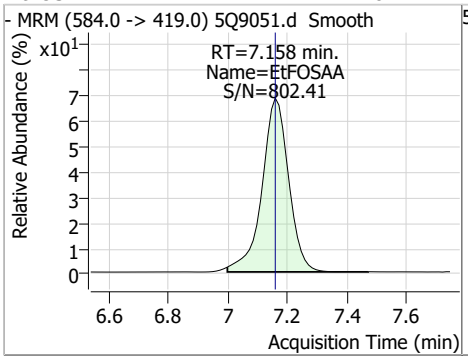
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.81	7.16	0.01	34698				

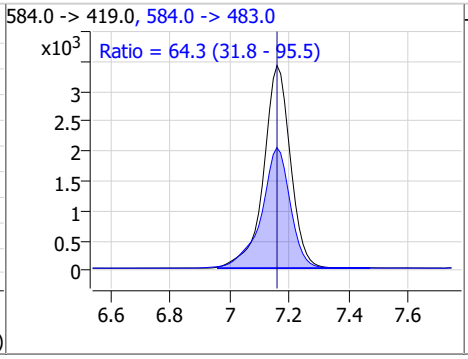


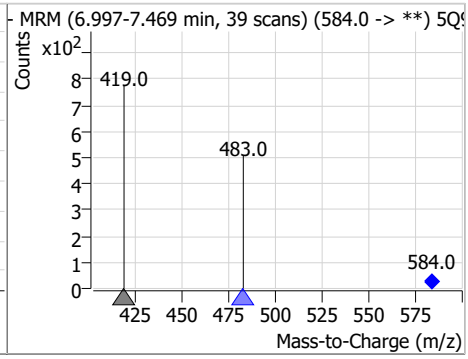




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	18.17	7.16	0.01	21053	584.0 -> 483.0	64.3	31.8	95.5

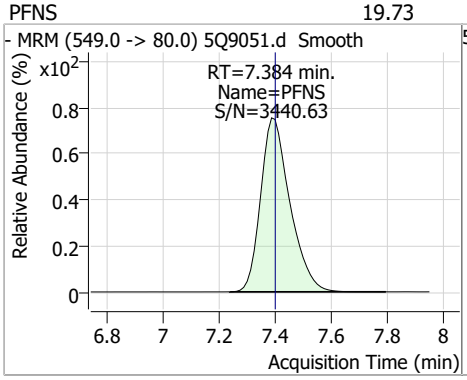


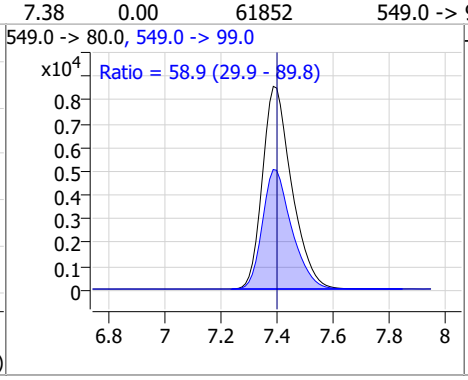


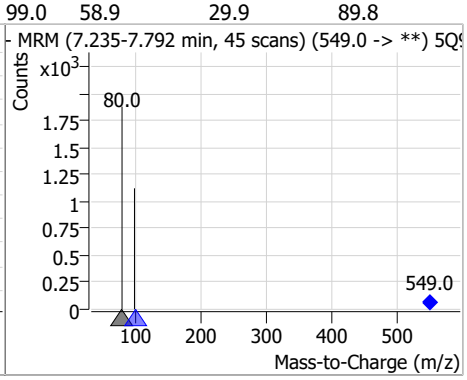


Perfluorinated Compounds by LC/MS/MS

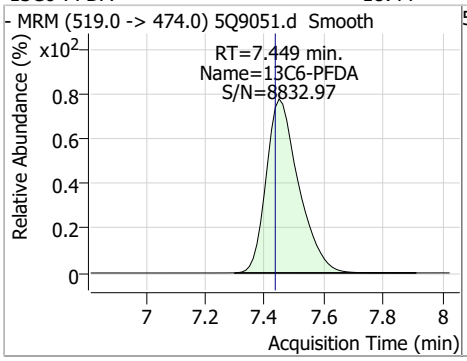
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	19.73	7.38	0.00	61852	549.0 -> 99.0	58.9	29.9	89.8

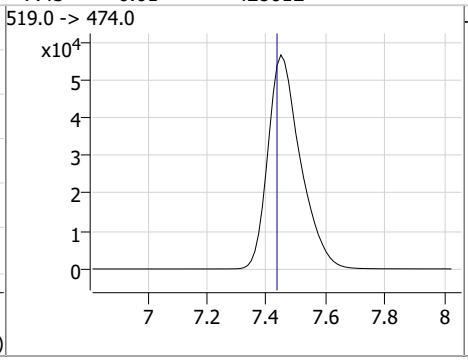


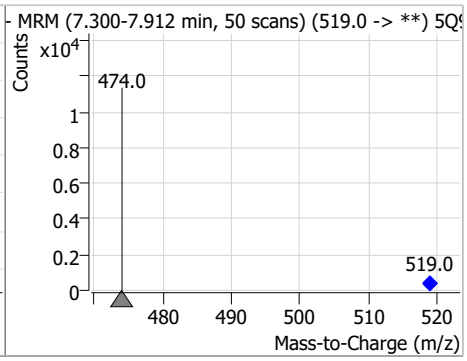




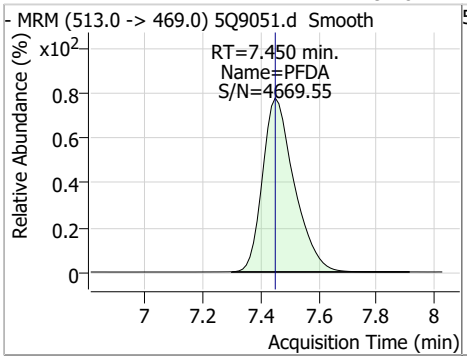
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.44	7.45	0.01	428612				

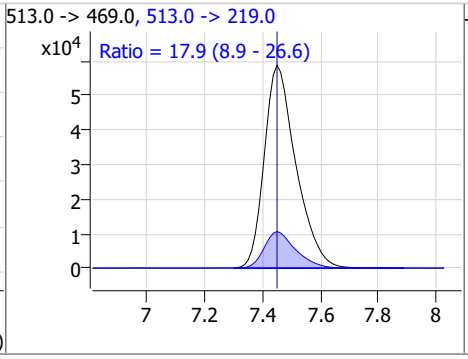


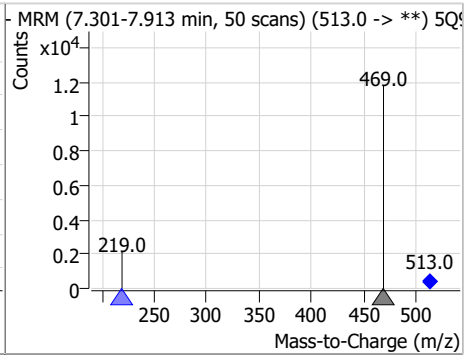




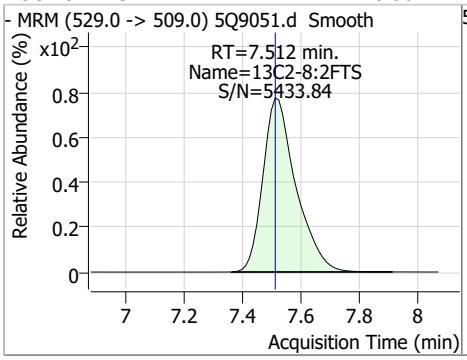
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.48	7.45	0.01	444421	513.0 -> 219.0	17.9	8.9	26.6

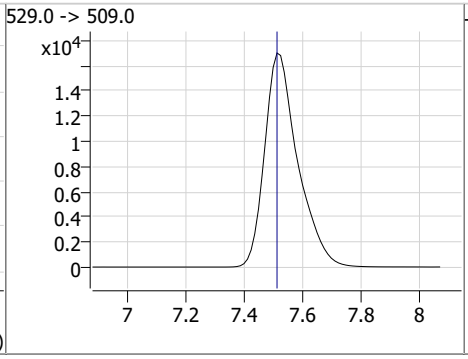


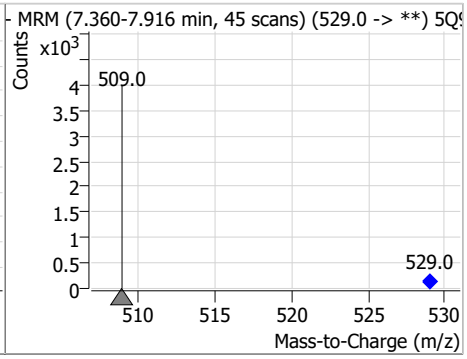




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.56	7.51	0.00	134000				

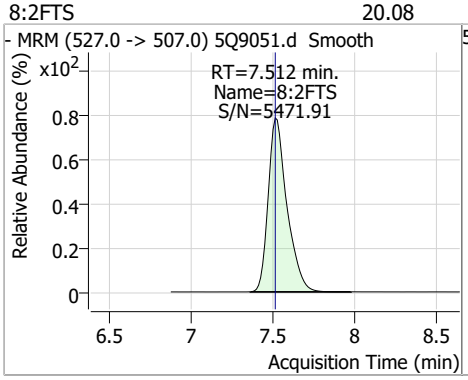


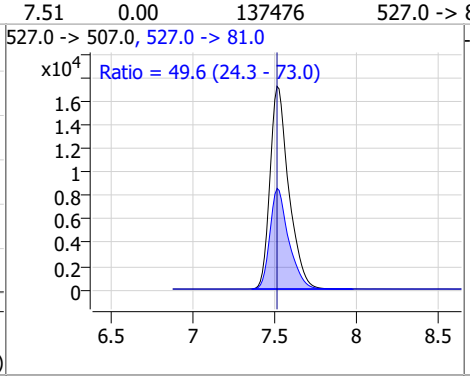


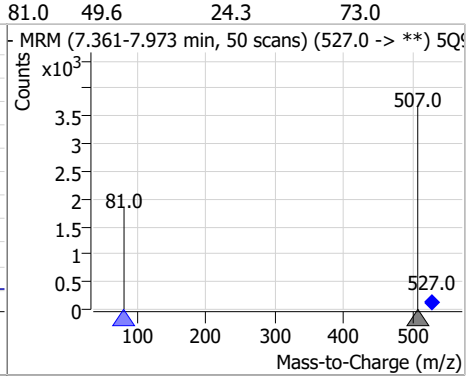


Perfluorinated Compounds by LC/MS/MS

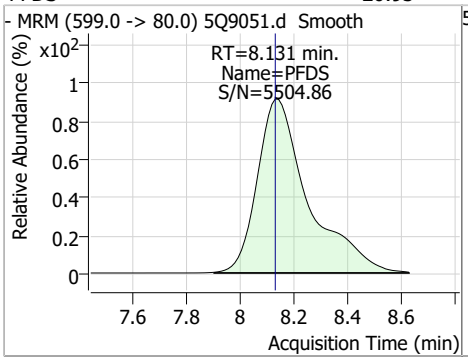
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.08	7.51	0.00	137476	527.0 -> 81.0	49.6	24.3	73.0

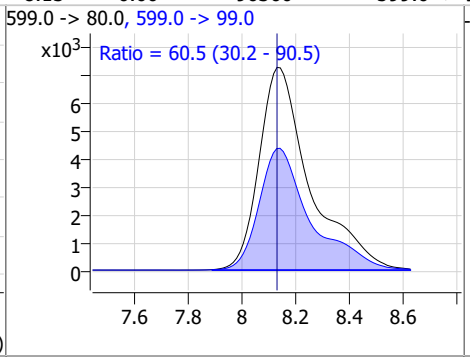


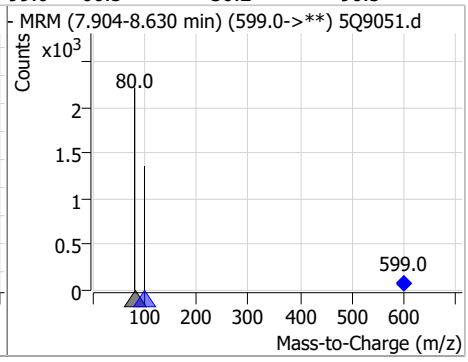




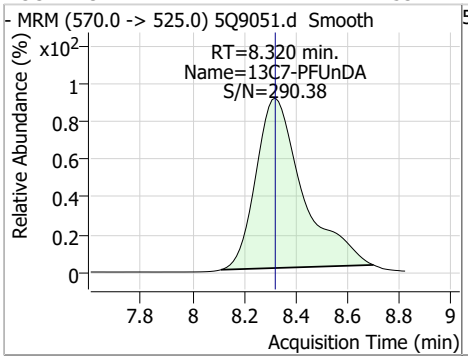
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	20.93	8.13	0.00	96360	599.0 -> 99.0	60.5	30.2	90.5

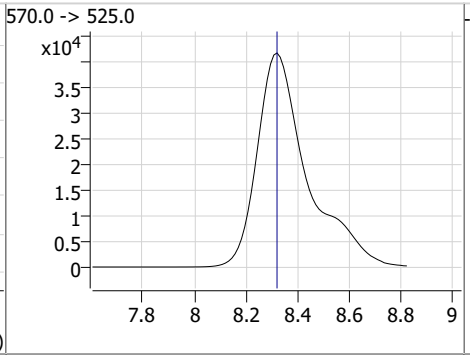


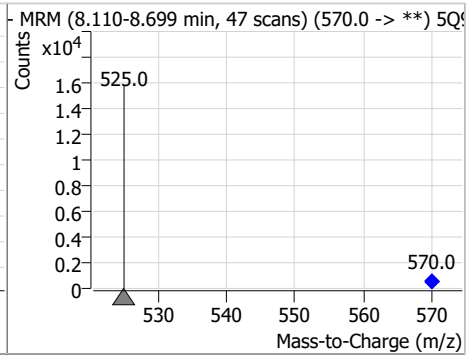




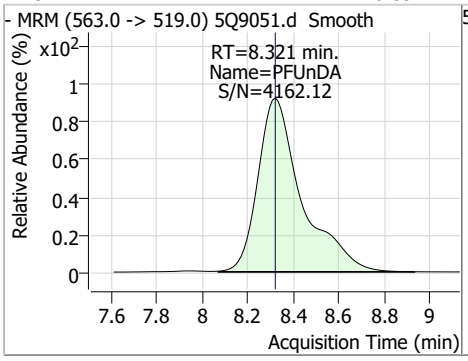
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	17.53	8.32	0.00	513080				

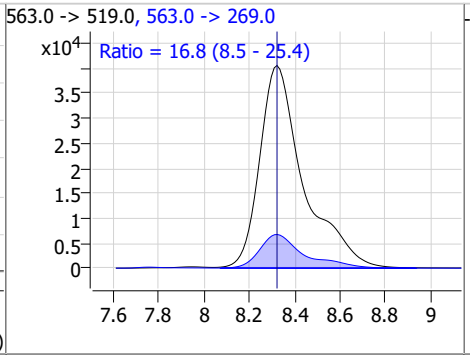


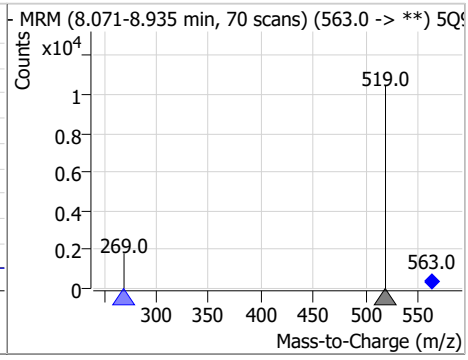




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	20.59	8.32	0.00	543474	563.0 -> 269.0	16.8	8.5	25.4

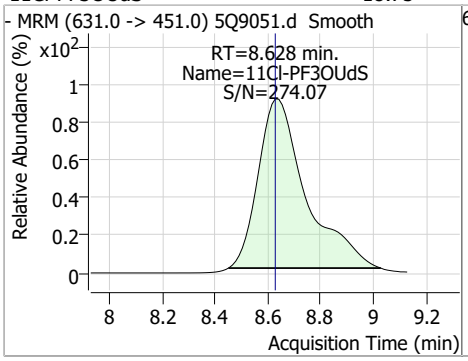


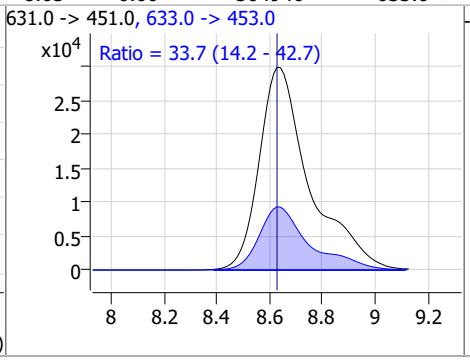


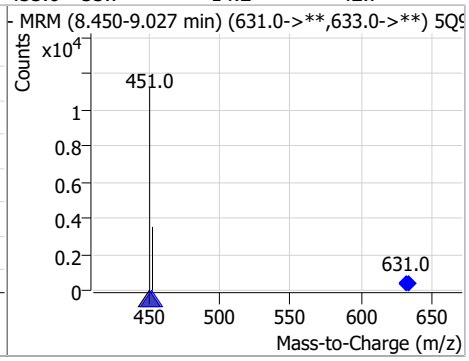


Perfluorinated Compounds by LC/MS/MS

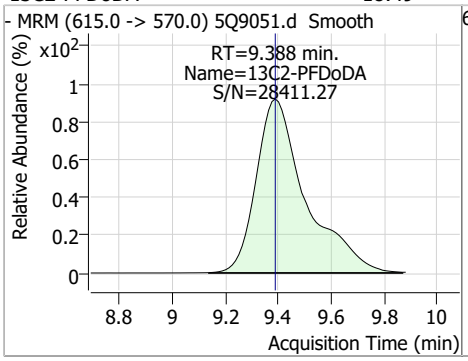
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	18.75	8.63	0.00	364940	633.0 -> 453.0	33.7	14.2	42.7

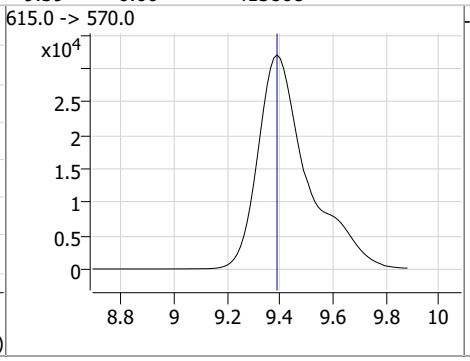


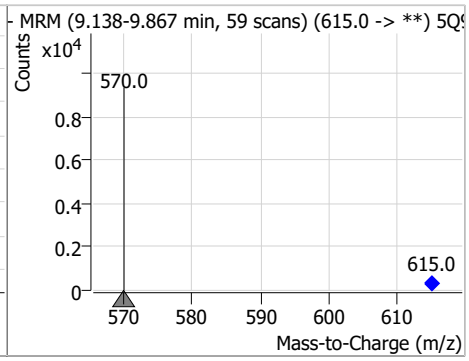




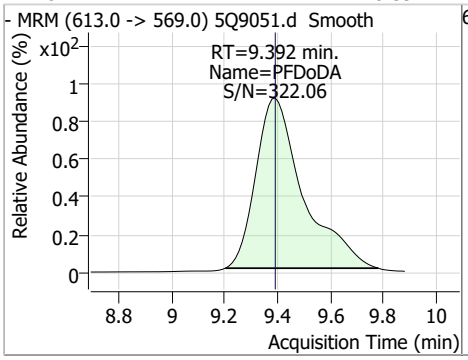
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	18.49	9.39	0.00	415868				

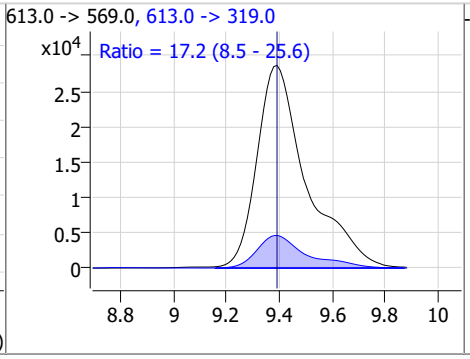


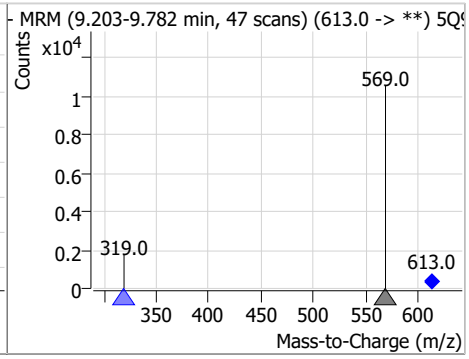




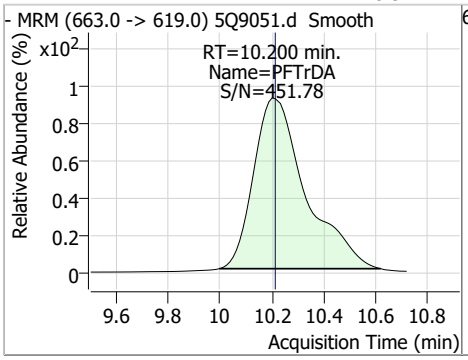
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	18.39	9.39	0.00	348892	613.0 -> 319.0	17.2	8.5	25.6

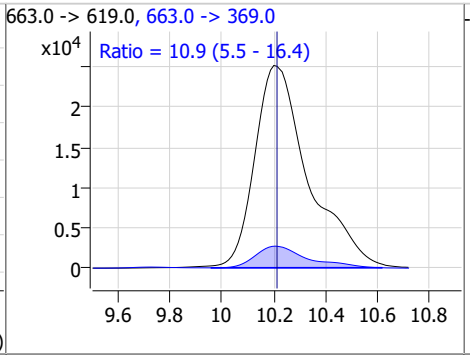


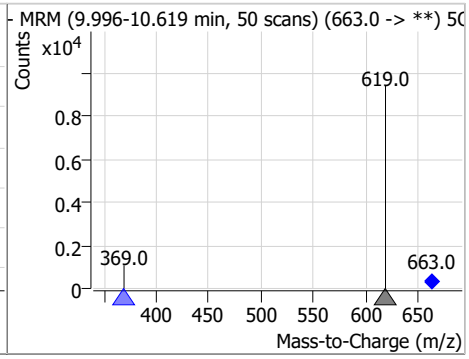




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	18.92	10.20	-0.01	342805	663.0 -> 369.0	10.9	5.5	16.4

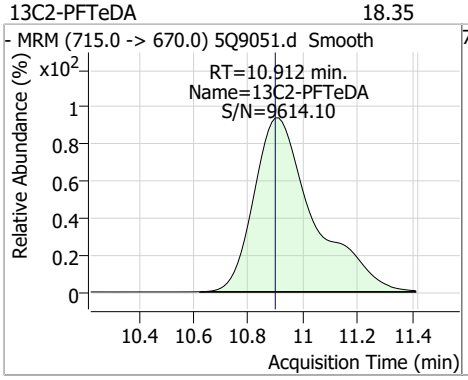


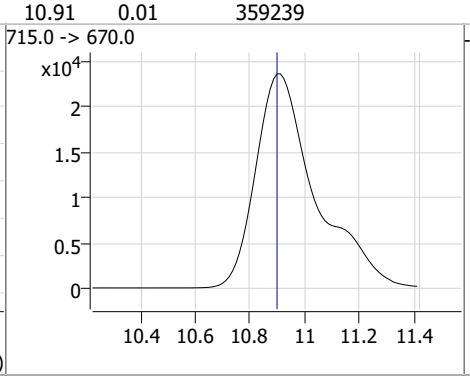


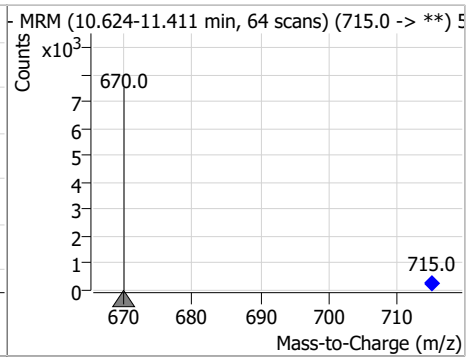


Perfluorinated Compounds by LC/MS/MS

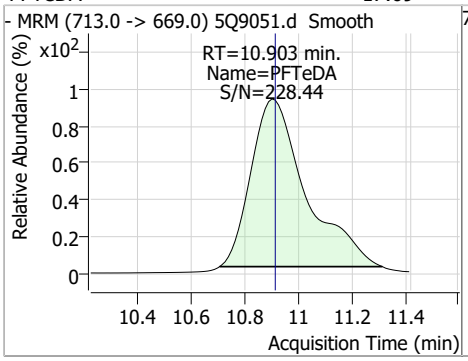
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	18.35	10.91	0.01	359239				

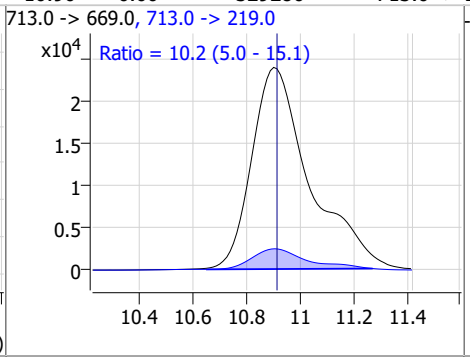


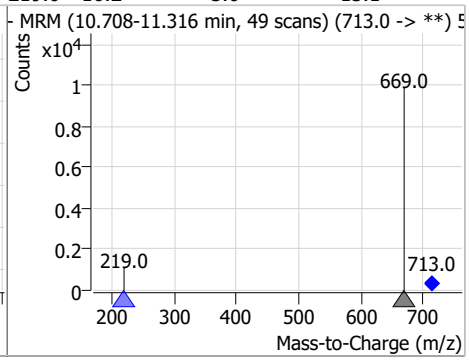




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	17.69	10.90	0.00	329286	713.0 -> 219.0	10.2	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q134-CC134
Lab FileID: 5Q9051.D
Injection Time: 12/28/22 15:53
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.75	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.89	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9052.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 4:10:30 PM
Sample Name : cc134-1.0ll
Vial : P1-A3
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	100650	20.00	µg/L	0.000
M5-PFPeA	3.932	268.0 -> 223.0	205902	20.00	µg/L	0.012
M5-PFHxA	4.977	318.0 -> 273.0	294465	20.00	µg/L	0.012
M4-PFHpA	5.738	367.0 -> 322.0	300234	20.00	µg/L	0.012
M8-PFOA	6.374	421.0 -> 376.0	395022	20.00	µg/L	0.012
M9-PFNA	6.931	472.0 -> 427.0	413306	20.00	µg/L	0.013
M6-PFDA	7.449	519.0 -> 474.0	452922	20.00	µg/L	0.013
M7-PFUnDA	8.320	570.0 -> 525.0	571829	20.00	µg/L	0.000
M2-PFDoDA	9.388	615.0 -> 570.0	427651	20.00	µg/L	0.000
M2-PFTeDA	10.899	715.0 -> 670.0	367110	20.00	µg/L	0.000
M8-FOSA	6.605	506.0 -> 78.0	91137	20.00	µg/L	0.012
M3-PFBS	4.136	302.0 -> 99.0	25886	20.00	µg/L	0.012
M3-PFHxS	5.748	402.0 -> 99.0	34994	20.00	µg/L	0.015
M8-PFOS	6.891	507.0 -> 99.0	46860	20.00	µg/L	0.012
M2-4:2FTS	4.886	329.0 -> 309.0	86528	20.00	µg/L	0.000
M2-6:2FTS	6.372	429.0 -> 409.0	142239	20.00	µg/L	0.012
M2-8:2FTS	7.512	529.0 -> 509.0	132346	20.00	µg/L	0.000
M3-MeFOSAA	7.047	573.0 -> 419.0	31503	20.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	65136	20.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	30557	20.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	33973	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	86528	17.97	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.9%		
13C2-6:2FTS	6.372	429.0 -> 409.0	142239	18.55	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%		
13C2-8:2FTS	7.512	529.0 -> 509.0	132346	18.33	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.6%		
13C2-PFDoDA	9.388	615.0 -> 570.0	427651	19.02	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.1%		
13C2-PFTeDA	10.899	715.0 -> 670.0	367110	18.75	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.7%		
13C3-PFBS	4.136	302.0 -> 99.0	25886	19.92	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.6%		
13C3-PFHxS	5.748	402.0 -> 99.0	34994	19.55	µg/L	0.015
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.8%		
13C4-PFBA	2.400	217.0 -> 172.0	100650	19.35	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.7%		
13C4-PFHpA	5.738	367.0 -> 322.0	300234	19.53	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.6%		
13C5-PFHxA	4.977	318.0 -> 273.0	294465	19.57	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.9%		
13C5-PFPeA	3.932	268.0 -> 223.0	205902	19.63	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.1%		
13C6-PFDA	7.449	519.0 -> 474.0	452922	19.48	µg/L	0.013

Perfluorinated Compounds by LC/MS/MS

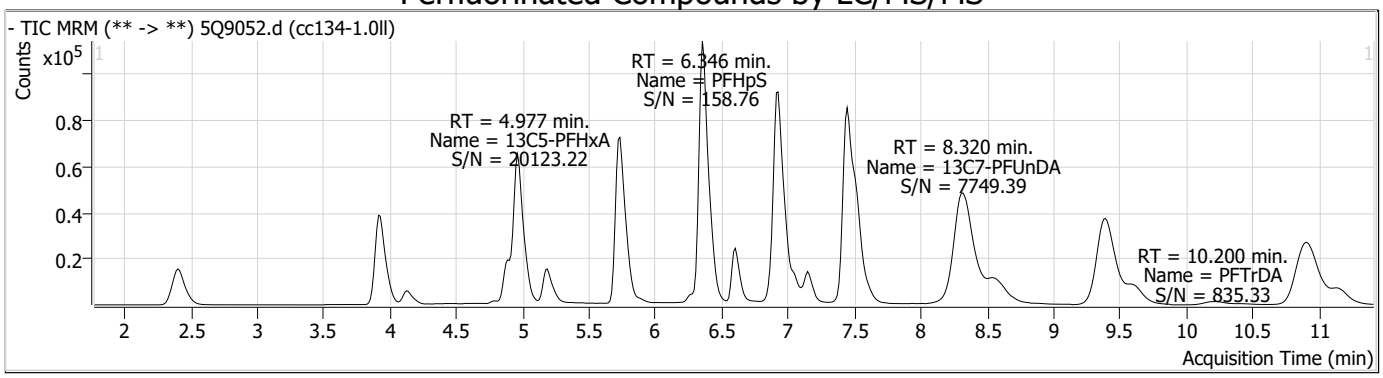
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.4%			
13C7-PFUnDA	8.320	570.0 -> 525.0	571829	19.54	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.7%			
13C8-FOSA	6.605	506.0 -> 78.0	91137	18.87	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.4%			
13C8-PFOA	6.374	421.0 -> 376.0	395022	19.60	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%			
13C8-PFOS	6.891	507.0 -> 99.0	46860	19.65	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.3%			
13C9-PFNA	6.931	472.0 -> 427.0	413306	19.65	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%			
d3-MeFOSAA	7.047	573.0 -> 419.0	31503	17.73	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.7%			
13C3-HFPO-DA	5.194	287.0 -> 169.0	65136	19.69	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.5%			
d3-MeFOSA	6.964	515.0 -> 169.0	30557	20.17	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.8%			
d5-EtFOSAA	7.157	589.0 -> 419.0	33973	18.42	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.1%			
Target Compounds							QValue
4:2FTS	4.888	327.0 -> 307.0	4988	1.05	µg/L		95
		327.0 -> 81.0	3133				
6:2FTS	6.373	427.0 -> 407.0	7276	1.00	µg/L		97
		427.0 -> 81.0	3231				
8:2FTS	7.512	527.0 -> 507.0	6805	1.01	µg/L		93
		527.0 -> 81.0	3632				
EtFOSAA	7.158	584.0 -> 419.0	1053	0.93	µg/L		98
		584.0 -> 483.0	686				
FOSA	6.606	498.0 -> 78.0	4367	0.93	µg/L		99
		498.0 -> 478.0	123				
MeFOSAA	7.060	570.0 -> 419.0	1296	1.01	µg/L		95
		570.0 -> 512.0	577				
PFBA	2.406	213.0 -> 169.0	4986	0.91	µg/L		100
PFBS	4.129	299.0 -> 80.0	3895	0.93	µg/L		99
		299.0 -> 99.0	1688				
PFDA	7.450	513.0 -> 469.0	21548	0.89	µg/L		98
		513.0 -> 219.0	4036				
PFDoDA	9.392	613.0 -> 569.0	17790	0.91	µg/L		100
		613.0 -> 319.0	3030				
PFDS	8.144	599.0 -> 80.0	4404	0.86	µg/L		95
		599.0 -> 99.0	2819				
PFHpA	5.739	363.0 -> 319.0	16864	0.90	µg/L		97
		363.0 -> 169.0	3975				
PFHpS	6.346	449.0 -> 80.0	3469	0.97	µg/L		97
		449.0 -> 99.0	1832				
PFHxA	4.978	313.0 -> 269.0	13409	0.90	µg/L		100
		313.0 -> 119.0	596				
PFHxS	5.749	399.0 -> 80.0	3324	0.94	µg/L	m	98
		399.0 -> 99.0	1906				
PFNA	6.931	463.0 -> 419.0	18480	0.86	µg/L		99
		463.0 -> 219.0	4123				
PFNS	7.384	549.0 -> 80.0	3228	1.00	µg/L		96
		549.0 -> 99.0	1827				
PFOA	6.374	413.0 -> 369.0	21243	0.94	µg/L		100
		413.0 -> 169.0	5652				
PFOS	6.892	499.0 -> 80.0	4037	0.93	µg/L	m	95

Perfluorinated Compounds by LC/MS/MS

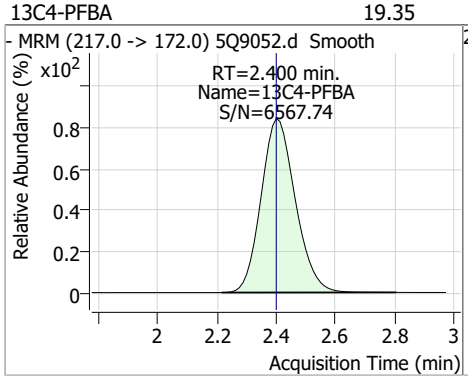
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	2078			
PFPeA	3.934	263.0 -> 219.0	11019	0.91	µg/L	100
PFPeS	5.047	349.0 -> 80.0	2467	0.89	µg/L	95
		349.0 -> 99.0	1344			
PFTeDA	10.903	713.0 -> 669.0	15704	0.83	µg/L	94
		713.0 -> 219.0	1959			
PFTrDA	10.200	663.0 -> 619.0	17305	0.93	µg/L	98
		663.0 -> 369.0	1768			
PFUnDA	8.321	563.0 -> 519.0	25940	0.88	µg/L	97
		563.0 -> 269.0	4667			
11Cl-PF3OUdS	8.628	631.0 -> 451.0	17456	0.88	µg/L	93
		633.0 -> 453.0	5611			
9Cl-PF3ONS	7.123	531.0 -> 351.0	17438	0.87	µg/L	99
		533.0 -> 353.0	5665			
ADONA	5.777	377.0 -> 251.0	22084	0.94	µg/L	98
		377.0 -> 85.0	8536			
HFPO-DA	5.190	329.0 -> 169.0	4986	0.96	µg/L	100
		285.0 -> 169.0	2931			
MeFOSA	6.966	512.0 -> 169.0	1753	0.97	µg/L	85
		512.0 -> 219.0	1134			
4-PFECHS	6.280	461.0 -> 381.0	11116	0.88	µg/L	100
		461.0 -> 99.0	5967			
FBSA	4.793	298.0 -> 78.0	5331	0.87	µg/L	99
		298.0 -> 64.0	469			
FHxSA	5.900	398.0 -> 78.0	5120	0.87	µg/L	99
		398.0 -> 64.0	474			

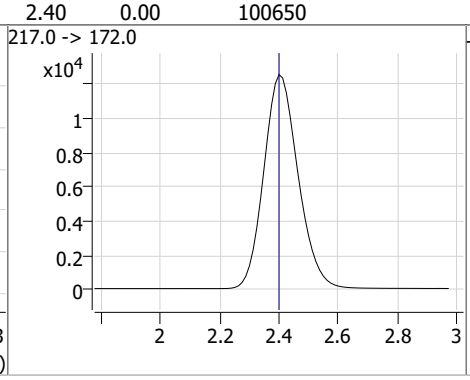
 # = Qualifier out of range, m = manually integrated, + = Area summed

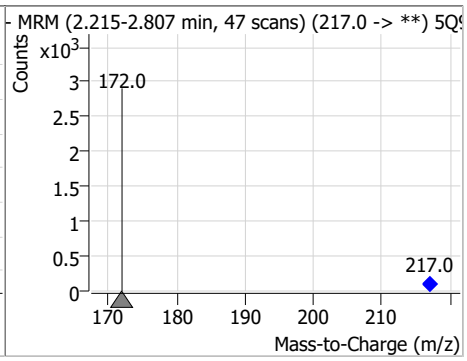
Perfluorinated Compounds by LC/MS/MS



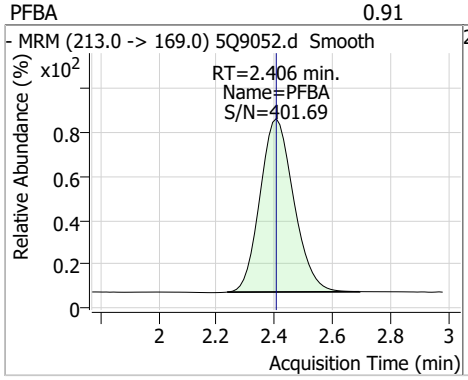
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.35	2.40	0.00	100650				

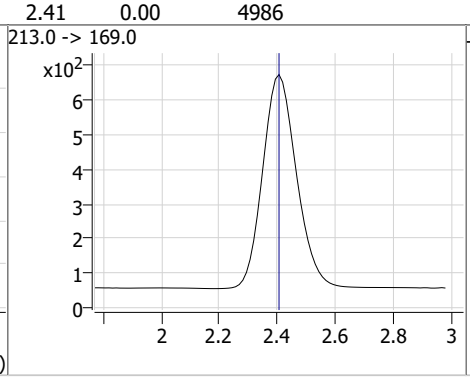


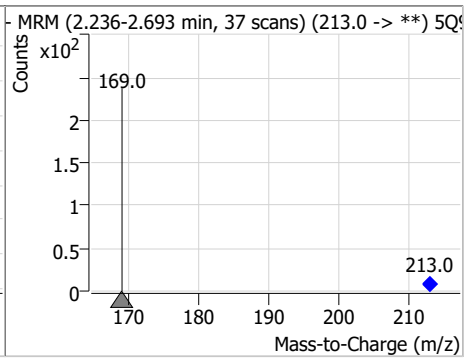




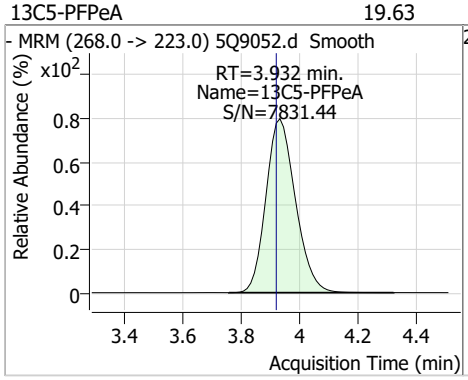
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.91	2.41	0.00	4986				

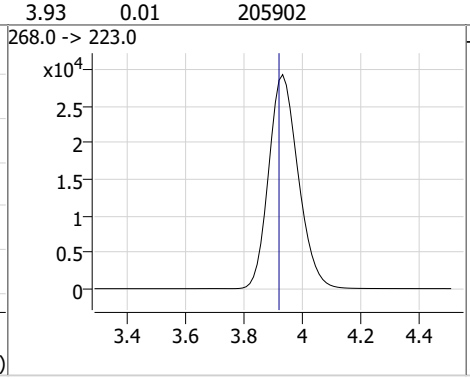


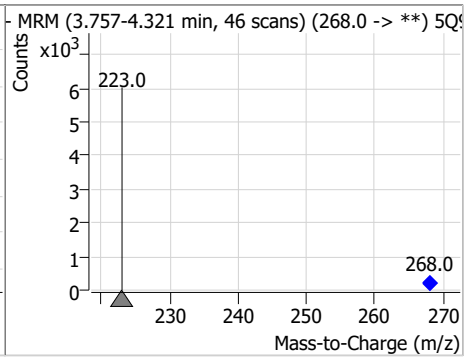




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.63	3.93	0.01	205902				

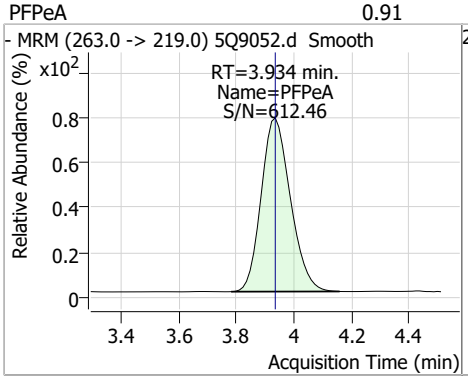


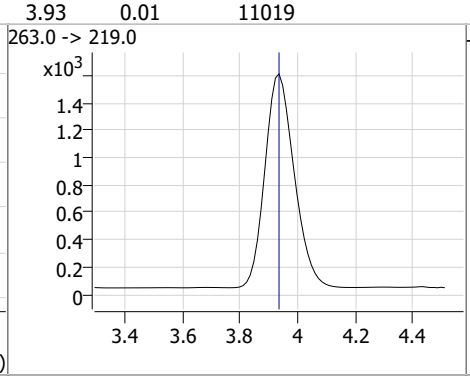


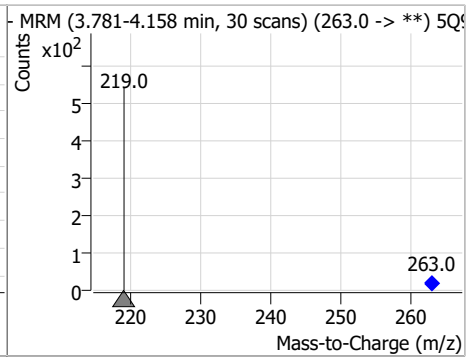


Perfluorinated Compounds by LC/MS/MS

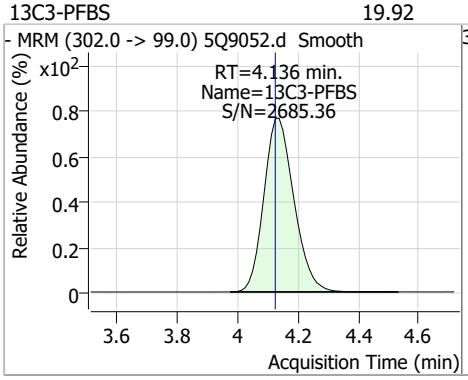
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.91	3.93	0.01	11019				

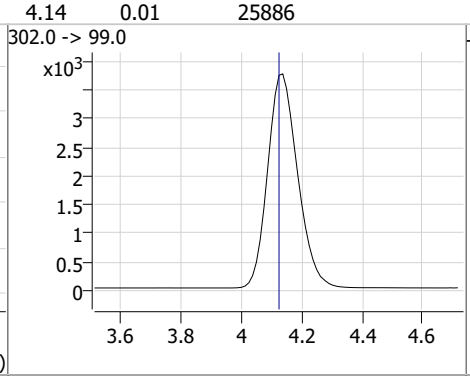


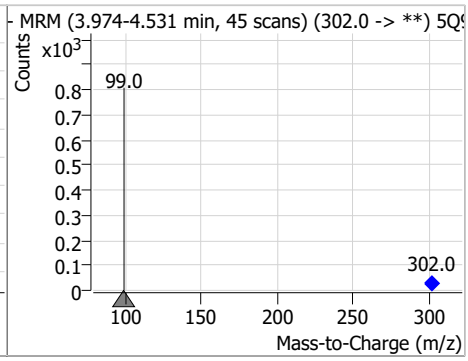




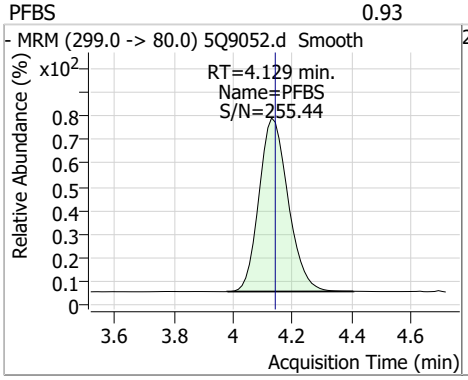
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.92	4.14	0.01	25886				

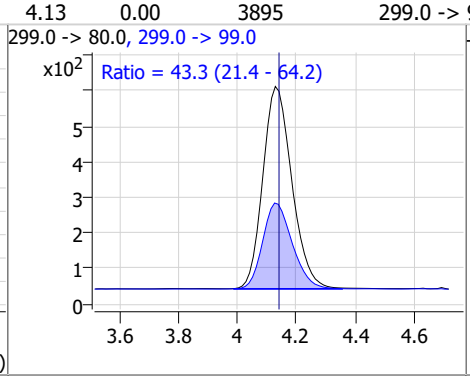


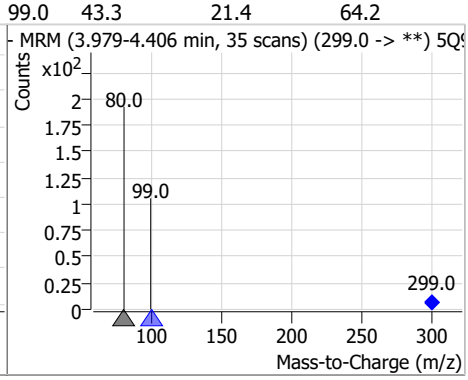




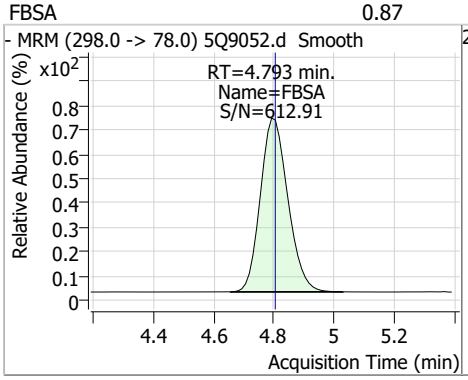
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.93	4.13	0.00	3895	299.0 -> 99.0	43.3	21.4	64.2

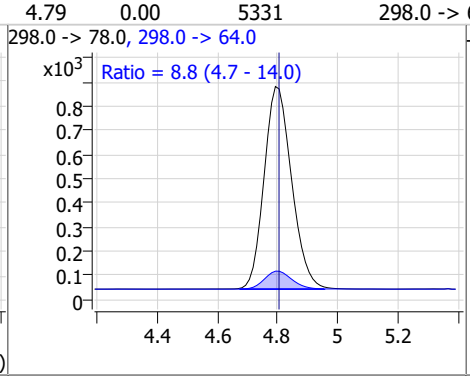


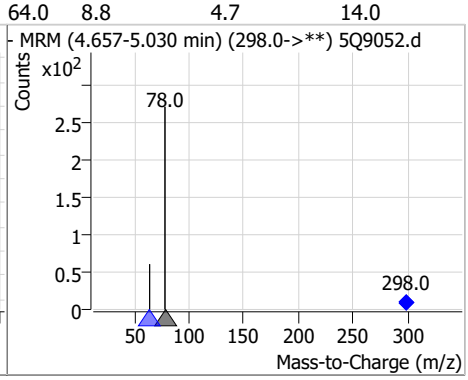




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	0.87	4.79	0.00	5331	298.0 -> 64.0	8.8	4.7	14.0

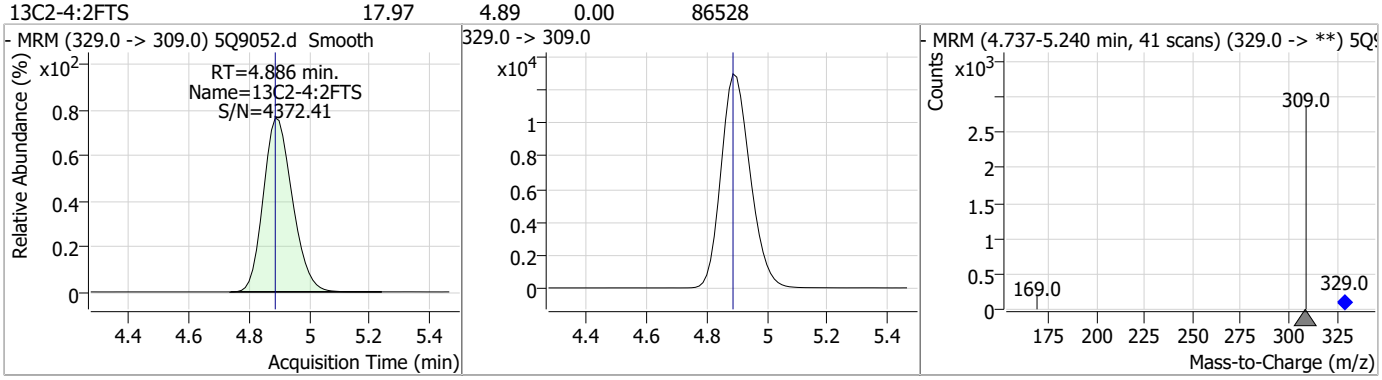




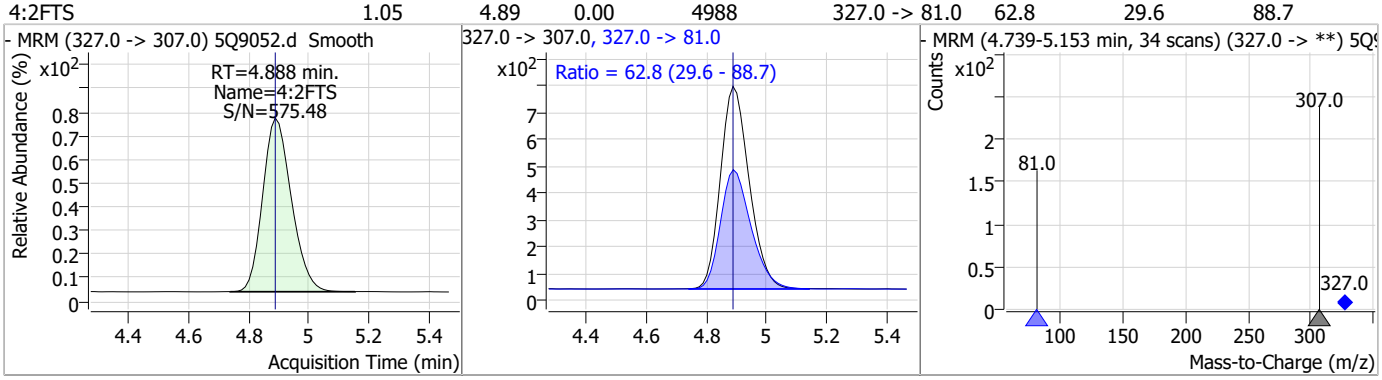


Perfluorinated Compounds by LC/MS/MS

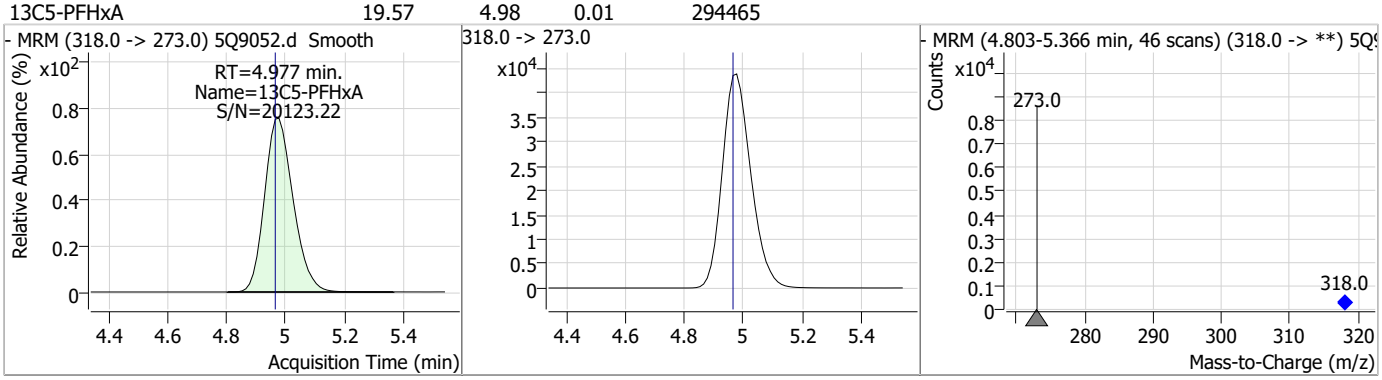
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	17.97	4.89	0.00	86528				



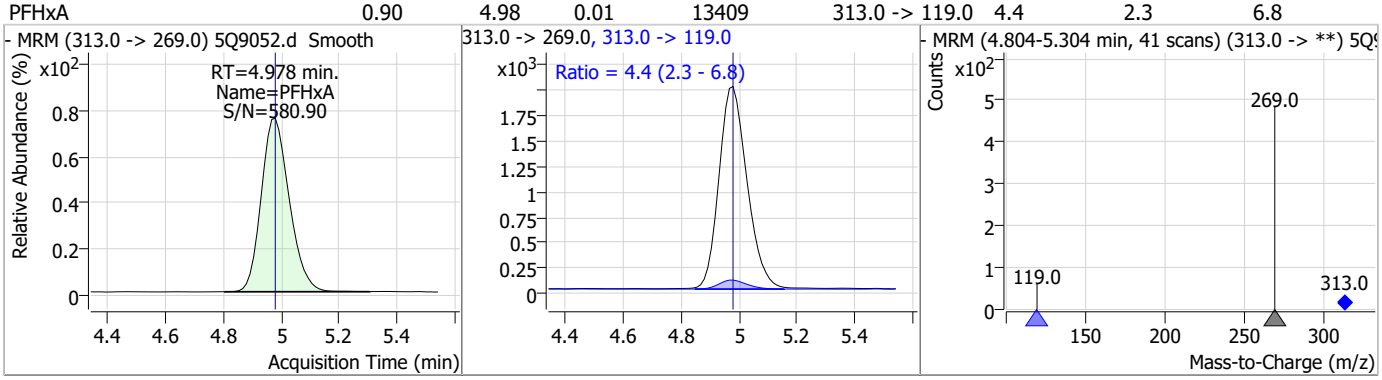
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	1.05	4.89	0.00	4988	327.0 -> 81.0	62.8	29.6	88.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.57	4.98	0.01	294465				

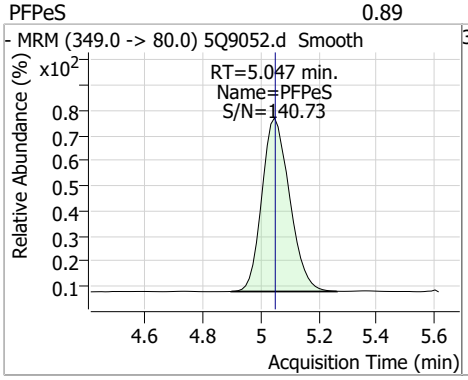


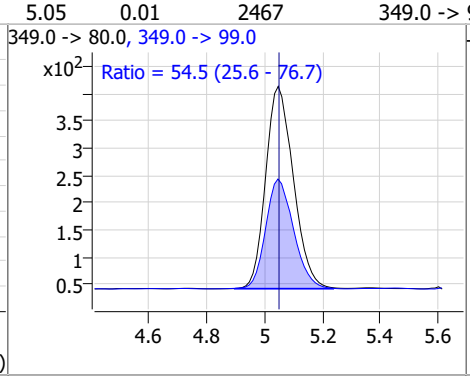
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.90	4.98	0.01	13409	313.0 -> 119.0	4.4	2.3	6.8

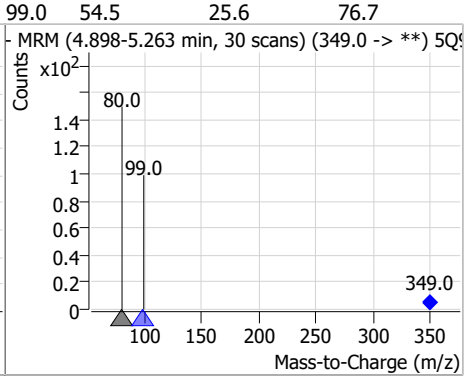


Perfluorinated Compounds by LC/MS/MS

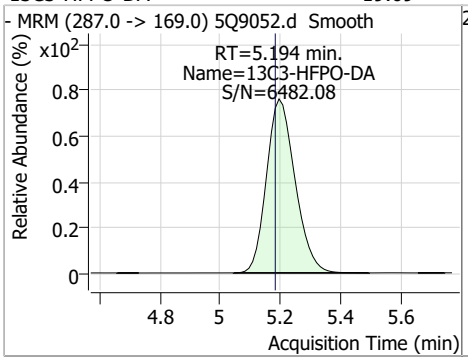
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	0.89	5.05	0.01	2467	349.0 -> 99.0	54.5	25.6	76.7

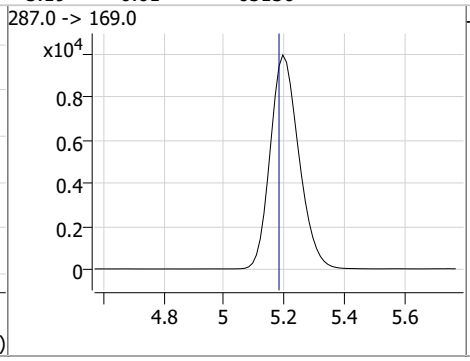


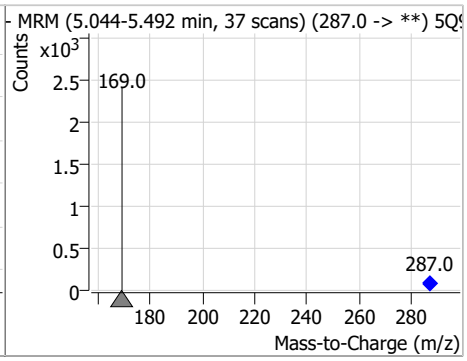




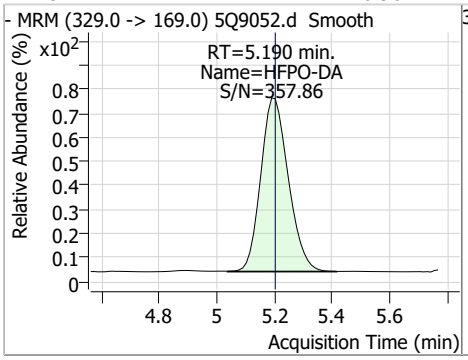
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.69	5.19	0.01	65136				

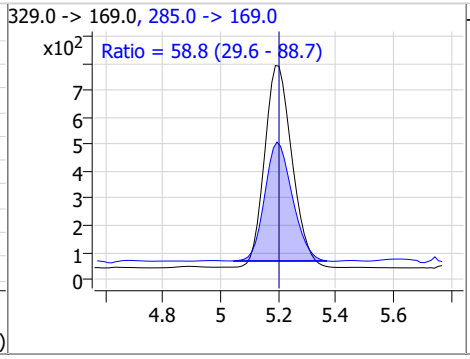


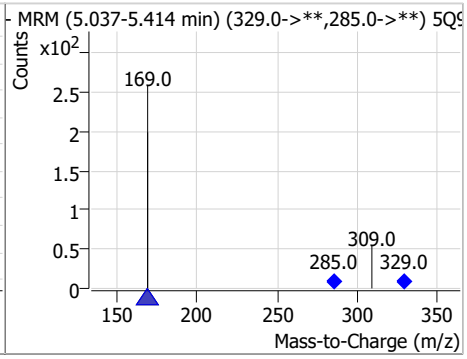




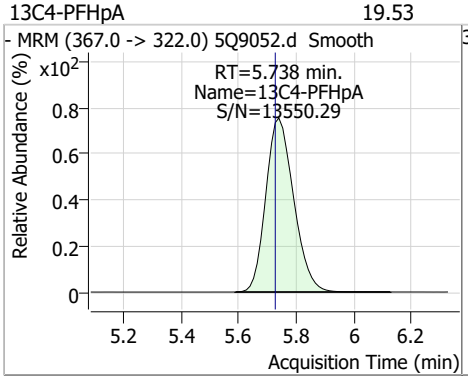
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.96	5.19	0.00	4986	285.0 -> 169.0	58.8	29.6	88.7

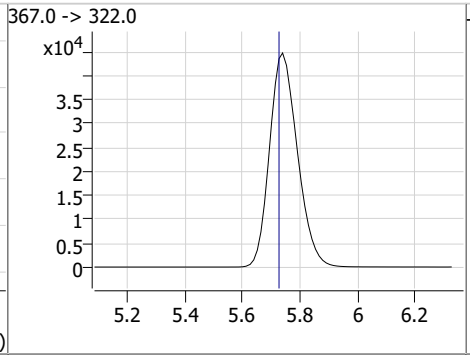


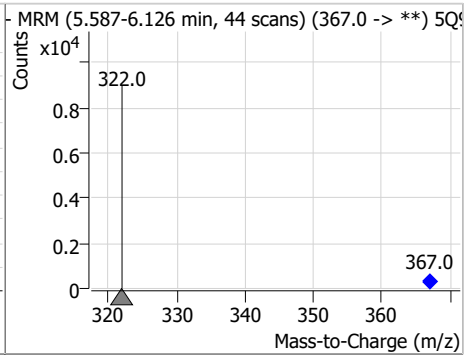




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.53	5.74	0.01	300234				

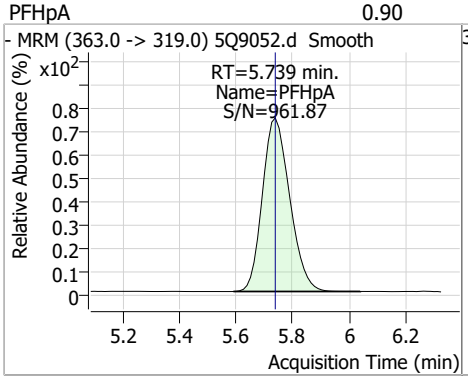


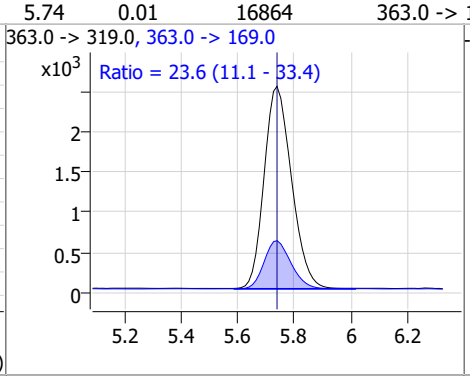


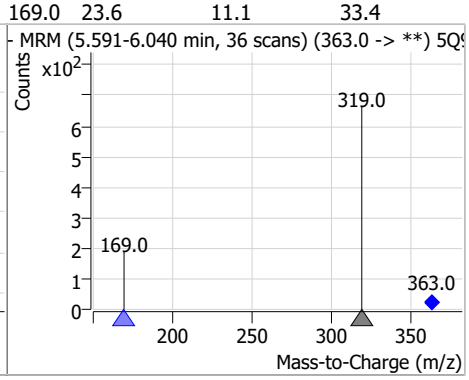


Perfluorinated Compounds by LC/MS/MS

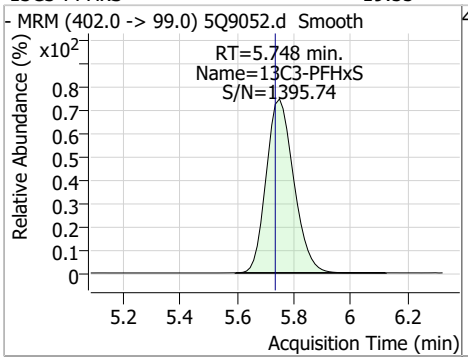
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.90	5.74	0.01	16864	363.0 -> 169.0	23.6	11.1	33.4

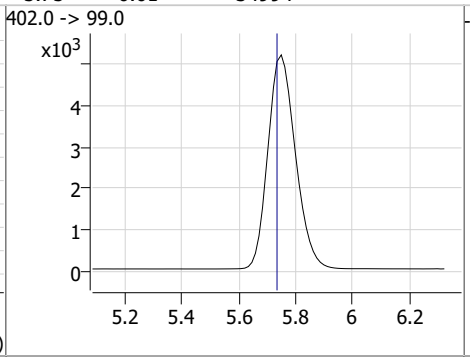


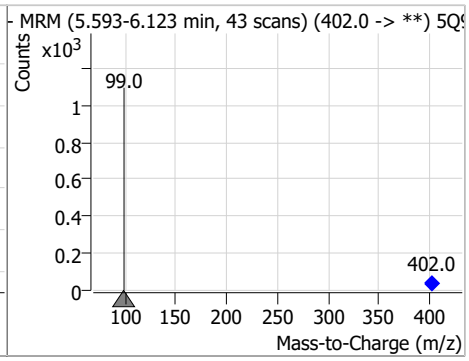




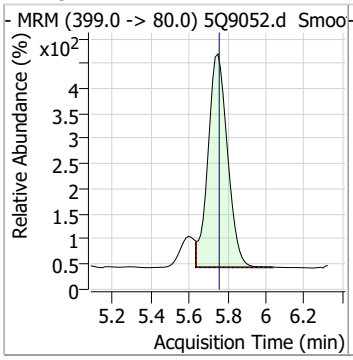
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.55	5.75	0.01	34994				

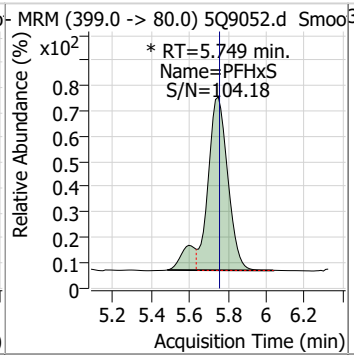


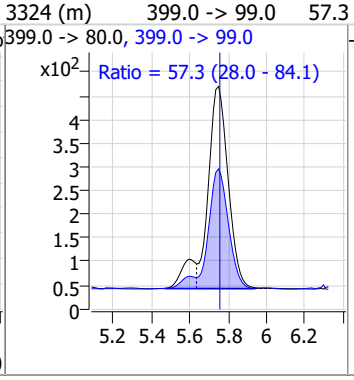


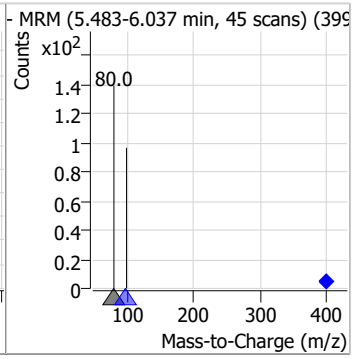


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.94	5.75	0.01	3324 (m)	399.0 -> 99.0	57.3	28.0	84.1

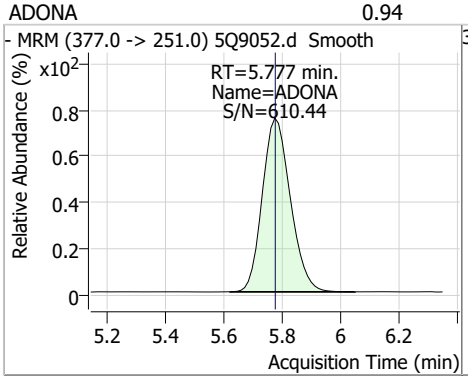


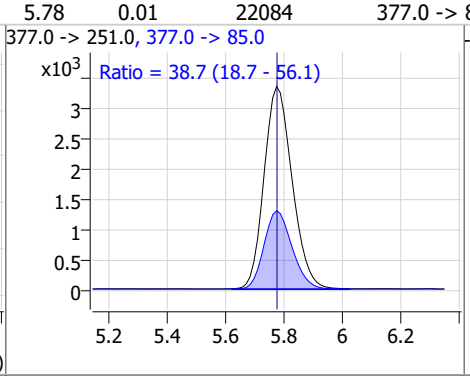


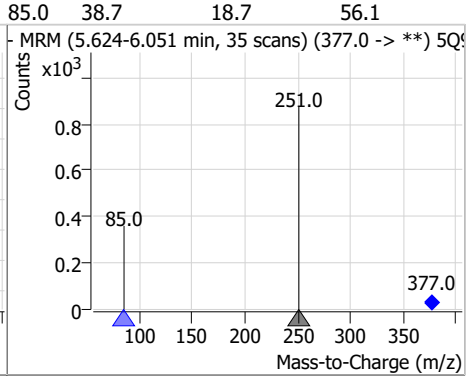




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.94	5.78	0.01	22084	377.0 -> 85.0	38.7	18.7	56.1

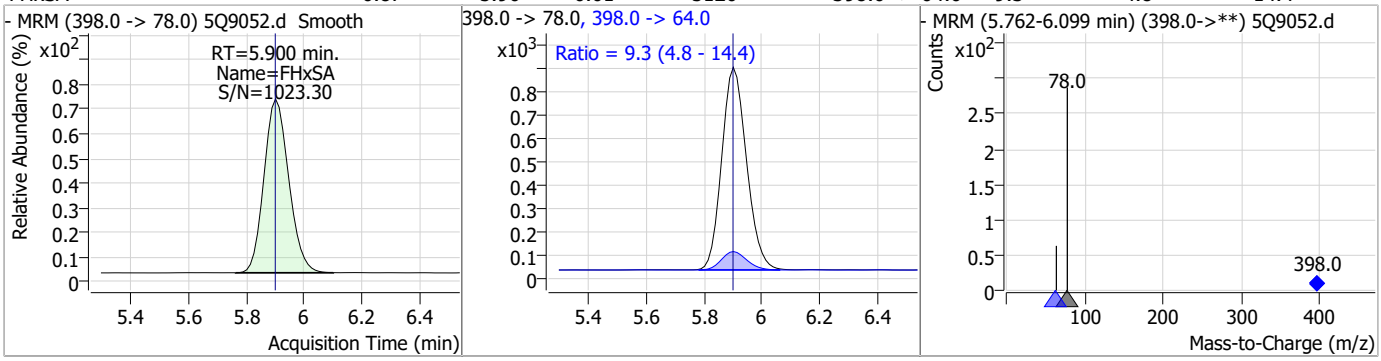




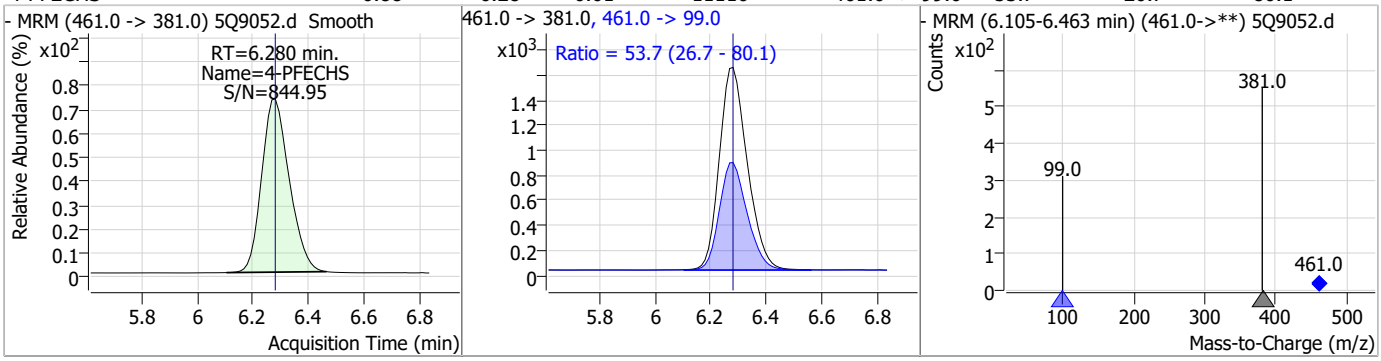


Perfluorinated Compounds by LC/MS/MS

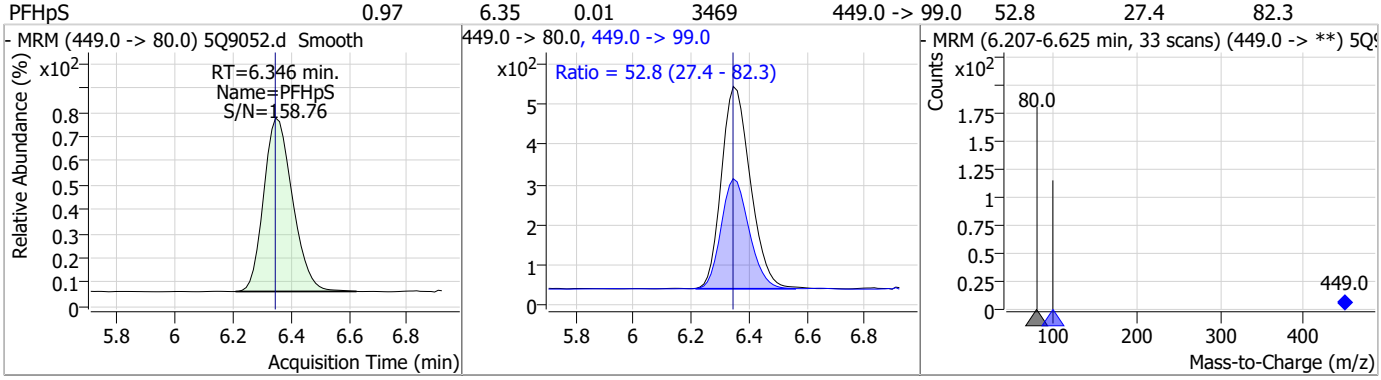
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	0.87	5.90	0.01	5120	398.0 -> 64.0	9.3	4.8	14.4



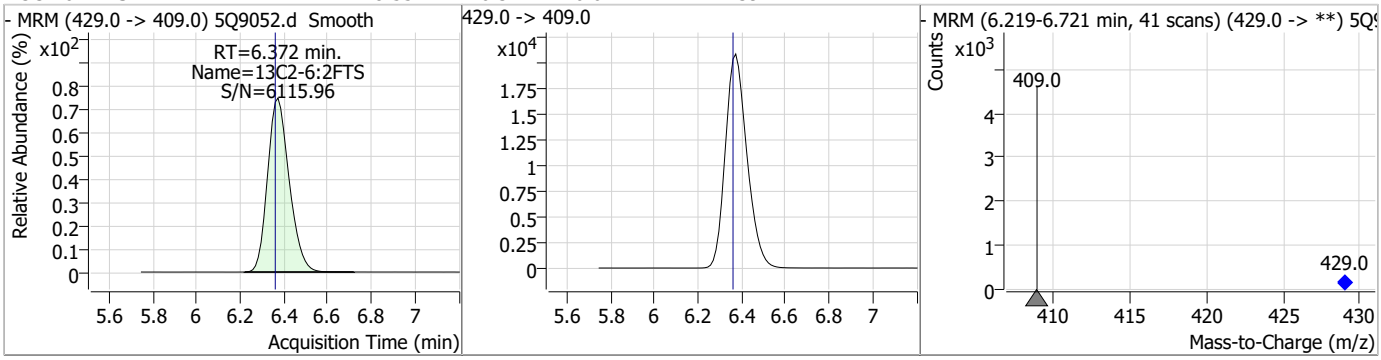
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	0.88	6.28	0.01	11116	461.0 -> 99.0	53.7	26.7	80.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	0.97	6.35	0.01	3469	449.0 -> 99.0	52.8	27.4	82.3

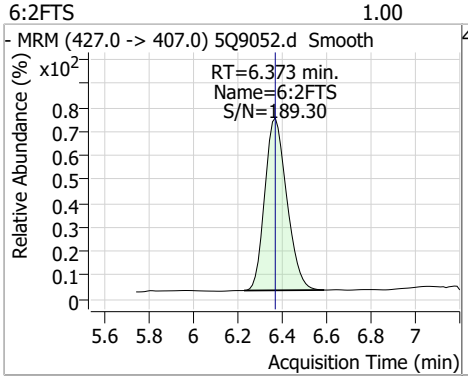


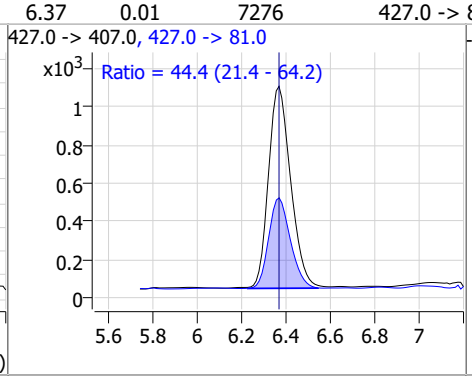
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.55	6.37	0.01	142239				

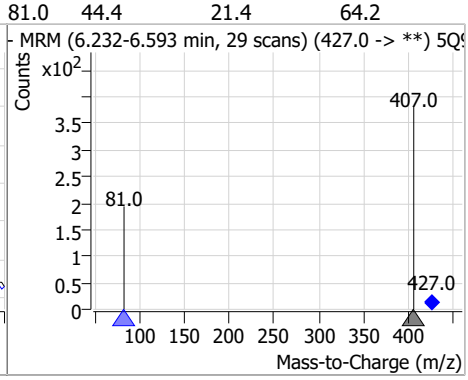


Perfluorinated Compounds by LC/MS/MS

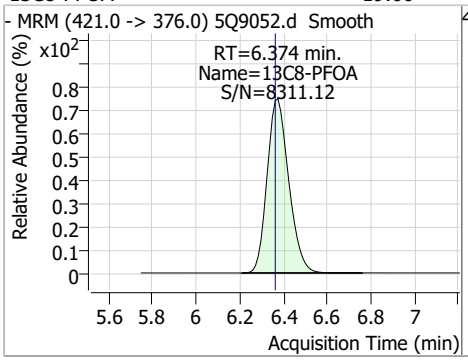
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	1.00	6.37	0.01	7276	427.0 -> 81.0	44.4	21.4	64.2

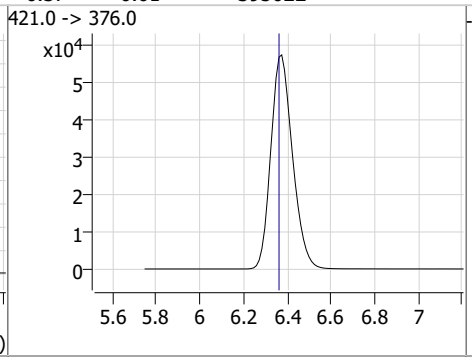


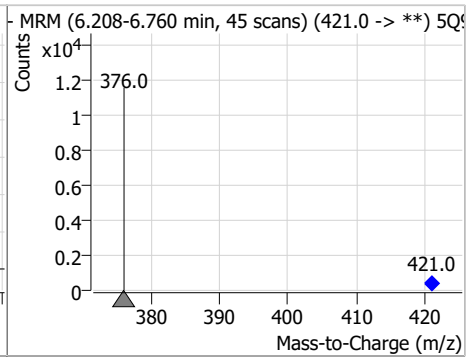




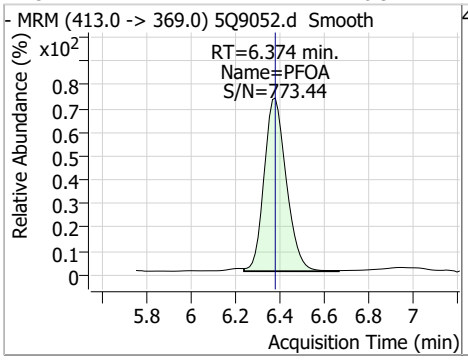
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.60	6.37	0.01	395022				

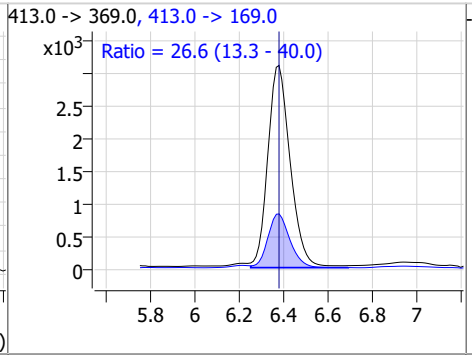


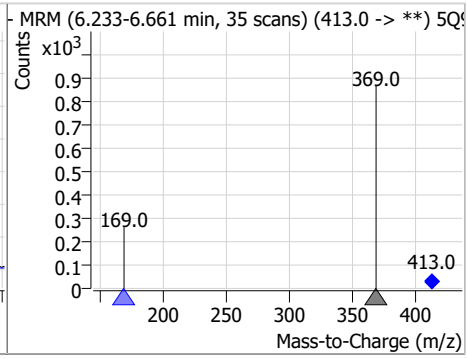




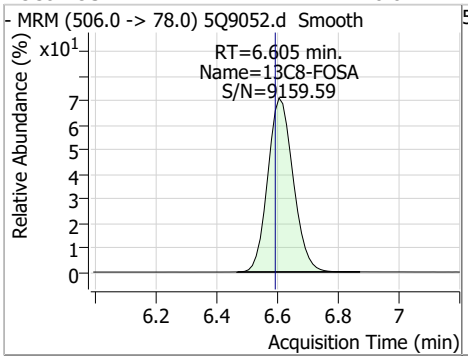
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.94	6.37	0.01	21243	413.0 -> 169.0	26.6	13.3	40.0

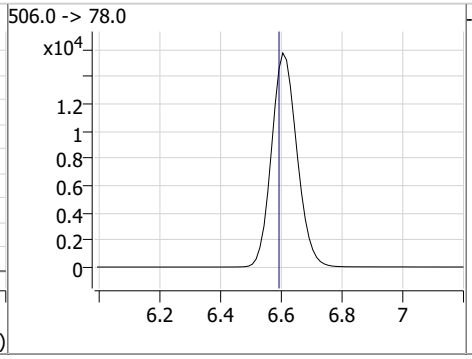


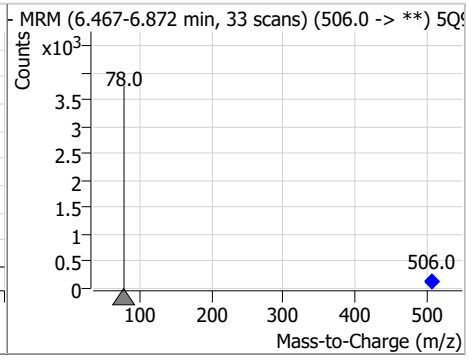




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	18.87	6.60	0.01	91137				

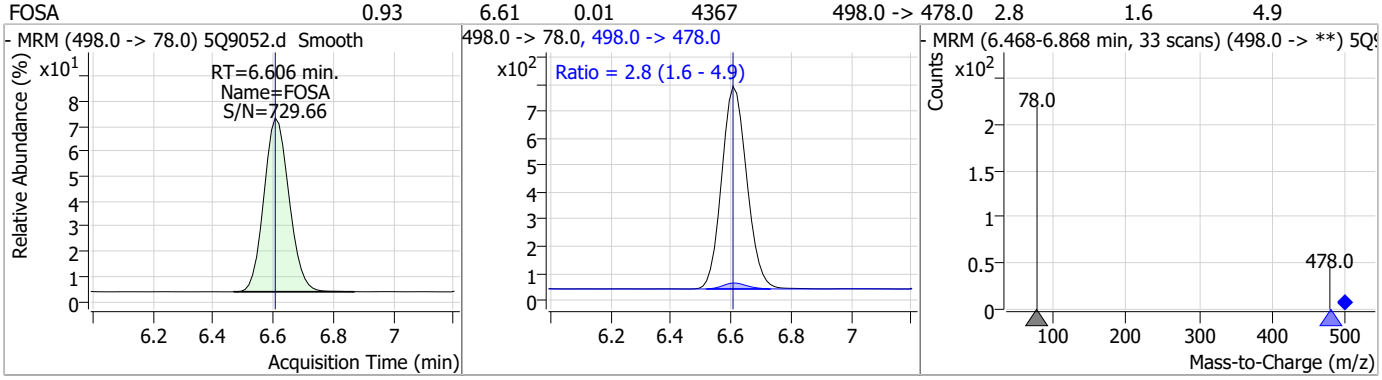




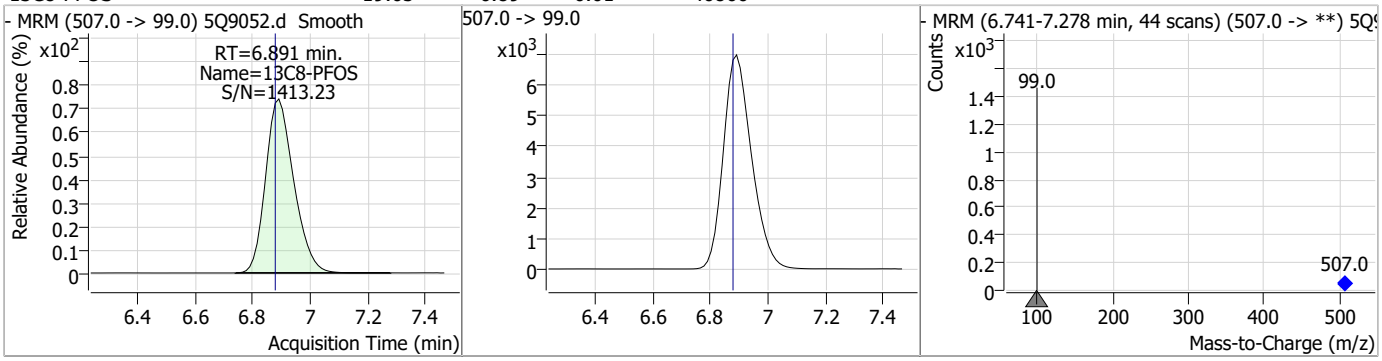


Perfluorinated Compounds by LC/MS/MS

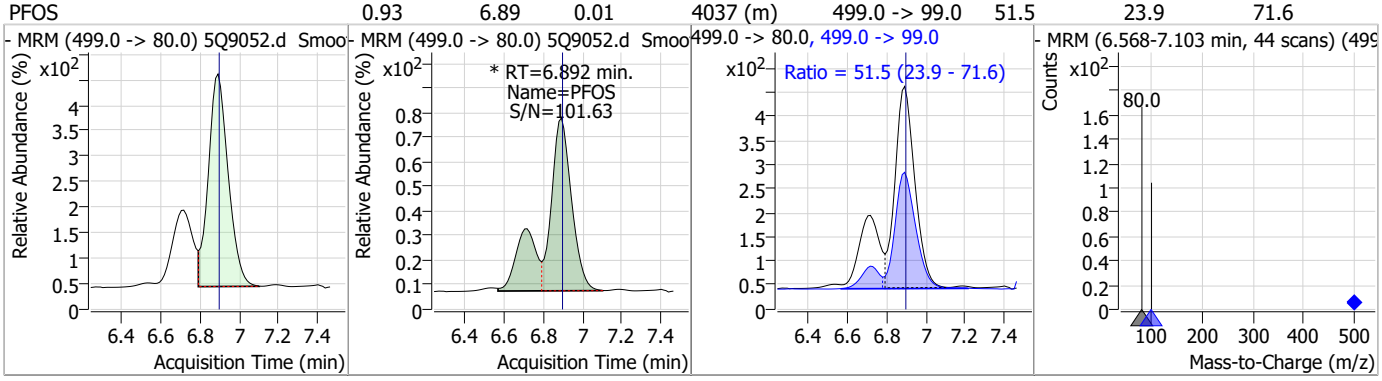
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	0.93	6.61	0.01	4367	498.0 -> 478.0	2.8	1.6	4.9



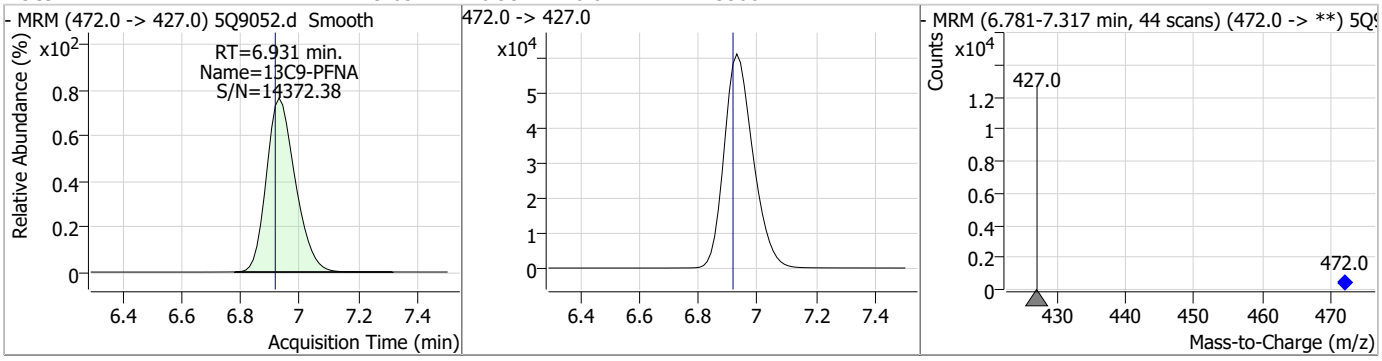
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.65	6.89	0.01	46860				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.93	6.89	0.01	4037 (m)	499.0 -> 99.0	51.5	23.9	71.6

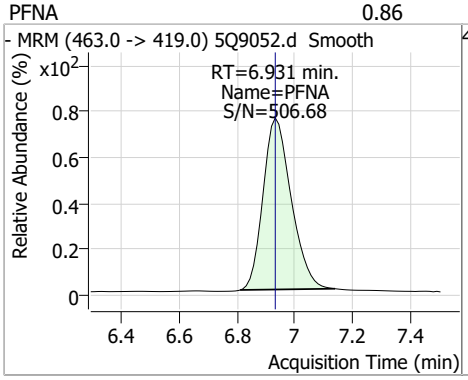


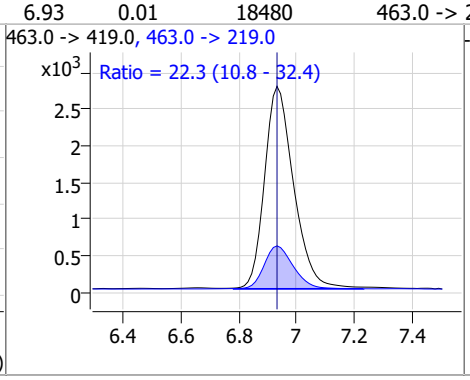
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.65	6.93	0.01	413306				

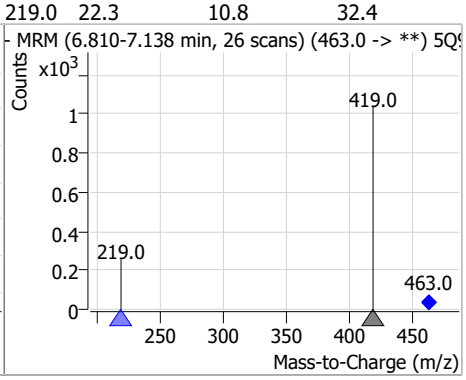


Perfluorinated Compounds by LC/MS/MS

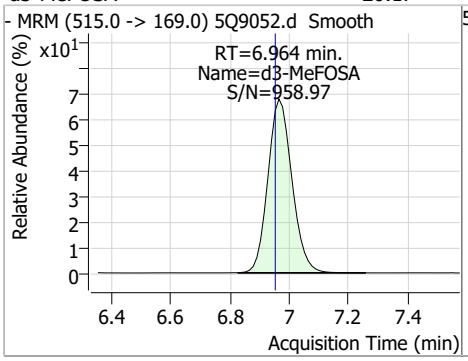
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.86	6.93	0.01	18480	463.0 -> 219.0	22.3	10.8	32.4

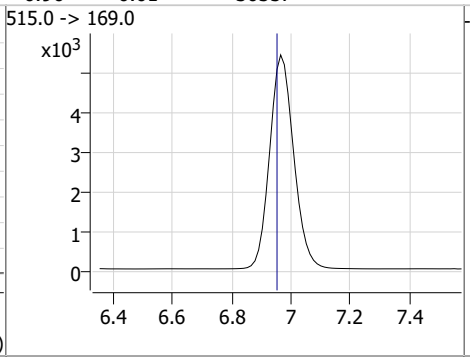


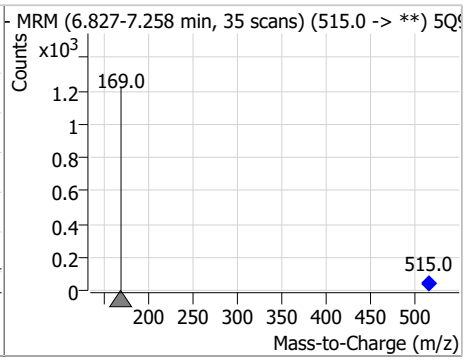




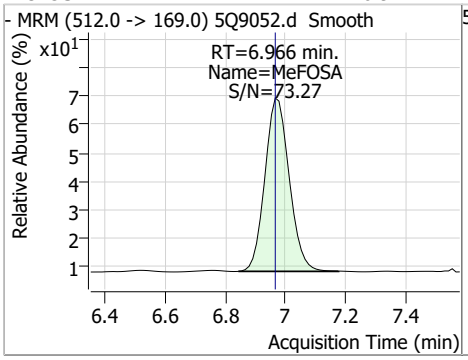
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	20.17	6.96	0.01	30557				

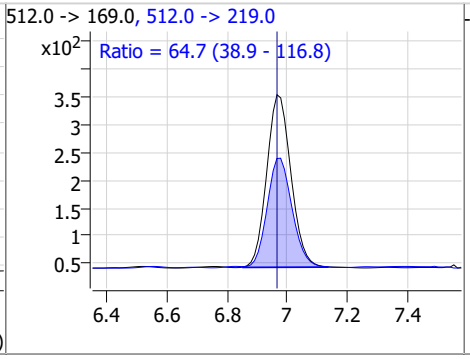


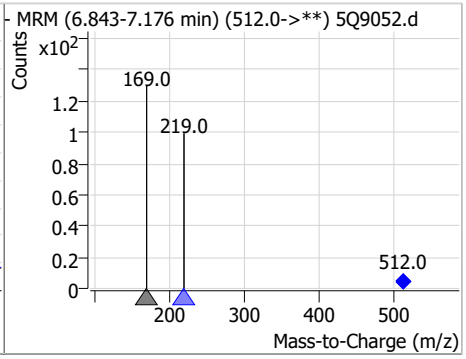




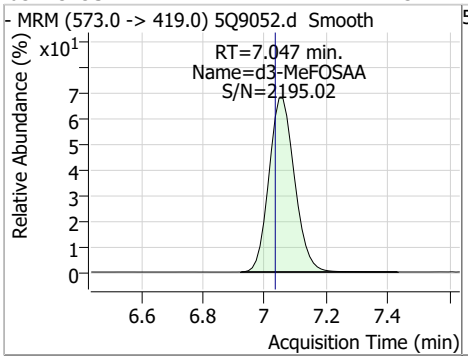
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	0.97	6.97	0.01	1753	512.0 -> 219.0	64.7	38.9	116.8

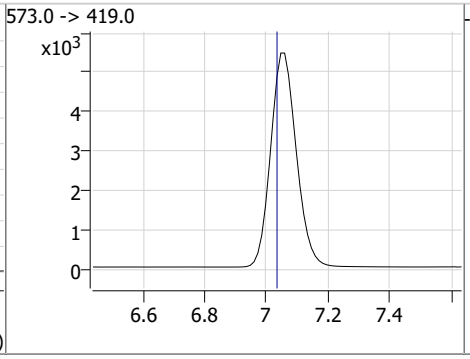


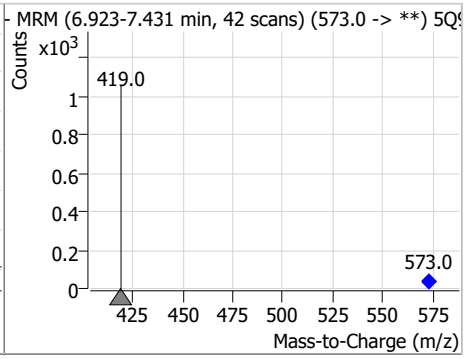




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	17.73	7.05	0.01	31503				

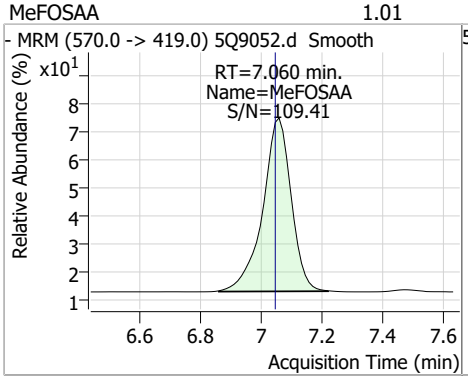


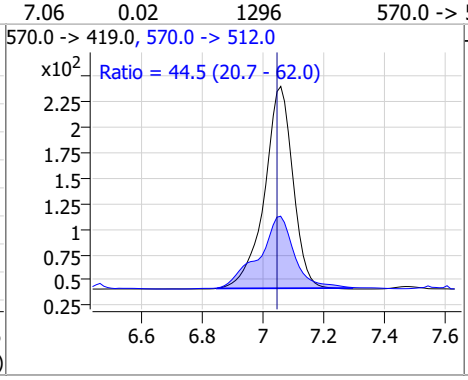


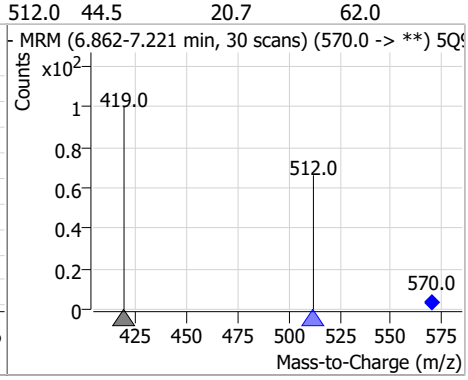


Perfluorinated Compounds by LC/MS/MS

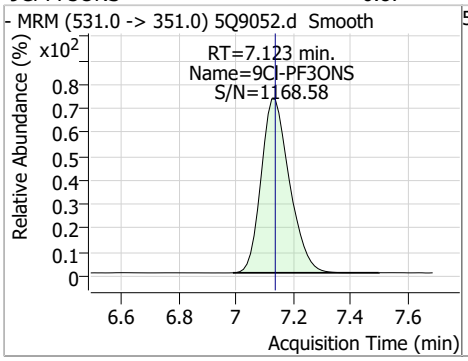
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	1.01	7.06	0.02	1296	570.0 -> 512.0	44.5	20.7	62.0

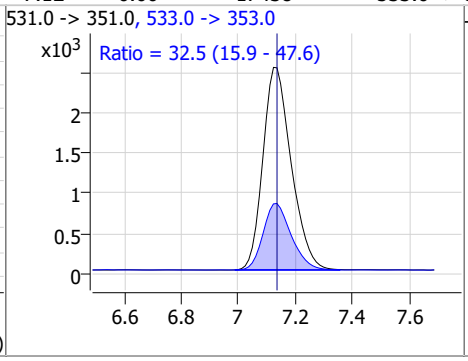


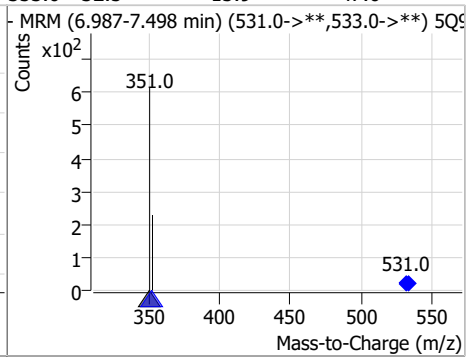




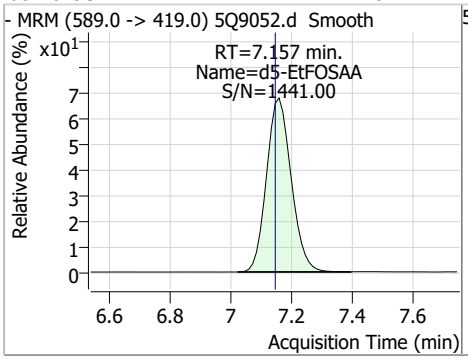
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.87	7.12	0.00	17438	533.0 -> 353.0	32.5	15.9	47.6

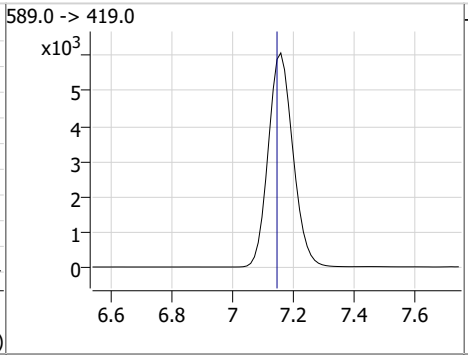


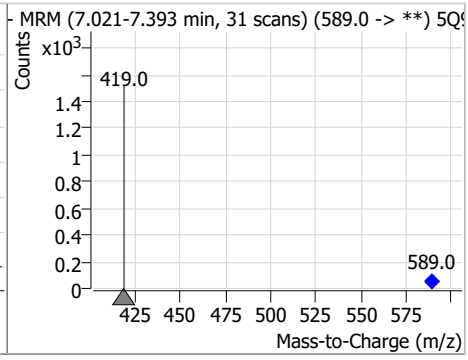




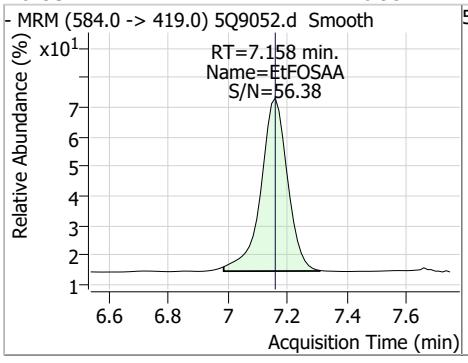
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.42	7.16	0.01	33973				

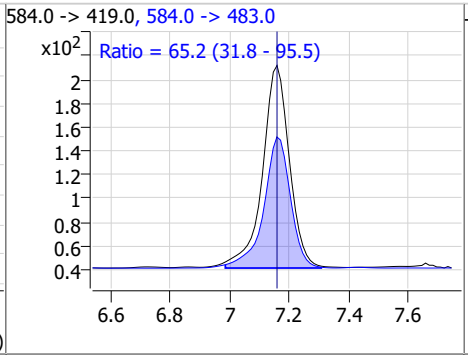


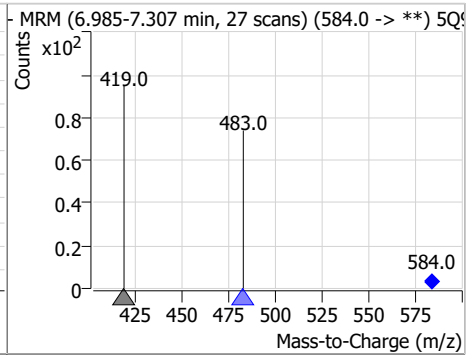




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	0.93	7.16	0.01	1053	584.0 -> 483.0	65.2	31.8	95.5

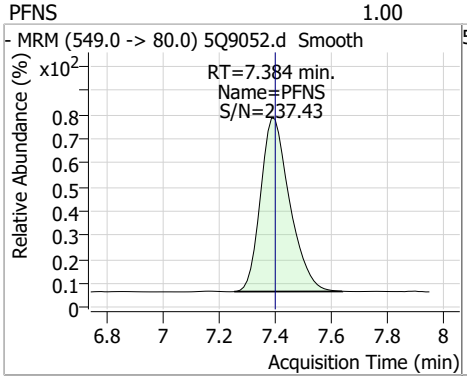


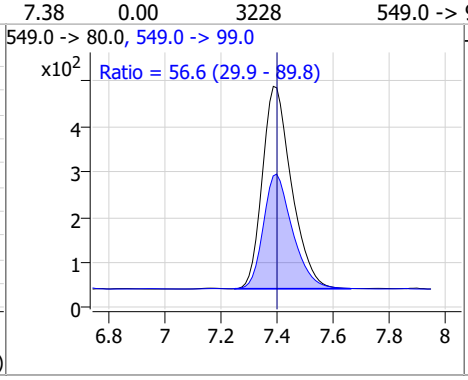


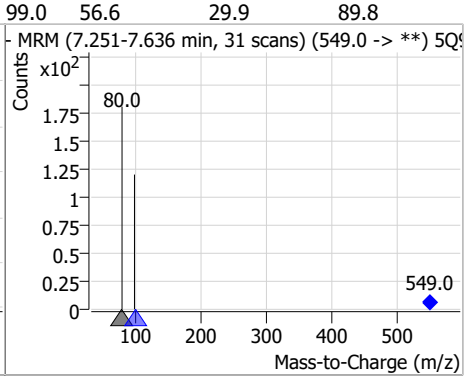


Perfluorinated Compounds by LC/MS/MS

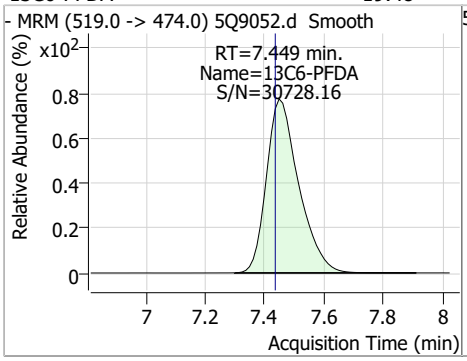
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	1.00	7.38	0.00	3228	549.0 -> 99.0	56.6	29.9	89.8

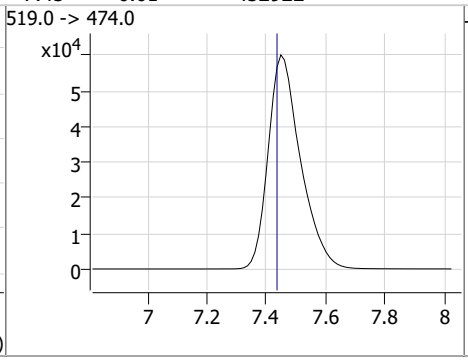


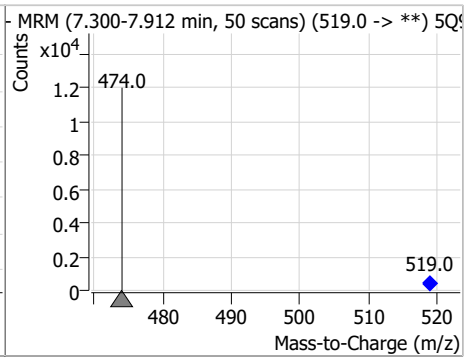




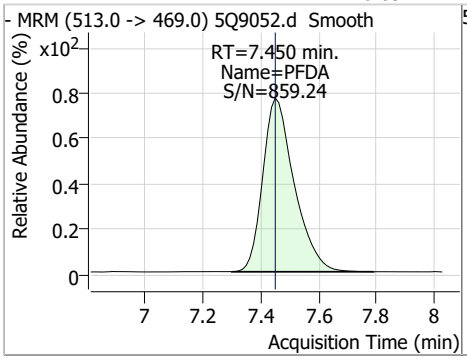
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.48	7.45	0.01	452922				

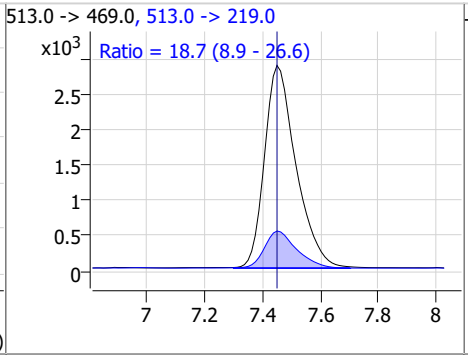


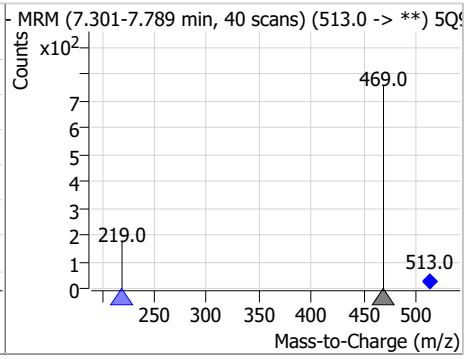




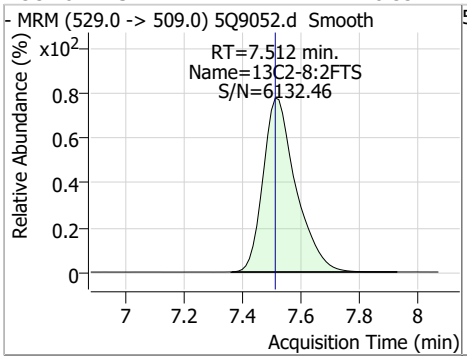
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.89	7.45	0.01	21548	513.0 -> 219.0	18.7	8.9	26.6

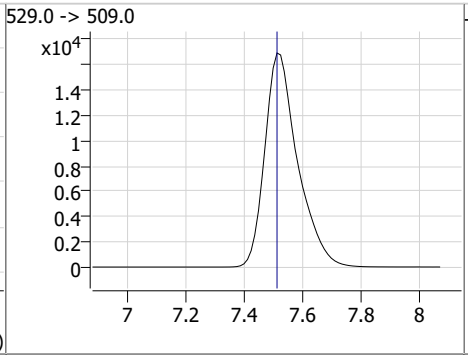


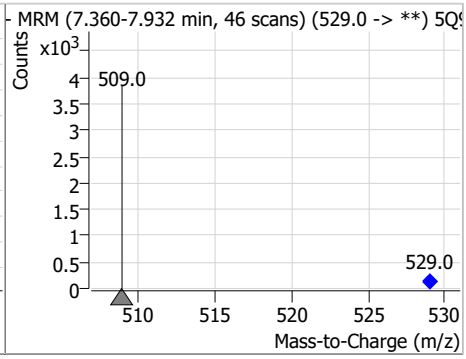




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.33	7.51	0.00	132346				

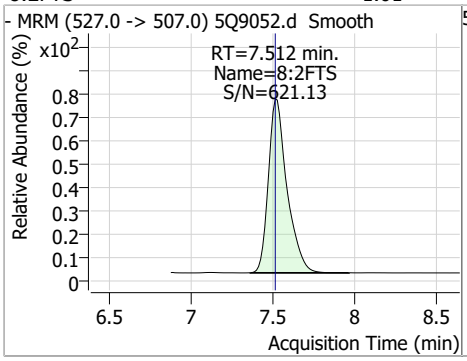


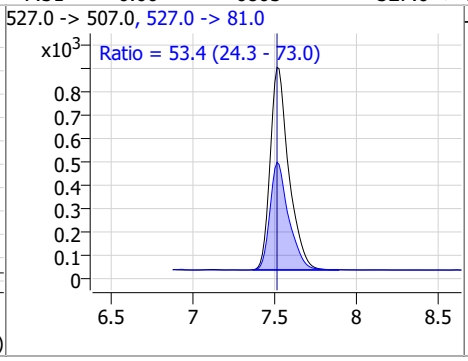


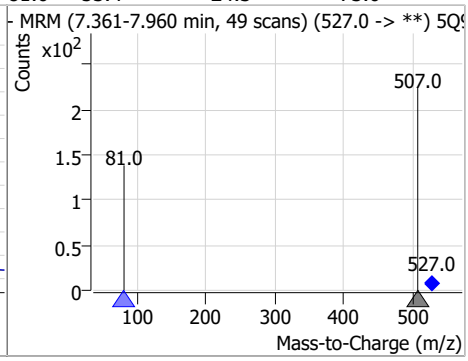


Perfluorinated Compounds by LC/MS/MS

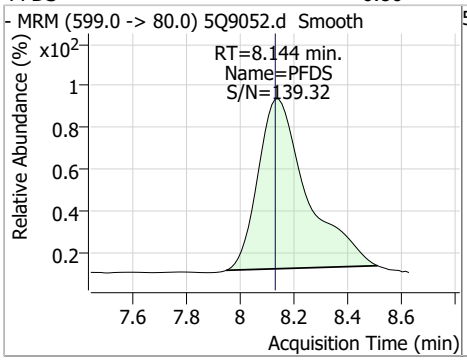
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	1.01	7.51	0.00	6805	527.0 -> 81.0	53.4	24.3	73.0

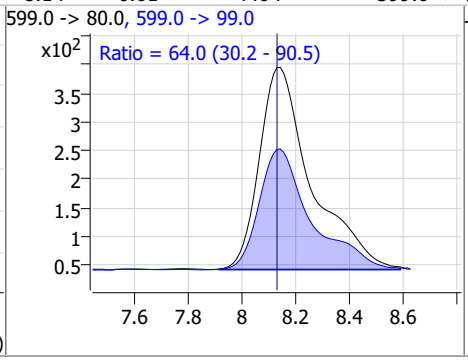


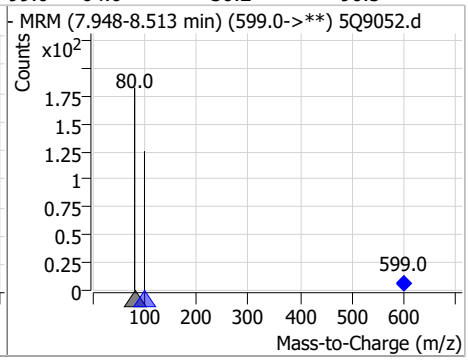




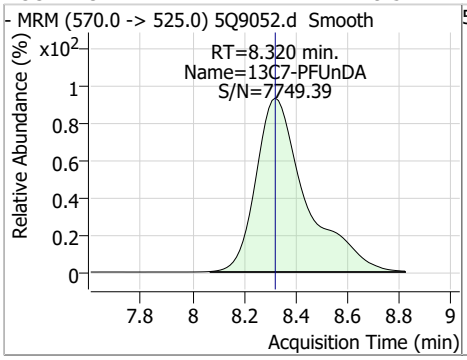
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	0.86	8.14	0.01	4404	599.0 -> 99.0	64.0	30.2	90.5

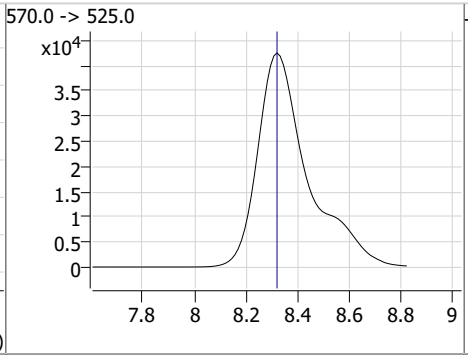


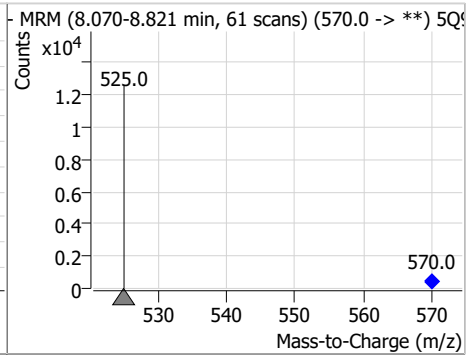




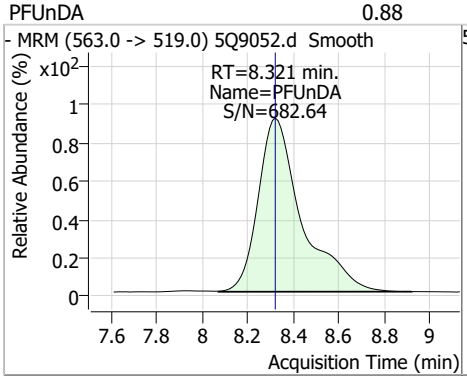
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.54	8.32	0.00	571829				

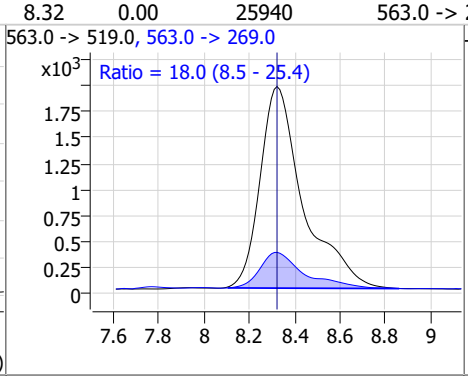


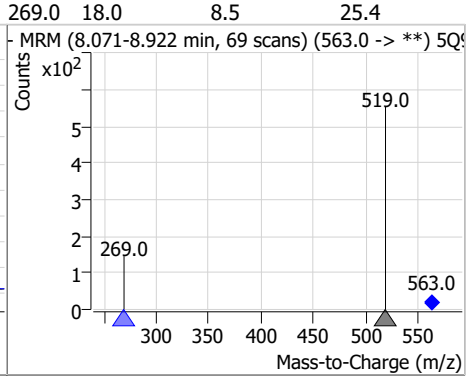




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.88	8.32	0.00	25940	563.0 -> 269.0	18.0	8.5	25.4

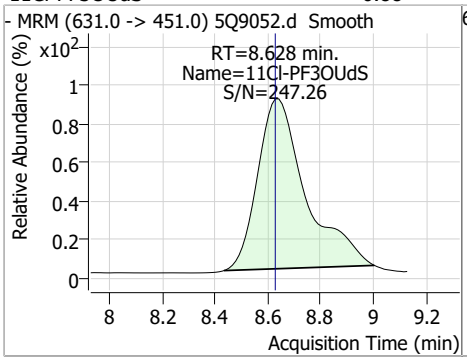


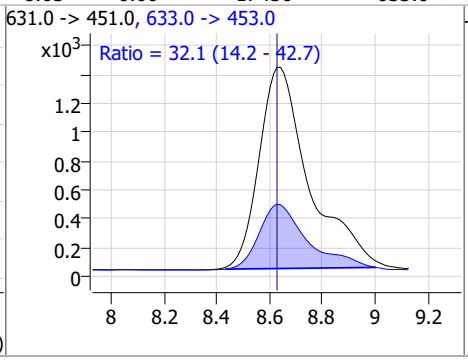


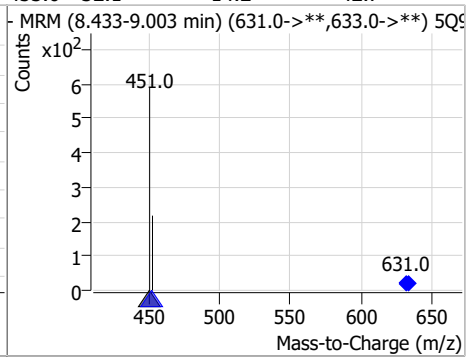


Perfluorinated Compounds by LC/MS/MS

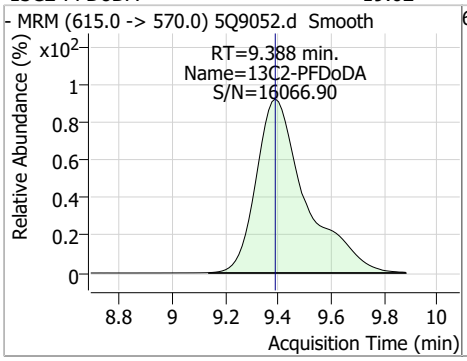
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.88	8.63	0.00	17456	633.0 -> 453.0	32.1	14.2	42.7

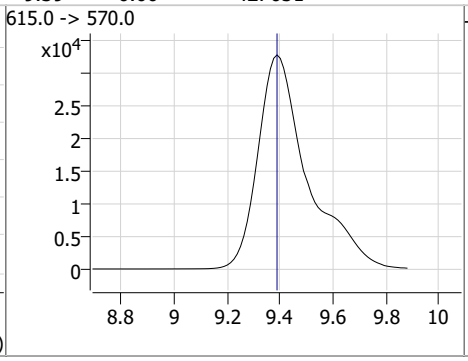


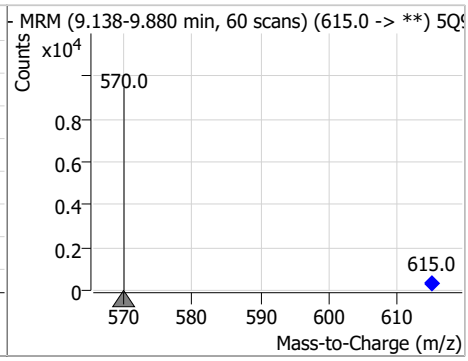




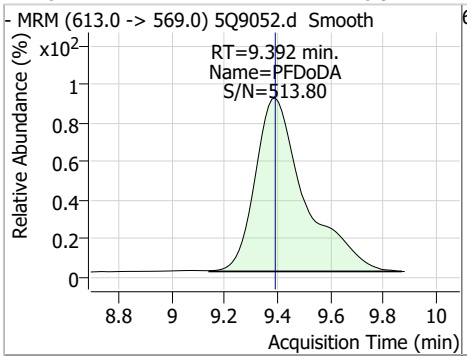
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.02	9.39	0.00	427651				

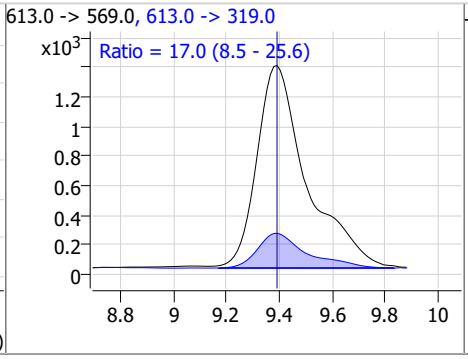


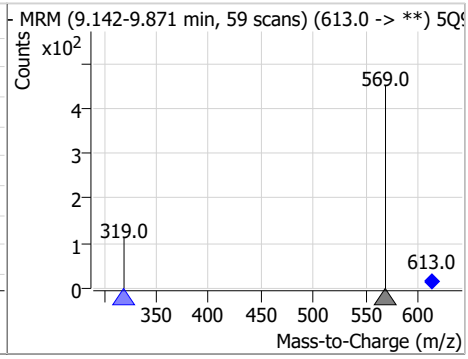




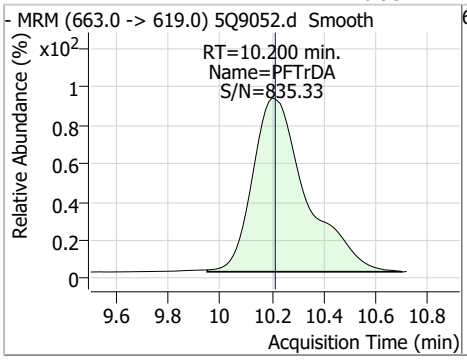
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.91	9.39	0.00	17790	613.0 -> 319.0	17.0	8.5	25.6

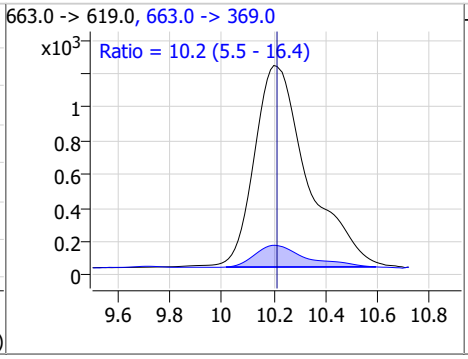


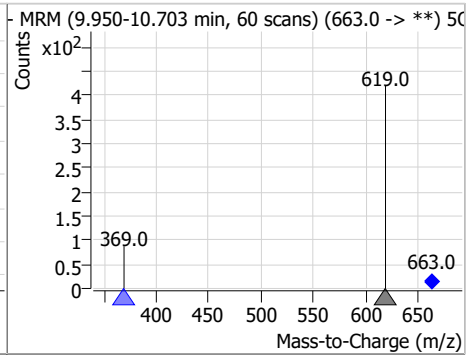




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.93	10.20	-0.01	17305	663.0 -> 369.0	10.2	5.5	16.4

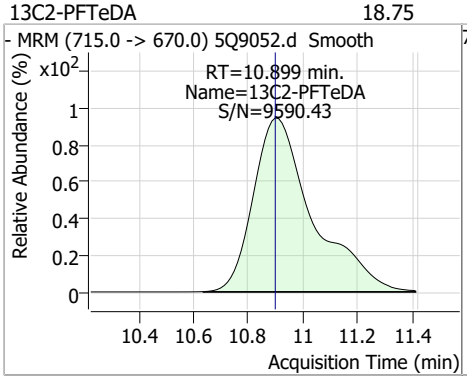


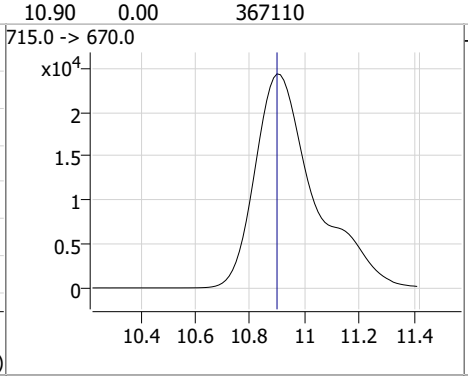


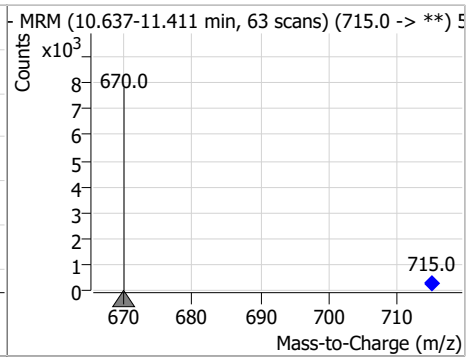


Perfluorinated Compounds by LC/MS/MS

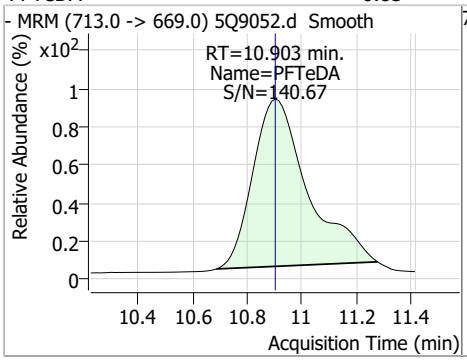
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	18.75	10.90	0.00	367110				

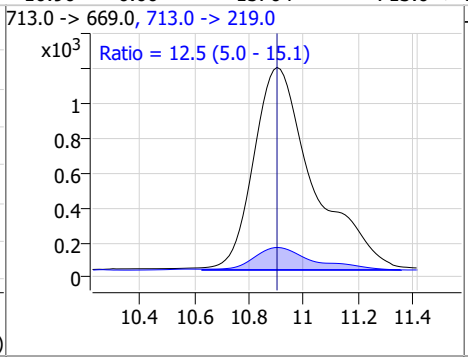


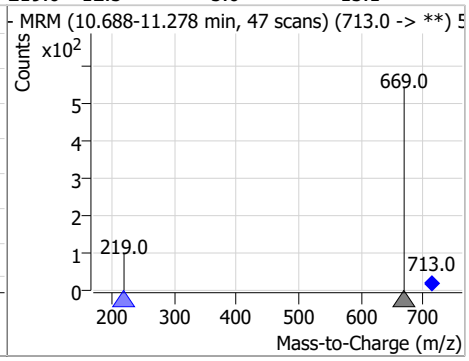




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.83	10.90	0.00	15704	713.0 -> 219.0	12.5	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q134-CC134
Lab FileID: 5Q9052.D
Injection Time: 12/28/22 16:10
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.75	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.89	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9058.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 5:52:51 PM
Sample Name : cc134-20
Vial : P1-A7
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	102451	20.00	µg/L	0.000
M5-PFPeA	3.932	268.0 -> 223.0	204063	20.00	µg/L	0.012
M5-PFHxA	4.965	318.0 -> 273.0	294792	20.00	µg/L	0.000
M4-PFHpA	5.738	367.0 -> 322.0	303496	20.00	µg/L	0.012
M8-PFOA	6.361	421.0 -> 376.0	404302	20.00	µg/L	0.000
M9-PFNA	6.931	472.0 -> 427.0	422966	20.00	µg/L	0.013
M6-PFDA	7.449	519.0 -> 474.0	461081	20.00	µg/L	0.013
M7-PFUnDA	8.320	570.0 -> 525.0	603987	20.00	µg/L	0.000
M2-PFDoDA	9.388	615.0 -> 570.0	463928	20.00	µg/L	0.000
M2-PFTeDA	10.899	715.0 -> 670.0	363641	20.00	µg/L	0.000
M8-FOSA	6.605	506.0 -> 78.0	100361	20.00	µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	25269	20.00	µg/L	0.000
M3-PFHxS	5.748	402.0 -> 99.0	34525	20.00	µg/L	0.015
M8-PFOS	6.891	507.0 -> 99.0	46447	20.00	µg/L	0.012
M2-4:2FTS	4.886	329.0 -> 309.0	93096	20.00	µg/L	0.000
M2-6:2FTS	6.372	429.0 -> 409.0	154588	20.00	µg/L	0.012
M2-8:2FTS	7.512	529.0 -> 509.0	141813	20.00	µg/L	0.000
M3-MeFOSAA	7.047	573.0 -> 419.0	39369	20.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	62544	20.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	30978	20.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	39234	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	93096	19.34	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.7%		
13C2-6:2FTS	6.372	429.0 -> 409.0	154588	20.16	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.8%		
13C2-8:2FTS	7.512	529.0 -> 509.0	141813	19.64	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%		
13C2-PFDoDA	9.388	615.0 -> 570.0	463928	20.63	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.2%		
13C2-PFTeDA	10.899	715.0 -> 670.0	363641	18.57	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.9%		
13C3-PFBS	4.124	302.0 -> 99.0	25269	19.44	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.2%		
13C3-PFHxS	5.748	402.0 -> 99.0	34525	19.29	µg/L	0.015
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.5%		
13C4-PFBA	2.400	217.0 -> 172.0	102451	19.69	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.5%		
13C4-PFHpA	5.738	367.0 -> 322.0	303496	19.74	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%		
13C5-PFHxA	4.965	318.0 -> 273.0	294792	19.60	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%		
13C5-PFPeA	3.932	268.0 -> 223.0	204063	19.45	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.3%		
13C6-PFDA	7.449	519.0 -> 474.0	461081	19.83	µg/L	0.013

Perfluorinated Compounds by LC/MS/MS

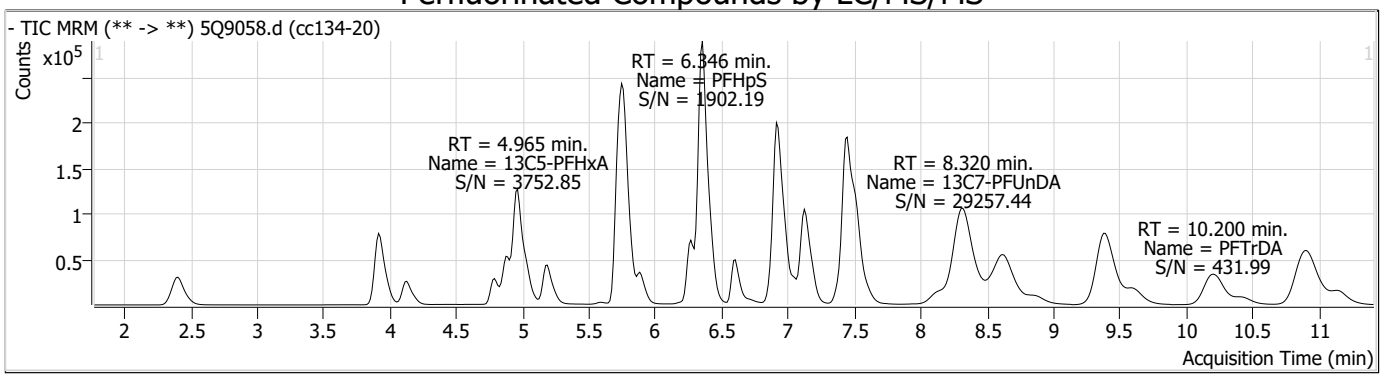
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%		
13C7-PFUnDA	8.320	570.0 -> 525.0	603987	20.64 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.2%		
13C8-FOSA	6.605	506.0 -> 78.0	100361	20.78 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.9%		
13C8-PFOA	6.361	421.0 -> 376.0	404302	20.06 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.3%		
13C8-PFOS	6.891	507.0 -> 99.0	46447	19.48 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.4%		
13C9-PFNA	6.931	472.0 -> 427.0	422966	20.11 µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.5%		
d3-MeFOSAA	7.047	573.0 -> 419.0	39369	22.16 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.8%		
13C3-HFPO-DA	5.194	287.0 -> 169.0	62544	18.91 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.5%		
d3-MeFOSA	6.964	515.0 -> 169.0	30978	20.45 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.2%		
d5-EtFOSAA	7.157	589.0 -> 419.0	39234	21.27 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.4%		
Target Compounds						QValue
4:2FTS	4.888	327.0 -> 307.0	104107	20.43 µg/L		100
		327.0 -> 81.0	61738			
6:2FTS	6.360	427.0 -> 407.0	159908	20.15 µg/L		99
		427.0 -> 81.0	69233			
8:2FTS	7.512	527.0 -> 507.0	146690	20.25 µg/L		97
		527.0 -> 81.0	74041			
EtFOSAA	7.158	584.0 -> 419.0	27291	20.83 µg/L		94
		584.0 -> 483.0	16211			
FOSA	6.606	498.0 -> 78.0	97830	18.97 µg/L		100
		498.0 -> 478.0	3279			
MeFOSAA	7.047	570.0 -> 419.0	31247	19.56 µg/L		97
		570.0 -> 512.0	12323			
PFBA	2.406	213.0 -> 169.0	107134	19.20 µg/L		100
PFBS	4.129	299.0 -> 80.0	78833	19.18 µg/L		100
		299.0 -> 99.0	33841			
PFDA	7.450	513.0 -> 469.0	474049	19.31 µg/L		100
		513.0 -> 219.0	85003			
PFDoDA	9.392	613.0 -> 569.0	388965	18.37 µg/L		99
		613.0 -> 319.0	67184			
PFDS	8.131	599.0 -> 80.0	98497	18.17 µg/L		100
		599.0 -> 99.0	59427			
PFHpA	5.739	363.0 -> 319.0	368018	19.39 µg/L		100
		363.0 -> 169.0	81551			
PFHpS	6.346	449.0 -> 80.0	68659	19.34 µg/L		99
		449.0 -> 99.0	37318			
PFHxA	4.966	313.0 -> 269.0	289167	19.31 µg/L		100
		313.0 -> 119.0	13089			
PFHxS	5.749	399.0 -> 80.0	68161	19.45 µg/L	m	100
		399.0 -> 99.0	38008			
PFNA	6.931	463.0 -> 419.0	426191	19.43 µg/L		100
		463.0 -> 219.0	91851			
PFNS	7.384	549.0 -> 80.0	63354	19.89 µg/L		98
		549.0 -> 99.0	36758			
PFOA	6.362	413.0 -> 369.0	450683	19.48 µg/L		99
		413.0 -> 169.0	121838			
PFOS	6.892	499.0 -> 80.0	82455	19.24 µg/L	m	99

Perfluorinated Compounds by LC/MS/MS

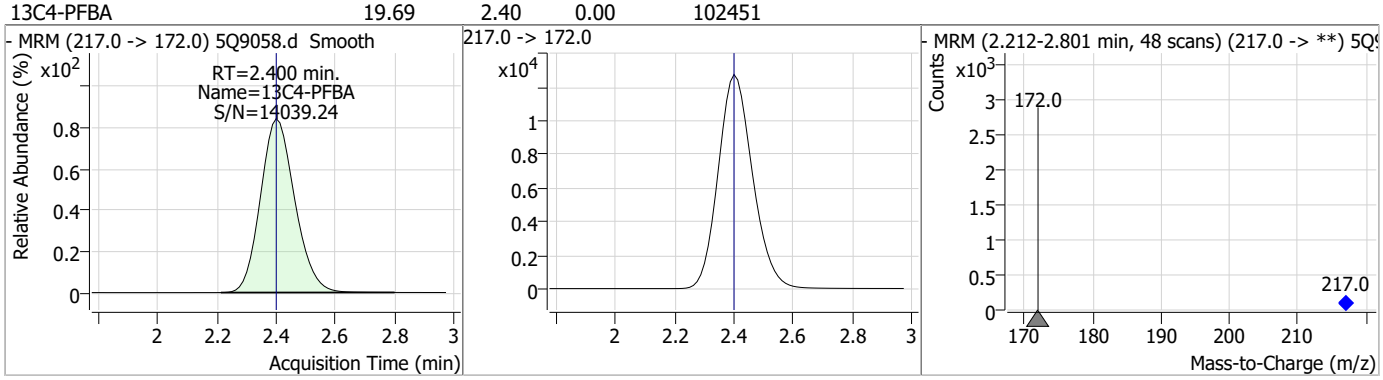
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	38621			
PFPeA	3.922	263.0 -> 219.0	231912	19.34	µg/L	100
PFPeS	5.047	349.0 -> 80.0	51013	18.96	µg/L	99
		349.0 -> 99.0	25587			
PFTeDA	10.903	713.0 -> 669.0	409404	21.73	µg/L	98
		713.0 -> 219.0	37892			
PFTrDA	10.200	663.0 -> 619.0	379611	18.78	µg/L	100
		663.0 -> 369.0	42051			
PFUnDA	8.321	563.0 -> 519.0	587934	18.93	µg/L	100
		563.0 -> 269.0	99570			
11Cl-PF3OUdS	8.628	631.0 -> 451.0	408991	18.84	µg/L	100
		633.0 -> 453.0	115722			
9Cl-PF3ONS	7.123	531.0 -> 351.0	364651	17.90	µg/L	98
		533.0 -> 353.0	111015			
ADONA	5.777	377.0 -> 251.0	481566	20.68	µg/L	100
		377.0 -> 85.0	181352			
HFPO-DA	5.190	329.0 -> 169.0	97433	19.50	µg/L	100
		285.0 -> 169.0	57570			
MeFOSA	6.966	512.0 -> 169.0	35239	19.22	µg/L	96
		512.0 -> 219.0	26358			
4-PFECHS	6.268	461.0 -> 381.0	228650	17.75	µg/L	99
		461.0 -> 99.0	123718			
FBSA	4.793	298.0 -> 78.0	124587	20.37	µg/L	99
		298.0 -> 64.0	11281			
FHxSA	5.900	398.0 -> 78.0	117118	19.47	µg/L	100
		398.0 -> 64.0	11233			

 # = Qualifier out of range, m = manually integrated, + = Area summed

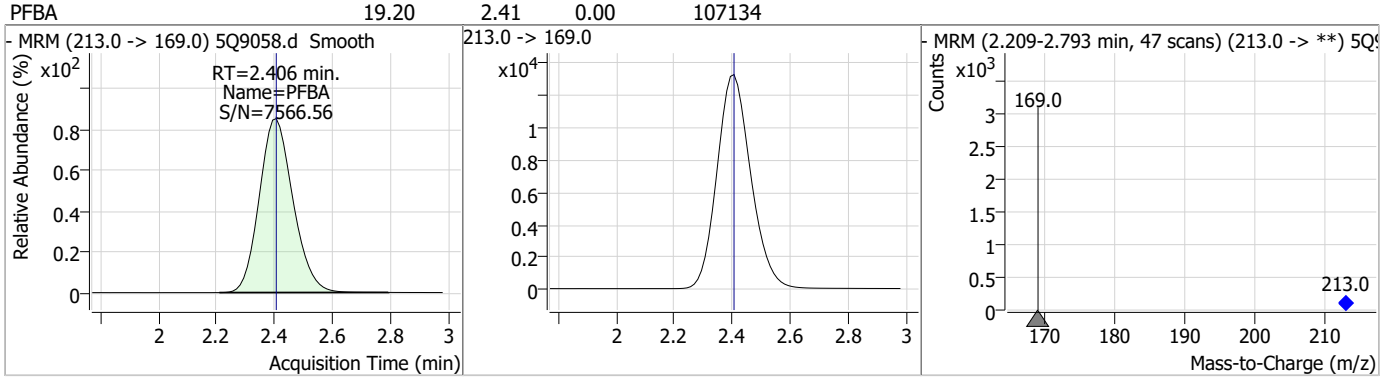
Perfluorinated Compounds by LC/MS/MS



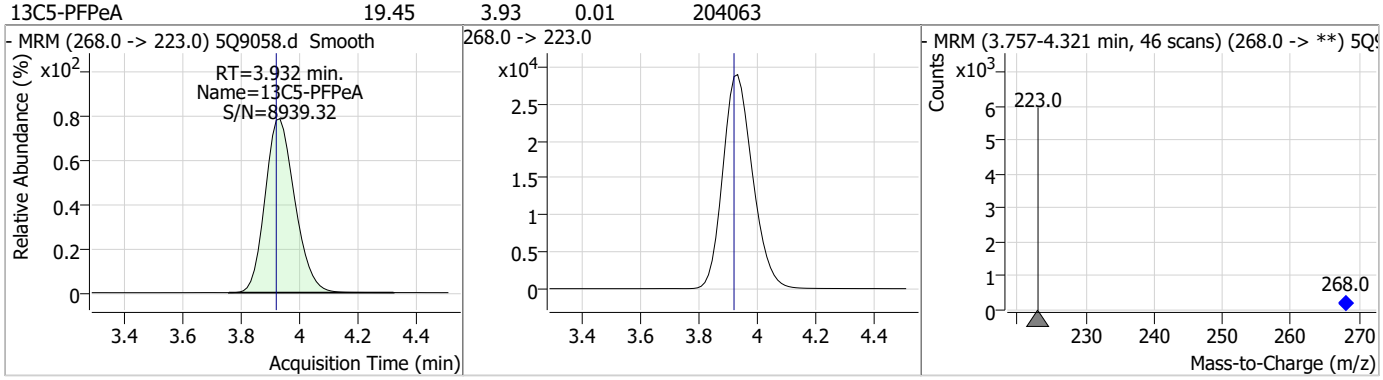
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.69	2.40	0.00	102451				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.20	2.41	0.00	107134				

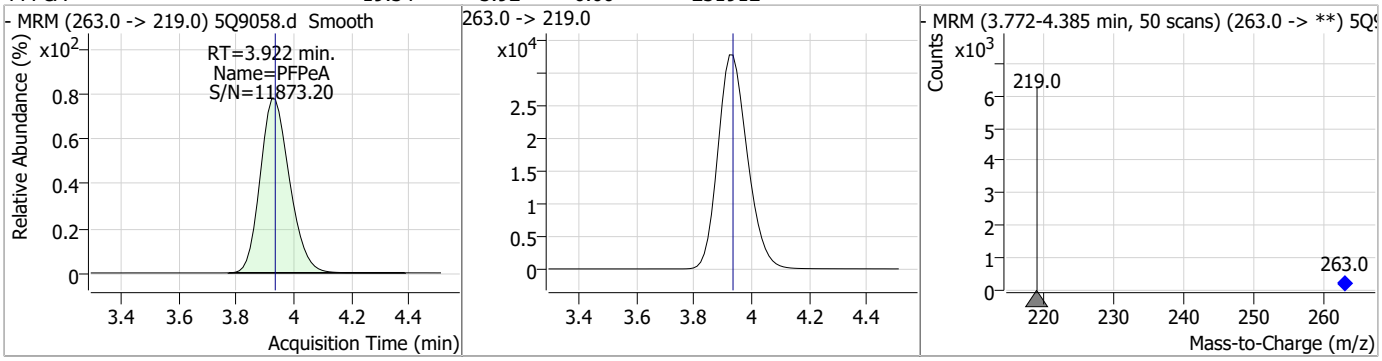


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.45	3.93	0.01	204063				

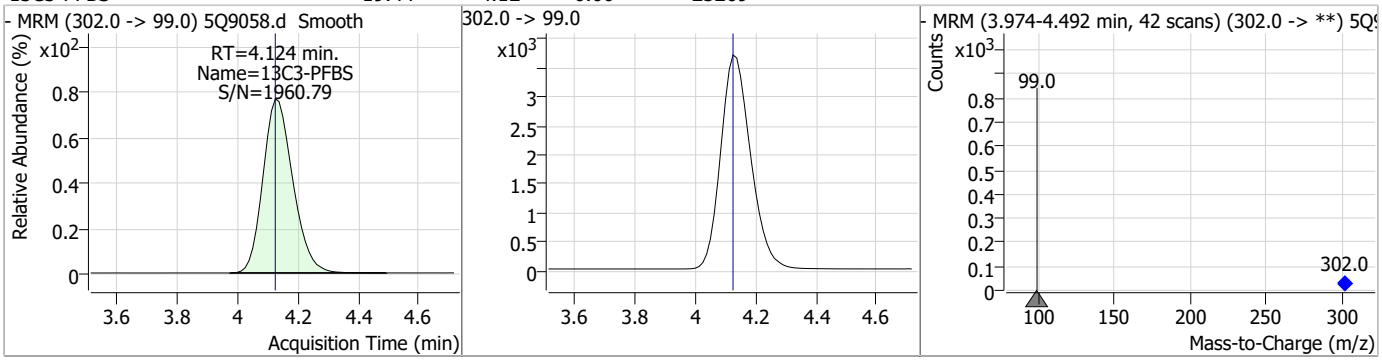


Perfluorinated Compounds by LC/MS/MS

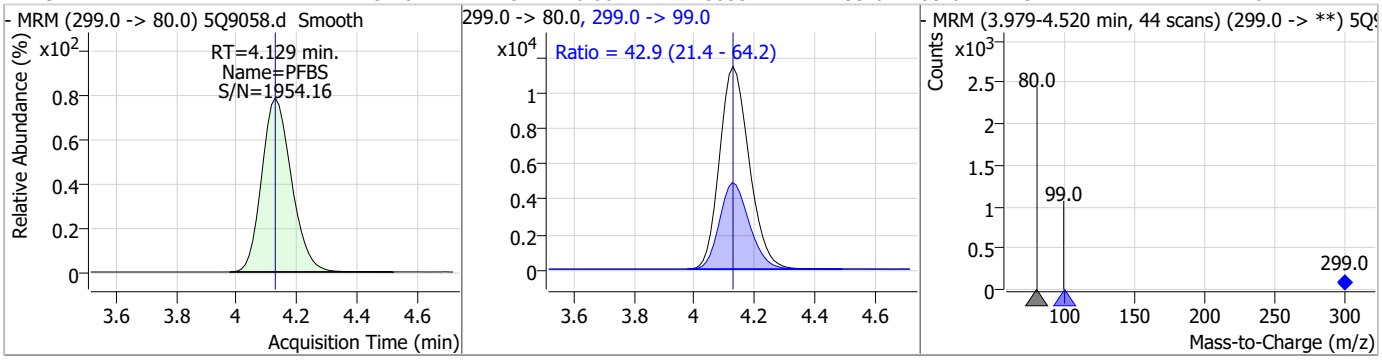
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.34	3.92	0.00	231912				



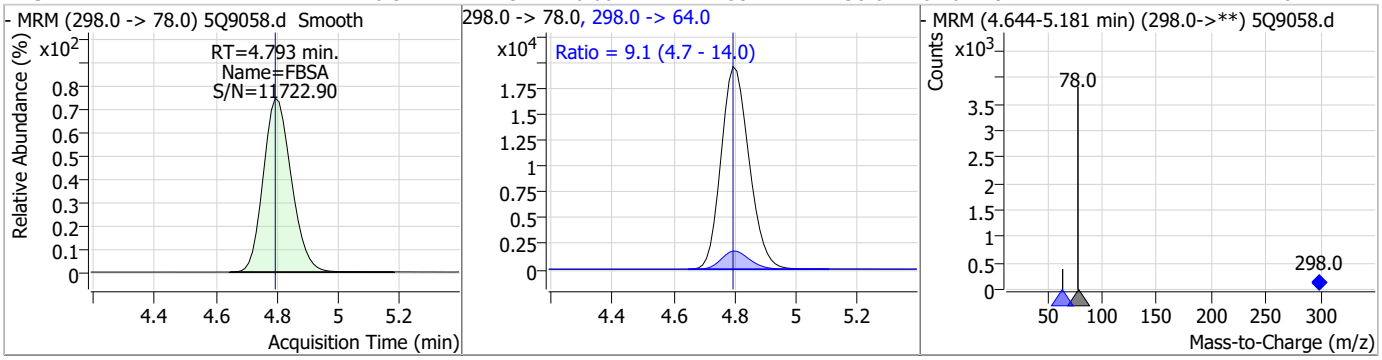
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.44	4.12	0.00	25269				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.18	4.13	0.00	78833	299.0 -> 99.0	42.9	21.4	64.2

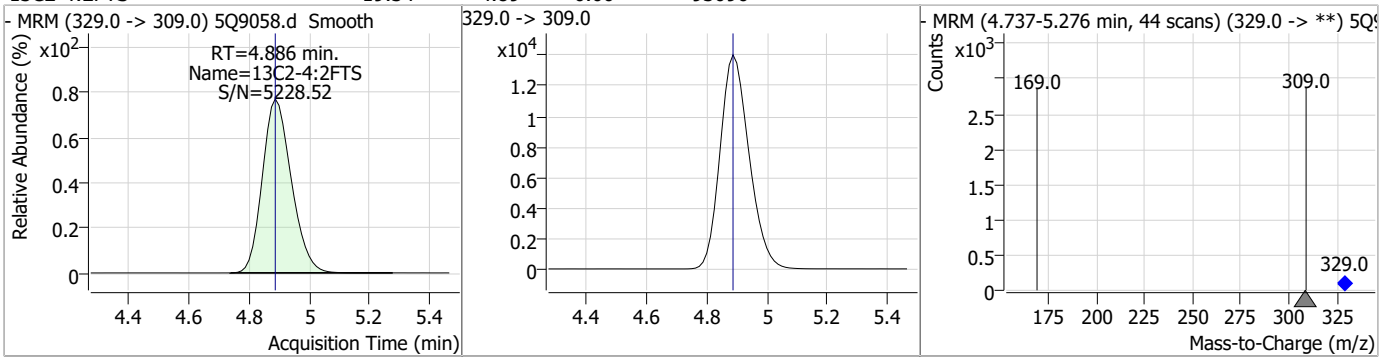


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	20.37	4.79	0.00	124587	298.0 -> 64.0	9.1	4.7	14.0

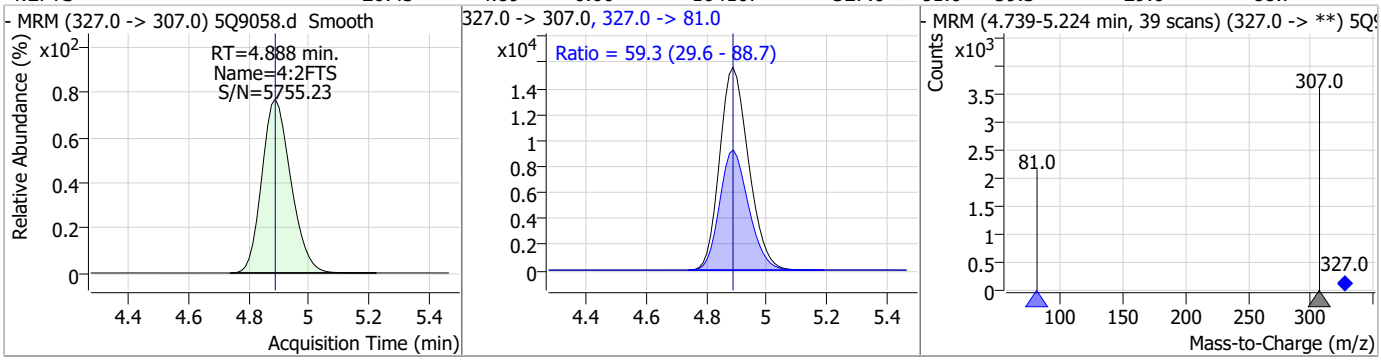


Perfluorinated Compounds by LC/MS/MS

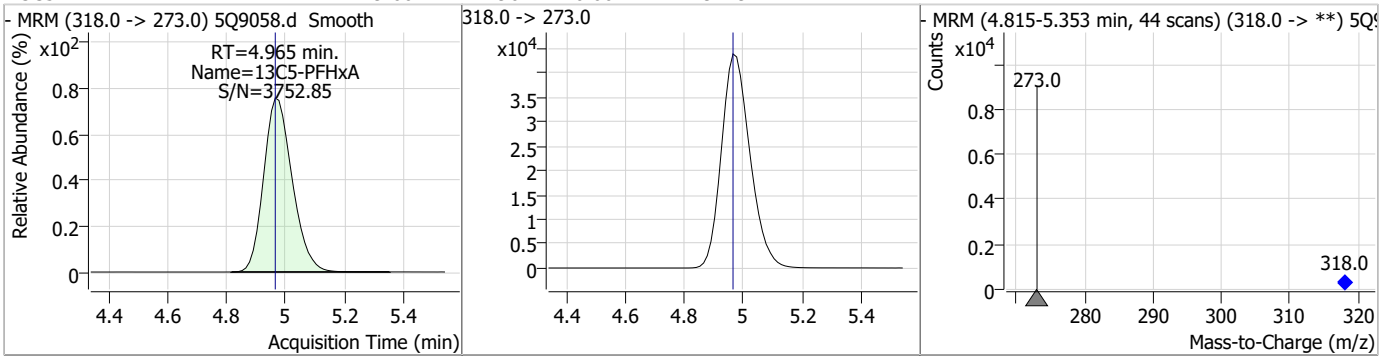
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.34	4.89	0.00	93096				



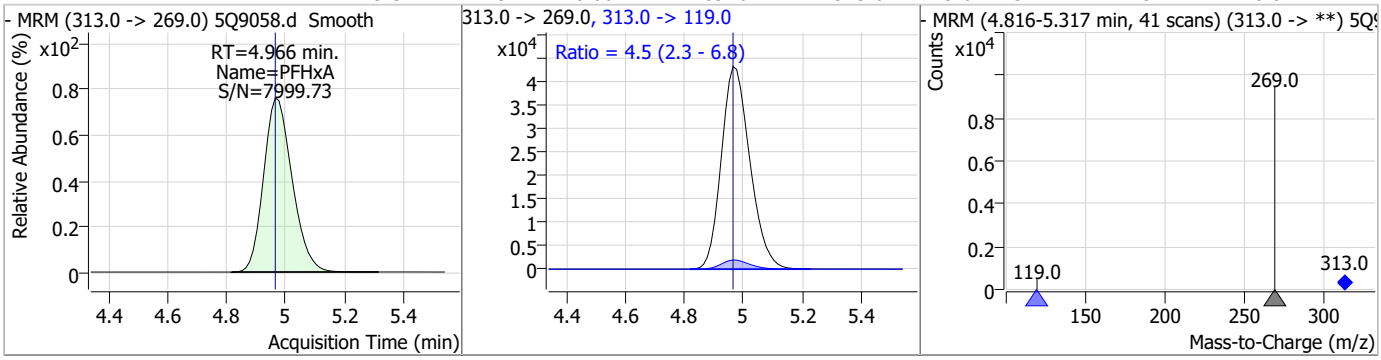
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.43	4.89	0.00	104107	327.0 -> 81.0	59.3	29.6	88.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.60	4.96	0.00	294792				

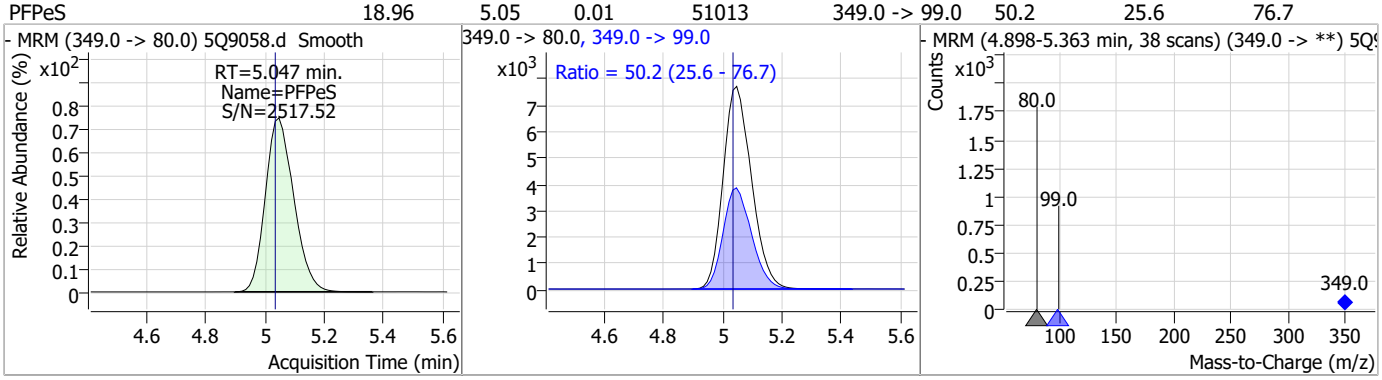


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.31	4.97	0.00	289167	313.0 -> 119.0	4.5	2.3	6.8

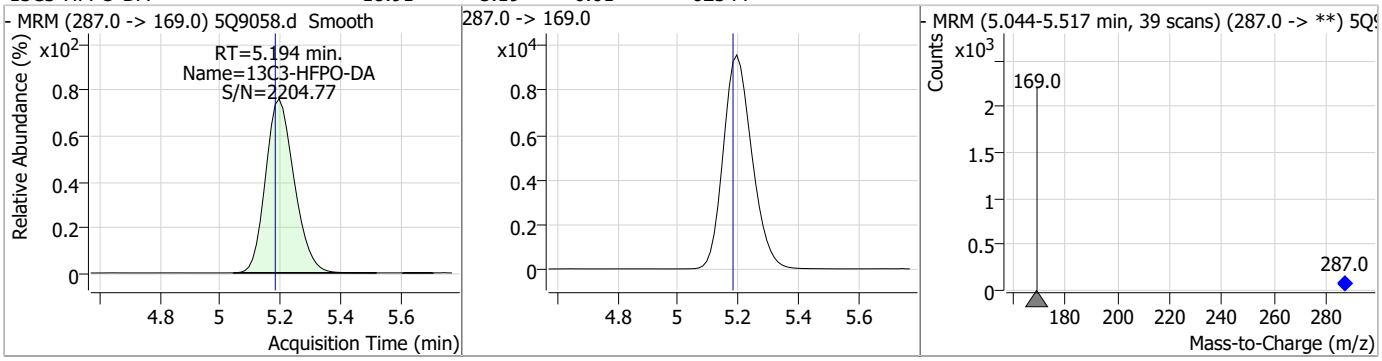


Perfluorinated Compounds by LC/MS/MS

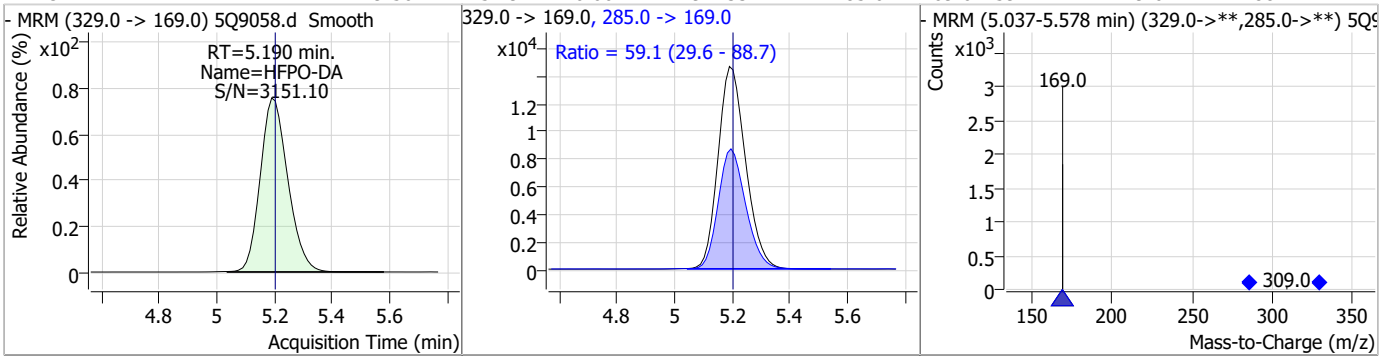
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	18.96	5.05	0.01	51013	349.0 -> 99.0	50.2	25.6	76.7



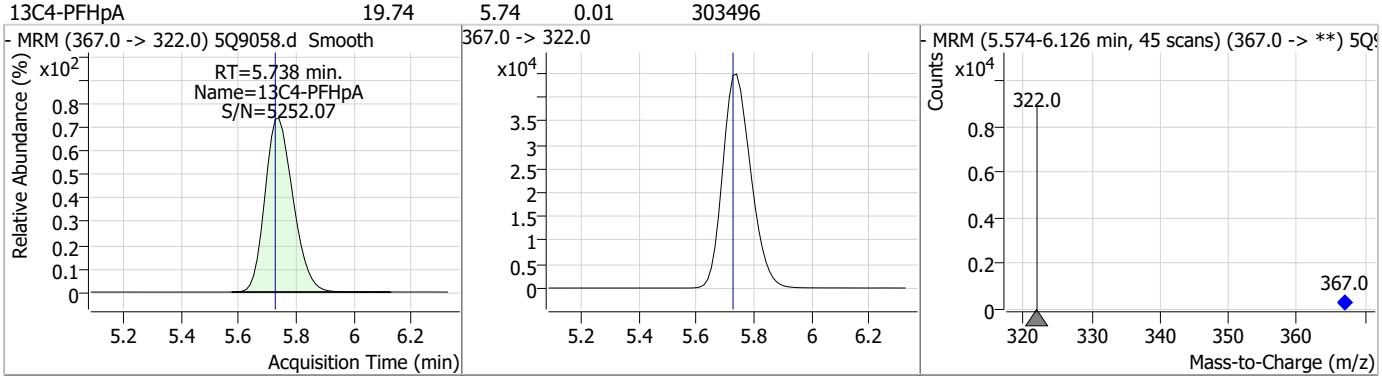
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	18.91	5.19	0.01	62544				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	19.50	5.19	0.00	97433	285.0 -> 169.0	59.1	29.6	88.7

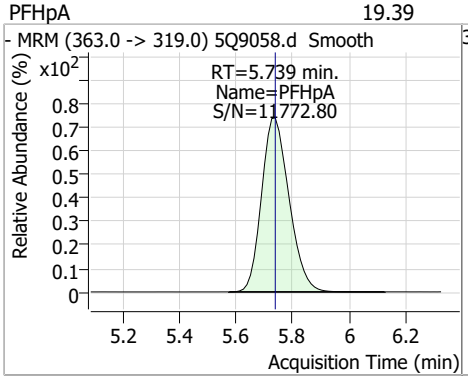


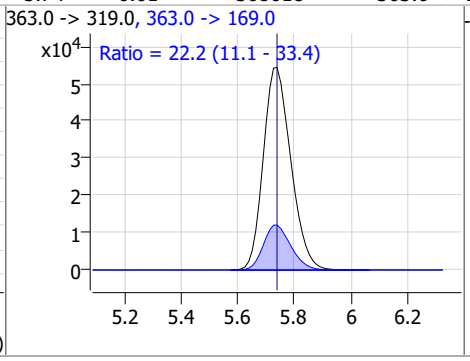
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.74	5.74	0.01	303496				

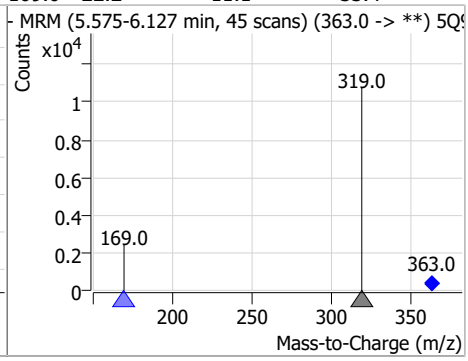


Perfluorinated Compounds by LC/MS/MS

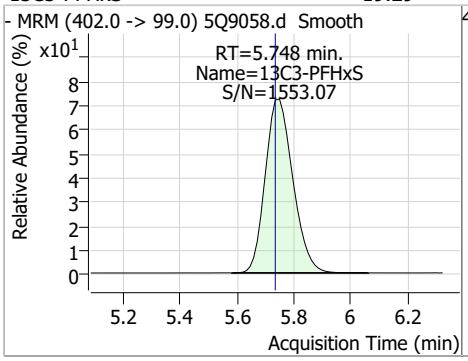
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	19.39	5.74	0.01	368018	363.0 -> 169.0	22.2	11.1	33.4

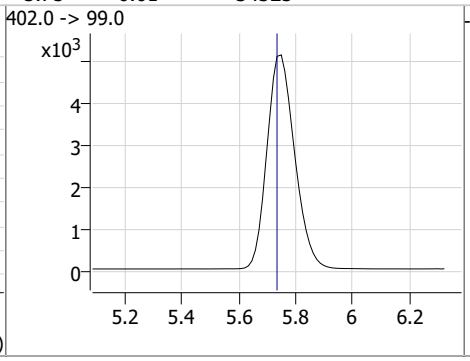


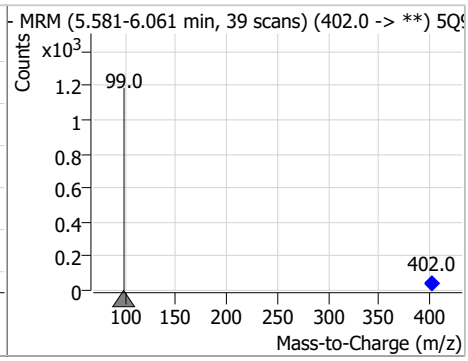




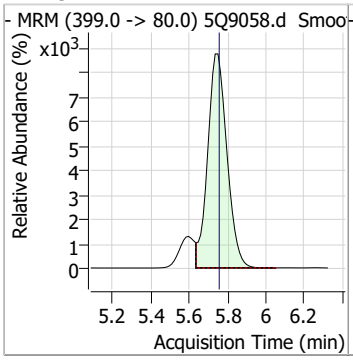
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.29	5.75	0.01	34525				

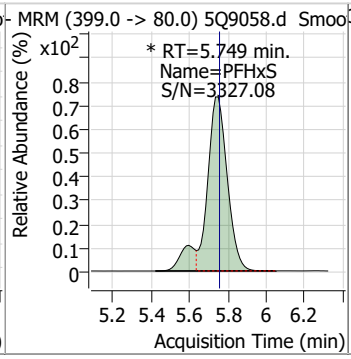


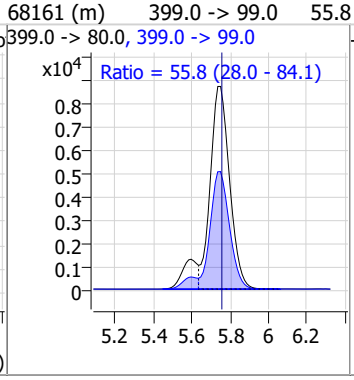


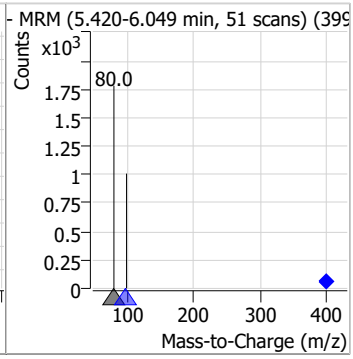


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	19.45	5.75	0.01	68161 (m)	399.0 -> 99.0	55.8	28.0	84.1

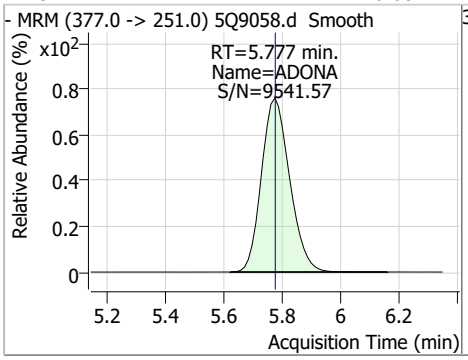


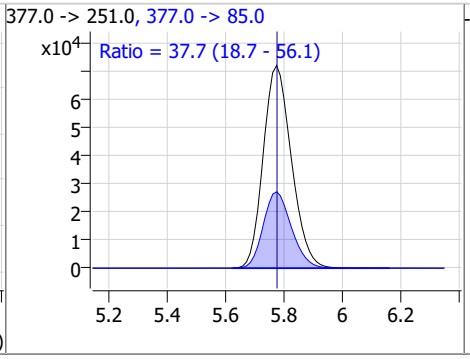


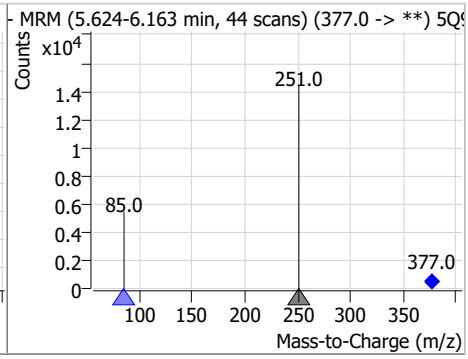




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	20.68	5.78	0.01	481566	377.0 -> 85.0	37.7	18.7	56.1

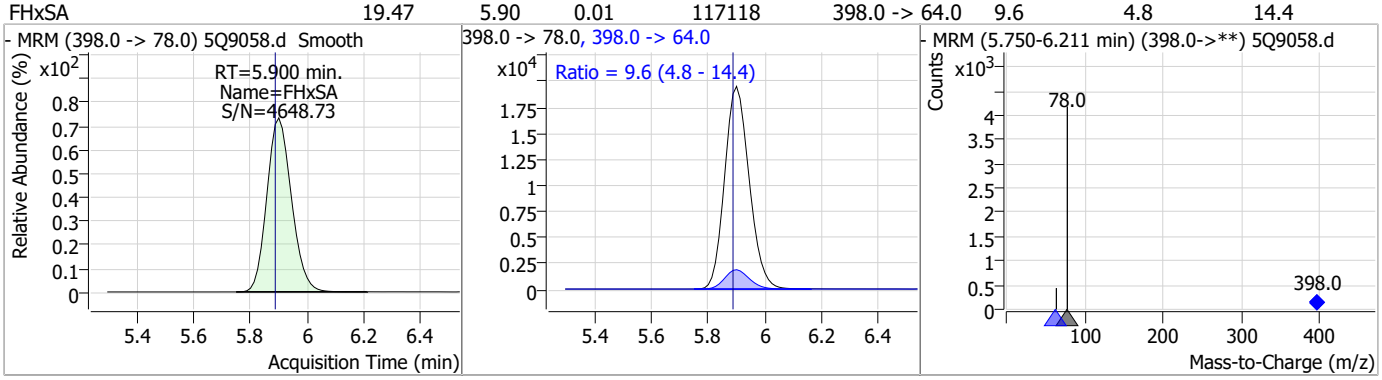




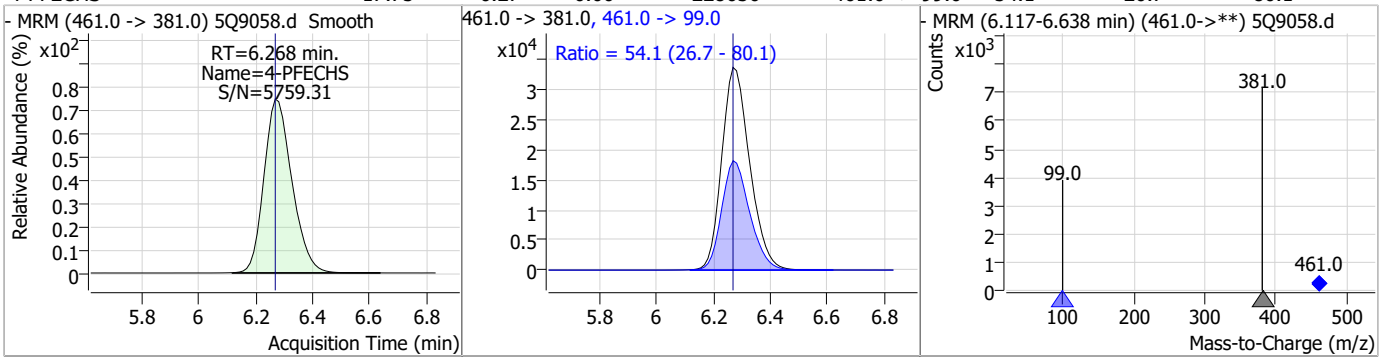


Perfluorinated Compounds by LC/MS/MS

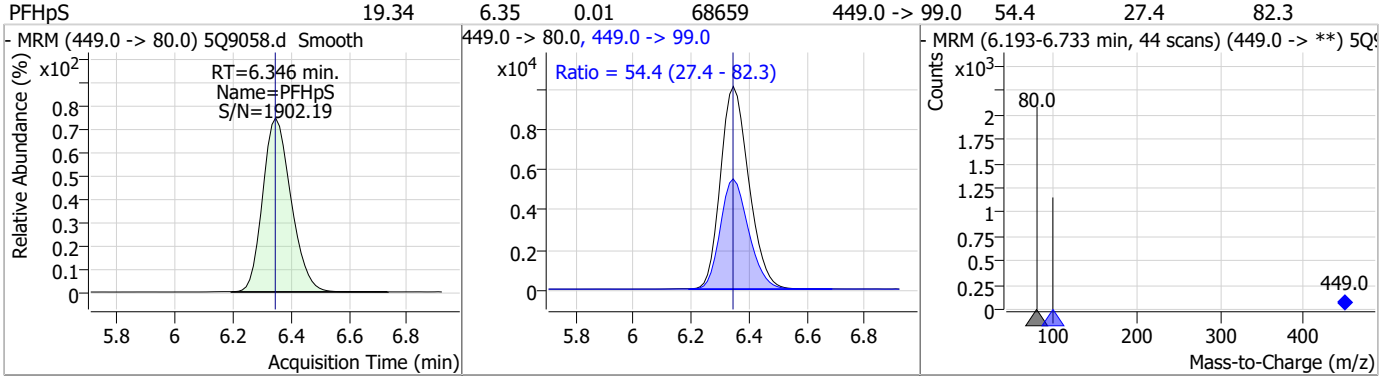
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	19.47	5.90	0.01	117118	398.0 -> 64.0	9.6	4.8	14.4



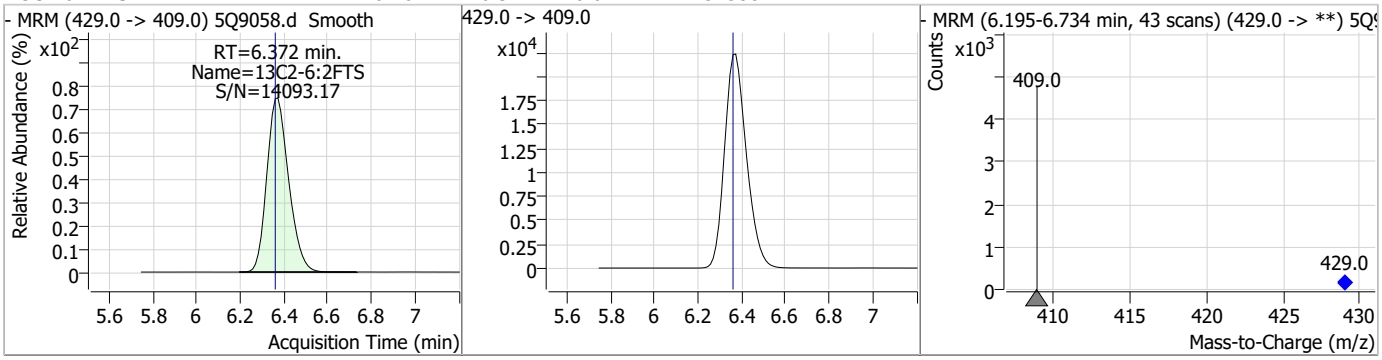
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	17.75	6.27	0.00	228650	461.0 -> 99.0	54.1	26.7	80.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	19.34	6.35	0.01	68659	449.0 -> 99.0	54.4	27.4	82.3

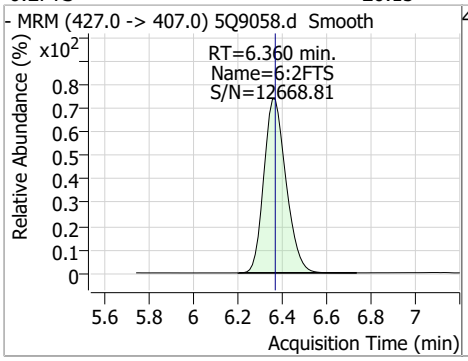


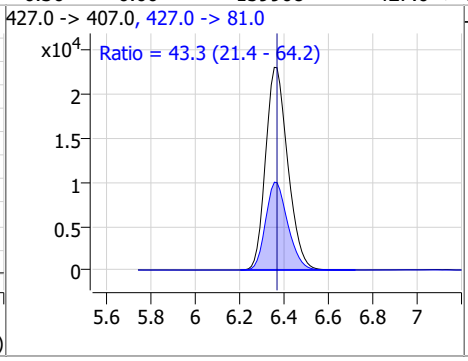
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.16	6.37	0.01	154588				

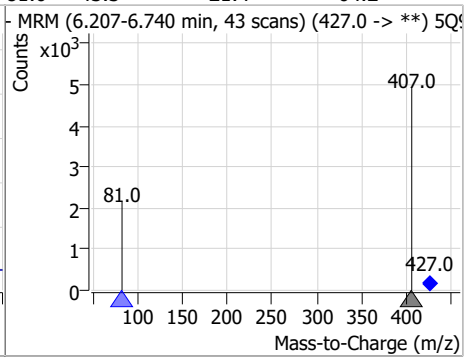


Perfluorinated Compounds by LC/MS/MS

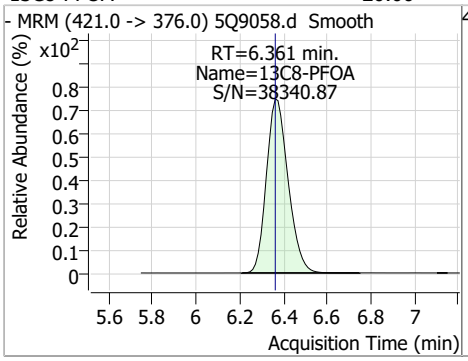
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	20.15	6.36	0.00	159908	427.0 -> 81.0	43.3	21.4	64.2

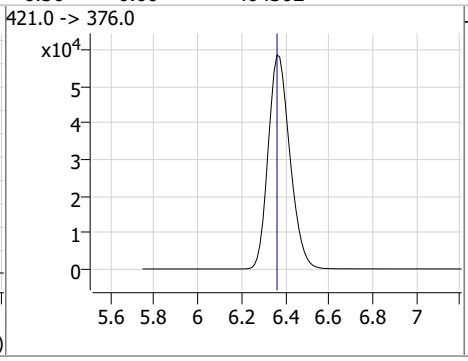


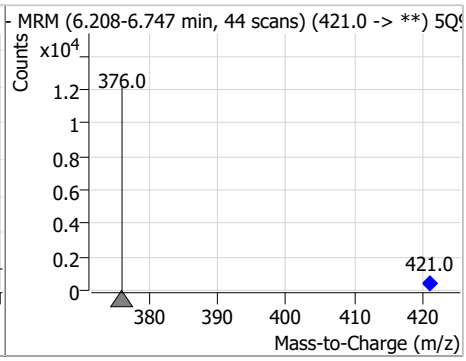




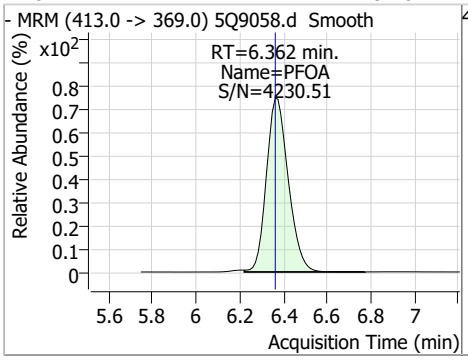
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.06	6.36	0.00	404302				

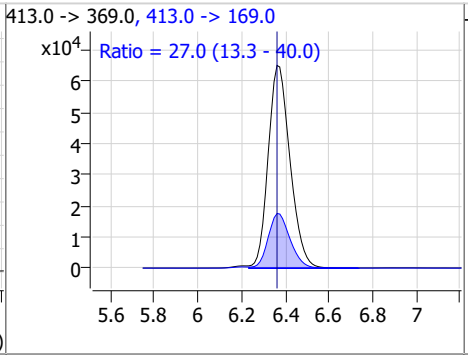


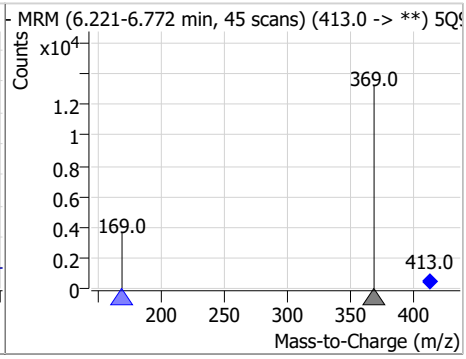




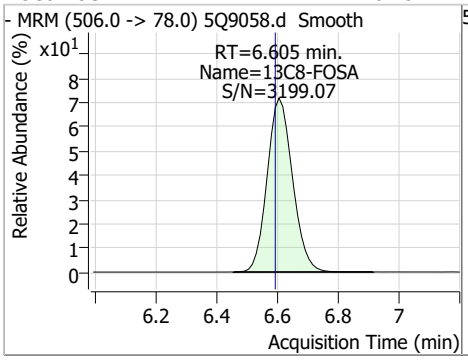
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.48	6.36	0.00	450683	413.0 -> 169.0	27.0	13.3	40.0

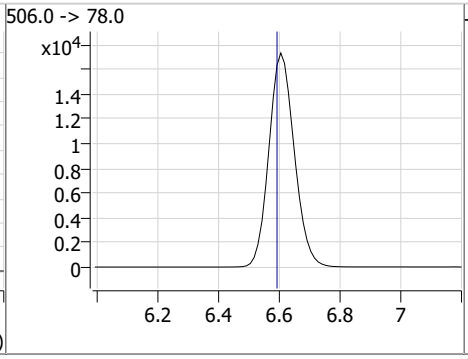


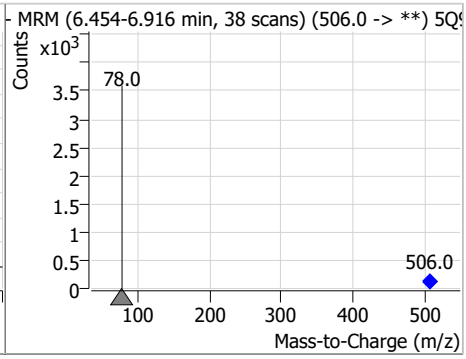




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	20.78	6.60	0.01	100361				

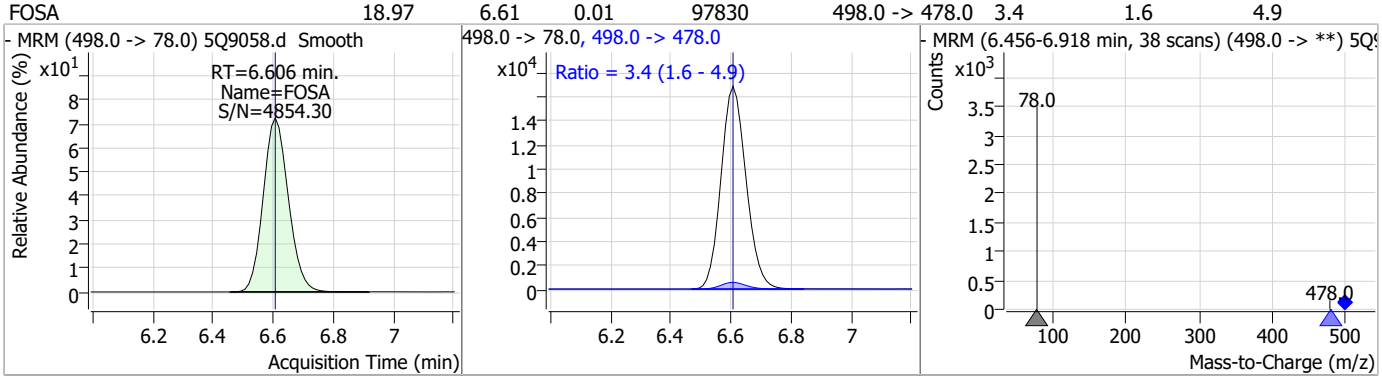




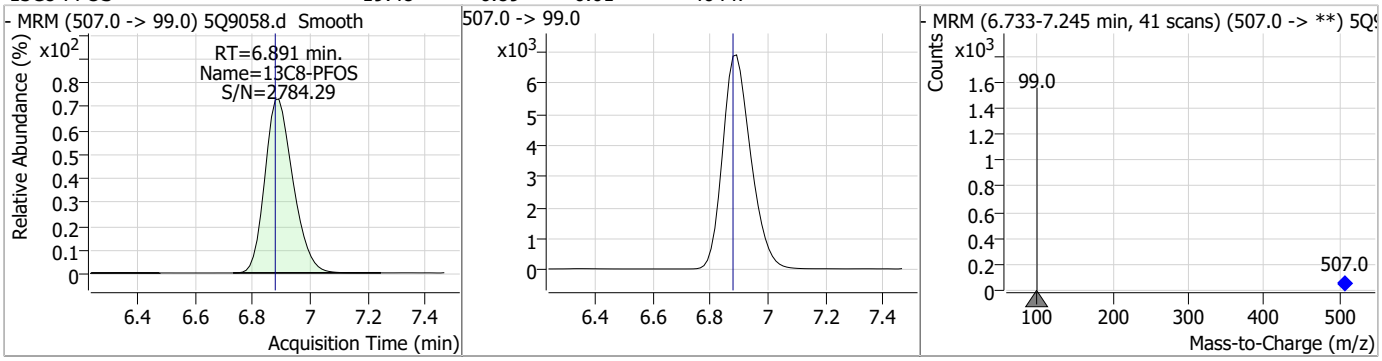


Perfluorinated Compounds by LC/MS/MS

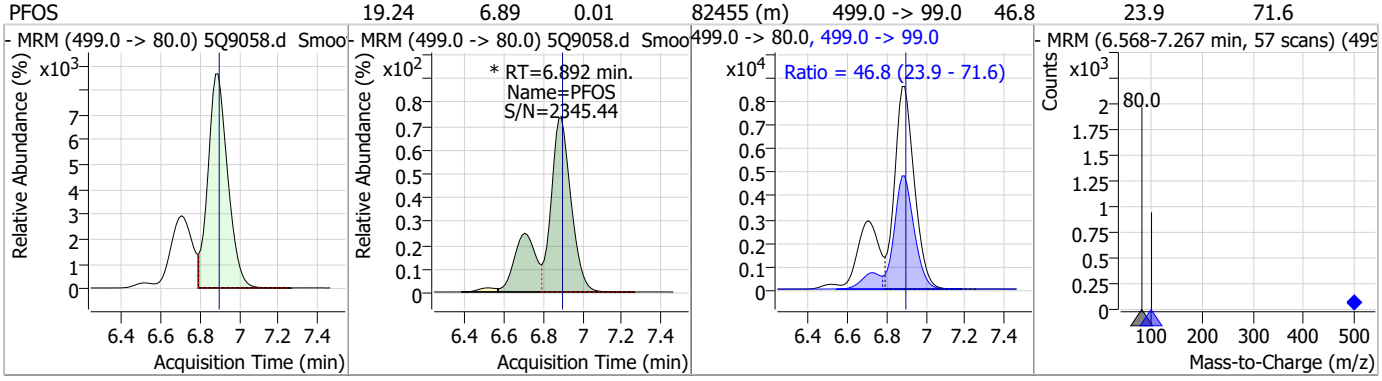
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	18.97	6.61	0.01	97830	498.0 -> 478.0	3.4	1.6	4.9



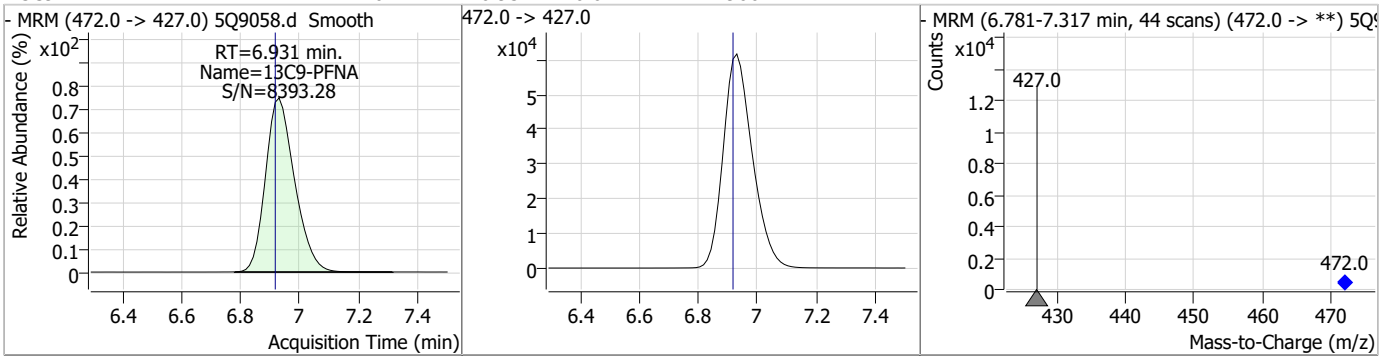
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.48	6.89	0.01	46447				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.24	6.89	0.01	82455 (m)	499.0 -> 99.0	46.8	23.9	71.6

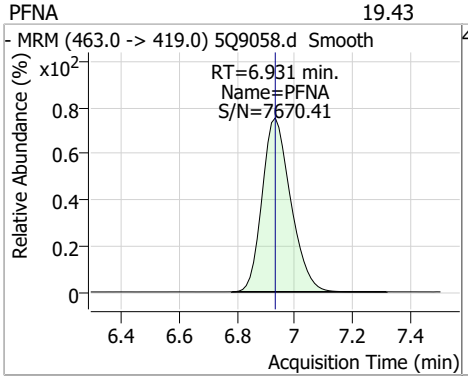


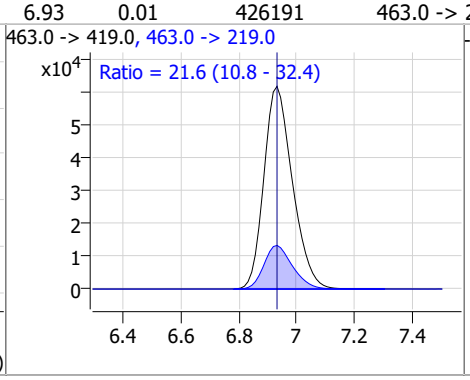
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.11	6.93	0.01	422966				

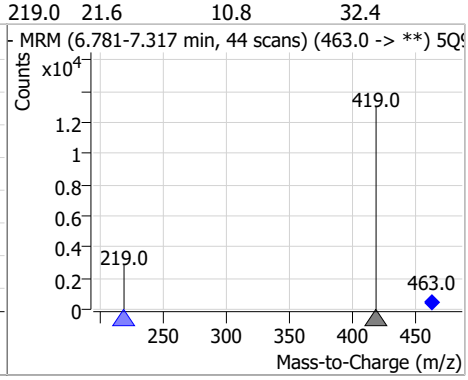


Perfluorinated Compounds by LC/MS/MS

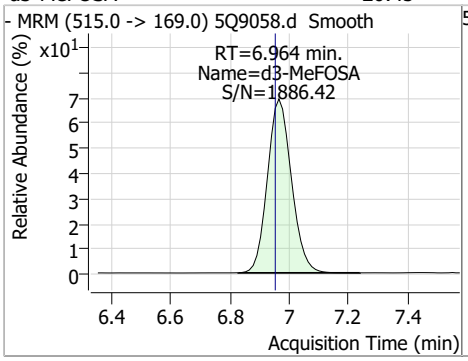
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.43	6.93	0.01	426191	463.0 -> 219.0	21.6	10.8	32.4

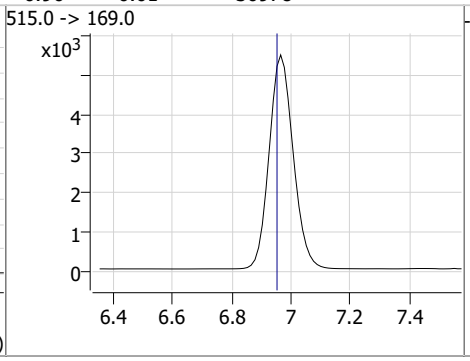


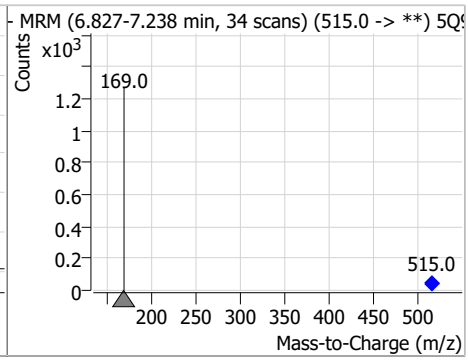




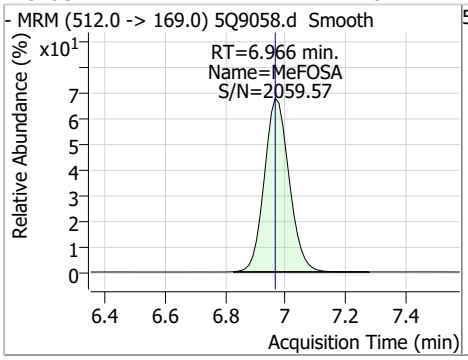
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	20.45	6.96	0.01	30978				

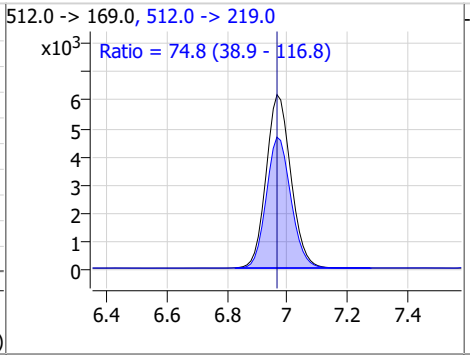


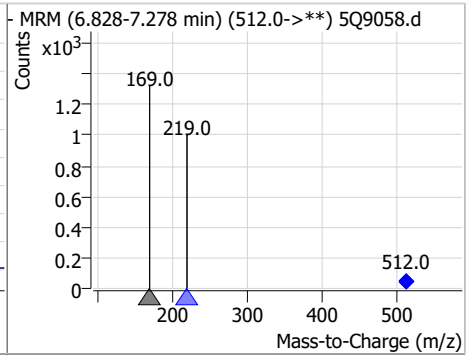




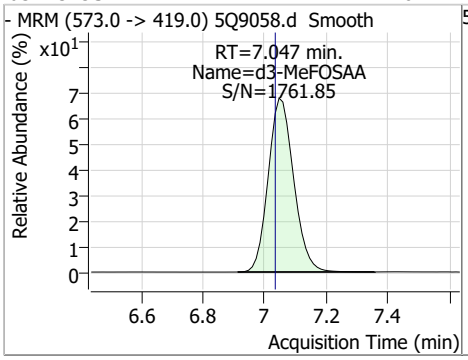
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	19.22	6.97	0.01	35239	512.0 -> 219.0	74.8	38.9	116.8

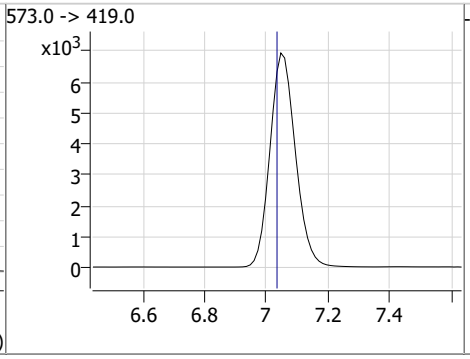


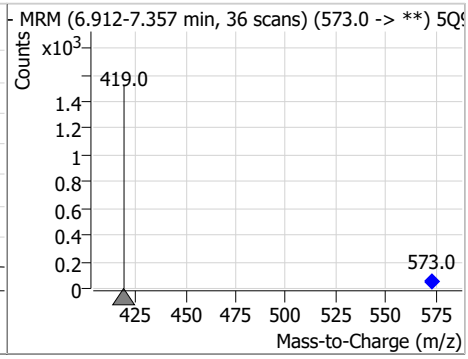




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	22.16	7.05	0.01	39369				

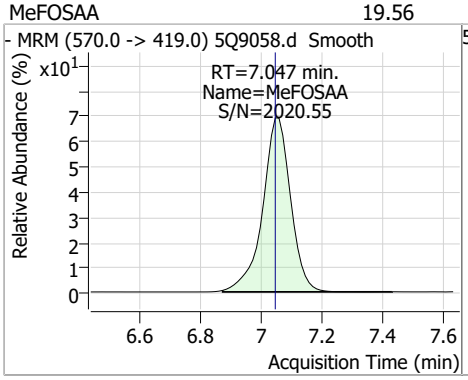


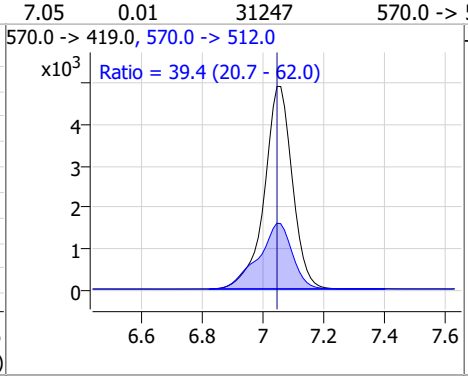


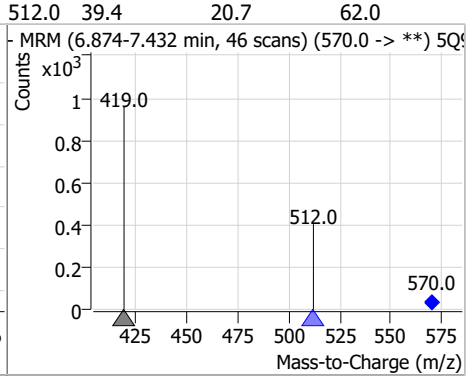


Perfluorinated Compounds by LC/MS/MS

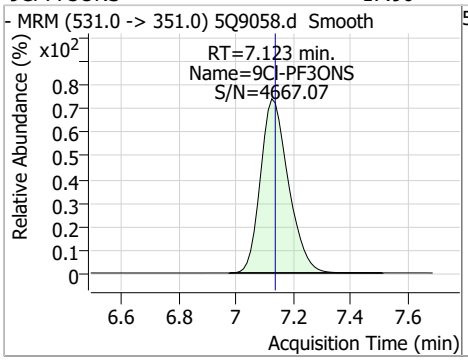
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	19.56	7.05	0.01	31247	570.0 -> 512.0	39.4	20.7	62.0

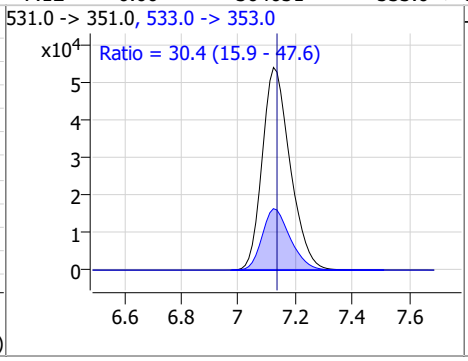


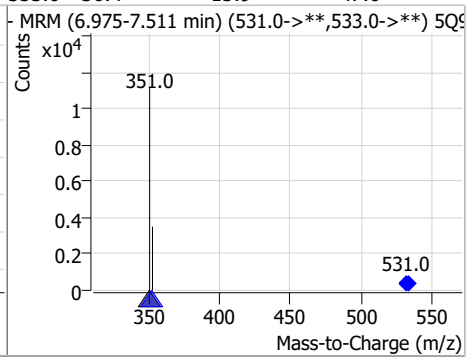




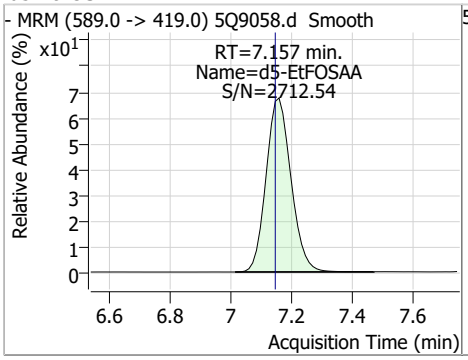
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	17.90	7.12	0.00	364651	533.0 -> 353.0	30.4	15.9	47.6

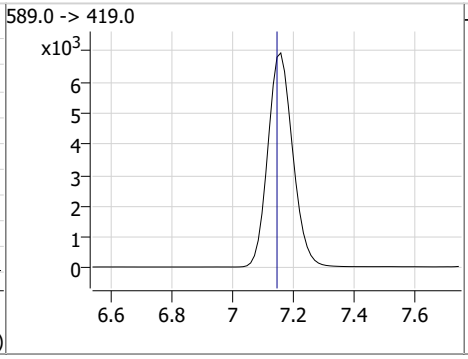


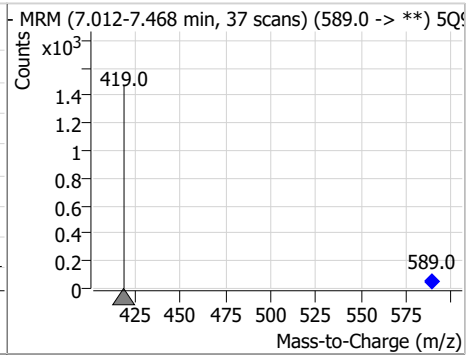




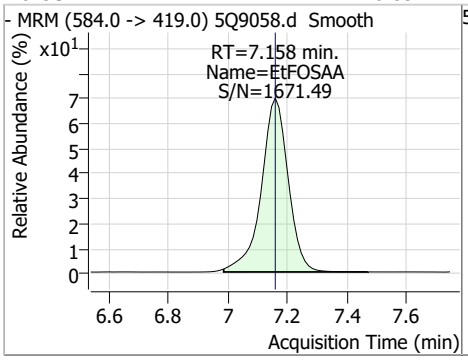
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	21.27	7.16	0.01	39234				

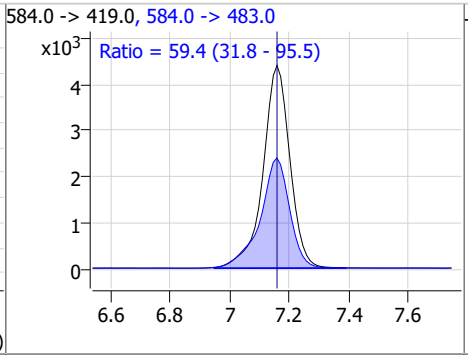


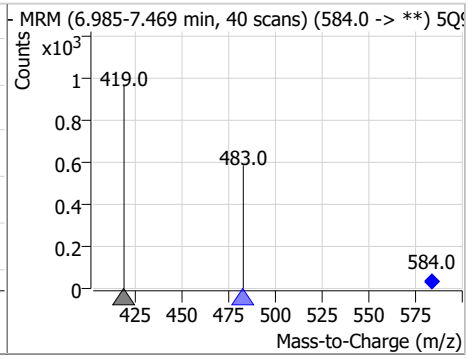




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	20.83	7.16	0.01	27291	584.0 -> 483.0	59.4	31.8	95.5

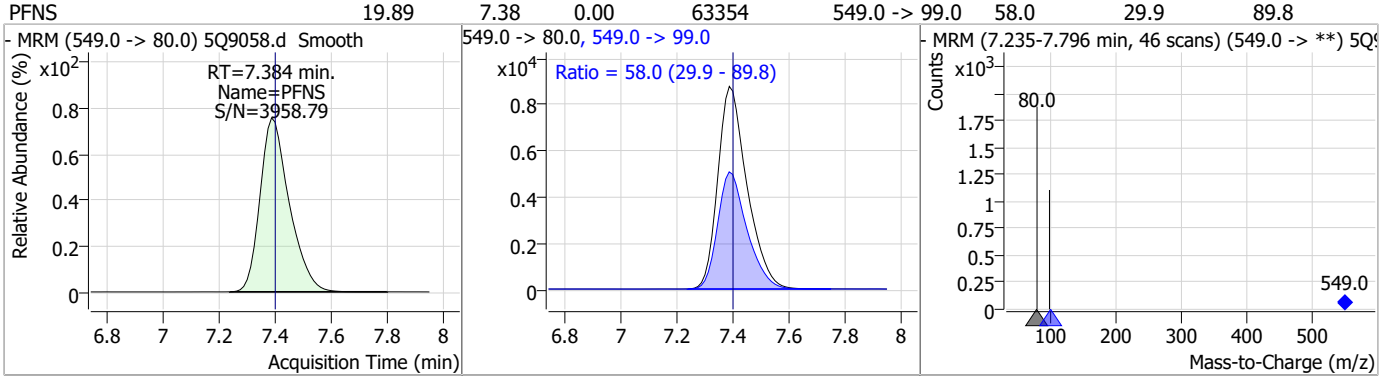




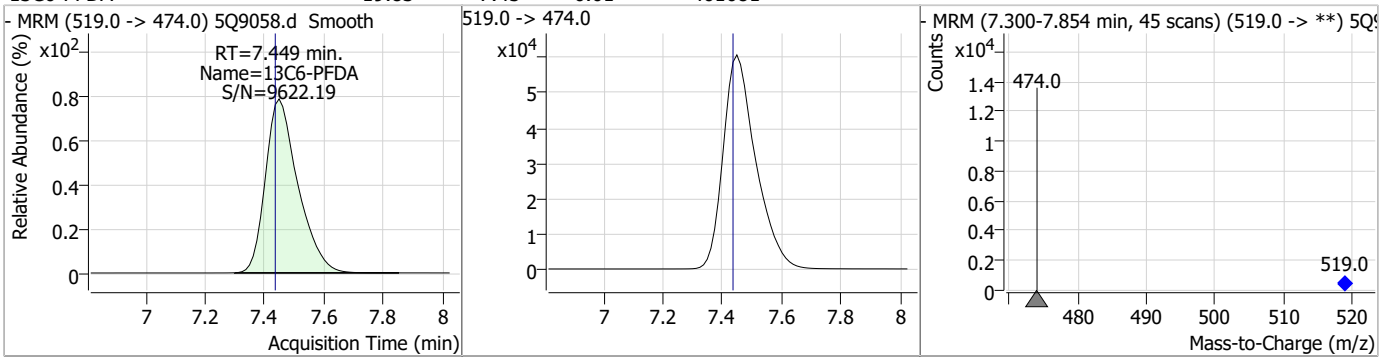


Perfluorinated Compounds by LC/MS/MS

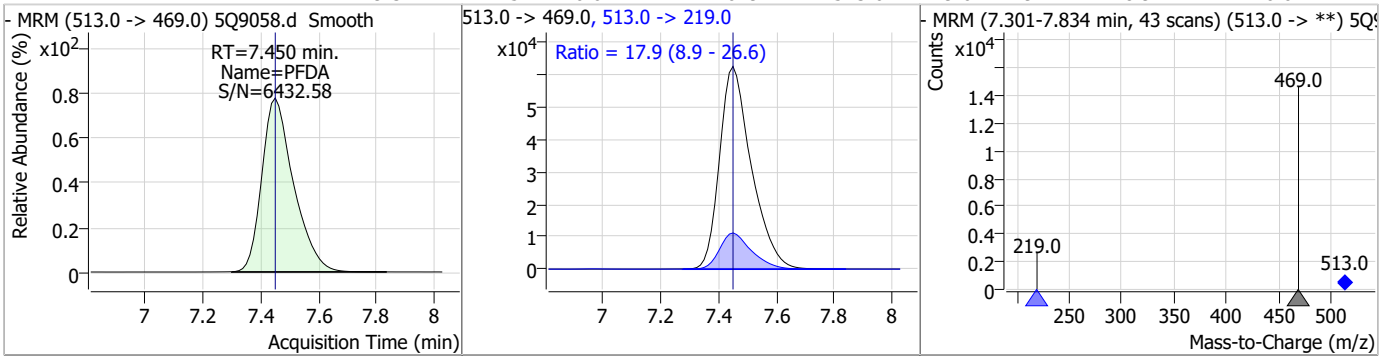
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	19.89	7.38	0.00	63354	549.0 -> 99.0	58.0	29.9	89.8



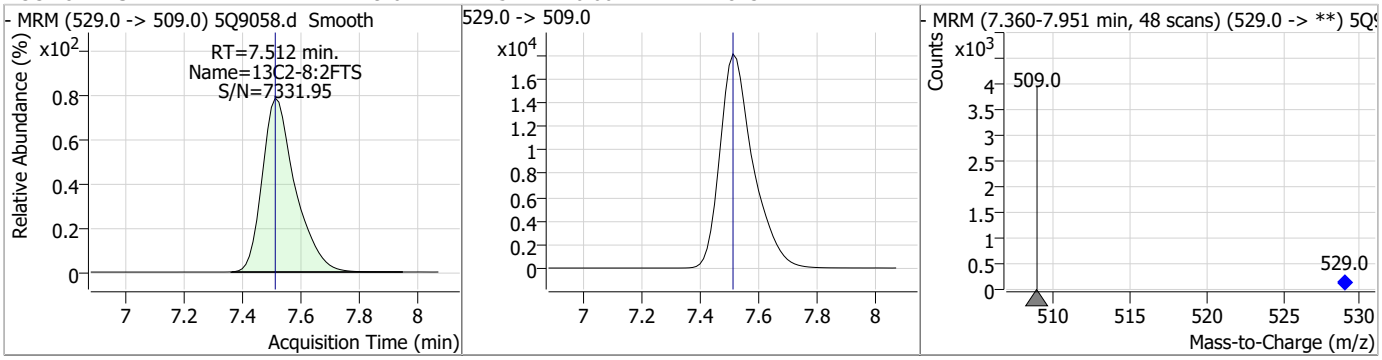
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.83	7.45	0.01	461081				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.31	7.45	0.01	474049	513.0 -> 219.0	17.9	8.9	26.6

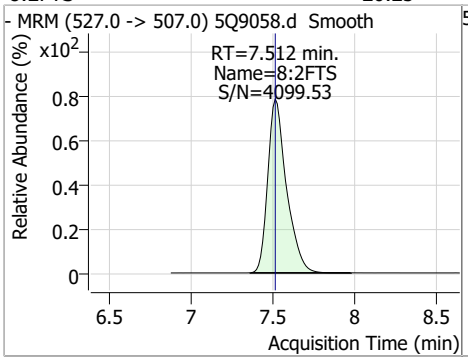


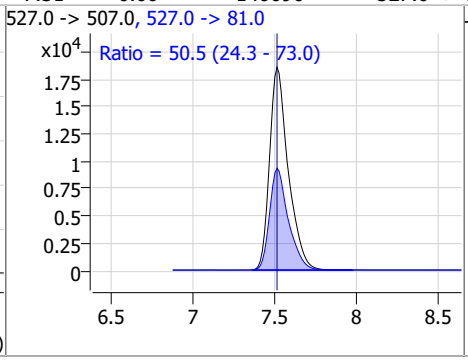
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.64	7.51	0.00	141813				

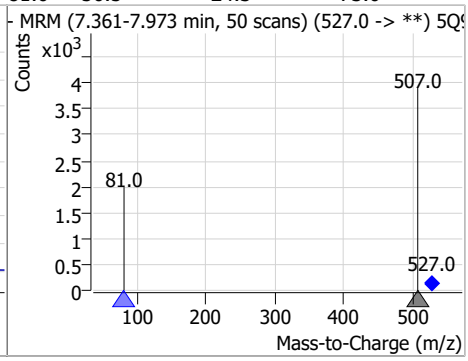


Perfluorinated Compounds by LC/MS/MS

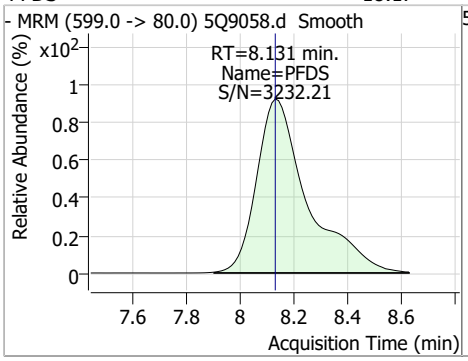
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.25	7.51	0.00	146690	527.0 -> 81.0	50.5	24.3	73.0

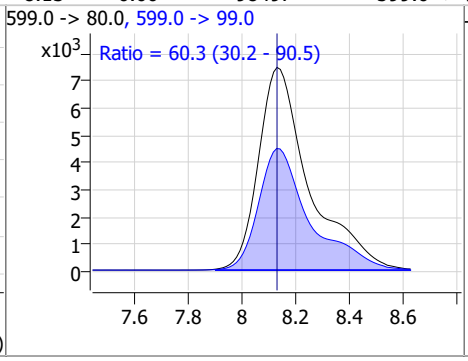


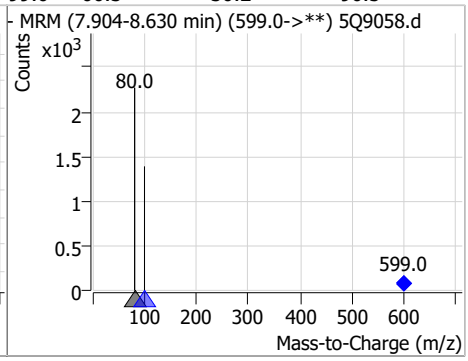




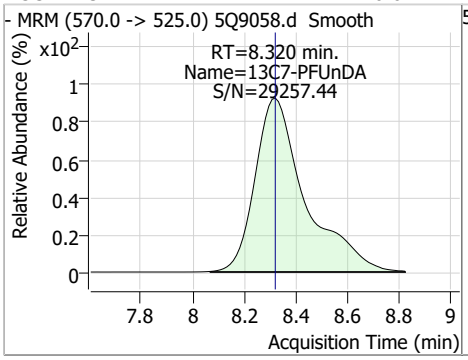
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	18.17	8.13	0.00	98497	599.0 -> 99.0	60.3	30.2	90.5

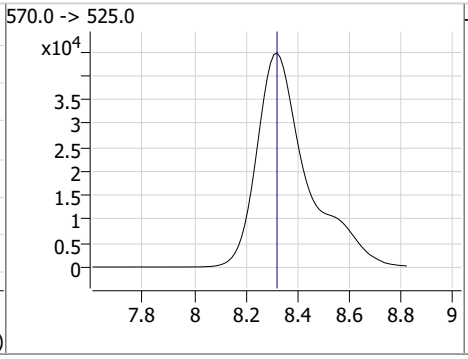


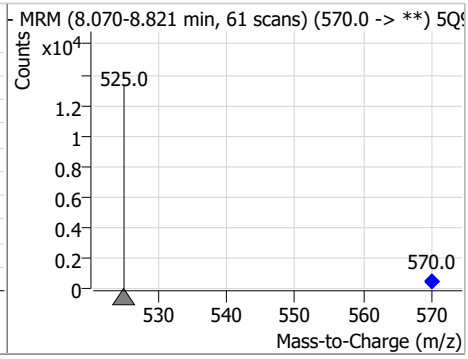




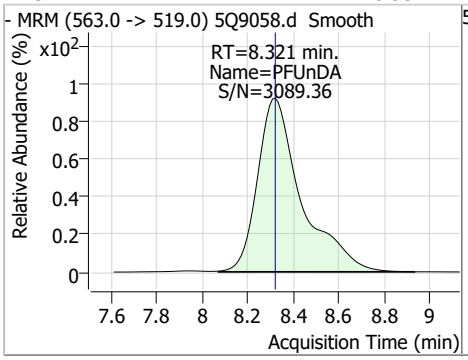
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.64	8.32	0.00	603987				

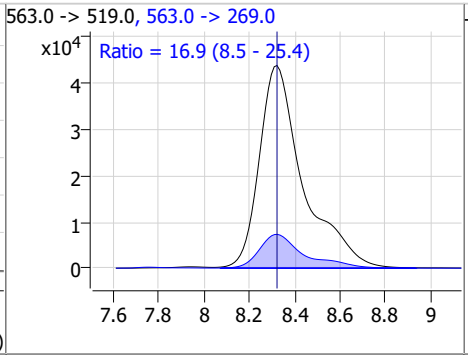


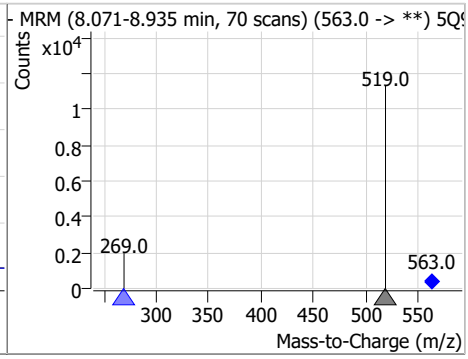




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	18.93	8.32	0.00	587934	563.0 -> 269.0	16.9	8.5	25.4

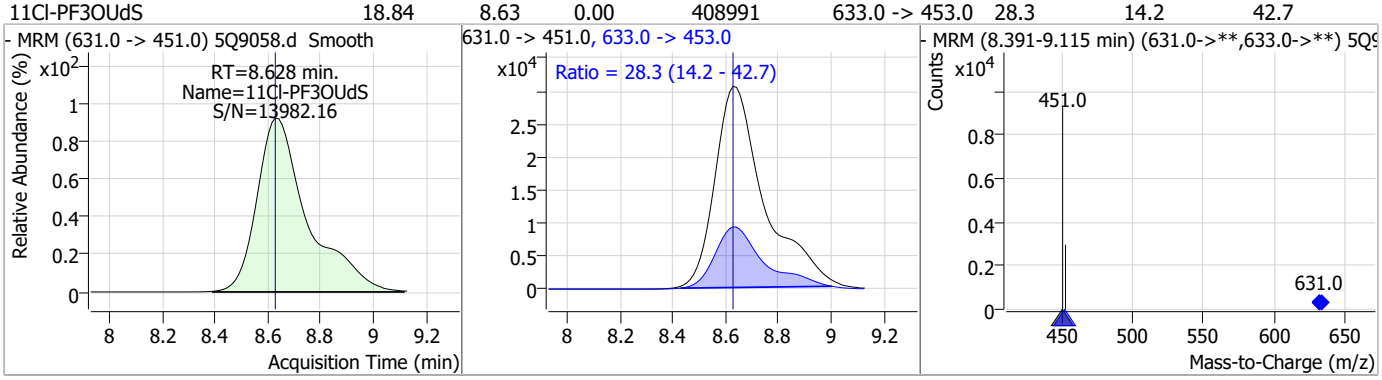




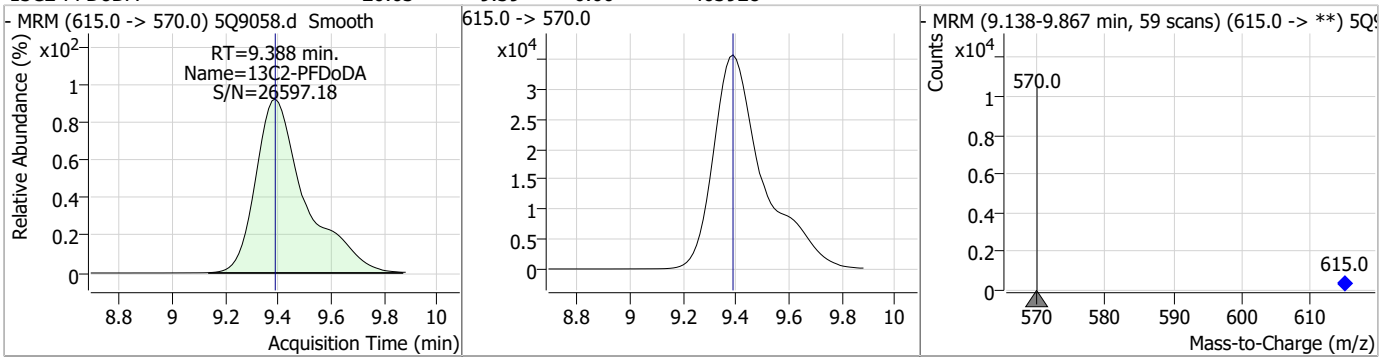


Perfluorinated Compounds by LC/MS/MS

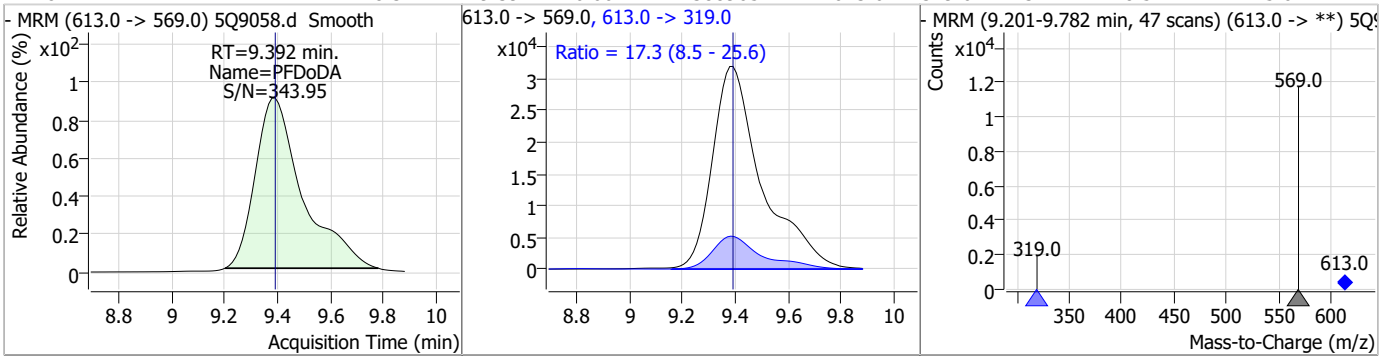
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	18.84	8.63	0.00	408991	633.0 -> 453.0	28.3	14.2	42.7



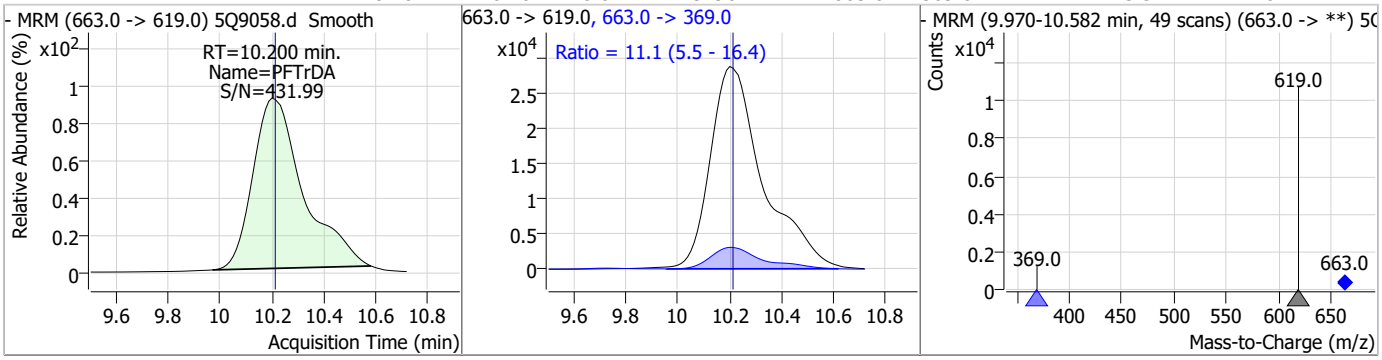
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.63	9.39	0.00	463928				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	18.37	9.39	0.00	388965	613.0 -> 319.0	17.3	8.5	25.6

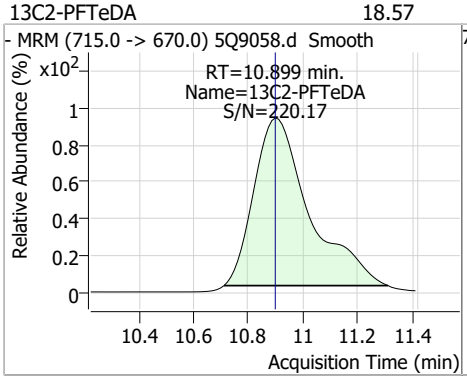


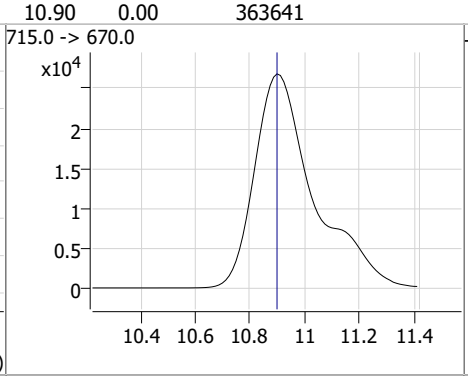
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	18.78	10.20	-0.01	379611	663.0 -> 369.0	11.1	5.5	16.4

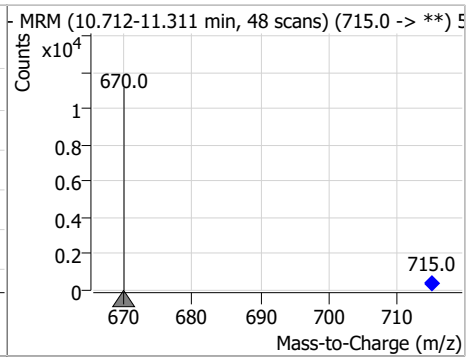


Perfluorinated Compounds by LC/MS/MS

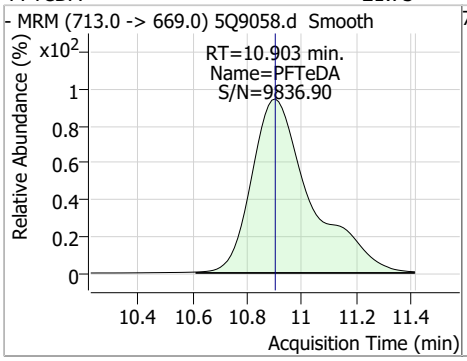
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	18.57	10.90	0.00	363641				

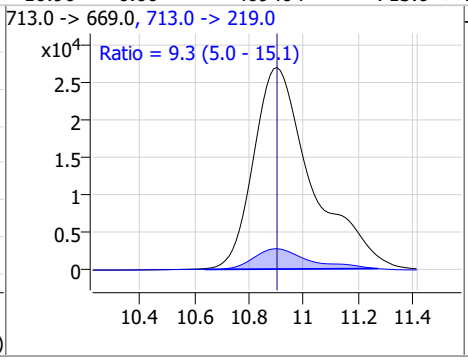


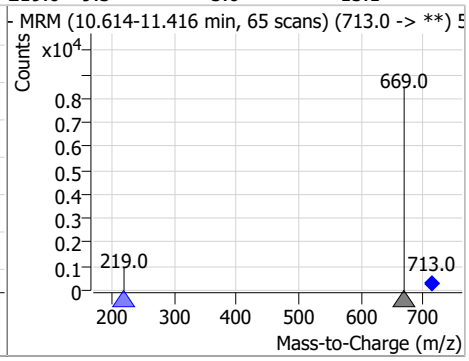




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	21.73	10.90	0.00	409404	713.0 -> 219.0	9.3	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q134-CC134
Lab FileID: 5Q9058.D
Injection Time: 12/28/22 17:52
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.75	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.89	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9069.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 8:43:23 PM
Sample Name : cc134-20
Vial : P1-A7
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	107307	20.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	208292	20.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	300825	20.00	µg/L	0.000
M4-PFHpA	5.726	367.0 -> 322.0	312951	20.00	µg/L	0.000
M8-PFOA	6.361	421.0 -> 376.0	412455	20.00	µg/L	0.000
M9-PFNA	6.918	472.0 -> 427.0	434152	20.00	µg/L	0.000
M6-PFDA	7.436	519.0 -> 474.0	471914	20.00	µg/L	0.000
M7-PFUnDA	8.295	570.0 -> 525.0	634233	20.00	µg/L	-0.025
M2-PFDoDA	9.363	615.0 -> 570.0	470732	20.00	µg/L	-0.025
M2-PFTeDA	10.874	715.0 -> 670.0	380627	20.00	µg/L	-0.025
M8-FOSA	6.605	506.0 -> 78.0	104435	20.00	µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	25651	20.00	µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	35178	20.00	µg/L	0.000
M8-PFOS	6.879	507.0 -> 99.0	46640	20.00	µg/L	0.000
M2-4:2FTS	4.886	329.0 -> 309.0	94734	20.00	µg/L	0.000
M2-6:2FTS	6.360	429.0 -> 409.0	155606	20.00	µg/L	0.000
M2-8:2FTS	7.498	529.0 -> 509.0	144984	20.00	µg/L	-0.013
M3-MeFOSAA	7.047	573.0 -> 419.0	41964	20.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	62945	20.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	32063	20.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	42292	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	94734	19.68	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%		
13C2-6:2FTS	6.360	429.0 -> 409.0	155606	20.30	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.5%		
13C2-8:2FTS	7.498	529.0 -> 509.0	144984	20.08	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.4%		
13C2-PFDoDA	9.363	615.0 -> 570.0	470732	20.93	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.7%		
13C2-PFTeDA	10.874	715.0 -> 670.0	380627	19.44	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.2%		
13C3-PFBS	4.124	302.0 -> 99.0	25651	19.74	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%		
13C3-PFHxS	5.733	402.0 -> 99.0	35178	19.66	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.3%		
13C4-PFBA	2.400	217.0 -> 172.0	107307	20.62	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.1%		
13C4-PFHpA	5.726	367.0 -> 322.0	312951	20.36	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.8%		
13C5-PFHxA	4.965	318.0 -> 273.0	300825	20.00	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.0%		
13C5-PFPeA	3.919	268.0 -> 223.0	208292	19.86	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.3%		
13C6-PFDA	7.436	519.0 -> 474.0	471914	20.30	µg/L	0.000

Perfluorinated Compounds by LC/MS/MS

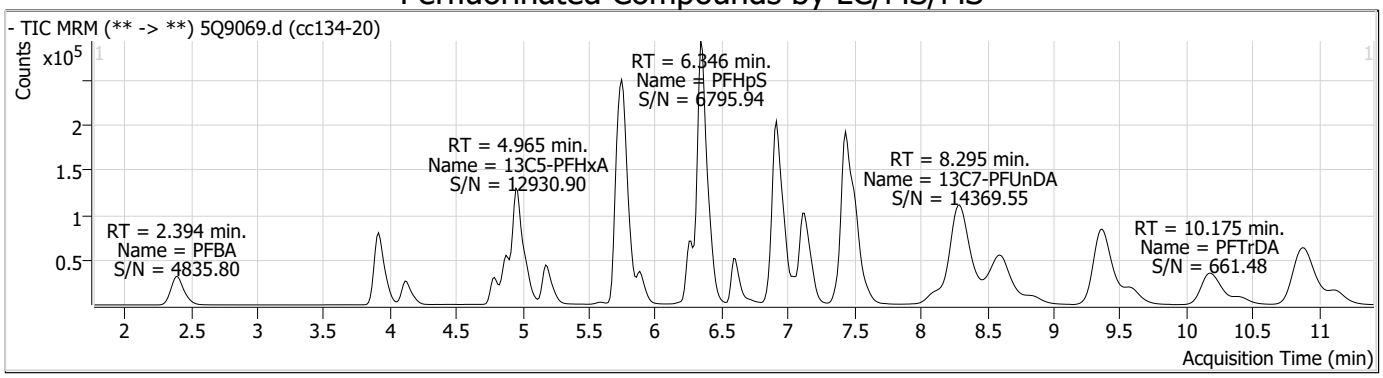
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.5%			
13C7-PFUnDA	8.295	570.0 -> 525.0	634233	21.67	µg/L		-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.4%			
13C8-FOSA	6.605	506.0 -> 78.0	104435	21.63	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.1%			
13C8-PFOA	6.361	421.0 -> 376.0	412455	20.47	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.3%			
13C8-PFOS	6.879	507.0 -> 99.0	46640	19.56	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.8%			
13C9-PFNA	6.918	472.0 -> 427.0	434152	20.64	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.2%			
d3-MeFOSAA	7.047	573.0 -> 419.0	41964	23.62	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 118.1%			
13C3-HFPO-DA	5.194	287.0 -> 169.0	62945	19.03	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.1%			
d3-MeFOSA	6.964	515.0 -> 169.0	32063	21.16	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.8%			
d5-EtFOSAA	7.157	589.0 -> 419.0	42292	22.93	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 114.7%			
Target Compounds							QValue
4:2FTS	4.888	327.0 -> 307.0	105759	20.40	µg/L		99
		327.0 -> 81.0	62013				
6:2FTS	6.360	427.0 -> 407.0	162337	20.33	µg/L		100
		427.0 -> 81.0	68971				
8:2FTS	7.499	527.0 -> 507.0	150672	20.35	µg/L		98
		527.0 -> 81.0	75263				
EtFOSAA	7.158	584.0 -> 419.0	29502	20.89	µg/L		99
		584.0 -> 483.0	18499				
FOSA	6.606	498.0 -> 78.0	103619	19.31	µg/L		100
		498.0 -> 478.0	3410				
MeFOSAA	7.047	570.0 -> 419.0	33850	19.88	µg/L		99
		570.0 -> 512.0	13768				
PFBA	2.394	213.0 -> 169.0	111402	19.06	µg/L		100
PFBS	4.129	299.0 -> 80.0	80169	19.22	µg/L		100
		299.0 -> 99.0	34371				
PFDA	7.437	513.0 -> 469.0	490325	19.52	µg/L		100
		513.0 -> 219.0	87937				
PFDoDA	9.367	613.0 -> 569.0	443020	20.63	µg/L		98
		613.0 -> 319.0	70997				
PFDS	8.106	599.0 -> 80.0	99669	17.51	µg/L		94
		599.0 -> 99.0	55367				
PFHpA	5.727	363.0 -> 319.0	376660	19.24	µg/L		100
		363.0 -> 169.0	83965				
PFHpS	6.346	449.0 -> 80.0	69249	19.43	µg/L		99
		449.0 -> 99.0	37723				
PFHxA	4.966	313.0 -> 269.0	292858	19.17	µg/L		100
		313.0 -> 119.0	13683				
PFHxS	5.735	399.0 -> 80.0	69518	19.47	µg/L	m	100
		399.0 -> 99.0	39037				
PFNA	6.918	463.0 -> 419.0	438486	19.48	µg/L		99
		463.0 -> 219.0	92773				
PFNS	7.384	549.0 -> 80.0	62451	19.53	µg/L		100
		549.0 -> 99.0	37309				
PFOA	6.362	413.0 -> 369.0	458937	19.44	µg/L		100
		413.0 -> 169.0	122760				
PFOS	6.880	499.0 -> 80.0	84020	19.53	µg/L	m	97

Perfluorinated Compounds by LC/MS/MS

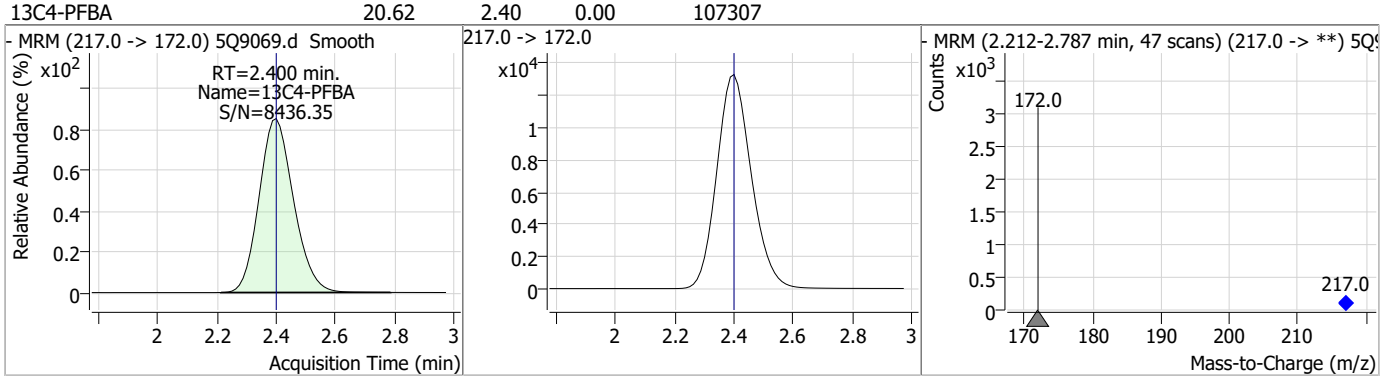
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	38654			
PFPeA	3.922	263.0 -> 219.0	238562	19.49	µg/L	100
PFPeS	5.035	349.0 -> 80.0	51370	18.81	µg/L	99
		349.0 -> 99.0	26054			
PFTeDA	10.878	713.0 -> 669.0	401008	20.33	µg/L	98
		713.0 -> 219.0	44140			
PFTrDA	10.175	663.0 -> 619.0	399408	19.47	µg/L	100
		663.0 -> 369.0	43846			
PFUnDA	8.296	563.0 -> 519.0	613240	18.80	µg/L	100
		563.0 -> 269.0	104247			
11Cl-PF3OUdS	8.615	631.0 -> 451.0	404734	18.38	µg/L	95
		633.0 -> 453.0	125235			
9Cl-PF3ONS	7.123	531.0 -> 351.0	363792	17.44	µg/L	99
		533.0 -> 353.0	114026			
ADONA	5.777	377.0 -> 251.0	500256	21.08	µg/L	100
		377.0 -> 85.0	186088			
HFPO-DA	5.190	329.0 -> 169.0	97635	19.41	µg/L	98
		285.0 -> 169.0	59062			
MeFOSA	6.966	512.0 -> 169.0	37164	19.59	µg/L	96
		512.0 -> 219.0	27641			
4-PFECHS	6.268	461.0 -> 381.0	231284	17.60	µg/L	100
		461.0 -> 99.0	123757			
FBSA	4.793	298.0 -> 78.0	131367	21.05	µg/L	99
		298.0 -> 64.0	11855			
FHxSA	5.900	398.0 -> 78.0	124982	20.37	µg/L	99
		398.0 -> 64.0	11703			

 # = Qualifier out of range, m = manually integrated, + = Area summed

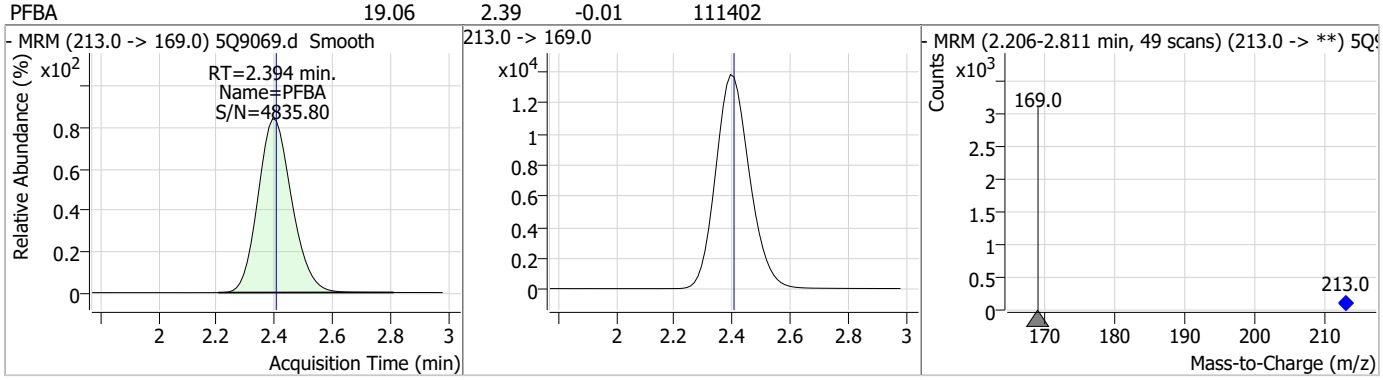
Perfluorinated Compounds by LC/MS/MS



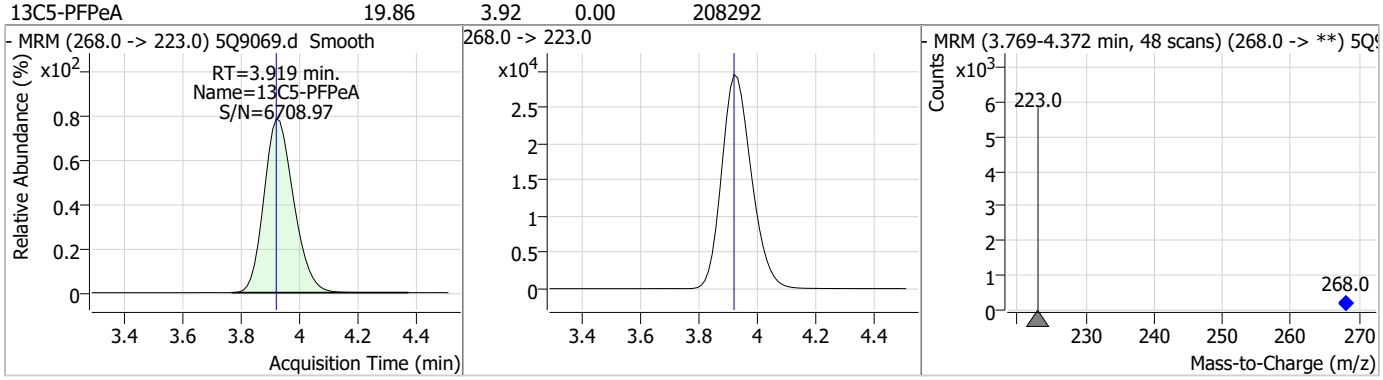
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.62	2.40	0.00	107307				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.06	2.39	-0.01	111402				

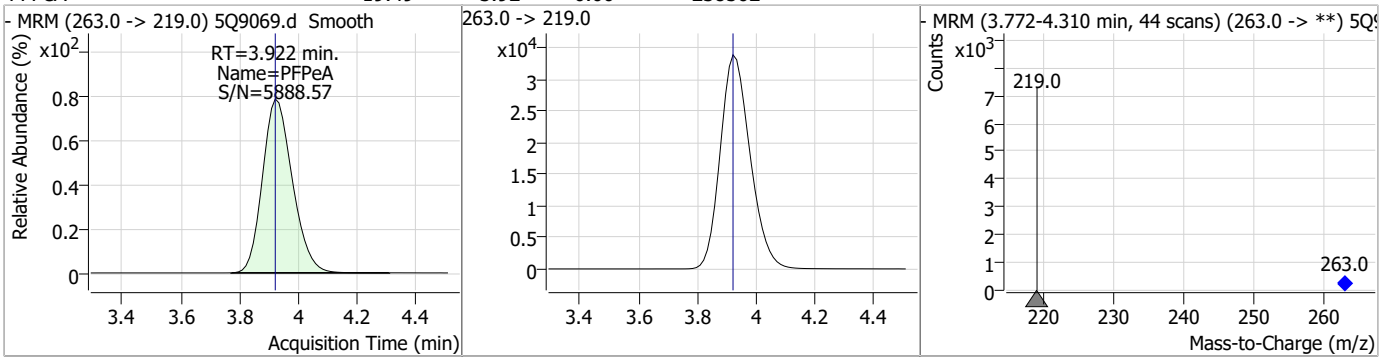


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.86	3.92	0.00	208292				

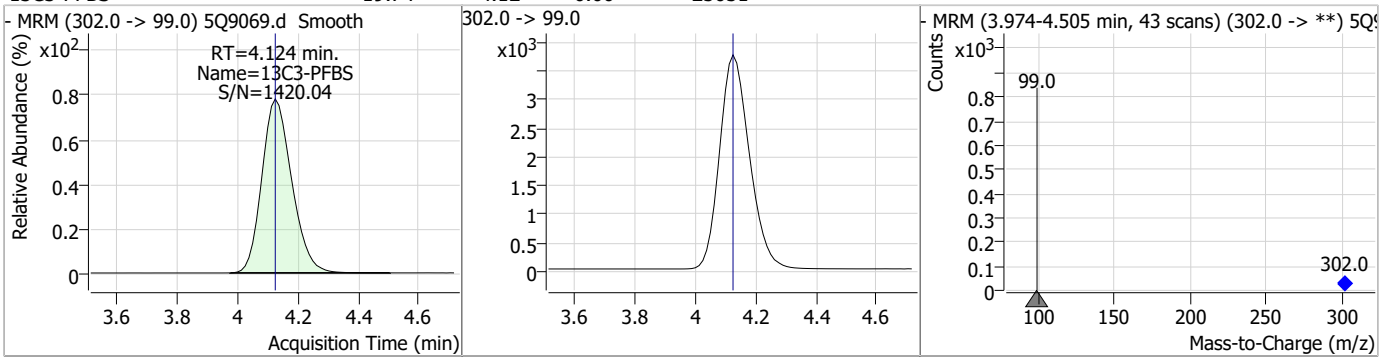


Perfluorinated Compounds by LC/MS/MS

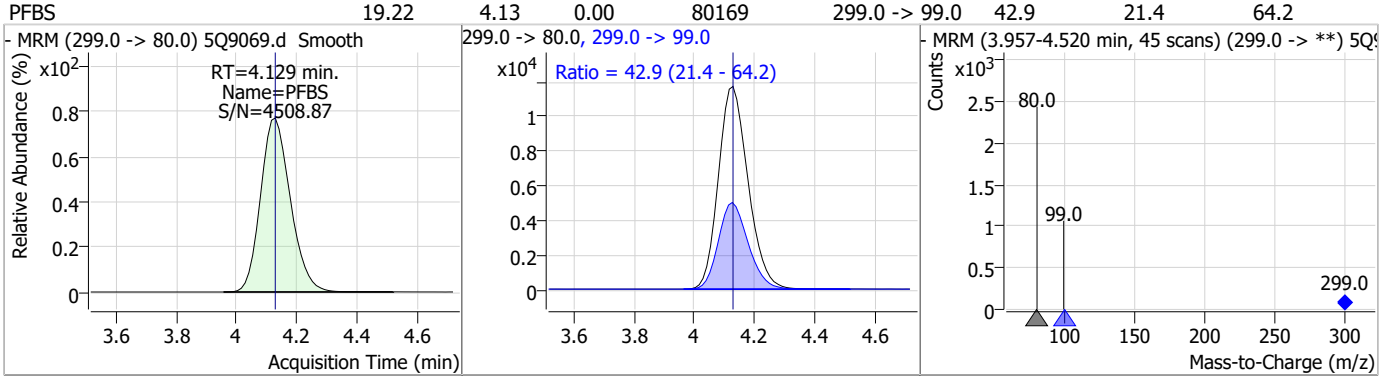
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.49	3.92	0.00	238562				



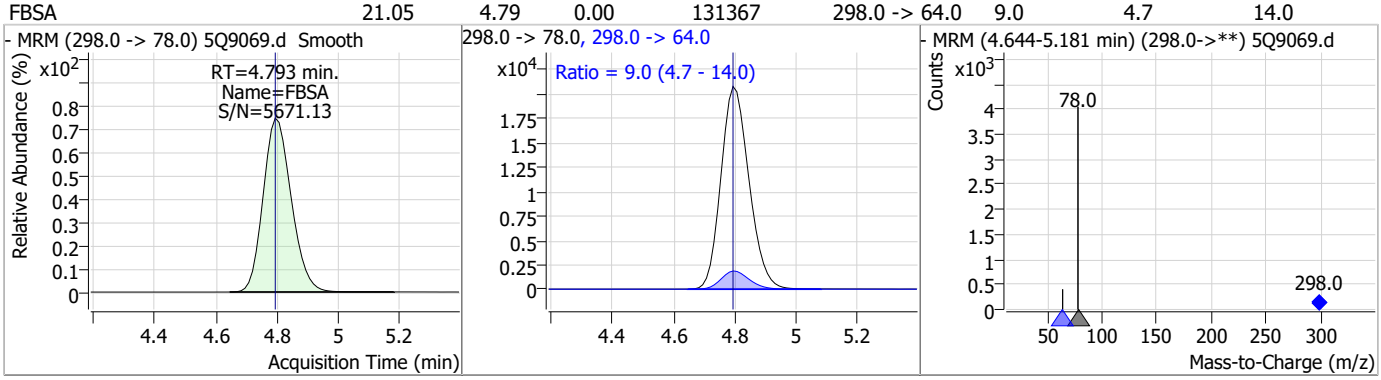
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.74	4.12	0.00	25651				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.22	4.13	0.00	80169	299.0 -> 99.0	42.9	21.4	64.2

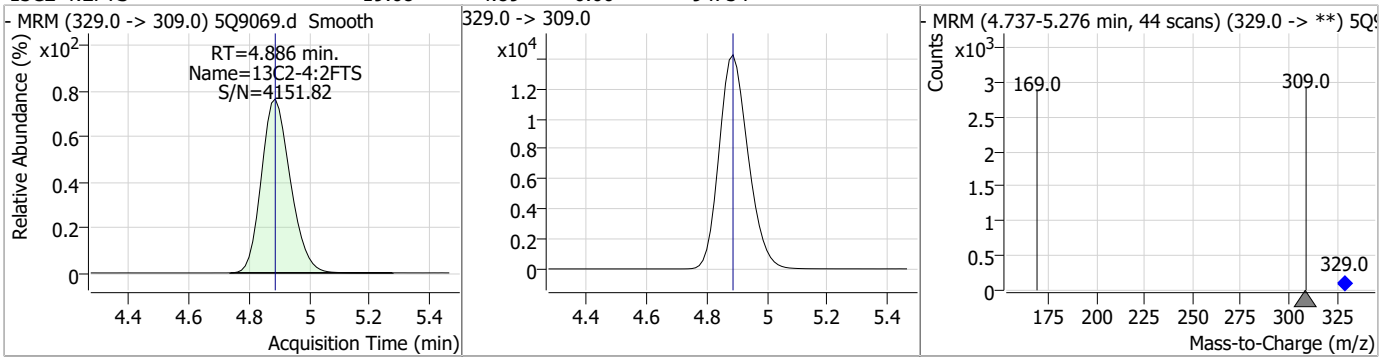


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	21.05	4.79	0.00	131367	298.0 -> 64.0	9.0	4.7	14.0

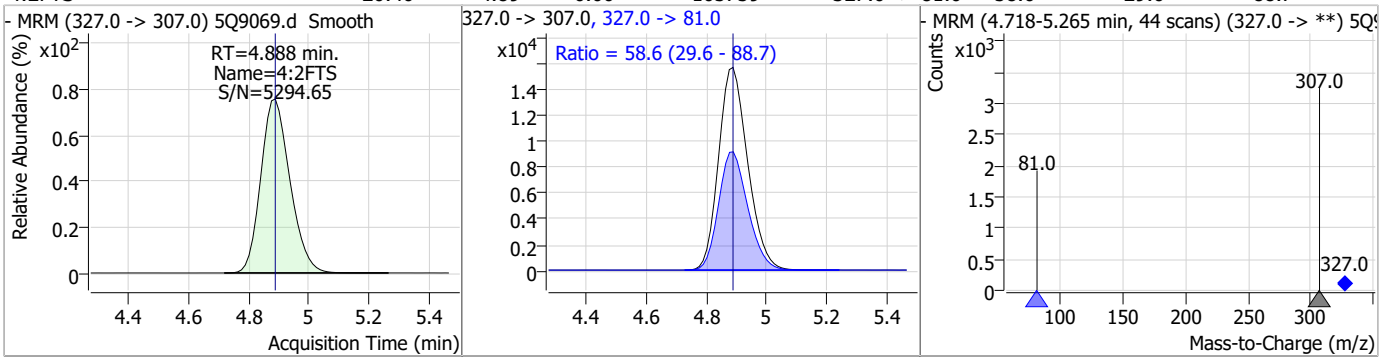


Perfluorinated Compounds by LC/MS/MS

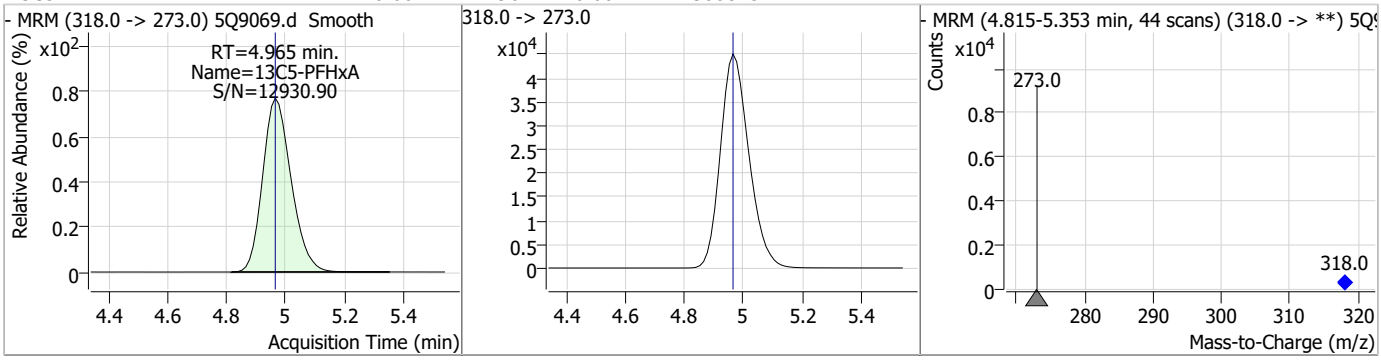
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.68	4.89	0.00	94734				



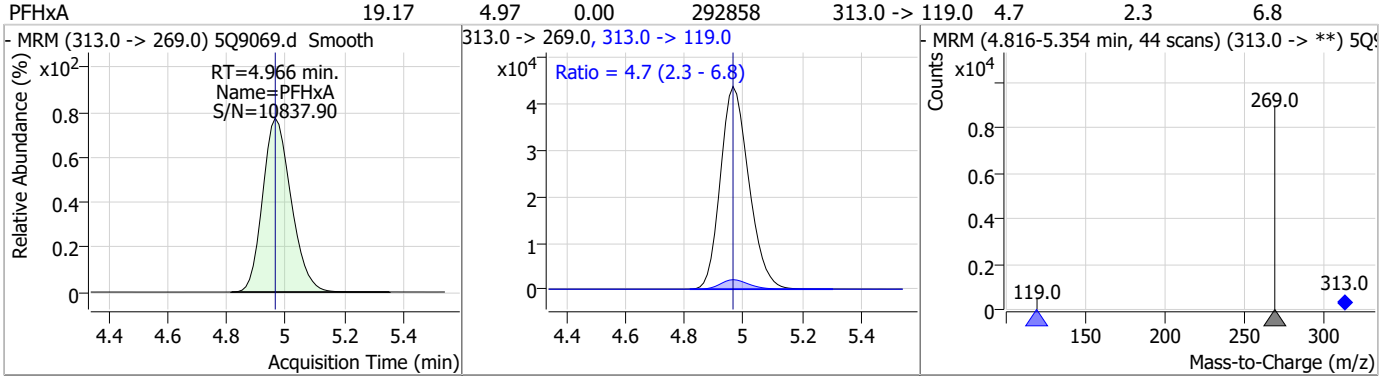
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.40	4.89	0.00	105759	327.0 -> 81.0	58.6	29.6	88.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.00	4.96	0.00	300825				

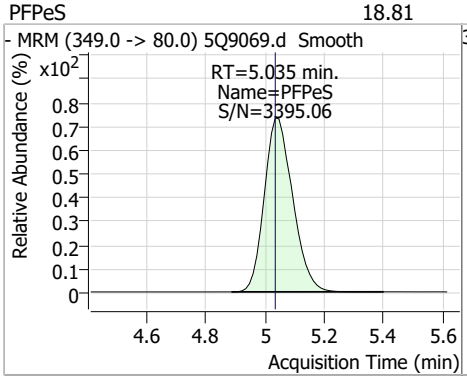


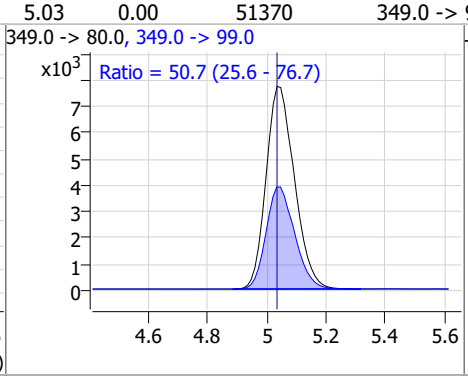
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.17	4.97	0.00	292858	313.0 -> 119.0	4.7	2.3	6.8

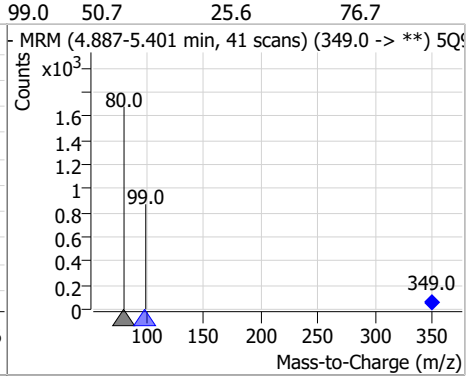


Perfluorinated Compounds by LC/MS/MS

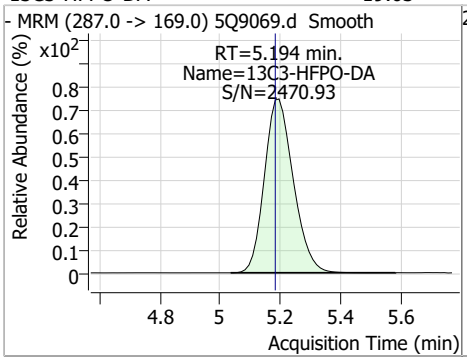
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	18.81	5.03	0.00	51370	349.0 -> 99.0	50.7	25.6	76.7

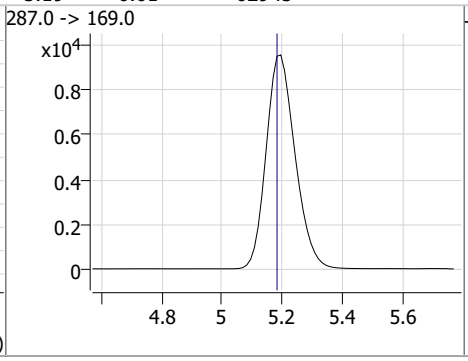


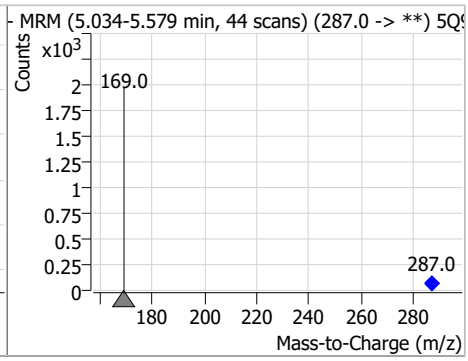




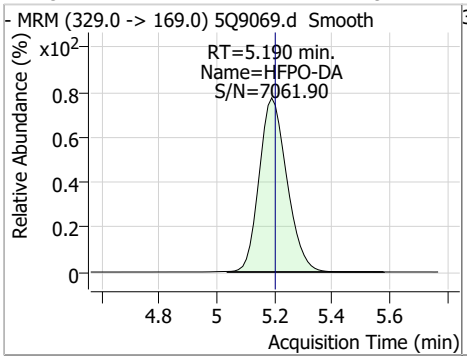
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.03	5.19	0.01	62945				

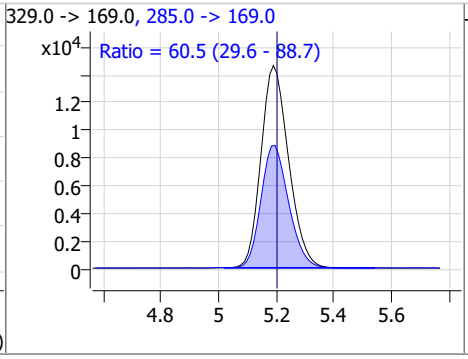


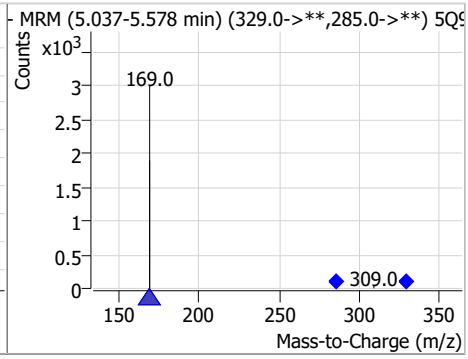




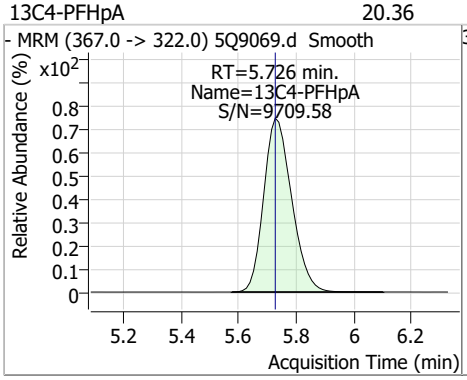
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	19.41	5.19	0.00	97635	285.0 -> 169.0	60.5	29.6	88.7

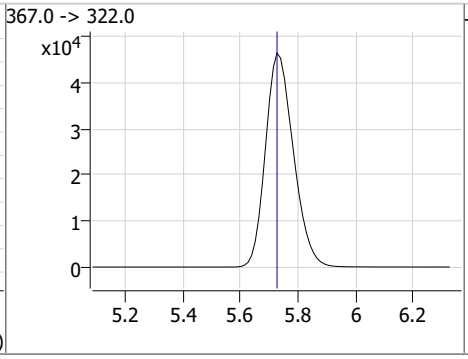


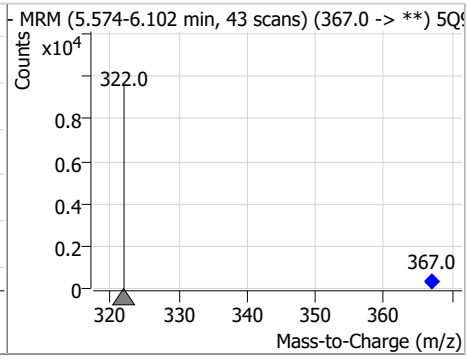




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.36	5.73	0.00	312951				

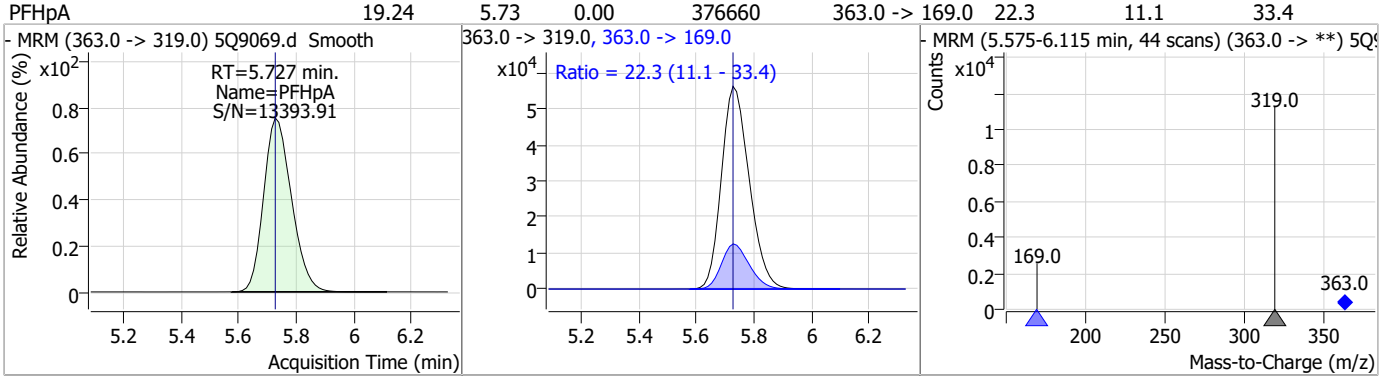




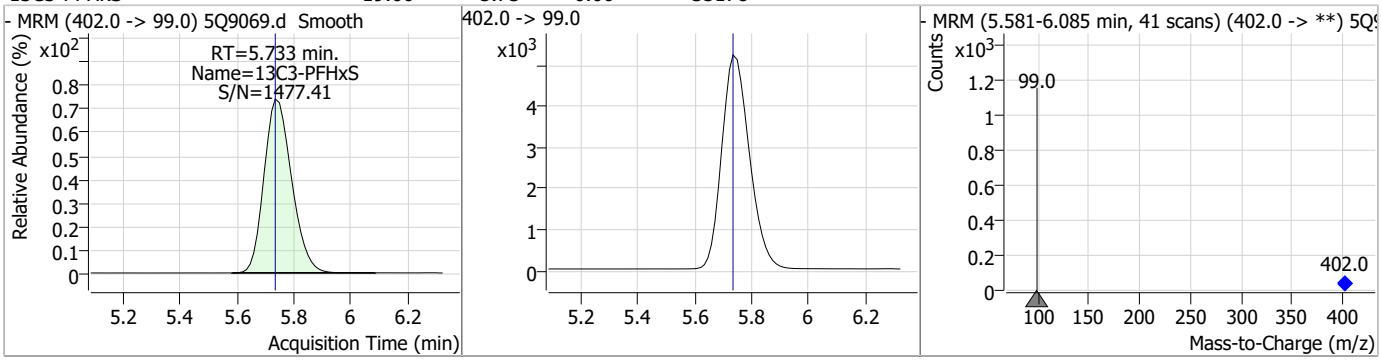


Perfluorinated Compounds by LC/MS/MS

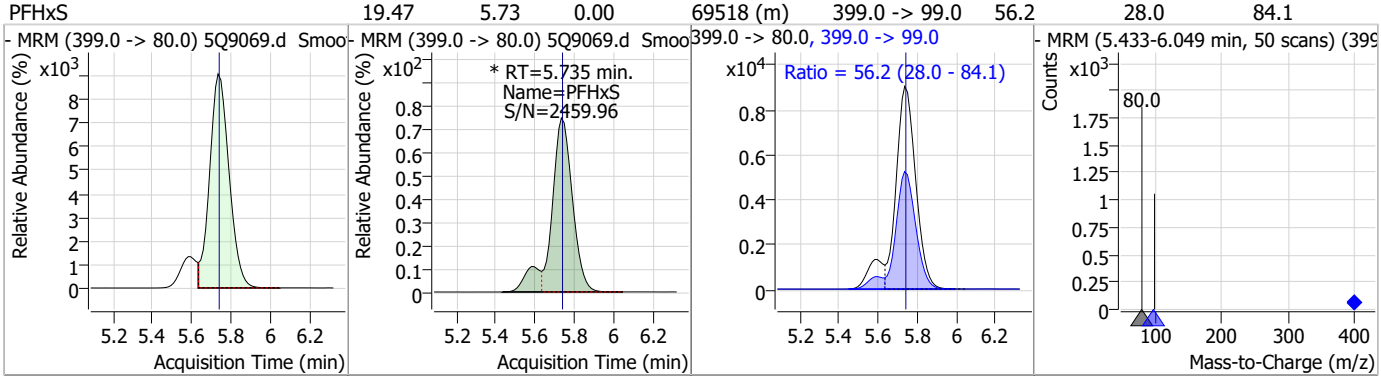
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	19.24	5.73	0.00	376660	363.0 -> 169.0	22.3	11.1	33.4



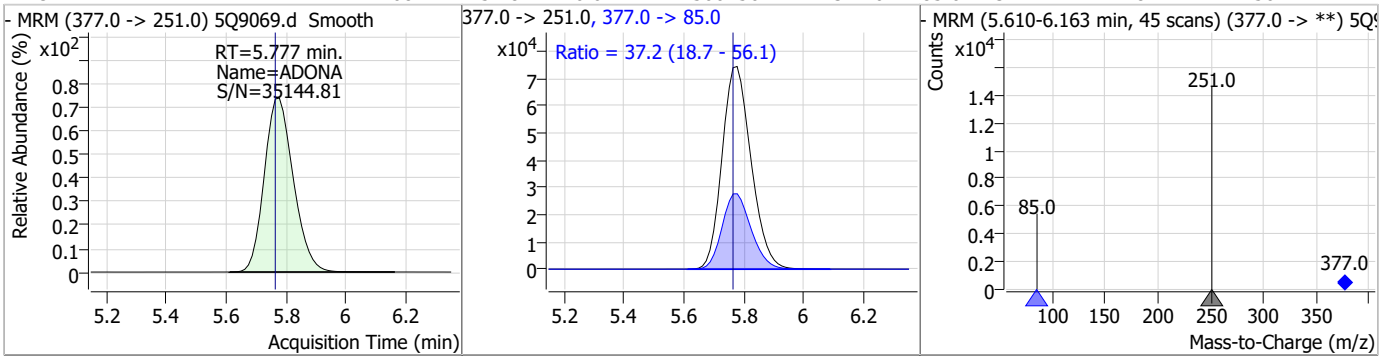
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.66	5.73	0.00	35178				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	19.47	5.73	0.00	69518 (m)	399.0 -> 99.0	56.2	28.0	84.1

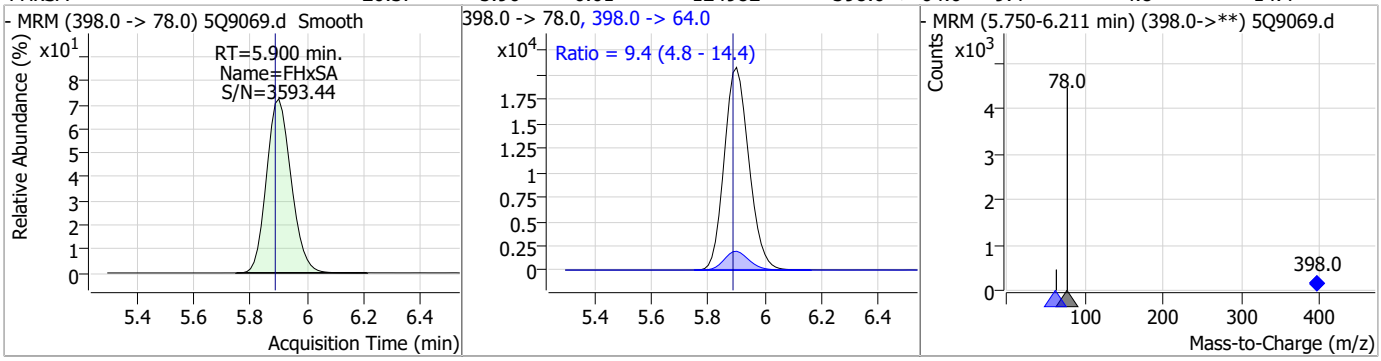


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	21.08	5.78	0.01	500256	377.0 -> 85.0	37.2	18.7	56.1

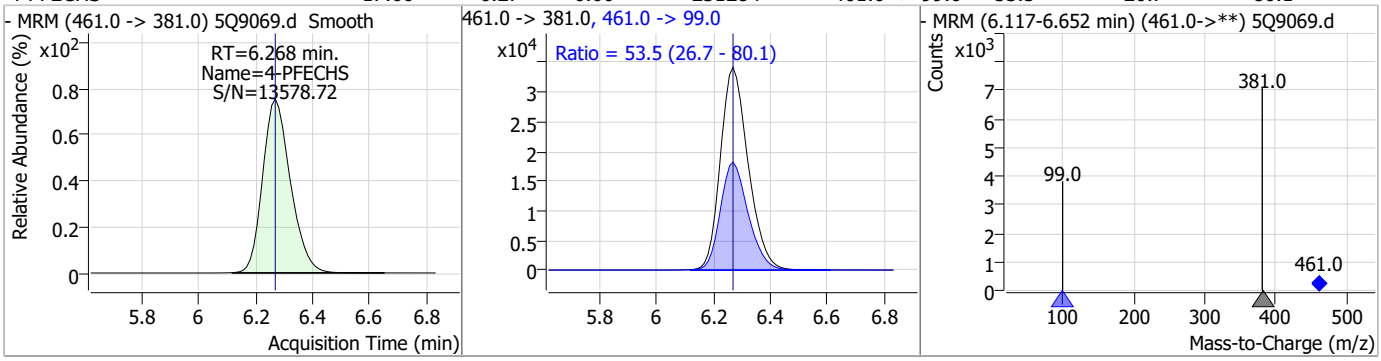


Perfluorinated Compounds by LC/MS/MS

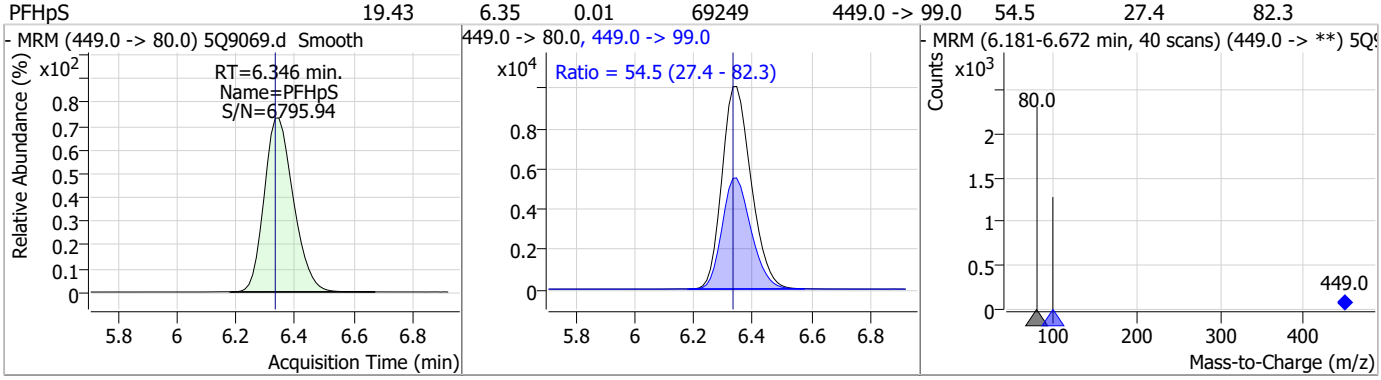
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	20.37	5.90	0.01	124982	398.0 -> 64.0	9.4	4.8	14.4



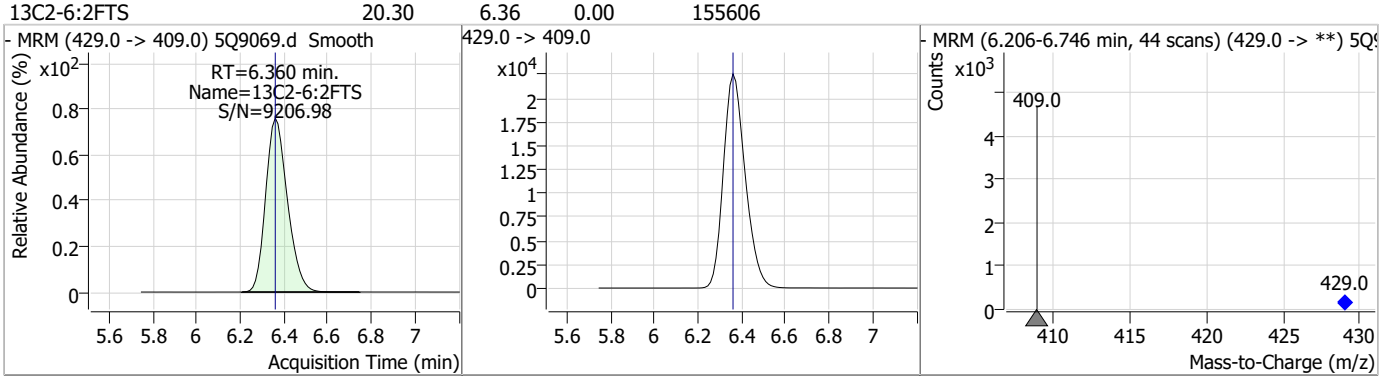
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	17.60	6.27	0.00	231284	461.0 -> 99.0	53.5	26.7	80.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	19.43	6.35	0.01	69249	449.0 -> 99.0	54.5	27.4	82.3

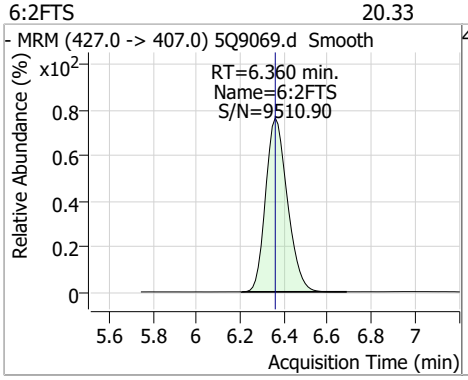


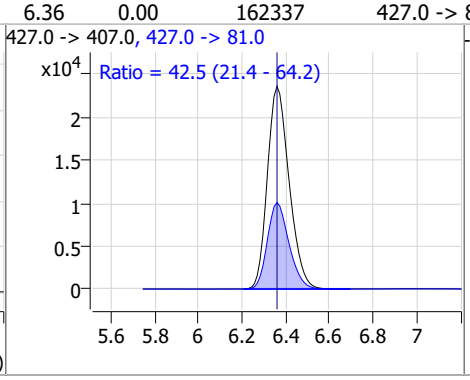
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.30	6.36	0.00	155606				

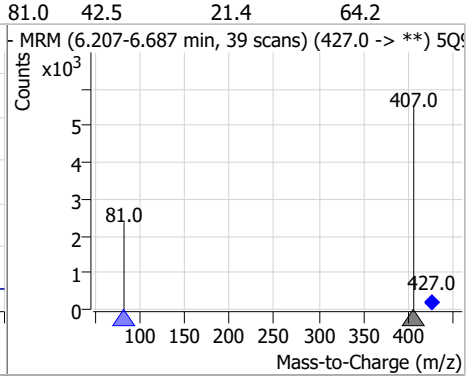


Perfluorinated Compounds by LC/MS/MS

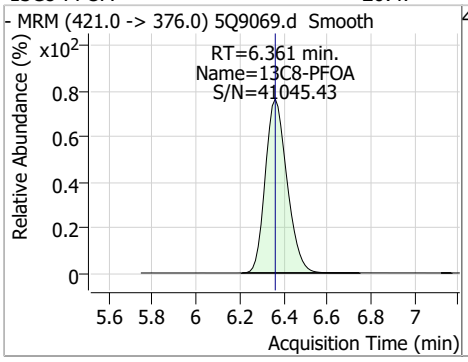
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	20.33	6.36	0.00	162337	427.0 -> 81.0	42.5	21.4	64.2

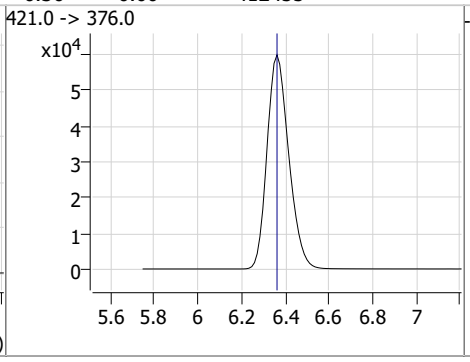


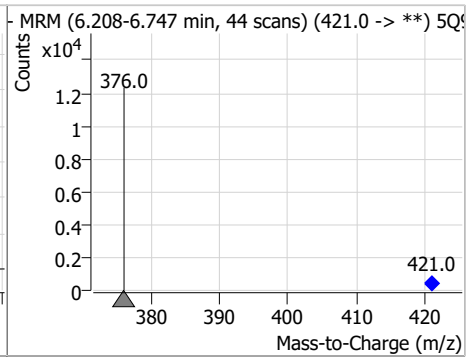




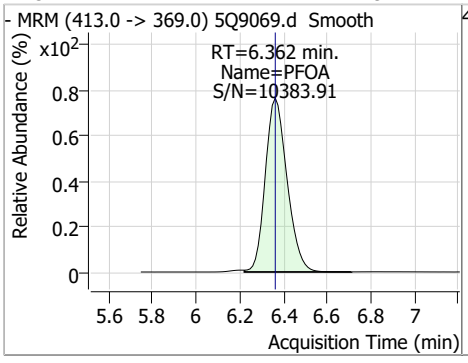
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.47	6.36	0.00	412455				

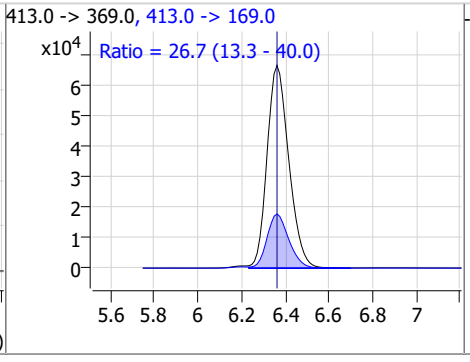


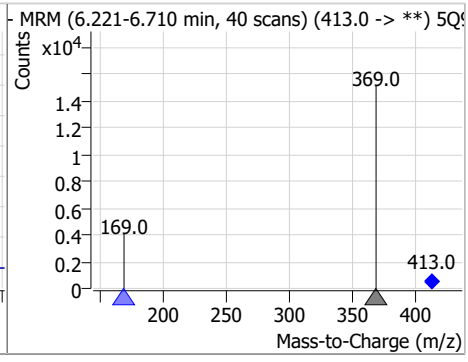




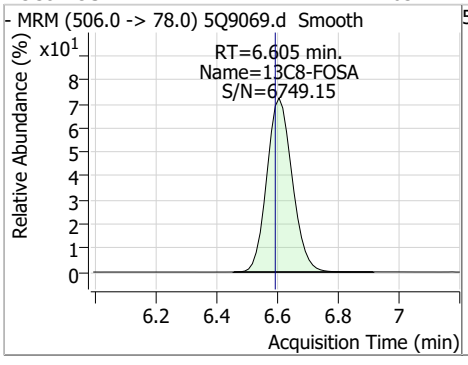
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.44	6.36	0.00	458937	413.0 -> 169.0	26.7	13.3	40.0

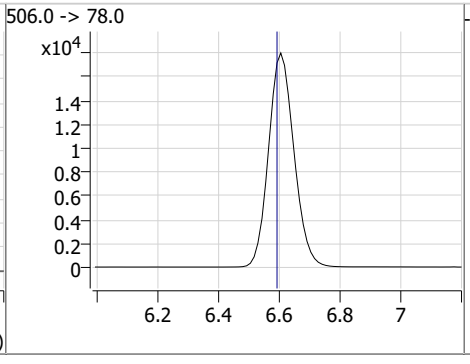


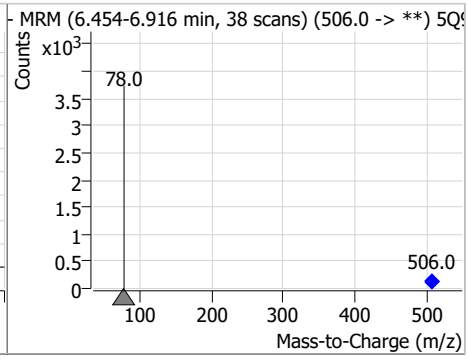




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	21.63	6.60	0.01	104435				

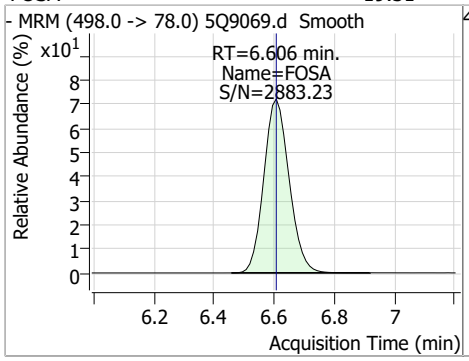


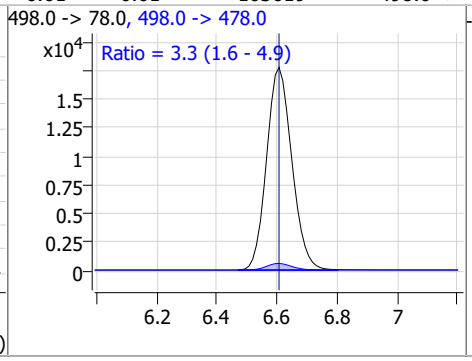


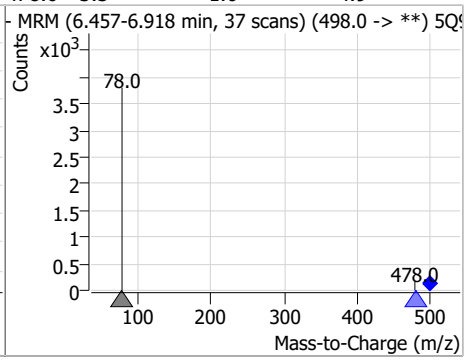


Perfluorinated Compounds by LC/MS/MS

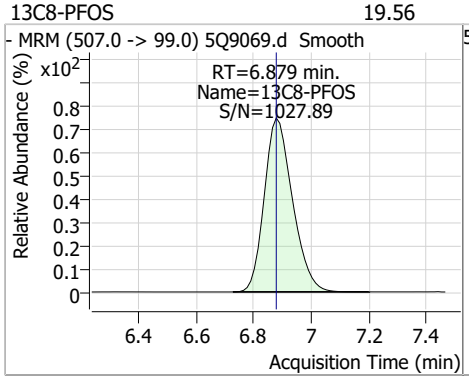
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	19.31	6.61	0.01	103619	498.0 -> 478.0	3.3	1.6	4.9

