

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

e-Hardcopy 2.0
Automated Report

Technical Report for

Town of Coupeville

PFAS Analysis

SGS Job Number: FC6520

Sampling Date: 05/30/23

Report to:

Town of Coupeville
434 Wannamaker Road
Coupeville, WA 98239
utilities1@townofcoupeville.org

ATTN: Joseph Grogan

Total number of pages in report: 403



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.

A handwritten signature in black ink, appearing to read "Norm Farmer".

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

This report shall not be reproduced, except in its entirety, without the written approval of SGS.
Test results relate only to samples analyzed.

Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	5
Section 3: Summary of Hits	6
Section 4: Sample Results	9
4.1: FC6520-1: FCWTP-INF 001(BOOSTER TAP)	10
4.2: FC6520-2: FCWTP-INF 001 FB	11
4.3: FC6520-3: FCWTP-INF 100(SA101)	12
4.4: FC6520-4: FCWTP-MP 105(SA105)	13
4.5: FC6520-5: FCWTP-MP 105 FB	14
4.6: FC6520-6: FCWTP-50%MEDIA 50103(SA103)	15
4.7: FC6520-7: FCWTP-50%MEDIA 50107(SA107)	16
4.8: FC6520-8: FCWTP-EF 109(SA109)	17
4.9: FC6520-9: FCWTP-INF 200(SA201)	18
4.10: FC6520-10: FCWTP-MP 205(SA205)	19
4.11: FC6520-11: FCWTP-MP 205 FB	20
4.12: FC6520-12: FCWTP-MP (SA105)	21
4.13: FC6520-13: FCWTP-EF 209(SA209)	22
4.14: FC6520-14: FCWTP-50%MEDIA 50203(SA203)	23
4.15: FC6520-15: FCWTP-50%MEDIA 50207(SA207)	24
4.16: FC6520-16: FCWTP-EF 002(EXISTING PLANT EFFLUENT/POST PUMPS)	25
4.17: FC6520-17: FCWTP-EF 002 FB (EXISTING PLANT EFFLUENT)	26
Section 5: Misc. Forms	27
5.1: Chain of Custody	28
Section 6: MS Semi-volatiles - QC Data Summaries	31
6.1: Method Blank Summary	32
6.2: Blank Spike Summary	33
6.3: Matrix Spike/Matrix Spike Duplicate Summary	34
6.4: Internal Standard Area Summaries	35
6.5: Surrogate Recovery Summaries	40
6.6: Initial and Continuing Calibration Summaries	41
6.7: Run Sequence Reports	54
Section 7: MS Semi-volatiles - Raw Data	57
7.1: Samples	58
7.2: Method Blanks	151
7.3: Blank Spikes	156
7.4: Matrix Spike/Matrix Spike Duplicates	167
7.5: Retention Time Markers	189
7.6: Initial and Continuing Calibrations	201
7.7: Instrument Run Logs	400
7.8: Sample Prep Logs	403



Sample Summary

Town of Coupeville

Job No: FC6520

PFAS Analysis

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

FC6520-1	05/30/23	09:40 JJ	06/01/23	DW	Drinking Water	FCWTP-INF 001(BOOSTER TAP)
FC6520-2	05/30/23	09:40 JJ	06/01/23	DW	Drinking Water FB	FCWTP-INF 001 FB
FC6520-3	05/30/23	09:50 JJ	06/01/23	DW	Drinking Water	FCWTP-INF 100(SA101)
FC6520-4	05/30/23	10:00 JJ	06/01/23	DW	Drinking Water	FCWTP-MP 105(SA105)
FC6520-5	05/30/23	09:55 JJ	06/01/23	DW	Drinking Water FB	FCWTP-MP 105 FB
FC6520-6	05/30/23	10:05 JJ	06/01/23	DW	Drinking Water	FCWTP-50%MEDIA 50103(SA103)
FC6520-7	05/30/23	10:10 JJ	06/01/23	DW	Drinking Water	FCWTP-50%MEDIA 50107(SA107)
FC6520-8	05/30/23	10:15 JJ	06/01/23	DW	Drinking Water	FCWTP-EF 109(SA109)
FC6520-9	05/30/23	10:20 JJ	06/01/23	DW	Drinking Water	FCWTP-INF 200(SA201)
FC6520-10	05/30/23	10:25 JJ	06/01/23	DW	Drinking Water	FCWTP-MP 205(SA205)
FC6520-11	05/30/23	10:25 JJ	06/01/23	DW	Drinking Water FB	FCWTP-MP 205 FB
FC6520-12	05/30/23	10:00 JJ	06/01/23	DW	Drinking Water	FCWTP-MP (SA105)



Sample Summary (continued)

Town of Coupeville

Job No: FC6520

PFAS Analysis

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
FC6520-13	05/30/23	10:35 JJ	06/01/23	DW	Drinking Water	FCWTP-EF 209(SA209)
FC6520-14	05/30/23	10:40 JJ	06/01/23	DW	Drinking Water	FCWTP-50%MEDIA 50203(SA203)
FC6520-15	05/30/23	10:50 JJ	06/01/23	DW	Drinking Water	FCWTP-50%MEDIA 50207(SA207)
FC6520-16	05/30/23	10:55 JJ	06/01/23	DW	Drinking Water	FCWTP-EF 002(EXISTING PLANT EFFLUENT/POST PUMPS)
FC6520-16D	05/30/23	10:55 JJ	06/01/23	DW	Drinking Water Dup.	FCWTP-EF 002(EXISTING PLANT EFFLUENT/POST PUMPS)
FC6520-16S	05/30/23	10:55 JJ	06/01/23	DW	Drinking Water MS	FCWTP-EF 002(EXISTING PLANT EFFLUENT/POST PUMPS)
FC6520-17	05/30/23	10:55 JJ	06/01/23	DW	Drinking Water FB	FCWTP-EF 002 FB (EXISTING PLANT EFFLUENT)

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Town of Coupeville

Job No: FC6520

Site: PFAS Analysis

Report Date: 6/21/2023 4:19:30 PM

On 06/01/2023, 13 Sample(s), 0 Trip Blank(s) and 4 Field Blank(s) were received at SGS North America Inc - Orlando, at a maximum corrected temperature of 2.6 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC6520 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 537.1 REV 1.0

Matrix: DW

Batch ID: OP97324

Sample(s) FC6520-16MS, FC6520-16MSD were used as the QC samples indicated.

Matrix Spike Duplicate Recovery(s) for HFPO-DA (GenX), Perfluorobutanesulfonic acid, Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for EtFOSAA are outside control limits for sample OP97324-MSD. Probable cause is due to sample non-homogeneity.

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: FC6520
 Account: Town of Coupeville
 Project: PFAS Analysis
 Collected: 05/30/23



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

FC6520-1 FCWTP-INF 001(BOOSTER TAP)

Perfluorohexanoic acid	0.0161	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluoroheptanoic acid	0.0053	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid	0.0429	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorobutanesulfonic acid	0.0087	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorohexanesulfonic acid	0.0357	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorooctanesulfonic acid	0.0018	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0

FC6520-2 FCWTP-INF 001 FB

No hits reported in this sample.

FC6520-3 FCWTP-INF 100(SA101)

Perfluorohexanoic acid	0.0165	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluoroheptanoic acid	0.0052	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid	0.0434	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorobutanesulfonic acid	0.0092	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorohexanesulfonic acid	0.0361	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorooctanesulfonic acid	0.0015 J	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0

FC6520-4 FCWTP-MP 105(SA105)

No hits reported in this sample.

FC6520-5 FCWTP-MP 105 FB

No hits reported in this sample.

FC6520-6 FCWTP-50%MEDIA 50103(SA103)

No hits reported in this sample.

FC6520-7 FCWTP-50%MEDIA 50107(SA107)

Perfluorohexanoic acid	0.0212	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluoroheptanoic acid	0.0055	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid	0.0276	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorobutanesulfonic acid	0.0107	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorohexanesulfonic acid	0.0169	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0

FC6520-8 FCWTP-EF 109(SA109)

Perfluorohexanoic acid	0.0247	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
------------------------	--------	--------	---------	------	-------------------

Summary of Hits

Job Number: FC6520
Account: Town of Coupeville
Project: PFAS Analysis
Collected: 05/30/23



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

Perfluoroheptanoic acid		0.0053	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid		0.0196	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorobutanesulfonic acid		0.0116	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorohexanesulfonic acid		0.0103	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0

FC6520-9 FCWTP-INF 200(SA201)

Perfluorohexanoic acid		0.0161	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluoroheptanoic acid		0.0051	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid		0.0422	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorobutanesulfonic acid		0.0090	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorohexanesulfonic acid		0.0348	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorooctanesulfonic acid		0.0015 J	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0

FC6520-10 FCWTP-MP 205(SA205)

No hits reported in this sample.

FC6520-11 FCWTP-MP 205 FB

No hits reported in this sample.

FC6520-12 FCWTP-MP (SA105)

No hits reported in this sample.

FC6520-13 FCWTP-EF 209(SA209)

Perfluorohexanoic acid		0.0220	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluoroheptanoic acid		0.0055	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid		0.0221	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorobutanesulfonic acid		0.0117	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorohexanesulfonic acid		0.0134	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0

FC6520-14 FCWTP-50%MEDIA 50203(SA203)

No hits reported in this sample.

FC6520-15 FCWTP-50%MEDIA 50207(SA207)

Perfluorohexanoic acid		0.0214	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluoroheptanoic acid		0.0058	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid		0.0330	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorobutanesulfonic acid		0.0115	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0
Perfluorohexanesulfonic acid		0.0212	0.0018	0.00071	ug/l	EPA 537.1 REV 1.0

Summary of Hits

Job Number: FC6520
Account: Town of Coupeville
Project: PFAS Analysis
Collected: 05/30/23



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

FC6520-16 FCWTP-EF 002(EXISTING PLANT EFFLUENT/POST PUMPS)

No hits reported in this sample.

FC6520-17 FCWTP-EF 002 FB (EXISTING PLANT EFFLUENT)

No hits reported in this sample.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	FCWTP-INF 001(BOOSTER TAP)	Date Sampled:	05/30/23
Lab Sample ID:	FC6520-1	Date Received:	06/01/23
Matrix:	DW - Drinking Water	Percent Solids:	n/a
Method:	EPA 537.1 REV 1.0 EPA 537		
Project:	PFAS Analysis		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q103538.D	1	06/19/23 21:04	AL	06/13/23 13:00	OP97324	SQ2202
Run #2							

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

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
307-24-4	Perfluorohexanoic acid	0.0161		0.0018	0.00071	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0053		0.0018	0.00071	ug/l	
335-67-1	Perfluorooctanoic acid	0.0429		0.0018	0.00071	ug/l	
375-95-1	Perfluorononanoic acid	ND		0.0018	0.00071	ug/l	
335-76-2	Perfluorodecanoic acid	ND		0.0018	0.00071	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND		0.0018	0.00071	ug/l	
307-55-1	Perfluorododecanoic acid	ND		0.0018	0.00071	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND		0.0018	0.00071	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.0087		0.0018	0.00071	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0357		0.0018	0.00071	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0018		0.0018	0.00071	ug/l	

PERFLUOROOCATANESULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	ND		0.0036	0.00089	ug/l	
2991-50-6	EtFOSAA	ND		0.0036	0.00089	ug/l	

NEXT GENERATION PFAS ANALYTES

13252-13-6	HFPO-DA (GenX)	ND		0.0071	0.0027	ug/l	
919005-14-4	ADONA	ND		0.0071	0.0018	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		0.0071	0.0018	ug/l	
763051-92-9	11Cl-PF3OUds (F-53B Minor)	ND		0.0071	0.0018	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	107%		70-130%
	13C2-PFDA	91%		70-130%
	d5-EtFOSAA	71%		70-130%
	13C3-HFPO-DA	110%		70-130%

ND = Not detected MDL = Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	FCWTP-INF 001 FB	Date Sampled:	05/30/23
Lab Sample ID:	FC6520-2	Date Received:	06/01/23
Matrix:	DW - Drinking Water FB	Percent Solids:	n/a
Method:	EPA 537.1 REV 1.0 EPA 537		
Project:	PFAS Analysis		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q103476.D	1	06/18/23 20:12	AL	06/13/23 13:00	OP97324	SQ2201
Run #2							

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

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
307-24-4	Perfluorohexanoic acid	ND	0.0018	0.00071	ug/l		
375-85-9	Perfluoroheptanoic acid	ND	0.0018	0.00071	ug/l		
335-67-1	Perfluorooctanoic acid	ND	0.0018	0.00071	ug/l		
375-95-1	Perfluorononanoic acid	ND	0.0018	0.00071	ug/l		
335-76-2	Perfluorodecanoic acid	ND	0.0018	0.00071	ug/l		
2058-94-8	Perfluoroundecanoic acid	ND	0.0018	0.00071	ug/l		
307-55-1	Perfluorododecanoic acid	ND	0.0018	0.00071	ug/l		
72629-94-8	Perfluorotridecanoic acid	ND	0.0018	0.00071	ug/l		
376-06-7	Perfluorotetradecanoic acid	ND	0.0018	0.00071	ug/l		

PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	ND	0.0018	0.00071	ug/l		
355-46-4	Perfluorohexanesulfonic acid	ND	0.0018	0.00071	ug/l		
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0018	0.00071	ug/l		

PERFLUOROOCETANESULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	ND	0.0036	0.00089	ug/l		
2991-50-6	EtFOSAA	ND	0.0036	0.00089	ug/l		

NEXT GENERATION PFAS ANALYTES

13252-13-6	HFPO-DA (GenX)	ND	0.0071	0.0027	ug/l		
919005-14-4	ADONA	ND	0.0071	0.0018	ug/l		
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0071	0.0018	ug/l		
763051-92-9	11Cl-PF3OUds (F-53B Minor)	ND	0.0071	0.0018	ug/l		

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	102%		70-130%
	13C2-PFDA	102%		70-130%
	d5-EtFOSAA	91%		70-130%
	13C3-HFPO-DA	105%		70-130%

ND = Not detected MDL = Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	FCWTP-INF 100(SA101)	Date Sampled:	05/30/23
Lab Sample ID:	FC6520-3	Date Received:	06/01/23
Matrix:	DW - Drinking Water	Percent Solids:	n/a
Method:	EPA 537.1 REV 1.0 EPA 537		
Project:	PFAS Analysis		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q103477.D	1	06/18/23 20:28	AL	06/13/23 13:00	OP97324	SQ2201
Run #2							

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

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
307-24-4	Perfluorohexanoic acid	0.0165		0.0018	0.00071	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0052		0.0018	0.00071	ug/l	
335-67-1	Perfluorooctanoic acid	0.0434		0.0018	0.00071	ug/l	
375-95-1	Perfluorononanoic acid	ND		0.0018	0.00071	ug/l	
335-76-2	Perfluorodecanoic acid	ND		0.0018	0.00071	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND		0.0018	0.00071	ug/l	
307-55-1	Perfluorododecanoic acid	ND		0.0018	0.00071	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND		0.0018	0.00071	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.0092		0.0018	0.00071	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0361		0.0018	0.00071	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0015		0.0018	0.00071	ug/l	J

PERFLUOROOCATANESULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	ND		0.0036	0.00089	ug/l	
2991-50-6	EtFOSAA	ND		0.0036	0.00089	ug/l	

NEXT GENERATION PFAS ANALYTES

13252-13-6	HFPO-DA (GenX)	ND		0.0071	0.0027	ug/l	
919005-14-4	ADONA	ND		0.0071	0.0018	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		0.0071	0.0018	ug/l	
763051-92-9	11Cl-PF3OUds (F-53B Minor)	ND		0.0071	0.0018	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	105%		70-130%
	13C2-PFDA	94%		70-130%
	d5-EtFOSAA	75%		70-130%
	13C3-HFPO-DA	110%		70-130%

ND = Not detected MDL = Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	FCWTP-MP 105(SA105)	Date Sampled:	05/30/23
Lab Sample ID:	FC6520-4	Date Received:	06/01/23
Matrix:	DW - Drinking Water	Percent Solids:	n/a
Method:	EPA 537.1 REV 1.0 EPA 537		
Project:	PFAS Analysis		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q103478.D	1	06/18/23 20:44	AL	06/13/23 13:00	OP97324	SQ2201
Run #2							

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

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
307-24-4	Perfluorohexanoic acid	ND		0.0018	0.00071	ug/l	
375-85-9	Perfluoroheptanoic acid	ND		0.0018	0.00071	ug/l	
335-67-1	Perfluorooctanoic acid	ND		0.0018	0.00071	ug/l	
375-95-1	Perfluorononanoic acid	ND		0.0018	0.00071	ug/l	
335-76-2	Perfluorodecanoic acid	ND		0.0018	0.00071	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND		0.0018	0.00071	ug/l	
307-55-1	Perfluorododecanoic acid	ND		0.0018	0.00071	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND		0.0018	0.00071	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	ND		0.0018	0.00071	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND		0.0018	0.00071	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROOCATANESULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	ND		0.0036	0.00089	ug/l	
2991-50-6	EtFOSAA	ND		0.0036	0.00089	ug/l	

NEXT GENERATION PFAS ANALYTES

13252-13-6	HFPO-DA (GenX)	ND		0.0071	0.0027	ug/l	
919005-14-4	ADONA	ND		0.0071	0.0018	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		0.0071	0.0018	ug/l	
763051-92-9	11Cl-PF3OUds (F-53B Minor)	ND		0.0071	0.0018	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	108%		70-130%
	13C2-PFDA	81%		70-130%
	d5-EtFOSAA	71%		70-130%
	13C3-HFPO-DA	103%		70-130%

ND = Not detected MDL = Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	FCWTP-MP 105 FB	Date Sampled:	05/30/23
Lab Sample ID:	FC6520-5	Date Received:	06/01/23
Matrix:	DW - Drinking Water FB	Percent Solids:	n/a
Method:	EPA 537.1 REV 1.0 EPA 537		
Project:	PFAS Analysis		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q103479.D	1	06/18/23 20:59	AL	06/13/23 13:00	OP97324	SQ2201
Run #2							

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

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
307-24-4	Perfluorohexanoic acid	ND		0.0018	0.00071	ug/l	
375-85-9	Perfluoroheptanoic acid	ND		0.0018	0.00071	ug/l	
335-67-1	Perfluorooctanoic acid	ND		0.0018	0.00071	ug/l	
375-95-1	Perfluorononanoic acid	ND		0.0018	0.00071	ug/l	
335-76-2	Perfluorodecanoic acid	ND		0.0018	0.00071	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND		0.0018	0.00071	ug/l	
307-55-1	Perfluorododecanoic acid	ND		0.0018	0.00071	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND		0.0018	0.00071	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	ND		0.0018	0.00071	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND		0.0018	0.00071	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROOCATANESULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	ND		0.0036	0.00089	ug/l	
2991-50-6	EiFOSAA	ND		0.0036	0.00089	ug/l	

NEXT GENERATION PFAS ANALYTES

13252-13-6	HFPO-DA (GenX)	ND		0.0071	0.0027	ug/l	
919005-14-4	ADONA	ND		0.0071	0.0018	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		0.0071	0.0018	ug/l	
763051-92-9	11Cl-PF3OUds (F-53B Minor)	ND		0.0071	0.0018	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	105%		70-130%
	13C2-PFDA	107%		70-130%
	d5-EiFOSAA	92%		70-130%
	13C3-HFPO-DA	107%		70-130%

ND = Not detected MDL = Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	FCWTP-50%MEDIA 50103(SA103)	Date Sampled:	05/30/23
Lab Sample ID:	FC6520-6	Date Received:	06/01/23
Matrix:	DW - Drinking Water	Percent Solids:	n/a
Method:	EPA 537.1 REV 1.0 EPA 537		
Project:	PFAS Analysis		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q103480.D	1	06/18/23 21:15	AL	06/13/23 13:00	OP97324	SQ2201
Run #2							

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

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS							
307-24-4	Perfluorohexanoic acid	ND		0.0018	0.00071	ug/l	
375-85-9	Perfluoroheptanoic acid	ND		0.0018	0.00071	ug/l	
335-67-1	Perfluorooctanoic acid	ND		0.0018	0.00071	ug/l	
375-95-1	Perfluorononanoic acid	ND		0.0018	0.00071	ug/l	
335-76-2	Perfluorodecanoic acid	ND		0.0018	0.00071	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND		0.0018	0.00071	ug/l	
307-55-1	Perfluorododecanoic acid	ND		0.0018	0.00071	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND		0.0018	0.00071	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	ND		0.0018	0.00071	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND		0.0018	0.00071	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0018	0.00071	ug/l	

PERFLUORO OCTANESULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	ND		0.0036	0.00089	ug/l	
2991-50-6	EtFOSAA	ND		0.0036	0.00089	ug/l	

NEXT GENERATION PFAS ANALYTES

13252-13-6	HFPO-DA (GenX)	ND		0.0071	0.0027	ug/l	
919005-14-4	ADONA	ND		0.0071	0.0018	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		0.0071	0.0018	ug/l	
763051-92-9	11Cl-PF3OUds (F-53B Minor)	ND		0.0071	0.0018	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	107%		70-130%
	13C2-PFDA	95%		70-130%
	d5-EtFOSAA	78%		70-130%
	13C3-HFPO-DA	110%		70-130%

ND = Not detected MDL = Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	FCWTP-50%MEDIA 50107(SA107)	Date Sampled:	05/30/23
Lab Sample ID:	FC6520-7	Date Received:	06/01/23
Matrix:	DW - Drinking Water	Percent Solids:	n/a
Method:	EPA 537.1 REV 1.0 EPA 537		
Project:	PFAS Analysis		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q103481.D	1	06/18/23 21:31	AL	06/13/23 13:00	OP97324	SQ2201
Run #2							

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

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
307-24-4	Perfluorohexanoic acid	0.0212		0.0018	0.00071	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0055		0.0018	0.00071	ug/l	
335-67-1	Perfluorooctanoic acid	0.0276		0.0018	0.00071	ug/l	
375-95-1	Perfluorononanoic acid	ND		0.0018	0.00071	ug/l	
335-76-2	Perfluorodecanoic acid	ND		0.0018	0.00071	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND		0.0018	0.00071	ug/l	
307-55-1	Perfluorododecanoic acid	ND		0.0018	0.00071	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND		0.0018	0.00071	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.0107		0.0018	0.00071	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0169		0.0018	0.00071	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROOCATANESULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	ND		0.0036	0.00089	ug/l	
2991-50-6	EiFOSAA	ND		0.0036	0.00089	ug/l	

NEXT GENERATION PFAS ANALYTES

13252-13-6	HFPO-DA (GenX)	ND		0.0071	0.0027	ug/l	
919005-14-4	ADONA	ND		0.0071	0.0018	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		0.0071	0.0018	ug/l	
763051-92-9	11Cl-PF3OUds (F-53B Minor)	ND		0.0071	0.0018	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	103%		70-130%
	13C2-PFDA	95%		70-130%
	d5-EiFOSAA	71%		70-130%
	13C3-HFPO-DA	101%		70-130%

ND = Not detected MDL = Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	FCWTP-EF 109(SA109)	Date Sampled:	05/30/23
Lab Sample ID:	FC6520-8	Date Received:	06/01/23
Matrix:	DW - Drinking Water	Percent Solids:	n/a
Method:	EPA 537.1 REV 1.0 EPA 537		
Project:	PFAS Analysis		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q103482.D	1	06/18/23 21:47	AL	06/13/23 13:00	OP97324	SQ2201
Run #2							

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

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
307-24-4	Perfluorohexanoic acid	0.0247		0.0018	0.00071	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0053		0.0018	0.00071	ug/l	
335-67-1	Perfluorooctanoic acid	0.0196		0.0018	0.00071	ug/l	
375-95-1	Perfluorononanoic acid	ND		0.0018	0.00071	ug/l	
335-76-2	Perfluorodecanoic acid	ND		0.0018	0.00071	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND		0.0018	0.00071	ug/l	
307-55-1	Perfluorododecanoic acid	ND		0.0018	0.00071	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND		0.0018	0.00071	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.0116		0.0018	0.00071	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0103		0.0018	0.00071	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROOCATANESULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	ND		0.0036	0.00089	ug/l	
2991-50-6	EtFOSAA	ND		0.0036	0.00089	ug/l	

NEXT GENERATION PFAS ANALYTES

13252-13-6	HFPO-DA (GenX)	ND		0.0071	0.0027	ug/l	
919005-14-4	ADONA	ND		0.0071	0.0018	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		0.0071	0.0018	ug/l	
763051-92-9	11Cl-PF3OUds (F-53B Minor)	ND		0.0071	0.0018	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	110%		70-130%
	13C2-PFDA	94%		70-130%
	d5-EtFOSAA	70%		70-130%
	13C3-HFPO-DA	110%		70-130%

ND = Not detected MDL = Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	FCWTP-INF 200(SA201)	Date Sampled:	05/30/23
Lab Sample ID:	FC6520-9	Date Received:	06/01/23
Matrix:	DW - Drinking Water	Percent Solids:	n/a
Method:	EPA 537.1 REV 1.0 EPA 537		
Project:	PFAS Analysis		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q103485.D	1	06/18/23 22:34	AL	06/13/23 13:00	OP97324	SQ2201
Run #2							

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

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
307-24-4	Perfluorohexanoic acid	0.0161		0.0018	0.00071	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0051		0.0018	0.00071	ug/l	
335-67-1	Perfluorooctanoic acid	0.0422		0.0018	0.00071	ug/l	
375-95-1	Perfluorononanoic acid	ND		0.0018	0.00071	ug/l	
335-76-2	Perfluorodecanoic acid	ND		0.0018	0.00071	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND		0.0018	0.00071	ug/l	
307-55-1	Perfluorododecanoic acid	ND		0.0018	0.00071	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND		0.0018	0.00071	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.0090		0.0018	0.00071	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0348		0.0018	0.00071	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0015		0.0018	0.00071	ug/l	J

PERFLUOROOCATANESULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	ND		0.0036	0.00089	ug/l	
2991-50-6	EtFOSAA	ND		0.0036	0.00089	ug/l	

NEXT GENERATION PFAS ANALYTES

13252-13-6	HFPO-DA (GenX)	ND		0.0071	0.0027	ug/l	
919005-14-4	ADONA	ND		0.0071	0.0018	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		0.0071	0.0018	ug/l	
763051-92-9	11Cl-PF3OUds (F-53B Minor)	ND		0.0071	0.0018	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	106%		70-130%
	13C2-PFDA	97%		70-130%
	d5-EtFOSAA	76%		70-130%
	13C3-HFPO-DA	108%		70-130%

ND = Not detected MDL = Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	FCWTP-MP 205(SA205)	Date Sampled:	05/30/23
Lab Sample ID:	FC6520-10	Date Received:	06/01/23
Matrix:	DW - Drinking Water	Percent Solids:	n/a
Method:	EPA 537.1 REV 1.0 EPA 537		
Project:	PFAS Analysis		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q103486.D	1	06/18/23 22:50	AL	06/13/23 13:00	OP97324	SQ2201
Run #2							

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

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
307-24-4	Perfluorohexanoic acid	ND	0.0018	0.00071	ug/l		
375-85-9	Perfluoroheptanoic acid	ND	0.0018	0.00071	ug/l		
335-67-1	Perfluorooctanoic acid	ND	0.0018	0.00071	ug/l		
375-95-1	Perfluorononanoic acid	ND	0.0018	0.00071	ug/l		
335-76-2	Perfluorodecanoic acid	ND	0.0018	0.00071	ug/l		
2058-94-8	Perfluoroundecanoic acid	ND	0.0018	0.00071	ug/l		
307-55-1	Perfluorododecanoic acid	ND	0.0018	0.00071	ug/l		
72629-94-8	Perfluorotridecanoic acid	ND	0.0018	0.00071	ug/l		
376-06-7	Perfluorotetradecanoic acid	ND	0.0018	0.00071	ug/l		

PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	ND	0.0018	0.00071	ug/l		
355-46-4	Perfluorohexanesulfonic acid	ND	0.0018	0.00071	ug/l		
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0018	0.00071	ug/l		

PERFLUOROOCATANESULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	ND	0.0036	0.00089	ug/l		
2991-50-6	EtFOSAA	ND	0.0036	0.00089	ug/l		

NEXT GENERATION PFAS ANALYTES

13252-13-6	HFPO-DA (GenX)	ND	0.0071	0.0027	ug/l		
919005-14-4	ADONA	ND	0.0071	0.0018	ug/l		
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0071	0.0018	ug/l		
763051-92-9	11Cl-PF3OUds (F-53B Minor)	ND	0.0071	0.0018	ug/l		

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	101%		70-130%
	13C2-PFDA	90%		70-130%
	d5-EtFOSAA	76%		70-130%
	13C3-HFPO-DA	102%		70-130%

ND = Not detected MDL = Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	FCWTP-MP 205 FB	Date Sampled:	05/30/23
Lab Sample ID:	FC6520-11	Date Received:	06/01/23
Matrix:	DW - Drinking Water FB	Percent Solids:	n/a
Method:	EPA 537.1 REV 1.0 EPA 537		
Project:	PFAS Analysis		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q103487.D	1	06/18/23 23:06	AL	06/13/23 13:00	OP97324	SQ2201
Run #2							

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

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
307-24-4	Perfluorohexanoic acid	ND		0.0018	0.00071	ug/l	
375-85-9	Perfluoroheptanoic acid	ND		0.0018	0.00071	ug/l	
335-67-1	Perfluorooctanoic acid	ND		0.0018	0.00071	ug/l	
375-95-1	Perfluorononanoic acid	ND		0.0018	0.00071	ug/l	
335-76-2	Perfluorodecanoic acid	ND		0.0018	0.00071	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND		0.0018	0.00071	ug/l	
307-55-1	Perfluorododecanoic acid	ND		0.0018	0.00071	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND		0.0018	0.00071	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	ND		0.0018	0.00071	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND		0.0018	0.00071	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROOCATANESULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	ND		0.0036	0.00089	ug/l	
2991-50-6	EtFOSAA	ND		0.0036	0.00089	ug/l	

NEXT GENERATION PFAS ANALYTES

13252-13-6	HFPO-DA (GenX)	ND		0.0071	0.0027	ug/l	
919005-14-4	ADONA	ND		0.0071	0.0018	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		0.0071	0.0018	ug/l	
763051-92-9	11Cl-PF3OUds (F-53B Minor)	ND		0.0071	0.0018	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	104%		70-130%
	13C2-PFDA	97%		70-130%
	d5-EtFOSAA	88%		70-130%
	13C3-HFPO-DA	110%		70-130%

ND = Not detected MDL = Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	FCWTP-MP (SA105)	Date Sampled:	05/30/23
Lab Sample ID:	FC6520-12	Date Received:	06/01/23
Matrix:	DW - Drinking Water	Percent Solids:	n/a
Method:	EPA 537.1 REV 1.0 EPA 537		
Project:	PFAS Analysis		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q103488.D	1	06/18/23 23:21	AL	06/13/23 13:00	OP97324	SQ2201
Run #2							

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

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS							
307-24-4	Perfluorohexanoic acid	ND		0.0018	0.00071	ug/l	
375-85-9	Perfluoroheptanoic acid	ND		0.0018	0.00071	ug/l	
335-67-1	Perfluorooctanoic acid	ND		0.0018	0.00071	ug/l	
375-95-1	Perfluorononanoic acid	ND		0.0018	0.00071	ug/l	
335-76-2	Perfluorodecanoic acid	ND		0.0018	0.00071	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND		0.0018	0.00071	ug/l	
307-55-1	Perfluorododecanoic acid	ND		0.0018	0.00071	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND		0.0018	0.00071	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	ND		0.0018	0.00071	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND		0.0018	0.00071	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROOCETANESULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	ND		0.0036	0.00089	ug/l	
2991-50-6	EtFOSAA	ND		0.0036	0.00089	ug/l	

NEXT GENERATION PFAS ANALYTES

13252-13-6	HFPO-DA (GenX)	ND		0.0071	0.0027	ug/l	
919005-14-4	ADONA	ND		0.0071	0.0018	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		0.0071	0.0018	ug/l	
763051-92-9	11Cl-PF3OUds (F-53B Minor)	ND		0.0071	0.0018	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	114%		70-130%
	13C2-PFDA	95%		70-130%
	d5-EtFOSAA	87%		70-130%
	13C3-HFPO-DA	115%		70-130%

ND = Not detected MDL = Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	FCWTP-EF 209(SA209)	Date Sampled:	05/30/23
Lab Sample ID:	FC6520-13	Date Received:	06/01/23
Matrix:	DW - Drinking Water	Percent Solids:	n/a
Method:	EPA 537.1 REV 1.0 EPA 537		
Project:	PFAS Analysis		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q103489.D	1	06/18/23 23:37	AL	06/13/23 13:00	OP97324	SQ2201
Run #2							

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

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
307-24-4	Perfluorohexanoic acid	0.0220		0.0018	0.00071	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0055		0.0018	0.00071	ug/l	
335-67-1	Perfluorooctanoic acid	0.0221		0.0018	0.00071	ug/l	
375-95-1	Perfluorononanoic acid	ND		0.0018	0.00071	ug/l	
335-76-2	Perfluorodecanoic acid	ND		0.0018	0.00071	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND		0.0018	0.00071	ug/l	
307-55-1	Perfluorododecanoic acid	ND		0.0018	0.00071	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND		0.0018	0.00071	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.0117		0.0018	0.00071	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0134		0.0018	0.00071	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROOCETANESULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	ND		0.0036	0.00089	ug/l	
2991-50-6	EtFOSAA	ND		0.0036	0.00089	ug/l	

NEXT GENERATION PFAS ANALYTES

13252-13-6	HFPO-DA (GenX)	ND		0.0071	0.0027	ug/l	
919005-14-4	ADONA	ND		0.0071	0.0018	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		0.0071	0.0018	ug/l	
763051-92-9	11Cl-PF3OUds (F-53B Minor)	ND		0.0071	0.0018	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	101%		70-130%
	13C2-PFDA	90%		70-130%
	d5-EtFOSAA	75%		70-130%
	13C3-HFPO-DA	96%		70-130%

ND = Not detected MDL = Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	FCWTP-50%MEDIA 50203(SA203)	Date Sampled:	05/30/23
Lab Sample ID:	FC6520-14	Date Received:	06/01/23
Matrix:	DW - Drinking Water	Percent Solids:	n/a
Method:	EPA 537.1 REV 1.0 EPA 537		
Project:	PFAS Analysis		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q103490.D	1	06/18/23 23:53	AL	06/13/23 13:00	OP97324	SQ2201
Run #2							

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

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS							
307-24-4	Perfluorohexanoic acid	ND		0.0018	0.00071	ug/l	
375-85-9	Perfluoroheptanoic acid	ND		0.0018	0.00071	ug/l	
335-67-1	Perfluorooctanoic acid	ND		0.0018	0.00071	ug/l	
375-95-1	Perfluorononanoic acid	ND		0.0018	0.00071	ug/l	
335-76-2	Perfluorodecanoic acid	ND		0.0018	0.00071	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND		0.0018	0.00071	ug/l	
307-55-1	Perfluorododecanoic acid	ND		0.0018	0.00071	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND		0.0018	0.00071	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	ND		0.0018	0.00071	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND		0.0018	0.00071	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROOCETANESULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	ND		0.0036	0.00089	ug/l	
2991-50-6	EtFOSAA	ND		0.0036	0.00089	ug/l	

NEXT GENERATION PFAS ANALYTES

13252-13-6	HFPO-DA (GenX)	ND		0.0071	0.0027	ug/l	
919005-14-4	ADONA	ND		0.0071	0.0018	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		0.0071	0.0018	ug/l	
763051-92-9	11Cl-PF3OUds (F-53B Minor)	ND		0.0071	0.0018	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	108%		70-130%
	13C2-PFDA	91%		70-130%
	d5-EtFOSAA	76%		70-130%
	13C3-HFPO-DA	108%		70-130%

ND = Not detected MDL = Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	FCWTP-50%MEDIA 50207(SA207)	Date Sampled:	05/30/23
Lab Sample ID:	FC6520-15	Date Received:	06/01/23
Matrix:	DW - Drinking Water	Percent Solids:	n/a
Method:	EPA 537.1 REV 1.0 EPA 537		
Project:	PFAS Analysis		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q103491.D	1	06/19/23 00:09	AL	06/13/23 13:00	OP97324	SQ2201
Run #2							

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

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
307-24-4	Perfluorohexanoic acid	0.0214		0.0018	0.00071	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0058		0.0018	0.00071	ug/l	
335-67-1	Perfluorooctanoic acid	0.0330		0.0018	0.00071	ug/l	
375-95-1	Perfluorononanoic acid	ND		0.0018	0.00071	ug/l	
335-76-2	Perfluorodecanoic acid	ND		0.0018	0.00071	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND		0.0018	0.00071	ug/l	
307-55-1	Perfluorododecanoic acid	ND		0.0018	0.00071	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND		0.0018	0.00071	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.0115		0.0018	0.00071	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0212		0.0018	0.00071	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0018	0.00071	ug/l	

PERFLUOROOCETANESULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	ND		0.0036	0.00089	ug/l	
2991-50-6	EtFOSAA	ND		0.0036	0.00089	ug/l	

NEXT GENERATION PFAS ANALYTES

13252-13-6	HFPO-DA (GenX)	ND		0.0071	0.0027	ug/l	
919005-14-4	ADONA	ND		0.0071	0.0018	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		0.0071	0.0018	ug/l	
763051-92-9	11Cl-PF3OUds (F-53B Minor)	ND		0.0071	0.0018	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	113%		70-130%
	13C2-PFDA	100%		70-130%
	d5-EtFOSAA	81%		70-130%
	13C3-HFPO-DA	115%		70-130%

ND = Not detected MDL = Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	FCWTP-EF 002(EXISTING PLANT EFFLUENT/POST PUMPS)		
Lab Sample ID:	FC6520-16	Date Sampled:	05/30/23
Matrix:	DW - Drinking Water	Date Received:	06/01/23
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	PFAS Analysis		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q103492.D	1	06/19/23 00:24	AL	06/13/23 13:00	OP97324	SQ2201
Run #2							

Run #	Initial Volume	Final Volume
Run #1	270 ml	1.0 ml
Run #2		

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS							
307-24-4	Perfluorohexanoic acid	ND		0.0019	0.00074	ug/l	
375-85-9	Perfluoroheptanoic acid	ND		0.0019	0.00074	ug/l	
335-67-1	Perfluorooctanoic acid	ND		0.0019	0.00074	ug/l	
375-95-1	Perfluorononanoic acid	ND		0.0019	0.00074	ug/l	
335-76-2	Perfluorodecanoic acid	ND		0.0019	0.00074	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND		0.0019	0.00074	ug/l	
307-55-1	Perfluorododecanoic acid	ND		0.0019	0.00074	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND		0.0019	0.00074	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND		0.0019	0.00074	ug/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	ND		0.0019	0.00074	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND		0.0019	0.00074	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0019	0.00074	ug/l	
PERFLUORO OCTANESULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	ND		0.0037	0.00093	ug/l	
2991-50-6	EtFOSAA	ND		0.0037	0.00093	ug/l	
NEXT GENERATION PFAS ANALYTES							
13252-13-6	HFPO-DA (GenX)	ND		0.0074	0.0028	ug/l	
919005-14-4	ADONA	ND		0.0074	0.0019	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		0.0074	0.0019	ug/l	
763051-92-9	11Cl-PF3OUds (F-53B Minor)	ND		0.0074	0.0019	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	109%		70-130%
	13C2-PFDA	105%		70-130%
	d5-EtFOSAA	87%		70-130%
	13C3-HFPO-DA	112%		70-130%

ND = Not detected MDL = Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	FCWTP-EF 002 FB (EXISTING PLANT EFFLUENT)		
Lab Sample ID:	FC6520-17	Date Sampled:	05/30/23
Matrix:	DW - Drinking Water FB	Date Received:	06/01/23
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	PFAS Analysis		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q103498.D	1	06/19/23 01:59	AL	06/13/23 13:00	OP97324	SQ2201
Run #2							

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

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
307-24-4	Perfluorohexanoic acid	ND	0.0018	0.00071	ug/l		
375-85-9	Perfluoroheptanoic acid	ND	0.0018	0.00071	ug/l		
335-67-1	Perfluorooctanoic acid	ND	0.0018	0.00071	ug/l		
375-95-1	Perfluorononanoic acid	ND	0.0018	0.00071	ug/l		
335-76-2	Perfluorodecanoic acid	ND	0.0018	0.00071	ug/l		
2058-94-8	Perfluoroundecanoic acid	ND	0.0018	0.00071	ug/l		
307-55-1	Perfluorododecanoic acid	ND	0.0018	0.00071	ug/l		
72629-94-8	Perfluorotridecanoic acid	ND	0.0018	0.00071	ug/l		
376-06-7	Perfluorotetradecanoic acid	ND	0.0018	0.00071	ug/l		

PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	ND	0.0018	0.00071	ug/l		
355-46-4	Perfluorohexanesulfonic acid	ND	0.0018	0.00071	ug/l		
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0018	0.00071	ug/l		

PERFLUOROOCATANESULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	ND	0.0036	0.00089	ug/l		
2991-50-6	EiFOSAA	ND	0.0036	0.00089	ug/l		

NEXT GENERATION PFAS ANALYTES

13252-13-6	HFPO-DA (GenX)	ND	0.0071	0.0027	ug/l		
919005-14-4	ADONA	ND	0.0071	0.0018	ug/l		
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0071	0.0018	ug/l		
763051-92-9	11Cl-PF3OUds (F-53B Minor)	ND	0.0071	0.0018	ug/l		

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	101%		70-130%
	13C2-PFDA	99%		70-130%
	d5-EiFOSAA	91%		70-130%
	13C3-HFPO-DA	103%		70-130%

ND = Not detected MDL = Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



SGS North America Inc - Orlando
Chain of Custody

Vineland Road, Suite C-15 Orlando, FL 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.sgs.com

4405

SGS - ORLANDO JOB #:

PAGE 1 OF 2

FC6520

Client / Reporting Information		Project Information		Analytical Information										Matrix Codes									
Company Name: TOWN OF COUPEVILLE		Project Name FCWTP												Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid IWP - IWP									
434 WANNAMAHER RD		Street 434 WANNAMAHER RD																					
COUPEVILLE WA 98277		City COUPEVILLE State WA																					
Project Contact: Joseph Grogan Email: utilities1@townofcoupeville.org		Project # N44255-21-0-001																					
Phone #: 360-678-4461 EXT 113		Fax #																					
Sampler(s) Name(s) (Printed) Sampler 1: Jimmy Sampler 2: Jesse		Client Purchase Order #																					
SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION			CONTAINER INFORMATION										LAB USE ONLY								
		DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NiOH	HNO3	H2SO4	NaOH-ZnCl2	DI WATER		MEDIA							
1	FCWTP-INF 001 (booster tap)	5/30/23	0940	JW	DW	2											X						
2	FCWTP-INF 001 FB	5/30/23	0940	JW	DW	1											X						
3	FCWTP-INF 100 (SA101)	5/30/23	0950	JW	DW	2											X						
4	FCWTP- MP 105 (SA105)	5/30/23	1000	JW	DW	2											X						
5	FCWTP- MP 105 FB	5/30/23	1005	JW	DW	1											X						
6	FCWTP-50%MEDIA 50103 (SA103)	5/30/23	1005	JW	DW	2											X						
7	FCWTP-50%MEDIA 50107 (SA107)	5/30/23	1010	JW	DW	2											X						
8	FCWTP EF 109 (SA109)	5/30/23	1015	JW	DW	2											X						
9	FCWTP INF 200 (SA201)	5/30/23	1020	JW	DW	2											X						
10	FCWTP MP 205 (SA205)	5/30/23	1025	JW	DW	2											X						
11	FCWTP MP 205 FB	5/30/23	1025	JW	DW	1											X						
12	FCWTP MP (SA105)	5/30/23	1000	JW	DW	2											X						
Turnaround Time (Business days)				Data Deliverable Information										Comments / Remarks									
10 Day (Business)		Approved By: / Date:		<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY) <input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC) <input type="checkbox"/> REDT1 (EPA LEVEL 3) <input type="checkbox"/> FULLT1 (EPA LEVEL 4) <input type="checkbox"/> EDD'S										INITIAL ASSESSMENT <u>SP</u>									
7 Day														LABEL VERIFICATION <u>ZB</u>									
5 Day																							
3 Day RUSH																							
2 Day RUSH																							
1 Day RUSH																							
Other																							
Rush T/A Data Available VIA Email or Lablink																							
Sample Custody must be documented below each time samples change possession, including courier delivery.																							
Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:										
1 Jimmy Wiley	5/30/23 1100	2 Fed Ex	3 Fed Ex		4								1000										
5		6	7		8								06/01/23										

Copy of finished Chain of custody 2-2022 Rev 031318 2.6 IR#1



5.1
5

Lab Use Only : Cooler Temperature (s) Celsius (corrected):



SGS North America Inc - Orlando
Chain of Custody

SGS - ORLANDO JOB # : PAGE 2 OF 2

Vineland Road, Suite C-15 Orlando, FL 32811

4405

SGS - ORLANDO Quote # SKIFF #

Client / Reporting Information		Project Information				Analytical Information						Matrix Codes
Company Name: TOWN OF COUPEVILLE		Project Name FCWTP										DW - Drinking Water
434 WANNAMAHER RD		Street 434 WANNAMAHER RD										GW - Ground Water
COUPEVILLE WA 98277		City COUPEVILLE		State WA								WW - Water
Project Contact: Joseph Grogan Email: utilities1@townofcoupeville.org		Project # N44255-21-0-001										SW - Surface Water
Phone #: 360-678-4461 Ext 113		Fax #										SO - Soil
Sampler(s) Name(s) (Printed) Sampler 1: Jimmy Sampler 2: Jesse		Client Purchase Order #										SL - Sludge
												OI - Oil
												LIQ - Other Liquid
												AIR - Air
												SOL - Other Solid
												WP - Wipe

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION			CONTAINER INFORMATION											PFAS EPA 537.1	PFAS EPA 537.1 (MS)	PFAS EPA 537.1 (MSD)	LAB USE ONLY	
		DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	PC	NGOH	PNOS	P204	NON-HZ/MC	PI WATER	MEQH					
13	FCWTP EF 209 (SA209)	5/30/23	1035	JW	DW	2												X		
14	FCWTP 50% MEDIA 50203 (SA203)	5/30/23	1040	JW	DW	2												X		
15	FCWTP 50% MEDIA 50207 (SA207)	5/30/23	1050	JW	DW	2												X		
16	FCWTP EF 002 (Existing plant effluent/post pumps)	5/30/23	1055	JW	DW	2												X		
17	FCWTP EF 002 FB (Existing plant effluent)	5/30/23	1055	JW	DW	1												X		
16	FCWTP EF 002 MS (Existing plant effluent/post pumps)	5/30/23	1055	JW	DW	1											X			
16	FCWTP EF 002 MSD(Existing plant effluent/post pump)	5/30/23	1055	JW	DW	1											X			

Turnaround Time (Business days)	Data Deliverable Information	Comments / Remarks
10 Day (Business) Approved By: / Date: _____ 7 Day _____ 5 Day _____ 3 Day RUSH _____ 2 Day RUSH _____ 1 Day RUSH _____ Other _____ Rush T/A Data Available VIA Email or Lablink	<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY) <input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC) <input type="checkbox"/> REDT1 (EPA LEVEL 3) <input type="checkbox"/> FULLT1 (EPA LEVEL 4) <input type="checkbox"/> EDD'S	

Sample Custody must be documented below each time samples change possession, including courier delivery.					
Relinquished by Sampler/Affiliation 1 Amy Wylugh	Date Time: 5/30/23 11:00AM	Received By/Affiliation 2 Fed Ex	Relinquished By/Affiliation 3 Fed Ex	Date Time:	Received By/Affiliation 4 [Signature] 06/01/23
Relinquished by/Affiliation 5	Date Time:	Received By/Affiliation 6	Relinquished By/Affiliation 7	Date Time:	Received By/Affiliation 8

Copy of finished Chain of custody 2-2022 Rev 031318



5.1
5

SGS Sample Receipt Summary

Job Number: FC6520

Client: TOWN OF COUPEVILLE

Project: FCWTP

Date / Time Received: 6/1/2023 10:00:00 AM

Delivery Method: FED EX

Airbill #'s: 3989 6288 2848

Therm ID: IR 1;

Therm CF: -0.1;

of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.7);

Cooler Temps (Corrected) °C: Cooler 1: (2.6);

Cooler Information

Y or N

- | | | |
|-----------------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Temp criteria achieved | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. Cooler temp verification | <u>IR Gun</u> | |
| 5. Cooler media | <u>Ice (Bag)</u> | |

Sample Information

Y or N N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Sample labels present on bottles | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Samples preserved properly | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 3. Sufficient volume/containers recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Condition of sample | <u>Intact</u> | | |
| 5. Sample recvd within HT | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 6. Dates/Times/IDs on COC match Sample Label | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 7. VOCs have headspace | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 9. Compositing instructions clear | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10. Voa Soil Kits/Jars received past 48hrs? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 11. % Solids Jar received? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 12. Residual Chlorine Present? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Trip Blank Information

Y or N N/A

- | | | | |
|--------------------------------|--------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

W or S N/A

- | | | | |
|------------------------|--------------------------|--------------------------|-------------------------------------|
| 3. Type Of TB Received | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|------------------------|--------------------------|--------------------------|-------------------------------------|

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 230320 pH 10-12 _____ Other: (Specify) pH 1.0 - 12.0 222221
 Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: SHAYLAP

Date: 6/1/2023 10:00:00 AM

Reviewer: _____

Date: _____

FC6520: Chain of Custody

Page 3 of 3

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97324-MB	Q103474.D	1	06/18/23	AL	06/13/23	OP97324	SQ2201

The QC reported here applies to the following samples:

Method: EPA 537.1 REV 1.0

FC6520-1, FC6520-2, FC6520-3, FC6520-4, FC6520-5, FC6520-6, FC6520-7, FC6520-8, FC6520-9, FC6520-10, FC6520-11, FC6520-12, FC6520-13, FC6520-14, FC6520-15, FC6520-16, FC6520-17

CAS No.	Compound	Result	RL	MDL	Units	Q
307-24-4	Perfluorohexanoic acid	ND	0.0020	0.00080	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0020	0.00080	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0020	0.00080	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0020	0.00080	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0020	0.00080	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0020	0.00080	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0020	0.00080	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0020	0.00080	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0020	0.00080	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0020	0.00080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0020	0.00080	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0020	0.00080	ug/l	
2355-31-9	MeFOSAA	ND	0.0040	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0040	0.0010	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0080	0.0030	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0020	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0020	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0020	ug/l	

CAS No.	Surrogate Recoveries	Limits	
	13C2-PFHxA	105%	70-130%
	13C2-PFDA	110%	70-130%
	d5-EtFOSAA	101%	70-130%
	13C3-HFPO-DA	105%	70-130%

Blank Spike Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97324-BS	Q103473.D	1	06/18/23	AL	06/13/23	OP97324	SQ2201

The QC reported here applies to the following samples:

Method: EPA 537.1 REV 1.0

FC6520-1, FC6520-2, FC6520-3, FC6520-4, FC6520-5, FC6520-6, FC6520-7, FC6520-8, FC6520-9, FC6520-10, FC6520-11, FC6520-12, FC6520-13, FC6520-14, FC6520-15, FC6520-16, FC6520-17

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
307-24-4	Perfluorohexanoic acid	0.004	0.0049	123	50-150
375-85-9	Perfluoroheptanoic acid	0.004	0.0047	118	50-150
335-67-1	Perfluorooctanoic acid	0.004	0.0049	123	50-150
375-95-1	Perfluorononanoic acid	0.004	0.0047	118	50-150
335-76-2	Perfluorodecanoic acid	0.004	0.0051	128	50-150
2058-94-8	Perfluoroundecanoic acid	0.004	0.0045	113	50-150
307-55-1	Perfluorododecanoic acid	0.004	0.0038	95	50-150
72629-94-8	Perfluorotridecanoic acid	0.004	0.0034	85	50-150
376-06-7	Perfluorotetradecanoic acid	0.004	0.0032	80	50-150
375-73-5	Perfluorobutanesulfonic acid	0.004	0.0053	133	50-150
355-46-4	Perfluorohexanesulfonic acid	0.004	0.0052	130	50-150
1763-23-1	Perfluorooctanesulfonic acid	0.004	0.0051	128	50-150
2355-31-9	MeFOSAA	0.004	0.0046	115	50-150
2991-50-6	EtFOSAA	0.004	0.0043	108	50-150
13252-13-6	HFPO-DA (GenX)	0.004	0.0055	138	50-150
919005-14-4	ADONA	0.004	0.0047	118	50-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.004	0.0042	105	50-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.004	0.0035	88	50-150

CAS No.	Surrogate Recoveries	BSP	Limits
	13C2-PFHxA	99%	70-130%
	13C2-PFDA	103%	70-130%
	d5-EtFOSAA	94%	70-130%
	13C3-HFPO-DA	101%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97324-MS	Q103493.D	1	06/19/23	AL	06/13/23	OP97324	SQ2201
OP97324-MSD	Q103494.D	1	06/19/23	AL	06/13/23	OP97324	SQ2201
FC6520-16	Q103492.D	1	06/19/23	AL	06/13/23	OP97324	SQ2201

The QC reported here applies to the following samples:

Method: EPA 537.1 REV 1.0

FC6520-1, FC6520-2, FC6520-3, FC6520-4, FC6520-5, FC6520-6, FC6520-7, FC6520-8, FC6520-9, FC6520-10, FC6520-11, FC6520-12, FC6520-13, FC6520-14, FC6520-15, FC6520-16, FC6520-17

CAS No.	Compound	FC6520-16 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
307-24-4	Perfluorohexanoic acid	ND	0.00357	0.0047	132	0.00357	0.0051	143	8	50-150/30
375-85-9	Perfluoroheptanoic acid	ND	0.00357	0.0045	126	0.00357	0.0048	134	6	50-150/30
335-67-1	Perfluorooctanoic acid	ND	0.00357	0.0045	126	0.00357	0.0052	146	14	50-150/30
375-95-1	Perfluorononanoic acid	ND	0.00357	0.0042	118	0.00357	0.0048	134	13	50-150/30
335-76-2	Perfluorodecanoic acid	ND	0.00357	0.0043	120	0.00357	0.0047	132	9	50-150/30
2058-94-8	Perfluoroundecanoic acid	ND	0.00357	0.0042	118	0.00357	0.0042	118	0	50-150/30
307-55-1	Perfluorododecanoic acid	ND	0.00357	0.0037	104	0.00357	0.0035	98	6	50-150/30
72629-94-8	Perfluorotridecanoic acid	ND	0.00357	0.0034	95	0.00357	0.0030	84	13	50-150/30
376-06-7	Perfluorotetradecanoic acid	ND	0.00357	0.0033	92	0.00357	0.0030	84	10	50-150/30
375-73-5	Perfluorobutanesulfonic acid	ND	0.00357	0.0049	137	0.00357	0.0058	162*	17	50-150/30
355-46-4	Perfluorohexanesulfonic acid	ND	0.00357	0.0052	146	0.00357	0.0058	162*	11	50-150/30
1763-23-1	Perfluorooctanesulfonic acid	ND	0.00357	0.0046	129	0.00357	0.0058	162*	23	50-150/30
2355-31-9	MeFOSAA	ND	0.00357	0.0037	104	0.00357	0.0037	104	0	50-150/30
2991-50-6	EtFOSAA	ND	0.00357	0.0030	84	0.00357	0.0042	118	33*	50-150/30
13252-13-6	HFPO-DA (GenX)	ND	0.00357	0.0043	120	0.00357	0.0056	157*	26	50-150/30
919005-14-4	ADONA	ND	0.00357	0.0046	129	0.00357	0.0049	137	6	50-150/30
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.00357	0.0043	120	0.00357	0.0044	123	2	50-150/30
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.00357	0.0035	98	0.00357	0.0033	92	6	50-150/30

CAS No.	Surrogate Recoveries	MS	MSD	FC6520-16	Limits
	13C2-PFHxA	111%	107%	109%	70-130%
	13C2-PFDA	105%	101%	105%	70-130%
	d5-EtFOSAA	89%	81%	87%	70-130%
	13C3-HFPO-DA	116%	108%	112%	70-130%

* = Outside of Control Limits.

Internal Standard Area Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Check Std:	SQ2201-ICC2201	Injection Date:	06/18/23
Lab File ID:	Q103466.D	Injection Time:	17:34
Instrument ID:	GCMSQ	Method:	EPA 537.1 REV 1.0

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Initial Cal ^a	73527	4.37	48834	7.22	230137	7.24	41680	7.71	52782	8.16
Check Std ^b	73497	4.37	48956	7.22	228291	7.24	41386	7.71	52437	8.16
Upper Limit ^c	102896	5.37	68538	8.22	319607	8.24	57940	8.71	73412	9.16
Lower Limit ^d	51448	3.37	34269	6.22	159804	6.24	28970	6.71	36706	7.16

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
SQ2201-RT	71101	4.37	45871	7.20	227724	7.21	40214	7.70	51216	8.15

- IS 1 = 13C3-PFPeA
- IS 2 = 13C2-6:2FTS
- IS 3 = 13C2-PFOA
- IS 4 = 13C4-PFOS
- IS 5 = d3-MeFOSAA

- (a) Initial Cal is: SQ2201-ICC2201 Q103466.D 06/18/23 17:34. Area is AVERAGE of initial cal points.
- (b) Check Std Limit = -50 to +50% of initial cal area.
- (c) Upper Limit = +40% of check standard area; Retention time +1 minutes.
- (d) Lower Limit = -30% of check standard area; Retention time -1 minutes.

6.4.1
6

Internal Standard Area Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Check Std:	SQ2201-CC2201	Injection Date:	06/18/23
Lab File ID:	Q103471.D	Injection Time:	18:53
Instrument ID:	GCMSQ	Method:	EPA 537.1 REV 1.0

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Initial Cal ^a	73527	4.37	48834	7.22	230137	7.24	41680	7.71	52782	8.16
Check Std ^b	71797	4.34	47583	7.22	226661	7.24	39710	7.71	51839	8.16
Upper Limit ^c	100516	5.34	66616	8.22	317325	8.24	55594	8.71	72575	9.16
Lower Limit ^d	50258	3.34	33308	6.22	158663	6.24	27797	6.71	36287	7.16

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
OP97324-BS	64947	4.34	44635	7.20	217227	7.21	36483	7.69	49139	8.14
OP97324-MB	67036	4.33	46236	7.19	223169	7.20	36799	7.69	50272	8.14
FC6520-2	71051	4.33	61761	7.25	231760	7.26	39517	7.75	54177	8.19
FC6520-3	59242	4.32	43467	7.25	206720	7.26	34277	7.75	41855	8.20
FC6520-4	70104	4.33	46743	7.24	226572	7.25	36001	7.74	43304	8.19
FC6520-5	64199	4.34	53543	7.21	210547	7.23	36005	7.72	47566	8.16
FC6520-6	61863	4.34	40674	7.25	206752	7.26	34301	7.75	46371	8.19
FC6520-7	60726	4.36	42781	7.26	207739	7.26	34791	7.75	46915	8.20
FC6520-8	60018	4.34	42525	7.25	206045	7.26	35299	7.74	45943	8.19

- IS 1 = 13C3-PFPeA
- IS 2 = 13C2-6:2FTS
- IS 3 = 13C2-PFOA
- IS 4 = 13C4-PFOS
- IS 5 = d3-MeFOSAA

- (a) Initial Cal is: SQ2201-ICC2201 Q103466.D 06/18/23 17:34. Area is AVERAGE of initial cal points.
- (b) Check Std Limit = -50 to + 50% of initial cal area.
- (c) Upper Limit = + 40% of check standard area; Retention time + 1 minutes.
- (d) Lower Limit = -30% of check standard area; Retention time -1 minutes.

Internal Standard Area Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Check Std:	SQ2201-CC2201	Injection Date:	06/18/23
Lab File ID:	Q103483.D	Injection Time:	22:02
Instrument ID:	GCMSQ	Method:	EPA 537.1 REV 1.0

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Initial Cal ^a	73527	4.37	48834	7.22	230137	7.24	41680	7.71	52782	8.16
Check Std ^b	69876	4.33	47329	7.25	219878	7.25	38607	7.74	50774	8.20
Upper Limit ^c	97826	5.33	66261	8.25	307829	8.25	54050	8.74	71084	9.20
Lower Limit ^d	48913	3.33	33130	6.25	153915	6.25	27025	6.74	35542	7.20

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
FC6520-9	54653	4.33	38966	7.24	188107	7.25	30946	7.74	42624	8.19
FC6520-10	61980	4.36	41505	7.22	203772	7.23	33803	7.70	47373	8.15
FC6520-11	66303	4.33	46590	7.22	215507	7.24	36638	7.73	49288	8.19
FC6520-12	63902	4.33	42683	7.22	209996	7.24	34699	7.72	45442	8.16
FC6520-13	63694	4.32	46258	7.20	220105	7.21	35601	7.72	50108	8.18
FC6520-14	62209	4.32	41486	7.24	203581	7.25	32582	7.73	47021	8.18
FC6520-15	57128	4.33	41802	7.25	198521	7.25	33761	7.73	44570	8.18
FC6520-16	58216	4.33	39235	7.22	190906	7.23	31762	7.73	42334	8.19
OP97324-MS	60682	4.32	40345	7.20	197454	7.21	32212	7.70	46910	8.16
OP97324-MSD	65574	4.32	44346	7.24	211662	7.25	34675	7.73	48354	8.18

- IS 1 = 13C3-PFPeA
- IS 2 = 13C2-6:2FTS
- IS 3 = 13C2-PFOA
- IS 4 = 13C4-PFOS
- IS 5 = d3-MeFOSAA

(a) Initial Cal is: SQ2201-ICC2201 Q103466.D 06/18/23 17:34. Area is AVERAGE of initial cal points.

(b) Check Std Limit = -50 to + 50% of initial cal area.

(c) Upper Limit = + 40% of check standard area; Retention time + 1 minutes.

(d) Lower Limit = -30% of check standard area; Retention time -1 minutes.

Internal Standard Area Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Check Std:	SQ2201-CC2201	Injection Date:	06/19/23
Lab File ID:	Q103495.D	Injection Time:	01:12
Instrument ID:	GCMSQ	Method:	EPA 537.1 REV 1.0

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Initial Cal ^a	73527	4.37	48834	7.22	230137	7.24	41680	7.71	52782	8.16
Check Std ^b	68322	4.34	47139	7.24	203081	7.25	38518	7.73	47624	8.18
Upper Limit ^c	95651	5.34	65995	8.24	284313	8.25	53925	8.73	66674	9.18
Lower Limit ^d	47825	3.34	32997	6.24	142157	6.25	26963	6.73	33337	7.18

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
FC6520-17	64300	4.33	44849	7.24	215541	7.25	34948	7.73	48842	8.15
OP97367-BS	64190	4.36	44781	7.25	203654	7.26	34968	7.74	46108	8.19
OP97367-MB	59742	4.36	40216	7.25	198465	7.25	31778	7.74	44633	8.19
FC6595-1	53896	4.33	37435	7.24	184990	7.25	29401	7.74	43374	8.19
OP97367-MS1	59863	4.34	42569	7.24	196097	7.25	32964	7.74	45996	8.19
OP97367-MSD1	61773	4.34	45155	7.24	203134	7.25	35911	7.74	47972	8.19
ZZZZZZ	59907	4.33	42841	7.19	202735	7.20	33143	7.69	47408	8.16
ZZZZZZ	61324	4.34	40601	7.24	201718	7.25	31381	7.73	46023	8.18
FC6597-1	67677	4.36	47014	7.24	225749	7.25	36643	7.73	51520	8.18
OP97367-MS2	60346	4.34	42819	7.22	194085	7.24	33300	7.72	46218	8.18

- IS 1 = 13C3-PFPeA
- IS 2 = 13C2-6:2FTS
- IS 3 = 13C2-PFOA
- IS 4 = 13C4-PFOS
- IS 5 = d3-MeFOSAA

- (a) Initial Cal is: SQ2201-ICC2201 Q103466.D 06/18/23 17:34. Area is AVERAGE of initial cal points.
- (b) Check Std Limit = -50 to + 50% of initial cal area.
- (c) Upper Limit = + 40% of check standard area; Retention time + 1 minutes.
- (d) Lower Limit = -30% of check standard area; Retention time -1 minutes.

Internal Standard Area Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Check Std:	SQ2202-CC2201	Injection Date:	06/19/23
Lab File ID:	Q103536.D	Injection Time:	20:48
Instrument ID:	GCMSQ	Method:	EPA 537.1 REV 1.0

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Initial Cal ^a	73527	4.37	48834	7.22	230137	7.24	41680	7.71	52782	8.16
Check Std ^b	70340	4.36	49050	7.21	219758	7.23	37839	7.71	50766	8.16
Upper Limit ^c	98476	5.36	68670	8.21	307661	8.23	52975	8.71	71072	9.16
Lower Limit ^d	49238	3.36	34335	6.21	153831	6.23	26487	6.71	35536	7.16

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
FC6520-1	56807	4.34	41911	7.24	198510	7.25	32784	7.73	42886	8.18

- IS 1 = 13C3-PFPeA
- IS 2 = 13C2-6:2FTS
- IS 3 = 13C2-PFOA
- IS 4 = 13C4-PFOS
- IS 5 = d3-MeFOSAA

- (a) Initial Cal is: SQ2201-ICC2201 Q103466.D 06/18/23 17:34. Area is AVERAGE of initial cal points.
- (b) Check Std Limit = -50 to + 50% of initial cal area.
- (c) Upper Limit = + 40% of check standard area; Retention time + 1 minutes.
- (d) Lower Limit = -30% of check standard area; Retention time -1 minutes.

6.4.5
6

Surrogate Recovery Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Method: EPA 537.1 REV 1.0	Matrix: DW
---------------------------	------------

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
FC6520-1	Q103538.D	107	91	71	110
FC6520-2	Q103476.D	102	102	91	105
FC6520-3	Q103477.D	105	94	75	110
FC6520-4	Q103478.D	108	81	71	103
FC6520-5	Q103479.D	105	107	92	107
FC6520-6	Q103480.D	107	95	78	110
FC6520-7	Q103481.D	103	95	71	101
FC6520-8	Q103482.D	110	94	70	110
FC6520-9	Q103485.D	106	97	76	108
FC6520-10	Q103486.D	101	90	76	102
FC6520-11	Q103487.D	104	97	88	110
FC6520-12	Q103488.D	114	95	87	115
FC6520-13	Q103489.D	101	90	75	96
FC6520-14	Q103490.D	108	91	76	108
FC6520-15	Q103491.D	113	100	81	115
FC6520-16	Q103492.D	109	105	87	112
FC6520-17	Q103498.D	101	99	91	103
OP97324-BS	Q103473.D	99	103	94	101
OP97324-MB	Q103474.D	105	110	101	105
OP97324-MS	Q103493.D	111	105	89	116
OP97324-MSD	Q103494.D	107	101	81	108

Surrogate Compounds

Recovery Limits

S1 = 13C2-PFHxA	70-130%
S2 = 13C2-PFDA	70-130%
S3 = d5-EtFOSAA	70-130%
S4 = 13C3-HFPO-DA	70-130%

6.5.1
6

Initial Calibration Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Sample: SQ2201-ICC2201
 Lab FileID: Q103466.D

Initial Calibration Report

Method Path	Method File	Batch Name	Last Calib Update	Calibration Files	Level Name	Acq. Date/Time	Level Last Update Time	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
D:\MassHunter\Methods	537_061823_SQ2201_quantmethod.xml	D:\MassHunter\Data\061823_DW_SQ2201	6/19/2023 3:45:54 PM	D:\MassHunter\Data\061823_DW_SQ2201\Q103461.d	1	6/18/2023 4:15:39 PM	6/19/2023 3:45:54 PM	Linear	1.0171	0.9398	1.1570	1.0303	1.0244	1.0147	0.9571	0.8701	1.0013	8.355
D:\MassHunter\Methods	537_061823_SQ2201_quantmethod.xml	D:\MassHunter\Data\061823_DW_SQ2201	6/19/2023 3:45:54 PM	D:\MassHunter\Data\061823_DW_SQ2201\Q103462.d	2	6/18/2023 4:31:25 PM	6/19/2023 3:45:54 PM	Quadratic	0.7030	0.6916	0.8561	0.6990	0.7390	0.7230	0.6834	0.6060	0.7126	9.826
D:\MassHunter\Methods	537_061823_SQ2201_quantmethod.xml	D:\MassHunter\Data\061823_DW_SQ2201	6/19/2023 3:45:54 PM	D:\MassHunter\Data\061823_DW_SQ2201\Q103463.d	3	6/18/2023 4:47:13 PM	6/19/2023 3:45:54 PM	Quadratic	0.0079	0.0069	0.0080	0.0077	0.0085	0.0087	0.0089	0.0091	0.0082	8.727
D:\MassHunter\Methods	537_061823_SQ2201_quantmethod.xml	D:\MassHunter\Data\061823_DW_SQ2201	6/19/2023 3:45:54 PM	D:\MassHunter\Data\061823_DW_SQ2201\Q103464.d	4	6/18/2023 5:03:00 PM	6/19/2023 3:45:54 PM	Quadratic	0.0067	0.0068	0.0068	0.0070	0.0073	0.0079	0.0079	0.0081	0.0075	8.376
D:\MassHunter\Methods	537_061823_SQ2201_quantmethod.xml	D:\MassHunter\Data\061823_DW_SQ2201	6/19/2023 3:45:54 PM	D:\MassHunter\Data\061823_DW_SQ2201\Q103465.d	5	6/18/2023 5:18:48 PM	6/19/2023 3:45:54 PM	Quadratic	0.5926	0.5244	0.6385	0.5518	0.5755	0.6209	0.6386	0.6582	0.6001	7.840
D:\MassHunter\Methods	537_061823_SQ2201_quantmethod.xml	D:\MassHunter\Data\061823_DW_SQ2201	6/19/2023 3:45:54 PM	D:\MassHunter\Data\061823_DW_SQ2201\Q103466.d	6	6/18/2023 5:34:35 PM	6/19/2023 3:45:54 PM	Quadratic	0.9998	0.9503	1.1678	1.0340	1.0673	1.1020	1.1846	1.2564	1.0953	9.381
D:\MassHunter\Methods	537_061823_SQ2201_quantmethod.xml	D:\MassHunter\Data\061823_DW_SQ2201	6/19/2023 3:45:54 PM	D:\MassHunter\Data\061823_DW_SQ2201\Q103467.d	7	6/18/2023 5:50:24 PM	6/19/2023 3:45:54 PM	Linear	0.9758	0.9222	1.1114	1.0136	1.0371	1.0930	1.0851	1.0902	1.0411	6.409
D:\MassHunter\Methods	537_061823_SQ2201_quantmethod.xml	D:\MassHunter\Data\061823_DW_SQ2201	6/19/2023 3:45:54 PM	D:\MassHunter\Data\061823_DW_SQ2201\Q103468.d	8	6/18/2023 6:06:09 PM	6/19/2023 3:45:54 PM	Quadratic	0.3856	0.4039	0.5093	0.4378	0.4611	0.4899	0.4991	0.5079	0.4618	10.446
I 13C2-6:2FTS																		
T 6:2FTS																		
T 8:2FTS																		
I 13C2-PFOA																		
S 13C2-PFOA																		
T PFHxA																		
T HFPO-DA																		
S 13C3-HFPO-DA																		
T PFHpA																		
T ADONA																		
T PFOA																		
T PFNA																		
T 9Cl-PF3ONS																		
S 13C2-PFDA																		
T PFDA																		
T 11Cl-PF3OUds																		
I 13C3-PFPeA																		
T PFBA																		
T PFPeA																		
I 13C4-PFOS																		
T PFBS																		
T PFHxS																		
T PFHpS																		
T PFOS																		
T PFUnDA																		
T PFDoDA																		
T PFTfDA																		

Generated at 3:46 PM on 6/19/2023

Page 1 of 3

Initial Calibration Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Sample: SQ2201-ICC2201
 Lab FileID: Q103466.D

Initial Calibration Report

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
T PFTeDA	Linear	4.2847	3.9089	4.8902	4.5469	4.7495	4.9391	4.9400	5.2223	4.6852	9.006
I d3-MeFOSAA	Linear	1.1389	0.9187	1.0846	0.9961	0.9577	1.0879	1.1281	1.0915	1.0504	7.803
T MeFOSAA	Quadratic	0.9304	0.9698	1.1301	1.0028	1.0154	1.1049	1.1991	1.1307	1.0604	8.837
S d5-EFOSAA	Quadratic	0.9867	0.8704	0.9568	0.9763	0.9393	1.0337	1.1244	1.0913	0.9974	8.301

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

Initial Calibration Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Sample: SQ2201-ICC2201
 Lab FileID: Q103466.D

Initial Calibration Report

Compounds with Curve fitting not using Avg Response Factor:

Compound	Curve Fit	Curve Fit Formula	Curve Fit R2
T PFBA	Linear	$y = 0.498253 * x$	0.999737
T PFPeA	Linear	$y = 0.806444 * x$	0.999862
T PFBS	Quadratic	$y = 0.014716 * x^2 + 0.665388 * x$	0.999922
S 13C2-PFHxA	Quadratic	$y = 0.008728 * x^2 + 0.569767 * x$	0.999888
T PFHxA	Quadratic	$y = 0.008840 * x^2 + 0.514414 * x$	0.999907
T HFPO-DA	Quadratic	$y = 8.531272E-005 * x^2 + 0.008647 * x$	0.999946
S 13C3-HFO-DA	Quadratic	$y = 4.376369E-005 * x^2 + 0.007640 * x$	0.999936
T PFHpA	Quadratic	$y = 0.009577 * x^2 + 0.610759 * x$	0.999918
T PFHxS	Quadratic	$y = 0.009743 * x^2 + 0.914524 * x$	0.999889
T ADONA	Quadratic	$y = 0.033113 * x^2 + 1.091803 * x$	0.999941
T 6:2FTS	Linear	$y = 0.892834 * x$	0.996382
T PFHpS	Linear	$y = 0.892352 * x$	0.999485
T PFOA	Linear	$y = 1.088755 * x$	0.999951
T PFOS	Linear	$y = 1.144511 * x$	0.999739
T PFNA	Linear	$y = 0.004722 * x^2 + 0.484644 * x$	0.999930
T 9CH-PF3ONS	Quadratic	$y = 0.012156 * x^2 + 0.406614 * x$	0.998845
S 13C2-PFDA	Linear	$y = 0.560474 * x$	0.999409
T PFDA	Linear	$y = 0.766691 * x$	0.998882
T MeFOSAA	Linear	$y = 1.097183 * x$	0.999521
T 8:2FTS	Quadratic	$y = -0.029139 * x^2 + 0.752572 * x$	0.999462
S d5-EFOSAA	Quadratic	$y = 0.035267 * x^2 + 1.010205 * x$	0.993824
T EtFOSAA	Quadratic	$y = 0.034970 * x^2 + 1.017839 * x$	0.998298
T PFUnDA	Linear	$y = 3.996831 * x$	0.999802
T 11CI-PF3OUdS	Quadratic	$y = 0.013400 * x^2 + 0.577542 * x$	0.999111
T PFDoDA	Linear	$y = 5.046157 * x$	0.999979
T PFTfDA	Linear	$y = 6.026668 * x$	0.999667
T PFTeDA	Linear	$y = 5.154308 * x$	0.999109

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

Initial Calibration Verification

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Sample: SQ2201-ICV2201
 Lab FileID: Q103470.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\061823_DW_SQ2201\sq2201.batch.bin

Level ID: Calibration File

1:D:\MassHunter\Data\061823_DW_SQ2201\Q103461.d
 2:D:\MassHunter\Data\061823_DW_SQ2201\Q103462.d
 3:D:\MassHunter\Data\061823_DW_SQ2201\Q103463.d
 4:D:\MassHunter\Data\061823_DW_SQ2201\Q103464.d
 5:D:\MassHunter\Data\061823_DW_SQ2201\Q103465.d
 6:D:\MassHunter\Data\061823_DW_SQ2201\Q103466.d
 7:D:\MassHunter\Data\061823_DW_SQ2201\Q103467.d
 8:D:\MassHunter\Data\061823_DW_SQ2201\Q103468.d

Data File: Q103470
 Type : QC
 Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	0.000	# -100.0	0.0
13C2-PFHxA	20.000	0.000	# -100.0	0.0
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
6:2FTS	20.000	24.916	24.6	124.6
8:2FTS	20.000	22.432	12.2	112.2
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	40.000	0.000	# -100.0	0.0
EtFOSAA	20.000	22.427	12.1	112.1
MeFOSAA	20.000	21.539	7.7	107.7
PFBA	20.000	22.392	12.0	112.0
PFBS	20.000	20.060	0.3	100.3
PFDA	20.000	23.667	18.3	118.3
PFDoDA	20.000	25.984	29.9	129.9
PFHpA	20.000	21.630	8.1	108.1
PFHpS	20.000	22.896	14.5	114.5
PFHxA	20.000	21.312	6.6	106.6
PFHxS	20.000	19.589	-2.1	97.9
PFNA	20.000	20.421	2.1	102.1
PFOA	20.000	22.582	12.9	112.9
PFOS	20.000	25.423	27.1	127.1
PFPeA	20.000	20.664	3.3	103.3
PFTeDA	20.000	21.167	5.8	105.8
PFTTrDA	20.000	24.506	22.5	122.5
PFunDA	20.000	24.371	21.9	121.9
ADONA	20.000	21.509	7.5	107.5
9Cl-PF3ONS	20.000	20.654	3.3	103.3
11Cl-PF3OUdS	20.000	20.223	1.1	101.1
13C3-HFPO-DA	40.000	0.000	# -100.0	0.0
HFPO-DA	20.000	22.570	12.8	112.8

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Sample: SQ2201-CC2201
 Lab FileID: Q103471.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\061823_DW_SQ2201\sq2201.batch.bin

Level ID: Calibration File

1:D:\MassHunter\Data\061823_DW_SQ2201\Q103461.d
 2:D:\MassHunter\Data\061823_DW_SQ2201\Q103462.d
 3:D:\MassHunter\Data\061823_DW_SQ2201\Q103463.d
 4:D:\MassHunter\Data\061823_DW_SQ2201\Q103464.d
 5:D:\MassHunter\Data\061823_DW_SQ2201\Q103465.d
 6:D:\MassHunter\Data\061823_DW_SQ2201\Q103466.d
 7:D:\MassHunter\Data\061823_DW_SQ2201\Q103467.d
 8:D:\MassHunter\Data\061823_DW_SQ2201\Q103468.d

Data File: Q103471
 Type : QC
 Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	20.517	2.6	102.6
13C2-PFHxA	20.000	19.668	-1.7	98.3
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
6:2FTS	20.000	22.535	12.7	112.7
8:2FTS	20.000	19.910	-0.5	99.5
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	40.000	41.368	3.4	103.4
EtFOSAA	20.000	18.891	-5.5	94.5
MeFOSAA	20.000	18.825	-5.9	94.1
PFBA	20.000	19.518	-2.4	97.6
PFBS	20.000	20.826	4.1	104.1
PFDA	20.000	20.794	4.0	104.0
PFDoDA	20.000	20.207	1.0	101.0
PFHpA	20.000	19.435	-2.8	97.2
PFHpS	20.000	21.545	7.7	107.7
PFHxA	20.000	19.723	-1.4	98.6
PFHxS	20.000	20.993	5.0	105.0
PFNA	20.000	19.665	-1.7	98.3
PFOA	20.000	19.613	-1.9	98.1
PFOS	20.000	20.541	2.7	102.7
PFPeA	20.000	19.068	-4.7	95.3
PFTeDA	20.000	19.587	-2.1	97.9
PFTTrDA	20.000	20.211	1.1	101.1
PFUnDA	20.000	21.688	8.4	108.4
ADONA	20.000	19.466	-2.7	97.3
9Cl-PF3ONS	20.000	20.073	0.4	100.4
11Cl-PF3OUdS	20.000	20.318	1.6	101.6
13C3-HFPO-DA	40.000	38.619	-3.5	96.5
HFPO-DA	20.000	19.663	-1.7	98.3

CC Criteria: +/- 30%

Continuing Calibration Summary

Page 1 of 1

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Sample: SQ2201-CC2201
 Lab FileID: Q103472.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\061823_DW_SQ2201\sq2201.batch.bin

Level ID: Calibration File

1:D:\MassHunter\Data\061823_DW_SQ2201\Q103461.d
 2:D:\MassHunter\Data\061823_DW_SQ2201\Q103462.d
 3:D:\MassHunter\Data\061823_DW_SQ2201\Q103463.d
 4:D:\MassHunter\Data\061823_DW_SQ2201\Q103464.d
 5:D:\MassHunter\Data\061823_DW_SQ2201\Q103465.d
 6:D:\MassHunter\Data\061823_DW_SQ2201\Q103466.d
 7:D:\MassHunter\Data\061823_DW_SQ2201\Q103467.d
 8:D:\MassHunter\Data\061823_DW_SQ2201\Q103468.d

Data File: Q103472
 Type : QC
 Level : 1

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	0.500	0.458	-8.3	91.7
13C2-PFHxA	0.500	0.455	-8.9	91.1
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
6:2FTS	0.500	0.538	7.6	107.6
8:2FTS	0.500	0.564	12.7	112.7
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	1.000	1.182	18.2	118.2
EtFOSAA	0.500	0.718	43.6	143.6
MeFOSAA	0.500	0.591	18.2	118.2
PFBA	0.500	0.457	-8.5	91.5
PFBS	0.500	0.483	-3.4	96.6
PFDA	0.500	0.457	-8.6	91.4
PFDoDA	0.500	0.473	-5.5	94.5
PFHpA	0.500	0.488	-2.3	97.7
PFHpS	0.500	0.519	3.8	103.8
PFHxA	0.500	0.469	-6.2	93.8
PFHxS	0.500	0.512	2.3	102.3
PFNA	0.500	0.405	-19.0	81.0
PFOA	0.500	0.432	-13.7	86.3
PFOS	0.500	0.471	-5.8	94.2
PFPeA	0.500	0.455	-9.0	91.0
PFTeDA	0.500	0.457	-8.7	91.3
PFTTrDA	0.500	0.453	-9.5	90.5
PFUnDA	0.500	0.493	-1.5	98.5
ADONA	0.500	0.439	-12.1	87.9
9Cl-PF3ONS	0.500	0.438	-12.4	87.6
11Cl-PF3OUdS	0.500	0.453	-9.3	90.7
13C3-HFPO-DA	1.000	1.079	7.9	107.9
HFPO-DA	0.500	0.572	14.3	114.3

CC Criteria: +/- 50%

Continuing Calibration Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Sample: SQ2201-CC2201
 Lab FileID: Q103483.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\061823_DW_SQ2201\sq2201.batch.bin

Level ID: Calibration File

1:D:\MassHunter\Data\061823_DW_SQ2201\Q103461.d
 2:D:\MassHunter\Data\061823_DW_SQ2201\Q103462.d
 3:D:\MassHunter\Data\061823_DW_SQ2201\Q103463.d
 4:D:\MassHunter\Data\061823_DW_SQ2201\Q103464.d
 5:D:\MassHunter\Data\061823_DW_SQ2201\Q103465.d
 6:D:\MassHunter\Data\061823_DW_SQ2201\Q103466.d
 7:D:\MassHunter\Data\061823_DW_SQ2201\Q103467.d
 8:D:\MassHunter\Data\061823_DW_SQ2201\Q103468.d

Data File: Q103483
 Type : QC
 Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	20.686	3.4	103.4
13C2-PFHxA	20.000	20.085	0.4	100.4
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
6:2FTS	20.000	22.519	12.6	112.6
8:2FTS	20.000	19.683	-1.6	98.4
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	40.000	40.194	0.5	100.5
EtFOSAA	20.000	19.631	-1.8	98.2
MeFOSAA	20.000	19.215	-3.9	96.1
PFBA	20.000	19.797	-1.0	99.0
PFBS	20.000	20.978	4.9	104.9
PFDA	20.000	21.436	7.2	107.2
PFDoDA	20.000	20.502	2.5	102.5
PFHpA	20.000	19.676	-1.6	98.4
PFHpS	20.000	21.718	8.6	108.6
PFHxA	20.000	20.219	1.1	101.1
PFHxS	20.000	21.328	6.6	106.6
PFNA	20.000	19.445	-2.8	97.2
PFOA	20.000	19.604	-2.0	98.0
PFOS	20.000	20.021	0.1	100.1
PFPeA	20.000	18.728	-6.4	93.6
PFTeDA	20.000	20.065	0.3	100.3
PFTTrDA	20.000	19.950	-0.2	99.8
PFUnDA	20.000	21.467	7.3	107.3
ADONA	20.000	19.326	-3.4	96.6
9Cl-PF3ONS	20.000	21.077	5.4	105.4
11Cl-PF3OUdS	20.000	19.809	-1.0	99.0
13C3-HFPO-DA	40.000	40.255	0.6	100.6
HFPO-DA	20.000	18.809	-6.0	94.0

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Sample: SQ2201-CC2201
 Lab FileID: Q103495.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\061823_DW_SQ2201\sq2201.batch.bin

Level ID: Calibration File

1:D:\MassHunter\Data\061823_DW_SQ2201\Q103461.d
 2:D:\MassHunter\Data\061823_DW_SQ2201\Q103462.d
 3:D:\MassHunter\Data\061823_DW_SQ2201\Q103463.d
 4:D:\MassHunter\Data\061823_DW_SQ2201\Q103464.d
 5:D:\MassHunter\Data\061823_DW_SQ2201\Q103465.d
 6:D:\MassHunter\Data\061823_DW_SQ2201\Q103466.d
 7:D:\MassHunter\Data\061823_DW_SQ2201\Q103467.d
 8:D:\MassHunter\Data\061823_DW_SQ2201\Q103468.d

Data File: Q103495
 Type : QC
 Level : 7

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	50.000	50.637	1.3	101.3
13C2-PFHxA	50.000	51.629	3.3	103.3
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
6:2FTS	50.000	54.008	8.0	108.0
8:2FTS	50.000	49.081	-1.8	98.2
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	100.000	102.583	2.6	102.6
EtFOSAA	50.000	50.304	0.6	100.6
MeFOSAA	50.000	50.910	1.8	101.8
PFBA	50.000	51.129	2.3	102.3
PFBS	50.000	51.353	2.7	102.7
PFDA	50.000	52.815	5.6	105.6
PFDoDA	50.000	48.923	-2.2	97.8
PFHpA	50.000	50.444	0.9	100.9
PFHpS	50.000	52.239	4.5	104.5
PFHxA	50.000	52.038	4.1	104.1
PFHxS	50.000	52.672	5.3	105.3
PFNA	50.000	49.279	-1.4	98.6
PFOA	50.000	51.629	3.3	103.3
PFOS	50.000	52.008	4.0	104.0
PFPeA	50.000	49.301	-1.4	98.6
PFTeDA	50.000	50.118	0.2	100.2
PFTTrDA	50.000	49.493	-1.0	99.0
PFUnDA	50.000	52.100	4.2	104.2
ADONA	50.000	49.899	-0.2	99.8
9Cl-PF3ONS	50.000	53.938	7.9	107.9
11Cl-PF3OUdS	50.000	51.438	2.9	102.9
13C3-HFPO-DA	100.000	105.436	5.4	105.4
HFPO-DA	50.000	52.428	4.9	104.9

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Sample: SQ2201-CC2201
 Lab FileID: Q103496.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\061823_DW_SQ2201\sq2201.batch.bin

Level ID: Calibration File

1:D:\MassHunter\Data\061823_DW_SQ2201\Q103461.d
 2:D:\MassHunter\Data\061823_DW_SQ2201\Q103462.d
 3:D:\MassHunter\Data\061823_DW_SQ2201\Q103463.d
 4:D:\MassHunter\Data\061823_DW_SQ2201\Q103464.d
 5:D:\MassHunter\Data\061823_DW_SQ2201\Q103465.d
 6:D:\MassHunter\Data\061823_DW_SQ2201\Q103466.d
 7:D:\MassHunter\Data\061823_DW_SQ2201\Q103467.d
 8:D:\MassHunter\Data\061823_DW_SQ2201\Q103468.d

Data File: Q103496
 Type : QC
 Level : 1

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	0.500	0.530	5.9	105.9
13C2-PFHxA	0.500	0.436	-12.8	87.2
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
6:2FTS	0.500	0.674	34.8	134.8
8:2FTS	0.500	0.522	4.4	104.4
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	1.000	1.369	36.9	136.9
EtFOSAA	0.500	0.610	21.9	121.9
MeFOSAA	0.500	0.665	33.0	133.0
PFBA	0.500	0.459	-8.2	91.8
PFBS	0.500	0.513	2.6	102.6
PFDA	0.500	0.498	-0.4	99.6
PFDoDA	0.500	0.514	2.7	102.7
PFHpA	0.500	0.492	-1.6	98.4
PFHpS	0.500	0.485	-3.0	97.0
PFHxA	0.500	0.471	-5.8	94.2
PFHxS	0.500	0.514	2.7	102.7
PFNA	0.500	0.405	-19.0	81.0
PFOA	0.500	0.454	-9.3	90.7
PFOS	0.500	0.584	16.8	116.8
PFPeA	0.500	0.448	-10.5	89.5
PFTeDA	0.500	0.503	0.6	100.6
PFTTrDA	0.500	0.483	-3.4	96.6
PFUnDA	0.500	0.540	8.0	108.0
ADONA	0.500	0.444	-11.1	88.9
9Cl-PF3ONS	0.500	0.467	-6.6	93.4
11Cl-PF3OUdS	0.500	0.440	-12.0	88.0
13C3-HFPO-DA	1.000	0.883	-11.7	88.3
HFPO-DA	0.500	0.462	-7.7	92.3

CC Criteria: +/- 50%

Continuing Calibration Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Sample: SQ2201-CC2201
 Lab FileID: Q103508.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\061823_DW_SQ2201\sq2201.batch.bin

Level ID: Calibration File

1:D:\MassHunter\Data\061823_DW_SQ2201\Q103461.d
 2:D:\MassHunter\Data\061823_DW_SQ2201\Q103462.d
 3:D:\MassHunter\Data\061823_DW_SQ2201\Q103463.d
 4:D:\MassHunter\Data\061823_DW_SQ2201\Q103464.d
 5:D:\MassHunter\Data\061823_DW_SQ2201\Q103465.d
 6:D:\MassHunter\Data\061823_DW_SQ2201\Q103466.d
 7:D:\MassHunter\Data\061823_DW_SQ2201\Q103467.d
 8:D:\MassHunter\Data\061823_DW_SQ2201\Q103468.d

Data File: Q103508
 Type : QC
 Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	20.444	2.2	102.2
13C2-PFHxA	20.000	19.922	-0.4	99.6
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
6:2FTS	20.000	22.379	11.9	111.9
8:2FTS	20.000	19.462	-2.7	97.3
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	40.000	41.500	3.8	103.8
EtFOSAA	20.000	19.606	-2.0	98.0
MeFOSAA	20.000	19.651	-1.7	98.3
PFBA	20.000	19.703	-1.5	98.5
PFBS	20.000	21.135	5.7	105.7
PFDA	20.000	21.283	6.4	106.4
PFDoDA	20.000	20.531	2.7	102.7
PFHpA	20.000	19.602	-2.0	98.0
PFHpS	20.000	22.446	12.2	112.2
PFHxA	20.000	20.262	1.3	101.3
PFHxS	20.000	21.600	8.0	108.0
PFNA	20.000	19.619	-1.9	98.1
PFOA	20.000	20.234	1.2	101.2
PFOS	20.000	21.212	6.1	106.1
PFPeA	20.000	18.824	-5.9	94.1
PFTeDA	20.000	20.443	2.2	102.2
PFTrDA	20.000	20.437	2.2	102.2
PFUnDA	20.000	21.816	9.1	109.1
ADONA	20.000	19.630	-1.8	98.2
9Cl-PF3ONS	20.000	21.034	5.2	105.2
11Cl-PF3OUdS	20.000	20.208	1.0	101.0
13C3-HFPO-DA	40.000	40.665	1.7	101.7
HFPO-DA	20.000	20.076	0.4	100.4

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Sample: SQ2202-CC2201
 Lab FileID: Q103525.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\061923_DW_SQ2202\sq2202.batch.bin

Level ID: Calibration File

1:D:\MassHunter\Data\061823_DW_SQ2201\Q103461.d
 2:D:\MassHunter\Data\061823_DW_SQ2201\Q103462.d
 3:D:\MassHunter\Data\061823_DW_SQ2201\Q103463.d
 4:D:\MassHunter\Data\061823_DW_SQ2201\Q103464.d
 5:D:\MassHunter\Data\061823_DW_SQ2201\Q103465.d
 6:D:\MassHunter\Data\061823_DW_SQ2201\Q103466.d
 7:D:\MassHunter\Data\061823_DW_SQ2201\Q103467.d
 8:D:\MassHunter\Data\061823_DW_SQ2201\Q103468.d

Data File: Q103525
 Type : QC
 Level : 1

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	0.500	0.493	-1.5	98.5
13C2-PFHxA	0.500	0.482	-3.5	96.5
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
6:2FTS	0.500	0.756	# 51.2	151.2
8:2FTS	0.500	0.458	-8.5	91.5
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	1.000	1.090	9.0	109.0
EtFOSAA	0.500	0.597	19.5	119.5
MeFOSAA	0.500	0.528	5.6	105.6
PFBA	0.500	0.480	-4.0	96.0
PFBS	0.500	0.656	31.3	131.3
PFDA	0.500	0.508	1.6	101.6
PFDoDA	0.500	0.481	-3.9	96.1
PFHpA	0.500	0.510	1.9	101.9
PFHpS	0.500	0.615	23.0	123.0
PFHxA	0.500	0.482	-3.7	96.3
PFHxS	0.500	0.685	37.0	137.0
PFNA	0.500	0.413	-17.4	82.6
PFOA	0.500	0.469	-6.3	93.7
PFOS	0.500	0.698	39.5	139.5
PFPeA	0.500	0.501	0.2	100.2
PFTeDA	0.500	0.456	-8.9	91.1
PFTTrDA	0.500	0.481	-3.7	96.3
PFUnDA	0.500	0.510	2.0	102.0
ADONA	0.500	0.490	-2.0	98.0
9Cl-PF3ONS	0.500	0.470	-5.9	94.1
11Cl-PF3OUdS	0.500	0.461	-7.9	92.1
13C3-HFPO-DA	1.000	0.965	-3.5	96.5
HFPO-DA	0.500	0.471	-5.7	94.3

CC Criteria: +/- 50%

Continuing Calibration Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Sample: SQ2202-CC2201
 Lab FileID: Q103536.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\061923_DW_SQ2202\sq2202.batch.bin

Level ID: Calibration File

1:D:\MassHunter\Data\061823_DW_SQ2201\Q103461.d
 2:D:\MassHunter\Data\061823_DW_SQ2201\Q103462.d
 3:D:\MassHunter\Data\061823_DW_SQ2201\Q103463.d
 4:D:\MassHunter\Data\061823_DW_SQ2201\Q103464.d
 5:D:\MassHunter\Data\061823_DW_SQ2201\Q103465.d
 6:D:\MassHunter\Data\061823_DW_SQ2201\Q103466.d
 7:D:\MassHunter\Data\061823_DW_SQ2201\Q103467.d
 8:D:\MassHunter\Data\061823_DW_SQ2201\Q103468.d

Data File: Q103536
 Type : QC
 Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	20.513	2.6	102.6
13C2-PFHxA	20.000	19.849	-0.8	99.2
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
6:2FTS	20.000	22.303	11.5	111.5
8:2FTS	20.000	19.749	-1.3	98.7
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	40.000	41.222	3.1	103.1
EtFOSAA	20.000	20.178	0.9	100.9
MeFOSAA	20.000	19.559	-2.2	97.8
PFBA	20.000	19.813	-0.9	99.1
PFBS	20.000	21.867	9.3	109.3
PFDA	20.000	21.761	8.8	108.8
PFDoDA	20.000	20.912	4.6	104.6
PFHpA	20.000	19.542	-2.3	97.7
PFHpS	20.000	22.321	11.6	111.6
PFHxA	20.000	20.285	1.4	101.4
PFHxS	20.000	21.980	9.9	109.9
PFNA	20.000	19.491	-2.5	97.5
PFOA	20.000	20.190	0.9	100.9
PFOS	20.000	21.105	5.5	105.5
PFPeA	20.000	19.233	-3.8	96.2
PFTeDA	20.000	20.228	1.1	101.1
PFTrDA	20.000	20.469	2.3	102.3
PFUnDA	20.000	22.350	11.8	111.8
ADONA	20.000	19.815	-0.9	99.1
9Cl-PF3ONS	20.000	20.481	2.4	102.4
11Cl-PF3OUdS	20.000	20.451	2.3	102.3
13C3-HFPO-DA	40.000	42.635	6.6	106.6
HFPO-DA	20.000	19.861	-0.7	99.3

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Sample: SQ2202-CC2201
 Lab FileID: Q103540.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\061923_DW_SQ2202\sq2202.batch.bin

Level ID: Calibration File

1:D:\MassHunter\Data\061823_DW_SQ2201\Q103461.d
 2:D:\MassHunter\Data\061823_DW_SQ2201\Q103462.d
 3:D:\MassHunter\Data\061823_DW_SQ2201\Q103463.d
 4:D:\MassHunter\Data\061823_DW_SQ2201\Q103464.d
 5:D:\MassHunter\Data\061823_DW_SQ2201\Q103465.d
 6:D:\MassHunter\Data\061823_DW_SQ2201\Q103466.d
 7:D:\MassHunter\Data\061823_DW_SQ2201\Q103467.d
 8:D:\MassHunter\Data\061823_DW_SQ2201\Q103468.d

Data File: Q103540
 Type : QC
 Level : 7

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	50.000	49.919	-0.2	99.8
13C2-PFHxA	50.000	49.891	-0.2	99.8
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
6:2FTS	50.000	55.177	10.4	110.4
8:2FTS	50.000	51.252	2.5	102.5
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	100.000	101.326	1.3	101.3
EtFOSAA	50.000	50.473	0.9	100.9
MeFOSAA	50.000	49.801	-0.4	99.6
PFBA	50.000	51.090	2.2	102.2
PFBS	50.000	53.958	7.9	107.9
PFDA	50.000	51.783	3.6	103.6
PFDoDA	50.000	54.200	8.4	108.4
PFHpA	50.000	49.020	-2.0	98.0
PFHpS	50.000	55.404	10.8	110.8
PFHxA	50.000	50.578	1.2	101.2
PFHxS	50.000	55.044	10.1	110.1
PFNA	50.000	48.317	-3.4	96.6
PFOA	50.000	50.548	1.1	101.1
PFOS	50.000	54.343	8.7	108.7
PFPeA	50.000	48.792	-2.4	97.6
PFTeDA	50.000	53.756	7.5	107.5
PFTTrDA	50.000	53.092	6.2	106.2
PFUnDA	50.000	54.152	8.3	108.3
ADONA	50.000	50.174	0.3	100.3
9Cl-PF3ONS	50.000	52.215	4.4	104.4
11Cl-PF3OUdS	50.000	50.468	0.9	100.9
13C3-HFPO-DA	100.000	102.171	2.2	102.2
HFPO-DA	50.000	50.937	1.9	101.9

CC Criteria: +/- 30%

Run Sequence Report

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Run ID: SQ2201	Method: EPA 537.1 REV 1.0	Instrument ID: GCMSQ
----------------	---------------------------	----------------------

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
SQ2201-IC2201	Q103460.D	06/18/23 15:59	n/a	Mass Calibration Verification
SQ2201-IC2201	Q103461.D	06/18/23 16:15	n/a	Initial cal 0.5
SQ2201-IC2201	Q103462.D	06/18/23 16:31	n/a	Initial cal 1
SQ2201-IC2201	Q103463.D	06/18/23 16:47	n/a	Initial cal 2
SQ2201-IC2201	Q103464.D	06/18/23 17:03	n/a	Initial cal 5
SQ2201-IC2201	Q103465.D	06/18/23 17:18	n/a	Initial cal 10
SQ2201-ICC2201	Q103466.D	06/18/23 17:34	n/a	Initial cal 20
SQ2201-IC2201	Q103467.D	06/18/23 17:50	n/a	Initial cal 50
SQ2201-IC2201	Q103468.D	06/18/23 18:06	n/a	Initial cal 100
SQ2201-RT	Q103469.D	06/18/23 18:21	n/a	Retention Time Marker
SQ2201-ICV2201	Q103470.D	06/18/23 18:37	n/a	Initial cal verification 20
SQ2201-CC2201	Q103471.D	06/18/23 18:53	n/a	Continuing cal 20
SQ2201-CC2201	Q103472.D	06/18/23 19:09	n/a	Continuing cal 0.5LL
OP97324-BS	Q103473.D	06/18/23 19:25	OP97324	Blank Spike
OP97324-MB	Q103474.D	06/18/23 19:40	OP97324	Method Blank
FC6520-2	Q103476.D	06/18/23 20:12	OP97324	FCWTP-INF 001 FB
FC6520-3	Q103477.D	06/18/23 20:28	OP97324	FCWTP-INF 100(SA101)
FC6520-4	Q103478.D	06/18/23 20:44	OP97324	FCWTP-MP 105(SA105)
FC6520-5	Q103479.D	06/18/23 20:59	OP97324	FCWTP-MP 105 FB
FC6520-6	Q103480.D	06/18/23 21:15	OP97324	FCWTP-50%MEDIA 50103(SA103)
FC6520-7	Q103481.D	06/18/23 21:31	OP97324	FCWTP-50%MEDIA 50107(SA107)
FC6520-8	Q103482.D	06/18/23 21:47	OP97324	FCWTP-EF 109(SA109)
SQ2201-CC2201	Q103483.D	06/18/23 22:02	n/a	Continuing cal 20
FC6520-9	Q103485.D	06/18/23 22:34	OP97324	FCWTP-INF 200(SA201)
FC6520-10	Q103486.D	06/18/23 22:50	OP97324	FCWTP-MP 205(SA205)
FC6520-11	Q103487.D	06/18/23 23:06	OP97324	FCWTP-MP 205 FB
FC6520-12	Q103488.D	06/18/23 23:21	OP97324	FCWTP-MP (SA105)
FC6520-13	Q103489.D	06/18/23 23:37	OP97324	FCWTP-EF 209(SA209)
FC6520-14	Q103490.D	06/18/23 23:53	OP97324	FCWTP-50%MEDIA 50203(SA203)
FC6520-15	Q103491.D	06/19/23 00:09	OP97324	FCWTP-50%MEDIA 50207(SA207)
FC6520-16	Q103492.D	06/19/23 00:24	OP97324	FCWTP-EF 002(EXISTING PLANT EFFLUENT/POS
OP97324-MS	Q103493.D	06/19/23 00:40	OP97324	Matrix Spike
OP97324-MSD	Q103494.D	06/19/23 00:56	OP97324	Matrix Spike Duplicate
SQ2201-CC2201	Q103495.D	06/19/23 01:12	n/a	Continuing cal 50
SQ2201-CC2201	Q103496.D	06/19/23 01:28	n/a	Continuing cal 0.5LL
FC6520-17	Q103498.D	06/19/23 01:59	OP97324	FCWTP-EF 002 FB (EXISTING PLANT EFFLUENT)
OP97367-BS	Q103499.D	06/19/23 02:15	OP97367	Blank Spike
OP97367-MB	Q103500.D	06/19/23 02:31	OP97367	Method Blank
FC6595-1	Q103501.D	06/19/23 02:47	OP97367	(used for QC only; not part of job FC6520)
OP97367-MS1	Q103502.D	06/19/23 03:02	OP97367	Matrix Spike
OP97367-MSD1	Q103503.D	06/19/23 03:18	OP97367	Matrix Spike Duplicate
ZZZZZZ	Q103504.D	06/19/23 03:34	OP97367	(unrelated sample)
ZZZZZZ	Q103505.D	06/19/23 03:50	OP97367	(unrelated sample)
FC6597-1	Q103506.D	06/19/23 04:05	OP97367	(used for QC only; not part of job FC6520)
OP97367-MS2	Q103507.D	06/19/23 04:21	OP97367	Matrix Spike
SQ2201-CC2201	Q103508.D	06/19/23 04:37	n/a	Continuing cal 20

Run Sequence Report

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Run ID: SQ2201	Method: EPA 537.1 REV 1.0	Instrument ID: GCMSQ
----------------	---------------------------	----------------------

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
OP97367-MSD2	Q103510.D	06/19/23 05:09	OP97367	Matrix Spike Duplicate
ZZZZZZ	Q103511.D	06/19/23 05:24	OP97367	(unrelated sample)
ZZZZZZ	Q103512.D	06/19/23 05:40	OP97367	(unrelated sample)
ZZZZZZ	Q103513.D	06/19/23 05:56	OP97367	(unrelated sample)
ZZZZZZ	Q103514.D	06/19/23 06:12	OP97367	(unrelated sample)
ZZZZZZ	Q103515.D	06/19/23 06:27	OP97367	(unrelated sample)
ZZZZZZ	Q103516.D	06/19/23 06:43	OP97367	(unrelated sample)
ZZZZZZ	Q103517.D	06/19/23 06:59	OP97367	(unrelated sample)
SQ2201-ECC2201	Q103518.D	06/19/23 07:15	n/a	Ending cal 20
ZZZZZZ	Q103542.D	06/19/23 21:51	OP97367	(unrelated sample)
ZZZZZZ	Q103543.D	06/19/23 22:07	OP97367	(unrelated sample)

6.7.1
6

Run Sequence Report

Job Number: FC6520
 Account: TOCOUWAC Town of Coupeville
 Project: PFAS Analysis

Run ID: SQ2202	Method: EPA 537.1 REV 1.0	Instrument ID: GCMSQ
----------------	---------------------------	----------------------

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
SQ2202-RT	Q103523.D	06/19/23 17:23	n/a	Retention Time Marker
SQ2202-CC2201	Q103524.D	06/19/23 17:39	n/a	Continuing cal 20
SQ2202-CC2201	Q103525.D	06/19/23 17:55	n/a	Continuing cal 0.5LL
OP97367-BS	Q103526.D	06/19/23 18:10	OP97367	Blank Spike
OP97367-MB	Q103527.D	06/19/23 18:26	OP97367	Method Blank
SQ2202-CC2201	Q103536.D	06/19/23 20:48	n/a	Continuing cal 20
FC6520-1	Q103538.D	06/19/23 21:04	OP97324	FCWTP-INF 001(BOOSTER TAP)
SQ2202-CC2201	Q103540.D	06/19/23 21:36	n/a	Continuing cal 50
SQ2202-ECC2201	Q103544.D	06/19/23 22:23	n/a	Ending cal 20

MS Semi-volatiles

Raw Data

Perfluorinated Compounds by LC/MS/MS

Data File : Q103538.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/19/2023 9:04:26 PM
 Sample Name : fc6520-1
 Vial : P1-B5
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2202.batch.bin
 Sample Information : OP97324,SQ2202,280,,,1,1,water

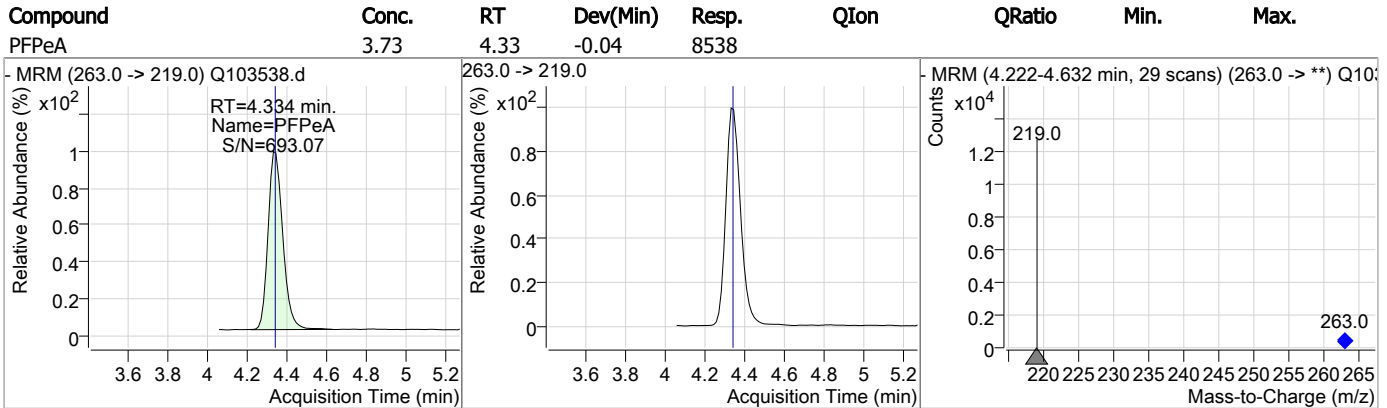
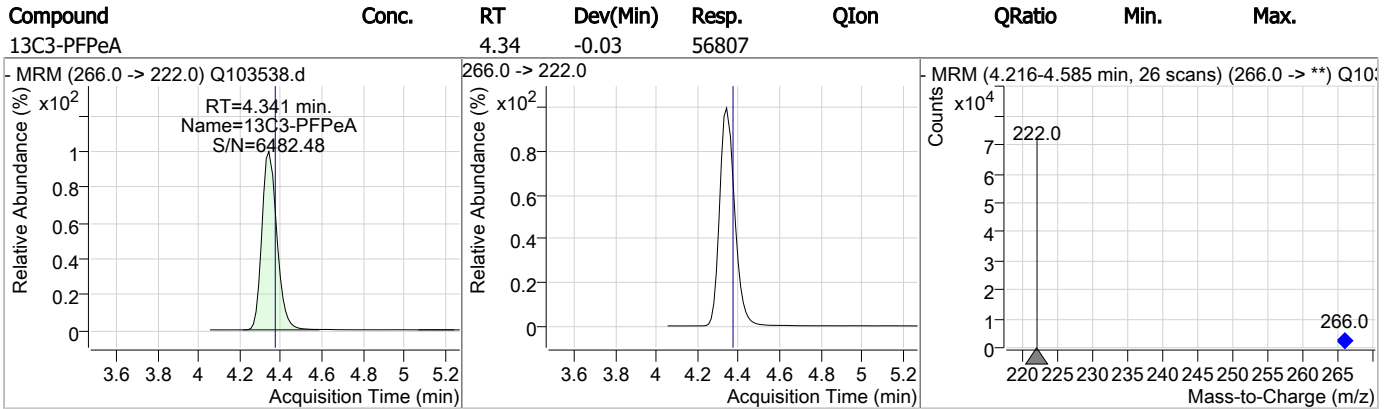
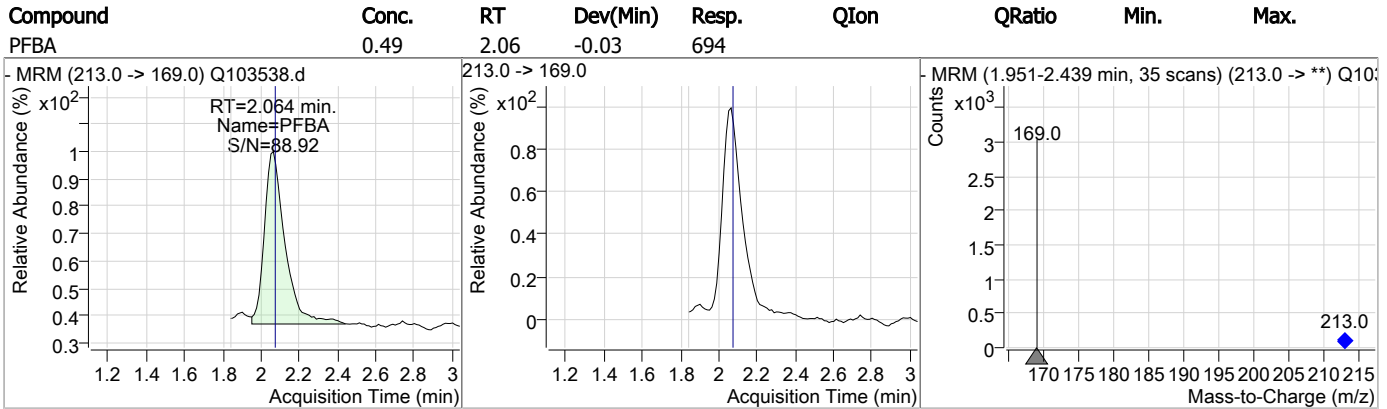
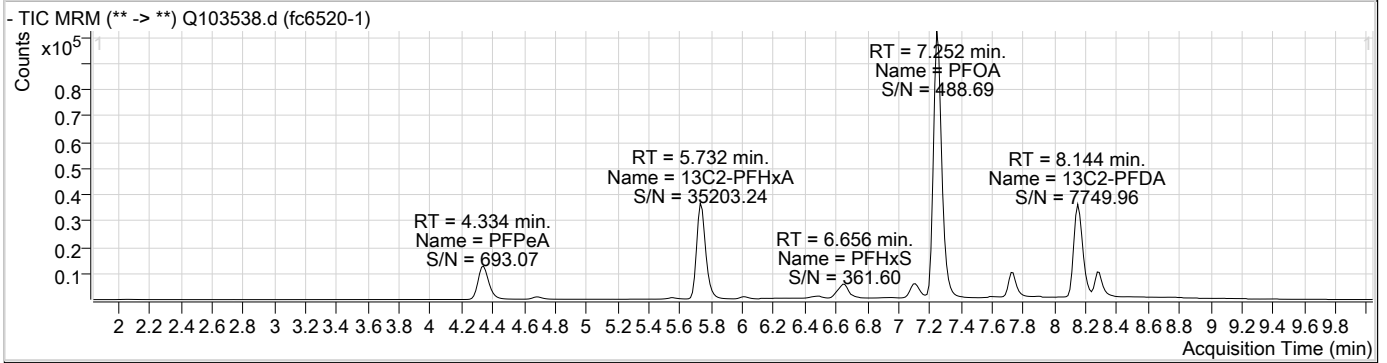
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.237	429.0 -> 409.0	41911	20.00 µg/L	0.013
13C2-PFOA	7.252	415.0 -> 370.0	198510	20.00 µg/L	0.013
13C3-PFPeA	4.341	266.0 -> 222.0	56807	20.00 µg/L	-0.031
13C4-PFOS	7.728	503.0 -> 80.0	32784	20.00 µg/L	0.013
d3-MeFOSAA	8.177	573.0 -> 419.0	42886	40.00 µg/L	0.013
System Monitoring Compounds					
13C2-PFDA	8.144	515.0 -> 470.0	100942	18.15 µg/L	0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 90.7%	
13C2-PFHxA	5.732	315.0 -> 270.0	123396	21.47 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 107.3%	
d5-EtFOSAA	8.277	589.0 -> 419.0	31639	28.50 µg/L	0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 71.3%	
13C3-HFPO-DA	6.013	287.0 -> 169.0	3394	44.20 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 110.5%	
Target Compounds					
6:2FTS	7.238	427.0 -> 407.0	357	0.19 µg/L	96
8:2FTS	-	527.0 -> 507.0	-	N.D.	
EtFOSAA	8.290	584.0 -> 419.0	151	0.14 µg/L	m 81
MeFOSAA	8.178	570.0 -> 419.0	120	0.10 µg/L	m 86
PFBA	2.064	213.0 -> 169.0	694	0.49 µg/L	100
PFBS	4.678	299.0 -> 80.0	2662	2.43 µg/L	99
PFDA	-	513.0 -> 469.0	-	N.D.	
PFDoDA	-	613.0 -> 569.0	-	N.D.	
PFHpA	6.612	363.0 -> 319.0	8927	1.47 µg/L	m 97
PFHpS	-	449.0 -> 80.0	-	N.D.	
PFHxA	5.734	313.0 -> 269.0	23105	4.51 µg/L	98
PFHxS	6.656	399.0 -> 80.0	15045	9.98 µg/L	m 95
PFNA	-	463.0 -> 419.0	-	N.D.	
PFOA	7.252	413.0 -> 369.0	129684	12.00 µg/L	m 97
PFOS	7.574	499.0 -> 80.0	940	0.50 µg/L	#m 56
PFPeA	4.334	263.0 -> 219.0	8538	3.73 µg/L	100
PFTeDA	-	713.0 -> 669.0	-	N.D.	
PFTTrDA	-	663.0 -> 619.0	-	N.D.	
PFUnDA	-	563.0 -> 519.0	-	N.D.	
ADONA	-	377.0 -> 251.0	-	N.D.	
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
HFPO-DA	-	285.0 -> 169.0	-	N.D.	

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

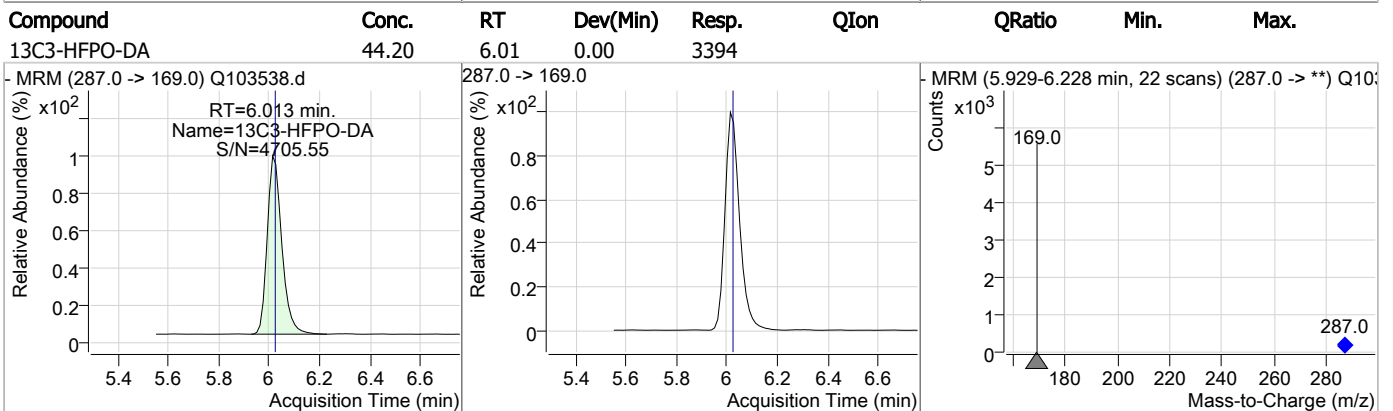
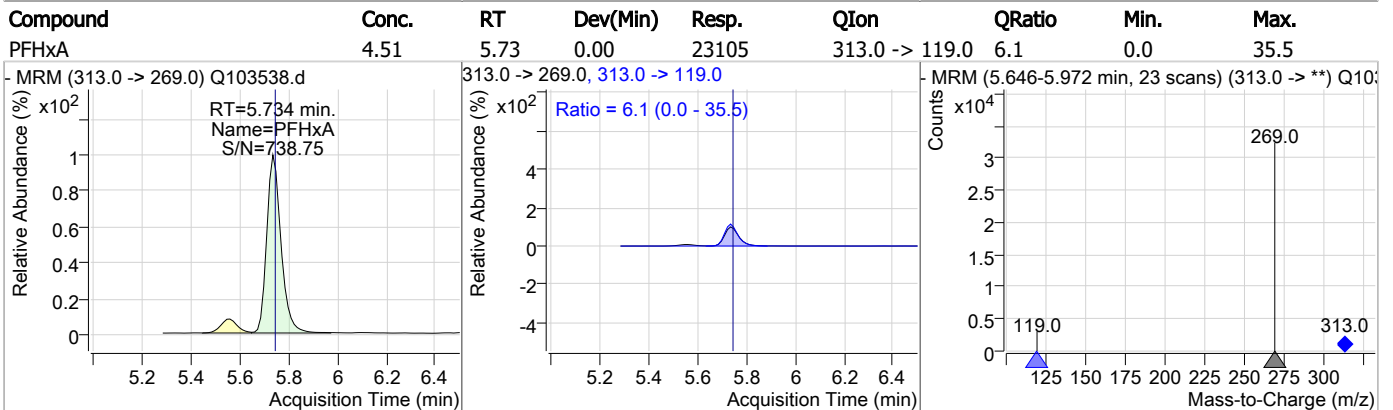
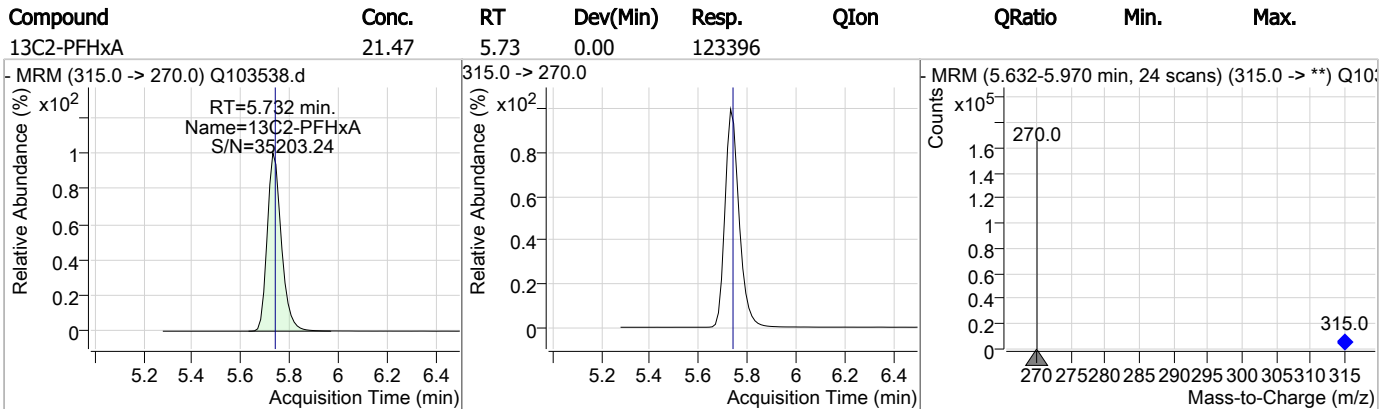
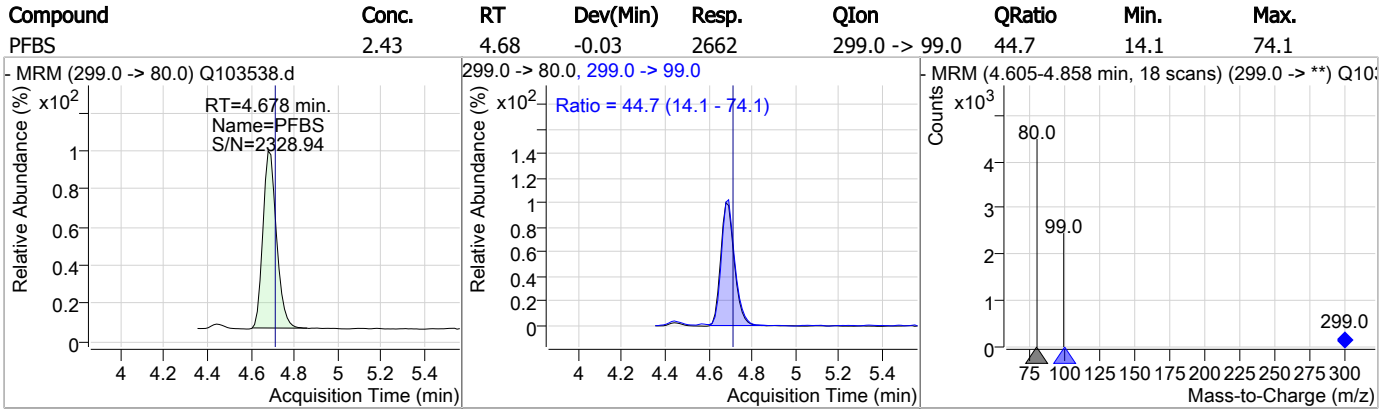
7.1.1
7



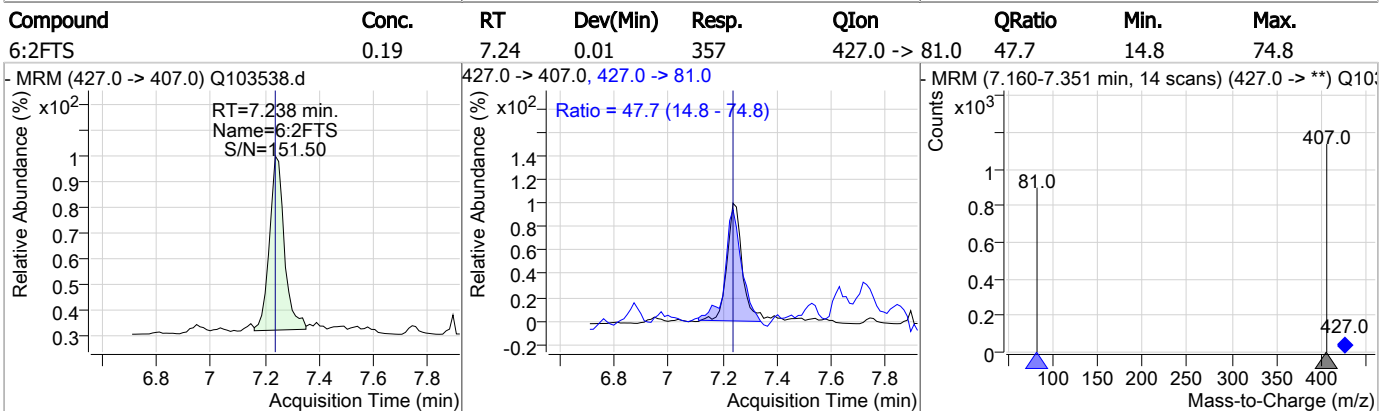
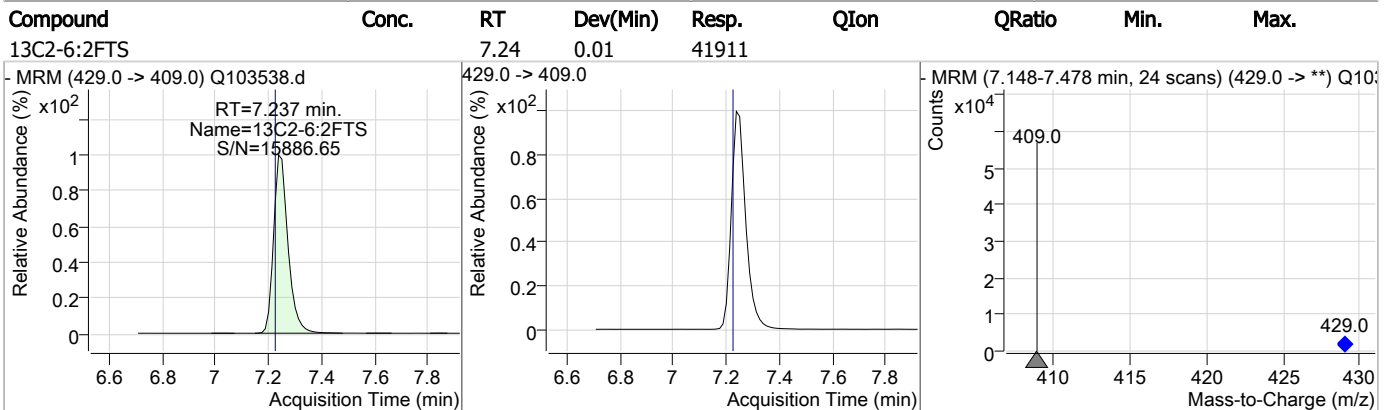
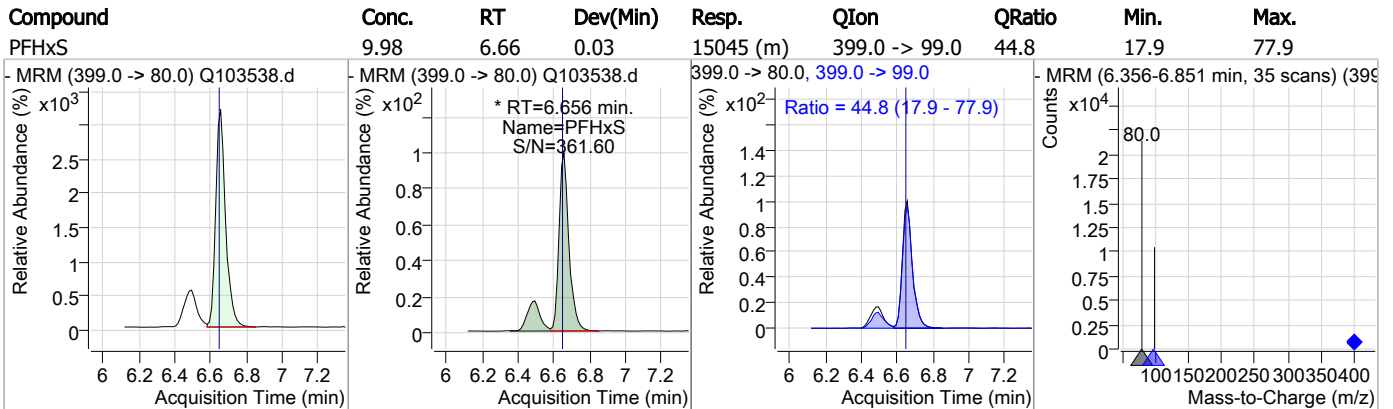
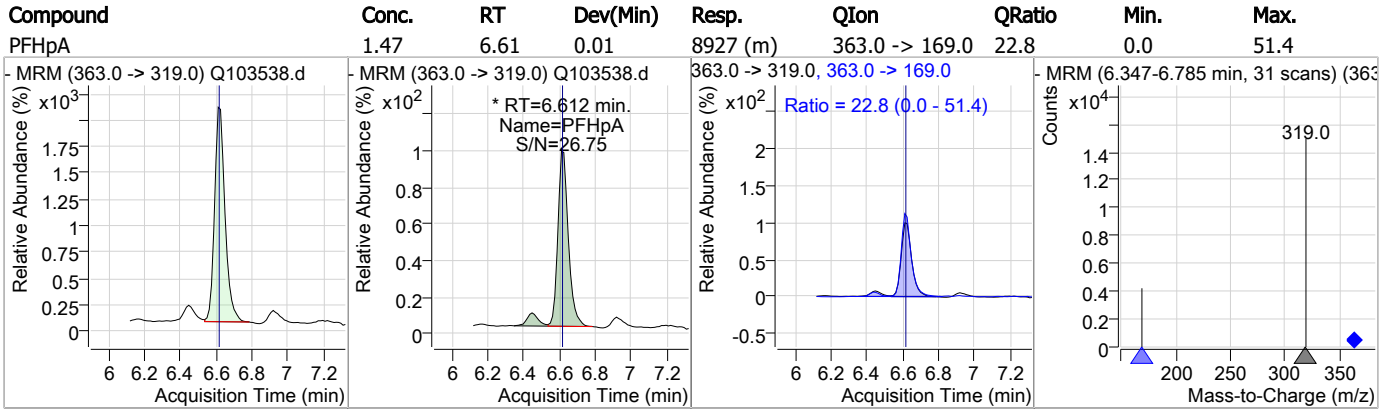
Perfluorinated Compounds by LC/MS/MS



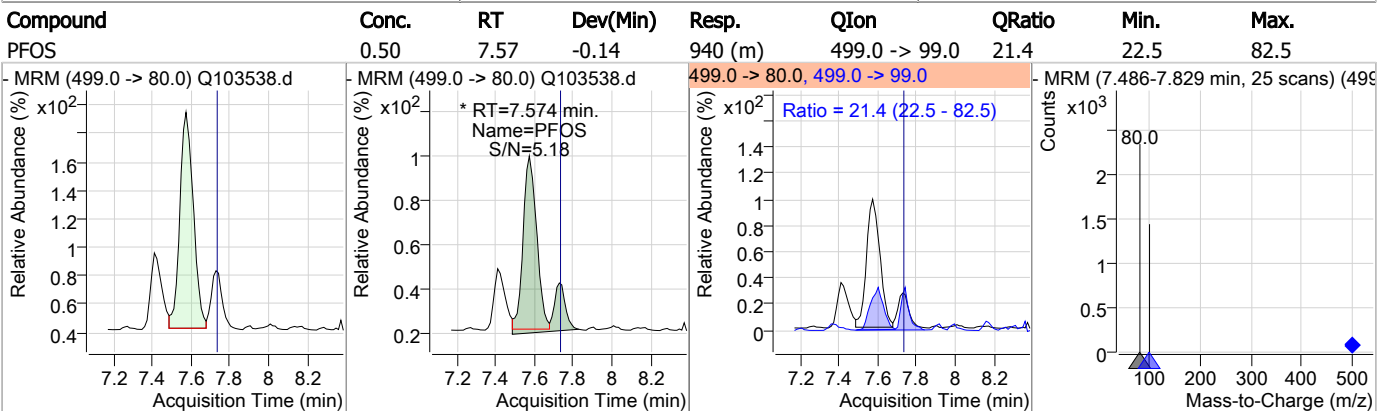
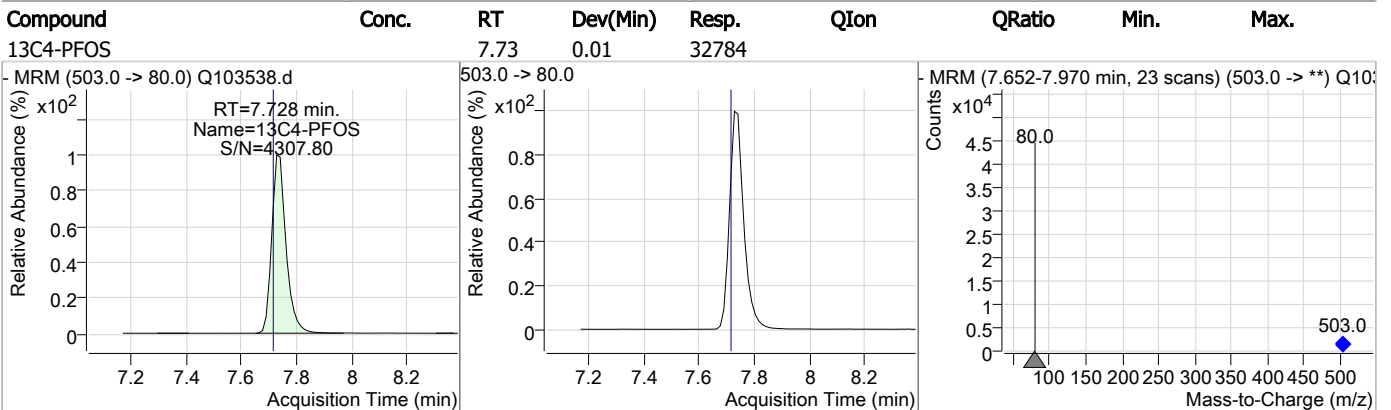
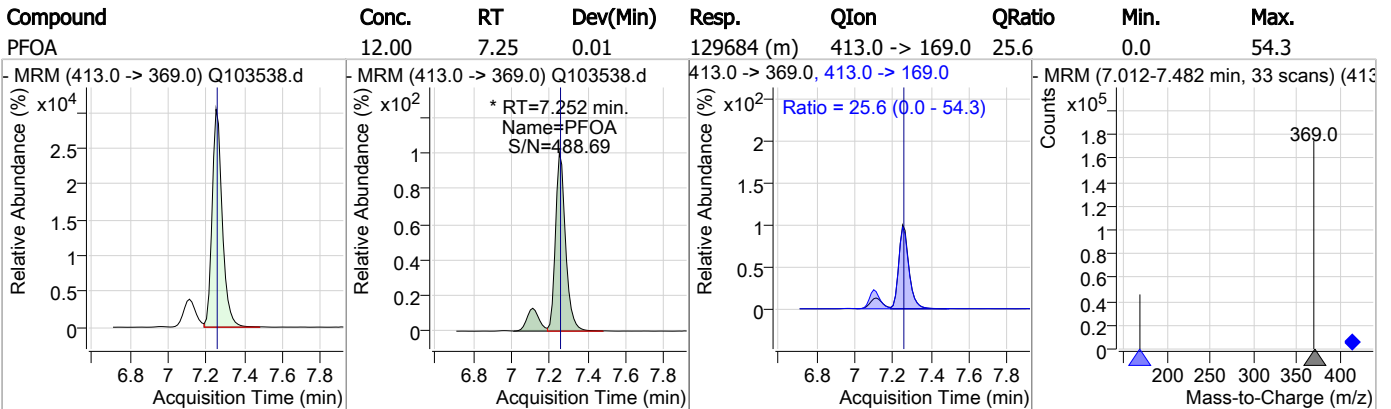
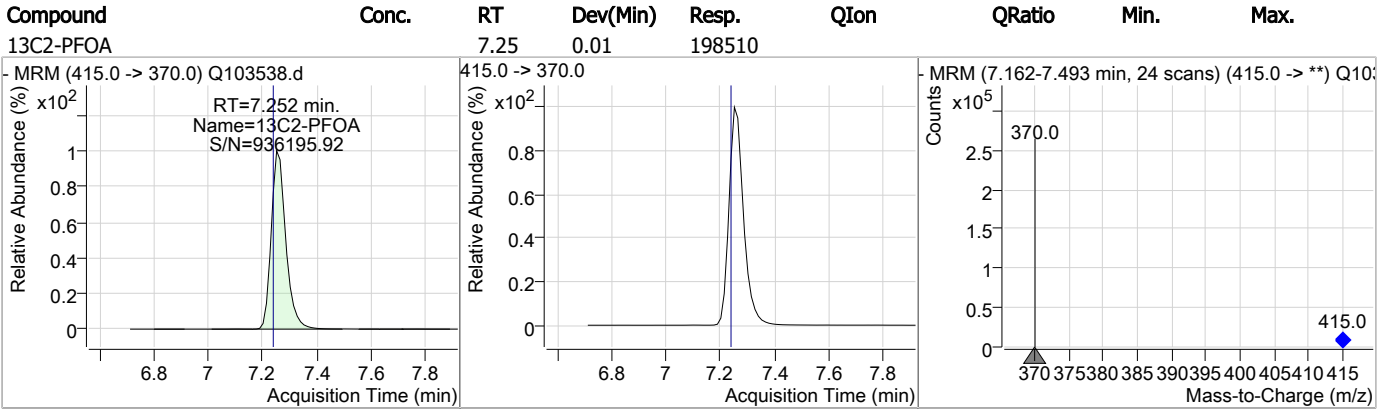
Perfluorinated Compounds by LC/MS/MS



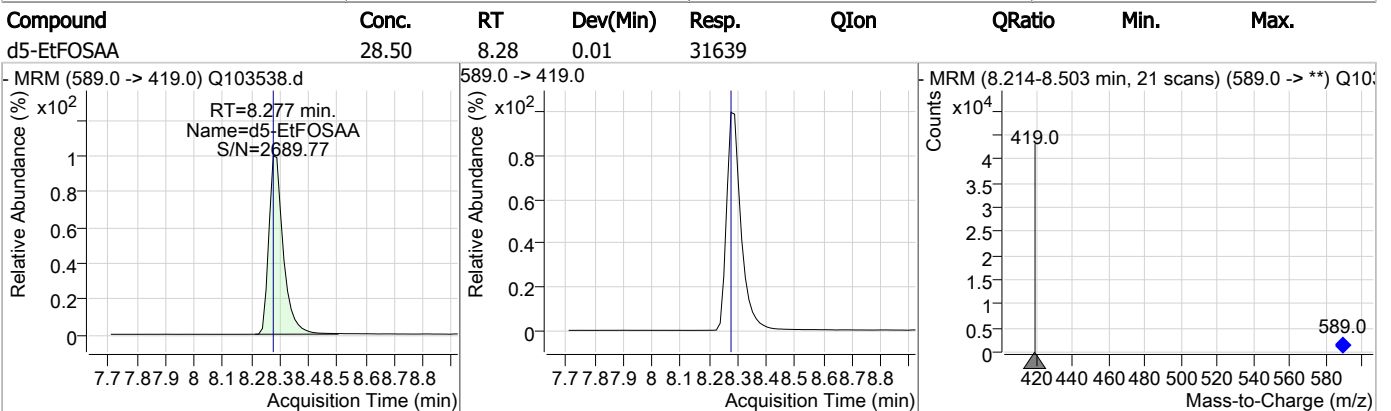
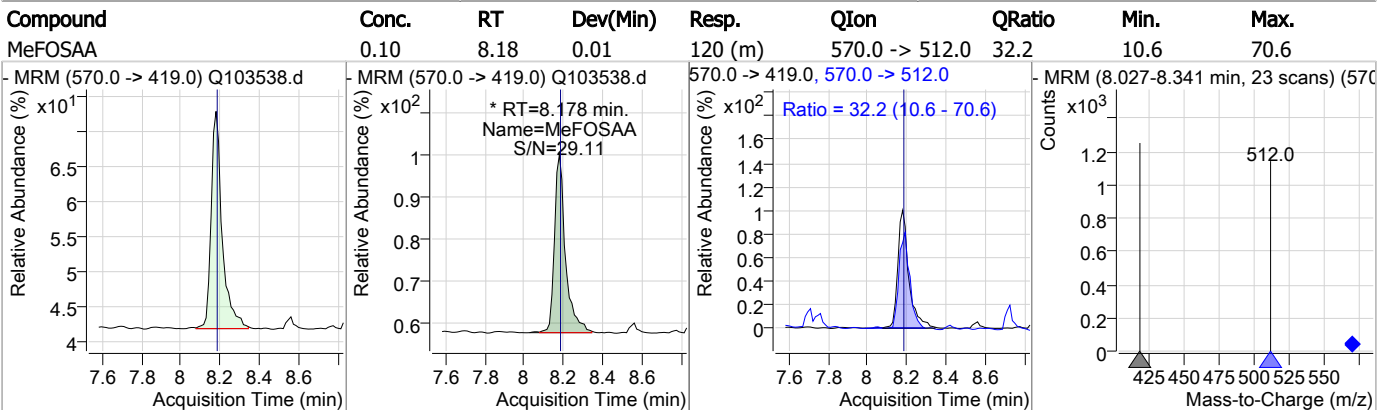
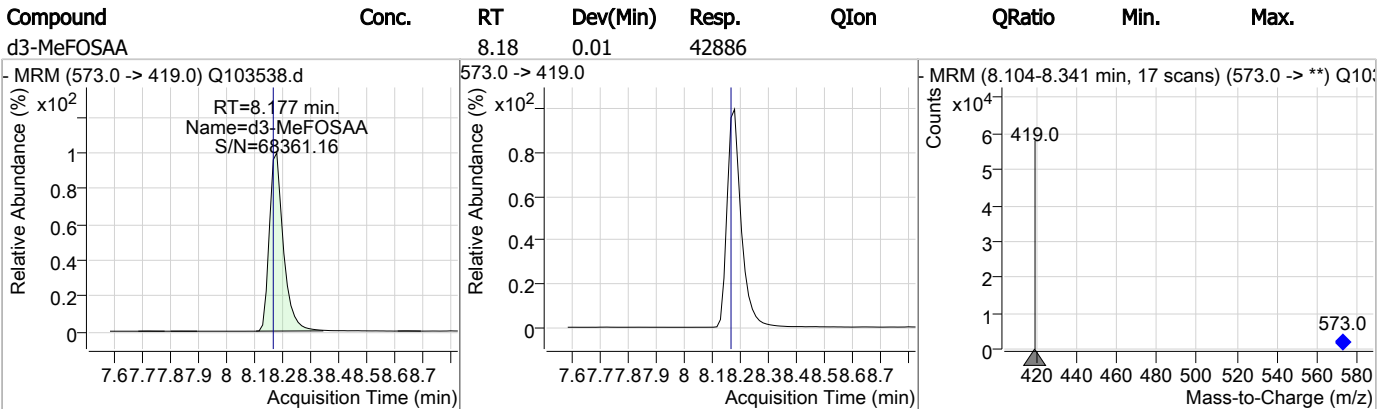
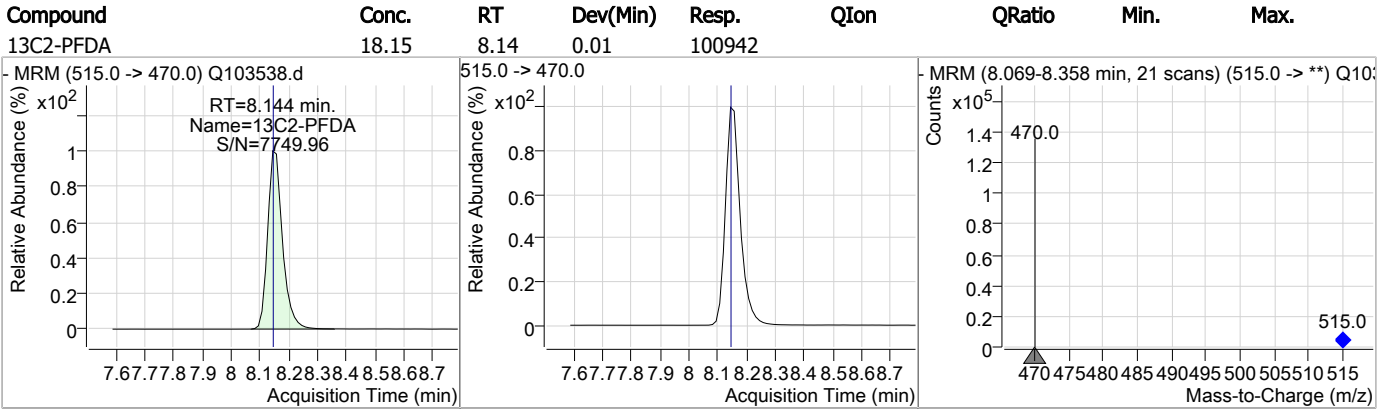
Perfluorinated Compounds by LC/MS/MS



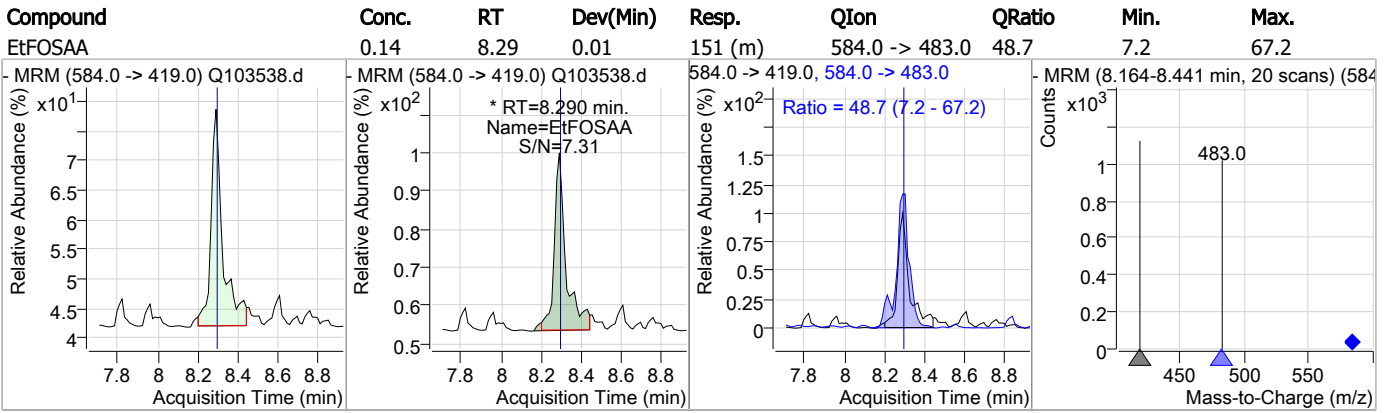
Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS



7.1.1
7

Manual Integration Approval Summary

Sample Number: FC6520-1 Method: EPA 537.1 REV 1.0
Lab FileID: Q103538.D Analyst approved: 06/20/23 16:45 Anna Ludwig
Injection Time: 06/19/23 21:04 Supervisor approved: 06/21/23 09:46 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluoroheptanoic acid	375-85-9		6.61	Split peak
Perfluorohexanesulfonic acid	355-46-4		6.66	Split peak
Perfluorooctanoic acid	335-67-1		7.25	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.57	Split peak
MeFOSAA	2355-31-9		8.18	Split peak
EtFOSAA	2991-50-6		8.29	Split peak

7.1.1.1
7

Perfluorinated Compounds by LC/MS/MS

Data File : Q103476.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 8:12:26 PM
 Sample Name : fc6520-2
 Vial : P1-B6
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,280,,,1,1,water

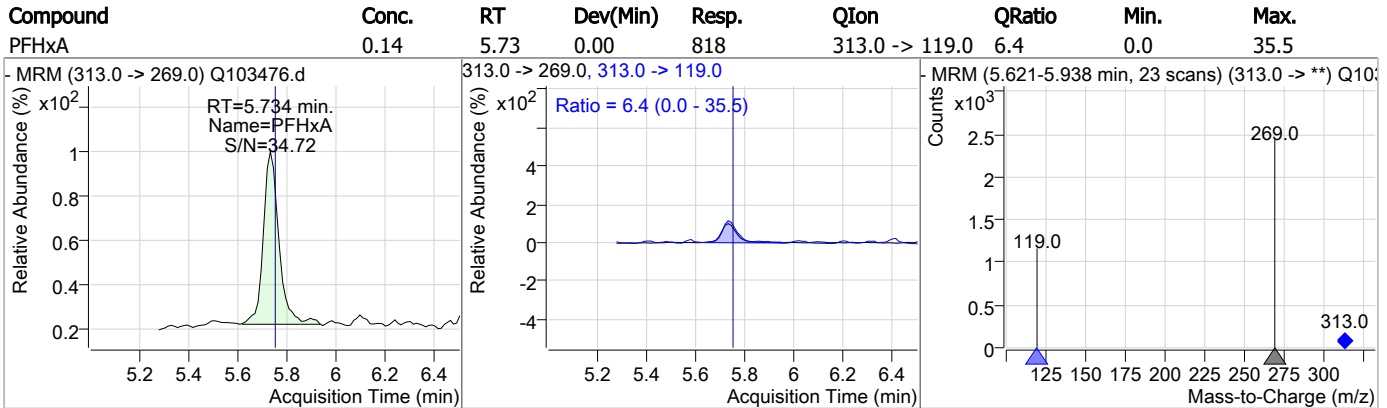
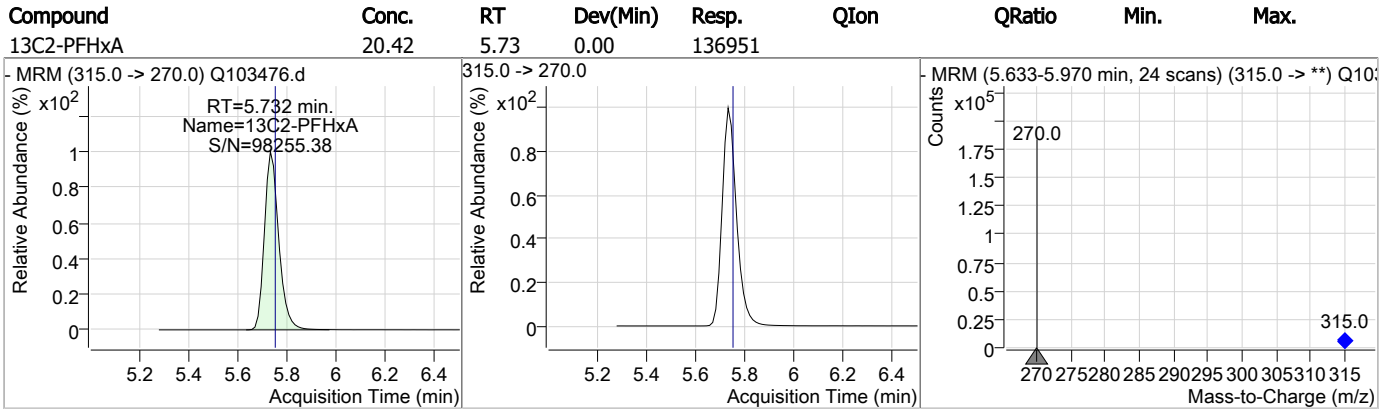
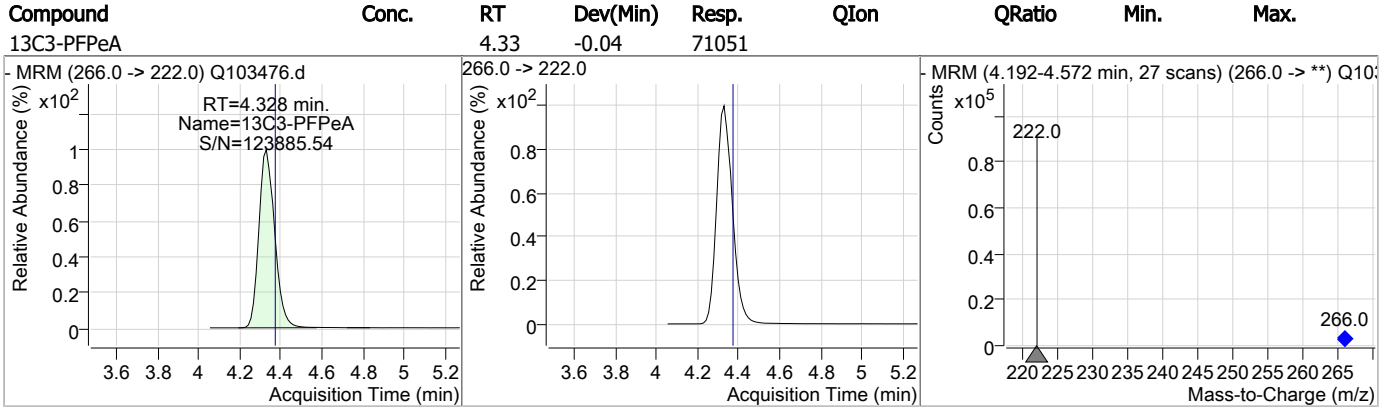
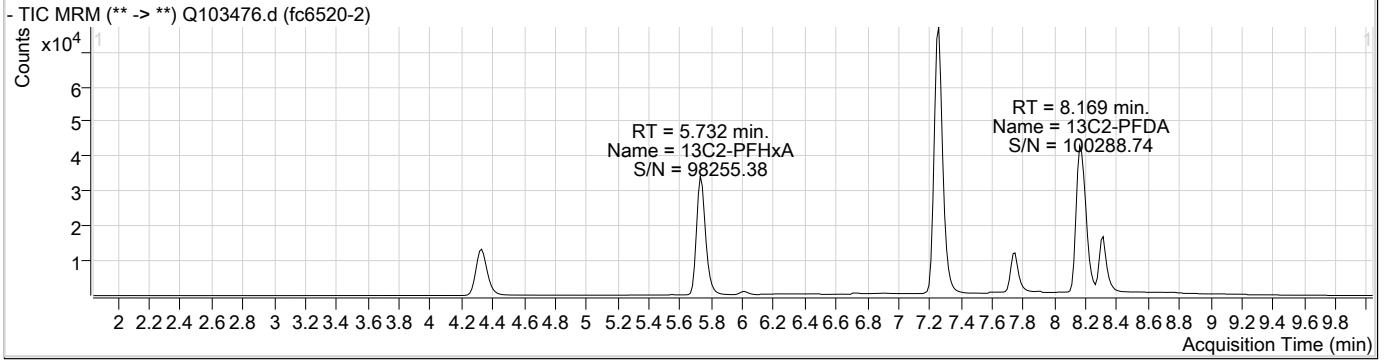
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
13C2-6:2FTS	7.250	429.0 -> 409.0	61761	20.00	µg/L	0.025
13C2-PFOA	7.264	415.0 -> 370.0	231760	20.00	µg/L	0.025
13C3-PFPeA	4.328	266.0 -> 222.0	71051	20.00	µg/L	-0.044
13C4-PFOS	7.753	503.0 -> 80.0	39517	20.00	µg/L	0.038
d3-MeFOSAA	8.190	573.0 -> 419.0	54177	40.00	µg/L	0.025
System Monitoring Compounds						
13C2-PFDA	8.169	515.0 -> 470.0	131982	20.32	µg/L	0.038
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 101.6%		
13C2-PFHxA	5.732	315.0 -> 270.0	136951	20.42	µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 102.1%		
d5-EtFOSAA	8.314	589.0 -> 419.0	51545	36.51	µg/L	0.050
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 91.3%		
13C3-HFPO-DA	6.013	287.0 -> 169.0	3759	41.96	µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 104.9%		
Target Compounds						
6:2FTS	7.238	427.0 -> 407.0	0	0.00	µg/L	m 1
8:2FTS	-	527.0 -> 507.0	-	N.D.		
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
MeFOSAA	-	570.0 -> 419.0	-	N.D.		
PFBA	-	213.0 -> 169.0	-	N.D.		
PFBS	-	299.0 -> 80.0	-	N.D.		
PFDA	-	513.0 -> 469.0	-	N.D.		
PFDoDA	-	613.0 -> 569.0	-	N.D.		
PFHpA	-	363.0 -> 319.0	-	N.D.		
PFHpS	-	449.0 -> 80.0	-	N.D.		
PFHxA	5.734	313.0 -> 269.0	818	0.14	µg/L	97
PFHxS	-	399.0 -> 80.0	-	N.D.		
PFNA	-	463.0 -> 419.0	-	N.D.		
PFOA	-	413.0 -> 369.0	-	N.D.		
PFOS	-	499.0 -> 80.0	-	N.D.		
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFTeDA	-	713.0 -> 669.0	-	N.D.		
PFTTrDA	-	663.0 -> 619.0	-	N.D.		
PFUnDA	-	563.0 -> 519.0	-	N.D.		
ADONA	-	377.0 -> 251.0	-	N.D.		
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
HFPO-DA	-	285.0 -> 169.0	-	N.D.		