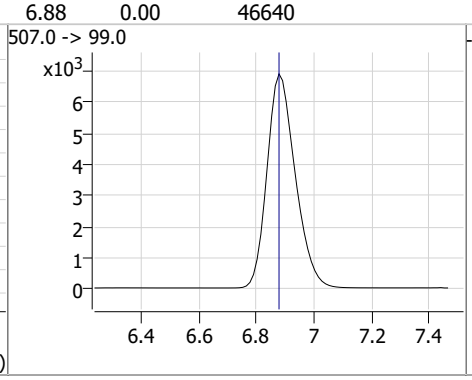


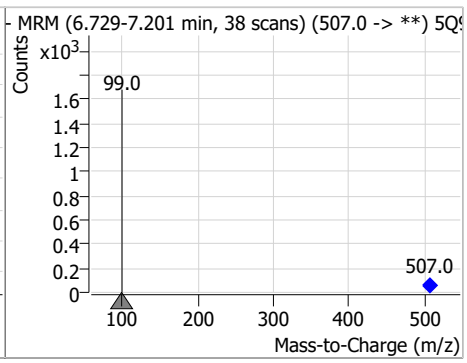




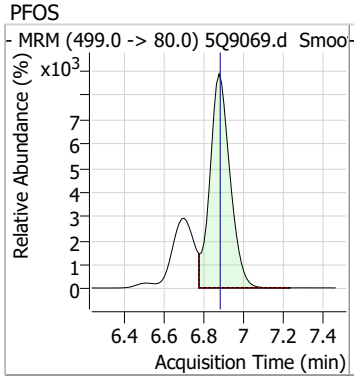
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.56	6.88	0.00	46640				

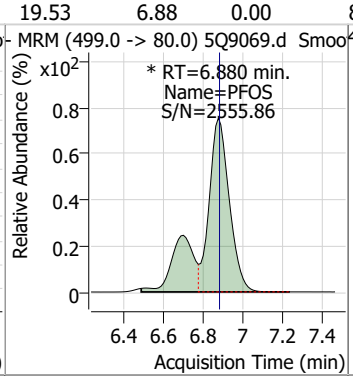


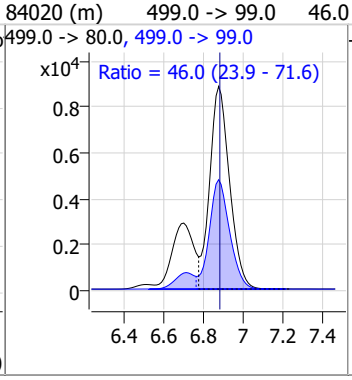


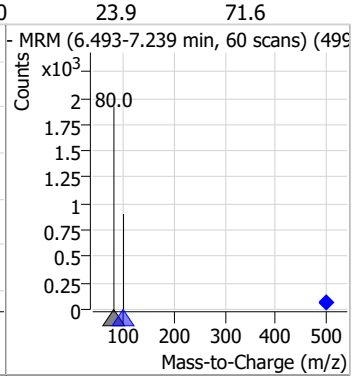


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.53	6.88	0.00	84020 (m)	499.0 -> 99.0	46.0	23.9	71.6

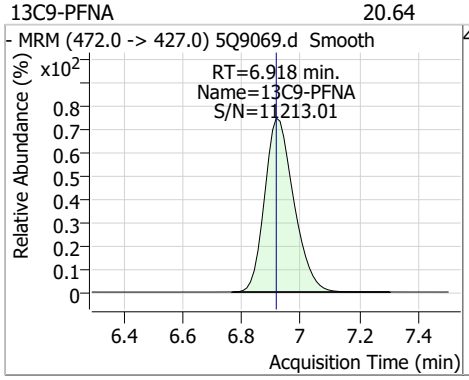


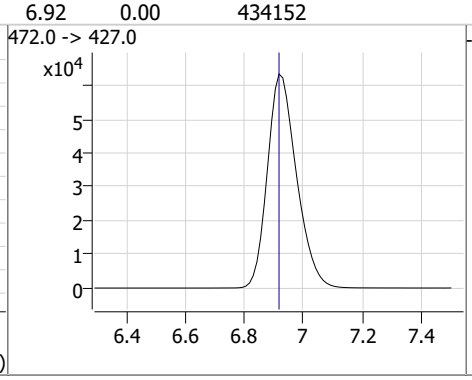


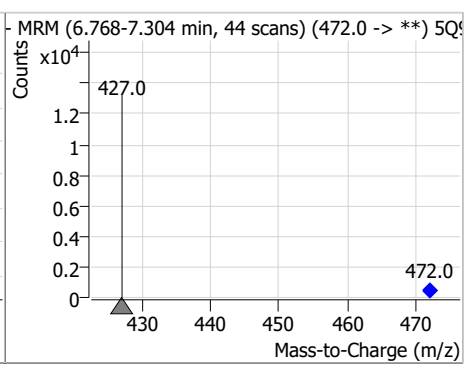




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.64	6.92	0.00	434152				

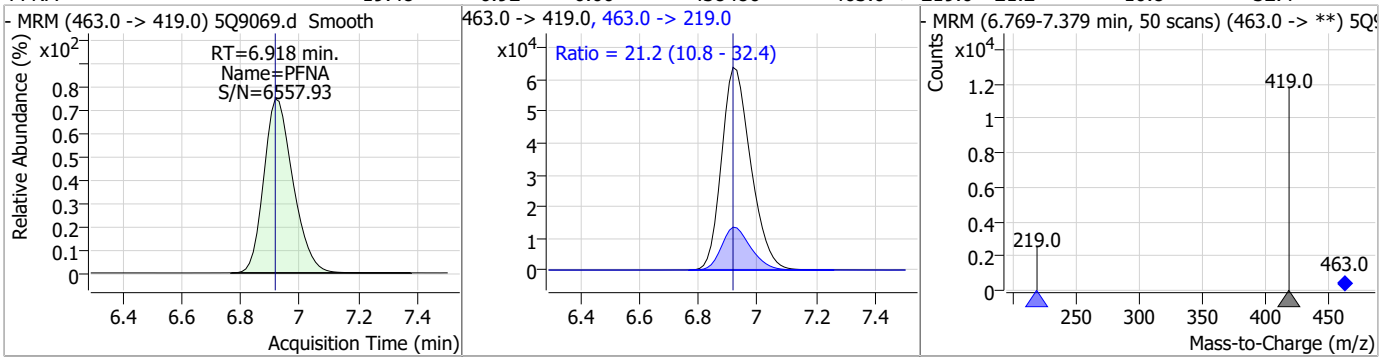




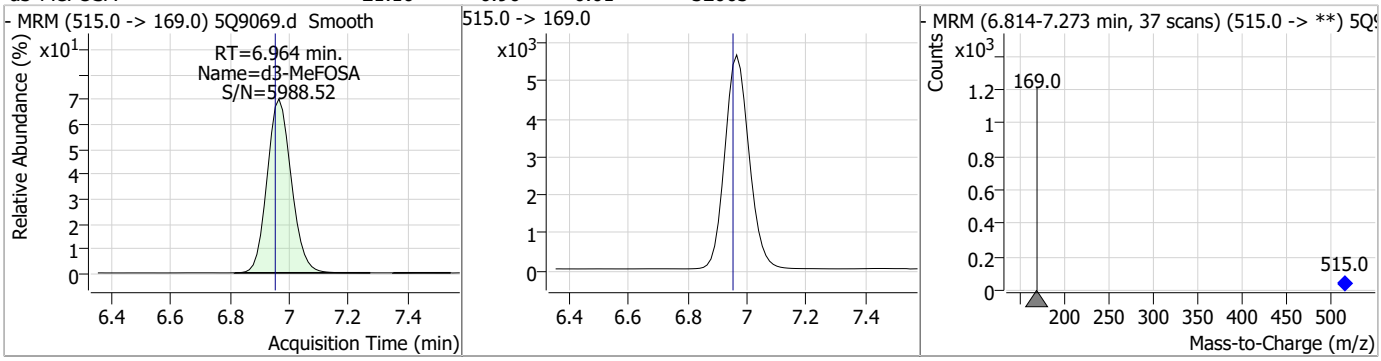


Perfluorinated Compounds by LC/MS/MS

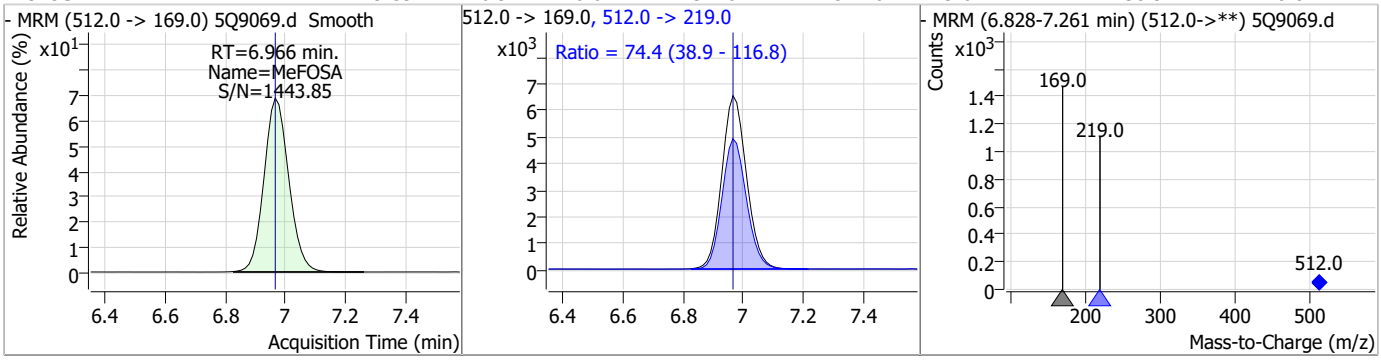
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.48	6.92	0.00	438486	463.0 -> 219.0	21.2	10.8	32.4



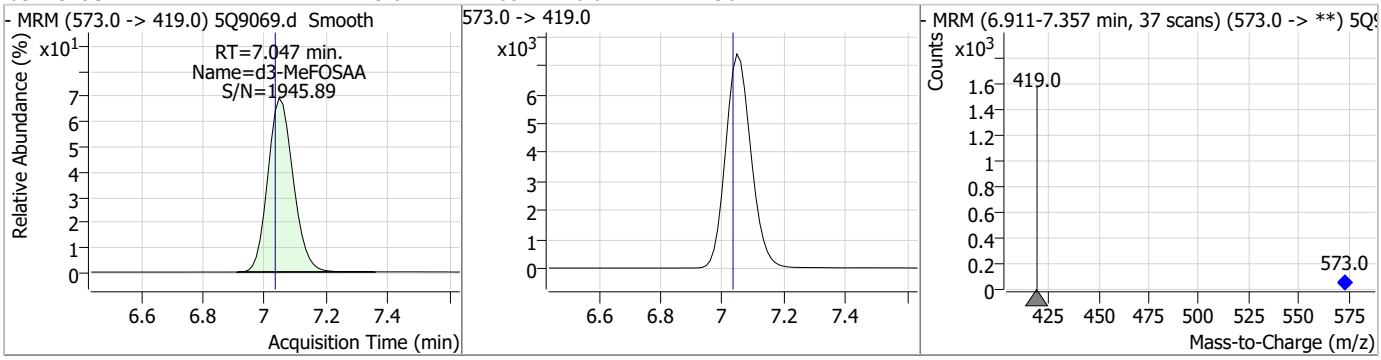
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	21.16	6.96	0.01	32063				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	19.59	6.97	0.01	37164	512.0 -> 219.0	74.4	38.9	116.8

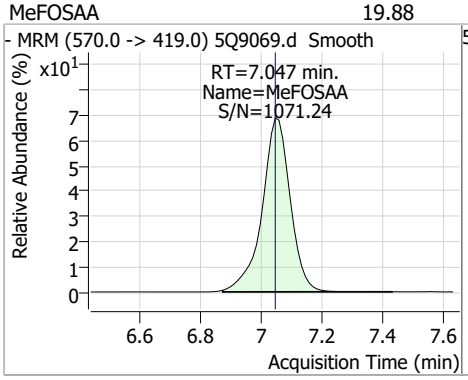


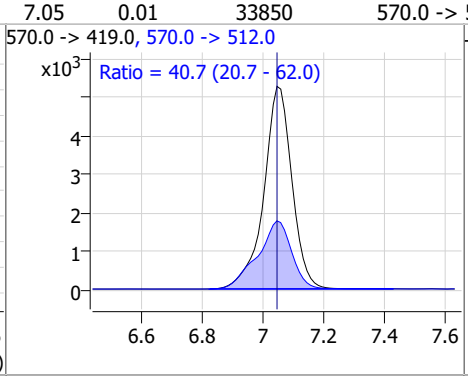
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	23.62	7.05	0.01	41964				

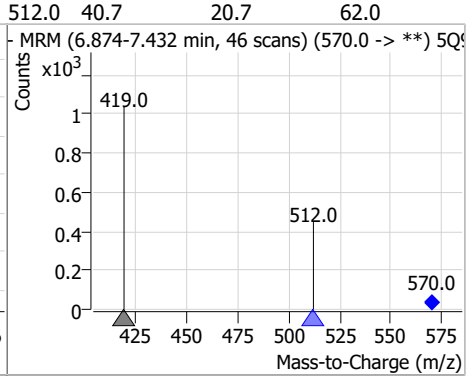


Perfluorinated Compounds by LC/MS/MS

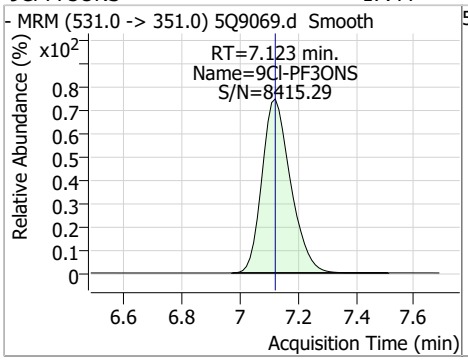
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	19.88	7.05	0.01	33850	570.0 -> 512.0	40.7	20.7	62.0

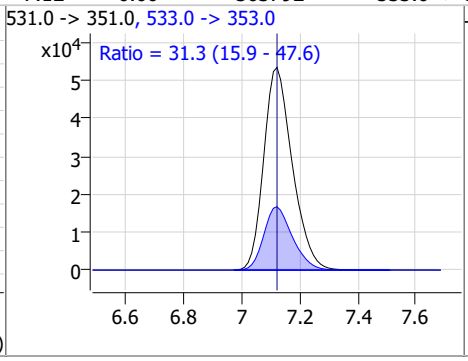


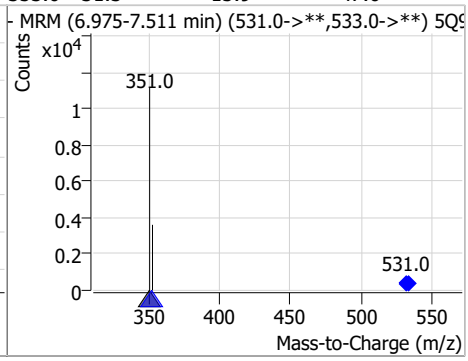




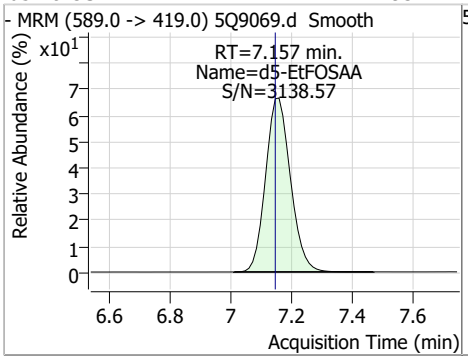
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	17.44	7.12	0.00	363792	533.0 -> 353.0	31.3	15.9	47.6

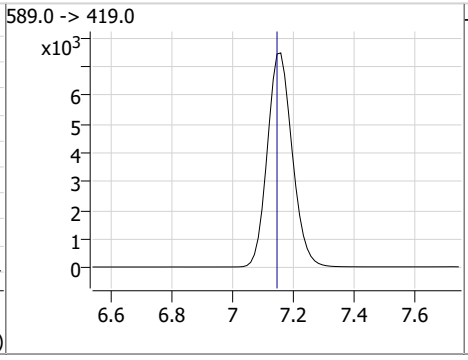


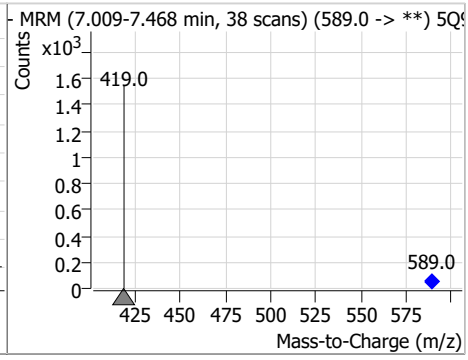




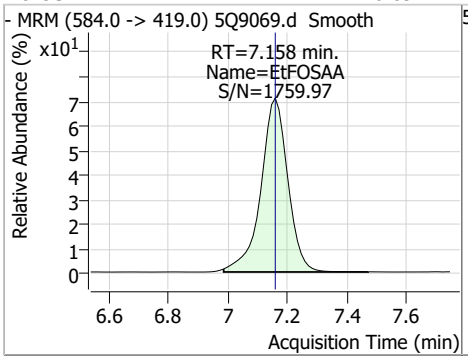
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	22.93	7.16	0.01	42292				

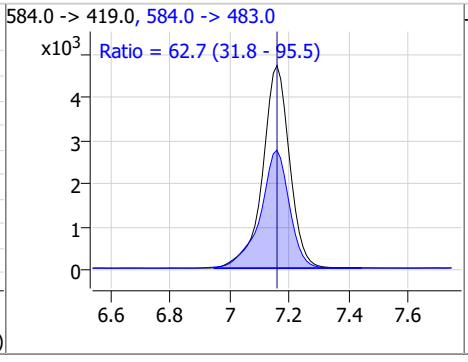


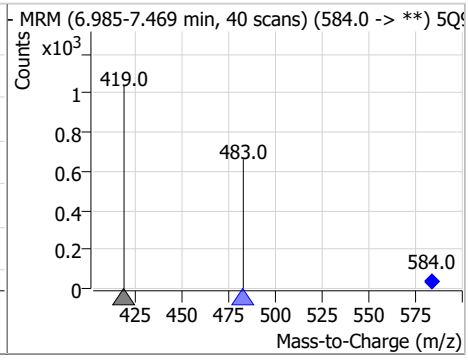




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	20.89	7.16	0.01	29502	584.0 -> 483.0	62.7	31.8	95.5

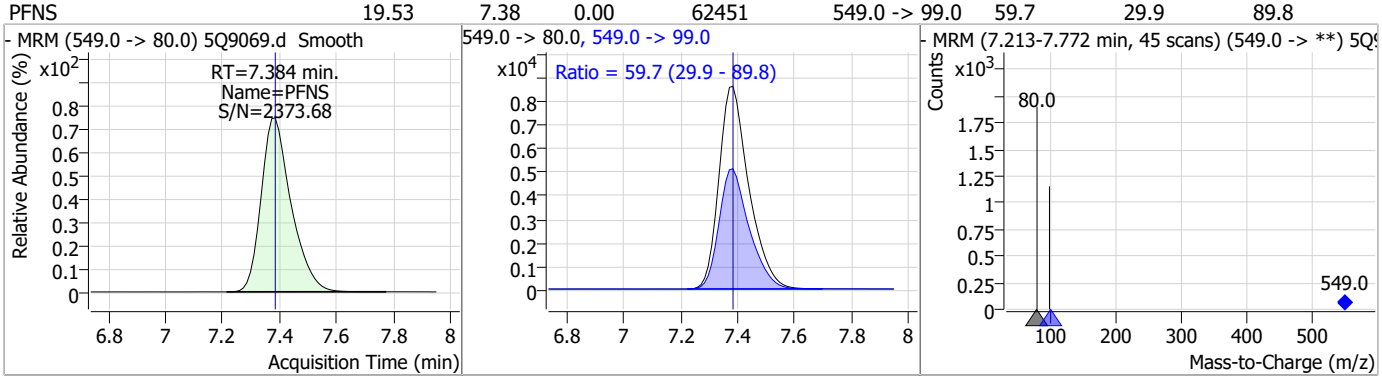




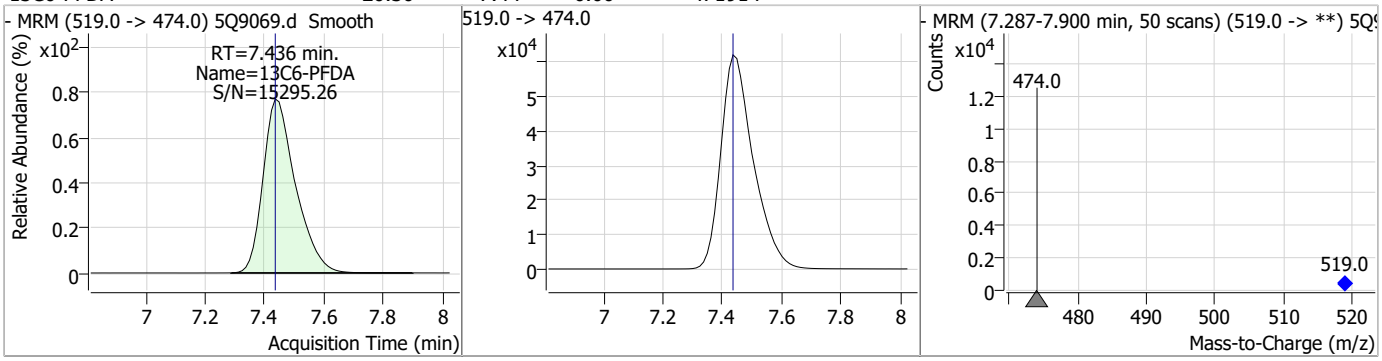


Perfluorinated Compounds by LC/MS/MS

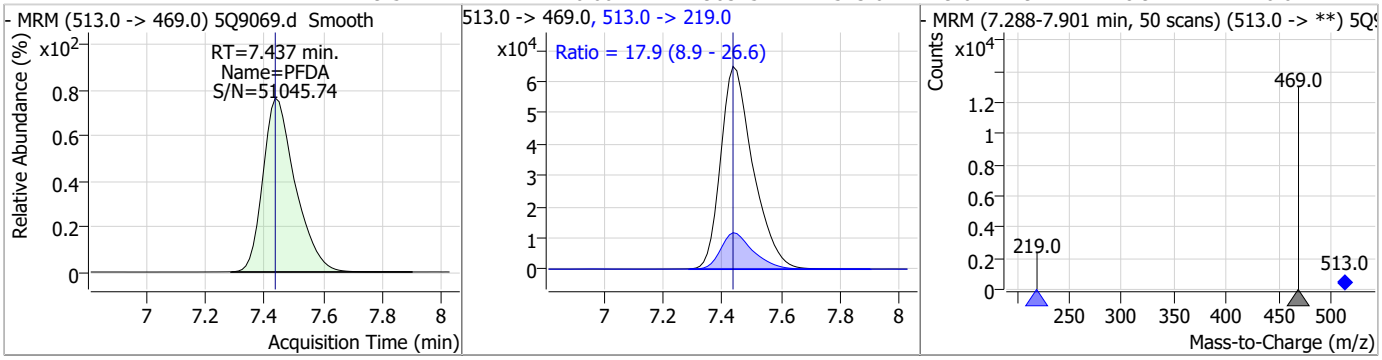
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	19.53	7.38	0.00	62451	549.0 -> 99.0	59.7	29.9	89.8



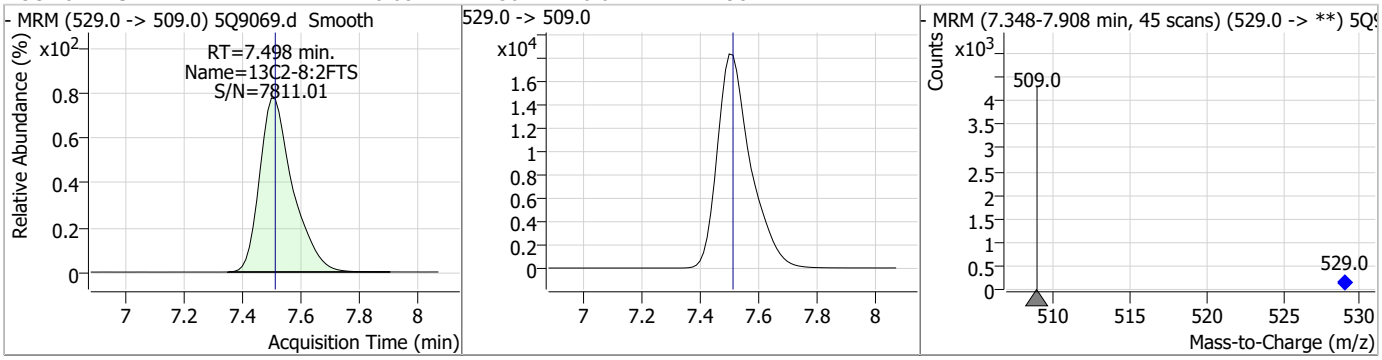
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.30	7.44	0.00	471914				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.52	7.44	0.00	490325	513.0 -> 219.0	17.9	8.9	26.6

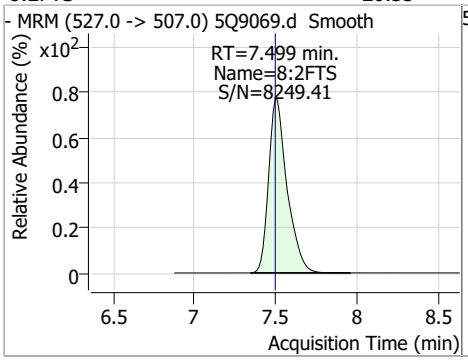


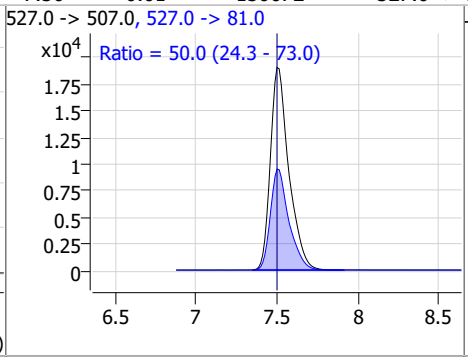
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	20.08	7.50	-0.01	144984				

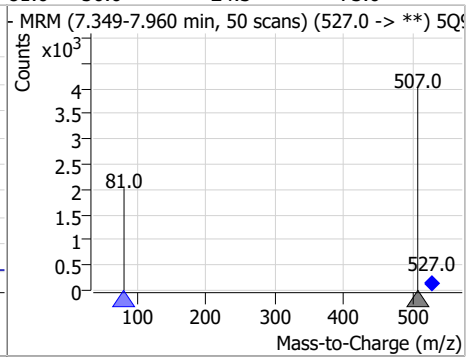


Perfluorinated Compounds by LC/MS/MS

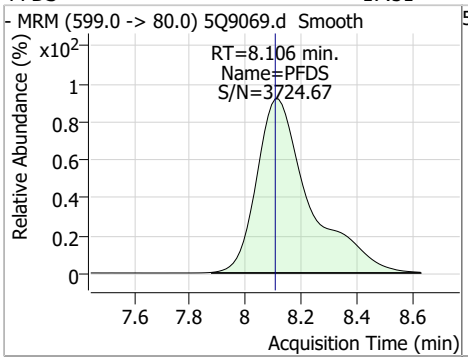
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.35	7.50	-0.01	150672	527.0 -> 81.0	50.0	24.3	73.0

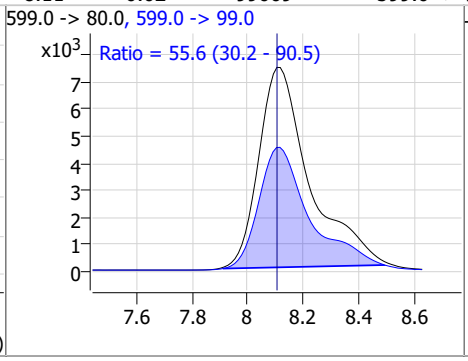


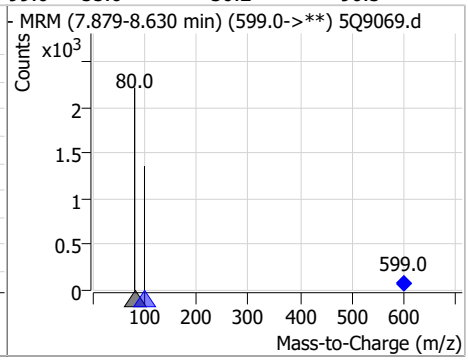




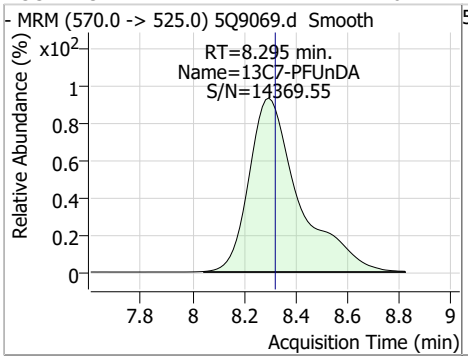
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	17.51	8.11	-0.02	99669	599.0 -> 99.0	55.6	30.2	90.5

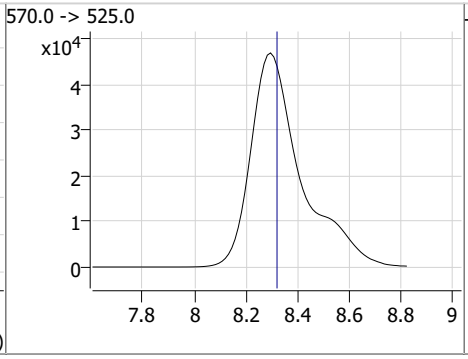


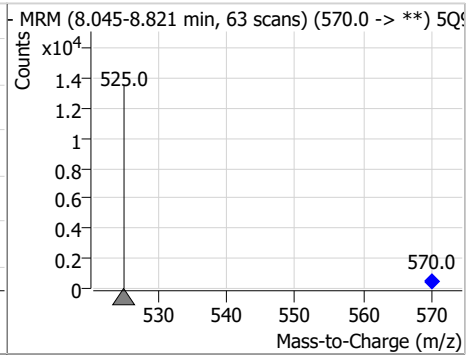




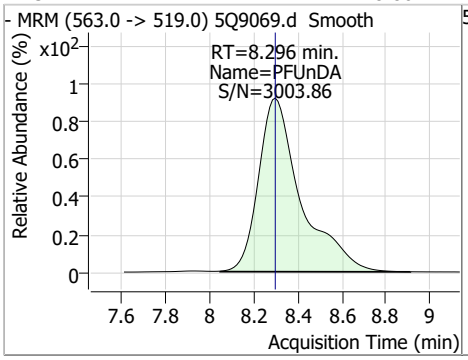
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	21.67	8.29	-0.02	634233				

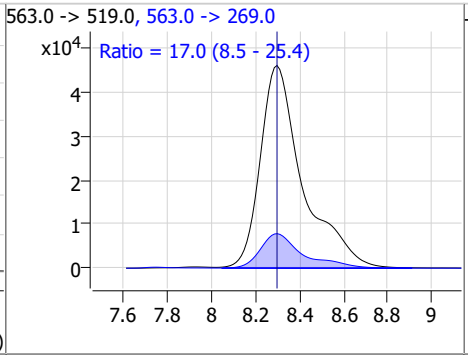


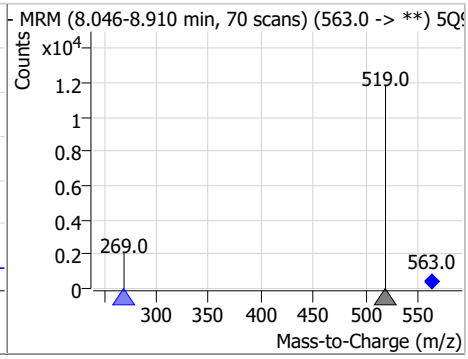




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	18.80	8.30	-0.02	613240	563.0 -> 269.0	17.0	8.5	25.4

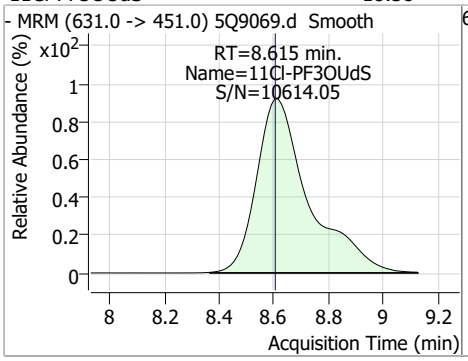


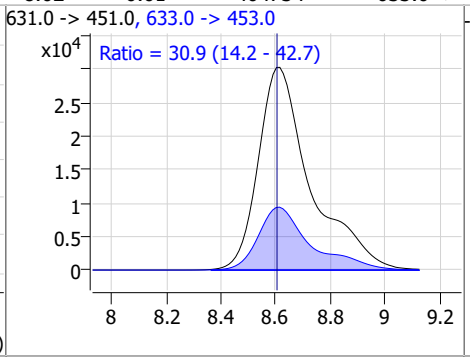


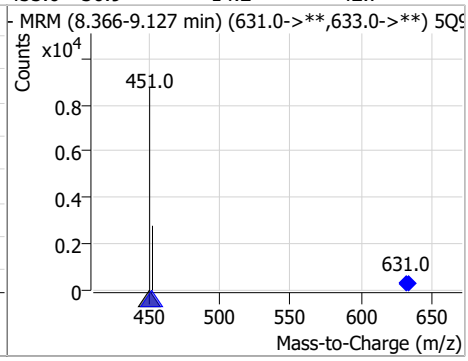


Perfluorinated Compounds by LC/MS/MS

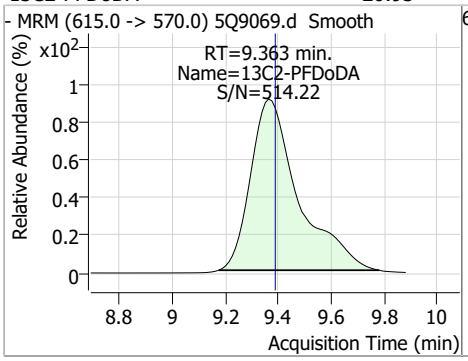
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	18.38	8.62	-0.01	404734	633.0 -> 453.0	30.9	14.2	42.7

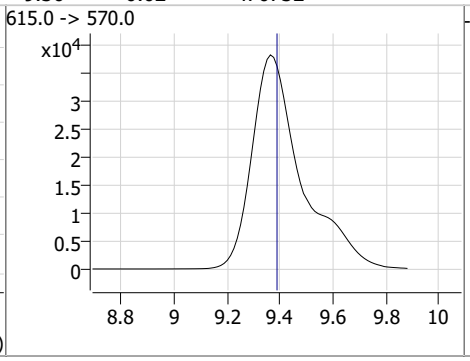


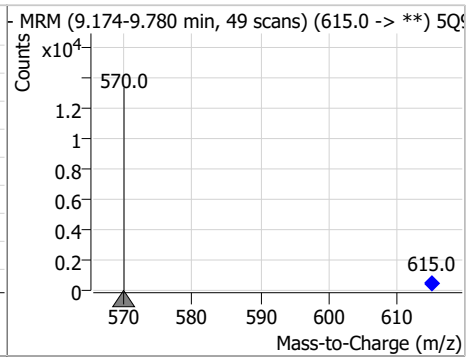




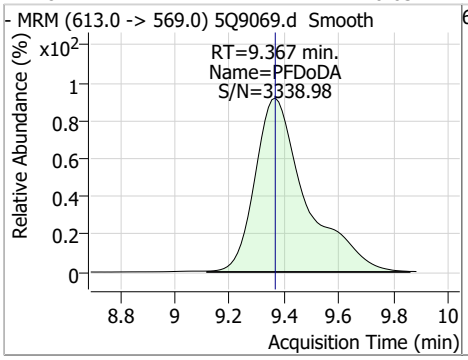
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.93	9.36	-0.02	470732				

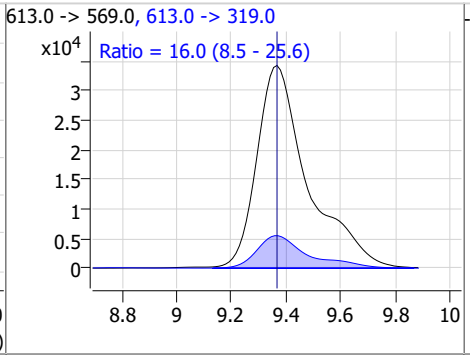


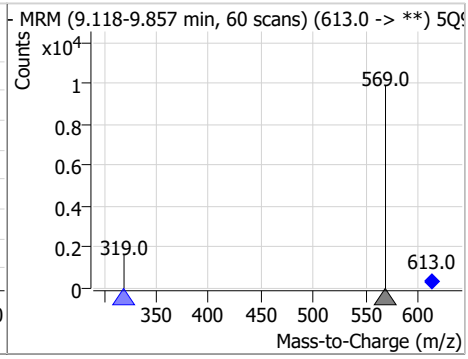




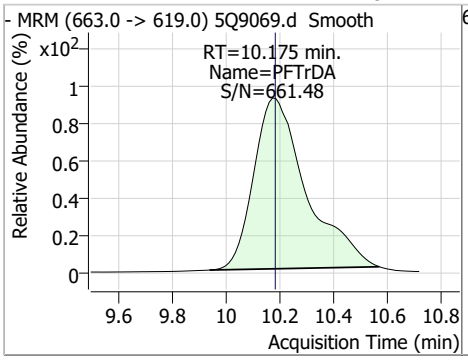
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	20.63	9.37	-0.02	443020	613.0 -> 319.0	16.0	8.5	25.6

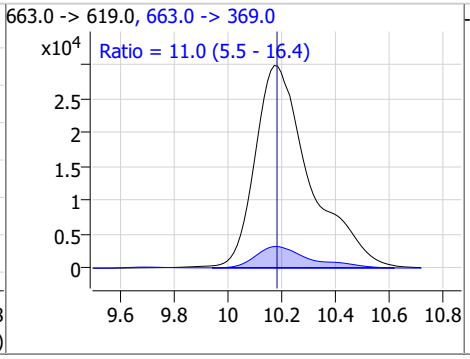


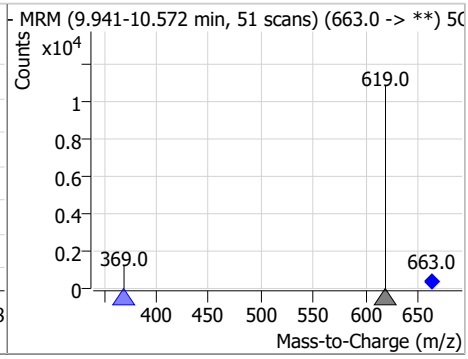




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	19.47	10.17	-0.04	399408	663.0 -> 369.0	11.0	5.5	16.4

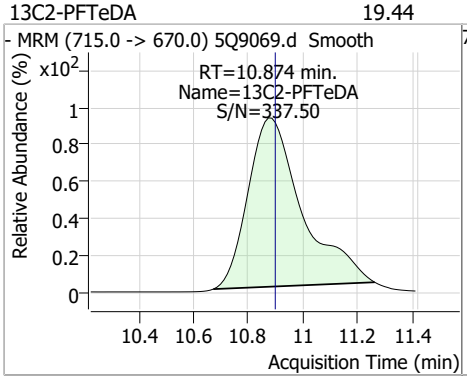


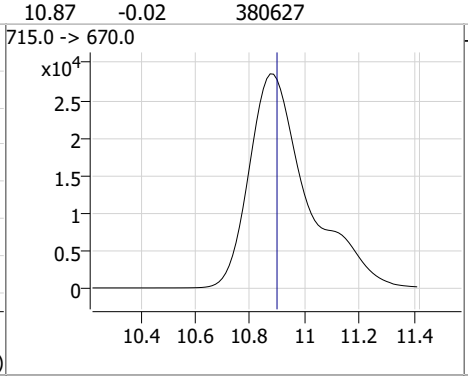


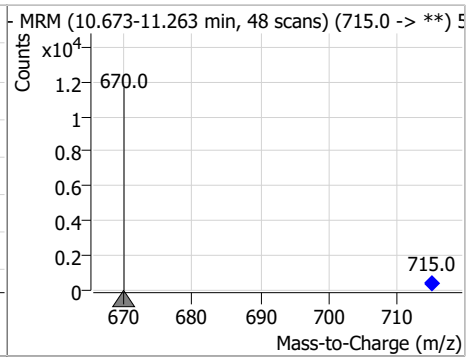


Perfluorinated Compounds by LC/MS/MS

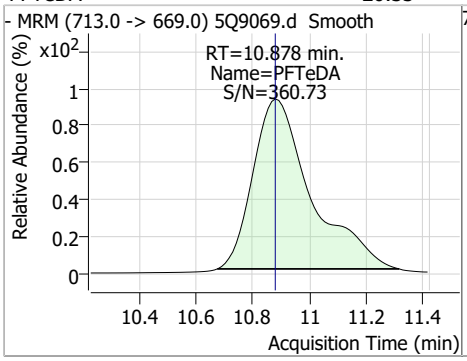
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.44	10.87	-0.02	380627				

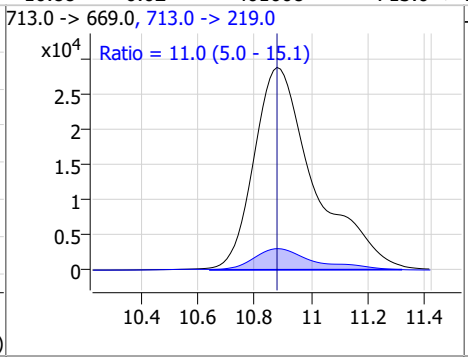


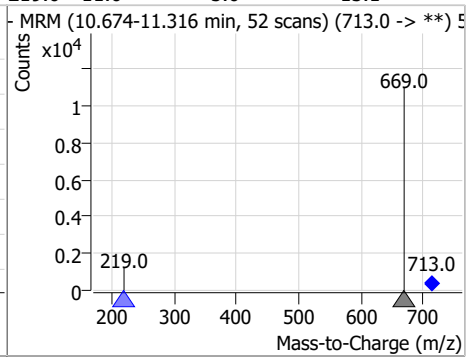




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	20.33	10.88	-0.02	401008	713.0 -> 219.0	11.0	5.0	15.1







Manual Integration Approval Summary

Sample Number:	S5Q134-CC134	**Method:**	EPA 537M QSM5.3 B-15
Lab FileID:	5Q9069.D	**Analyst approved:**	12/29/22 10:50 Lindsay Ritner
Injection Time:	12/28/22 20:43	**Supervisor approved:**	12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.74	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.88	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9080.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/28/2022 11:51:04 PM
Sample Name : cc134-20
Vial : P1-A7
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	107680	20.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	207922	20.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	302478	20.00	µg/L	0.000
M4-PFHpA	5.726	367.0 -> 322.0	316191	20.00	µg/L	0.000
M8-PFOA	6.361	421.0 -> 376.0	414432	20.00	µg/L	0.000
M9-PFNA	6.918	472.0 -> 427.0	437825	20.00	µg/L	0.000
M6-PFDA	7.436	519.0 -> 474.0	486993	20.00	µg/L	0.000
M7-PFUnDA	8.295	570.0 -> 525.0	649501	20.00	µg/L	-0.025
M2-PFDoDA	9.375	615.0 -> 570.0	504266	20.00	µg/L	-0.013
M2-PFTeDA	10.887	715.0 -> 670.0	386342	20.00	µg/L	-0.013
M8-FOSA	6.605	506.0 -> 78.0	107929	20.00	µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	25646	20.00	µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	35001	20.00	µg/L	0.000
M8-PFOS	6.879	507.0 -> 99.0	47531	20.00	µg/L	0.000
M2-4:2FTS	4.886	329.0 -> 309.0	94358	20.00	µg/L	0.000
M2-6:2FTS	6.360	429.0 -> 409.0	153999	20.00	µg/L	0.000
M2-8:2FTS	7.512	529.0 -> 509.0	150215	20.00	µg/L	0.000
M3-MeFOSAA	7.047	573.0 -> 419.0	44042	20.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	63564	20.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	33428	20.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	44159	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	94358	19.60	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%		
13C2-6:2FTS	6.360	429.0 -> 409.0	153999	20.09	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.4%		
13C2-8:2FTS	7.512	529.0 -> 509.0	150215	20.80	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.0%		
13C2-PFDoDA	9.375	615.0 -> 570.0	504266	22.43	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 112.1%		
13C2-PFTeDA	10.887	715.0 -> 670.0	386342	19.73	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%		
13C3-PFBS	4.124	302.0 -> 99.0	25646	19.73	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%		
13C3-PFHxS	5.733	402.0 -> 99.0	35001	19.56	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.8%		
13C4-PFBA	2.400	217.0 -> 172.0	107680	20.70	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.5%		
13C4-PFHpA	5.726	367.0 -> 322.0	316191	20.57	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.8%		
13C5-PFHxA	4.965	318.0 -> 273.0	302478	20.11	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.5%		
13C5-PFPeA	3.919	268.0 -> 223.0	207922	19.82	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.1%		
13C6-PFDA	7.436	519.0 -> 474.0	486993	20.95	µg/L	0.000

Perfluorinated Compounds by LC/MS/MS

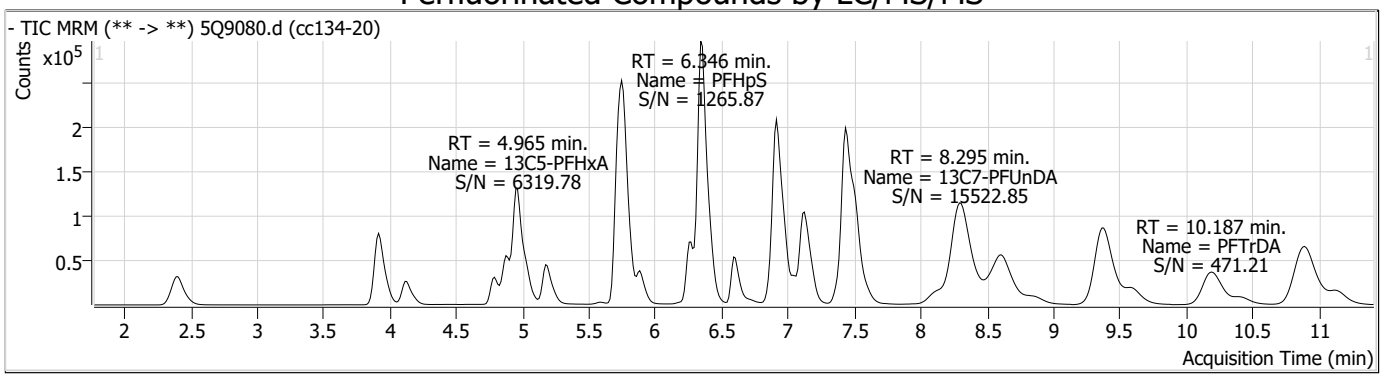
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.7%			
13C7-PFUnDA	8.295	570.0 -> 525.0	649501	22.20	µg/L		-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 111.0%			
13C8-FOSA	6.605	506.0 -> 78.0	107929	22.35	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 111.7%			
13C8-PFOA	6.361	421.0 -> 376.0	414432	20.57	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.8%			
13C8-PFOS	6.879	507.0 -> 99.0	47531	19.93	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.7%			
13C9-PFNA	6.918	472.0 -> 427.0	437825	20.81	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.1%			
d3-MeFOSAA	7.047	573.0 -> 419.0	44042	24.79	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 123.9%			
13C3-HFPO-DA	5.194	287.0 -> 169.0	63564	19.22	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.1%			
d3-MeFOSA	6.964	515.0 -> 169.0	33428	22.06	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.3%			
d5-EtFOSAA	7.157	589.0 -> 419.0	44159	23.94	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 119.7%			
Target Compounds							QValue
4:2FTS	4.888	327.0 -> 307.0	106197	20.56	µg/L		100
		327.0 -> 81.0	63079				
6:2FTS	6.360	427.0 -> 407.0	164583	20.82	µg/L		100
		427.0 -> 81.0	70623				
8:2FTS	7.512	527.0 -> 507.0	156415	20.38	µg/L		99
		527.0 -> 81.0	77514				
EtFOSAA	7.158	584.0 -> 419.0	31462	21.34	µg/L		100
		584.0 -> 483.0	20149				
FOSA	6.606	498.0 -> 78.0	107294	19.35	µg/L		99
		498.0 -> 478.0	3245				
MeFOSAA	7.047	570.0 -> 419.0	36425	20.38	µg/L		96
		570.0 -> 512.0	14203				
PFBA	2.394	213.0 -> 169.0	111690	19.04	µg/L		100
PFBS	4.129	299.0 -> 80.0	80470	19.29	µg/L		100
		299.0 -> 99.0	34306				
PFDA	7.437	513.0 -> 469.0	501678	19.35	µg/L		100
		513.0 -> 219.0	89303				
PFDoDA	9.379	613.0 -> 569.0	422794	18.37	µg/L		99
		613.0 -> 319.0	73121				
PFDS	8.119	599.0 -> 80.0	91799	15.75	µg/L		92
		599.0 -> 99.0	60895				
PFHpA	5.727	363.0 -> 319.0	377863	19.11	µg/L		100
		363.0 -> 169.0	84600				
PFHpS	6.346	449.0 -> 80.0	70264	19.34	µg/L		98
		449.0 -> 99.0	37678				
PFHxA	4.966	313.0 -> 269.0	298768	19.45	µg/L		100
		313.0 -> 119.0	13643				
PFHxS	5.735	399.0 -> 80.0	69223	19.48	µg/L	m	98
		399.0 -> 99.0	39712				
PFNA	6.918	463.0 -> 419.0	442928	19.51	µg/L		100
		463.0 -> 219.0	95617				
PFNS	7.384	549.0 -> 80.0	64268	19.72	µg/L		100
		549.0 -> 99.0	38480				
PFOA	6.362	413.0 -> 369.0	465777	19.64	µg/L		100
		413.0 -> 169.0	124487				
PFOS	6.880	499.0 -> 80.0	83593	19.06	µg/L	m	99

Perfluorinated Compounds by LC/MS/MS

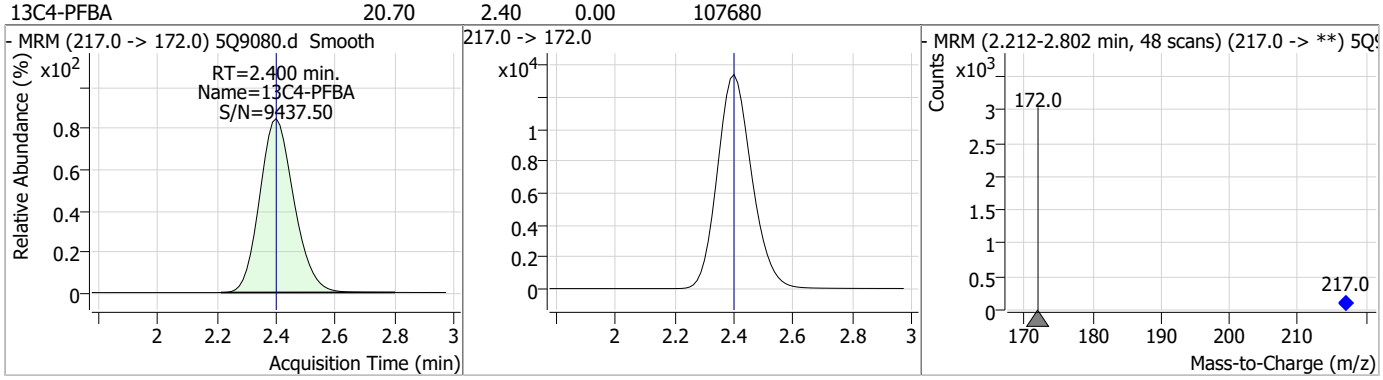
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	40393			
PFPeA	3.922	263.0 -> 219.0	236134	19.32	µg/L	100
PFPeS	5.047	349.0 -> 80.0	51659	18.92	µg/L	99
		349.0 -> 99.0	26191			
PFTeDA	10.891	713.0 -> 669.0	403891	20.18	µg/L	98
		713.0 -> 219.0	44077			
PFTrDA	10.187	663.0 -> 619.0	407505	18.54	µg/L	100
		663.0 -> 369.0	44869			
PFUnDA	8.296	563.0 -> 519.0	630365	18.87	µg/L	100
		563.0 -> 269.0	106815			
11Cl-PF3OUdS	8.615	631.0 -> 451.0	408360	17.32	µg/L	96
		633.0 -> 453.0	125281			
9Cl-PF3ONS	7.123	531.0 -> 351.0	362697	16.85	µg/L	99
		533.0 -> 353.0	113848			
ADONA	5.777	377.0 -> 251.0	500200	21.19	µg/L	100
		377.0 -> 85.0	188135			
HFPO-DA	5.190	329.0 -> 169.0	98010	19.30	µg/L	98
		285.0 -> 169.0	59330			
MeFOSA	6.966	512.0 -> 169.0	38241	19.33	µg/L	96
		512.0 -> 219.0	28528			
4-PFECHS	6.268	461.0 -> 381.0	229090	17.35	µg/L	98
		461.0 -> 99.0	125819			
FBSA	4.793	298.0 -> 78.0	133132	21.21	µg/L	100
		298.0 -> 64.0	12382			
FHxSA	5.900	398.0 -> 78.0	126950	20.59	µg/L	100
		398.0 -> 64.0	12144			

 # = Qualifier out of range, m = manually integrated, + = Area summed

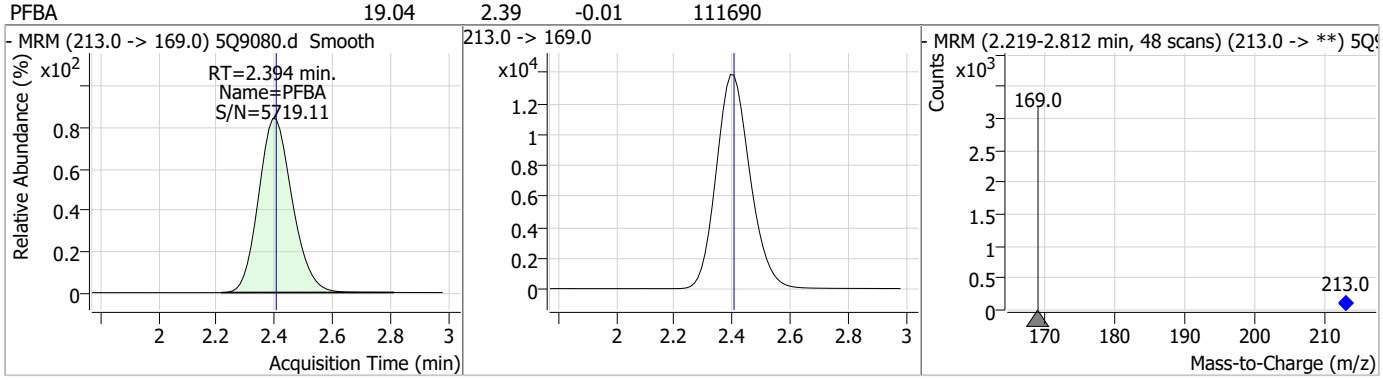
Perfluorinated Compounds by LC/MS/MS



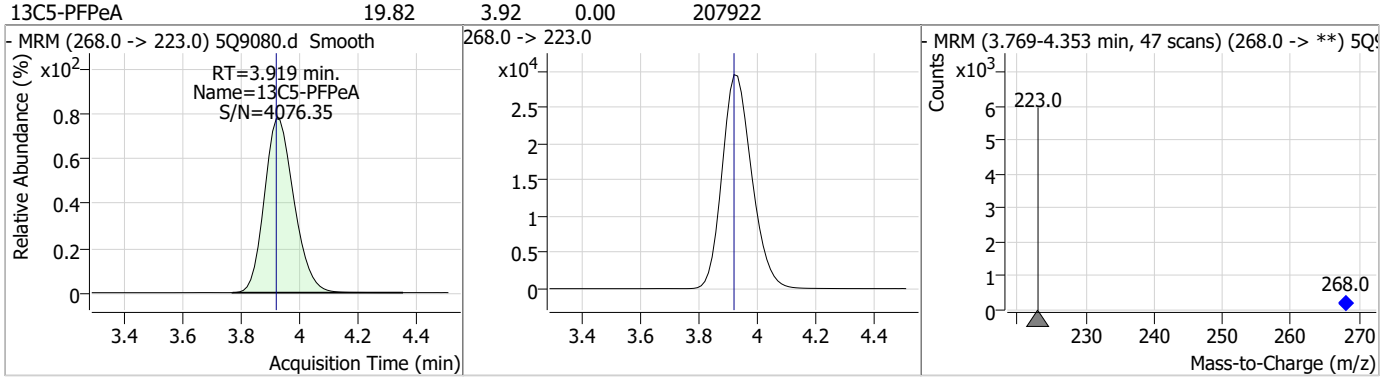
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.70	2.40	0.00	107680				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.04	2.39	-0.01	111690				

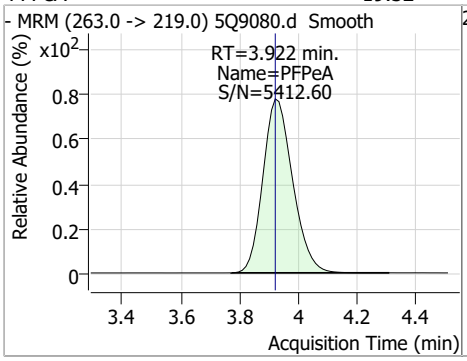


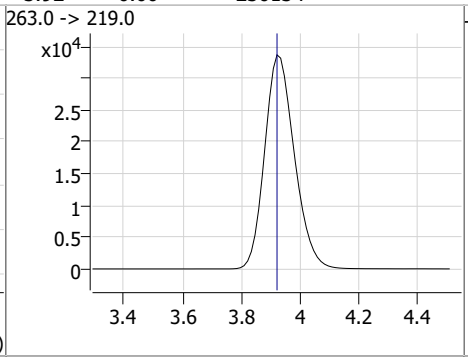
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.82	3.92	0.00	207922				

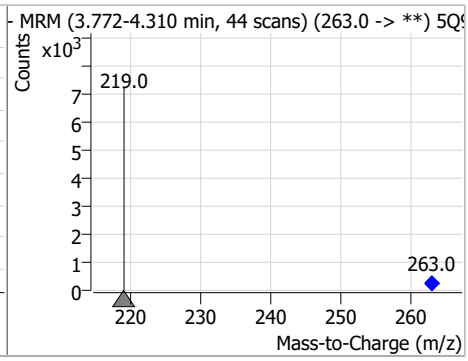


Perfluorinated Compounds by LC/MS/MS

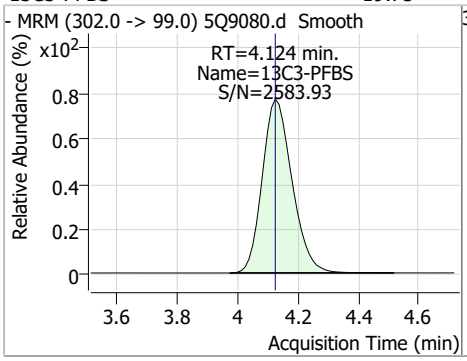
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.32	3.92	0.00	236134				

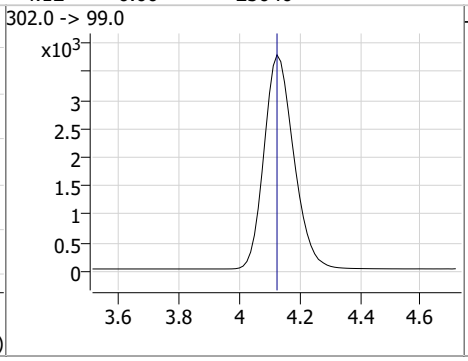


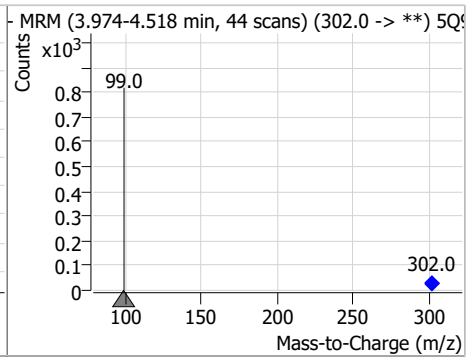




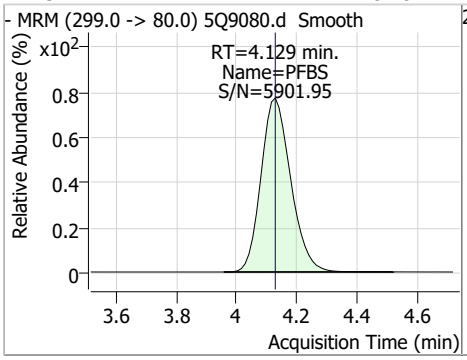
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.73	4.12	0.00	25646				

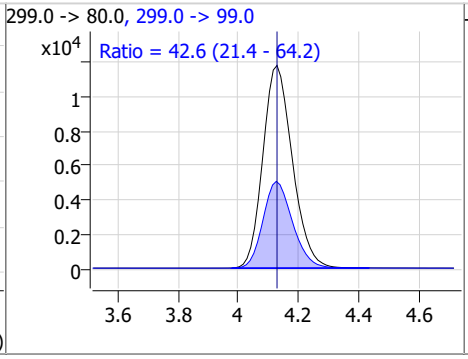


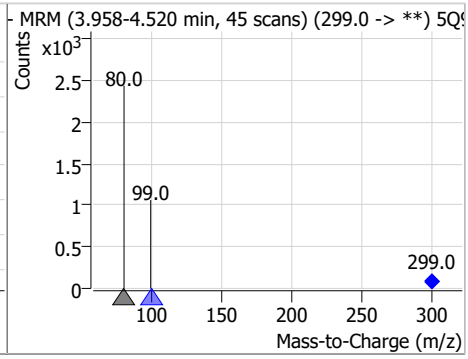




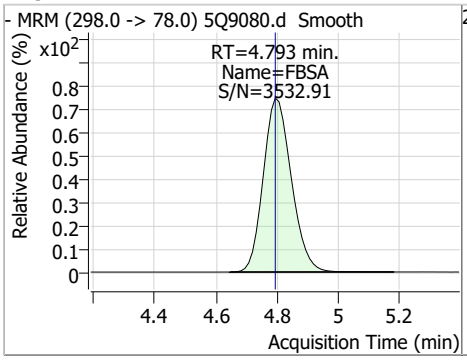
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.29	4.13	0.00	80470	299.0 -> 99.0	42.6	21.4	64.2

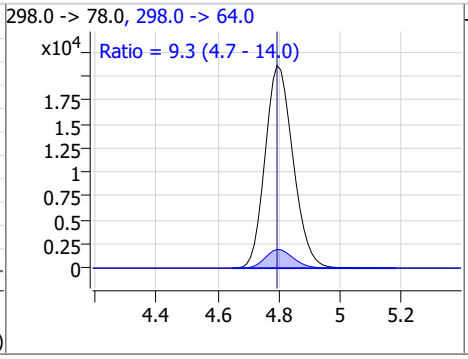


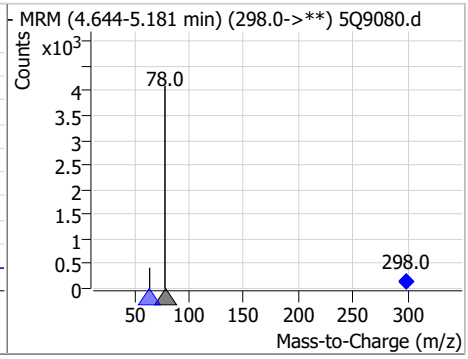




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	21.21	4.79	0.00	133132	298.0 -> 64.0	9.3	4.7	14.0

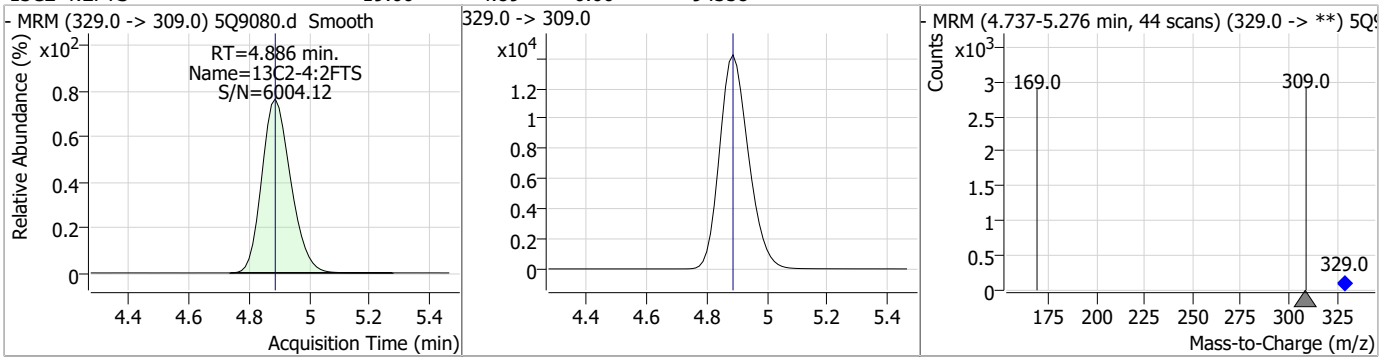




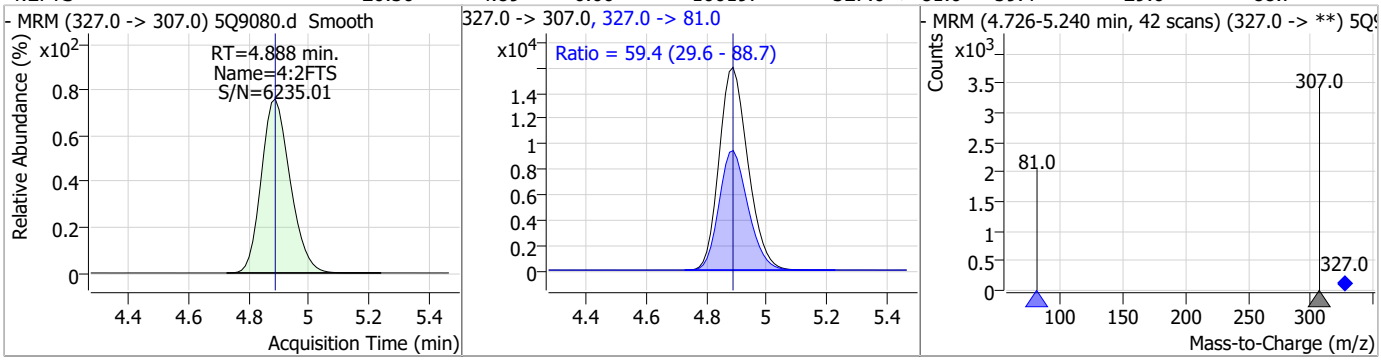


Perfluorinated Compounds by LC/MS/MS

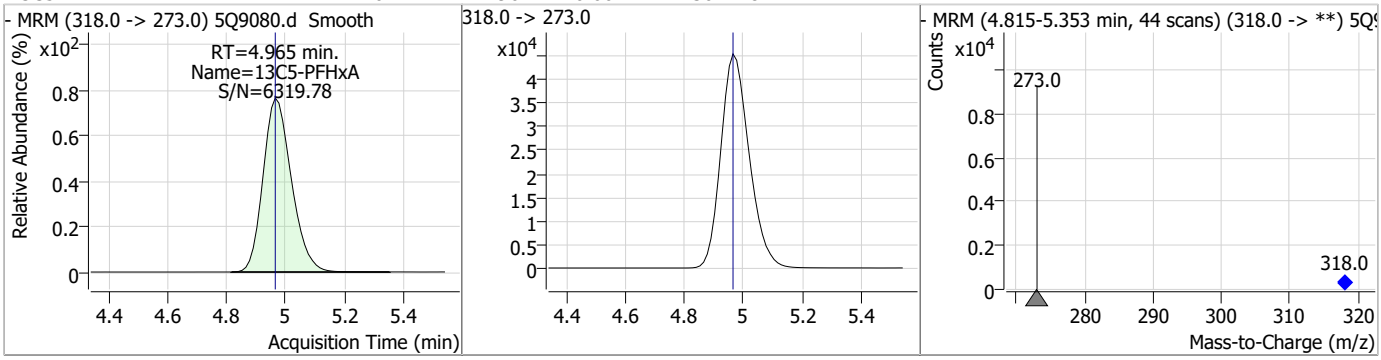
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.60	4.89	0.00	94358				



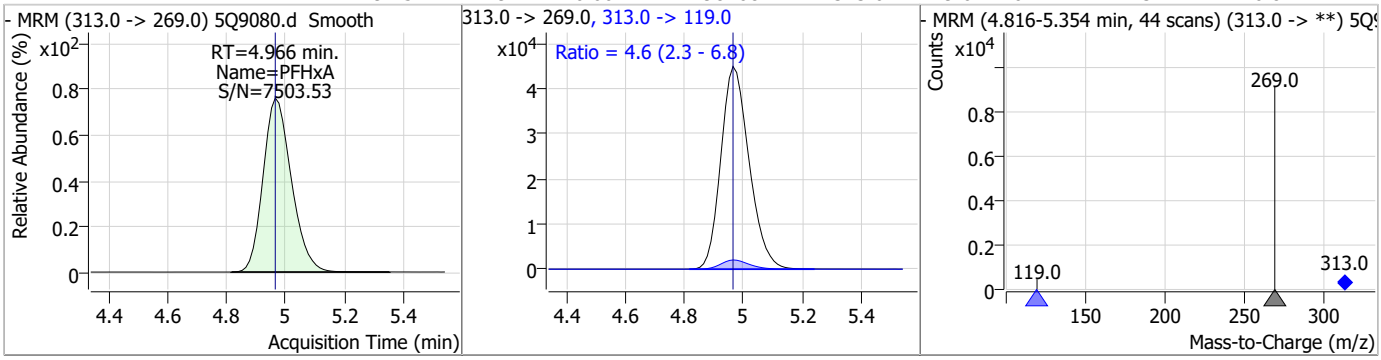
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.56	4.89	0.00	106197	327.0 -> 81.0	59.4	29.6	88.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.11	4.96	0.00	302478				

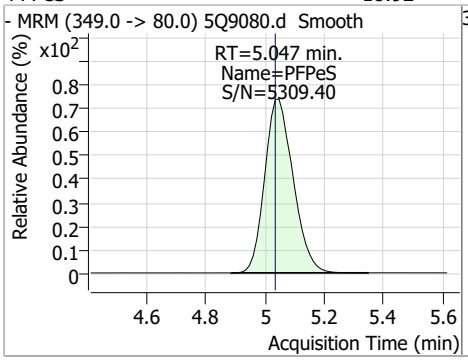


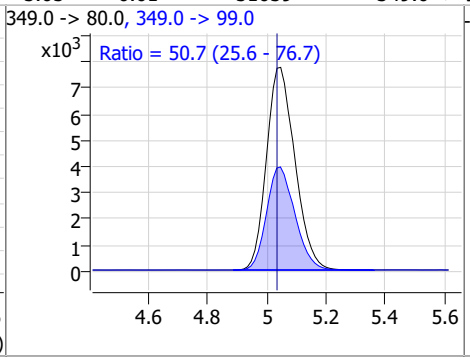
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.45	4.97	0.00	298768	313.0 -> 119.0	4.6	2.3	6.8

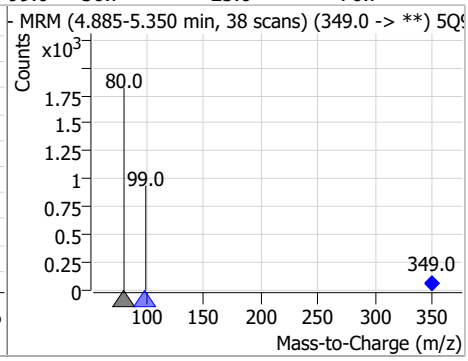


Perfluorinated Compounds by LC/MS/MS

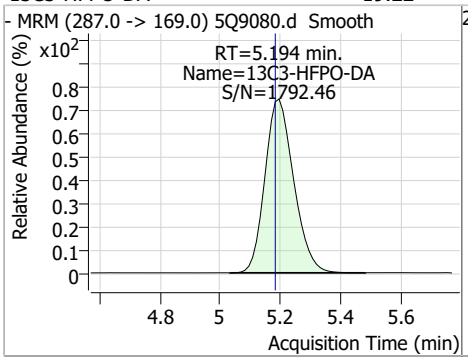
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	18.92	5.05	0.01	51659	349.0 -> 99.0	50.7	25.6	76.7

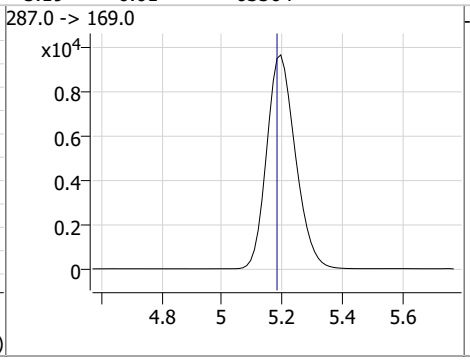


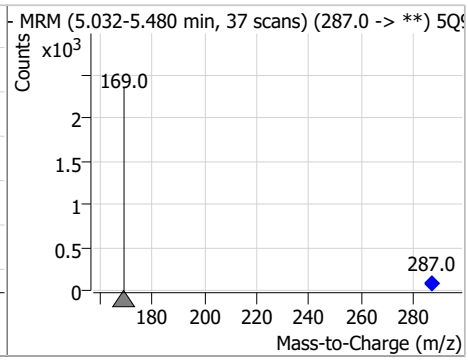




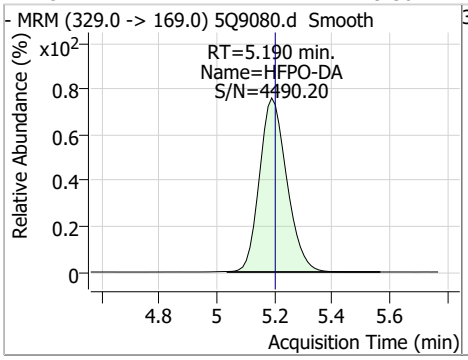
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.22	5.19	0.01	63564				

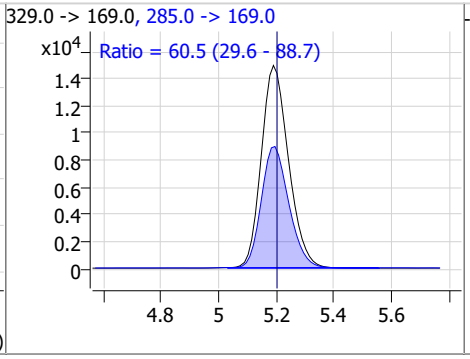


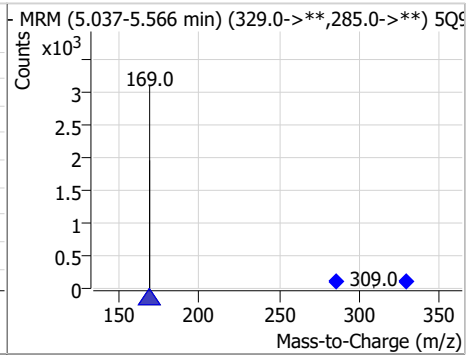




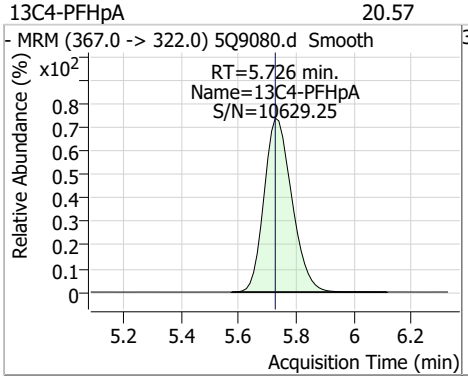
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	19.30	5.19	0.00	98010	285.0 -> 169.0	60.5	29.6	88.7

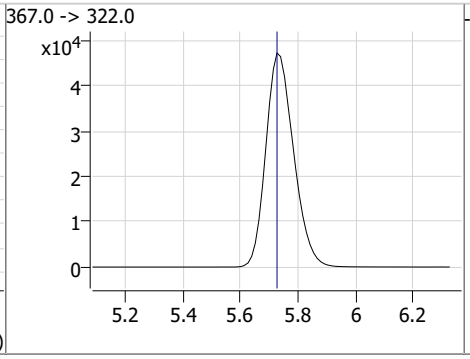


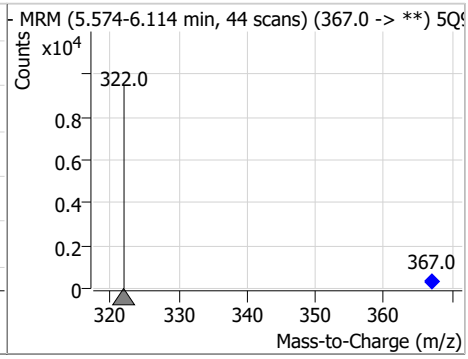




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.57	5.73	0.00	316191				

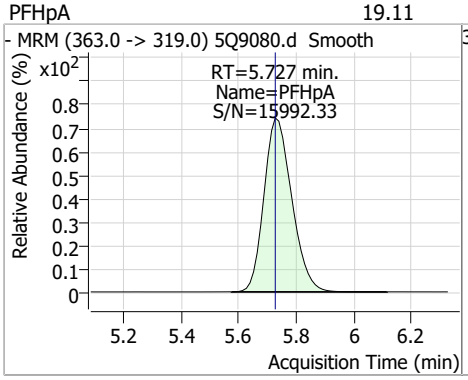


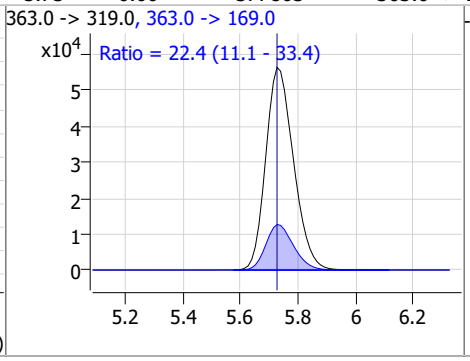


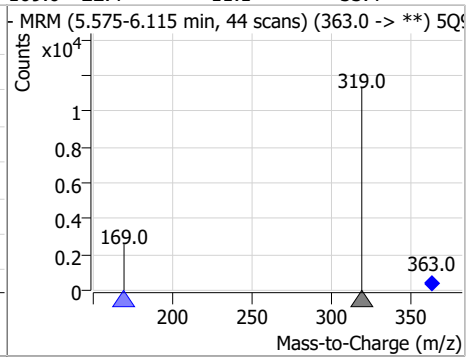


Perfluorinated Compounds by LC/MS/MS

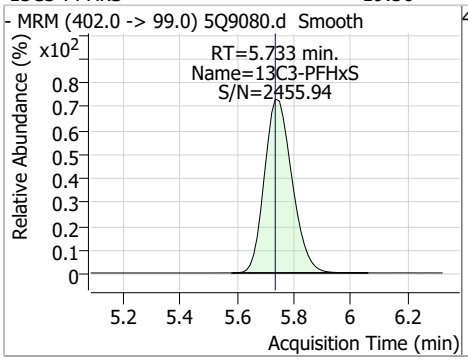
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	19.11	5.73	0.00	377863	363.0 -> 169.0	22.4	11.1	33.4

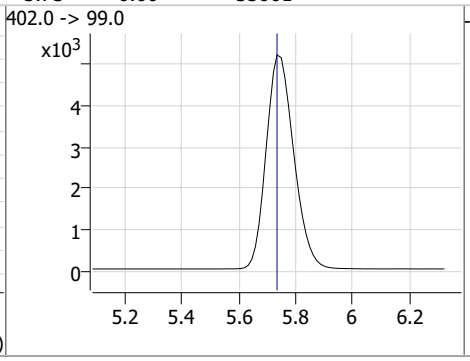


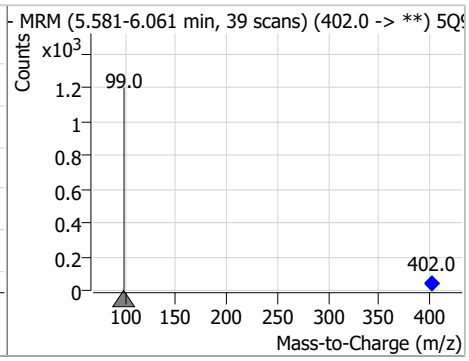




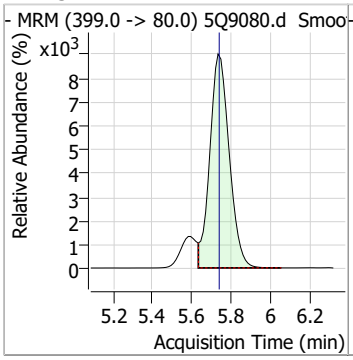
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.56	5.73	0.00	35001				

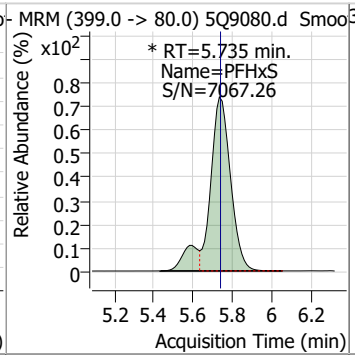


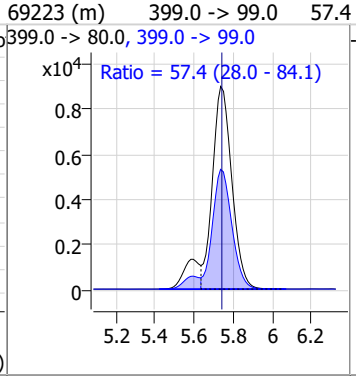


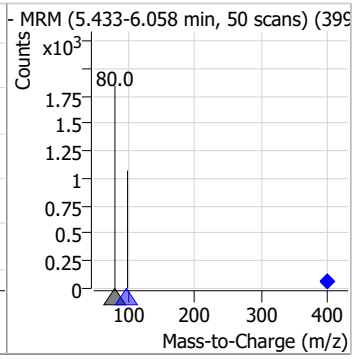


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	19.48	5.73	0.00	69223 (m)	399.0 -> 99.0	57.4	28.0	84.1

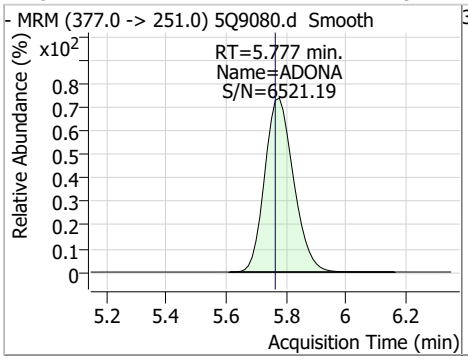


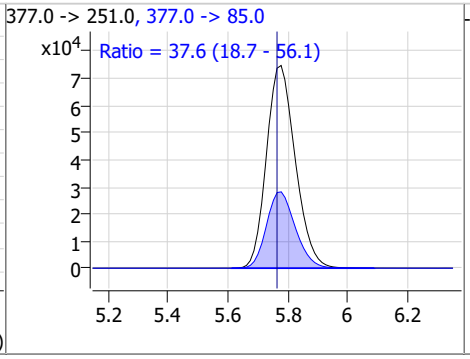


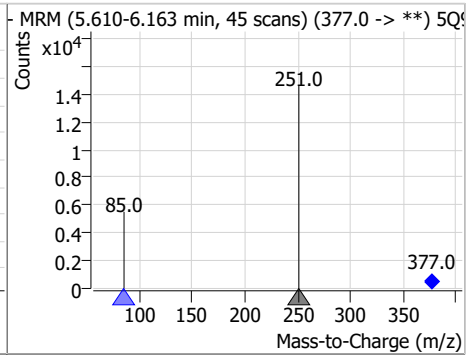




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	21.19	5.78	0.01	500200	377.0 -> 85.0	37.6	18.7	56.1

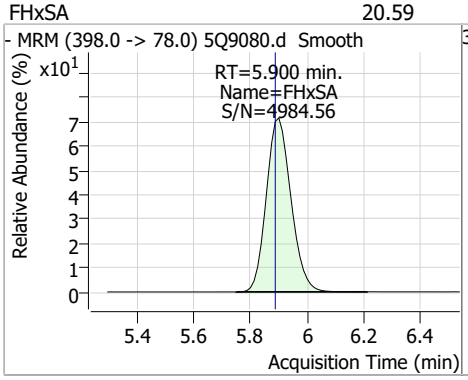


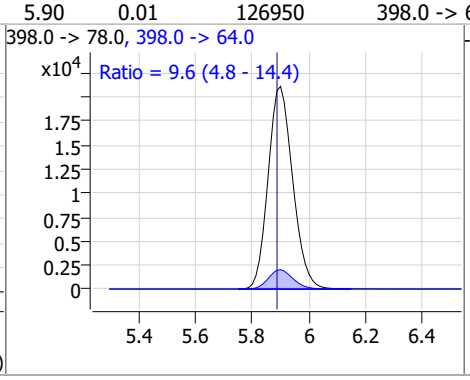


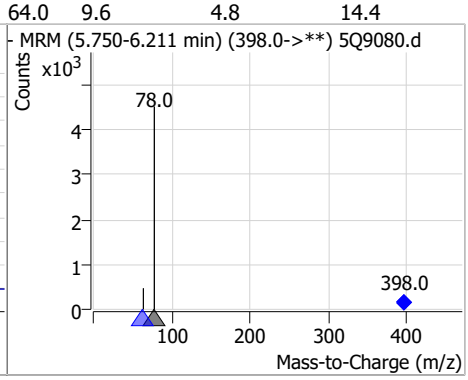


Perfluorinated Compounds by LC/MS/MS

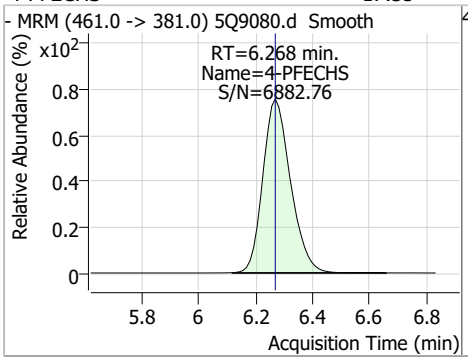
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	20.59	5.90	0.01	126950	398.0 -> 64.0	9.6	4.8	14.4

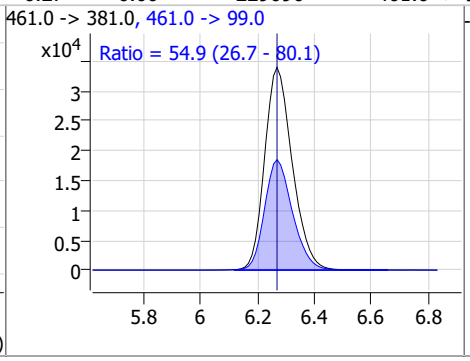


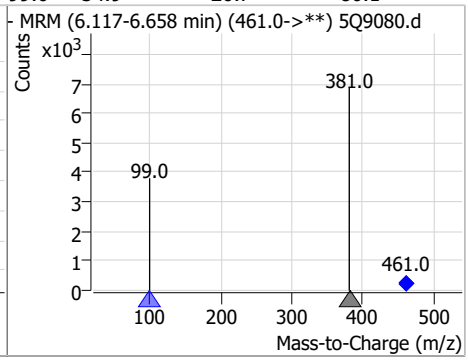




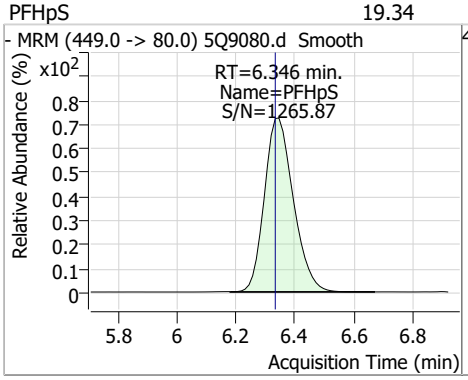
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	17.35	6.27	0.00	229090	461.0 -> 99.0	54.9	26.7	80.1

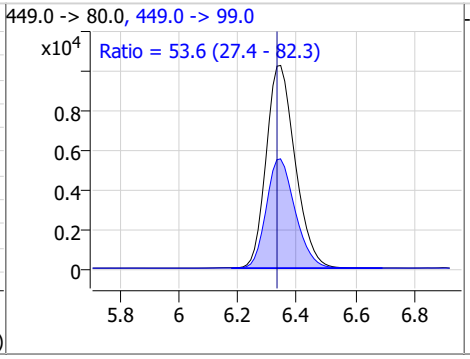


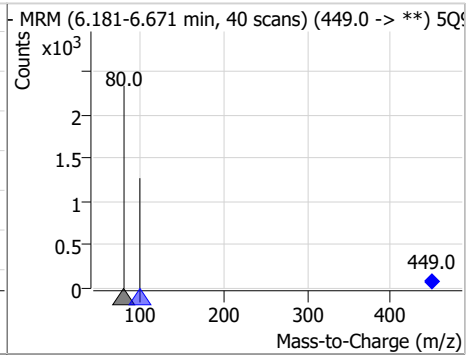




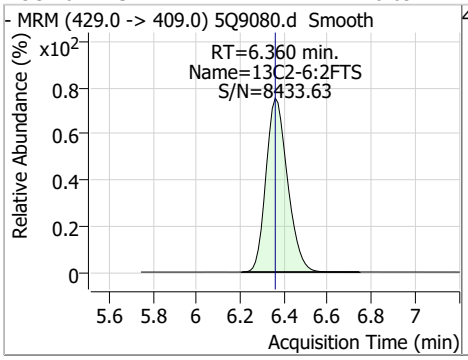
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	19.34	6.35	0.01	70264	449.0 -> 99.0	53.6	27.4	82.3

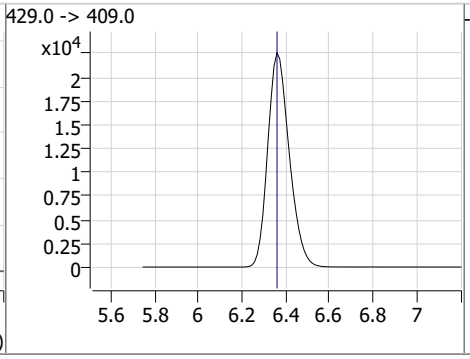


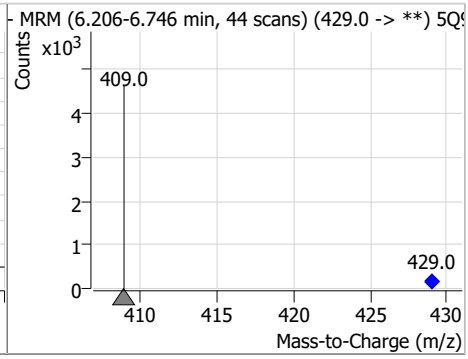




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.09	6.36	0.00	153999				

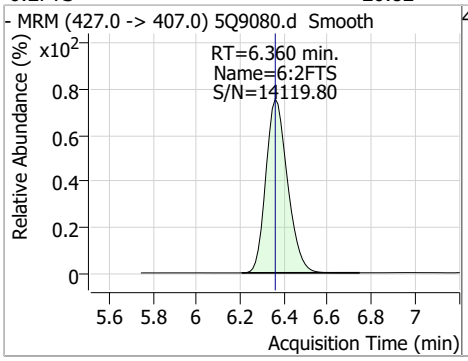


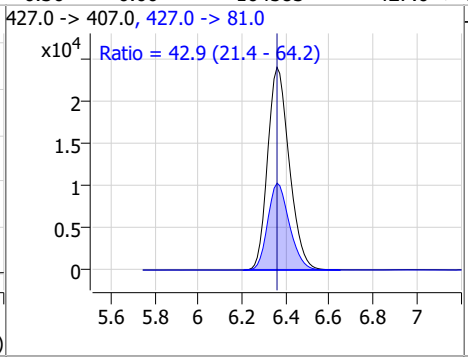


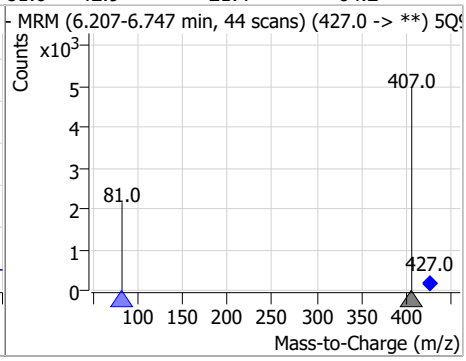


Perfluorinated Compounds by LC/MS/MS

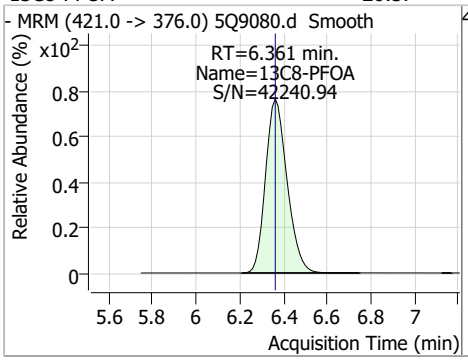
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	20.82	6.36	0.00	164583	427.0 -> 81.0	42.9	21.4	64.2

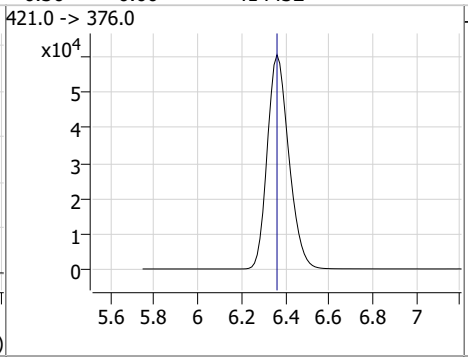


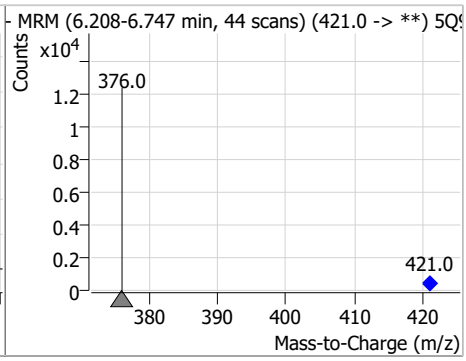




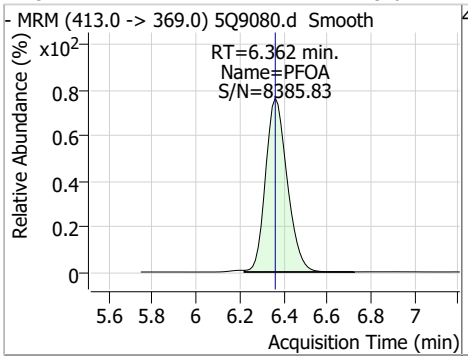
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.57	6.36	0.00	414432				

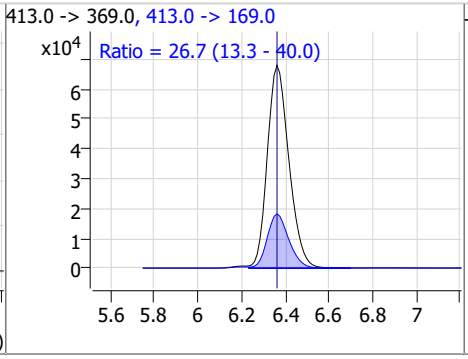


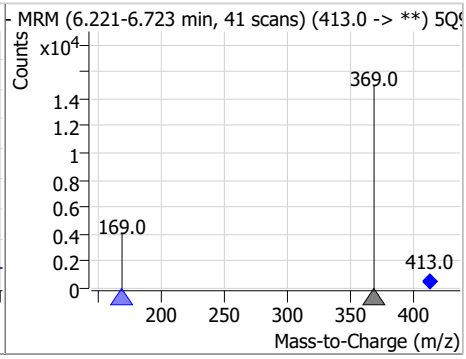




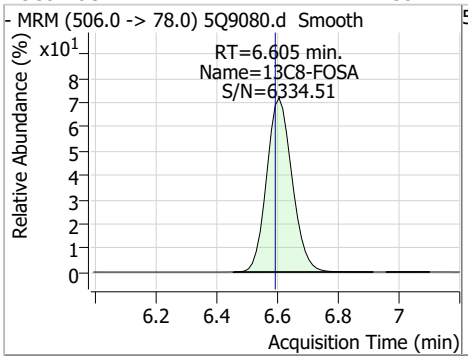
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.64	6.36	0.00	465777	413.0 -> 169.0	26.7	13.3	40.0

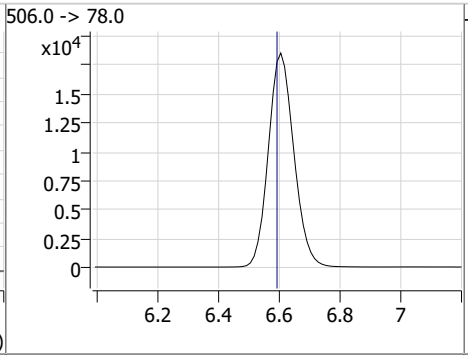


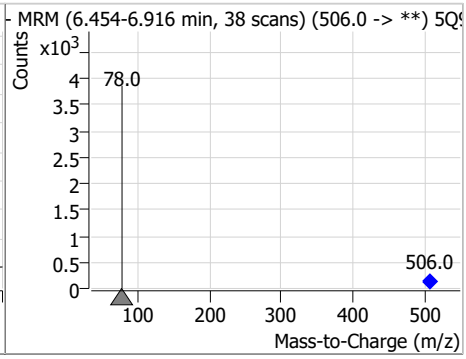




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	22.35	6.60	0.01	107929				

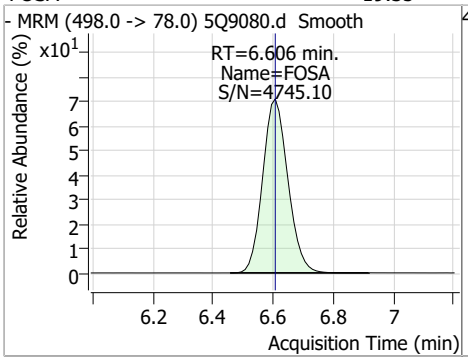


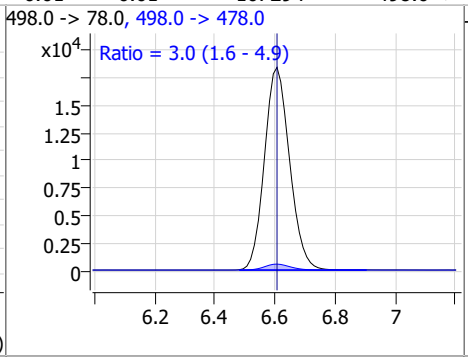


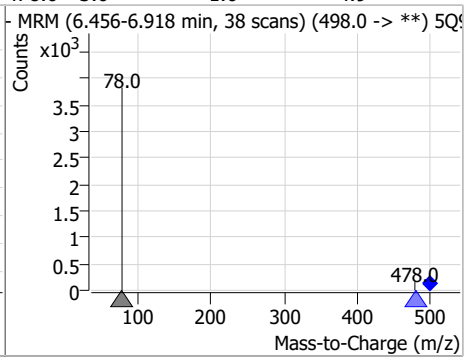


Perfluorinated Compounds by LC/MS/MS

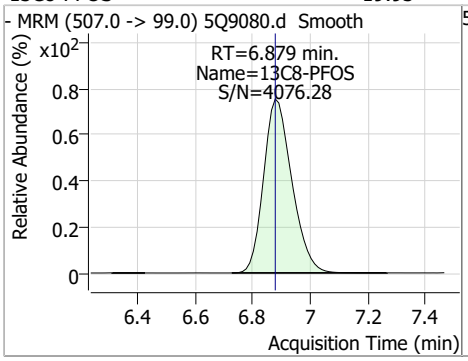
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	19.35	6.61	0.01	107294	498.0 -> 478.0	3.0	1.6	4.9

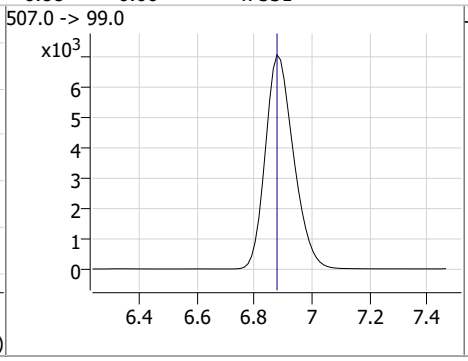


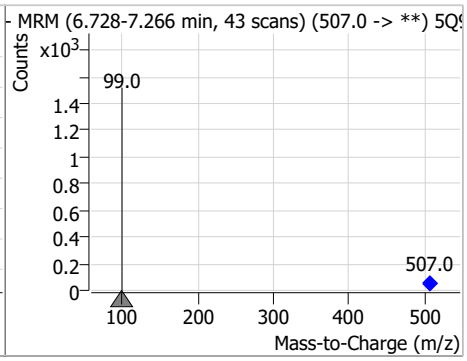




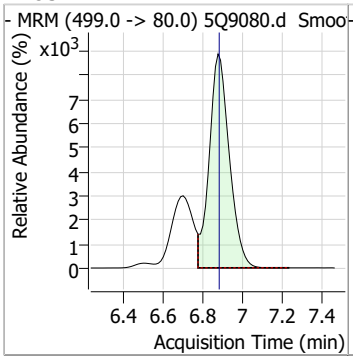
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.93	6.88	0.00	47531				

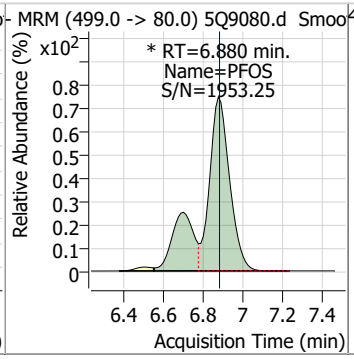


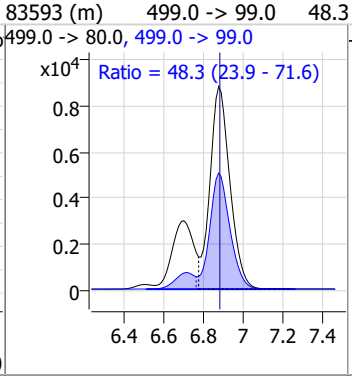


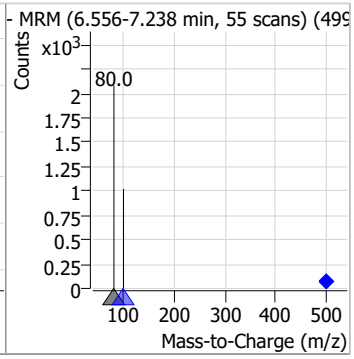


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.06	6.88	0.00	83593 (m)	499.0 -> 99.0	48.3	23.9	71.6

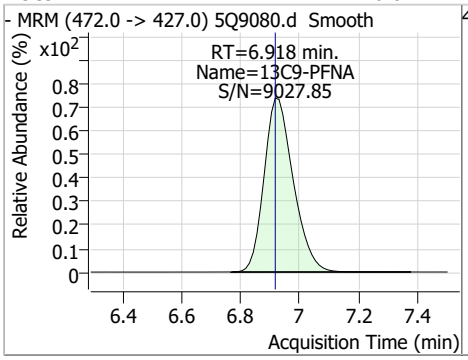


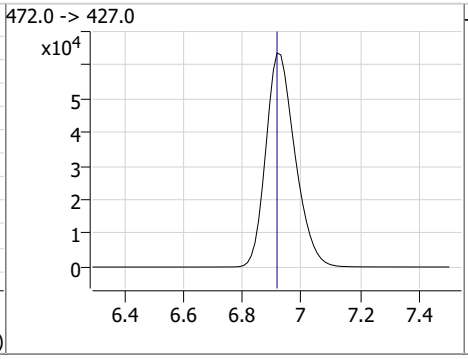


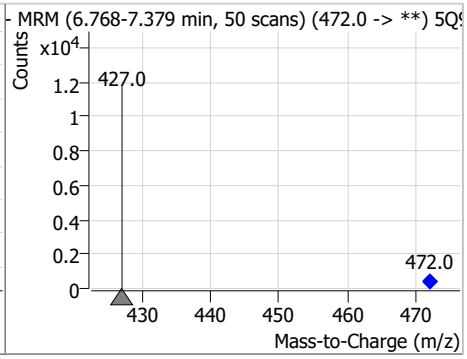




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.81	6.92	0.00	437825				

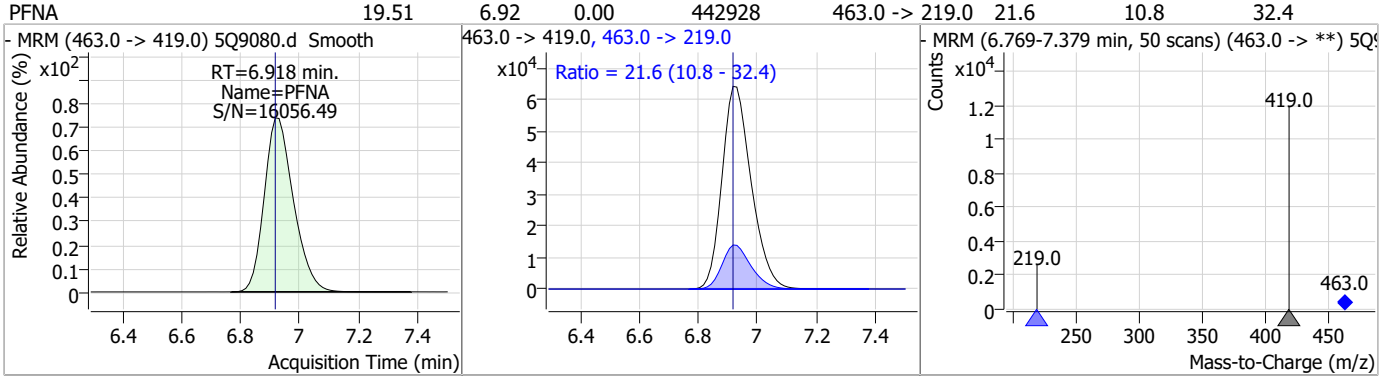




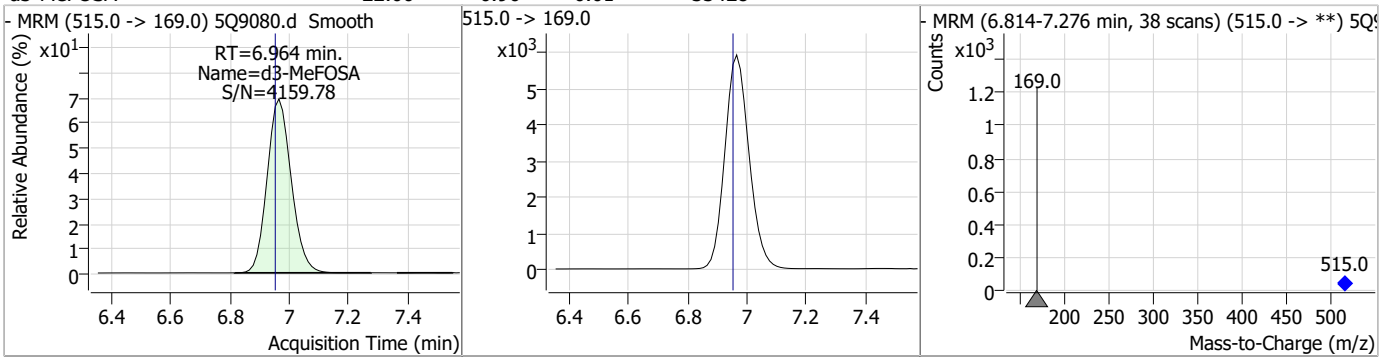


Perfluorinated Compounds by LC/MS/MS

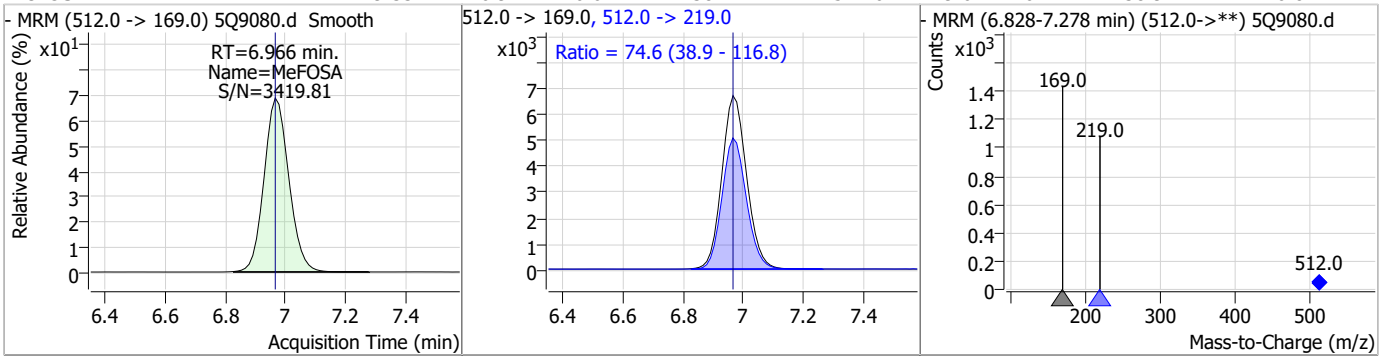
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.51	6.92	0.00	442928	463.0 -> 219.0	21.6	10.8	32.4



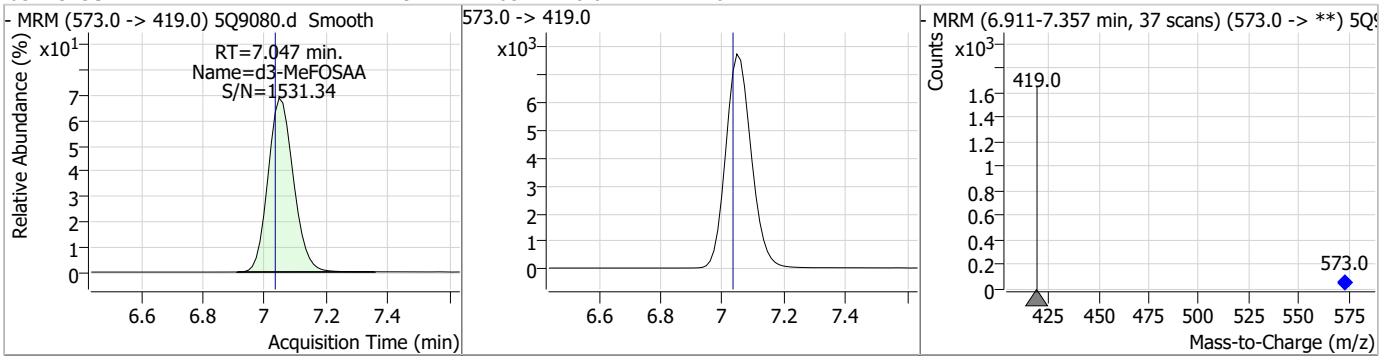
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	22.06	6.96	0.01	33428				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	19.33	6.97	0.01	38241	512.0 -> 219.0	74.6	38.9	116.8

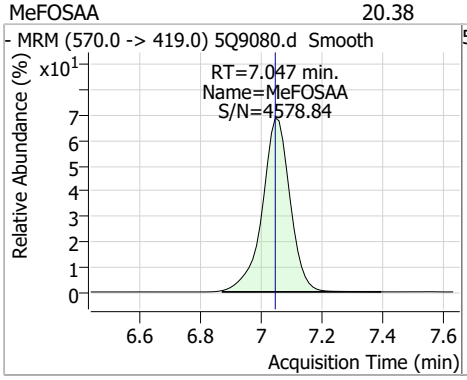


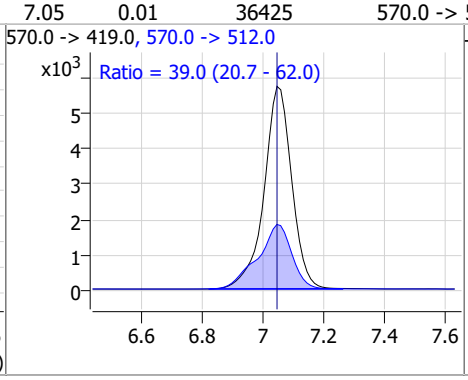
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	24.79	7.05	0.01	44042				

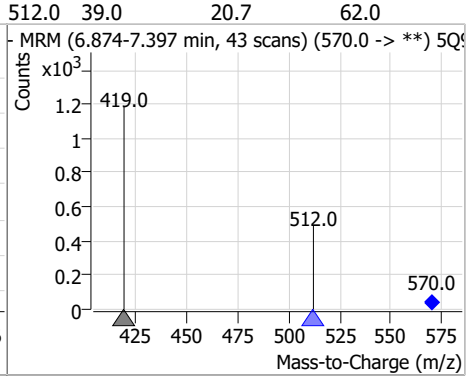


Perfluorinated Compounds by LC/MS/MS

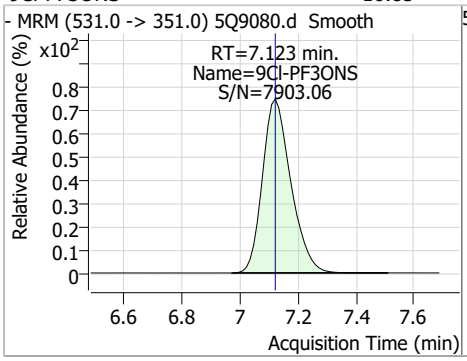
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	20.38	7.05	0.01	36425	570.0 -> 512.0	39.0	20.7	62.0

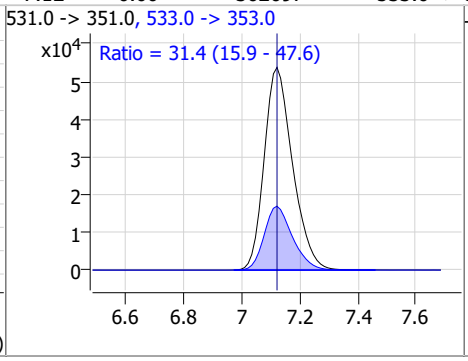


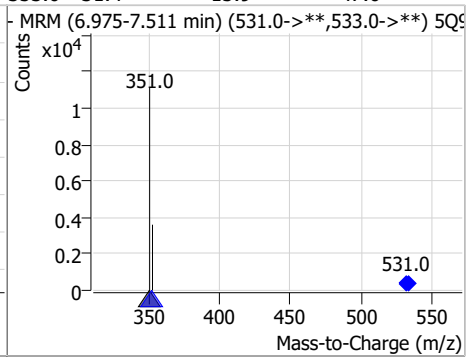




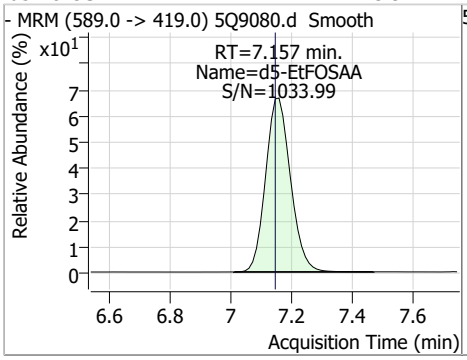
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	16.85	7.12	0.00	362697	533.0 -> 353.0	31.4	15.9	47.6

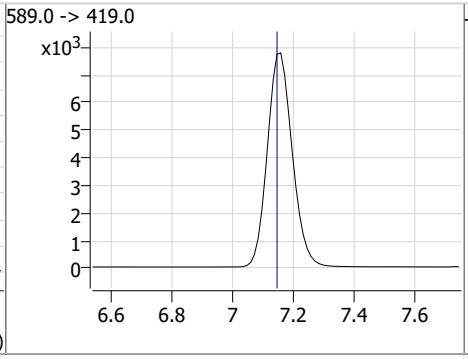


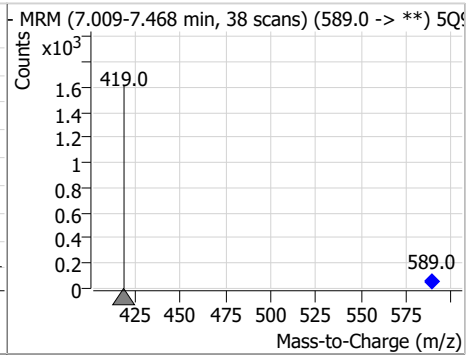




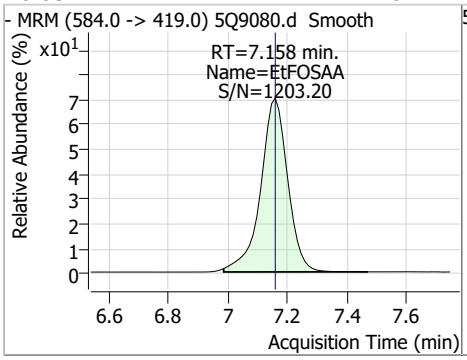
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	23.94	7.16	0.01	44159				

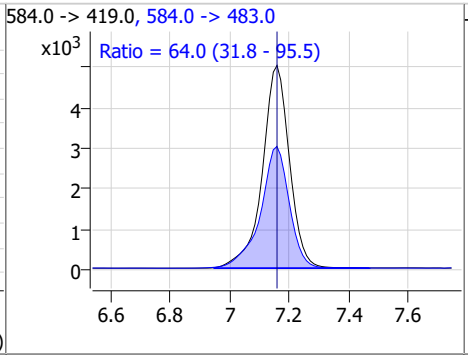


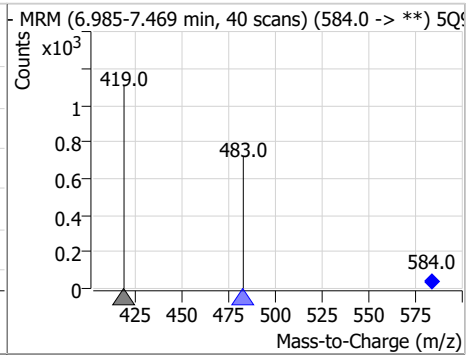




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	21.34	7.16	0.01	31462	584.0 -> 483.0	64.0	31.8	95.5

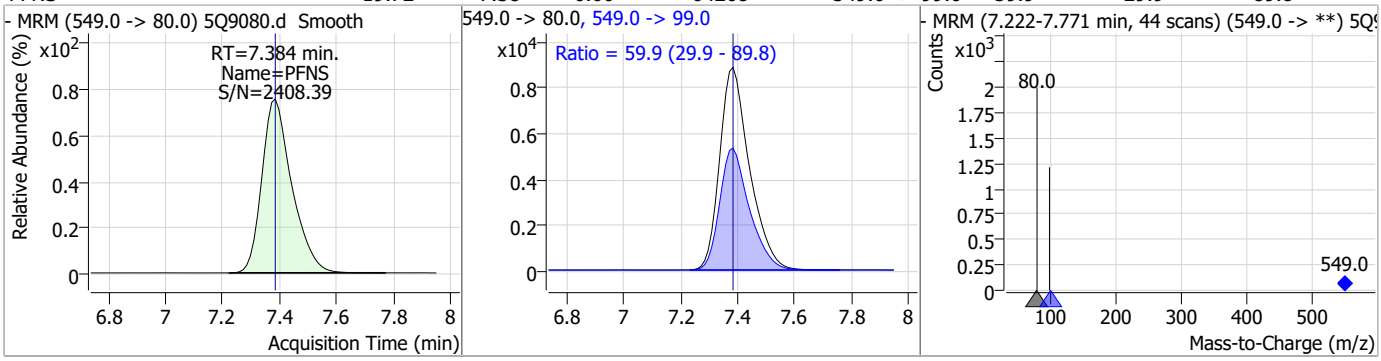




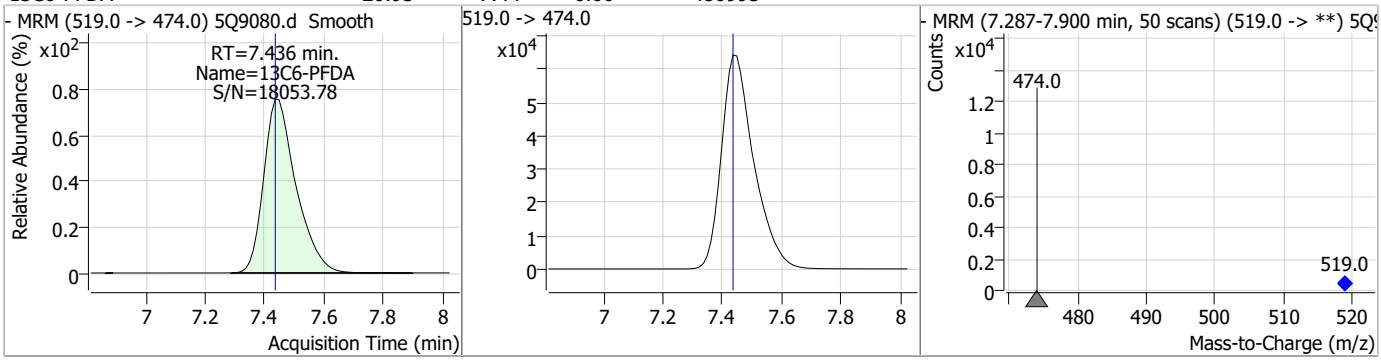


Perfluorinated Compounds by LC/MS/MS

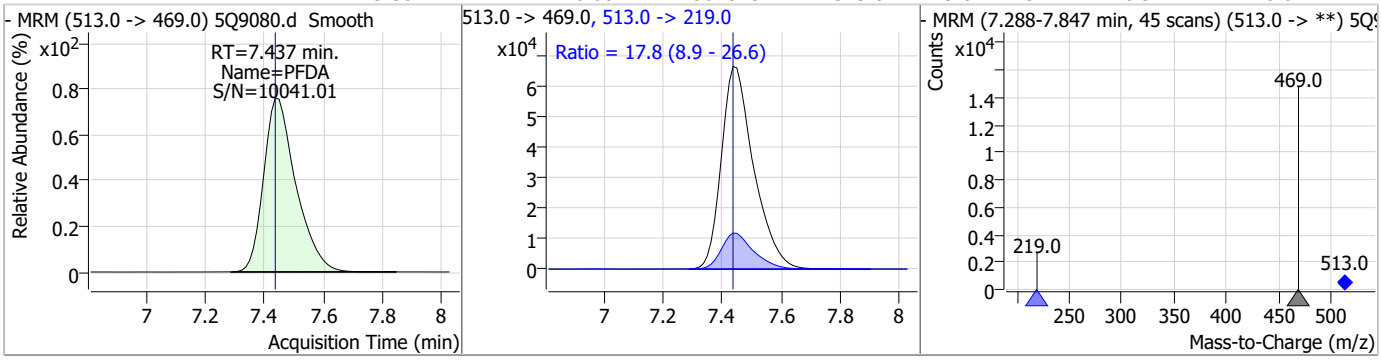
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	19.72	7.38	0.00	64268	549.0 -> 99.0	59.9	29.9	89.8



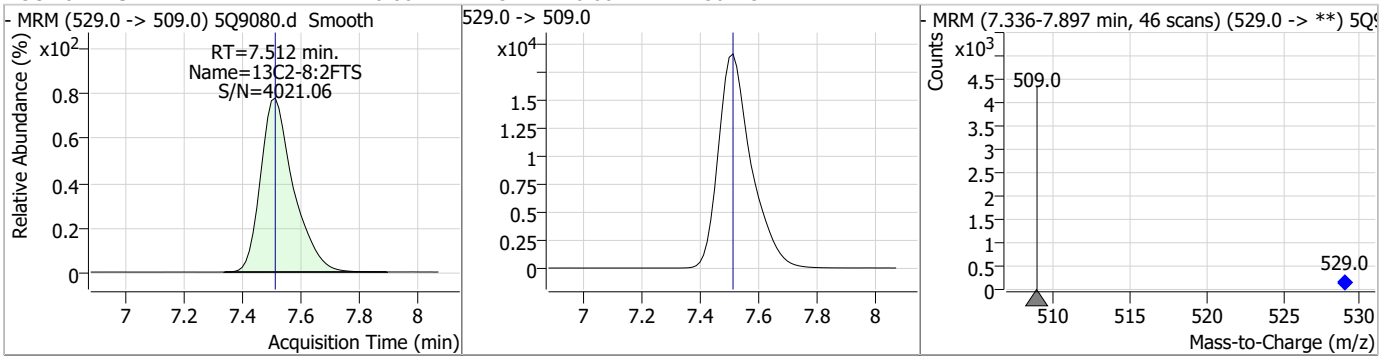
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.95	7.44	0.00	486993				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.35	7.44	0.00	501678	513.0 -> 219.0	17.8	8.9	26.6

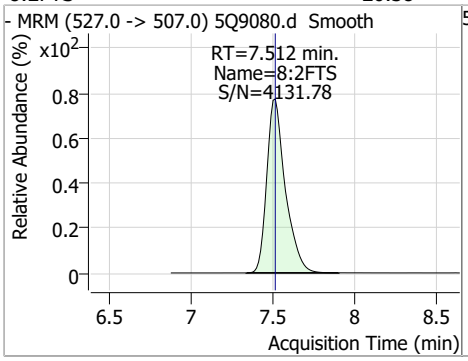


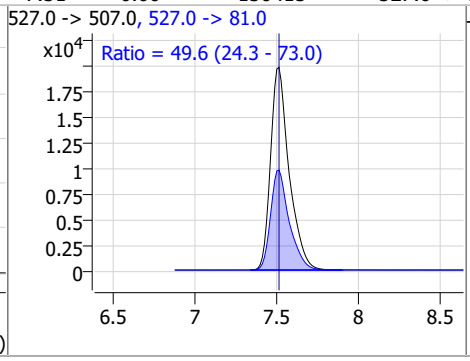
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	20.80	7.51	0.00	150215				

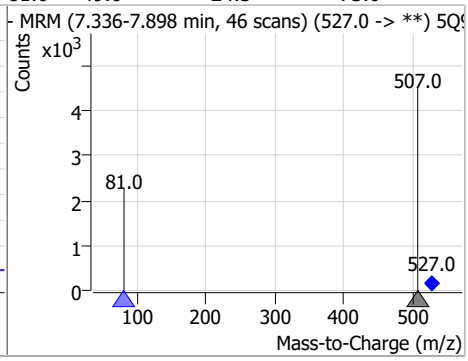


Perfluorinated Compounds by LC/MS/MS

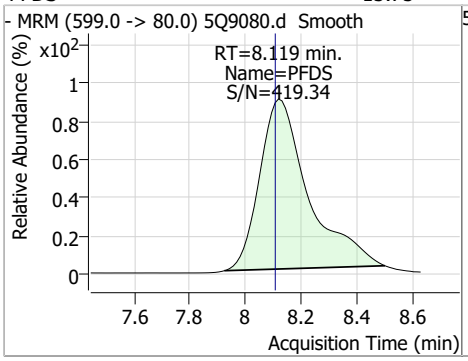
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.38	7.51	0.00	156415	527.0 -> 81.0	49.6	24.3	73.0

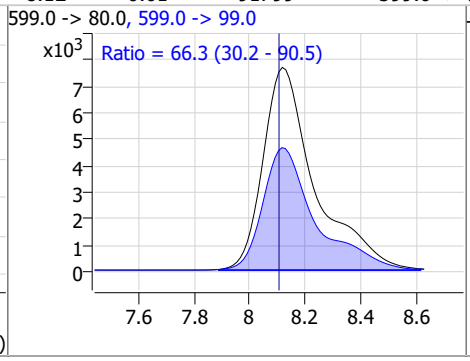


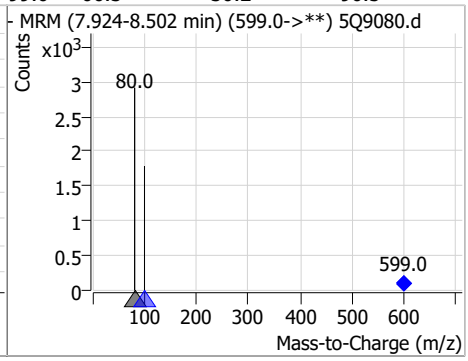




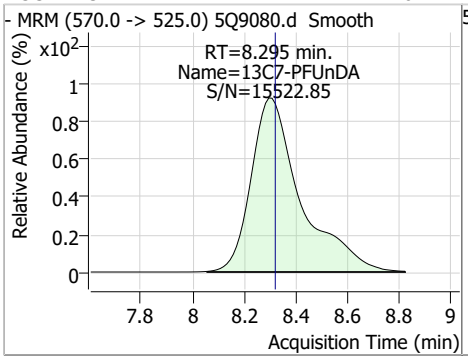
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	15.75	8.12	-0.01	91799	599.0 -> 99.0	66.3	30.2	90.5

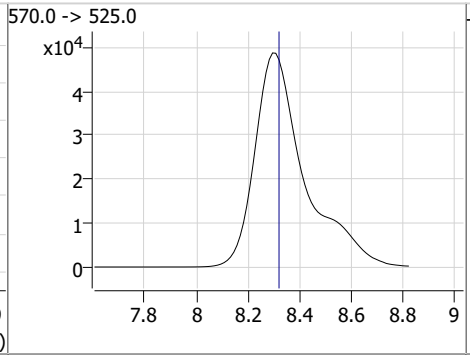


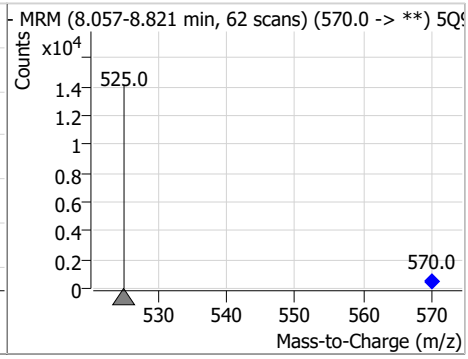




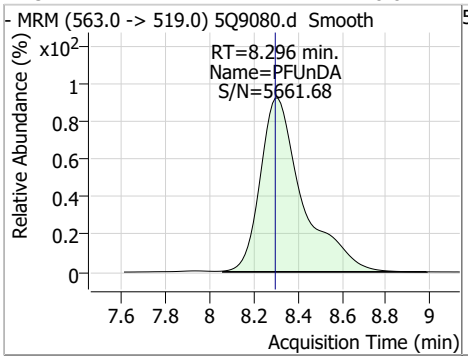
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	22.20	8.29	-0.02	649501				

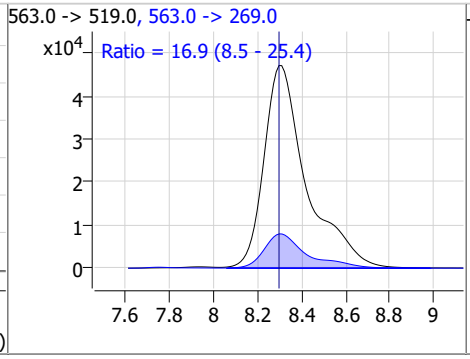


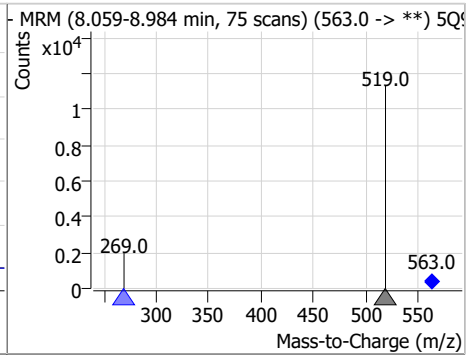




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	18.87	8.30	-0.02	630365	563.0 -> 269.0	16.9	8.5	25.4

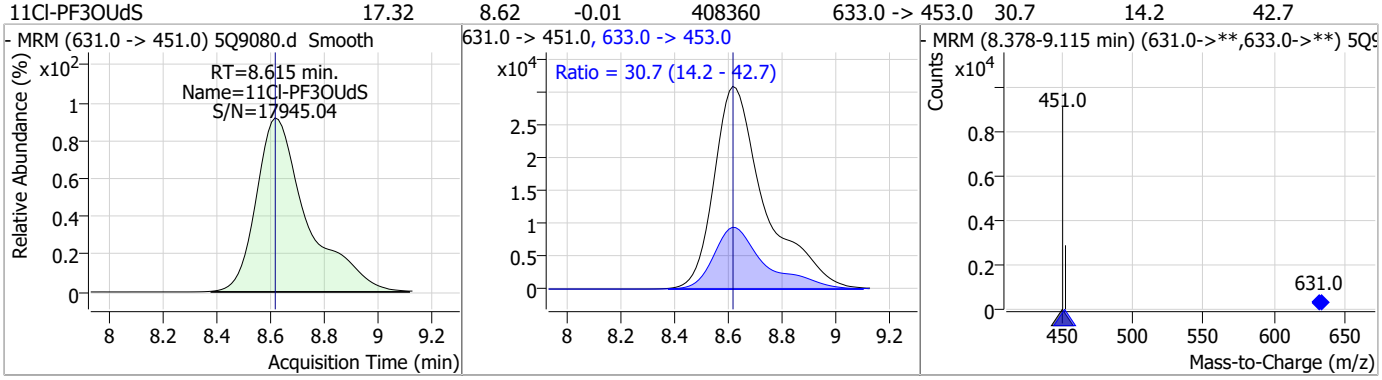




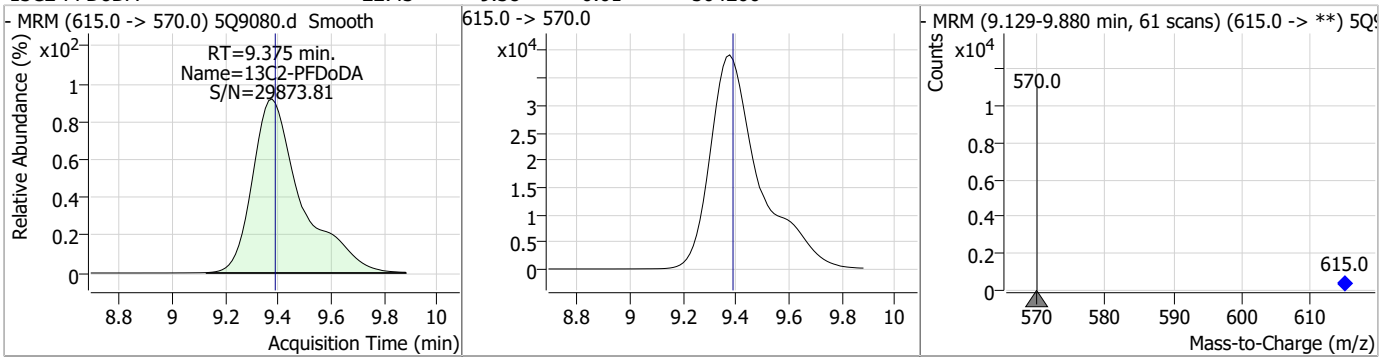


Perfluorinated Compounds by LC/MS/MS

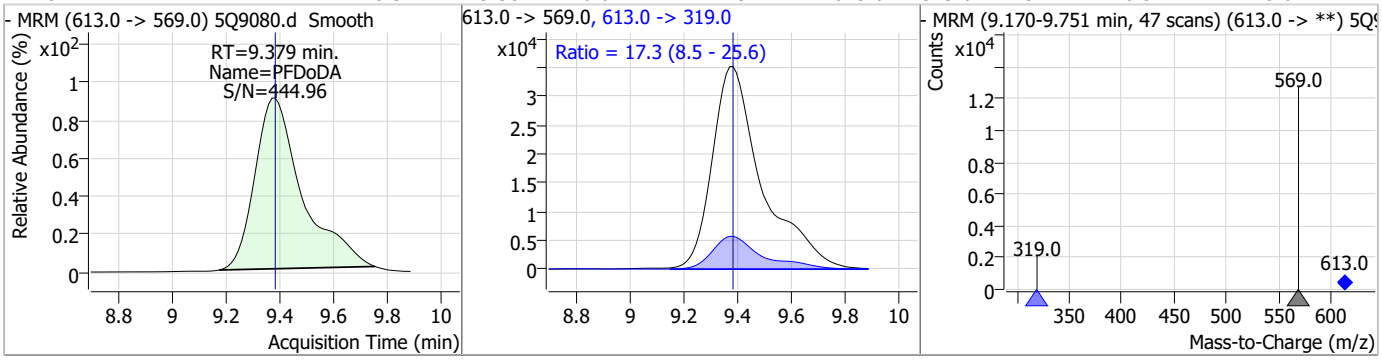
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	17.32	8.62	-0.01	408360	633.0 -> 453.0	30.7	14.2	42.7



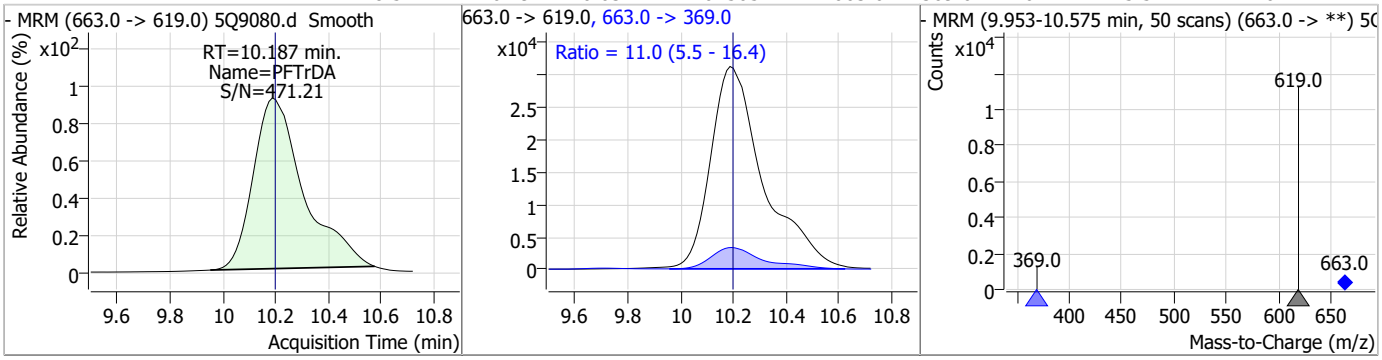
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	22.43	9.38	-0.01	504266				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	18.37	9.38	-0.01	422794	613.0 -> 319.0	17.3	8.5	25.6

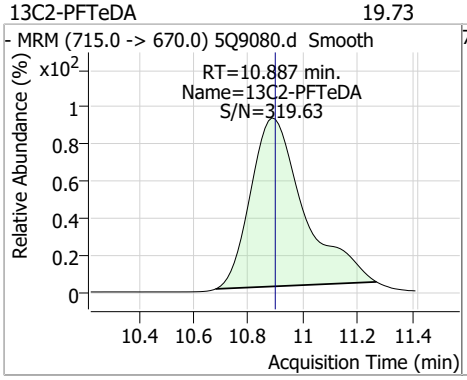


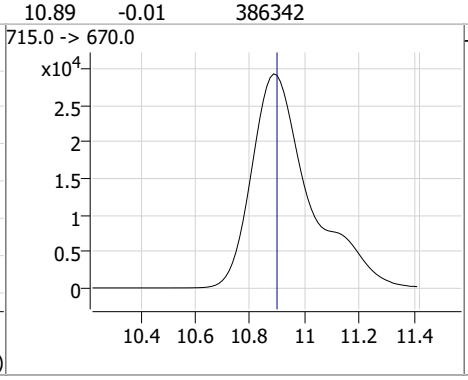
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	18.54	10.19	-0.03	407505	663.0 -> 369.0	11.0	5.5	16.4

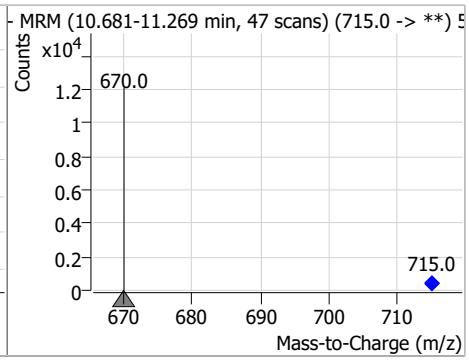


Perfluorinated Compounds by LC/MS/MS

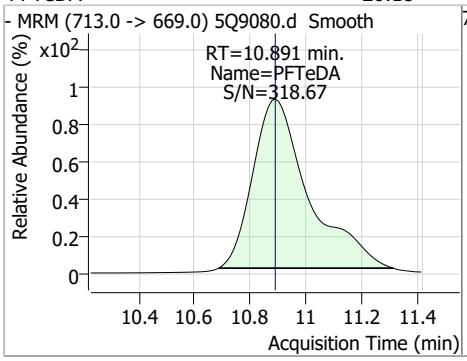
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.73	10.89	-0.01	386342				

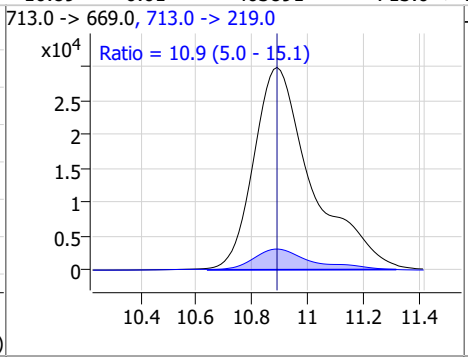


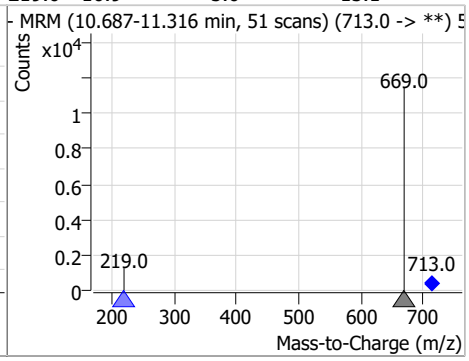




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	20.18	10.89	-0.01	403891	713.0 -> 219.0	10.9	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q134-CC134
Lab FileID: 5Q9080.D
Injection Time: 12/28/22 23:51

Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.74	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.88	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9081.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/29/2022 12:08:07 AM
Sample Name : cc134-1.0ll
Vial : P1-A3
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
Internal Standards					
M4-PFBA	2.400	217.0 -> 172.0	111631	20.00 µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	215686	20.00 µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	314618	20.00 µg/L	0.000
M4-PFHpA	5.726	367.0 -> 322.0	330966	20.00 µg/L	0.000
M8-PFOA	6.361	421.0 -> 376.0	436366	20.00 µg/L	0.000
M9-PFNA	6.918	472.0 -> 427.0	456959	20.00 µg/L	0.000
M6-PFDA	7.449	519.0 -> 474.0	509087	20.00 µg/L	0.013
M7-PFUnDA	8.307	570.0 -> 525.0	679001	20.00 µg/L	-0.012
M2-PFDoDA	9.375	615.0 -> 570.0	492422	20.00 µg/L	-0.013
M2-PFTeDA	10.887	715.0 -> 670.0	404796	20.00 µg/L	-0.013
M8-FOSA	6.605	506.0 -> 78.0	115218	20.00 µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	26463	20.00 µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	36427	20.00 µg/L	0.000
M8-PFOS	6.879	507.0 -> 99.0	49370	20.00 µg/L	0.000
M2-4:2FTS	4.886	329.0 -> 309.0	93782	20.00 µg/L	0.000
M2-6:2FTS	6.360	429.0 -> 409.0	154554	20.00 µg/L	0.000
M2-8:2FTS	7.512	529.0 -> 509.0	148085	20.00 µg/L	0.000
M3-MeFOSAA	7.047	573.0 -> 419.0	45705	20.00 µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	65614	20.00 µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	34615	20.00 µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	45705	20.00 µg/L	0.012
System Monitoring Compounds					
13C2-4:2FTS	4.886	329.0 -> 309.0	93782	19.48 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.4%	
13C2-6:2FTS	6.360	429.0 -> 409.0	154554	20.16 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.8%	
13C2-8:2FTS	7.512	529.0 -> 509.0	148085	20.51 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.5%	
13C2-PFDoDA	9.375	615.0 -> 570.0	492422	21.90 µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.5%	
13C2-PFTeDA	10.887	715.0 -> 670.0	404796	20.67 µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.4%	
13C3-PFBS	4.124	302.0 -> 99.0	26463	20.36 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.8%	
13C3-PFHxS	5.733	402.0 -> 99.0	36427	20.35 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.8%	
13C4-PFBA	2.400	217.0 -> 172.0	111631	21.46 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.3%	
13C4-PFHpA	5.726	367.0 -> 322.0	330966	21.53 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.6%	
13C5-PFHxA	4.965	318.0 -> 273.0	314618	20.91 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.6%	
13C5-PFPeA	3.919	268.0 -> 223.0	215686	20.56 µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.8%	
13C6-PFDA	7.449	519.0 -> 474.0	509087	21.90 µg/L	0.013

Perfluorinated Compounds by LC/MS/MS

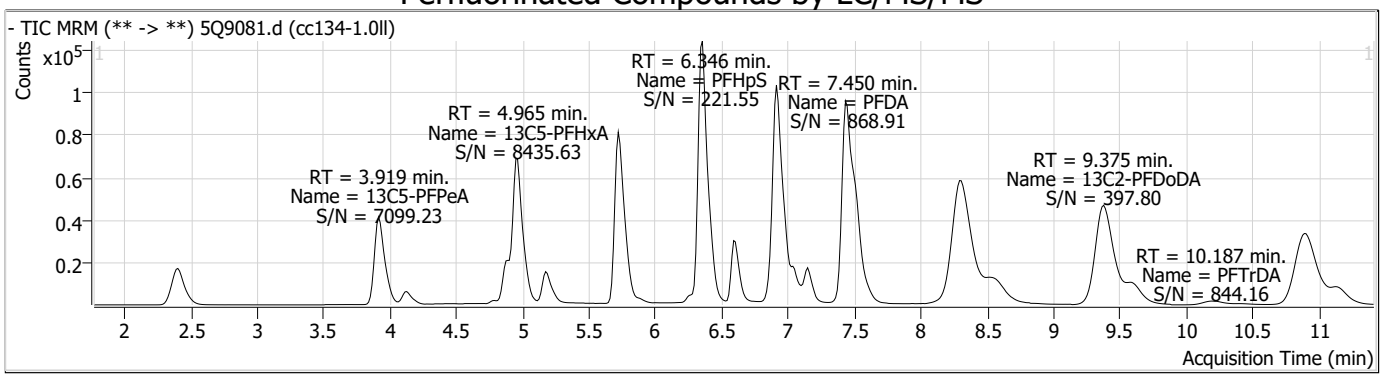
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.5%		
13C7-PFUnDA	8.307	570.0 -> 525.0	679001	23.20 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 116.0%		
13C8-FOSA	6.605	506.0 -> 78.0	115218	23.86 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 119.3%		
13C8-PFOA	6.361	421.0 -> 376.0	436366	21.65 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.3%		
13C8-PFOS	6.879	507.0 -> 99.0	49370	20.70 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.5%		
13C9-PFNA	6.918	472.0 -> 427.0	456959	21.72 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.6%		
d3-MeFOSAA	7.047	573.0 -> 419.0	45705	25.72 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 128.6%		
13C3-HFPO-DA	5.194	287.0 -> 169.0	65614	19.84 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%		
d3-MeFOSA	6.964	515.0 -> 169.0	34615	22.85 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 114.2%		
d5-EtFOSAA	7.157	589.0 -> 419.0	45705	24.78 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 123.9%		
Target Compounds						QValue
4:2FTS	4.888	327.0 -> 307.0	5155	1.00 µg/L		93
		327.0 -> 81.0	3318			
6:2FTS	6.360	427.0 -> 407.0	8131	1.03 µg/L		96
		427.0 -> 81.0	3664			
8:2FTS	7.512	527.0 -> 507.0	7710	1.02 µg/L		98
		527.0 -> 81.0	3872			
EtFOSAA	7.158	584.0 -> 419.0	1574	1.03 µg/L		87
		584.0 -> 483.0	1160			
FOSA	6.606	498.0 -> 78.0	5447	0.92 µg/L		100
		498.0 -> 478.0	179			
MeFOSAA	7.047	570.0 -> 419.0	1835	0.99 µg/L		97
		570.0 -> 512.0	789			
PFBA	2.394	213.0 -> 169.0	5486	0.90 µg/L		100
PFBS	4.129	299.0 -> 80.0	4029	0.94 µg/L		100
		299.0 -> 99.0	1718			
PFDA	7.450	513.0 -> 469.0	24462	0.90 µg/L		100
		513.0 -> 219.0	4352			
PFDoDA	9.379	613.0 -> 569.0	22207	0.99 µg/L		99
		613.0 -> 319.0	3698			
PFDS	8.119	599.0 -> 80.0	4514	0.74 µg/L		88
		599.0 -> 99.0	3120			
PFHpA	5.727	363.0 -> 319.0	18527	0.89 µg/L		98
		363.0 -> 169.0	4278			
PFHpS	6.346	449.0 -> 80.0	3538	0.94 µg/L		100
		449.0 -> 99.0	1948			
PFHxA	4.966	313.0 -> 269.0	14715	0.92 µg/L		100
		313.0 -> 119.0	674			
PFHxS	5.735	399.0 -> 80.0	3375	0.91 µg/L	m	95
		399.0 -> 99.0	2013			
PFNA	6.931	463.0 -> 419.0	22273	0.94 µg/L		98
		463.0 -> 219.0	4567			
PFNS	7.384	549.0 -> 80.0	3349	0.99 µg/L		98
		549.0 -> 99.0	2042			
PFOA	6.362	413.0 -> 369.0	23151	0.93 µg/L		98
		413.0 -> 169.0	6381			
PFOS	6.880	499.0 -> 80.0	3824	0.84 µg/L	m	93

Perfluorinated Compounds by LC/MS/MS

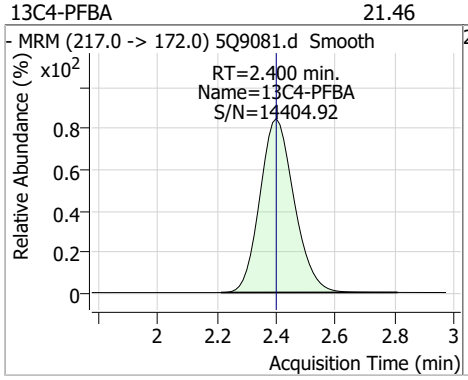
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	2016			
PFPeA	3.922	263.0 -> 219.0	11743	0.93	µg/L	100
PFPeS	5.047	349.0 -> 80.0	2564	0.91	µg/L	95
		349.0 -> 99.0	1222			
PFTeDA	10.891	713.0 -> 669.0	21462	1.02	µg/L	98
		713.0 -> 219.0	2356			
PFTrDA	10.187	663.0 -> 619.0	20962	0.98	µg/L	100
		663.0 -> 369.0	2254			
PFUnDA	8.309	563.0 -> 519.0	31083	0.89	µg/L	99
		563.0 -> 269.0	5161			
11Cl-PF3OUdS	8.615	631.0 -> 451.0	19707	0.86	µg/L	99
		633.0 -> 453.0	5762			
9Cl-PF3ONS	7.123	531.0 -> 351.0	17687	0.79	µg/L	99
		533.0 -> 353.0	5490			
ADONA	5.777	377.0 -> 251.0	24231	0.99	µg/L	98
		377.0 -> 85.0	9355			
HFPO-DA	5.190	329.0 -> 169.0	4533	0.86	µg/L	98
		285.0 -> 169.0	2753			
MeFOSA	6.966	512.0 -> 169.0	2032	0.99	µg/L	86
		512.0 -> 219.0	1341			
4-PFECHS	6.268	461.0 -> 381.0	11008	0.79	µg/L	96
		461.0 -> 99.0	6204			
FBSA	4.793	298.0 -> 78.0	6769	1.04	µg/L	99
		298.0 -> 64.0	657			
FHxSA	5.900	398.0 -> 78.0	6237	0.96	µg/L	99
		398.0 -> 64.0	625			

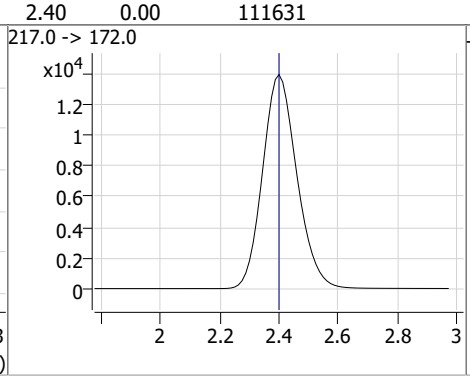
 # = Qualifier out of range, m = manually integrated, + = Area summed

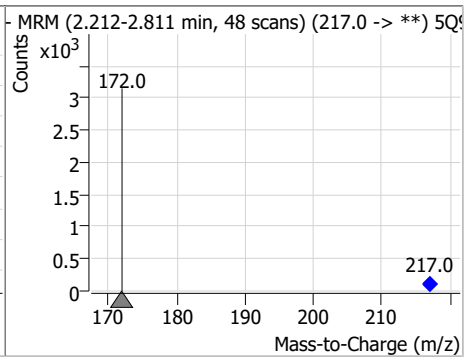
Perfluorinated Compounds by LC/MS/MS



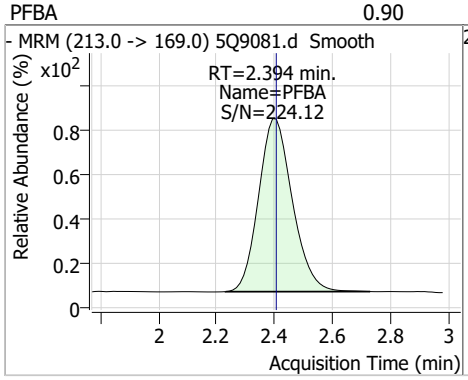
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	21.46	2.40	0.00	111631				

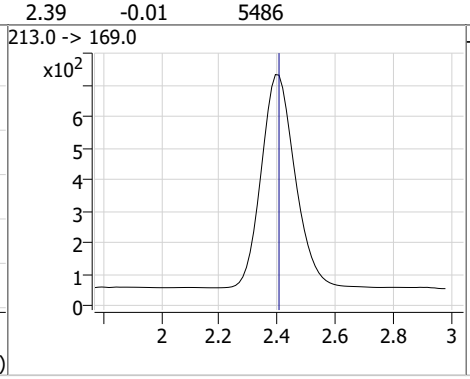


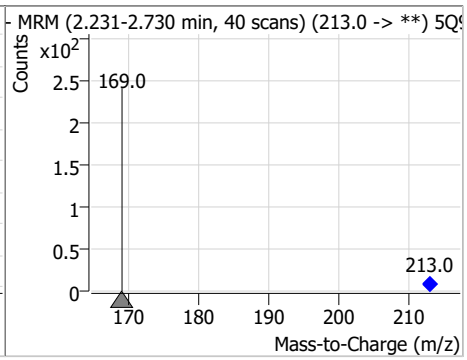




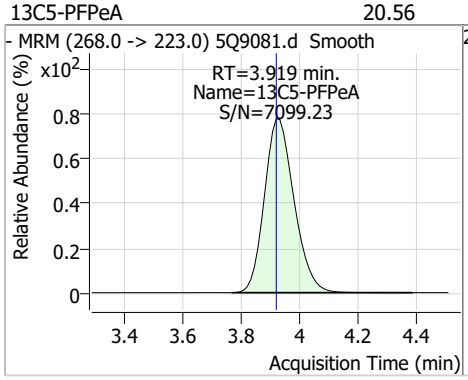
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.90	2.39	-0.01	5486				

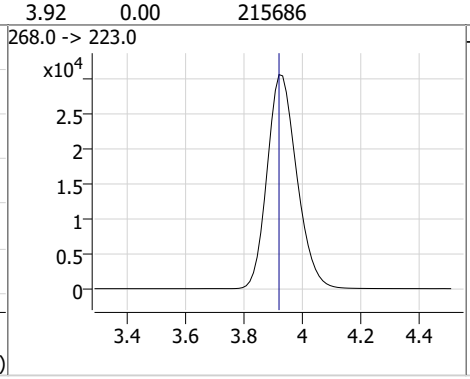


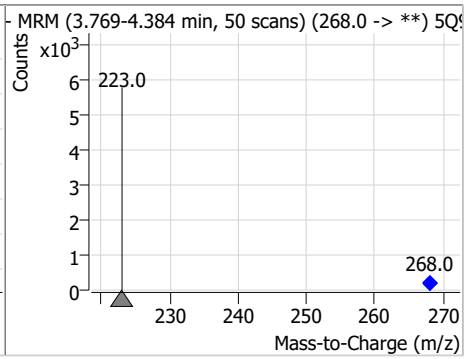




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.56	3.92	0.00	215686				

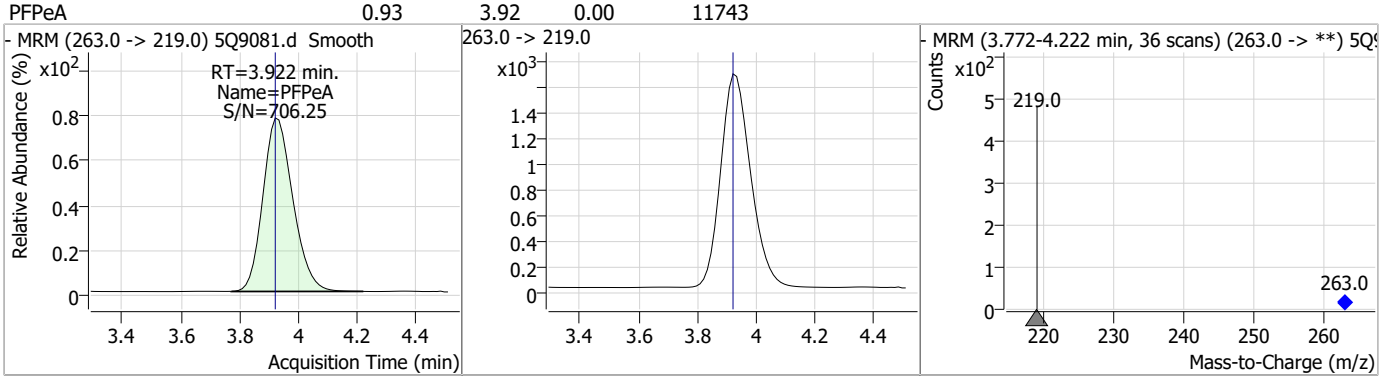




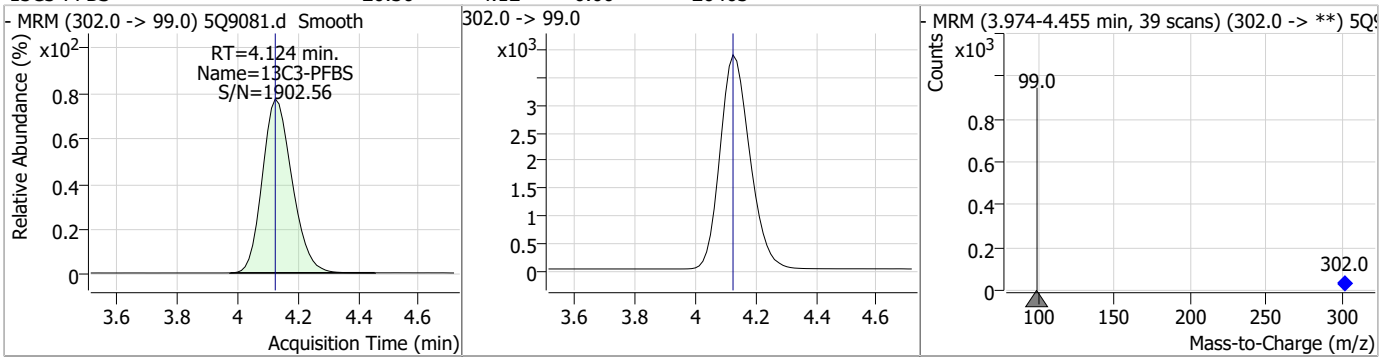


Perfluorinated Compounds by LC/MS/MS

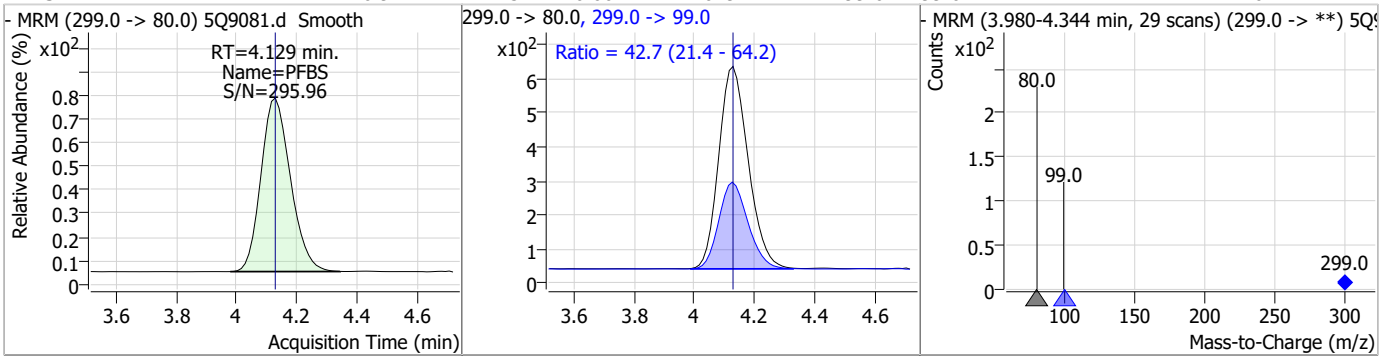
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.93	3.92	0.00	11743				



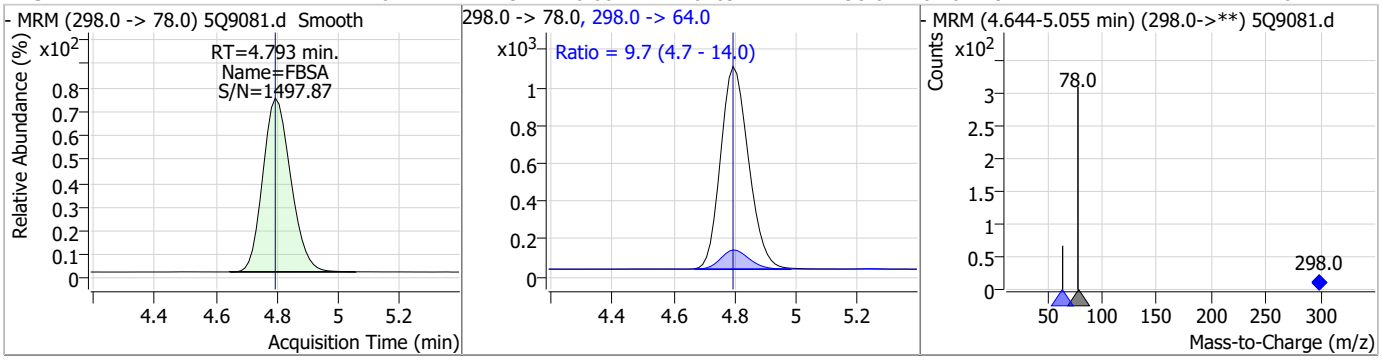
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.36	4.12	0.00	26463				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.94	4.13	0.00	4029	299.0 -> 99.0	42.7	21.4	64.2

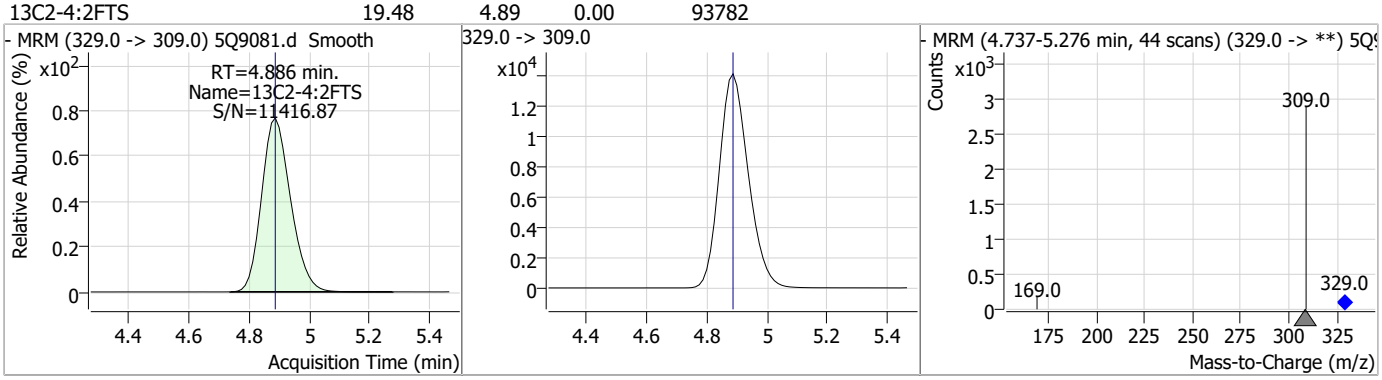


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	1.04	4.79	0.00	6769	298.0 -> 64.0	9.7	4.7	14.0

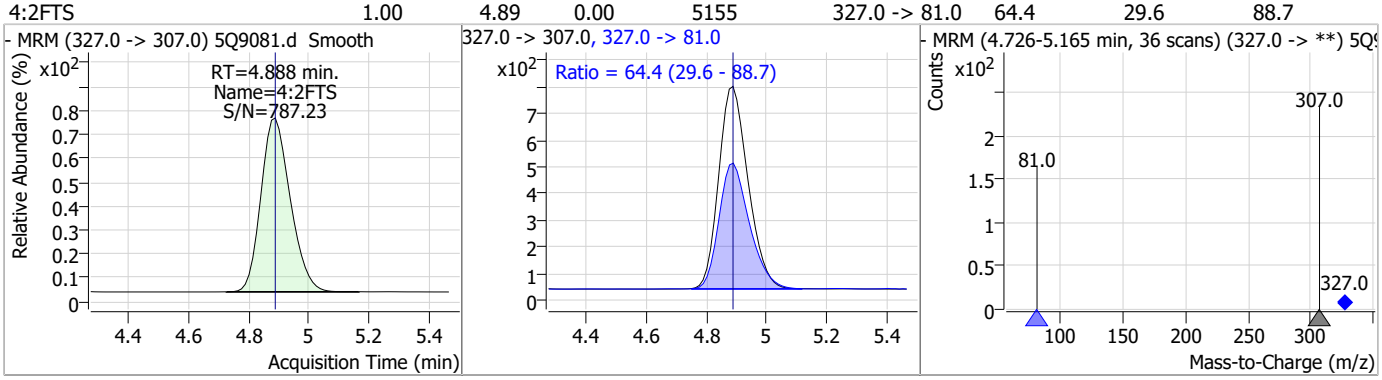


Perfluorinated Compounds by LC/MS/MS

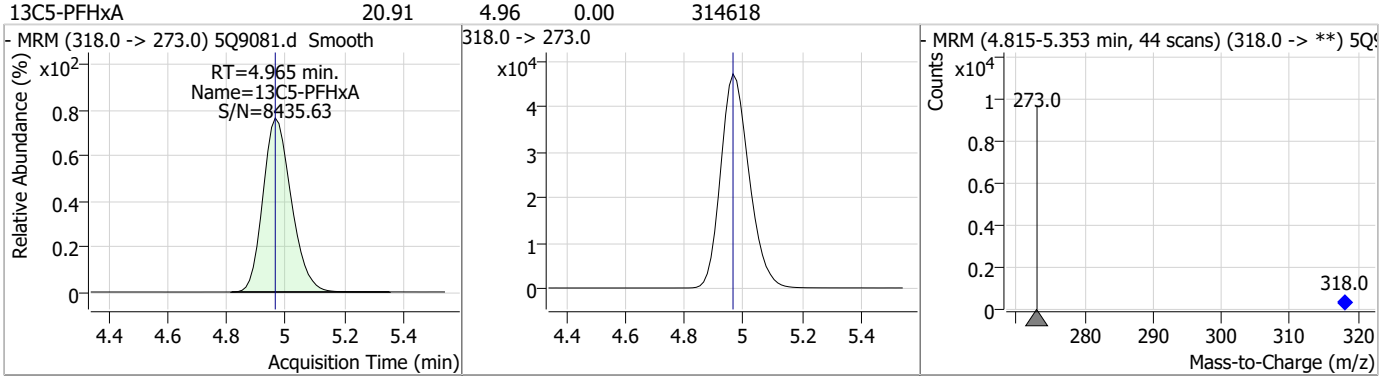
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.48	4.89	0.00	93782				



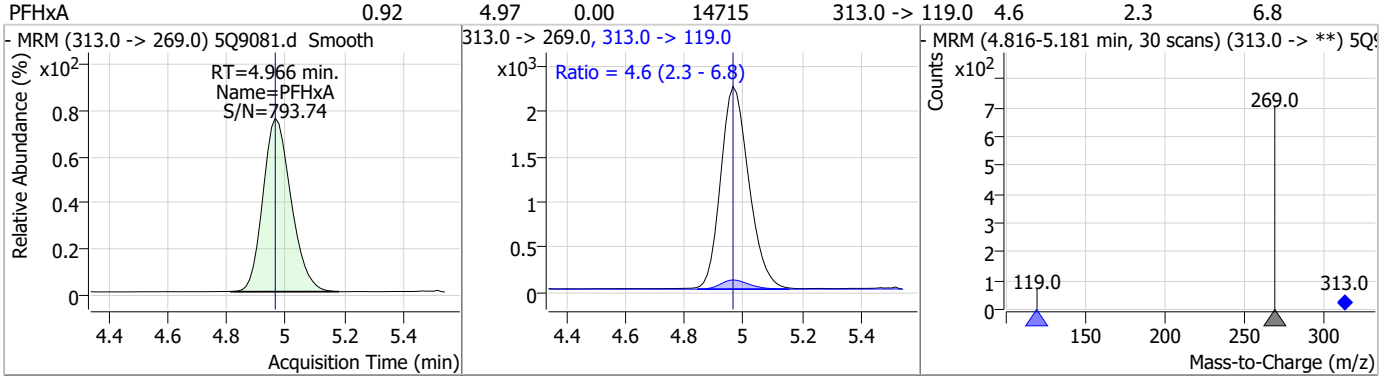
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	1.00	4.89	0.00	5155	327.0 -> 81.0	64.4	29.6	88.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.91	4.96	0.00	314618				

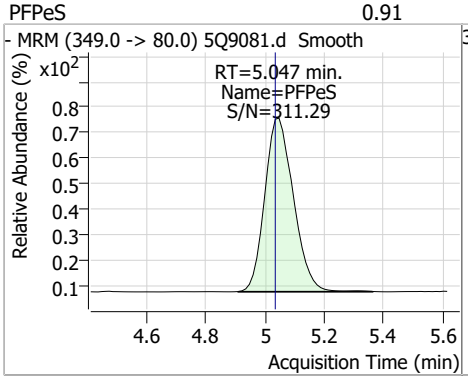


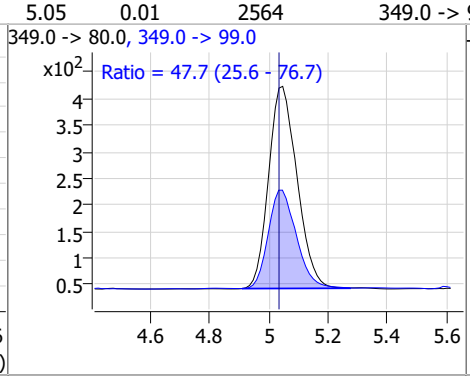
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.92	4.97	0.00	14715	313.0 -> 119.0	4.6	2.3	6.8

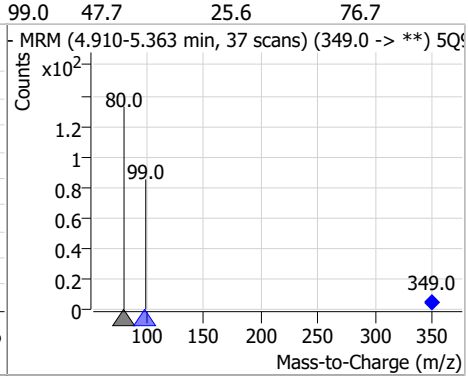


Perfluorinated Compounds by LC/MS/MS

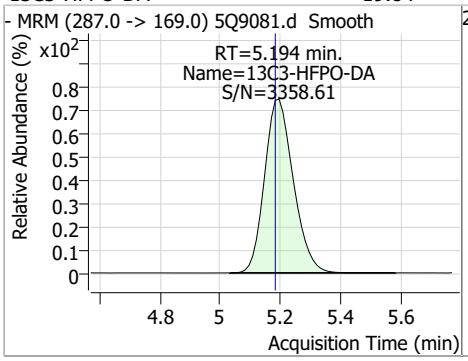
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	0.91	5.05	0.01	2564	349.0 -> 99.0	47.7	25.6	76.7

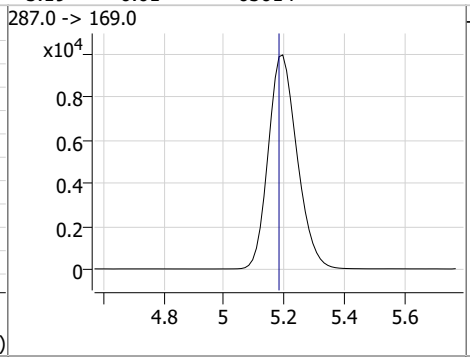


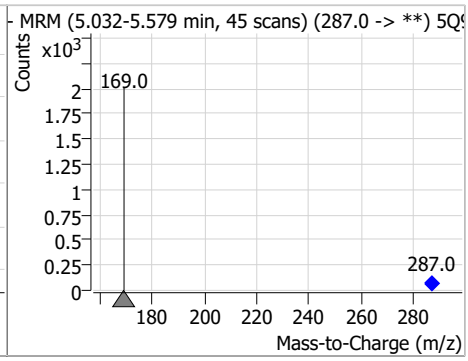




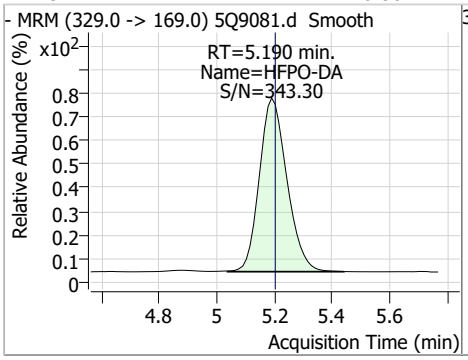
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.84	5.19	0.01	65614				

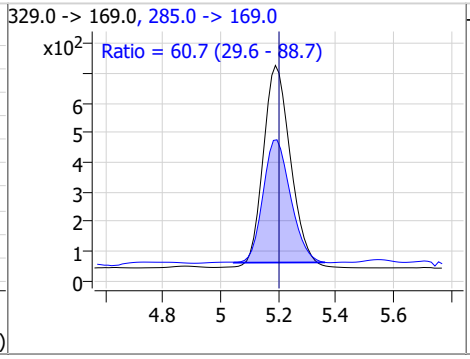


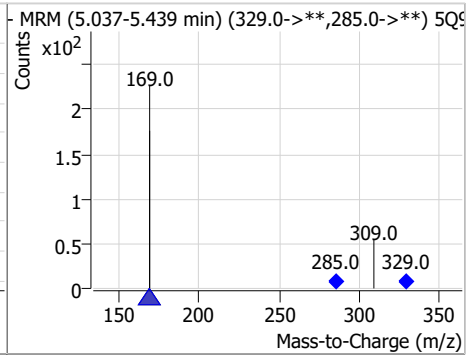




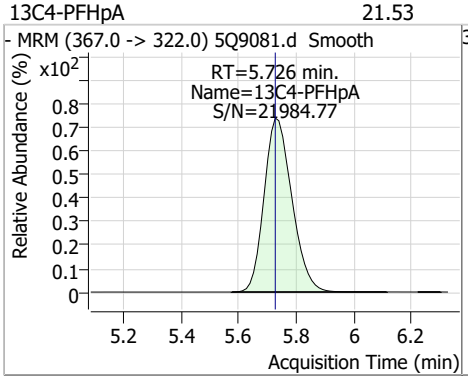
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.86	5.19	0.00	4533	285.0 -> 169.0	60.7	29.6	88.7

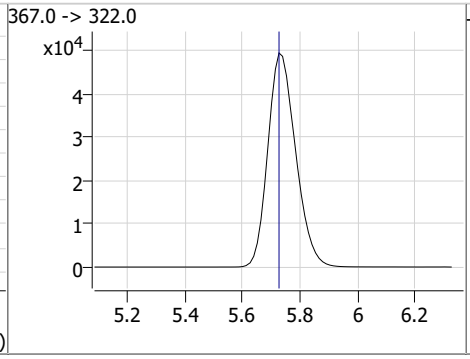


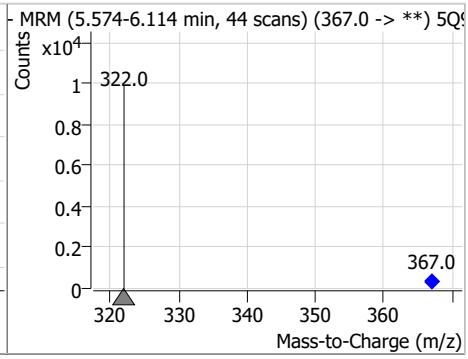




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	21.53	5.73	0.00	330966				

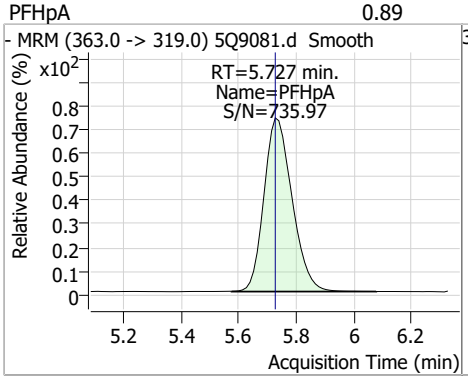


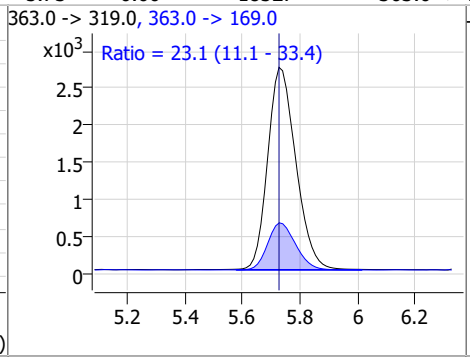


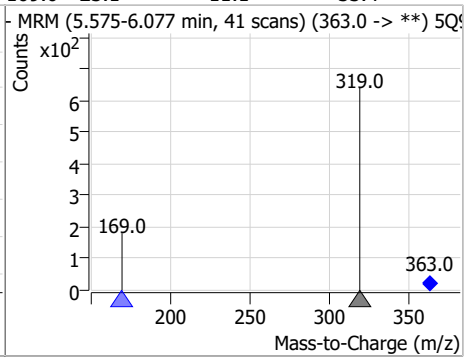


Perfluorinated Compounds by LC/MS/MS

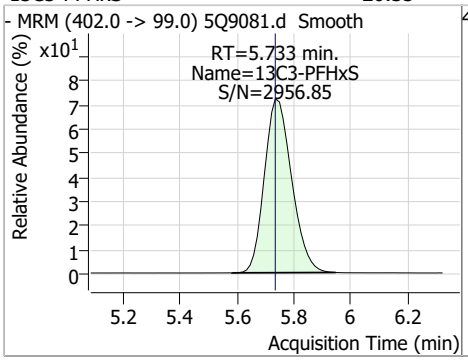
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.89	5.73	0.00	18527	363.0 -> 169.0	23.1	11.1	33.4

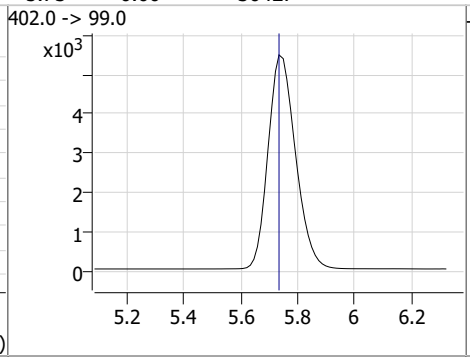


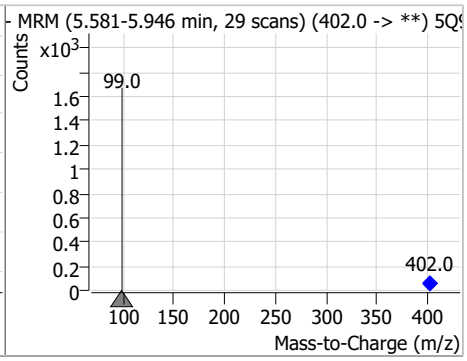




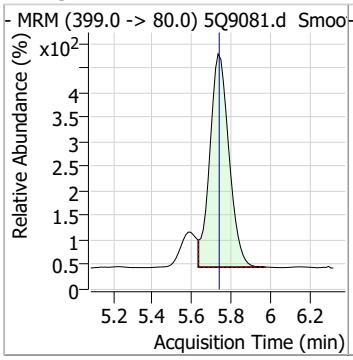
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.35	5.73	0.00	36427				

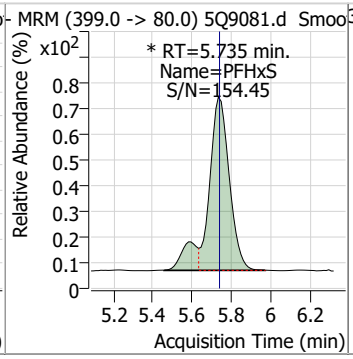


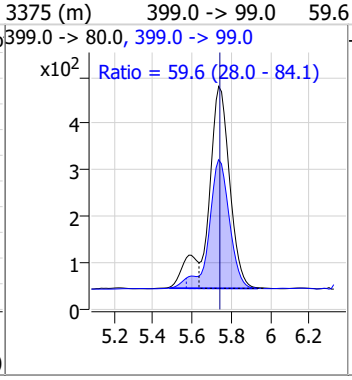


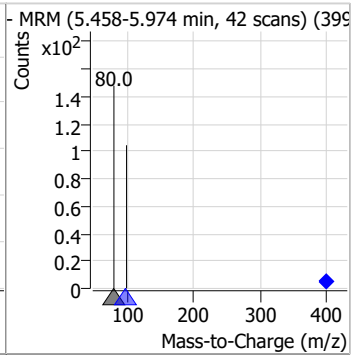


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.91	5.73	0.00	3375 (m)	399.0 -> 99.0	59.6	28.0	84.1

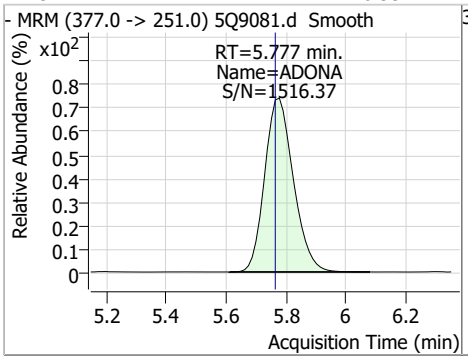


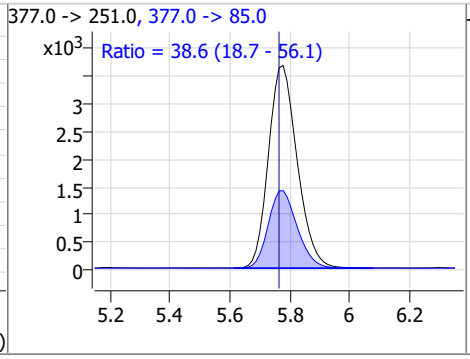


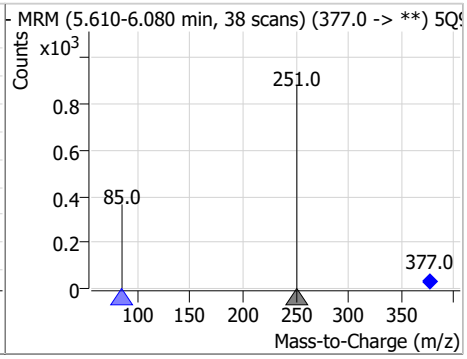




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.99	5.78	0.01	24231	377.0 -> 85.0	38.6	18.7	56.1

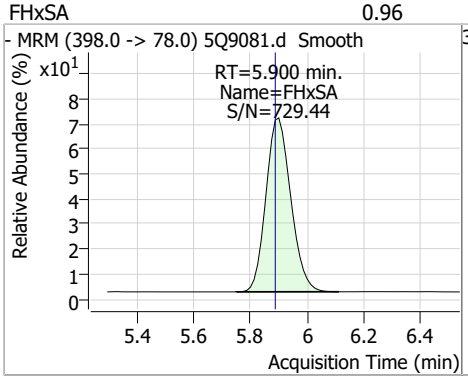


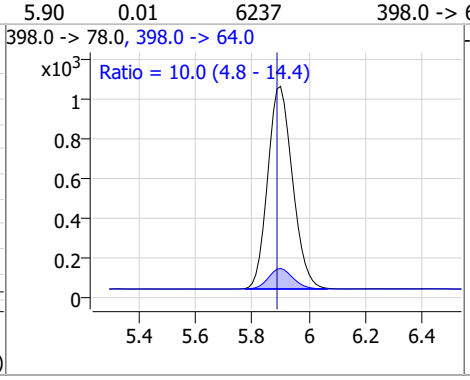


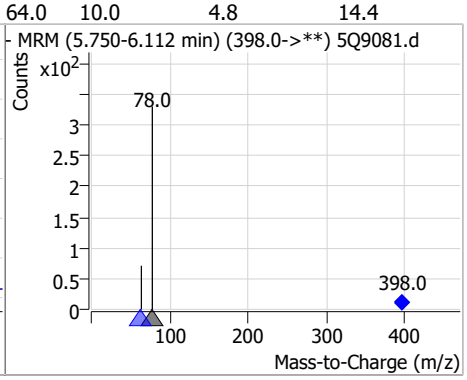


Perfluorinated Compounds by LC/MS/MS

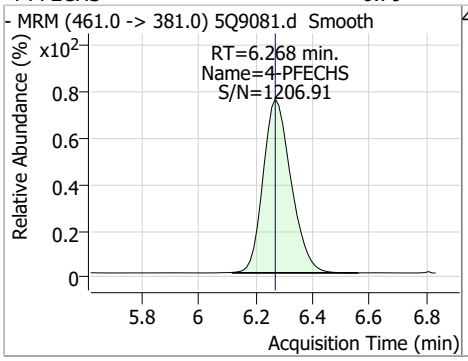
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	0.96	5.90	0.01	6237	398.0 -> 64.0	10.0	4.8	14.4

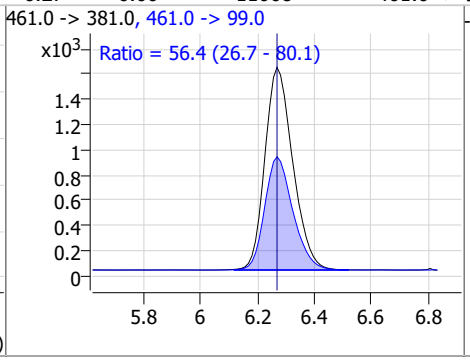


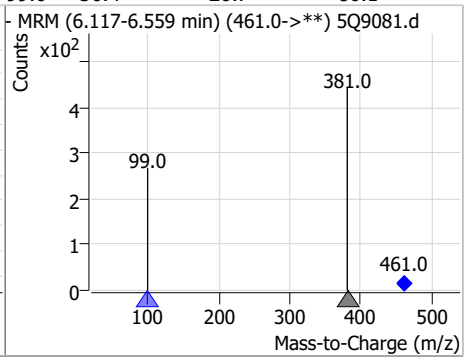




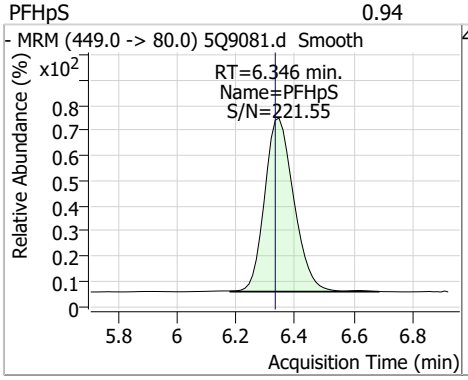
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	0.79	6.27	0.00	11008	461.0 -> 99.0	56.4	26.7	80.1

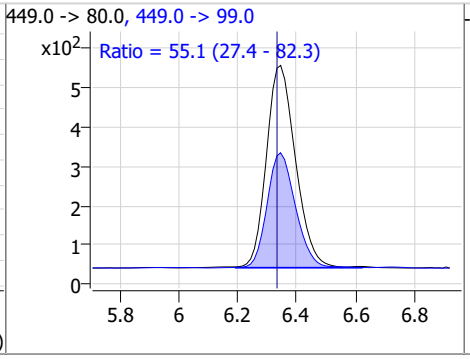


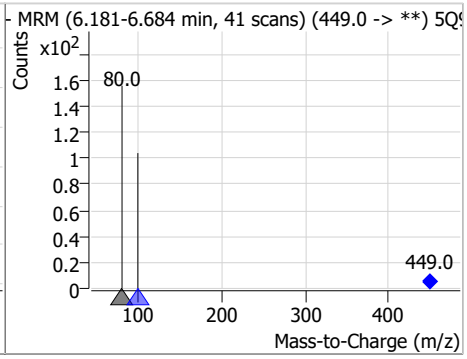




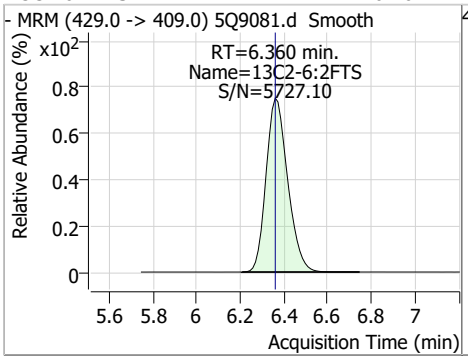
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	0.94	6.35	0.01	3538	449.0 -> 99.0	55.1	27.4	82.3

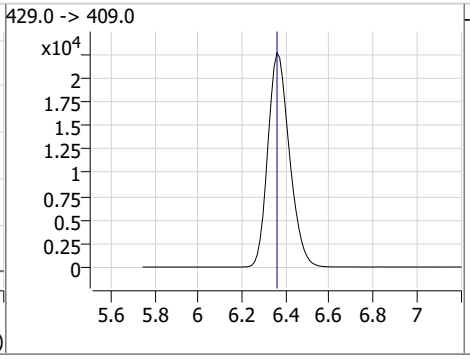


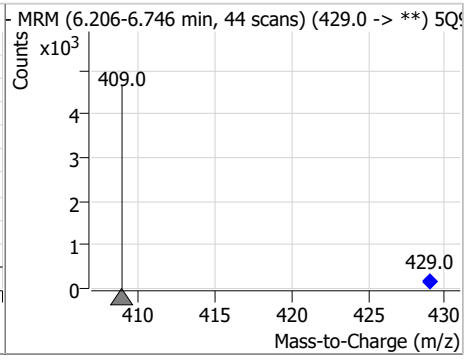




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.16	6.36	0.00	154554				

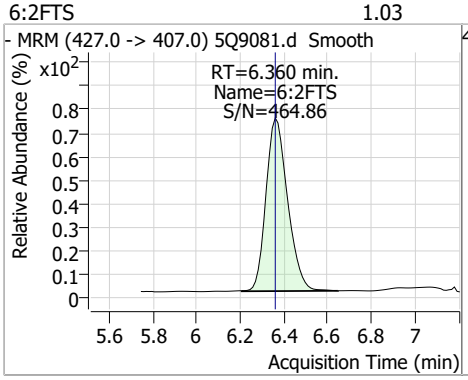


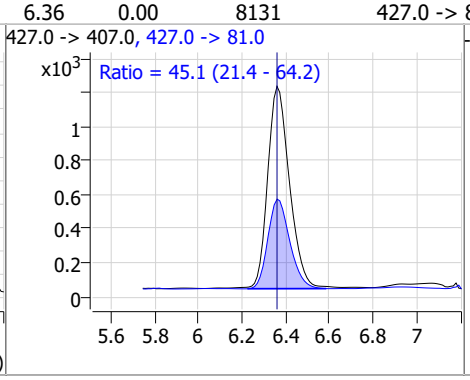


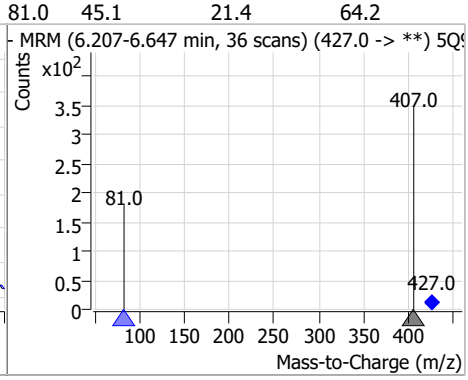


Perfluorinated Compounds by LC/MS/MS

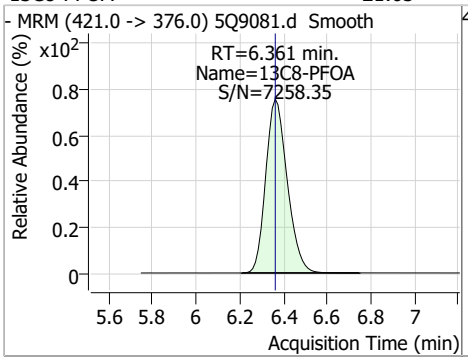
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	1.03	6.36	0.00	8131	427.0 -> 81.0	45.1	21.4	64.2

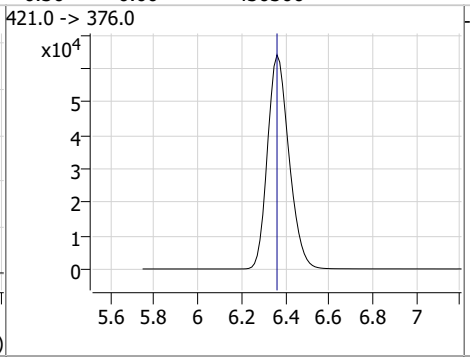


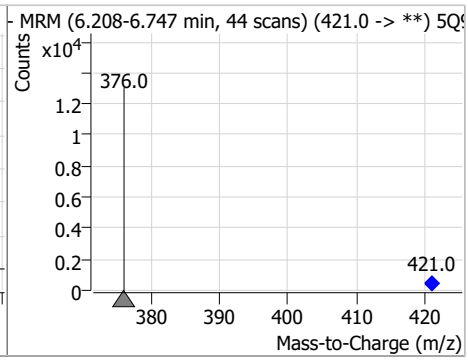




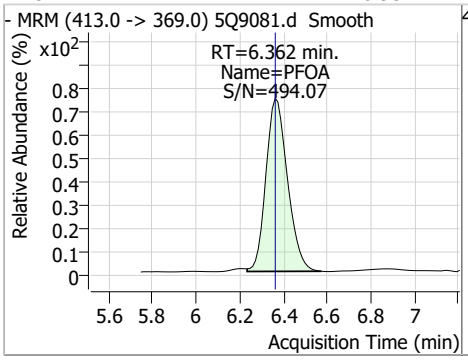
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	21.65	6.36	0.00	436366				

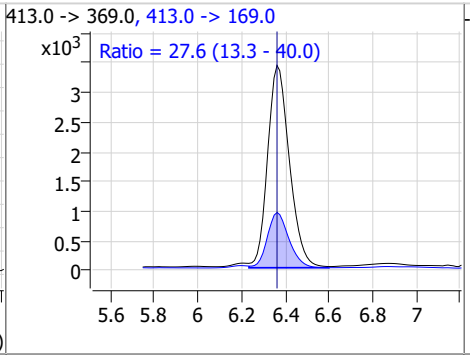


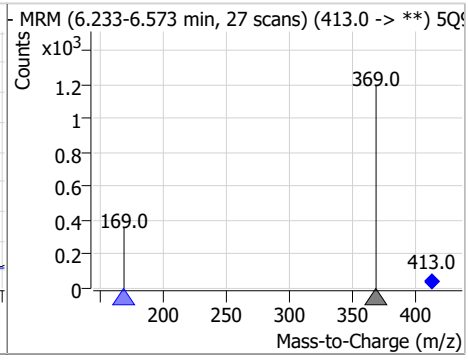




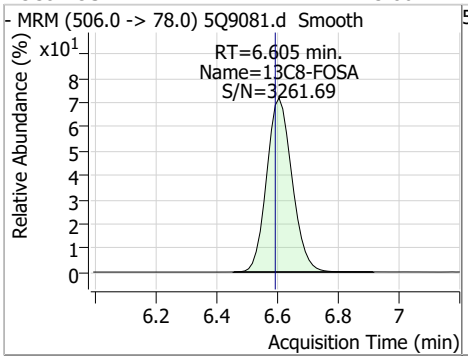
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.93	6.36	0.00	23151	413.0 -> 169.0	27.6	13.3	40.0

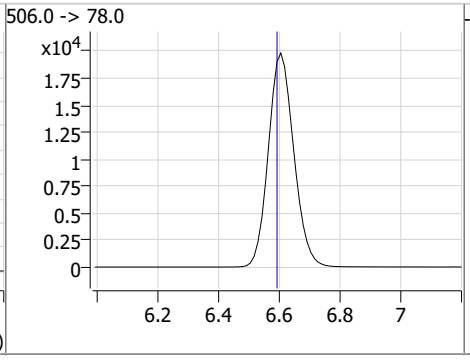


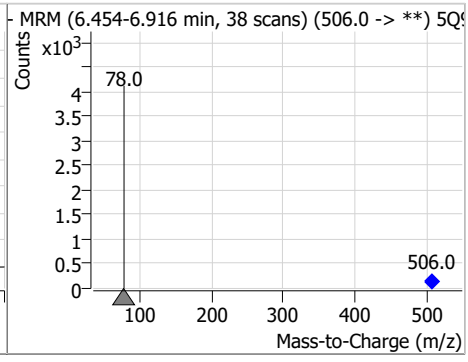




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	23.86	6.60	0.01	115218				

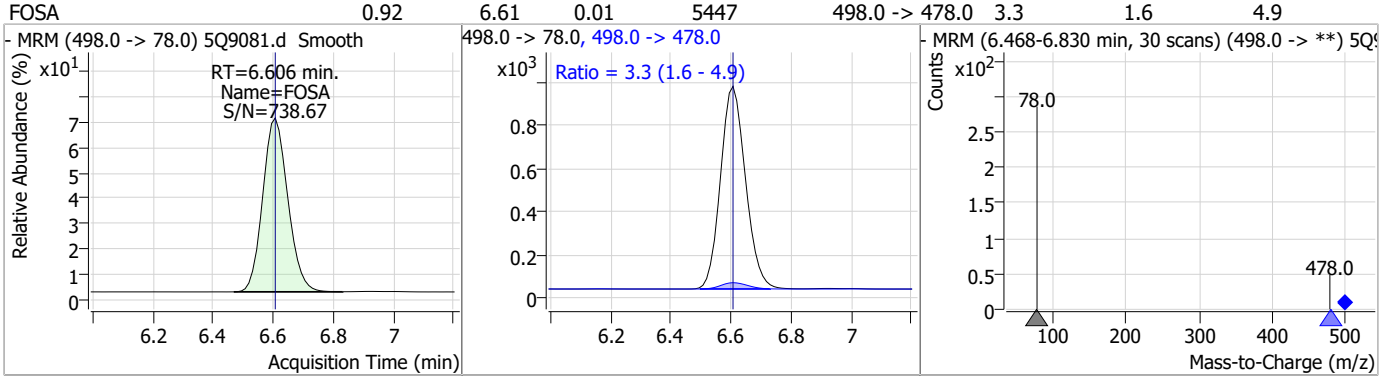




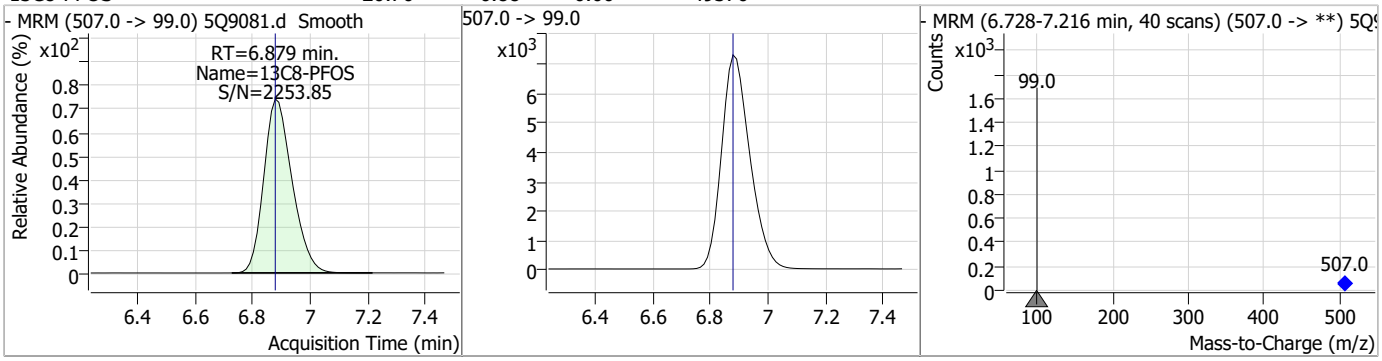


Perfluorinated Compounds by LC/MS/MS

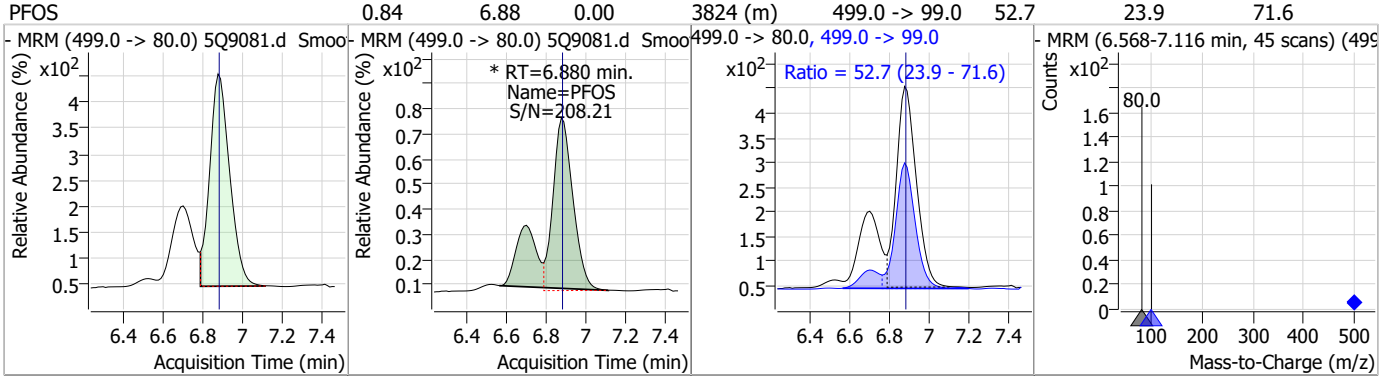
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	0.92	6.61	0.01	5447	498.0 -> 478.0	3.3	1.6	4.9



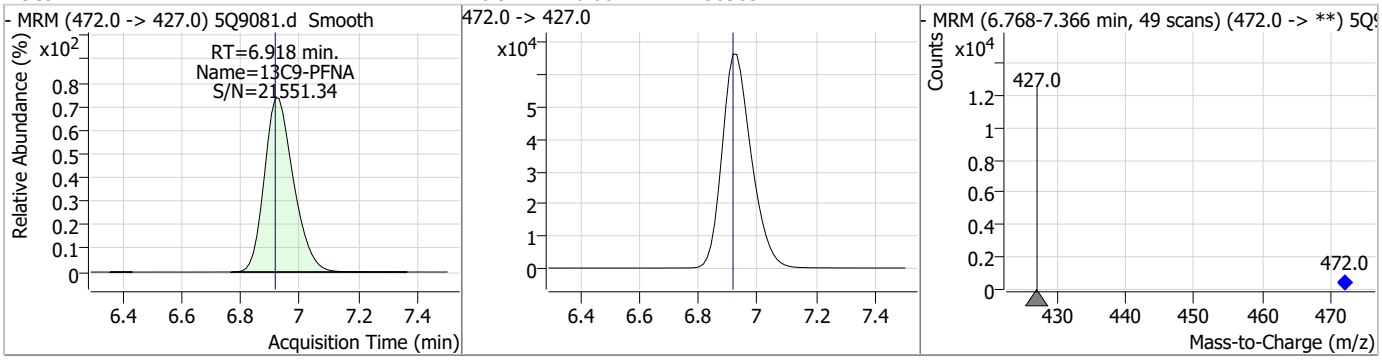
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.70	6.88	0.00	49370				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.84	6.88	0.00	3824 (m)	499.0 -> 99.0	52.7	23.9	71.6

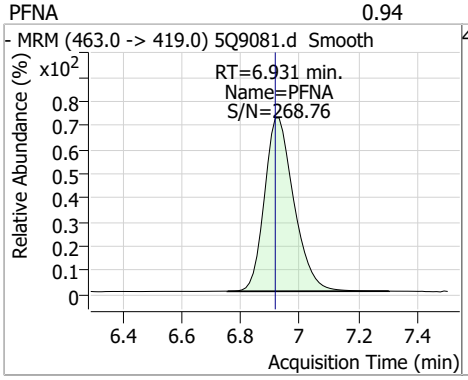


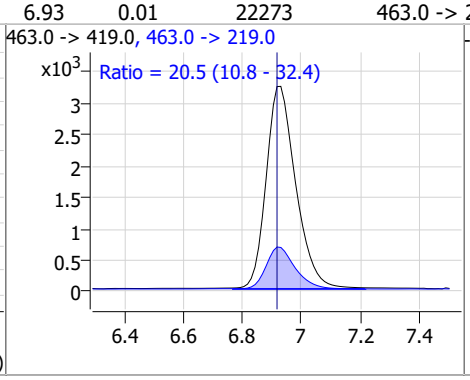
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	21.72	6.92	0.00	456959				

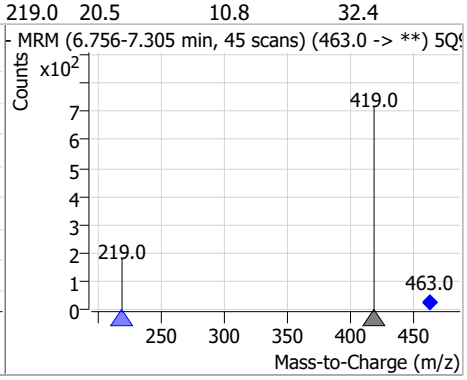


Perfluorinated Compounds by LC/MS/MS

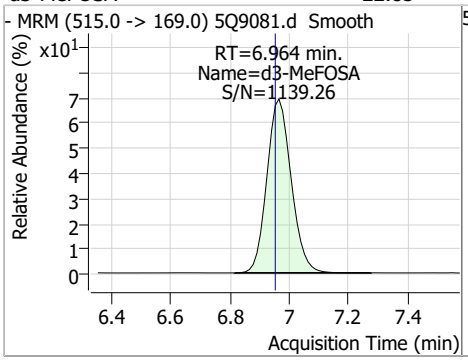
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.94	6.93	0.01	22273	463.0 -> 219.0	20.5	10.8	32.4

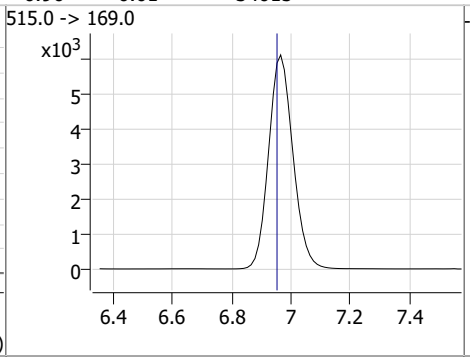


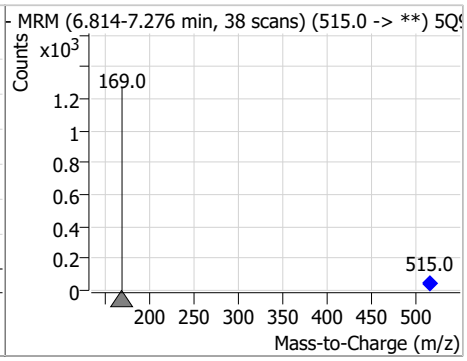




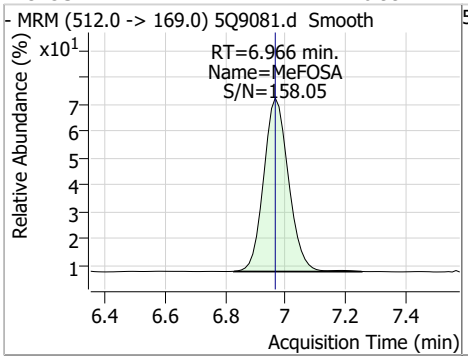
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	22.85	6.96	0.01	34615				

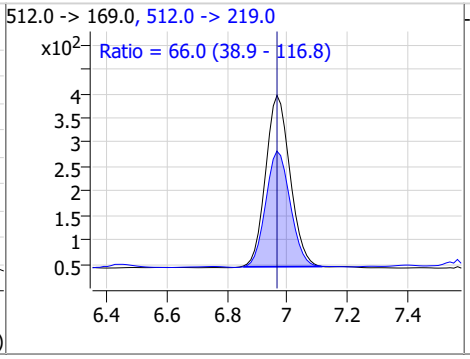


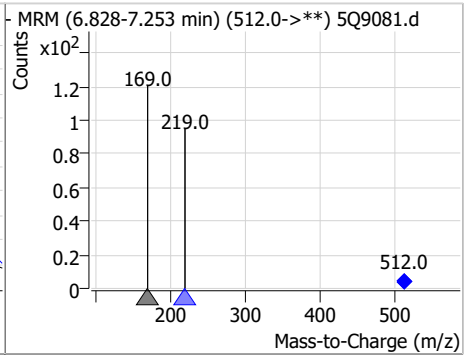




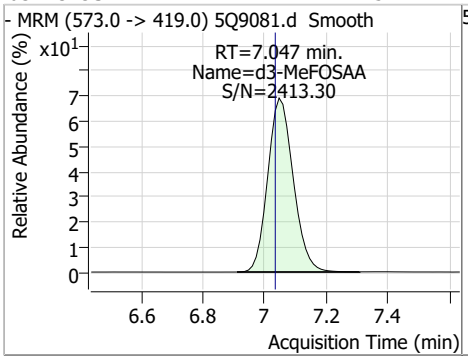
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	0.99	6.97	0.01	2032	512.0 -> 219.0	66.0	38.9	116.8

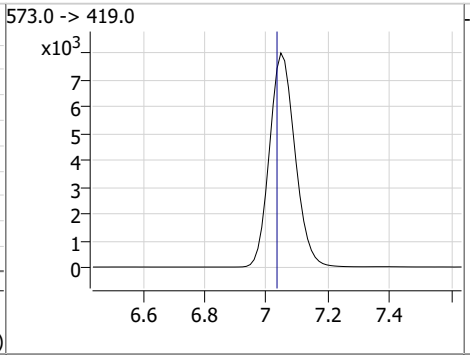


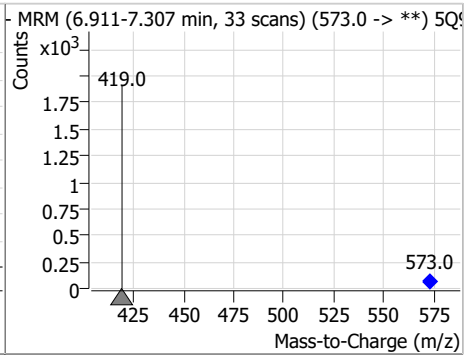




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	25.72	7.05	0.01	45705				

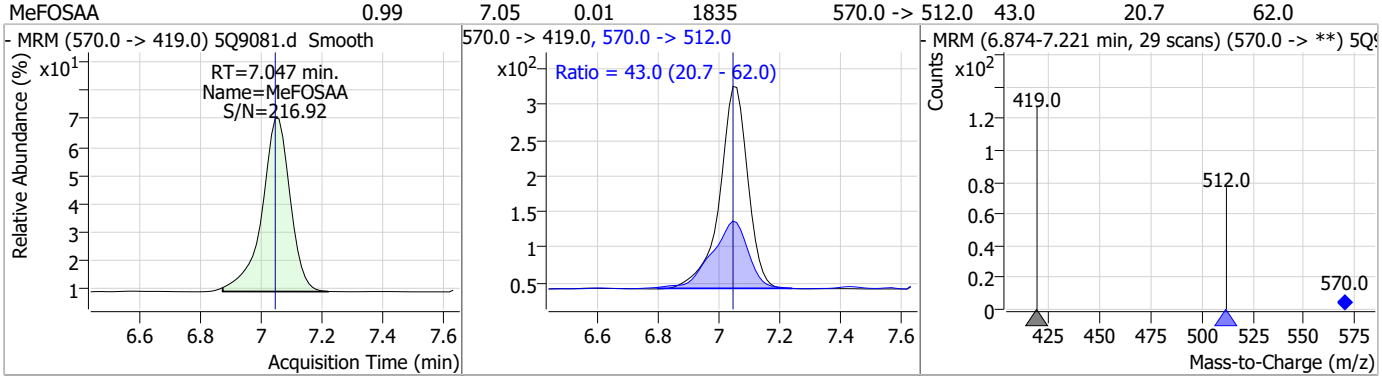




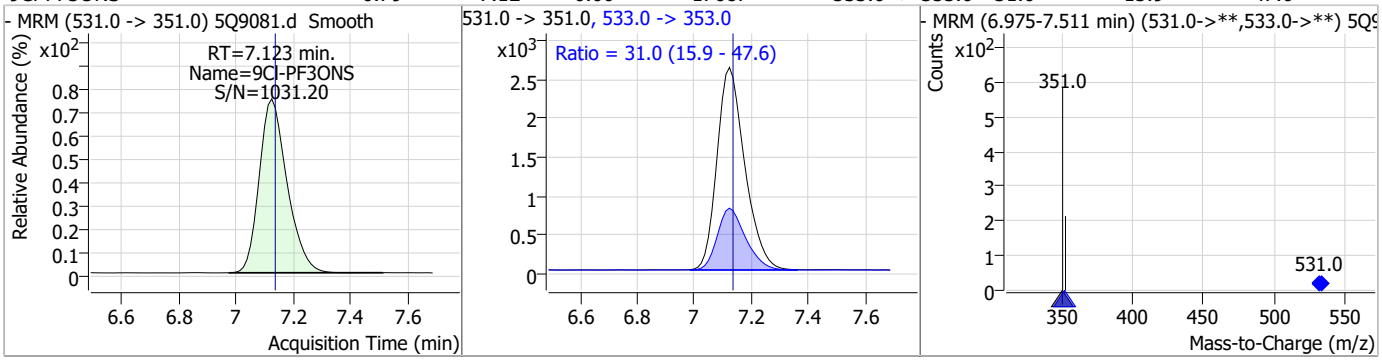


Perfluorinated Compounds by LC/MS/MS

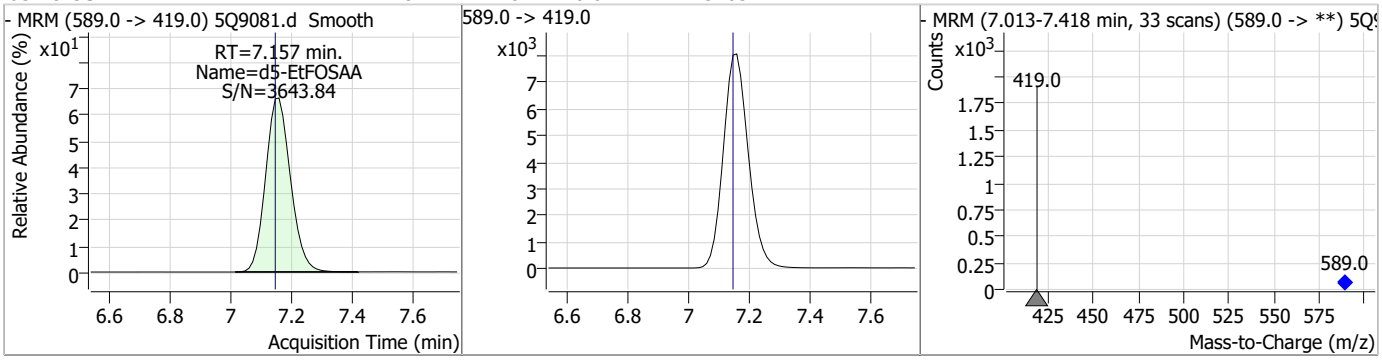
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.99	7.05	0.01	1835	570.0 -> 512.0	43.0	20.7	62.0



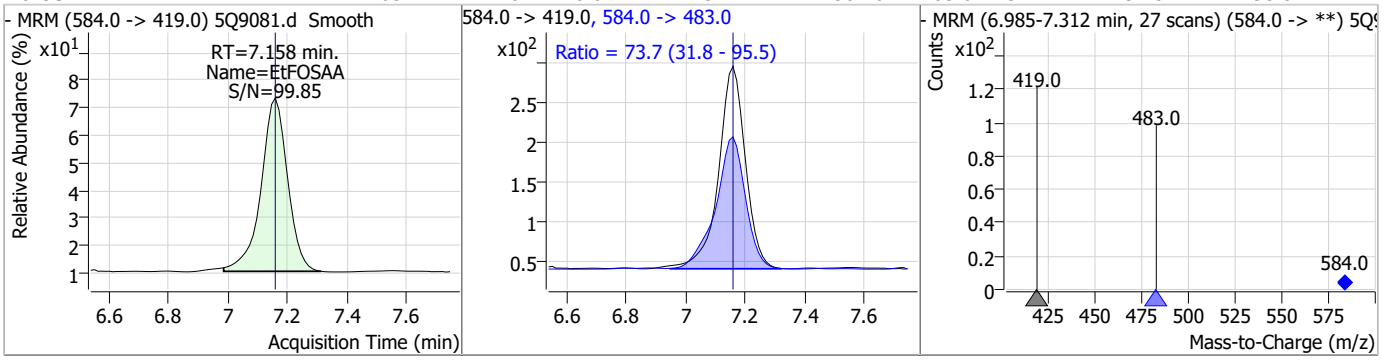
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.79	7.12	0.00	17687	533.0 -> 353.0	31.0	15.9	47.6



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	24.78	7.16	0.01	45705				

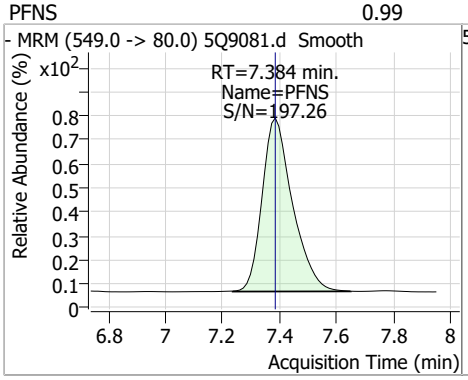


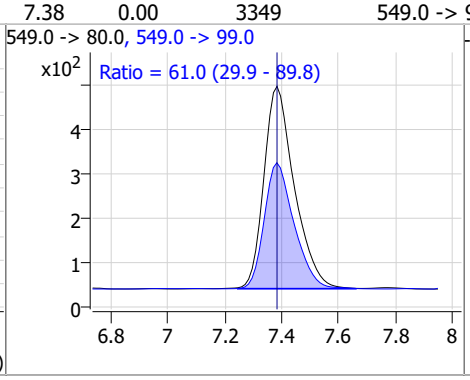
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	1.03	7.16	0.01	1574	584.0 -> 483.0	73.7	31.8	95.5

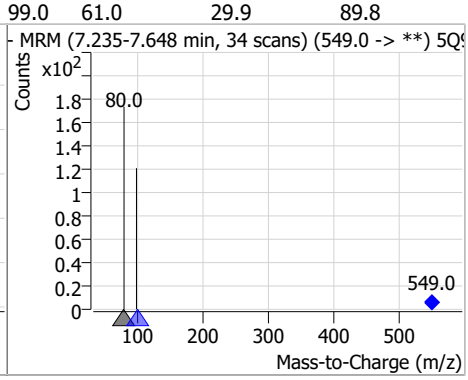


Perfluorinated Compounds by LC/MS/MS

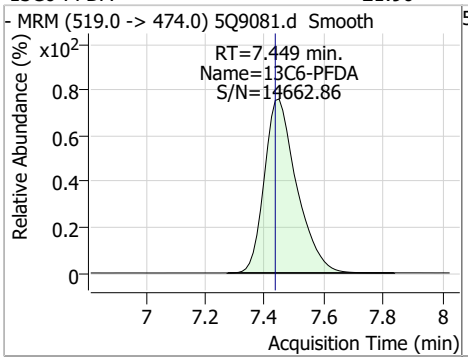
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	0.99	7.38	0.00	3349	549.0 -> 99.0	61.0	29.9	89.8

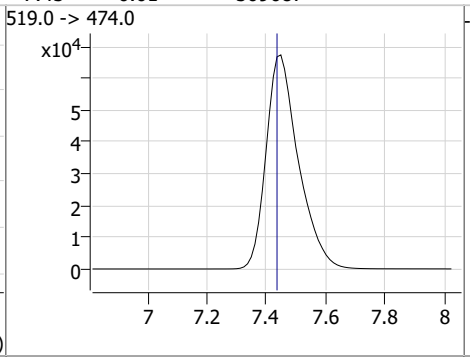


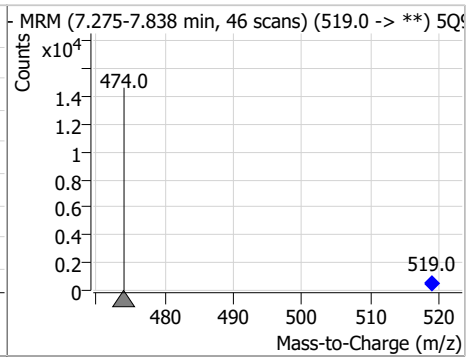




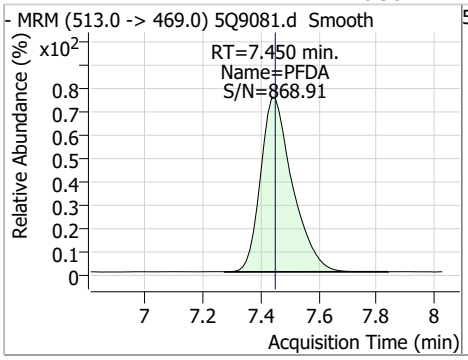
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	21.90	7.45	0.01	509087				

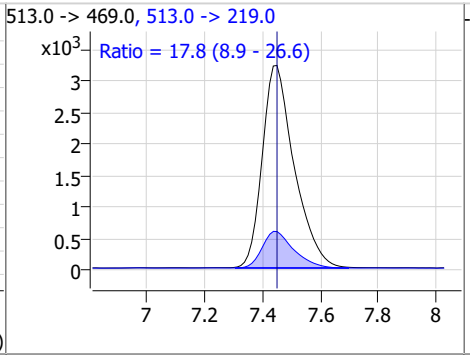


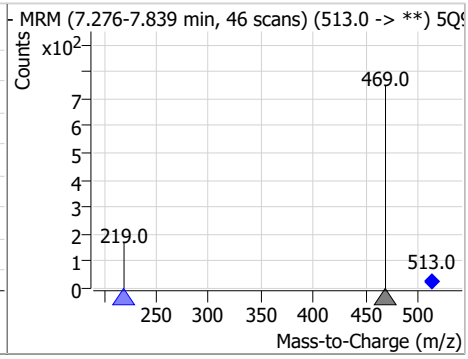




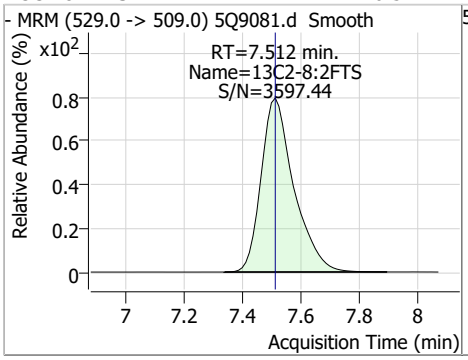
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.90	7.45	0.01	24462	513.0 -> 219.0	17.8	8.9	26.6

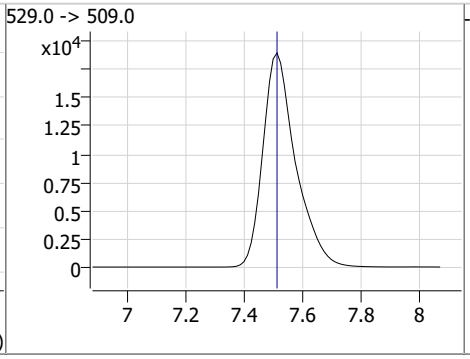


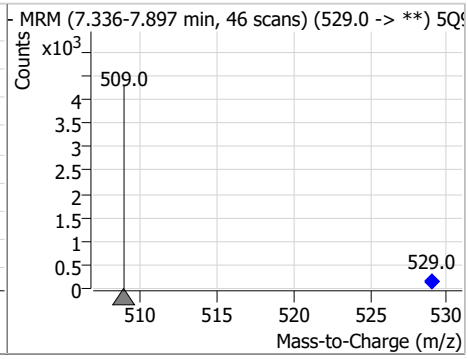




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	20.51	7.51	0.00	148085				

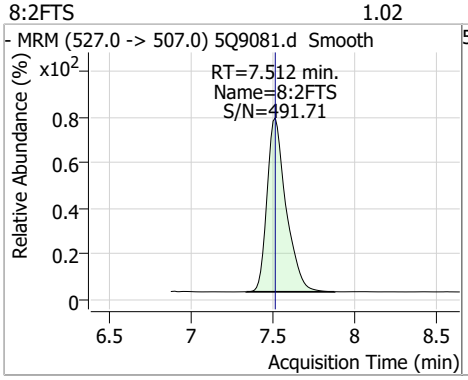


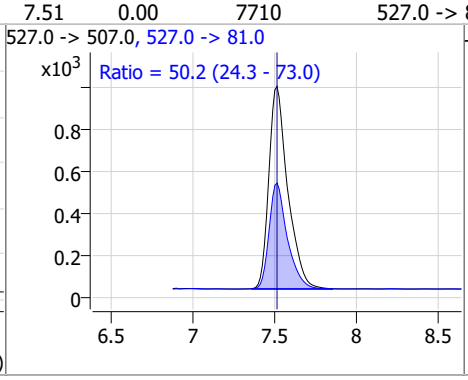


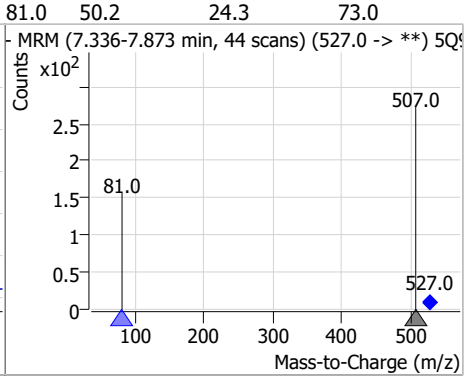


Perfluorinated Compounds by LC/MS/MS

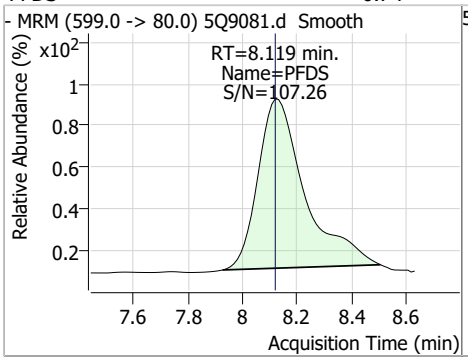
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	1.02	7.51	0.00	7710	527.0 -> 81.0	50.2	24.3	73.0

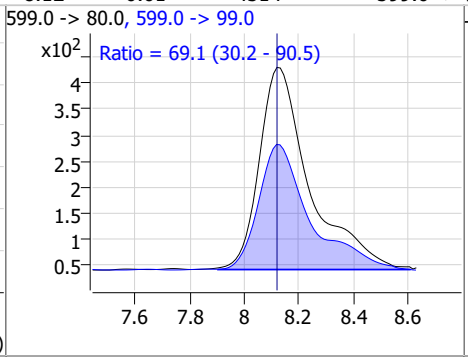


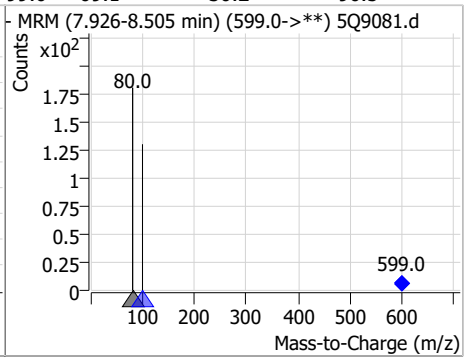




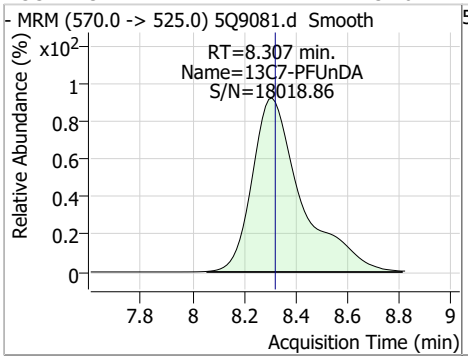
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	0.74	8.12	-0.01	4514	599.0 -> 99.0	69.1	30.2	90.5

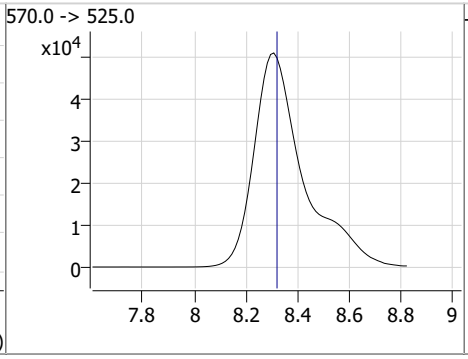


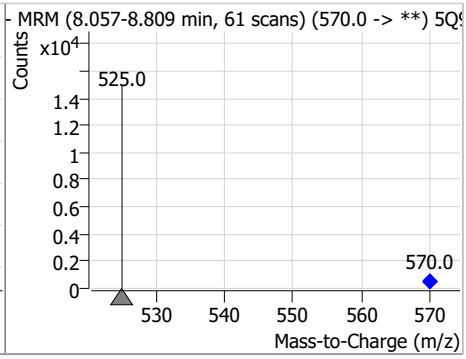




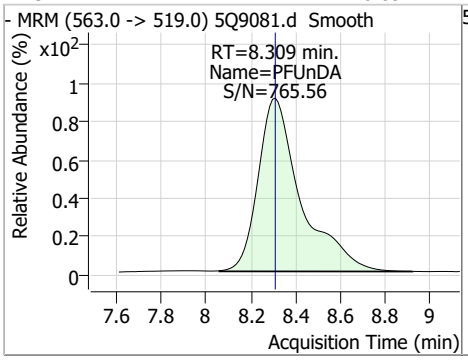
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	23.20	8.31	-0.01	679001				

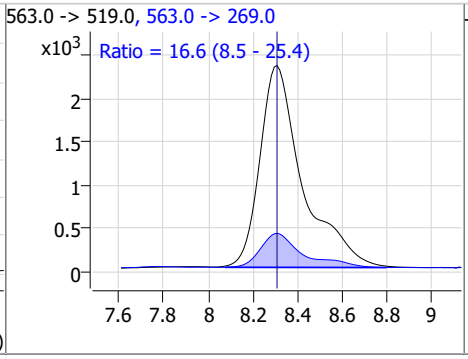


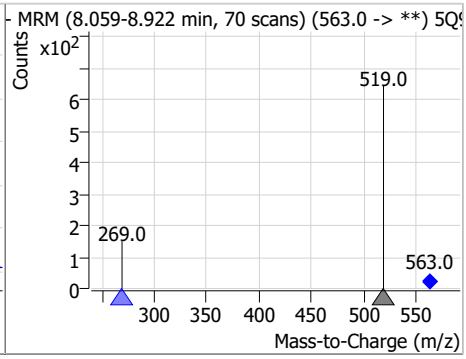




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.89	8.31	-0.01	31083	563.0 -> 269.0	16.6	8.5	25.4

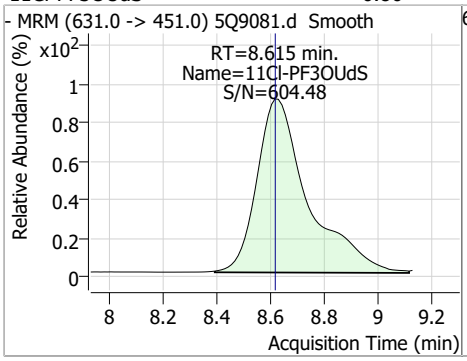


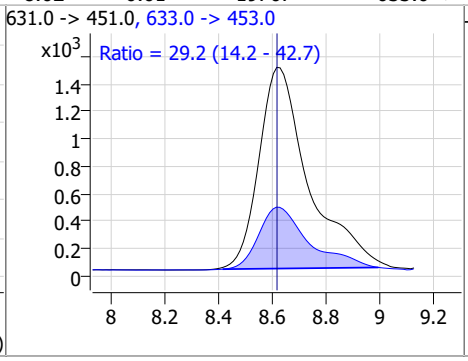


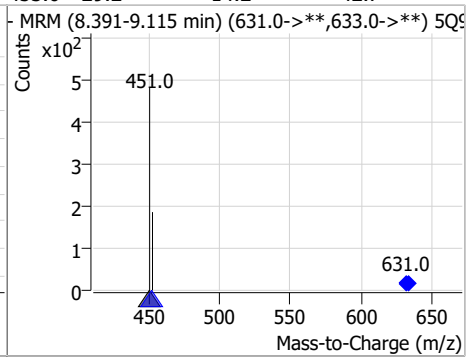


Perfluorinated Compounds by LC/MS/MS

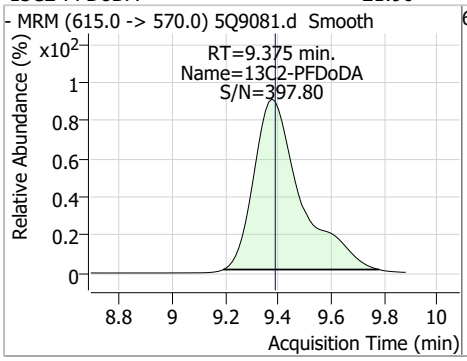
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.86	8.62	-0.01	19707	633.0 -> 453.0	29.2	14.2	42.7

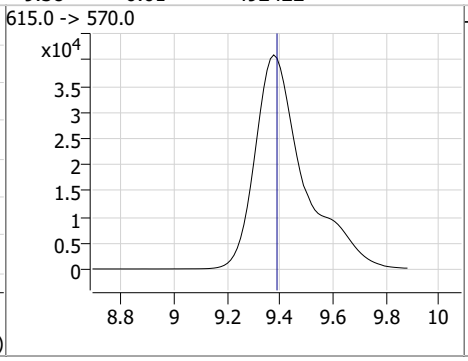


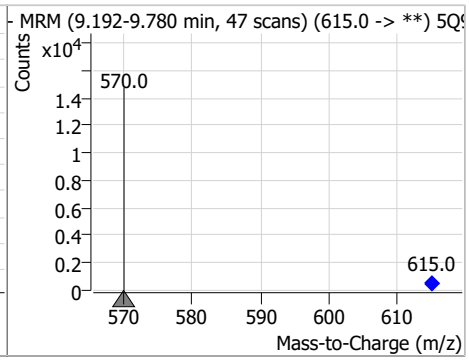




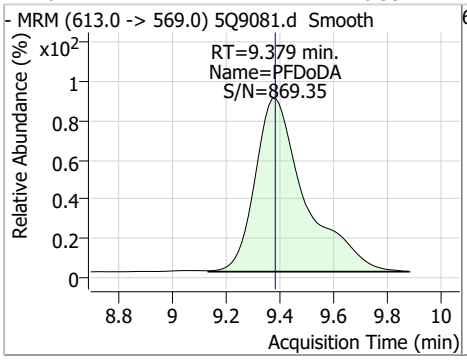
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	21.90	9.38	-0.01	492422				

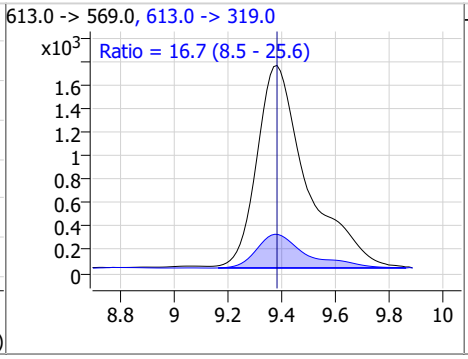


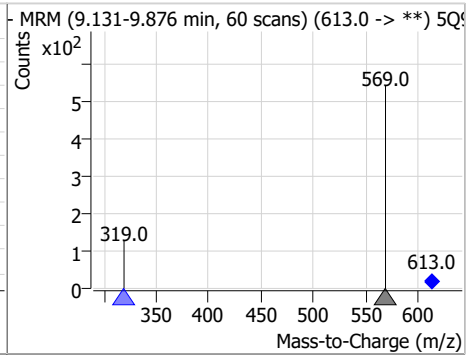




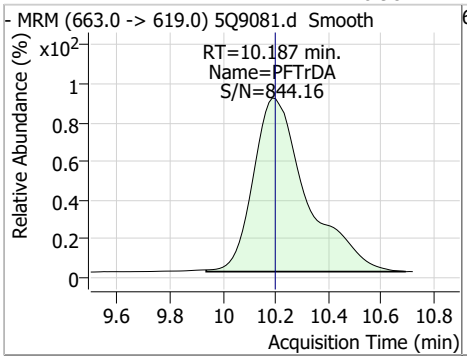
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.99	9.38	-0.01	22207	613.0 -> 319.0	16.7	8.5	25.6

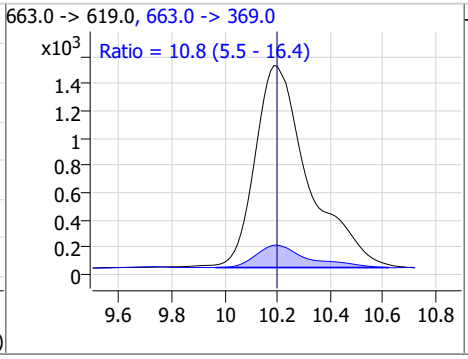


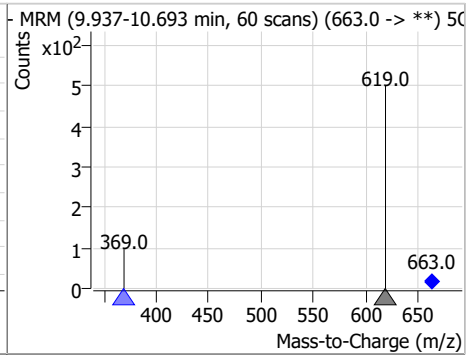




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.98	10.19	-0.03	20962	663.0 -> 369.0	10.8	5.5	16.4

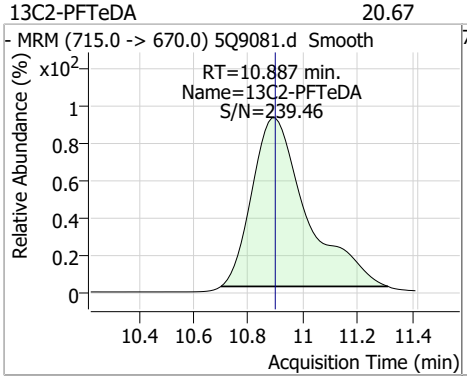


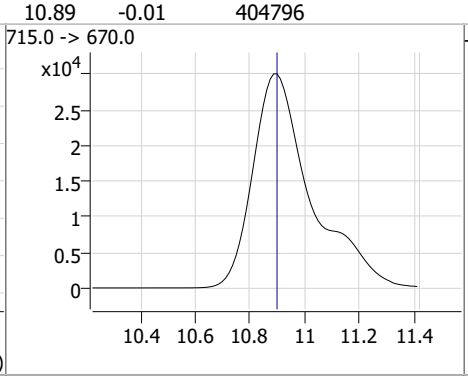


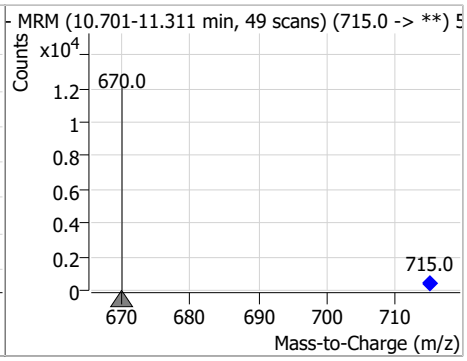


Perfluorinated Compounds by LC/MS/MS

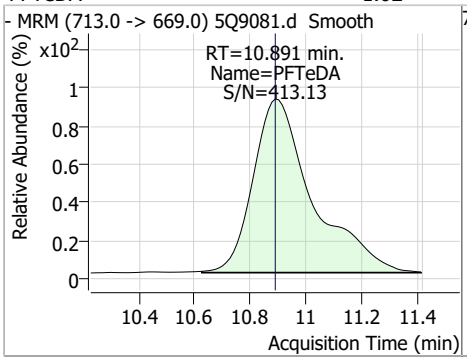
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.67	10.89	-0.01	404796				

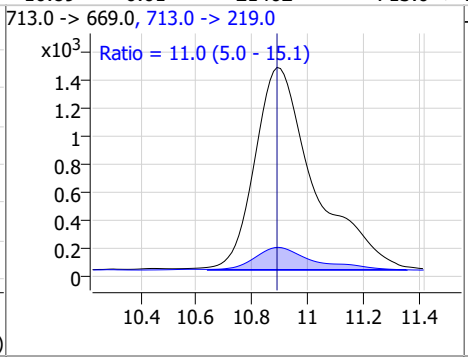


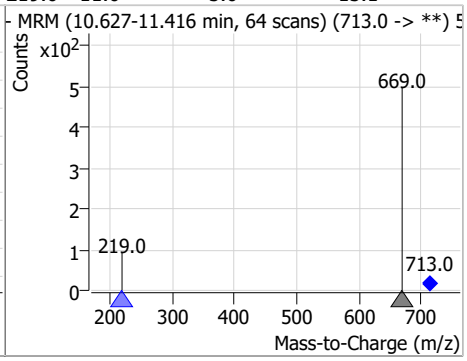




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	1.02	10.89	-0.01	21462	713.0 -> 219.0	11.0	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q134-CC134
Lab FileID: 5Q9081.D
Injection Time: 12/29/22 00:08
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.74	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.88	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
12/30/22 13:18

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9085.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/29/2022 1:16:21 AM
Sample Name : ecc134-20
Vial : P1-A7
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q134.batch.bin
Sample Information : OP94373,S5Q134,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	108360	20.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	208515	20.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	303861	20.00	µg/L	0.000
M4-PFHpA	5.726	367.0 -> 322.0	317539	20.00	µg/L	0.000
M8-PFOA	6.361	421.0 -> 376.0	417925	20.00	µg/L	0.000
M9-PFNA	6.931	472.0 -> 427.0	435816	20.00	µg/L	0.013
M6-PFDA	7.449	519.0 -> 474.0	486261	20.00	µg/L	0.013
M7-PFUnDA	8.307	570.0 -> 525.0	656069	20.00	µg/L	-0.012
M2-PFDoDA	9.375	615.0 -> 570.0	481052	20.00	µg/L	-0.013
M2-PFTeDA	10.899	715.0 -> 670.0	405450	20.00	µg/L	0.000
M8-FOSA	6.605	506.0 -> 78.0	106484	20.00	µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	25469	20.00	µg/L	0.000
M3-PFHxS	5.733	402.0 -> 99.0	35348	20.00	µg/L	0.000
M8-PFOS	6.879	507.0 -> 99.0	46593	20.00	µg/L	0.000
M2-4:2FTS	4.886	329.0 -> 309.0	95533	20.00	µg/L	0.000
M2-6:2FTS	6.360	429.0 -> 409.0	156367	20.00	µg/L	0.000
M2-8:2FTS	7.512	529.0 -> 509.0	151352	20.00	µg/L	0.000
M3-MeFOSAA	7.047	573.0 -> 419.0	44453	20.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	63734	20.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	33166	20.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	45072	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	95533	19.84	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%		
13C2-6:2FTS	6.360	429.0 -> 409.0	156367	20.40	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.0%		
13C2-8:2FTS	7.512	529.0 -> 509.0	151352	20.96	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.8%		
13C2-PFDoDA	9.375	615.0 -> 570.0	481052	21.39	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.0%		
13C2-PFTeDA	10.899	715.0 -> 670.0	405450	20.71	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.5%		
13C3-PFBS	4.124	302.0 -> 99.0	25469	19.60	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%		
13C3-PFHxS	5.733	402.0 -> 99.0	35348	19.75	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.8%		
13C4-PFBA	2.400	217.0 -> 172.0	108360	20.83	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.1%		
13C4-PFHpA	5.726	367.0 -> 322.0	317539	20.65	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.3%		
13C5-PFHxA	4.965	318.0 -> 273.0	303861	20.20	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.0%		
13C5-PFPeA	3.919	268.0 -> 223.0	208515	19.88	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.4%		
13C6-PFDA	7.449	519.0 -> 474.0	486261	20.92	µg/L	0.013

Perfluorinated Compounds by LC/MS/MS

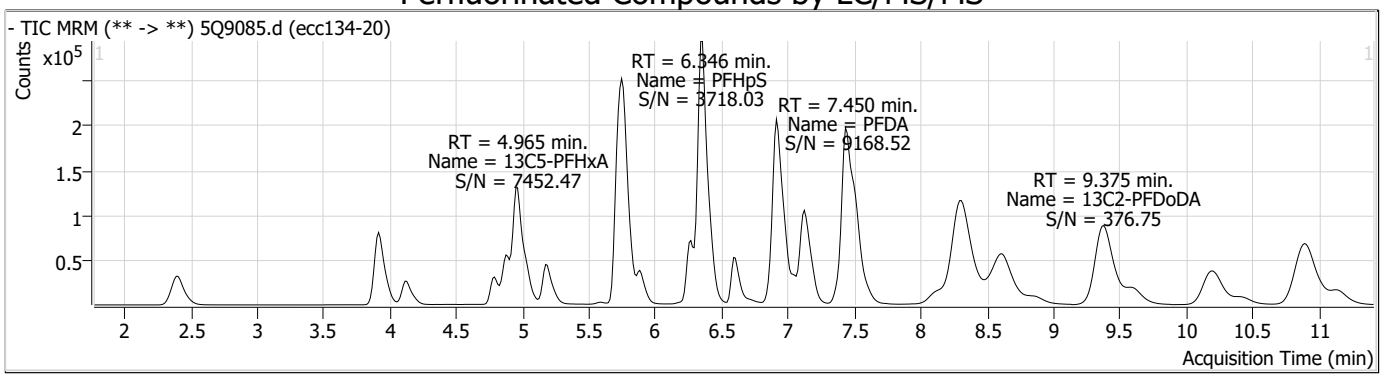
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.6%		
13C7-PFUnDA	8.307	570.0 -> 525.0	656069	22.42 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 112.1%		
13C8-FOSA	6.605	506.0 -> 78.0	106484	22.05 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.2%		
13C8-PFOA	6.361	421.0 -> 376.0	417925	20.74 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.7%		
13C8-PFOS	6.879	507.0 -> 99.0	46593	19.54 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.7%		
13C9-PFNA	6.931	472.0 -> 427.0	435816	20.72 µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.6%		
d3-MeFOSAA	7.047	573.0 -> 419.0	44453	25.02 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 125.1%		
13C3-HFPO-DA	5.194	287.0 -> 169.0	63734	19.27 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.3%		
d3-MeFOSA	6.964	515.0 -> 169.0	33166	21.89 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.5%		
d5-EtFOSAA	7.157	589.0 -> 419.0	45072	24.44 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 122.2%		
Target Compounds						QValue
4:2FTS	4.888	327.0 -> 307.0	107051	20.47 µg/L		99
		327.0 -> 81.0	62673			
6:2FTS	6.360	427.0 -> 407.0	164023	20.44 µg/L		99
		427.0 -> 81.0	71513			
8:2FTS	7.512	527.0 -> 507.0	157522	20.37 µg/L		99
		527.0 -> 81.0	77337			
EtFOSAA	7.158	584.0 -> 419.0	32235	21.42 µg/L		98
		584.0 -> 483.0	19949			
FOSA	6.606	498.0 -> 78.0	106608	19.48 µg/L		100
		498.0 -> 478.0	3456			
MeFOSAA	7.047	570.0 -> 419.0	35412	19.63 µg/L		100
		570.0 -> 512.0	14613			
PFBA	2.394	213.0 -> 169.0	112511	19.06 µg/L		100
PFBS	4.129	299.0 -> 80.0	80448	19.42 µg/L		99
		299.0 -> 99.0	34090			
PFDA	7.450	513.0 -> 469.0	499085	19.28 µg/L		100
		513.0 -> 219.0	89271			
PFDoDA	9.379	613.0 -> 569.0	432278	19.69 µg/L		100
		613.0 -> 319.0	73462			
PFDS	8.119	599.0 -> 80.0	100501	17.07 µg/L		100
		599.0 -> 99.0	60222			
PFHpA	5.727	363.0 -> 319.0	379971	19.13 µg/L		100
		363.0 -> 169.0	84259			
PFHpS	6.346	449.0 -> 80.0	70348	19.75 µg/L		98
		449.0 -> 99.0	37597			
PFHxA	4.966	313.0 -> 269.0	297360	19.27 µg/L		100
		313.0 -> 119.0	13780			
PFHxS	5.735	399.0 -> 80.0	68744	19.16 µg/L	m	99
		399.0 -> 99.0	39188			
PFNA	6.931	463.0 -> 419.0	439240	19.43 µg/L		100
		463.0 -> 219.0	93860			
PFNS	7.384	549.0 -> 80.0	64302	20.13 µg/L		97
		549.0 -> 99.0	37145			
PFOA	6.362	413.0 -> 369.0	466202	19.49 µg/L		100
		413.0 -> 169.0	123873			
PFOS	6.880	499.0 -> 80.0	83322	19.38 µg/L	m	99

Perfluorinated Compounds by LC/MS/MS

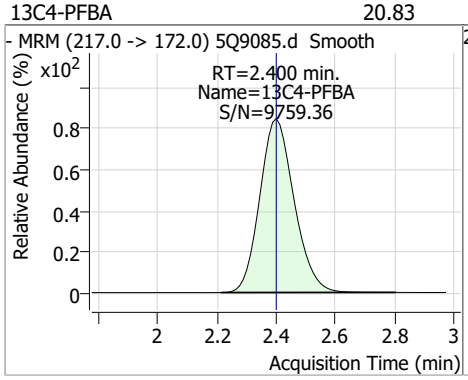
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	40227			
PFPeA	3.922	263.0 -> 219.0	238017	19.42	µg/L	100
PFPeS	5.047	349.0 -> 80.0	51376	18.95	µg/L	100
		349.0 -> 99.0	26137			
PFTeDA	10.891	713.0 -> 669.0	453529	21.59	µg/L	98
		713.0 -> 219.0	41723			
PFTrDA	10.187	663.0 -> 619.0	416391	19.86	µg/L	100
		663.0 -> 369.0	45705			
PFUnDA	8.309	563.0 -> 519.0	638055	18.91	µg/L	99
		563.0 -> 269.0	105807			
11Cl-PF3OUdS	8.615	631.0 -> 451.0	408619	18.16	µg/L	95
		633.0 -> 453.0	126770			
9Cl-PF3ONS	7.123	531.0 -> 351.0	364779	16.98	µg/L	99
		533.0 -> 353.0	113189			
ADONA	5.777	377.0 -> 251.0	499747	20.96	µg/L	100
		377.0 -> 85.0	187983			
HFPO-DA	5.190	329.0 -> 169.0	98802	19.40	µg/L	100
		285.0 -> 169.0	58679			
MeFOSA	6.966	512.0 -> 169.0	37938	19.33	µg/L	100
		512.0 -> 219.0	29476			
4-PFECHS	6.268	461.0 -> 381.0	229766	17.25	µg/L	98
		461.0 -> 99.0	125439			
FBSA	4.793	298.0 -> 78.0	133850	21.23	µg/L	99
		298.0 -> 64.0	12118			
FHxSA	5.900	398.0 -> 78.0	126996	20.43	µg/L	100
		398.0 -> 64.0	12118			

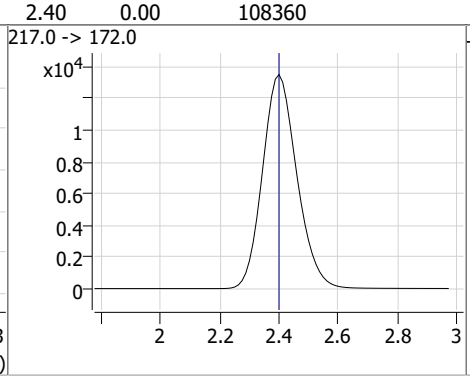
 # = Qualifier out of range, m = manually integrated, + = Area summed

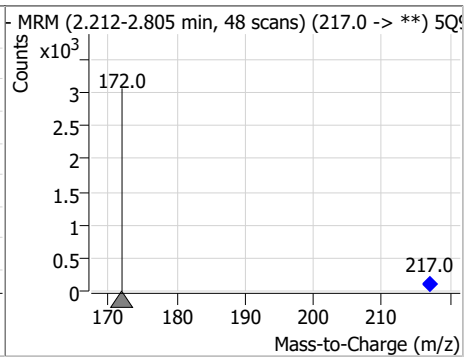
Perfluorinated Compounds by LC/MS/MS



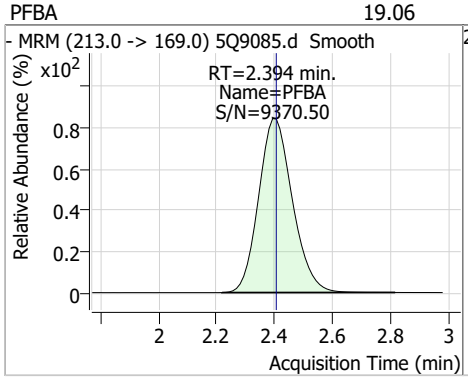
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.83	2.40	0.00	108360				

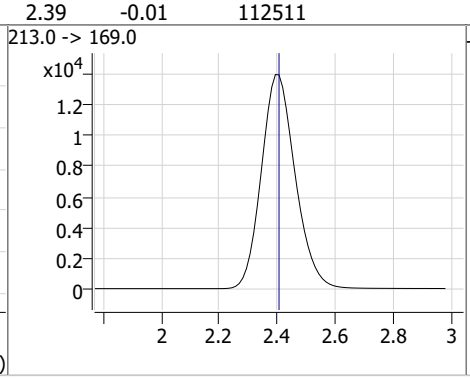


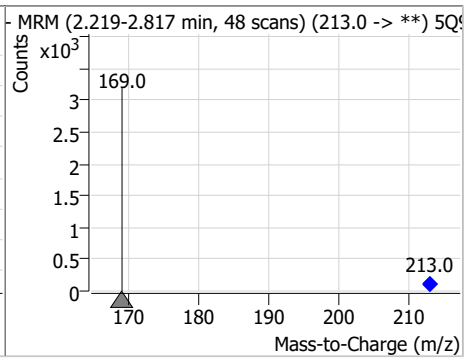




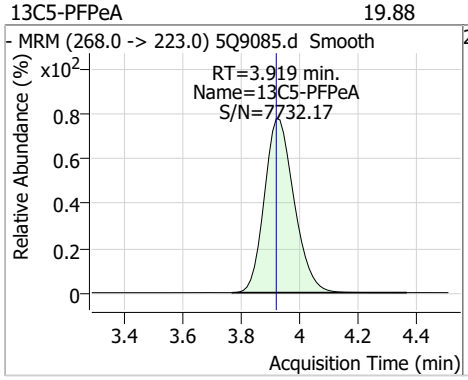
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.06	2.39	-0.01	112511				

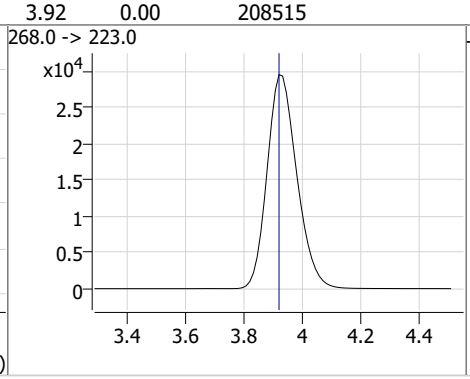


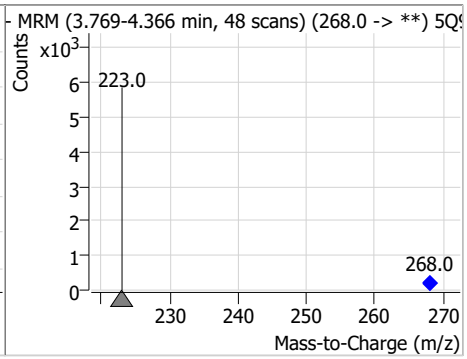




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.88	3.92	0.00	208515				

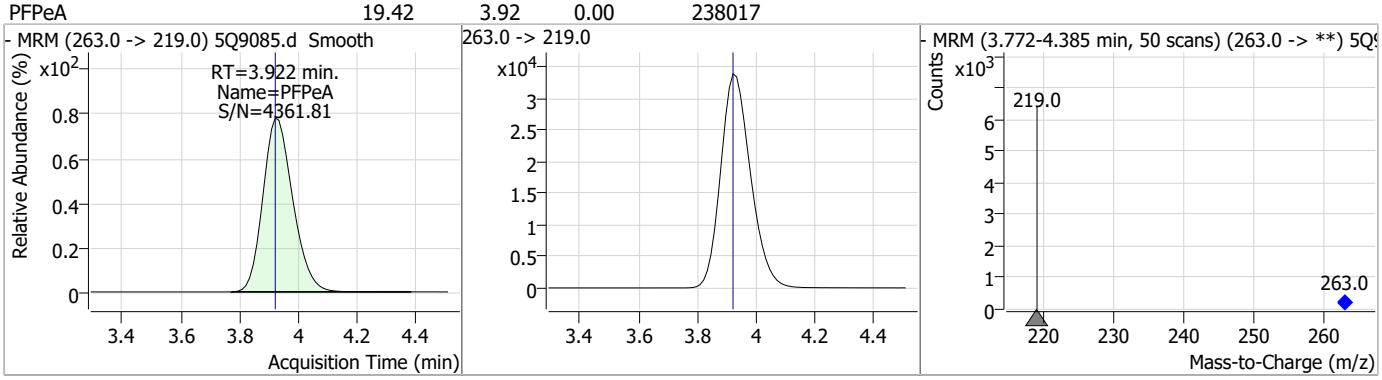




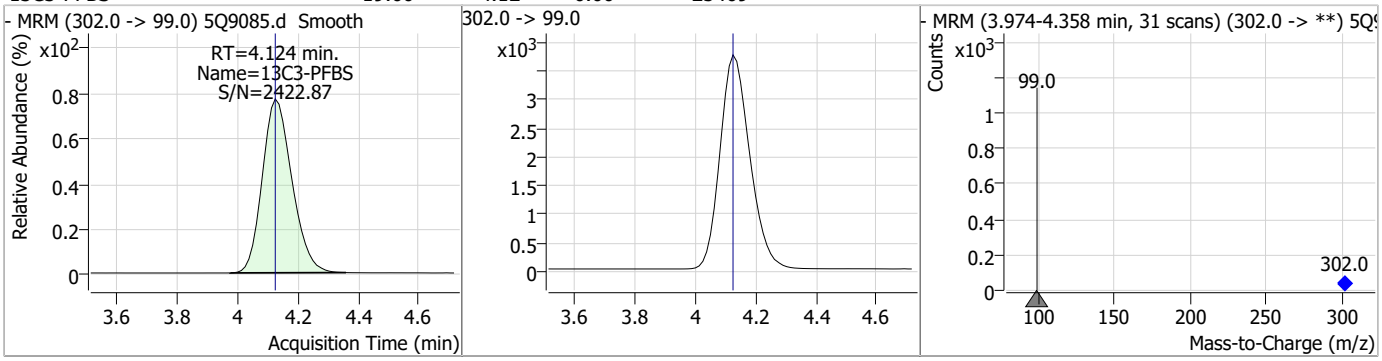


Perfluorinated Compounds by LC/MS/MS

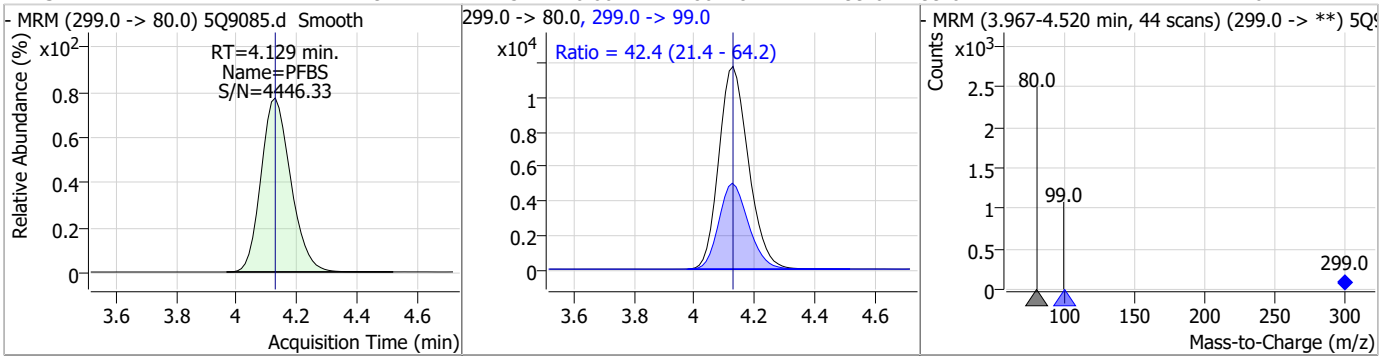
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.42	3.92	0.00	238017				



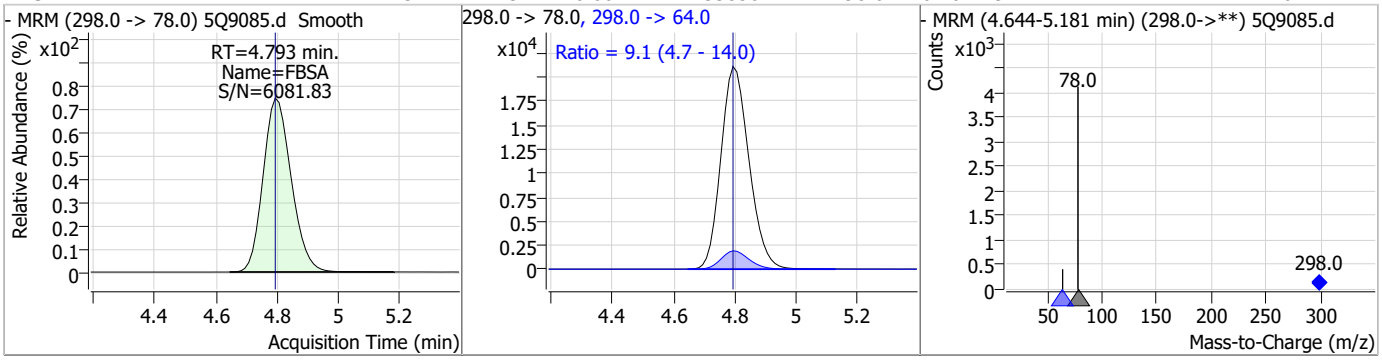
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.60	4.12	0.00	25469				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.42	4.13	0.00	80448	299.0 -> 99.0	42.4	21.4	64.2

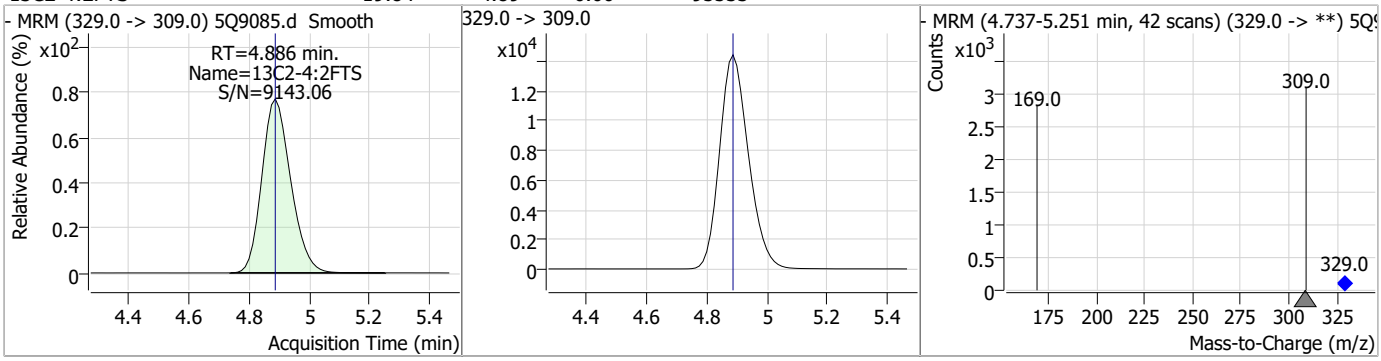


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	21.23	4.79	0.00	133850	298.0 -> 64.0	9.1	4.7	14.0

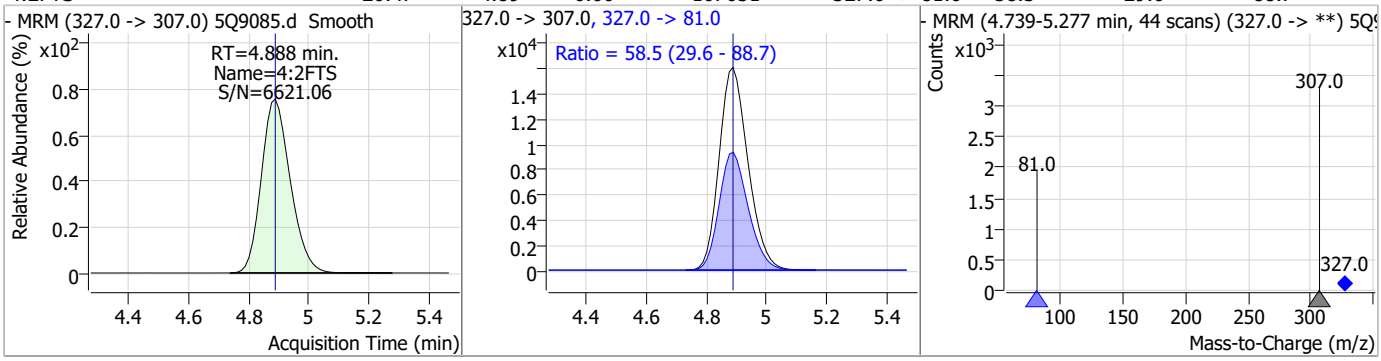


Perfluorinated Compounds by LC/MS/MS

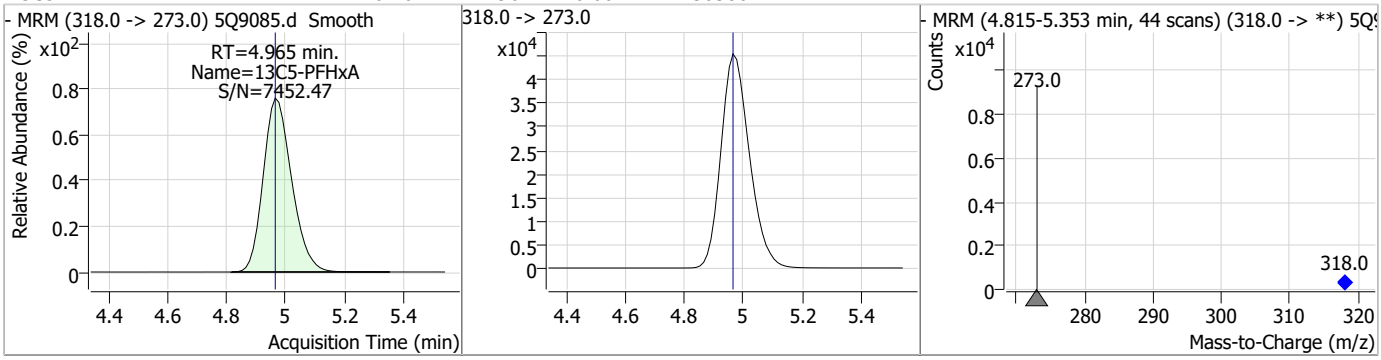
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.84	4.89	0.00	95533				



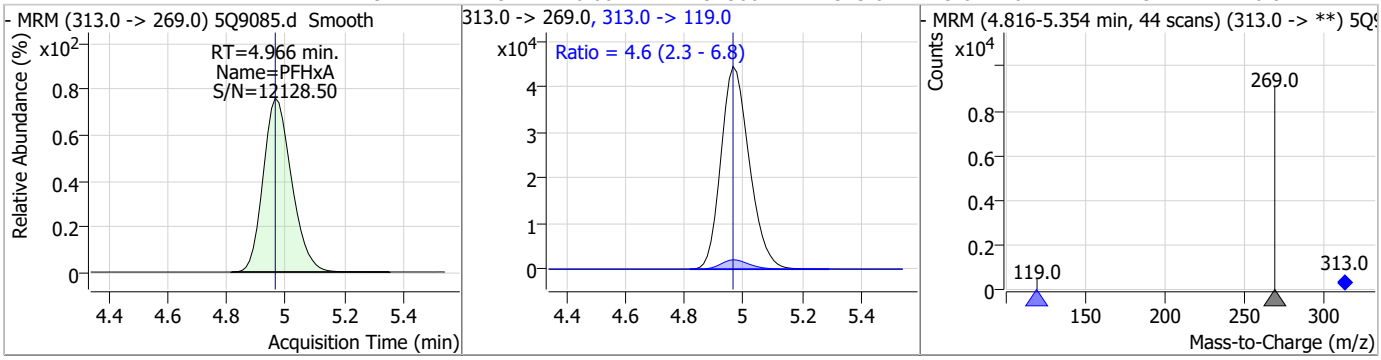
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.47	4.89	0.00	107051	327.0 -> 81.0	58.5	29.6	88.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.20	4.96	0.00	303861				

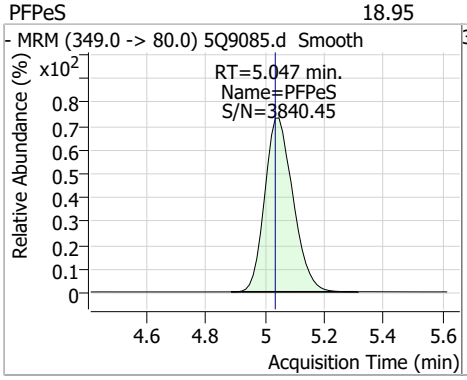


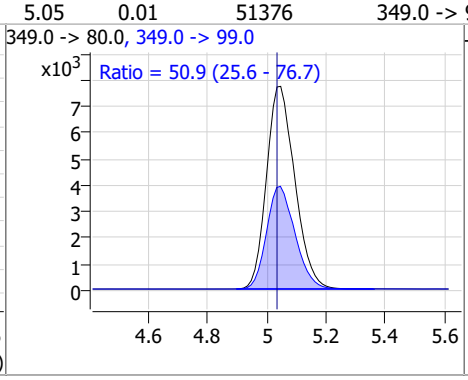
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.27	4.97	0.00	297360	313.0 -> 119.0	4.6	2.3	6.8

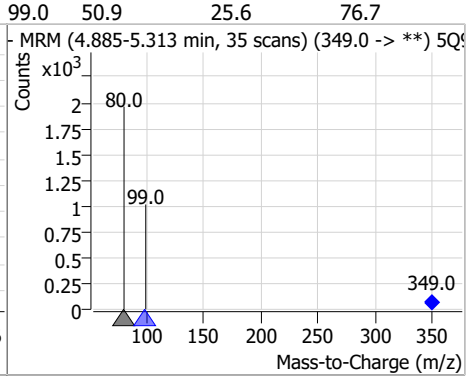


Perfluorinated Compounds by LC/MS/MS

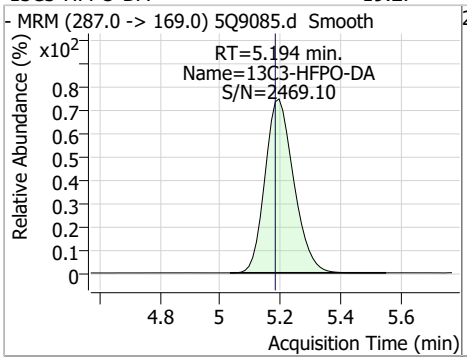
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	18.95	5.05	0.01	51376	349.0 -> 99.0	50.9	25.6	76.7

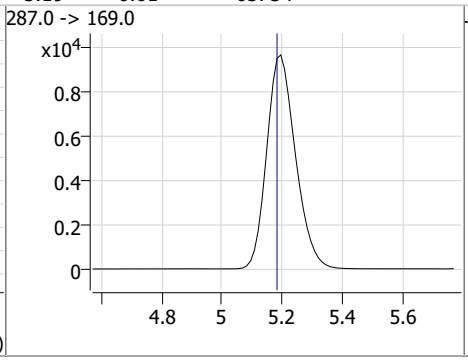


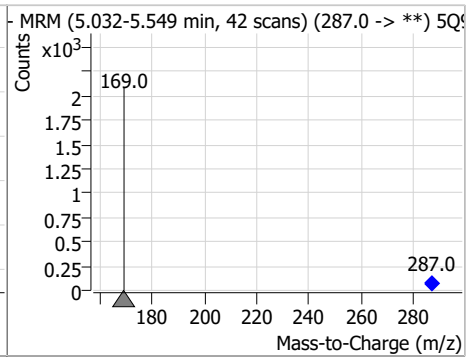




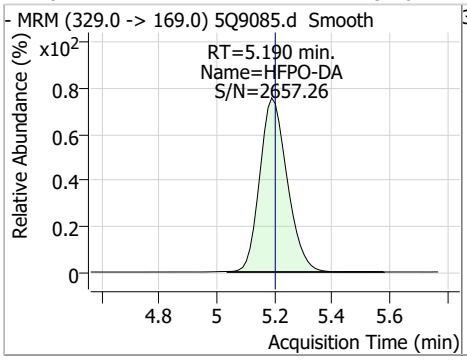
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.27	5.19	0.01	63734				

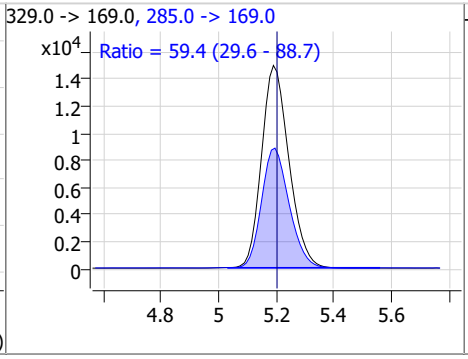


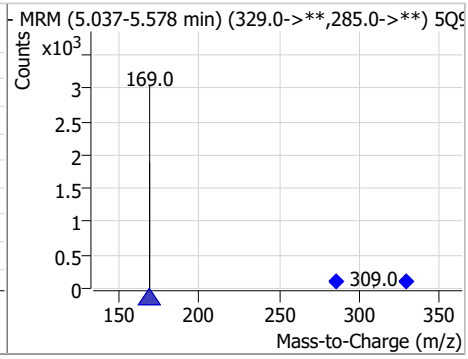




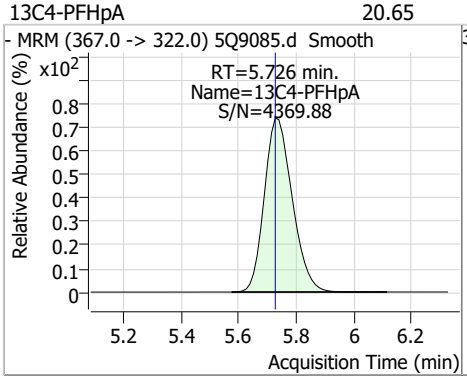
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	19.40	5.19	0.00	98802	285.0 -> 169.0	59.4	29.6	88.7

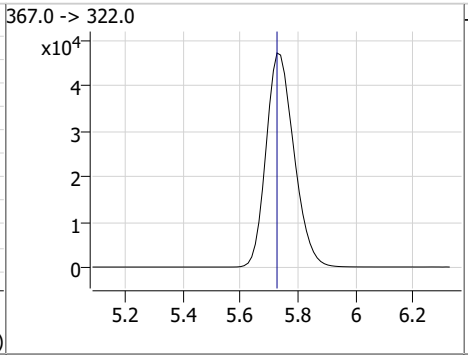


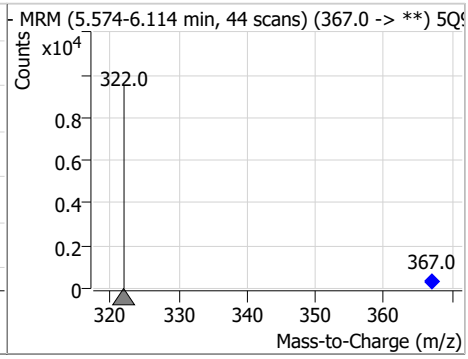




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.65	5.73	0.00	317539				

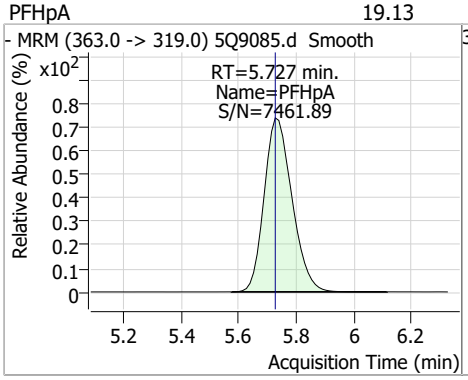


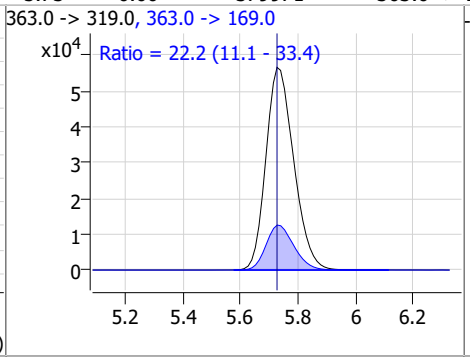


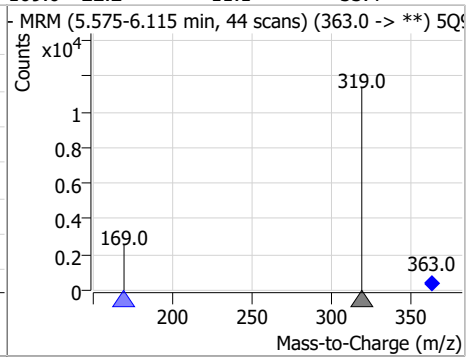


Perfluorinated Compounds by LC/MS/MS

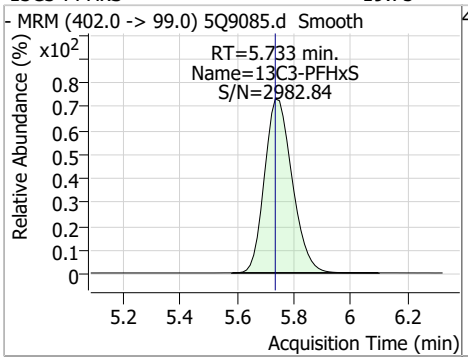
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	19.13	5.73	0.00	379971	363.0 -> 169.0	22.2	11.1	33.4

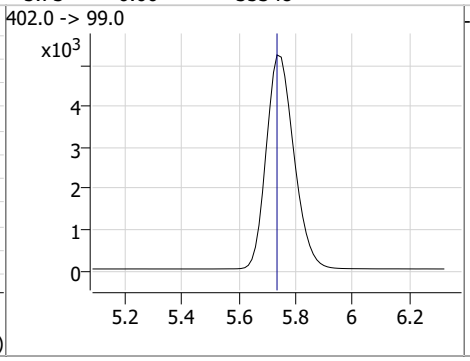


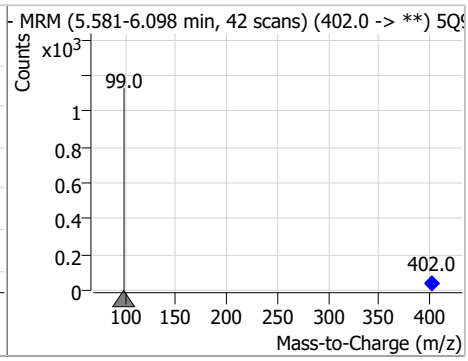




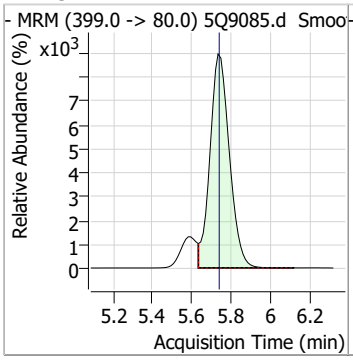
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.75	5.73	0.00	35348				

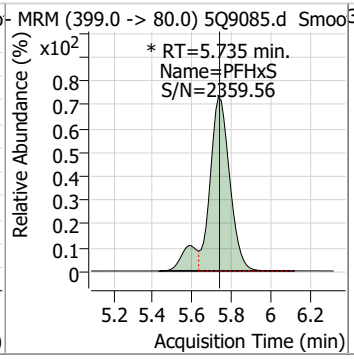


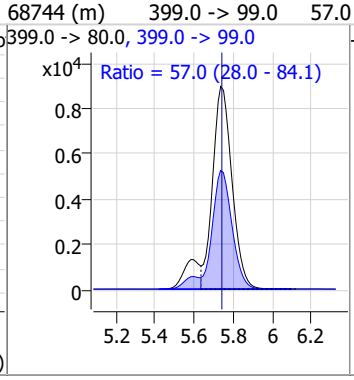


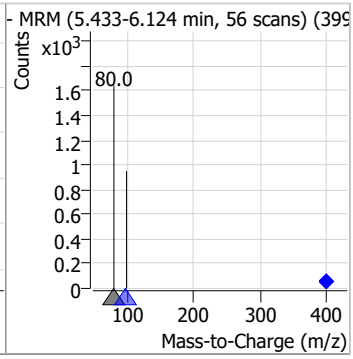


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	19.16	5.73	0.00	68744 (m)	399.0 -> 99.0	57.0	28.0	84.1

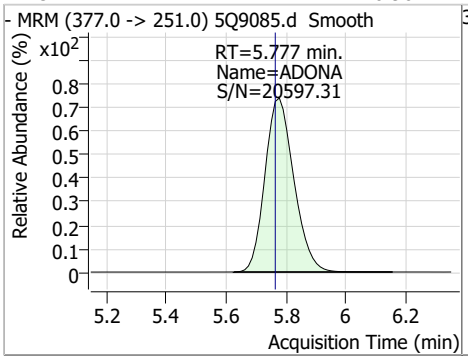


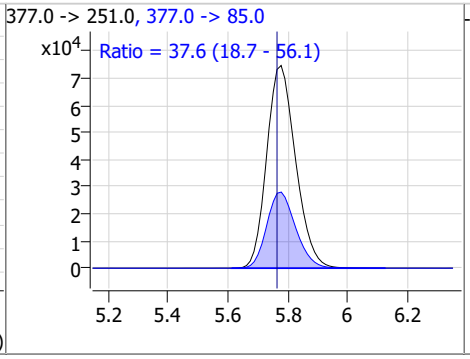


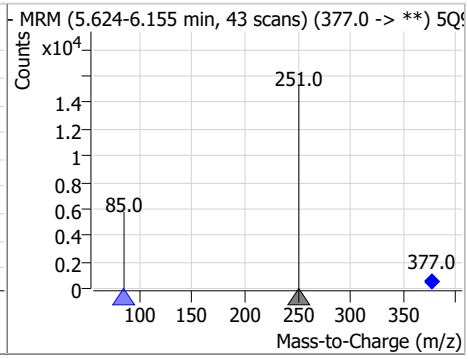




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	20.96	5.78	0.01	499747	377.0 -> 85.0	37.6	18.7	56.1

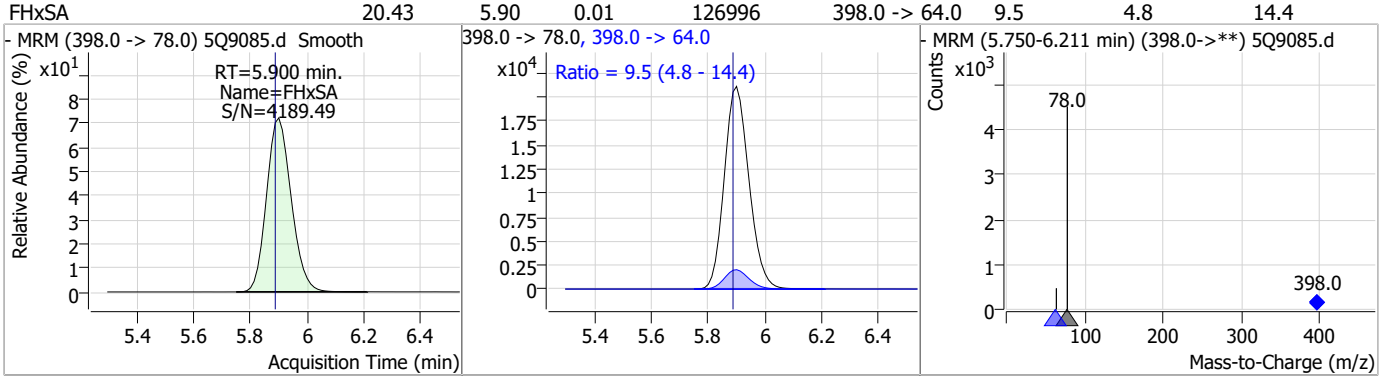




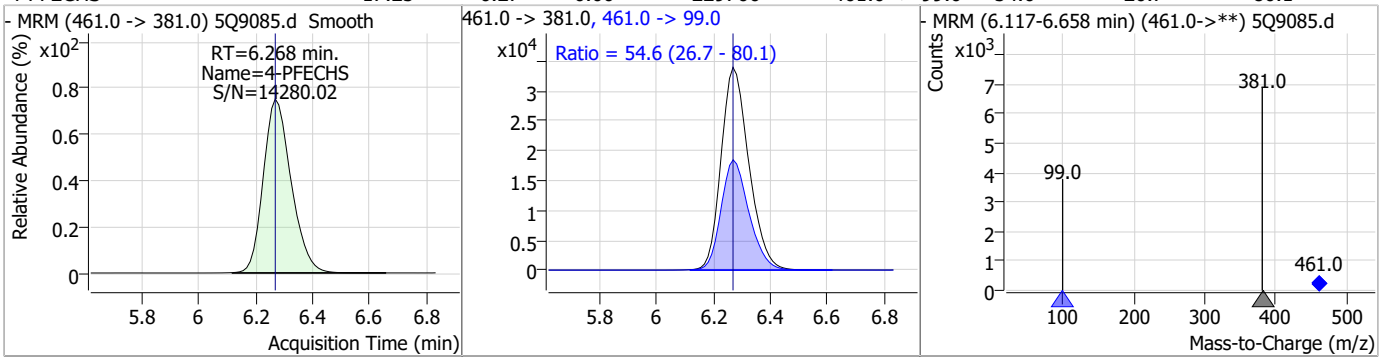


Perfluorinated Compounds by LC/MS/MS

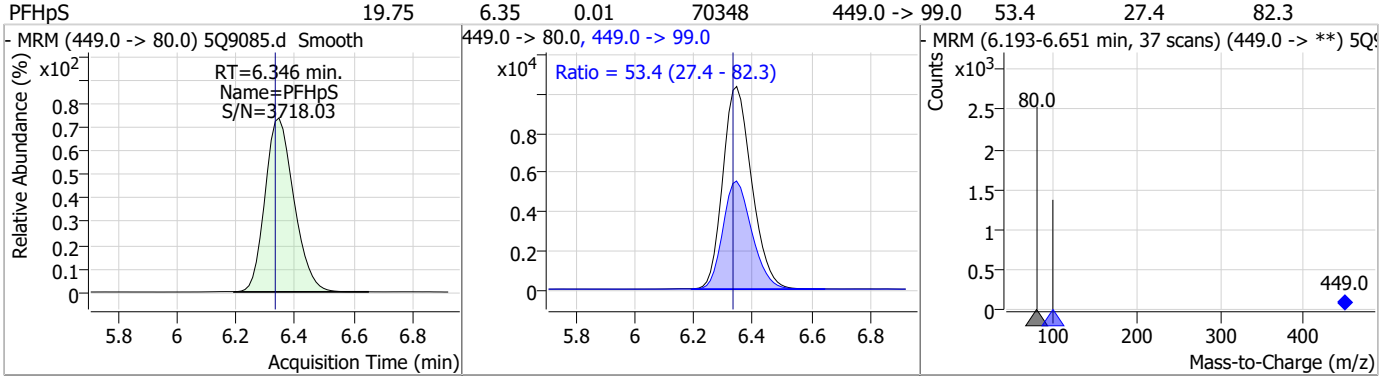
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	20.43	5.90	0.01	126996	398.0 -> 64.0	9.5	4.8	14.4



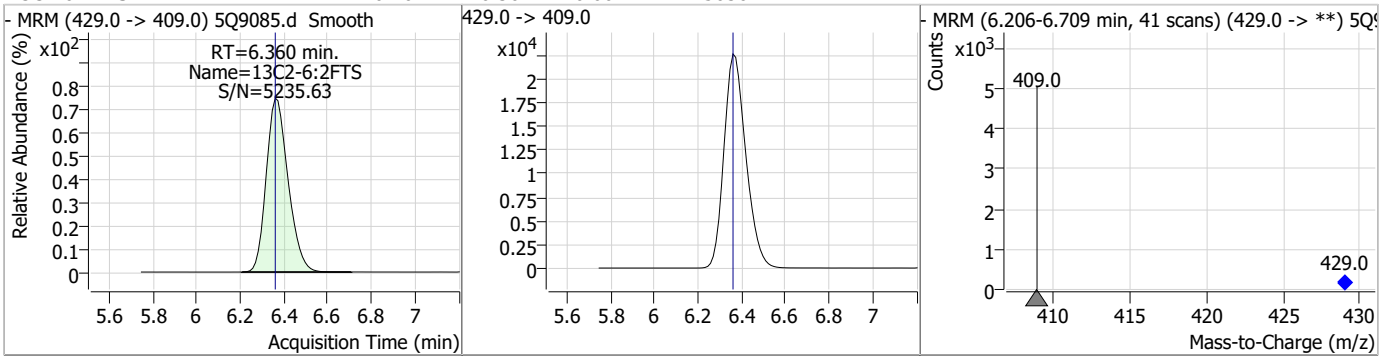
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	17.25	6.27	0.00	229766	461.0 -> 99.0	54.6	26.7	80.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	19.75	6.35	0.01	70348	449.0 -> 99.0	53.4	27.4	82.3

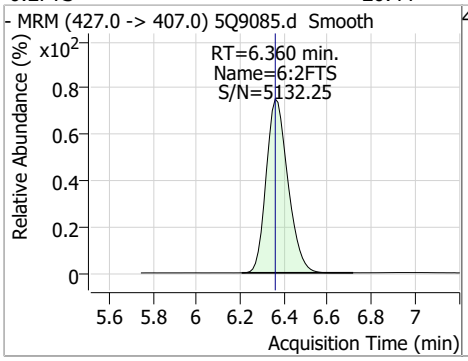


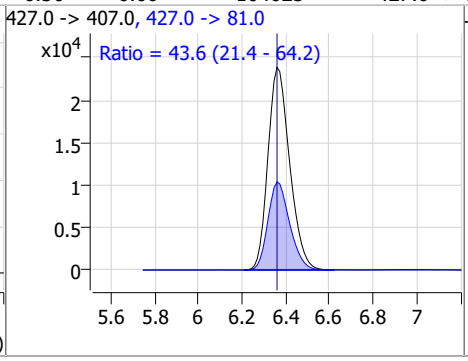
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.40	6.36	0.00	156367				

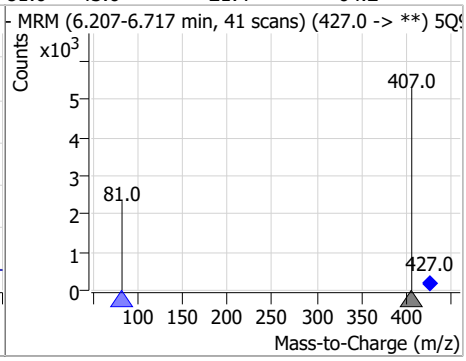


Perfluorinated Compounds by LC/MS/MS

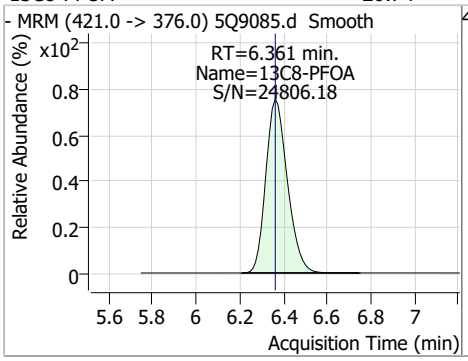
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	20.44	6.36	0.00	164023	427.0 -> 81.0	43.6	21.4	64.2

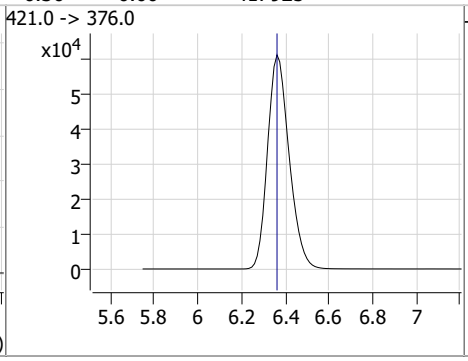


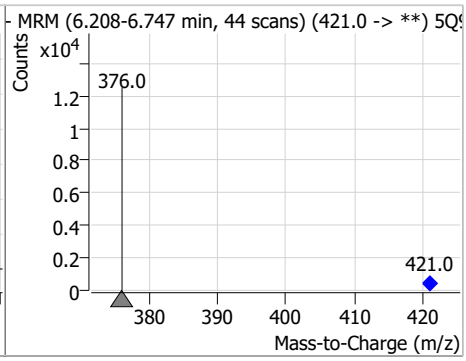




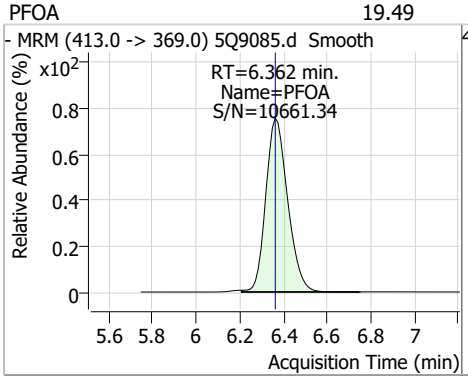
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.74	6.36	0.00	417925				

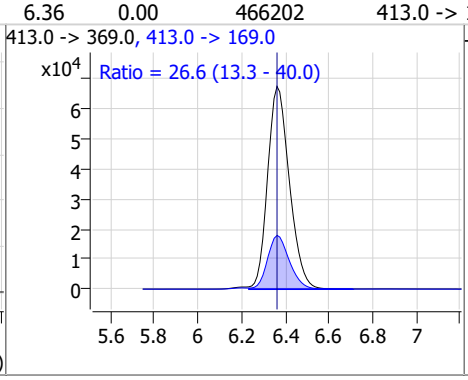


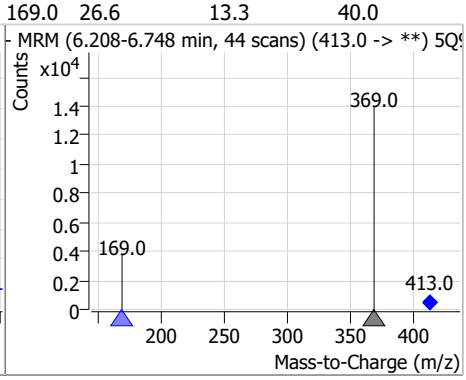




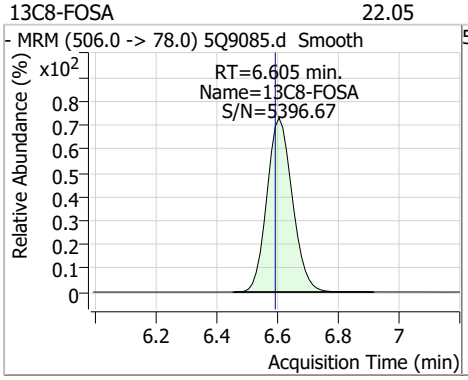
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.49	6.36	0.00	466202	413.0 -> 169.0	26.6	13.3	40.0

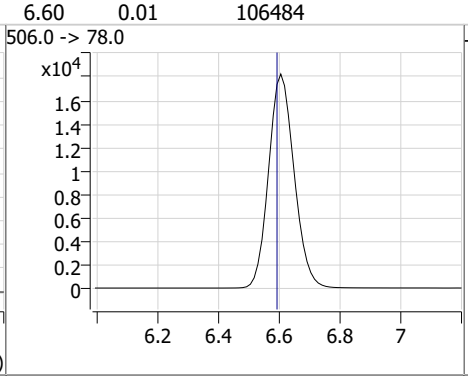


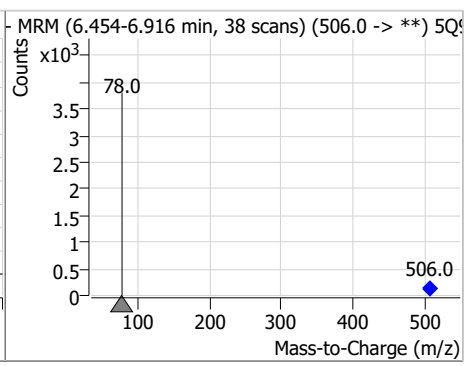




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	22.05	6.60	0.01	106484				

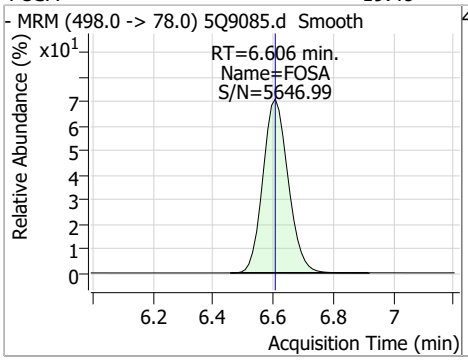


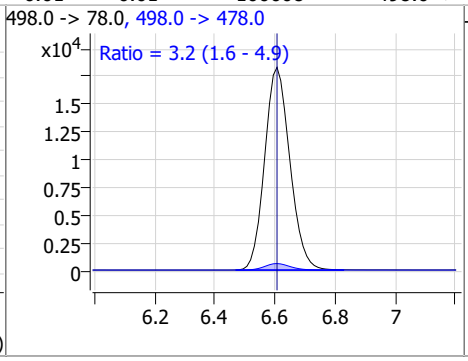


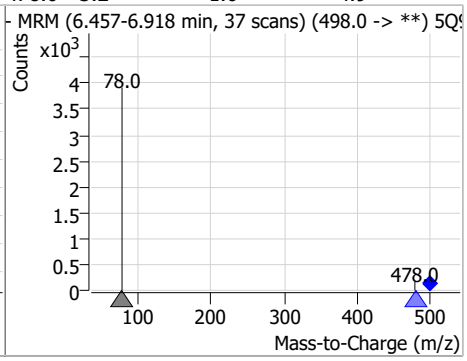


Perfluorinated Compounds by LC/MS/MS

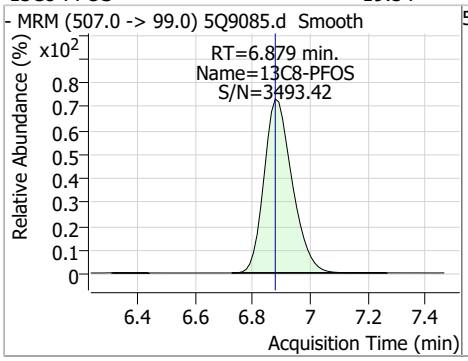
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	19.48	6.61	0.01	106608	498.0 -> 478.0	3.2	1.6	4.9

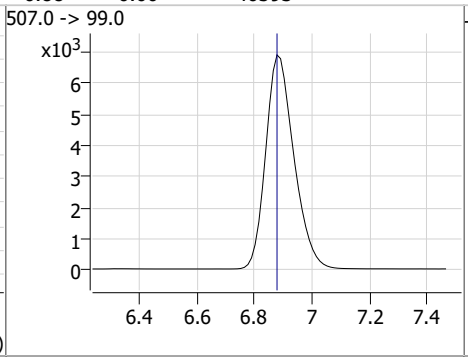


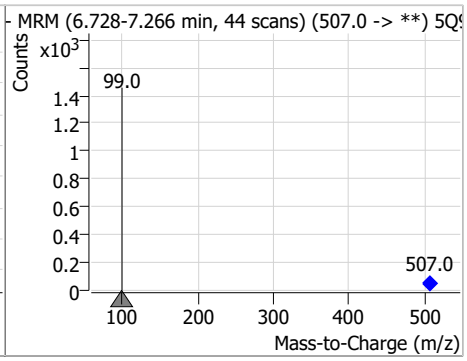




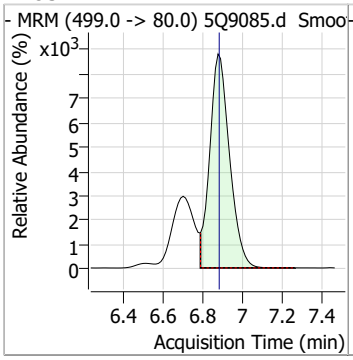
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.54	6.88	0.00	46593				

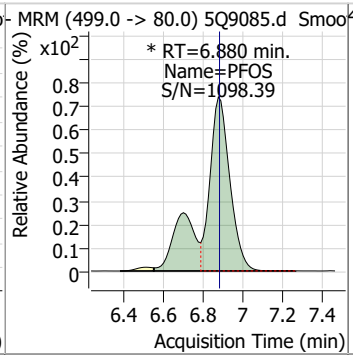


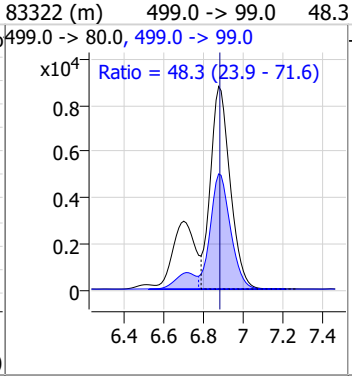


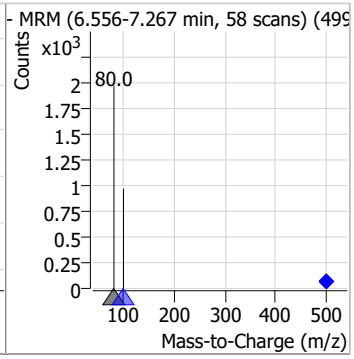


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.38	6.88	0.00	83322 (m)	499.0 -> 99.0	48.3	23.9	71.6

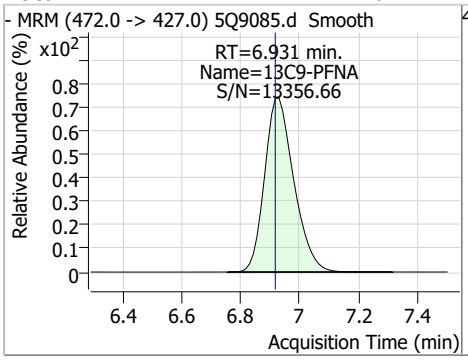


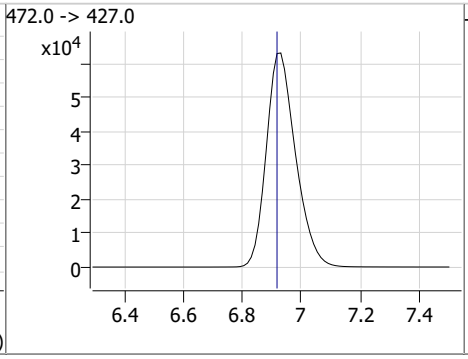


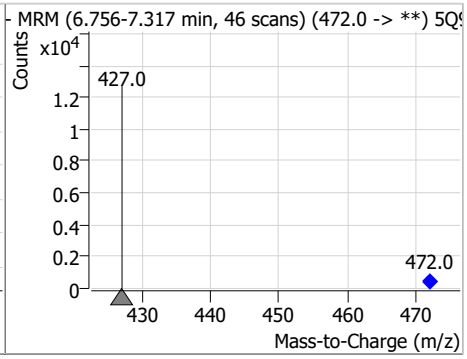




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.72	6.93	0.01	435816				

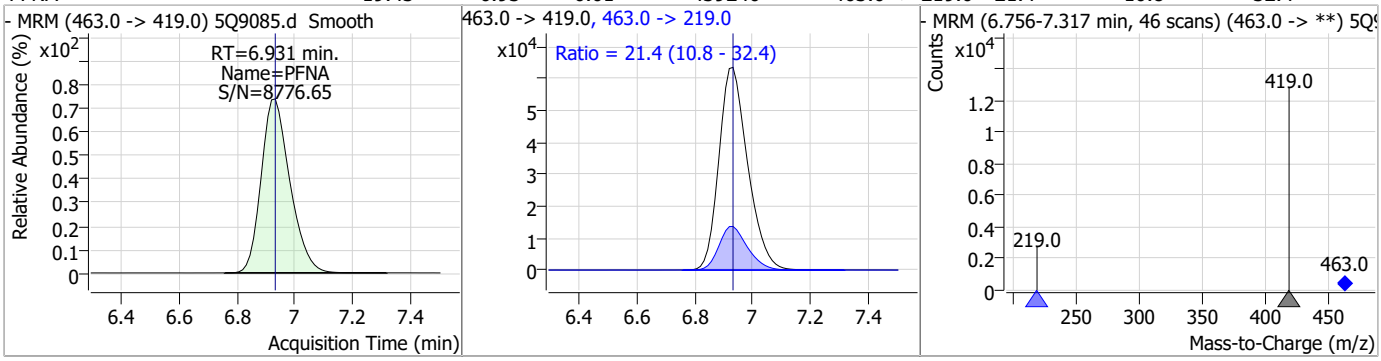




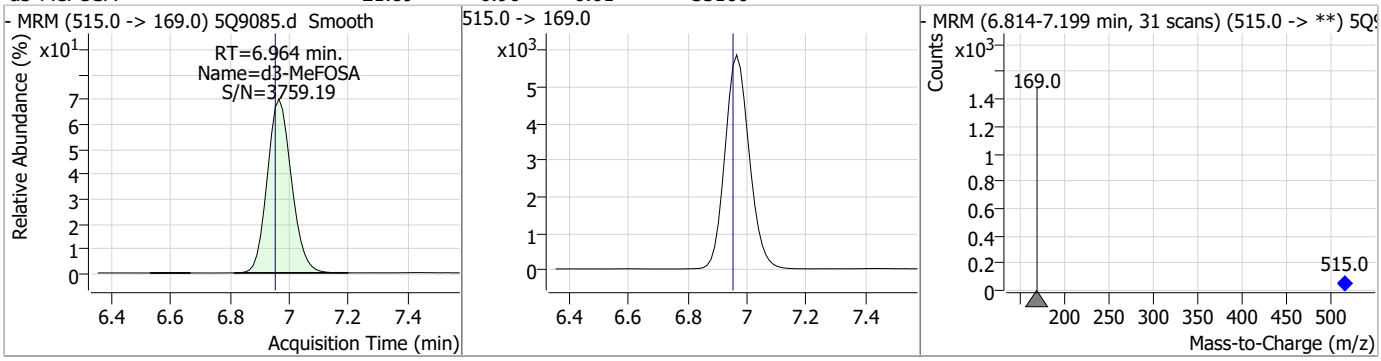


Perfluorinated Compounds by LC/MS/MS

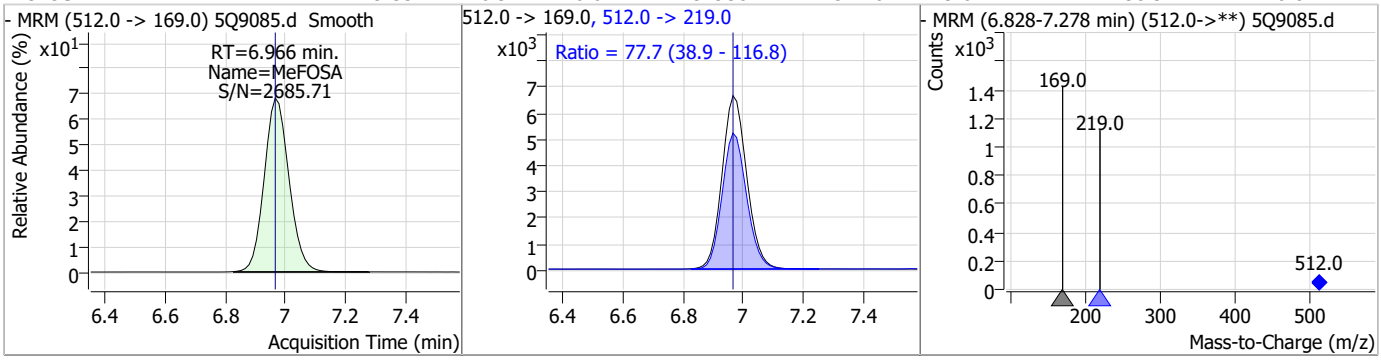
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.43	6.93	0.01	439240	463.0 -> 219.0	21.4	10.8	32.4



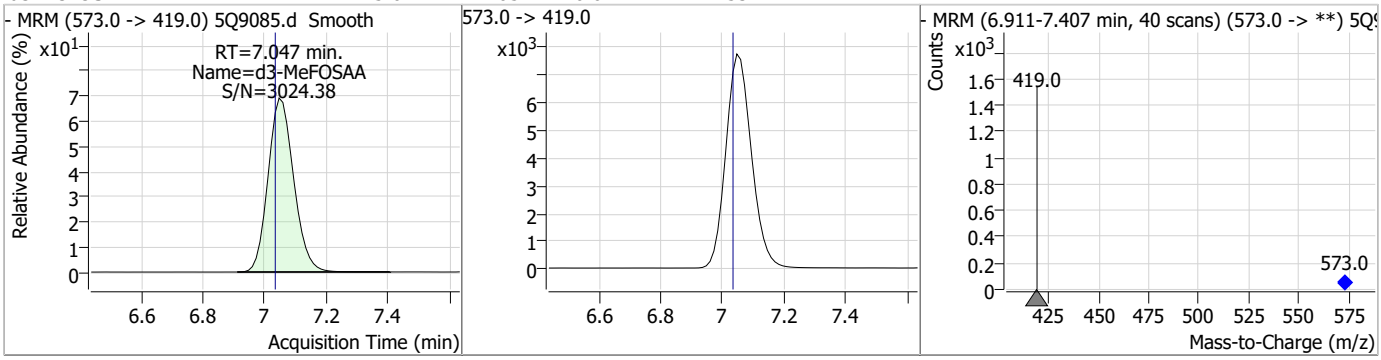
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	21.89	6.96	0.01	33166				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	19.33	6.97	0.01	37938	512.0 -> 219.0	77.7	38.9	116.8

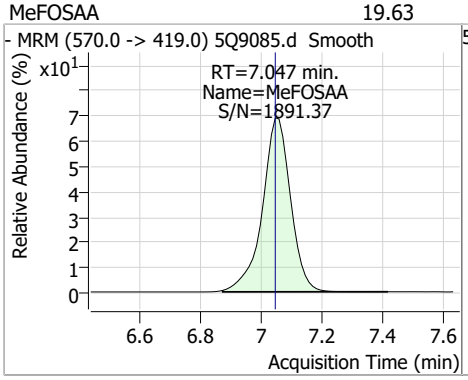


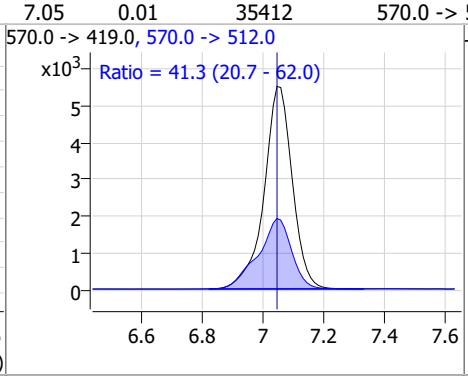
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	25.02	7.05	0.01	44453				

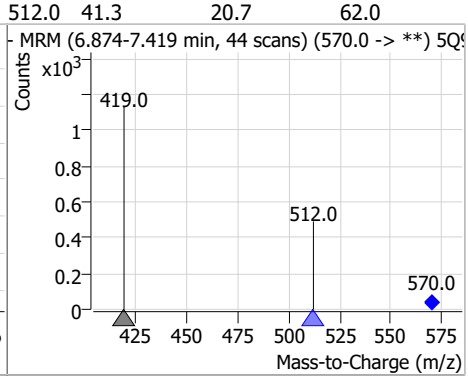


Perfluorinated Compounds by LC/MS/MS

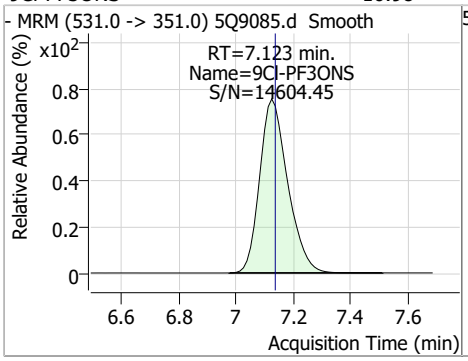
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	19.63	7.05	0.01	35412	570.0 -> 512.0	41.3	20.7	62.0

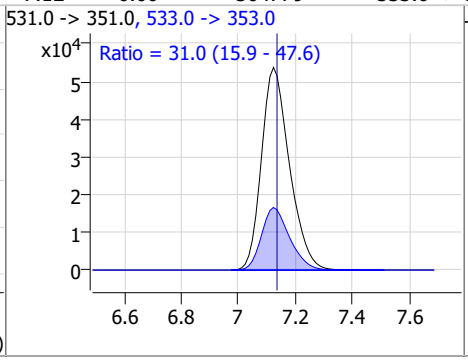


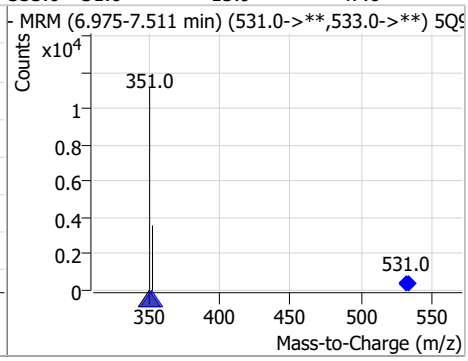




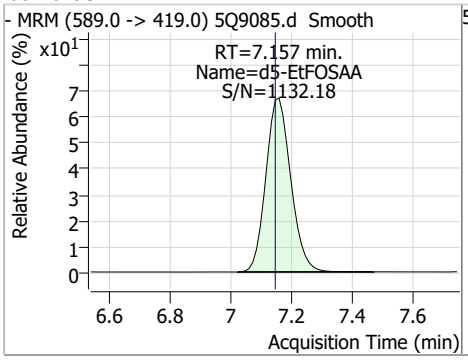
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	16.98	7.12	0.00	364779	533.0 -> 353.0	31.0	15.9	47.6

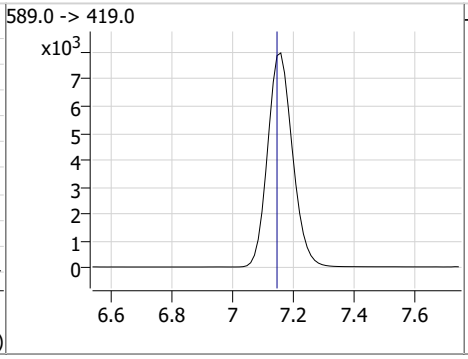


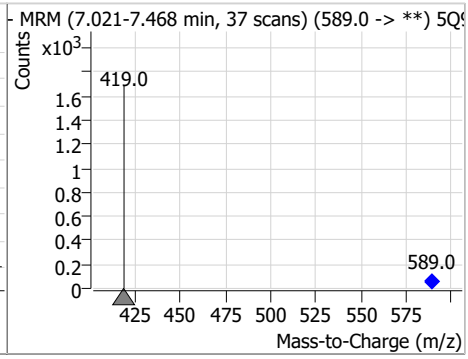




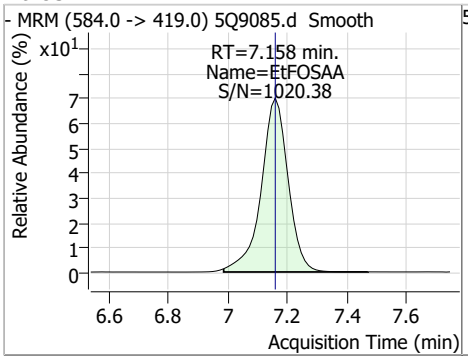
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	24.44	7.16	0.01	45072				

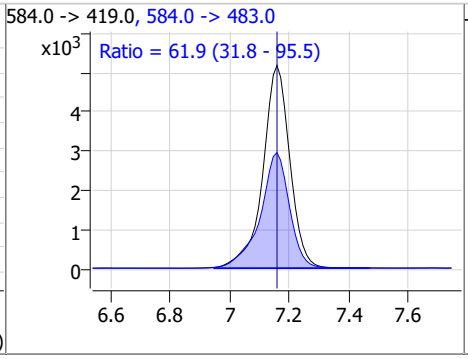


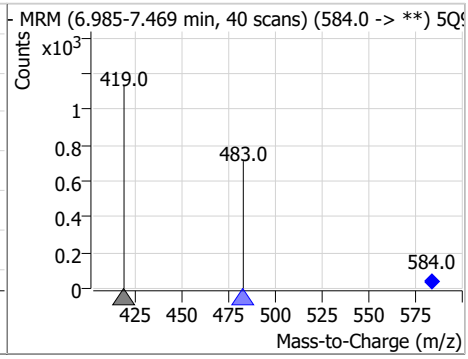




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	21.42	7.16	0.01	32235	584.0 -> 483.0	61.9	31.8	95.5

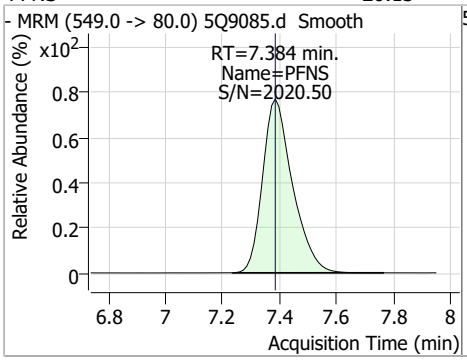


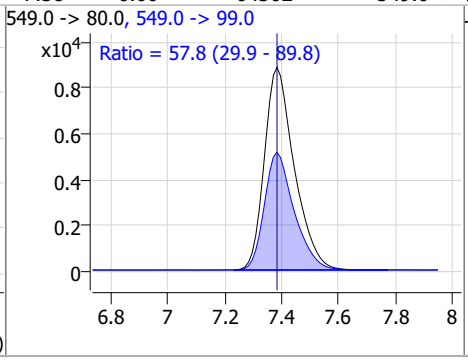


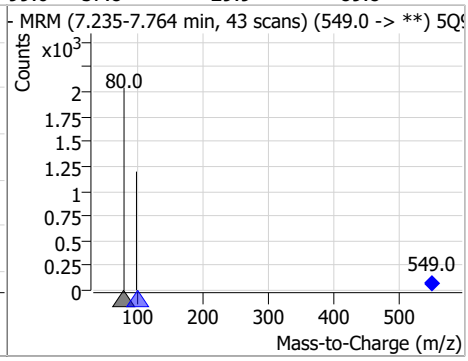


Perfluorinated Compounds by LC/MS/MS

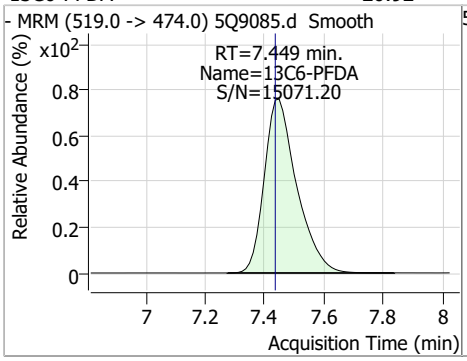
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	20.13	7.38	0.00	64302	549.0 -> 99.0	57.8	29.9	89.8

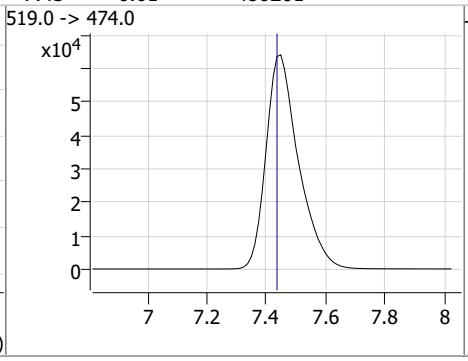


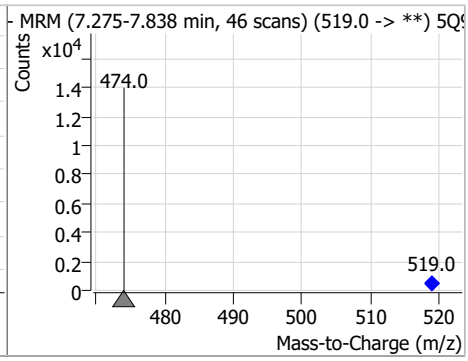




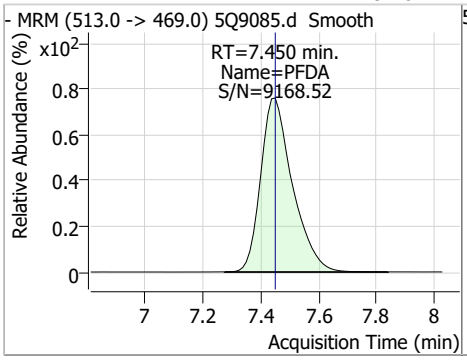
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.92	7.45	0.01	486261				

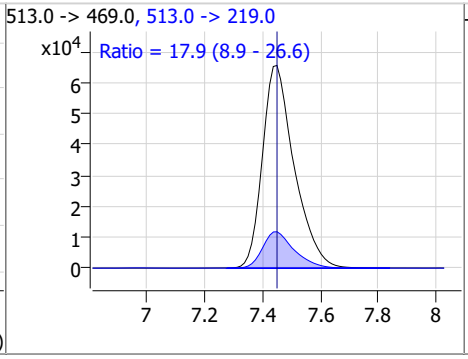


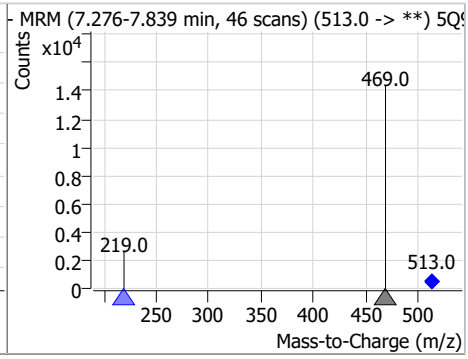




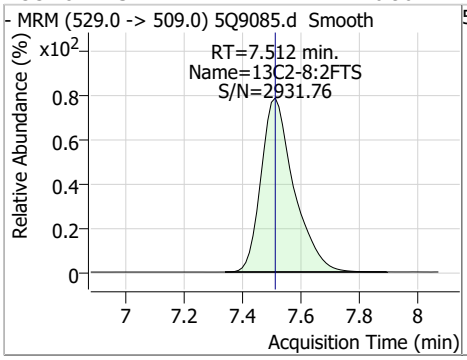
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.28	7.45	0.01	499085	513.0 -> 219.0	17.9	8.9	26.6

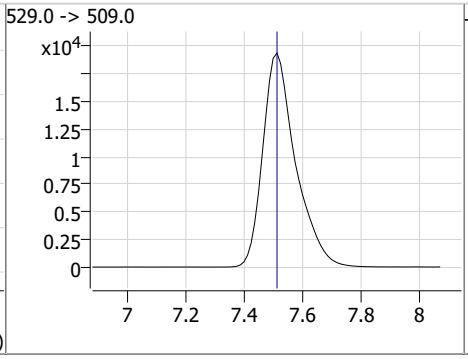


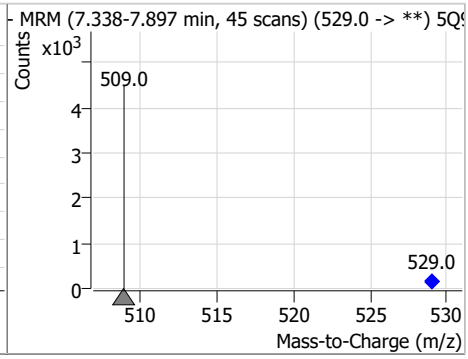




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	20.96	7.51	0.00	151352				

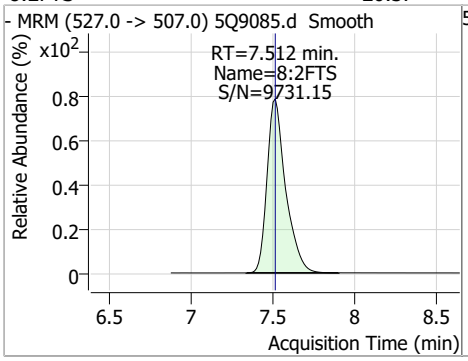


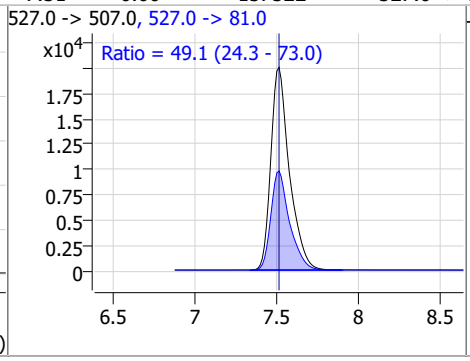


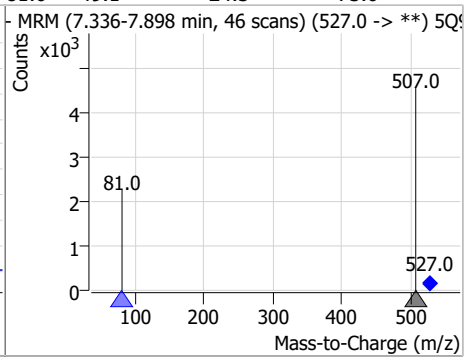


Perfluorinated Compounds by LC/MS/MS

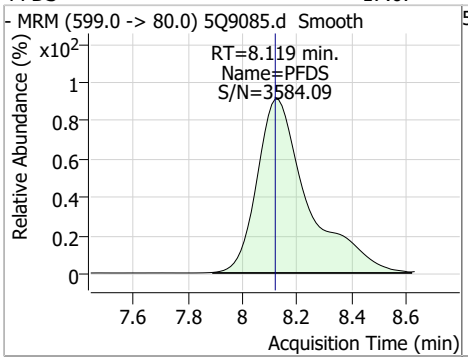
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.37	7.51	0.00	157522	527.0 -> 81.0	49.1	24.3	73.0

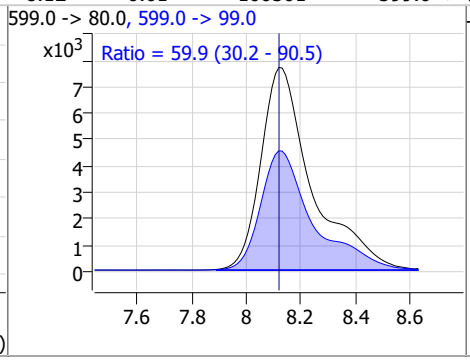


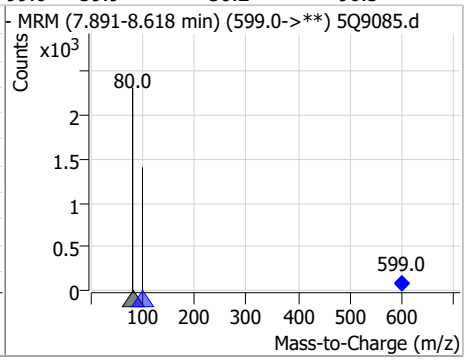




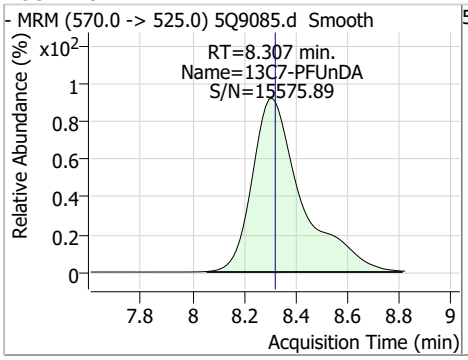
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	17.07	8.12	-0.01	100501	599.0 -> 99.0	59.9	30.2	90.5

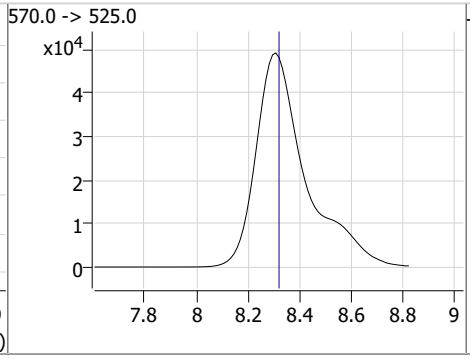


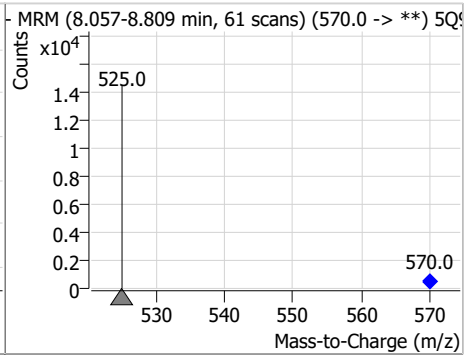




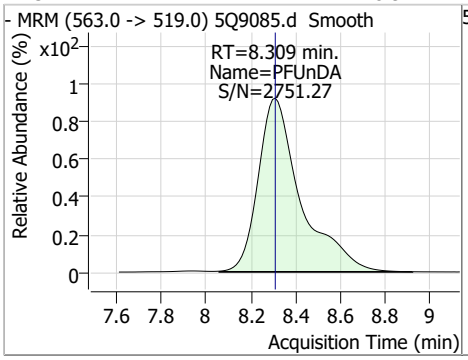
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	22.42	8.31	-0.01	656069				

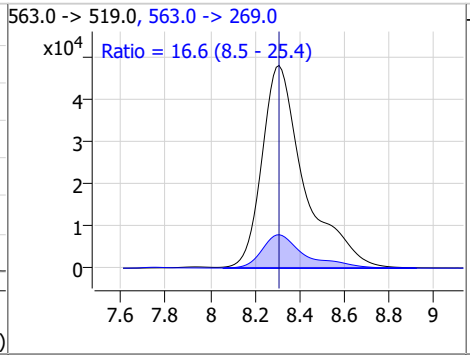


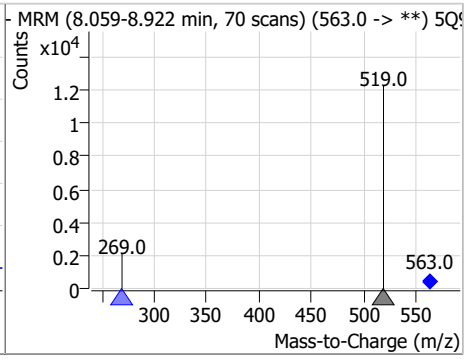




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	18.91	8.31	-0.01	638055	563.0 -> 269.0	16.6	8.5	25.4

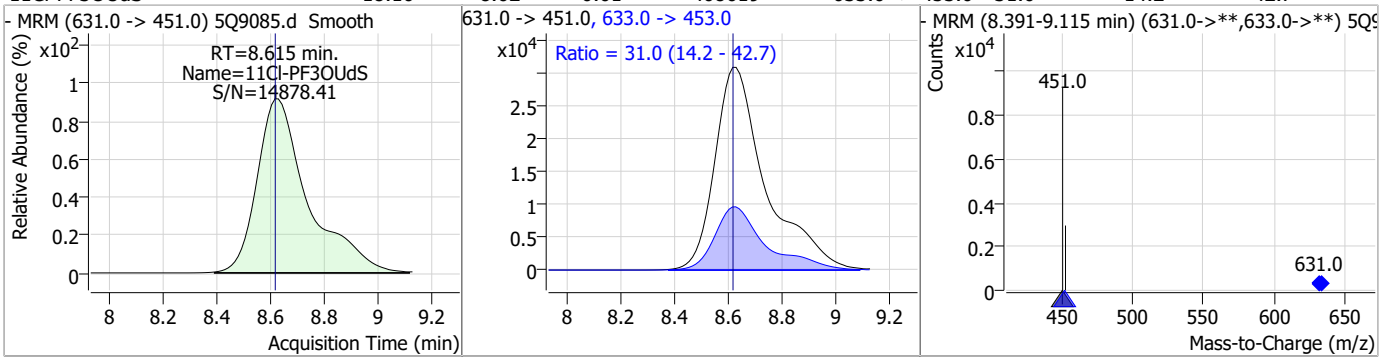




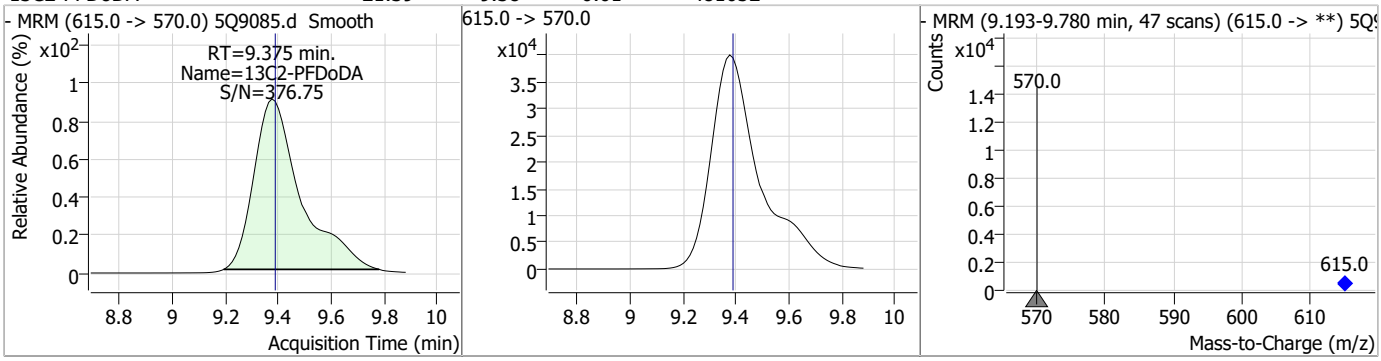


Perfluorinated Compounds by LC/MS/MS

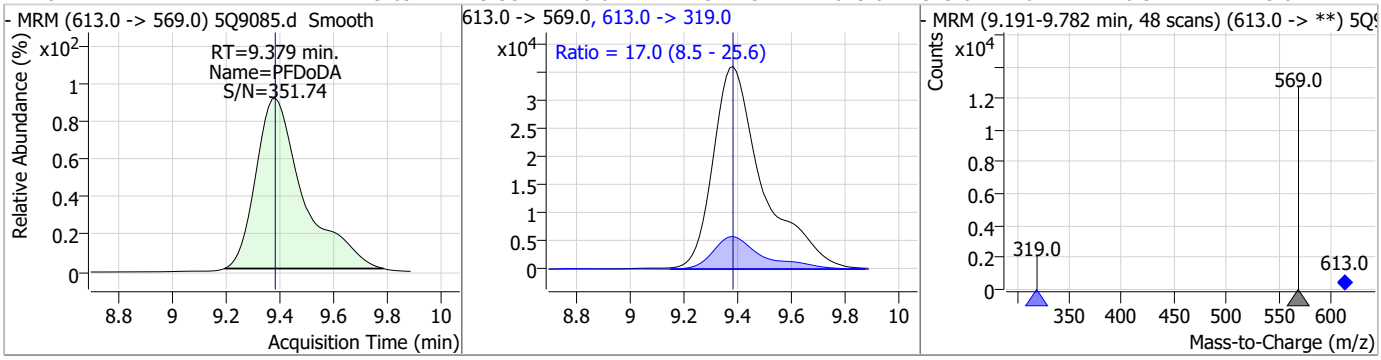
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	18.16	8.62	-0.01	408619	633.0 -> 453.0	31.0	14.2	42.7



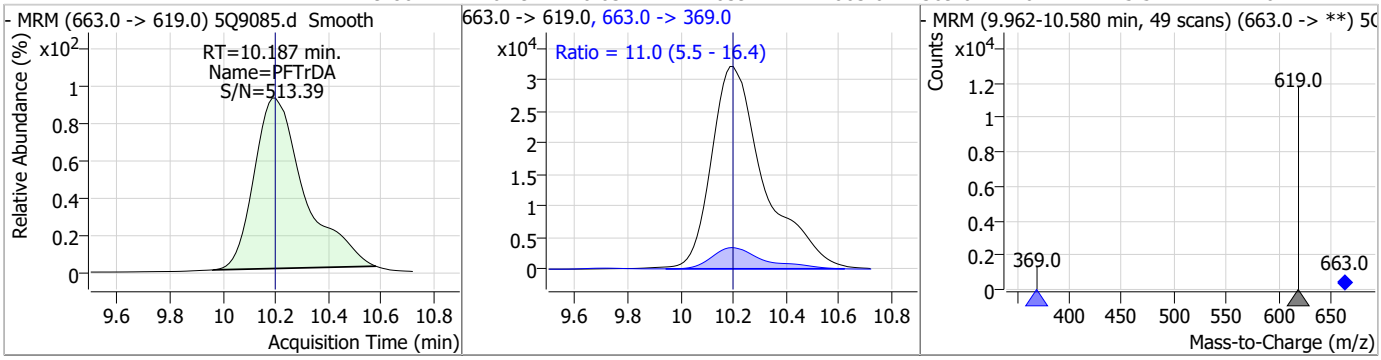
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	21.39	9.38	-0.01	481052				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	19.69	9.38	-0.01	432278	613.0 -> 319.0	17.0	8.5	25.6

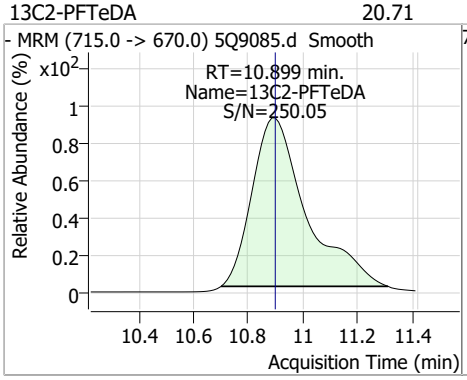


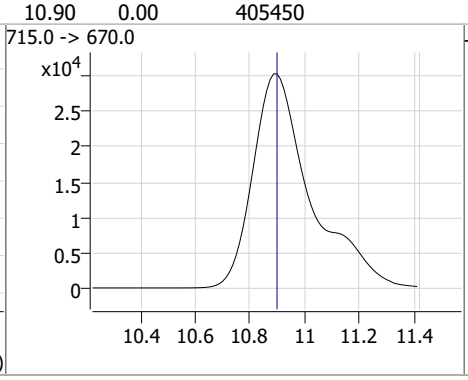
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	19.86	10.19	-0.03	416391	663.0 -> 369.0	11.0	5.5	16.4

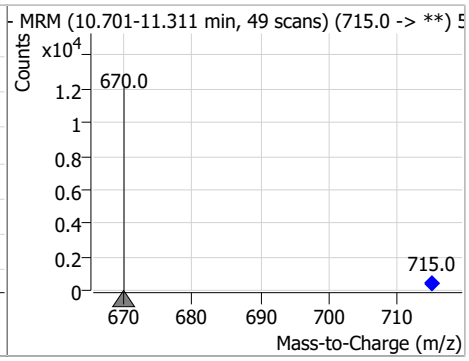


Perfluorinated Compounds by LC/MS/MS

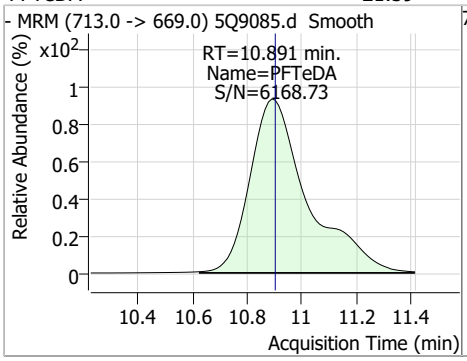
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.71	10.90	0.00	405450				

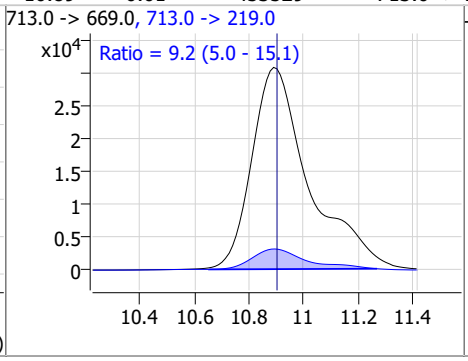


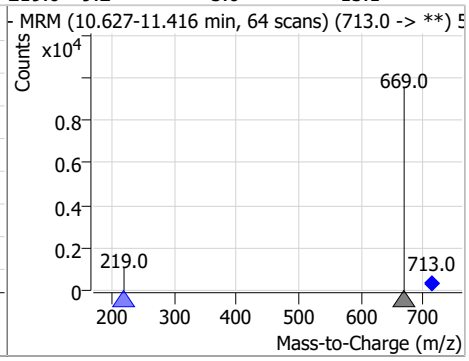




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	21.59	10.89	-0.01	453529	713.0 -> 219.0	9.2	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q134-ECC134
Lab FileID: 5Q9085.D
Injection Time: 12/29/22 01:16
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/29/22 10:50 Lindsay Ritner
Supervisor approved: 12/30/22 13:18 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.74	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.88	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Norman Farmer 12/31/22 16:37

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9093.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/29/2022 11:30:43 AM
Sample Name : cc134-20
Vial : P1-A7
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q135.batch.bin
Sample Information : OP94373,S5Q135,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	98300	20.00	µg/L	0.000
M5-PFPeA	3.932	268.0 -> 223.0	198896	20.00	µg/L	0.012
M5-PFHxA	4.977	318.0 -> 273.0	284393	20.00	µg/L	0.012
M4-PFHpA	5.738	367.0 -> 322.0	289626	20.00	µg/L	0.012
M8-PFOA	6.374	421.0 -> 376.0	376757	20.00	µg/L	0.012
M9-PFNA	6.931	472.0 -> 427.0	387334	20.00	µg/L	0.013
M6-PFDA	7.449	519.0 -> 474.0	420287	20.00	µg/L	0.013
M7-PFUnDA	8.332	570.0 -> 525.0	478596	20.00	µg/L	0.012
M2-PFDoDA	9.400	615.0 -> 570.0	371797	20.00	µg/L	0.012
M2-PFTeDA	10.924	715.0 -> 670.0	350058	20.00	µg/L	0.025
M8-FOSA	6.605	506.0 -> 78.0	86295	20.00	µg/L	0.012
M3-PFBS	4.136	302.0 -> 99.0	24638	20.00	µg/L	0.012
M3-PFHxS	5.748	402.0 -> 99.0	33218	20.00	µg/L	0.015
M8-PFOS	6.891	507.0 -> 99.0	45291	20.00	µg/L	0.012
M2-4:2FTS	4.886	329.0 -> 309.0	90125	20.00	µg/L	0.000
M2-6:2FTS	6.372	429.0 -> 409.0	141949	20.00	µg/L	0.012
M2-8:2FTS	7.524	529.0 -> 509.0	131536	20.00	µg/L	0.012
M3-MeFOSAA	7.047	573.0 -> 419.0	30443	20.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	69951	20.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	27309	20.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	32786	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	90125	18.72	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.6%		
13C2-6:2FTS	6.372	429.0 -> 409.0	141949	18.52	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.6%		
13C2-8:2FTS	7.524	529.0 -> 509.0	131536	18.21	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.1%		
13C2-PFDoDA	9.400	615.0 -> 570.0	371797	16.53	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 82.7%		
13C2-PFTeDA	10.924	715.0 -> 670.0	350058	17.88	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.4%		
13C3-PFBS	4.136	302.0 -> 99.0	24638	18.96	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.8%		
13C3-PFHxS	5.748	402.0 -> 99.0	33218	18.56	µg/L	0.015
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%		
13C4-PFBA	2.400	217.0 -> 172.0	98300	18.89	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.5%		
13C4-PFHpA	5.738	367.0 -> 322.0	289626	18.84	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.2%		
13C5-PFHxA	4.977	318.0 -> 273.0	284393	18.91	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.5%		
13C5-PFPeA	3.932	268.0 -> 223.0	198896	18.96	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.8%		
13C6-PFDA	7.449	519.0 -> 474.0	420287	18.08	µg/L	0.013

Perfluorinated Compounds by LC/MS/MS

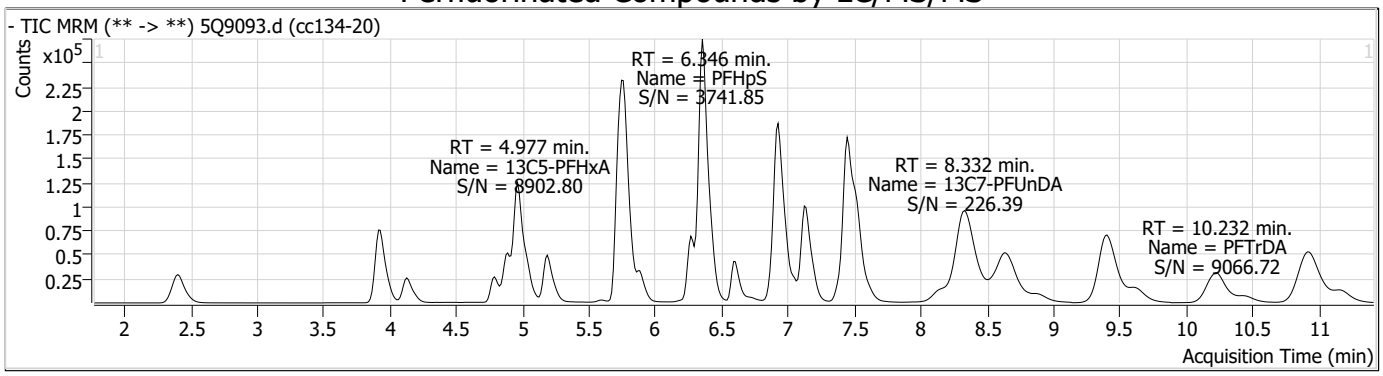
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.4%			
13C7-PFUnDA	8.332	570.0 -> 525.0	478596	16.36	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.8%			
13C8-FOSA	6.605	506.0 -> 78.0	86295	17.87	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.3%			
13C8-PFOA	6.374	421.0 -> 376.0	376757	18.70	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.5%			
13C8-PFOS	6.891	507.0 -> 99.0	45291	18.99	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.0%			
13C9-PFNA	6.931	472.0 -> 427.0	387334	18.41	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.1%			
d3-MeFOSAA	7.047	573.0 -> 419.0	30443	17.13	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.7%			
13C3-HFPO-DA	5.194	287.0 -> 169.0	69951	21.15	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.7%			
d3-MeFOSA	6.964	515.0 -> 169.0	27309	18.03	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.1%			
d5-EtFOSAA	7.157	589.0 -> 419.0	32786	17.78	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.9%			
Target Compounds							QValue
4:2FTS	4.888	327.0 -> 307.0	100398	20.35	µg/L		99
		327.0 -> 81.0	60062				
6:2FTS	6.373	427.0 -> 407.0	149571	20.53	µg/L		100
		427.0 -> 81.0	63889				
8:2FTS	7.525	527.0 -> 507.0	136950	20.38	µg/L		98
		527.0 -> 81.0	68215				
EtFOSAA	7.158	584.0 -> 419.0	21402	19.55	µg/L		98
		584.0 -> 483.0	13321				
FOSA	6.606	498.0 -> 78.0	86004	19.40	µg/L		99
		498.0 -> 478.0	2581				
MeFOSAA	7.060	570.0 -> 419.0	24728	20.02	µg/L		98
		570.0 -> 512.0	9979				
PFBA	2.406	213.0 -> 169.0	102526	19.15	µg/L		100
PFBS	4.129	299.0 -> 80.0	78381	19.56	µg/L		100
		299.0 -> 99.0	33324				
PFDA	7.450	513.0 -> 469.0	433754	19.39	µg/L		99
		513.0 -> 219.0	79063				
PFDoDA	9.404	613.0 -> 569.0	333857	19.68	µg/L		98
		613.0 -> 319.0	59532				
PFDS	8.156	599.0 -> 80.0	82329	19.17	µg/L		88
		599.0 -> 99.0	57325				
PFHpA	5.739	363.0 -> 319.0	348889	19.26	µg/L		100
		363.0 -> 169.0	77309				
PFHpS	6.346	449.0 -> 80.0	66915	19.33	µg/L		99
		449.0 -> 99.0	36163				
PFHxA	4.978	313.0 -> 269.0	279075	19.32	µg/L		100
		313.0 -> 119.0	12885				
PFHxS	5.749	399.0 -> 80.0	66049	19.59	µg/L	m	99
		399.0 -> 99.0	36798				
PFNA	6.931	463.0 -> 419.0	391588	19.50	µg/L		100
		463.0 -> 219.0	84536				
PFNS	7.396	549.0 -> 80.0	61354	19.76	µg/L		99
		549.0 -> 99.0	36023				
PFOA	6.374	413.0 -> 369.0	421325	19.54	µg/L		100
		413.0 -> 169.0	112953				
PFOS	6.892	499.0 -> 80.0	79647	19.06	µg/L	m	99

Perfluorinated Compounds by LC/MS/MS

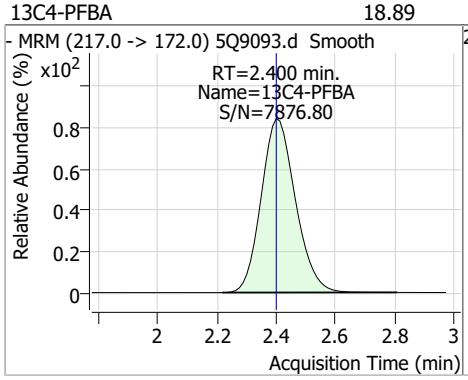
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	38403			
PFPeA	3.934	263.0 -> 219.0	226834	19.40	µg/L	100
PFPeS	5.047	349.0 -> 80.0	49919	19.03	µg/L	100
		349.0 -> 99.0	25383			
PFTeDA	10.916	713.0 -> 669.0	313043	17.26	µg/L	94
		713.0 -> 219.0	39059			
PFTrDA	10.232	663.0 -> 619.0	361060	22.28	µg/L	98
		663.0 -> 369.0	37296			
PFUnDA	8.334	563.0 -> 519.0	524522	21.31	µg/L	99
		563.0 -> 269.0	90525			
11Cl-PF3OUdS	8.654	631.0 -> 451.0	346737	19.92	µg/L	88
		633.0 -> 453.0	119986			
9Cl-PF3ONS	7.136	531.0 -> 351.0	351361	18.92	µg/L	99
		533.0 -> 353.0	110143			
ADONA	5.777	377.0 -> 251.0	458832	20.48	µg/L	100
		377.0 -> 85.0	172976			
HFPO-DA	5.202	329.0 -> 169.0	107197	19.18	µg/L	98
		285.0 -> 169.0	65359			
MeFOSA	6.966	512.0 -> 169.0	31690	19.61	µg/L	97
		512.0 -> 219.0	23940			
4-PFECHS	6.280	461.0 -> 381.0	219470	18.28	µg/L	98
		461.0 -> 99.0	119762			
FBSA	4.793	298.0 -> 78.0	114908	19.47	µg/L	99
		298.0 -> 64.0	10406			
FHxSA	5.900	398.0 -> 78.0	103408	18.45	µg/L	99
		398.0 -> 64.0	9475			

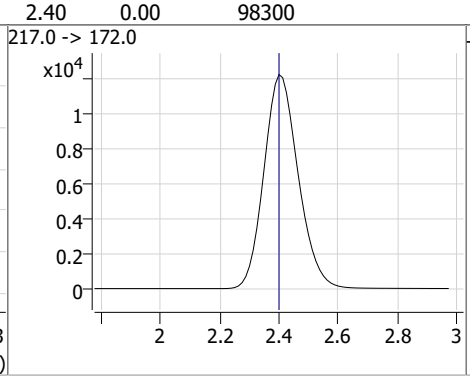
 # = Qualifier out of range, m = manually integrated, + = Area summed

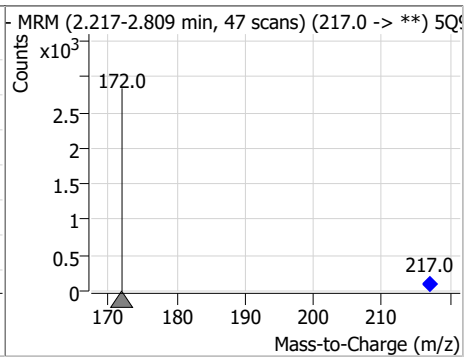
Perfluorinated Compounds by LC/MS/MS



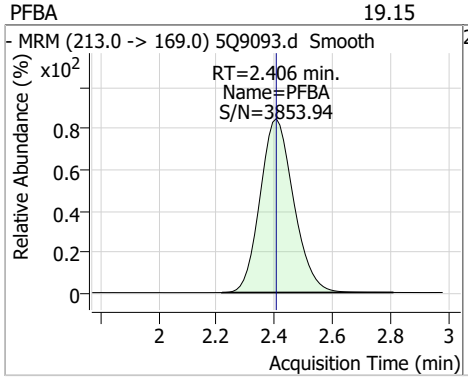
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.89	2.40	0.00	98300				

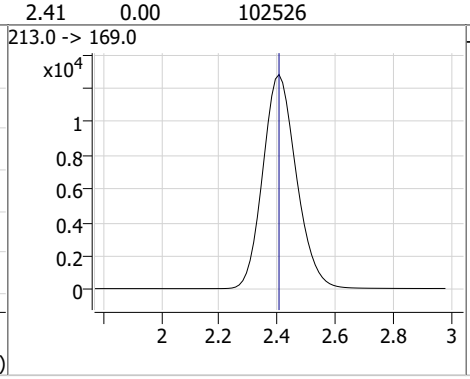


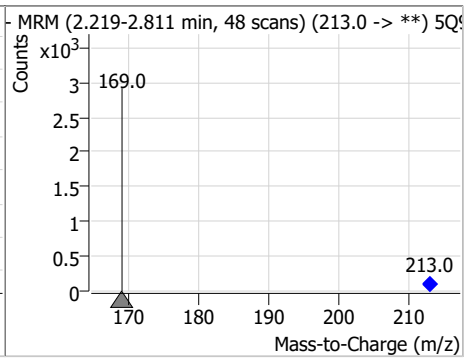




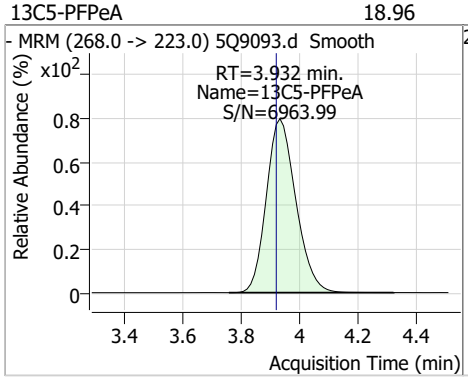
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.15	2.41	0.00	102526				

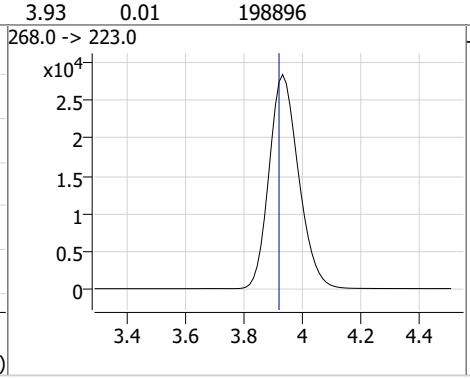


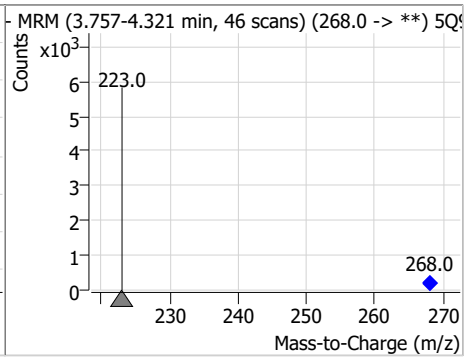




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	18.96	3.93	0.01	198896				

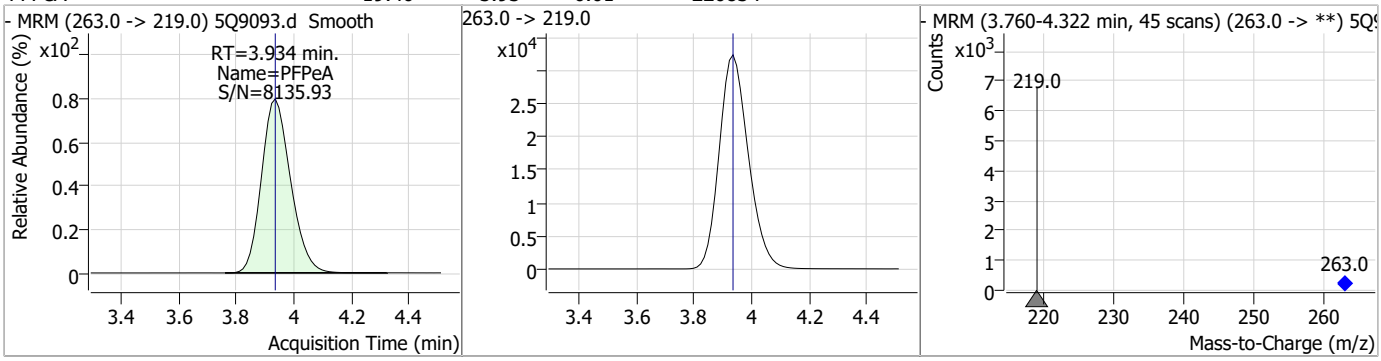




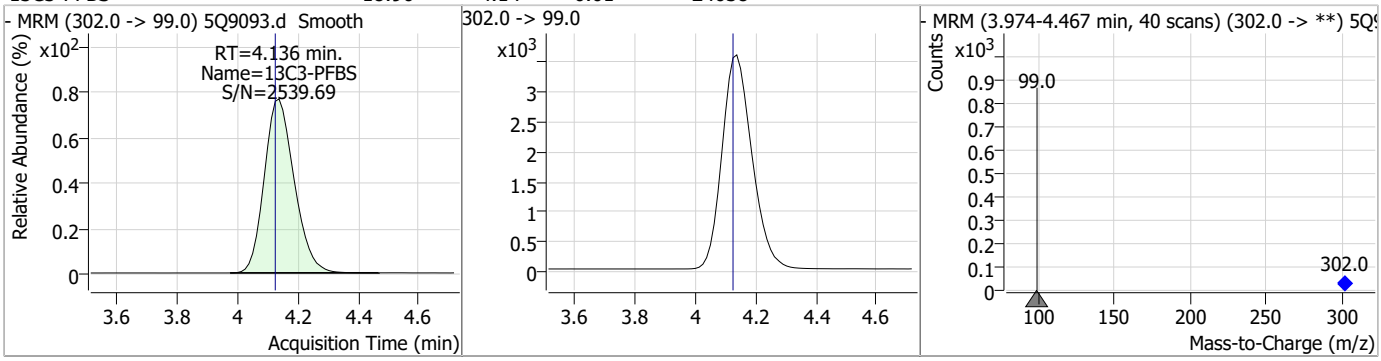


Perfluorinated Compounds by LC/MS/MS

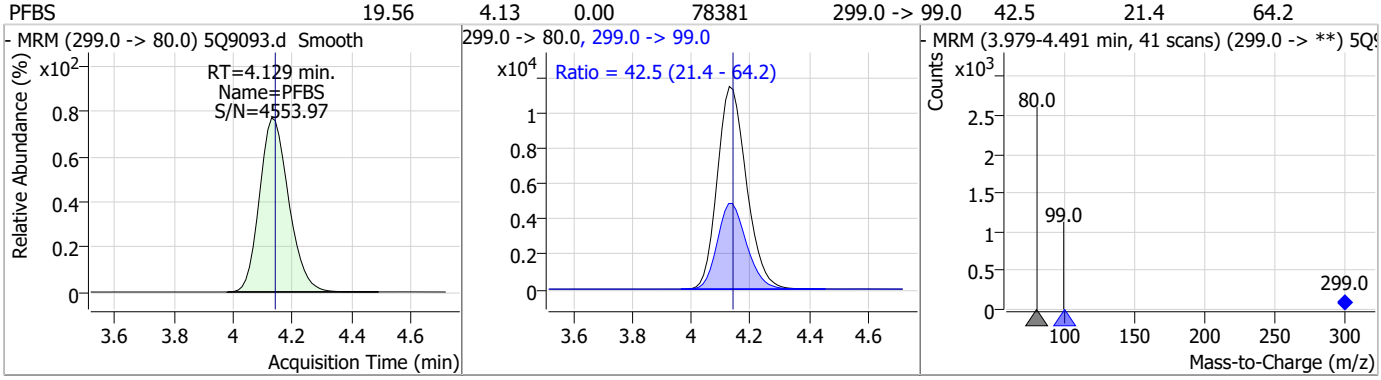
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.40	3.93	0.01	226834				



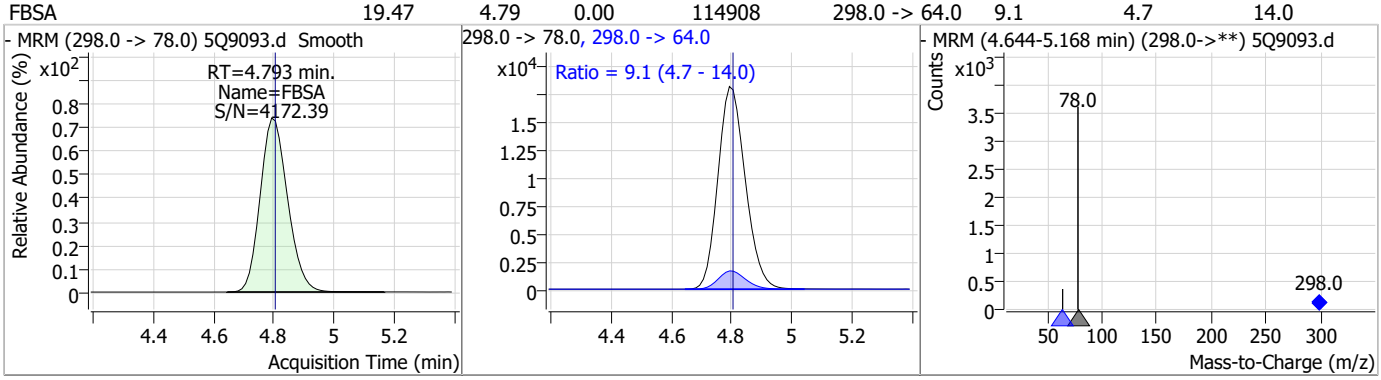
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	18.96	4.14	0.01	24638				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.56	4.13	0.00	78381	299.0 -> 99.0	42.5	21.4	64.2

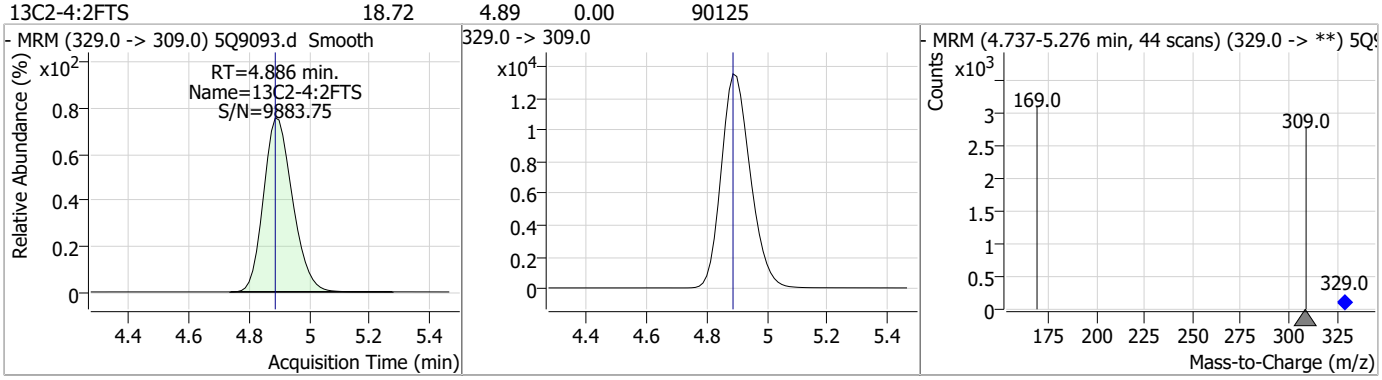


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	19.47	4.79	0.00	114908	298.0 -> 64.0	9.1	4.7	14.0

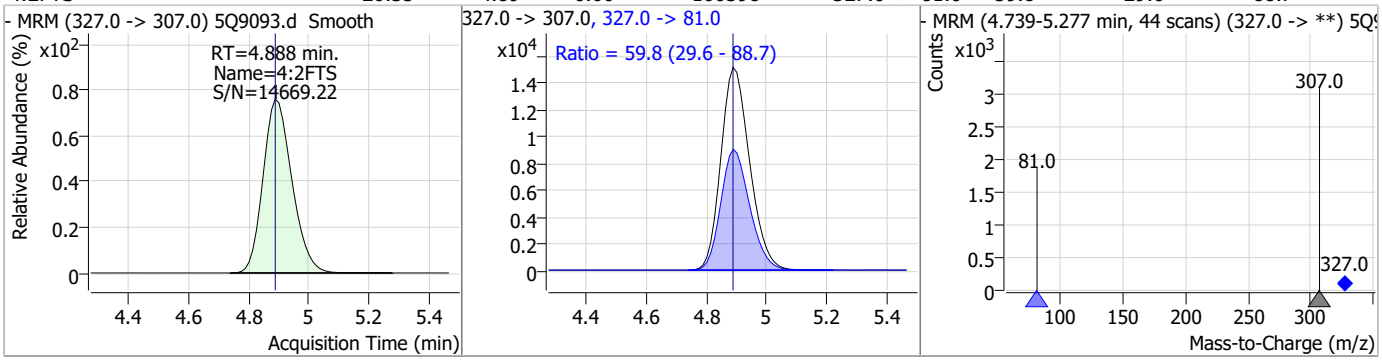


Perfluorinated Compounds by LC/MS/MS

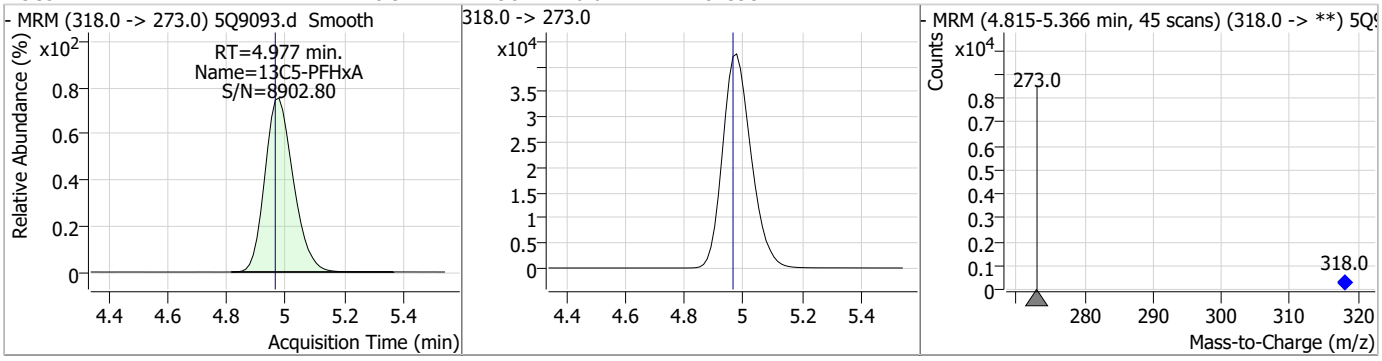
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.72	4.89	0.00	90125				



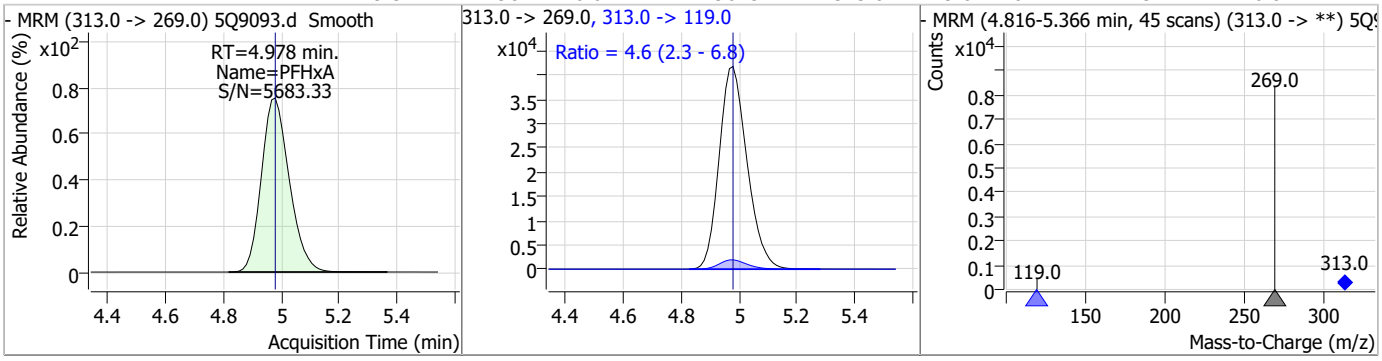
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.35	4.89	0.00	100398	327.0 -> 81.0	59.8	29.6	88.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	18.91	4.98	0.01	284393				

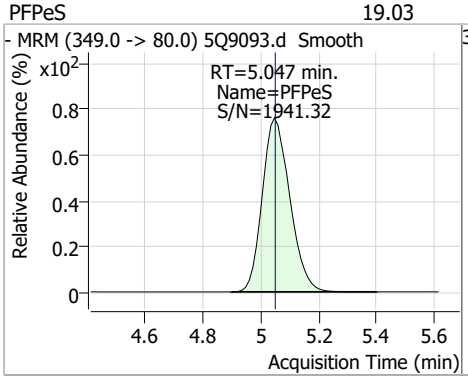


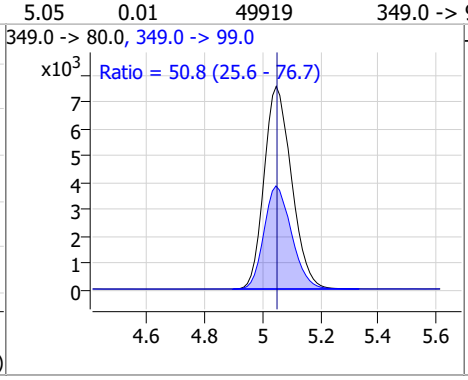
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.32	4.98	0.01	279075	313.0 -> 119.0	4.6	2.3	6.8

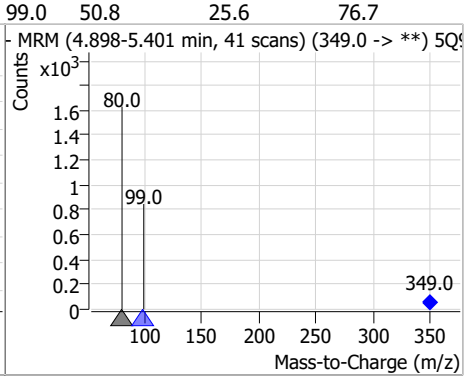


Perfluorinated Compounds by LC/MS/MS

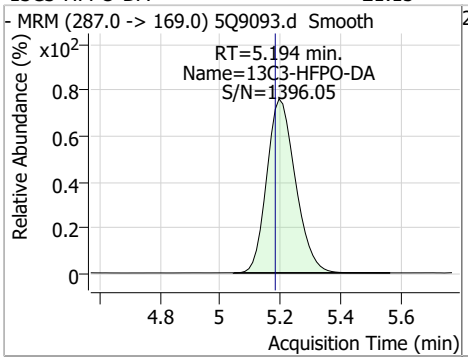
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	19.03	5.05	0.01	49919	349.0 -> 99.0	50.8	25.6	76.7

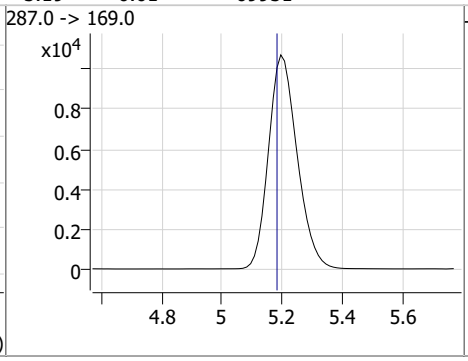


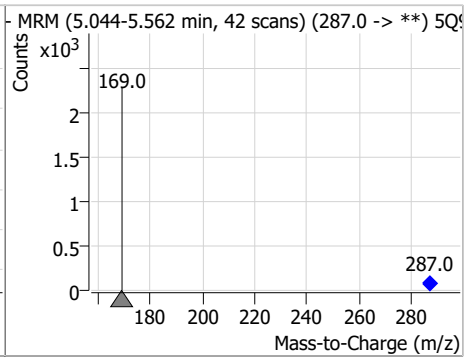




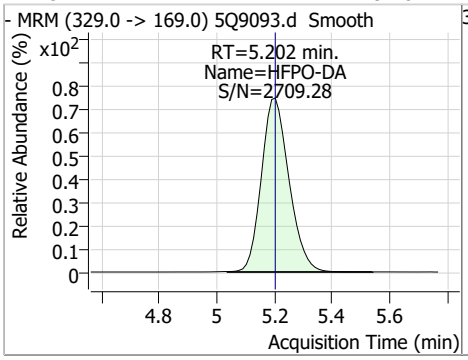
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	21.15	5.19	0.01	69951				

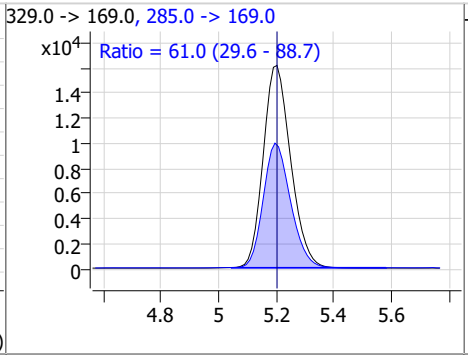


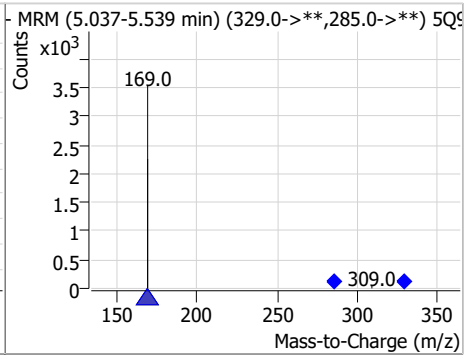




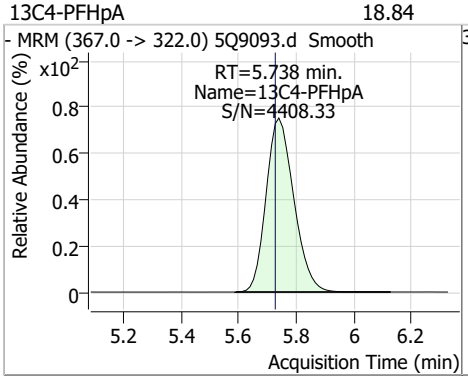
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	19.18	5.20	0.01	107197	285.0 -> 169.0	61.0	29.6	88.7

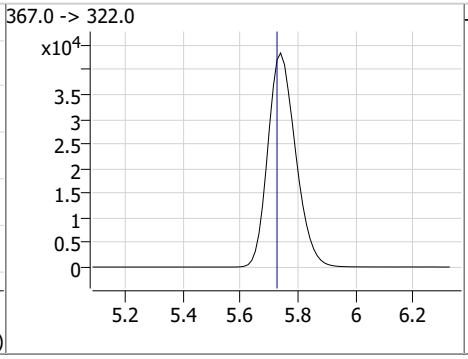


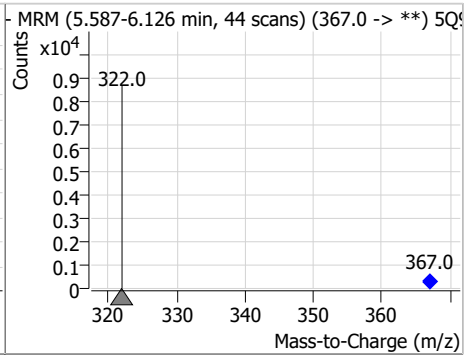




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	18.84	5.74	0.01	289626				

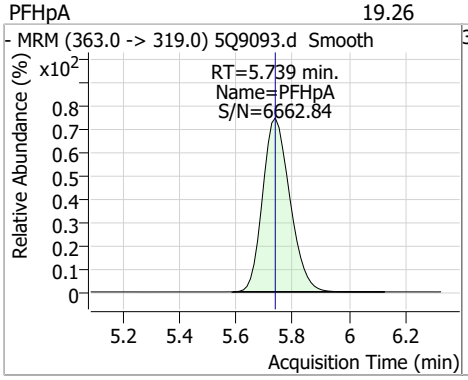


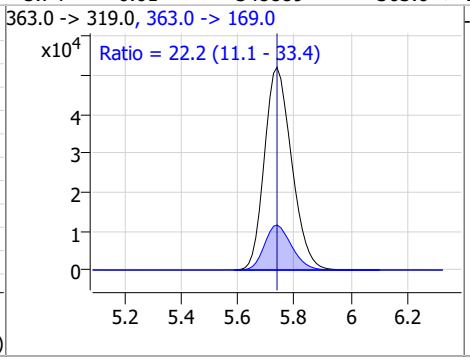


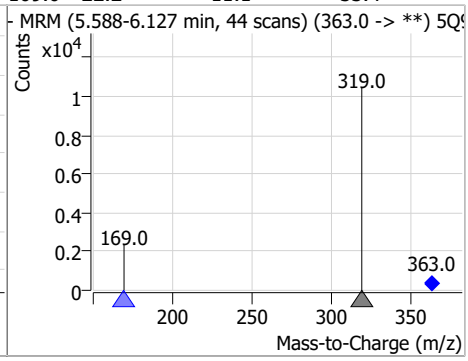


Perfluorinated Compounds by LC/MS/MS

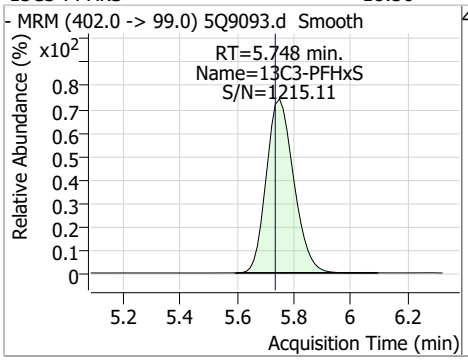
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	19.26	5.74	0.01	348889	363.0 -> 169.0	22.2	11.1	33.4

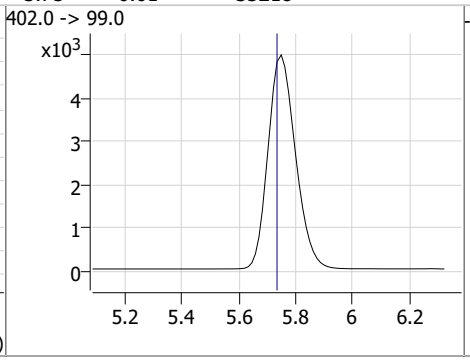


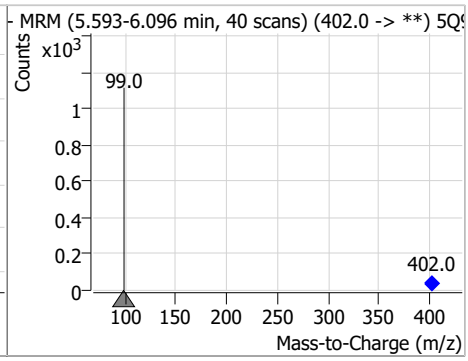




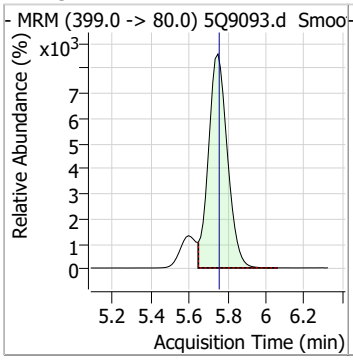
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	18.56	5.75	0.01	33218				

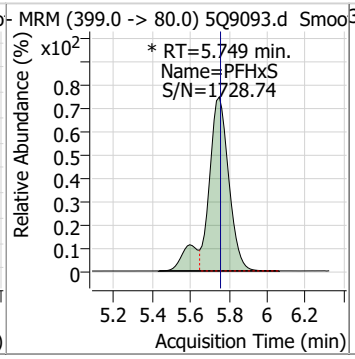


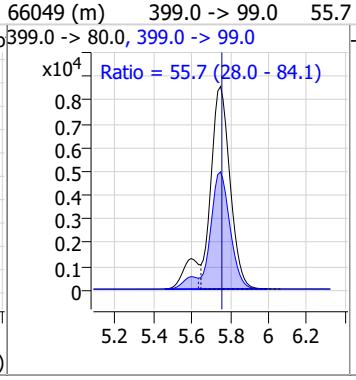


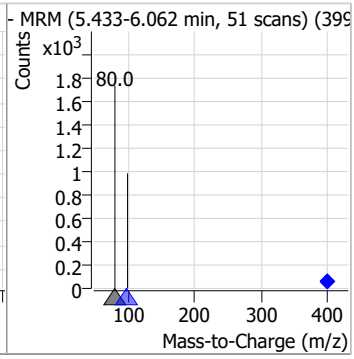


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	19.59	5.75	0.01	66049 (m)	399.0 -> 99.0	55.7	28.0	84.1

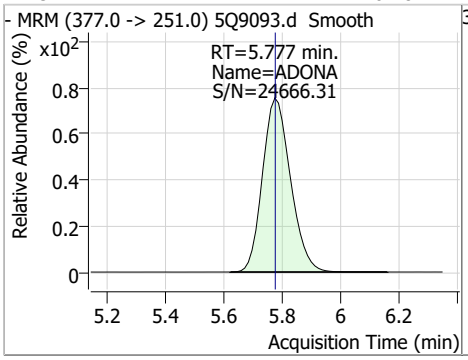


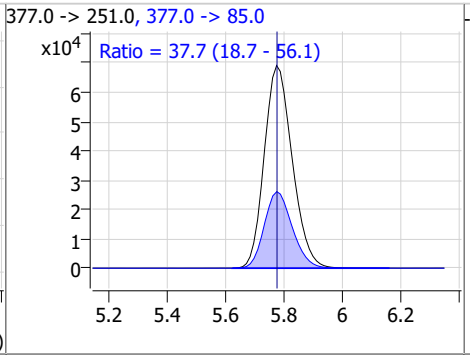


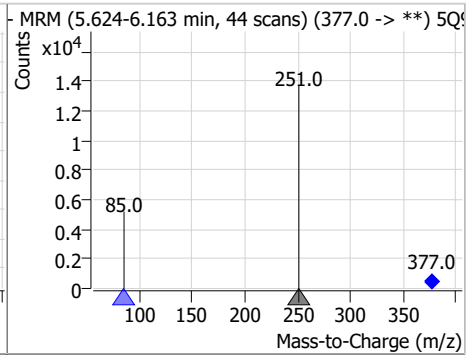




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	20.48	5.78	0.01	458832	377.0 -> 85.0	37.7	18.7	56.1

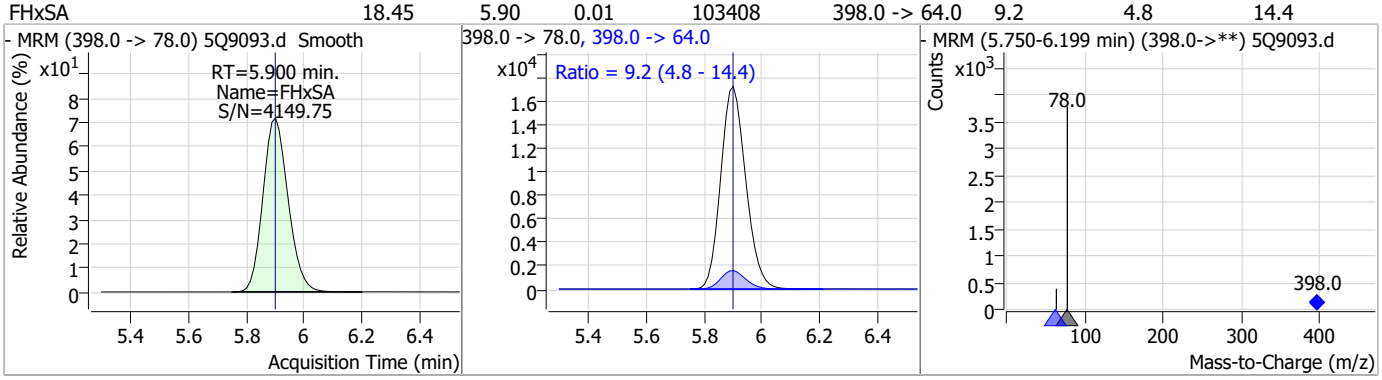




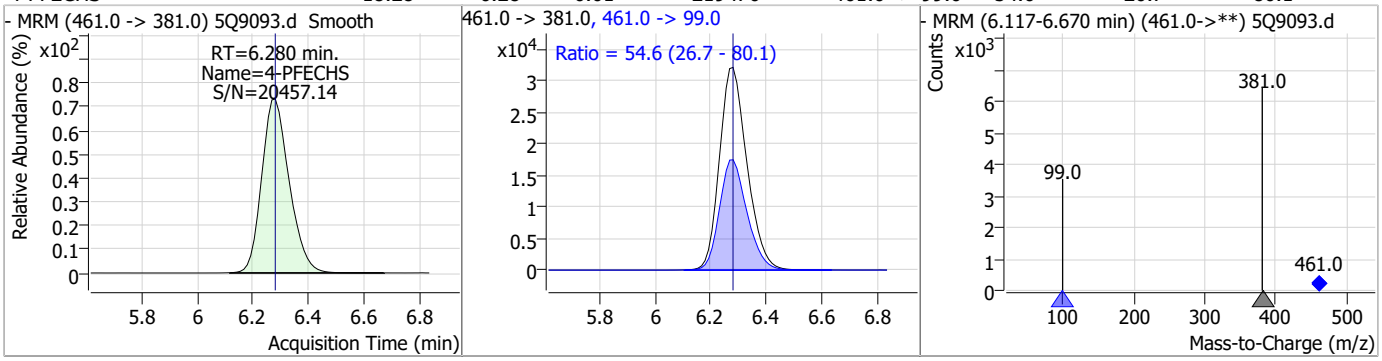


Perfluorinated Compounds by LC/MS/MS

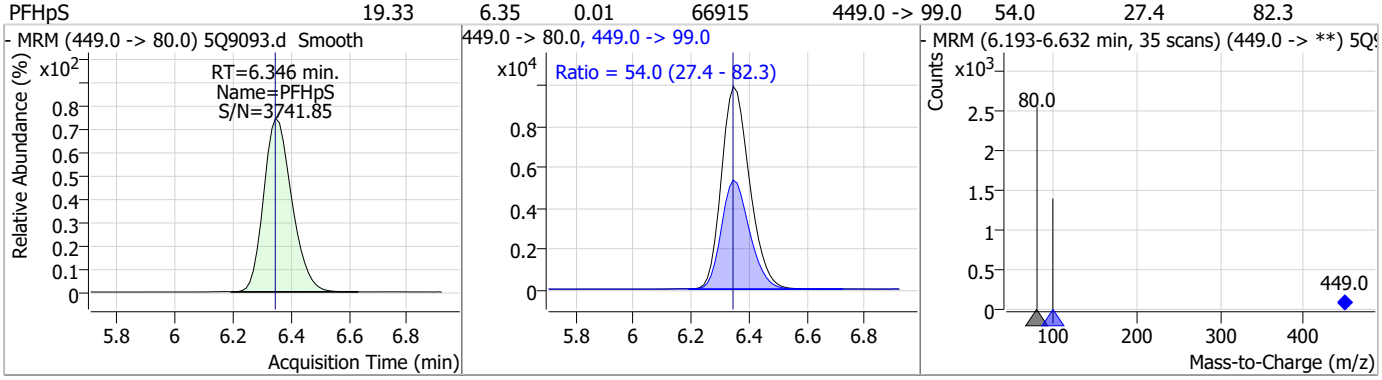
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	18.45	5.90	0.01	103408	398.0 -> 64.0	9.2	4.8	14.4



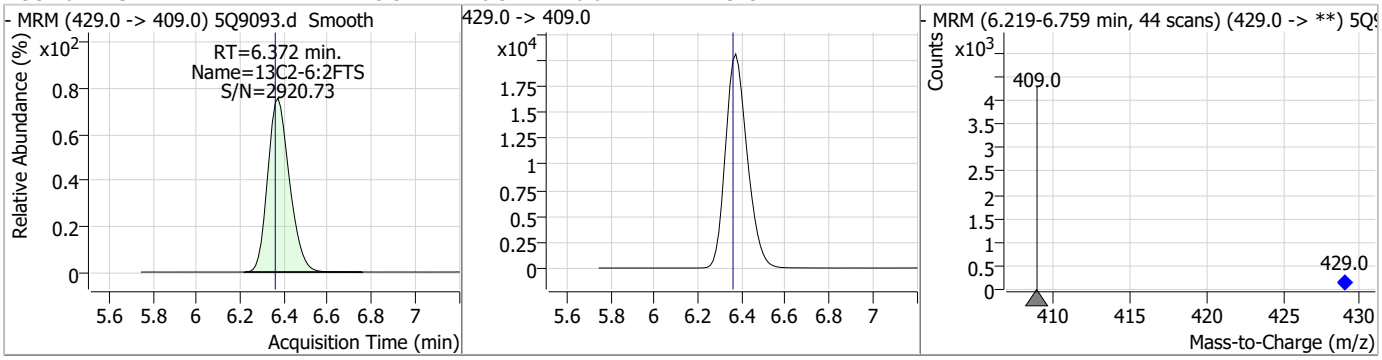
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	18.28	6.28	0.01	219470	461.0 -> 99.0	54.6	26.7	80.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	19.33	6.35	0.01	66915	449.0 -> 99.0	54.0	27.4	82.3

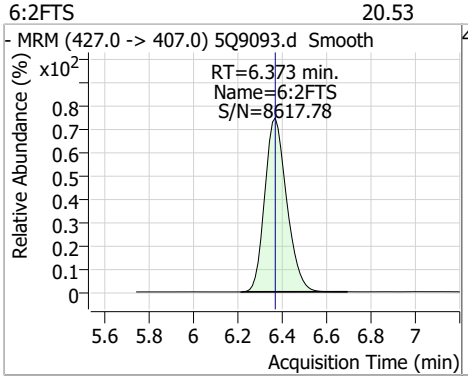


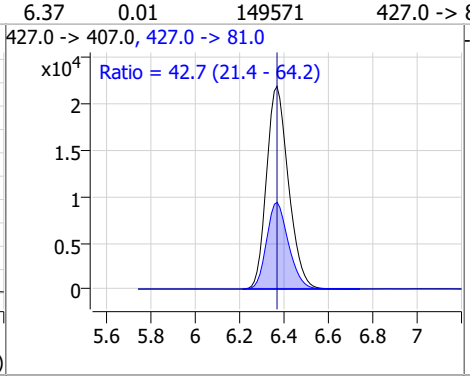
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.52	6.37	0.01	141949				

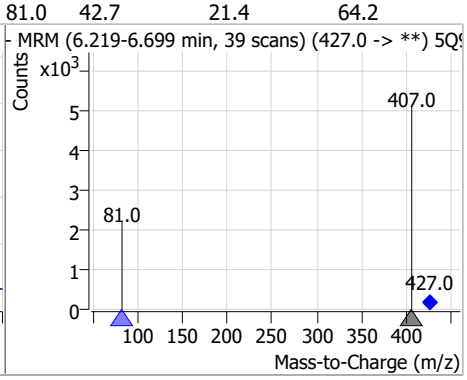


Perfluorinated Compounds by LC/MS/MS

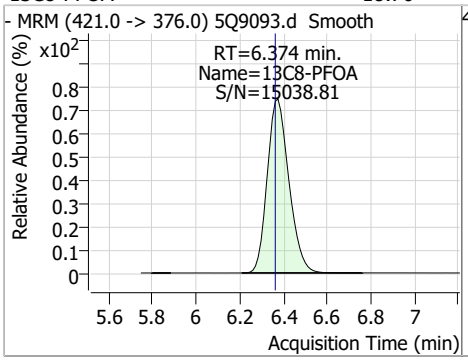
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	20.53	6.37	0.01	149571	427.0 -> 81.0	42.7	21.4	64.2

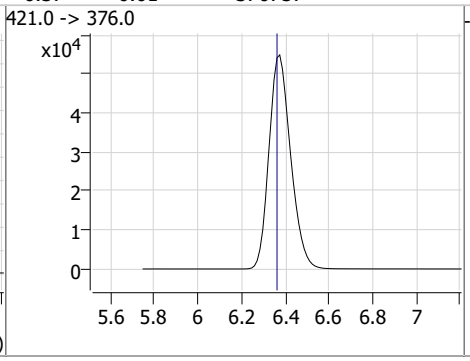


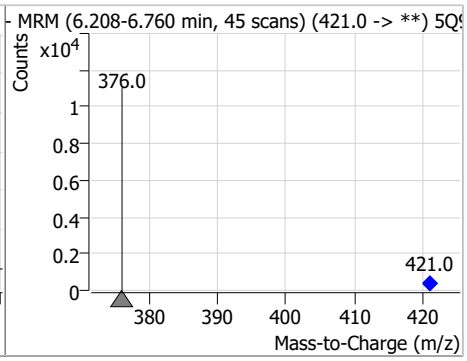




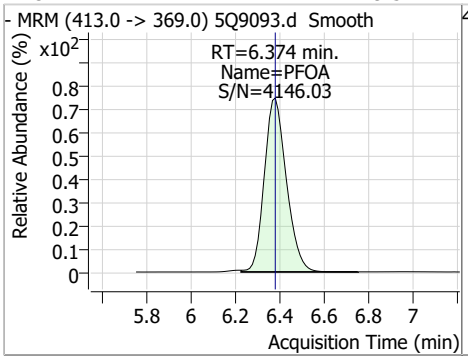
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	18.70	6.37	0.01	376757				

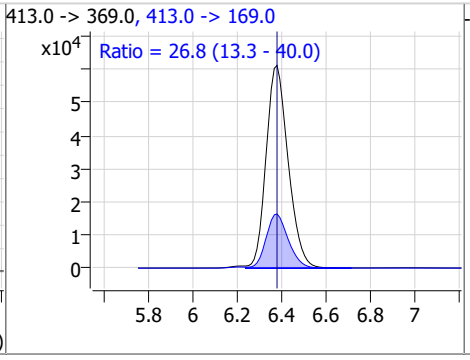


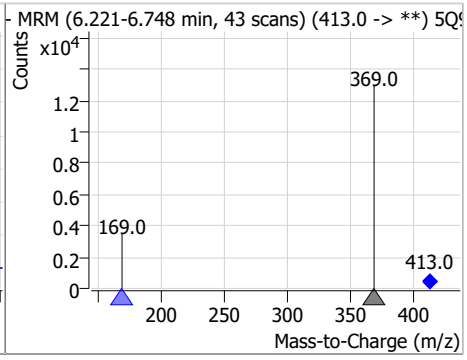




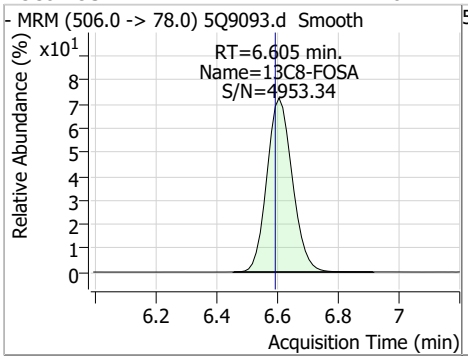
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.54	6.37	0.01	421325	413.0 -> 169.0	26.8	13.3	40.0

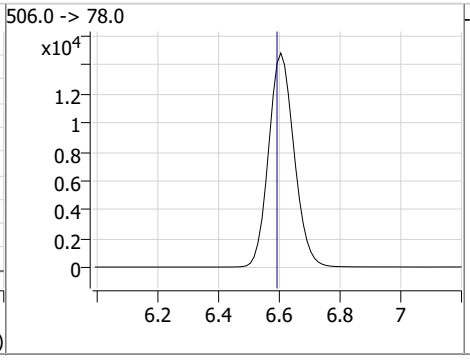


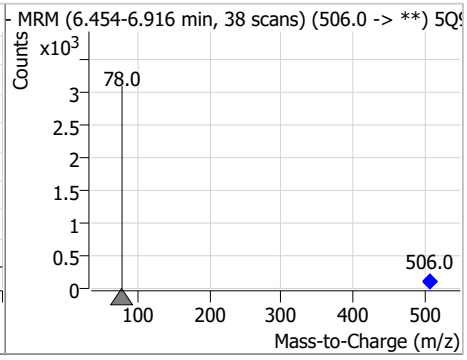




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	17.87	6.60	0.01	86295				

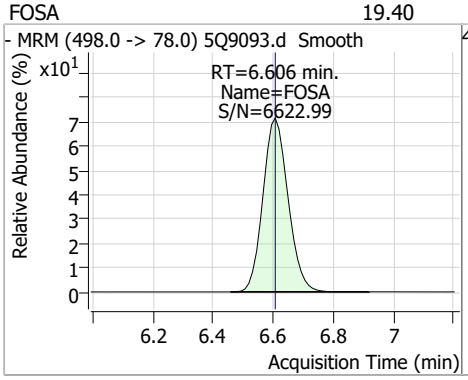


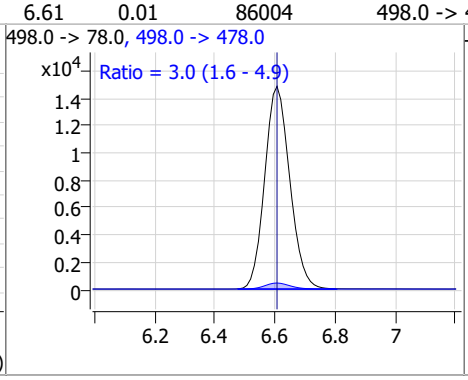


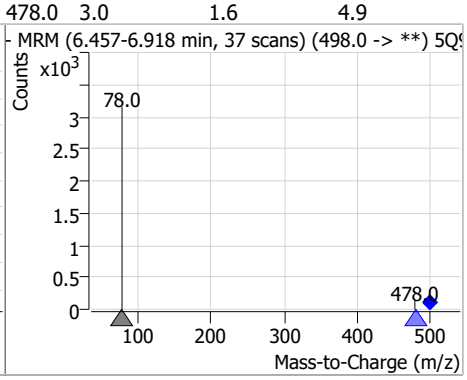


Perfluorinated Compounds by LC/MS/MS

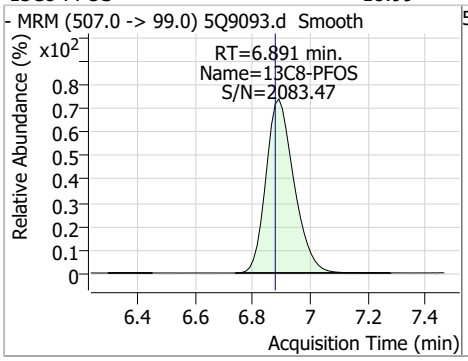
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	19.40	6.61	0.01	86004	498.0 -> 478.0	3.0	1.6	4.9

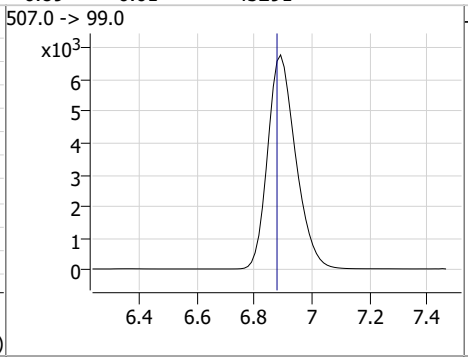


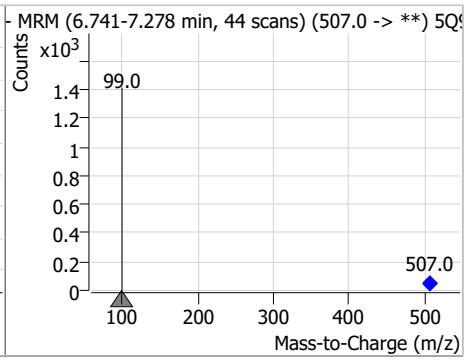




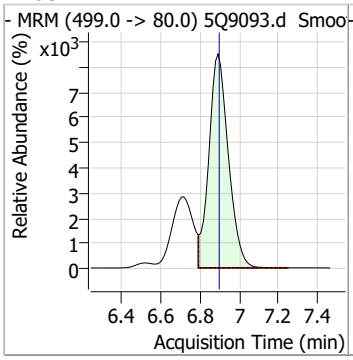
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	18.99	6.89	0.01	45291				

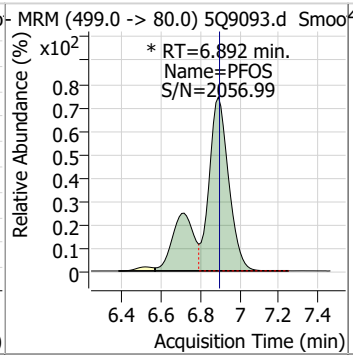


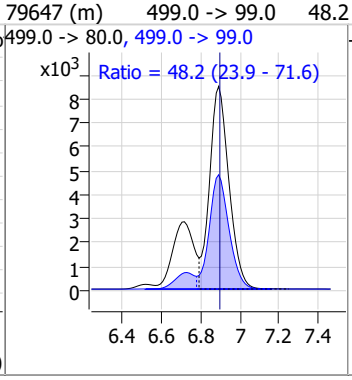


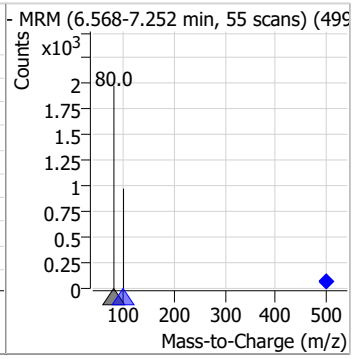


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.06	6.89	0.01	79647 (m)	499.0 -> 99.0	48.2	23.9	71.6

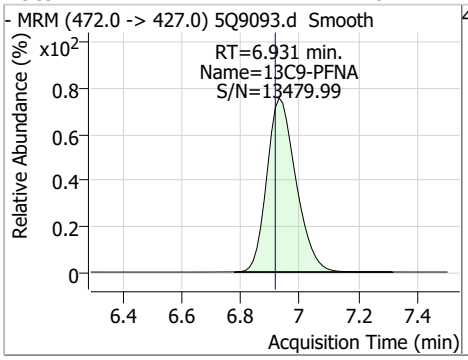


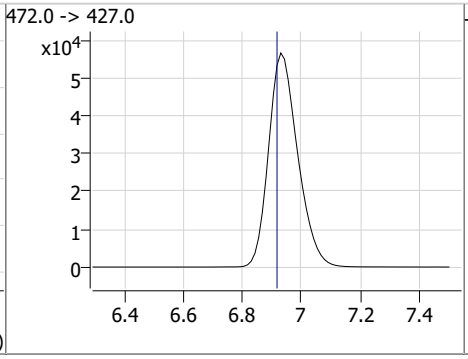


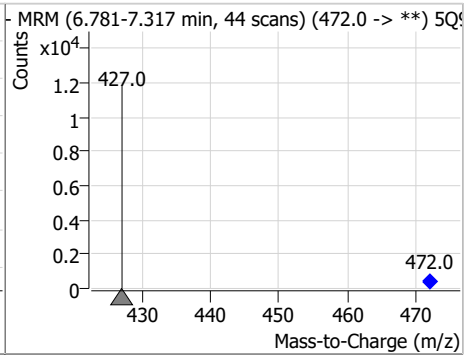




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.41	6.93	0.01	387334				

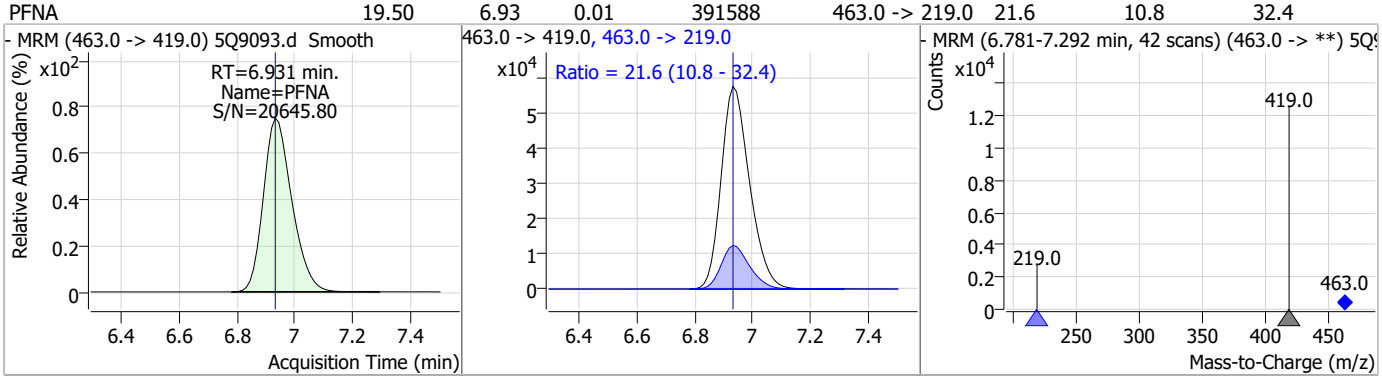




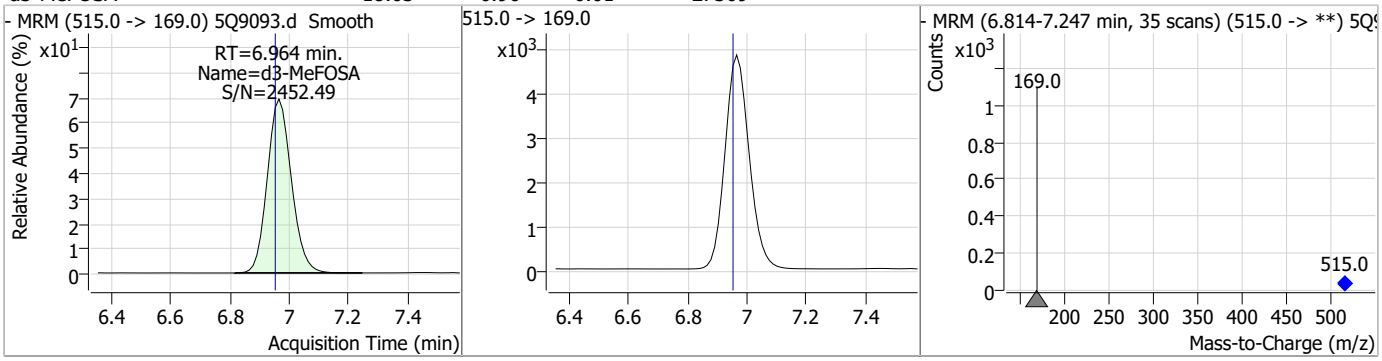


Perfluorinated Compounds by LC/MS/MS

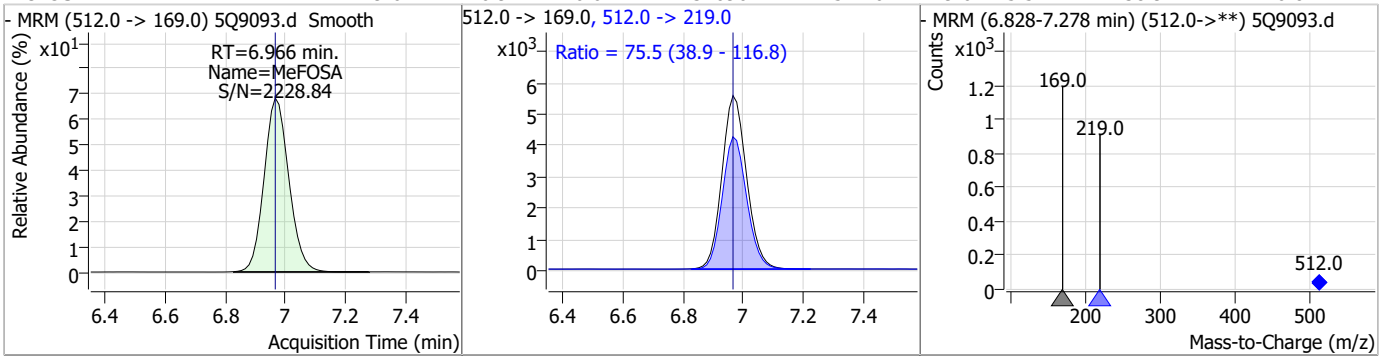
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.50	6.93	0.01	391588	463.0 -> 219.0	21.6	10.8	32.4



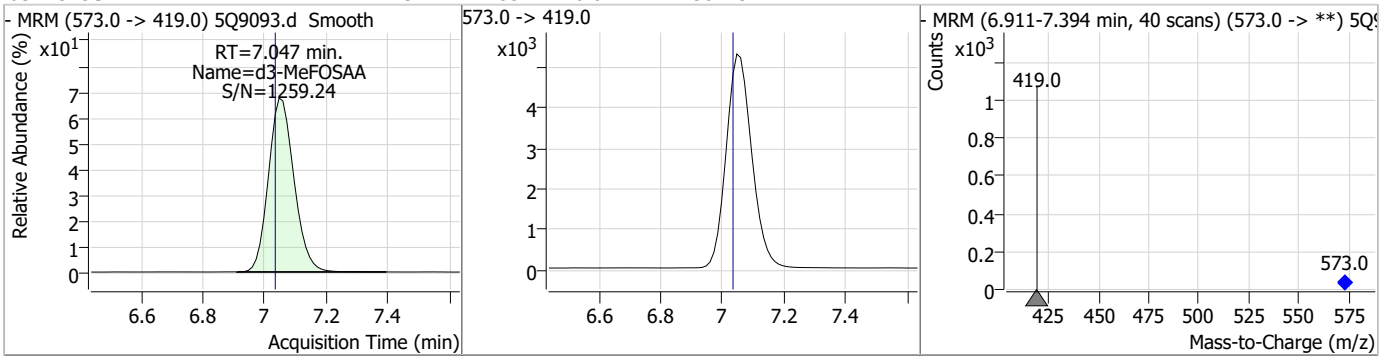
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	18.03	6.96	0.01	27309				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	19.61	6.97	0.01	31690	512.0 -> 219.0	75.5	38.9	116.8

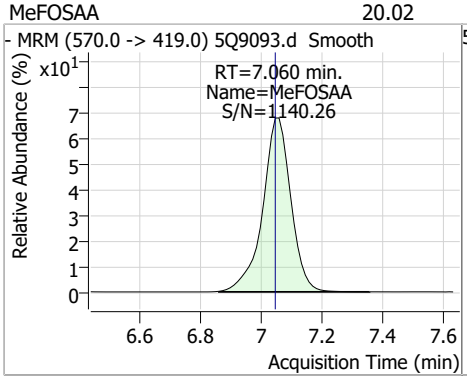


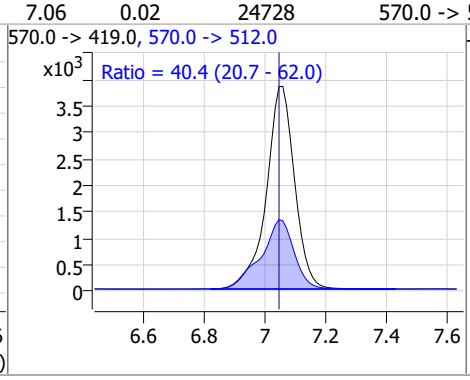
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	17.13	7.05	0.01	30443				

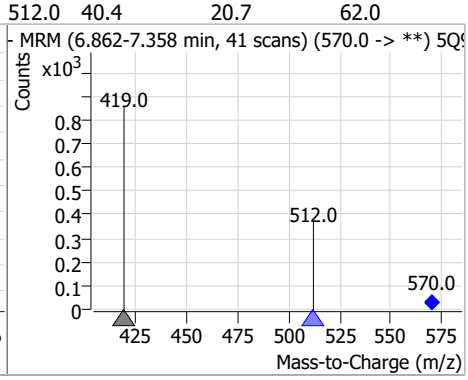


Perfluorinated Compounds by LC/MS/MS

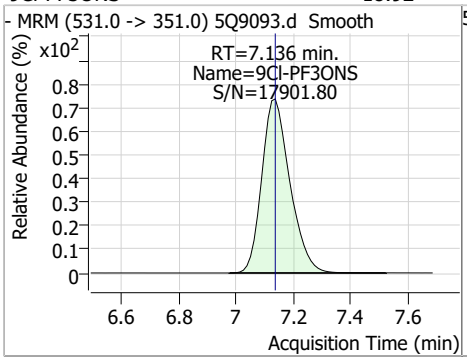
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	20.02	7.06	0.02	24728	570.0 -> 512.0	40.4	20.7	62.0

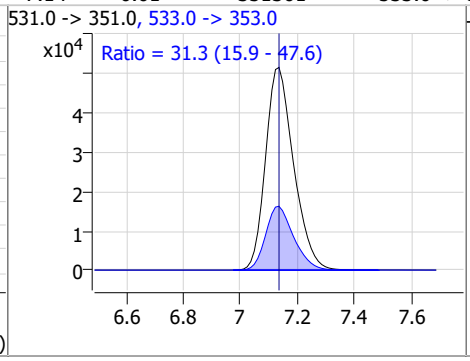


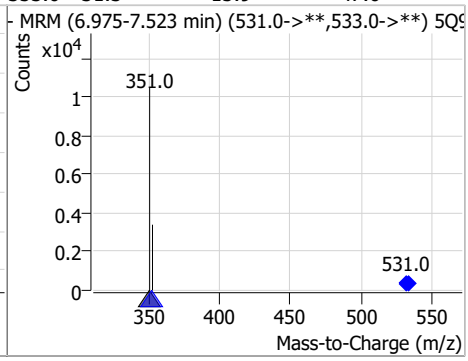




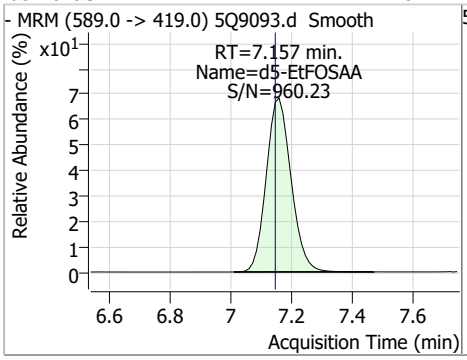
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	18.92	7.14	0.01	351361	533.0 -> 353.0	31.3	15.9	47.6

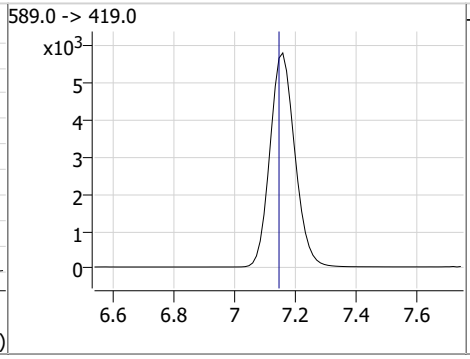


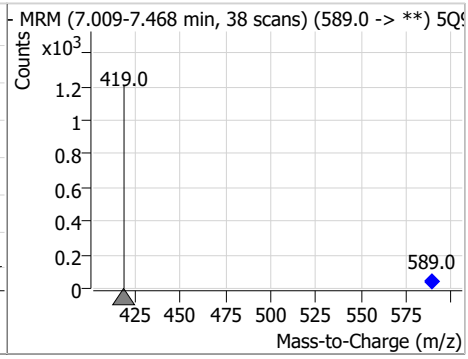




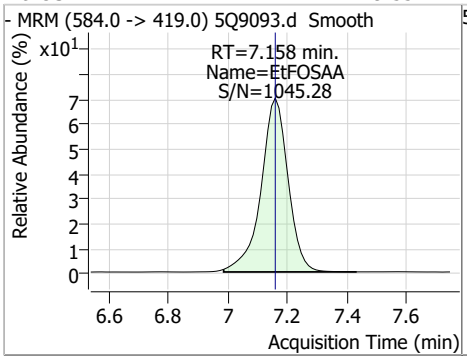
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	17.78	7.16	0.01	32786				

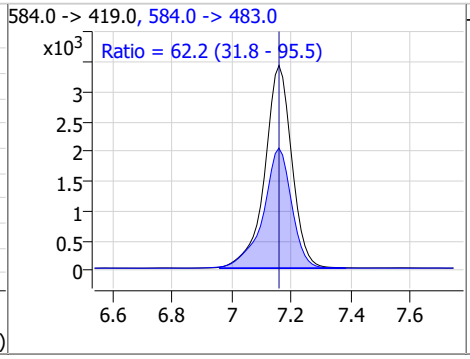


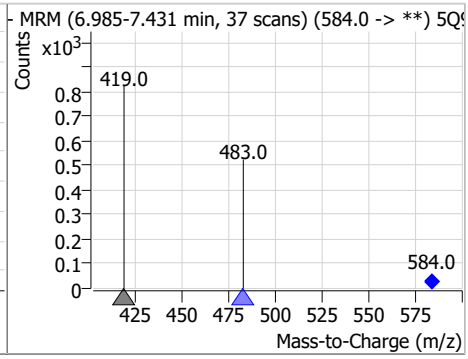




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	19.55	7.16	0.01	21402	584.0 -> 483.0	62.2	31.8	95.5

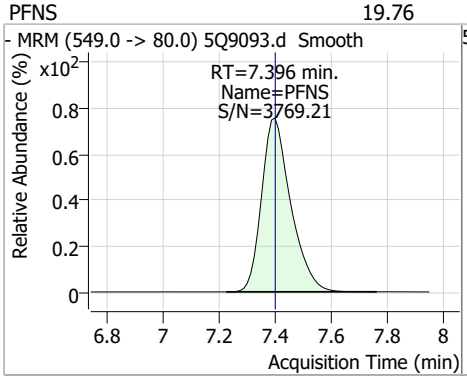


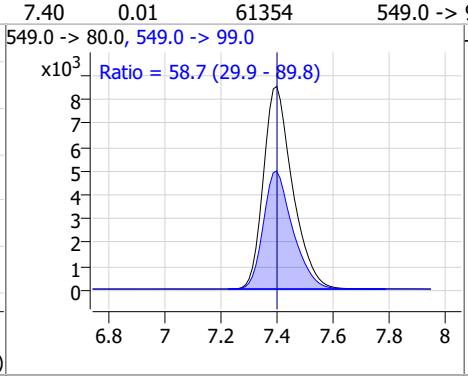


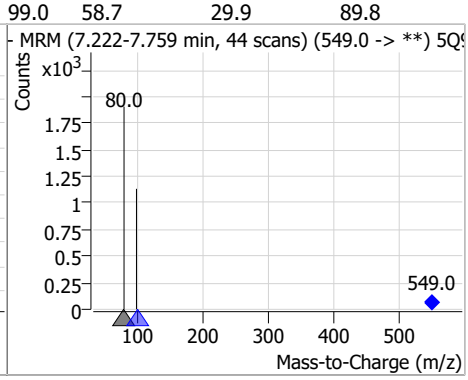


Perfluorinated Compounds by LC/MS/MS

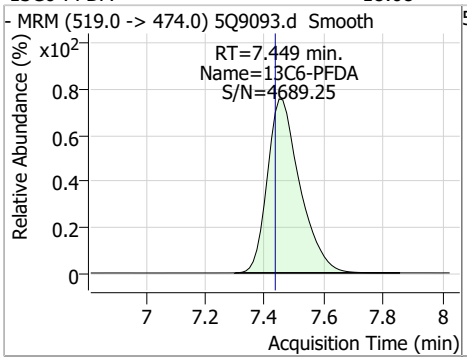
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	19.76	7.40	0.01	61354	549.0 -> 99.0	58.7	29.9	89.8

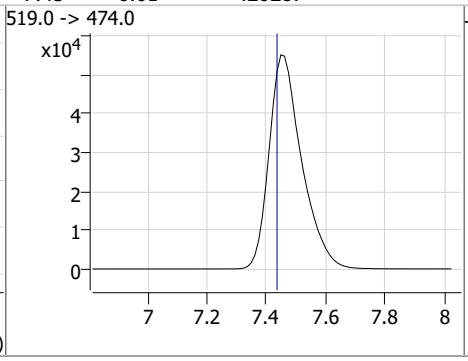


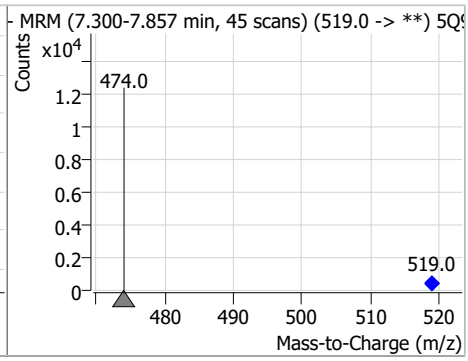




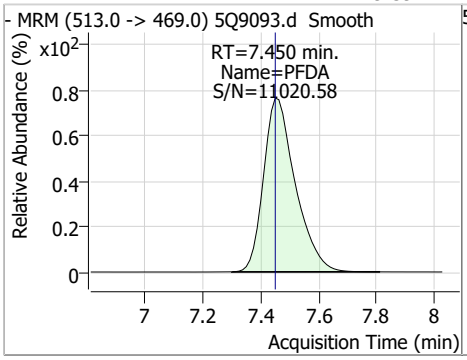
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.08	7.45	0.01	420287				

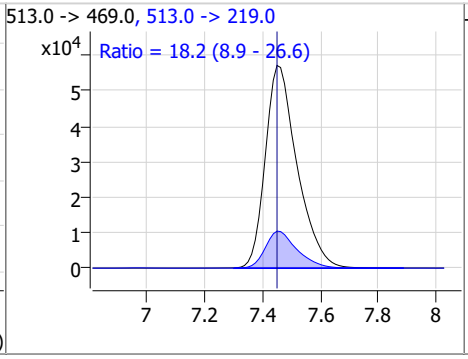


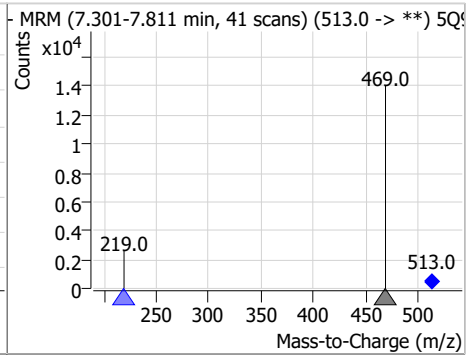




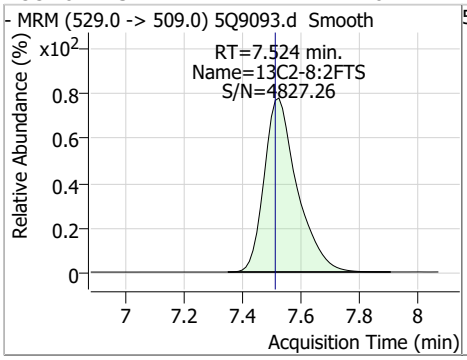
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.39	7.45	0.01	433754	513.0 -> 219.0	18.2	8.9	26.6

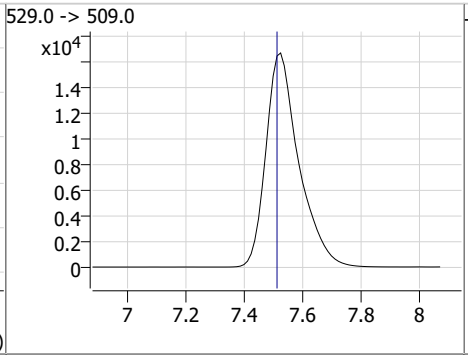


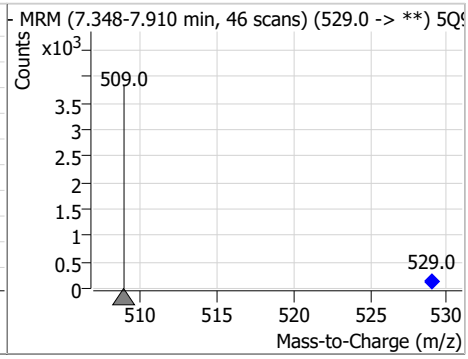




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.21	7.52	0.01	131536				

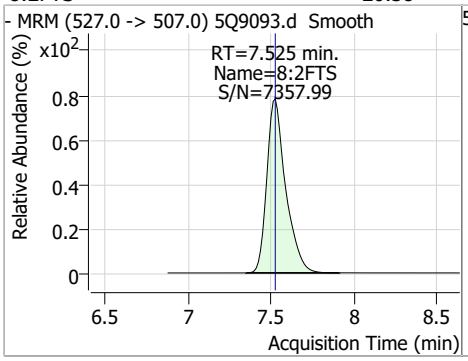


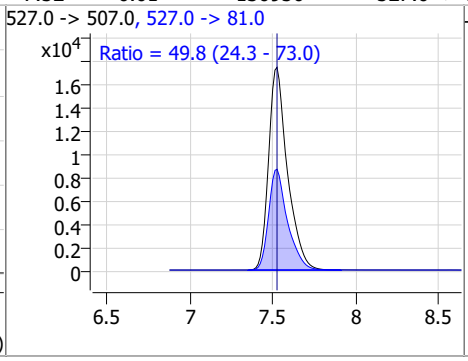


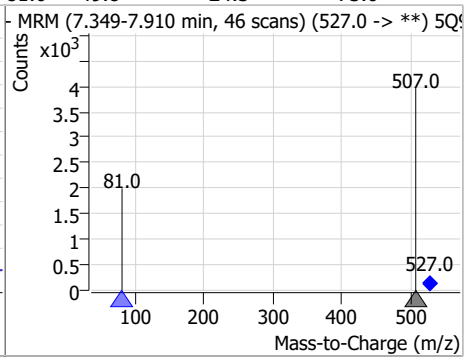


Perfluorinated Compounds by LC/MS/MS

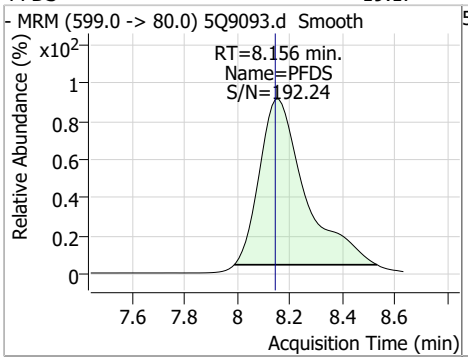
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.38	7.52	0.01	136950	527.0 -> 81.0	49.8	24.3	73.0

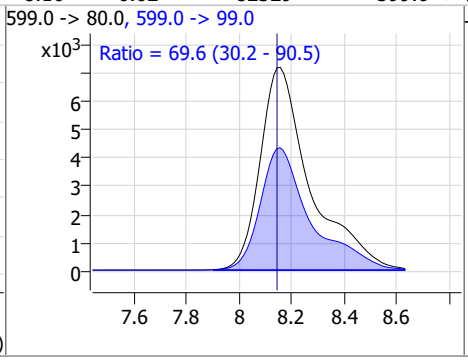


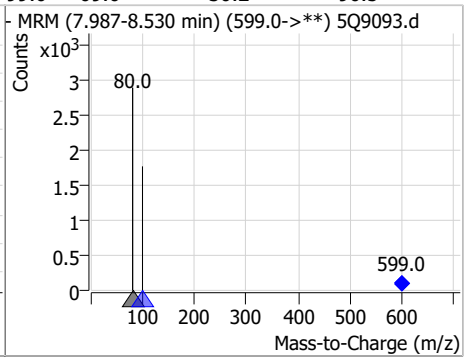




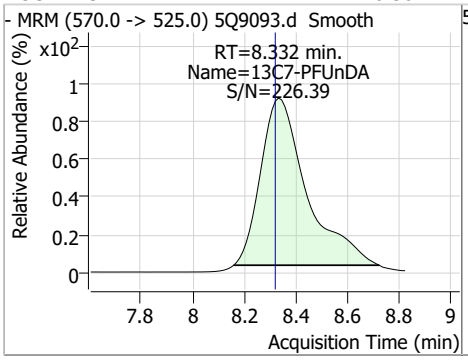
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	19.17	8.16	0.02	82329	599.0 -> 99.0	69.6	30.2	90.5

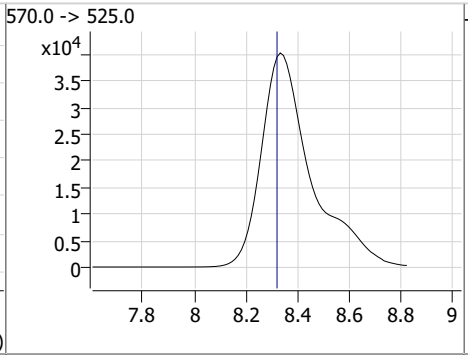


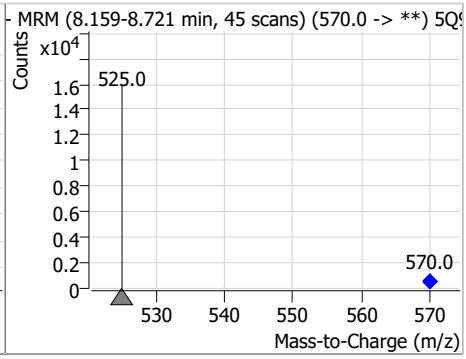




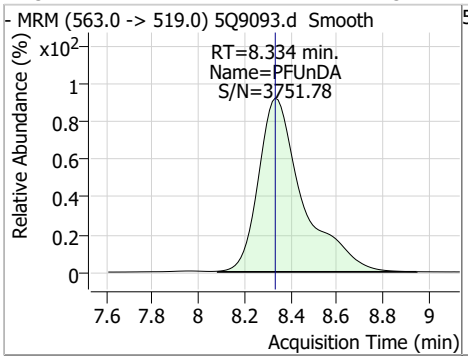
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	16.36	8.33	0.01	478596				

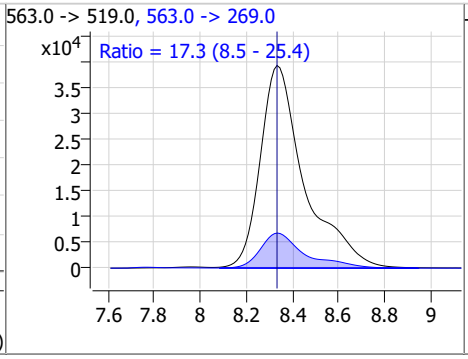


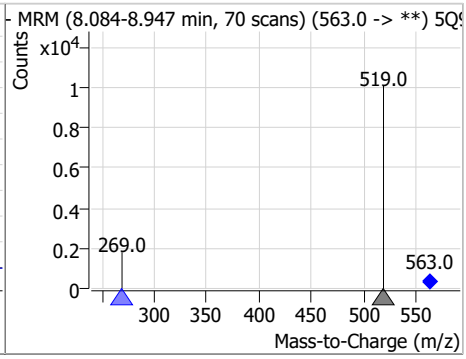




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	21.31	8.33	0.01	524522	563.0 -> 269.0	17.3	8.5	25.4

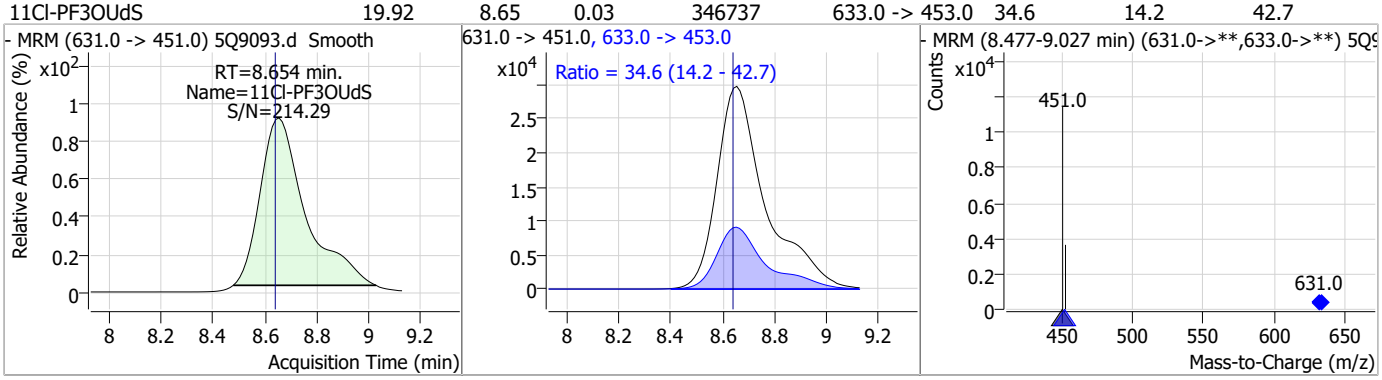




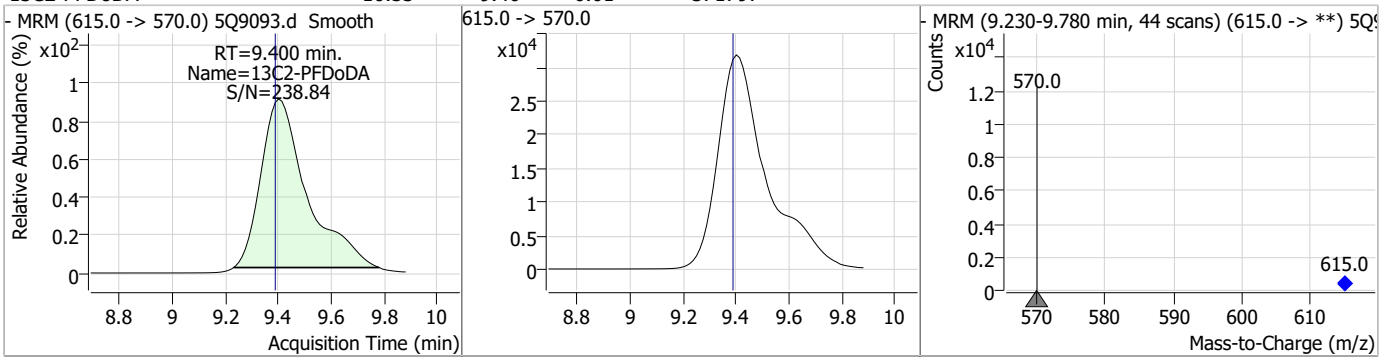


Perfluorinated Compounds by LC/MS/MS

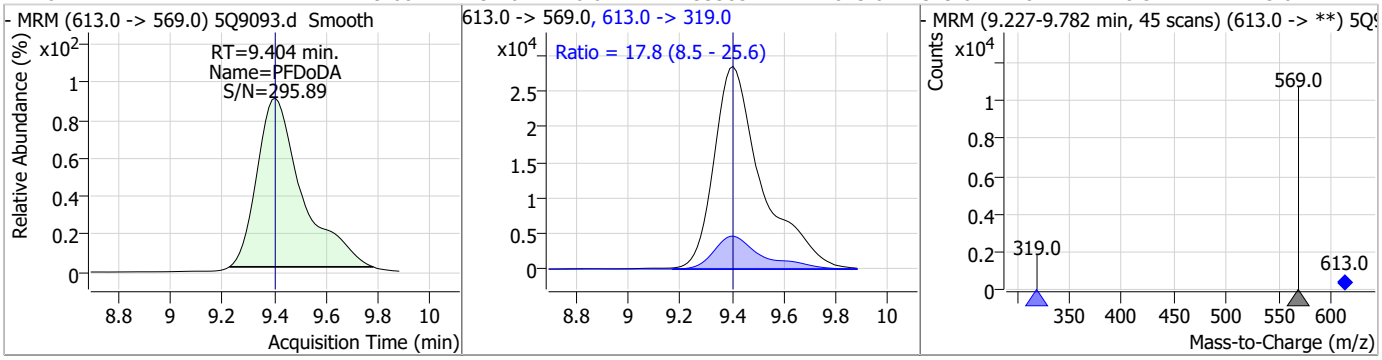
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	19.92	8.65	0.03	346737	633.0 -> 453.0	34.6	14.2	42.7



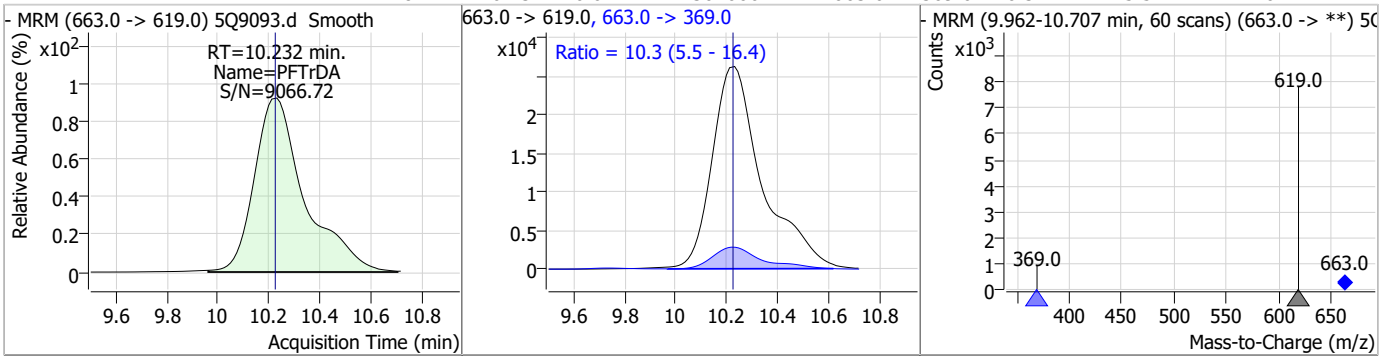
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	16.53	9.40	0.01	371797				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	19.68	9.40	0.01	333857	613.0 -> 319.0	17.8	8.5	25.6

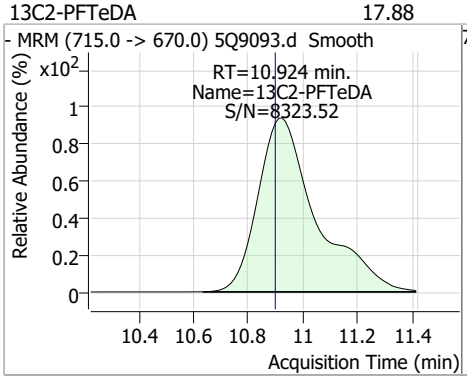


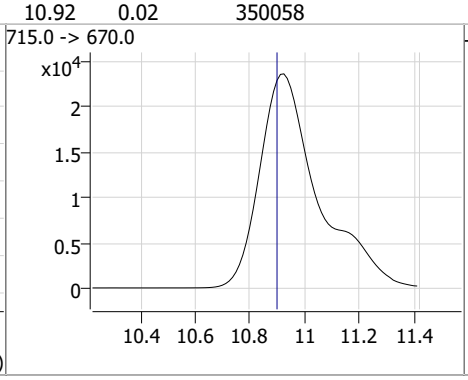
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	22.28	10.23	0.02	361060	663.0 -> 369.0	10.3	5.5	16.4

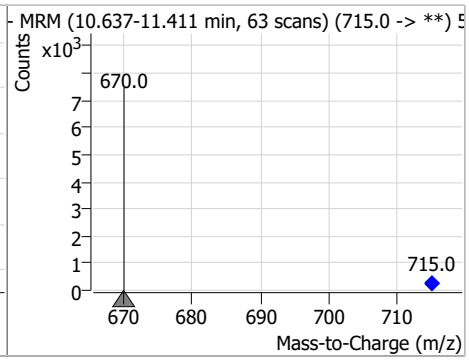


Perfluorinated Compounds by LC/MS/MS

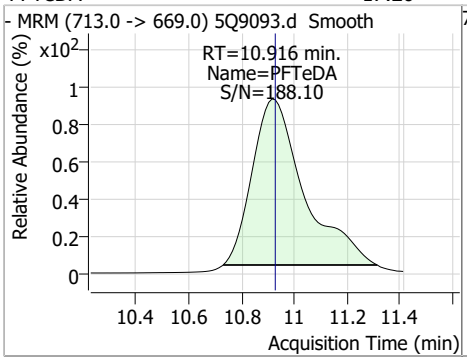
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	17.88	10.92	0.02	350058				

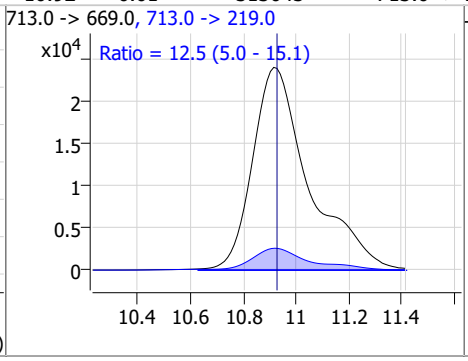


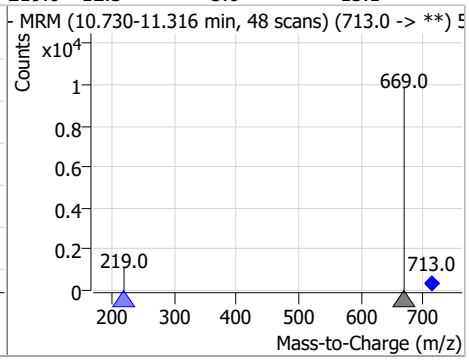




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	17.26	10.92	0.01	313043	713.0 -> 219.0	12.5	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q135-CC134
Lab FileID: 5Q9093.D
Injection Time: 12/29/22 11:30
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/30/22 11:46 Lindsay Ritner
Supervisor approved: 12/31/22 16:37 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.75	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.89	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Norman Farmer 12/31/22 16:37

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9094.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/29/2022 11:47:49 AM
Sample Name : cc134-1.0ll
Vial : P1-A3
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q135.batch.bin
Sample Information : OP94373,S5Q135,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	97148	20.00	µg/L	0.000
M5-PFPeA	3.932	268.0 -> 223.0	198670	20.00	µg/L	0.012
M5-PFHxA	4.977	318.0 -> 273.0	280629	20.00	µg/L	0.012
M4-PFHpA	5.738	367.0 -> 322.0	287670	20.00	µg/L	0.012
M8-PFOA	6.374	421.0 -> 376.0	373577	20.00	µg/L	0.012
M9-PFNA	6.931	472.0 -> 427.0	379031	20.00	µg/L	0.013
M6-PFDA	7.462	519.0 -> 474.0	419625	20.00	µg/L	0.025
M7-PFUnDA	8.332	570.0 -> 525.0	464905	20.00	µg/L	0.012
M2-PFDoDA	9.400	615.0 -> 570.0	387407	20.00	µg/L	0.012
M2-PFTeDA	10.924	715.0 -> 670.0	285802	20.00	µg/L	0.025
M8-FOSA	6.605	506.0 -> 78.0	84135	20.00	µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	25584	20.00	µg/L	0.000
M3-PFHxS	5.748	402.0 -> 99.0	34262	20.00	µg/L	0.015
M8-PFOS	6.891	507.0 -> 99.0	46223	20.00	µg/L	0.012
M2-4:2FTS	4.886	329.0 -> 309.0	84802	20.00	µg/L	0.000
M2-6:2FTS	6.372	429.0 -> 409.0	134989	20.00	µg/L	0.012
M2-8:2FTS	7.524	529.0 -> 509.0	123309	20.00	µg/L	0.012
M3-MeFOSAA	7.047	573.0 -> 419.0	28445	20.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	70492	20.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	27396	20.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	32095	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	84802	17.61	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.1%		
13C2-6:2FTS	6.372	429.0 -> 409.0	134989	17.61	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.0%		
13C2-8:2FTS	7.524	529.0 -> 509.0	123309	17.08	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.4%		
13C2-PFDoDA	9.400	615.0 -> 570.0	387407	17.23	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.1%		
13C2-PFTeDA	10.924	715.0 -> 670.0	285802	14.60	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 73.0%		
13C3-PFBS	4.124	302.0 -> 99.0	25584	19.69	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%		
13C3-PFHxS	5.748	402.0 -> 99.0	34262	19.14	µg/L	0.015
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.7%		
13C4-PFBA	2.400	217.0 -> 172.0	97148	18.67	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.4%		
13C4-PFHpA	5.738	367.0 -> 322.0	287670	18.71	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.6%		
13C5-PFHxA	4.977	318.0 -> 273.0	280629	18.65	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.3%		
13C5-PFPeA	3.932	268.0 -> 223.0	198670	18.94	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.7%		
13C6-PFDA	7.462	519.0 -> 474.0	419625	18.05	µg/L	0.025

Perfluorinated Compounds by LC/MS/MS

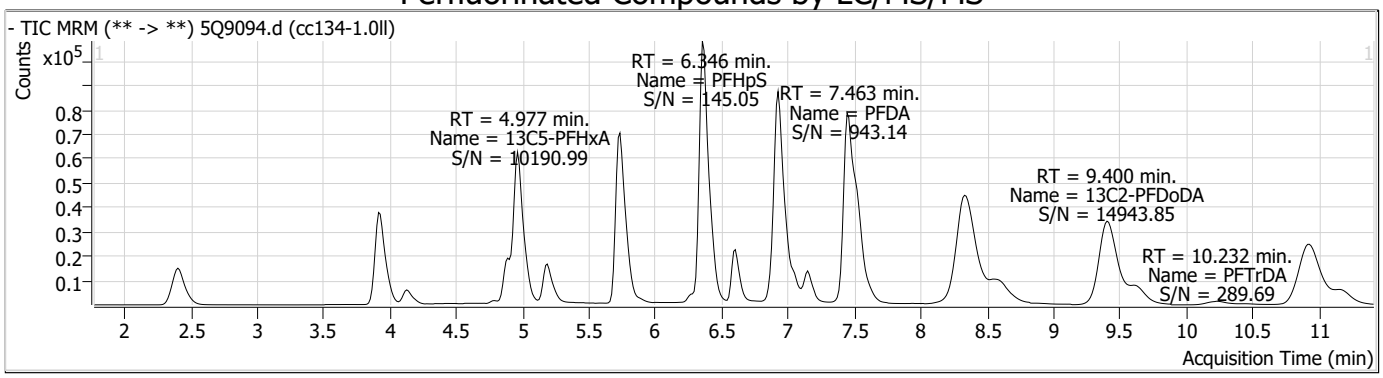
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.3%			
13C7-PFUnDA	8.332	570.0 -> 525.0	464905	15.89	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 79.4%			
13C8-FOSA	6.605	506.0 -> 78.0	84135	17.42	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.1%			
13C8-PFOA	6.374	421.0 -> 376.0	373577	18.54	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.7%			
13C8-PFOS	6.891	507.0 -> 99.0	46223	19.38	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.9%			
13C9-PFNA	6.931	472.0 -> 427.0	379031	18.02	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.1%			
d3-MeFOSAA	7.047	573.0 -> 419.0	28445	16.01	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 80.0%			
13C3-HFPO-DA	5.194	287.0 -> 169.0	70492	21.31	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 106.5%			
d3-MeFOSA	6.964	515.0 -> 169.0	27396	18.08	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.4%			
d5-EtFOSAA	7.157	589.0 -> 419.0	32095	17.40	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.0%			
Target Compounds							QValue
4:2FTS	4.888	327.0 -> 307.0	4782	1.03	µg/L		96
		327.0 -> 81.0	2965				
6:2FTS	6.373	427.0 -> 407.0	6777	0.98	µg/L		93
		427.0 -> 81.0	3182				
8:2FTS	7.525	527.0 -> 507.0	6437	1.02	µg/L		98
		527.0 -> 81.0	3239				
EtFOSAA	7.158	584.0 -> 419.0	1028	0.96	µg/L		99
		584.0 -> 483.0	666				
FOSA	6.606	498.0 -> 78.0	3915	0.91	µg/L		98
		498.0 -> 478.0	101				
MeFOSAA	7.060	570.0 -> 419.0	1028	0.89	µg/L		89
		570.0 -> 512.0	352				
PFBA	2.406	213.0 -> 169.0	4847	0.92	µg/L		100
PFBS	4.129	299.0 -> 80.0	3934	0.95	µg/L		98
		299.0 -> 99.0	1628				
PFDA	7.463	513.0 -> 469.0	20369	0.91	µg/L		99
		513.0 -> 219.0	3687				
PFDoDA	9.404	613.0 -> 569.0	15120	0.86	µg/L		100
		613.0 -> 319.0	2570				
PFDS	8.156	599.0 -> 80.0	4105	0.98	µg/L		90
		599.0 -> 99.0	2772				
PFHpA	5.739	363.0 -> 319.0	15961	0.89	µg/L		97
		363.0 -> 169.0	3817				
PFHpS	6.346	449.0 -> 80.0	3350	0.95	µg/L		96
		449.0 -> 99.0	1752				
PFHxA	4.978	313.0 -> 269.0	13107	0.92	µg/L		99
		313.0 -> 119.0	631				
PFHxS	5.749	399.0 -> 80.0	3290	0.95	µg/L	m	99
		399.0 -> 99.0	1865				
PFNA	6.931	463.0 -> 419.0	17885	0.91	µg/L		99
		463.0 -> 219.0	3911				
PFNS	7.396	549.0 -> 80.0	2950	0.93	µg/L		99
		549.0 -> 99.0	1776				
PFOA	6.374	413.0 -> 369.0	19978	0.93	µg/L		100
		413.0 -> 169.0	5331				
PFOS	6.892	499.0 -> 80.0	3986	0.93	µg/L	m	99

Perfluorinated Compounds by LC/MS/MS

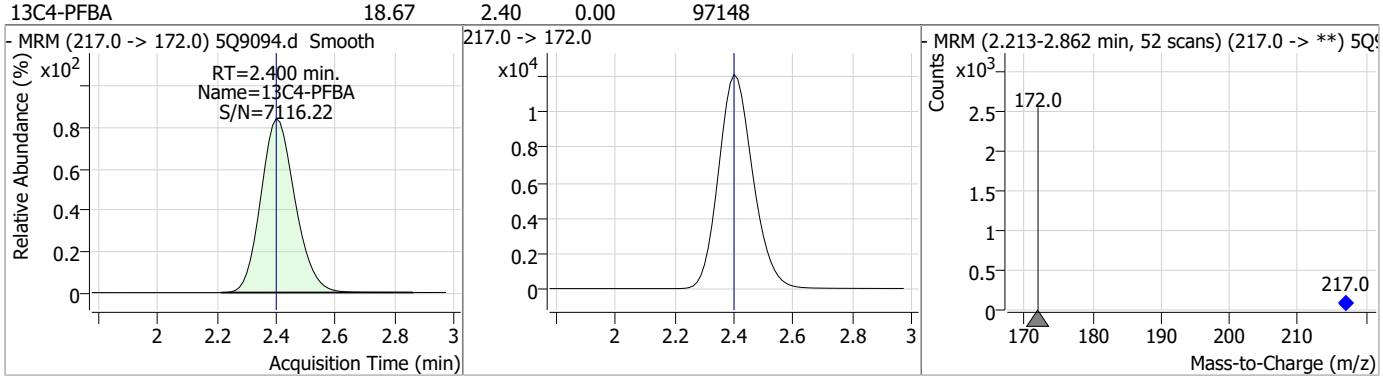
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	1939			
PFPeA	3.934	263.0 -> 219.0	10716	0.92	µg/L	100
PFPeS	5.047	349.0 -> 80.0	2378	0.87	µg/L	100
		349.0 -> 99.0	1222			
PFTeDA	10.916	713.0 -> 669.0	16274	1.10	µg/L	98
		713.0 -> 219.0	1791			
PFTrDA	10.232	663.0 -> 619.0	14757	0.87	µg/L	100
		663.0 -> 369.0	1634			
PFUnDA	8.334	563.0 -> 519.0	23727	0.99	µg/L	99
		563.0 -> 269.0	3901			
11Cl-PF3OUdS	8.654	631.0 -> 451.0	18213	1.01	µg/L	95
		633.0 -> 453.0	5673			
9Cl-PF3ONS	7.136	531.0 -> 351.0	16863	0.91	µg/L	99
		533.0 -> 353.0	5493			
ADONA	5.777	377.0 -> 251.0	20797	0.90	µg/L	99
		377.0 -> 85.0	7859			
HFPO-DA	5.202	329.0 -> 169.0	5047	0.90	µg/L	93
		285.0 -> 169.0	3246			
MeFOSA	6.966	512.0 -> 169.0	1429	0.88	µg/L	100
		512.0 -> 219.0	1118			
4-PFECHS	6.280	461.0 -> 381.0	10263	0.86	µg/L	95
		461.0 -> 99.0	5879			
FBSA	4.793	298.0 -> 78.0	5275	0.91	µg/L	100
		298.0 -> 64.0	482			
FHxSA	5.900	398.0 -> 78.0	4652	0.84	µg/L	96
		398.0 -> 64.0	384			

 # = Qualifier out of range, m = manually integrated, + = Area summed

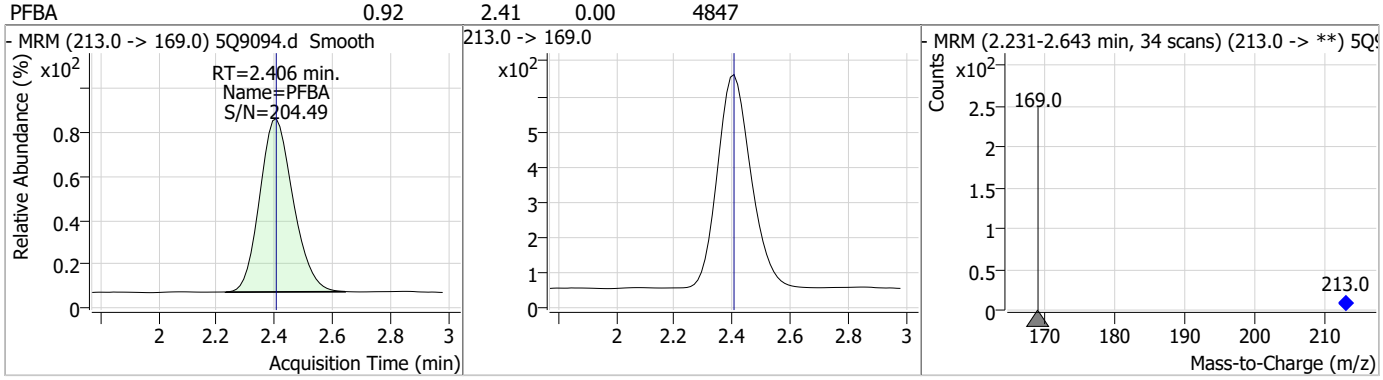
Perfluorinated Compounds by LC/MS/MS



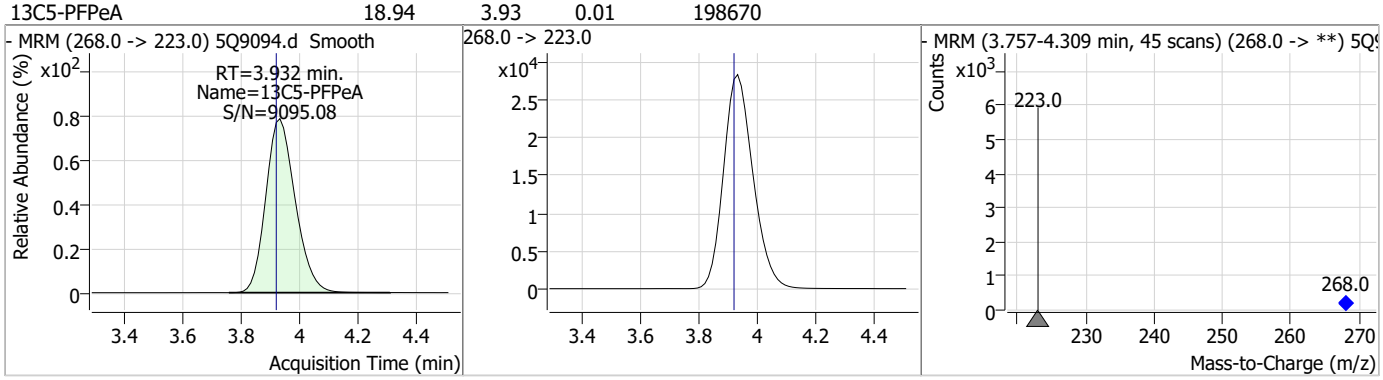
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.67	2.40	0.00	97148				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.92	2.41	0.00	4847				

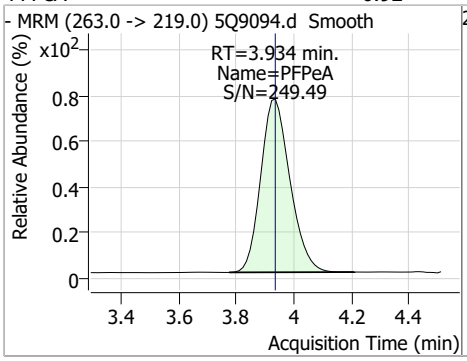


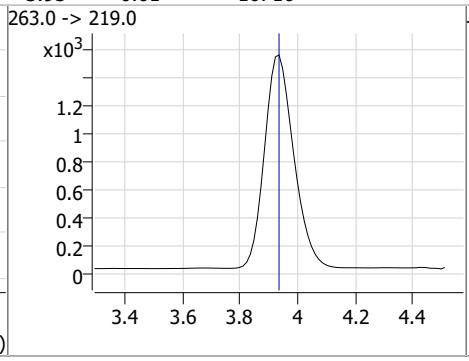
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	18.94	3.93	0.01	198670				

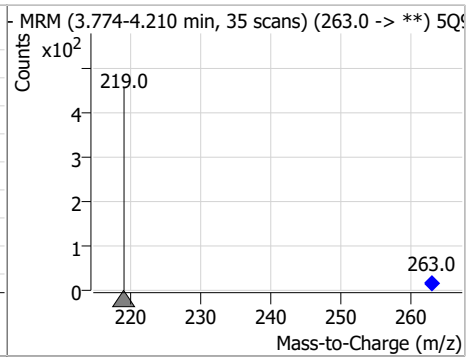


Perfluorinated Compounds by LC/MS/MS

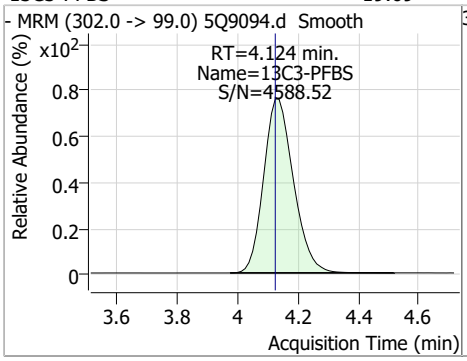
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.92	3.93	0.01	10716				

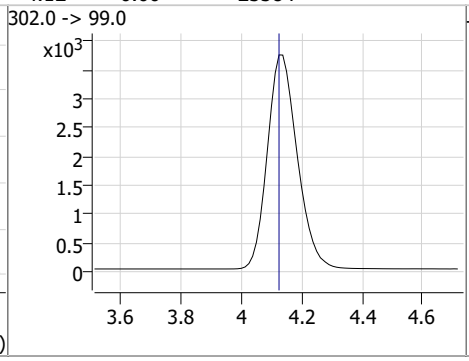


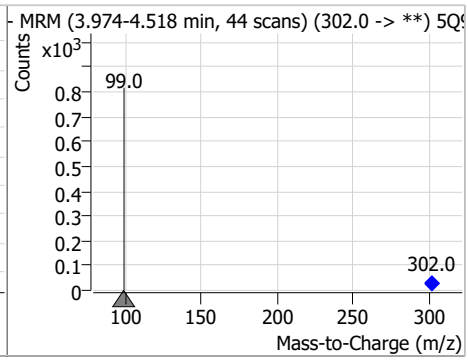




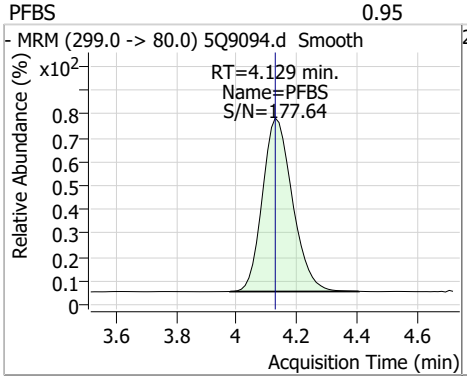
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.69	4.12	0.00	25584				

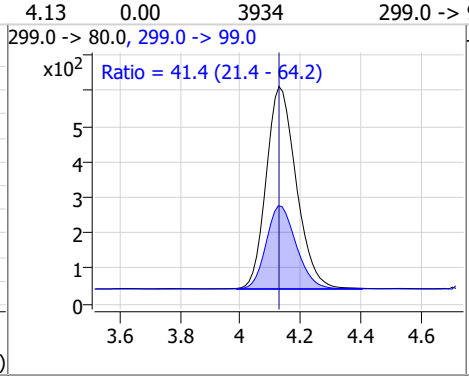


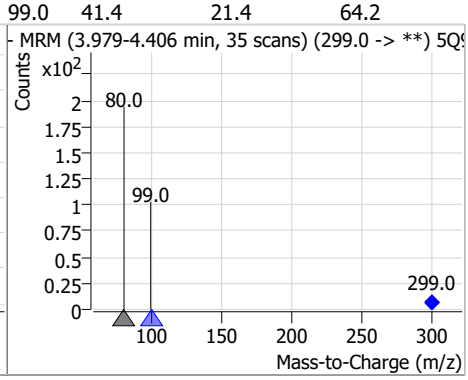




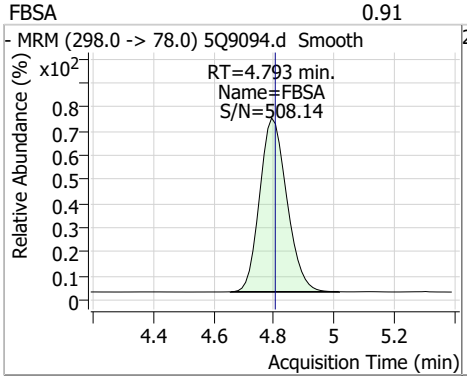
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.95	4.13	0.00	3934	299.0 -> 99.0	41.4	21.4	64.2

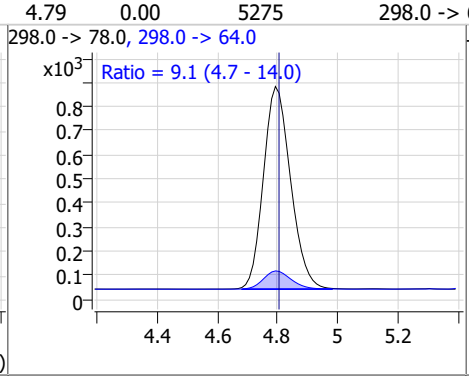


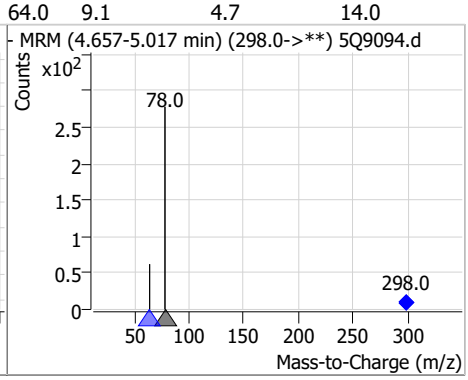




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	0.91	4.79	0.00	5275	298.0 -> 64.0	9.1	4.7	14.0

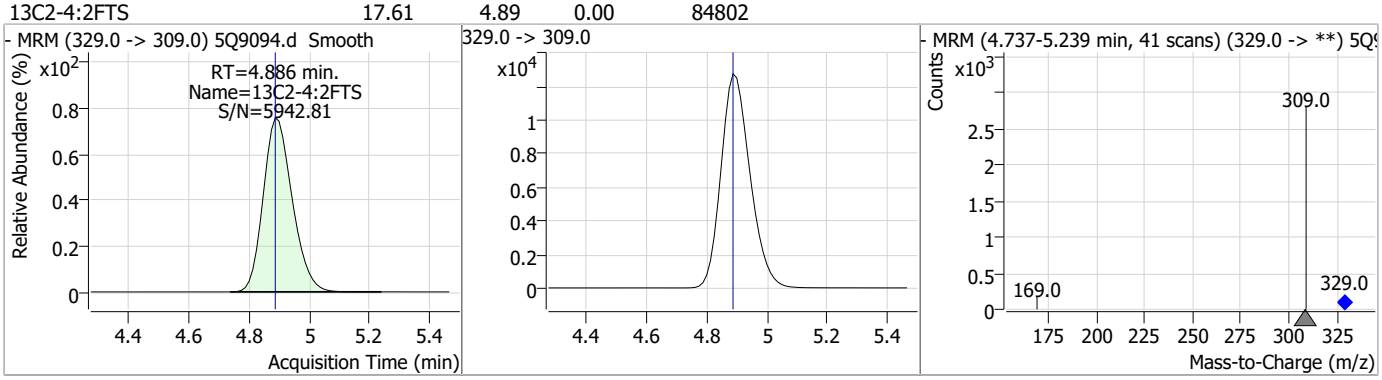




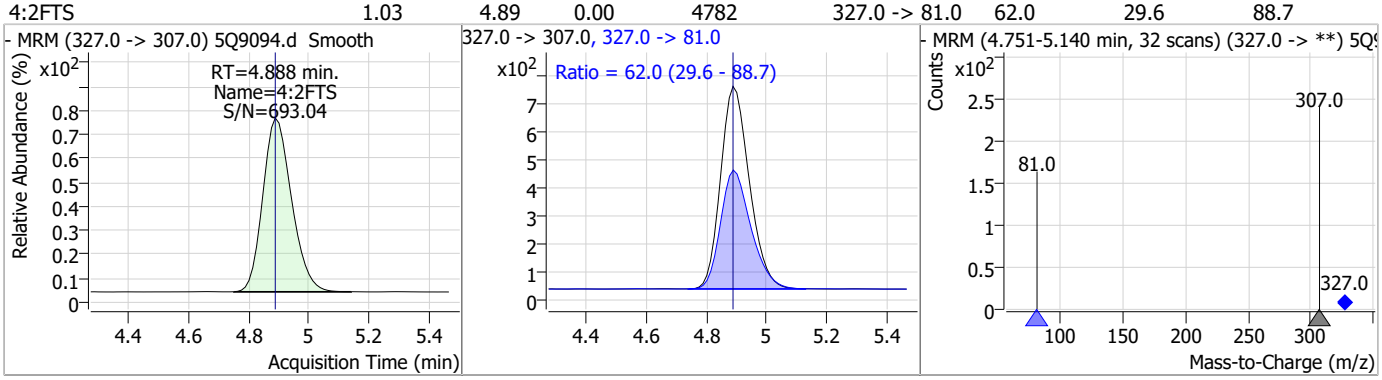


Perfluorinated Compounds by LC/MS/MS

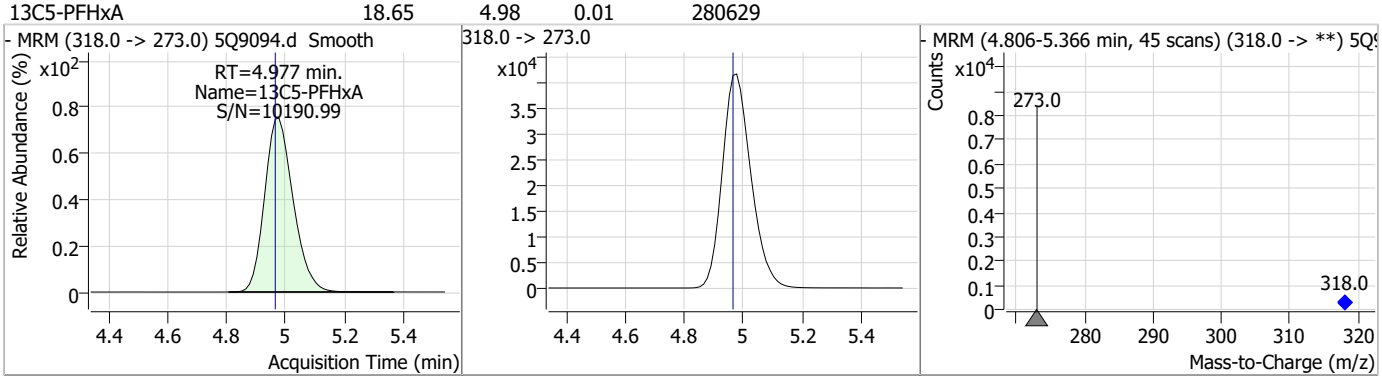
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	17.61	4.89	0.00	84802				



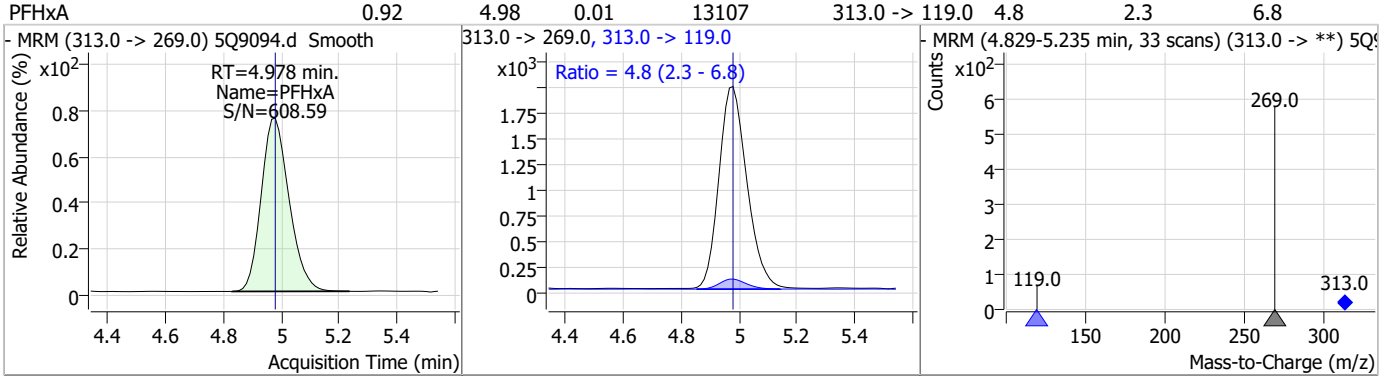
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	1.03	4.89	0.00	4782	327.0 -> 81.0	62.0	29.6	88.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	18.65	4.98	0.01	280629				

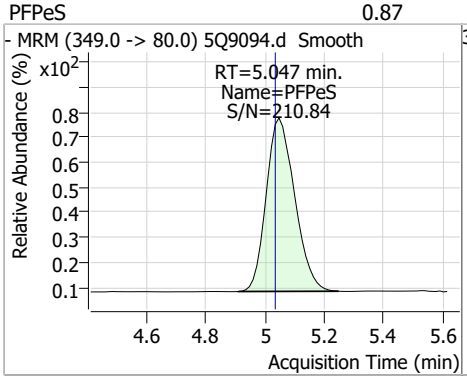


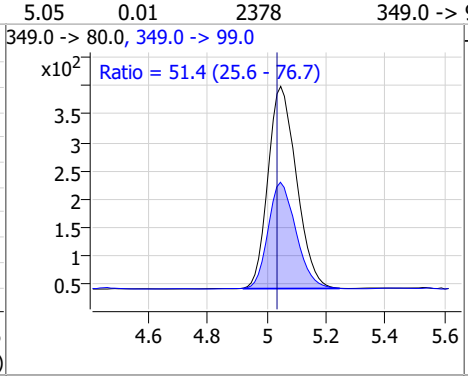
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.92	4.98	0.01	13107	313.0 -> 119.0	4.8	2.3	6.8

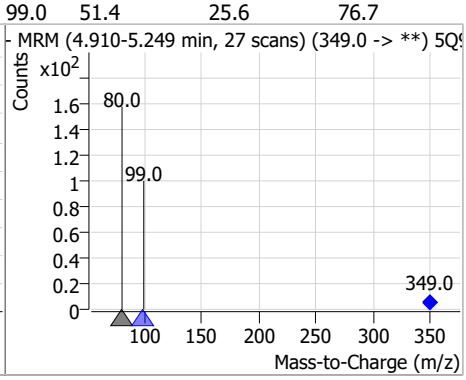


Perfluorinated Compounds by LC/MS/MS

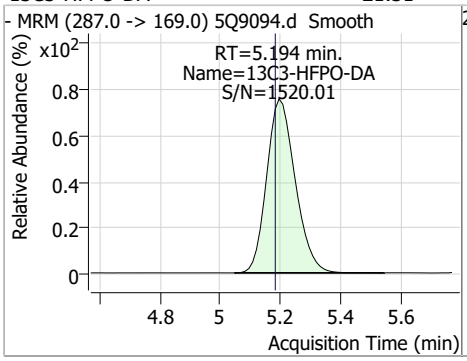
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	0.87	5.05	0.01	2378	349.0 -> 99.0	51.4	25.6	76.7

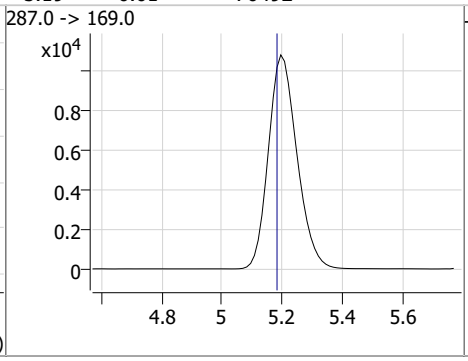


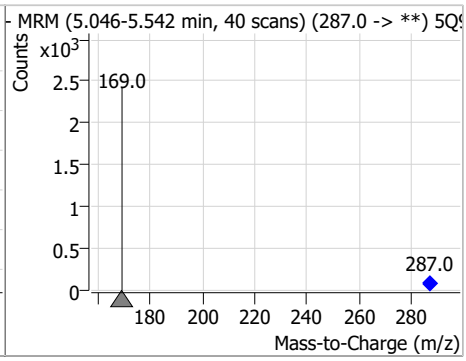




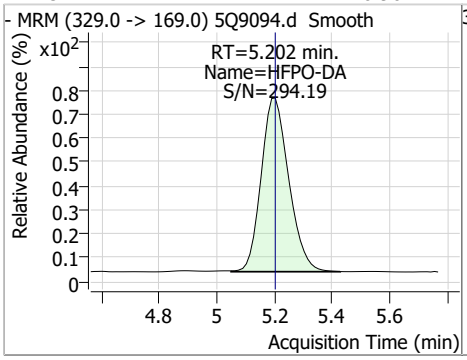
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	21.31	5.19	0.01	70492				

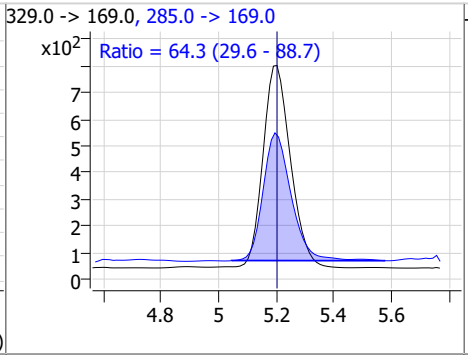


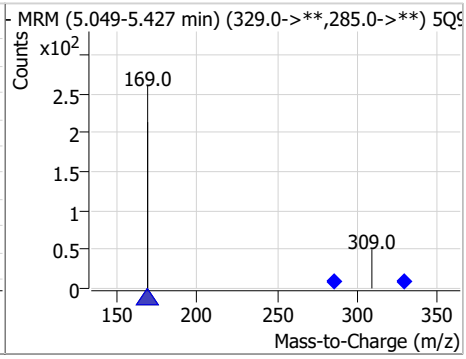




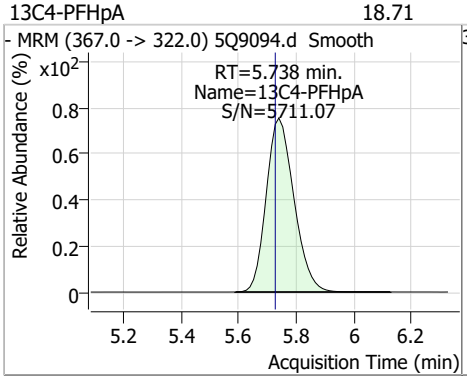
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.90	5.20	0.01	5047	285.0 -> 169.0	64.3	29.6	88.7

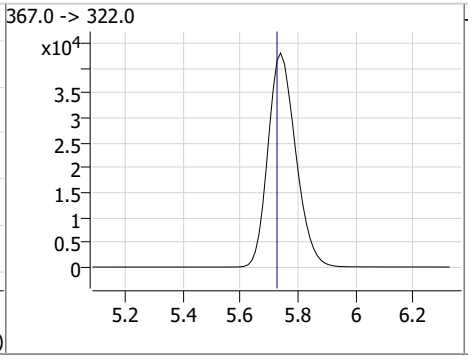


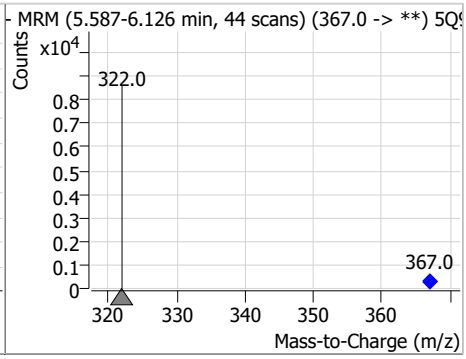




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	18.71	5.74	0.01	287670				

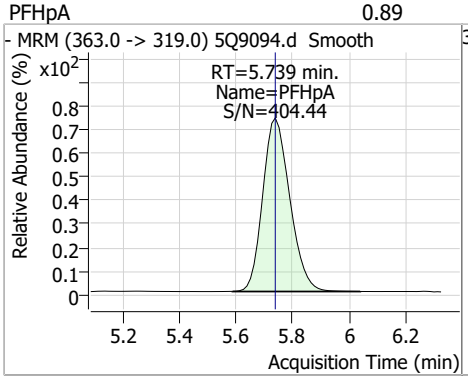


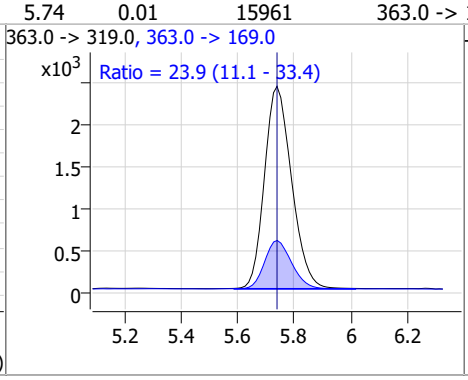


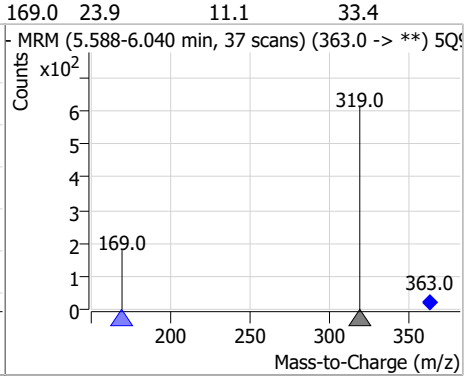


Perfluorinated Compounds by LC/MS/MS

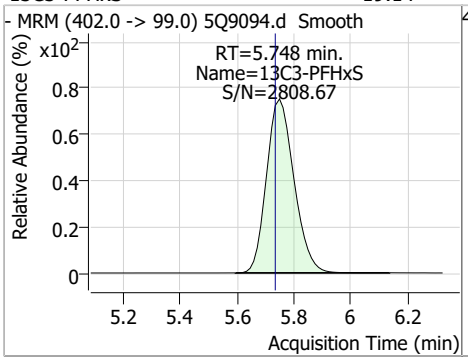
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.89	5.74	0.01	15961	363.0 -> 169.0	23.9	11.1	33.4

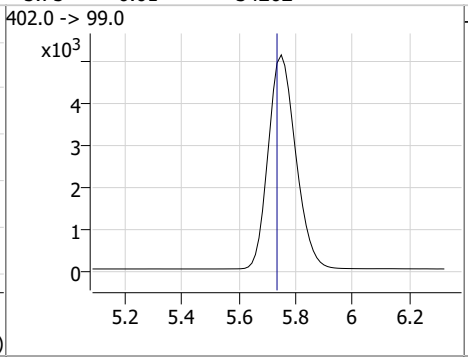


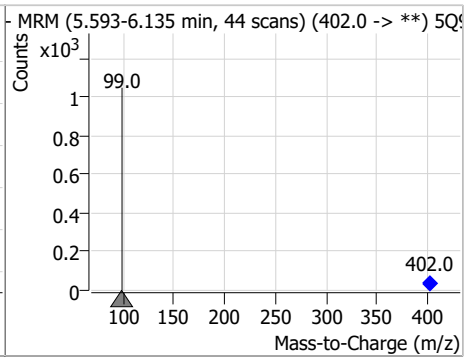




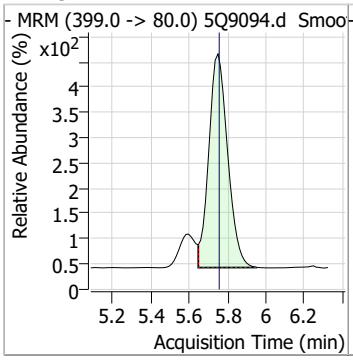
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.14	5.75	0.01	34262				

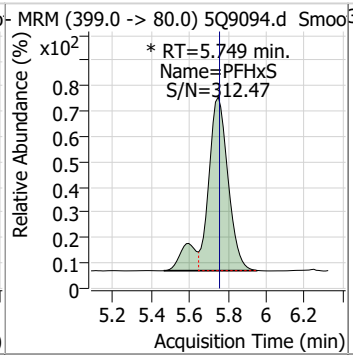


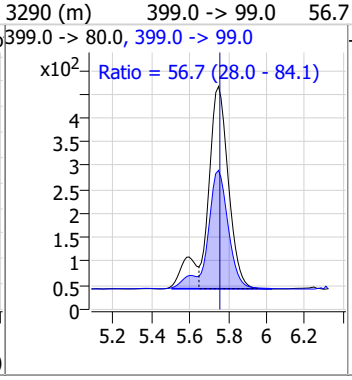


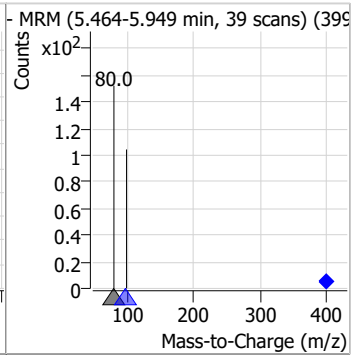


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.95	5.75	0.01	3290 (m)	399.0 -> 99.0	56.7	28.0	84.1

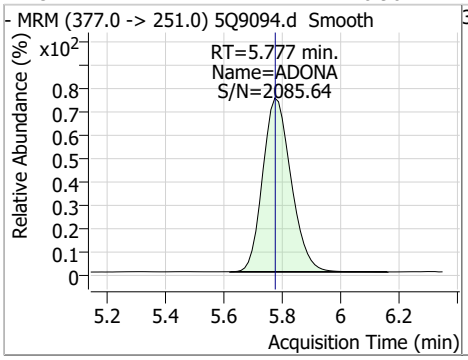


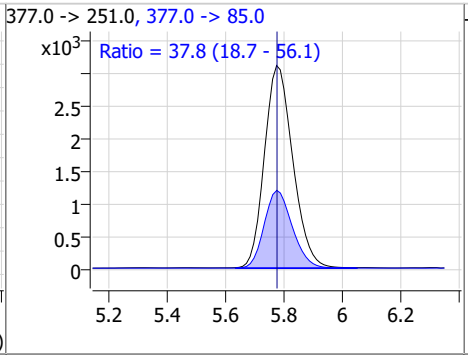


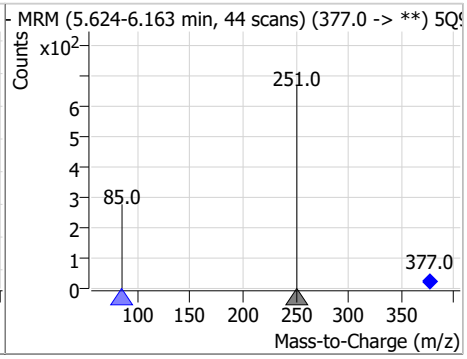




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.90	5.78	0.01	20797	377.0 -> 85.0	37.8	18.7	56.1

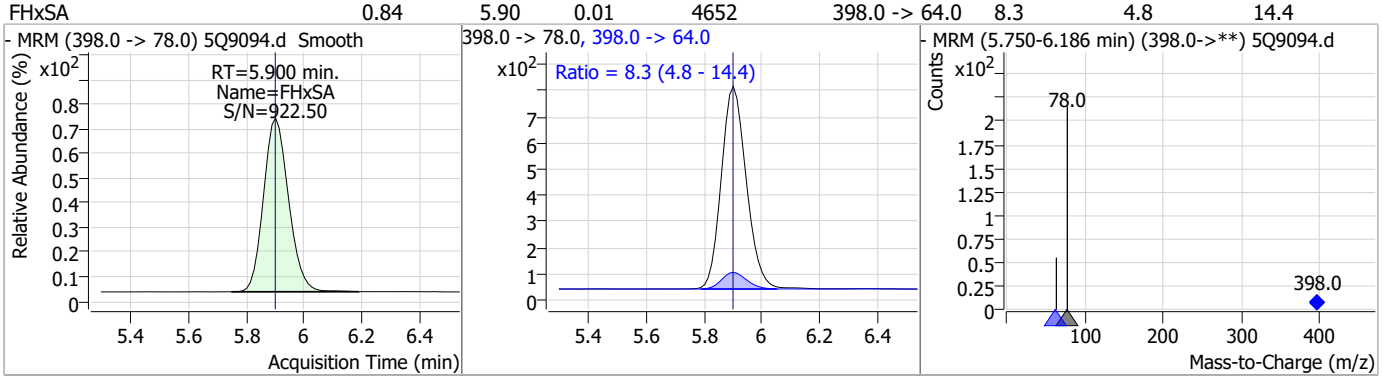




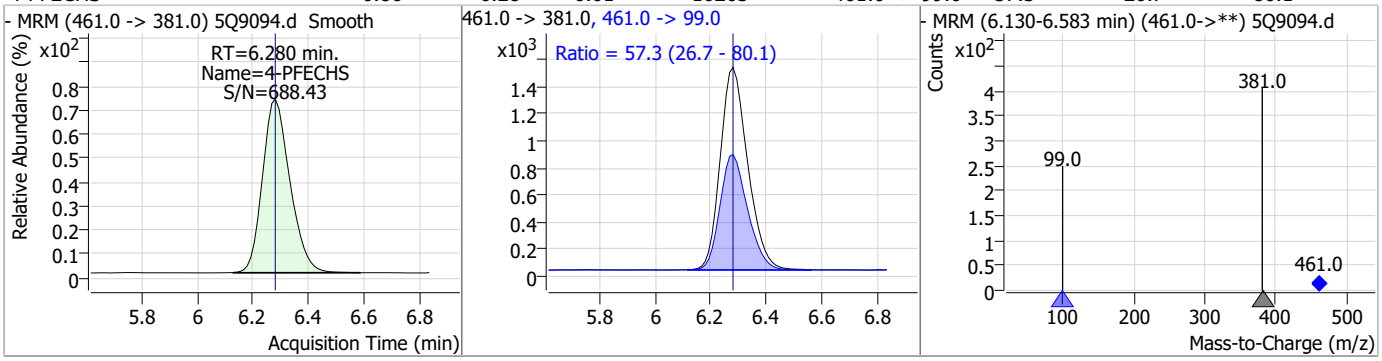


Perfluorinated Compounds by LC/MS/MS

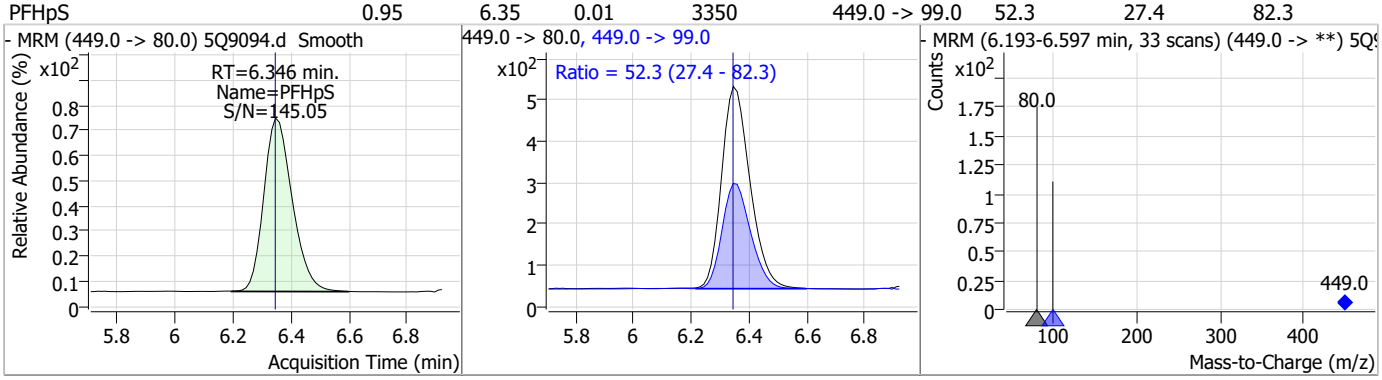
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	0.84	5.90	0.01	4652	398.0 -> 64.0	8.3	4.8	14.4



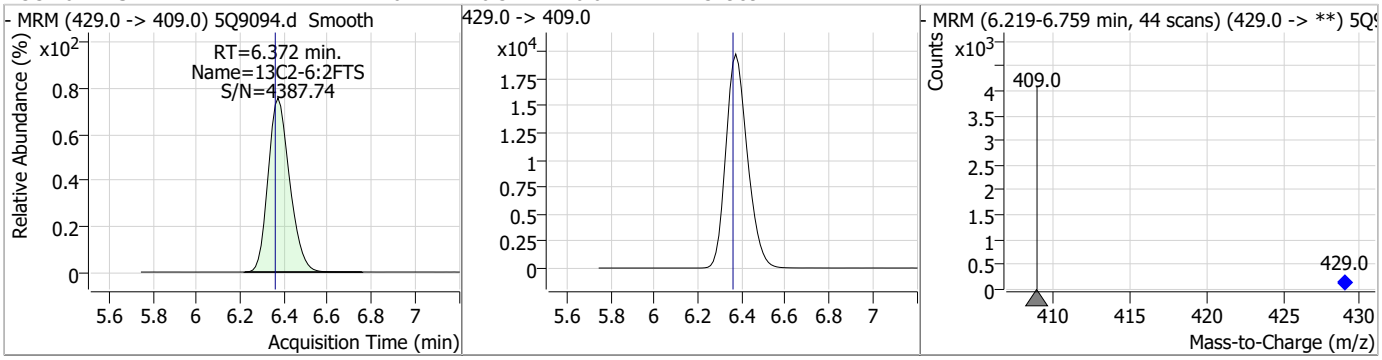
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	0.86	6.28	0.01	10263	461.0 -> 99.0	57.3	26.7	80.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	0.95	6.35	0.01	3350	449.0 -> 99.0	52.3	27.4	82.3

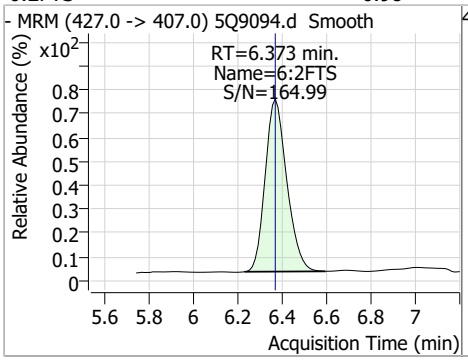


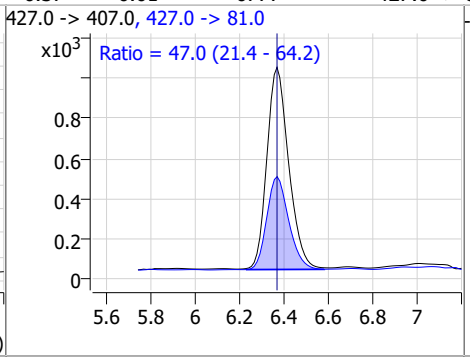
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	17.61	6.37	0.01	134989				

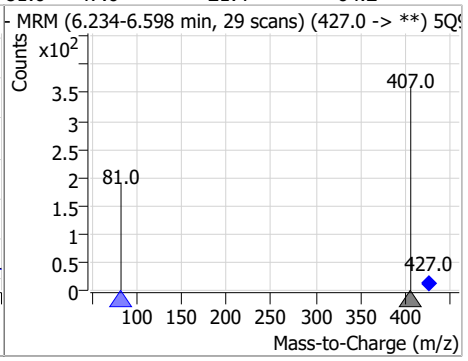


Perfluorinated Compounds by LC/MS/MS

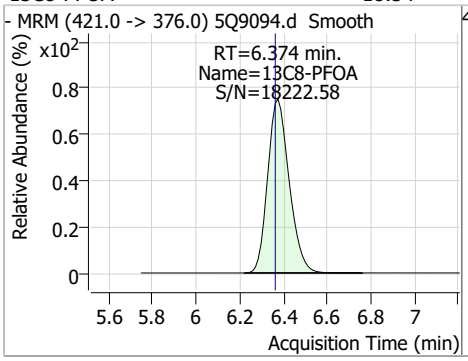
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	0.98	6.37	0.01	6777	427.0 -> 81.0	47.0	21.4	64.2

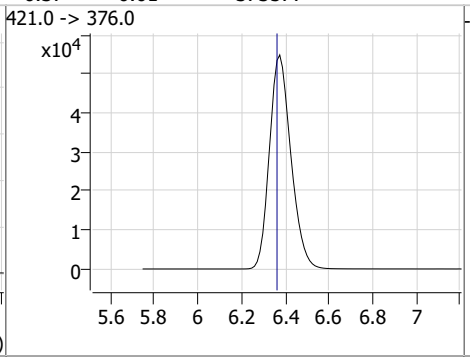


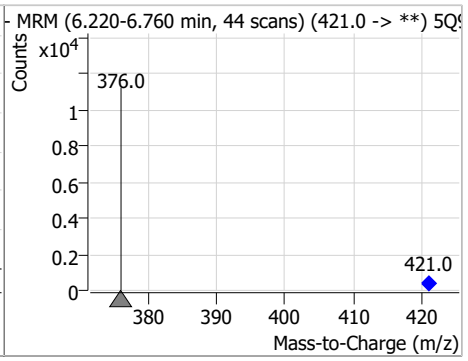




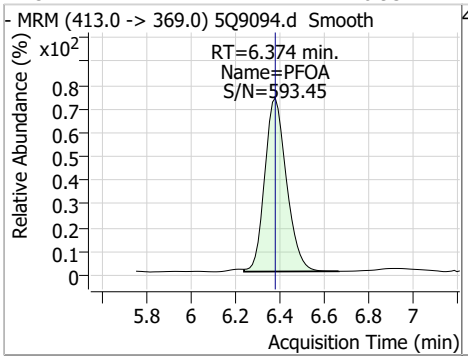
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	18.54	6.37	0.01	373577				

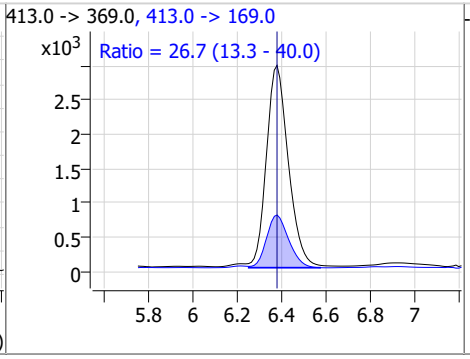


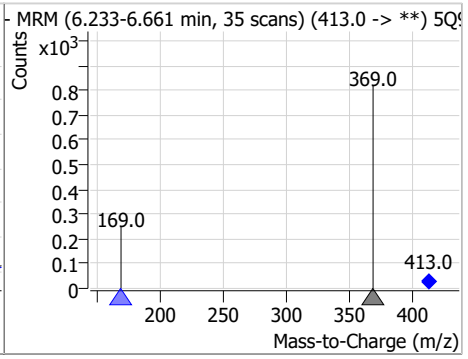




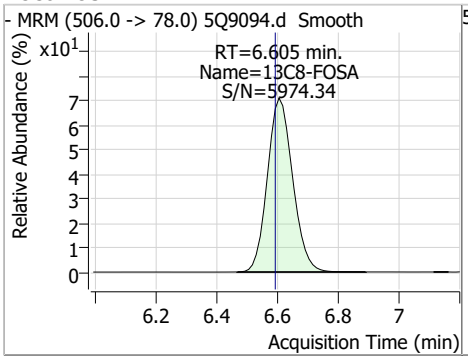
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.93	6.37	0.01	19978	413.0 -> 169.0	26.7	13.3	40.0

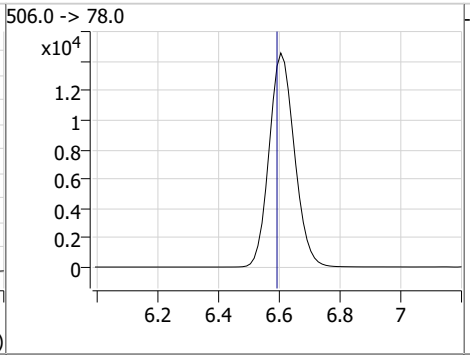


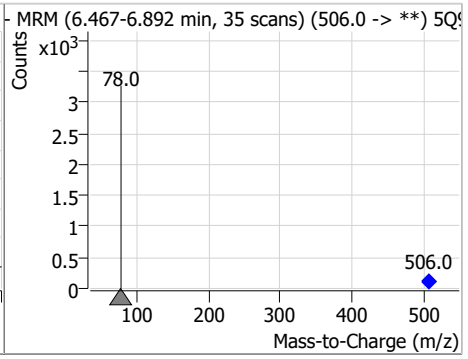




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	17.42	6.60	0.01	84135				

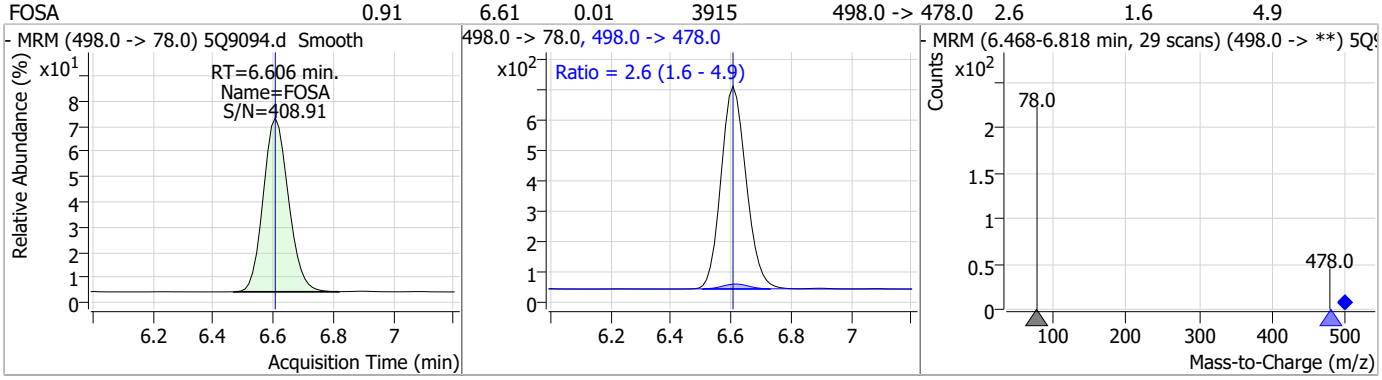




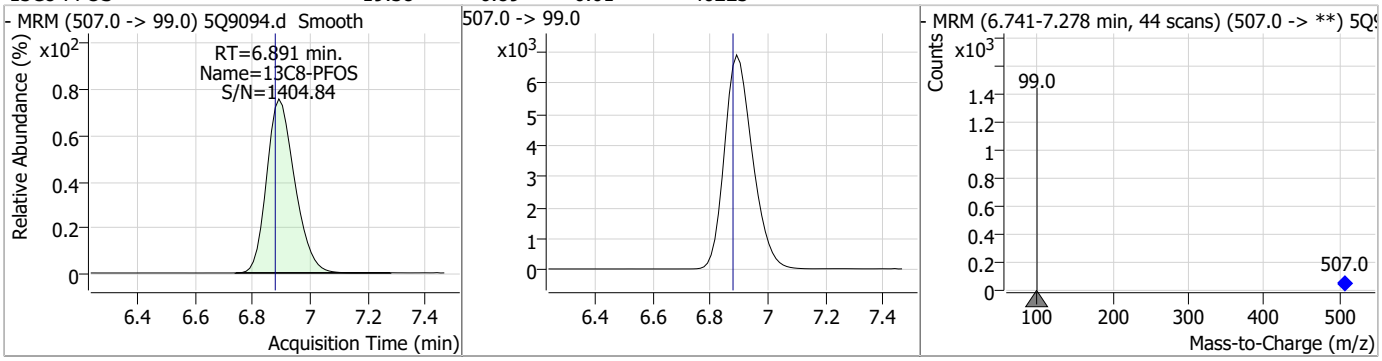


Perfluorinated Compounds by LC/MS/MS

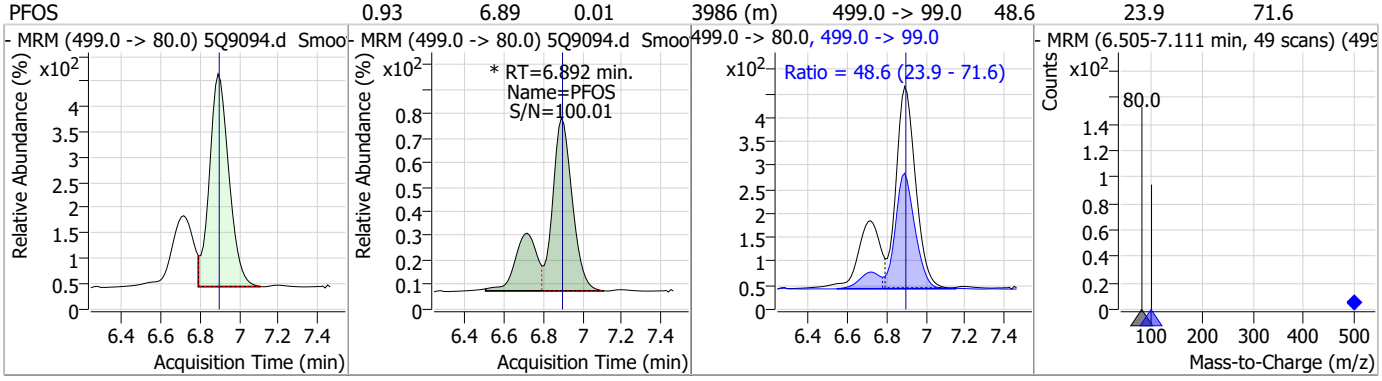
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	0.91	6.61	0.01	3915	498.0 -> 478.0	2.6	1.6	4.9



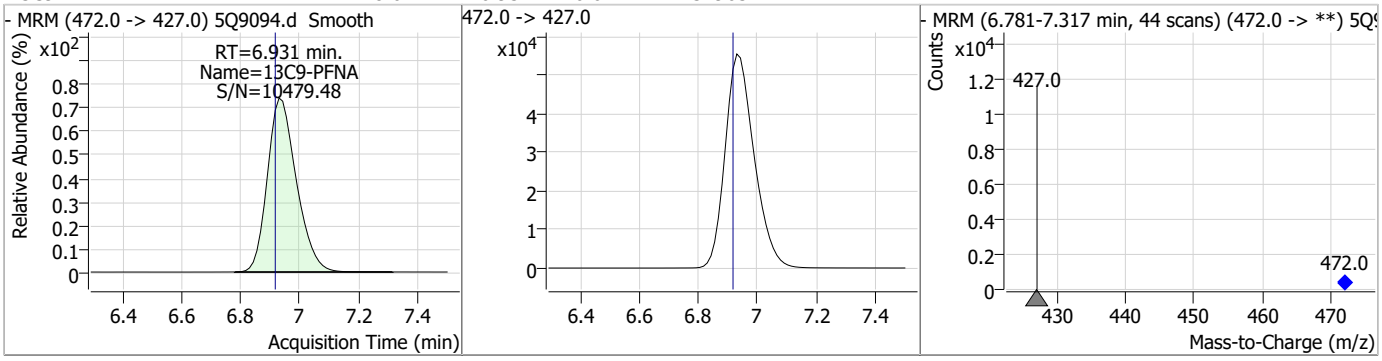
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.38	6.89	0.01	46223				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.93	6.89	0.01	3986 (m)	499.0 -> 99.0	48.6	23.9	71.6

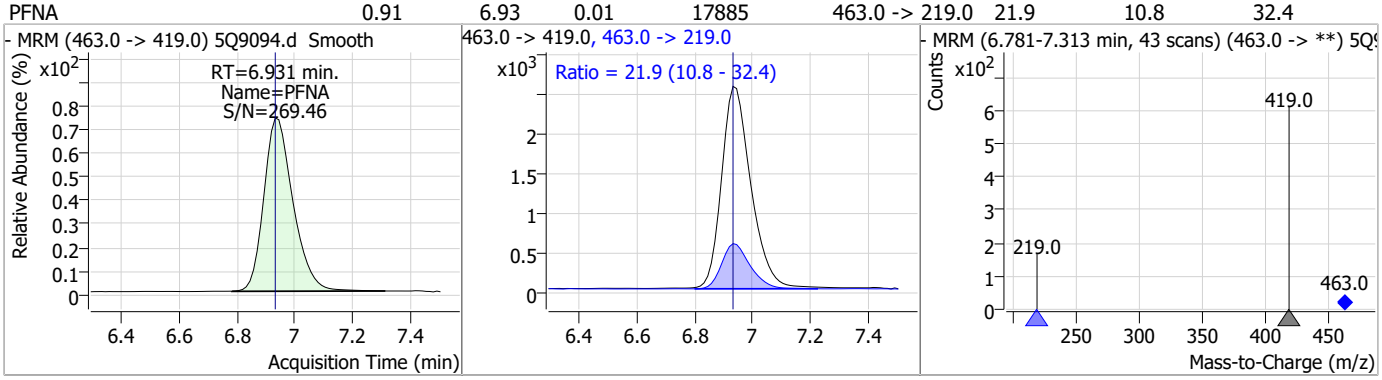


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.02	6.93	0.01	379031				

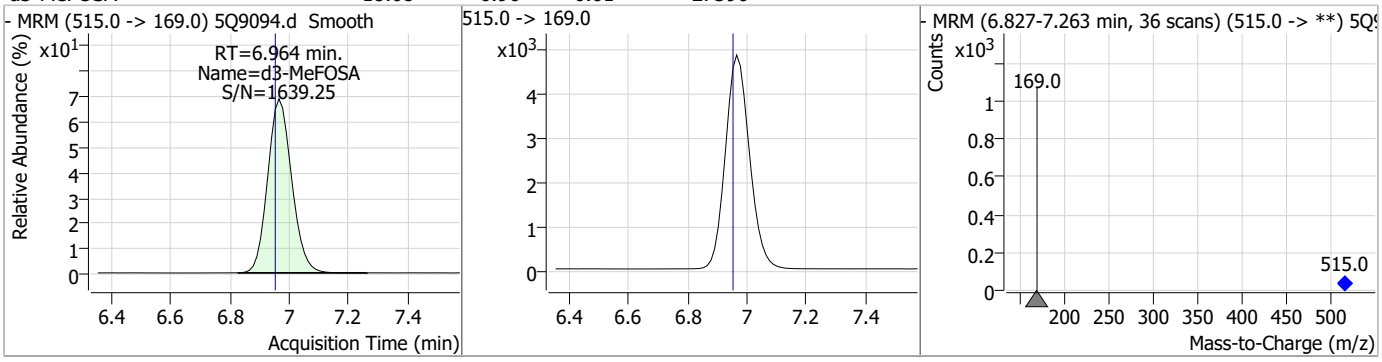


Perfluorinated Compounds by LC/MS/MS

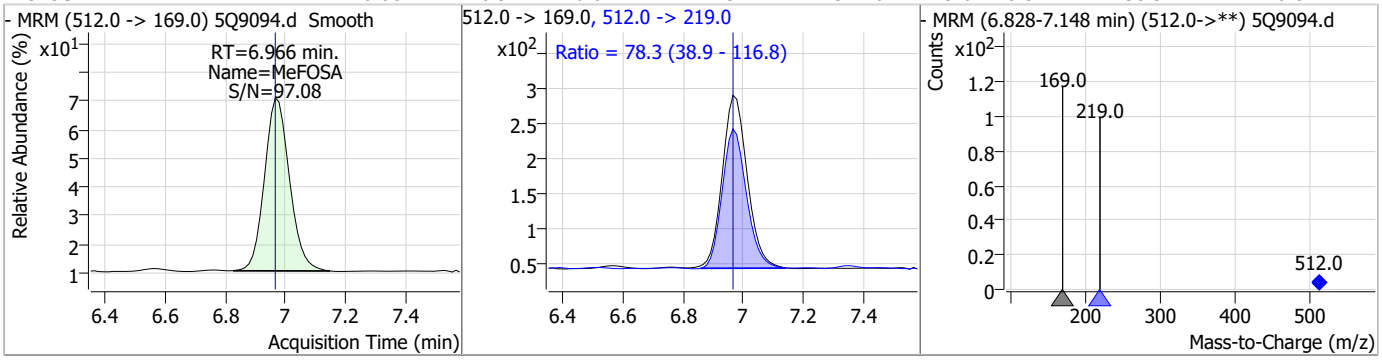
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.91	6.93	0.01	17885	463.0 -> 219.0	21.9	10.8	32.4



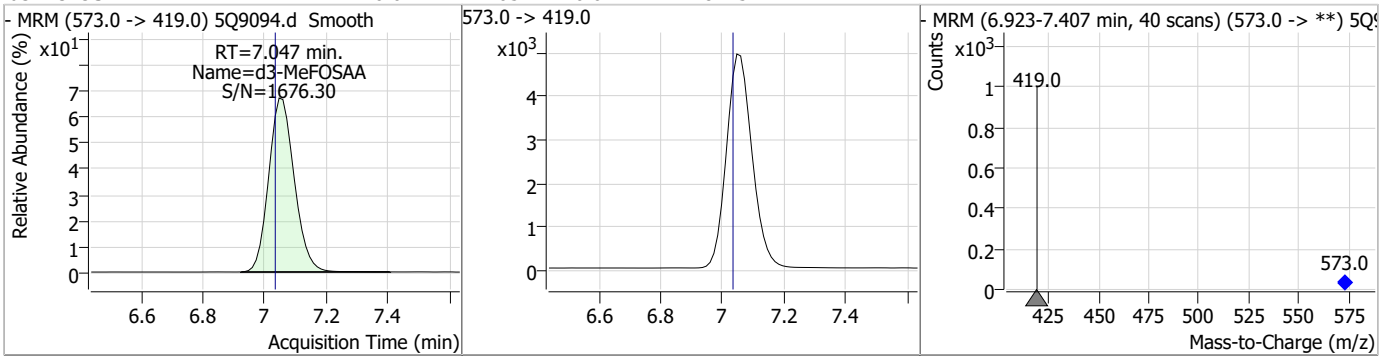
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	18.08	6.96	0.01	27396				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	0.88	6.97	0.01	1429	512.0 -> 219.0	78.3	38.9	116.8

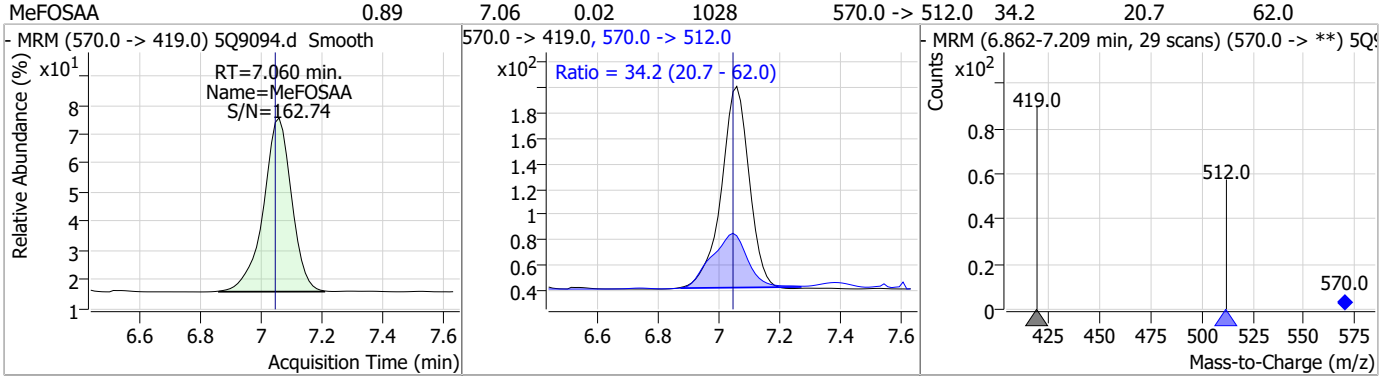


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	16.01	7.05	0.01	28445				

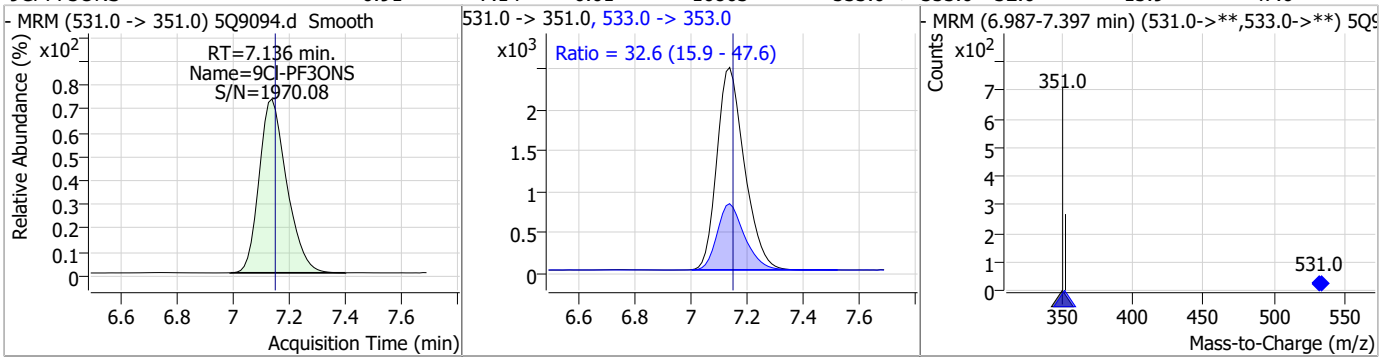


Perfluorinated Compounds by LC/MS/MS

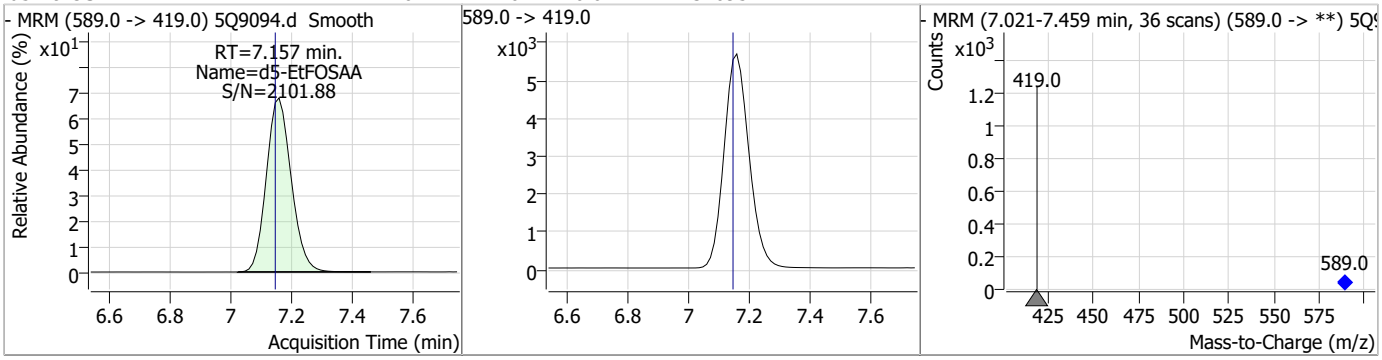
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.89	7.06	0.02	1028	570.0 -> 512.0	34.2	20.7	62.0



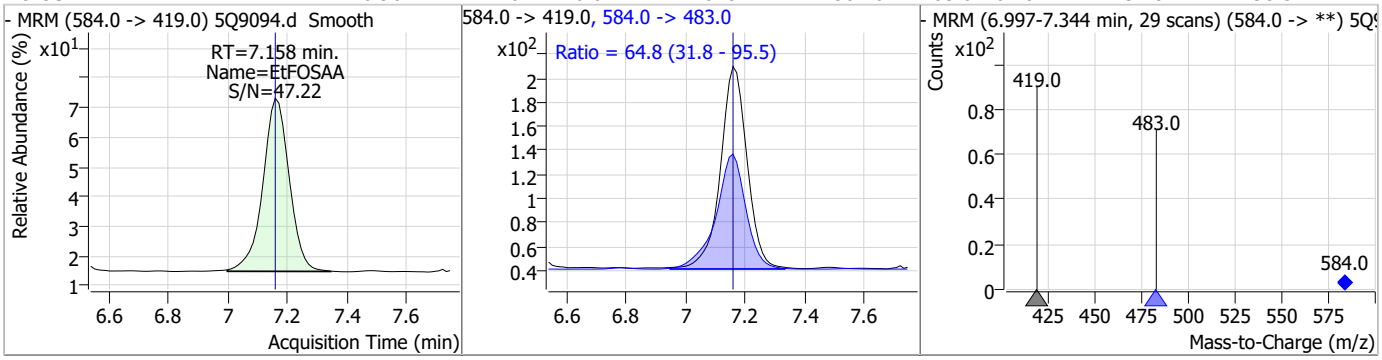
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.91	7.14	0.01	16863	533.0 -> 353.0	32.6	15.9	47.6



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	17.40	7.16	0.01	32095				

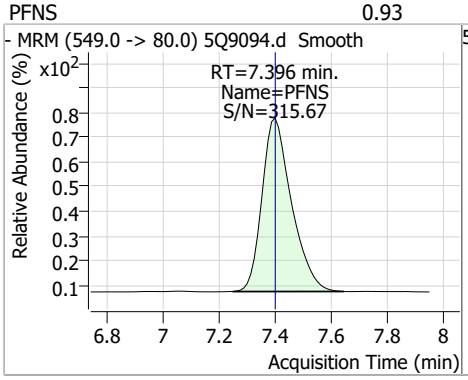


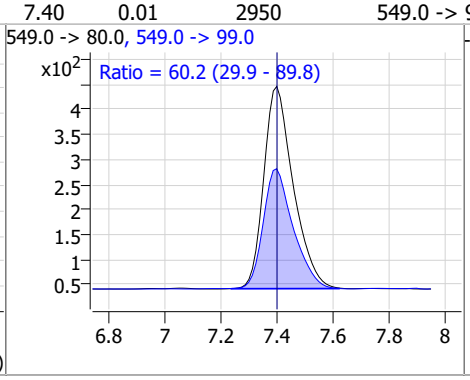
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	0.96	7.16	0.01	1028	584.0 -> 483.0	64.8	31.8	95.5

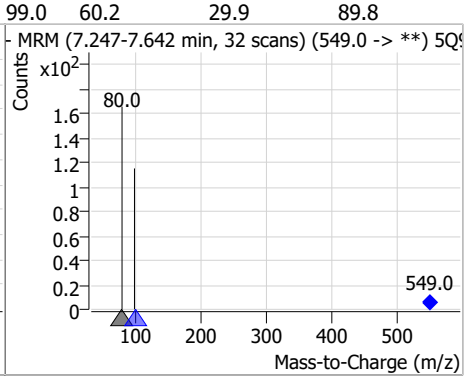


Perfluorinated Compounds by LC/MS/MS

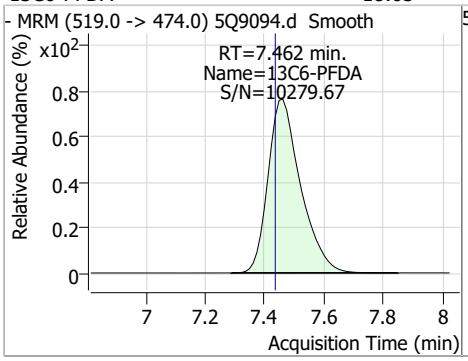
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	0.93	7.40	0.01	2950	549.0 -> 99.0	60.2	29.9	89.8

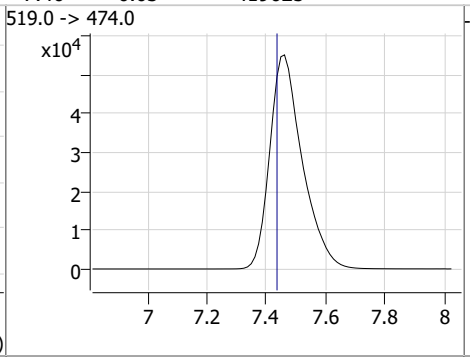


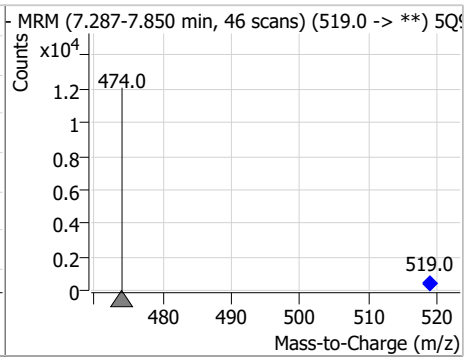




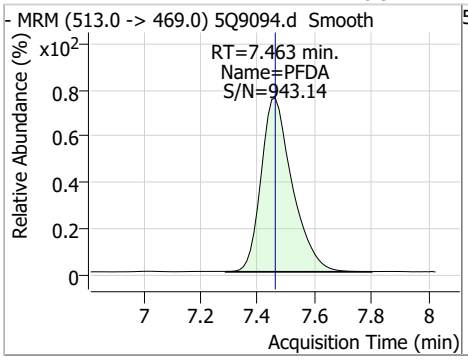
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.05	7.46	0.03	419625				

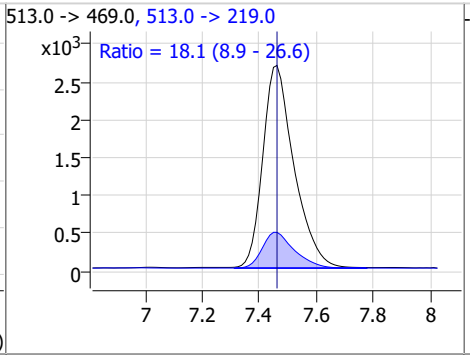


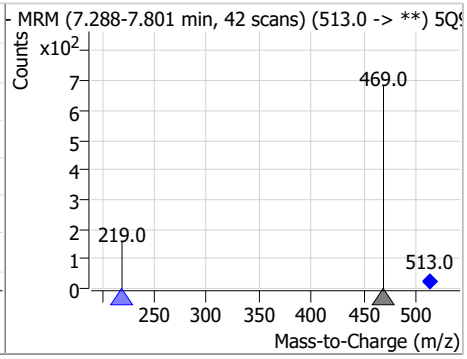




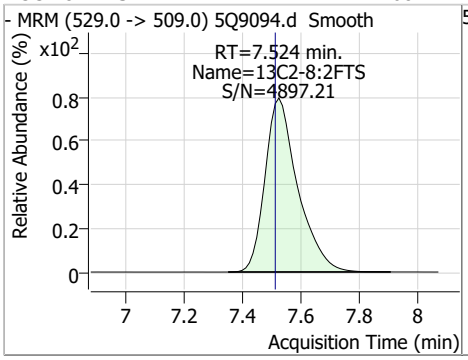
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.91	7.46	0.03	20369	513.0 -> 219.0	18.1	8.9	26.6

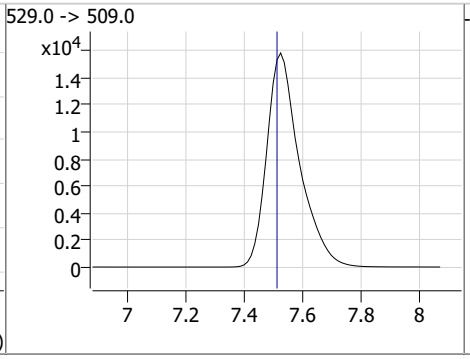


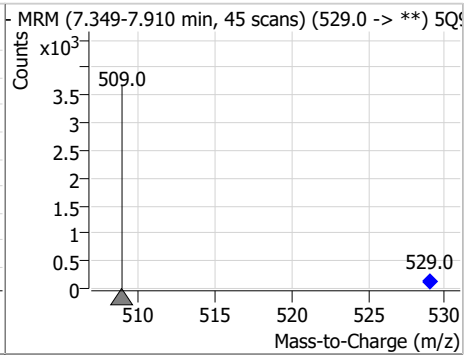




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	17.08	7.52	0.01	123309				

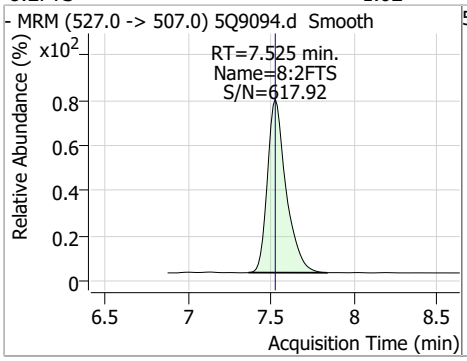


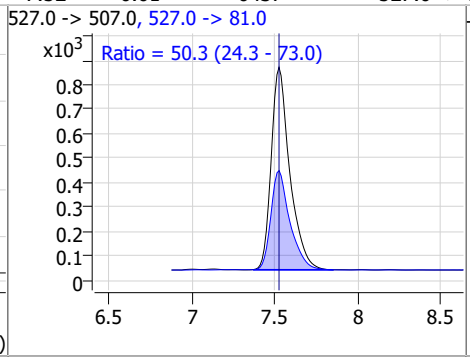


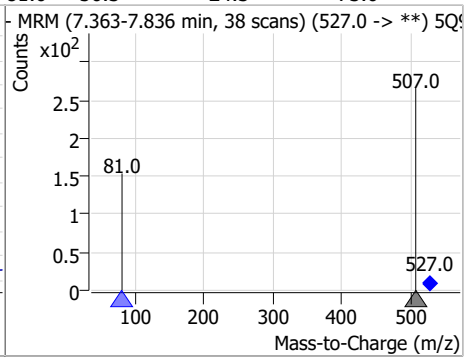


Perfluorinated Compounds by LC/MS/MS

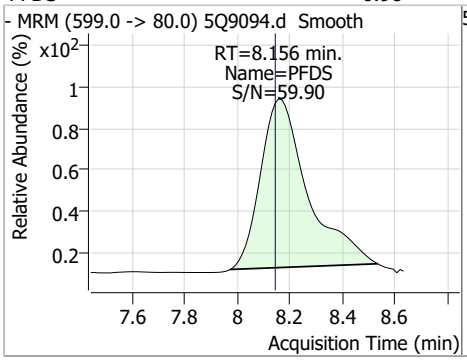
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	1.02	7.52	0.01	6437	527.0 -> 81.0	50.3	24.3	73.0

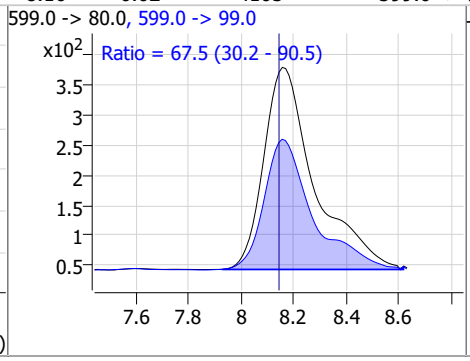


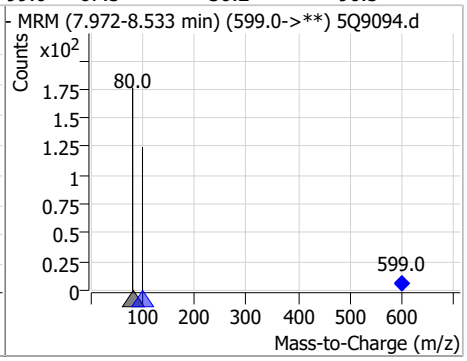




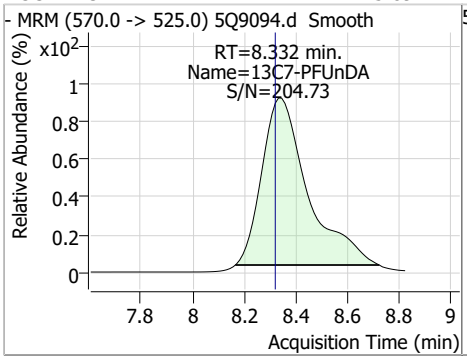
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	0.98	8.16	0.02	4105	599.0 -> 99.0	67.5	30.2	90.5

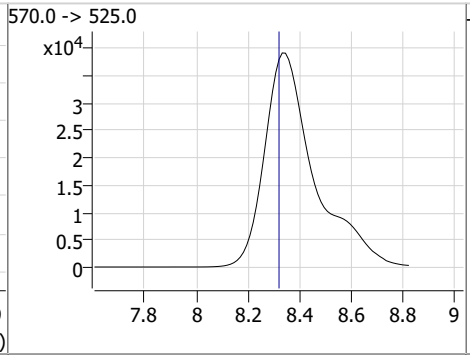


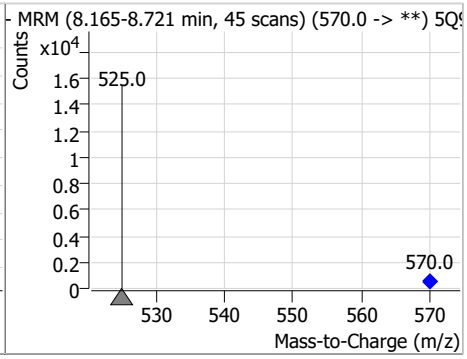




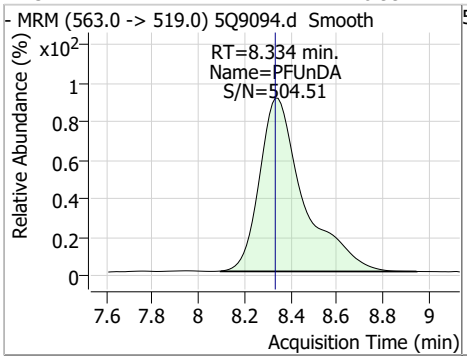
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	15.89	8.33	0.01	464905				

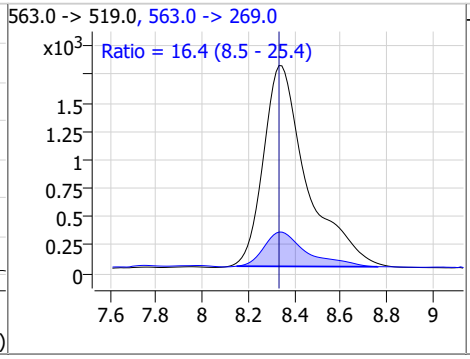


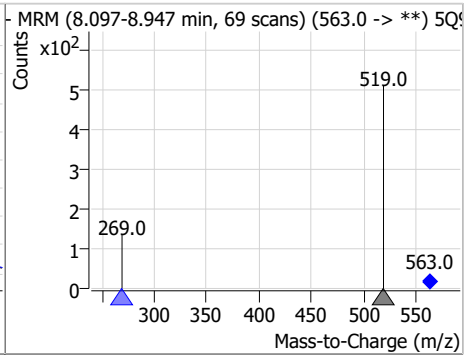




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.99	8.33	0.01	23727	563.0 -> 269.0	16.4	8.5	25.4

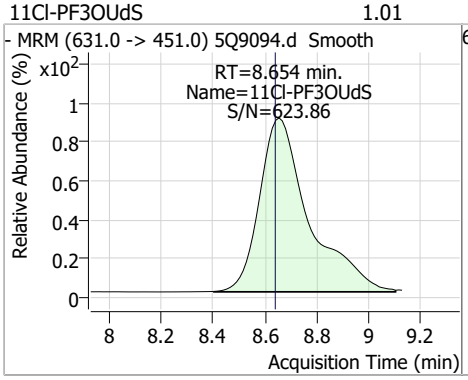


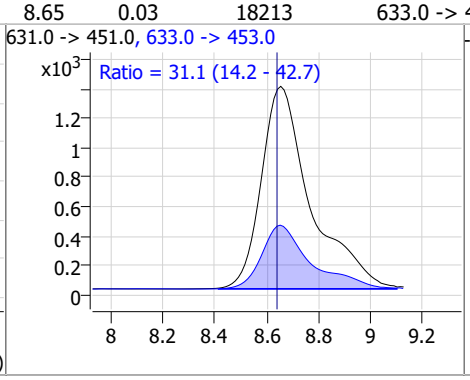


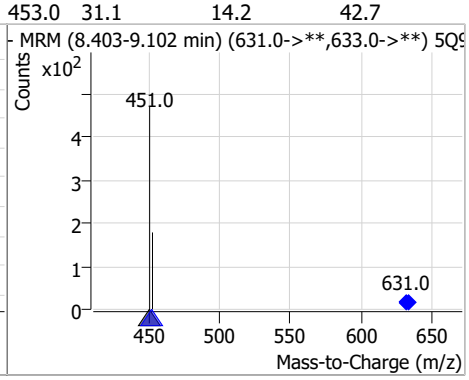


Perfluorinated Compounds by LC/MS/MS

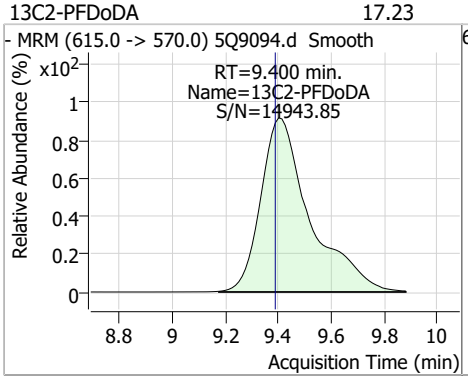
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	1.01	8.65	0.03	18213	633.0 -> 453.0	31.1	14.2	42.7

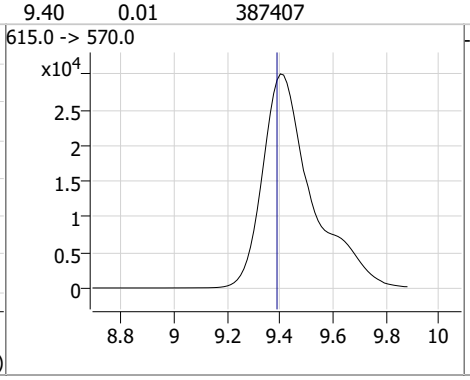


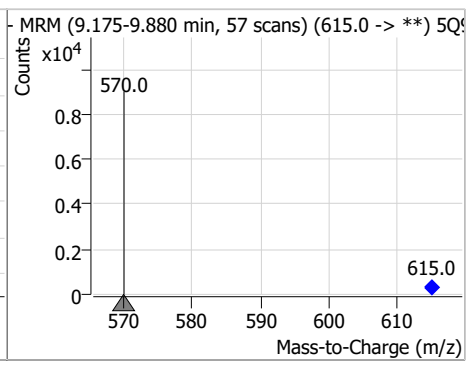




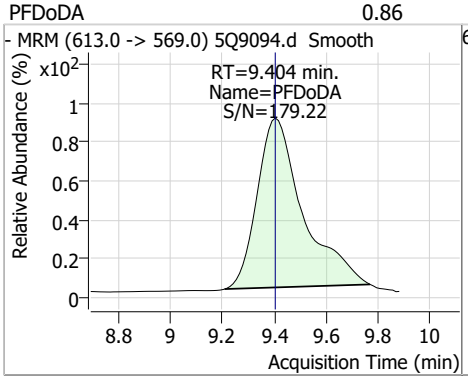
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	17.23	9.40	0.01	387407				

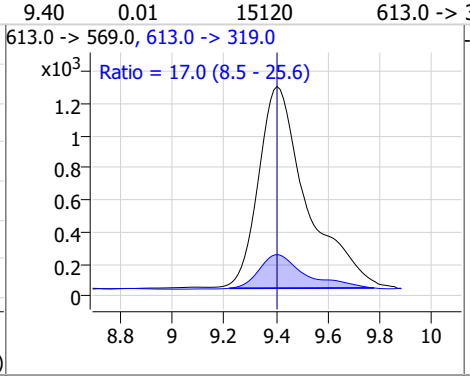


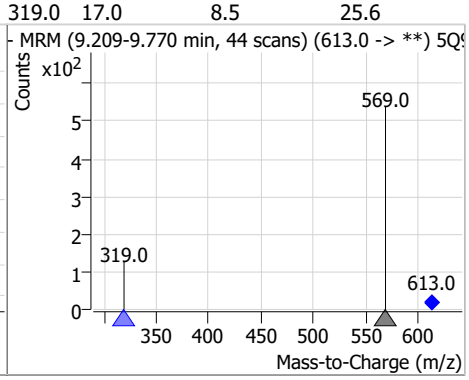




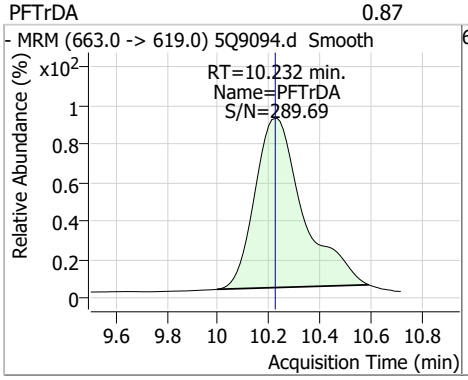
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.86	9.40	0.01	15120	613.0 -> 319.0	17.0	8.5	25.6

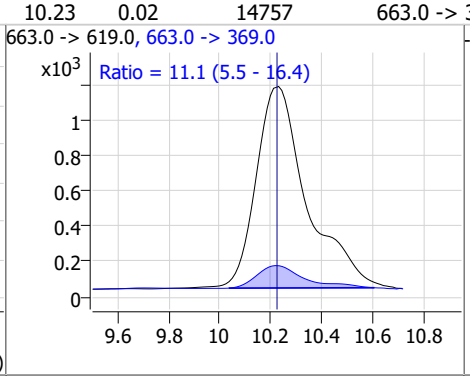


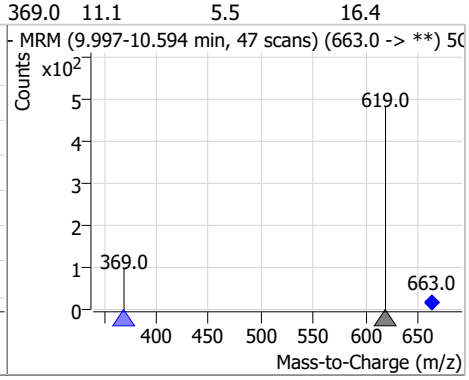




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.87	10.23	0.02	14757	663.0 -> 369.0	11.1	5.5	16.4

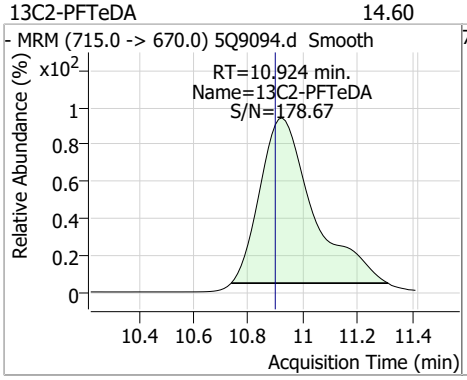


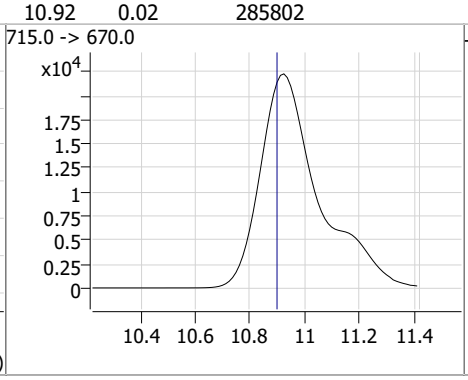


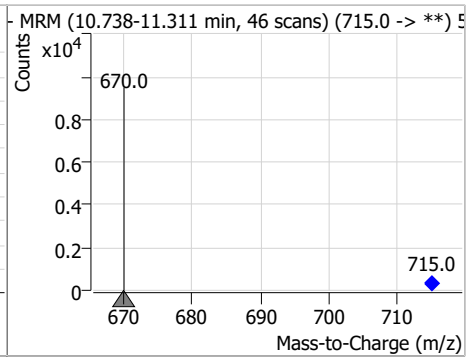


Perfluorinated Compounds by LC/MS/MS

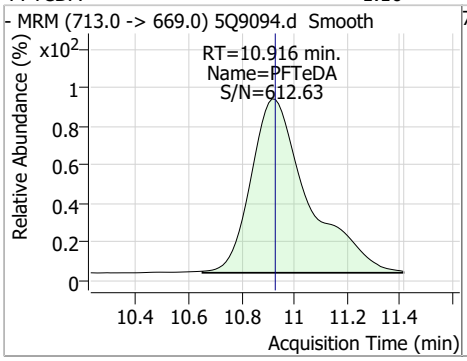
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	14.60	10.92	0.02	285802				

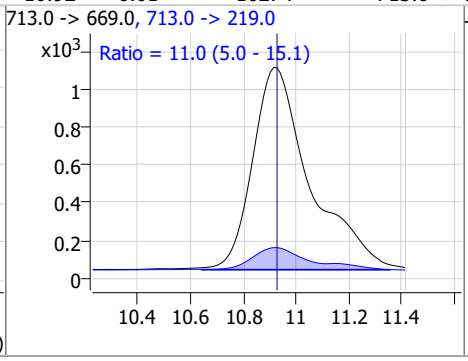


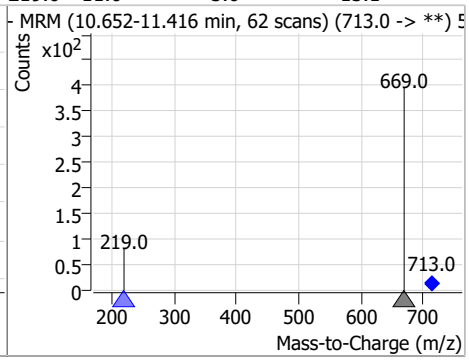




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	1.10	10.92	0.01	16274	713.0 -> 219.0	11.0	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q135-CC134
Lab FileID: 5Q9094.D
Injection Time: 12/29/22 11:47
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/30/22 11:46 Lindsay Ritner
Supervisor approved: 12/31/22 16:37 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.75	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.89	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Norman Farmer 12/31/22 16:37

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9101.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 12/29/2022 1:48:35 PM
Sample Name : cc134-20
Vial : P1-A7
DA Method File : ID_122822_S5Q134.quantmethod.xml
Batch Name : s5q135.batch.bin
Sample Information : OP94373,S5Q135,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.400	217.0 -> 172.0	85355	20.00	µg/L	0.000
M5-PFPeA	3.919	268.0 -> 223.0	175784	20.00	µg/L	0.000
M5-PFHxA	4.965	318.0 -> 273.0	246500	20.00	µg/L	0.000
M4-PFHpA	5.738	367.0 -> 322.0	246559	20.00	µg/L	0.012
M8-PFOA	6.361	421.0 -> 376.0	314596	20.00	µg/L	0.000
M9-PFNA	6.931	472.0 -> 427.0	333422	20.00	µg/L	0.013
M6-PFDA	7.449	519.0 -> 474.0	360538	20.00	µg/L	0.013
M7-PFUnDA	8.332	570.0 -> 525.0	445772	20.00	µg/L	0.012
M2-PFDoDA	9.400	615.0 -> 570.0	319694	20.00	µg/L	0.012
M2-PFTeDA	10.912	715.0 -> 670.0	269360	20.00	µg/L	0.012
M8-FOSA	6.605	506.0 -> 78.0	72828	20.00	µg/L	0.012
M3-PFBS	4.124	302.0 -> 99.0	25297	20.00	µg/L	0.000
M3-PFHxS	5.748	402.0 -> 99.0	34002	20.00	µg/L	0.015
M8-PFOS	6.891	507.0 -> 99.0	45697	20.00	µg/L	0.012
M2-4:2FTS	4.886	329.0 -> 309.0	83260	20.00	µg/L	0.000
M2-6:2FTS	6.372	429.0 -> 409.0	131403	20.00	µg/L	0.012
M2-8:2FTS	7.512	529.0 -> 509.0	120571	20.00	µg/L	0.000
M3-MeFOSAA	7.047	573.0 -> 419.0	21864	20.00	µg/L	0.012
M3-HFPO-DA	5.194	287.0 -> 169.0	63173	20.00	µg/L	0.012
M3-MeFOSA	6.964	515.0 -> 169.0	25081	20.00	µg/L	0.012
M5-EtFOSAA	7.157	589.0 -> 419.0	28080	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.886	329.0 -> 309.0	83260	17.29	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.5%		
13C2-6:2FTS	6.372	429.0 -> 409.0	131403	17.14	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 85.7%		
13C2-8:2FTS	7.512	529.0 -> 509.0	120571	16.70	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.5%		
13C2-PFDoDA	9.400	615.0 -> 570.0	319694	14.22	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 71.1%		
13C2-PFTeDA	10.912	715.0 -> 670.0	269360	13.76	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 68.8%		
13C3-PFBS	4.124	302.0 -> 99.0	25297	19.46	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.3%		
13C3-PFHxS	5.748	402.0 -> 99.0	34002	19.00	µg/L	0.015
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.0%		
13C4-PFBA	2.400	217.0 -> 172.0	85355	16.41	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 82.0%		
13C4-PFHpA	5.738	367.0 -> 322.0	246559	16.04	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 80.2%		
13C5-PFHxA	4.965	318.0 -> 273.0	246500	16.39	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.9%		
13C5-PFPeA	3.919	268.0 -> 223.0	175784	16.76	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.8%		
13C6-PFDA	7.449	519.0 -> 474.0	360538	15.51	µg/L	0.013

Perfluorinated Compounds by LC/MS/MS

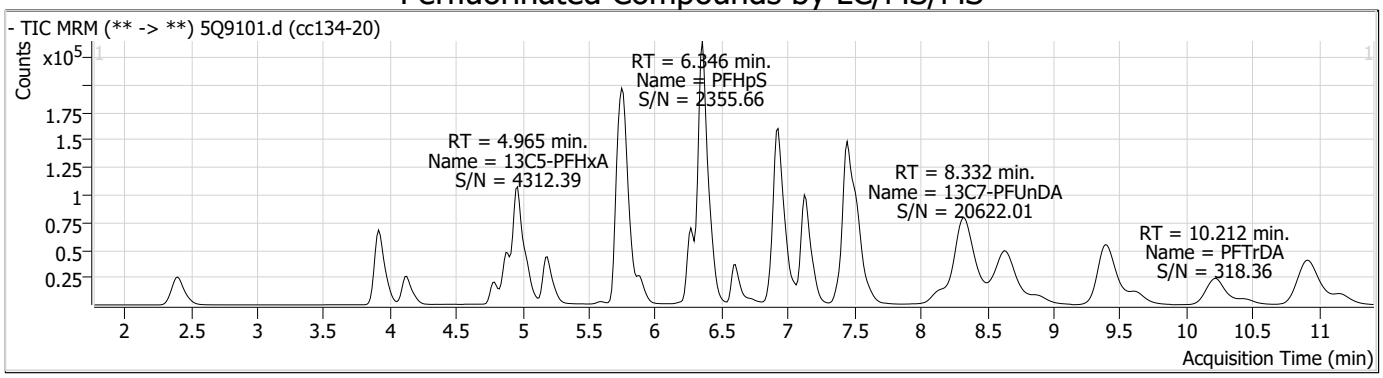
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 77.5%			
13C7-PFUnDA	8.332	570.0 -> 525.0	445772	15.23	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 76.2%			
13C8-FOSA	6.605	506.0 -> 78.0	72828	15.08	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 75.4%			
13C8-PFOA	6.361	421.0 -> 376.0	314596	15.61	µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 78.1%			
13C8-PFOS	6.891	507.0 -> 99.0	45697	19.16	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.8%			
13C9-PFNA	6.931	472.0 -> 427.0	333422	15.85	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 79.3%			
d3-MeFOSAA	7.047	573.0 -> 419.0	21864	12.31	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 61.5%			
13C3-HFPO-DA	5.194	287.0 -> 169.0	63173	19.10	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.5%			
d3-MeFOSA	6.964	515.0 -> 169.0	25081	16.56	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 82.8%			
d5-EtFOSAA	7.157	589.0 -> 419.0	28080	15.22	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 76.1%			
Target Compounds							QValue
4:2FTS	4.888	327.0 -> 307.0	93545	20.53	µg/L		99
		327.0 -> 81.0	56056				
6:2FTS	6.373	427.0 -> 407.0	137794	20.43	µg/L		99
		427.0 -> 81.0	59765				
8:2FTS	7.512	527.0 -> 507.0	127220	20.66	µg/L		97
		527.0 -> 81.0	64548				
EtFOSAA	7.158	584.0 -> 419.0	13425	14.32	µg/L		99
		584.0 -> 483.0	8640				
FOSA	6.606	498.0 -> 78.0	72897	19.48	µg/L		99
		498.0 -> 478.0	2529				
MeFOSAA	7.060	570.0 -> 419.0	16238	18.30	µg/L		97
		570.0 -> 512.0	6410				
PFBA	2.406	213.0 -> 169.0	88896	19.12	µg/L		100
PFBS	4.129	299.0 -> 80.0	79130	19.23	µg/L		100
		299.0 -> 99.0	33674				
PFDA	7.450	513.0 -> 469.0	373165	19.44	µg/L		99
		513.0 -> 219.0	67962				
PFDoDA	9.392	613.0 -> 569.0	262001	17.96	µg/L		98
		613.0 -> 319.0	47064				
PFDS	8.144	599.0 -> 80.0	91623	22.90	µg/L		93
		599.0 -> 99.0	50211				
PFHpA	5.739	363.0 -> 319.0	294583	19.10	µg/L		100
		363.0 -> 169.0	65571				
PFHpS	6.346	449.0 -> 80.0	67253	19.26	µg/L		99
		449.0 -> 99.0	36648				
PFHxA	4.966	313.0 -> 269.0	241134	19.26	µg/L		100
		313.0 -> 119.0	11096				
PFHxS	5.749	399.0 -> 80.0	66930	19.39	µg/L	m	100
		399.0 -> 99.0	37503				
PFNA	6.931	463.0 -> 419.0	329704	19.07	µg/L		100
		463.0 -> 219.0	71420				
PFNS	7.396	549.0 -> 80.0	61877	19.75	µg/L		99
		549.0 -> 99.0	36657				
PFOA	6.374	413.0 -> 369.0	356091	19.78	µg/L		99
		413.0 -> 169.0	96373				
PFOS	6.892	499.0 -> 80.0	81663	19.37	µg/L	m	98

Perfluorinated Compounds by LC/MS/MS

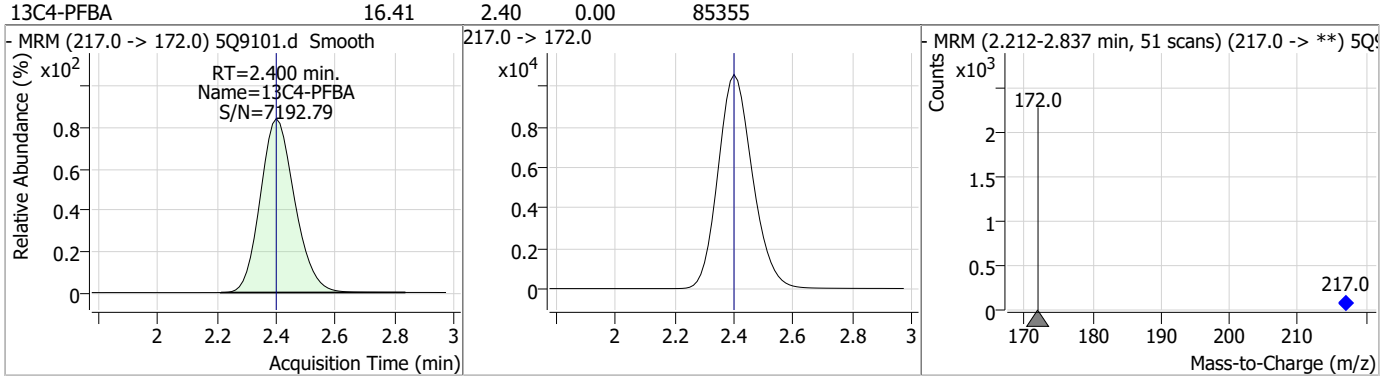
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	40224			
PFPeA	3.922	263.0 -> 219.0	200227	19.38	µg/L	100
PFPeS	5.047	349.0 -> 80.0	50054	18.58	µg/L	100
		349.0 -> 99.0	25442			
PFTeDA	10.916	713.0 -> 669.0	240289	17.22	µg/L	99
		713.0 -> 219.0	25527			
PFTrDA	10.212	663.0 -> 619.0	258199	18.53	µg/L	99
		663.0 -> 369.0	29051			
PFUnDA	8.334	563.0 -> 519.0	429714	18.74	µg/L	99
		563.0 -> 269.0	74833			
11Cl-PF3OUdS	8.641	631.0 -> 451.0	375261	25.00	µg/L	95
		633.0 -> 453.0	116119			
9Cl-PF3ONS	7.136	531.0 -> 351.0	355403	22.31	µg/L	99
		533.0 -> 353.0	111902			
ADONA	5.777	377.0 -> 251.0	380154	16.58	µg/L	99
		377.0 -> 85.0	143514			
HFPO-DA	5.190	329.0 -> 169.0	95516	18.92	µg/L	97
		285.0 -> 169.0	58879			
MeFOSA	6.966	512.0 -> 169.0	29221	19.69	µg/L	98
		512.0 -> 219.0	22179			
4-PFECHS	6.268	461.0 -> 381.0	223036	22.25	µg/L	99
		461.0 -> 99.0	120964			
FBSA	4.793	298.0 -> 78.0	88555	17.31	µg/L	99
		298.0 -> 64.0	8021			
FHxSA	5.900	398.0 -> 78.0	80411	17.18	µg/L	99
		398.0 -> 64.0	7537			

 # = Qualifier out of range, m = manually integrated, + = Area summed

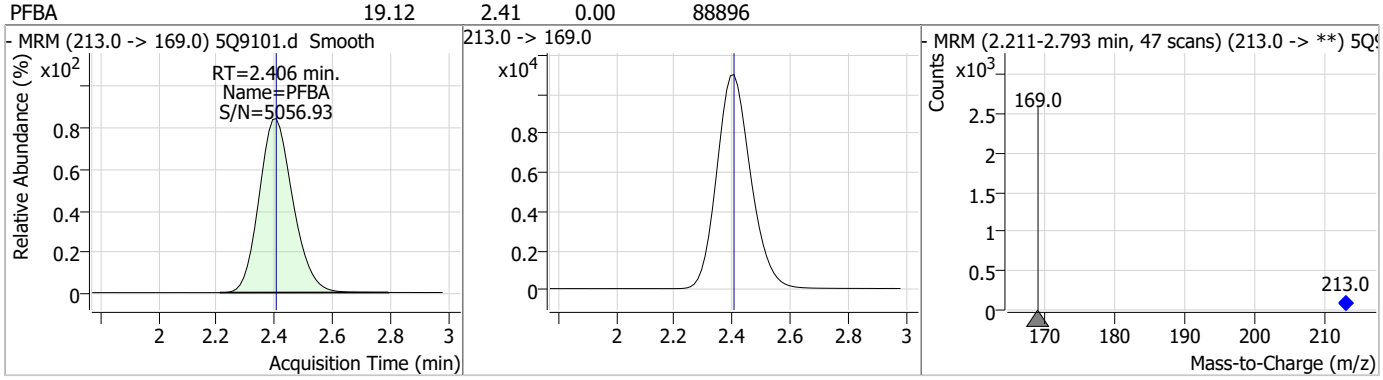
Perfluorinated Compounds by LC/MS/MS



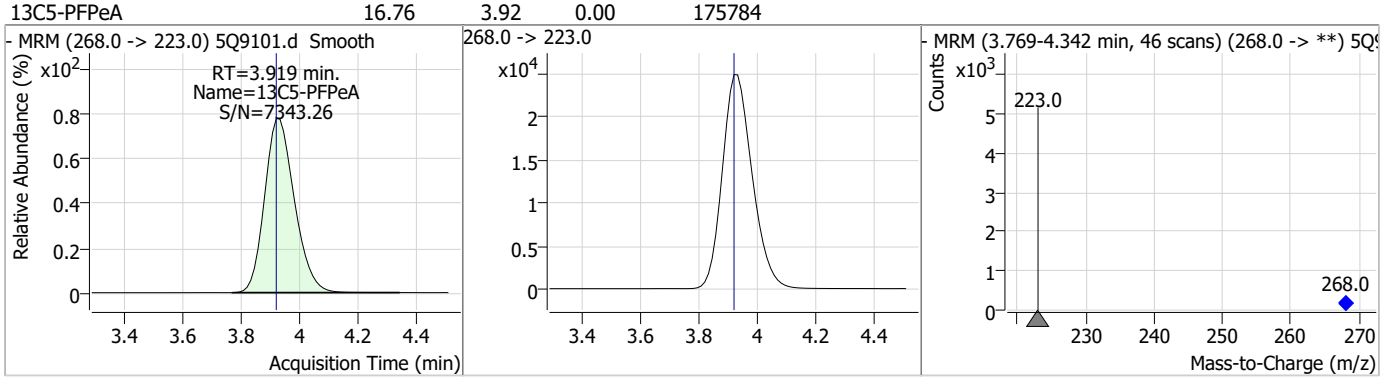
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	16.41	2.40	0.00	85355				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.12	2.41	0.00	88896				

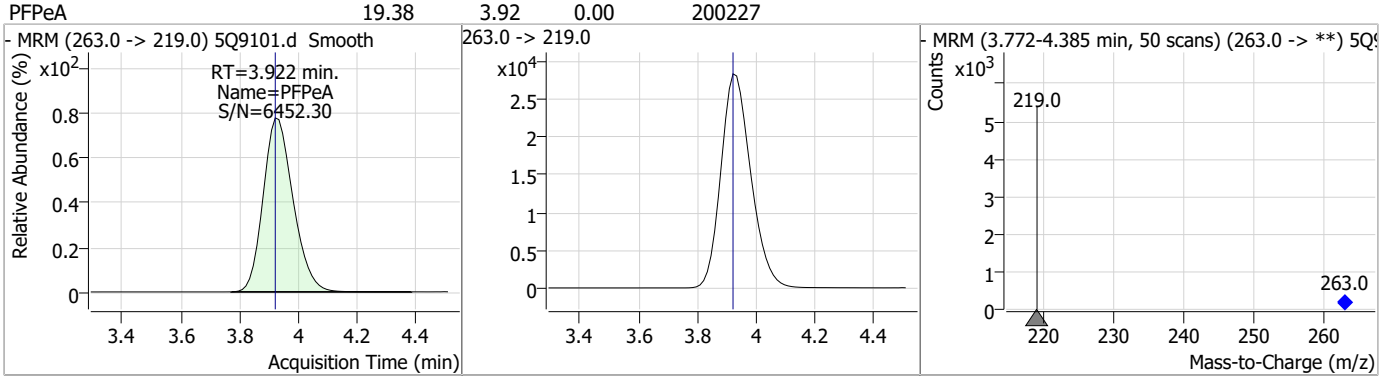


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	16.76	3.92	0.00	175784				

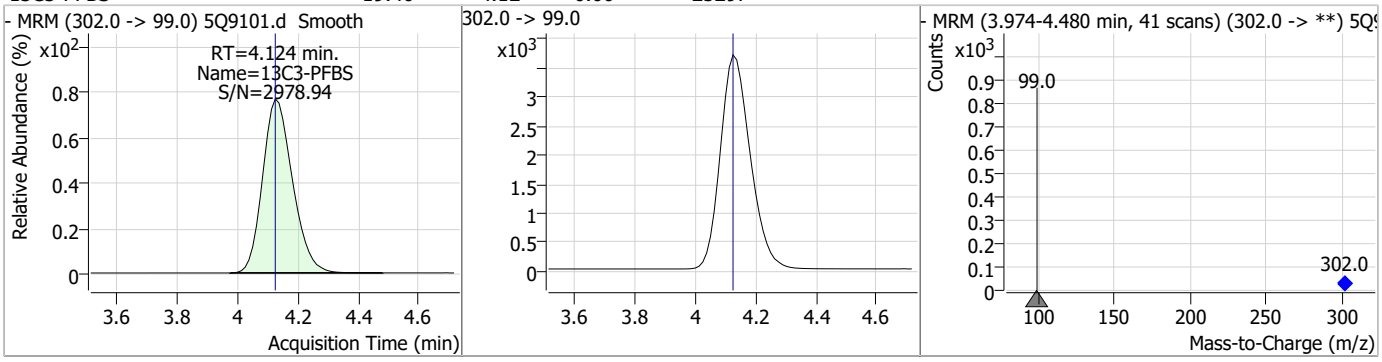


Perfluorinated Compounds by LC/MS/MS

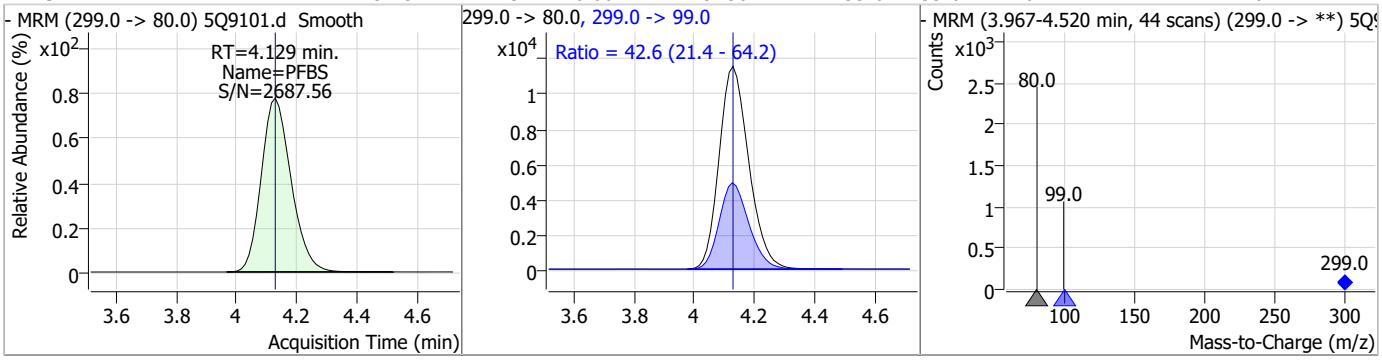
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.38	3.92	0.00	200227				