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

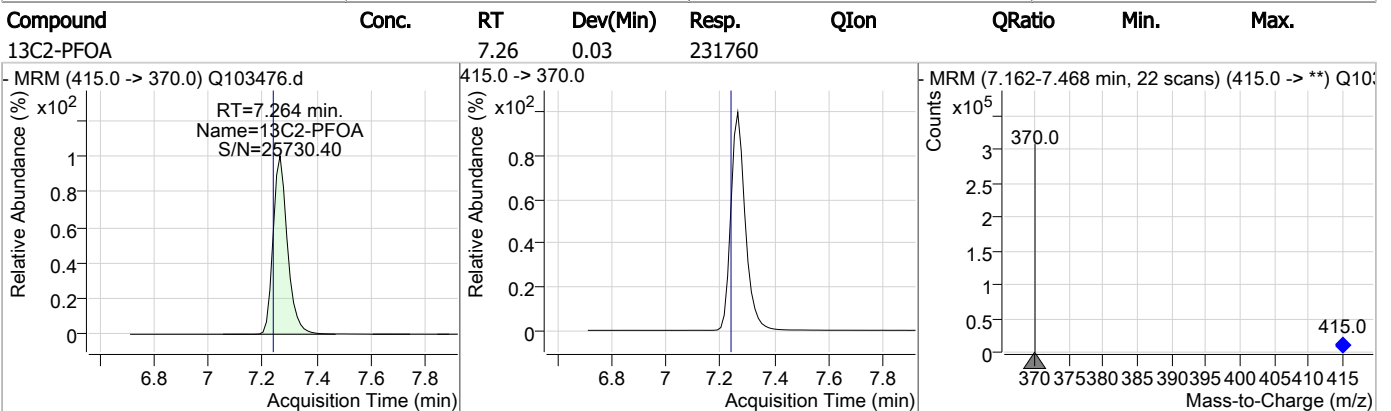
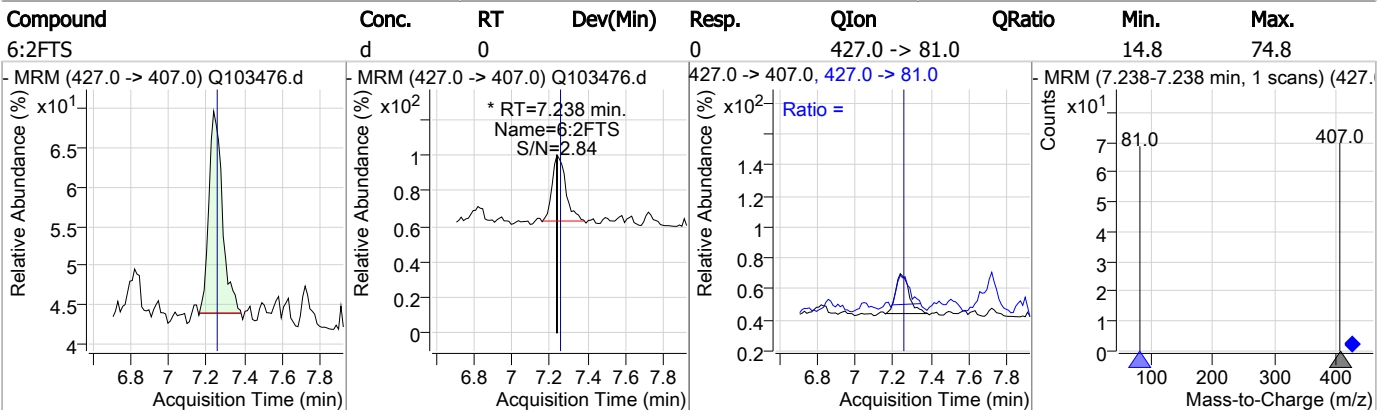
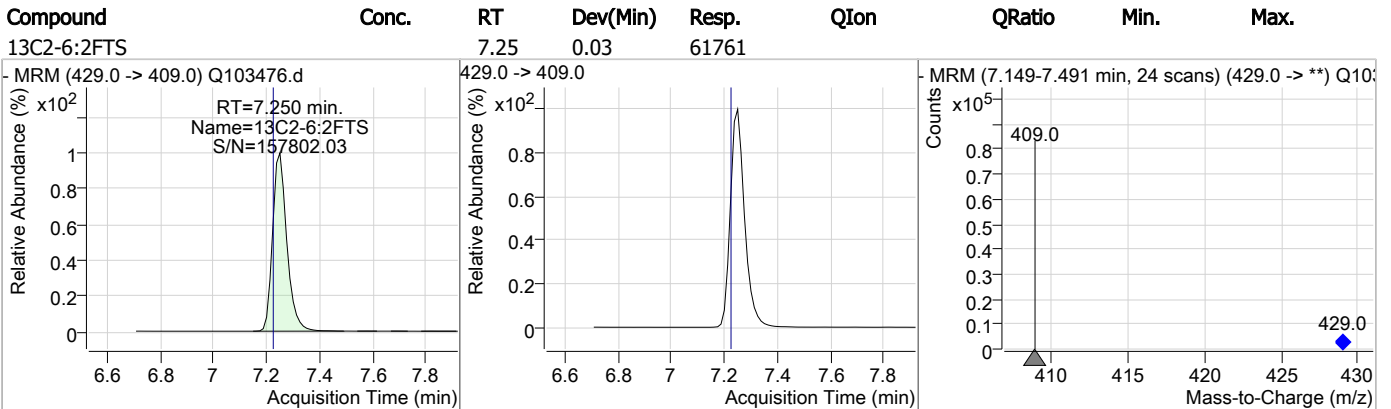
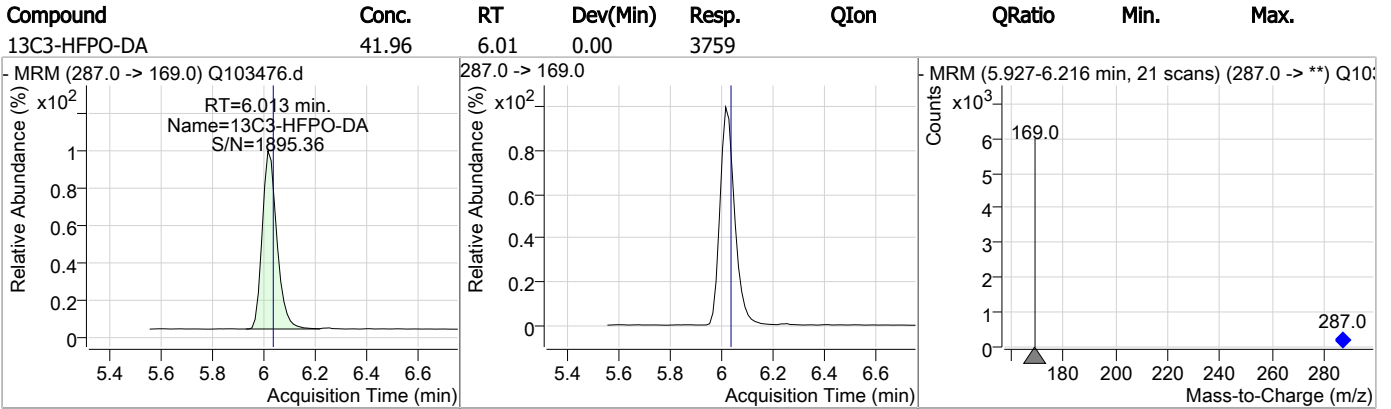
7.12
7



Perfluorinated Compounds by LC/MS/MS



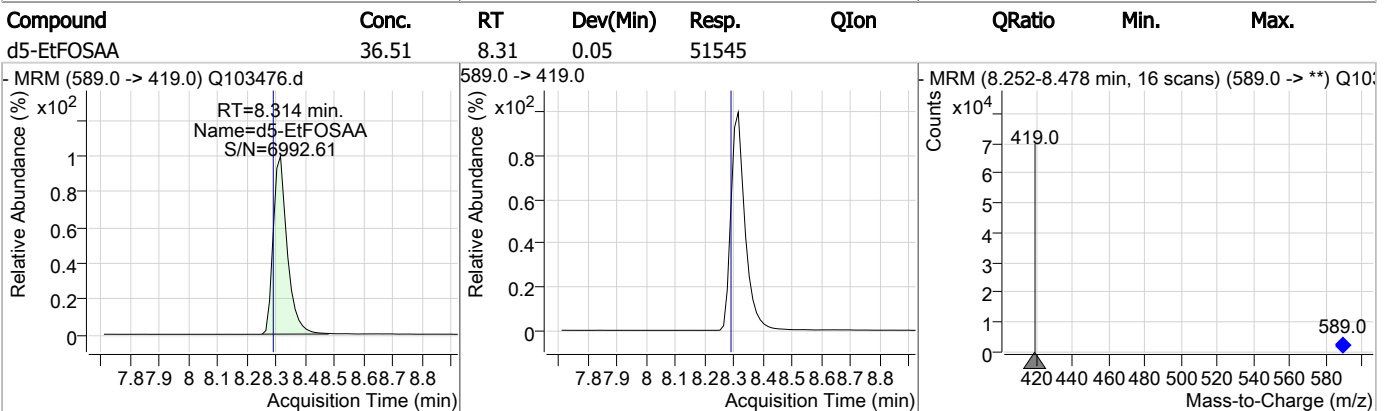
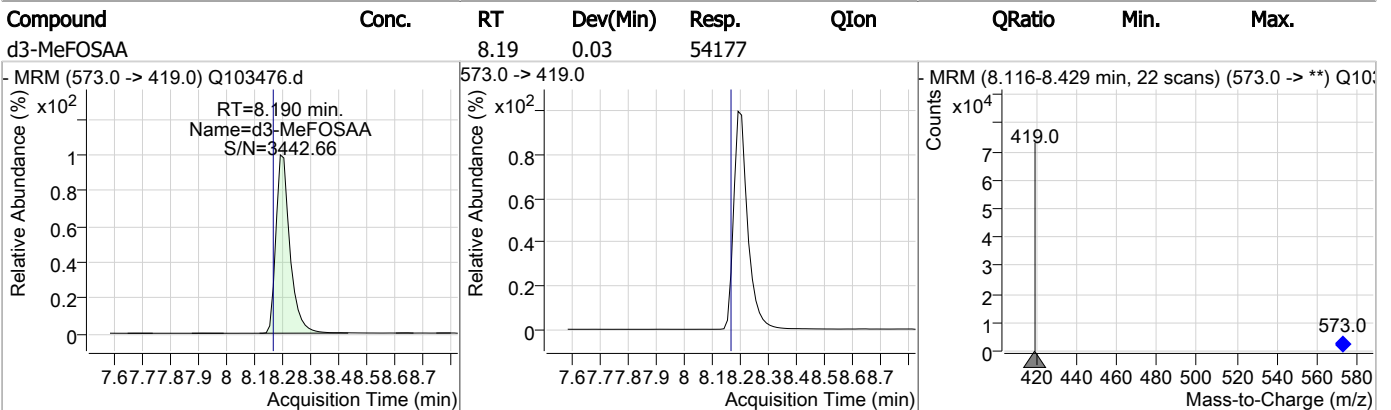
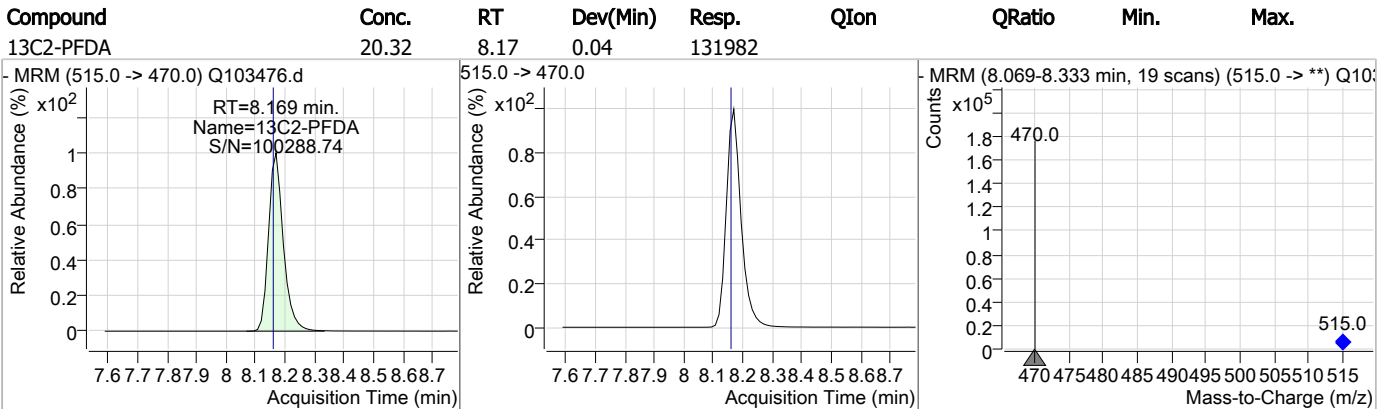
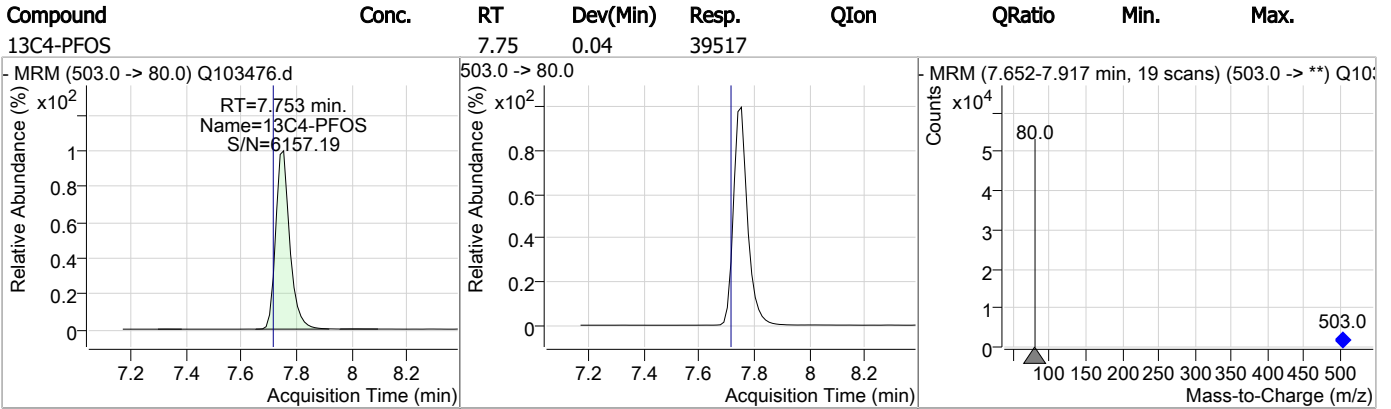
Perfluorinated Compounds by LC/MS/MS



7.1.2

7

Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS

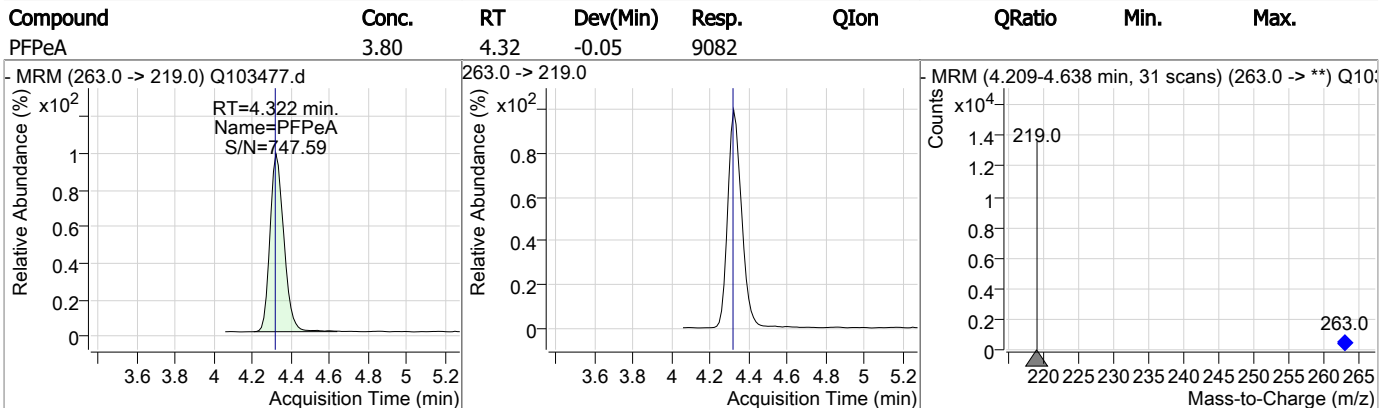
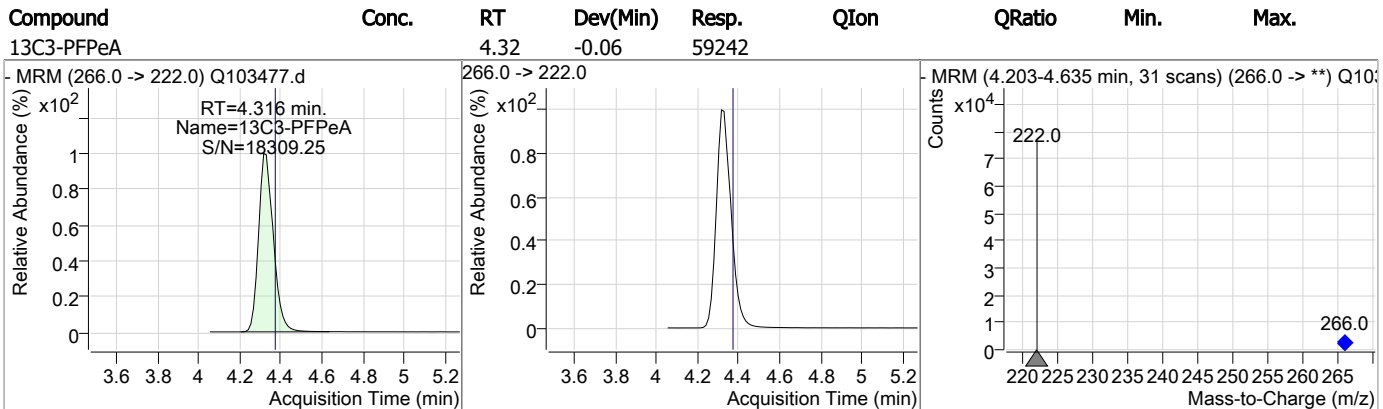
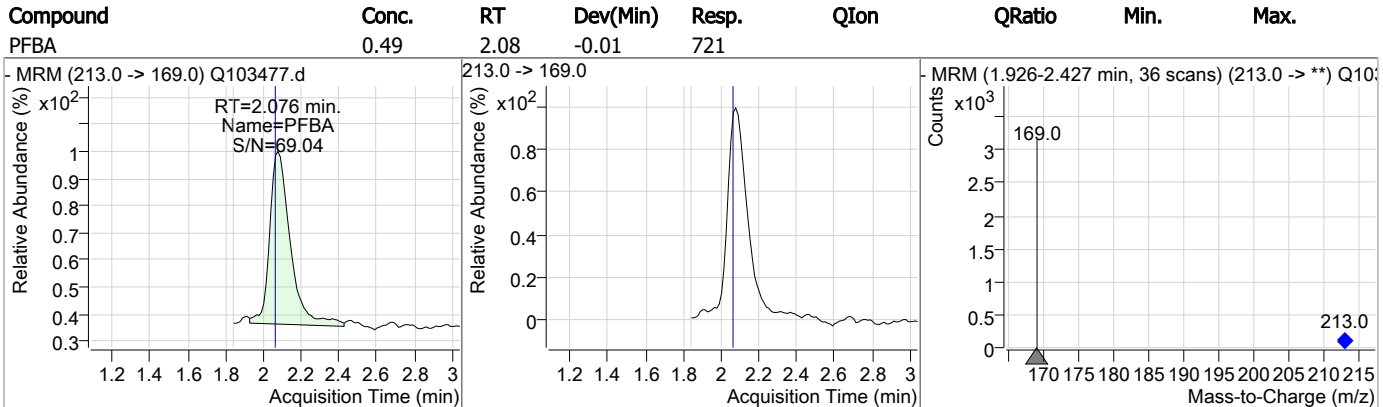
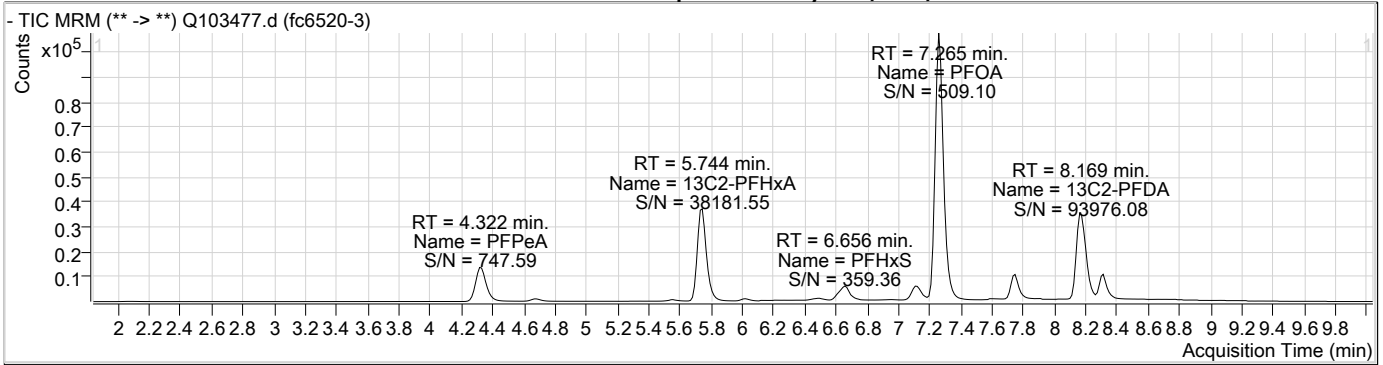
Data File : Q103477.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 8:28:13 PM
 Sample Name : fc6520-3
 Vial : P1-B7
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,280,,,1,1,water

Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)	QValue
Internal Standards							
13C2-6:2FTS	7.250	429.0 -> 409.0	43467	20.00	µg/L	0.025	
13C2-PFOA	7.264	415.0 -> 370.0	206720	20.00	µg/L	0.025	
13C3-PFPeA	4.316	266.0 -> 222.0	59242	20.00	µg/L	-0.056	
13C4-PFOS	7.753	503.0 -> 80.0	34277	20.00	µg/L	0.038	
d3-MeFOSAA	8.202	573.0 -> 419.0	41855	40.00	µg/L	0.038	
System Monitoring Compounds							
13C2-PFDA	8.169	515.0 -> 470.0	109223	18.85	µg/L	0.038	
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 94.3%			
13C2-PFHxA	5.744	315.0 -> 270.0	126009	21.06	µg/L	0.013	
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 105.3%			
d5-EtFOSAA	8.314	589.0 -> 419.0	32375	29.85	µg/L	0.050	
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 74.6%			
13C3-HFPO-DA	6.026	287.0 -> 169.0	3532	44.18	µg/L	0.013	
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 110.4%			
Target Compounds							
6:2FTS	7.250	427.0 -> 407.0	0	0.00	µg/L	m	1
8:2FTS	-	527.0 -> 507.0	-	N.D.			
EtFOSAA	-	584.0 -> 419.0	-	N.D.			
MeFOSAA	-	570.0 -> 419.0	-	N.D.			
PFBA	2.076	213.0 -> 169.0	721	0.49	µg/L		100
PFBS	4.666	299.0 -> 80.0	2942	2.57	µg/L		96
PFDA	-	513.0 -> 469.0	-	N.D.			
PFDoDA	-	613.0 -> 569.0	-	N.D.			
PFHpA	6.624	363.0 -> 319.0	9288	1.47	µg/L	m	96
PFHpS	-	449.0 -> 80.0	-	N.D.			
PFHxA	5.734	313.0 -> 269.0	24694	4.63	µg/L		99
PFHxS	6.656	399.0 -> 80.0	15939	10.11	µg/L	m	95
PFNA	-	463.0 -> 419.0	-	N.D.			
PFOA	7.265	413.0 -> 369.0	136867	12.16	µg/L	m	98
PFOS	7.602	499.0 -> 80.0	806	0.41	µg/L	#m	56
PFPeA	4.322	263.0 -> 219.0	9082	3.80	µg/L		100
PFTeDA	-	713.0 -> 669.0	-	N.D.			
PFTTrDA	-	663.0 -> 619.0	-	N.D.			
PFUnDA	-	563.0 -> 519.0	-	N.D.			
ADONA	-	377.0 -> 251.0	-	N.D.			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.			
HFPO-DA	-	285.0 -> 169.0	-	N.D.			

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

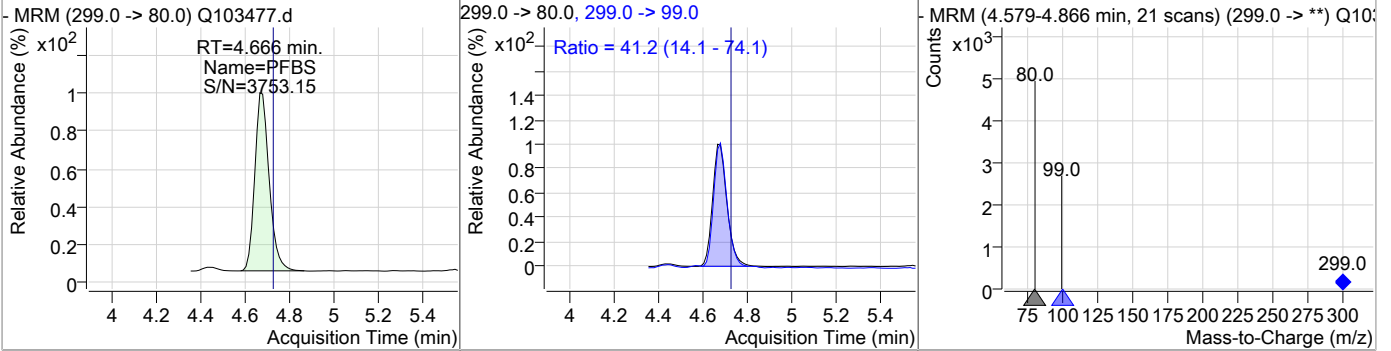
7.1.3
7

Perfluorinated Compounds by LC/MS/MS

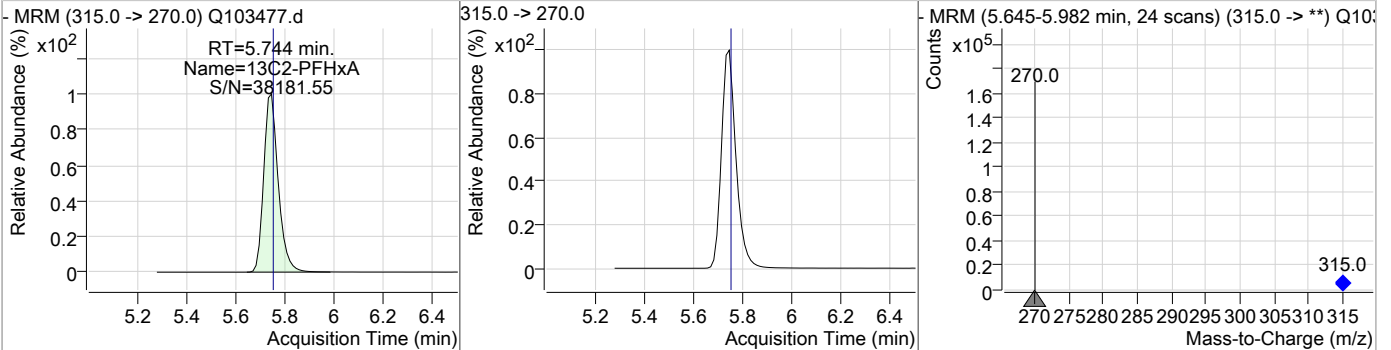


Perfluorinated Compounds by LC/MS/MS

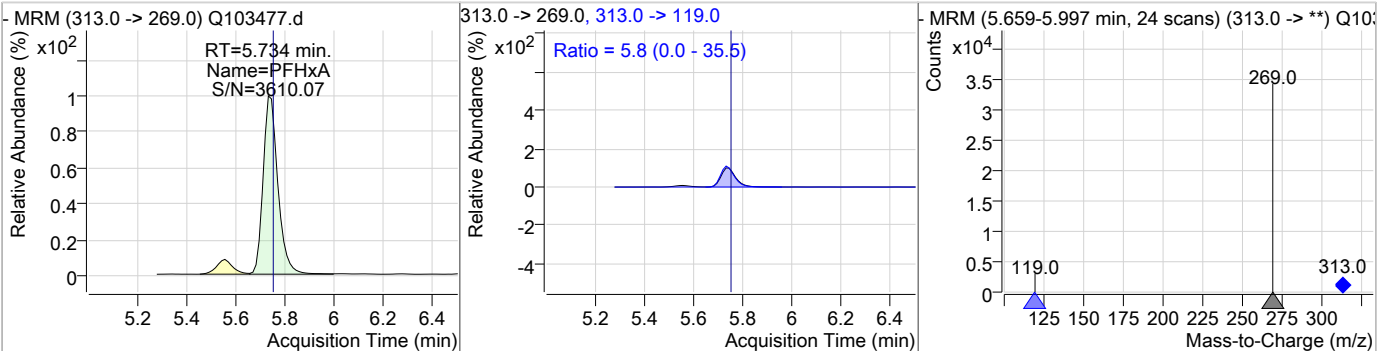
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	2.57	4.67	-0.04	2942	299.0 -> 99.0	41.2	14.1	74.1



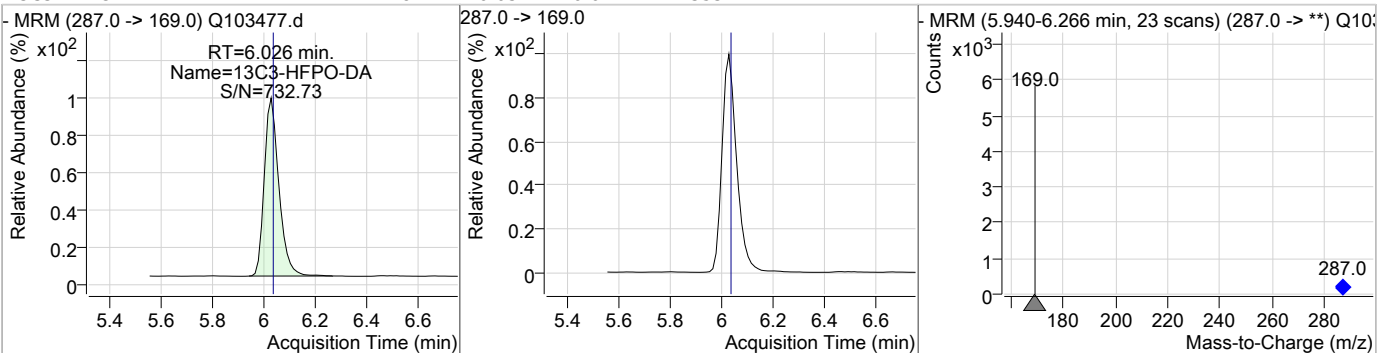
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	21.06	5.74	0.01	126009				



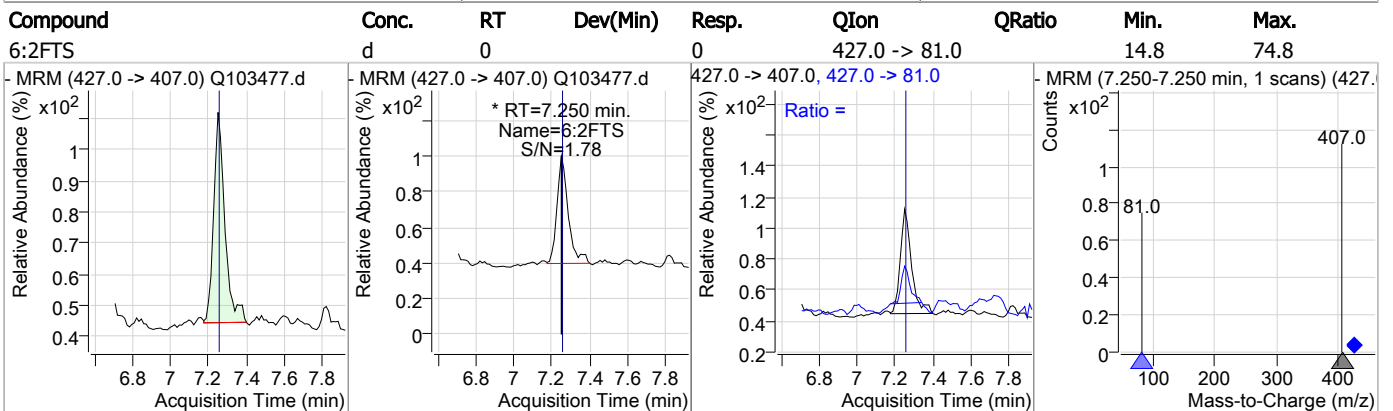
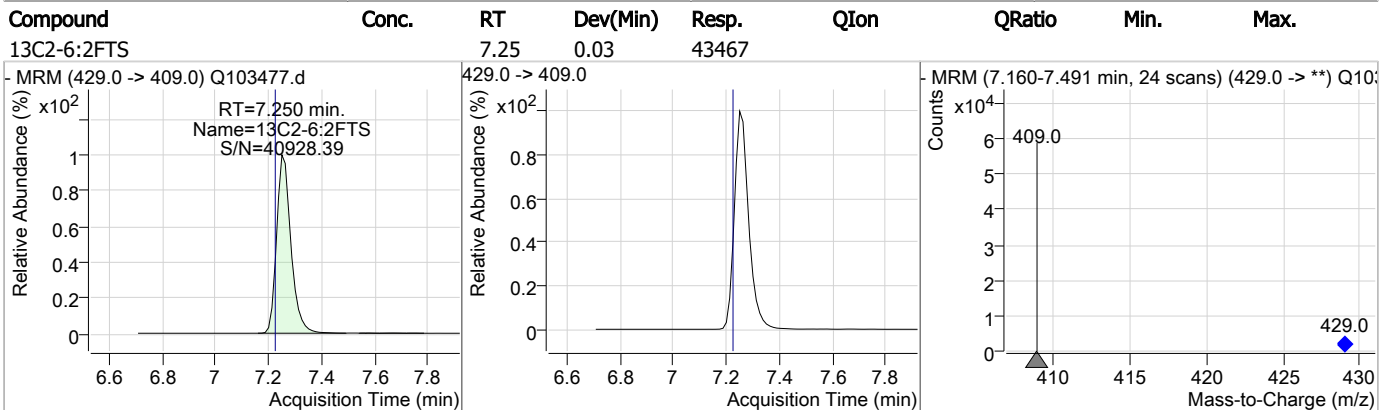
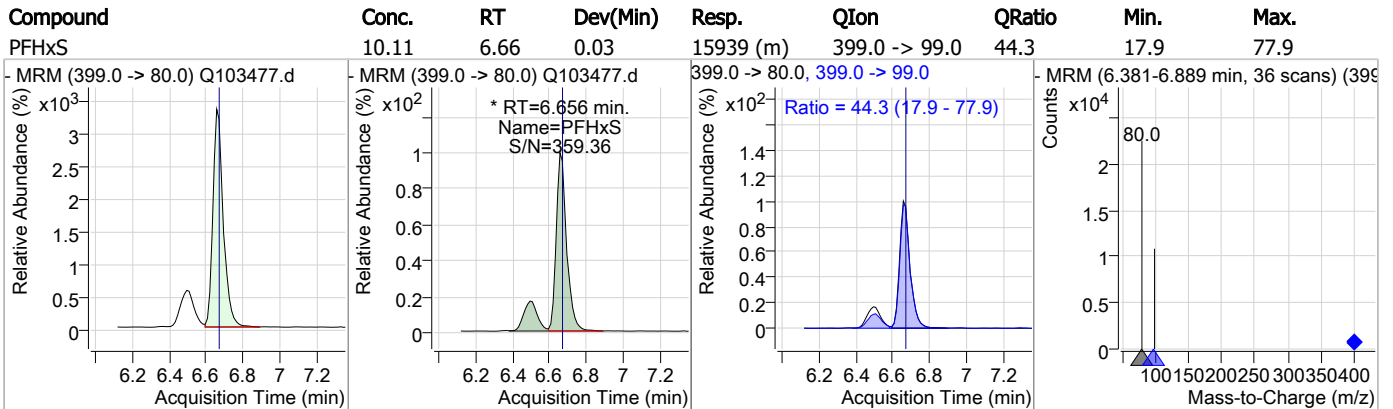
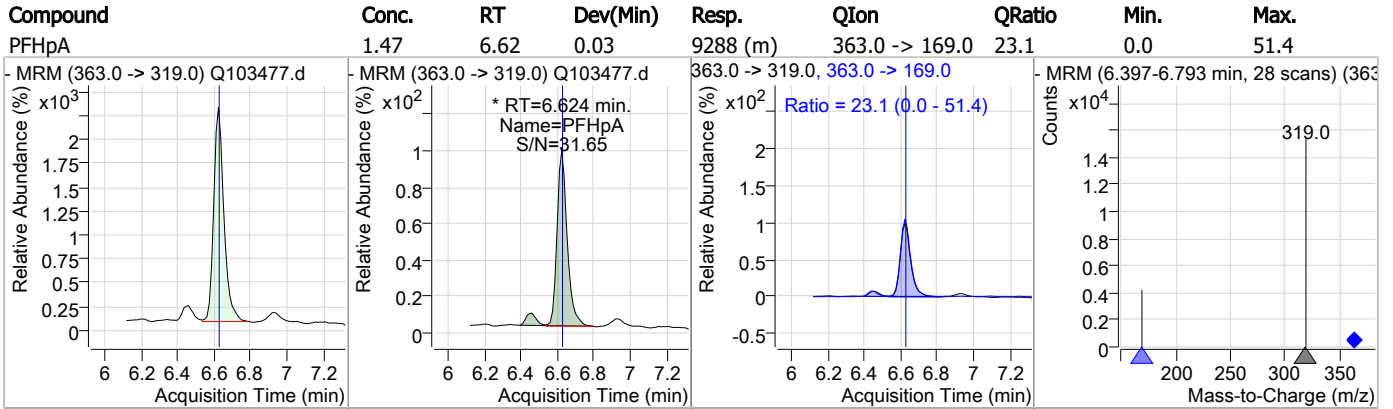
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	4.63	5.73	0.00	24694	313.0 -> 119.0	5.8	0.0	35.5



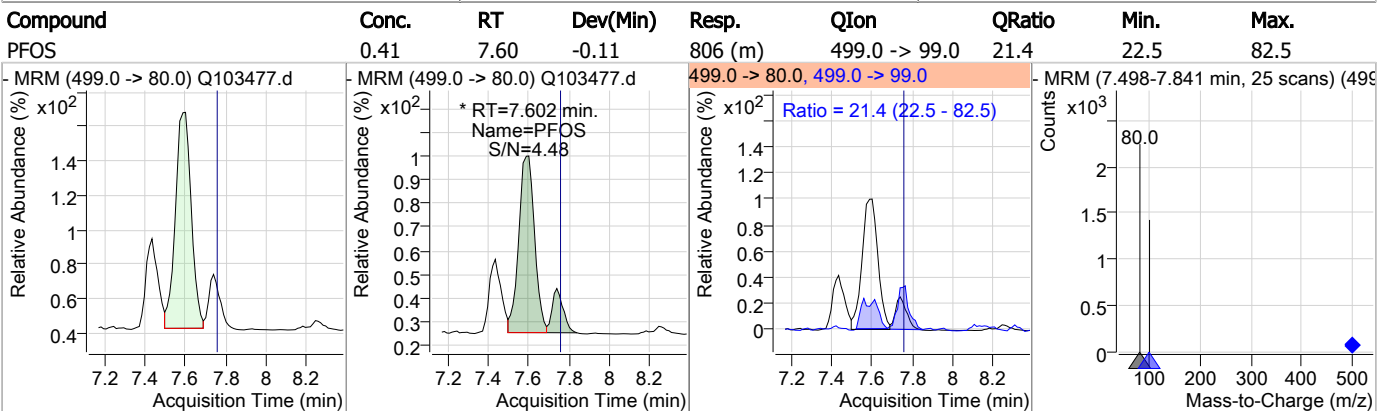
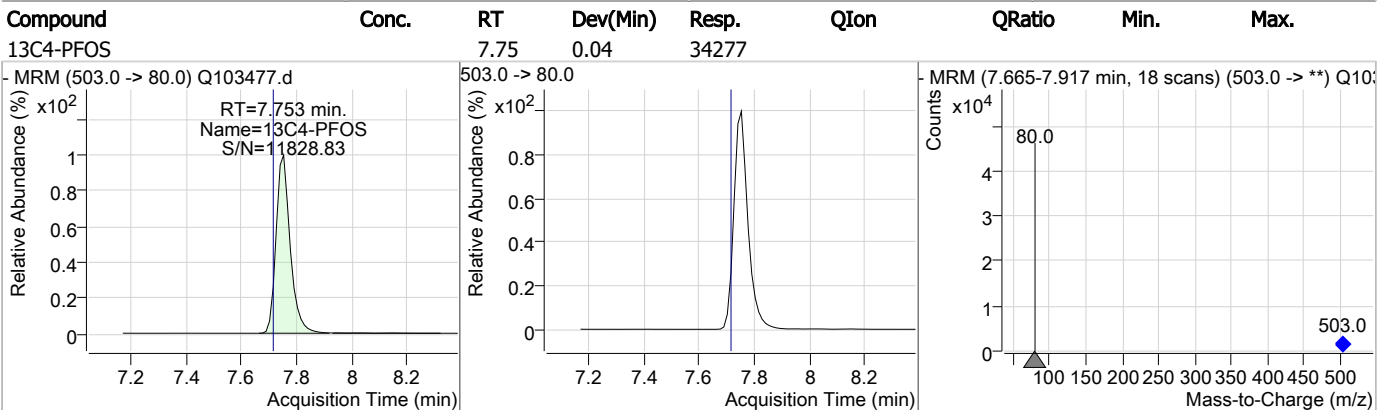
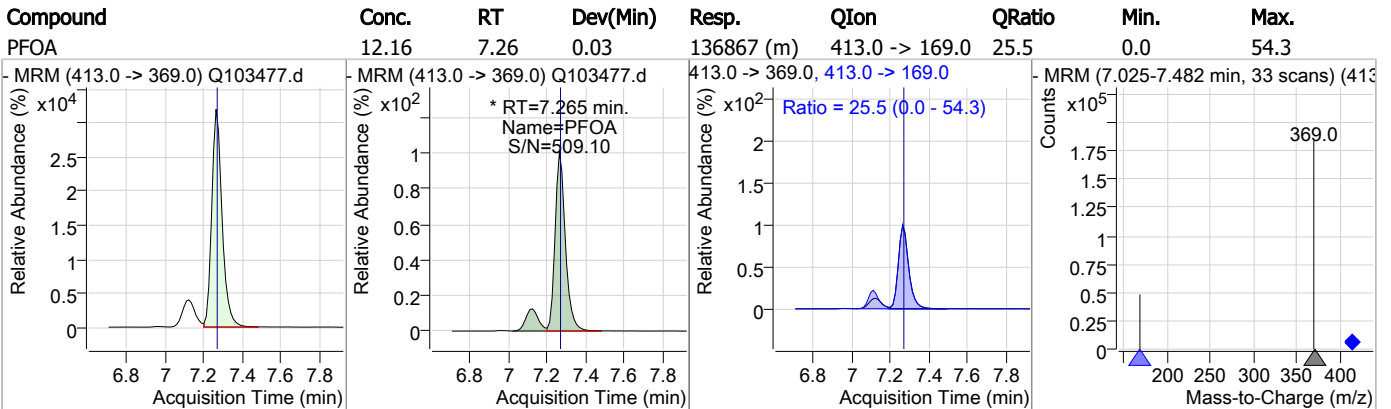
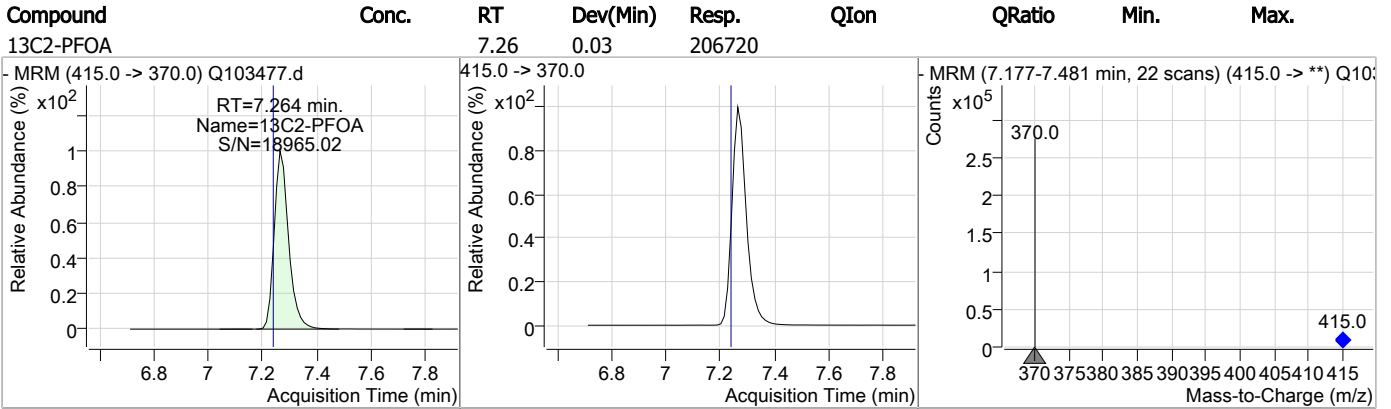
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	44.18	6.03	0.01	3532				



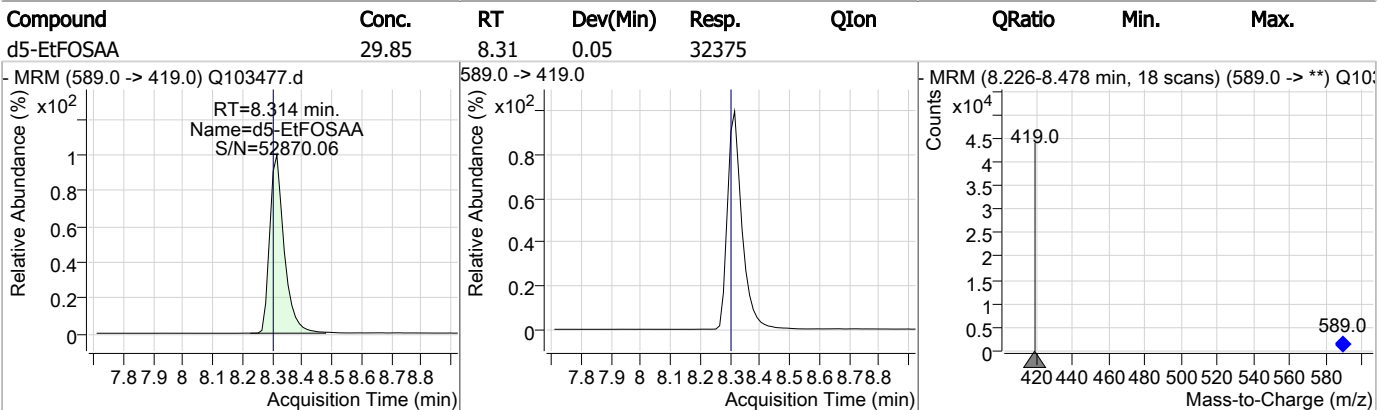
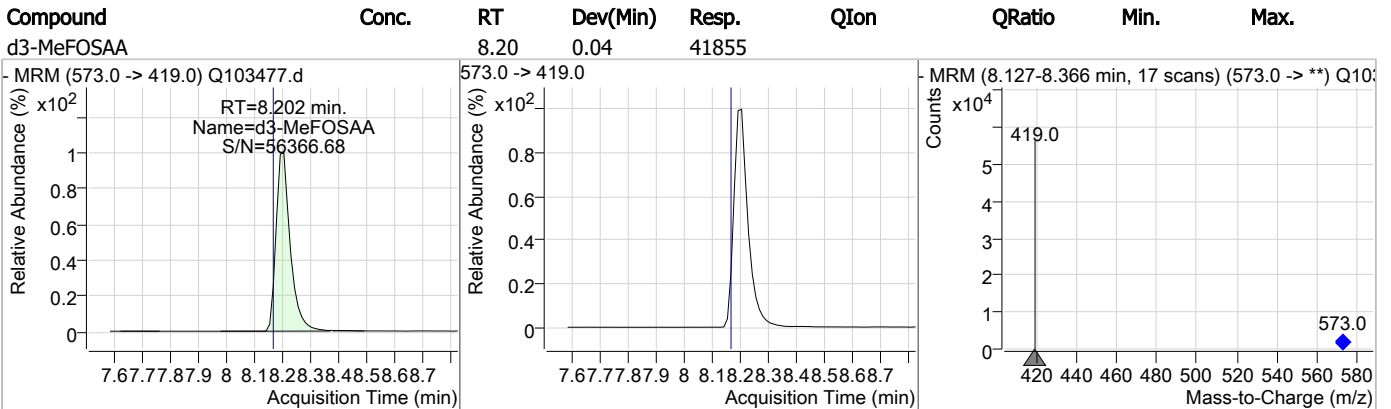
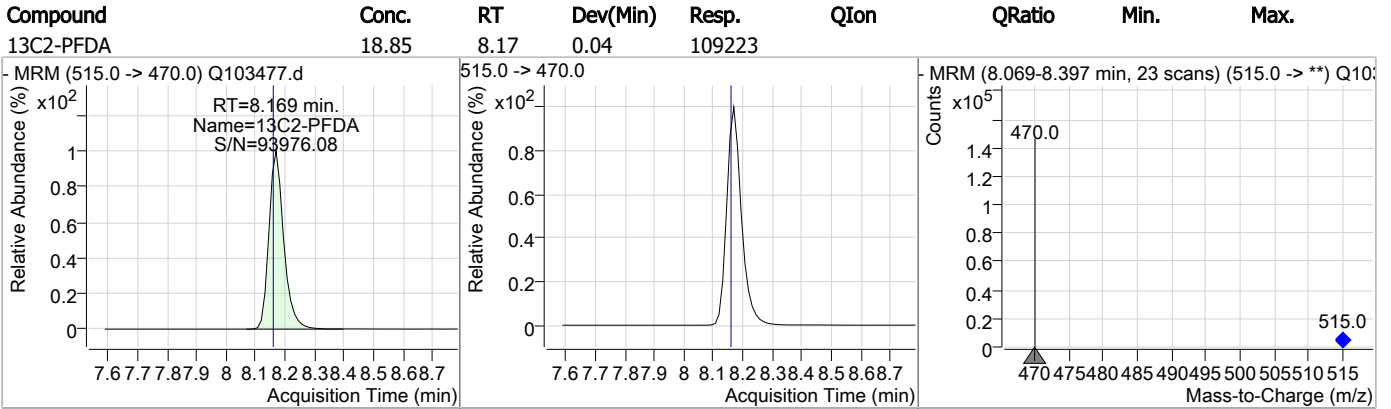
Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS



7.1.3

7

Manual Integration Approval Summary

Sample Number: FC6520-3 Method: EPA 537.1 REV 1.0
Lab FileID: Q103477.D Analyst approved: 06/19/23 16:34 Anna Ludwig
Injection Time: 06/18/23 20:28 Supervisor approved: 06/19/23 17:33 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluoroheptanoic acid	375-85-9		6.62	Split peak
Perfluorohexanesulfonic acid	355-46-4		6.66	Split peak
Perfluorooctanoic acid	335-67-1		7.26	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.60	Split peak

7.1.3.1
7

Perfluorinated Compounds by LC/MS/MS

Data File : Q103478.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 8:44:02 PM
 Sample Name : fc6520-4
 Vial : P1-B8
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,280,,,1,1,water

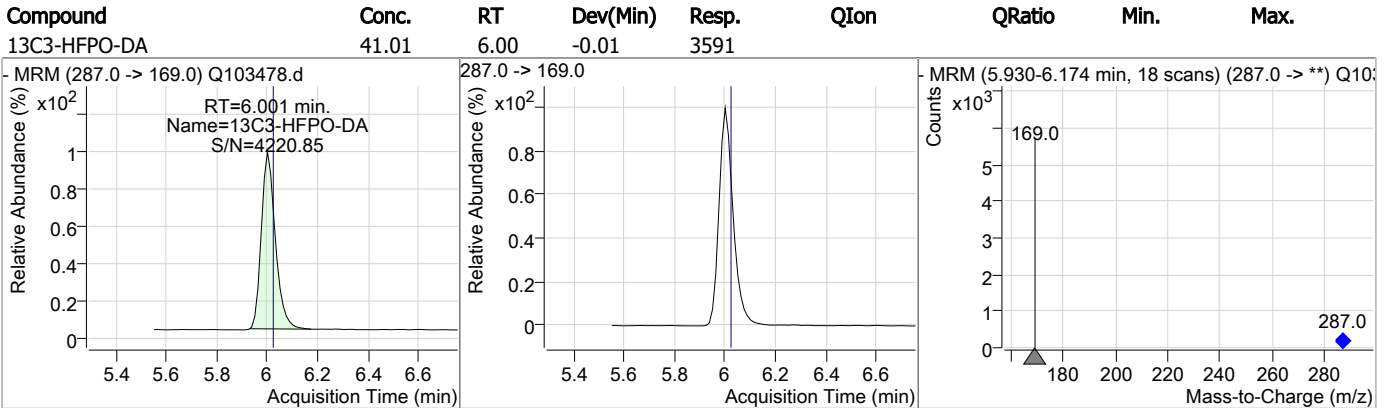
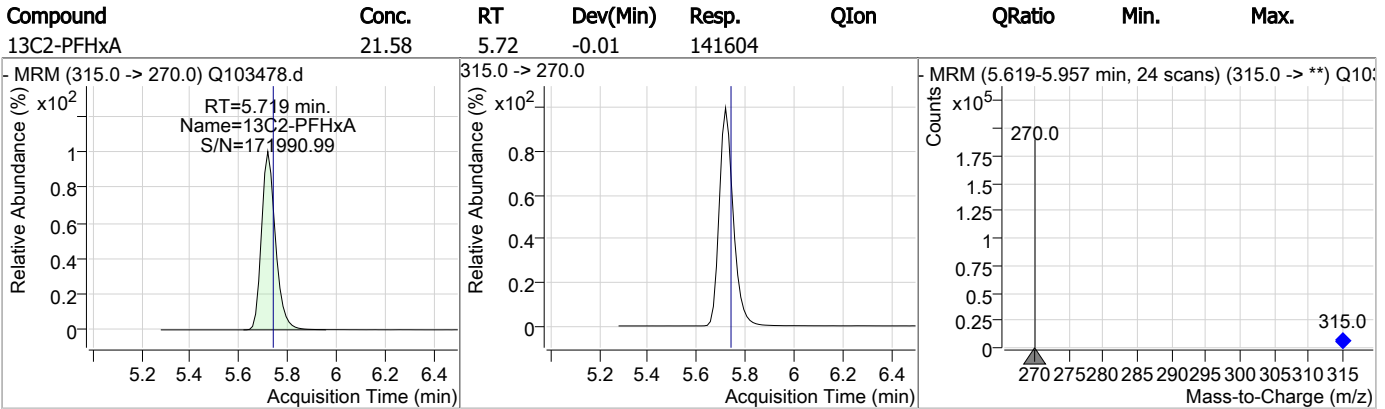
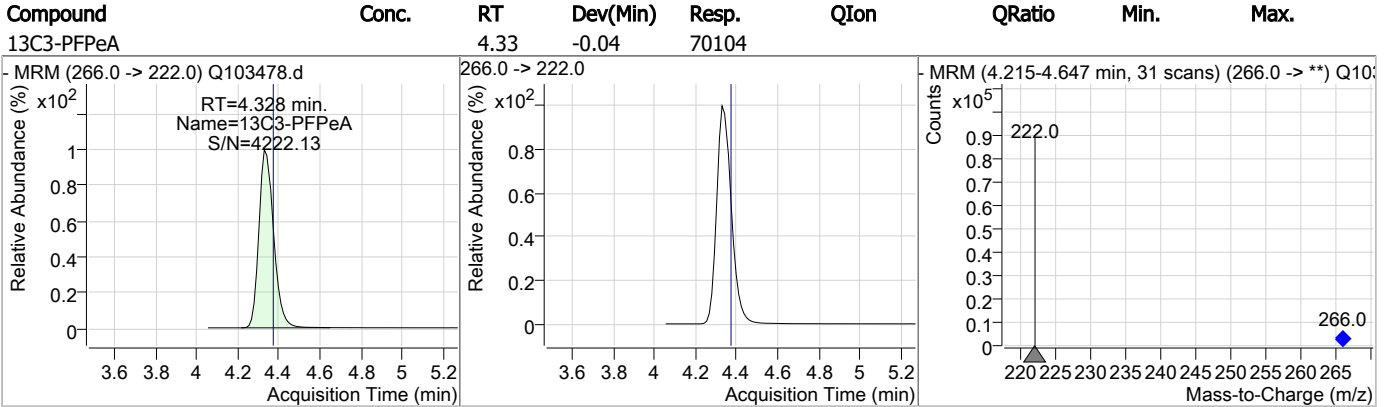
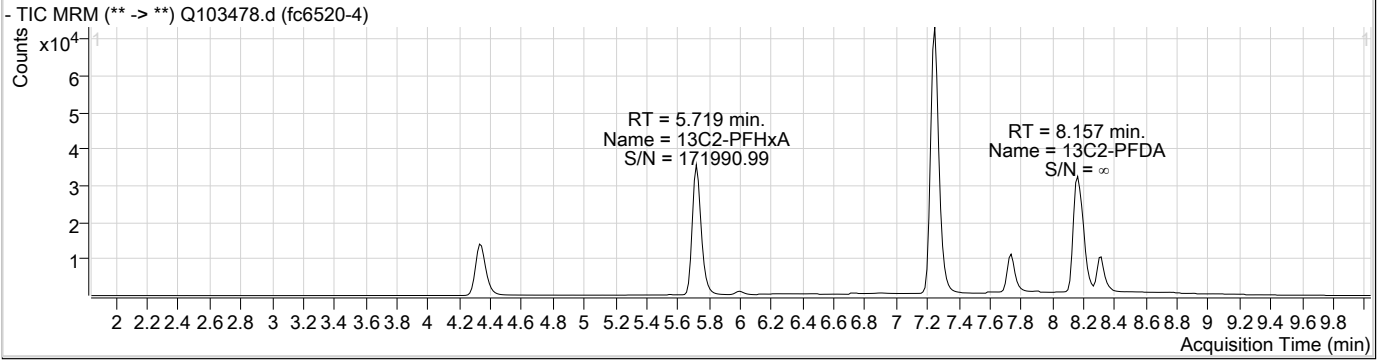
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
13C2-6:2FTS	7.237	429.0 -> 409.0	46743	20.00	µg/L	0.013
13C2-PFOA	7.252	415.0 -> 370.0	226572	20.00	µg/L	0.013
13C3-PFPeA	4.328	266.0 -> 222.0	70104	20.00	µg/L	-0.044
13C4-PFOS	7.741	503.0 -> 80.0	36001	20.00	µg/L	0.025
d3-MeFOSAA	8.190	573.0 -> 419.0	43304	40.00	µg/L	0.025
System Monitoring Compounds						
13C2-PFDA	8.157	515.0 -> 470.0	102764	16.18	µg/L	0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 80.9%		
13C2-PFHxA	5.719	315.0 -> 270.0	141604	21.58	µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 107.9%		
d5-EtFOSAA	8.315	589.0 -> 419.0	31611	28.21	µg/L	0.050
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 70.5%		
13C3-HFPO-DA	6.001	287.0 -> 169.0	3591	41.01	µg/L	-0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 102.5%		
Target Compounds						
6:2FTS	7.225	427.0 -> 407.0	0	0.00	µg/L m	1
8:2FTS	-	527.0 -> 507.0	-	N.D.		
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
MeFOSAA	-	570.0 -> 419.0	-	N.D.		
PFBA	-	213.0 -> 169.0	-	N.D.		
PFBS	-	299.0 -> 80.0	-	N.D.		
PFDA	-	513.0 -> 469.0	-	N.D.		
PFDoDA	-	613.0 -> 569.0	-	N.D.		
PFHpA	-	363.0 -> 319.0	-	N.D.		
PFHpS	-	449.0 -> 80.0	-	N.D.		
PFHxA	-	313.0 -> 269.0	-	N.D.		
PFHxS	-	399.0 -> 80.0	-	N.D.		
PFNA	-	463.0 -> 419.0	-	N.D.		
PFOA	-	413.0 -> 369.0	-	N.D.		
PFOS	-	499.0 -> 80.0	-	N.D.		
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFTeDA	-	713.0 -> 669.0	-	N.D.		
PFTrDA	-	663.0 -> 619.0	-	N.D.		
PFUnDA	-	563.0 -> 519.0	-	N.D.		
ADONA	-	377.0 -> 251.0	-	N.D.		
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
HFPO-DA	-	285.0 -> 169.0	-	N.D.		

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

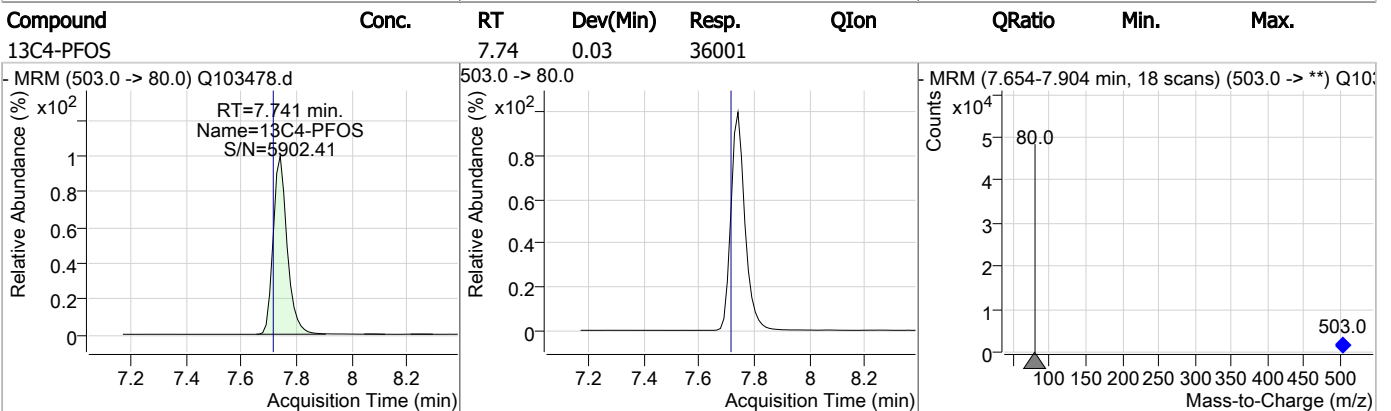
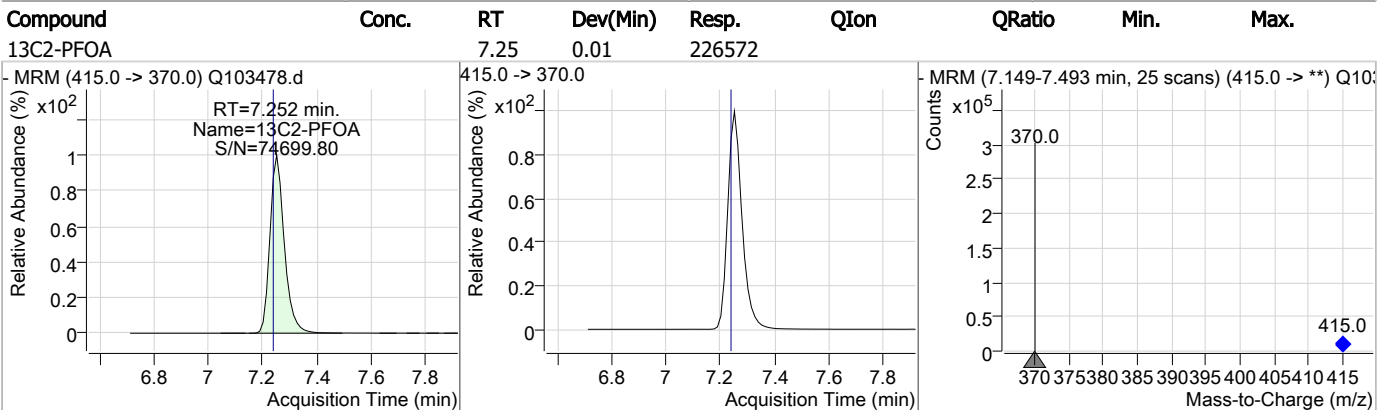
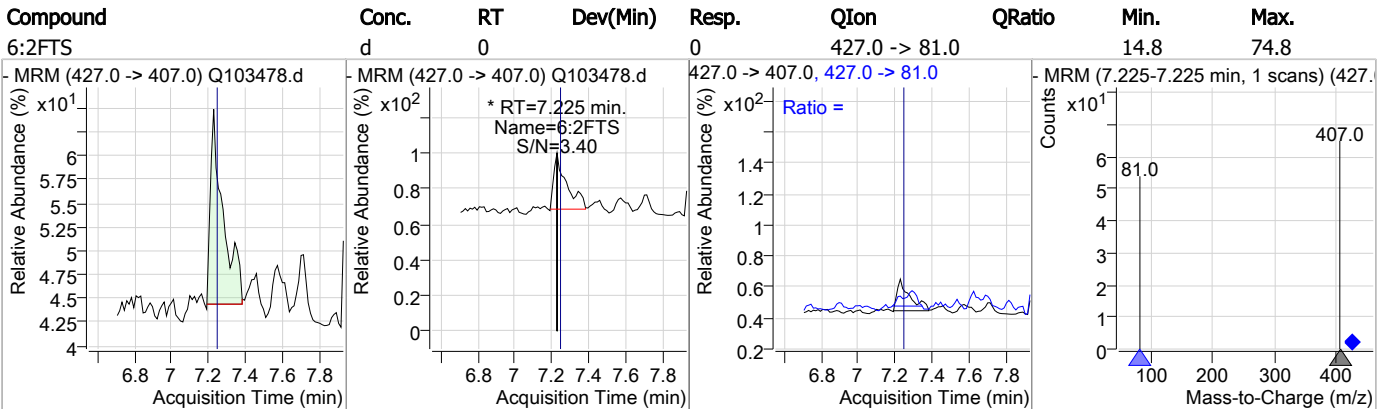
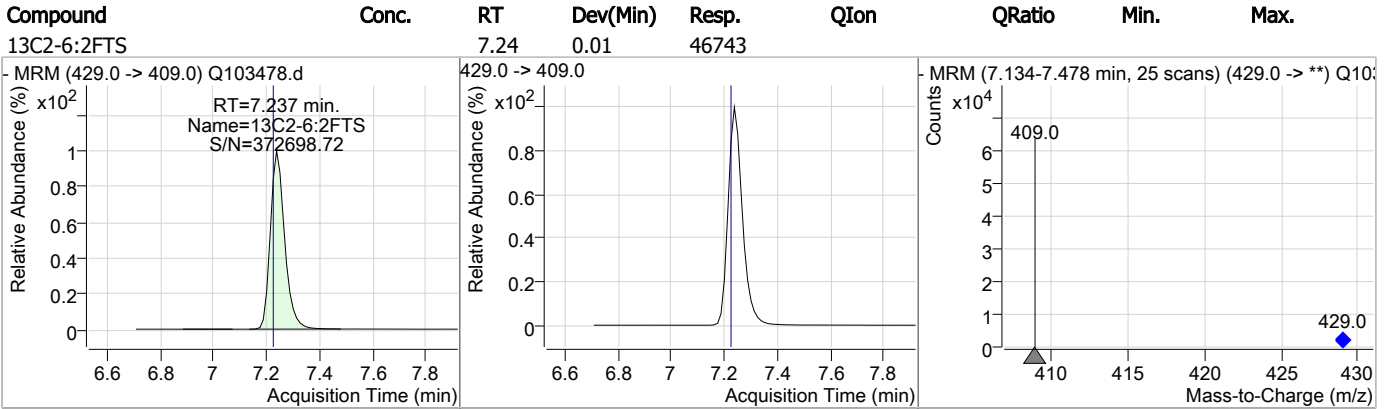
7.14
7



Perfluorinated Compounds by LC/MS/MS

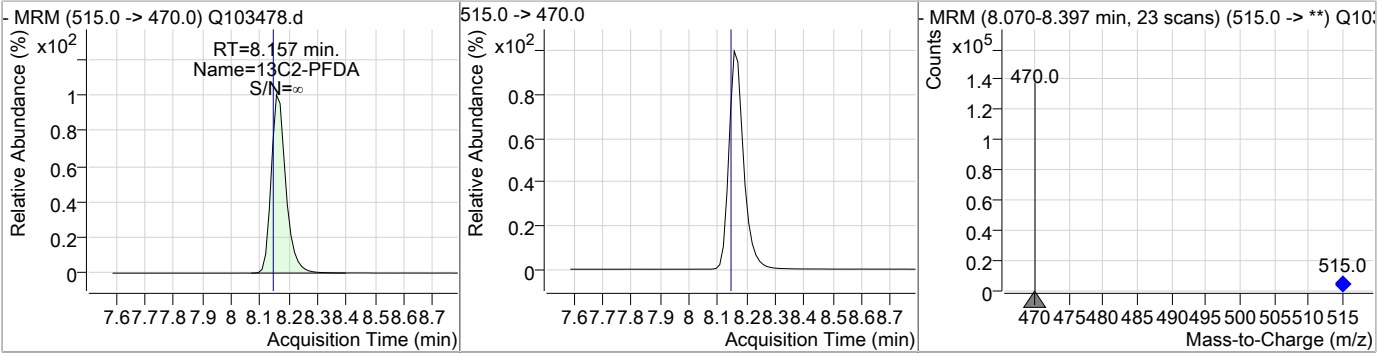


Perfluorinated Compounds by LC/MS/MS

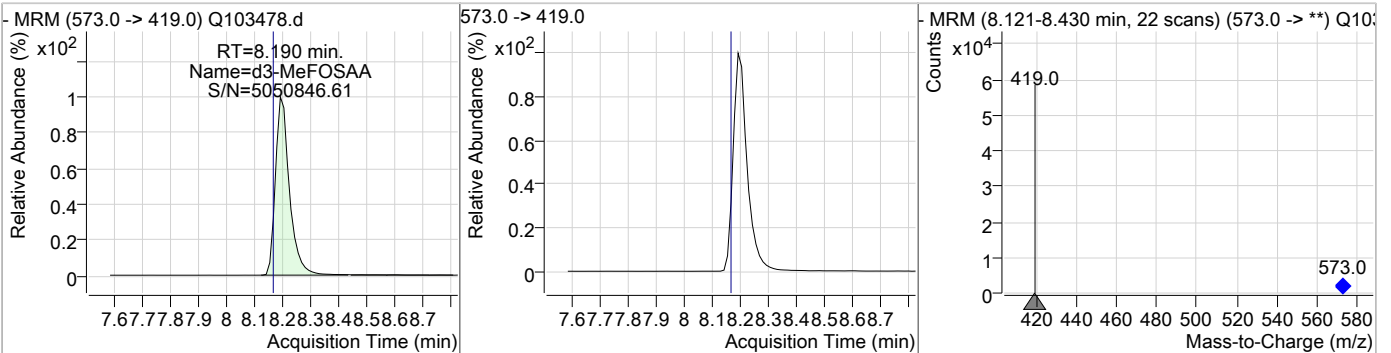


Perfluorinated Compounds by LC/MS/MS

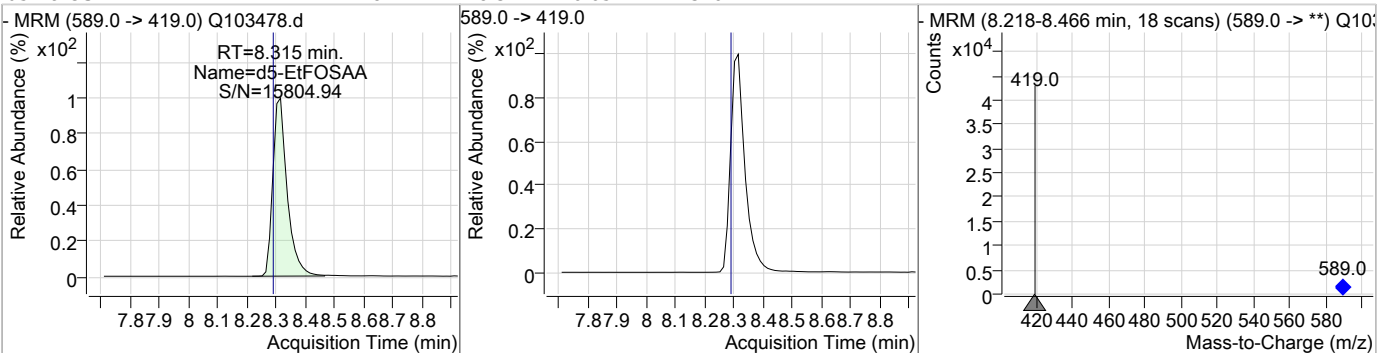
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
----------	-------	----	----------	-------	------	--------	------	------



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
----------	-------	----	----------	-------	------	--------	------	------



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
----------	-------	----	----------	-------	------	--------	------	------



Perfluorinated Compounds by LC/MS/MS

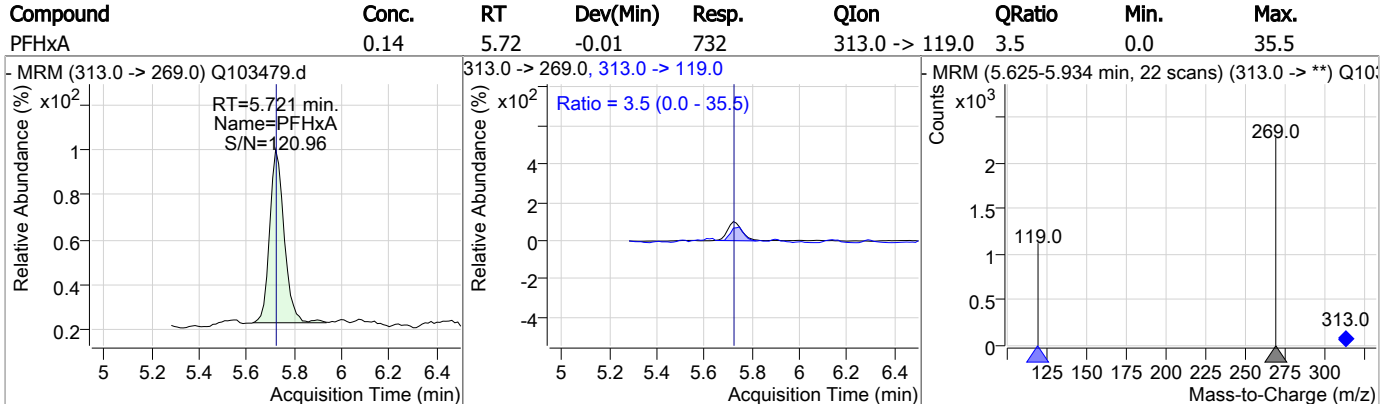
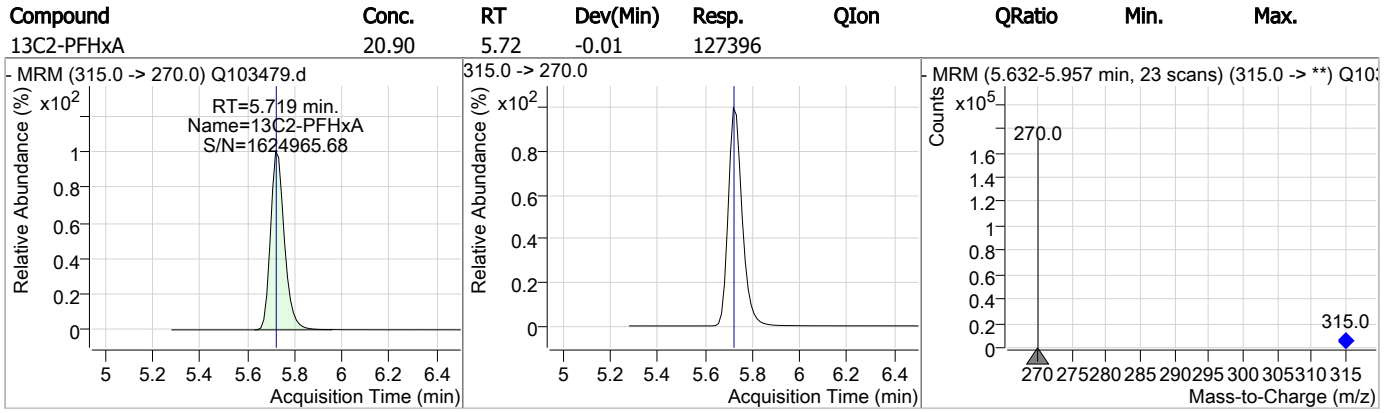
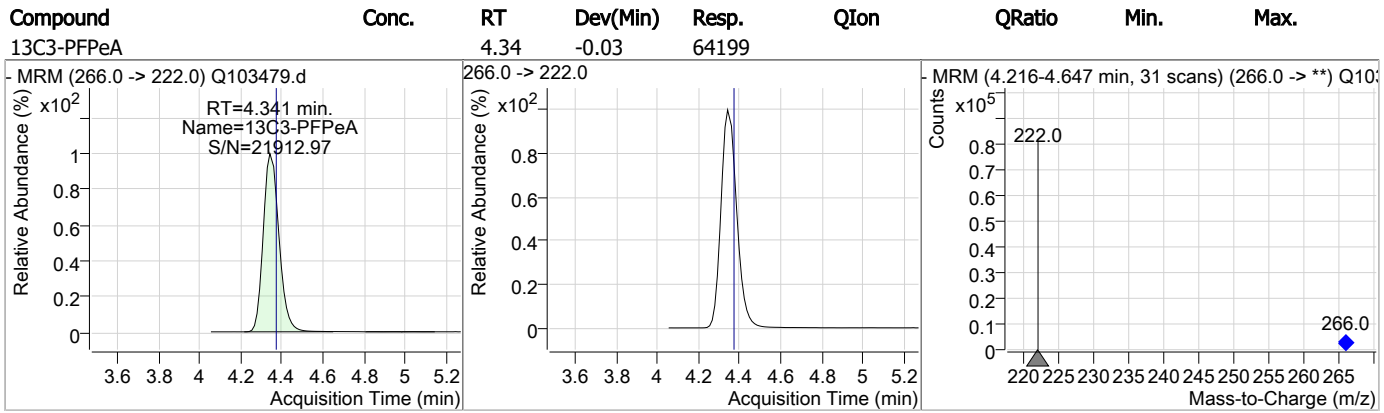
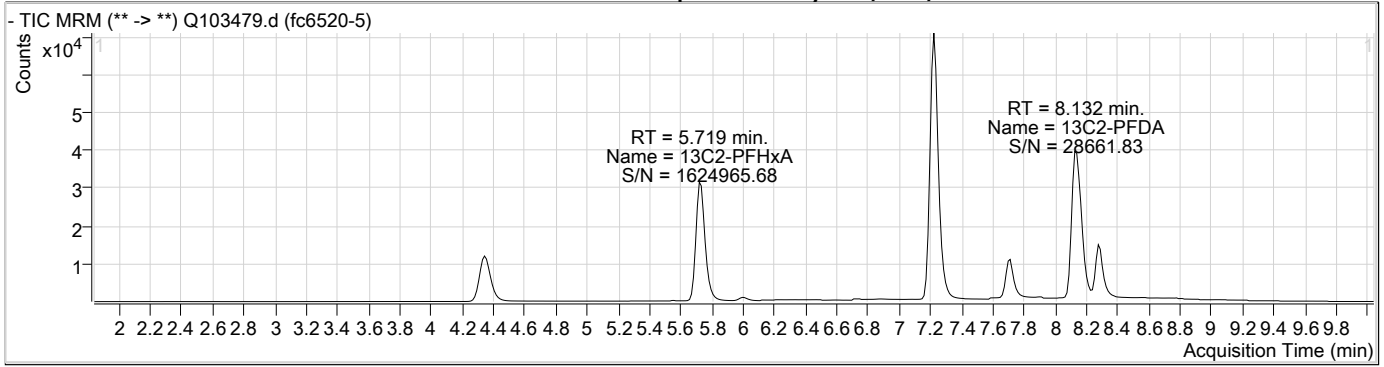
Data File : Q103479.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 8:59:48 PM
 Sample Name : fc6520-5
 Vial : P1-B9
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,280,,,1,1,water

Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
13C2-6:2FTS	7.212	429.0 -> 409.0	53543	20.00	µg/L	-0.012
13C2-PFOA	7.227	415.0 -> 370.0	210547	20.00	µg/L	-0.012
13C3-PFPeA	4.341	266.0 -> 222.0	64199	20.00	µg/L	-0.031
13C4-PFOS	7.716	503.0 -> 80.0	36005	20.00	µg/L	0.000
d3-MeFOSAA	8.165	573.0 -> 419.0	47566	40.00	µg/L	0.000
System Monitoring Compounds						
13C2-PFDA	8.132	515.0 -> 470.0	125770	21.32	µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 106.6%		
13C2-PFHxA	5.719	315.0 -> 270.0	127396	20.90	µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 104.5%		
d5-EtFOSAA	8.277	589.0 -> 419.0	45848	36.97	µg/L	0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 92.4%		
13C3-HFPO-DA	6.001	287.0 -> 169.0	3474	42.68	µg/L	-0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 106.7%		
Target Compounds						
6:2FTS	7.200	427.0 -> 407.0	0	0.00	µg/L m	1
8:2FTS	8.168	527.0 -> 507.0	0	0.00	µg/L m	1
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
MeFOSAA	-	570.0 -> 419.0	-	N.D.		
PFBA	-	213.0 -> 169.0	-	N.D.		
PFBS	-	299.0 -> 80.0	-	N.D.		
PFDA	-	513.0 -> 469.0	-	N.D.		
PFDoDA	-	613.0 -> 569.0	-	N.D.		
PFHpA	-	363.0 -> 319.0	-	N.D.		
PFHpS	-	449.0 -> 80.0	-	N.D.		
PFHxA	5.721	313.0 -> 269.0	732	0.14	µg/L	94
PFHxS	-	399.0 -> 80.0	-	N.D.		
PFNA	-	463.0 -> 419.0	-	N.D.		
PFOA	-	413.0 -> 369.0	-	N.D.		
PFOS	-	499.0 -> 80.0	-	N.D.		
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFTeDA	-	713.0 -> 669.0	-	N.D.		
PFTTrDA	-	663.0 -> 619.0	-	N.D.		
PFUnDA	-	563.0 -> 519.0	-	N.D.		
ADONA	-	377.0 -> 251.0	-	N.D.		
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
HFPO-DA	-	285.0 -> 169.0	-	N.D.		

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

7.1.5
7

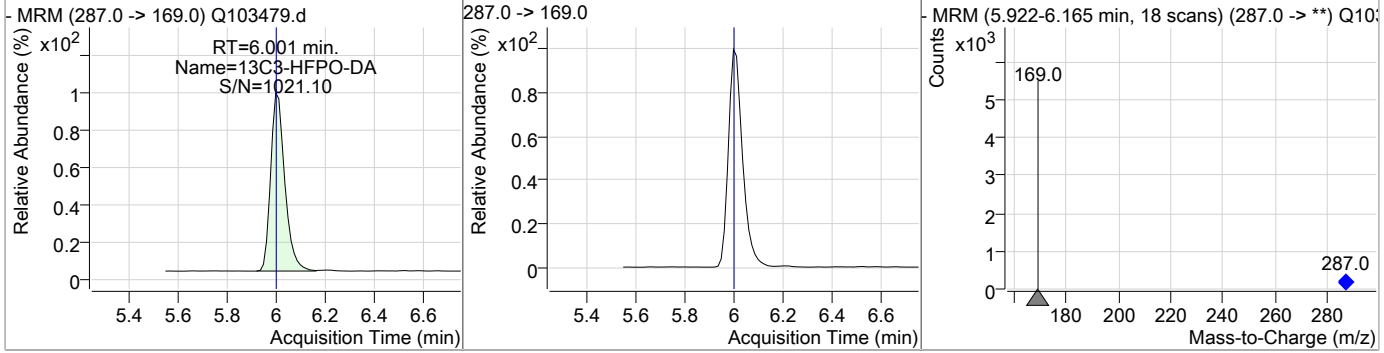
Perfluorinated Compounds by LC/MS/MS



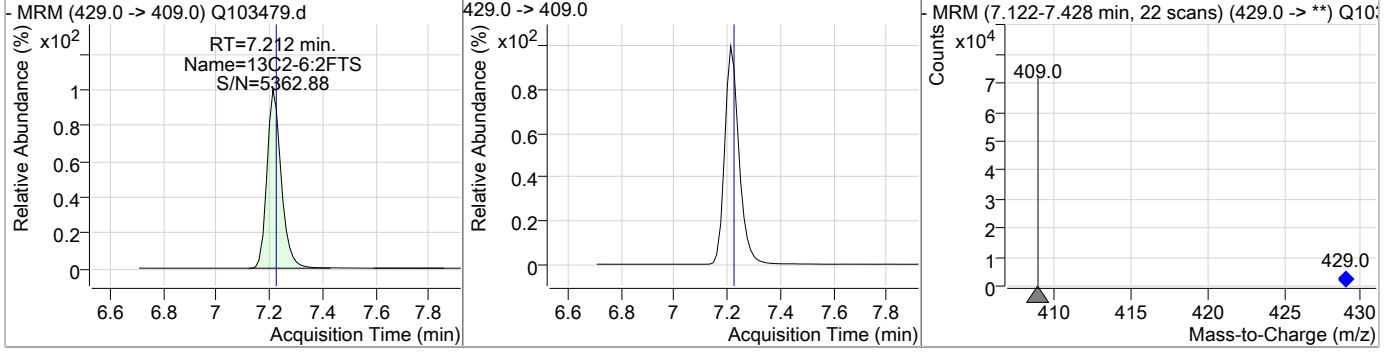
7.1.5
7

Perfluorinated Compounds by LC/MS/MS

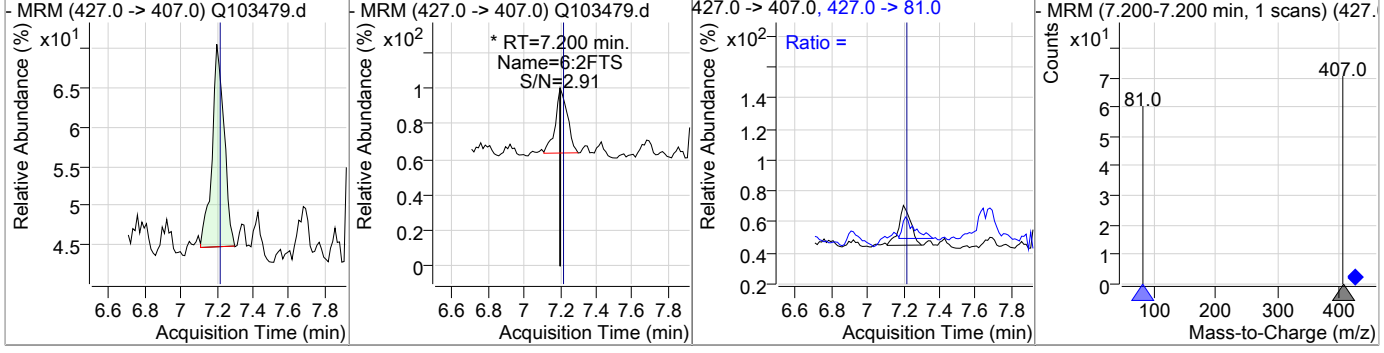
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	42.68	6.00	-0.01	3474				



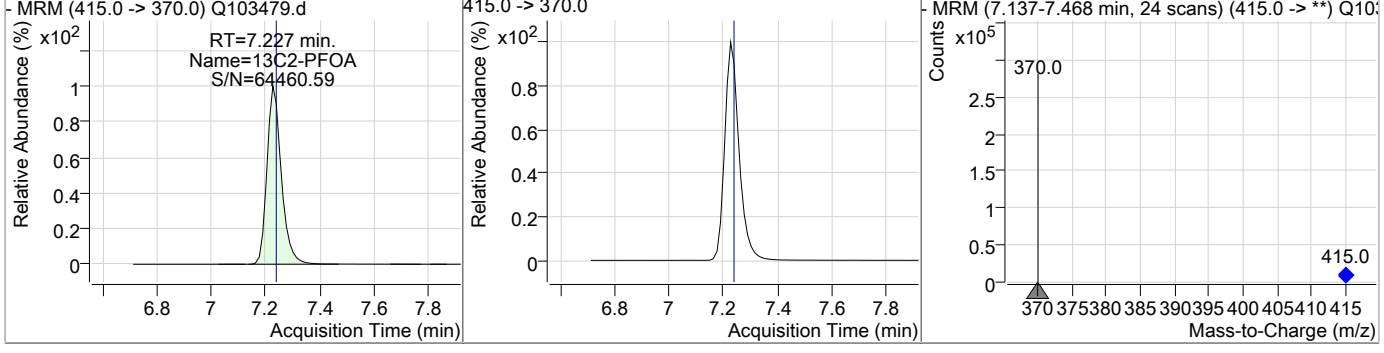
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS		7.21	-0.01	53543				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	0	0	0	0	427.0 -> 81.0		14.8	74.8

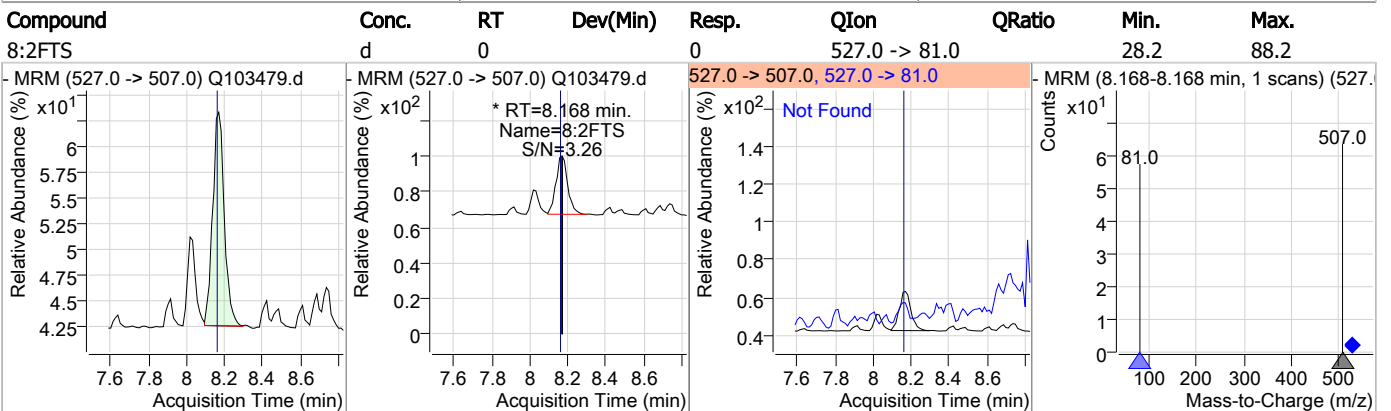
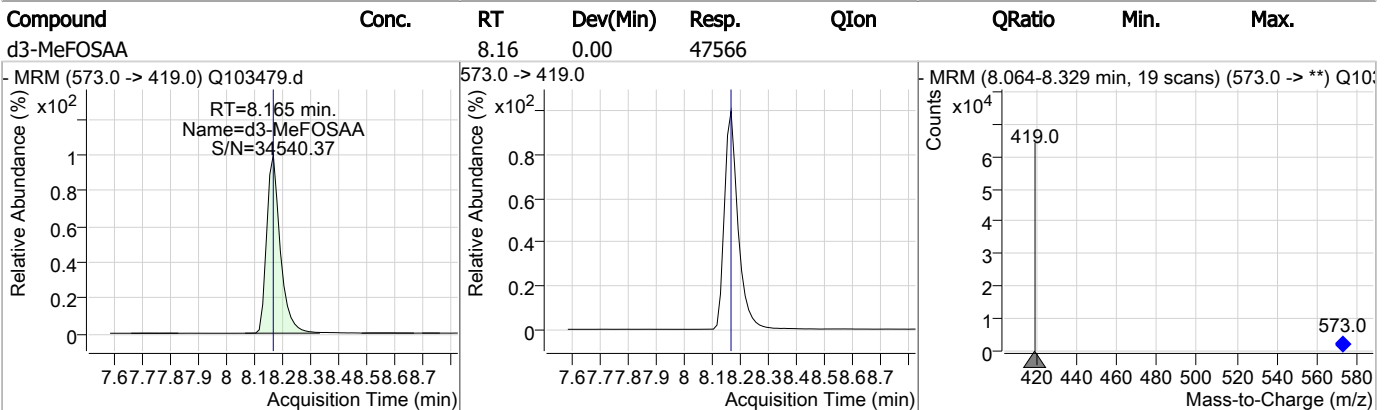
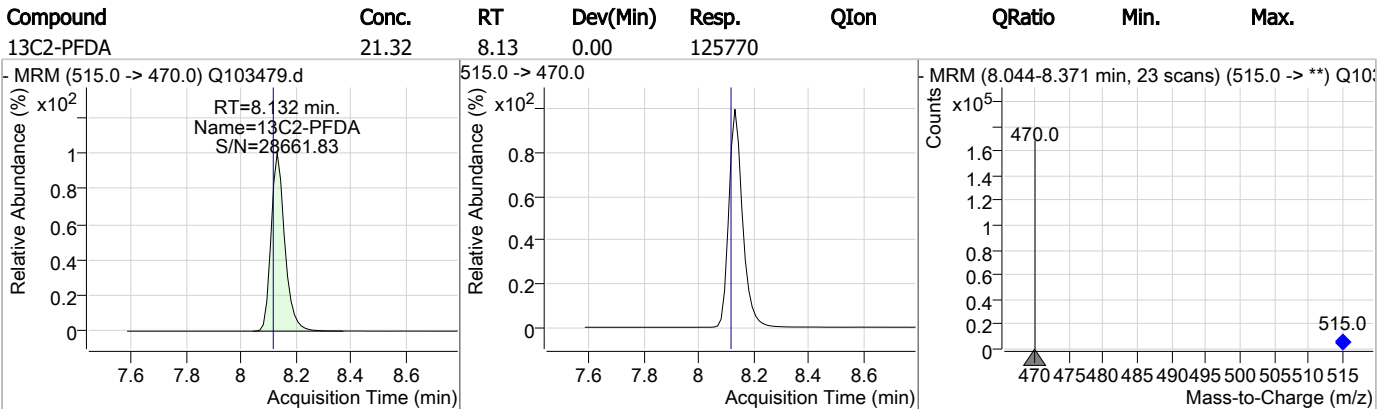
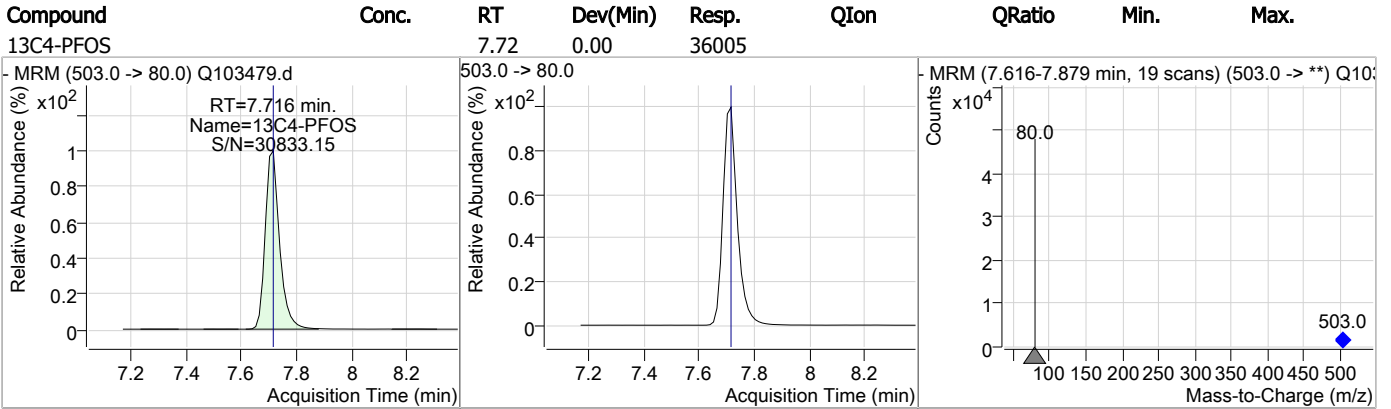


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFOA		7.23	-0.01	210547				



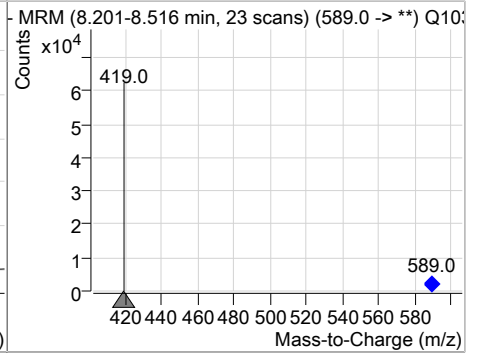
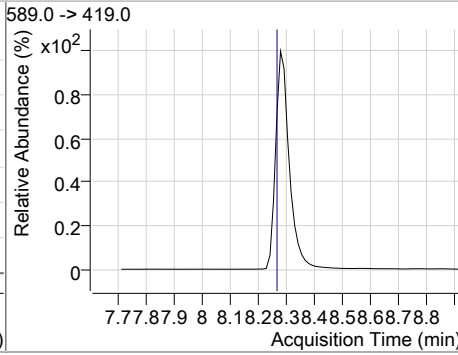
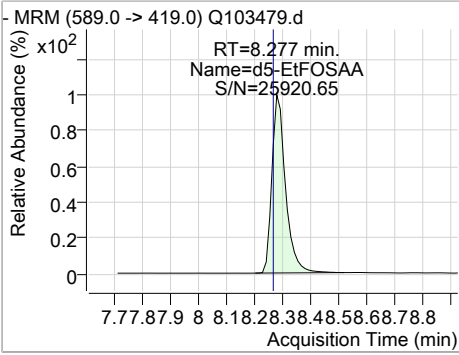
7.15
7

Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	36.97	8.28	0.01	45848				



7.15

7

Perfluorinated Compounds by LC/MS/MS

Data File : Q103480.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 9:15:34 PM
 Sample Name : fc6520-6
 Vial : P1-C1
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,280,,,1,1,water

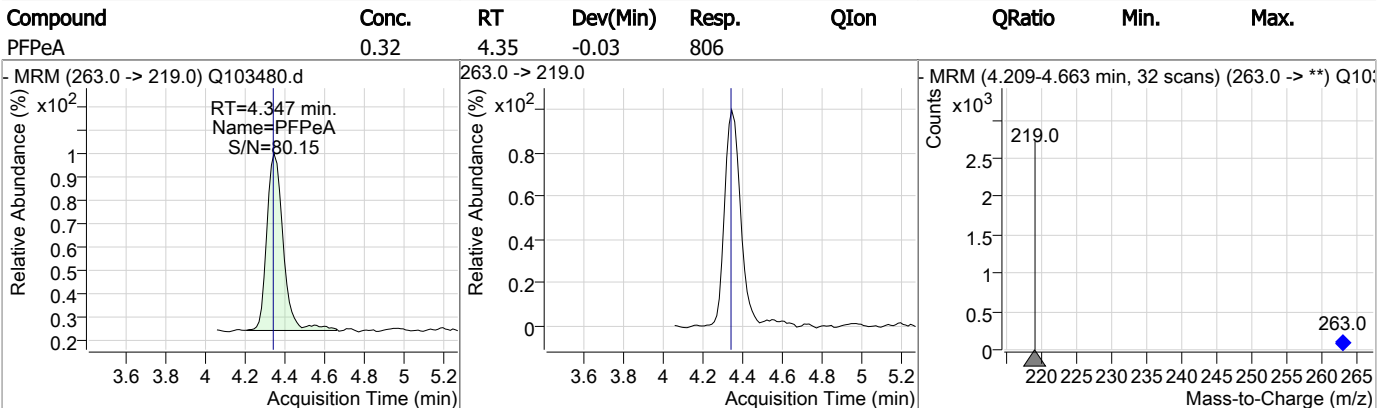
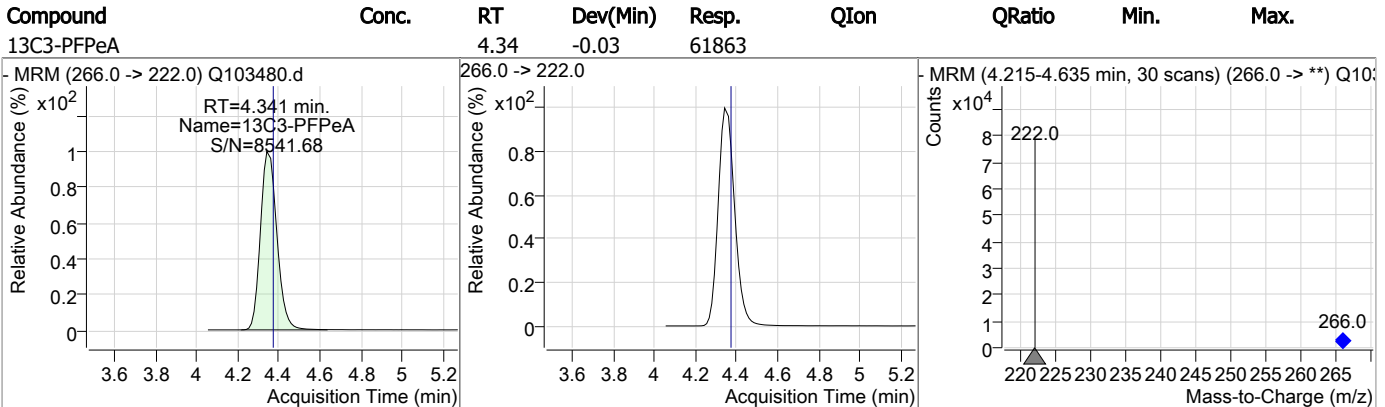
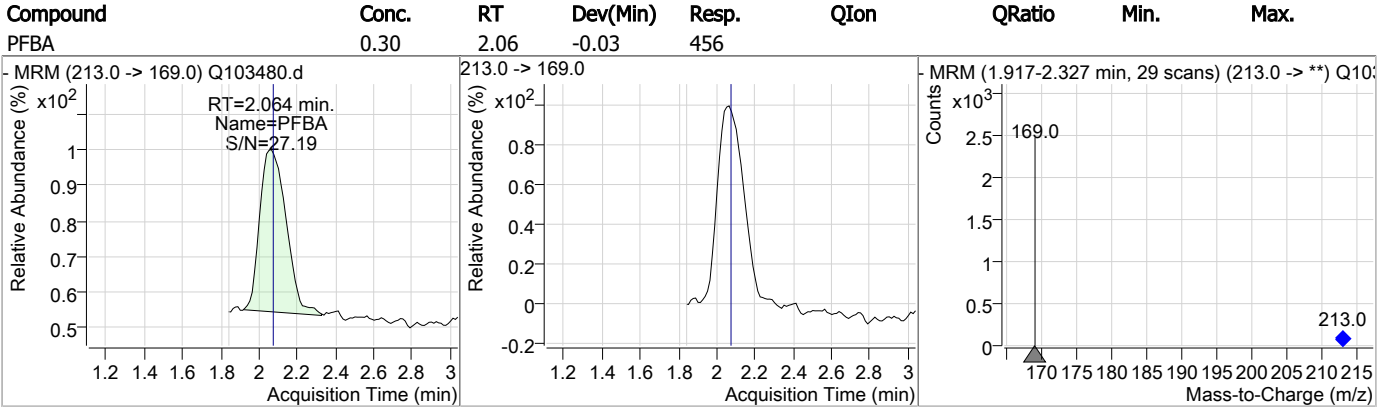
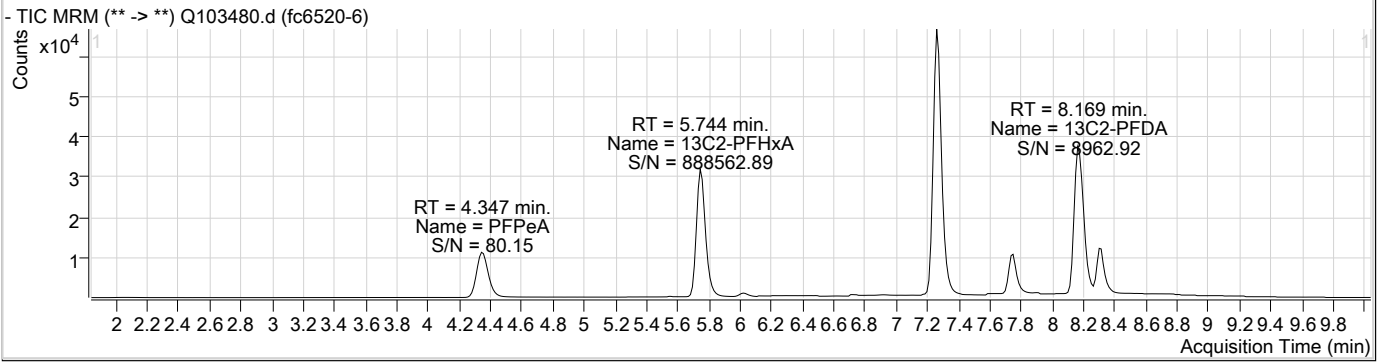
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
13C2-6:2FTS	7.250	429.0 -> 409.0	40674	20.00	µg/L	0.025
13C2-PFOA	7.264	415.0 -> 370.0	206752	20.00	µg/L	0.025
13C3-PFPeA	4.341	266.0 -> 222.0	61863	20.00	µg/L	-0.031
13C4-PFOS	7.753	503.0 -> 80.0	34301	20.00	µg/L	0.038
d3-MeFOSAA	8.190	573.0 -> 419.0	46371	40.00	µg/L	0.025
System Monitoring Compounds						
13C2-PFDA	8.169	515.0 -> 470.0	110499	19.07	µg/L	0.038
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 95.4%		
13C2-PFHxA	5.744	315.0 -> 270.0	128123	21.40	µg/L	0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 107.0%		
d5-EtFOSAA	8.302	589.0 -> 419.0	37452	31.13	µg/L	0.038
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 77.8%		
13C3-HFPO-DA	6.026	287.0 -> 169.0	3520	44.01	µg/L	0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 110.0%		
Target Compounds						
6:2FTS	7.832	427.0 -> 407.0	0	0.00	µg/L m	1
8:2FTS	-	527.0 -> 507.0	-	N.D.		
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
MeFOSAA	-	570.0 -> 419.0	-	N.D.		
PFBA	2.064	213.0 -> 169.0	456	0.30	µg/L	100
PFBS	-	299.0 -> 80.0	-	N.D.		
PFDA	-	513.0 -> 469.0	-	N.D.		
PFDoDA	-	613.0 -> 569.0	-	N.D.		
PFHpA	-	363.0 -> 319.0	-	N.D.		
PFHpS	-	449.0 -> 80.0	-	N.D.		
PFHxA	-	313.0 -> 269.0	-	N.D.		
PFHxS	-	399.0 -> 80.0	-	N.D.		
PFNA	-	463.0 -> 419.0	-	N.D.		
PFOA	-	413.0 -> 369.0	-	N.D.		
PFOS	-	499.0 -> 80.0	-	N.D.		
PFPeA	4.347	263.0 -> 219.0	806	0.32	µg/L	100
PFTeDA	-	713.0 -> 669.0	-	N.D.		
PFTTrDA	-	663.0 -> 619.0	-	N.D.		
PFUnDA	-	563.0 -> 519.0	-	N.D.		
ADONA	-	377.0 -> 251.0	-	N.D.		
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
HFPO-DA	-	285.0 -> 169.0	-	N.D.		

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

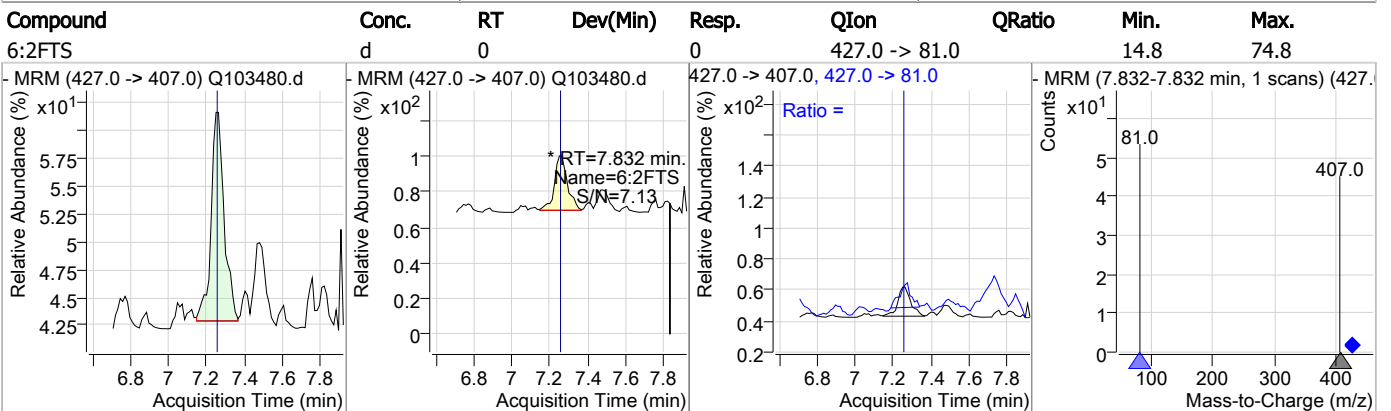
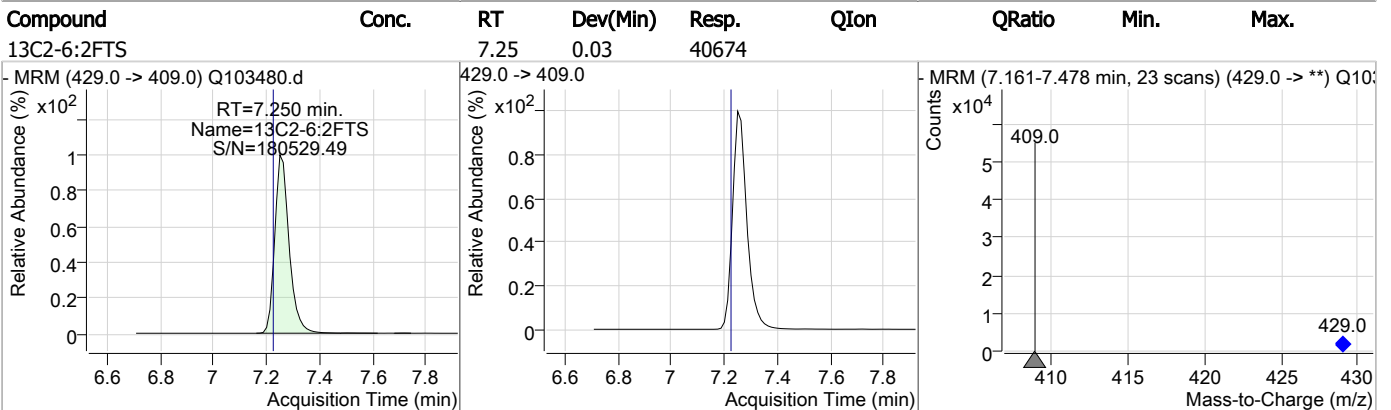
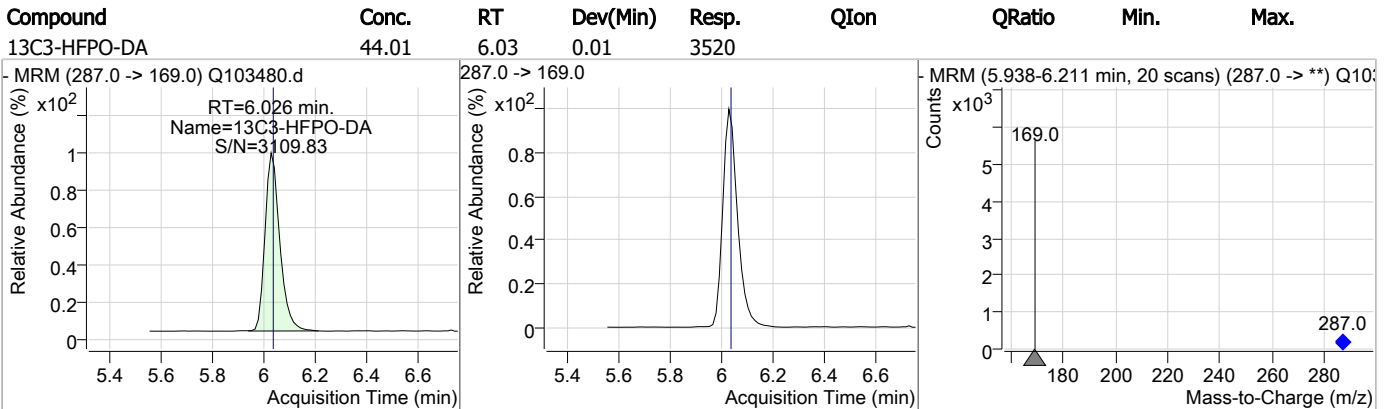
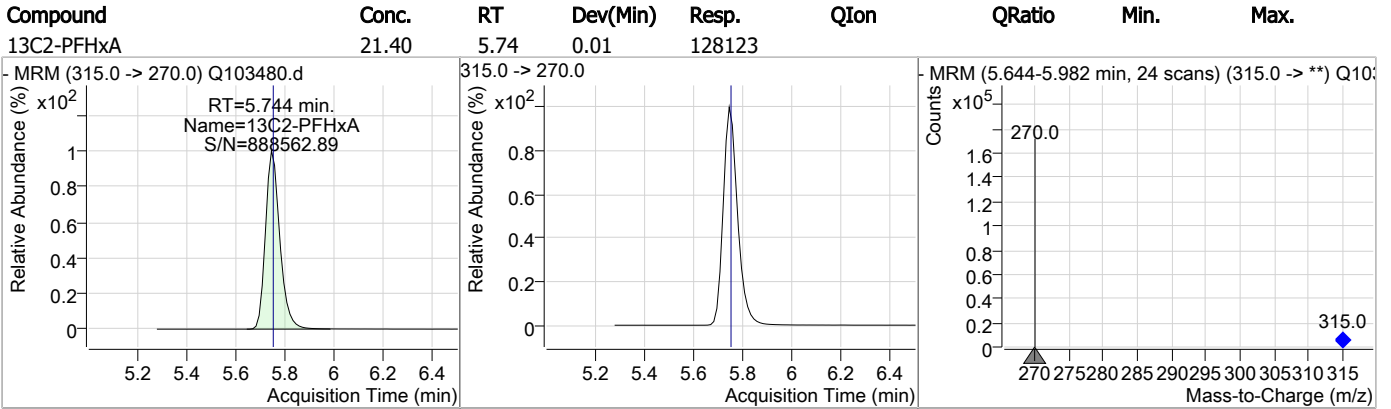
7.1.6
7



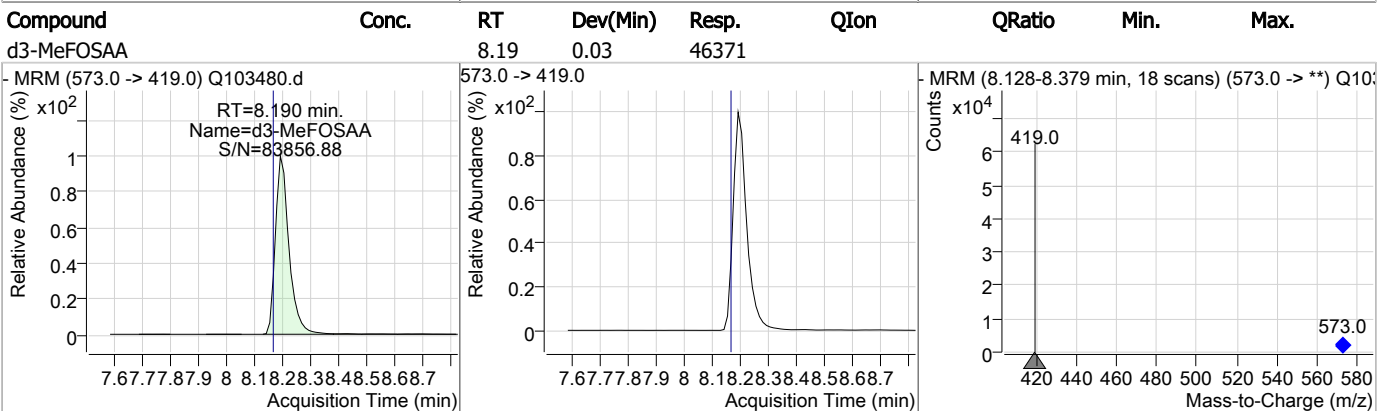
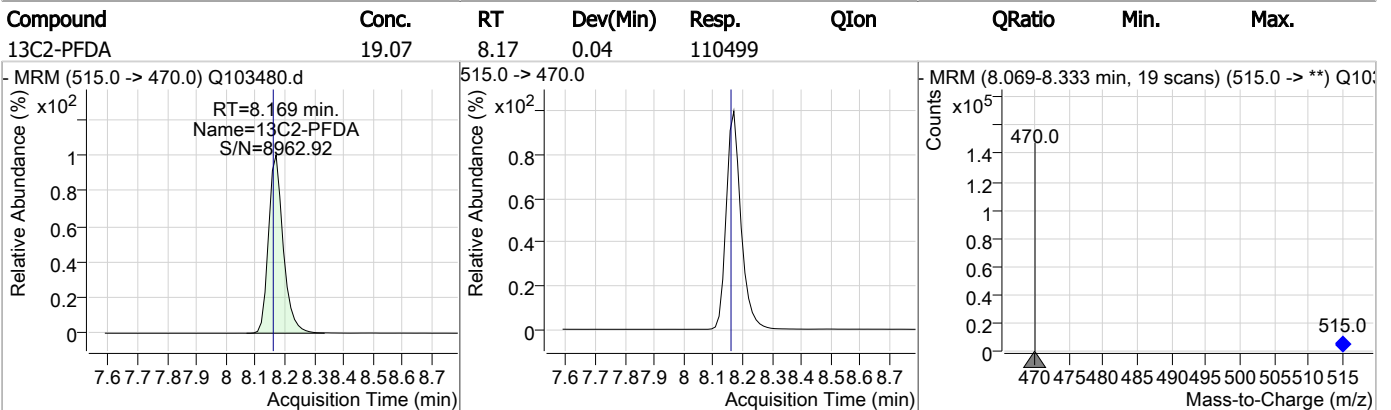
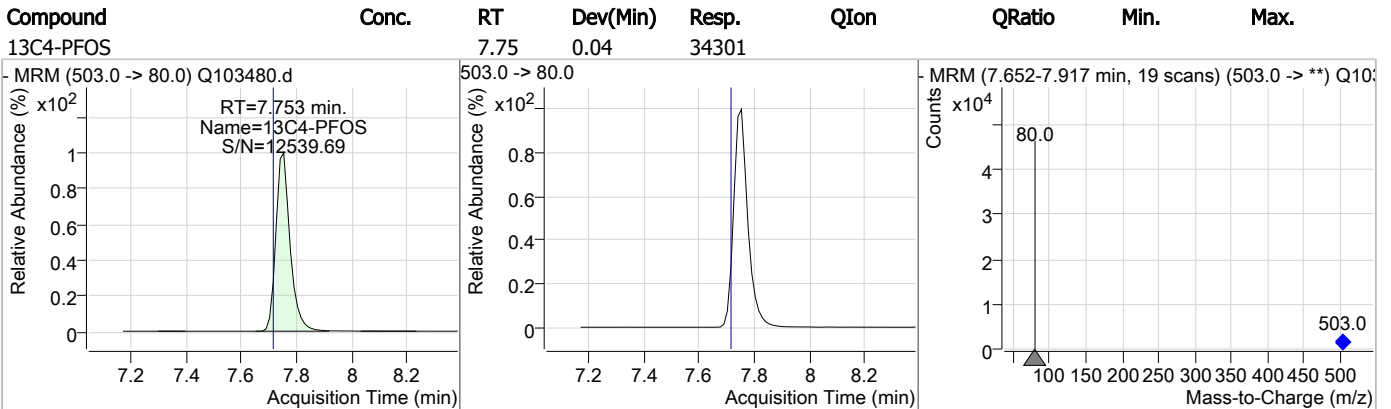
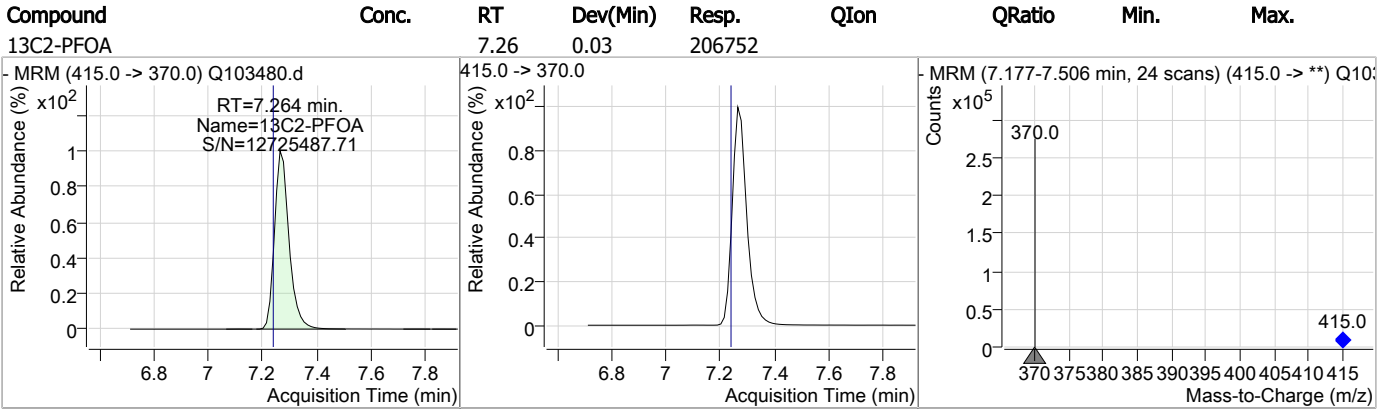
Perfluorinated Compounds by LC/MS/MS



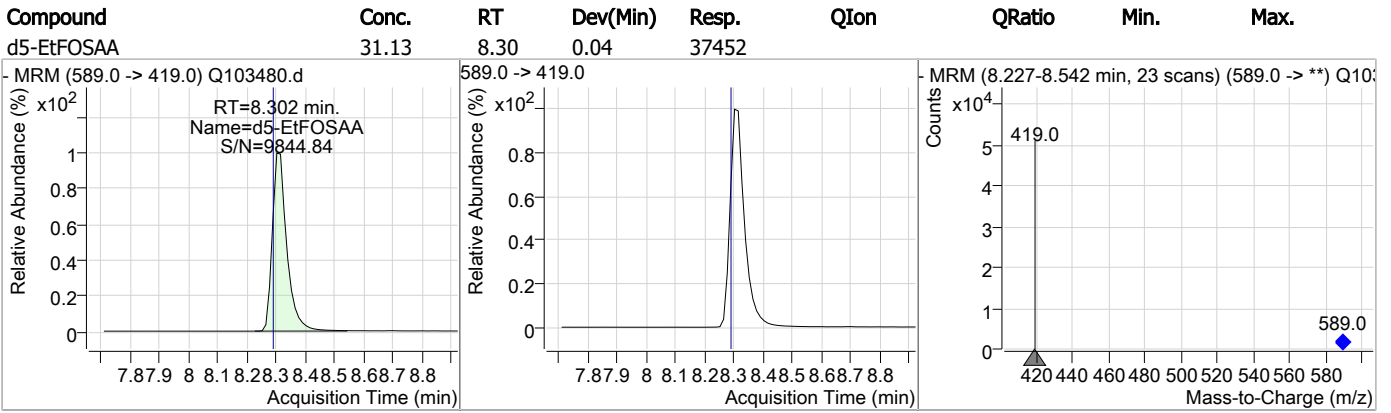
Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS



7.1.6

7

Perfluorinated Compounds by LC/MS/MS

Data File : Q103481.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 9:31:21 PM
 Sample Name : fc6520-7
 Vial : P1-C2
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,280,,,1,1,water

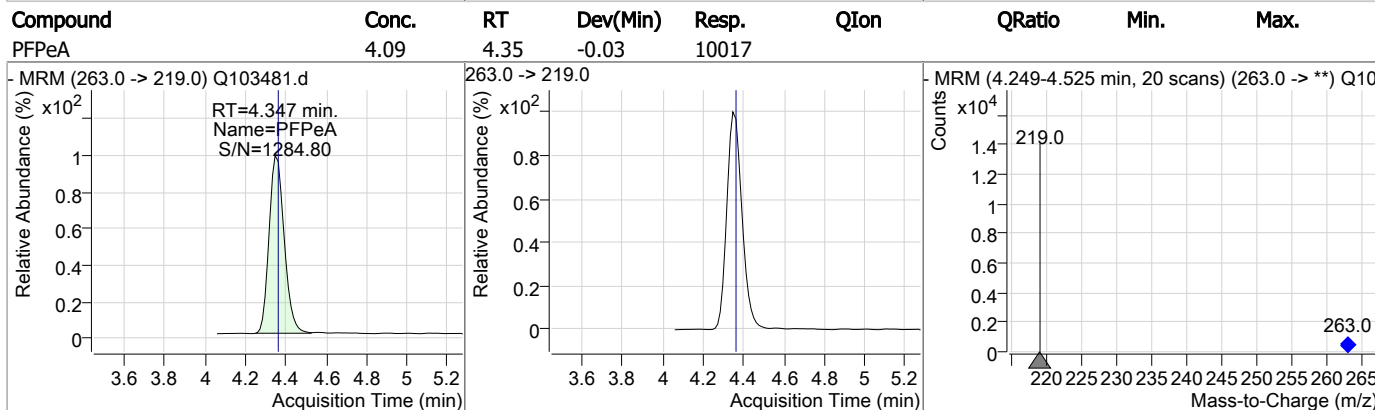
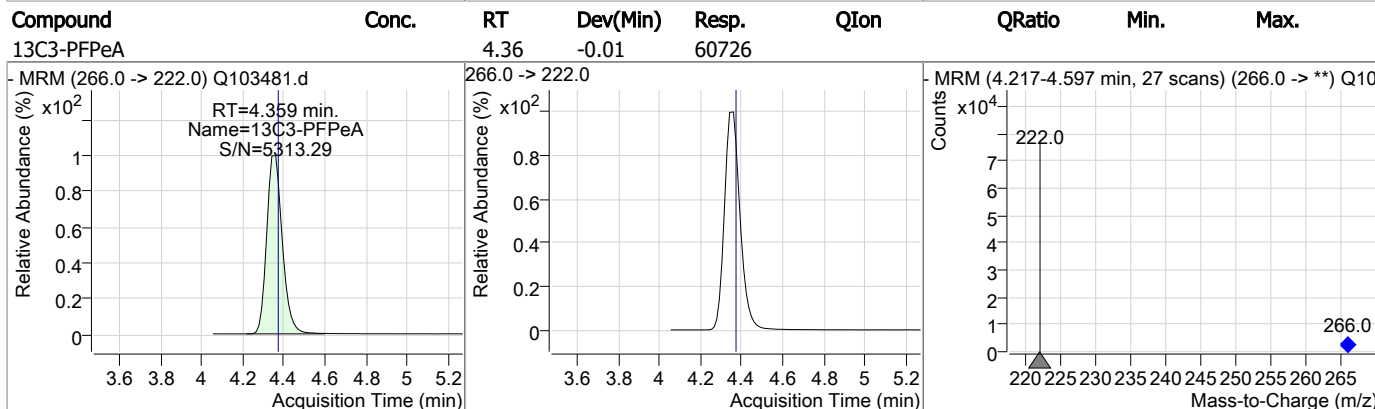
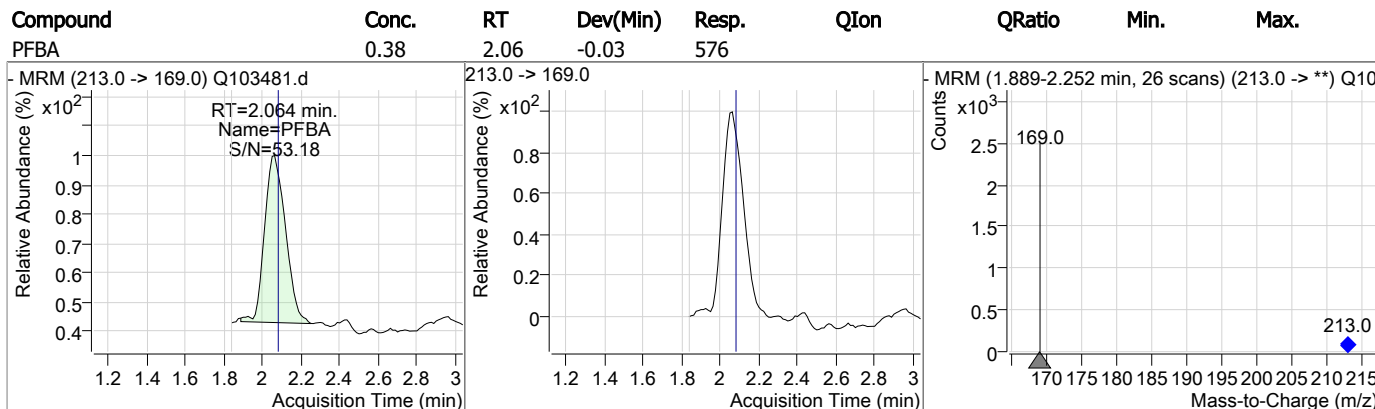
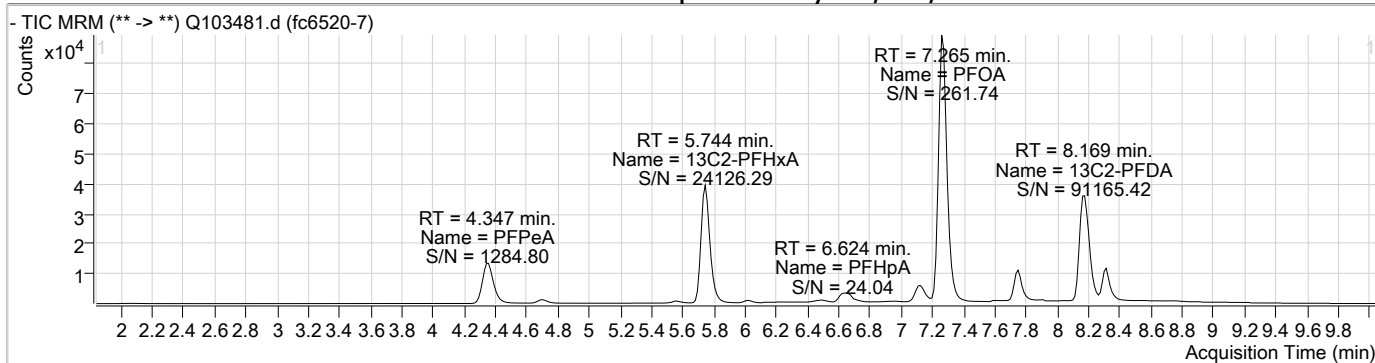
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
13C2-6:2FTS	7.262	429.0 -> 409.0	42781	20.00	µg/L	0.038
13C2-PFOA	7.264	415.0 -> 370.0	207739	20.00	µg/L	0.025
13C3-PFPeA	4.359	266.0 -> 222.0	60726	20.00	µg/L	-0.013
13C4-PFOS	7.753	503.0 -> 80.0	34791	20.00	µg/L	0.038
d3-MeFOSAA	8.202	573.0 -> 419.0	46915	40.00	µg/L	0.038
System Monitoring Compounds						
13C2-PFDA	8.169	515.0 -> 470.0	110379	18.96	µg/L	0.038
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 94.8%		
13C2-PFHxA	5.744	315.0 -> 270.0	124013	20.63	µg/L	0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 103.1%		
d5-EtFOSAA	8.315	589.0 -> 419.0	34630	28.52	µg/L	0.050
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 71.3%		
13C3-HFPO-DA	6.026	287.0 -> 169.0	3231	40.26	µg/L	0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 100.6%		
Target Compounds						
6:2FTS	7.238	427.0 -> 407.0	0	0.00	µg/L	m 1
8:2FTS	-	527.0 -> 507.0	-	N.D.		
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
MeFOSAA	-	570.0 -> 419.0	-	N.D.		
PFBA	2.064	213.0 -> 169.0	576	0.38	µg/L	100
PFBS	4.691	299.0 -> 80.0	3492	3.01	µg/L	98
PFDA	-	513.0 -> 469.0	-	N.D.		
PFDoDA	-	613.0 -> 569.0	-	N.D.		
PFHpA	6.624	363.0 -> 319.0	9718	1.53	µg/L	m 98
PFHpS	-	449.0 -> 80.0	-	N.D.		
PFHxA	5.746	313.0 -> 269.0	31870	5.93	µg/L	100
PFHxS	6.669	399.0 -> 80.0	7551	4.73	µg/L	m 93
PFNA	-	463.0 -> 419.0	-	N.D.		
PFOA	7.265	413.0 -> 369.0	87482	7.74	µg/L	m 95
PFOS	-	499.0 -> 80.0	-	N.D.		
PFPeA	4.347	263.0 -> 219.0	10017	4.09	µg/L	100
PFTeDA	-	713.0 -> 669.0	-	N.D.		
PFTrDA	-	663.0 -> 619.0	-	N.D.		
PFUnDA	-	563.0 -> 519.0	-	N.D.		
ADONA	-	377.0 -> 251.0	-	N.D.		
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
HFPO-DA	-	285.0 -> 169.0	-	N.D.		