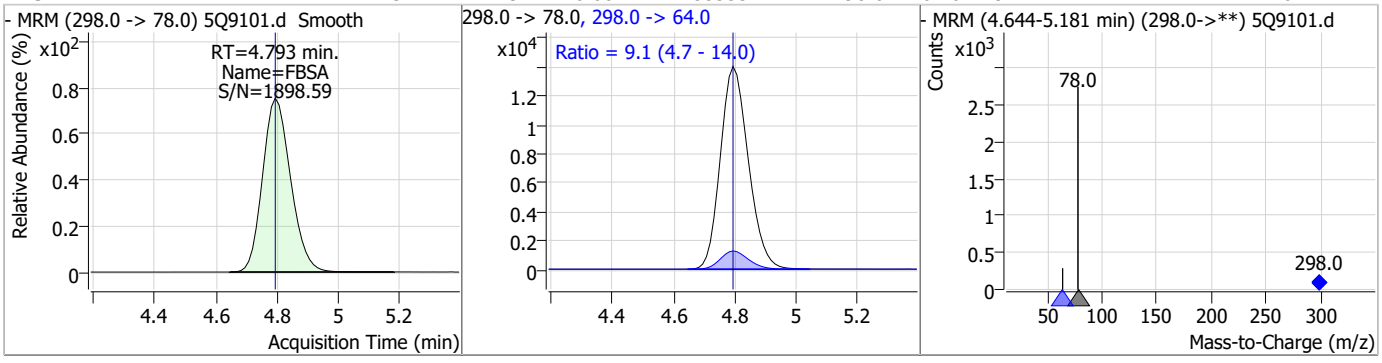
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.46	4.12	0.00	25297				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.23	4.13	0.00	79130	299.0 -> 99.0	42.6	21.4	64.2

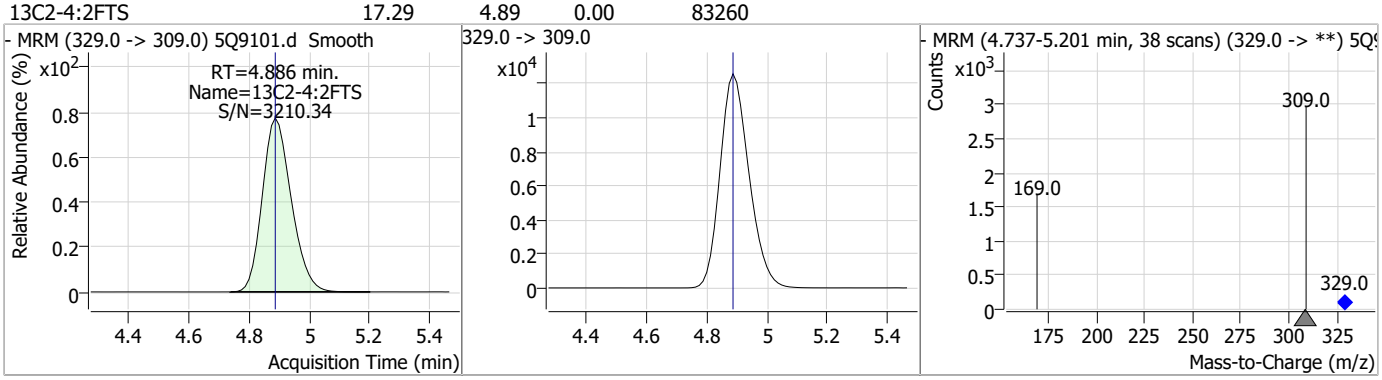


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	17.31	4.79	0.00	88555	298.0 -> 64.0	9.1	4.7	14.0

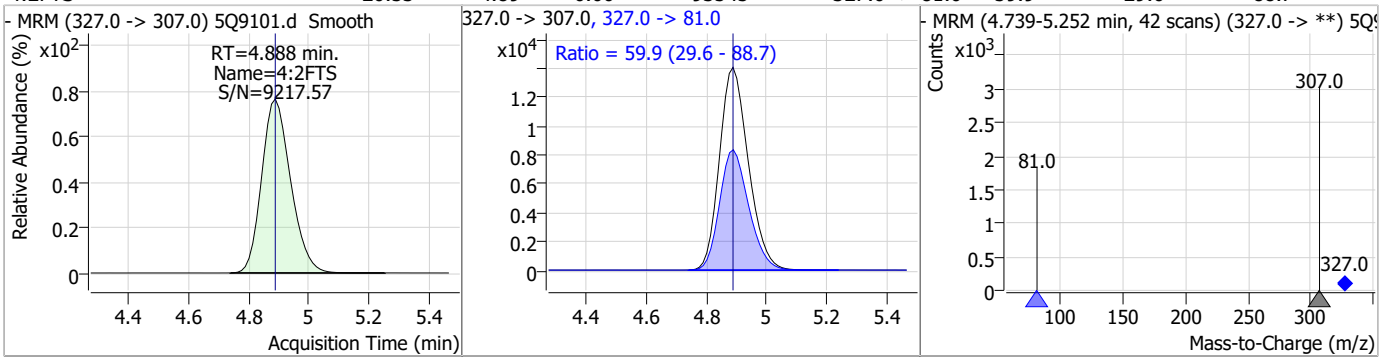


Perfluorinated Compounds by LC/MS/MS

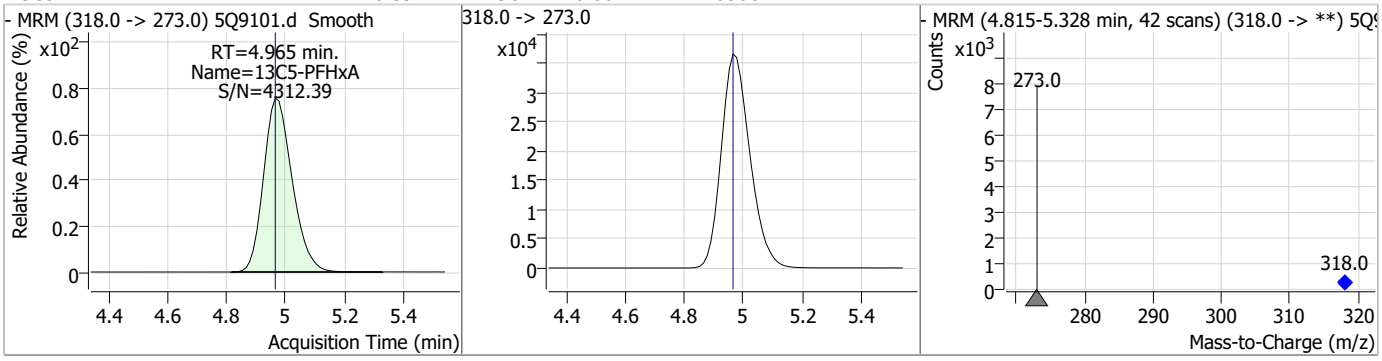
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	17.29	4.89	0.00	83260				



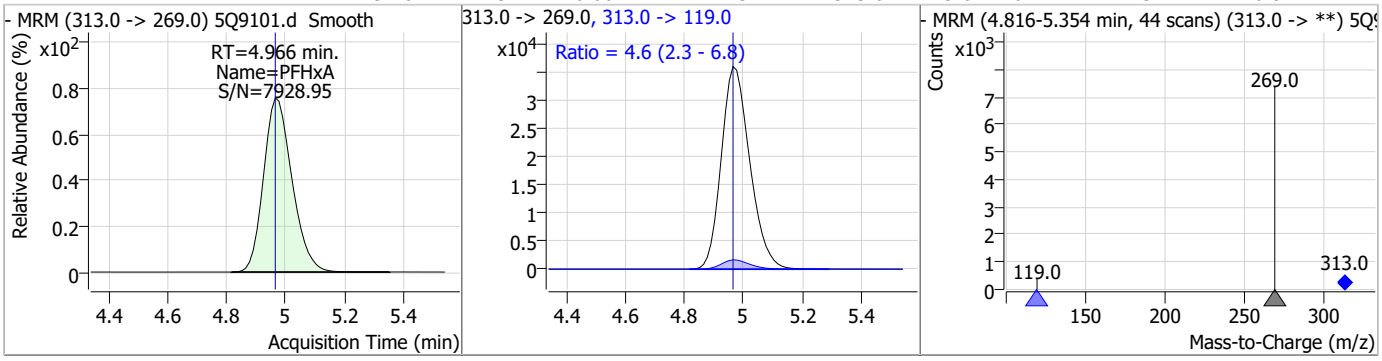
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.53	4.89	0.00	93545	327.0 -> 81.0	59.9	29.6	88.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	16.39	4.96	0.00	246500				

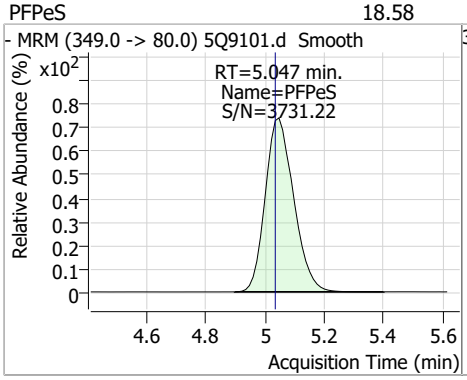


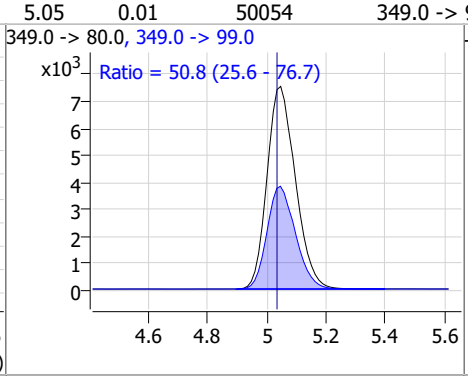
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.26	4.97	0.00	241134	313.0 -> 119.0	4.6	2.3	6.8

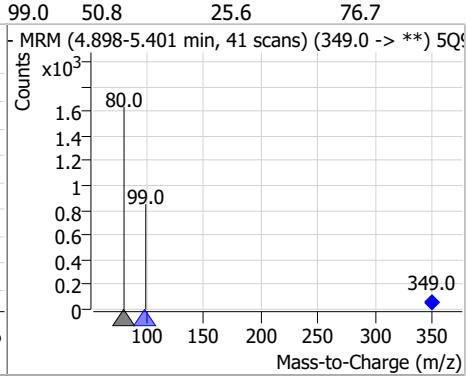


Perfluorinated Compounds by LC/MS/MS

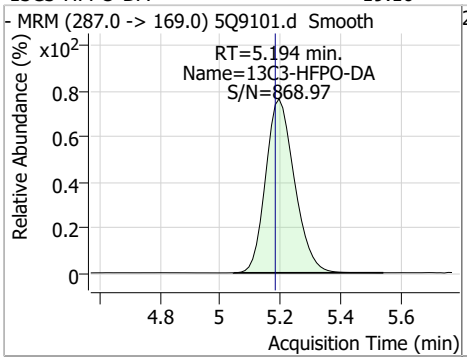
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	18.58	5.05	0.01	50054	349.0 -> 99.0	50.8	25.6	76.7

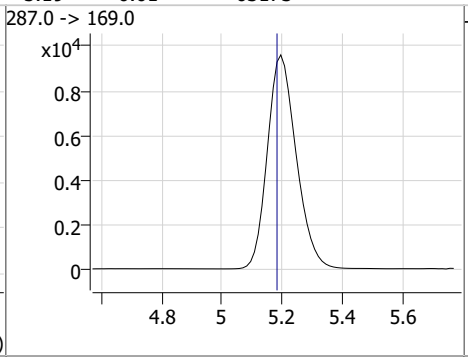


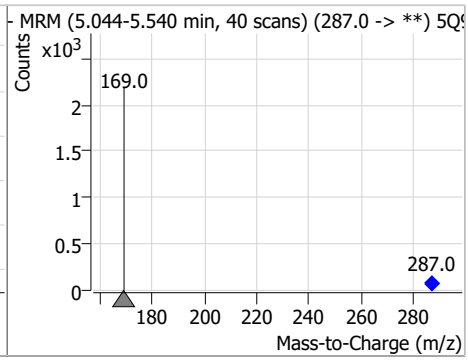




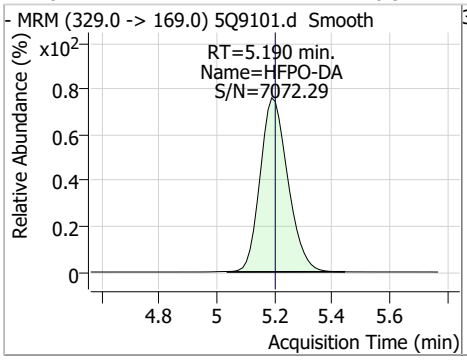
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.10	5.19	0.01	63173				

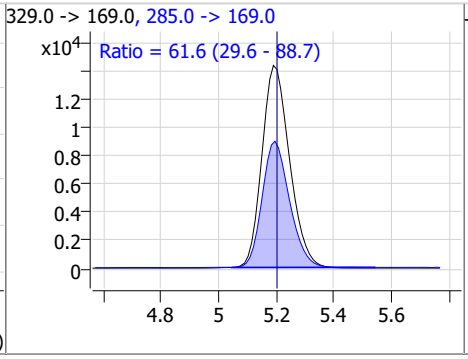


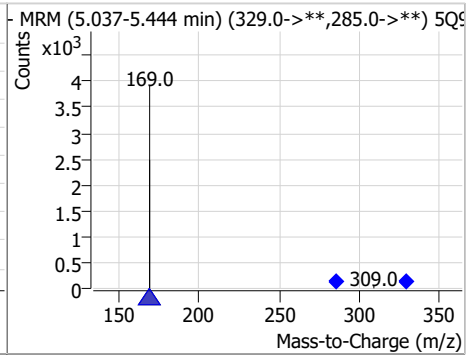




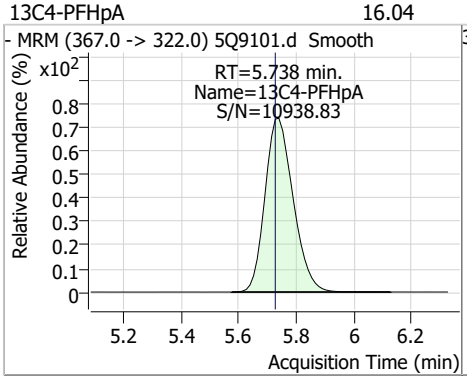
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	18.92	5.19	0.00	95516	285.0 -> 169.0	61.6	29.6	88.7

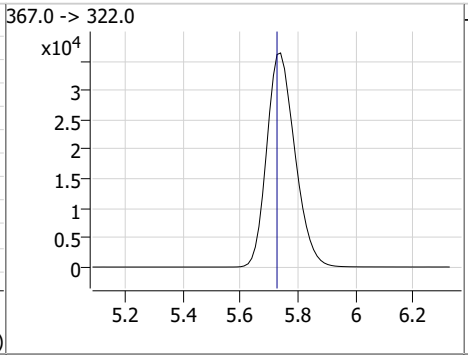


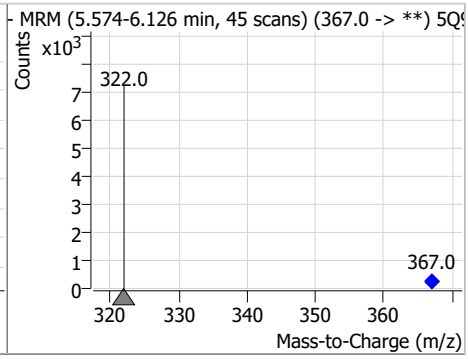




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	16.04	5.74	0.01	246559				

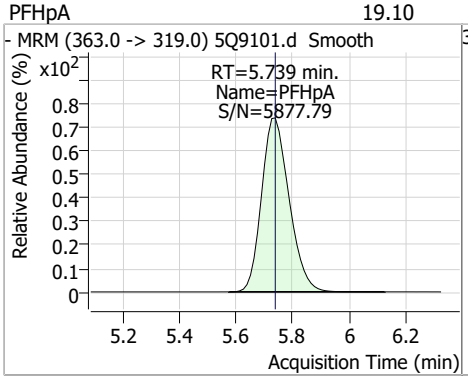


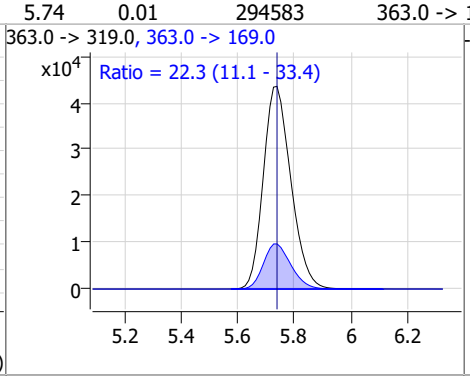


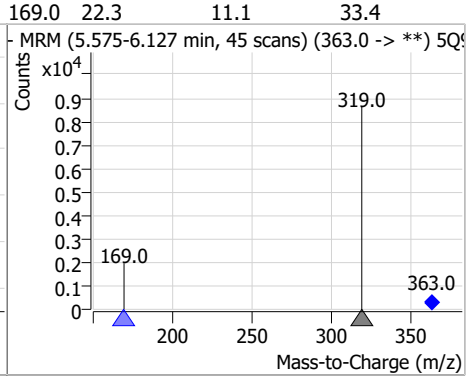


Perfluorinated Compounds by LC/MS/MS

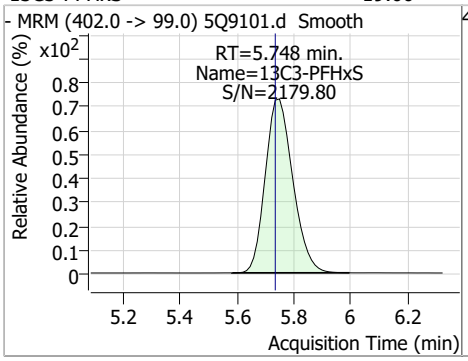
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	19.10	5.74	0.01	294583	363.0 -> 169.0	22.3	11.1	33.4

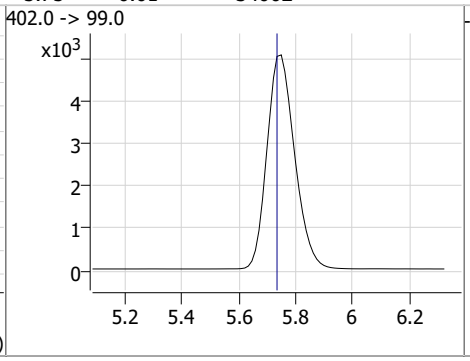


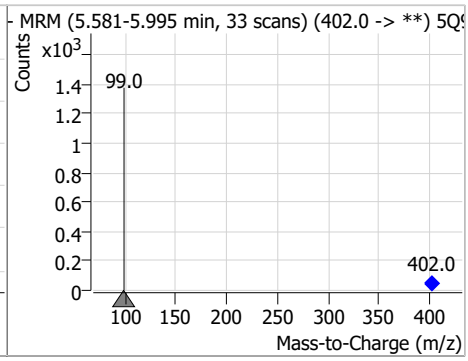




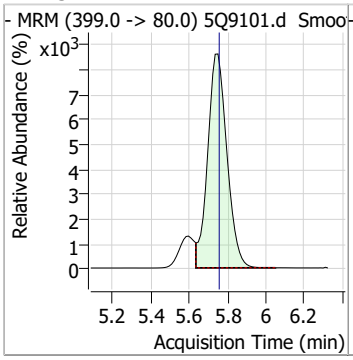
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.00	5.75	0.01	34002				

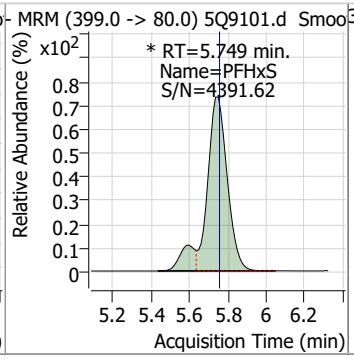


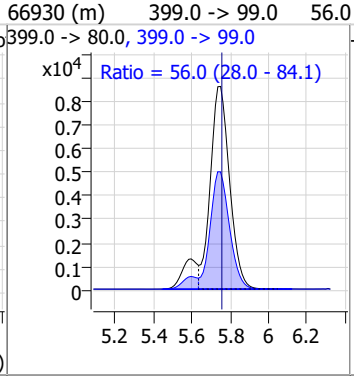


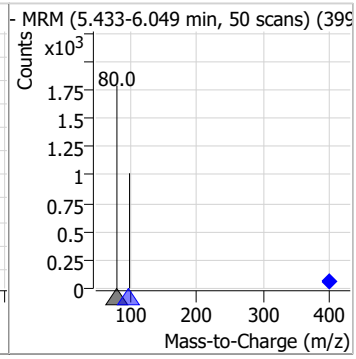


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	19.39	5.75	0.01	66930 (m)	399.0 -> 99.0	56.0	28.0	84.1

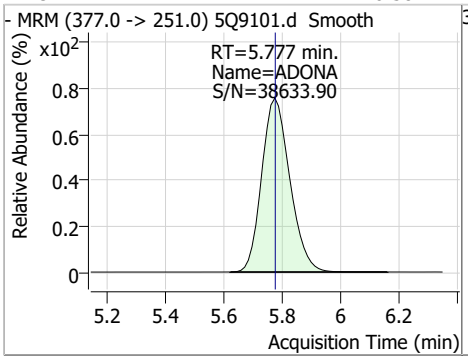


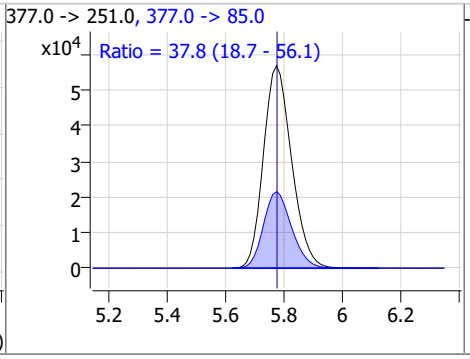


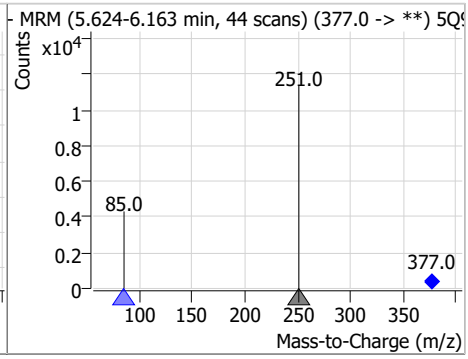




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	16.58	5.78	0.01	380154	377.0 -> 85.0	37.8	18.7	56.1

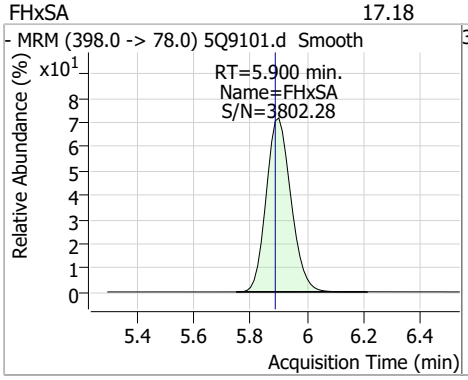


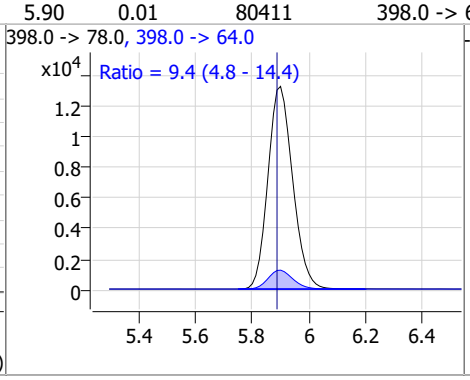


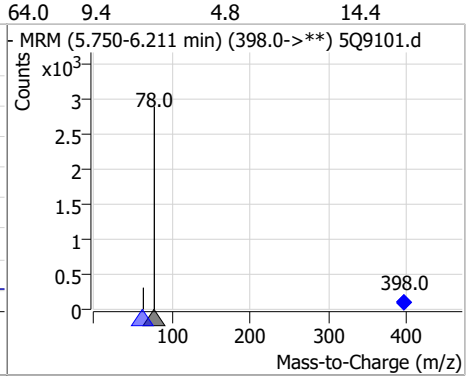


Perfluorinated Compounds by LC/MS/MS

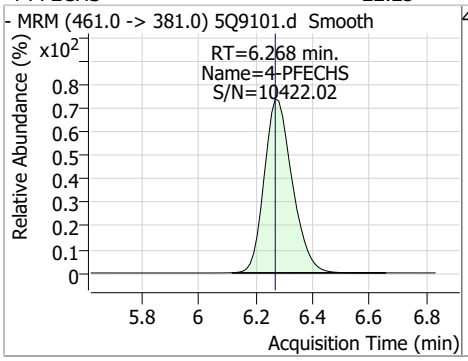
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	17.18	5.90	0.01	80411	398.0 -> 64.0	9.4	4.8	14.4

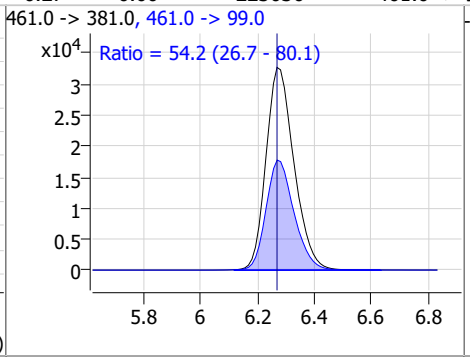


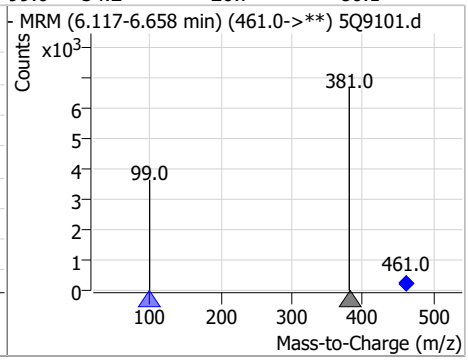




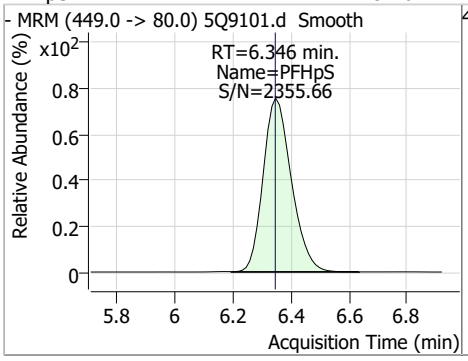
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	22.25	6.27	0.00	223036	461.0 -> 99.0	54.2	26.7	80.1

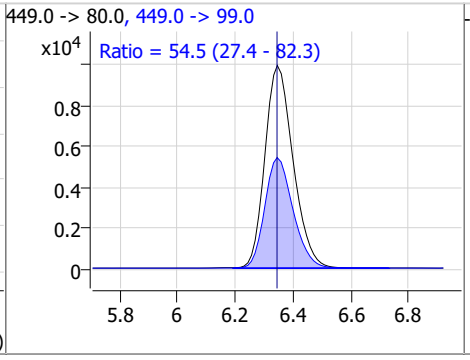


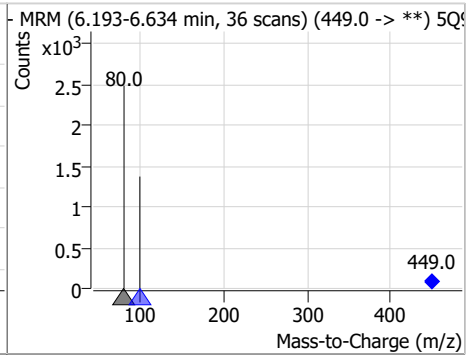




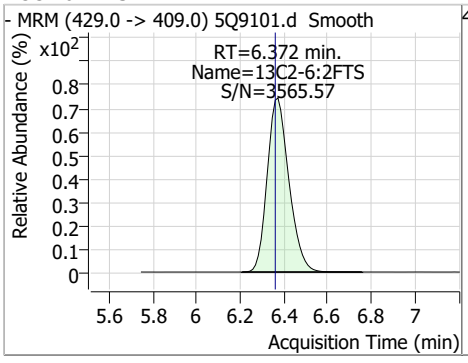
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	19.26	6.35	0.01	67253	449.0 -> 99.0	54.5	27.4	82.3

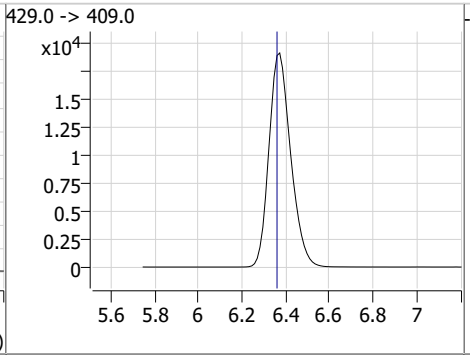


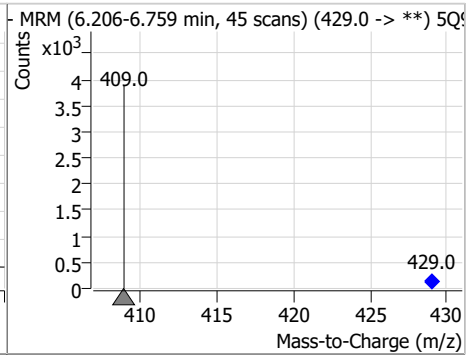




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	17.14	6.37	0.01	131403				

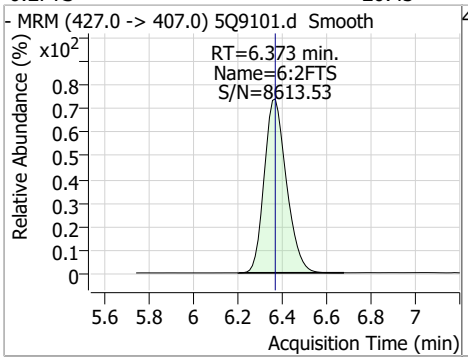


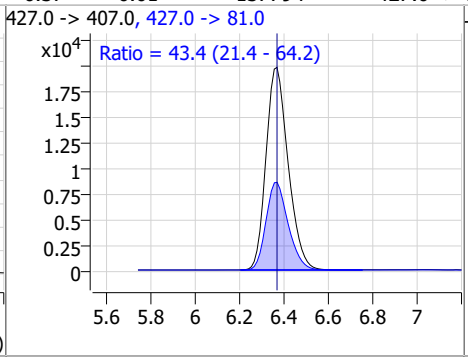


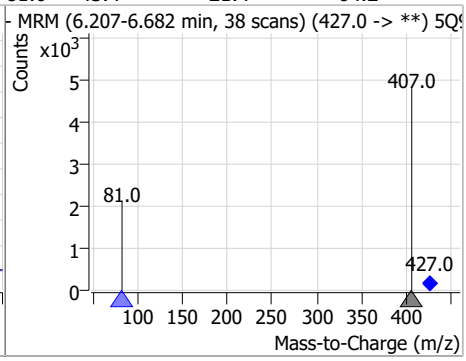


Perfluorinated Compounds by LC/MS/MS

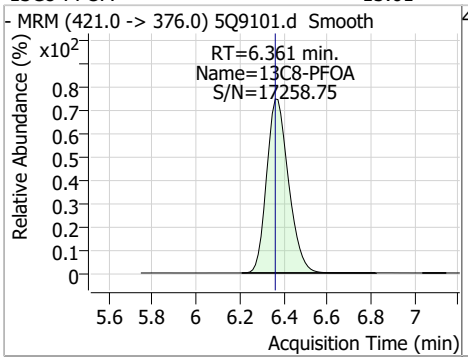
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	20.43	6.37	0.01	137794	427.0 -> 81.0	43.4	21.4	64.2

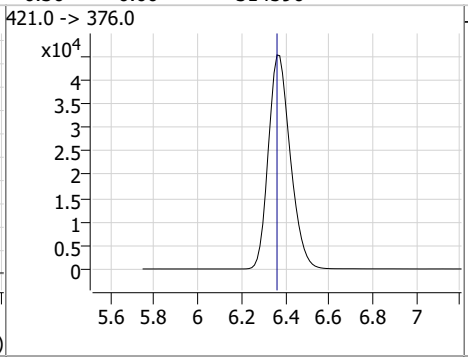


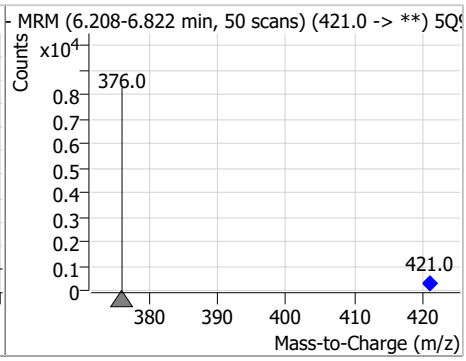




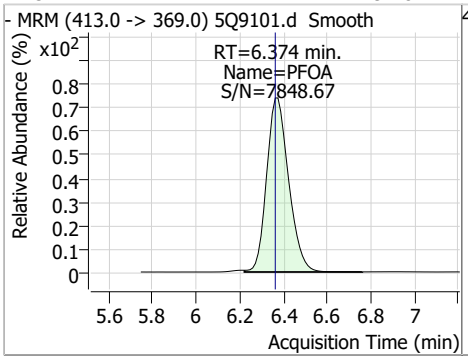
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	15.61	6.36	0.00	314596				

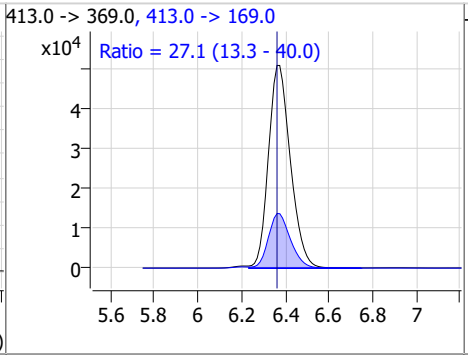


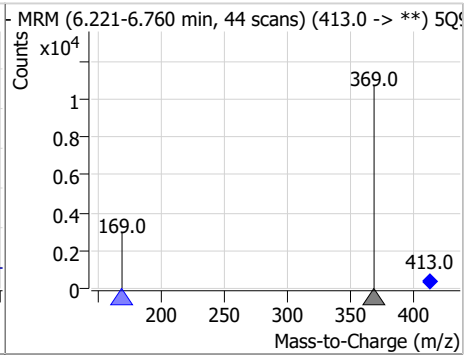




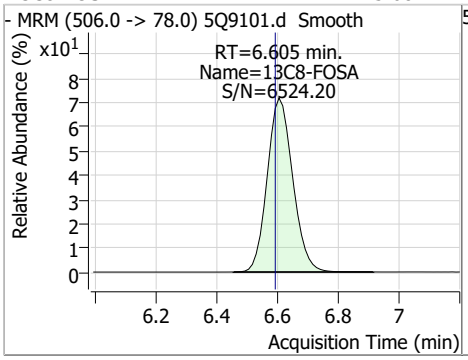
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.78	6.37	0.01	356091	413.0 -> 169.0	27.1	13.3	40.0

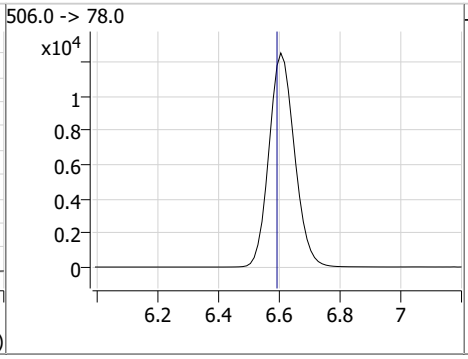


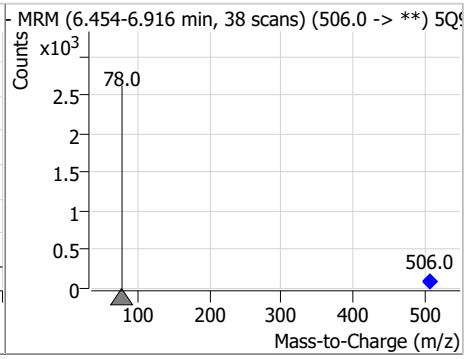




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	15.08	6.60	0.01	72828				

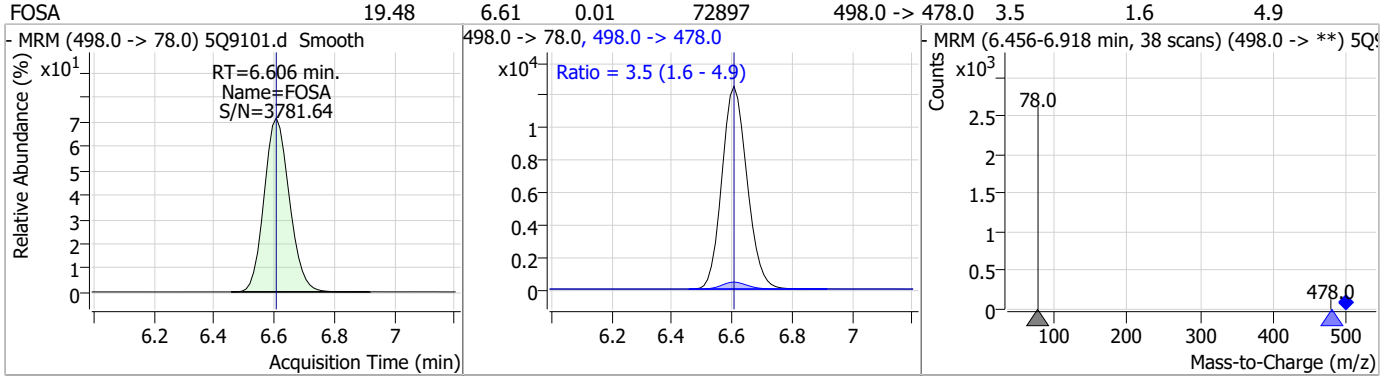




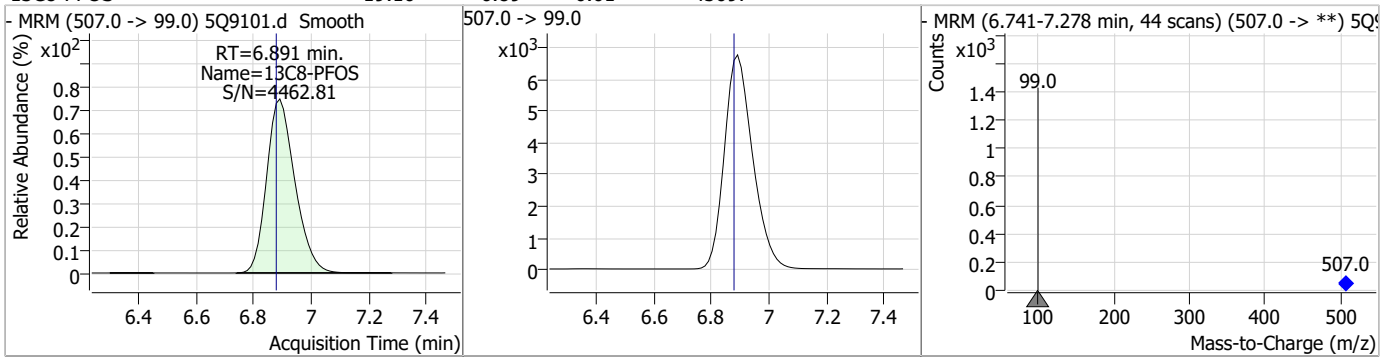


Perfluorinated Compounds by LC/MS/MS

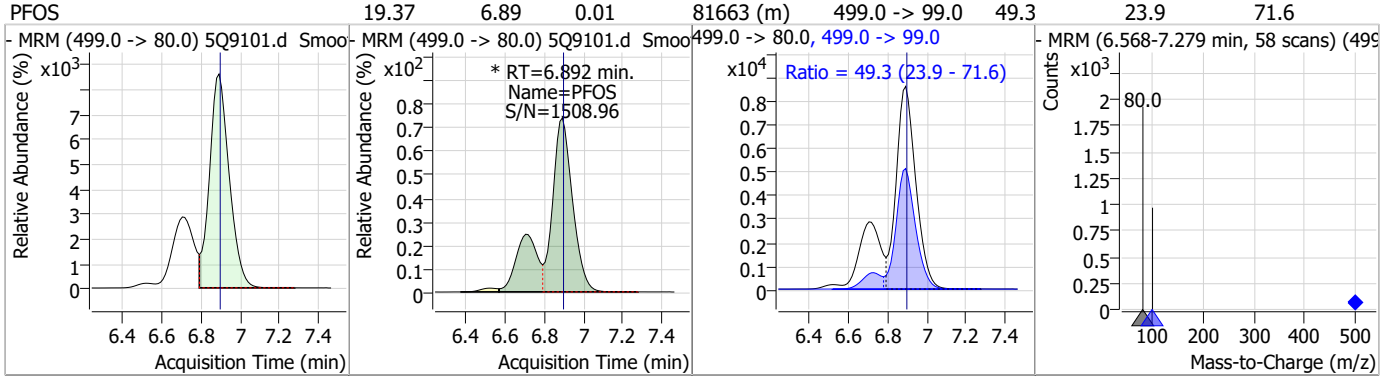
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	19.48	6.61	0.01	72897	498.0 -> 478.0	3.5	1.6	4.9



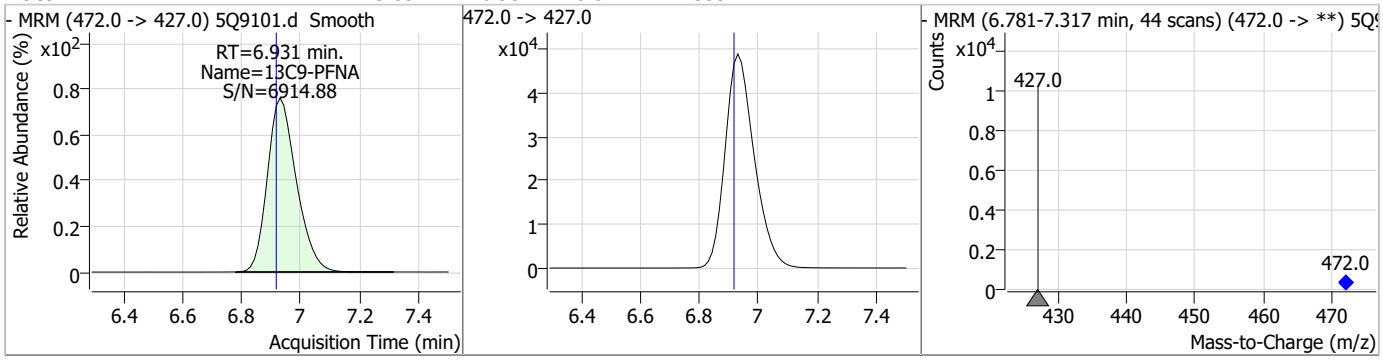
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.16	6.89	0.01	45697				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.37	6.89	0.01	81663 (m)	499.0 -> 99.0	49.3	23.9	71.6

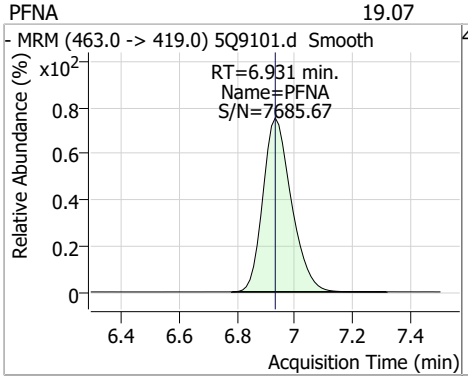


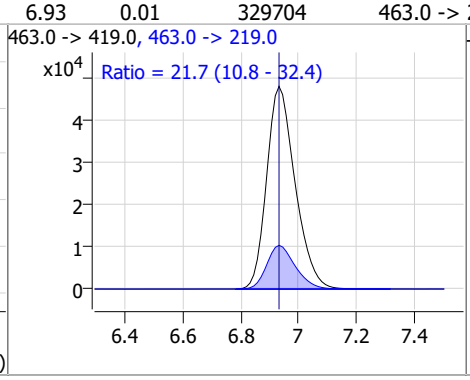
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	15.85	6.93	0.01	333422				

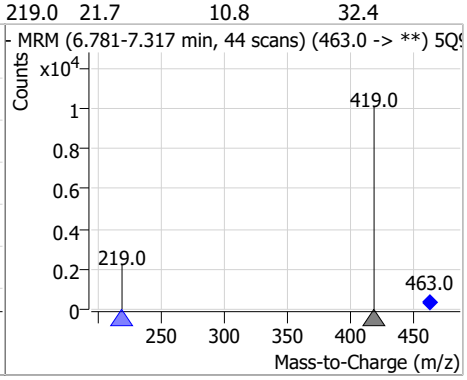


Perfluorinated Compounds by LC/MS/MS

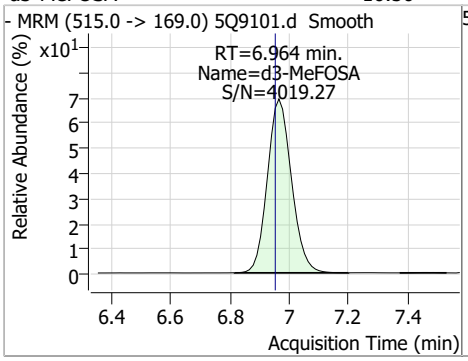
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.07	6.93	0.01	329704	463.0 -> 219.0	21.7	10.8	32.4

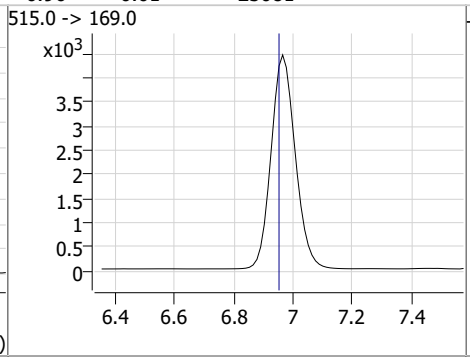


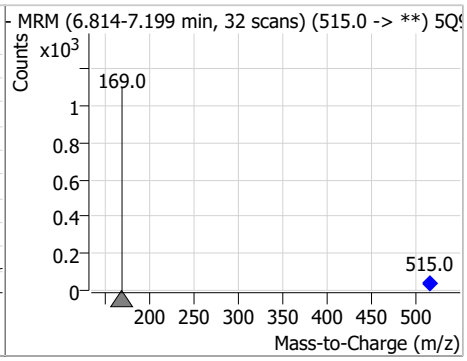




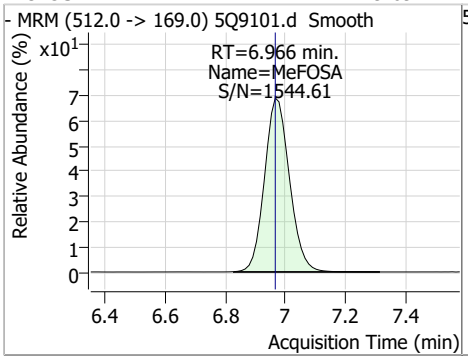
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	16.56	6.96	0.01	25081				

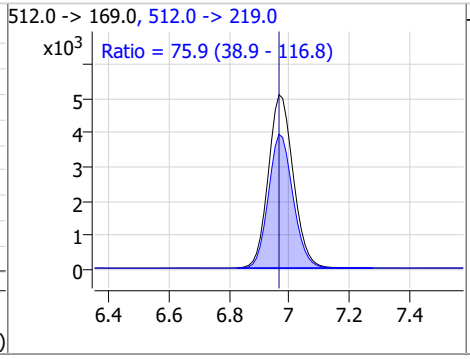


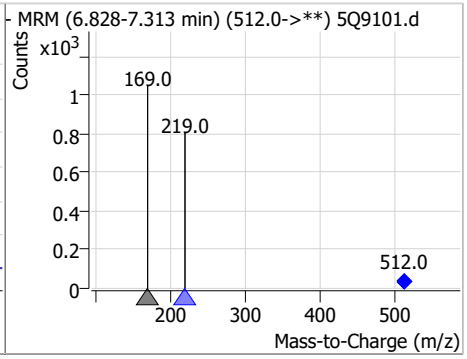




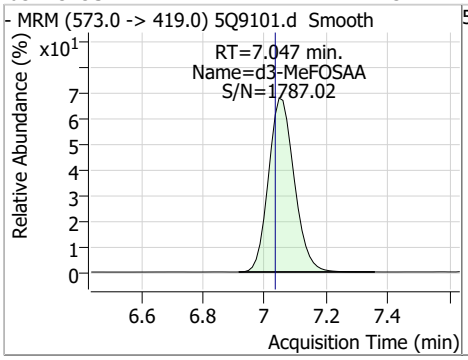
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	19.69	6.97	0.01	29221	512.0 -> 219.0	75.9	38.9	116.8

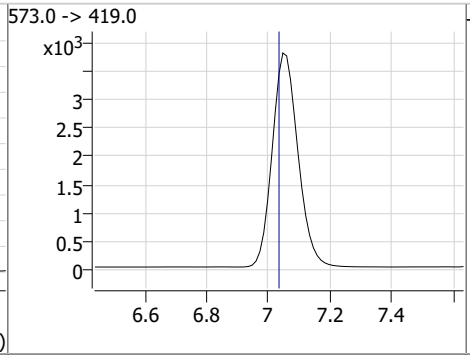


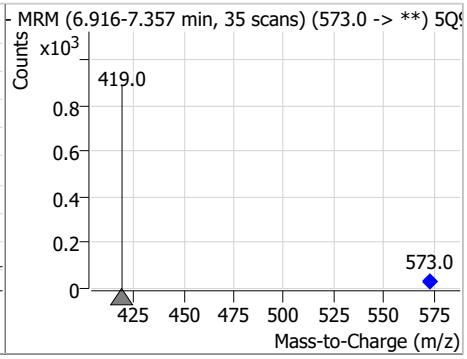




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	12.31	7.05	0.01	21864				

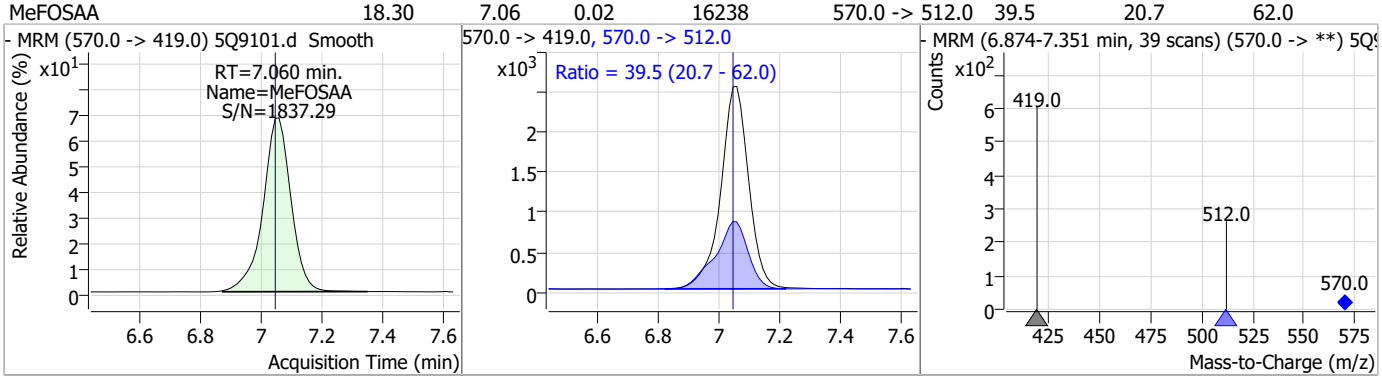




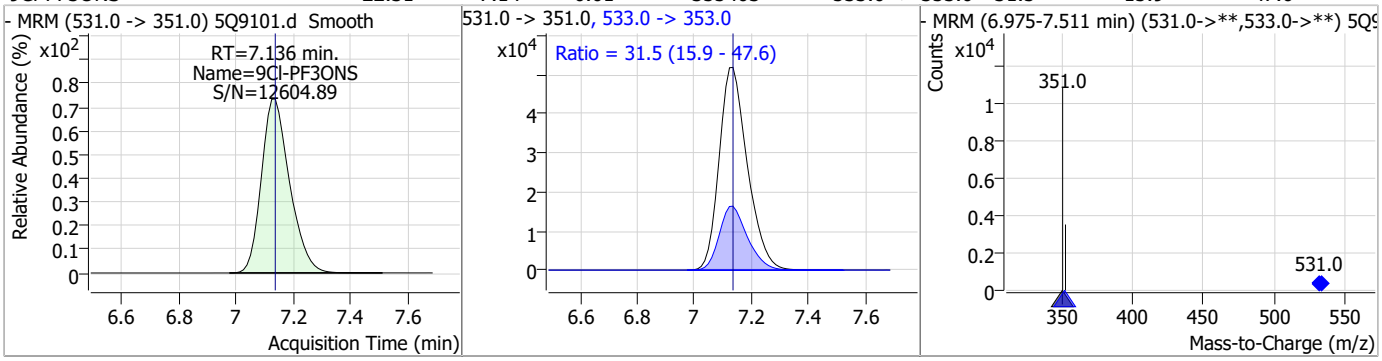


Perfluorinated Compounds by LC/MS/MS

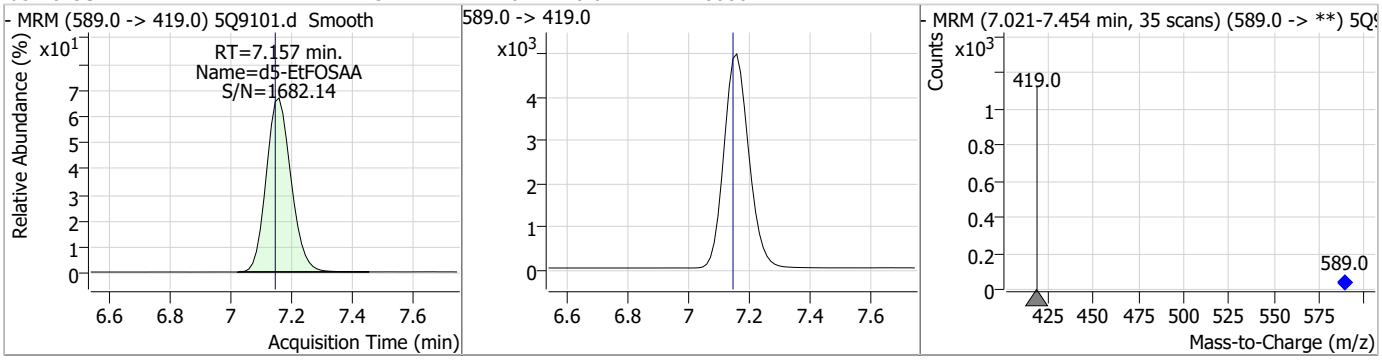
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	18.30	7.06	0.02	16238	570.0 -> 512.0	39.5	20.7	62.0



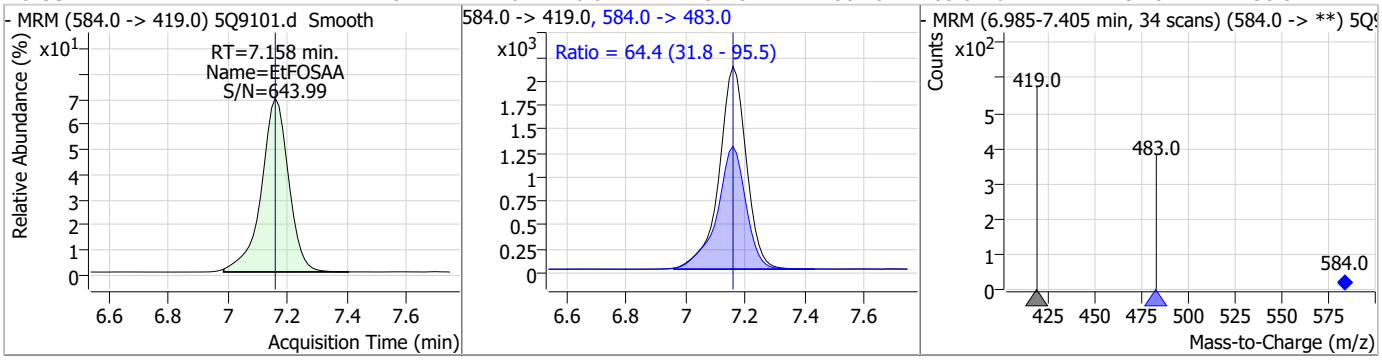
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	22.31	7.14	0.01	355403	533.0 -> 353.0	31.5	15.9	47.6



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	15.22	7.16	0.01	28080				

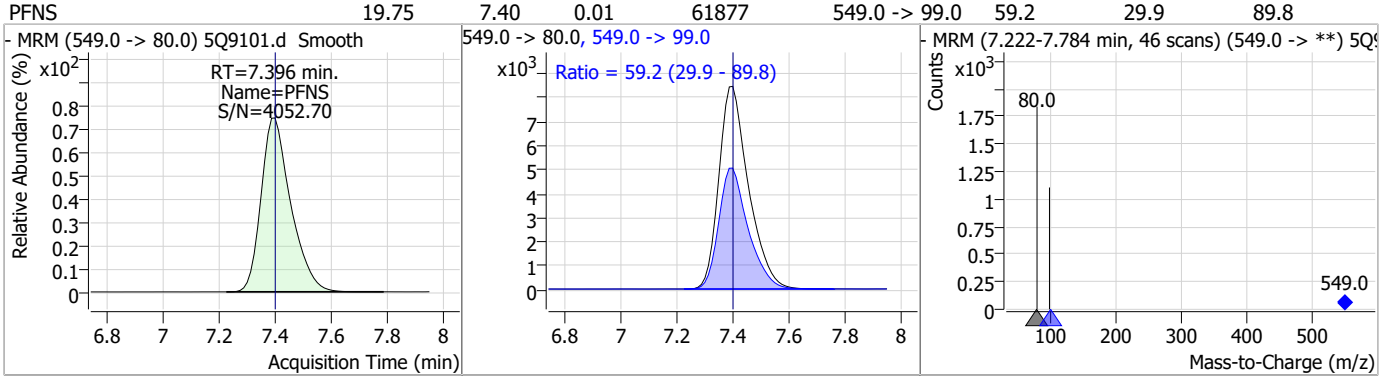


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	14.32	7.16	0.01	13425	584.0 -> 483.0	64.4	31.8	95.5

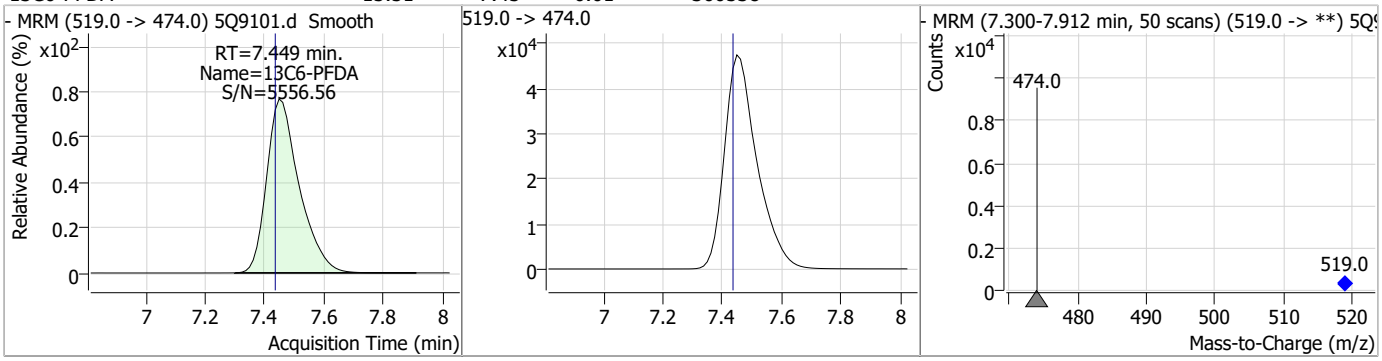


Perfluorinated Compounds by LC/MS/MS

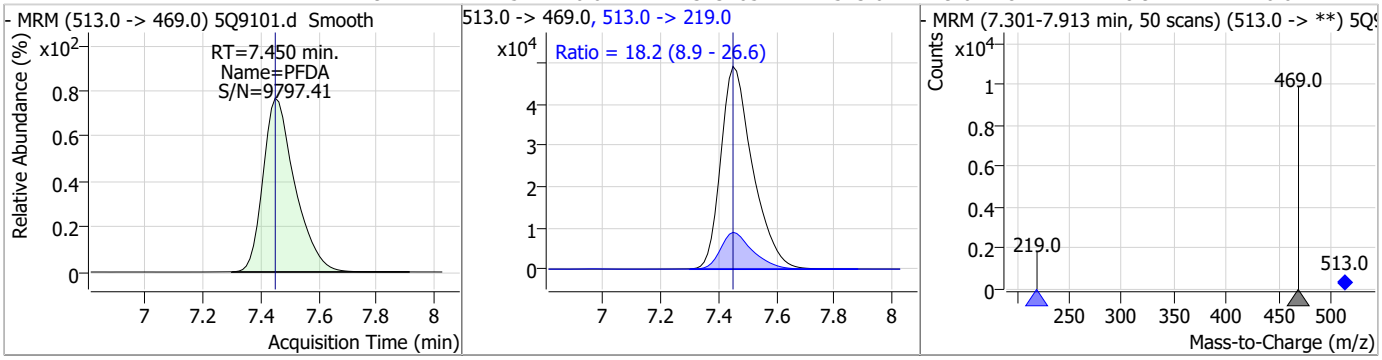
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	19.75	7.40	0.01	61877	549.0 -> 99.0	59.2	29.9	89.8



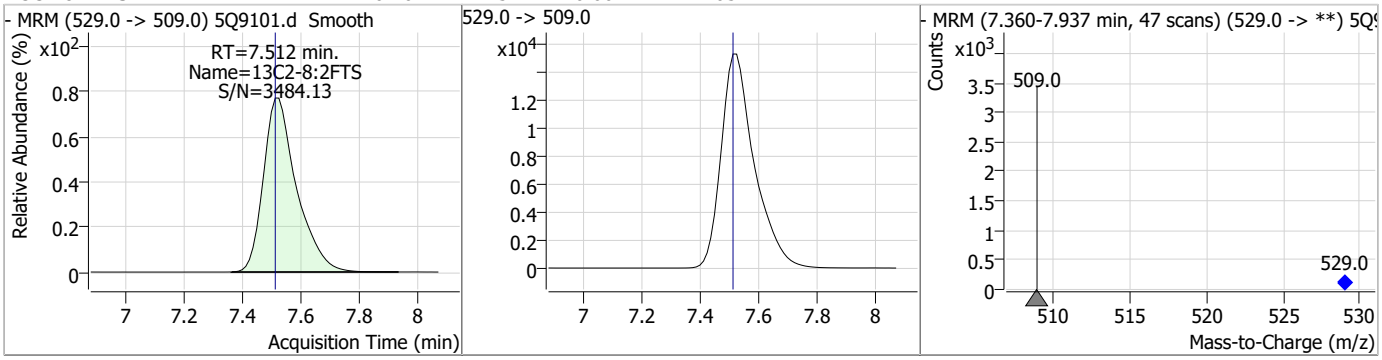
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	15.51	7.45	0.01	360538				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.44	7.45	0.01	373165	513.0 -> 219.0	18.2	8.9	26.6

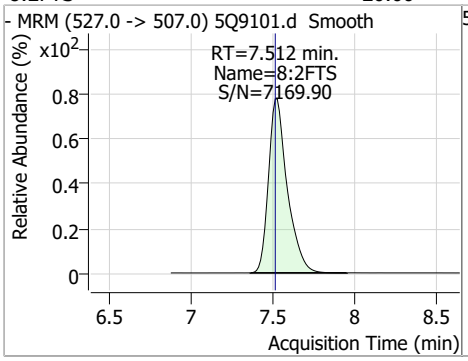


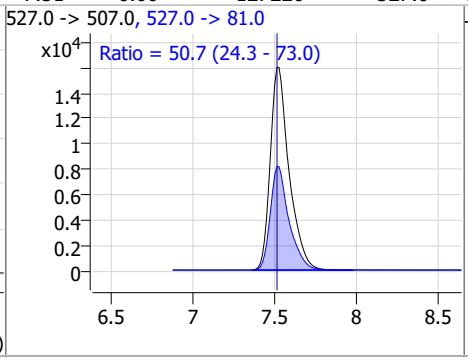
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	16.70	7.51	0.00	120571				

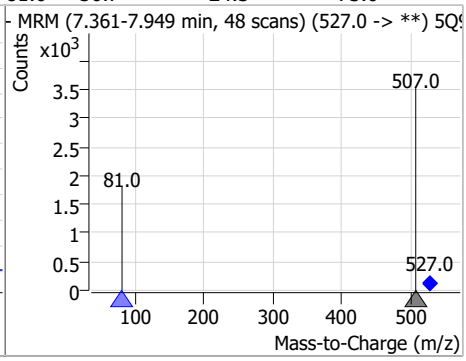


Perfluorinated Compounds by LC/MS/MS

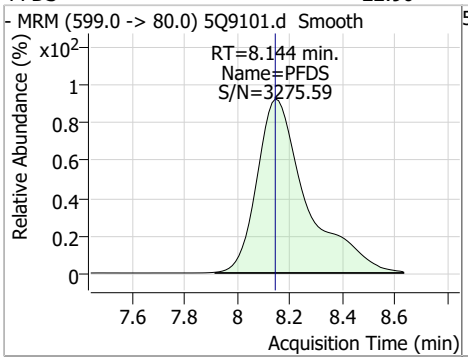
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.66	7.51	0.00	127220	527.0 -> 81.0	50.7	24.3	73.0

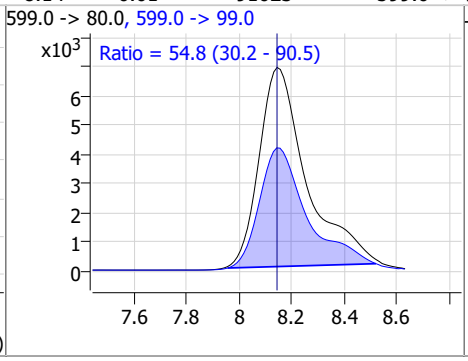


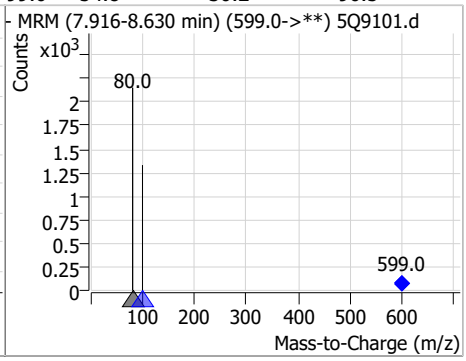




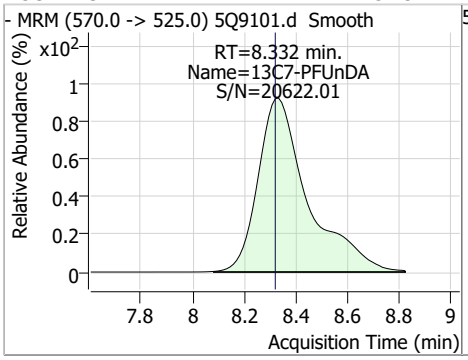
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	22.90	8.14	0.01	91623	599.0 -> 99.0	54.8	30.2	90.5

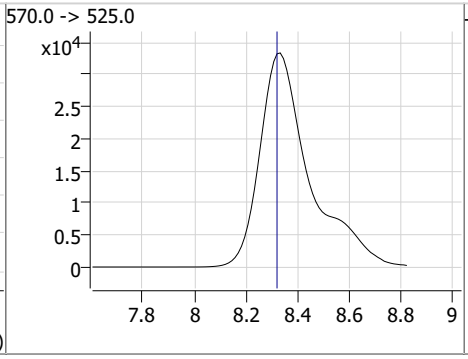


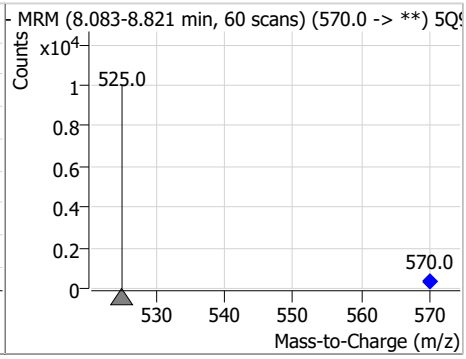




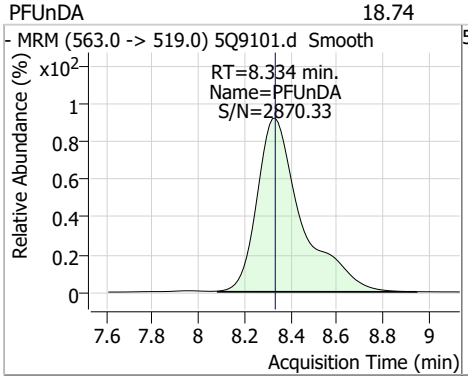
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	15.23	8.33	0.01	445772				

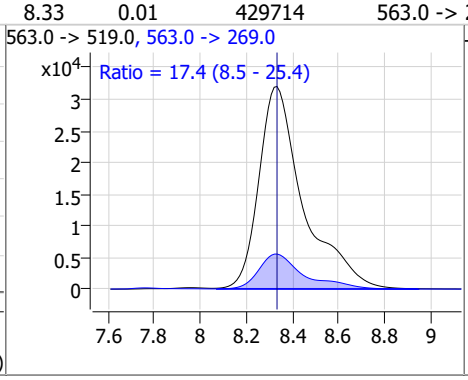


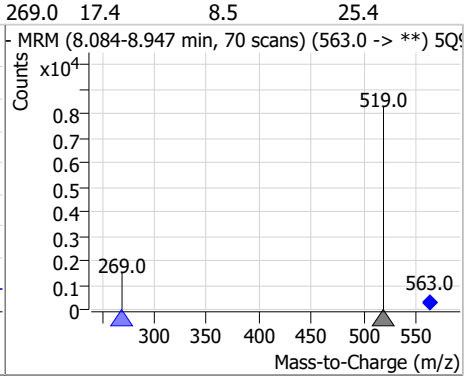




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	18.74	8.33	0.01	429714	563.0 -> 269.0	17.4	8.5	25.4

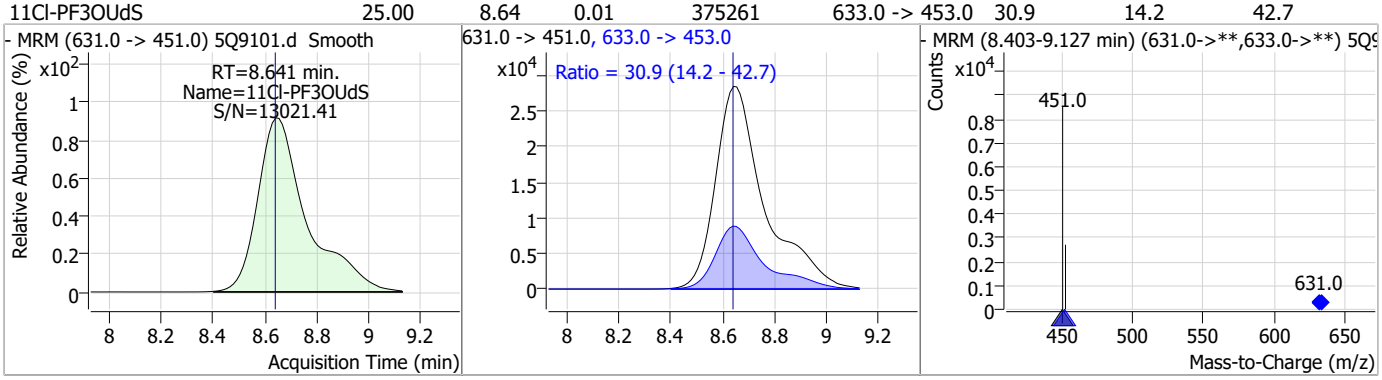




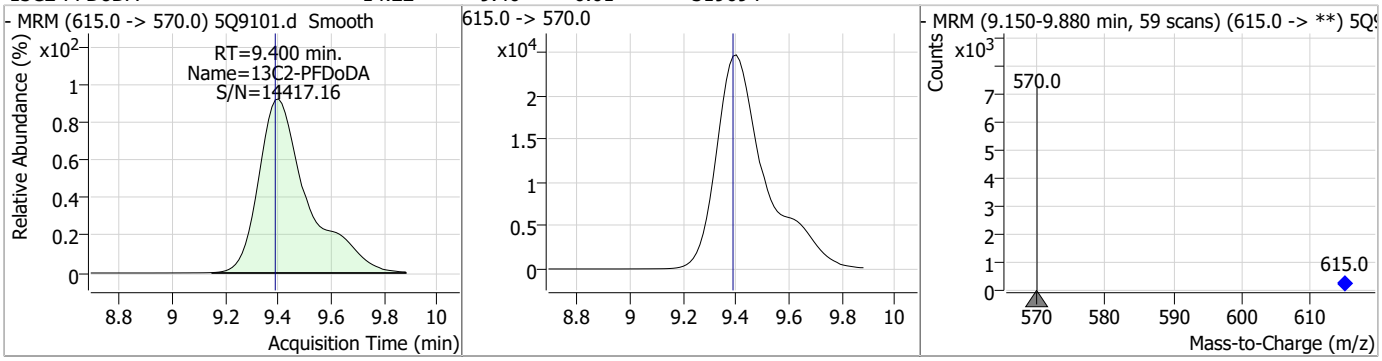


Perfluorinated Compounds by LC/MS/MS

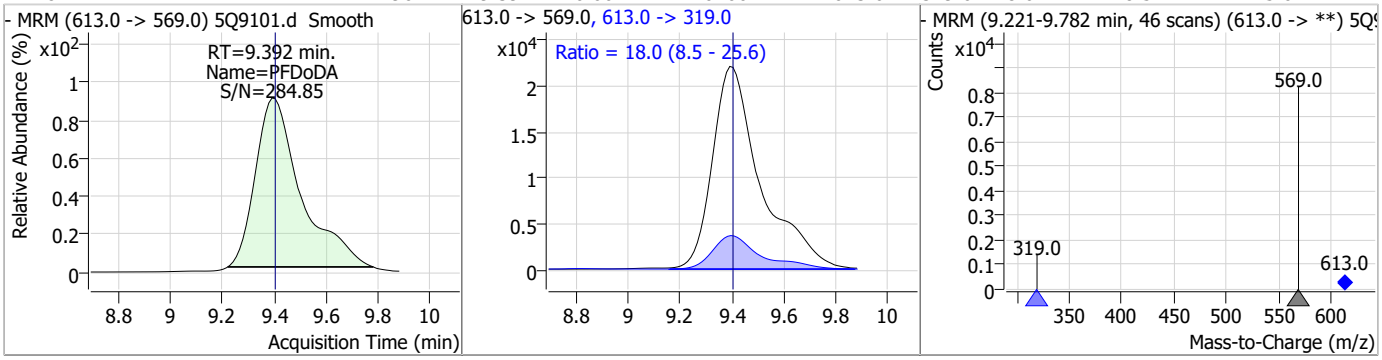
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	25.00	8.64	0.01	375261	633.0 -> 453.0	30.9	14.2	42.7



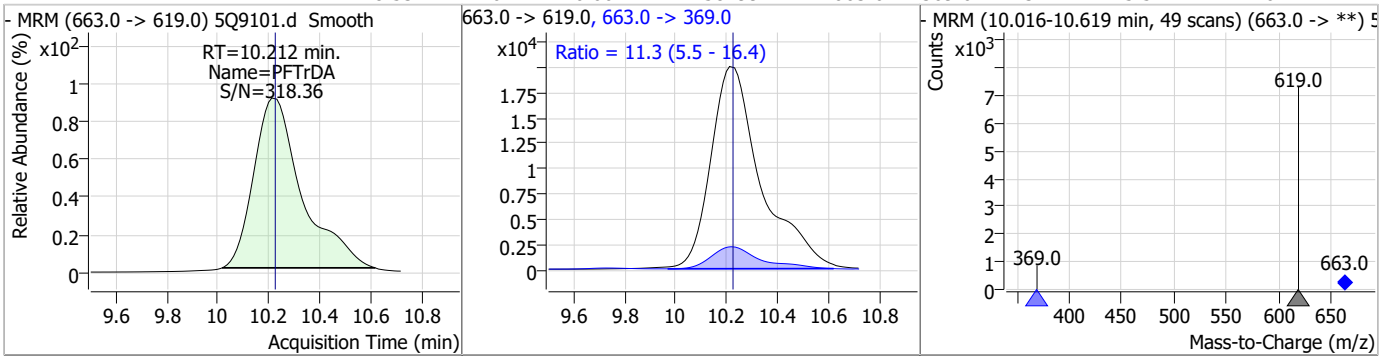
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	14.22	9.40	0.01	319694				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	17.96	9.39	0.00	262001	613.0 -> 319.0	18.0	8.5	25.6

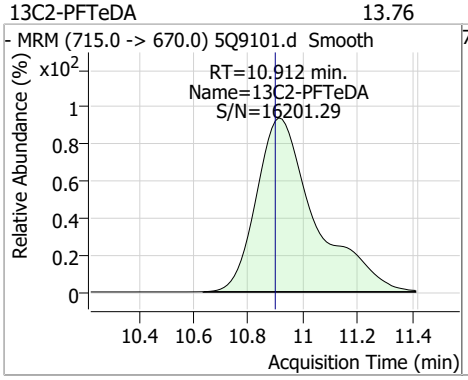


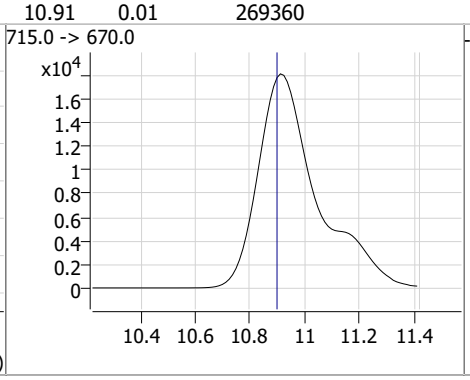
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	18.53	10.21	0.00	258199	663.0 -> 369.0	11.3	5.5	16.4

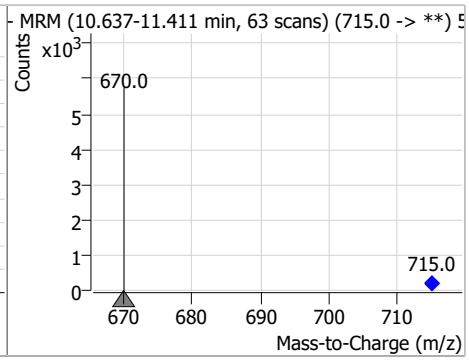


Perfluorinated Compounds by LC/MS/MS

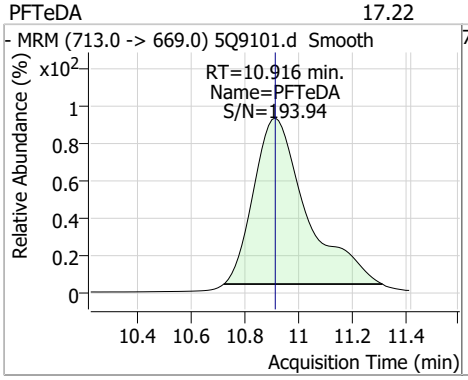
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	13.76	10.91	0.01	269360				

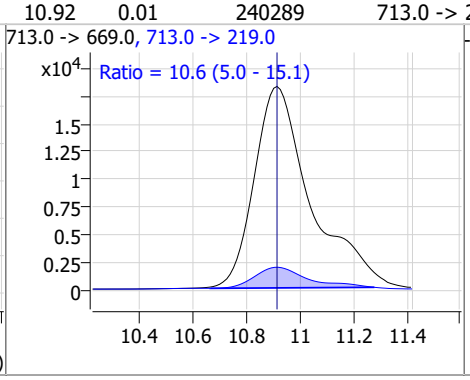


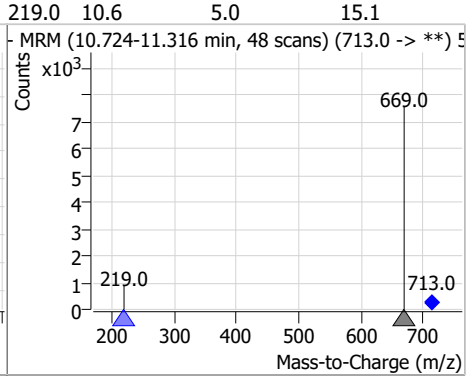




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	17.22	10.92	0.01	240289	713.0 -> 219.0	10.6	5.0	15.1







Manual Integration Approval Summary

Sample Number: S5Q135-CC134
Lab FileID: 5Q9101.D
Injection Time: 12/29/22 13:48
Method: EPA 537M QSM5.3 B-15
Analyst approved: 12/30/22 11:46 Lindsay Ritner
Supervisor approved: 12/31/22 16:37 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.75	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.89	Split peak

QQQ Check Tune Report

Agilent | Trusted Answers

Instrument Name	LCMS5Q
MS Model	G6470B
MS Instrument Serial	SG2221G211
Software_Firmware Version	10.1.67, FW: A.00.08.112
Tune Date & Time	03 January 2023 11:37:29
File Path	D:\MassHunter\Tune\QQQ\G6470B\atunes.TUNE.XML
Ion Source	AJS ESI
Ionization Mode	AJS ESI
Tuned Resolution	All
Vacuum Pressure	1.33E+0 [R] (Torr); 4.41E-5 [H] (Torr)

Source Parameters

Parameter	Negative
Gas Temp (°C)	300
Gas Flow (l/min)	8
Nebulizer (psi)	15
Capillary (V)	3500
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	113.00	0.01	Pass	0.70	0.70	0.00	Pass	374784
302.00	301.96	-0.04	Pass	0.70	0.75	0.05	Pass	247094
601.98	601.90	-0.08	Pass	0.70	0.72	0.02	Pass	545551
1033.99	1033.90	-0.09	Pass	0.70	0.70	0.00	Pass	813410
1633.95	1633.80	-0.15	Pass	0.70	0.70	0.00	Pass	1681687
2233.91	2233.71	-0.20	Pass	0.70	0.72	0.02	Pass	1047278

Analyzer: MS2 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.07	0.07	Pass	0.70	0.59	-0.11	Pass	69684
112.99	112.99	0.00	Pass	0.70	0.67	-0.03	Pass	218849
302.00	301.99	-0.01	Pass	0.70	0.70	0.00	Pass	152356
601.98	601.93	-0.05	Pass	0.70	0.72	0.02	Pass	222019
1033.99	1033.92	-0.07	Pass	0.70	0.72	0.02	Pass	250466
1633.95	1633.90	-0.05	Pass	0.70	0.73	0.03	Pass	480516
2233.91	2233.86	-0.05	Pass	0.70	0.72	0.02	Pass	276851

Analyzer: MS1 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.98	-0.01	Pass	1.20	1.18	-0.02	Pass	451984
302.00	301.94	-0.06	Pass	1.20	1.45	0.25	Pass	306471
601.98	601.86	-0.12	Pass	1.20	1.54	0.34	Pass	792332
1033.99	1033.86	-0.13	Pass	1.20	1.49	0.29	Pass	1491919
1633.95	1633.77	-0.18	Pass	1.20	1.34	0.14	Pass	3398999
2233.91	2233.63	-0.28	Pass	1.20	1.11	-0.09	Pass	2148290

Analyzer: MS2 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.07	0.07	Pass	1.20	1.17	-0.03	Pass	93567
112.99	112.96	-0.03	Pass	1.20	1.21	0.01	Pass	347554
302.00	301.98	-0.02	Pass	1.20	1.30	0.10	Pass	230549
601.98	601.94	-0.04	Pass	1.20	1.40	0.20	Pass	462736
1033.99	1033.90	-0.09	Pass	1.20	1.40	0.20	Pass	736420
1633.95	1633.87	-0.08	Pass	1.20	1.36	0.16	Pass	1613568
2233.91	2233.87	-0.04	Pass	1.20	1.26	0.06	Pass	849530

Analyzer: MS1 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.98	-0.01	Pass	2.50	2.44	-0.06	Pass	564936
302.00	301.90	-0.10	Pass	2.50	2.73	0.23	Pass	375787
601.98	601.86	-0.12	Pass	2.50	2.88	0.38	Pass	1020903
1033.99	1033.87	-0.12	Pass	2.50	2.86	0.36	Pass	2512545
1633.95	1633.78	-0.17	Pass	2.50	2.82	0.32	Pass	6848417
2233.91	2233.67	-0.24	Pass	2.50	2.68	0.18	Pass	6215041

Analyzer: MS2 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.04	0.04	Pass	2.50	2.38	-0.12	Pass	123195
112.99	112.99	0.00	Pass	2.50	2.47	-0.03	Pass	479950
302.00	301.99	-0.01	Pass	2.50	2.51	0.01	Pass	307933
601.98	601.97	-0.01	Pass	2.50	2.58	0.08	Pass	725632
1033.99	1033.93	-0.06	Pass	2.50	2.51	0.01	Pass	1496870
1633.95	1633.89	-0.06	Pass	2.50	2.46	-0.04	Pass	4099677
2233.91	2233.78	-0.13	Pass	2.50	2.35	-0.15	Pass	2976723

Manual Integrations APPROVED (compounds with "m" flag)
Natasha Gumtie 01/04/23 15:00

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9232.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 1/3/2023 3:04:04 PM
Sample Name : ic137-0.5
Vial : P1-A2
DA Method File : ID_010323_S5Q137.quantmethod.xml
Batch Name : s5q137.batch.bin
Sample Information : OP94373,S5Q137,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.912	217.0 -> 172.0	114223	20.00	µg/L	-0.063
M5-PFPeA	3.394	268.0 -> 223.0	204261	20.00	µg/L	-0.075
M5-PFHxA	4.377	318.0 -> 273.0	288510	20.00	µg/L	-0.077
M4-PFHpA	5.051	367.0 -> 322.0	296477	20.00	µg/L	-0.062
M8-PFOA	5.559	421.0 -> 376.0	384266	20.00	µg/L	-0.063
M9-PFNA	5.967	472.0 -> 427.0	375905	20.00	µg/L	-0.076
M6-PFDA	6.328	519.0 -> 474.0	385285	20.00	µg/L	-0.074
M7-PFUnDA	6.635	570.0 -> 525.0	382605	20.00	µg/L	-0.088
M2-PFDoDA	6.905	615.0 -> 570.0	383252	20.00	µg/L	-0.074
M2-PFTeDA	7.299	715.0 -> 670.0	394960	20.00	µg/L	-0.087
M8-FOSA	6.592	506.0 -> 78.0	130615	20.00	µg/L	-0.050
M3-PFBS	3.612	302.0 -> 99.0	24634	20.00	µg/L	-0.067
M3-PFHxS	5.061	402.0 -> 99.0	31615	20.00	µg/L	-0.062
M8-PFOS	5.941	507.0 -> 99.0	37795	20.00	µg/L	-0.075
M2-4:2FTS	4.274	329.0 -> 309.0	87751	20.00	µg/L	-0.075
M2-6:2FTS	5.520	429.0 -> 409.0	138013	20.00	µg/L	-0.074
M2-8:2FTS	6.314	529.0 -> 509.0	120538	20.00	µg/L	-0.086
M3-MeFOSAA	6.921	573.0 -> 419.0	66030	20.00	µg/L	-0.037
M3-HFPO-DA	4.582	287.0 -> 169.0	70998	20.00	µg/L	-0.062
M3-MeFOSA	6.949	515.0 -> 169.0	37372	20.00	µg/L	-0.037
M5-EtFOSAA	7.044	589.0 -> 419.0	63949	20.00	µg/L	-0.037
System Monitoring Compounds						
13C2-4:2FTS	4.274	329.0 -> 309.0	87751	18.55	µg/L	-0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%		
13C2-6:2FTS	5.520	429.0 -> 409.0	138013	19.38	µg/L	-0.074
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.9%		
13C2-8:2FTS	6.314	529.0 -> 509.0	120538	19.63	µg/L	-0.086
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%		
13C2-PFDoDA	6.905	615.0 -> 570.0	383252	20.71	µg/L	-0.074
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.5%		
13C2-PFTeDA	7.299	715.0 -> 670.0	394960	20.20	µg/L	-0.087
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.0%		
13C3-PFBS	3.612	302.0 -> 99.0	24634	19.22	µg/L	-0.067
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.1%		
13C3-PFHxS	5.061	402.0 -> 99.0	31615	19.90	µg/L	-0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.5%		
13C4-PFBA	1.912	217.0 -> 172.0	114223	19.92	µg/L	-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.6%		
13C4-PFHpA	5.051	367.0 -> 322.0	296477	20.18	µg/L	-0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.9%		
13C5-PFHxA	4.377	318.0 -> 273.0	288510	19.64	µg/L	-0.077
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%		
13C5-PFPeA	3.394	268.0 -> 223.0	204261	19.66	µg/L	-0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.3%		
13C6-PFDA	6.328	519.0 -> 474.0	385285	20.78	µg/L	-0.074

Perfluorinated Compounds by LC/MS/MS

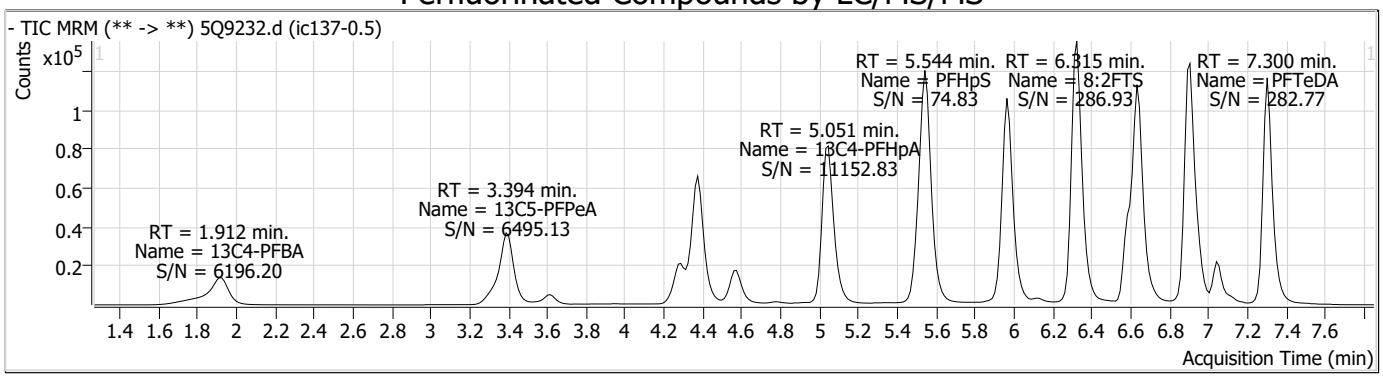
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.9%		
13C7-PFUnDA	6.635	570.0 -> 525.0	382605	20.28 µg/L		-0.088
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.4%		
13C8-FOSA	6.592	506.0 -> 78.0	130615	21.79 µg/L		-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.9%		
13C8-PFOA	5.559	421.0 -> 376.0	384266	20.40 µg/L		-0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.0%		
13C8-PFOS	5.941	507.0 -> 99.0	37795	19.83 µg/L		-0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.1%		
13C9-PFNA	5.967	472.0 -> 427.0	375905	19.91 µg/L		-0.076
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.6%		
d3-MeFOSAA	6.921	573.0 -> 419.0	66030	23.56 µg/L		-0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 117.8%		
13C3-HFPO-DA	4.582	287.0 -> 169.0	70998	21.17 µg/L		-0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.8%		
d3-MeFOSA	6.949	515.0 -> 169.0	37372	21.68 µg/L		-0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.4%		
d5-EtFOSAA	7.044	589.0 -> 419.0	63949	23.06 µg/L		-0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 115.3%		
Target Compounds						QValue
4:2FTS	4.276	327.0 -> 307.0	1775	0.44 µg/L		88
		327.0 -> 81.0	1231			
6:2FTS	5.520	427.0 -> 407.0	2775	0.46 µg/L		94
		427.0 -> 81.0	1129			
8:2FTS	6.315	527.0 -> 507.0	2371	0.46 µg/L		95
		527.0 -> 81.0	1150			
EtFOSAA	7.057	584.0 -> 419.0	920	0.43 µg/L		89
		584.0 -> 483.0	475			
FOSA	6.592	498.0 -> 78.0	2401	0.41 µg/L		99
		498.0 -> 478.0	81			
MeFOSAA	6.922	570.0 -> 419.0	1049	0.43 µg/L		98
		570.0 -> 512.0	402			
PFBA	1.919	213.0 -> 169.0	2186	0.41 µg/L		100
PFBS	3.617	299.0 -> 80.0	1374	0.39 µg/L		98
		299.0 -> 99.0	563			
PFDA	6.328	513.0 -> 469.0	7307	0.40 µg/L		96
		513.0 -> 219.0	1268			
PFDoDA	6.906	613.0 -> 569.0	6231	0.40 µg/L		96
		613.0 -> 319.0	999			
PFDS	6.596	599.0 -> 80.0	797	0.35 µg/L		89
		599.0 -> 99.0	539			
PFHpA	5.051	363.0 -> 319.0	6638	0.41 µg/L		97
		363.0 -> 169.0	1382			
PFHpS	5.544	449.0 -> 80.0	1129	0.41 µg/L		98
		449.0 -> 99.0	640			
PFHxA	4.378	313.0 -> 269.0	4969	0.39 µg/L		98
		313.0 -> 119.0	273			
PFHxS	5.062	399.0 -> 80.0	1069	0.37 µg/L		95
		399.0 -> 99.0	643			
PFNA	5.968	463.0 -> 419.0	6409	0.38 µg/L		100
		463.0 -> 219.0	1448			
PFNS	6.288	549.0 -> 80.0	810	0.36 µg/L		99
		549.0 -> 99.0	454			
PFOA	5.559	413.0 -> 369.0	7557	0.40 µg/L		96
		413.0 -> 169.0	1929			
PFOS	5.942	499.0 -> 80.0	1384	0.42 µg/L	m	98

Perfluorinated Compounds by LC/MS/MS

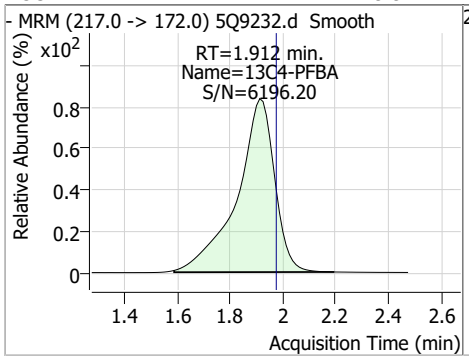
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	647			
PFPeA	3.397	263.0 -> 219.0	4197	0.40	µg/L	100
PFPeS	4.452	349.0 -> 80.0	868	0.40	µg/L	93
		349.0 -> 99.0	391			
PFTeDA	7.300	713.0 -> 669.0	7538	0.41	µg/L	97
		713.0 -> 219.0	827			
PFTrDA	7.114	663.0 -> 619.0	6322	0.38	µg/L	99
		663.0 -> 369.0	700			
PFUnDA	6.636	563.0 -> 519.0	6582	0.39	µg/L	97
		563.0 -> 269.0	1118			
11Cl-PF3OUdS	6.719	631.0 -> 451.0	3681	0.37	µg/L	99
		633.0 -> 453.0	1129			
9Cl-PF3ONS	6.126	531.0 -> 351.0	4955	0.36	µg/L	96
		533.0 -> 353.0	1654			
ADONA	5.087	377.0 -> 251.0	8089	0.37	µg/L	99
		377.0 -> 85.0	2978			
HFPO-DA	4.577	329.0 -> 169.0	1814	0.35	µg/L	85
		285.0 -> 169.0	1271			
MeFOSA	6.963	512.0 -> 169.0	946	0.49	µg/L	90
		512.0 -> 219.0	646			
4-PFECHS	5.481	461.0 -> 381.0	3244	0.35	µg/L	95
		461.0 -> 99.0	1920			
FBSA	4.792	298.0 -> 78.0	2734	0.43	µg/L	97
		298.0 -> 64.0	225			
FHxSA	5.886	398.0 -> 78.0	2644	0.44	µg/L	98
		398.0 -> 64.0	271			

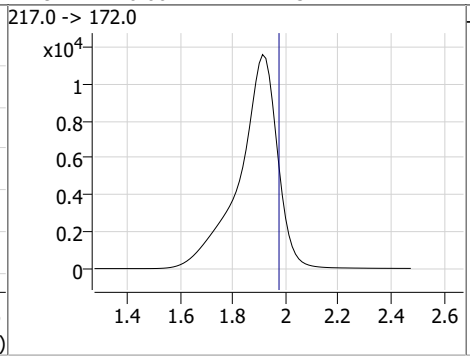
 # = Qualifier out of range, m = manually integrated, + = Area summed

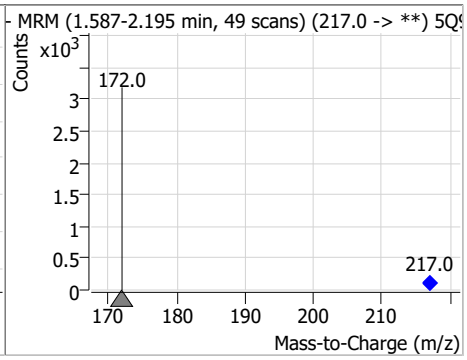
Perfluorinated Compounds by LC/MS/MS



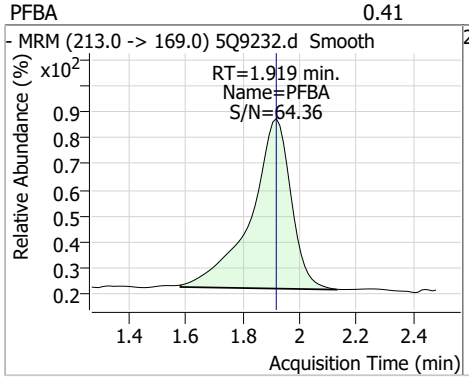
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.92	1.91	-0.06	114223				

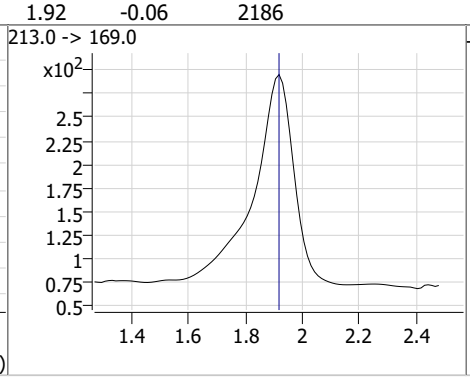


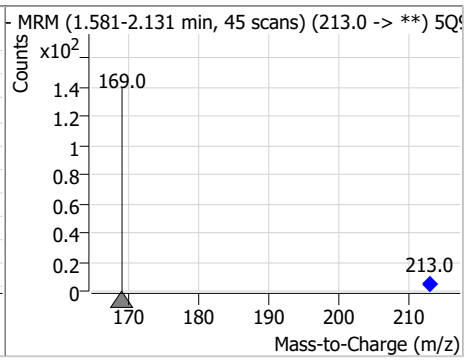




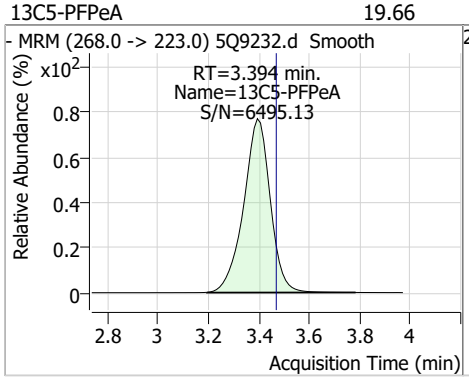
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.41	1.92	-0.06	2186				

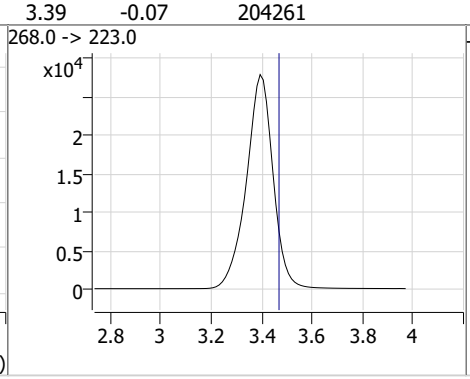


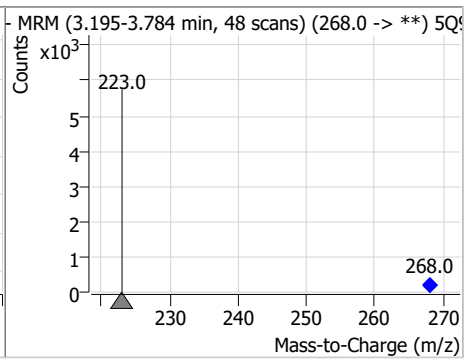




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.66	3.39	-0.07	204261				

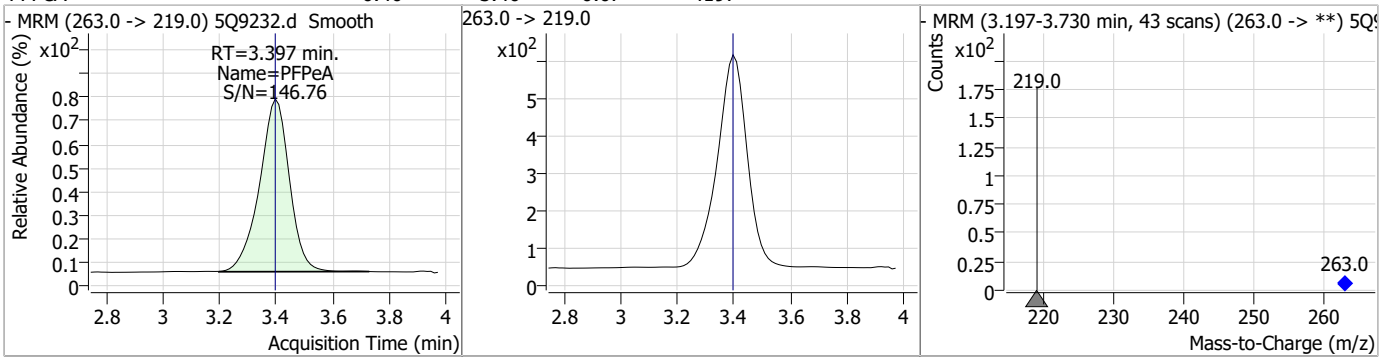




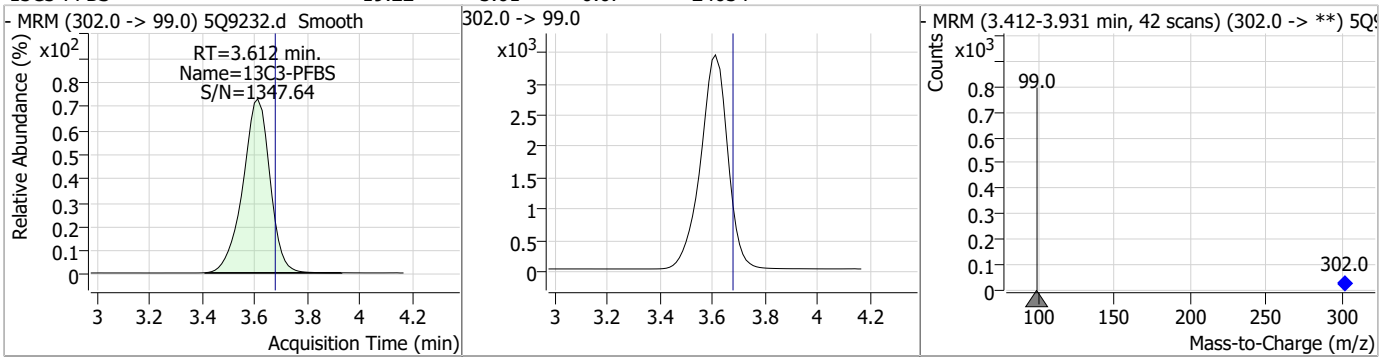


Perfluorinated Compounds by LC/MS/MS

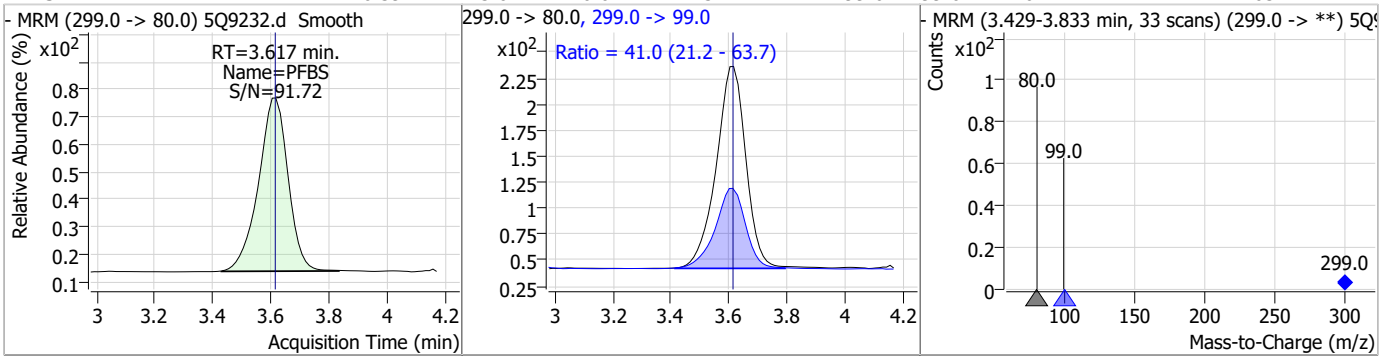
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.40	3.40	-0.07	4197				



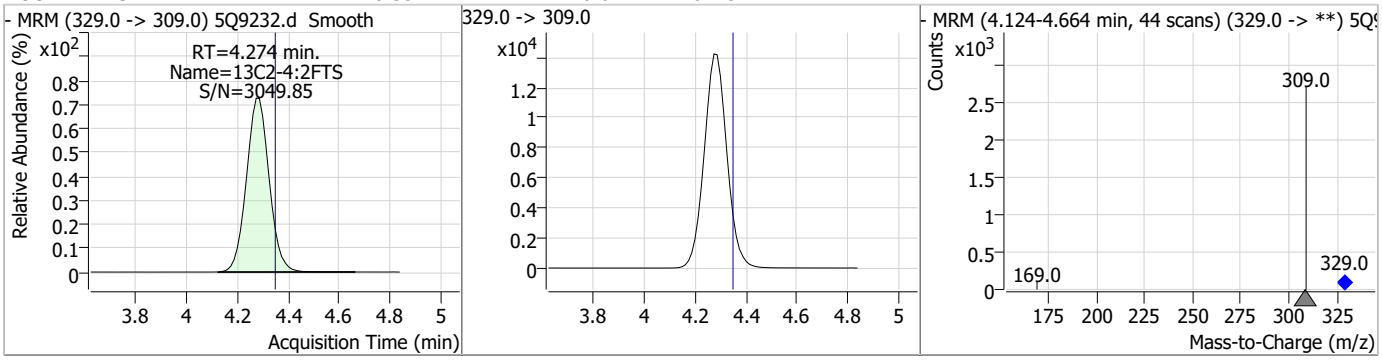
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.22	3.61	-0.07	24634				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.39	3.62	-0.07	1374	299.0 -> 99.0	41.0	21.2	63.7

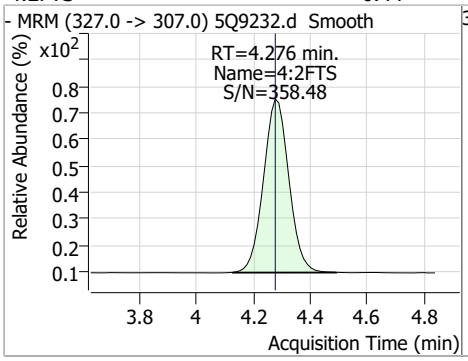


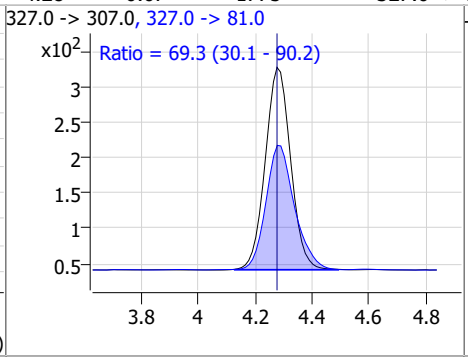
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.55	4.27	-0.07	87751				

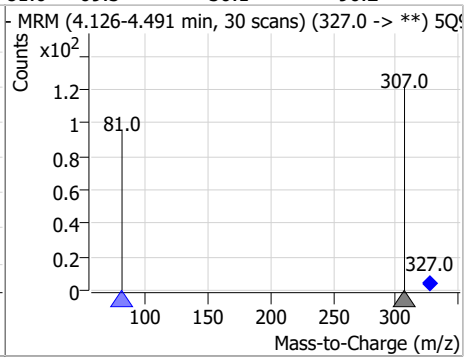


Perfluorinated Compounds by LC/MS/MS

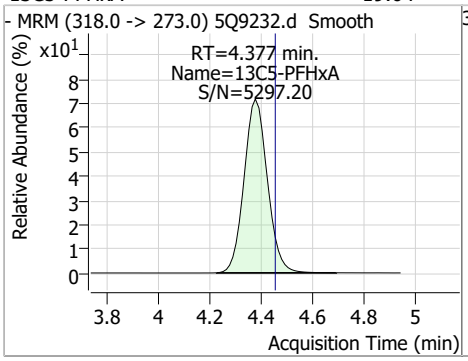
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	0.44	4.28	-0.07	1775	327.0 -> 81.0	69.3	30.1	90.2

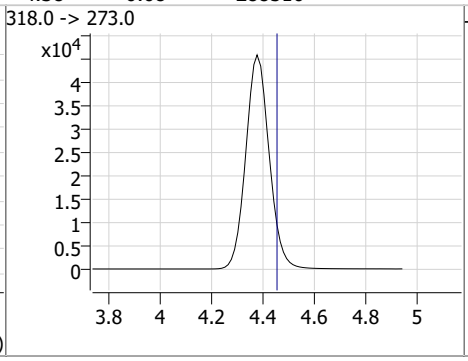


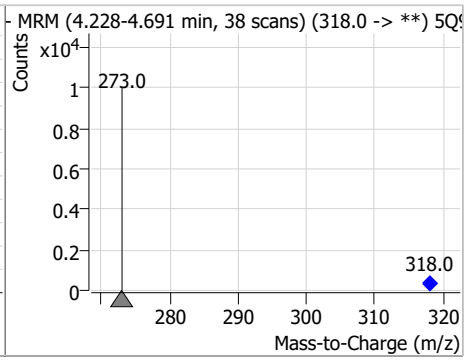




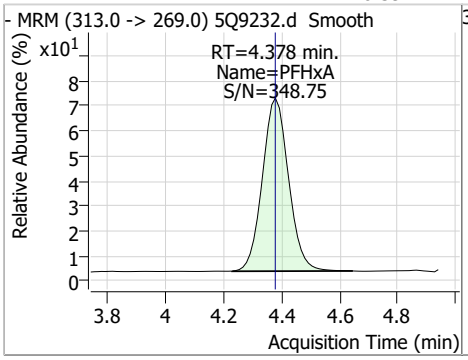
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.64	4.38	-0.08	288510				

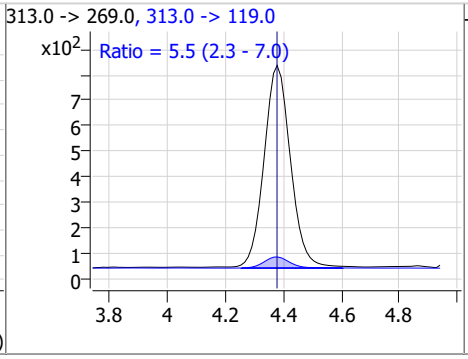


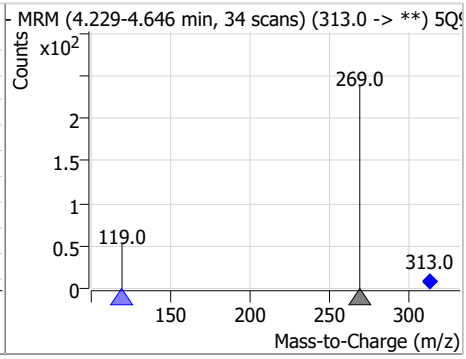




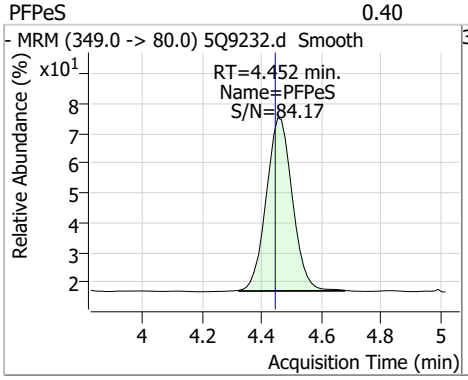
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.39	4.38	-0.08	4969	313.0 -> 119.0	5.5	2.3	7.0

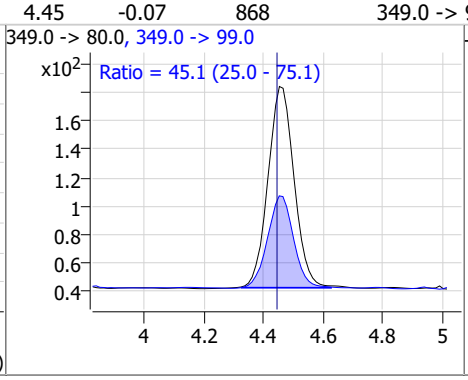


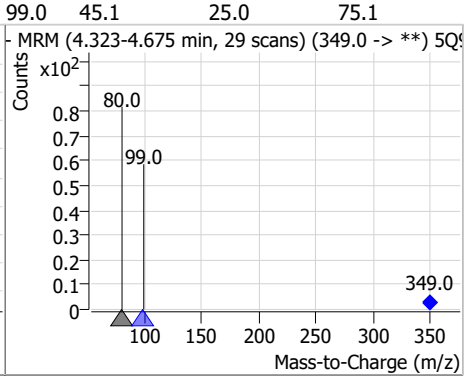




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	0.40	4.45	-0.07	868	349.0 -> 99.0	45.1	25.0	75.1

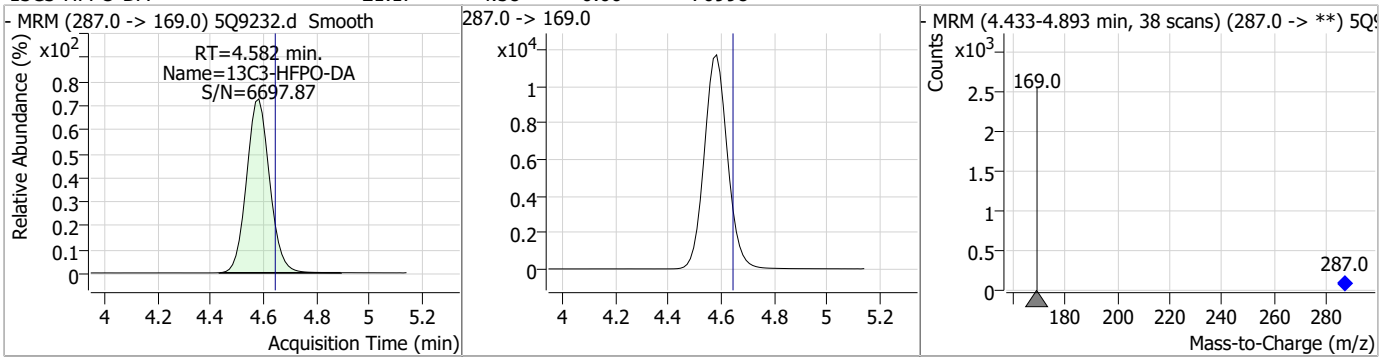




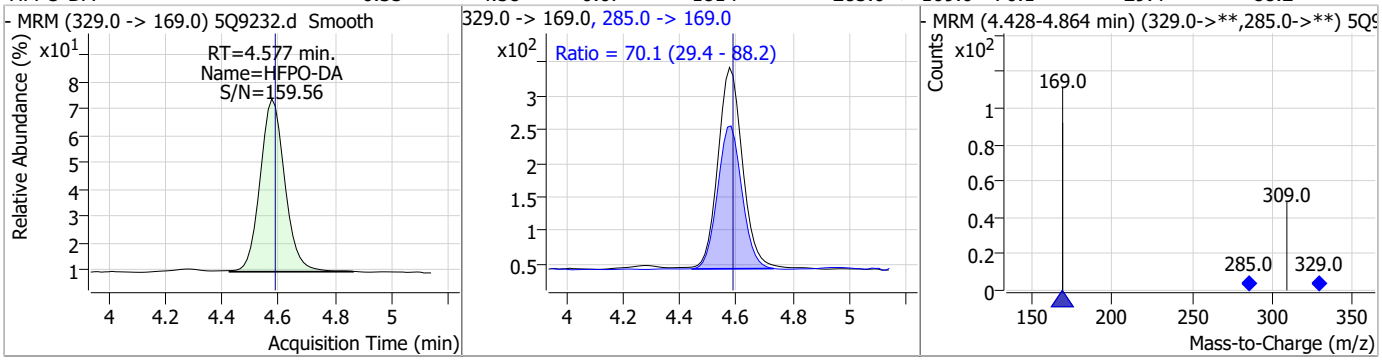


Perfluorinated Compounds by LC/MS/MS

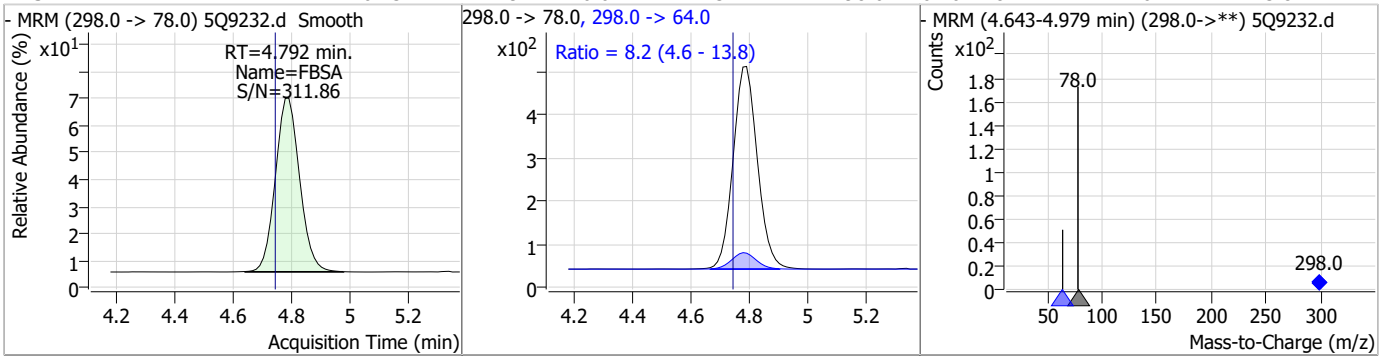
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	21.17	4.58	-0.06	70998				



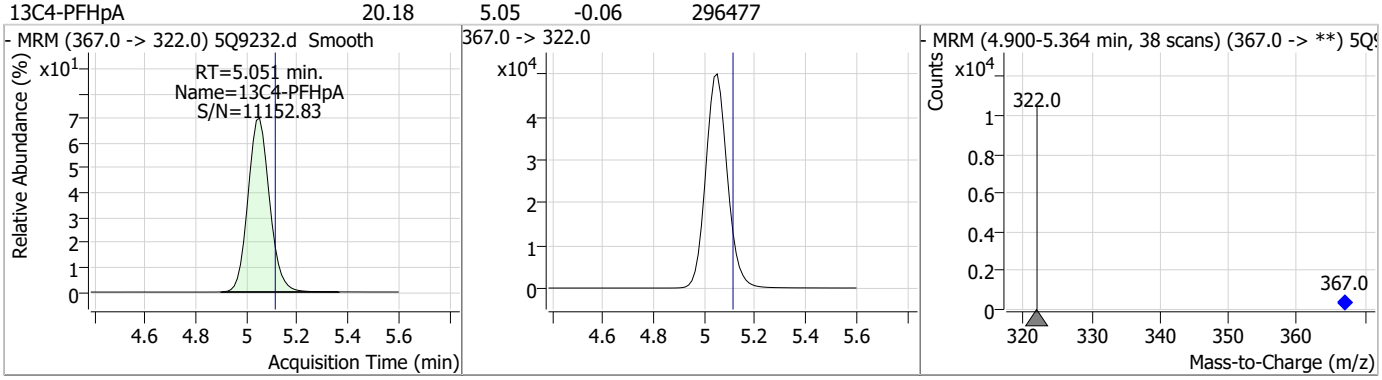
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.35	4.58	-0.07	1814	285.0 -> 169.0	70.1	29.4	88.2



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	0.43	4.79	-0.04	2734	298.0 -> 64.0	8.2	4.6	13.8

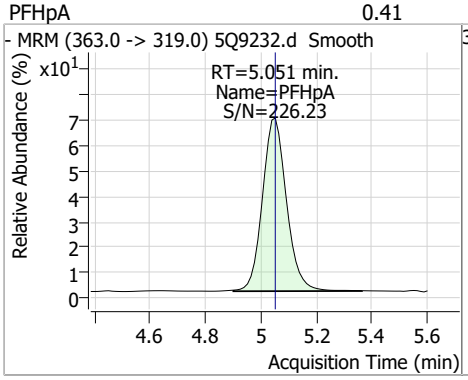


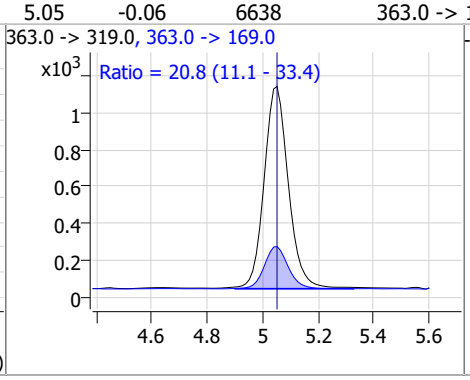
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.18	5.05	-0.06	296477				

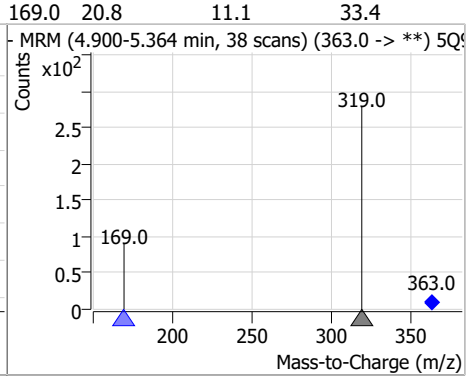


Perfluorinated Compounds by LC/MS/MS

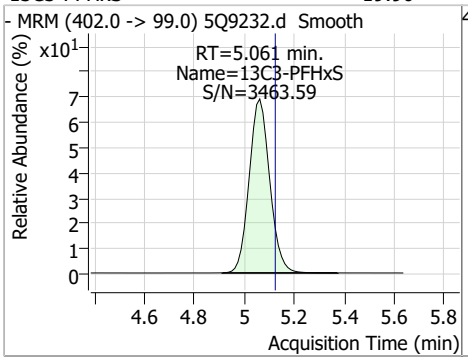
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.41	5.05	-0.06	6638	363.0 -> 169.0	20.8	11.1	33.4

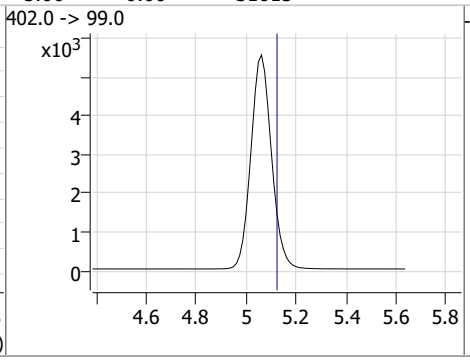


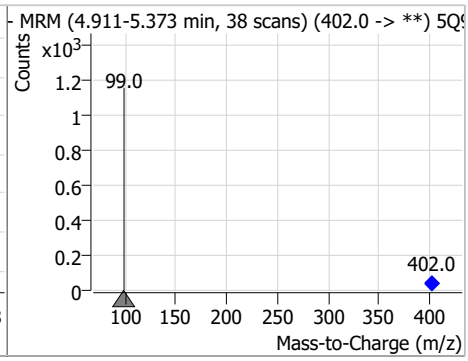




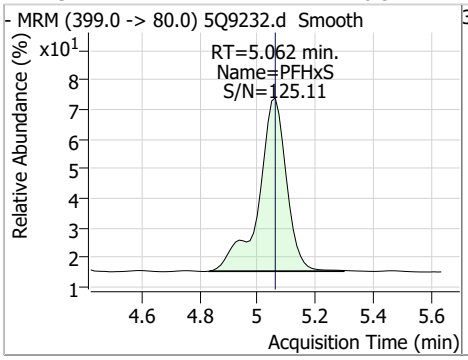
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.90	5.06	-0.06	31615				

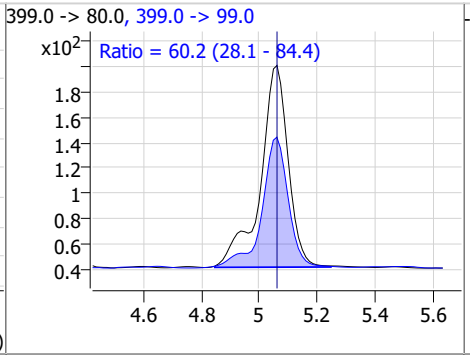


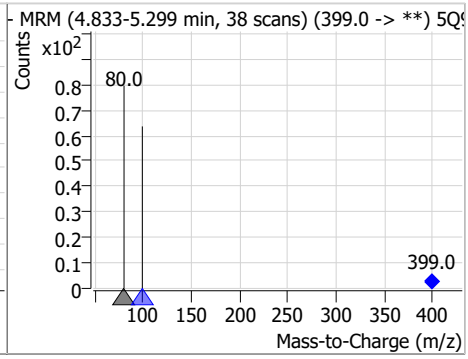




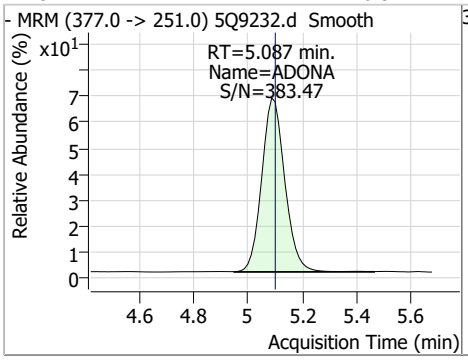
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.37	5.06	-0.06	1069	399.0 -> 99.0	60.2	28.1	84.4

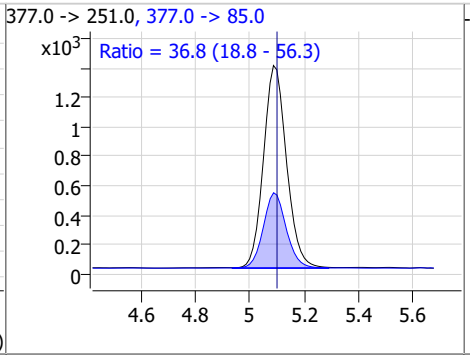


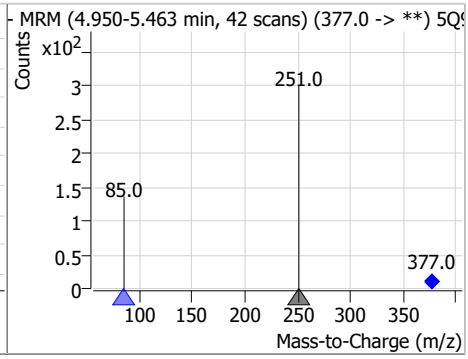




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.37	5.09	-0.08	8089	377.0 -> 85.0	36.8	18.8	56.3

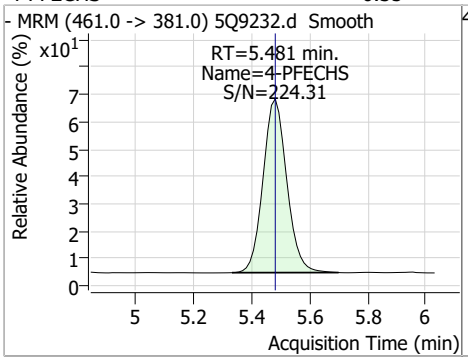


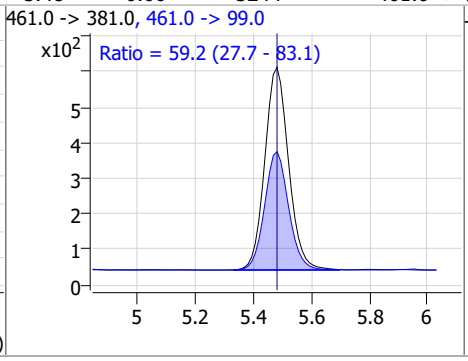


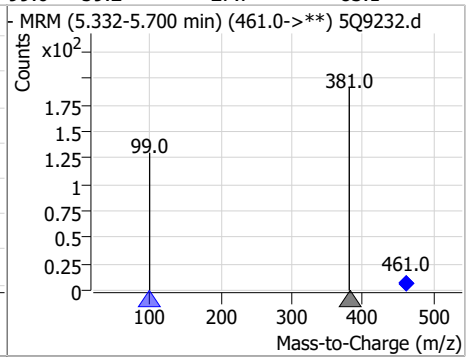


Perfluorinated Compounds by LC/MS/MS

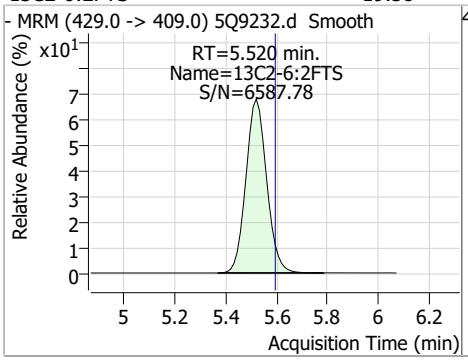
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	0.35	5.48	-0.06	3244	461.0 -> 99.0	59.2	27.7	83.1

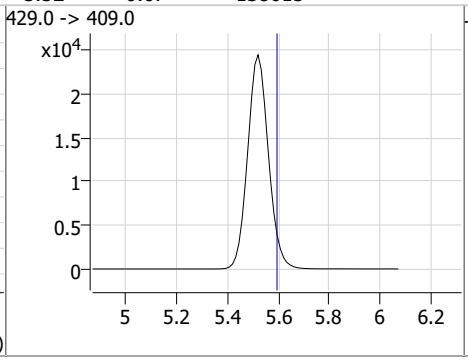


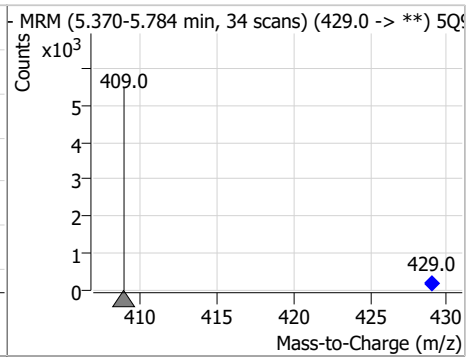




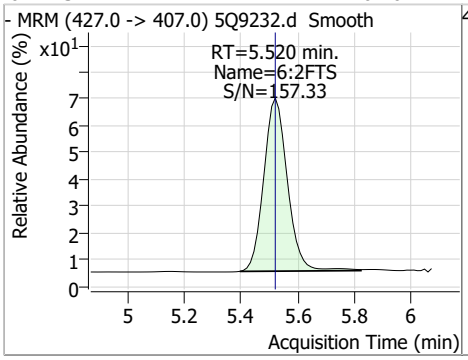
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.38	5.52	-0.07	138013				

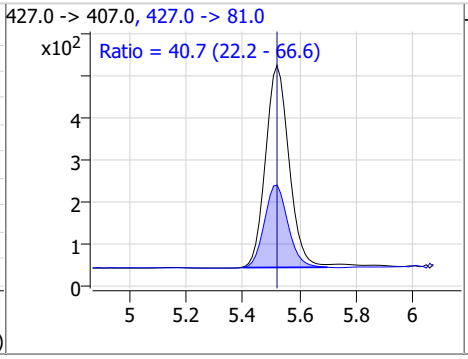


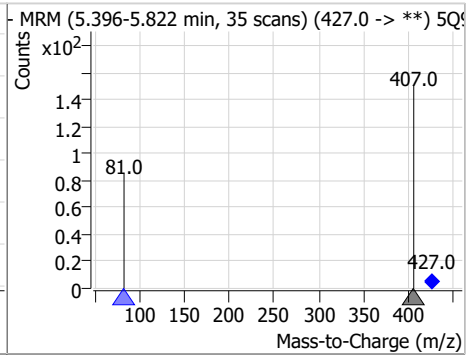




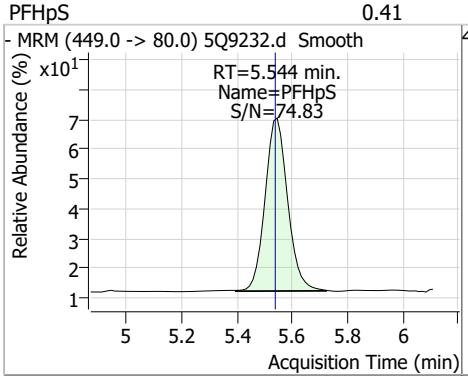
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	0.46	5.52	-0.07	2775	427.0 -> 81.0	40.7	22.2	66.6

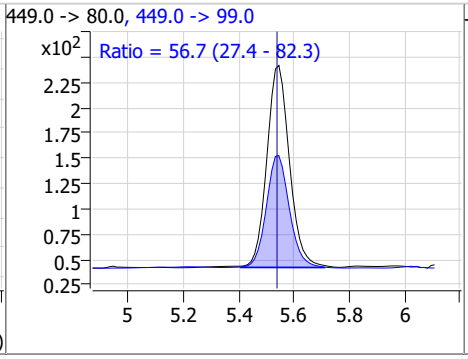


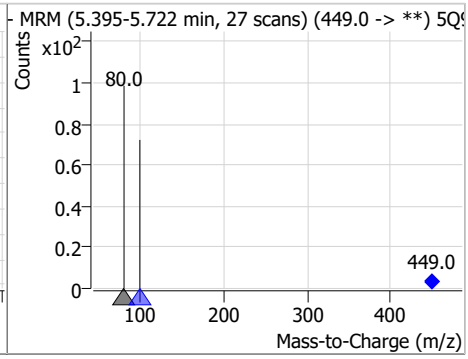




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	0.41	5.54	-0.06	1129	449.0 -> 99.0	56.7	27.4	82.3

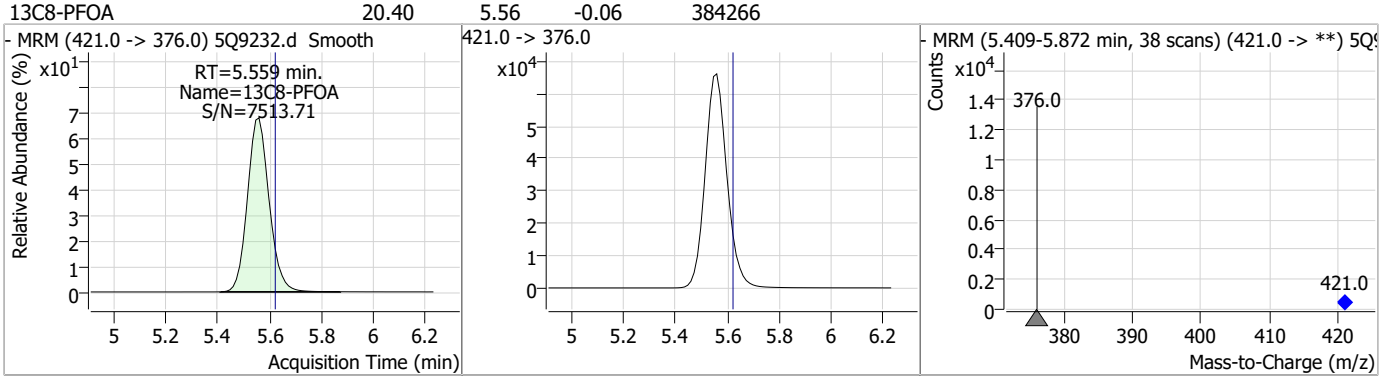




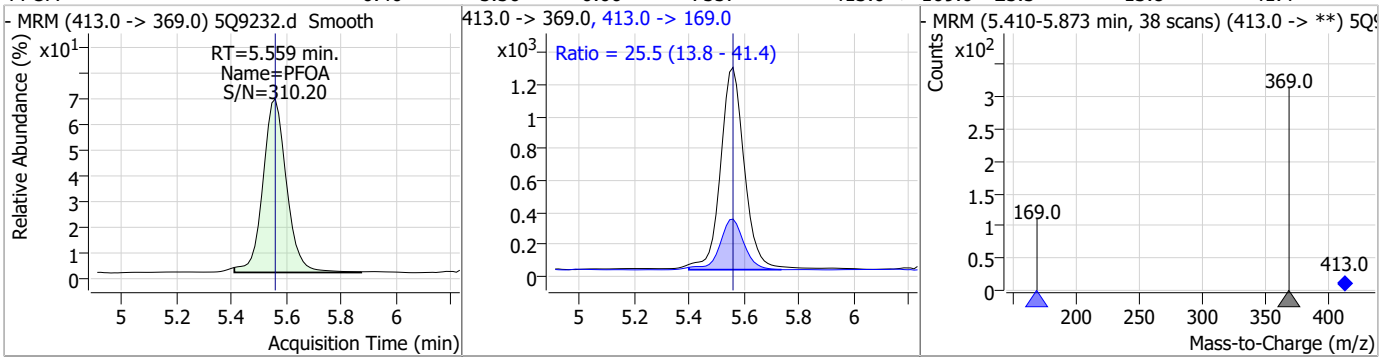


Perfluorinated Compounds by LC/MS/MS

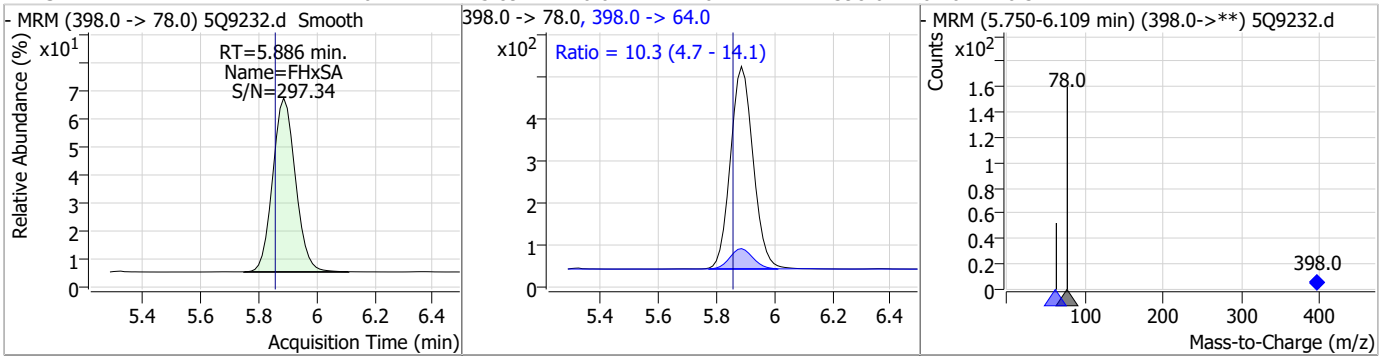
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.40	5.56	-0.06	384266				



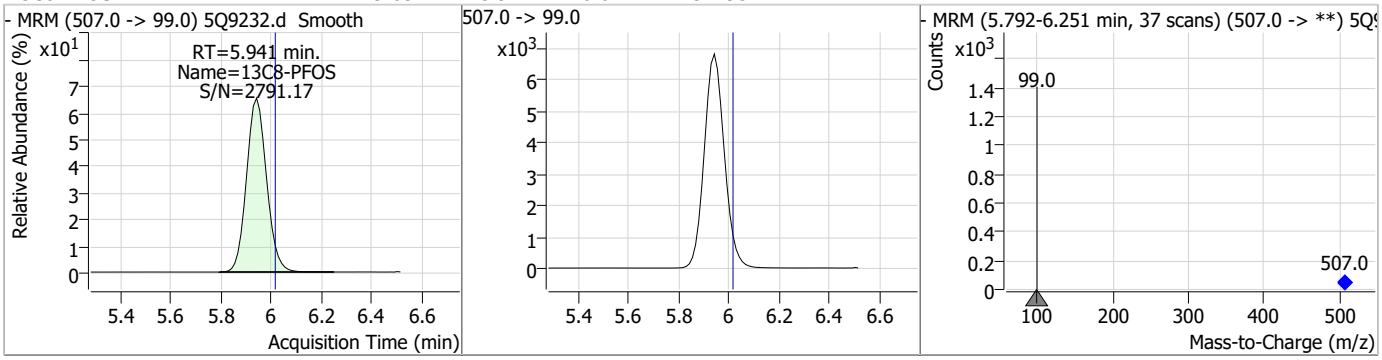
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.40	5.56	-0.06	7557	413.0 -> 169.0	25.5	13.8	41.4



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	0.44	5.89	-0.04	2644	398.0 -> 64.0	10.3	4.7	14.1

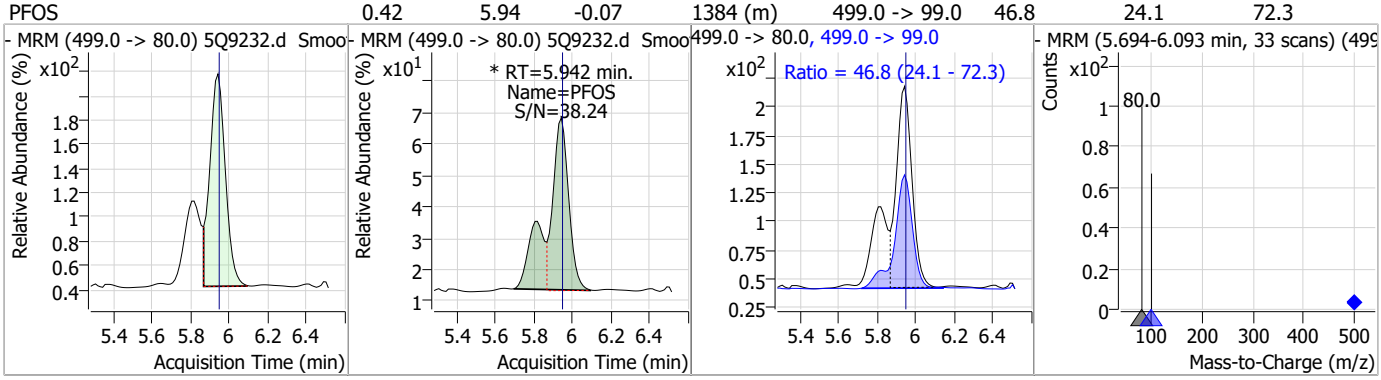


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.83	5.94	-0.07	37795				

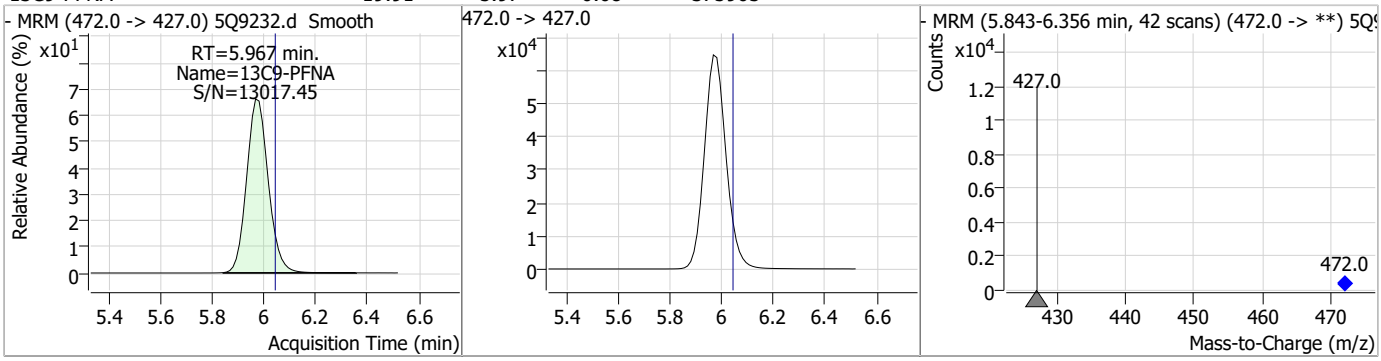


Perfluorinated Compounds by LC/MS/MS

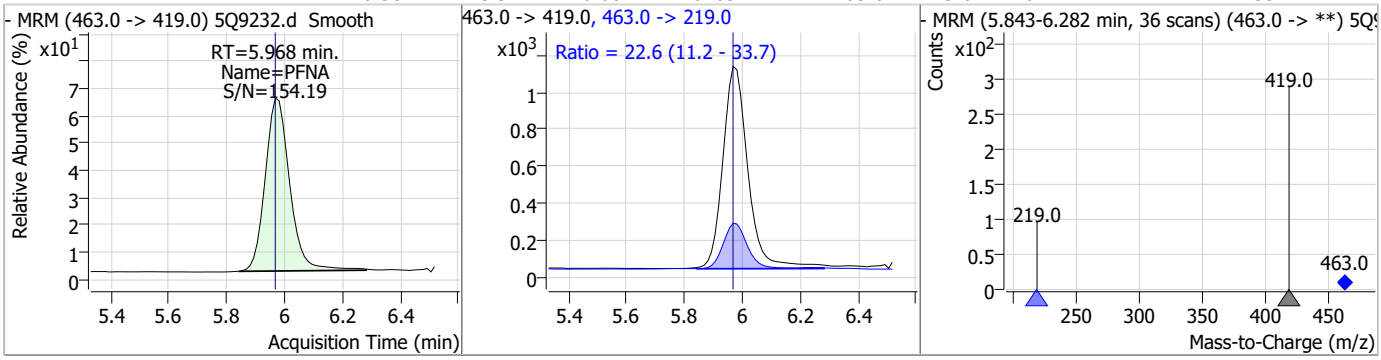
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.42	5.94	-0.07	1384 (m)	499.0 -> 99.0	46.8	24.1	72.3



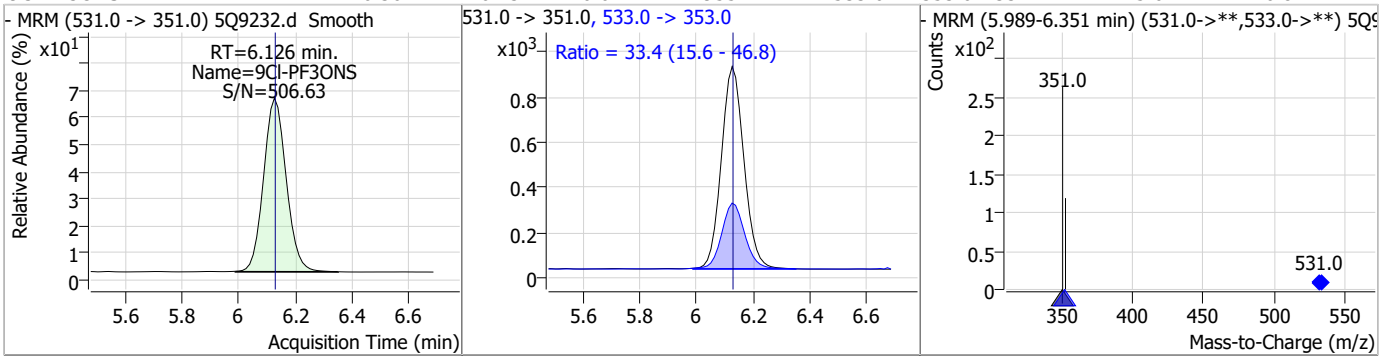
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.91	5.97	-0.08	375905				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.38	5.97	-0.08	6409	463.0 -> 219.0	22.6	11.2	33.7

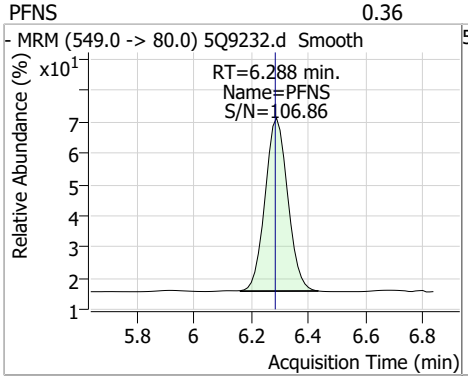


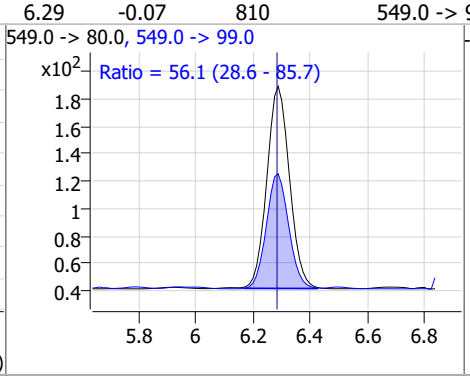
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.36	6.13	-0.07	4955	533.0 -> 353.0	33.4	15.6	46.8

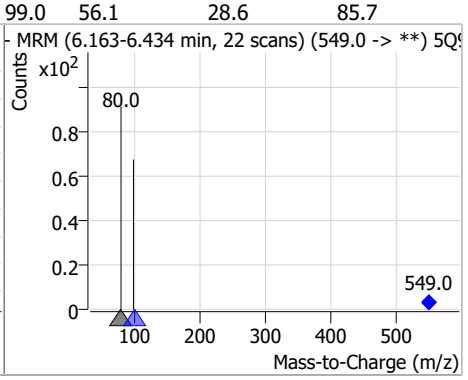


Perfluorinated Compounds by LC/MS/MS

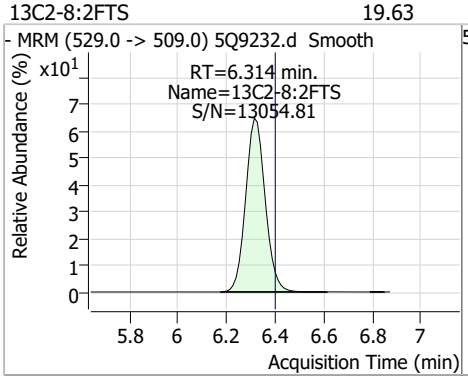
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	0.36	6.29	-0.07	810	549.0 -> 99.0	56.1	28.6	85.7

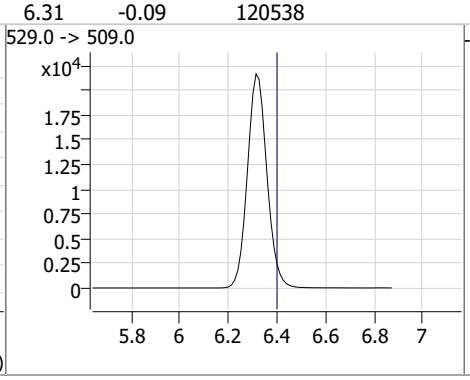


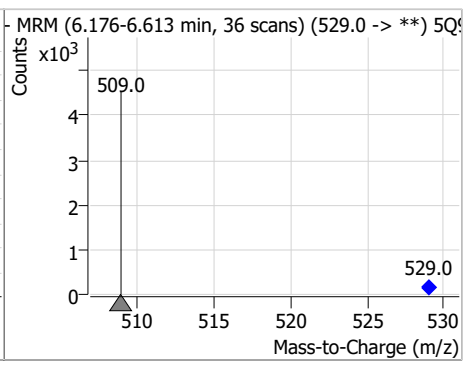




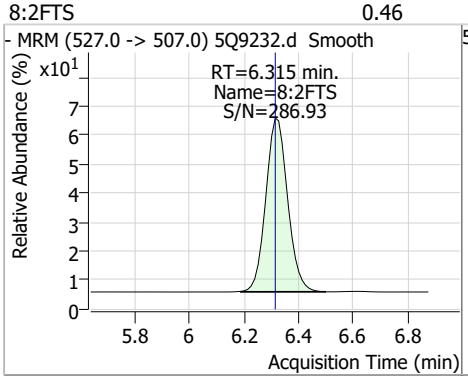
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.63	6.31	-0.09	120538				

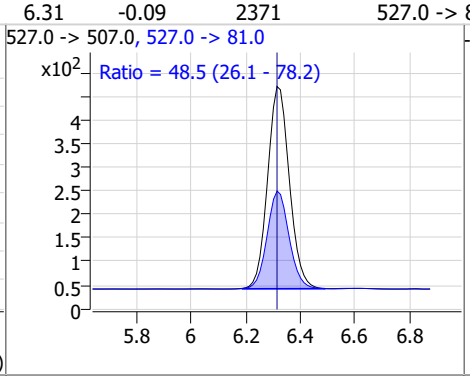


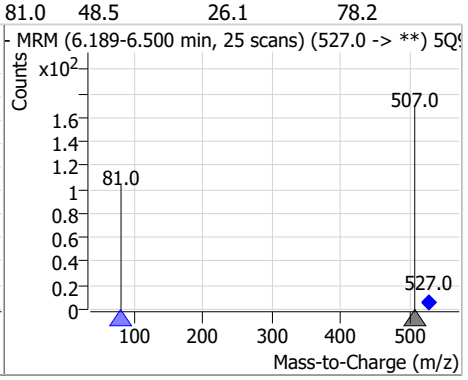




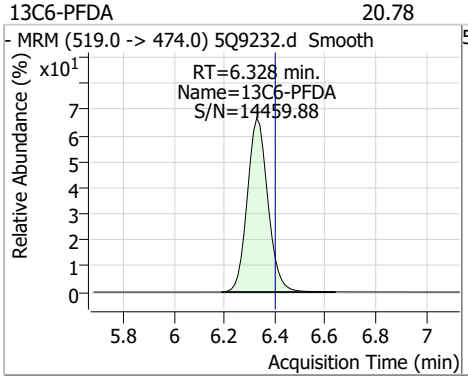
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	0.46	6.31	-0.09	2371	527.0 -> 81.0	48.5	26.1	78.2

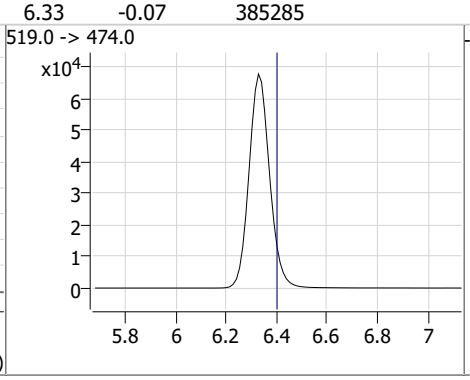


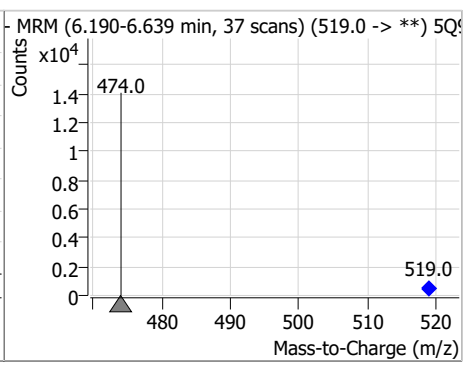




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.78	6.33	-0.07	385285				

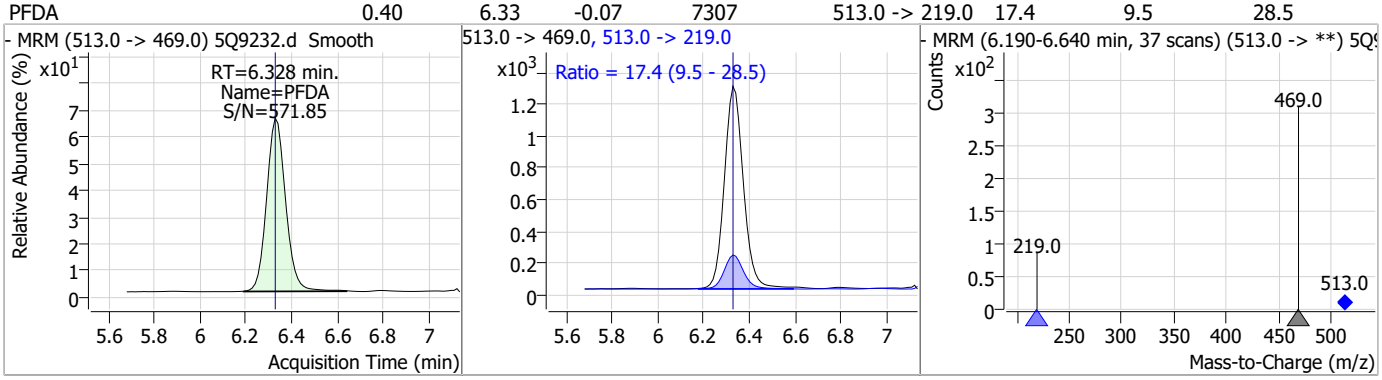




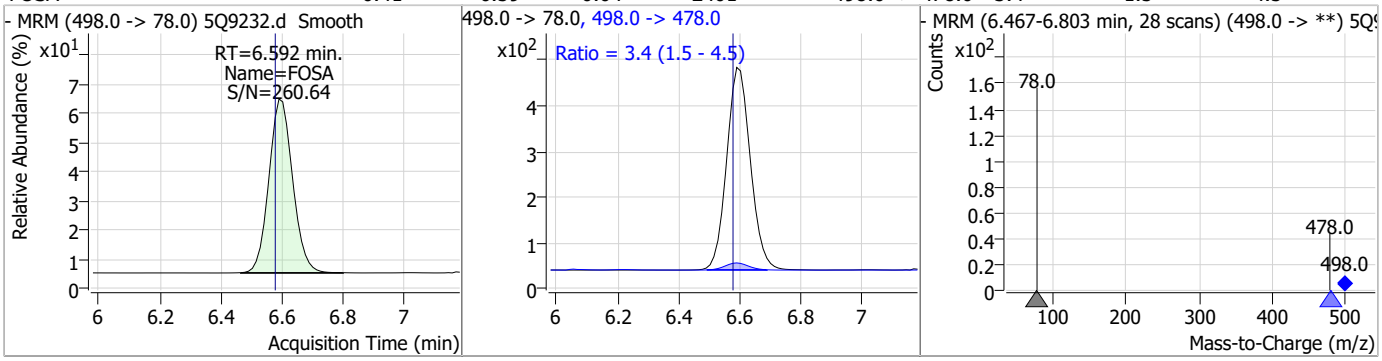


Perfluorinated Compounds by LC/MS/MS

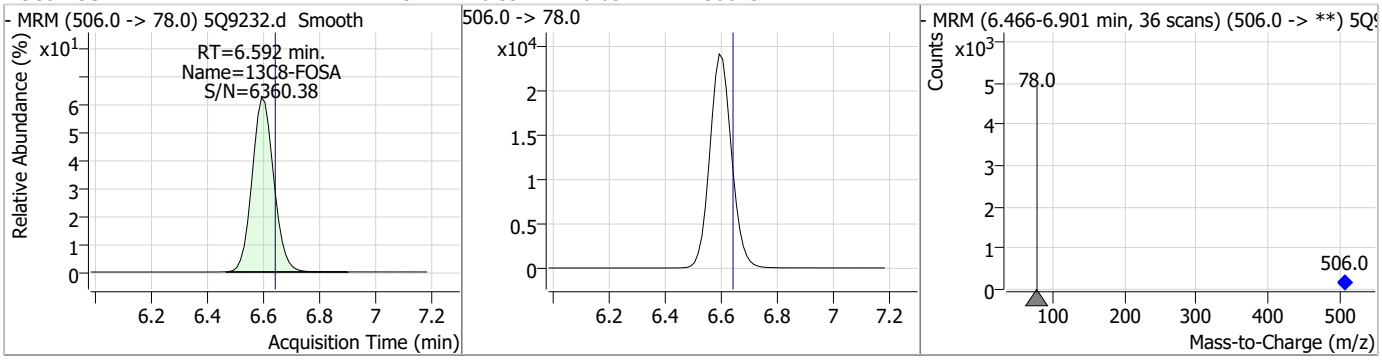
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.40	6.33	-0.07	7307	513.0 -> 219.0	17.4	9.5	28.5



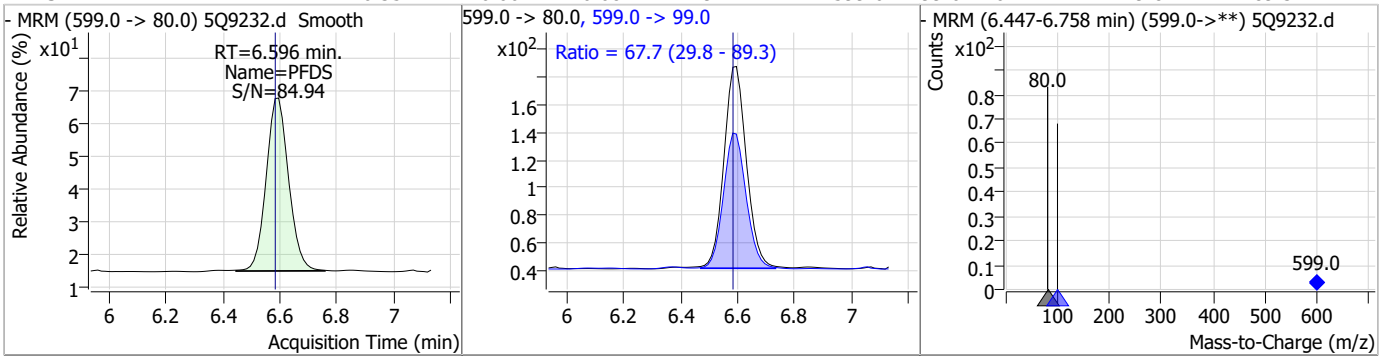
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	0.41	6.59	-0.04	2401	498.0 -> 478.0	3.4	1.5	4.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	21.79	6.59	-0.05	130615				

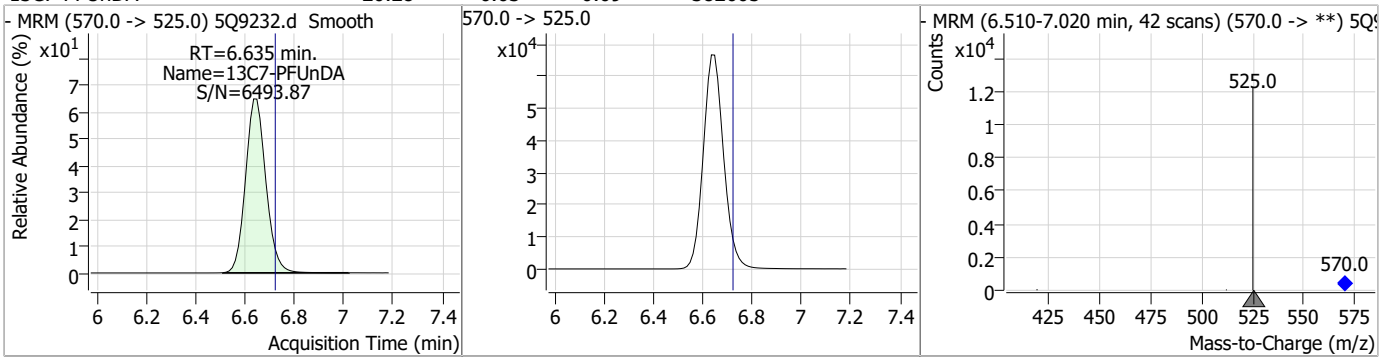


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	0.35	6.60	-0.08	797	599.0 -> 99.0	67.7	29.8	89.3

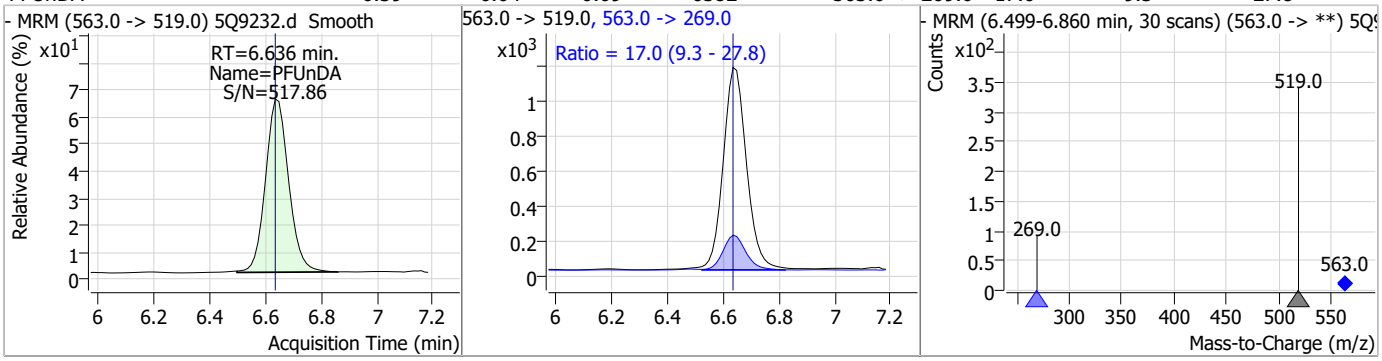


Perfluorinated Compounds by LC/MS/MS

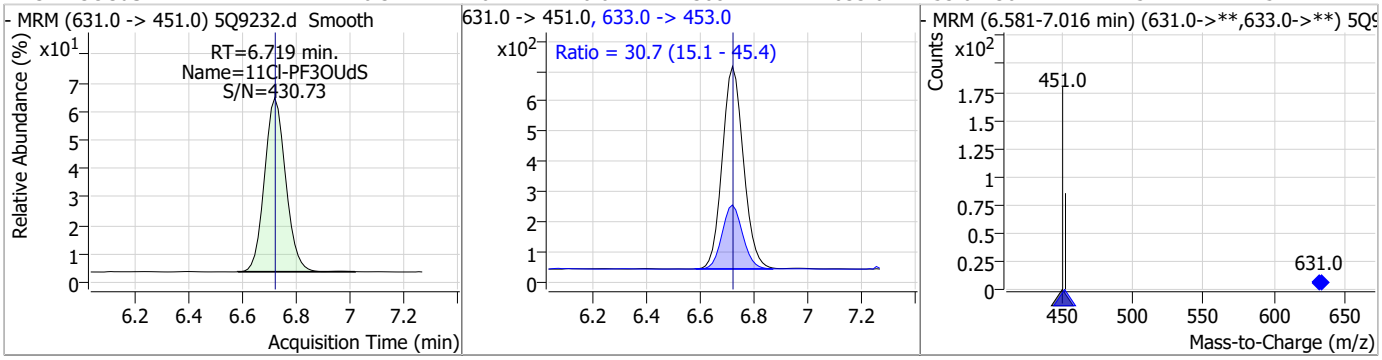
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.28	6.63	-0.09	382605				



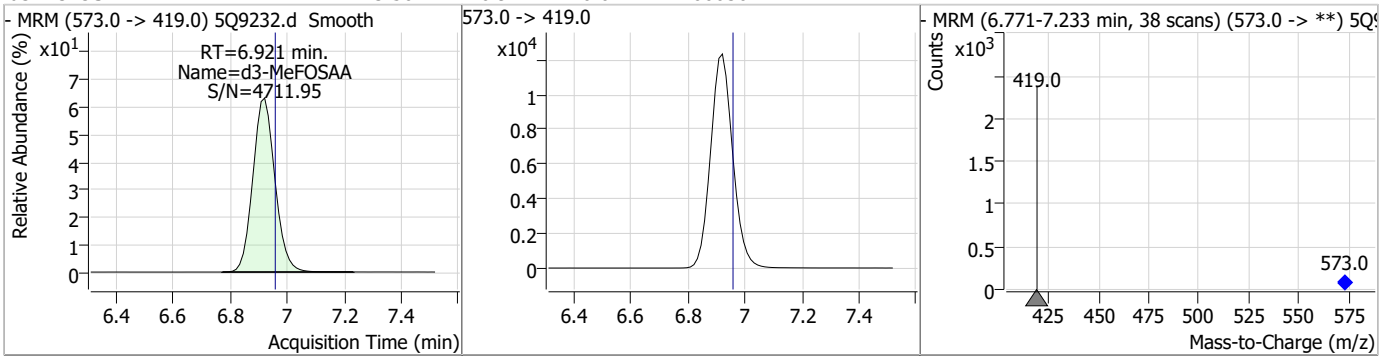
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.39	6.64	-0.09	6582	563.0 -> 269.0	17.0	9.3	27.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.37	6.72	-0.07	3681	633.0 -> 453.0	30.7	15.1	45.4

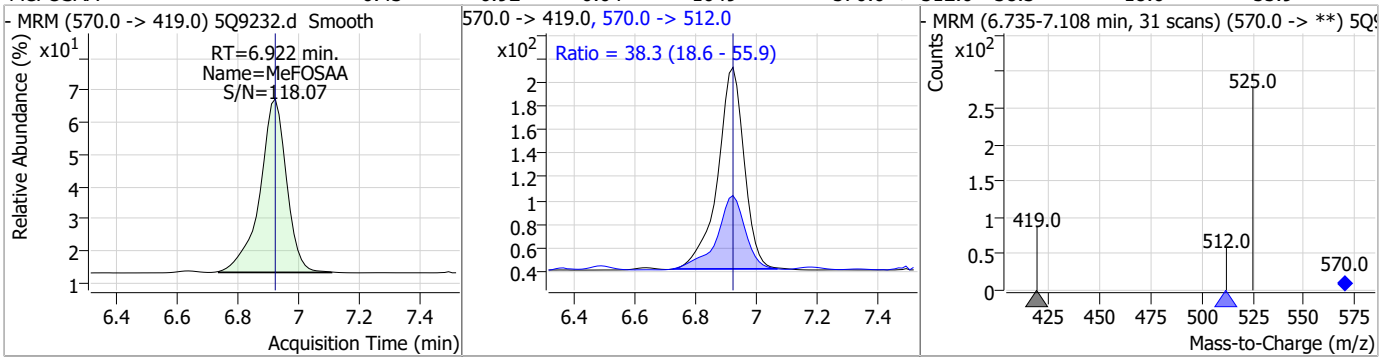


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	23.56	6.92	-0.04	66030				

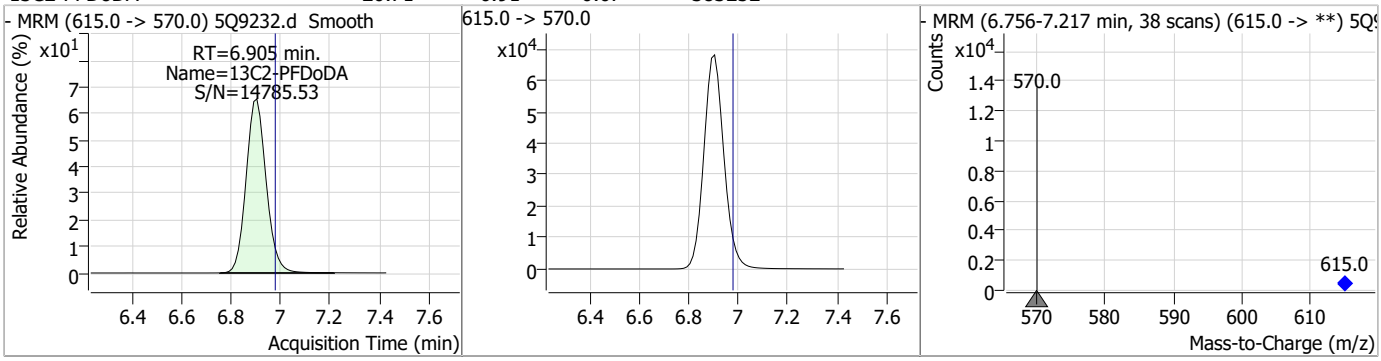


Perfluorinated Compounds by LC/MS/MS

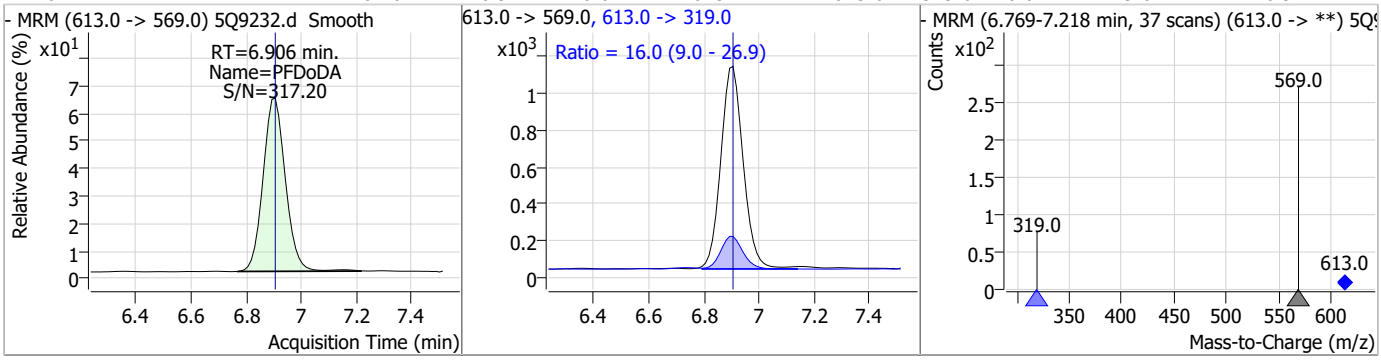
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.43	6.92	-0.04	1049	570.0 -> 512.0	38.3	18.6	55.9



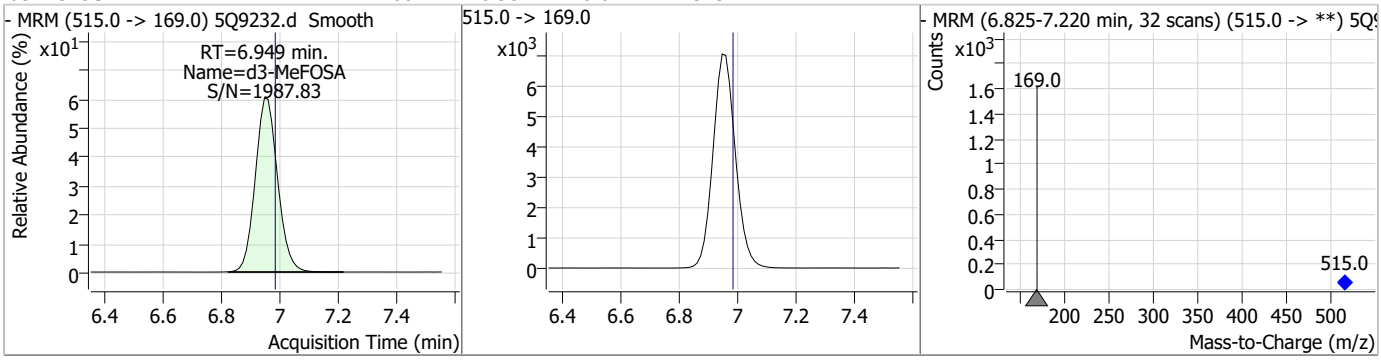
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.71	6.91	-0.07	383252				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.40	6.91	-0.07	6231	613.0 -> 319.0	16.0	9.0	26.9

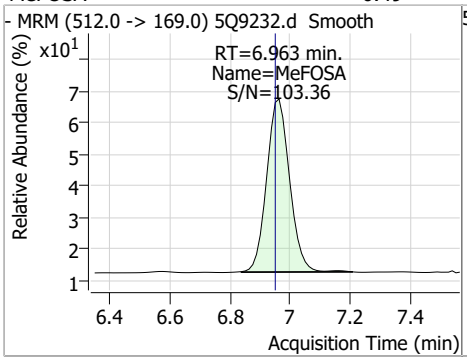


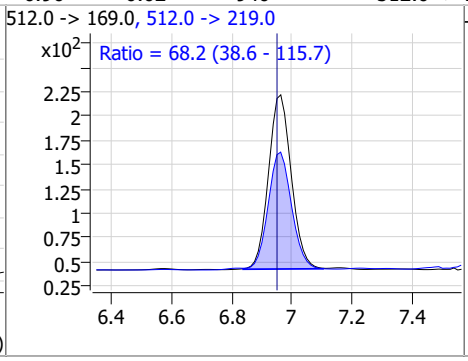
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	21.68	6.95	-0.04	37372				

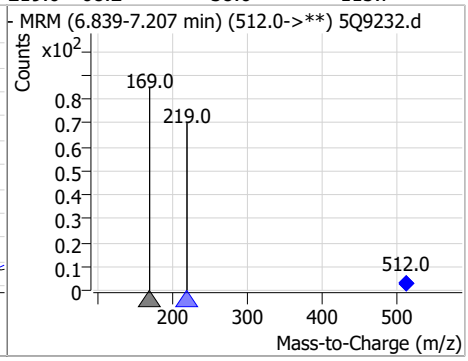


Perfluorinated Compounds by LC/MS/MS

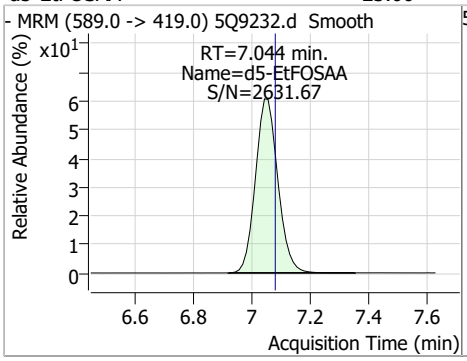
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	0.49	6.96	-0.02	946	512.0 -> 219.0	68.2	38.6	115.7

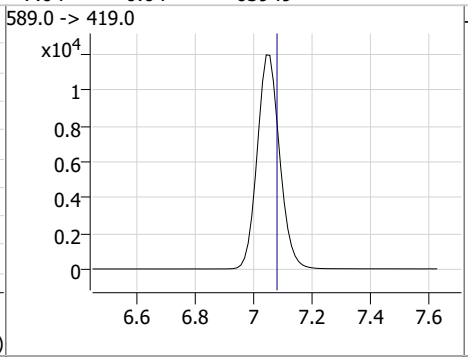


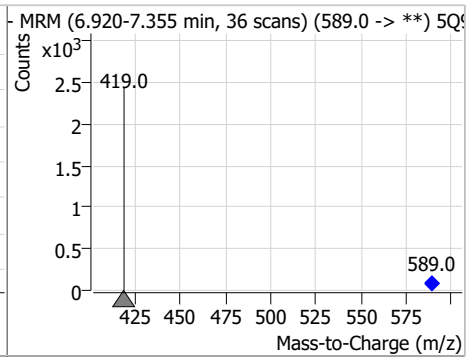




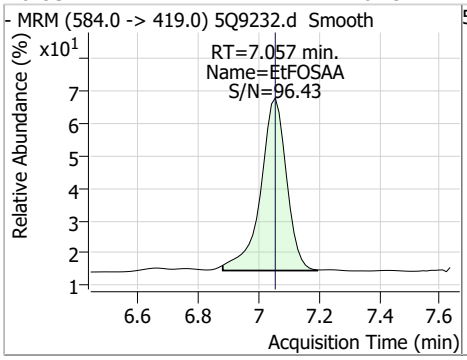
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	23.06	7.04	-0.04	63949				

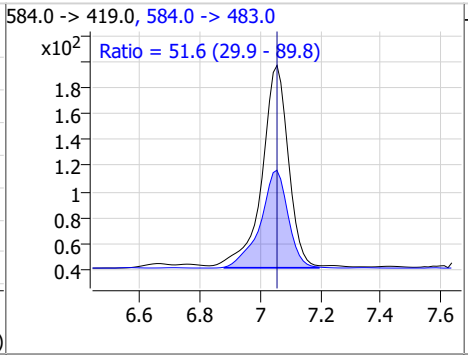


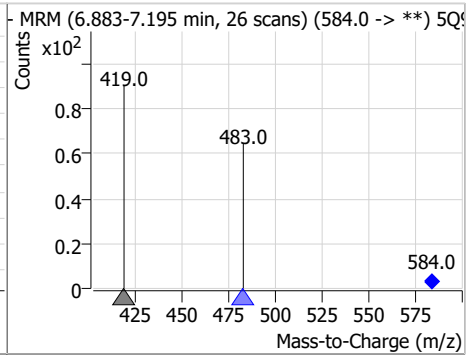




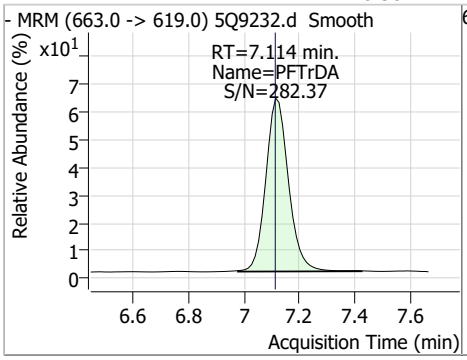
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	0.43	7.06	-0.04	920	584.0 -> 483.0	51.6	29.9	89.8

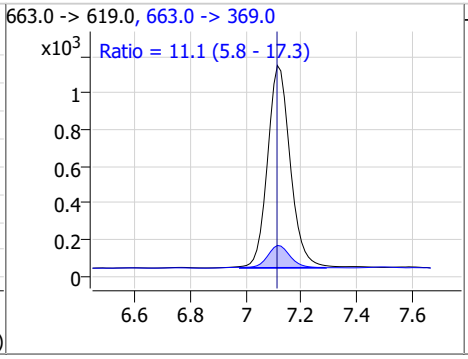


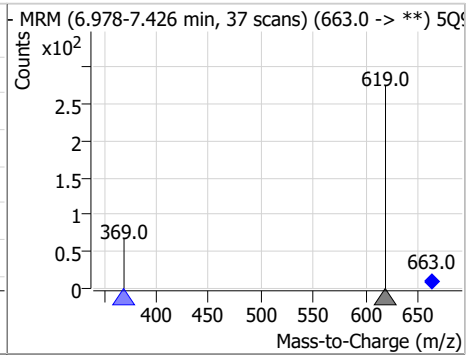




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.38	7.11	-0.08	6322	663.0 -> 369.0	11.1	5.8	17.3

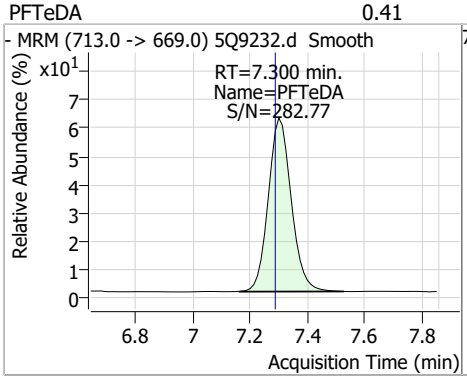


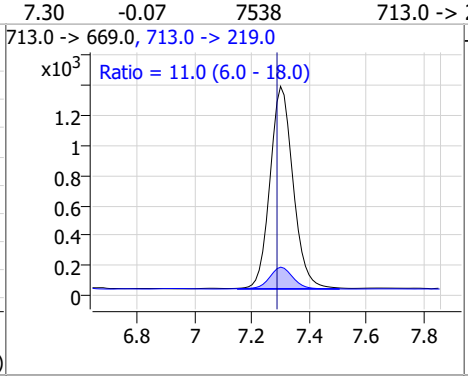


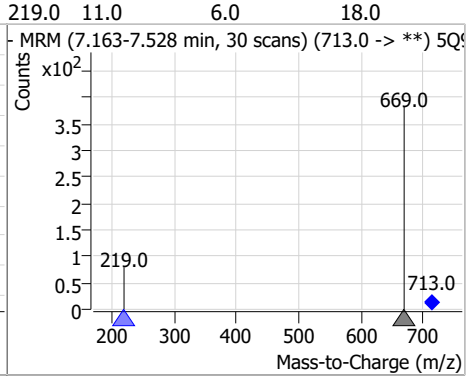


Perfluorinated Compounds by LC/MS/MS

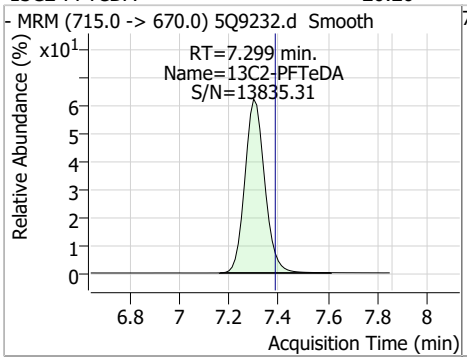
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.41	7.30	-0.07	7538	713.0 -> 219.0	11.0	6.0	18.0

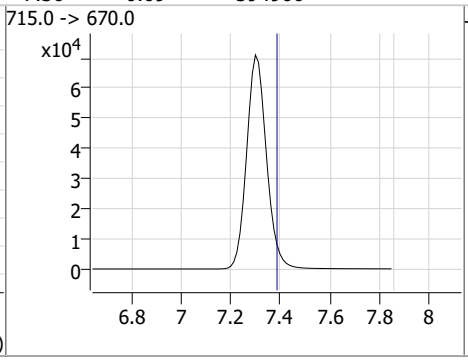


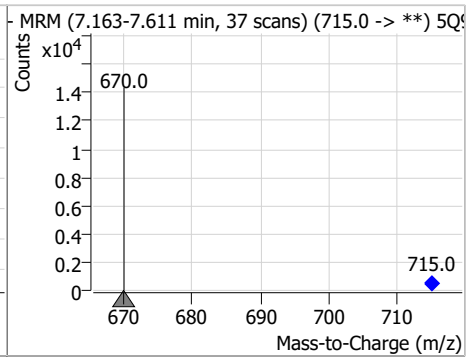




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.20	7.30	-0.09	394960				







Manual Integration Approval Summary

Sample Number: S5Q137-IC137
Lab FileID: 5Q9232.D
Injection Time: 01/03/23 15:04
Method: EPA 537M QSM5.3 B-15
Analyst approved: 01/04/23 11:33 Lindsay Ritner
Supervisor approved: 01/04/23 15:00 Natasha Gumtie

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanesulfonic acid	1763-23-1		5.94	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Natasha Gumtie 01/04/23 15:00

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9233.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 1/3/2023 3:19:36 PM
Sample Name : ic137-1
Vial : P1-A3
DA Method File : ID_010323_S5Q137.quantmethod.xml
Batch Name : s5q137.batch.bin
Sample Information : OP94373,S5Q137,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.950	217.0 -> 172.0	118525	20.00	µg/L	-0.025
M5-PFPeA	3.444	268.0 -> 223.0	211246	20.00	µg/L	-0.025
M5-PFHxA	4.416	318.0 -> 273.0	296330	20.00	µg/L	-0.038
M4-PFHpA	5.088	367.0 -> 322.0	302084	20.00	µg/L	-0.025
M8-PFOA	5.583	421.0 -> 376.0	387990	20.00	µg/L	-0.038
M9-PFNA	6.006	472.0 -> 427.0	390774	20.00	µg/L	-0.038
M6-PFDA	6.364	519.0 -> 474.0	384891	20.00	µg/L	-0.037
M7-PFUnDA	6.672	570.0 -> 525.0	387661	20.00	µg/L	-0.050
M2-PFDoDA	6.930	615.0 -> 570.0	387806	20.00	µg/L	-0.050
M2-PFTeDA	7.337	715.0 -> 670.0	403671	20.00	µg/L	-0.050
M8-FOSA	6.629	506.0 -> 78.0	135240	20.00	µg/L	-0.012
M3-PFBS	3.654	302.0 -> 99.0	26445	20.00	µg/L	-0.025
M3-PFHxS	5.098	402.0 -> 99.0	32803	20.00	µg/L	-0.025
M8-PFOS	5.979	507.0 -> 99.0	39756	20.00	µg/L	-0.037
M2-4:2FTS	4.324	329.0 -> 309.0	91127	20.00	µg/L	-0.025
M2-6:2FTS	5.557	429.0 -> 409.0	140848	20.00	µg/L	-0.037
M2-8:2FTS	6.351	529.0 -> 509.0	121009	20.00	µg/L	-0.049
M3-MeFOSAA	6.946	573.0 -> 419.0	63826	20.00	µg/L	-0.012
M3-HFPO-DA	4.619	287.0 -> 169.0	69423	20.00	µg/L	-0.025
M3-MeFOSA	6.986	515.0 -> 169.0	38951	20.00	µg/L	0.000
M5-EtFOSAA	7.081	589.0 -> 419.0	64262	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.324	329.0 -> 309.0	91127	19.27	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.3%		
13C2-6:2FTS	5.557	429.0 -> 409.0	140848	19.78	µg/L	-0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.9%		
13C2-8:2FTS	6.351	529.0 -> 509.0	121009	19.71	µg/L	-0.049
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.5%		
13C2-PFDoDA	6.930	615.0 -> 570.0	387806	20.95	µg/L	-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.8%		
13C2-PFTeDA	7.337	715.0 -> 670.0	403671	20.64	µg/L	-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.2%		
13C3-PFBS	3.654	302.0 -> 99.0	26445	20.63	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.1%		
13C3-PFHxS	5.098	402.0 -> 99.0	32803	20.65	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.2%		
13C4-PFBA	1.950	217.0 -> 172.0	118525	20.67	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.4%		
13C4-PFHpA	5.088	367.0 -> 322.0	302084	20.56	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.8%		
13C5-PFHxA	4.416	318.0 -> 273.0	296330	20.17	µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.9%		
13C5-PFPeA	3.444	268.0 -> 223.0	211246	20.33	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.7%		
13C6-PFDA	6.364	519.0 -> 474.0	384891	20.76	µg/L	-0.037

Perfluorinated Compounds by LC/MS/MS

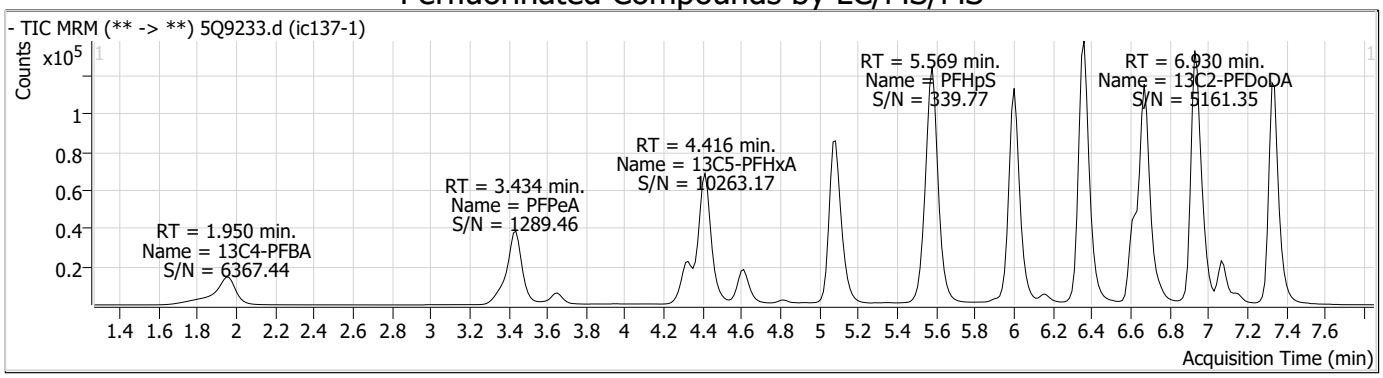
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.8%		
13C7-PFUnDA	6.672	570.0 -> 525.0	387661	20.55 µg/L		-0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.7%		
13C8-FOSA	6.629	506.0 -> 78.0	135240	22.56 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 112.8%		
13C8-PFOA	5.583	421.0 -> 376.0	387990	20.60 µg/L		-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.0%		
13C8-PFOS	5.979	507.0 -> 99.0	39756	20.86 µg/L		-0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.3%		
13C9-PFNA	6.006	472.0 -> 427.0	390774	20.70 µg/L		-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.5%		
d3-MeFOSAA	6.946	573.0 -> 419.0	63826	22.77 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 113.9%		
13C3-HFPO-DA	4.619	287.0 -> 169.0	69423	20.70 µg/L		-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.5%		
d3-MeFOSA	6.986	515.0 -> 169.0	38951	22.59 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 113.0%		
d5-EtFOSAA	7.081	589.0 -> 419.0	64262	23.18 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 115.9%		
Target Compounds						QValue
4:2FTS	4.313	327.0 -> 307.0	3796	0.91 µg/L		91
		327.0 -> 81.0	2536			
6:2FTS	5.558	427.0 -> 407.0	5831	0.95 µg/L		98
		427.0 -> 81.0	2666			
8:2FTS	6.351	527.0 -> 507.0	4609	0.89 µg/L		94
		527.0 -> 81.0	2611			
EtFOSAA	7.082	584.0 -> 419.0	1964	0.92 µg/L		92
		584.0 -> 483.0	1064			
FOSA	6.630	498.0 -> 78.0	4965	0.82 µg/L		97
		498.0 -> 478.0	204			
MeFOSAA	6.947	570.0 -> 419.0	2106	0.89 µg/L		98
		570.0 -> 512.0	806			
PFBA	1.956	213.0 -> 169.0	4632	0.83 µg/L		100
PFBS	3.657	299.0 -> 80.0	3039	0.80 µg/L		96
		299.0 -> 99.0	1367			
PFDA	6.365	513.0 -> 469.0	14971	0.83 µg/L		99
		513.0 -> 219.0	2800			
PFDoDA	6.930	613.0 -> 569.0	12843	0.82 µg/L		100
		613.0 -> 319.0	2305			
PFDS	6.620	599.0 -> 80.0	1964	0.85 µg/L		91
		599.0 -> 99.0	1303			
PFHpA	5.089	363.0 -> 319.0	13459	0.82 µg/L		99
		363.0 -> 169.0	3081			
PFHpS	5.569	449.0 -> 80.0	2405	0.83 µg/L		100
		449.0 -> 99.0	1312			
PFHxA	4.417	313.0 -> 269.0	10847	0.82 µg/L		99
		313.0 -> 119.0	528			
PFHxS	5.099	399.0 -> 80.0	2448	0.82 µg/L		95
		399.0 -> 99.0	1463			
PFNA	6.006	463.0 -> 419.0	14741	0.84 µg/L		95
		463.0 -> 219.0	3653			
PFNS	6.326	549.0 -> 80.0	1881	0.79 µg/L		99
		549.0 -> 99.0	1055			
PFOA	5.584	413.0 -> 369.0	15928	0.83 µg/L		98
		413.0 -> 169.0	4547			
PFOS	5.980	499.0 -> 80.0	2931	0.85 µg/L	m	98

Perfluorinated Compounds by LC/MS/MS

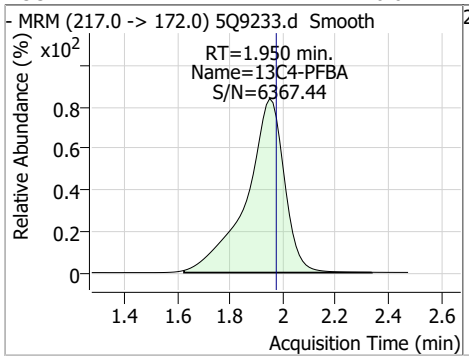
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
		499.0 -> 99.0	1365				
PFPeA	3.434	263.0 -> 219.0	9047	0.83	µg/L		100
PFPeS	4.489	349.0 -> 80.0	1820	0.79	µg/L		95
		349.0 -> 99.0	973				
PFTeDA	7.337	713.0 -> 669.0	15278	0.82	µg/L		98
		713.0 -> 219.0	1719				
PFTrDA	7.152	663.0 -> 619.0	13080	0.77	µg/L		98
		663.0 -> 369.0	1633				
PFUnDA	6.673	563.0 -> 519.0	13952	0.82	µg/L		100
		563.0 -> 269.0	2566				
11Cl-PF3OUdS	6.756	631.0 -> 451.0	8434	0.83	µg/L		98
		633.0 -> 453.0	2452				
9Cl-PF3ONS	6.163	531.0 -> 351.0	11230	0.82	µg/L		96
		533.0 -> 353.0	3274				
ADONA	5.124	377.0 -> 251.0	17689	0.79	µg/L		100
		377.0 -> 85.0	6655				
HFPO-DA	4.614	329.0 -> 169.0	4295	0.85	µg/L		94
		285.0 -> 169.0	2344				
MeFOSA	6.987	512.0 -> 169.0	2094	1.03	µg/L	m	98
		512.0 -> 219.0	1571				
4-PFECHS	5.518	461.0 -> 381.0	7162	0.77	µg/L		97
		461.0 -> 99.0	4147				
FBSA	4.817	298.0 -> 78.0	6249	0.97	µg/L		99
		298.0 -> 64.0	553				
FHxSA	5.911	398.0 -> 78.0	5778	0.95	µg/L		98
		398.0 -> 64.0	577				

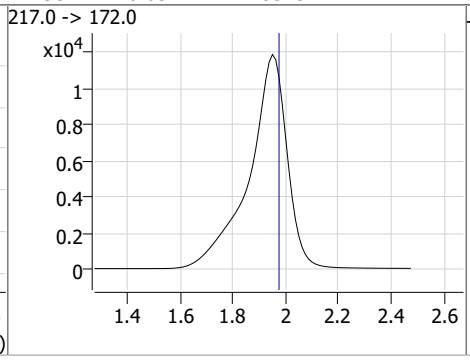
 # = Qualifier out of range, m = manually integrated, + = Area summed

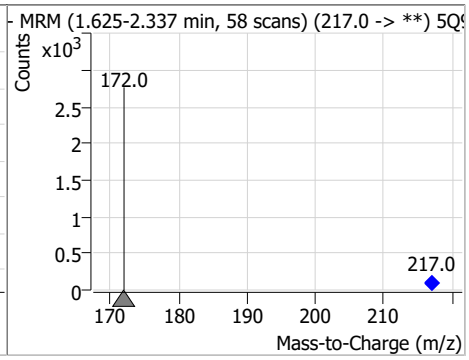
Perfluorinated Compounds by LC/MS/MS



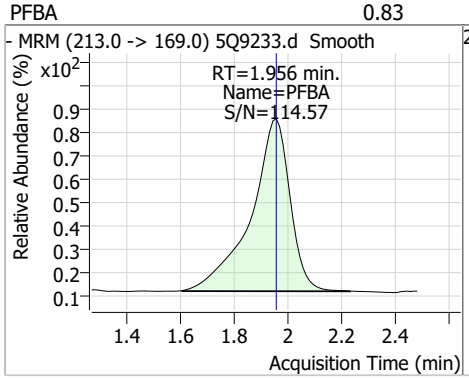
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.67	1.95	-0.03	118525				

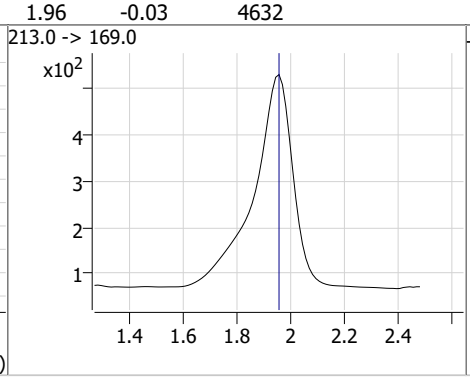


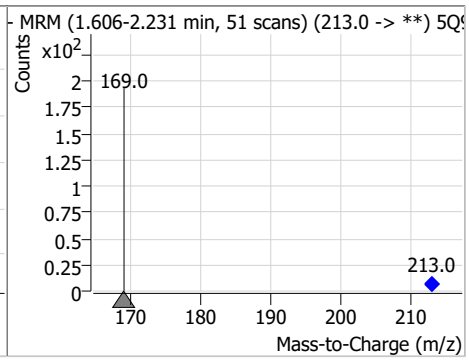




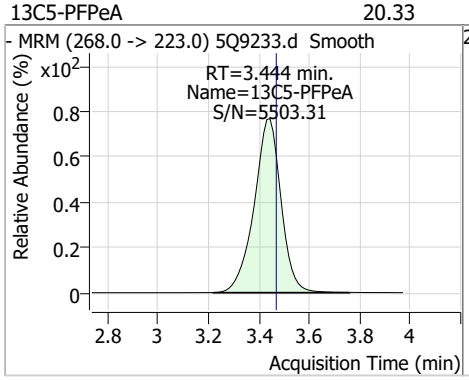
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.83	1.96	-0.03	4632				

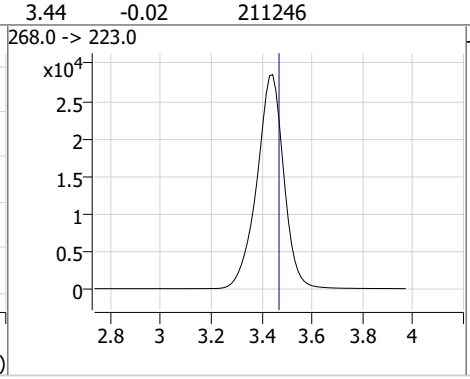


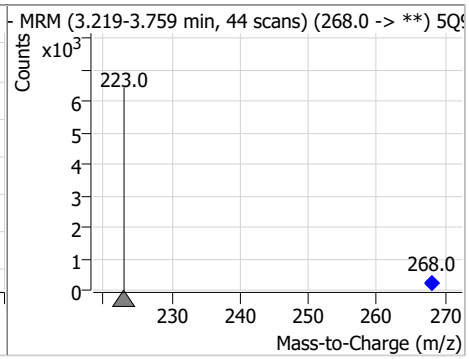




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.33	3.44	-0.02	211246				

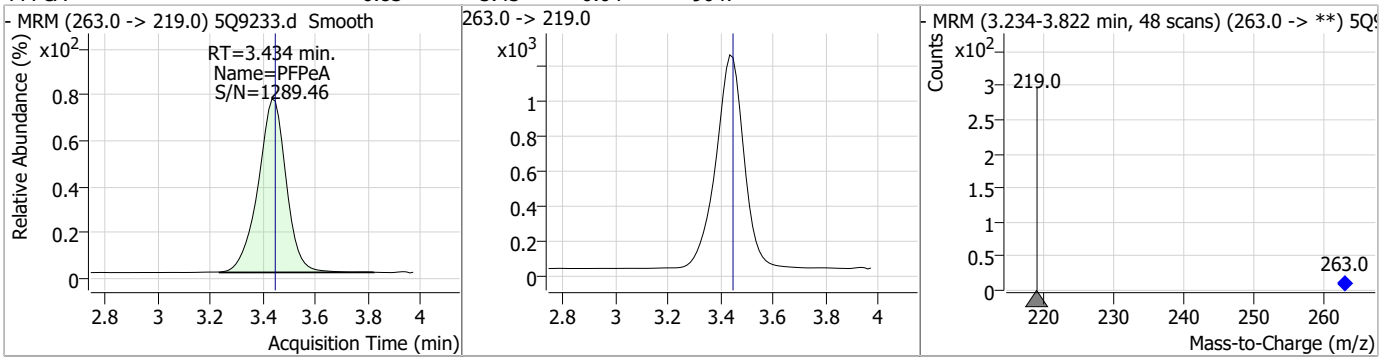




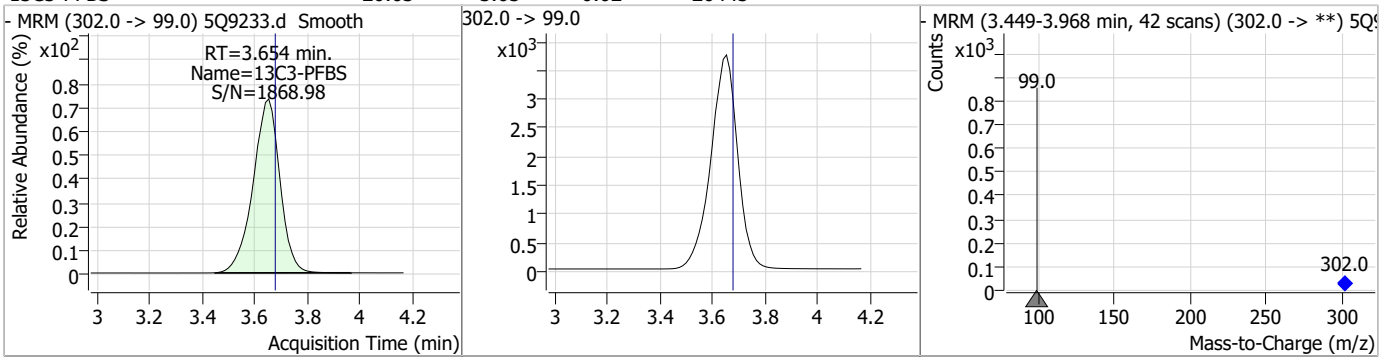


Perfluorinated Compounds by LC/MS/MS

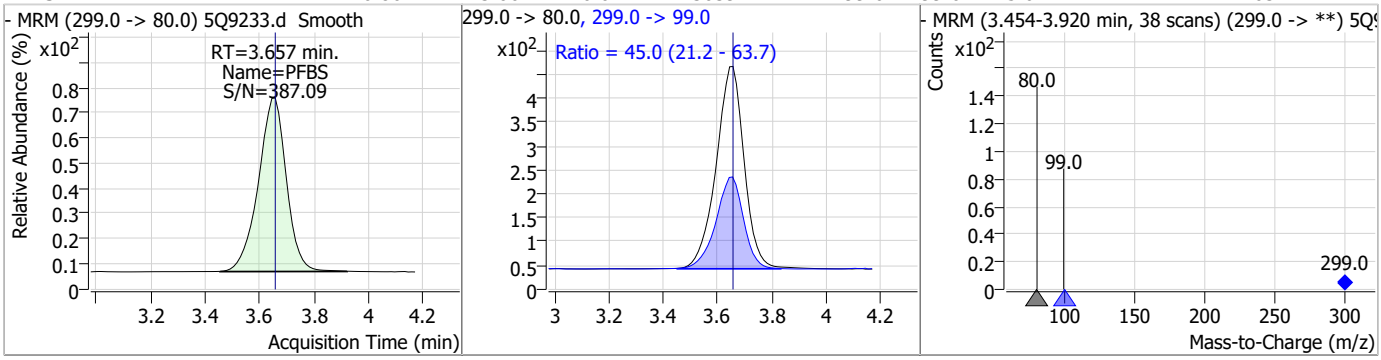
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.83	3.43	-0.04	9047				



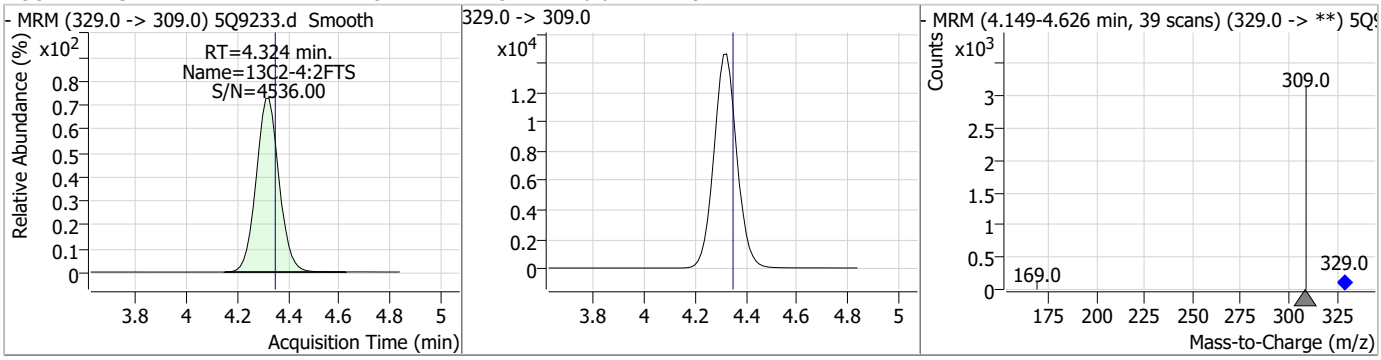
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.63	3.65	-0.02	26445				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.80	3.66	-0.02	3039	299.0 -> 99.0	45.0	21.2	63.7

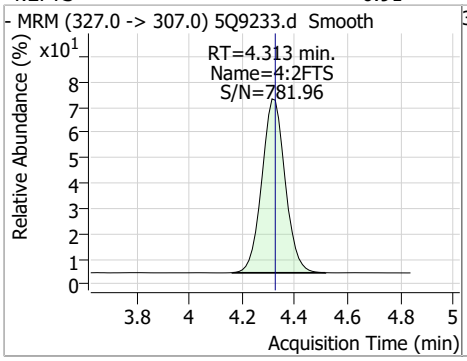


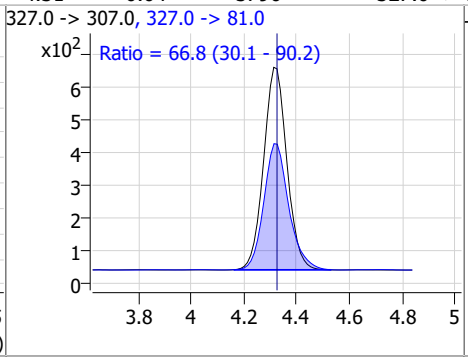
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.27	4.32	-0.02	91127				

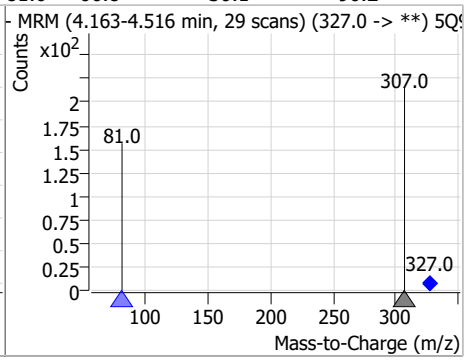


Perfluorinated Compounds by LC/MS/MS

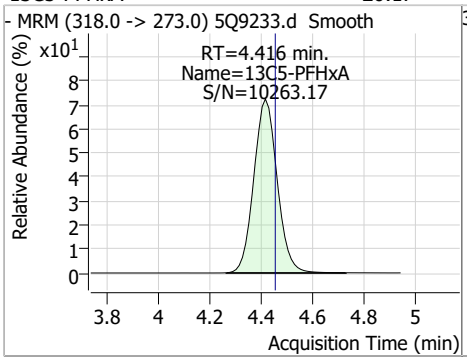
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	0.91	4.31	-0.04	3796	327.0 -> 81.0	66.8	30.1	90.2

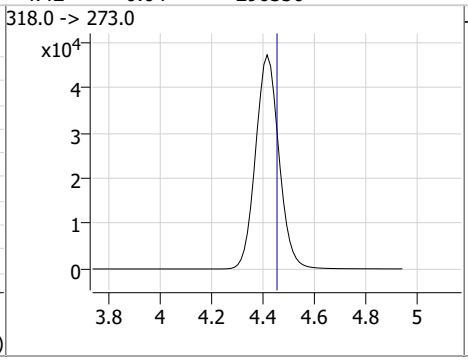


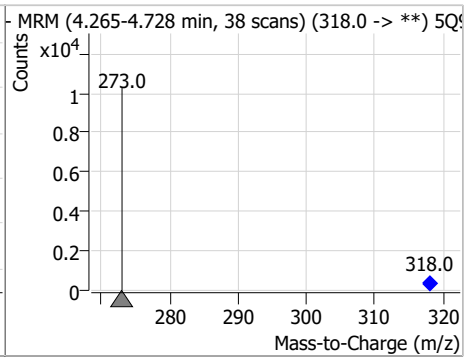




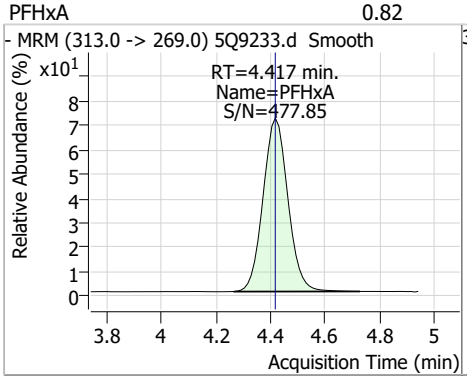
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.17	4.42	-0.04	296330				

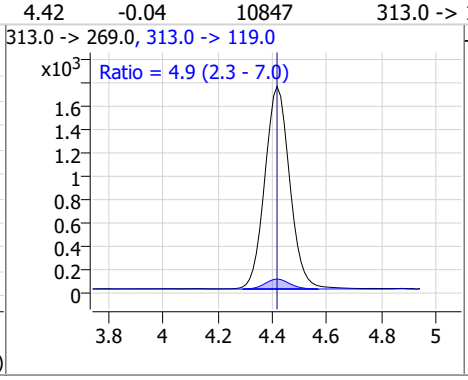


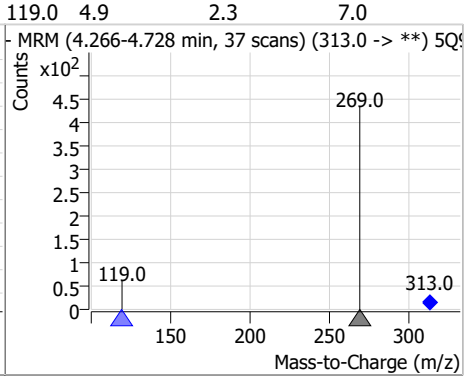




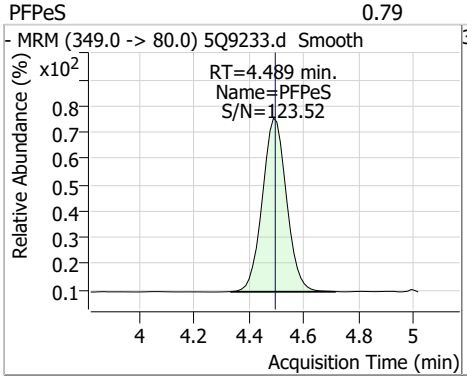
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.82	4.42	-0.04	10847	313.0 -> 119.0	4.9	2.3	7.0

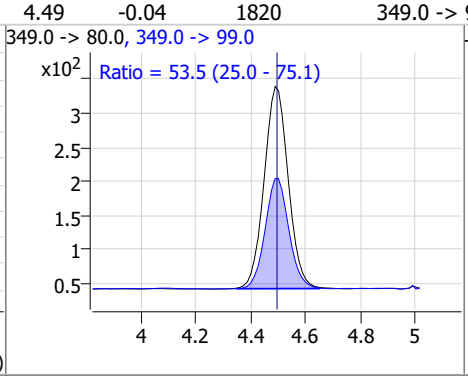


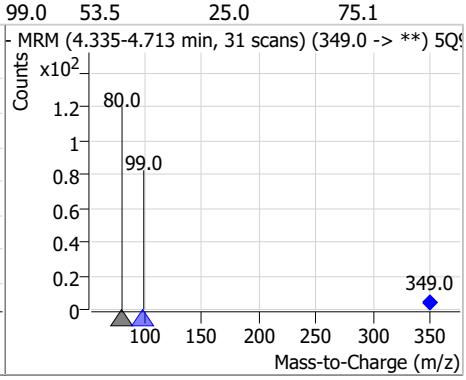




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	0.79	4.49	-0.04	1820	349.0 -> 99.0	53.5	25.0	75.1

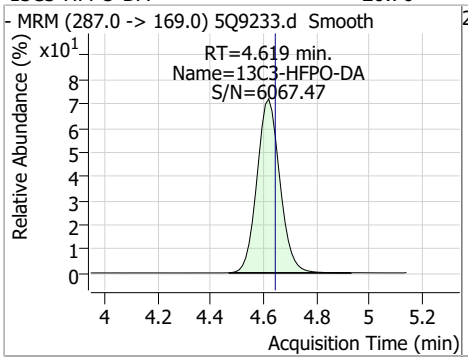


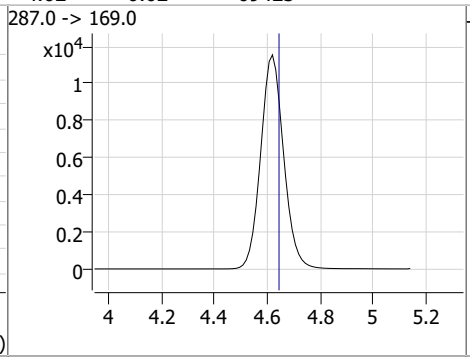


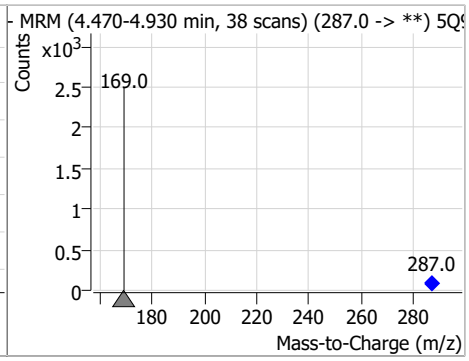


Perfluorinated Compounds by LC/MS/MS

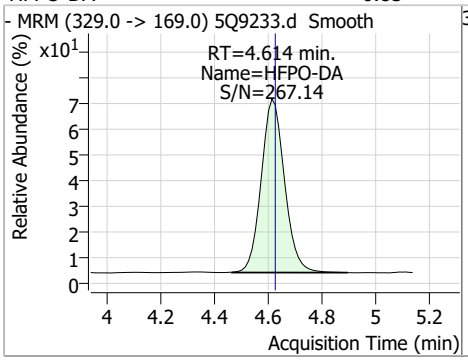
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.70	4.62	-0.02	69423				

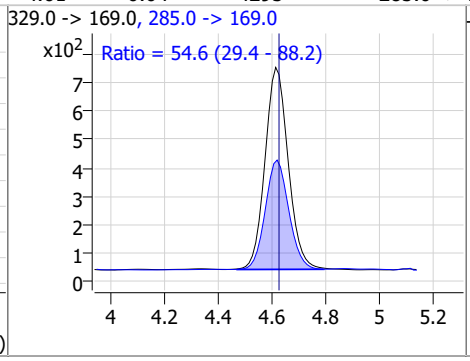


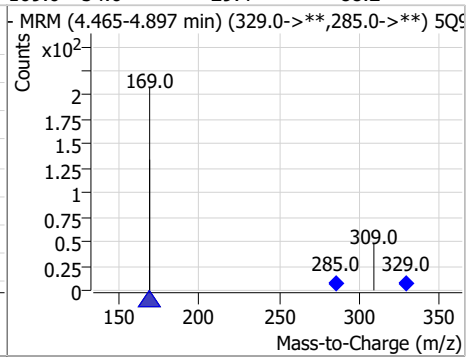




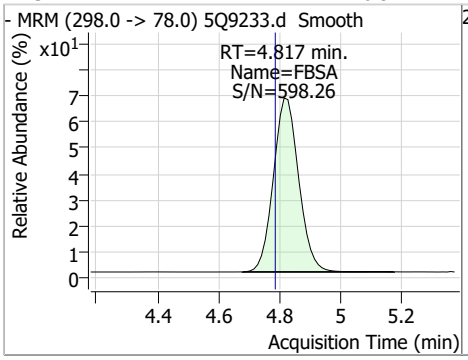
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.85	4.61	-0.04	4295	285.0 -> 169.0	54.6	29.4	88.2

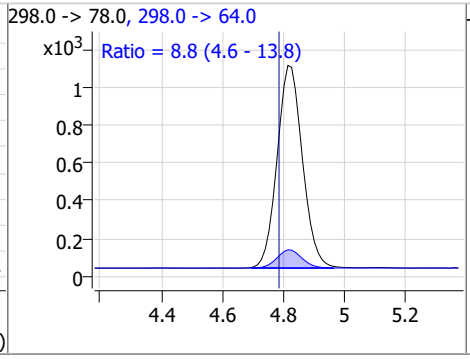


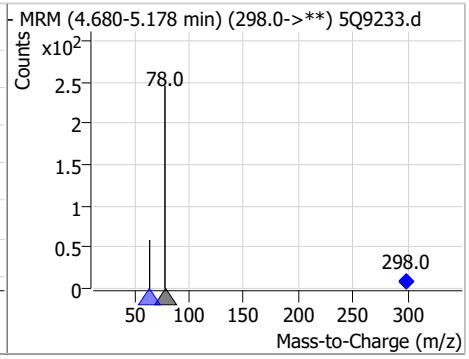




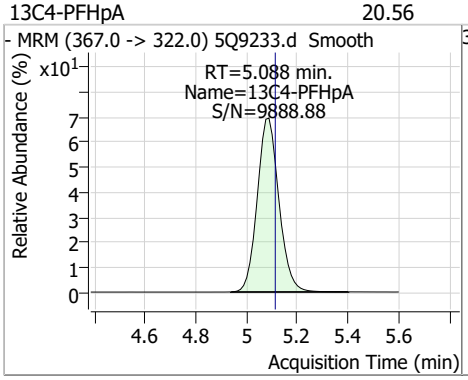
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	0.97	4.82	-0.01	6249	298.0 -> 64.0	8.8	4.6	13.8

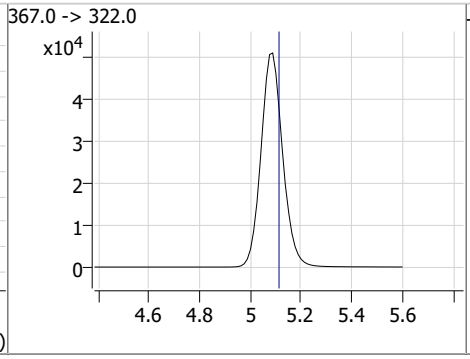


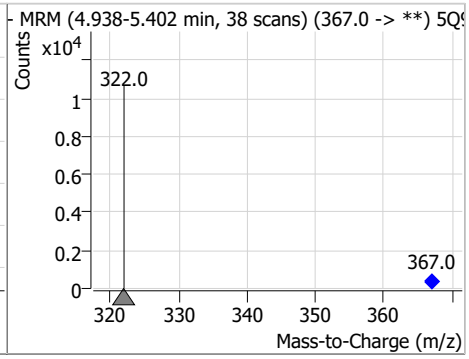




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.56	5.09	-0.02	302084				

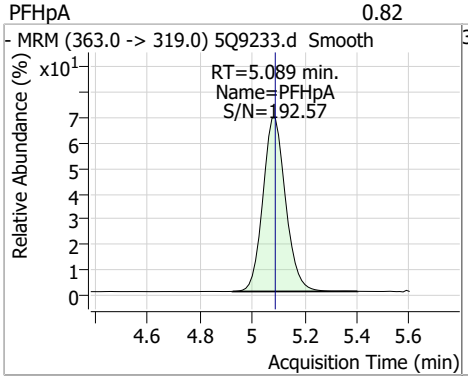


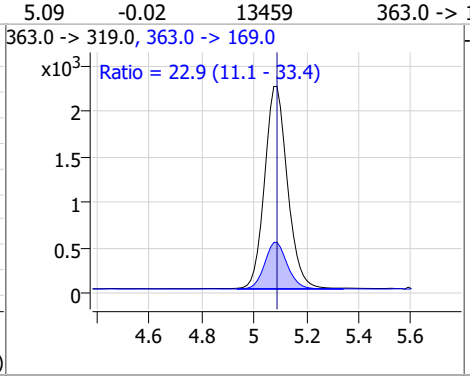


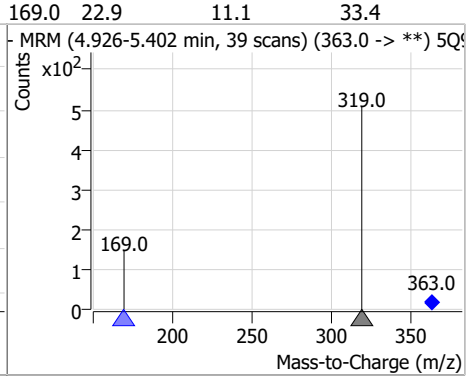


Perfluorinated Compounds by LC/MS/MS

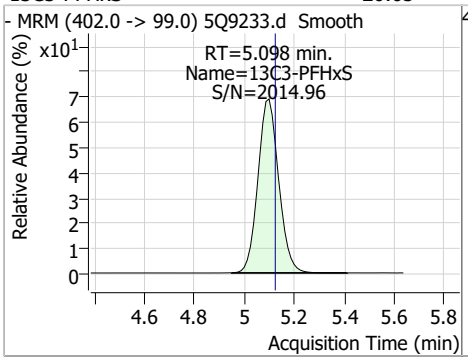
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.82	5.09	-0.02	13459	363.0 -> 169.0	22.9	11.1	33.4

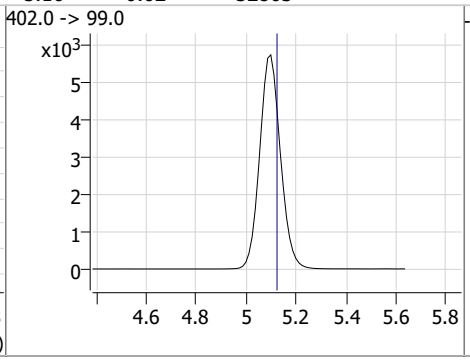


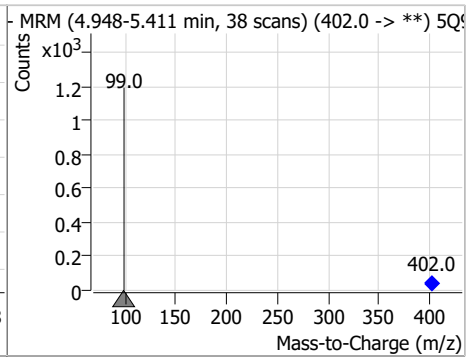




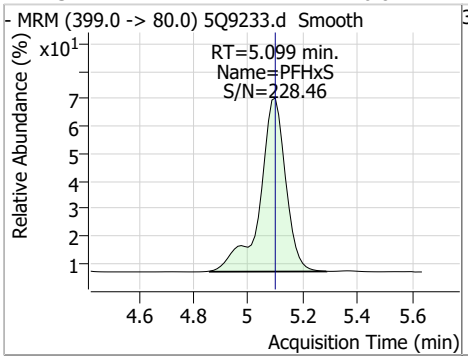
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.65	5.10	-0.02	32803				

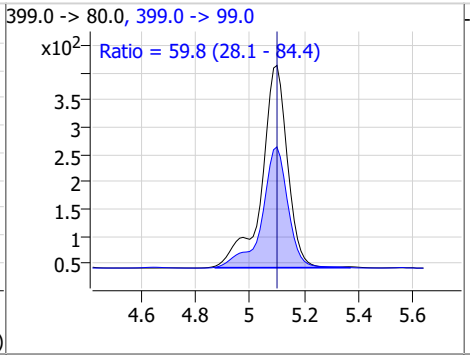


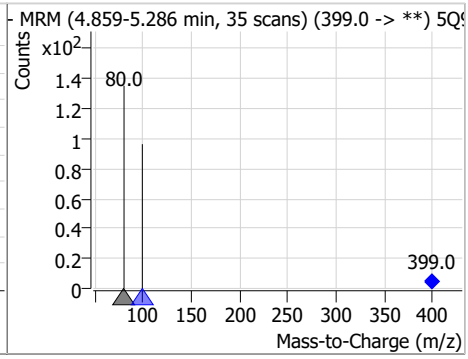




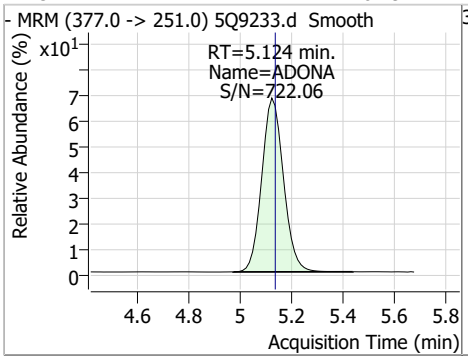
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.82	5.10	-0.02	2448	399.0 -> 99.0	59.8	28.1	84.4

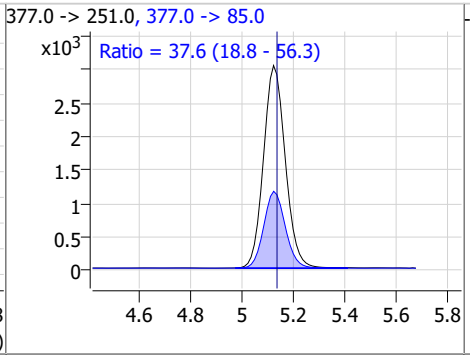


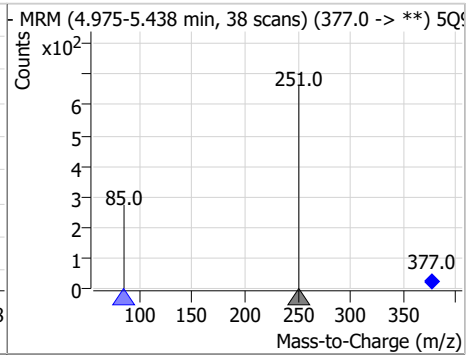




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.79	5.12	-0.04	17689	377.0 -> 85.0	37.6	18.8	56.3

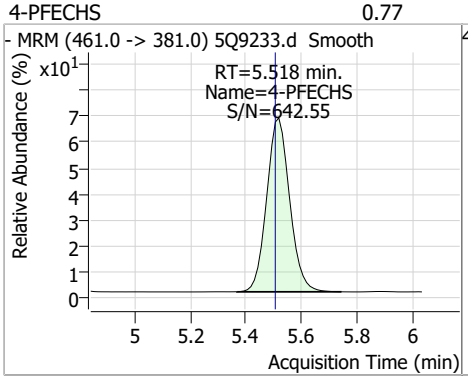


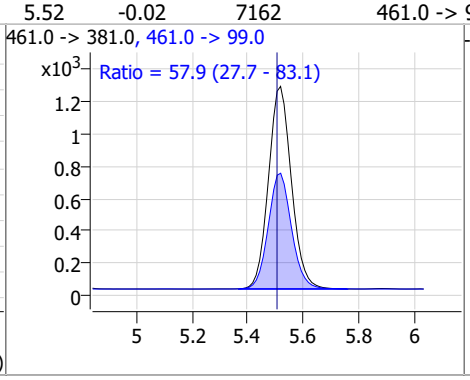


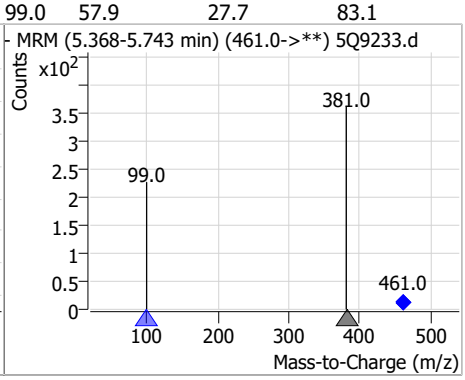


Perfluorinated Compounds by LC/MS/MS

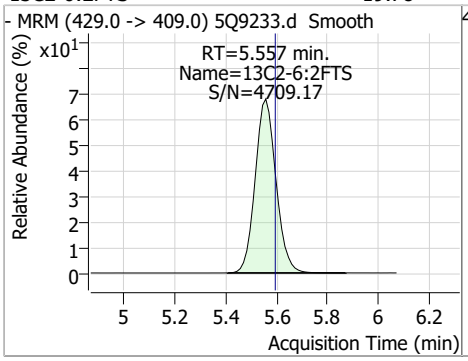
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	0.77	5.52	-0.02	7162	461.0 -> 99.0	57.9	27.7	83.1

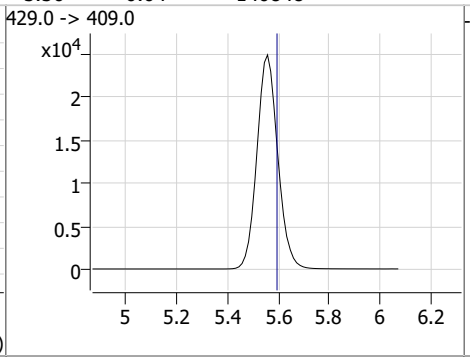


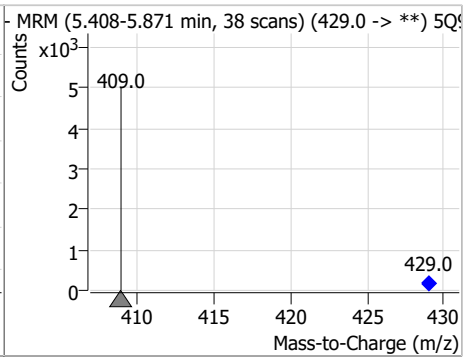




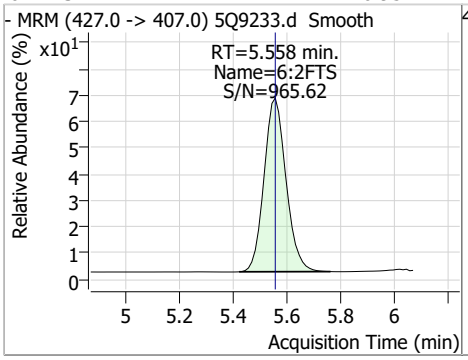
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.78	5.56	-0.04	140848				

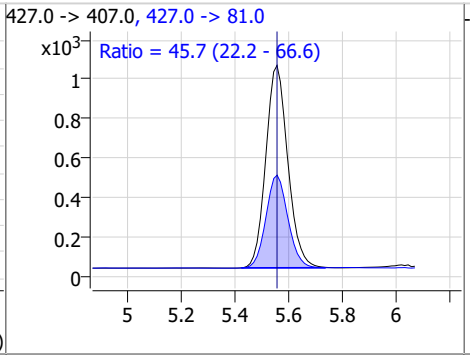


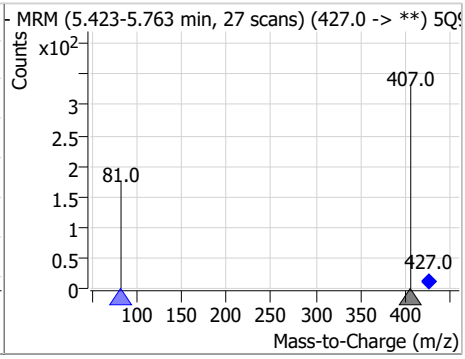




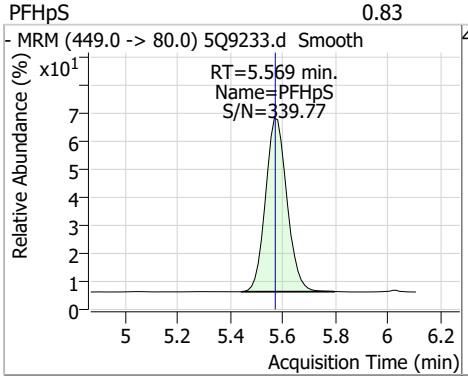
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	0.95	5.56	-0.04	5831	427.0 -> 81.0	45.7	22.2	66.6

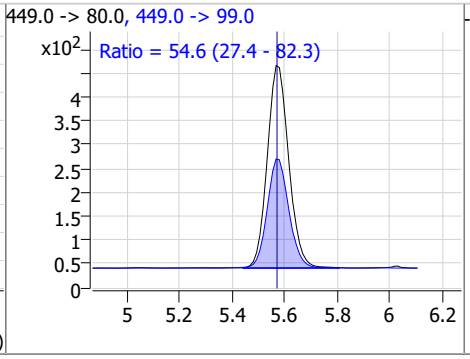


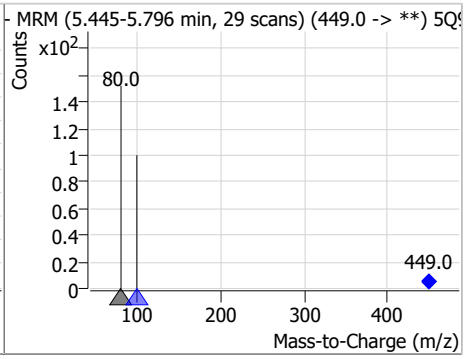




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	0.83	5.57	-0.04	2405	449.0 -> 99.0	54.6	27.4	82.3

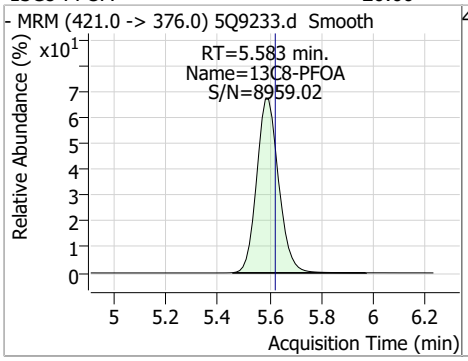


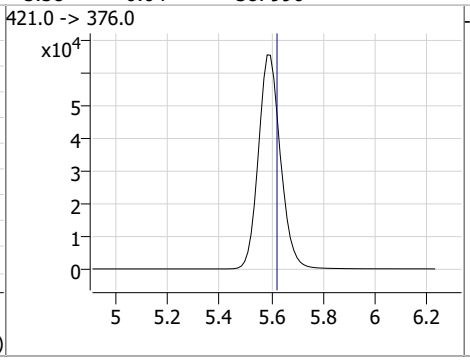


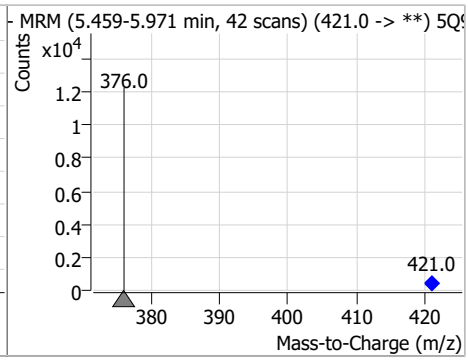


Perfluorinated Compounds by LC/MS/MS

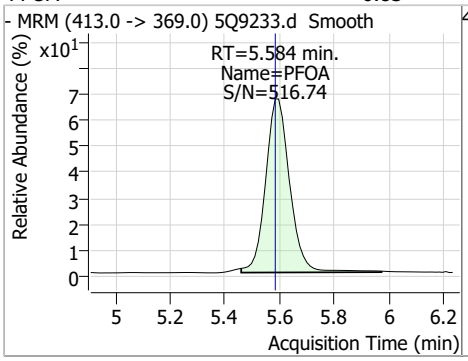
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.60	5.58	-0.04	387990				

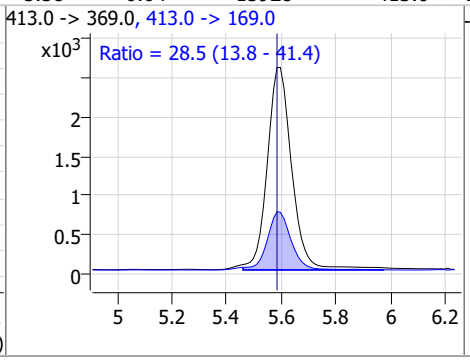


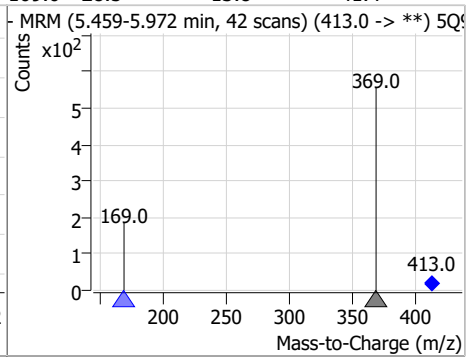




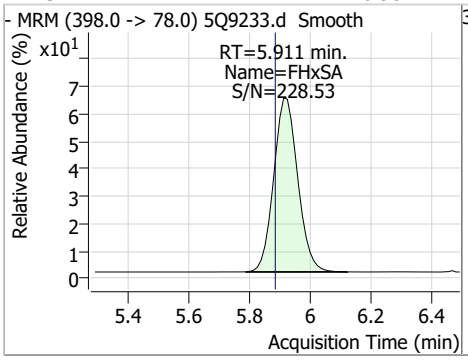
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.83	5.58	-0.04	15928	413.0 -> 169.0	28.5	13.8	41.4

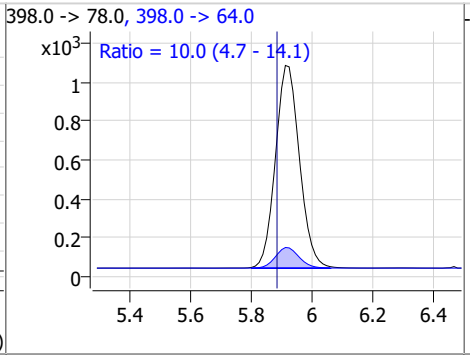


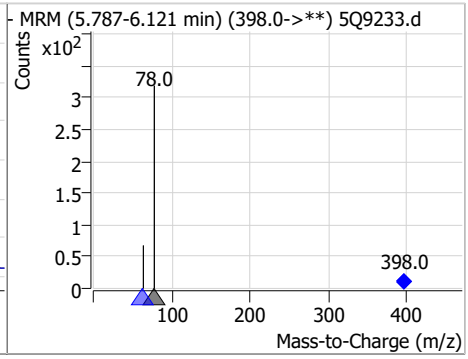




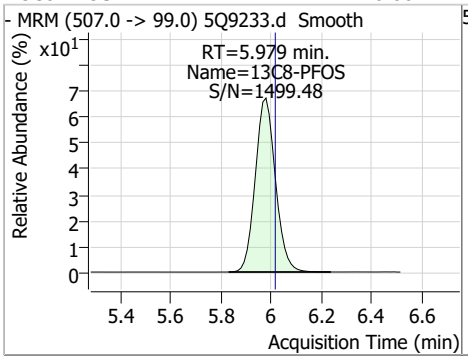
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	0.95	5.91	-0.01	5778	398.0 -> 64.0	10.0	4.7	14.1

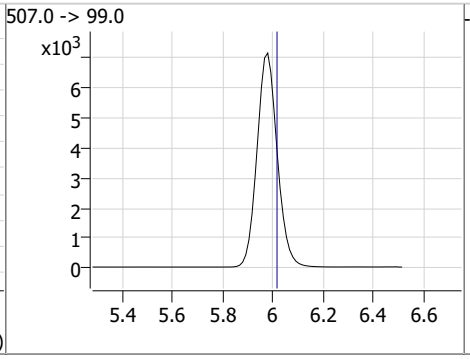


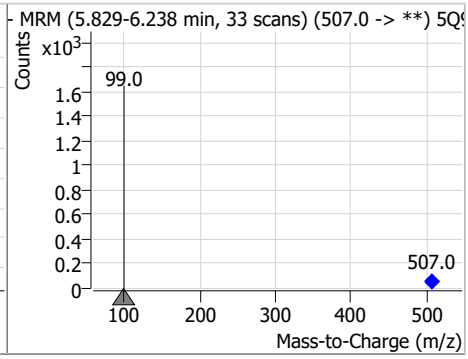




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.86	5.98	-0.04	39756				

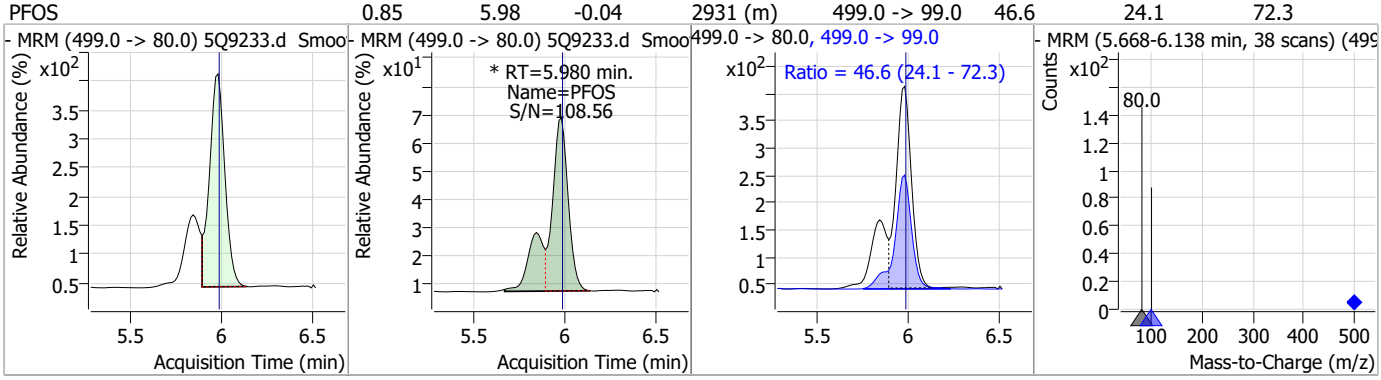




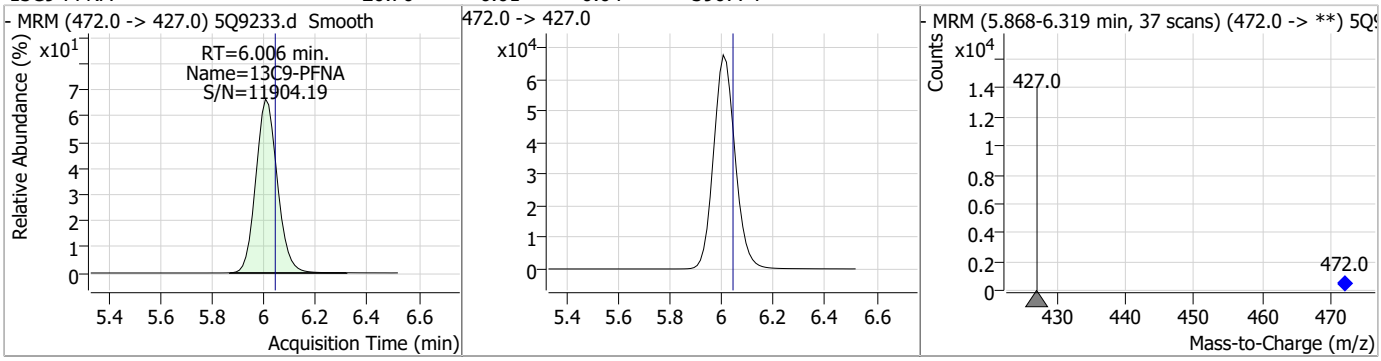


Perfluorinated Compounds by LC/MS/MS

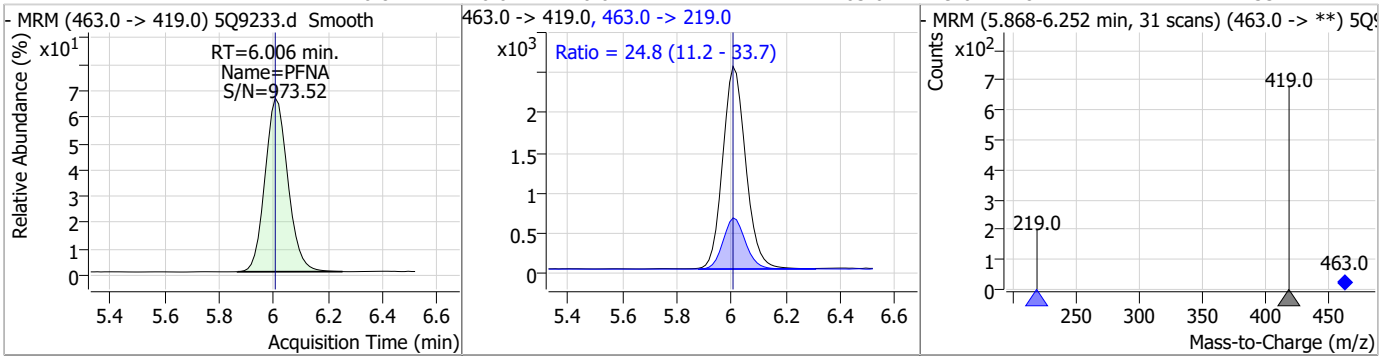
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.85	5.98	-0.04	2931 (m)	499.0 -> 99.0	46.6	24.1	72.3



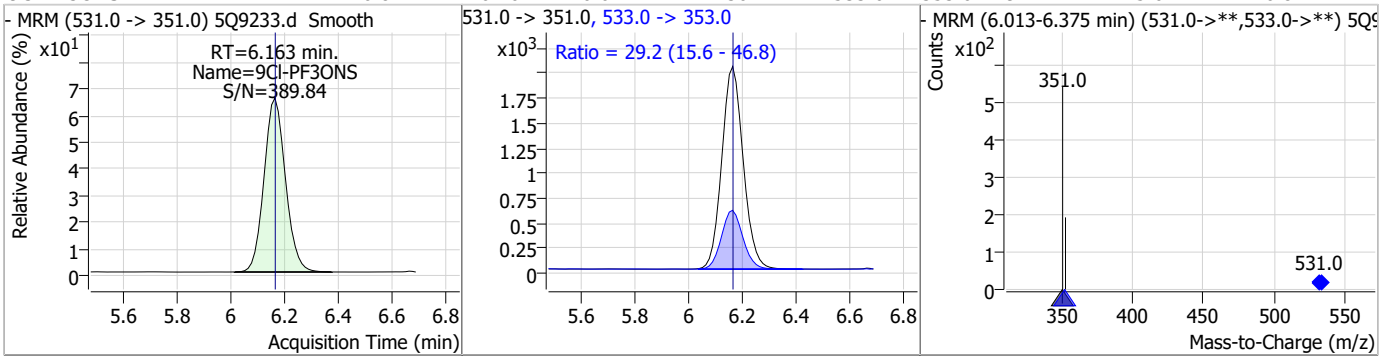
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.70	6.01	-0.04	390774				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.84	6.01	-0.04	14741	463.0 -> 219.0	24.8	11.2	33.7

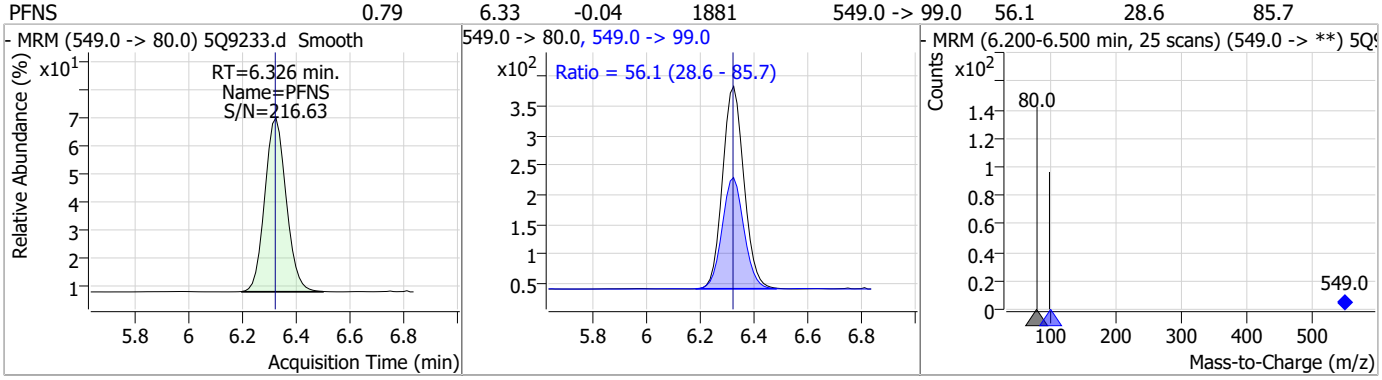


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.82	6.16	-0.04	11230	533.0 -> 353.0	29.2	15.6	46.8

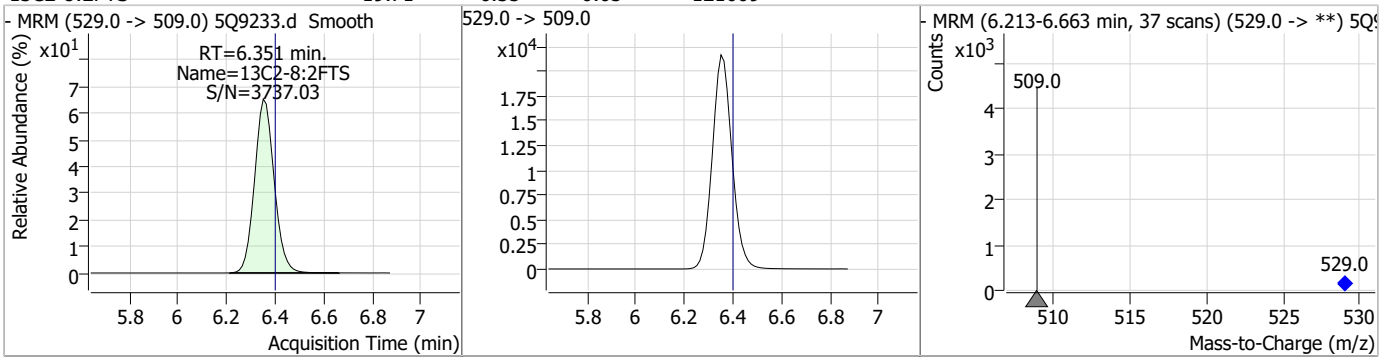


Perfluorinated Compounds by LC/MS/MS

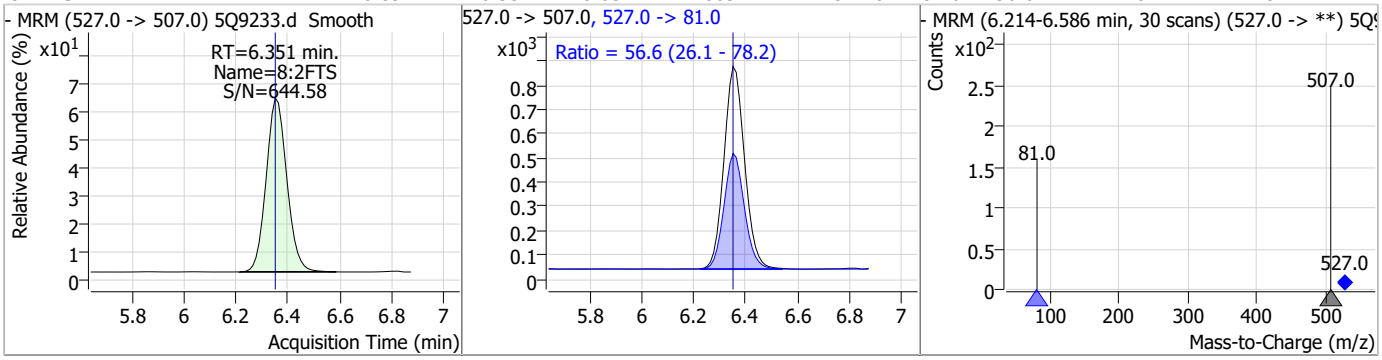
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	0.79	6.33	-0.04	1881	549.0 -> 99.0	56.1	28.6	85.7



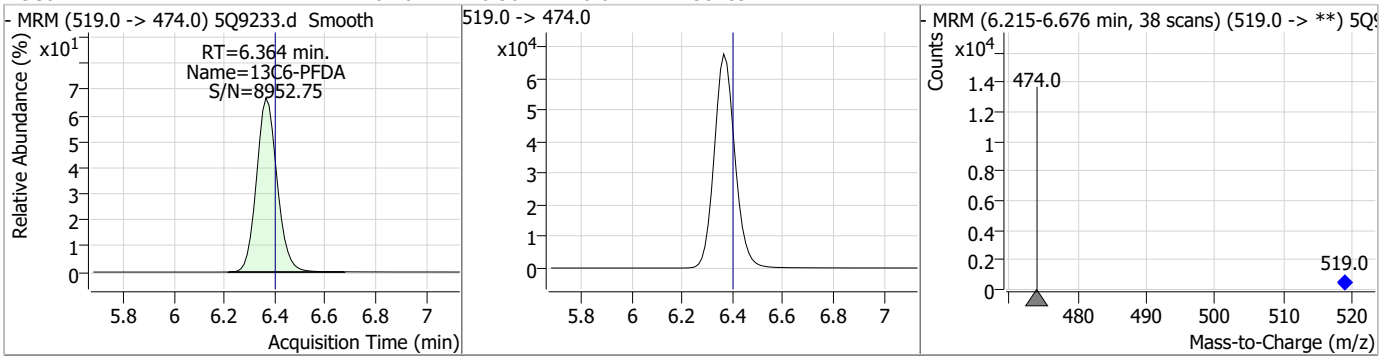
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.71	6.35	-0.05	121009				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	0.89	6.35	-0.05	4609	527.0 -> 81.0	56.6	26.1	78.2

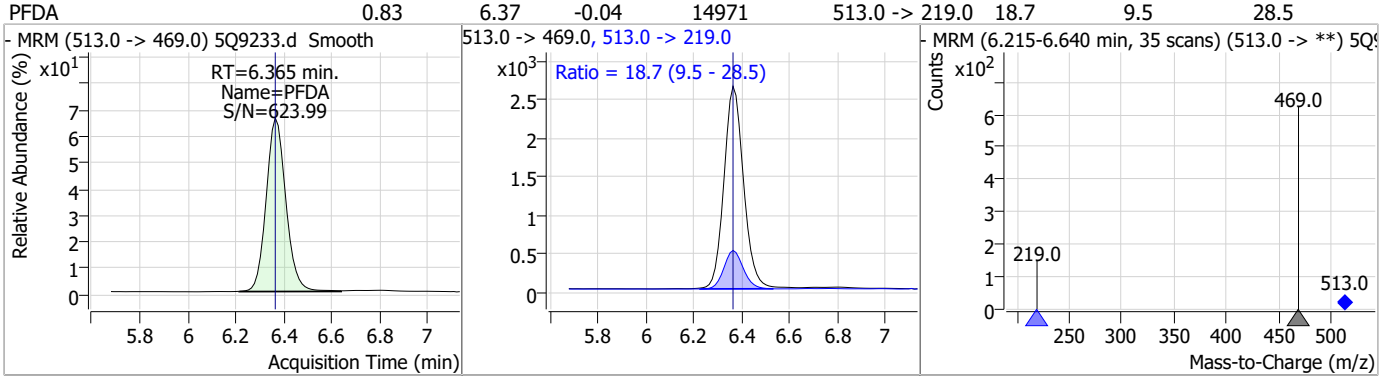


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.76	6.36	-0.04	384891				

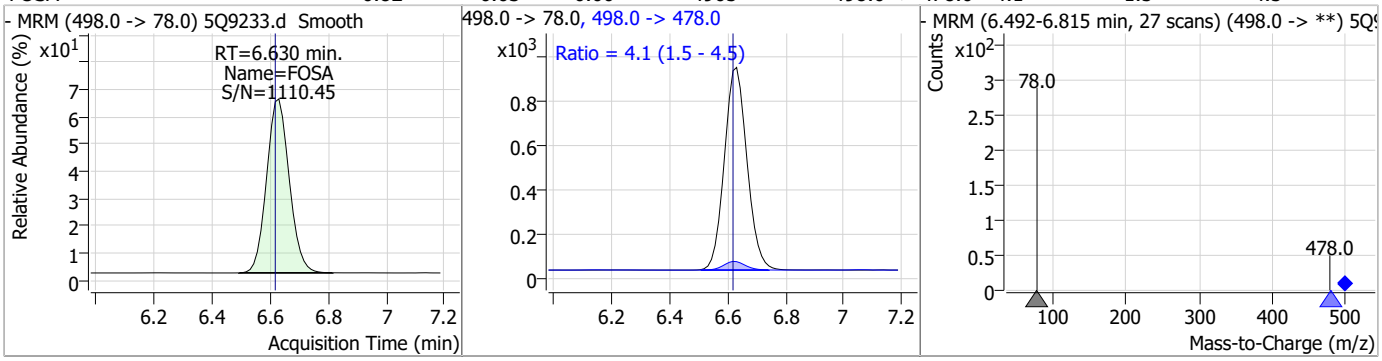


Perfluorinated Compounds by LC/MS/MS

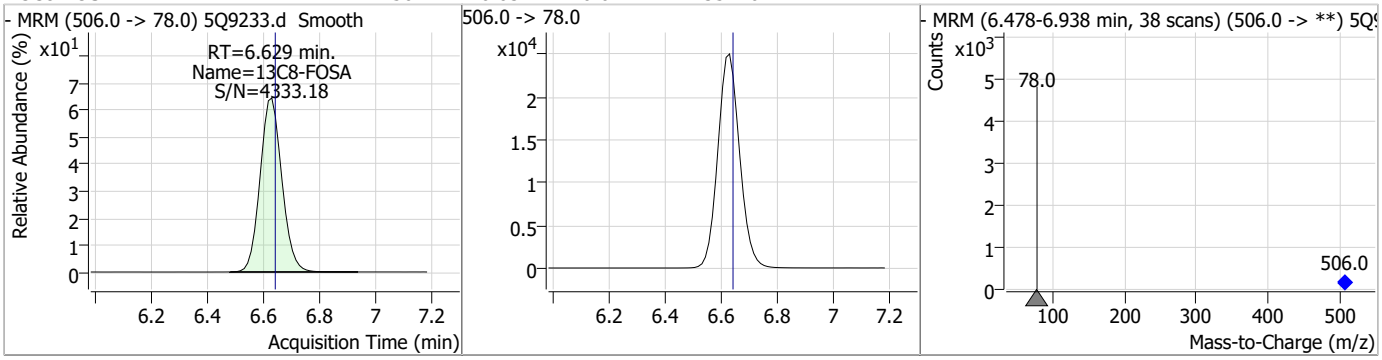
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.83	6.37	-0.04	14971	513.0 -> 219.0	18.7	9.5	28.5



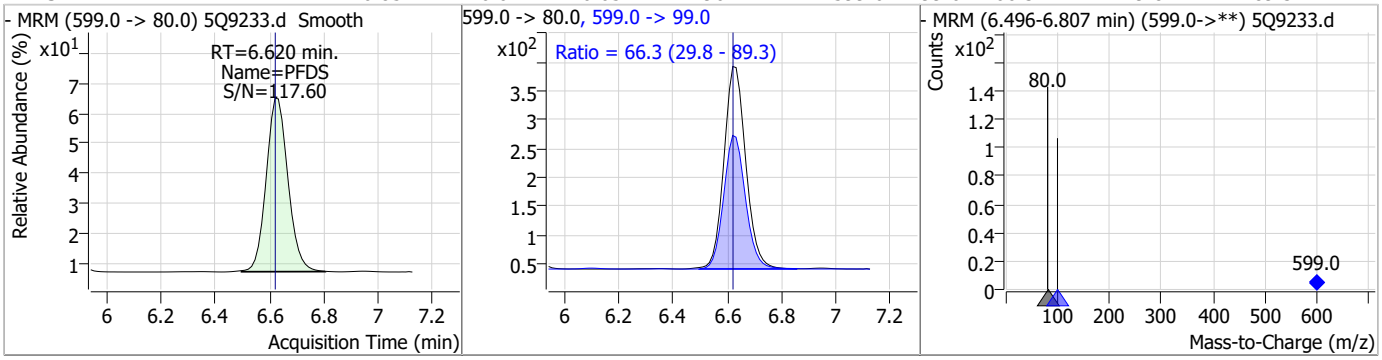
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	0.82	6.63	0.00	4965	498.0 -> 478.0	4.1	1.5	4.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	22.56	6.63	-0.01	135240				

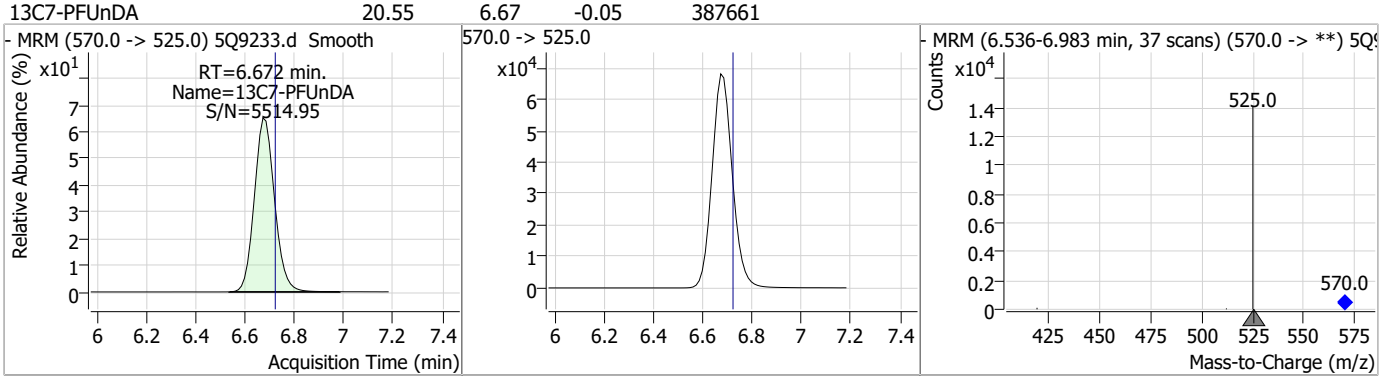


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	0.85	6.62	-0.05	1964	599.0 -> 99.0	66.3	29.8	89.3

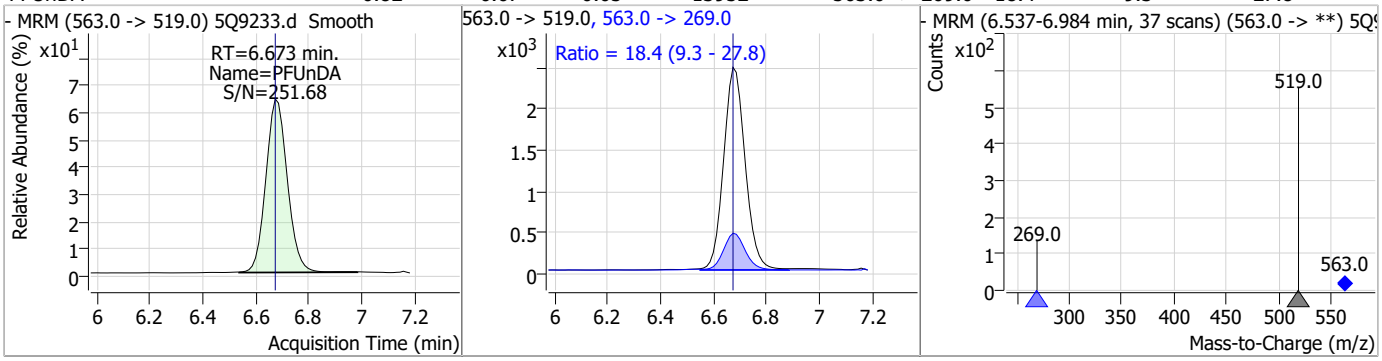


Perfluorinated Compounds by LC/MS/MS

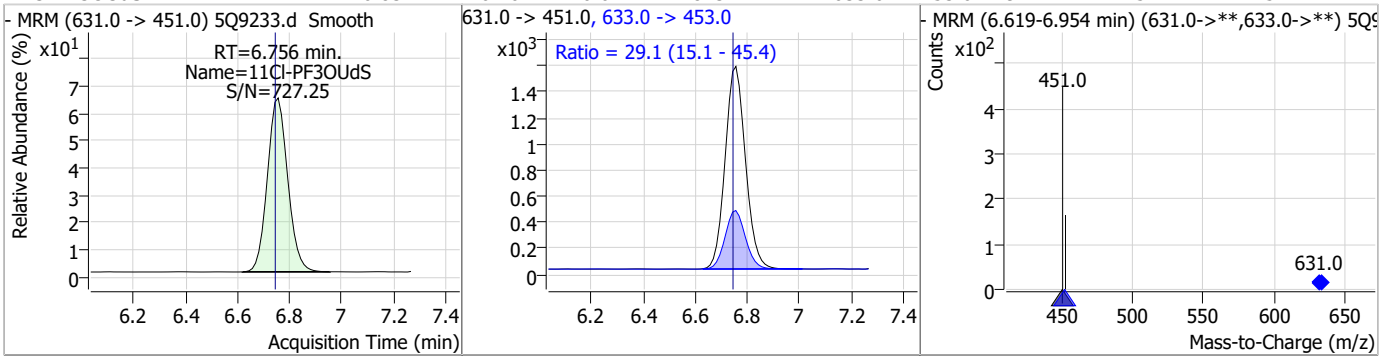
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.55	6.67	-0.05	387661				



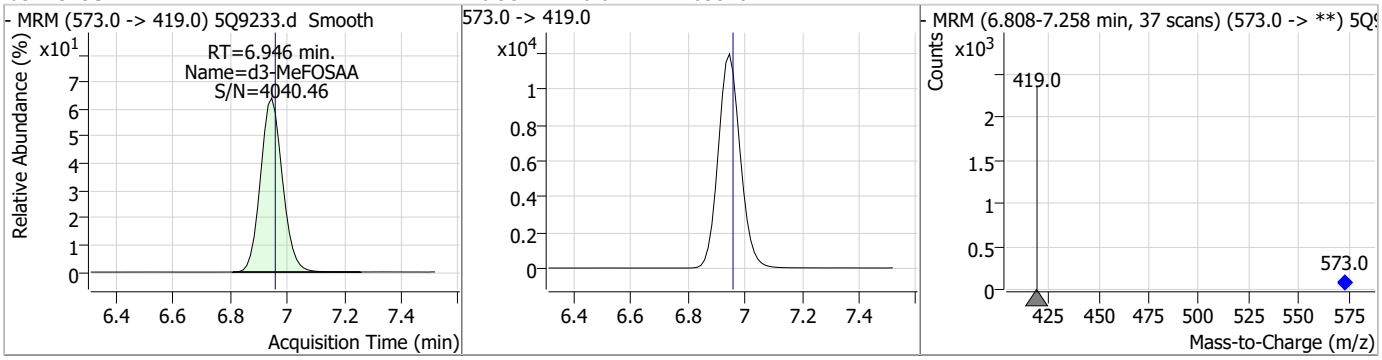
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.82	6.67	-0.05	13952	563.0 -> 269.0	18.4	9.3	27.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.83	6.76	-0.04	8434	633.0 -> 453.0	29.1	15.1	45.4

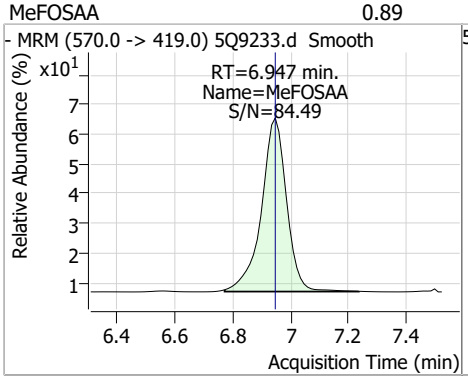


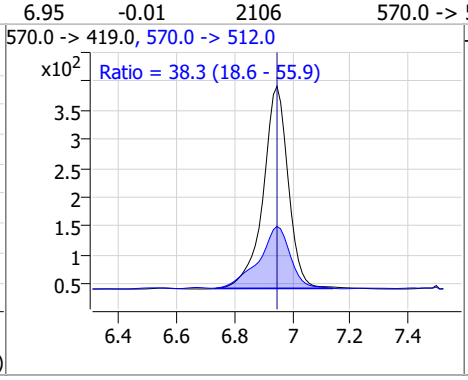
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	22.77	6.95	-0.01	63826				

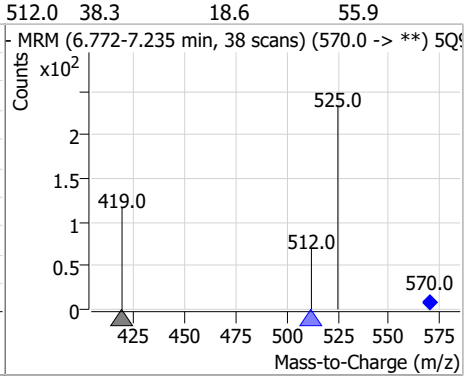


Perfluorinated Compounds by LC/MS/MS

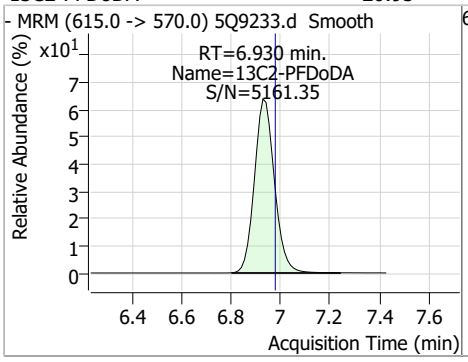
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.89	6.95	-0.01	2106	570.0 -> 512.0	38.3	18.6	55.9

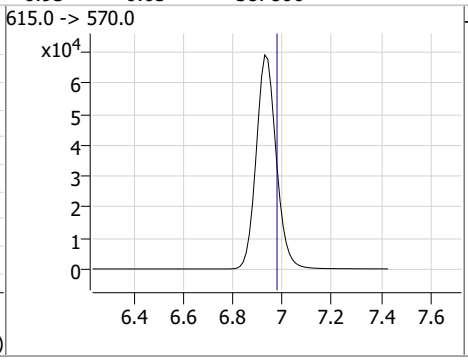


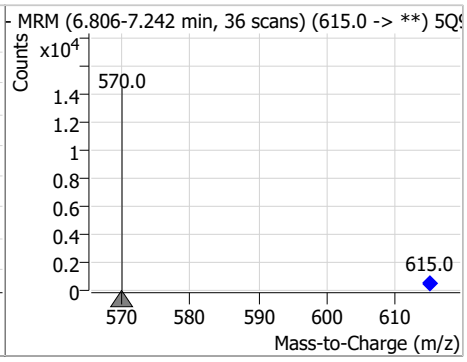




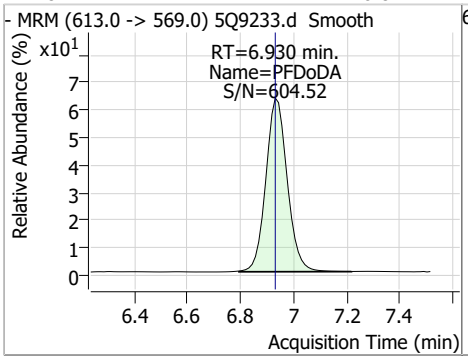
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.95	6.93	-0.05	387806				

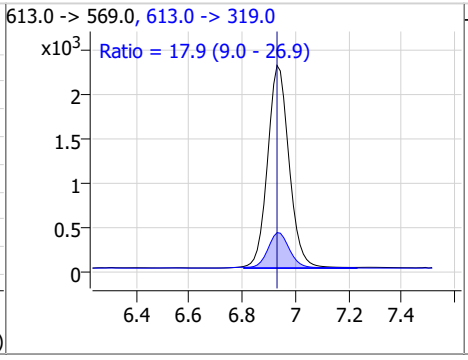


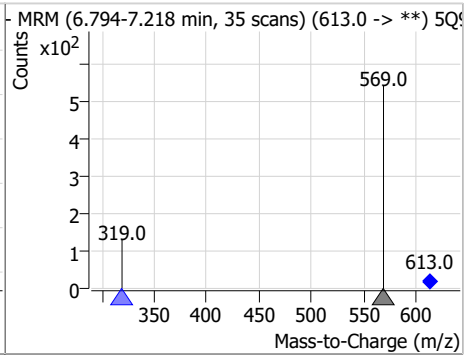




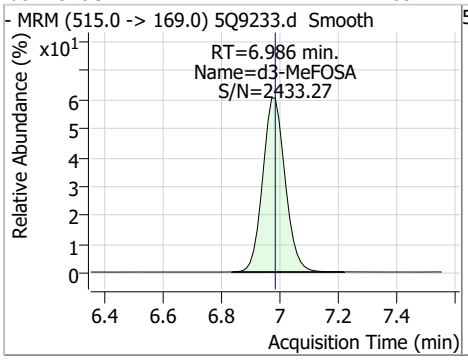
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.82	6.93	-0.05	12843	613.0 -> 319.0	17.9	9.0	26.9

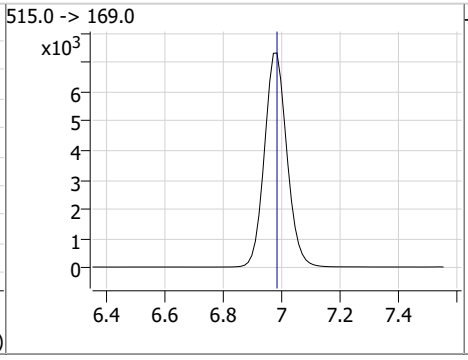


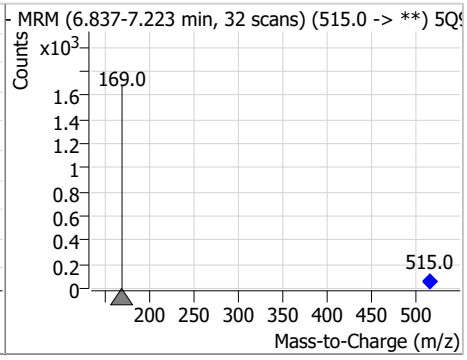




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	22.59	6.99	0.00	38951				

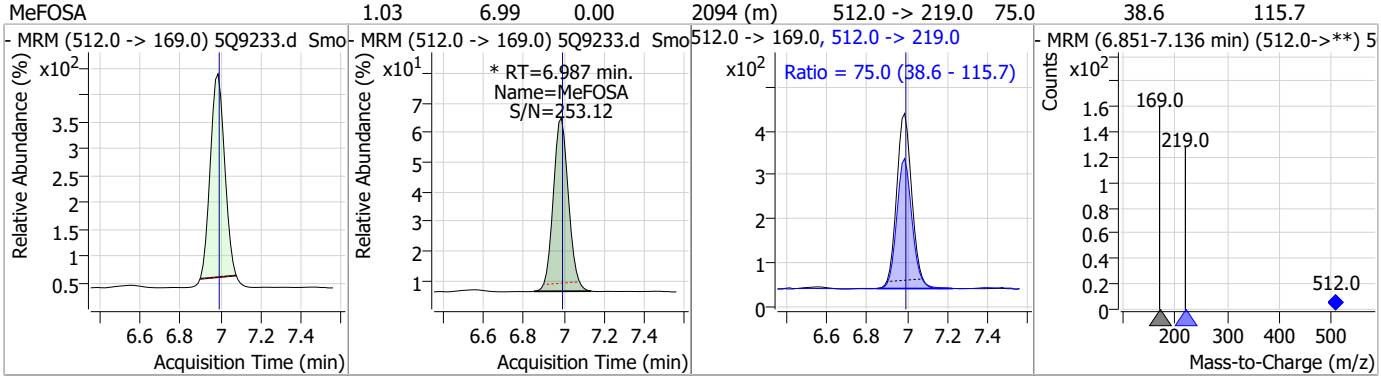




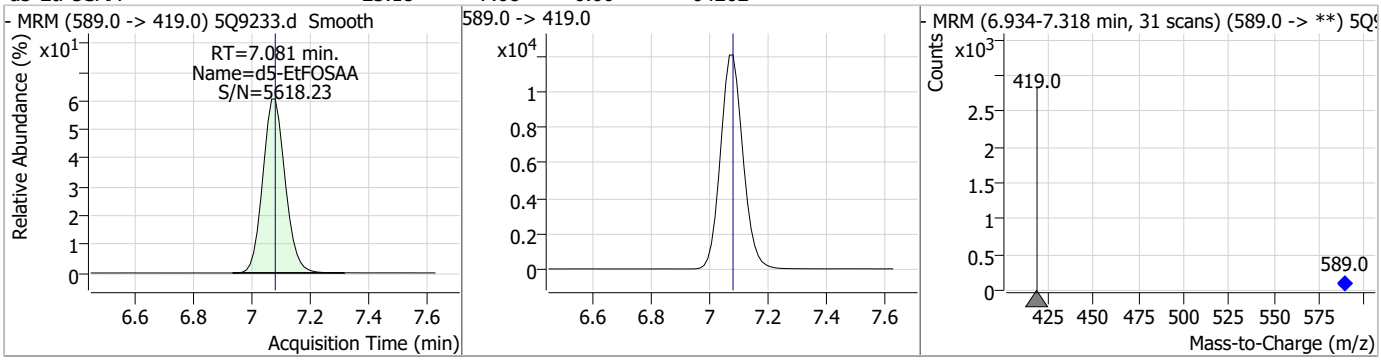


Perfluorinated Compounds by LC/MS/MS

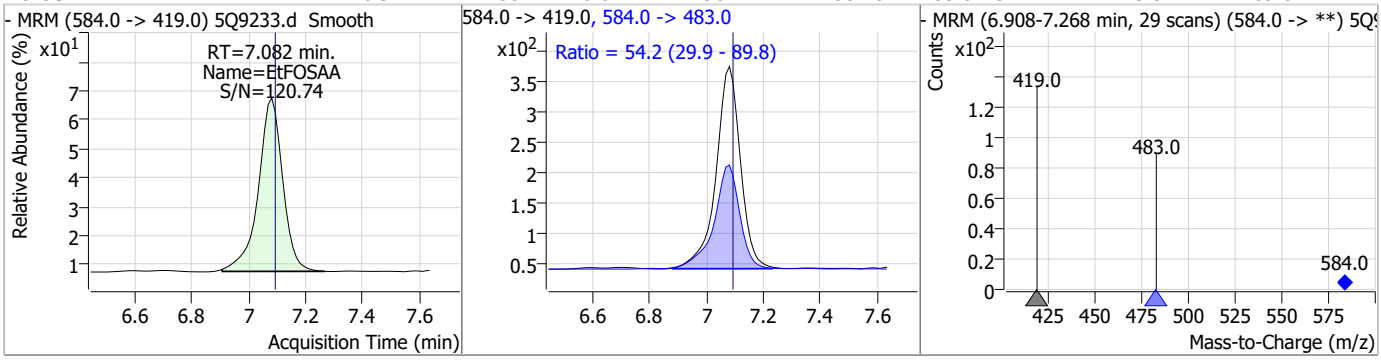
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	1.03	6.99	0.00	2094 (m)	512.0 -> 219.0	75.0	38.6	115.7



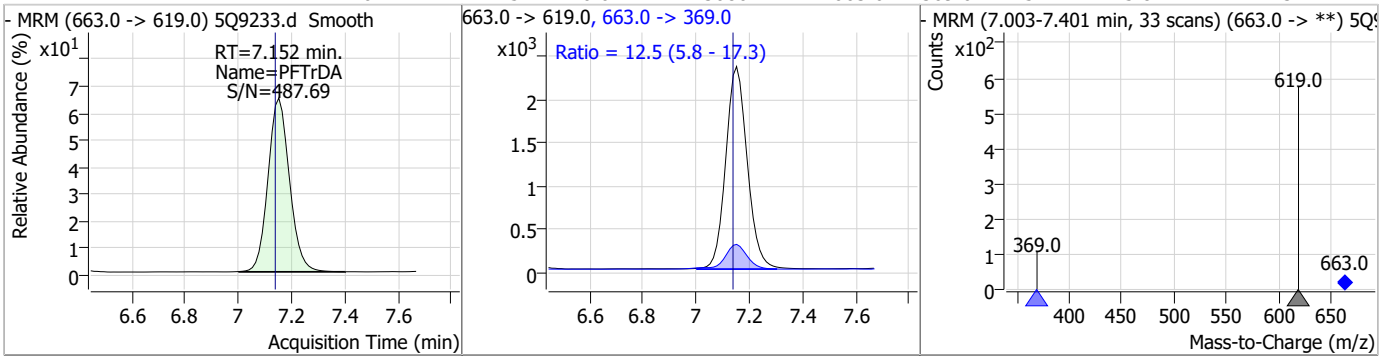
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	23.18	7.08	0.00	64262				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	0.92	7.08	-0.01	1964	584.0 -> 483.0	54.2	29.9	89.8

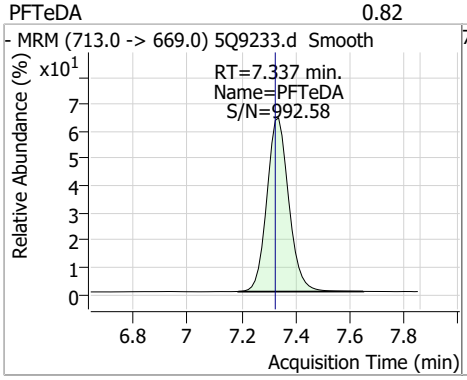


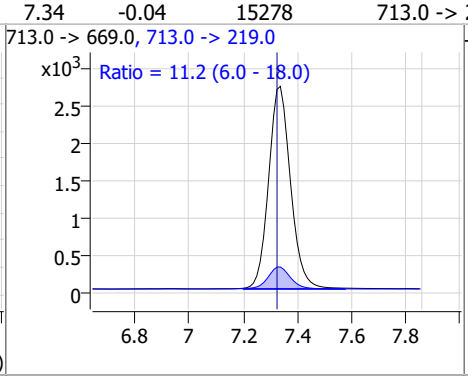
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.77	7.15	-0.04	13080	663.0 -> 369.0	12.5	5.8	17.3

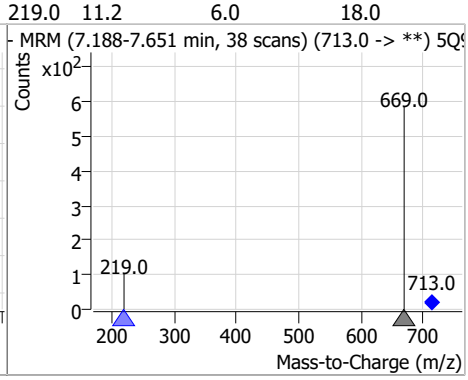


Perfluorinated Compounds by LC/MS/MS

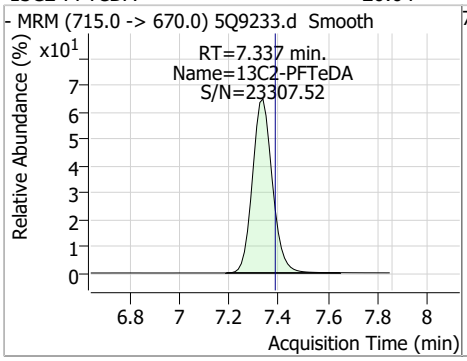
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.82	7.34	-0.04	15278	713.0 -> 219.0	11.2	6.0	18.0

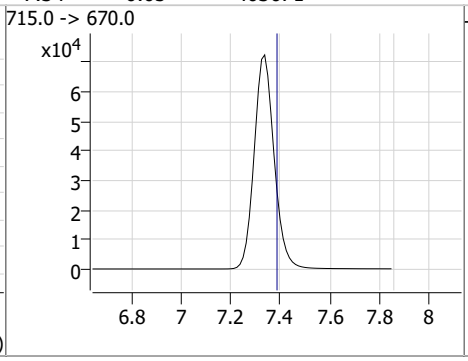


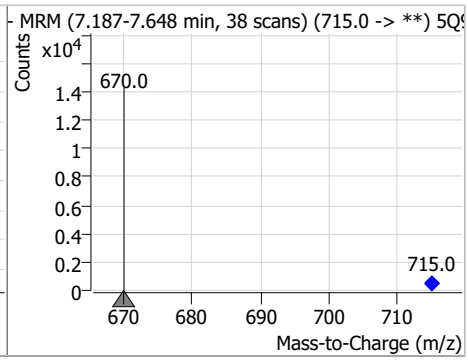




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.64	7.34	-0.05	403671				







Manual Integration Approval Summary

Sample Number: S5Q137-IC137
Lab FileID: 5Q9233.D
Injection Time: 01/03/23 15:19
Method: EPA 537M QSM5.3 B-15
Analyst approved: 01/04/23 11:33 Lindsay Ritner
Supervisor approved: 01/04/23 15:00 Natasha Gumtie

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanesulfonic acid	1763-23-1		5.98	Split peak
MeFOSA	31506-32-8		6.99	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Natasha Gumtie 01/04/23 15:00

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9234.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 1/3/2023 3:39:24 PM
Sample Name : ic137-2
Vial : P1-A4
DA Method File : ID_010323_S5Q137.quantmethod.xml
Batch Name : s5q137.batch.bin
Sample Information : OP94373,S5Q137,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.962	217.0 -> 172.0	117070	20.00	µg/L	-0.013
M5-PFPeA	3.444	268.0 -> 223.0	210329	20.00	µg/L	-0.025
M5-PFHxA	4.416	318.0 -> 273.0	295933	20.00	µg/L	-0.038
M4-PFHpA	5.088	367.0 -> 322.0	304885	20.00	µg/L	-0.025
M8-PFOA	5.596	421.0 -> 376.0	388520	20.00	µg/L	-0.026
M9-PFNA	6.018	472.0 -> 427.0	390633	20.00	µg/L	-0.025
M6-PFDA	6.377	519.0 -> 474.0	381468	20.00	µg/L	-0.025
M7-PFUnDA	6.685	570.0 -> 525.0	389890	20.00	µg/L	-0.037
M2-PFDoDA	6.942	615.0 -> 570.0	386719	20.00	µg/L	-0.037
M2-PFTeDA	7.349	715.0 -> 670.0	406050	20.00	µg/L	-0.037
M8-FOSA	6.616	506.0 -> 78.0	131080	20.00	µg/L	-0.025
M3-PFBS	3.654	302.0 -> 99.0	26204	20.00	µg/L	-0.025
M3-PFHxS	5.098	402.0 -> 99.0	32985	20.00	µg/L	-0.025
M8-PFOS	5.979	507.0 -> 99.0	38449	20.00	µg/L	-0.037
M2-4:2FTS	4.324	329.0 -> 309.0	91137	20.00	µg/L	-0.025
M2-6:2FTS	5.557	429.0 -> 409.0	140093	20.00	µg/L	-0.037
M2-8:2FTS	6.363	529.0 -> 509.0	122435	20.00	µg/L	-0.037
M3-MeFOSAA	6.946	573.0 -> 419.0	63101	20.00	µg/L	-0.012
M3-HFPO-DA	4.619	287.0 -> 169.0	67563	20.00	µg/L	-0.025
M3-MeFOSA	6.973	515.0 -> 169.0	36912	20.00	µg/L	-0.012
M5-EtFOSAA	7.068	589.0 -> 419.0	61815	20.00	µg/L	-0.012
System Monitoring Compounds						
13C2-4:2FTS	4.324	329.0 -> 309.0	91137	19.27	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.3%		
13C2-6:2FTS	5.557	429.0 -> 409.0	140093	19.68	µg/L	-0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%		
13C2-8:2FTS	6.363	529.0 -> 509.0	122435	19.94	µg/L	-0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.7%		
13C2-PFDoDA	6.942	615.0 -> 570.0	386719	20.89	µg/L	-0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.5%		
13C2-PFTeDA	7.349	715.0 -> 670.0	406050	20.76	µg/L	-0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.8%		
13C3-PFBS	3.654	302.0 -> 99.0	26204	20.44	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.2%		
13C3-PFHxS	5.098	402.0 -> 99.0	32985	20.76	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.8%		
13C4-PFBA	1.962	217.0 -> 172.0	117070	20.42	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.1%		
13C4-PFHpA	5.088	367.0 -> 322.0	304885	20.75	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.8%		
13C5-PFHxA	4.416	318.0 -> 273.0	295933	20.15	µg/L	-0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.7%		
13C5-PFPeA	3.444	268.0 -> 223.0	210329	20.24	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.2%		
13C6-PFDA	6.377	519.0 -> 474.0	381468	20.58	µg/L	-0.025

Perfluorinated Compounds by LC/MS/MS

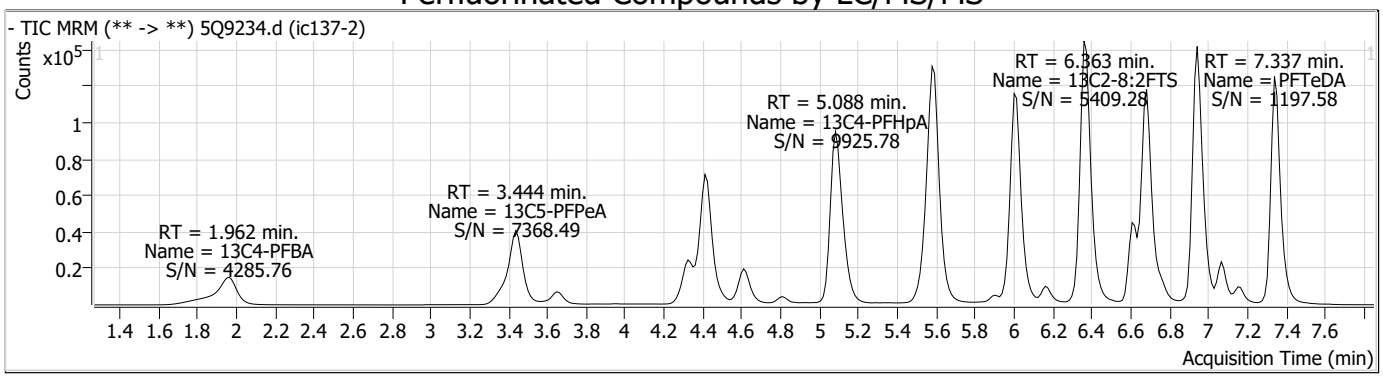
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.9%		
13C7-PFUnDA	6.685	570.0 -> 525.0	389890	20.67 µg/L		-0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.3%		
13C8-FOSA	6.616	506.0 -> 78.0	131080	21.87 µg/L		-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 109.3%		
13C8-PFOA	5.596	421.0 -> 376.0	388520	20.63 µg/L		-0.026
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.1%		
13C8-PFOS	5.979	507.0 -> 99.0	38449	20.17 µg/L		-0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.9%		
13C9-PFNA	6.018	472.0 -> 427.0	390633	20.69 µg/L		-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.5%		
d3-MeFOSAA	6.946	573.0 -> 419.0	63101	22.51 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 112.6%		
13C3-HFPO-DA	4.619	287.0 -> 169.0	67563	20.14 µg/L		-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.7%		
d3-MeFOSA	6.973	515.0 -> 169.0	36912	21.41 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.0%		
d5-EtFOSAA	7.068	589.0 -> 419.0	61815	22.30 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 111.5%		
Target Compounds						QValue
4:2FTS	4.326	327.0 -> 307.0	8338	2.01 µg/L		98
		327.0 -> 81.0	5125			
6:2FTS	5.558	427.0 -> 407.0	11674	1.92 µg/L		100
		427.0 -> 81.0	5210			
8:2FTS	6.364	527.0 -> 507.0	10184	1.95 µg/L		99
		527.0 -> 81.0	5211			
EtFOSAA	7.082	584.0 -> 419.0	3523	1.71 µg/L		96
		584.0 -> 483.0	2012			
FOSA	6.617	498.0 -> 78.0	10006	1.70 µg/L		99
		498.0 -> 478.0	349			
MeFOSAA	6.947	570.0 -> 419.0	3668	1.57 µg/L		95
		570.0 -> 512.0	1468			
PFBA	1.956	213.0 -> 169.0	9317	1.70 µg/L		100
PFBS	3.657	299.0 -> 80.0	6428	1.71 µg/L		97
		299.0 -> 99.0	2837			
PFDA	6.377	513.0 -> 469.0	29902	1.67 µg/L		97
		513.0 -> 219.0	6106			
PFDoDA	6.943	613.0 -> 569.0	24842	1.59 µg/L		100
		613.0 -> 319.0	4486			
PFDS	6.633	599.0 -> 80.0	4306	1.86 µg/L		98
		599.0 -> 99.0	2614			
PFHpA	5.089	363.0 -> 319.0	27345	1.65 µg/L		99
		363.0 -> 169.0	6191			
PFHpS	5.582	449.0 -> 80.0	4721	1.69 µg/L		93
		449.0 -> 99.0	2814			
PFHxA	4.417	313.0 -> 269.0	22771	1.73 µg/L		100
		313.0 -> 119.0	1090			
PFHxS	5.099	399.0 -> 80.0	5229	1.74 µg/L		95
		399.0 -> 99.0	2767			
PFNA	6.018	463.0 -> 419.0	28992	1.66 µg/L		100
		463.0 -> 219.0	6553			
PFNS	6.326	549.0 -> 80.0	4151	1.81 µg/L		98
		549.0 -> 99.0	2296			
PFOA	5.596	413.0 -> 369.0	32854	1.71 µg/L		99
		413.0 -> 169.0	8840			
PFOS	5.980	499.0 -> 80.0	5408	1.63 µg/L	m	99

Perfluorinated Compounds by LC/MS/MS

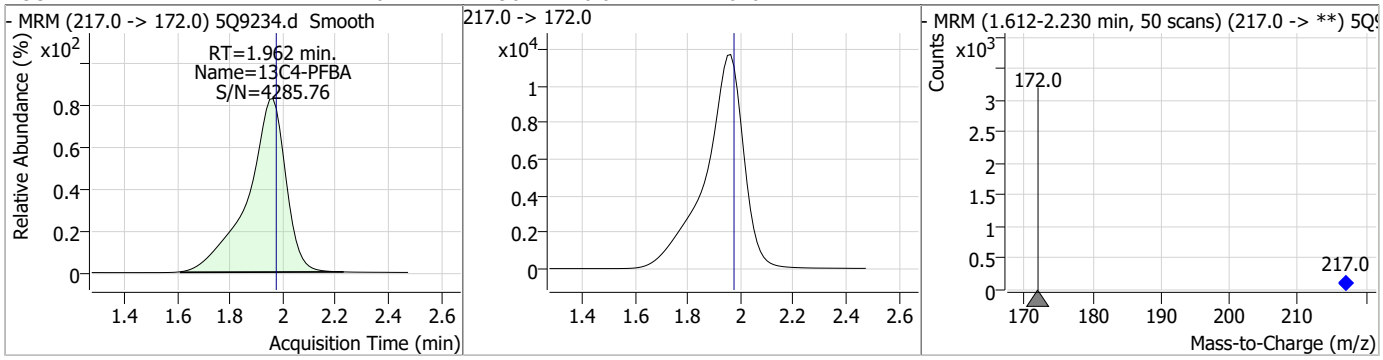
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	2656			
PFPeA	3.447	263.0 -> 219.0	18043	1.66	µg/L	100
PFPeS	4.501	349.0 -> 80.0	3788	1.66	µg/L	97
		349.0 -> 99.0	1980			
PFTeDA	7.337	713.0 -> 669.0	31057	1.66	µg/L	99
		713.0 -> 219.0	3811			
PFTrDA	7.164	663.0 -> 619.0	26827	1.59	µg/L	100
		663.0 -> 369.0	3104			
PFUnDA	6.686	563.0 -> 519.0	28665	1.67	µg/L	100
		563.0 -> 269.0	5347			
11Cl-PF3OUdS	6.756	631.0 -> 451.0	17136	1.69	µg/L	97
		633.0 -> 453.0	5510			
9Cl-PF3ONS	6.163	531.0 -> 351.0	23084	1.70	µg/L	99
		533.0 -> 353.0	7121			
ADONA	5.137	377.0 -> 251.0	35959	1.59	µg/L	99
		377.0 -> 85.0	13316			
HFPO-DA	4.627	329.0 -> 169.0	8095	1.66	µg/L	93
		285.0 -> 169.0	5197			
MeFOSA	6.987	512.0 -> 169.0	3780	1.97	µg/L	95
		512.0 -> 219.0	3065			
4-PFECHS	5.518	461.0 -> 381.0	14943	1.60	µg/L	97
		461.0 -> 99.0	8591			
FBSA	4.817	298.0 -> 78.0	13010	2.01	µg/L	98
		298.0 -> 64.0	1300			
FHxSA	5.911	398.0 -> 78.0	12149	1.99	µg/L	99
		398.0 -> 64.0	1181			

 # = Qualifier out of range, m = manually integrated, + = Area summed

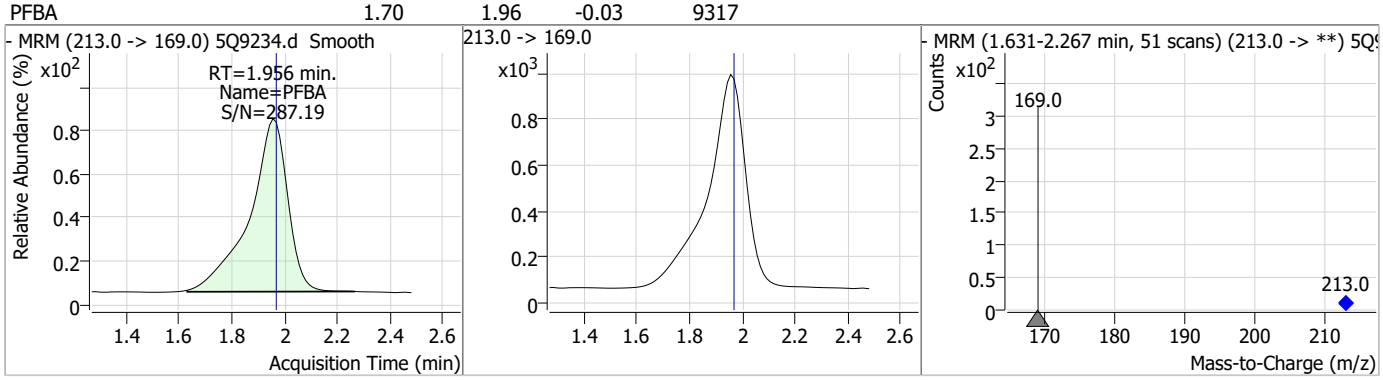
Perfluorinated Compounds by LC/MS/MS



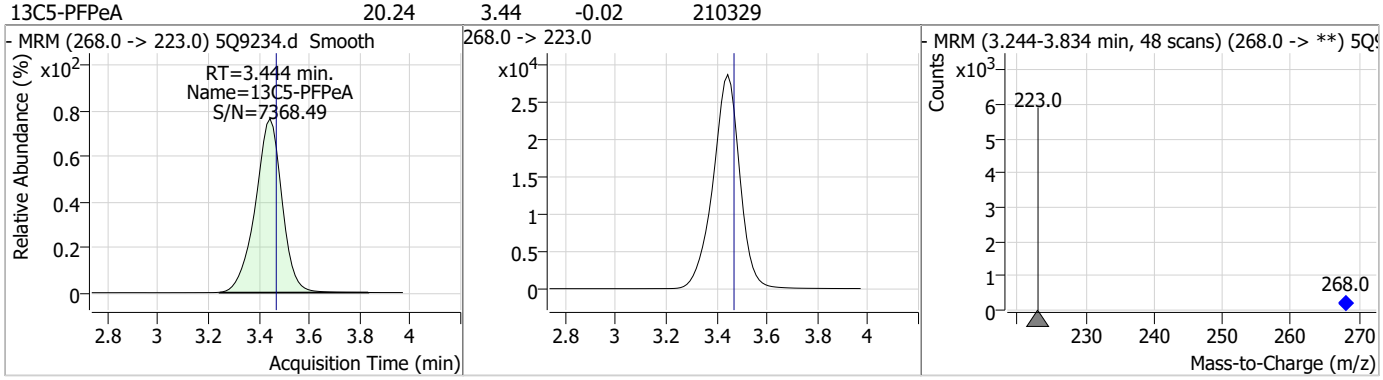
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.42	1.96	-0.01	117070				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	1.70	1.96	-0.03	9317				

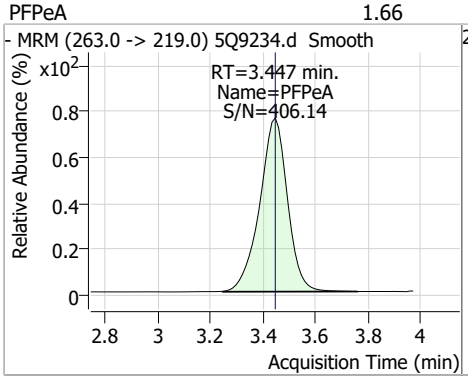


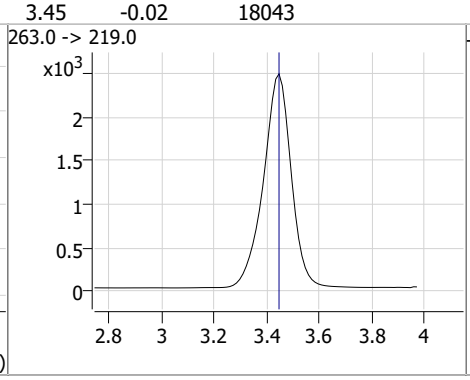
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.24	3.44	-0.02	210329				

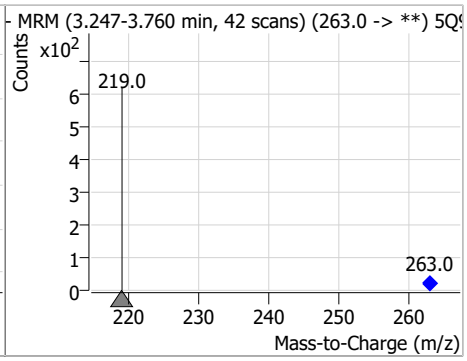


Perfluorinated Compounds by LC/MS/MS

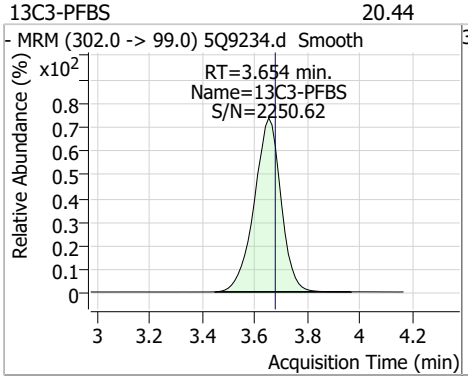
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	1.66	3.45	-0.02	18043				

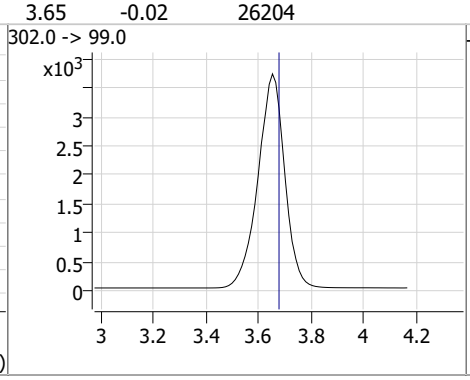


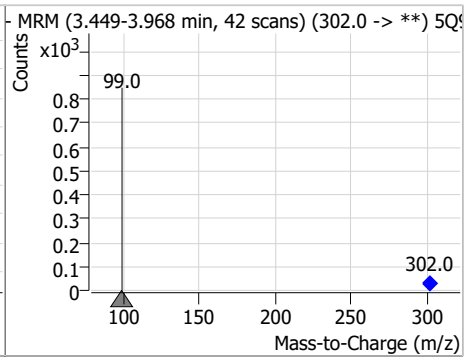




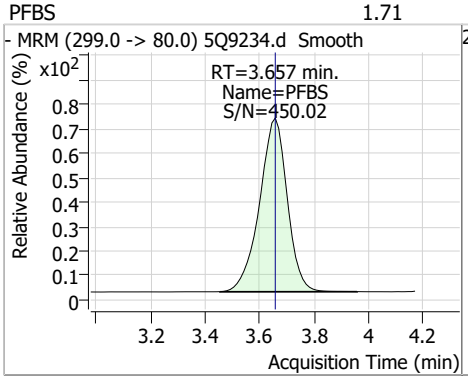
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.44	3.65	-0.02	26204				

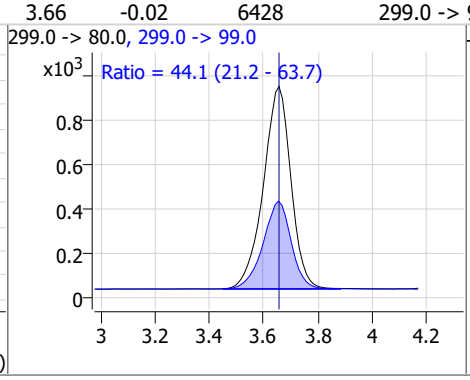


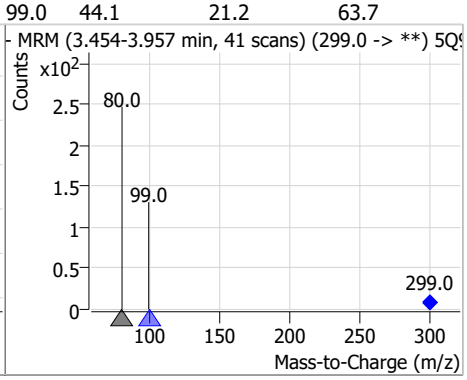




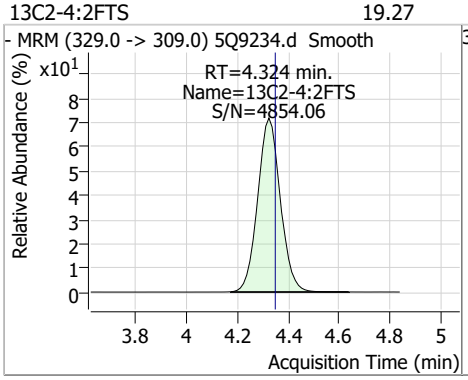
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	1.71	3.66	-0.02	6428	299.0 -> 99.0	44.1	21.2	63.7

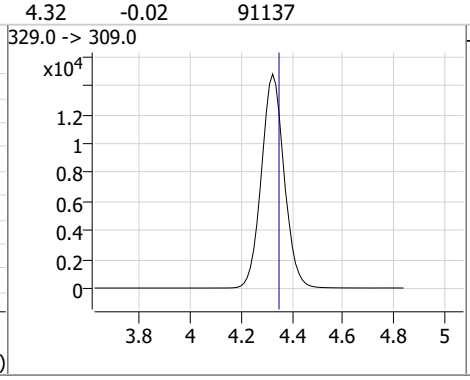


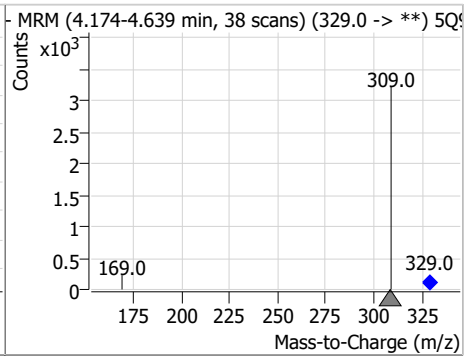




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.27	4.32	-0.02	91137				

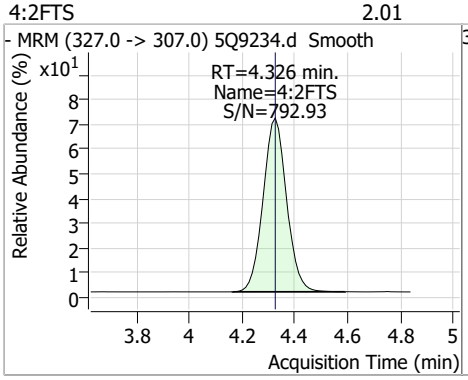


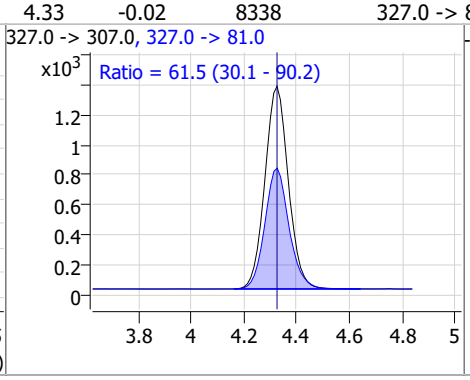


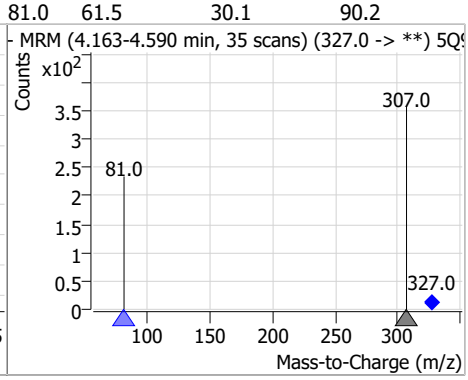


Perfluorinated Compounds by LC/MS/MS

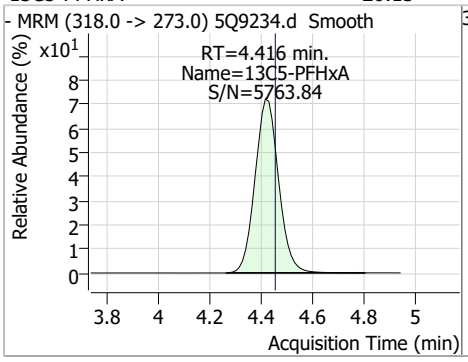
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	2.01	4.33	-0.02	8338	327.0 -> 81.0	61.5	30.1	90.2

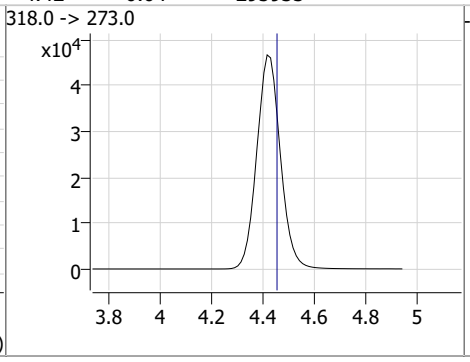


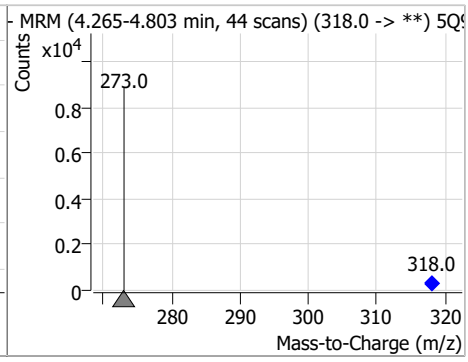




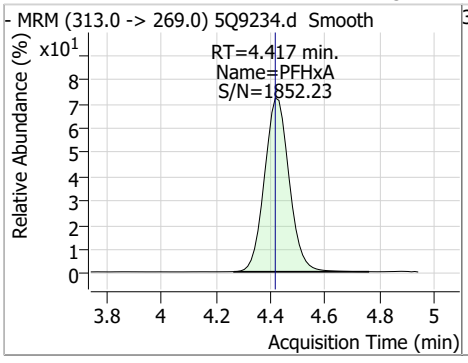
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.15	4.42	-0.04	295933				

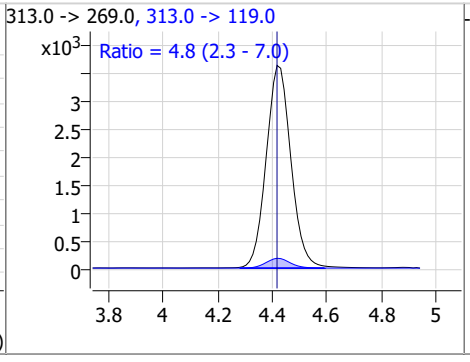


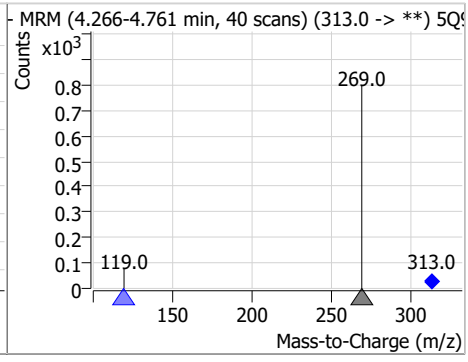




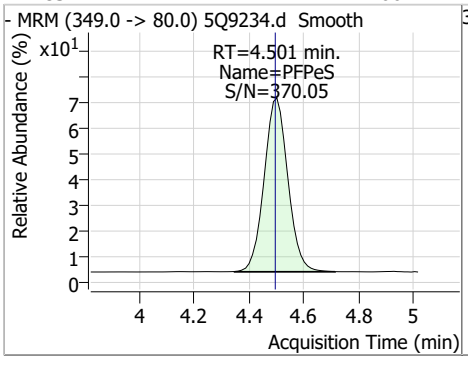
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	1.73	4.42	-0.04	22771	313.0 -> 119.0	4.8	2.3	7.0

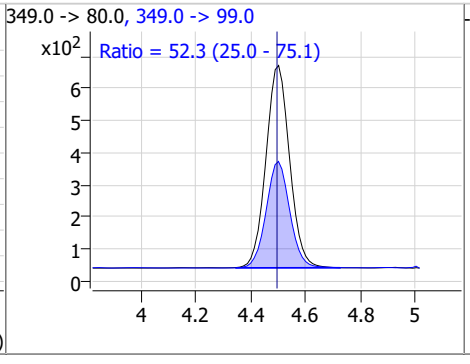


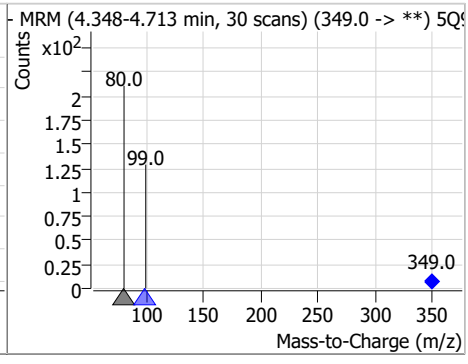




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	1.66	4.50	-0.02	3788	349.0 -> 99.0	52.3	25.0	75.1

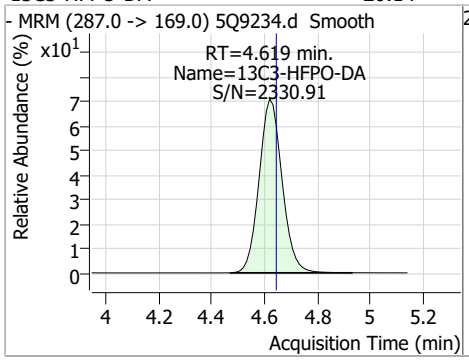


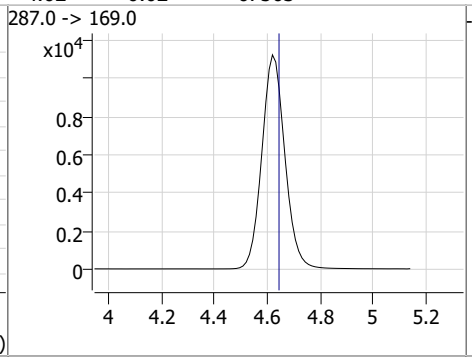


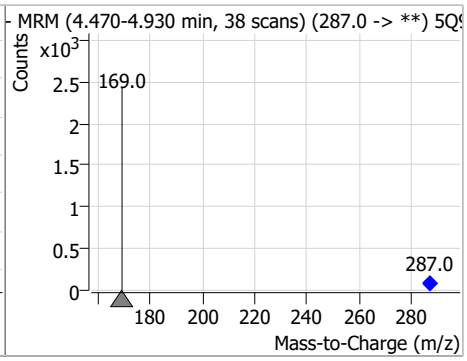


Perfluorinated Compounds by LC/MS/MS

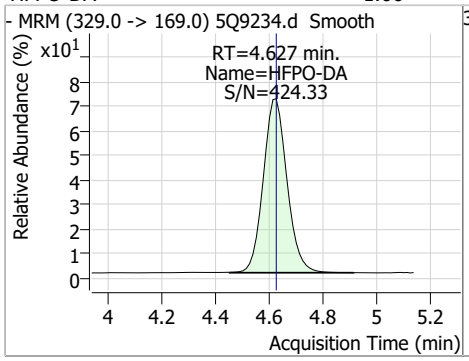
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.14	4.62	-0.02	67563				

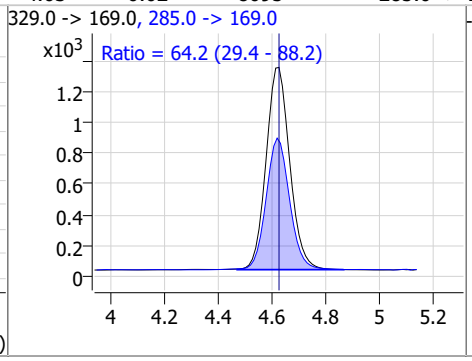


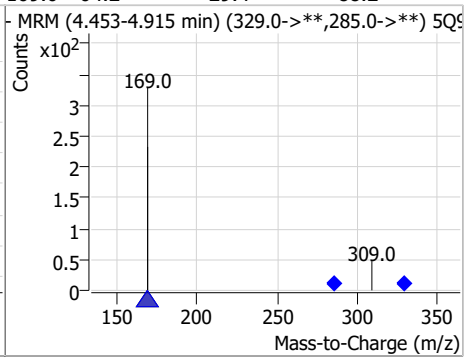




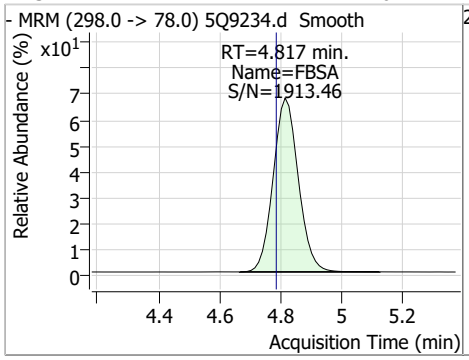
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	1.66	4.63	-0.02	8095	285.0 -> 169.0	64.2	29.4	88.2

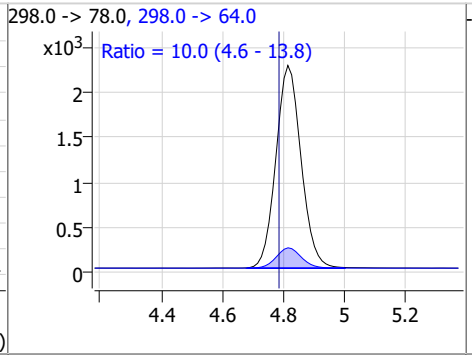


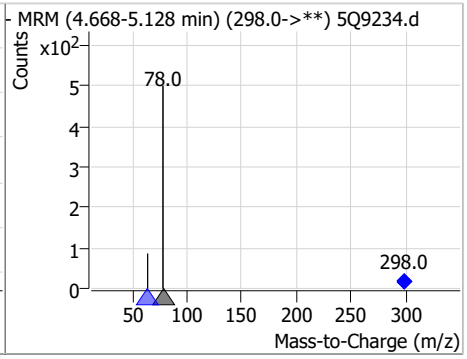




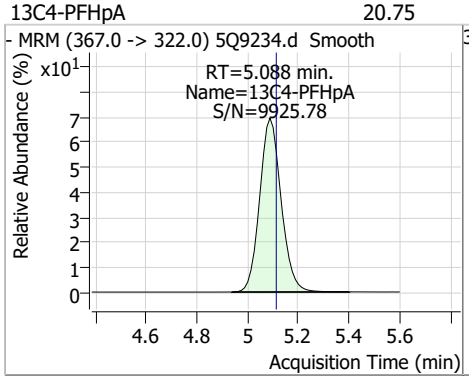
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	2.01	4.82	-0.01	13010	298.0 -> 64.0	10.0	4.6	13.8

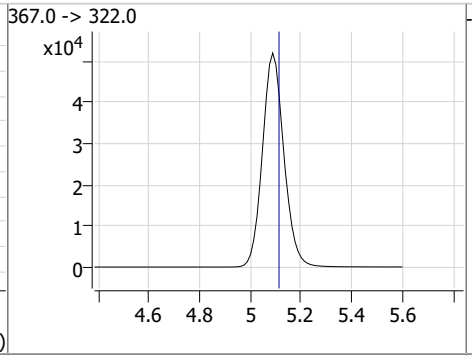


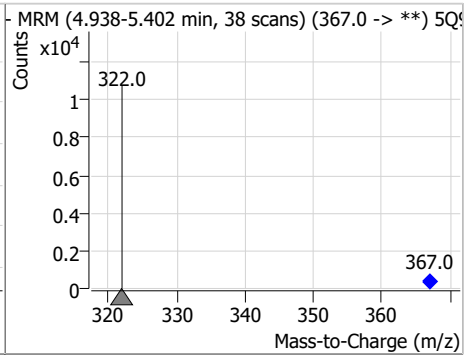




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.75	5.09	-0.02	304885				

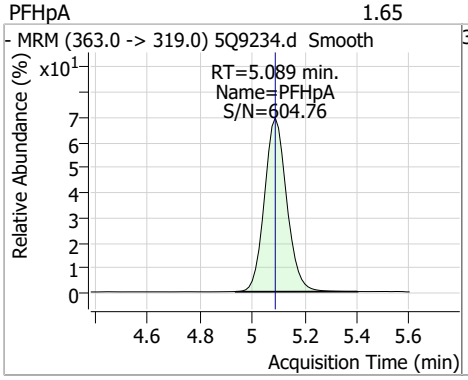


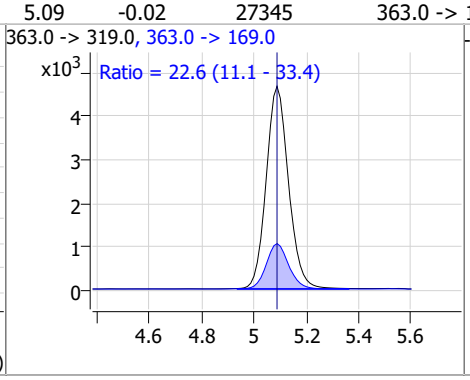


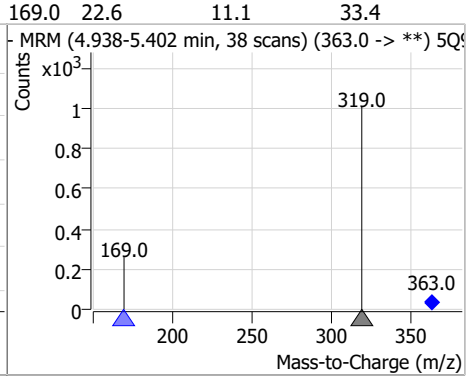


Perfluorinated Compounds by LC/MS/MS

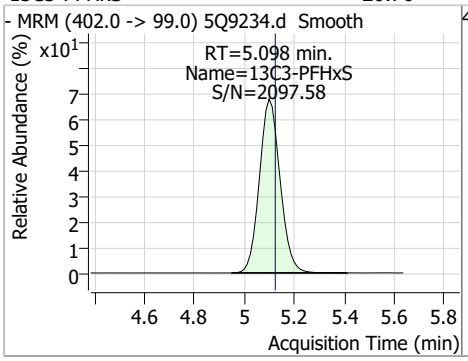
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	1.65	5.09	-0.02	27345	363.0 -> 169.0	22.6	11.1	33.4

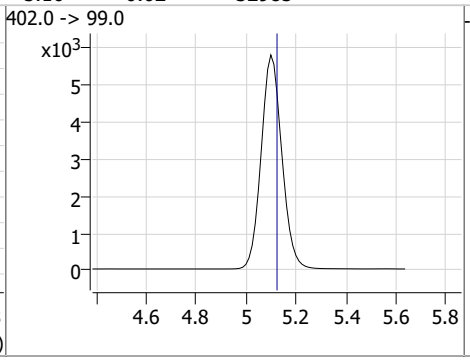


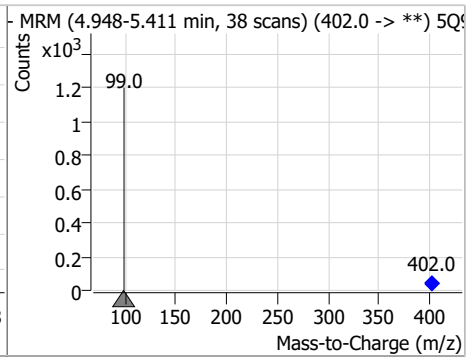




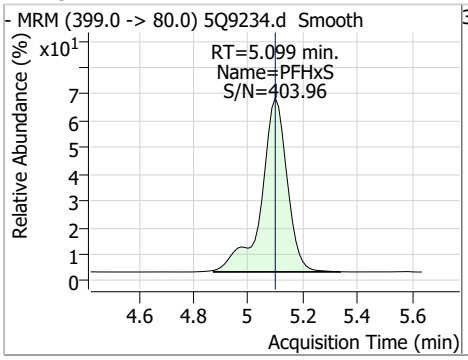
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.76	5.10	-0.02	32985				

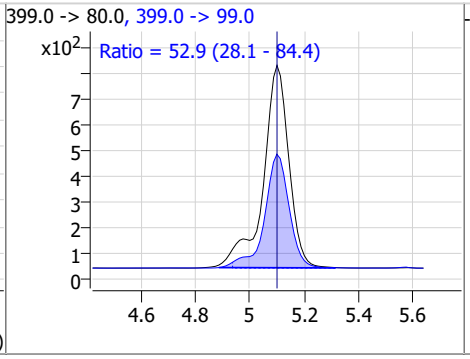


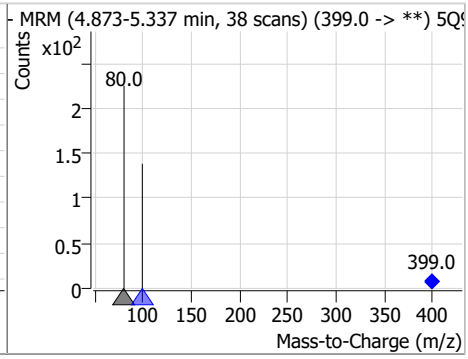




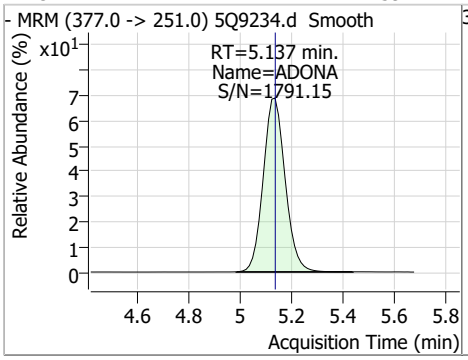
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	1.74	5.10	-0.02	5229	399.0 -> 99.0	52.9	28.1	84.4

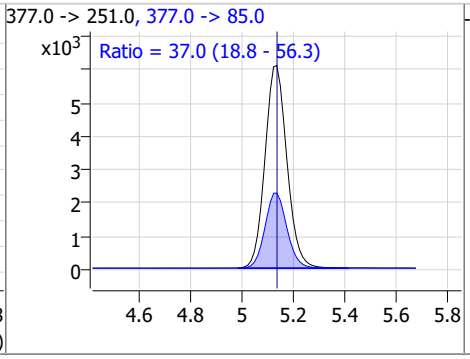


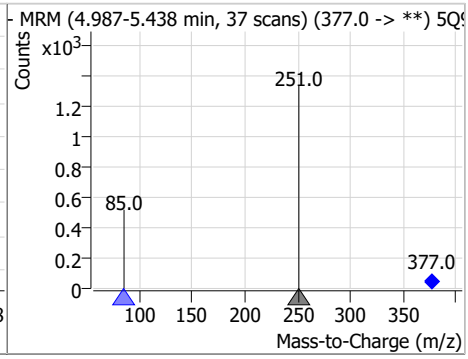




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	1.59	5.14	-0.03	35959	377.0 -> 85.0	37.0	18.8	56.3

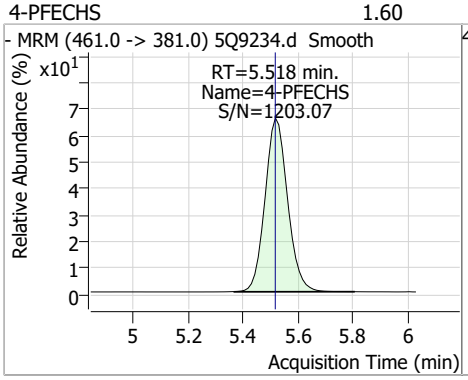


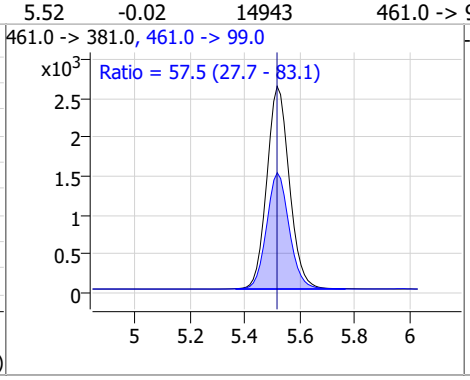


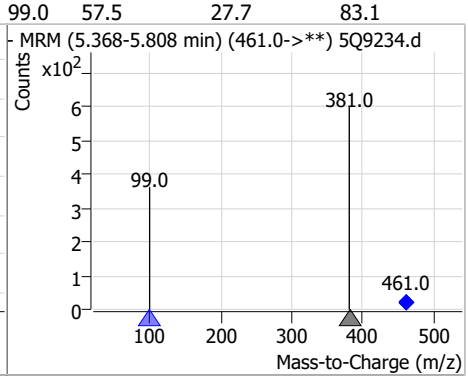


Perfluorinated Compounds by LC/MS/MS

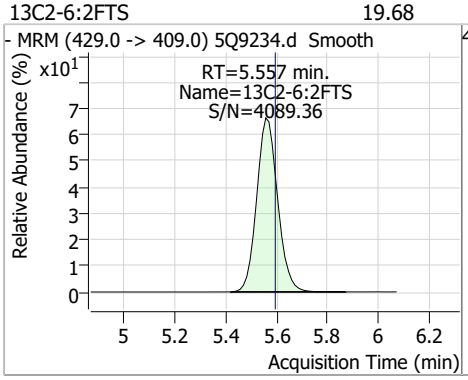
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	1.60	5.52	-0.02	14943	461.0 -> 99.0	57.5	27.7	83.1

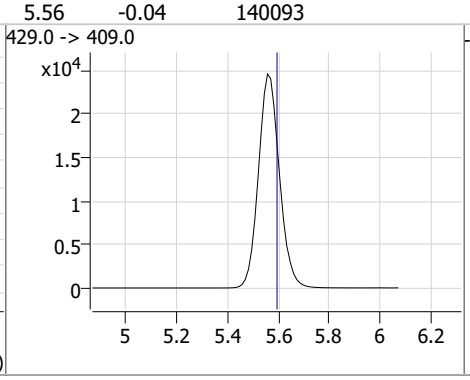


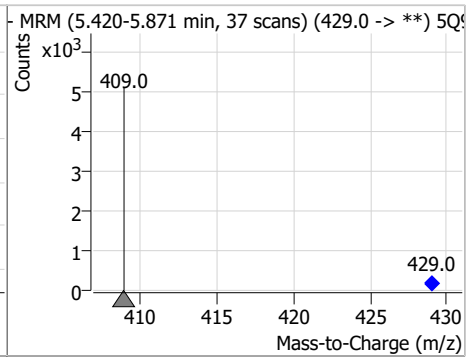




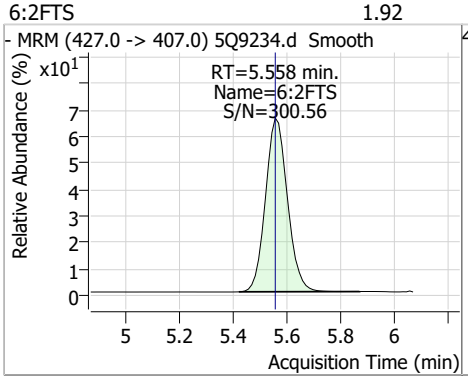
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.68	5.56	-0.04	140093				

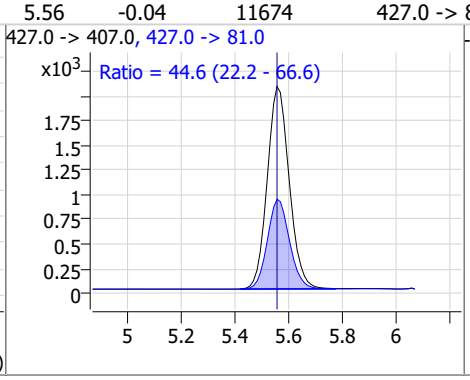


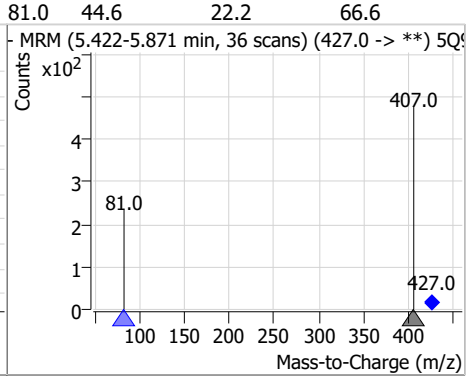




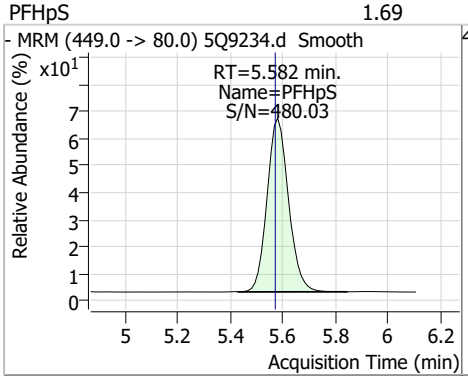
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	1.92	5.56	-0.04	11674	427.0 -> 81.0	44.6	22.2	66.6

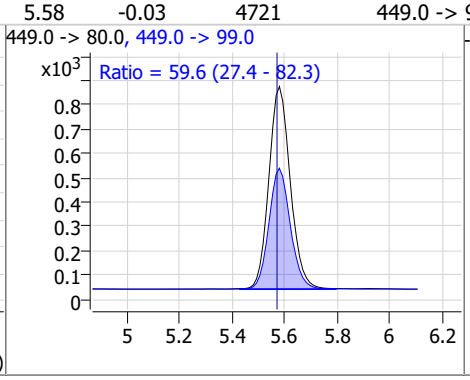


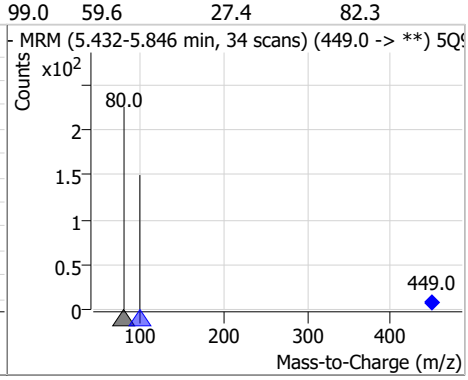




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	1.69	5.58	-0.03	4721	449.0 -> 99.0	59.6	27.4	82.3

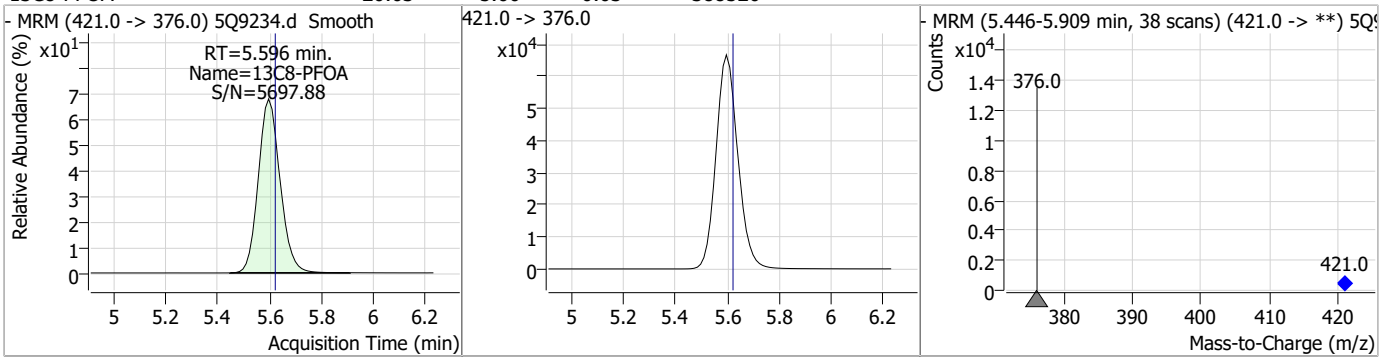




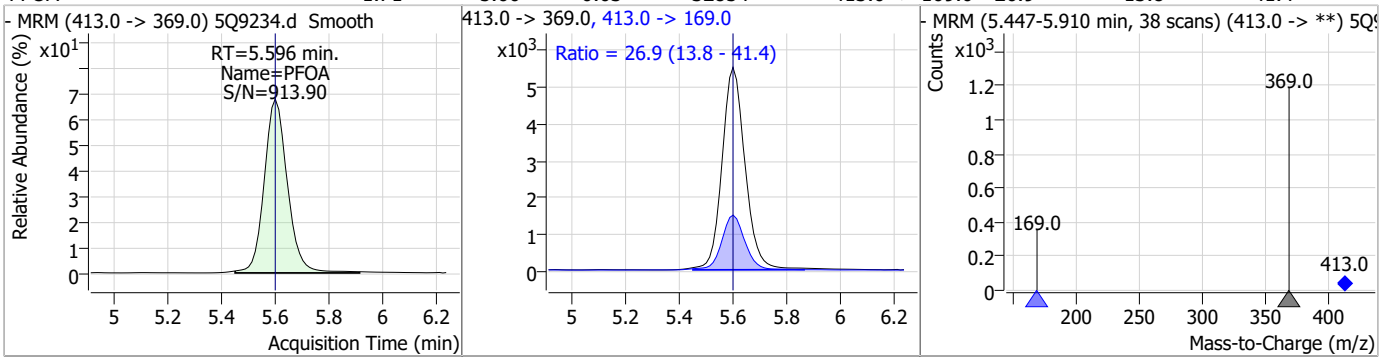


Perfluorinated Compounds by LC/MS/MS

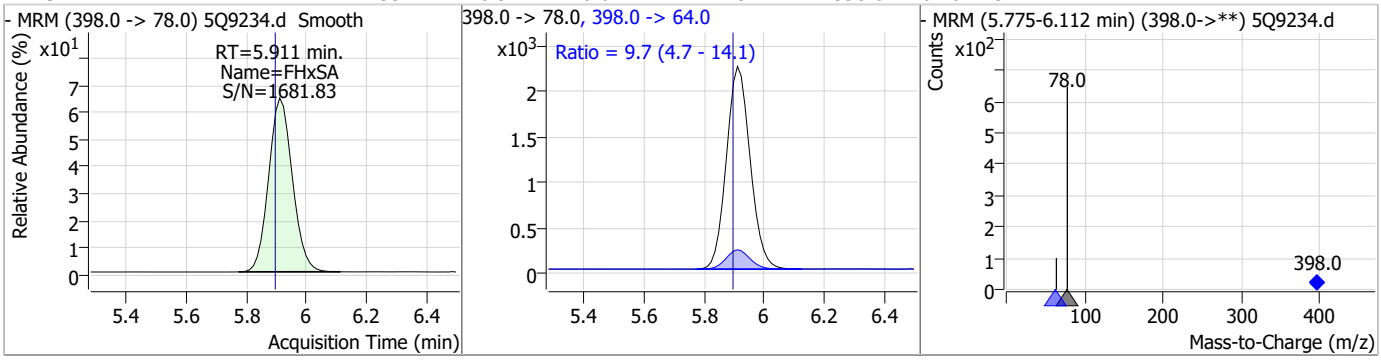
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.63	5.60	-0.03	388520				



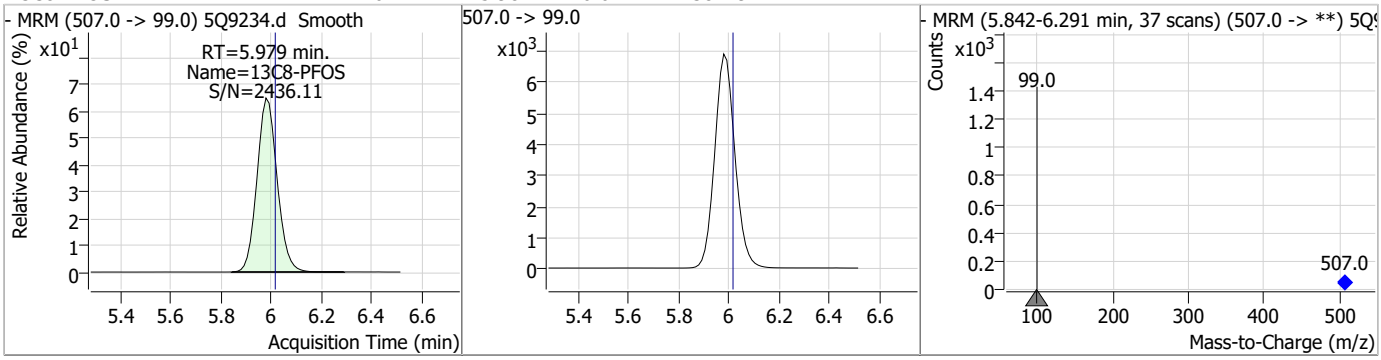
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	1.71	5.60	-0.03	32854	413.0 -> 169.0	26.9	13.8	41.4



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	1.99	5.91	-0.01	12149	398.0 -> 64.0	9.7	4.7	14.1

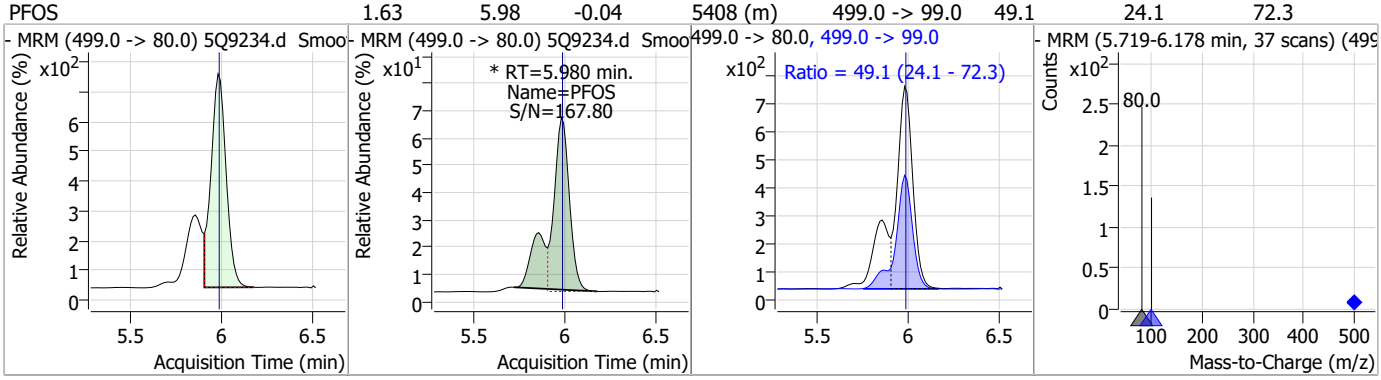


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.17	5.98	-0.04	38449				

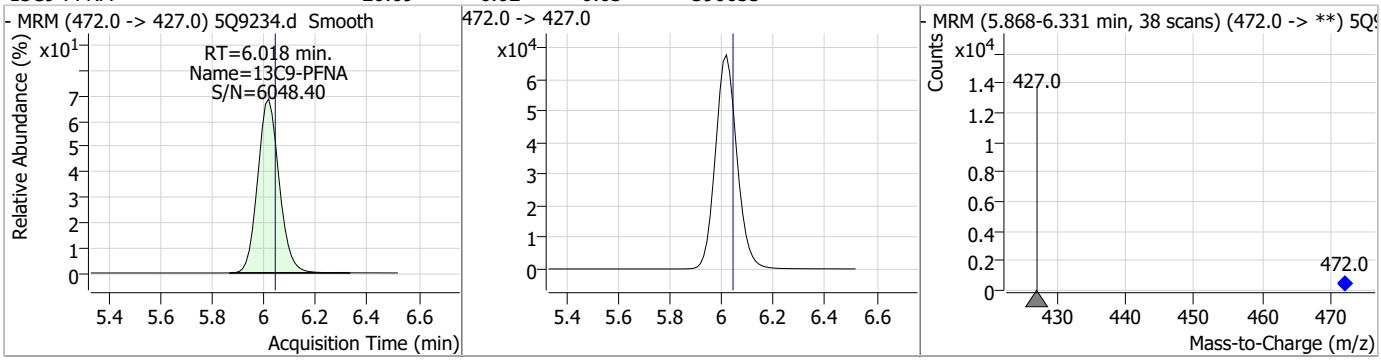


Perfluorinated Compounds by LC/MS/MS

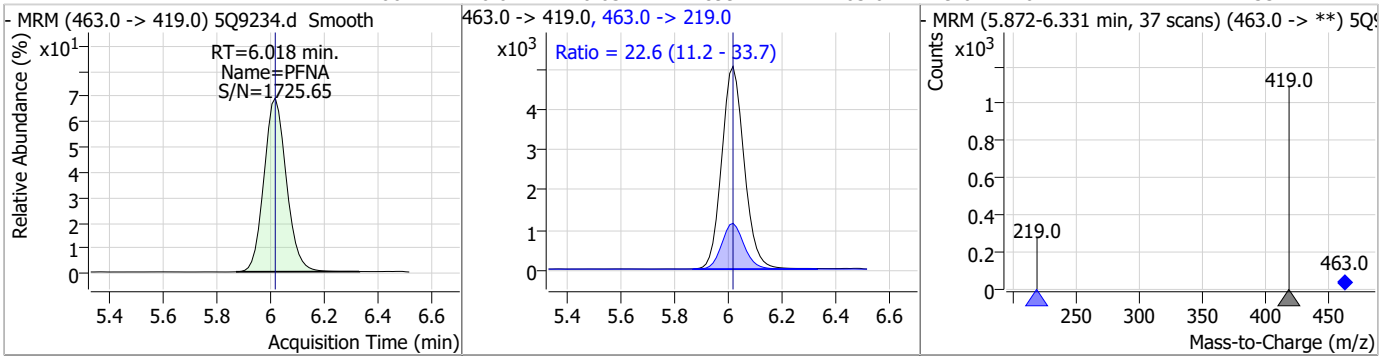
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	1.63	5.98	-0.04	5408 (m)	499.0 -> 99.0	49.1	24.1	72.3



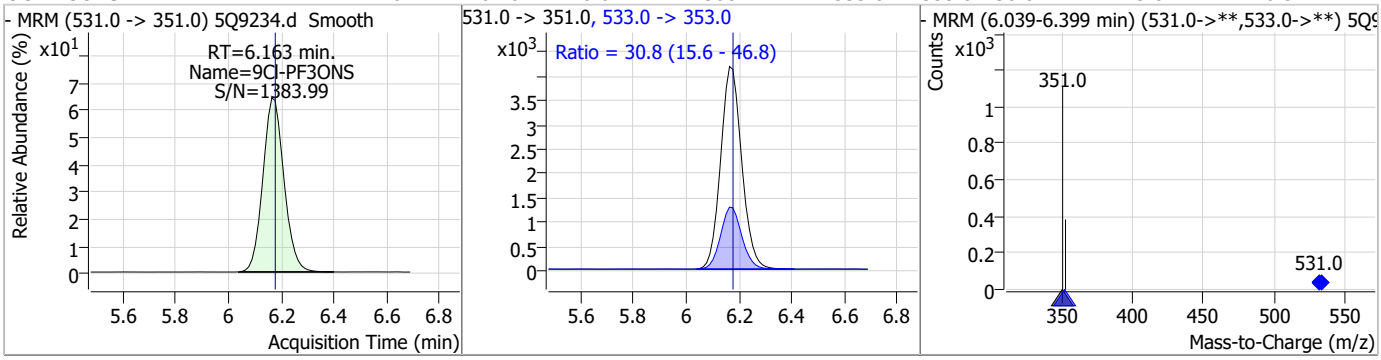
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.69	6.02	-0.03	390633				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	1.66	6.02	-0.03	28992	463.0 -> 219.0	22.6	11.2	33.7

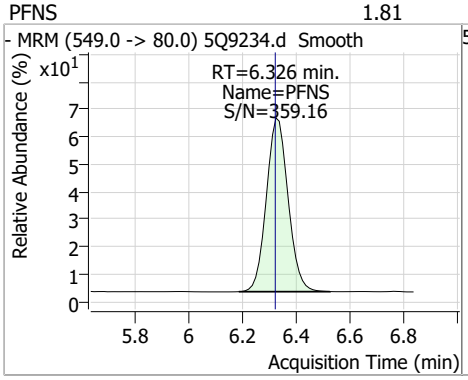


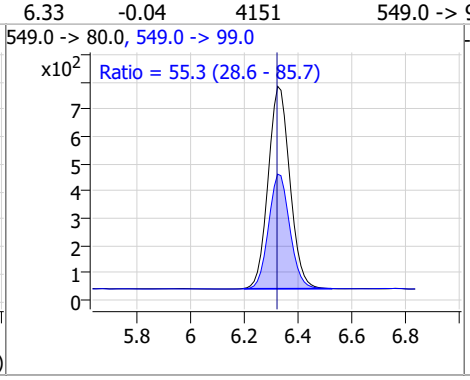
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	1.70	6.16	-0.04	23084	533.0 -> 353.0	30.8	15.6	46.8

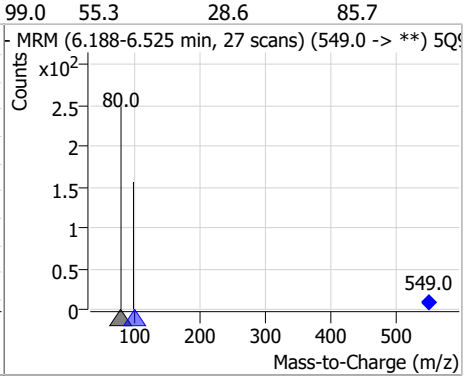


Perfluorinated Compounds by LC/MS/MS

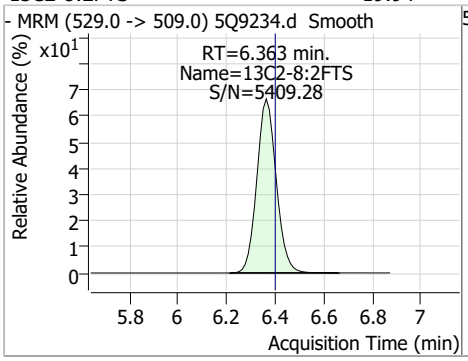
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	1.81	6.33	-0.04	4151	549.0 -> 99.0	55.3	28.6	85.7

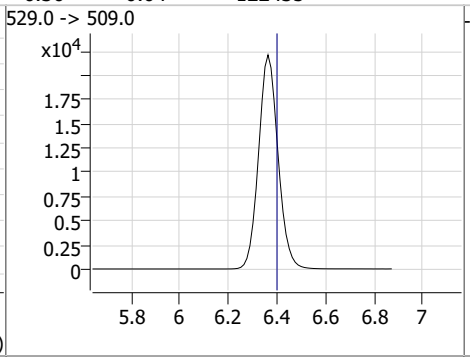


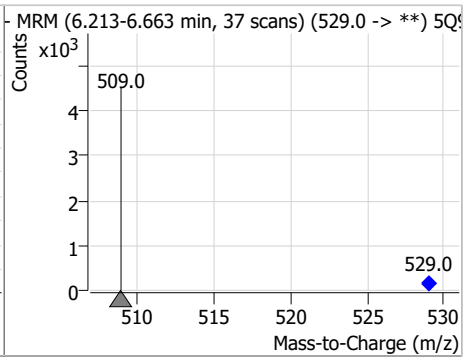




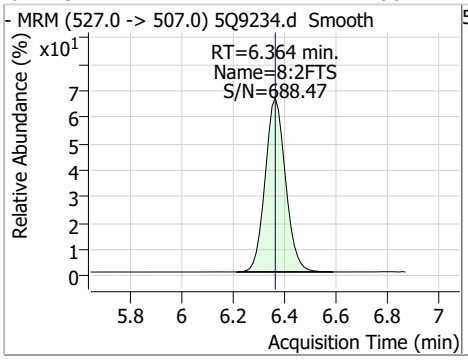
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.94	6.36	-0.04	122435				

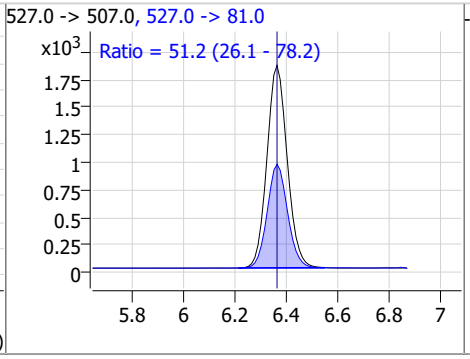


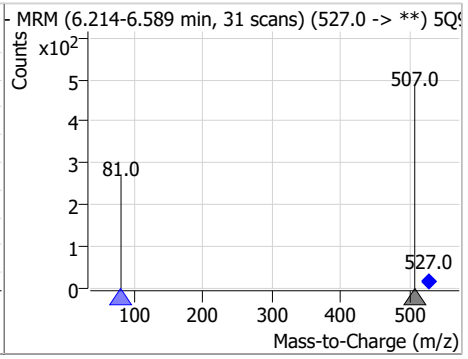




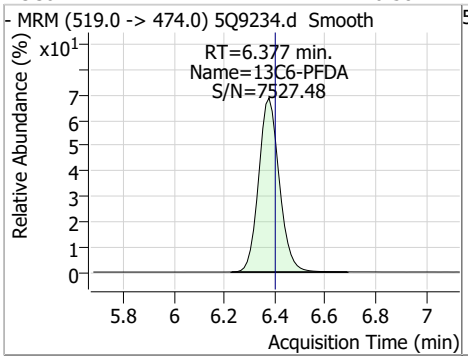
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	1.95	6.36	-0.04	10184	527.0 -> 81.0	51.2	26.1	78.2

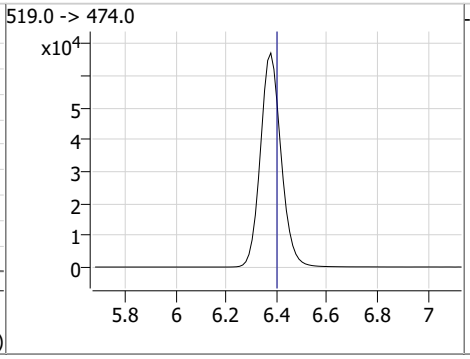


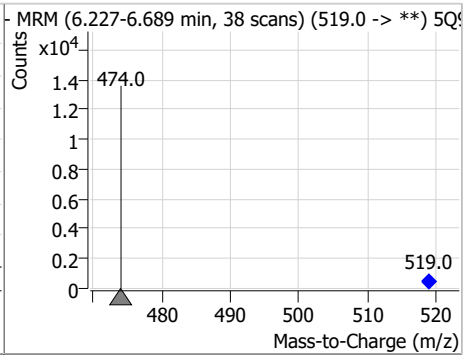




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.58	6.38	-0.02	381468				

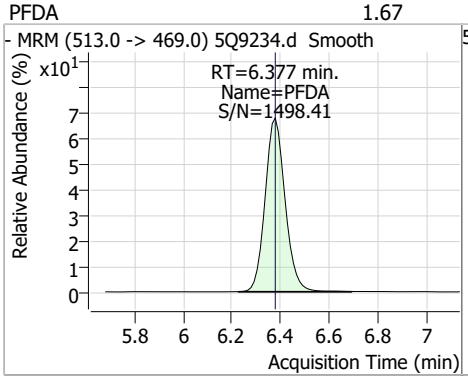


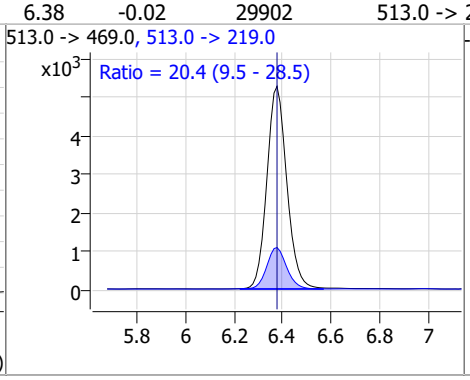


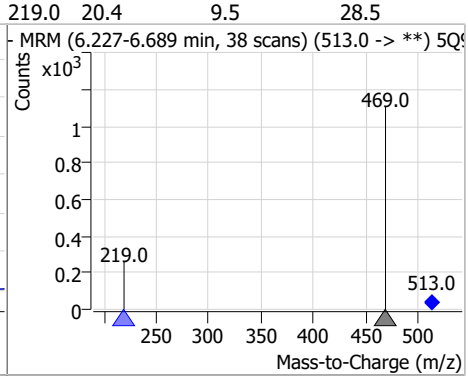


Perfluorinated Compounds by LC/MS/MS

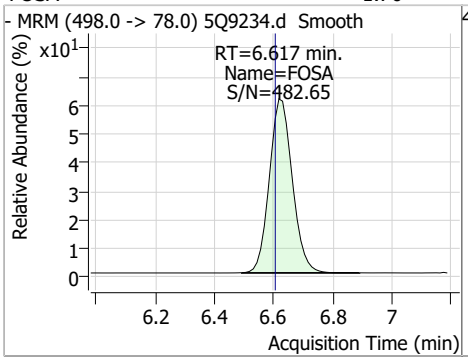
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	1.67	6.38	-0.02	29902	513.0 -> 219.0	20.4	9.5	28.5

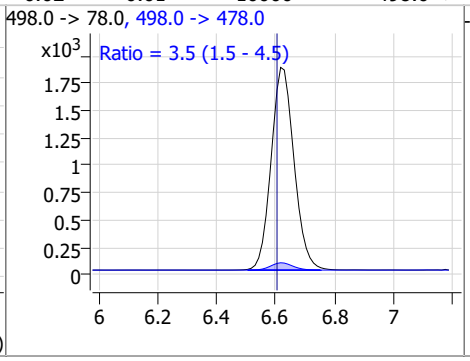


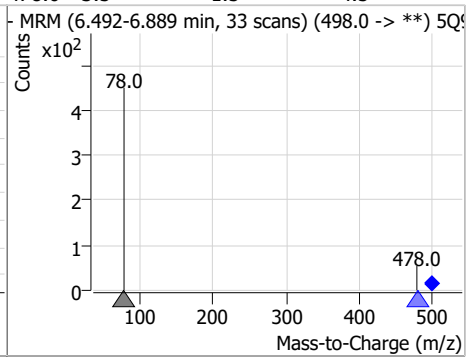




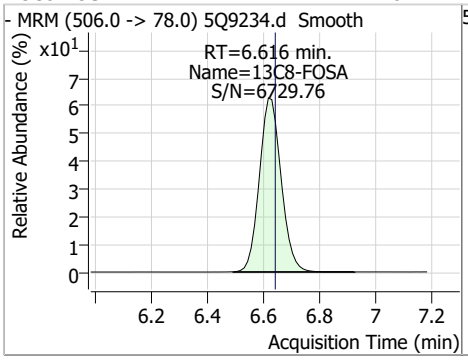
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	1.70	6.62	-0.01	10006	498.0 -> 478.0	3.5	1.5	4.5

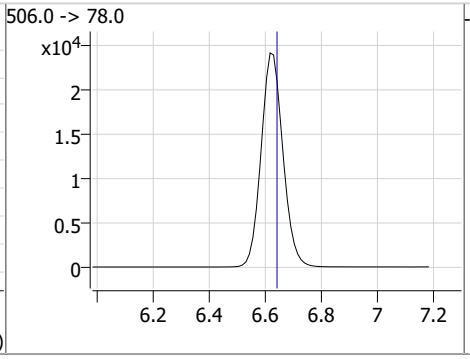


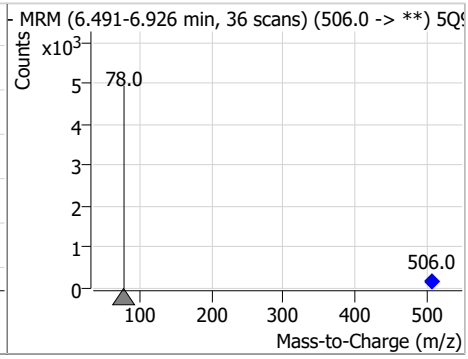




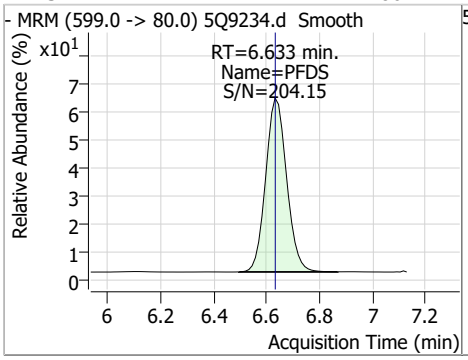
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	21.87	6.62	-0.02	131080				

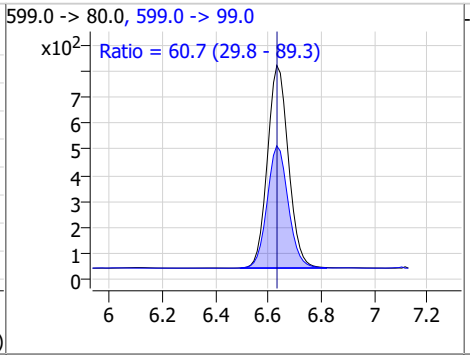


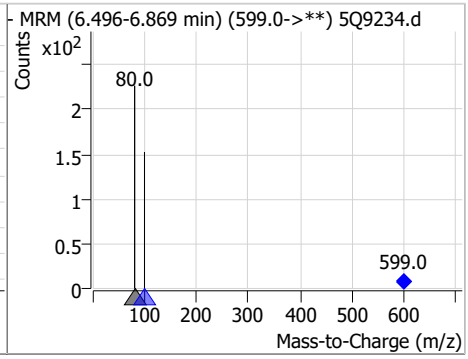




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	1.86	6.63	-0.04	4306	599.0 -> 99.0	60.7	29.8	89.3

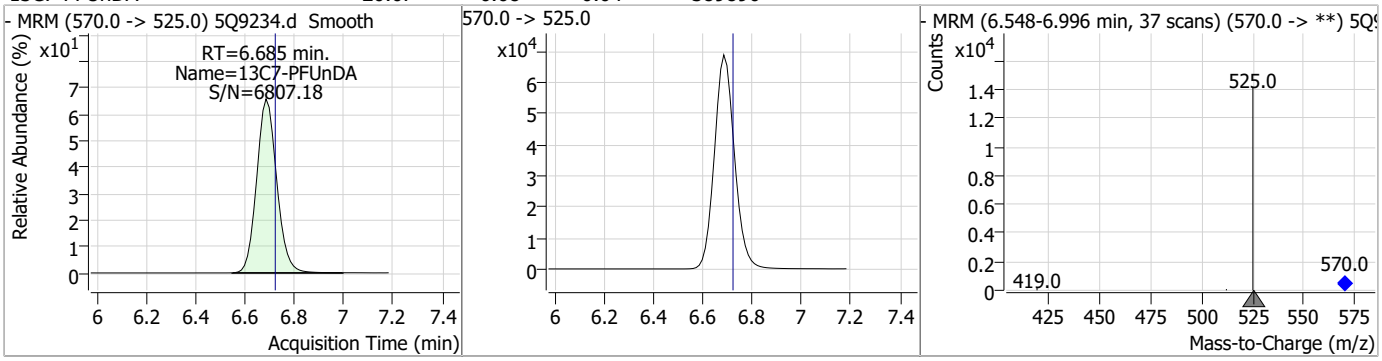




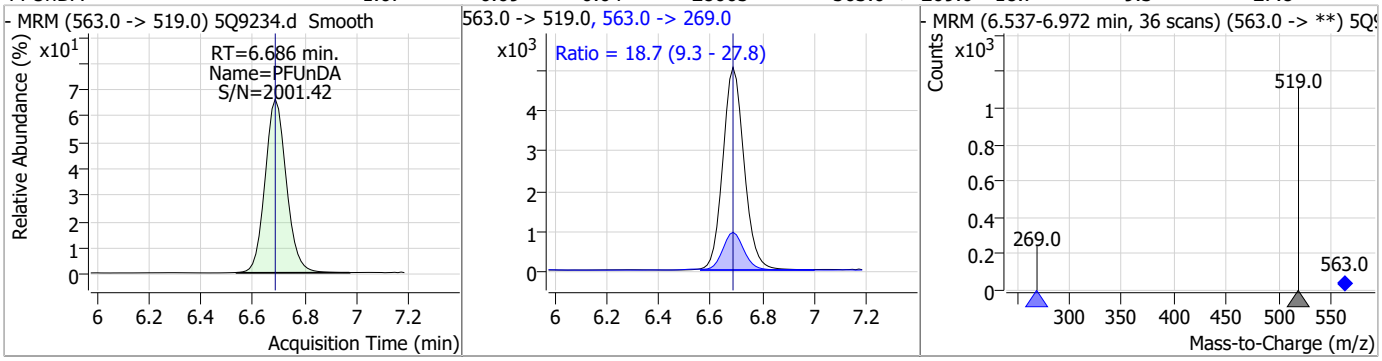


Perfluorinated Compounds by LC/MS/MS

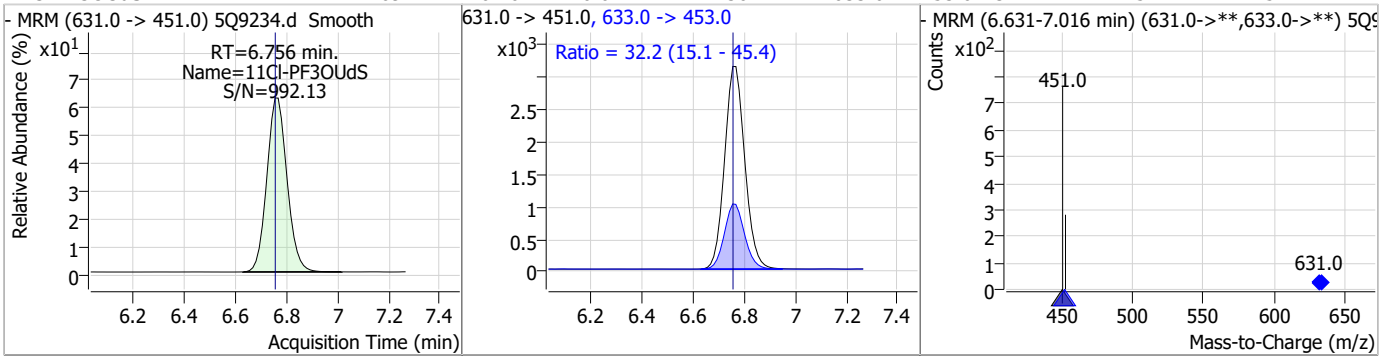
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.67	6.68	-0.04	389890				



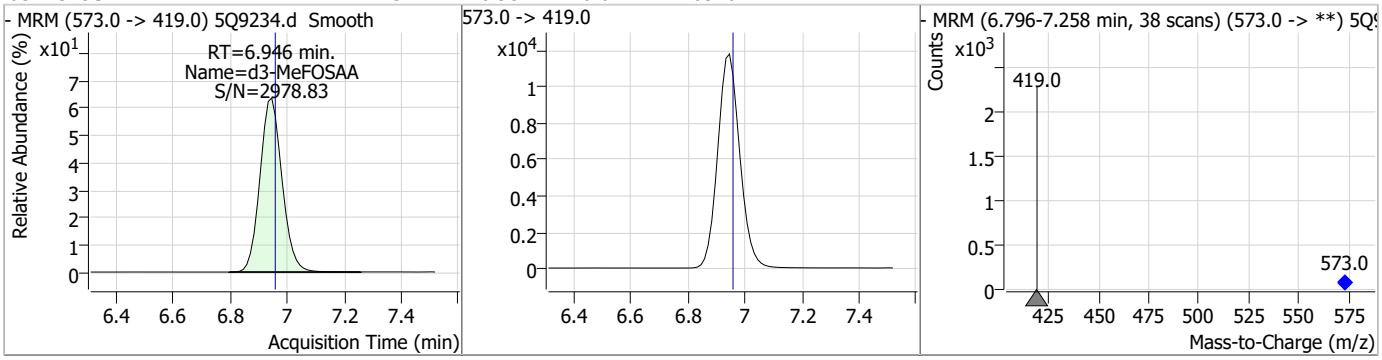
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	1.67	6.69	-0.04	28665	563.0 -> 269.0	18.7	9.3	27.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	1.69	6.76	-0.04	17136	633.0 -> 453.0	32.2	15.1	45.4

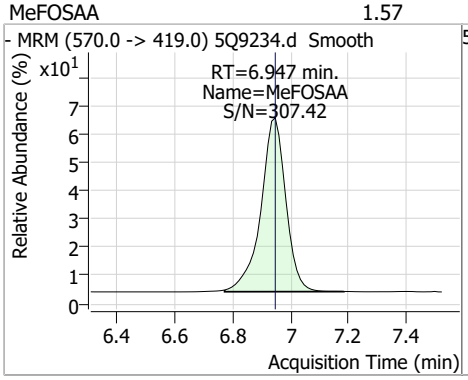


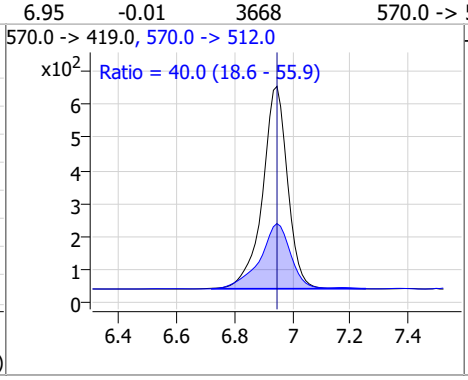
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	22.51	6.95	-0.01	63101				

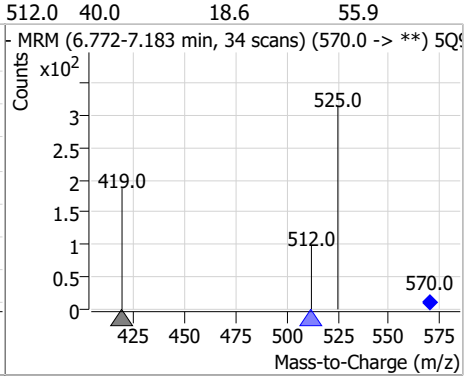


Perfluorinated Compounds by LC/MS/MS

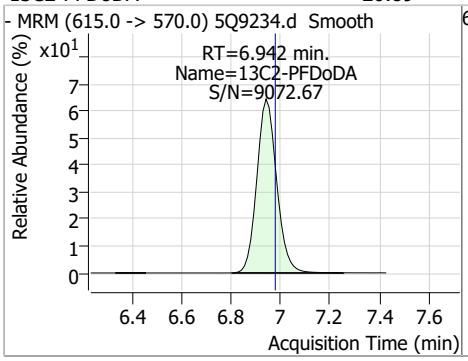
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	1.57	6.95	-0.01	3668	570.0 -> 512.0	40.0	18.6	55.9

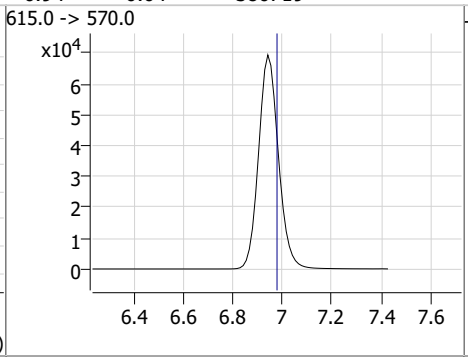


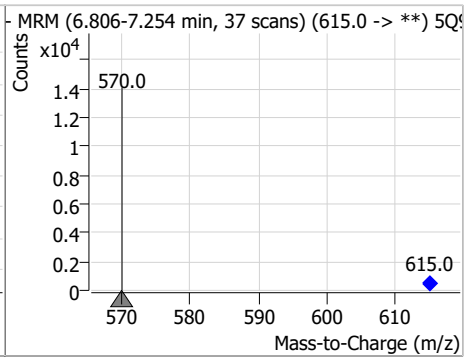




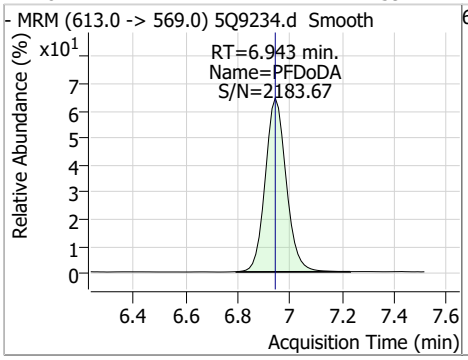
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.89	6.94	-0.04	386719				

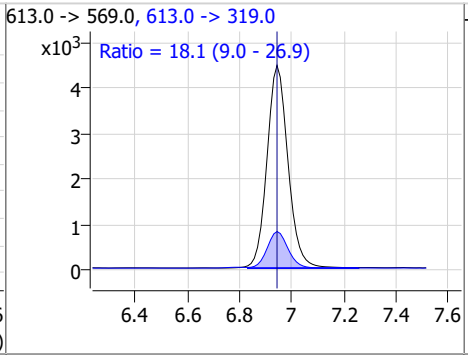


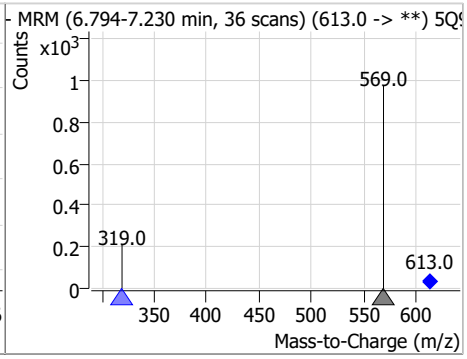




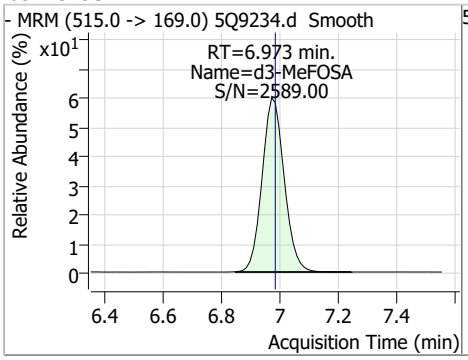
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	1.59	6.94	-0.04	24842	613.0 -> 319.0	18.1	9.0	26.9

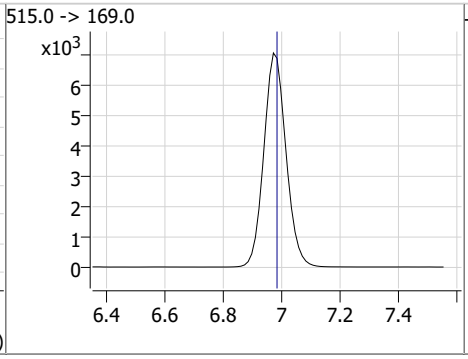


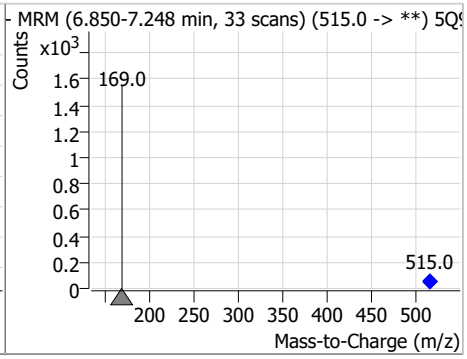




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	21.41	6.97	-0.01	36912				

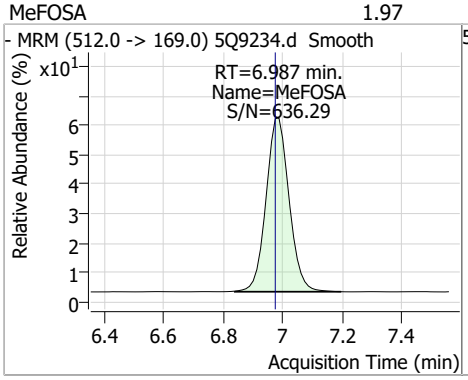


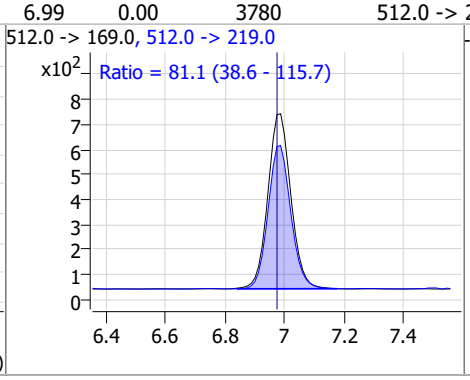


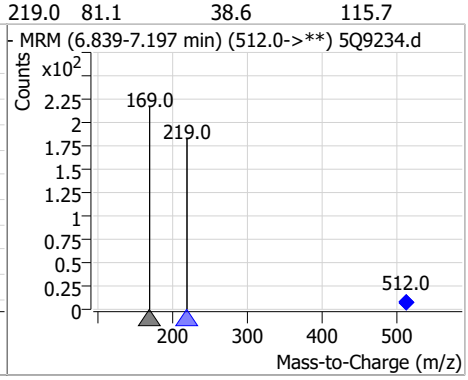


Perfluorinated Compounds by LC/MS/MS

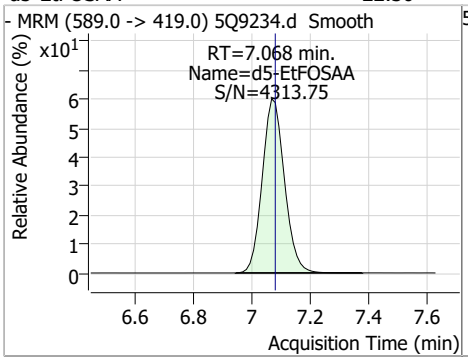
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	1.97	6.99	0.00	3780	512.0 -> 219.0	81.1	38.6	115.7

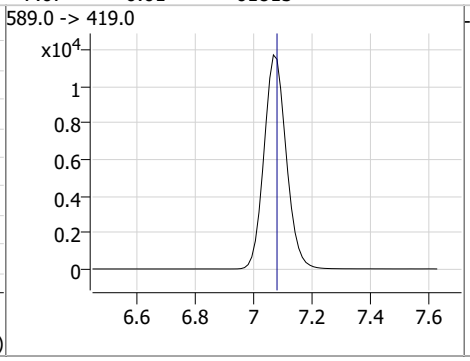


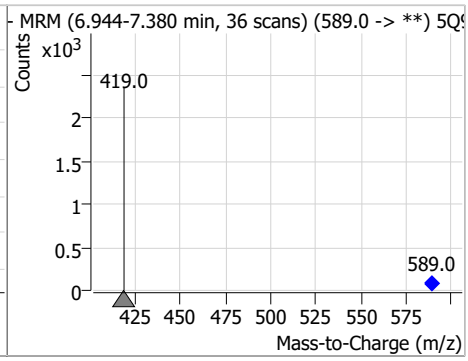




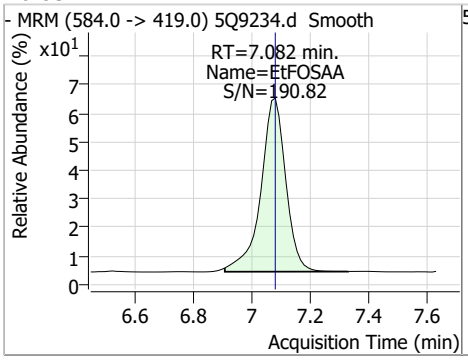
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	22.30	7.07	-0.01	61815				

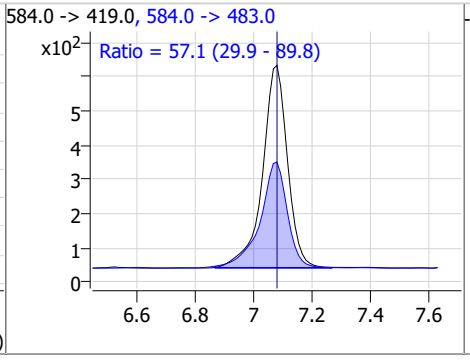


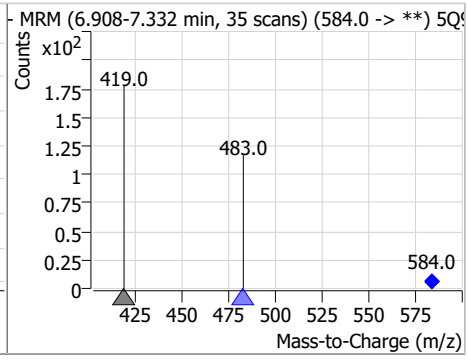




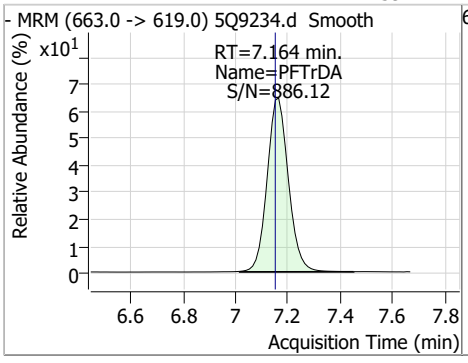
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	1.71	7.08	-0.01	3523	584.0 -> 483.0	57.1	29.9	89.8

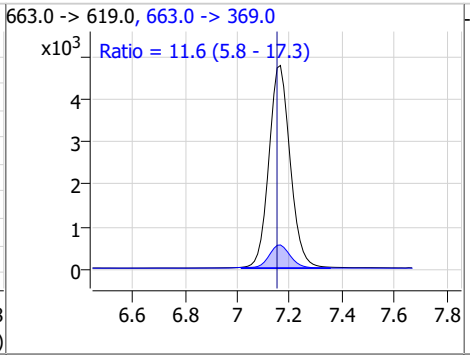


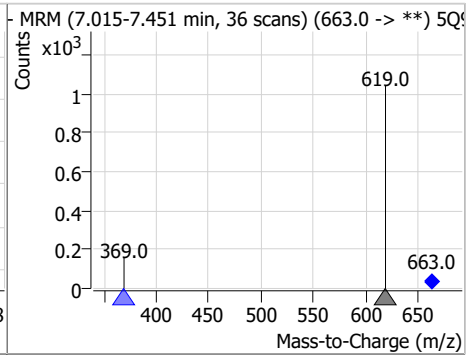




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	1.59	7.16	-0.03	26827	663.0 -> 369.0	11.6	5.8	17.3

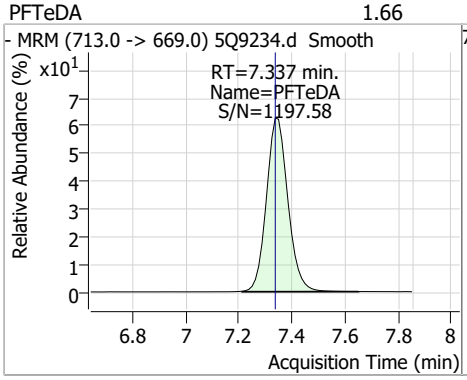


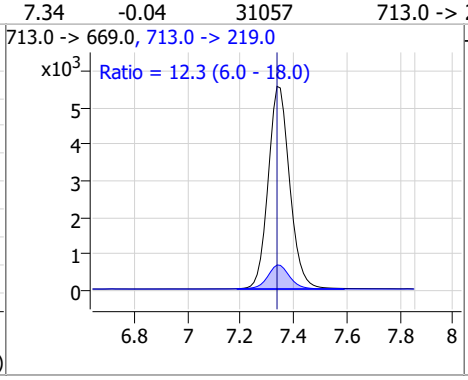


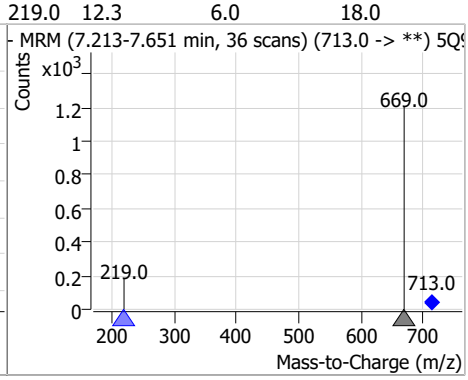


Perfluorinated Compounds by LC/MS/MS

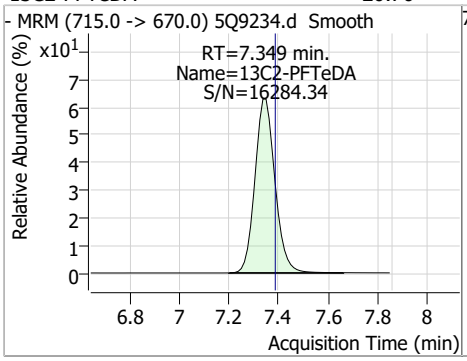
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	1.66	7.34	-0.04	31057	713.0 -> 219.0	12.3	6.0	18.0

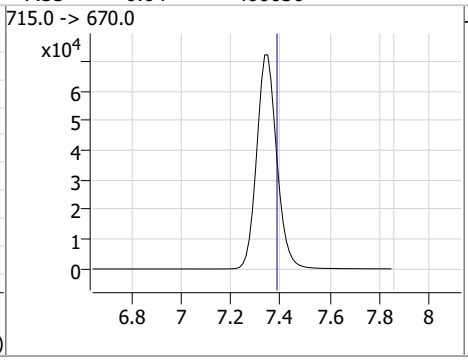


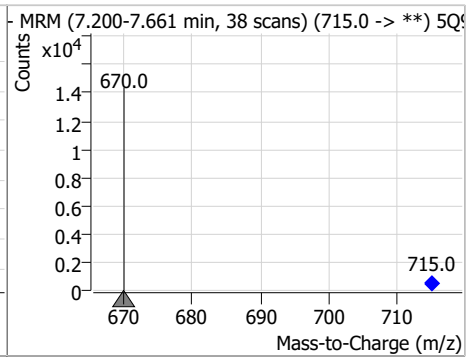




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.76	7.35	-0.04	406050				







Manual Integration Approval Summary

Sample Number: S5Q137-IC137
Lab FileID: 5Q9234.D
Injection Time: 01/03/23 15:39
Method: EPA 537M QSM5.3 B-15
Analyst approved: 01/04/23 11:33 Lindsay Ritner
Supervisor approved: 01/04/23 15:00 Natasha Gumtie

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanesulfonic acid	1763-23-1		5.98	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Natasha Gumtie 01/04/23 15:00

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9235.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 1/3/2023 3:54:57 PM
Sample Name : ic137-5
Vial : P1-A5
DA Method File : ID_010323_S5Q137.quantmethod.xml
Batch Name : s5q137.batch.bin
Sample Information : OP94373,S5Q137,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.962	217.0 -> 172.0	119069	20.00	µg/L	-0.013
M5-PFPeA	3.457	268.0 -> 223.0	210562	20.00	µg/L	-0.012
M5-PFHxA	4.430	318.0 -> 273.0	297480	20.00	µg/L	-0.025
M4-PFHpA	5.101	367.0 -> 322.0	302094	20.00	µg/L	-0.012
M8-PFOA	5.609	421.0 -> 376.0	386373	20.00	µg/L	-0.012
M9-PFNA	6.030	472.0 -> 427.0	386597	20.00	µg/L	-0.013
M6-PFDA	6.389	519.0 -> 474.0	380927	20.00	µg/L	-0.012
M7-PFUnDA	6.698	570.0 -> 525.0	391511	20.00	µg/L	-0.025
M2-PFDoDA	6.955	615.0 -> 570.0	378017	20.00	µg/L	-0.025
M2-PFTeDA	7.362	715.0 -> 670.0	398701	20.00	µg/L	-0.025
M8-FOSA	6.629	506.0 -> 78.0	128882	20.00	µg/L	-0.012
M3-PFBS	3.666	302.0 -> 99.0	26055	20.00	µg/L	-0.012
M3-PFHxS	5.110	402.0 -> 99.0	32858	20.00	µg/L	-0.012
M8-PFOS	5.991	507.0 -> 99.0	39012	20.00	µg/L	-0.025
M2-4:2FTS	4.336	329.0 -> 309.0	91975	20.00	µg/L	-0.012
M2-6:2FTS	5.570	429.0 -> 409.0	139604	20.00	µg/L	-0.025
M2-8:2FTS	6.376	529.0 -> 509.0	121059	20.00	µg/L	-0.025
M3-MeFOSAA	6.946	573.0 -> 419.0	60480	20.00	µg/L	-0.012
M3-HFPO-DA	4.632	287.0 -> 169.0	67795	20.00	µg/L	-0.012
M3-MeFOSA	6.986	515.0 -> 169.0	36505	20.00	µg/L	0.000
M5-EtFOSAA	7.081	589.0 -> 419.0	58150	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.336	329.0 -> 309.0	91975	19.45	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.2%		
13C2-6:2FTS	5.570	429.0 -> 409.0	139604	19.61	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%		
13C2-8:2FTS	6.376	529.0 -> 509.0	121059	19.72	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.6%		
13C2-PFDoDA	6.955	615.0 -> 570.0	378017	20.42	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.1%		
13C2-PFTeDA	7.362	715.0 -> 670.0	398701	20.39	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.9%		
13C3-PFBS	3.666	302.0 -> 99.0	26055	20.32	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.6%		
13C3-PFHxS	5.110	402.0 -> 99.0	32858	20.68	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.4%		
13C4-PFBA	1.962	217.0 -> 172.0	119069	20.77	µg/L	-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.8%		
13C4-PFHpA	5.101	367.0 -> 322.0	302094	20.56	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.8%		
13C5-PFHxA	4.430	318.0 -> 273.0	297480	20.25	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%		
13C5-PFPeA	3.457	268.0 -> 223.0	210562	20.27	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%		
13C6-PFDA	6.389	519.0 -> 474.0	380927	20.55	µg/L	-0.012

Perfluorinated Compounds by LC/MS/MS

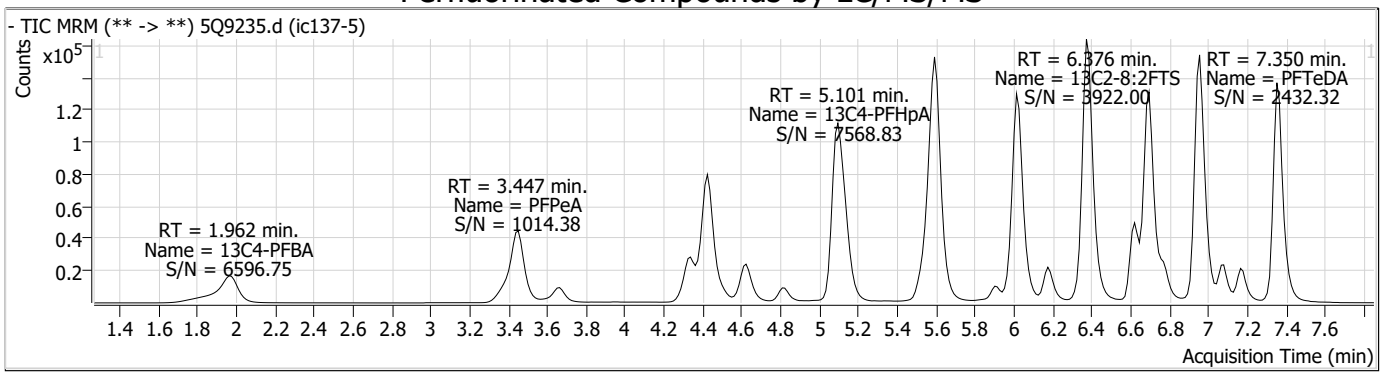
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.7%		
13C7-PFUnDA	6.698	570.0 -> 525.0	391511	20.75 µg/L		-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.8%		
13C8-FOSA	6.629	506.0 -> 78.0	128882	21.50 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.5%		
13C8-PFOA	5.609	421.0 -> 376.0	386373	20.51 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.6%		
13C8-PFOS	5.991	507.0 -> 99.0	39012	20.47 µg/L		-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.3%		
13C9-PFNA	6.030	472.0 -> 427.0	386597	20.48 µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.4%		
d3-MeFOSAA	6.946	573.0 -> 419.0	60480	21.58 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 107.9%		
13C3-HFPO-DA	4.632	287.0 -> 169.0	67795	20.21 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.1%		
d3-MeFOSA	6.986	515.0 -> 169.0	36505	21.17 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.9%		
d5-EtFOSAA	7.081	589.0 -> 419.0	58150	20.97 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.9%		
Target Compounds						QValue
4:2FTS	4.326	327.0 -> 307.0	19217	4.59 µg/L		98
		327.0 -> 81.0	11874			
6:2FTS	5.570	427.0 -> 407.0	27949	4.61 µg/L		99
		427.0 -> 81.0	12624			
8:2FTS	6.376	527.0 -> 507.0	23153	4.48 µg/L		97
		527.0 -> 81.0	12597			
EtFOSAA	7.082	584.0 -> 419.0	7936	4.09 µg/L		96
		584.0 -> 483.0	5008			
FOSA	6.630	498.0 -> 78.0	23565	4.08 µg/L		100
		498.0 -> 478.0	726			
MeFOSAA	6.947	570.0 -> 419.0	9162	4.09 µg/L		98
		570.0 -> 512.0	3533			
PFBA	1.969	213.0 -> 169.0	22189	3.98 µg/L		100
PFBS	3.657	299.0 -> 80.0	15367	4.11 µg/L		100
		299.0 -> 99.0	6481			
PFDA	6.390	513.0 -> 469.0	70512	3.93 µg/L		99
		513.0 -> 219.0	13651			
PFDoDA	6.955	613.0 -> 569.0	61150	4.00 µg/L		99
		613.0 -> 319.0	10811			
PFDS	6.646	599.0 -> 80.0	10748	4.63 µg/L		96
		599.0 -> 99.0	6110			
PFHpA	5.101	363.0 -> 319.0	66705	4.06 µg/L		100
		363.0 -> 169.0	14954			
PFHpS	5.594	449.0 -> 80.0	11433	4.04 µg/L		98
		449.0 -> 99.0	6116			
PFHxA	4.430	313.0 -> 269.0	53195	4.01 µg/L		100
		313.0 -> 119.0	2514			
PFHxS	5.111	399.0 -> 80.0	11860	3.95 µg/L		100
		399.0 -> 99.0	6714			
PFNA	6.031	463.0 -> 419.0	69525	4.01 µg/L		100
		463.0 -> 219.0	15559			
PFNS	6.338	549.0 -> 80.0	9496	4.09 µg/L		99
		549.0 -> 99.0	5496			
PFOA	5.609	413.0 -> 369.0	78199	4.09 µg/L		100
		413.0 -> 169.0	21608			
PFOS	5.992	499.0 -> 80.0	13980	4.14 µg/L	m	96

Perfluorinated Compounds by LC/MS/MS

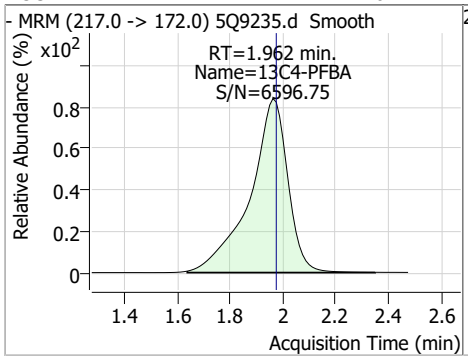
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	6350			
PFPeA	3.447	263.0 -> 219.0	43493	4.00	µg/L	100
PFPeS	4.501	349.0 -> 80.0	9259	4.08	µg/L	99
		349.0 -> 99.0	4717			
PFTeDA	7.350	713.0 -> 669.0	74827	4.07	µg/L	100
		713.0 -> 219.0	9025			
PFTrDA	7.164	663.0 -> 619.0	63516	3.85	µg/L	100
		663.0 -> 369.0	7405			
PFUnDA	6.699	563.0 -> 519.0	68692	3.97	µg/L	100
		563.0 -> 269.0	12600			
11Cl-PF3OUdS	6.768	631.0 -> 451.0	42761	4.29	µg/L	99
		633.0 -> 453.0	12822			
9Cl-PF3ONS	6.176	531.0 -> 351.0	55560	4.09	µg/L	100
		533.0 -> 353.0	17287			
ADONA	5.137	377.0 -> 251.0	87206	3.88	µg/L	99
		377.0 -> 85.0	32977			
HFPO-DA	4.627	329.0 -> 169.0	19839	4.04	µg/L	99
		285.0 -> 169.0	11879			
MeFOSA	6.987	512.0 -> 169.0	9485	5.00	µg/L	97
		512.0 -> 219.0	7072			
4-PFECHS	5.531	461.0 -> 381.0	35369	3.80	µg/L	98
		461.0 -> 99.0	19987			
FBSA	4.829	298.0 -> 78.0	30956	4.77	µg/L	99
		298.0 -> 64.0	2952			
FHxSA	5.923	398.0 -> 78.0	28393	4.68	µg/L	100
		398.0 -> 64.0	2717			

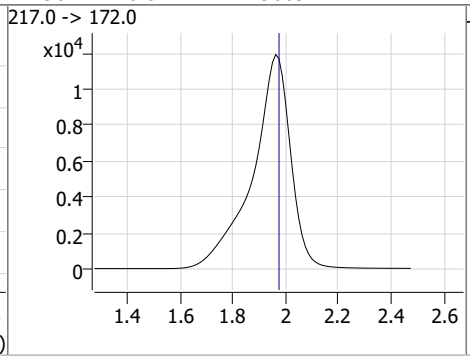
 # = Qualifier out of range, m = manually integrated, + = Area summed

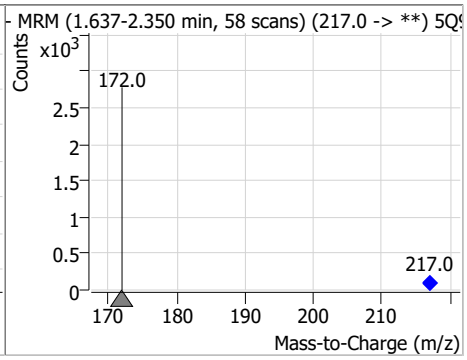
Perfluorinated Compounds by LC/MS/MS



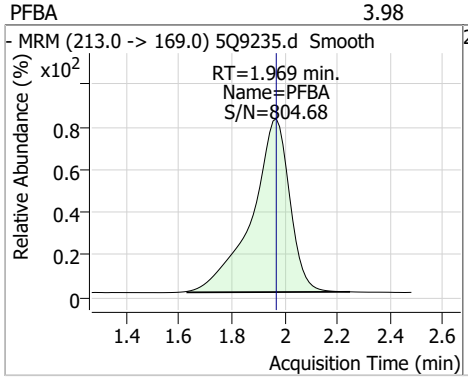
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.77	1.96	-0.01	119069				

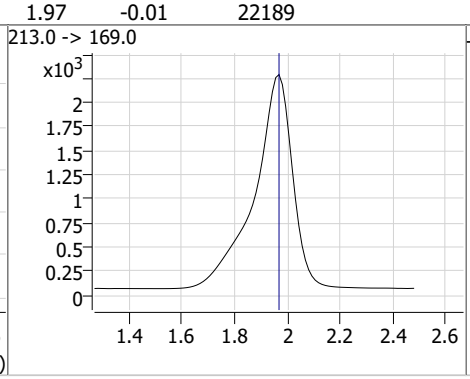


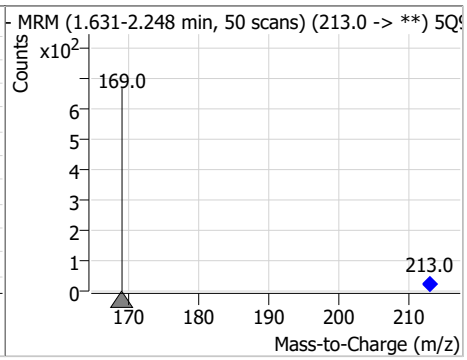




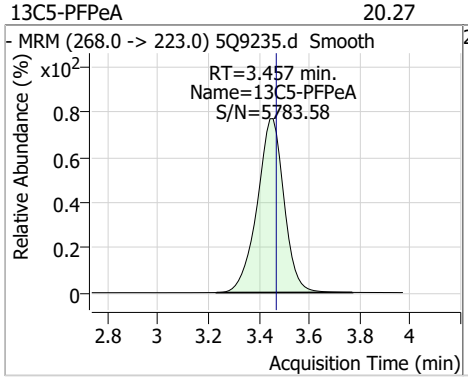
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	3.98	1.97	-0.01	22189				

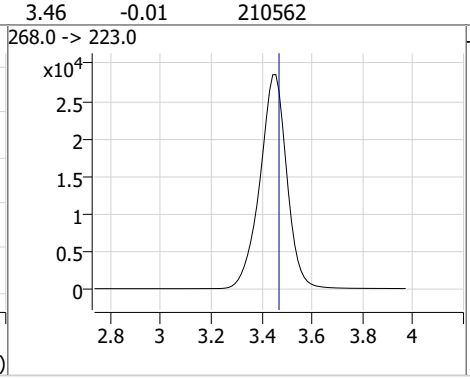


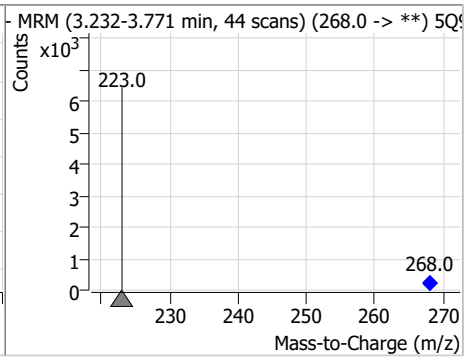




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.27	3.46	-0.01	210562				

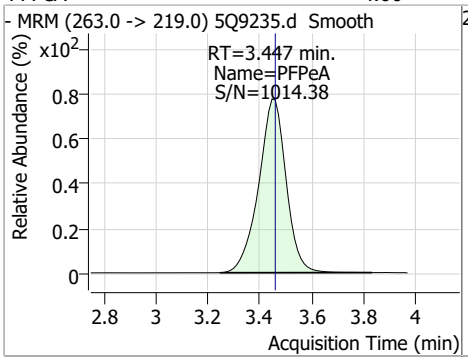


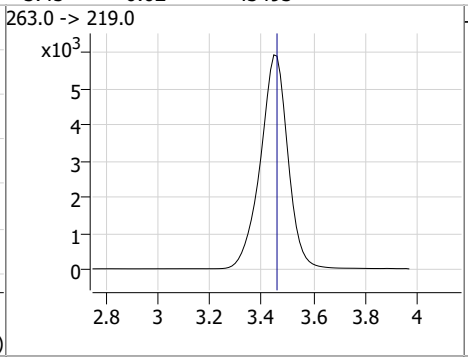


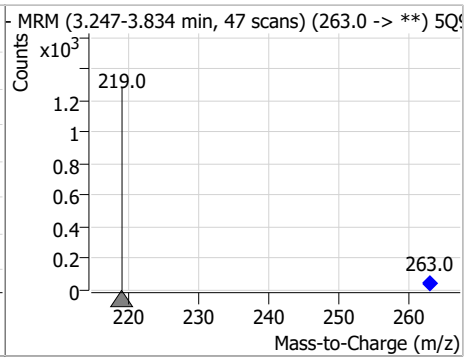


Perfluorinated Compounds by LC/MS/MS

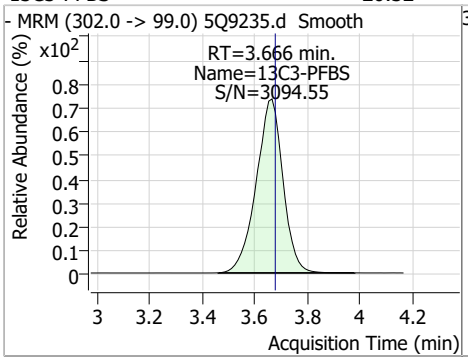
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	4.00	3.45	-0.02	43493				

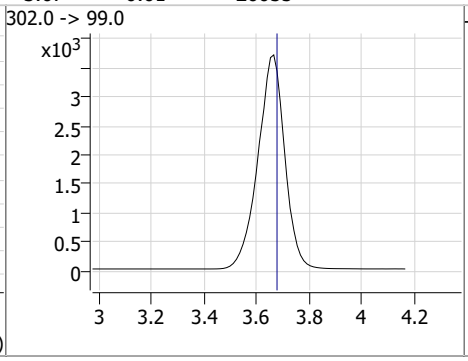


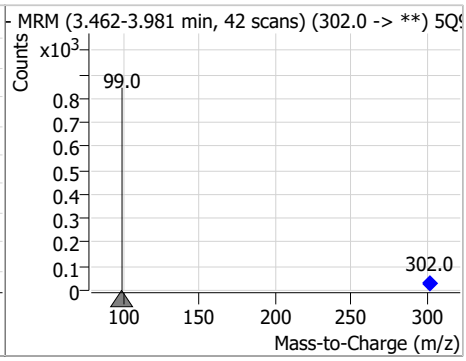




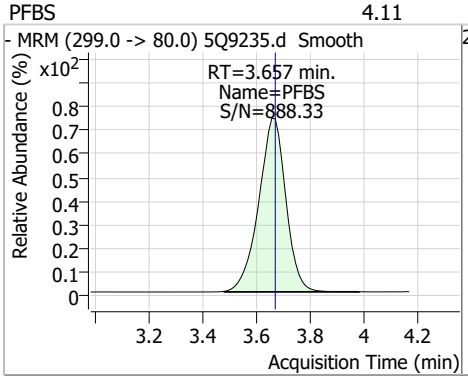
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.32	3.67	-0.01	26055				

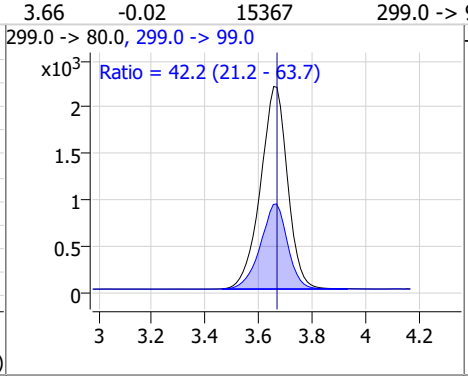


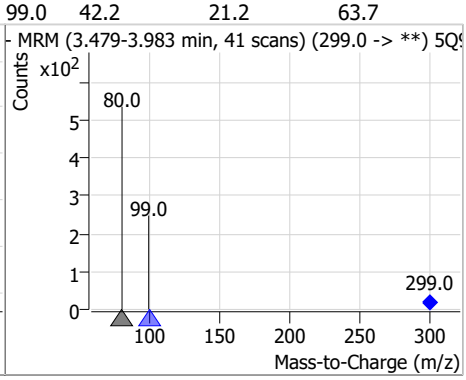




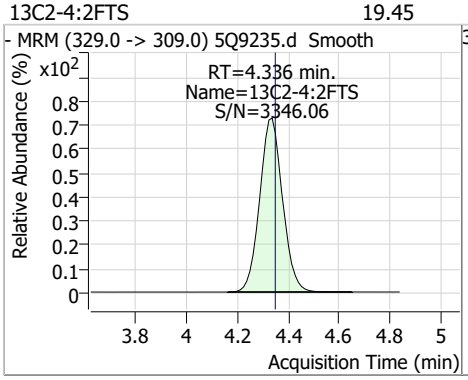
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	4.11	3.66	-0.02	15367	299.0 -> 99.0	42.2	21.2	63.7

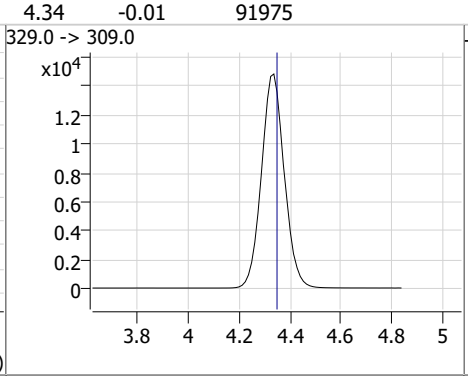


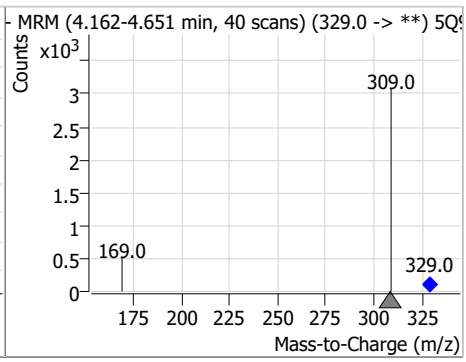




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.45	4.34	-0.01	91975				

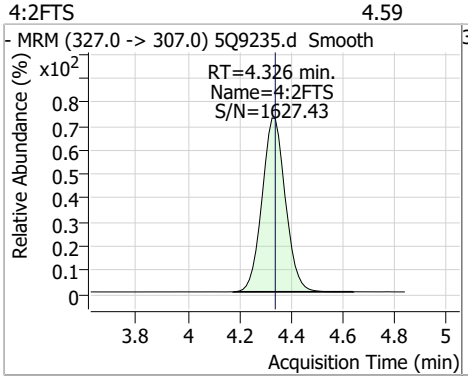


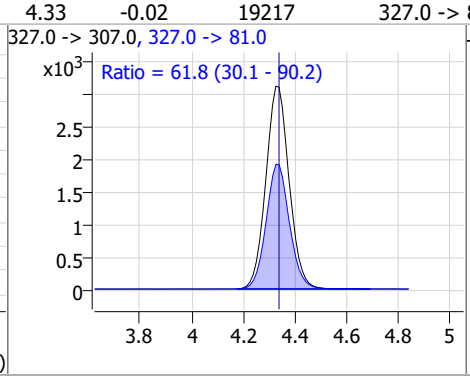


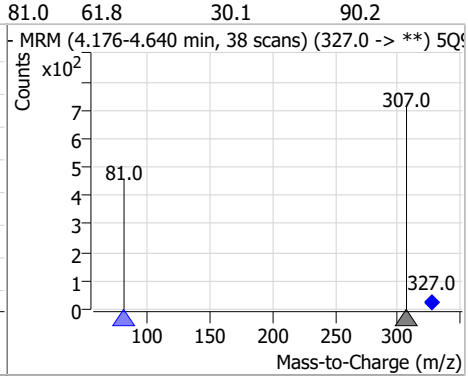


Perfluorinated Compounds by LC/MS/MS

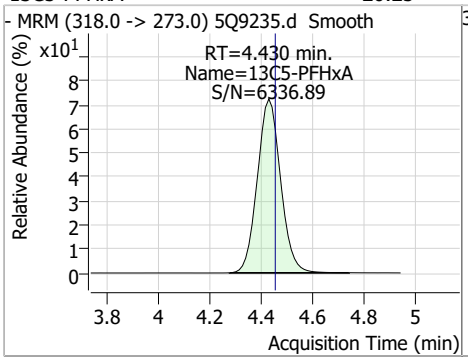
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	4.59	4.33	-0.02	19217	327.0 -> 81.0	61.8	30.1	90.2

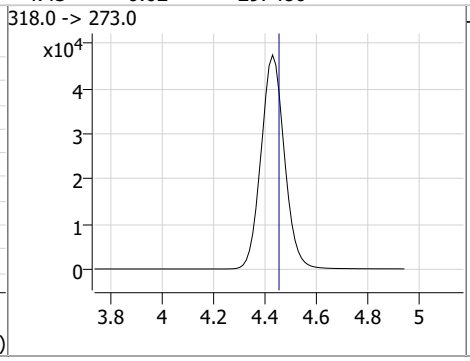


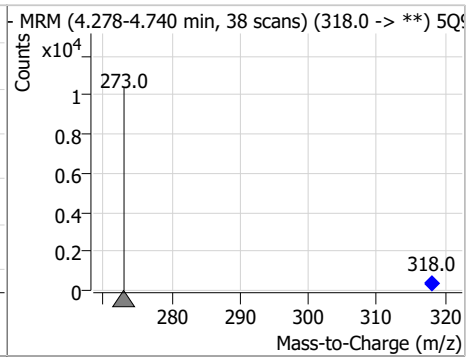




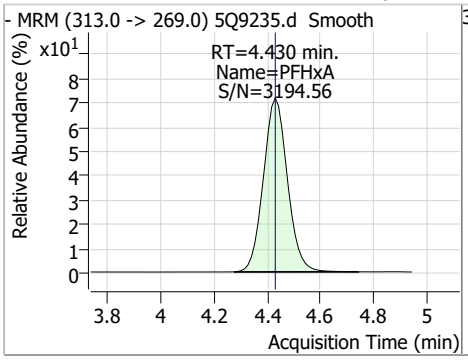
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.25	4.43	-0.02	297480				

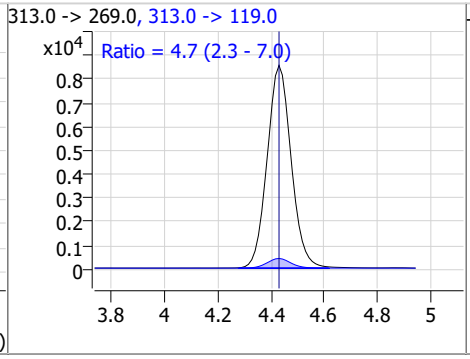


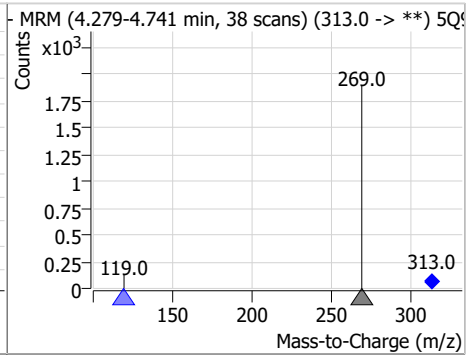




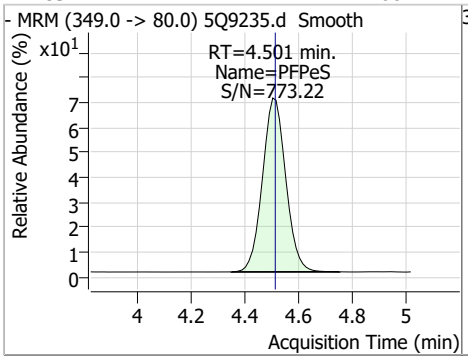
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	4.01	4.43	-0.02	53195	313.0 -> 119.0	4.7	2.3	7.0

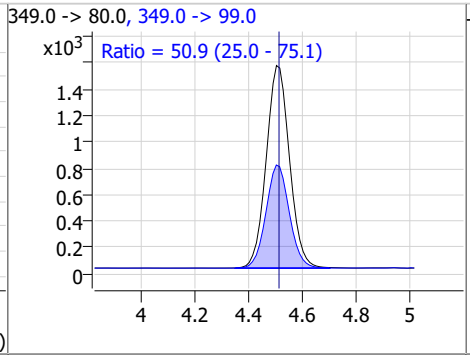


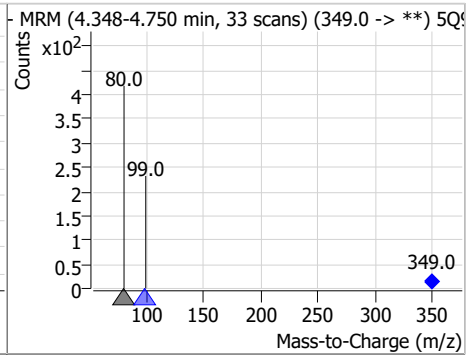




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	4.08	4.50	-0.02	9259	349.0 -> 99.0	50.9	25.0	75.1

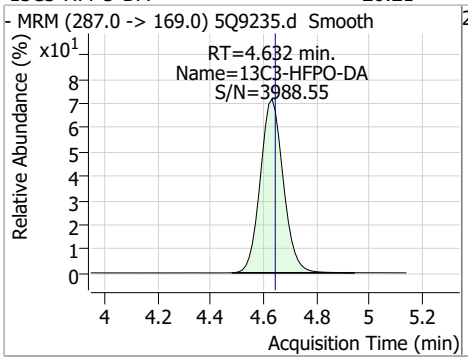


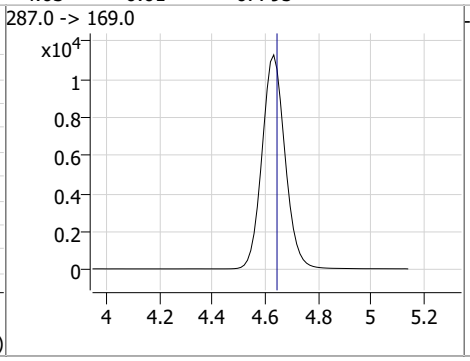


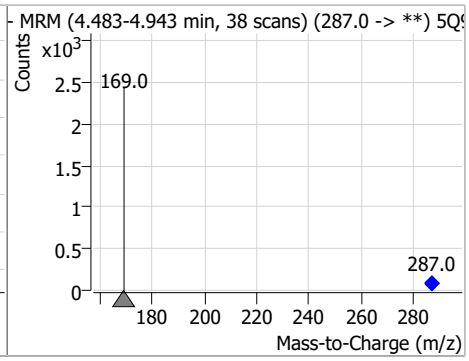


Perfluorinated Compounds by LC/MS/MS

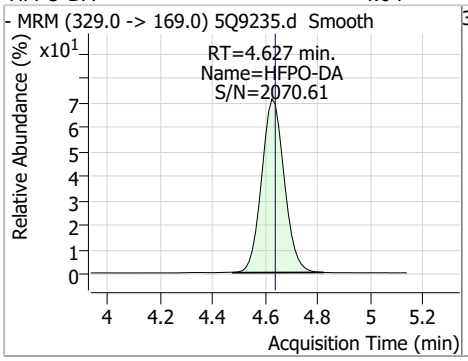
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.21	4.63	-0.01	67795				

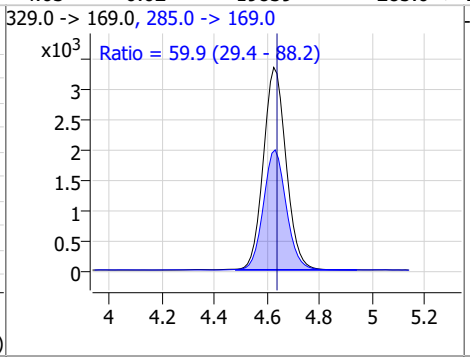


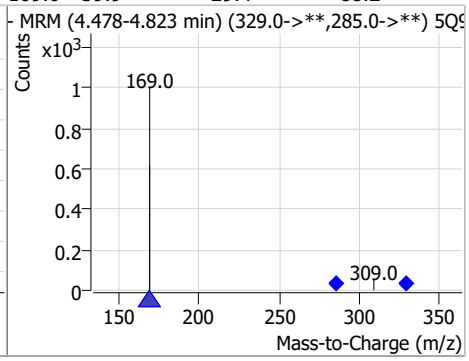




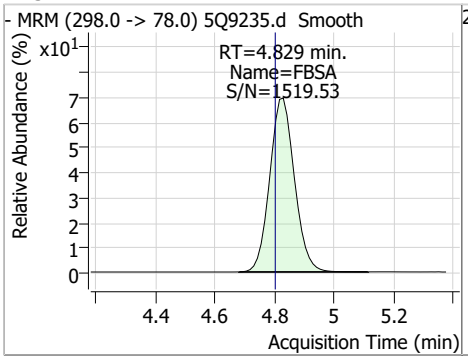
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	4.04	4.63	-0.02	19839	285.0 -> 169.0	59.9	29.4	88.2

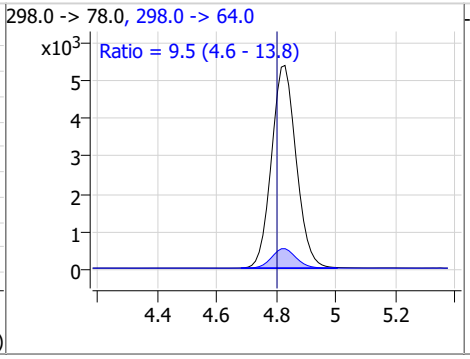


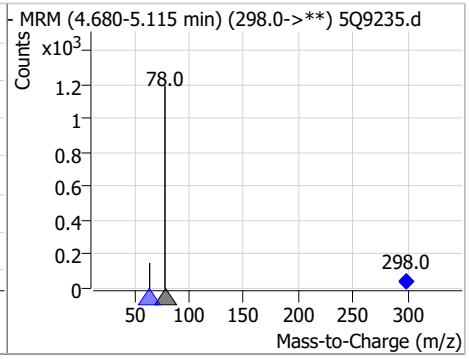




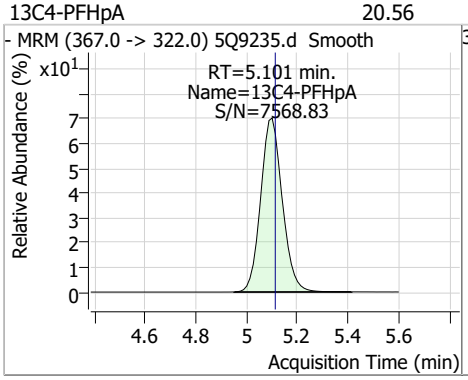
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	4.77	4.83	0.00	30956	298.0 -> 64.0	9.5	4.6	13.8

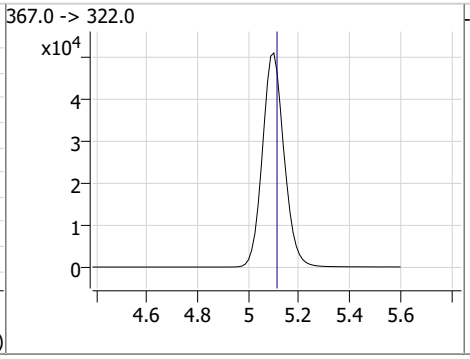


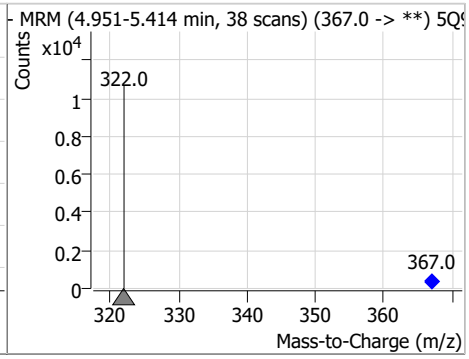




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.56	5.10	-0.01	302094				

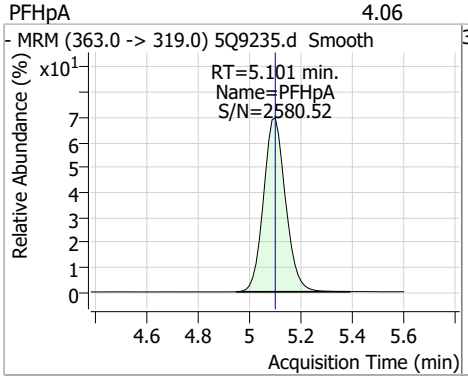


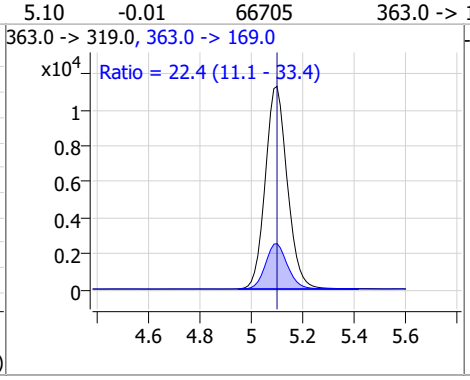


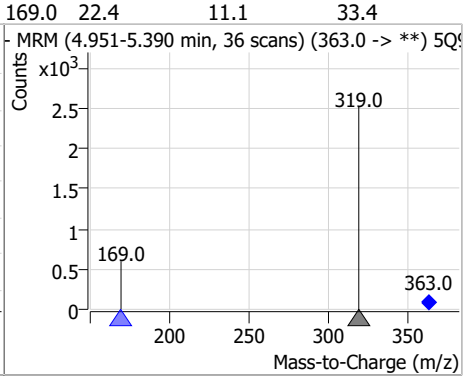


Perfluorinated Compounds by LC/MS/MS

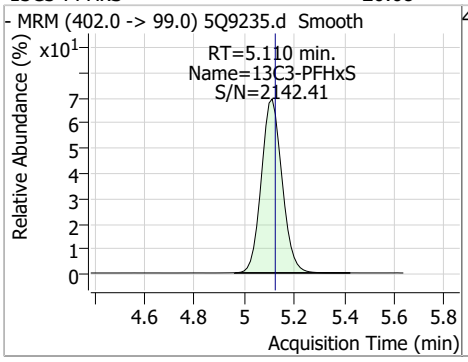
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	4.06	5.10	-0.01	66705	363.0 -> 169.0	22.4	11.1	33.4

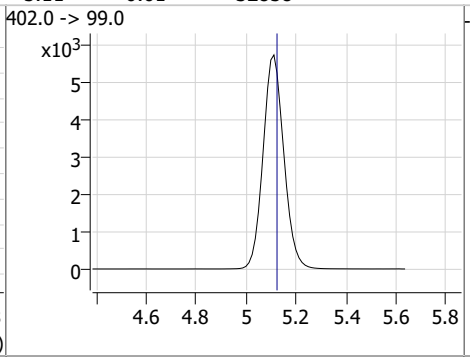


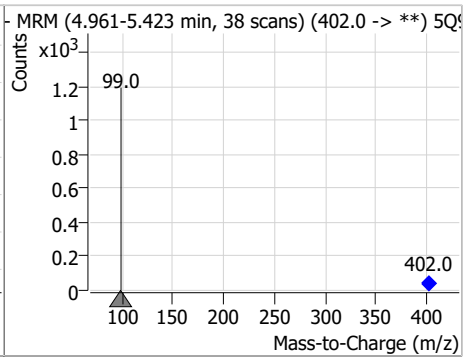




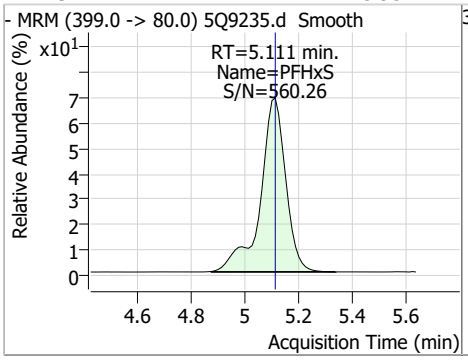
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.68	5.11	-0.01	32858				

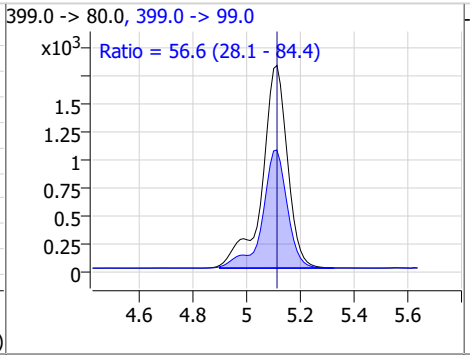


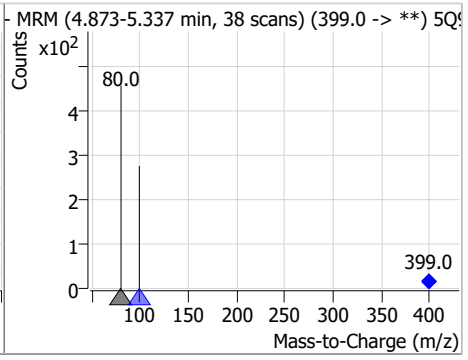




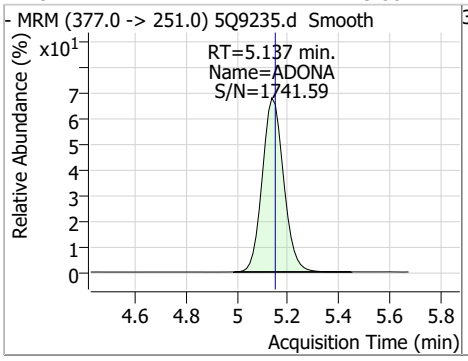
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	3.95	5.11	-0.01	11860	399.0 -> 99.0	56.6	28.1	84.4

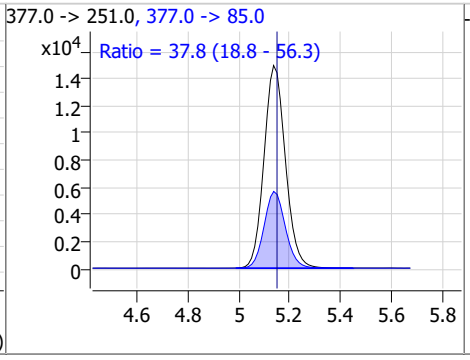


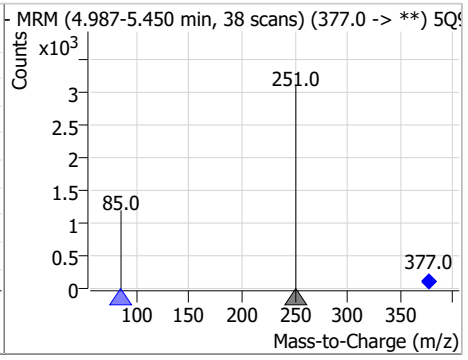




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	3.88	5.14	-0.03	87206	377.0 -> 85.0	37.8	18.8	56.3

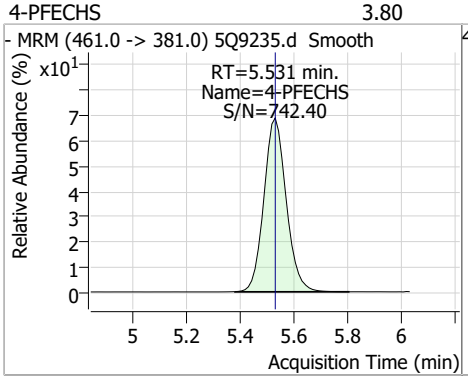


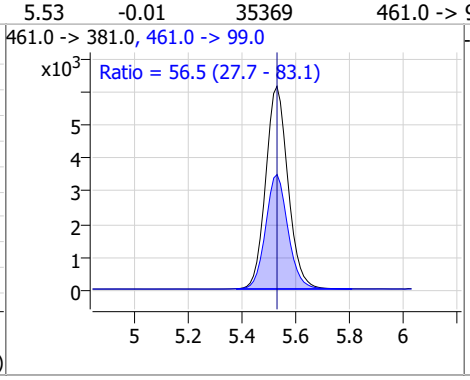


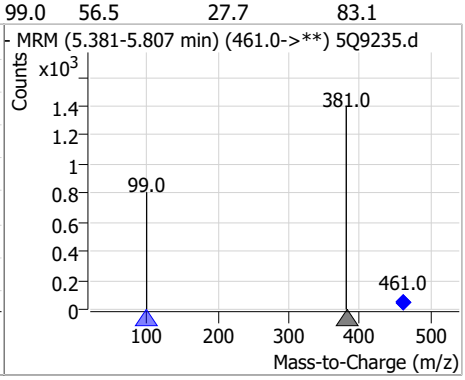


Perfluorinated Compounds by LC/MS/MS

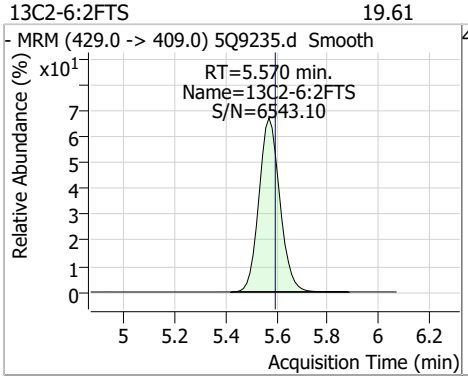
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	3.80	5.53	-0.01	35369	461.0 -> 99.0	56.5	27.7	83.1

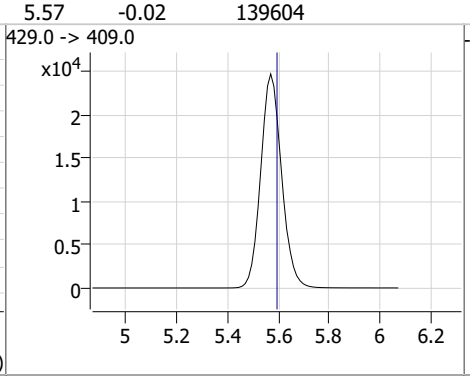


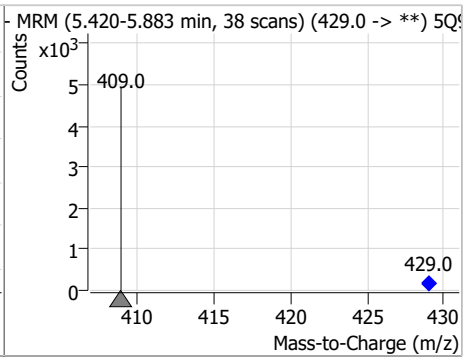




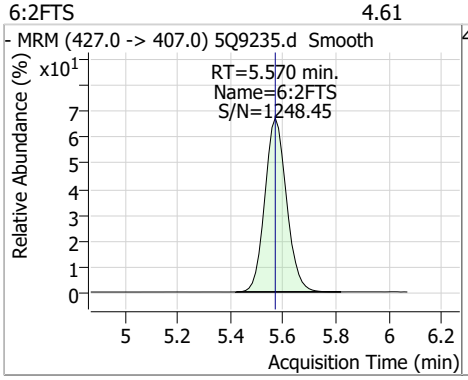
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.61	5.57	-0.02	139604				

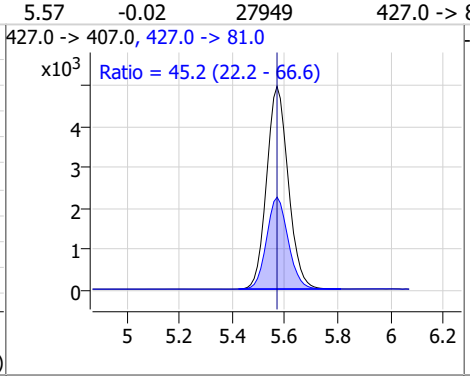


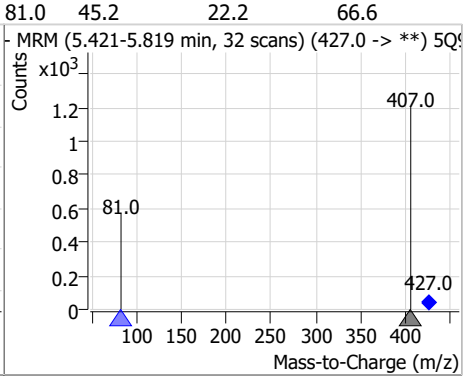




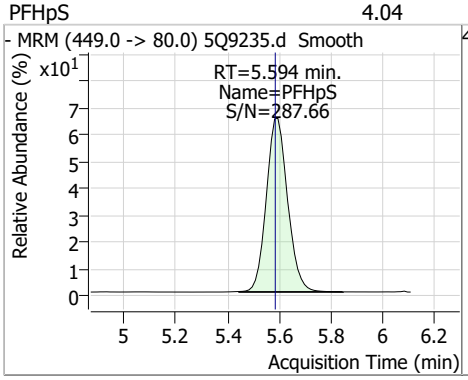
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	4.61	5.57	-0.02	27949	427.0 -> 81.0	45.2	22.2	66.6

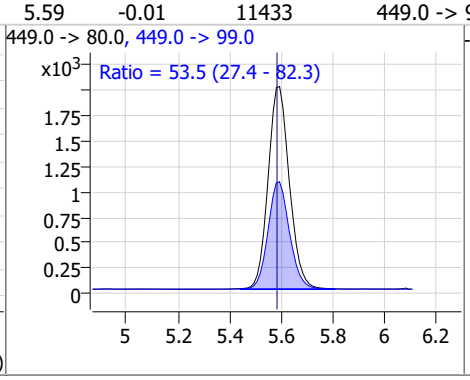


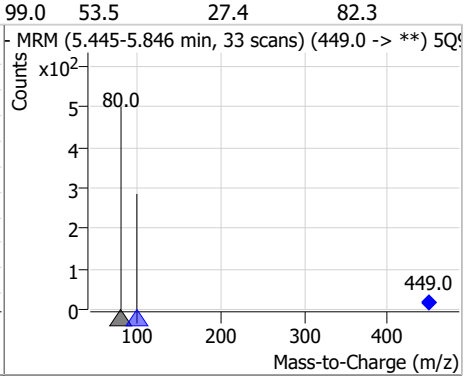




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	4.04	5.59	-0.01	11433	449.0 -> 99.0	53.5	27.4	82.3

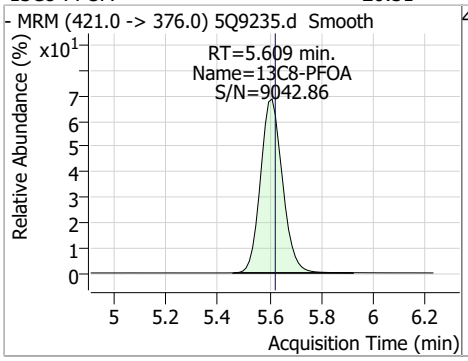


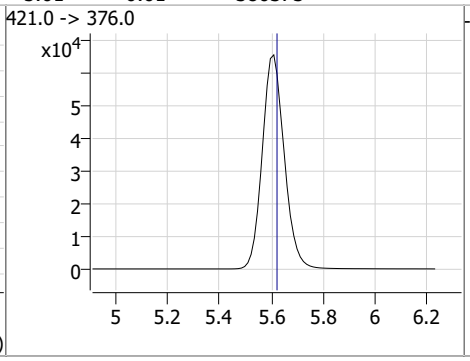


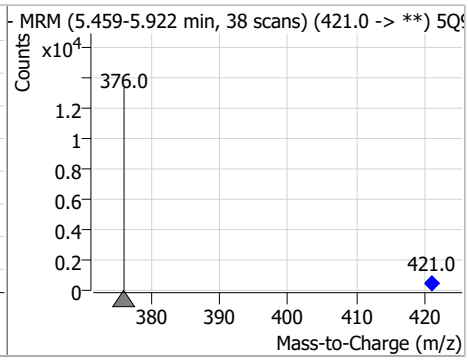


Perfluorinated Compounds by LC/MS/MS

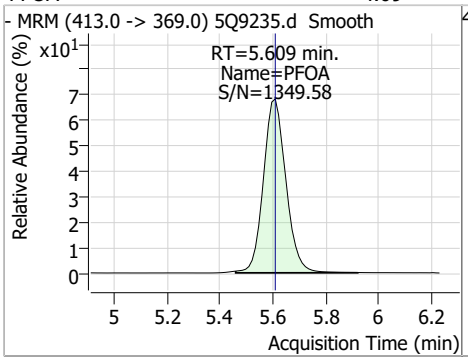
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.51	5.61	-0.01	386373				

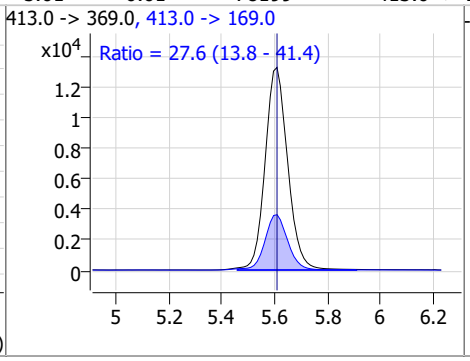


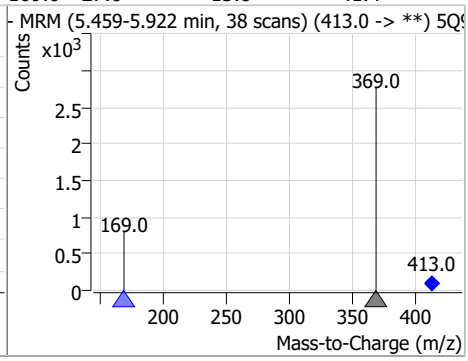




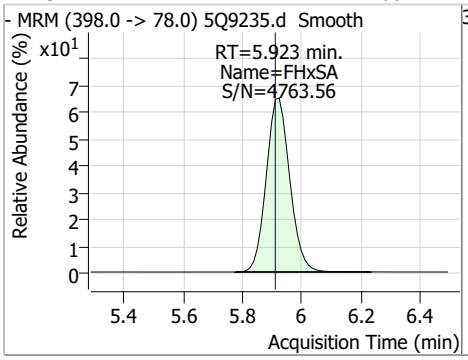
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	4.09	5.61	-0.01	78199	413.0 -> 169.0	27.6	13.8	41.4

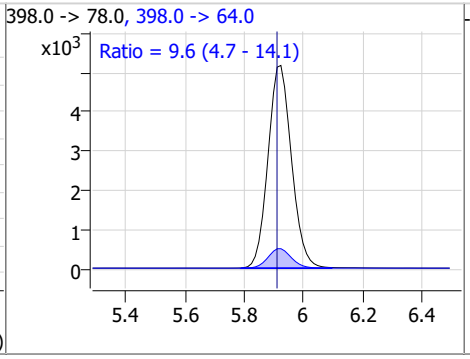


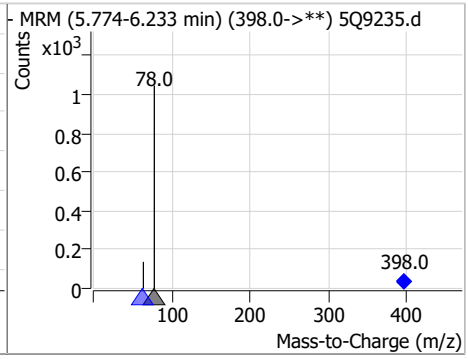




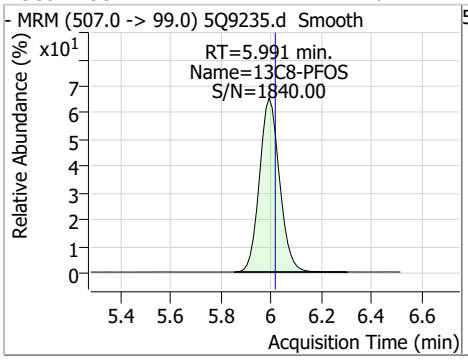
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	4.68	5.92	0.00	28393	398.0 -> 64.0	9.6	4.7	14.1

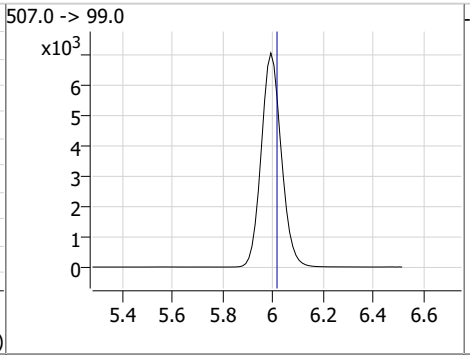


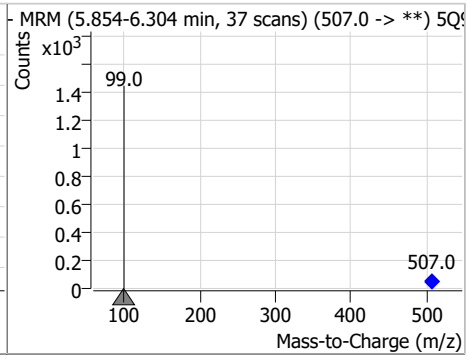




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.47	5.99	-0.02	39012				

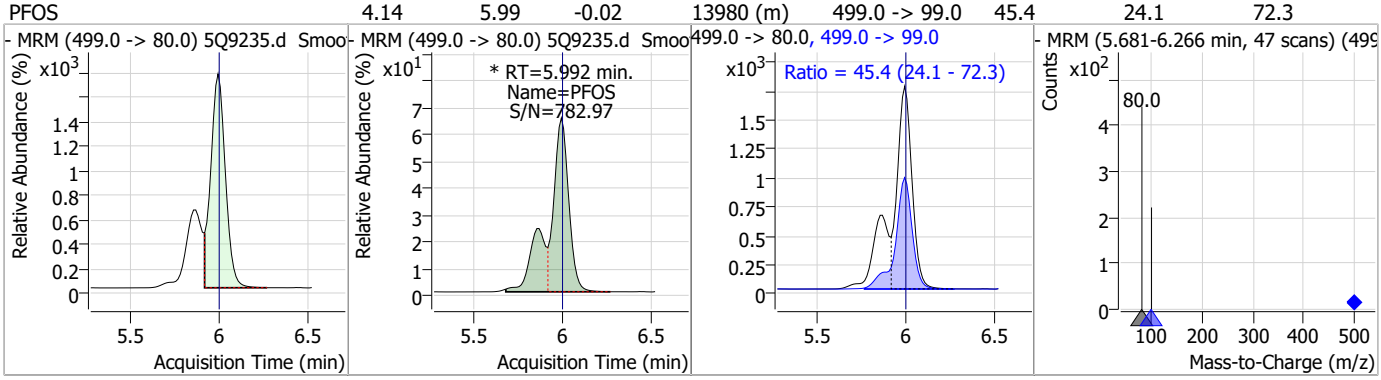




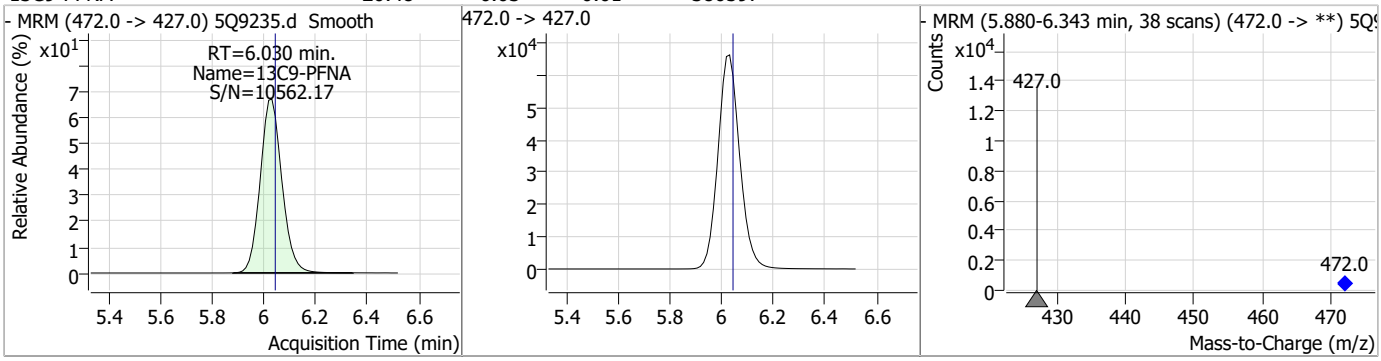


Perfluorinated Compounds by LC/MS/MS

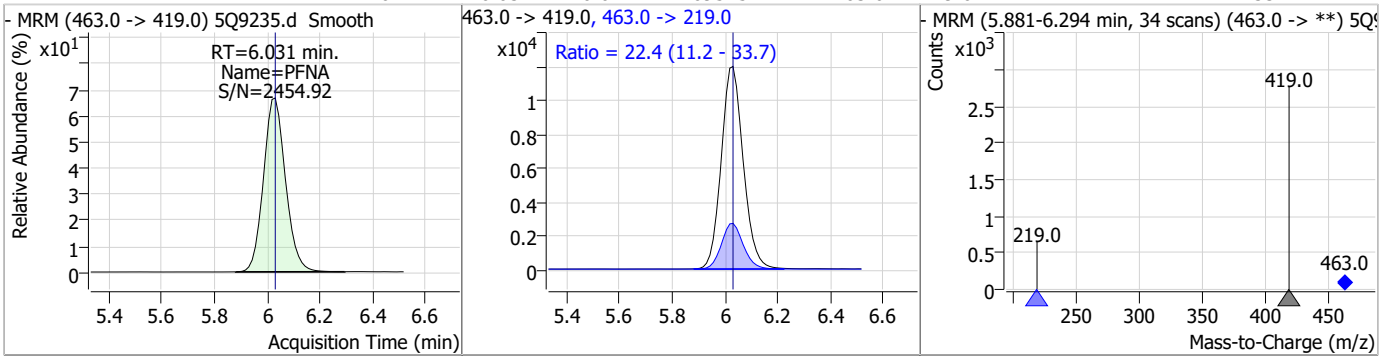
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	4.14	5.99	-0.02	13980 (m)	499.0 -> 99.0	45.4	24.1	72.3



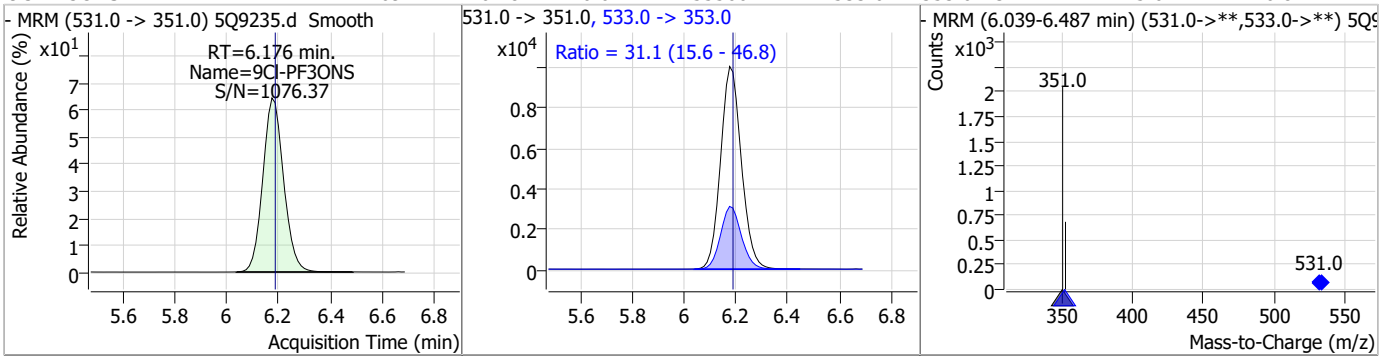
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.48	6.03	-0.01	386597				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	4.01	6.03	-0.01	69525	463.0 -> 219.0	22.4	11.2	33.7

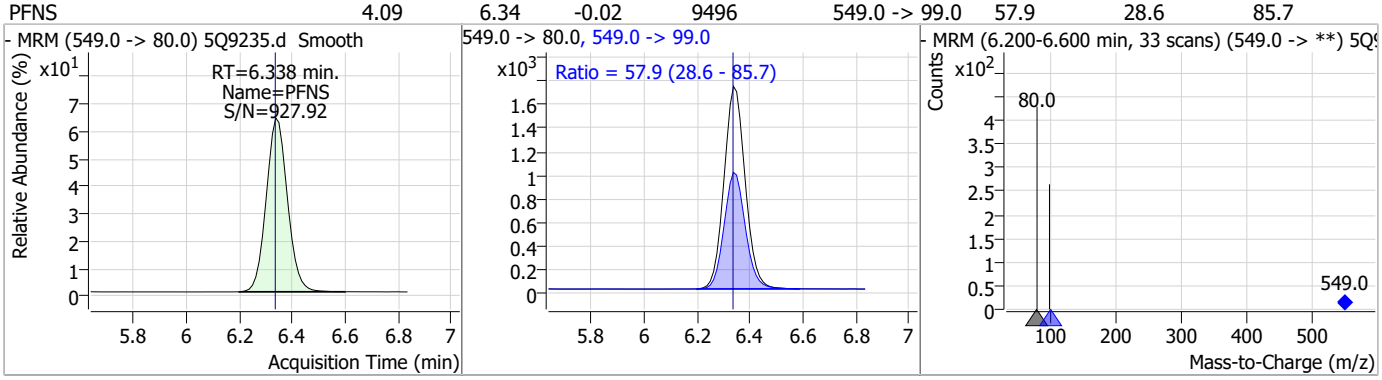


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	4.09	6.18	-0.02	55560	533.0 -> 353.0	31.1	15.6	46.8

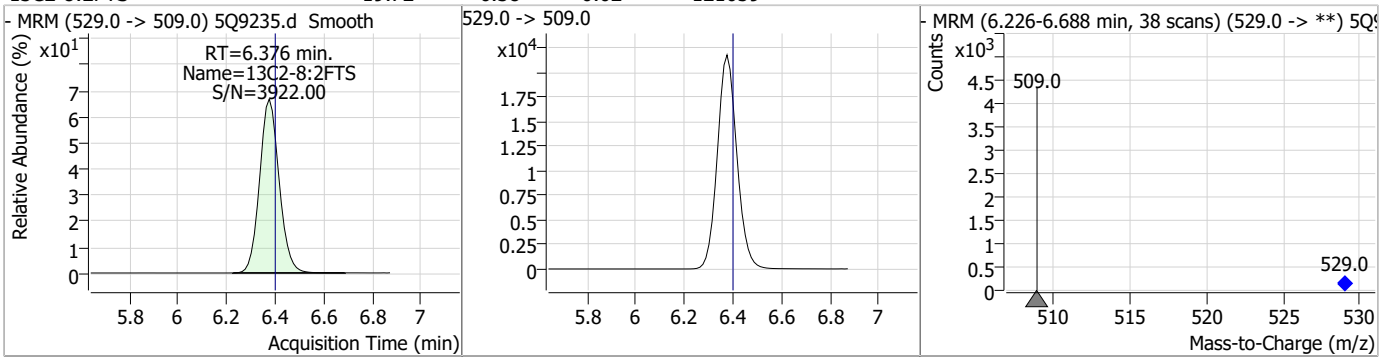


Perfluorinated Compounds by LC/MS/MS

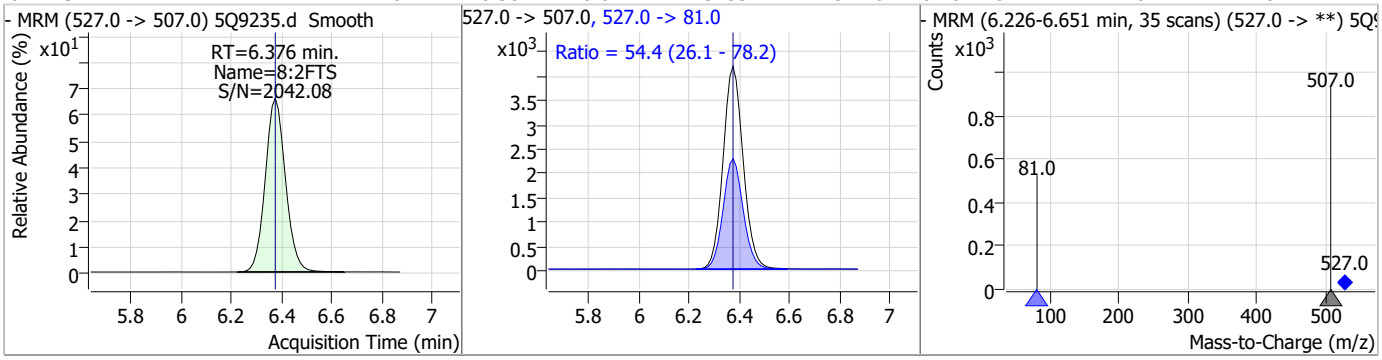
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	4.09	6.34	-0.02	9496	549.0 -> 99.0	57.9	28.6	85.7



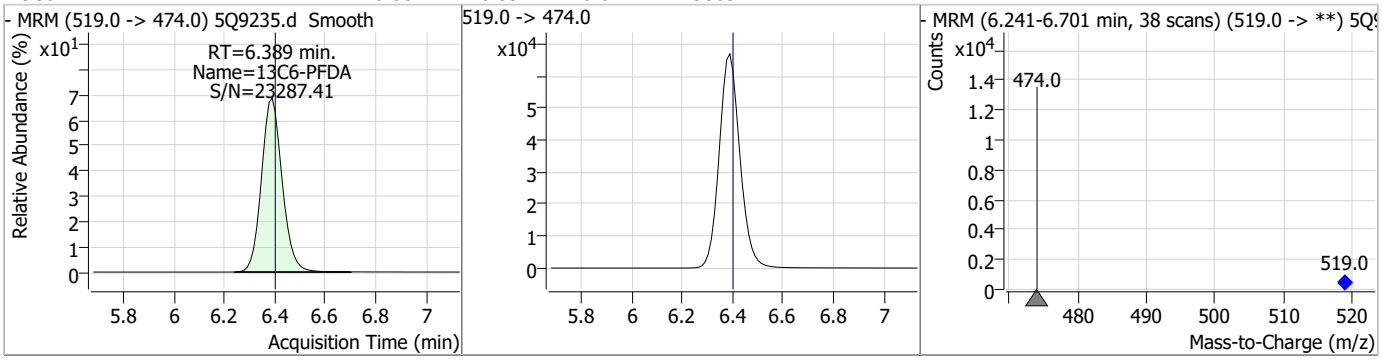
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.72	6.38	-0.02	121059				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	4.48	6.38	-0.02	23153	527.0 -> 81.0	54.4	26.1	78.2

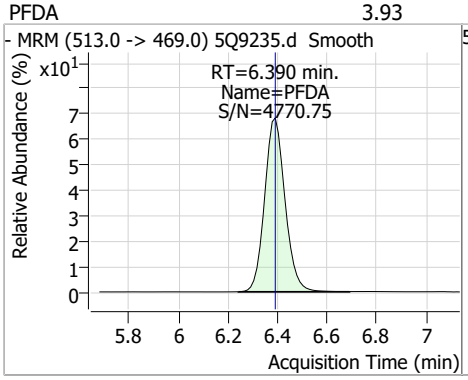


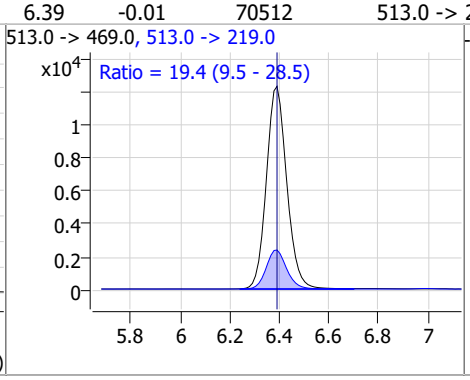
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.55	6.39	-0.01	380927				

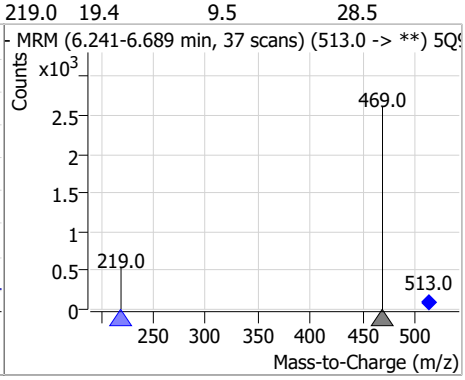


Perfluorinated Compounds by LC/MS/MS

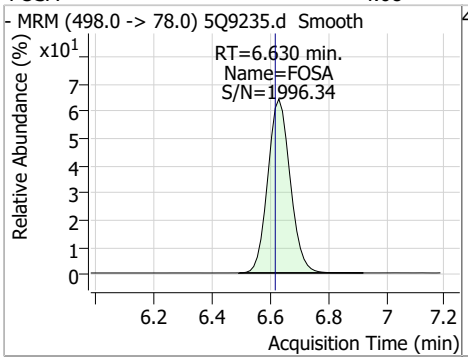
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	3.93	6.39	-0.01	70512	513.0 -> 219.0	19.4	9.5	28.5

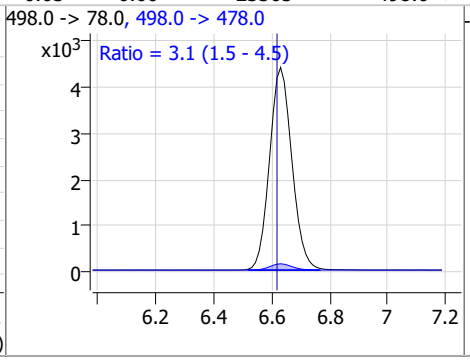


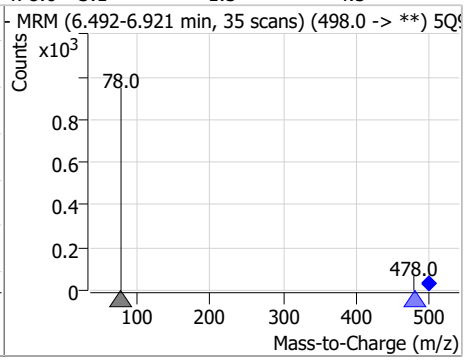




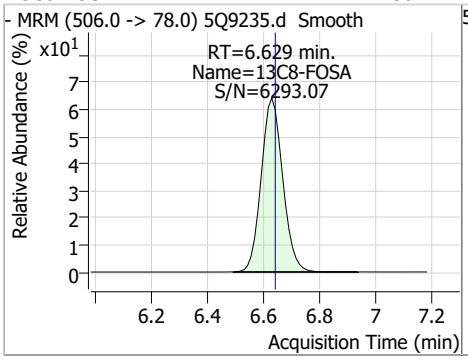
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	4.08	6.63	0.00	23565	498.0 -> 478.0	3.1	1.5	4.5

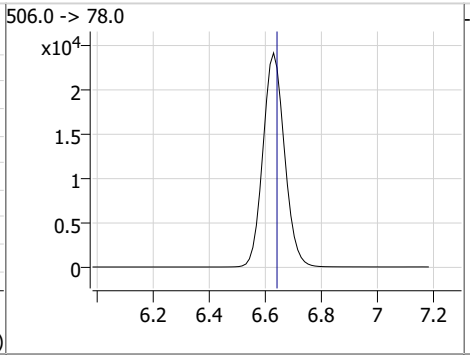


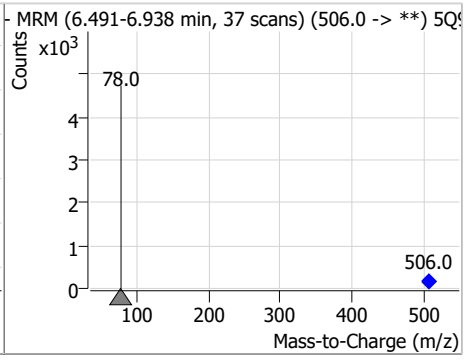




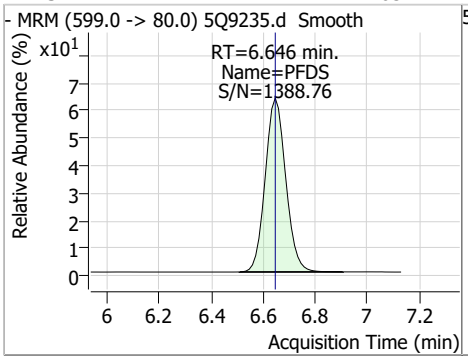
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	21.50	6.63	-0.01	128882				

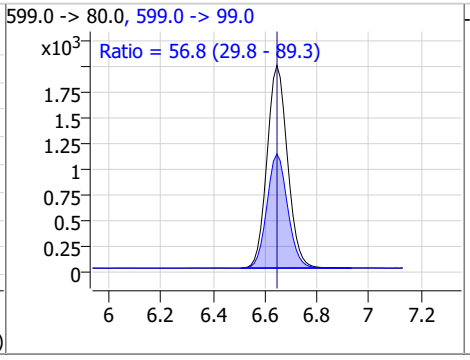


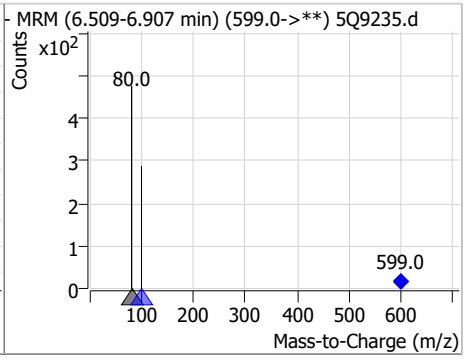




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	4.63	6.65	-0.02	10748	599.0 -> 99.0	56.8	29.8	89.3

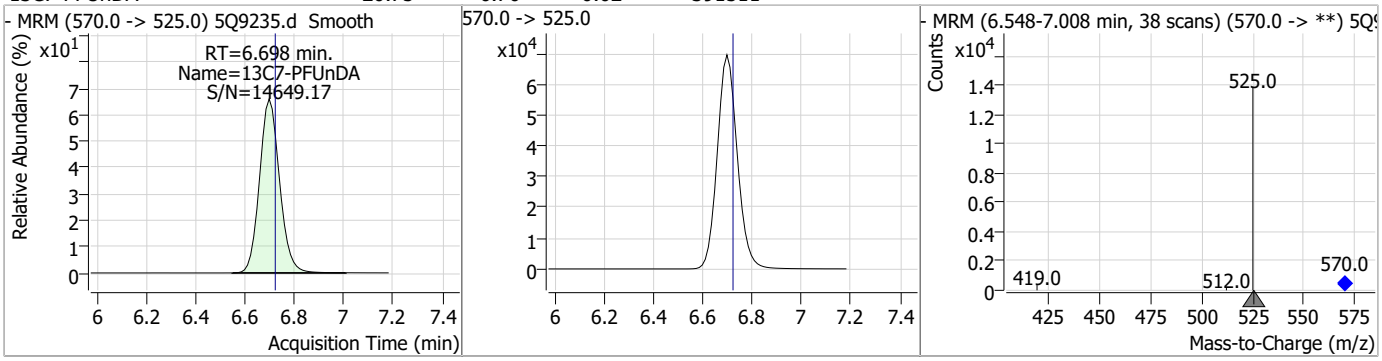




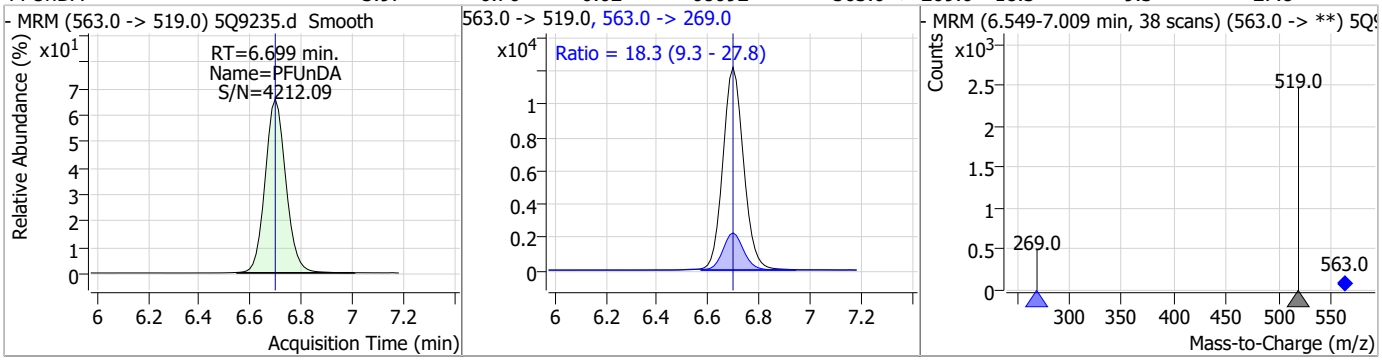


Perfluorinated Compounds by LC/MS/MS

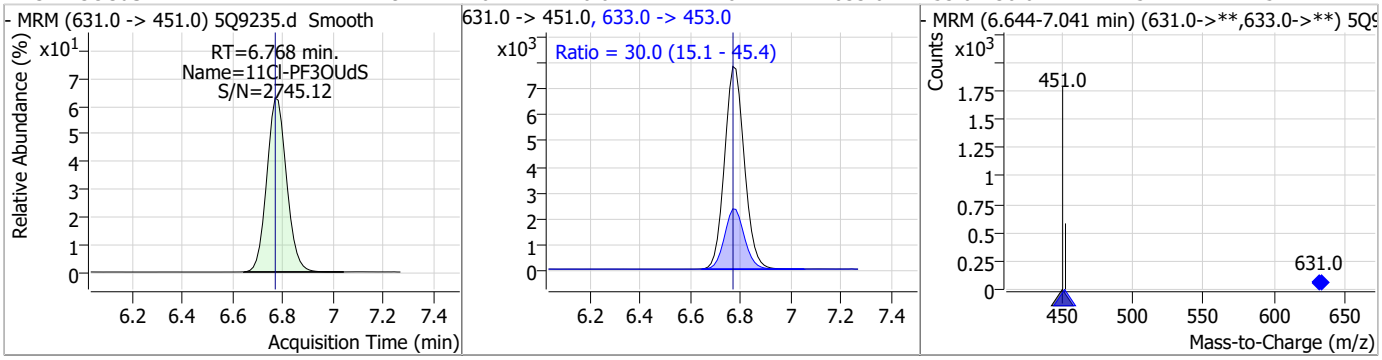
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.75	6.70	-0.02	391511				



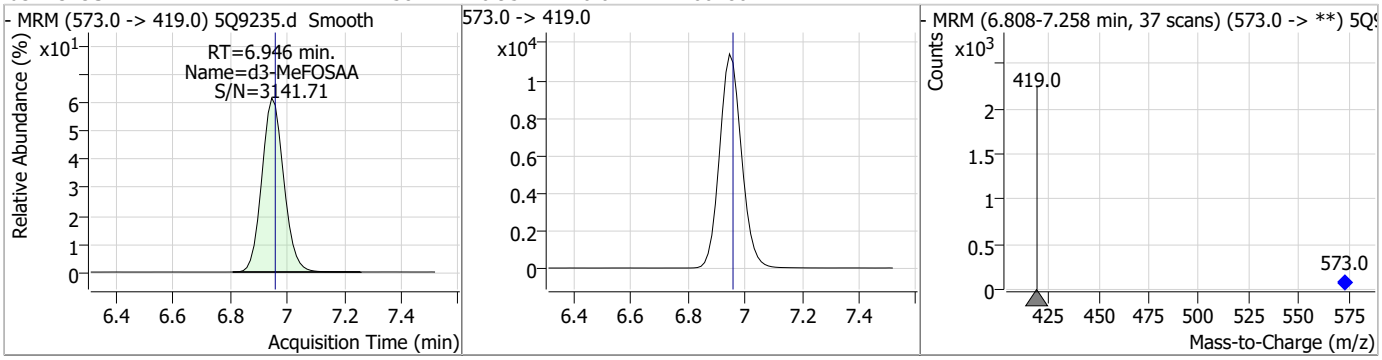
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	3.97	6.70	-0.02	68692	563.0 -> 269.0	18.3	9.3	27.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	4.29	6.77	-0.02	42761	633.0 -> 453.0	30.0	15.1	45.4

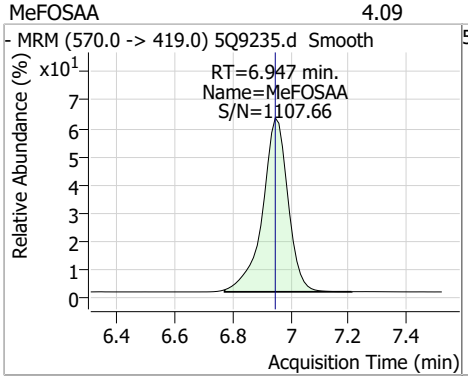


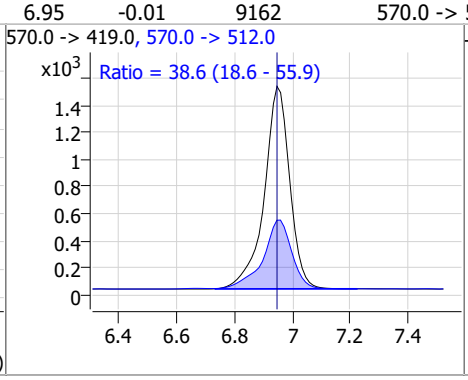
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	21.58	6.95	-0.01	60480				

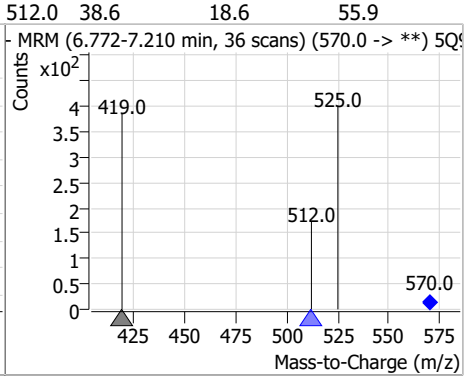


Perfluorinated Compounds by LC/MS/MS

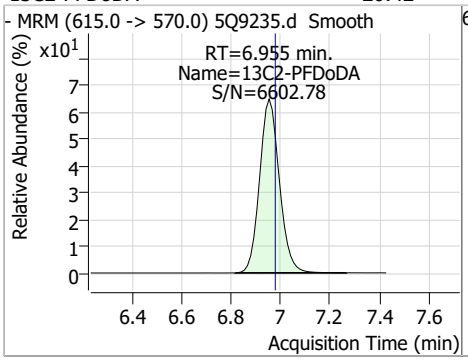
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	4.09	6.95	-0.01	9162	570.0 -> 512.0	38.6	18.6	55.9

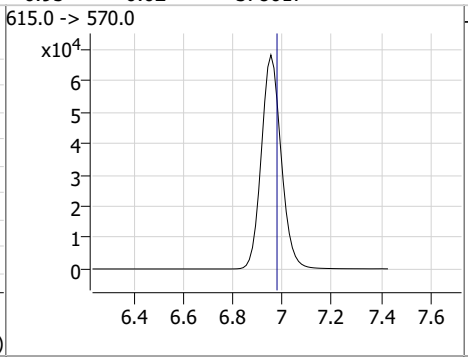


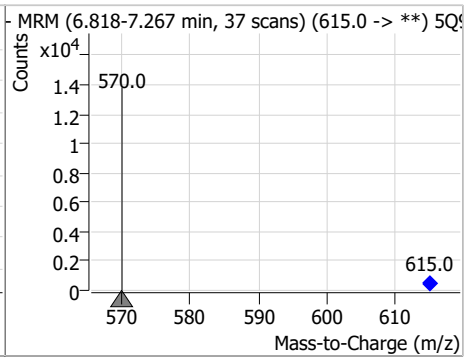




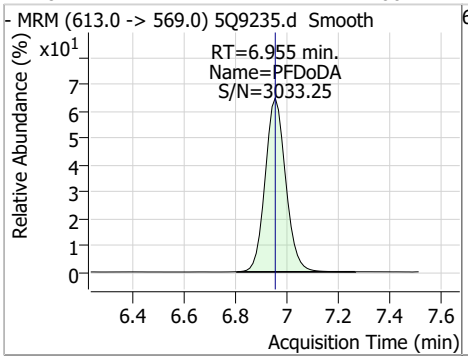
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.42	6.95	-0.02	378017				

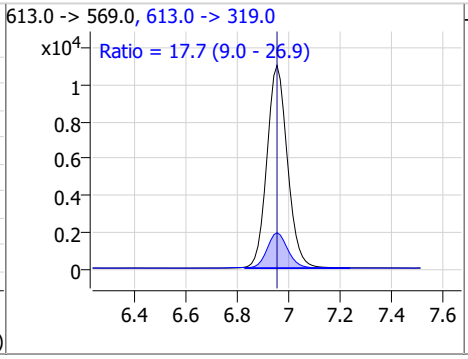


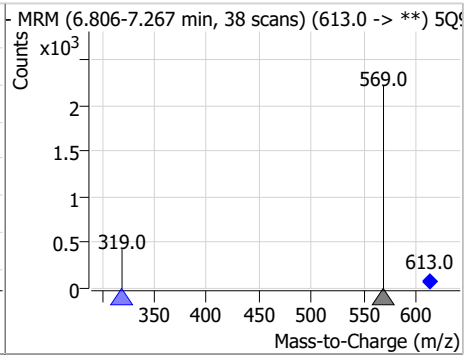




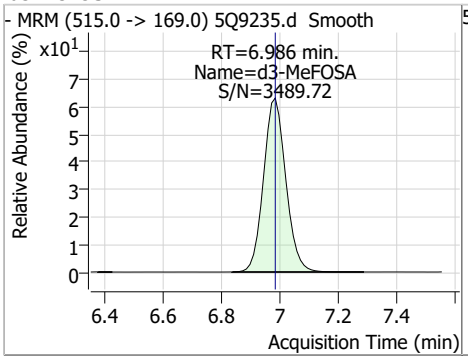
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	4.00	6.96	-0.02	61150	613.0 -> 319.0	17.7	9.0	26.9

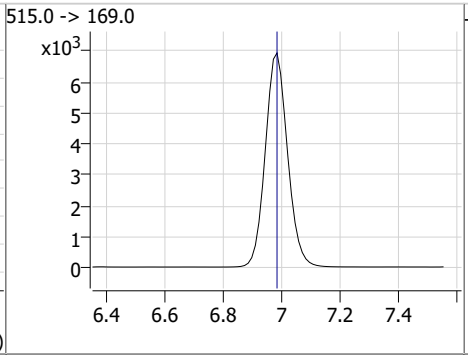


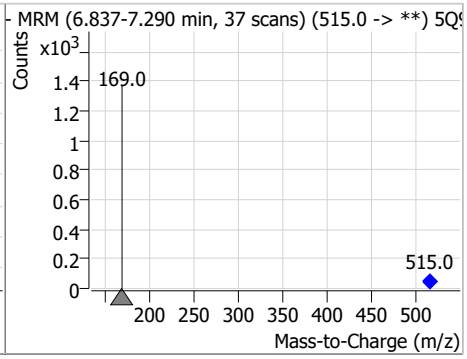




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	21.17	6.99	0.00	36505				

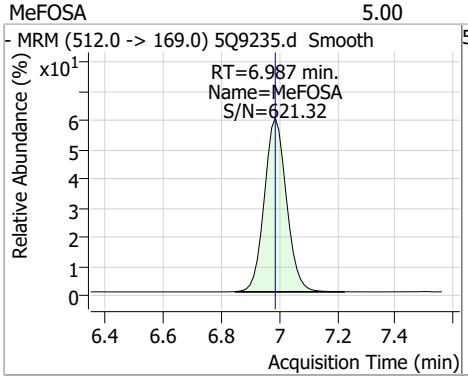


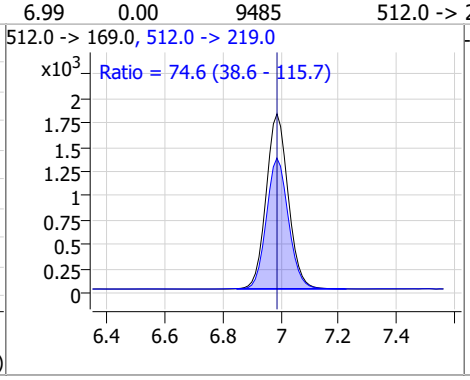


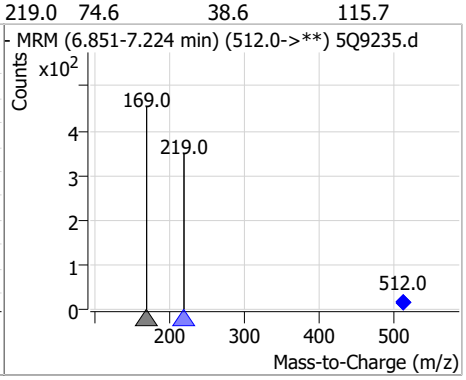


Perfluorinated Compounds by LC/MS/MS

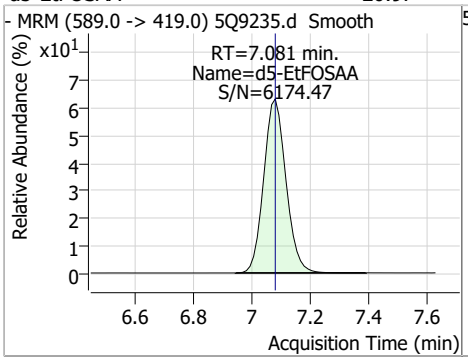
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	5.00	6.99	0.00	9485	512.0 -> 219.0	74.6	38.6	115.7

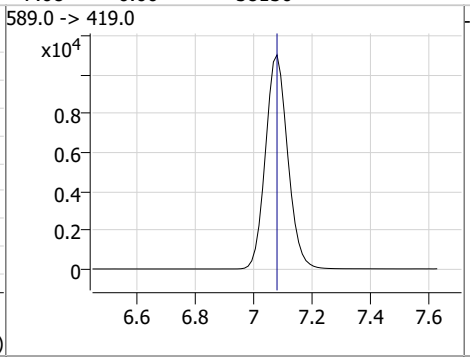


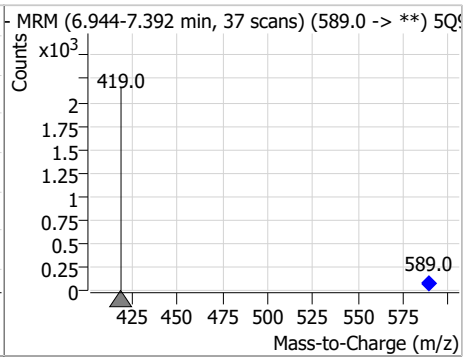




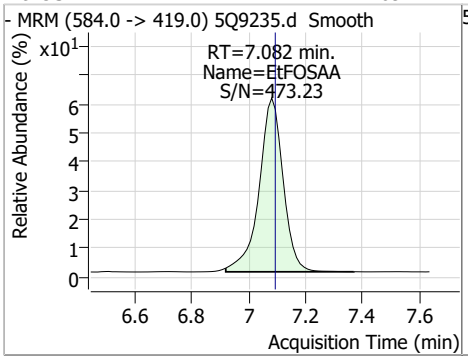
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.97	7.08	0.00	58150				

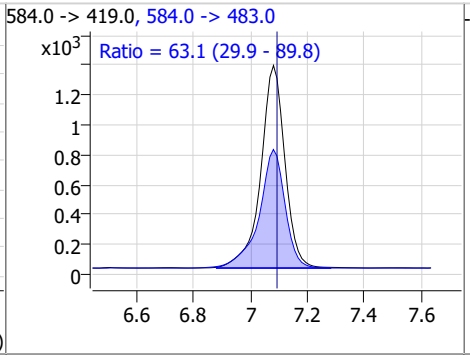


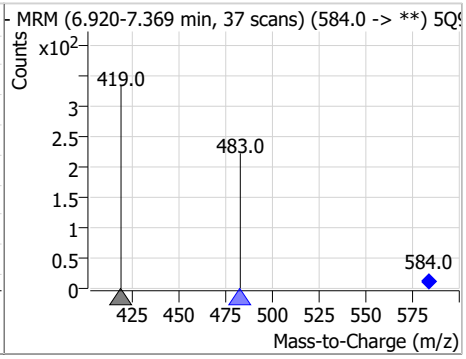




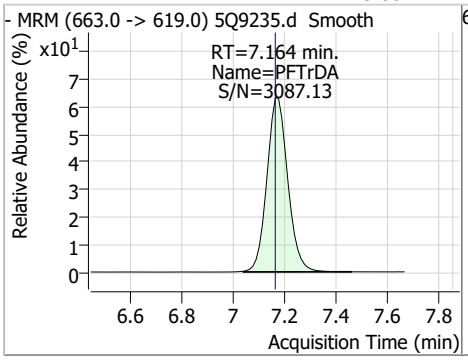
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	4.09	7.08	-0.01	7936	584.0 -> 483.0	63.1	29.9	89.8

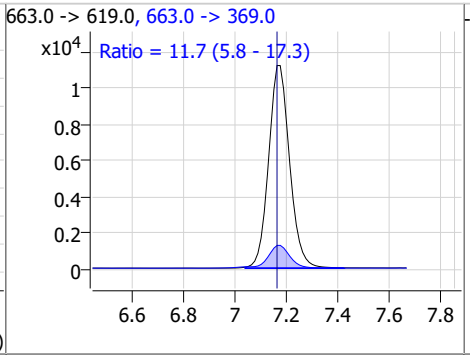


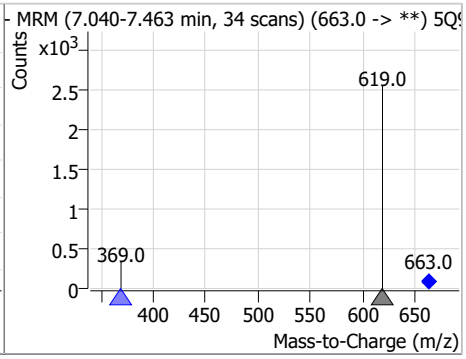




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	3.85	7.16	-0.03	63516	663.0 -> 369.0	11.7	5.8	17.3

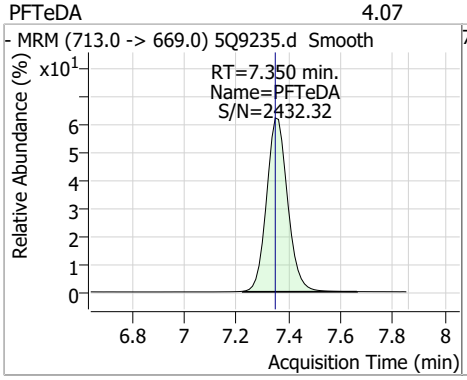


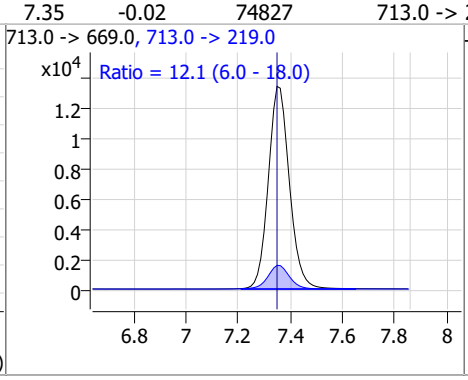


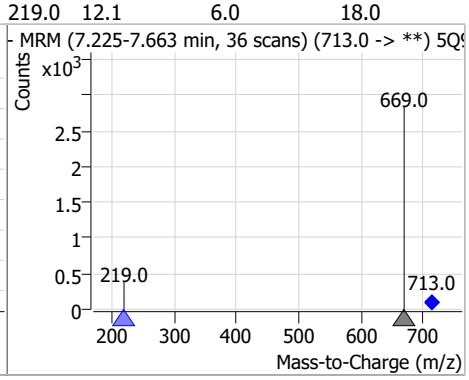


Perfluorinated Compounds by LC/MS/MS

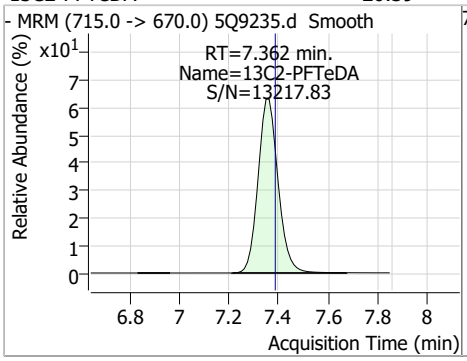
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	4.07	7.35	-0.02	74827	713.0 -> 219.0	12.1	6.0	18.0

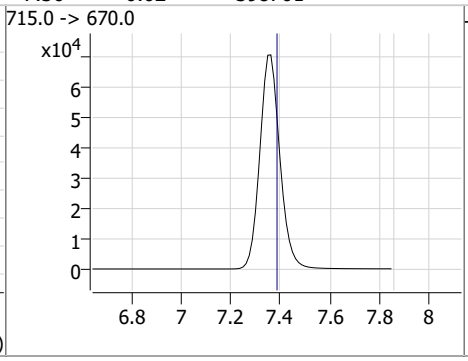


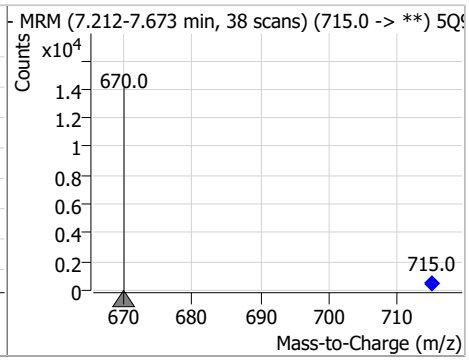




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.39	7.36	-0.02	398701				







Manual Integration Approval Summary

Sample Number: S5Q137-IC137
Lab FileID: 5Q9235.D
Injection Time: 01/03/23 15:54
Method: EPA 537M QSM5.3 B-15
Analyst approved: 01/04/23 11:33 Lindsay Ritner
Supervisor approved: 01/04/23 15:00 Natasha Gumtie

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanesulfonic acid	1763-23-1		5.99	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Natasha Gumtie 01/04/23 15:00

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9236.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 1/3/2023 4:15:56 PM
Sample Name : ic137-10
Vial : P1-A6
DA Method File : ID_010323_S5Q137.quantmethod.xml
Batch Name : s5q137.batch.bin
Sample Information : OP94373,S5Q137,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.975	217.0 -> 172.0	109739	20.00	µg/L	0.000
M5-PFPeA	3.457	268.0 -> 223.0	203524	20.00	µg/L	-0.012
M5-PFHxA	4.430	318.0 -> 273.0	292928	20.00	µg/L	-0.025
M4-PFHpA	5.101	367.0 -> 322.0	292316	20.00	µg/L	-0.012
M8-PFOA	5.609	421.0 -> 376.0	373112	20.00	µg/L	-0.012
M9-PFNA	6.030	472.0 -> 427.0	374293	20.00	µg/L	-0.013
M6-PFDA	6.389	519.0 -> 474.0	363970	20.00	µg/L	-0.012
M7-PFUnDA	6.710	570.0 -> 525.0	372728	20.00	µg/L	-0.012
M2-PFDoDA	6.967	615.0 -> 570.0	369355	20.00	µg/L	-0.012
M2-PFTeDA	7.362	715.0 -> 670.0	390817	20.00	µg/L	-0.025
M8-FOSA	6.629	506.0 -> 78.0	116987	20.00	µg/L	-0.012
M3-PFBS	3.666	302.0 -> 99.0	25317	20.00	µg/L	-0.012
M3-PFHxS	5.110	402.0 -> 99.0	31623	20.00	µg/L	-0.012
M8-PFOS	6.004	507.0 -> 99.0	37164	20.00	µg/L	-0.012
M2-4:2FTS	4.336	329.0 -> 309.0	89658	20.00	µg/L	-0.012
M2-6:2FTS	5.582	429.0 -> 409.0	136664	20.00	µg/L	-0.012
M2-8:2FTS	6.388	529.0 -> 509.0	116731	20.00	µg/L	-0.012
M3-MeFOSAA	6.946	573.0 -> 419.0	53685	20.00	µg/L	-0.012
M3-HFPO-DA	4.632	287.0 -> 169.0	64625	20.00	µg/L	-0.012
M3-MeFOSA	6.986	515.0 -> 169.0	33941	20.00	µg/L	0.000
M5-EtFOSAA	7.081	589.0 -> 419.0	54630	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.336	329.0 -> 309.0	89658	18.96	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.8%		
13C2-6:2FTS	5.582	429.0 -> 409.0	136664	19.19	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.0%		
13C2-8:2FTS	6.388	529.0 -> 509.0	116731	19.01	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.1%		
13C2-PFDoDA	6.967	615.0 -> 570.0	369355	19.96	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.8%		
13C2-PFTeDA	7.362	715.0 -> 670.0	390817	19.99	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.9%		
13C3-PFBS	3.666	302.0 -> 99.0	25317	19.75	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%		
13C3-PFHxS	5.110	402.0 -> 99.0	31623	19.91	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.5%		
13C4-PFBA	1.975	217.0 -> 172.0	109739	19.14	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.7%		
13C4-PFHpA	5.101	367.0 -> 322.0	292316	19.89	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.5%		
13C5-PFHxA	4.430	318.0 -> 273.0	292928	19.94	µg/L	-0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.7%		
13C5-PFPeA	3.457	268.0 -> 223.0	203524	19.59	µg/L	-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.9%		
13C6-PFDA	6.389	519.0 -> 474.0	363970	19.63	µg/L	-0.012

Perfluorinated Compounds by LC/MS/MS

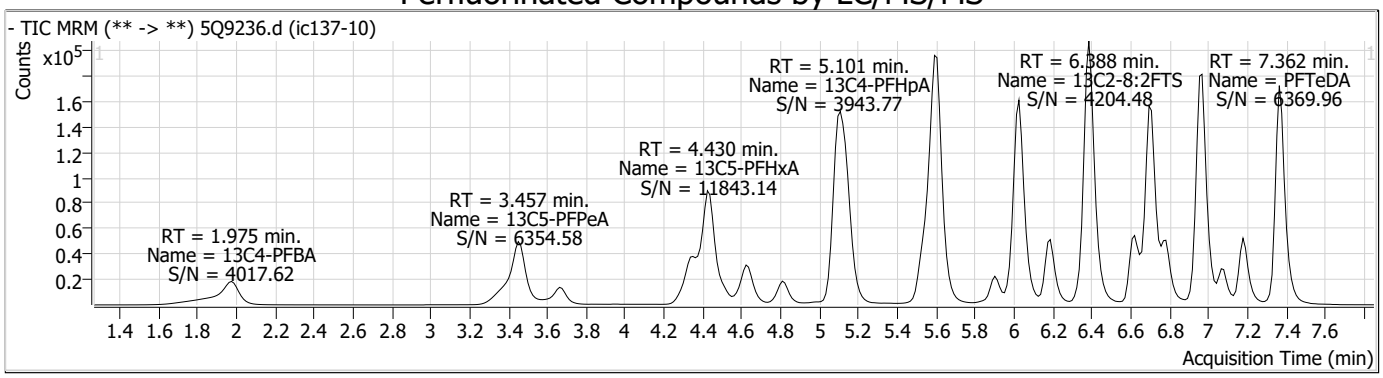
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%		
13C7-PFUnDA	6.710	570.0 -> 525.0	372728	19.76 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.8%		
13C8-FOSA	6.629	506.0 -> 78.0	116987	19.51 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.6%		
13C8-PFOA	5.609	421.0 -> 376.0	373112	19.81 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.0%		
13C8-PFOS	6.004	507.0 -> 99.0	37164	19.50 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.5%		
13C9-PFNA	6.030	472.0 -> 427.0	374293	19.82 µg/L		-0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.1%		
d3-MeFOSAA	6.946	573.0 -> 419.0	53685	19.15 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.8%		
13C3-HFPO-DA	4.632	287.0 -> 169.0	64625	19.27 µg/L		-0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.3%		
d3-MeFOSA	6.986	515.0 -> 169.0	33941	19.69 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%		
d5-EtFOSAA	7.081	589.0 -> 419.0	54630	19.70 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.5%		
Target Compounds						QValue
4:2FTS	4.338	327.0 -> 307.0	48172	11.80 µg/L		100
		327.0 -> 81.0	29034			
6:2FTS	5.570	427.0 -> 407.0	68982	11.62 µg/L		100
		427.0 -> 81.0	30565			
8:2FTS	6.388	527.0 -> 507.0	59148	11.86 µg/L		99
		527.0 -> 81.0	30273			
EtFOSAA	7.082	584.0 -> 419.0	18382	10.09 µg/L		97
		584.0 -> 483.0	11448			
FOSA	6.630	498.0 -> 78.0	53924	10.28 µg/L		99
		498.0 -> 478.0	1746			
MeFOSAA	6.947	570.0 -> 419.0	20034	10.07 µg/L		99
		570.0 -> 512.0	7652			
PFBA	1.969	213.0 -> 169.0	53274	10.36 µg/L		100
PFBS	3.669	299.0 -> 80.0	37188	10.24 µg/L		100
		299.0 -> 99.0	15826			
PFDA	6.390	513.0 -> 469.0	176033	10.28 µg/L		99
		513.0 -> 219.0	33871			
PFDoDA	6.968	613.0 -> 569.0	151988	10.18 µg/L		99
		613.0 -> 319.0	26601			
PFDS	6.658	599.0 -> 80.0	25192	11.39 µg/L		99
		599.0 -> 99.0	15262			
PFHpA	5.101	363.0 -> 319.0	163691	10.29 µg/L		100
		363.0 -> 169.0	36345			
PFHpS	5.594	449.0 -> 80.0	28380	10.54 µg/L		99
		449.0 -> 99.0	15719			
PFHxA	4.430	313.0 -> 269.0	132096	10.12 µg/L		99
		313.0 -> 119.0	5929			
PFHxS	5.111	399.0 -> 80.0	28640	9.92 µg/L		100
		399.0 -> 99.0	16218			
PFNA	6.031	463.0 -> 419.0	170635	10.17 µg/L		99
		463.0 -> 219.0	39315			
PFNS	6.350	549.0 -> 80.0	23835	10.78 µg/L		100
		549.0 -> 99.0	13588			
PFOA	5.609	413.0 -> 369.0	190746	10.32 µg/L		100
		413.0 -> 169.0	53112			
PFOS	6.005	499.0 -> 80.0	33483	10.41 µg/L	m	98

Perfluorinated Compounds by LC/MS/MS

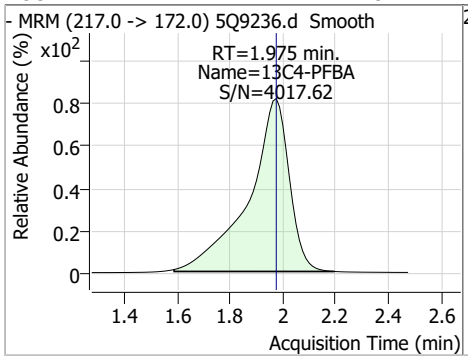
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	15770			
PFPeA	3.459	263.0 -> 219.0	107016	10.18	µg/L	100
PFPeS	4.514	349.0 -> 80.0	22360	10.13	µg/L	100
		349.0 -> 99.0	11272			
PFTeDA	7.362	713.0 -> 669.0	187296	10.39	µg/L	99
		713.0 -> 219.0	21911			
PFTrDA	7.176	663.0 -> 619.0	161581	10.02	µg/L	100
		663.0 -> 369.0	18439			
PFUnDA	6.711	563.0 -> 519.0	169005	10.27	µg/L	99
		563.0 -> 269.0	30787			
11Cl-PF3OUdS	6.781	631.0 -> 451.0	106226	10.67	µg/L	98
		633.0 -> 453.0	33114			
9Cl-PF3ONS	6.188	531.0 -> 351.0	139287	10.68	µg/L	99
		533.0 -> 353.0	42944			
ADONA	5.150	377.0 -> 251.0	215868	9.97	µg/L	100
		377.0 -> 85.0	81013			
HFPO-DA	4.639	329.0 -> 169.0	48120	10.29	µg/L	100
		285.0 -> 169.0	28308			
MeFOSA	6.987	512.0 -> 169.0	18369	10.42	µg/L	95
		512.0 -> 219.0	13381			
4-PFECHS	5.531	461.0 -> 381.0	90514	10.04	µg/L	98
		461.0 -> 99.0	51476			
FBSA	4.817	298.0 -> 78.0	68237	10.67	µg/L	99
		298.0 -> 64.0	6472			
FHxSA	5.911	398.0 -> 78.0	65044	11.11	µg/L	100
		398.0 -> 64.0	6124			

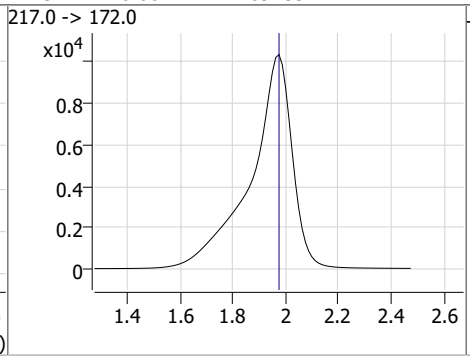
 # = Qualifier out of range, m = manually integrated, + = Area summed

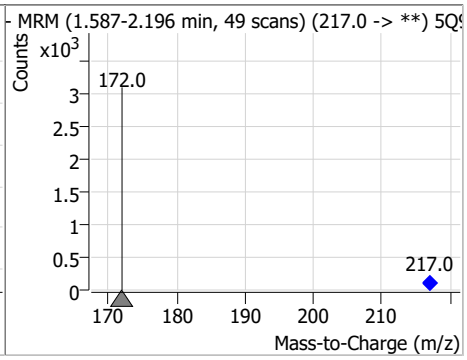
Perfluorinated Compounds by LC/MS/MS



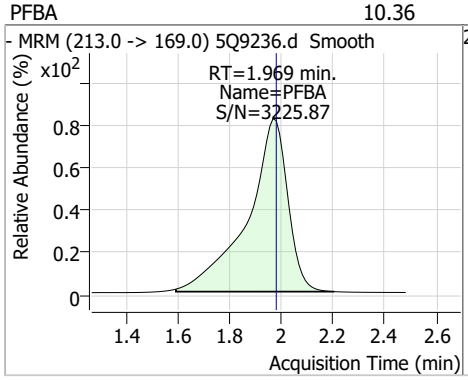
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.14	1.97	0.00	109739				

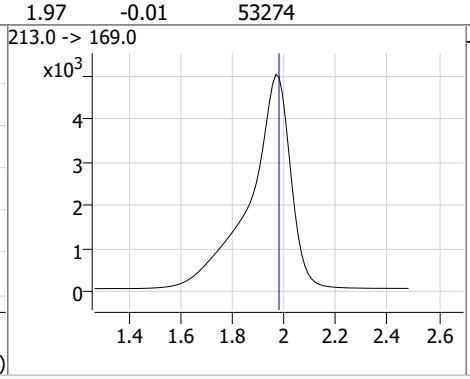


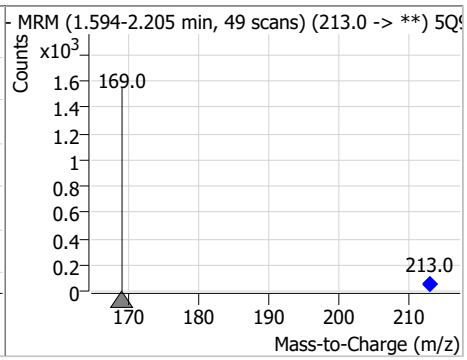




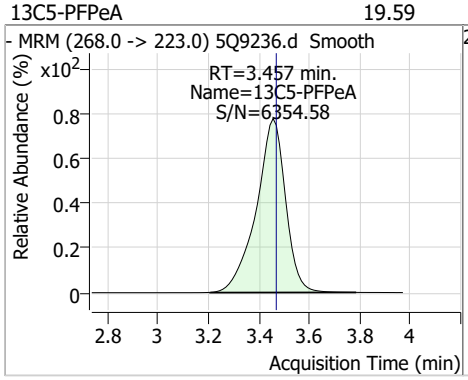
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	10.36	1.97	-0.01	53274				

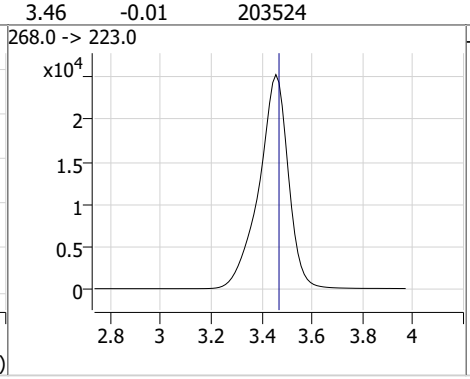


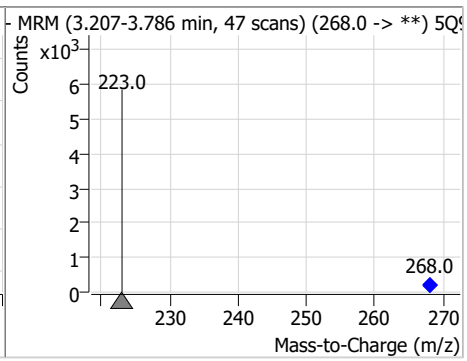




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.59	3.46	-0.01	203524				

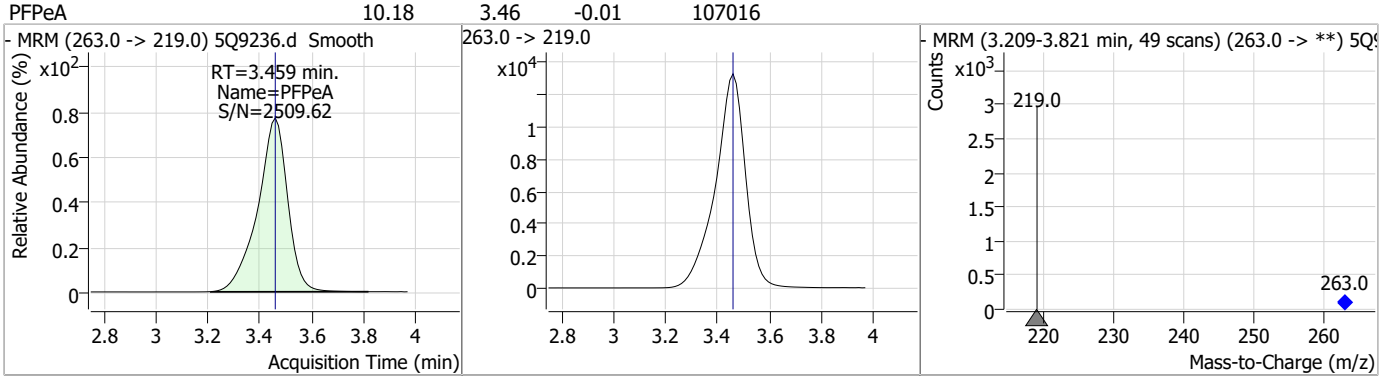




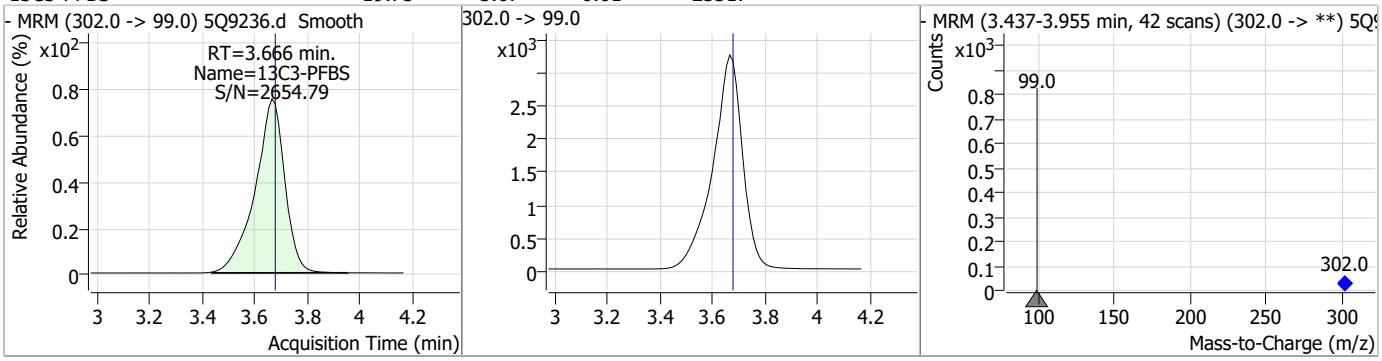


Perfluorinated Compounds by LC/MS/MS

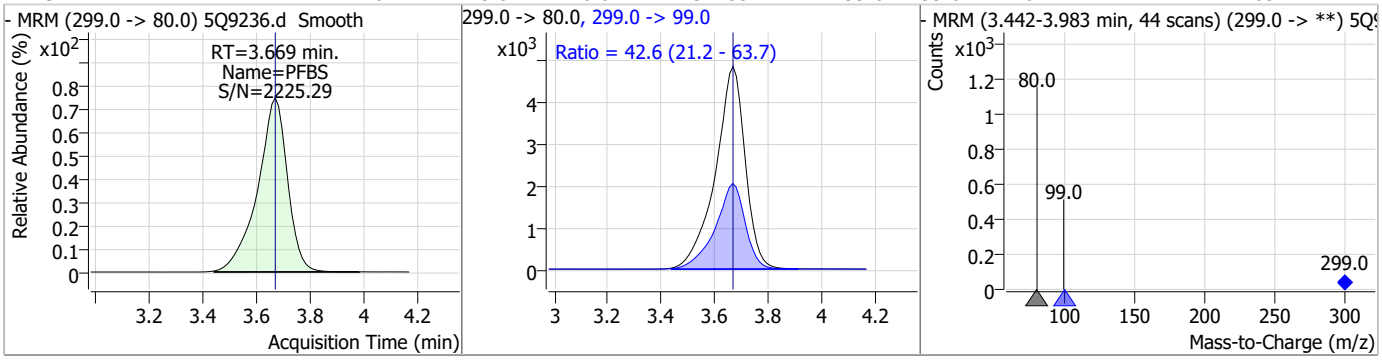
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	10.18	3.46	-0.01	107016				



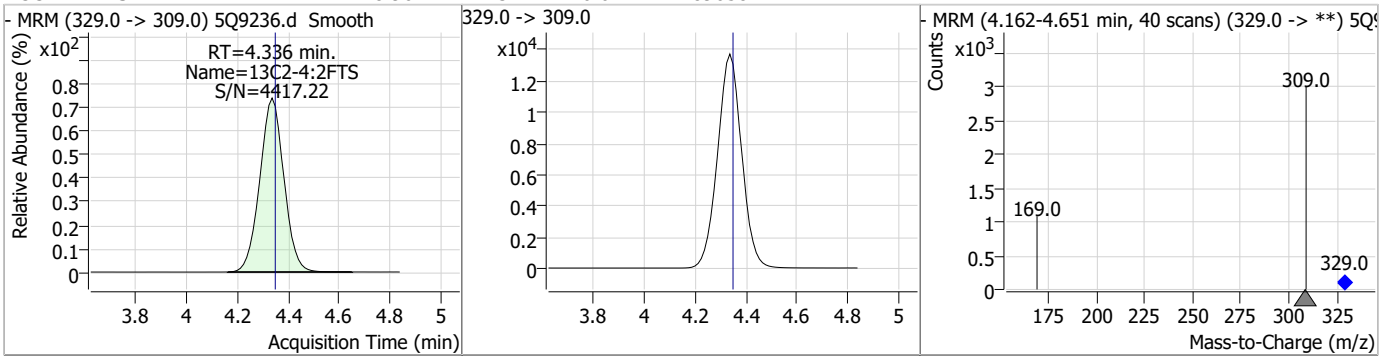
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.75	3.67	-0.01	25317				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	10.24	3.67	-0.01	37188	299.0 -> 99.0	42.6	21.2	63.7

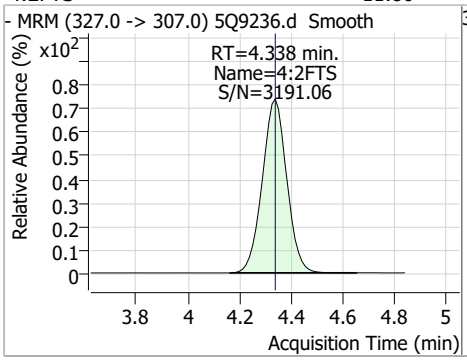


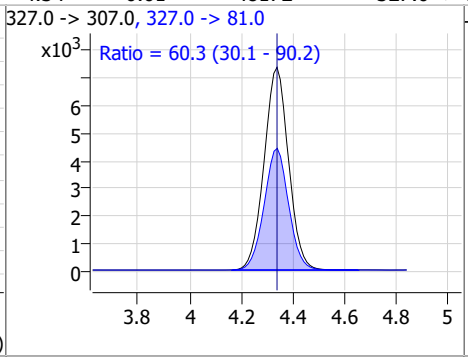
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.96	4.34	-0.01	89658				

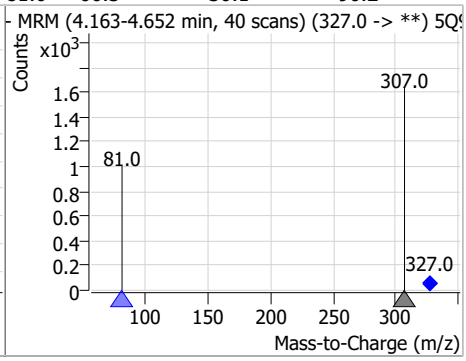


Perfluorinated Compounds by LC/MS/MS

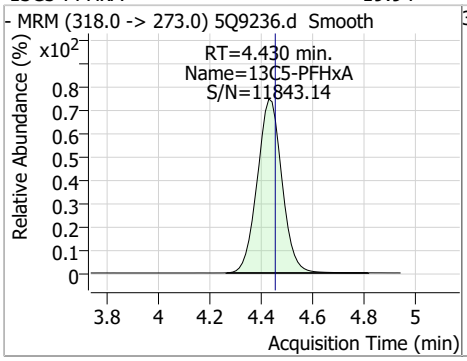
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	11.80	4.34	-0.01	48172	327.0 -> 81.0	60.3	30.1	90.2

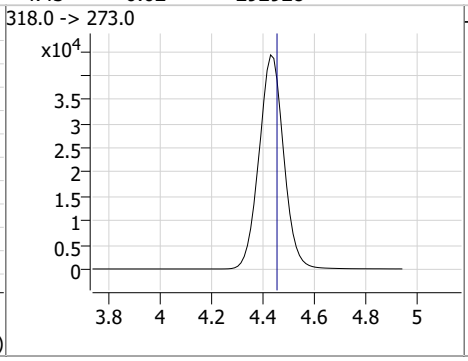


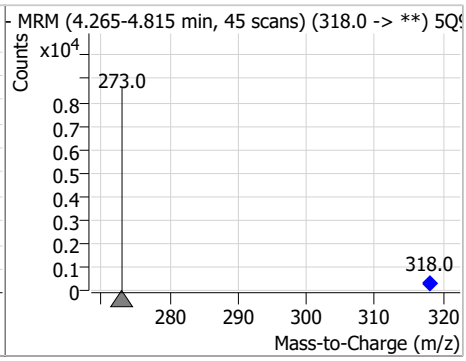




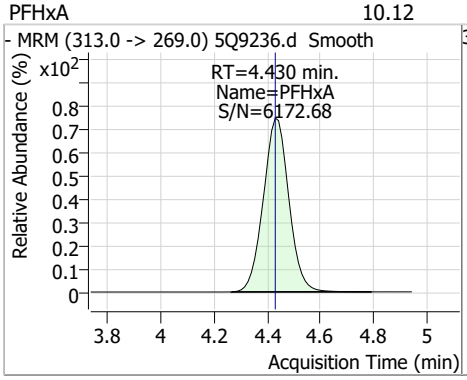
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.94	4.43	-0.02	292928				

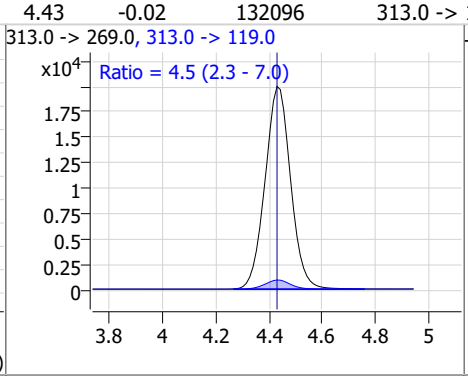


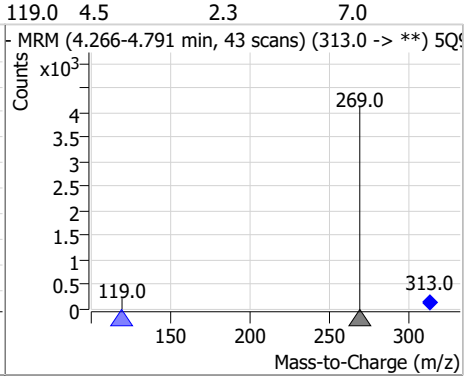




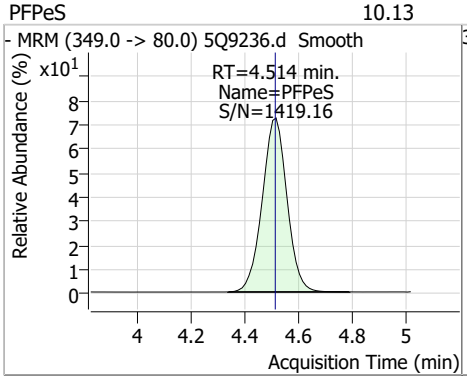
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	10.12	4.43	-0.02	132096	313.0 -> 119.0	4.5	2.3	7.0

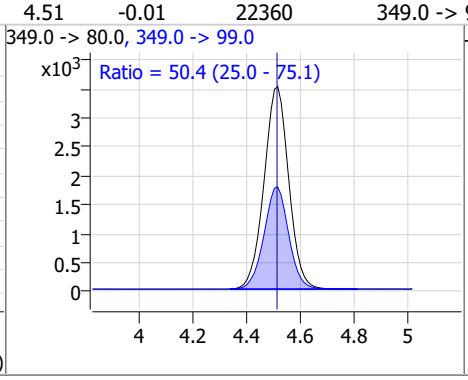


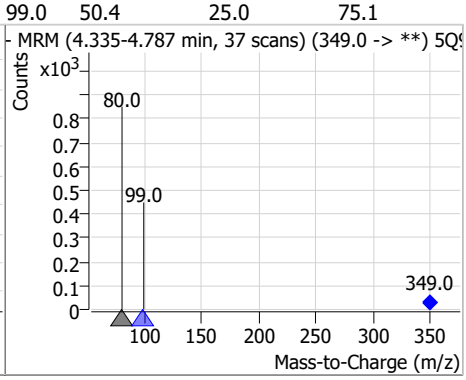




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	10.13	4.51	-0.01	22360	349.0 -> 99.0	50.4	25.0	75.1

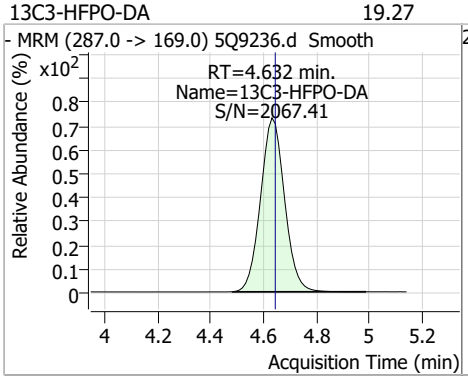


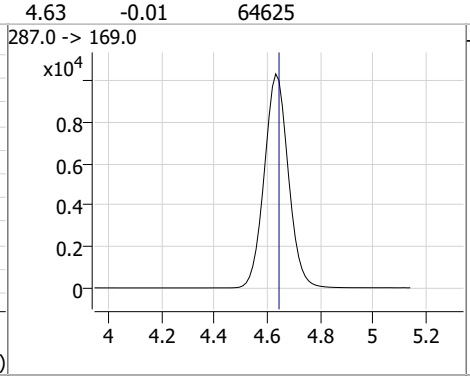


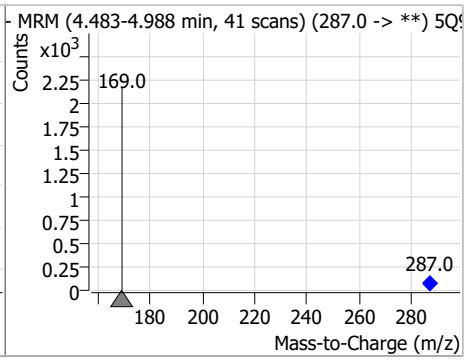


Perfluorinated Compounds by LC/MS/MS

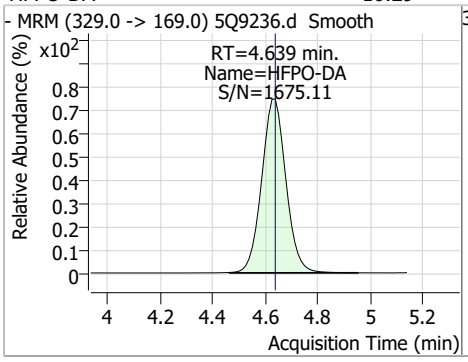
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.27	4.63	-0.01	64625				

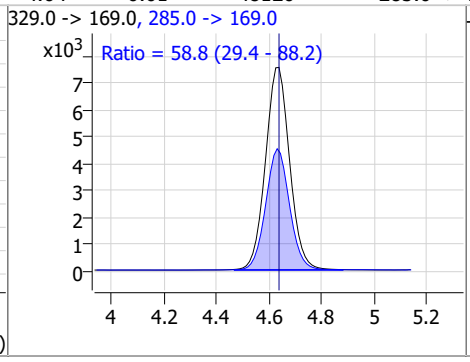


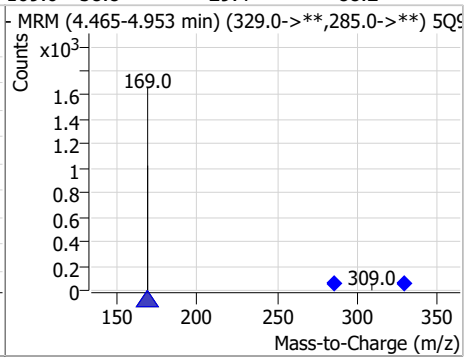




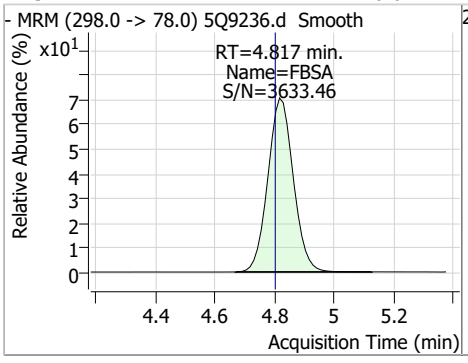
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	10.29	4.64	-0.01	48120	285.0 -> 169.0	58.8	29.4	88.2

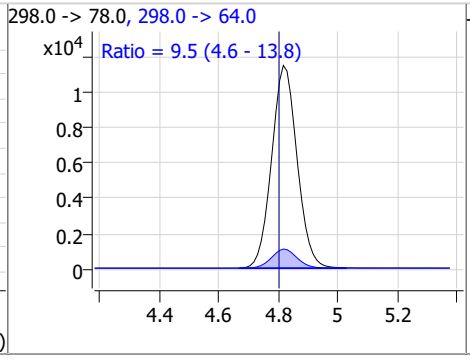


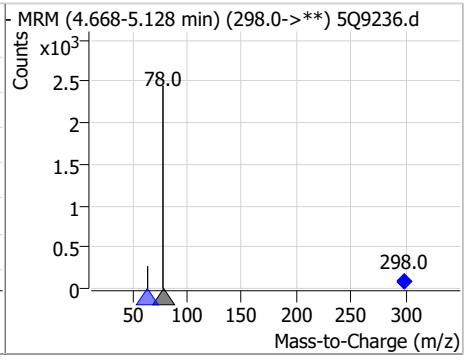




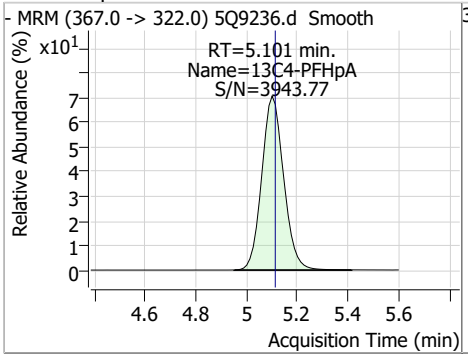
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	10.67	4.82	-0.01	68237	298.0 -> 64.0	9.5	4.6	13.8

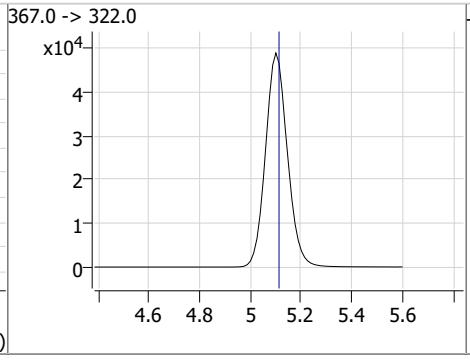


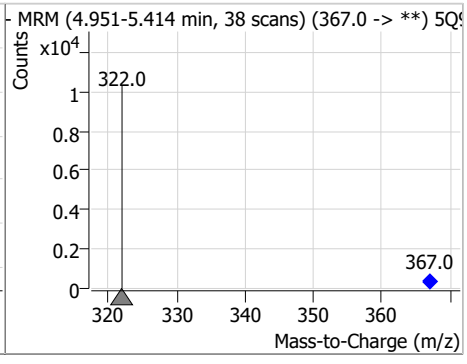




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.89	5.10	-0.01	292316				

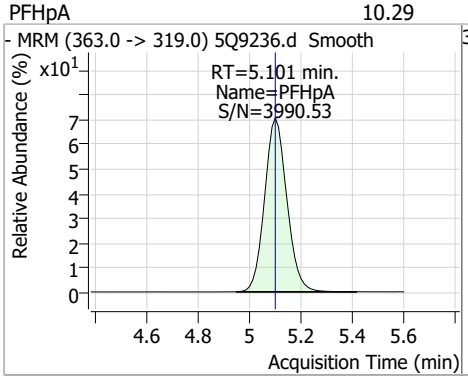


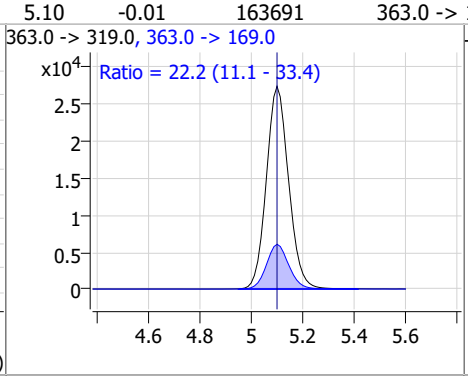


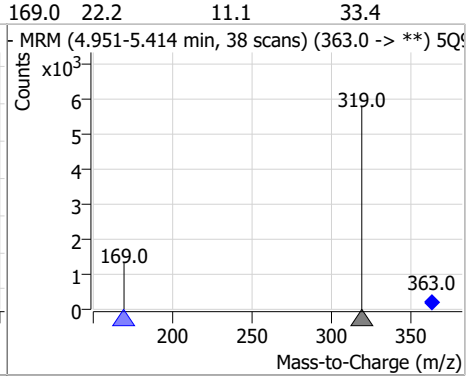


Perfluorinated Compounds by LC/MS/MS

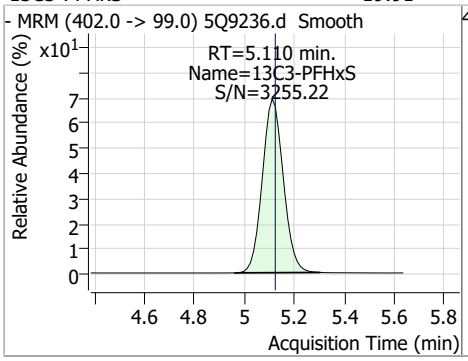
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	10.29	5.10	-0.01	163691	363.0 -> 169.0	22.2	11.1	33.4

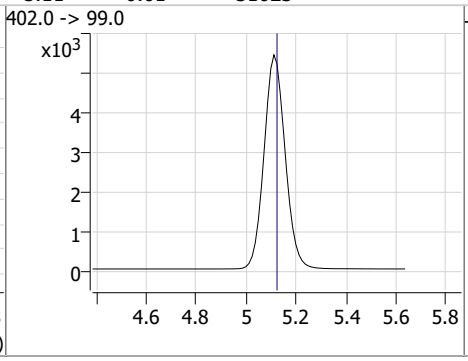


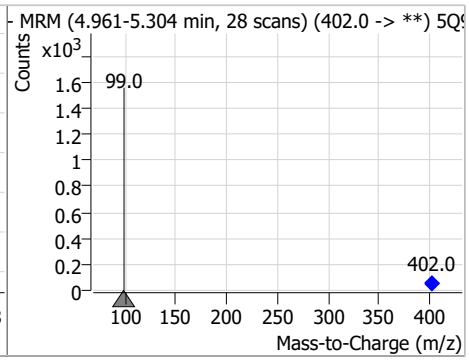




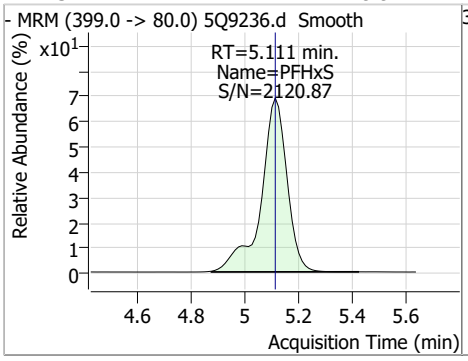
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.91	5.11	-0.01	31623				

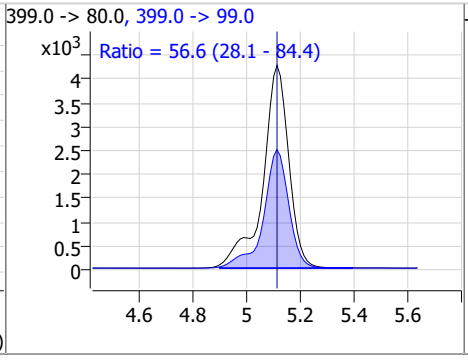


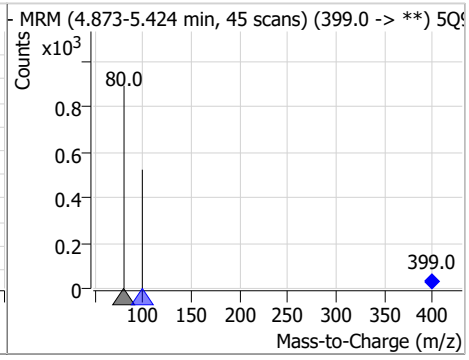




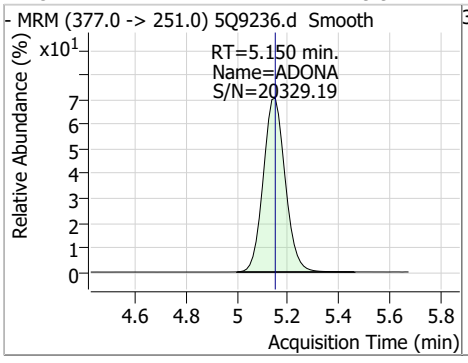
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	9.92	5.11	-0.01	28640	399.0 -> 99.0	56.6	28.1	84.4

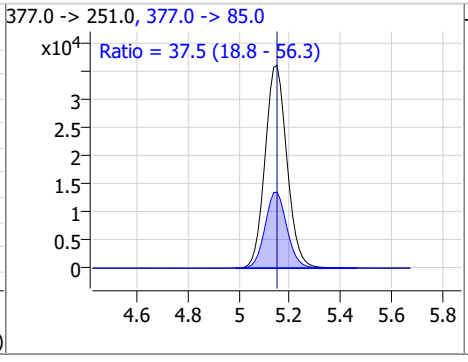


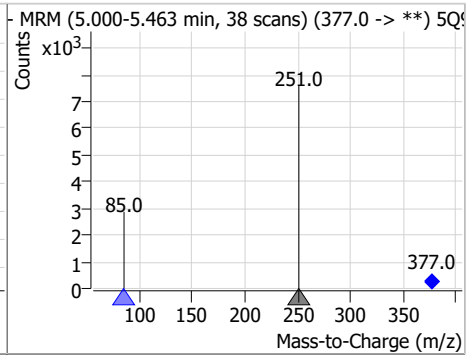




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	9.97	5.15	-0.01	215868	377.0 -> 85.0	37.5	18.8	56.3

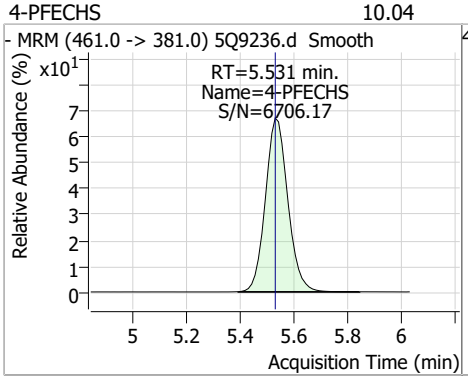


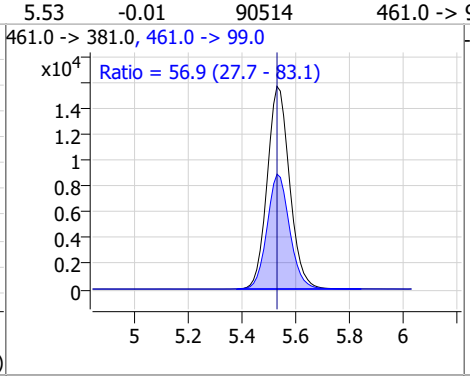


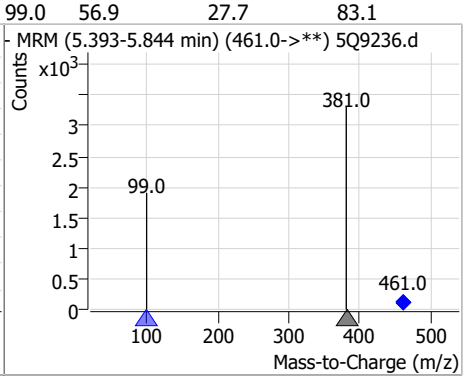


Perfluorinated Compounds by LC/MS/MS

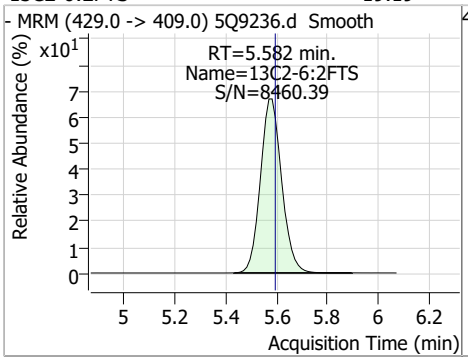
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	10.04	5.53	-0.01	90514	461.0 -> 99.0	56.9	27.7	83.1

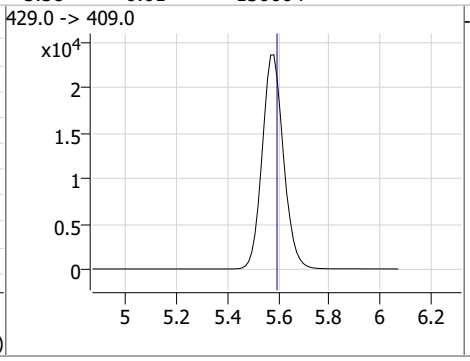


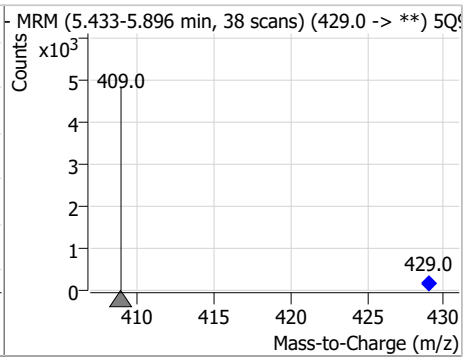




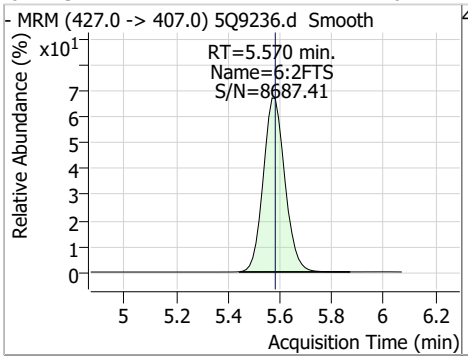
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.19	5.58	-0.01	136664				

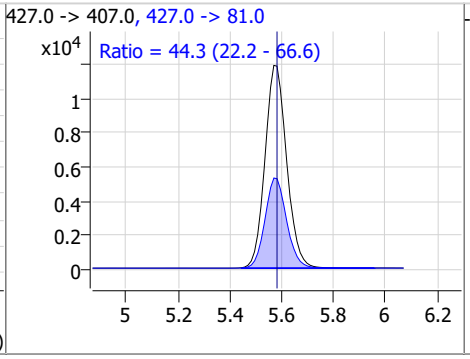


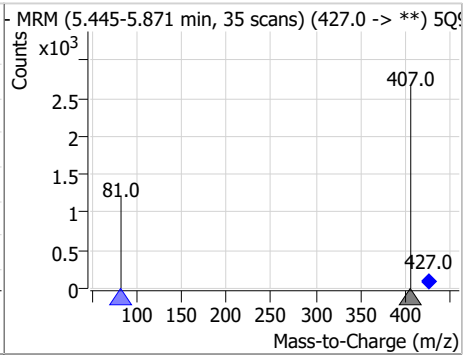




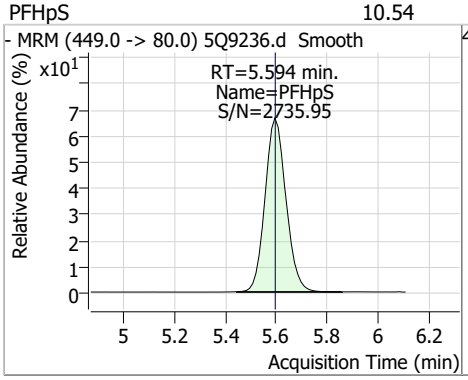
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	11.62	5.57	-0.02	68982	427.0 -> 81.0	44.3	22.2	66.6

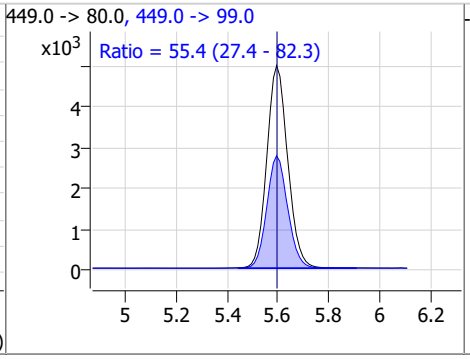


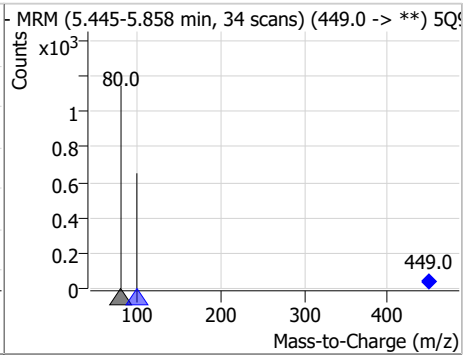




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	10.54	5.59	-0.01	28380	449.0 -> 99.0	55.4	27.4	82.3

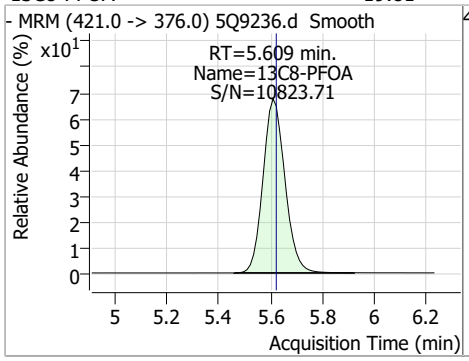


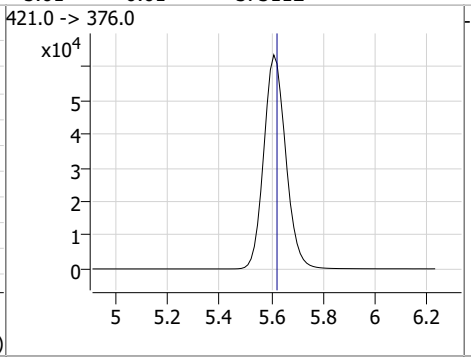


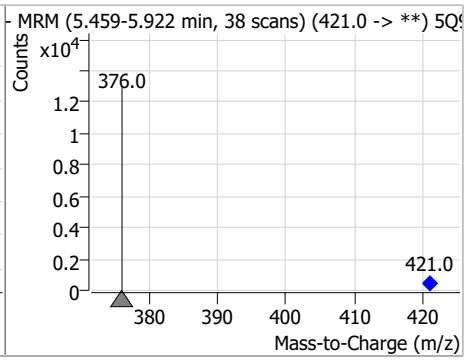


Perfluorinated Compounds by LC/MS/MS

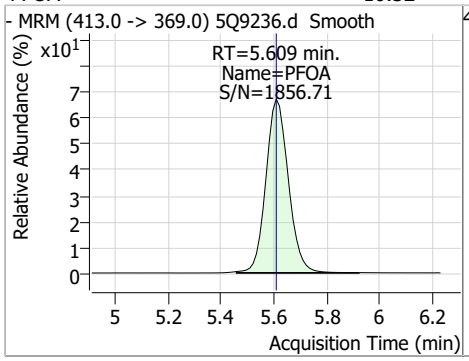
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.81	5.61	-0.01	373112				

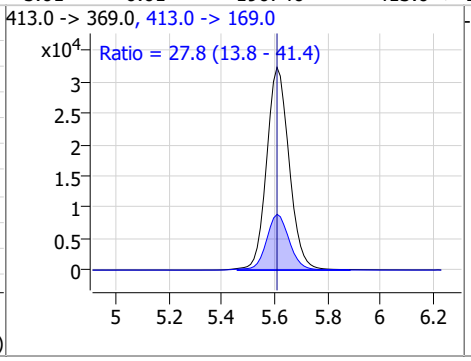


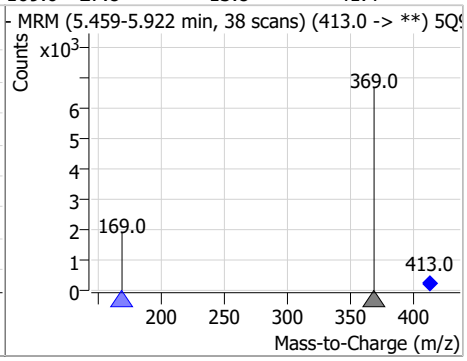




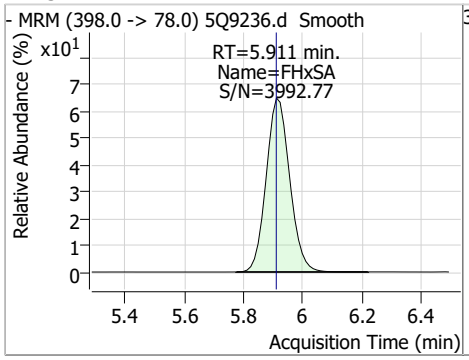
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	10.32	5.61	-0.01	190746	413.0 -> 169.0	27.8	13.8	41.4

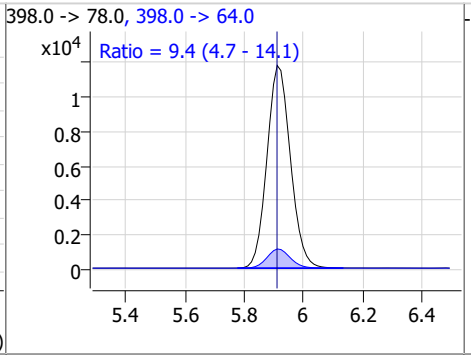


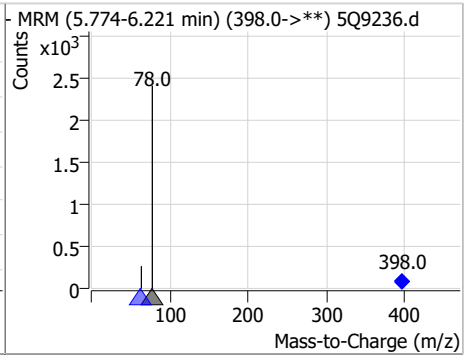




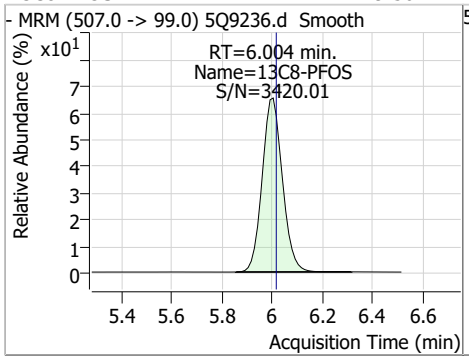
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	11.11	5.91	-0.01	65044	398.0 -> 64.0	9.4	4.7	14.1

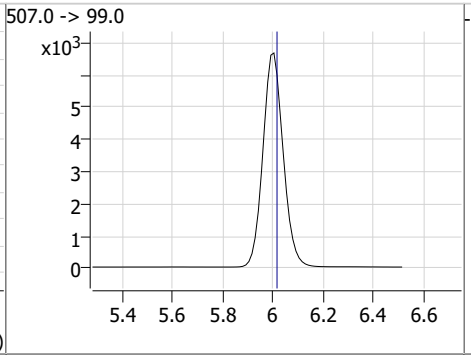


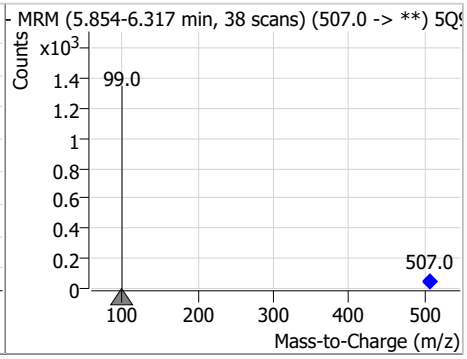




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.50	6.00	-0.01	37164				

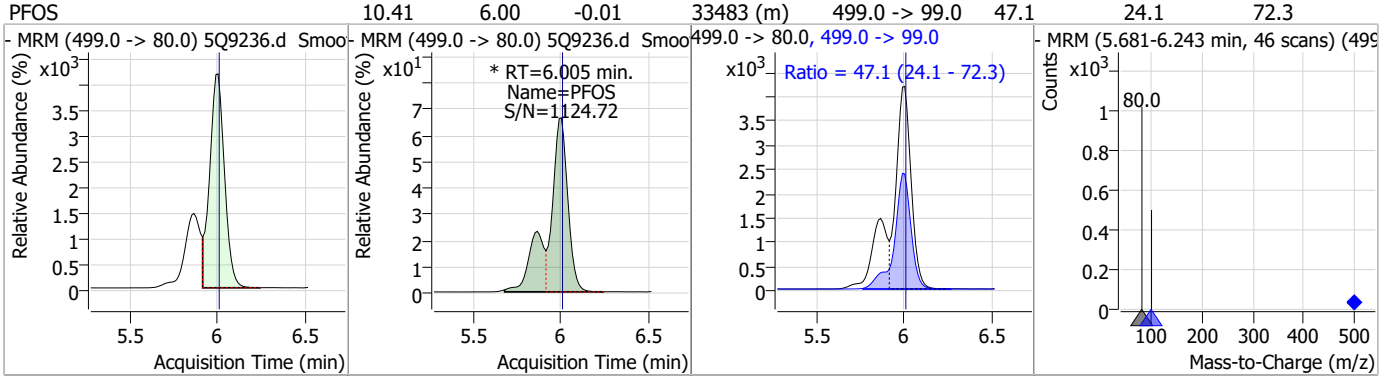




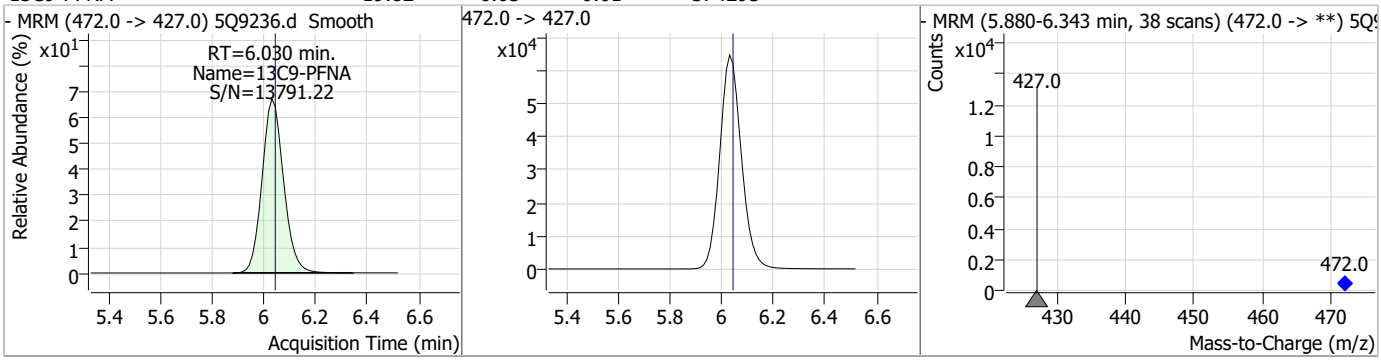


Perfluorinated Compounds by LC/MS/MS

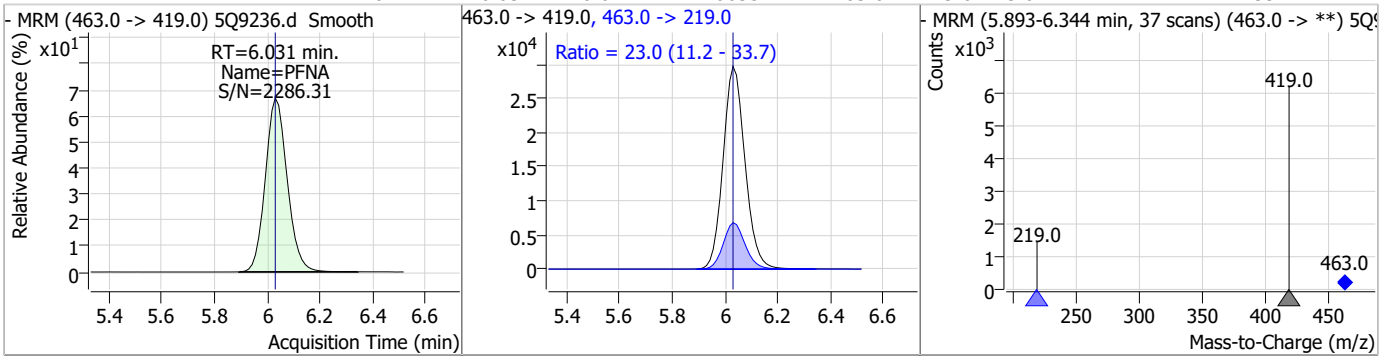
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	10.41	6.00	-0.01	33483 (m)	499.0 -> 99.0	47.1	24.1	72.3



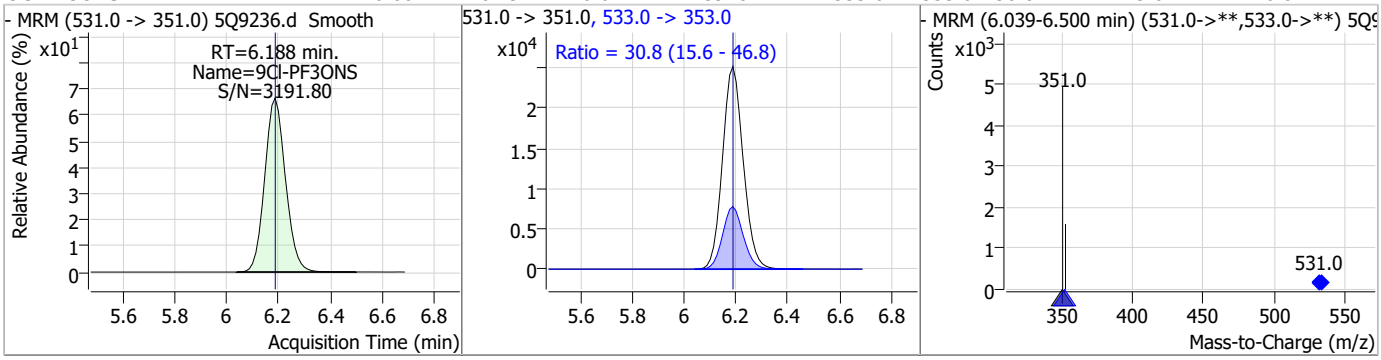
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.82	6.03	-0.01	374293				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	10.17	6.03	-0.01	170635	463.0 -> 219.0	23.0	11.2	33.7

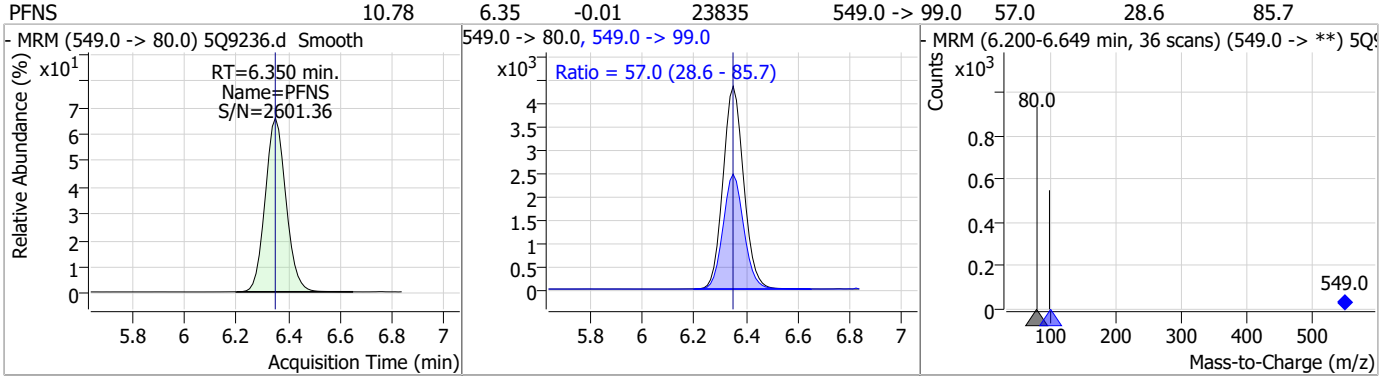


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	10.68	6.19	-0.01	139287	533.0 -> 353.0	30.8	15.6	46.8

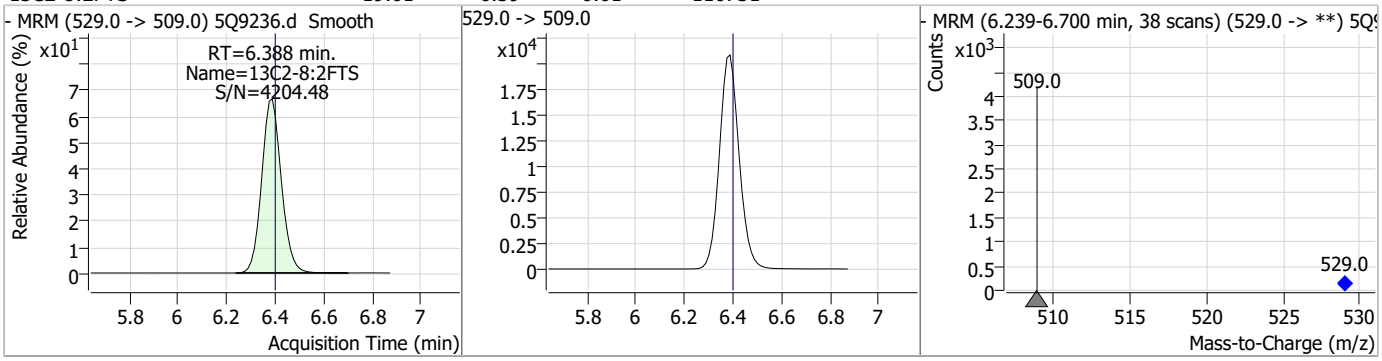


Perfluorinated Compounds by LC/MS/MS

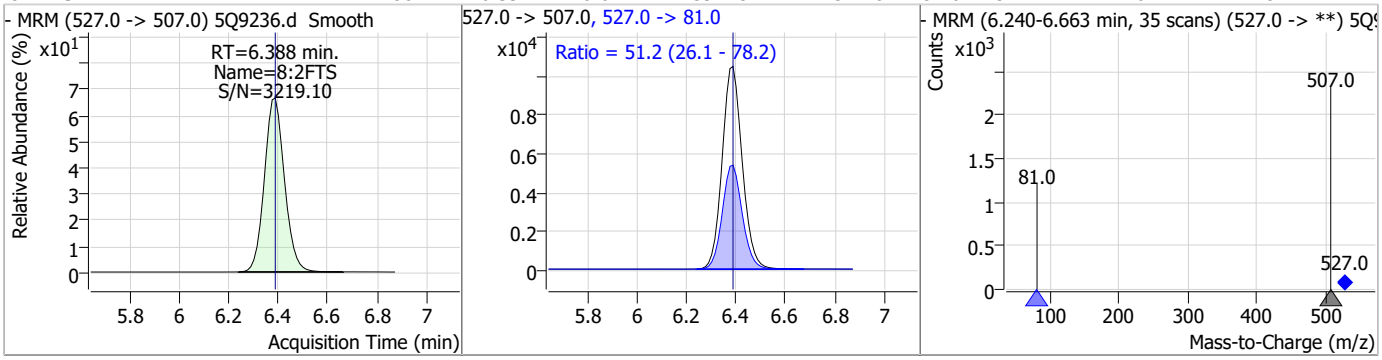
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	10.78	6.35	-0.01	23835	549.0 -> 99.0	57.0	28.6	85.7



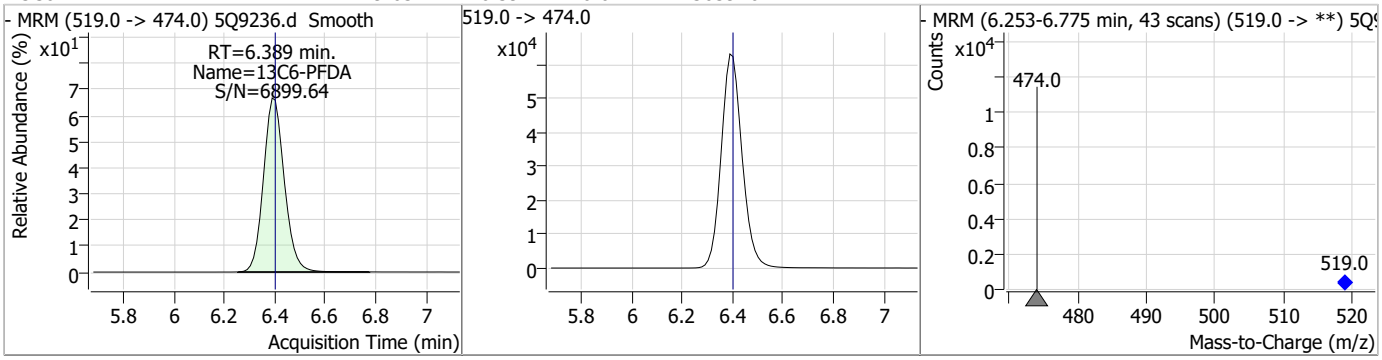
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.01	6.39	-0.01	116731				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	11.86	6.39	-0.01	59148	527.0 -> 81.0	51.2	26.1	78.2

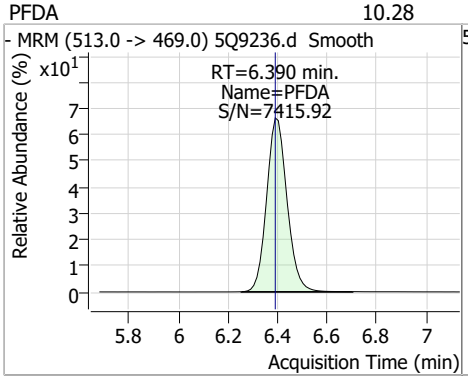


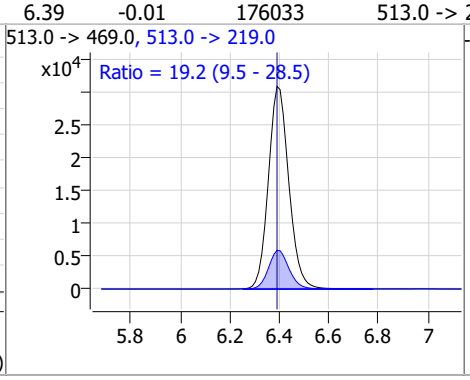
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	19.63	6.39	-0.01	363970				

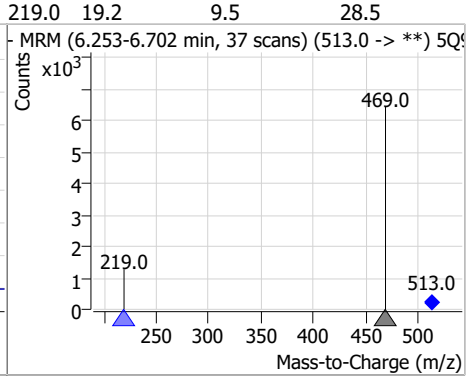


Perfluorinated Compounds by LC/MS/MS

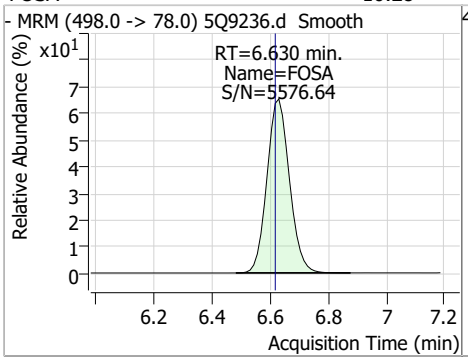
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	10.28	6.39	-0.01	176033	513.0 -> 219.0	19.2	9.5	28.5

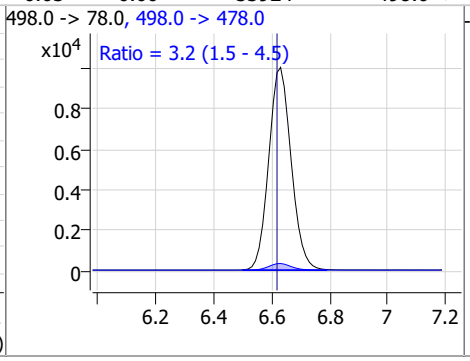


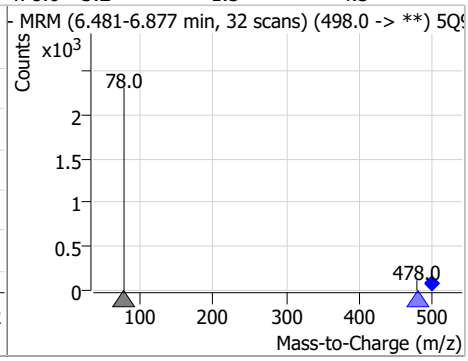




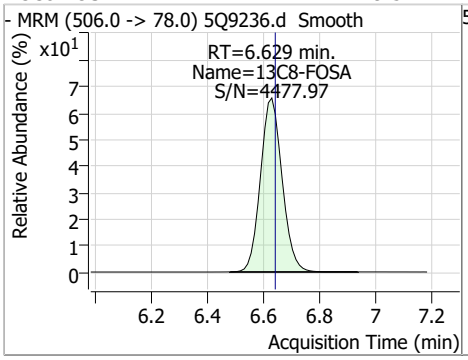
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	10.28	6.63	0.00	53924	498.0 -> 478.0	3.2	1.5	4.5

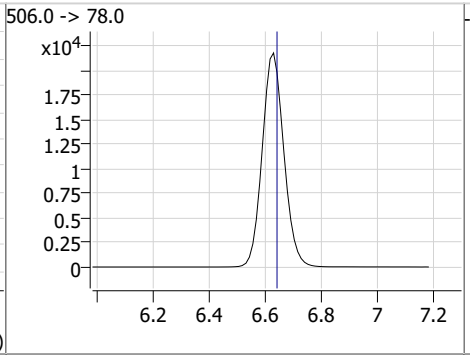


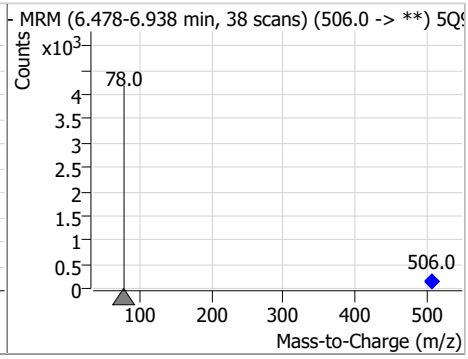




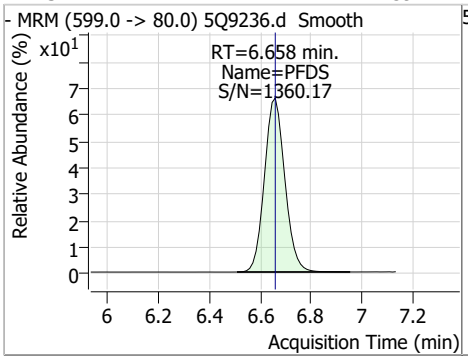
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	19.51	6.63	-0.01	116987				