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

7.17
7

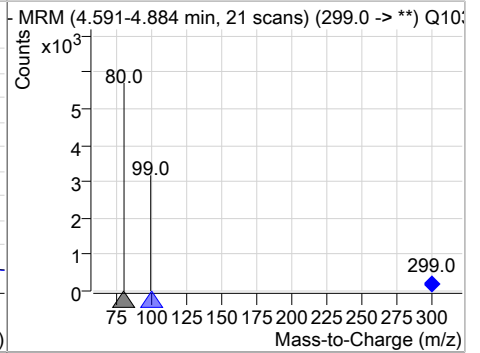
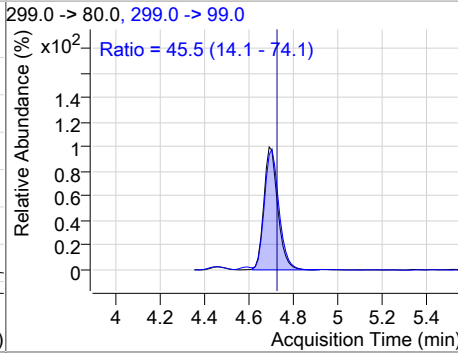
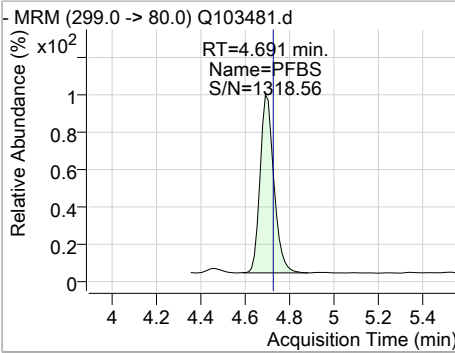


Perfluorinated Compounds by LC/MS/MS

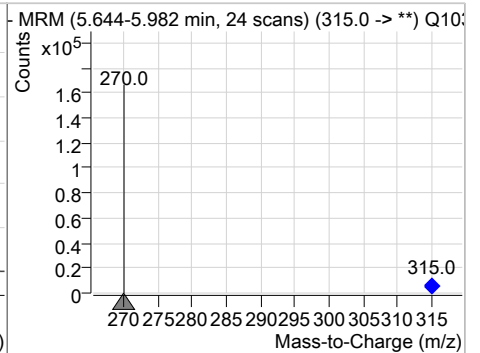
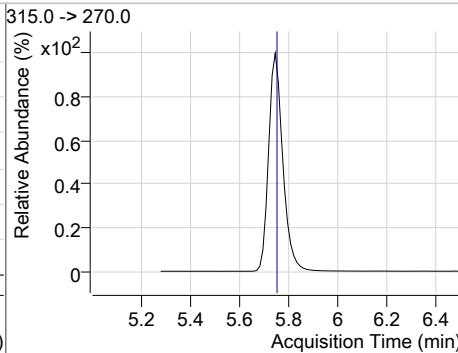
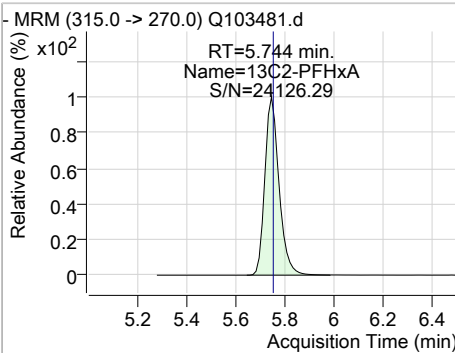


Perfluorinated Compounds by LC/MS/MS

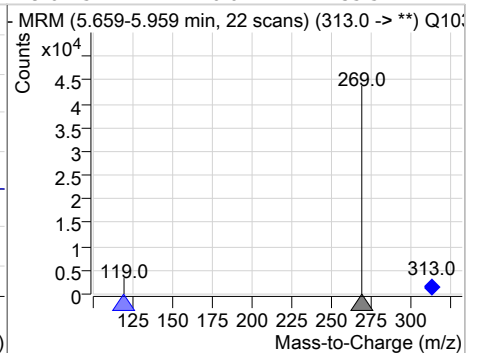
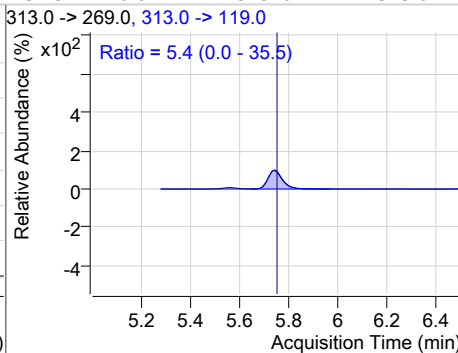
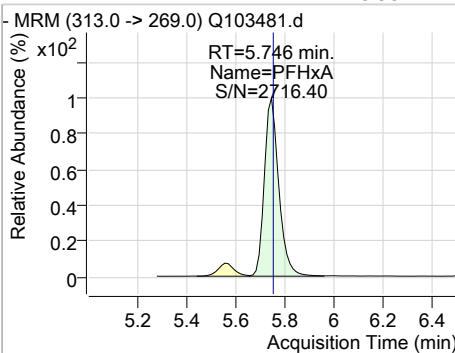
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	3.01	4.69	-0.01	3492	299.0 -> 99.0	45.5	14.1	74.1



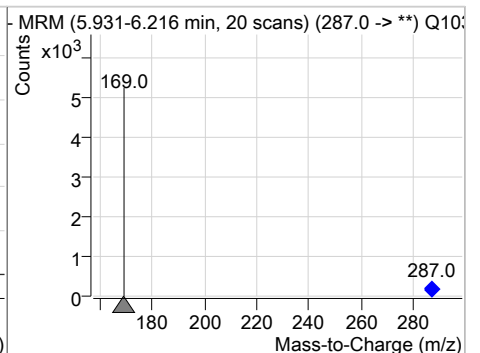
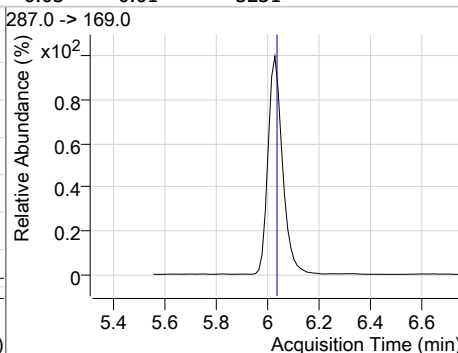
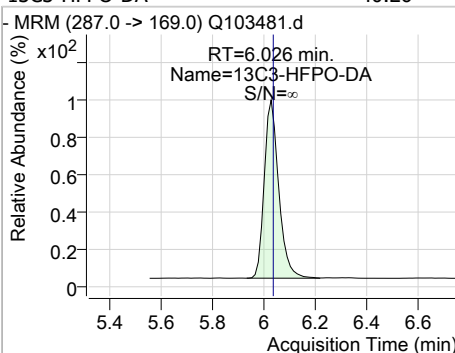
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	20.63	5.74	0.01	124013				



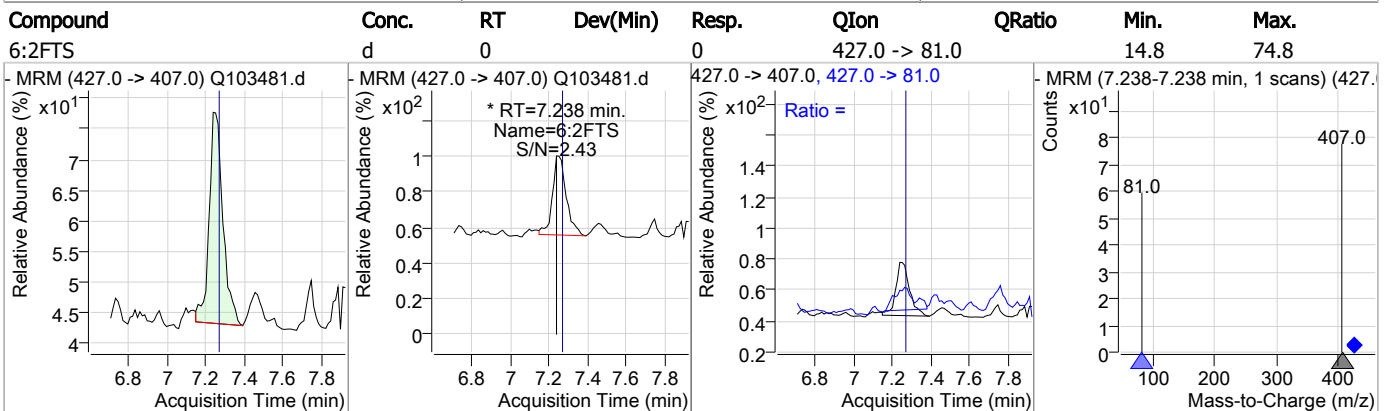
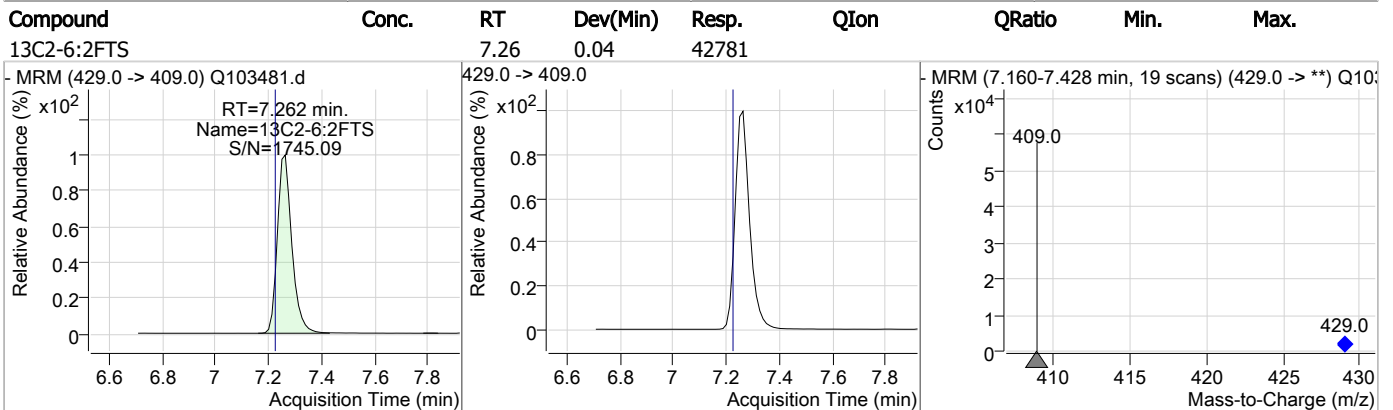
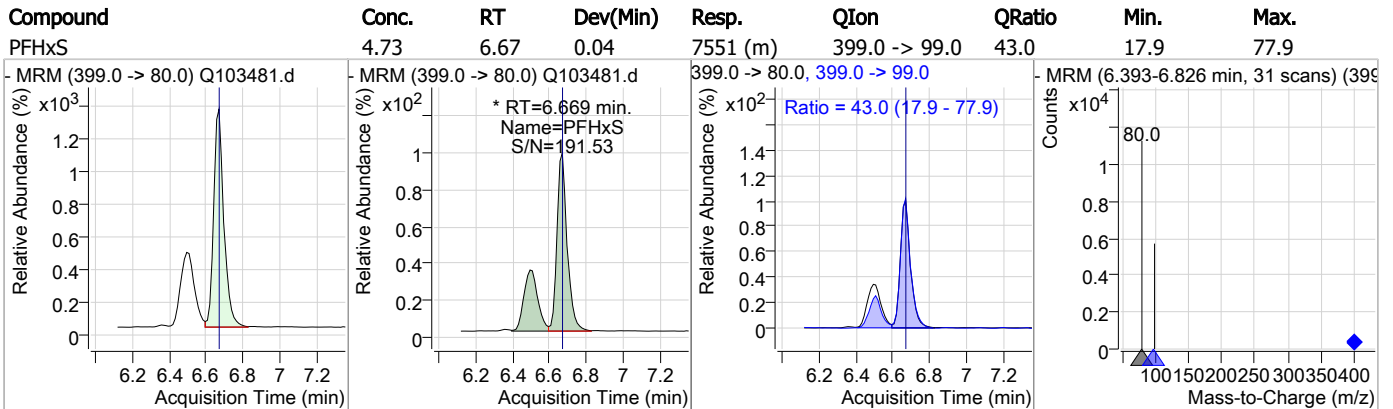
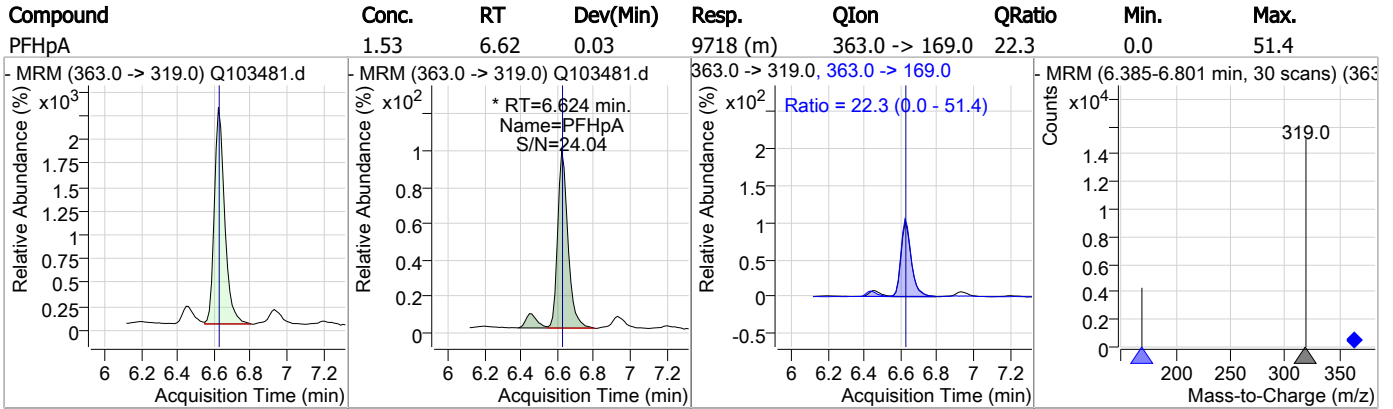
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	5.93	5.75	0.01	31870	313.0 -> 119.0	5.4	0.0	35.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	40.26	6.03	0.01	3231				

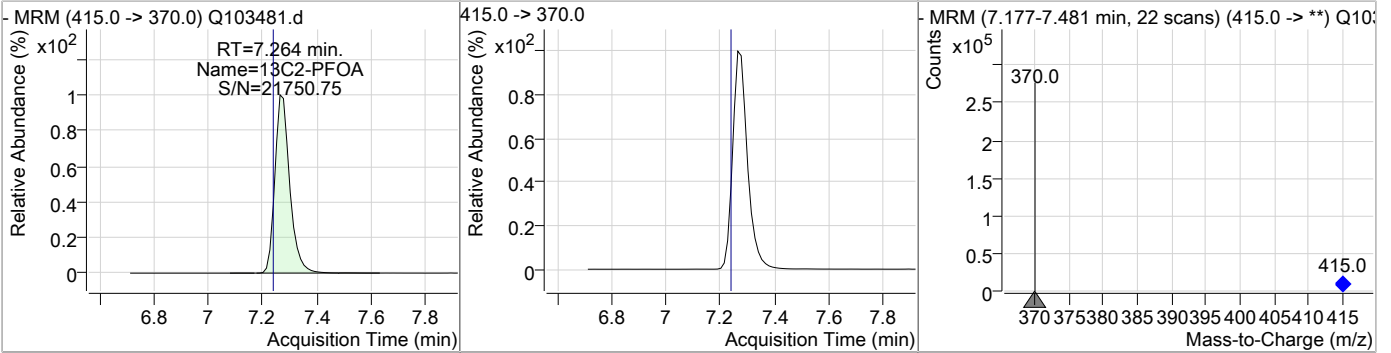


Perfluorinated Compounds by LC/MS/MS

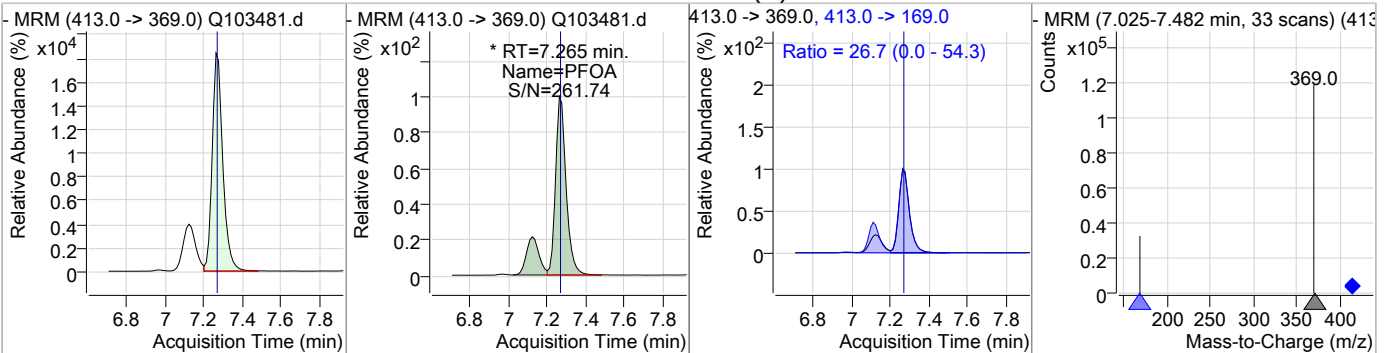


Perfluorinated Compounds by LC/MS/MS

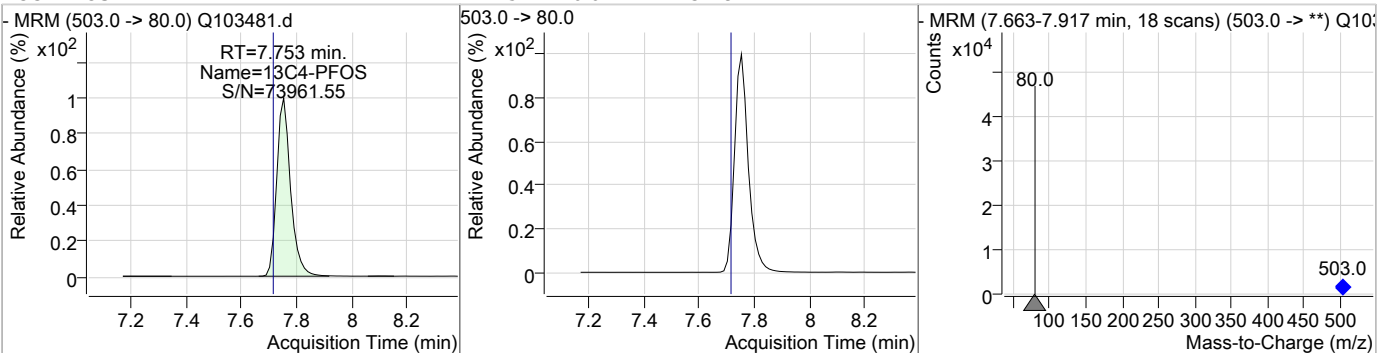
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFOA		7.26	0.03	207739				



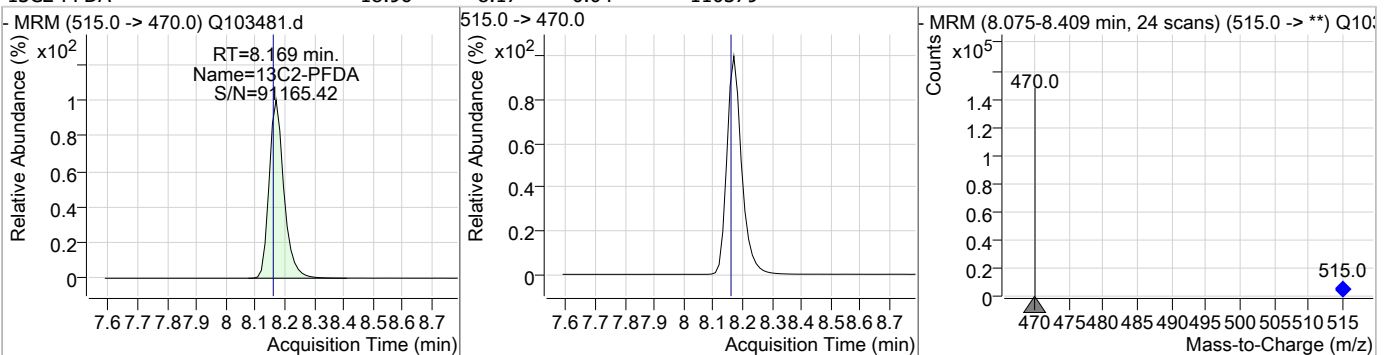
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	7.74	7.27	0.03	87482 (m)	413.0 -> 169.0	26.7	0.0	54.3



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.75	0.04	34791				

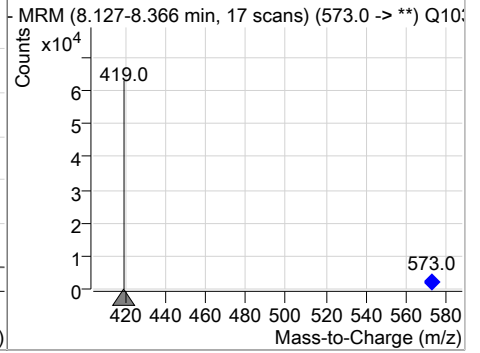
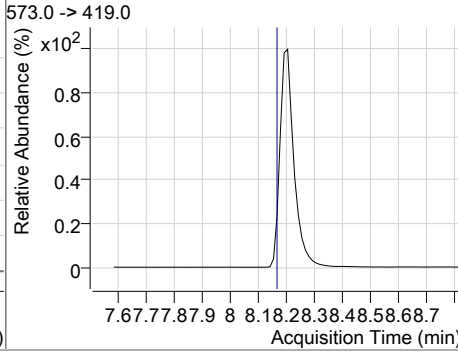
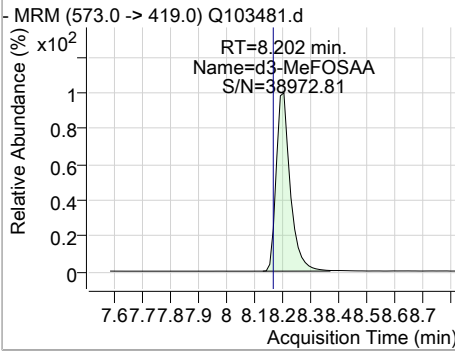


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	18.96	8.17	0.04	110379				

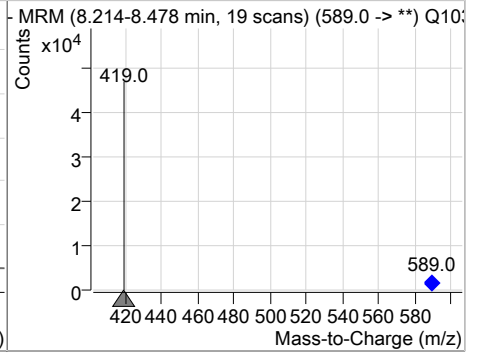
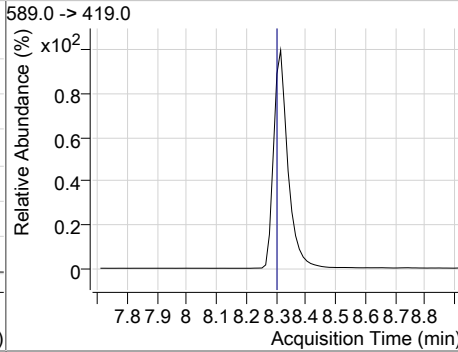
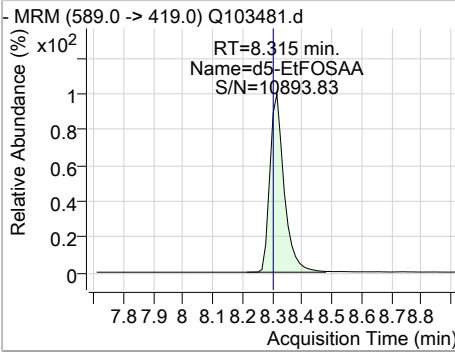


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.20	0.04	46915				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	28.52	8.31	0.05	34630				



7.1.7
7



Manual Integration Approval Summary

Sample Number: FC6520-7 Method: EPA 537.1 REV 1.0
Lab FileID: Q103481.D Analyst approved: 06/19/23 16:34 Anna Ludwig
Injection Time: 06/18/23 21:31 Supervisor approved: 06/19/23 17:33 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluoroheptanoic acid	375-85-9		6.62	Split peak
Perfluorohexanesulfonic acid	355-46-4		6.67	Split peak
Perfluorooctanoic acid	335-67-1		7.26	Split peak

7.1.7.1

7

Manual Integrations
APPROVED
 (compounds with "m" flag)
 Norman Farmer
 06/19/23 17:33

Perfluorinated Compounds by LC/MS/MS

Data File : Q103482.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 9:47:08 PM
 Sample Name : fc6520-8
 Vial : P1-C3
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,280,,,1,1,water

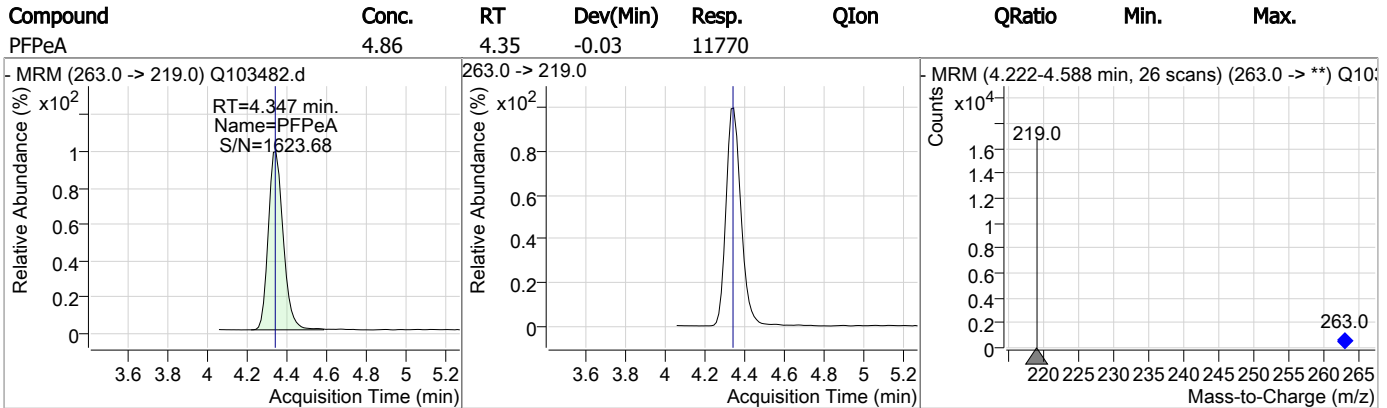
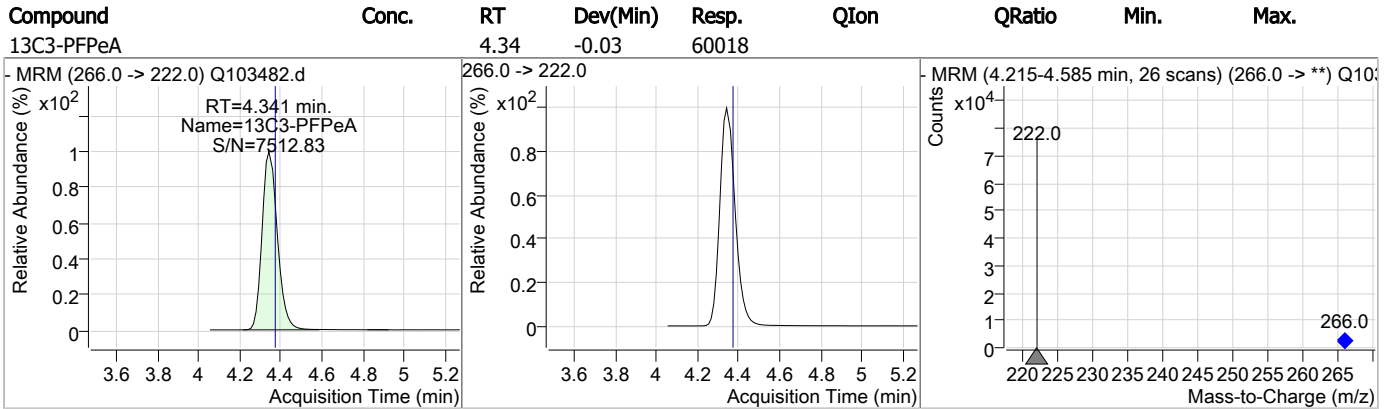
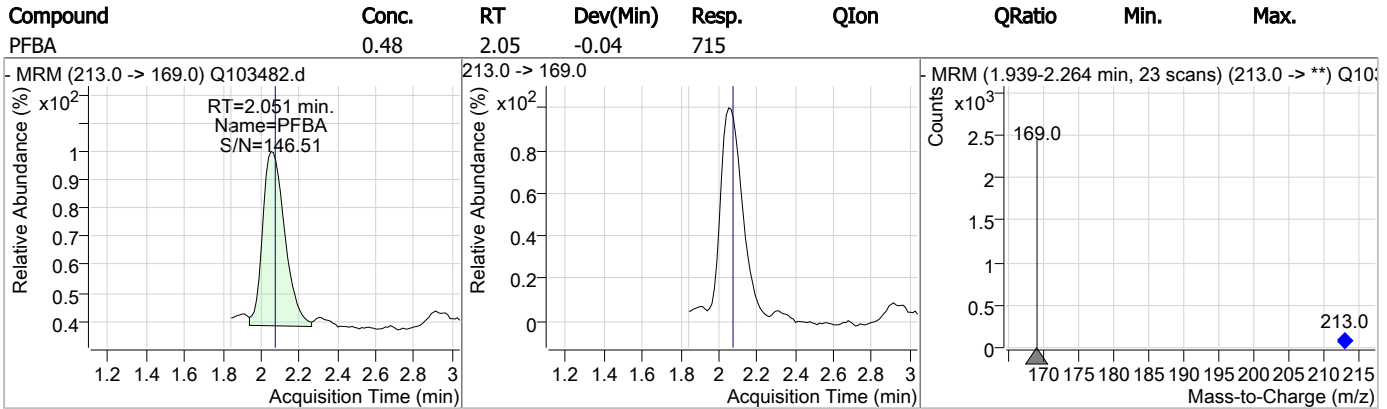
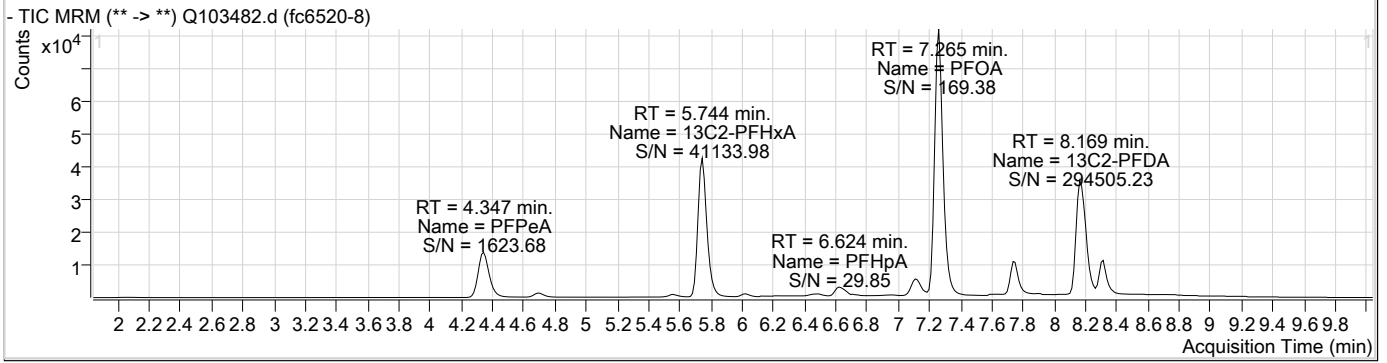
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)	QValue
Internal Standards							
13C2-6:2FTS	7.250	429.0 -> 409.0	42525	20.00	µg/L	0.025	
13C2-PFOA	7.264	415.0 -> 370.0	206045	20.00	µg/L	0.025	
13C3-PFPeA	4.341	266.0 -> 222.0	60018	20.00	µg/L	-0.031	
13C4-PFOS	7.741	503.0 -> 80.0	35299	20.00	µg/L	0.025	
d3-MeFOSAA	8.190	573.0 -> 419.0	45943	40.00	µg/L	0.025	
System Monitoring Compounds							
13C2-PFDA	8.169	515.0 -> 470.0	108249	18.75	µg/L	0.038	
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 93.7%			
13C2-PFHxA	5.744	315.0 -> 270.0	130848	21.92	µg/L	0.013	
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 109.6%			
d5-EtFOSAA	8.315	589.0 -> 419.0	33445	28.13	µg/L	0.050	
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 70.3%			
13C3-HFPO-DA	6.026	287.0 -> 169.0	3514	44.09	µg/L	0.013	
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 110.2%			
Target Compounds							
6:2FTS	7.250	427.0 -> 407.0	0	0.00	µg/L	m	1
8:2FTS	-	527.0 -> 507.0	-	N.D.			
EtFOSAA	-	584.0 -> 419.0	-	N.D.			
MeFOSAA	-	570.0 -> 419.0	-	N.D.			
PFBA	2.051	213.0 -> 169.0	715	0.48	µg/L		100
PFBS	4.691	299.0 -> 80.0	3820	3.24	µg/L		98
PFDA	-	513.0 -> 469.0	-	N.D.			
PFDoDA	-	613.0 -> 569.0	-	N.D.			
PFHpA	6.624	363.0 -> 319.0	9410	1.49	µg/L	m	97
PFHpS	-	449.0 -> 80.0	-	N.D.			
PFHxA	5.746	313.0 -> 269.0	36798	6.90	µg/L		100
PFHxS	6.656	399.0 -> 80.0	4674	2.89	µg/L	m	89
PFNA	-	463.0 -> 419.0	-	N.D.			
PFOA	7.265	413.0 -> 369.0	61571	5.49	µg/L	m	95
PFOS	-	499.0 -> 80.0	-	N.D.			
PFPeA	4.347	263.0 -> 219.0	11770	4.86	µg/L		100
PFTeDA	-	713.0 -> 669.0	-	N.D.			
PFTrDA	-	663.0 -> 619.0	-	N.D.			
PFUnDA	-	563.0 -> 519.0	-	N.D.			
ADONA	-	377.0 -> 251.0	-	N.D.			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.			
HFPO-DA	-	285.0 -> 169.0	-	N.D.			

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

7.1.8
7

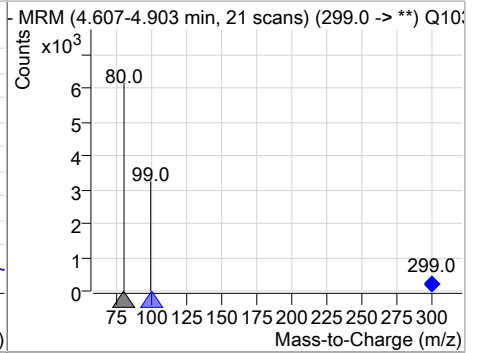
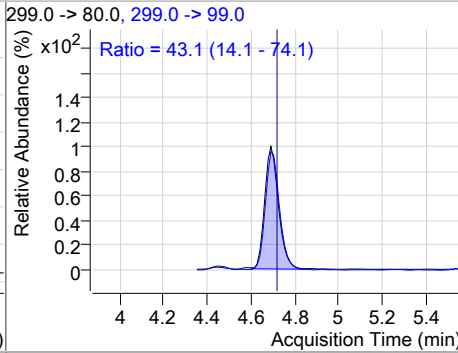
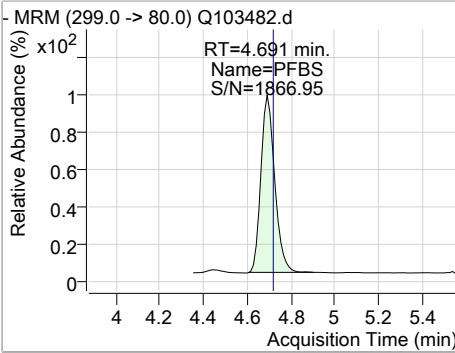


Perfluorinated Compounds by LC/MS/MS

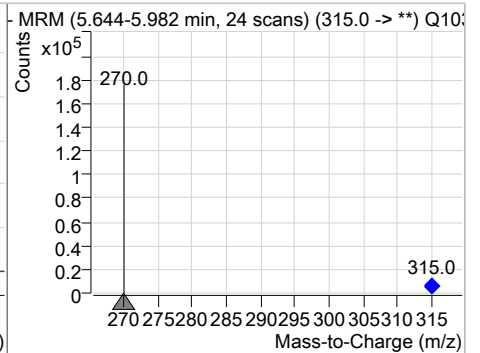
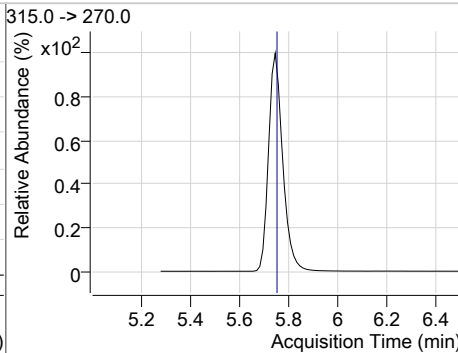
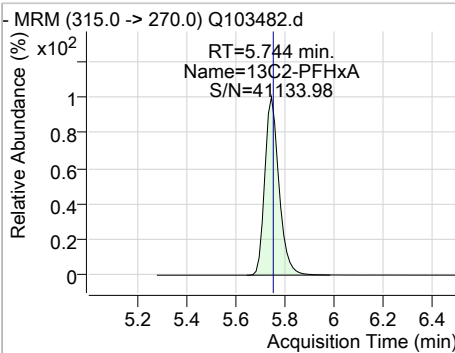


Perfluorinated Compounds by LC/MS/MS

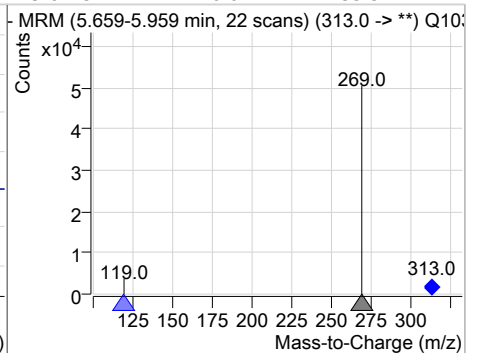
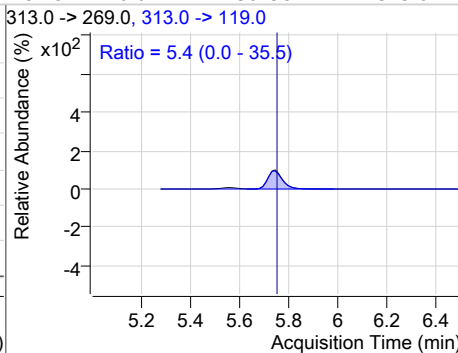
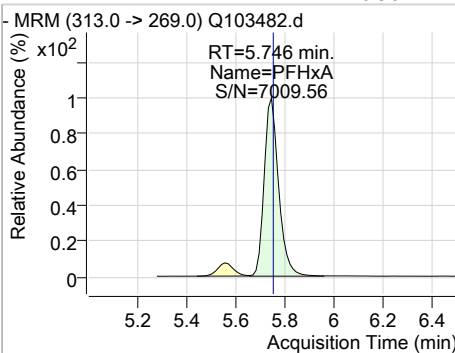
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	3.24	4.69	-0.01	3820	299.0 -> 99.0	43.1	14.1	74.1



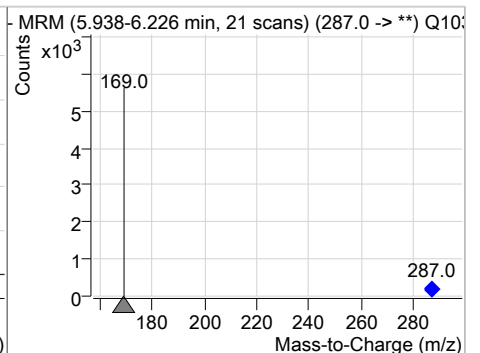
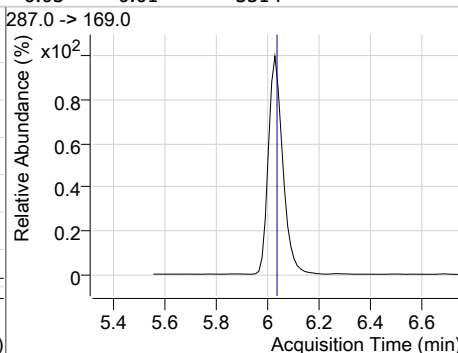
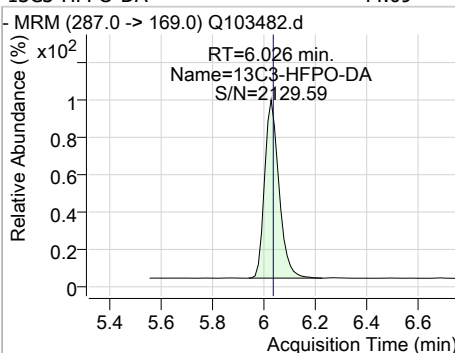
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	21.92	5.74	0.01	130848				



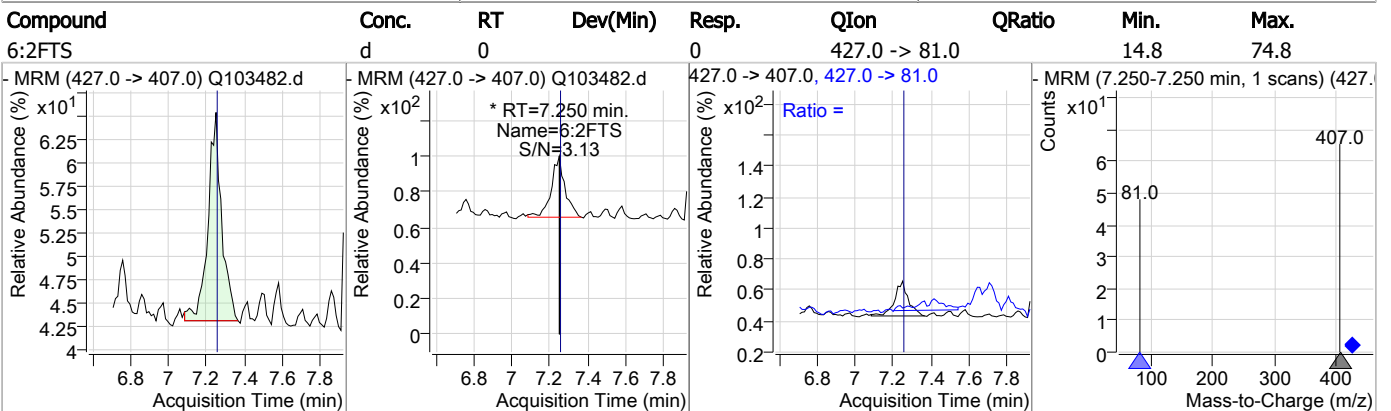
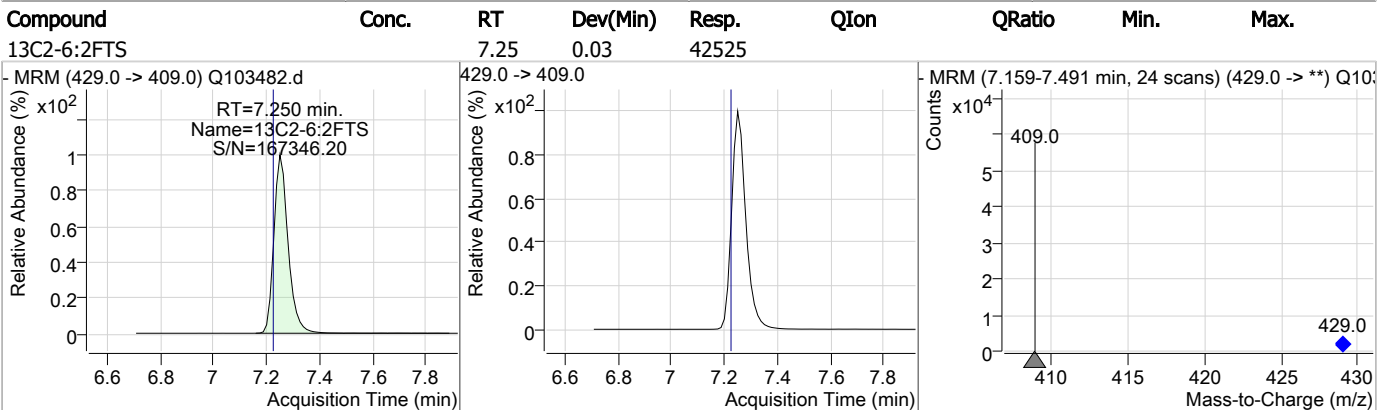
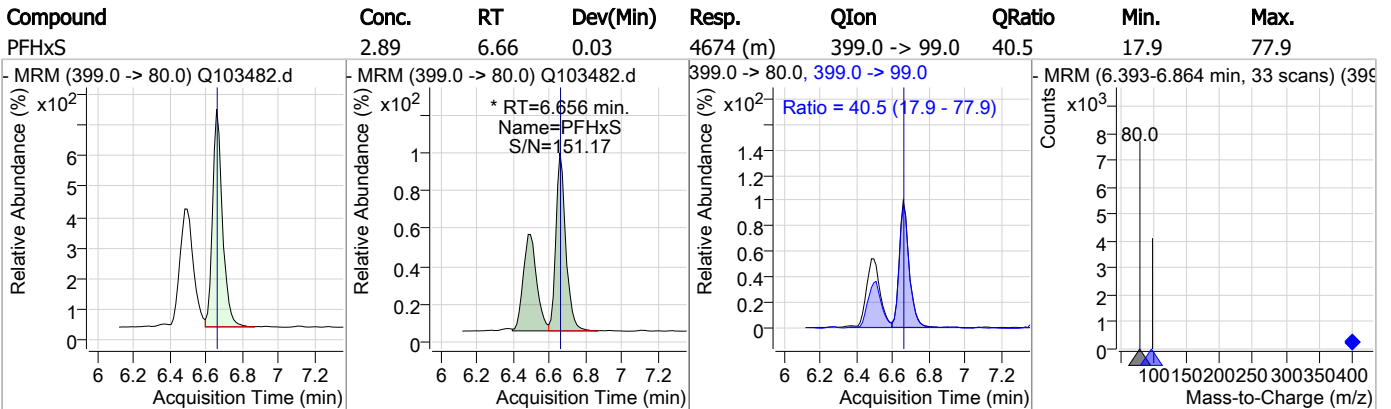
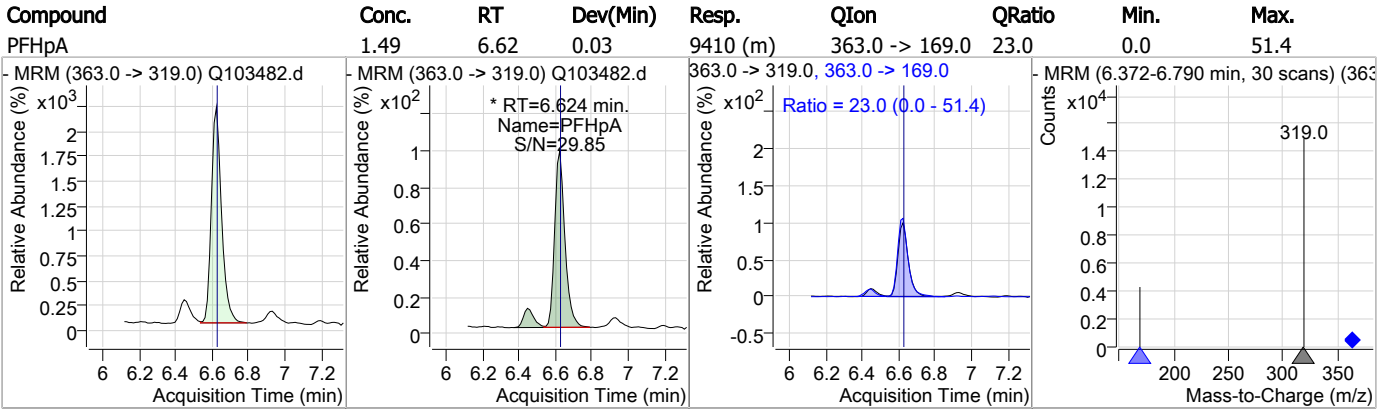
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	6.90	5.75	0.01	36798	313.0 -> 119.0	5.4	0.0	35.5



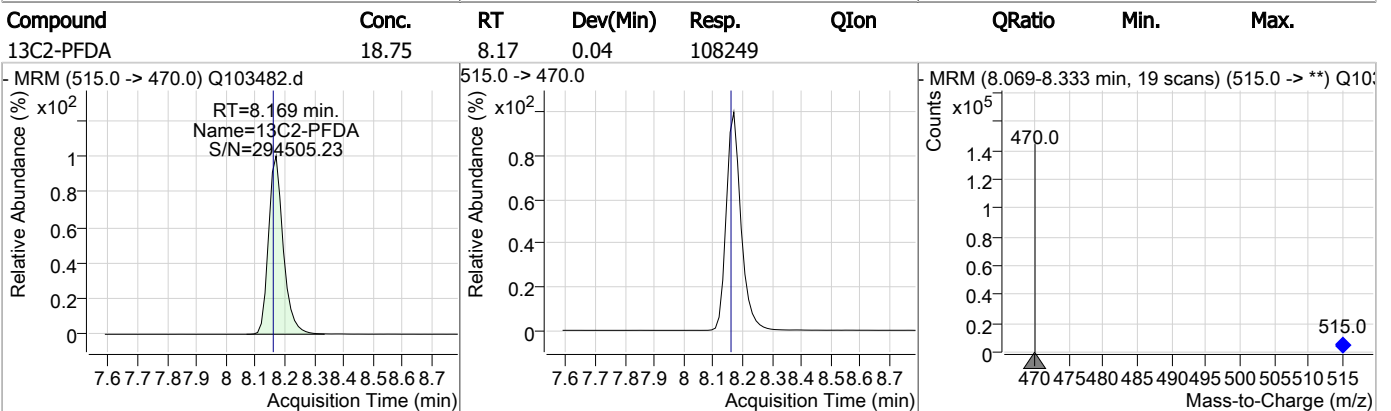
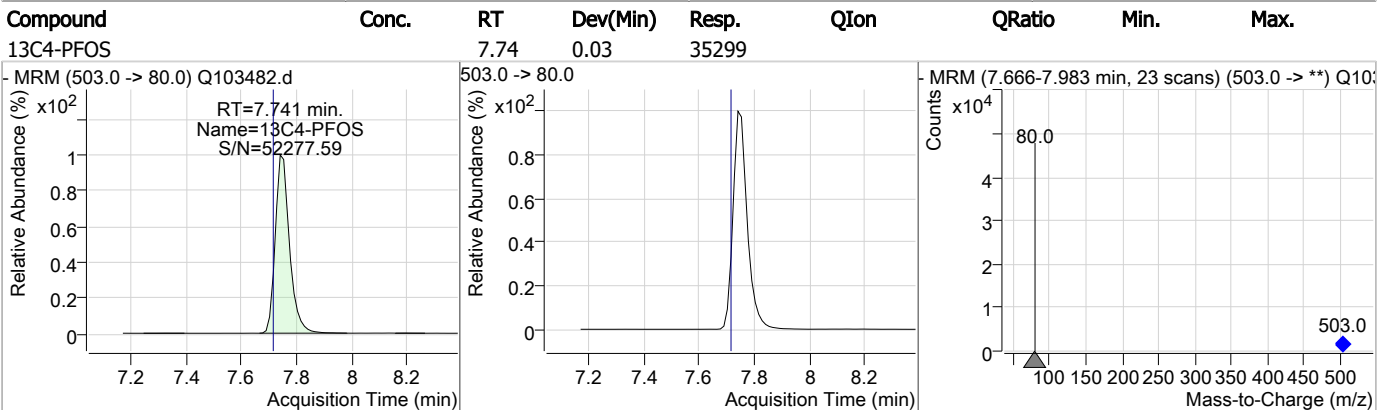
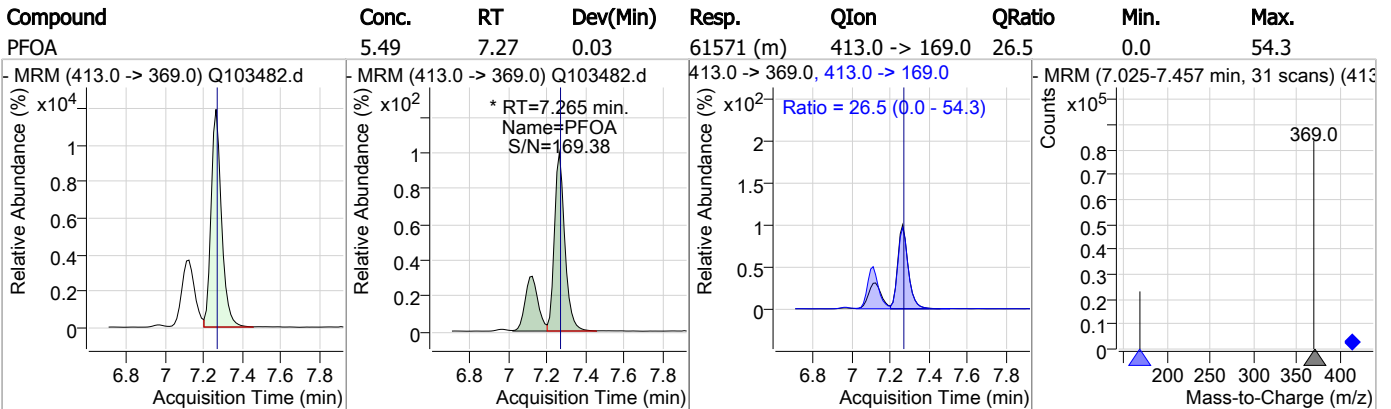
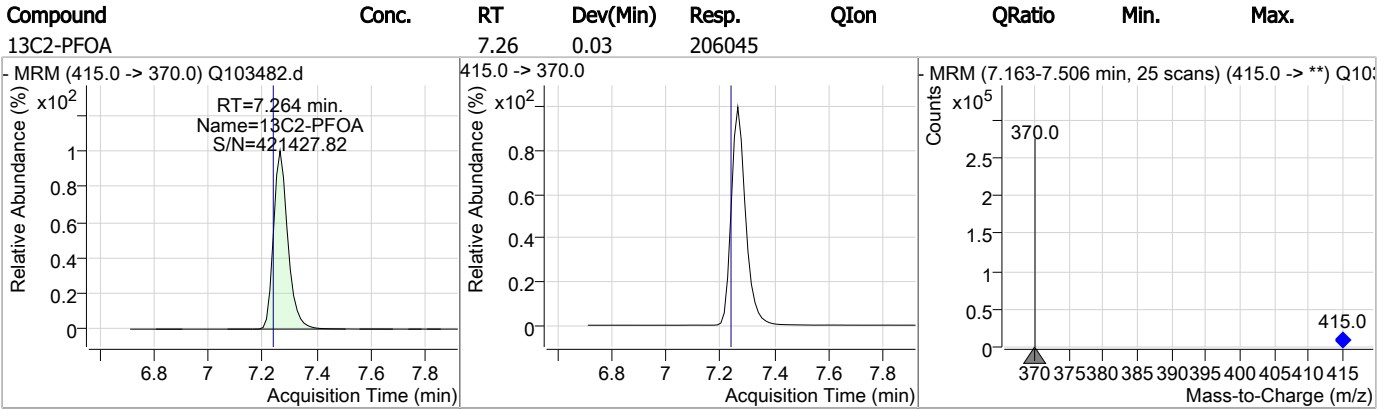
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	44.09	6.03	0.01	3514				



Perfluorinated Compounds by LC/MS/MS

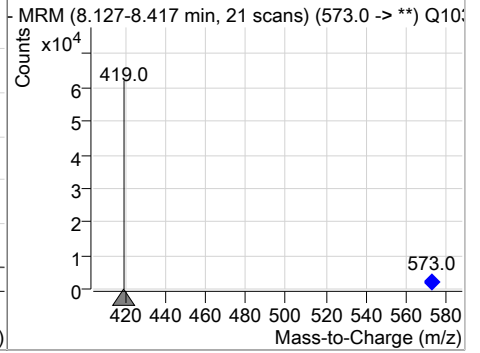
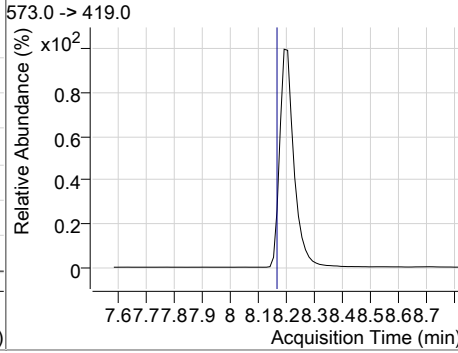
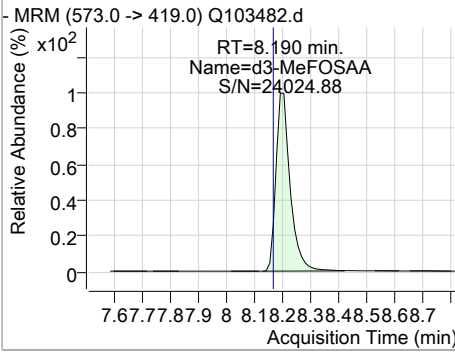


Perfluorinated Compounds by LC/MS/MS

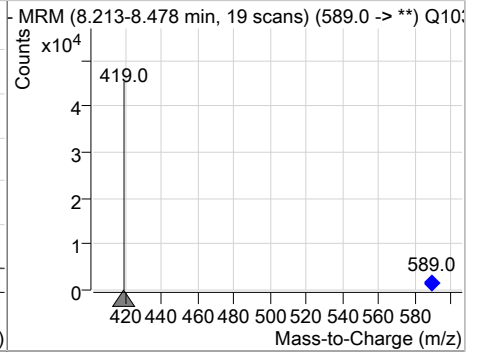
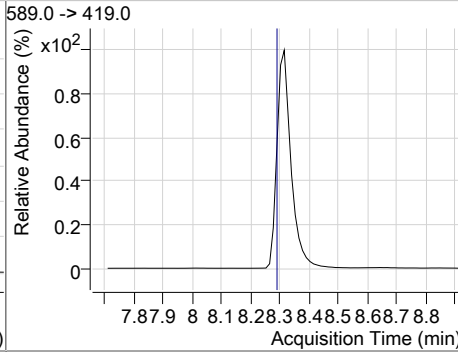
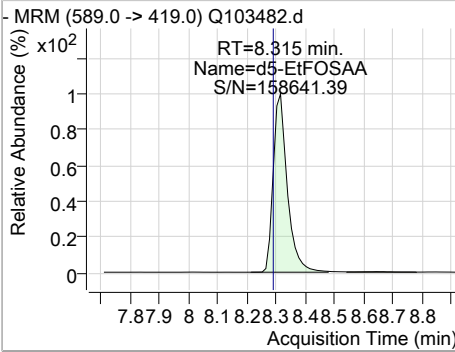


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.19	0.03	45943				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	28.13	8.31	0.05	33445				



7.1.8

7

Manual Integration Approval Summary

Sample Number: FC6520-8 Method: EPA 537.1 REV 1.0
Lab FileID: Q103482.D Analyst approved: 06/19/23 16:34 Anna Ludwig
Injection Time: 06/18/23 21:47 Supervisor approved: 06/19/23 17:33 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluoroheptanoic acid	375-85-9		6.62	Split peak
Perfluorohexanesulfonic acid	355-46-4		6.66	Split peak
Perfluorooctanoic acid	335-67-1		7.26	Split peak

7.1.8.1

7

Perfluorinated Compounds by LC/MS/MS

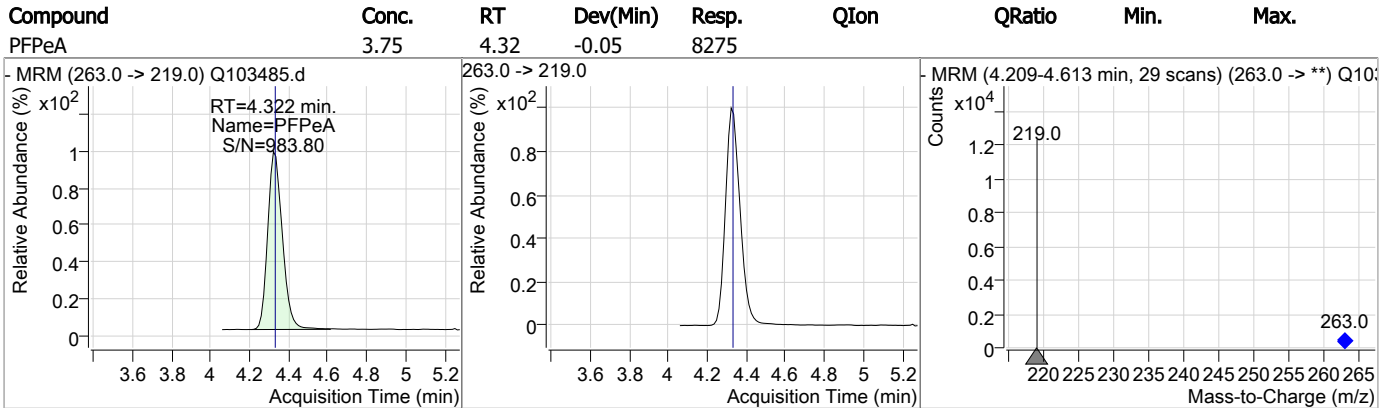
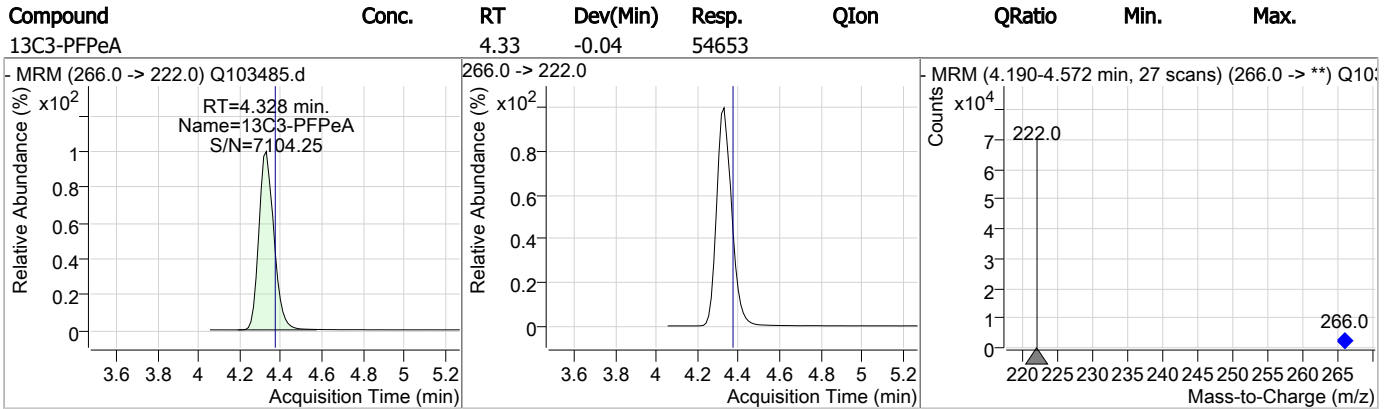
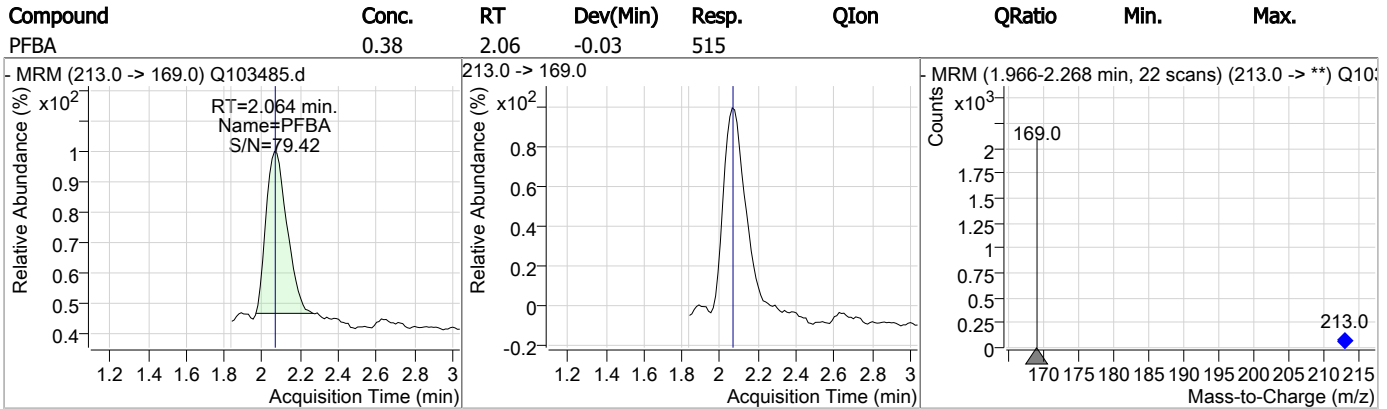
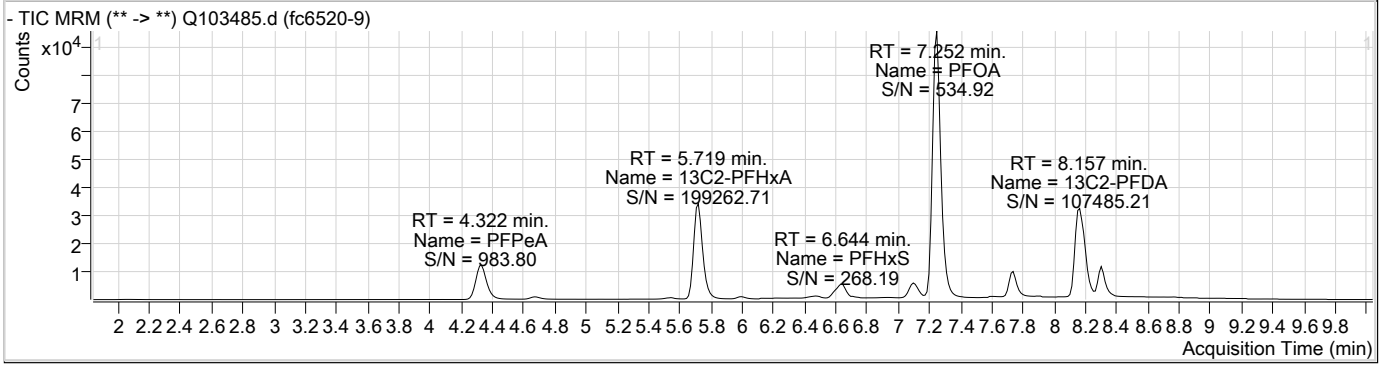
Data File : Q103485.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 10:34:28 PM
 Sample Name : fc6520-9
 Vial : P1-C4
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,280,,,1,1,water

Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.237	429.0 -> 409.0	38966	20.00 µg/L	0.013
13C2-PFOA	7.252	415.0 -> 370.0	188107	20.00 µg/L	0.013
13C3-PFPeA	4.328	266.0 -> 222.0	54653	20.00 µg/L	-0.044
13C4-PFOS	7.741	503.0 -> 80.0	30946	20.00 µg/L	0.025
d3-MeFOSAA	8.190	573.0 -> 419.0	42624	40.00 µg/L	0.025
System Monitoring Compounds					
13C2-PFDA	8.157	515.0 -> 470.0	102168	19.38 µg/L	0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 96.9%	
13C2-PFHxA	5.719	315.0 -> 270.0	114958	21.11 µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 105.6%	
d5-EtFOSAA	8.302	589.0 -> 419.0	33377	30.21 µg/L	0.038
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 75.5%	
13C3-HFPO-DA	6.001	287.0 -> 169.0	3143	43.21 µg/L	-0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 108.0%	
Target Compounds					
6:2FTS	7.225	427.0 -> 407.0	391	0.22 µg/L	83
8:2FTS	8.181	527.0 -> 507.0	101	0.07 µg/L	99
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
PFBA	2.064	213.0 -> 169.0	515	0.38 µg/L	100
PFBS	4.666	299.0 -> 80.0	2604	2.52 µg/L	96
PFDA	-	513.0 -> 469.0	-	N.D.	
PFDoDA	-	613.0 -> 569.0	-	N.D.	
PFHpA	6.599	363.0 -> 319.0	8257	1.44 µg/L	m 99
PFHpS	-	449.0 -> 80.0	-	N.D.	
PFHxA	5.721	313.0 -> 269.0	21942	4.52 µg/L	99
PFHxS	6.644	399.0 -> 80.0	13848	9.74 µg/L	m 96
PFNA	-	463.0 -> 419.0	-	N.D.	
PFOA	7.252	413.0 -> 369.0	121086	11.82 µg/L	m 98
PFOS	7.561	499.0 -> 80.0	758	0.43 µg/L	m 71
PFPeA	4.322	263.0 -> 219.0	8275	3.75 µg/L	100
PFTeDA	-	713.0 -> 669.0	-	N.D.	
PFTrDA	-	663.0 -> 619.0	-	N.D.	
PFUnDA	-	563.0 -> 519.0	-	N.D.	
ADONA	-	377.0 -> 251.0	-	N.D.	
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
HFPO-DA	-	285.0 -> 169.0	-	N.D.	

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

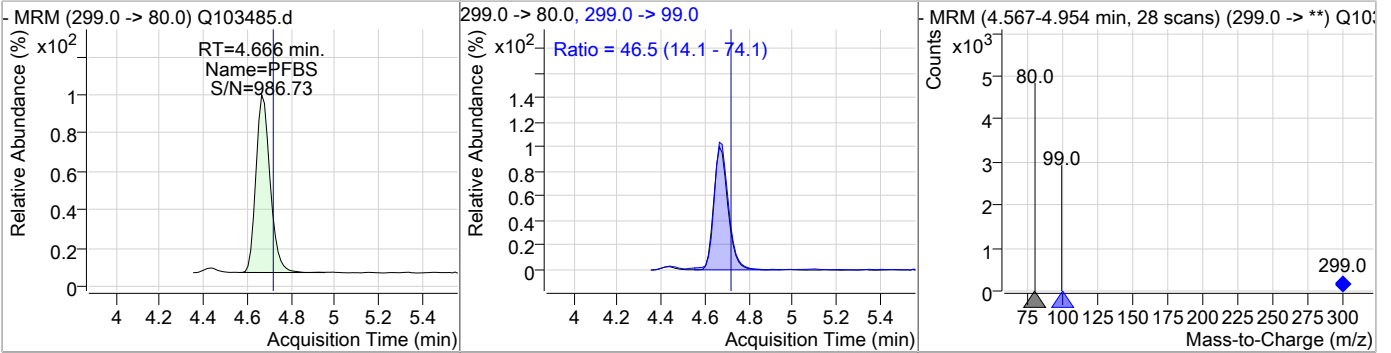
7.1.9
7

Perfluorinated Compounds by LC/MS/MS

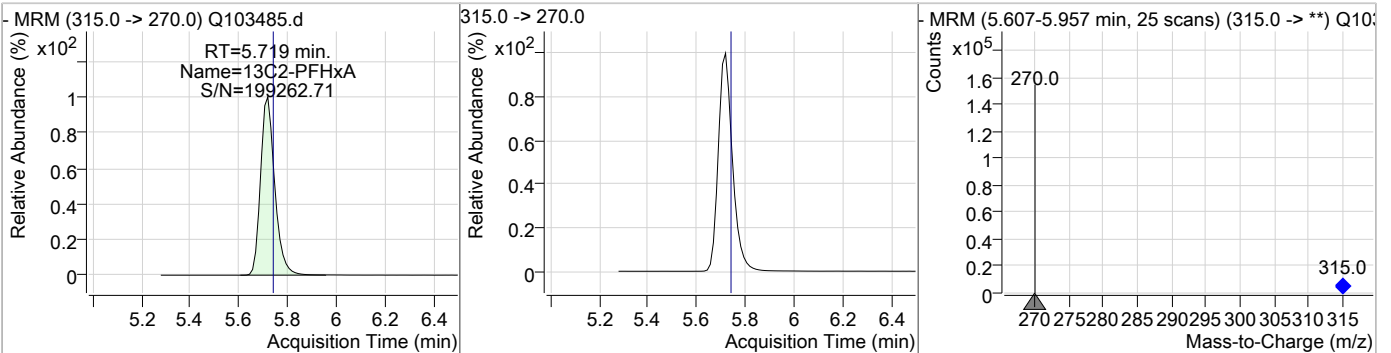


Perfluorinated Compounds by LC/MS/MS

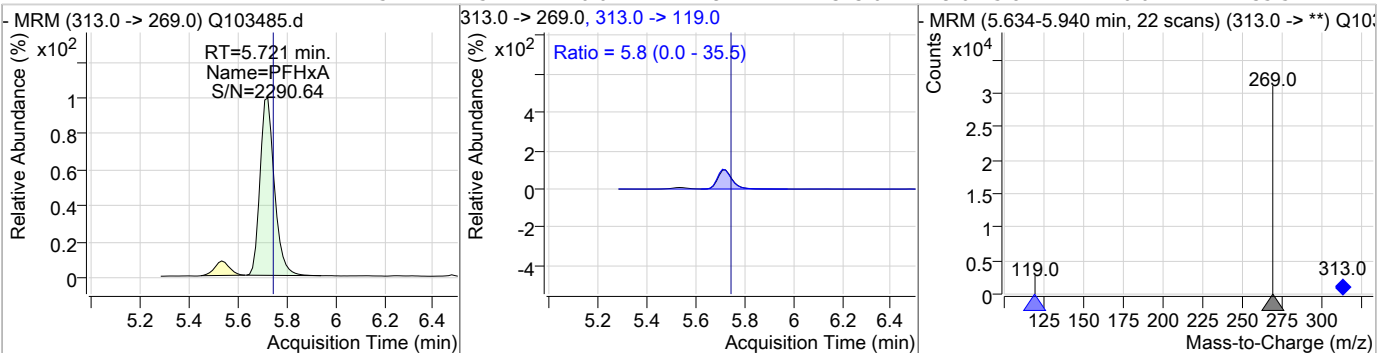
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	2.52	4.67	-0.04	2604	299.0 -> 99.0	46.5	14.1	74.1



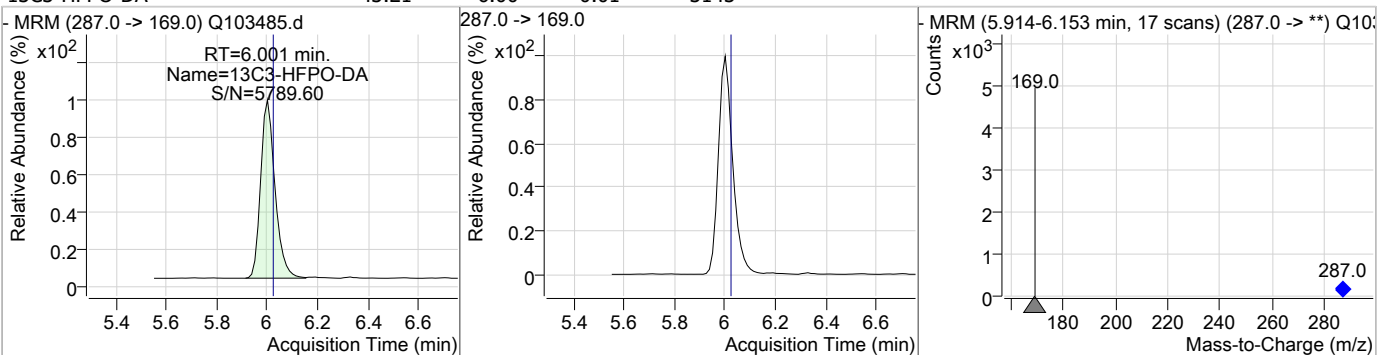
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	21.11	5.72	-0.01	114958				



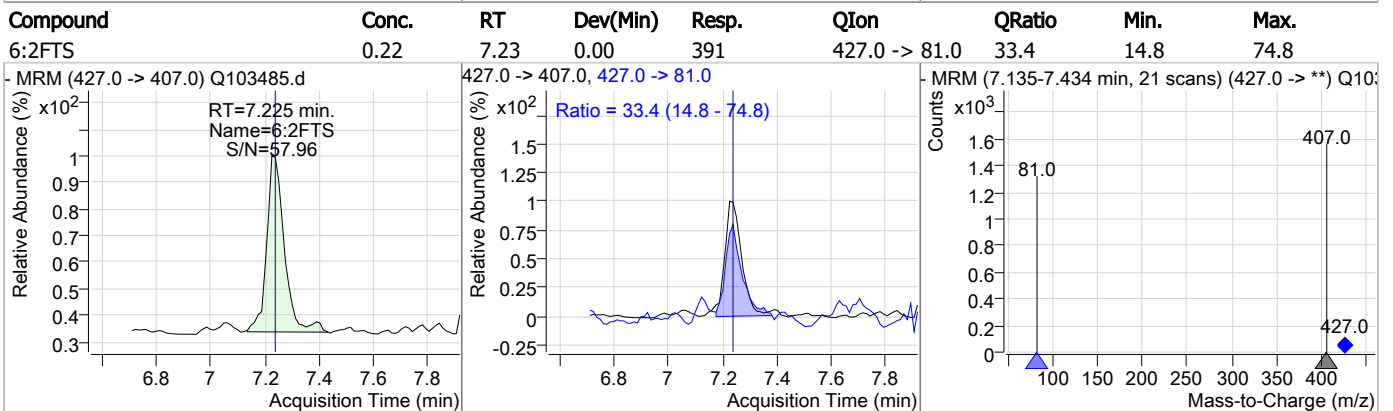
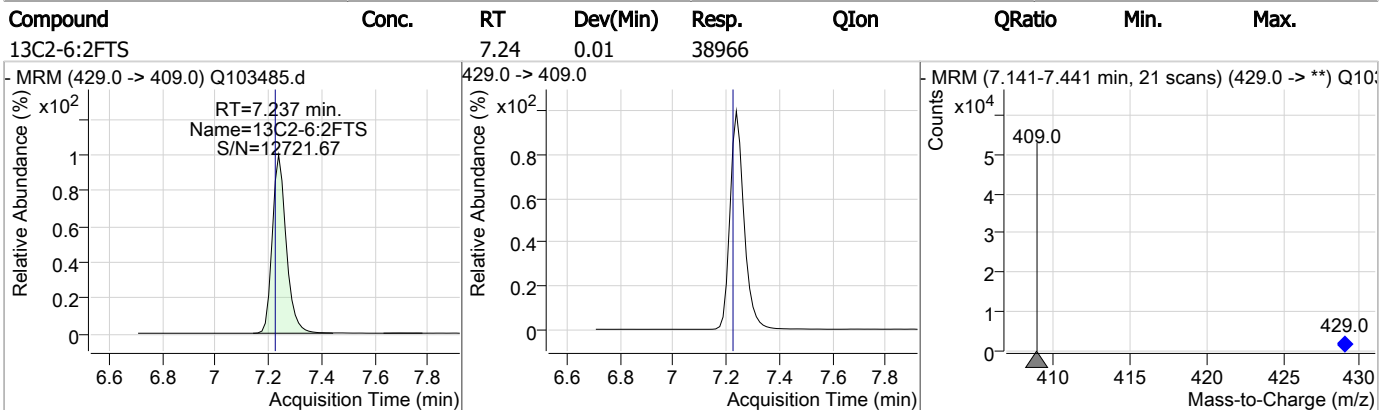
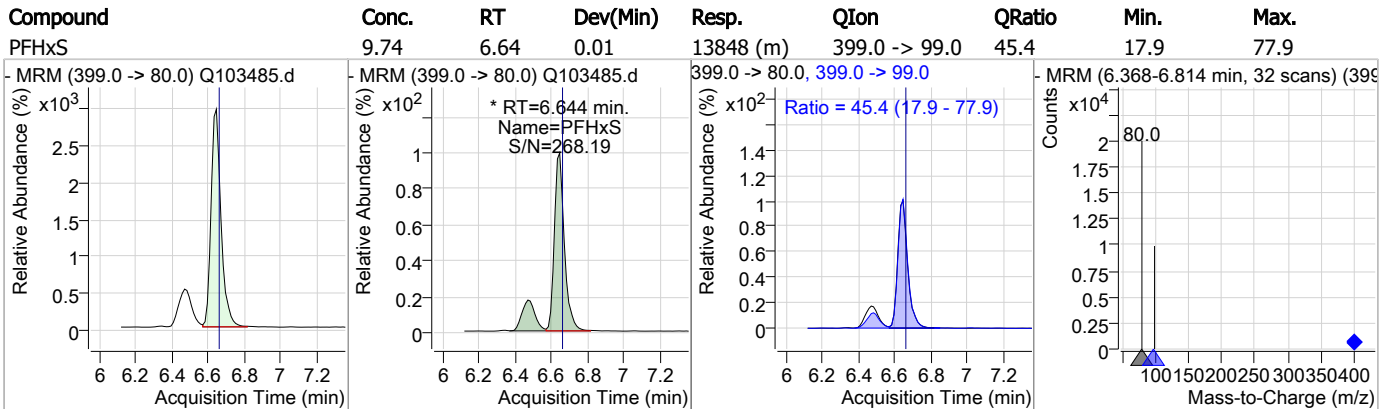
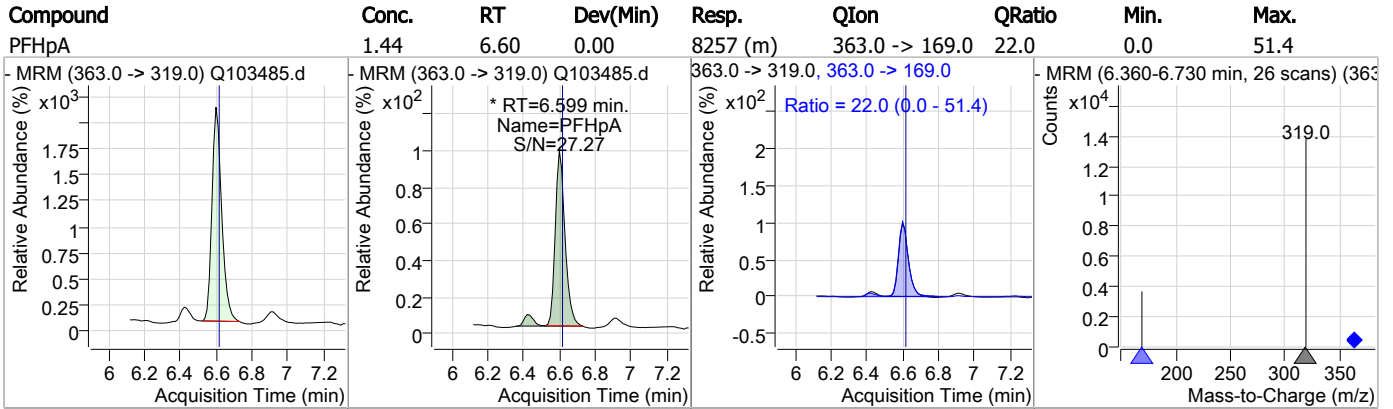
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	4.52	5.72	-0.01	21942	313.0 -> 119.0	5.8	0.0	35.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	43.21	6.00	-0.01	3143				



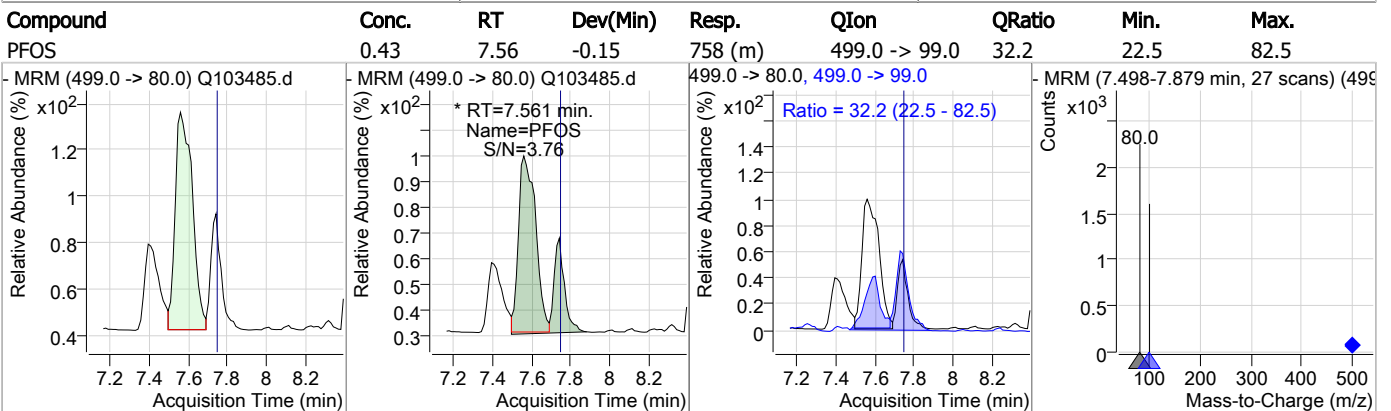
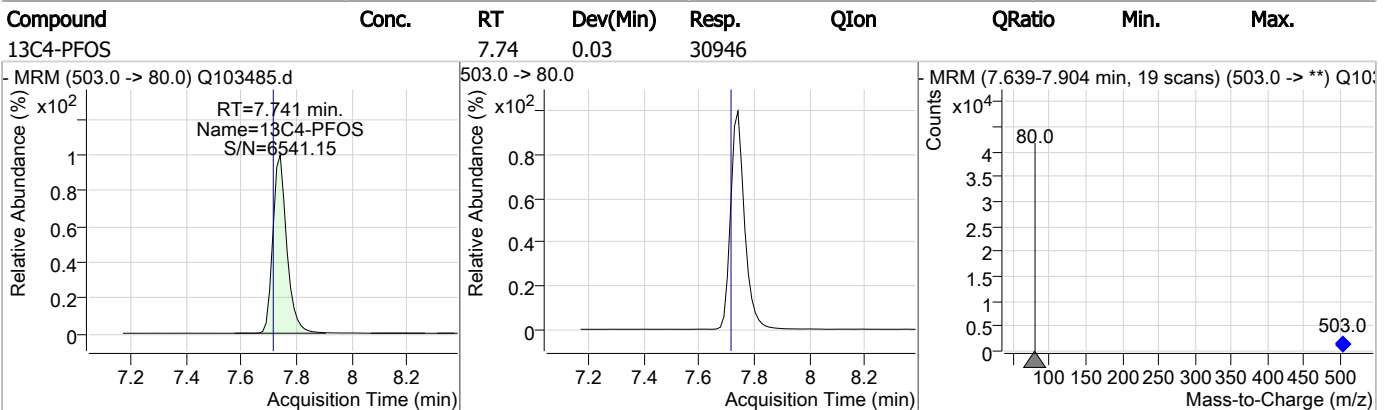
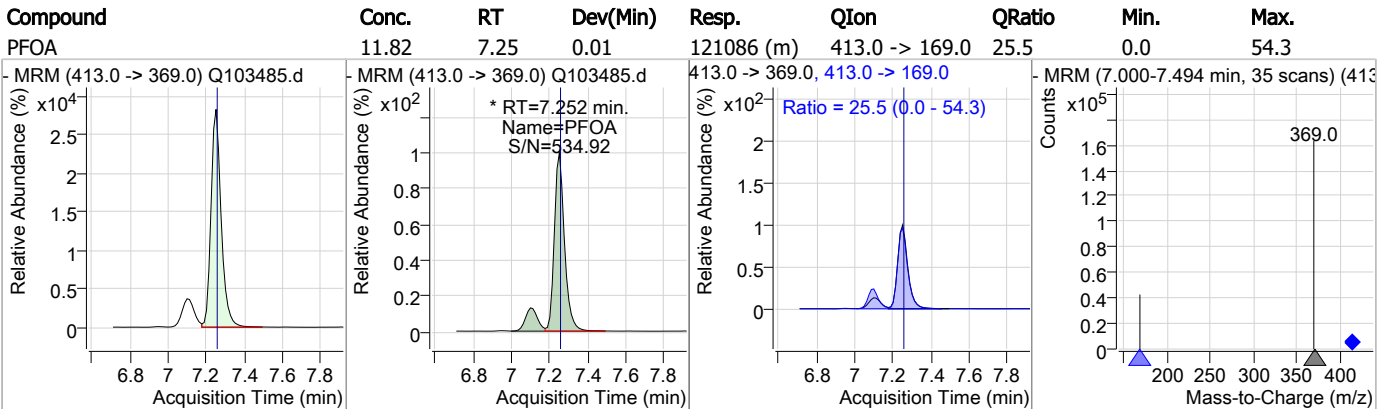
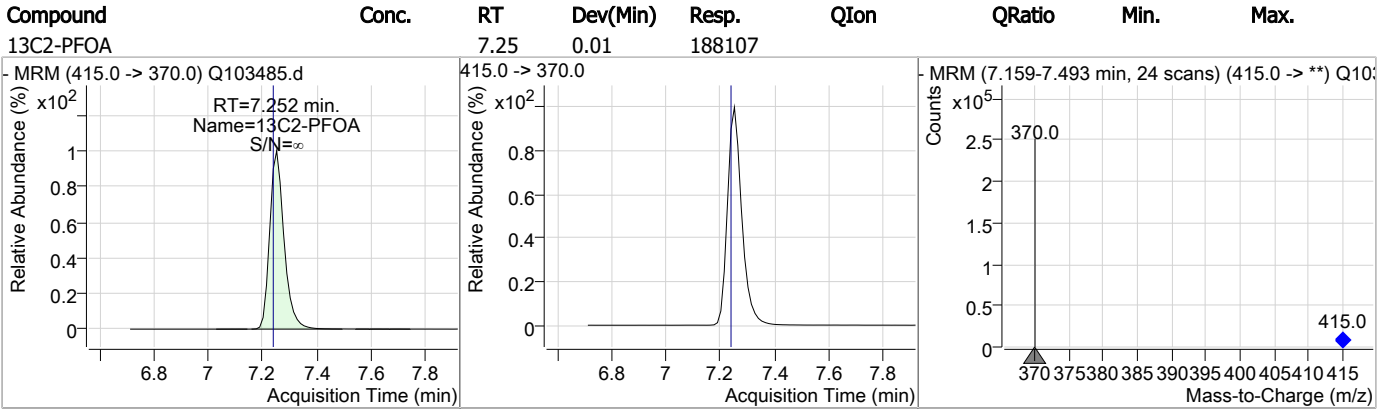
Perfluorinated Compounds by LC/MS/MS



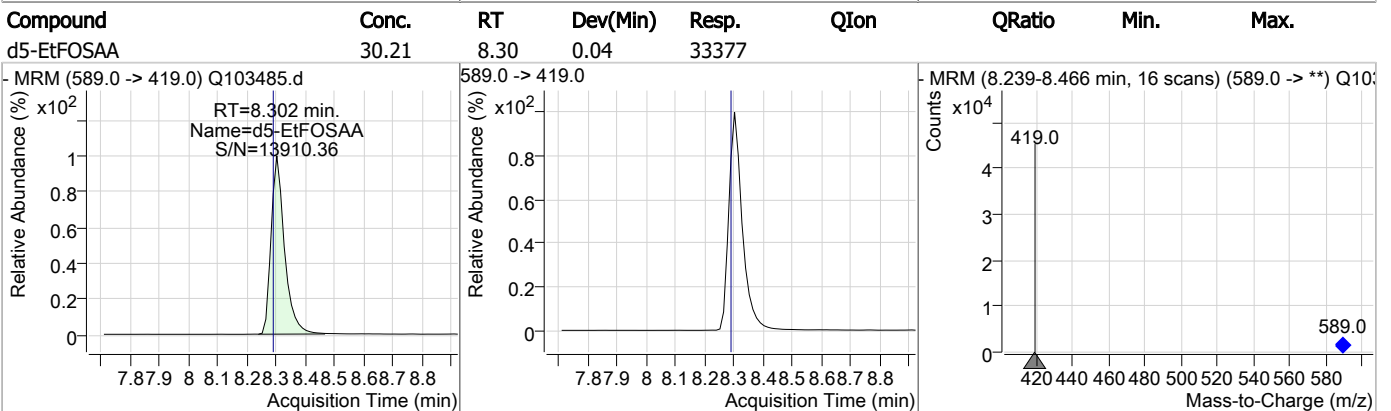
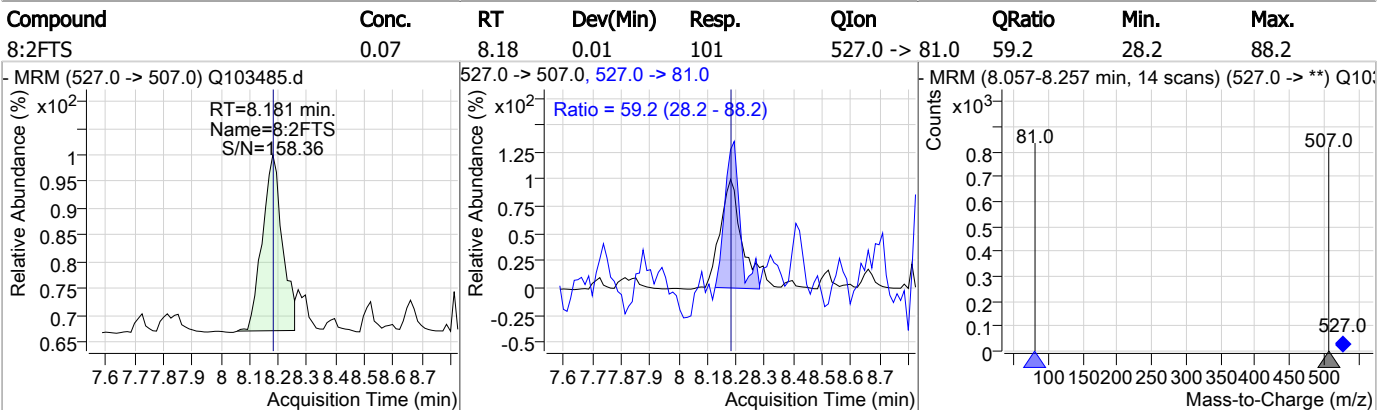
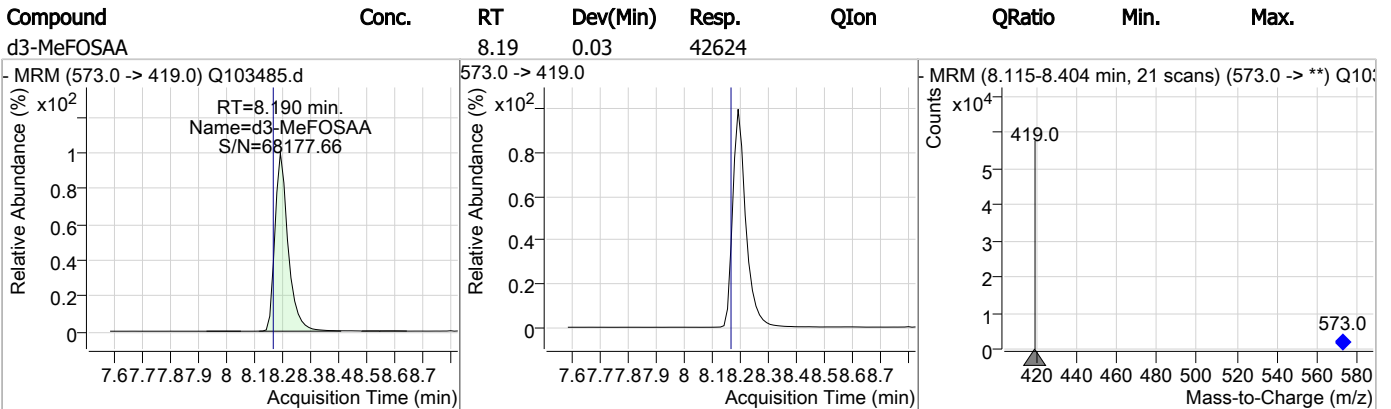
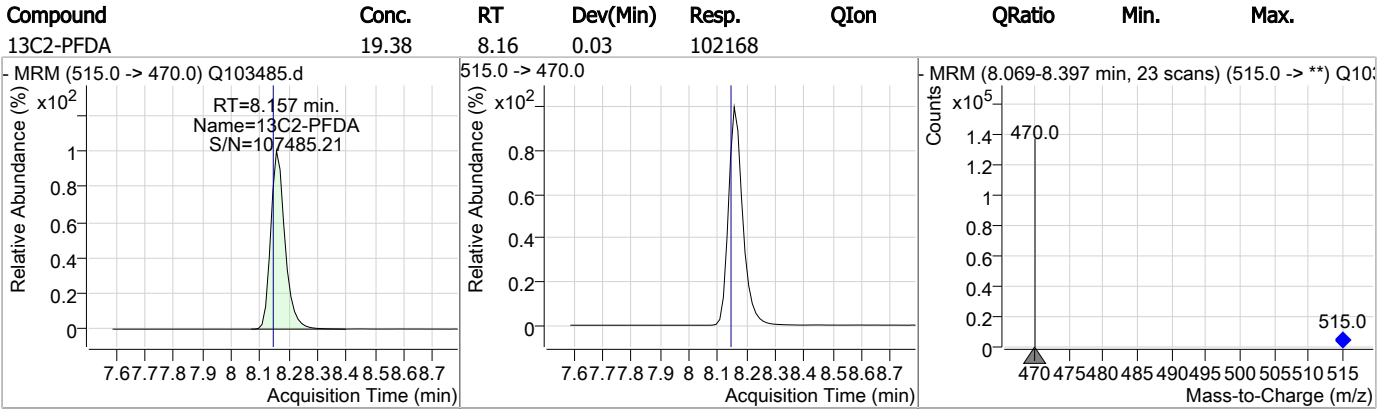
7.1.9

7

Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS



Manual Integration Approval Summary

Sample Number: FC6520-9 Method: EPA 537.1 REV 1.0
Lab FileID: Q103485.D Analyst approved: 06/19/23 16:34 Anna Ludwig
Injection Time: 06/18/23 22:34 Supervisor approved: 06/19/23 17:33 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluoroheptanoic acid	375-85-9		6.60	Split peak
Perfluorohexanesulfonic acid	355-46-4		6.64	Split peak
Perfluorooctanoic acid	335-67-1		7.25	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.56	Split peak

7.19.1

7

Perfluorinated Compounds by LC/MS/MS

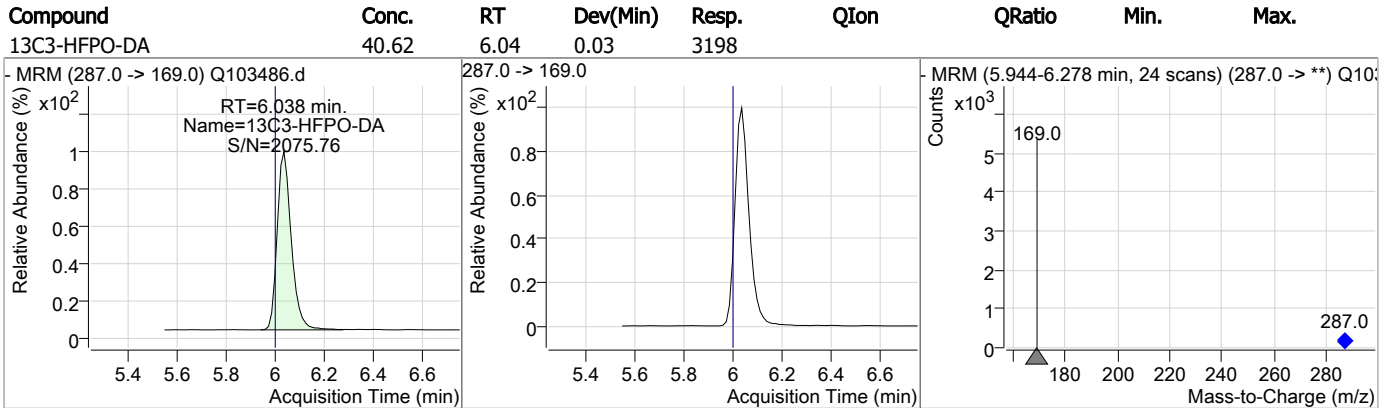
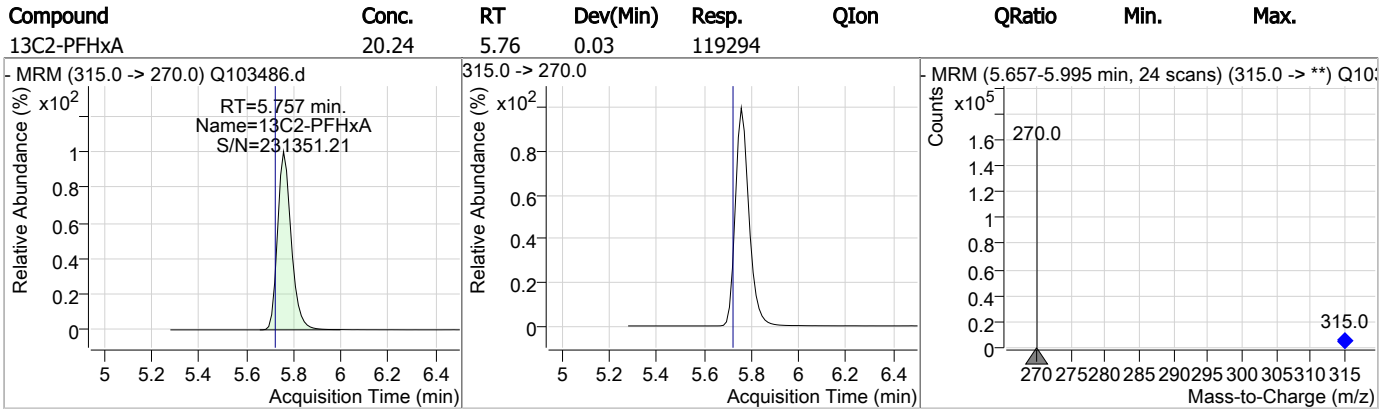
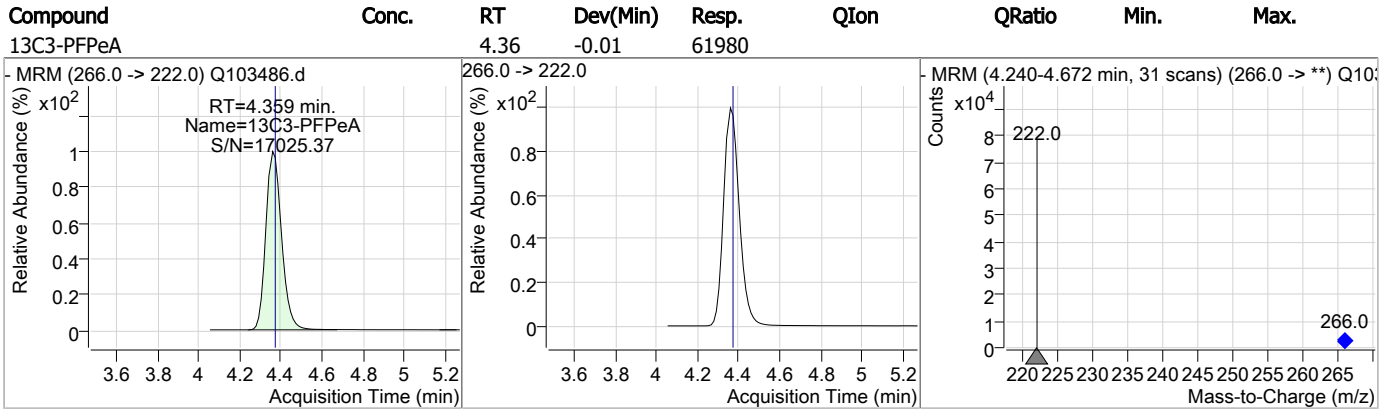
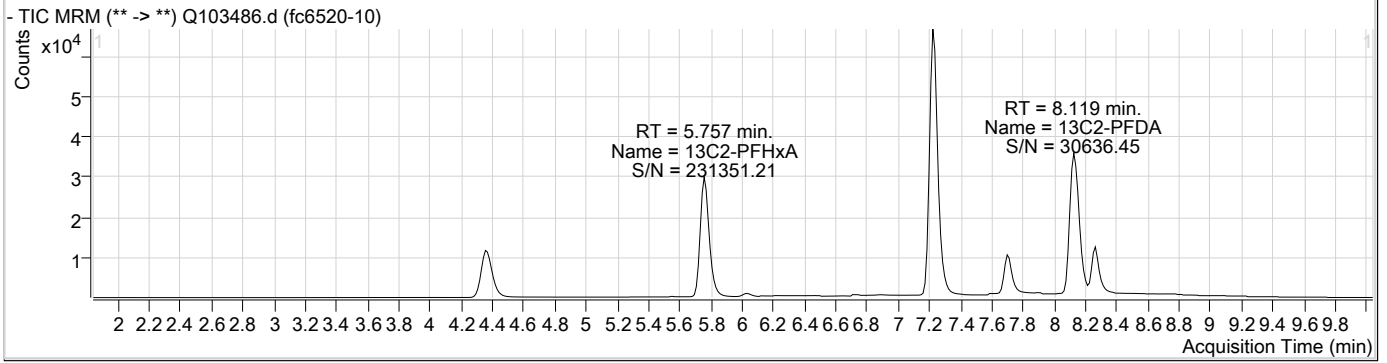
Data File : Q103486.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 10:50:14 PM
 Sample Name : fc6520-10
 Vial : P1-C5
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,280,,,1,1,water

Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
13C2-6:2FTS	7.225	429.0 -> 409.0	41505	20.00	µg/L	0.000
13C2-PFOA	7.227	415.0 -> 370.0	203772	20.00	µg/L	-0.012
13C3-PFPeA	4.359	266.0 -> 222.0	61980	20.00	µg/L	-0.012
13C4-PFOS	7.702	503.0 -> 80.0	33803	20.00	µg/L	-0.013
d3-MeFOSAA	8.152	573.0 -> 419.0	47373	40.00	µg/L	-0.012
System Monitoring Compounds						
13C2-PFDA	8.119	515.0 -> 470.0	102773	18.00	µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 90.0%		
13C2-PFHxA	5.757	315.0 -> 270.0	119294	20.24	µg/L	0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 101.2%		
d5-EtFOSAA	8.264	589.0 -> 419.0	37169	30.27	µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 75.7%		
13C3-HFPO-DA	6.038	287.0 -> 169.0	3198	40.62	µg/L	0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 101.5%		
Target Compounds						
6:2FTS	-	427.0 -> 407.0	-	N.D.		
8:2FTS	8.156	527.0 -> 507.0	0	0.00	µg/L m	1
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
MeFOSAA	-	570.0 -> 419.0	-	N.D.		
PFBA	-	213.0 -> 169.0	-	N.D.		
PFBS	-	299.0 -> 80.0	-	N.D.		
PFDA	-	513.0 -> 469.0	-	N.D.		
PFDoDA	-	613.0 -> 569.0	-	N.D.		
PFHpA	-	363.0 -> 319.0	-	N.D.		
PFHpS	-	449.0 -> 80.0	-	N.D.		
PFHxA	-	313.0 -> 269.0	-	N.D.		
PFHxS	-	399.0 -> 80.0	-	N.D.		
PFNA	-	463.0 -> 419.0	-	N.D.		
PFOA	-	413.0 -> 369.0	-	N.D.		
PFOS	-	499.0 -> 80.0	-	N.D.		
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFTeDA	-	713.0 -> 669.0	-	N.D.		
PFTrDA	-	663.0 -> 619.0	-	N.D.		
PFUnDA	-	563.0 -> 519.0	-	N.D.		
ADONA	-	377.0 -> 251.0	-	N.D.		
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
HFPO-DA	-	285.0 -> 169.0	-	N.D.		

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

7.1.10
7

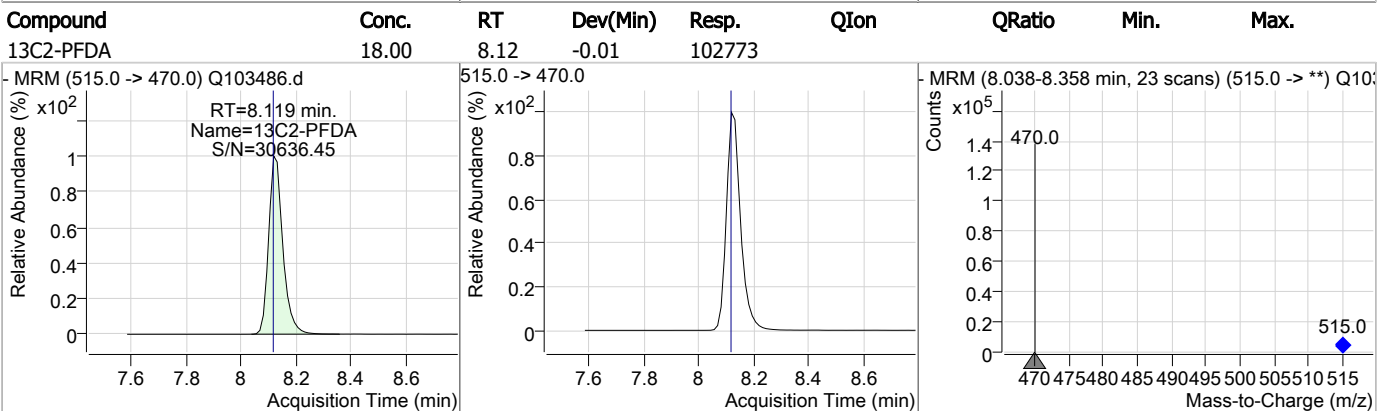
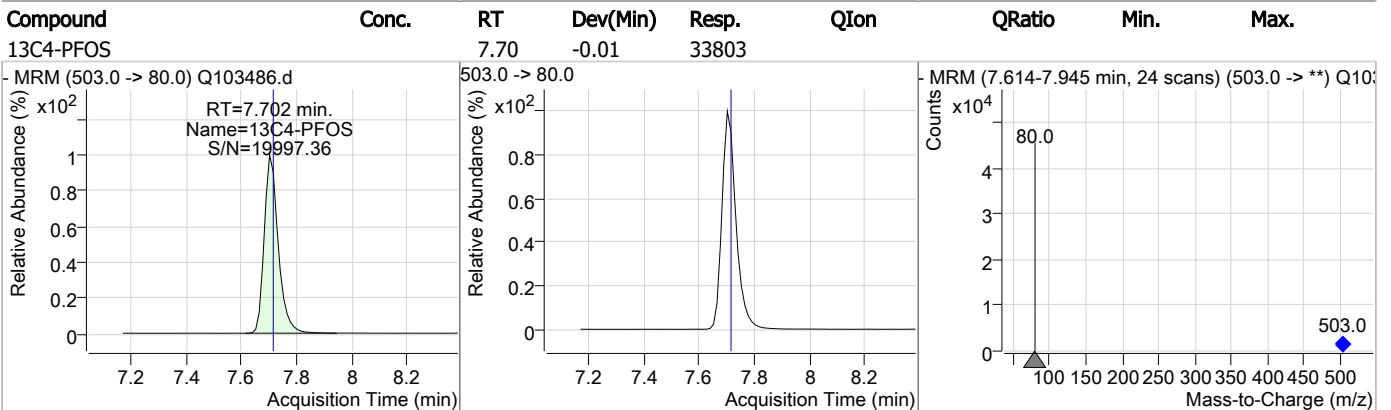
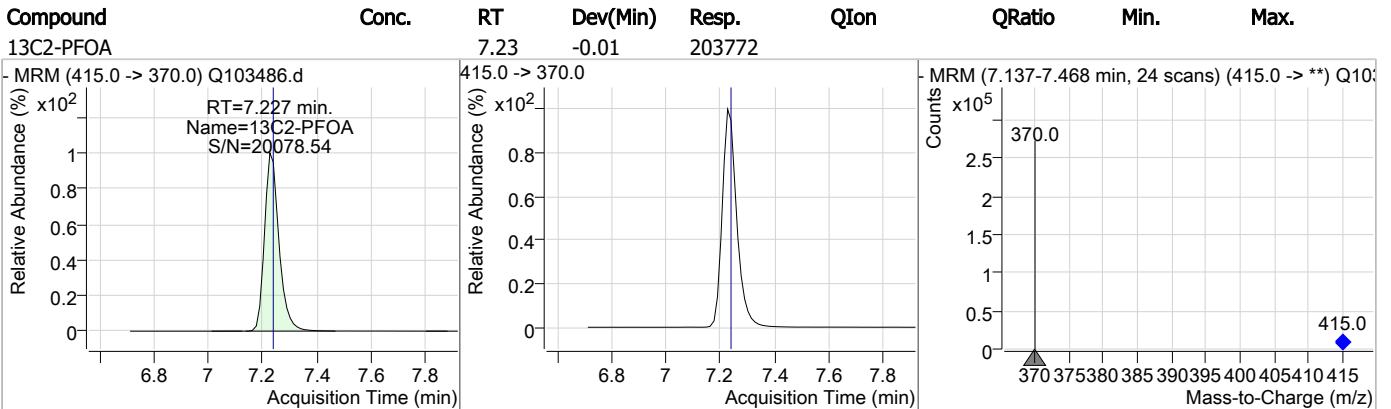
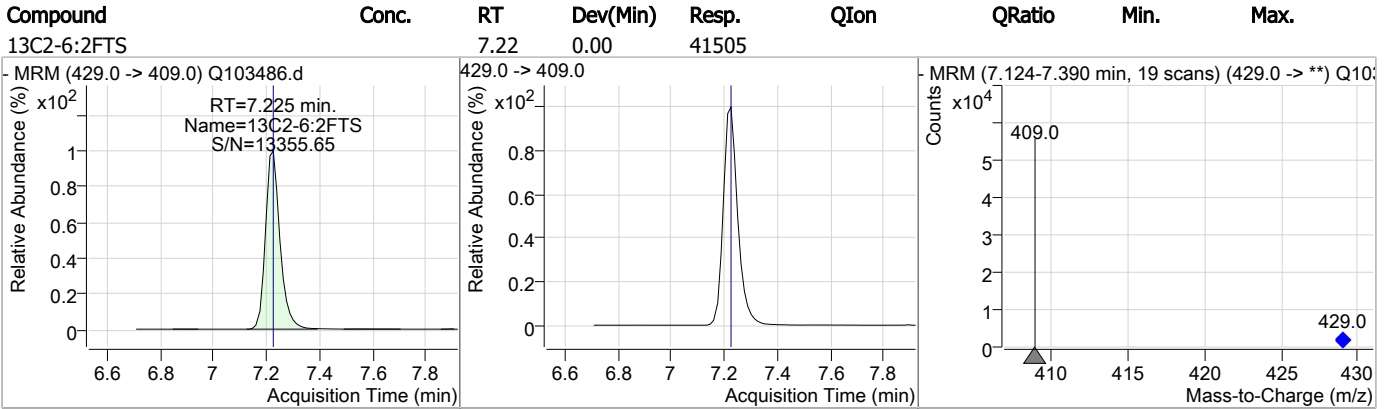
Perfluorinated Compounds by LC/MS/MS



7.1.10

7

Perfluorinated Compounds by LC/MS/MS

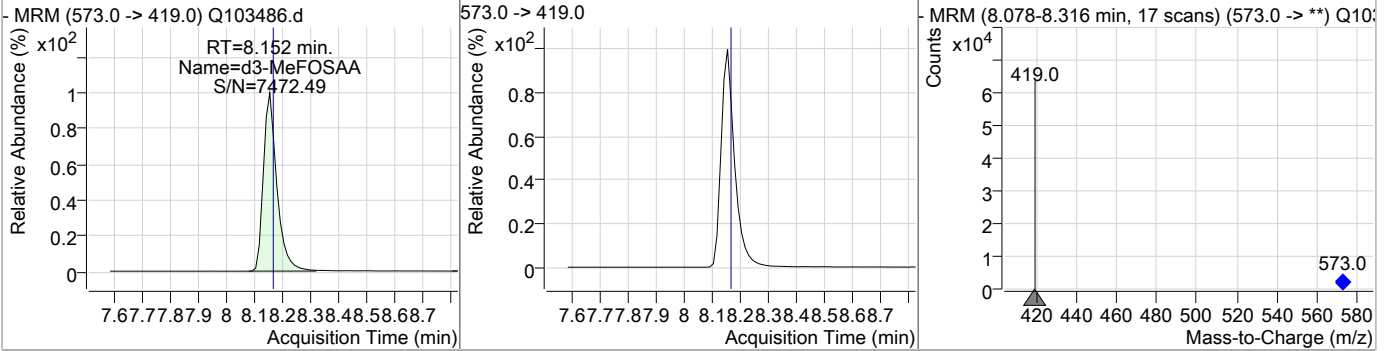


7.1.10
7

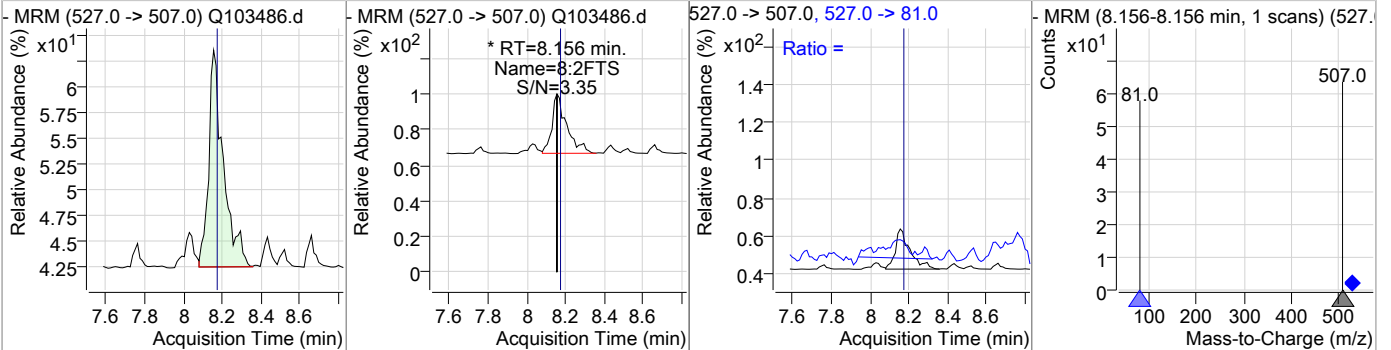


Perfluorinated Compounds by LC/MS/MS

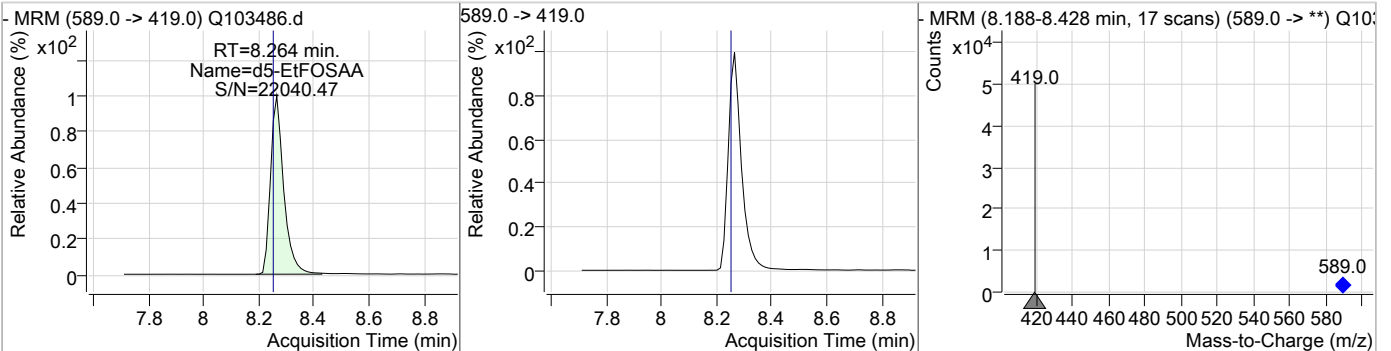
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.15	-0.01	47373				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	d	0		0	527.0 -> 81.0		28.2	88.2



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	30.27	8.26	0.00	37169				



7.1.10 7



Perfluorinated Compounds by LC/MS/MS

Data File : Q103487.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 11:06:02 PM
 Sample Name : fc6520-11
 Vial : P1-C6
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,280,,,1,1,water

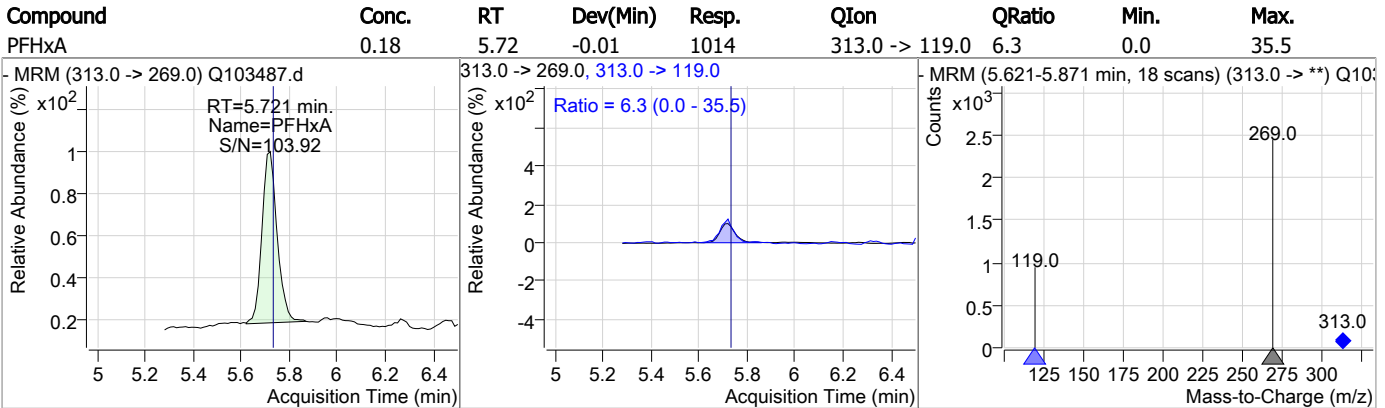
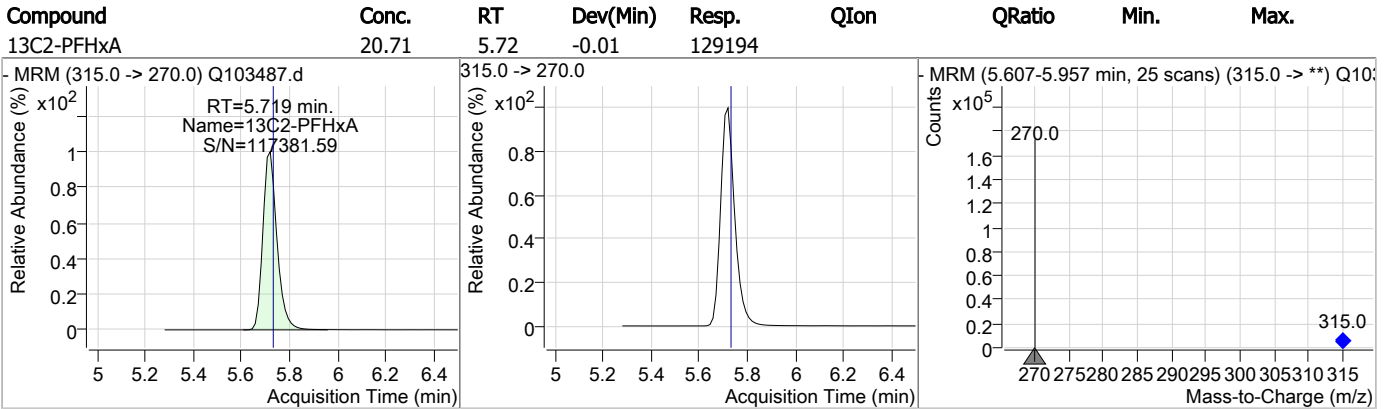
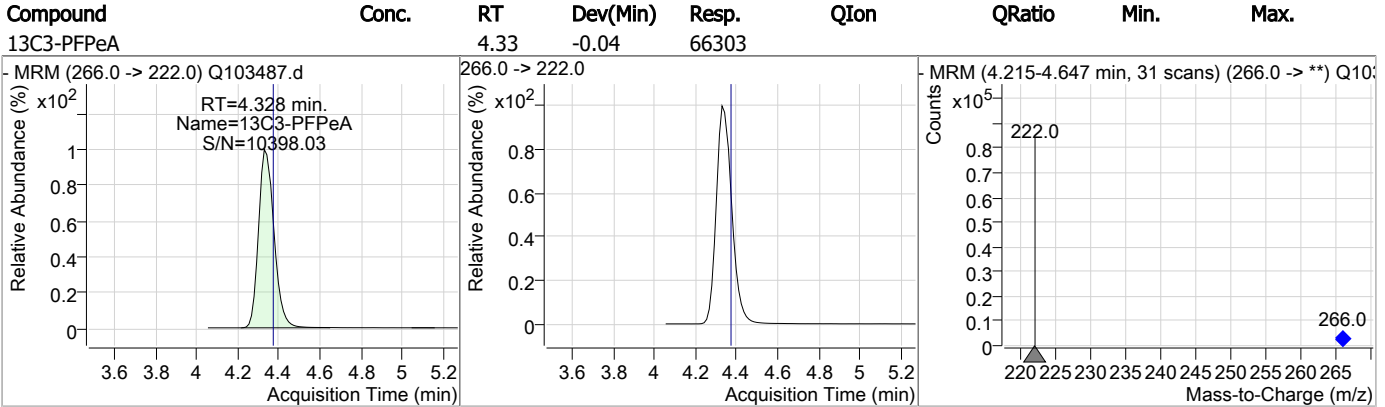
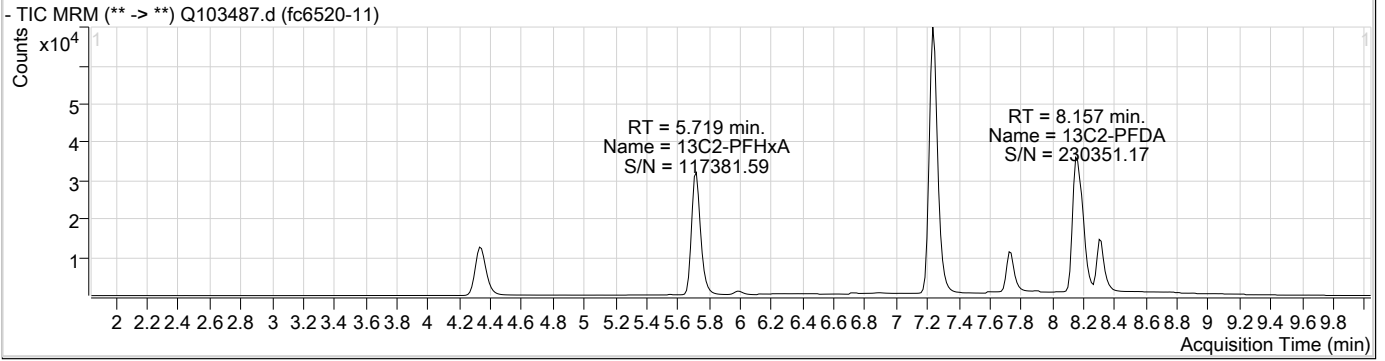
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
13C2-6:2FTS	7.225	429.0 -> 409.0	46590	20.00	µg/L	0.000
13C2-PFOA	7.239	415.0 -> 370.0	215507	20.00	µg/L	0.000
13C3-PFPeA	4.328	266.0 -> 222.0	66303	20.00	µg/L	-0.044
13C4-PFOS	7.728	503.0 -> 80.0	36638	20.00	µg/L	0.013
d3-MeFOSAA	8.190	573.0 -> 419.0	49288	40.00	µg/L	0.025
System Monitoring Compounds						
13C2-PFDA	8.157	515.0 -> 470.0	117363	19.43	µg/L	0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 97.2%		
13C2-PFHxA	5.719	315.0 -> 270.0	129194	20.71	µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 103.6%		
d5-EtFOSAA	8.302	589.0 -> 419.0	45043	35.11	µg/L	0.038
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 87.8%		
13C3-HFPO-DA	5.988	287.0 -> 169.0	3667	43.99	µg/L	-0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 110.0%		
Target Compounds						
6:2FTS	7.213	427.0 -> 407.0	0	0.00	µg/L m	1
8:2FTS	8.181	527.0 -> 507.0	0	0.00	µg/L m	1
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
MeFOSAA	-	570.0 -> 419.0	-	N.D.		
PFBA	-	213.0 -> 169.0	-	N.D.		
PFBS	-	299.0 -> 80.0	-	N.D.		
PFDA	-	513.0 -> 469.0	-	N.D.		
PFDoDA	-	613.0 -> 569.0	-	N.D.		
PFHpA	-	363.0 -> 319.0	-	N.D.		
PFHpS	-	449.0 -> 80.0	-	N.D.		
PFHxA	5.721	313.0 -> 269.0	1014	0.18	µg/L	98
PFHxS	-	399.0 -> 80.0	-	N.D.		
PFNA	-	463.0 -> 419.0	-	N.D.		
PFOA	-	413.0 -> 369.0	-	N.D.		
PFOS	-	499.0 -> 80.0	-	N.D.		
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFTeDA	-	713.0 -> 669.0	-	N.D.		
PFTTrDA	-	663.0 -> 619.0	-	N.D.		
PFUnDA	-	563.0 -> 519.0	-	N.D.		
ADONA	-	377.0 -> 251.0	-	N.D.		
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
HFPO-DA	-	285.0 -> 169.0	-	N.D.		

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

7.1.11
7

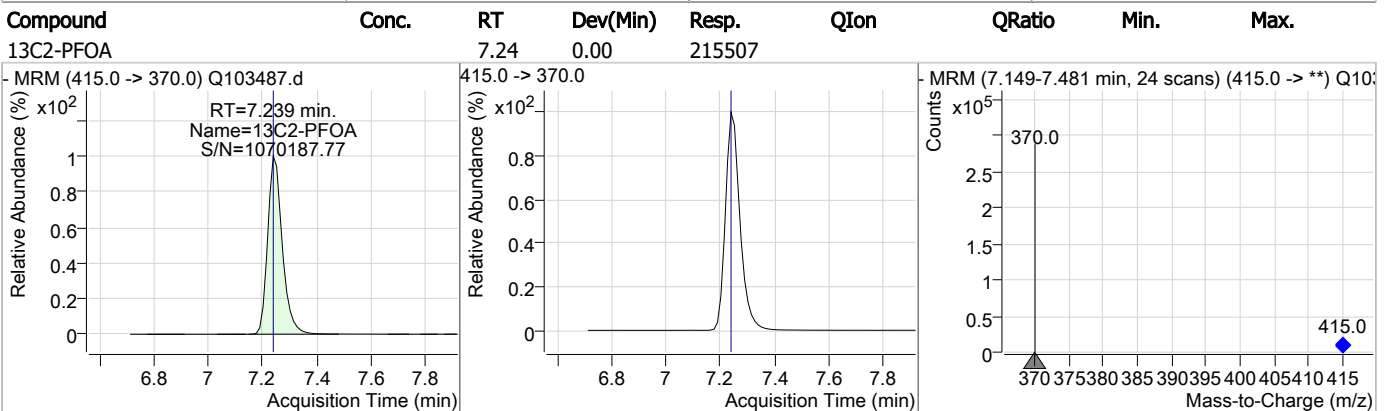
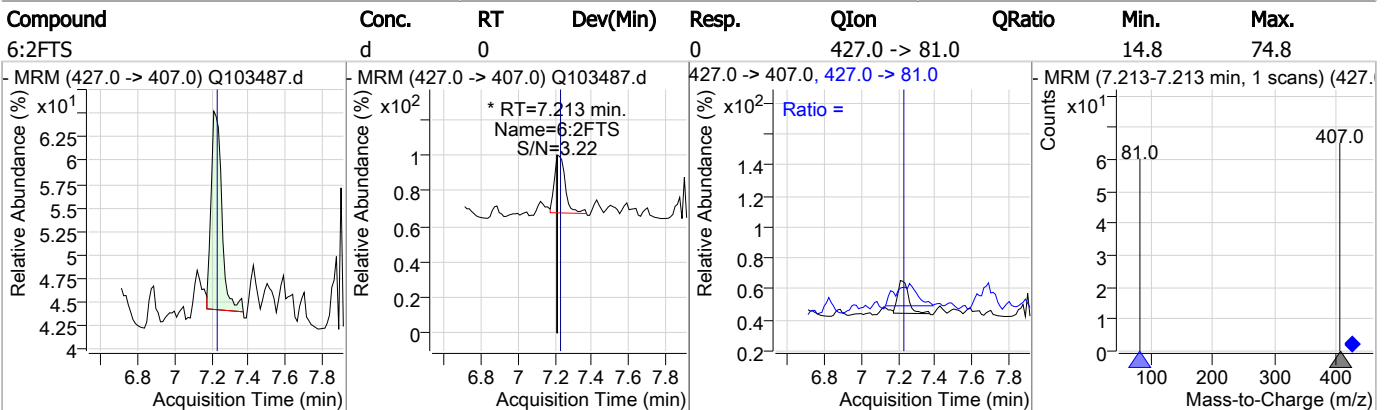
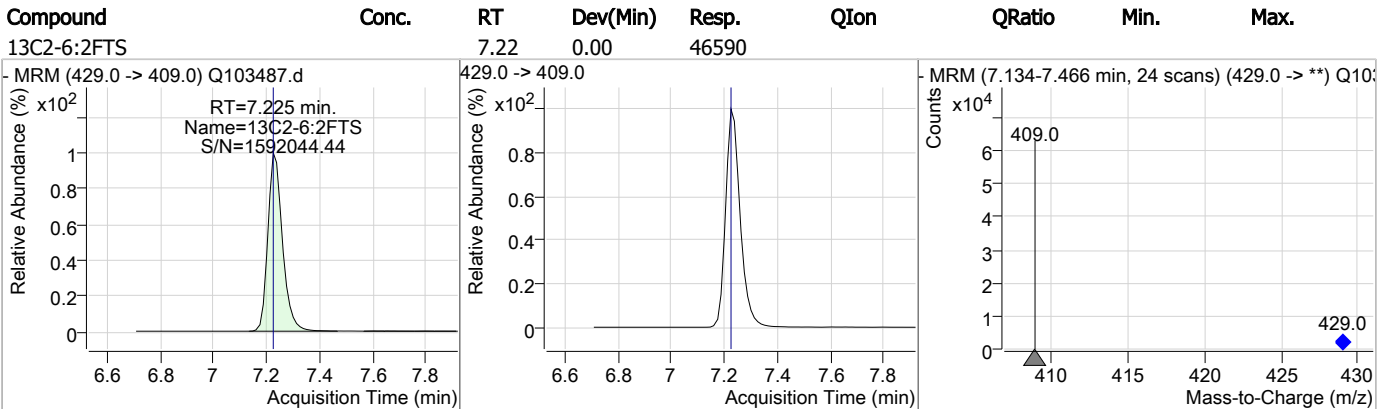
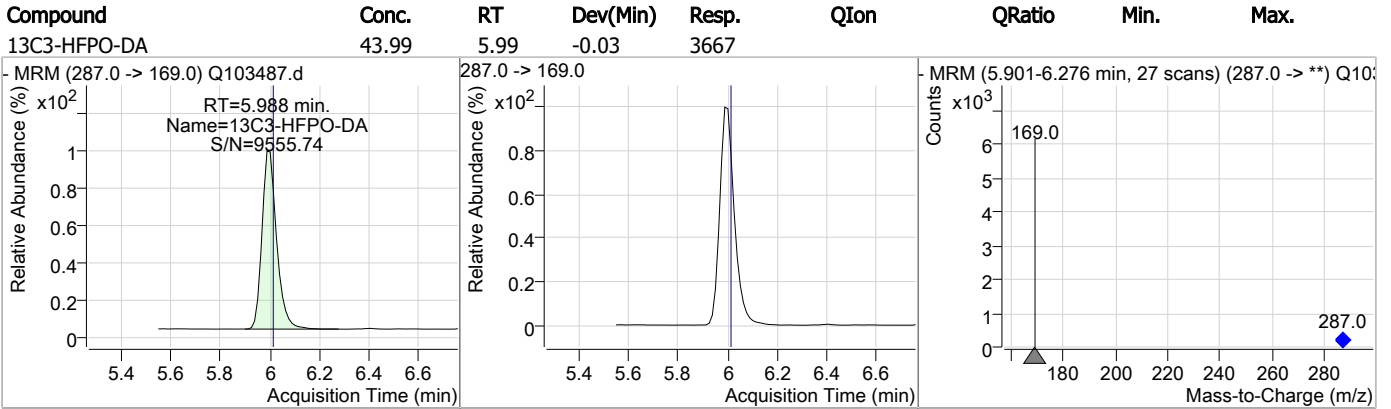


Perfluorinated Compounds by LC/MS/MS

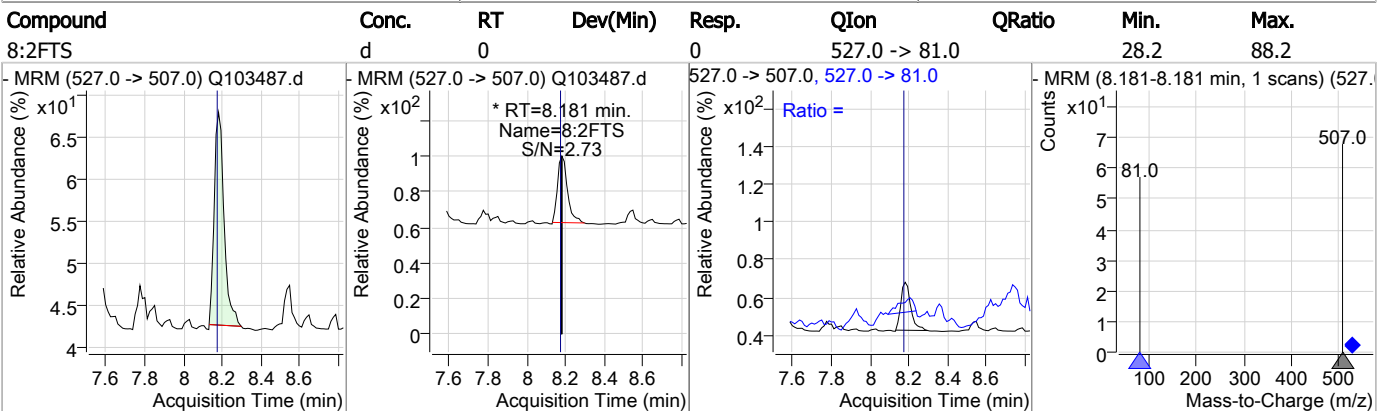
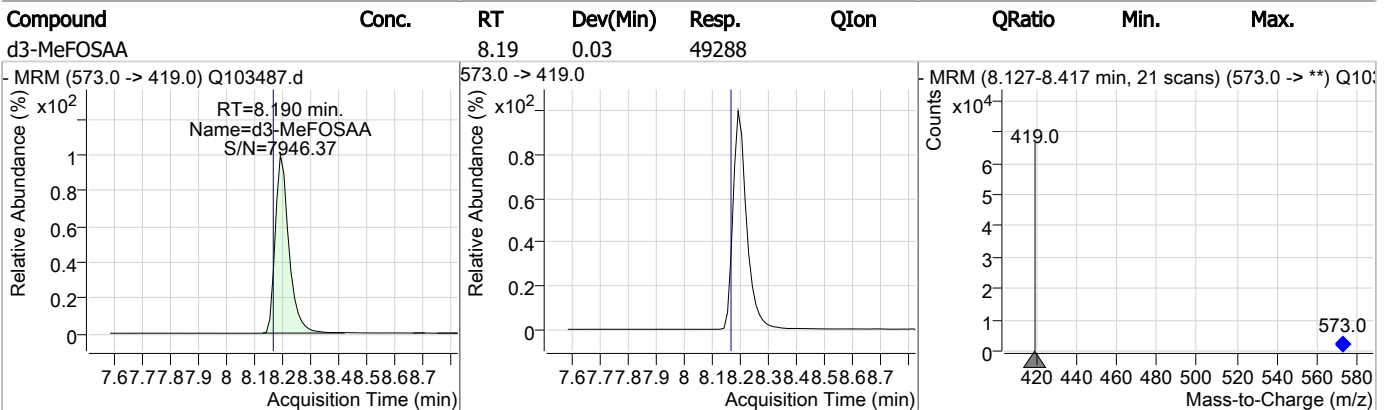
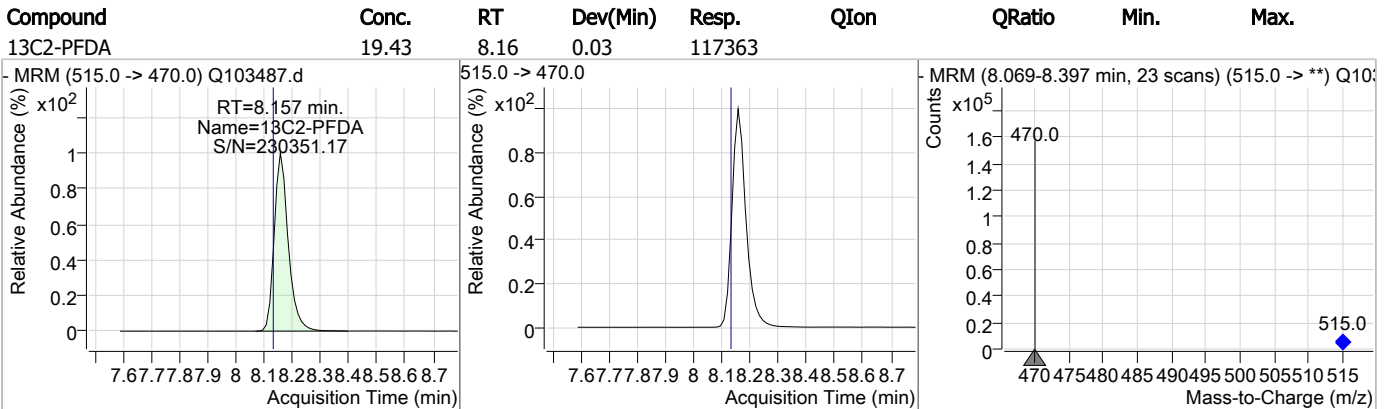
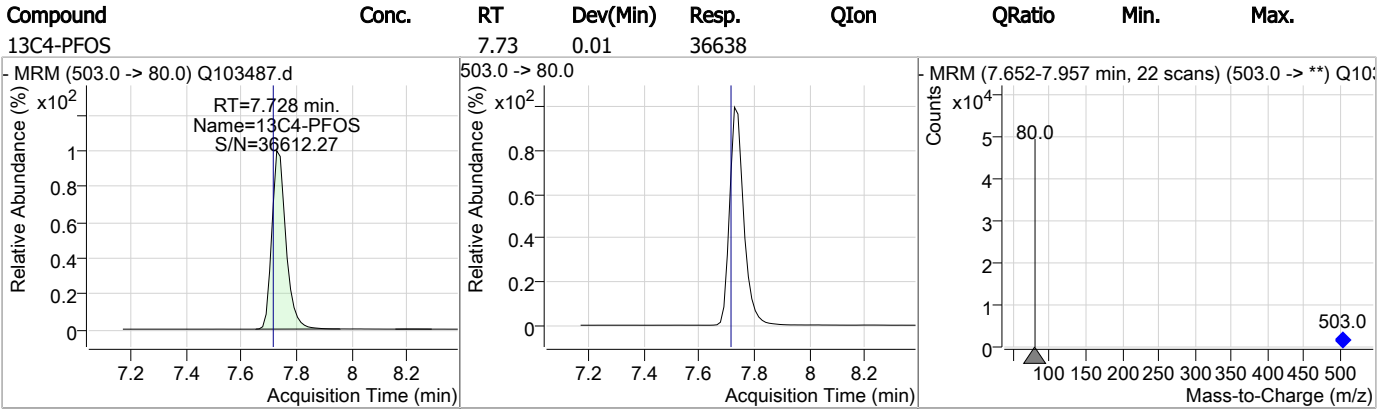


7.1.11
7

Perfluorinated Compounds by LC/MS/MS

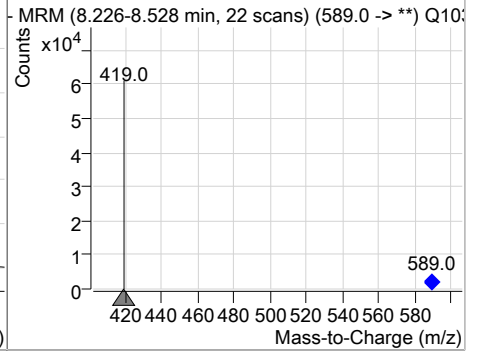
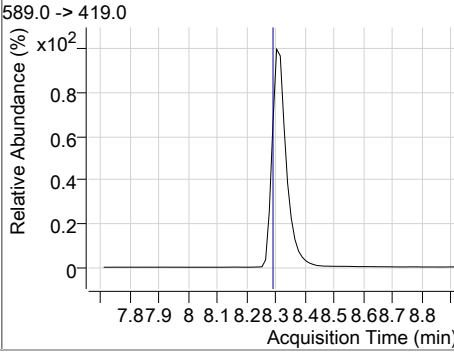
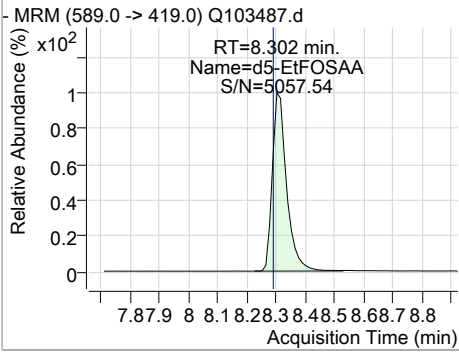


Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	35.11	8.30	0.04	45043				



7.1.11
7

Perfluorinated Compounds by LC/MS/MS

Data File : Q103488.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 11:21:49 PM
 Sample Name : fc6520-12
 Vial : P1-C7
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,280,,,1,1,water

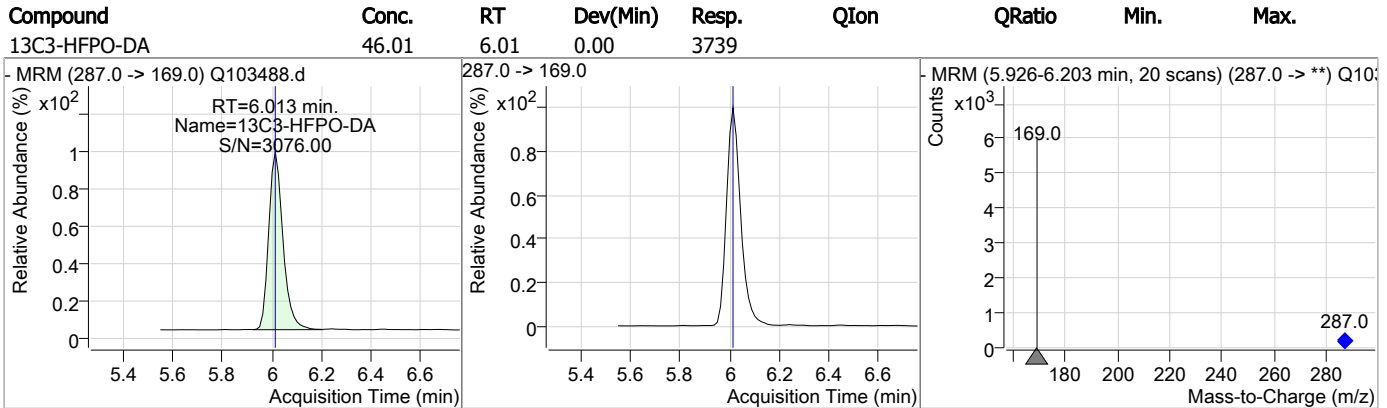
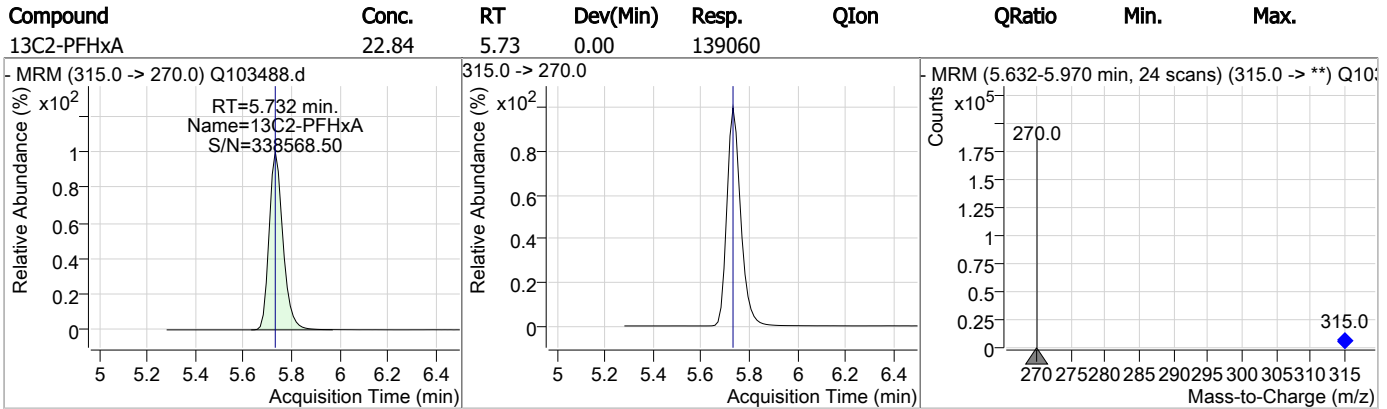
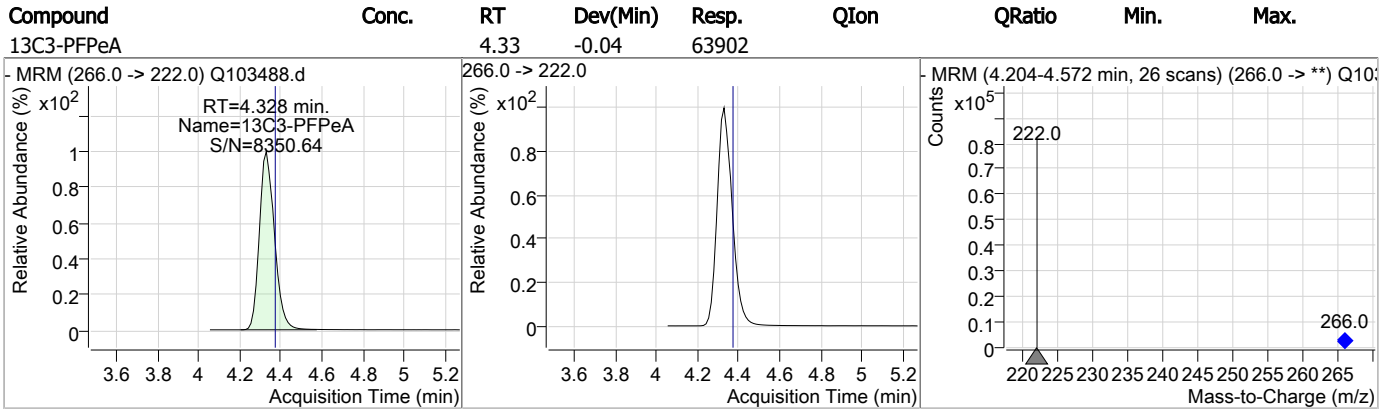
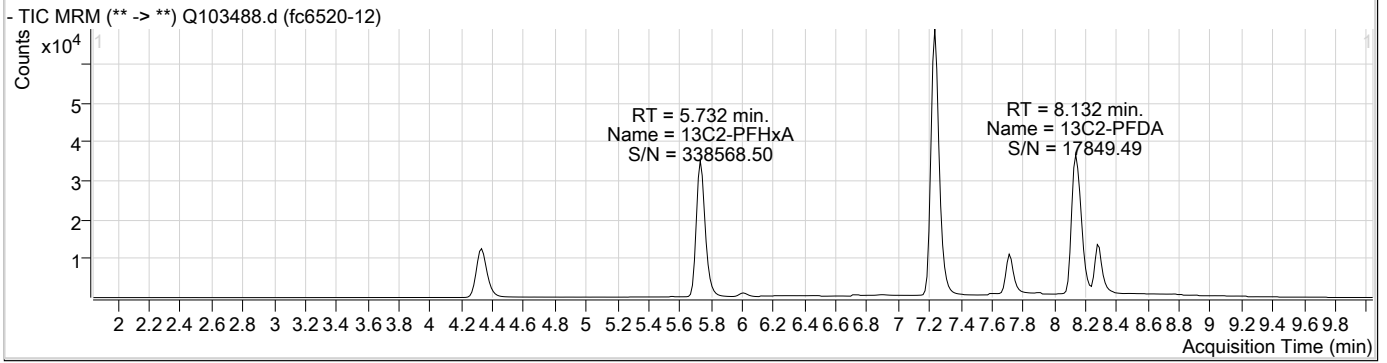
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.225	429.0 -> 409.0	42683	20.00 µg/L	0.000
13C2-PFOA	7.239	415.0 -> 370.0	209996	20.00 µg/L	0.000
13C3-PFPeA	4.328	266.0 -> 222.0	63902	20.00 µg/L	-0.044
13C4-PFOS	7.716	503.0 -> 80.0	34699	20.00 µg/L	0.000
d3-MeFOSAA	8.165	573.0 -> 419.0	45442	40.00 µg/L	0.000
System Monitoring Compounds					
13C2-PFDA	8.132	515.0 -> 470.0	111490	18.95 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 94.7%	
13C2-PFHxA	5.732	315.0 -> 270.0	139060	22.84 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 114.2%	
d5-EtFOSAA	8.277	589.0 -> 419.0	41047	34.71 µg/L	0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 86.8%	
13C3-HFPO-DA	6.013	287.0 -> 169.0	3739	46.01 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 115.0%	
Target Compounds					
6:2FTS	-	427.0 -> 407.0	-	N.D.	QValue
8:2FTS	-	527.0 -> 507.0	-	N.D.	
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0	-	N.D.	
PFDA	-	513.0 -> 469.0	-	N.D.	
PFDoDA	-	613.0 -> 569.0	-	N.D.	
PFHpA	-	363.0 -> 319.0	-	N.D.	
PFHpS	-	449.0 -> 80.0	-	N.D.	
PFHxA	-	313.0 -> 269.0	-	N.D.	
PFHxS	-	399.0 -> 80.0	-	N.D.	
PFNA	-	463.0 -> 419.0	-	N.D.	
PFOA	-	413.0 -> 369.0	-	N.D.	
PFOS	-	499.0 -> 80.0	-	N.D.	
PFPeA	-	263.0 -> 219.0	-	N.D.	
PFTeDA	-	713.0 -> 669.0	-	N.D.	
PFTrDA	-	663.0 -> 619.0	-	N.D.	
PFUnDA	-	563.0 -> 519.0	-	N.D.	
ADONA	-	377.0 -> 251.0	-	N.D.	
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
HFPO-DA	-	285.0 -> 169.0	-	N.D.	