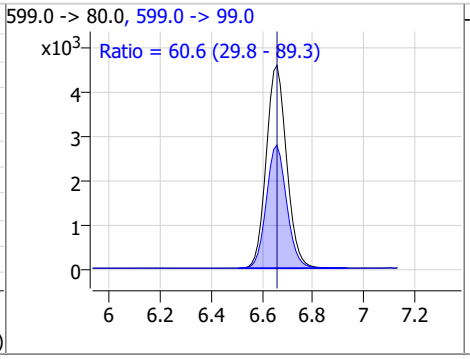


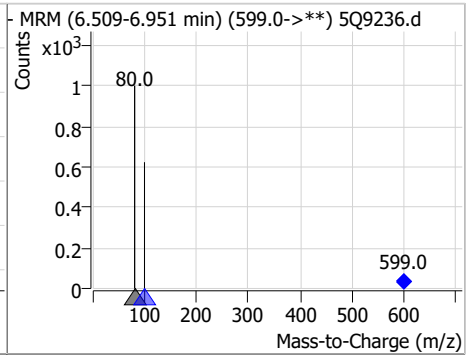




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	11.39	6.66	-0.01	25192	599.0 -> 99.0	60.6	29.8	89.3

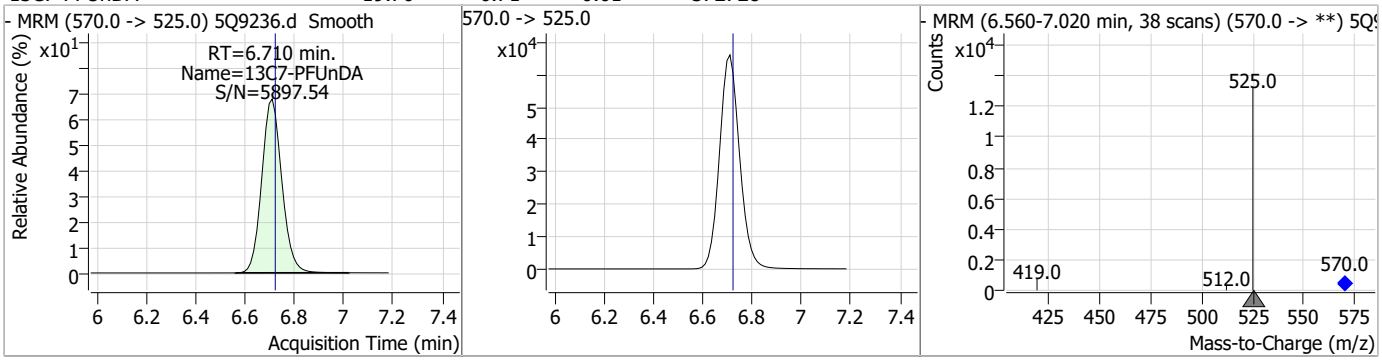




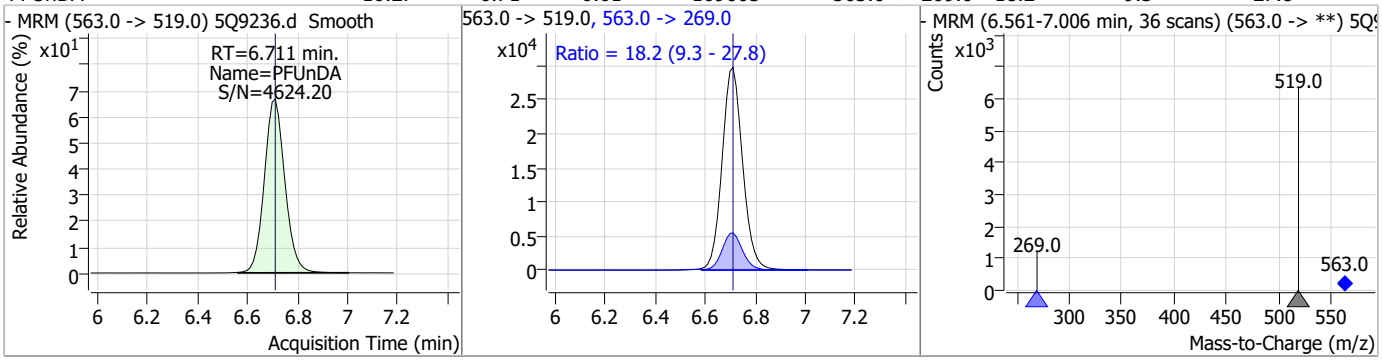


Perfluorinated Compounds by LC/MS/MS

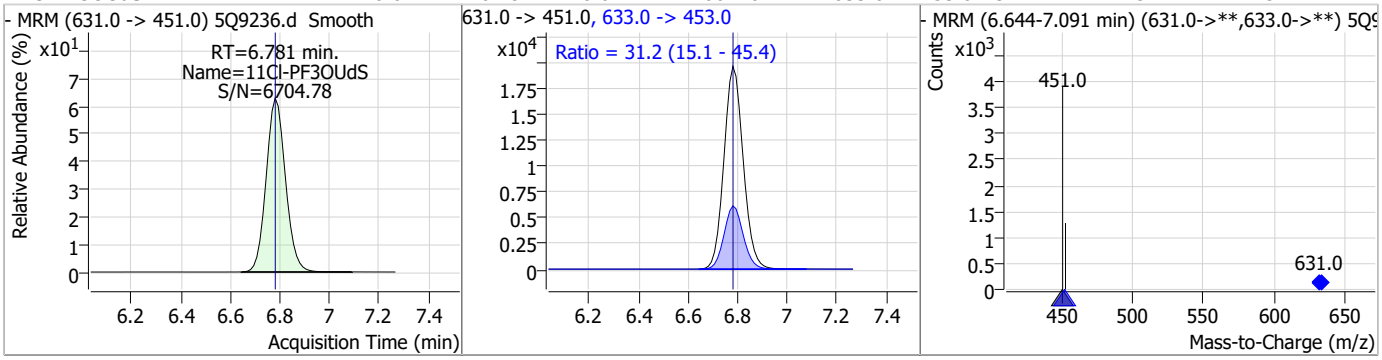
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.76	6.71	-0.01	372728				



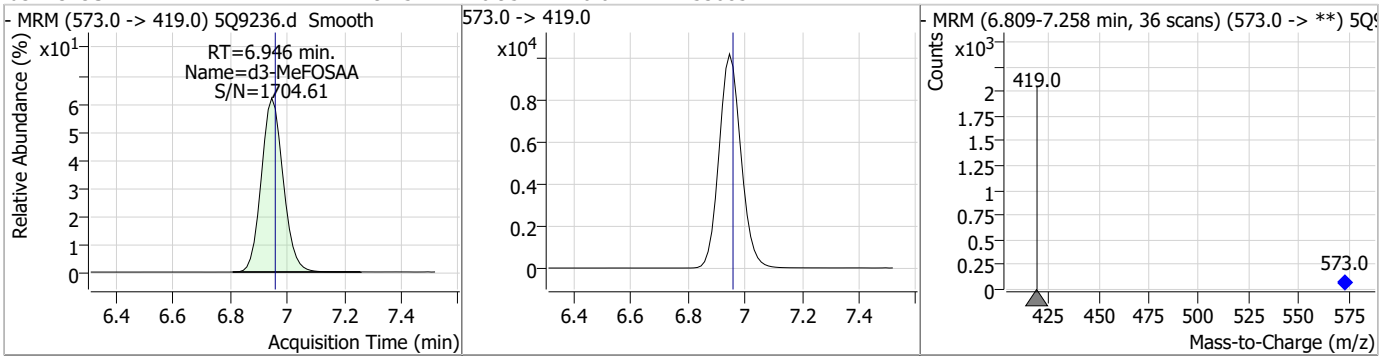
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	10.27	6.71	-0.01	169005	563.0 -> 269.0	18.2	9.3	27.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	10.67	6.78	-0.01	106226	633.0 -> 453.0	31.2	15.1	45.4

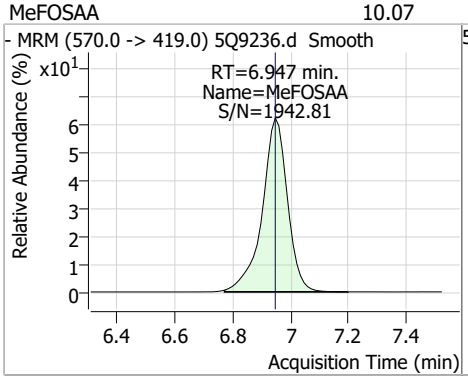


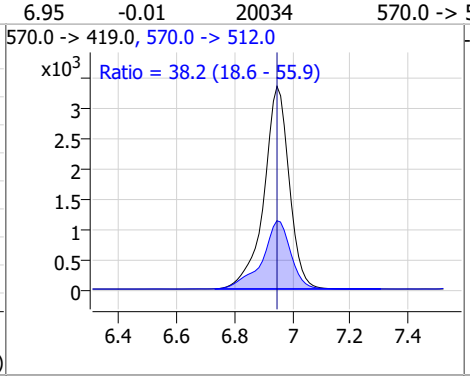
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	19.15	6.95	-0.01	53685				

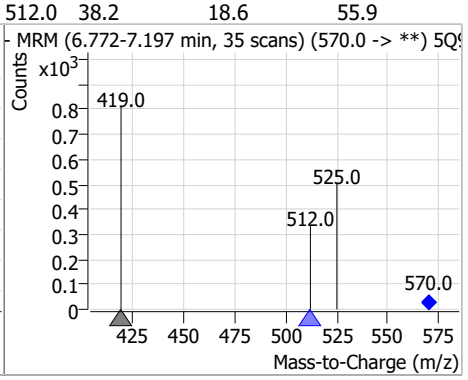


Perfluorinated Compounds by LC/MS/MS

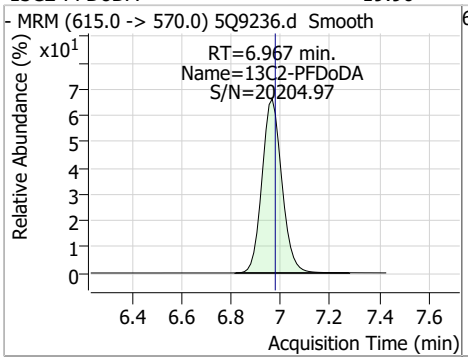
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	10.07	6.95	-0.01	20034	570.0 -> 512.0	38.2	18.6	55.9

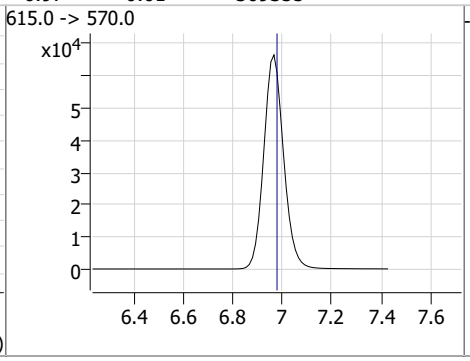


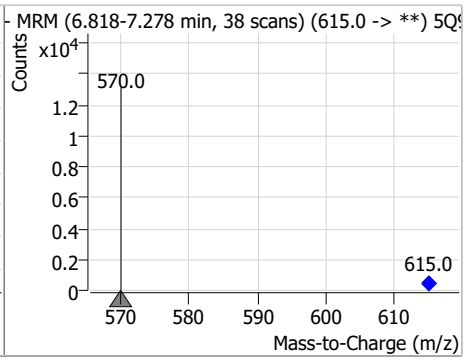




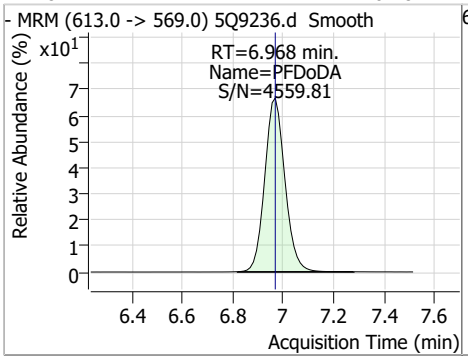
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.96	6.97	-0.01	369355				

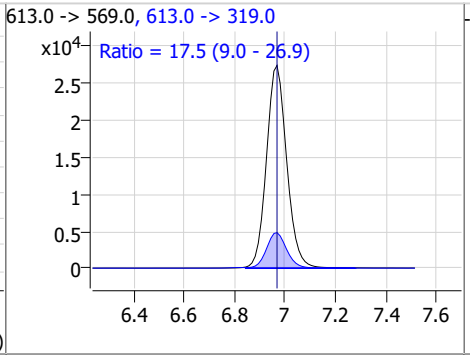


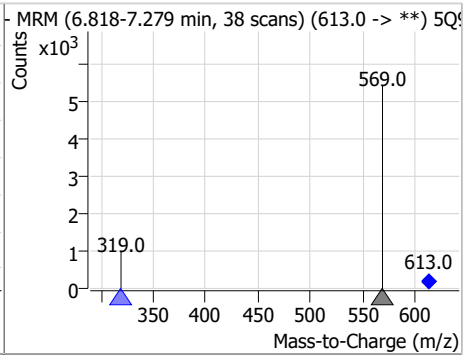




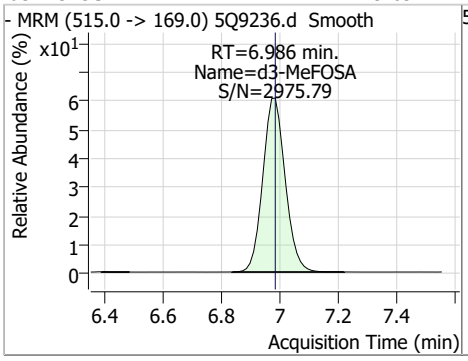
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	10.18	6.97	-0.01	151988	613.0 -> 319.0	17.5	9.0	26.9

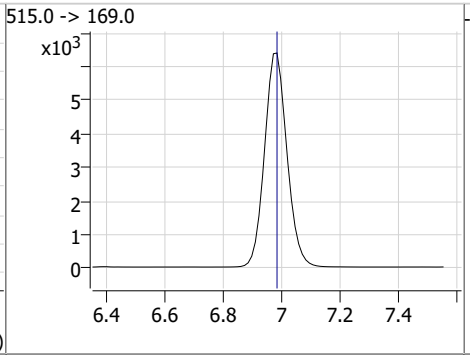


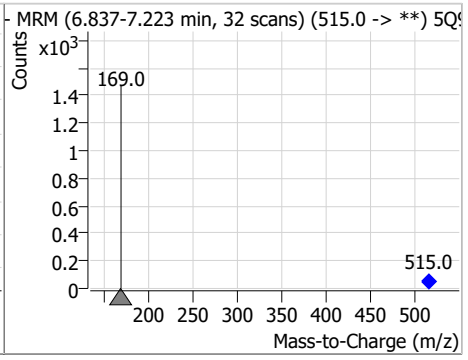




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	19.69	6.99	0.00	33941				

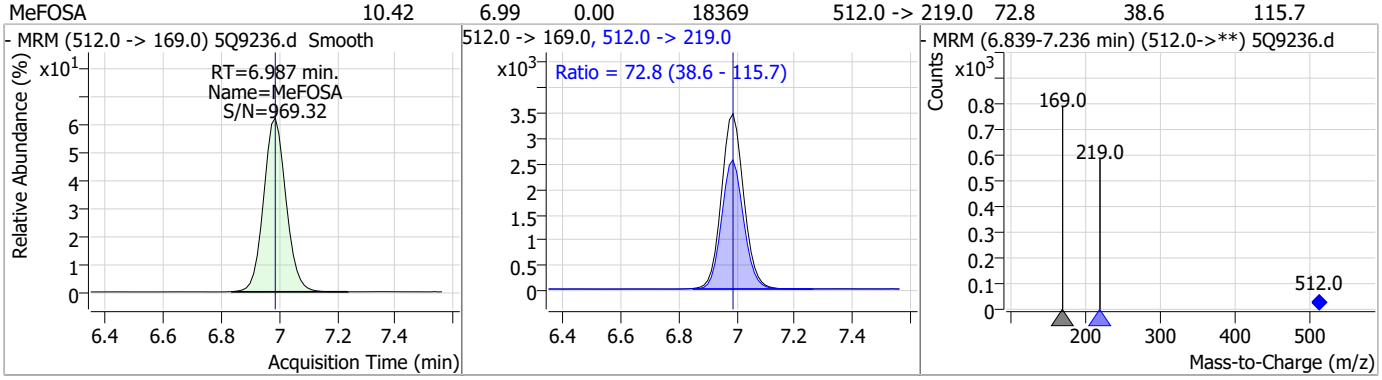




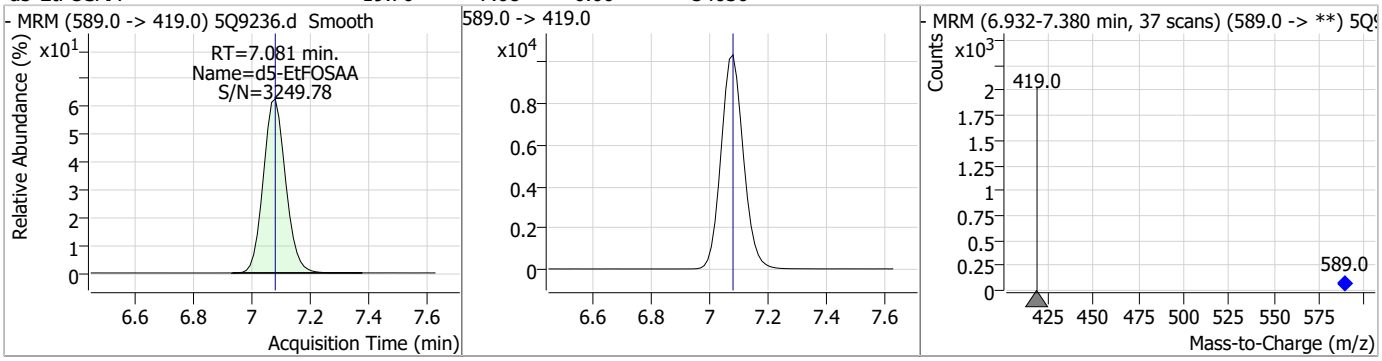


Perfluorinated Compounds by LC/MS/MS

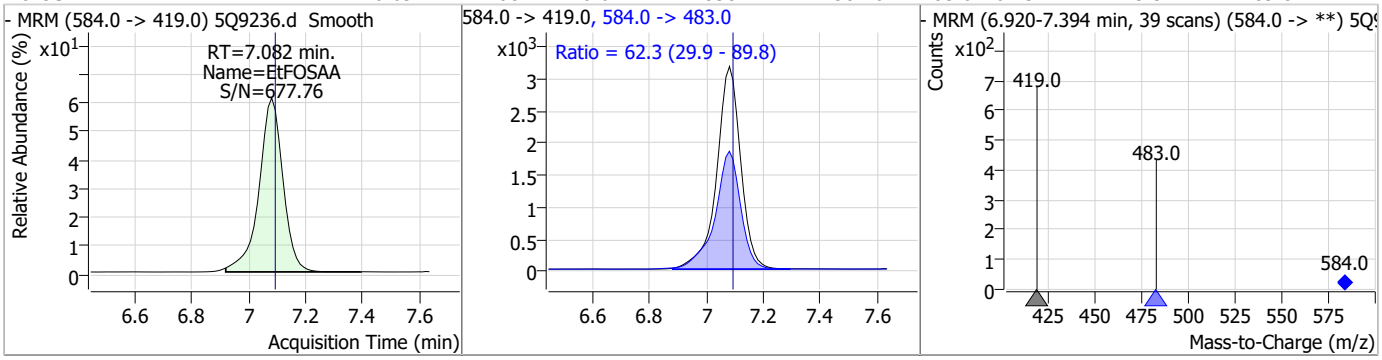
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	10.42	6.99	0.00	18369	512.0 -> 219.0	72.8	38.6	115.7



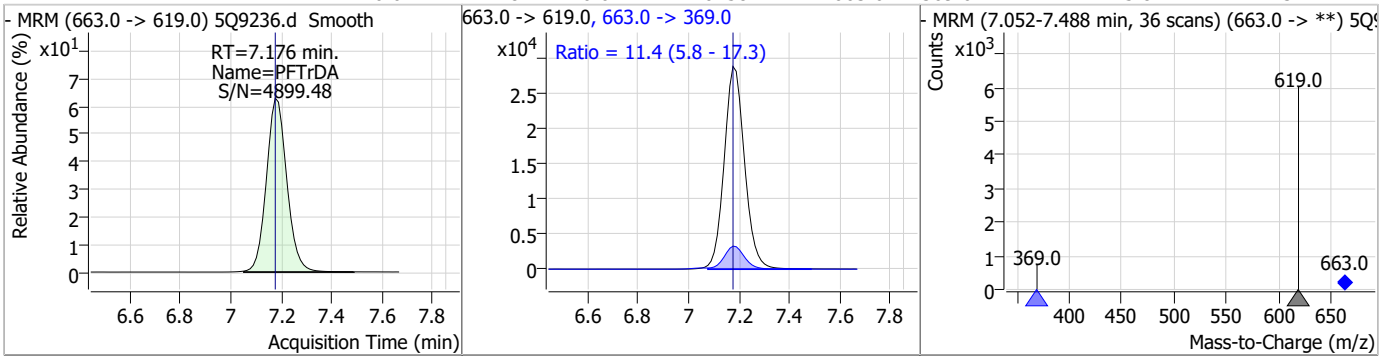
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.70	7.08	0.00	54630				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	10.09	7.08	-0.01	18382	584.0 -> 483.0	62.3	29.9	89.8

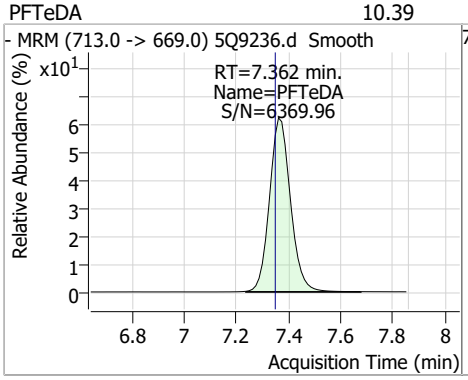


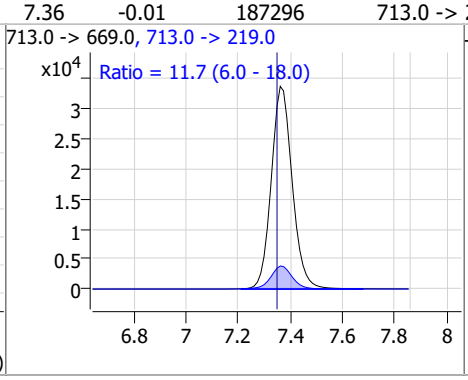
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	10.02	7.18	-0.01	161581	663.0 -> 369.0	11.4	5.8	17.3

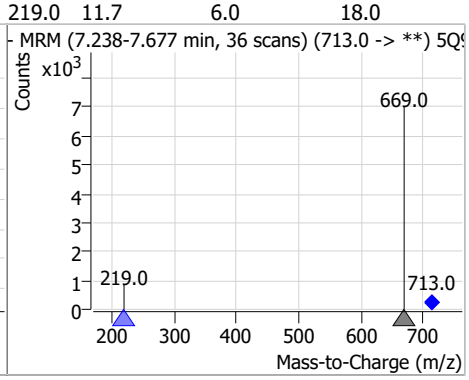


Perfluorinated Compounds by LC/MS/MS

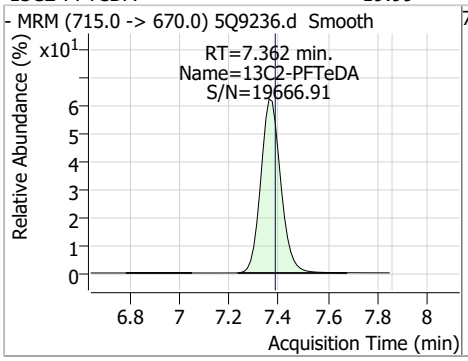
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	10.39	7.36	-0.01	187296	713.0 -> 219.0	11.7	6.0	18.0

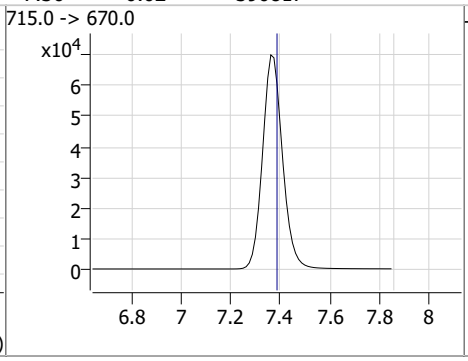


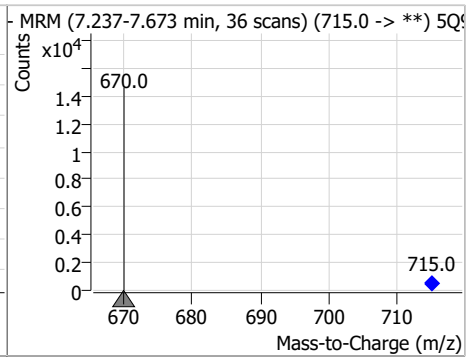




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.99	7.36	-0.02	390817				







Manual Integration Approval Summary

Sample Number: S5Q137-IC137
Lab FileID: 5Q9236.D
Injection Time: 01/03/23 16:15
Method: EPA 537M QSM5.3 B-15
Analyst approved: 01/04/23 11:33 Lindsay Ritner
Supervisor approved: 01/04/23 15:00 Natasha Gumtie

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanesulfonic acid	1763-23-1		6.00	Split peak

5Q9237.D

Manual Integrations APPROVED (compounds with "m" flag)

Natasha Gumtie 01/04/23 15:00

Perfluorinated Compounds by LC/MS/MS

Data File	:	5Q9237.d
Operator	:	lindsayr
Acq. Method	:	537_ID.m
Acq. Date-Time	:	1/3/2023 4:31:29 PM
Sample Name	:	icc137-20
Vial	:	P1-A7
DA Method File	:	ID_010323_S5Q137.quantmethod.xml
Batch Name	:	s5q137.batch.bin
Sample Information	:	OP94373,S5Q137,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.975	217.0 -> 172.0	114767	20.00	µg/L	0.000
M5-PFPeA	3.469	268.0 -> 223.0	210060	20.00	µg/L	0.000
M5-PFHxA	4.455	318.0 -> 273.0	297099	20.00	µg/L	0.000
M4-PFHpA	5.113	367.0 -> 322.0	295538	20.00	µg/L	0.000
M8-PFOA	5.621	421.0 -> 376.0	382248	20.00	µg/L	0.000
M9-PFNA	6.043	472.0 -> 427.0	380727	20.00	µg/L	0.000
M6-PFDA	6.401	519.0 -> 474.0	376224	20.00	µg/L	0.000
M7-PFUnDA	6.722	570.0 -> 525.0	373067	20.00	µg/L	0.000
M2-PFDoDA	6.980	615.0 -> 570.0	366741	20.00	µg/L	0.000
M2-PFTeDA	7.386	715.0 -> 670.0	389405	20.00	µg/L	0.000
M8-FOSA	6.641	506.0 -> 78.0	113781	20.00	µg/L	0.000
M3-PFBS	3.679	302.0 -> 99.0	25962	20.00	µg/L	0.000
M3-PFHxS	5.123	402.0 -> 99.0	31403	20.00	µg/L	0.000
M8-PFOS	6.016	507.0 -> 99.0	38640	20.00	µg/L	0.000
M2-4:2FTS	4.349	329.0 -> 309.0	95530	20.00	µg/L	0.000
M2-6:2FTS	5.594	429.0 -> 409.0	142358	20.00	µg/L	0.000
M2-8:2FTS	6.400	529.0 -> 509.0	122060	20.00	µg/L	0.000
M3-MeFOSAA	6.958	573.0 -> 419.0	50796	20.00	µg/L	0.000
M3-HFPO-DA	4.644	287.0 -> 169.0	65736	20.00	µg/L	0.000
M3-MeFOSA	6.986	515.0 -> 169.0	33979	20.00	µg/L	0.000
M5-EtFOSAA	7.081	589.0 -> 419.0	50525	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-4:2FTS	4.349	329.0 -> 309.0	95530	20.20	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.0%		
13C2-6:2FTS	5.594	429.0 -> 409.0	142358	19.99	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.0%		
13C2-8:2FTS	6.400	529.0 -> 509.0	122060	19.88	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.4%		
13C2-PFDoDA	6.980	615.0 -> 570.0	366741	19.81	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.1%		
13C2-PFTeDA	7.386	715.0 -> 670.0	389405	19.91	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.6%		
13C3-PFBS	3.679	302.0 -> 99.0	25962	20.25	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%		
13C3-PFHxS	5.123	402.0 -> 99.0	31403	19.77	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.8%		
13C4-PFBA	1.975	217.0 -> 172.0	114767	20.02	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.1%		
13C4-PFHpA	5.113	367.0 -> 322.0	295538	20.11	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.6%		
13C5-PFHxA	4.455	318.0 -> 273.0	297099	20.23	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.1%		
13C5-PFPeA	3.469	268.0 -> 223.0	210060	20.22	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.1%		
13C6-PFDA	6.401	519.0 -> 474.0	376224	20.29	µg/L	0.000

Perfluorinated Compounds by LC/MS/MS

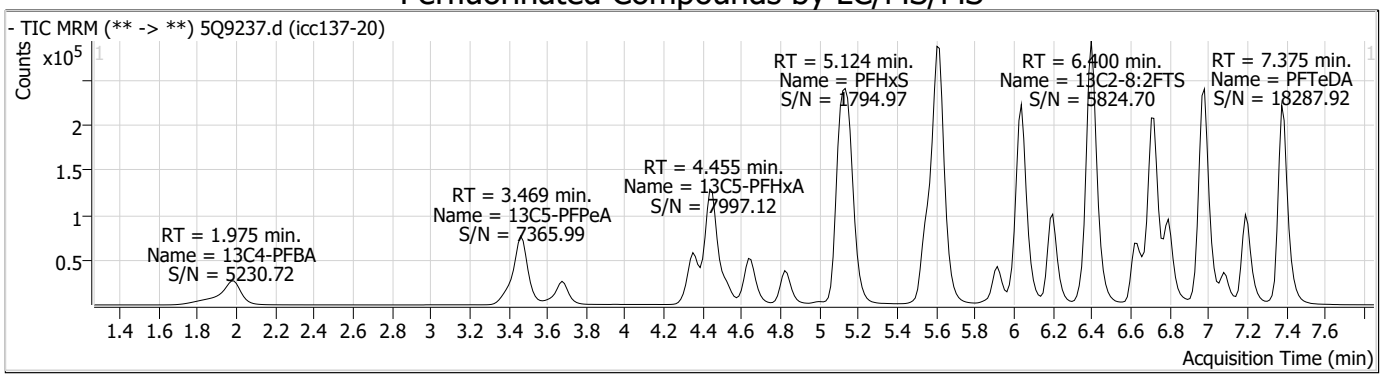
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.5%		
13C7-PFUnDA	6.722	570.0 -> 525.0	373067	19.78 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.9%		
13C8-FOSA	6.641	506.0 -> 78.0	113781	18.98 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.9%		
13C8-PFOA	5.621	421.0 -> 376.0	382248	20.29 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.5%		
13C8-PFOS	6.016	507.0 -> 99.0	38640	20.27 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.4%		
13C9-PFNA	6.043	472.0 -> 427.0	380727	20.17 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.8%		
d3-MeFOSAA	6.958	573.0 -> 419.0	50796	18.12 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.6%		
13C3-HFPO-DA	4.644	287.0 -> 169.0	65736	19.60 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.0%		
d3-MeFOSA	6.986	515.0 -> 169.0	33979	19.71 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.5%		
d5-EtFOSAA	7.081	589.0 -> 419.0	50525	18.22 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.1%		
Target Compounds						QValue
4:2FTS	4.351	327.0 -> 307.0	96663	22.22 µg/L		100
		327.0 -> 81.0	58118			
6:2FTS	5.595	427.0 -> 407.0	137149	22.19 µg/L		100
		427.0 -> 81.0	60875			
8:2FTS	6.401	527.0 -> 507.0	118353	22.69 µg/L		100
		527.0 -> 81.0	61719			
EtFOSAA	7.094	584.0 -> 419.0	34489	20.47 µg/L		100
		584.0 -> 483.0	20645			
FOSA	6.630	498.0 -> 78.0	103730	20.34 µg/L		100
		498.0 -> 478.0	3102			
MeFOSAA	6.959	570.0 -> 419.0	39517	21.00 µg/L		100
		570.0 -> 512.0	14740			
PFBA	1.981	213.0 -> 169.0	108158	20.11 µg/L		100
PFBS	3.682	299.0 -> 80.0	75035	20.14 µg/L		100
		299.0 -> 99.0	31845			
PFDA	6.402	513.0 -> 469.0	353798	19.98 µg/L		100
		513.0 -> 219.0	67191			
PFDoDA	6.980	613.0 -> 569.0	298488	20.14 µg/L		100
		613.0 -> 319.0	53607			
PFDS	6.671	599.0 -> 80.0	50763	22.94 µg/L		100
		599.0 -> 99.0	30205			
PFHpA	5.113	363.0 -> 319.0	323813	20.14 µg/L		100
		363.0 -> 169.0	71997			
PFHpS	5.607	449.0 -> 80.0	56115	20.04 µg/L		100
		449.0 -> 99.0	30780			
PFHxA	4.455	313.0 -> 269.0	266920	20.16 µg/L		100
		313.0 -> 119.0	12465			
PFHxS	5.124	399.0 -> 80.0	58434	20.39 µg/L		100
		399.0 -> 99.0	32873			
PFNA	6.044	463.0 -> 419.0	342043	20.04 µg/L		100
		463.0 -> 219.0	76879			
PFNS	6.362	549.0 -> 80.0	46674	20.30 µg/L		100
		549.0 -> 99.0	26663			
PFOA	5.622	413.0 -> 369.0	378902	20.02 µg/L		100
		413.0 -> 169.0	104630			
PFOS	6.017	499.0 -> 80.0	65831	19.69 µg/L	m	100

Perfluorinated Compounds by LC/MS/MS

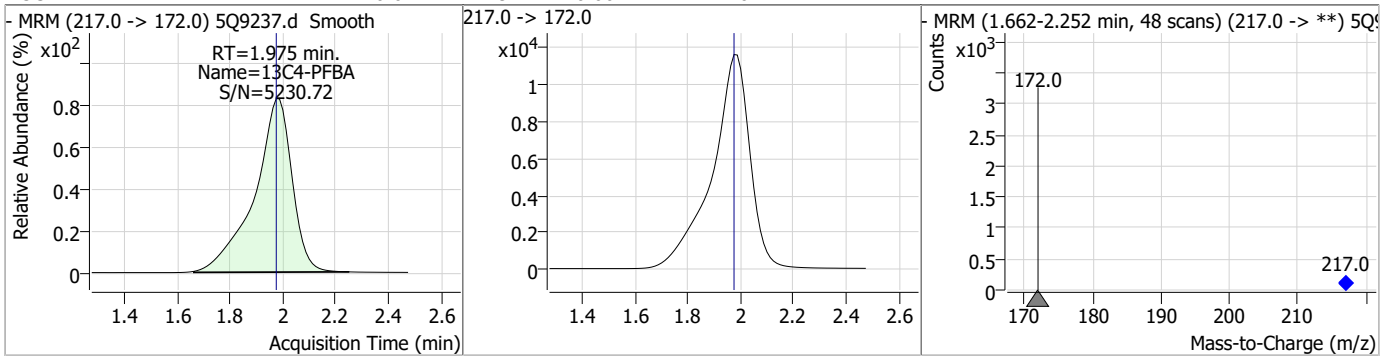
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	31713			
PFPeA	3.472	263.0 -> 219.0	216642	19.96	µg/L	100
PFPeS	4.526	349.0 -> 80.0	44896	19.83	µg/L	100
		349.0 -> 99.0	22484			
PFTeDA	7.375	713.0 -> 669.0	360398	20.06	µg/L	100
		713.0 -> 219.0	43179			
PFTrDA	7.189	663.0 -> 619.0	316886	19.80	µg/L	100
		663.0 -> 369.0	36638			
PFUnDA	6.723	563.0 -> 519.0	339172	20.59	µg/L	100
		563.0 -> 269.0	62782			
11Cl-PF3OUdS	6.793	631.0 -> 451.0	214592	21.00	µg/L	100
		633.0 -> 453.0	65000			
9Cl-PF3ONS	6.201	531.0 -> 351.0	276606	20.37	µg/L	100
		533.0 -> 353.0	86298			
ADONA	5.163	377.0 -> 251.0	435708	20.26	µg/L	100
		377.0 -> 85.0	163434			
HFPO-DA	4.652	329.0 -> 169.0	97631	20.52	µg/L	100
		285.0 -> 169.0	57424			
MeFOSA	6.987	512.0 -> 169.0	35347	20.02	µg/L	100
		512.0 -> 219.0	27260			
4-PFECHS	5.543	461.0 -> 381.0	185623	20.00	µg/L	100
		461.0 -> 99.0	102838			
FBSA	4.829	298.0 -> 78.0	134447	20.73	µg/L	100
		298.0 -> 64.0	12383			
FHxSA	5.923	398.0 -> 78.0	125536	20.92	µg/L	100
		398.0 -> 64.0	11834			

 # = Qualifier out of range, m = manually integrated, + = Area summed

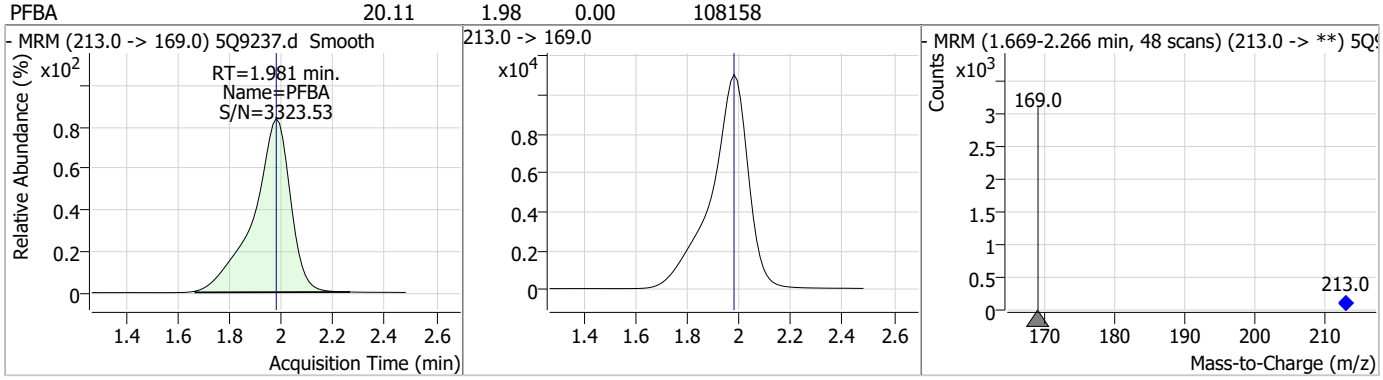
Perfluorinated Compounds by LC/MS/MS



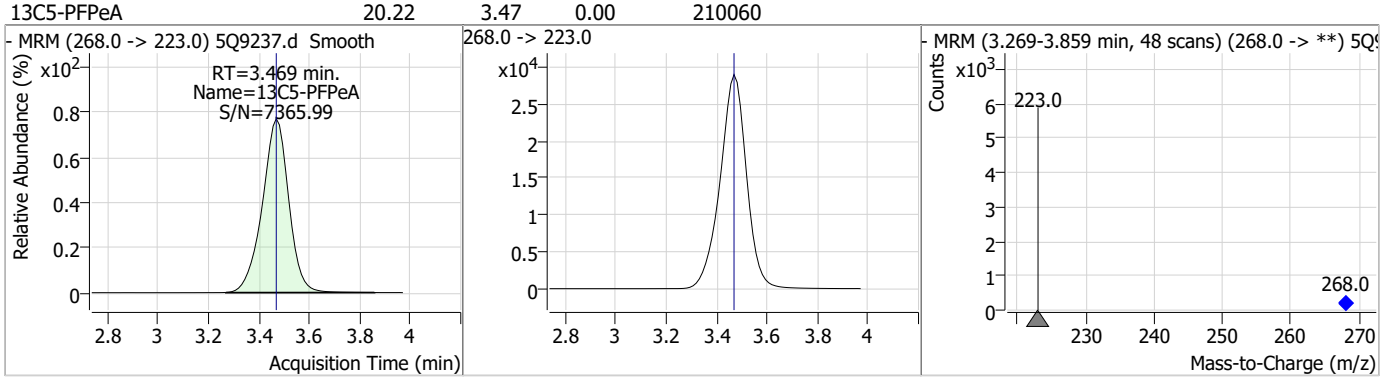
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.02	1.97	0.00	114767				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	20.11	1.98	0.00	108158				

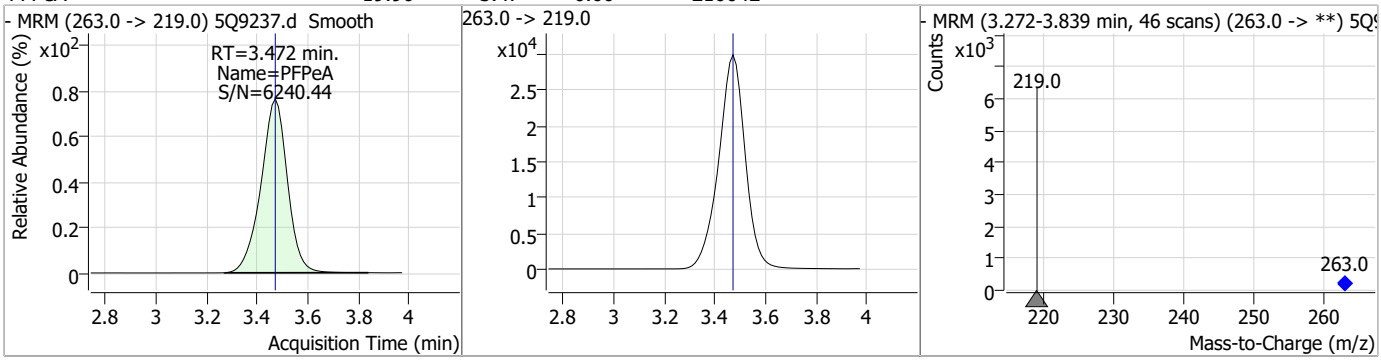


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.22	3.47	0.00	210060				

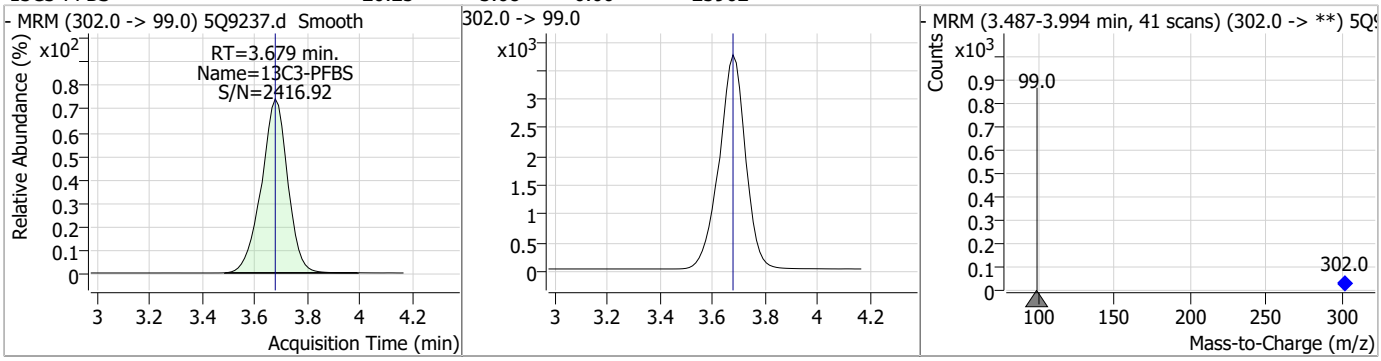


Perfluorinated Compounds by LC/MS/MS

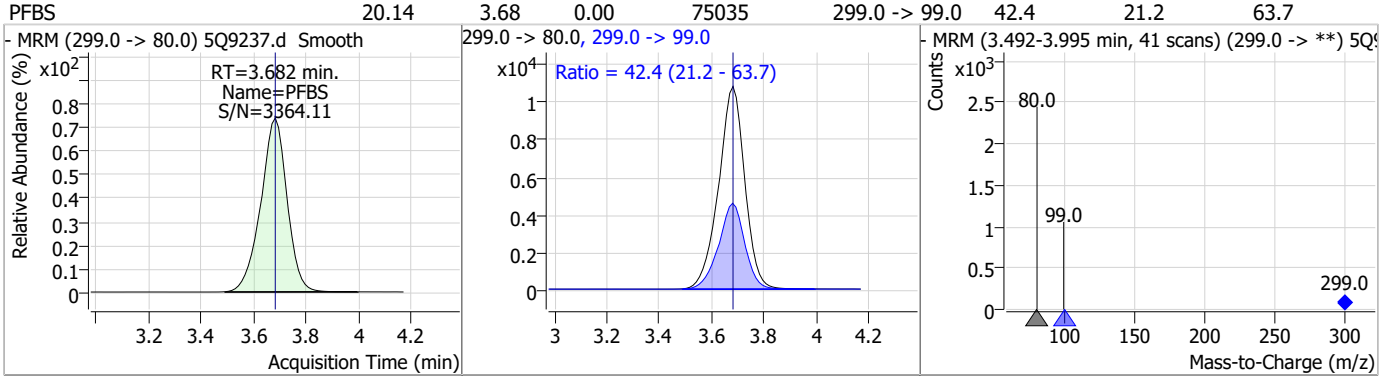
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.96	3.47	0.00	216642				



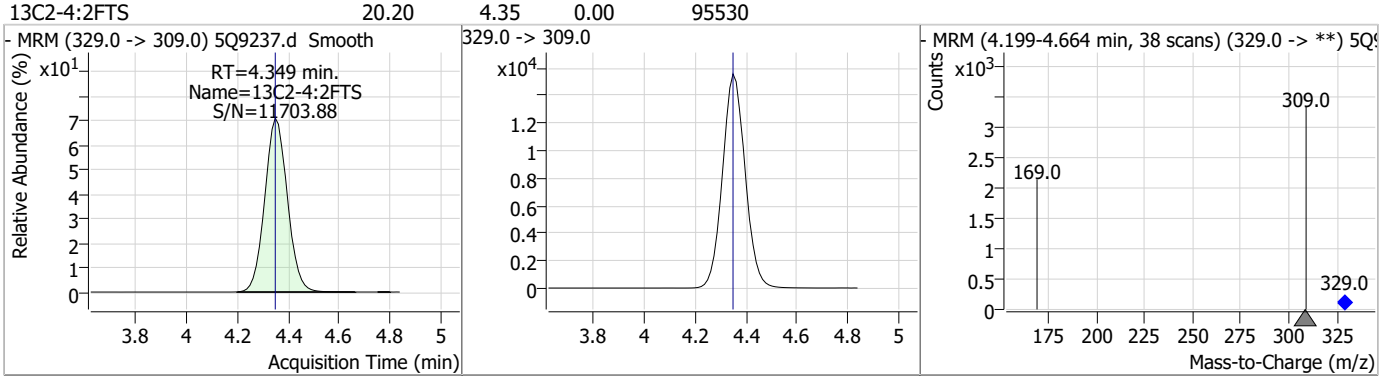
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.25	3.68	0.00	25962				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	20.14	3.68	0.00	75035	299.0 -> 99.0	42.4	21.2	63.7

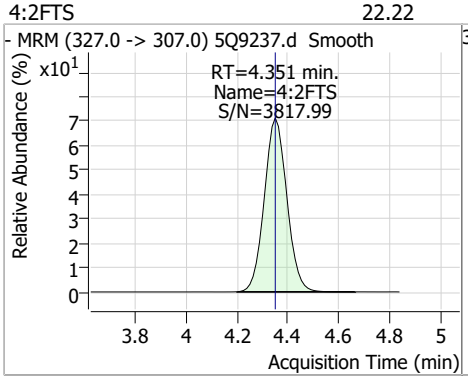


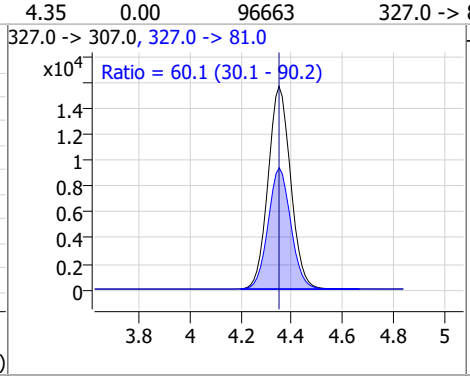
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	20.20	4.35	0.00	95530				

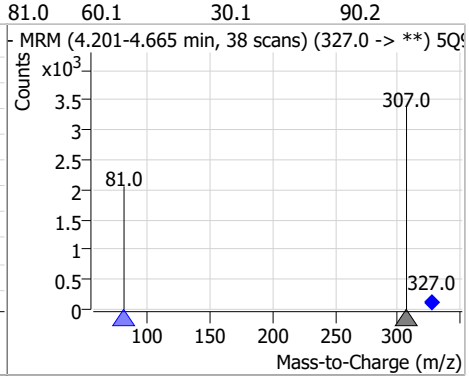


Perfluorinated Compounds by LC/MS/MS

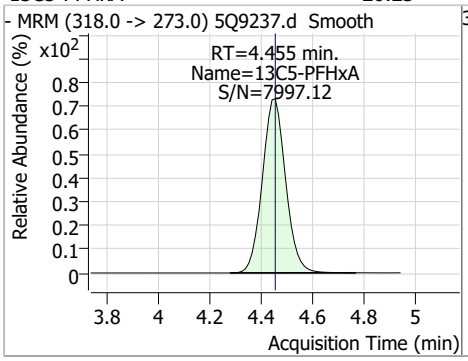
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	22.22	4.35	0.00	96663	327.0 -> 81.0	60.1	30.1	90.2

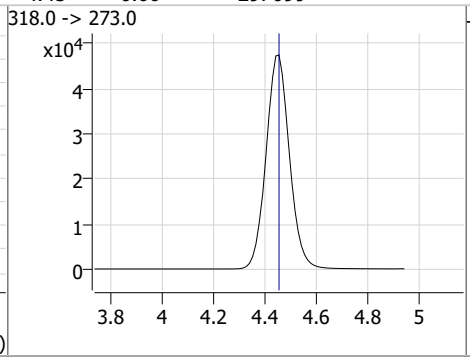


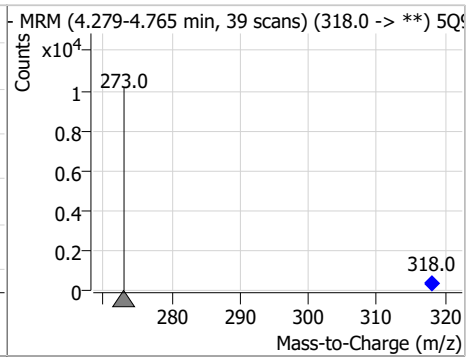




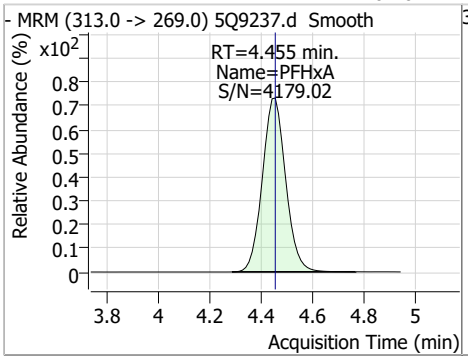
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.23	4.45	0.00	297099				

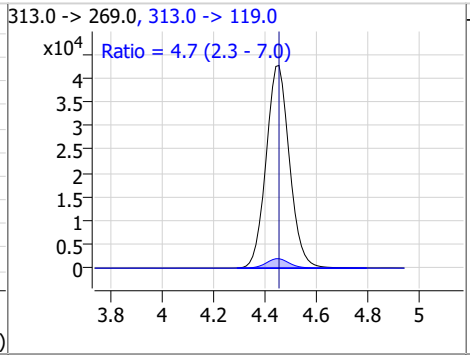


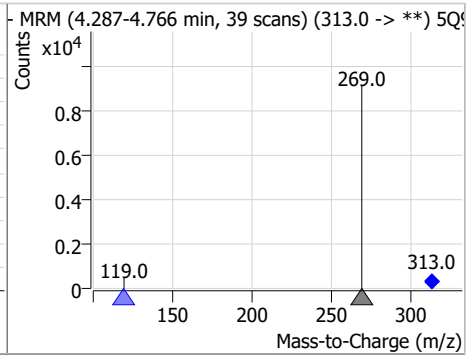




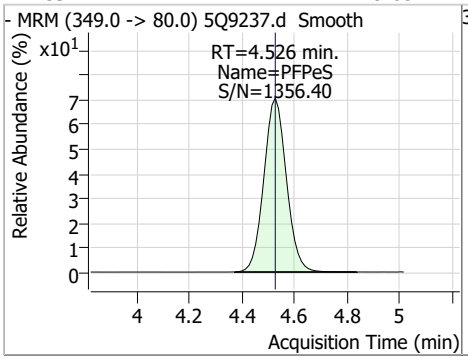
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	20.16	4.46	0.00	266920	313.0 -> 119.0	4.7	2.3	7.0

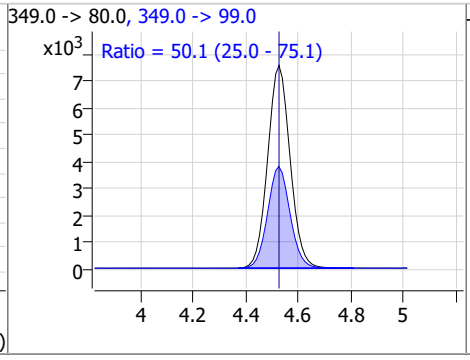


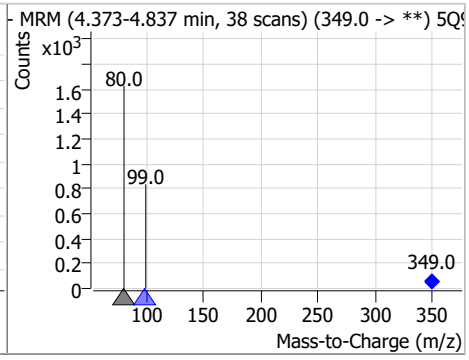




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	19.83	4.53	0.00	44896	349.0 -> 99.0	50.1	25.0	75.1

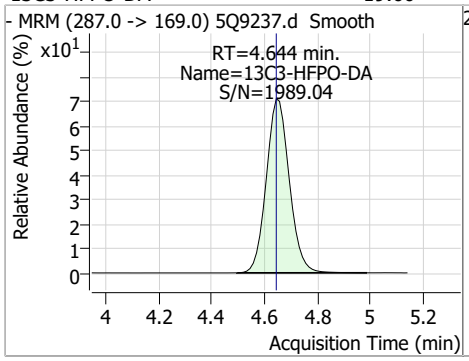


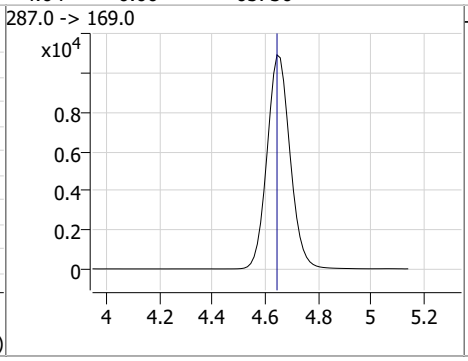


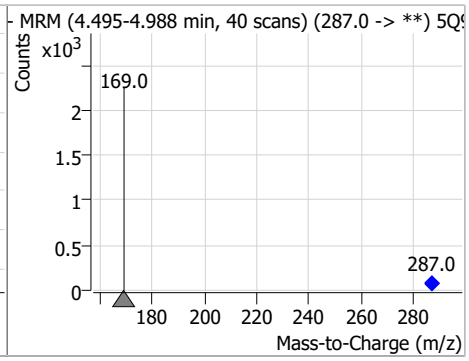


Perfluorinated Compounds by LC/MS/MS

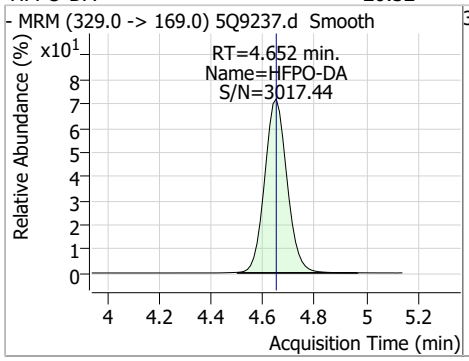
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.60	4.64	0.00	65736				

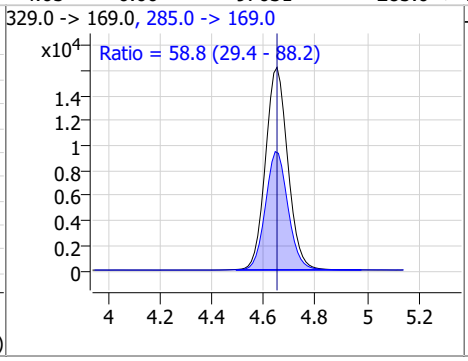


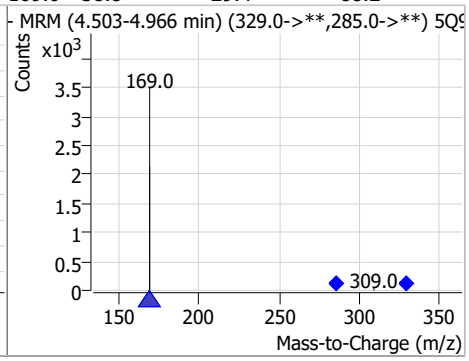




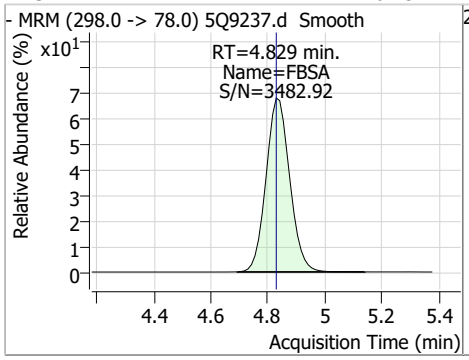
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	20.52	4.65	0.00	97631	285.0 -> 169.0	58.8	29.4	88.2

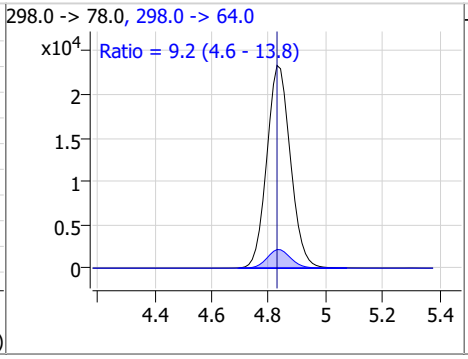


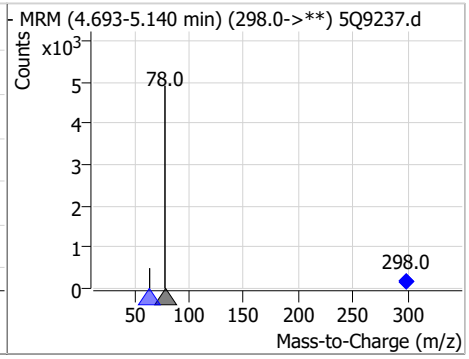




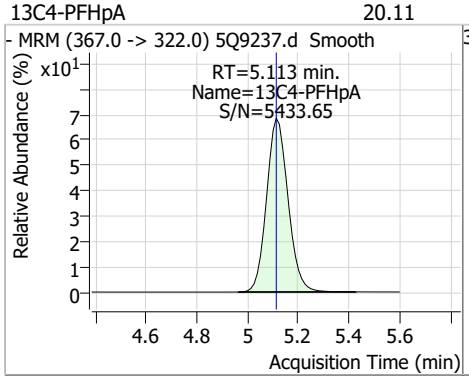
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	20.73	4.83	0.00	134447	298.0 -> 64.0	9.2	4.6	13.8

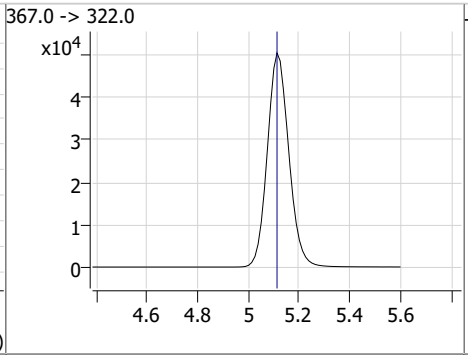


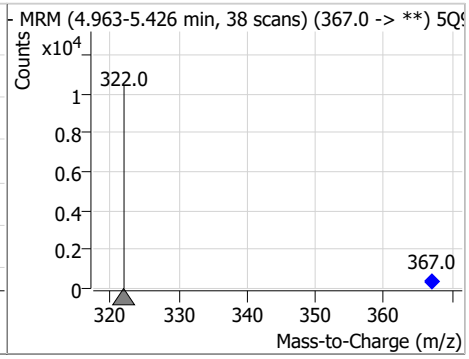




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.11	5.11	0.00	295538				

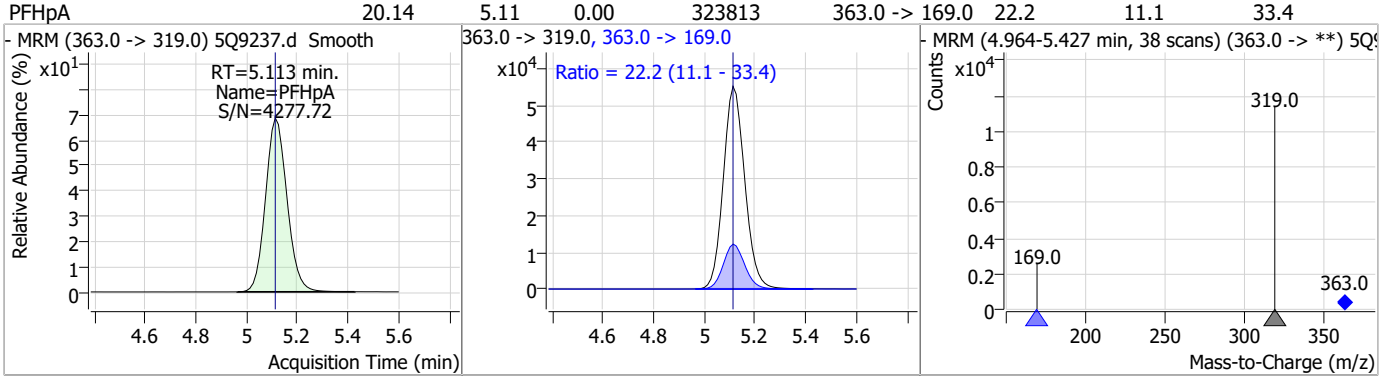




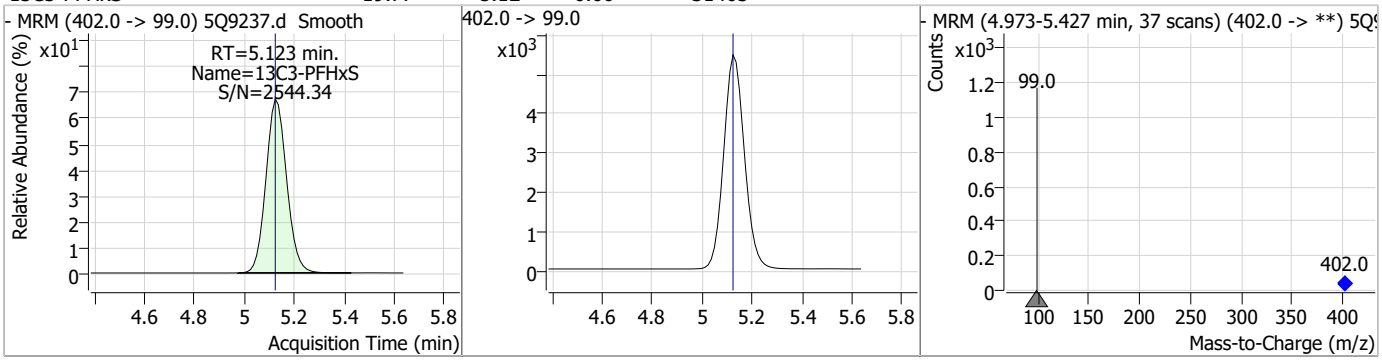


Perfluorinated Compounds by LC/MS/MS

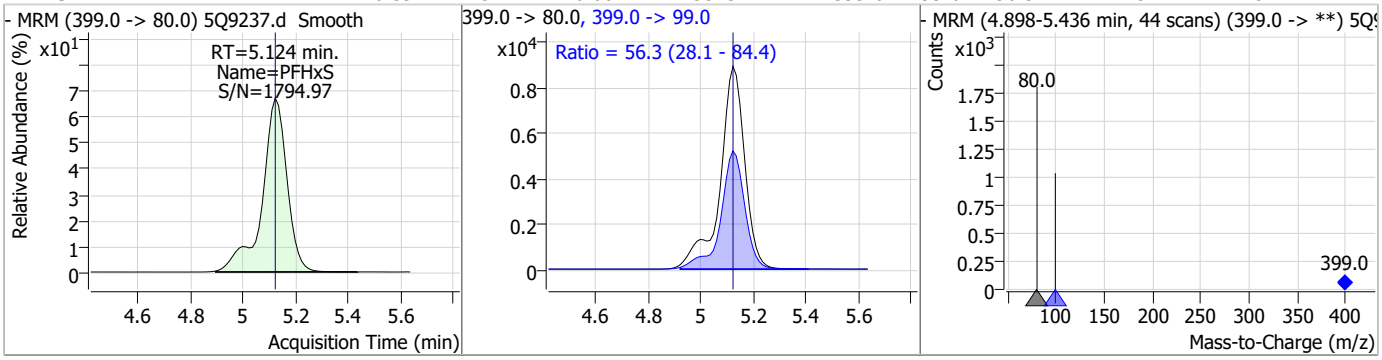
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	20.14	5.11	0.00	323813	363.0 -> 169.0	22.2	11.1	33.4



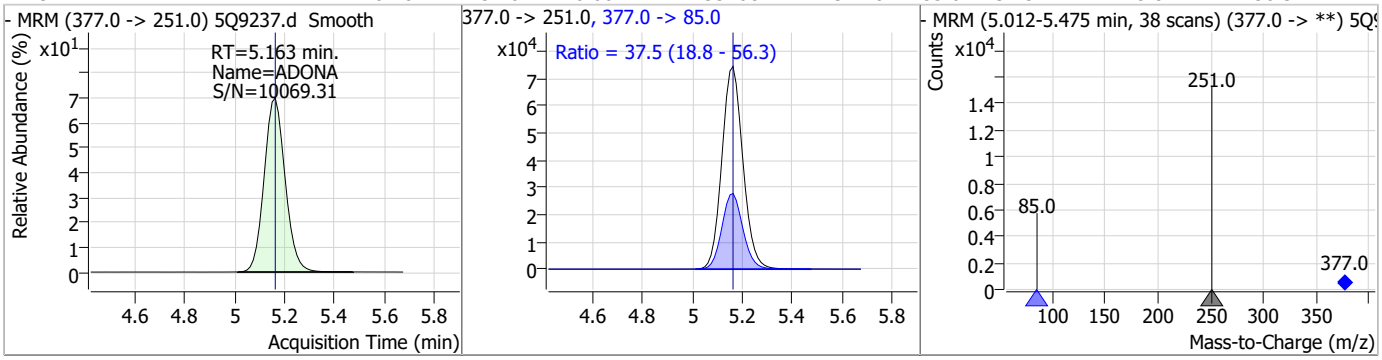
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.77	5.12	0.00	31403				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	20.39	5.12	0.00	58434	399.0 -> 99.0	56.3	28.1	84.4

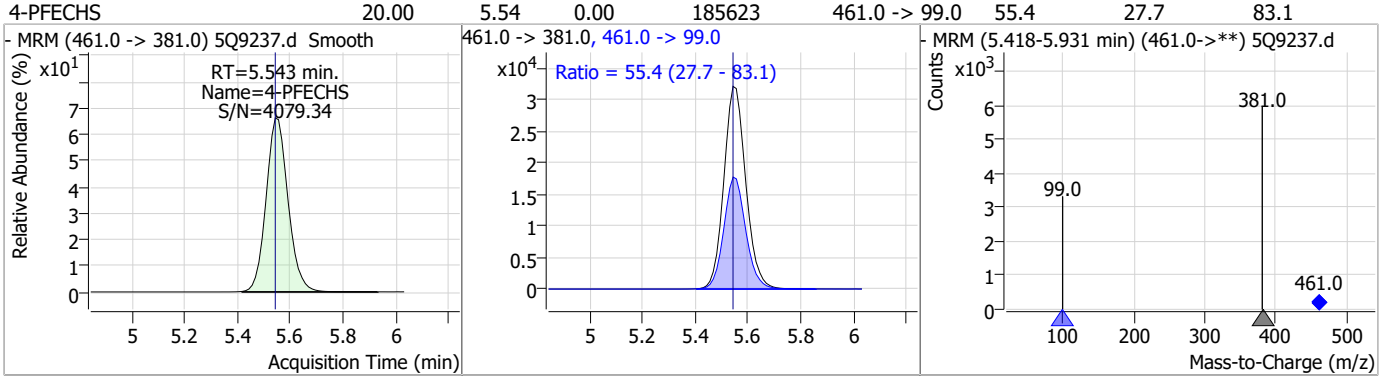


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	20.26	5.16	0.00	435708	377.0 -> 85.0	37.5	18.8	56.3

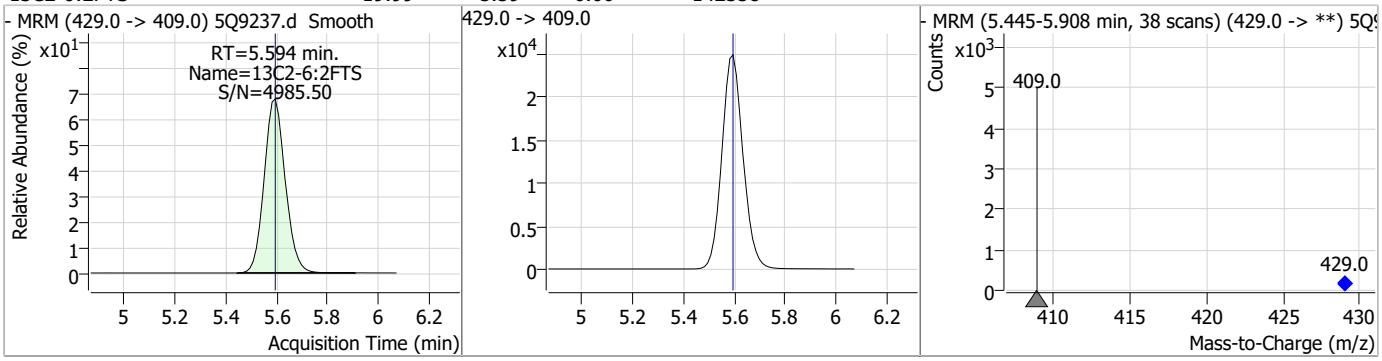


Perfluorinated Compounds by LC/MS/MS

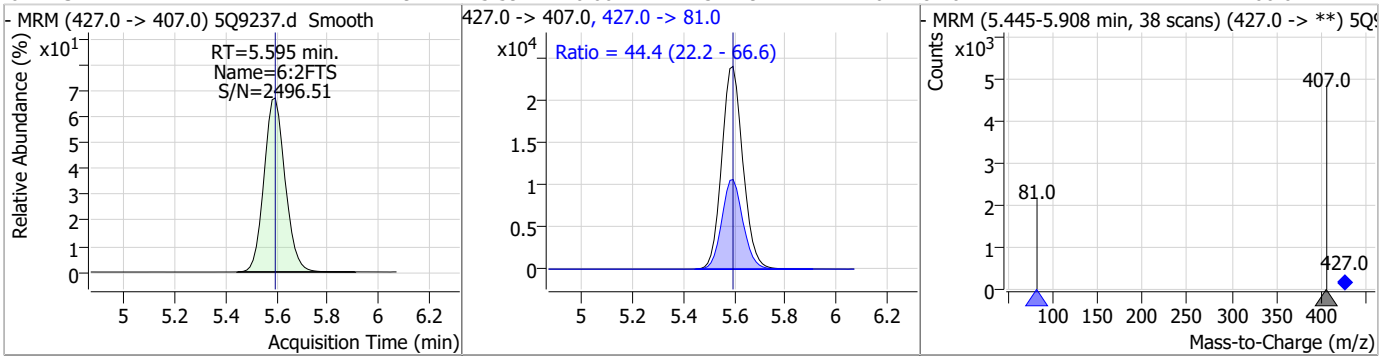
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	20.00	5.54	0.00	185623	461.0 -> 99.0	55.4	27.7	83.1



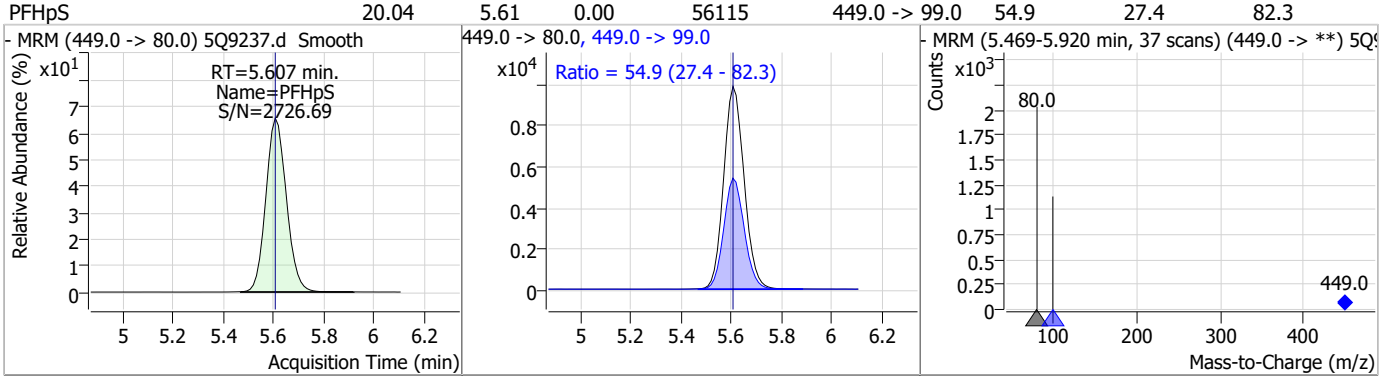
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.99	5.59	0.00	142358				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	22.19	5.59	0.00	137149	427.0 -> 81.0	44.4	22.2	66.6

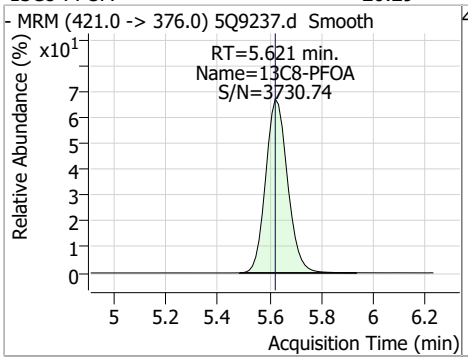


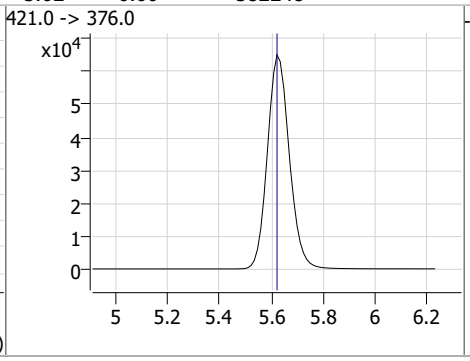
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	20.04	5.61	0.00	56115	449.0 -> 99.0	54.9	27.4	82.3

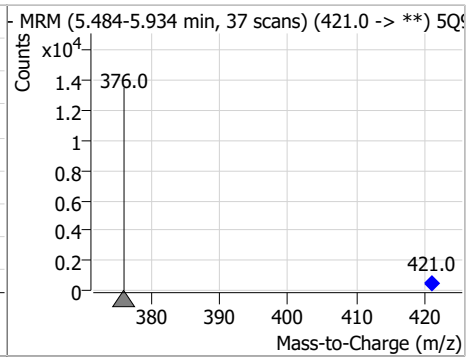


Perfluorinated Compounds by LC/MS/MS

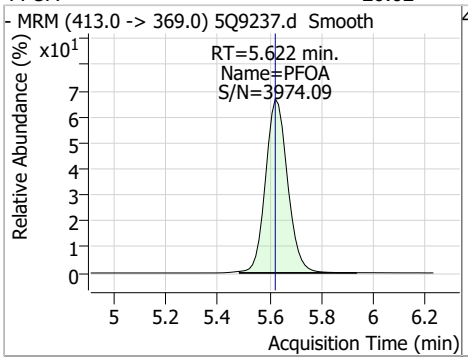
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.29	5.62	0.00	382248				

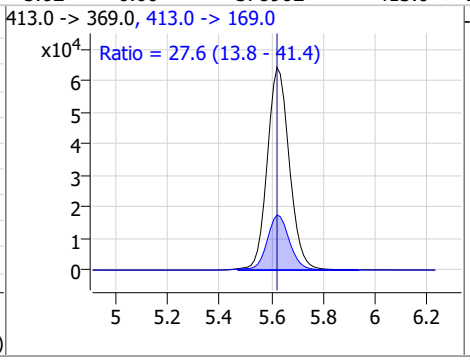


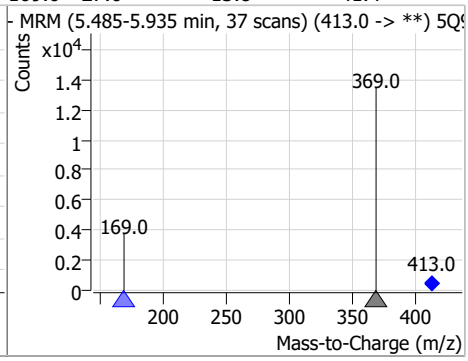




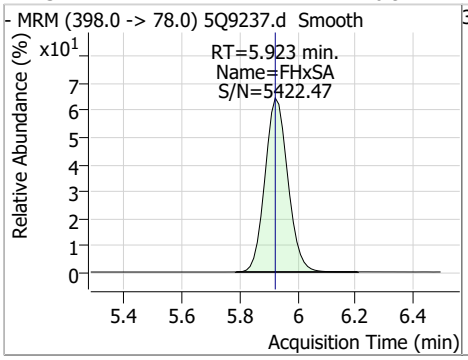
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	20.02	5.62	0.00	378902	413.0 -> 169.0	27.6	13.8	41.4

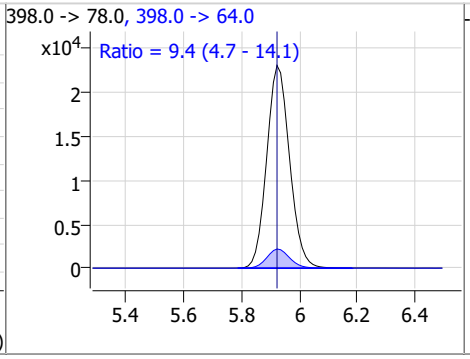


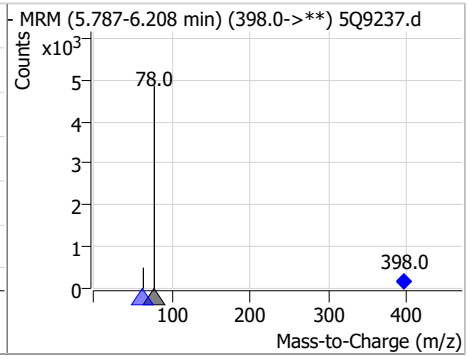




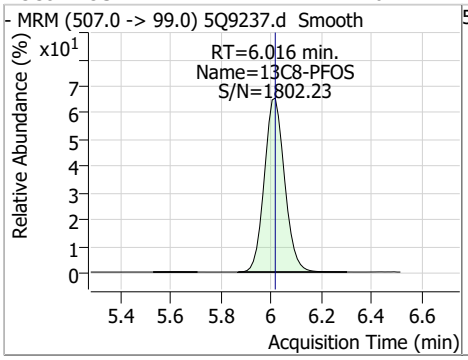
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	20.92	5.92	0.00	125536	398.0 -> 64.0	9.4	4.7	14.1

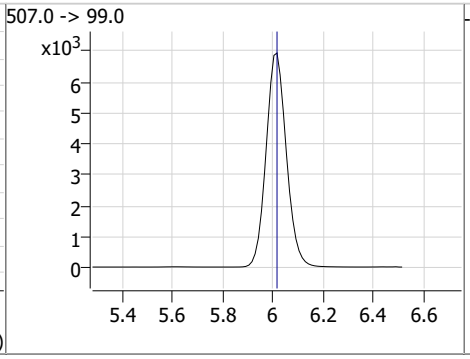


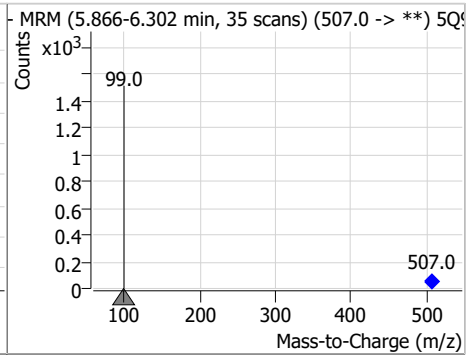




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.27	6.02	0.00	38640				

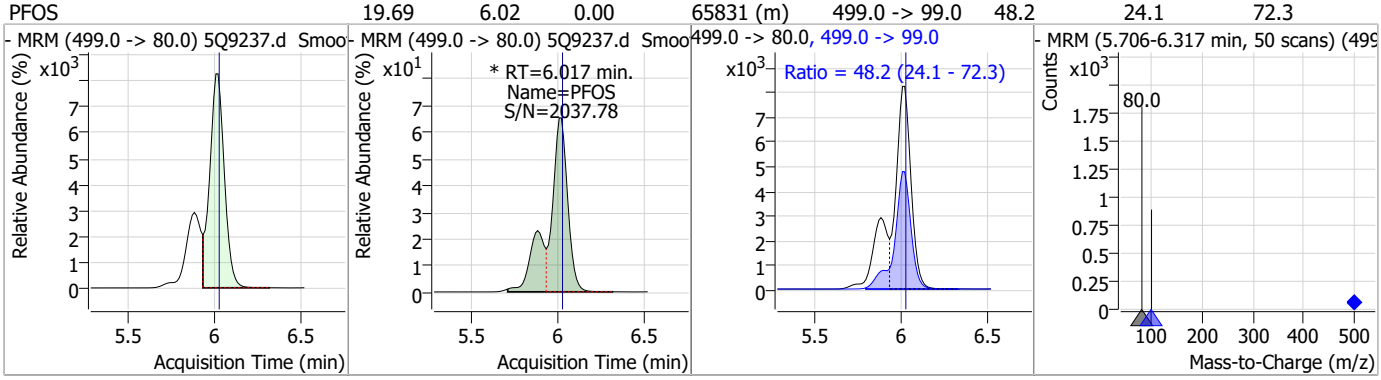




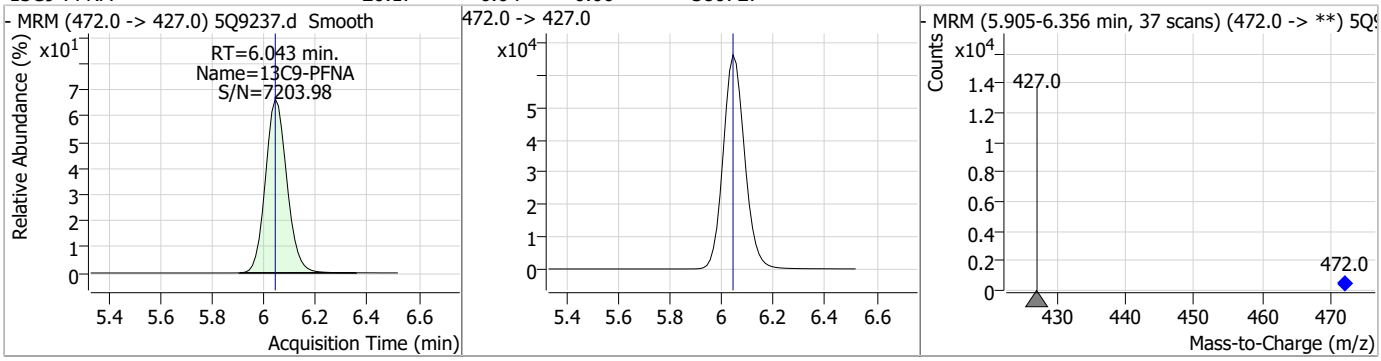


Perfluorinated Compounds by LC/MS/MS

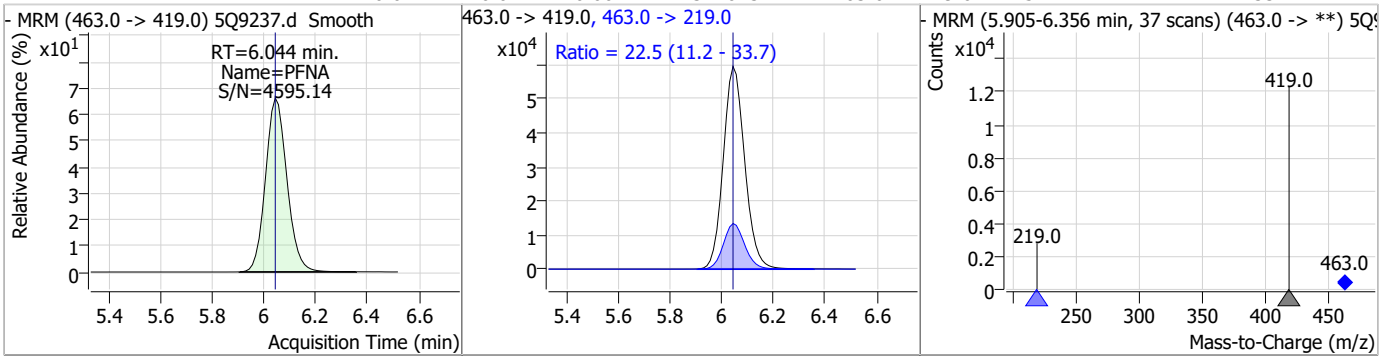
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.69	6.02	0.00	65831 (m)	499.0 -> 99.0	48.2	24.1	72.3



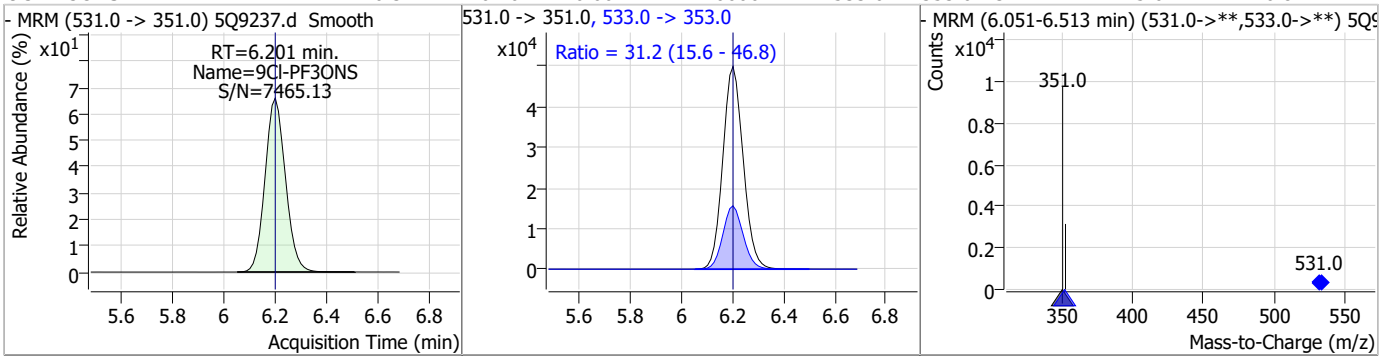
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.17	6.04	0.00	380727				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	20.04	6.04	0.00	342043	463.0 -> 219.0	22.5	11.2	33.7

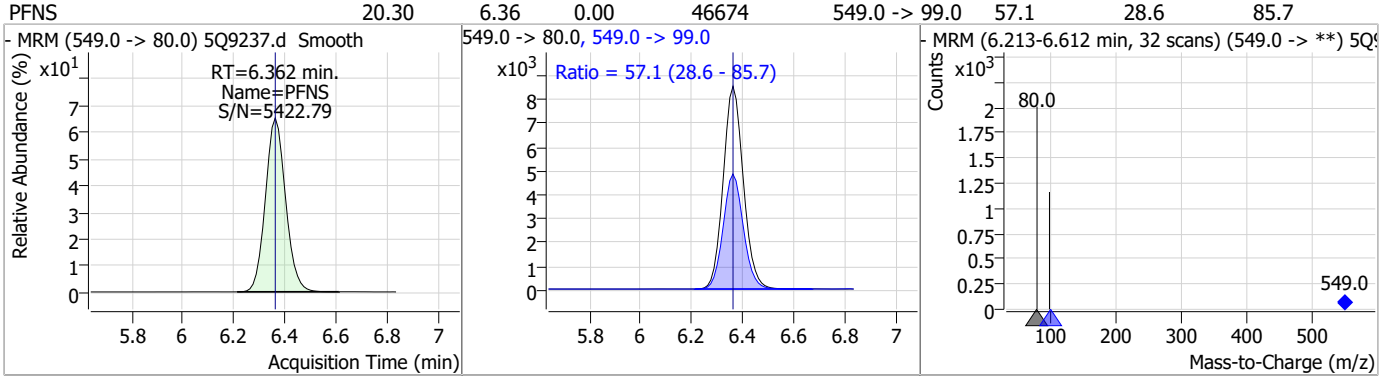


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	20.37	6.20	0.00	276606	533.0 -> 353.0	31.2	15.6	46.8

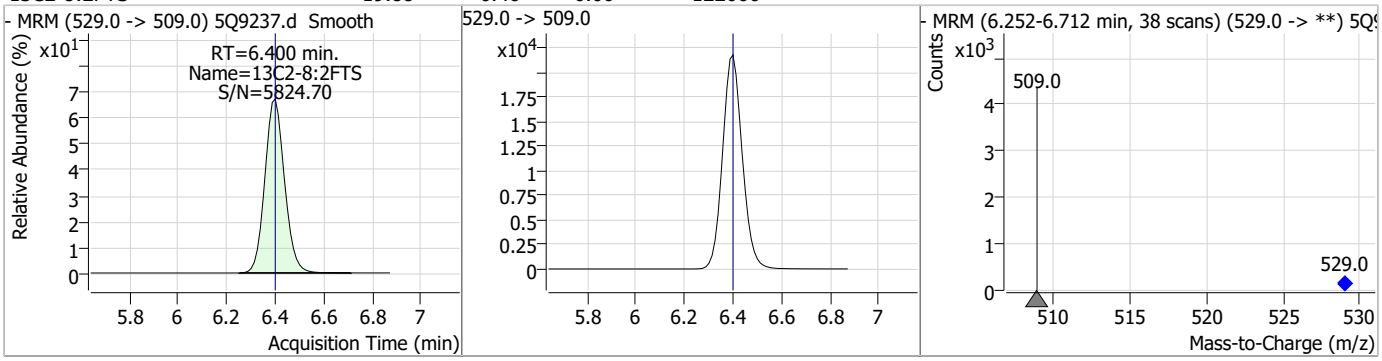


Perfluorinated Compounds by LC/MS/MS

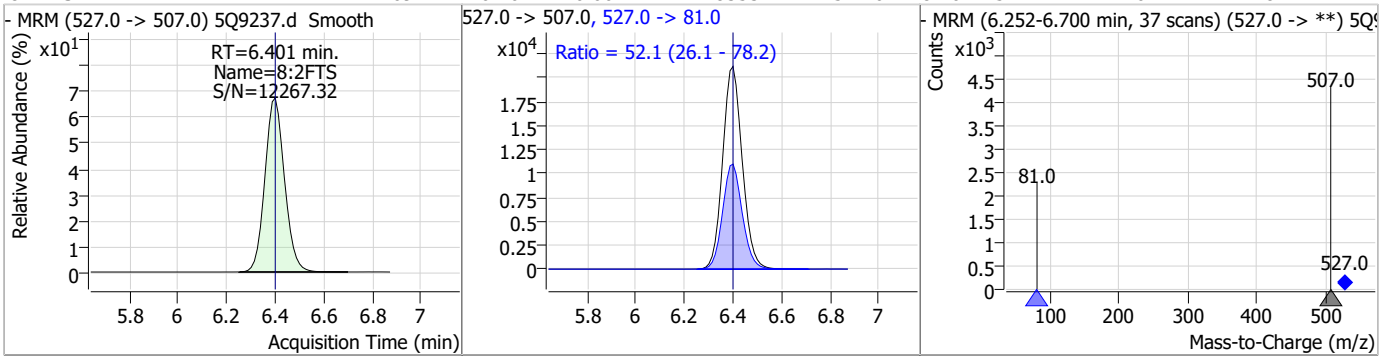
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	20.30	6.36	0.00	46674	549.0 -> 99.0	57.1	28.6	85.7



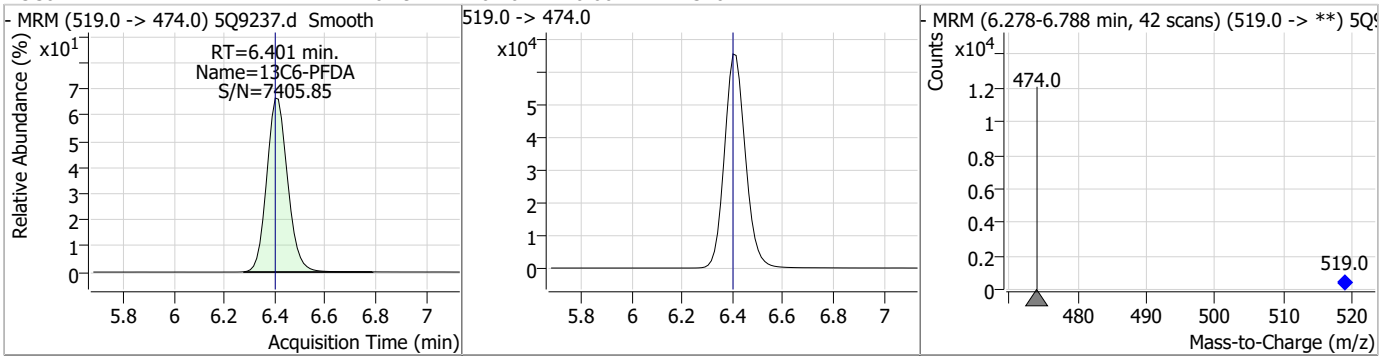
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.88	6.40	0.00	122060				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	22.69	6.40	0.00	118353	527.0 -> 81.0	52.1	26.1	78.2

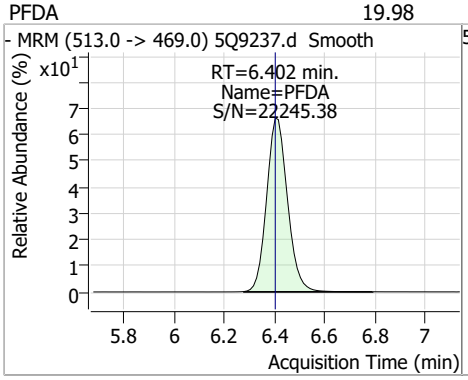


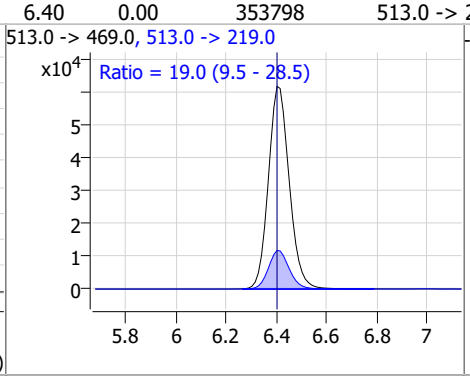
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.29	6.40	0.00	376224				

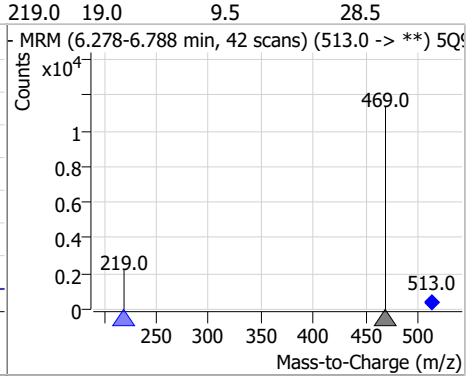


Perfluorinated Compounds by LC/MS/MS

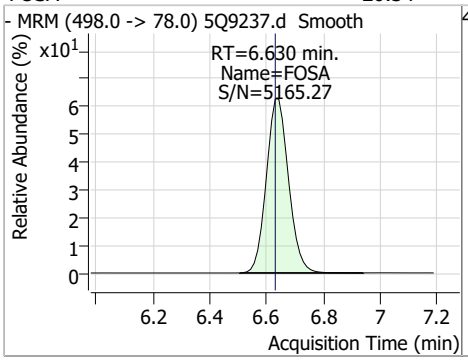
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.98	6.40	0.00	353798	513.0 -> 219.0	19.0	9.5	28.5

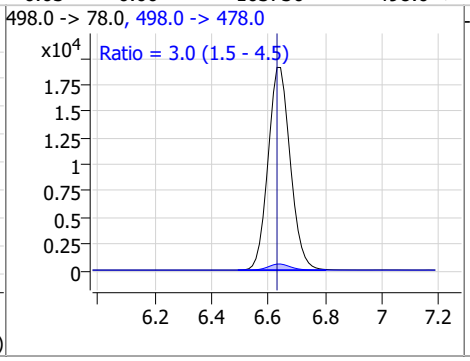


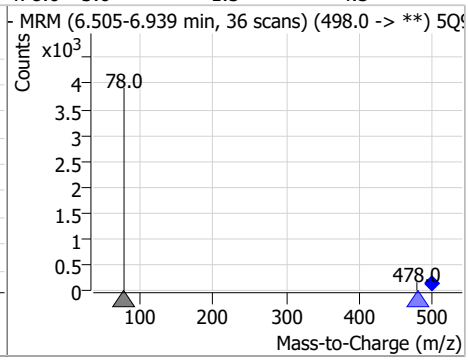




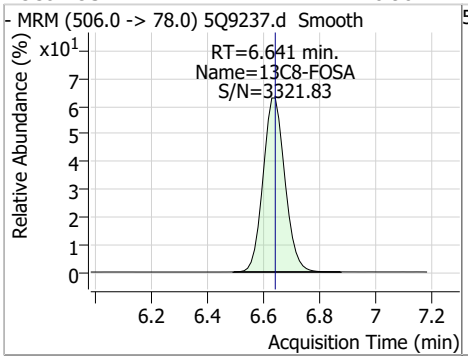
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	20.34	6.63	0.00	103730	498.0 -> 478.0	3.0	1.5	4.5

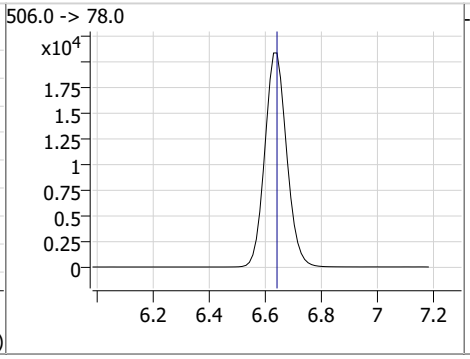


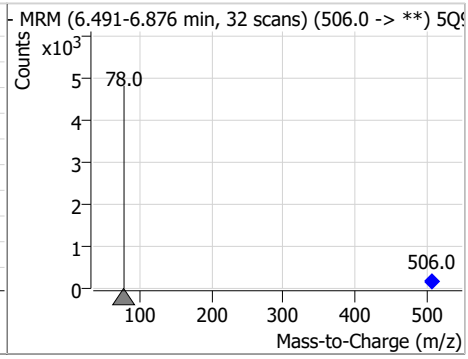




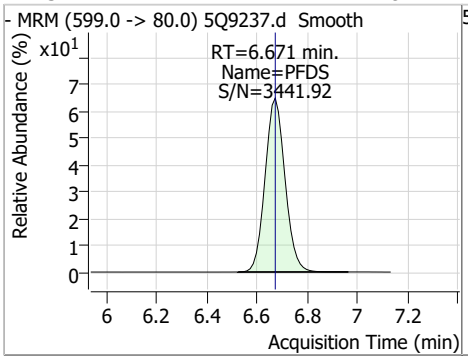
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	18.98	6.64	0.00	113781				

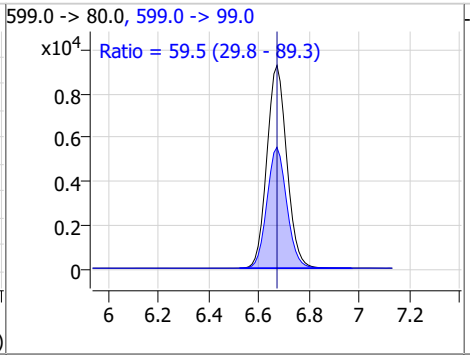


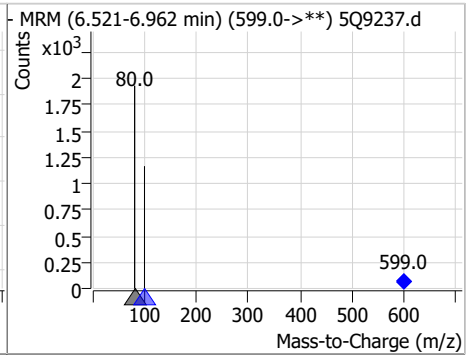




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	22.94	6.67	0.00	50763	599.0 -> 99.0	59.5	29.8	89.3

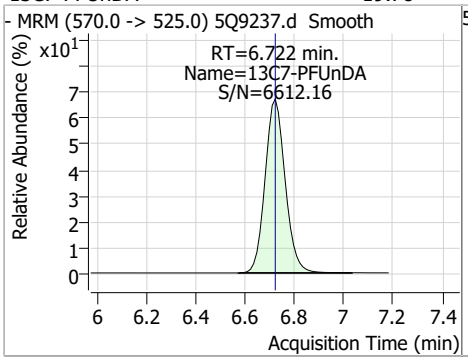


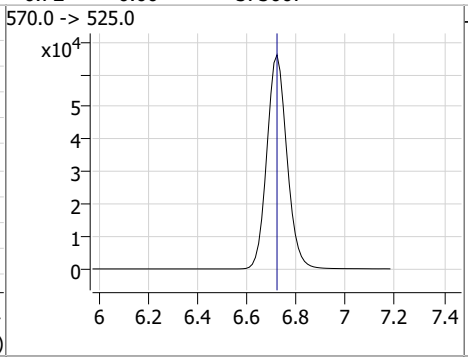


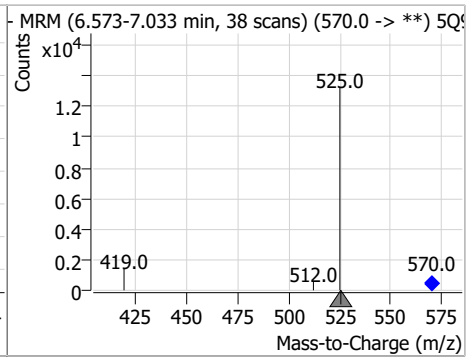


Perfluorinated Compounds by LC/MS/MS

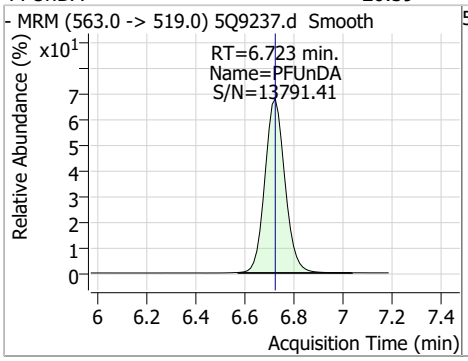
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.78	6.72	0.00	373067				

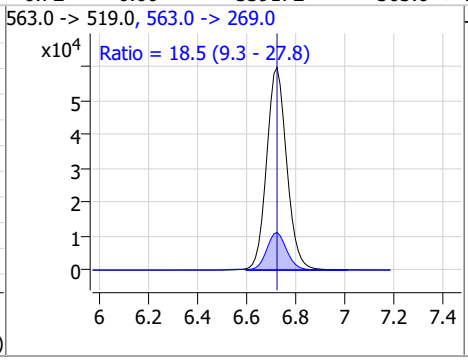


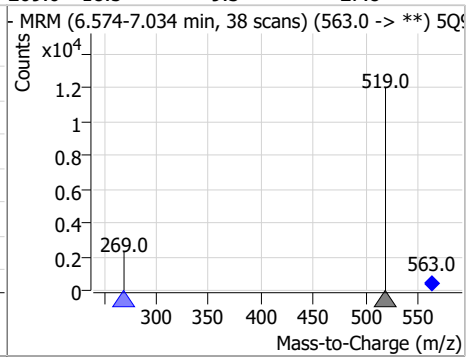




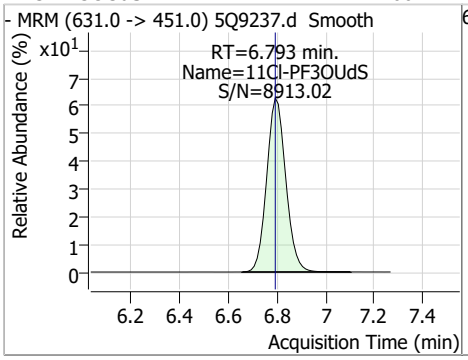
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	20.59	6.72	0.00	339172	563.0 -> 269.0	18.5	9.3	27.8

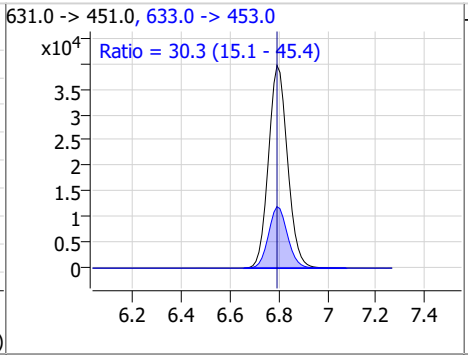


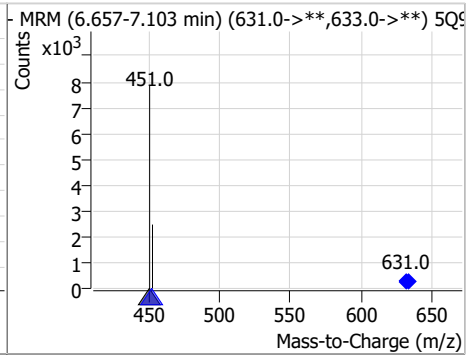




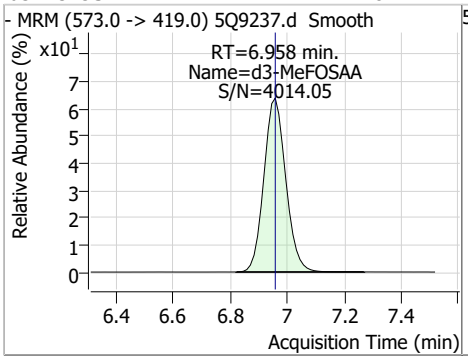
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	21.00	6.79	0.00	214592	633.0 -> 453.0	30.3	15.1	45.4

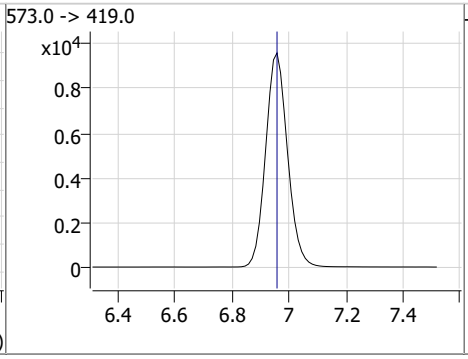


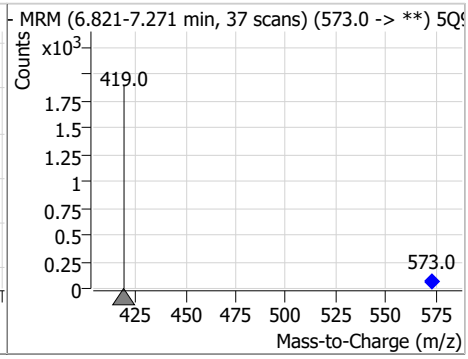




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	18.12	6.96	0.00	50796				





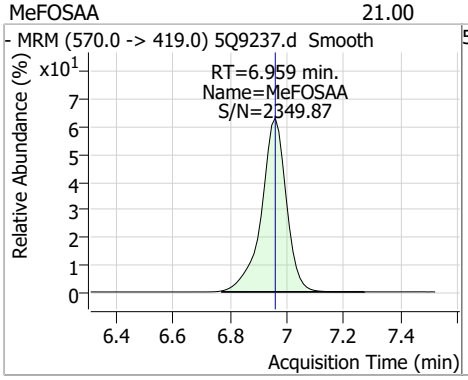


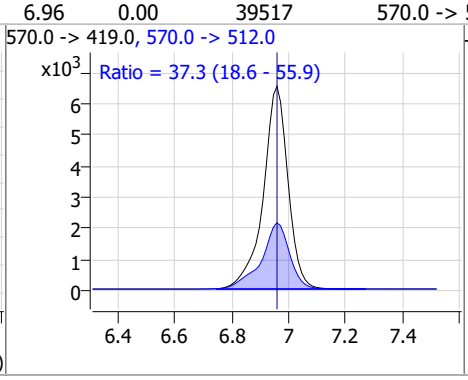
7.6.28

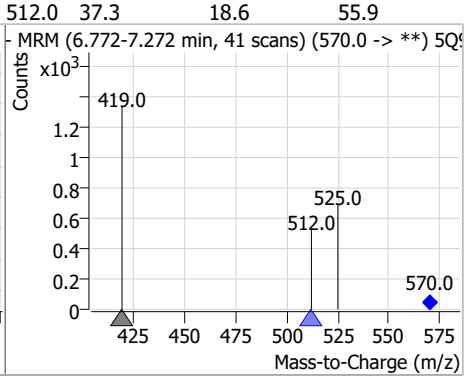
7

Perfluorinated Compounds by LC/MS/MS

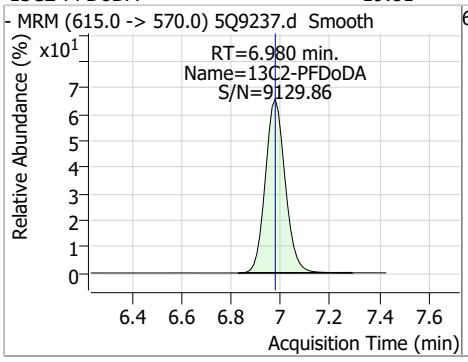
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	21.00	6.96	0.00	39517	570.0 -> 512.0	37.3	18.6	55.9

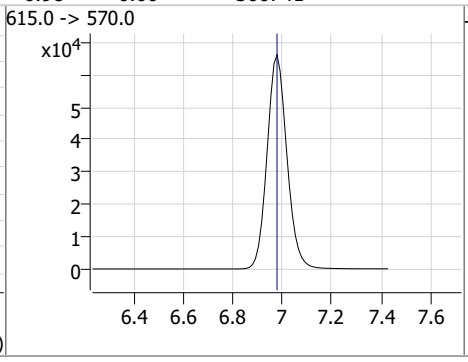


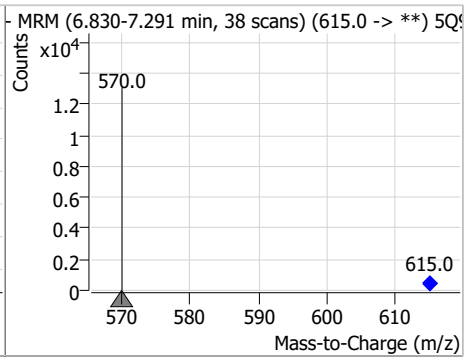




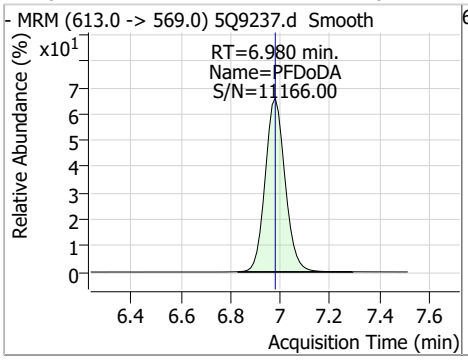
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	19.81	6.98	0.00	366741				

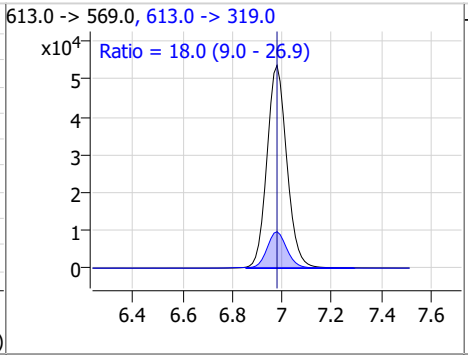


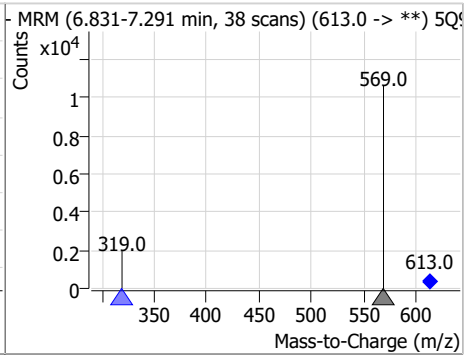




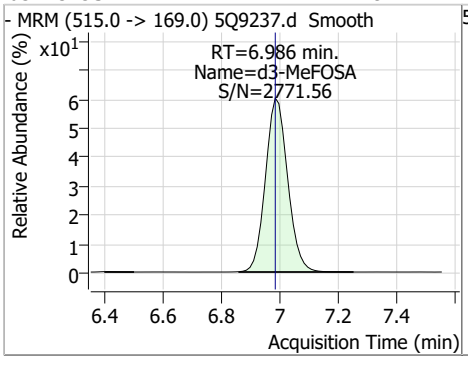
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	20.14	6.98	0.00	298488	613.0 -> 319.0	18.0	9.0	26.9

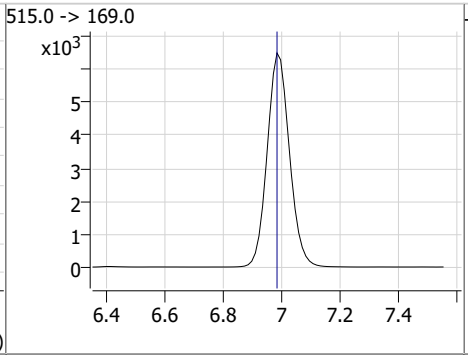


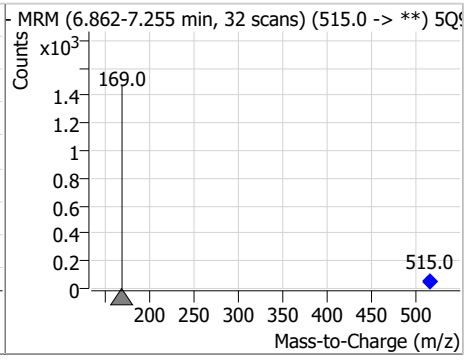




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	19.71	6.99	0.00	33979				

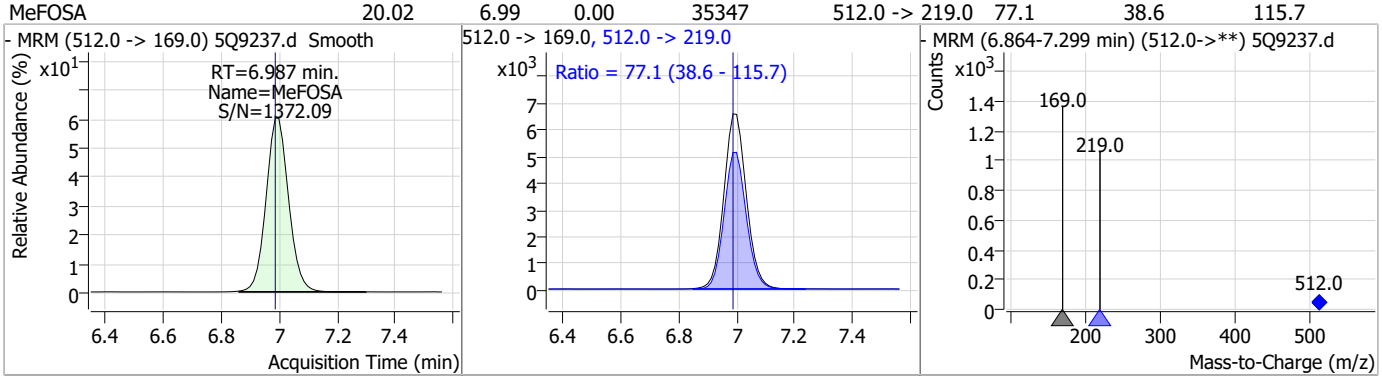




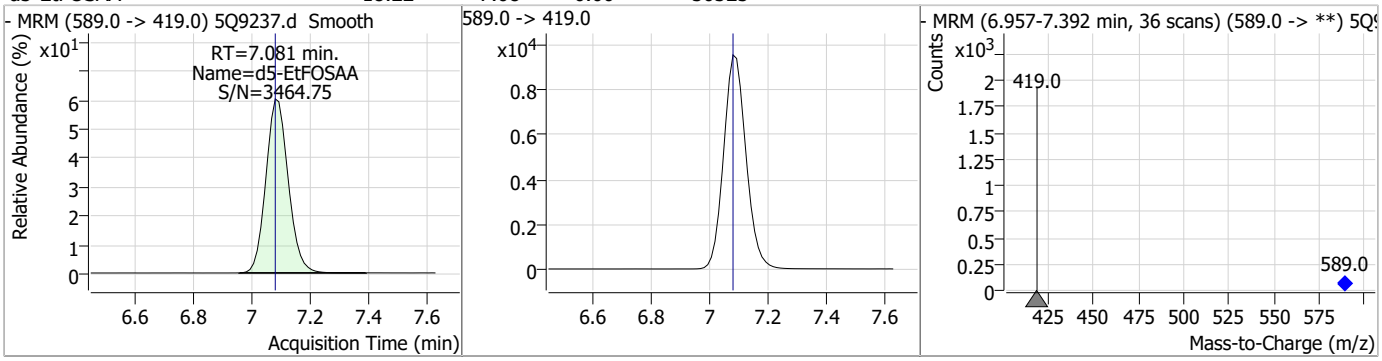


Perfluorinated Compounds by LC/MS/MS

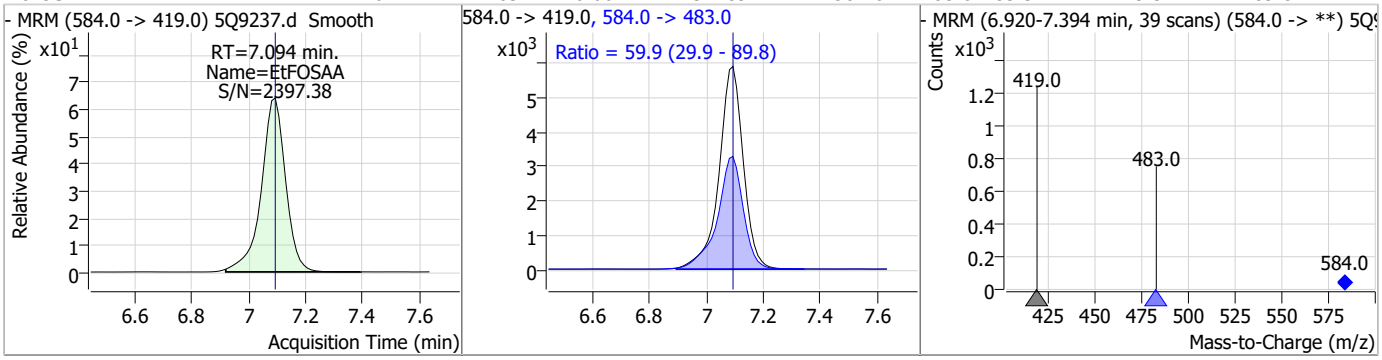
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	20.02	6.99	0.00	35347	512.0 -> 219.0	77.1	38.6	115.7



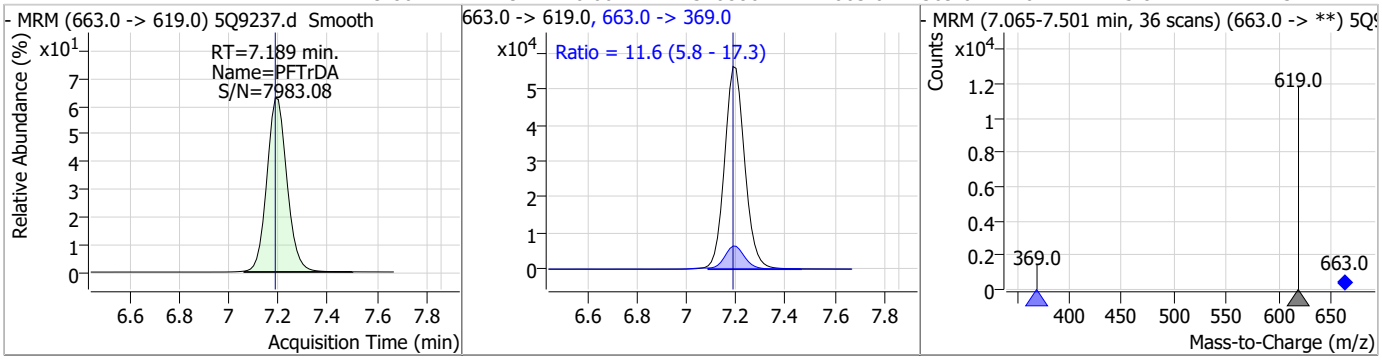
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.22	7.08	0.00	50525				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	20.47	7.09	0.00	34489	584.0 -> 483.0	59.9	29.9	89.8

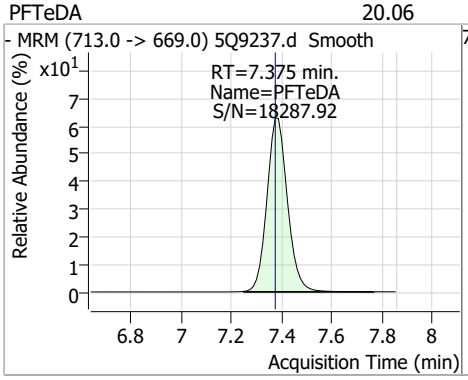


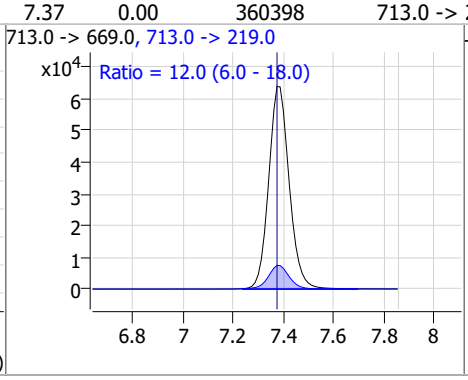
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	19.80	7.19	0.00	316886	663.0 -> 369.0	11.6	5.8	17.3

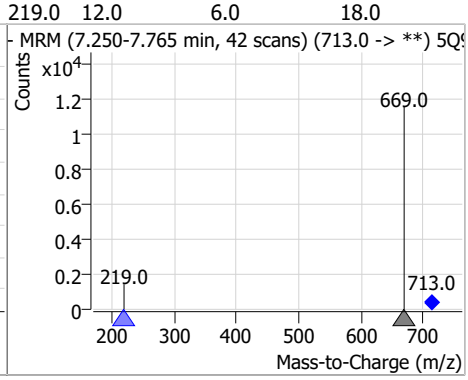


Perfluorinated Compounds by LC/MS/MS

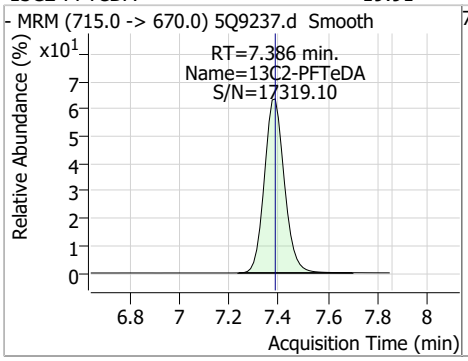
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	20.06	7.37	0.00	360398	713.0 -> 219.0	12.0	6.0	18.0

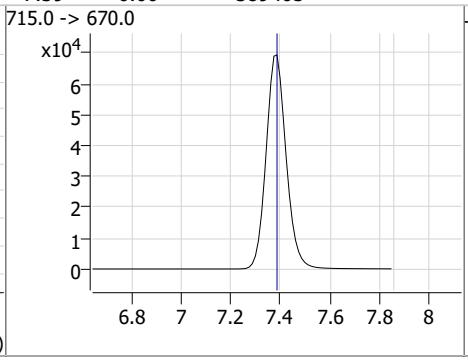


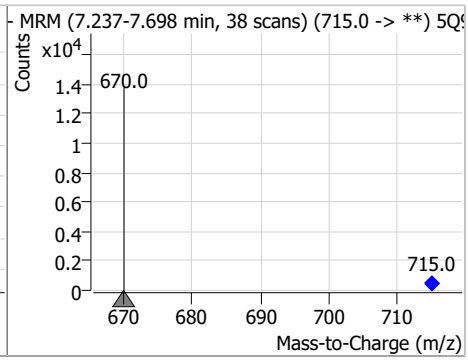




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.91	7.39	0.00	389405				







Manual Integration Approval Summary

Sample Number:	S5Q137-ICC137	**Method:**	EPA 537M QSM5.3 B-15
Lab FileID:	5Q9237.D	**Analyst approved:**	01/04/23 11:33 Lindsay Ritner
Injection Time:	01/03/23 16:31	**Supervisor approved:**	01/04/23 15:00 Natasha Gumtie

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanesulfonic acid	1763-23-1		6.02	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Natasha Gumtie 01/04/23 15:00

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9238.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 1/3/2023 4:47:02 PM
Sample Name : ic137-50
Vial : P1-A8
DA Method File : ID_010323_S5Q137.quantmethod.xml
Batch Name : s5q137.batch.bin
Sample Information : OP94373,S5Q137,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	1.987	217.0 -> 172.0	111646	20.00	µg/L	0.013
M5-PFPeA	3.482	268.0 -> 223.0	205300	20.00	µg/L	0.012
M5-PFHxA	4.455	318.0 -> 273.0	290402	20.00	µg/L	0.000
M4-PFHpA	5.125	367.0 -> 322.0	282525	20.00	µg/L	0.012
M8-PFOA	5.634	421.0 -> 376.0	361646	20.00	µg/L	0.012
M9-PFNA	6.056	472.0 -> 427.0	363893	20.00	µg/L	0.012
M6-PFDA	6.414	519.0 -> 474.0	350756	20.00	µg/L	0.012
M7-PFUnDA	6.722	570.0 -> 525.0	361687	20.00	µg/L	0.000
M2-PFDoDA	6.992	615.0 -> 570.0	346079	20.00	µg/L	0.012
M2-PFTeDA	7.386	715.0 -> 670.0	373938	20.00	µg/L	0.000
M8-FOSA	6.641	506.0 -> 78.0	104774	20.00	µg/L	0.000
M3-PFBS	3.691	302.0 -> 99.0	25273	20.00	µg/L	0.012
M3-PFHxS	5.135	402.0 -> 99.0	30444	20.00	µg/L	0.012
M8-PFOS	6.016	507.0 -> 99.0	37437	20.00	µg/L	0.000
M2-4:2FTS	4.361	329.0 -> 309.0	99320	20.00	µg/L	0.012
M2-6:2FTS	5.594	429.0 -> 409.0	144464	20.00	µg/L	0.000
M2-8:2FTS	6.400	529.0 -> 509.0	122935	20.00	µg/L	0.000
M3-MeFOSAA	6.958	573.0 -> 419.0	46356	20.00	µg/L	0.000
M3-HFPO-DA	4.656	287.0 -> 169.0	64285	20.00	µg/L	0.012
M3-MeFOSA	6.986	515.0 -> 169.0	30686	20.00	µg/L	0.000
M5-EtFOSAA	7.093	589.0 -> 419.0	46098	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.361	329.0 -> 309.0	99320	21.00	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 105.0%		
13C2-6:2FTS	5.594	429.0 -> 409.0	144464	20.29	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.4%		
13C2-8:2FTS	6.400	529.0 -> 509.0	122935	20.02	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.1%		
13C2-PFDoDA	6.992	615.0 -> 570.0	346079	18.70	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.5%		
13C2-PFTeDA	7.386	715.0 -> 670.0	373938	19.12	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.6%		
13C3-PFBS	3.691	302.0 -> 99.0	25273	19.71	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.6%		
13C3-PFHxS	5.135	402.0 -> 99.0	30444	19.17	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.8%		
13C4-PFBA	1.987	217.0 -> 172.0	111646	19.47	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.4%		
13C4-PFHpA	5.125	367.0 -> 322.0	282525	19.23	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.1%		
13C5-PFHxA	4.455	318.0 -> 273.0	290402	19.77	µg/L	0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.9%		
13C5-PFPeA	3.482	268.0 -> 223.0	205300	19.76	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.8%		
13C6-PFDA	6.414	519.0 -> 474.0	350756	18.92	µg/L	0.012

Perfluorinated Compounds by LC/MS/MS

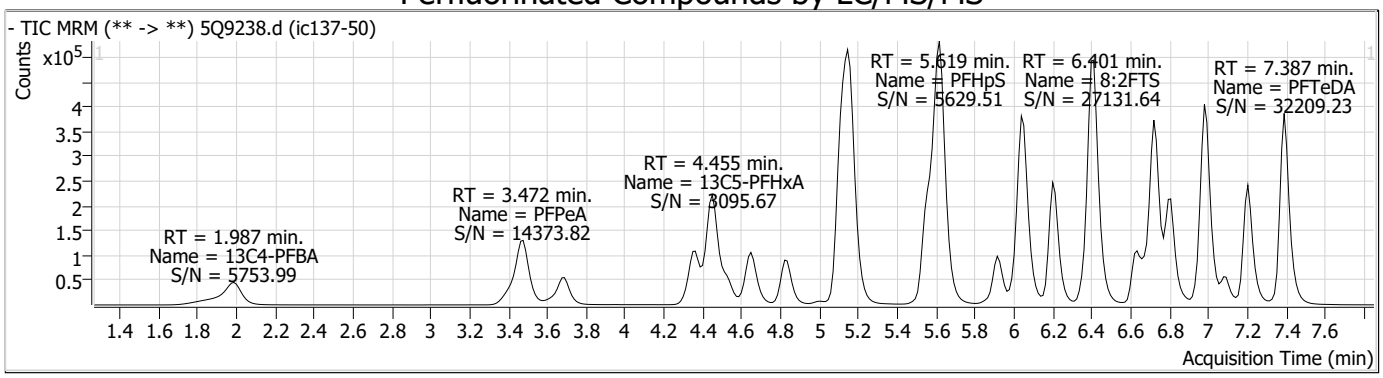
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.6%		
13C7-PFUnDA	6.722	570.0 -> 525.0	361687	19.17 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.9%		
13C8-FOSA	6.641	506.0 -> 78.0	104774	17.48 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.4%		
13C8-PFOA	5.634	421.0 -> 376.0	361646	19.20 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.0%		
13C8-PFOS	6.016	507.0 -> 99.0	37437	19.64 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.2%		
13C9-PFNA	6.056	472.0 -> 427.0	363893	19.27 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.4%		
d3-MeFOSAA	6.958	573.0 -> 419.0	46356	16.54 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 82.7%		
13C3-HFPO-DA	4.656	287.0 -> 169.0	64285	19.17 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.8%		
d3-MeFOSA	6.986	515.0 -> 169.0	30686	17.80 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.0%		
d5-EtFOSAA	7.093	589.0 -> 419.0	46098	16.63 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.1%		
Target Compounds						QValue
4:2FTS	4.351	327.0 -> 307.0	236961	52.40 µg/L		99
		327.0 -> 81.0	141183			
6:2FTS	5.595	427.0 -> 407.0	327698	52.24 µg/L		100
		427.0 -> 81.0	146001			
8:2FTS	6.401	527.0 -> 507.0	282773	53.83 µg/L		100
		527.0 -> 81.0	146453			
EtFOSAA	7.094	584.0 -> 419.0	79443	51.69 µg/L		99
		584.0 -> 483.0	46744			
FOSA	6.642	498.0 -> 78.0	234897	50.02 µg/L		100
		498.0 -> 478.0	7072			
MeFOSAA	6.959	570.0 -> 419.0	88380	51.46 µg/L		97
		570.0 -> 512.0	34391			
PFBA	1.981	213.0 -> 169.0	266625	50.97 µg/L		100
PFBS	3.682	299.0 -> 80.0	182739	50.39 µg/L		99
		299.0 -> 99.0	78914			
PFDA	6.414	513.0 -> 469.0	839023	50.83 µg/L		99
		513.0 -> 219.0	162217			
PFDoDA	6.980	613.0 -> 569.0	711446	50.86 µg/L		99
		613.0 -> 319.0	126438			
PFDS	6.671	599.0 -> 80.0	123961	57.77 µg/L		99
		599.0 -> 99.0	73013			
PFHpA	5.126	363.0 -> 319.0	776932	50.55 µg/L		99
		363.0 -> 169.0	174900			
PFHpS	5.619	449.0 -> 80.0	137303	50.60 µg/L		98
		449.0 -> 99.0	73415			
PFHxA	4.455	313.0 -> 269.0	653903	50.54 µg/L		100
		313.0 -> 119.0	29716			
PFHxS	5.136	399.0 -> 80.0	140711	50.64 µg/L		99
		399.0 -> 99.0	79766			
PFNA	6.056	463.0 -> 419.0	826315	50.65 µg/L		100
		463.0 -> 219.0	187516			
PFNS	6.375	549.0 -> 80.0	112210	50.36 µg/L		99
		549.0 -> 99.0	64681			
PFOA	5.634	413.0 -> 369.0	900439	50.28 µg/L		100
		413.0 -> 169.0	249358			
PFOS	6.017	499.0 -> 80.0	161529	49.85 µg/L	m	97

Perfluorinated Compounds by LC/MS/MS

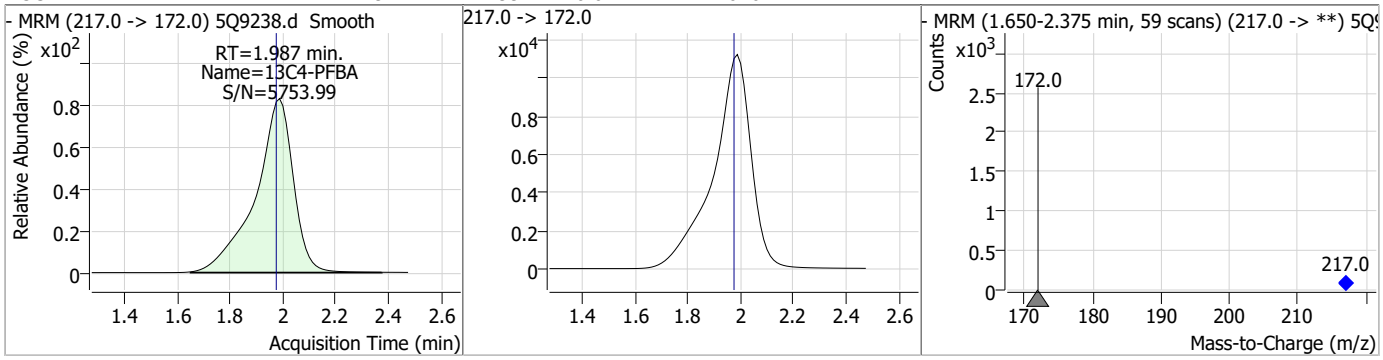
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	74923			
PFPeA	3.472	263.0 -> 219.0	534137	50.36	µg/L	100
PFPeS	4.526	349.0 -> 80.0	110145	49.98	µg/L	99
		349.0 -> 99.0	56075			
PFTeDA	7.387	713.0 -> 669.0	876575	50.80	µg/L	100
		713.0 -> 219.0	104600			
PFTrDA	7.202	663.0 -> 619.0	764060	50.58	µg/L	99
		663.0 -> 369.0	90271			
PFUnDA	6.723	563.0 -> 519.0	813203	50.92	µg/L	99
		563.0 -> 269.0	148229			
11Cl-PF3OUdS	6.805	631.0 -> 451.0	522086	49.62	µg/L	99
		633.0 -> 453.0	160510			
9Cl-PF3ONS	6.201	531.0 -> 351.0	671670	51.88	µg/L	99
		533.0 -> 353.0	212742			
ADONA	5.163	377.0 -> 251.0	1067150	51.20	µg/L	100
		377.0 -> 85.0	399884			
HFPO-DA	4.652	329.0 -> 169.0	241002	51.80	µg/L	100
		285.0 -> 169.0	142435			
MeFOSA	7.000	512.0 -> 169.0	81588	51.18	µg/L	99
		512.0 -> 219.0	61986			
4-PFECHS	5.555	461.0 -> 381.0	447933	50.25	µg/L	100
		461.0 -> 99.0	248647			
FBSA	4.842	298.0 -> 78.0	330168	52.07	µg/L	100
		298.0 -> 64.0	30280			
FHxSA	5.923	398.0 -> 78.0	290538	51.18	µg/L	100
		398.0 -> 64.0	27577			

 # = Qualifier out of range, m = manually integrated, + = Area summed

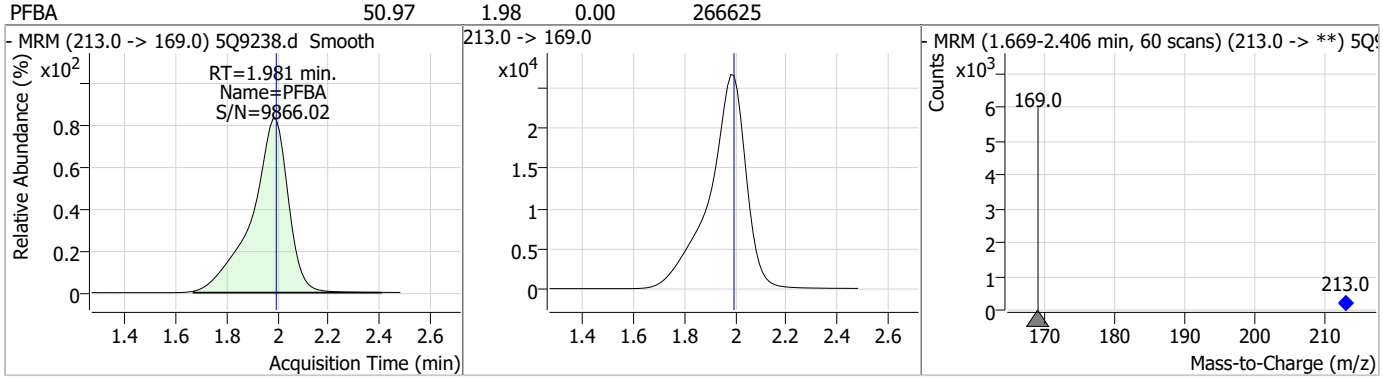
Perfluorinated Compounds by LC/MS/MS



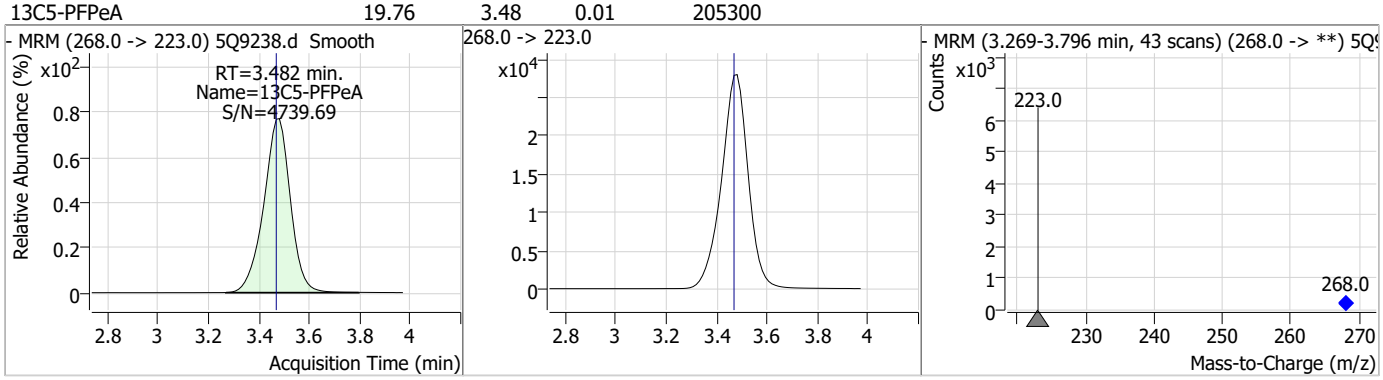
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.47	1.99	0.01	111646				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	50.97	1.98	0.00	266625				

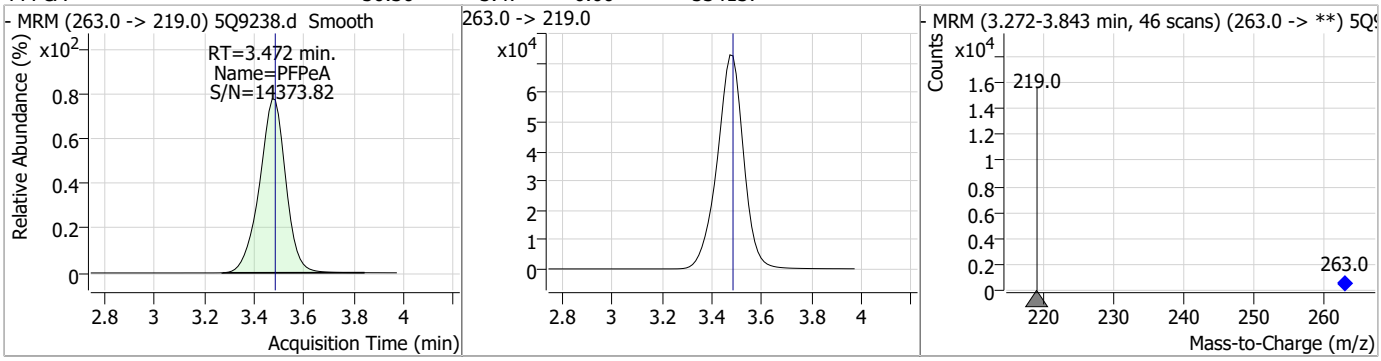


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.76	3.48	0.01	205300				

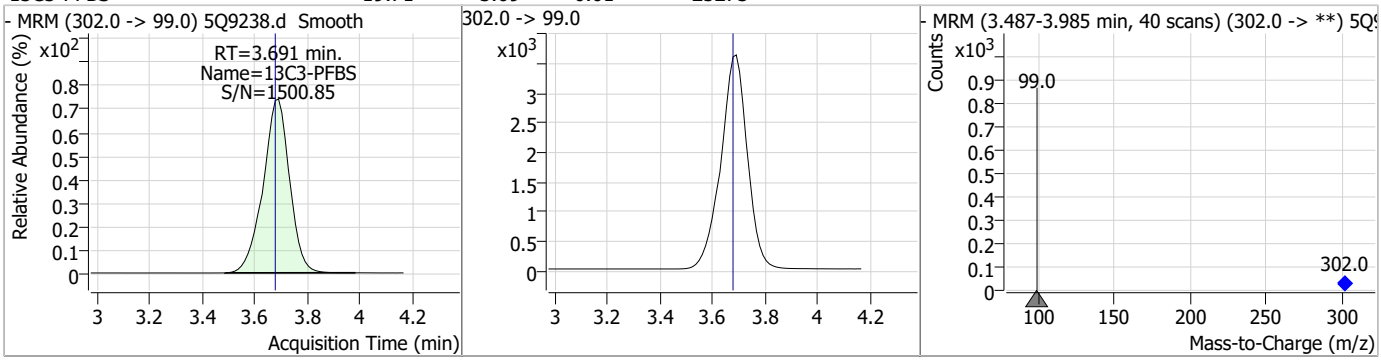


Perfluorinated Compounds by LC/MS/MS

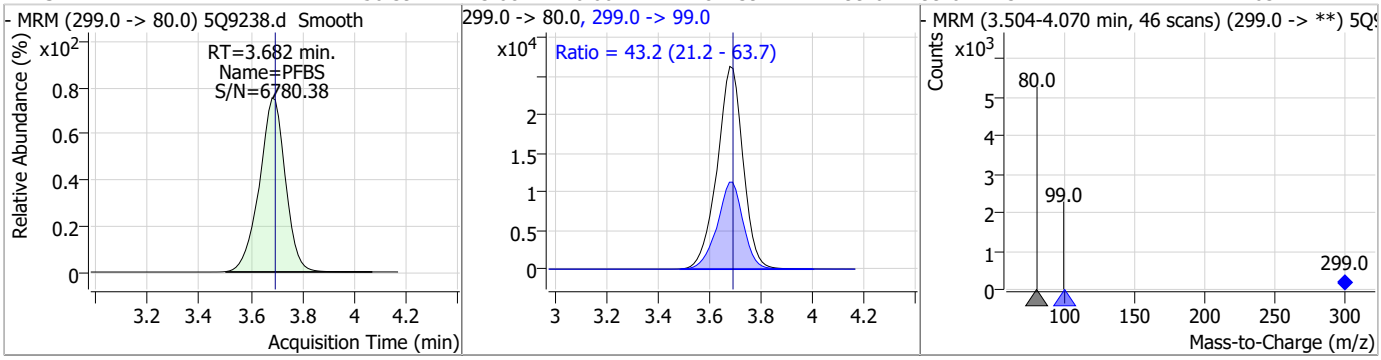
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	50.36	3.47	0.00	534137				



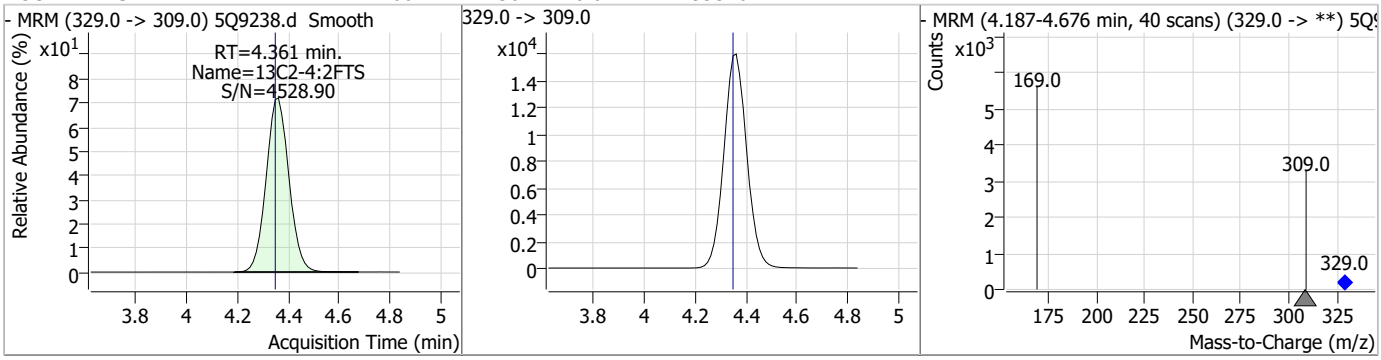
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.71	3.69	0.01	25273				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	50.39	3.68	0.00	182739	299.0 -> 99.0	43.2	21.2	63.7

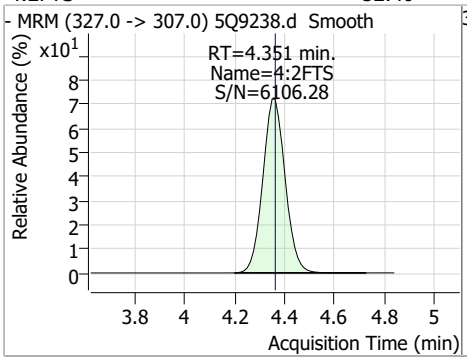


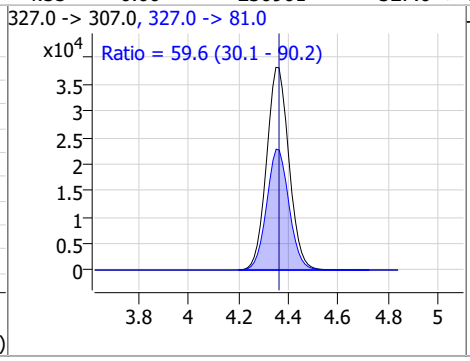
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	21.00	4.36	0.01	99320				

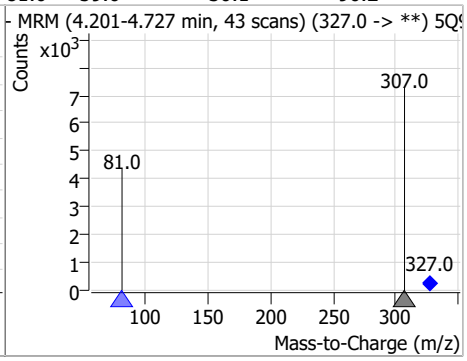


Perfluorinated Compounds by LC/MS/MS

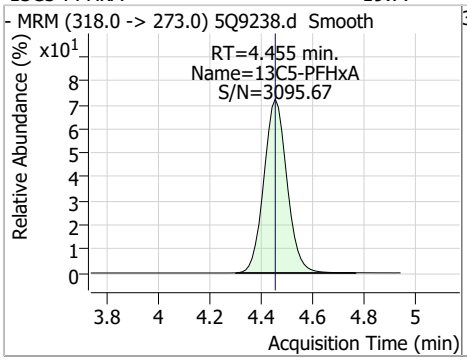
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	52.40	4.35	0.00	236961	327.0 -> 81.0	59.6	30.1	90.2

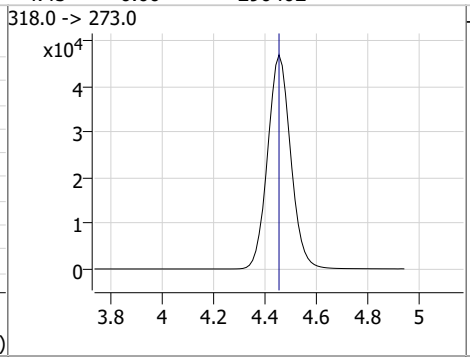


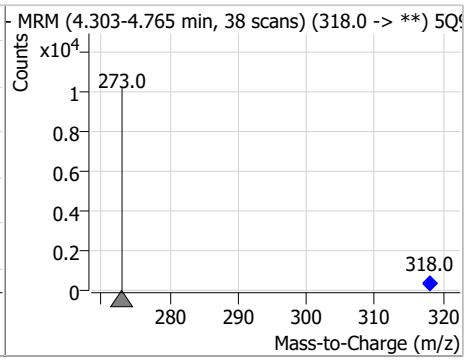




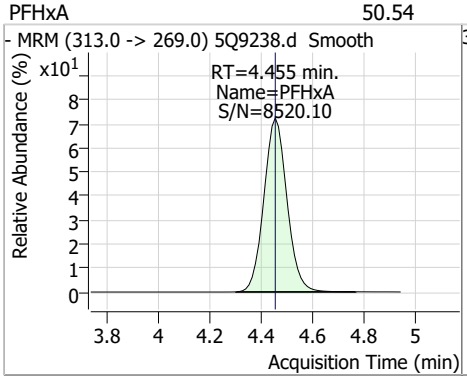
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.77	4.45	0.00	290402				

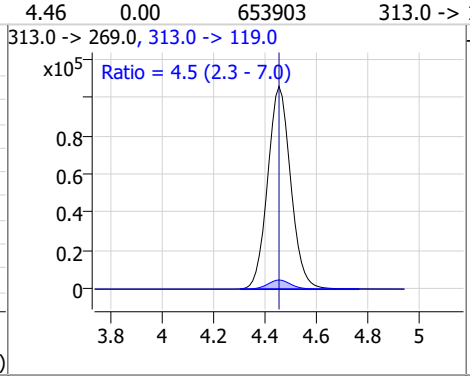


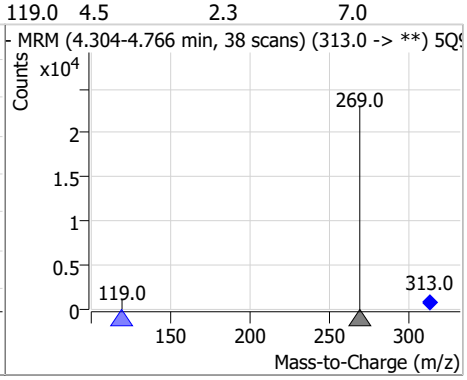




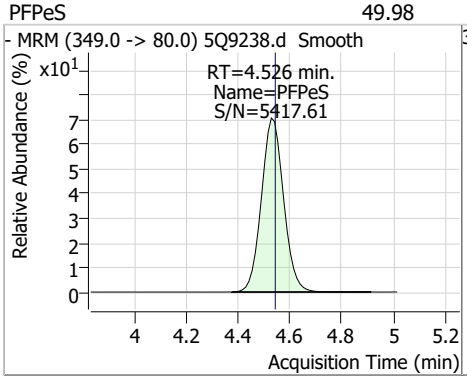
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	50.54	4.46	0.00	653903	313.0 -> 119.0	4.5	2.3	7.0

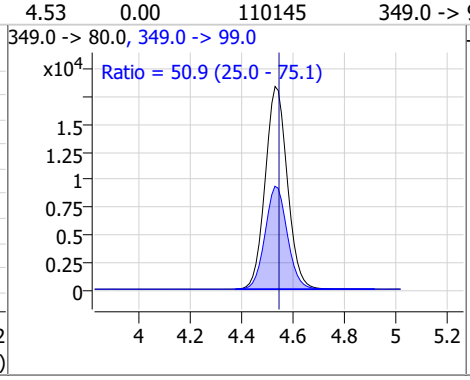


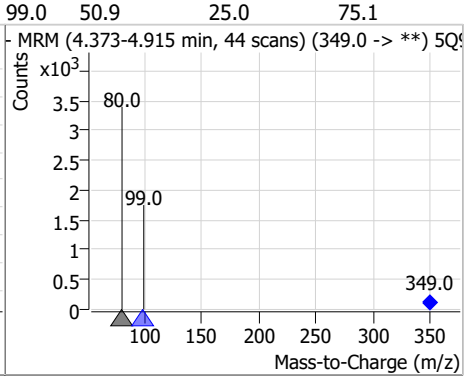




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	49.98	4.53	0.00	110145	349.0 -> 99.0	50.9	25.0	75.1

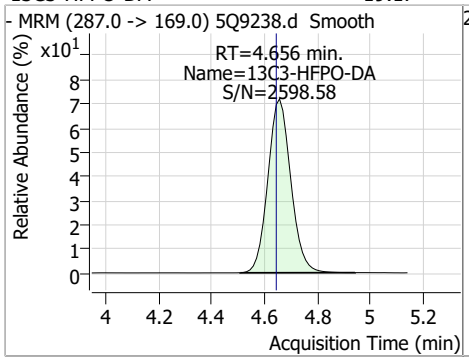


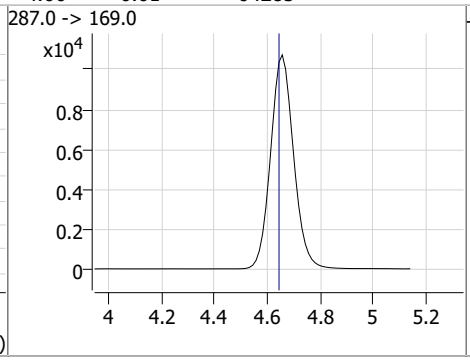


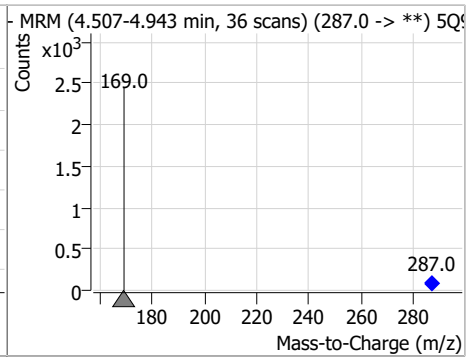


Perfluorinated Compounds by LC/MS/MS

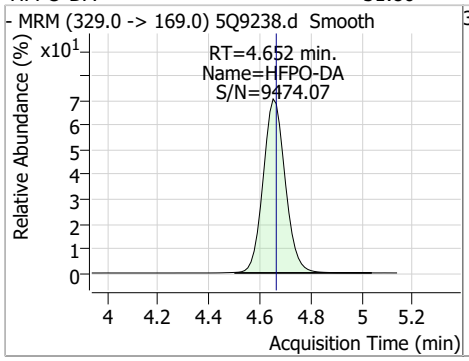
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.17	4.66	0.01	64285				

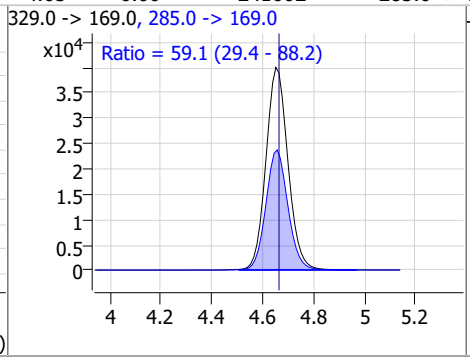


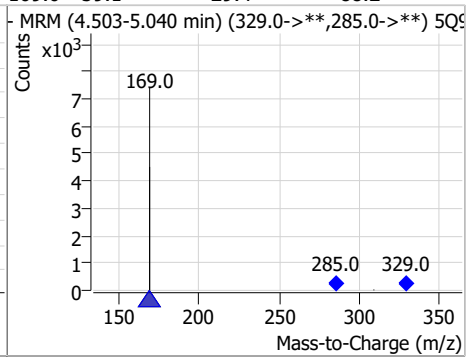




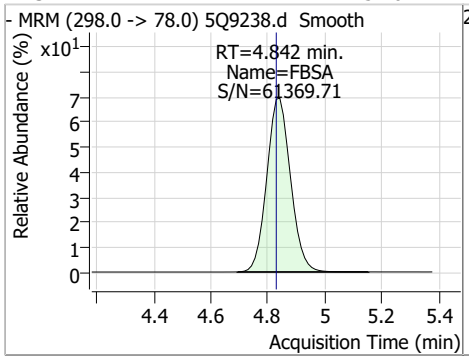
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	51.80	4.65	0.00	241002	285.0 -> 169.0	59.1	29.4	88.2

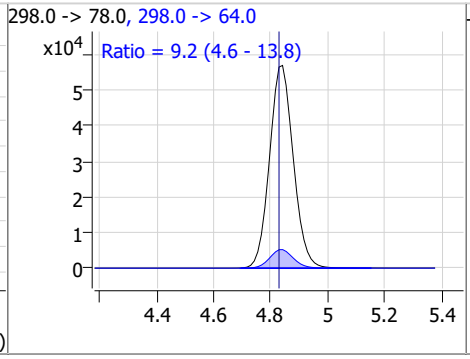


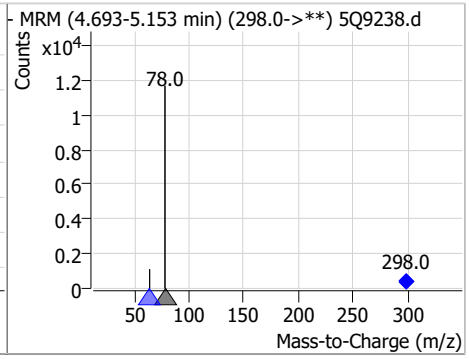




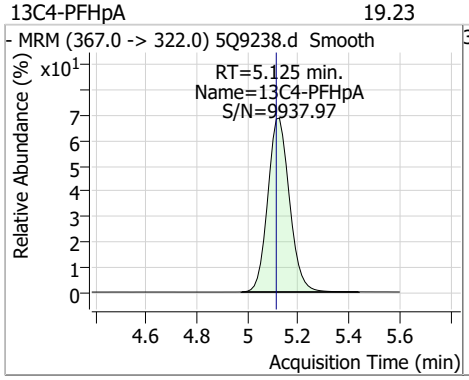
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	52.07	4.84	0.01	330168	298.0 -> 64.0	9.2	4.6	13.8

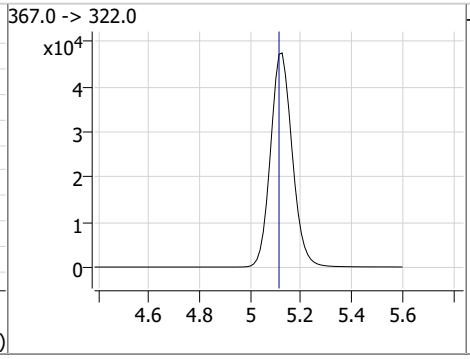


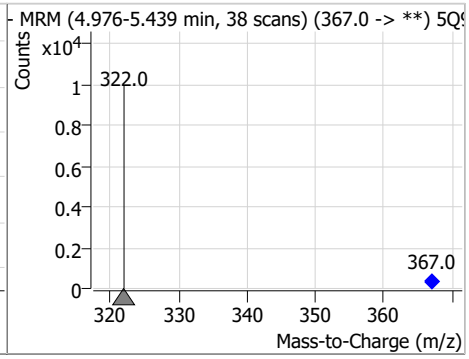




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	19.23	5.13	0.01	282525				

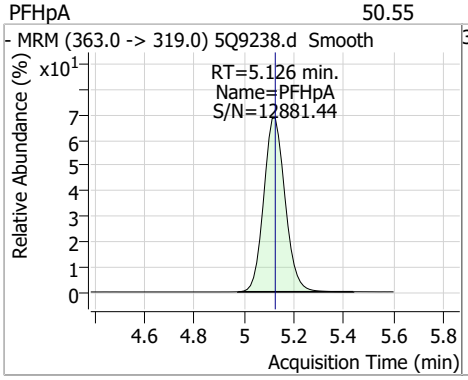


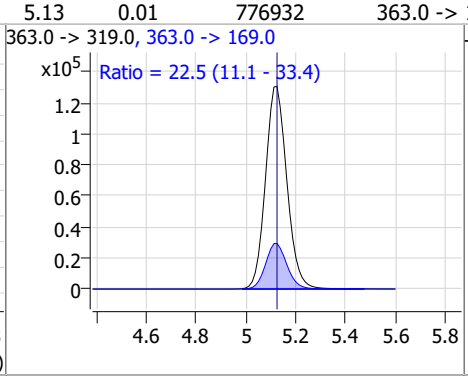


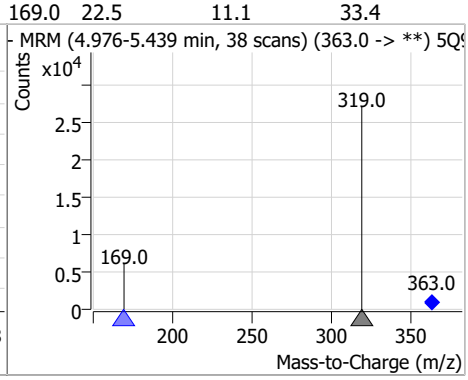


Perfluorinated Compounds by LC/MS/MS

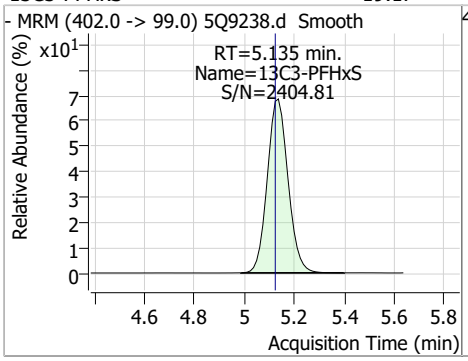
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	50.55	5.13	0.01	776932	363.0 -> 169.0	22.5	11.1	33.4

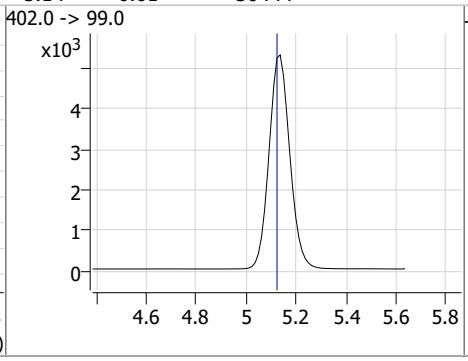


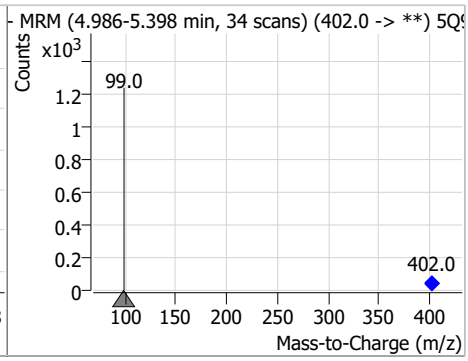




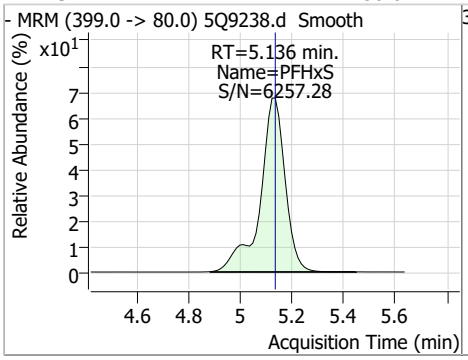
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.17	5.14	0.01	30444				

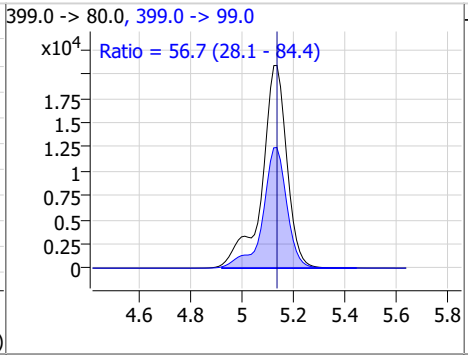


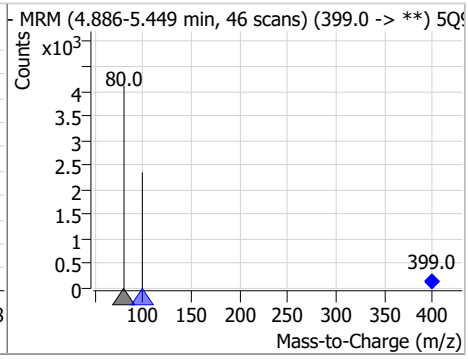




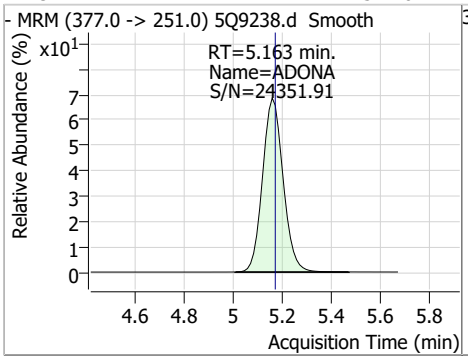
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	50.64	5.14	0.01	140711	399.0 -> 99.0	56.7	28.1	84.4

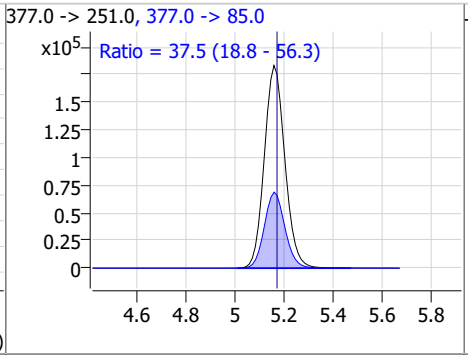


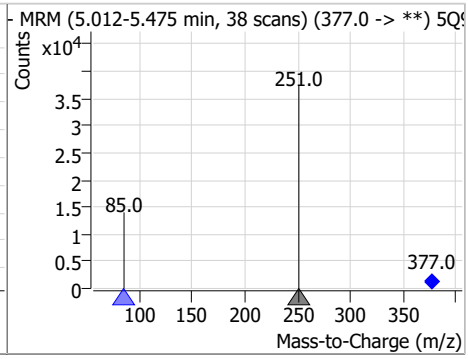




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	51.20	5.16	0.00	1067150	377.0 -> 85.0	37.5	18.8	56.3

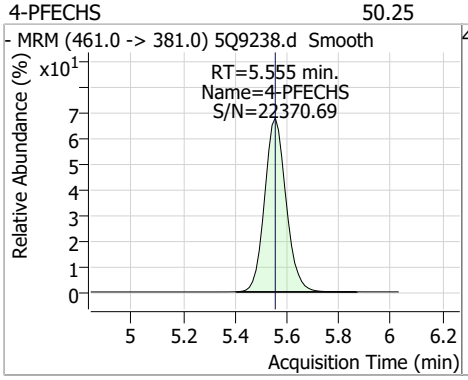


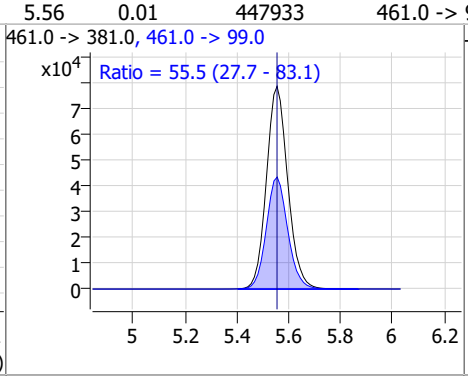


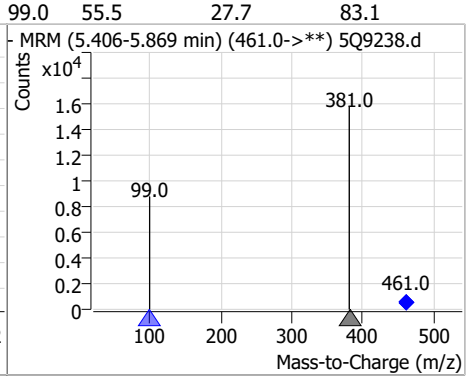


Perfluorinated Compounds by LC/MS/MS

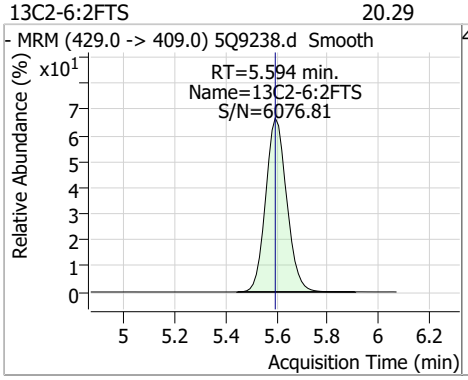
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	50.25	5.56	0.01	447933	461.0 -> 99.0	55.5	27.7	83.1

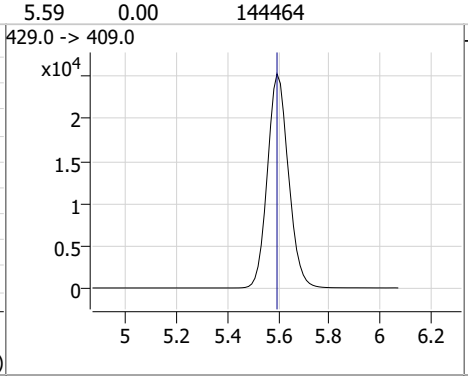


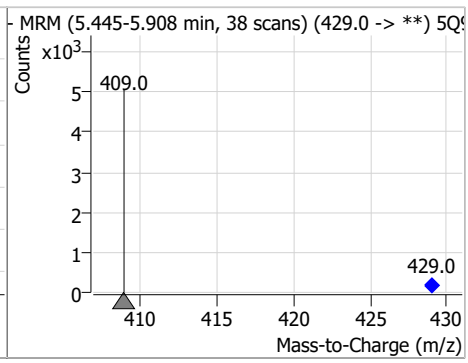




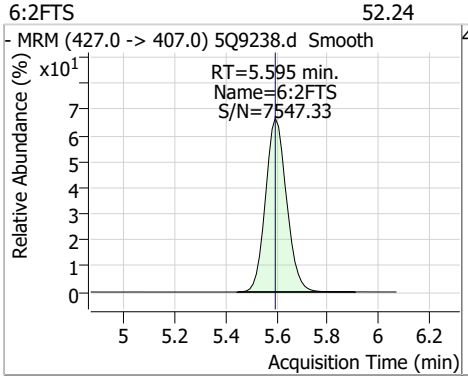
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.29	5.59	0.00	144464				

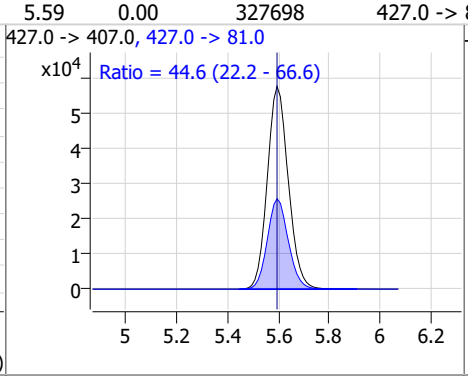


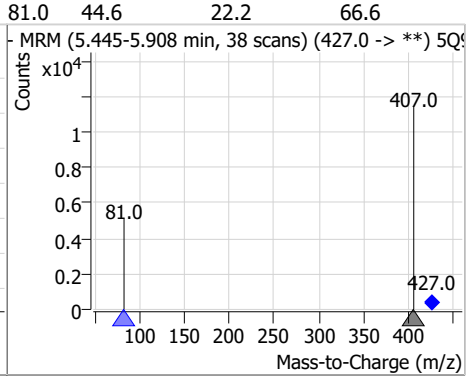




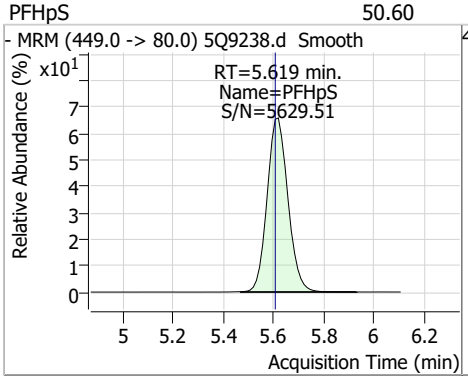
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	52.24	5.59	0.00	327698	427.0 -> 81.0	44.6	22.2	66.6

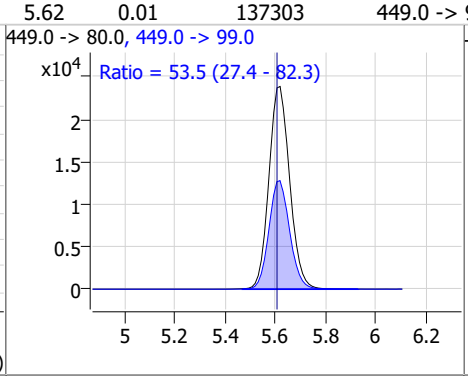


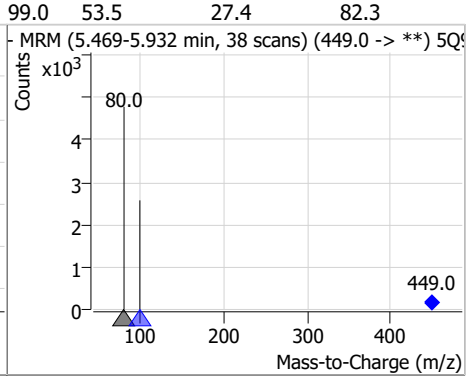




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	50.60	5.62	0.01	137303	449.0 -> 99.0	53.5	27.4	82.3

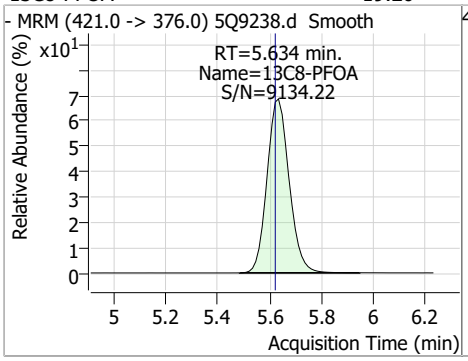


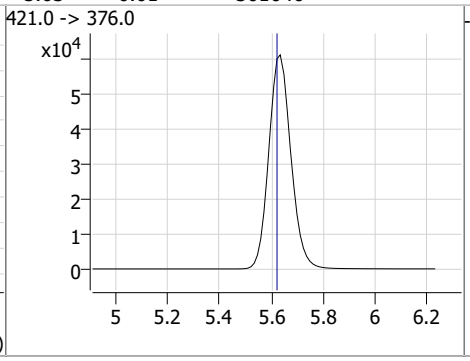


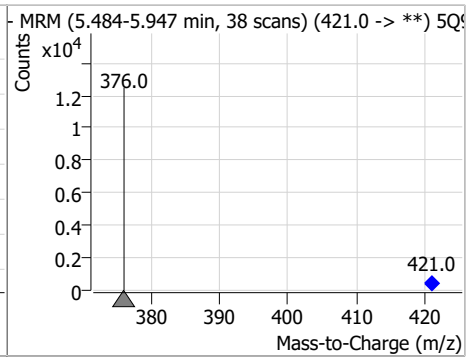


Perfluorinated Compounds by LC/MS/MS

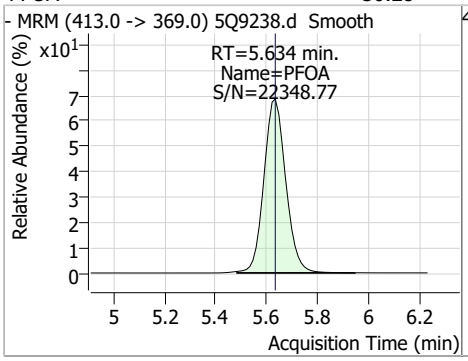
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	19.20	5.63	0.01	361646				

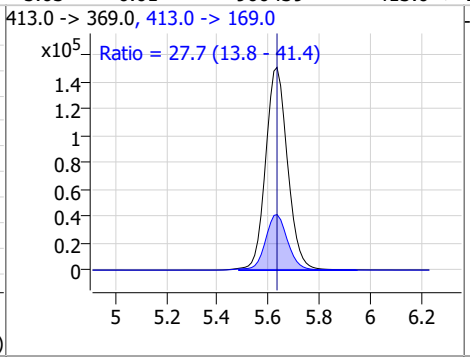


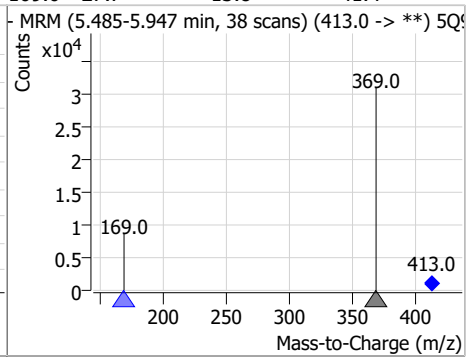




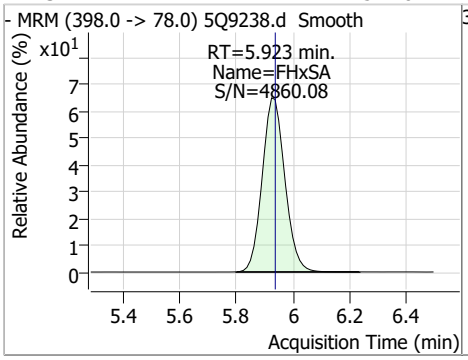
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	50.28	5.63	0.01	900439	413.0 -> 169.0	27.7	13.8	41.4

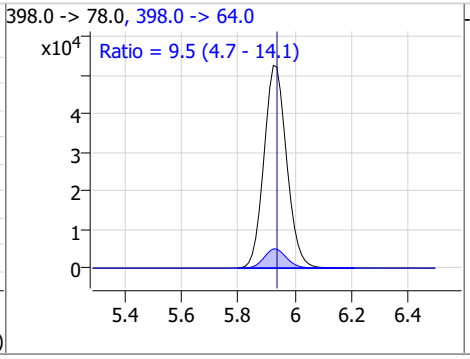


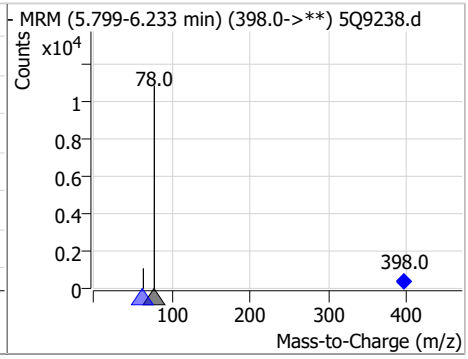




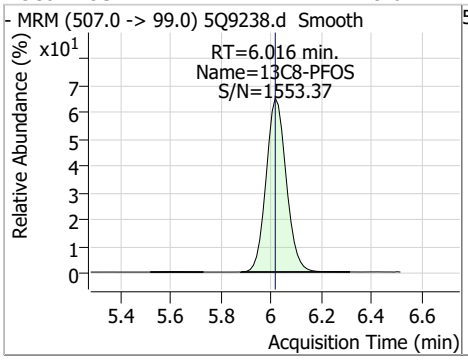
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	51.18	5.92	0.00	290538	398.0 -> 64.0	9.5	4.7	14.1

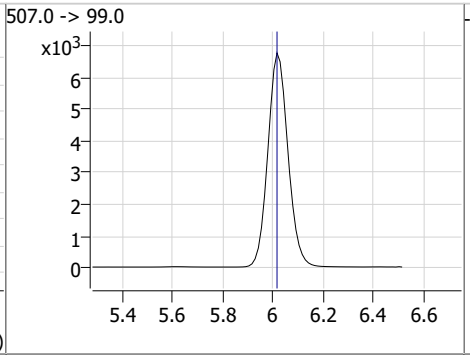


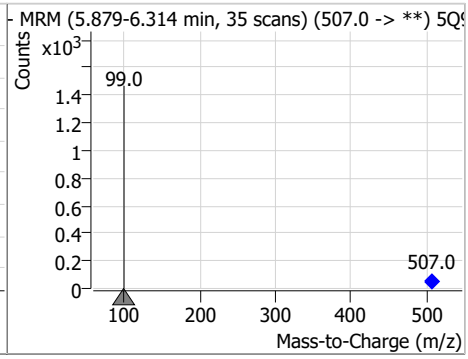




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.64	6.02	0.00	37437				

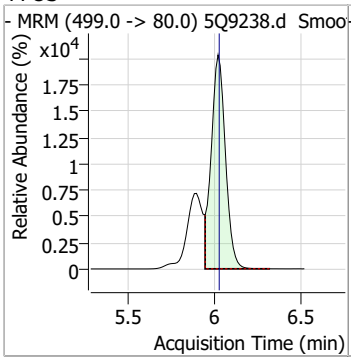


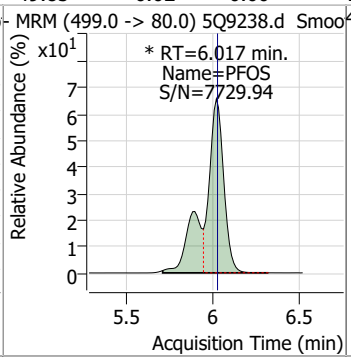


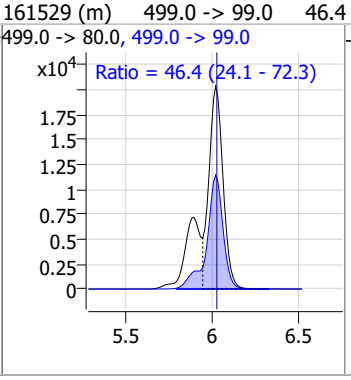


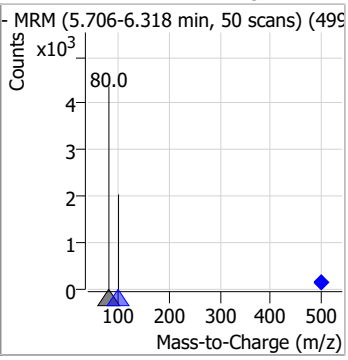
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	49.85	6.02	0.00	161529 (m)	499.0 -> 99.0	46.4	24.1	72.3

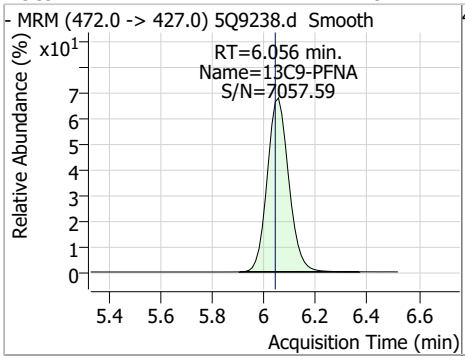


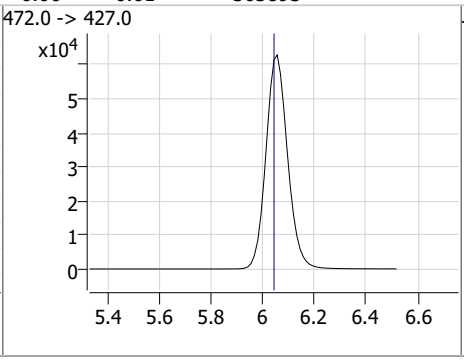


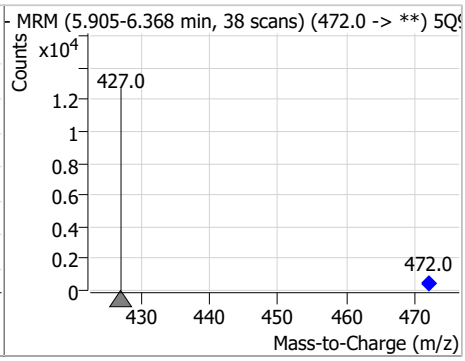




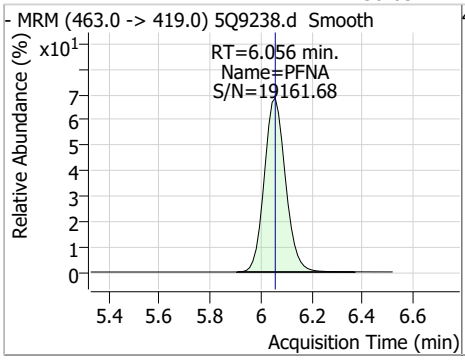
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	19.27	6.06	0.01	363893				

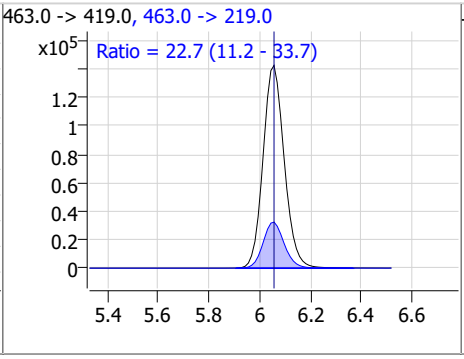


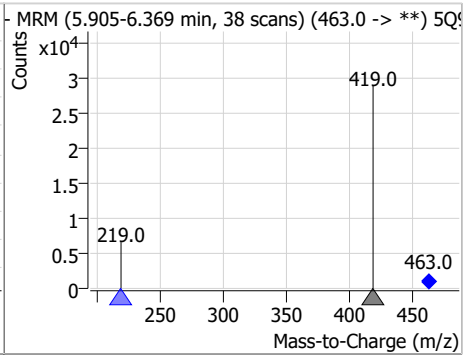




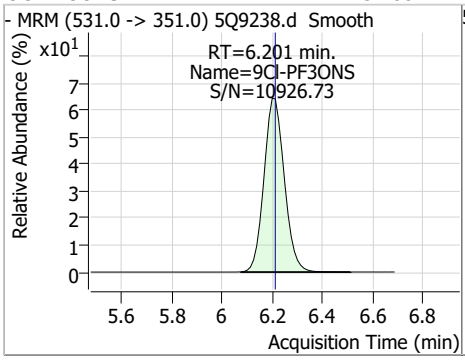
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	50.65	6.06	0.01	826315	463.0 -> 219.0	22.7	11.2	33.7

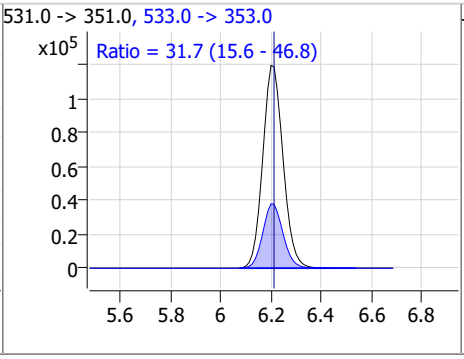


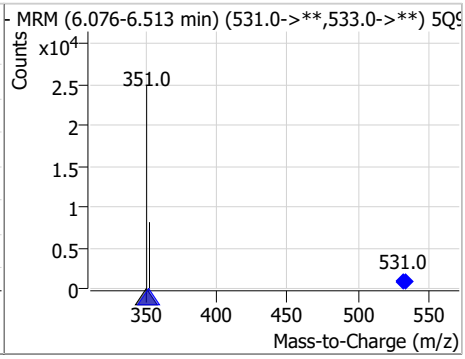




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	51.88	6.20	0.00	671670	533.0 -> 353.0	31.7	15.6	46.8

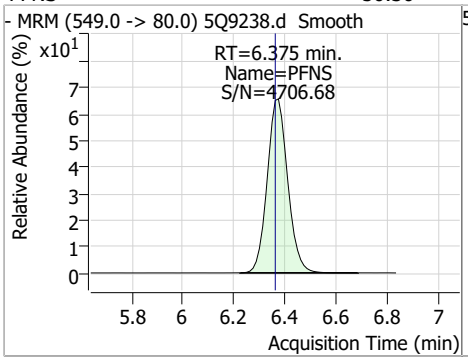


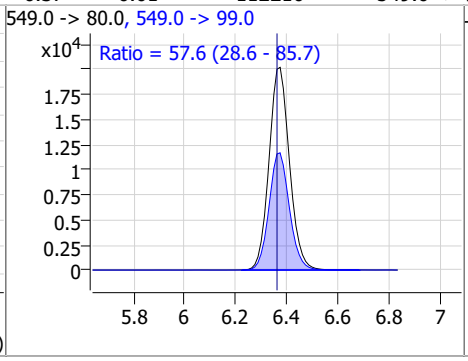


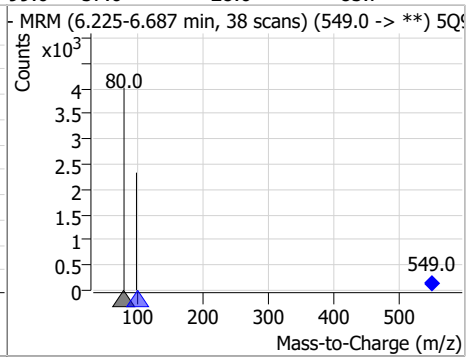


Perfluorinated Compounds by LC/MS/MS

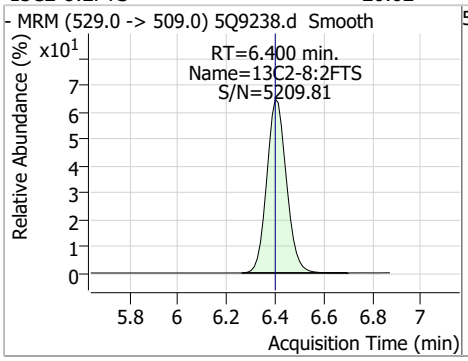
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	50.36	6.37	0.01	112210	549.0 -> 99.0	57.6	28.6	85.7

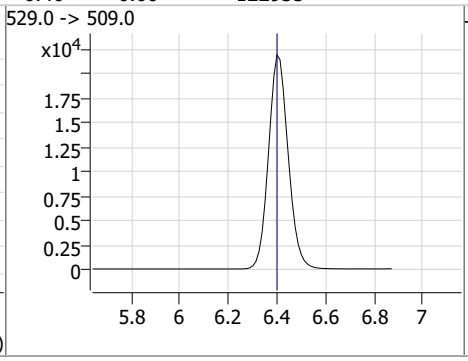


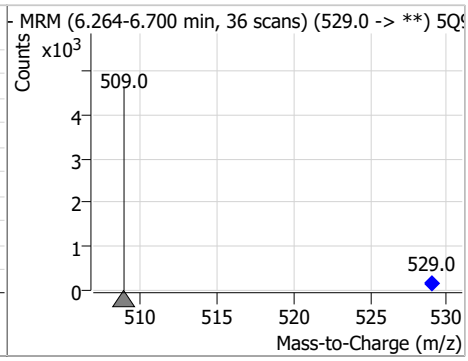




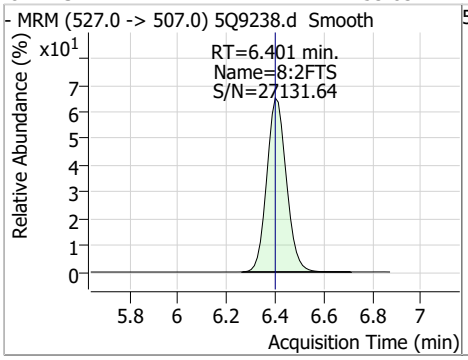
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	20.02	6.40	0.00	122935				

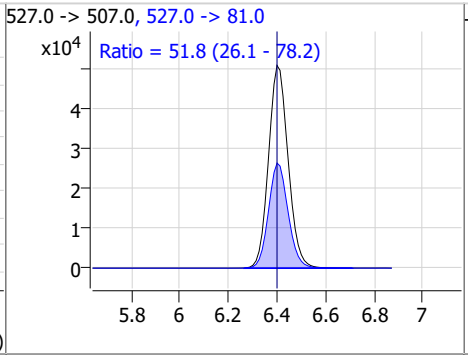


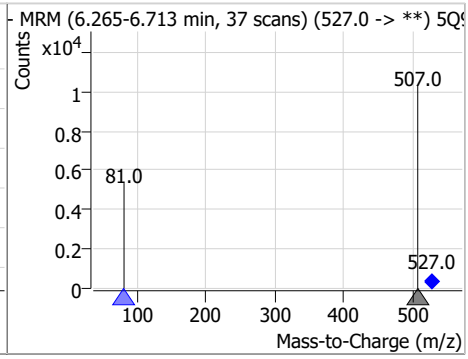




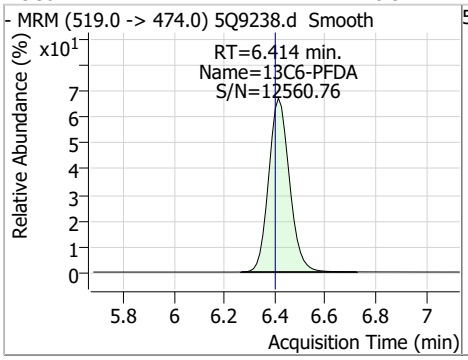
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	53.83	6.40	0.00	282773	527.0 -> 81.0	51.8	26.1	78.2

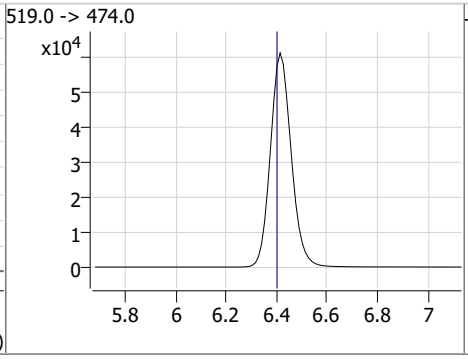


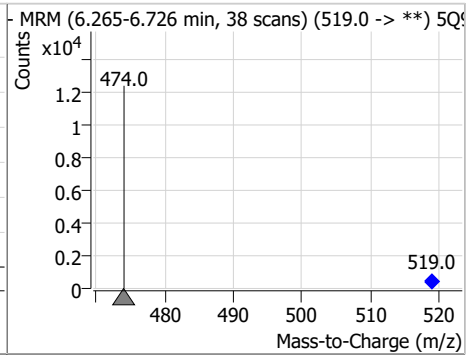




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.92	6.41	0.01	350756				

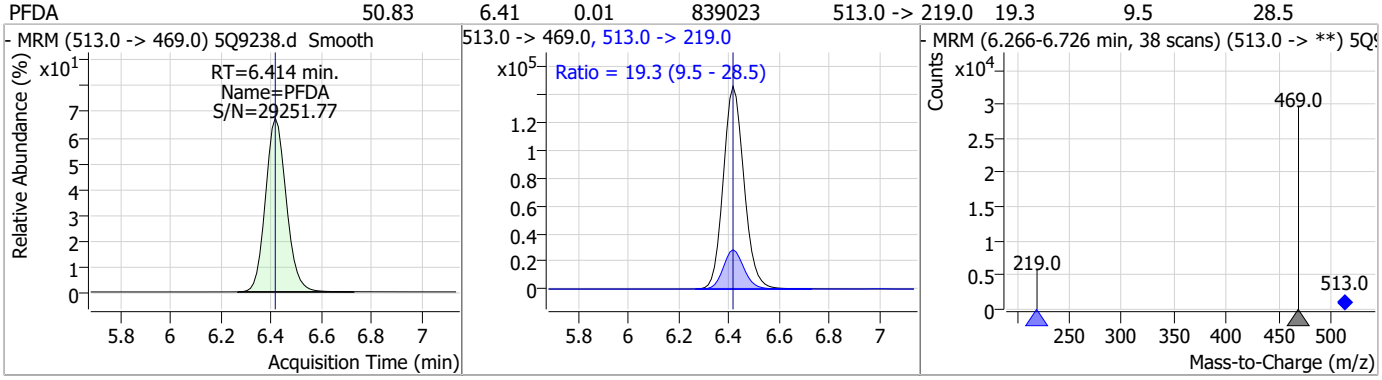




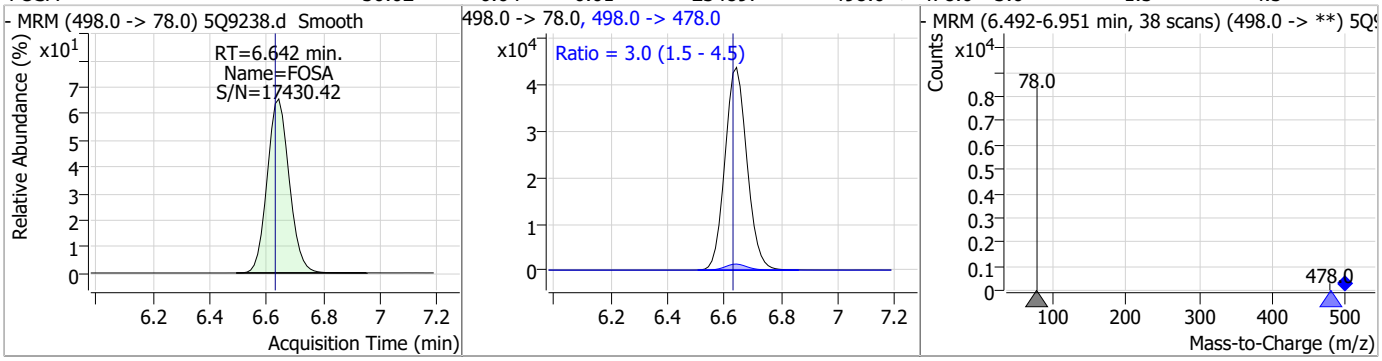


Perfluorinated Compounds by LC/MS/MS

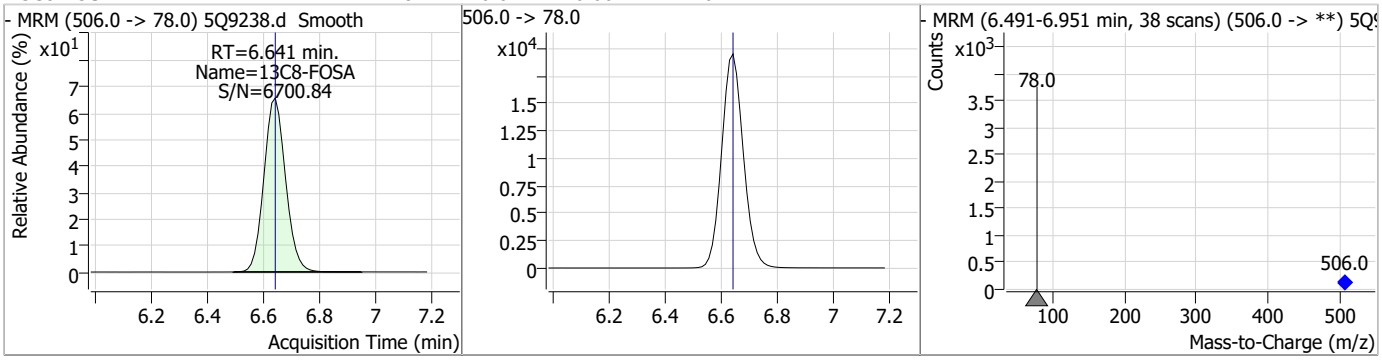
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	50.83	6.41	0.01	839023	513.0 -> 219.0	19.3	9.5	28.5



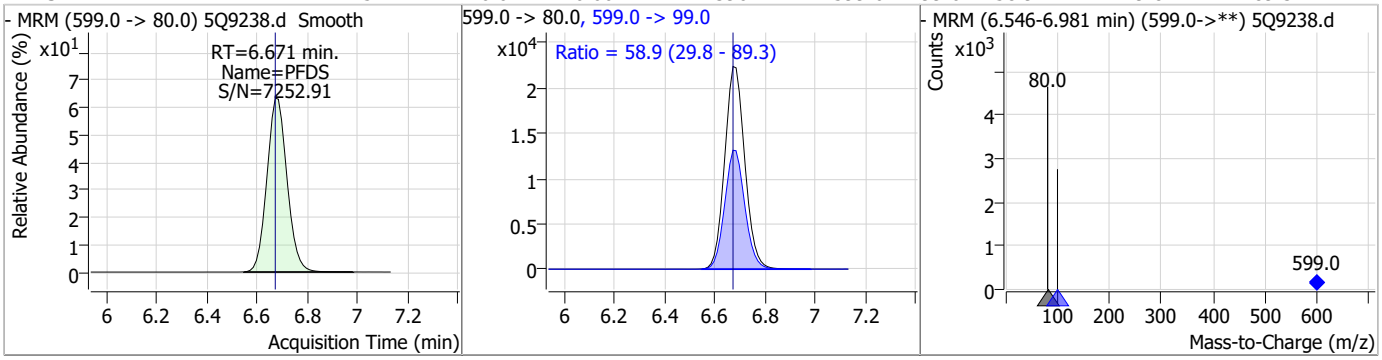
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	50.02	6.64	0.01	234897	498.0 -> 478.0	3.0	1.5	4.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	17.48	6.64	0.00	104774				

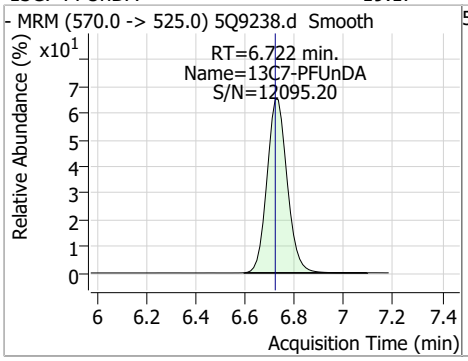


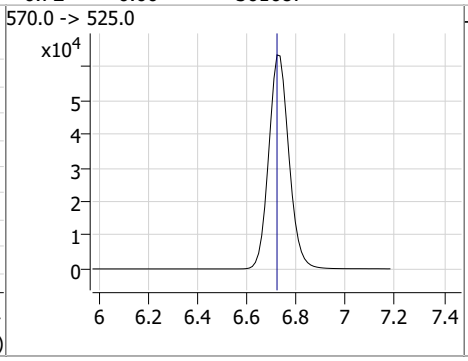
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	57.77	6.67	0.00	123961	599.0 -> 99.0	58.9	29.8	89.3

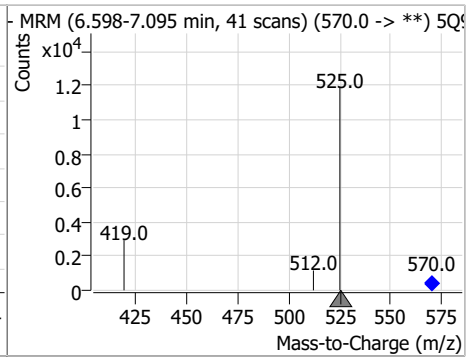


Perfluorinated Compounds by LC/MS/MS

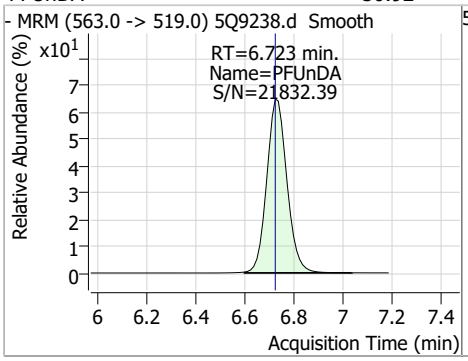
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.17	6.72	0.00	361687				

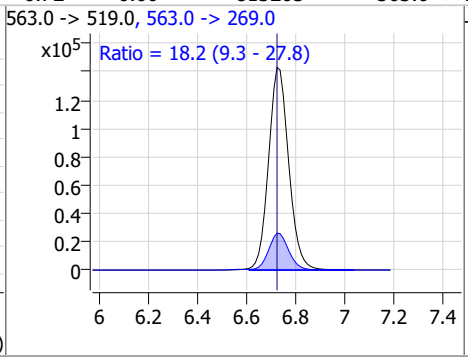


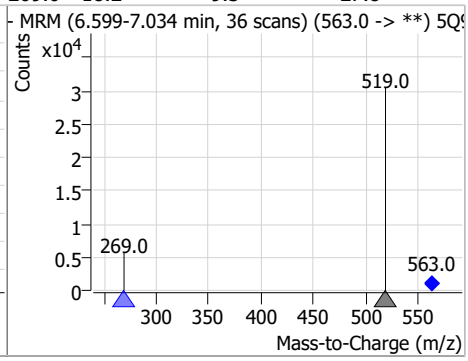




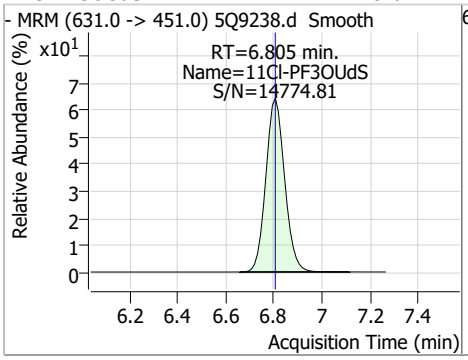
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	50.92	6.72	0.00	813203	563.0 -> 269.0	18.2	9.3	27.8

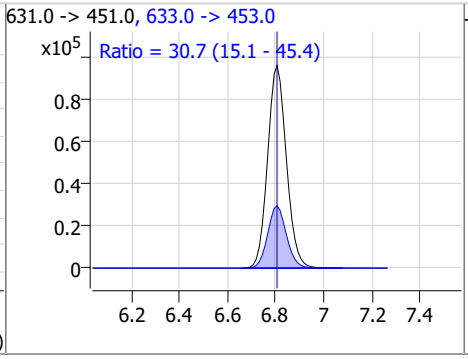


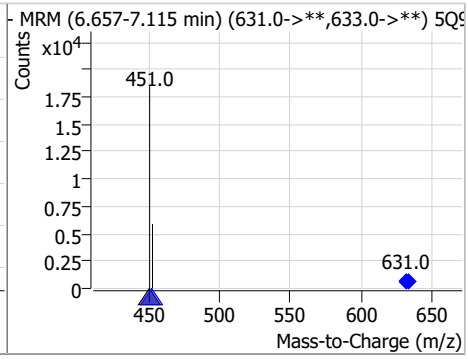




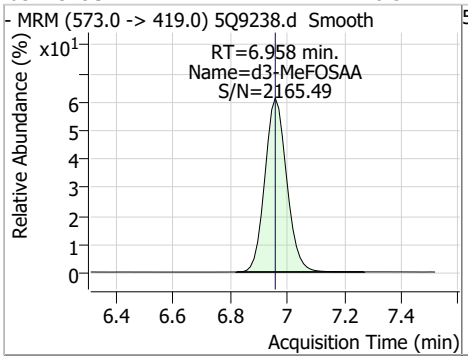
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	49.62	6.81	0.01	522086	633.0 -> 453.0	30.7	15.1	45.4

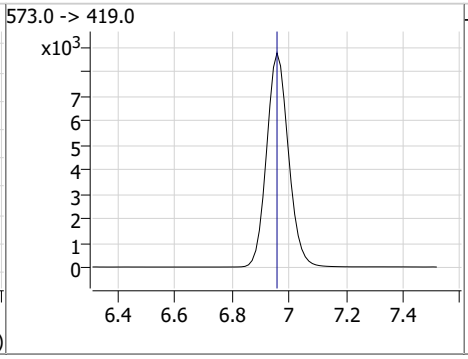


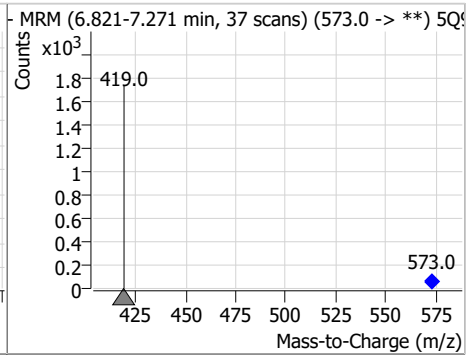




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	16.54	6.96	0.00	46356				

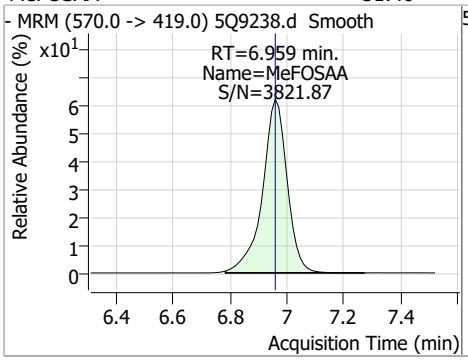


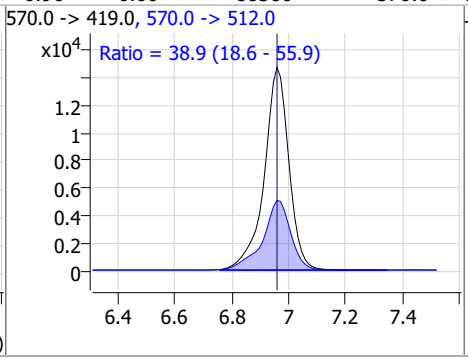


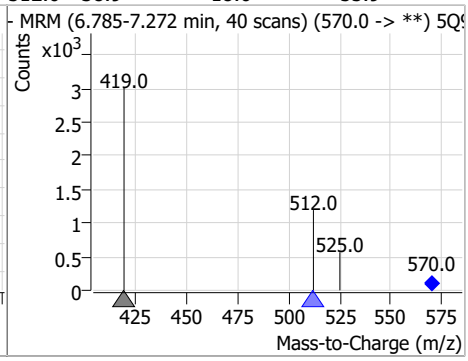


Perfluorinated Compounds by LC/MS/MS

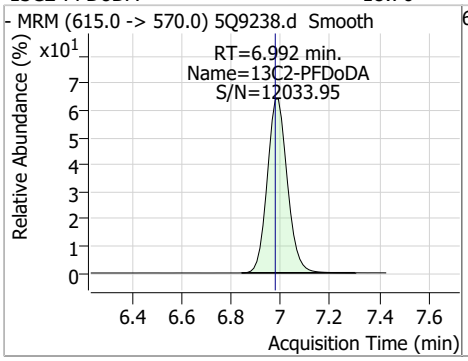
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	51.46	6.96	0.00	88380	570.0 -> 512.0	38.9	18.6	55.9

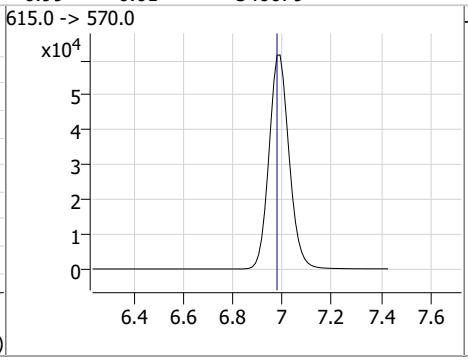


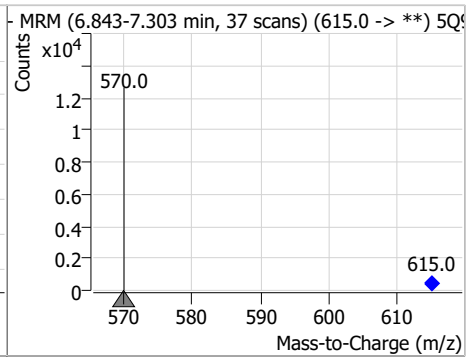




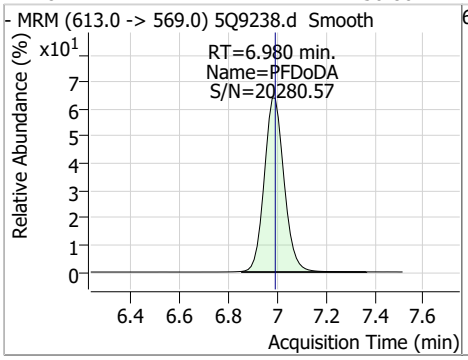
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	18.70	6.99	0.01	346079				

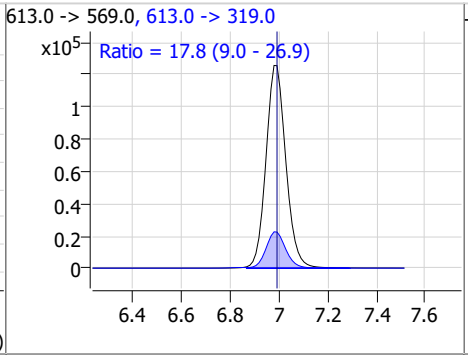


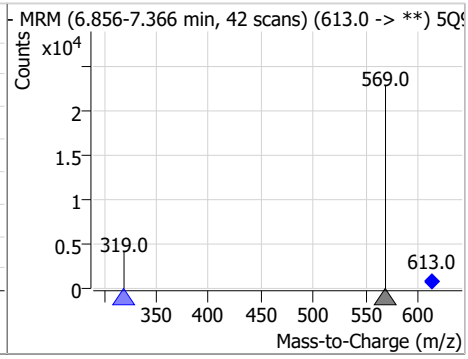




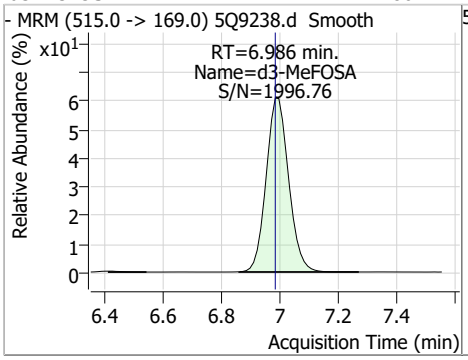
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	50.86	6.98	0.00	711446	613.0 -> 319.0	17.8	9.0	26.9

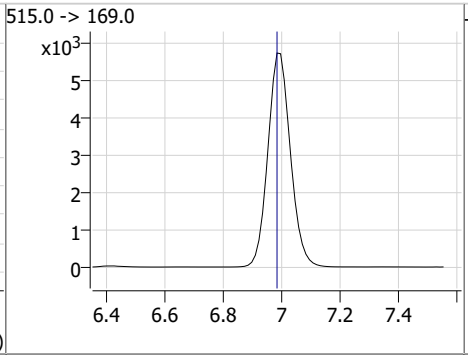


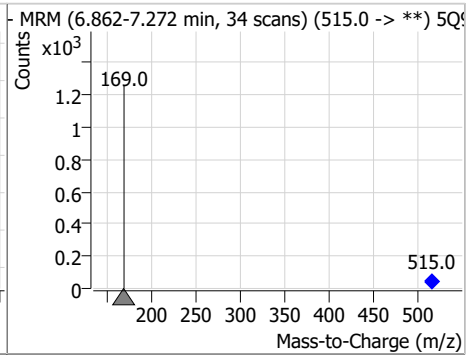




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	17.80	6.99	0.00	30686				

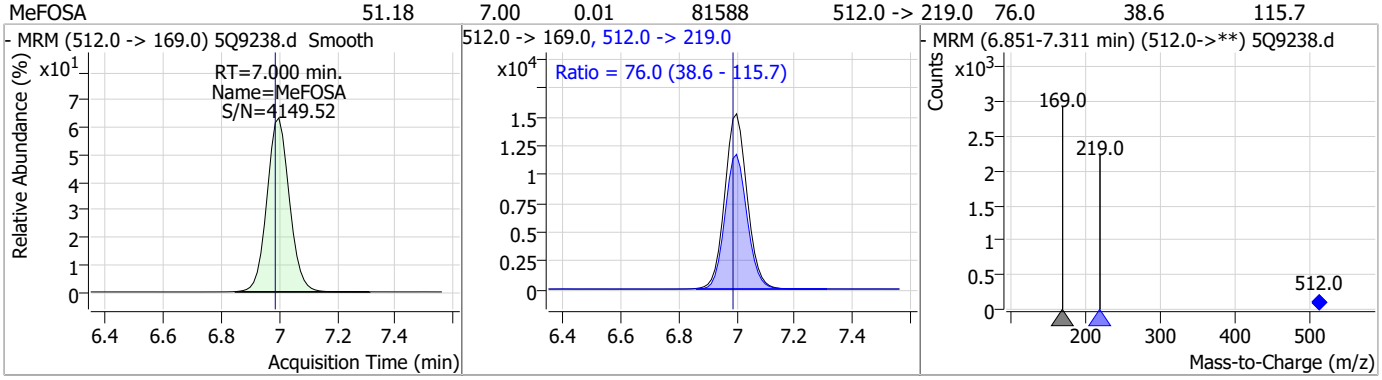




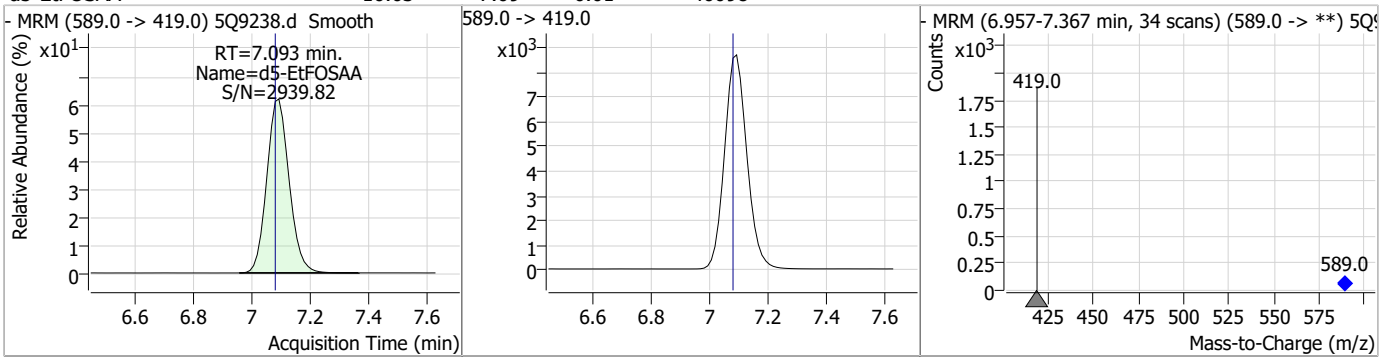


Perfluorinated Compounds by LC/MS/MS

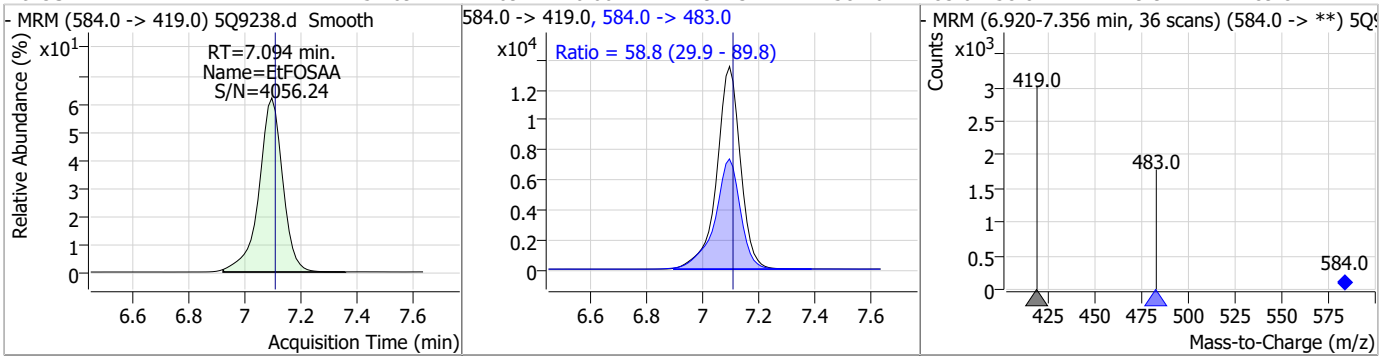
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	51.18	7.00	0.01	81588	512.0 -> 219.0	76.0	38.6	115.7



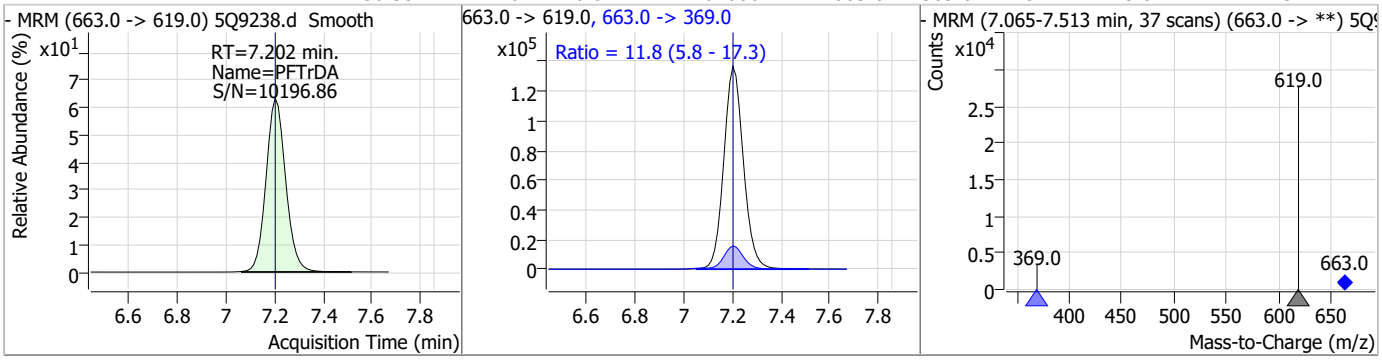
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	16.63	7.09	0.01	46098				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	51.69	7.09	0.00	79443	584.0 -> 483.0	58.8	29.9	89.8

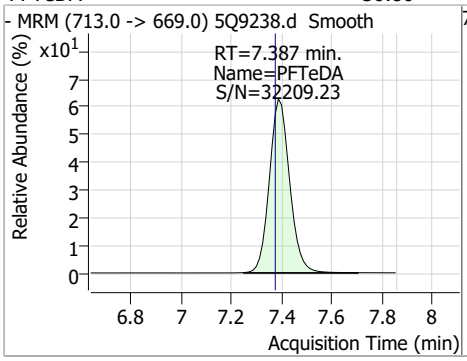


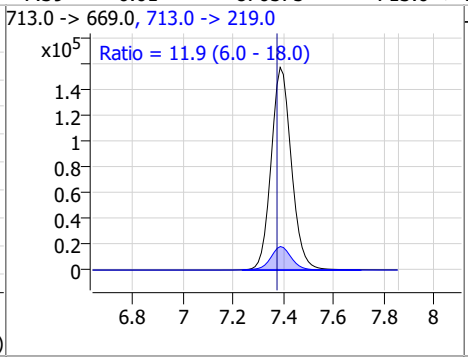
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	50.58	7.20	0.01	764060	663.0 -> 369.0	11.8	5.8	17.3

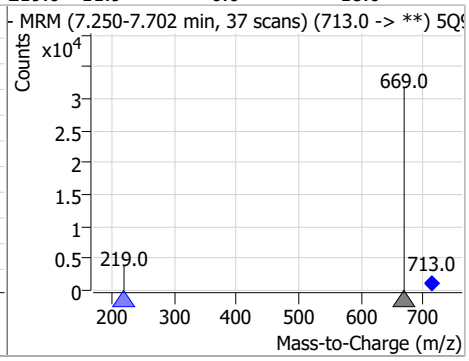


Perfluorinated Compounds by LC/MS/MS

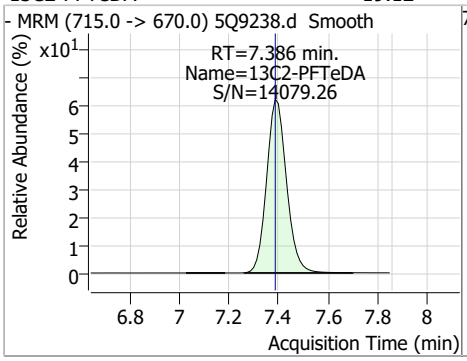
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	50.80	7.39	0.01	876575	713.0 -> 219.0	11.9	6.0	18.0

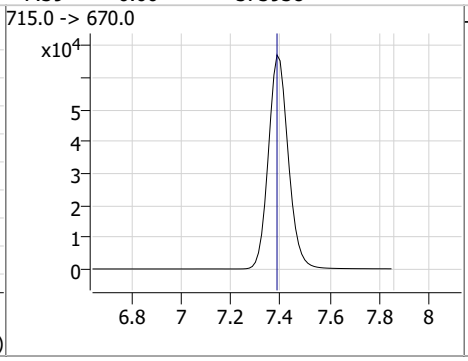


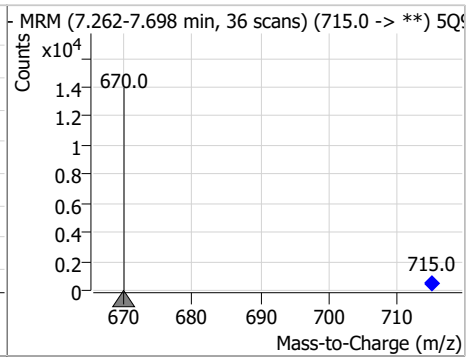




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	19.12	7.39	0.00	373938				







Manual Integration Approval Summary

Sample Number:	S5Q137-IC137	**Method:**	EPA 537M QSM5.3 B-15
Lab FileID:	5Q9238.D	**Analyst approved:**	01/04/23 11:33 Lindsay Ritner
Injection Time:	01/03/23 16:47	**Supervisor approved:**	01/04/23 15:00 Natasha Gumtie

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanesulfonic acid	1763-23-1		6.02	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Natasha Gumtie 01/04/23 15:00

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9239.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 1/3/2023 5:02:35 PM
Sample Name : ic137-100
Vial : P1-A9
DA Method File : ID_010323_S5Q137.quantmethod.xml
Batch Name : s5q137.batch.bin
Sample Information : OP94373,S5Q137,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.000	217.0 -> 172.0	112260	20.00	µg/L	0.025
M5-PFPeA	3.494	268.0 -> 223.0	207012	20.00	µg/L	0.025
M5-PFHxA	4.467	318.0 -> 273.0	291455	20.00	µg/L	0.012
M4-PFHpA	5.125	367.0 -> 322.0	274957	20.00	µg/L	0.012
M8-PFOA	5.648	421.0 -> 376.0	349754	20.00	µg/L	0.027
M9-PFNA	6.068	472.0 -> 427.0	357967	20.00	µg/L	0.025
M6-PFDA	6.426	519.0 -> 474.0	342575	20.00	µg/L	0.025
M7-PFUnDA	6.735	570.0 -> 525.0	359178	20.00	µg/L	0.012
M2-PFDoDA	7.004	615.0 -> 570.0	343479	20.00	µg/L	0.025
M2-PFTeDA	7.399	715.0 -> 670.0	371190	20.00	µg/L	0.012
M8-FOSA	6.641	506.0 -> 78.0	97811	20.00	µg/L	0.000
M3-PFBS	3.691	302.0 -> 99.0	25237	20.00	µg/L	0.012
M3-PFHxS	5.135	402.0 -> 99.0	30431	20.00	µg/L	0.012
M8-PFOS	6.028	507.0 -> 99.0	36700	20.00	µg/L	0.012
M2-4:2FTS	4.374	329.0 -> 309.0	110269	20.00	µg/L	0.025
M2-6:2FTS	5.607	429.0 -> 409.0	157185	20.00	µg/L	0.013
M2-8:2FTS	6.413	529.0 -> 509.0	135683	20.00	µg/L	0.012
M3-MeFOSAA	6.970	573.0 -> 419.0	44170	20.00	µg/L	0.012
M3-HFPO-DA	4.669	287.0 -> 169.0	66233	20.00	µg/L	0.025
M3-MeFOSA	6.998	515.0 -> 169.0	27524	20.00	µg/L	0.012
M5-EtFOSAA	7.093	589.0 -> 419.0	44181	20.00	µg/L	0.012
System Monitoring Compounds						
13C2-4:2FTS	4.374	329.0 -> 309.0	110269	23.31	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 116.6%		
13C2-6:2FTS	5.607	429.0 -> 409.0	157185	22.08	µg/L	0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.4%		
13C2-8:2FTS	6.413	529.0 -> 509.0	135683	22.10	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.5%		
13C2-PFDoDA	7.004	615.0 -> 570.0	343479	18.56	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%		
13C2-PFTeDA	7.399	715.0 -> 670.0	371190	18.98	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.9%		
13C3-PFBS	3.691	302.0 -> 99.0	25237	19.69	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%		
13C3-PFHxS	5.135	402.0 -> 99.0	30431	19.16	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.8%		
13C4-PFBA	2.000	217.0 -> 172.0	112260	19.58	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.9%		
13C4-PFHpA	5.125	367.0 -> 322.0	274957	18.71	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.6%		
13C5-PFHxA	4.467	318.0 -> 273.0	291455	19.84	µg/L	0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%		
13C5-PFPeA	3.494	268.0 -> 223.0	207012	19.93	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.6%		
13C6-PFDA	6.426	519.0 -> 474.0	342575	18.48	µg/L	0.025

Perfluorinated Compounds by LC/MS/MS

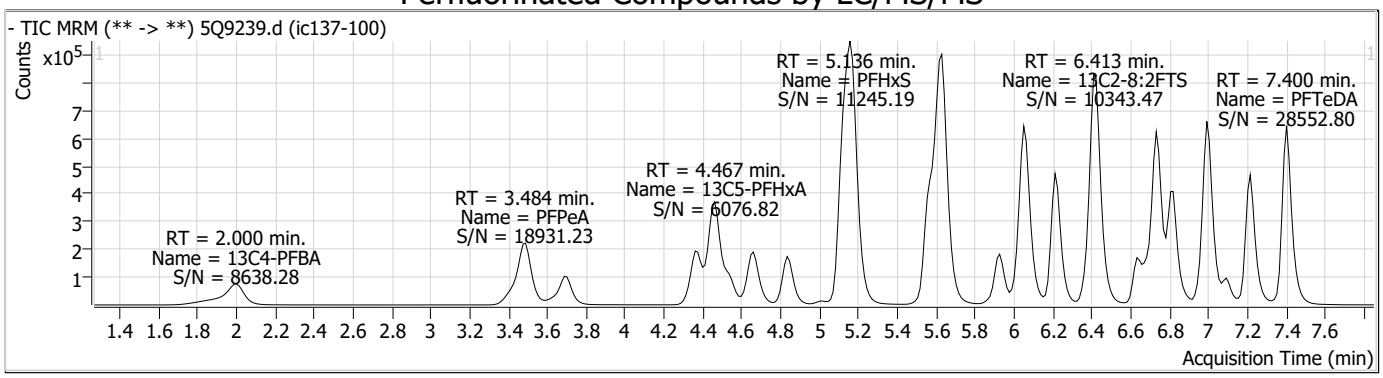
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.4%		
13C7-PFUnDA	6.735	570.0 -> 525.0	359178	19.04 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.2%		
13C8-FOSA	6.641	506.0 -> 78.0	97811	16.32 µg/L		0.000
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 81.6%		
13C8-PFOA	5.648	421.0 -> 376.0	349754	18.57 µg/L		0.027
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%		
13C8-PFOS	6.028	507.0 -> 99.0	36700	19.26 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.3%		
13C9-PFNA	6.068	472.0 -> 427.0	357967	18.96 µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.8%		
d3-MeFOSAA	6.970	573.0 -> 419.0	44170	15.76 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 78.8%		
13C3-HFPO-DA	4.669	287.0 -> 169.0	66233	19.75 µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.7%		
d3-MeFOSA	6.998	515.0 -> 169.0	27524	15.96 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 79.8%		
d5-EtFOSAA	7.093	589.0 -> 419.0	44181	15.94 µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 79.7%		
Target Compounds						QValue
4:2FTS	4.363	327.0 -> 307.0	469641	93.54 µg/L		99
		327.0 -> 81.0	279435			
6:2FTS	5.608	427.0 -> 407.0	630053	92.30 µg/L		100
		427.0 -> 81.0	280377			
8:2FTS	6.413	527.0 -> 507.0	534701	92.23 µg/L		99
		527.0 -> 81.0	275426			
EtFOSAA	7.094	584.0 -> 419.0	145981	99.10 µg/L		100
		584.0 -> 483.0	87502			
FOSA	6.642	498.0 -> 78.0	438151	99.95 µg/L		99
		498.0 -> 478.0	12188			
MeFOSAA	6.972	570.0 -> 419.0	162207	99.12 µg/L		99
		570.0 -> 512.0	61307			
PFBA	1.994	213.0 -> 169.0	523472	99.52 µg/L		100
PFBS	3.694	299.0 -> 80.0	361477	99.81 µg/L		100
		299.0 -> 99.0	153792			
PFDA	6.427	513.0 -> 469.0	1606222	99.63 µg/L		99
		513.0 -> 219.0	309292			
PFDoDA	6.992	613.0 -> 569.0	1382660	99.59 µg/L		99
		613.0 -> 319.0	243794			
PFDS	6.683	599.0 -> 80.0	244311	114.65 µg/L		100
		599.0 -> 99.0	144804			
PFHpA	5.126	363.0 -> 319.0	1491796	99.73 µg/L		99
		363.0 -> 169.0	337791			
PFHpS	5.619	449.0 -> 80.0	265176	99.69 µg/L		98
		449.0 -> 99.0	142304			
PFHxA	4.468	313.0 -> 269.0	1295335	99.74 µg/L		100
		313.0 -> 119.0	60037			
PFHxS	5.136	399.0 -> 80.0	276835	99.67 µg/L		99
		399.0 -> 99.0	154048			
PFNA	6.068	463.0 -> 419.0	1600279	99.71 µg/L		99
		463.0 -> 219.0	364646			
PFNS	6.375	549.0 -> 80.0	217829	99.73 µg/L		99
		549.0 -> 99.0	125989			
PFOA	5.648	413.0 -> 369.0	1729776	99.88 µg/L		100
		413.0 -> 169.0	481189			
PFOS	6.029	499.0 -> 80.0	318097	100.15 µg/L	m	97

Perfluorinated Compounds by LC/MS/MS

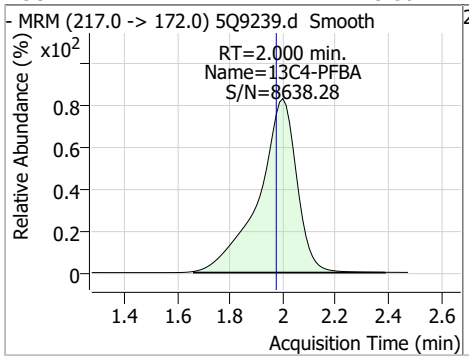
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	147489			
PFPeA	3.484	263.0 -> 219.0	1068030	99.87	µg/L	100
PFPeS	4.539	349.0 -> 80.0	220255	100.09	µg/L	99
		349.0 -> 99.0	111381			
PFTeDA	7.400	713.0 -> 669.0	1706051	99.61	µg/L	100
		713.0 -> 219.0	203215			
PFTrDA	7.214	663.0 -> 619.0	1496347	99.81	µg/L	99
		663.0 -> 369.0	178290			
PFUnDA	6.736	563.0 -> 519.0	1577402	99.46	µg/L	99
		563.0 -> 269.0	286836			
11Cl-PF3OUdS	6.818	631.0 -> 451.0	1020269	87.91	µg/L	100
		633.0 -> 453.0	310281			
9Cl-PF3ONS	6.213	531.0 -> 351.0	1294249	99.06	µg/L	100
		533.0 -> 353.0	406276			
ADONA	5.175	377.0 -> 251.0	2071429	99.42	µg/L	99
		377.0 -> 85.0	784674			
HFPO-DA	4.664	329.0 -> 169.0	474732	99.03	µg/L	100
		285.0 -> 169.0	279652			
MeFOSA	7.000	512.0 -> 169.0	142073	99.36	µg/L	99
		512.0 -> 219.0	110369			
4-PFECHS	5.568	461.0 -> 381.0	882685	99.94	µg/L	99
		461.0 -> 99.0	493466			
FBSA	4.842	298.0 -> 78.0	628514	98.76	µg/L	100
		298.0 -> 64.0	57536			
FHxSA	5.935	398.0 -> 78.0	544186	99.13	µg/L	99
		398.0 -> 64.0	52574			

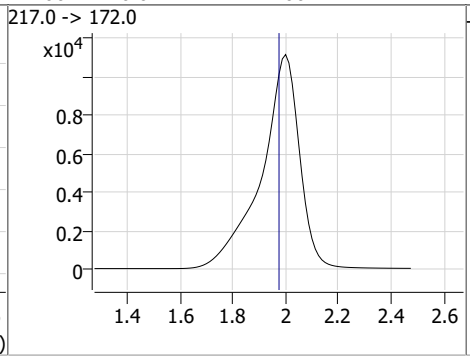
 # = Qualifier out of range, m = manually integrated, + = Area summed

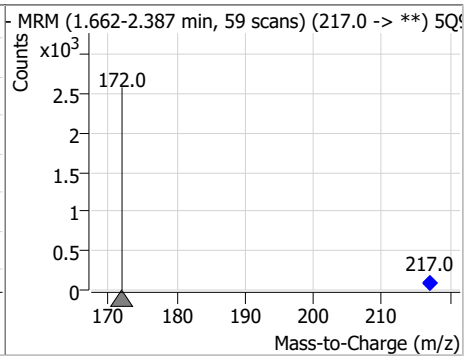
Perfluorinated Compounds by LC/MS/MS



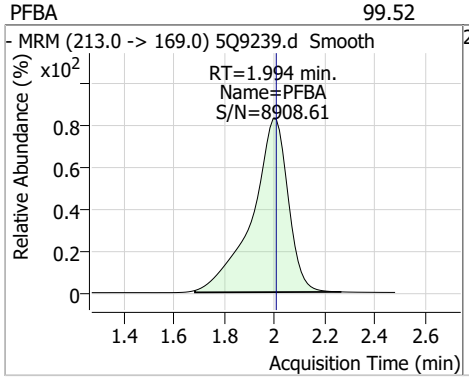
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	19.58	2.00	0.02	112260				

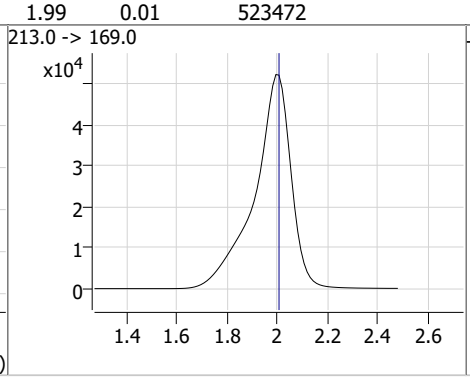


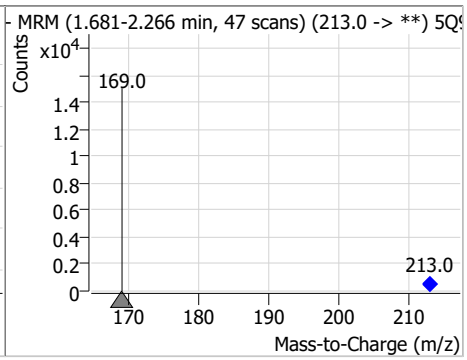




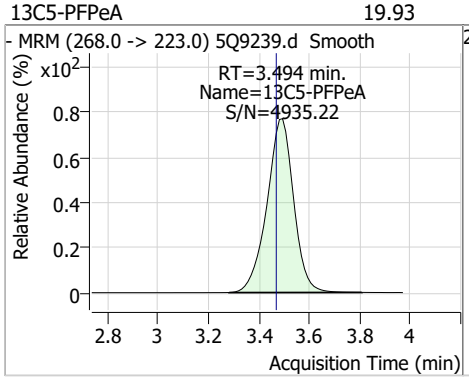
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	99.52	1.99	0.01	523472				

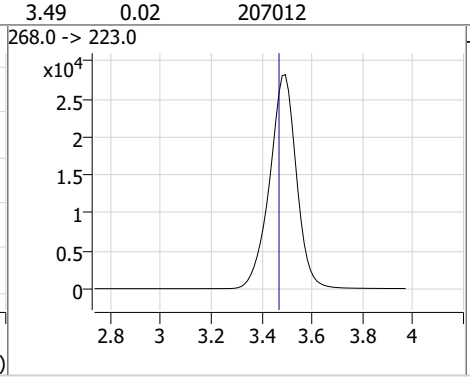


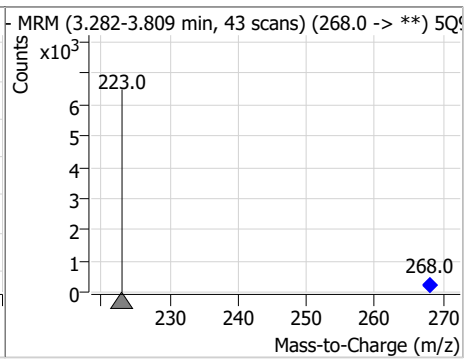




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.93	3.49	0.02	207012				

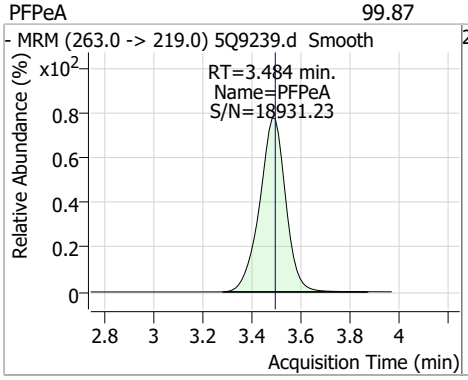


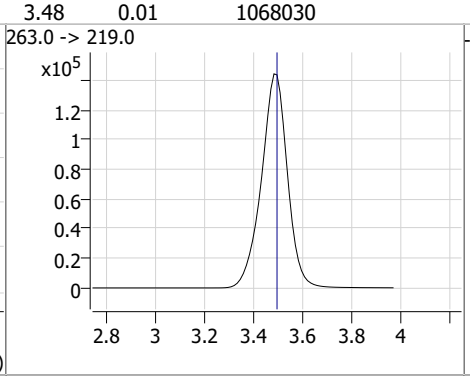


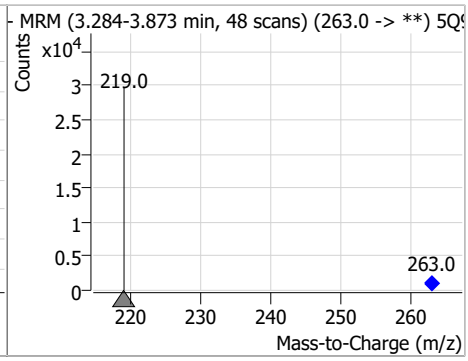


Perfluorinated Compounds by LC/MS/MS

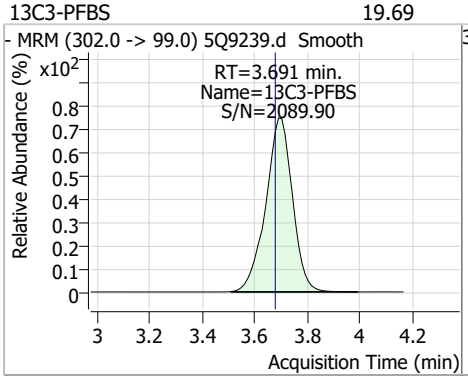
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	99.87	3.48	0.01	1068030				

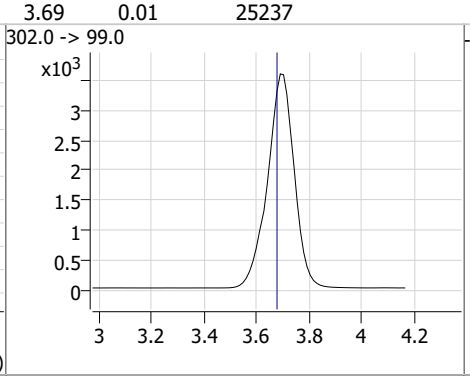


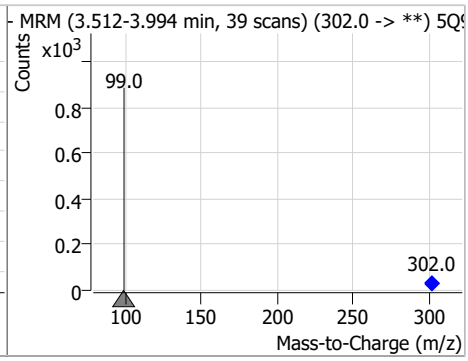




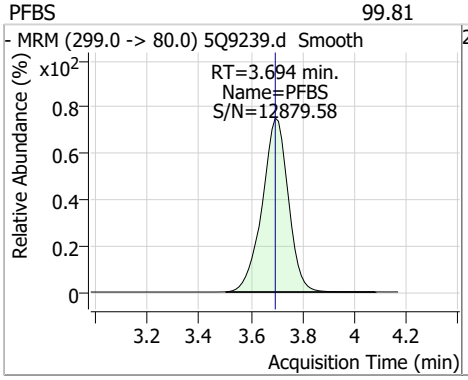
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.69	3.69	0.01	25237				

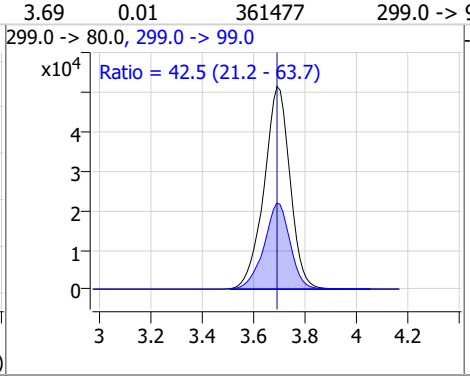


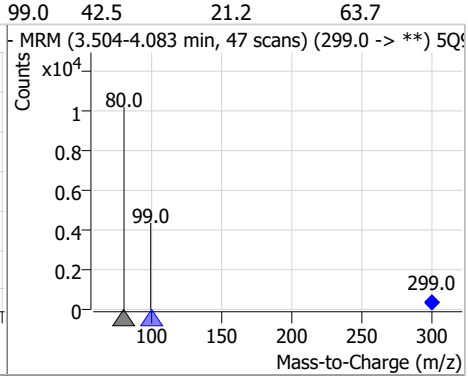




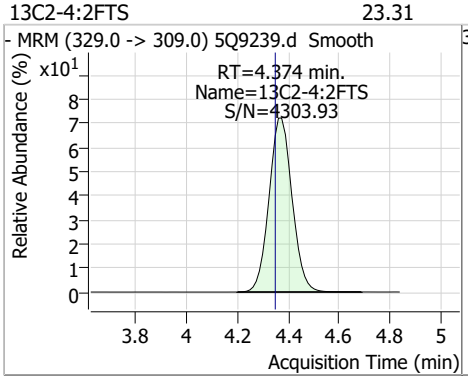
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	99.81	3.69	0.01	361477	299.0 -> 99.0	42.5	21.2	63.7

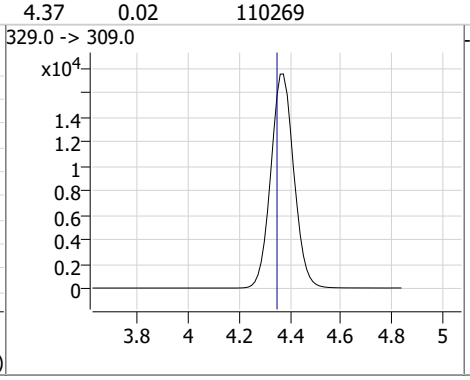


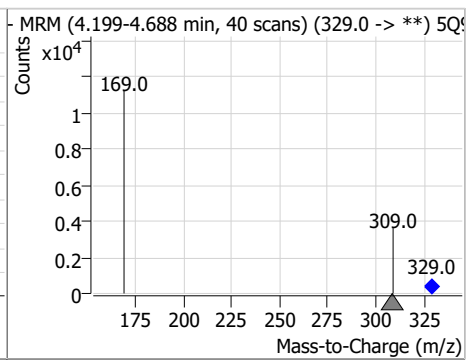




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	23.31	4.37	0.02	110269				

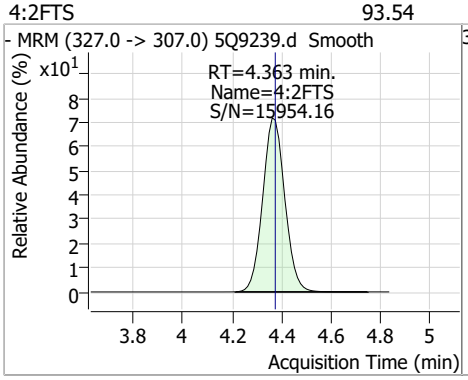


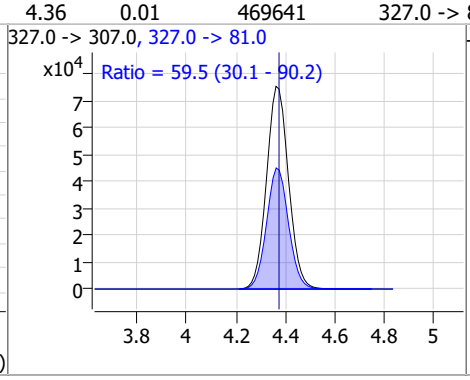


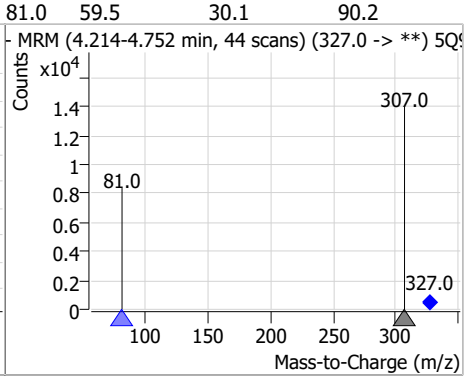


Perfluorinated Compounds by LC/MS/MS

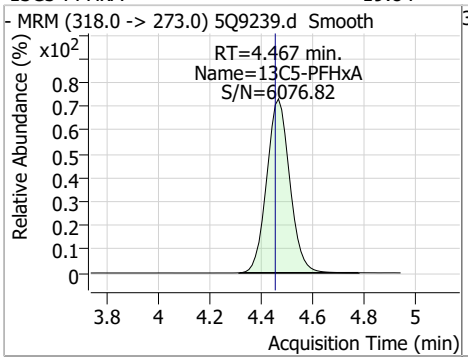
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	93.54	4.36	0.01	469641	327.0 -> 81.0	59.5	30.1	90.2

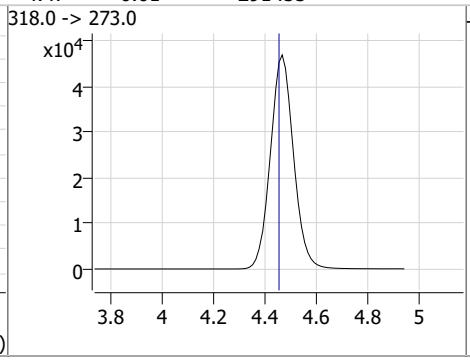


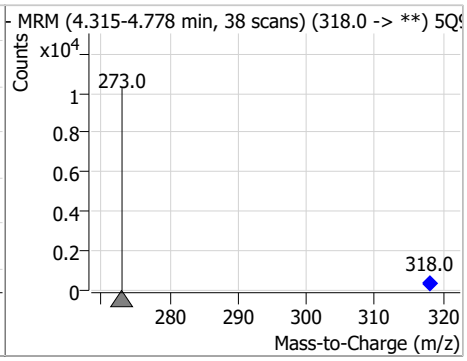




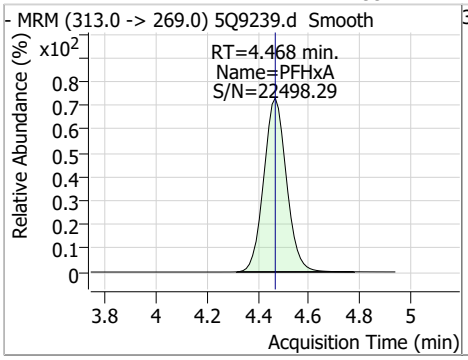
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.84	4.47	0.01	291455				

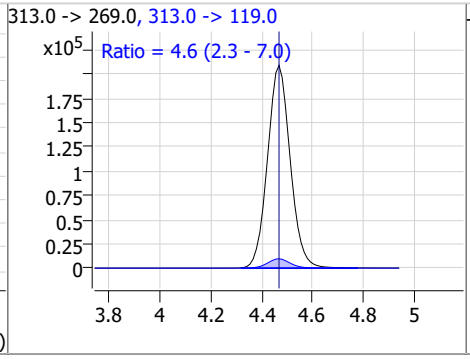


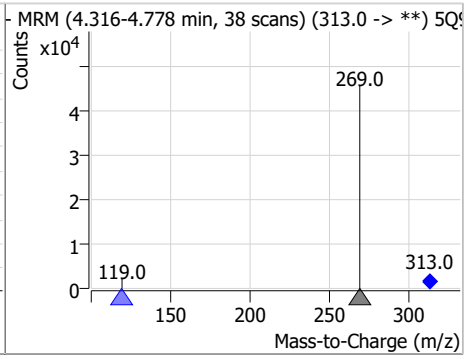




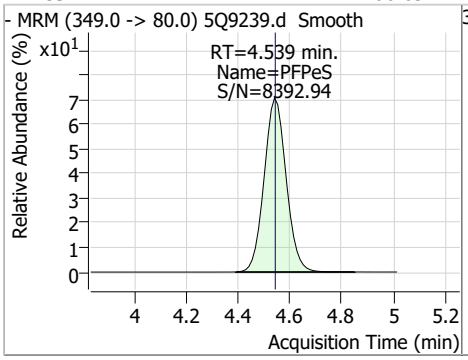
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	99.74	4.47	0.01	1295335	313.0 -> 119.0	4.6	2.3	7.0

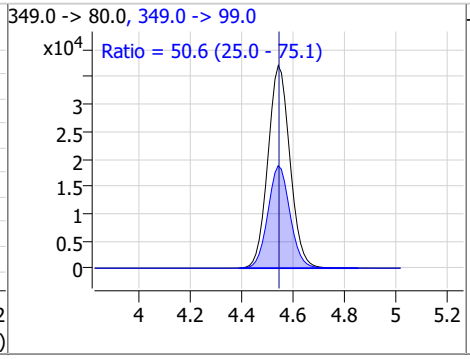


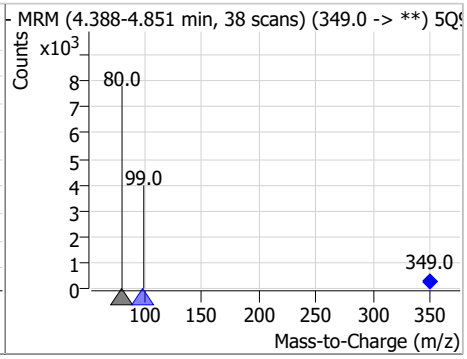




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	100.09	4.54	0.01	220255	349.0 -> 99.0	50.6	25.0	75.1

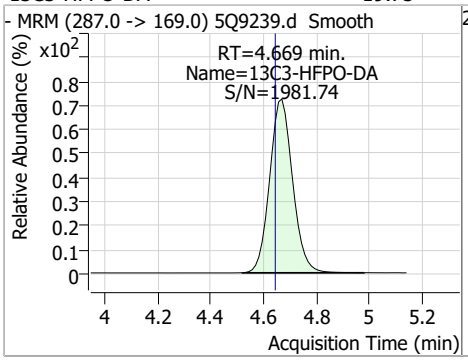


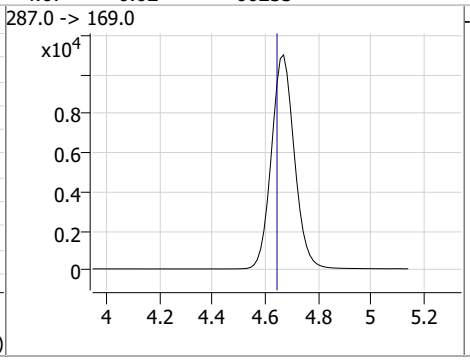


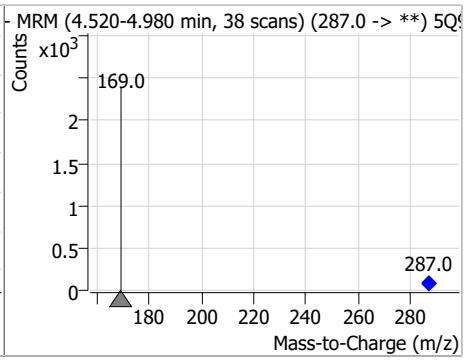


Perfluorinated Compounds by LC/MS/MS

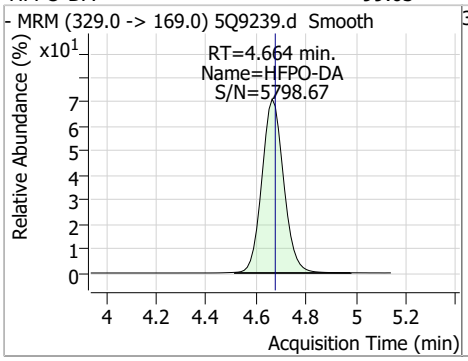
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.75	4.67	0.02	66233				

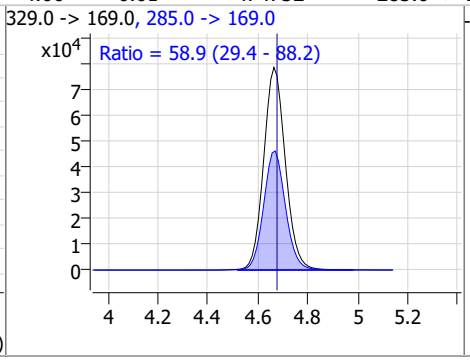


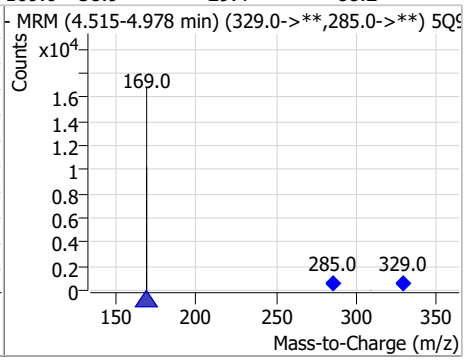




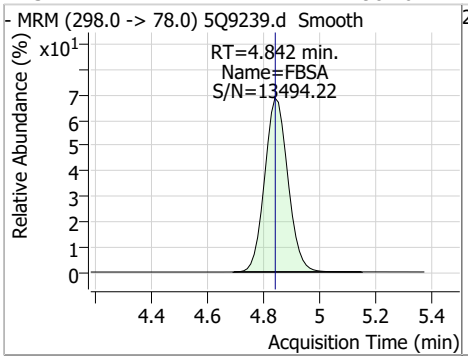
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	99.03	4.66	0.01	474732	285.0 -> 169.0	58.9	29.4	88.2

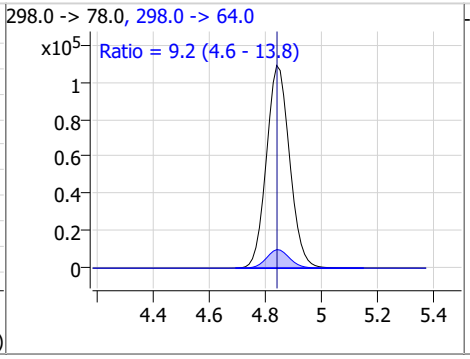


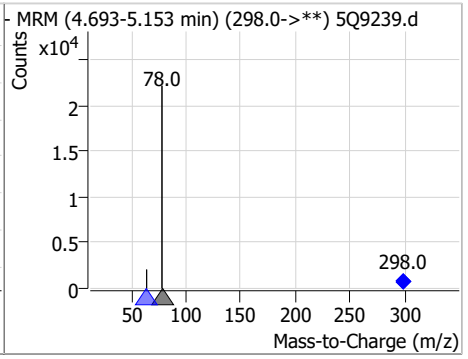




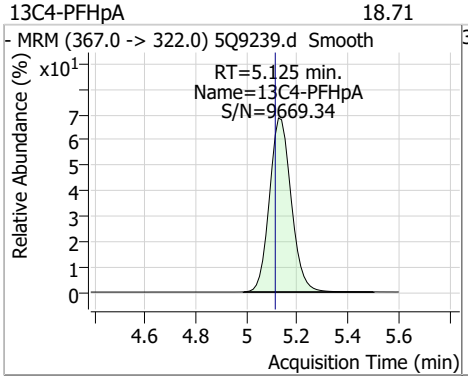
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	98.76	4.84	0.01	628514	298.0 -> 64.0	9.2	4.6	13.8

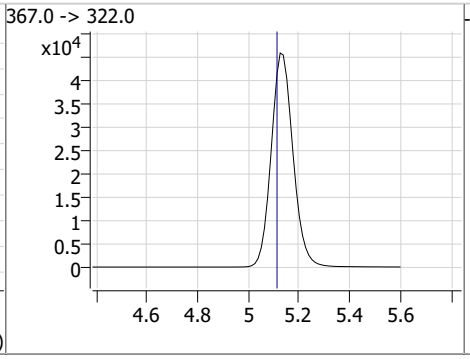


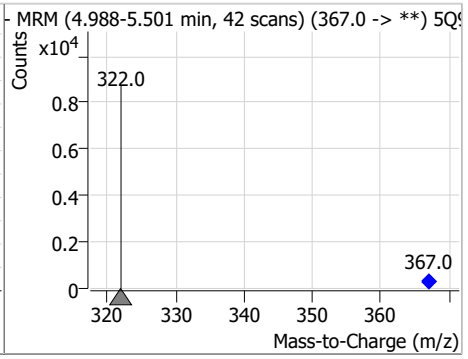




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	18.71	5.13	0.01	274957				

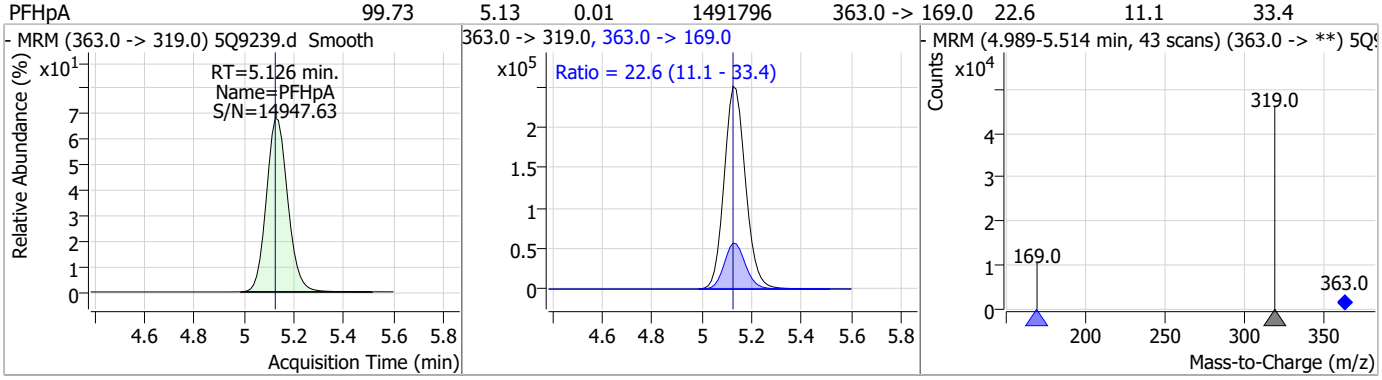




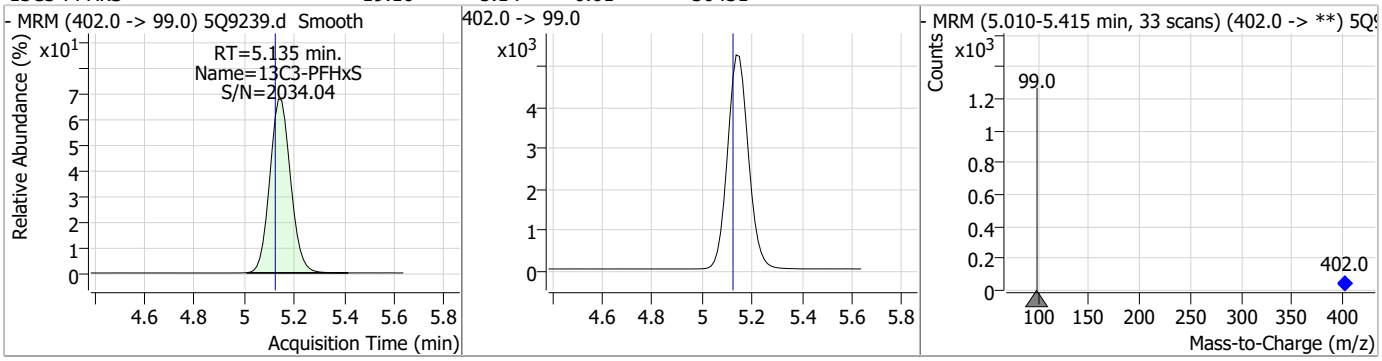


Perfluorinated Compounds by LC/MS/MS

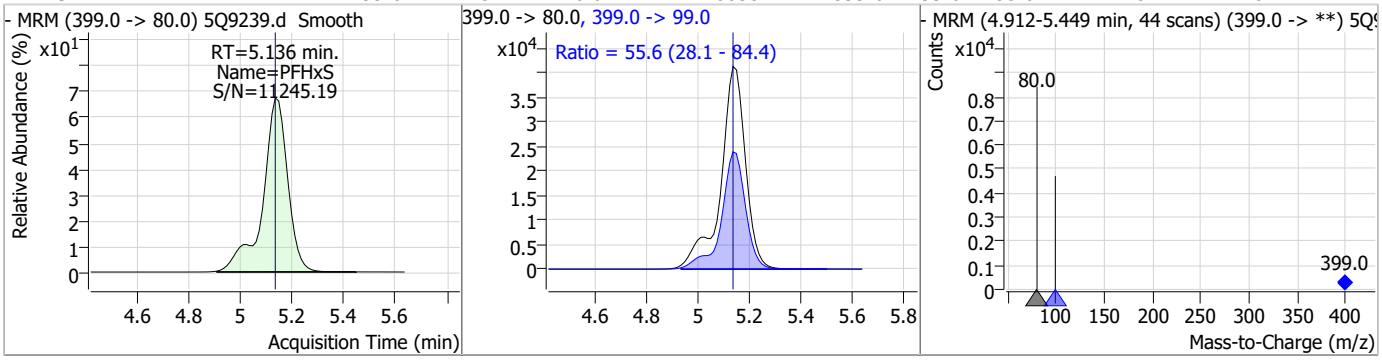
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	99.73	5.13	0.01	1491796	363.0 -> 169.0	22.6	11.1	33.4



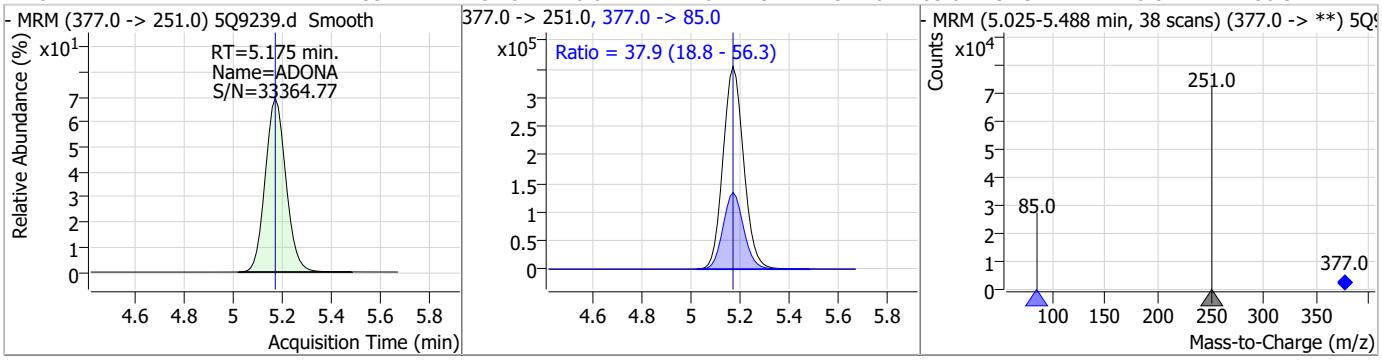
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.16	5.14	0.01	30431				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	99.67	5.14	0.01	276835	399.0 -> 99.0	55.6	28.1	84.4

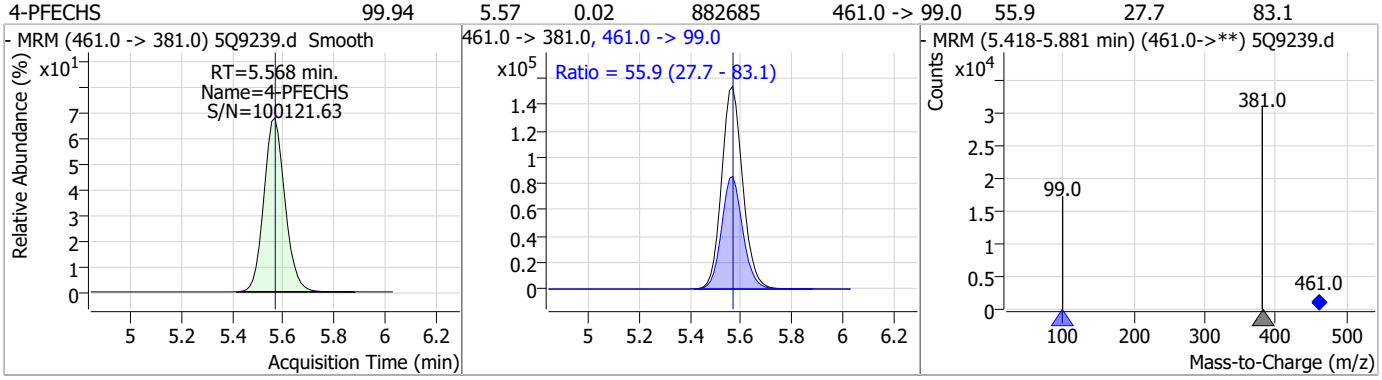


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	99.42	5.18	0.01	2071429	377.0 -> 85.0	37.9	18.8	56.3

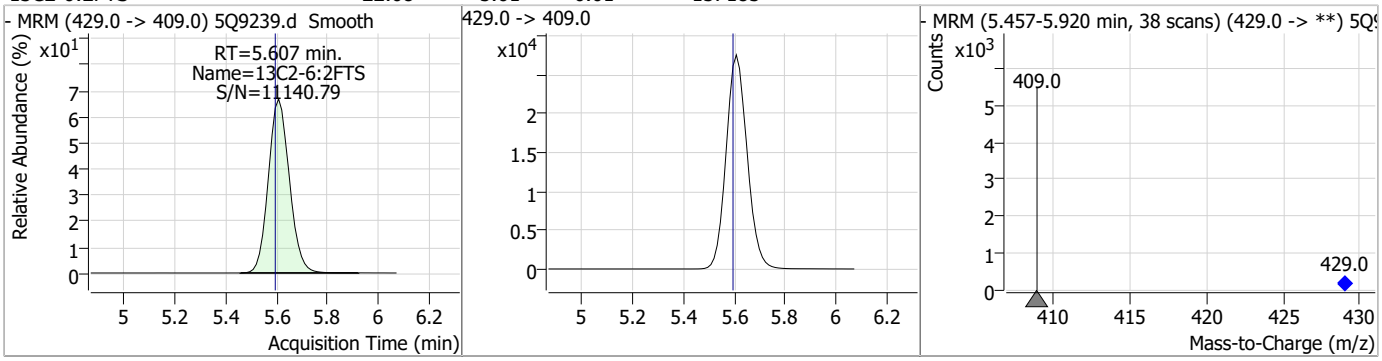


Perfluorinated Compounds by LC/MS/MS

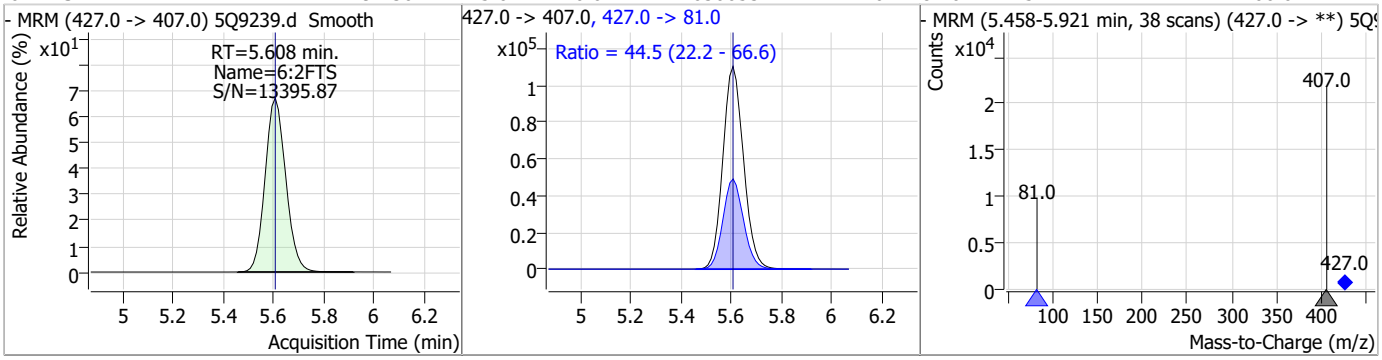
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	99.94	5.57	0.02	882685	461.0 -> 99.0	55.9	27.7	83.1



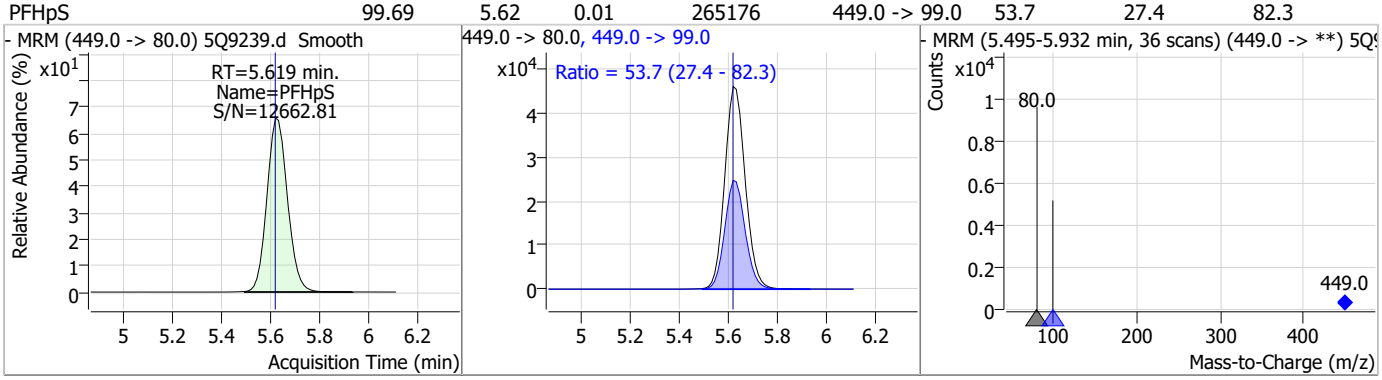
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	22.08	5.61	0.01	157185				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	92.30	5.61	0.01	630053	427.0 -> 81.0	44.5	22.2	66.6

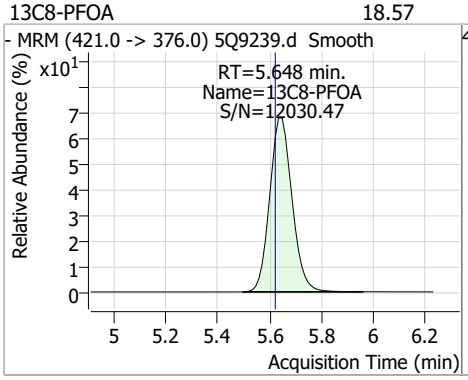


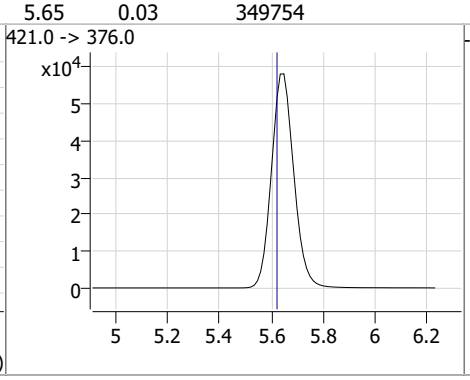
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	99.69	5.62	0.01	265176	449.0 -> 99.0	53.7	27.4	82.3

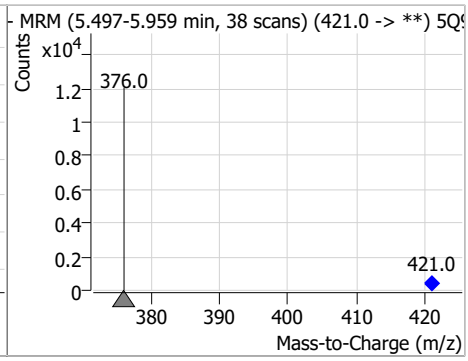


Perfluorinated Compounds by LC/MS/MS

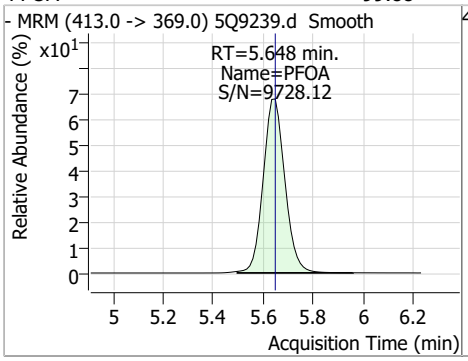
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	18.57	5.65	0.03	349754				

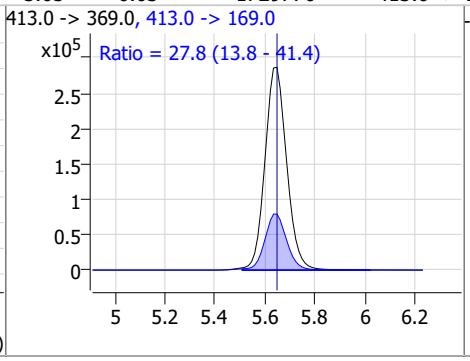


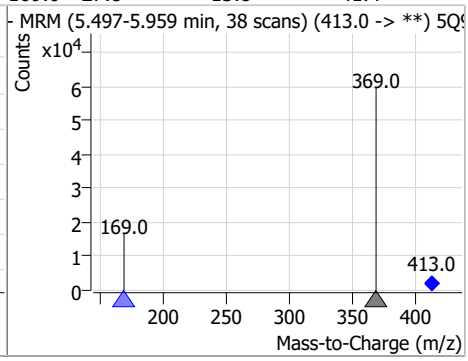




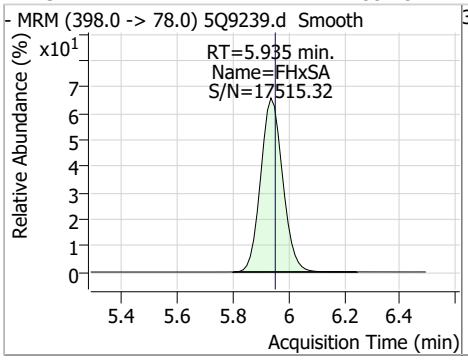
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	99.88	5.65	0.03	1729776	413.0 -> 169.0	27.8	13.8	41.4

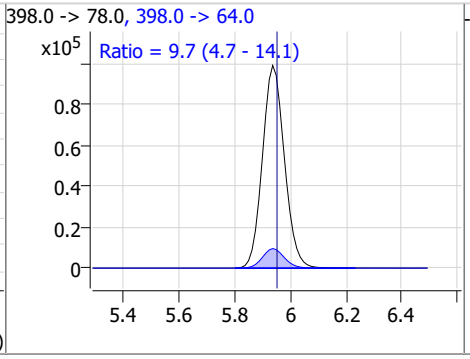


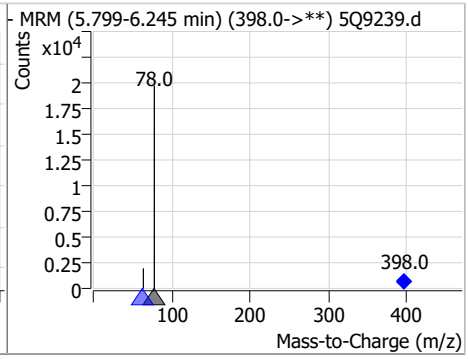




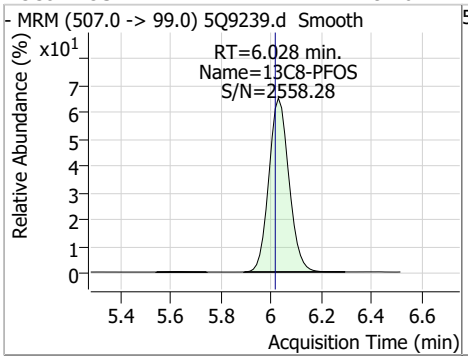
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	99.13	5.94	0.01	544186	398.0 -> 64.0	9.7	4.7	14.1

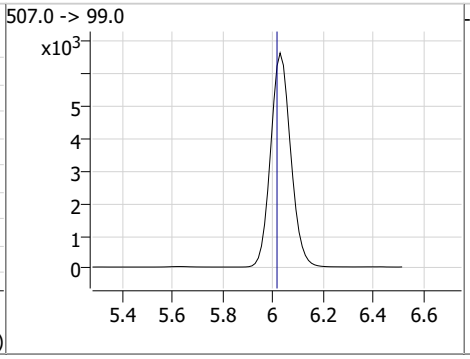


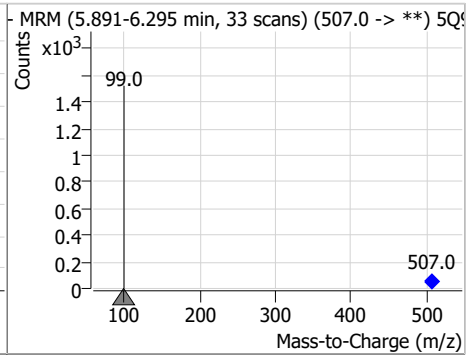




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	19.26	6.03	0.01	36700				

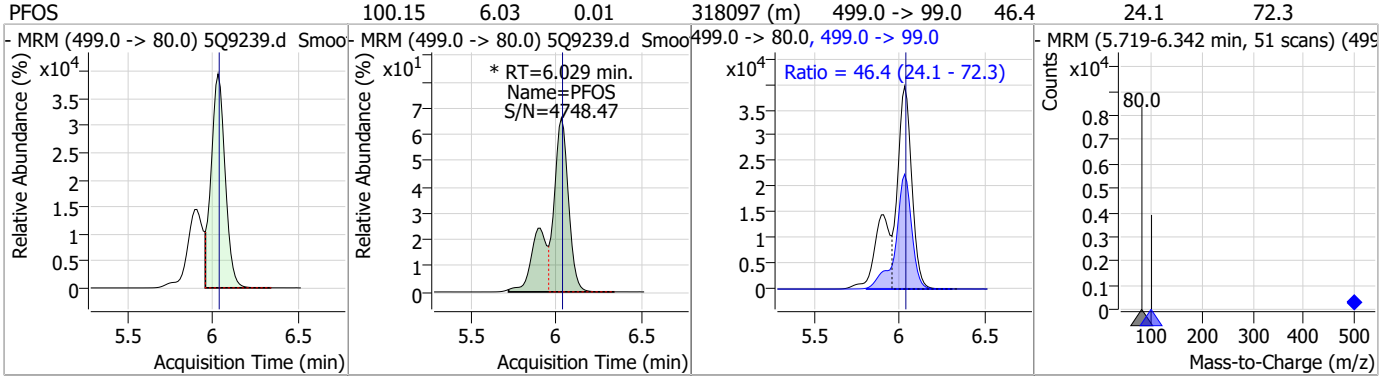




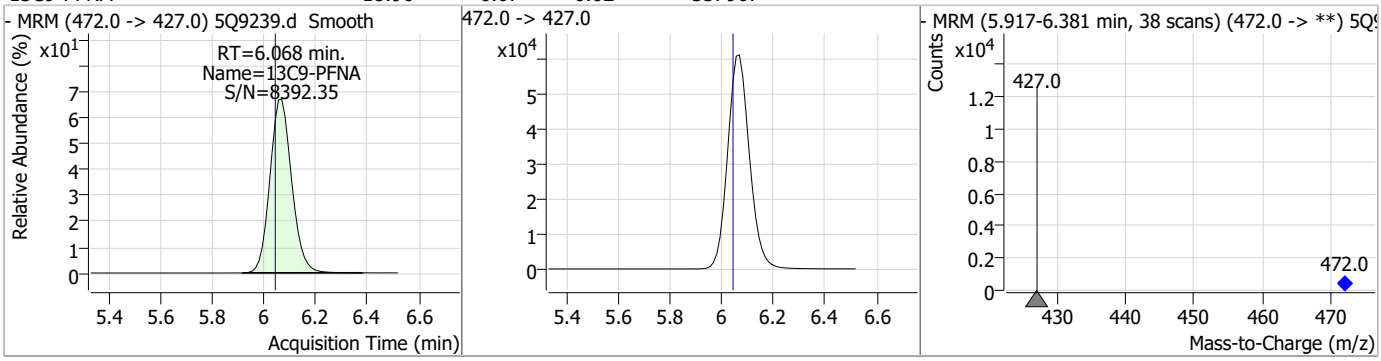


Perfluorinated Compounds by LC/MS/MS

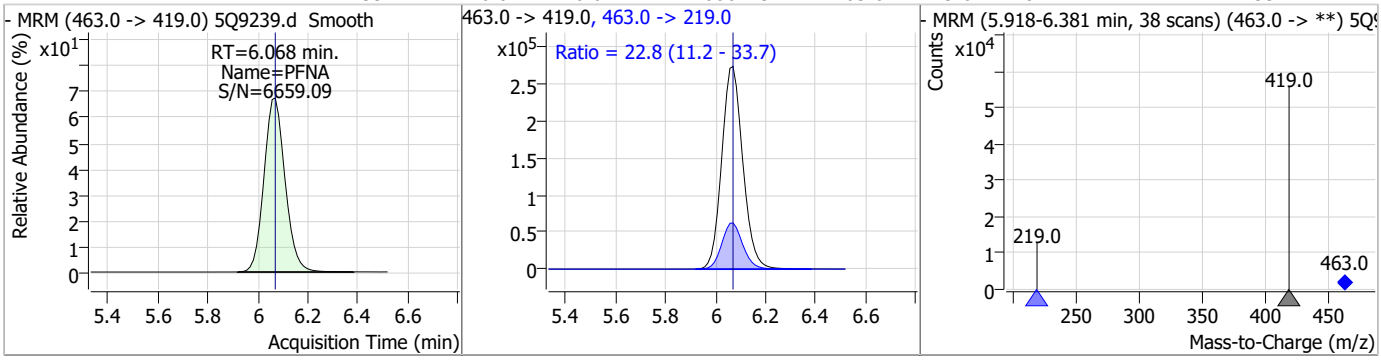
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	100.15	6.03	0.01	318097 (m)	499.0 -> 99.0	46.4	24.1	72.3



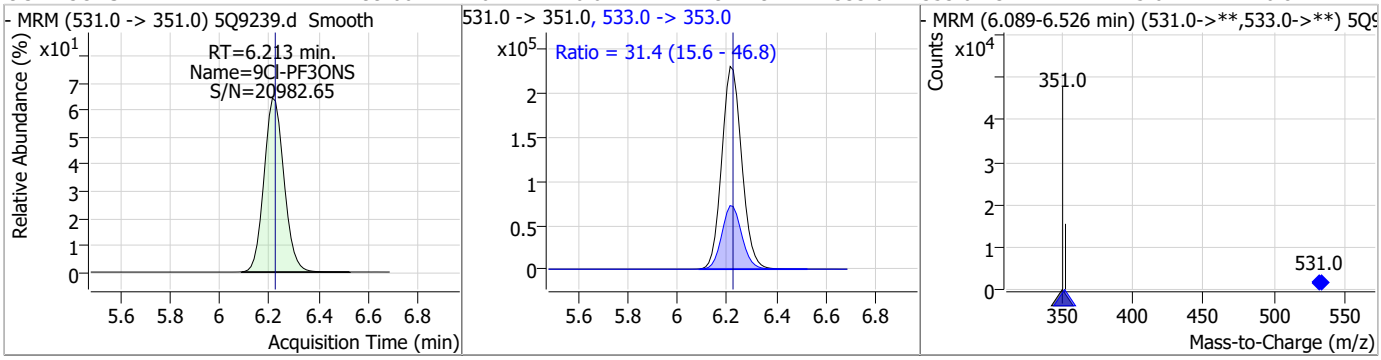
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.96	6.07	0.02	357967				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	99.71	6.07	0.02	1600279	463.0 -> 219.0	22.8	11.2	33.7

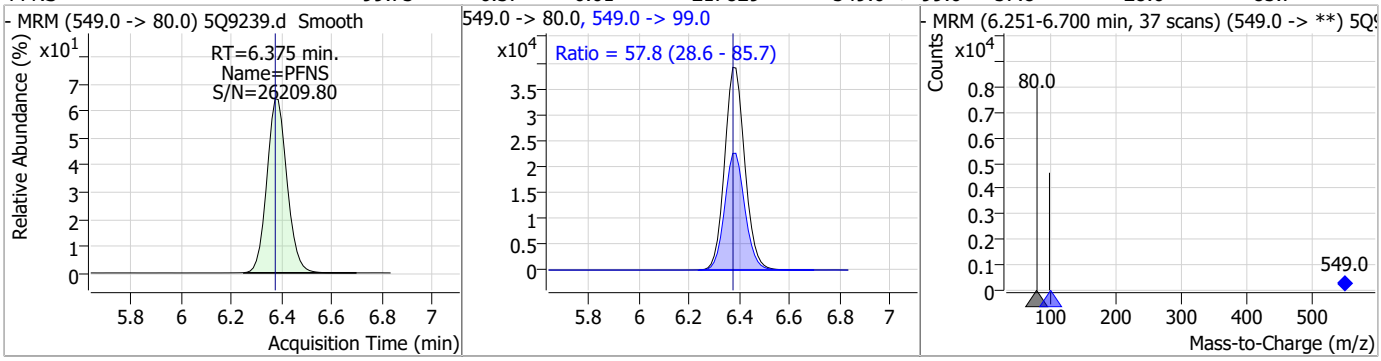


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	99.06	6.21	0.01	1294249	533.0 -> 353.0	31.4	15.6	46.8

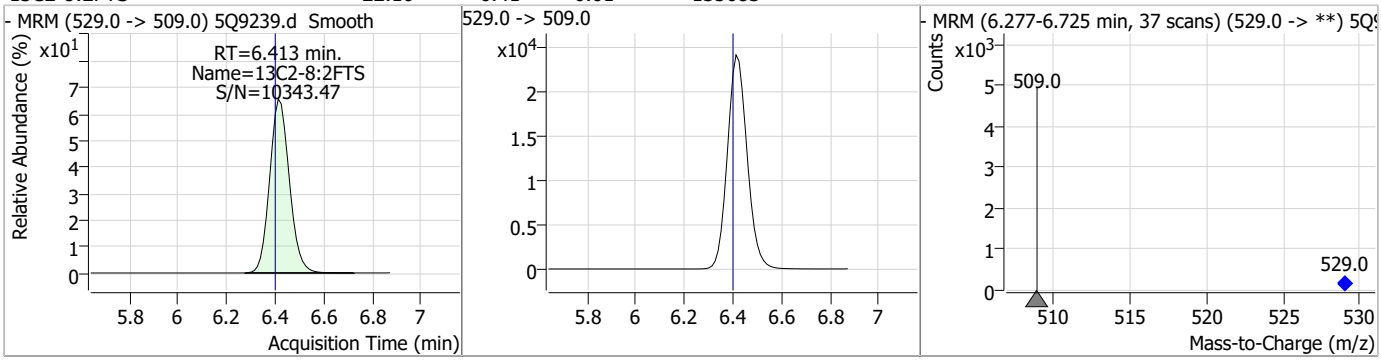


Perfluorinated Compounds by LC/MS/MS

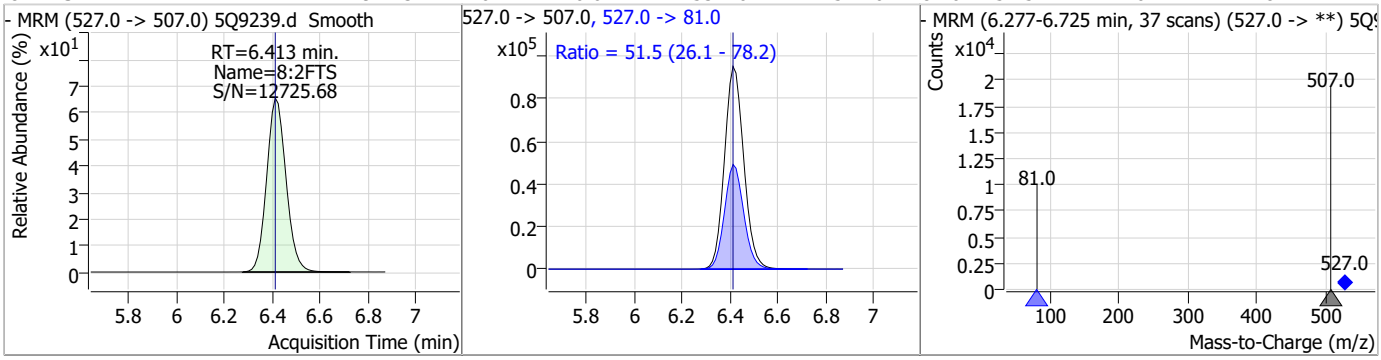
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	99.73	6.37	0.01	217829	549.0 -> 99.0	57.8	28.6	85.7



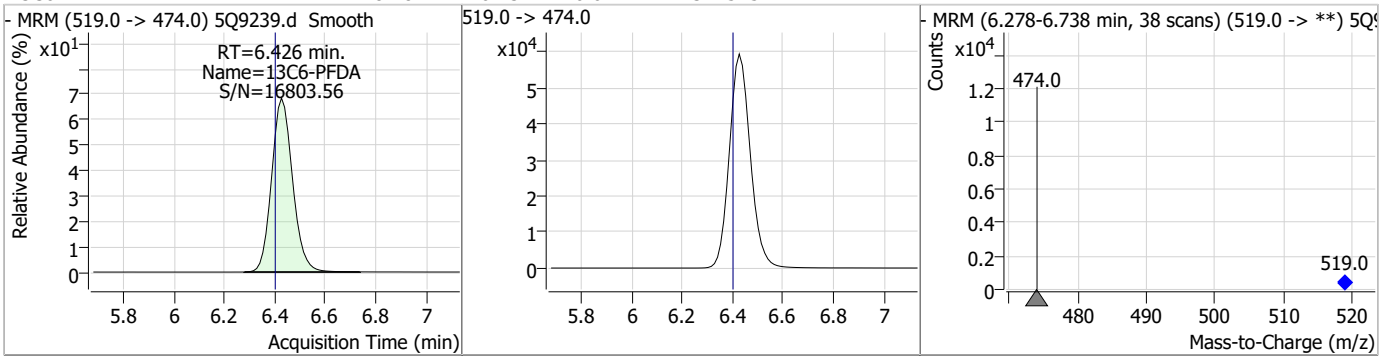
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	22.10	6.41	0.01	135683				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	92.23	6.41	0.01	534701	527.0 -> 81.0	51.5	26.1	78.2

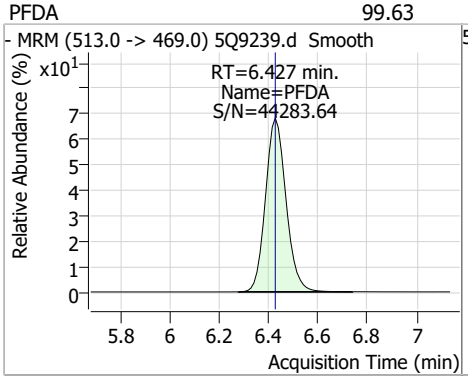


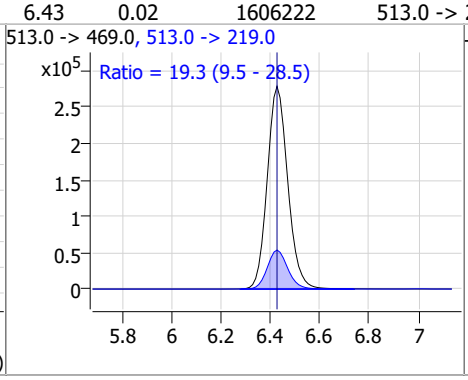
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.48	6.43	0.02	342575				

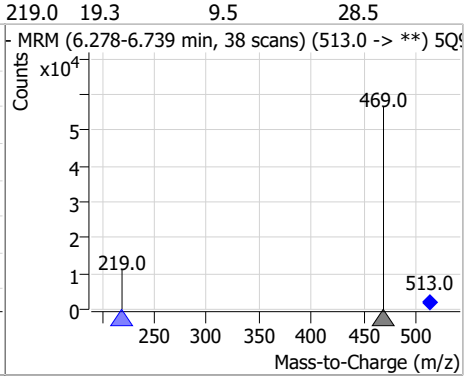


Perfluorinated Compounds by LC/MS/MS

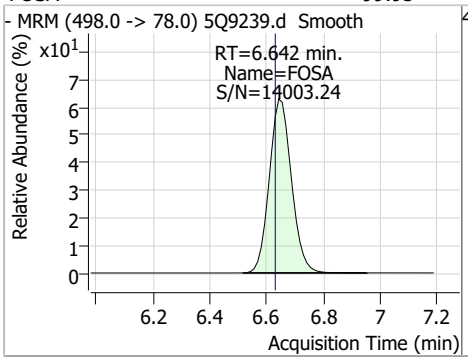
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	99.63	6.43	0.02	1606222	513.0 -> 219.0	19.3	9.5	28.5

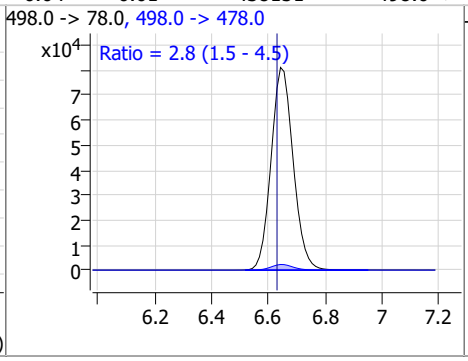


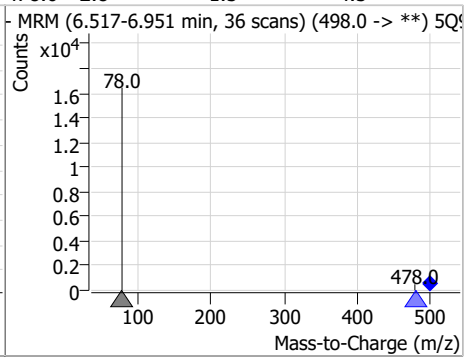




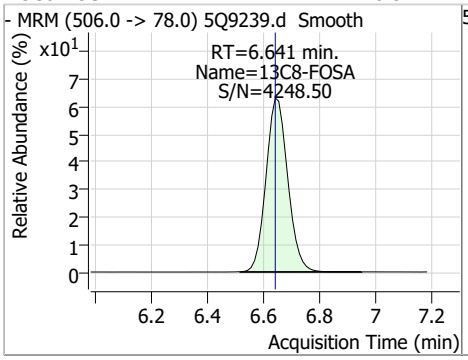
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	99.95	6.64	0.01	438151	498.0 -> 478.0	2.8	1.5	4.5

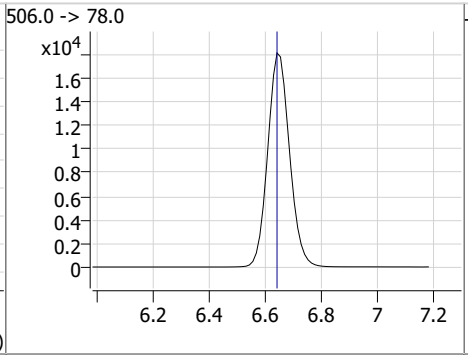


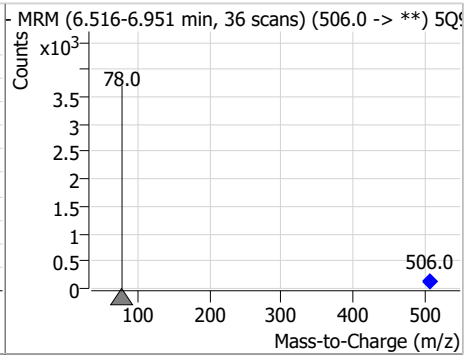




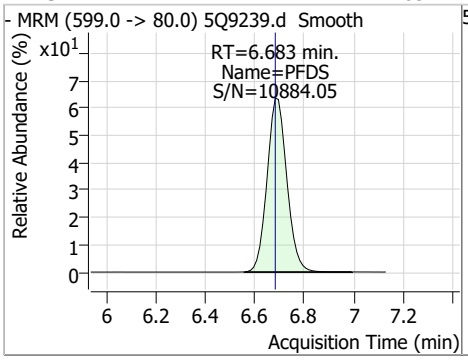
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	16.32	6.64	0.00	97811				

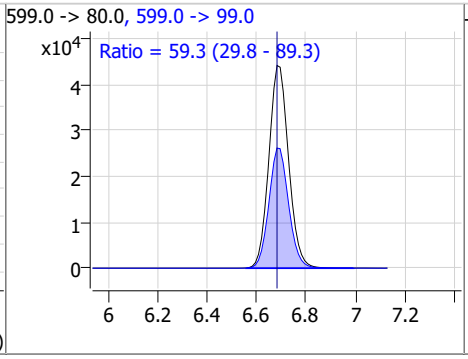


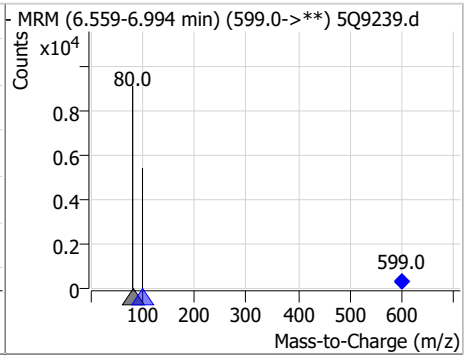




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	114.65	6.68	0.01	244311	599.0 -> 99.0	59.3	29.8	89.3

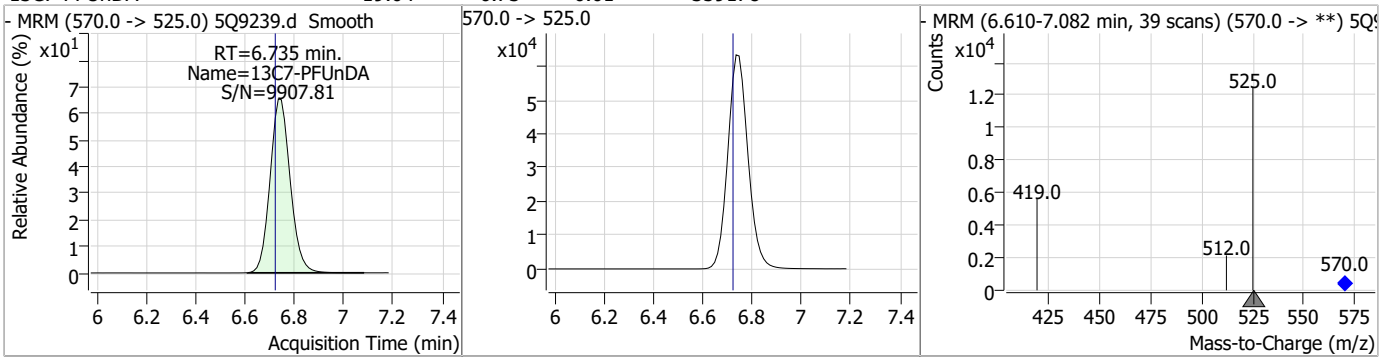




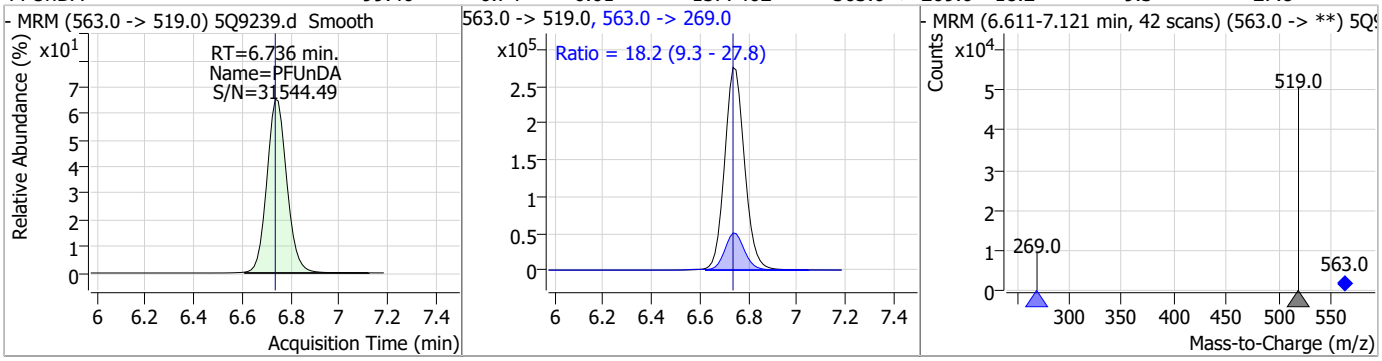


Perfluorinated Compounds by LC/MS/MS

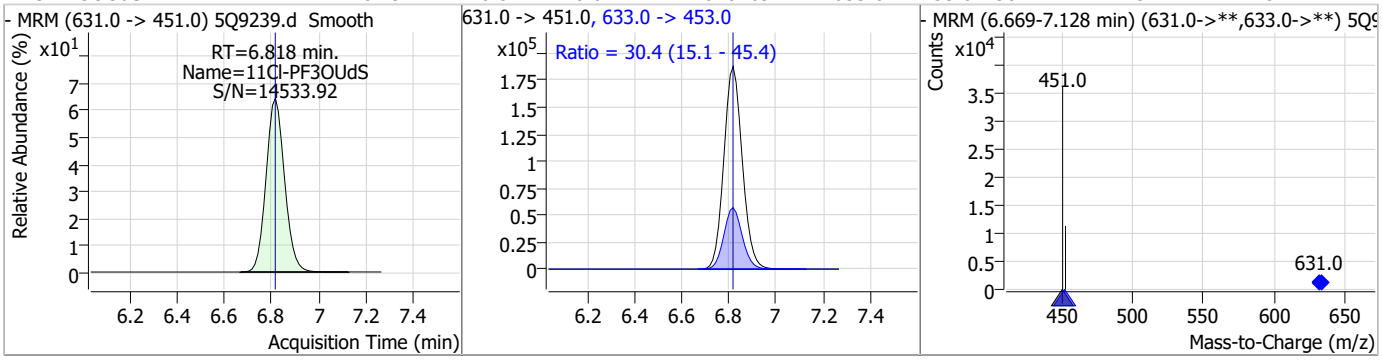
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	19.04	6.73	0.01	359178				



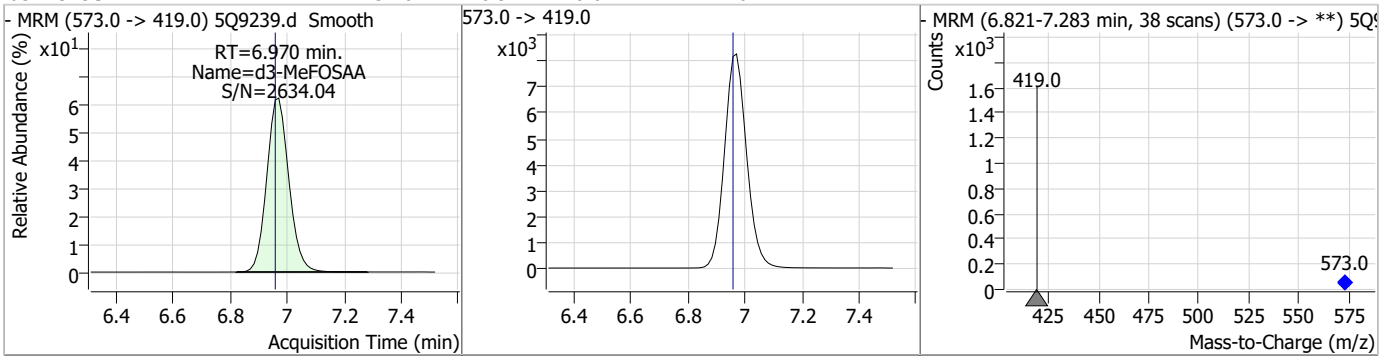
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	99.46	6.74	0.01	1577402	563.0 -> 269.0	18.2	9.3	27.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	87.91	6.82	0.02	1020269	633.0 -> 453.0	30.4	15.1	45.4

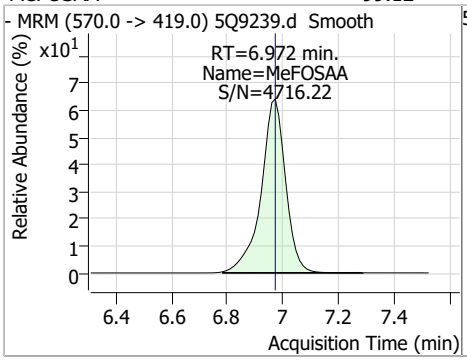


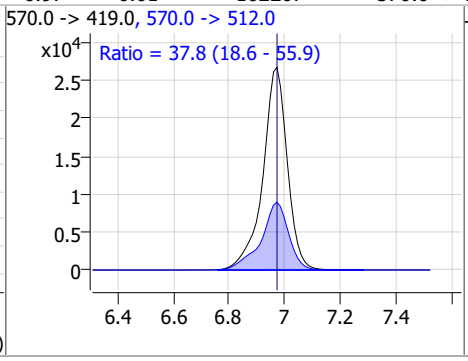
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	15.76	6.97	0.01	44170				

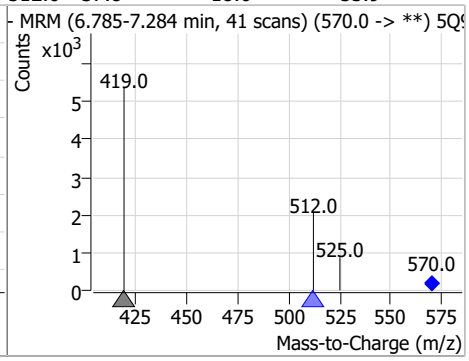


Perfluorinated Compounds by LC/MS/MS

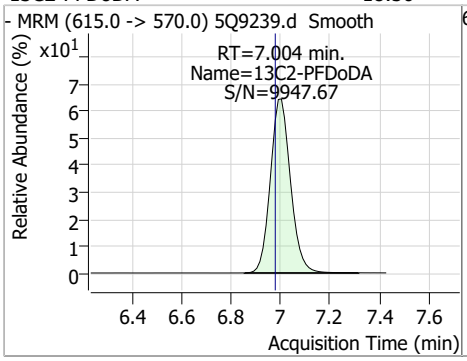
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	99.12	6.97	0.01	162207	570.0 -> 512.0	37.8	18.6	55.9

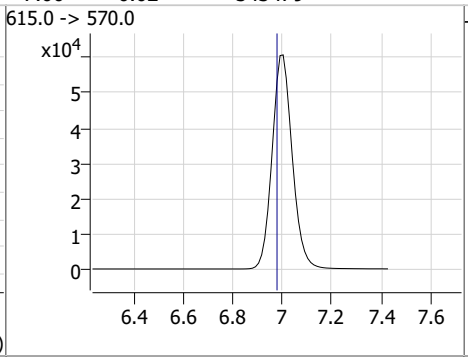


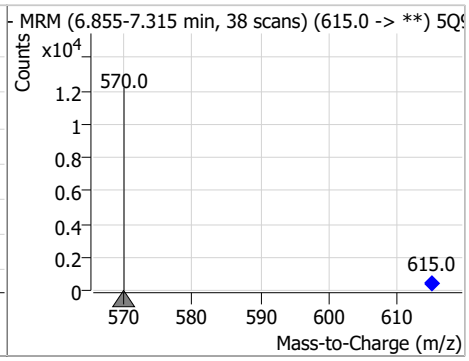




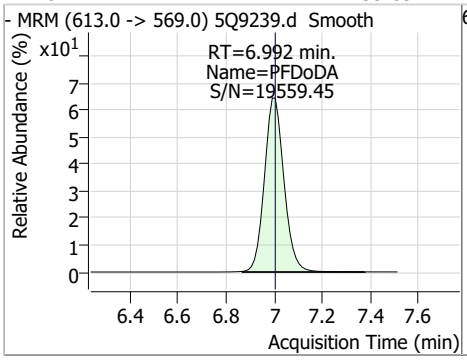
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	18.56	7.00	0.02	343479				

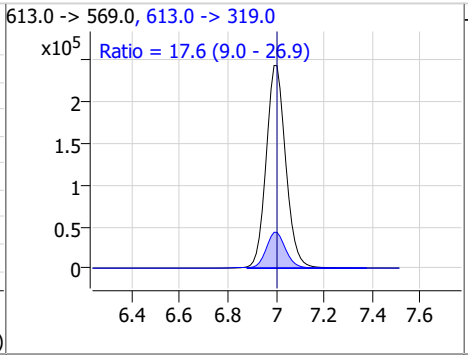


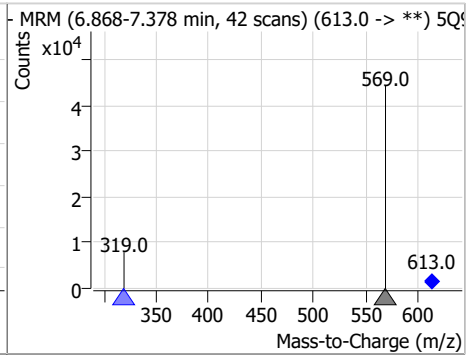




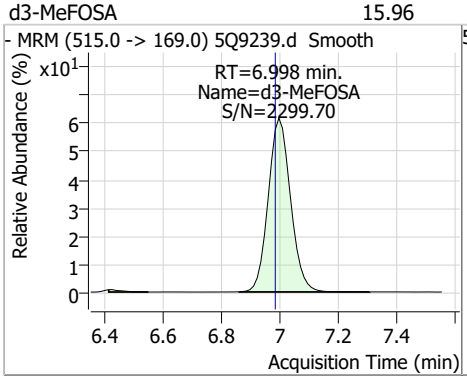
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	99.59	6.99	0.01	1382660	613.0 -> 319.0	17.6	9.0	26.9

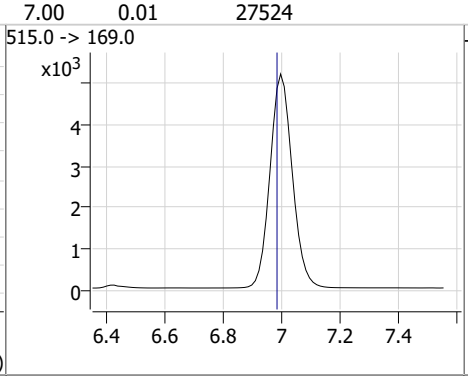


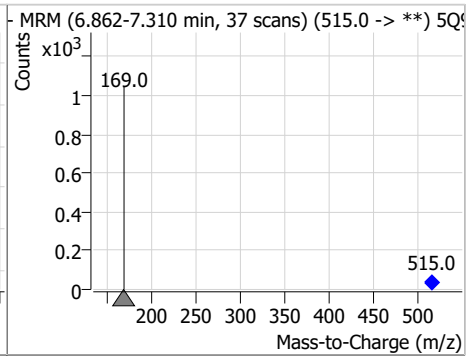




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	15.96	7.00	0.01	27524				

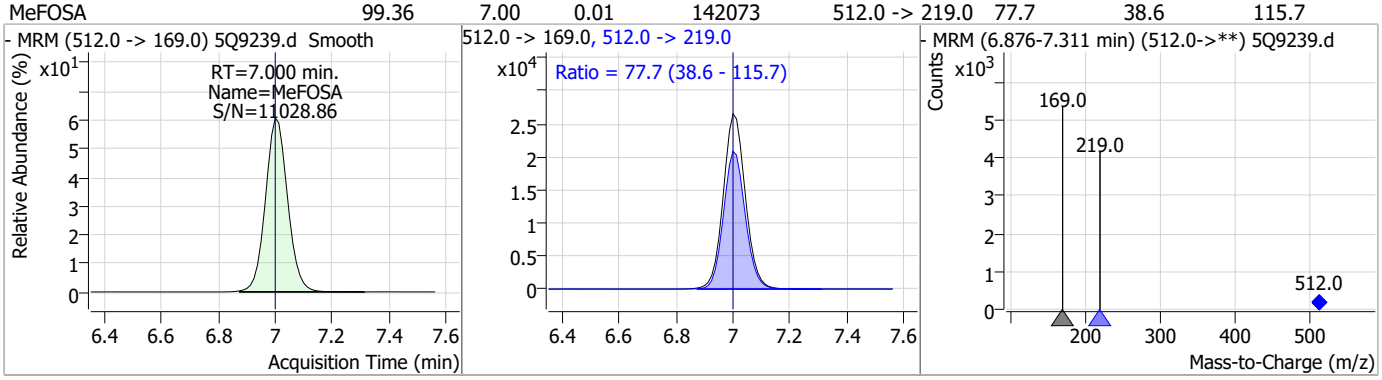




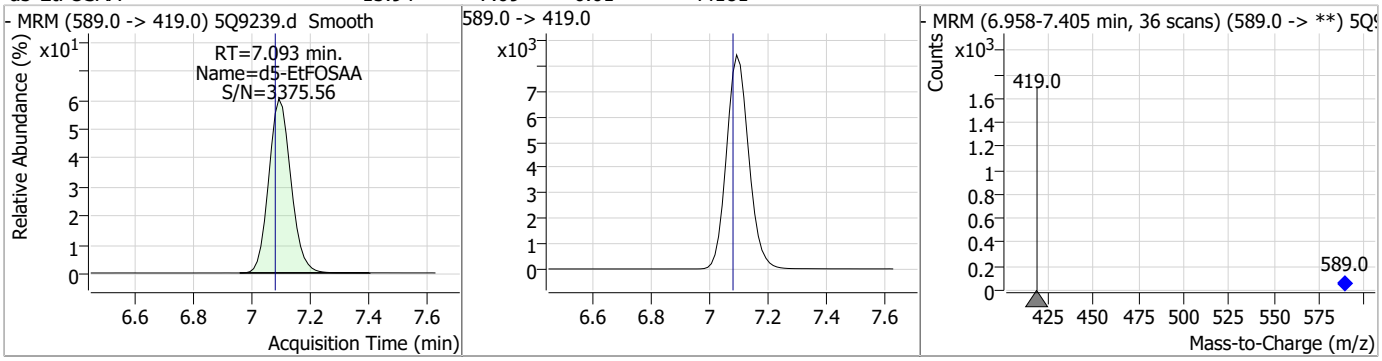


Perfluorinated Compounds by LC/MS/MS

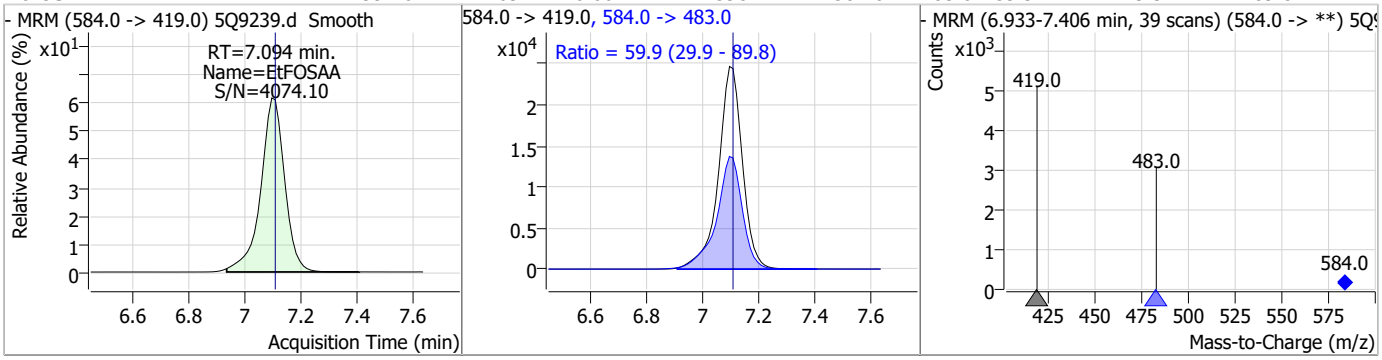
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	99.36	7.00	0.01	142073	512.0 -> 219.0	77.7	38.6	115.7



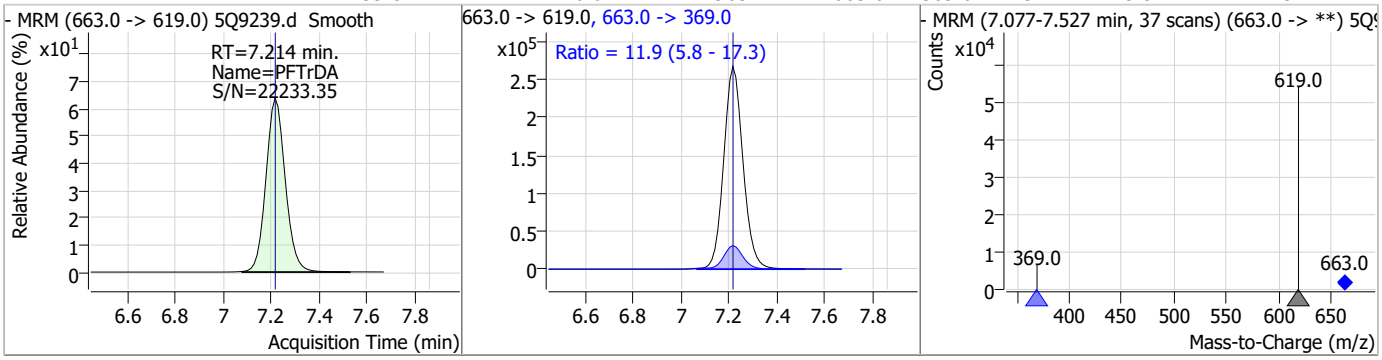
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	15.94	7.09	0.01	44181				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	99.10	7.09	0.00	145981	584.0 -> 483.0	59.9	29.9	89.8

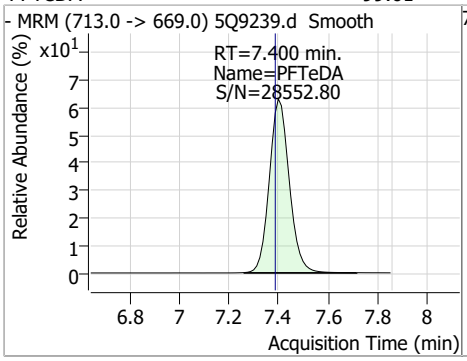


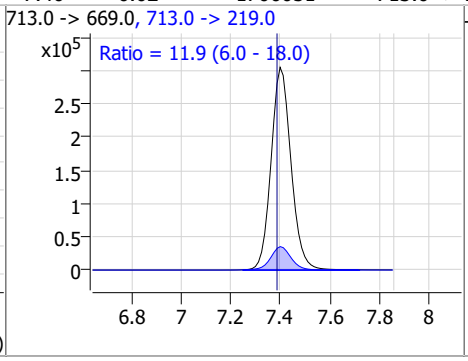
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	99.81	7.21	0.02	1496347	663.0 -> 369.0	11.9	5.8	17.3

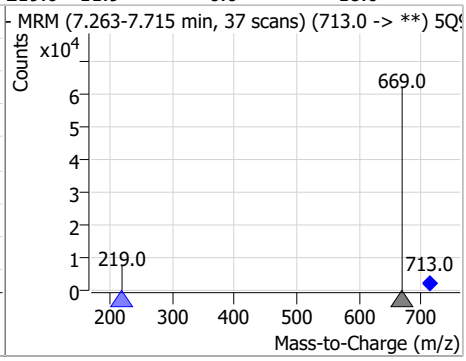


Perfluorinated Compounds by LC/MS/MS

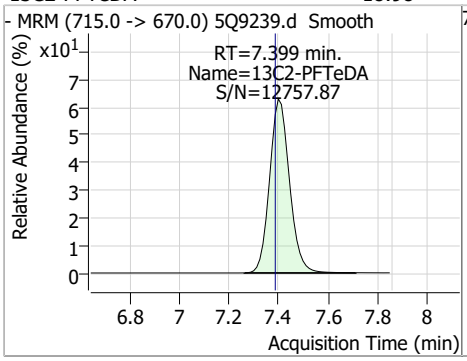
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	99.61	7.40	0.02	1706051	713.0 -> 219.0	11.9	6.0	18.0

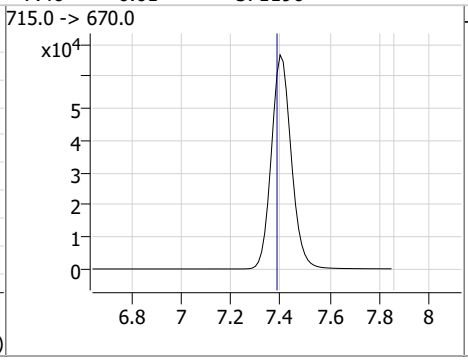


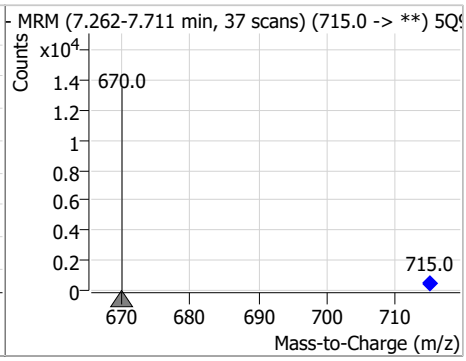




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	18.98	7.40	0.01	371190				







Manual Integration Approval Summary

Sample Number: S5Q137-IC137
Lab FileID: 5Q9239.D
Injection Time: 01/03/23 17:02
Method: EPA 537M QSM5.3 B-15
Analyst approved: 01/04/23 11:33 Lindsay Ritner
Supervisor approved: 01/04/23 15:00 Natasha Gumtie

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanesulfonic acid	1763-23-1		6.03	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Natasha Gumtie 01/04/23 15:00

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9241.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 1/3/2023 5:33:40 PM
Sample Name : icv137-20
Vial : P1-B1
DA Method File : ID_010323_S5Q137.quantmethod.xml
Batch Name : s5q137.batch.bin
Sample Information : OP94373,S5Q137,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.012	217.0 -> 172.0	107509	20.00	µg/L	0.038
M5-PFPeA	3.507	268.0 -> 223.0	203418	20.00	µg/L	0.037
M5-PFHxA	4.480	318.0 -> 273.0	285720	20.00	µg/L	0.025
M4-PFHpA	5.151	367.0 -> 322.0	278744	20.00	µg/L	0.039
M8-PFOA	5.660	421.0 -> 376.0	357661	20.00	µg/L	0.039
M9-PFNA	6.081	472.0 -> 427.0	357396	20.00	µg/L	0.038
M6-PFDA	6.452	519.0 -> 474.0	349488	20.00	µg/L	0.050
M7-PFUnDA	6.759	570.0 -> 525.0	353018	20.00	µg/L	0.037
M2-PFDoDA	7.017	615.0 -> 570.0	341955	20.00	µg/L	0.037
M2-PFTeDA	7.424	715.0 -> 670.0	361680	20.00	µg/L	0.037
M8-FOSA	6.654	506.0 -> 78.0	104581	20.00	µg/L	0.013
M3-PFBS	3.716	302.0 -> 99.0	24819	20.00	µg/L	0.037
M3-PFHxS	5.161	402.0 -> 99.0	30948	20.00	µg/L	0.038
M8-PFOS	6.054	507.0 -> 99.0	35580	20.00	µg/L	0.038
M2-4:2FTS	4.389	329.0 -> 309.0	87814	20.00	µg/L	0.040
M2-6:2FTS	5.620	429.0 -> 409.0	133221	20.00	µg/L	0.025
M2-8:2FTS	6.438	529.0 -> 509.0	111537	20.00	µg/L	0.037
M3-MeFOSAA	6.970	573.0 -> 419.0	41483	20.00	µg/L	0.012
M3-HFPO-DA	4.681	287.0 -> 169.0	62627	20.00	µg/L	0.037
M3-MeFOSA	7.011	515.0 -> 169.0	31963	20.00	µg/L	0.025
M5-EtFOSAA	7.106	589.0 -> 419.0	42209	20.00	µg/L	0.025
System Monitoring Compounds						
13C2-4:2FTS	4.389	329.0 -> 309.0	87814	18.57	µg/L	0.040
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%		
13C2-6:2FTS	5.620	429.0 -> 409.0	133221	18.71	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.6%		
13C2-8:2FTS	6.438	529.0 -> 509.0	111537	18.16	µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.8%		
13C2-PFDoDA	7.017	615.0 -> 570.0	341955	18.48	µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.4%		
13C2-PFTeDA	7.424	715.0 -> 670.0	361680	18.50	µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.5%		
13C3-PFBS	3.716	302.0 -> 99.0	24819	19.36	µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.8%		
13C3-PFHxS	5.161	402.0 -> 99.0	30948	19.48	µg/L	0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.4%		
13C4-PFBA	2.012	217.0 -> 172.0	107509	18.75	µg/L	0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.8%		
13C4-PFHpA	5.151	367.0 -> 322.0	278744	18.97	µg/L	0.039
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.9%		
13C5-PFHxA	4.480	318.0 -> 273.0	285720	19.45	µg/L	0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.3%		
13C5-PFPeA	3.507	268.0 -> 223.0	203418	19.58	µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.9%		
13C6-PFDA	6.452	519.0 -> 474.0	349488	18.85	µg/L	0.050

Perfluorinated Compounds by LC/MS/MS

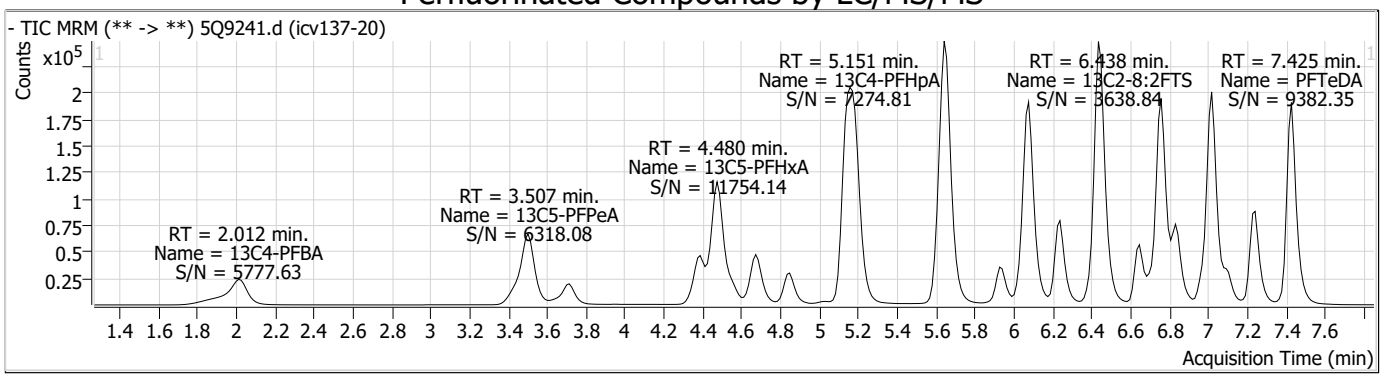
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.3%			
13C7-PFUnDA	6.759	570.0 -> 525.0	353018	18.71	µg/L		0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.6%			
13C8-FOSA	6.654	506.0 -> 78.0	104581	17.45	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 87.2%			
13C8-PFOA	5.660	421.0 -> 376.0	357661	18.99	µg/L		0.039
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.9%			
13C8-PFOS	6.054	507.0 -> 99.0	35580	18.67	µg/L		0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.3%			
13C9-PFNA	6.081	472.0 -> 427.0	357396	18.93	µg/L		0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.6%			
d3-MeFOSAA	6.970	573.0 -> 419.0	41483	14.80	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 74.0%			
13C3-HFPO-DA	4.681	287.0 -> 169.0	62627	18.67	µg/L		0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.4%			
d3-MeFOSA	7.011	515.0 -> 169.0	31963	18.54	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.7%			
d5-EtFOSAA	7.106	589.0 -> 419.0	42209	15.22	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 76.1%			
Target Compounds							QValue
4:2FTS	4.390	327.0 -> 307.0	72369	18.10	µg/L		100
		327.0 -> 81.0	43221				
6:2FTS	5.620	427.0 -> 407.0	107056	18.50	µg/L		99
		427.0 -> 81.0	47130				
8:2FTS	6.438	527.0 -> 507.0	91835	19.27	µg/L		100
		527.0 -> 81.0	47932				
EtFOSAA	7.106	584.0 -> 419.0	23240	16.51	µg/L		100
		584.0 -> 483.0	13835				
FOSA	6.654	498.0 -> 78.0	80112	17.09	µg/L		99
		498.0 -> 478.0	2194				
MeFOSAA	6.972	570.0 -> 419.0	27571	17.94	µg/L		94
		570.0 -> 512.0	9233				
PFBA	2.019	213.0 -> 169.0	94280	18.72	µg/L		100
PFBS	3.719	299.0 -> 80.0	54337	15.26	µg/L		99
		299.0 -> 99.0	23275				
PFDA	6.452	513.0 -> 469.0	283482	17.24	µg/L		99
		513.0 -> 219.0	54707				
PFDoDA	7.017	613.0 -> 569.0	278850	20.17	µg/L		100
		613.0 -> 319.0	50081				
PFDS	6.708	599.0 -> 80.0	41049	19.60	µg/L		99
		599.0 -> 99.0	24874				
PFHpA	5.152	363.0 -> 319.0	272485	17.97	µg/L		100
		363.0 -> 169.0	60985				
PFHpS	5.646	449.0 -> 80.0	44505	17.26	µg/L		99
		449.0 -> 99.0	23987				
PFHxA	4.480	313.0 -> 269.0	219502	17.24	µg/L		100
		313.0 -> 119.0	10209				
PFHxS	5.162	399.0 -> 80.0	42493	15.04	µg/L	m	98
		399.0 -> 99.0	24505				
PFNA	6.082	463.0 -> 419.0	269886	16.84	µg/L		100
		463.0 -> 219.0	60891				
PFNS	6.399	549.0 -> 80.0	36882	17.42	µg/L		98
		549.0 -> 99.0	21675				
PFOA	5.661	413.0 -> 369.0	320715	18.11	µg/L		100
		413.0 -> 169.0	88068				
PFOS	6.042	499.0 -> 80.0	59953	19.47	µg/L	m	98

Perfluorinated Compounds by LC/MS/MS

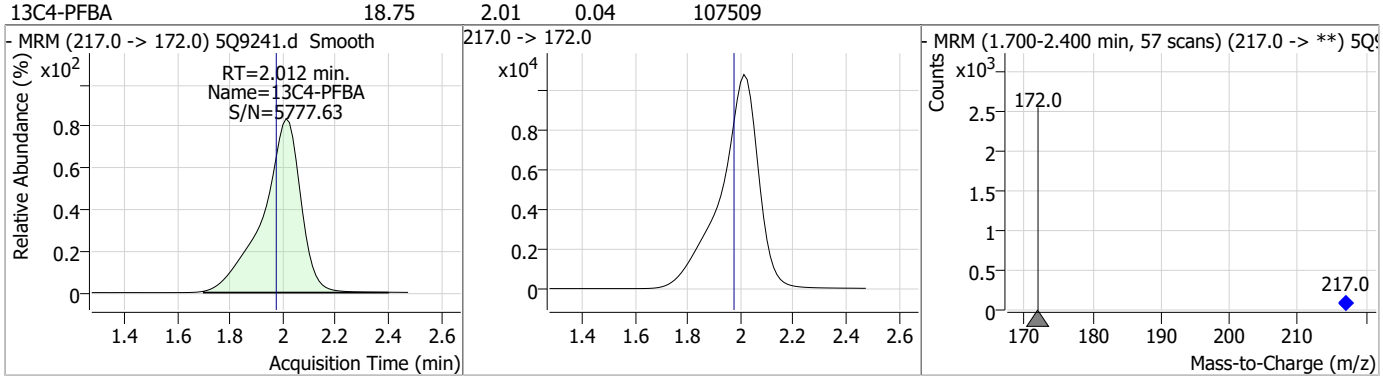
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
		499.0 -> 99.0	29606				
PFPeA	3.509	263.0 -> 219.0	175255	16.68	µg/L		100
PFPeS	4.551	349.0 -> 80.0	34302	15.85	µg/L		98
		349.0 -> 99.0	17665				
PFTeDA	7.425	713.0 -> 669.0	275446	16.50	µg/L		98
		713.0 -> 219.0	31279				
PFTrDA	7.239	663.0 -> 619.0	284560	19.07	µg/L		99
		663.0 -> 369.0	32429				
PFUnDA	6.760	563.0 -> 519.0	290576	18.64	µg/L		99
		563.0 -> 269.0	52751				
11Cl-PF3OUdS	6.830	631.0 -> 451.0	165128	17.52	µg/L		99
		633.0 -> 453.0	50808				
9Cl-PF3ONS	6.239	531.0 -> 351.0	215382	17.12	µg/L		100
		533.0 -> 353.0	67644				
ADONA	5.188	377.0 -> 251.0	363622	17.16	µg/L		100
		377.0 -> 85.0	135682				
HFPO-DA	4.677	329.0 -> 169.0	86701	19.13	µg/L		100
		285.0 -> 169.0	51136				
MeFOSA	6.975	512.0 -> 169.0	0		µg/L	m	1
		512.0 -> 219.0	0				
4-PFECHS	-	461.0 -> 381.0	-	N.D.			
		461.0 -> 99.0					
FBSA	4.854	298.0 -> 78.0	106653	17.10	µg/L		99
		298.0 -> 64.0	10026				
FHxSA	5.948	398.0 -> 78.0	103031	18.35	µg/L		100
		398.0 -> 64.0	9730				

 # = Qualifier out of range, m = manually integrated, + = Area summed

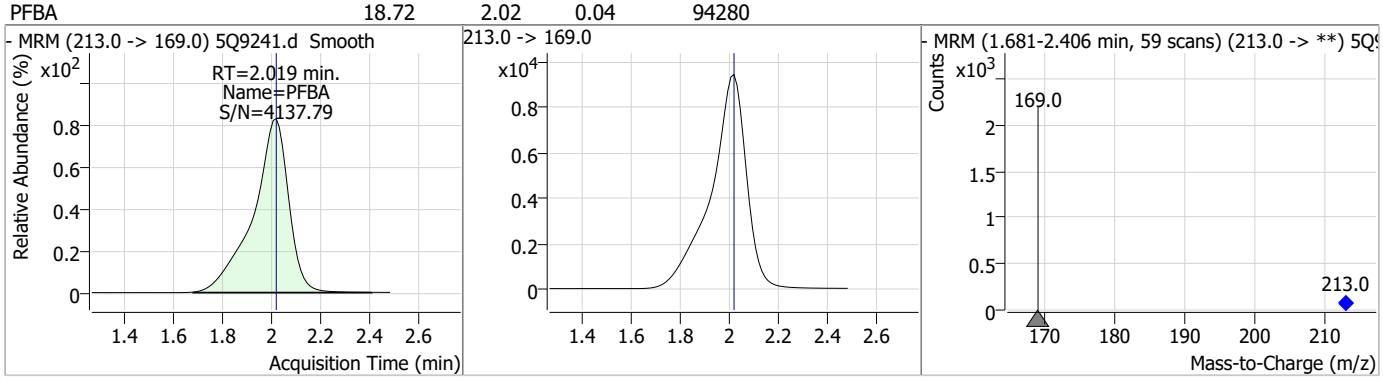
Perfluorinated Compounds by LC/MS/MS



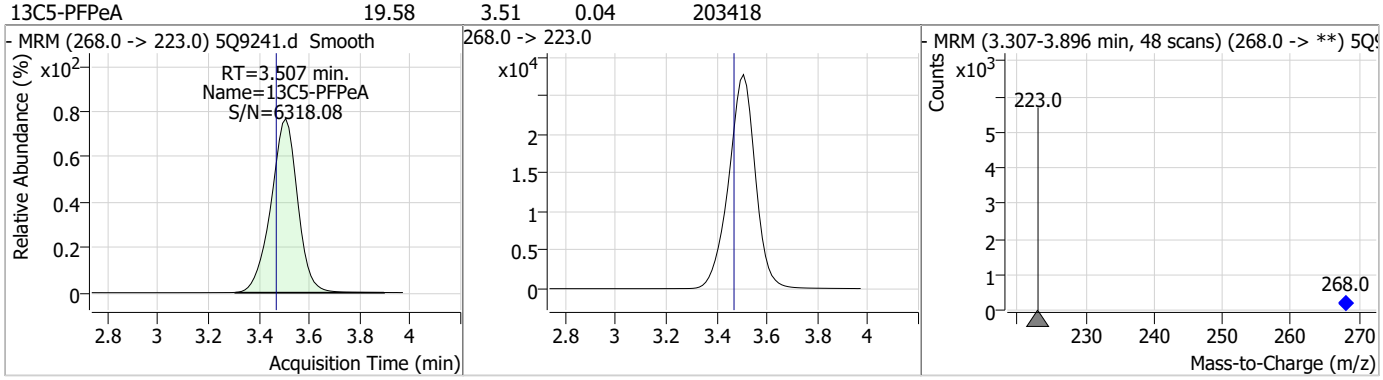
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.75	2.01	0.04	107509				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	18.72	2.02	0.04	94280				

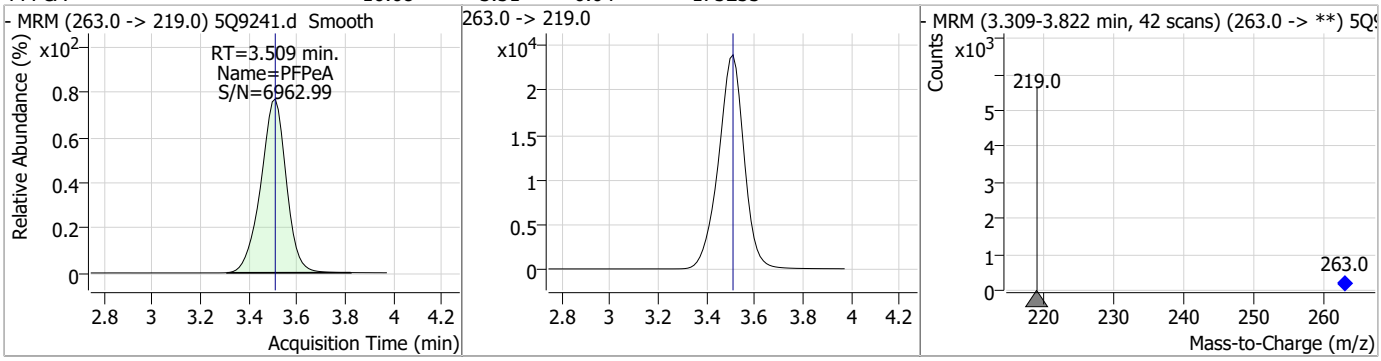


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.58	3.51	0.04	203418				

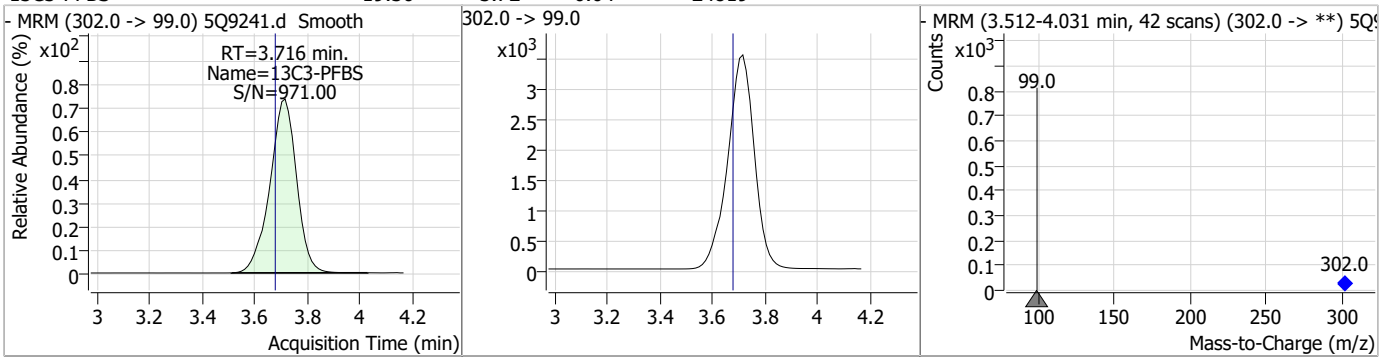


Perfluorinated Compounds by LC/MS/MS

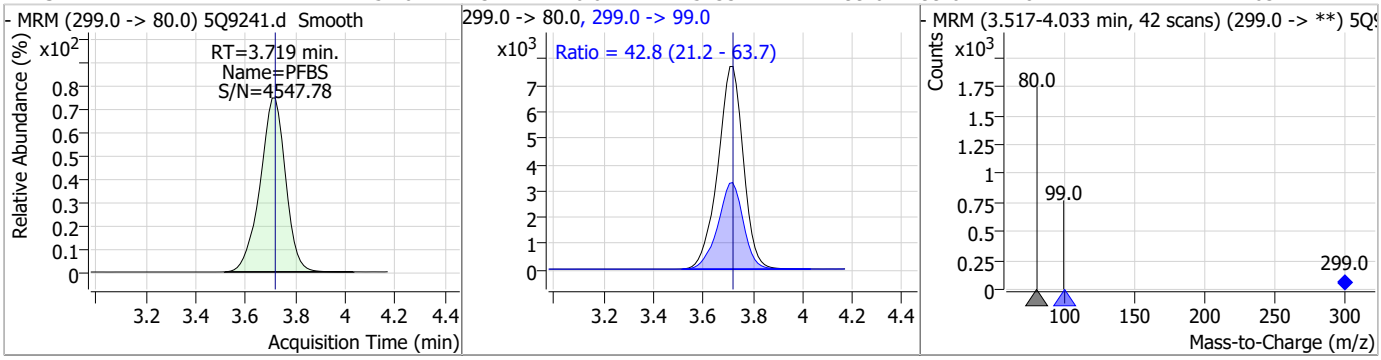
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	16.68	3.51	0.04	175255				



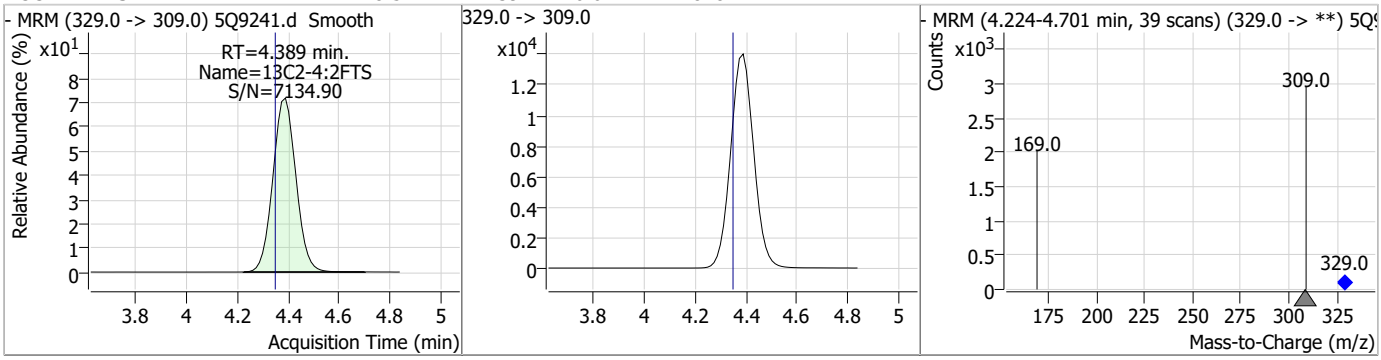
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.36	3.72	0.04	24819				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	15.26	3.72	0.04	54337	299.0 -> 99.0	42.8	21.2	63.7

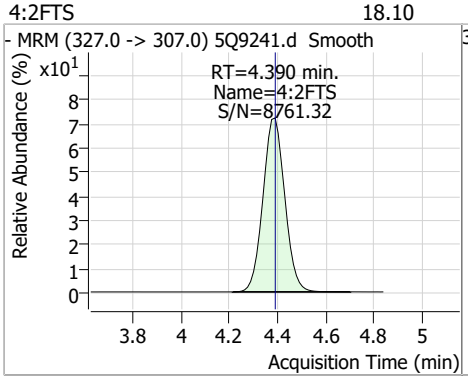


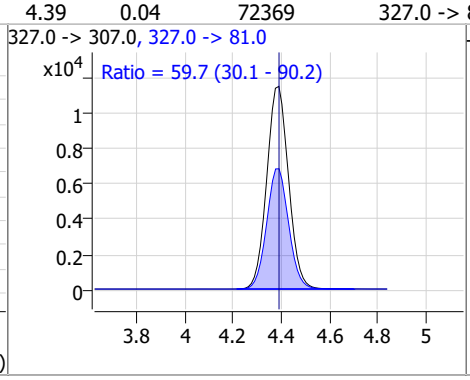
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.57	4.39	0.04	87814				

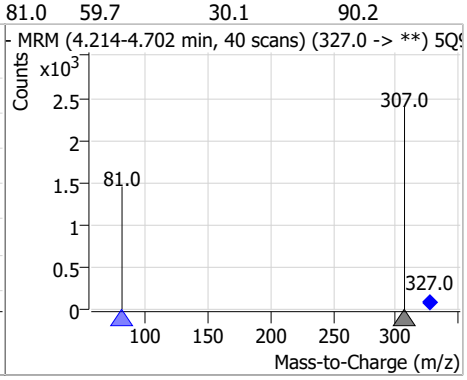


Perfluorinated Compounds by LC/MS/MS

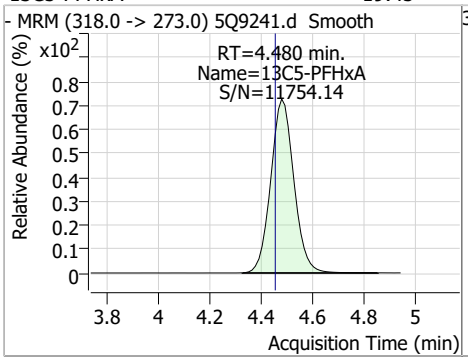
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	18.10	4.39	0.04	72369	327.0 -> 81.0	59.7	30.1	90.2

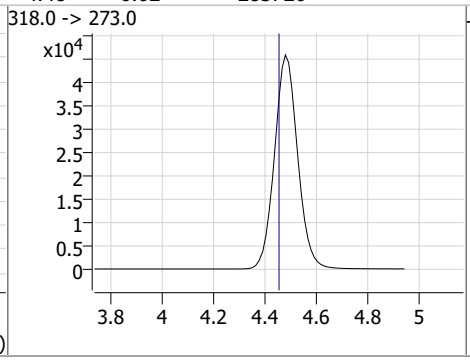


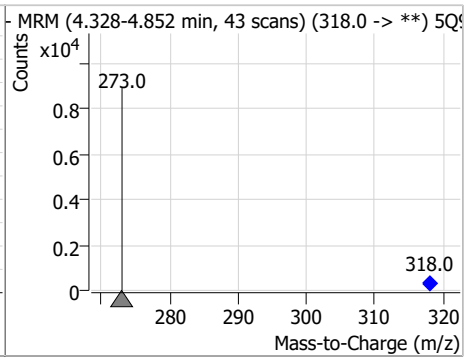




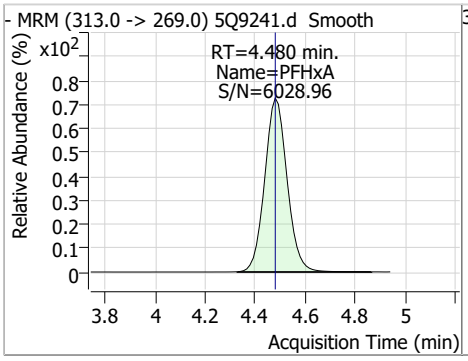
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.45	4.48	0.02	285720				

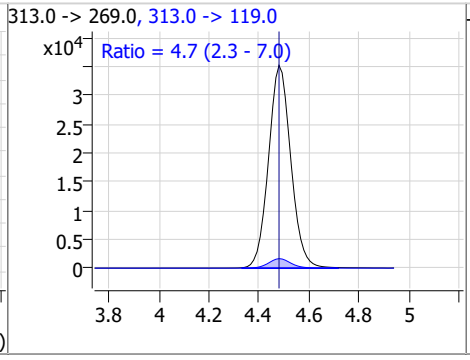


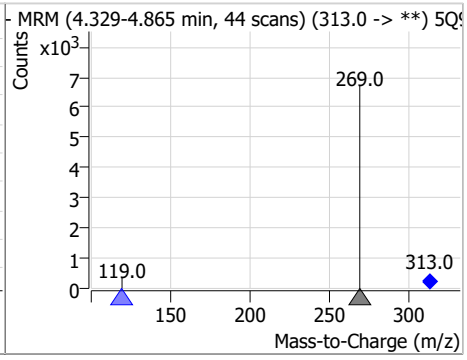




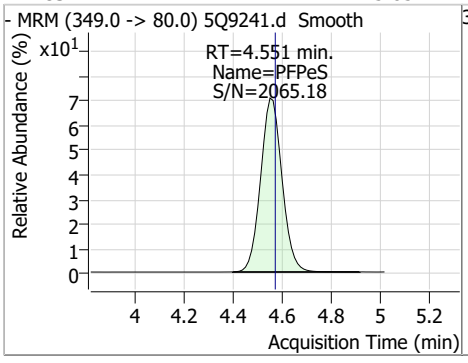
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	17.24	4.48	0.02	219502	313.0 -> 119.0	4.7	2.3	7.0

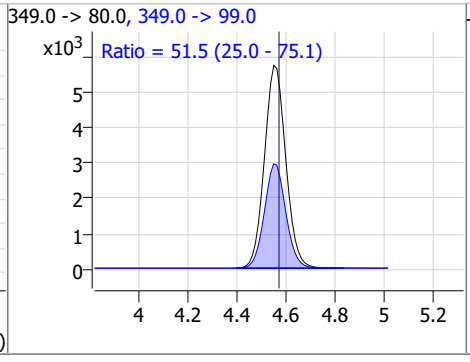


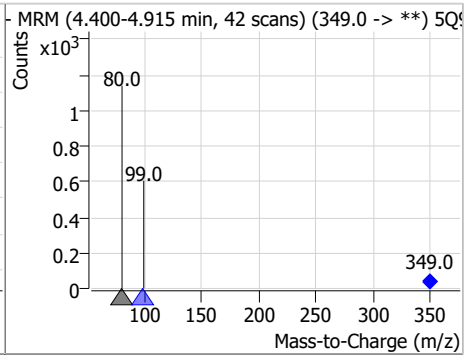




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	15.85	4.55	0.02	34302	349.0 -> 99.0	51.5	25.0	75.1

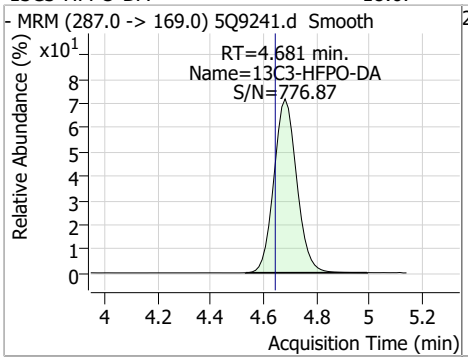


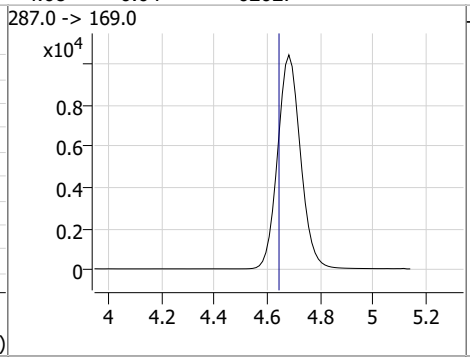


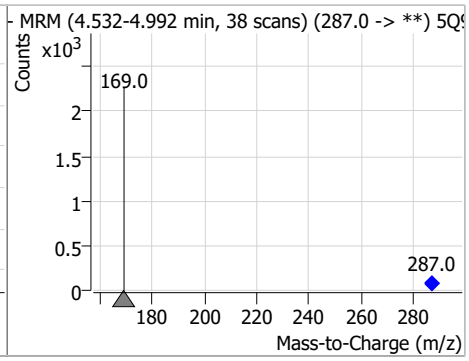


Perfluorinated Compounds by LC/MS/MS

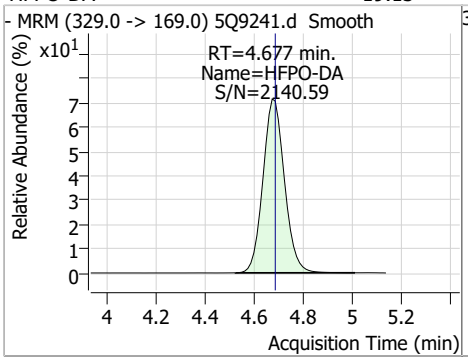
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	18.67	4.68	0.04	62627				

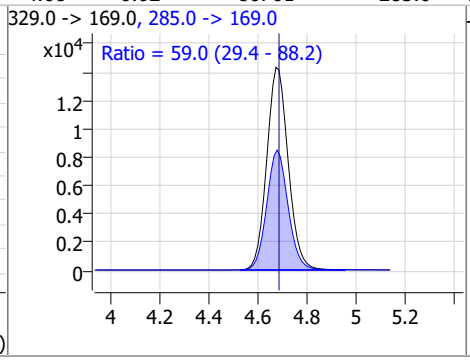


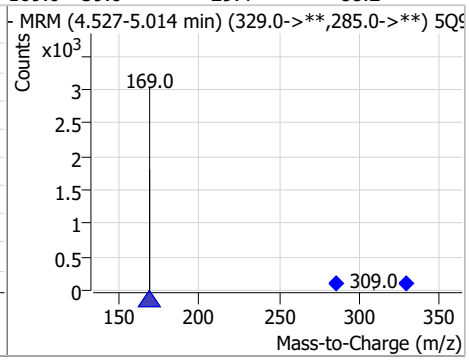




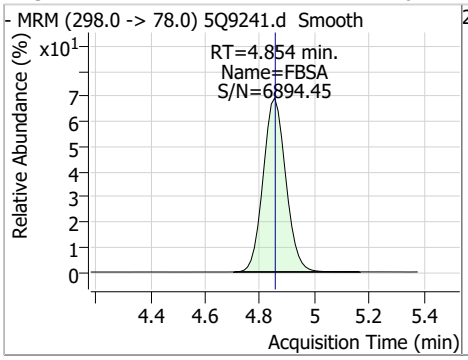
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	19.13	4.68	0.02	86701	285.0 -> 169.0	59.0	29.4	88.2

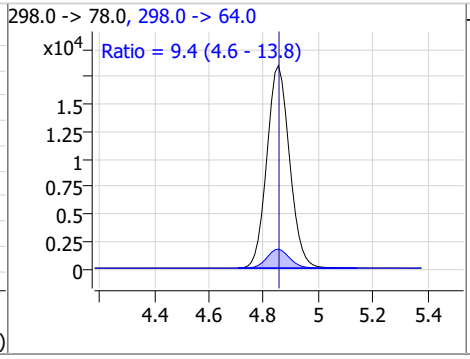


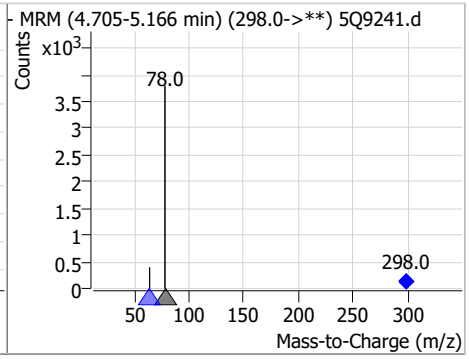




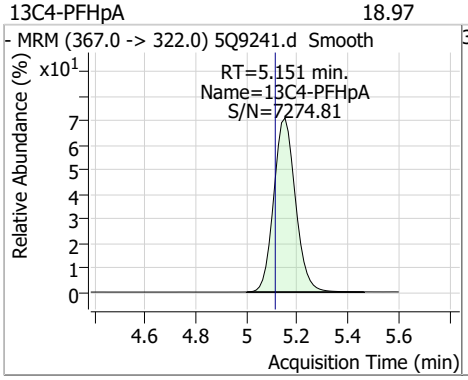
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	17.10	4.85	0.02	106653	298.0 -> 64.0	9.4	4.6	13.8

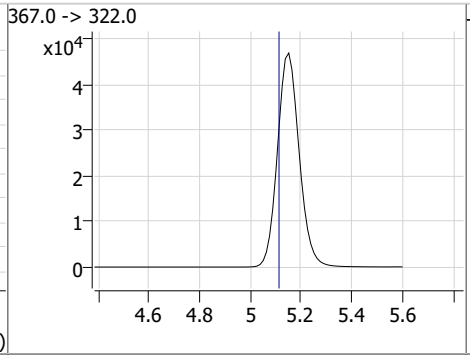


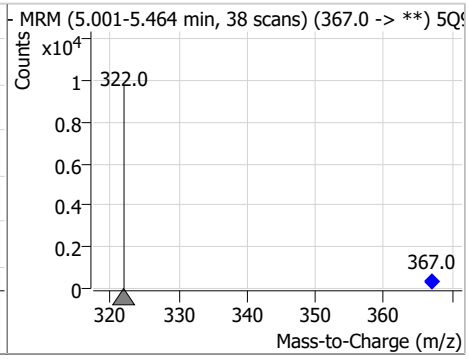




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	18.97	5.15	0.04	278744				

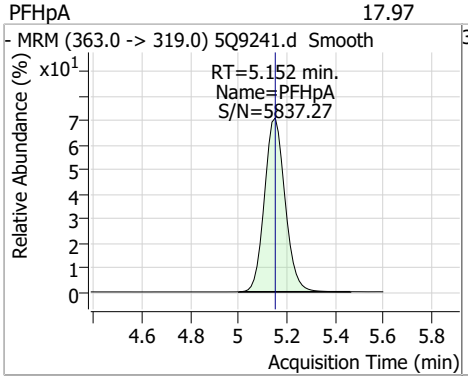


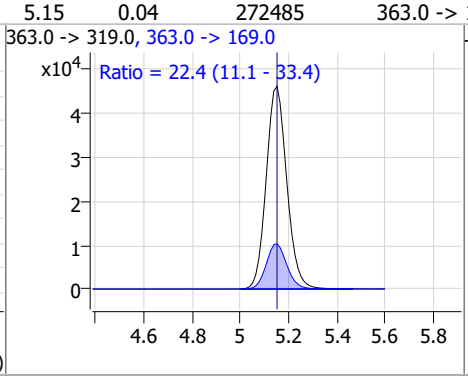


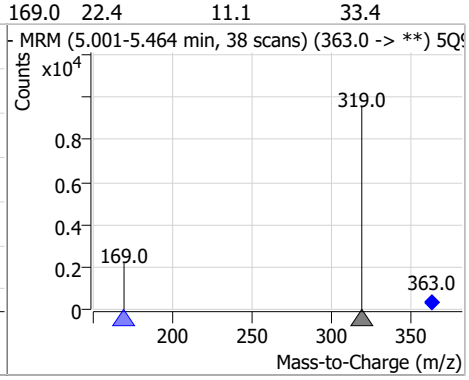


Perfluorinated Compounds by LC/MS/MS

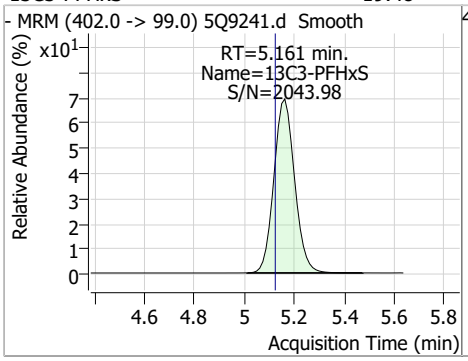
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	17.97	5.15	0.04	272485	363.0 -> 169.0	22.4	11.1	33.4

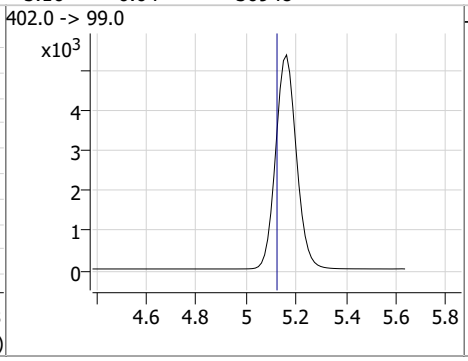


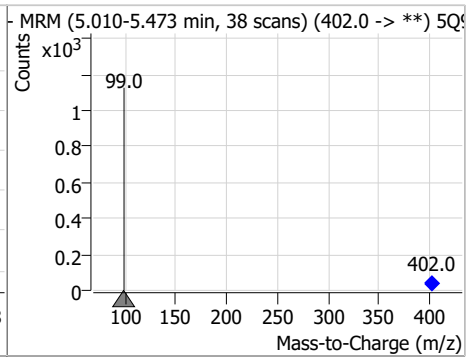




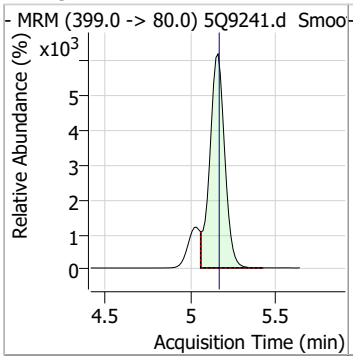
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.48	5.16	0.04	30948				

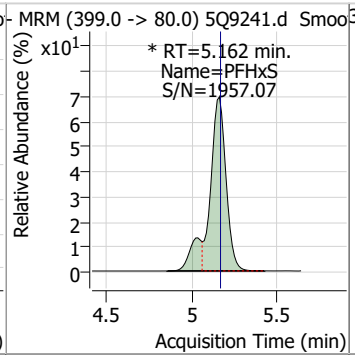


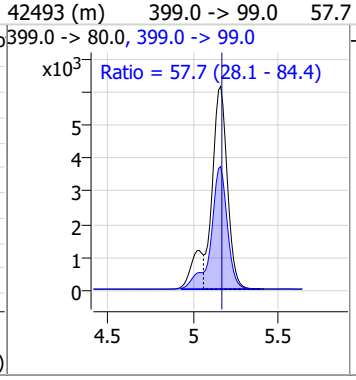


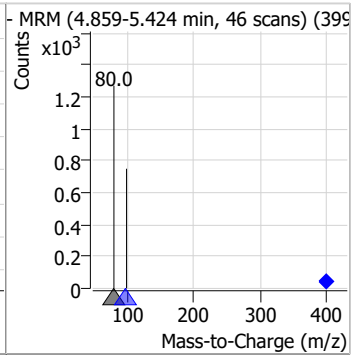


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	15.04	5.16	0.04	42493 (m)	399.0 -> 99.0	57.7	28.1	84.4

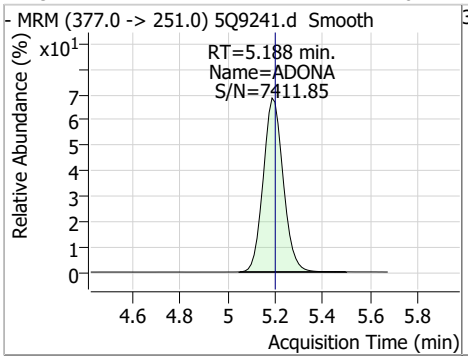


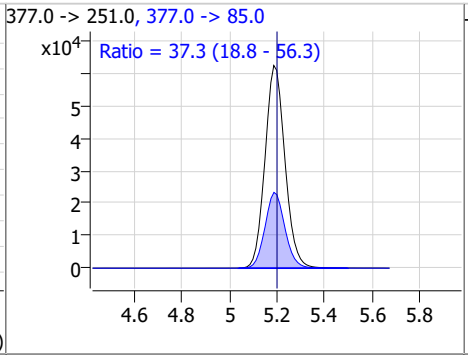


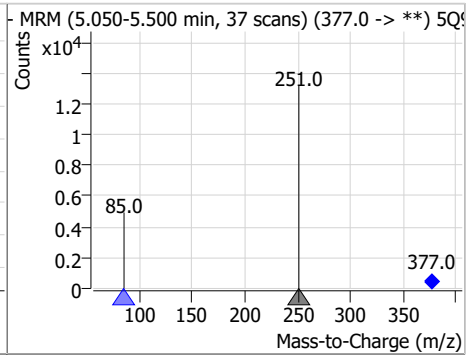




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	17.16	5.19	0.02	363622	377.0 -> 85.0	37.3	18.8	56.3

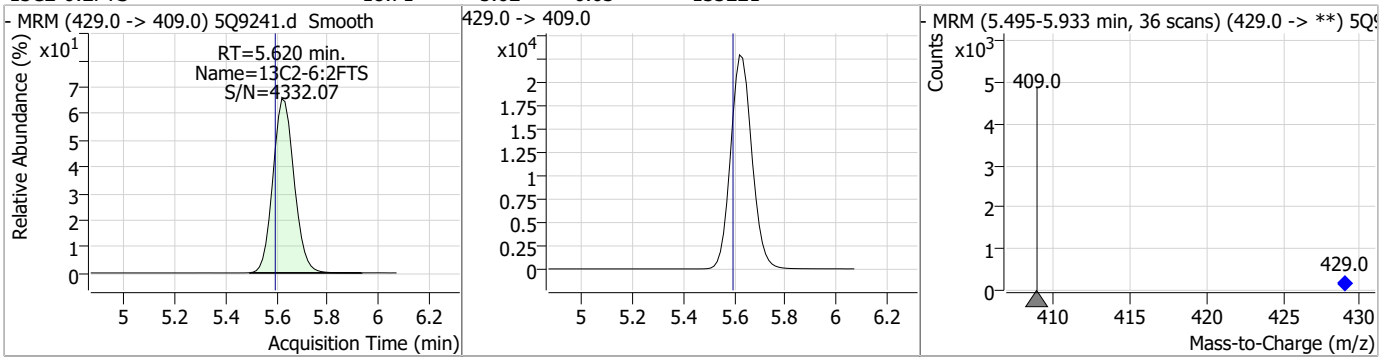




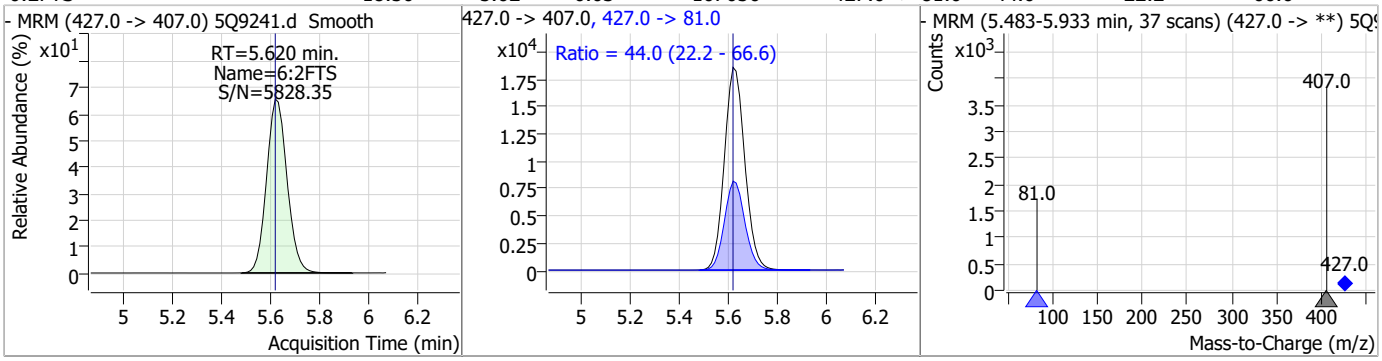


Perfluorinated Compounds by LC/MS/MS

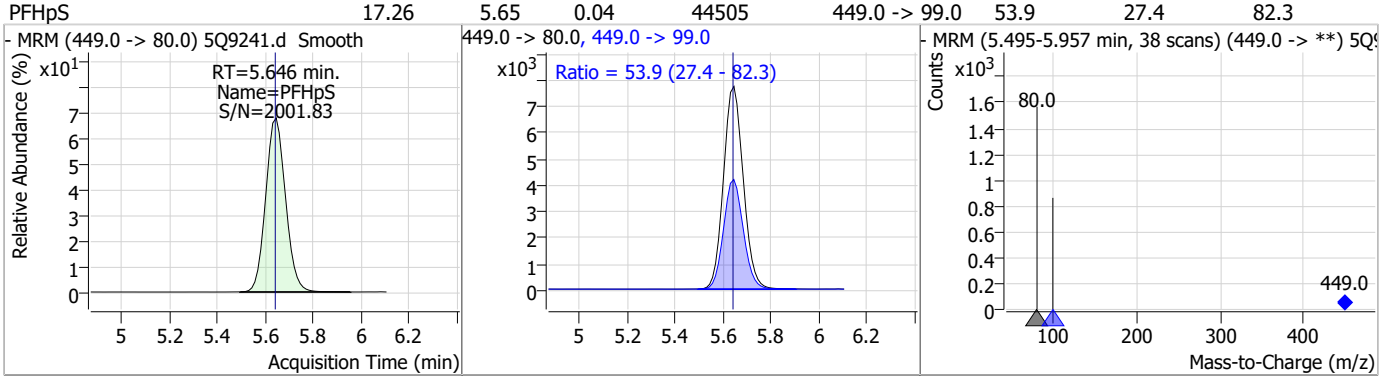
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.71	5.62	0.03	133221				



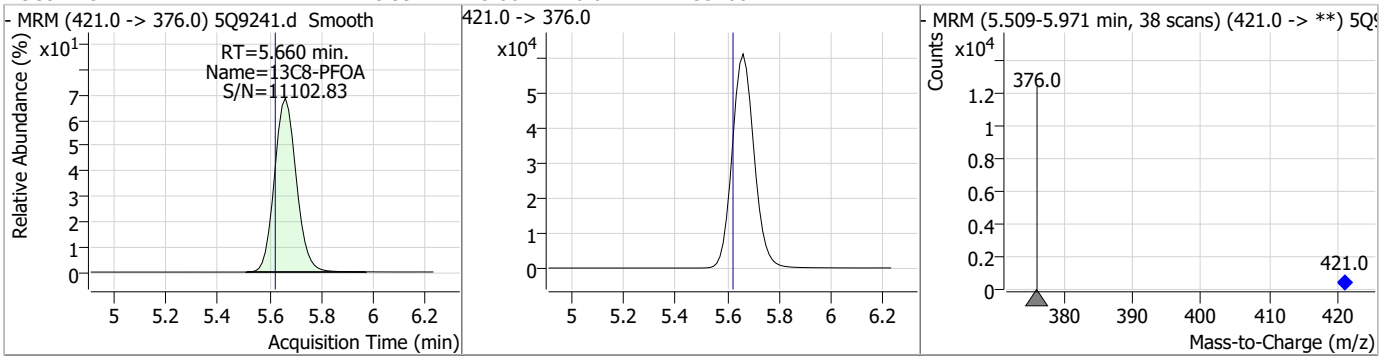
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	18.50	5.62	0.03	107056	427.0 -> 81.0	44.0	22.2	66.6



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	17.26	5.65	0.04	44505	449.0 -> 99.0	53.9	27.4	82.3

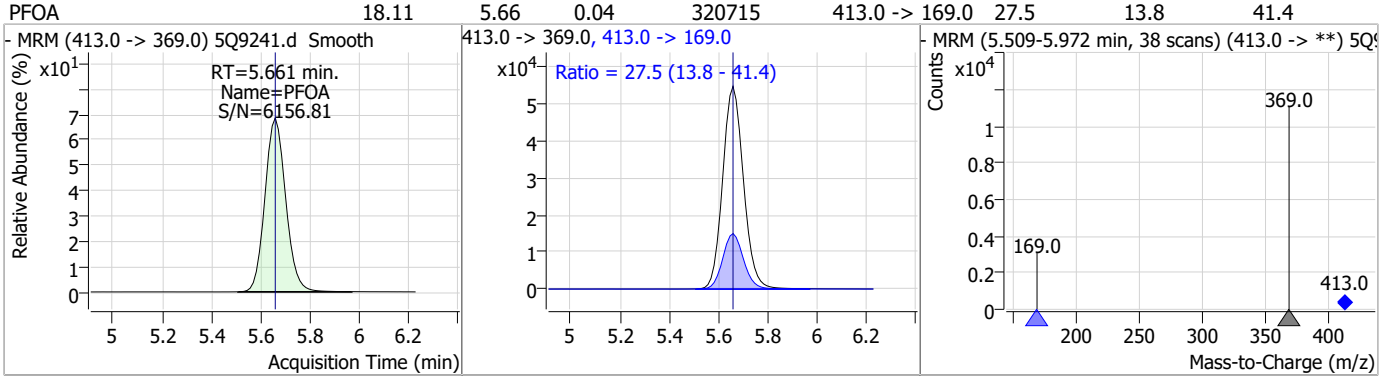


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	18.99	5.66	0.04	357661				

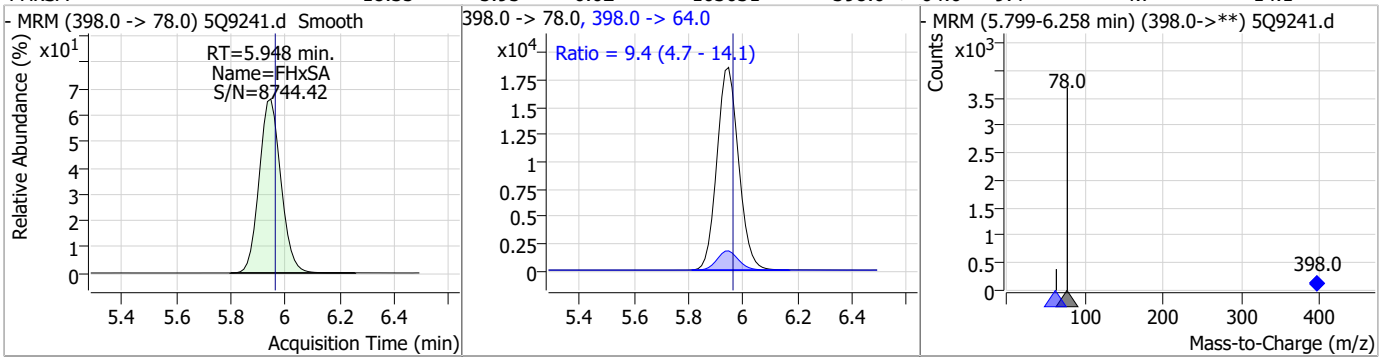


Perfluorinated Compounds by LC/MS/MS

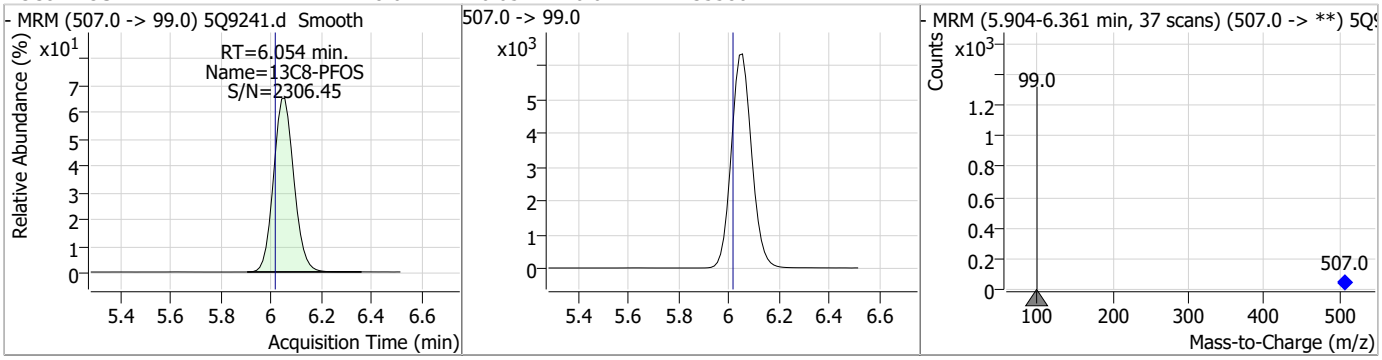
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	18.11	5.66	0.04	320715	413.0 -> 169.0	27.5	13.8	41.4



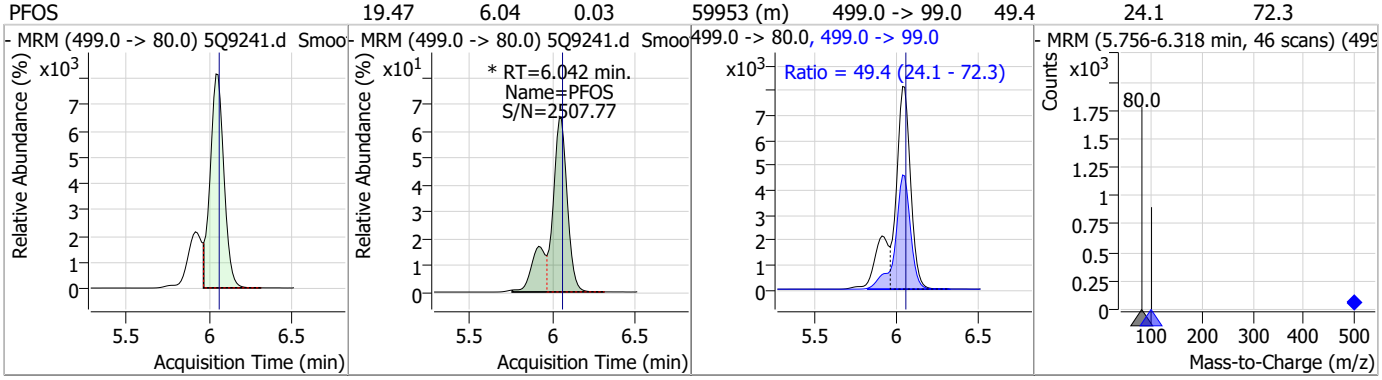
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	18.35	5.95	0.02	103031	398.0 -> 64.0	9.4	4.7	14.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	18.67	6.05	0.04	35580				

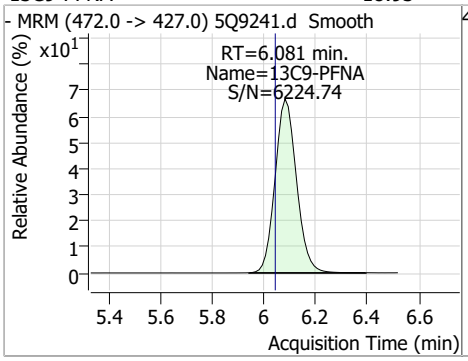


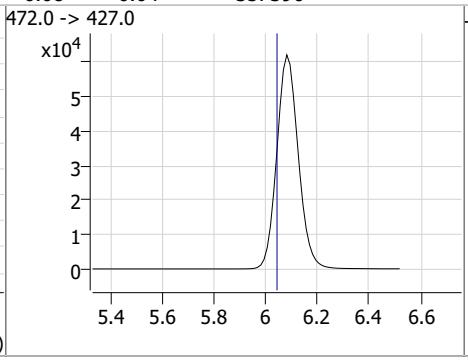
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.47	6.04	0.03	59953 (m)	499.0 -> 99.0	49.4	24.1	72.3

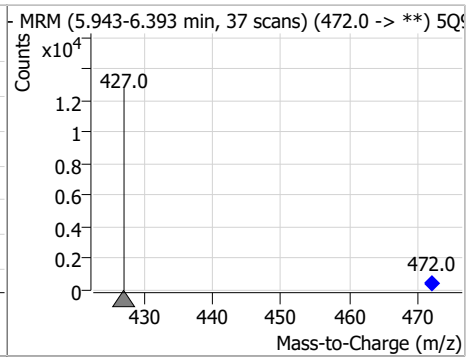


Perfluorinated Compounds by LC/MS/MS

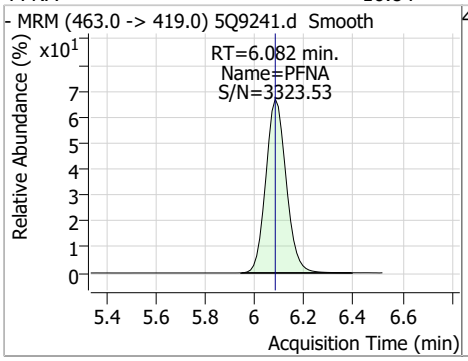
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.93	6.08	0.04	357396				

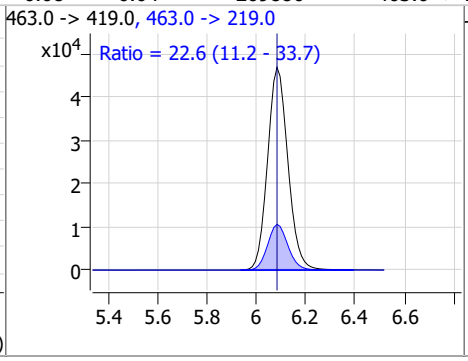


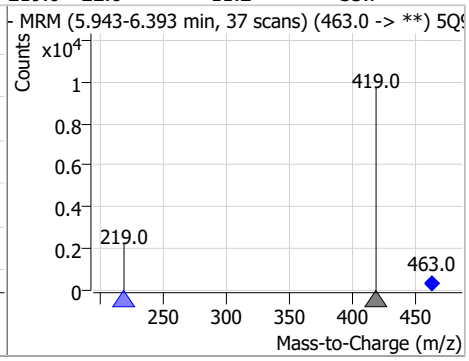




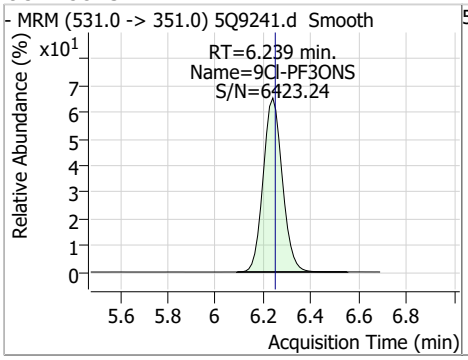
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	16.84	6.08	0.04	269886	463.0 -> 219.0	22.6	11.2	33.7

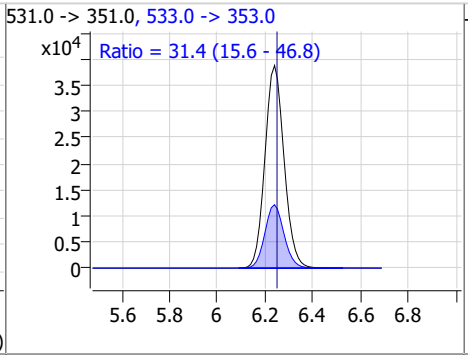


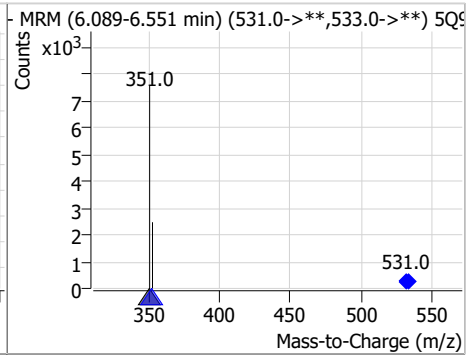




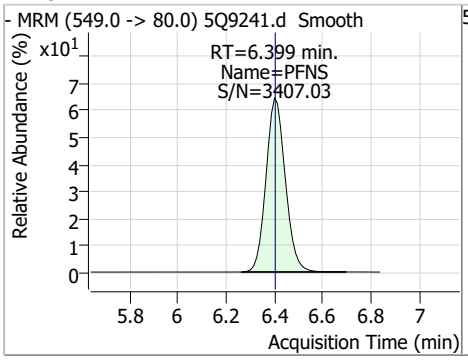
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	17.12	6.24	0.04	215382	533.0 -> 353.0	31.4	15.6	46.8

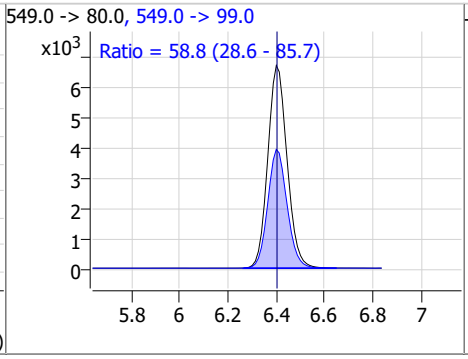


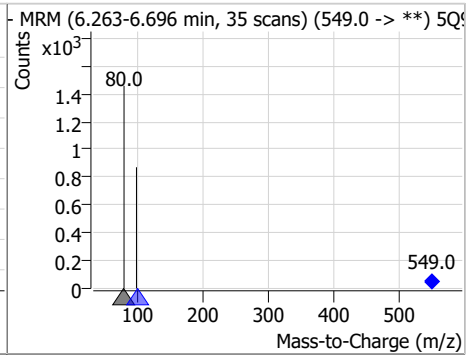




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	17.42	6.40	0.04	36882	549.0 -> 99.0	58.8	28.6	85.7

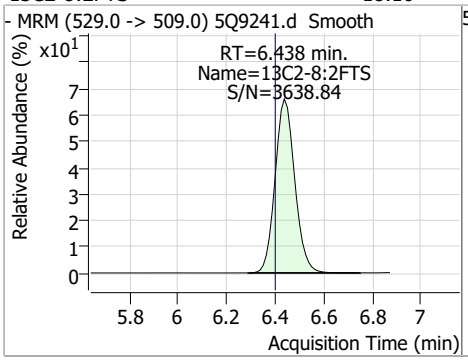


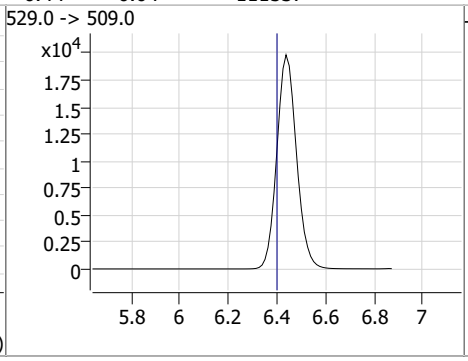


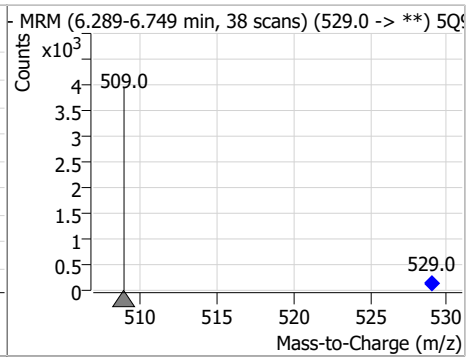


Perfluorinated Compounds by LC/MS/MS

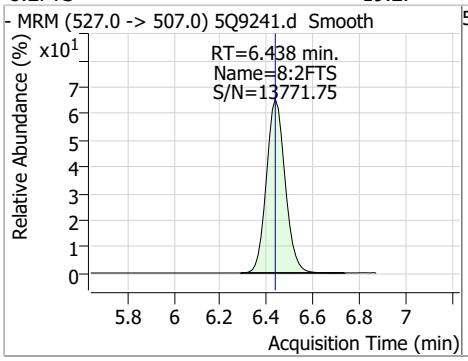
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	18.16	6.44	0.04	111537				

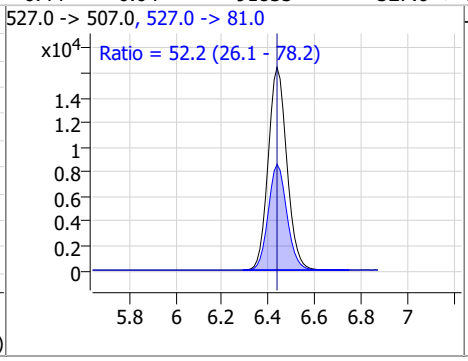


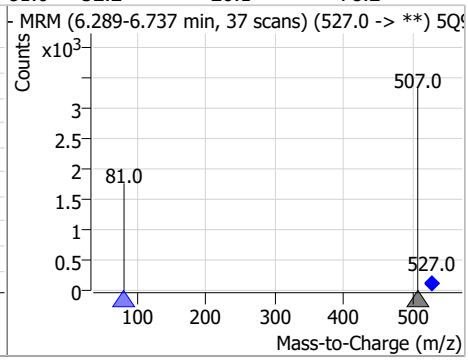




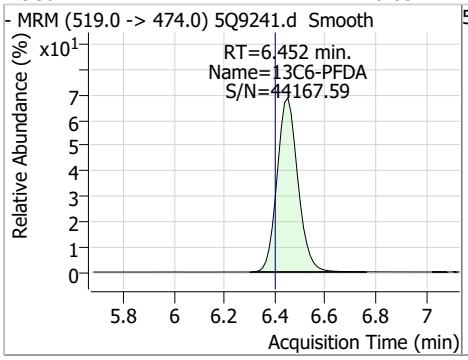
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	19.27	6.44	0.04	91835	527.0 -> 81.0	52.2	26.1	78.2

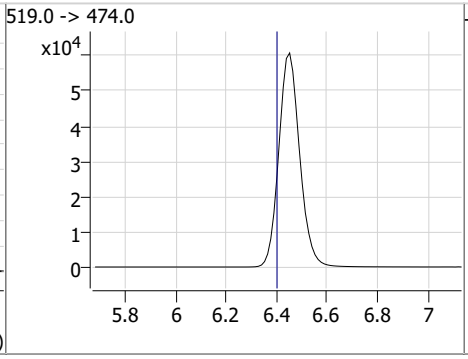


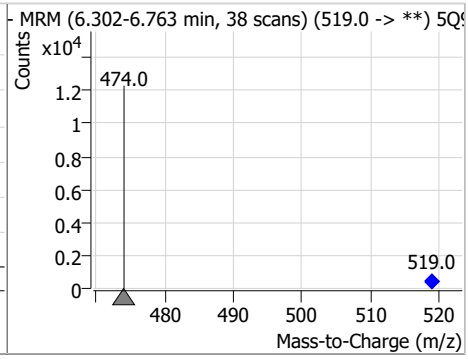




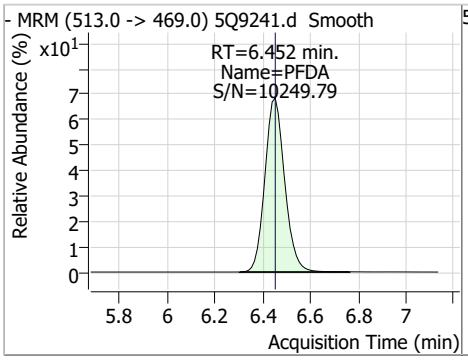
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.85	6.45	0.05	349488				

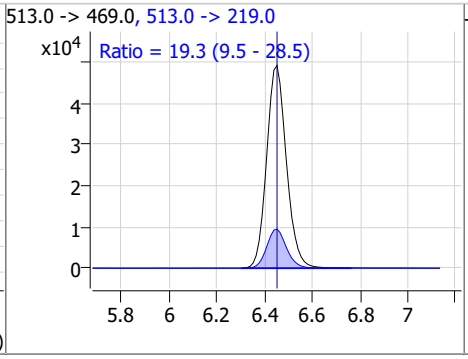


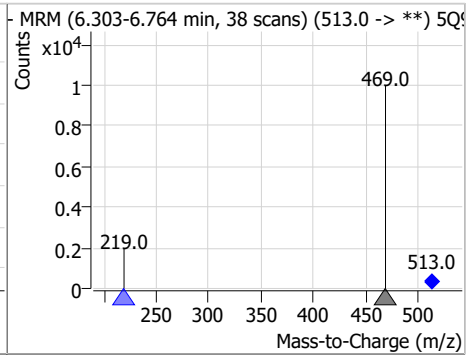




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	17.24	6.45	0.05	283482	513.0 -> 219.0	19.3	9.5	28.5

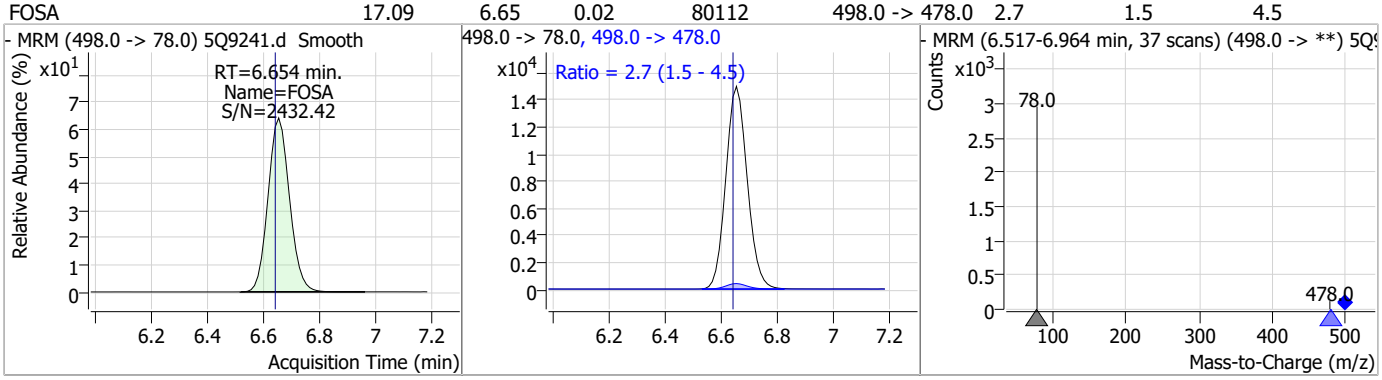




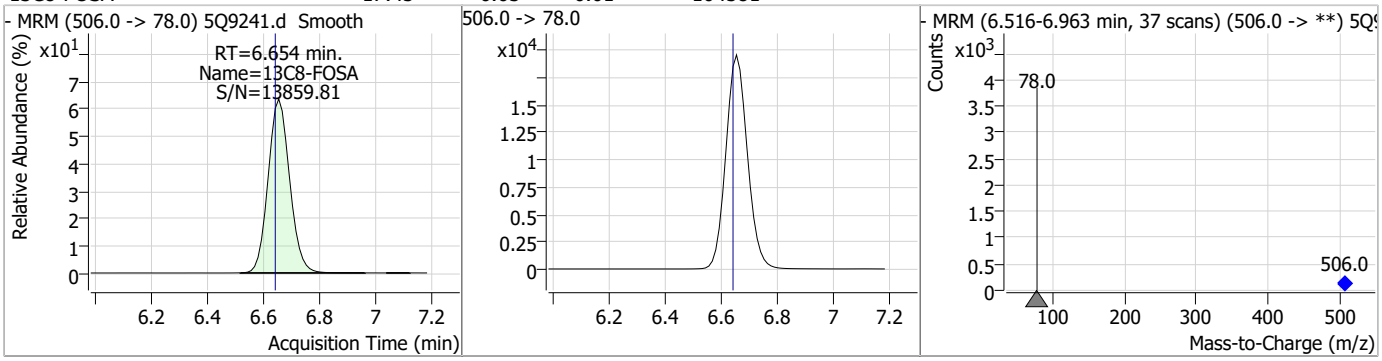


Perfluorinated Compounds by LC/MS/MS

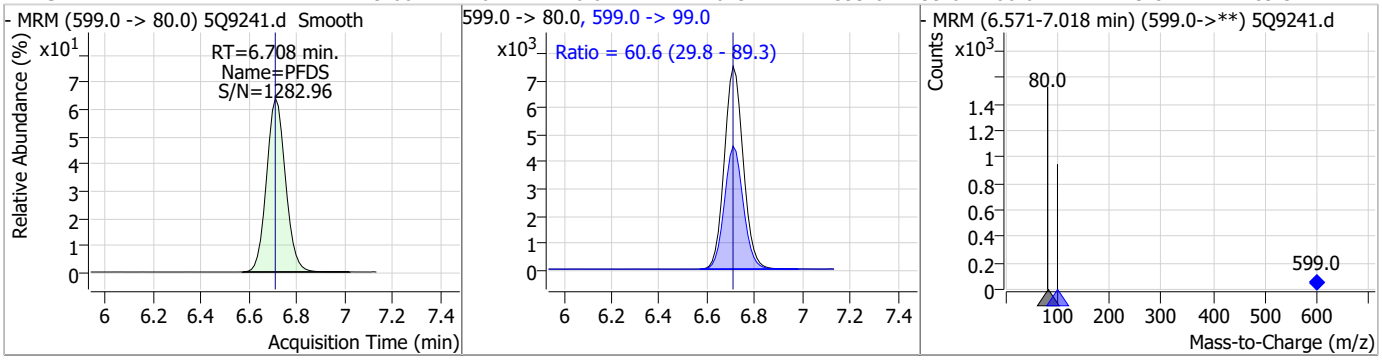
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	17.09	6.65	0.02	80112	498.0 -> 478.0	2.7	1.5	4.5



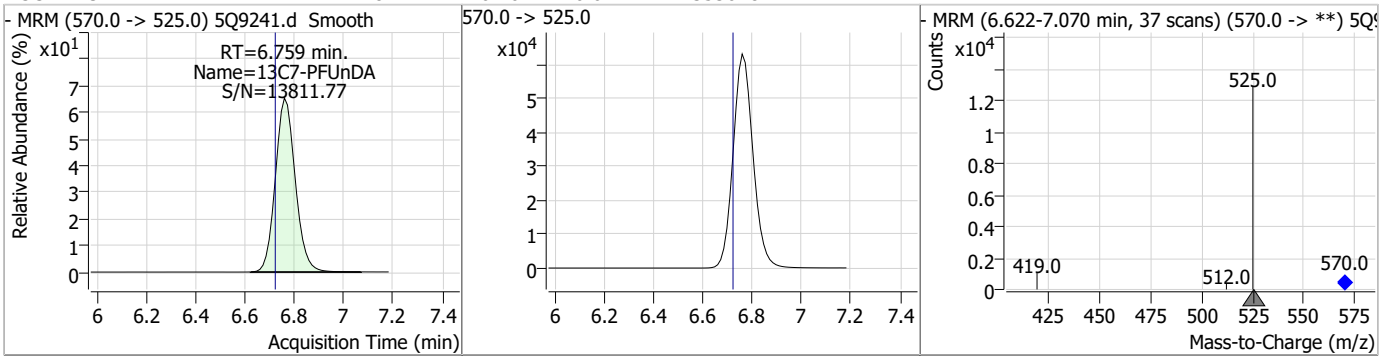
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	17.45	6.65	0.01	104581				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	19.60	6.71	0.04	41049	599.0 -> 99.0	60.6	29.8	89.3

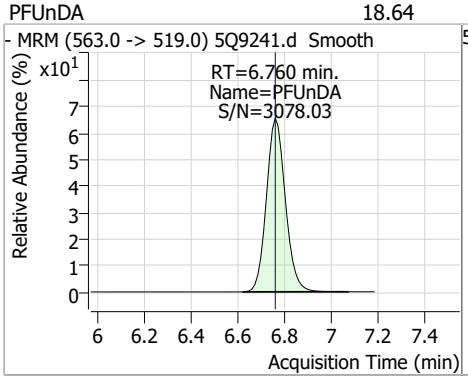


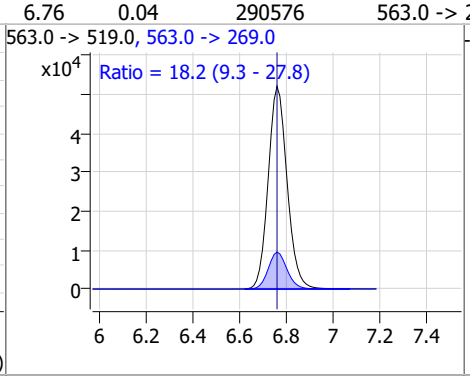
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	18.71	6.76	0.04	353018				

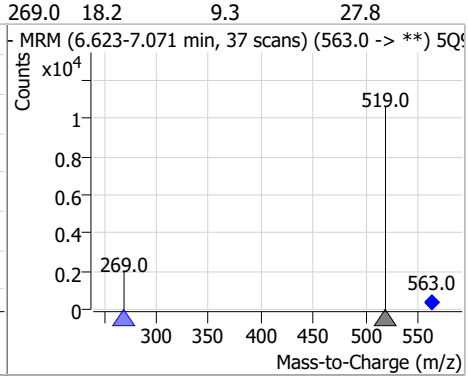


Perfluorinated Compounds by LC/MS/MS

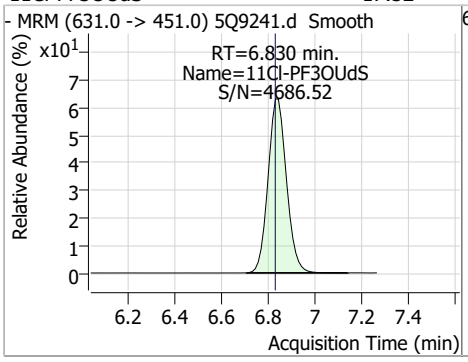
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	18.64	6.76	0.04	290576	563.0 -> 269.0	18.2	9.3	27.8

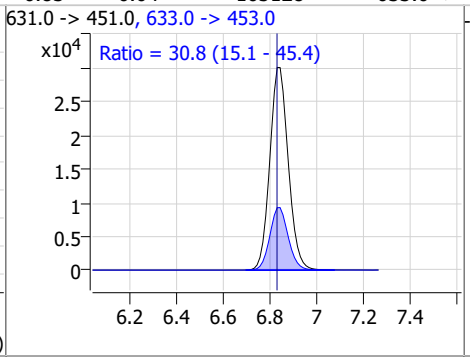


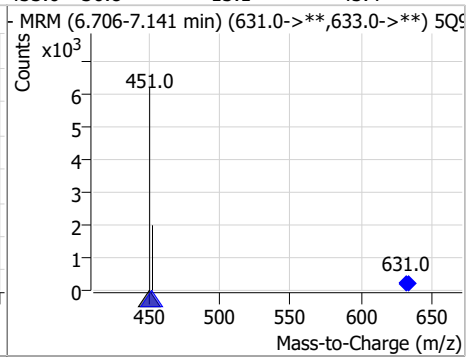




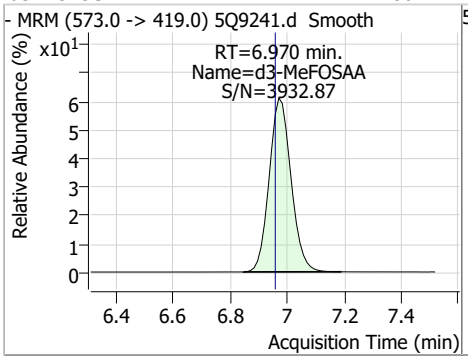
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	17.52	6.83	0.04	165128	633.0 -> 453.0	30.8	15.1	45.4

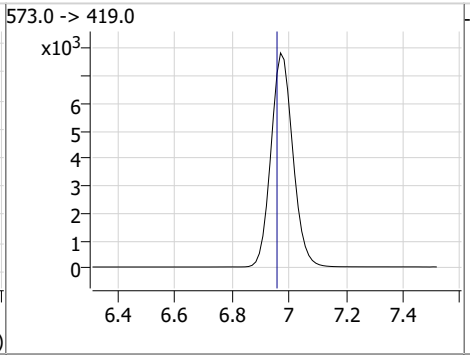


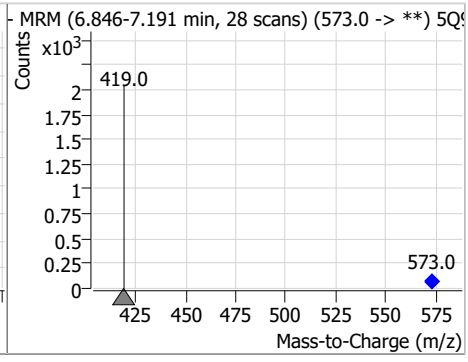




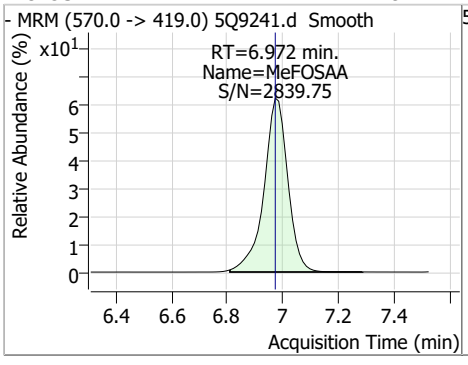
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	14.80	6.97	0.01	41483				

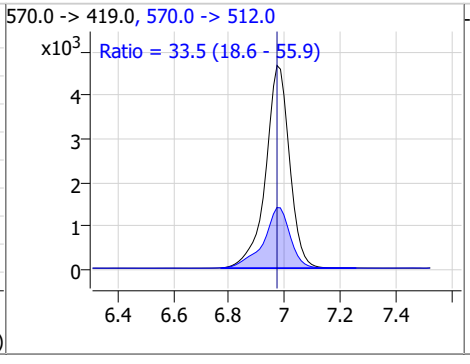


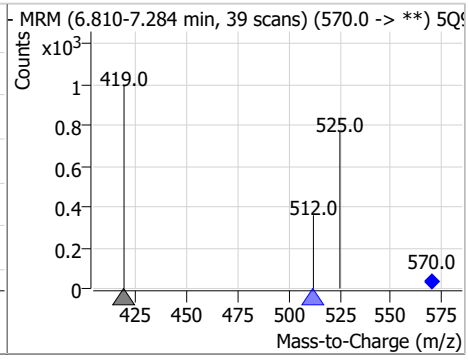




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	17.94	6.97	0.01	27571	570.0 -> 512.0	33.5	18.6	55.9

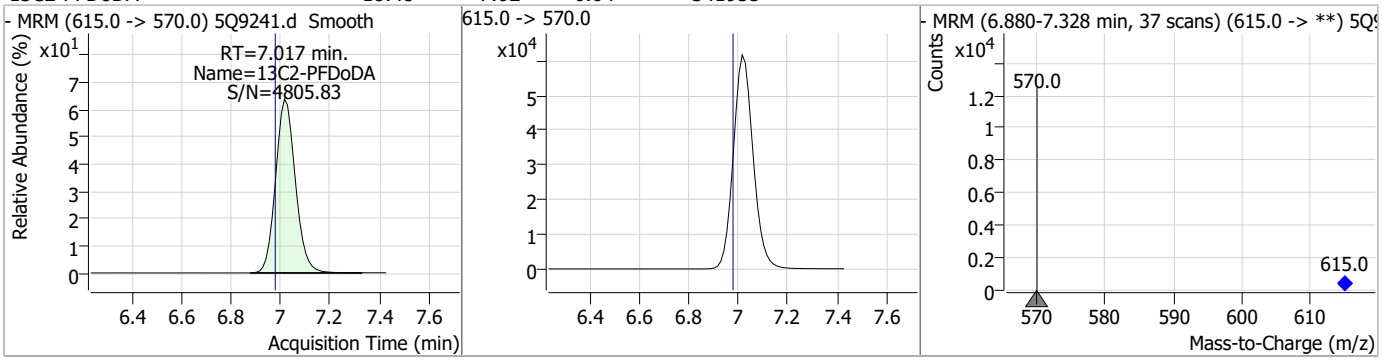




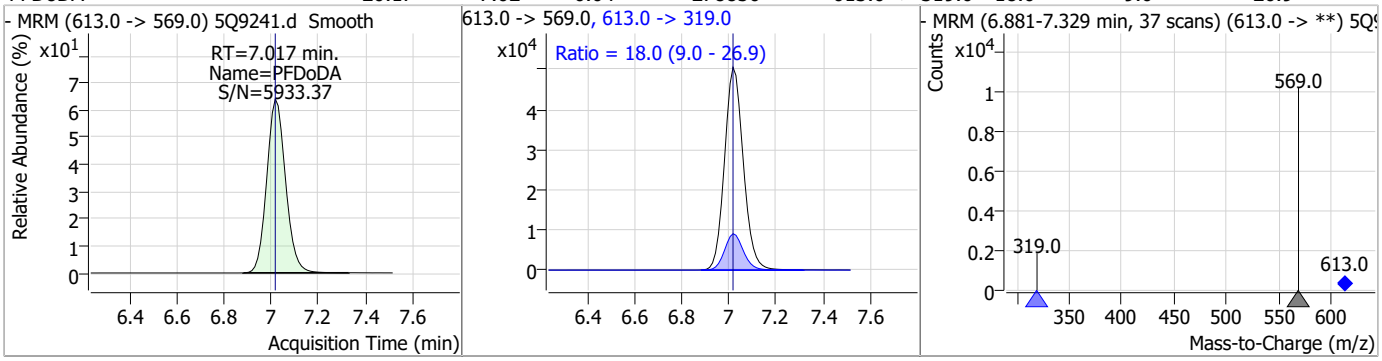


Perfluorinated Compounds by LC/MS/MS

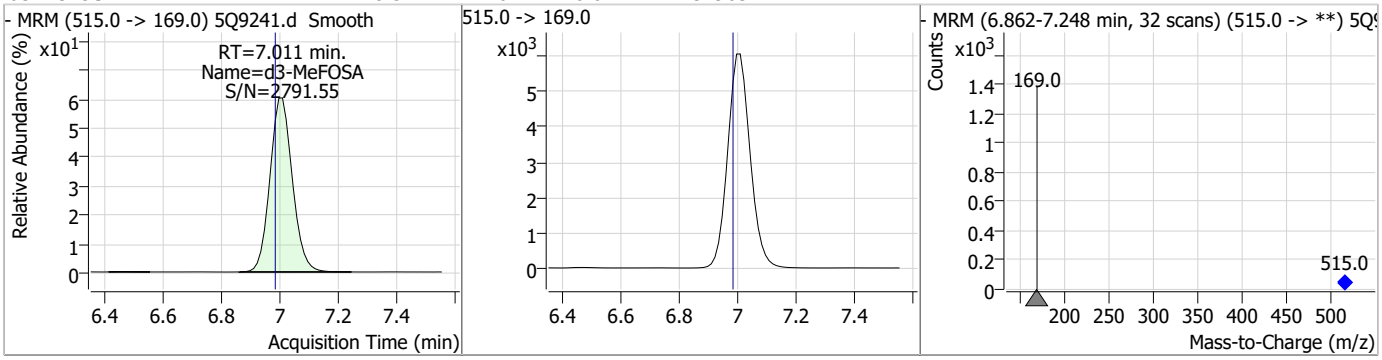
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	18.48	7.02	0.04	341955				



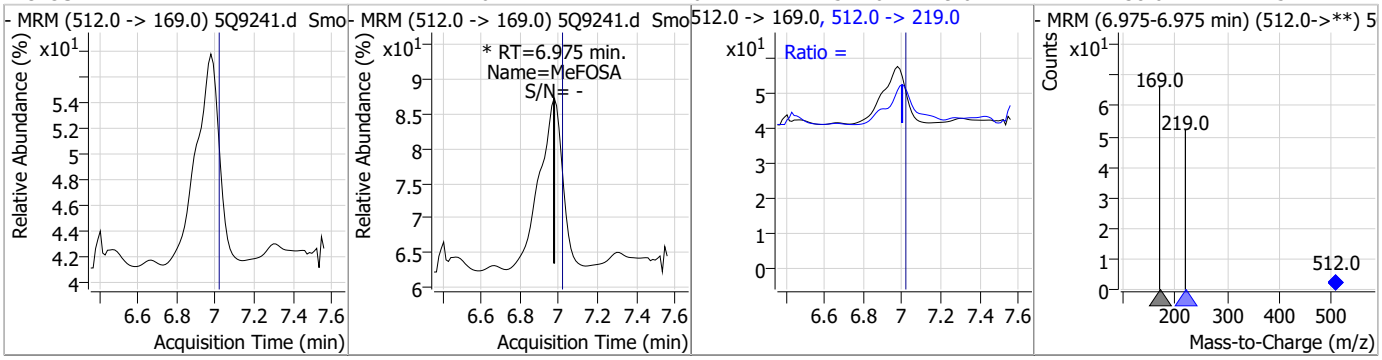
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	20.17	7.02	0.04	278850	613.0 -> 319.0	18.0	9.0	26.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	18.54	7.01	0.02	31963				

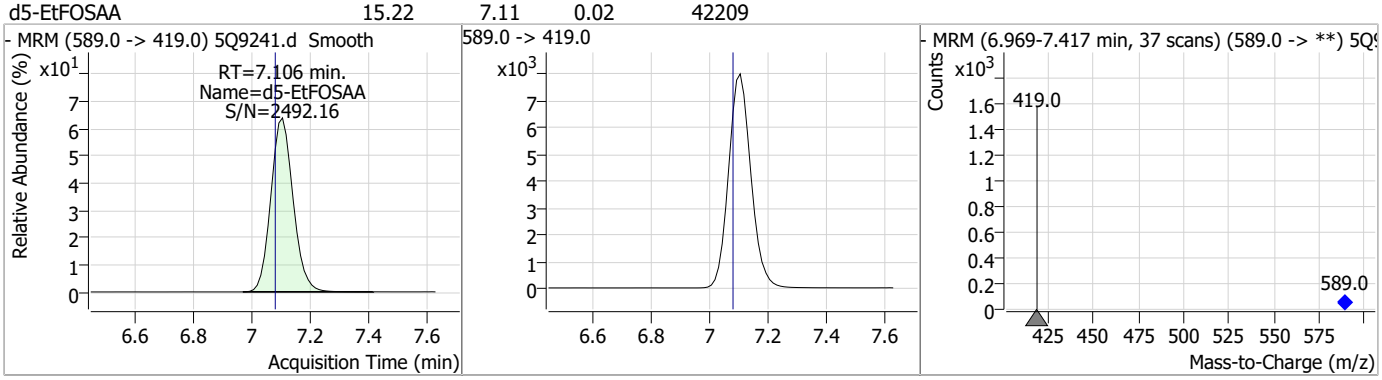


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA		0		0	512.0 -> 219.0		38.6	115.7

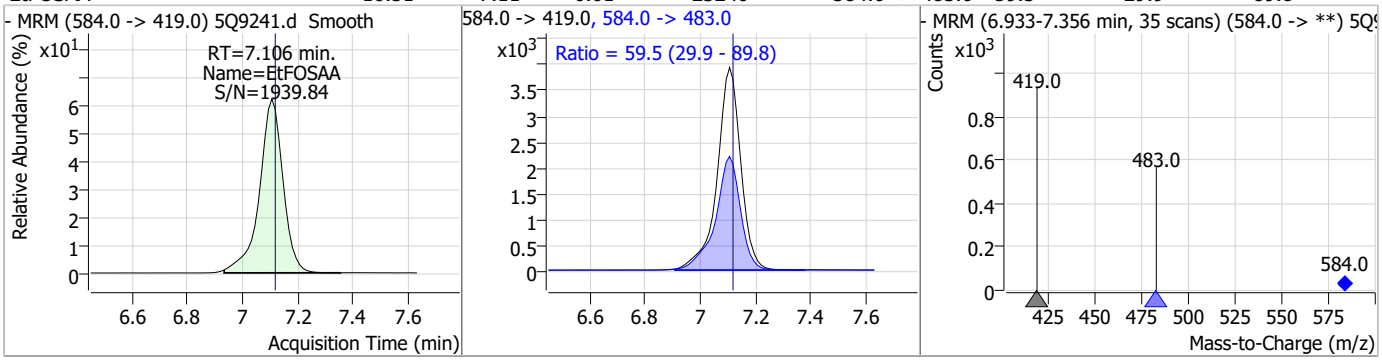


Perfluorinated Compounds by LC/MS/MS

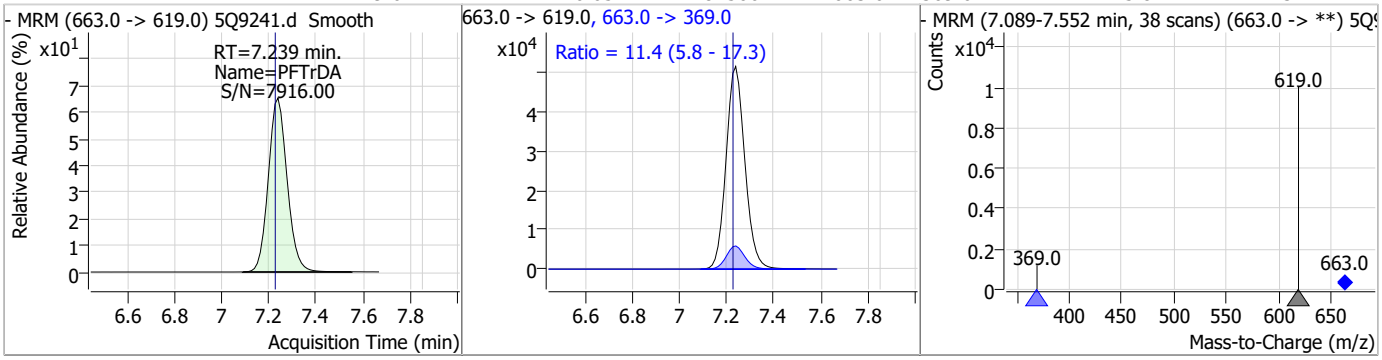
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	15.22	7.11	0.02	42209				



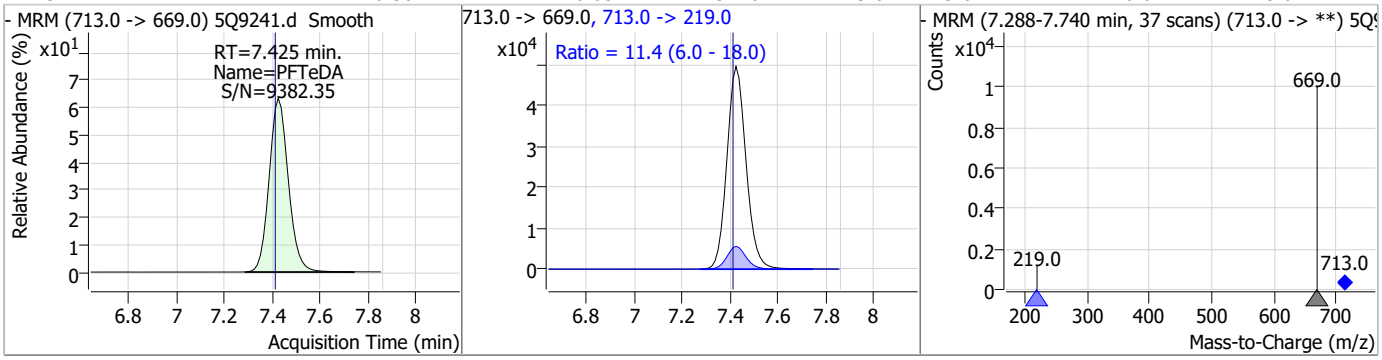
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	16.51	7.11	0.01	23240	584.0 -> 483.0	59.5	29.9	89.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	19.07	7.24	0.05	284560	663.0 -> 369.0	11.4	5.8	17.3

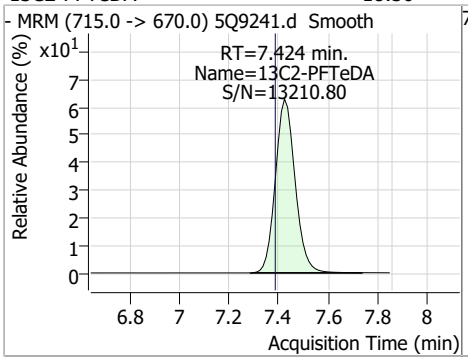


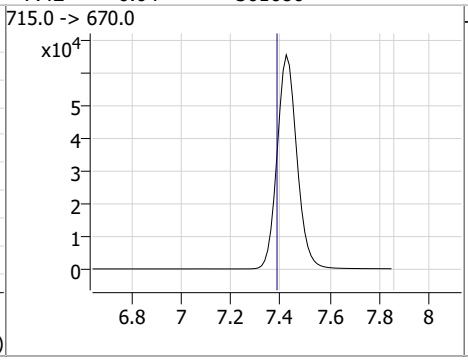
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	16.50	7.42	0.05	275446	713.0 -> 219.0	11.4	6.0	18.0

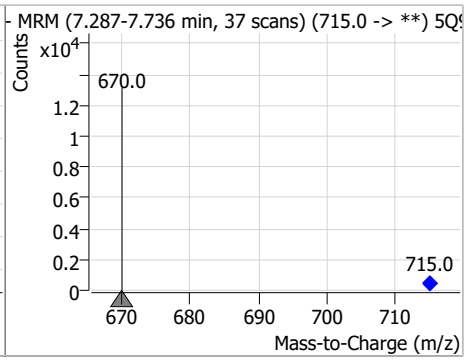


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	18.50	7.42	0.04	361680				







Manual Integration Approval Summary

Sample Number: S5Q137-ICV137
Lab FileID: 5Q9241.D
Injection Time: 01/03/23 17:33
Method: EPA 537M QSM5.3 B-15
Analyst approved: 01/04/23 11:33 Lindsay Ritner
Supervisor approved: 01/04/23 15:00 Natasha Gumtie

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.16	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.04	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Natasha Gumtie 01/04/23 15:00

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9242.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 1/3/2023 5:49:12 PM
Sample Name : icv137-20
Vial : P1-B2
DA Method File : ID_010323_S5Q137.quantmethod.xml
Batch Name : s5q137.batch.bin
Sample Information : OP94373,S5Q137,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.025	217.0 -> 172.0	105858	20.00	µg/L	0.050
M5-PFPeA	3.507	268.0 -> 223.0	201690	20.00	µg/L	0.037
M5-PFHxA	4.492	318.0 -> 273.0	282532	20.00	µg/L	0.037
M4-PFHpA	5.151	367.0 -> 322.0	278175	20.00	µg/L	0.039
M8-PFOA	5.660	421.0 -> 376.0	355744	20.00	µg/L	0.039
M9-PFNA	6.081	472.0 -> 427.0	350282	20.00	µg/L	0.038
M6-PFDA	6.452	519.0 -> 474.0	344021	20.00	µg/L	0.050
M7-PFUnDA	6.759	570.0 -> 525.0	350501	20.00	µg/L	0.037
M2-PFDoDA	7.029	615.0 -> 570.0	331636	20.00	µg/L	0.050
M2-PFTeDA	7.436	715.0 -> 670.0	360204	20.00	µg/L	0.050
M8-FOSA	6.654	506.0 -> 78.0	103549	20.00	µg/L	0.013
M3-PFBS	3.716	302.0 -> 99.0	24714	20.00	µg/L	0.037
M3-PFHxS	5.161	402.0 -> 99.0	30709	20.00	µg/L	0.038
M8-PFOS	6.054	507.0 -> 99.0	35767	20.00	µg/L	0.038
M2-4:2FTS	4.389	329.0 -> 309.0	87466	20.00	µg/L	0.040
M2-6:2FTS	5.632	429.0 -> 409.0	130421	20.00	µg/L	0.038
M2-8:2FTS	6.438	529.0 -> 509.0	109771	20.00	µg/L	0.037
M3-MeFOSAA	6.970	573.0 -> 419.0	41475	20.00	µg/L	0.012
M3-HFPO-DA	4.681	287.0 -> 169.0	61831	20.00	µg/L	0.037
M3-MeFOSA	6.998	515.0 -> 169.0	30583	20.00	µg/L	0.012
M5-EtFOSAA	7.106	589.0 -> 419.0	42061	20.00	µg/L	0.025
System Monitoring Compounds						
13C2-4:2FTS	4.389	329.0 -> 309.0	87466	18.49	µg/L	0.040
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.5%		
13C2-6:2FTS	5.632	429.0 -> 409.0	130421	18.32	µg/L	0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.6%		
13C2-8:2FTS	6.438	529.0 -> 509.0	109771	17.88	µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.4%		
13C2-PFDoDA	7.029	615.0 -> 570.0	331636	17.92	µg/L	0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 89.6%		
13C2-PFTeDA	7.436	715.0 -> 670.0	360204	18.42	µg/L	0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.1%		
13C3-PFBS	3.716	302.0 -> 99.0	24714	19.28	µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.4%		
13C3-PFHxS	5.161	402.0 -> 99.0	30709	19.33	µg/L	0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.7%		
13C4-PFBA	2.025	217.0 -> 172.0	105858	18.46	µg/L	0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.3%		
13C4-PFHpA	5.151	367.0 -> 322.0	278175	18.93	µg/L	0.039
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.7%		
13C5-PFHxA	4.492	318.0 -> 273.0	282532	19.24	µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.2%		
13C5-PFPeA	3.507	268.0 -> 223.0	201690	19.41	µg/L	0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.1%		
13C6-PFDA	6.452	519.0 -> 474.0	344021	18.56	µg/L	0.050

Perfluorinated Compounds by LC/MS/MS

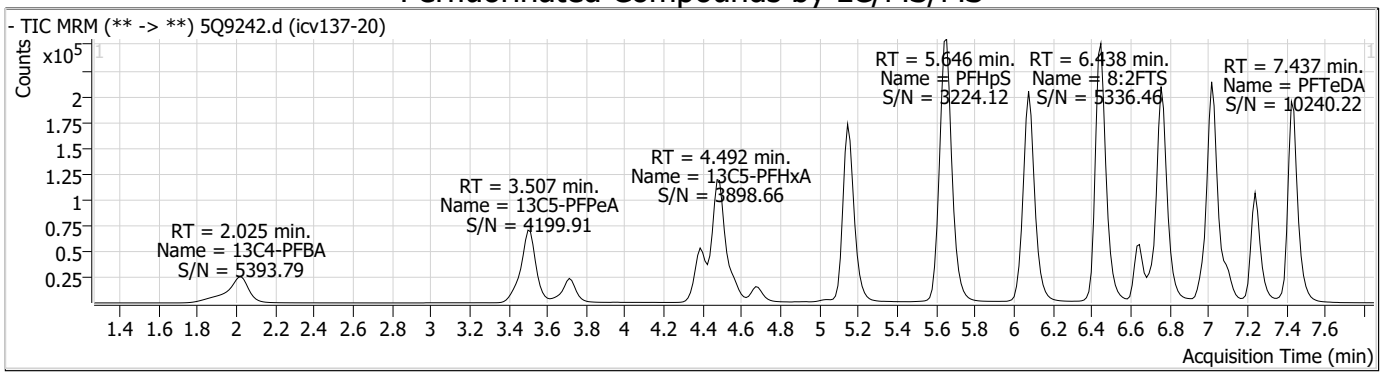
Compound	RT	Transition	Response	Conc.	Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%			
13C7-PFUnDA	6.759	570.0 -> 525.0	350501	18.58	µg/L		0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.9%			
13C8-FOSA	6.654	506.0 -> 78.0	103549	17.27	µg/L		0.013
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.4%			
13C8-PFOA	5.660	421.0 -> 376.0	355744	18.89	µg/L		0.039
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 94.4%			
13C8-PFOS	6.054	507.0 -> 99.0	35767	18.77	µg/L		0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 93.8%			
13C9-PFNA	6.081	472.0 -> 427.0	350282	18.55	µg/L		0.038
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.8%			
d3-MeFOSAA	6.970	573.0 -> 419.0	41475	14.80	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 74.0%			
13C3-HFPO-DA	4.681	287.0 -> 169.0	61831	18.43	µg/L		0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 92.2%			
d3-MeFOSA	6.998	515.0 -> 169.0	30583	17.74	µg/L		0.012
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 88.7%			
d5-EtFOSAA	7.106	589.0 -> 419.0	42061	15.17	µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 75.9%			
Target Compounds							QValue
4:2FTS	4.390	327.0 -> 307.0	86925	21.83	µg/L		99
		327.0 -> 81.0	51608				
6:2FTS	5.633	427.0 -> 407.0	120877	21.34	µg/L		100
		427.0 -> 81.0	53631				
8:2FTS	6.438	527.0 -> 507.0	103914	22.15	µg/L		100
		527.0 -> 81.0	54325				
EtFOSAA	7.106	584.0 -> 419.0	22047	15.72	µg/L		99
		584.0 -> 483.0	13428				
FOSA	6.654	498.0 -> 78.0	86732	18.69	µg/L		99
		498.0 -> 478.0	2363				
MeFOSAA	6.972	570.0 -> 419.0	27370	17.81	µg/L		98
		570.0 -> 512.0	10471				
PFBA	2.019	213.0 -> 169.0	101591	20.48	µg/L		100
PFBS	3.719	299.0 -> 80.0	64938	18.31	µg/L		100
		299.0 -> 99.0	27457				
PFDA	6.452	513.0 -> 469.0	307352	18.98	µg/L		100
		513.0 -> 219.0	58581				
PFDoDA	7.017	613.0 -> 569.0	304277	22.70	µg/L		99
		613.0 -> 319.0	53835				
PFDS	6.708	599.0 -> 80.0	48069	23.12	µg/L		100
		599.0 -> 99.0	28729				
PFHpA	5.152	363.0 -> 319.0	264970	17.51	µg/L		99
		363.0 -> 169.0	59957				
PFHpS	5.646	449.0 -> 80.0	52052	20.08	µg/L		98
		449.0 -> 99.0	27907				
PFHxA	4.493	313.0 -> 269.0	237122	18.84	µg/L		100
		313.0 -> 119.0	10989				
PFHxS	5.162	399.0 -> 80.0	52992	18.91	µg/L	m	99
		399.0 -> 99.0	30108				
PFNA	6.082	463.0 -> 419.0	300762	19.15	µg/L		100
		463.0 -> 219.0	67787				
PFNS	-	549.0 -> 80.0	-	N.D.			
		549.0 -> 99.0					
PFOA	5.661	413.0 -> 369.0	339105	19.25	µg/L		100
		413.0 -> 169.0	94083				
PFOS	6.055	499.0 -> 80.0	67330	21.75	µg/L		89

Perfluorinated Compounds by LC/MS/MS

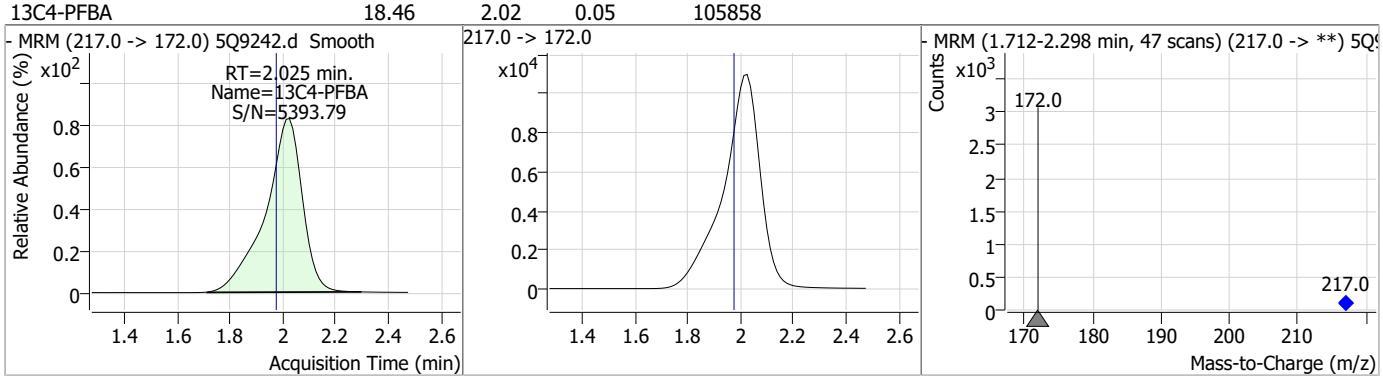
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	37241			
PFPeA	3.509	263.0 -> 219.0	189210	18.16	µg/L	100
PFPeS	4.564	349.0 -> 80.0	40973	19.01	µg/L	99
		349.0 -> 99.0	20898			
PFTeDA	7.437	713.0 -> 669.0	305815	18.40	µg/L	99
		713.0 -> 219.0	37846			
PFTrDA	7.239	663.0 -> 619.0	330780	22.85	µg/L	99
		663.0 -> 369.0	37621			
PFUnDA	6.760	563.0 -> 519.0	334926	21.64	µg/L	100
		563.0 -> 269.0	61441			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
		633.0 -> 453.0				
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
		533.0 -> 353.0				
ADONA	-	377.0 -> 251.0	-	N.D.		
		377.0 -> 85.0				
HFPO-DA	-	329.0 -> 169.0	-	N.D.		
		285.0 -> 169.0				
MeFOSA	7.012	512.0 -> 169.0	32541	20.48	µg/L	96
		512.0 -> 219.0	23985			
4-PFECHS	-	461.0 -> 381.0	-	N.D.		
		461.0 -> 99.0				
FBSA	-	298.0 -> 78.0	-	N.D.		
		298.0 -> 64.0				
FHxSA	-	398.0 -> 78.0	-	N.D.		
		398.0 -> 64.0				

 # = Qualifier out of range, m = manually integrated, + = Area summed

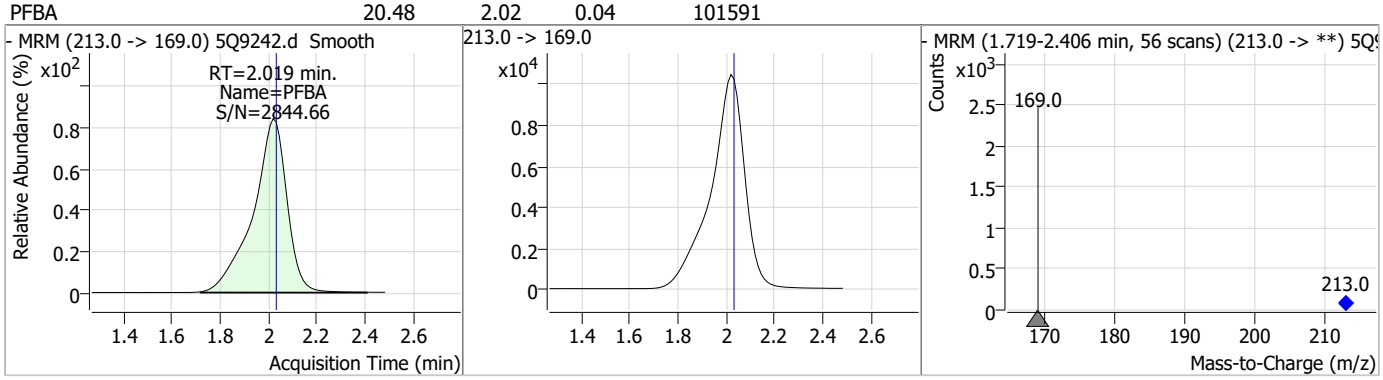
Perfluorinated Compounds by LC/MS/MS



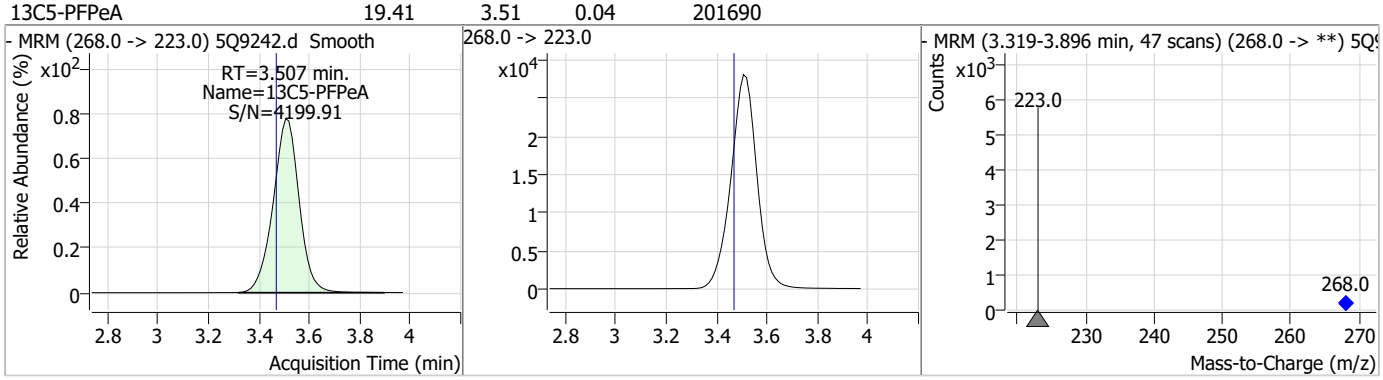
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	18.46	2.02	0.05	105858				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	20.48	2.02	0.04	101591				

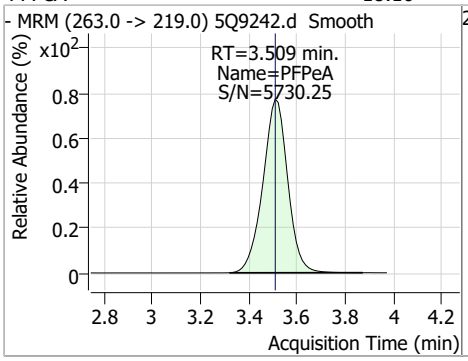


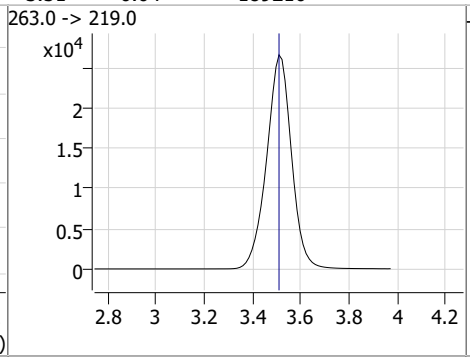
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	19.41	3.51	0.04	201690				

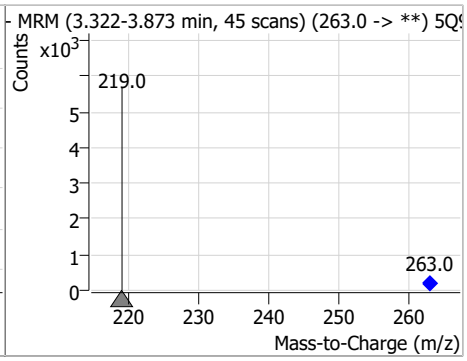


Perfluorinated Compounds by LC/MS/MS

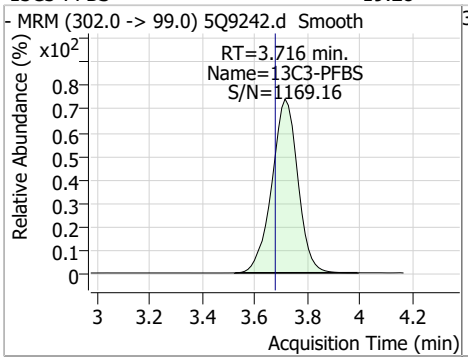
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	18.16	3.51	0.04	189210				

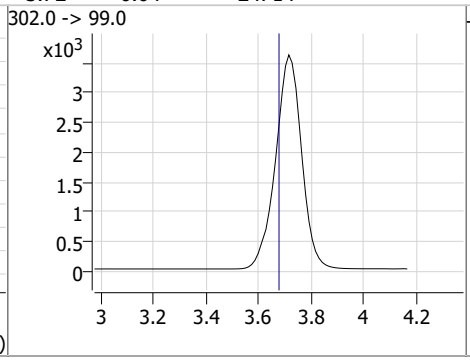


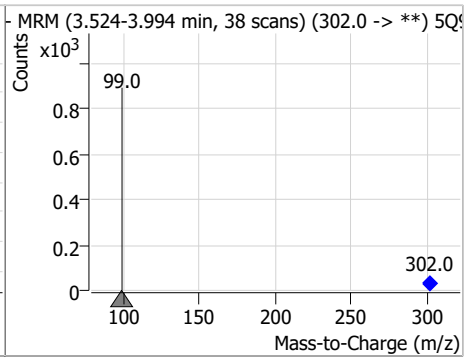




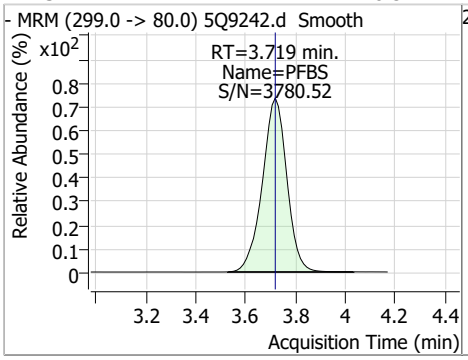
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	19.28	3.72	0.04	24714				

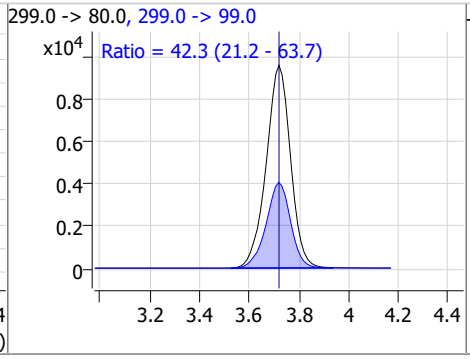


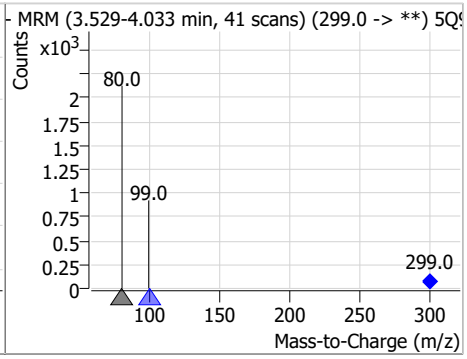




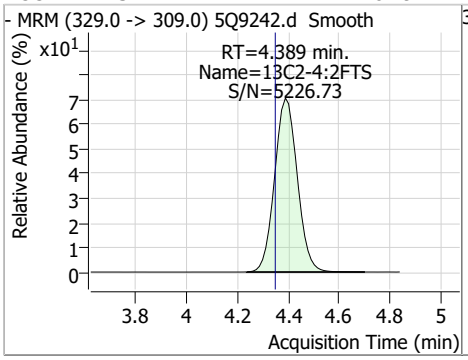
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	18.31	3.72	0.04	64938	299.0 -> 99.0	42.3	21.2	63.7

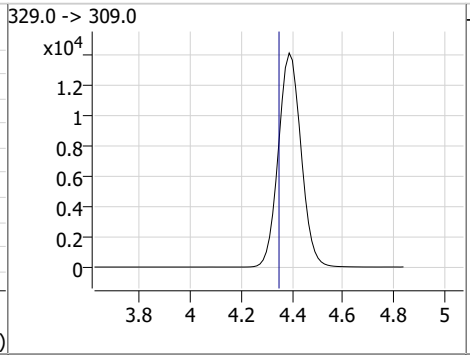


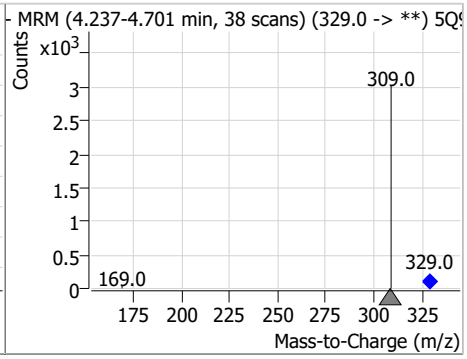




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	18.49	4.39	0.04	87466				

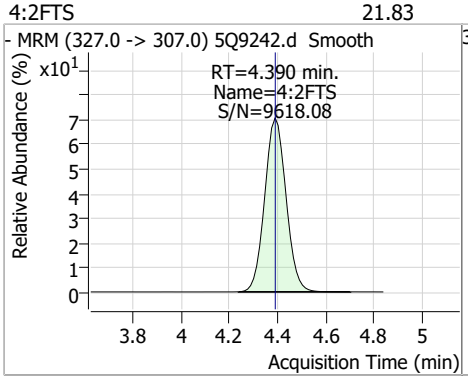


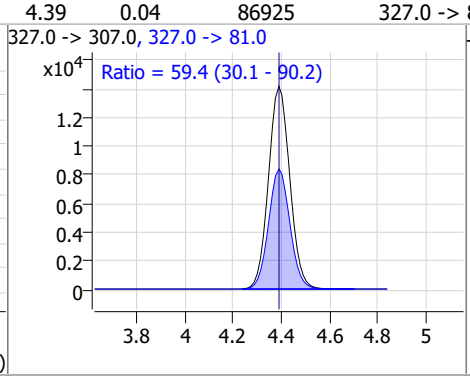


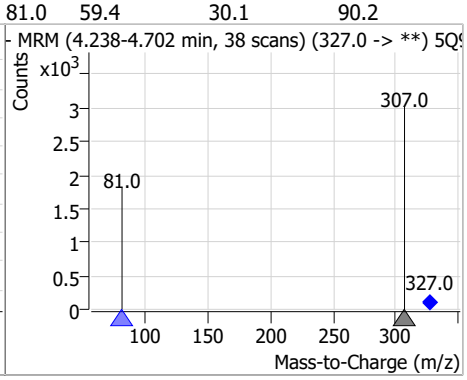


Perfluorinated Compounds by LC/MS/MS

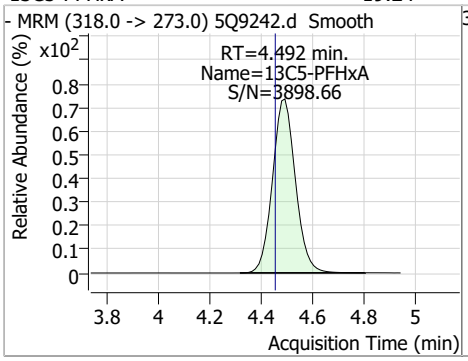
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	21.83	4.39	0.04	86925	327.0 -> 81.0	59.4	30.1	90.2

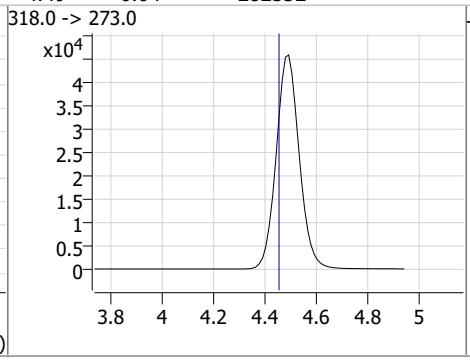


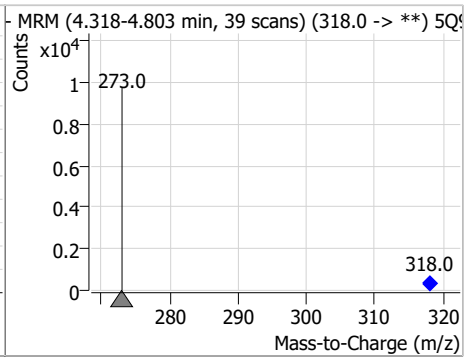




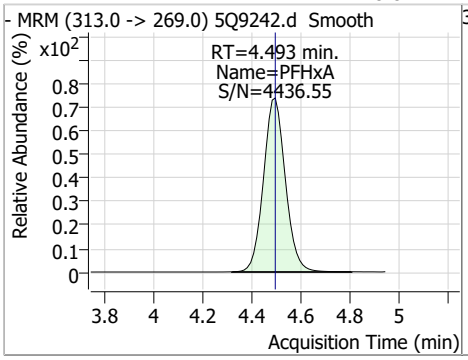
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	19.24	4.49	0.04	282532				

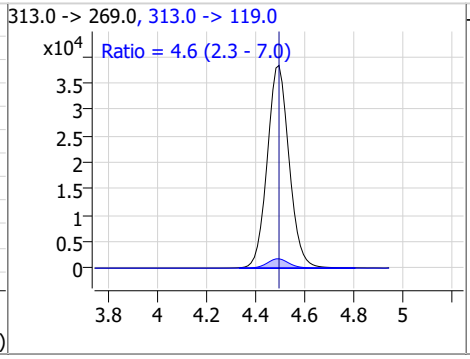


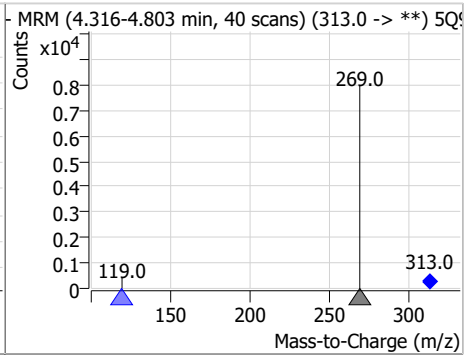




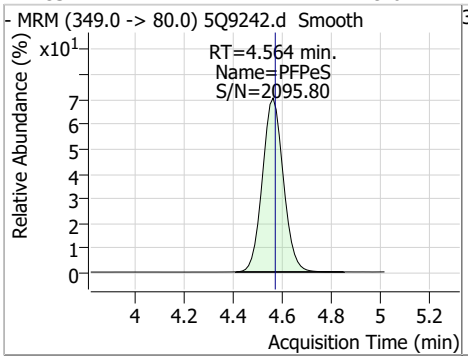
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	18.84	4.49	0.04	237122	313.0 -> 119.0	4.6	2.3	7.0

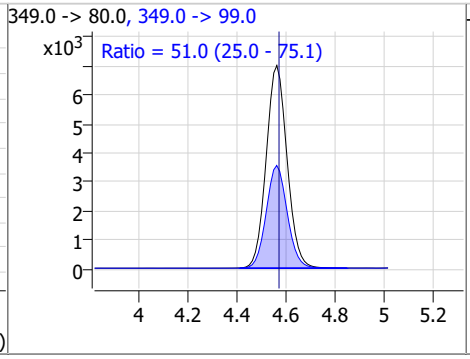


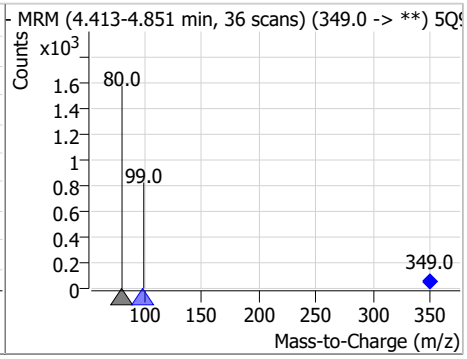




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	19.01	4.56	0.04	40973	349.0 -> 99.0	51.0	25.0	75.1

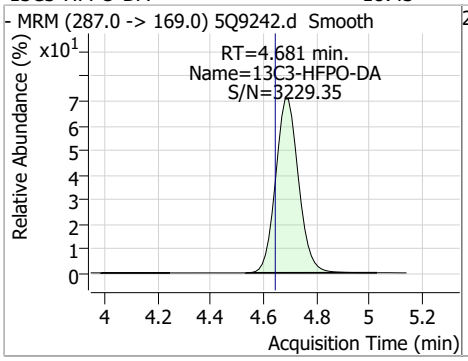


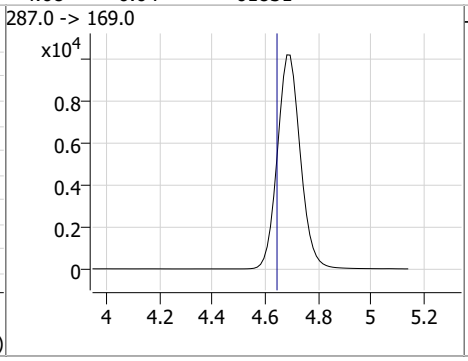


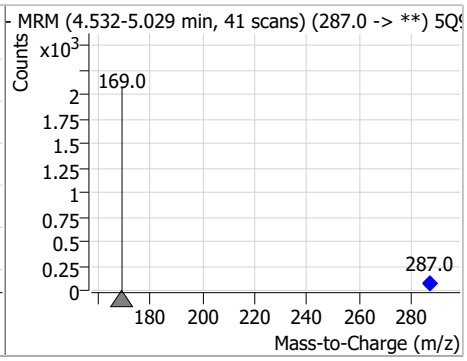


Perfluorinated Compounds by LC/MS/MS

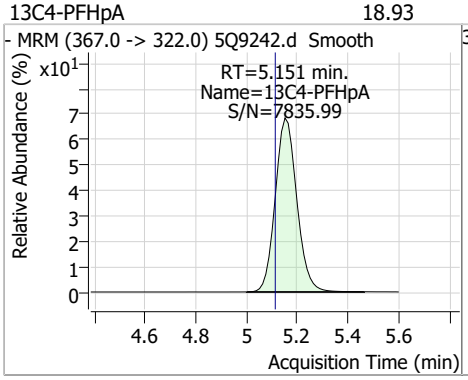
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	18.43	4.68	0.04	61831				

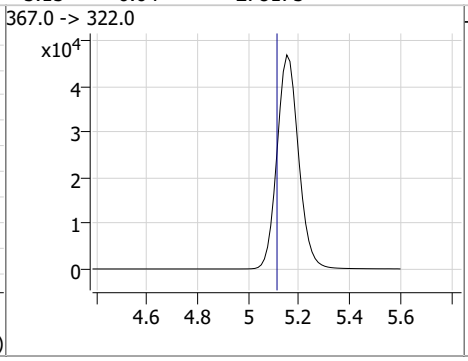


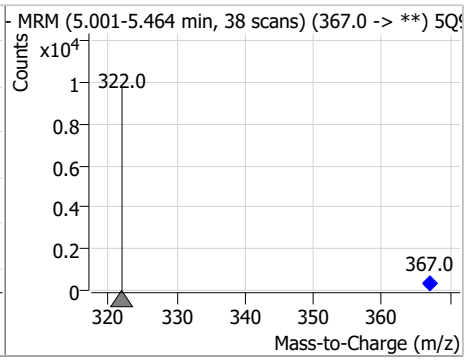




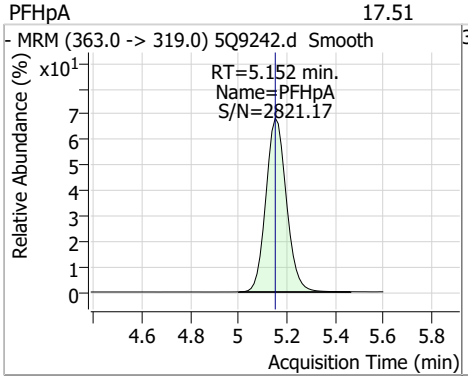
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	18.93	5.15	0.04	278175				

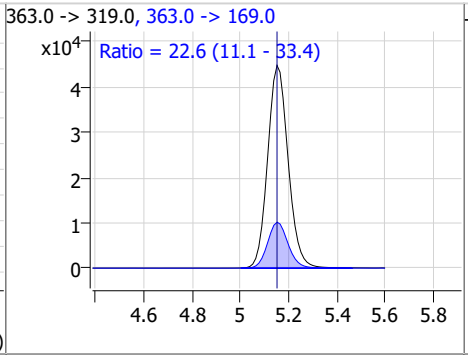


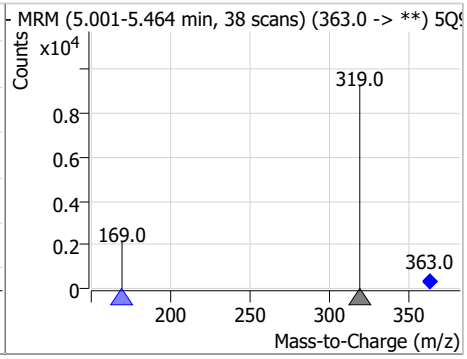




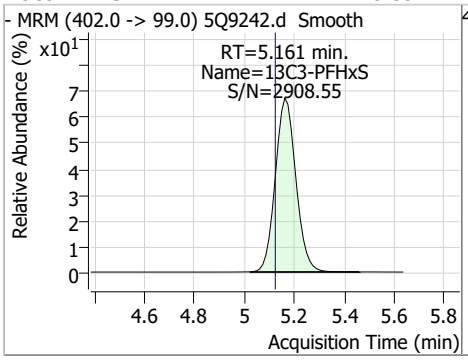
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	17.51	5.15	0.04	264970	363.0 -> 169.0	22.6	11.1	33.4

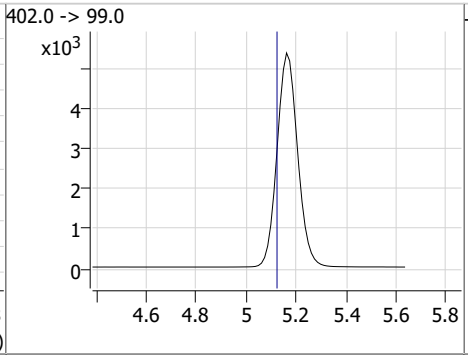


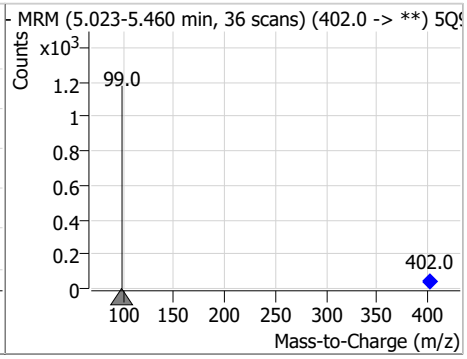




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	19.33	5.16	0.04	30709				

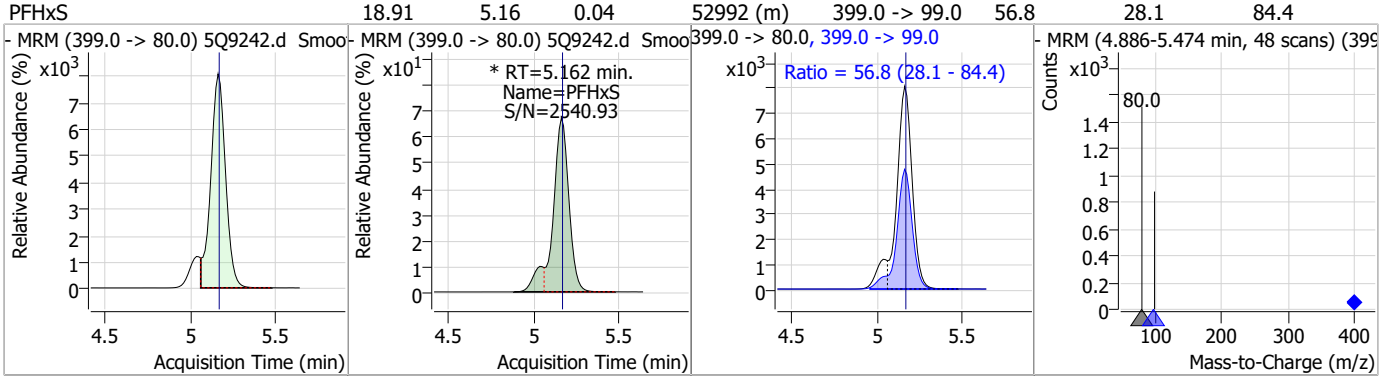




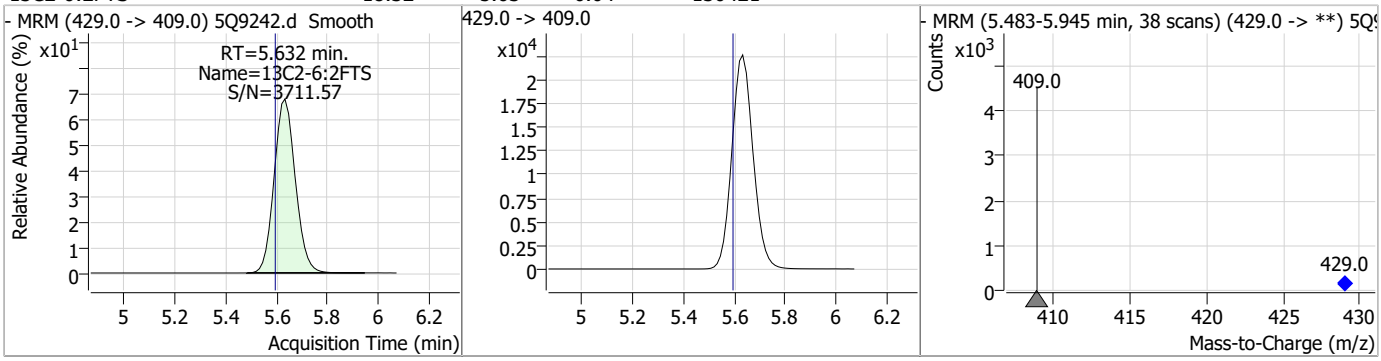


Perfluorinated Compounds by LC/MS/MS

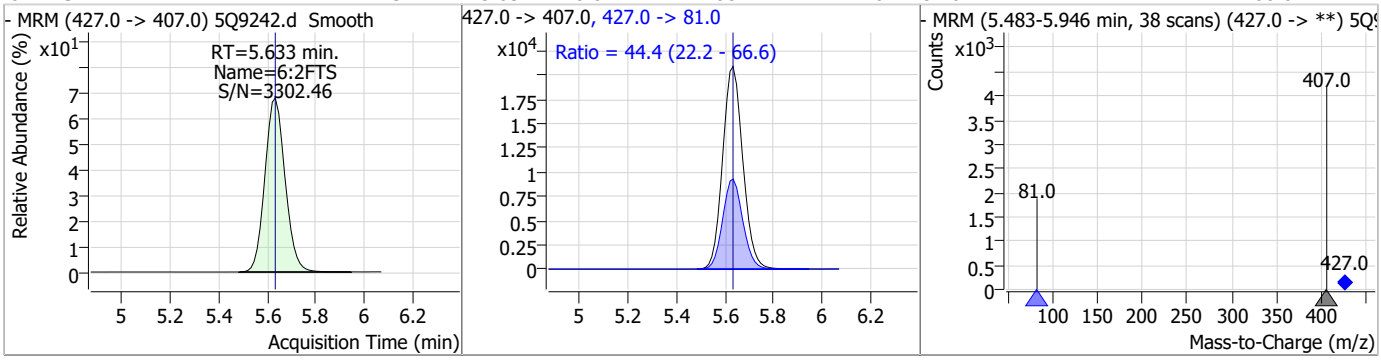
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	18.91	5.16	0.04	52992 (m)	399.0 -> 99.0	56.8	28.1	84.4



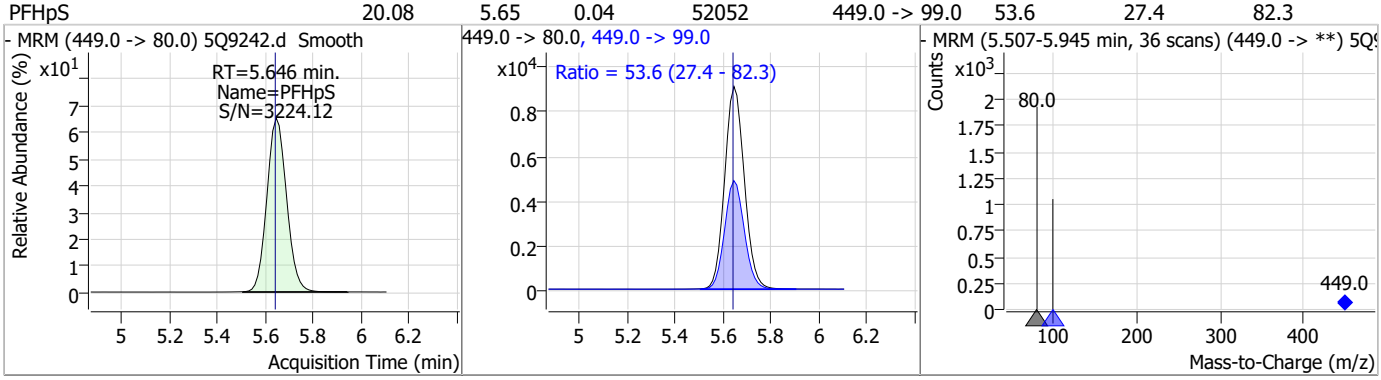
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	18.32	5.63	0.04	130421				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	21.34	5.63	0.04	120877	427.0 -> 81.0	44.4	22.2	66.6

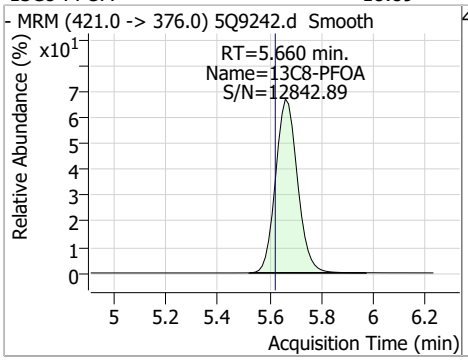


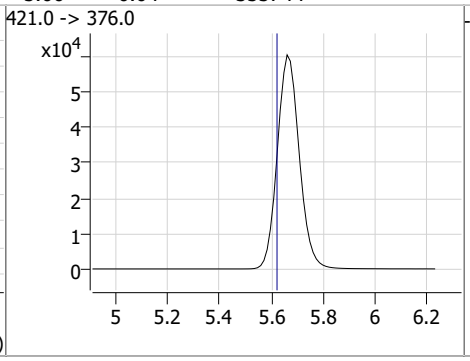
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	20.08	5.65	0.04	52052	449.0 -> 99.0	53.6	27.4	82.3

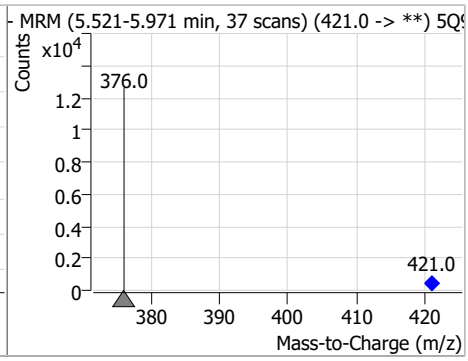


Perfluorinated Compounds by LC/MS/MS

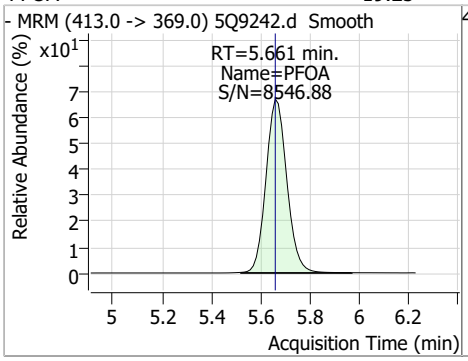
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	18.89	5.66	0.04	355744				

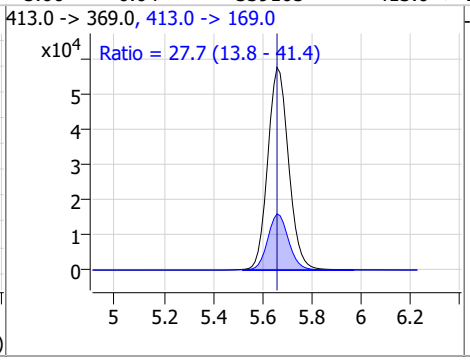


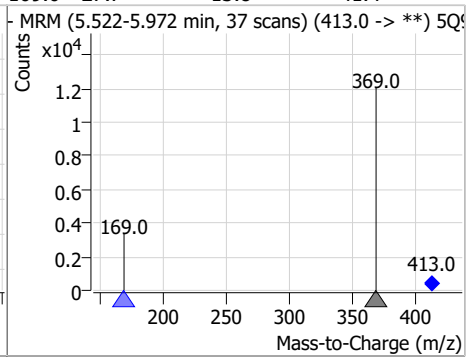




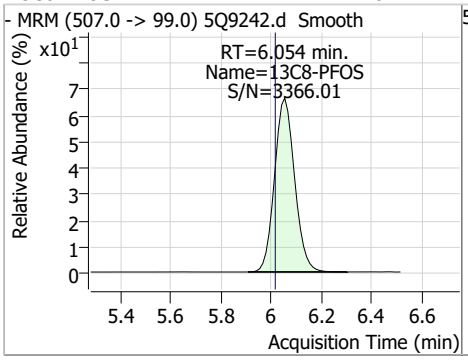
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.25	5.66	0.04	339105	413.0 -> 169.0	27.7	13.8	41.4

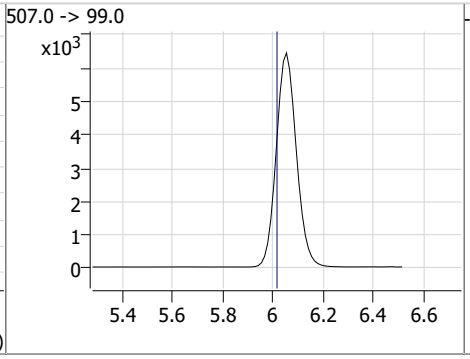


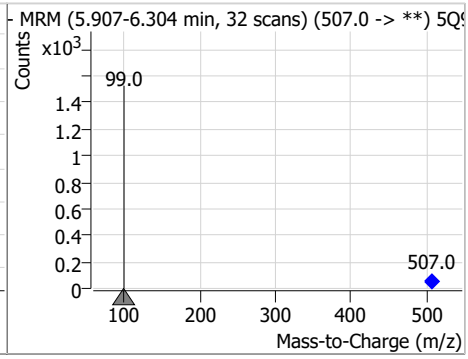




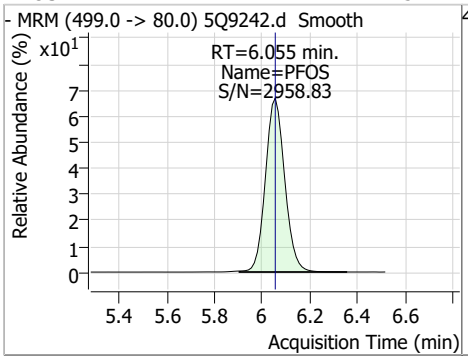
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	18.77	6.05	0.04	35767				

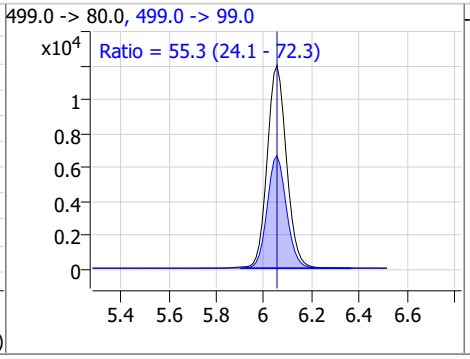


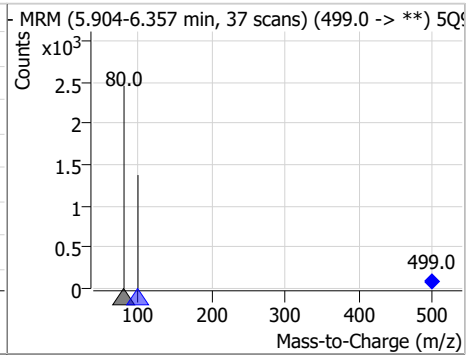




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	21.75	6.05	0.04	67330	499.0 -> 99.0	55.3	24.1	72.3

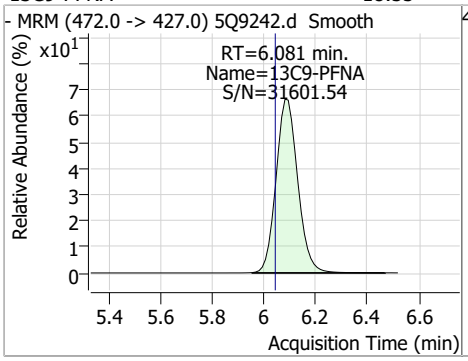


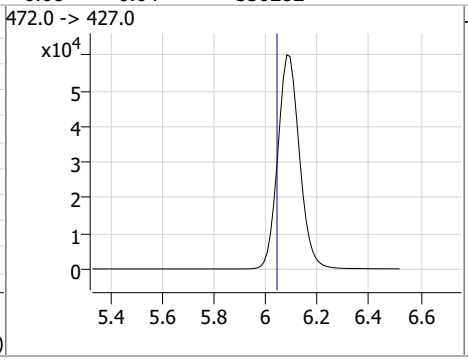


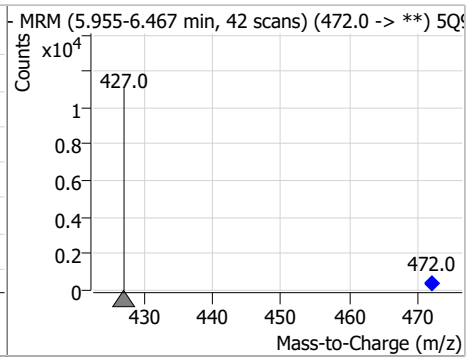


Perfluorinated Compounds by LC/MS/MS

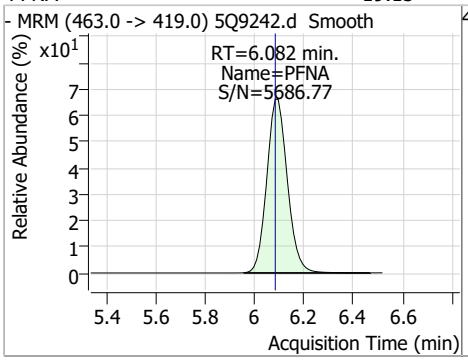
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	18.55	6.08	0.04	350282				

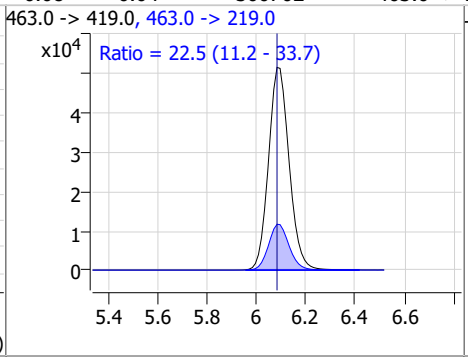


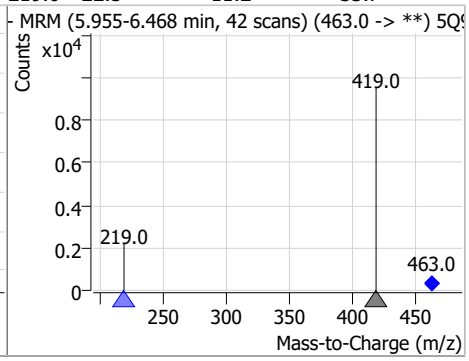




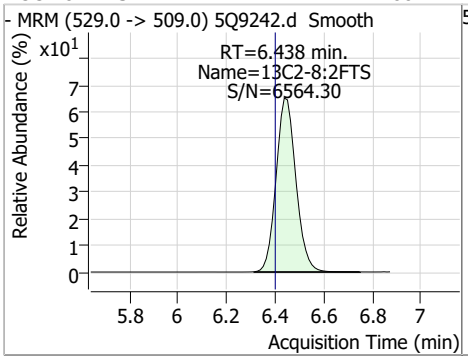
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.15	6.08	0.04	300762	463.0 -> 219.0	22.5	11.2	33.7

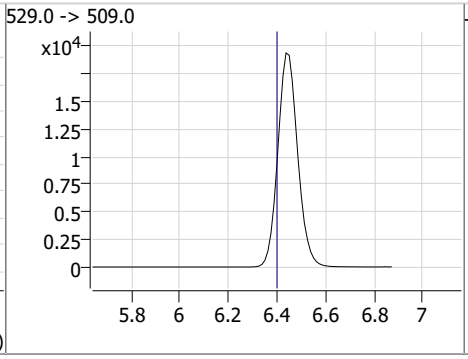


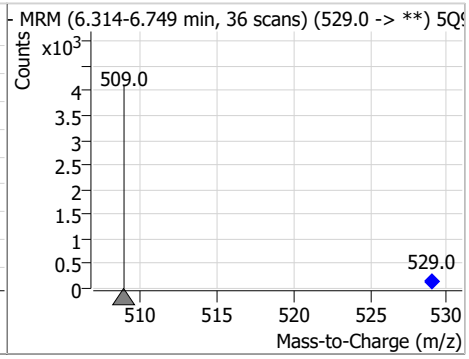




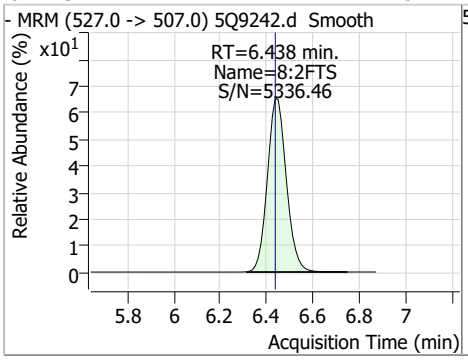
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	17.88	6.44	0.04	109771				

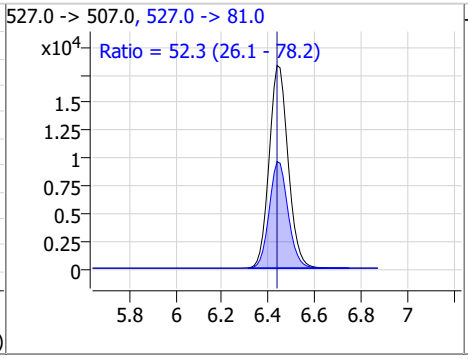


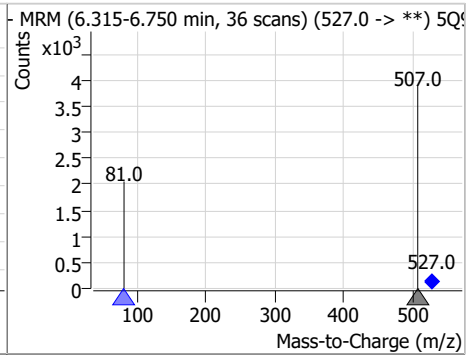




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	22.15	6.44	0.04	103914	527.0 -> 81.0	52.3	26.1	78.2

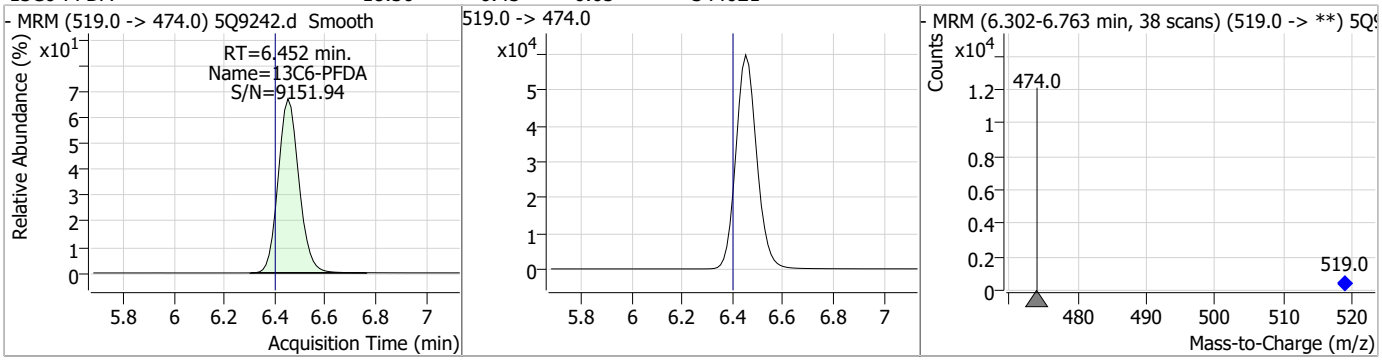




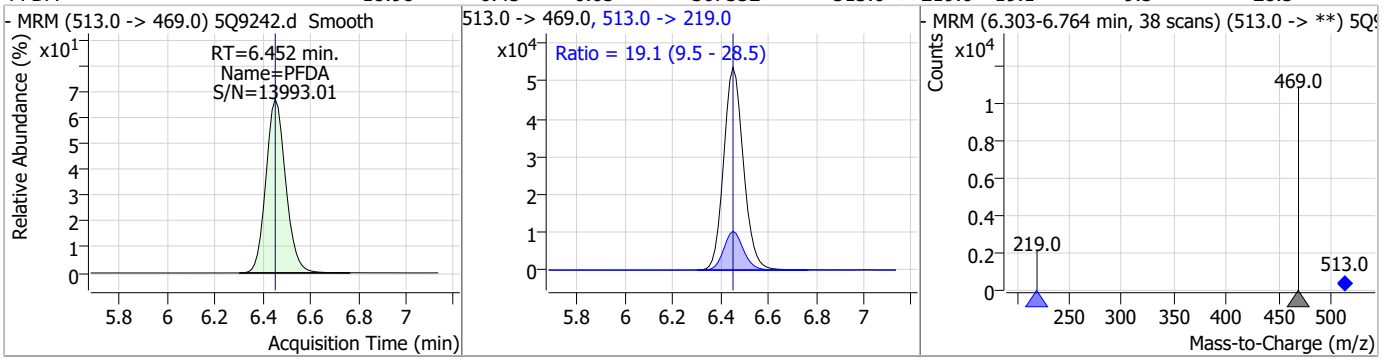


Perfluorinated Compounds by LC/MS/MS

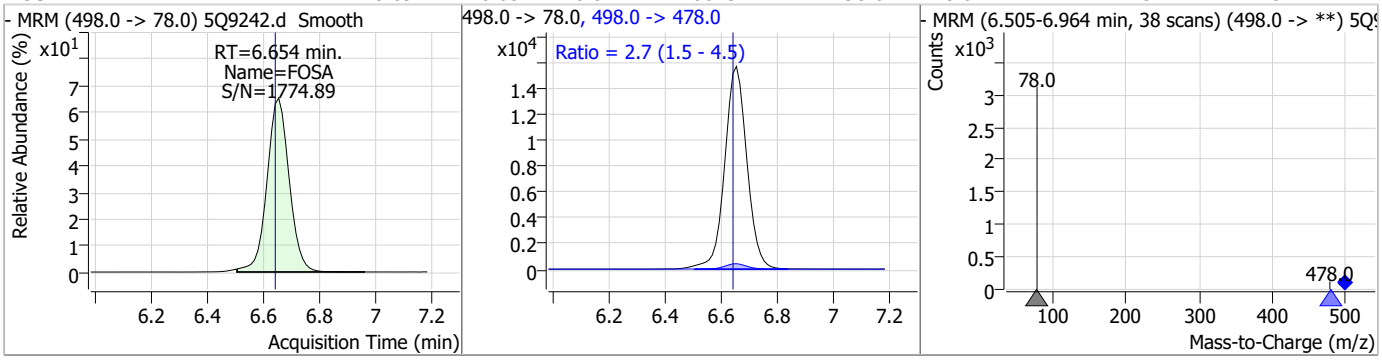
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	18.56	6.45	0.05	344021				



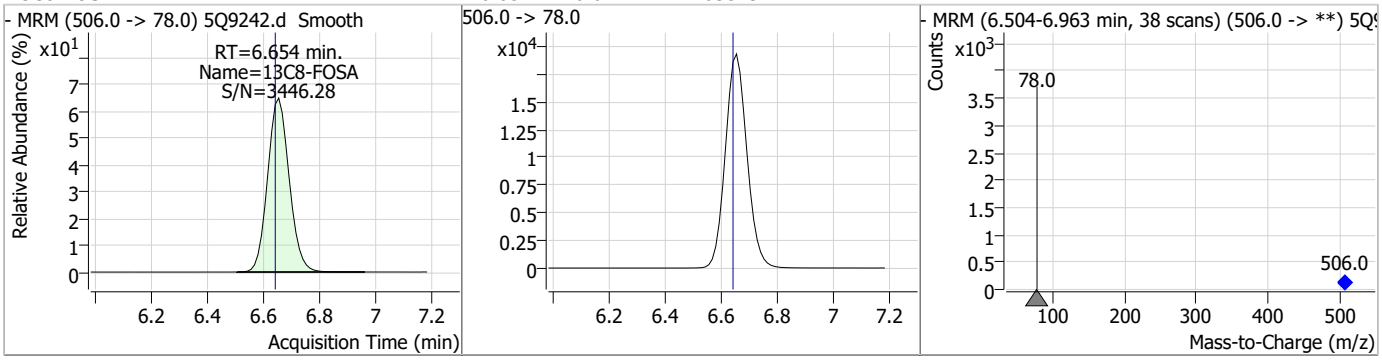
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	18.98	6.45	0.05	307352	513.0 -> 219.0	19.1	9.5	28.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	18.69	6.65	0.02	86732	498.0 -> 478.0	2.7	1.5	4.5

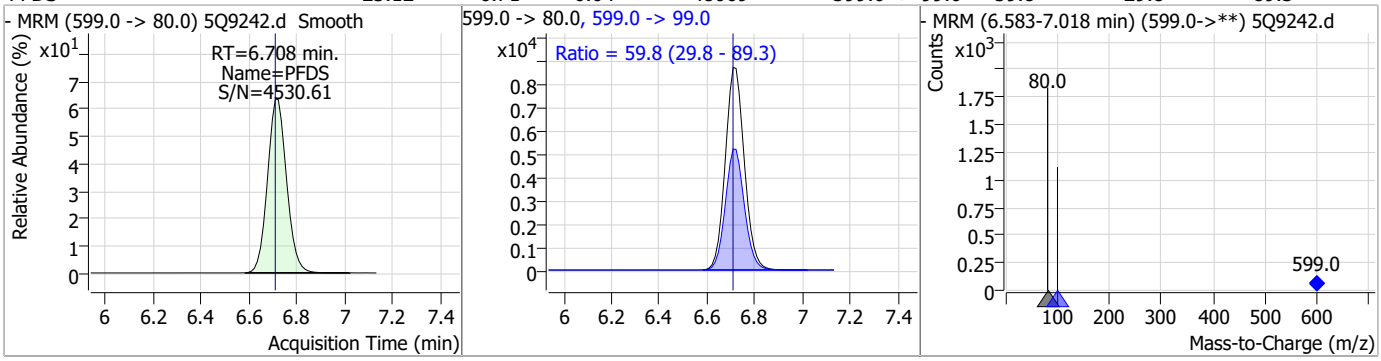


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	17.27	6.65	0.01	103549				

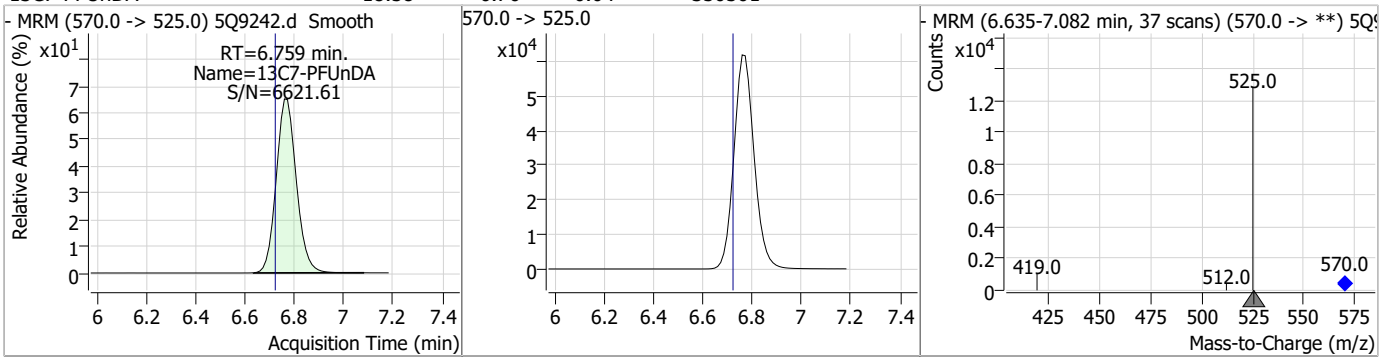


Perfluorinated Compounds by LC/MS/MS

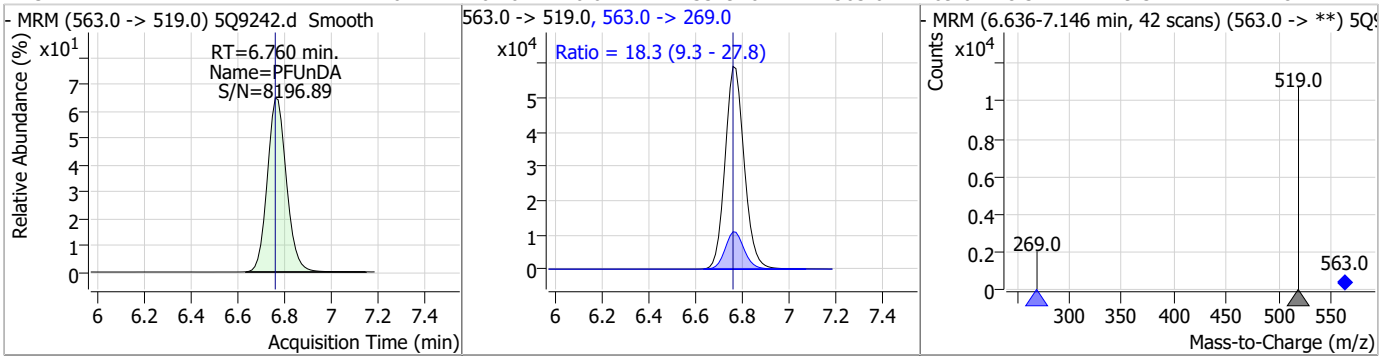
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	23.12	6.71	0.04	48069	599.0 -> 99.0	59.8	29.8	89.3



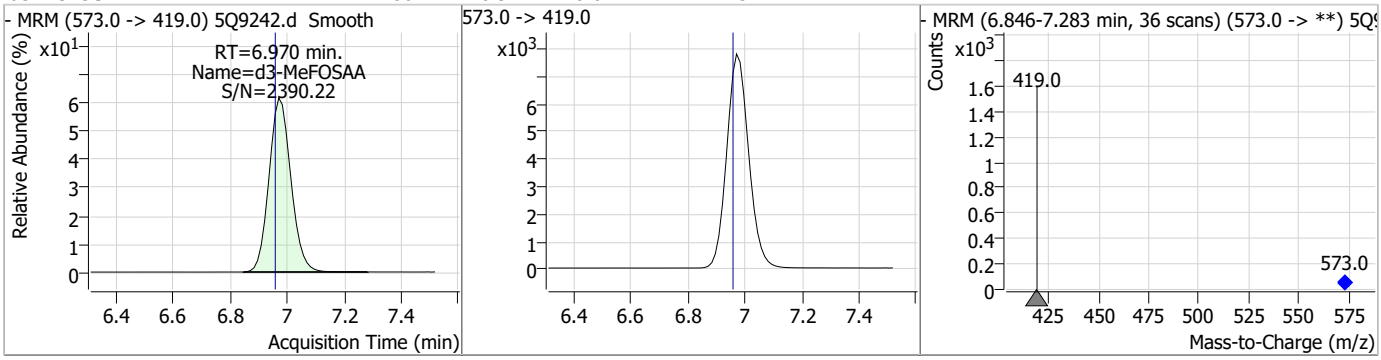
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	18.58	6.76	0.04	350501				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	21.64	6.76	0.04	334926	563.0 -> 269.0	18.3	9.3	27.8

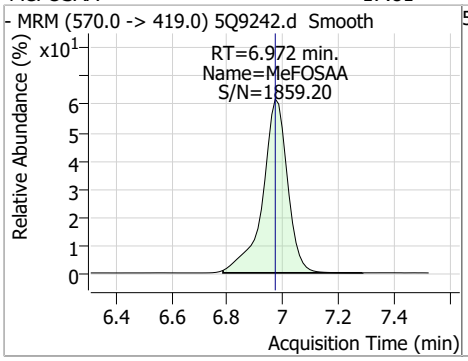


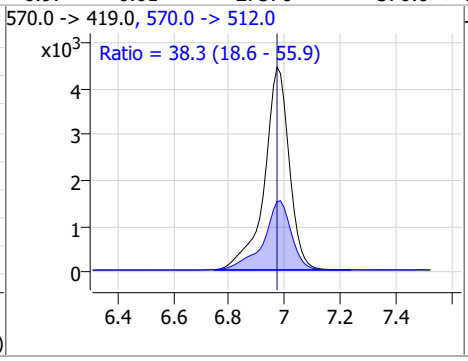
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	14.80	6.97	0.01	41475				

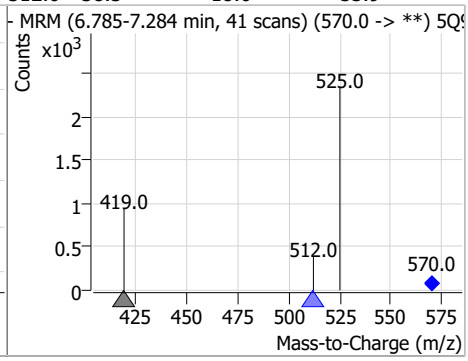


Perfluorinated Compounds by LC/MS/MS

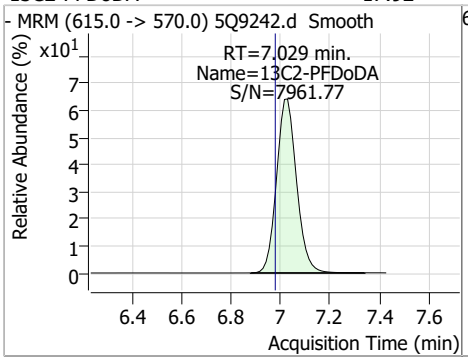
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	17.81	6.97	0.01	27370	570.0 -> 512.0	38.3	18.6	55.9

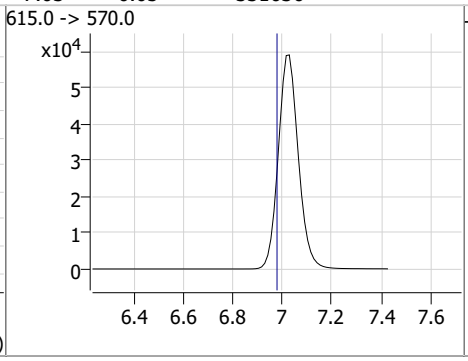


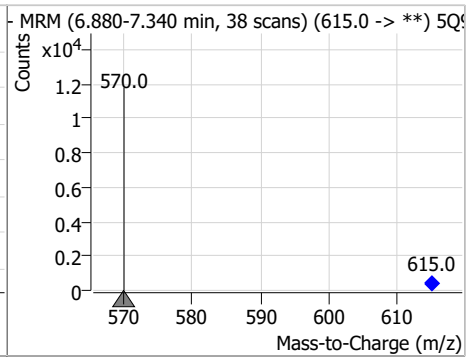




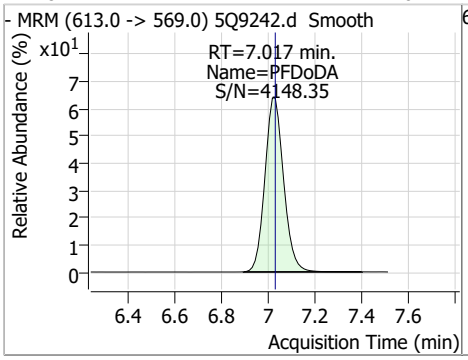
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	17.92	7.03	0.05	331636				

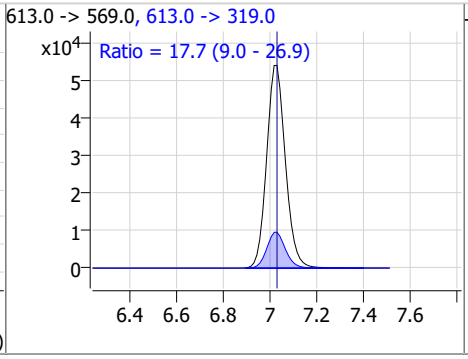


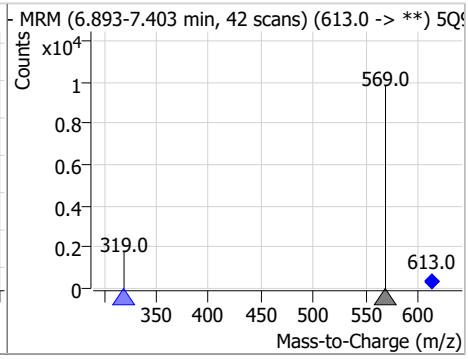




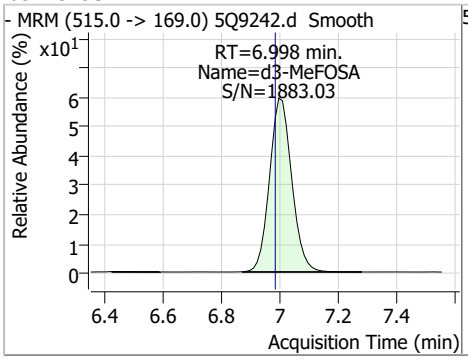
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	22.70	7.02	0.04	304277	613.0 -> 319.0	17.7	9.0	26.9

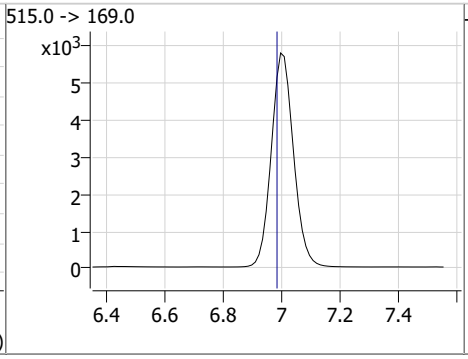


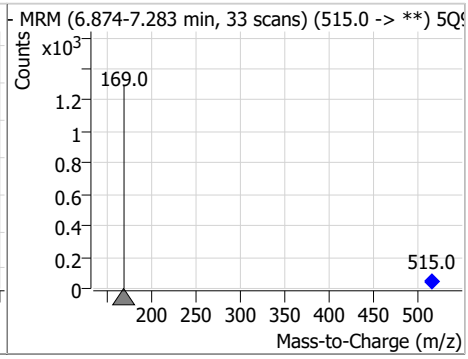




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	17.74	7.00	0.01	30583				

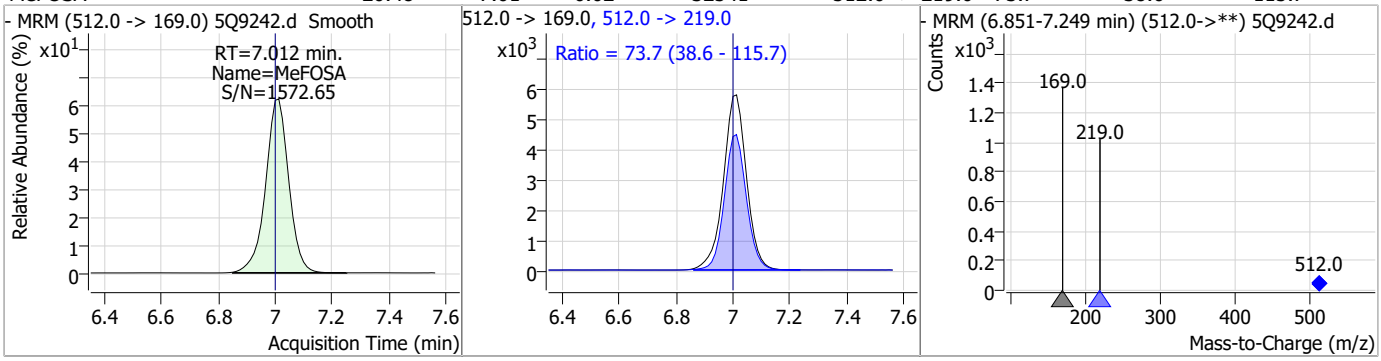




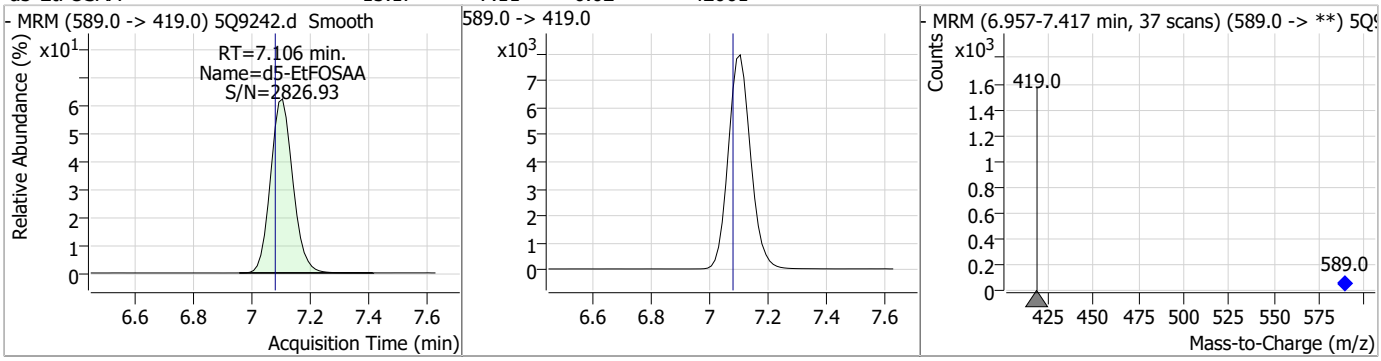


Perfluorinated Compounds by LC/MS/MS

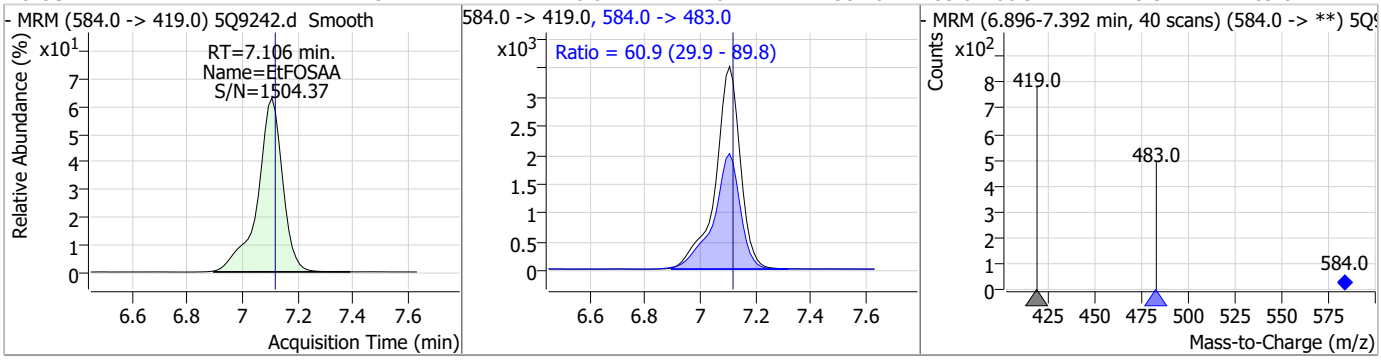
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	20.48	7.01	0.02	32541	512.0 -> 219.0	73.7	38.6	115.7



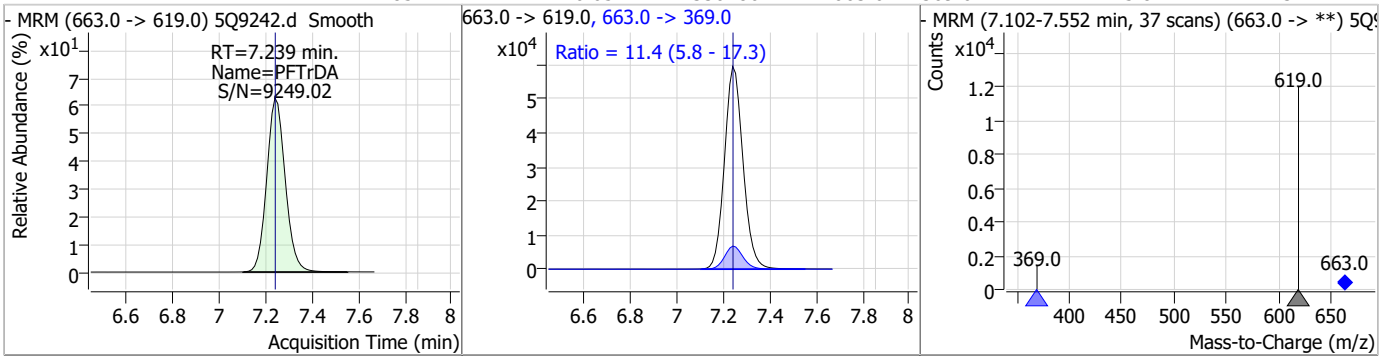
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	15.17	7.11	0.02	42061				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	15.72	7.11	0.01	22047	584.0 -> 483.0	60.9	29.9	89.8

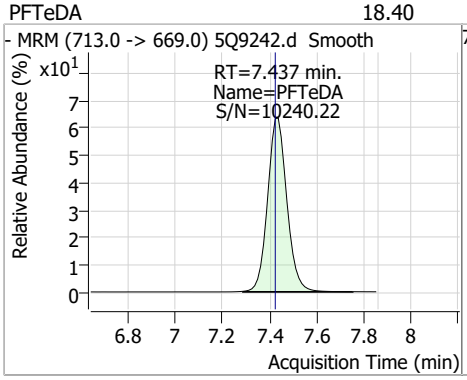


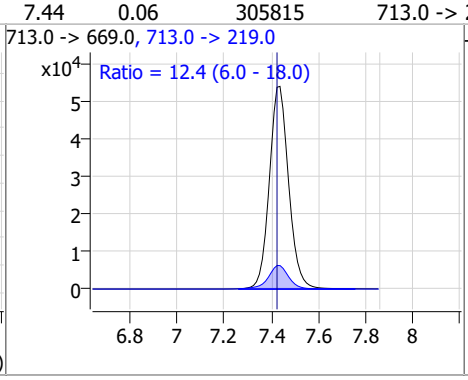
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	22.85	7.24	0.05	330780	663.0 -> 369.0	11.4	5.8	17.3

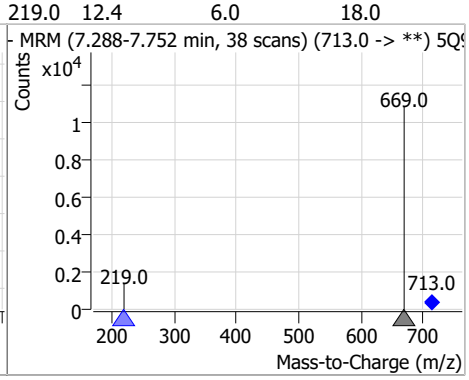


Perfluorinated Compounds by LC/MS/MS

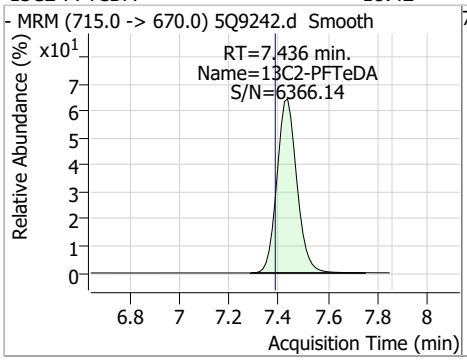
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	18.40	7.44	0.06	305815	713.0 -> 219.0	12.4	6.0	18.0

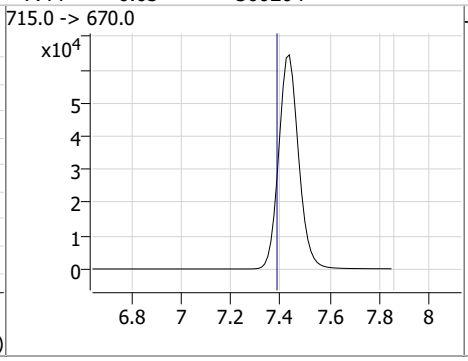


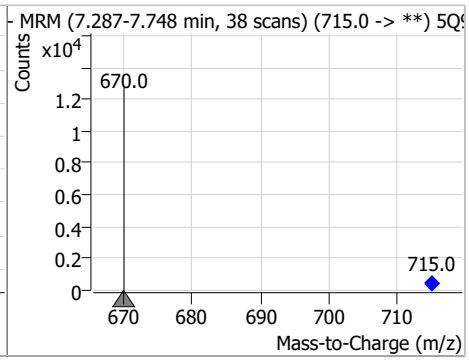




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	18.42	7.44	0.05	360204				







Manual Integration Approval Summary

Sample Number:	S5Q137-ICV137	**Method:**	EPA 537M QSM5.3 B-15
Lab FileID:	5Q9242.D	**Analyst approved:**	01/04/23 11:33 Lindsay Ritner
Injection Time:	01/03/23 17:49	**Supervisor approved:**	01/04/23 15:00 Natasha Gumtie

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.16	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Natasha Gumtie 01/04/23 15:00

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9244.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 1/3/2023 6:20:17 PM
Sample Name : cc137-20
Vial : P1-A7
DA Method File : ID_010323_S5Q137.quantmethod.xml
Batch Name : s5q137.batch.bin
Sample Information : OP94373,S5Q137,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.037	217.0 -> 172.0	115214	20.00	µg/L	0.062
M5-PFPeA	3.532	268.0 -> 223.0	214892	20.00	µg/L	0.062
M5-PFHxA	4.504	318.0 -> 273.0	303367	20.00	µg/L	0.050
M4-PFHpA	5.176	367.0 -> 322.0	301521	20.00	µg/L	0.063
M8-PFOA	5.686	421.0 -> 376.0	380030	20.00	µg/L	0.065
M9-PFNA	6.106	472.0 -> 427.0	386853	20.00	µg/L	0.063
M6-PFDA	6.476	519.0 -> 474.0	376184	20.00	µg/L	0.075
M7-PFUnDA	6.796	570.0 -> 525.0	382419	20.00	µg/L	0.074
M2-PFDoDA	7.054	615.0 -> 570.0	376996	20.00	µg/L	0.074
M2-PFTeDA	7.461	715.0 -> 670.0	396301	20.00	µg/L	0.075
M8-FOSA	6.666	506.0 -> 78.0	114008	20.00	µg/L	0.025
M3-PFBS	3.743	302.0 -> 99.0	26008	20.00	µg/L	0.065
M3-PFHxS	5.186	402.0 -> 99.0	32972	20.00	µg/L	0.063
M8-PFOS	6.079	507.0 -> 99.0	38845	20.00	µg/L	0.063
M2-4:2FTS	4.413	329.0 -> 309.0	95305	20.00	µg/L	0.065
M2-6:2FTS	5.659	429.0 -> 409.0	143648	20.00	µg/L	0.065
M2-8:2FTS	6.475	529.0 -> 509.0	125825	20.00	µg/L	0.075
M3-MeFOSAA	6.983	573.0 -> 419.0	48218	20.00	µg/L	0.025
M3-HFPO-DA	4.706	287.0 -> 169.0	65651	20.00	µg/L	0.062
M3-MeFOSA	7.011	515.0 -> 169.0	33939	20.00	µg/L	0.025
M5-EtFOSAA	7.118	589.0 -> 419.0	46112	20.00	µg/L	0.037
System Monitoring Compounds						
13C2-4:2FTS	4.413	329.0 -> 309.0	95305	20.15	µg/L	0.065
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.8%		
13C2-6:2FTS	5.659	429.0 -> 409.0	143648	20.17	µg/L	0.065
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.9%		
13C2-8:2FTS	6.475	529.0 -> 509.0	125825	20.49	µg/L	0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.5%		
13C2-PFDoDA	7.054	615.0 -> 570.0	376996	20.37	µg/L	0.074
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.8%		
13C2-PFTeDA	7.461	715.0 -> 670.0	396301	20.27	µg/L	0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.3%		
13C3-PFBS	3.743	302.0 -> 99.0	26008	20.29	µg/L	0.065
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.4%		
13C3-PFHxS	5.186	402.0 -> 99.0	32972	20.76	µg/L	0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.8%		
13C4-PFBA	2.037	217.0 -> 172.0	115214	20.10	µg/L	0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.5%		
13C4-PFHpA	5.176	367.0 -> 322.0	301521	20.52	µg/L	0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.6%		
13C5-PFHxA	4.504	318.0 -> 273.0	303367	20.65	µg/L	0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.3%		
13C5-PFPeA	3.532	268.0 -> 223.0	214892	20.68	µg/L	0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.4%		
13C6-PFDA	6.476	519.0 -> 474.0	376184	20.29	µg/L	0.075

Perfluorinated Compounds by LC/MS/MS

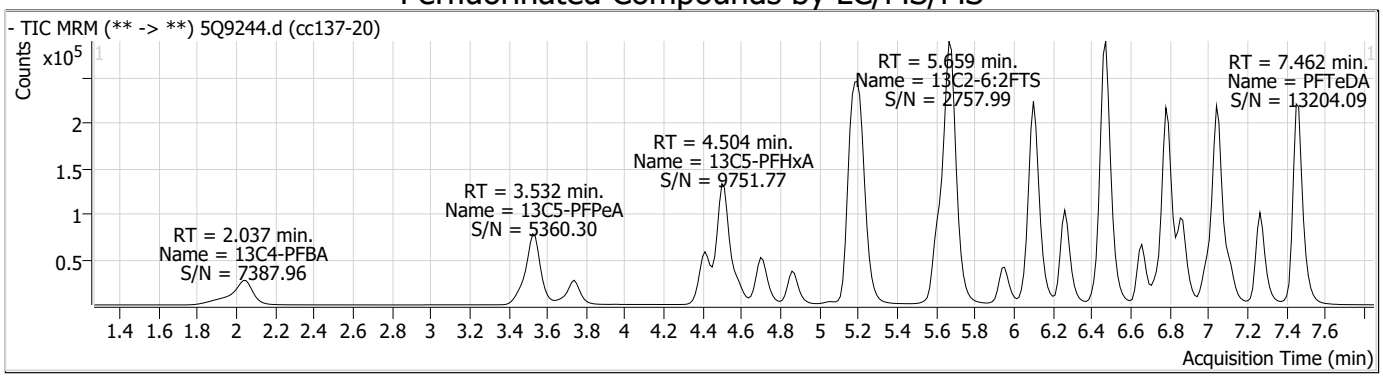
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.5%		
13C7-PFUnDA	6.796	570.0 -> 525.0	382419	20.27 µg/L		0.074
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.4%		
13C8-FOSA	6.666	506.0 -> 78.0	114008	19.02 µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 95.1%		
13C8-PFOA	5.686	421.0 -> 376.0	380030	20.17 µg/L		0.065
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.9%		
13C8-PFOS	6.079	507.0 -> 99.0	38845	20.38 µg/L		0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 101.9%		
13C9-PFNA	6.106	472.0 -> 427.0	386853	20.49 µg/L		0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.5%		
d3-MeFOSAA	6.983	573.0 -> 419.0	48218	17.20 µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 86.0%		
13C3-HFPO-DA	4.706	287.0 -> 169.0	65651	19.57 µg/L		0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 97.9%		
d3-MeFOSA	7.011	515.0 -> 169.0	33939	19.68 µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.4%		
d5-EtFOSAA	7.118	589.0 -> 419.0	46112	16.63 µg/L		0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 83.2%		
Target Compounds						QValue
4:2FTS	4.415	327.0 -> 307.0	98452	22.69 µg/L		98
		327.0 -> 81.0	57786			
6:2FTS	5.659	427.0 -> 407.0	136271	21.84 µg/L		100
		427.0 -> 81.0	60464			
8:2FTS	6.476	527.0 -> 507.0	118507	22.04 µg/L		99
		527.0 -> 81.0	61225			
EtFOSAA	7.119	584.0 -> 419.0	30909	20.11 µg/L		97
		584.0 -> 483.0	19174			
FOSA	6.667	498.0 -> 78.0	101091	19.78 µg/L		100
		498.0 -> 478.0	3097			
MeFOSAA	6.984	570.0 -> 419.0	35730	20.00 µg/L		99
		570.0 -> 512.0	13557			
PFBA	2.044	213.0 -> 169.0	107064	19.83 µg/L		100
PFBS	3.745	299.0 -> 80.0	76191	20.41 µg/L		100
		299.0 -> 99.0	32122			
PFDA	6.477	513.0 -> 469.0	357456	20.19 µg/L		100
		513.0 -> 219.0	68633			
PFDoDA	7.054	613.0 -> 569.0	304975	20.01 µg/L		99
		613.0 -> 319.0	53899			
PFDS	6.733	599.0 -> 80.0	51747	22.81 µg/L		99
		599.0 -> 99.0	30514			
PFHpA	5.177	363.0 -> 319.0	331294	20.20 µg/L		100
		363.0 -> 169.0	74000			
PFHpS	5.671	449.0 -> 80.0	57885	20.56 µg/L		98
		449.0 -> 99.0	30970			
PFHxA	4.505	313.0 -> 269.0	272005	20.12 µg/L		99
		313.0 -> 119.0	12254			
PFHxS	5.187	399.0 -> 80.0	60839	20.22 µg/L		99
		399.0 -> 99.0	33666			
PFNA	6.106	463.0 -> 419.0	347855	20.06 µg/L		99
		463.0 -> 219.0	76760			
PFNS	6.437	549.0 -> 80.0	46150	19.96 µg/L		98
		549.0 -> 99.0	27149			
PFOA	5.687	413.0 -> 369.0	382889	20.35 µg/L		100
		413.0 -> 169.0	106035			
PFOS	6.080	499.0 -> 80.0	66476	19.77 µg/L	m	98

Perfluorinated Compounds by LC/MS/MS

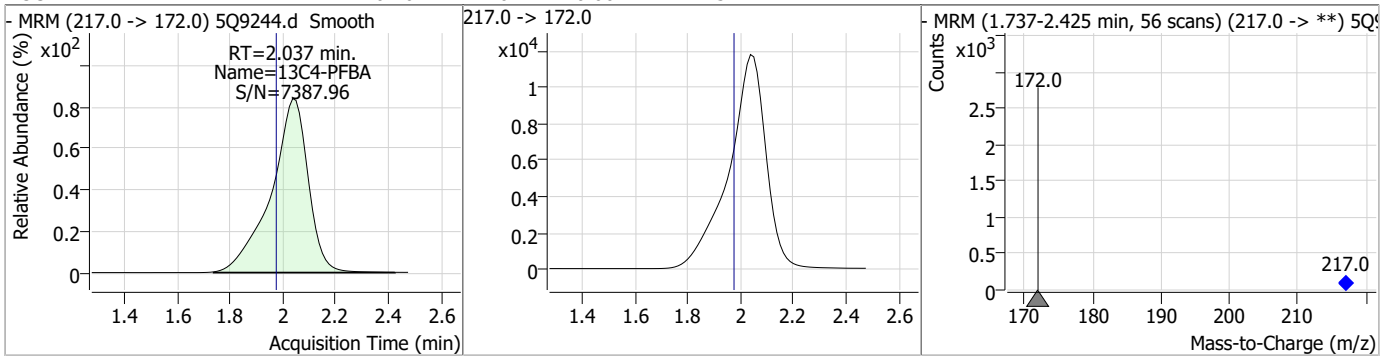
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	31210			
PFPeA	3.534	263.0 -> 219.0	221442	19.95	µg/L	100
PFPeS	4.588	349.0 -> 80.0	45491	20.06	µg/L	99
		349.0 -> 99.0	22963			
PFTeDA	7.462	713.0 -> 669.0	370490	20.26	µg/L	99
		713.0 -> 219.0	43134			
PFTrDA	7.264	663.0 -> 619.0	319083	19.39	µg/L	100
		663.0 -> 369.0	37205			
PFUnDA	6.785	563.0 -> 519.0	339471	20.10	µg/L	99
		563.0 -> 269.0	61514			
11Cl-PF3OUdS	6.867	631.0 -> 451.0	216948	20.67	µg/L	99
		633.0 -> 453.0	66724			
9Cl-PF3ONS	6.264	531.0 -> 351.0	283979	20.91	µg/L	100
		533.0 -> 353.0	87906			
ADONA	5.212	377.0 -> 251.0	448257	19.86	µg/L	100
		377.0 -> 85.0	168086			
HFPO-DA	4.714	329.0 -> 169.0	96126	20.23	µg/L	98
		285.0 -> 169.0	58137			
MeFOSA	7.025	512.0 -> 169.0	34772	19.72	µg/L	97
		512.0 -> 219.0	25773			
4-PFECHS	5.606	461.0 -> 381.0	188685	20.44	µg/L	99
		461.0 -> 99.0	105218			
FBSA	4.866	298.0 -> 78.0	130947	19.77	µg/L	100
		298.0 -> 64.0	11976			
FHxSA	5.960	398.0 -> 78.0	119975	20.11	µg/L	100
		398.0 -> 64.0	11256			

 # = Qualifier out of range, m = manually integrated, + = Area summed

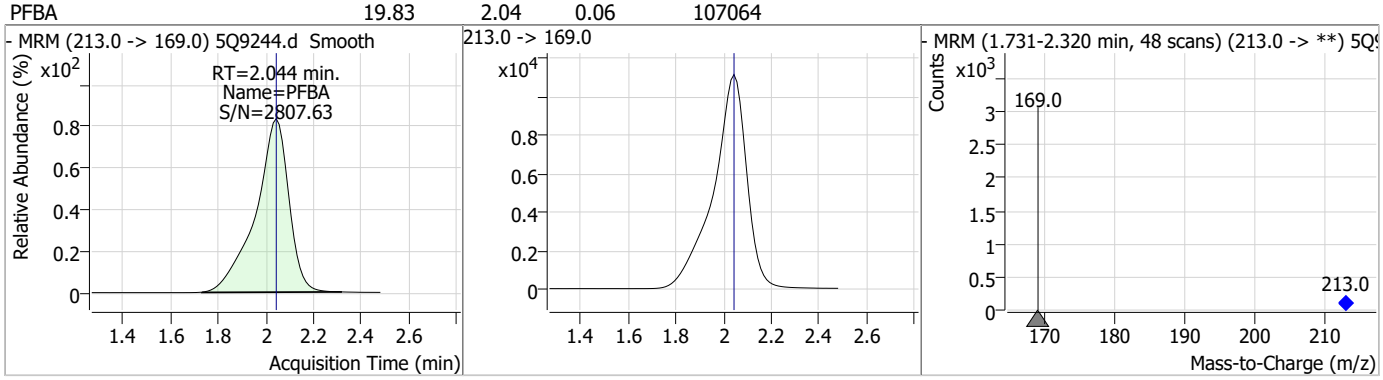
Perfluorinated Compounds by LC/MS/MS



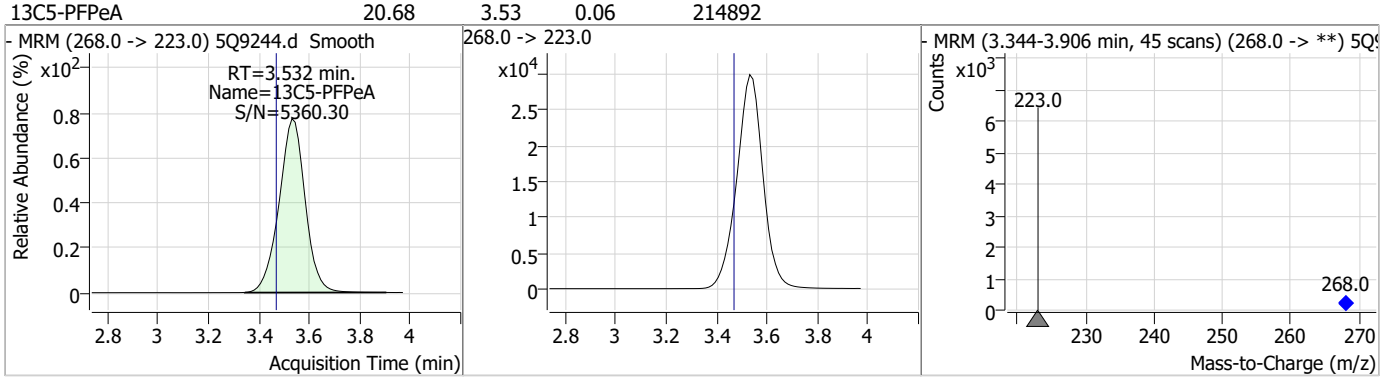
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.10	2.04	0.06	115214				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.83	2.04	0.06	107064				

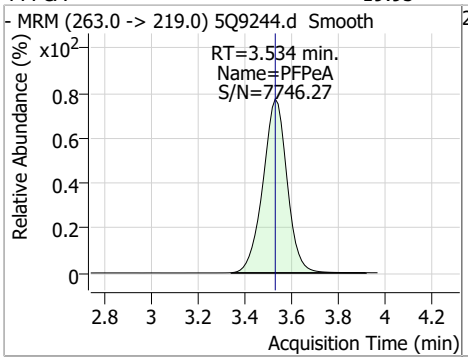


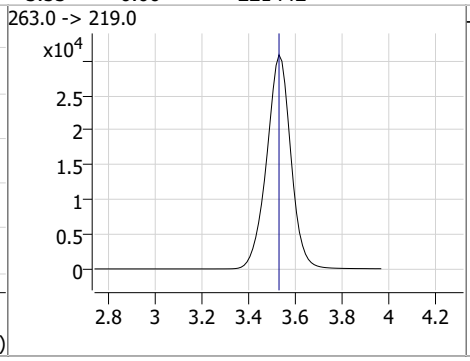
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.68	3.53	0.06	214892				

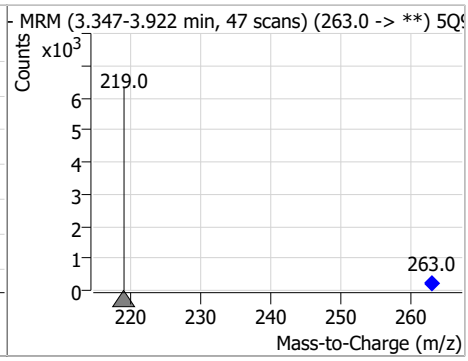


Perfluorinated Compounds by LC/MS/MS

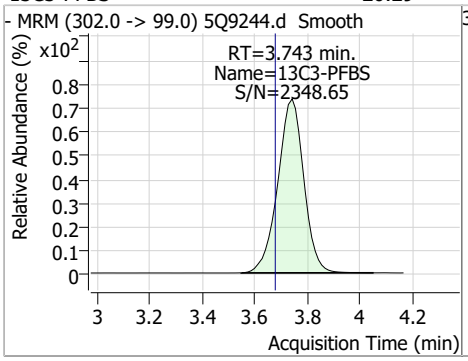
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.95	3.53	0.06	221442				

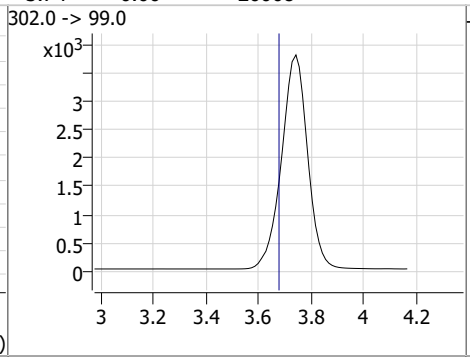


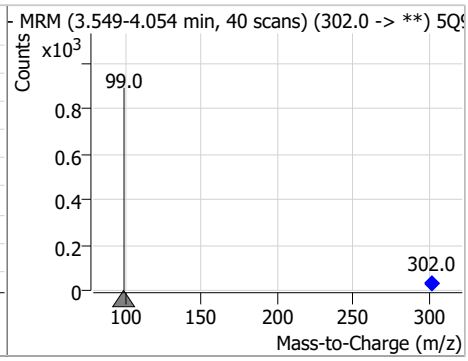




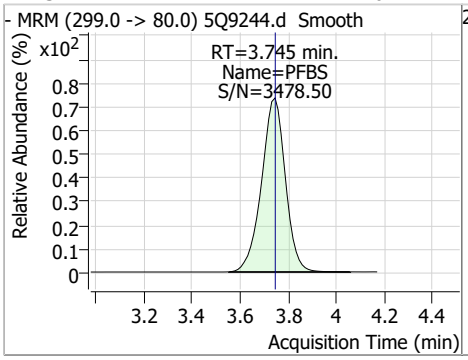
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.29	3.74	0.06	26008				

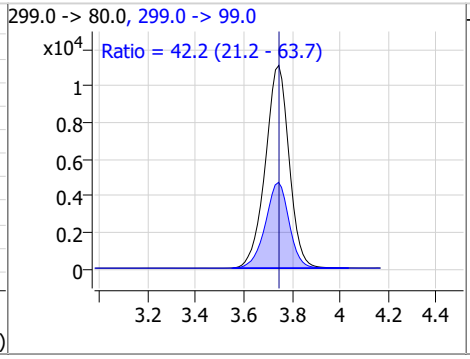


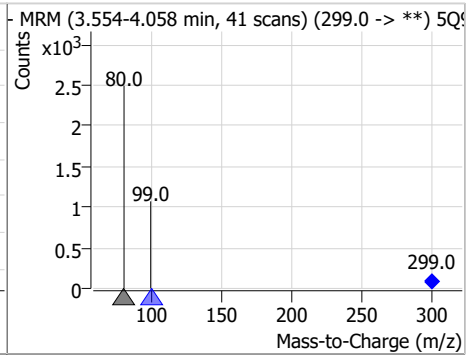




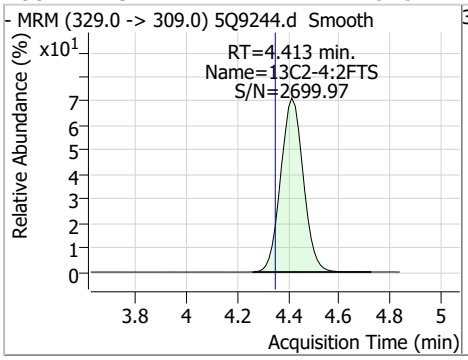
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	20.41	3.75	0.06	76191	299.0 -> 99.0	42.2	21.2	63.7

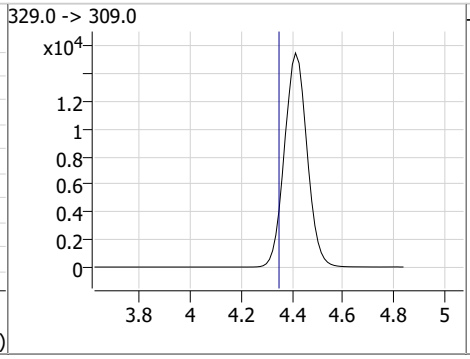


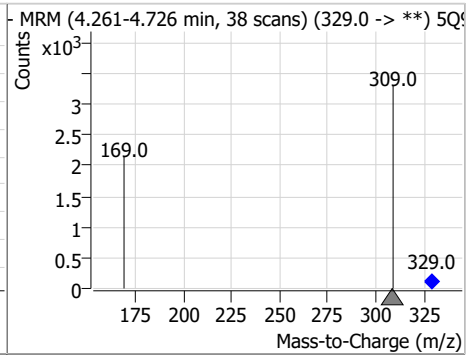




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	20.15	4.41	0.06	95305				

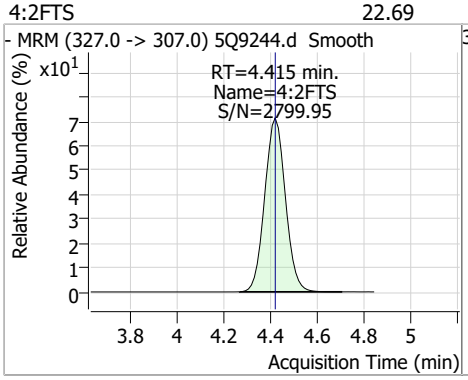


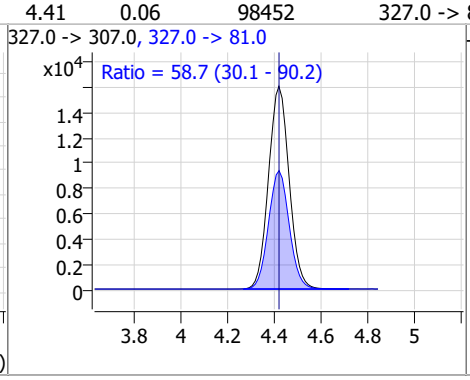


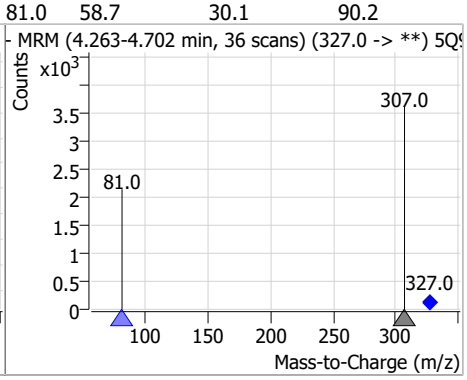


Perfluorinated Compounds by LC/MS/MS

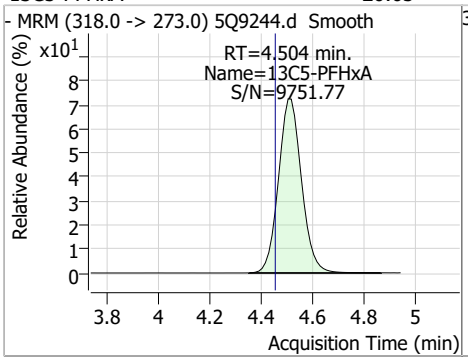
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	22.69	4.41	0.06	98452	327.0 -> 81.0	58.7	30.1	90.2

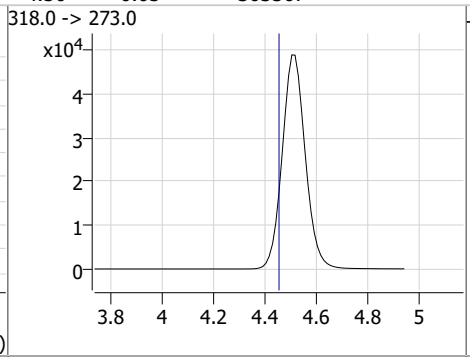


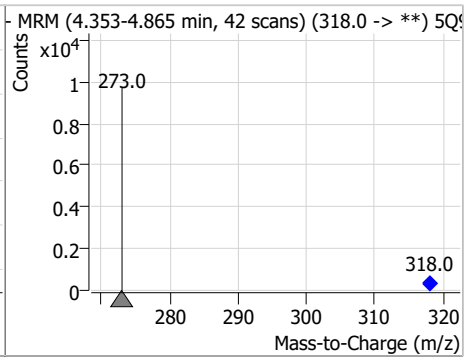




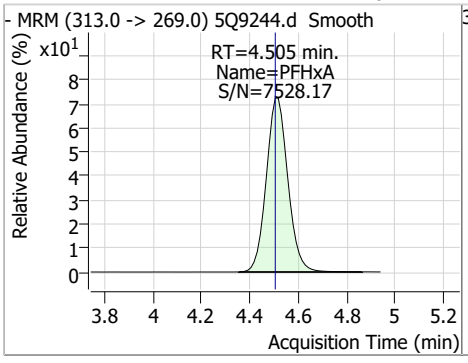
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.65	4.50	0.05	303367				

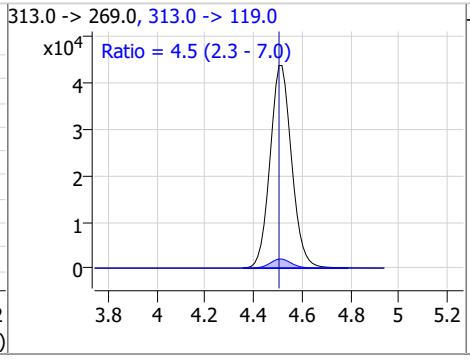


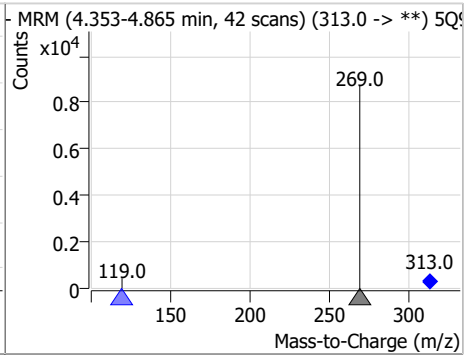




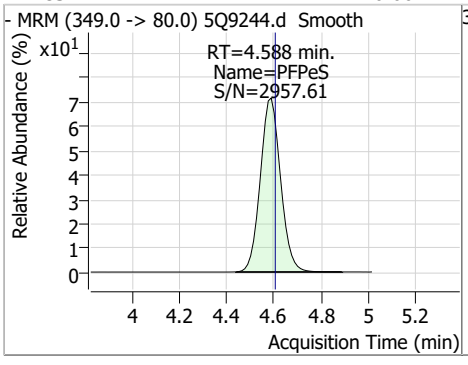
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	20.12	4.50	0.05	272005	313.0 -> 119.0	4.5	2.3	7.0

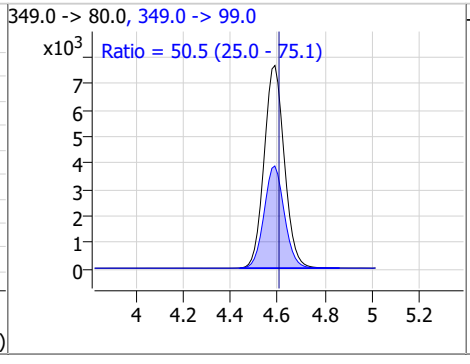


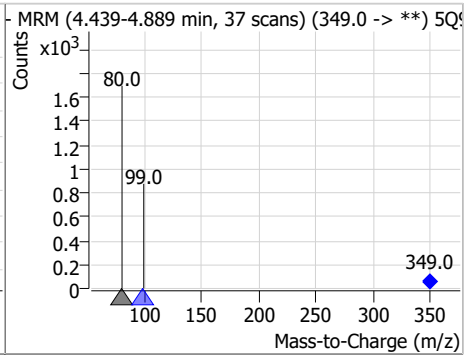




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	20.06	4.59	0.06	45491	349.0 -> 99.0	50.5	25.0	75.1

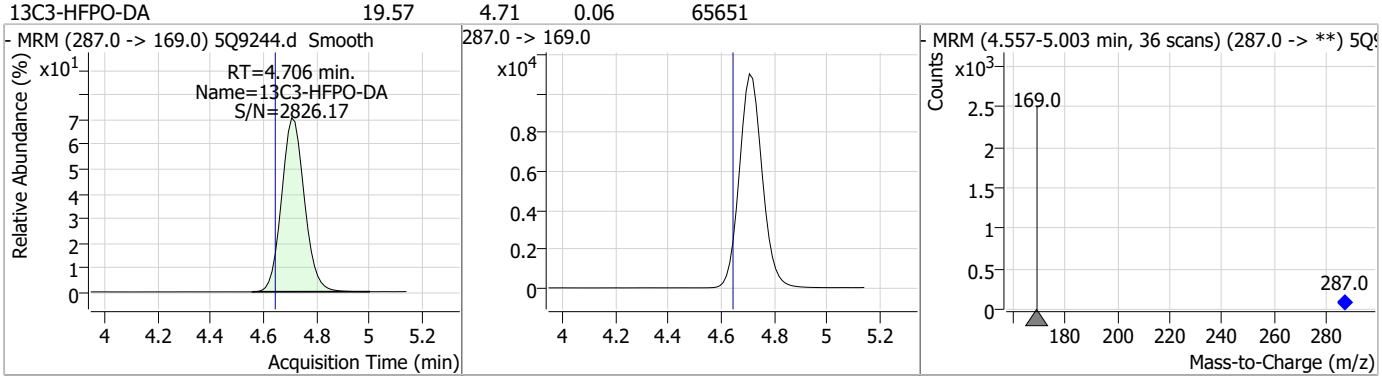




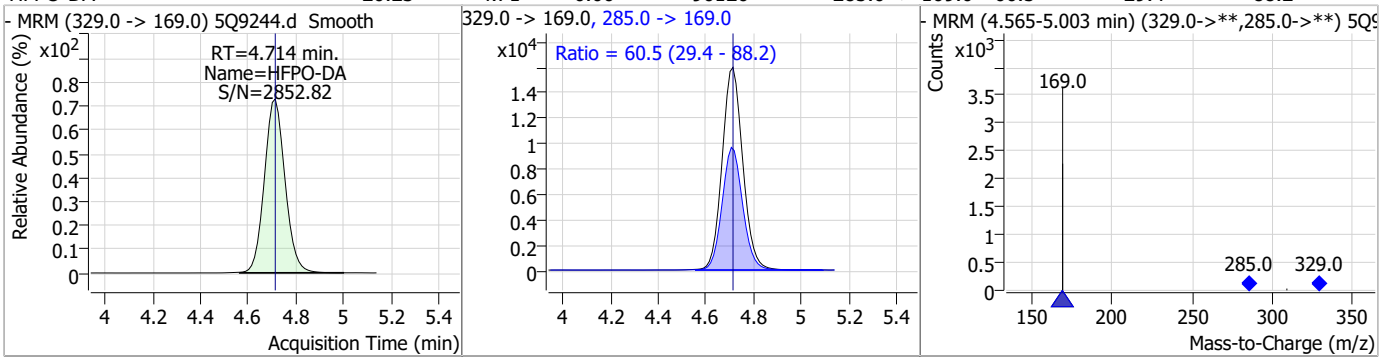


Perfluorinated Compounds by LC/MS/MS

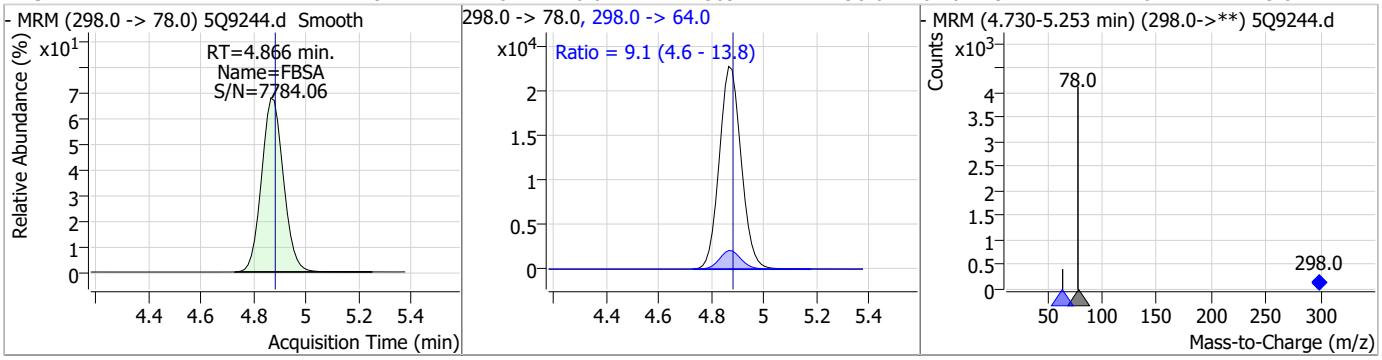
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.57	4.71	0.06	65651				



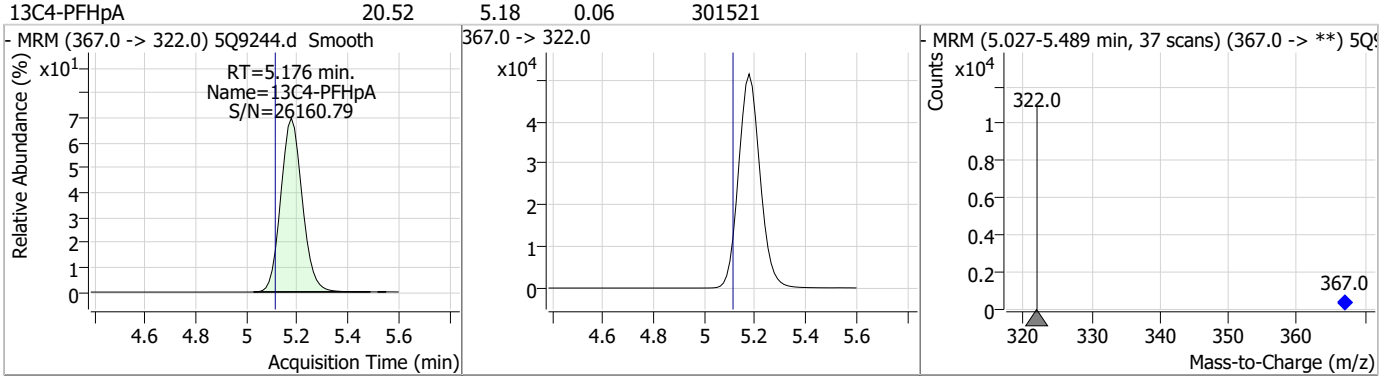
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	20.23	4.71	0.06	96126	285.0 -> 169.0	60.5	29.4	88.2



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	19.77	4.87	0.04	130947	298.0 -> 64.0	9.1	4.6	13.8

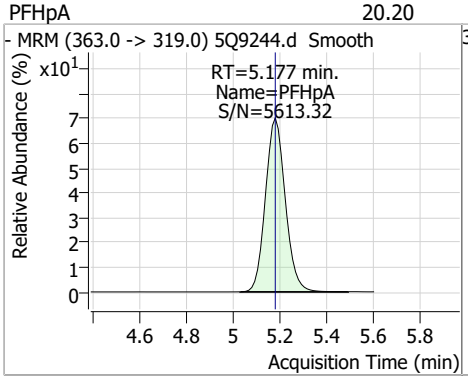


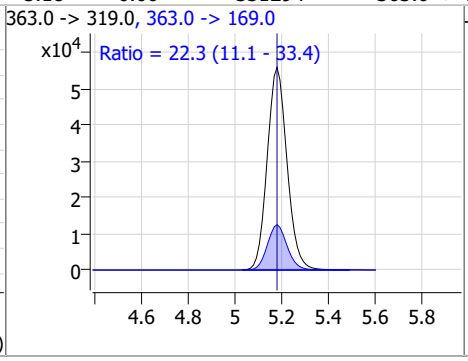
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.52	5.18	0.06	301521				

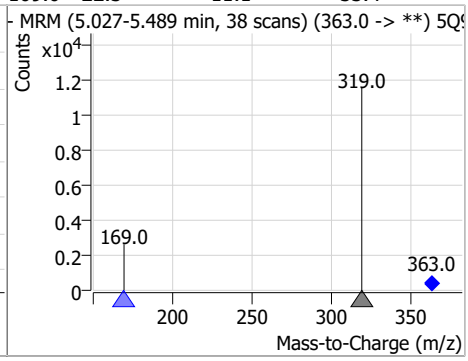


Perfluorinated Compounds by LC/MS/MS

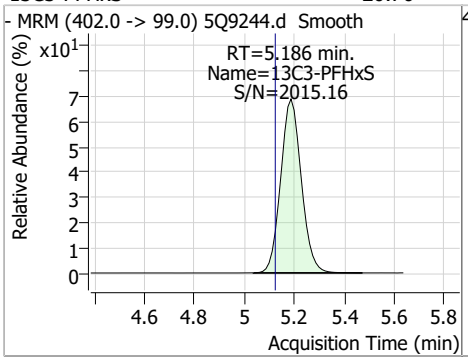
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	20.20	5.18	0.06	331294	363.0 -> 169.0	22.3	11.1	33.4

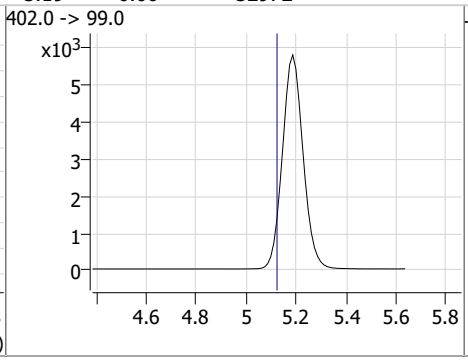


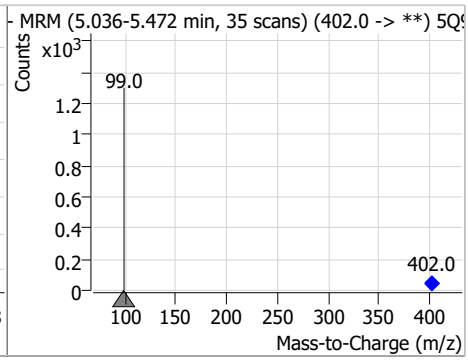




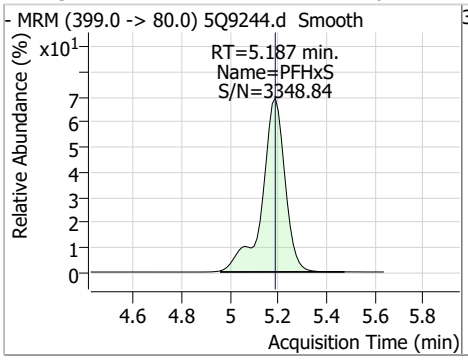
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.76	5.19	0.06	32972				

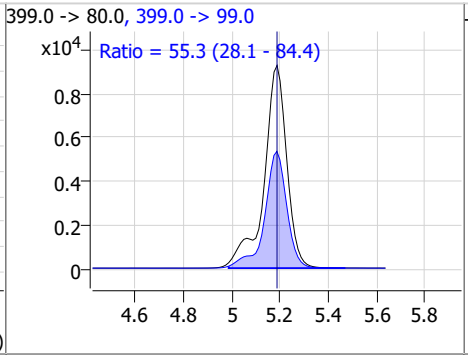


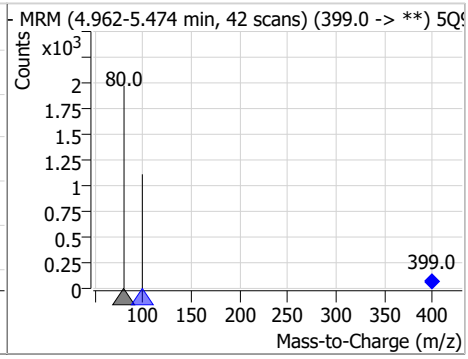




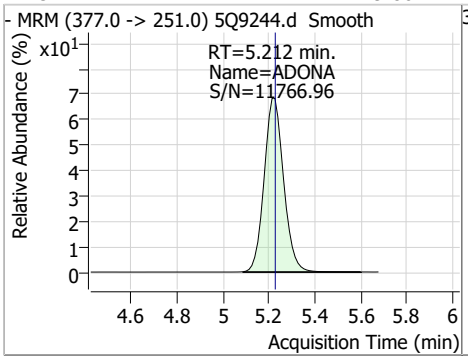
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	20.22	5.19	0.06	60839	399.0 -> 99.0	55.3	28.1	84.4

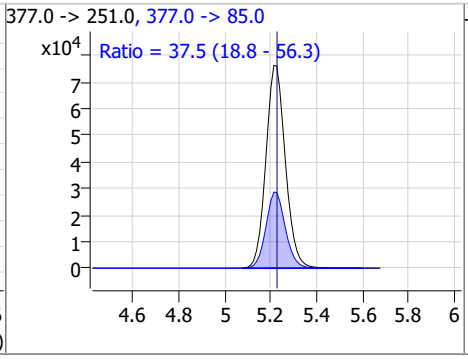


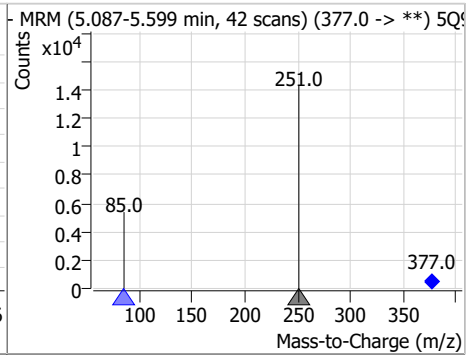




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	19.86	5.21	0.05	448257	377.0 -> 85.0	37.5	18.8	56.3

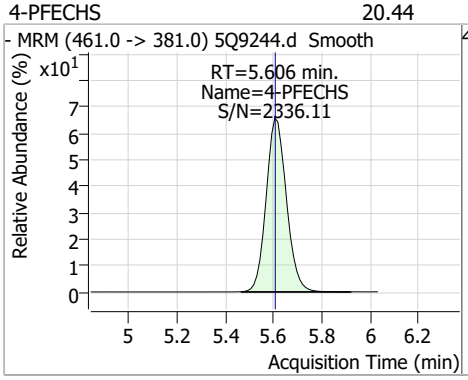


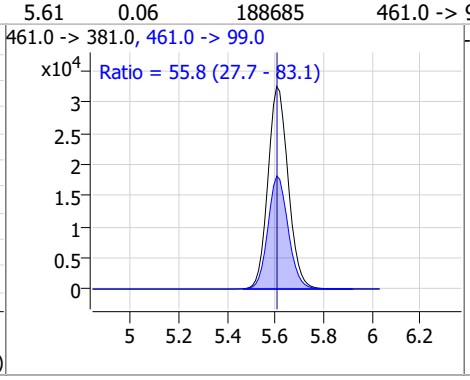


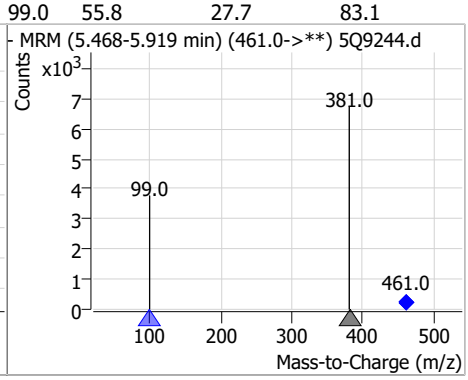


Perfluorinated Compounds by LC/MS/MS

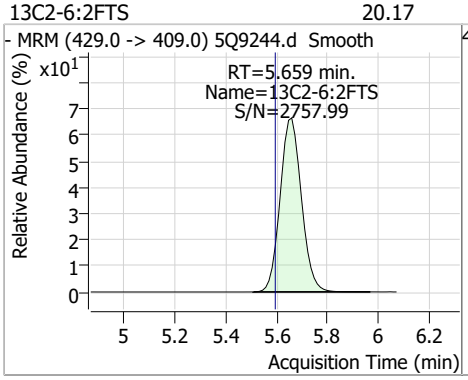
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	20.44	5.61	0.06	188685	461.0 -> 99.0	55.8	27.7	83.1

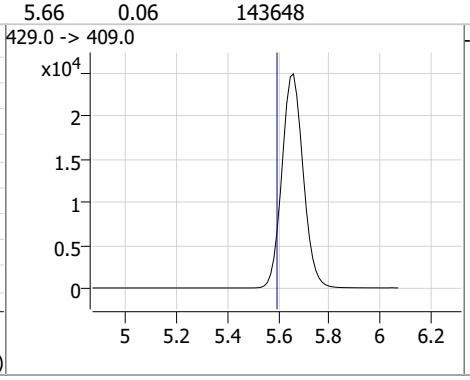


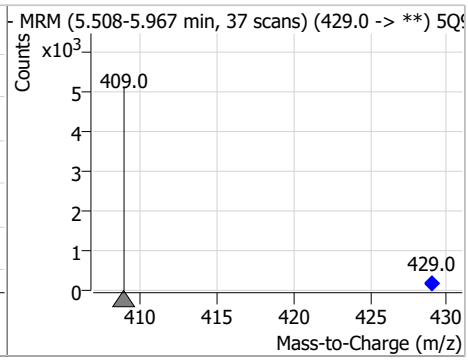




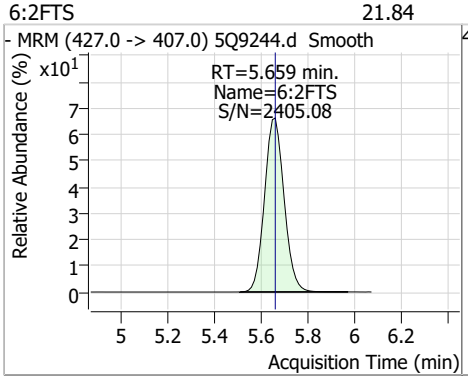
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	20.17	5.66	0.06	143648				

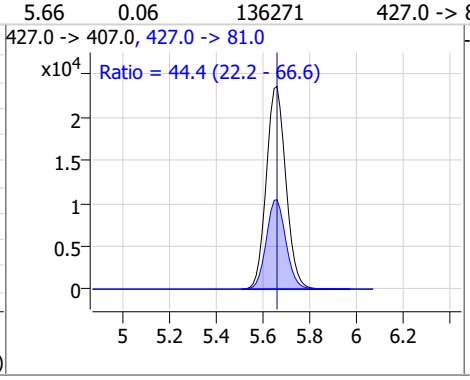


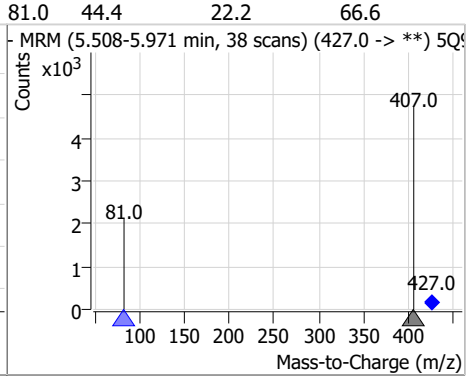




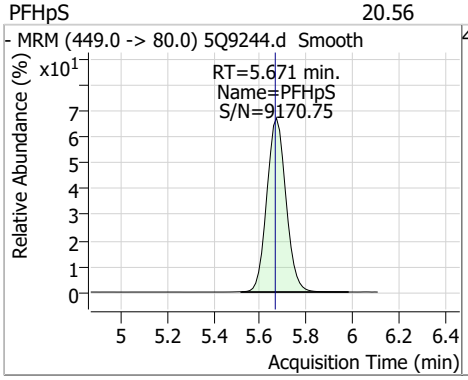
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	21.84	5.66	0.06	136271	427.0 -> 81.0	44.4	22.2	66.6

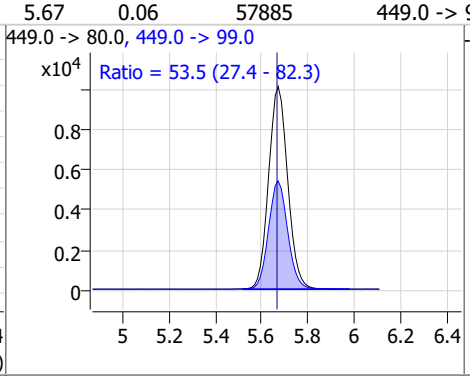


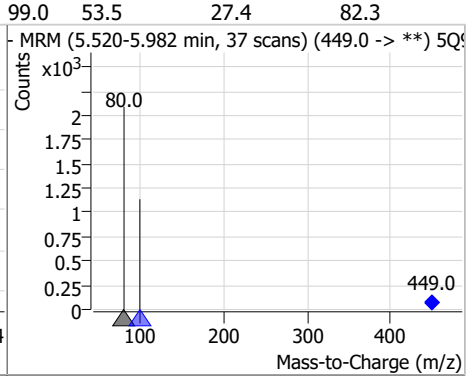




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	20.56	5.67	0.06	57885	449.0 -> 99.0	53.5	27.4	82.3

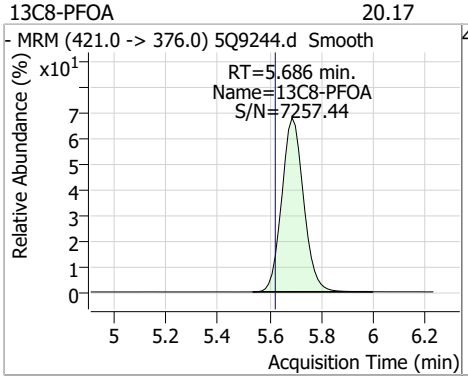


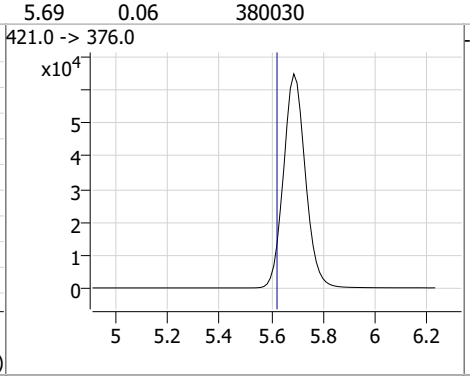


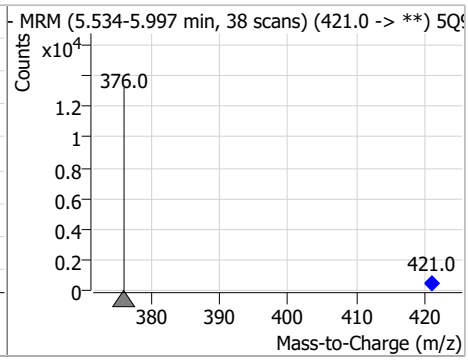


Perfluorinated Compounds by LC/MS/MS

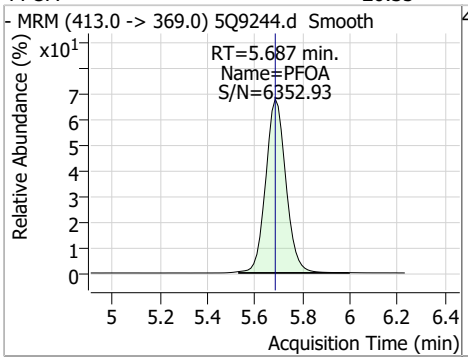
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.17	5.69	0.06	380030				