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

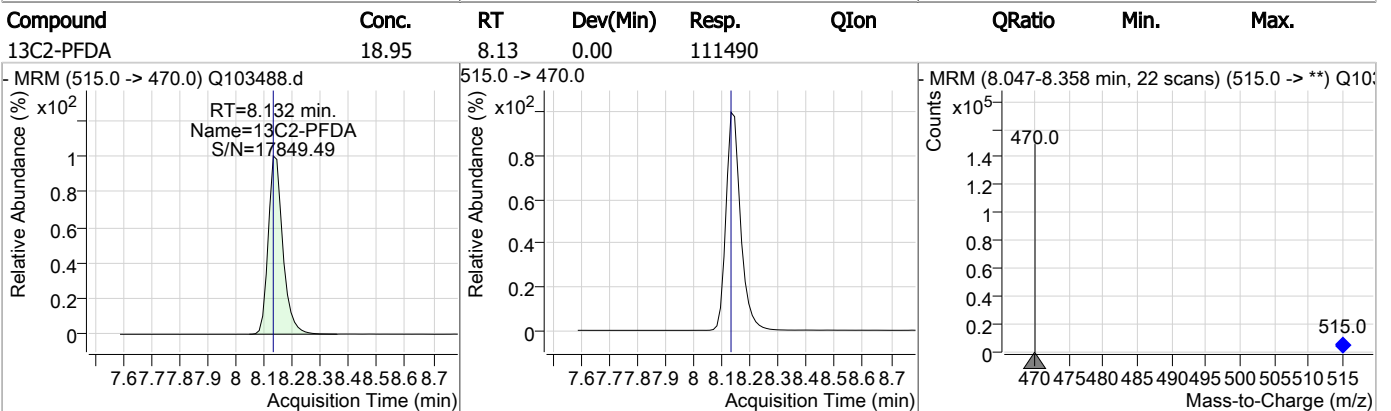
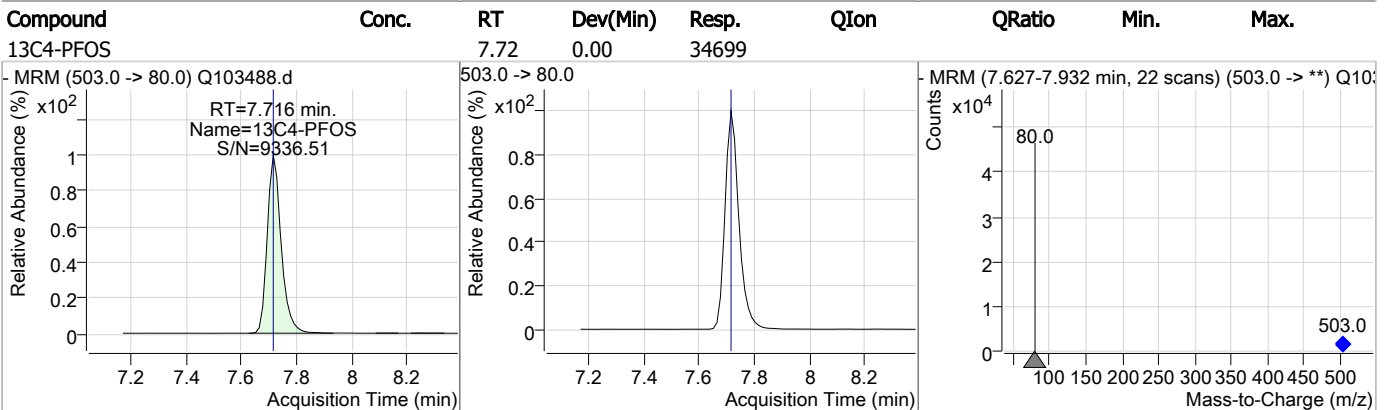
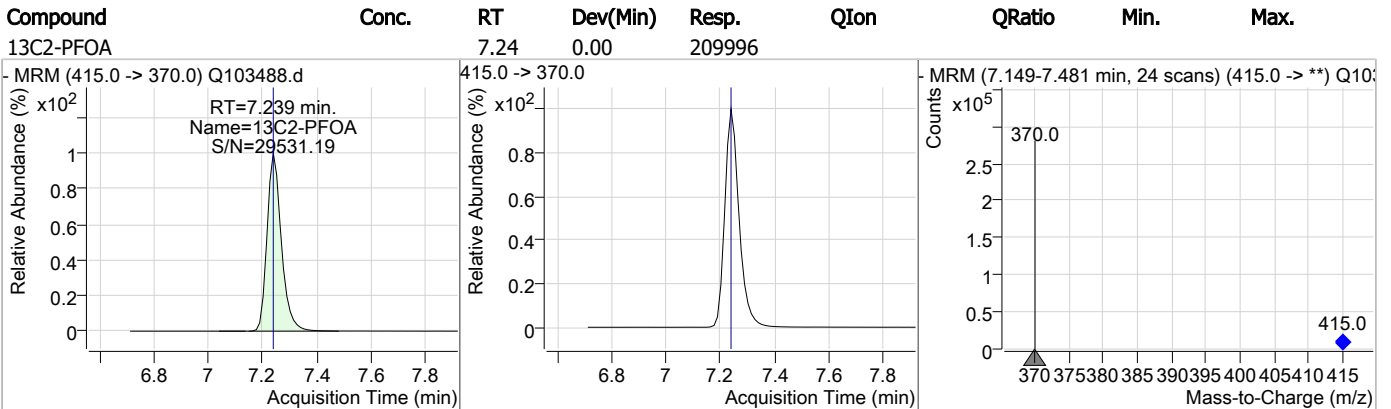
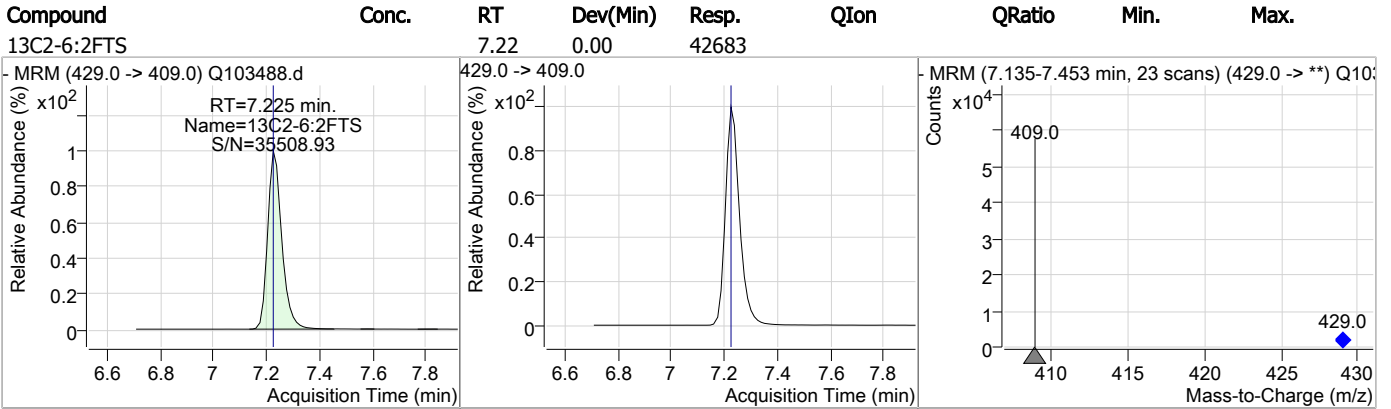
7.1.12
7



Perfluorinated Compounds by LC/MS/MS



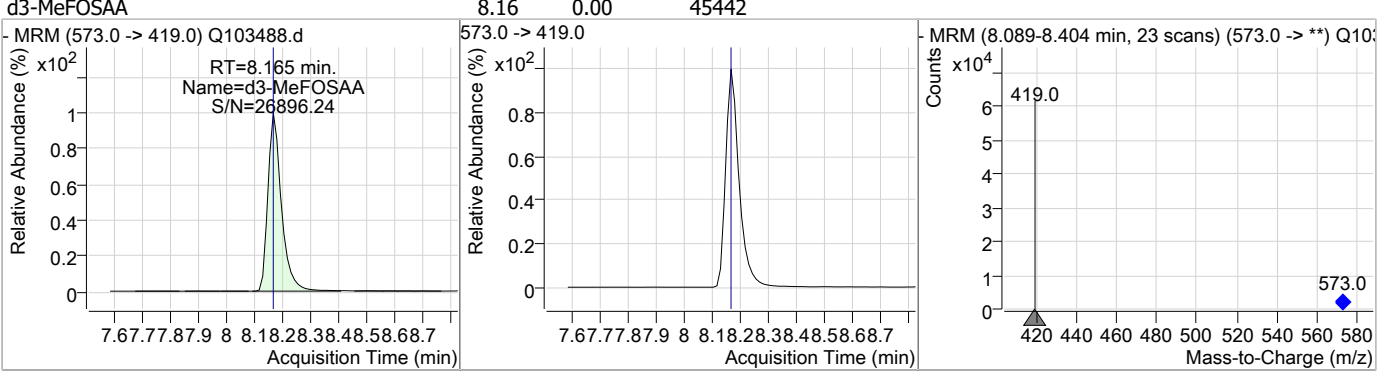
Perfluorinated Compounds by LC/MS/MS



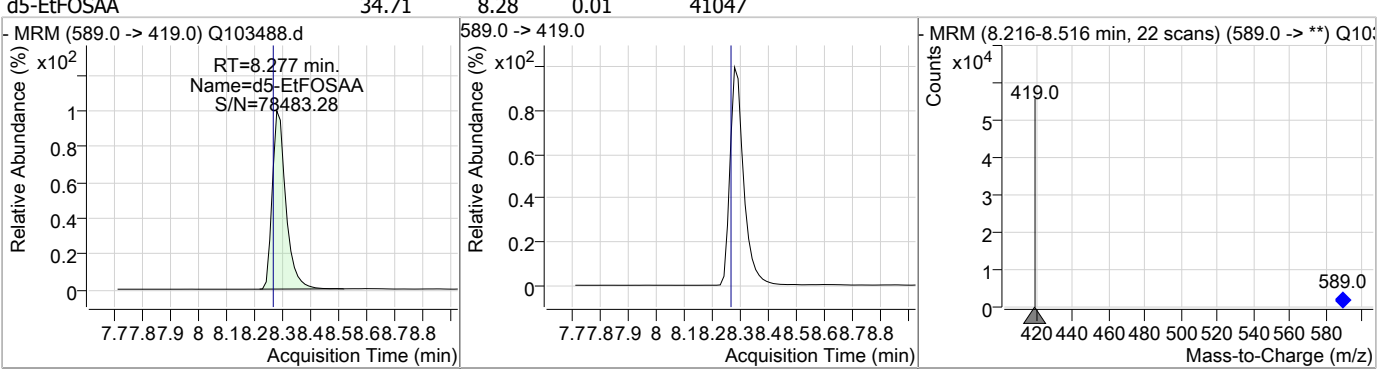
7.1.12
7

Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
----------	-------	----	----------	-------	------	--------	------	------



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
----------	-------	----	----------	-------	------	--------	------	------



7.1.12
7



Perfluorinated Compounds by LC/MS/MS

Data File : Q103489.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 11:37:37 PM
 Sample Name : fc6520-13
 Vial : P1-C8
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,280,,,1,1,water

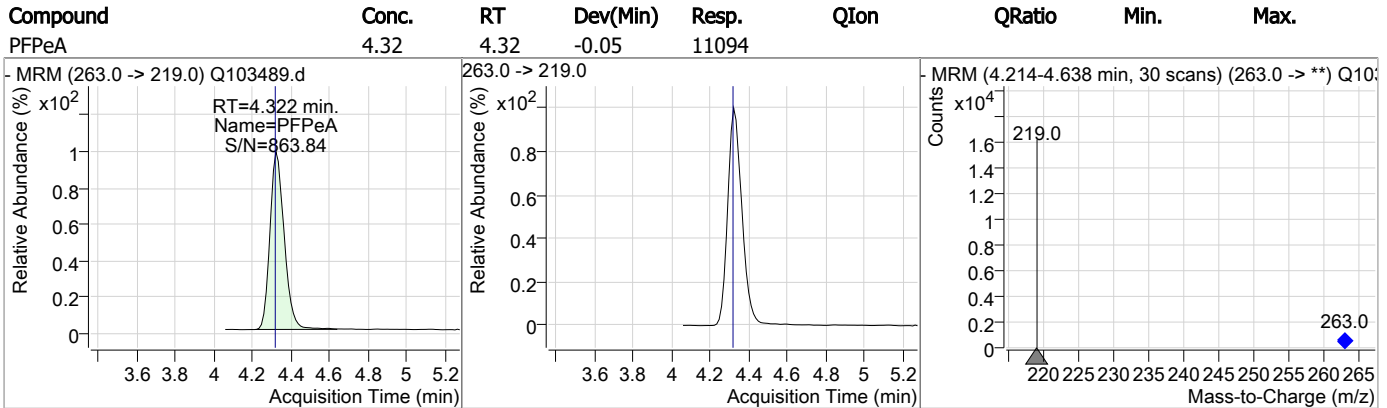
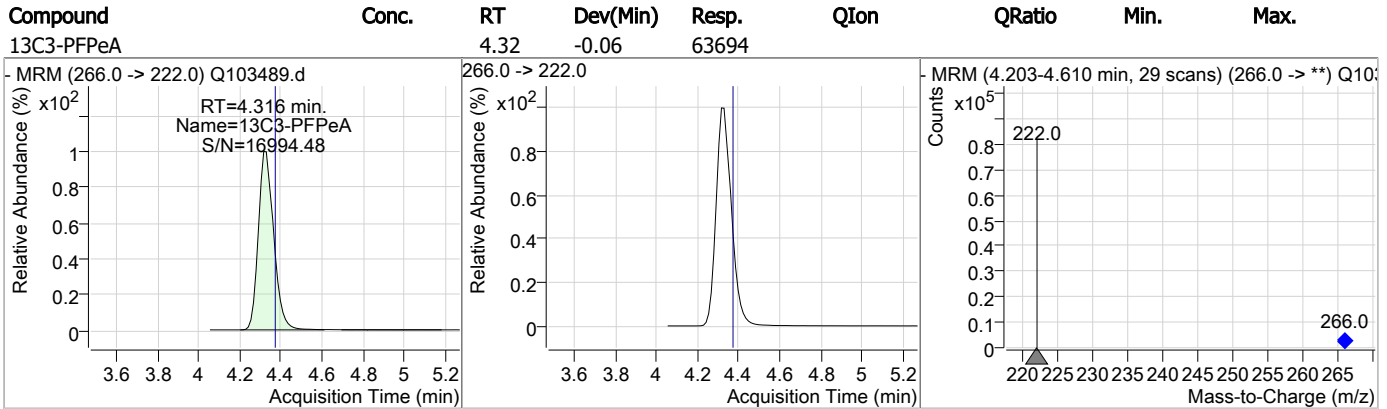
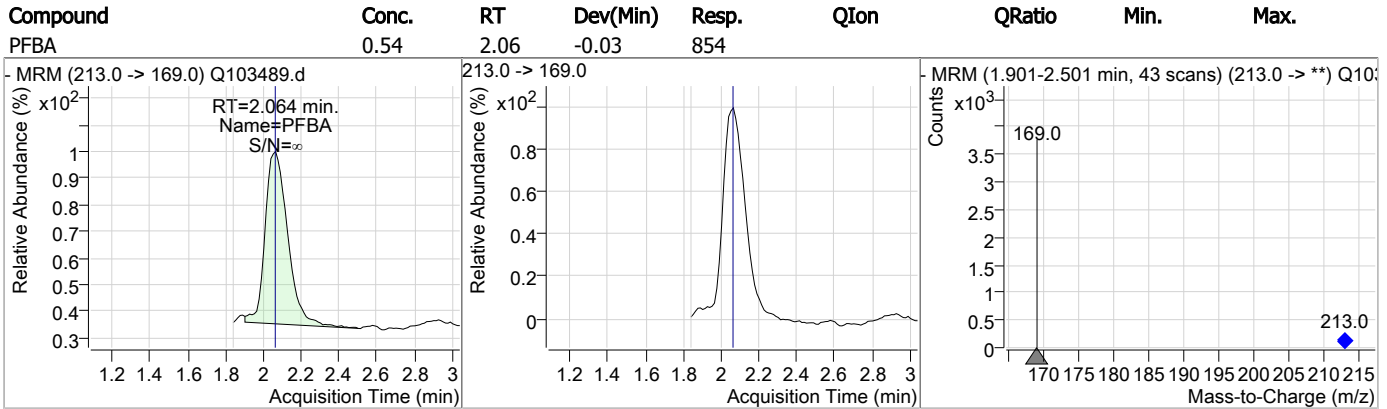
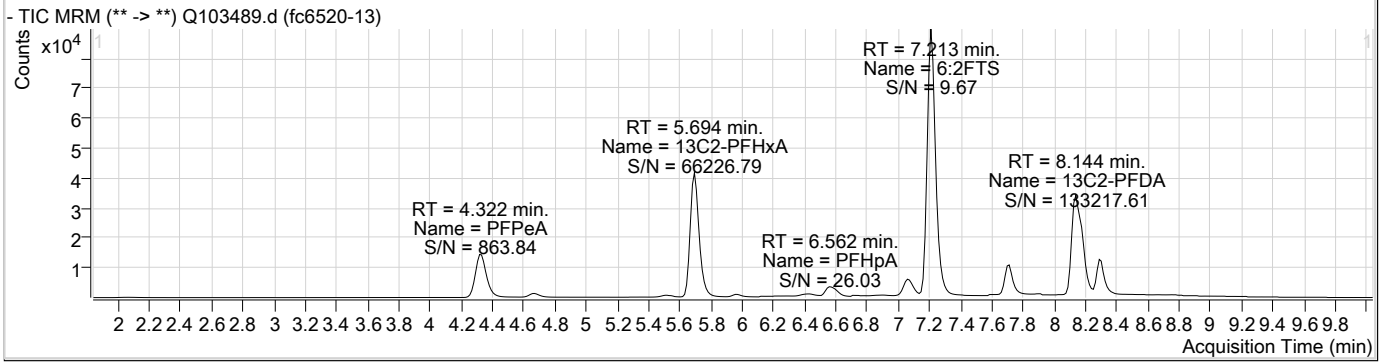
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.200	429.0 -> 409.0	46258	20.00 µg/L	-0.025
13C2-PFOA	7.214	415.0 -> 370.0	220105	20.00 µg/L	-0.025
13C3-PFPeA	4.316	266.0 -> 222.0	63694	20.00 µg/L	-0.056
13C4-PFOS	7.716	503.0 -> 80.0	35601	20.00 µg/L	0.000
d3-MeFOSAA	8.177	573.0 -> 419.0	50108	40.00 µg/L	0.013
System Monitoring Compounds					
13C2-PFDA	8.144	515.0 -> 470.0	111436	18.07 µg/L	0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 90.3%	
13C2-PFHxA	5.694	315.0 -> 270.0	128043	20.11 µg/L	-0.038
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 100.6%	
d5-EtFOSAA	8.289	589.0 -> 419.0	38711	29.81 µg/L	0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 74.5%	
13C3-HFPO-DA	5.963	287.0 -> 169.0	3280	38.58 µg/L	-0.050
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 96.5%	
Target Compounds					
6:2FTS	7.213	427.0 -> 407.0	94	0.05 µg/L	QValue 79
8:2FTS	-	527.0 -> 507.0	-	N.D.	
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
PFBA	2.064	213.0 -> 169.0	854	0.54 µg/L	100
PFBS	4.666	299.0 -> 80.0	3878	3.26 µg/L	97
PFDA	-	513.0 -> 469.0	-	N.D.	
PFDoDA	-	613.0 -> 569.0	-	N.D.	
PFHpA	6.562	363.0 -> 319.0	10287	1.53 µg/L	m 98
PFHpS	-	449.0 -> 80.0	-	N.D.	
PFHxA	5.696	313.0 -> 269.0	35042	6.16 µg/L	100
PFHxS	6.594	399.0 -> 80.0	6135	3.76 µg/L	m 93
PFNA	-	463.0 -> 419.0	-	N.D.	
PFOA	7.215	413.0 -> 369.0	74270	6.20 µg/L	m 94
PFOS	-	499.0 -> 80.0	-	N.D.	
PFPeA	4.322	263.0 -> 219.0	11094	4.32 µg/L	100
PFTeDA	-	713.0 -> 669.0	-	N.D.	
PFTTrDA	-	663.0 -> 619.0	-	N.D.	
PFUnDA	-	563.0 -> 519.0	-	N.D.	
ADONA	-	377.0 -> 251.0	-	N.D.	
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
HFPO-DA	-	285.0 -> 169.0	-	N.D.	

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

7.1.13
7

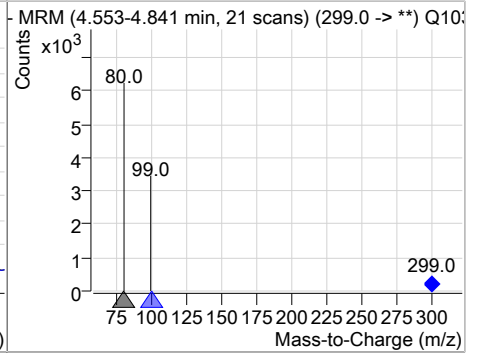
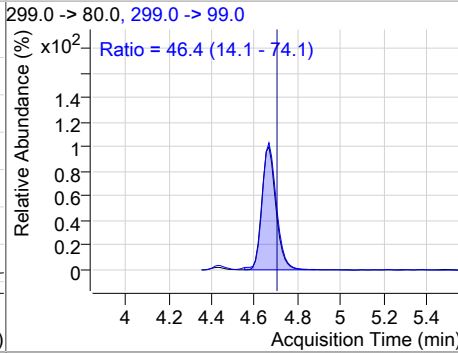
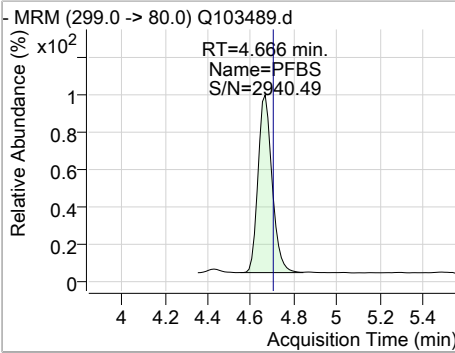


Perfluorinated Compounds by LC/MS/MS

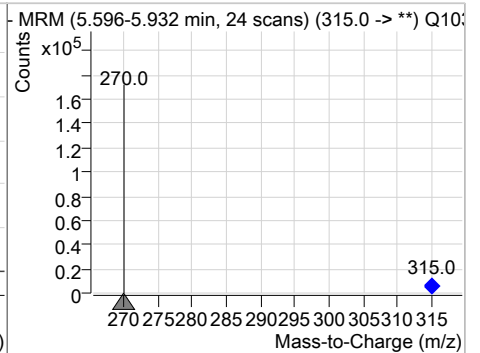
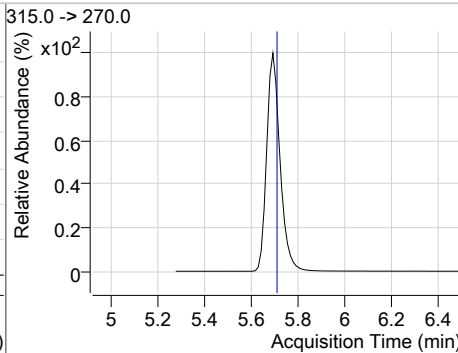
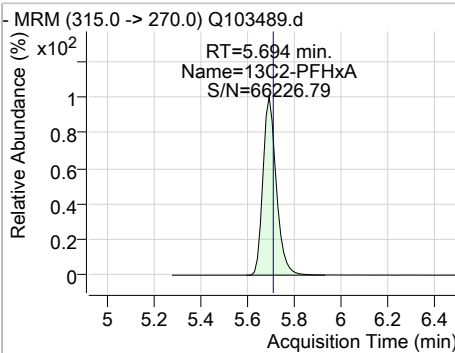


Perfluorinated Compounds by LC/MS/MS

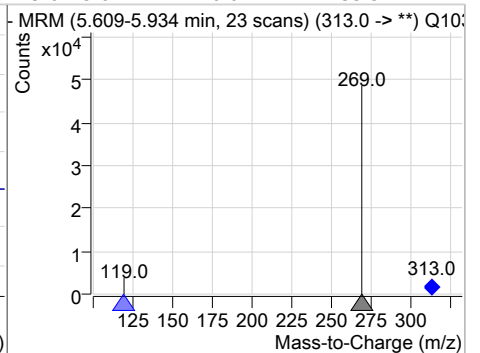
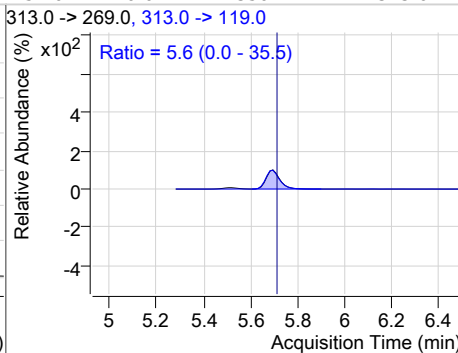
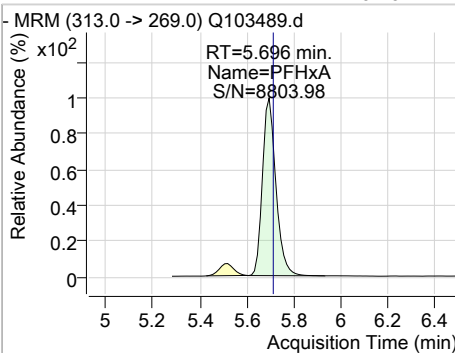
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	3.26	4.67	-0.04	3878	299.0 -> 99.0	46.4	14.1	74.1



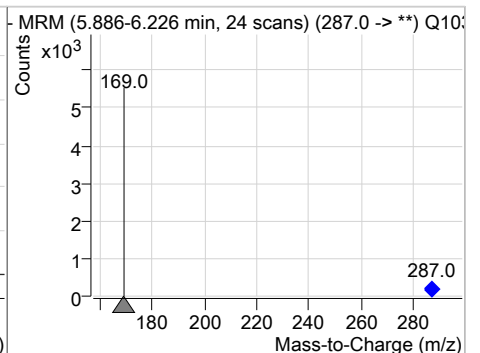
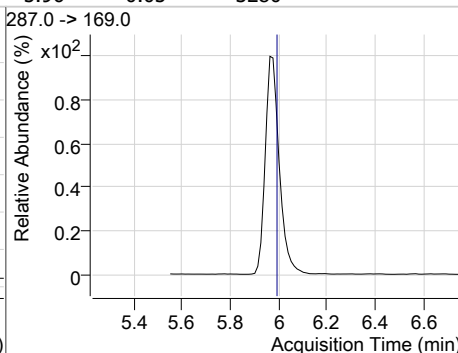
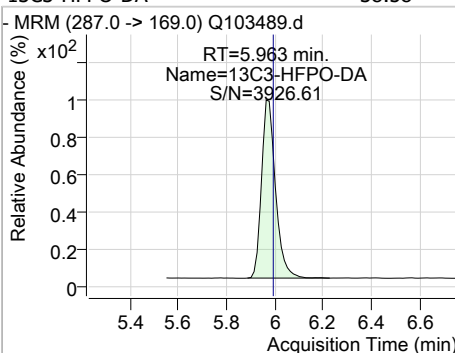
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	20.11	5.69	-0.04	128043				



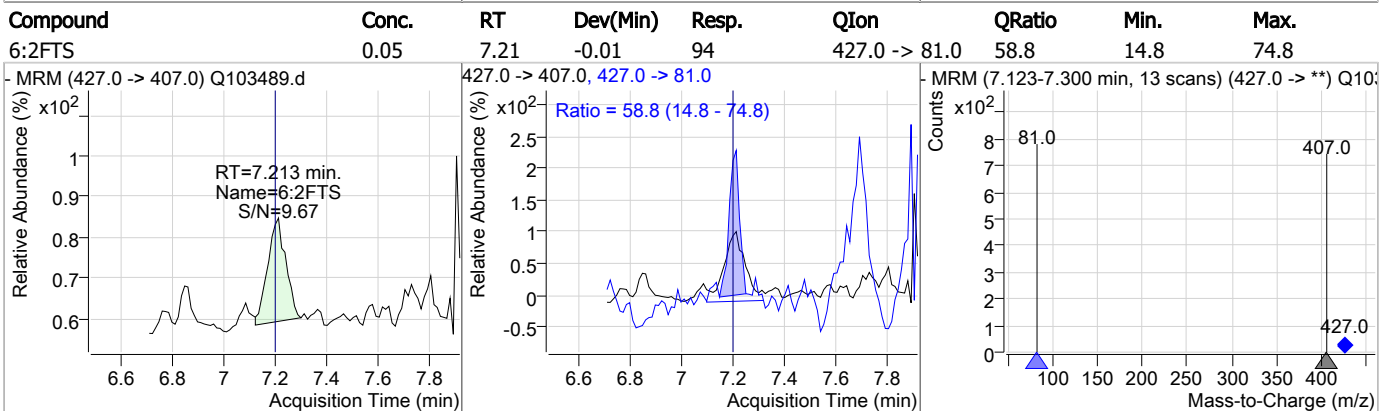
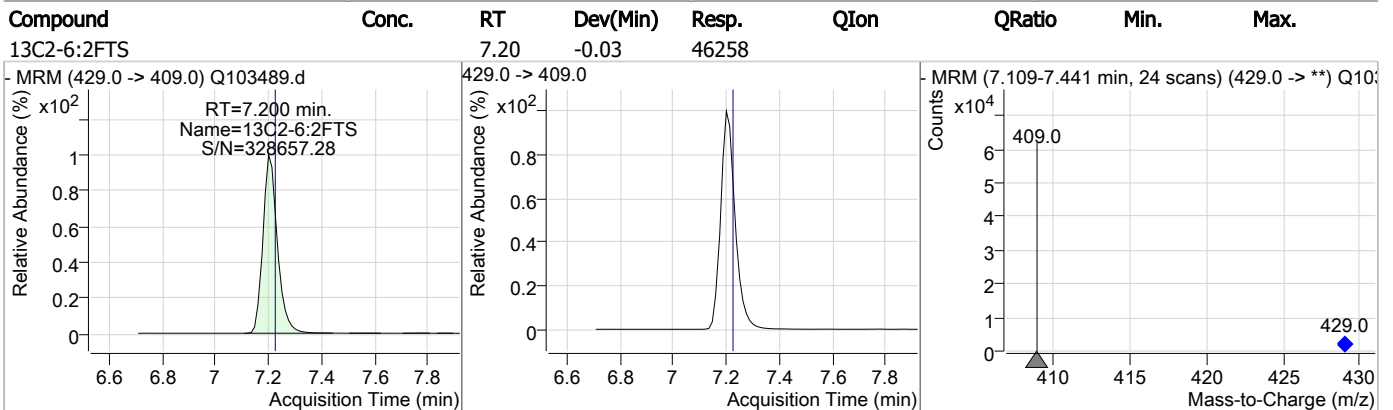
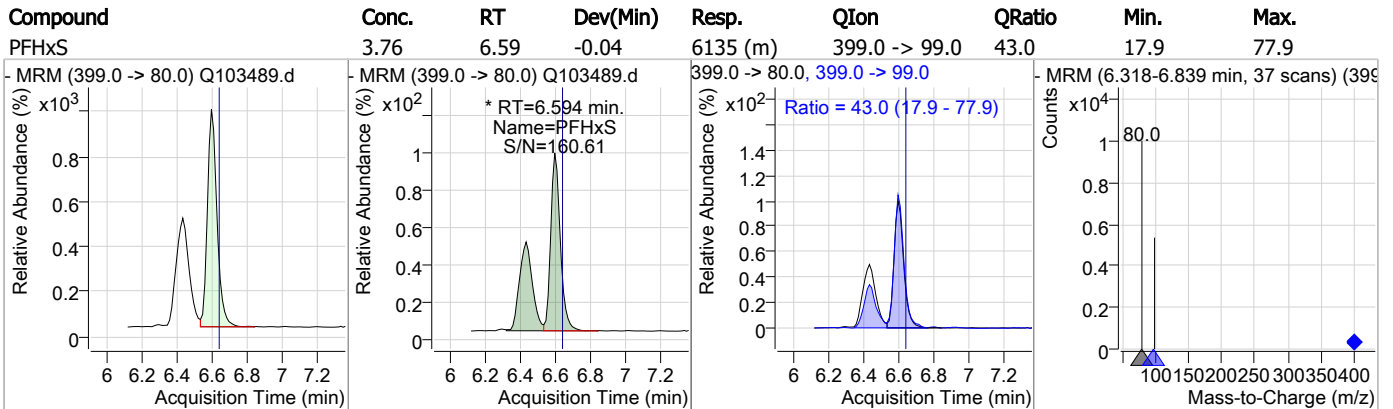
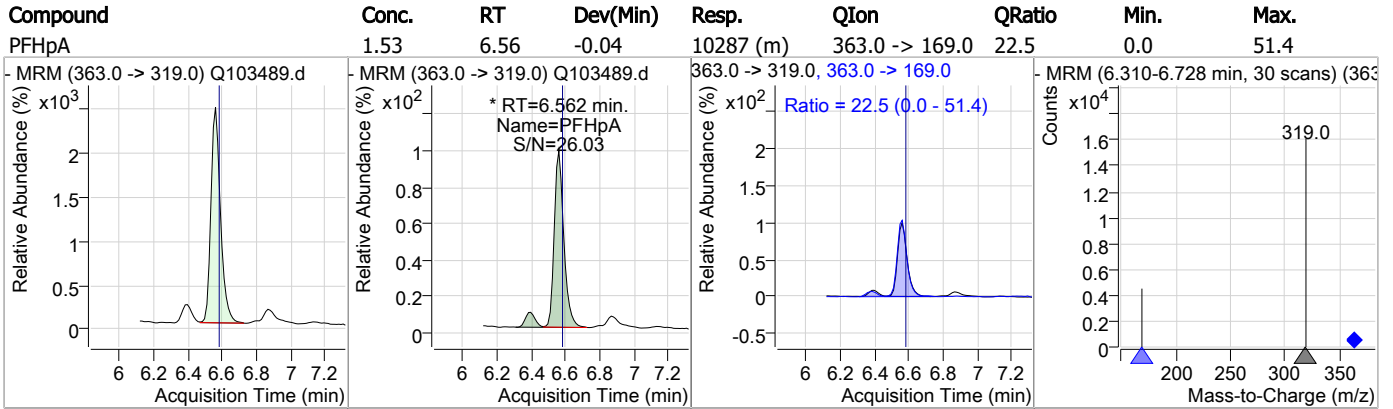
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	6.16	5.70	-0.04	35042	313.0 -> 119.0	5.6	0.0	35.5



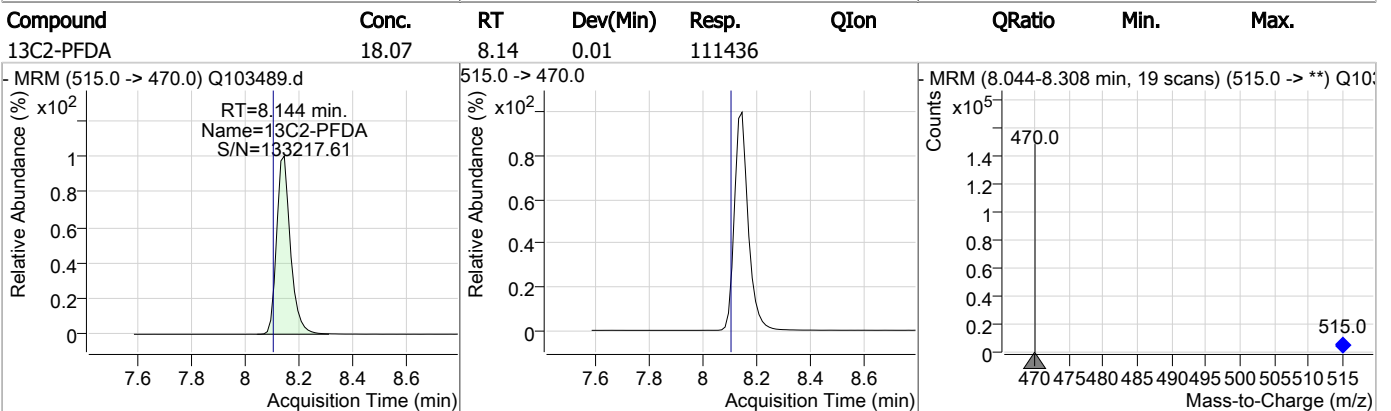
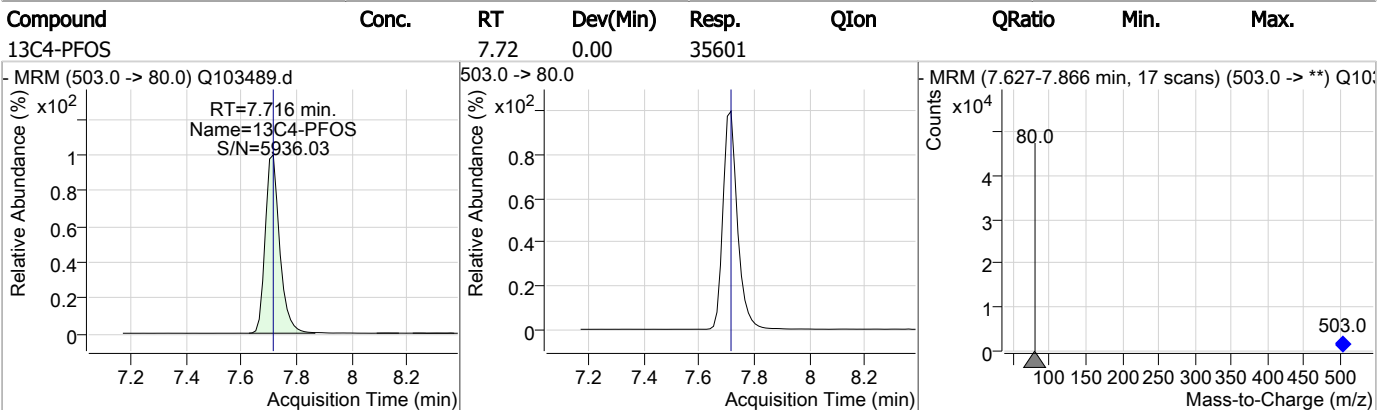
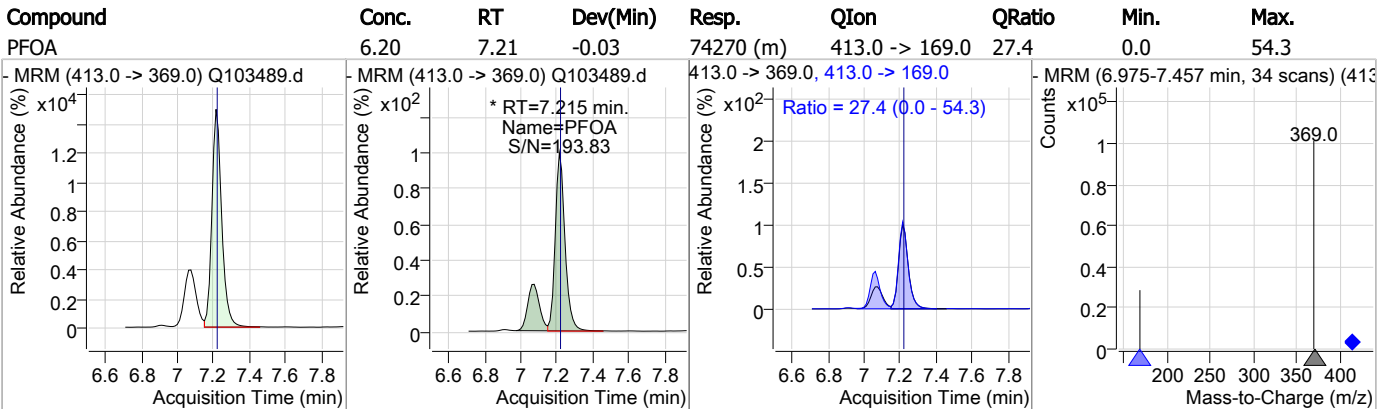
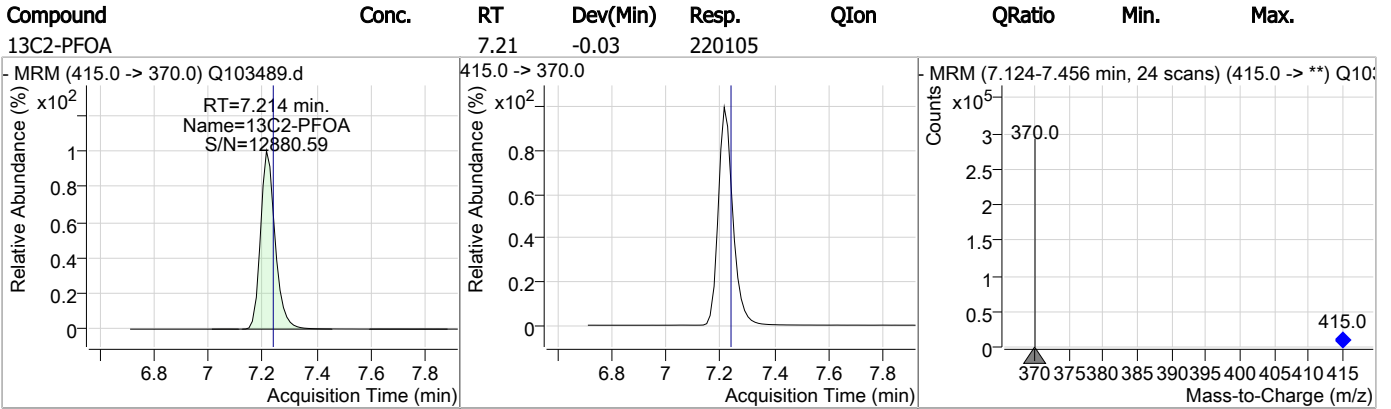
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	38.58	5.96	-0.05	3280				



Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS

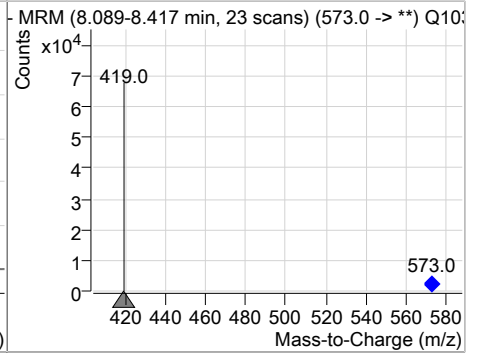
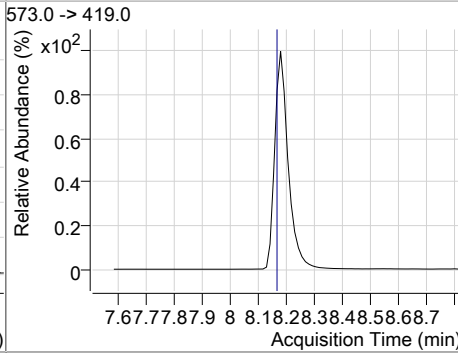
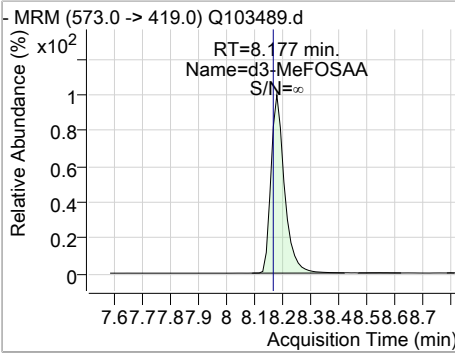


7.1.13
7

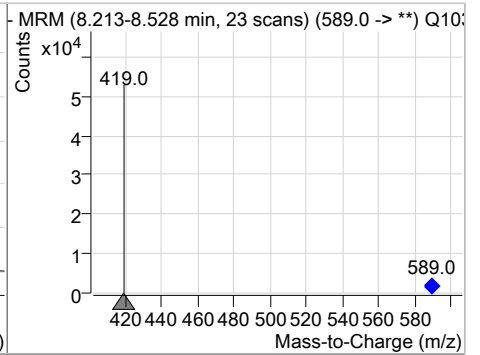
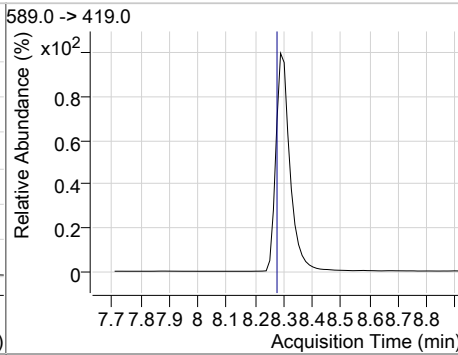
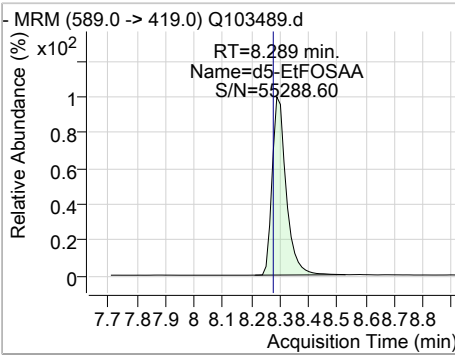


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.18	0.01	50108				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	29.81	8.29	0.03	38711				



7.1.13
7

Manual Integration Approval Summary

Sample Number: FC6520-13 Method: EPA 537.1 REV 1.0
Lab FileID: Q103489.D Analyst approved: 06/19/23 16:34 Anna Ludwig
Injection Time: 06/18/23 23:37 Supervisor approved: 06/19/23 17:33 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluoroheptanoic acid	375-85-9		6.56	Split peak
Perfluorohexanesulfonic acid	355-46-4		6.59	Split peak
Perfluorooctanoic acid	335-67-1		7.21	Split peak

7.1.13.1

7

Perfluorinated Compounds by LC/MS/MS

Data File : Q103490.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 11:53:26 PM
 Sample Name : fc6520-14
 Vial : P1-C9
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,280,,,1,1,water

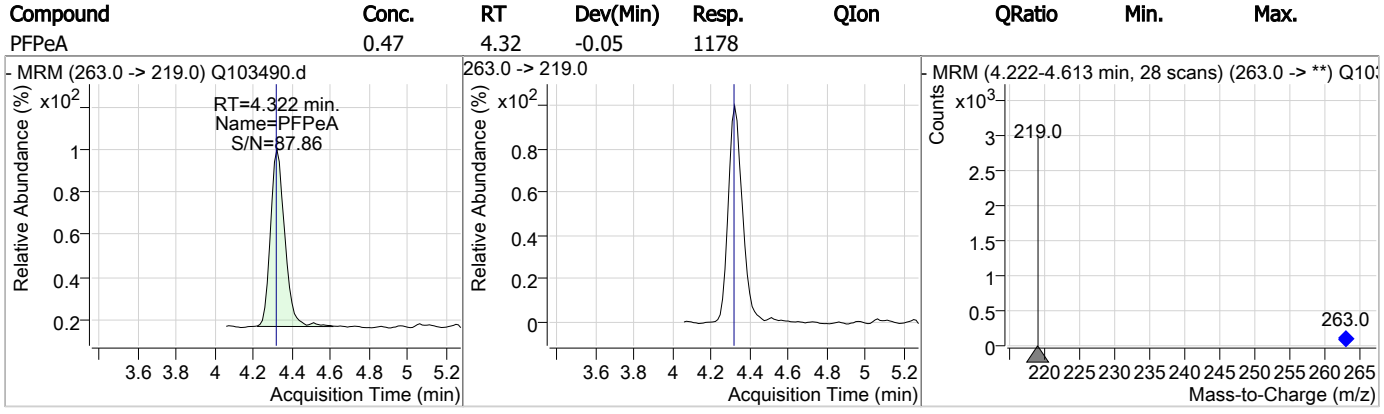
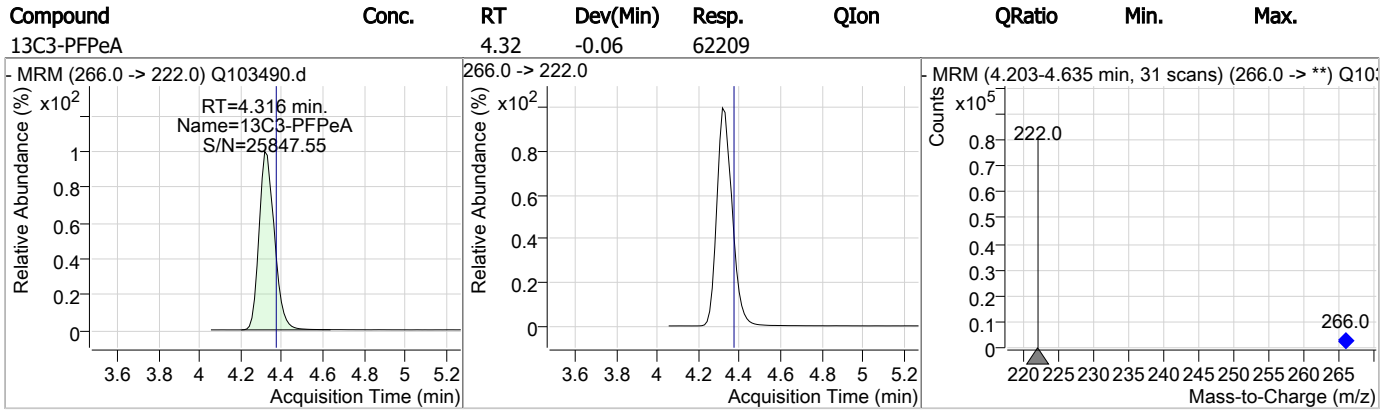
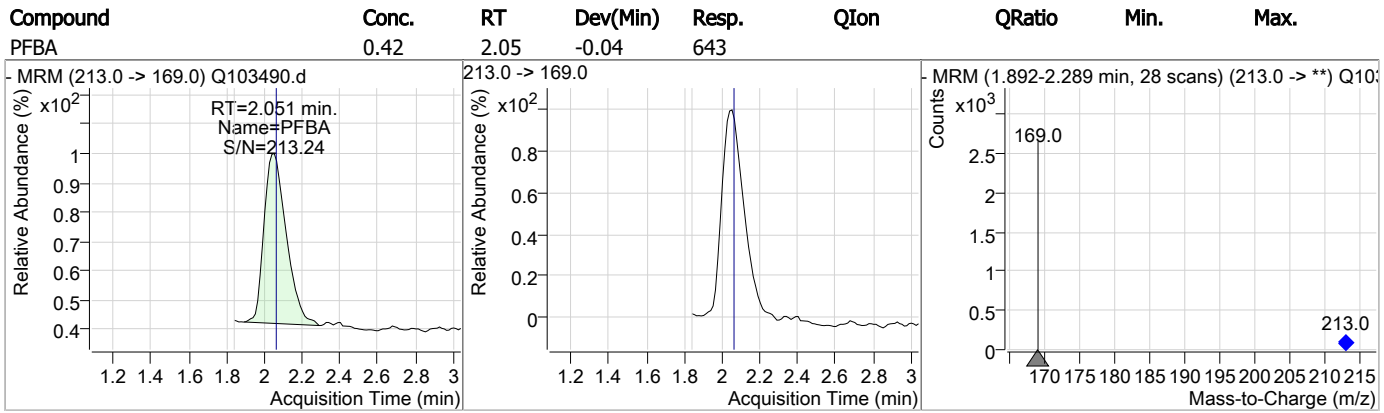
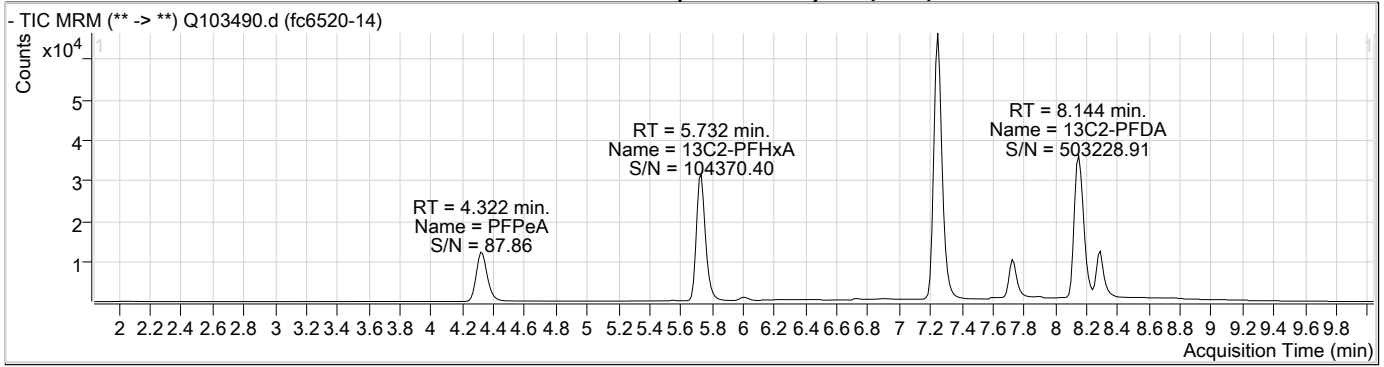
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.237	429.0 -> 409.0	41486	20.00 µg/L	0.013
13C2-PFOA	7.252	415.0 -> 370.0	203581	20.00 µg/L	0.013
13C3-PFPeA	4.316	266.0 -> 222.0	62209	20.00 µg/L	-0.056
13C4-PFOS	7.728	503.0 -> 80.0	32582	20.00 µg/L	0.013
d3-MeFOSAA	8.177	573.0 -> 419.0	47021	40.00 µg/L	0.013
System Monitoring Compounds					
13C2-PFDA	8.144	515.0 -> 470.0	103746	18.18 µg/L	0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 90.9%	
13C2-PFHxA	5.732	315.0 -> 270.0	126775	21.50 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 107.5%	
d5-EtFOSAA	8.289	589.0 -> 419.0	37055	30.40 µg/L	0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 76.0%	
13C3-HFPO-DA	6.013	287.0 -> 169.0	3404	43.24 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 108.1%	
Target Compounds					
6:2FTS	-	427.0 -> 407.0	-	N.D.	
8:2FTS	-	527.0 -> 507.0	-	N.D.	
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
PFBA	2.051	213.0 -> 169.0	643	0.42 µg/L	100
PFBS	-	299.0 -> 80.0	-	N.D.	
PFDA	-	513.0 -> 469.0	-	N.D.	
PFDoDA	-	613.0 -> 569.0	-	N.D.	
PFHpA	-	363.0 -> 319.0	-	N.D.	
PFHpS	-	449.0 -> 80.0	-	N.D.	
PFHxA	-	313.0 -> 269.0	-	N.D.	
PFHxS	-	399.0 -> 80.0	-	N.D.	
PFNA	-	463.0 -> 419.0	-	N.D.	
PFOA	-	413.0 -> 369.0	-	N.D.	
PFOS	-	499.0 -> 80.0	-	N.D.	
PFPeA	4.322	263.0 -> 219.0	1178	0.47 µg/L	100
PFTeDA	-	713.0 -> 669.0	-	N.D.	
PFTrDA	-	663.0 -> 619.0	-	N.D.	
PFUnDA	-	563.0 -> 519.0	-	N.D.	
ADONA	-	377.0 -> 251.0	-	N.D.	
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
HFPO-DA	-	285.0 -> 169.0	-	N.D.	

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

7.1.14
7



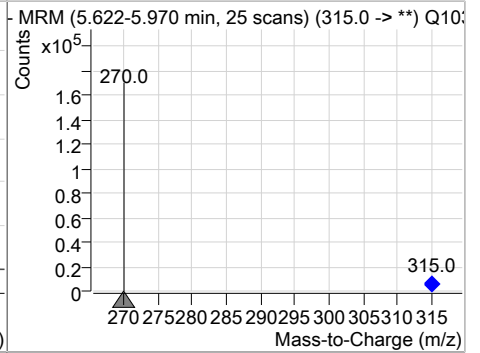
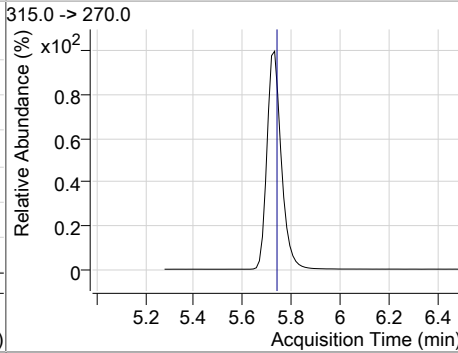
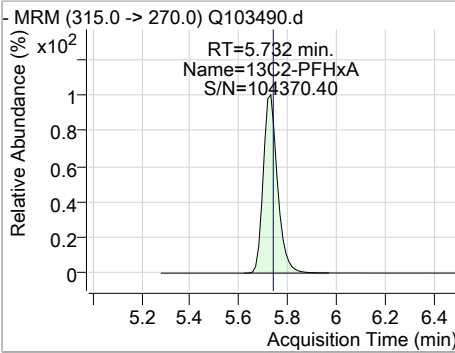
Perfluorinated Compounds by LC/MS/MS



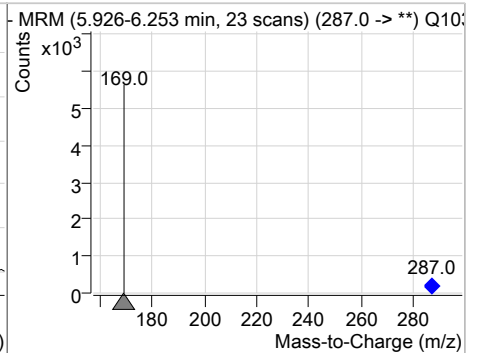
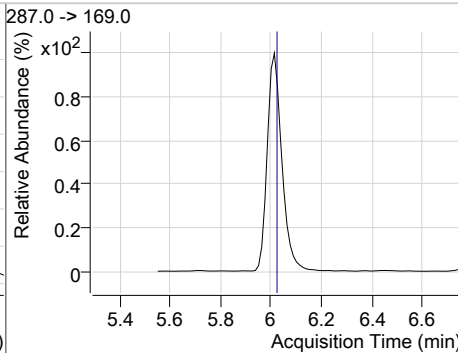
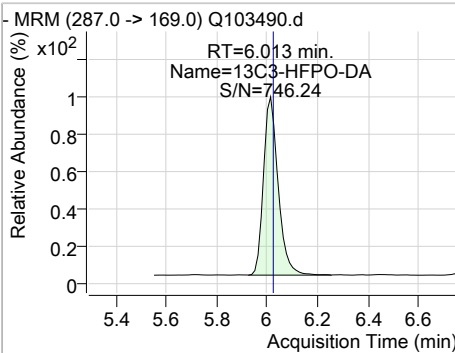
7.1.14

Perfluorinated Compounds by LC/MS/MS

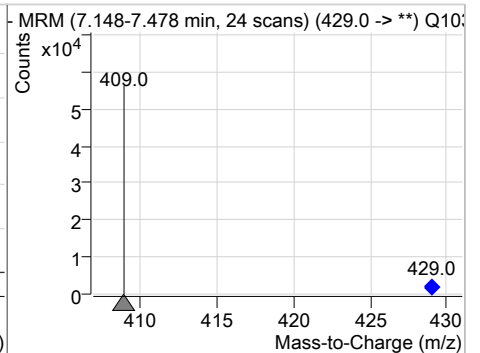
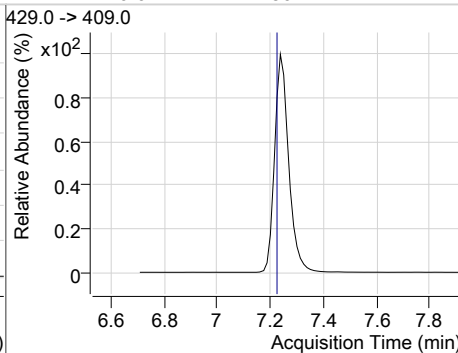
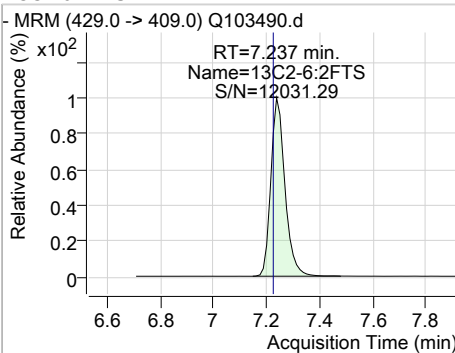
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	21.50	5.73	0.00	126775				



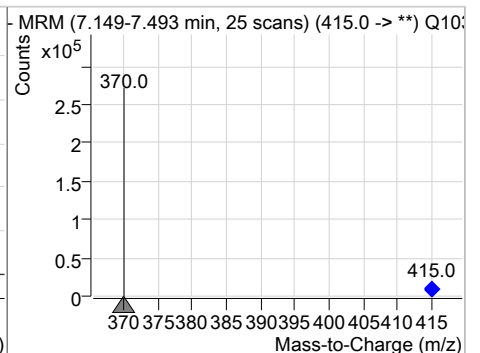
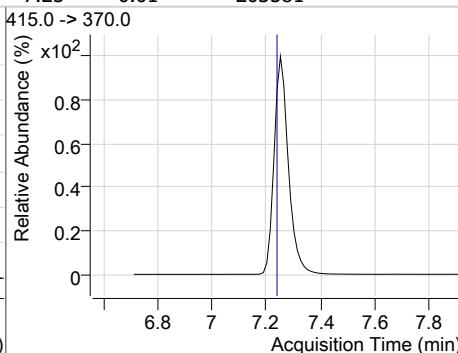
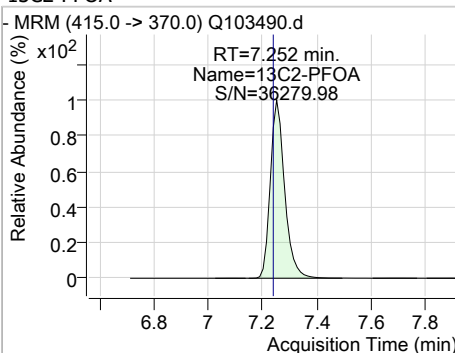
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	43.24	6.01	0.00	3404				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-6:2FTS		7.24	0.01	41486				

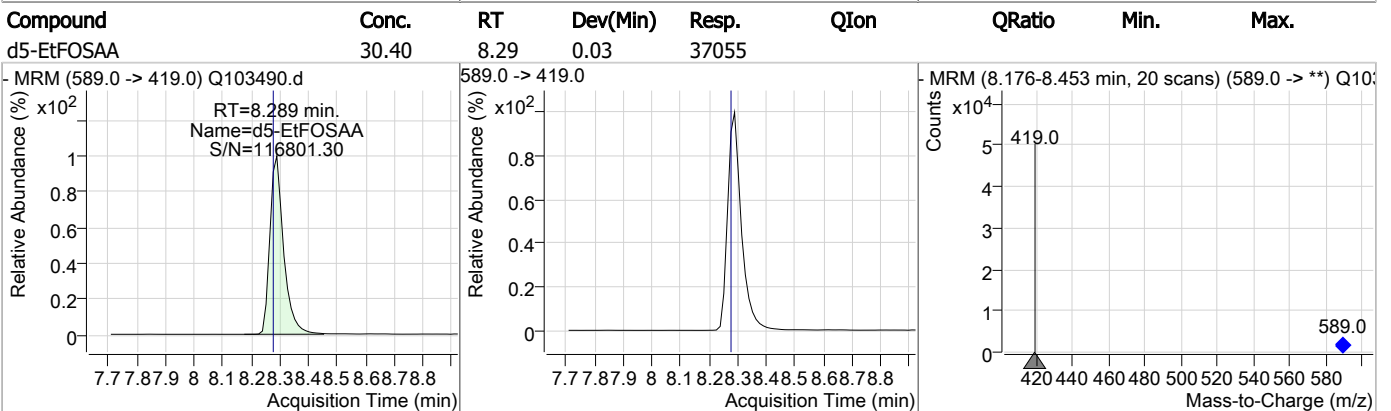
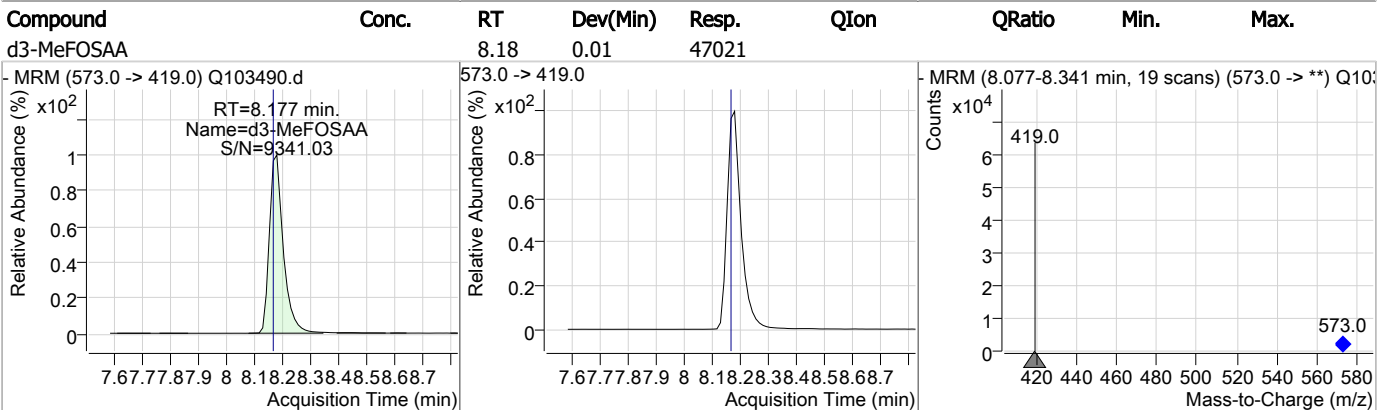
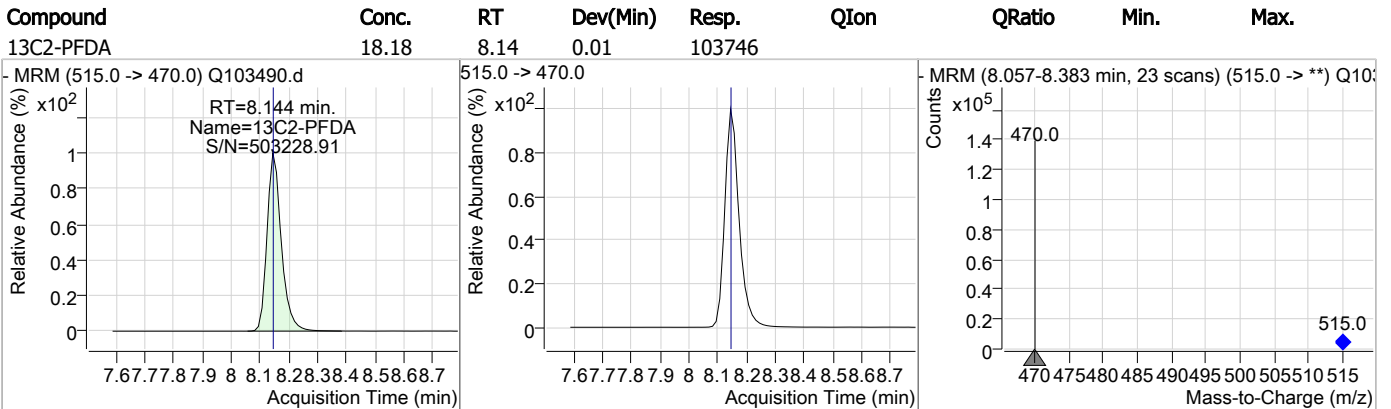
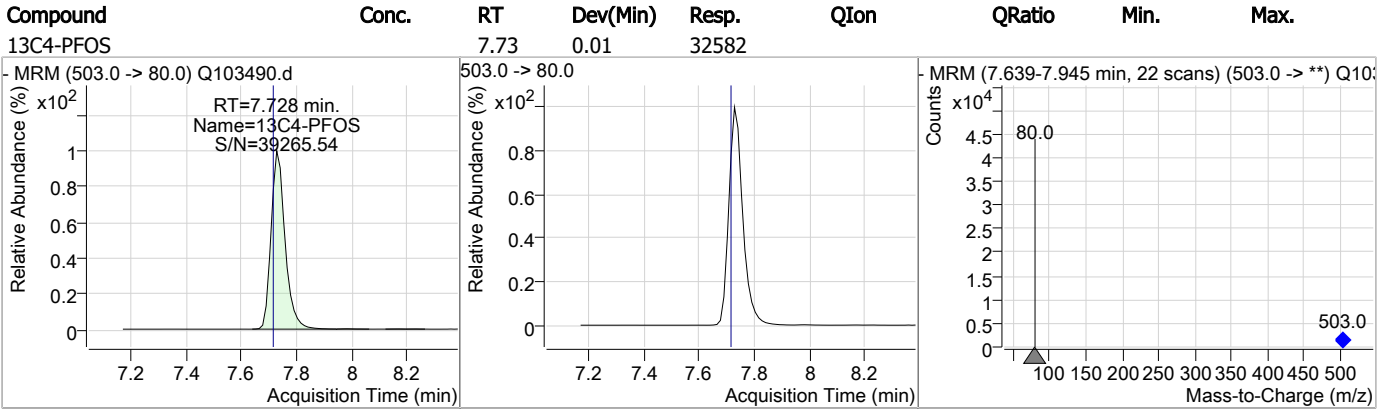


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFOA		7.25	0.01	203581				



7.1.14
7

Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS

Data File : Q103491.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/19/2023 12:09:12 AM
 Sample Name : fc6520-15
 Vial : P1-D1
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,280,,,1,1,water

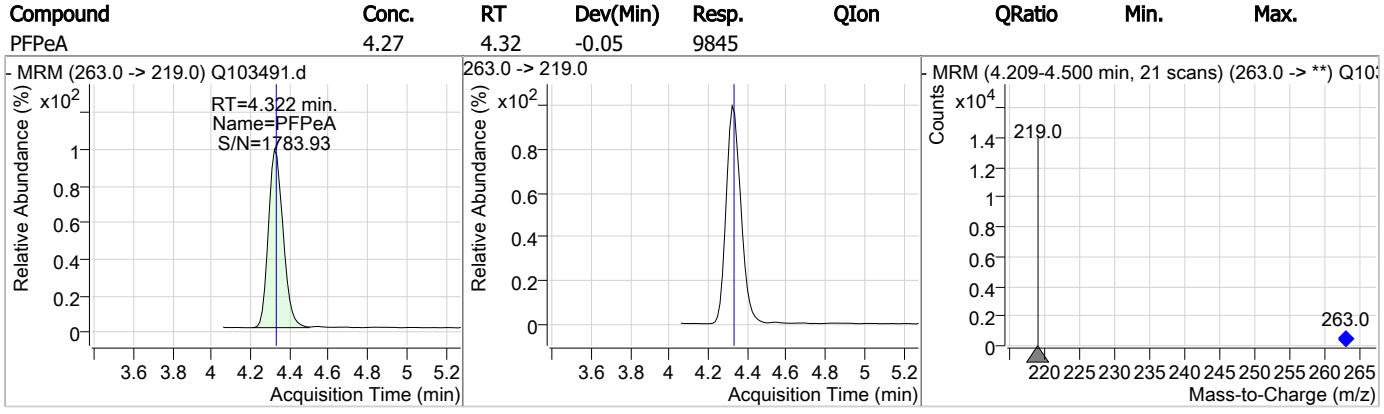
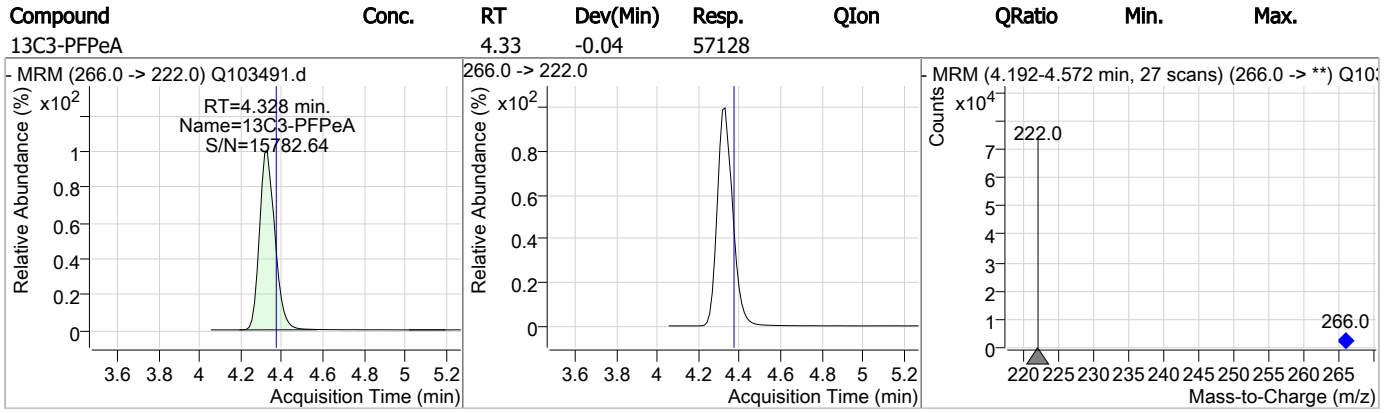
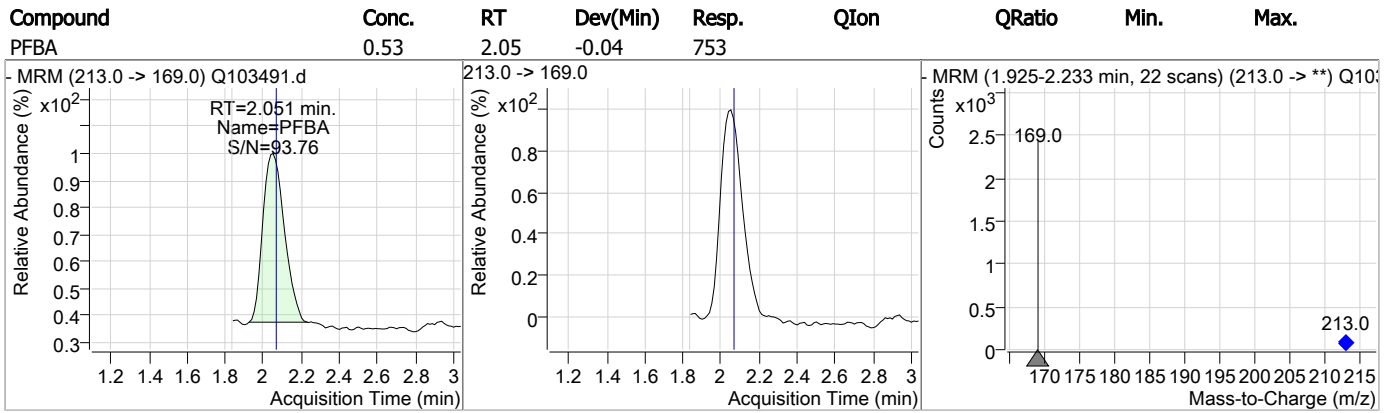
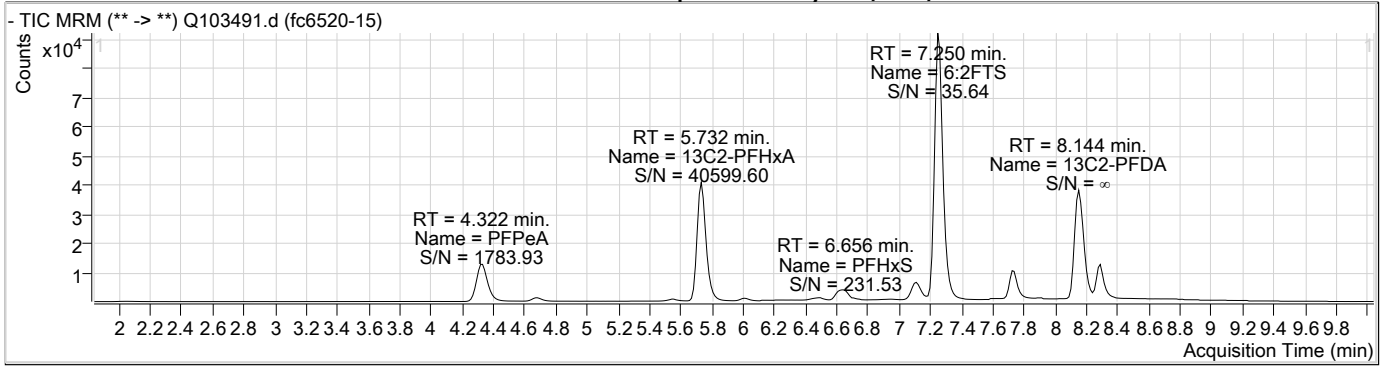
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.250	429.0 -> 409.0	41802	20.00 µg/L	0.025
13C2-PFOA	7.252	415.0 -> 370.0	198521	20.00 µg/L	0.013
13C3-PFPeA	4.328	266.0 -> 222.0	57128	20.00 µg/L	-0.044
13C4-PFOS	7.728	503.0 -> 80.0	33761	20.00 µg/L	0.013
d3-MeFOSAA	8.177	573.0 -> 419.0	44570	40.00 µg/L	0.013
System Monitoring Compounds					
13C2-PFDA	8.144	515.0 -> 470.0	111262	20.00 µg/L	0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 100.0%	
13C2-PFHxA	5.732	315.0 -> 270.0	130109	22.61 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 113.1%	
d5-EtFOSAA	8.289	589.0 -> 419.0	37622	32.50 µg/L	0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 81.3%	
13C3-HFPO-DA	6.013	287.0 -> 169.0	3520	45.82 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 114.5%	
Target Compounds					
6:2FTS	7.250	427.0 -> 407.0	161	0.09 µg/L	QValue 68
8:2FTS	-	527.0 -> 507.0	-	N.D.	
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
PFBA	2.051	213.0 -> 169.0	753	0.53 µg/L	100
PFBS	4.678	299.0 -> 80.0	3623	3.21 µg/L	99
PFDA	-	513.0 -> 469.0	-	N.D.	
PFDoDA	-	613.0 -> 569.0	-	N.D.	
PFHpA	6.612	363.0 -> 319.0	9908	1.63 µg/L m	96
PFHpS	-	449.0 -> 80.0	-	N.D.	
PFHxA	5.734	313.0 -> 269.0	30699	5.98 µg/L	98
PFHxS	6.656	399.0 -> 80.0	9200	5.94 µg/L m	93
PFNA	-	463.0 -> 419.0	-	N.D.	
PFOA	7.252	413.0 -> 369.0	99770	9.23 µg/L m	95
PFOS	-	499.0 -> 80.0	-	N.D.	
PFPeA	4.322	263.0 -> 219.0	9845	4.27 µg/L	100
PFTeDA	-	713.0 -> 669.0	-	N.D.	
PFTTrDA	-	663.0 -> 619.0	-	N.D.	
PFUnDA	-	563.0 -> 519.0	-	N.D.	
ADONA	-	377.0 -> 251.0	-	N.D.	
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
HFPO-DA	-	285.0 -> 169.0	-	N.D.	

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

7.1.15
7



Perfluorinated Compounds by LC/MS/MS

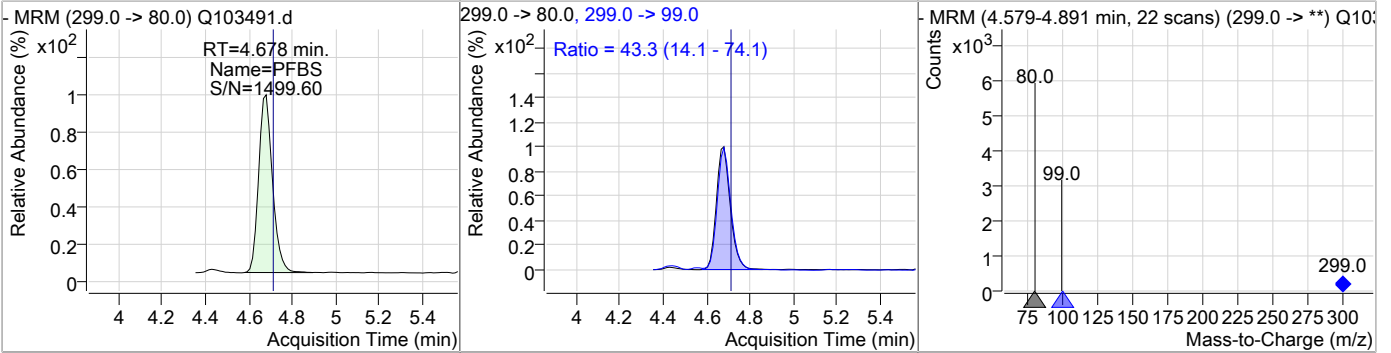


7.1.15
7

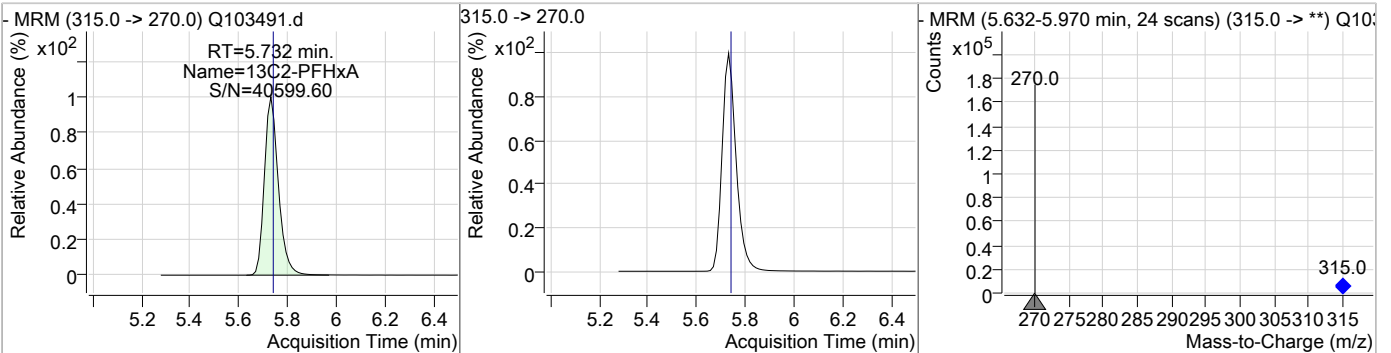


Perfluorinated Compounds by LC/MS/MS

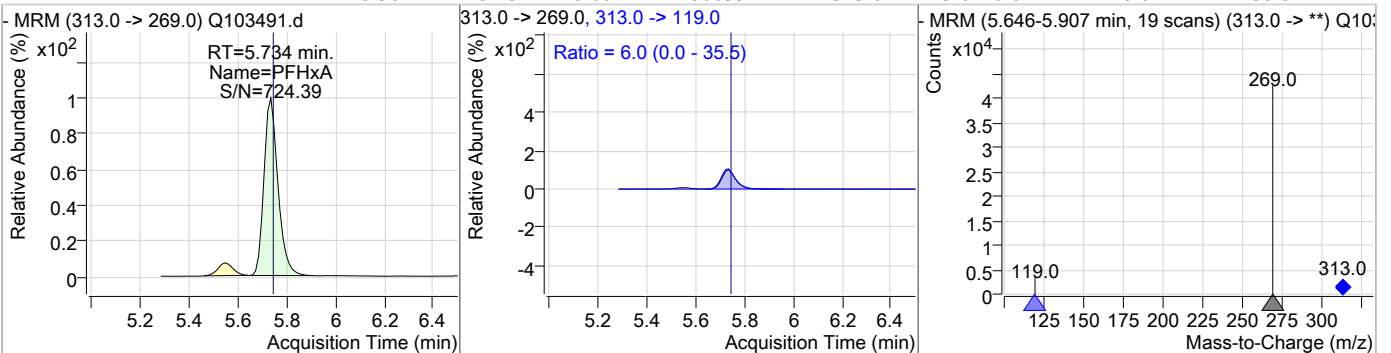
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	3.21	4.68	-0.03	3623	299.0 -> 99.0	43.3	14.1	74.1



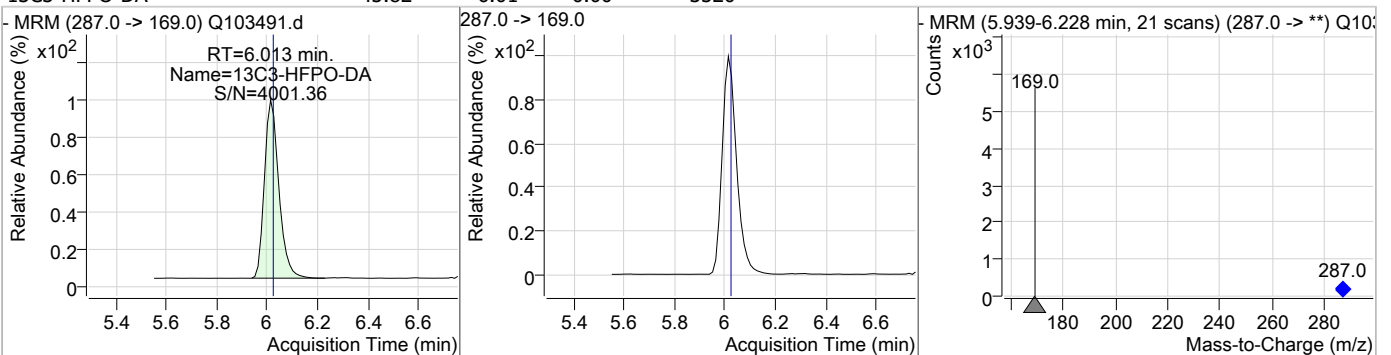
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	22.61	5.73	0.00	130109				



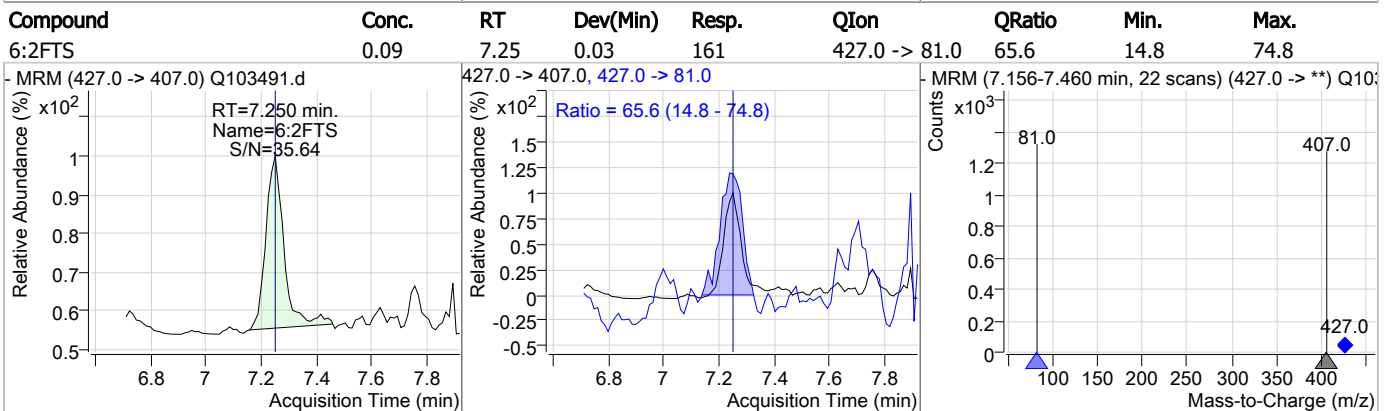
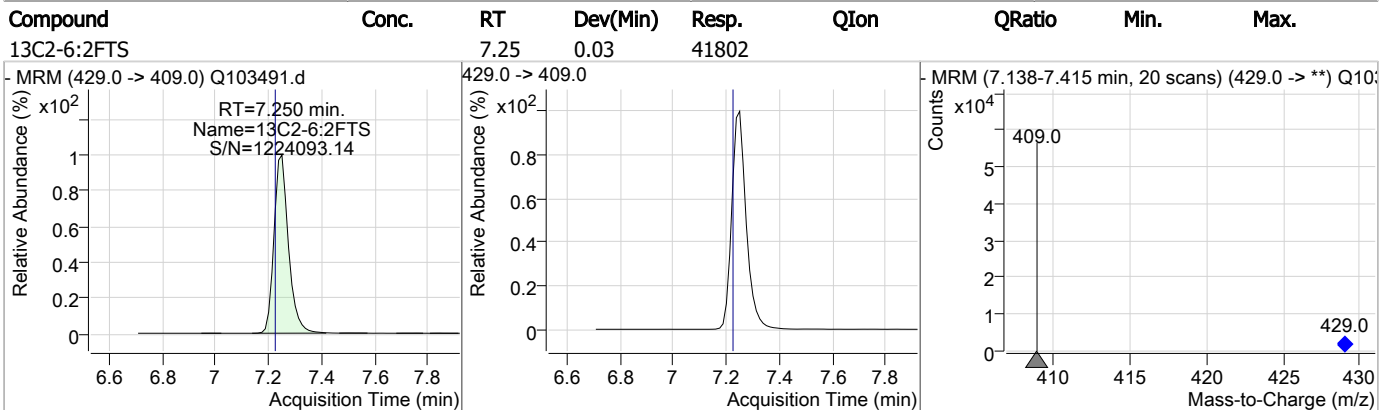
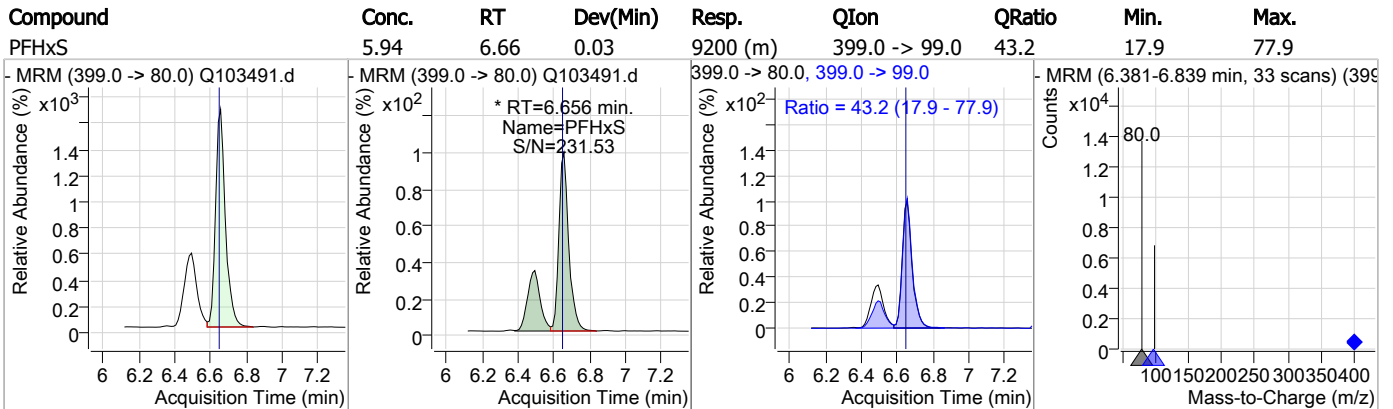
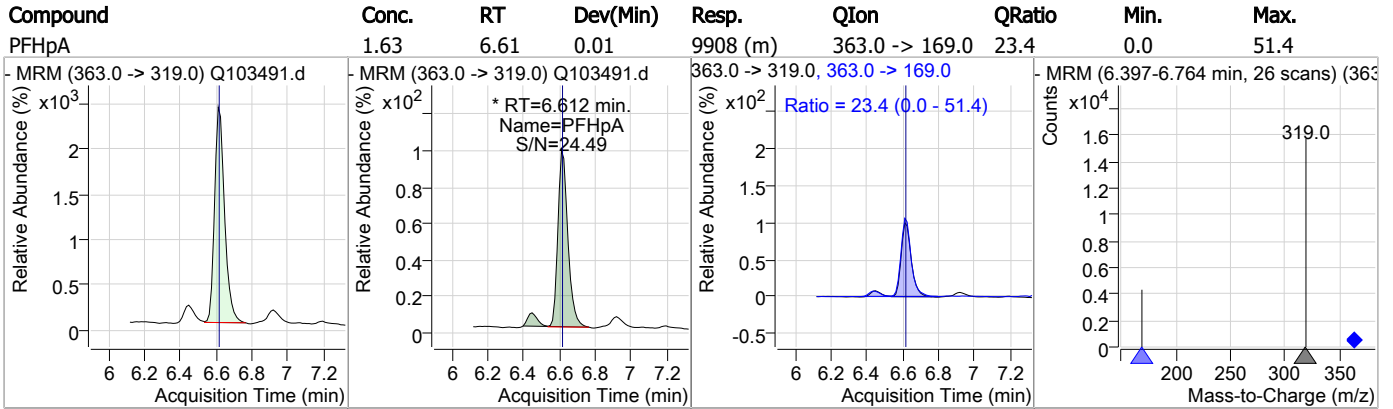
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	5.98	5.73	0.00	30699	313.0 -> 119.0	6.0	0.0	35.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	45.82	6.01	0.00	3520				

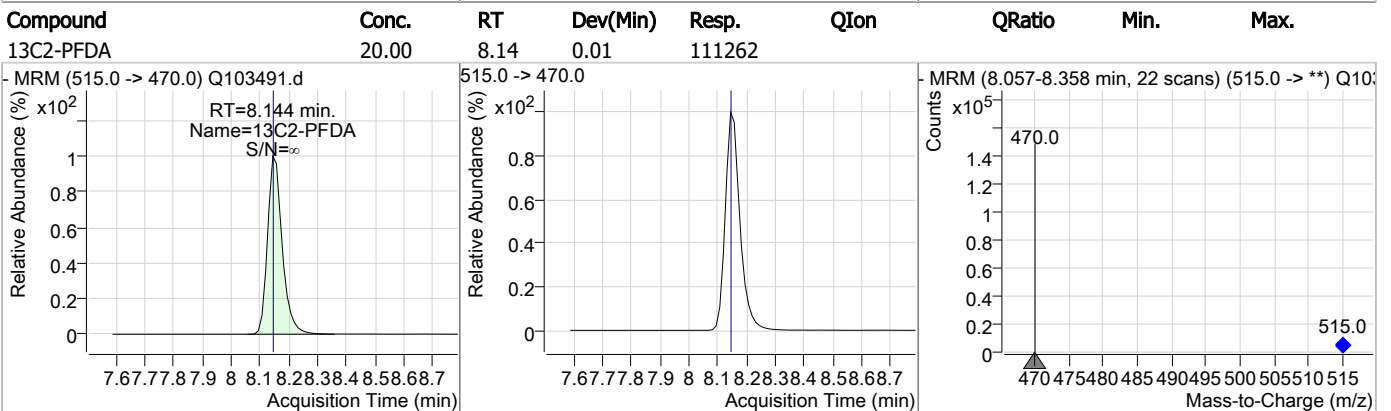
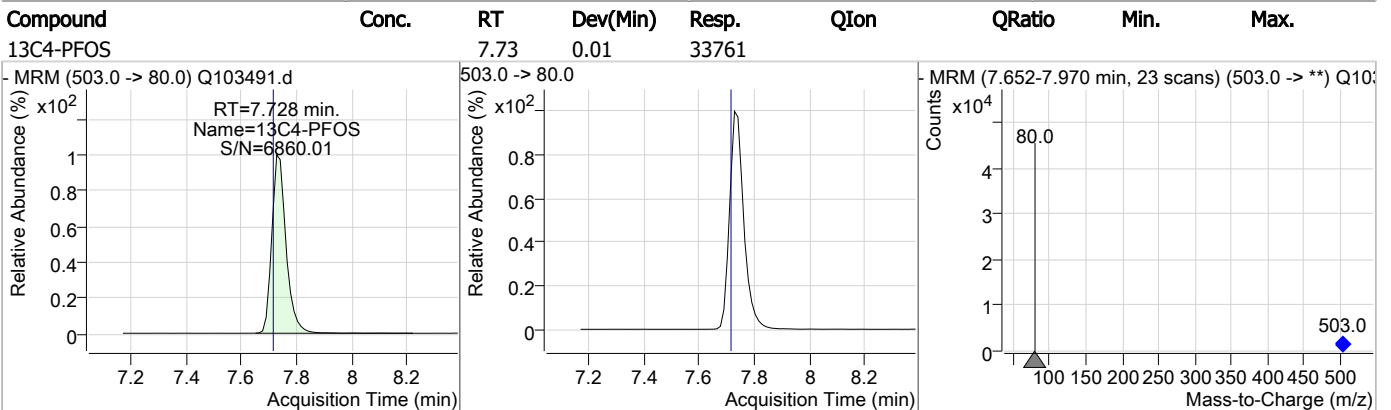
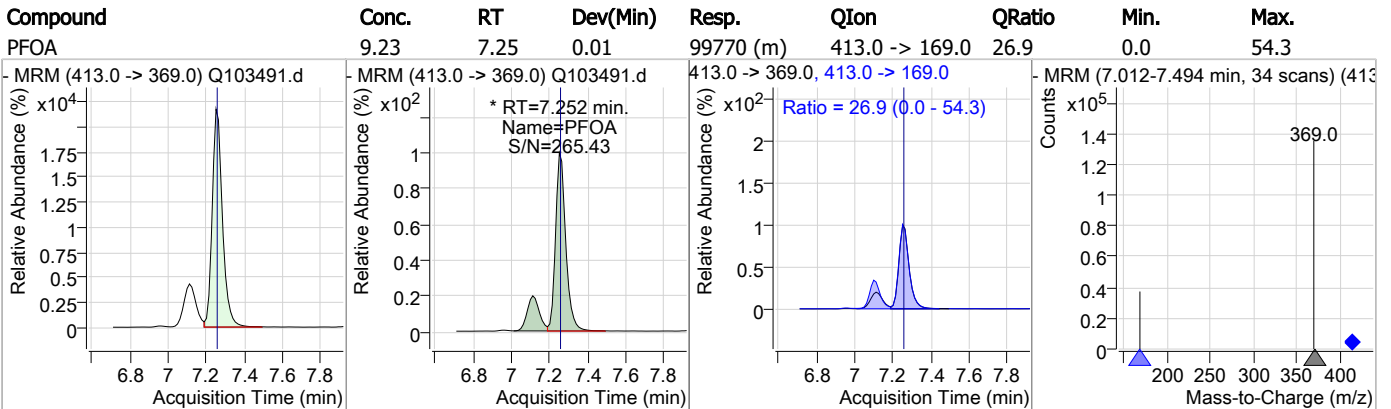
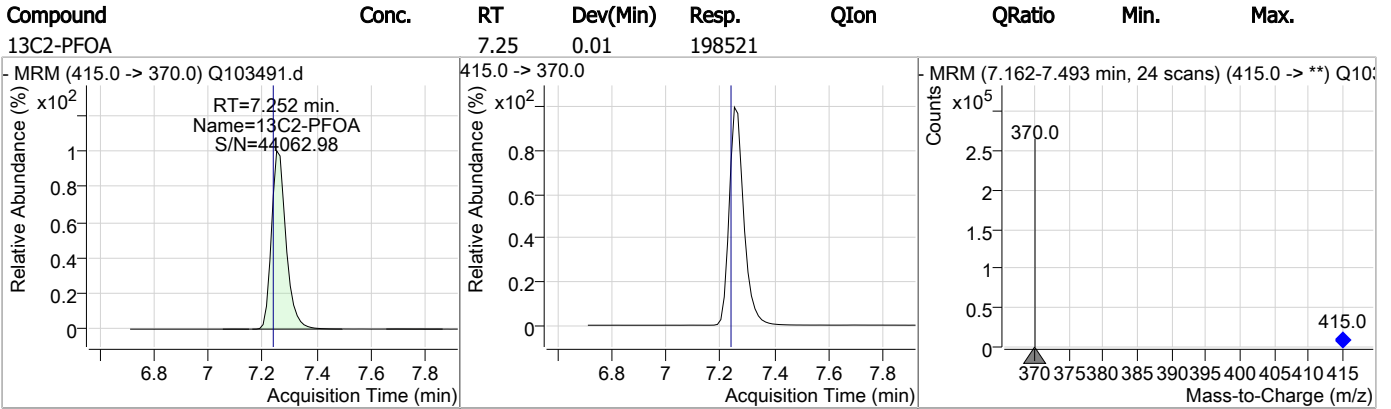


Perfluorinated Compounds by LC/MS/MS



7.1.15
7

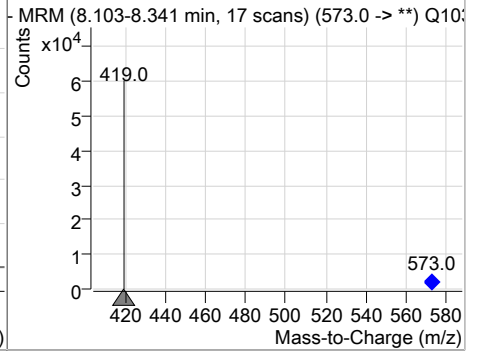
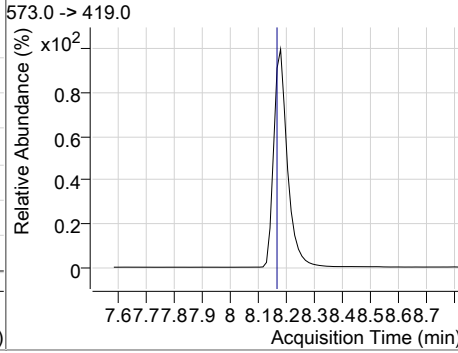
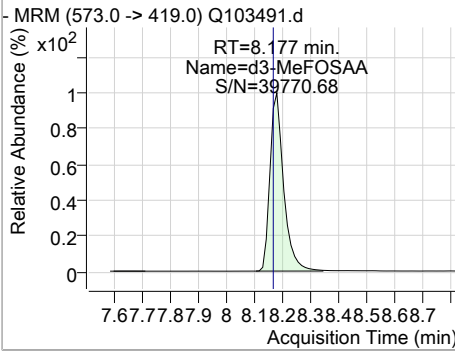
Perfluorinated Compounds by LC/MS/MS



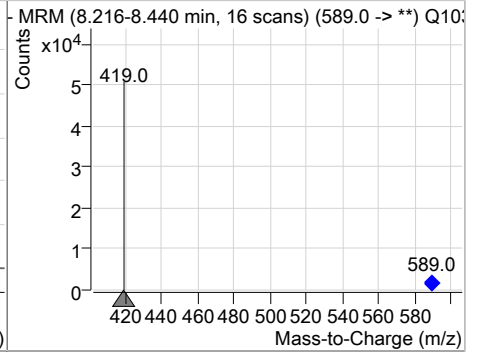
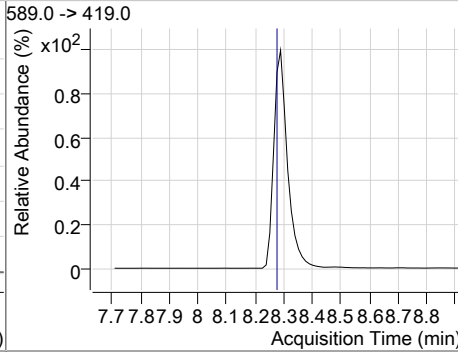
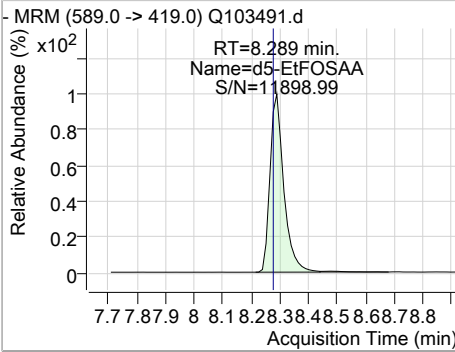
7.1.15
7

Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.18	0.01	44570				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	32.50	8.29	0.03	37622				



7.1.15
7



Manual Integration Approval Summary

Sample Number: FC6520-15 Method: EPA 537.1 REV 1.0
Lab FileID: Q103491.D Analyst approved: 06/19/23 16:34 Anna Ludwig
Injection Time: 06/19/23 00:09 Supervisor approved: 06/19/23 17:33 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluoroheptanoic acid	375-85-9		6.61	Split peak
Perfluorohexanesulfonic acid	355-46-4		6.66	Split peak
Perfluorooctanoic acid	335-67-1		7.25	Split peak

7.1.15.1

7

Perfluorinated Compounds by LC/MS/MS

Data File : Q103492.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/19/2023 12:24:59 AM
 Sample Name : fc6520-16
 Vial : P1-D2
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,270,,,1,1,water

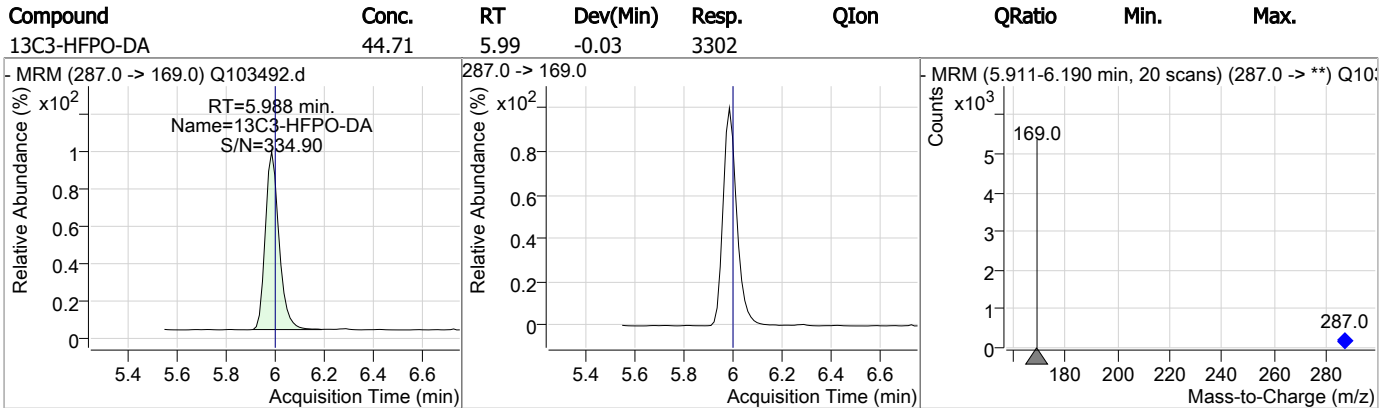
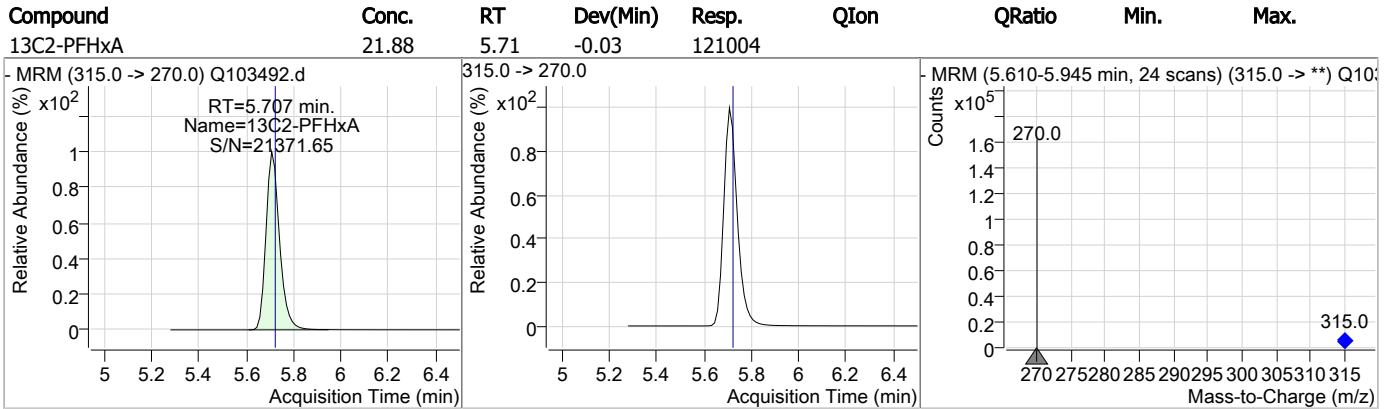
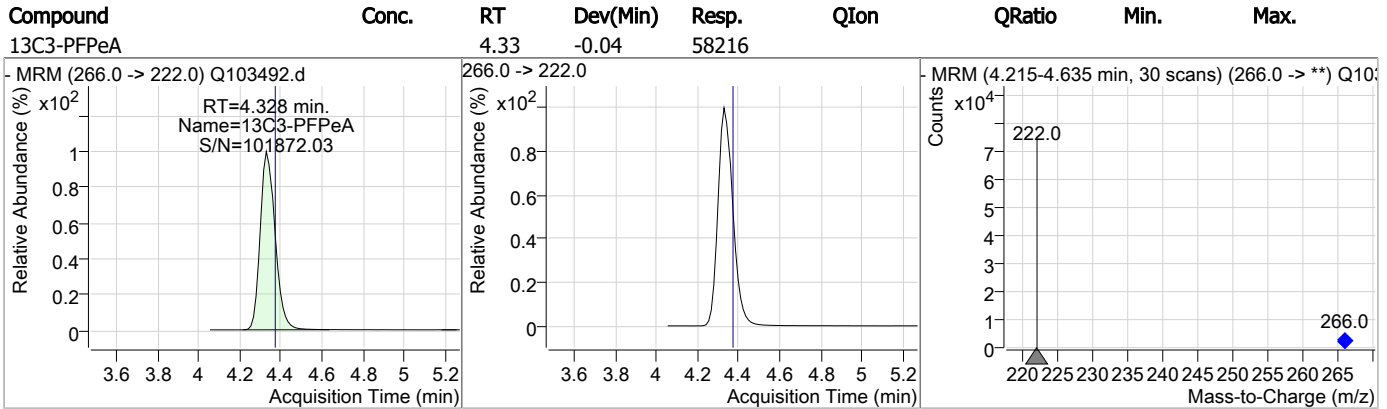
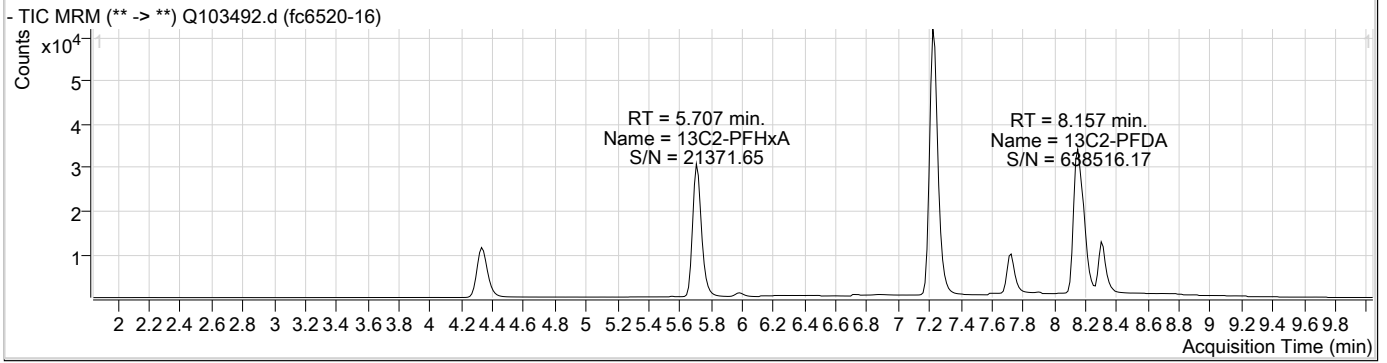
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.225	429.0 -> 409.0	39235	20.00 µg/L	0.000
13C2-PFOA	7.227	415.0 -> 370.0	190906	20.00 µg/L	-0.012
13C3-PFPeA	4.328	266.0 -> 222.0	58216	20.00 µg/L	-0.044
13C4-PFOS	7.728	503.0 -> 80.0	31762	20.00 µg/L	0.013
d3-MeFOSAA	8.190	573.0 -> 419.0	42334	40.00 µg/L	0.025
System Monitoring Compounds					
13C2-PFDA	8.157	515.0 -> 470.0	112177	20.97 µg/L	0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 104.8%	
13C2-PFHxA	5.707	315.0 -> 270.0	121004	21.88 µg/L	-0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 109.4%	
d5-EtFOSAA	8.302	589.0 -> 419.0	38357	34.82 µg/L	0.038
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 87.0%	
13C3-HFPO-DA	5.988	287.0 -> 169.0	3302	44.71 µg/L	-0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 111.8%	
Target Compounds					
6:2FTS	-	427.0 -> 407.0	-	N.D.	
8:2FTS	8.168	527.0 -> 507.0	88	0.06 µg/L	70
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0	-	N.D.	
PFDA	-	513.0 -> 469.0	-	N.D.	
PFDoDA	-	613.0 -> 569.0	-	N.D.	
PFHpA	-	363.0 -> 319.0	-	N.D.	
PFHpS	-	449.0 -> 80.0	-	N.D.	
PFHxA	-	313.0 -> 269.0	-	N.D.	
PFHxS	-	399.0 -> 80.0	-	N.D.	
PFNA	-	463.0 -> 419.0	-	N.D.	
PFOA	-	413.0 -> 369.0	-	N.D.	
PFOS	-	499.0 -> 80.0	-	N.D.	
PFPeA	-	263.0 -> 219.0	-	N.D.	
PFTeDA	-	713.0 -> 669.0	-	N.D.	
PFTrDA	-	663.0 -> 619.0	-	N.D.	
PFUnDA	-	563.0 -> 519.0	-	N.D.	
ADONA	-	377.0 -> 251.0	-	N.D.	
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
HFPO-DA	-	285.0 -> 169.0	-	N.D.	

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

7.1.16
7



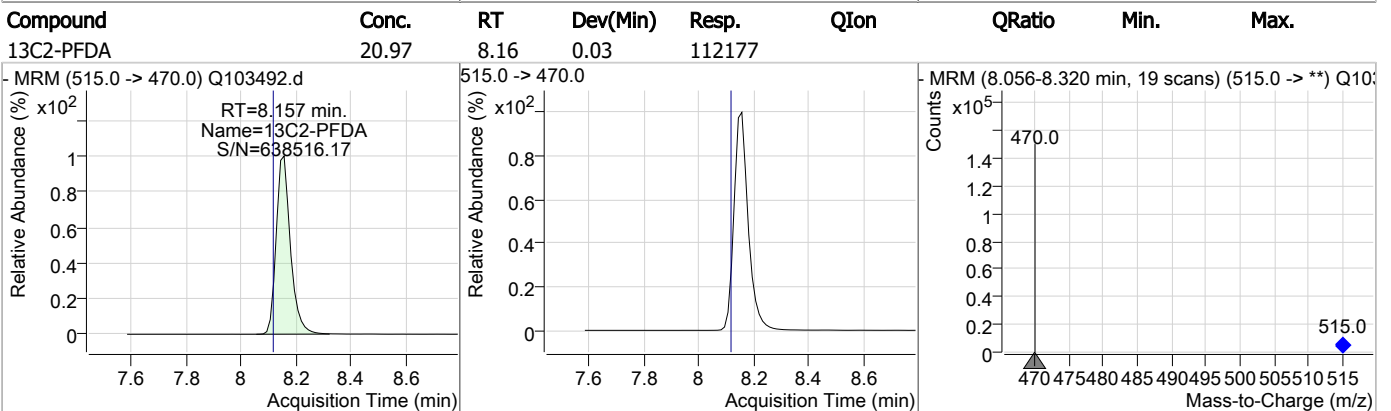
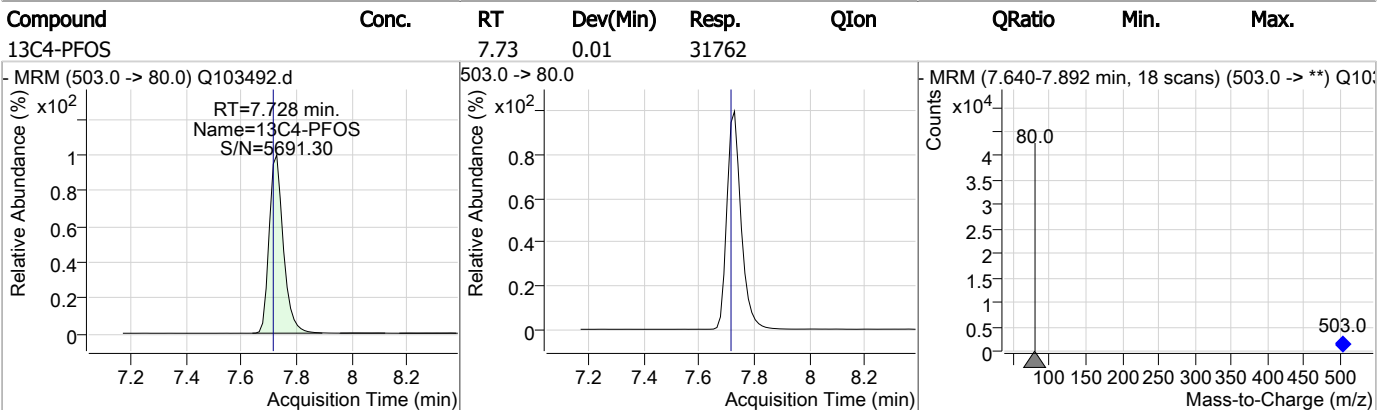
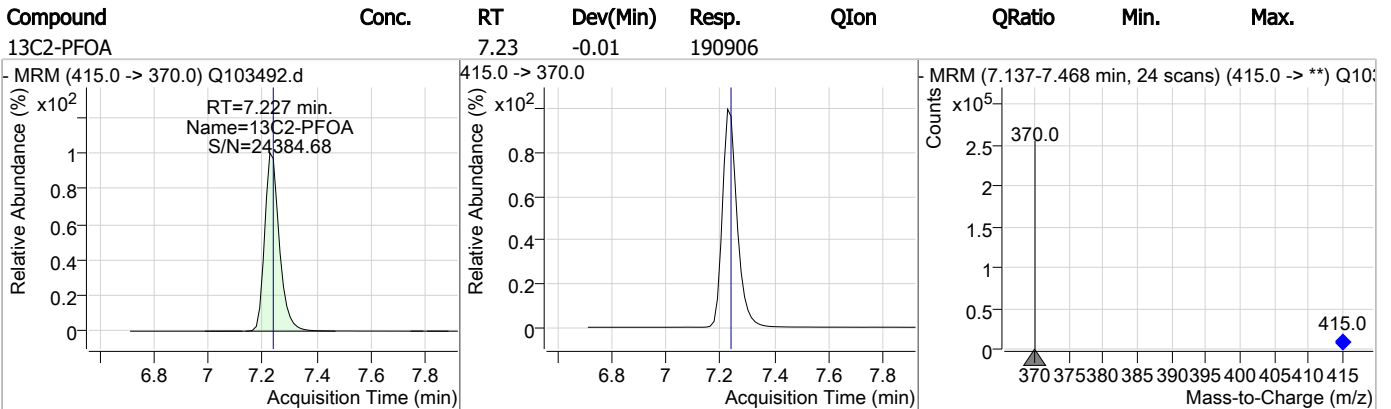
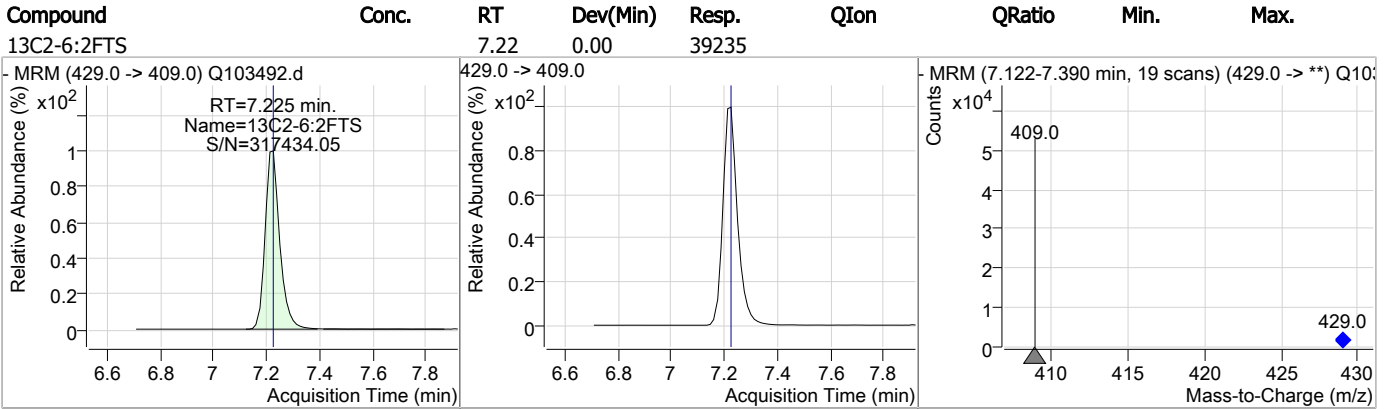
Perfluorinated Compounds by LC/MS/MS



7.1.16

7

Perfluorinated Compounds by LC/MS/MS

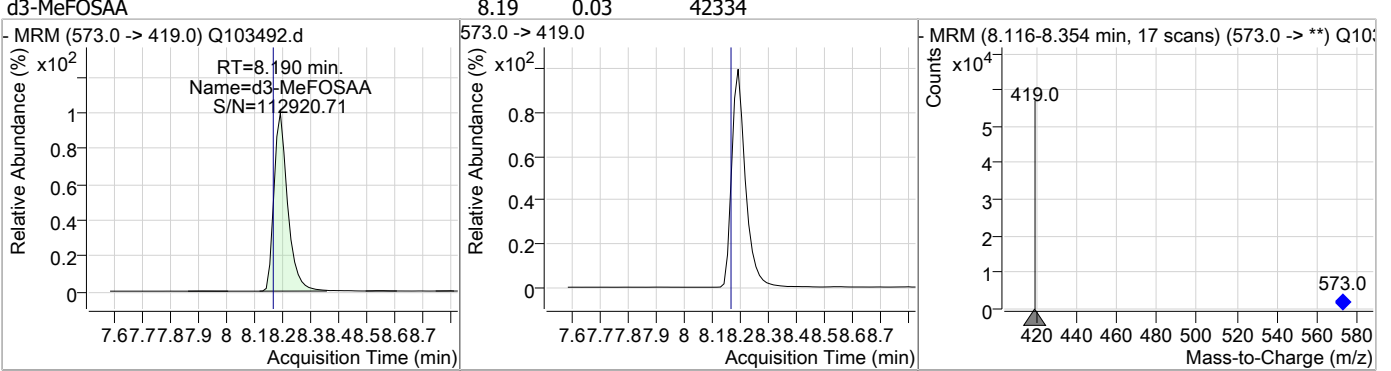


7.1.16
7

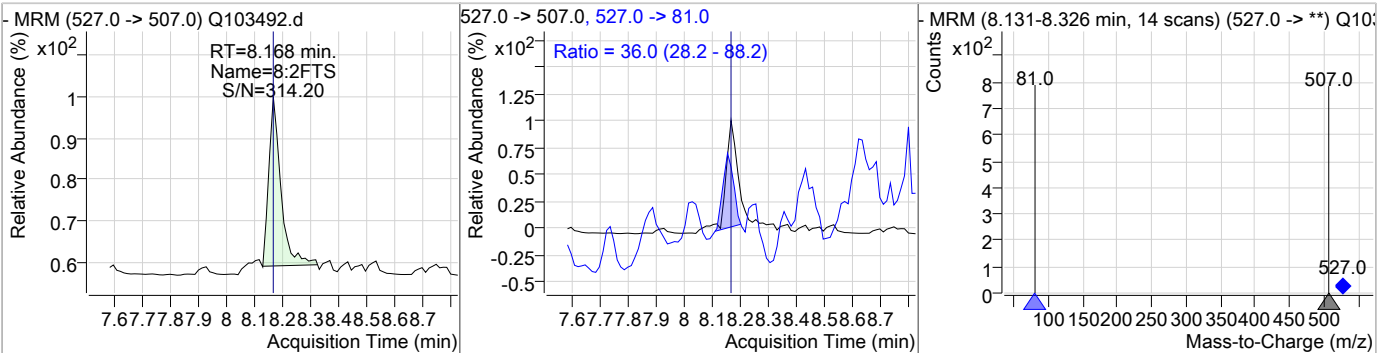


Perfluorinated Compounds by LC/MS/MS

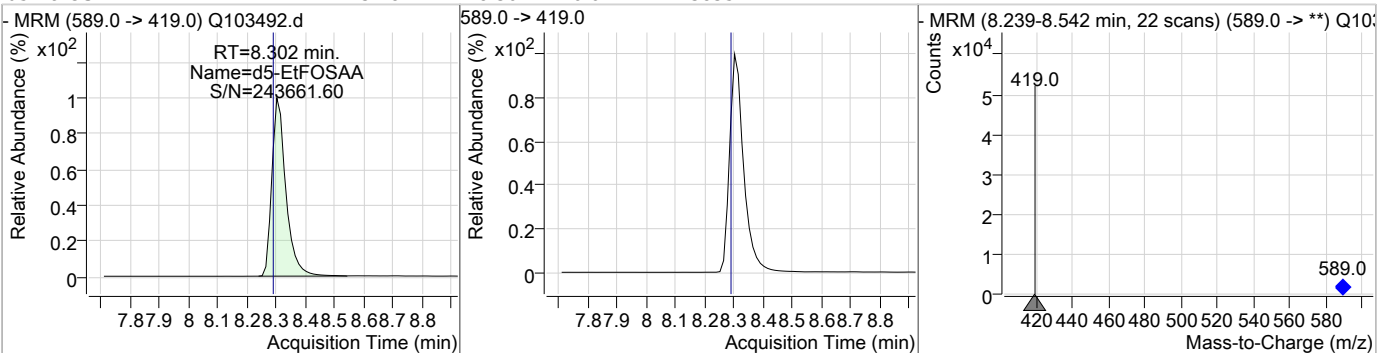
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
----------	-------	----	----------	-------	------	--------	------	------



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
----------	-------	----	----------	-------	------	--------	------	------



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
----------	-------	----	----------	-------	------	--------	------	------



Perfluorinated Compounds by LC/MS/MS

Data File : Q103498.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/19/2023 1:59:41 AM
 Sample Name : fc6520-17
 Vial : P1-D5
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,280,,,1,1,water

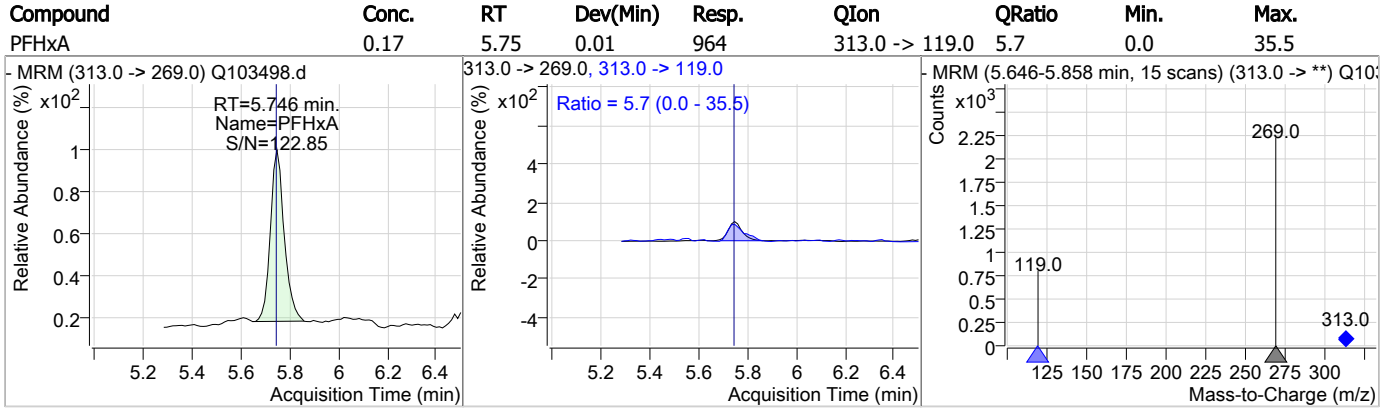
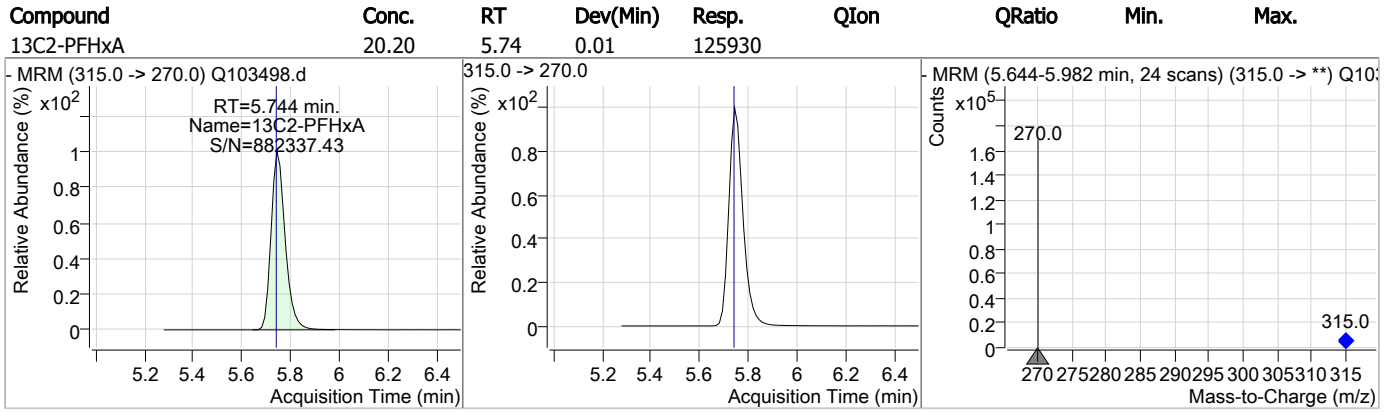
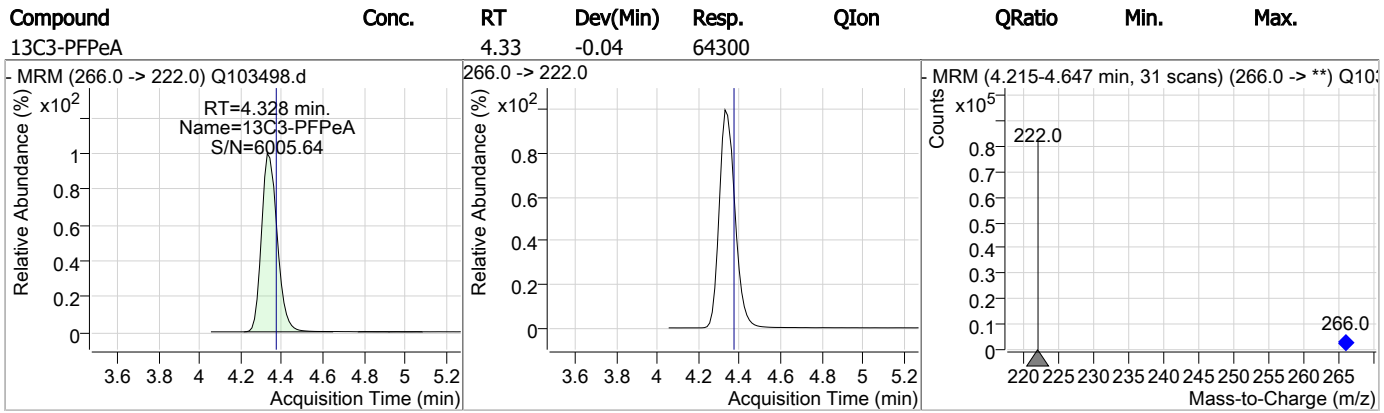
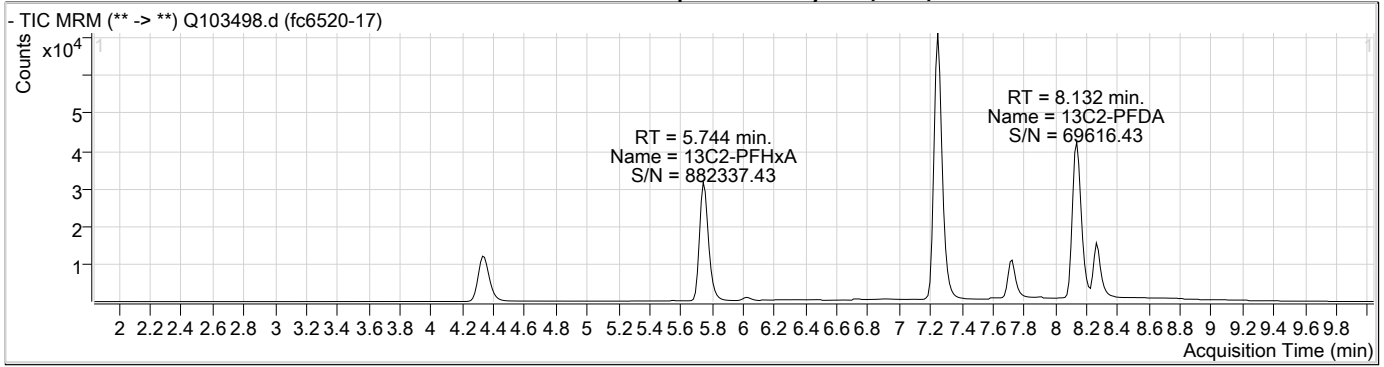
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.237	429.0 -> 409.0	44849	20.00 µg/L	0.013
13C2-PFOA	7.252	415.0 -> 370.0	215541	20.00 µg/L	0.013
13C3-PFPeA	4.328	266.0 -> 222.0	64300	20.00 µg/L	-0.044
13C4-PFOS	7.728	503.0 -> 80.0	34948	20.00 µg/L	0.013
d3-MeFOSAA	8.152	573.0 -> 419.0	48842	40.00 µg/L	-0.012
System Monitoring Compounds					
13C2-PFDA	8.132	515.0 -> 470.0	119268	19.75 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 98.7%	
13C2-PFHxA	5.744	315.0 -> 270.0	125930	20.20 µg/L	0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 101.0%	
d5-EtFOSAA	8.264	589.0 -> 419.0	46416	36.47 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 91.2%	
13C3-HFPO-DA	6.026	287.0 -> 169.0	3436	41.24 µg/L	0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 103.1%	
Target Compounds					
6:2FTS	-	427.0 -> 407.0	-	N.D.	
8:2FTS	-	527.0 -> 507.0	-	N.D.	
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0	-	N.D.	
PFDA	-	513.0 -> 469.0	-	N.D.	
PFDoDA	-	613.0 -> 569.0	-	N.D.	
PFHpA	-	363.0 -> 319.0	-	N.D.	
PFHpS	-	449.0 -> 80.0	-	N.D.	
PFHxA	5.746	313.0 -> 269.0	964	0.17 µg/L	99
PFHxS	-	399.0 -> 80.0	-	N.D.	
PFNA	-	463.0 -> 419.0	-	N.D.	
PFOA	-	413.0 -> 369.0	-	N.D.	
PFOS	-	499.0 -> 80.0	-	N.D.	
PFPeA	-	263.0 -> 219.0	-	N.D.	
PFTeDA	-	713.0 -> 669.0	-	N.D.	
PFTTrDA	-	663.0 -> 619.0	-	N.D.	
PFUnDA	-	563.0 -> 519.0	-	N.D.	
ADONA	-	377.0 -> 251.0	-	N.D.	
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
HFPO-DA	-	285.0 -> 169.0	-	N.D.	

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

7.1.17
7



Perfluorinated Compounds by LC/MS/MS



7.1.17

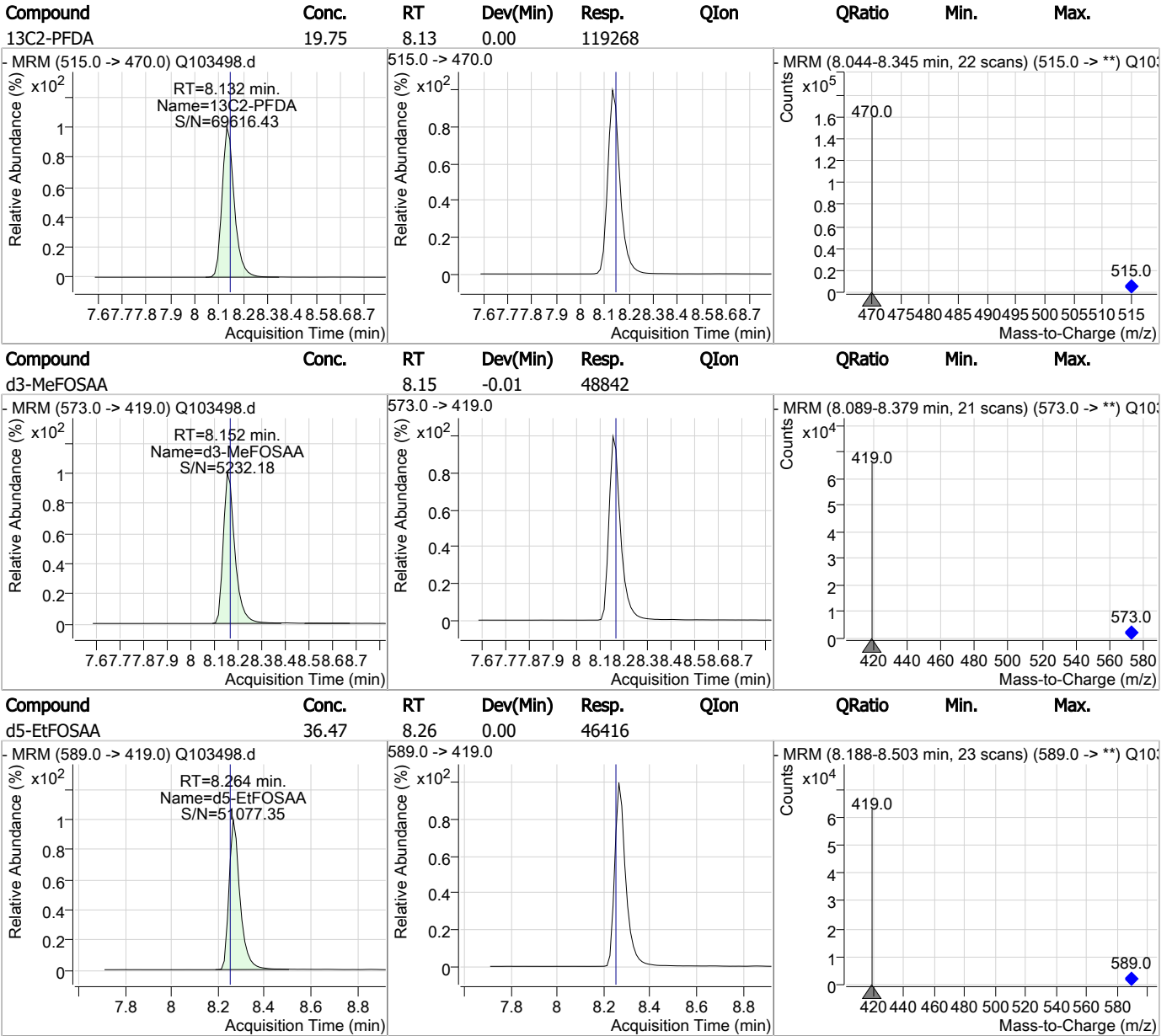
Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	41.24	6.03	0.01	3436				
-MRM (287.0 -> 169.0) Q103498.d RT=6.026 min. Name=13C3-HFPO-DA S/N=1370.80					287.0 -> 169.0 			
13C2-6:2FTS		7.24	0.01	44849				
-MRM (429.0 -> 409.0) Q103498.d RT=7.237 min. Name=13C2-6:2FTS S/N=∞					429.0 -> 409.0 			
13C2-PFOA		7.25	0.01	215541				
-MRM (415.0 -> 370.0) Q103498.d RT=7.252 min. Name=13C2-PFOA S/N=35051.00					415.0 -> 370.0 			
13C4-PFOS		7.73	0.01	34948				
-MRM (503.0 -> 80.0) Q103498.d RT=7.728 min. Name=13C4-PFOS S/N=12284.80					503.0 -> 80.0 			

7.1.17



Perfluorinated Compounds by LC/MS/MS



7.1.17



Perfluorinated Compounds by LC/MS/MS

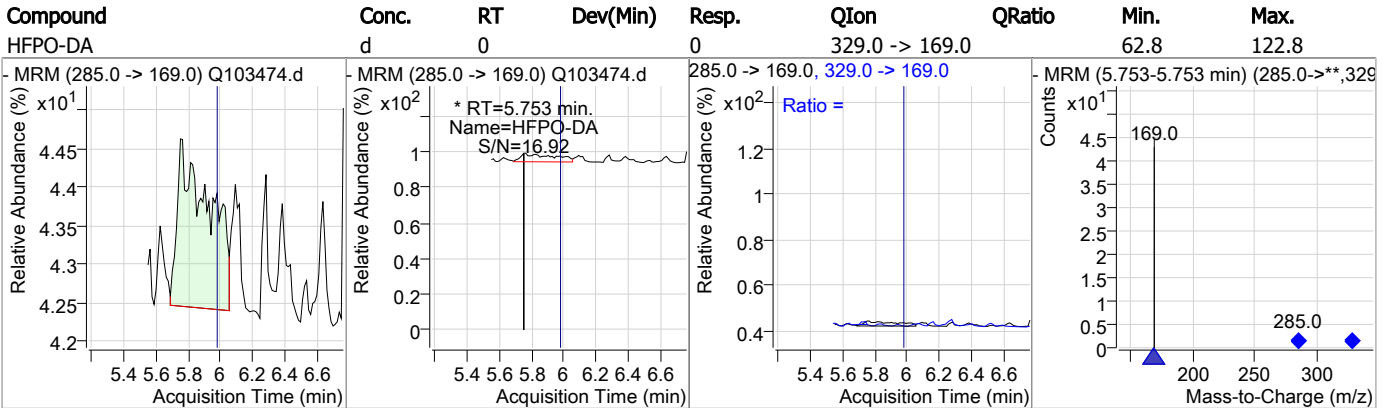
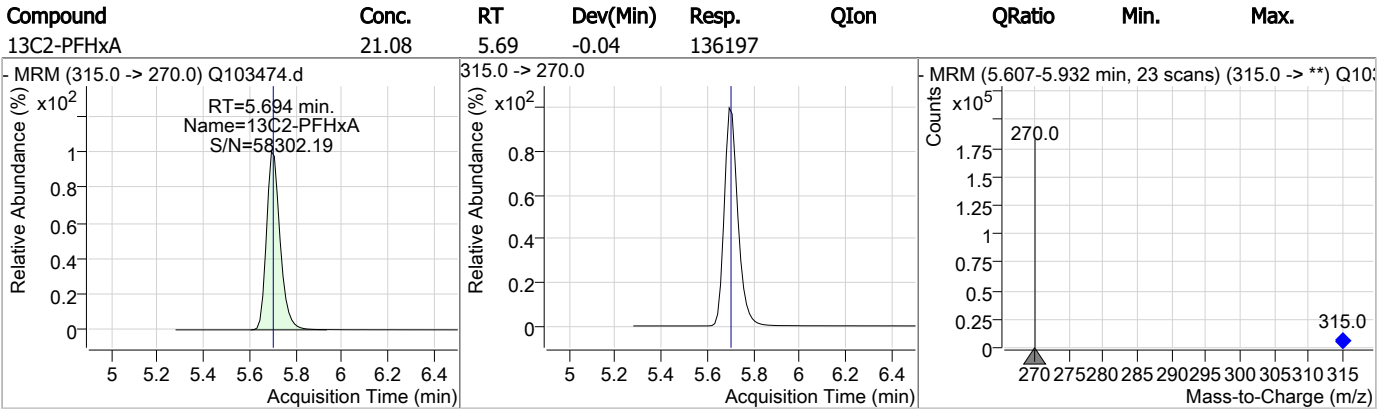
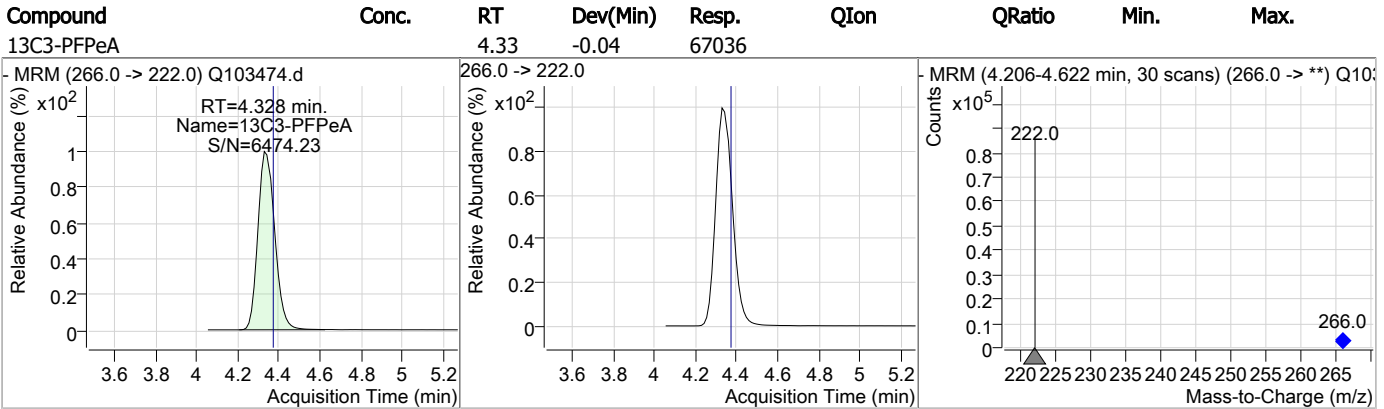
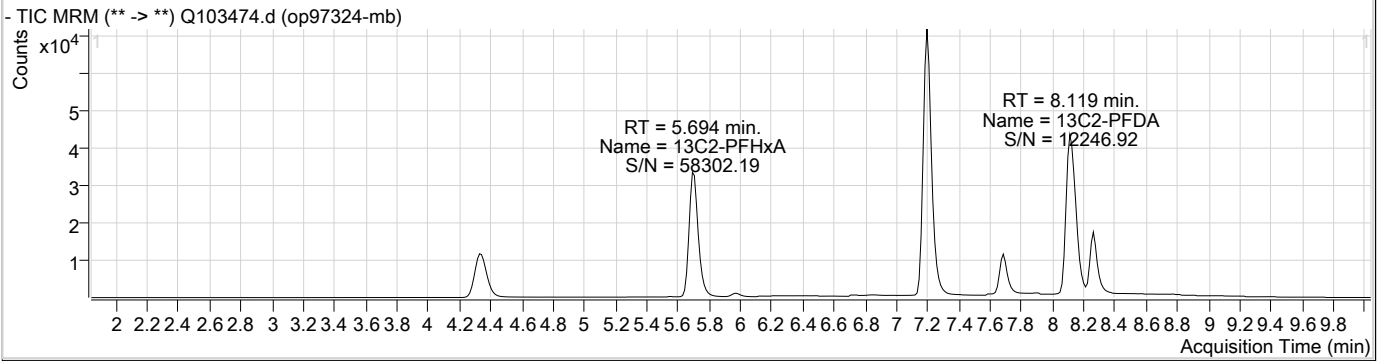
Data File : Q103474.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 7:40:51 PM
 Sample Name : op97324-mb
 Vial : P1-B4
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
13C2-6:2FTS	7.187	429.0 -> 409.0	46236	20.00	µg/L	-0.038
13C2-PFOA	7.202	415.0 -> 370.0	223169	20.00	µg/L	-0.038
13C3-PFPeA	4.328	266.0 -> 222.0	67036	20.00	µg/L	-0.044
13C4-PFOS	7.689	503.0 -> 80.0	36799	20.00	µg/L	-0.026
d3-MeFOSAA	8.139	573.0 -> 419.0	50272	40.00	µg/L	-0.025
System Monitoring Compounds						
13C2-PFDA	8.119	515.0 -> 470.0	137443	21.98	µg/L	-0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 109.9%		
13C2-PFHxA	5.694	315.0 -> 270.0	136197	21.08	µg/L	-0.038
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 105.4%		
d5-EtFOSAA	8.264	589.0 -> 419.0	53192	40.47	µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 101.2%		
13C3-HFPO-DA	5.976	287.0 -> 169.0	3635	42.13	µg/L	-0.038
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 105.3%		
Target Compounds						
6:2FTS	7.188	427.0 -> 407.0	0	0.00	µg/L	m
8:2FTS	-	527.0 -> 507.0	-	N.D.		1
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
MeFOSAA	8.152	570.0 -> 419.0	116	0.08	µg/L	95
PFBA	-	213.0 -> 169.0	-	N.D.		
PFBS	-	299.0 -> 80.0	-	N.D.		
PFDA	-	513.0 -> 469.0	-	N.D.		
PFDoDA	-	613.0 -> 569.0	-	N.D.		
PFHpA	-	363.0 -> 319.0	-	N.D.		
PFHpS	-	449.0 -> 80.0	-	N.D.		
PFHxA	-	313.0 -> 269.0	-	N.D.		
PFHxS	-	399.0 -> 80.0	-	N.D.		
PFNA	-	463.0 -> 419.0	-	N.D.		
PFOA	-	413.0 -> 369.0	-	N.D.		
PFOS	-	499.0 -> 80.0	-	N.D.		
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFTeDA	-	713.0 -> 669.0	-	N.D.		
PFTTrDA	-	663.0 -> 619.0	-	N.D.		
PFUnDA	-	563.0 -> 519.0	-	N.D.		
ADONA	-	377.0 -> 251.0	-	N.D.		
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.		
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
HFPO-DA	5.753	285.0 -> 169.0	0	0.00	µg/L	m

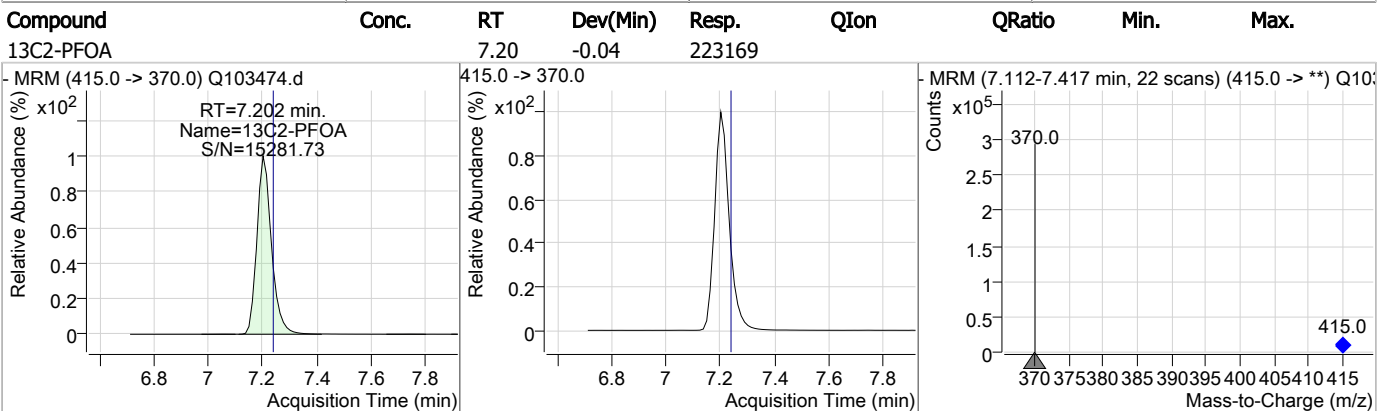
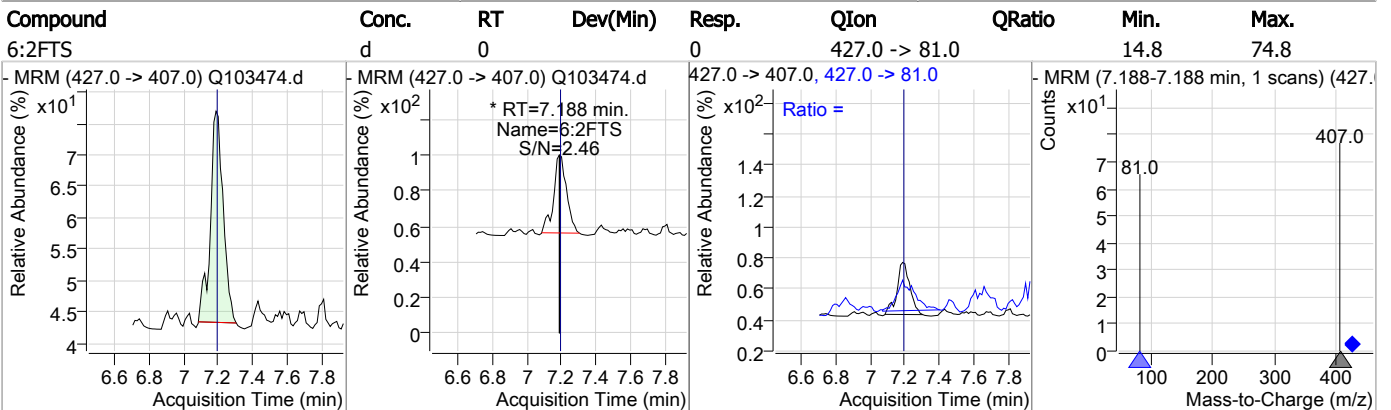
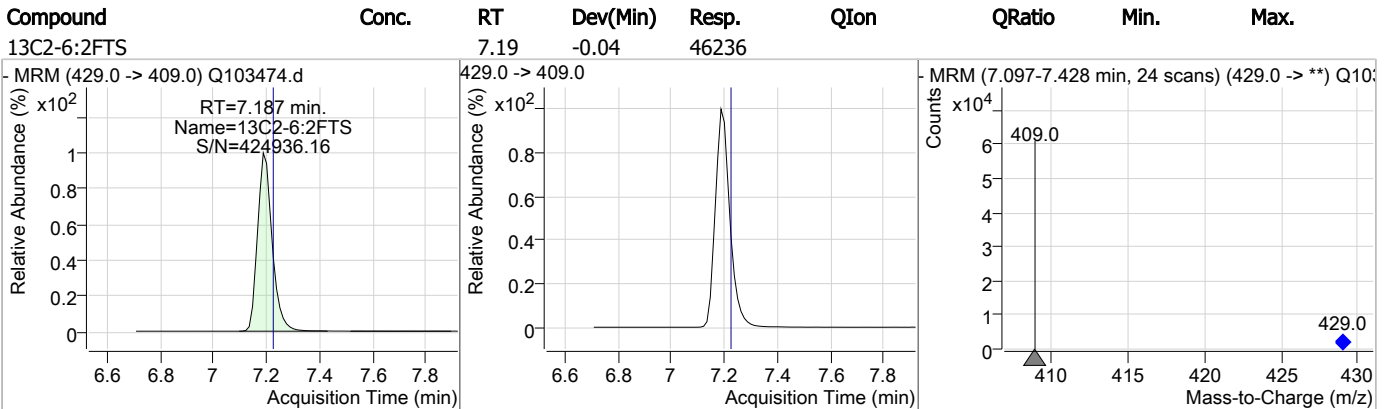
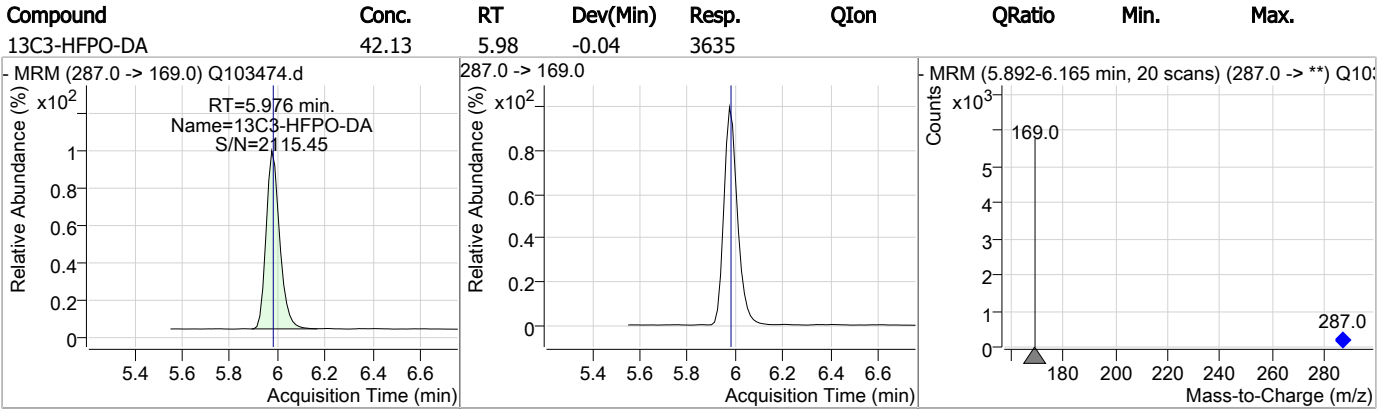
= Qualifier out of range, m = manually integrated, + = Area summed

7.2.1
7

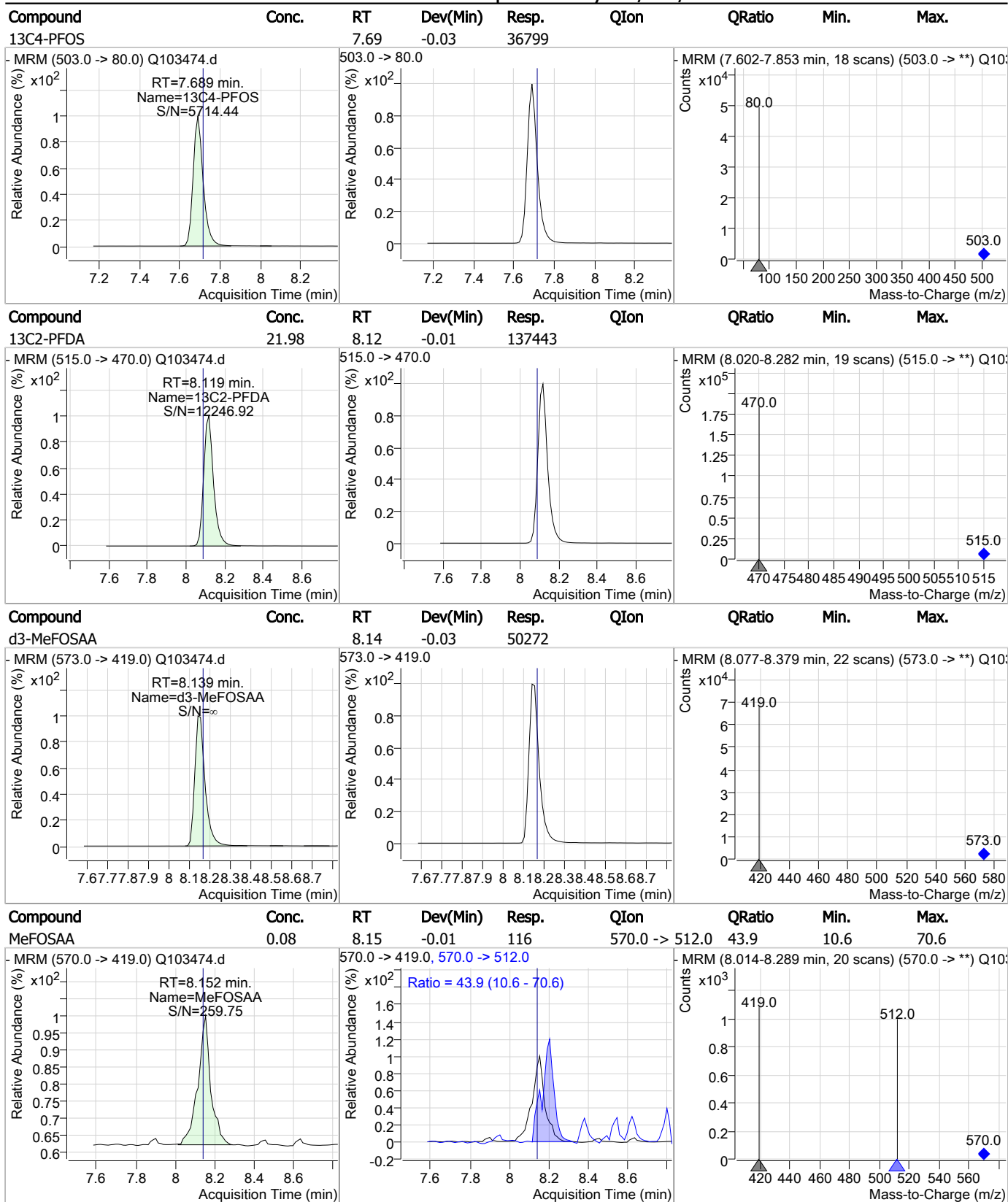
Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS

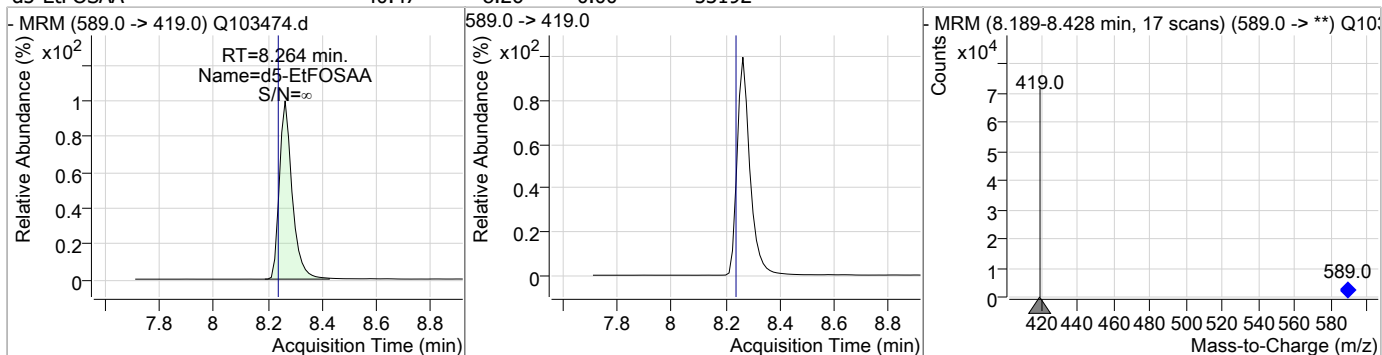


7.2.1

7

Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	40.47	8.26	0.00	53192				



7.2.1
7

Perfluorinated Compounds by LC/MS/MS

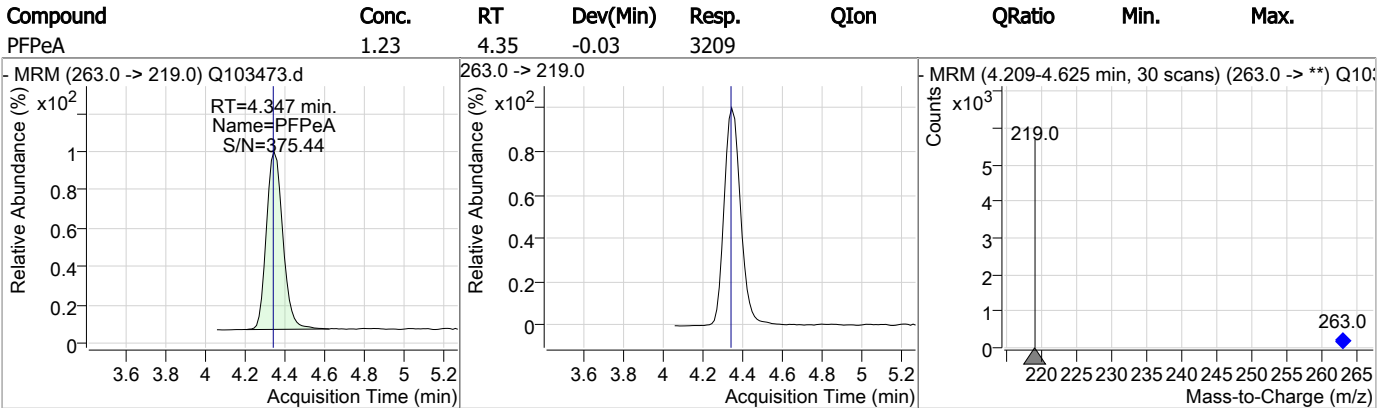
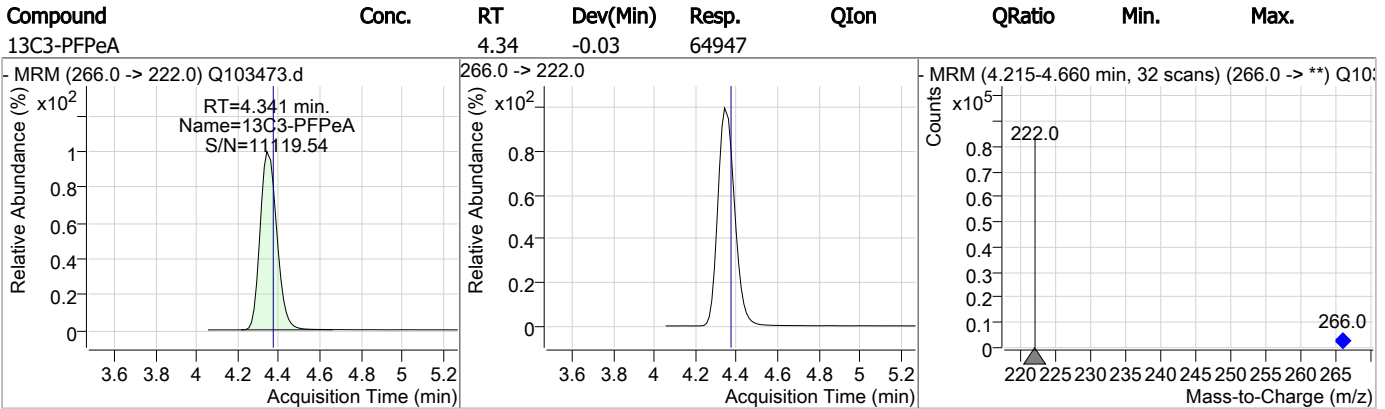
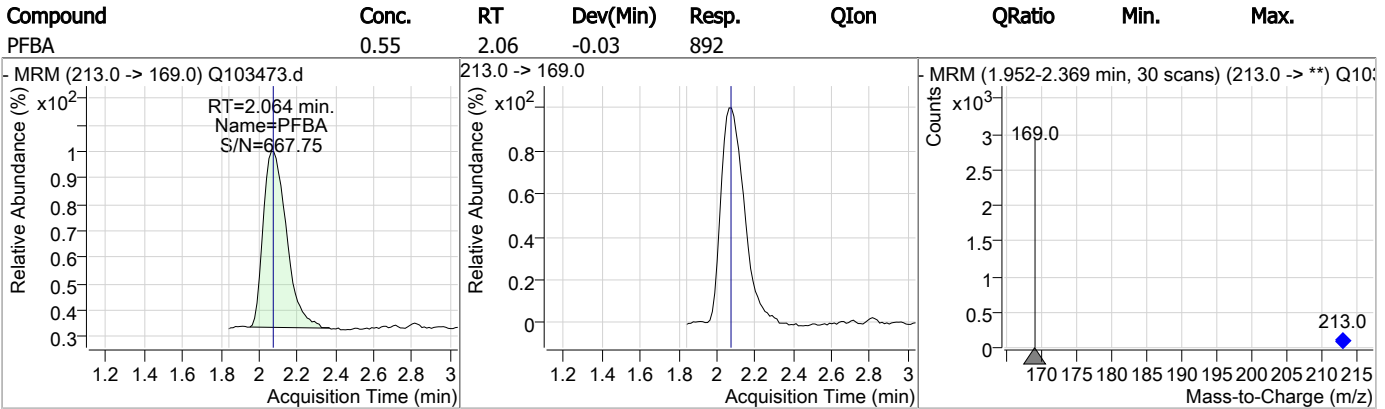
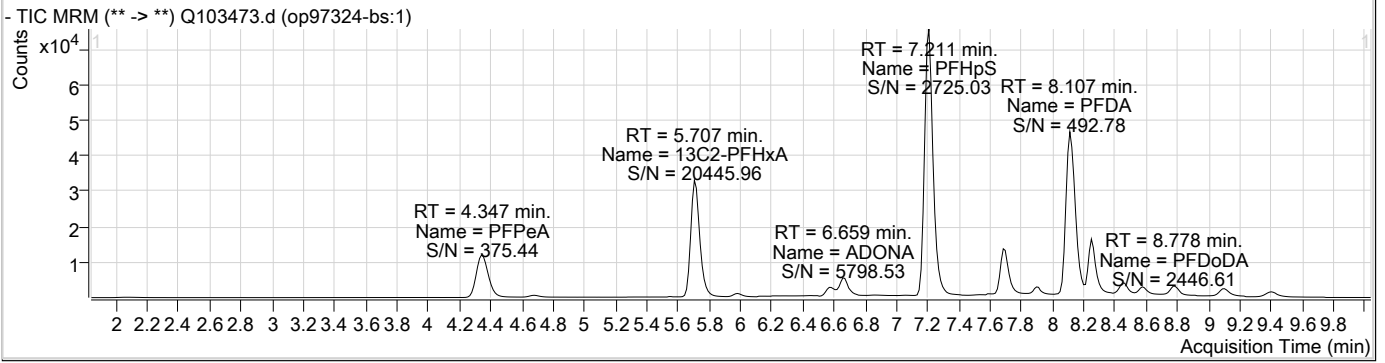
Data File : Q103473.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 7:25:05 PM
 Sample Name : op97324-bs:1
 Vial : P1-B3
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.200	429.0 -> 409.0	44635	20.00 µg/L	-0.025
13C2-PFOA	7.214	415.0 -> 370.0	217227	20.00 µg/L	-0.025
13C3-PFPeA	4.341	266.0 -> 222.0	64947	20.00 µg/L	-0.031
13C4-PFOS	7.689	503.0 -> 80.0	36483	20.00 µg/L	-0.026
d3-MeFOSAA	8.139	573.0 -> 419.0	49139	40.00 µg/L	-0.025
System Monitoring Compounds					
13C2-PFDA	8.119	515.0 -> 470.0	125993	20.70 µg/L	-0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 103.5%	
13C2-PFHxA	5.707	315.0 -> 270.0	124786	19.86 µg/L	-0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 99.3%	
d5-EtFOSAA	8.252	589.0 -> 419.0	48319	37.69 µg/L	-0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 94.2%	
13C3-HFPO-DA	5.988	287.0 -> 169.0	3389	40.37 µg/L	-0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 100.9%	
Target Compounds					
6:2FTS	7.200	427.0 -> 407.0	3203	1.61 µg/L	QValue 92
8:2FTS	8.143	527.0 -> 507.0	2137	1.28 µg/L	97
EtFOSAA	8.265	584.0 -> 419.0	1346	1.08 µg/L	94
MeFOSAA	8.140	570.0 -> 419.0	1552	1.15 µg/L	97
PFBA	2.064	213.0 -> 169.0	892	0.55 µg/L	100
PFBS	4.678	299.0 -> 80.0	1616	1.33 µg/L	99
PFDA	8.107	513.0 -> 469.0	10609	1.27 µg/L	99
PFDoDA	8.778	613.0 -> 569.0	8690	0.94 µg/L	98
PFHpA	6.574	363.0 -> 319.0	7820	1.18 µg/L	99
PFHpS	7.211	449.0 -> 80.0	1917	1.18 µg/L	99
PFHxA	5.709	313.0 -> 269.0	6876	1.23 µg/L	98
PFHxS	6.606	399.0 -> 80.0	2159	1.29 µg/L	m 97
PFNA	7.704	463.0 -> 419.0	6154	1.17 µg/L	96
PFOA	7.215	413.0 -> 369.0	14438	1.22 µg/L	98
PFOS	7.690	499.0 -> 80.0	2660	1.27 µg/L	m 82
PFPeA	4.347	263.0 -> 219.0	3209	1.23 µg/L	100
PFTeDA	9.402	713.0 -> 669.0	7445	0.79 µg/L	99
PFTrDA	9.104	663.0 -> 619.0	9327	0.85 µg/L	98
PFUnDA	8.469	563.0 -> 519.0	8191	1.12 µg/L	96
ADONA	6.659	377.0 -> 251.0	14009	1.18 µg/L	100
9CI-PF3ONS	7.901	531.0 -> 351.0	4632	1.05 µg/L	89
11CI-PF3OUdS	8.577	631.0 -> 451.0	5560	0.89 µg/L	95
HFPO-DA	5.990	285.0 -> 169.0	129	1.37 µg/L	97

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

7.3.1
7

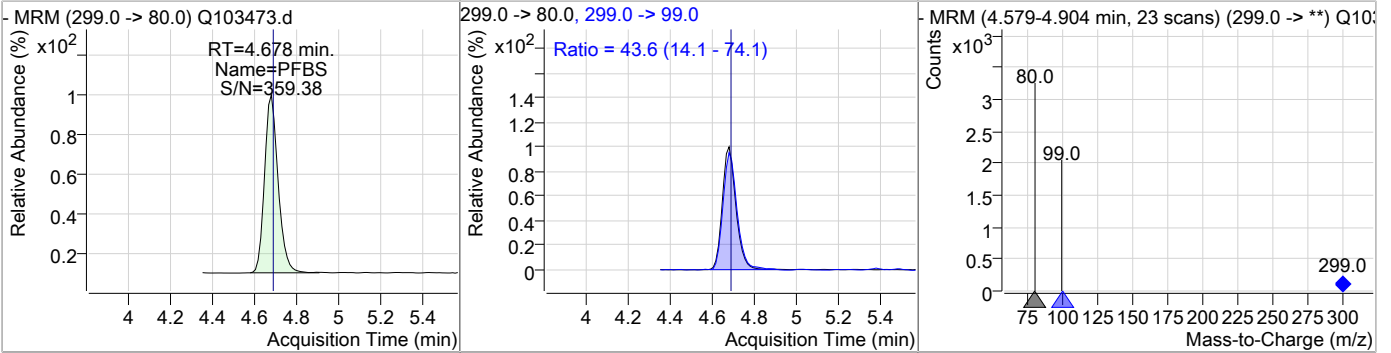
Perfluorinated Compounds by LC/MS/MS



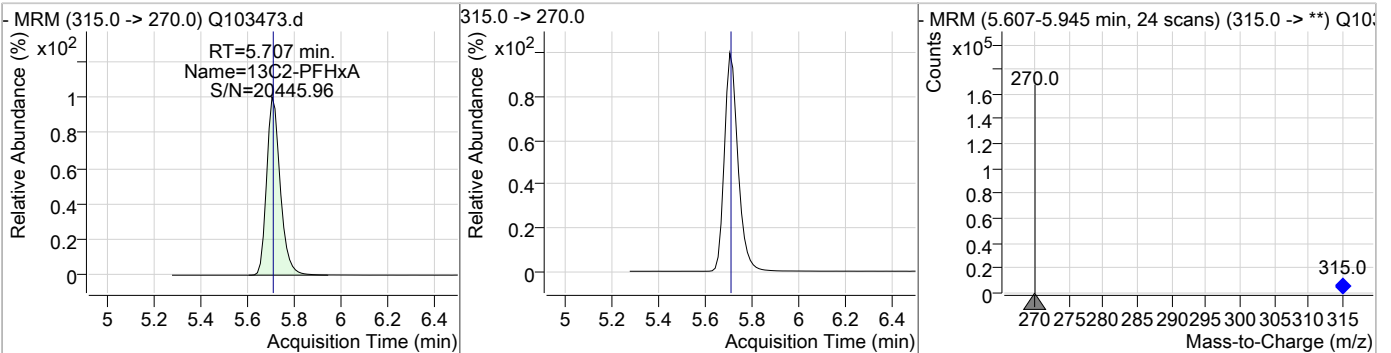
7.3.1
7

Perfluorinated Compounds by LC/MS/MS

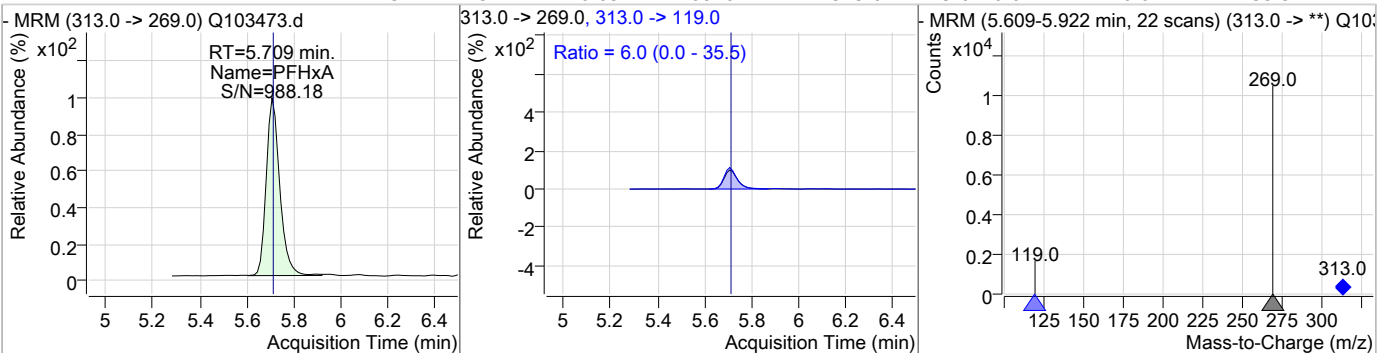
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	1.33	4.68	-0.03	1616	299.0 -> 99.0	43.6	14.1	74.1



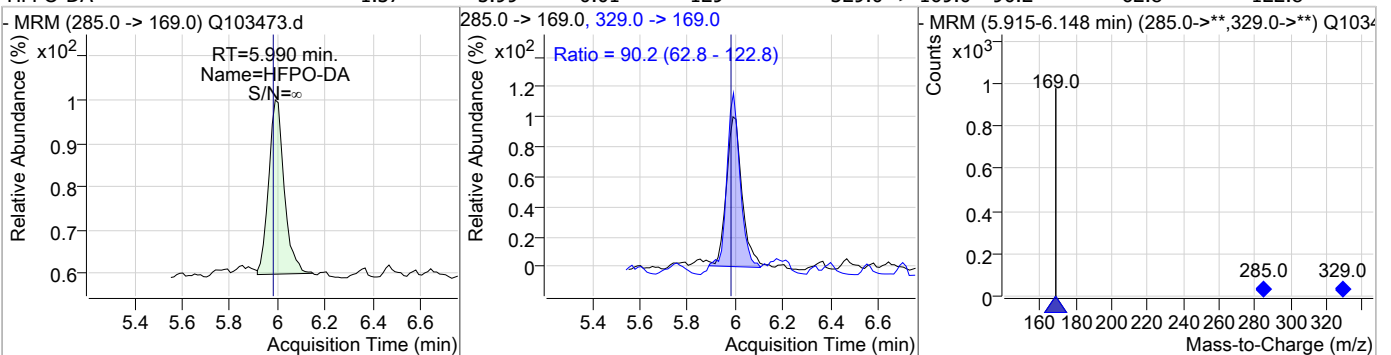
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	19.86	5.71	-0.03	124786				



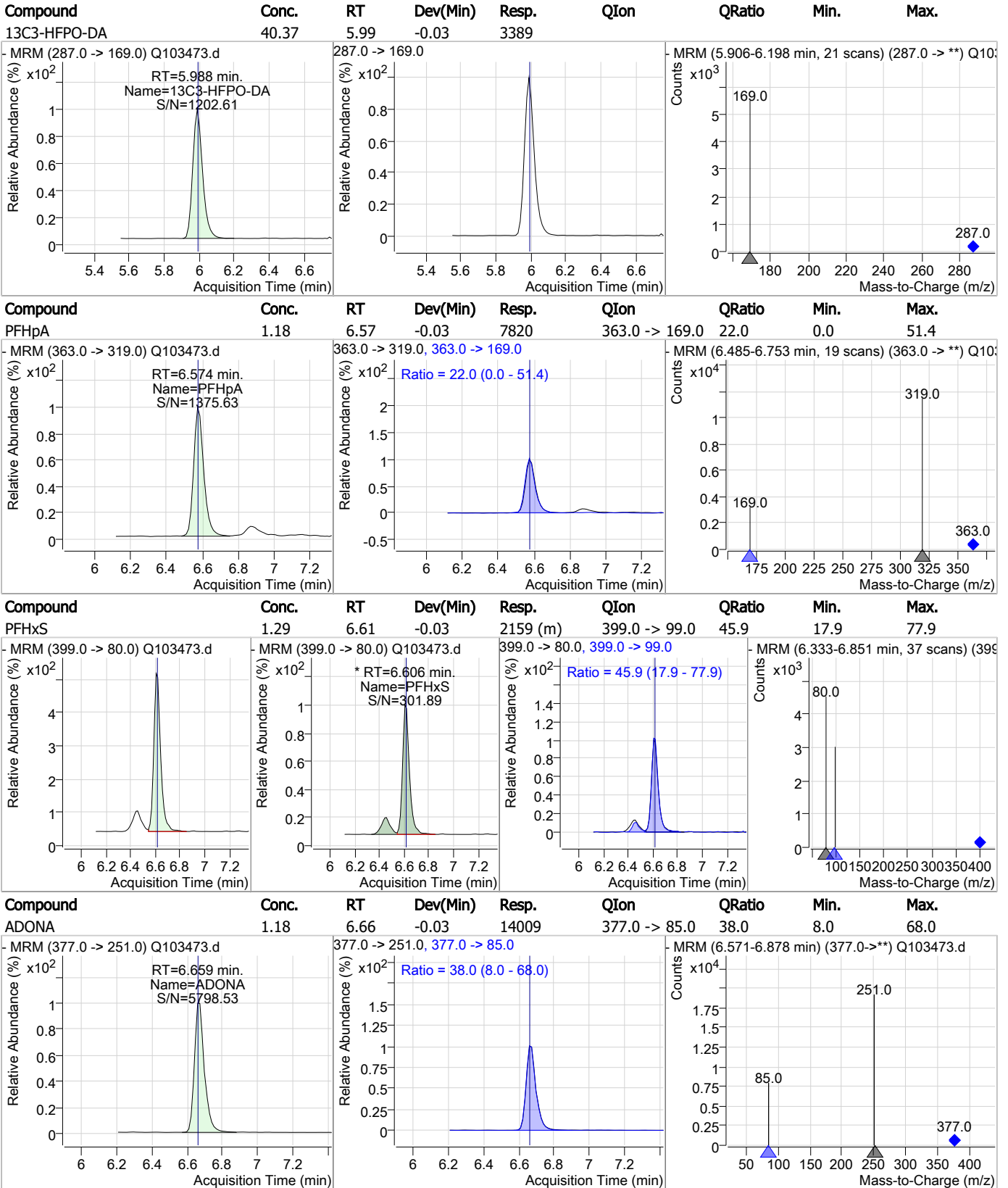
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	1.23	5.71	-0.03	6876	313.0 -> 119.0	6.0	0.0	35.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	1.37	5.99	-0.01	129	329.0 -> 169.0	90.2	62.8	122.8



Perfluorinated Compounds by LC/MS/MS

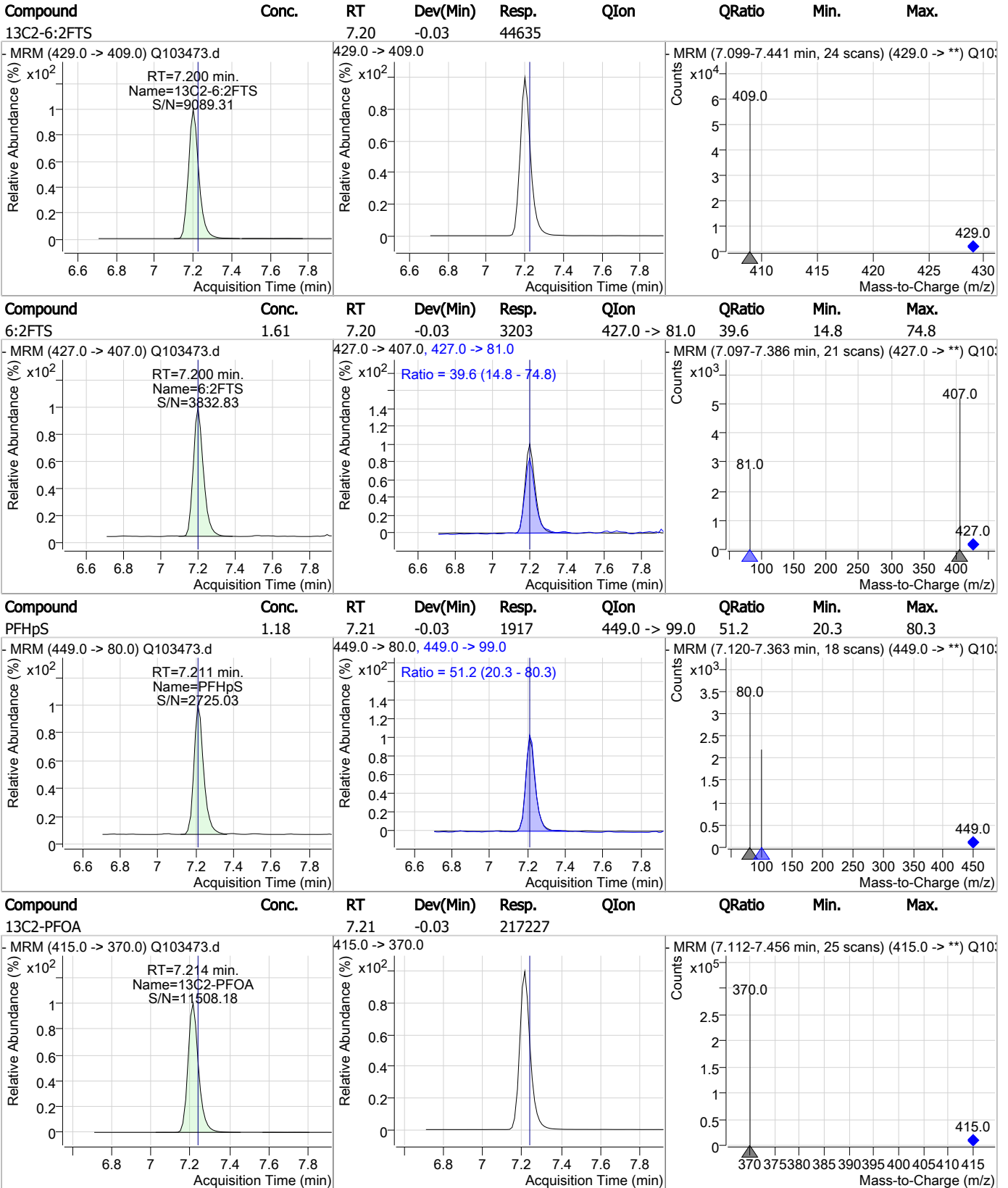


7.3.1

7



Perfluorinated Compounds by LC/MS/MS

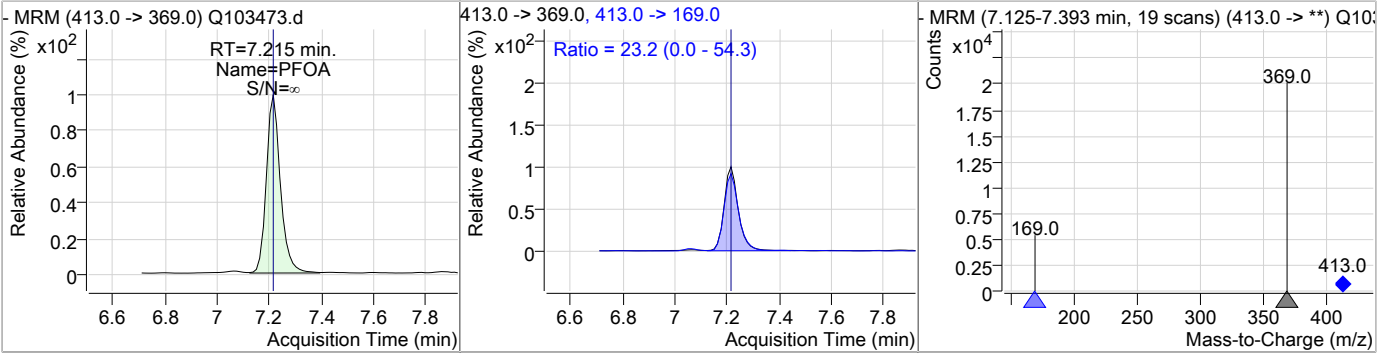


7.3.1

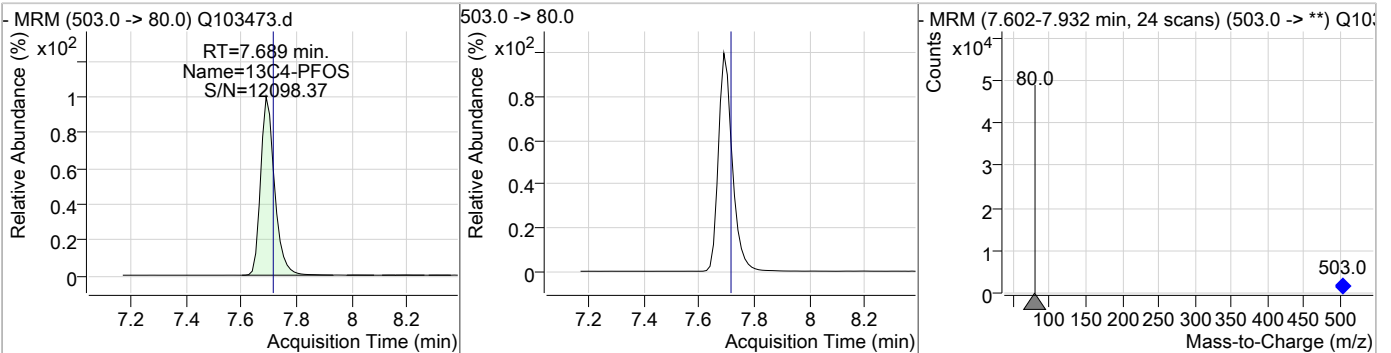
7

Perfluorinated Compounds by LC/MS/MS

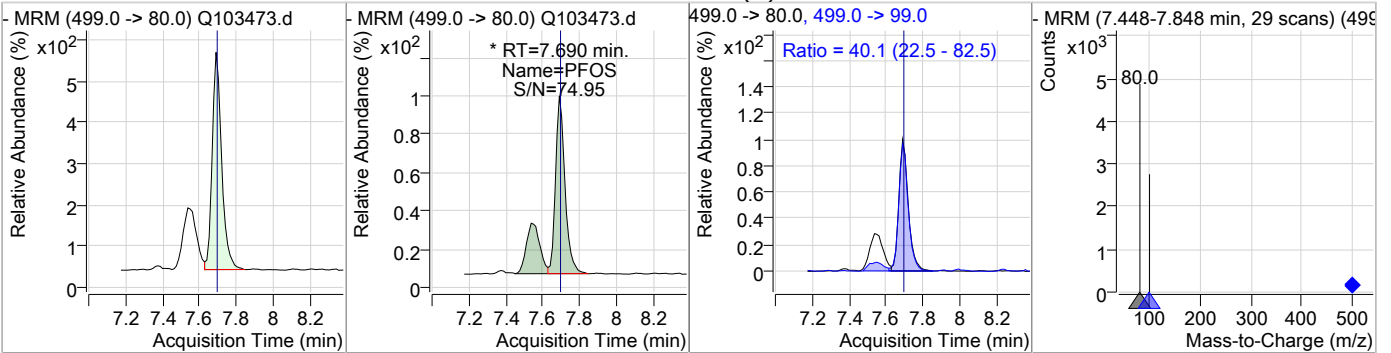
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	1.22	7.21	-0.03	14438	413.0 -> 169.0	23.2	0.0	54.3



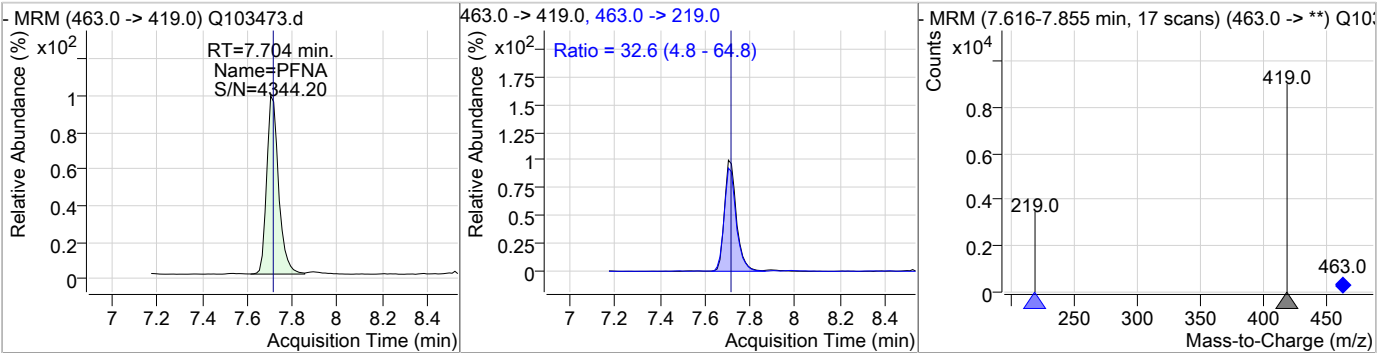
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.69	-0.03	36483				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	1.27	7.69	-0.03	2660 (m)	499.0 -> 99.0	40.1	22.5	82.5

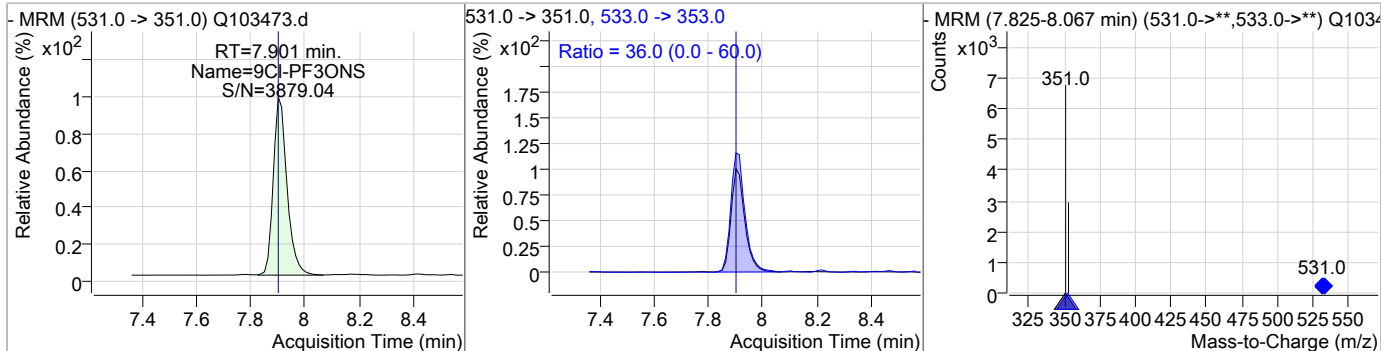


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	1.17	7.70	-0.04	6154	463.0 -> 219.0	32.6	4.8	64.8

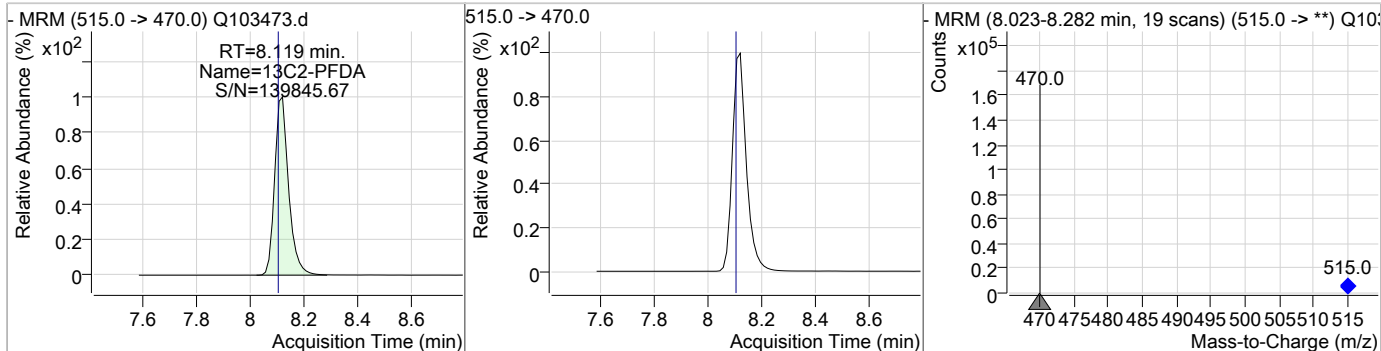


Perfluorinated Compounds by LC/MS/MS

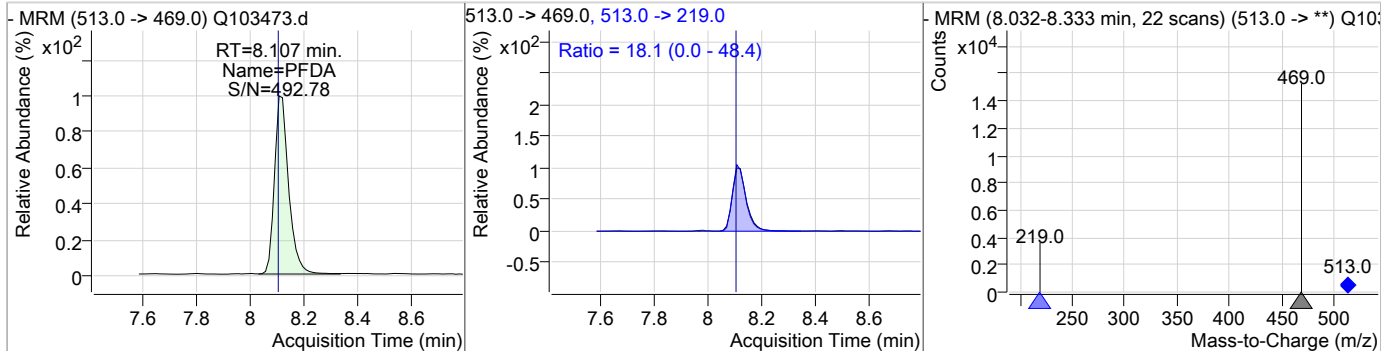
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9CI-PF3ONS	1.05	7.90	-0.03	4632	533.0 -> 353.0	36.0	0.0	60.0



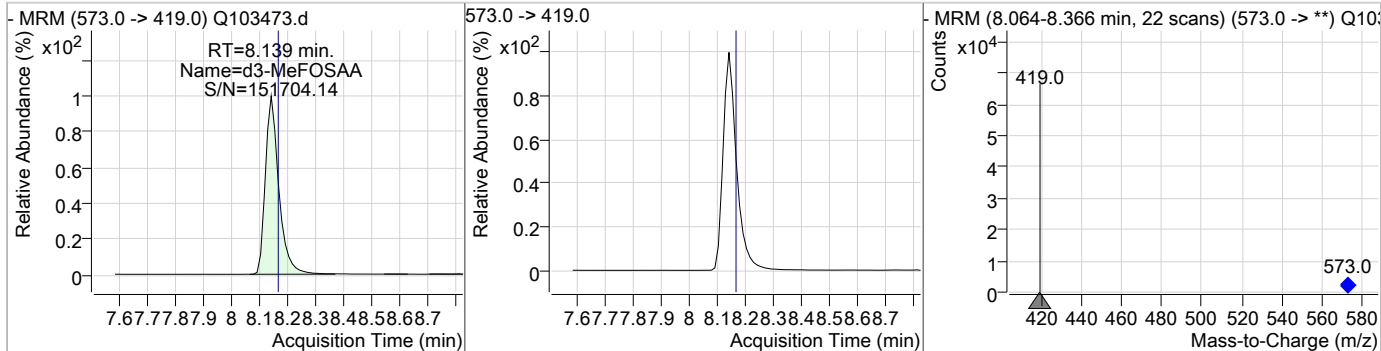
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	20.70	8.12	-0.01	125993				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	1.27	8.11	-0.03	10609	513.0 -> 219.0	18.1	0.0	48.4

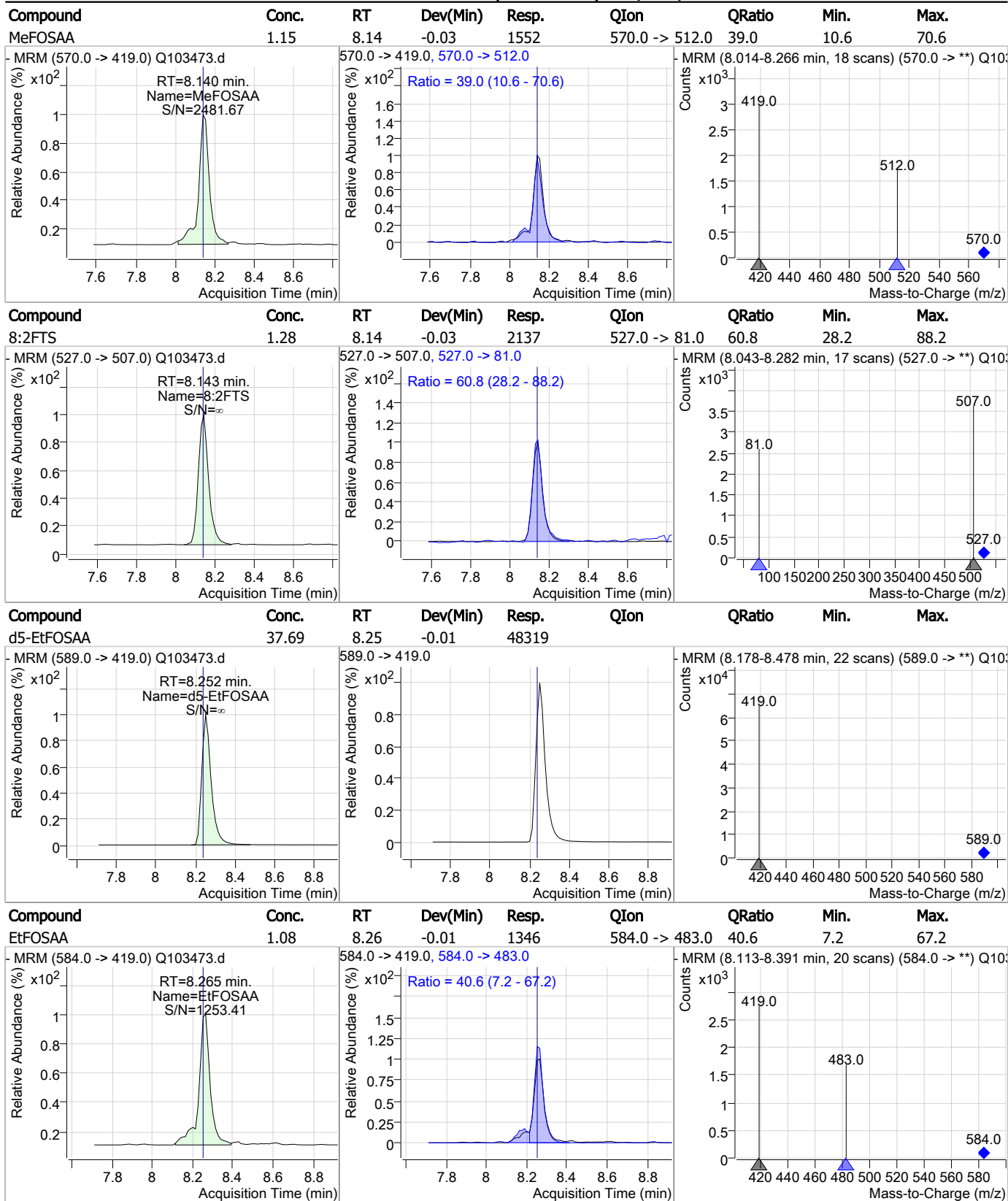


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.14	-0.03	49139				



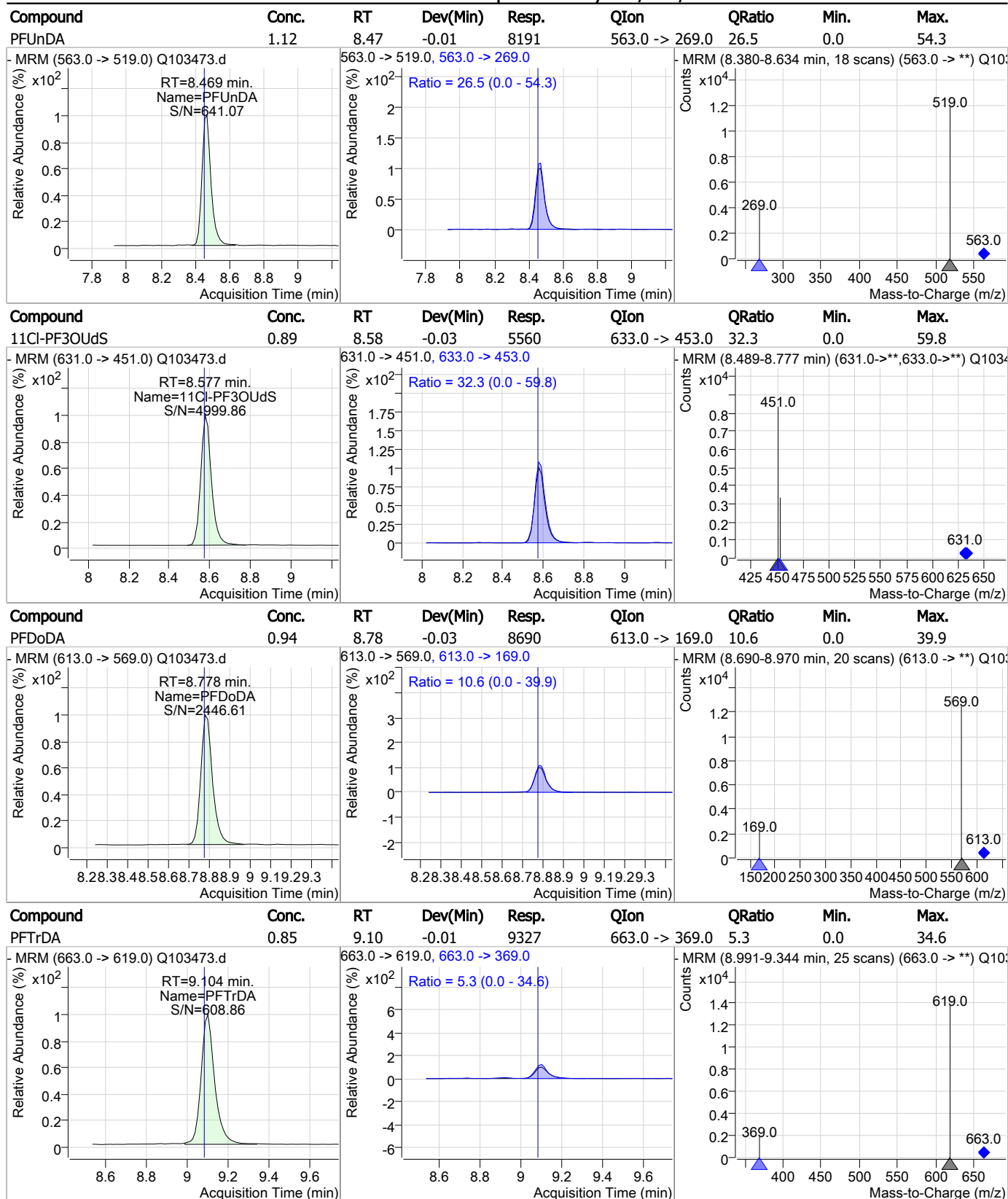
7.3.1
7

Perfluorinated Compounds by LC/MS/MS



7.3.1
7

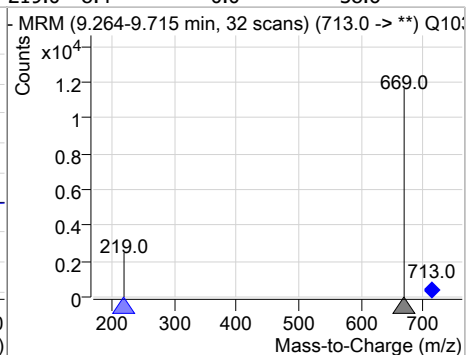
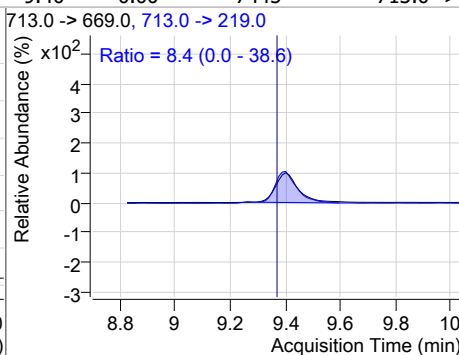
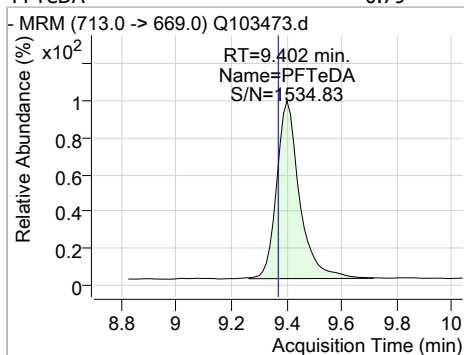
Perfluorinated Compounds by LC/MS/MS



7.3.1
7

Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.79	9.40	0.00	7445	713.0 -> 219.0	8.4	0.0	38.6



7.3.1

7

Manual Integration Approval Summary

Sample Number: OP97324-BS Method: EPA 537.1 REV 1.0
Lab FileID: Q103473.D Analyst approved: 06/19/23 16:24 Anna Ludwig
Injection Time: 06/18/23 19:25 Supervisor approved: 06/19/23 17:33 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.61	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.69	Split peak

7.3.1.1

7

Perfluorinated Compounds by LC/MS/MS

Data File : Q103493.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/19/2023 12:40:45 AM
 Sample Name : op97324-ms:1
 Vial : P1-D3
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,280,,,1,1,water

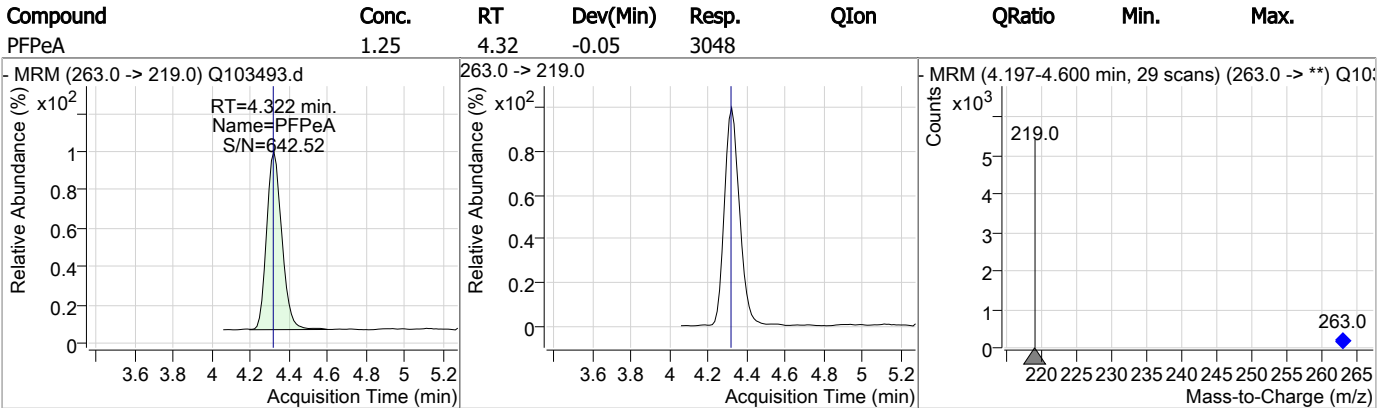
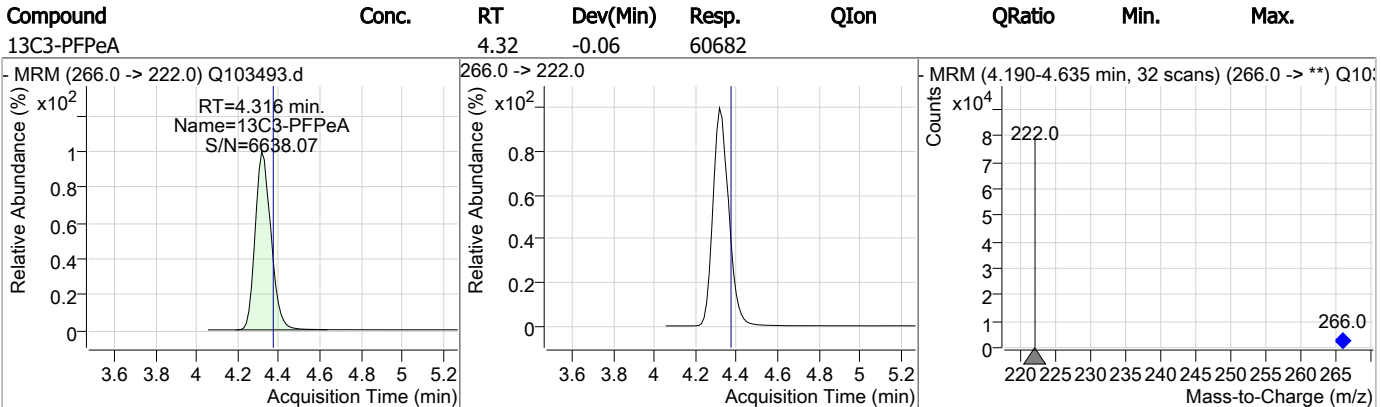
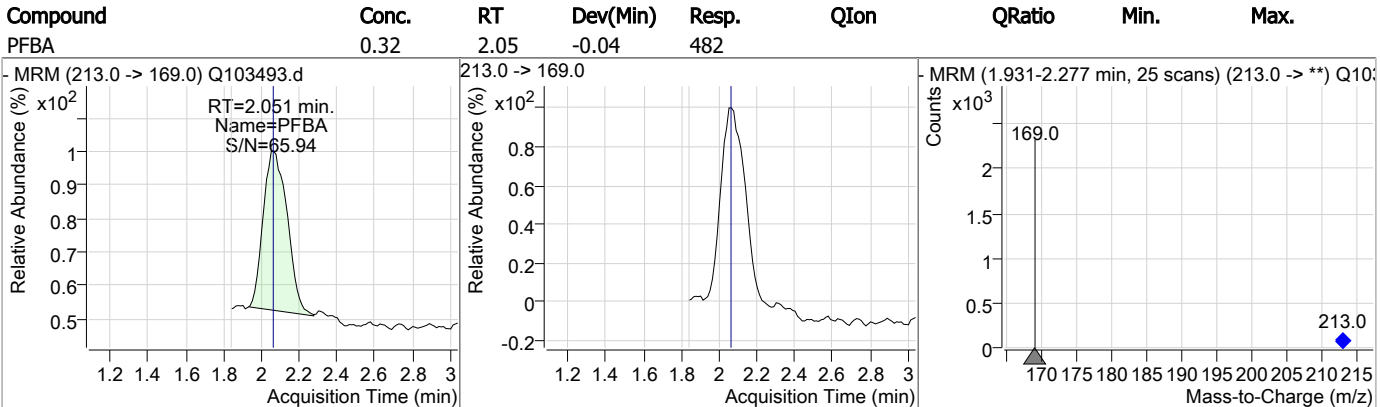
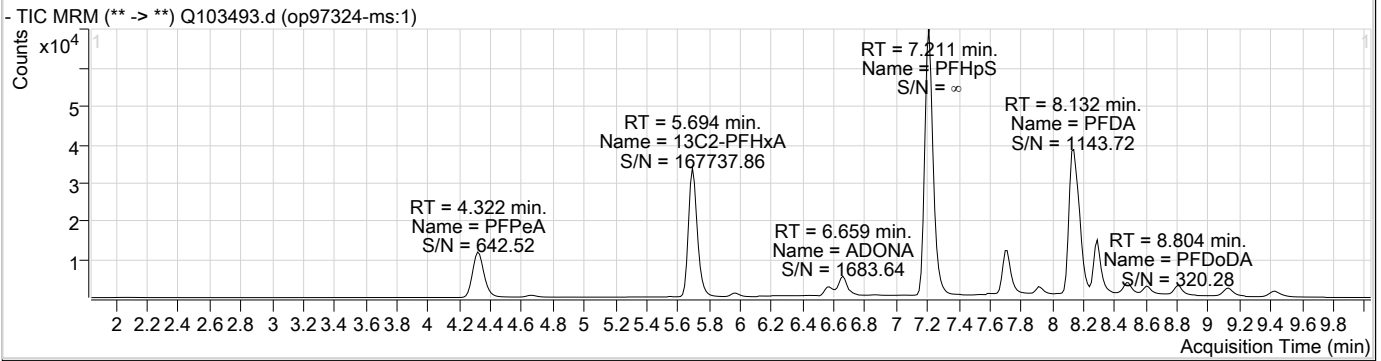
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.200	429.0 -> 409.0	40345	20.00 µg/L	-0.025
13C2-PFOA	7.214	415.0 -> 370.0	197454	20.00 µg/L	-0.025
13C3-PFPeA	4.316	266.0 -> 222.0	60682	20.00 µg/L	-0.056
13C4-PFOS	7.702	503.0 -> 80.0	32212	20.00 µg/L	-0.013
d3-MeFOSAA	8.165	573.0 -> 419.0	46910	40.00 µg/L	0.000
System Monitoring Compounds					
13C2-PFDA	8.132	515.0 -> 470.0	116448	21.04 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 105.2%	
13C2-PFHxA	5.694	315.0 -> 270.0	126854	22.17 µg/L	-0.038
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 110.9%	
d5-EtFOSAA	8.289	589.0 -> 419.0	43687	35.76 µg/L	0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 89.4%	
13C3-HFPO-DA	5.976	287.0 -> 169.0	3532	46.22 µg/L	-0.038
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 115.6%	
Target Compounds					
6:2FTS	7.200	427.0 -> 407.0	2899	1.61 µg/L	95
8:2FTS	8.156	527.0 -> 507.0	1859	1.23 µg/L	96
EtFOSAA	8.290	584.0 -> 419.0	1019	0.85 µg/L	87
MeFOSAA	8.178	570.0 -> 419.0	1332	1.04 µg/L	m 93
PFBA	2.051	213.0 -> 169.0	482	0.32 µg/L	100
PFBS	4.653	299.0 -> 80.0	1468	1.37 µg/L	94
PFDA	8.132	513.0 -> 469.0	9043	1.19 µg/L	98
PFDoDA	8.804	613.0 -> 569.0	8393	1.03 µg/L	97
PFHpA	6.562	363.0 -> 319.0	7557	1.25 µg/L	97
PFHpS	7.211	449.0 -> 80.0	2091	1.45 µg/L	98
PFHxA	5.696	313.0 -> 269.0	6685	1.31 µg/L	99
PFHxS	6.606	399.0 -> 80.0	2149	1.46 µg/L	m 96
PFNA	7.730	463.0 -> 419.0	5640	1.18 µg/L	96
PFOA	7.215	413.0 -> 369.0	13538	1.26 µg/L	100
PFOS	7.703	499.0 -> 80.0	2392	1.30 µg/L	m 84
PFPeA	4.322	263.0 -> 219.0	3048	1.25 µg/L	100
PFTeDA	9.427	713.0 -> 669.0	7619	0.92 µg/L	98
PFTrDA	9.129	663.0 -> 619.0	9132	0.94 µg/L	100
PFUnDA	8.494	563.0 -> 519.0	7625	1.18 µg/L	98
ADONA	6.659	377.0 -> 251.0	13965	1.29 µg/L	99
9Cl-PF3ONS	7.929	531.0 -> 351.0	4851	1.21 µg/L	95
11Cl-PF3OUdS	8.602	631.0 -> 451.0	5651	0.99 µg/L	98
HFPO-DA	5.978	285.0 -> 169.0	102	1.19 µg/L	86

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

7.4.1
7



Perfluorinated Compounds by LC/MS/MS

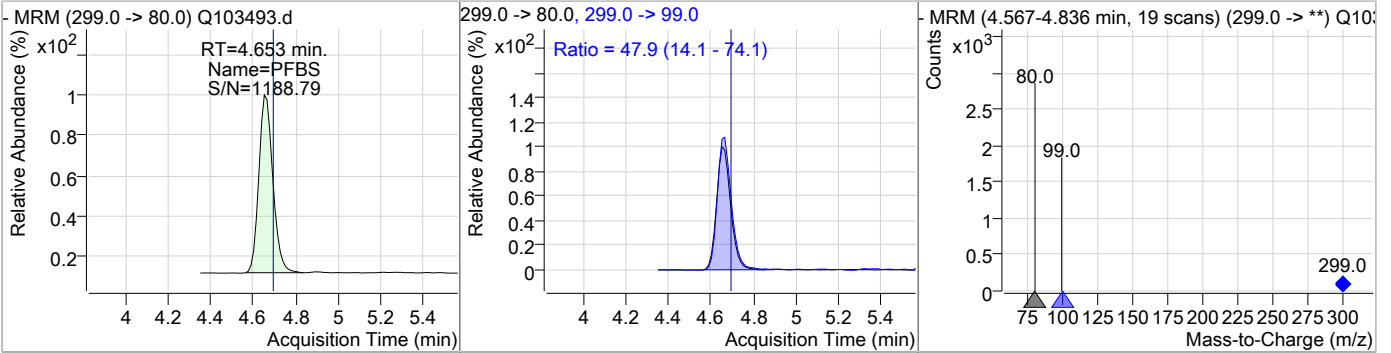


7.4.1
7

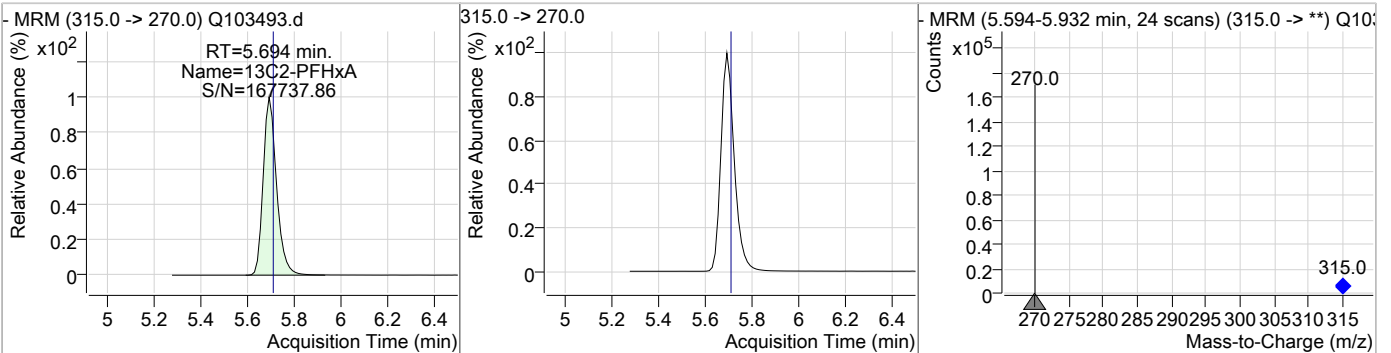


Perfluorinated Compounds by LC/MS/MS

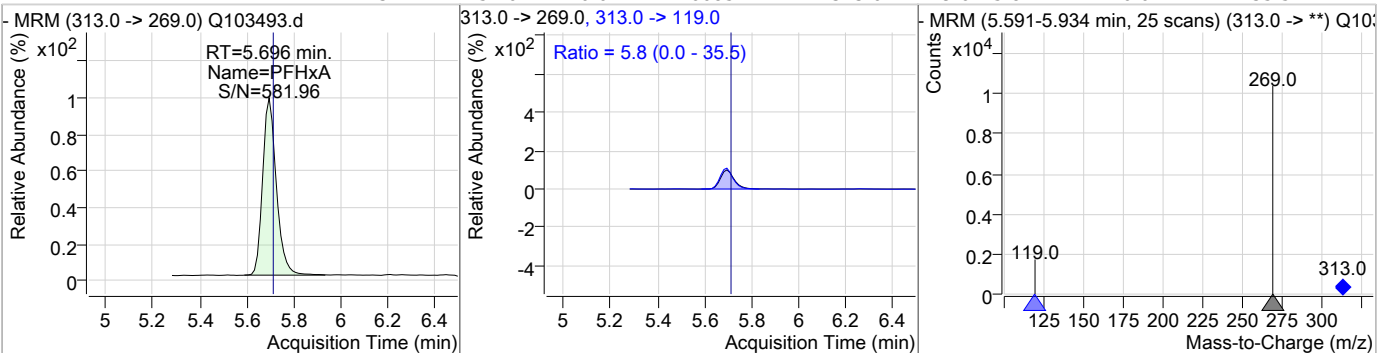
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	1.37	4.65	-0.05	1468	299.0 -> 99.0	47.9	14.1	74.1



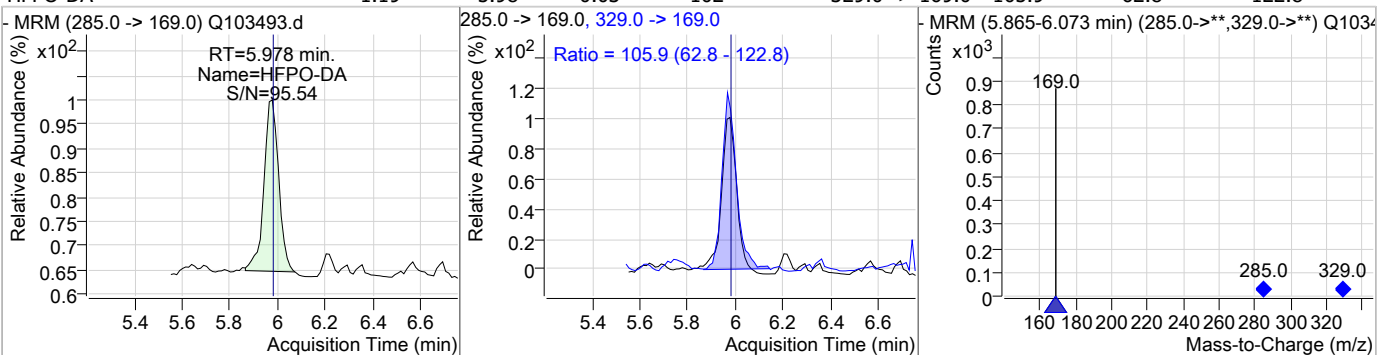
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	22.17	5.69	-0.04	126854				



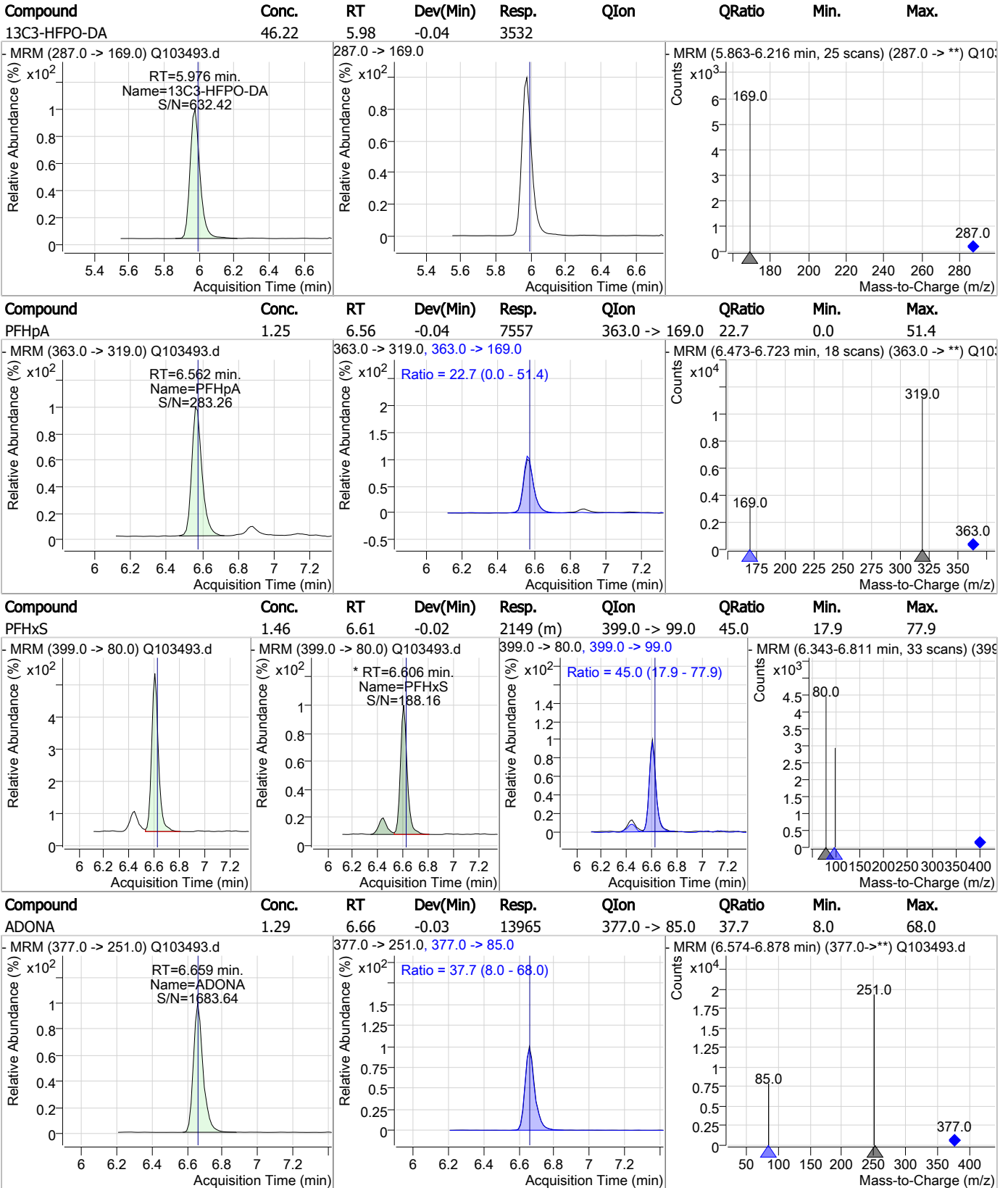
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	1.31	5.70	-0.04	6685	313.0 -> 119.0	5.8	0.0	35.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	1.19	5.98	-0.03	102	329.0 -> 169.0	105.9	62.8	122.8



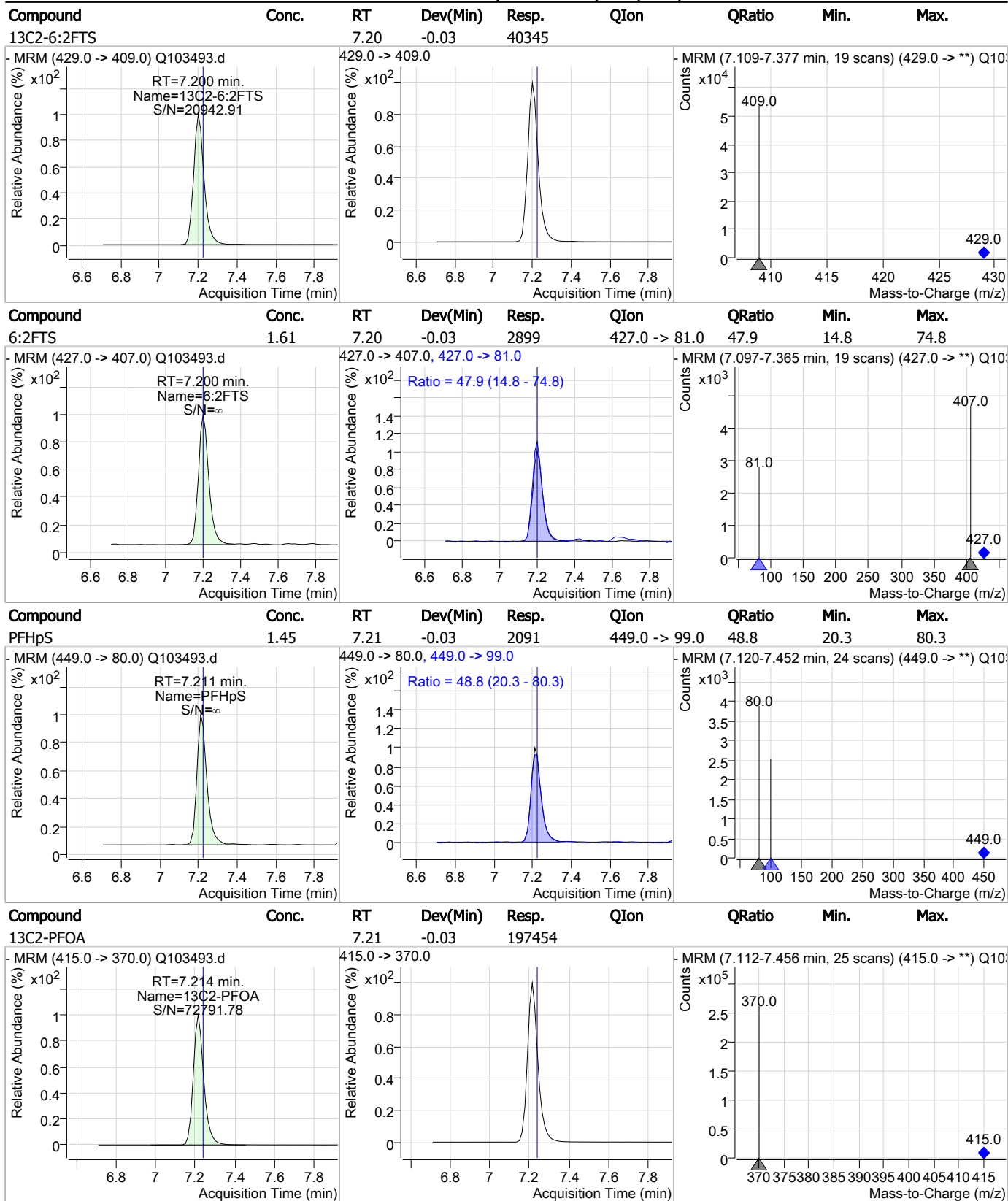
Perfluorinated Compounds by LC/MS/MS



7.4.1

7

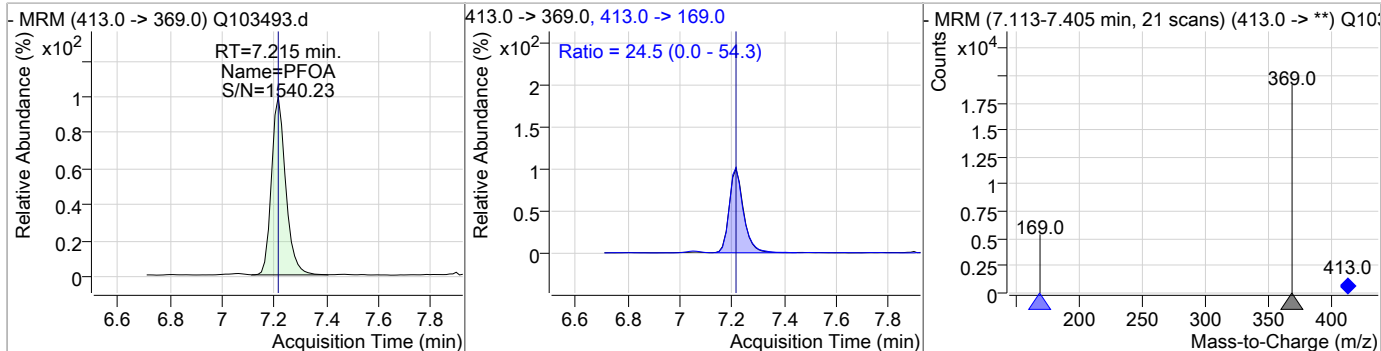
Perfluorinated Compounds by LC/MS/MS



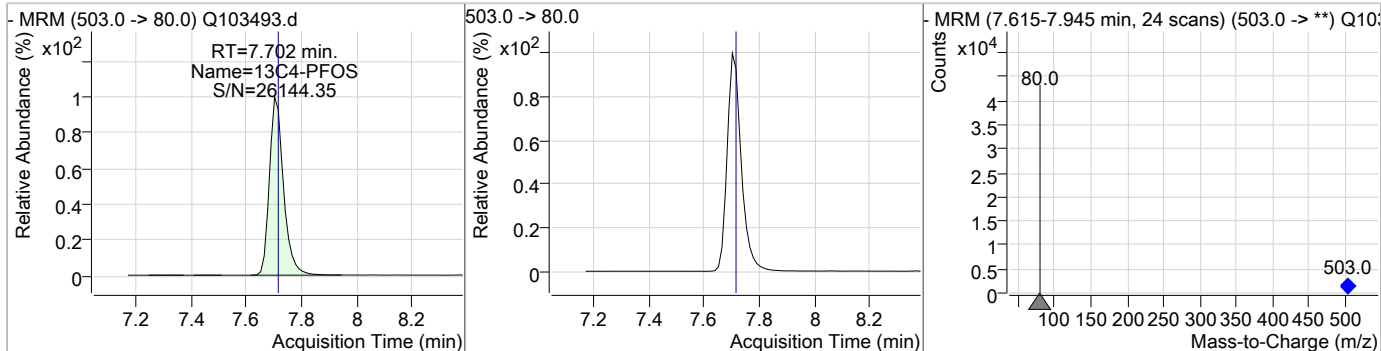
7.4.1

Perfluorinated Compounds by LC/MS/MS

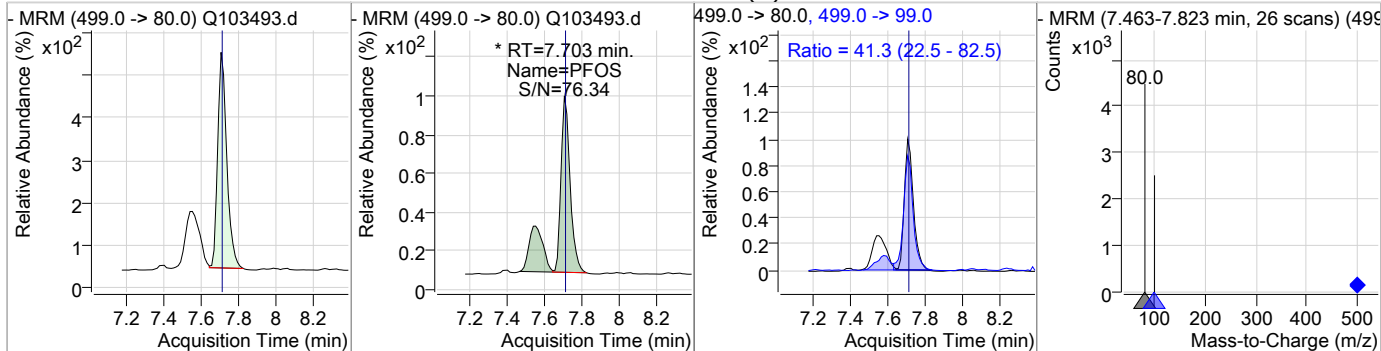
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	1.26	7.21	-0.03	13538	413.0 -> 169.0	24.5	0.0	54.3



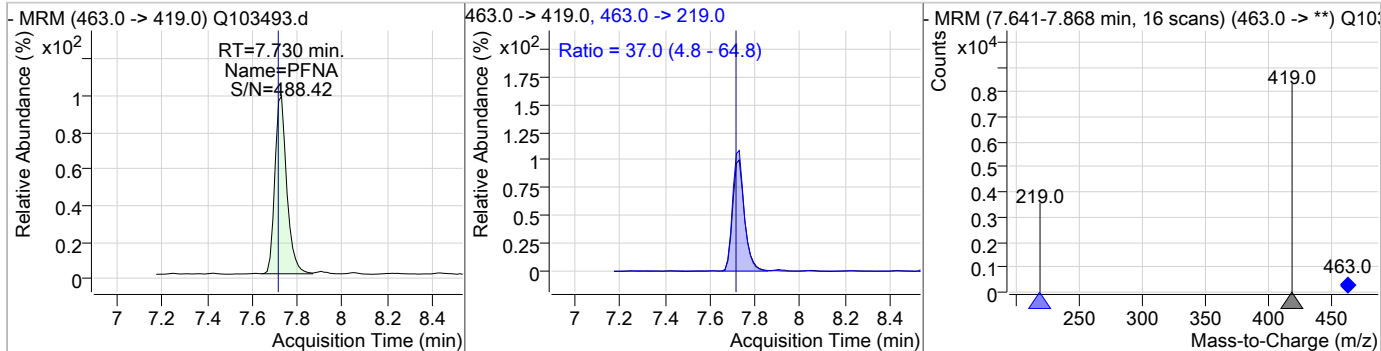
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.70	-0.01	32212				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	1.30	7.70	-0.01	2392 (m)	499.0 -> 99.0	41.3	22.5	82.5



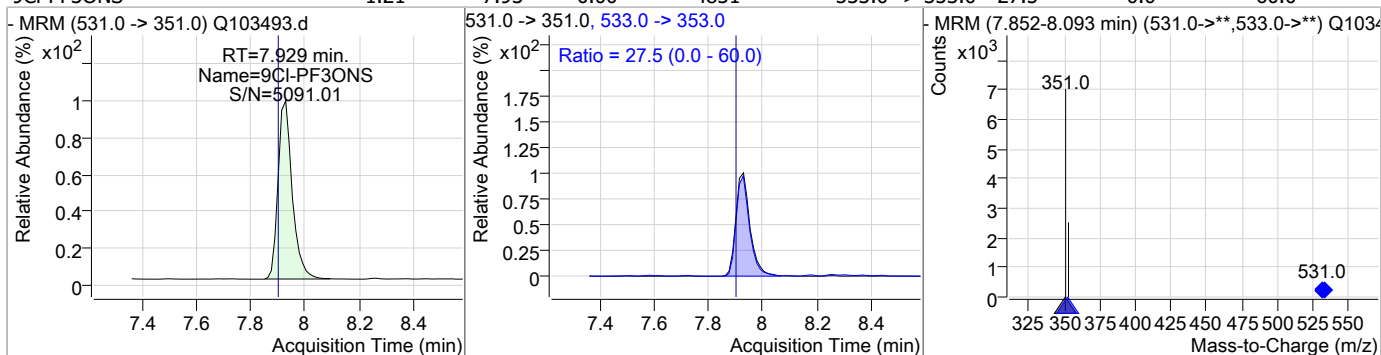
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	1.18	7.73	-0.01	5640	463.0 -> 219.0	37.0	4.8	64.8



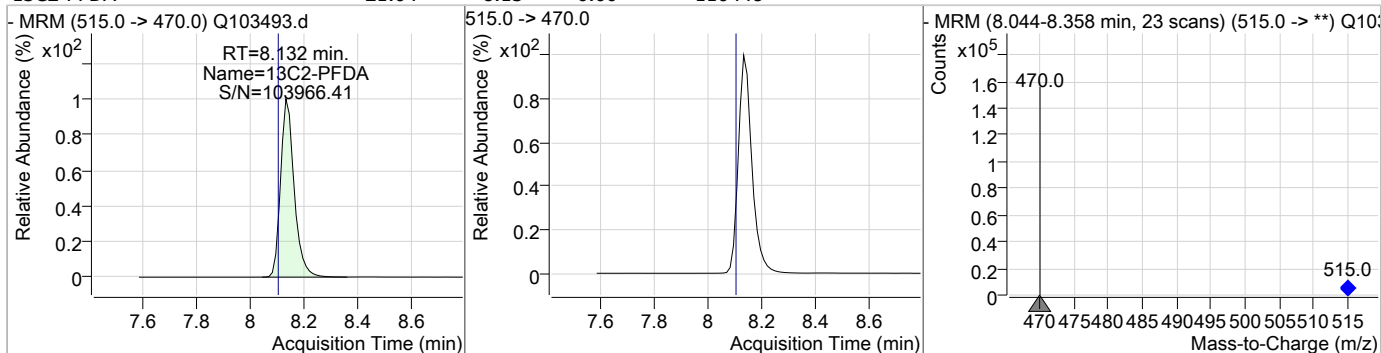
7.4.1
7

Perfluorinated Compounds by LC/MS/MS

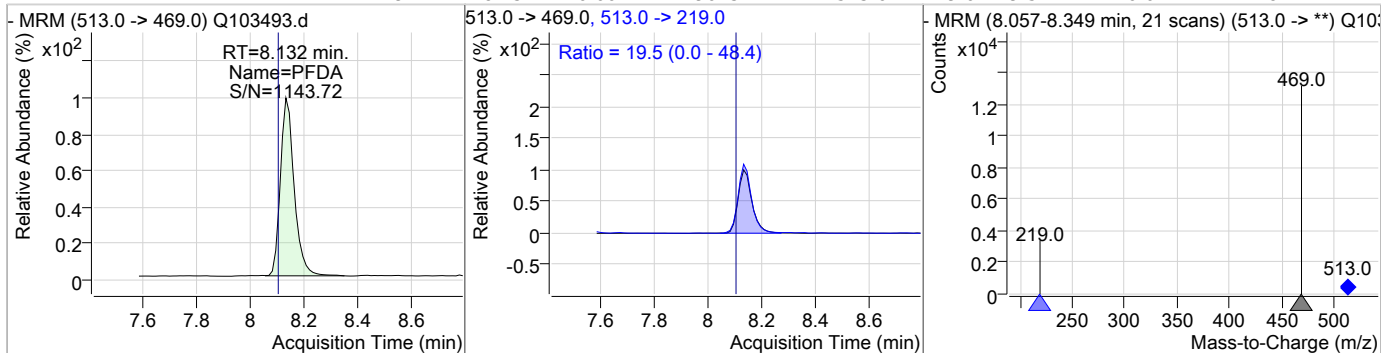
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9CI-PF3ONS	1.21	7.93	0.00	4851	533.0 -> 353.0	27.5	0.0	60.0



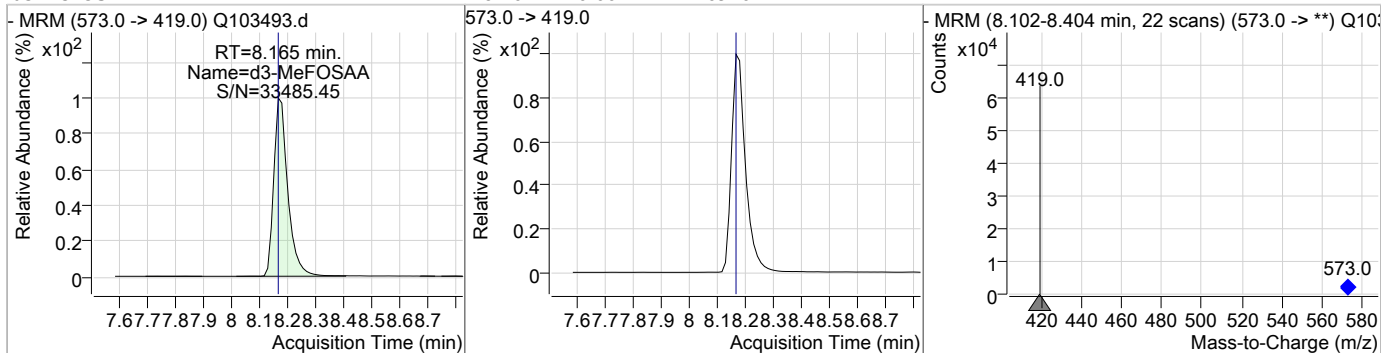
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	21.04	8.13	0.00	116448				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	1.19	8.13	0.00	9043	513.0 -> 219.0	19.5	0.0	48.4

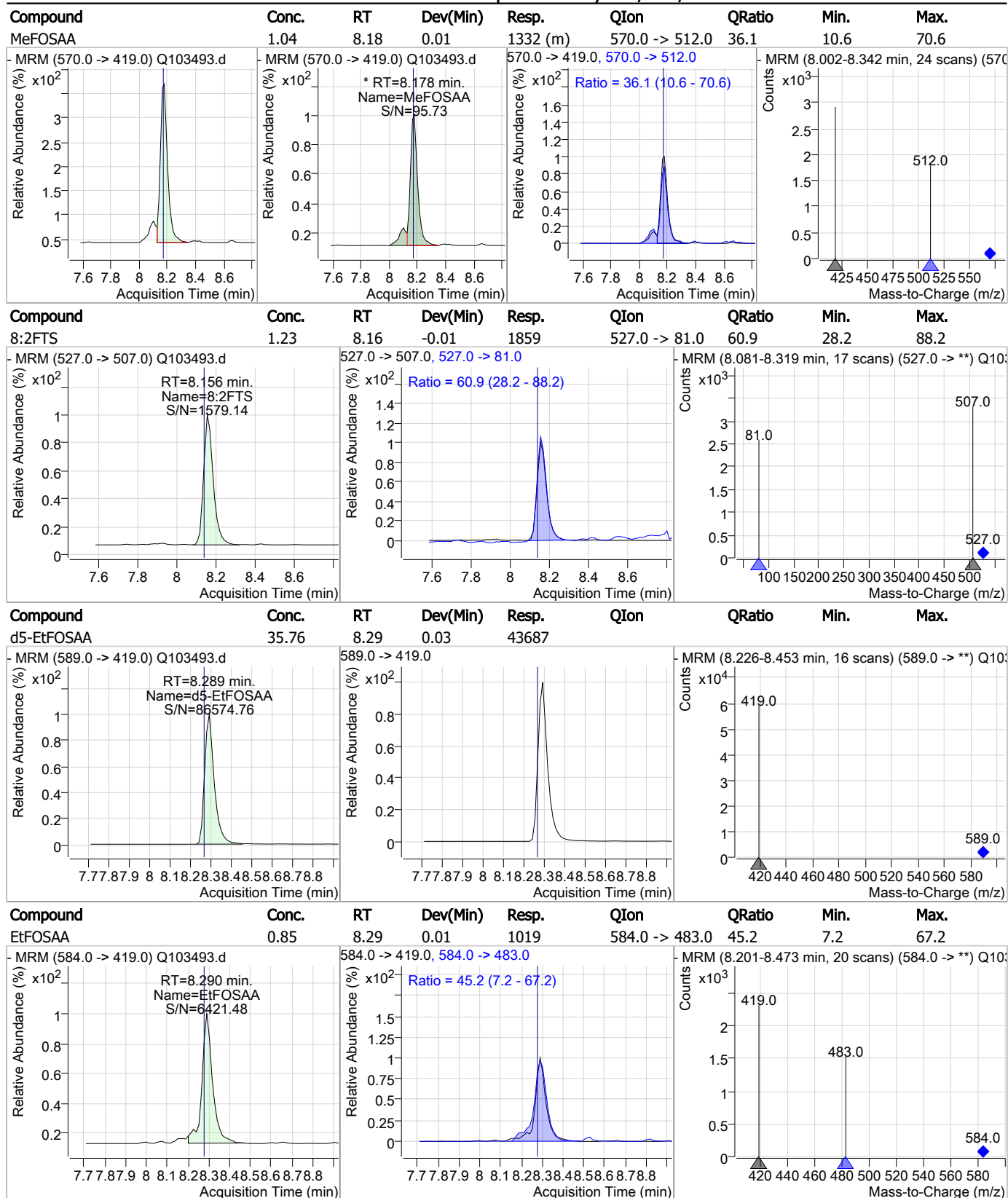


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.16	0.00	46910				



7.4.1
7

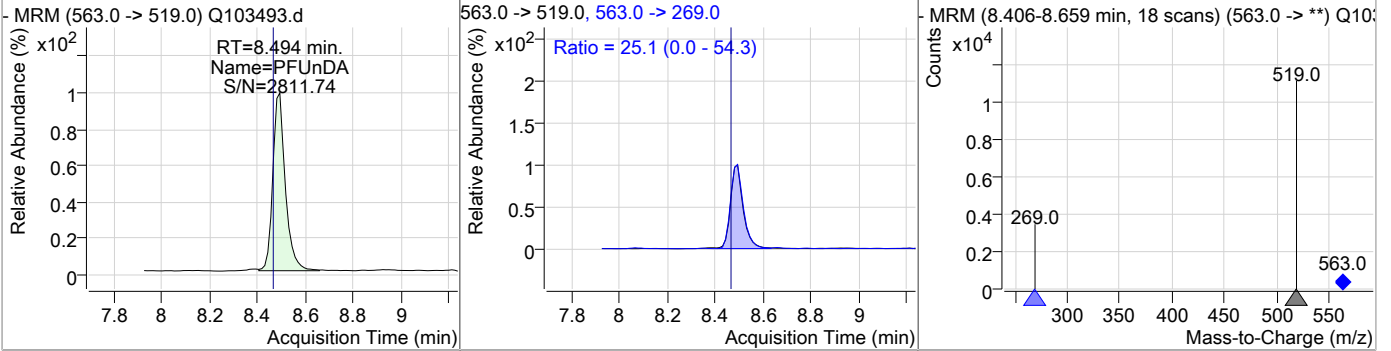
Perfluorinated Compounds by LC/MS/MS



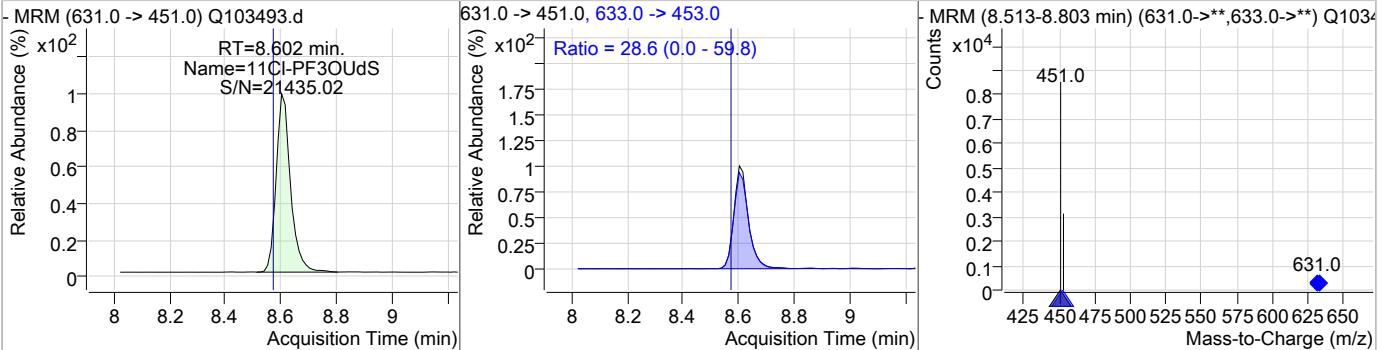
7.4.1
7

Perfluorinated Compounds by LC/MS/MS

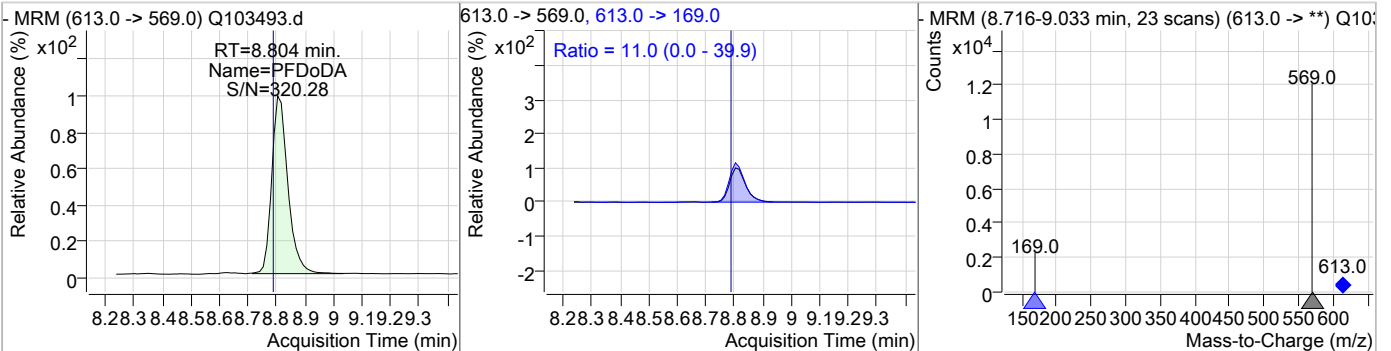
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	1.18	8.49	0.01	7625	563.0 -> 269.0	25.1	0.0	54.3



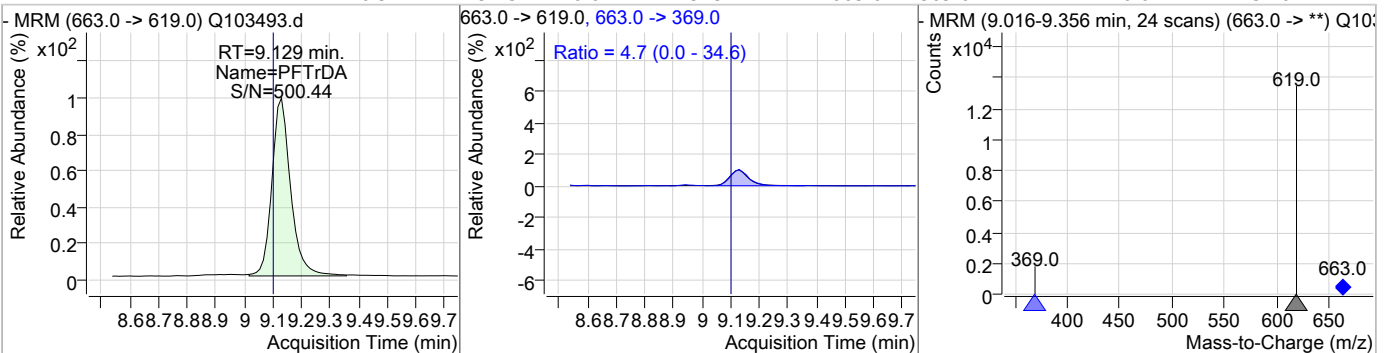
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.99	8.60	0.00	5651	633.0 -> 453.0	28.6	0.0	59.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDODA	1.03	8.80	0.00	8393	613.0 -> 169.0	11.0	0.0	39.9

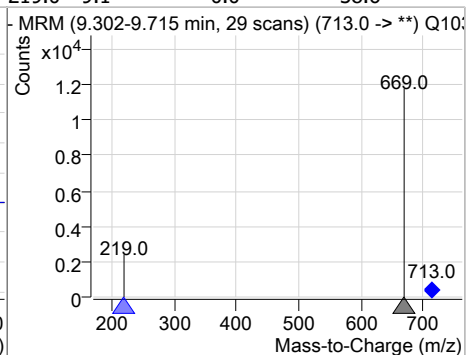
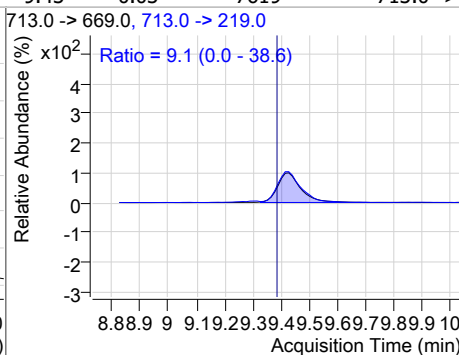
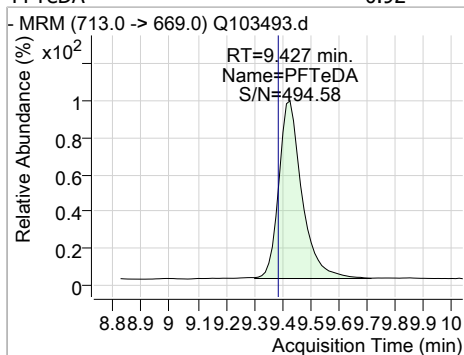


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	0.94	9.13	0.01	9132	663.0 -> 369.0	4.7	0.0	34.6



Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.92	9.43	0.03	7619	713.0 -> 219.0	9.1	0.0	38.6



7.4.1

7

Manual Integration Approval Summary

Sample Number: OP97324-MS Method: EPA 537.1 REV 1.0
Lab FileID: Q103493.D Analyst approved: 06/19/23 16:34 Anna Ludwig
Injection Time: 06/19/23 00:40 Supervisor approved: 06/19/23 17:33 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.61	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.70	Split peak
MeFOSAA	2355-31-9		8.18	Split peak

7.4.1.1

7

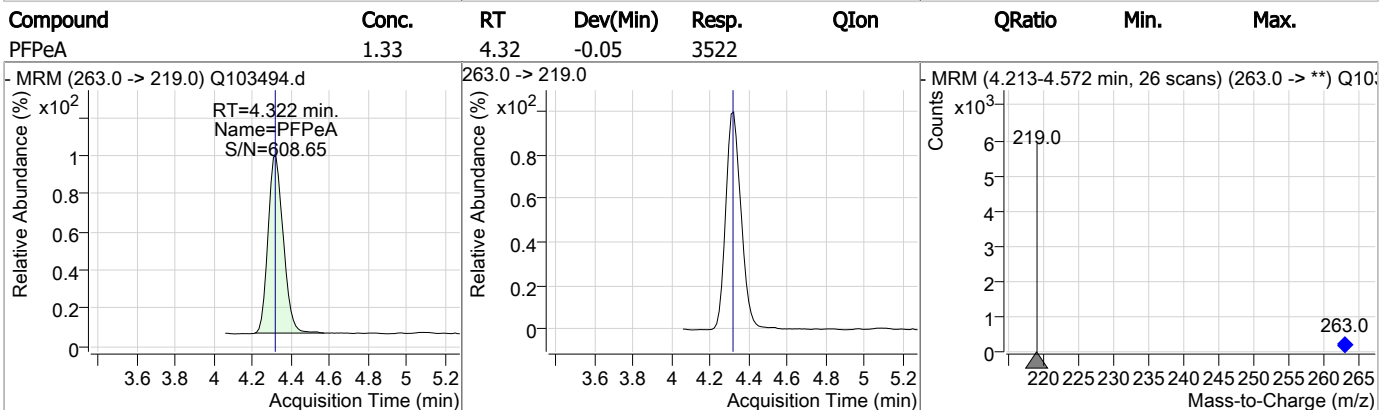
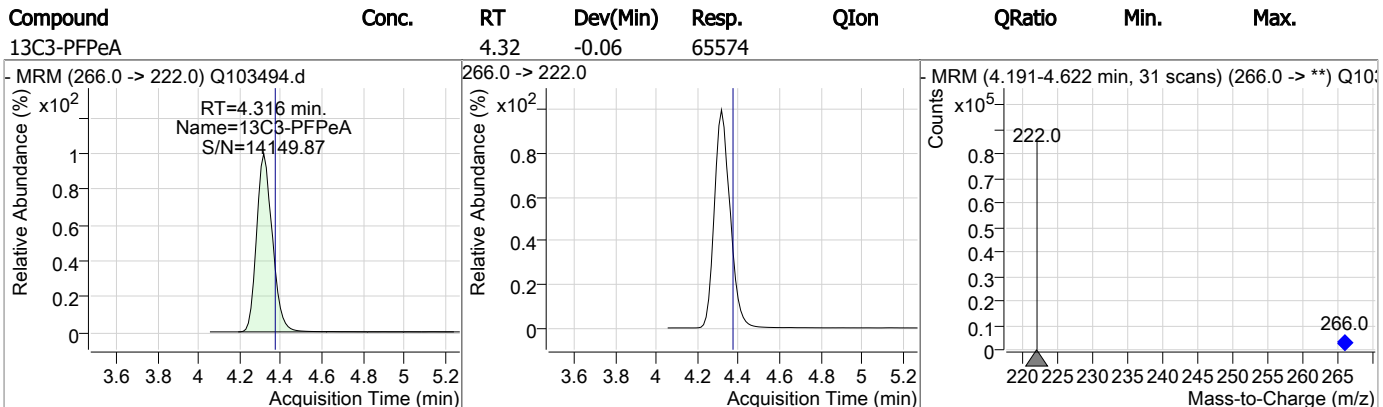
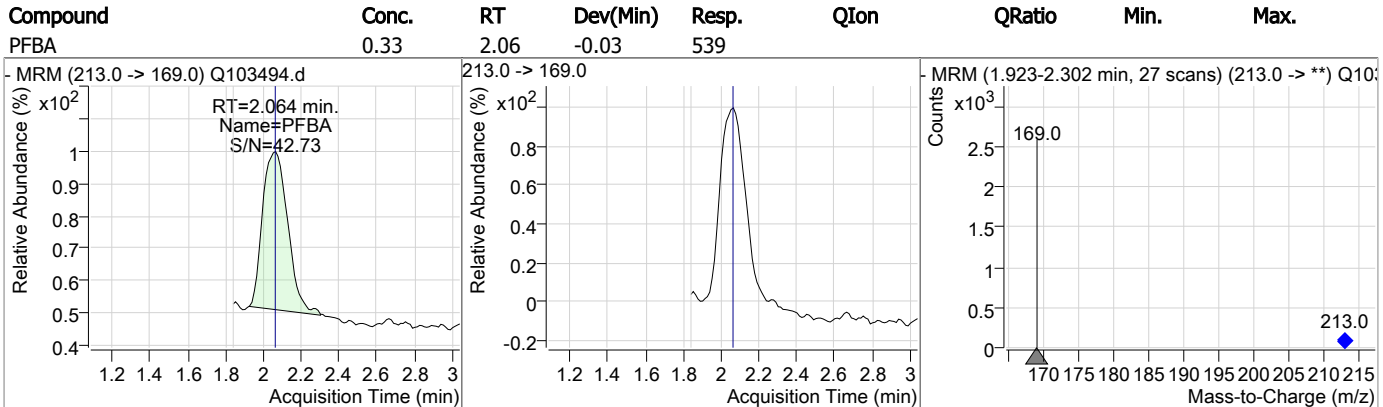
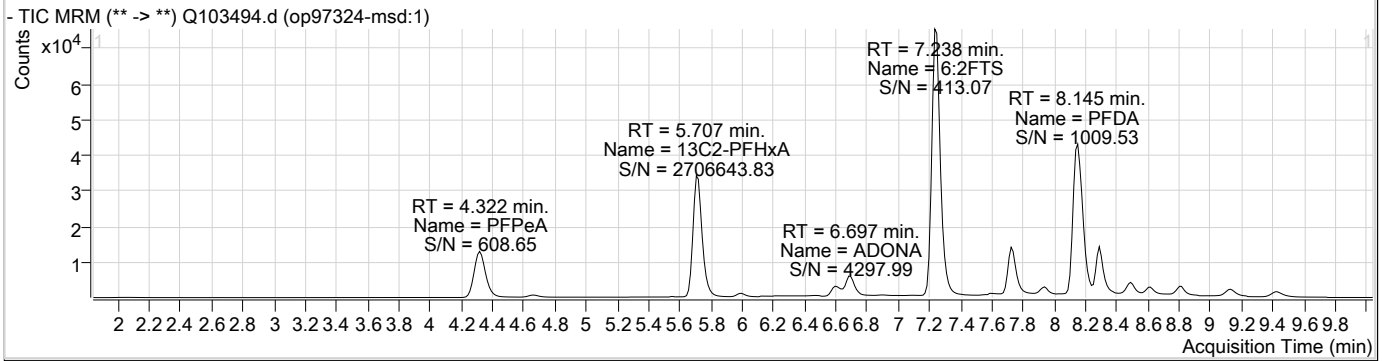
Perfluorinated Compounds by LC/MS/MS

Data File : Q103494.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/19/2023 12:56:32 AM
 Sample Name : op97324-msd:1
 Vial : P1-D4
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP97324,SQ2201,280,,,1,1,water

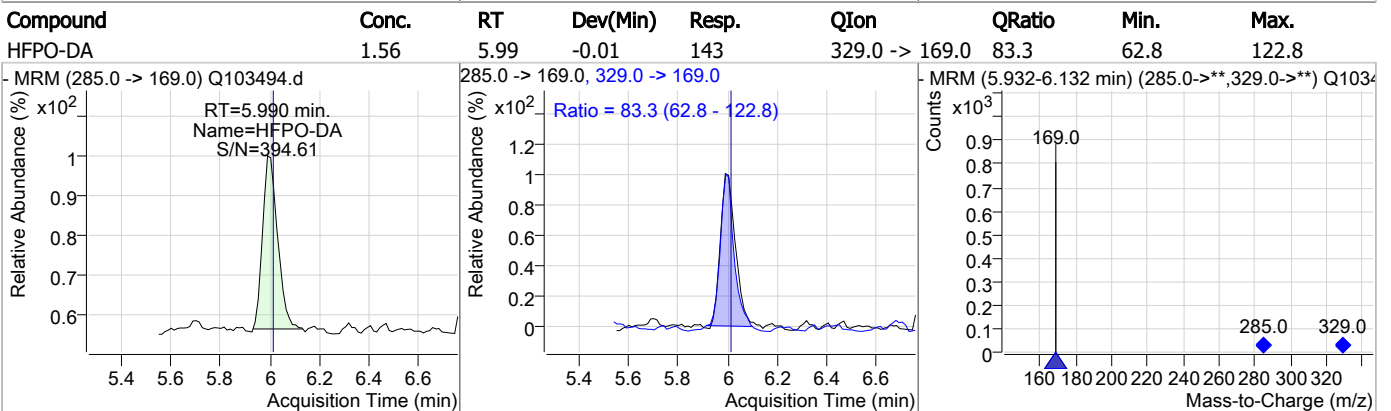
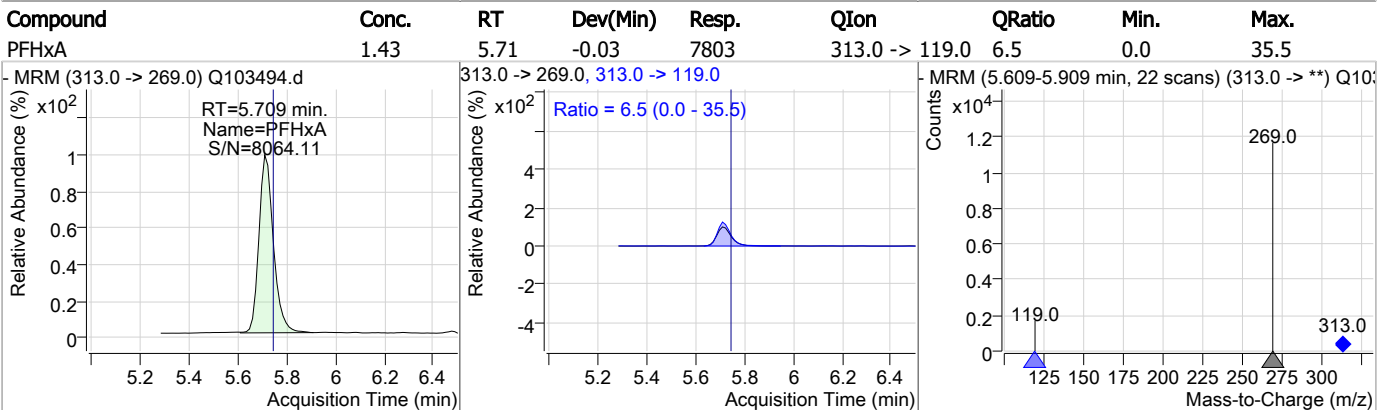
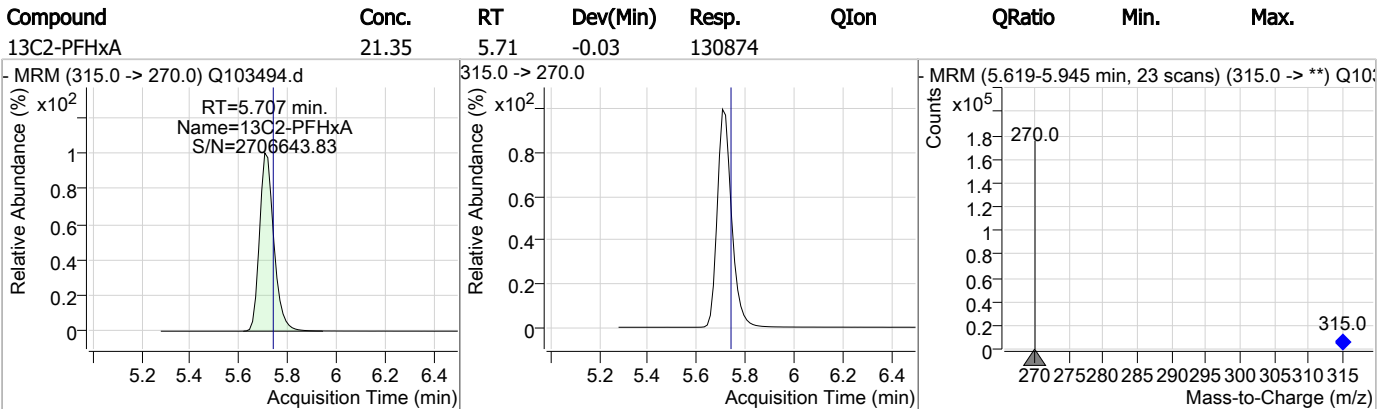
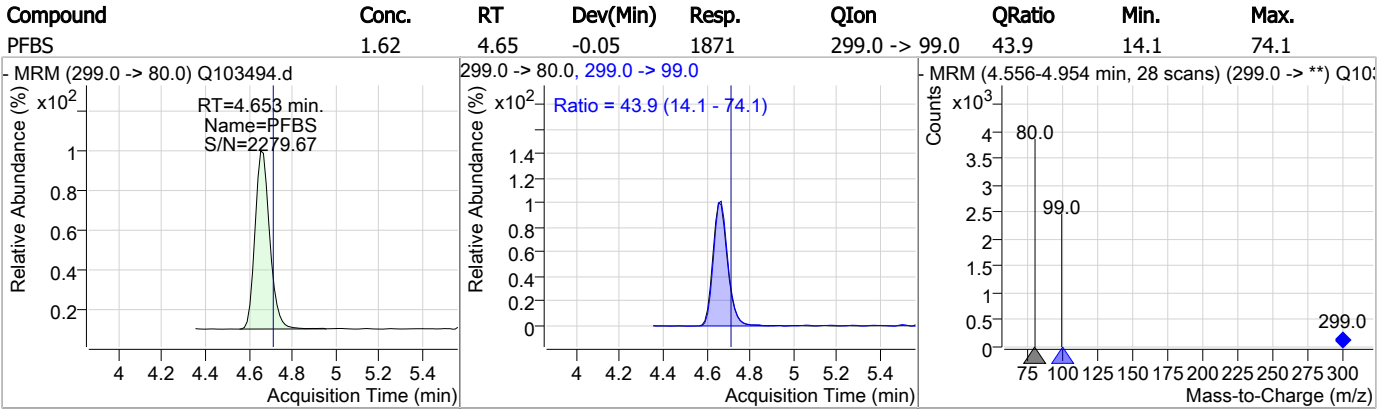
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.237	429.0 -> 409.0	44346	20.00 µg/L	0.013
13C2-PFOA	7.252	415.0 -> 370.0	211662	20.00 µg/L	0.013
13C3-PFPeA	4.316	266.0 -> 222.0	65574	20.00 µg/L	-0.056
13C4-PFOS	7.728	503.0 -> 80.0	34675	20.00 µg/L	0.013
d3-MeFOSAA	8.177	573.0 -> 419.0	48354	40.00 µg/L	0.013
System Monitoring Compounds					
13C2-PFDA	8.144	515.0 -> 470.0	119247	20.10 µg/L	0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 100.5%	
13C2-PFHxA	5.707	315.0 -> 270.0	130874	21.35 µg/L	-0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 106.8%	
d5-EtFOSAA	8.289	589.0 -> 419.0	40521	32.27 µg/L	0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 80.7%	
13C3-HFPO-DA	6.001	287.0 -> 169.0	3527	43.09 µg/L	-0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 107.7%	
Target Compounds					
6:2FTS	7.238	427.0 -> 407.0	3226	1.63 µg/L	86
8:2FTS	8.168	527.0 -> 507.0	2364	1.42 µg/L	84
EtFOSAA	8.290	584.0 -> 419.0	1443	1.17 µg/L	82
MeFOSAA	8.178	570.0 -> 419.0	1356	1.02 µg/L	96
PFBA	2.064	213.0 -> 169.0	539	0.33 µg/L	100
PFBS	4.653	299.0 -> 80.0	1871	1.62 µg/L	100
PFDA	8.145	513.0 -> 469.0	10668	1.31 µg/L	98
PFDoDA	8.816	613.0 -> 569.0	8601	0.98 µg/L	98
PFHpA	6.599	363.0 -> 319.0	8783	1.36 µg/L	97
PFHpS	7.249	449.0 -> 80.0	2552	1.65 µg/L	96
PFHxA	5.709	313.0 -> 269.0	7803	1.43 µg/L	97
PFHxS	6.631	399.0 -> 80.0	2587	1.63 µg/L	99
PFNA	7.742	463.0 -> 419.0	6960	1.36 µg/L	94
PFOA	7.252	413.0 -> 369.0	16636	1.44 µg/L	100
PFOS	7.729	499.0 -> 80.0	3209	1.62 µg/L	79
PFPeA	4.322	263.0 -> 219.0	3522	1.33 µg/L	100
PFTeDA	9.427	713.0 -> 669.0	7418	0.83 µg/L	97
PFTTrDA	9.129	663.0 -> 619.0	8740	0.84 µg/L	99
PFUnDA	8.494	563.0 -> 519.0	8234	1.19 µg/L	97
ADONA	6.697	377.0 -> 251.0	15773	1.36 µg/L	100
9Cl-PF3ONS	7.942	531.0 -> 351.0	5343	1.24 µg/L	98
11Cl-PF3OUdS	8.615	631.0 -> 451.0	5587	0.91 µg/L	99
HFPO-DA	5.990	285.0 -> 169.0	143	1.56 µg/L	90

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

Perfluorinated Compounds by LC/MS/MS



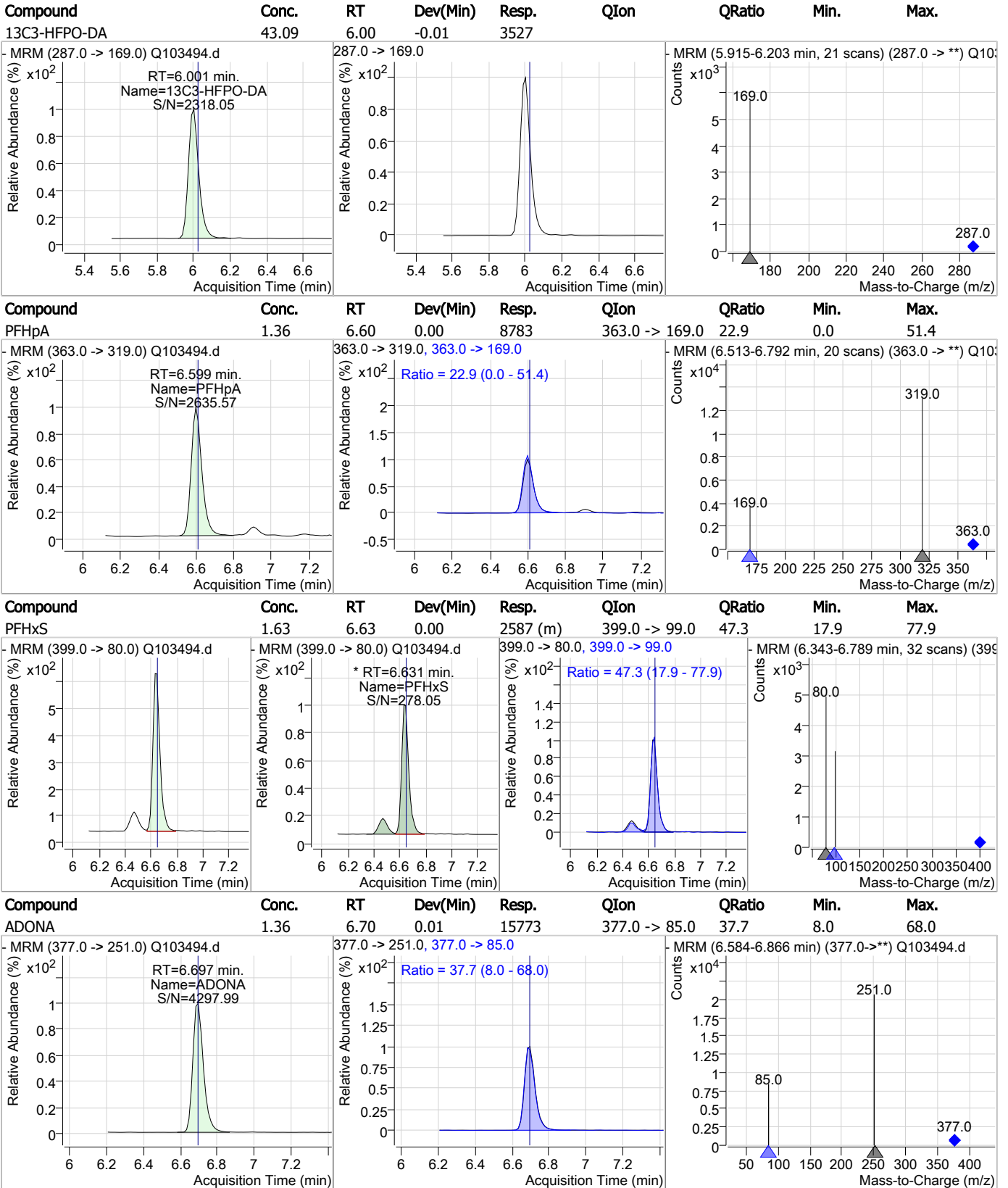
Perfluorinated Compounds by LC/MS/MS



7.4.2

7

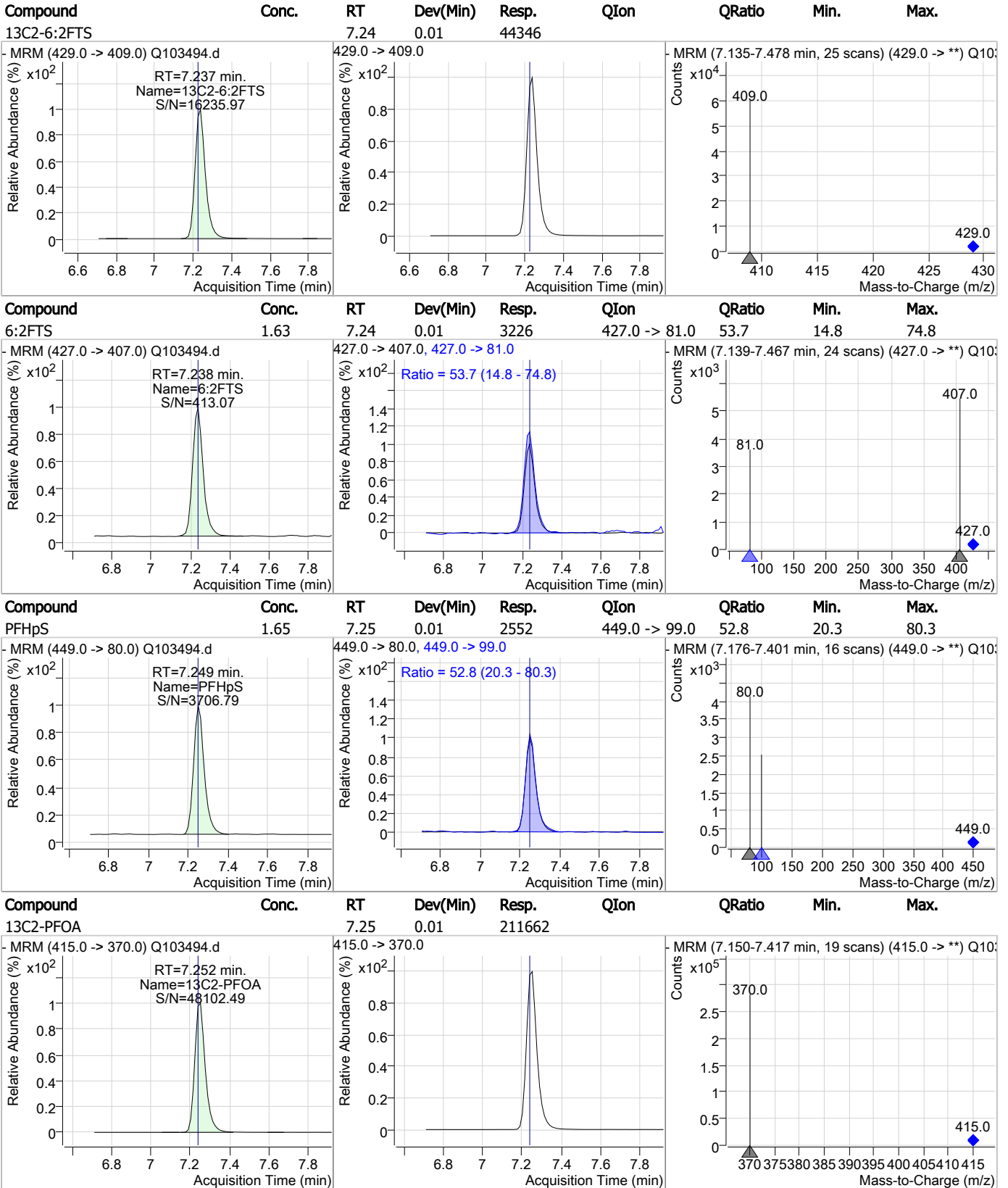
Perfluorinated Compounds by LC/MS/MS



7.4.2

7

Perfluorinated Compounds by LC/MS/MS

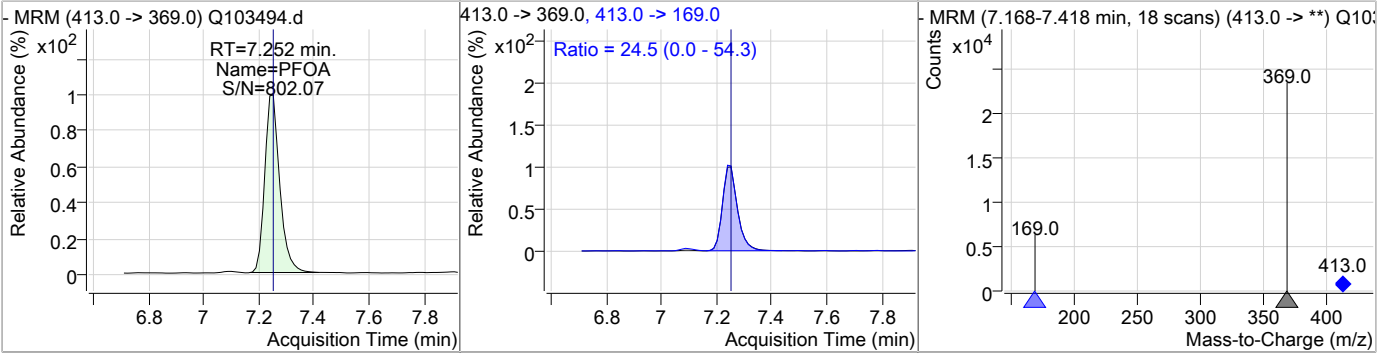


7.4.2

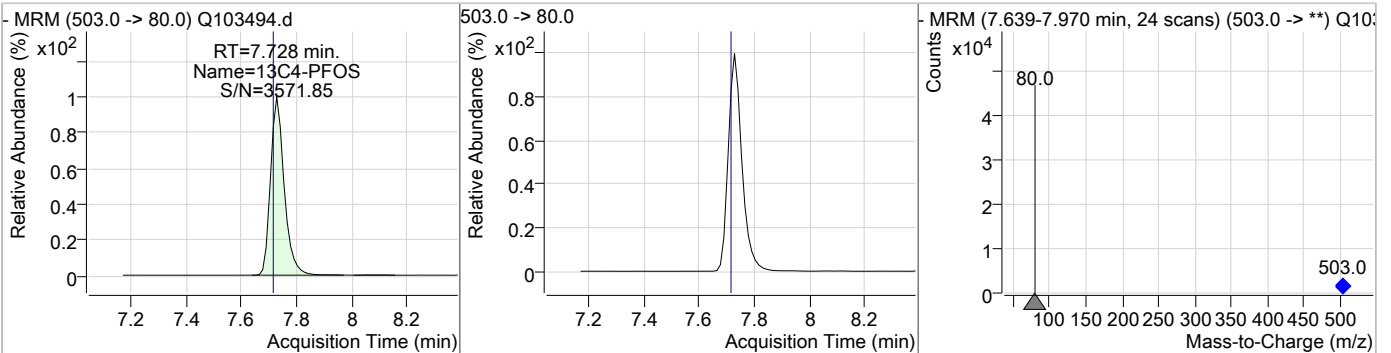
7

Perfluorinated Compounds by LC/MS/MS

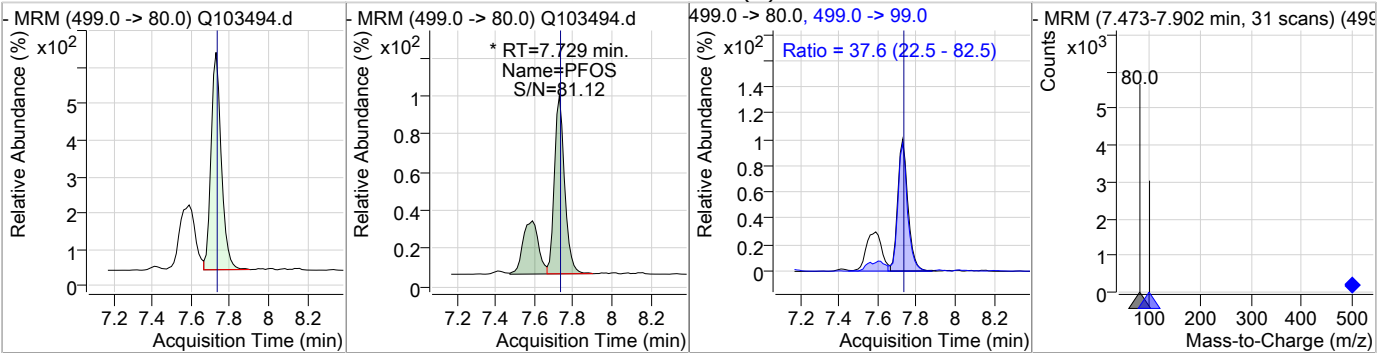
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	1.44	7.25	0.01	16636	413.0 -> 169.0	24.5	0.0	54.3