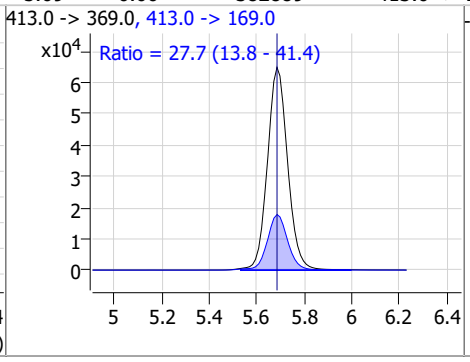


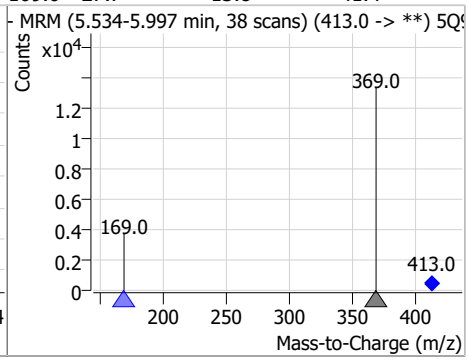




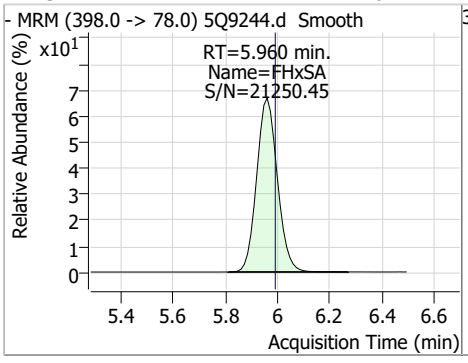
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	20.35	5.69	0.06	382889	413.0 -> 169.0	27.7	13.8	41.4

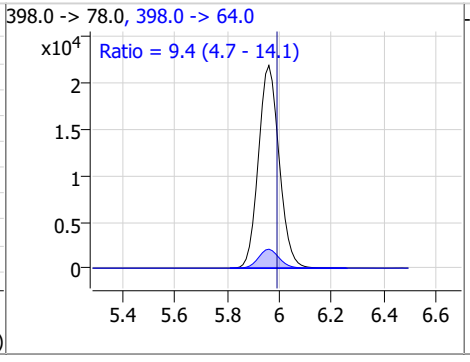


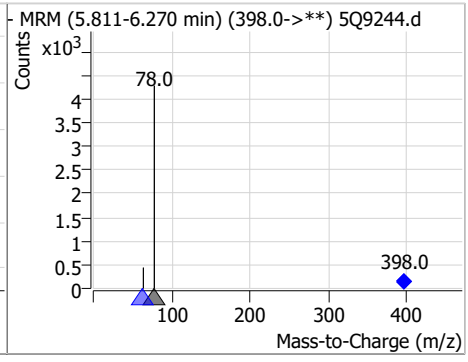




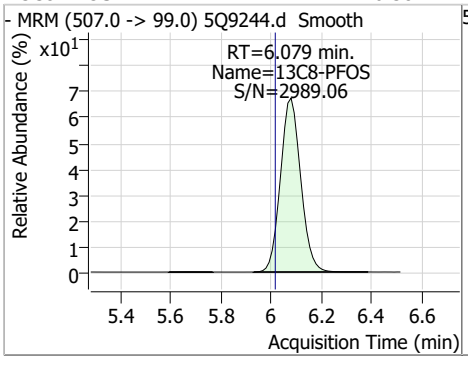
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	20.11	5.96	0.04	119975	398.0 -> 64.0	9.4	4.7	14.1

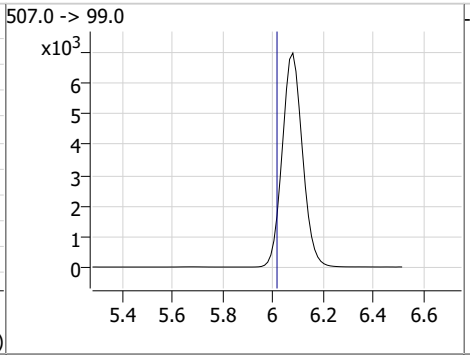


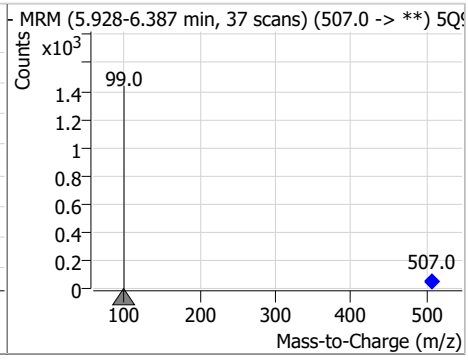




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.38	6.08	0.06	38845				

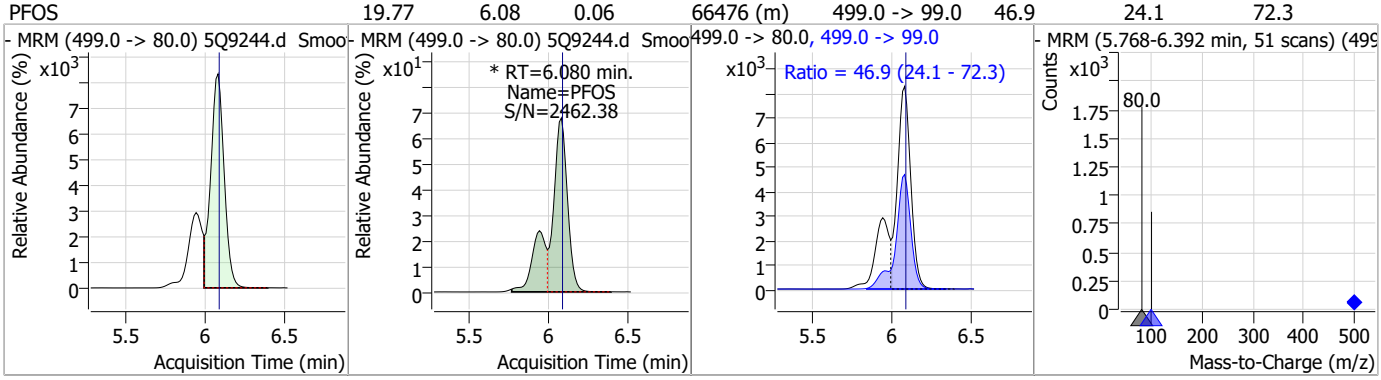




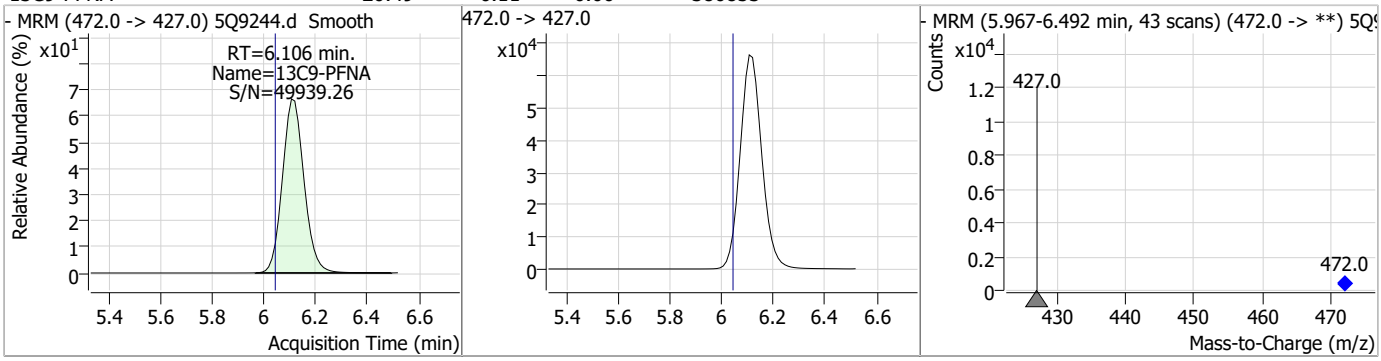


Perfluorinated Compounds by LC/MS/MS

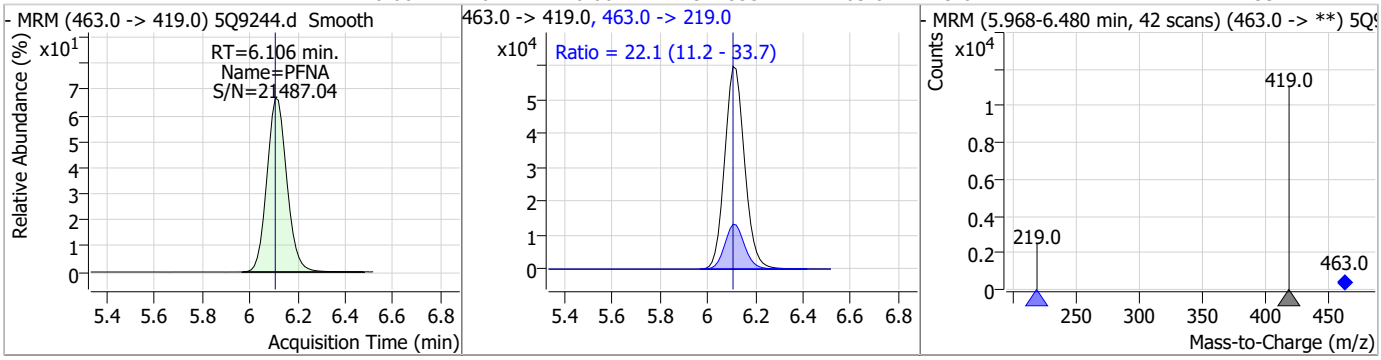
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.77	6.08	0.06	66476 (m)	499.0 -> 99.0	46.9	24.1	72.3



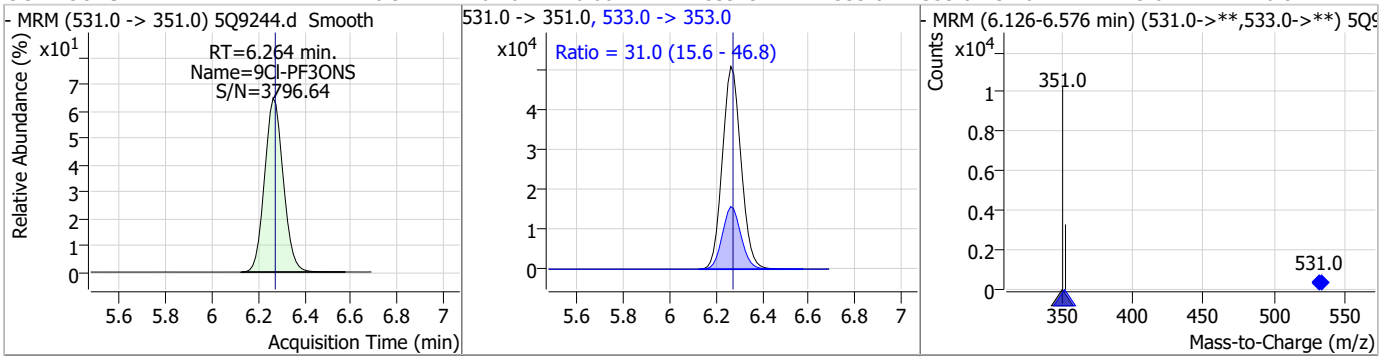
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.49	6.11	0.06	386853				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	20.06	6.11	0.06	347855	463.0 -> 219.0	22.1	11.2	33.7

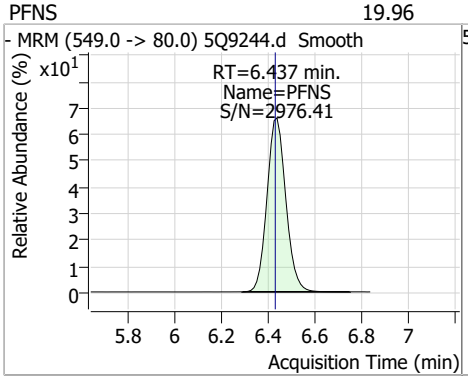


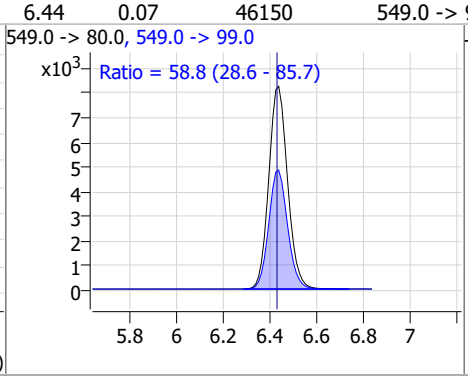
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	20.91	6.26	0.06	283979	533.0 -> 353.0	31.0	15.6	46.8

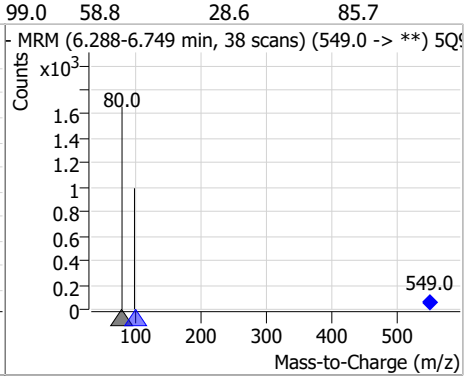


Perfluorinated Compounds by LC/MS/MS

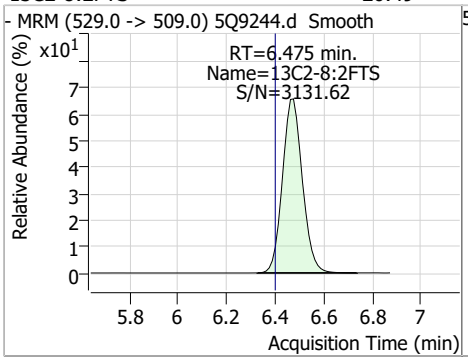
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	19.96	6.44	0.07	46150	549.0 -> 99.0	58.8	28.6	85.7

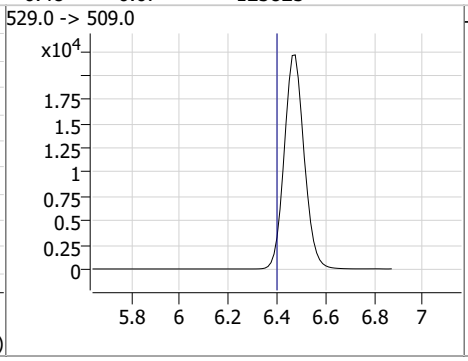


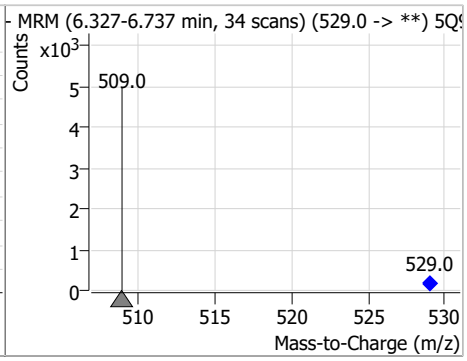




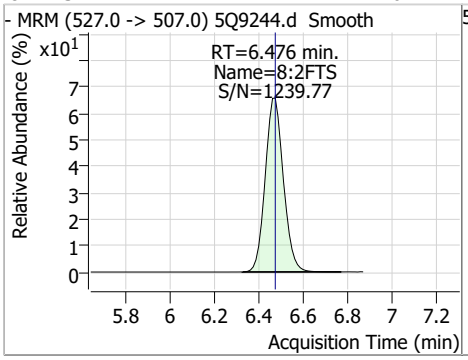
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	20.49	6.48	0.07	125825				

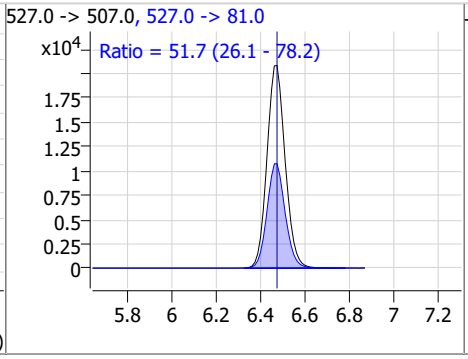


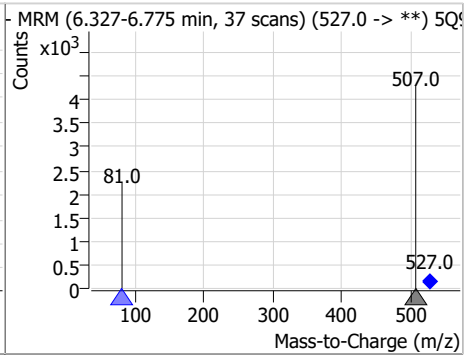




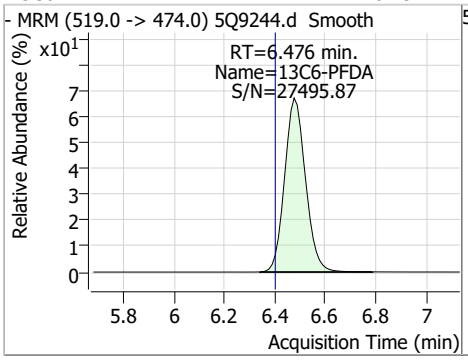
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	22.04	6.48	0.07	118507	527.0 -> 81.0	51.7	26.1	78.2

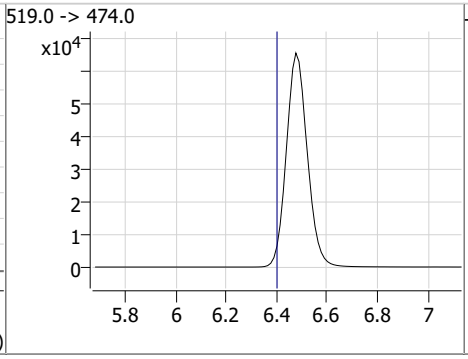


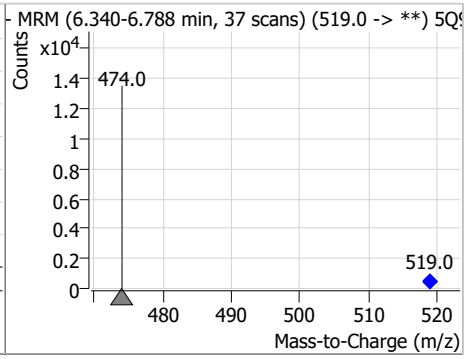




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.29	6.48	0.07	376184				

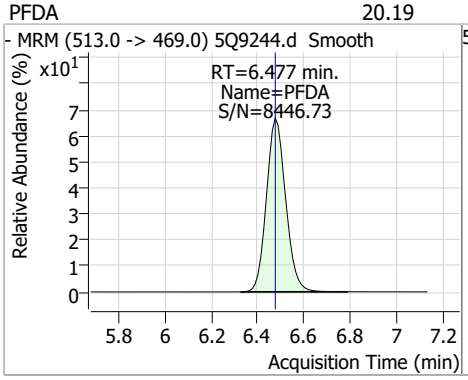


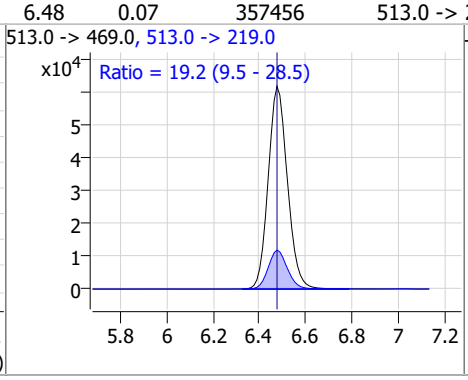


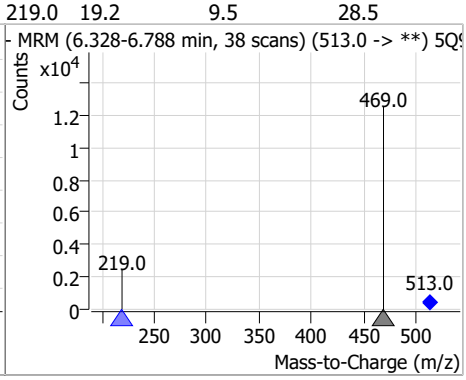


Perfluorinated Compounds by LC/MS/MS

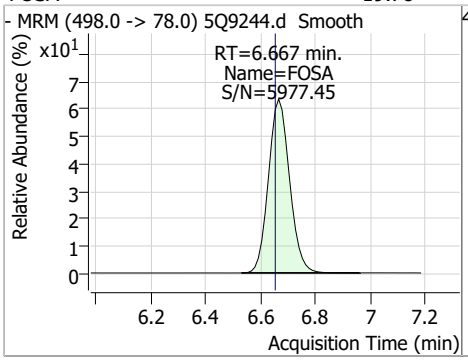
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	20.19	6.48	0.07	357456	513.0 -> 219.0	19.2	9.5	28.5

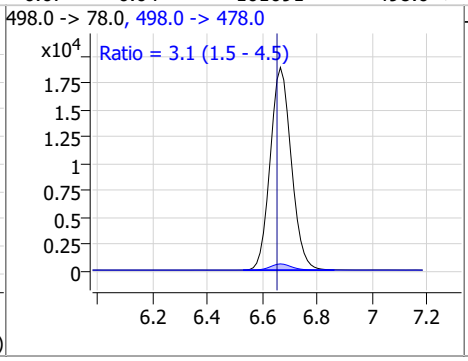


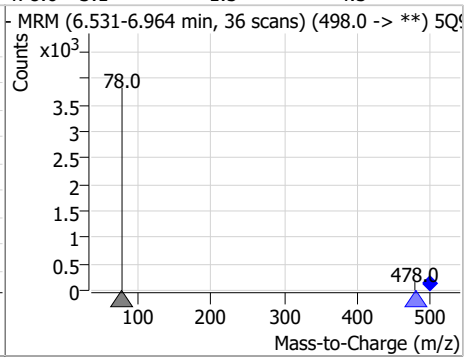




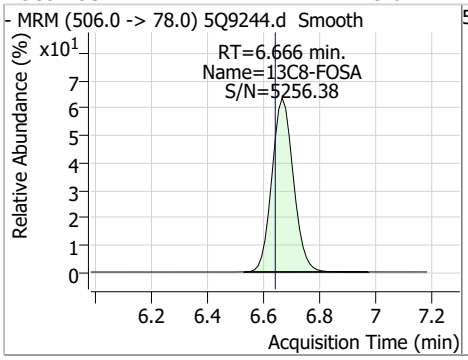
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	19.78	6.67	0.04	101091	498.0 -> 478.0	3.1	1.5	4.5

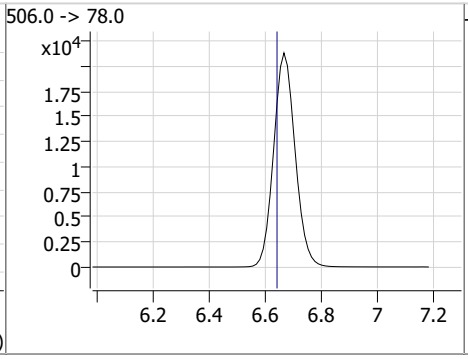


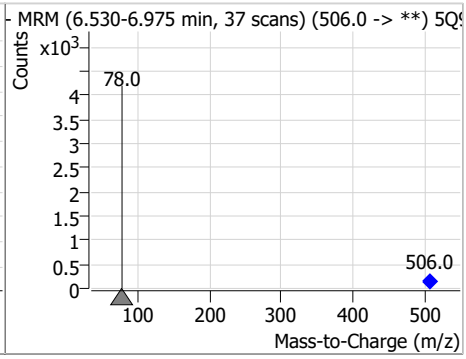




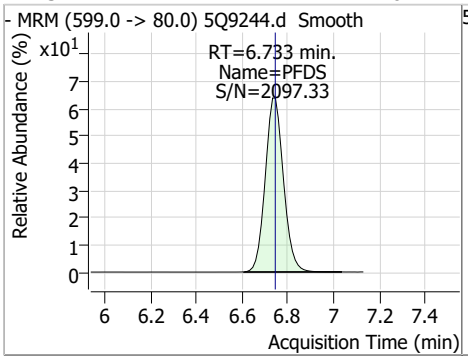
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	19.02	6.67	0.02	114008				

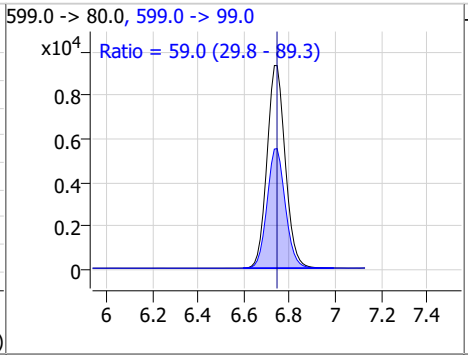


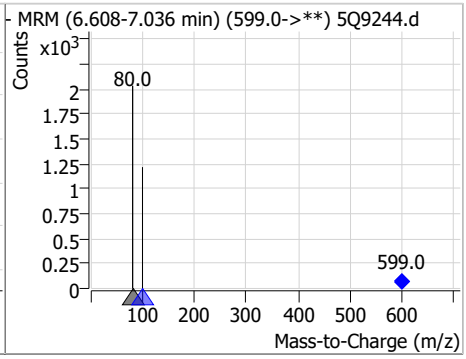




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	22.81	6.73	0.06	51747	599.0 -> 99.0	59.0	29.8	89.3

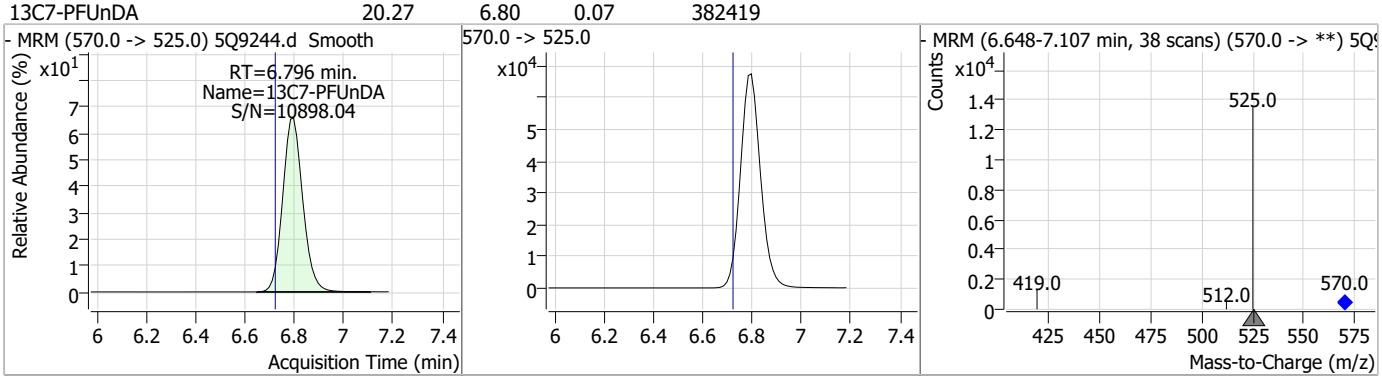




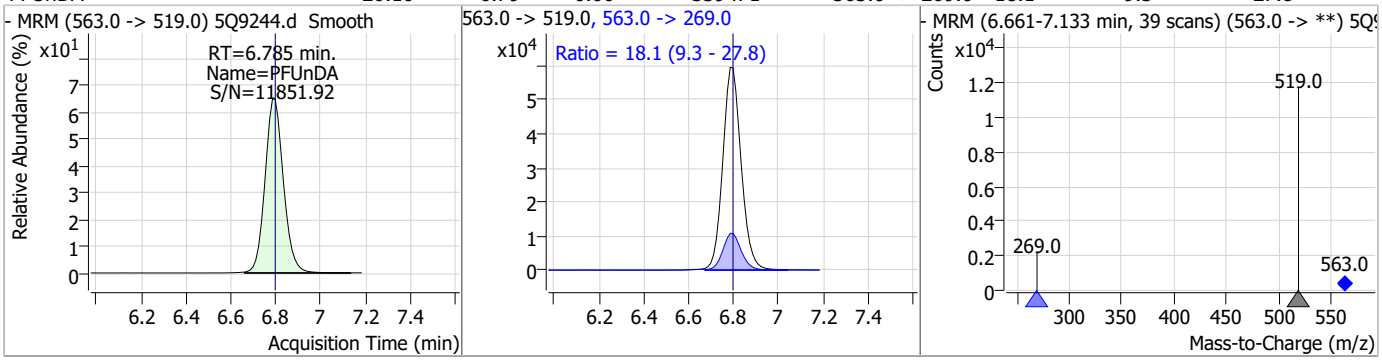


Perfluorinated Compounds by LC/MS/MS

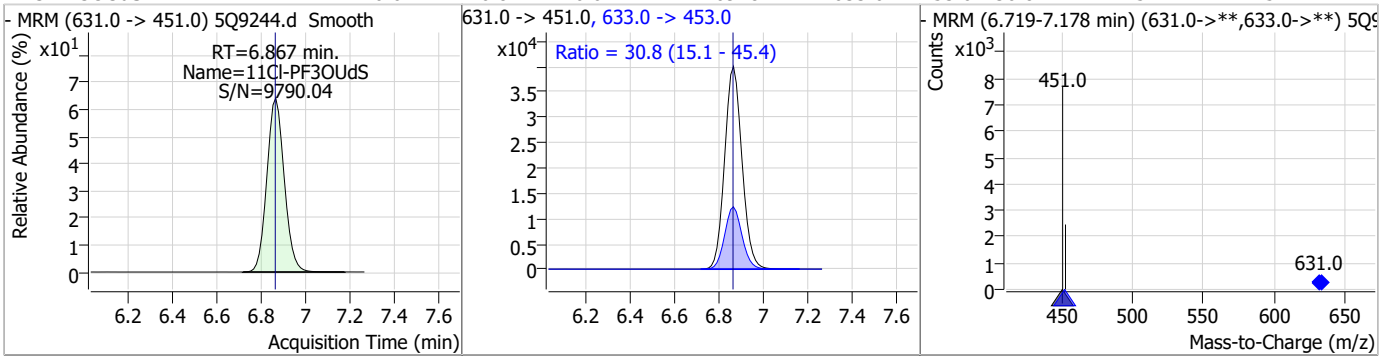
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.27	6.80	0.07	382419				



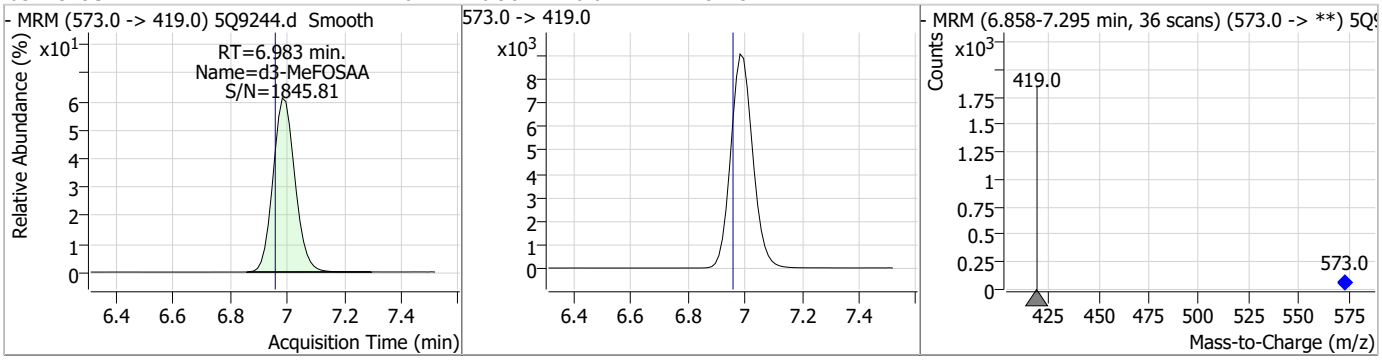
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	20.10	6.79	0.06	339471	563.0 -> 269.0	18.1	9.3	27.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	20.67	6.87	0.07	216948	633.0 -> 453.0	30.8	15.1	45.4

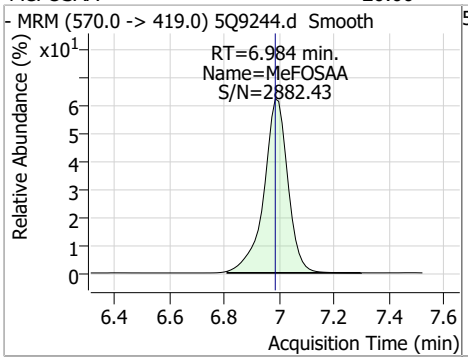


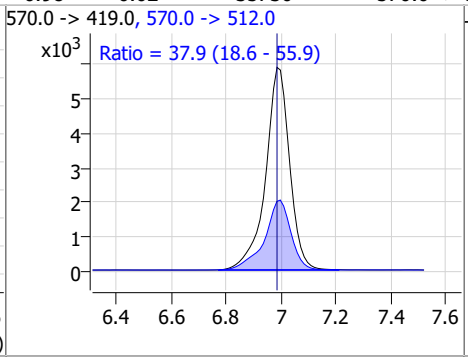
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	17.20	6.98	0.02	48218				

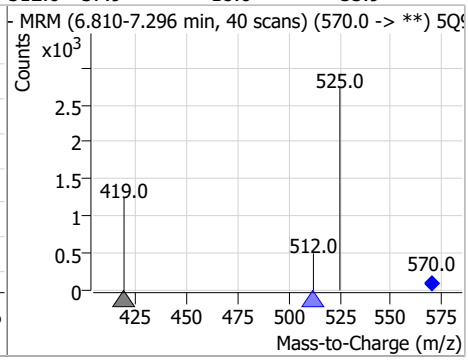


Perfluorinated Compounds by LC/MS/MS

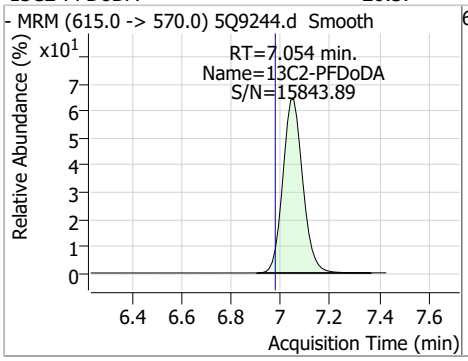
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	20.00	6.98	0.02	35730	570.0 -> 512.0	37.9	18.6	55.9

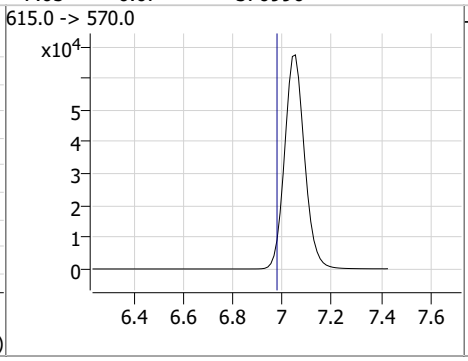


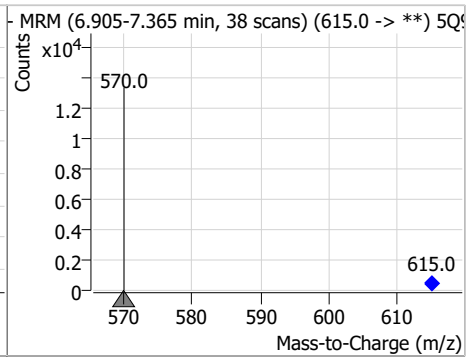




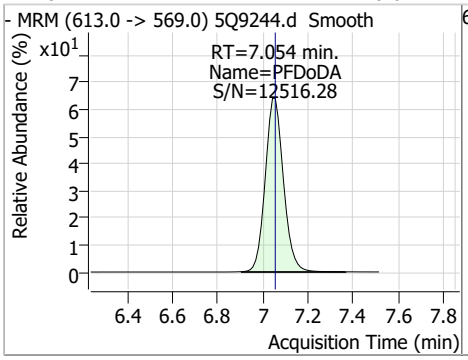
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.37	7.05	0.07	376996				

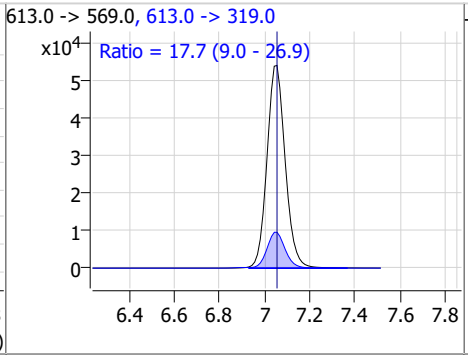


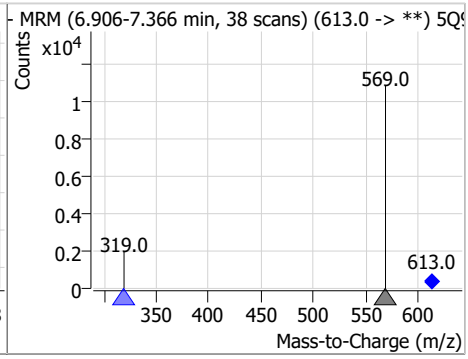




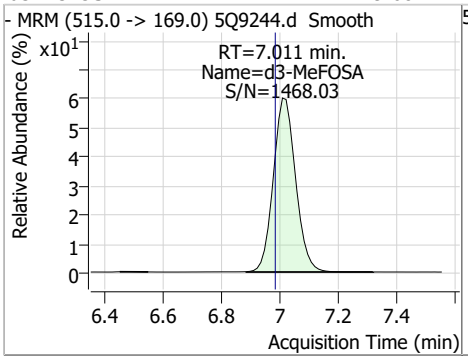
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	20.01	7.05	0.07	304975	613.0 -> 319.0	17.7	9.0	26.9

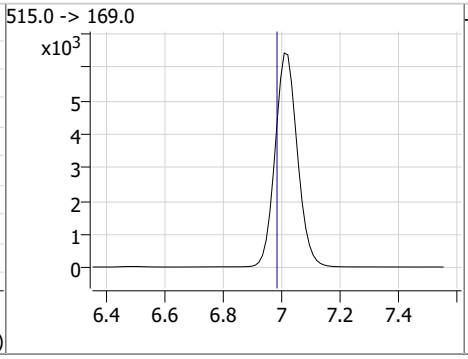


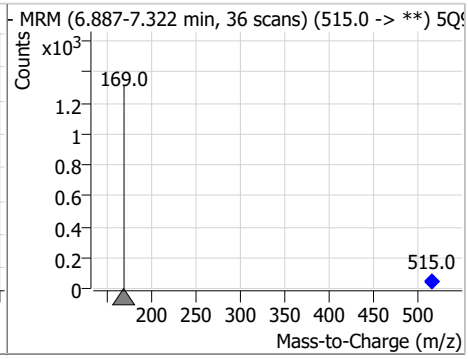




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	19.68	7.01	0.02	33939				

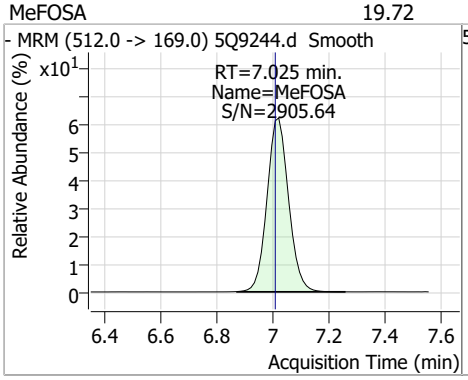


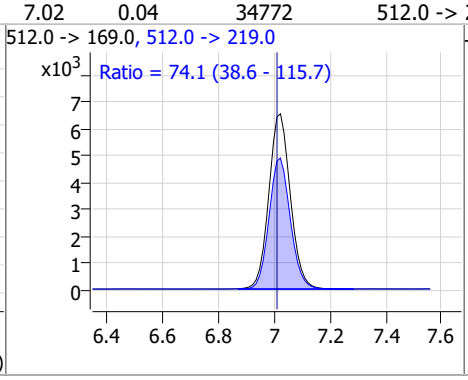


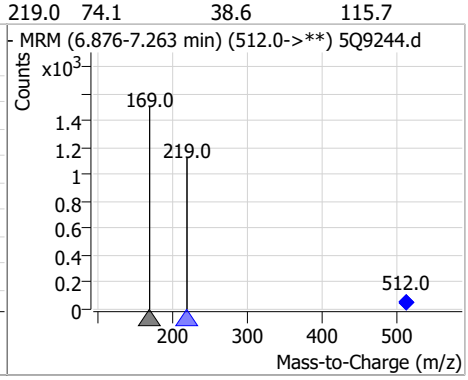


Perfluorinated Compounds by LC/MS/MS

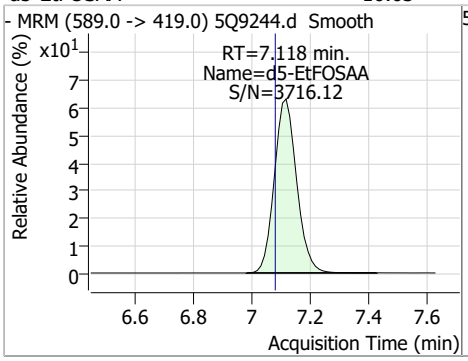
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	19.72	7.02	0.04	34772	512.0 -> 219.0	74.1	38.6	115.7

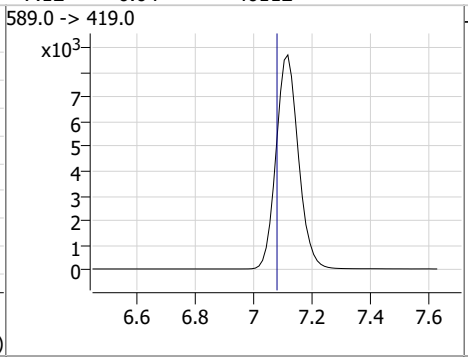


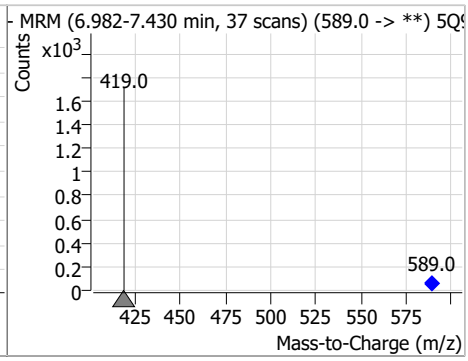




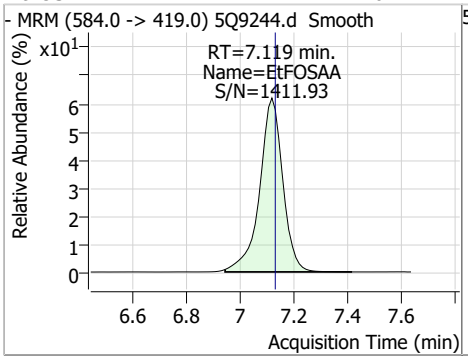
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	16.63	7.12	0.04	46112				

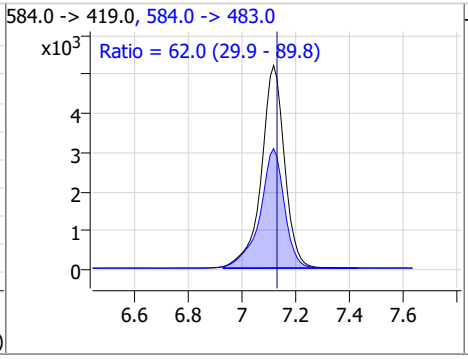


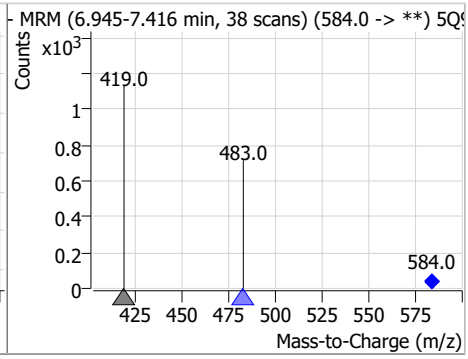




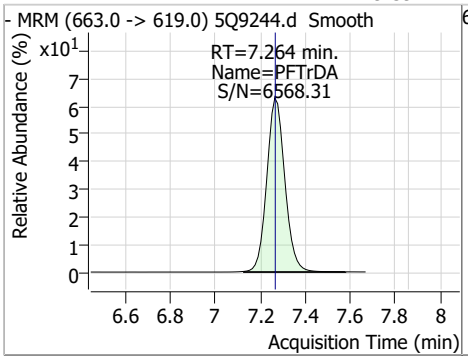
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	20.11	7.12	0.02	30909	584.0 -> 483.0	62.0	29.9	89.8

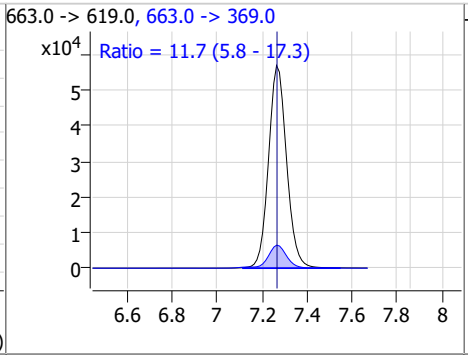


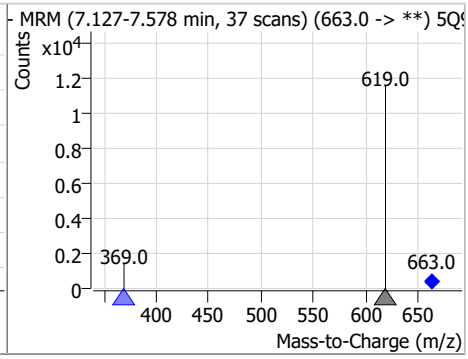




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	19.39	7.26	0.07	319083	663.0 -> 369.0	11.7	5.8	17.3

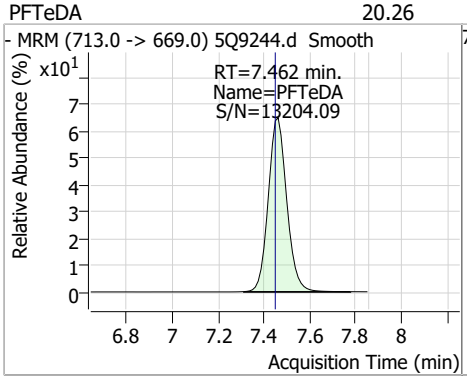


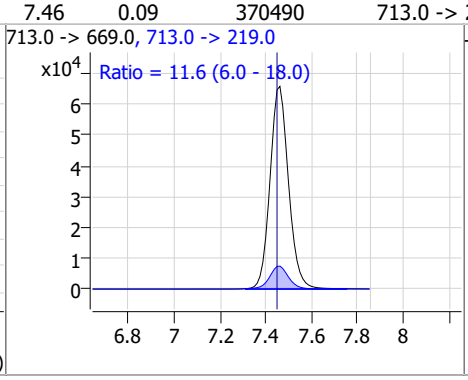


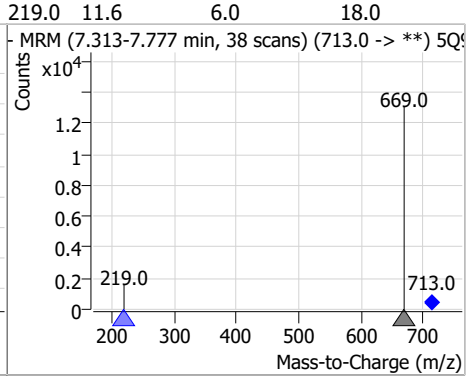


Perfluorinated Compounds by LC/MS/MS

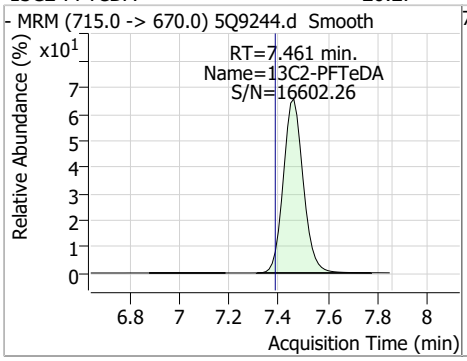
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	20.26	7.46	0.09	370490	713.0 -> 219.0	11.6	6.0	18.0

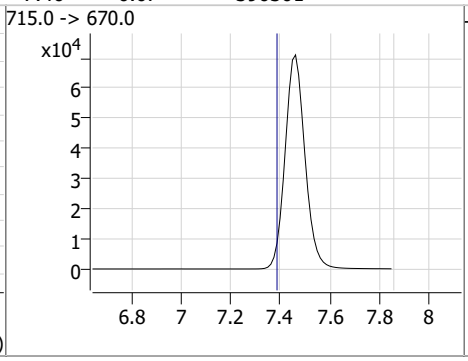


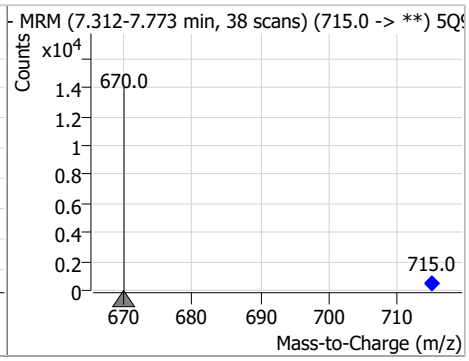




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.27	7.46	0.07	396301				







Manual Integration Approval Summary

Sample Number:	S5Q137-CC137	**Method:**	EPA 537M QSM5.3 B-15
Lab FileID:	5Q9244.D	**Analyst approved:**	01/04/23 11:33 Lindsay Ritner
Injection Time:	01/03/23 18:20	**Supervisor approved:**	01/04/23 15:00 Natasha Gumtie

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanesulfonic acid	1763-23-1		6.08	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Natasha Gumtie 01/04/23 15:00

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9245.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 1/3/2023 6:35:50 PM
Sample Name : cc137-1.0ll
Vial : P1-A3
DA Method File : ID_010323_S5Q137.quantmethod.xml
Batch Name : s5q137.batch.bin
Sample Information : OP94373,S5Q137,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.050	217.0 -> 172.0	114800	20.00	µg/L	0.075
M5-PFPeA	3.544	268.0 -> 223.0	216947	20.00	µg/L	0.075
M5-PFHxA	4.517	318.0 -> 273.0	306748	20.00	µg/L	0.062
M4-PFHpA	5.176	367.0 -> 322.0	308180	20.00	µg/L	0.063
M8-PFOA	5.699	421.0 -> 376.0	391137	20.00	µg/L	0.077
M9-PFNA	6.119	472.0 -> 427.0	392265	20.00	µg/L	0.076
M6-PFDA	6.489	519.0 -> 474.0	381091	20.00	µg/L	0.087
M7-PFUnDA	6.796	570.0 -> 525.0	386340	20.00	µg/L	0.074
M2-PFDoDA	7.054	615.0 -> 570.0	387576	20.00	µg/L	0.074
M2-PFTeDA	7.474	715.0 -> 670.0	409240	20.00	µg/L	0.087
M8-FOSA	6.666	506.0 -> 78.0	118836	20.00	µg/L	0.025
M3-PFBS	3.743	302.0 -> 99.0	26377	20.00	µg/L	0.065
M3-PFHxS	5.186	402.0 -> 99.0	33247	20.00	µg/L	0.063
M8-PFOS	6.079	507.0 -> 99.0	39169	20.00	µg/L	0.063
M2-4:2FTS	4.413	329.0 -> 309.0	91365	20.00	µg/L	0.065
M2-6:2FTS	5.659	429.0 -> 409.0	140376	20.00	µg/L	0.065
M2-8:2FTS	6.475	529.0 -> 509.0	121798	20.00	µg/L	0.075
M3-MeFOSAA	6.995	573.0 -> 419.0	51486	20.00	µg/L	0.037
M3-HFPO-DA	4.719	287.0 -> 169.0	64670	20.00	µg/L	0.075
M3-MeFOSA	7.023	515.0 -> 169.0	35296	20.00	µg/L	0.037
M5-EtFOSAA	7.118	589.0 -> 419.0	50311	20.00	µg/L	0.037
System Monitoring Compounds						
13C2-4:2FTS	4.413	329.0 -> 309.0	91365	19.32	µg/L	0.065
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.6%		
13C2-6:2FTS	5.659	429.0 -> 409.0	140376	19.72	µg/L	0.065
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 98.6%		
13C2-8:2FTS	6.475	529.0 -> 509.0	121798	19.84	µg/L	0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.2%		
13C2-PFDoDA	7.054	615.0 -> 570.0	387576	20.94	µg/L	0.074
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.7%		
13C2-PFTeDA	7.474	715.0 -> 670.0	409240	20.93	µg/L	0.087
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.6%		
13C3-PFBS	3.743	302.0 -> 99.0	26377	20.57	µg/L	0.065
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.9%		
13C3-PFHxS	5.186	402.0 -> 99.0	33247	20.93	µg/L	0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.6%		
13C4-PFBA	2.050	217.0 -> 172.0	114800	20.02	µg/L	0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 100.1%		
13C4-PFHpA	5.176	367.0 -> 322.0	308180	20.97	µg/L	0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.9%		
13C5-PFHxA	4.517	318.0 -> 273.0	306748	20.88	µg/L	0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.4%		
13C5-PFPeA	3.544	268.0 -> 223.0	216947	20.88	µg/L	0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 104.4%		
13C6-PFDA	6.489	519.0 -> 474.0	381091	20.56	µg/L	0.087

Perfluorinated Compounds by LC/MS/MS

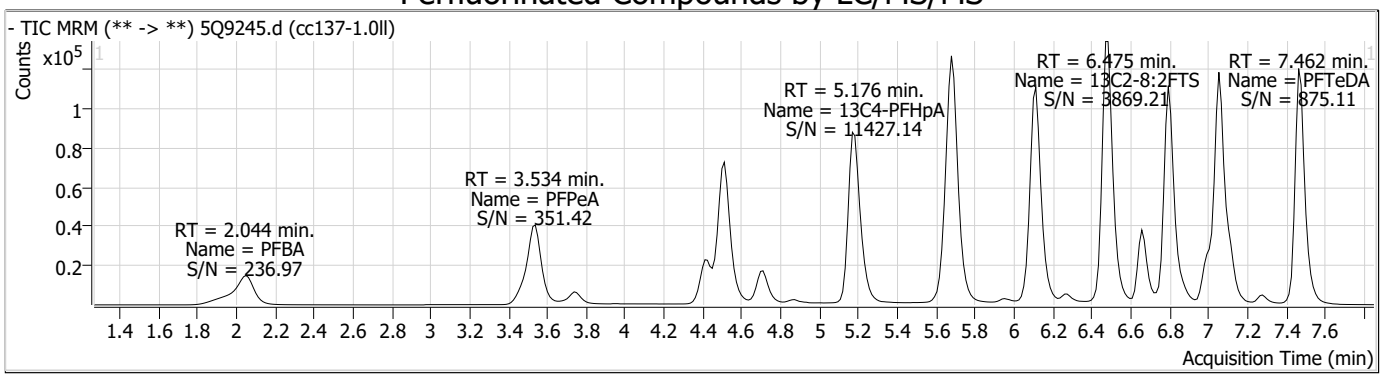
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.8%		
13C7-PFUnDA	6.796	570.0 -> 525.0	386340	20.48 µg/L		0.074
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.4%		
13C8-FOSA	6.666	506.0 -> 78.0	118836	19.82 µg/L		0.025
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 99.1%		
13C8-PFOA	5.699	421.0 -> 376.0	391137	20.76 µg/L		0.077
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.8%		
13C8-PFOS	6.079	507.0 -> 99.0	39169	20.55 µg/L		0.063
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.8%		
13C9-PFNA	6.119	472.0 -> 427.0	392265	20.78 µg/L		0.076
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.9%		
d3-MeFOSAA	6.995	573.0 -> 419.0	51486	18.37 µg/L		0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 91.8%		
13C3-HFPO-DA	4.719	287.0 -> 169.0	64670	19.28 µg/L		0.075
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 96.4%		
d3-MeFOSA	7.023	515.0 -> 169.0	35296	20.47 µg/L		0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 102.4%		
d5-EtFOSAA	7.118	589.0 -> 419.0	50311	18.15 µg/L		0.037
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 90.7%		
Target Compounds						QValue
4:2FTS	4.415	327.0 -> 307.0	3960	0.95 µg/L		96
		327.0 -> 81.0	2494			
6:2FTS	5.659	427.0 -> 407.0	5567	0.91 µg/L		100
		427.0 -> 81.0	2456			
8:2FTS	6.476	527.0 -> 507.0	4770	0.92 µg/L		99
		527.0 -> 81.0	2523			
EtFOSAA	7.119	584.0 -> 419.0	1219	0.73 µg/L		96
		584.0 -> 483.0	767			
FOSA	6.667	498.0 -> 78.0	4525	0.85 µg/L		99
		498.0 -> 478.0	118			
MeFOSAA	6.996	570.0 -> 419.0	1489	0.78 µg/L		100
		570.0 -> 512.0	559			
PFBA	2.044	213.0 -> 169.0	4513	0.84 µg/L		100
PFBS	3.745	299.0 -> 80.0	3145	0.83 µg/L		100
		299.0 -> 99.0	1334			
PFDA	6.489	513.0 -> 469.0	15009	0.84 µg/L		99
		513.0 -> 219.0	2893			
PFDoDA	7.054	613.0 -> 569.0	12651	0.81 µg/L		98
		613.0 -> 319.0	2404			
PFDS	6.745	599.0 -> 80.0	2165	0.94 µg/L		96
		599.0 -> 99.0	1217			
PFHpA	5.177	363.0 -> 319.0	13633	0.81 µg/L		98
		363.0 -> 169.0	3174			
PFHpS	5.671	449.0 -> 80.0	2366	0.83 µg/L		99
		449.0 -> 99.0	1324			
PFHxA	4.517	313.0 -> 269.0	11013	0.81 µg/L		98
		313.0 -> 119.0	604			
PFHxS	5.187	399.0 -> 80.0	2382	0.78 µg/L		90
		399.0 -> 99.0	1520			
PFNA	6.119	463.0 -> 419.0	14190	0.81 µg/L		97
		463.0 -> 219.0	3415			
PFNS	6.437	549.0 -> 80.0	1737	0.75 µg/L		93
		549.0 -> 99.0	1080			
PFOA	5.699	413.0 -> 369.0	16484	0.85 µg/L		98
		413.0 -> 169.0	4754			
PFOS	6.080	499.0 -> 80.0	2856	0.84 µg/L	m	99

Perfluorinated Compounds by LC/MS/MS

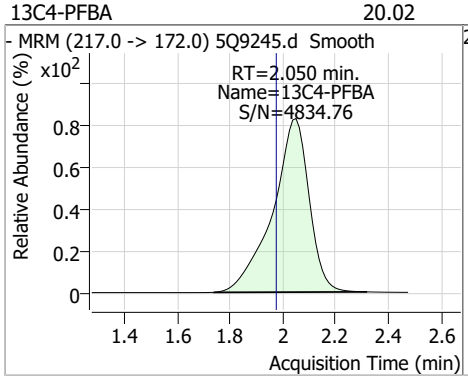
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	1365			
PFPeA	3.534	263.0 -> 219.0	9149	0.82	µg/L	100
PFPeS	4.588	349.0 -> 80.0	1866	0.81	µg/L	96
		349.0 -> 99.0	985			
PFTeDA	7.462	713.0 -> 669.0	15669	0.83	µg/L	100
		713.0 -> 219.0	1878			
PFTrDA	7.277	663.0 -> 619.0	13365	0.79	µg/L	99
		663.0 -> 369.0	1517			
PFUnDA	6.798	563.0 -> 519.0	13715	0.80	µg/L	100
		563.0 -> 269.0	2512			
11Cl-PF3OUdS	6.880	631.0 -> 451.0	8700	0.86	µg/L	100
		633.0 -> 453.0	2622			
9Cl-PF3ONS	6.276	531.0 -> 351.0	11306	0.83	µg/L	97
		533.0 -> 353.0	3325			
ADONA	5.225	377.0 -> 251.0	18424	0.81	µg/L	99
		377.0 -> 85.0	6804			
HFPO-DA	4.714	329.0 -> 169.0	3972	0.85	µg/L	96
		285.0 -> 169.0	2213			
MeFOSA	7.025	512.0 -> 169.0	1917	1.05	µg/L	94
		512.0 -> 219.0	1575			
4-PFECHS	5.618	461.0 -> 381.0	7647	0.81	µg/L	97
		461.0 -> 99.0	4086			
FBSA	4.879	298.0 -> 78.0	5895	0.88	µg/L	98
		298.0 -> 64.0	581			
FHxSA	5.960	398.0 -> 78.0	5447	0.89	µg/L	99
		398.0 -> 64.0	492			

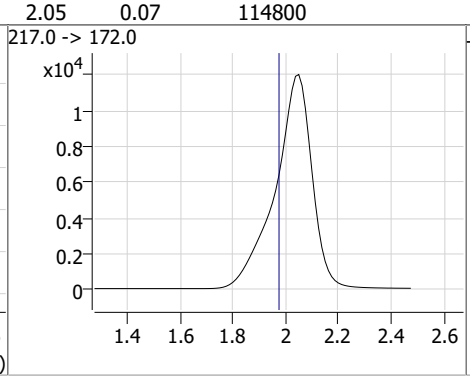
 # = Qualifier out of range, m = manually integrated, + = Area summed

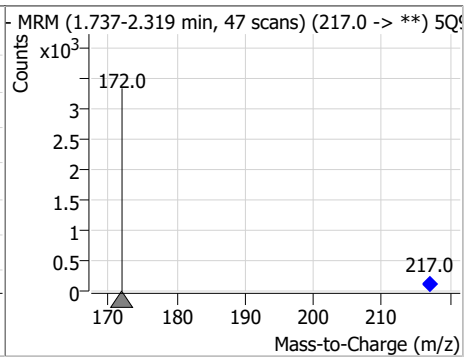
Perfluorinated Compounds by LC/MS/MS



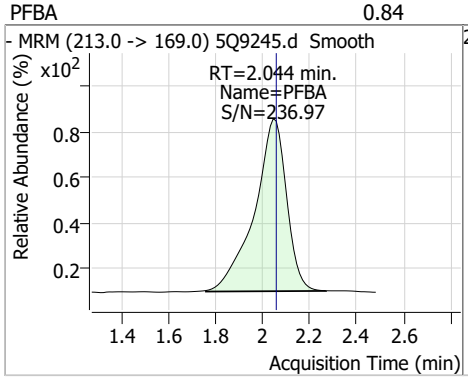
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	20.02	2.05	0.07	114800				

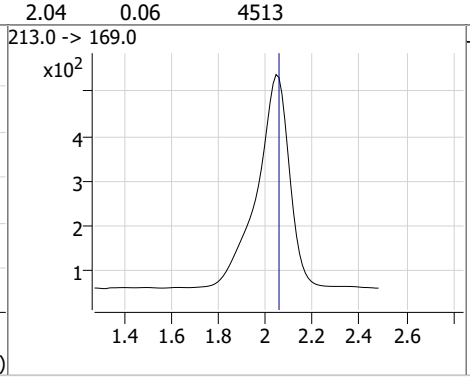


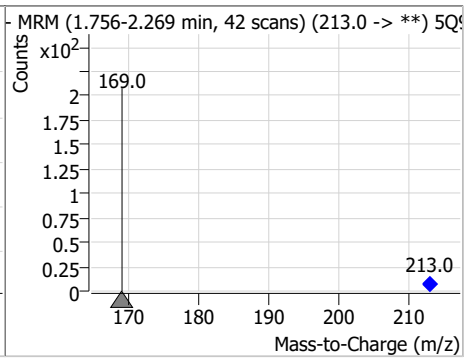




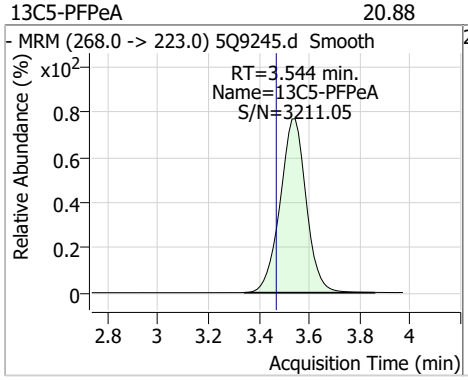
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.84	2.04	0.06	4513				

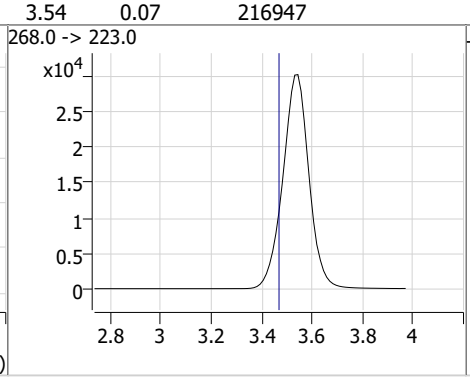


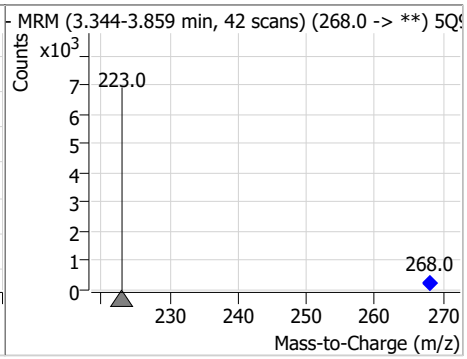




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	20.88	3.54	0.07	216947				

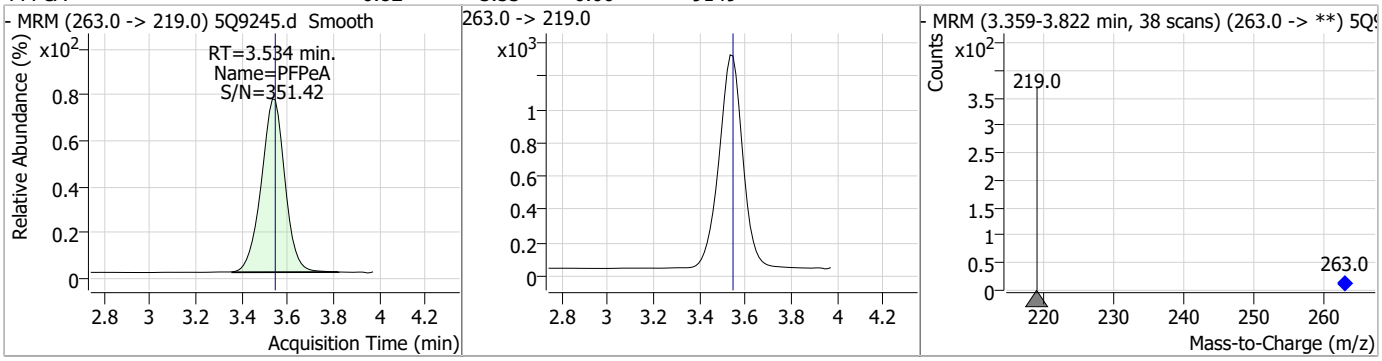




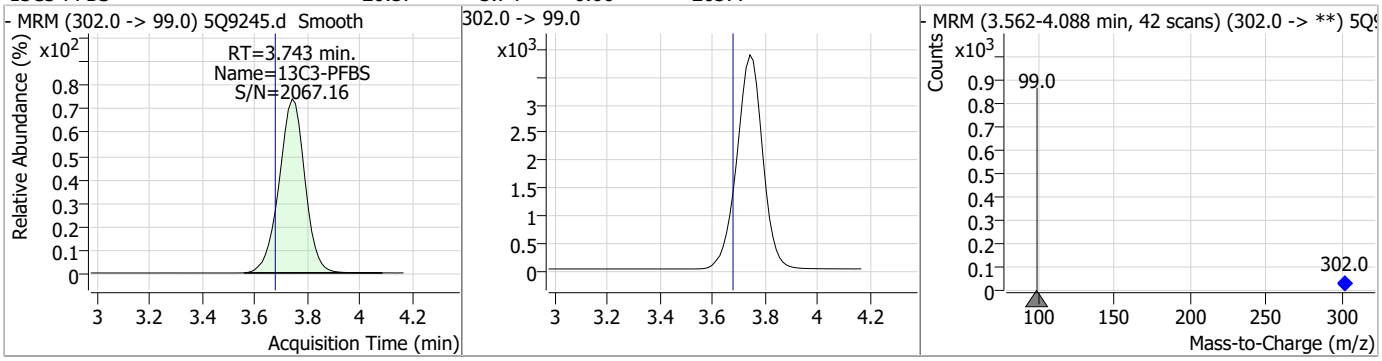


Perfluorinated Compounds by LC/MS/MS

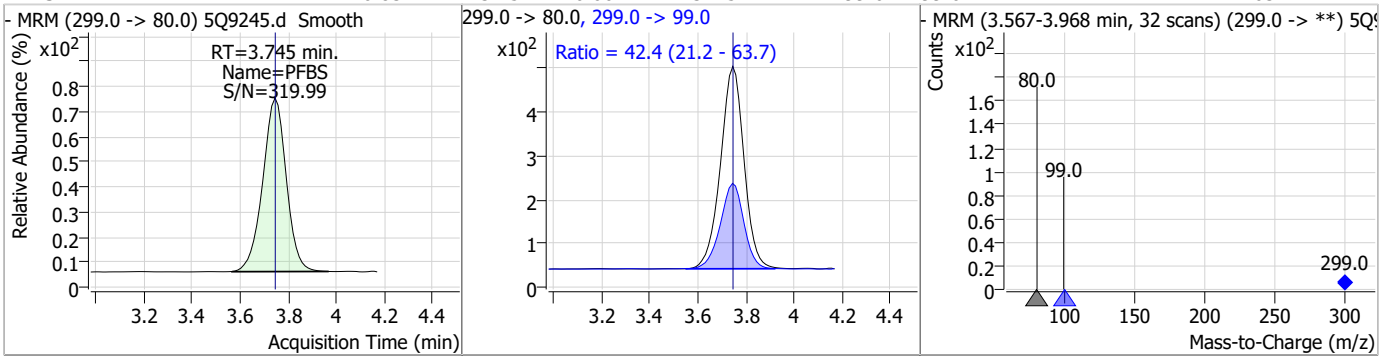
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.82	3.53	0.06	9149				



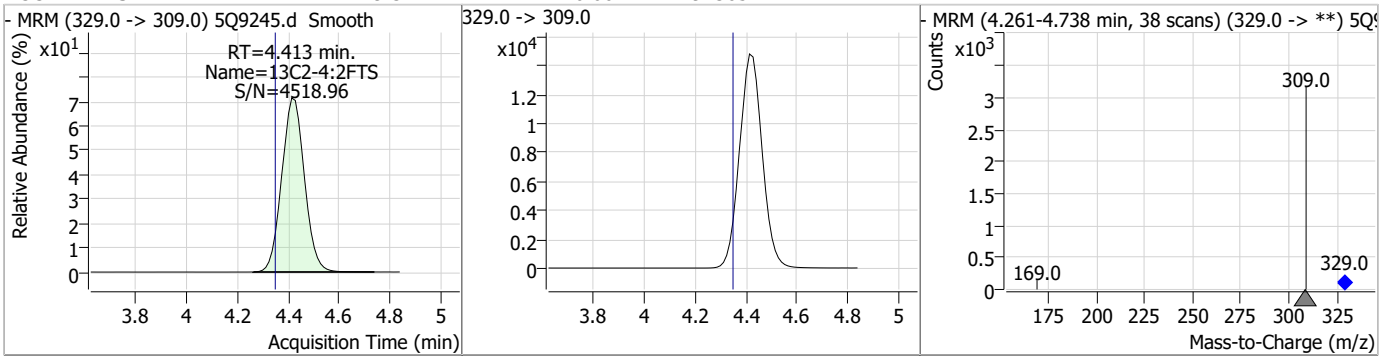
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	20.57	3.74	0.06	26377				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.83	3.75	0.06	3145	299.0 -> 99.0	42.4	21.2	63.7

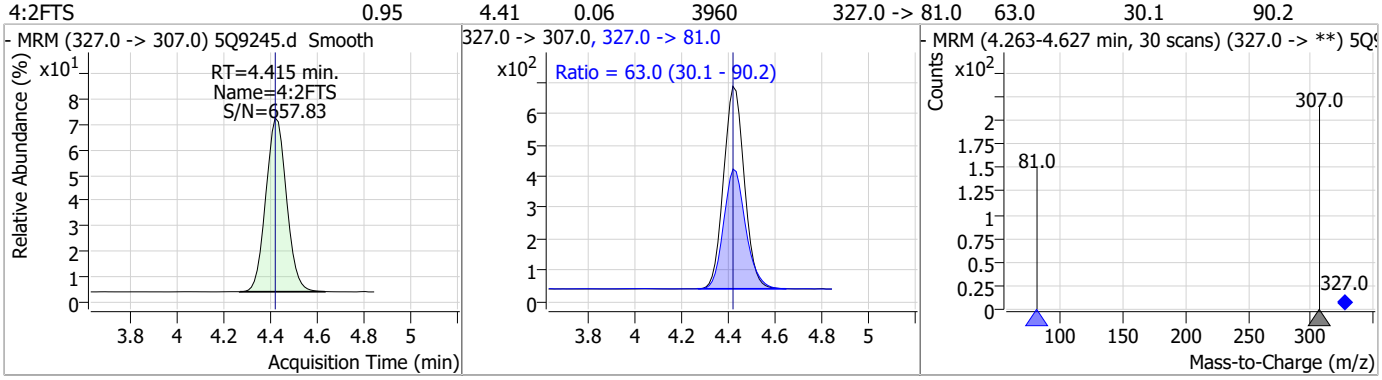


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	19.32	4.41	0.06	91365				

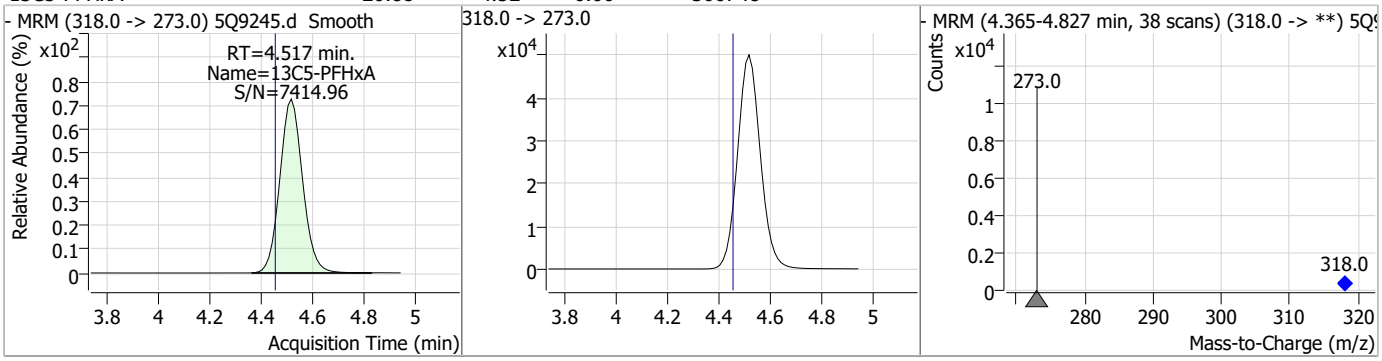


Perfluorinated Compounds by LC/MS/MS

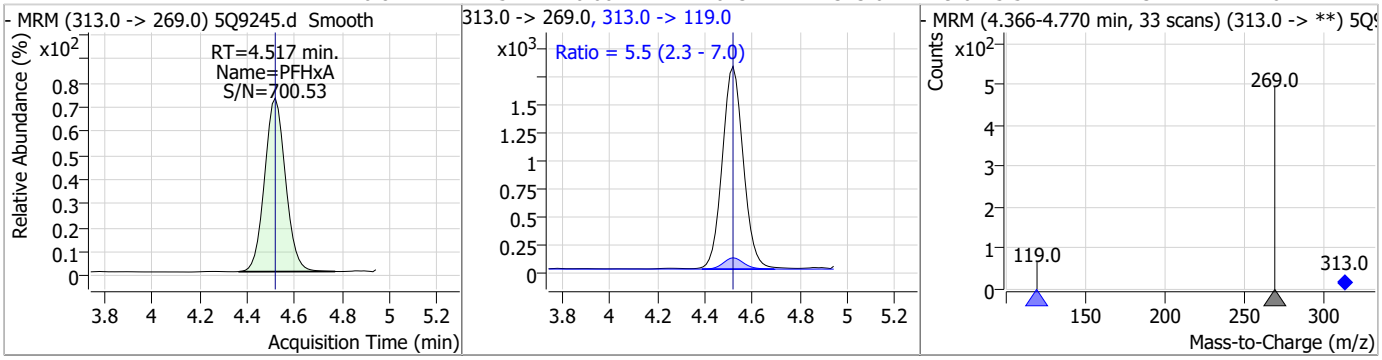
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	0.95	4.41	0.06	3960	327.0 -> 81.0	63.0	30.1	90.2



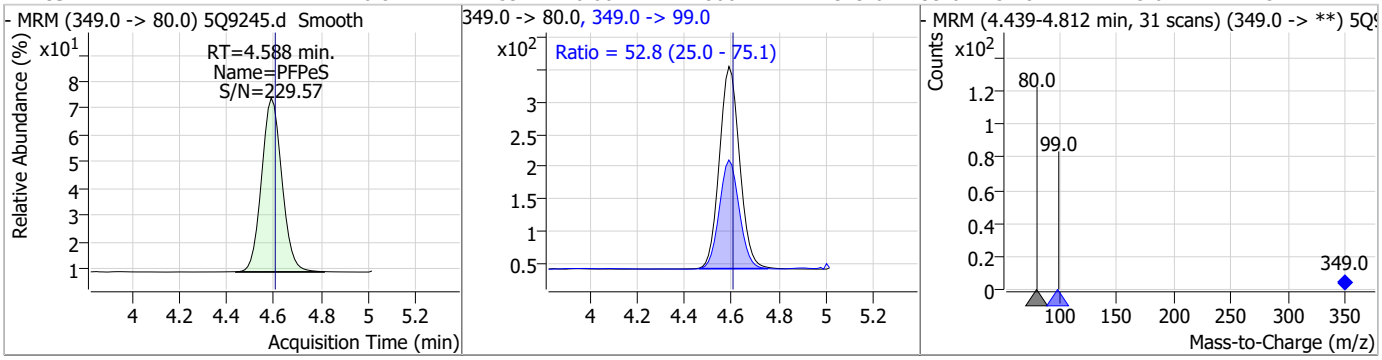
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	20.88	4.52	0.06	306748				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.81	4.52	0.06	11013	313.0 -> 119.0	5.5	2.3	7.0

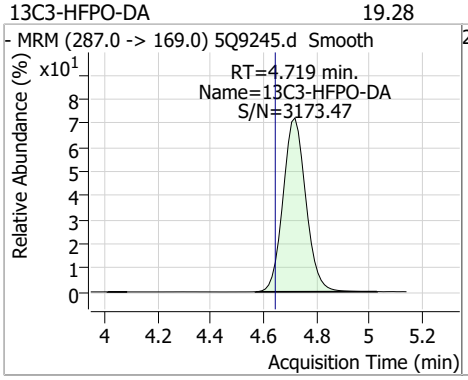


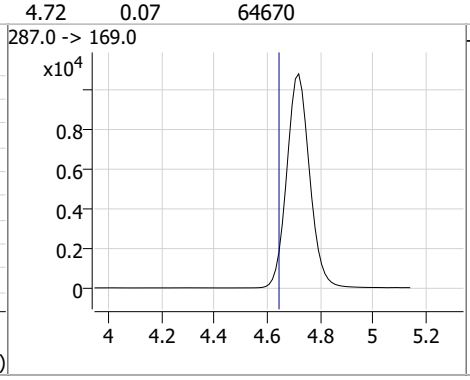
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	0.81	4.59	0.06	1866	349.0 -> 99.0	52.8	25.0	75.1

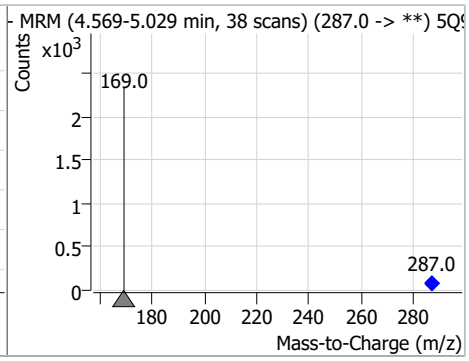


Perfluorinated Compounds by LC/MS/MS

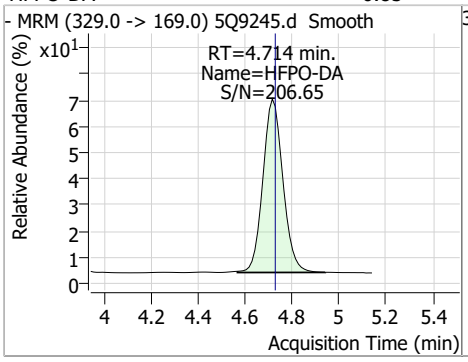
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	19.28	4.72	0.07	64670				

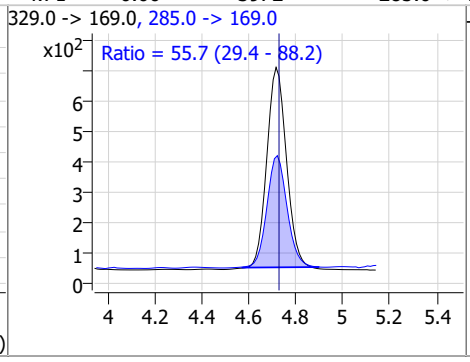


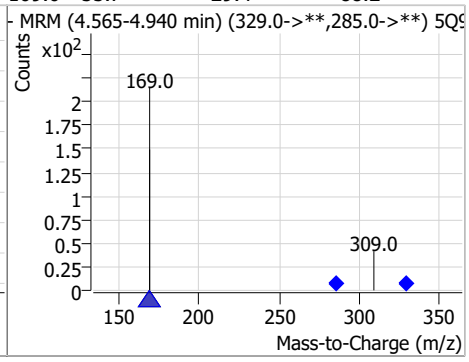




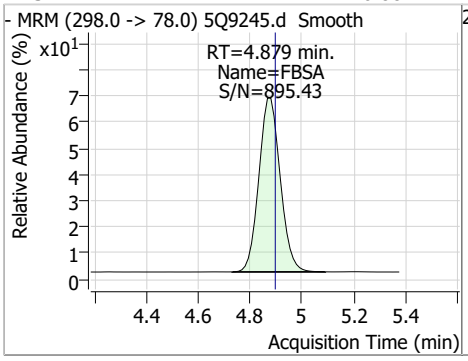
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.85	4.71	0.06	3972	285.0 -> 169.0	55.7	29.4	88.2

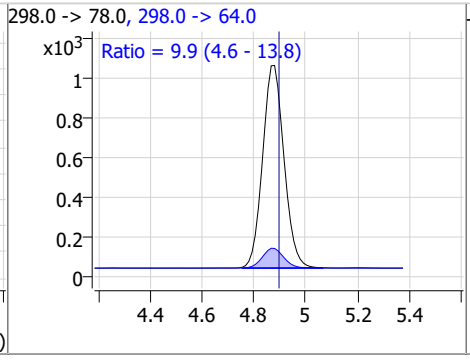


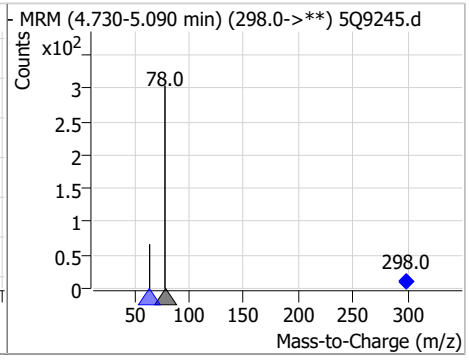




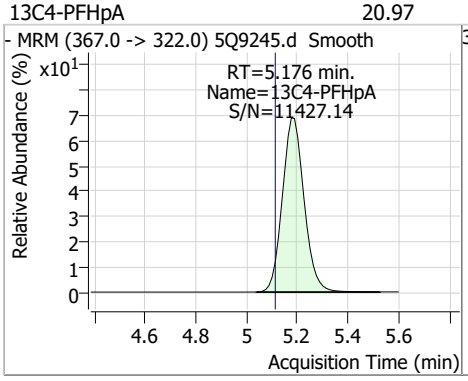
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	0.88	4.88	0.05	5895	298.0 -> 64.0	9.9	4.6	13.8

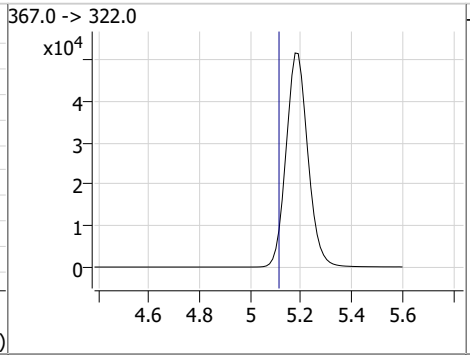


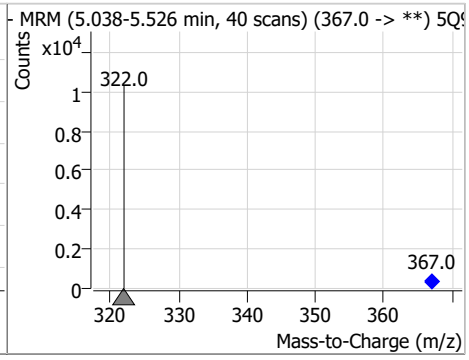




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	20.97	5.18	0.06	308180				

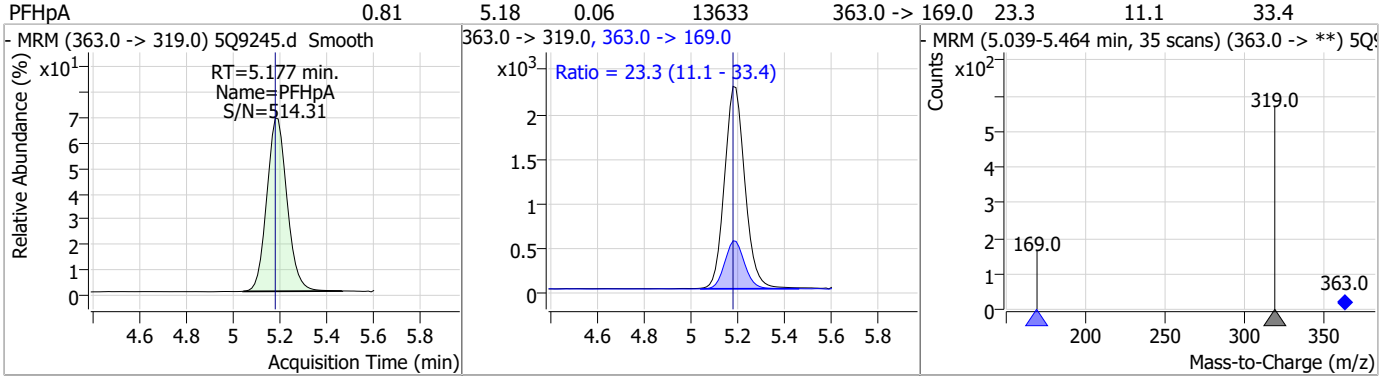




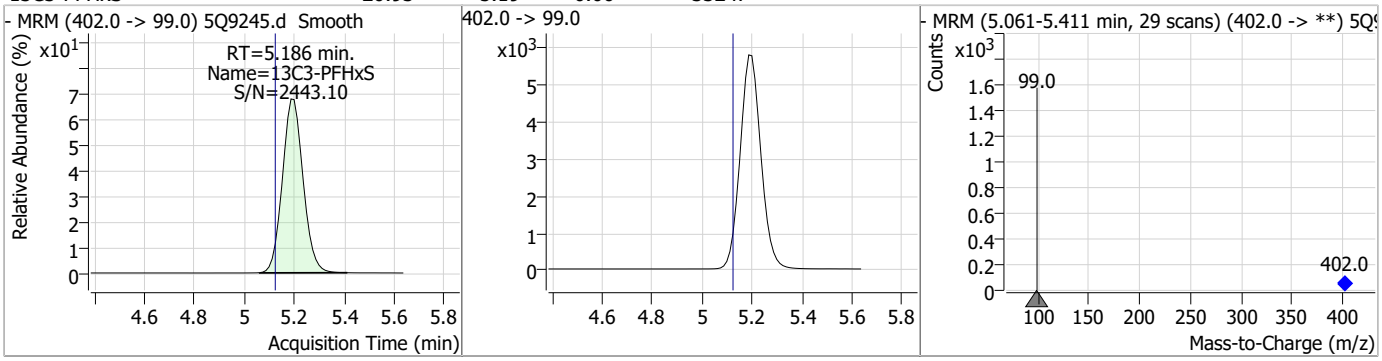


Perfluorinated Compounds by LC/MS/MS

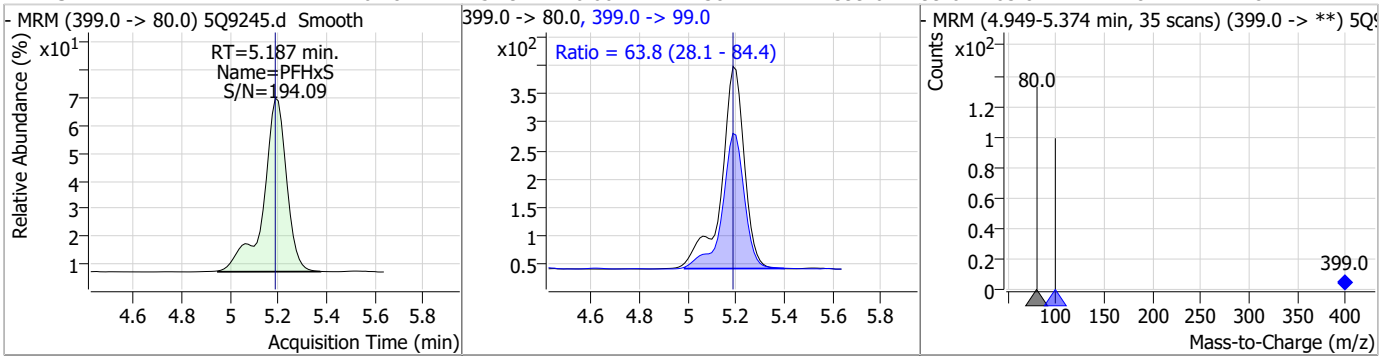
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.81	5.18	0.06	13633	363.0 -> 169.0	23.3	11.1	33.4



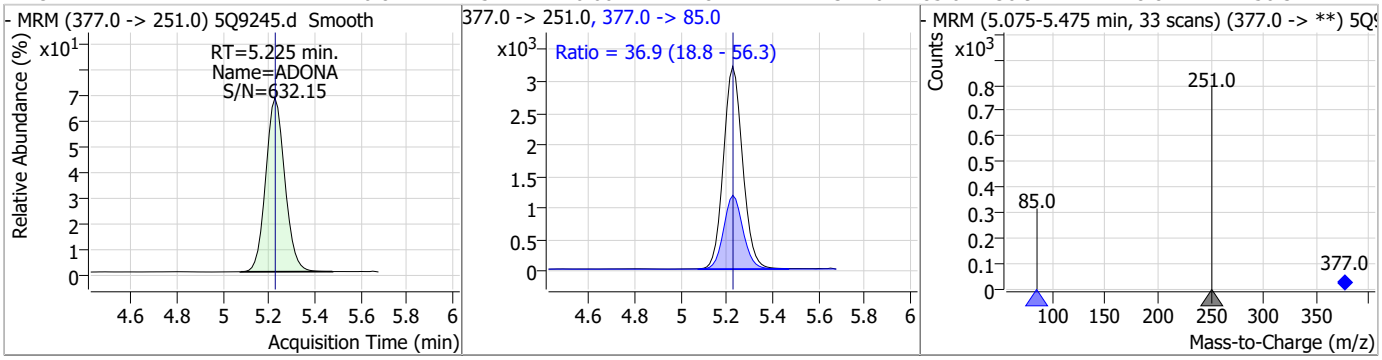
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	20.93	5.19	0.06	33247				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.78	5.19	0.06	2382	399.0 -> 99.0	63.8	28.1	84.4

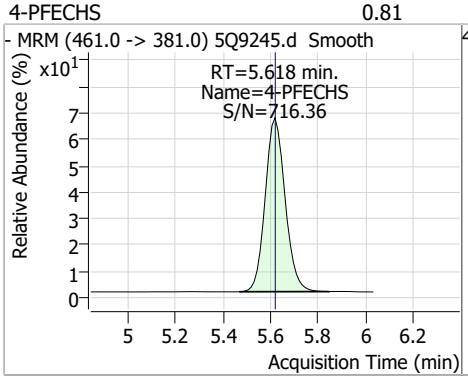


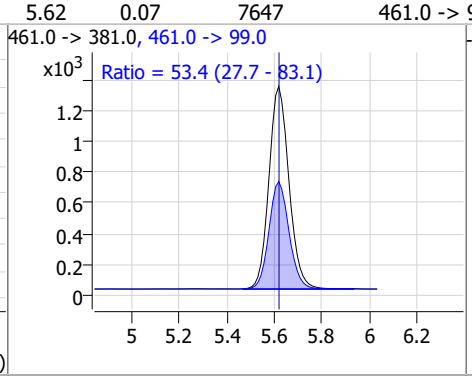
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	0.81	5.22	0.06	18424	377.0 -> 85.0	36.9	18.8	56.3

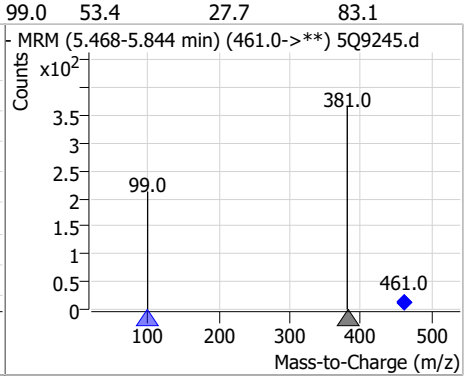


Perfluorinated Compounds by LC/MS/MS

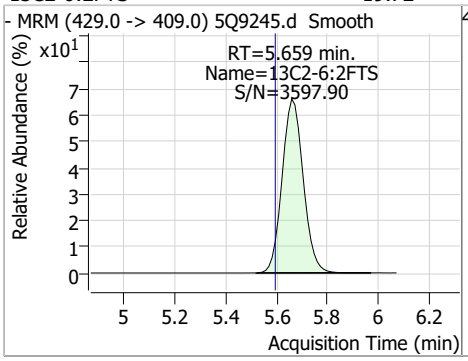
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	0.81	5.62	0.07	7647	461.0 -> 99.0	53.4	27.7	83.1

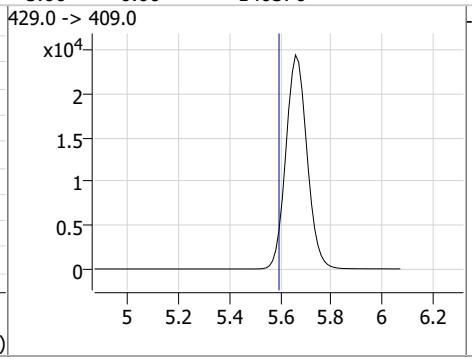


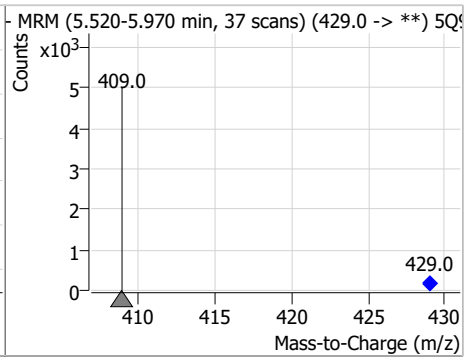




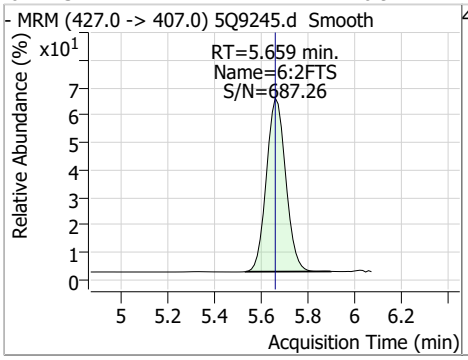
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	19.72	5.66	0.06	140376				

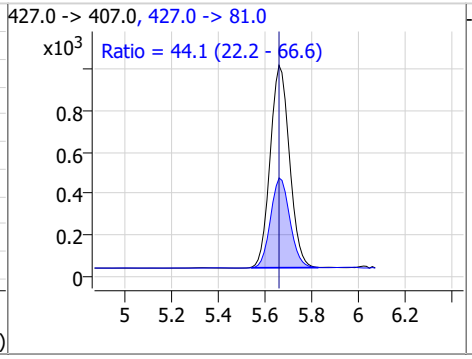


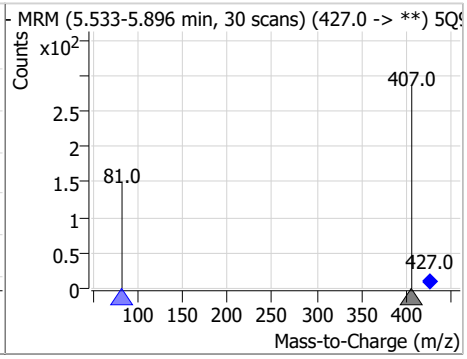




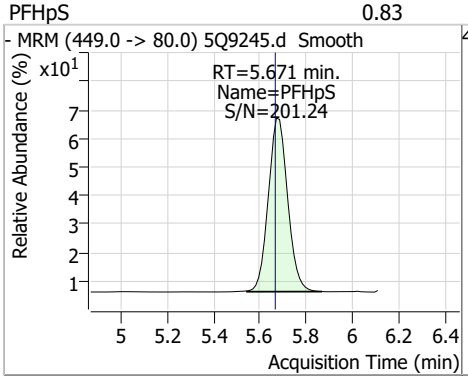
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	0.91	5.66	0.06	5567	427.0 -> 81.0	44.1	22.2	66.6

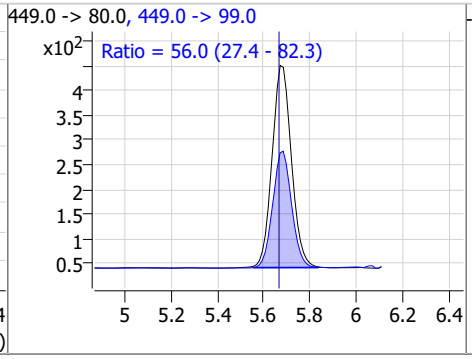


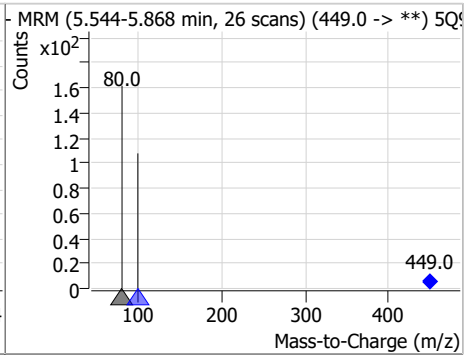




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	0.83	5.67	0.06	2366	449.0 -> 99.0	56.0	27.4	82.3

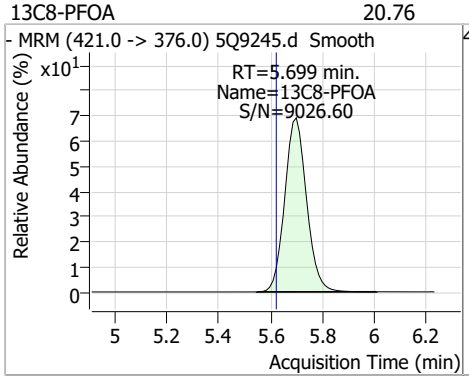


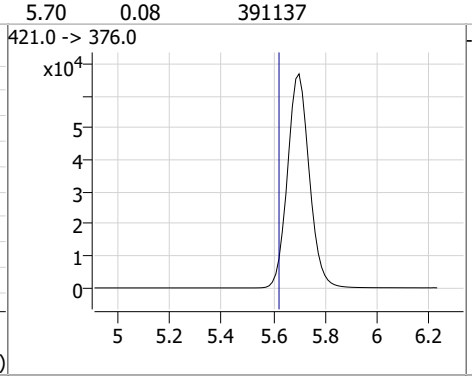


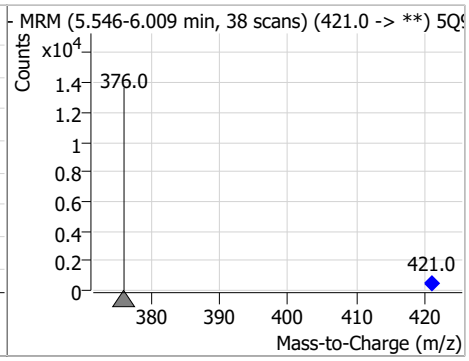


Perfluorinated Compounds by LC/MS/MS

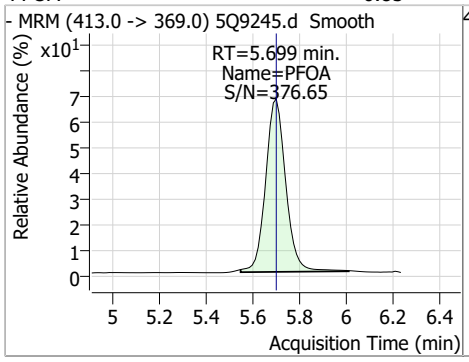
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	20.76	5.70	0.08	391137				

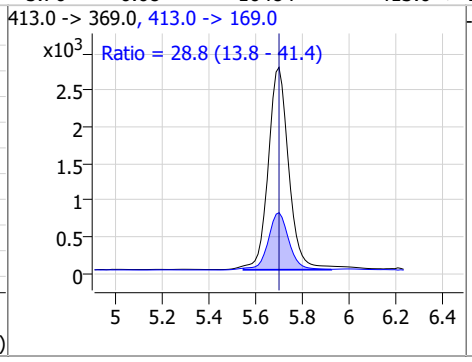


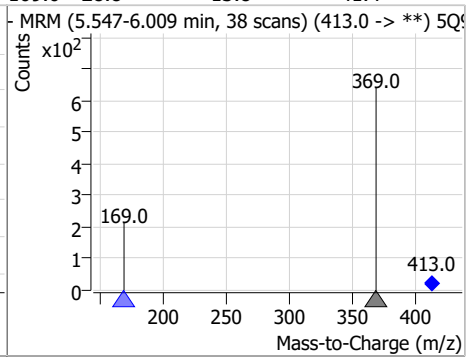




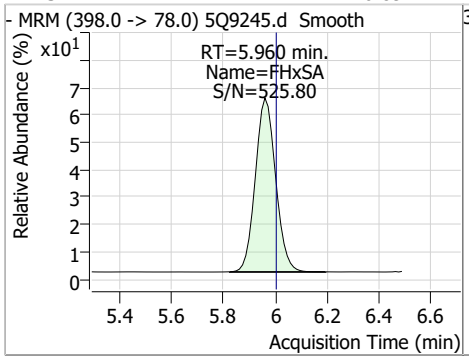
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.85	5.70	0.08	16484	413.0 -> 169.0	28.8	13.8	41.4

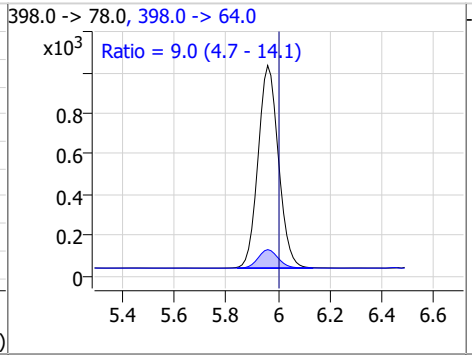


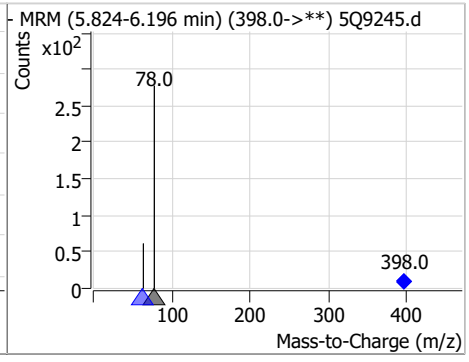




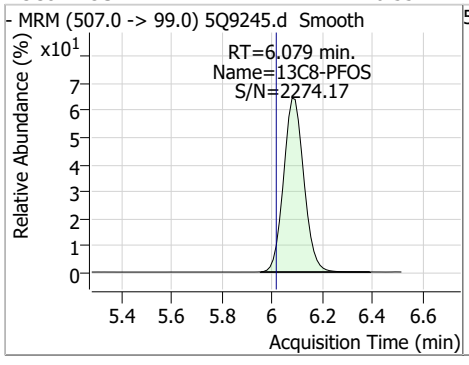
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	0.89	5.96	0.04	5447	398.0 -> 64.0	9.0	4.7	14.1

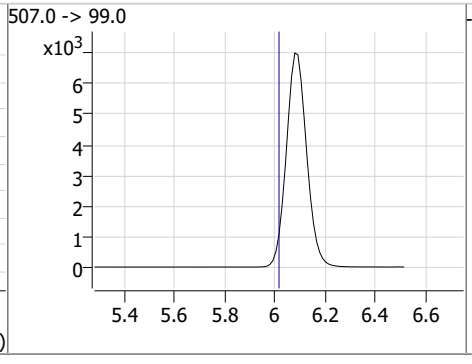


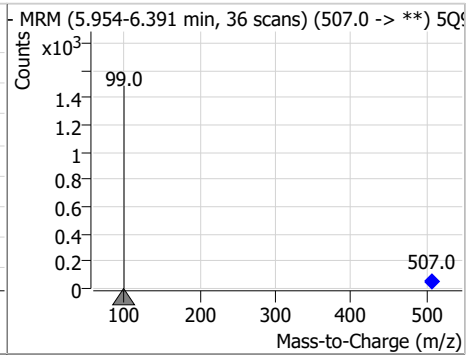




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	20.55	6.08	0.06	39169				

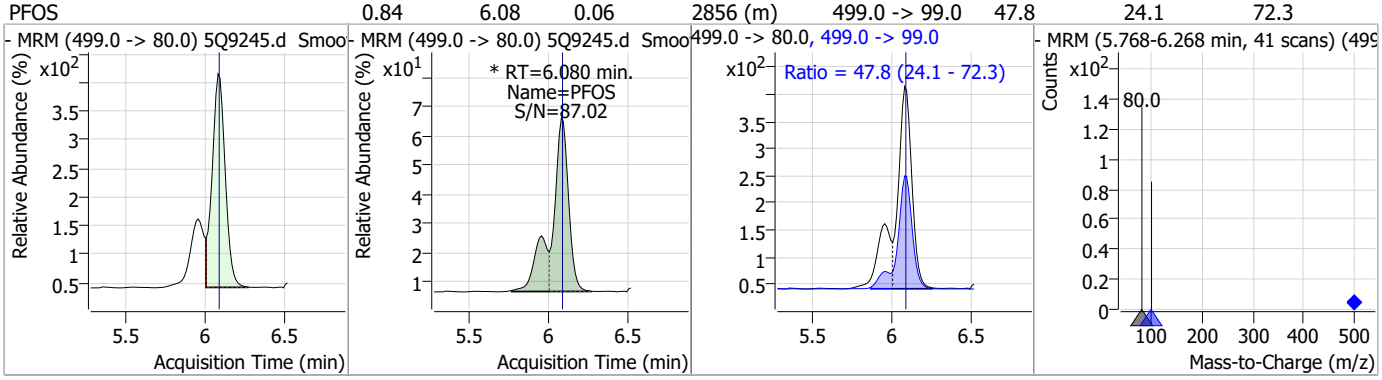




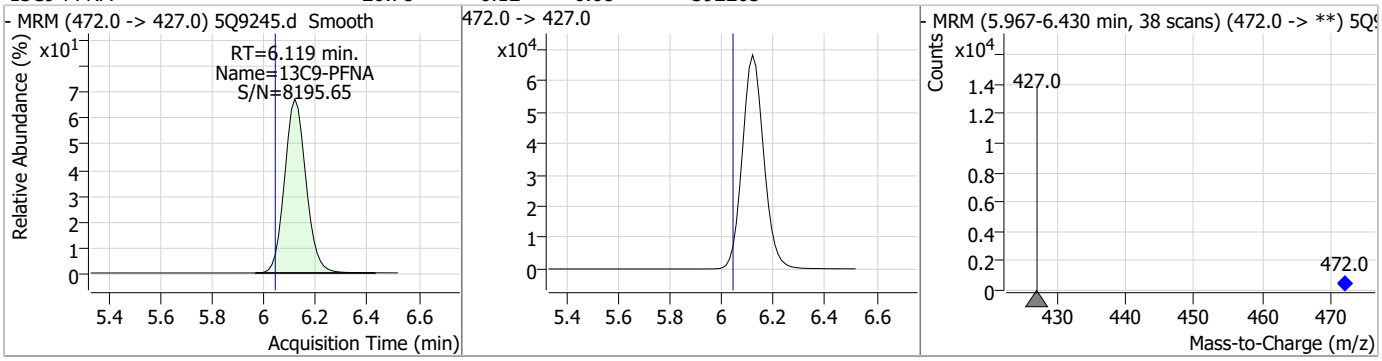


Perfluorinated Compounds by LC/MS/MS

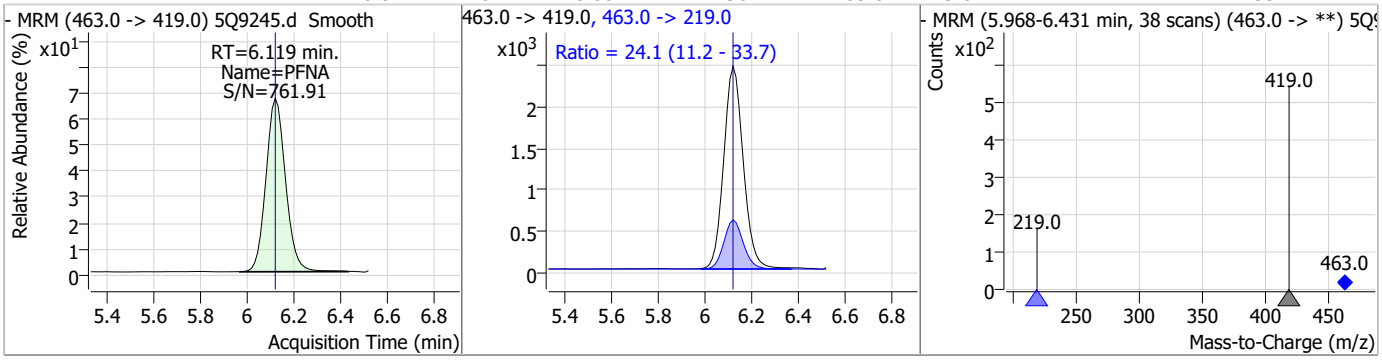
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.84	6.08	0.06	2856 (m)	499.0 -> 99.0	47.8	24.1	72.3



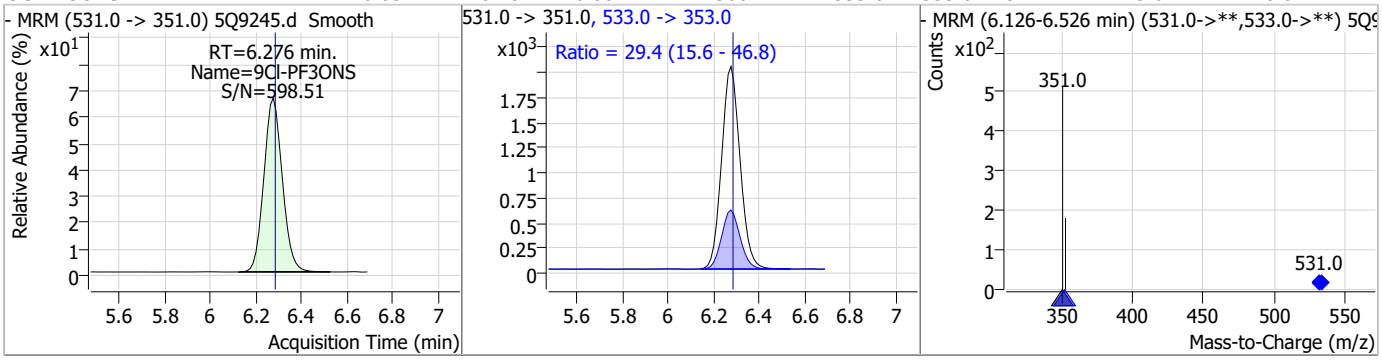
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	20.78	6.12	0.08	392265				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.81	6.12	0.08	14190	463.0 -> 219.0	24.1	11.2	33.7

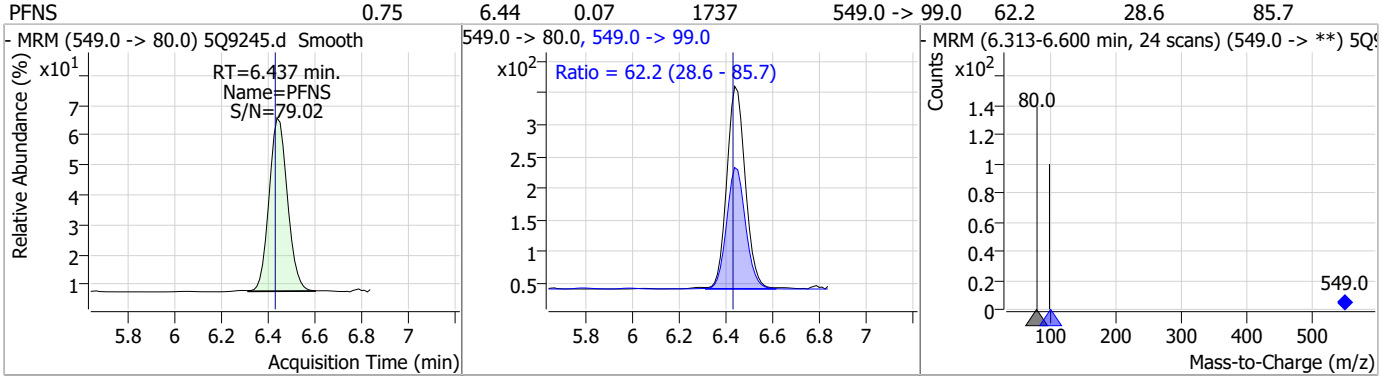


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	0.83	6.28	0.08	11306	533.0 -> 353.0	29.4	15.6	46.8

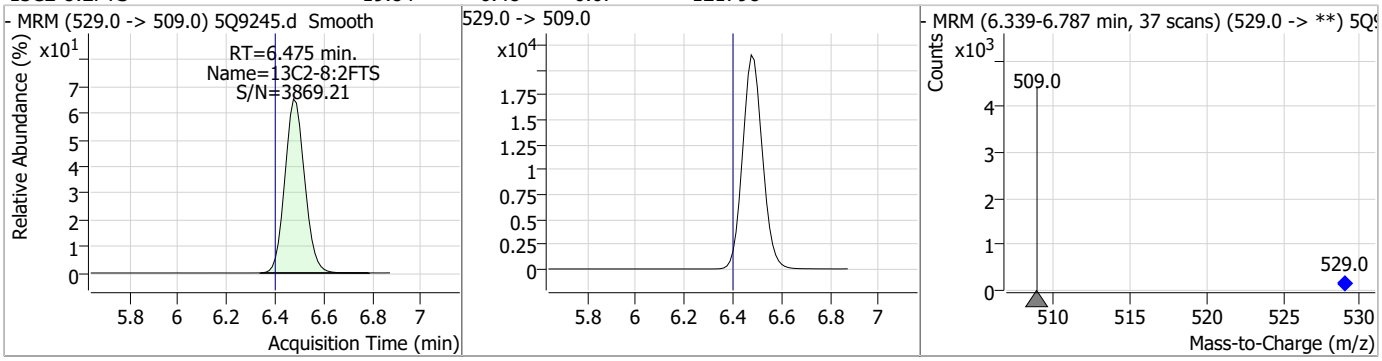


Perfluorinated Compounds by LC/MS/MS

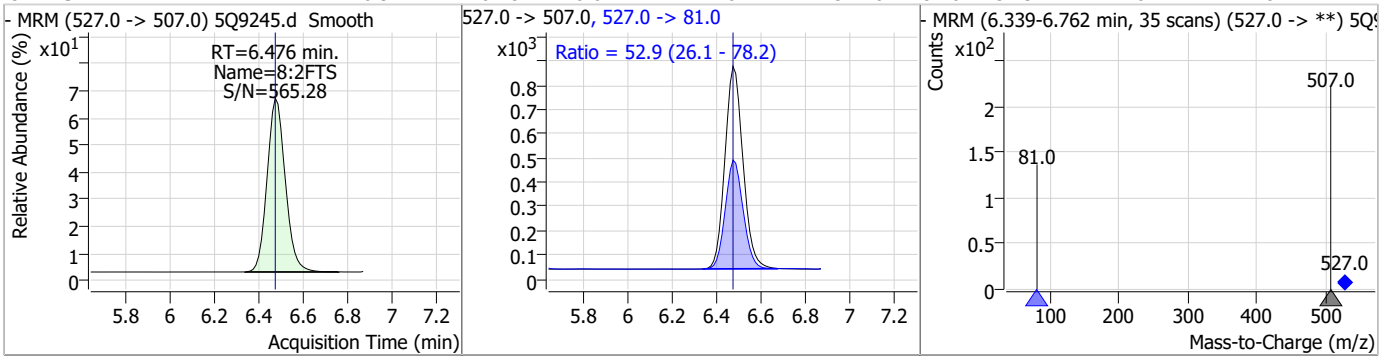
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	0.75	6.44	0.07	1737	549.0 -> 99.0	62.2	28.6	85.7



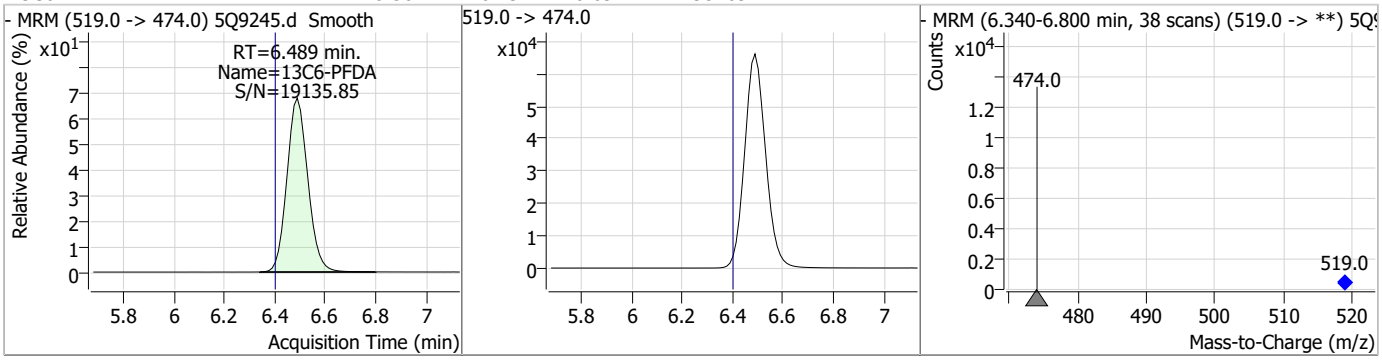
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	19.84	6.48	0.07	121798				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	0.92	6.48	0.07	4770	527.0 -> 81.0	52.9	26.1	78.2

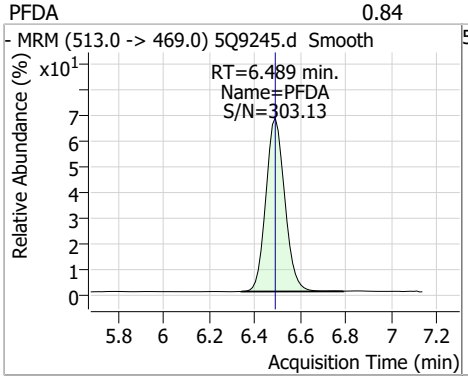


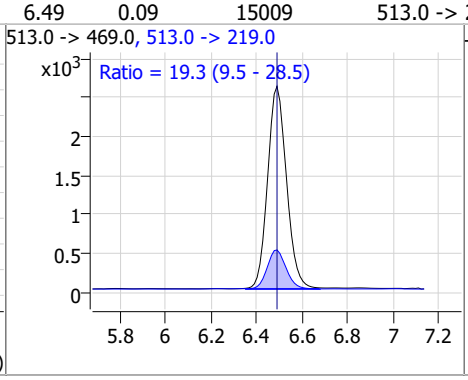
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	20.56	6.49	0.09	381091				

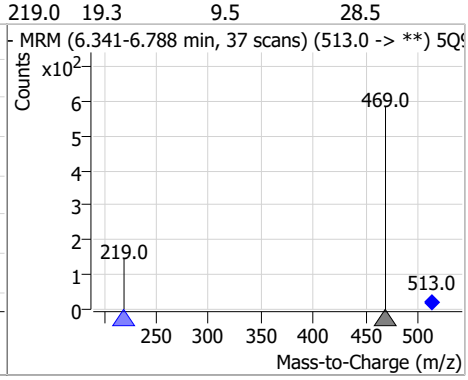


Perfluorinated Compounds by LC/MS/MS

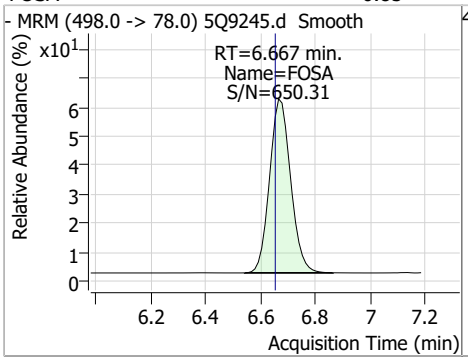
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.84	6.49	0.09	15009	513.0 -> 219.0	19.3	9.5	28.5

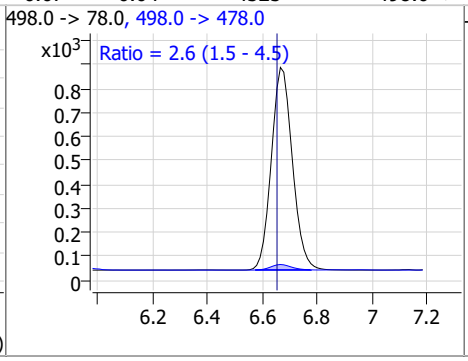


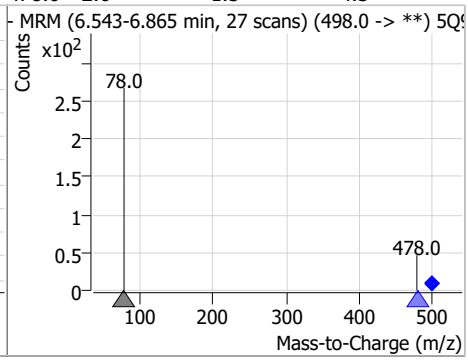




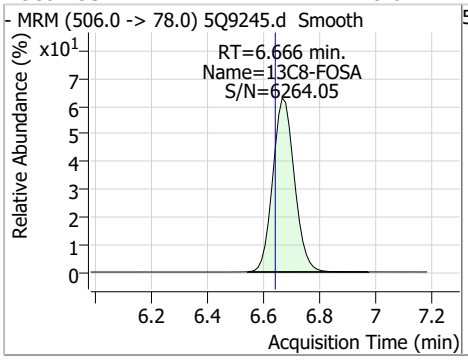
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	0.85	6.67	0.04	4525	498.0 -> 478.0	2.6	1.5	4.5

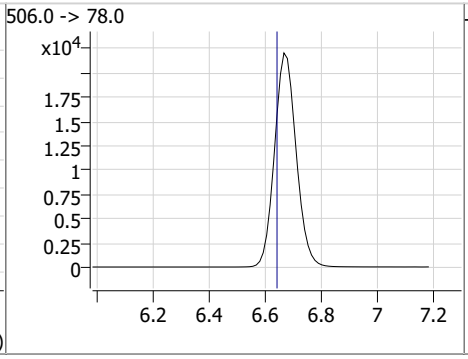


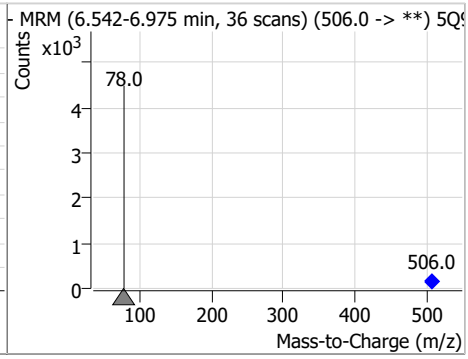




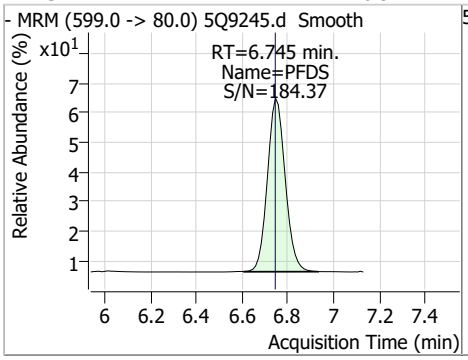
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	19.82	6.67	0.02	118836				

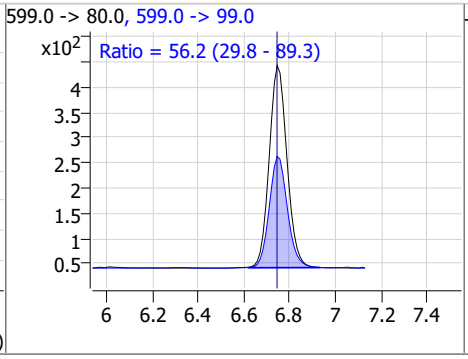


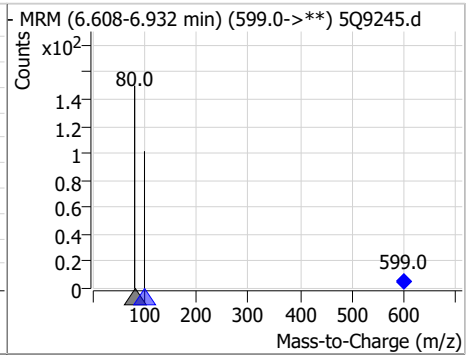




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	0.94	6.75	0.07	2165	599.0 -> 99.0	56.2	29.8	89.3

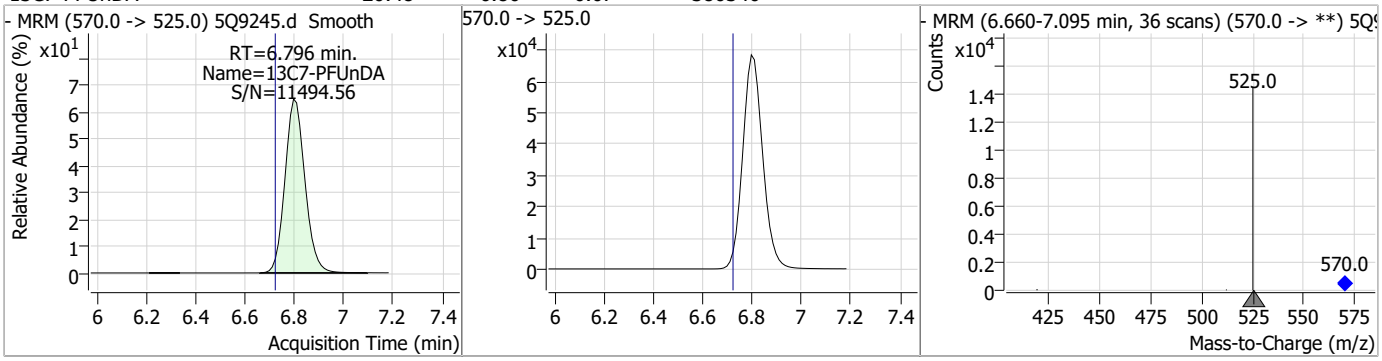




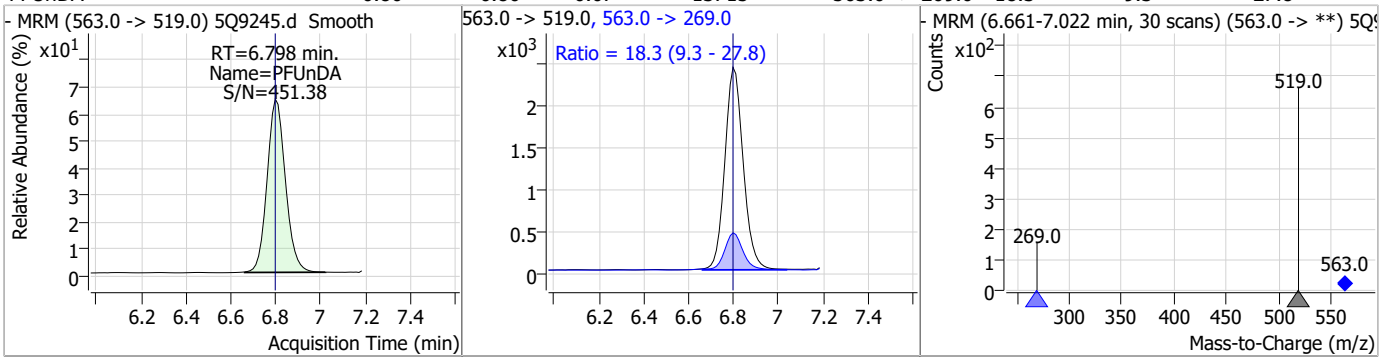


Perfluorinated Compounds by LC/MS/MS

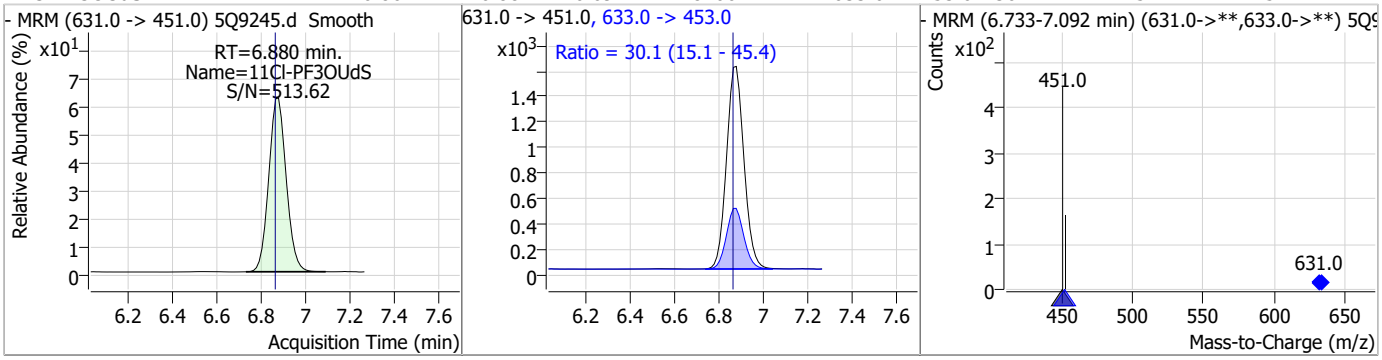
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	20.48	6.80	0.07	386340				



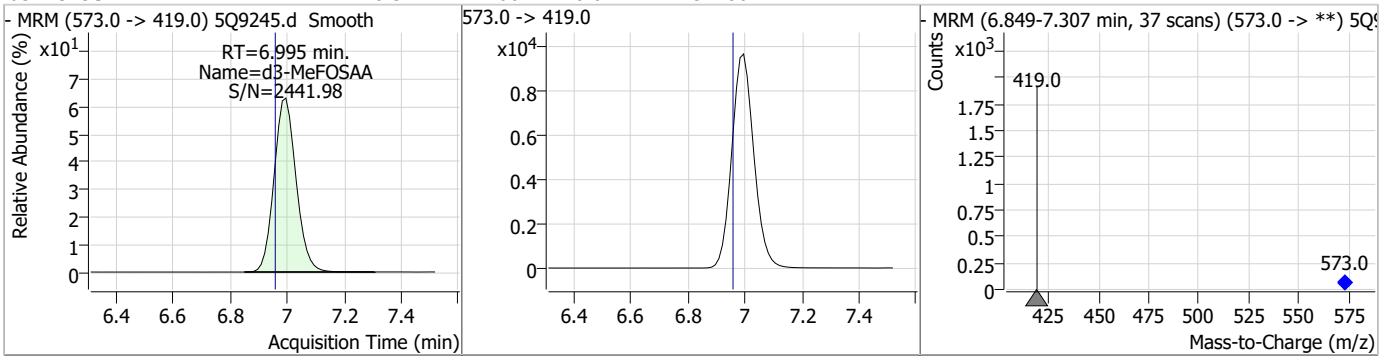
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.80	6.80	0.07	13715	563.0 -> 269.0	18.3	9.3	27.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.86	6.88	0.09	8700	633.0 -> 453.0	30.1	15.1	45.4

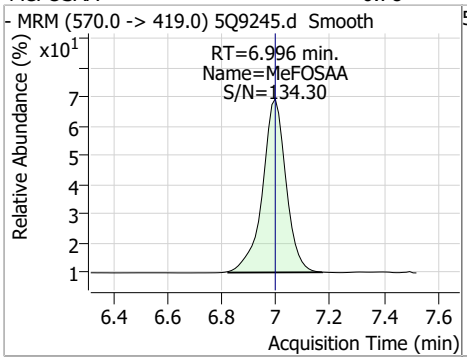


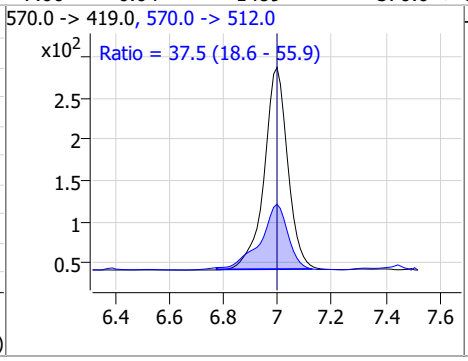
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	18.37	7.00	0.04	51486				

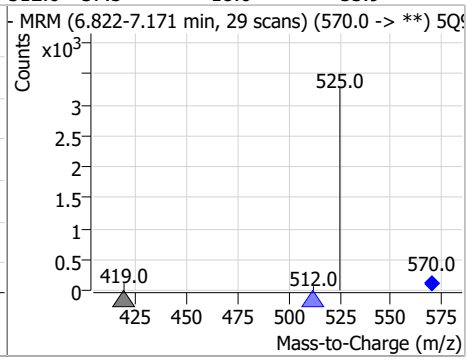


Perfluorinated Compounds by LC/MS/MS

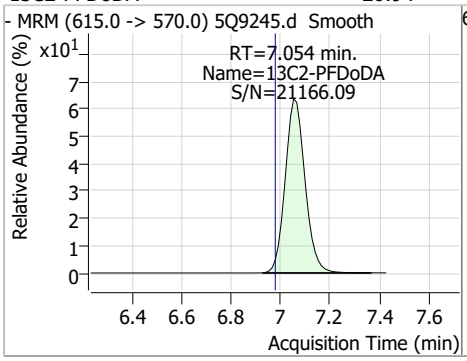
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.78	7.00	0.04	1489	570.0 -> 512.0	37.5	18.6	55.9

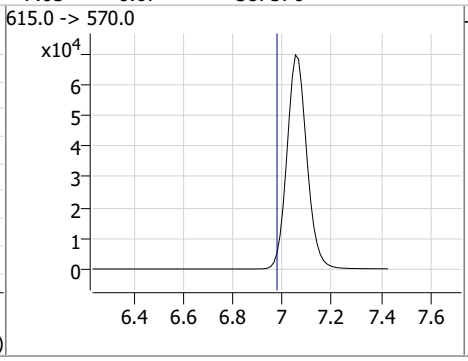


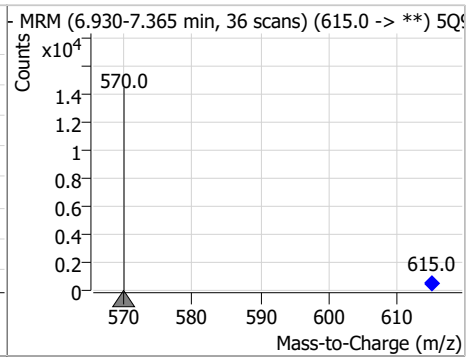




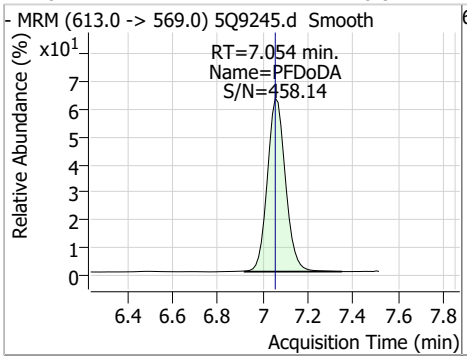
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	20.94	7.05	0.07	387576				

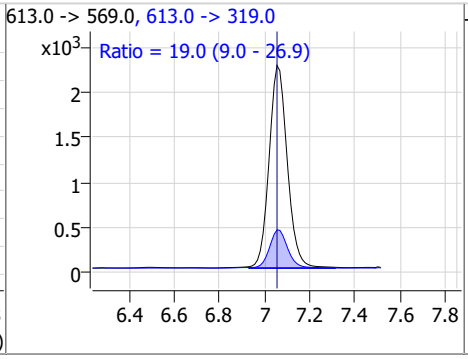


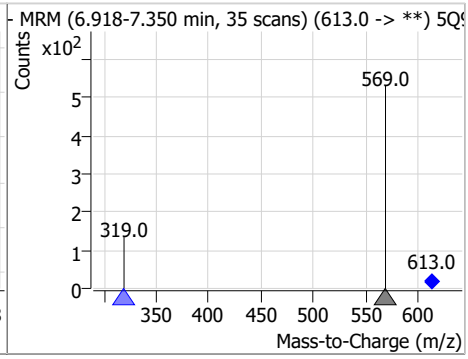




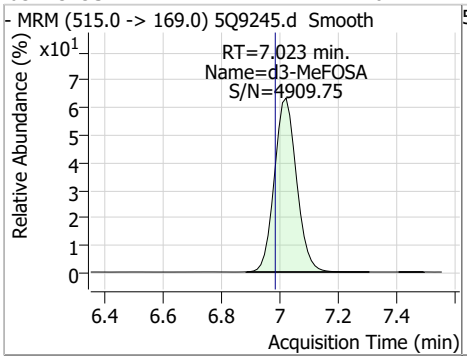
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.81	7.05	0.07	12651	613.0 -> 319.0	19.0	9.0	26.9

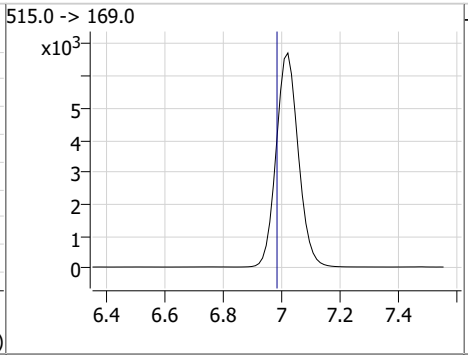


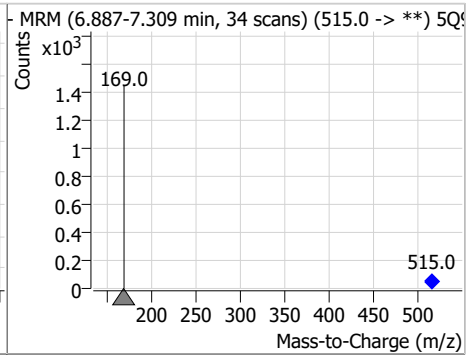




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	20.47	7.02	0.04	35296				

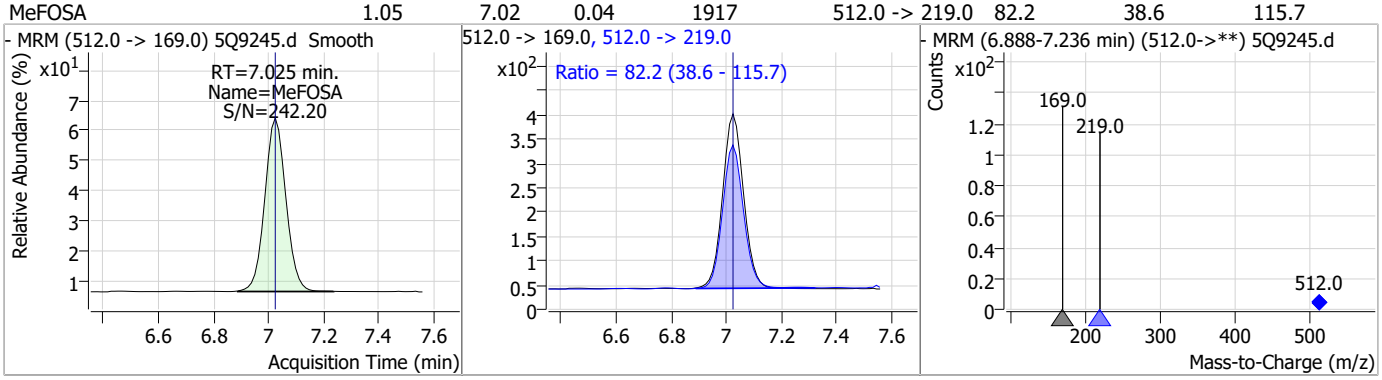




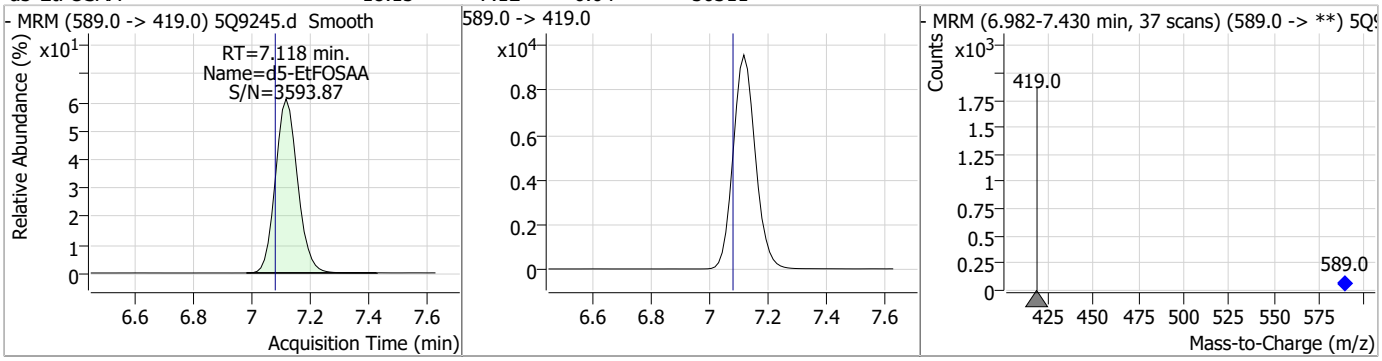


Perfluorinated Compounds by LC/MS/MS

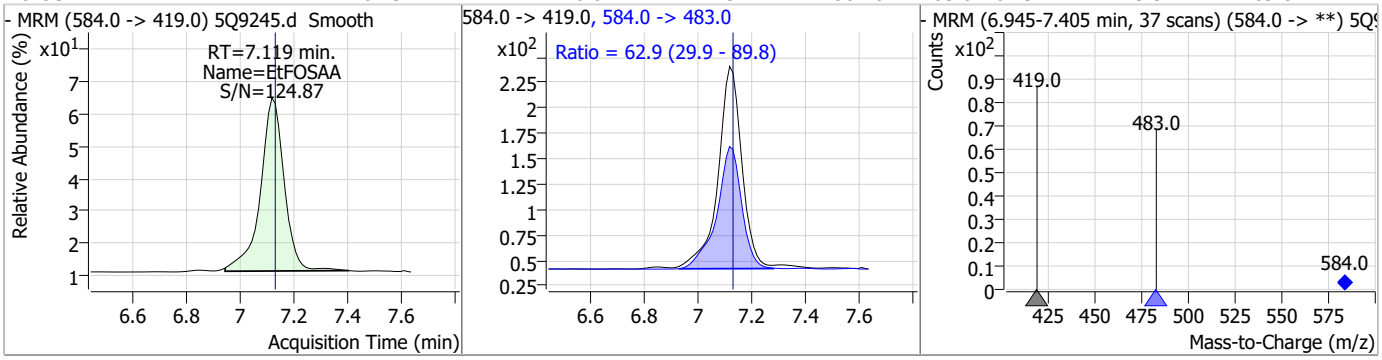
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	1.05	7.02	0.04	1917	512.0 -> 219.0	82.2	38.6	115.7



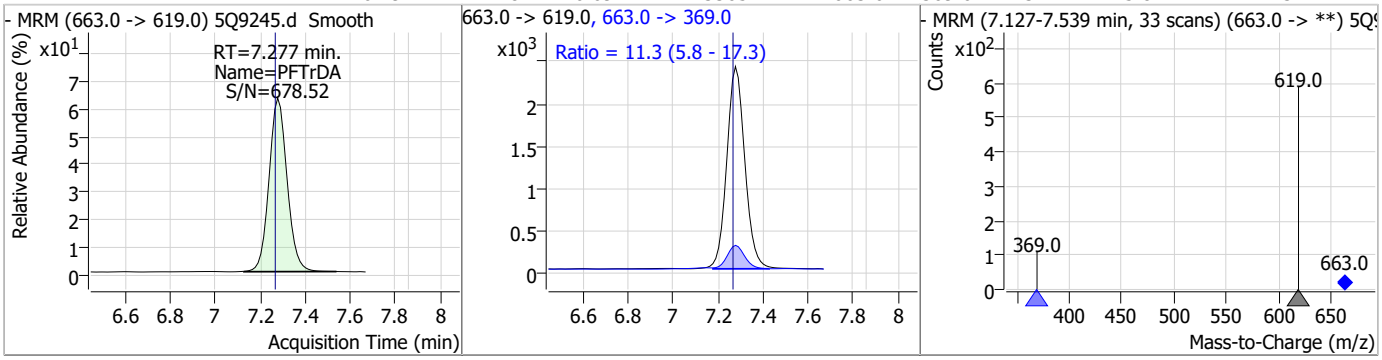
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.15	7.12	0.04	50311				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	0.73	7.12	0.02	1219	584.0 -> 483.0	62.9	29.9	89.8

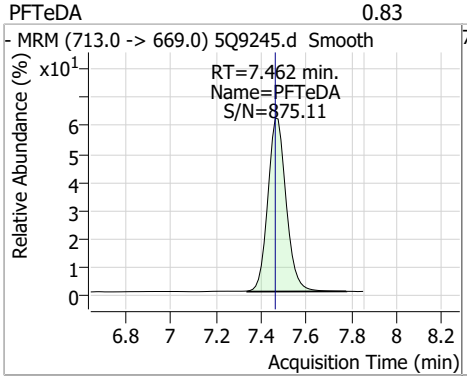


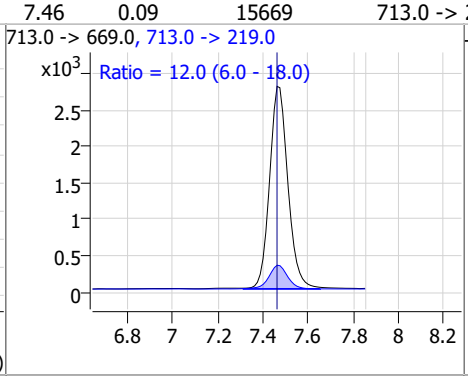
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.79	7.28	0.09	13365	663.0 -> 369.0	11.3	5.8	17.3

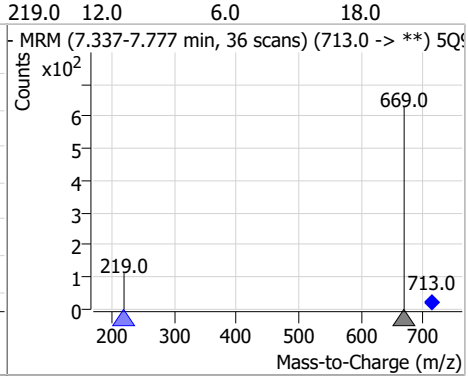


Perfluorinated Compounds by LC/MS/MS

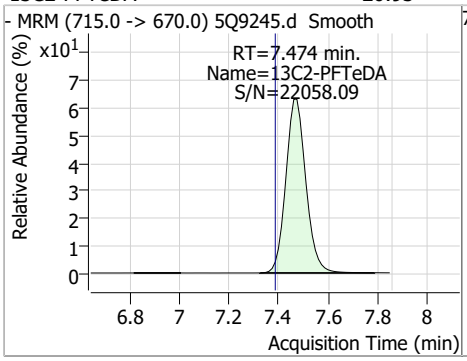
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.83	7.46	0.09	15669	713.0 -> 219.0	12.0	6.0	18.0

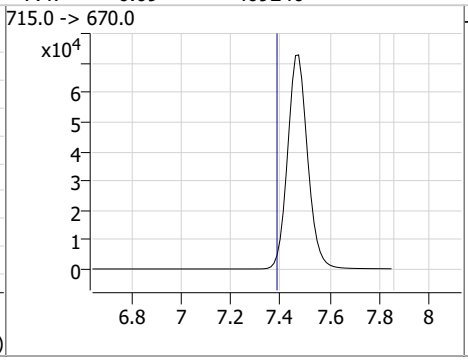


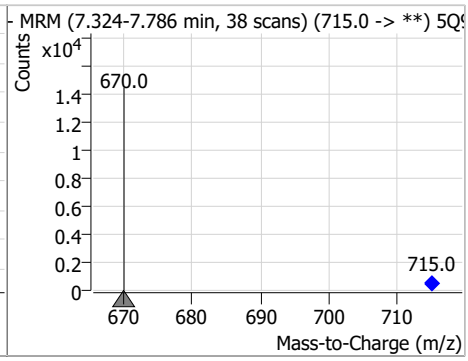




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	20.93	7.47	0.09	409240				







Manual Integration Approval Summary

Sample Number: S5Q137-CC137
Lab FileID: 5Q9245.D
Injection Time: 01/03/23 18:35
Method: EPA 537M QSM5.3 B-15
Analyst approved: 01/04/23 11:33 Lindsay Ritner
Supervisor approved: 01/04/23 15:00 Natasha Gumtie

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanesulfonic acid	1763-23-1		6.08	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Natasha Gumtie 01/04/23 15:00

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q9254.d
Operator : lindsayr
Acq. Method : 537_ID.m
Acq. Date-Time : 1/3/2023 8:55:44 PM
Sample Name : cc137-20
Vial : P1-A7
DA Method File : ID_010323_S5Q137.quantmethod.xml
Batch Name : s5q137.batch.bin
Sample Information : OP94373,S5Q137,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
Internal Standards						
M4-PFBA	2.100	217.0 -> 172.0	131151	20.00	µg/L	0.125
M5-PFPeA	3.594	268.0 -> 223.0	232759	20.00	µg/L	0.125
M5-PFHxA	4.566	318.0 -> 273.0	324063	20.00	µg/L	0.112
M4-PFHpA	5.238	367.0 -> 322.0	326761	20.00	µg/L	0.126
M8-PFOA	5.748	421.0 -> 376.0	422492	20.00	µg/L	0.127
M9-PFNA	6.181	472.0 -> 427.0	420563	20.00	µg/L	0.138
M6-PFDA	6.552	519.0 -> 474.0	419380	20.00	µg/L	0.151
M7-PFUnDA	6.859	570.0 -> 525.0	409304	20.00	µg/L	0.136
M2-PFDoDA	7.128	615.0 -> 570.0	413304	20.00	µg/L	0.149
M2-PFTeDA	7.536	715.0 -> 670.0	453100	20.00	µg/L	0.149
M8-FOSA	6.691	506.0 -> 78.0	137995	20.00	µg/L	0.050
M3-PFBS	3.805	302.0 -> 99.0	27851	20.00	µg/L	0.127
M3-PFHxS	5.248	402.0 -> 99.0	35168	20.00	µg/L	0.125
M8-PFOS	6.141	507.0 -> 99.0	42547	20.00	µg/L	0.126
M2-4:2FTS	4.477	329.0 -> 309.0	105382	20.00	µg/L	0.128
M2-6:2FTS	5.722	429.0 -> 409.0	158151	20.00	µg/L	0.128
M2-8:2FTS	6.551	529.0 -> 509.0	137219	20.00	µg/L	0.151
M3-MeFOSAA	7.020	573.0 -> 419.0	66463	20.00	µg/L	0.062
M3-HFPO-DA	4.768	287.0 -> 169.0	69432	20.00	µg/L	0.124
M3-MeFOSA	7.035	515.0 -> 169.0	38671	20.00	µg/L	0.050
M5-EtFOSAA	7.143	589.0 -> 419.0	62519	20.00	µg/L	0.062
System Monitoring Compounds						
13C2-4:2FTS	4.477	329.0 -> 309.0	105382	22.28	µg/L	0.128
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 111.4%		
13C2-6:2FTS	5.722	429.0 -> 409.0	158151	22.21	µg/L	0.128
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 111.1%		
13C2-8:2FTS	6.551	529.0 -> 509.0	137219	22.35	µg/L	0.151
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 111.7%		
13C2-PFDoDA	7.128	615.0 -> 570.0	413304	22.33	µg/L	0.149
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 111.6%		
13C2-PFTeDA	7.536	715.0 -> 670.0	453100	23.17	µg/L	0.149
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 115.9%		
13C3-PFBS	3.805	302.0 -> 99.0	27851	21.72	µg/L	0.127
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.6%		
13C3-PFHxS	5.248	402.0 -> 99.0	35168	22.14	µg/L	0.125
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.7%		
13C4-PFBA	2.100	217.0 -> 172.0	131151	22.88	µg/L	0.125
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 114.4%		
13C4-PFHpA	5.238	367.0 -> 322.0	326761	22.24	µg/L	0.126
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 111.2%		
13C5-PFHxA	4.566	318.0 -> 273.0	324063	22.06	µg/L	0.112
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 110.3%		
13C5-PFPeA	3.594	268.0 -> 223.0	232759	22.40	µg/L	0.125
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 112.0%		
13C6-PFDA	6.552	519.0 -> 474.0	419380	22.62	µg/L	0.151

Perfluorinated Compounds by LC/MS/MS

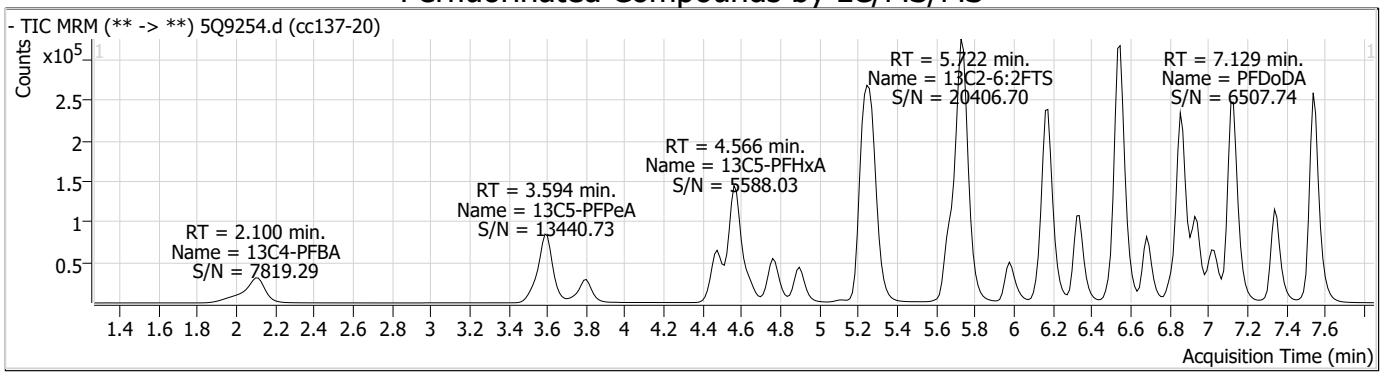
Compound	RT	Transition	Response	Conc. Units		Dev(Min)
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 113.1%		
13C7-PFUnDA	6.859	570.0 -> 525.0	409304	21.70 µg/L		0.136
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 108.5%		
13C8-FOSA	6.691	506.0 -> 78.0	137995	23.02 µg/L		0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 115.1%		
13C8-PFOA	5.748	421.0 -> 376.0	422492	22.43 µg/L		0.127
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 112.1%		
13C8-PFOS	6.141	507.0 -> 99.0	42547	22.32 µg/L		0.126
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 111.6%		
13C9-PFNA	6.181	472.0 -> 427.0	420563	22.28 µg/L		0.138
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 111.4%		
d3-MeFOSAA	7.020	573.0 -> 419.0	66463	23.71 µg/L		0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 118.6%		
13C3-HFPO-DA	4.768	287.0 -> 169.0	69432	20.70 µg/L		0.124
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 103.5%		
d3-MeFOSA	7.035	515.0 -> 169.0	38671	22.43 µg/L		0.050
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 112.1%		
d5-EtFOSAA	7.143	589.0 -> 419.0	62519	22.55 µg/L		0.062
Spiked Amount: 20.00	Range: 50.0 - 150.0%			Recovery = 112.7%		
Target Compounds						QValue
4:2FTS	4.478	327.0 -> 307.0	107755	22.46 µg/L		99
		327.0 -> 81.0	63912			
6:2FTS	5.723	427.0 -> 407.0	155291	22.61 µg/L		100
		427.0 -> 81.0	68799			
8:2FTS	6.539	527.0 -> 507.0	133896	22.84 µg/L		99
		527.0 -> 81.0	69094			
EtFOSAA	7.144	584.0 -> 419.0	45584	21.87 µg/L		99
		584.0 -> 483.0	26853			
FOSA	6.691	498.0 -> 78.0	124070	20.06 µg/L		100
		498.0 -> 478.0	3590			
MeFOSAA	7.021	570.0 -> 419.0	48925	19.87 µg/L		96
		570.0 -> 512.0	19489			
PFBA	2.106	213.0 -> 169.0	122529	19.94 µg/L		100
PFBS	3.808	299.0 -> 80.0	81256	20.33 µg/L		99
		299.0 -> 99.0	34835			
PFDA	6.553	513.0 -> 469.0	391928	19.86 µg/L		100
		513.0 -> 219.0	75074			
PFDoDA	7.129	613.0 -> 569.0	342779	20.52 µg/L		98
		613.0 -> 319.0	58457			
PFDS	6.807	599.0 -> 80.0	55324	22.78 µg/L		100
		599.0 -> 99.0	32962			
PFHpA	5.239	363.0 -> 319.0	356720	20.07 µg/L		100
		363.0 -> 169.0	79770			
PFHpS	5.734	449.0 -> 80.0	62121	20.14 µg/L		100
		449.0 -> 99.0	34074			
PFHxA	4.567	313.0 -> 269.0	292847	20.28 µg/L		100
		313.0 -> 119.0	13512			
PFHxS	5.237	399.0 -> 80.0	64351	20.05 µg/L	m	99
		399.0 -> 99.0	36669			
PFNA	6.181	463.0 -> 419.0	383849	20.36 µg/L		100
		463.0 -> 219.0	86289			
PFNS	6.500	549.0 -> 80.0	49700	19.63 µg/L		98
		549.0 -> 99.0	29183			
PFOA	5.749	413.0 -> 369.0	418271	19.99 µg/L		99
		413.0 -> 169.0	117146			
PFOS	6.143	499.0 -> 80.0	72573	19.71 µg/L	m	98

Perfluorinated Compounds by LC/MS/MS

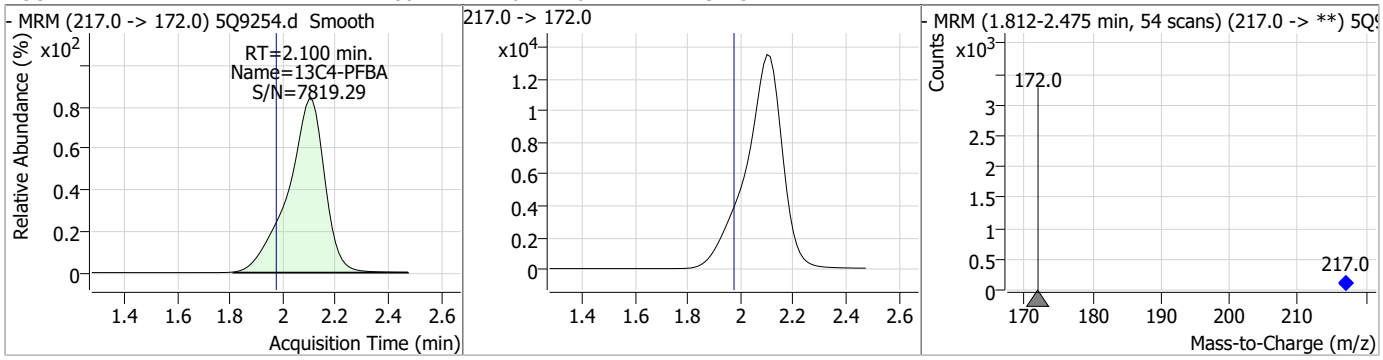
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
		499.0 -> 99.0	33903			
PFPeA	3.597	263.0 -> 219.0	240487	20.00	µg/L	100
PFPeS	4.638	349.0 -> 80.0	48661	20.04	µg/L	99
		349.0 -> 99.0	24616			
PFTeDA	7.537	713.0 -> 669.0	422185	20.19	µg/L	100
		713.0 -> 219.0	49881			
PFTrDA	7.339	663.0 -> 619.0	364223	20.19	µg/L	100
		663.0 -> 369.0	42779			
PFUnDA	6.860	563.0 -> 519.0	364247	20.15	µg/L	100
		563.0 -> 269.0	67503			
11Cl-PF3OUdS	6.942	631.0 -> 451.0	233627	20.33	µg/L	99
		633.0 -> 453.0	72094			
9Cl-PF3ONS	6.339	531.0 -> 351.0	301355	19.92	µg/L	99
		533.0 -> 353.0	95005			
ADONA	5.274	377.0 -> 251.0	474887	19.72	µg/L	99
		377.0 -> 85.0	180607			
HFPO-DA	4.776	329.0 -> 169.0	101186	20.13	µg/L	100
		285.0 -> 169.0	59542			
MeFOSA	7.049	512.0 -> 169.0	39438	19.63	µg/L	99
		512.0 -> 219.0	30220			
4-PFECHS	5.670	461.0 -> 381.0	200825	19.58	µg/L	99
		461.0 -> 99.0	109686			
FBSA	4.904	298.0 -> 78.0	154934	21.90	µg/L	99
		298.0 -> 64.0	13933			
FHxSA	5.985	398.0 -> 78.0	147758	22.28	µg/L	99
		398.0 -> 64.0	13429			

 # = Qualifier out of range, m = manually integrated, + = Area summed

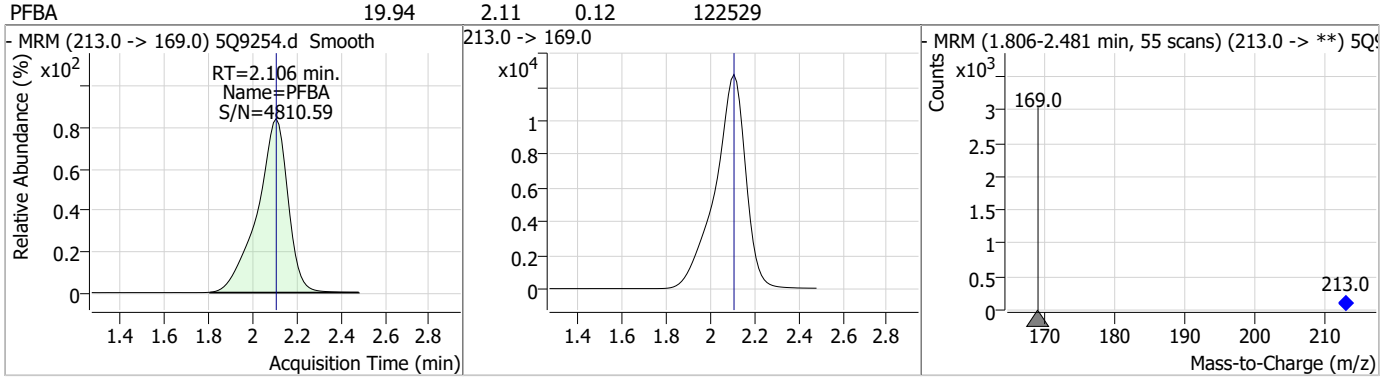
Perfluorinated Compounds by LC/MS/MS



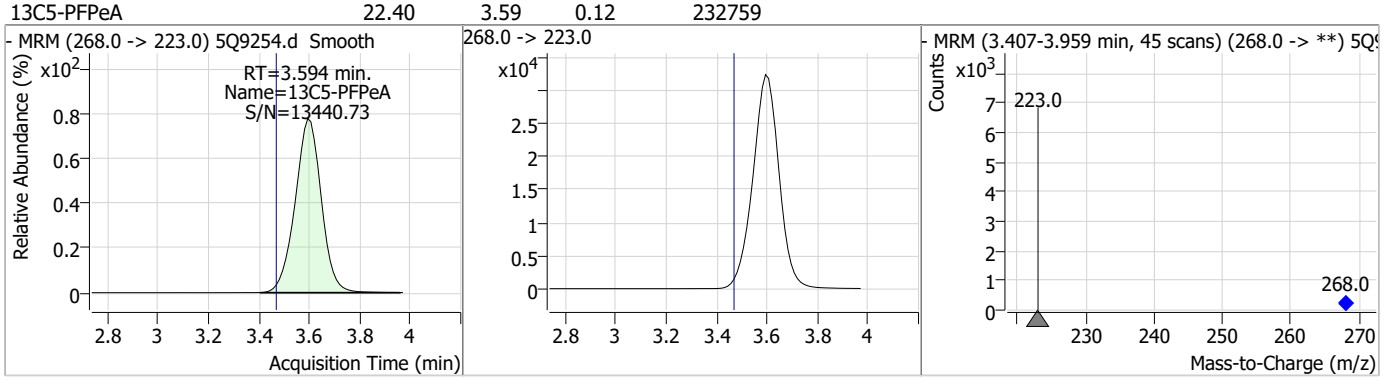
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFBA	22.88	2.10	0.12	131151				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.94	2.11	0.12	122529				

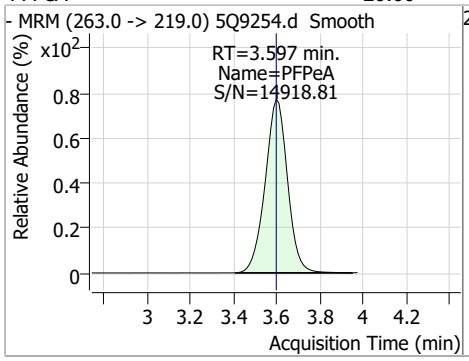


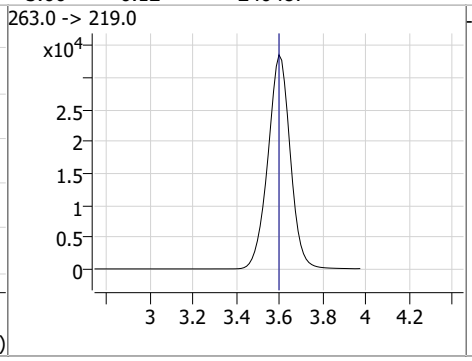
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFPeA	22.40	3.59	0.12	232759				

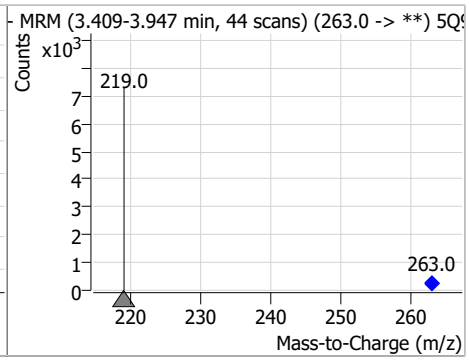


Perfluorinated Compounds by LC/MS/MS

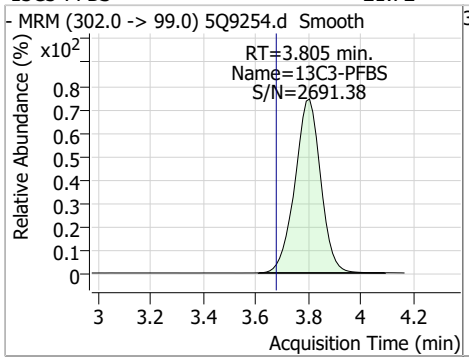
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	20.00	3.60	0.12	240487				

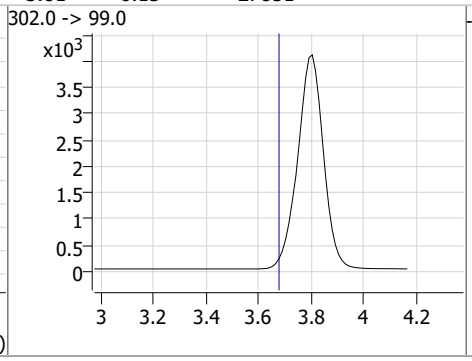


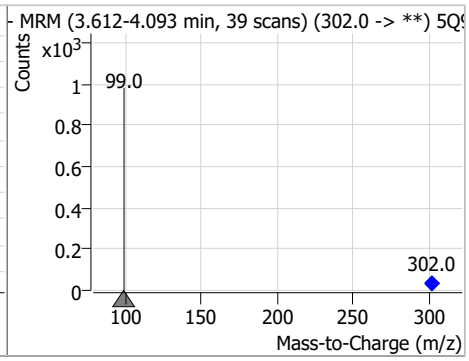




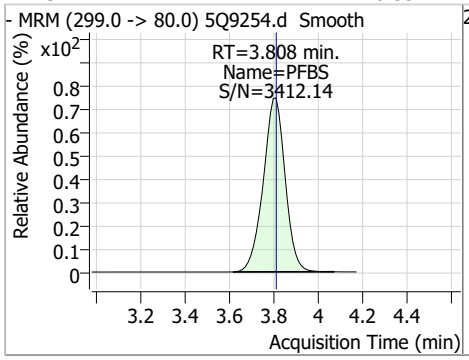
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFBS	21.72	3.81	0.13	27851				

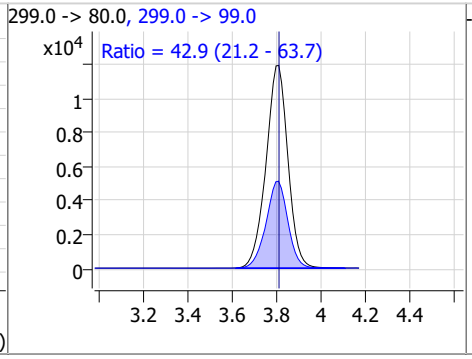


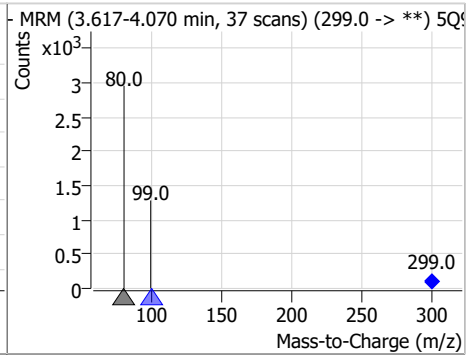




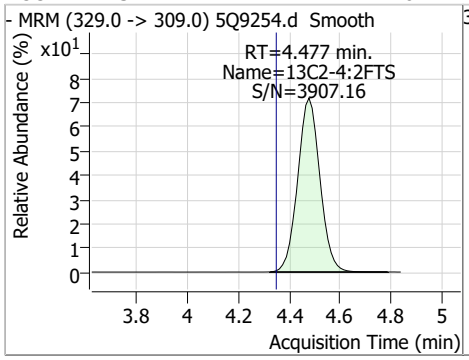
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	20.33	3.81	0.13	81256	299.0 -> 99.0	42.9	21.2	63.7

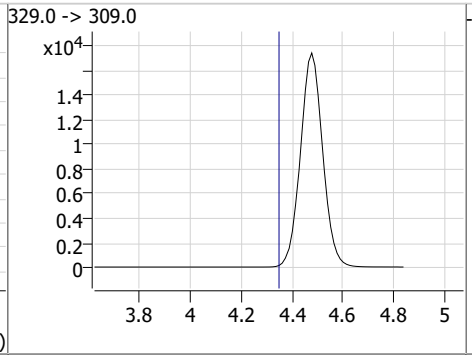


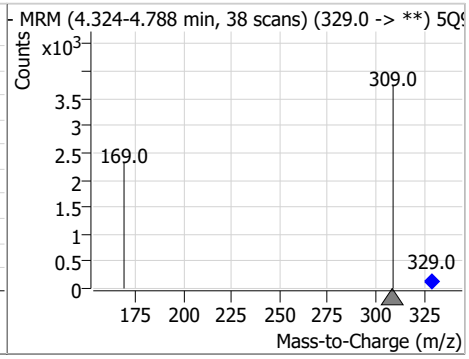




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-4:2FTS	22.28	4.48	0.13	105382				

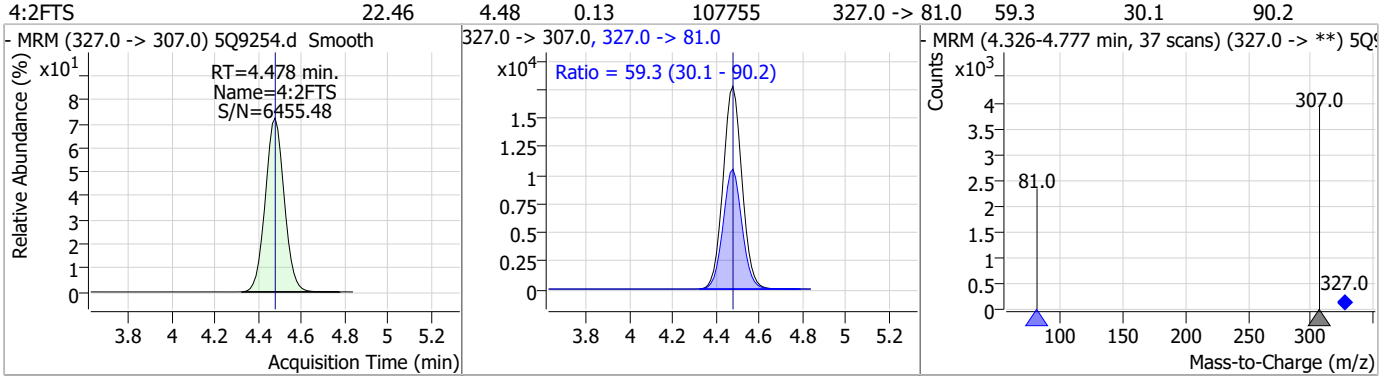




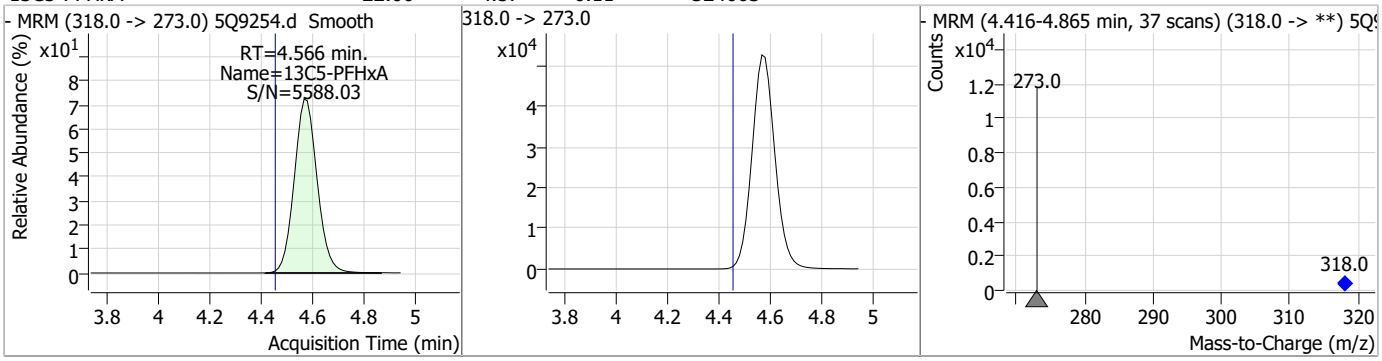


Perfluorinated Compounds by LC/MS/MS

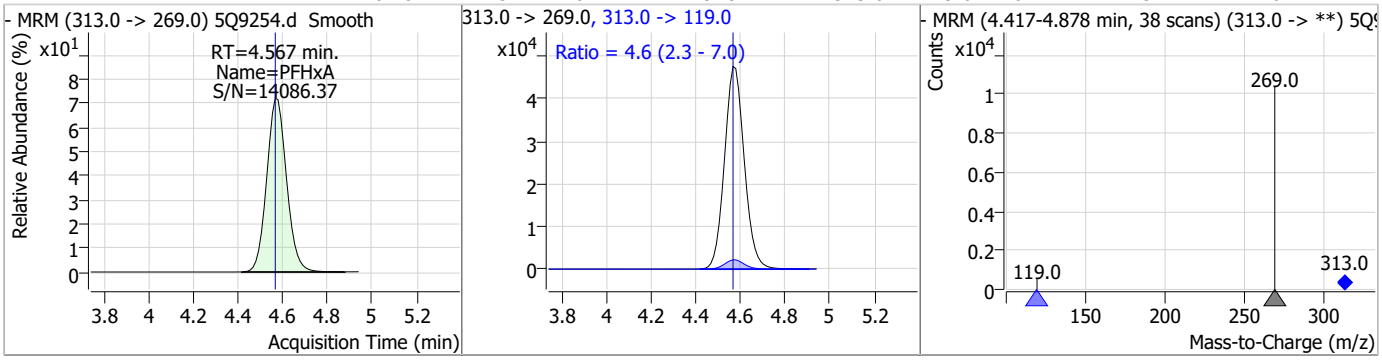
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	22.46	4.48	0.13	107755	327.0 -> 81.0	59.3	30.1	90.2



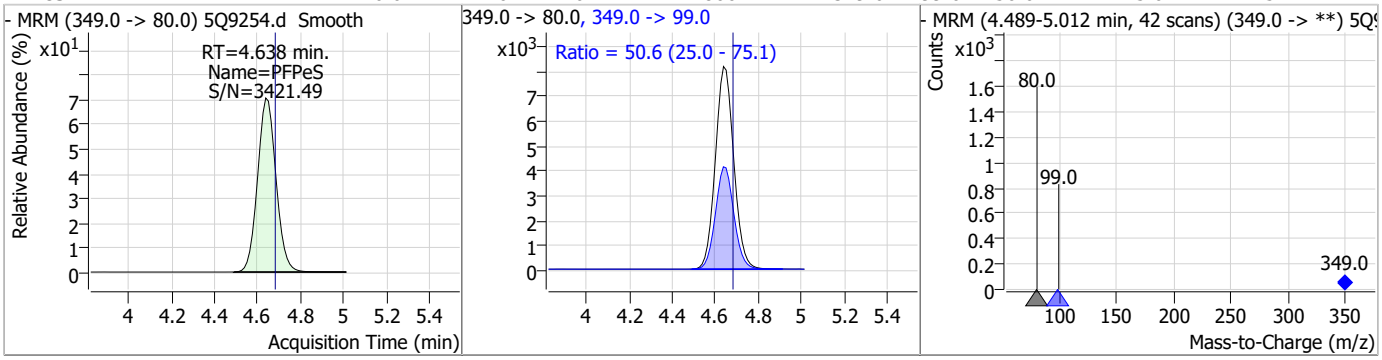
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C5-PFHxA	22.06	4.57	0.11	324063				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	20.28	4.57	0.11	292847	313.0 -> 119.0	4.6	2.3	7.0

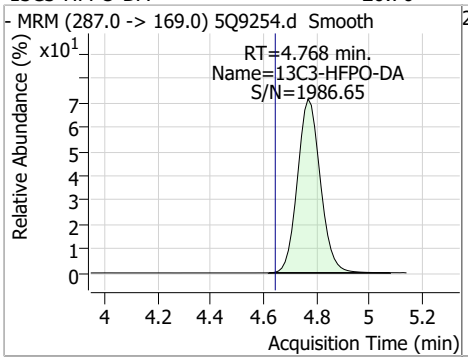


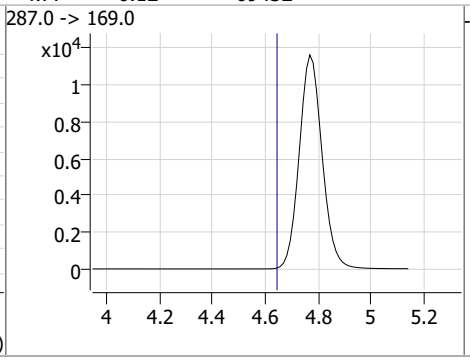
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	20.04	4.64	0.11	48661	349.0 -> 99.0	50.6	25.0	75.1

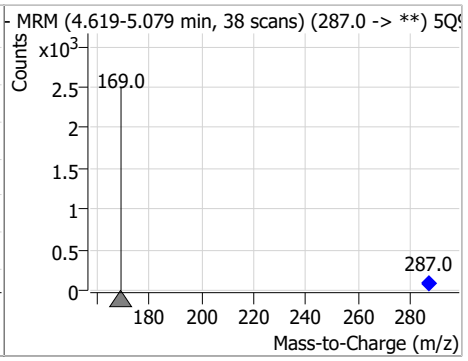


Perfluorinated Compounds by LC/MS/MS

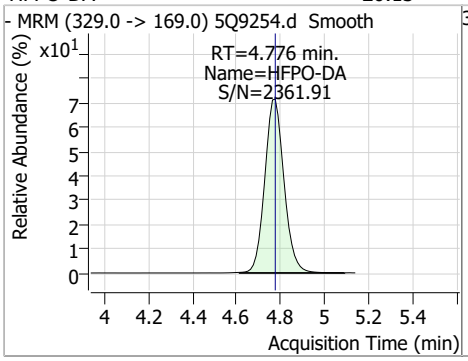
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	20.70	4.77	0.12	69432				

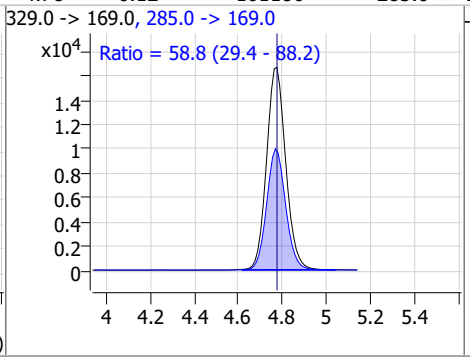


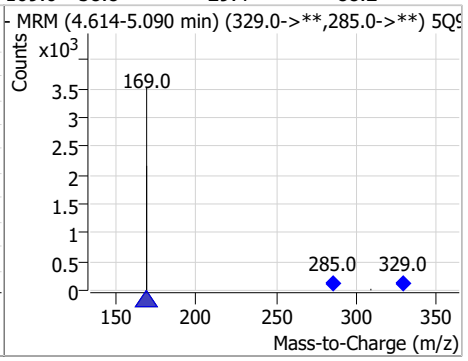




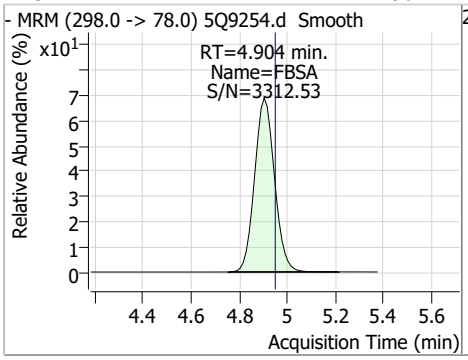
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	20.13	4.78	0.12	101186	285.0 -> 169.0	58.8	29.4	88.2

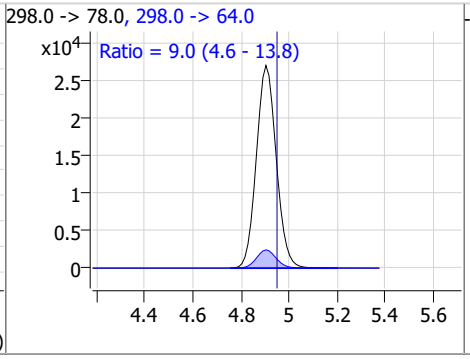


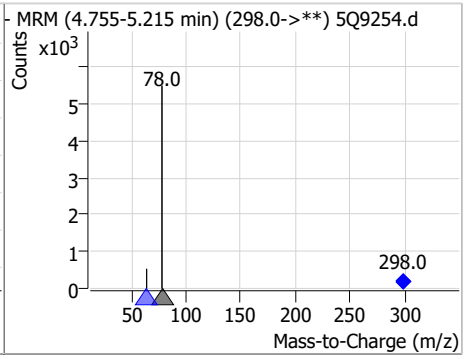




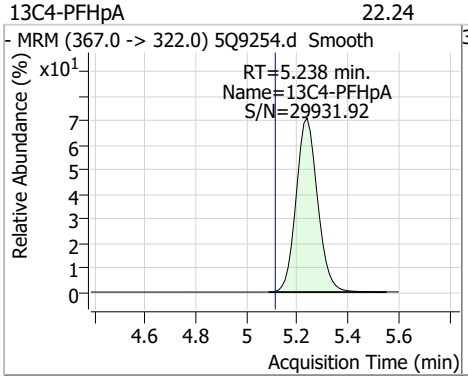
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FBSA	21.90	4.90	0.07	154934	298.0 -> 64.0	9.0	4.6	13.8

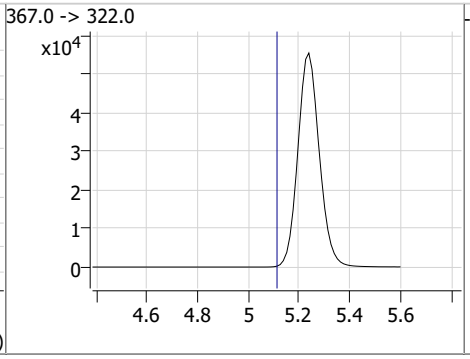


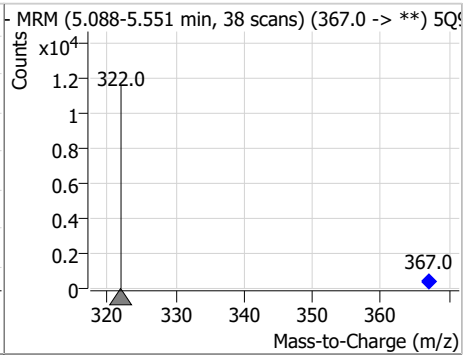




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFHpA	22.24	5.24	0.13	326761				

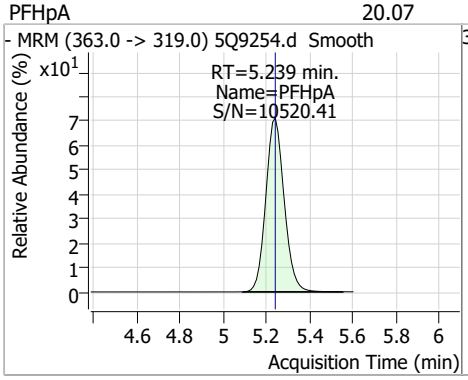


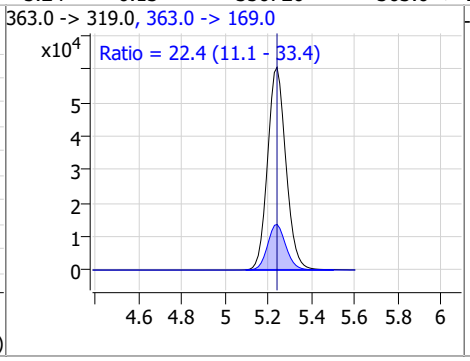


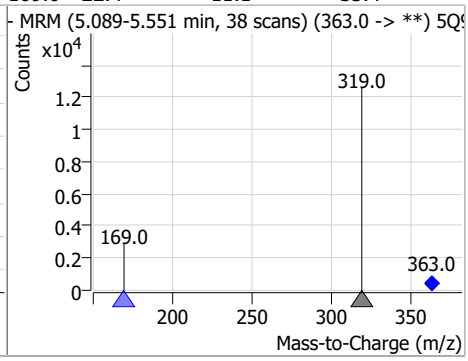


Perfluorinated Compounds by LC/MS/MS

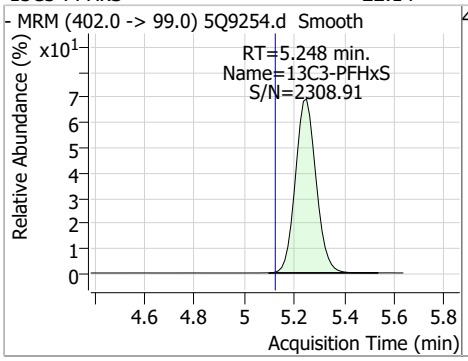
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	20.07	5.24	0.13	356720	363.0 -> 169.0	22.4	11.1	33.4

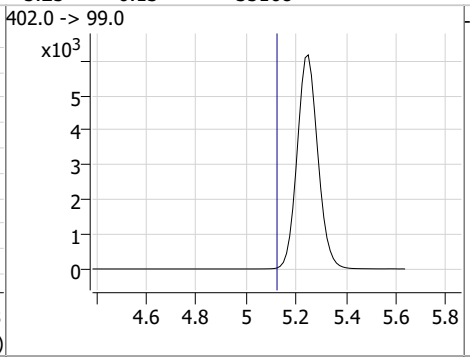


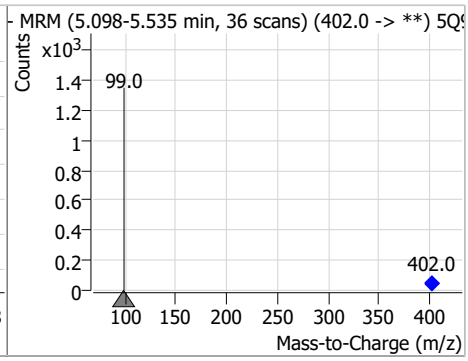




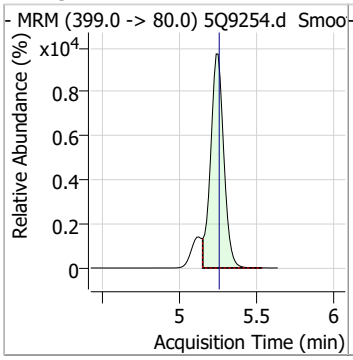
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFHxS	22.14	5.25	0.13	35168				

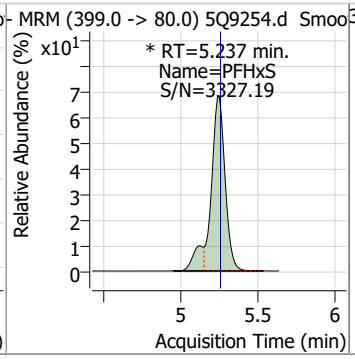


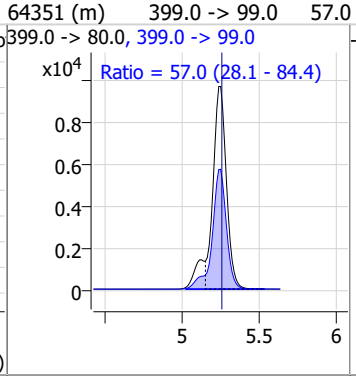


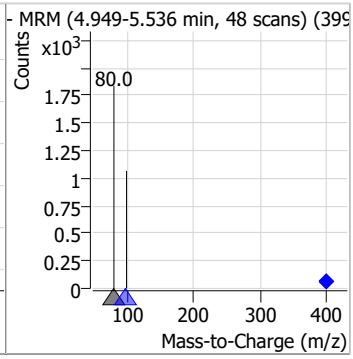


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	20.05	5.24	0.11	64351 (m)	399.0 -> 99.0	57.0	28.1	84.4

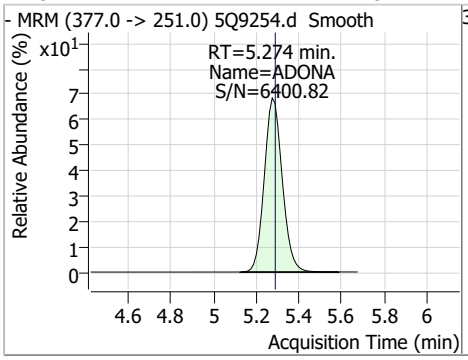


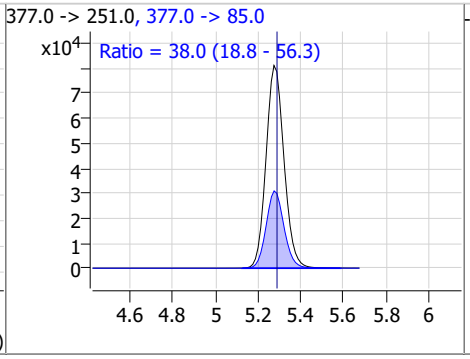


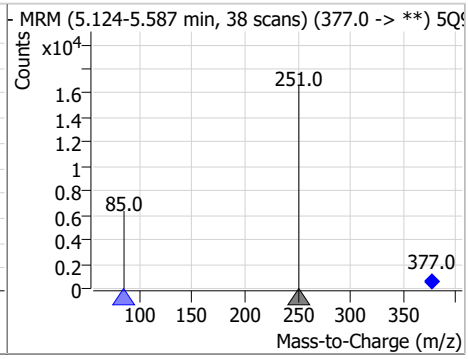




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	19.72	5.27	0.11	474887	377.0 -> 85.0	38.0	18.8	56.3

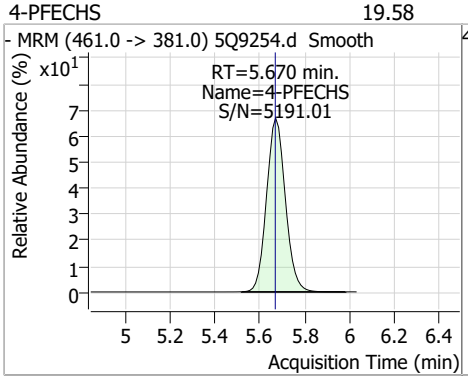


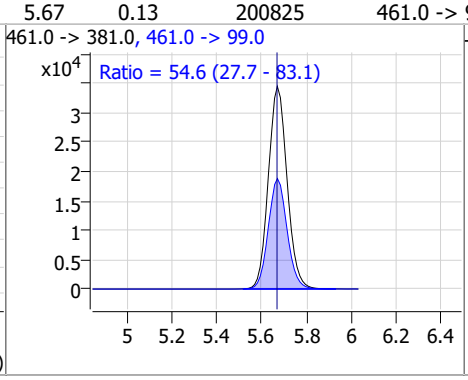


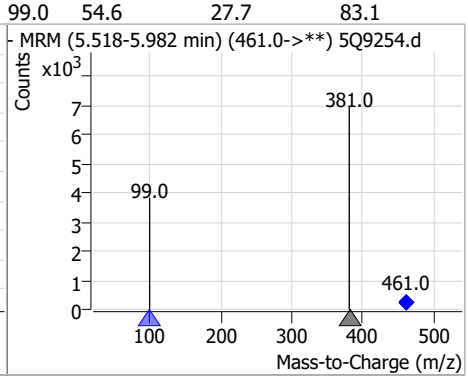


Perfluorinated Compounds by LC/MS/MS

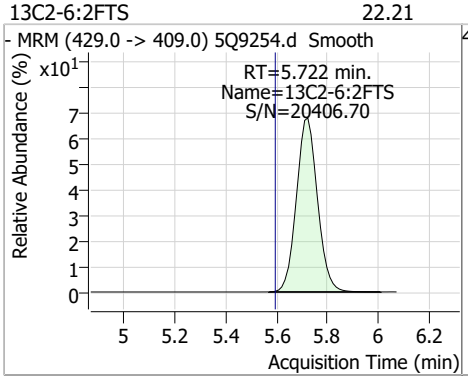
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4-PFECHS	19.58	5.67	0.13	200825	461.0 -> 99.0	54.6	27.7	83.1

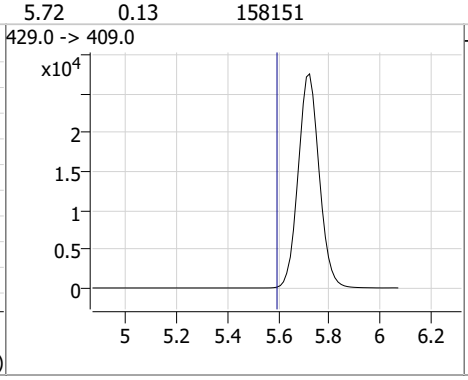


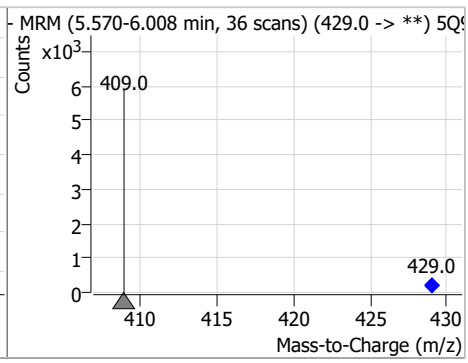




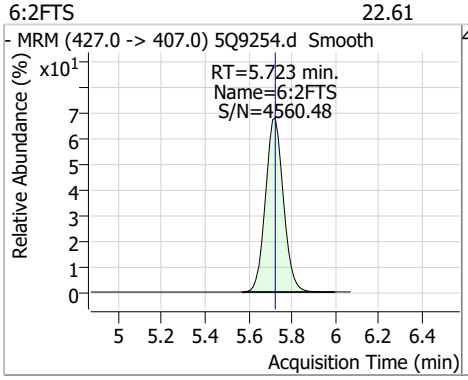
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS	22.21	5.72	0.13	158151				

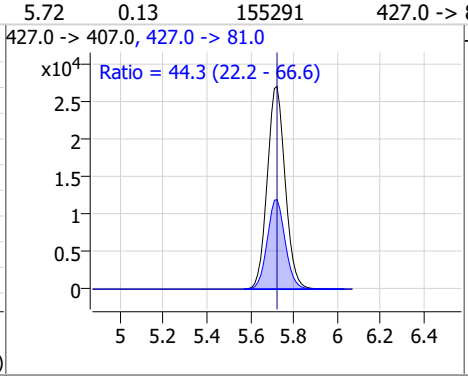


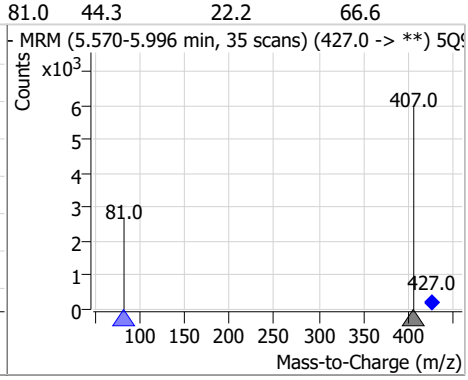




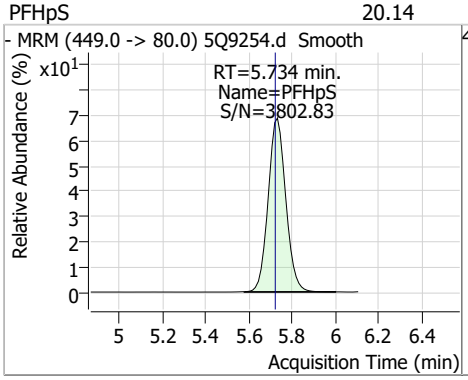
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	22.61	5.72	0.13	155291	427.0 -> 81.0	44.3	22.2	66.6

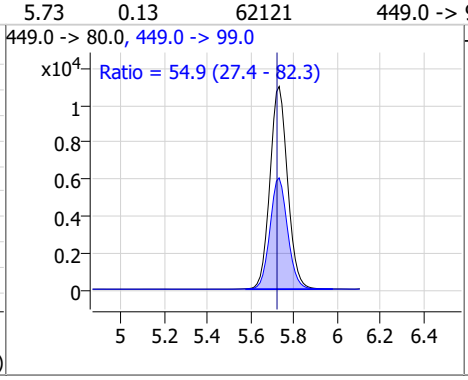


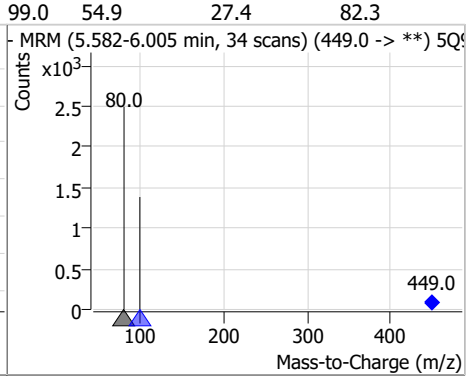




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	20.14	5.73	0.13	62121	449.0 -> 99.0	54.9	27.4	82.3

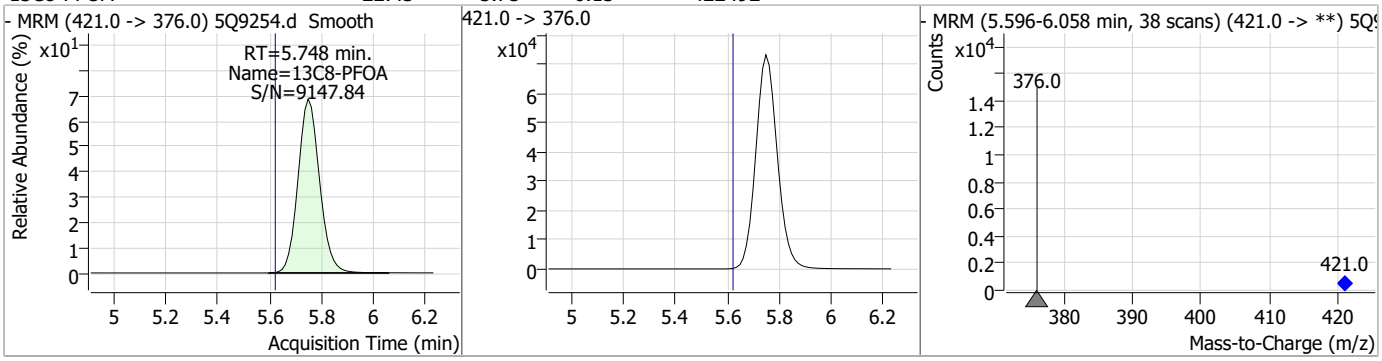




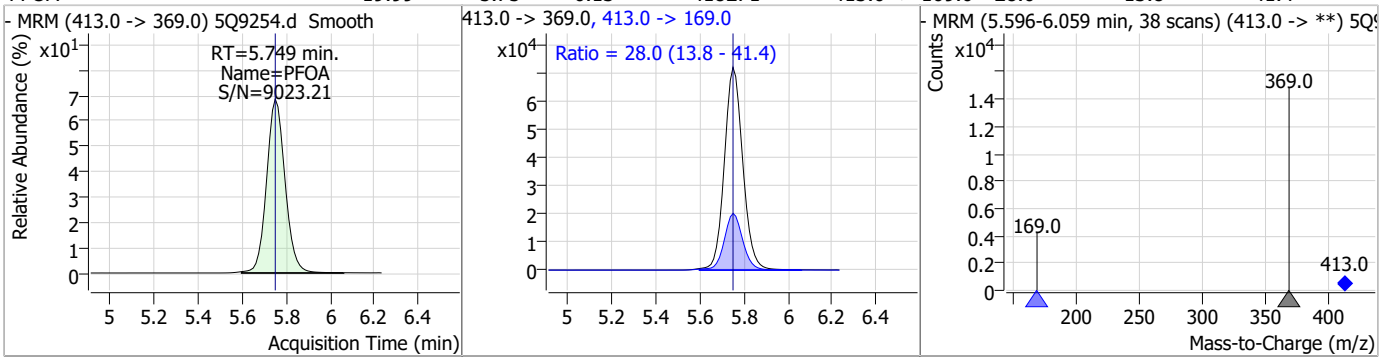


Perfluorinated Compounds by LC/MS/MS

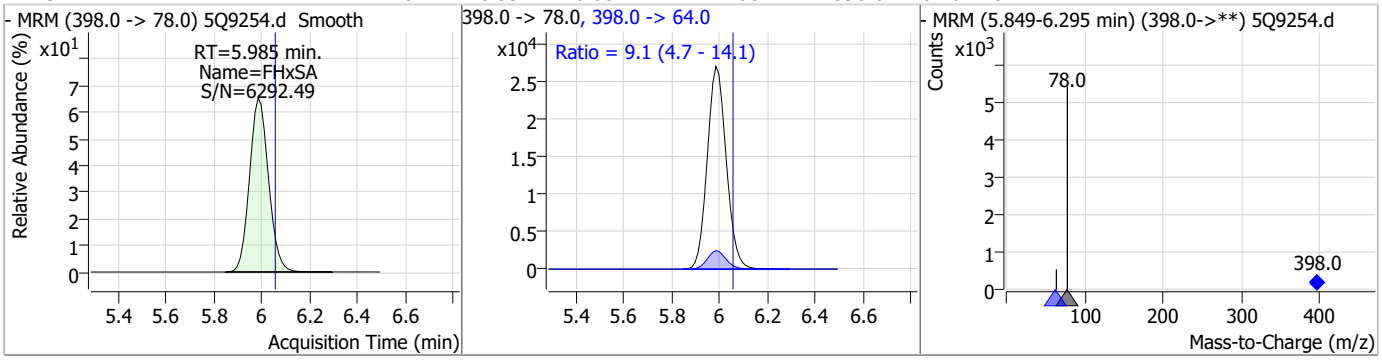
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOA	22.43	5.75	0.13	422492				



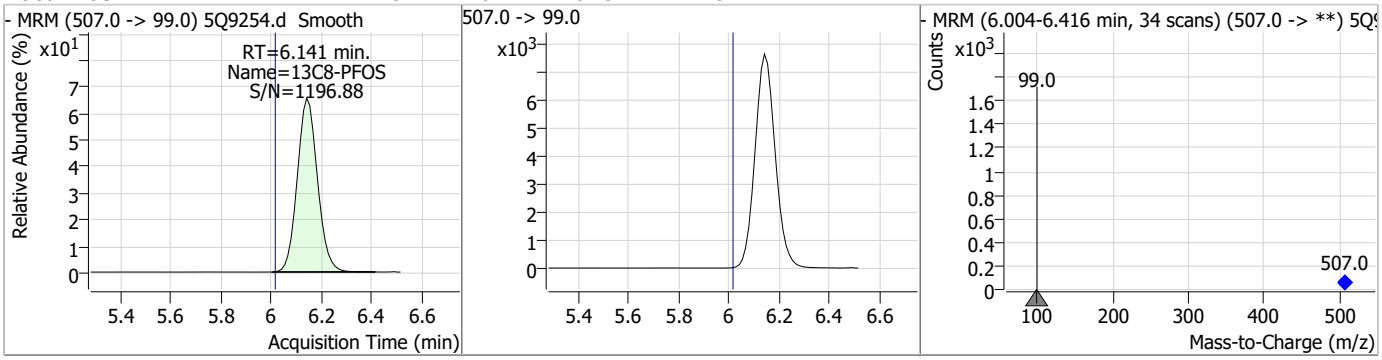
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.99	5.75	0.13	418271	413.0 -> 169.0	28.0	13.8	41.4



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FHxSA	22.28	5.99	0.06	147758	398.0 -> 64.0	9.1	4.7	14.1

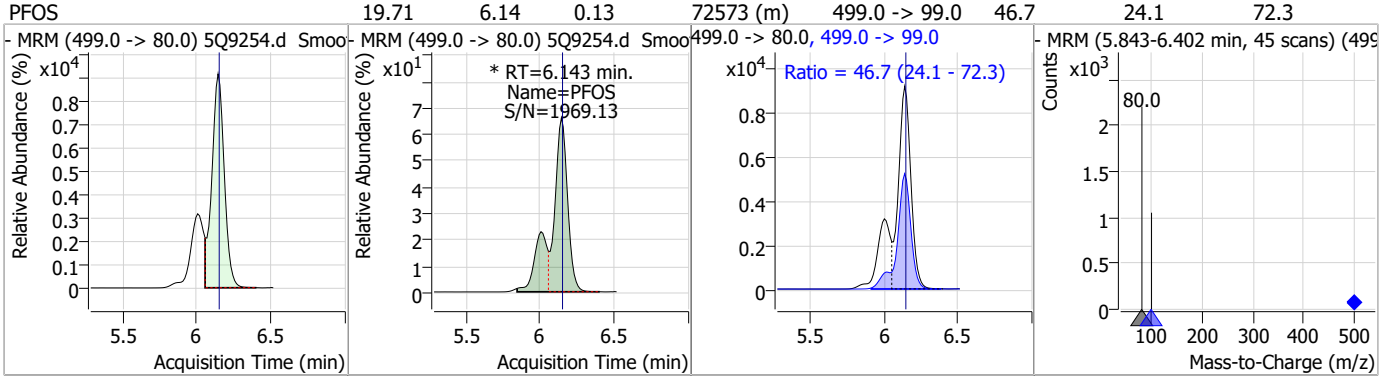


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-PFOS	22.32	6.14	0.13	42547				

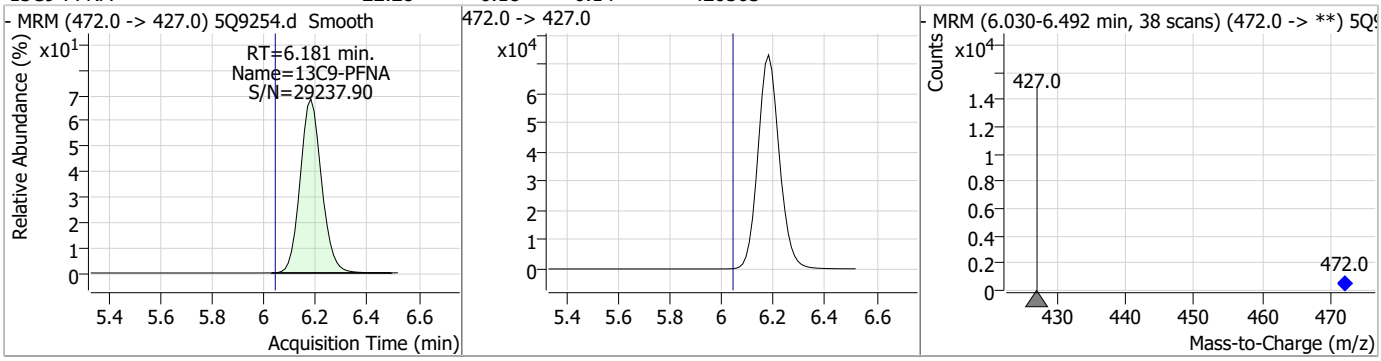


Perfluorinated Compounds by LC/MS/MS

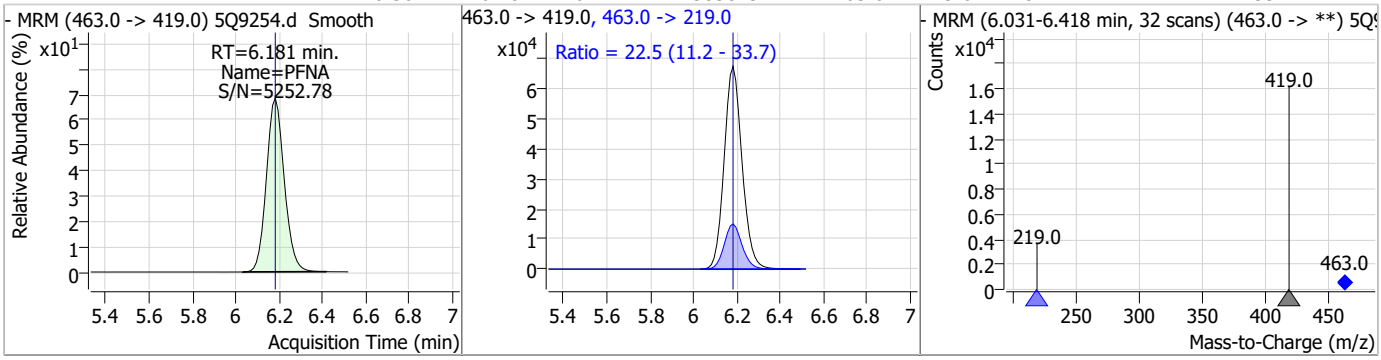
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.71	6.14	0.13	72573 (m)	499.0 -> 99.0	46.7	24.1	72.3



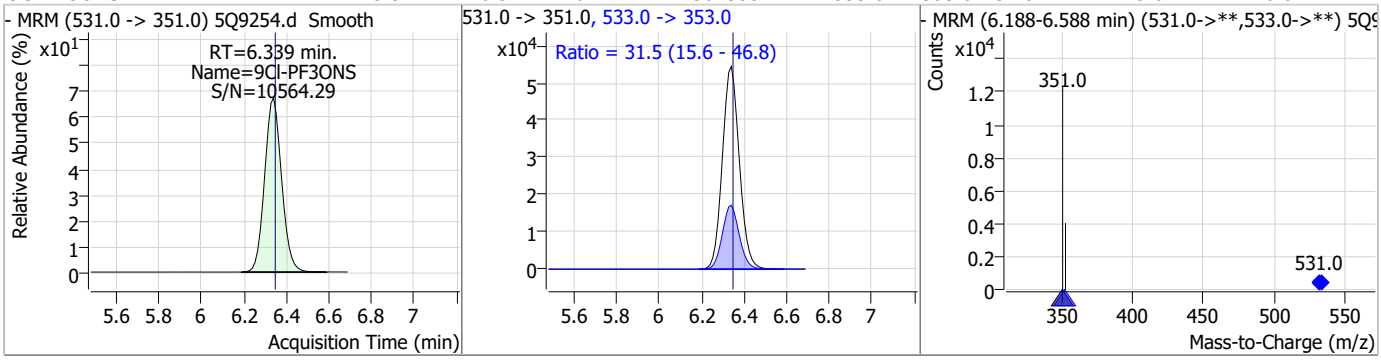
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C9-PFNA	22.28	6.18	0.14	420563				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	20.36	6.18	0.14	383849	463.0 -> 219.0	22.5	11.2	33.7

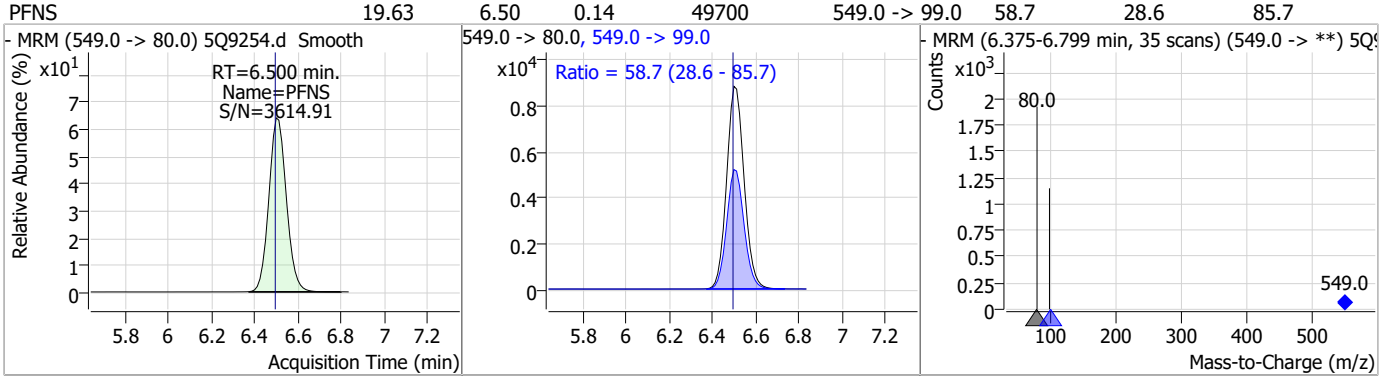


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	19.92	6.34	0.14	301355	533.0 -> 353.0	31.5	15.6	46.8

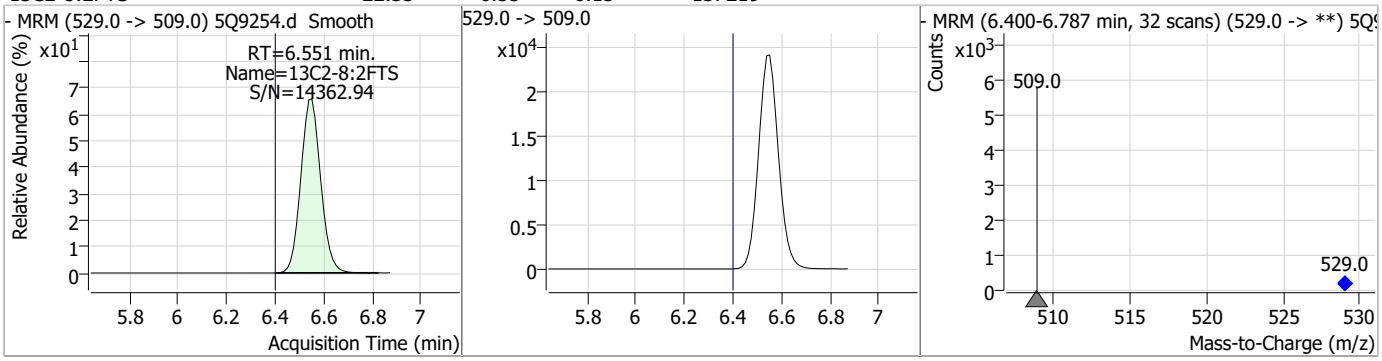


Perfluorinated Compounds by LC/MS/MS

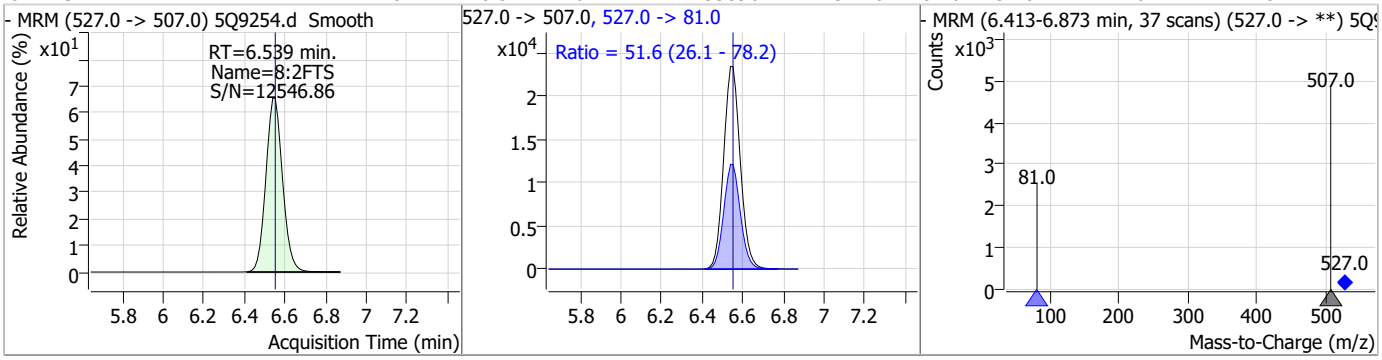
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	19.63	6.50	0.14	49700	549.0 -> 99.0	58.7	28.6	85.7



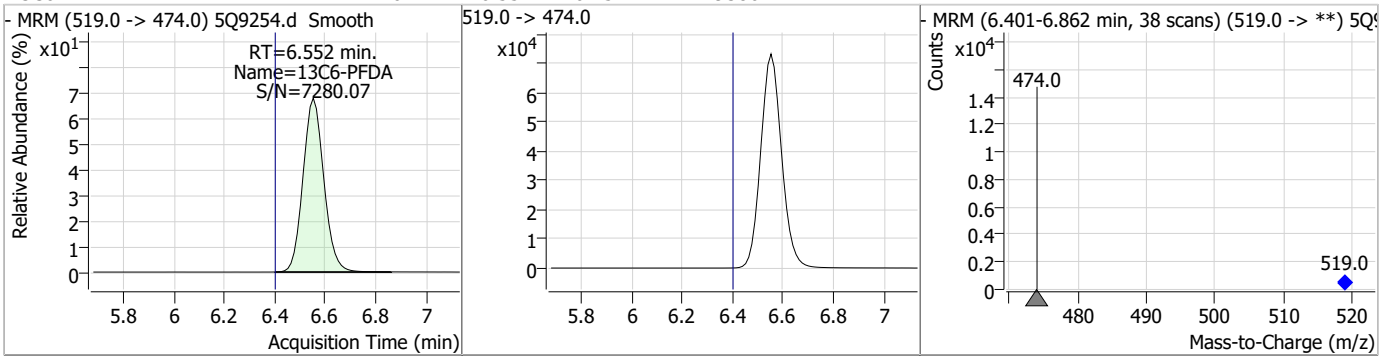
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-8:2FTS	22.35	6.55	0.15	137219				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	22.84	6.54	0.14	133896	527.0 -> 81.0	51.6	26.1	78.2

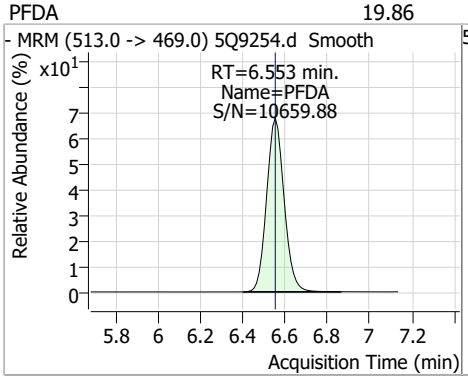


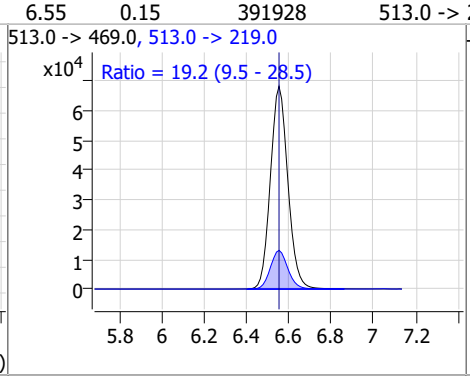
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C6-PFDA	22.62	6.55	0.15	419380				

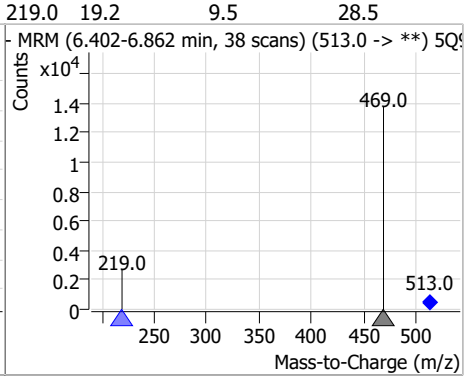


Perfluorinated Compounds by LC/MS/MS

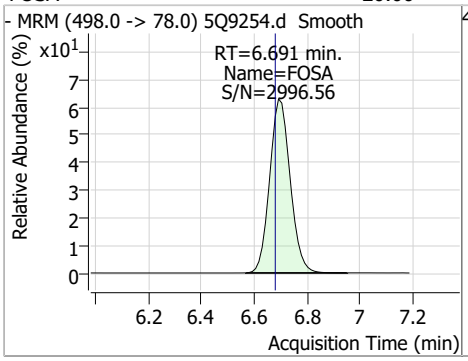
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.86	6.55	0.15	391928	513.0 -> 219.0	19.2	9.5	28.5

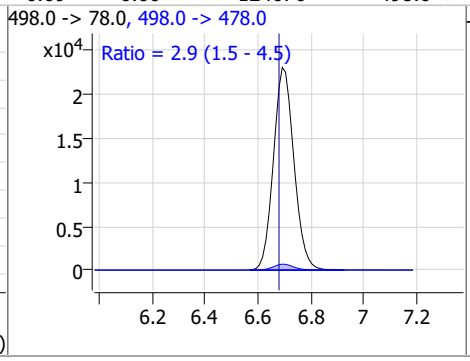


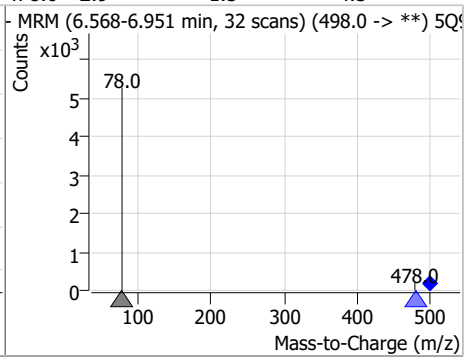




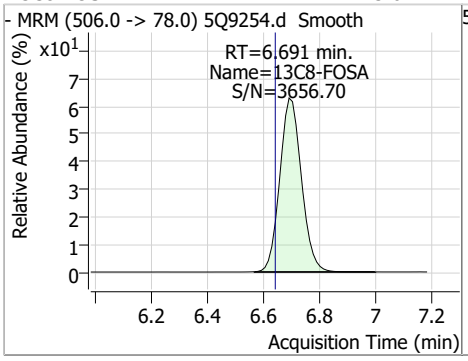
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	20.06	6.69	0.06	124070	498.0 -> 478.0	2.9	1.5	4.5

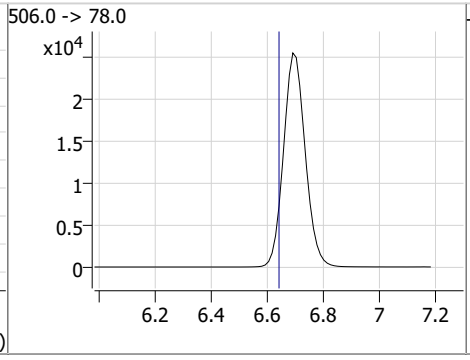


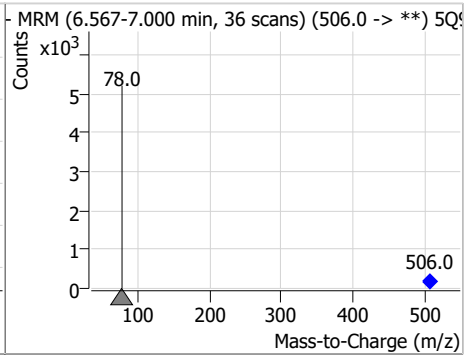




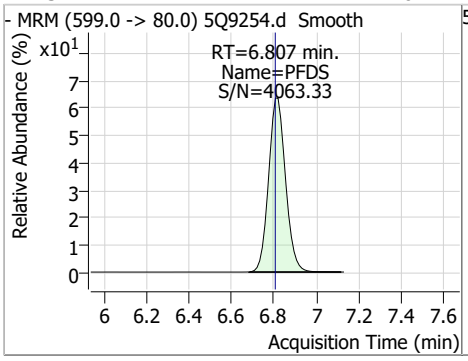
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C8-FOSA	23.02	6.69	0.05	137995				

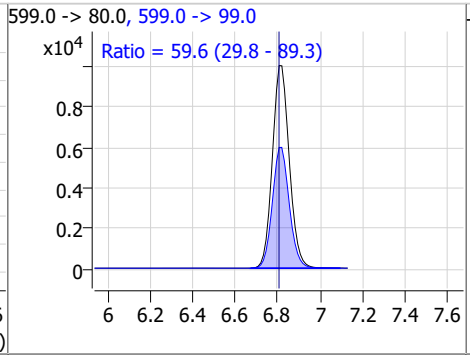


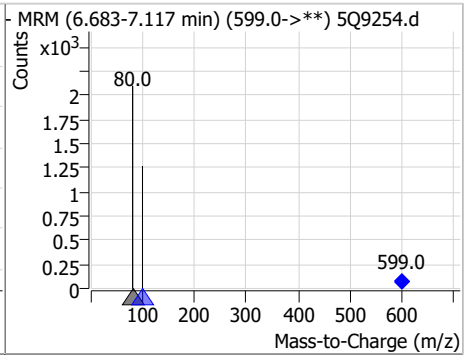




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	22.78	6.81	0.14	55324	599.0 -> 99.0	59.6	29.8	89.3

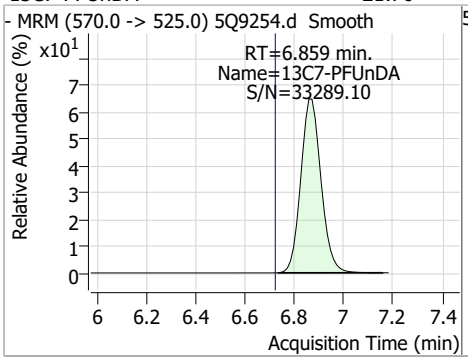


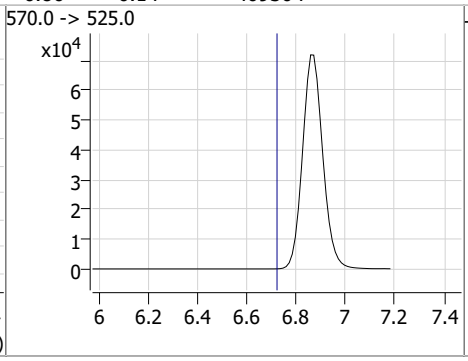


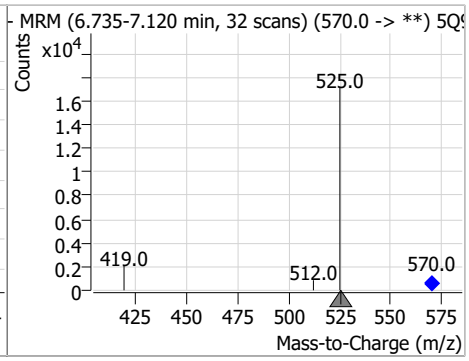


Perfluorinated Compounds by LC/MS/MS

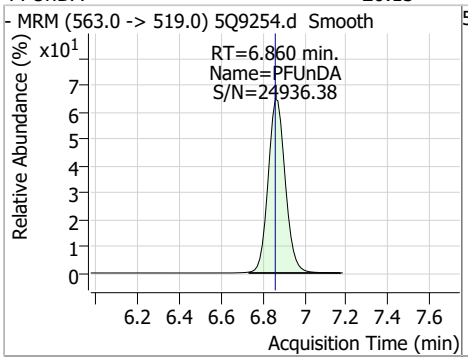
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C7-PFUnDA	21.70	6.86	0.14	409304				

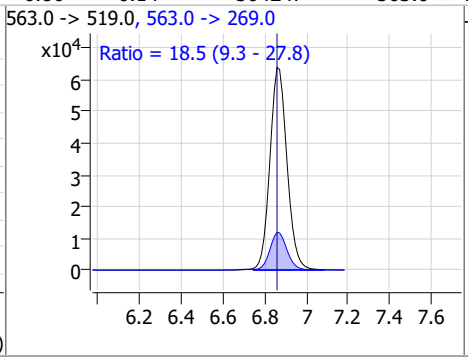


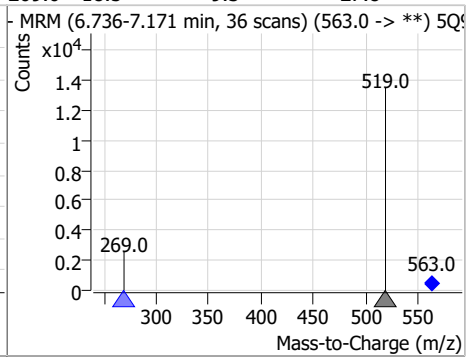




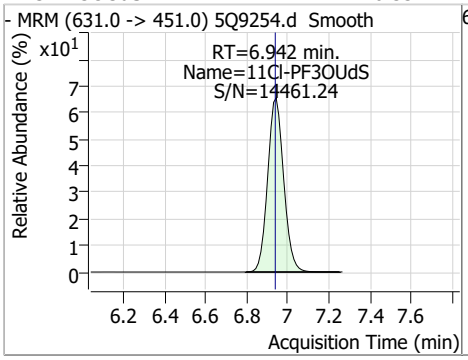
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	20.15	6.86	0.14	364247	563.0 -> 269.0	18.5	9.3	27.8

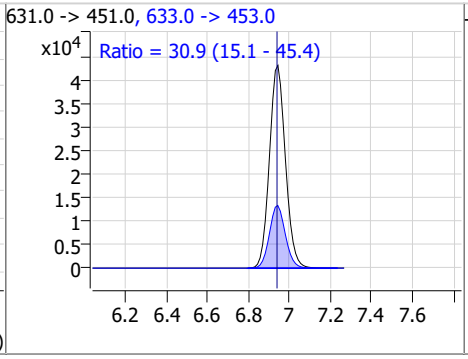


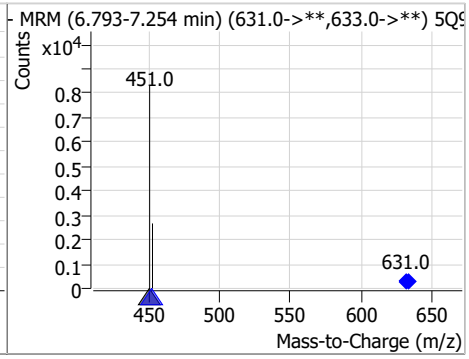




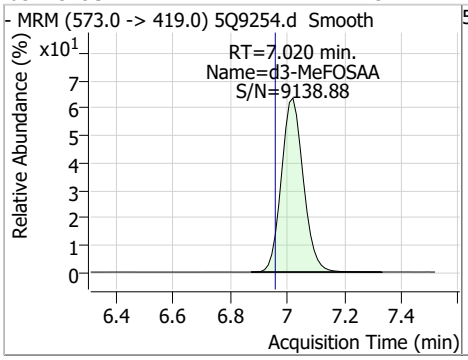
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	20.33	6.94	0.15	233627	633.0 -> 453.0	30.9	15.1	45.4

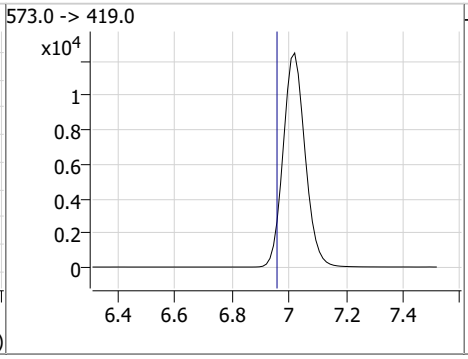


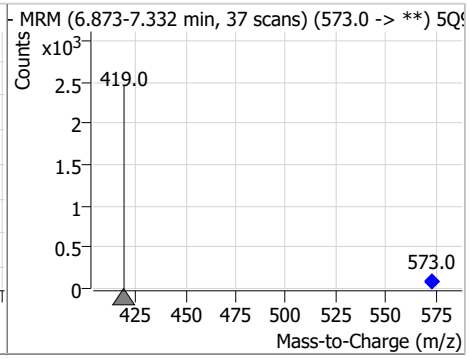




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA	23.71	7.02	0.06	66463				

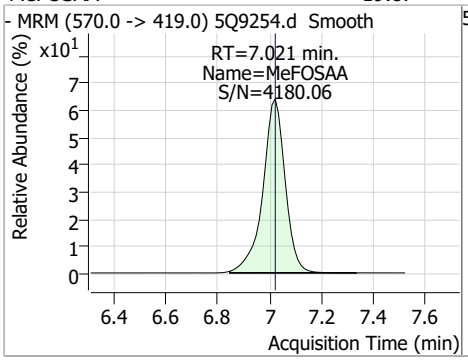


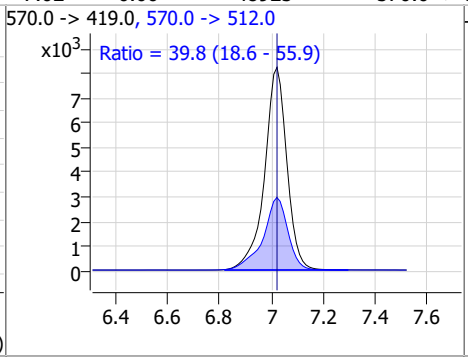


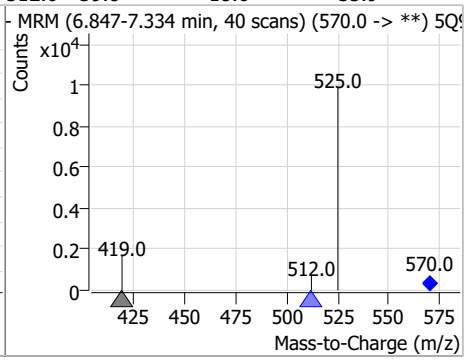


Perfluorinated Compounds by LC/MS/MS

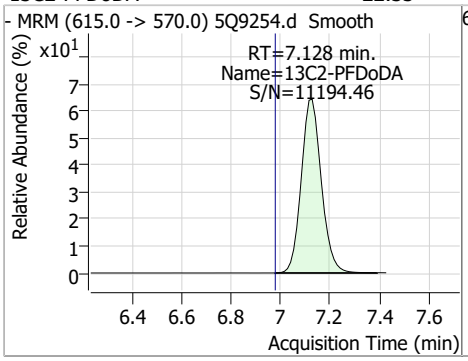
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	19.87	7.02	0.06	48925	570.0 -> 512.0	39.8	18.6	55.9

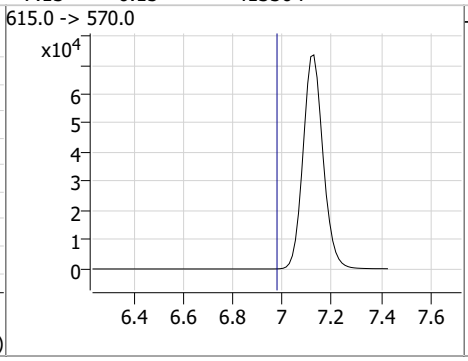


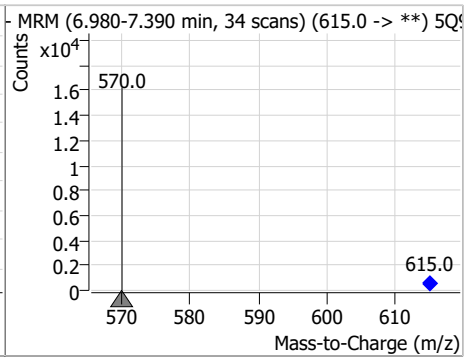




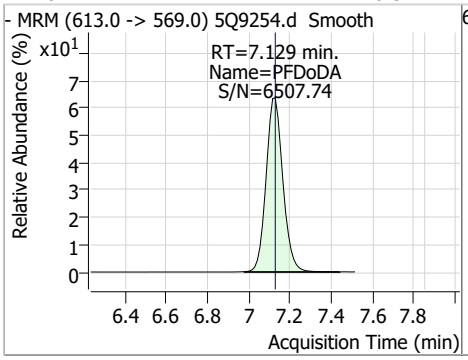
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDoDA	22.33	7.13	0.15	413304				

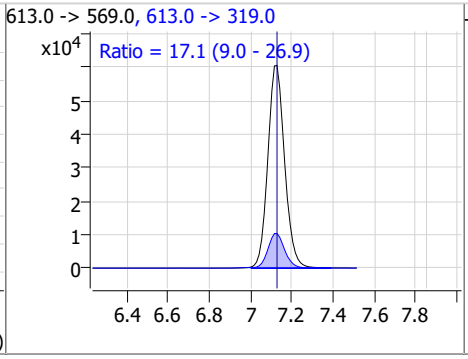


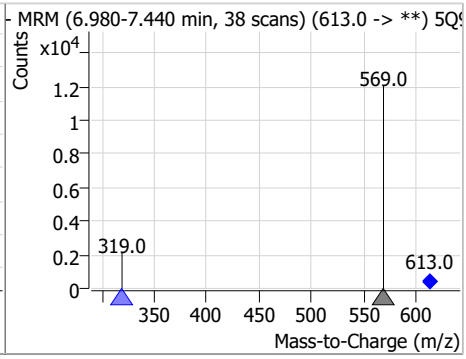




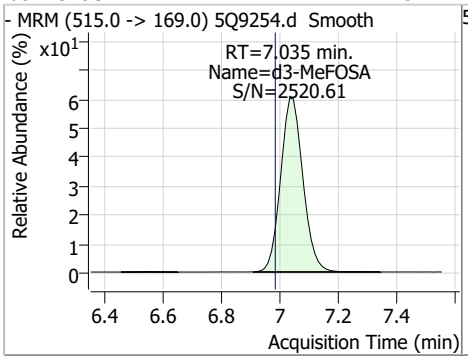
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	20.52	7.13	0.15	342779	613.0 -> 319.0	17.1	9.0	26.9

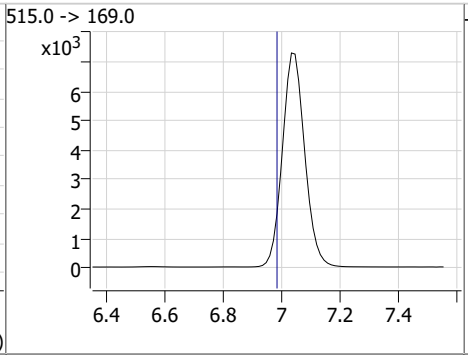


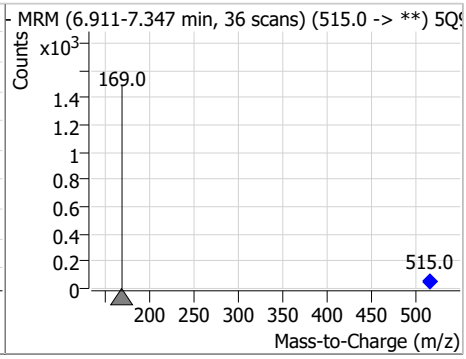




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSA	22.43	7.04	0.05	38671				

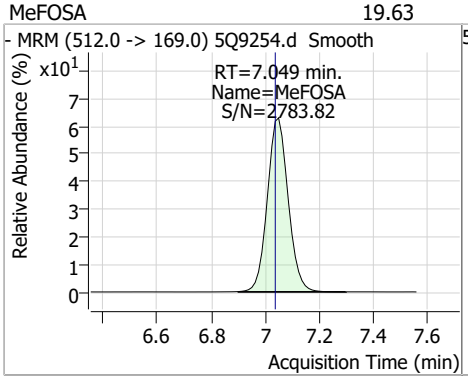


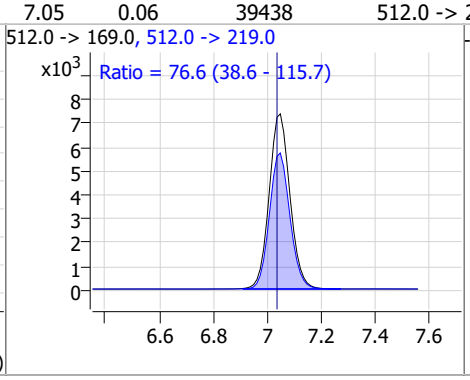


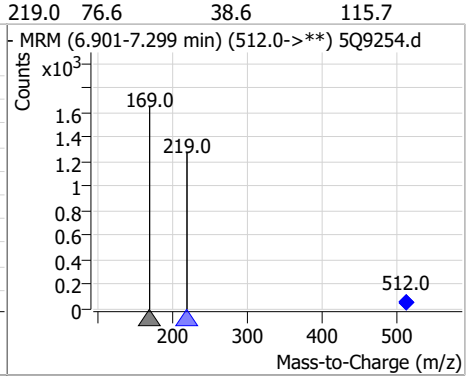


Perfluorinated Compounds by LC/MS/MS

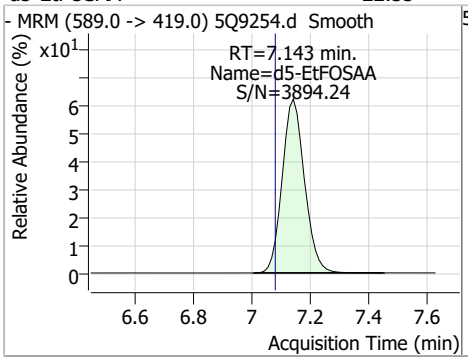
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSA	19.63	7.05	0.06	39438	512.0 -> 219.0	76.6	38.6	115.7

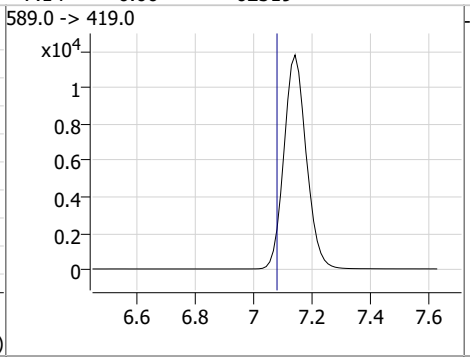


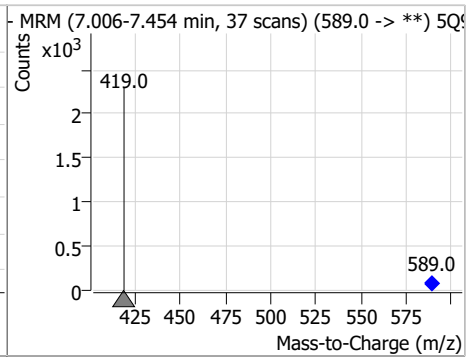




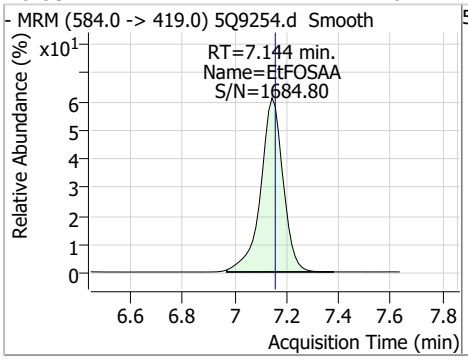
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	22.55	7.14	0.06	62519				

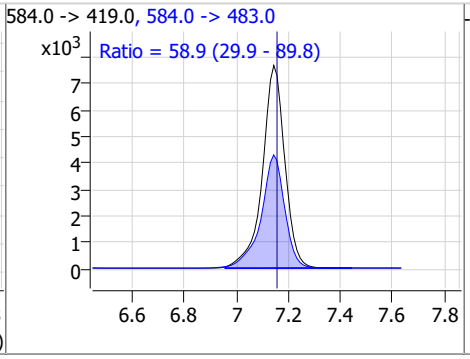


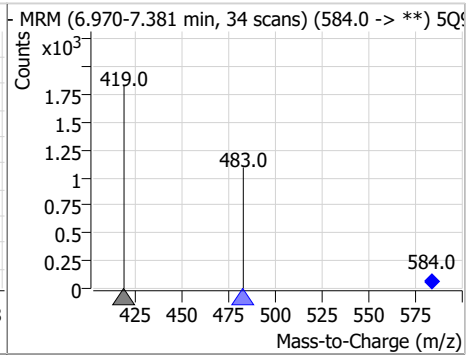




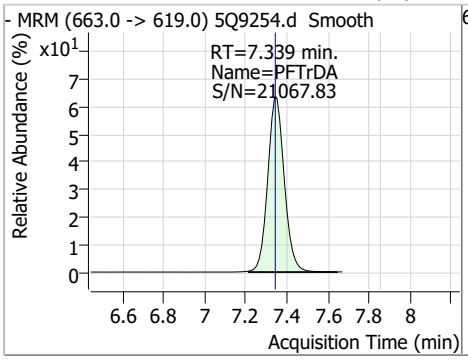
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	21.87	7.14	0.05	45584	584.0 -> 483.0	58.9	29.9	89.8

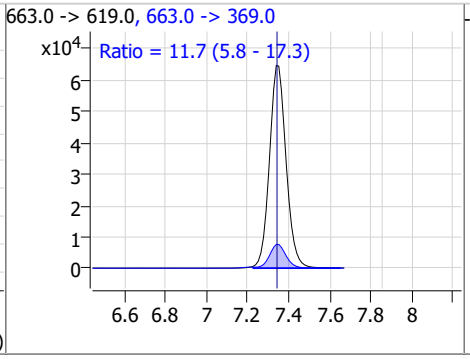


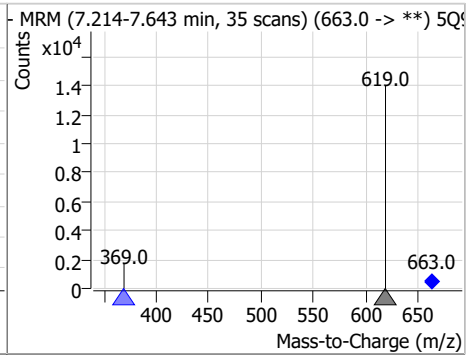




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	20.19	7.34	0.15	364223	663.0 -> 369.0	11.7	5.8	17.3

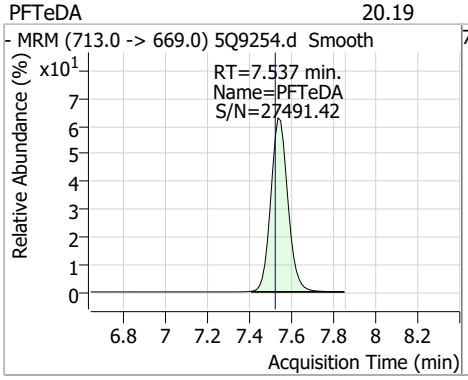


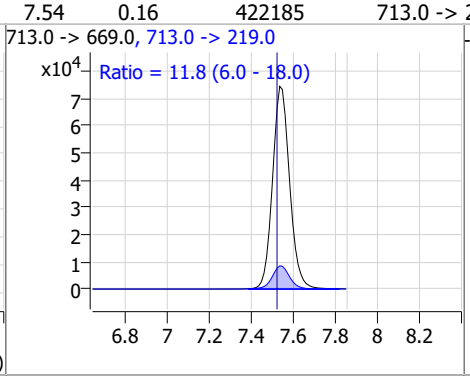


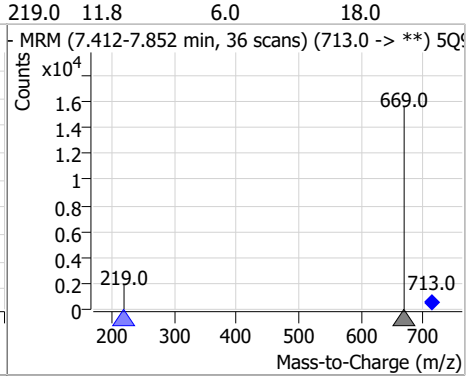


Perfluorinated Compounds by LC/MS/MS

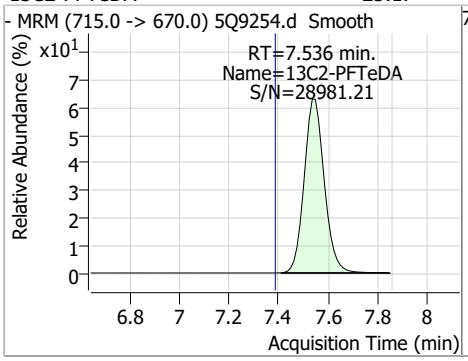
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	20.19	7.54	0.16	422185	713.0 -> 219.0	11.8	6.0	18.0

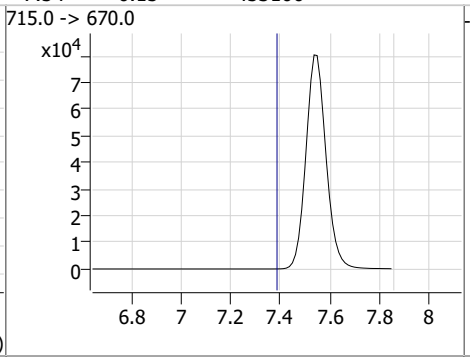


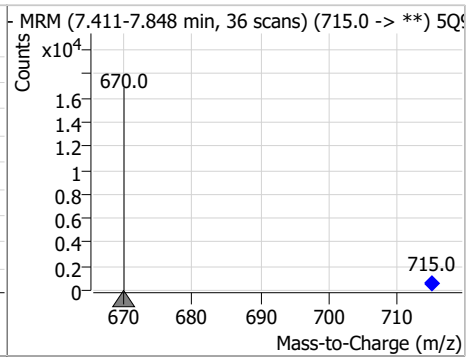




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFTeDA	23.17	7.54	0.15	453100				







Manual Integration Approval Summary

Sample Number: S5Q137-CC137
Lab FileID: 5Q9254.D
Injection Time: 01/03/23 20:55
Method: EPA 537M QSM5.3 B-15
Analyst approved: 01/04/23 11:33 Lindsay Ritner
Supervisor approved: 01/04/23 15:00 Natasha Gumtie

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.24	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.14	Split peak

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LCMS2-2Q ANALYSIS LOG

DATE:	12/28/22
COLUMN TYPE:	Poroshell EC18
AMOUNT INJ:	4 ul
INSTRUMENT:	LCMS5-5Q

METHODS:	537 ID
PROC. METH:	ID_122822_S5Q134
CAL DATE:	12/28/22
ANALYST:	LR
RUN BATCH:	S5Q134

ELUENT A LOT #:	217582 w/0.1% AA 194003
ELUENT B LOT #:	216542 w/0.1% AA 194003
IC/CC STD LOT #:	LCMS2031
ICV STD LOT #:	11040/11325A
ISTD/ID STD LOT #:	LCMS2033-C

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	5Q9030.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q134,250,,,1.0,1,water	nd
2	5Q9031.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q134,250,,,1.0,1,water	nd
3	5Q9032.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q134,250,,,1.0,1,water	nd
4	5Q9033.d	P1-A9	high standard	537_ID.m	Sample		OP94373,S5Q134,250,,,1.0,1,water	pass
5	5Q9034.d	P1-A1	iblk	537_ID.m	Sample		OP94373,S5Q134,250,,,1.0,1,water	nd
6	5Q9035.d	P1-B3	rt	537_ID.m	Sample		OP94373,S5Q134,250,,,1.0,1,water	pass
7	5Q9036.d	P1-A7	cc133-20	537_ID.m	QC	100/500	OP94373,S5Q134,250,,,1.0,1,water	failed high
8	5Q9037.d	P1-A7	cc133-20	537_ID.m	QC	100/500	OP94373,S5Q134,250,,,1.0,1,water	passed marginally; recal
9	5Q9038.d	P1-A1	ic134-0	537_ID.m	Sample		OP94373,S5Q134,250,,,1.0,1,water	tune report
10	5Q9039.d	P1-A2	ic134-0.5	537_ID.m	Calibration	2.5/500	OP94373,S5Q134,250,,,1.0,1,water	pass
11	5Q9040.d	P1-A3	ic134-1	537_ID.m	Calibration	5/500	OP94373,S5Q134,250,,,1.0,1,water	pass
12	5Q9041.d	P1-A4	ic134-2	537_ID.m	Calibration	10/500	OP94373,S5Q134,250,,,1.0,1,water	pass
13	5Q9042.d	P1-A5	ic134-5	537_ID.m	Calibration	25/500	OP94373,S5Q134,250,,,1.0,1,water	pass
14	5Q9043.d	P1-A6	ic134-10	537_ID.m	Calibration	50/500	OP94373,S5Q134,250,,,1.0,1,water	pass
15	5Q9044.d	P1-A7	icc134-20	537_ID.m	Calibration	100/500	OP94373,S5Q134,250,,,1.0,1,water	pass
16	5Q9045.d	P1-A8	ic134-50	537_ID.m	Calibration	250/500	OP94373,S5Q134,250,,,1.0,1,water	pass
17	5Q9046.d	P1-A9	ic134-100	537_ID.m	Calibration	1x	OP94373,S5Q134,250,,,1.0,1,water	pass
18	5Q9047.d	P1-A1	iblk	537_ID.m	Sample		OP94373,S5Q134,250,,,1.0,1,water	nd
19	5Q9048.d	P1-B1	icv134-20	537_ID.m	QC	100/500	OP94373,S5Q134,250,,,1.0,1,water	par30; pass
20	5Q9049.d	P1-B2	icv134-20	537_ID.m	QC	100/500	OP94373,S5Q134,250,,,1.0,1,water	mefosa; pass
21	5Q9050.d	P1-B3	rt	537_ID.m	Sample		OP94373,S5Q134,250,,,1.0,1,water	pass
22	5Q9051.d	P1-A7	cc134-20	537_ID.m	QC	100/500	OP94373,S5Q134,250,,,1.0,1,water	pass
23	5Q9052.d	P1-A3	cc134-1.0ll	537_ID.m	QC	5/500	OP94373,S5Q134,250,,,1.0,1,water	pass
24	5Q9053.d	P2-A1	op94692-bs	537_ID.m	Sample		OP94692,S5Q134,250,,,1.0,1,water	✓
25	5Q9054.d	P2-A2	op94692-mb	537_ID.m	Sample		OP94692,S5Q134,250,,,1.0,1,water	✓
26	5Q9055.d	P2-A3	fc1148-13re	537_ID.m	Sample		OP94692,S5Q134,200,,,1.0,1,water	✓
27	5Q9056.d	P2-A4	fc1148-13re	537_ID.m	Sample	100/500	OP94692,S5Q134,200,,,1.0,5,water	✓
28	5Q9057.d	P2-A5	fc1195-15re	537_ID.m	Sample		OP94692,S5Q134,265,,,1.0,1,water	CF ✓
29	5Q9058.d	P1-A7	cc134-20	537_ID.m	QC	100/500	OP94373,S5Q134,250,,,1.0,1,water	pass
30	5Q9059.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q134,250,,,1.0,1,water	error; did not run
31	5Q9060.d	P2-A6	op94649-bs	537_ID.m	Sample		OP94649,S5Q134,2.00,,,1.0,1,soil	✓
32	5Q9061.d	P2-A7	op94649-mb	537_ID.m	Sample		OP94649,S5Q134,2.00,,,1.0,1,soil	✓
33	5Q9062.d	P2-A8	fc1170-1	537_ID.m	Sample		OP94649,S5Q134,2.04,,,1.0,1,soil	✓
34	5Q9063.d	P2-A9	fc1170-2	537_ID.m	Sample		OP94649,S5Q134,2.01,,,1.0,1,soil	✓
35	5Q9064.d	P2-B1	fc1170-3	537_ID.m	Sample		OP94649,S5Q134,1.98,,,1.0,1,soil	✓

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SGS ORLANDO LCMS2-2Q ANALYSIS LOG

36	5Q9065.d	P2-B2	fc1170-4	537_ID.m	Sample		OP94649,S5Q134,2.03,,,1.0,1,soil	✓
37	5Q9066.d	P2-B3	fc1170-5	537_ID.m	Sample		OP94649,S5Q134,2.00,,,1.0,1,soil	✓
38	5Q9067.d	P2-B4	fc1170-6	537_ID.m	Sample		OP94649,S5Q134,2.01,,,1.0,1,soil	✓
39	5Q9068.d	P2-B5	fc1170-7	537_ID.m	Sample		OP94649,S5Q134,2.04,,,1.0,1,soil	✓
40	5Q9069.d	P1-A7	cc134-20	537_ID.m	QC	100/500	OP94373,S5Q134,250,,,1.0,1,water	pass
41	5Q9070.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q134,250,,,1.0,1,water	nd
42	5Q9071.d	P2-B6	fc1170-8	537_ID.m	Sample		OP94649,S5Q134,2.03,,,1.0,1,soil	✓
43	5Q9072.d	P2-B7	op94649-ms	537_ID.m	Sample		OP94649,S5Q134,2.00,,,1.0,1,soil	✓
44	5Q9073.d	P2-B8	op94649-msd	537_ID.m	Sample		OP94649,S5Q134,1.98,,,1.0,1,soil	✓
45	5Q9074.d	P2-B9	fc1170-9	537_ID.m	Sample		OP94649,S5Q134,2.00,,,1.0,1,soil	✓
46	5Q9075.d	P2-C1	fc1172-13	537_ID.m	Sample		OP94649,S5Q134,2.01,,,1.0,1,soil	✓
47	5Q9076.d	P2-C2	fc1172-16	537_ID.m	Sample		OP94649,S5Q134,1.98,,,1.0,1,soil	✓
48	5Q9077.d	P2-C3	fc1182-1	537_ID.m	Sample		OP94649,S5Q134,2.04,,,1.0,1,soil	✓
49	5Q9078.d	P2-C4	fc1182-2	537_ID.m	Sample		OP94649,S5Q134,2.01,,,1.0,1,soil	✓
50	5Q9079.d	P2-C5	fc1182-3	537_ID.m	Sample		OP94649,S5Q134,1.98,,,1.0,1,soil	✓
51	5Q9080.d	P1-A7	cc134-20	537_ID.m	QC	100/500	OP94373,S5Q134,250,,,1.0,1,water	pass
52	5Q9081.d	P1-A3	cc134-1.0ll	537_ID.m	QC	5/500	OP94373,S5Q134,250,,,1.0,1,water	pass
53	5Q9082.d	P2-C6	fc1302-1	537_ID.m	Sample	50/500	OP94649,S5Q134,2.00,,,1.0,10,soil	rr20/40x, EIS out of range
54	5Q9083.d	P2-C7	fc1302-1a	537_ID.m	Sample	50/500	OP94649,S5Q134,2.03,,,1.0,10,soil	rr20/40x, EIS out of range
55	5Q9084.d	P2-C8	fc1302-1b	537_ID.m	Sample	50/500	OP94649,S5Q134,2.01,,,1.0,10,soil	rr20/40x, EIS out of range
56	5Q9085.d	P1-A7	ecc134-20	537_ID.m	QC	100/500	OP94373,S5Q134,250,,,1.0,1,water	pass
57	5Q9086.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q134,250,,,1.0,1,water	nd

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LCMS2-2Q ANALYSIS LOG

DATE:	12/29/22
COLUMN TYPE:	Poroshell EC18
AMOUNT INJ:	4 ul
INSTRUMENT:	LCMS5-5Q

METHODS:	537 ID
PROC. METH:	ID_122822_S5Q134
CAL DATE:	12/28/22
ANALYST:	LR
RUN BATCH:	S5Q135

ELUENT A LOT #:	217582 w/0.1% AA 194003
ELUENT B LOT #:	216542 w/0.1% AA 194003
IC/CC STD LOT #:	LCMS2031
ICV STD LOT #:	11040/11325A
ISTD/ID STD LOT #:	LCMS2033-C

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	5Q9087.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q135,250,,,1.0,1,water	nd
2	5Q9088.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q135,250,,,1.0,1,water	nd
3	5Q9089.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q135,250,,,1.0,1,water	nd
4	5Q9090.d	P1-A9	high standard	537_ID.m	Sample		OP94373,S5Q135,250,,,1.0,1,water	pass
5	5Q9091.d	P1-A1	iblk	537_ID.m	Sample		OP94373,S5Q135,250,,,1.0,1,water	nd
6	5Q9092.d	P1-B3	rt	537_ID.m	Sample		OP94373,S5Q135,250,,,1.0,1,water	pass
7	5Q9093.d	P1-A7	cc134-20	537_ID.m	QC	100/500	OP94373,S5Q135,250,,,1.0,1,water	pass
8	5Q9094.d	P1-A3	cc134-1.0ll	537_ID.m	QC	5/500	OP94373,S5Q135,250,,,1.0,1,water	pass
9	5Q9095.d	P2-D1	fc1302-1	537_ID.m	Sample	25/500	OP94649,S5Q135,2.00,,,1.0,20,soil	xNot used, EIS failure
10	5Q9096.d	P2-D2	fc1302-1	537_ID.m	Sample	12.5/500	OP94649,S5Q135,2.00,,,1.0,40,soil	rr100x, 6:2↑
11	5Q9097.d	P2-D3	fc1302-1a	537_ID.m	Sample	25/500	OP94649,S5Q135,2.03,,,1.0,20,soil	xNot used, EIS failure
12	5Q9098.d	P2-D4	fc1302-1a	537_ID.m	Sample	12.5/500	OP94649,S5Q135,2.03,,,1.0,40,soil	✓
13	5Q9099.d	P2-D5	fc1302-1b	537_ID.m	Sample	25/500	OP94649,S5Q135,2.01,,,1.0,20,soil	xNot used, EIS failure
14	5Q9100.d	P2-D6	fc1302-1b	537_ID.m	Sample	12.5/500	OP94649,S5Q135,2.01,,,1.0,40,soil	rr100x, 6:2↑
15	5Q9101.d	P1-A7	cc134-20	537_ID.m	QC	100/500	OP94373,S5Q135,250,,,1.0,1,water	pass
16	5Q9102.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q135,250,,,1.0,1,water	nd
17	5Q9103.d	P2-D7	op94702-bs	537_ID.m	Sample		OP94702,S5Q135,125,,,1.0,1,water	✓
18	5Q9104.d	P2-D8	op94702-mb	537_ID.m	Sample		OP94702,S5Q135,125,,,1.0,1,water	✓
19	5Q9105.d	P2-D9	fc1504-30	537_ID.m	Sample		OP94702,S5Q135,25,,,1.0,1,water	rr5x, low EIS
20	5Q9106.d	P2-E1	op94702-ms	537_ID.m	Sample		OP94702,S5Q135,25,,,1.0,1,water	rr5x, low EIS
21	5Q9107.d	P2-E2	op94702-msd	537_ID.m	Sample		OP94702,S5Q135,25,,,1.0,1,water	rr5x, low EIS
22	5Q9108.d	P2-E3	fc1504-41	537_ID.m	Sample		OP94702,S5Q135,125,,,1.0,1,water	rr5x, low EIS
23	5Q9109.d	P2-E4	op94702-ms2	537_ID.m	Sample		OP94702,S5Q135,125,,,1.0,1,water	rr5x, low EIS
24	5Q9110.d	P2-E5	op94702-msd2	537_ID.m	Sample		OP94702,S5Q135,125,,,1.0,1,water	rr5x, low EIS
25	5Q9111.d	P2-E6	fc1504-53	537_ID.m	Sample		OP94702,S5Q135,125,,,1.0,1,water	rr5x, low EIS
26	5Q9112.d	P2-E7	fc1504-54	537_ID.m	Sample		OP94702,S5Q135,125,,,1.0,1,water	rr5x, low EIS
27	5Q9113.d	P1-A7	cc134-20	537_ID.m	QC	100/500	OP94373,S5Q135,250,,,1.0,1,water	pass
28	5Q9114.d	P1-A3	cc134-1.0ll	537_ID.m	QC	5/500	OP94373,S5Q135,250,,,1.0,1,water	pass
29	5Q9115.d	P2-E8	fc1504-55	537_ID.m	Sample		OP94702,S5Q135,125,,,1.0,1,water	rr5x, low EIS
30	5Q9116.d	P2-E9	fc1504-56	537_ID.m	Sample		OP94702,S5Q135,125,,,1.0,1,water	rr5x, TeDA low
31	5Q9117.d	P2-F1	fc1504-57	537_ID.m	Sample		OP94702,S5Q135,125,,,1.0,1,water	rr5x, low EIS
32	5Q9118.d	P2-F2	fc1504-58	537_ID.m	Sample		OP94702,S5Q135,125,,,1.0,1,water	rr5x, low EIS
33	5Q9119.d	P2-F3	fc1504-59	537_ID.m	Sample		OP94702,S5Q135,125,,,1.0,1,water	rr1x, low EIS (WFB)
34	5Q9120.d	P2-F4	fc1504-60	537_ID.m	Sample		OP94702,S5Q135,125,,,1.0,1,water	✓
35	5Q9121.d	P2-F5	fc1504-61	537_ID.m	Sample		OP94702,S5Q135,125,,,1.0,1,water	rr50x, E-value

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SGS ORLANDO LCMS2-2Q ANALYSIS LOG

36	5Q9122.d	P2-F6	fc1504-62	537_ID.m	Sample		OP94702,S5Q135,125,,,1.0,1,water	rr1/5x, PFOS c/o, low eis
37	5Q9123.d	P2-F7	fc982-21r	537_ID.m	Sample		OP94702,S5Q135,120,,,1.0,1,water	rr5x, TeDA low
38	5Q9124.d	P2-F8	fc982-22r	537_ID.m	Sample		OP94702,S5Q135,120,,,1.0,1,water	rr5x, low EIS
39	5Q9125.d	P1-A7	cc134-20	537_ID.m	QC	100/500	OP94373,S5Q135,250,,,1.0,1,water	pass
40	5Q9126.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q135,250,,,1.0,1,water	nd
41	5Q9127.d	P2-F9	fc982-23r	537_ID.m	Sample		OP94702,S5Q135,125,,,1.0,1,water	rr1x, TeDA low (WFB)
42	5Q9128.d	P3-A1	fc982-24r	537_ID.m	Sample		OP94702,S5Q135,120,,,1.0,1,water	rr5x, low EIS
43	5Q9129.d	P3-A2	op94652-bs	537_ID.m	Sample		OP94652,S5Q135,125,,,1.0,1,water	✓
44	5Q9130.d	P3-A3	op94652-mb	537_ID.m	Sample		OP94652,S5Q135,125,,,1.0,1,water	✓
45	5Q9131.d	P3-A4	fc1411-1	537_ID.m	Sample		OP94652,S5Q135,125,,,1.0,1,water	rr5x, low EIS
46	5Q9132.d	P3-A5	op94652-ms	537_ID.m	Sample		OP94652,S5Q135,125,,,1.0,1,water	rr5x, low EIS
47	5Q9133.d	P3-A6	fc1411-2	537_ID.m	Sample		OP94652,S5Q135,125,,,1.0,1,water	rr10x, E-value
48	5Q9134.d	P3-A7	op94652-dup	537_ID.m	Sample		OP94652,S5Q135,125,,,1.0,1,water	rr10x, E-value
49	5Q9135.d	P3-A8	fc1411-3	537_ID.m	Sample		OP94652,S5Q135,125,,,1.0,1,water	rr20x, E-value
50	5Q9136.d	P3-A9	fc1411-4	537_ID.m	Sample		OP94652,S5Q135,125,,,1.0,1,water	rr20x, E-value
51	5Q9137.d	P1-A7	cc134-20	537_ID.m	QC	100/500	OP94373,S5Q135,250,,,1.0,1,water	pass
52	5Q9138.d	P1-A3	cc134-1.0ll	537_ID.m	QC	5/500	OP94373,S5Q135,250,,,1.0,1,water	pass
53	5Q9139.d	P3-B1	fc1411-5	537_ID.m	Sample		OP94652,S5Q135,125,,,1.0,1,water	rr5x, E-value
54	5Q9140.d	P3-B2	fc1411-6	537_ID.m	Sample		OP94652,S5Q135,125,,,1.0,1,water	rr5x, E-value
55	5Q9141.d	P3-B3	fc1411-7	537_ID.m	Sample		OP94652,S5Q135,25,,,1.0,1,water	rr1x, c/o
56	5Q9142.d	P3-B4	fc1411-8	537_ID.m	Sample		OP94652,S5Q135,25,,,1.0,1,water	rr1x, c/o
57	5Q9143.d	P3-B5	fc1411-9	537_ID.m	Sample		OP94652,S5Q135,125,,,1.0,1,water	rr1x, low EIS (WFB)
58	5Q9144.d	P3-B6	fc1411-10	537_ID.m	Sample		OP94652,S5Q135,125,,,1.0,1,water	rr5x, low EIS
59	5Q9145.d	P3-B7	fc1411-11	537_ID.m	Sample		OP94652,S5Q135,25,,,1.0,1,water	rr5x, TeDA low
60	5Q9146.d	P3-B8	fc1411-12	537_ID.m	Sample		OP94652,S5Q135,25,,,1.0,1,water	rr5x, FOSA low
61	5Q9147.d	P3-B9	fc1411-13	537_ID.m	Sample		OP94652,S5Q135,125,,,1.0,1,water	rr5x, low EIS
62	5Q9148.d	P3-C1	fc1411-14	537_ID.m	Sample		OP94652,S5Q135,125,,,1.0,1,water	rr5x, low EIS
63	5Q9149.d	P1-A7	cc134-20	537_ID.m	QC	100/500	OP94373,S5Q135,250,,,1.0,1,water	pass
64	5Q9150.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q135,250,,,1.0,1,water	nd
65	5Q9151.d	P3-C2	fc1411-15	537_ID.m	Sample		OP94652,S5Q135,25,,,1.0,1,water	✓
66	5Q9152.d	P3-C3	fc1411-16	537_ID.m	Sample		OP94652,S5Q135,25,,,1.0,1,water	rr5x, low EIS
67	5Q9153.d	P3-C4	fc1411-17	537_ID.m	Sample		OP94652,S5Q135,25,,,1.0,1,water	✓
68	5Q9154.d	P3-C5	fc1411-18	537_ID.m	Sample		OP94652,S5Q135,125,,,1.0,1,water	rr5x, low EIS
69	5Q9155.d	P3-C6	fc1411-19	537_ID.m	Sample		OP94652,S5Q135,125,,,1.0,1,water	rr5x, TeDA low
70	5Q9156.d	P3-C7	fc1411-20	537_ID.m	Sample		OP94652,S5Q135,125,,,1.0,1,water	rr5x, TeDA low
71	5Q9157.d	P3-C8	fc1415-1	537_ID.m	Sample	100/500	OP94617,S5Q135,270,,,1.0,5,water	redo/rr?x, low EIS
72	5Q9158.d	P3-C9	fc1256-5	537_ID.m	Sample	50/500	OP94515,S5Q135,280,,,1.0,10,water	redo/rr?x, FOSA low
73	5Q9159.d	P1-A7	ecc134-20	537_ID.m	QC	100/500	OP94373,S5Q135,250,,,1.0,1,water	EtFOSAA/MeFOSAA ISTD out
74	5Q9160.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q135,250,,,1.0,1,water	nd

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LCMS2-2Q ANALYSIS LOG

DATE:	01/03/22
COLUMN TYPE:	Poroshell EC18
AMOUNT INJ:	4 ul
INSTRUMENT:	LCMS5-5Q

METHODS:	537 ID
PROC. METH:	ID_010323_S5Q137
CAL DATE:	01/03/23
ANALYST:	LR
RUN BATCH:	S5Q137

ELUENT A LOT #:	217582 w/0.1% AA 194003
ELUENT B LOT #:	216542 w/0.1% AA 194003
IC/CC STD LOT #:	LCMS2031
ICV STD LOT #:	11040/11325A
ISTD/ID STD LOT #:	LCMS2033-E

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	5Q9225.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q137,250,,,1.0,1,water	column change
2	5Q9226.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q137,250,,,1.0,1,water	nd
3	5Q9227.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q137,250,,,1.0,1,water	nd
4	5Q9228.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q137,250,,,1.0,1,water	nd
5	5Q9229.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q137,250,,,1.0,1,water	nd
6	5Q9230.d	P1-A8	cond std	537_ID.m	Sample		OP94373,S5Q137,250,,,1.0,1,water	cc-50
7	5Q9231.d	P1-A1	ic137-0	537_ID.m	Sample		OP94373,S5Q137,250,,,1.0,1,water	tune file
8	5Q9232.d	P1-A2	ic137-0.5	537_ID.m	Calibration	2.5/500	OP94373,S5Q137,250,,,1.0,1,water	pass
9	5Q9233.d	P1-A3	ic137-1	537_ID.m	Calibration	5/500	OP94373,S5Q137,250,,,1.0,1,water	pass
10	5Q9234.d	P1-A4	ic137-2	537_ID.m	Calibration	10/500	OP94373,S5Q137,250,,,1.0,1,water	pass
11	5Q9235.d	P1-A5	ic137-5	537_ID.m	Calibration	25/500	OP94373,S5Q137,250,,,1.0,1,water	pass
12	5Q9236.d	P1-A6	ic137-10	537_ID.m	Calibration	50/500	OP94373,S5Q137,250,,,1.0,1,water	pass
13	5Q9237.d	P1-A7	icc137-20	537_ID.m	Calibration	100/500	OP94373,S5Q137,250,,,1.0,1,water	pass
14	5Q9238.d	P1-A8	ic137-50	537_ID.m	Calibration	250/500	OP94373,S5Q137,250,,,1.0,1,water	pass
15	5Q9239.d	P1-A9	ic137-100	537_ID.m	Calibration	1x	OP94373,S5Q137,250,,,1.0,1,water	pass; dropped 11cl
16	5Q9240.d	P1-A1	iblk	537_ID.m	Sample		OP94373,S5Q137,250,,,1.0,1,water	nd
17	5Q9241.d	P1-B1	icv137-20	537_ID.m	QC	10/500	OP94373,S5Q137,250,,,1.0,1,water	par30; pass
18	5Q9242.d	P1-B2	icv137-20	537_ID.m	QC	10/500	OP94373,S5Q137,250,,,1.0,1,water	mefosa; pass
19	5Q9243.d	P1-B3	rt	537_ID.m	Sample		OP94373,S5Q137,250,,,1.0,1,water	pass
20	5Q9244.d	P1-A7	cc137-20	537_ID.m	QC	100/500	OP94373,S5Q137,250,,,1.0,1,water	pass
21	5Q9245.d	P1-A3	cc137-1.0ll	537_ID.m	QC	5/500	OP94373,S5Q137,250,,,1.0,1,water	pass
22	5Q9246.d	P3-D1	fc1302-1	537_ID.m	Sample	5/500	OP94649,S5Q137,2.00,,,1.0,100,soil	✓
23	5Q9247.d	P3-D2	fc1302-1b	537_ID.m	Sample	5/500	OP94649,S5Q137,2.01,,,1.0,100,soil	✓
24	5Q9248.d	P3-E6	fc1504-61	537_ID.m	Sample	10/500	OP94702,S5Q137,125,,,1.0,50,water	✓
25	5Q9249.d	P3-E8	fc982-21r	537_ID.m	Sample	100/500	OP94702,S5Q137,120,,,1.0,5,water	✓
26	5Q9250.d	P3-F6	fc1411-3	537_ID.m	Sample	25/500	OP94652,S5Q137,125,,,1.0,20,water	redo, low eis
27	5Q9251.d	P1-C1	fc1411-3	537_ID.m	Sample	10/500	OP94652,S5Q137,125,,,1.0,50,water	redo, low eis
28	5Q9252.d	P3-F7	fc1411-4	537_ID.m	Sample	25/500	OP94652,S5Q137,125,,,1.0,20,water	redo, low eis
29	5Q9253.d	P1-C2	fc1411-4	537_ID.m	Sample	10/500	OP94652,S5Q137,125,,,1.0,50,water	redo, low eis
30	5Q9254.d	P1-A7	cc137-20	537_ID.m	QC	100/500	OP94373,S5Q137,250,,,1.0,1,water	pass
31	5Q9255.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q137,250,,,1.0,1,water	nd
32	5Q9256.d	P1-C3	op94793-bs	537_ID.m	Sample		OP94793,S5Q137,250,,,1.0,1,water	✓
33	5Q9257.d	P1-C4	op94793-mb	537_ID.m	Sample		OP94793,S5Q137,250,,,1.0,1,water	PFBA hit (0.0042ug/L) ✓
34	5Q9258.d	P1-C5	fc1258-5	537_ID.m	Sample		OP94793,S5Q137,260,,,1.0,1,water	OOH; CF ✓
35	5Q9259.d	P1-C6	fc1258-5	537_ID.m	Sample	100/500	OP94793,S5Q137,260,,,1.0,5,water	OOH; CF ✓

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SGS ORLANDO LCMS2-2Q ANALYSIS LOG

36	5Q9260.d	P1-C7	op94791-bs	537_ID.m	Sample		OP94791,S5Q137,250,,,1.0,1,water	✓
37	5Q9261.d	P1-C8	op94791-mb	537_ID.m	Sample		OP94791,S5Q137,250,,,1.0,1,water	PFBA hit (0.0027ug/L) ✓
38	5Q9262.d	P1-C9	fc1056-3re	537_ID.m	Sample		OP94791,S5Q137,260,,,1.0,1,water	OOH; CF ✓
39	5Q9263.d	P1-D1	fc1056-3re	537_ID.m	Sample	100/500	OP94791,S5Q137,260,,,1.0,5,water	OOH; CF ✓
40	5Q9264.d	P1-D2	fc1056-4re	537_ID.m	Sample		OP94791,S5Q137,270,,,1.0,1,water	OOH; CF ✓
41	5Q9265.d	P1-D3	fc1056-4re	537_ID.m	Sample	100/500	OP94791,S5Q137,270,,,1.0,5,water	OOH; CF ✓
42	5Q9266.d	P1-A7	cc137-20	537_ID.m	QC	100/500	OP94373,S5Q137,250,,,1.0,1,water	pass
43	5Q9267.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q137,250,,,1.0,1,water	nd
44	5Q9268.d	P1-D4	fc1056-10re	537_ID.m	Sample		OP94791,S5Q137,270,,,1.0,1,water	OOH; CF ✓
45	5Q9269.d	P1-D5	fc1056-10re	537_ID.m	Sample	100/500	OP94791,S5Q137,270,,,1.0,5,water	OOH; CF ✓
46	5Q9270.d	P1-D6	fc1352-2re	537_ID.m	Sample		OP94791,S5Q137,125,,,1.0,1,water	E-combine ✓
47	5Q9271.d	P1-D7	fc1352-2re	537_ID.m	Sample	100/500	OP94791,S5Q137,125,,,1.0,5,water	E-combine ✓
48	5Q9272.d	P1-D8	fc1352-3re	537_ID.m	Sample		OP94791,S5Q137,125,,,1.0,1,water	CF ✓
49	5Q9273.d	P1-D9	fc1352-3re	537_ID.m	Sample	100/500	OP94791,S5Q137,125,,,1.0,5,water	CF ✓
50	5Q9274.d	P1-A7	ecc137-20	537_ID.m	QC	100/500	OP94373,S5Q137,250,,,1.0,1,water	pass
51	5Q9275.d	P1-A1	ccb	537_ID.m	Sample		OP94373,S5Q137,250,,,1.0,1,water	nd

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EXP/PFC SAMPLE PREP REPORT

Prep Method: 8330A, 8332, 8330B, 537MOD (PFC) or Other_____ (circle)

Date/Time: 12/21/22 09:00 Started {mm/dd/yy 24:00}

Date/Time: 12/22/22 12:00 Finished {mm/dd/yy 24:00}

Therm. ID: 170(9028 Corr. Factor (±°C): 0

Bath Temp. (High) °C: 20 / 20 {obs/corr

Ultrasonic Bath ID (8330A or 8332): 4B1

Shaker Table ID (8330B): _____

Batch#: OP94649 Ext. By: GT Conc. By: EA Vialed By: _____ Balance ID: TOLEDO

Sample ID		Bottle Number	Amount Extracted (g)	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 94649	MB	/	2.00	20ul		1.0ml	
OP 94649	BS	/	2.00	↓	50ul	↓	
FC1170-1		1	2.04	↓	↓	↓	
-2		1	2.01	↓	↓	↓	
-3		1	1.98	↓	↓	↓	
-4		1	2.03	↓	↓	↓	
-5		1	2.00	↓	↓	↓	
-6		1	2.01	↓	↓	↓	
-7		1	2.04	↓	↓	↓	
-8		1	2.03	↓	↓	↓	
-9		1	2.00	↓	↓	↓	
FC1172-13		1	2.01	↓	↓	↓	
-16		1	1.98	↓	↓	↓	
FC1182-1		1	2.04	↓	↓	↓	
-2		1	2.01	↓	↓	↓	
-3		1	1.98	↓	↓	↓	
FC1302-1		1	2.00	↓	↓	↓	
-1A		1	2.03	↓	↓	↓	
-1B		1	2.01	↓	↓	↓	
FC1170-8	MS	1	2.00	20ul	50ul	1.0ml	
-8	MSD	1	1.98	↓	↓	↓	
	DUP						
	TRP						

Comments:

Surr. ID: cems200338 Conc: 1.0ppm Exp. Date: 6/20/23 Inj. By: GT Ver. By GT

Spk.1 ID: cems200328 Conc: 400ppb Exp. Date: 6/19/23 Inj. By: GT 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): XCel Vap 1

Observed Temp °C: 55 Corr. Temp °C: _____

N-Evap Temp (Therm ID): _____

Observed Temp °C: _____ Corr. Temp °C: _____

Acetonitrile Lot #_____ Methanol Lot # 221044 Water Lot#_____

Syringe Filter Lot#_____ Reagent #_____ Reagent #_____

Solvent#_____ Carbon Lot#_____ Other_____

Relinquished By: EA Date: 12/22/22

Accepted By: NH Date: 12/22/22

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