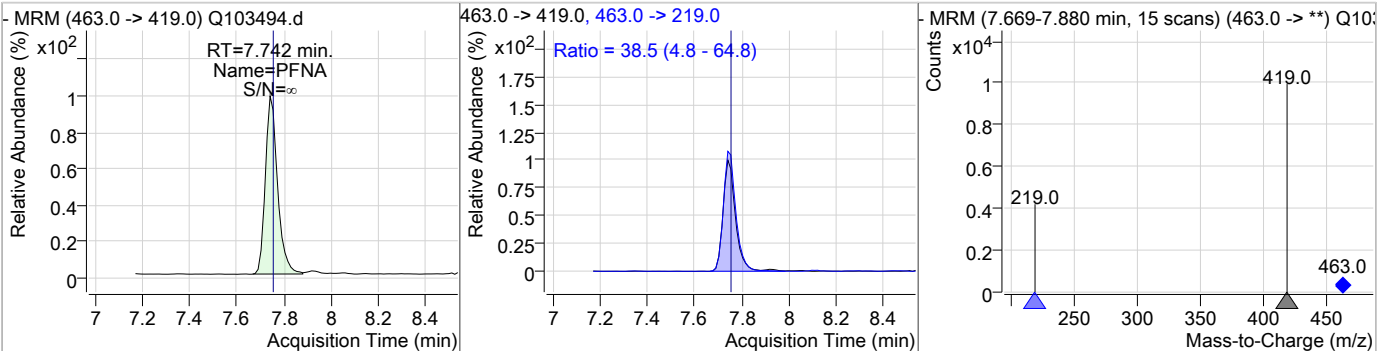
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.73	0.01	34675				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	1.62	7.73	0.01	3209 (m)	499.0 -> 99.0	37.6	22.5	82.5

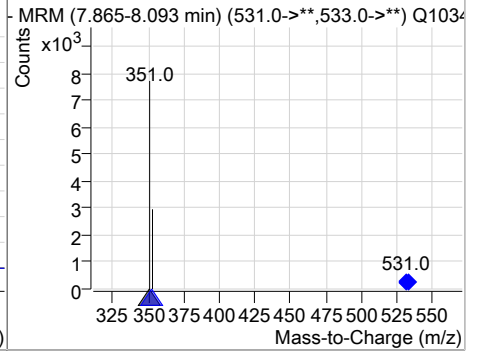
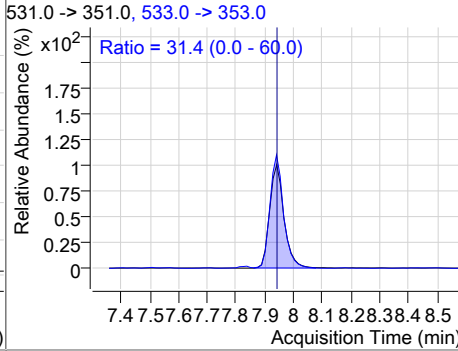
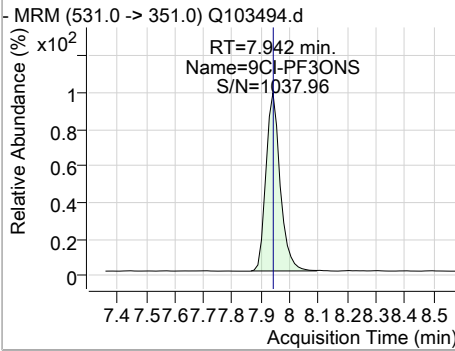


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	1.36	7.74	0.00	6960	463.0 -> 219.0	38.5	4.8	64.8

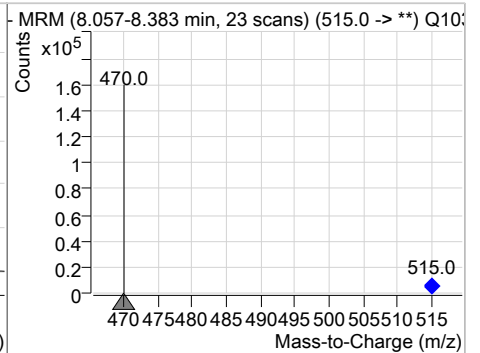
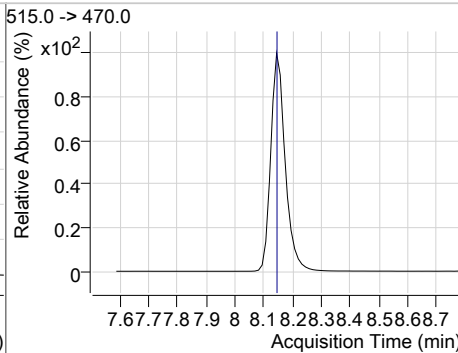
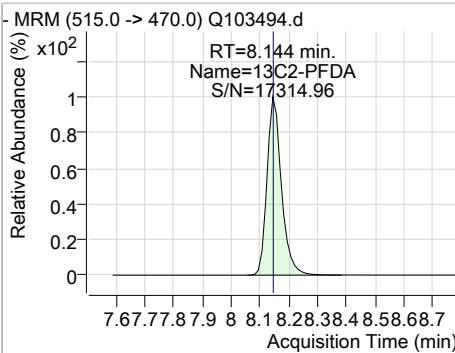


Perfluorinated Compounds by LC/MS/MS

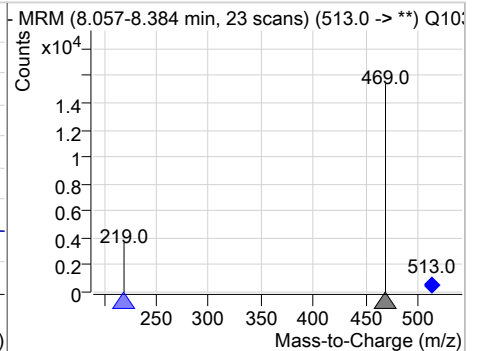
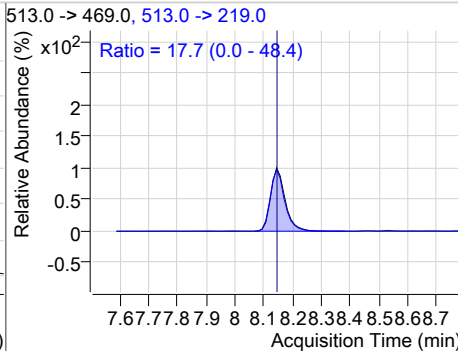
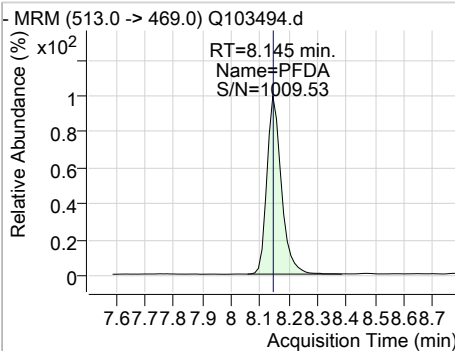
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9CI-PF3ONS	1.24	7.94	0.01	5343	533.0 -> 353.0	31.4	0.0	60.0



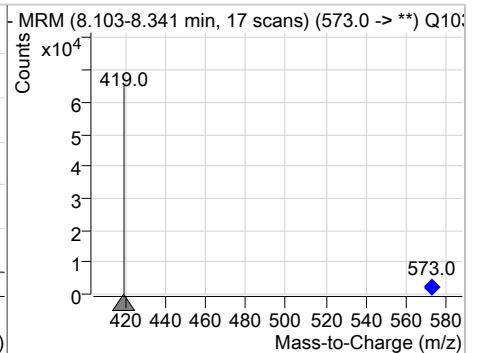
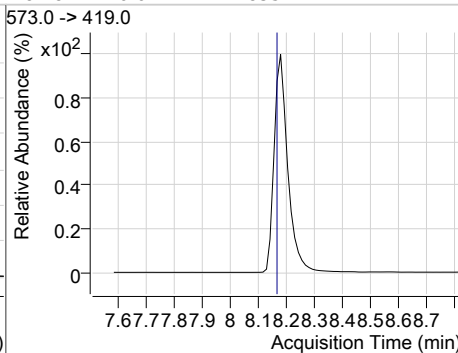
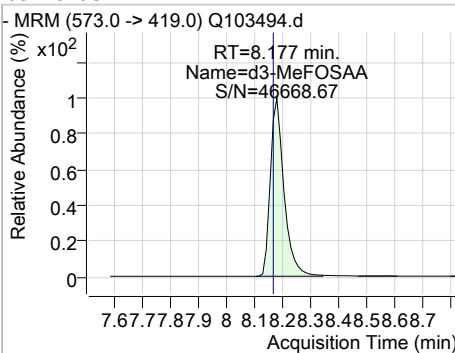
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	20.10	8.14	0.01	119247				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	1.31	8.14	0.01	10668	513.0 -> 219.0	17.7	0.0	48.4

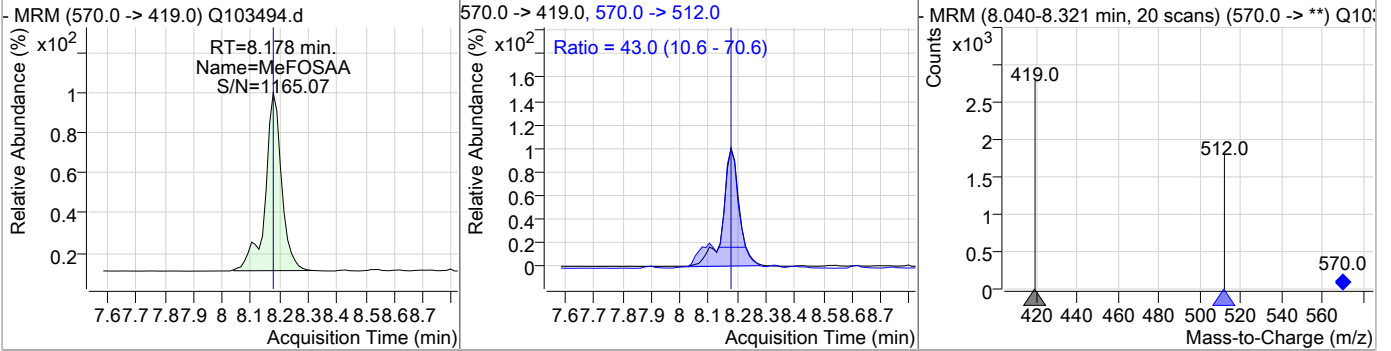


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.18	0.01	48354				

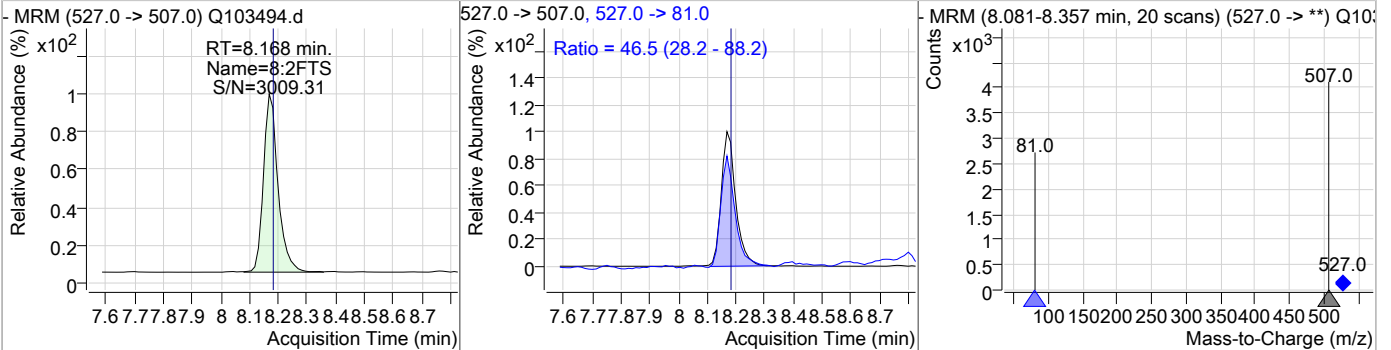


Perfluorinated Compounds by LC/MS/MS

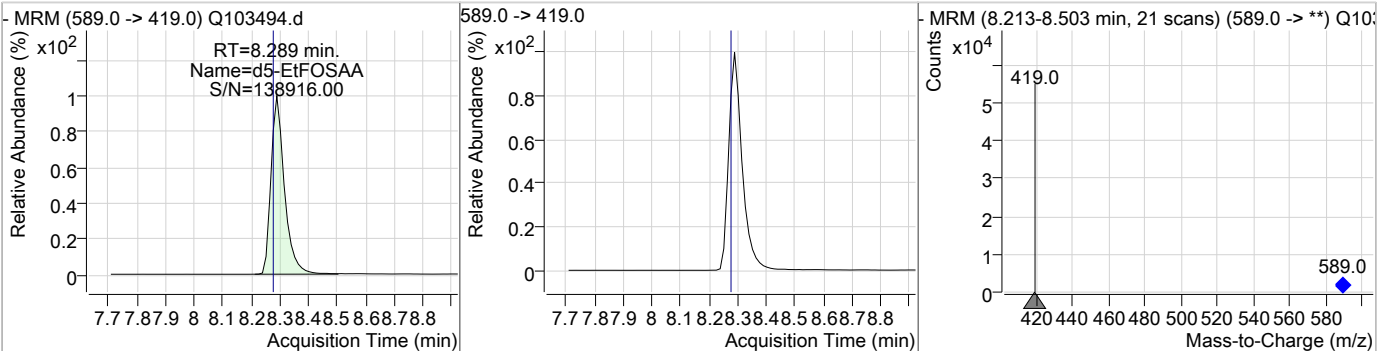
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	1.02	8.18	0.01	1356	570.0 -> 512.0	43.0	10.6	70.6



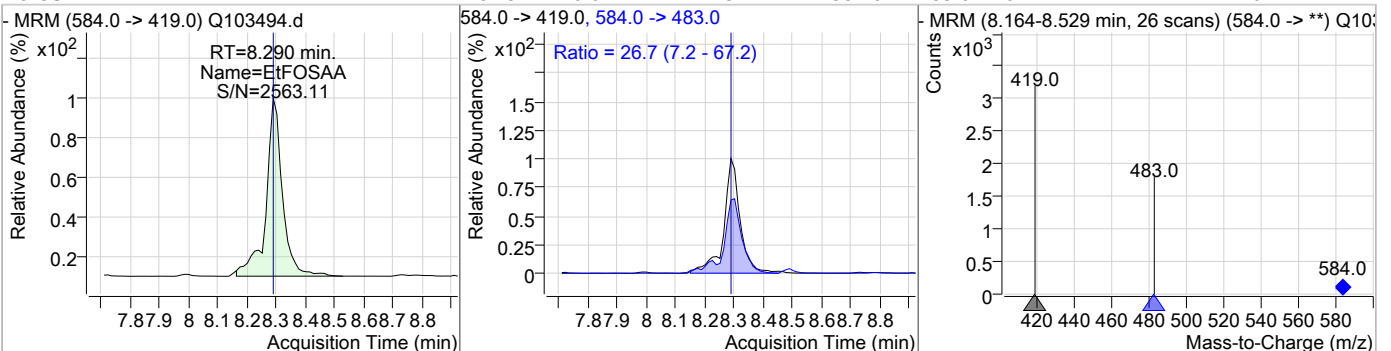
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	1.42	8.17	0.00	2364	527.0 -> 81.0	46.5	28.2	88.2



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	32.27	8.29	0.03	40521	589.0 -> 419.0			

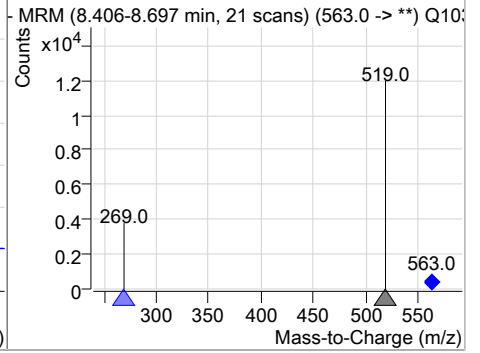
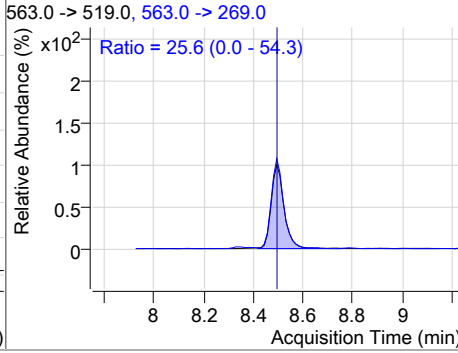
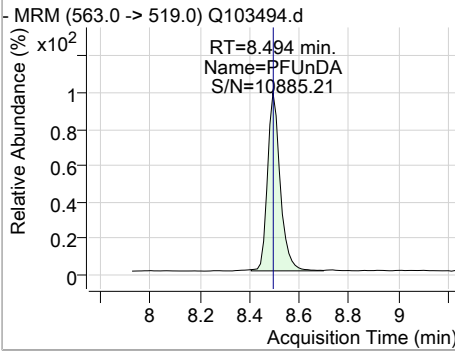


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	1.17	8.29	0.01	1443	584.0 -> 483.0	26.7	7.2	67.2

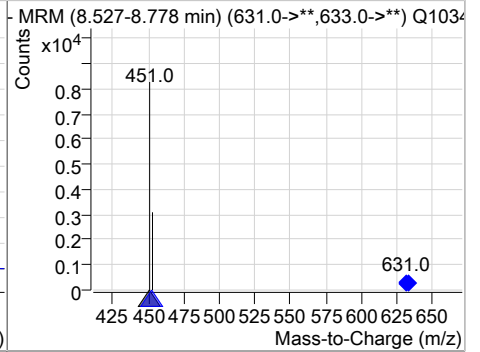
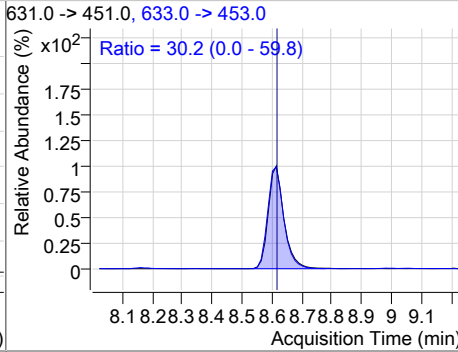
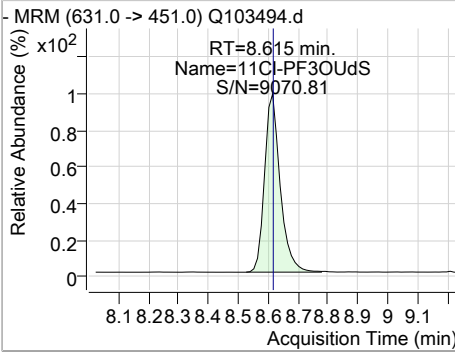


Perfluorinated Compounds by LC/MS/MS

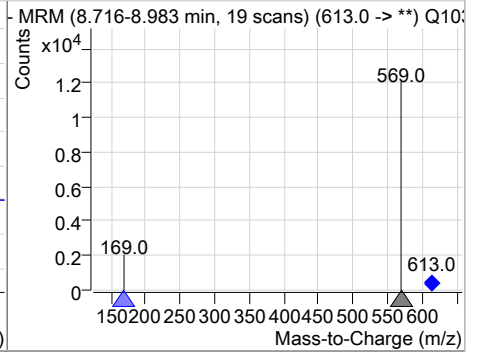
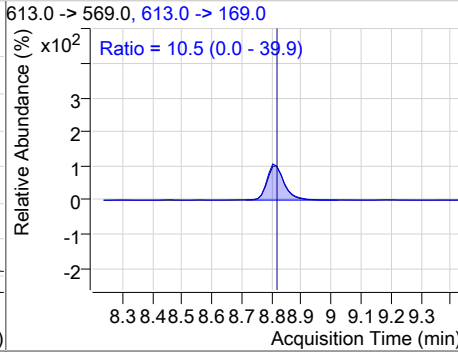
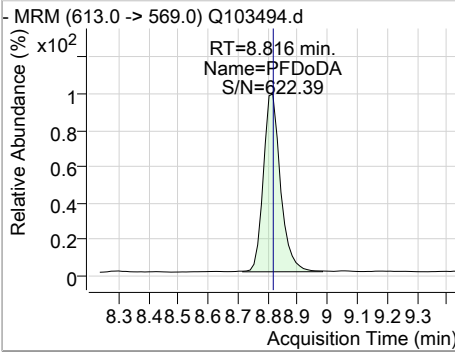
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	1.19	8.49	0.01	8234	563.0 -> 269.0	25.6	0.0	54.3



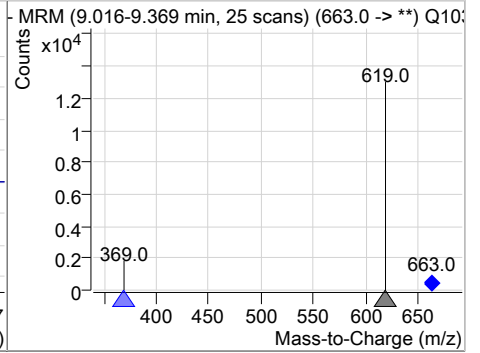
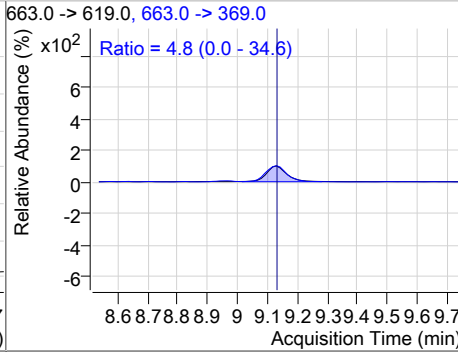
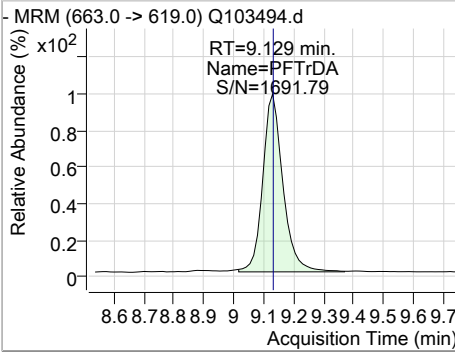
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.91	8.61	0.01	5587	633.0 -> 453.0	30.2	0.0	59.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.98	8.82	0.01	8601	613.0 -> 169.0	10.5	0.0	39.9

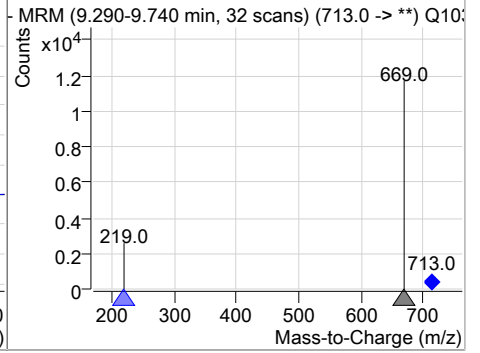
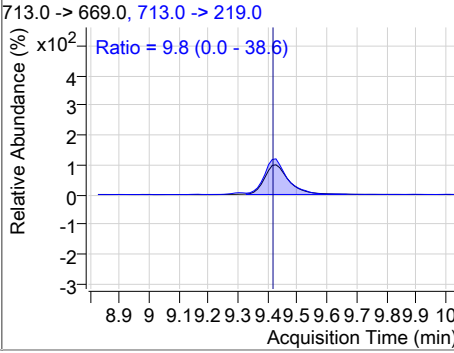
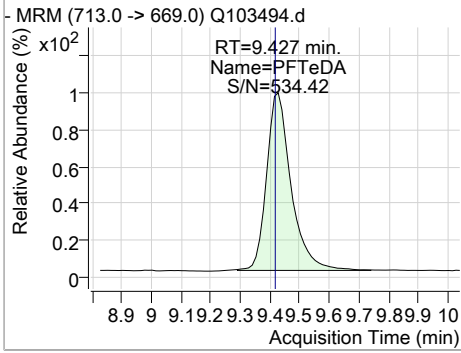


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	0.84	9.13	0.01	8740	663.0 -> 369.0	4.8	0.0	34.6



Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.83	9.43	0.03	7418	713.0 -> 219.0	9.8	0.0	38.6



7.4.2
7

Manual Integration Approval Summary

Sample Number: OP97324-MSD Method: EPA 537.1 REV 1.0
Lab FileID: Q103494.D Analyst approved: 06/19/23 16:34 Anna Ludwig
Injection Time: 06/19/23 00:56 Supervisor approved: 06/19/23 17:33 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.63	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.73	Split peak

7.4.2.1

7

Perfluorinated Compounds by LC/MS/MS

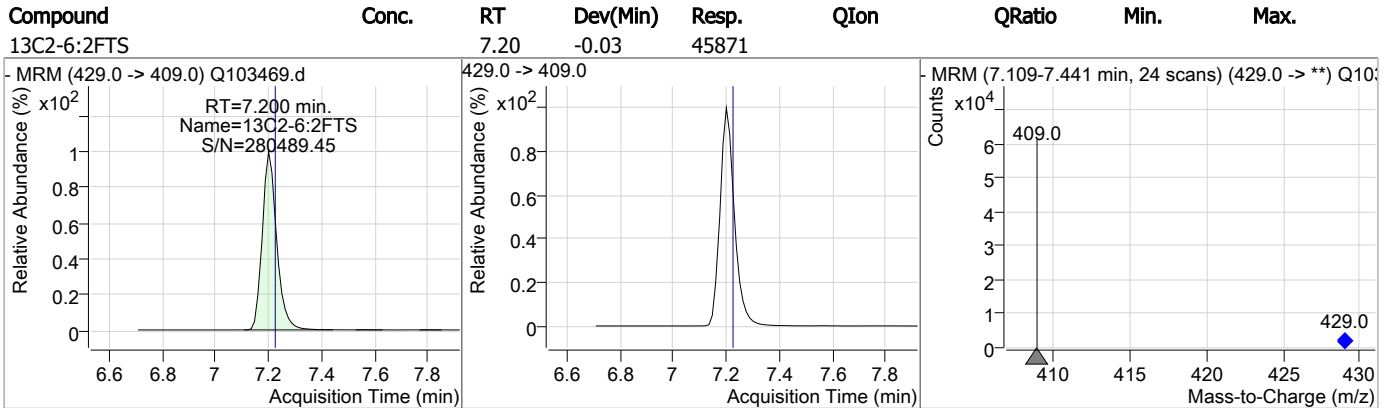
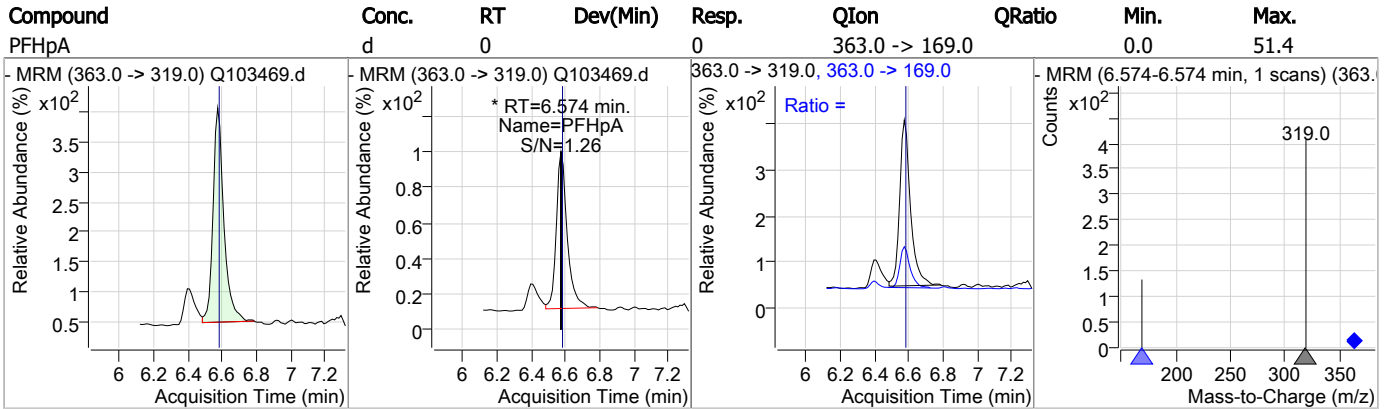
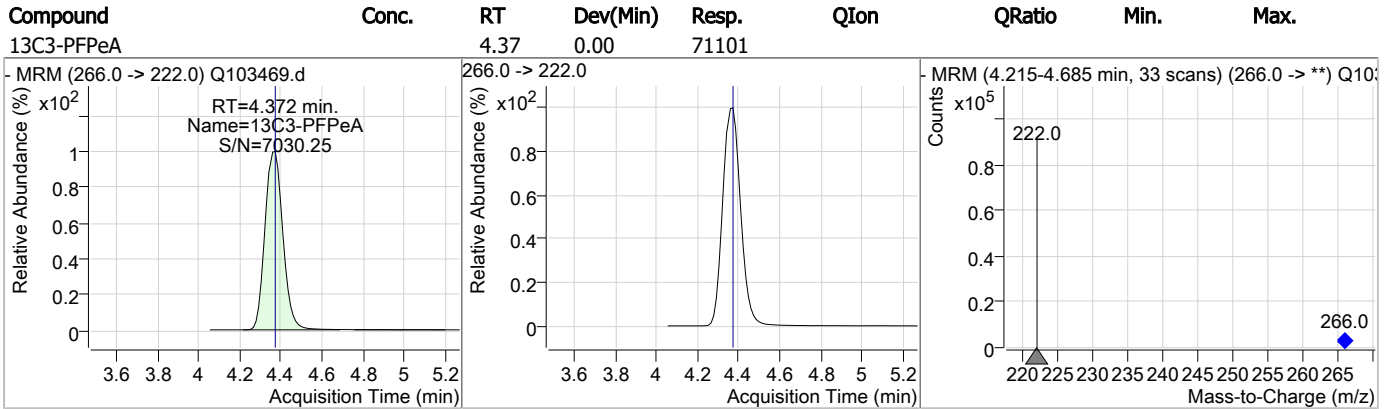
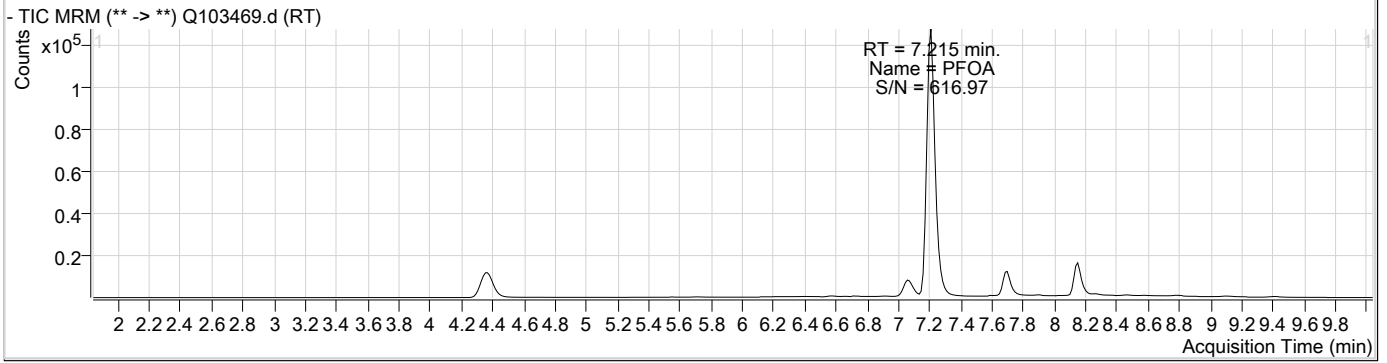
Data File : Q103469.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 6:21:58 PM
 Sample Name : RT
 Vial : P1-B2
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP96727,SQ2201,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
13C2-6:2FTS	7.200	429.0 -> 409.0	45871	20.00	µg/L	-0.025
13C2-PFOA	7.214	415.0 -> 370.0	227724	20.00	µg/L	-0.025
13C3-PFPeA	4.372	266.0 -> 222.0	71101	20.00	µg/L	0.000
13C4-PFOS	7.702	503.0 -> 80.0	40214	20.00	µg/L	-0.013
d3-MeFOSAA	8.152	573.0 -> 419.0	51216	40.00	µg/L	-0.013
System Monitoring Compounds						
13C2-PFDA	-	515.0 -> 470.0	-	N.D.		
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = NA%		
13C2-PFHxA	-	315.0 -> 270.0	-	N.D.		
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = NA%		
d5-EtFOSAA	8.264	589.0 -> 419.0	0	0.00	µg/L m	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = NA%		
13C3-HFPO-DA	-	287.0 -> 169.0	-	N.D.		
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = NA%		
Target Compounds						
						QValue
6:2FTS	7.188	427.0 -> 407.0	0	0.00	µg/L m	1
8:2FTS	8.143	527.0 -> 507.0	0	0.00	µg/L m	1
EtFOSAA	8.277	584.0 -> 419.0	0	0.00	µg/L m	1
MeFOSAA	8.152	570.0 -> 419.0	0	0.00	µg/L m	1
PFBA	-	213.0 -> 169.0	-	N.D.		
PFBS	-	299.0 -> 80.0	-	N.D.		
PFDA	-	513.0 -> 469.0	-	N.D.		
PFDoDA	8.791	613.0 -> 569.0	0	0.00	µg/L m	1
PFHpA	6.574	363.0 -> 319.0	0	0.00	µg/L m	1
PFHpS	-	449.0 -> 80.0	-	N.D.		
PFHxA	-	313.0 -> 269.0	-	N.D.		
PFHxS	-	399.0 -> 80.0	-	N.D.		
PFNA	-	463.0 -> 419.0	-	N.D.		
PFOA	7.215	413.0 -> 369.0	190595	15.37	µg/L m	97
PFOS	-	499.0 -> 80.0	-	N.D.		
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFTeDA	9.414	713.0 -> 669.0	0	0.00	µg/L m	1
PFTrDA	9.104	663.0 -> 619.0	0	0.00	µg/L m	1
PFUnDA	-	563.0 -> 519.0	-	N.D.		
ADONA	-	377.0 -> 251.0	-	N.D.		
9Cl-PF3ONS	7.914	531.0 -> 351.0	0	0.00	µg/L m	1
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
HFPO-DA	-	285.0 -> 169.0	-	N.D.		

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

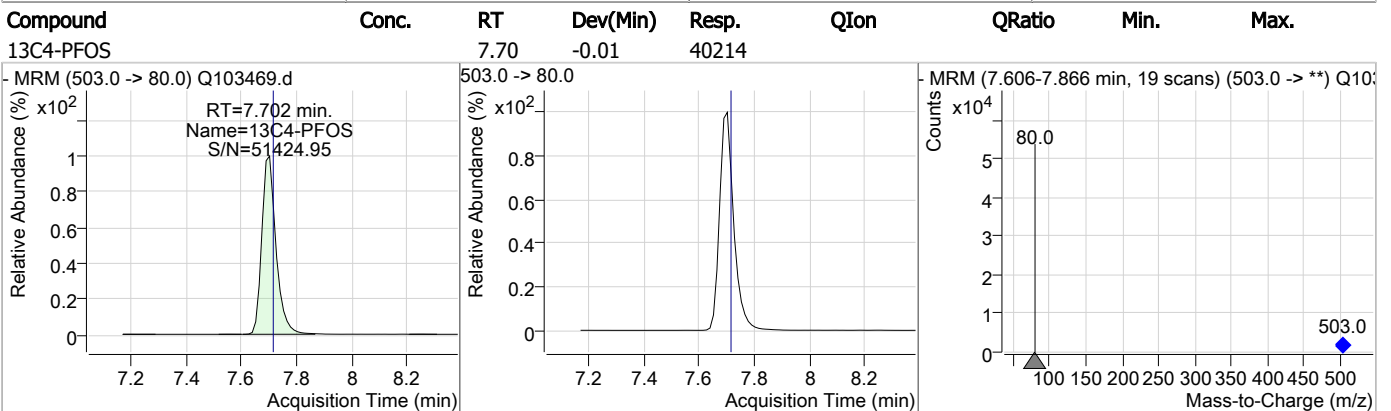
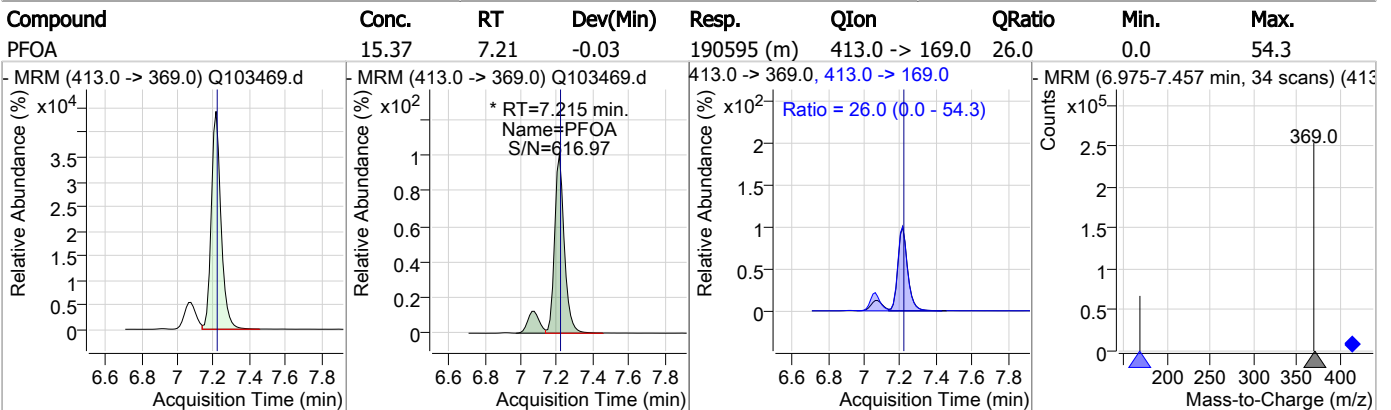
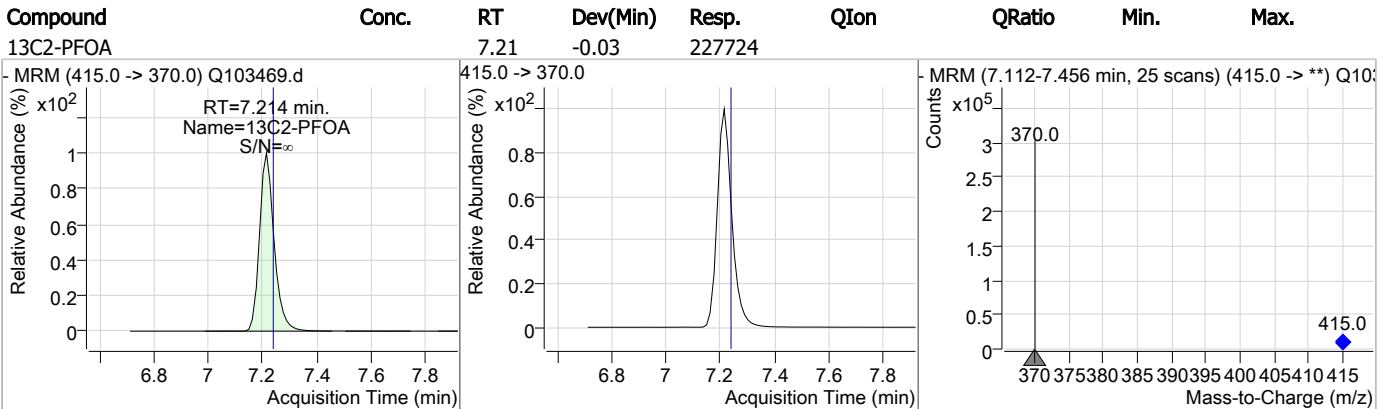
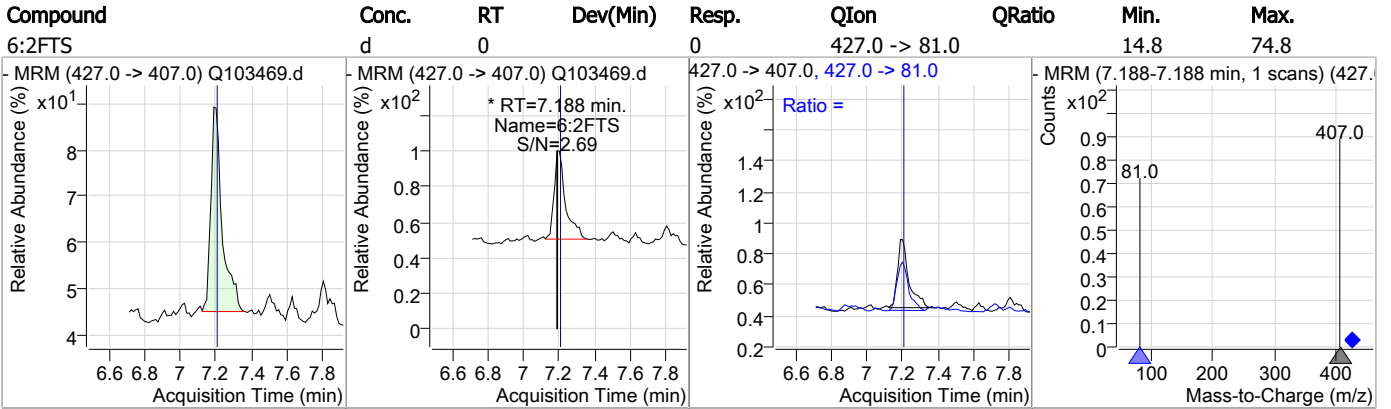
7.5.1
7

Perfluorinated Compounds by LC/MS/MS

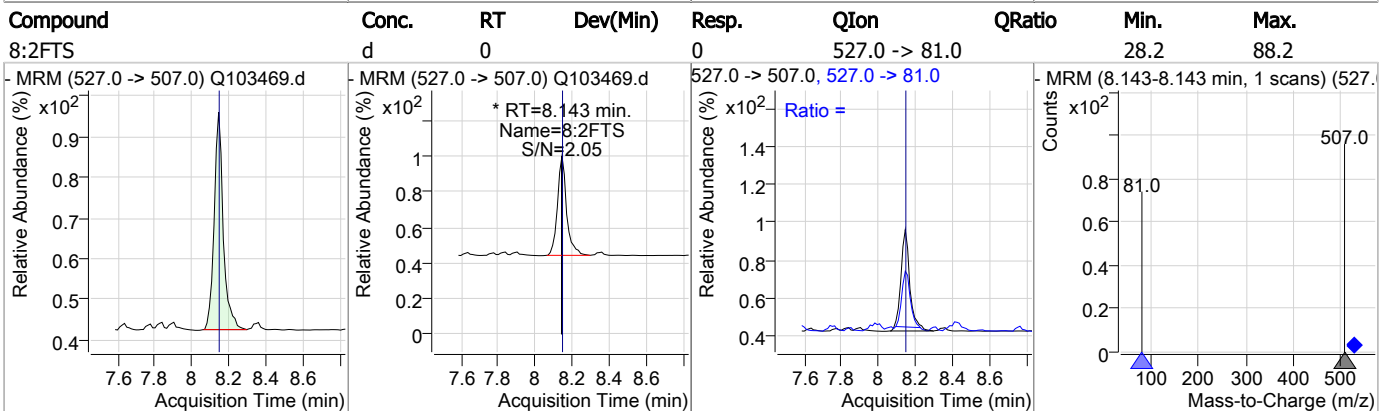
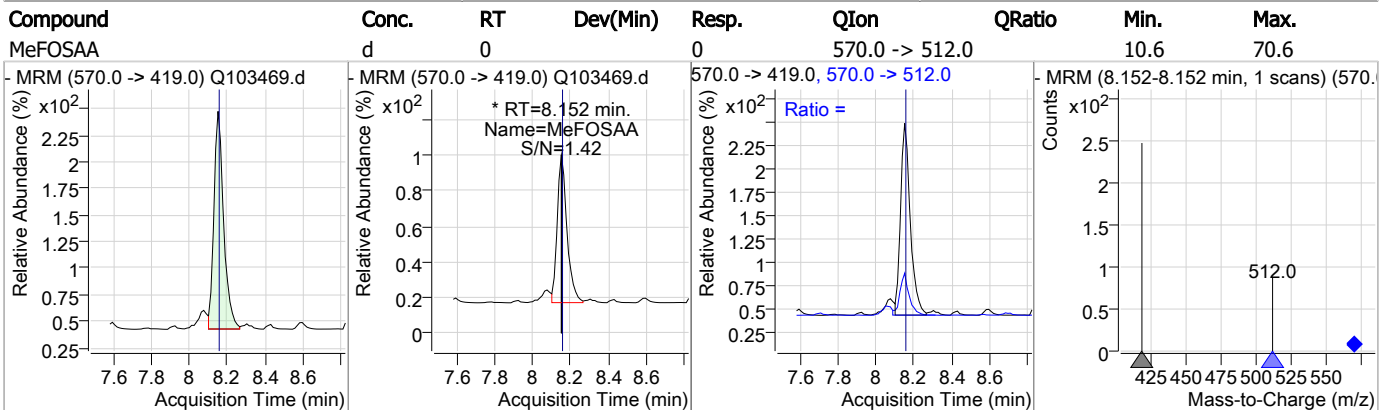
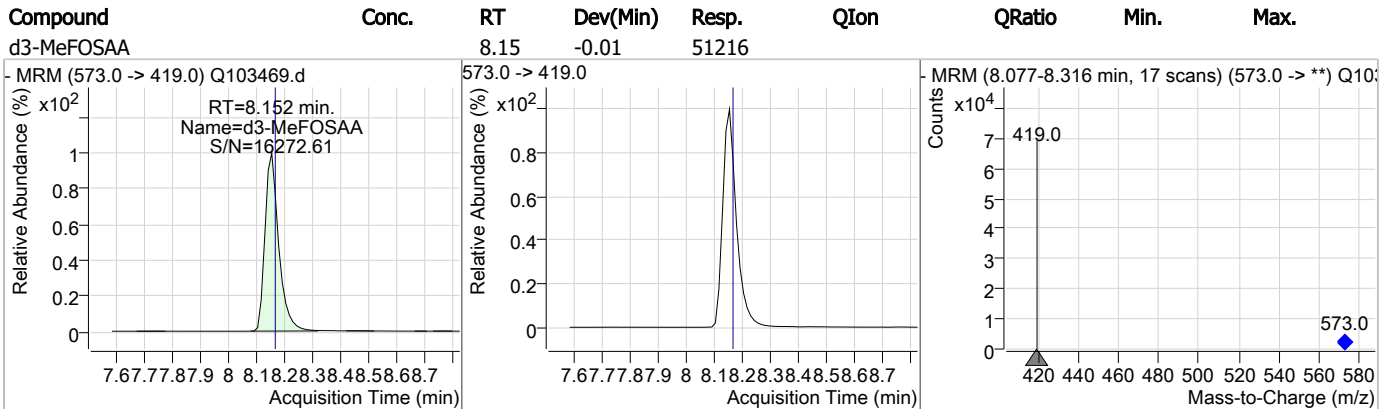
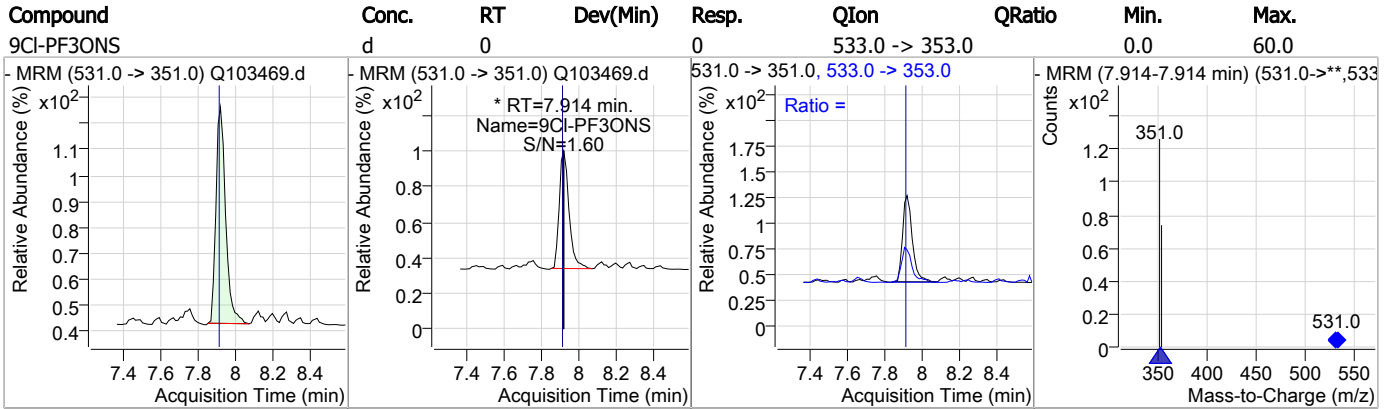


7.5.1
7

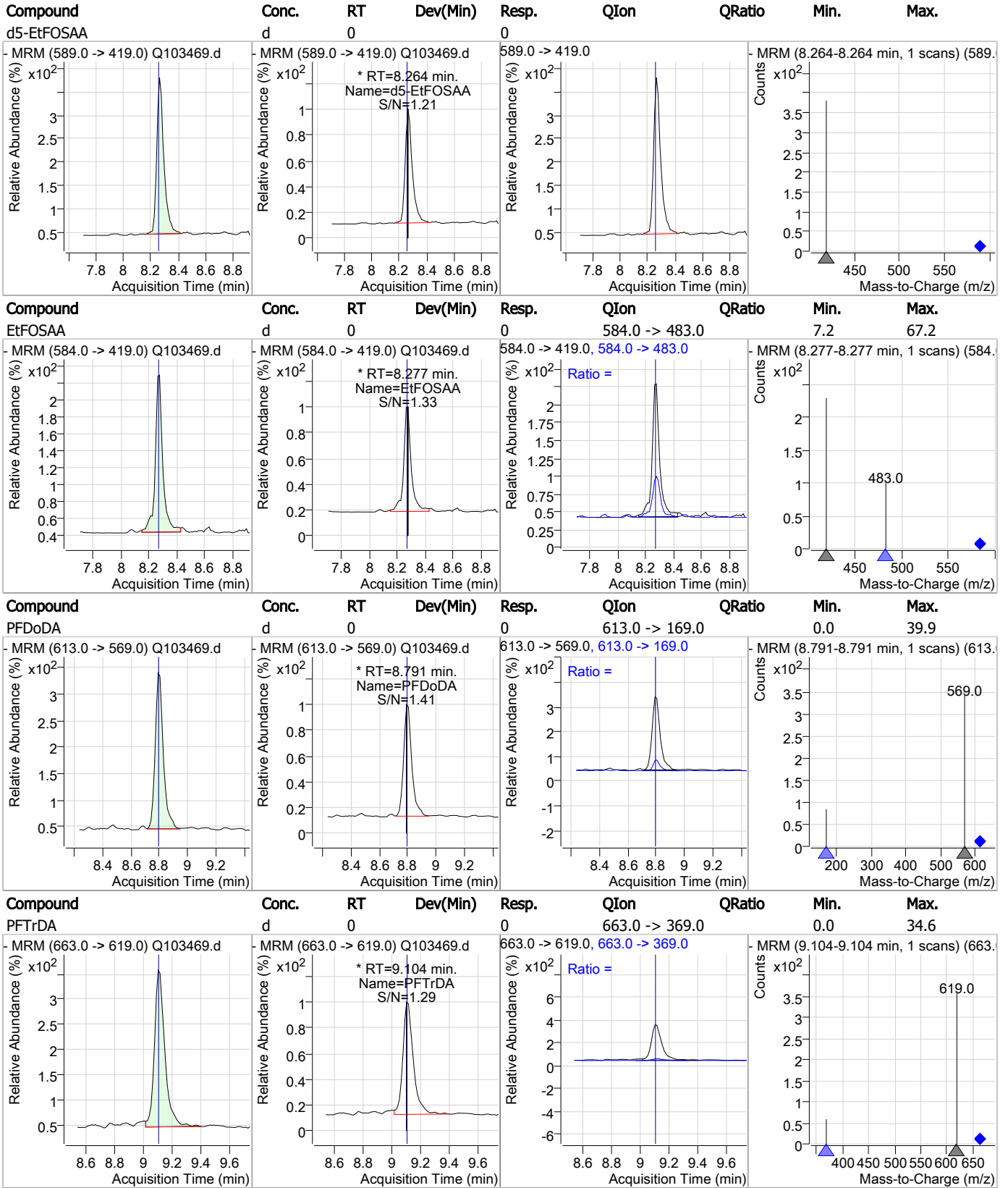
Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS



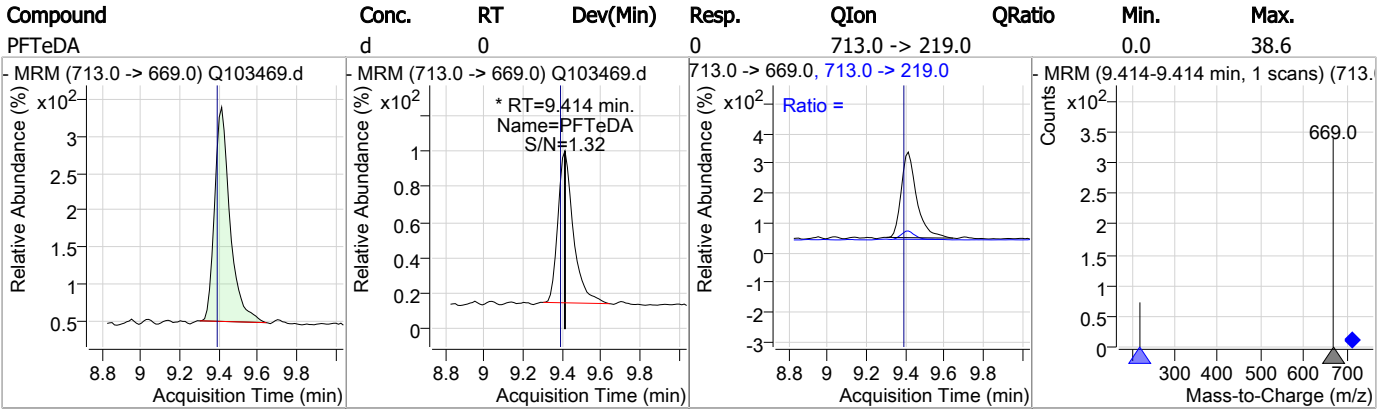
Perfluorinated Compounds by LC/MS/MS



7.5.1

7

Perfluorinated Compounds by LC/MS/MS



7.5.1

7

Manual Integration Approval Summary

Sample Number: SQ2201-RT Method: EPA 537.1 REV 1.0
Lab FileID: Q103469.D Analyst approved: 06/19/23 16:24 Anna Ludwig
Injection Time: 06/18/23 18:21 Supervisor approved: 06/19/23 17:23 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanoic acid	335-67-1		7.21	Split peak

7.5.1.1

7

Perfluorinated Compounds by LC/MS/MS

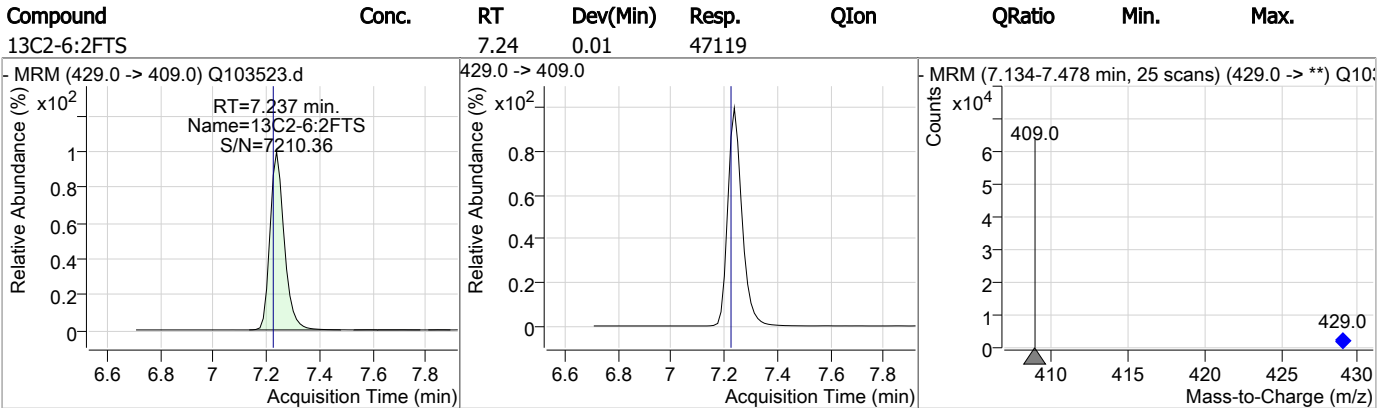
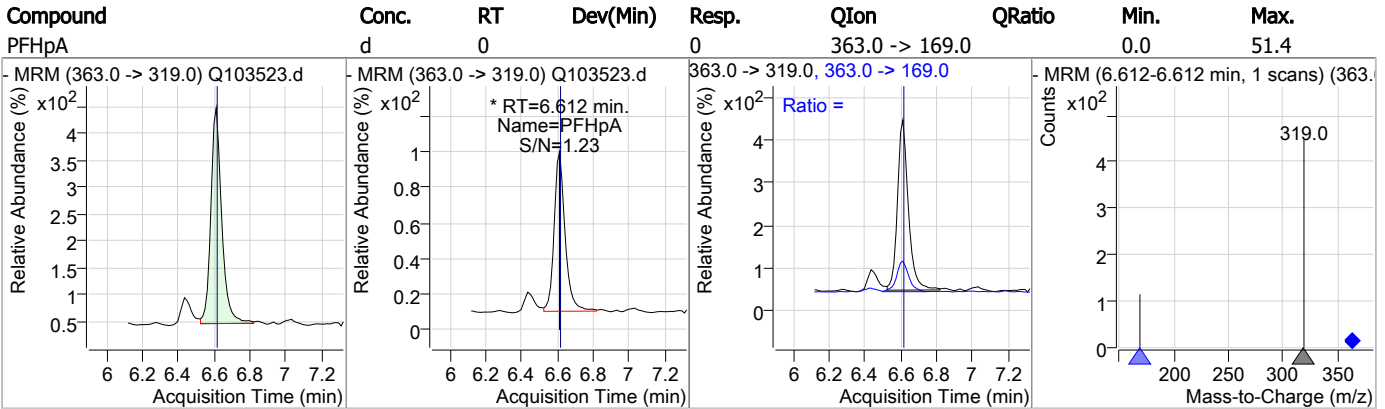
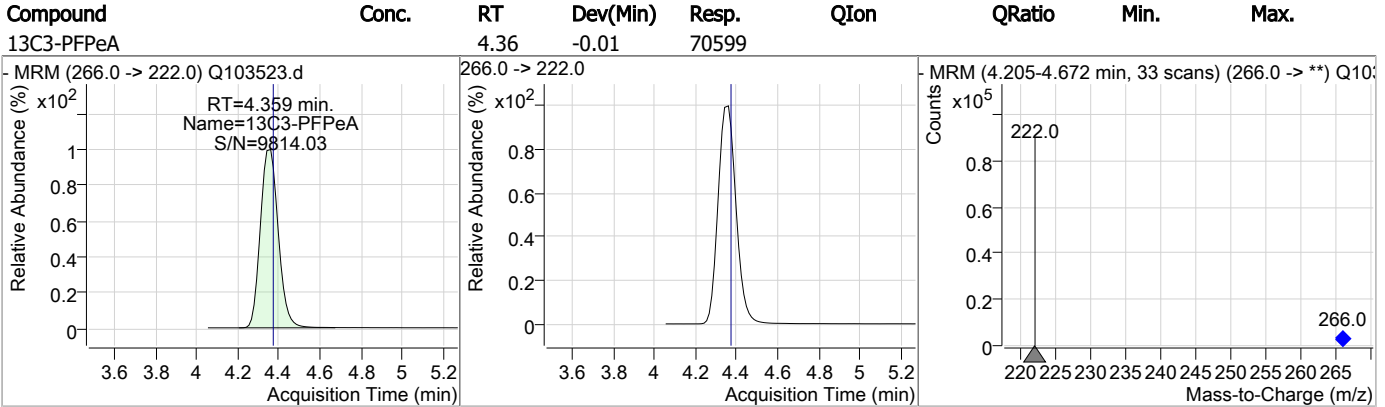
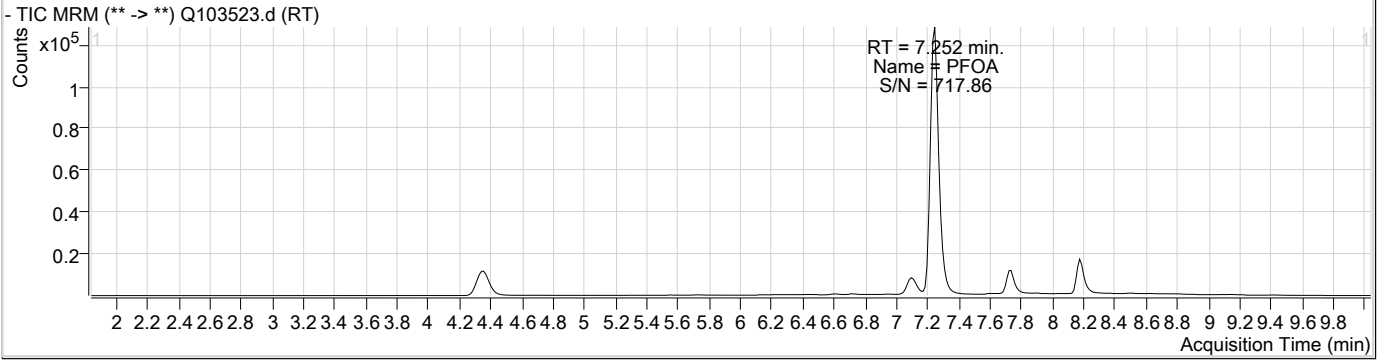
Data File : Q103523.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/19/2023 5:23:33 PM
 Sample Name : RT
 Vial : P1-B2
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2202.batch.bin
 Sample Information : OP96727,SQ2202,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
13C2-6:2FTS	7.237	429.0 -> 409.0	47119	20.00	µg/L	0.013
13C2-PFOA	7.252	415.0 -> 370.0	230919	20.00	µg/L	0.013
13C3-PFPeA	4.359	266.0 -> 222.0	70599	20.00	µg/L	-0.013
13C4-PFOS	7.728	503.0 -> 80.0	38905	20.00	µg/L	0.013
d3-MeFOSAA	8.177	573.0 -> 419.0	54087	40.00	µg/L	0.013
System Monitoring Compounds						
13C2-PFDA	-	515.0 -> 470.0	-	N.D.		
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = NA%		
13C2-PFHxA	-	315.0 -> 270.0	-	N.D.		
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = NA%		
d5-EtFOSAA	-	589.0 -> 419.0	-	N.D.		
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = NA%		
13C3-HFPO-DA	-	287.0 -> 169.0	-	N.D.		
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = NA%		
Target Compounds						
6:2FTS	7.238	427.0 -> 407.0	0	0.00	µg/L	m 1
8:2FTS	8.181	527.0 -> 507.0	0	0.00	µg/L	m 1
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
MeFOSAA	8.178	570.0 -> 419.0	0	0.00	µg/L	m 1
PFBA	-	213.0 -> 169.0	-	N.D.		
PFBS	-	299.0 -> 80.0	-	N.D.		
PFDA	-	513.0 -> 469.0	-	N.D.		
PFDoDA	-	613.0 -> 569.0	-	N.D.		
PFHpA	6.612	363.0 -> 319.0	0	0.00	µg/L	m 1
PFHpS	-	449.0 -> 80.0	-	N.D.		
PFHxA	-	313.0 -> 269.0	-	N.D.		
PFHxS	-	399.0 -> 80.0	-	N.D.		
PFNA	-	463.0 -> 419.0	-	N.D.		
PFOA	7.252	413.0 -> 369.0	192296	15.30	µg/L	m 95
PFOS	-	499.0 -> 80.0	-	N.D.		
PFPeA	-	263.0 -> 219.0	-	N.D.		
PFTeDA	-	713.0 -> 669.0	-	N.D.		
PFTTrDA	-	663.0 -> 619.0	-	N.D.		
PFUnDA	-	563.0 -> 519.0	-	N.D.		
ADONA	-	377.0 -> 251.0	-	N.D.		
9Cl-PF3ONS	7.941	531.0 -> 351.0	0	0.00	µg/L	m 1
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.		
HFPO-DA	-	285.0 -> 169.0	-	N.D.		

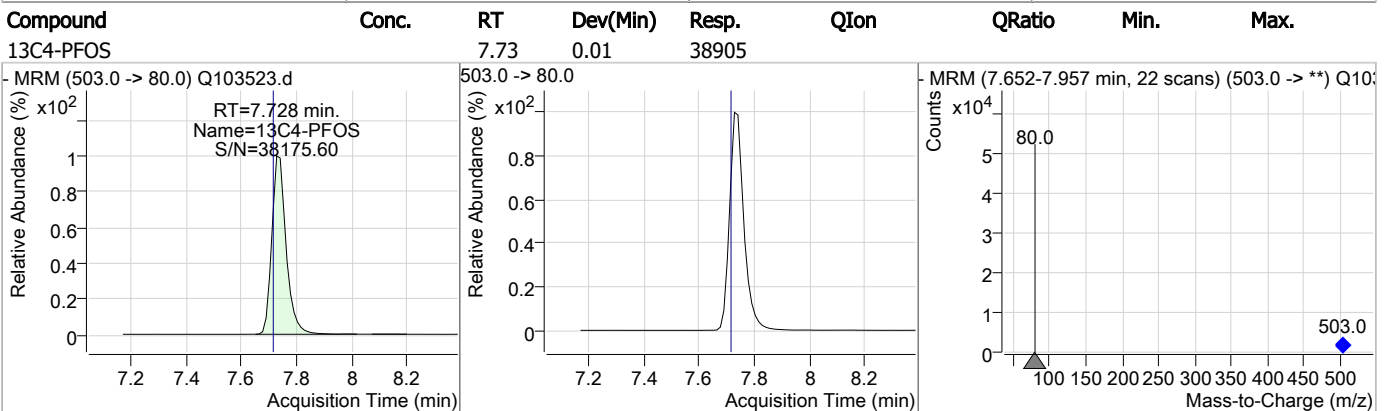
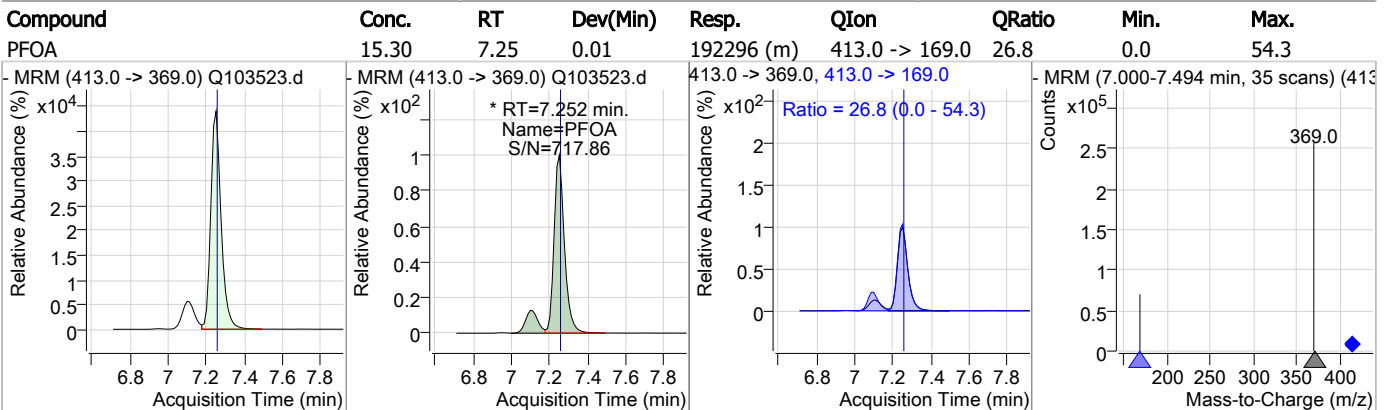
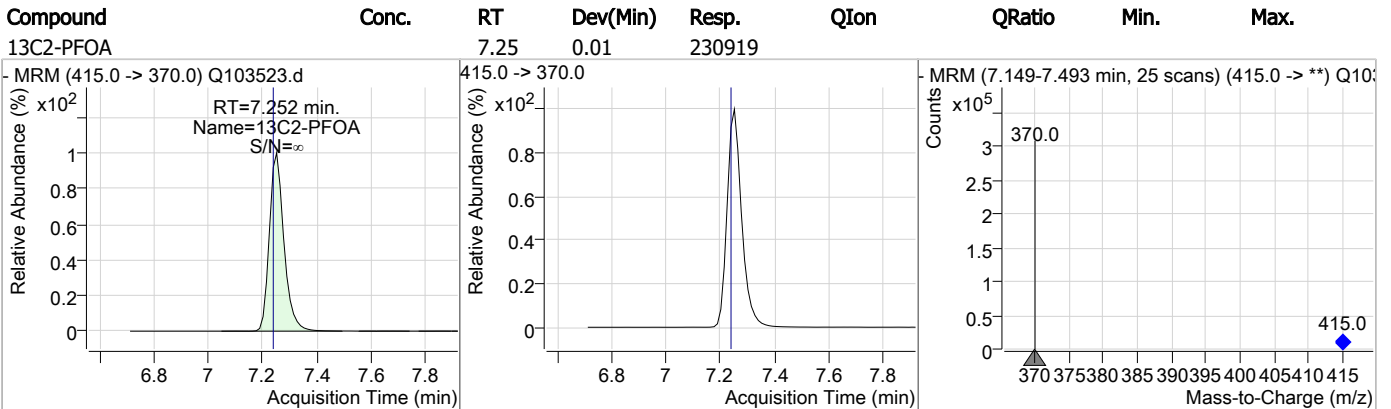
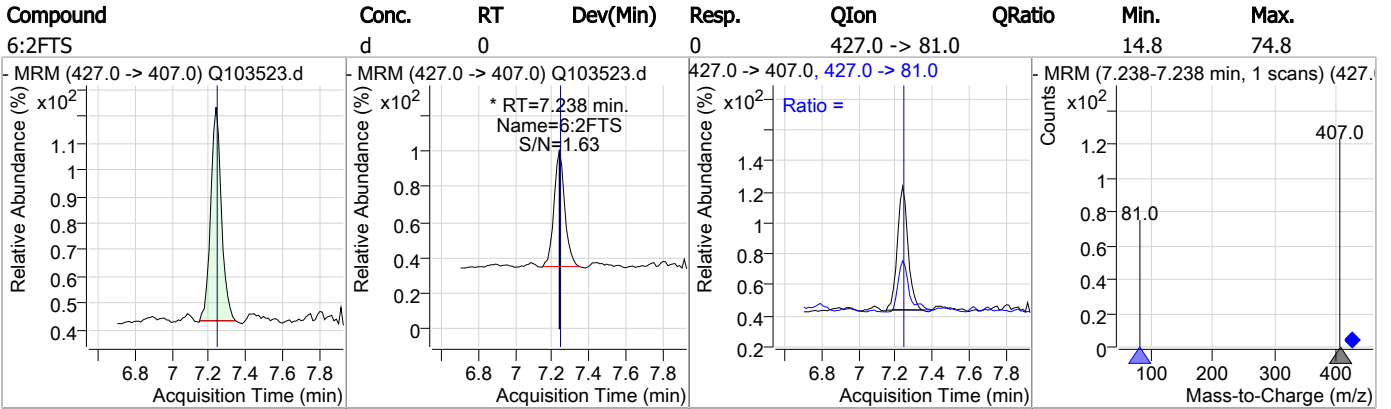
= Qualifier out of range, m = manually integrated, + = Area summed

7.5.2
7

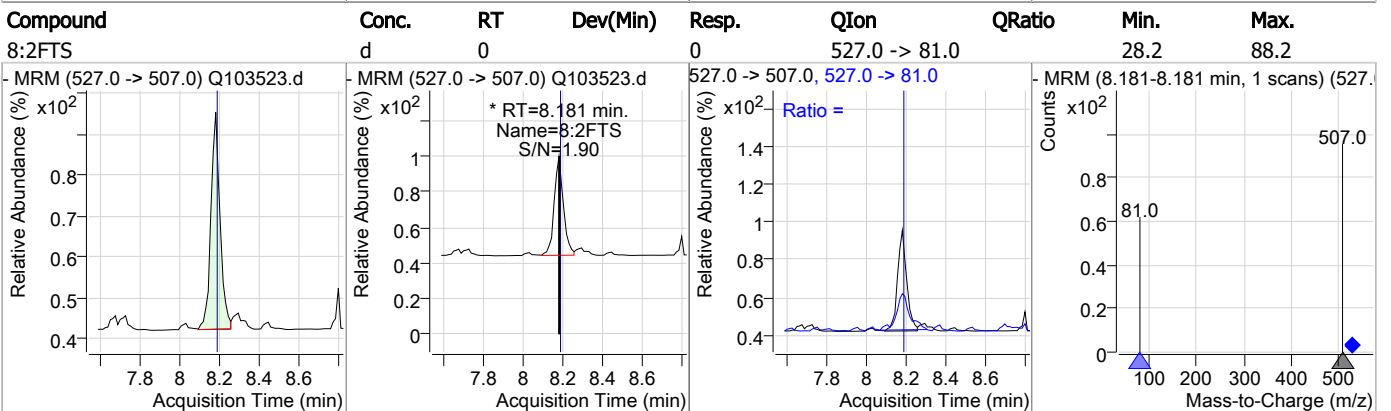
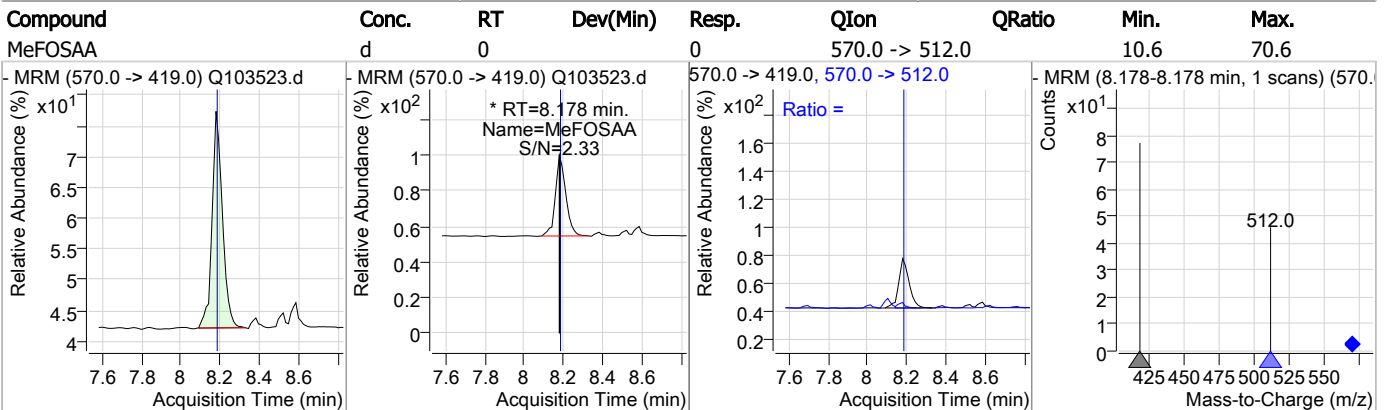
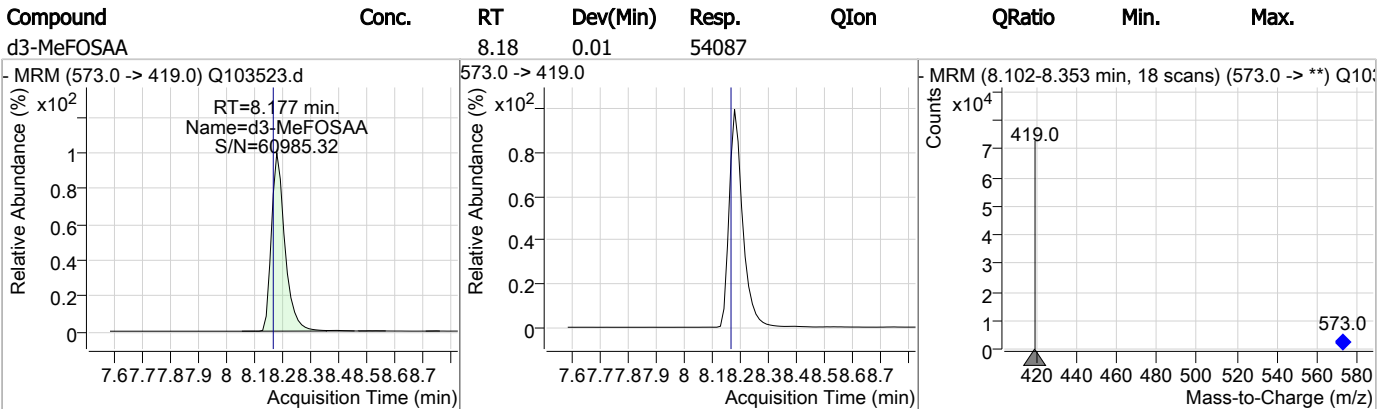
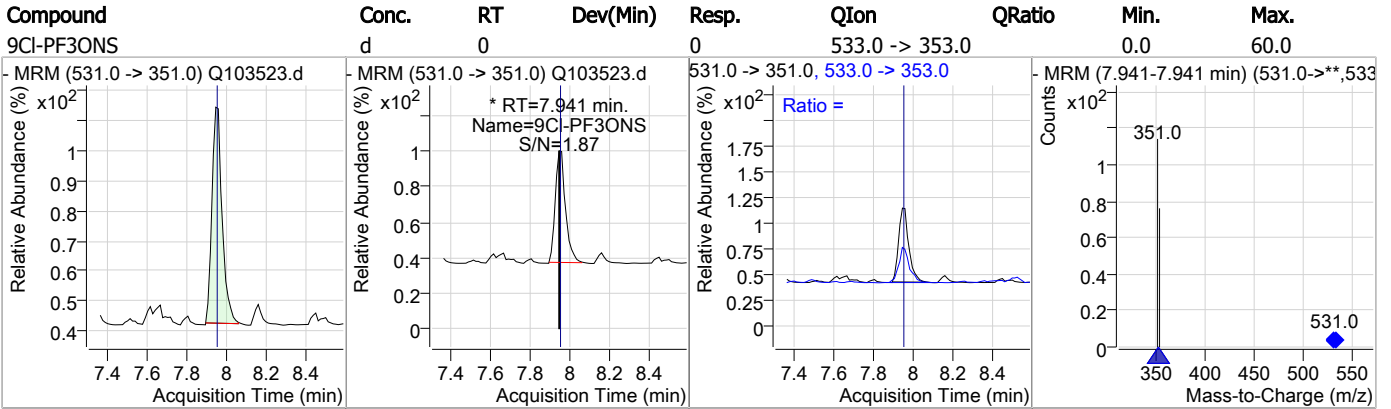
Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS



Manual Integration Approval Summary

Sample Number: SQ2202-RT Method: EPA 537.1 REV 1.0
Lab FileID: Q103523.D Analyst approved: 06/20/23 16:38 Anna Ludwig
Injection Time: 06/19/23 17:23 Supervisor approved: 06/21/23 09:45 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanoic acid	335-67-1		7.25	Split peak

7.5.2.1

7

QQQ Check Tune Report



Instrument Name Instrument 1
MS Model G6460A
MS Instrument Serial SG10447001
Software_Firmware Version B.08.02.B8260.0, FW: A.00.08.62
Tune Date & Time 16 June 2023 16:52:05
Data Path D:\MassHunter\Tune\QQQ\G6460A\atunes.TUNE.XML
Ion Source AJS ESI
Ionization Mode AJS ESI
Tuned Resolution All
Vacuum Pressure 1.46E+0[R]; 2.27E-5[H]

Source Parameters

Parameter	Value
Gas Temp	300
Gas Flow	10
Nebulizer	15
Capillary	4000
Nozzle Voltage	1500
Sheath Gas Temp	250
Sheath Gas Flow	7

7.6.1

7

QQQ Check Tune Report



Negative Results

Analyzer: MS1 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.99	0.00	Pass	0.70	0.71	0.01	Pass	70897
302.00	302.03	0.03	Pass	0.70	0.69	-0.01	Pass	34900
601.98	602.02	0.04	Pass	0.70	0.70	0.00	Pass	44259
1033.99	1034.04	0.05	Pass	0.70	0.68	-0.02	Pass	94613
1633.95	1634.01	0.06	Pass	0.70	0.70	0.00	Pass	203527
2233.91	2233.95	0.04	Pass	0.70	0.66	-0.04	Pass	77011

Analyzer: MS2 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.05	0.05	Pass	0.70	0.65	-0.05	Pass	23070
112.99	112.99	0.00	Pass	0.70	0.69	-0.01	Pass	169276
302.00	301.98	-0.02	Pass	0.70	0.72	0.02	Pass	75021
601.98	601.99	0.01	Pass	0.70	0.73	0.03	Pass	93675
1033.99	1033.98	-0.01	Pass	0.70	0.70	0.00	Pass	239490
1633.95	1633.96	0.01	Pass	0.70	0.68	-0.02	Pass	434661
2233.91	2233.93	0.02	Pass	0.70	0.70	0.00	Pass	211313

Analyzer: MS1 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	113.00	0.01	Pass	1.20	1.11	-0.09	Pass	98806
302.00	301.98	-0.02	Pass	1.20	1.35	0.15	Pass	50609
601.98	601.96	-0.02	Pass	1.20	1.39	0.19	Pass	71739
1033.99	1033.98	-0.01	Pass	1.20	1.39	0.19	Pass	200041
1633.95	1633.93	-0.02	Pass	1.20	1.22	0.02	Pass	557315
2233.91	2233.89	-0.02	Pass	1.20	1.15	-0.05	Pass	391333

Analyzer: MS2 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.03	0.03	Pass	1.20	1.13	-0.07	Pass	31964
112.99	112.95	-0.04	Pass	1.20	1.23	0.03	Pass	201936
302.00	301.94	-0.06	Pass	1.20	1.35	0.15	Pass	107694
601.98	601.92	-0.06	Pass	1.20	1.27	0.07	Pass	146019
1033.99	1033.97	-0.02	Pass	1.20	1.07	-0.13	Pass	433031
1633.95	1633.91	-0.04	Pass	1.20	1.14	-0.06	Pass	1219292
2233.91	2233.93	0.02	Pass	1.20	1.31	0.11	Pass	1297305

Analyzer: MS1 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.81	-0.18	Pass	2.50	2.35	-0.15	Pass	145020
302.00	301.98	-0.02	Pass	2.50	2.60	0.10	Pass	65038
601.98	601.93	-0.05	Pass	2.50	2.57	0.07	Pass	98409
1033.99	1033.97	-0.02	Pass	2.50	2.55	0.05	Pass	330753
1633.95	1633.91	-0.04	Pass	2.50	2.44	-0.06	Pass	1004821
2233.91	2233.85	-0.06	Pass	2.50	2.28	-0.22	Pass	859242

Analyzer: MS2 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.02	0.02	Pass	2.50	2.46	-0.04	Pass	37323
112.99	112.96	-0.03	Pass	2.50	2.56	0.06	Pass	238987
302.00	301.93	-0.07	Pass	2.50	2.69	0.19	Pass	129954
601.98	601.92	-0.06	Pass	2.50	2.65	0.15	Pass	194644
1033.99	1033.95	-0.04	Pass	2.50	2.42	-0.08	Pass	810202
1633.95	1633.93	-0.02	Pass	2.50	2.54	0.04	Pass	2938920
2233.91	2234.03	0.12	Pass	2.50	2.68	0.18	Pass	3536672

7.6.1
7

Perfluorinated Compounds by LC/MS/MS

Data File : Q103461.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 4:15:39 PM
 Sample Name : ic2201-0.5
 Vial : P1-A2
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP96727,SQ2201,250,,,1,1,water

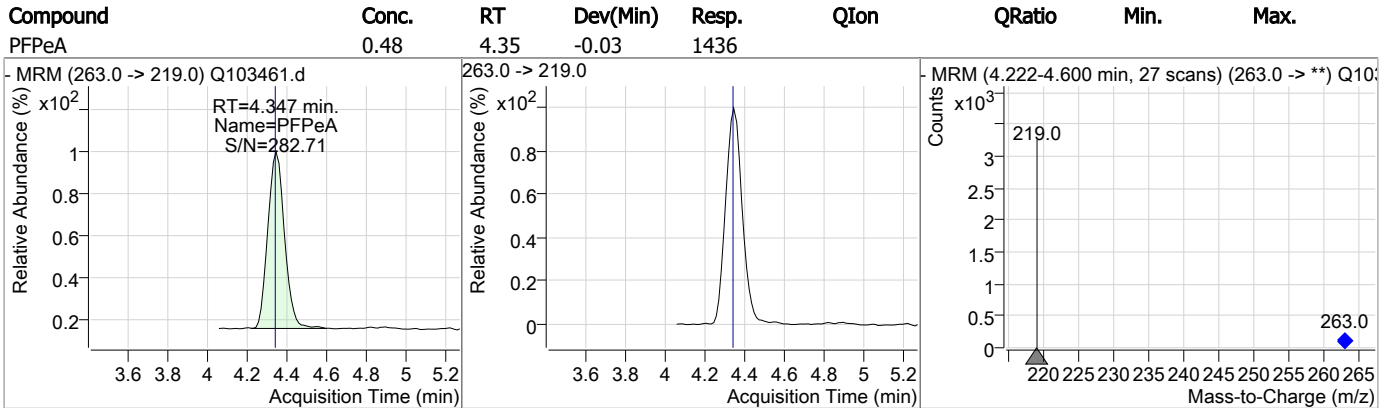
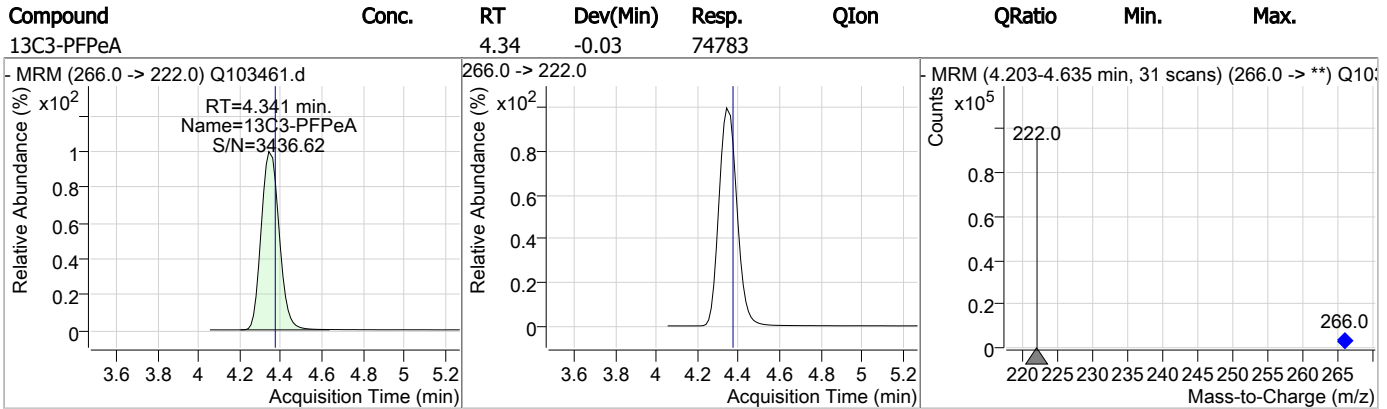
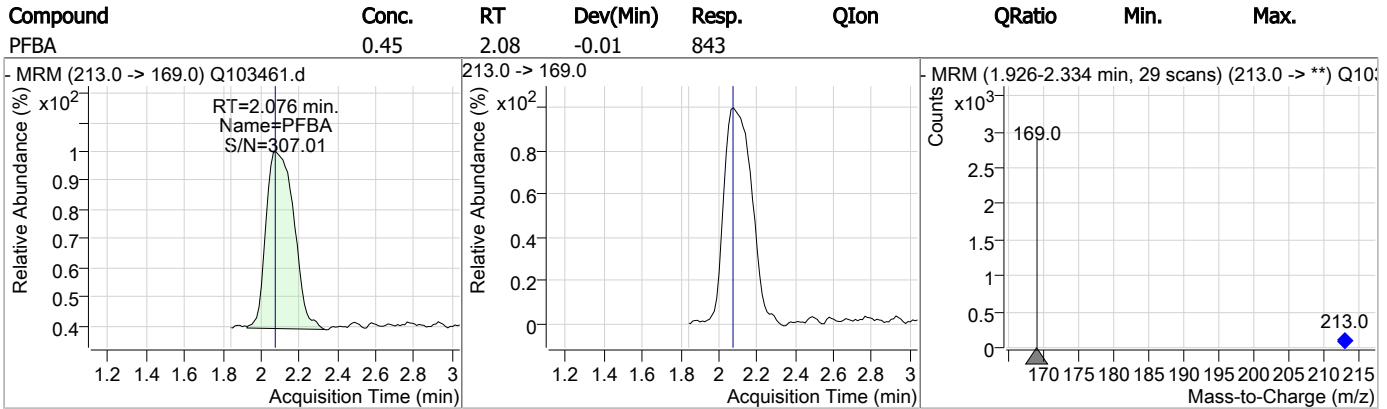
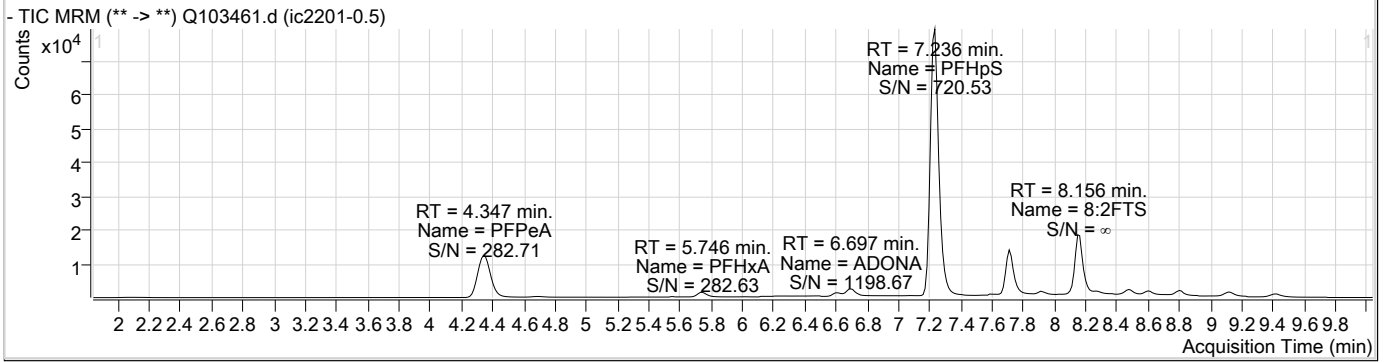
Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)	QValue
Internal Standards							
13C2-6:2FTS	7.225	429.0 -> 409.0	49664	20.00	µg/L	0.000	
13C2-PFOA	7.239	415.0 -> 370.0	240225	20.00	µg/L	0.000	
13C3-PFPeA	4.341	266.0 -> 222.0	74783	20.00	µg/L	-0.031	
13C4-PFOS	7.715	503.0 -> 80.0	42144	20.00	µg/L	0.000	
d3-MeFOSAA	8.165	573.0 -> 419.0	54759	40.00	µg/L	0.000	
System Monitoring Compounds							
13C2-PFDA	8.132	515.0 -> 470.0	3106	0.46	µg/L	0.000	
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 2.3%			
13C2-PFHxA	5.744	315.0 -> 270.0	2986	0.44	µg/L	0.013	
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 2.2%			
d5-EtFOSAA	8.277	589.0 -> 419.0	1274	0.92	µg/L	0.013	
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 2.3%			
13C3-HFPO-DA	6.026	287.0 -> 169.0	80	0.88	µg/L m	0.013	
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 2.2%			
Target Compounds							
6:2FTS	7.225	427.0 -> 407.0	1263	0.57	µg/L		84
8:2FTS	8.156	527.0 -> 507.0	873	0.47	µg/L		90
EtFOSAA	8.277	584.0 -> 419.0	675	0.48	µg/L m		99
MeFOSAA	8.165	570.0 -> 419.0	780	0.52	µg/L m		76
PFBA	2.076	213.0 -> 169.0	843	0.45	µg/L		100
PFBS	4.678	299.0 -> 80.0	705	0.50	µg/L		99
PFDA	8.132	513.0 -> 469.0	4482	0.49	µg/L		94
PFDoDA	8.804	613.0 -> 569.0	4719	0.44	µg/L		99
PFHpA	6.612	363.0 -> 319.0	3559	0.48	µg/L		98
PFHpS	7.236	449.0 -> 80.0	907	0.48	µg/L		88
PFHxA	5.746	313.0 -> 269.0	2809	0.45	µg/L		100
PFHxS	6.644	399.0 -> 80.0	909	0.47	µg/L m		92
PFNA	7.729	463.0 -> 419.0	2316	0.40	µg/L		96
PFOA	7.240	413.0 -> 369.0	5861	0.45	µg/L		98
PFOS	7.716	499.0 -> 80.0	1268	0.53	µg/L m		84
PFPeA	4.347	263.0 -> 219.0	1436	0.48	µg/L		100
PFTeDA	9.414	713.0 -> 669.0	4514	0.42	µg/L		99
PFTrDA	9.117	663.0 -> 619.0	5499	0.43	µg/L		100
PFUnDA	8.481	563.0 -> 519.0	3677	0.44	µg/L		100
ADONA	6.697	377.0 -> 251.0	6004	0.46	µg/L		97
9Cl-PF3ONS	7.929	531.0 -> 351.0	2274	0.47	µg/L		98
11Cl-PF3OUdS	8.602	631.0 -> 451.0	2999	0.43	µg/L		97
HFPO-DA	6.015	285.0 -> 169.0	48	0.46	µg/L		80

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

7.6.2
7

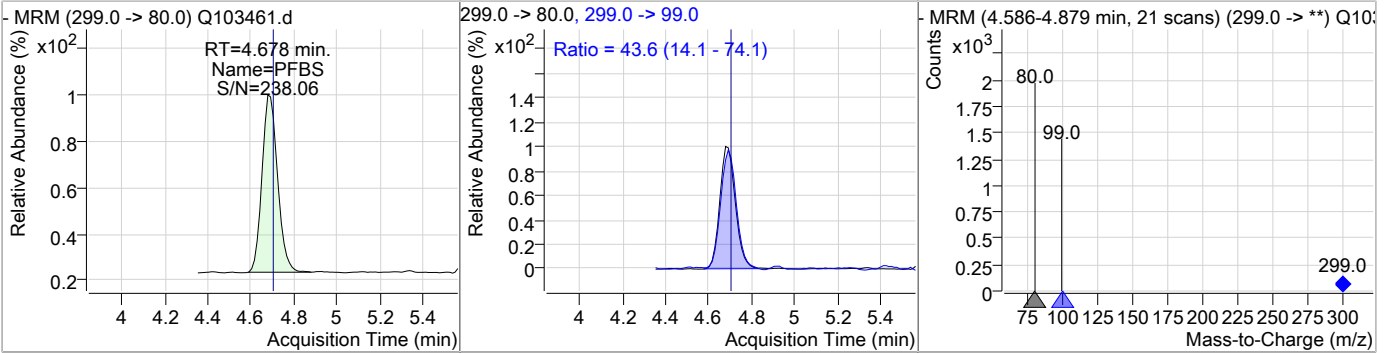


Perfluorinated Compounds by LC/MS/MS

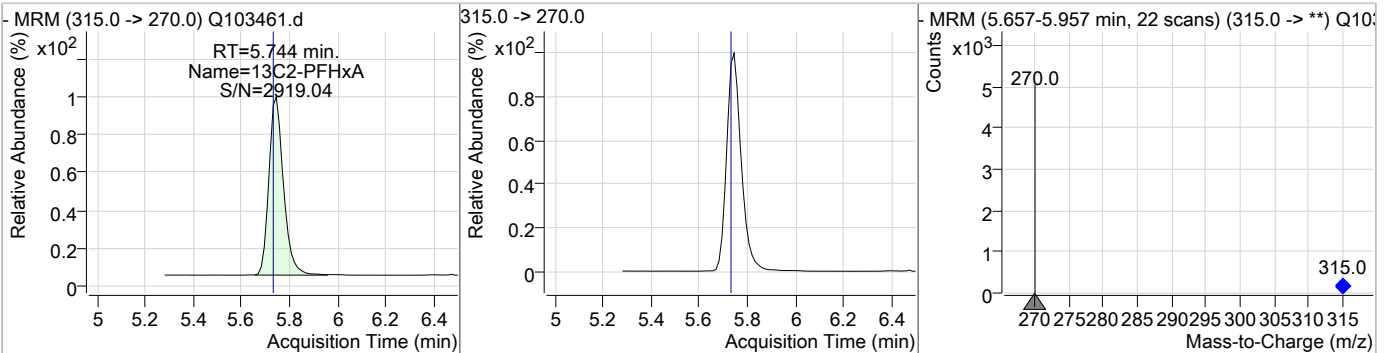


Perfluorinated Compounds by LC/MS/MS

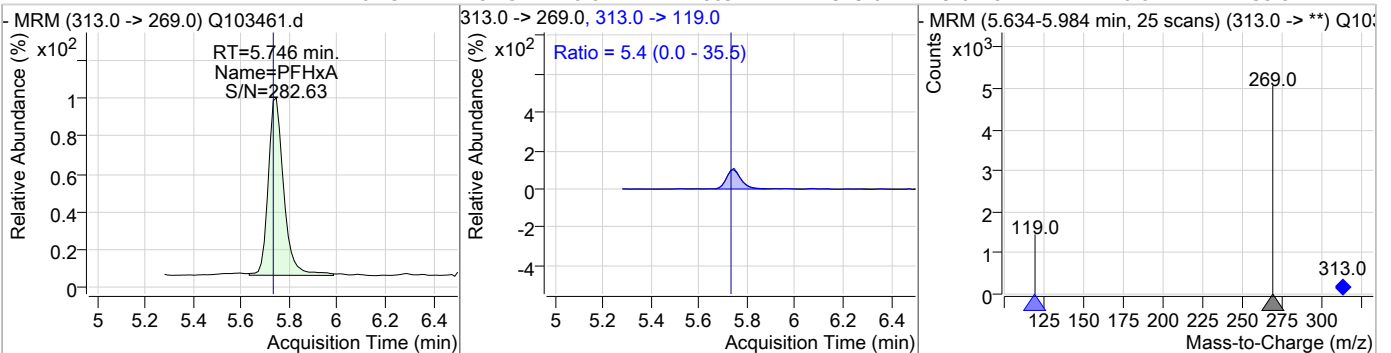
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.50	4.68	-0.03	705	299.0 -> 99.0	43.6	14.1	74.1



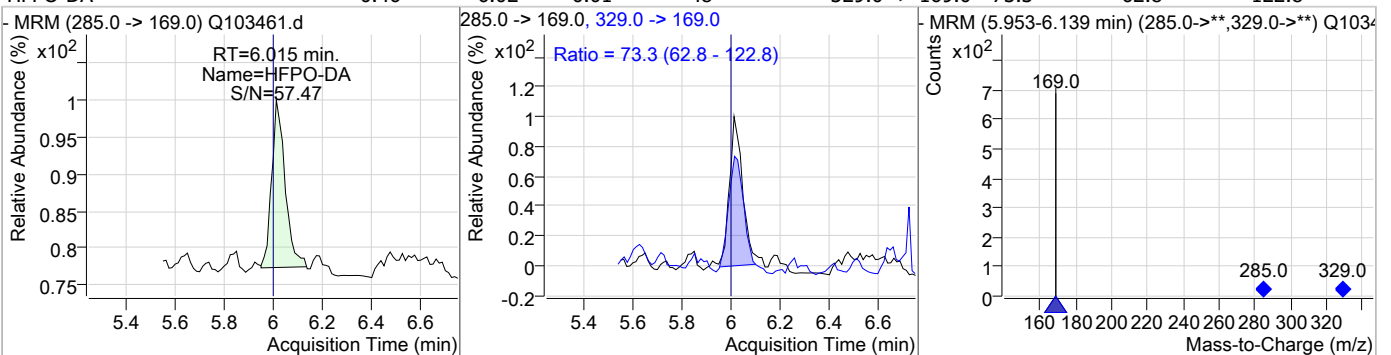
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	0.44	5.74	0.01	2986				



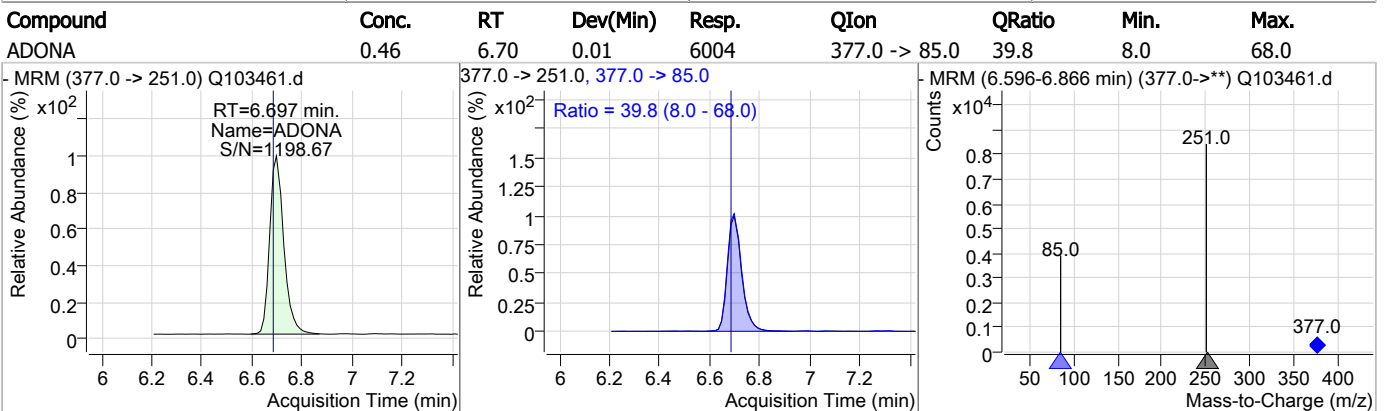
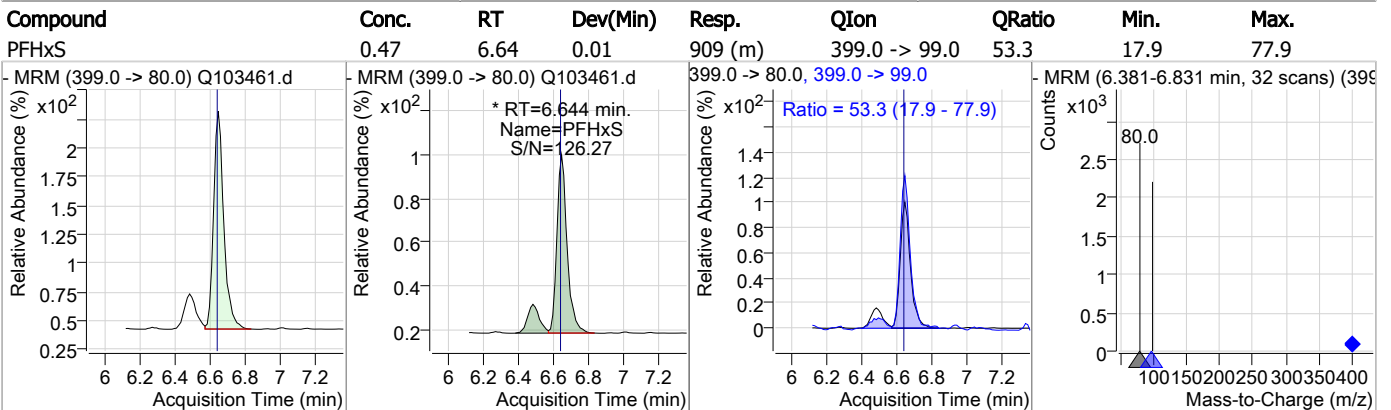
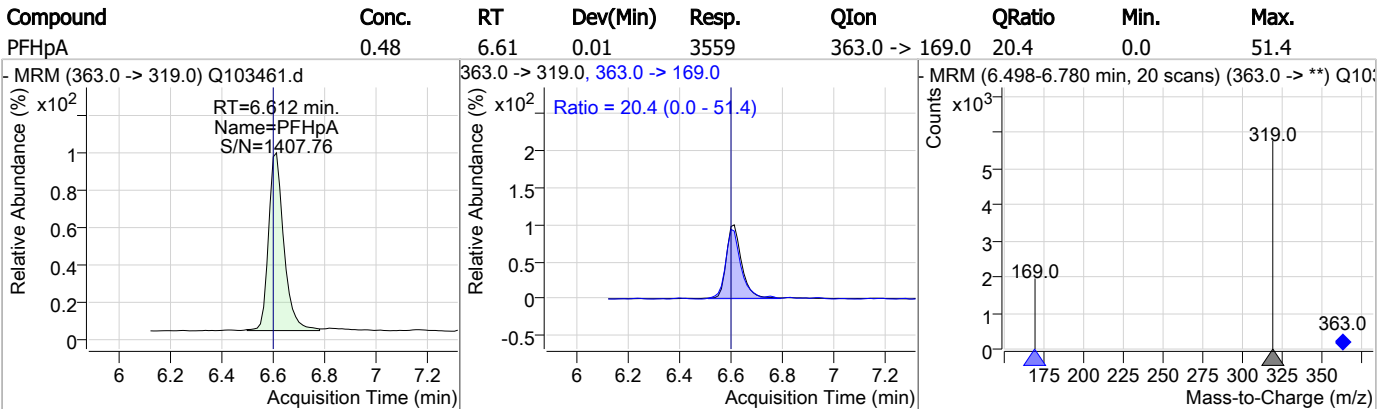
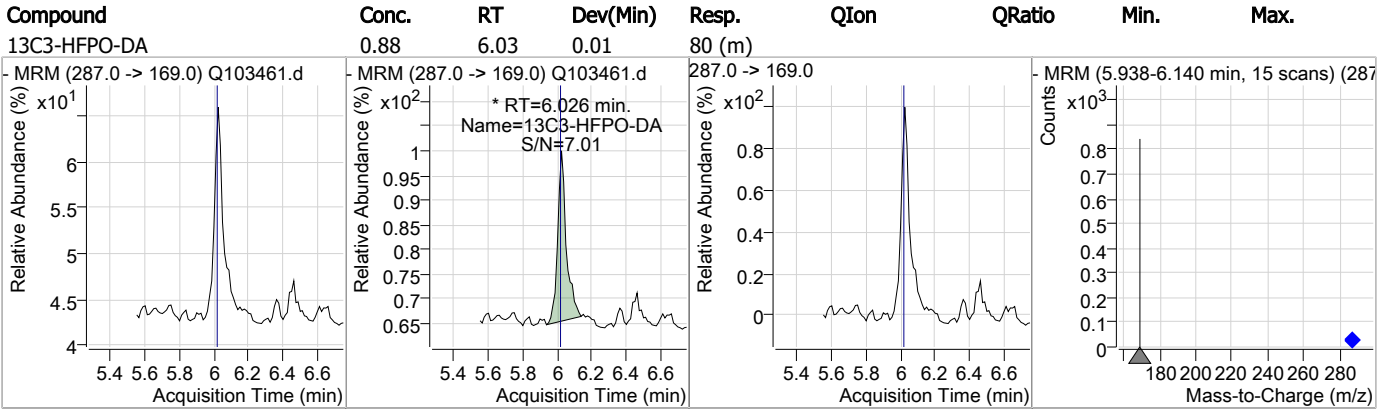
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.45	5.75	0.01	2809	313.0 -> 119.0	5.4	0.0	35.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.46	6.02	0.01	48	329.0 -> 169.0	73.3	62.8	122.8



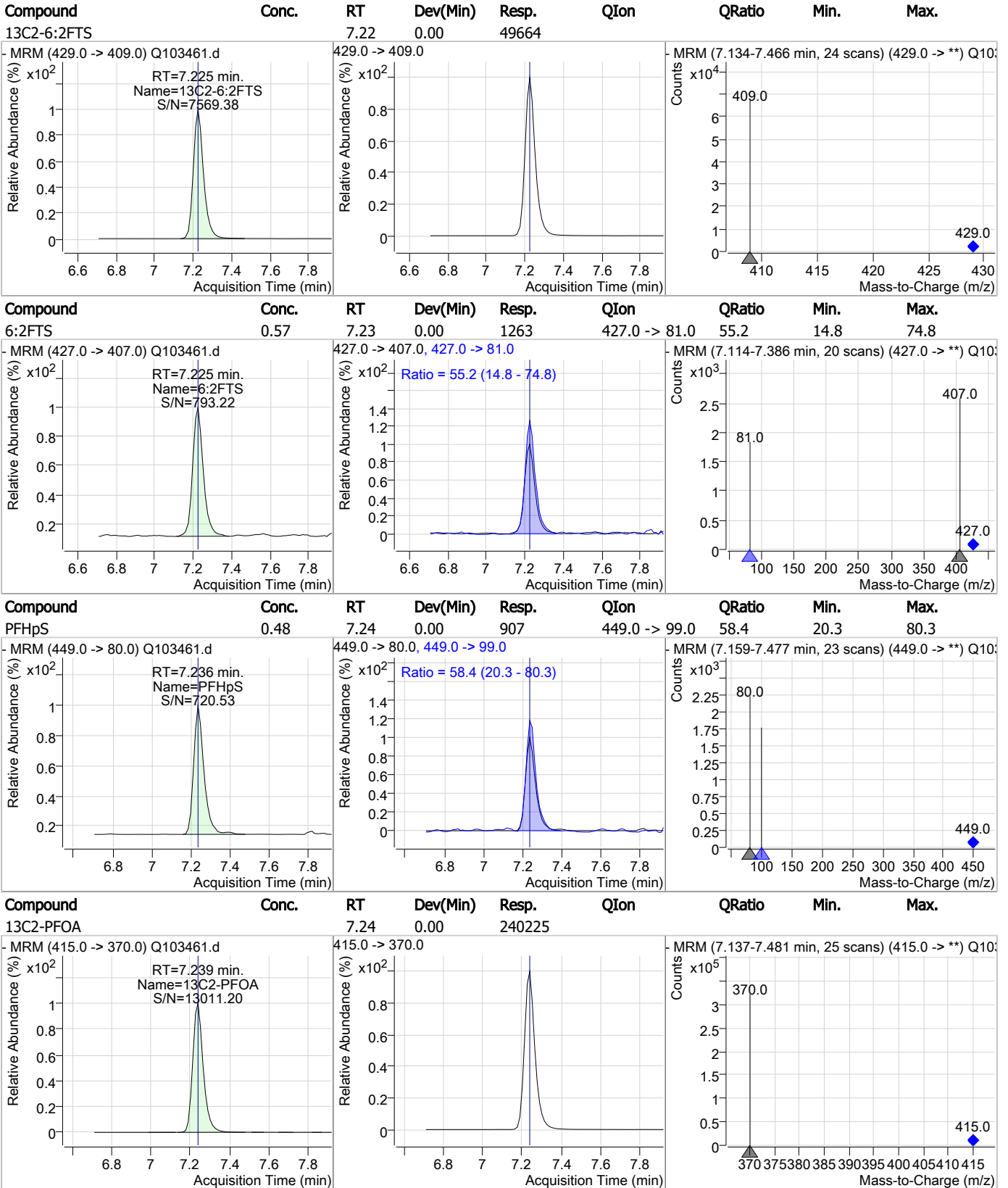
Perfluorinated Compounds by LC/MS/MS



7.6.2

7

Perfluorinated Compounds by LC/MS/MS

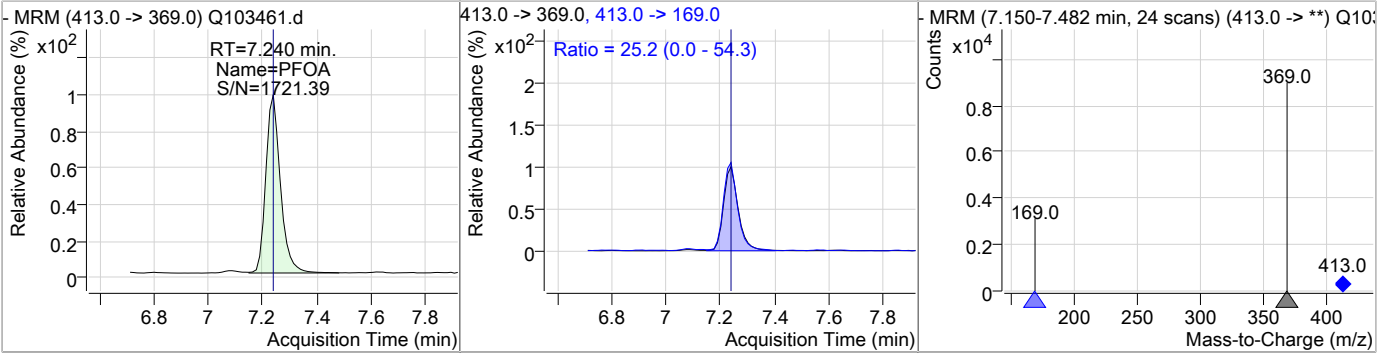


7.6.2

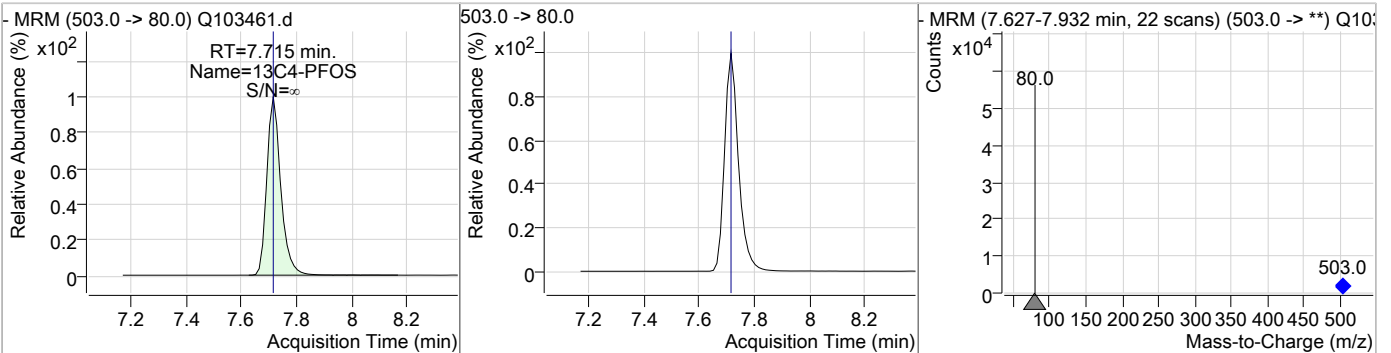
7

Perfluorinated Compounds by LC/MS/MS

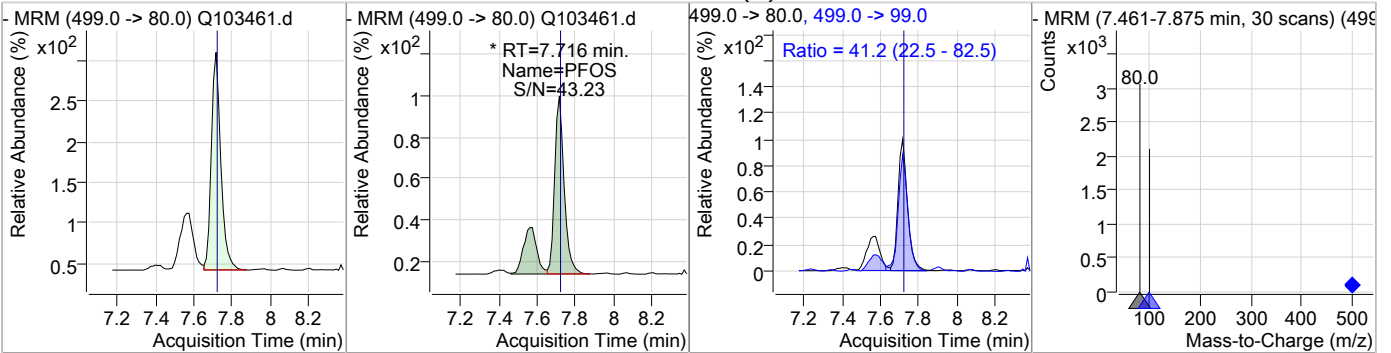
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.45	7.24	0.00	5861	413.0 -> 169.0	25.2	0.0	54.3



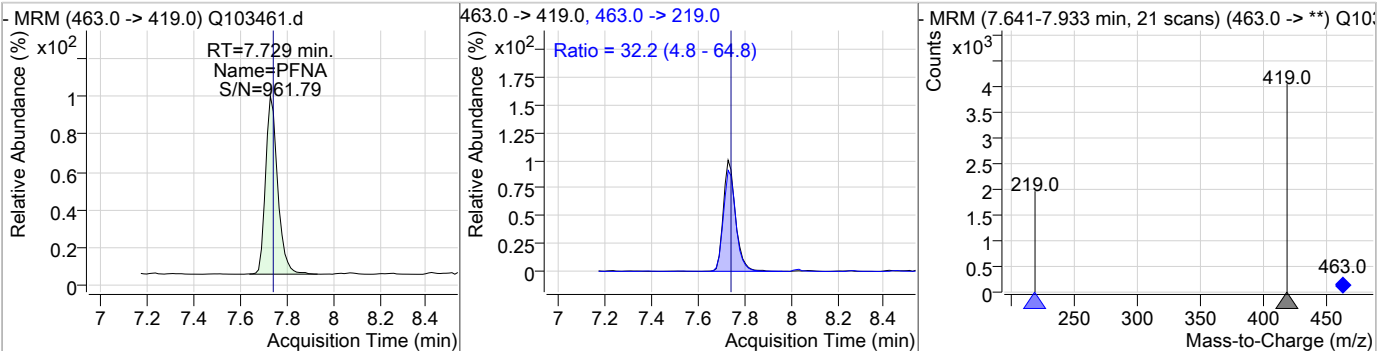
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.72	0.00	42144				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.53	7.72	0.00	1268 (m)	499.0 -> 99.0	41.2	22.5	82.5

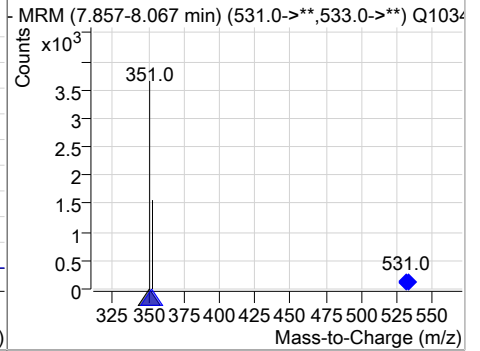
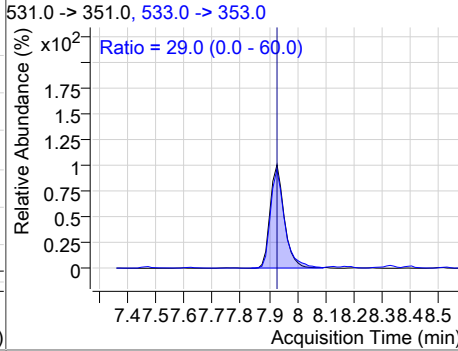
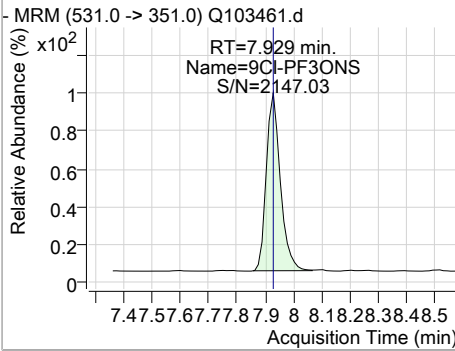


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.40	7.73	-0.01	2316	463.0 -> 219.0	32.2	4.8	64.8

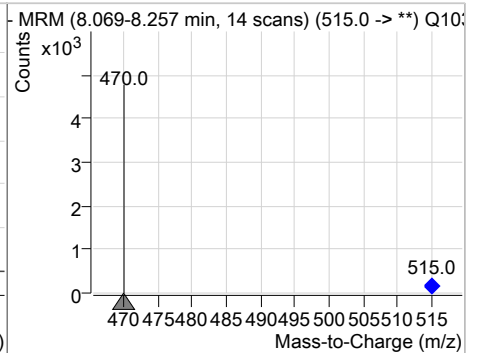
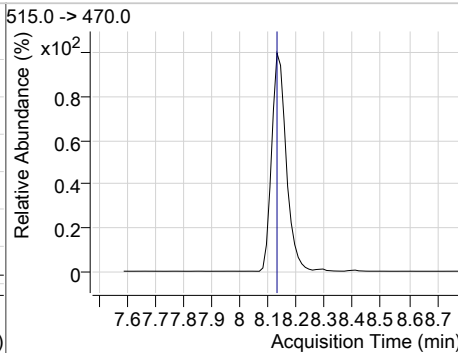
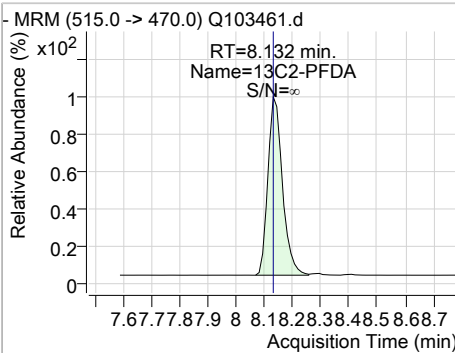


Perfluorinated Compounds by LC/MS/MS

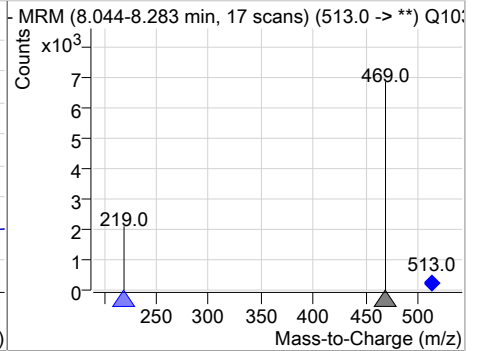
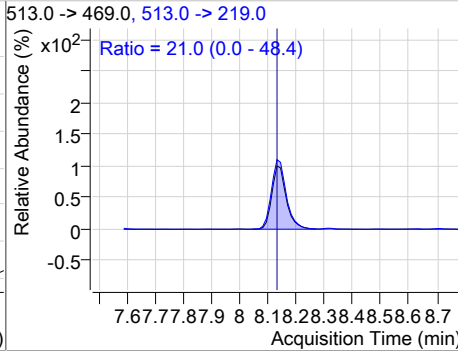
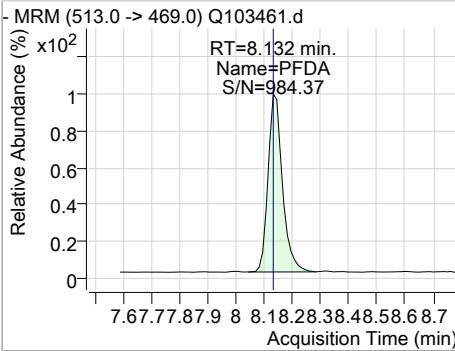
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9CI-PF3ONS	0.47	7.93	0.00	2274	533.0 -> 353.0	29.0	0.0	60.0



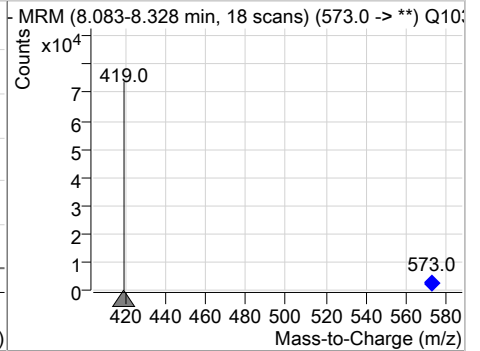
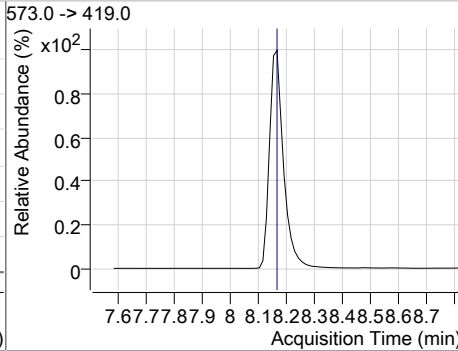
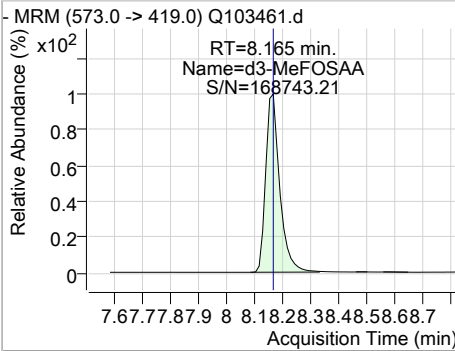
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	0.46	8.13	0.00	3106				



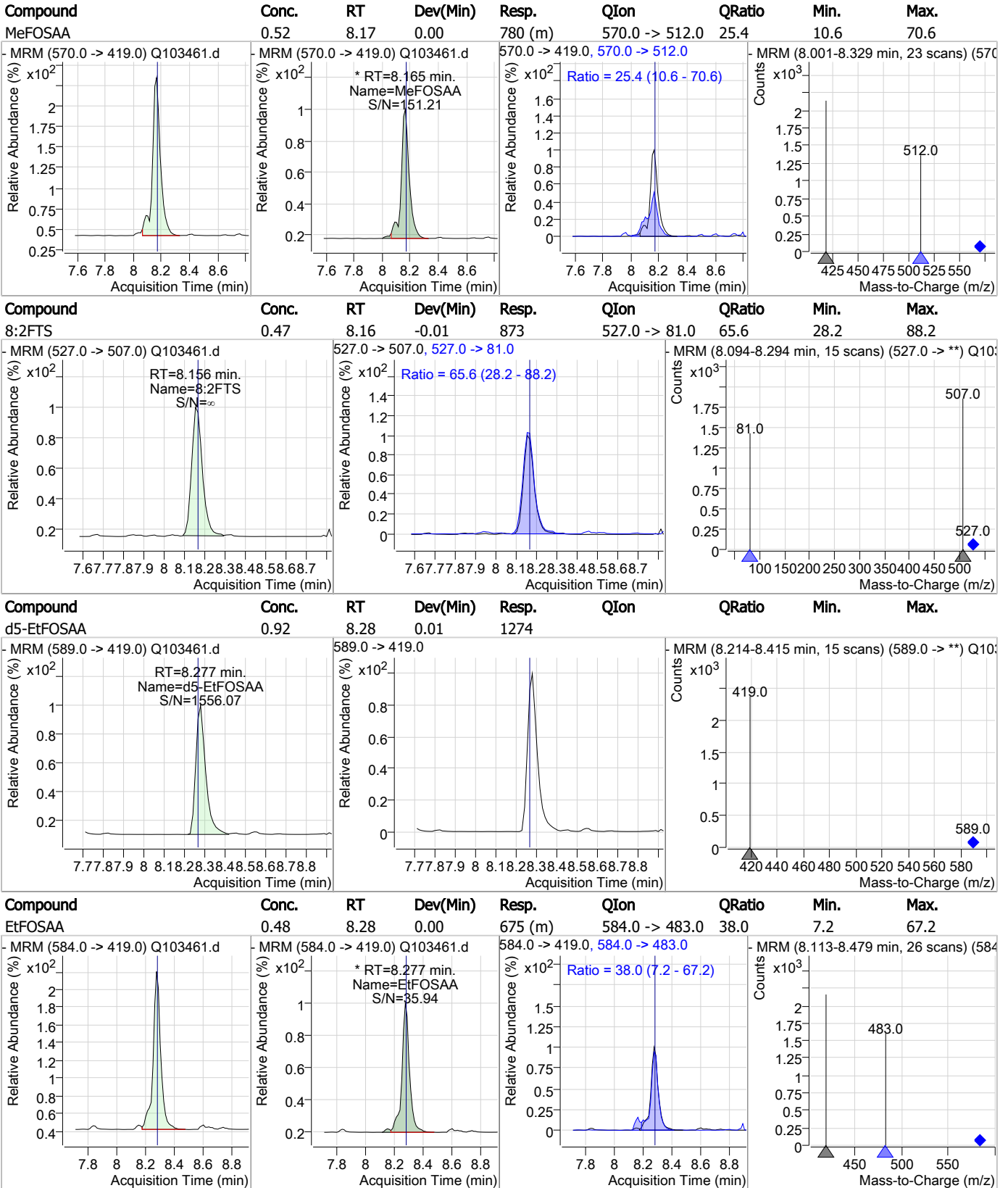
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.49	8.13	0.00	4482	513.0 -> 219.0	21.0	0.0	48.4



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.16	0.00	54759				



Perfluorinated Compounds by LC/MS/MS

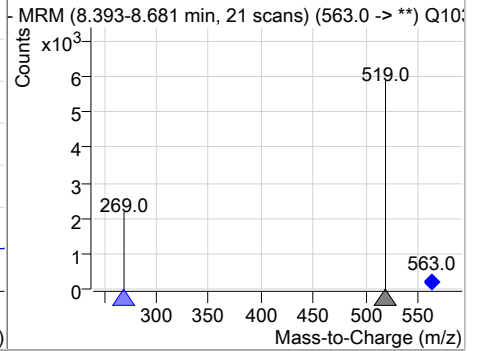
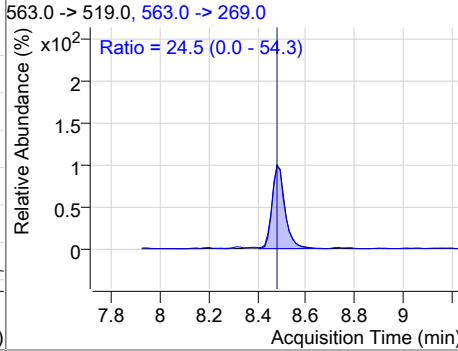
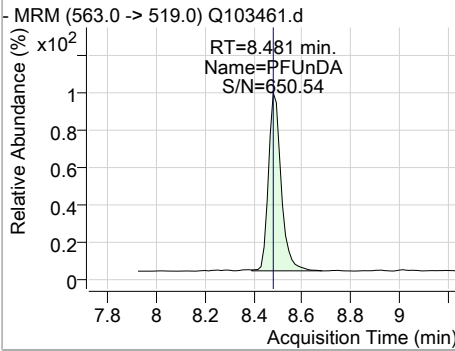


7.6.2

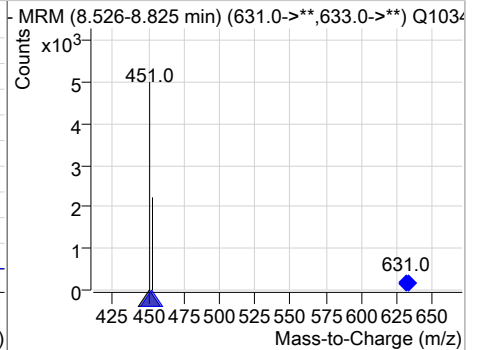
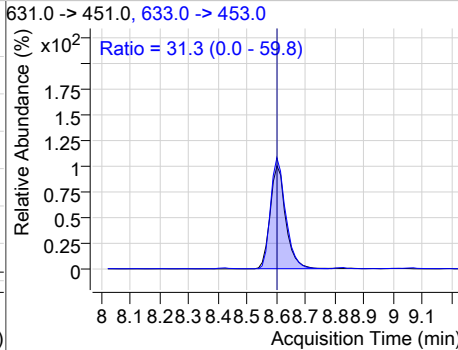
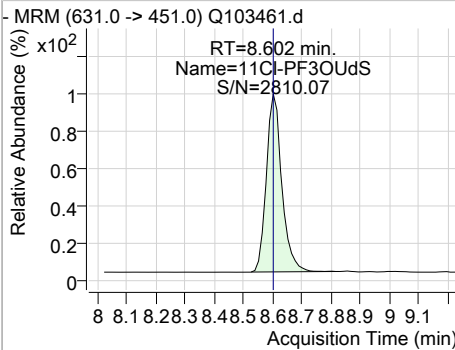
7

Perfluorinated Compounds by LC/MS/MS

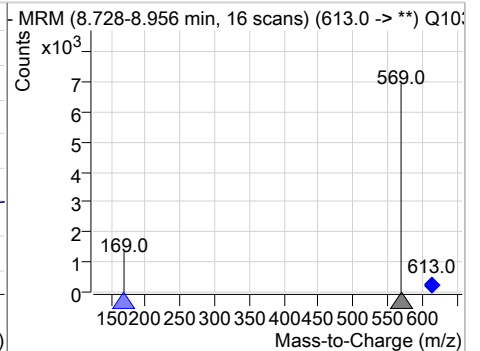
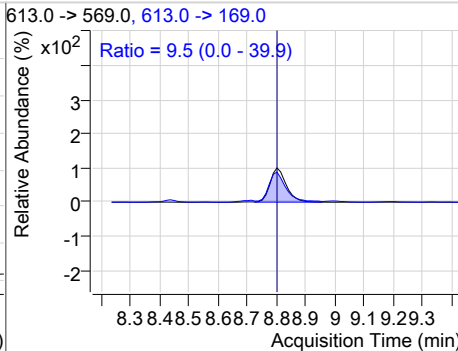
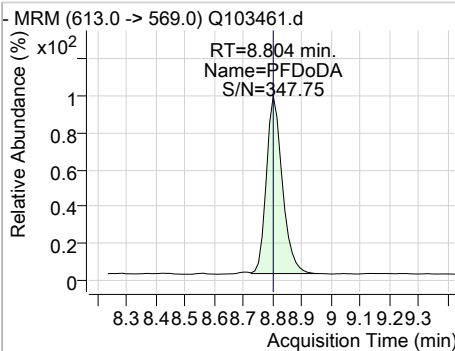
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.44	8.48	0.00	3677	563.0 -> 269.0	24.5	0.0	54.3



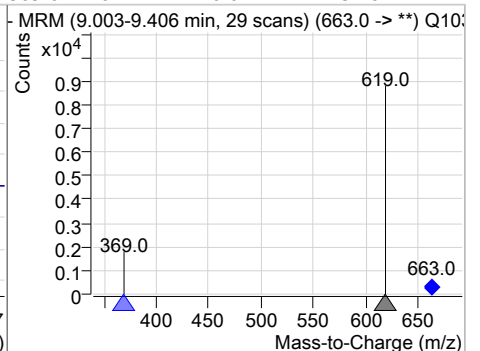
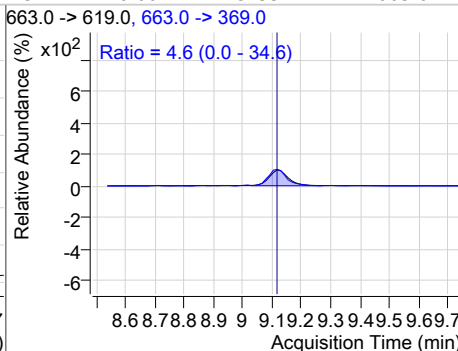
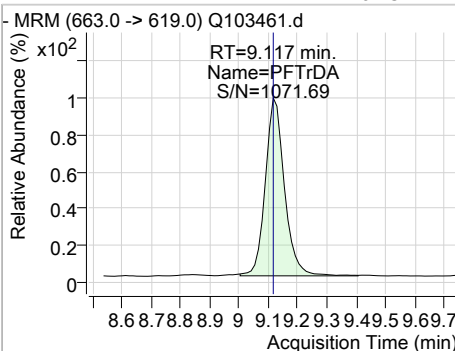
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.43	8.60	0.00	2999	633.0 -> 453.0	31.3	0.0	59.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.44	8.80	0.00	4719	613.0 -> 169.0	9.5	0.0	39.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	0.43	9.12	0.00	5499	663.0 -> 369.0	4.6	0.0	34.6

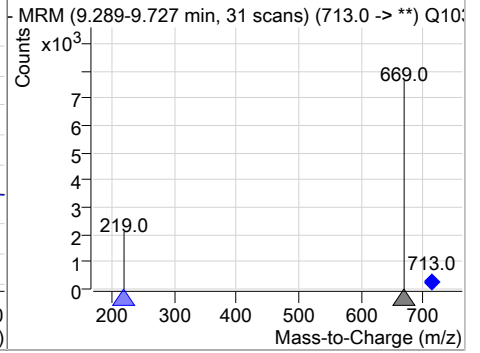
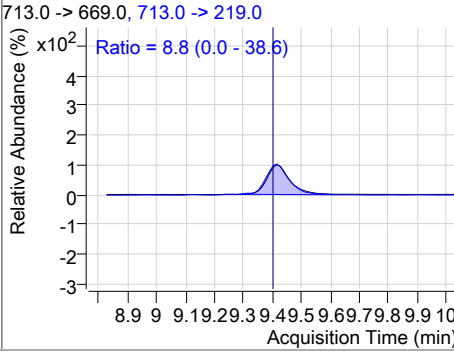
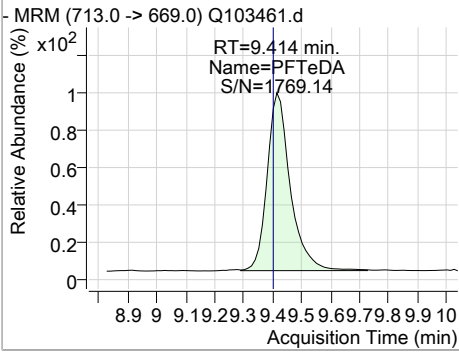


7.6.2
7



Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.42	9.41	0.01	4514	713.0 -> 219.0	8.8	0.0	38.6



7.6.2

7

Manual Integration Approval Summary

Sample Number: SQ2201-IC2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103461.D Analyst approved: 06/19/23 16:24 Anna Ludwig
Injection Time: 06/18/23 16:15 Supervisor approved: 06/19/23 17:23 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
13C3-HFPO-DA			6.03	Missed peak
Perfluorohexanesulfonic acid	355-46-4		6.64	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
MeFOSAA	2355-31-9		8.16	Split peak
EtFOSAA	2991-50-6		8.28	Split peak

7.6.2.1

7

Manual Integrations
APPROVED
 (compounds with "m" flag)

Norman Farmer
 06/19/23 17:23

Perfluorinated Compounds by LC/MS/MS

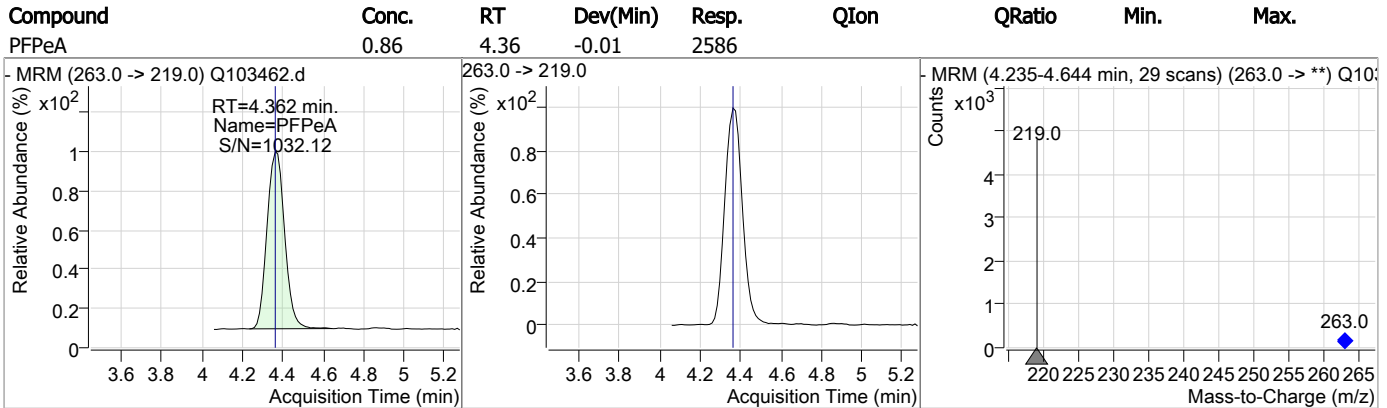
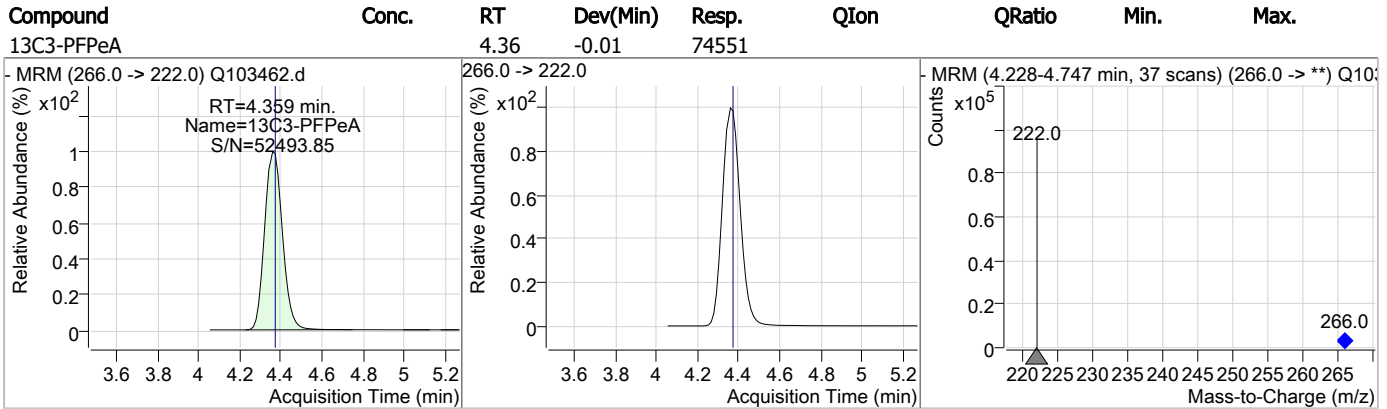
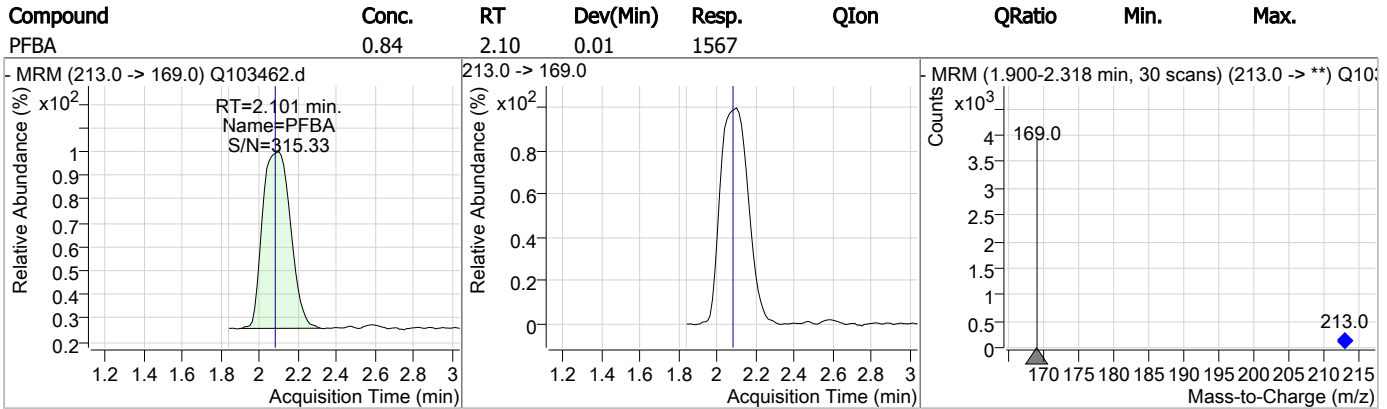
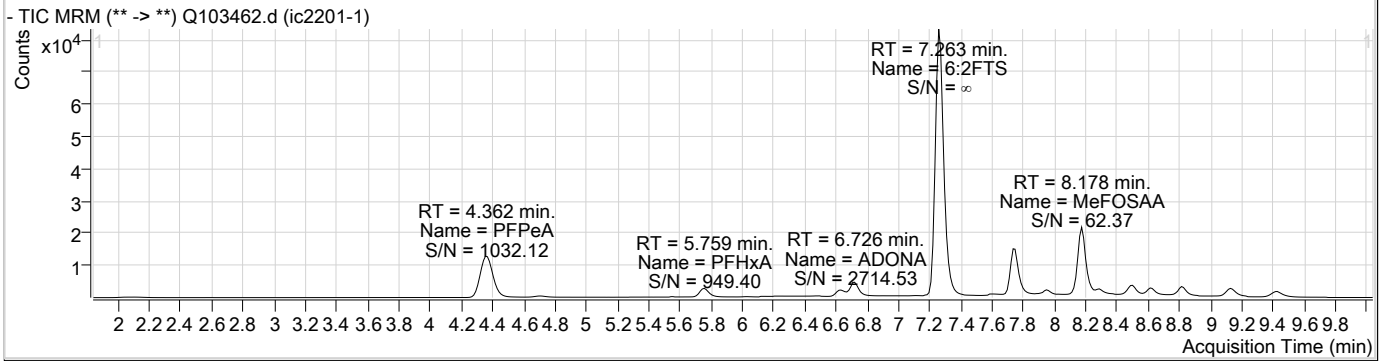
Data File : Q103462.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 4:31:25 PM
 Sample Name : ic2201-1
 Vial : P1-A3
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP96727,SQ2201,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)	QValue
Internal Standards							
13C2-6:2FTS	7.250	429.0 -> 409.0	49043	20.00	µg/L	0.025	
13C2-PFOA	7.264	415.0 -> 370.0	243348	20.00	µg/L	0.025	
13C3-PFPeA	4.359	266.0 -> 222.0	74551	20.00	µg/L	-0.013	
13C4-PFOS	7.740	503.0 -> 80.0	43327	20.00	µg/L	0.025	
d3-MeFOSAA	8.177	573.0 -> 419.0	56088	40.00	µg/L	0.013	
System Monitoring Compounds							
13C2-PFDA	8.157	515.0 -> 470.0	6417	0.94	µg/L	0.025	
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 4.7%			
13C2-PFHxA	5.757	315.0 -> 270.0	5697	0.82	µg/L	0.025	
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 4.1%			
d5-EtFOSAA	8.289	589.0 -> 419.0	2720	1.92	µg/L	0.025	
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 4.8%			
13C3-HFPO-DA	6.038	287.0 -> 169.0	166	1.78	µg/L	m	0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 4.5%			
Target Compounds							
6:2FTS	7.263	427.0 -> 407.0	2305	1.05	µg/L		92
8:2FTS	8.181	527.0 -> 507.0	1696	0.92	µg/L		89
EtFOSAA	8.290	584.0 -> 419.0	1221	0.85	µg/L	m	97
MeFOSAA	8.178	570.0 -> 419.0	1288	0.84	µg/L	m	94
PFBA	2.101	213.0 -> 169.0	1567	0.84	µg/L		100
PFBS	4.703	299.0 -> 80.0	1279	0.89	µg/L		96
PFDA	8.157	513.0 -> 469.0	8922	0.96	µg/L		100
PFDoDA	8.816	613.0 -> 569.0	9729	0.89	µg/L		100
PFHpA	6.624	363.0 -> 319.0	6381	0.86	µg/L		98
PFHpS	7.274	449.0 -> 80.0	1807	0.93	µg/L		98
PFHxA	5.759	313.0 -> 269.0	5237	0.84	µg/L		99
PFHxS	6.669	399.0 -> 80.0	1831	0.92	µg/L	m	94
PFNA	7.767	463.0 -> 419.0	4915	0.83	µg/L		99
PFOA	7.265	413.0 -> 369.0	11220	0.85	µg/L		100
PFOS	7.741	499.0 -> 80.0	2100	0.85	µg/L	m	81
PFPeA	4.362	263.0 -> 219.0	2586	0.86	µg/L		100
PFTeDA	9.427	713.0 -> 669.0	8468	0.76	µg/L		97
PFTTrDA	9.129	663.0 -> 619.0	10685	0.82	µg/L		100
PFUnDA	8.506	563.0 -> 519.0	7700	0.89	µg/L		100
ADONA	6.726	377.0 -> 251.0	11563	0.87	µg/L		97
9Cl-PF3ONS	7.954	531.0 -> 351.0	4059	0.82	µg/L		98
11Cl-PF3OUdS	8.614	631.0 -> 451.0	5861	0.83	µg/L		96
HFPO-DA	6.040	285.0 -> 169.0	84	0.80	µg/L		76

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

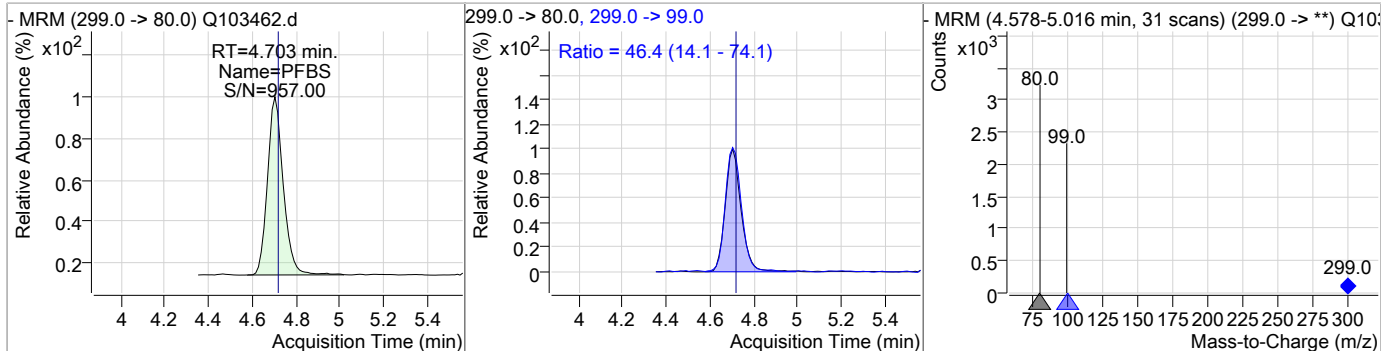
7.6.3
7

Perfluorinated Compounds by LC/MS/MS

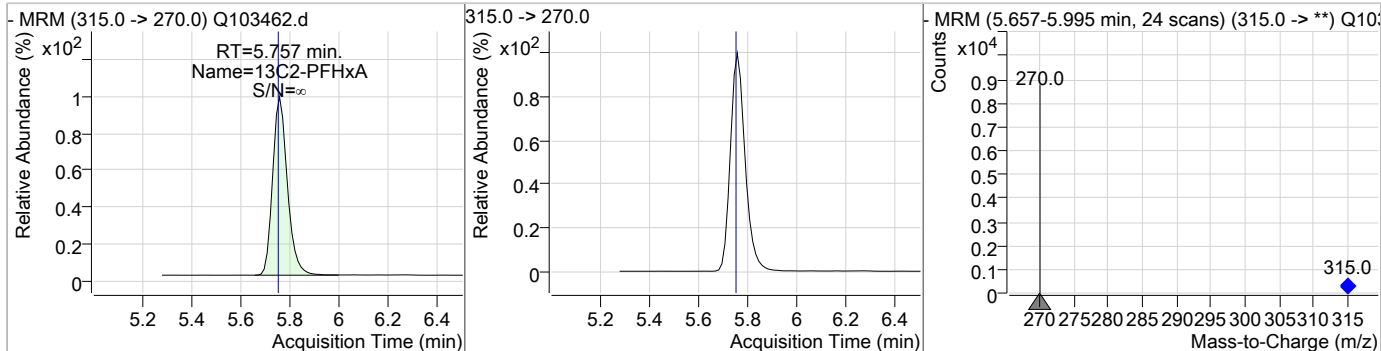


Perfluorinated Compounds by LC/MS/MS

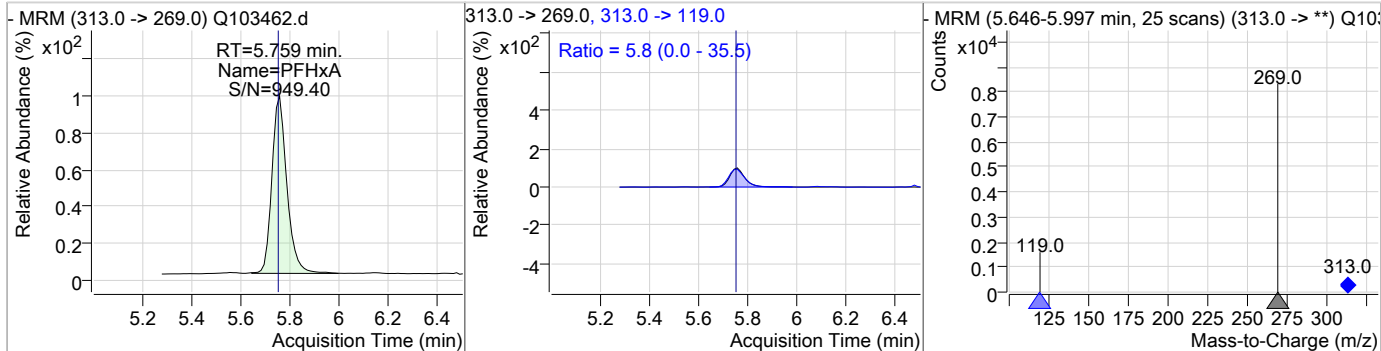
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.89	4.70	0.00	1279	299.0 -> 99.0	46.4	14.1	74.1



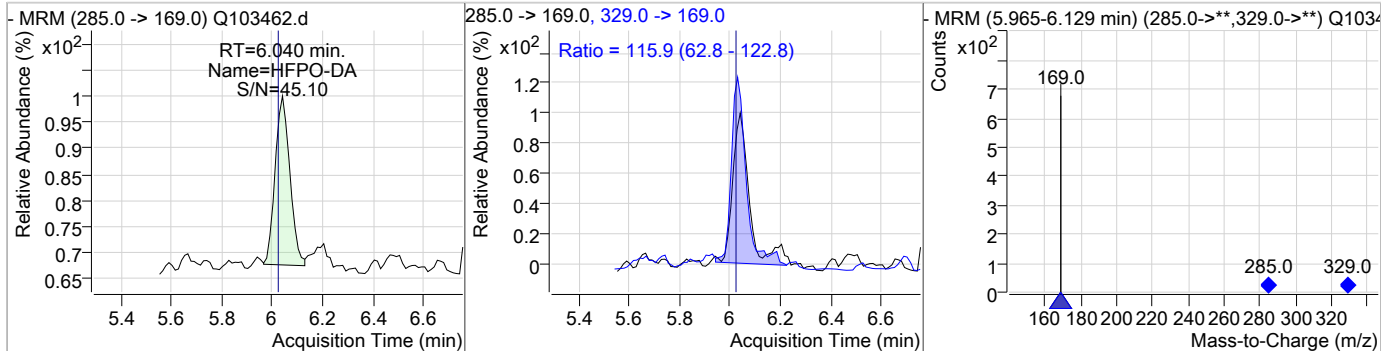
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	0.82	5.76	0.03	5697				



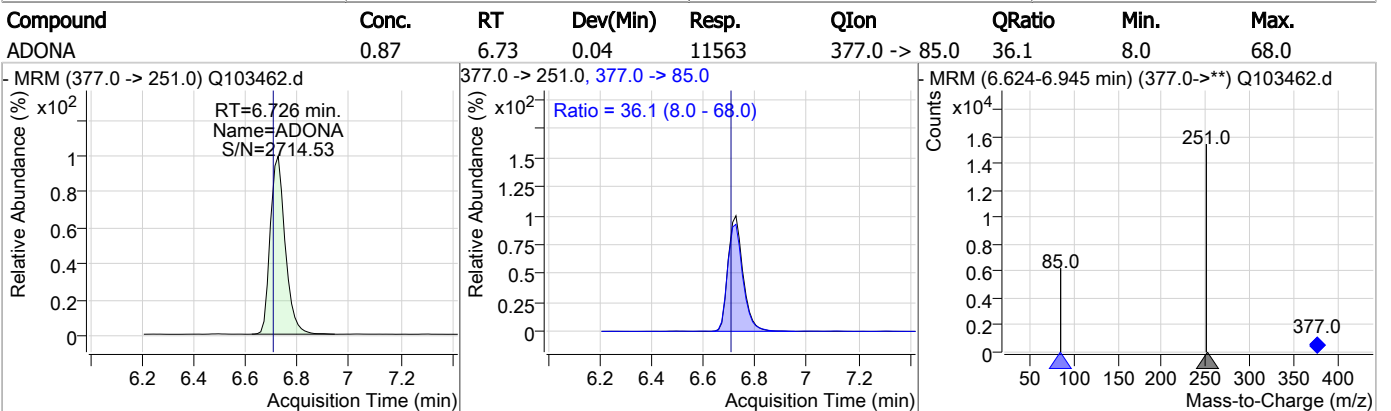
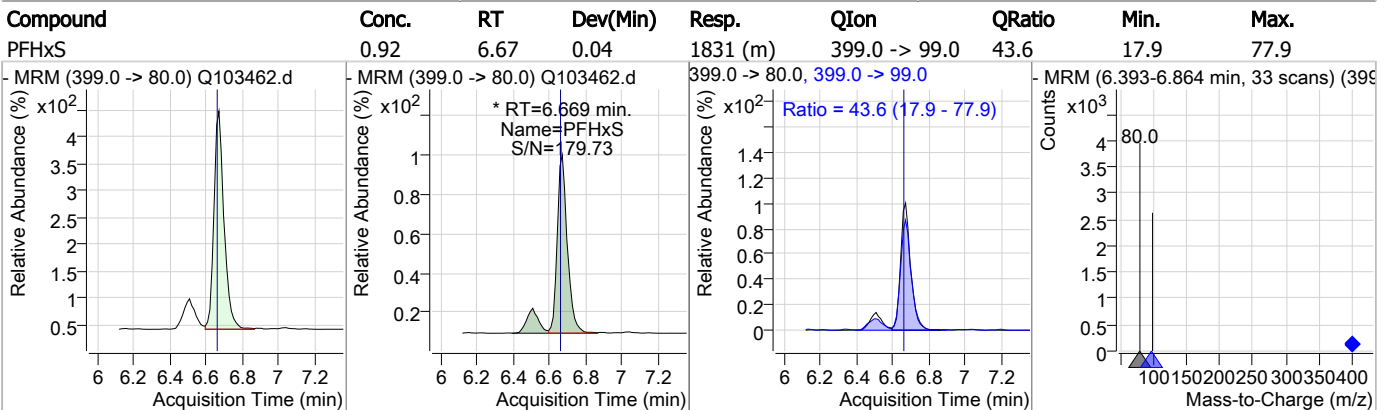
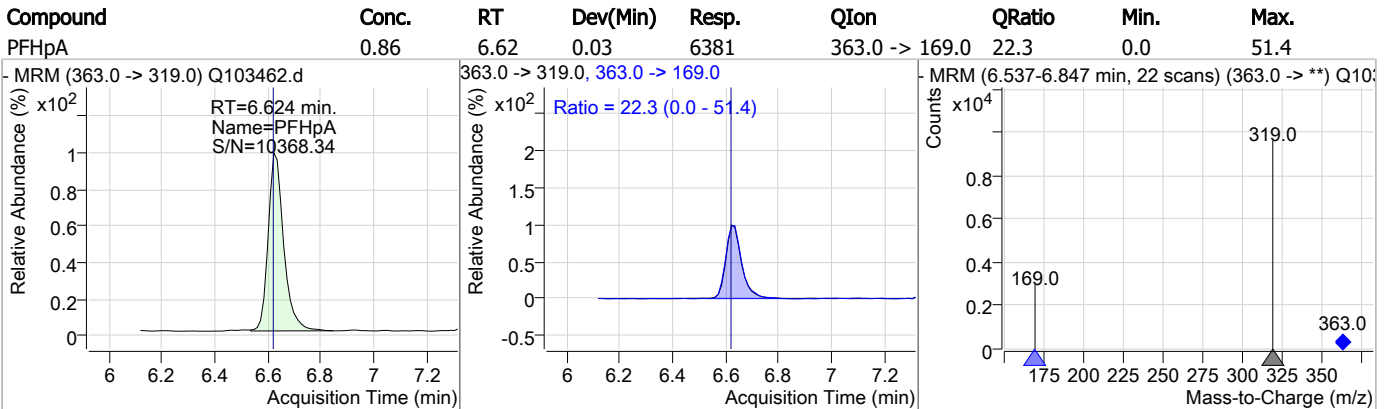
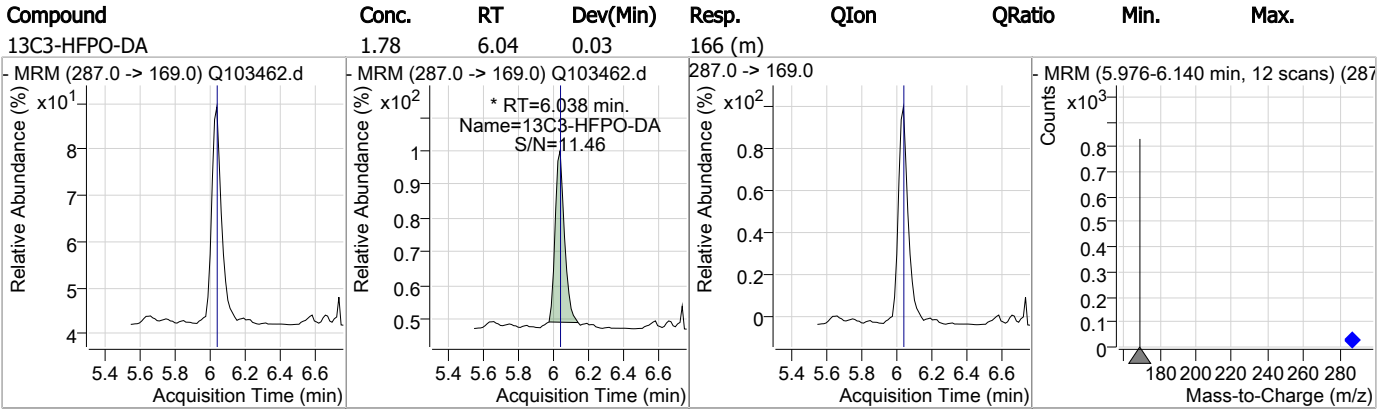
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.84	5.76	0.03	5237	313.0 -> 119.0	5.8	0.0	35.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.80	6.04	0.04	84	329.0 -> 169.0	115.9	62.8	122.8



Perfluorinated Compounds by LC/MS/MS

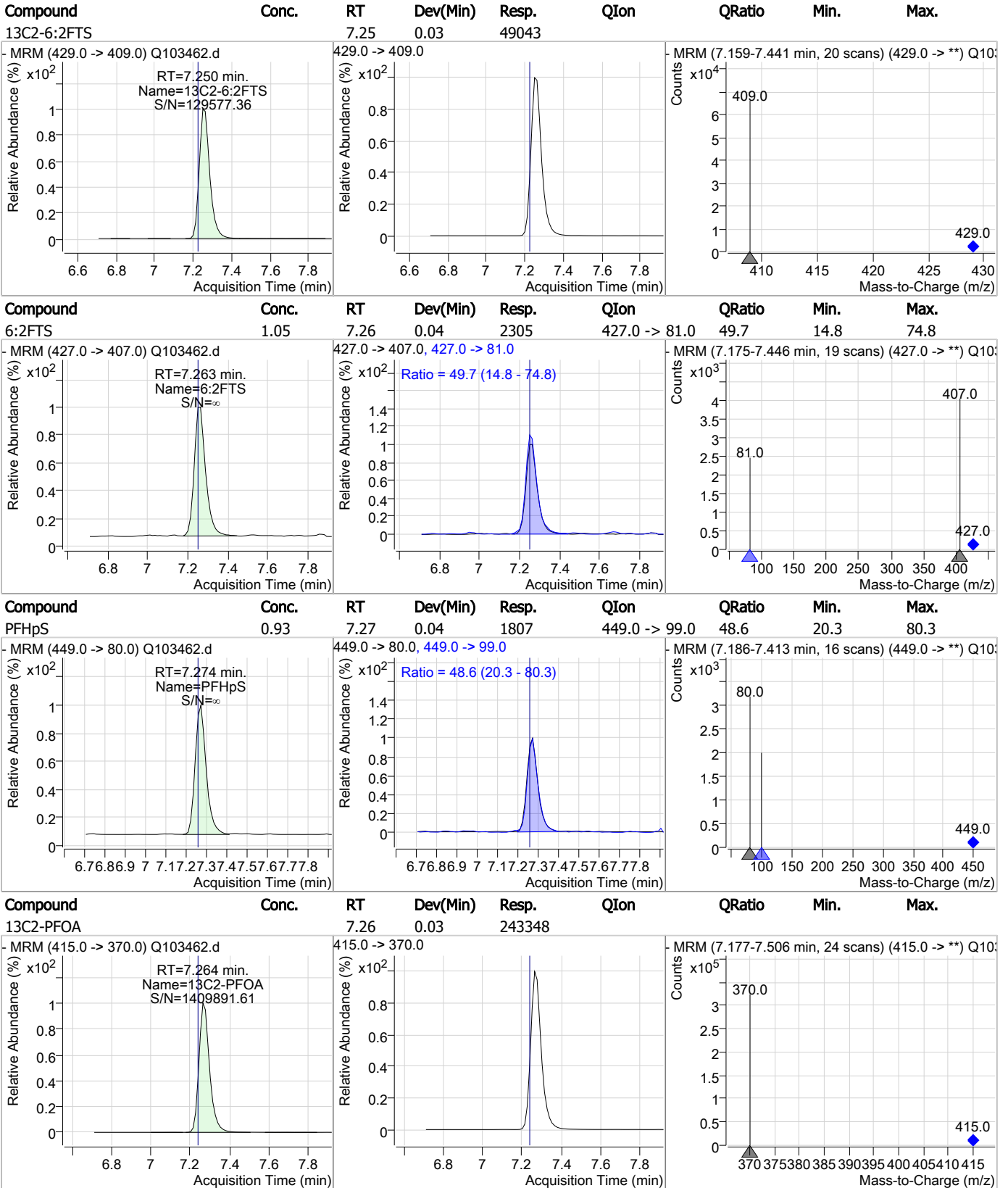


7.6.3

7



Perfluorinated Compounds by LC/MS/MS

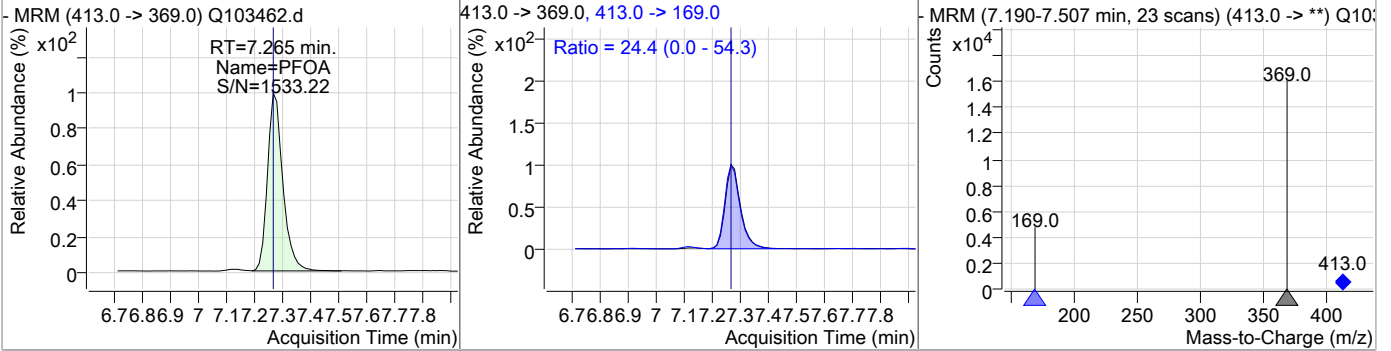


7.6.3

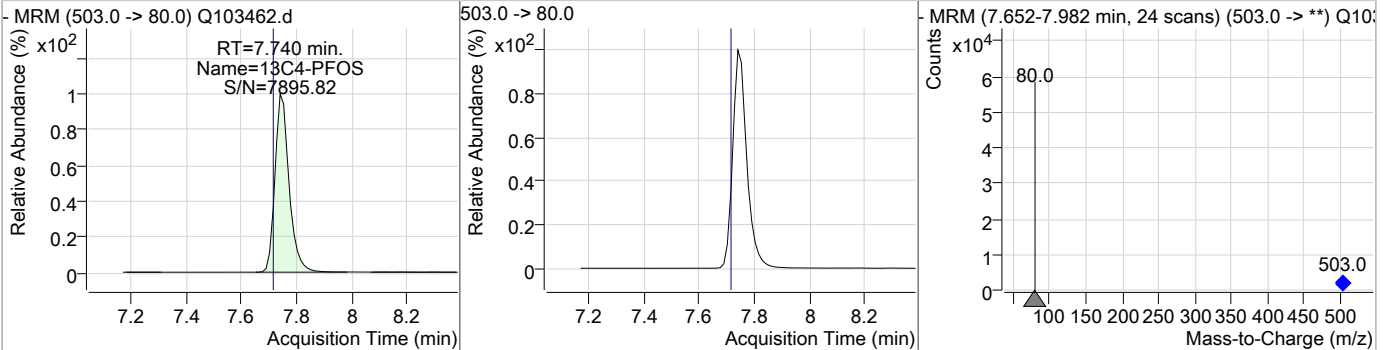
7

Perfluorinated Compounds by LC/MS/MS

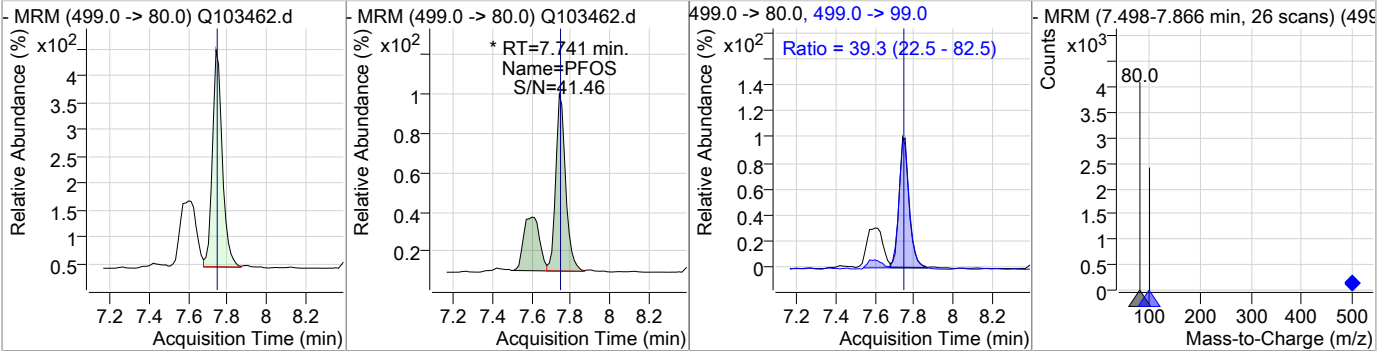
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.85	7.26	0.03	11220	413.0 -> 169.0	24.4	0.0	54.3



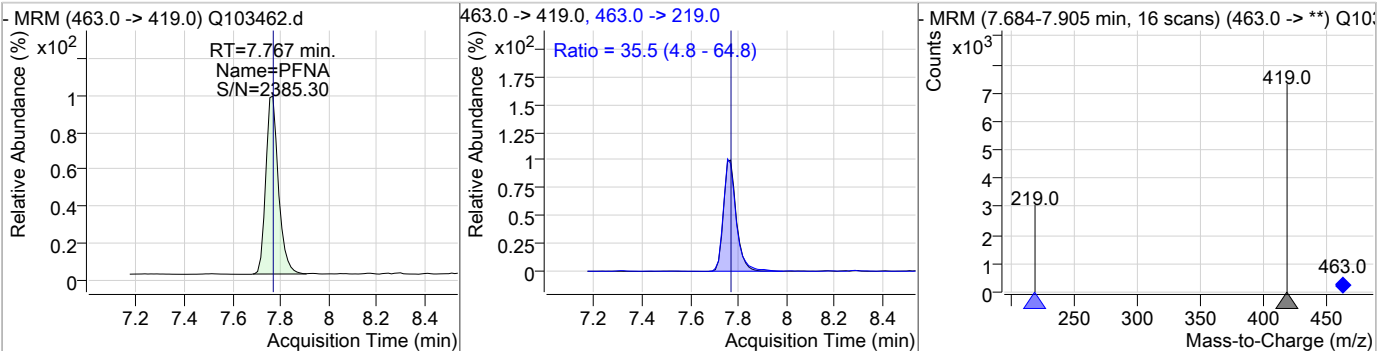
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.74	0.03	43327				



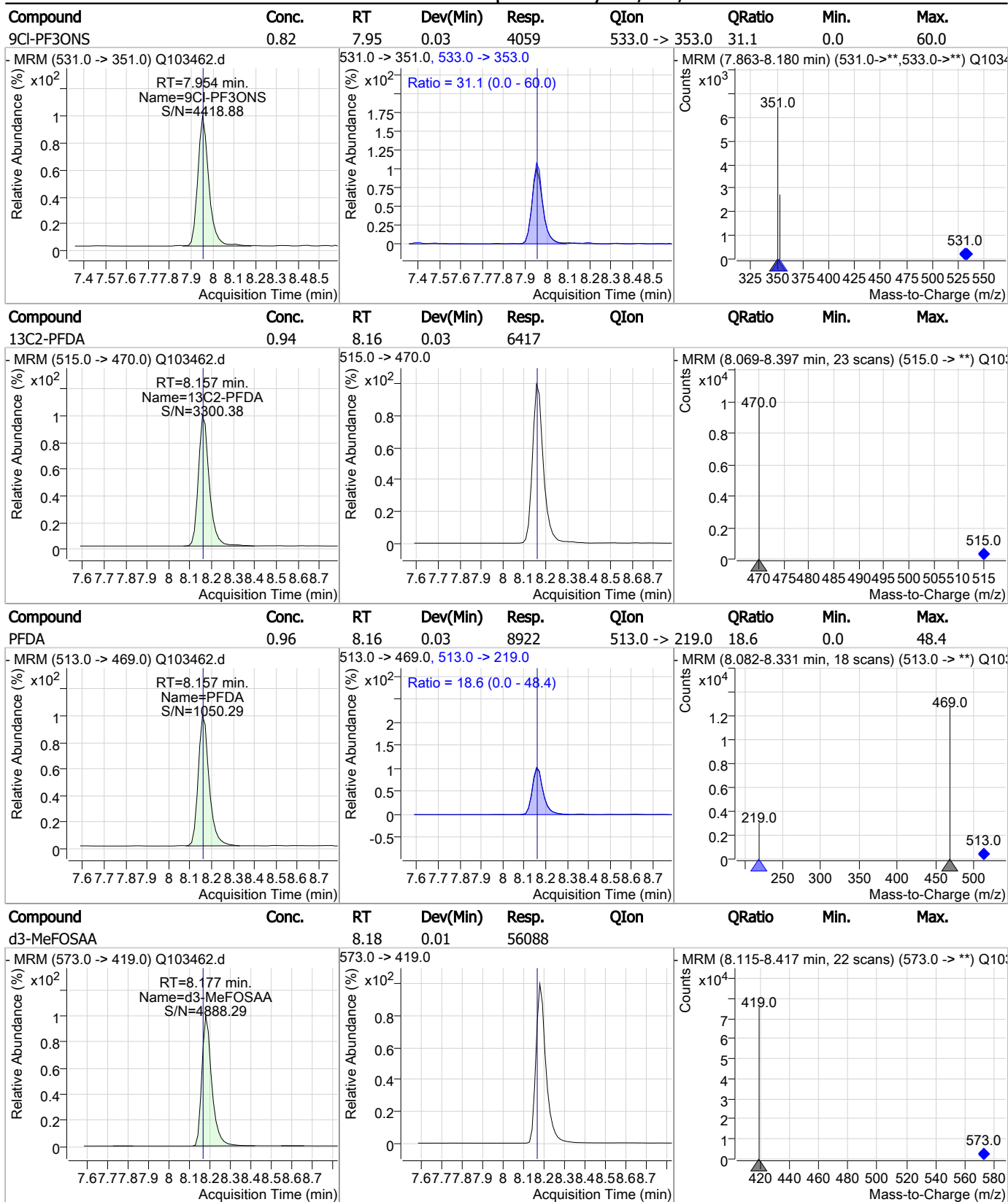
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.85	7.74	0.03	2100 (m)	499.0 -> 99.0	39.3	22.5	82.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.83	7.77	0.03	4915	463.0 -> 219.0	35.5	4.8	64.8



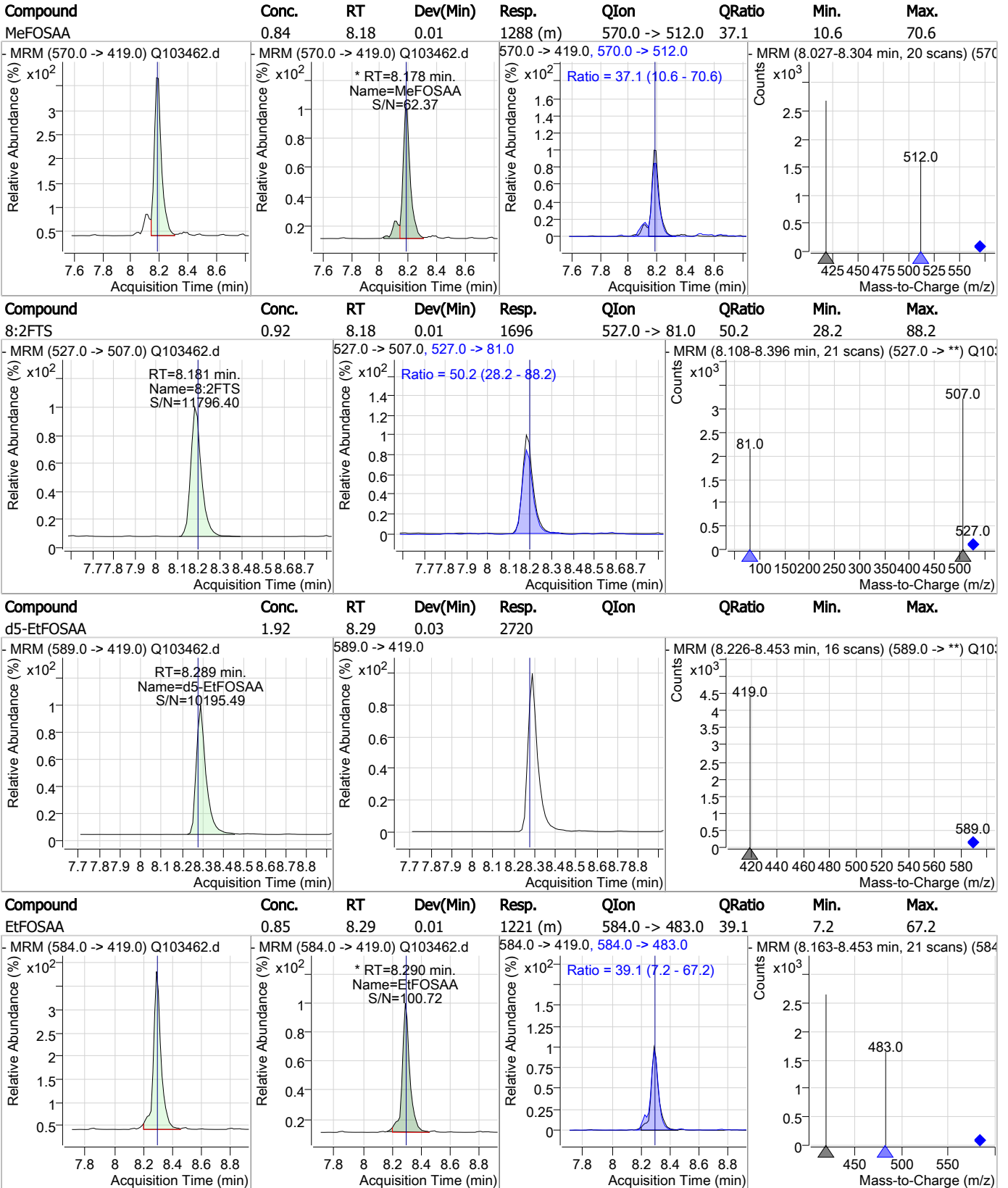
Perfluorinated Compounds by LC/MS/MS



7.6.3

7

Perfluorinated Compounds by LC/MS/MS



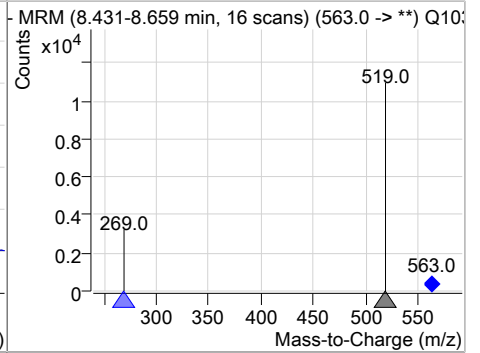
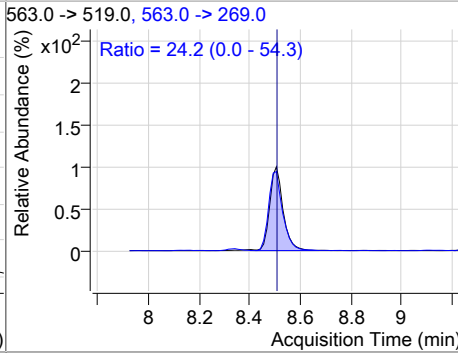
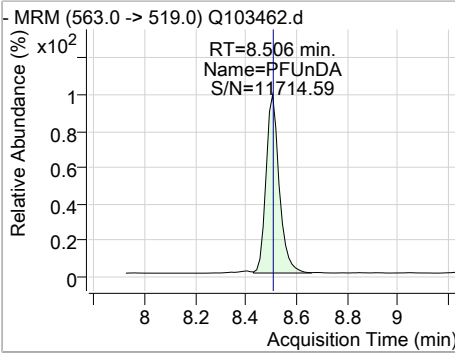
7.6.3

7

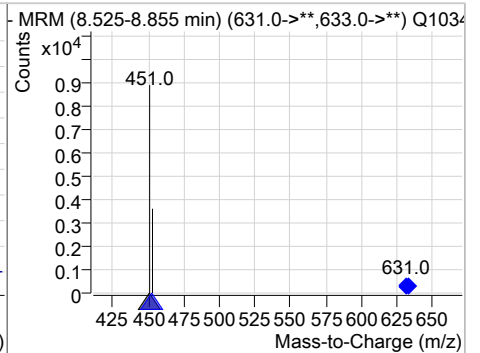
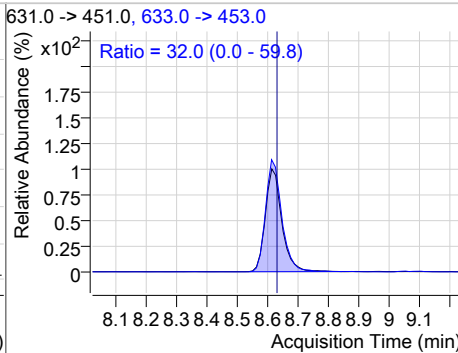
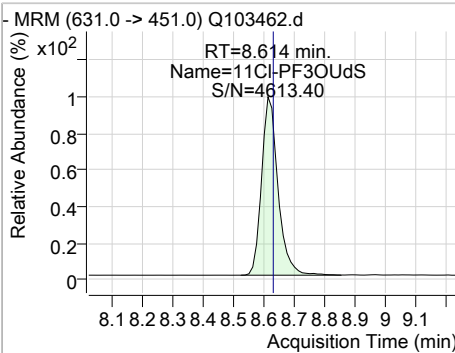


Perfluorinated Compounds by LC/MS/MS

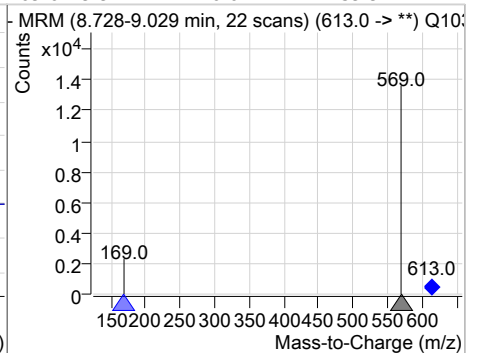
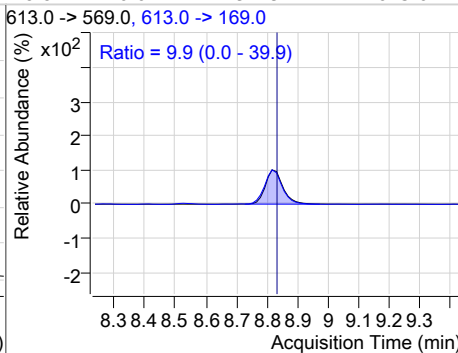
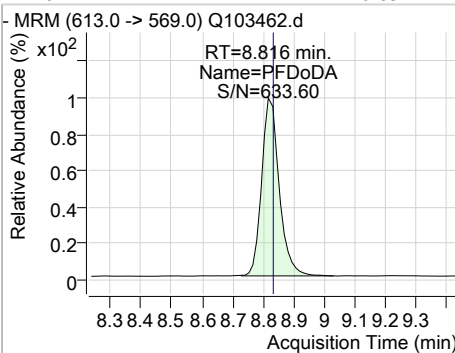
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.89	8.51	0.03	7700	563.0 -> 269.0	24.2	0.0	54.3



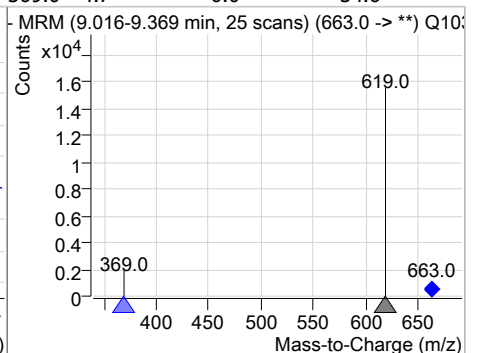
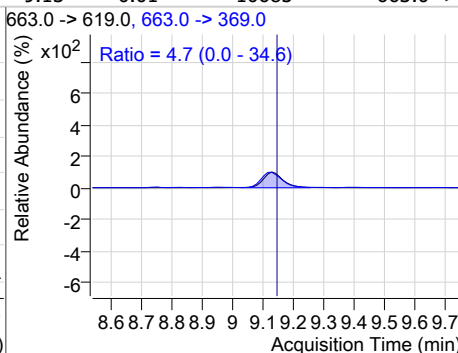
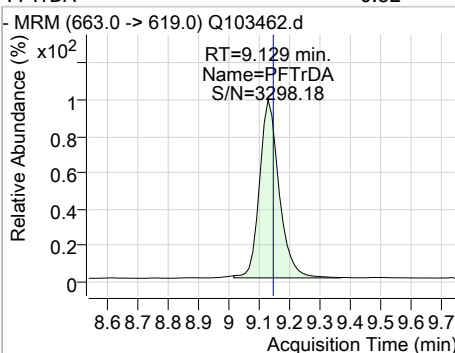
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.83	8.61	0.01	5861	633.0 -> 453.0	32.0	0.0	59.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDODA	0.89	8.82	0.01	9729	613.0 -> 169.0	9.9	0.0	39.9

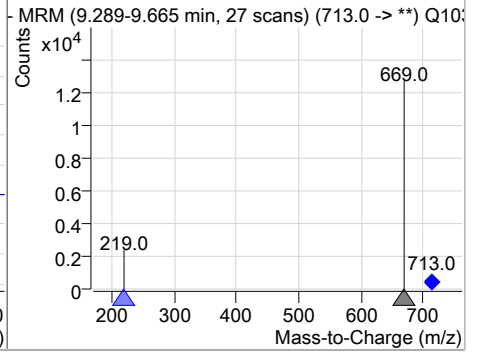
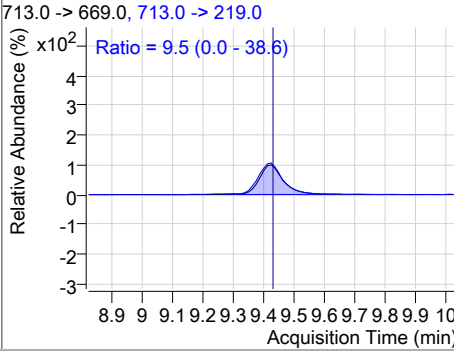
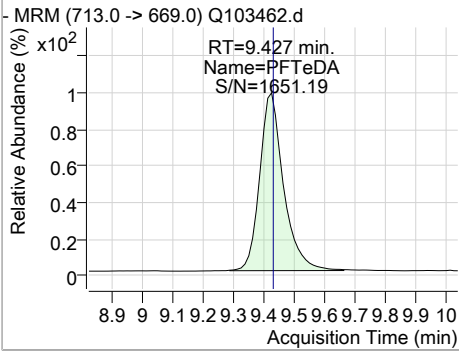


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	0.82	9.13	0.01	10685	663.0 -> 369.0	4.7	0.0	34.6



Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.76	9.43	0.03	8468	713.0 -> 219.0	9.5	0.0	38.6



7.6.3
7

Manual Integration Approval Summary

Sample Number: SQ2201-IC2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103462.D Analyst approved: 06/19/23 16:24 Anna Ludwig
Injection Time: 06/18/23 16:31 Supervisor approved: 06/19/23 17:23 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
13C3-HFPO-DA			6.04	Missed peak
Perfluorohexanesulfonic acid	355-46-4		6.67	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.74	Split peak
MeFOSAA	2355-31-9		8.18	Split peak
EtFOSAA	2991-50-6		8.29	Split peak

7.6.3.1

7

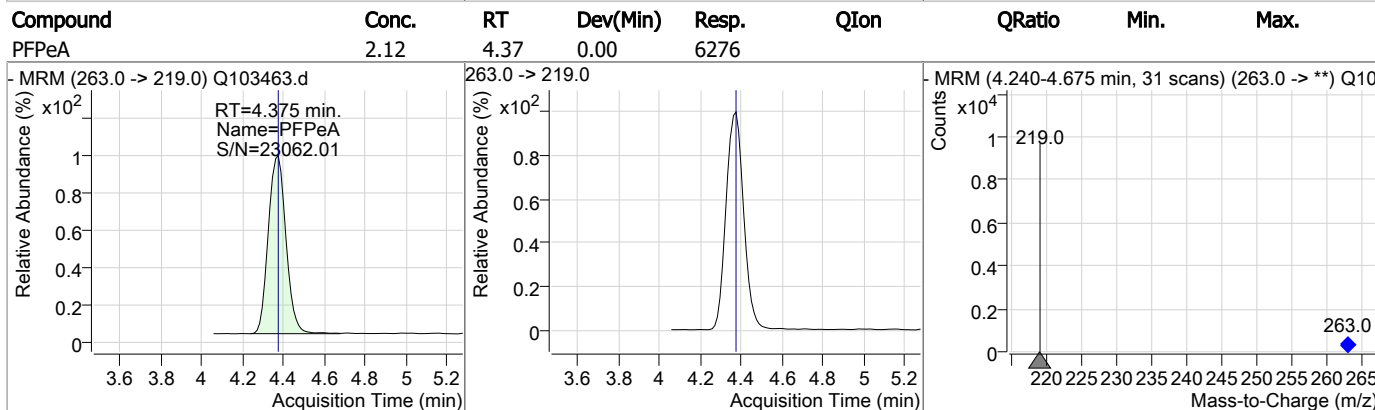
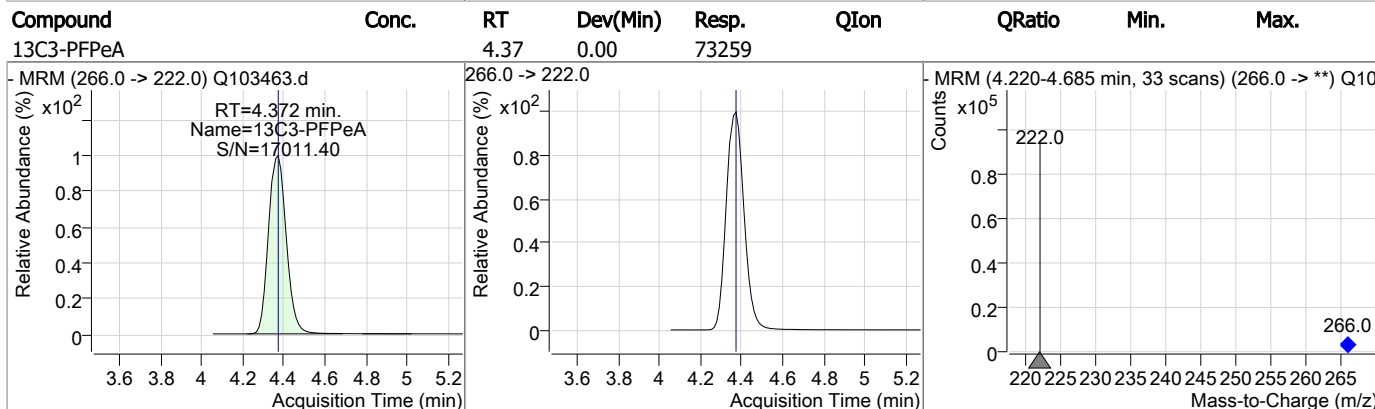
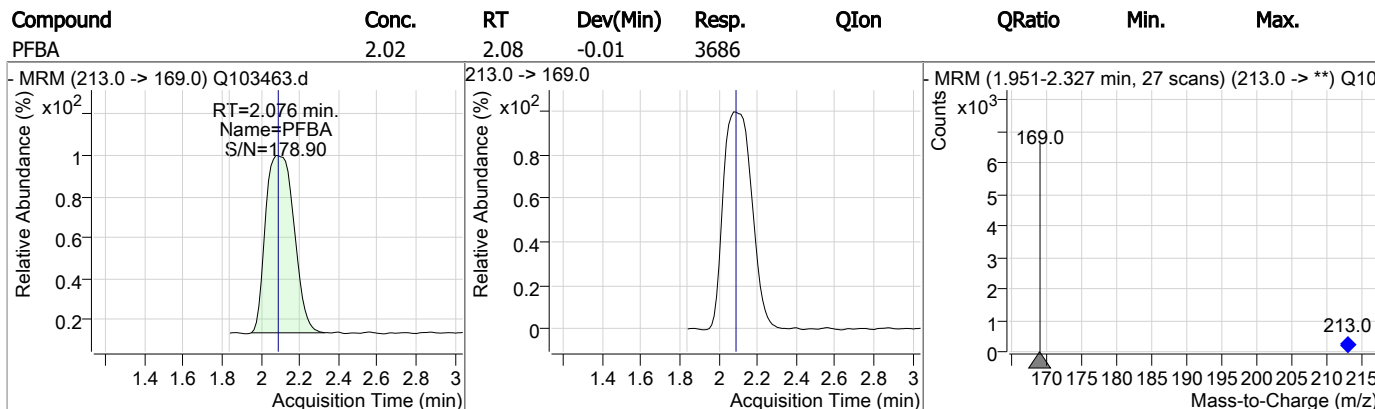
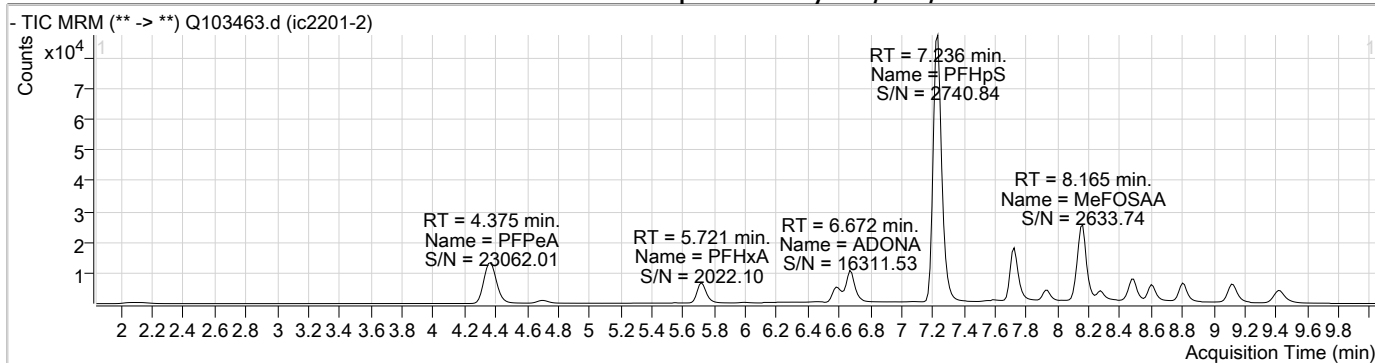
Perfluorinated Compounds by LC/MS/MS

Data File : Q103463.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 4:47:13 PM
 Sample Name : ic2201-2
 Vial : P1-A4
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP96727,SQ2201,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.225	429.0 -> 409.0	48383	20.00 µg/L	0.000
13C2-PFOA	7.239	415.0 -> 370.0	239097	20.00 µg/L	0.000
13C3-PFPeA	4.372	266.0 -> 222.0	73259	20.00 µg/L	0.000
13C4-PFOS	7.715	503.0 -> 80.0	42256	20.00 µg/L	0.000
d3-MeFOSAA	8.165	573.0 -> 419.0	54259	40.00 µg/L	0.000
System Monitoring Compounds					
13C2-PFDA	8.144	515.0 -> 470.0	14905	2.22 µg/L	0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 11.1%	
13C2-PFHxA	5.719	315.0 -> 270.0	13978	2.05 µg/L	-0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 10.2%	
d5-EtFOSAA	8.277	589.0 -> 419.0	6132	4.46 µg/L	0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 11.1%	
13C3-HFPO-DA	6.001	287.0 -> 169.0	399	4.37 µg/L	-0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 10.9%	
Target Compounds					
6:2FTS	7.225	427.0 -> 407.0	5598	2.59 µg/L	99
8:2FTS	8.168	527.0 -> 507.0	4142	2.29 µg/L	90
EtFOSAA	8.277	584.0 -> 419.0	2596	1.88 µg/L	m 95
MeFOSAA	8.165	570.0 -> 419.0	2942	1.98 µg/L	99
PFBA	2.076	213.0 -> 169.0	3686	2.02 µg/L	100
PFBS	4.703	299.0 -> 80.0	3195	2.27 µg/L	99
PFDA	8.145	513.0 -> 469.0	19625	2.14 µg/L	98
PFDoDA	8.804	613.0 -> 569.0	20860	1.96 µg/L	98
PFHpA	6.587	363.0 -> 319.0	15267	2.09 µg/L	97
PFHpS	7.236	449.0 -> 80.0	4281	2.27 µg/L	95
PFHxA	5.721	313.0 -> 269.0	12635	2.05 µg/L	97
PFHxS	6.619	399.0 -> 80.0	4317	2.23 µg/L	m 95
PFNA	7.742	463.0 -> 419.0	12176	2.10 µg/L	95
PFOA	7.240	413.0 -> 369.0	26574	2.04 µg/L	97
PFOS	7.716	499.0 -> 80.0	5137	2.12 µg/L	m 82
PFPeA	4.375	263.0 -> 219.0	6276	2.12 µg/L	100
PFTeDA	9.414	713.0 -> 669.0	20664	1.90 µg/L	100
PFTrDA	9.117	663.0 -> 619.0	25420	2.00 µg/L	99
PFUnDA	8.494	563.0 -> 519.0	19071	2.26 µg/L	96
ADONA	6.672	377.0 -> 251.0	27922	2.13 µg/L	99
9CI-PF3ONS	7.929	531.0 -> 351.0	9729	2.00 µg/L	98
11CI-PF3OUdS	8.602	631.0 -> 451.0	14596	2.11 µg/L	99
HFPO-DA	6.003	285.0 -> 169.0	192	1.86 µg/L	83

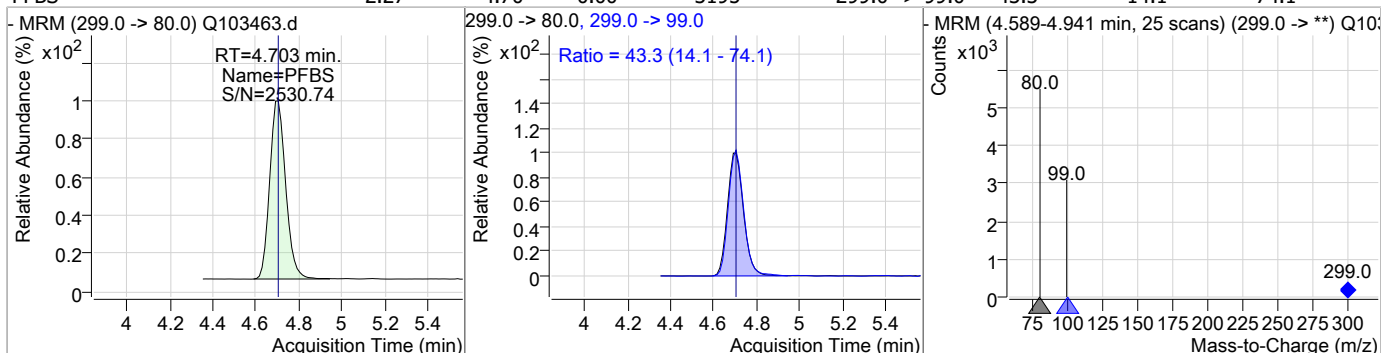
= Qualifier out of range, m = manually integrated, + = Area summed

Perfluorinated Compounds by LC/MS/MS

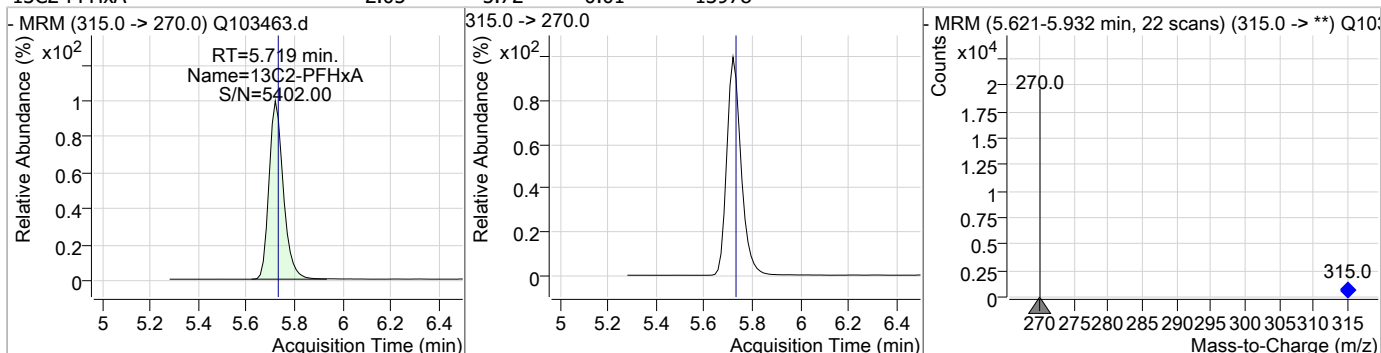


Perfluorinated Compounds by LC/MS/MS

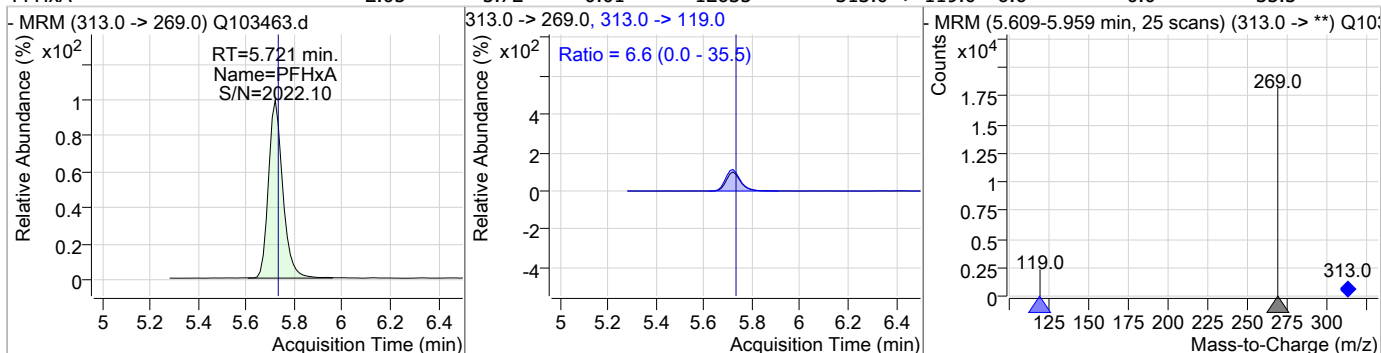
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	2.27	4.70	0.00	3195	299.0 -> 99.0	43.3	14.1	74.1



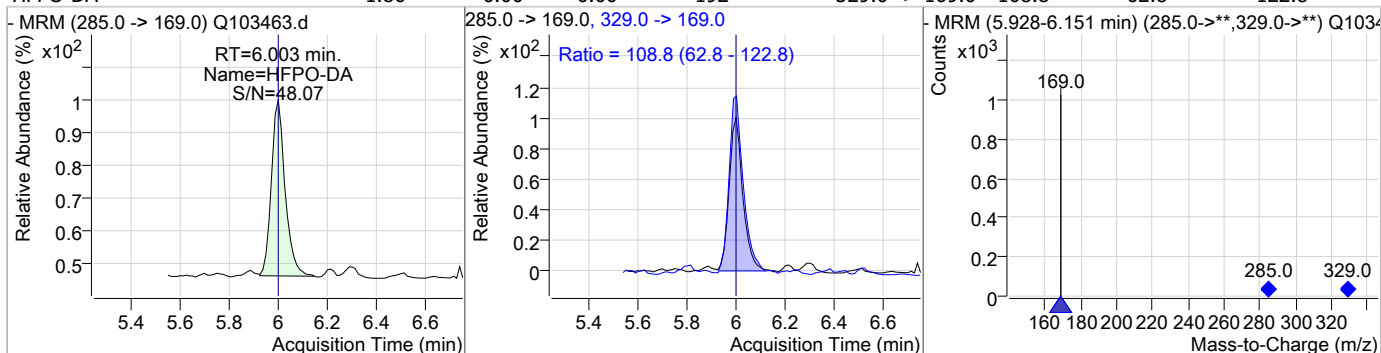
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	2.05	5.72	-0.01	13978				



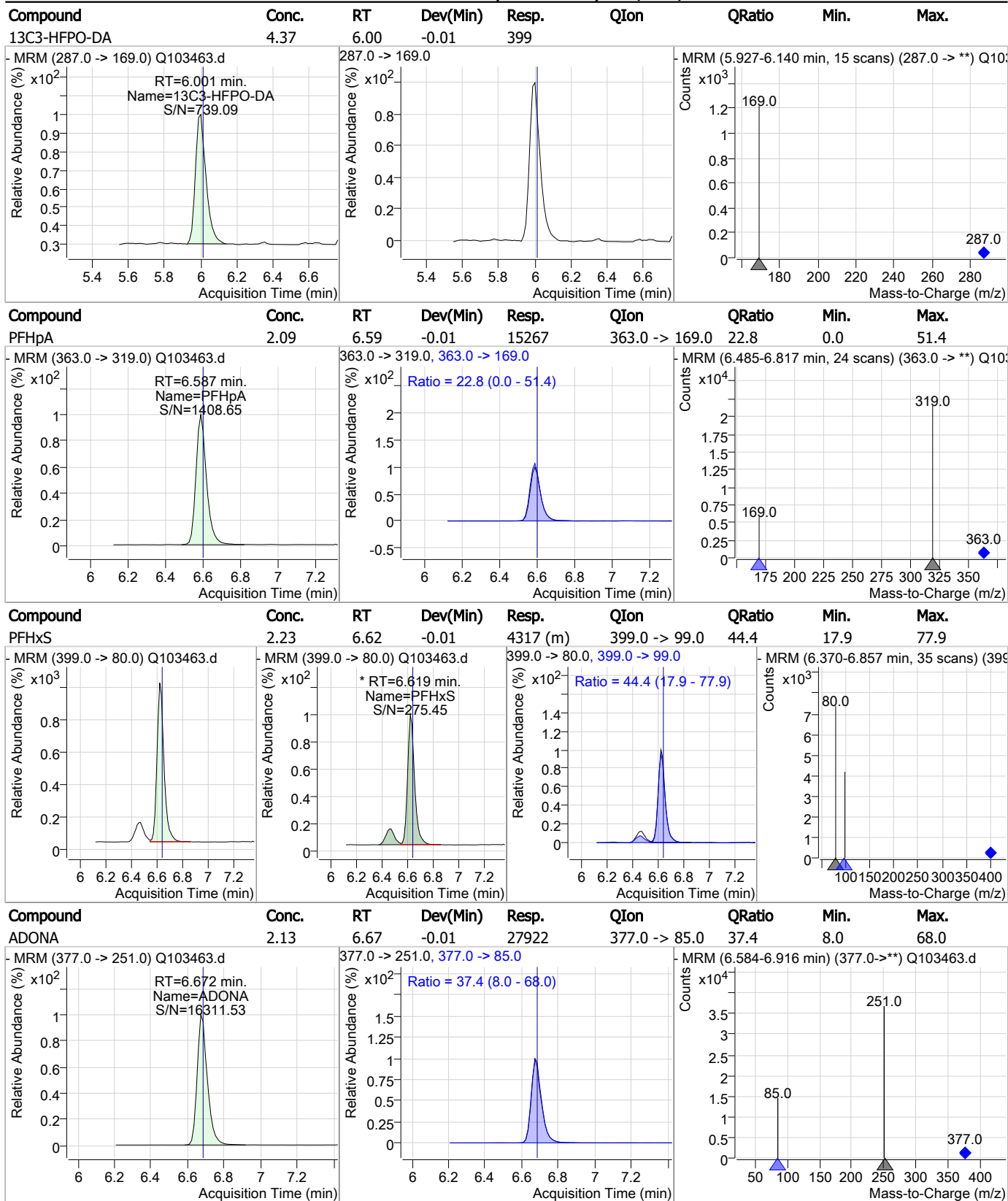
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	2.05	5.72	-0.01	12635	313.0 -> 119.0	6.6	0.0	35.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	1.86	6.00	0.00	192	329.0 -> 169.0	108.8	62.8	122.8



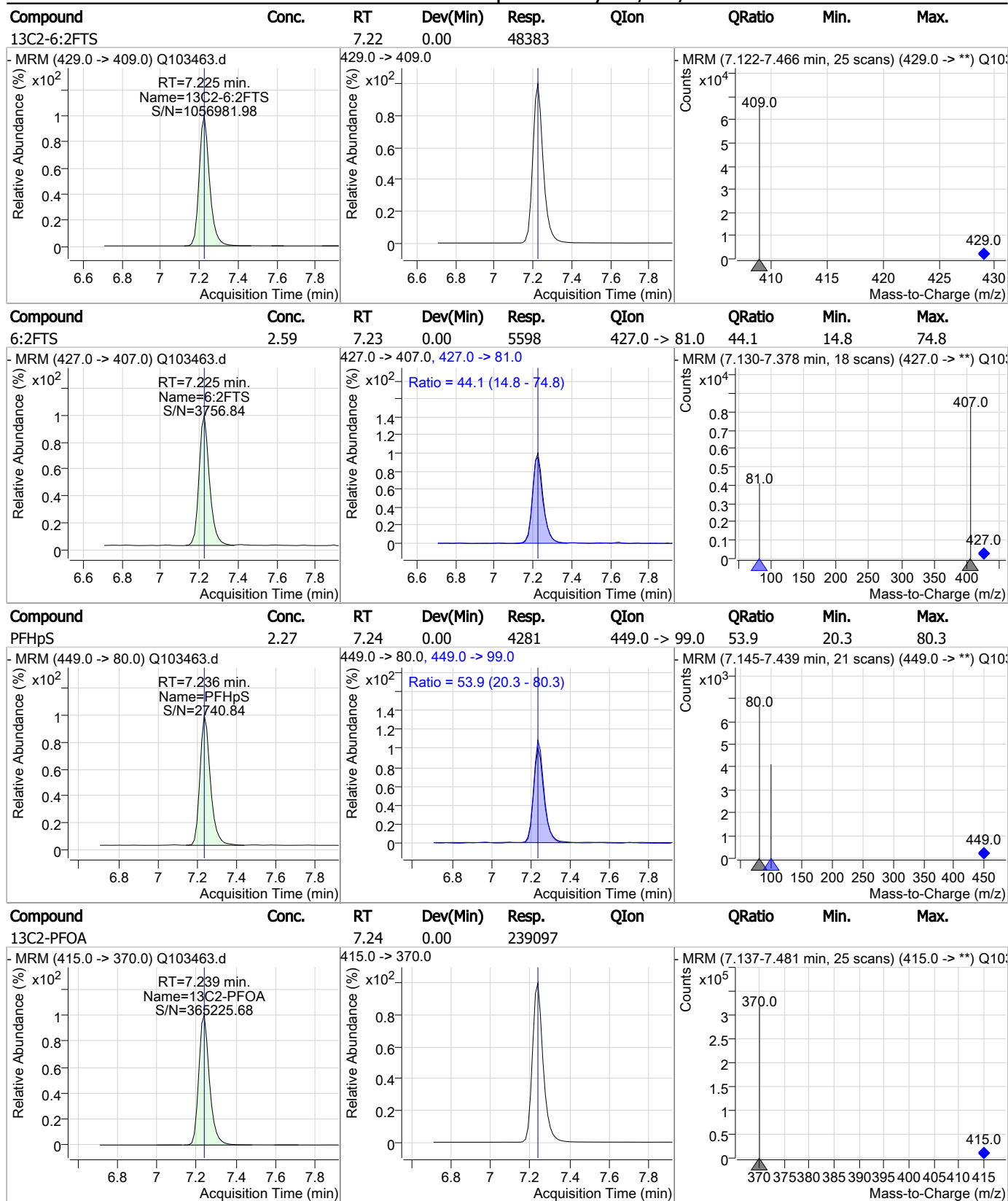
Perfluorinated Compounds by LC/MS/MS



7.6.4

7

Perfluorinated Compounds by LC/MS/MS

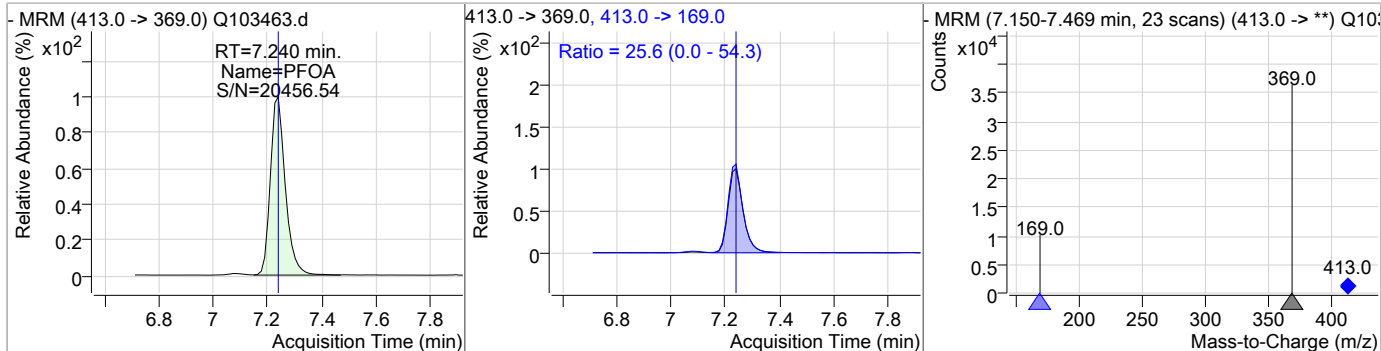


7.6.4

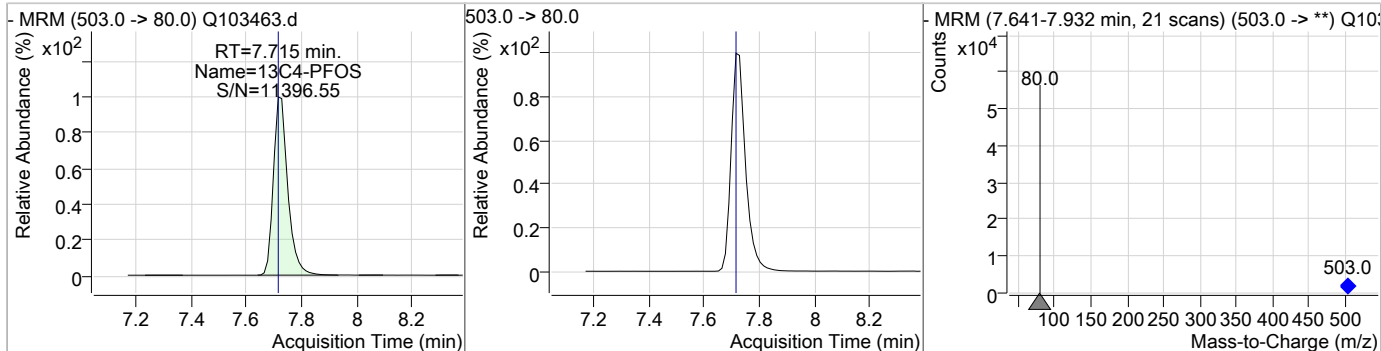
7

Perfluorinated Compounds by LC/MS/MS

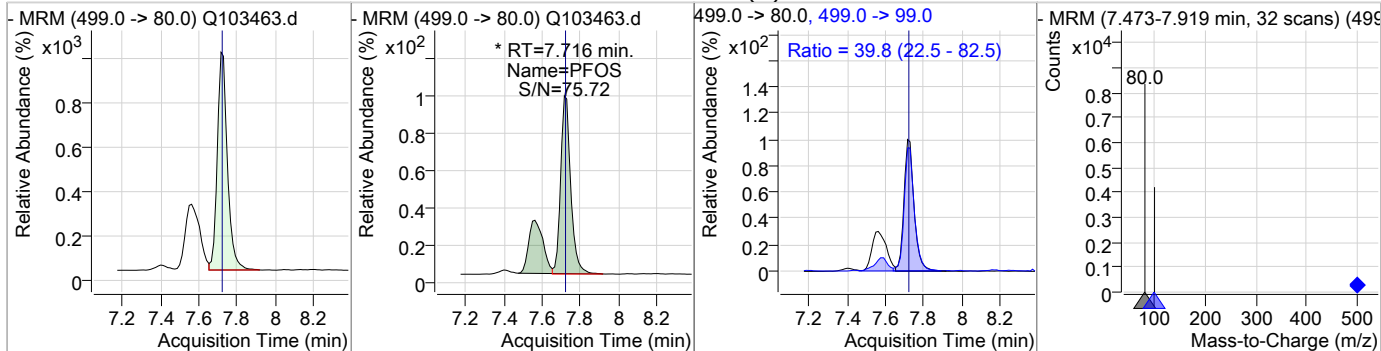
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	2.04	7.24	0.00	26574	413.0 -> 169.0	25.6	0.0	54.3



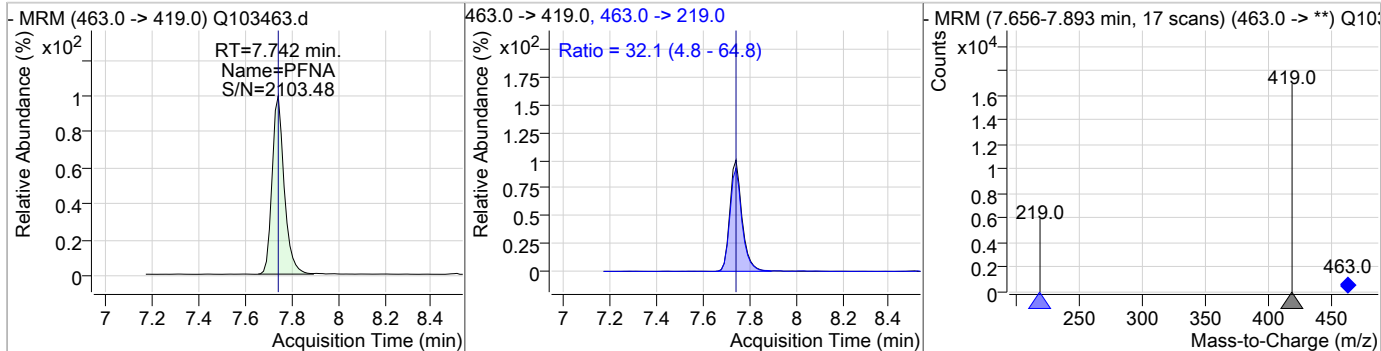
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.72	0.00	42256				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	2.12	7.72	0.00	5137 (m)	499.0 -> 99.0	39.8	22.5	82.5

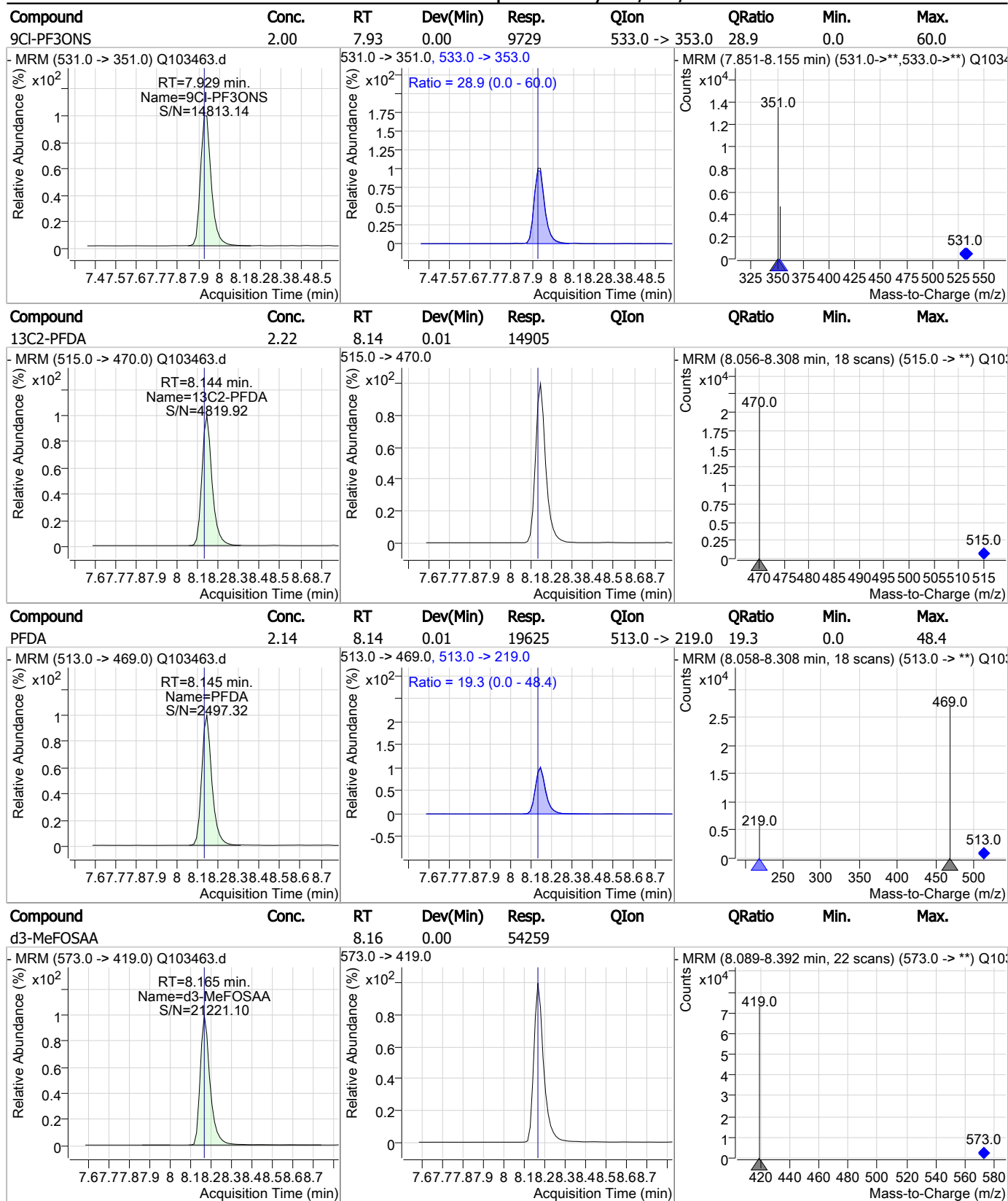


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	2.10	7.74	0.00	12176	463.0 -> 219.0	32.1	4.8	64.8



7.6.4
7

Perfluorinated Compounds by LC/MS/MS

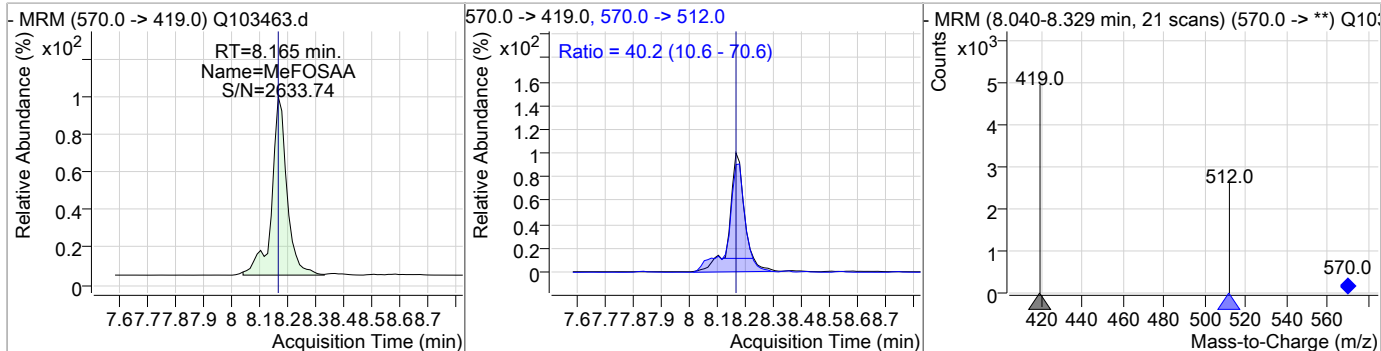


7.6.4

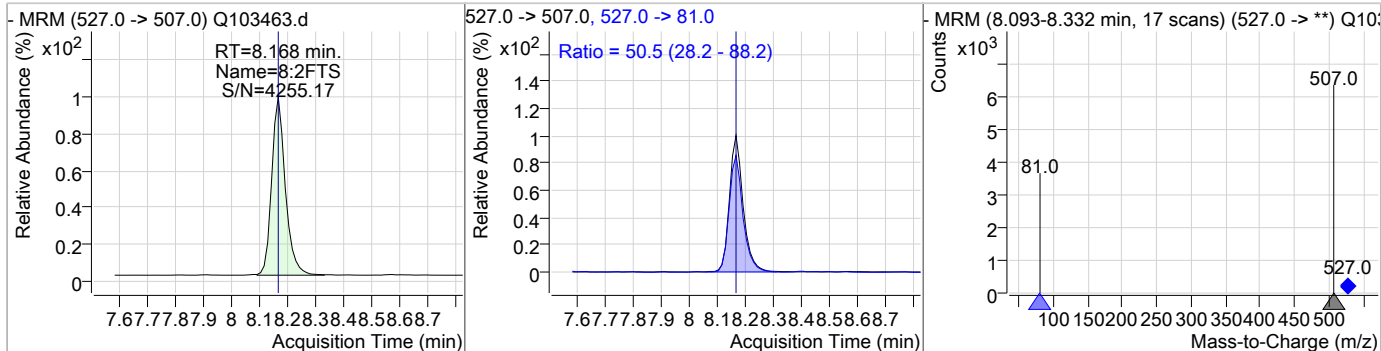
7

Perfluorinated Compounds by LC/MS/MS

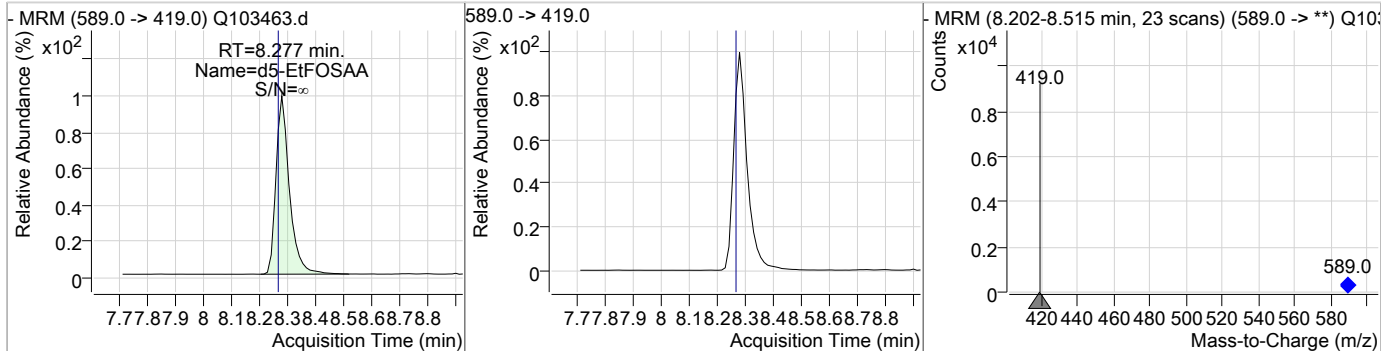
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	1.98	8.17	0.00	2942	570.0 -> 512.0	40.2	10.6	70.6



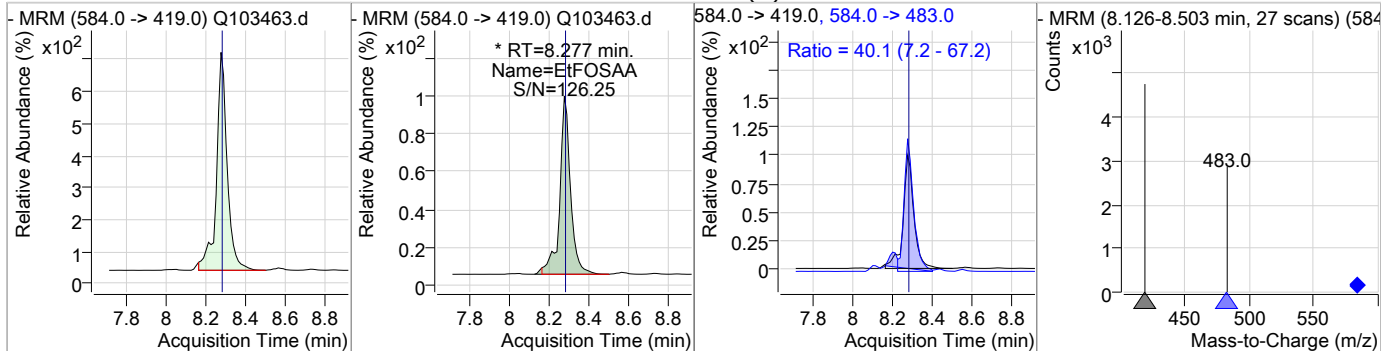
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	2.29	8.17	0.00	4142	527.0 -> 81.0	50.5	28.2	88.2



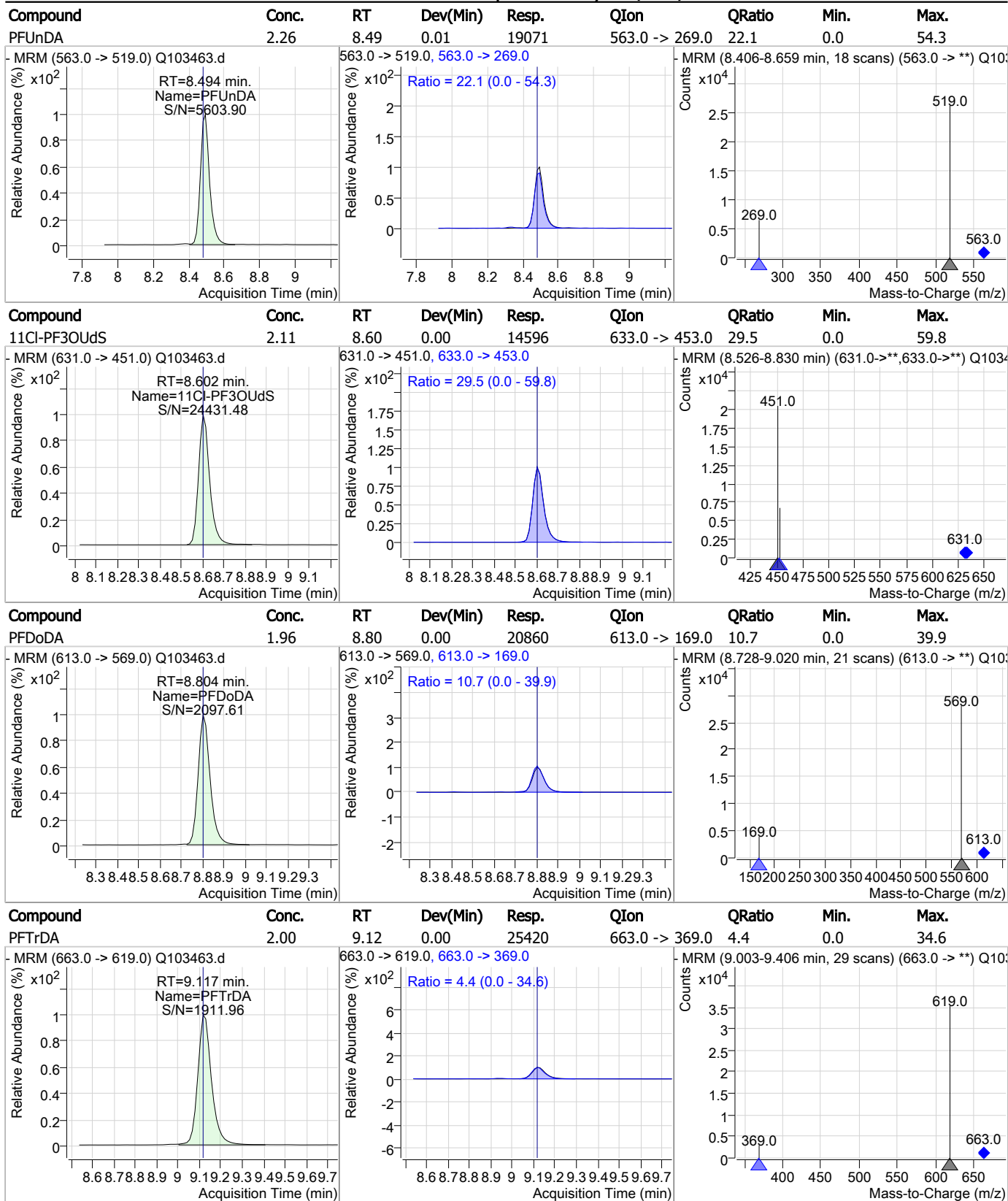
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	4.46	8.28	0.01	6132	589.0 -> 419.0			



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	1.88	8.28	0.00	2596 (m)	584.0 -> 483.0	40.1	7.2	67.2



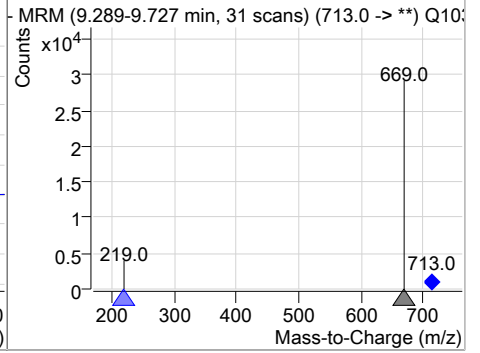
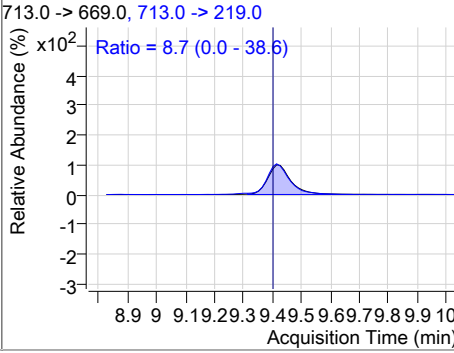
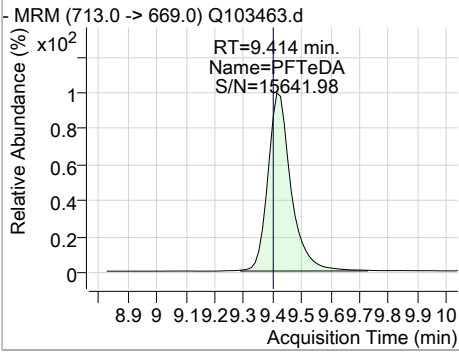
Perfluorinated Compounds by LC/MS/MS



7.6.4
7

Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	1.90	9.41	0.01	20664	713.0 -> 219.0	8.7	0.0	38.6



7.6.4

7

Manual Integration Approval Summary

Sample Number: SQ2201-IC2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103463.D Analyst approved: 06/19/23 16:24 Anna Ludwig
Injection Time: 06/18/23 16:47 Supervisor approved: 06/19/23 17:23 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.62	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
EtFOSAA	2991-50-6		8.28	Split peak

7.6.4.1

7

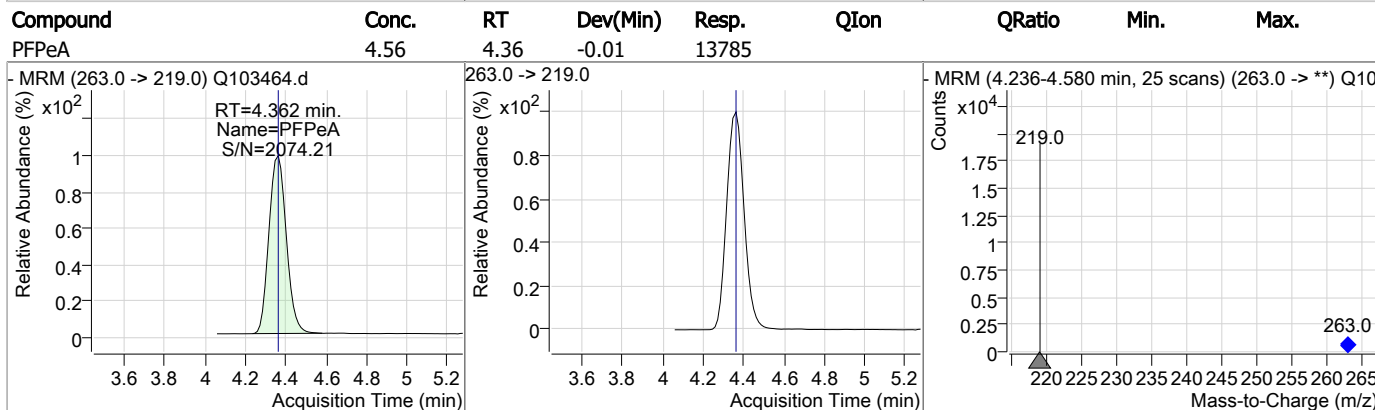
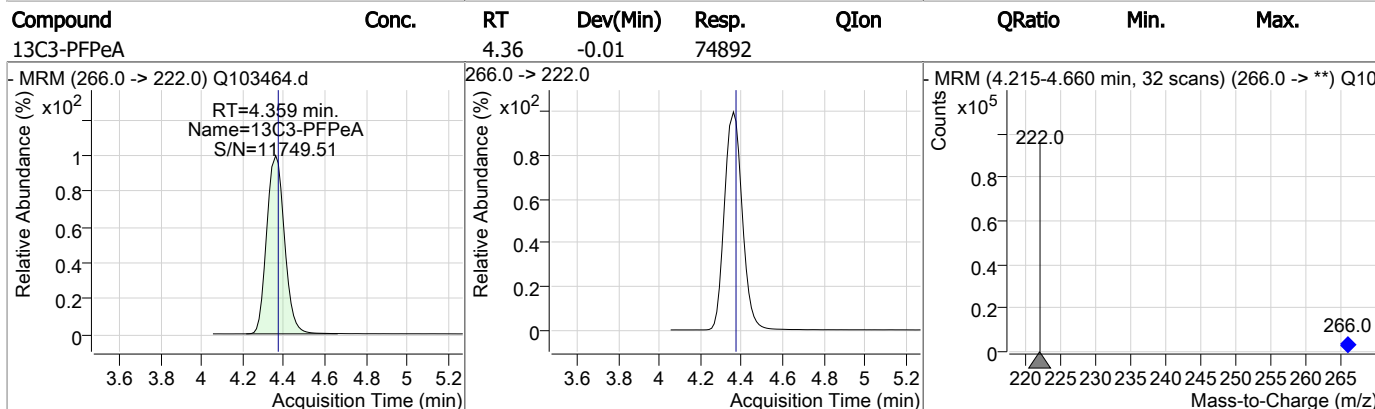
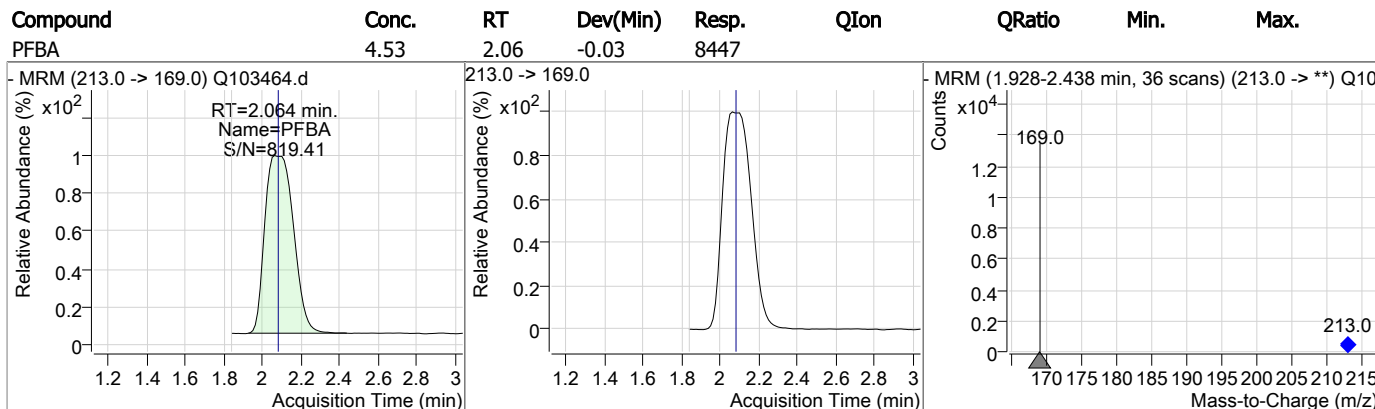
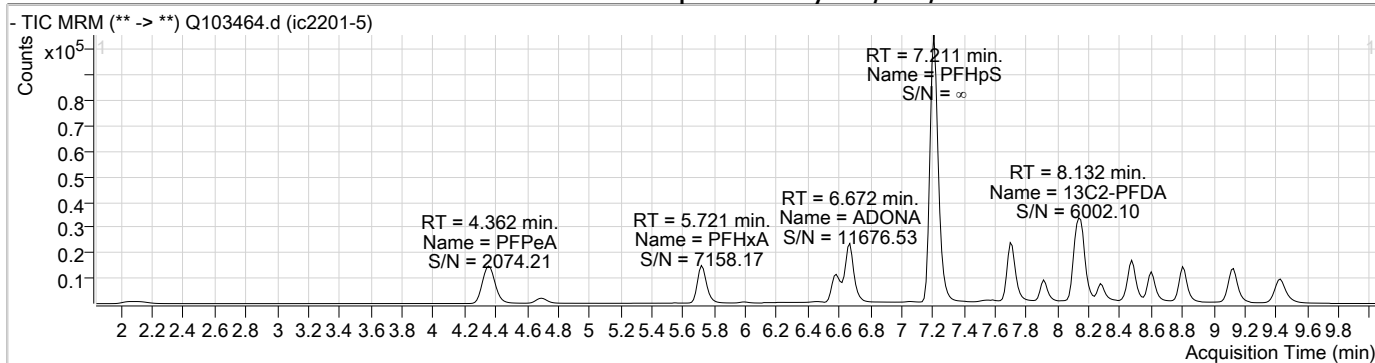
Perfluorinated Compounds by LC/MS/MS

Data File : Q103464.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 5:03:00 PM
 Sample Name : ic2201-5
 Vial : P1-A5
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP96727,SQ2201,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)	
Internal Standards						
13C2-6:2FTS	7.200	429.0 -> 409.0	49109	20.00 µg/L	-0.025	
13C2-PFOA	7.214	415.0 -> 370.0	241012	20.00 µg/L	-0.025	
13C3-PFPeA	4.359	266.0 -> 222.0	74892	20.00 µg/L	-0.013	
13C4-PFOS	7.702	503.0 -> 80.0	40780	20.00 µg/L	-0.013	
d3-MeFOSAA	8.165	573.0 -> 419.0	54290	40.00 µg/L	0.000	
System Monitoring Compounds						
13C2-PFDA	8.132	515.0 -> 470.0	32237	4.77 µg/L	0.000	
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 23.9%		
13C2-PFHxA	5.719	315.0 -> 270.0	31083	4.51 µg/L	-0.013	
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 22.6%		
d5-EtFOSAA	8.277	589.0 -> 419.0	13611	9.84 µg/L	0.013	
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 24.6%		
13C3-HFPO-DA	6.001	287.0 -> 169.0	841	9.11 µg/L	-0.013	
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 22.8%		
Target Compounds						
6:2FTS	7.200	427.0 -> 407.0	12650	5.77 µg/L		QValue
8:2FTS	8.156	527.0 -> 507.0	8581	4.69 µg/L		99
EtFOSAA	8.277	584.0 -> 419.0	6625	4.78 µg/L	m	98
MeFOSAA	8.165	570.0 -> 419.0	6760	4.54 µg/L	m	96
PFBA	2.064	213.0 -> 169.0	8447	4.53 µg/L		100
PFBS	4.691	299.0 -> 80.0	7047	5.16 µg/L		98
PFDA	8.132	513.0 -> 469.0	44692	4.84 µg/L		99
PFDoDA	8.804	613.0 -> 569.0	48127	4.68 µg/L		98
PFHpA	6.587	363.0 -> 319.0	33249	4.50 µg/L		100
PFHpS	7.211	449.0 -> 80.0	9243	5.08 µg/L		99
PFHxA	5.721	313.0 -> 269.0	28272	4.54 µg/L		99
PFHxS	6.619	399.0 -> 80.0	9287	4.97 µg/L	m	100
PFNA	7.717	463.0 -> 419.0	26376	4.51 µg/L		99
PFOA	7.215	413.0 -> 369.0	61071	4.65 µg/L		100
PFOS	7.703	499.0 -> 80.0	10219	4.38 µg/L	m	92
PFPeA	4.362	263.0 -> 219.0	13785	4.56 µg/L		100
PFTeDA	9.427	713.0 -> 669.0	46355	4.41 µg/L		100
PFTrDA	9.129	663.0 -> 619.0	56337	4.58 µg/L		99
PFUnDA	8.481	563.0 -> 519.0	41812	5.13 µg/L		99
ADONA	6.672	377.0 -> 251.0	62299	4.70 µg/L		99
9Cl-PF3ONS	7.914	531.0 -> 351.0	21761	4.41 µg/L		95
11Cl-PF3OUdS	8.602	631.0 -> 451.0	31553	4.51 µg/L		100
HFPO-DA	6.003	285.0 -> 169.0	464	4.44 µg/L		93

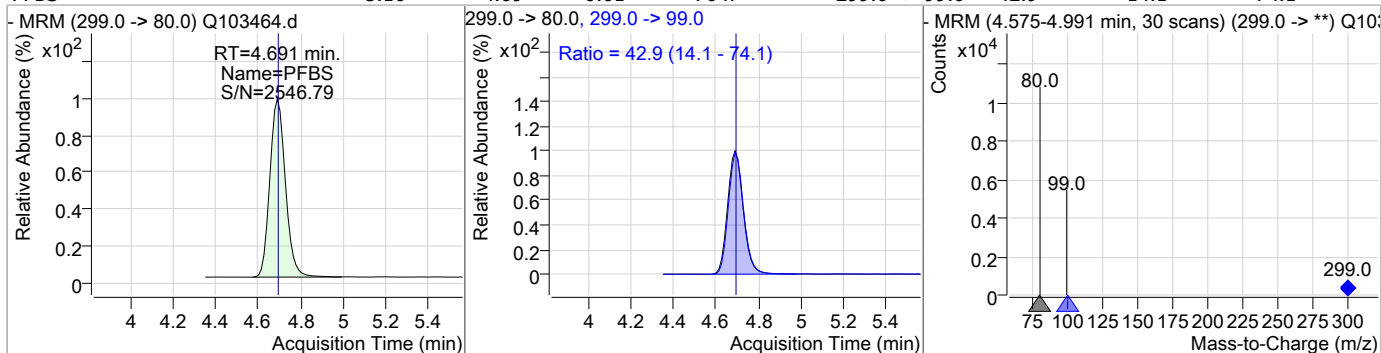
= Qualifier out of range, m = manually integrated, + = Area summed

Perfluorinated Compounds by LC/MS/MS

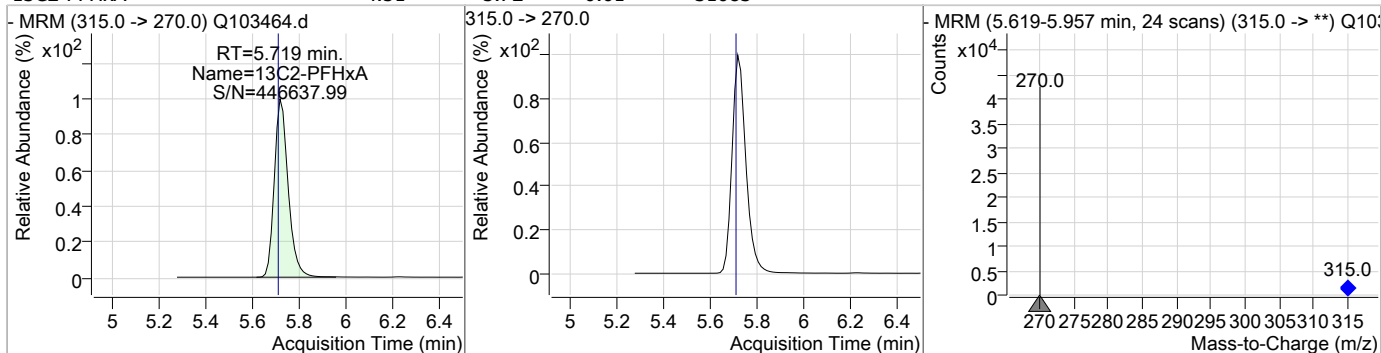


Perfluorinated Compounds by LC/MS/MS

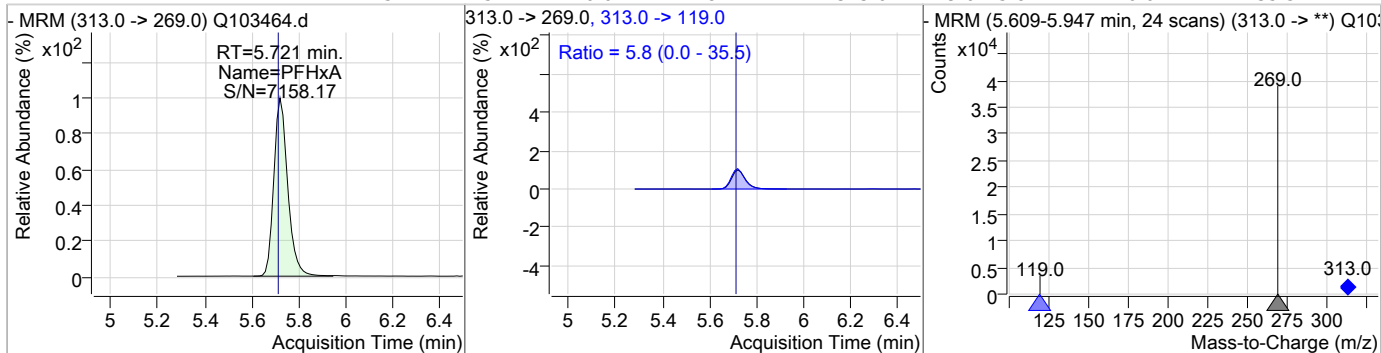
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	5.16	4.69	-0.01	7047	299.0 -> 99.0	42.9	14.1	74.1



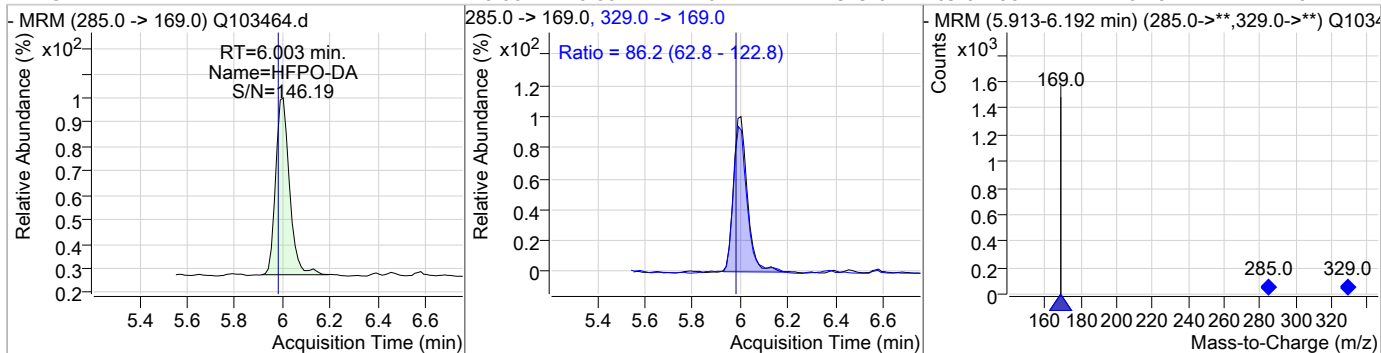
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	4.51	5.72	-0.01	31083				



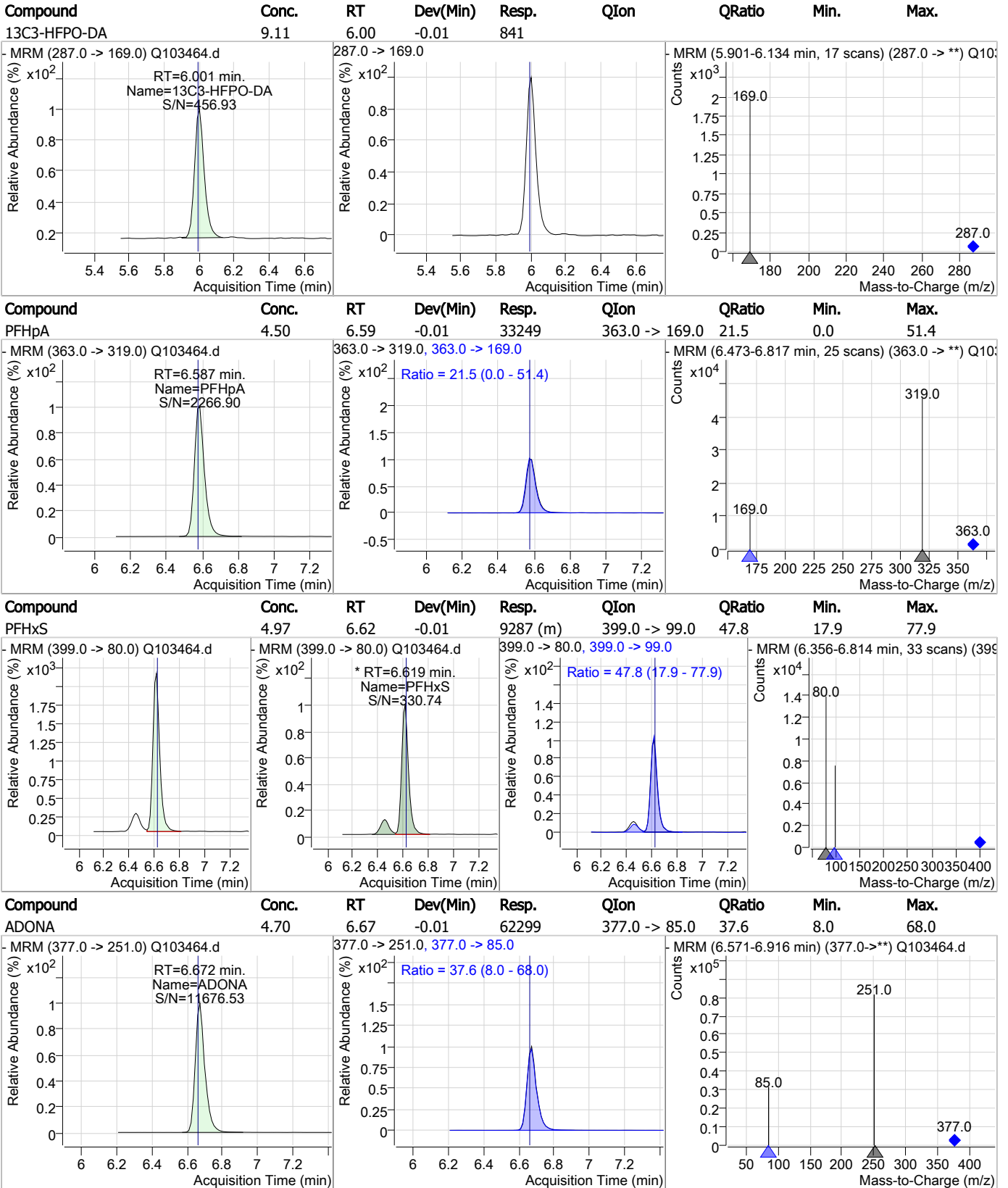
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	4.54	5.72	-0.01	28272	313.0 -> 119.0	5.8	0.0	35.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	4.44	6.00	0.00	464	329.0 -> 169.0	86.2	62.8	122.8



Perfluorinated Compounds by LC/MS/MS

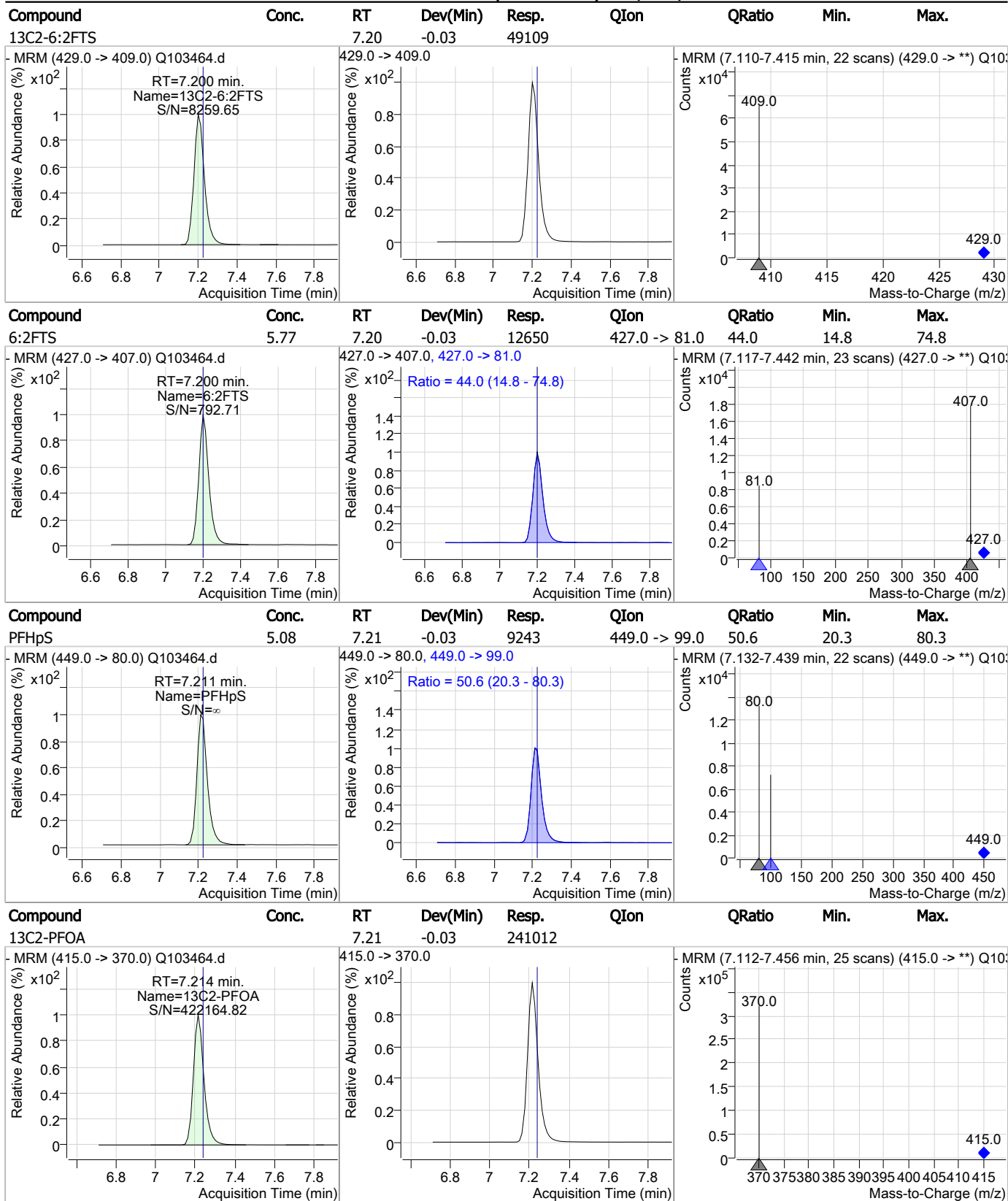


7.6.5

7



Perfluorinated Compounds by LC/MS/MS

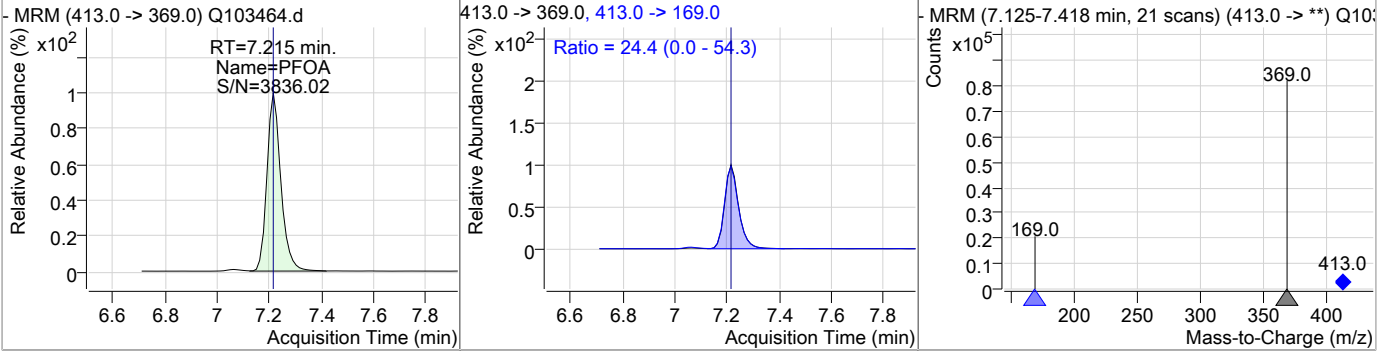


7.6.5

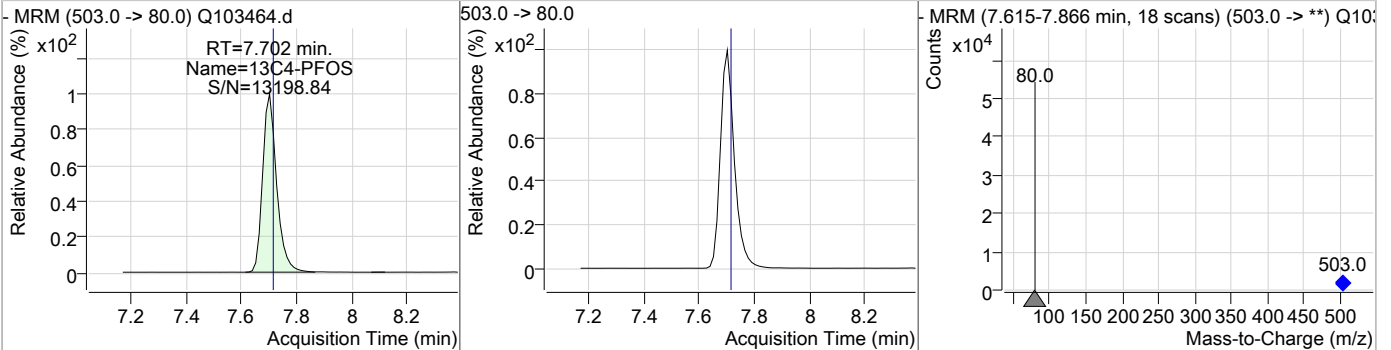
7

Perfluorinated Compounds by LC/MS/MS

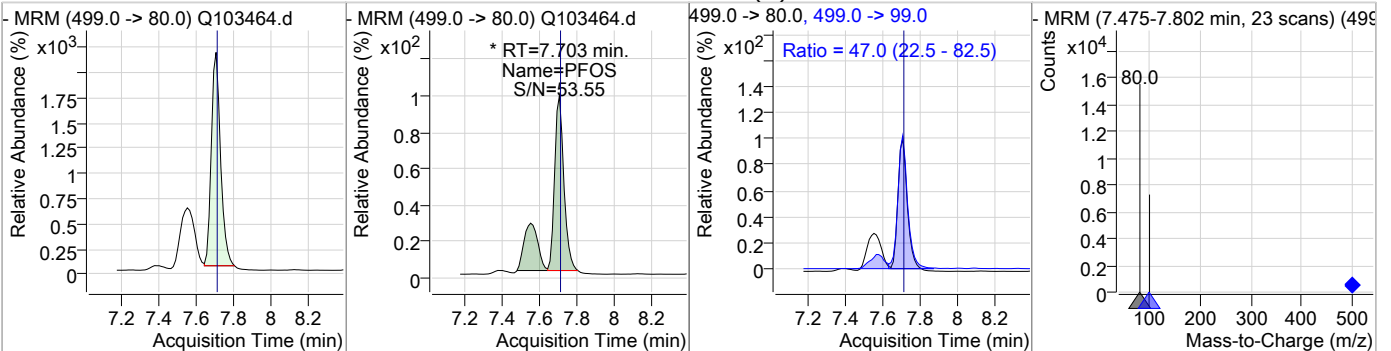
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	4.65	7.21	-0.03	61071	413.0 -> 169.0	24.4	0.0	54.3



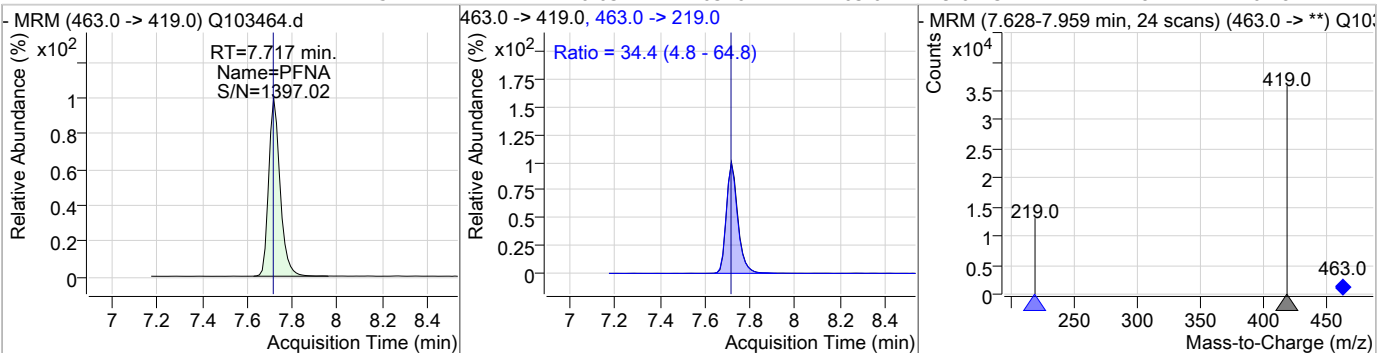
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.70	-0.01	40780				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	4.38	7.70	-0.01	10219 (m)	499.0 -> 99.0	47.0	22.5	82.5

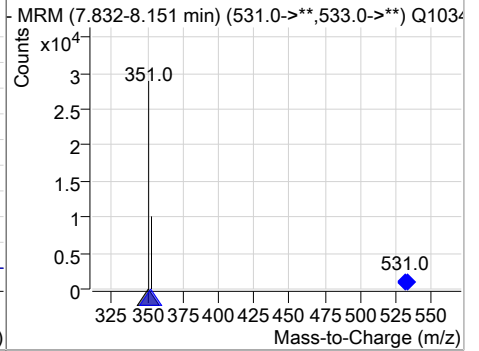
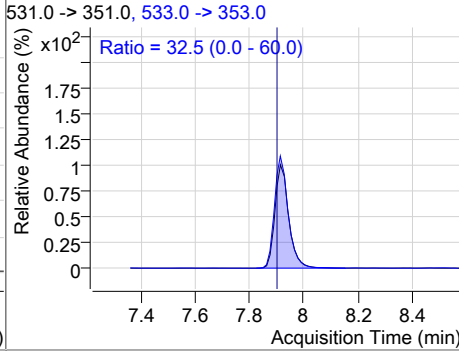
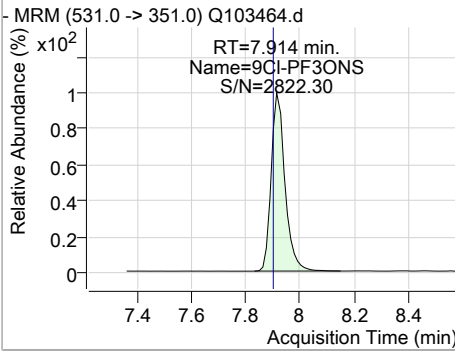


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	4.51	7.72	-0.03	26376	463.0 -> 219.0	34.4	4.8	64.8

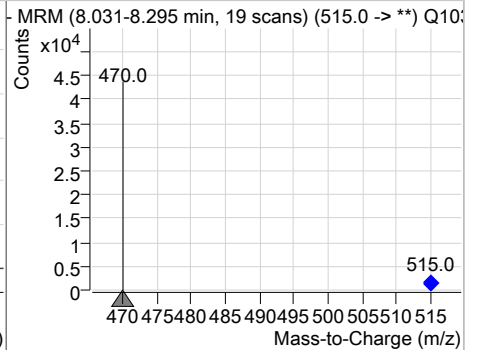
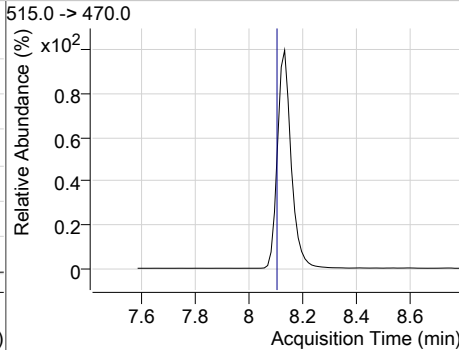
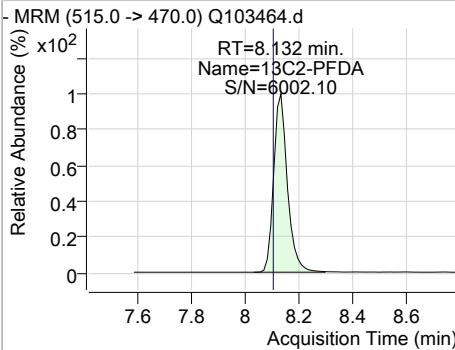


Perfluorinated Compounds by LC/MS/MS

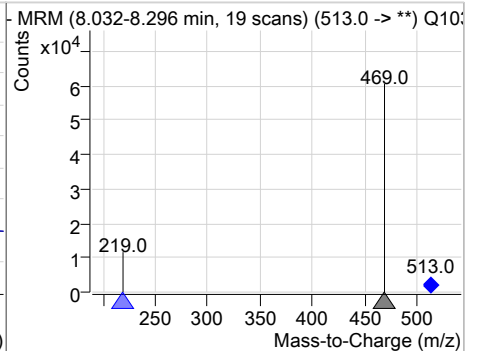
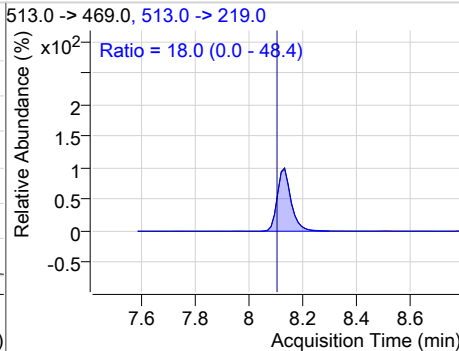
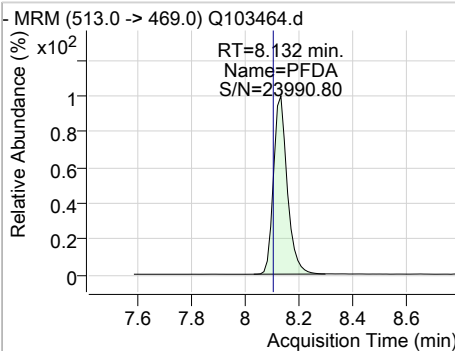
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9CI-PF3ONS	4.41	7.91	-0.01	21761	533.0 -> 353.0	32.5	0.0	60.0



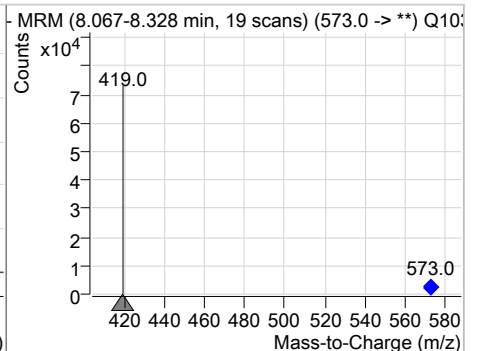
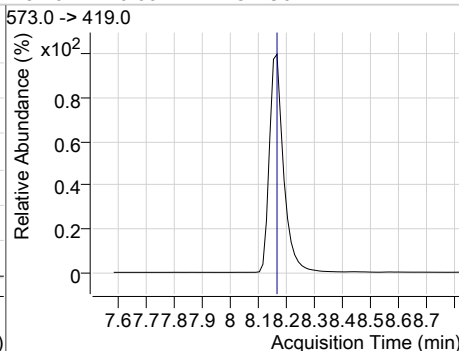
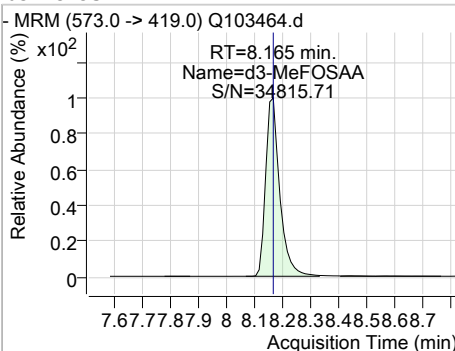
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	4.77	8.13	0.00	32237				



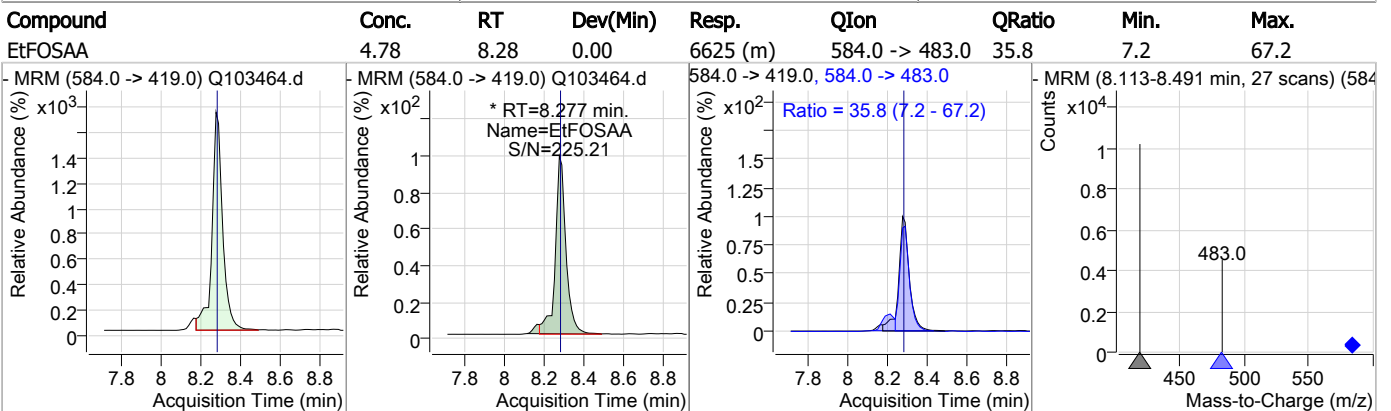
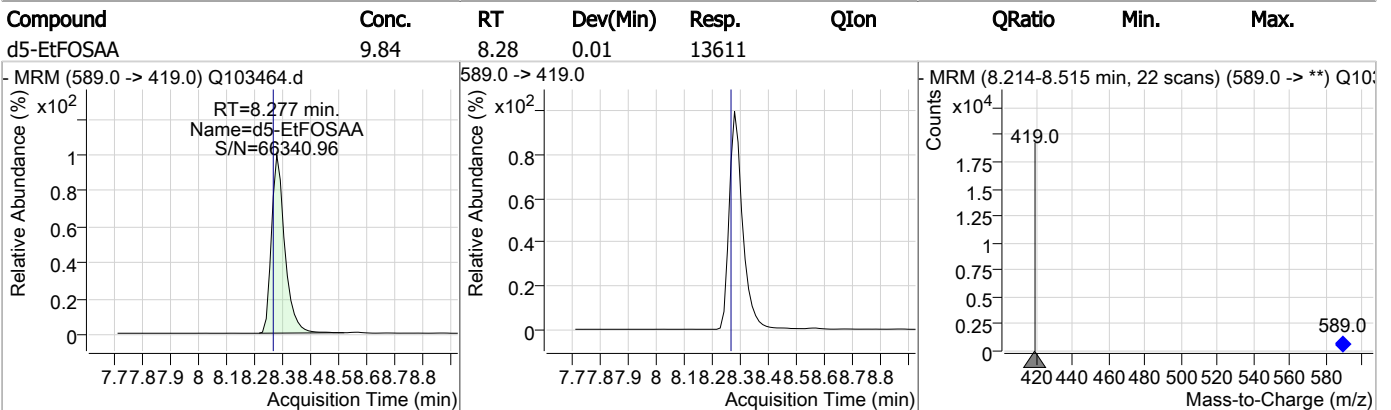
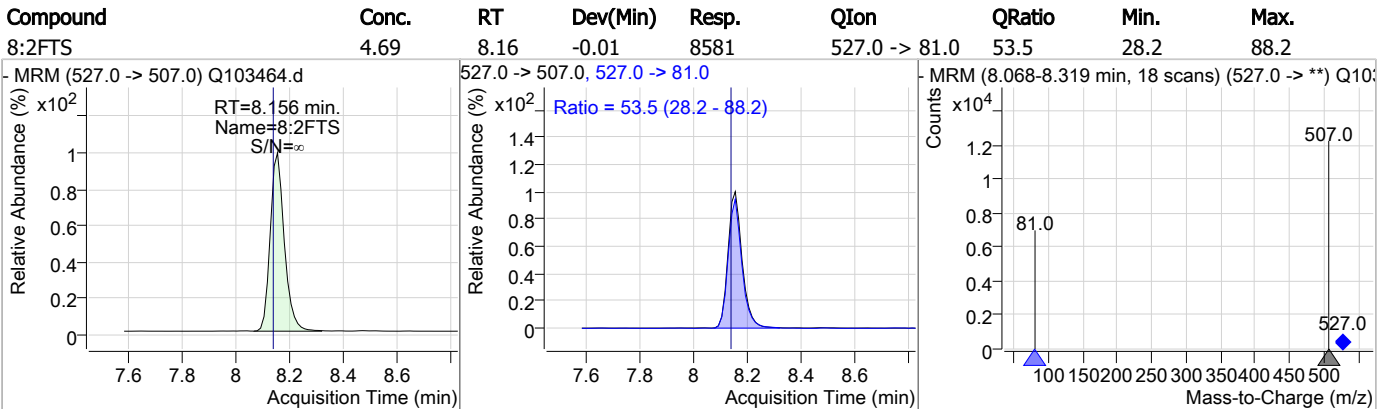
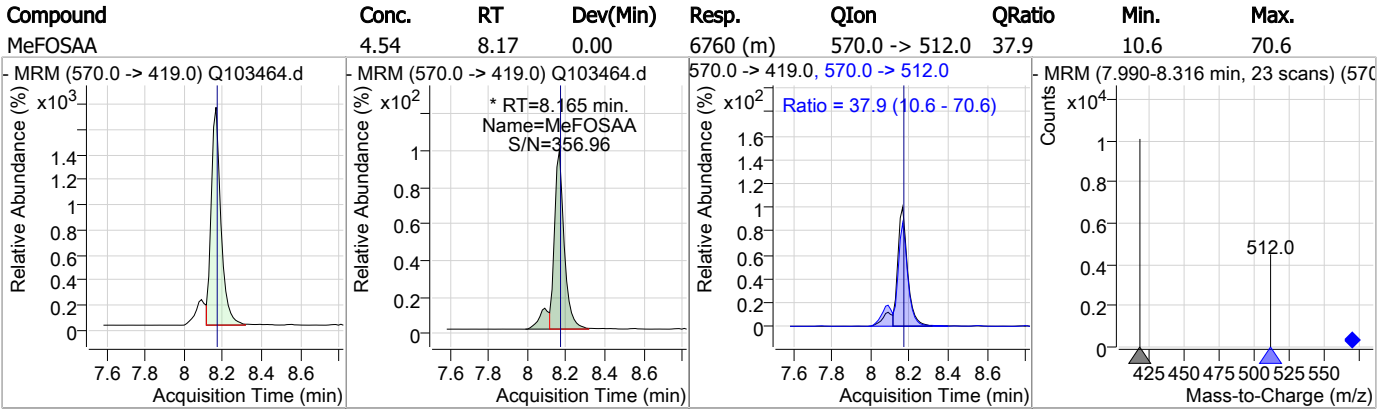
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	4.84	8.13	0.00	44692	513.0 -> 219.0	18.0	0.0	48.4



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.16	0.00	54290				



Perfluorinated Compounds by LC/MS/MS

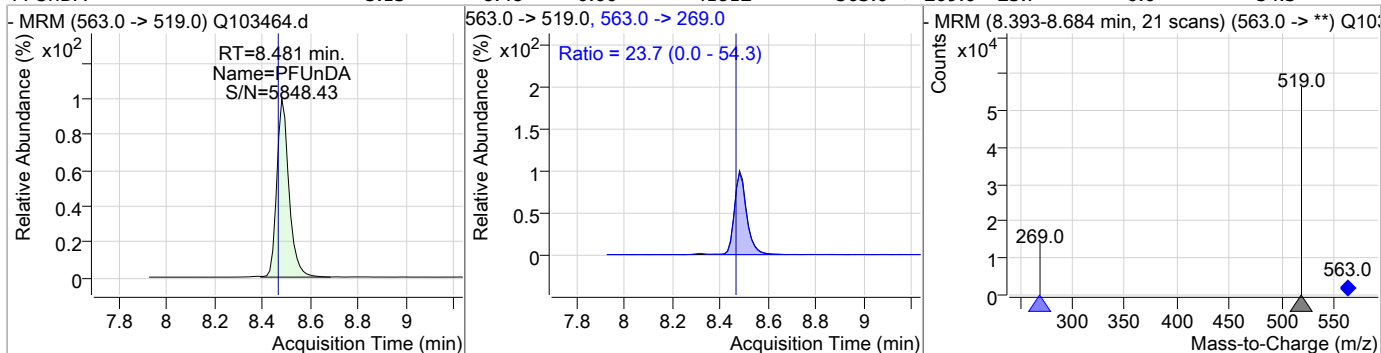


7.6.5

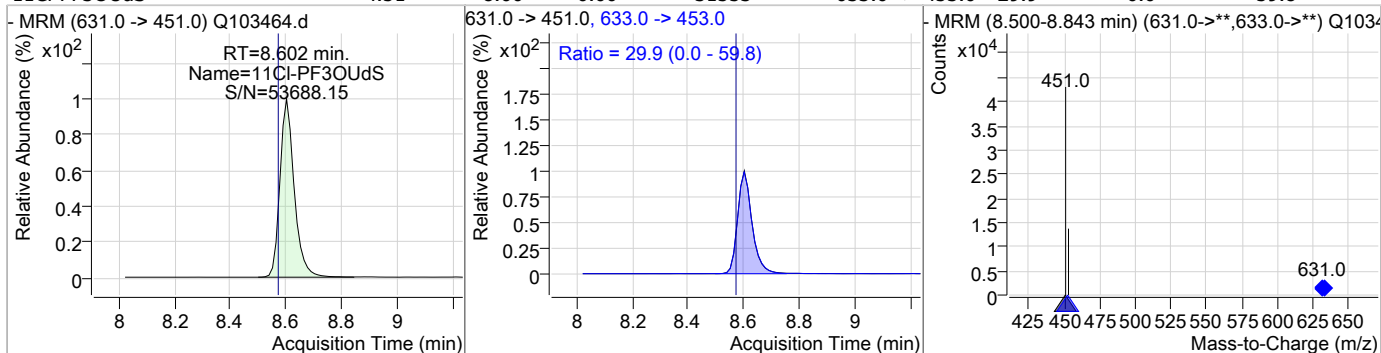
7

Perfluorinated Compounds by LC/MS/MS

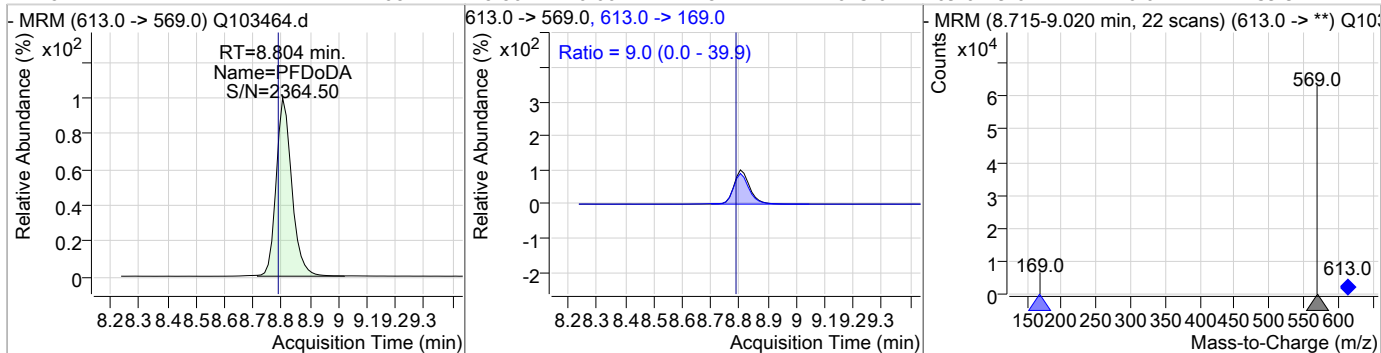
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	5.13	8.48	0.00	41812	563.0 -> 269.0	23.7	0.0	54.3



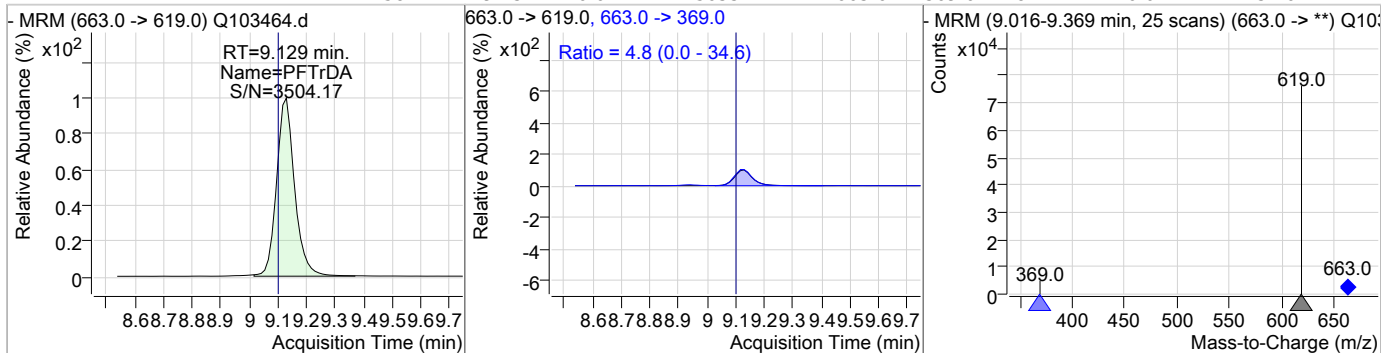
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	4.51	8.60	0.00	31553	633.0 -> 453.0	29.9	0.0	59.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	4.68	8.80	0.00	48127	613.0 -> 169.0	9.0	0.0	39.9



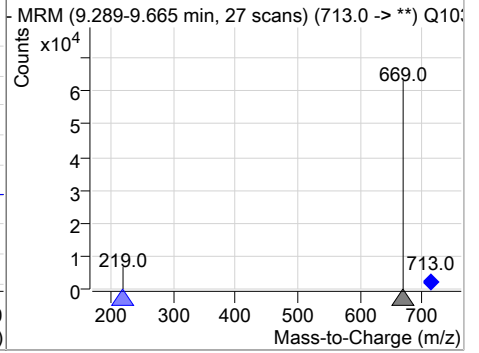
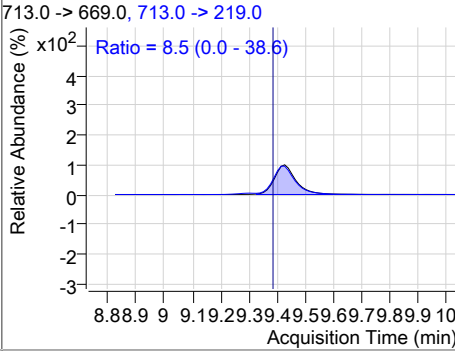
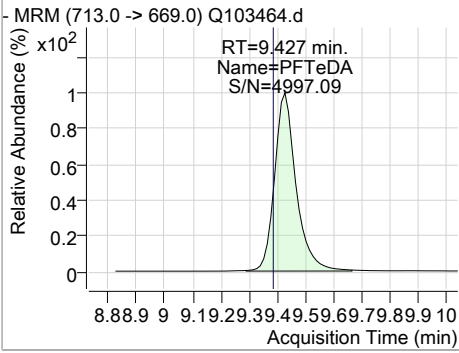
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	4.58	9.13	0.01	56337	663.0 -> 369.0	4.8	0.0	34.6



7.6.5
7

Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	4.41	9.43	0.03	46355	713.0 -> 219.0	8.5	0.0	38.6



7.6.5

7

Manual Integration Approval Summary

Sample Number: SQ2201-IC2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103464.D Analyst approved: 06/19/23 16:24 Anna Ludwig
Injection Time: 06/18/23 17:03 Supervisor approved: 06/19/23 17:23 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.62	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.70	Split peak
MeFOSAA	2355-31-9		8.16	Split peak
EtFOSAA	2991-50-6		8.28	Split peak

7.6.5.1

7

Manual Integrations
APPROVED
 (compounds with "m" flag)

Norman Farmer
 06/19/23 17:23

Perfluorinated Compounds by LC/MS/MS

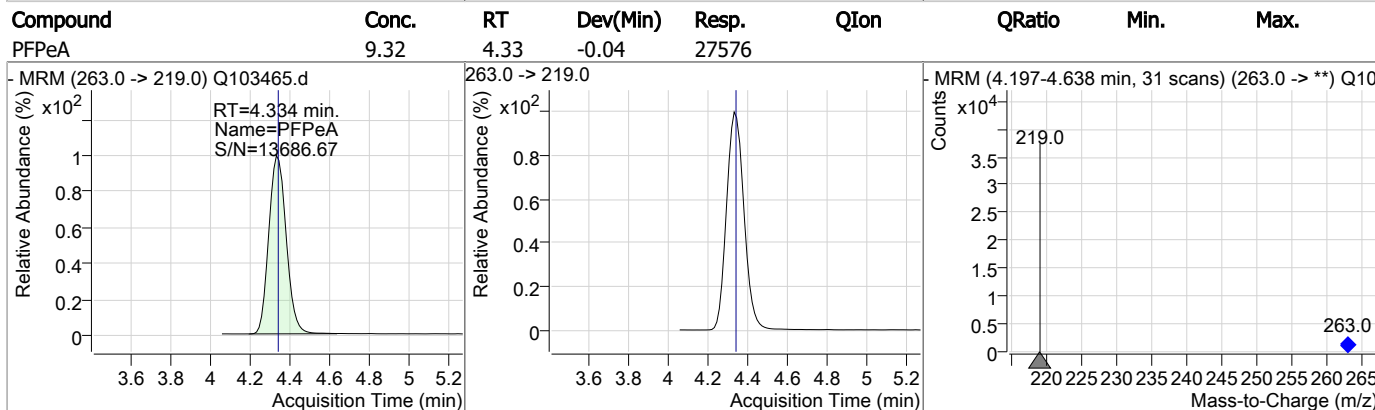
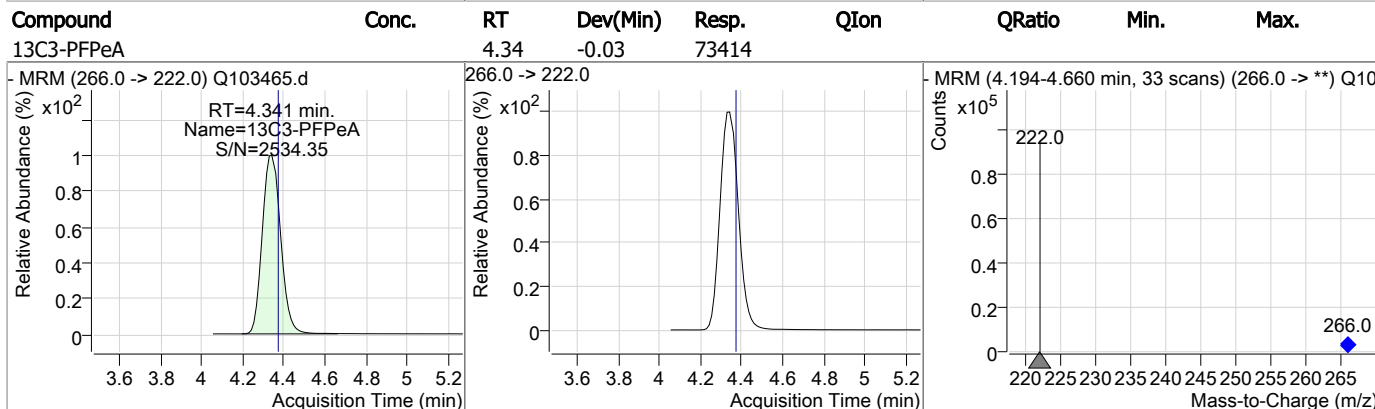
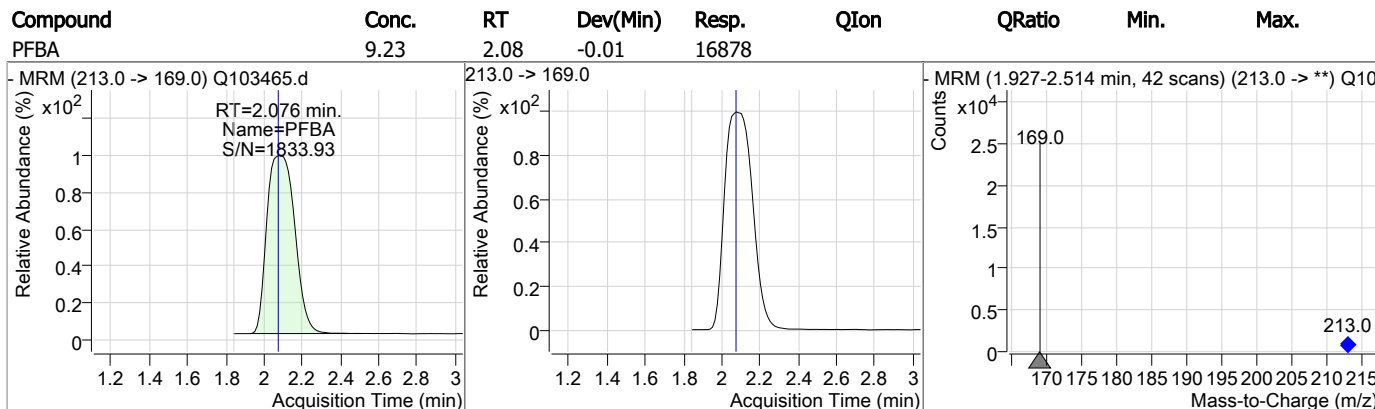
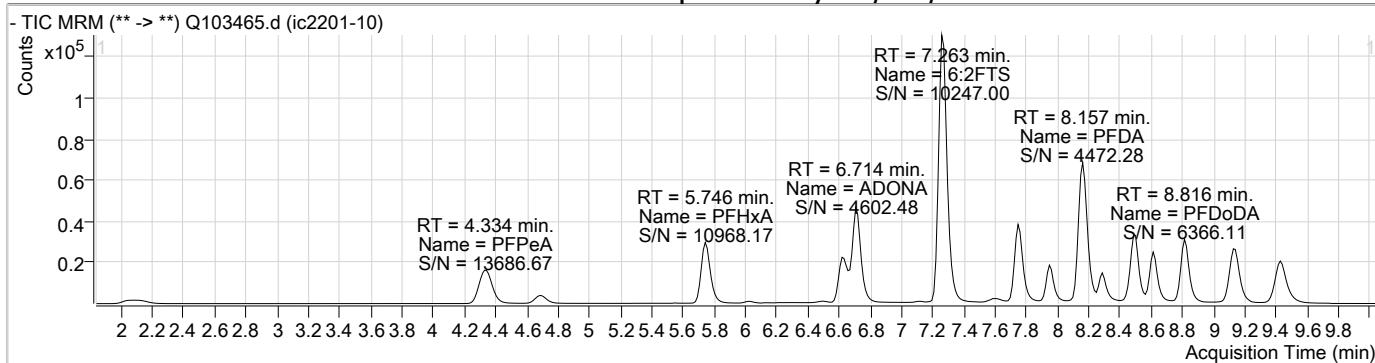
Data File : Q103465.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 5:18:48 PM
 Sample Name : ic2201-10
 Vial : P1-A6
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP96727,SQ2201,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.262	429.0 -> 409.0	47831	20.00 µg/L	0.038
13C2-PFOA	7.264	415.0 -> 370.0	235823	20.00 µg/L	0.025
13C3-PFPeA	4.341	266.0 -> 222.0	73414	20.00 µg/L	-0.031
13C4-PFOS	7.740	503.0 -> 80.0	42751	20.00 µg/L	0.025
d3-MeFOSAA	8.177	573.0 -> 419.0	55132	40.00 µg/L	0.013
System Monitoring Compounds					
13C2-PFDA	8.157	515.0 -> 470.0	66192	10.02 µg/L	0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 50.1%	
13C2-PFHxA	5.744	315.0 -> 270.0	62520	9.24 µg/L	0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 46.2%	
d5-EtFOSAA	8.289	589.0 -> 419.0	27991	19.76 µg/L	0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 49.4%	
13C3-HFPO-DA	6.026	287.0 -> 169.0	1725	19.04 µg/L	0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 47.6%	
Target Compounds					
6:2FTS	7.263	427.0 -> 407.0	24500	11.47 µg/L	99
8:2FTS	8.181	527.0 -> 507.0	17673	10.01 µg/L	98
EtFOSAA	8.290	584.0 -> 419.0	12946	9.16 µg/L	m 97
MeFOSAA	8.178	570.0 -> 419.0	13200	8.73 µg/L	96
PFBA	2.076	213.0 -> 169.0	16878	9.23 µg/L	100
PFBS	4.691	299.0 -> 80.0	13798	9.60 µg/L	99
PFDA	8.157	513.0 -> 469.0	92072	10.18 µg/L	99
PFDoDA	8.816	613.0 -> 569.0	109447	10.15 µg/L	99
PFHpA	6.624	363.0 -> 319.0	67852	9.35 µg/L	99
PFHpS	7.274	449.0 -> 80.0	18590	9.75 µg/L	97
PFHxA	5.746	313.0 -> 269.0	56599	9.26 µg/L	99
PFHxS	6.669	399.0 -> 80.0	19139	9.74 µg/L	m 98
PFNA	7.767	463.0 -> 419.0	54374	9.47 µg/L	99
PFOA	7.265	413.0 -> 369.0	122280	9.53 µg/L	99
PFOS	7.741	499.0 -> 80.0	23009	9.41 µg/L	m 84
PFPeA	4.334	263.0 -> 219.0	27576	9.32 µg/L	100
PFTeDA	9.427	713.0 -> 669.0	101523	9.21 µg/L	99
PFTTrDA	9.129	663.0 -> 619.0	118022	9.16 µg/L	100
PFUnDA	8.506	563.0 -> 519.0	86407	10.11 µg/L	100
ADONA	6.714	377.0 -> 251.0	125841	9.63 µg/L	99
9Cl-PF3ONS	7.954	531.0 -> 351.0	47361	9.74 µg/L	99
11Cl-PF3OUdS	8.614	631.0 -> 451.0	64989	9.44 µg/L	99
HFPO-DA	6.028	285.0 -> 169.0	1002	9.78 µg/L	94

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

7.6.6
7

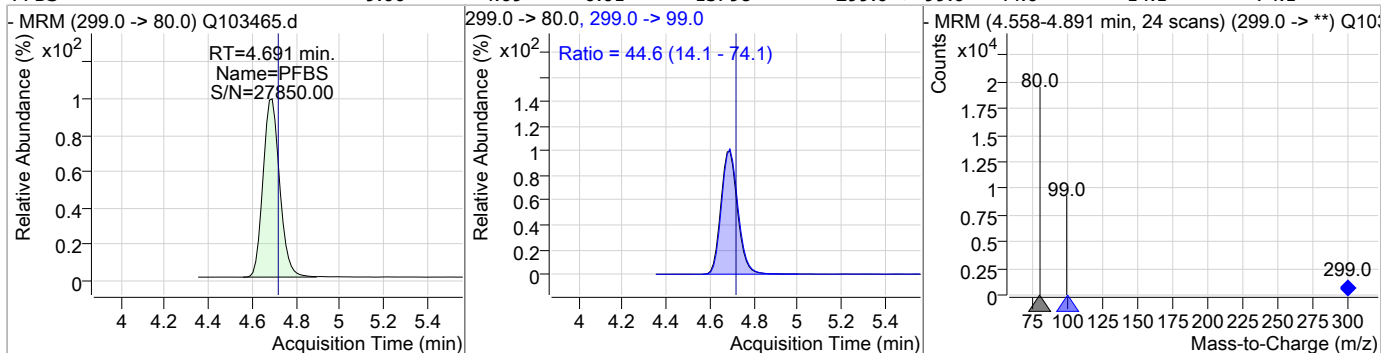
Perfluorinated Compounds by LC/MS/MS



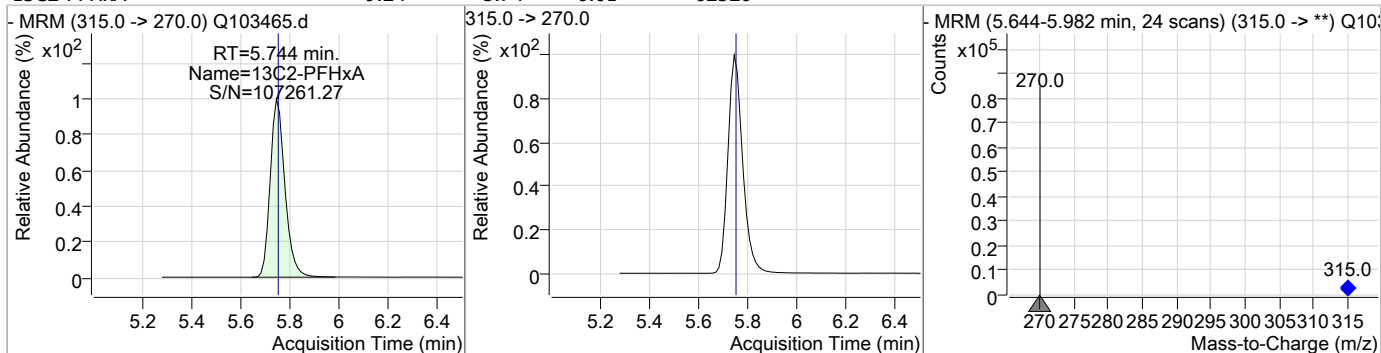
7.6.6
7

Perfluorinated Compounds by LC/MS/MS

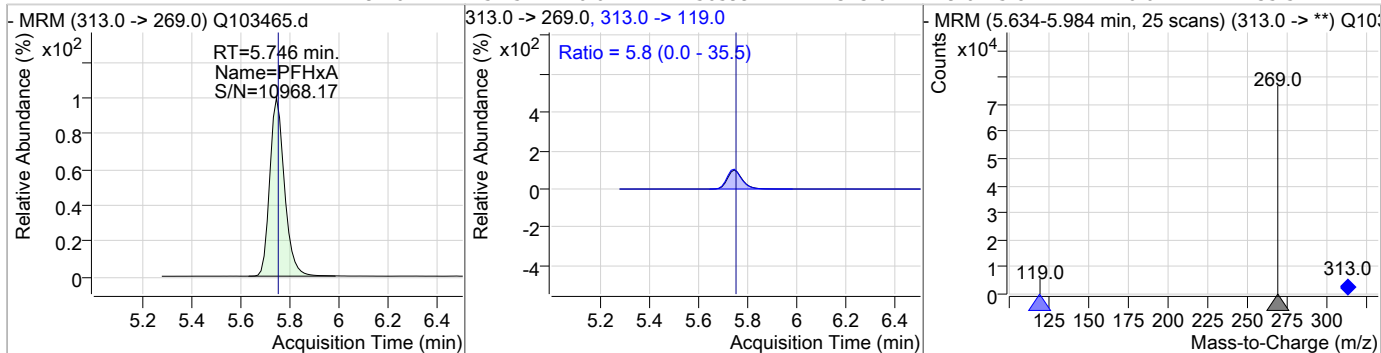
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	9.60	4.69	-0.01	13798	299.0 -> 99.0	44.6	14.1	74.1



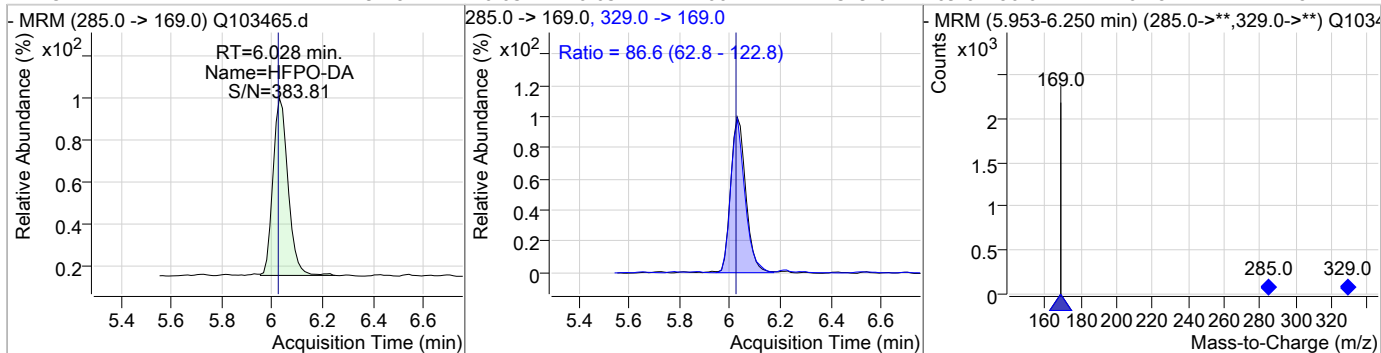
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	9.24	5.74	0.01	62520				



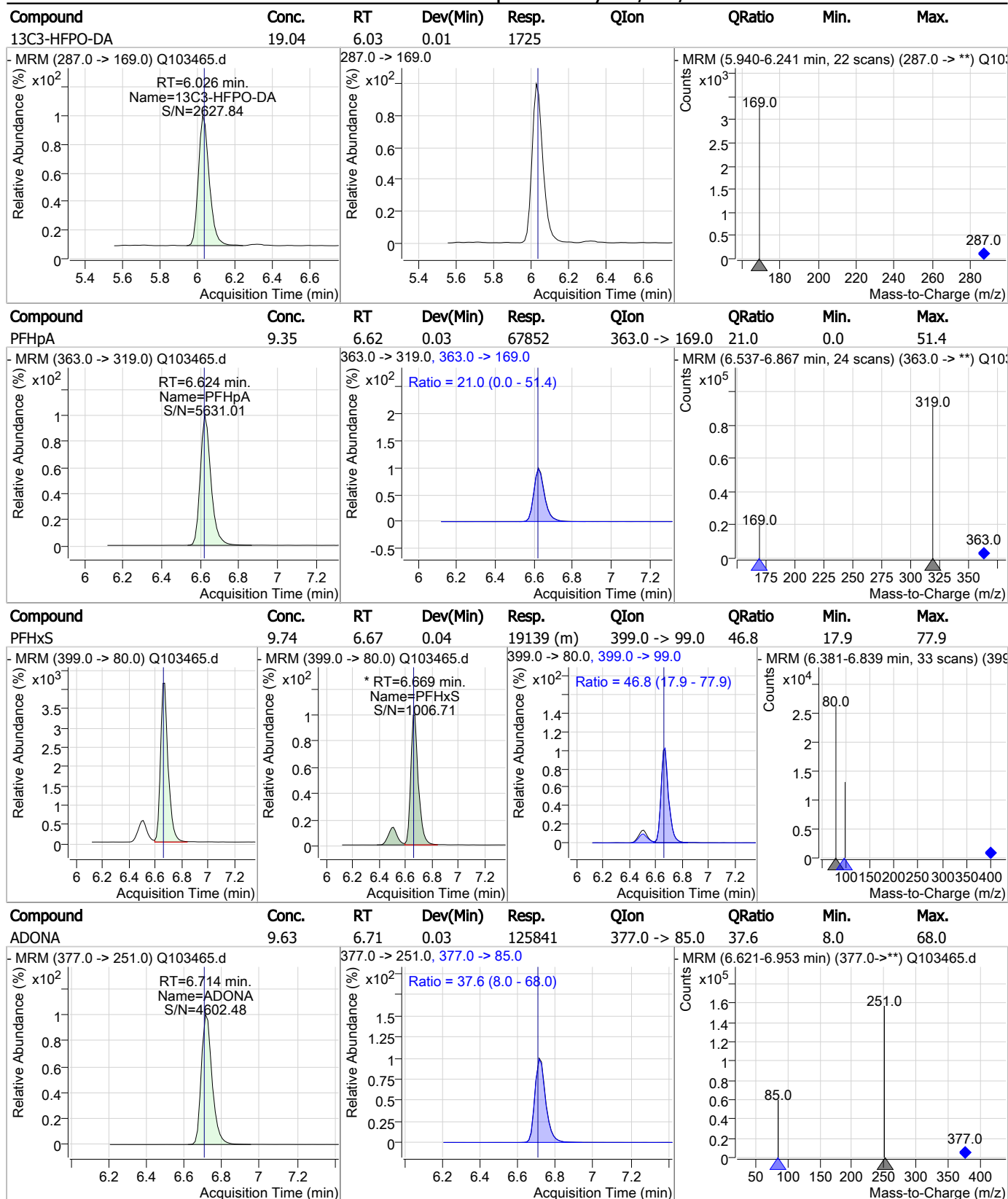
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	9.26	5.75	0.01	56599	313.0 -> 119.0	5.8	0.0	35.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	9.78	6.03	0.03	1002	329.0 -> 169.0	86.6	62.8	122.8



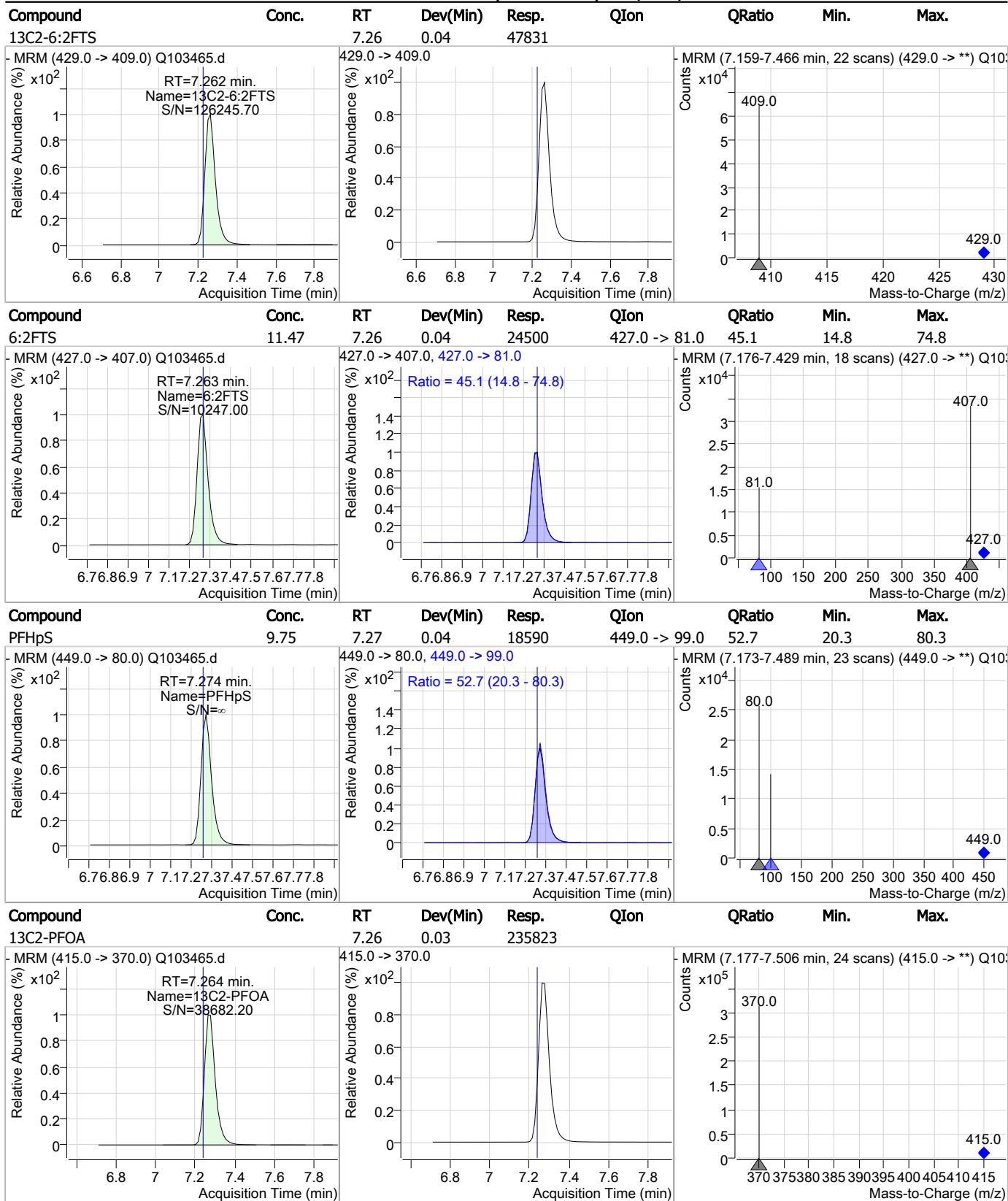
Perfluorinated Compounds by LC/MS/MS



7.6.6

7

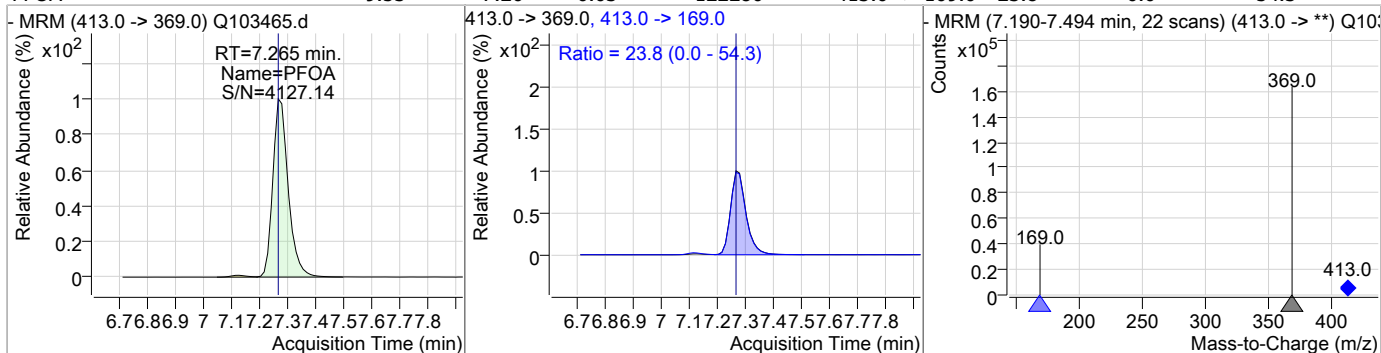
Perfluorinated Compounds by LC/MS/MS



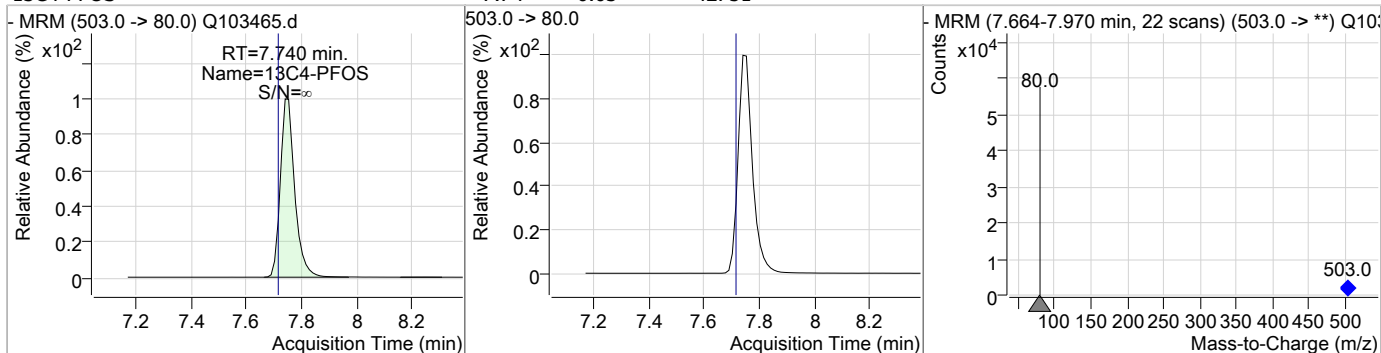
7.6.6
7

Perfluorinated Compounds by LC/MS/MS

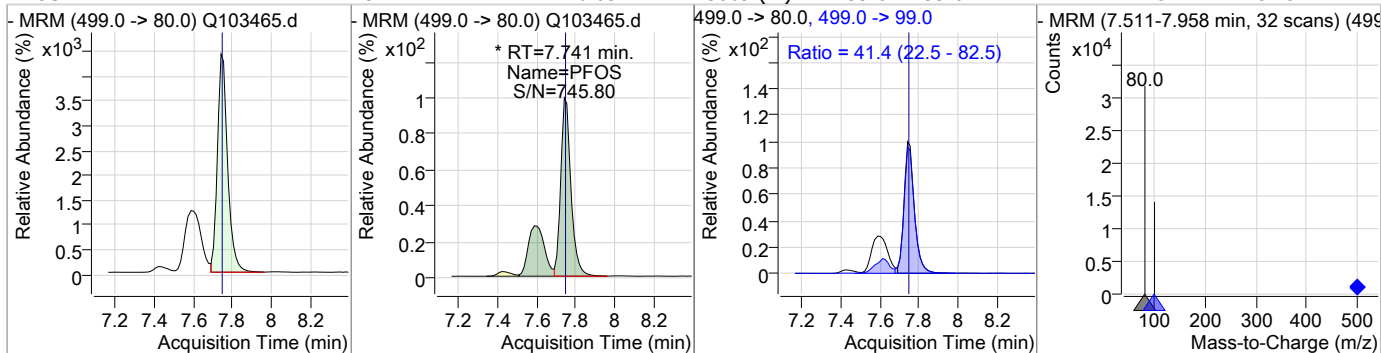
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	9.53	7.26	0.03	122280	413.0 -> 169.0	23.8	0.0	54.3



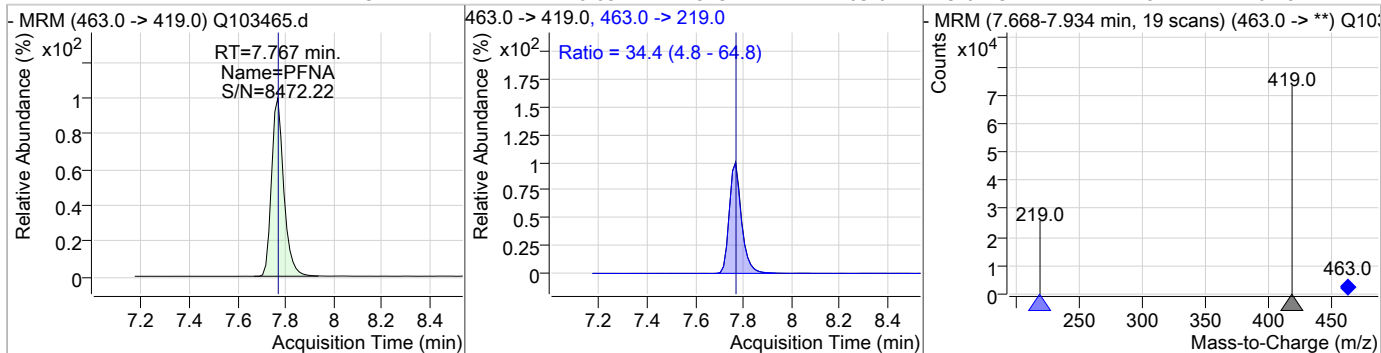
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.74	0.03	42751				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	9.41	7.74	0.03	23009 (m)	499.0 -> 99.0	41.4	22.5	82.5

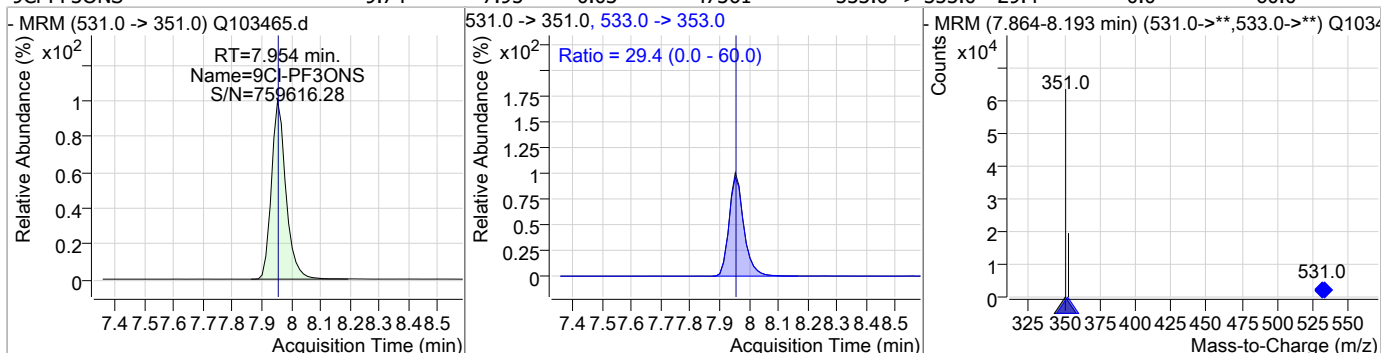


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	9.47	7.77	0.03	54374	463.0 -> 219.0	34.4	4.8	64.8

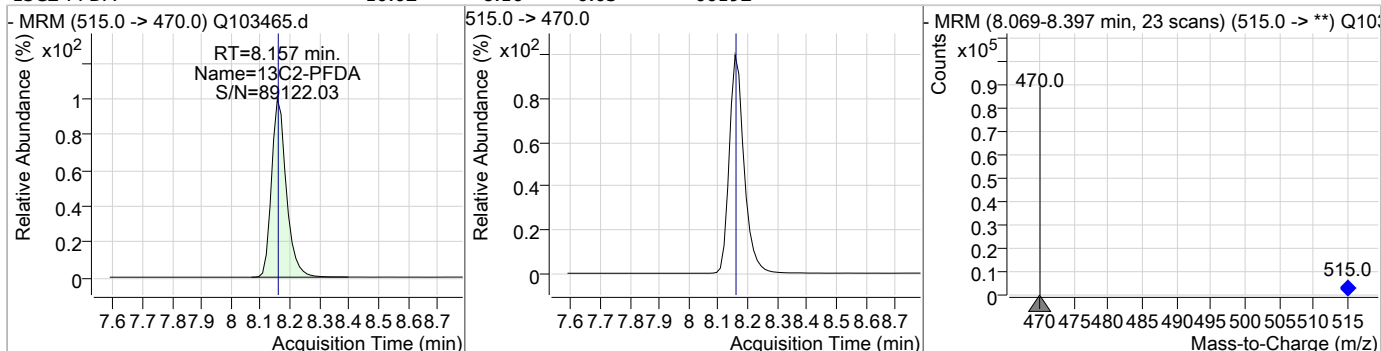


Perfluorinated Compounds by LC/MS/MS

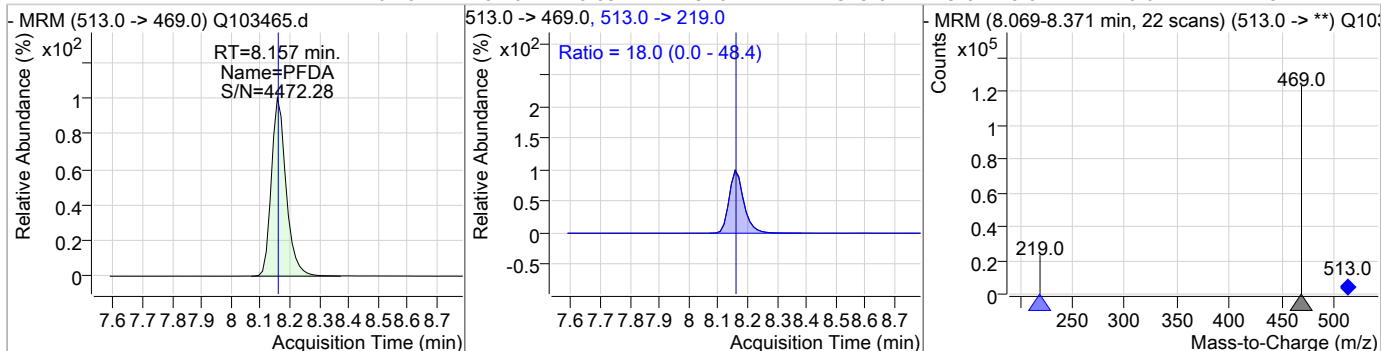
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9CI-PF3ONS	9.74	7.95	0.03	47361	533.0 -> 353.0	29.4	0.0	60.0



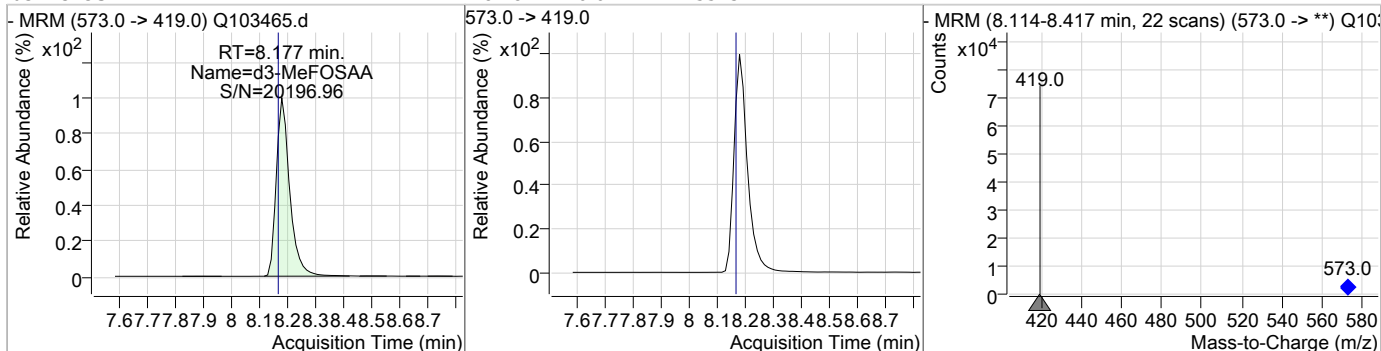
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	10.02	8.16	0.03	66192				



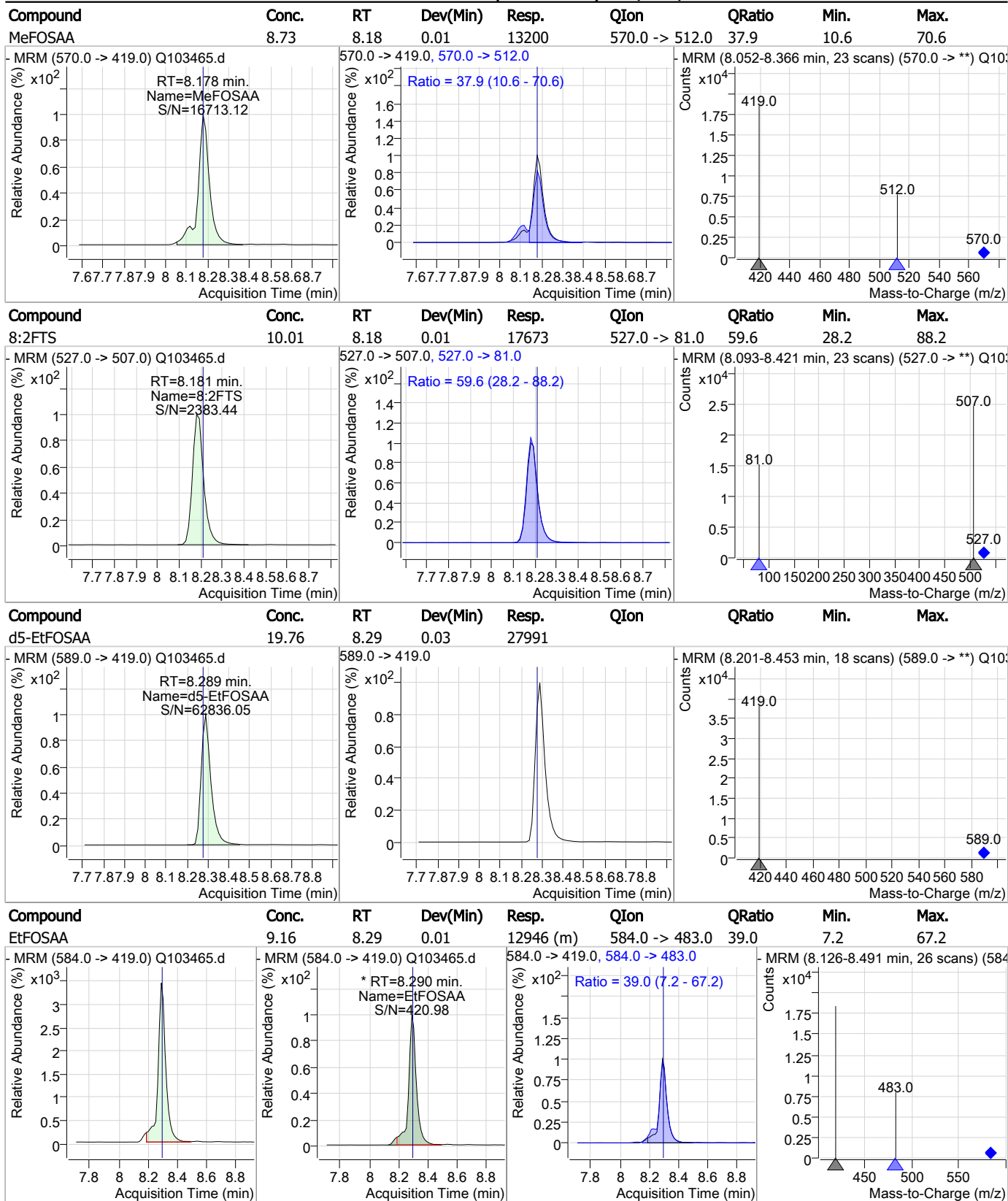
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	10.18	8.16	0.03	92072	513.0 -> 219.0	18.0	0.0	48.4



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.18	0.01	55132				



Perfluorinated Compounds by LC/MS/MS

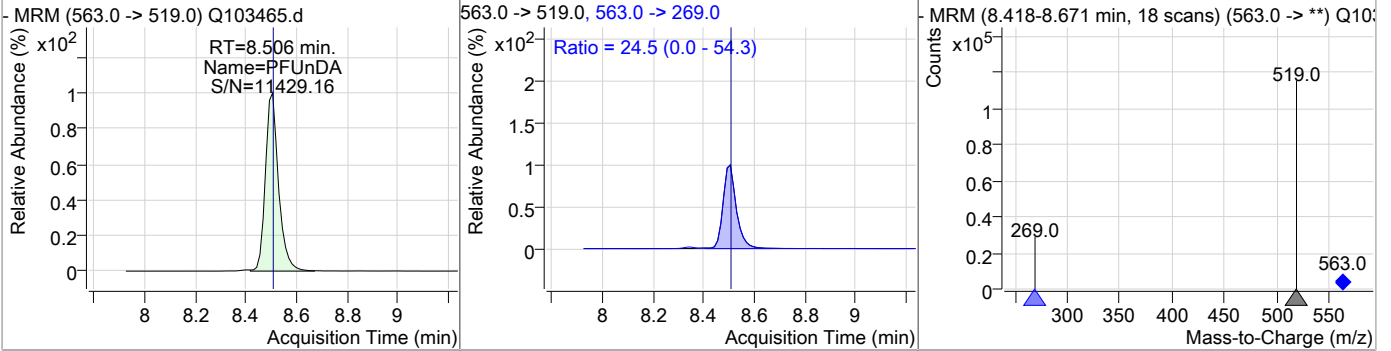


7.6.6

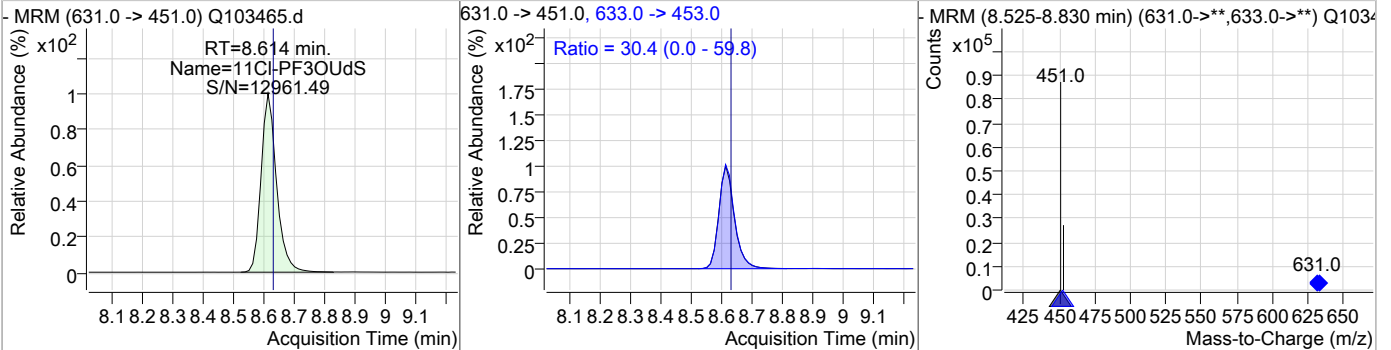
7

Perfluorinated Compounds by LC/MS/MS

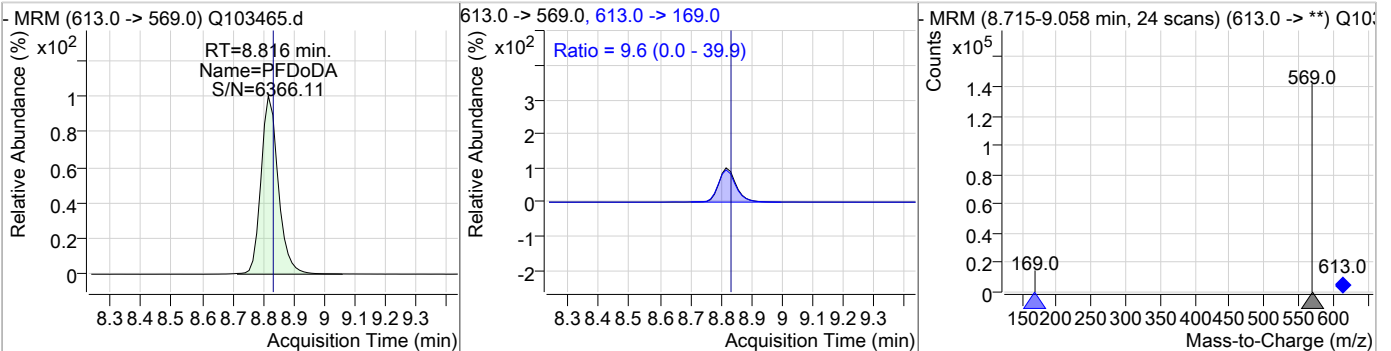
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	10.11	8.51	0.03	86407	563.0 -> 269.0	24.5	0.0	54.3



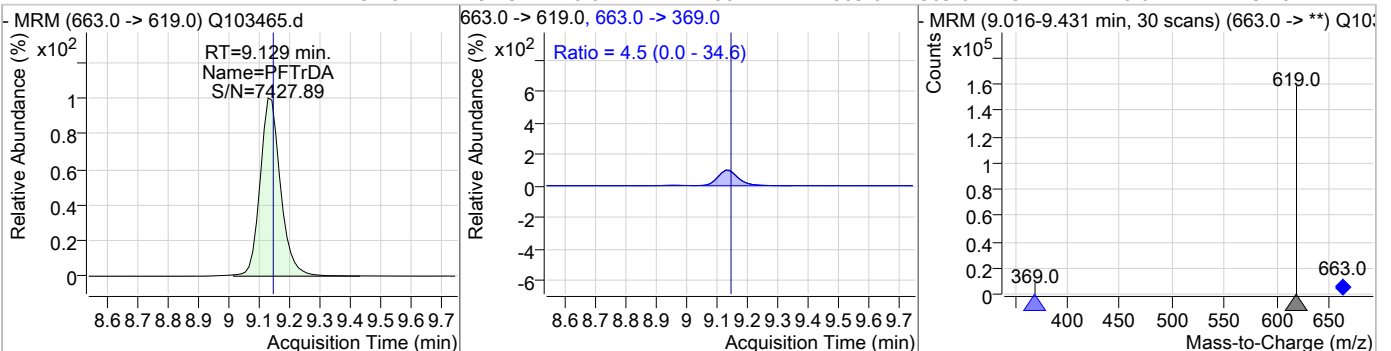
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	9.44	8.61	0.01	64989	633.0 -> 453.0	30.4	0.0	59.8



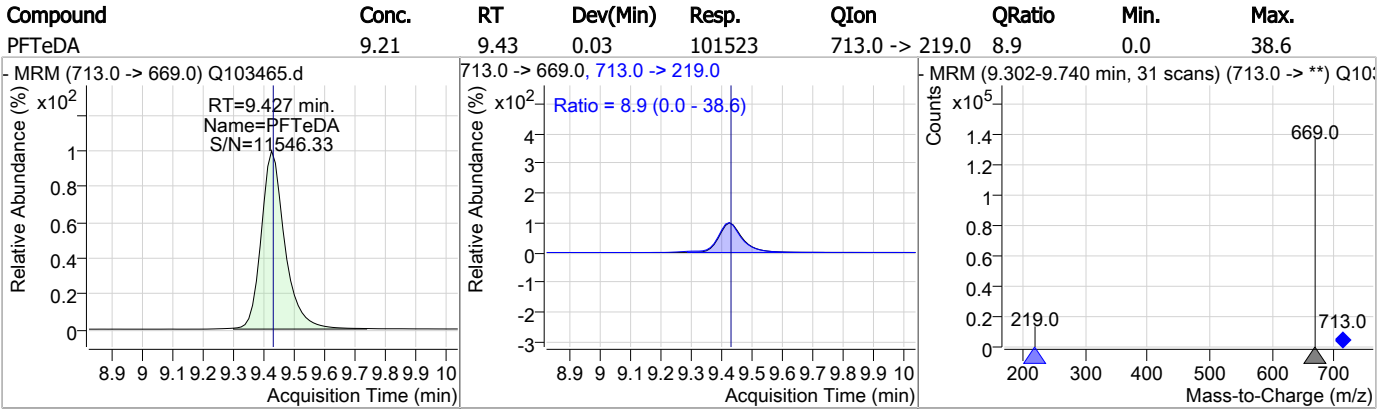
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	10.15	8.82	0.01	109447	613.0 -> 169.0	9.6	0.0	39.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	9.16	9.13	0.01	118022	663.0 -> 369.0	4.5	0.0	34.6



Perfluorinated Compounds by LC/MS/MS



7.6.6

7

Manual Integration Approval Summary

Sample Number: SQ2201-IC2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103465.D Analyst approved: 06/19/23 16:24 Anna Ludwig
Injection Time: 06/18/23 17:18 Supervisor approved: 06/19/23 17:23 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.67	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.74	Split peak
EtFOSAA	2991-50-6		8.29	Split peak

7.6.6.1

7

Manual Integrations
APPROVED
 (compounds with "m" flag)

Norman Farmer
 06/19/23 17:23

Perfluorinated Compounds by LC/MS/MS

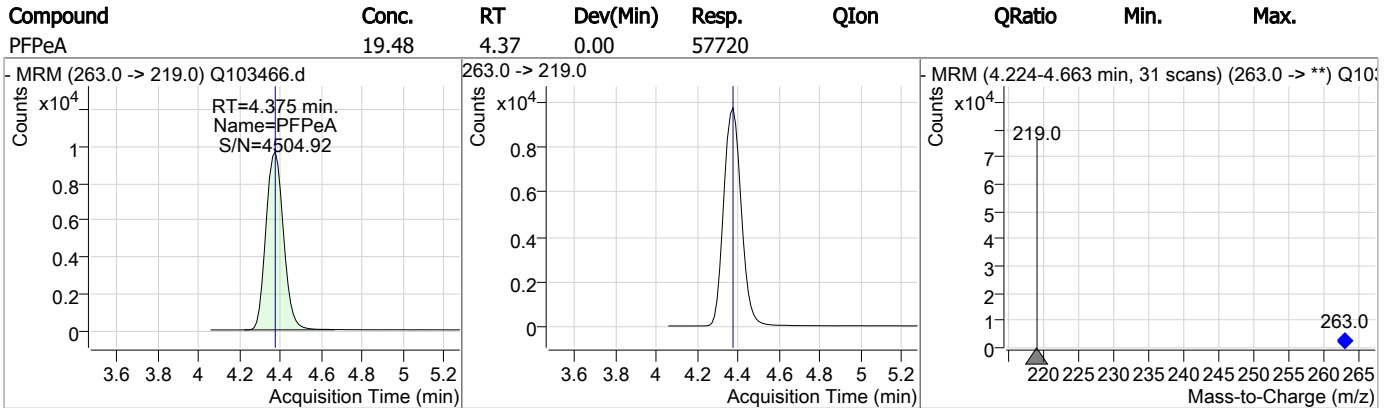
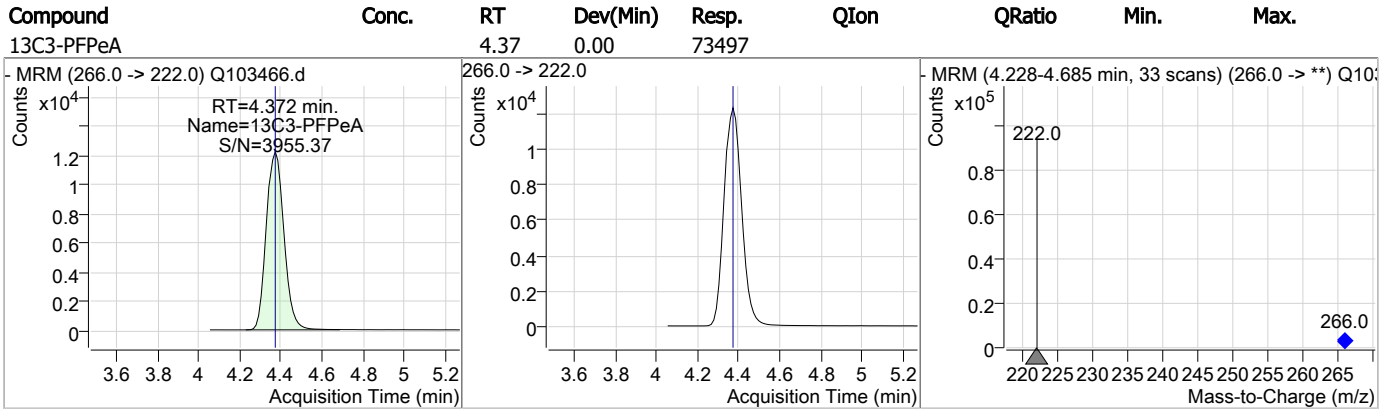
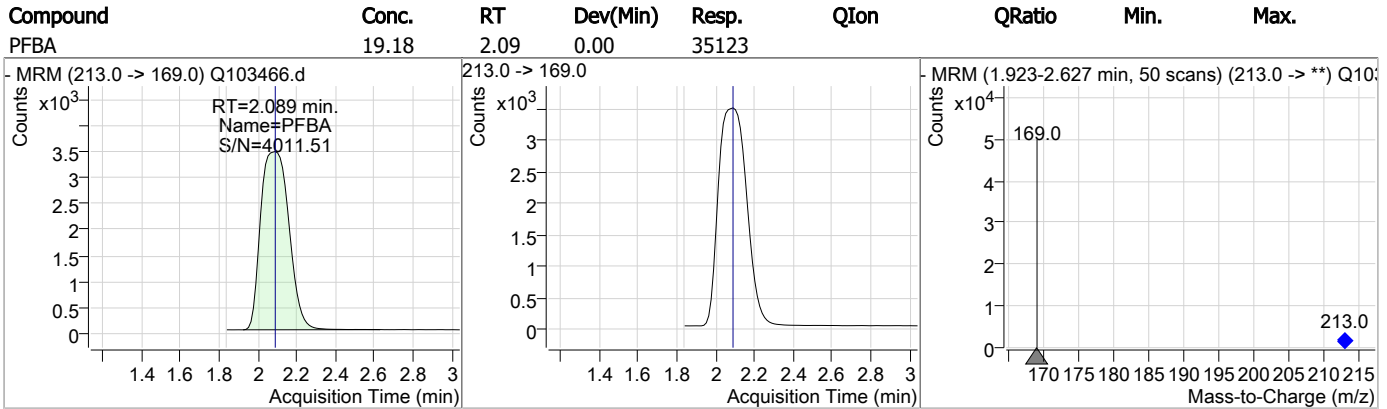
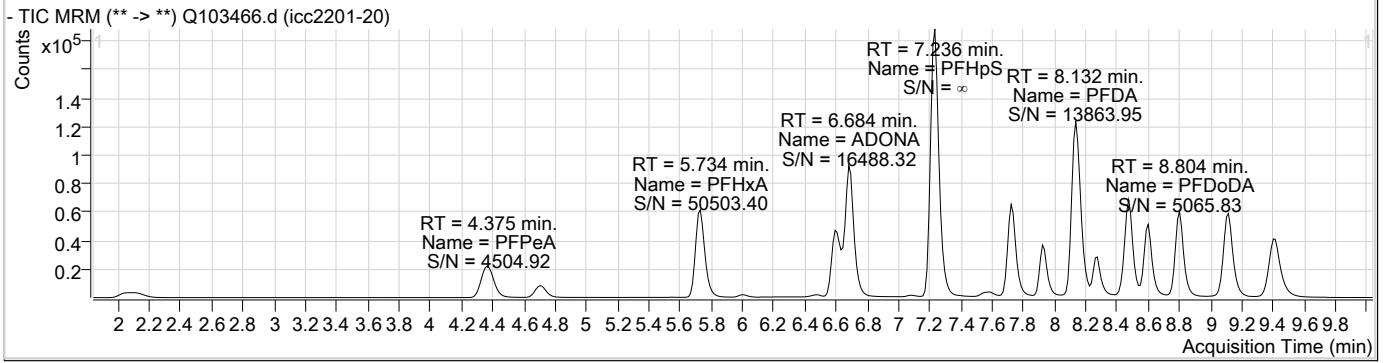
Data File : Q103466.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 5:34:35 PM
 Sample Name : icc2201-20
 Vial : P1-A7
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP96727,SQ2201,250,,,1,1,water

Compound	RT	QIon	Resp.	Symmetry	Conc.	Units	Dev(Min)
Internal Standards							
13C2-6:2FTS	7.225	429.0 -> 409.0	48956	1.41	20.00	µg/L	0.000
13C2-PFOA	7.239	415.0 -> 370.0	228291	1.31	20.00	µg/L	0.000
13C3-PFPeA	4.372	266.0 -> 222.0	73497	1.11	20.00	µg/L	0.000
13C4-PFOS	7.715	503.0 -> 80.0	41386	1.71	20.00	µg/L	0.000
d3-MeFOSAA	8.165	573.0 -> 419.0	52437	1.31	40.00	µg/L	0.000
System Monitoring Compounds							
13C2-PFDA	8.132	515.0 -> 470.0	136552		21.34	µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%				Recovery = 106.7%		
13C2-PFHxA	5.732	315.0 -> 270.0	131203		19.87	µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%				Recovery = 99.4%		
d5-EtFOSAA	8.264	589.0 -> 419.0	57940		42.20	µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%				Recovery = 105.5%		
13C3-HFPO-DA	6.013	287.0 -> 169.0	3590		40.69	µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%				Recovery = 101.7%		
Target Compounds							
6:2FTS	7.225	427.0 -> 407.0	49675		22.73	µg/L	100
8:2FTS	8.168	527.0 -> 507.0	35396		19.99	µg/L	100
EtFOSAA	8.277	584.0 -> 419.0	27103		19.97	µg/L	m 99
MeFOSAA	8.165	570.0 -> 419.0	28524		19.83	µg/L	m 94
PFBA	2.089	213.0 -> 169.0	35123	1.16	19.18	µg/L	100
PFBS	4.703	299.0 -> 80.0	29054	1.23	20.63	µg/L	100
PFDA	8.132	513.0 -> 469.0	186144		21.27	µg/L	100
PFDoDA	8.804	613.0 -> 569.0	209689		20.08	µg/L	100
PFHpA	6.599	363.0 -> 319.0	141756		20.02	µg/L	100
PFHpS	7.236	449.0 -> 80.0	39845		21.58	µg/L	100
PFHxA	5.734	313.0 -> 269.0	119558	1.17	20.02	µg/L	100
PFHxS	6.631	399.0 -> 80.0	39845		20.82	µg/L	m 95
PFNA	7.742	463.0 -> 419.0	111841		20.02	µg/L	100
PFOA	7.240	413.0 -> 369.0	249521		20.08	µg/L	100
PFOS	7.716	499.0 -> 80.0	46876		19.79	µg/L	m 85
PFPeA	4.375	263.0 -> 219.0	57720	1.05	19.48	µg/L	100
PFTeDA	9.402	713.0 -> 669.0	204411		19.16	µg/L	100
PFTrDA	9.117	663.0 -> 619.0	243761		19.55	µg/L	100
PFUnDA	8.481	563.0 -> 519.0	175576		21.23	µg/L	100
ADONA	6.684	377.0 -> 251.0	251572		19.60	µg/L	100
9Cl-PF3ONS	7.929	531.0 -> 351.0	96807		20.25	µg/L	100
11Cl-PF3OUdS	8.602	631.0 -> 451.0	138418		20.51	µg/L	100
HFPO-DA	6.003	285.0 -> 169.0	1983		19.90	µg/L	100

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

7.6.7
7

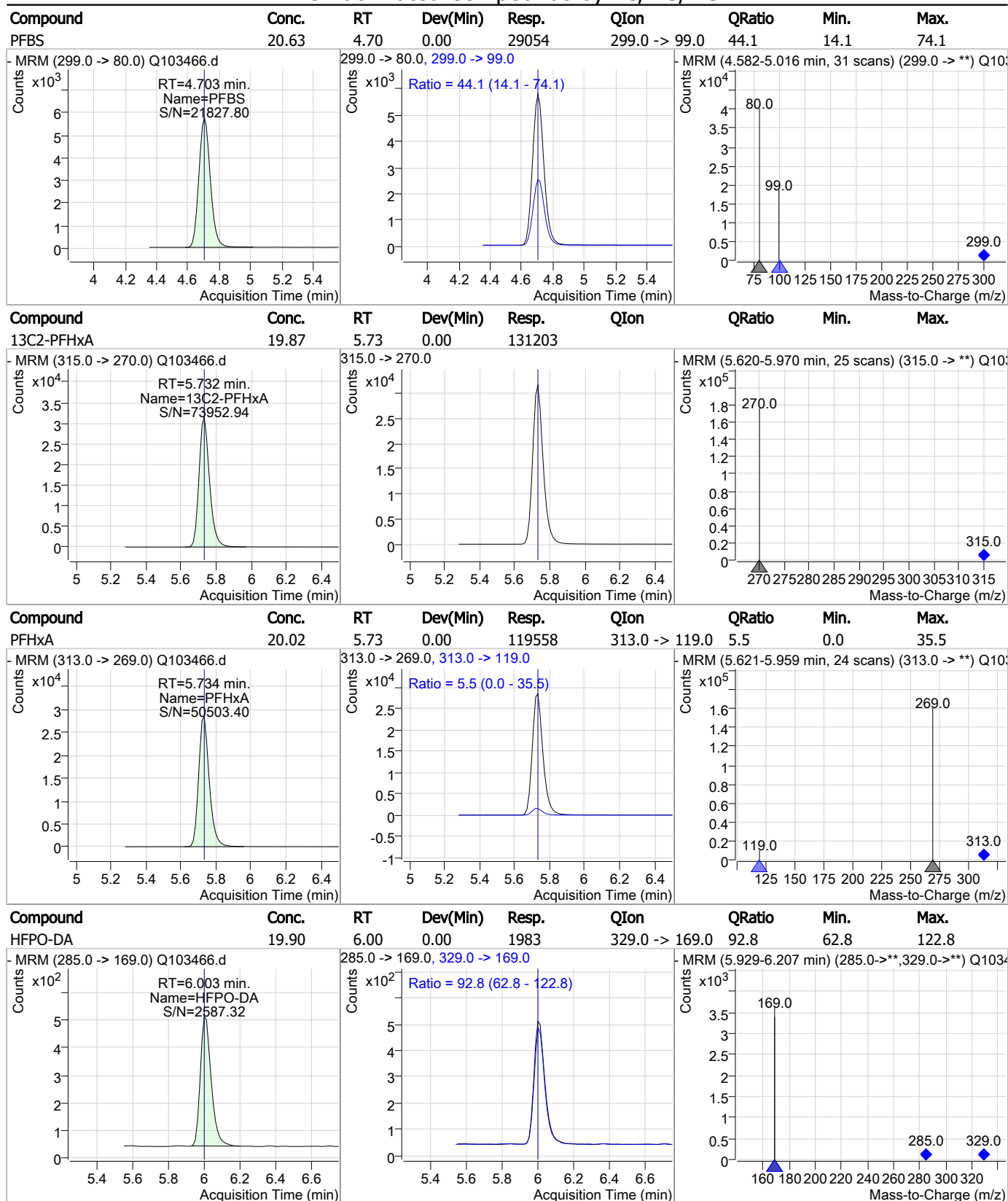
Perfluorinated Compounds by LC/MS/MS



7.6.7

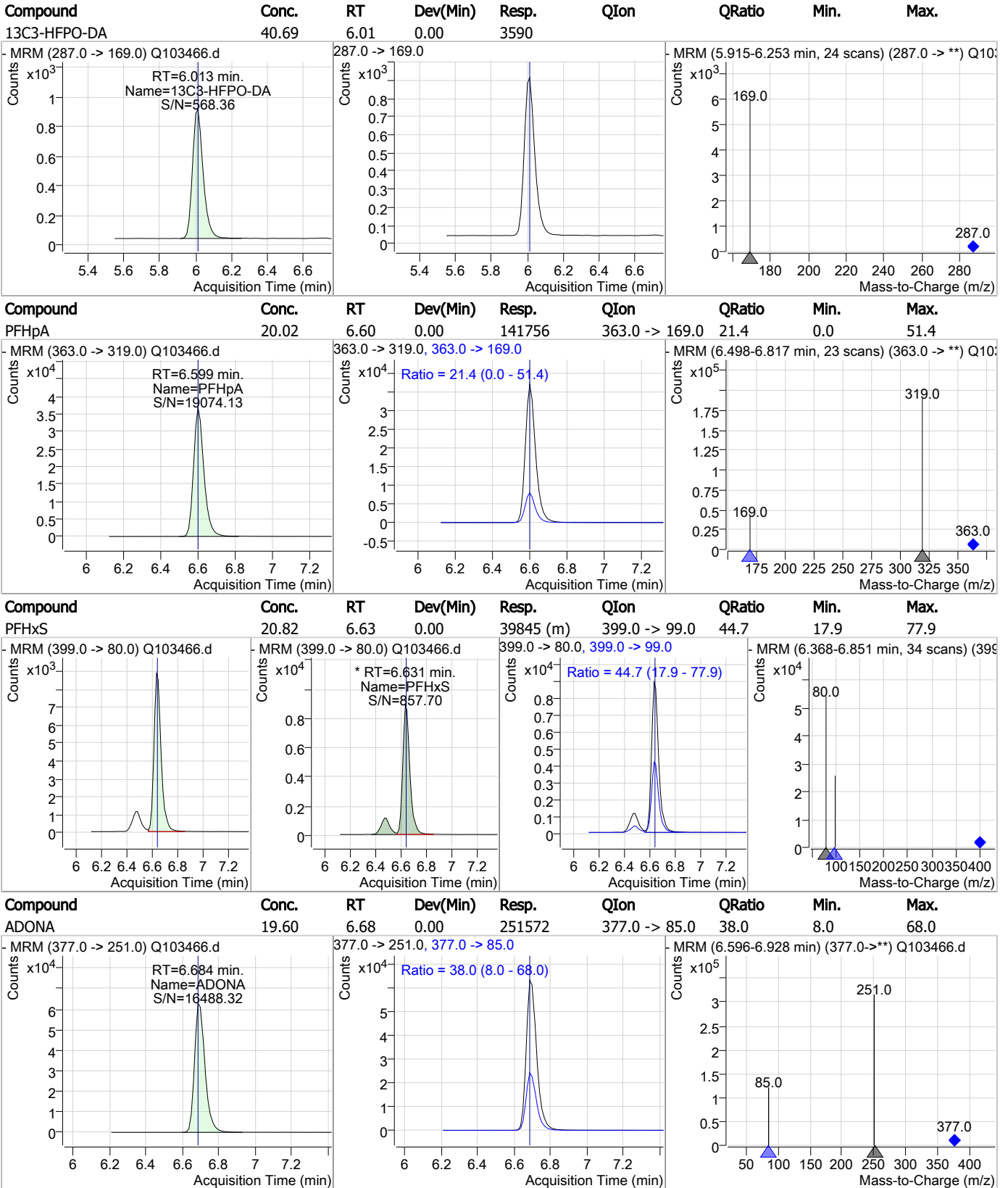
7

Perfluorinated Compounds by LC/MS/MS



7.67
7

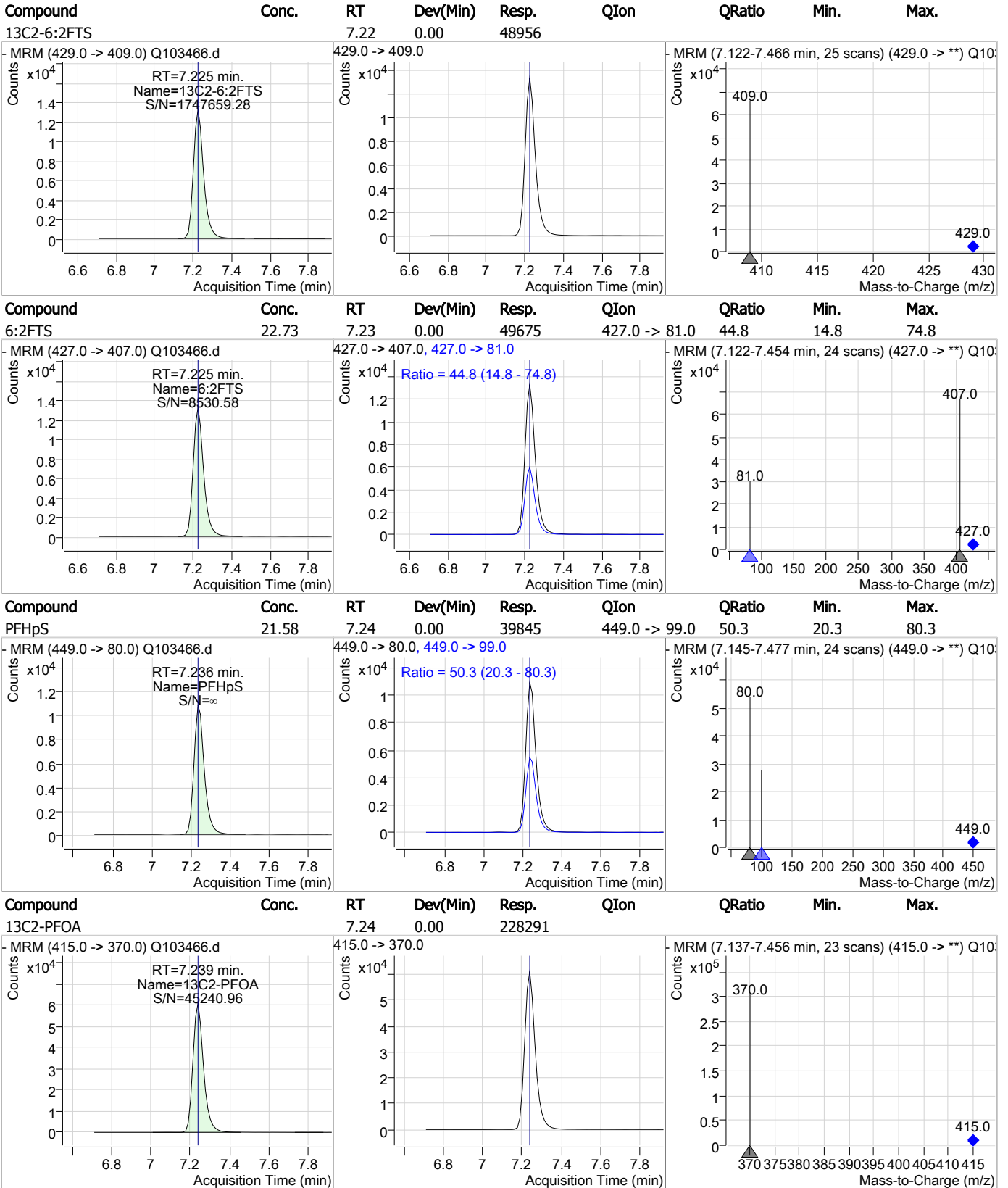
Perfluorinated Compounds by LC/MS/MS



7.67

7

Perfluorinated Compounds by LC/MS/MS

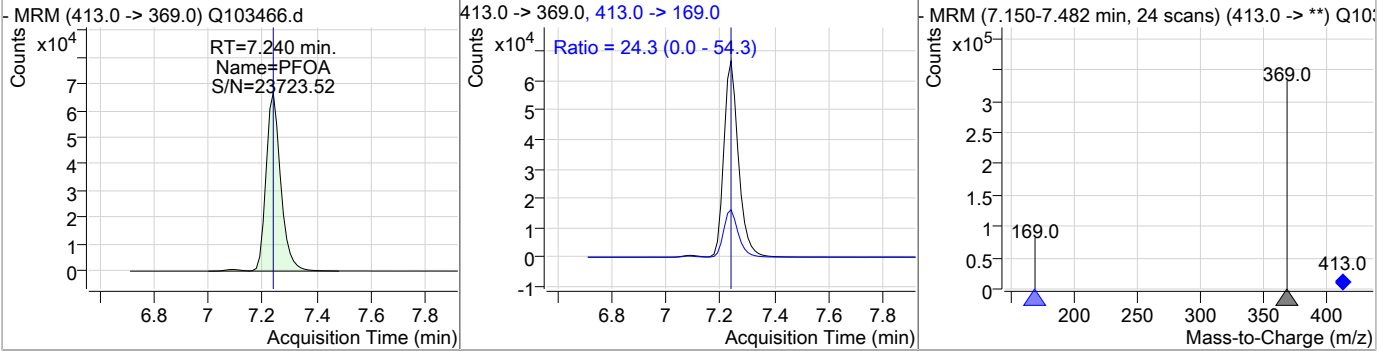


7.67

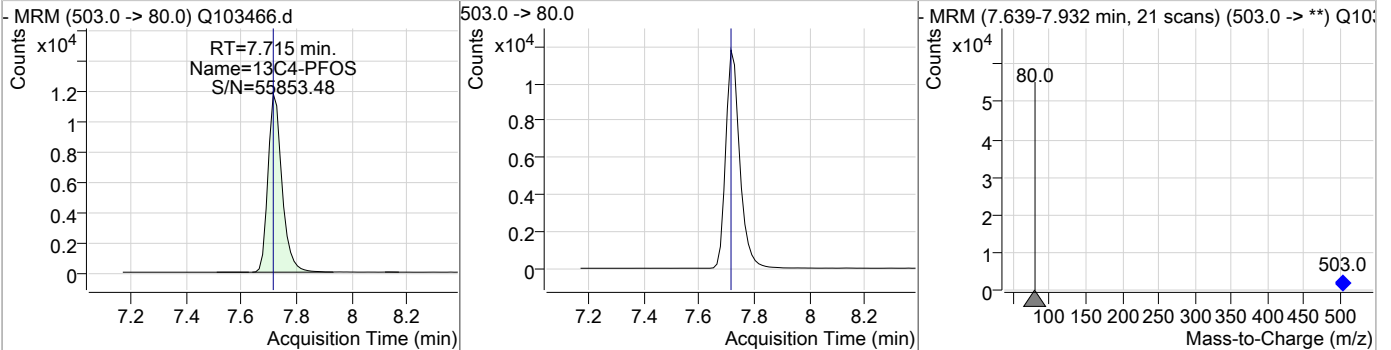
7

Perfluorinated Compounds by LC/MS/MS

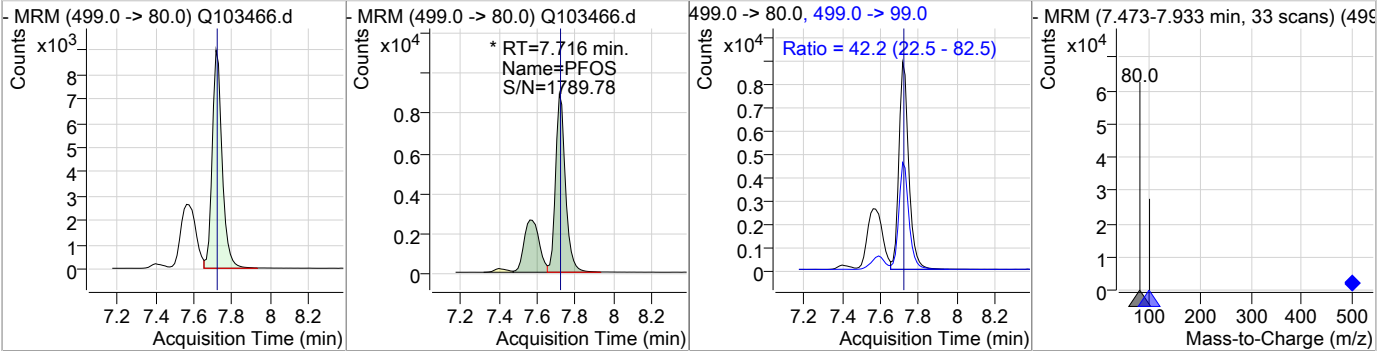
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	20.08	7.24	0.00	249521	413.0 -> 169.0	24.3	0.0	54.3



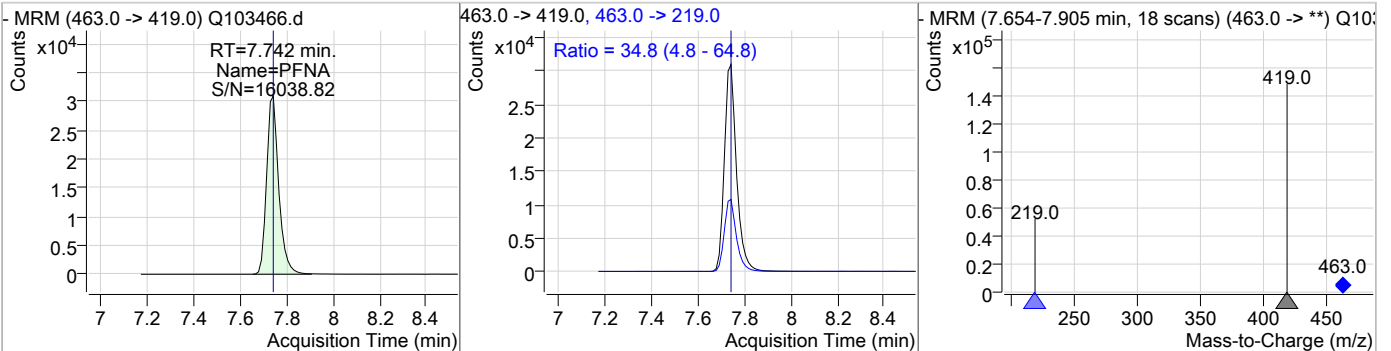
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.72	0.00	41386				



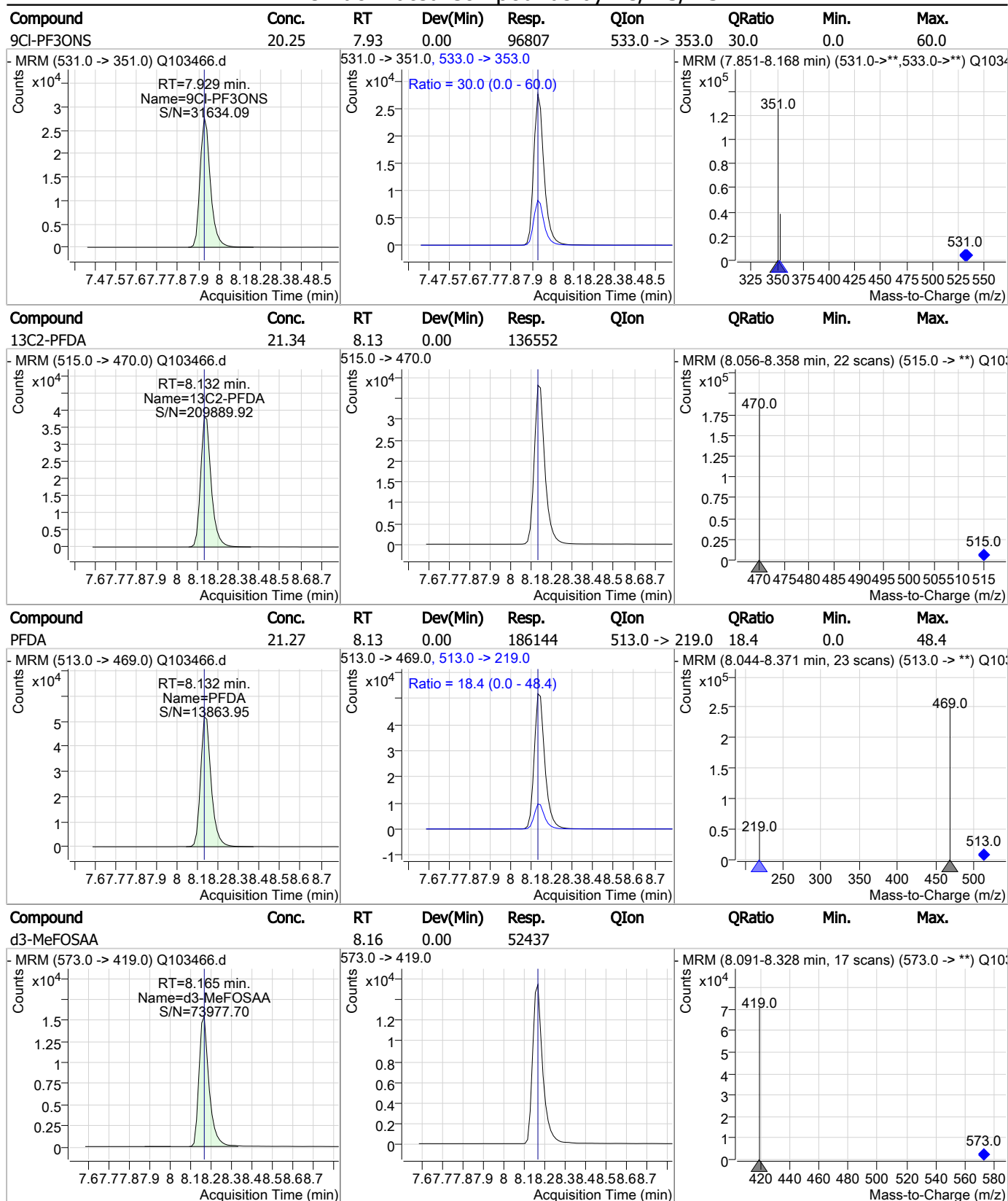
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.79	7.72	0.00	46876 (m)	499.0 -> 99.0	42.2	22.5	82.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	20.02	7.74	0.00	111841	463.0 -> 219.0	34.8	4.8	64.8

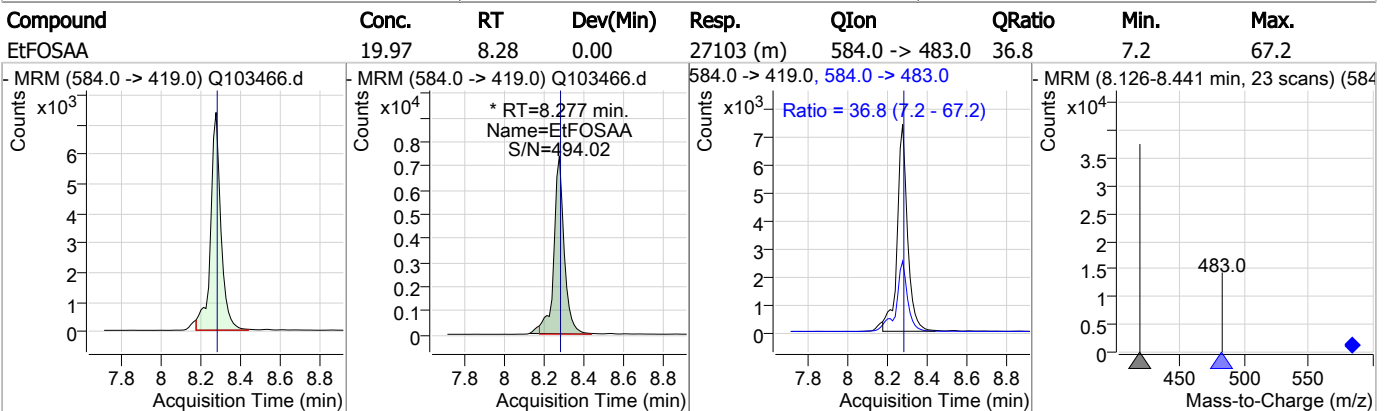
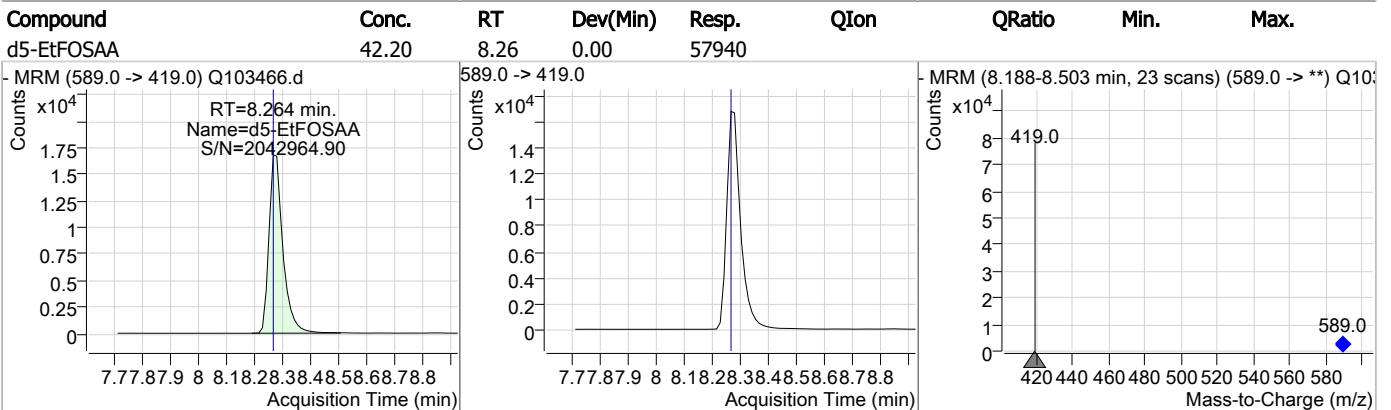
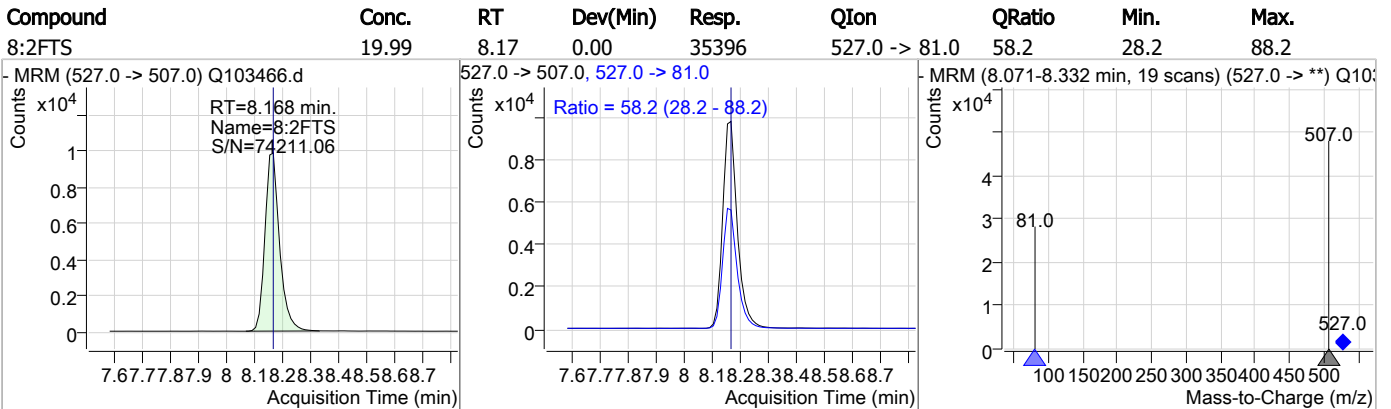
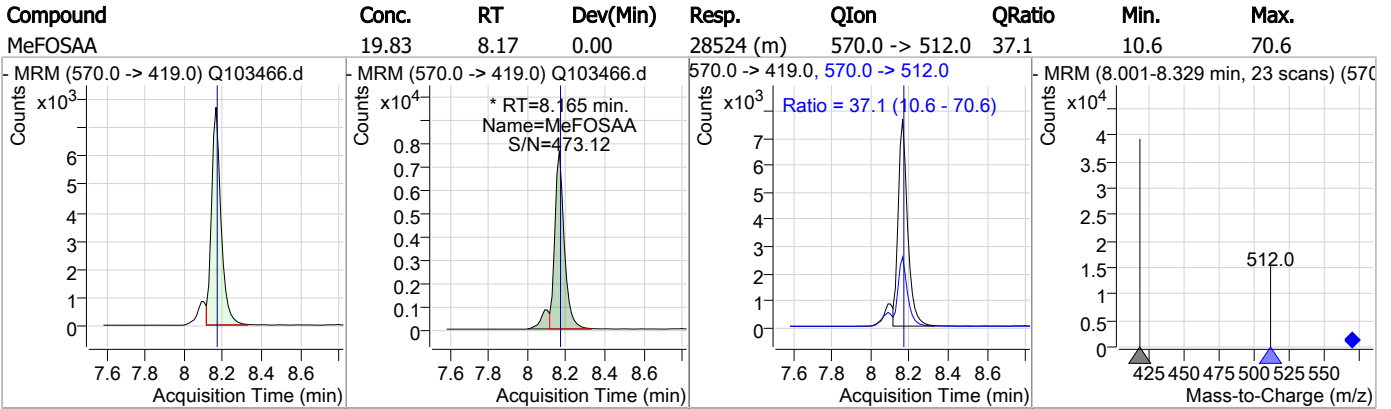


Perfluorinated Compounds by LC/MS/MS



7.67
7

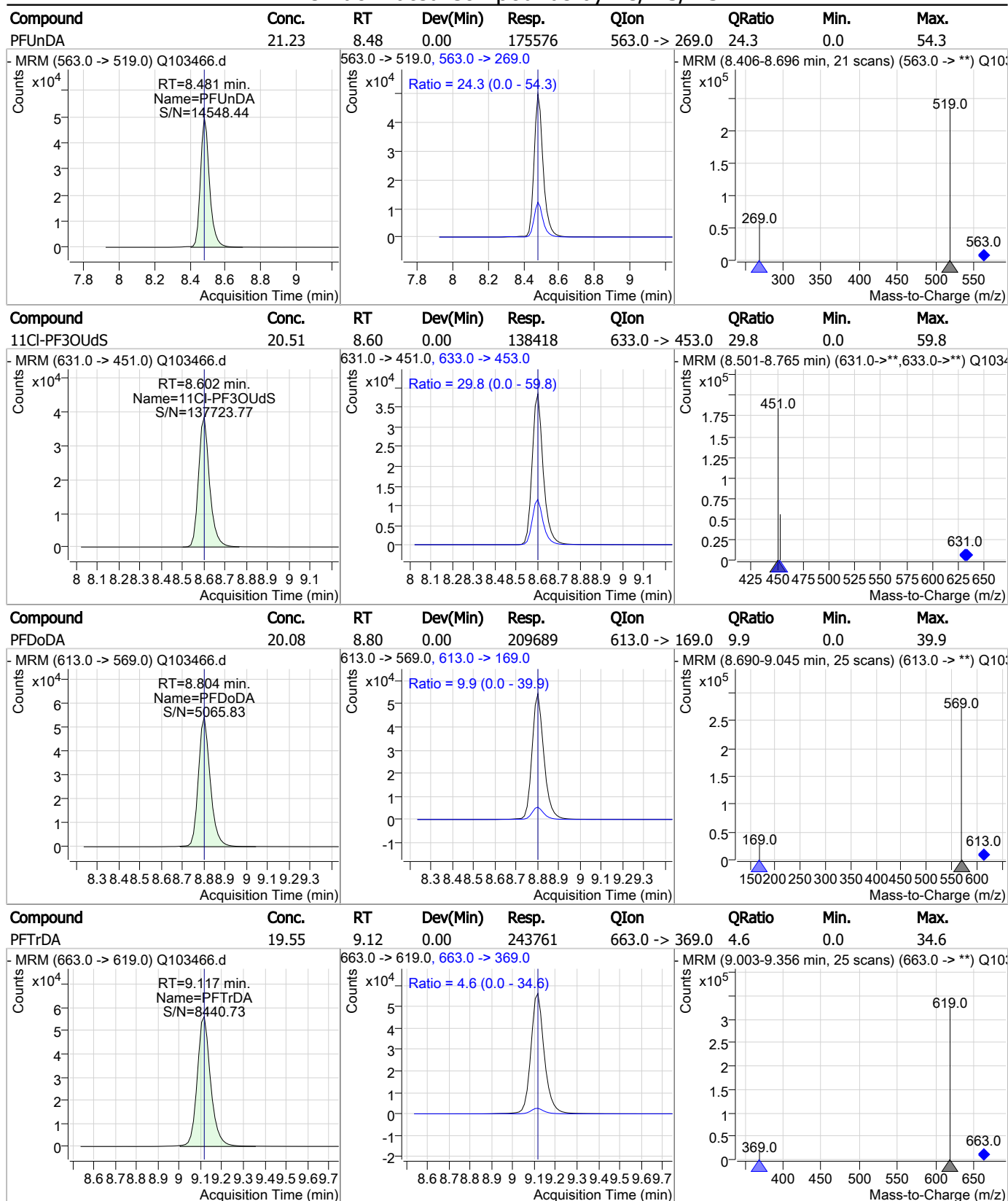
Perfluorinated Compounds by LC/MS/MS



7.67

7

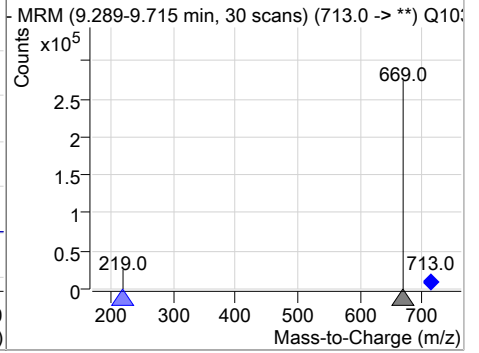
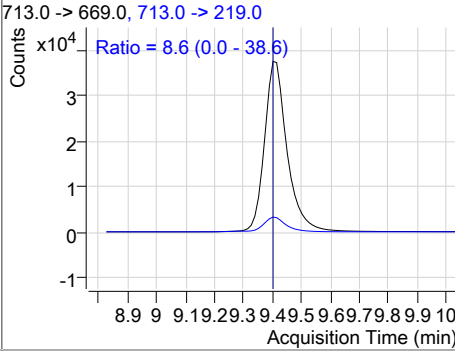
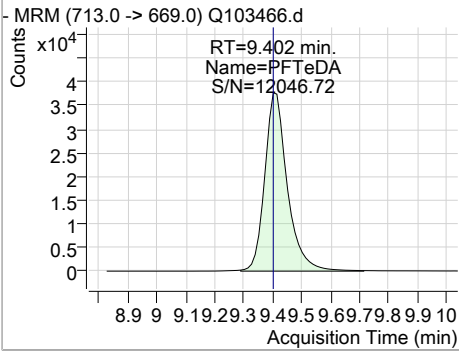
Perfluorinated Compounds by LC/MS/MS



7.67
7

Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	19.16	9.40	0.00	204411	713.0 -> 219.0	8.6	0.0	38.6



7.6.7

7

Manual Integration Approval Summary

Sample Number: SQ2201-ICC2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103466.D Analyst approved: 06/19/23 16:24 Anna Ludwig
Injection Time: 06/18/23 17:34 Supervisor approved: 06/19/23 17:23 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.63	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
MeFOSAA	2355-31-9		8.16	Split peak
EtFOSAA	2991-50-6		8.28	Split peak

7.6.7.1

7

Manual Integrations
APPROVED
(compounds with "m" flag)

Norman Farmer
06/19/23 17:23

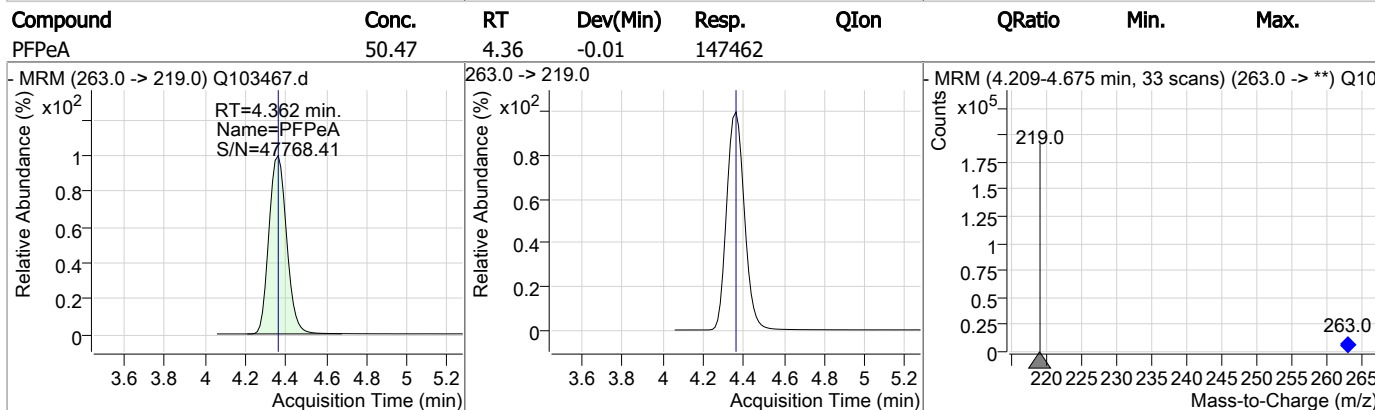
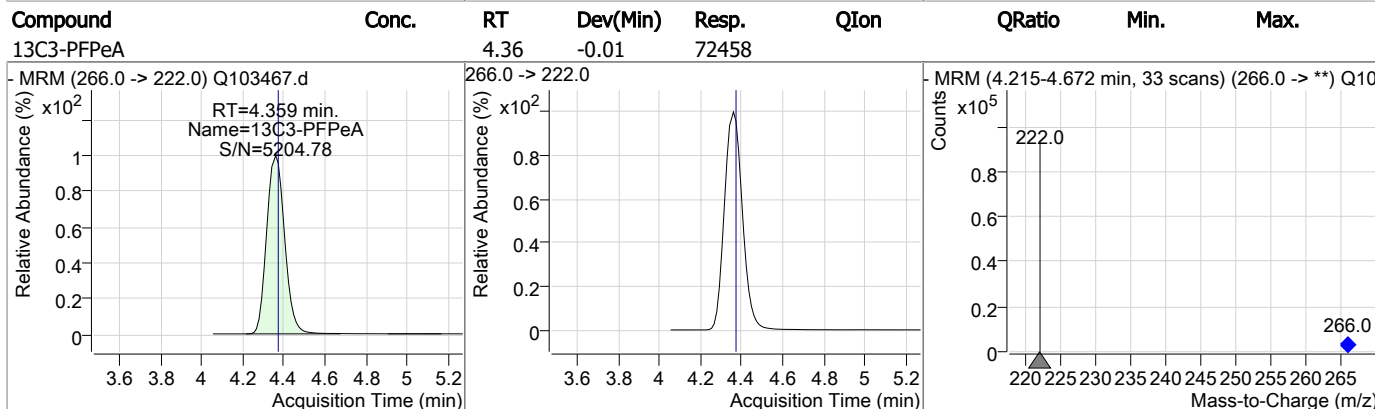
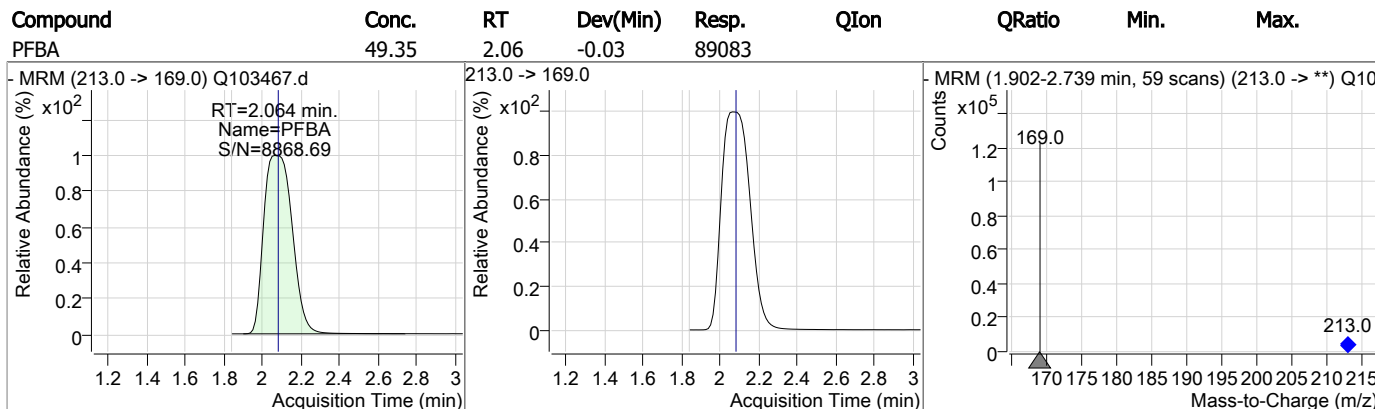
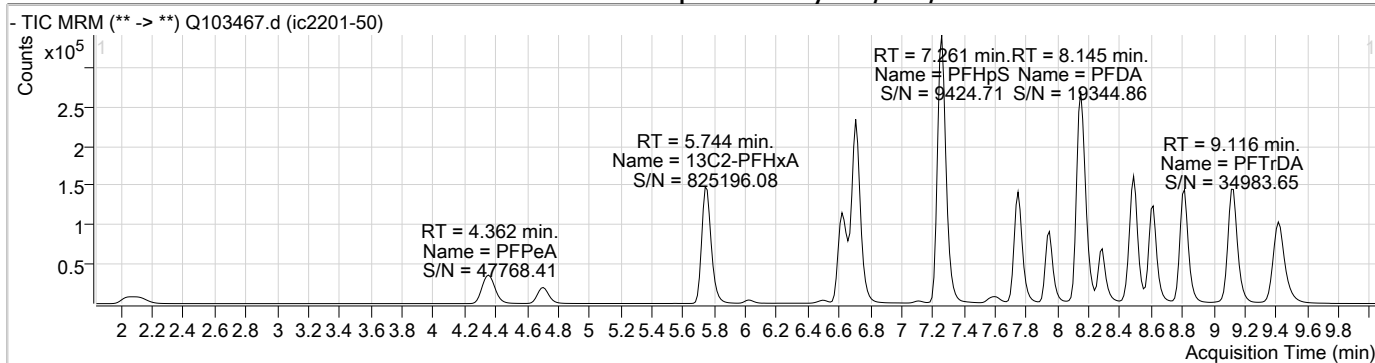
Perfluorinated Compounds by LC/MS/MS

Data File : Q103467.d
Operator : annal
Acq. Method : 537.m
Acq. Date-Time : 6/18/2023 5:50:24 PM
Sample Name : ic2201-50
Vial : P1-A8
DA Method File : 537_061823_SQ2201.quantmethod.xml
Batch Name : sq2201.batch.bin
Sample Information : OP96727,SQ2201,250,,,1,1,water

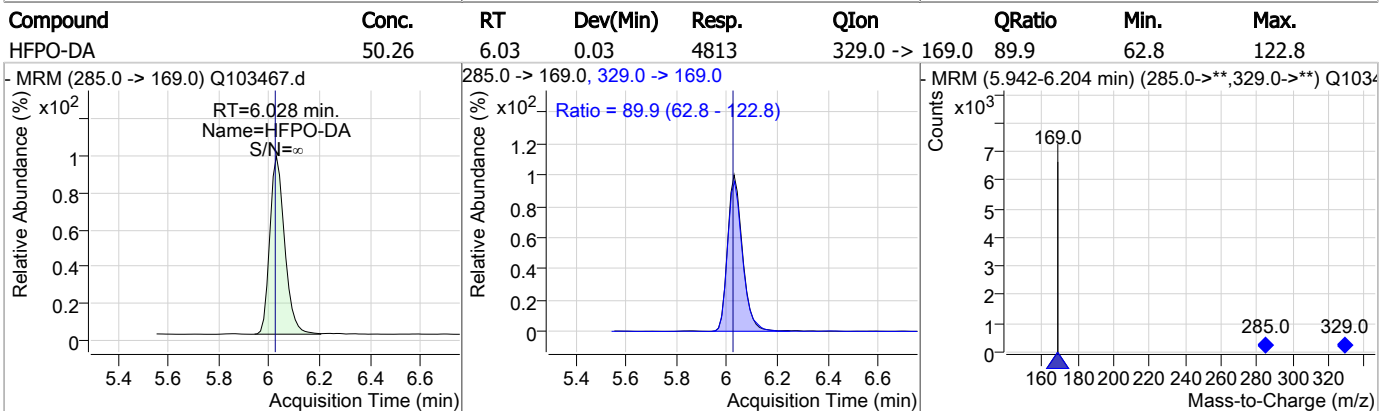
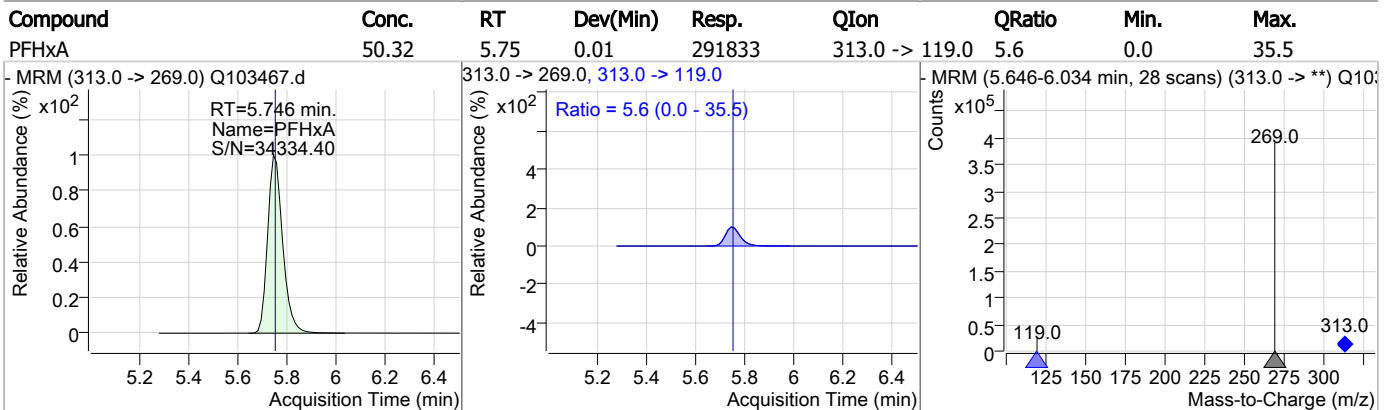
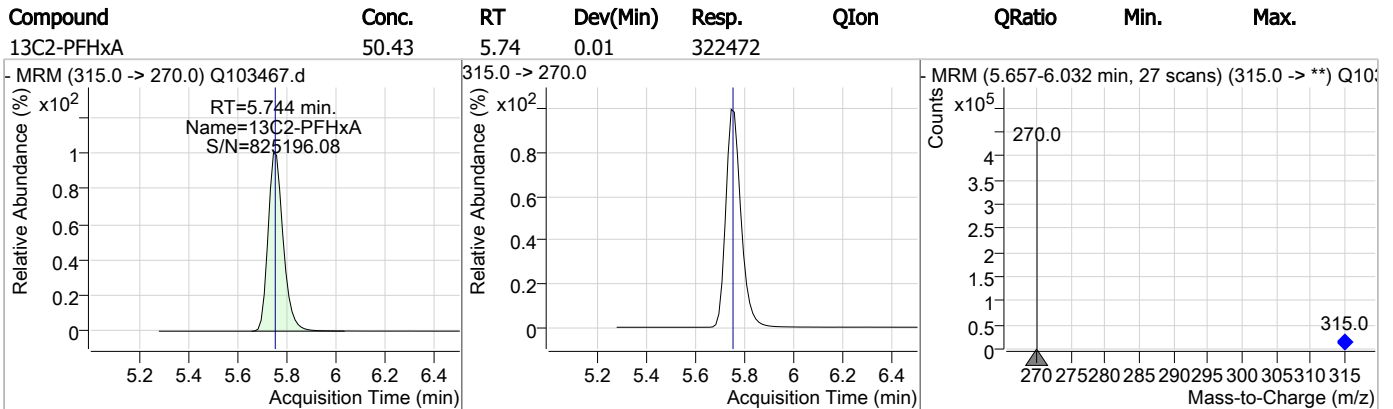
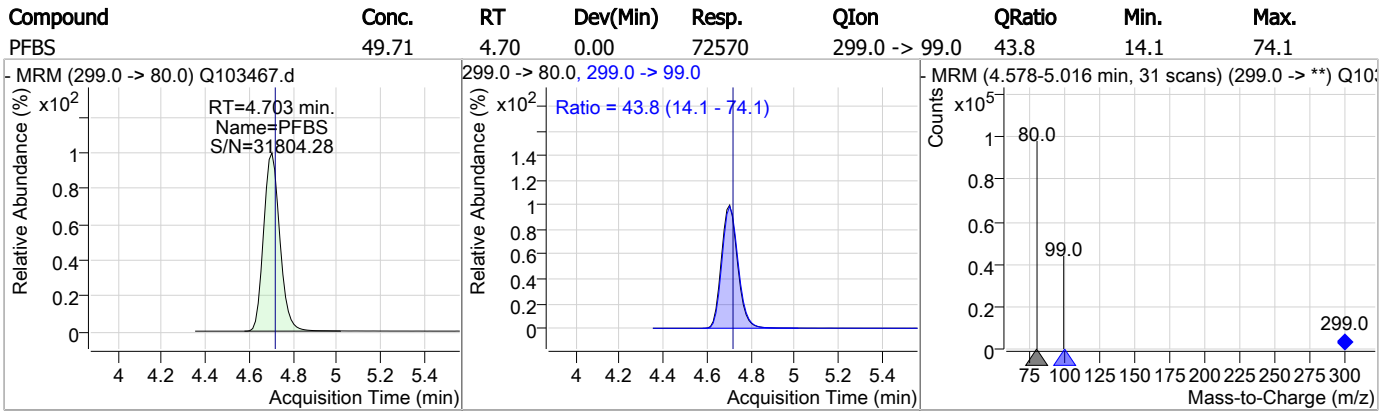
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.250	429.0 -> 409.0	48410	20.00 µg/L	0.025
13C2-PFOA	7.264	415.0 -> 370.0	216122	20.00 µg/L	0.025
13C3-PFPeA	4.359	266.0 -> 222.0	72458	20.00 µg/L	-0.013
13C4-PFOS	7.740	503.0 -> 80.0	41594	20.00 µg/L	0.025
d3-MeFOSAA	8.177	573.0 -> 419.0	47736	40.00 µg/L	0.013
System Monitoring Compounds					
13C2-PFDA	8.157	515.0 -> 470.0	311672	51.46 µg/L	0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 257.3%	
13C2-PFHxA	5.744	315.0 -> 270.0	322472	50.43 µg/L	0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 252.1%	
d5-EtFOSAA	8.289	589.0 -> 419.0	143095	108.43 µg/L	0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 271.1%	
13C3-HFPO-DA	6.026	287.0 -> 169.0	8496	100.05 µg/L	0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 250.1%	
Target Compounds					
6:2FTS	7.250	427.0 -> 407.0	115836	53.60 µg/L	QValue 99
8:2FTS	8.181	527.0 -> 507.0	82713	50.31 µg/L	99
EtFOSAA	8.290	584.0 -> 419.0	67094	52.84 µg/L	m 99
MeFOSAA	8.178	570.0 -> 419.0	67315	51.41 µg/L	m 95
PFBA	2.064	213.0 -> 169.0	89083	49.35 µg/L	100
PFBS	4.703	299.0 -> 80.0	72570	49.71 µg/L	100
PFDA	8.145	513.0 -> 469.0	433975	52.38 µg/L	100
PFDoDA	8.816	613.0 -> 569.0	523049	49.84 µg/L	99
PFHpA	6.624	363.0 -> 319.0	345031	50.29 µg/L	99
PFHpS	7.261	449.0 -> 80.0	94714	51.04 µg/L	98
PFHxA	5.746	313.0 -> 269.0	291833	50.32 µg/L	100
PFHxS	6.656	399.0 -> 80.0	96769	49.57 µg/L	m 100
PFNA	7.754	463.0 -> 419.0	269662	50.26 µg/L	99
PFOA	7.265	413.0 -> 369.0	586310	49.83 µg/L	98
PFOS	7.741	499.0 -> 80.0	116592	48.98 µg/L	m 83
PFPeA	4.362	263.0 -> 219.0	147462	50.47 µg/L	100
PFTeDA	9.414	713.0 -> 669.0	513689	47.92 µg/L	99
PFTrDA	9.116	663.0 -> 619.0	612865	48.90 µg/L	100
PFUnDA	8.494	563.0 -> 519.0	415337	49.97 µg/L	98
ADONA	6.714	377.0 -> 251.0	640033	50.40 µg/L	100
9Cl-PF3ONS	7.954	531.0 -> 351.0	245397	51.83 µg/L	100
11Cl-PF3OUdS	8.614	631.0 -> 451.0	338707	51.23 µg/L	98
HFPO-DA	6.028	285.0 -> 169.0	4813	50.26 µg/L	97

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

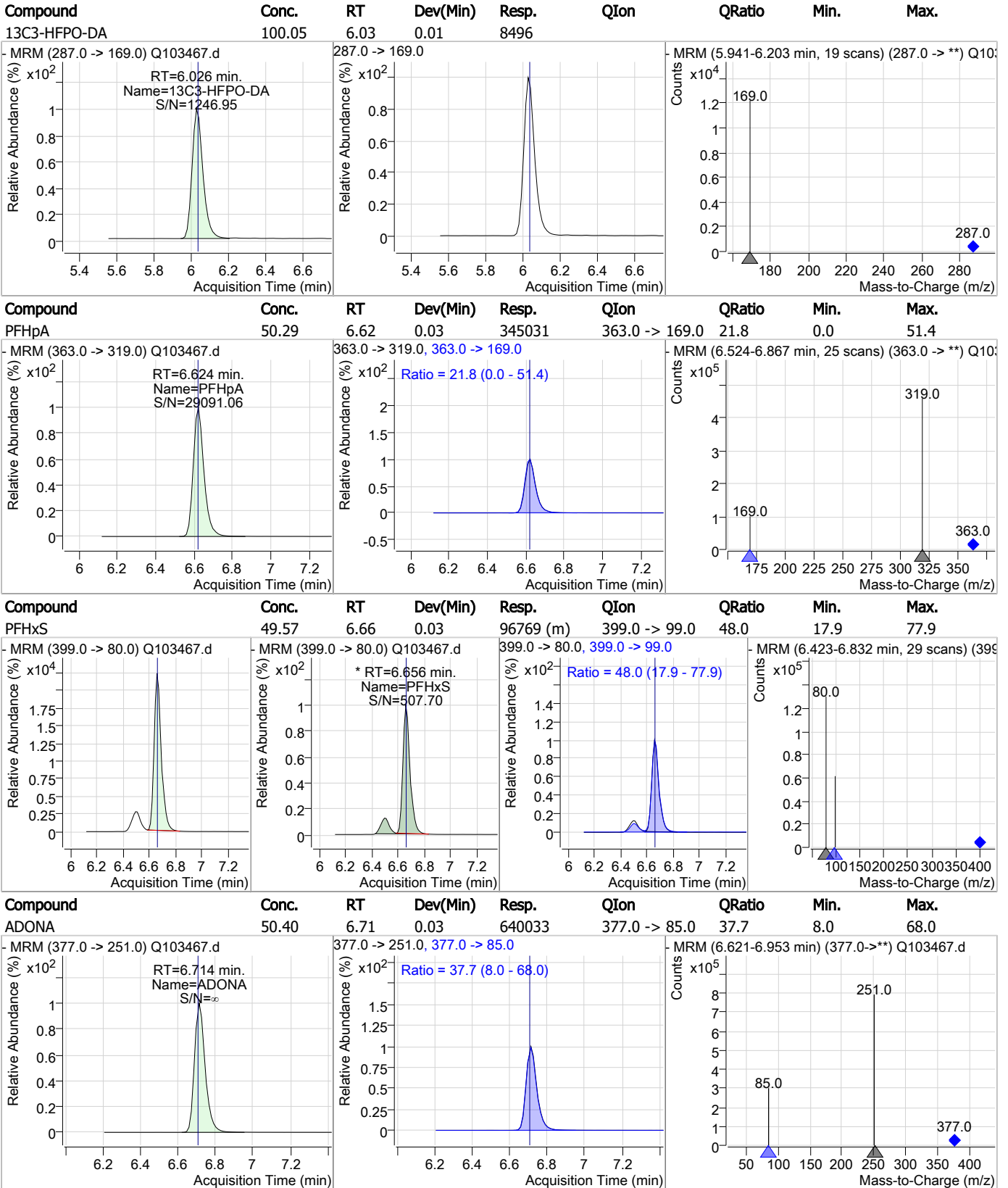
Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS

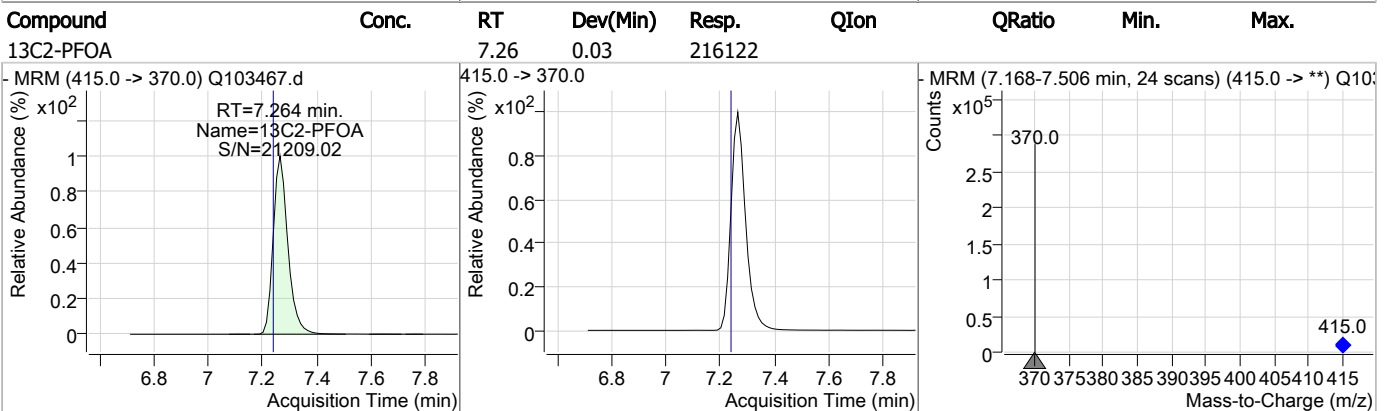
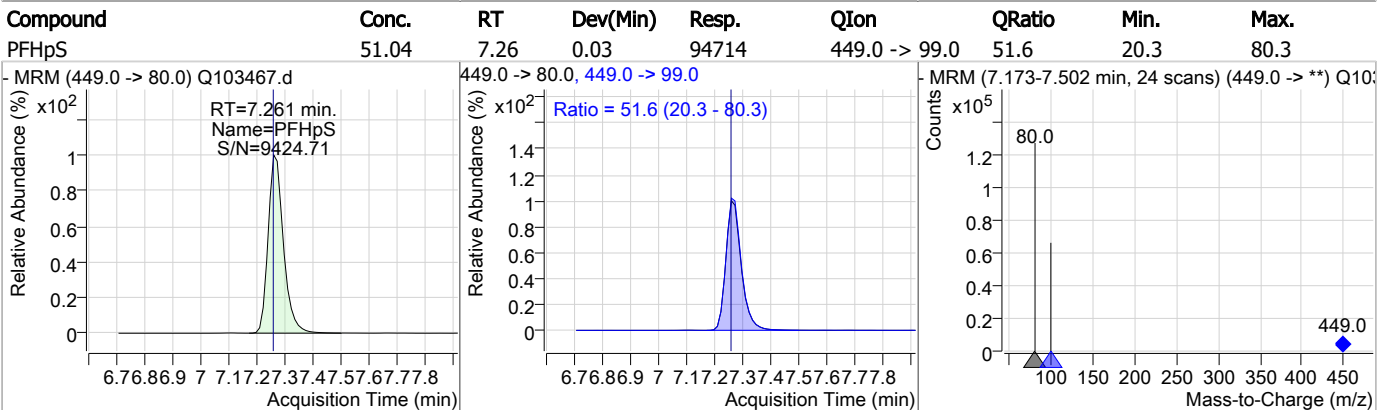
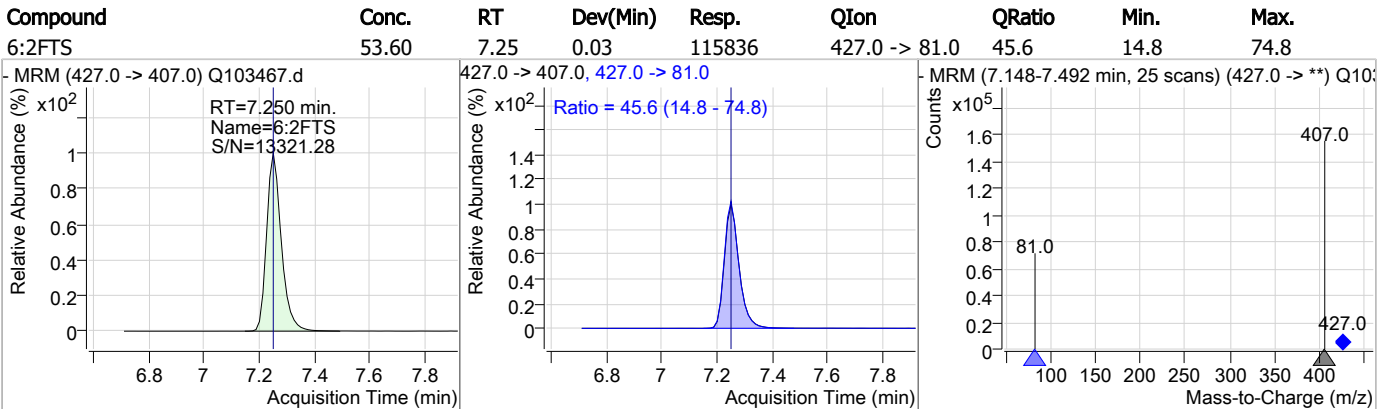
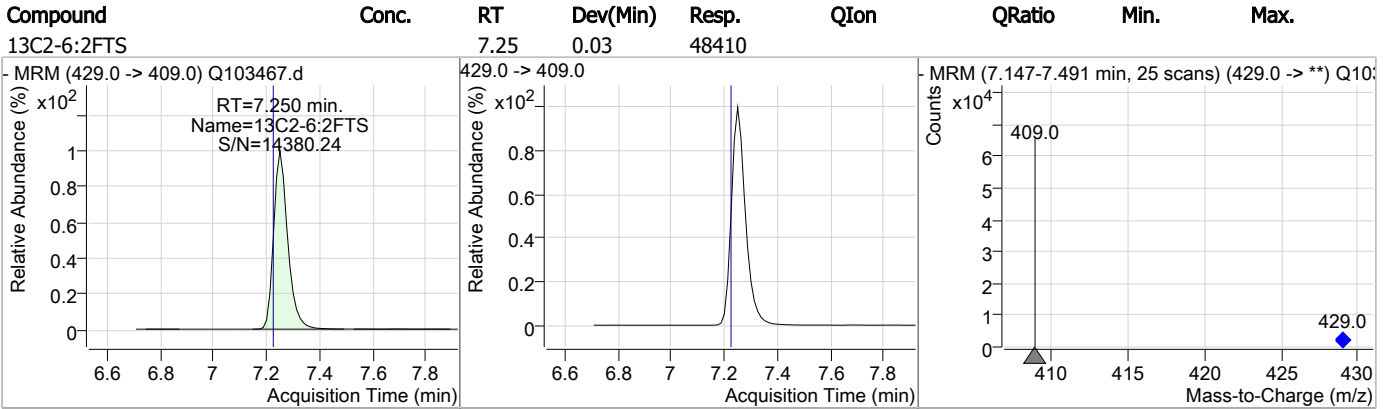


7.6.8

7

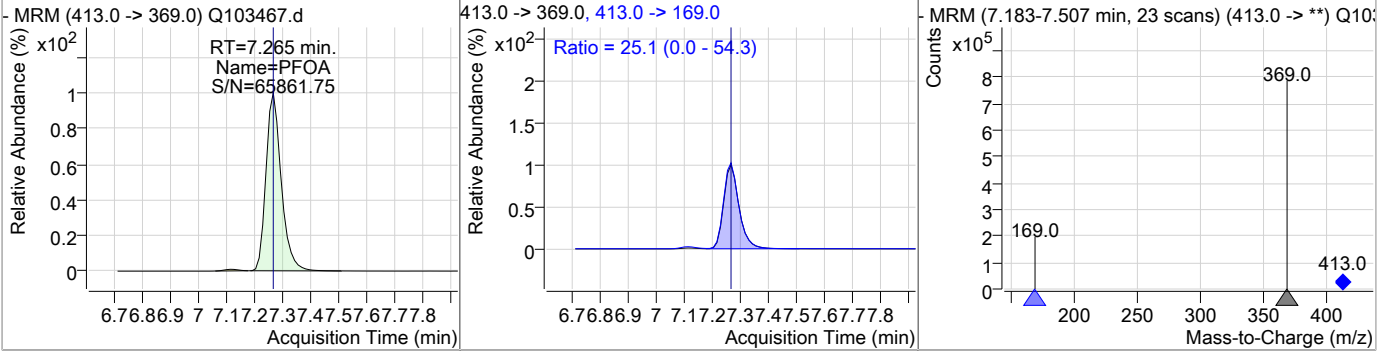


Perfluorinated Compounds by LC/MS/MS

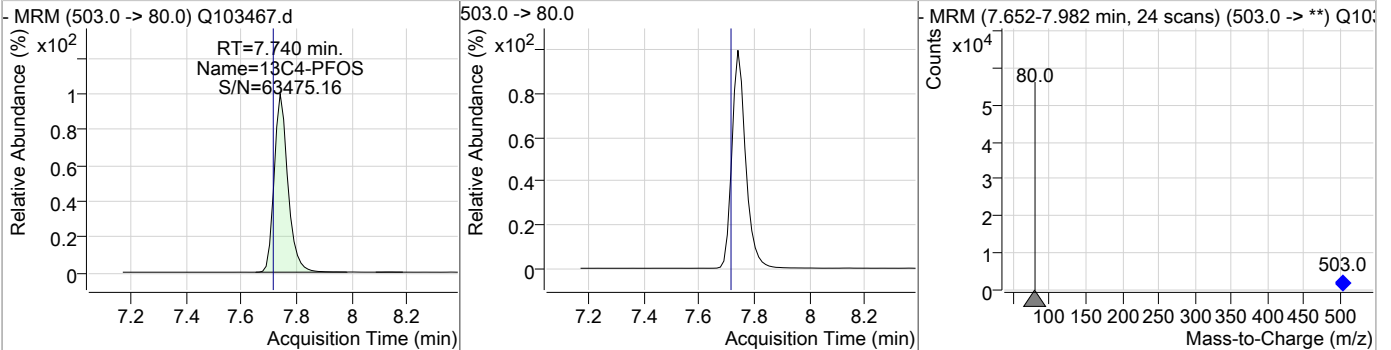


Perfluorinated Compounds by LC/MS/MS

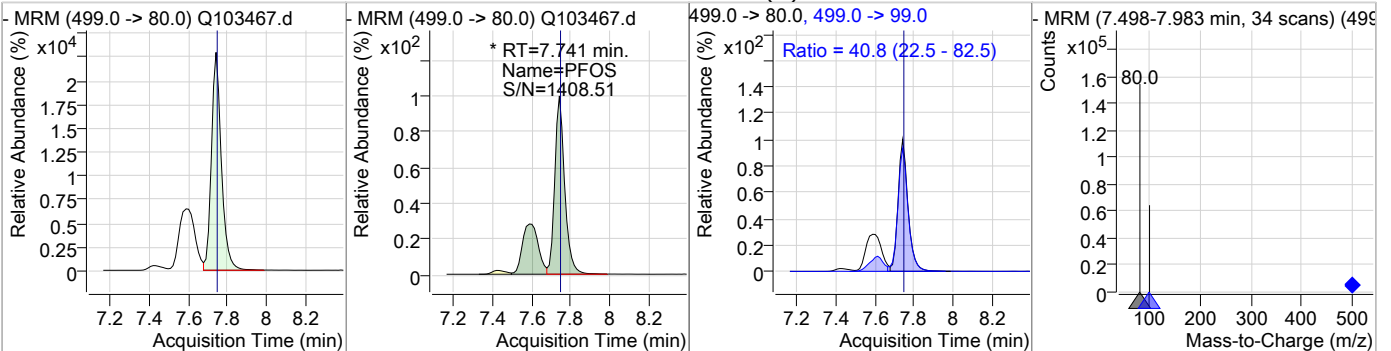
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	49.83	7.26	0.03	586310	413.0 -> 169.0	25.1	0.0	54.3



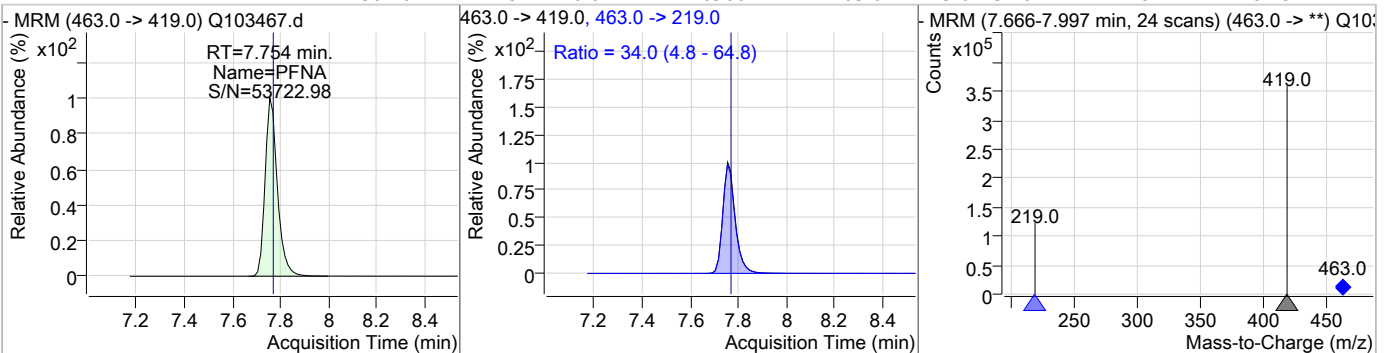
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.74	0.03	41594				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	48.98	7.74	0.03	116592 (m)	499.0 -> 99.0	40.8	22.5	82.5

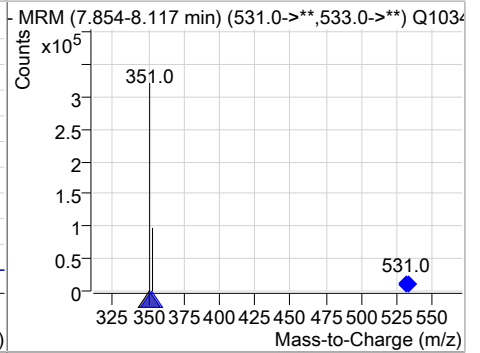
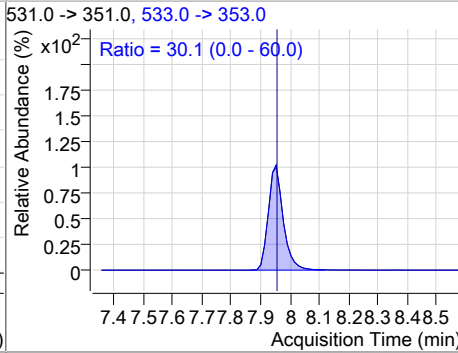
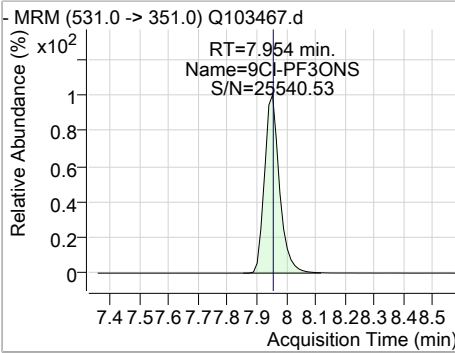


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	50.26	7.75	0.01	269662	463.0 -> 219.0	34.0	4.8	64.8

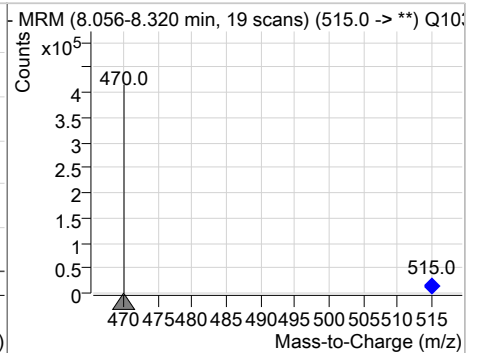
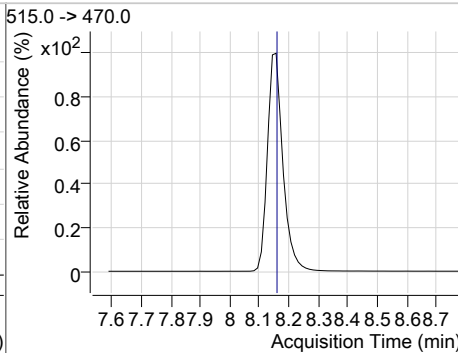
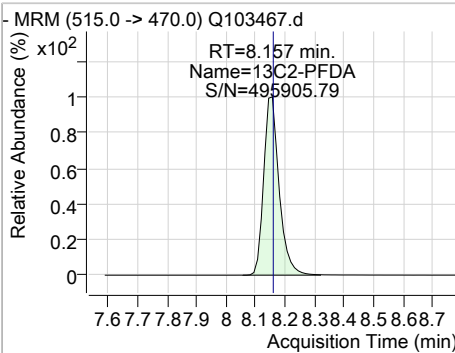


Perfluorinated Compounds by LC/MS/MS

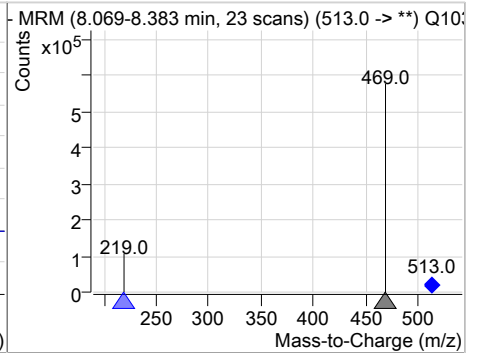
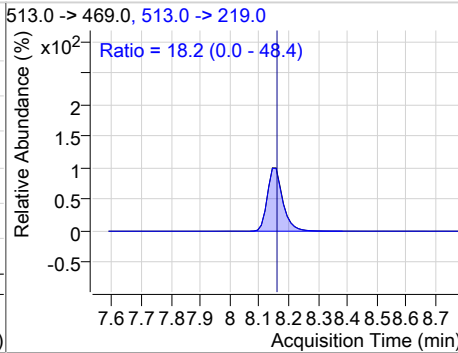
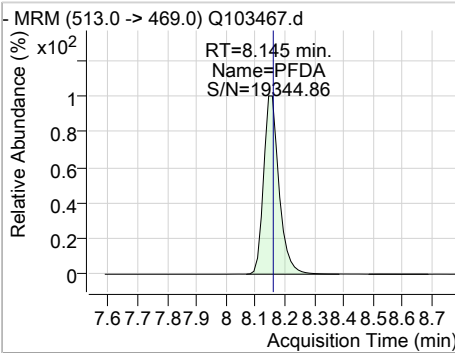
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9CI-PF3ONS	51.83	7.95	0.03	245397	533.0 -> 353.0	30.1	0.0	60.0



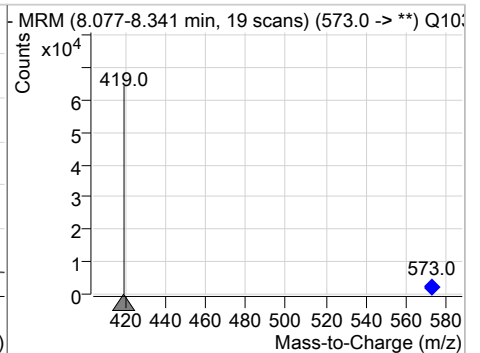
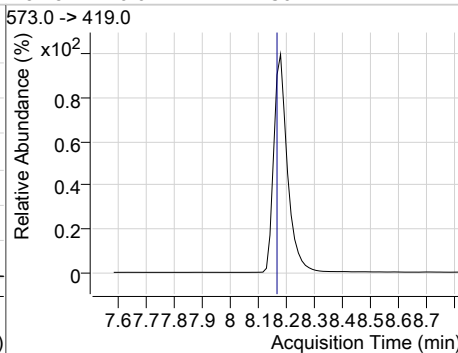
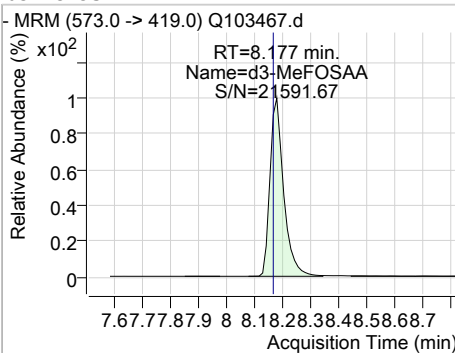
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	51.46	8.16	0.03	311672				



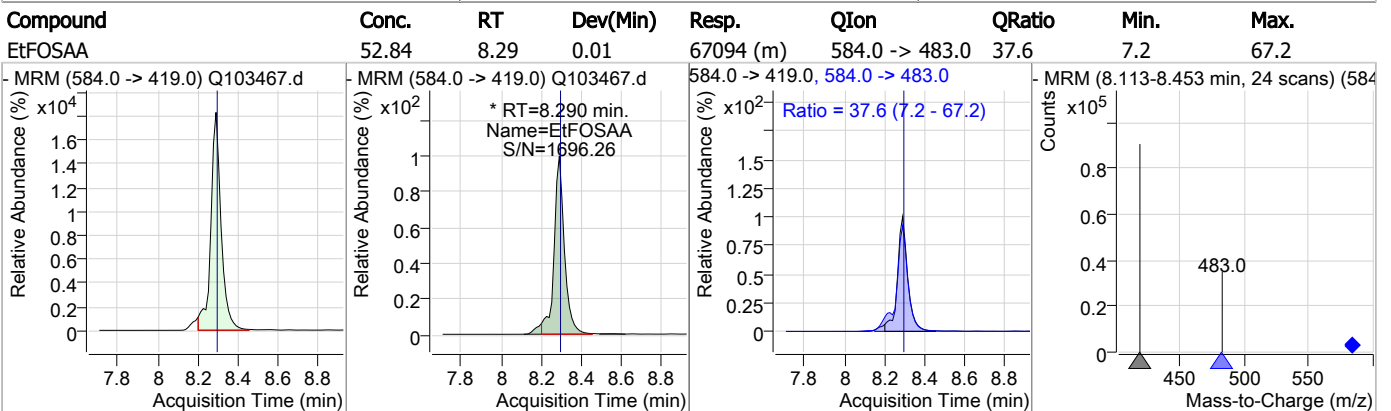
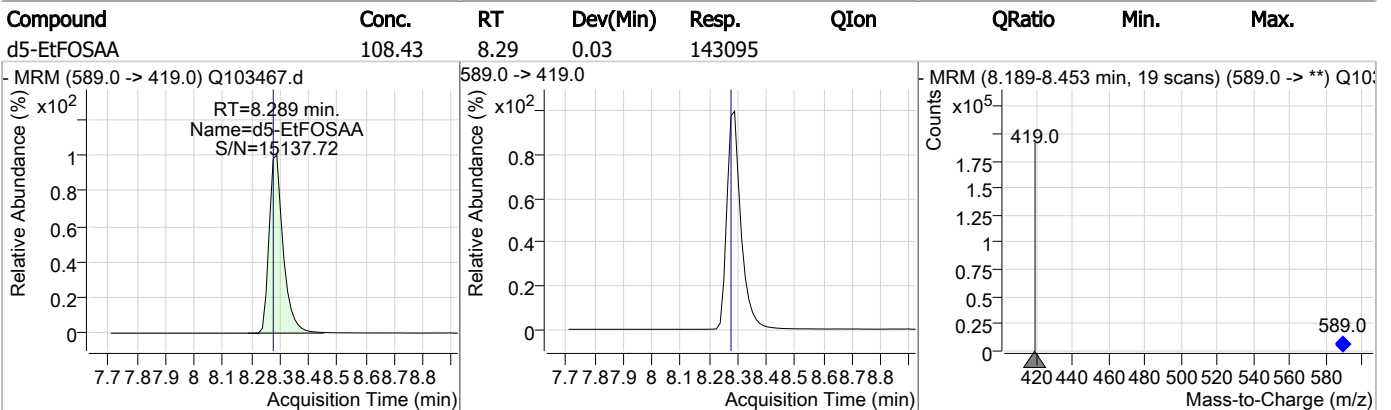
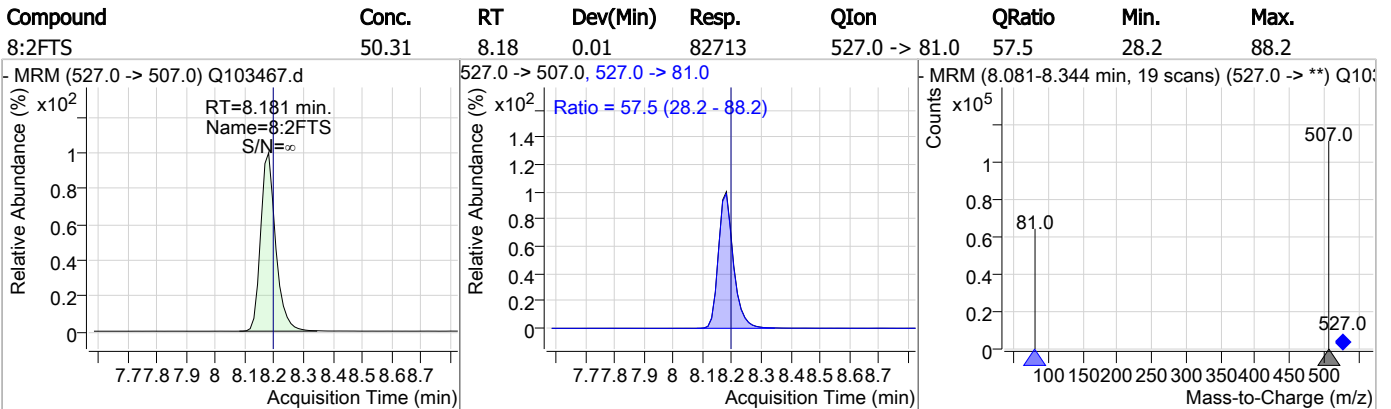
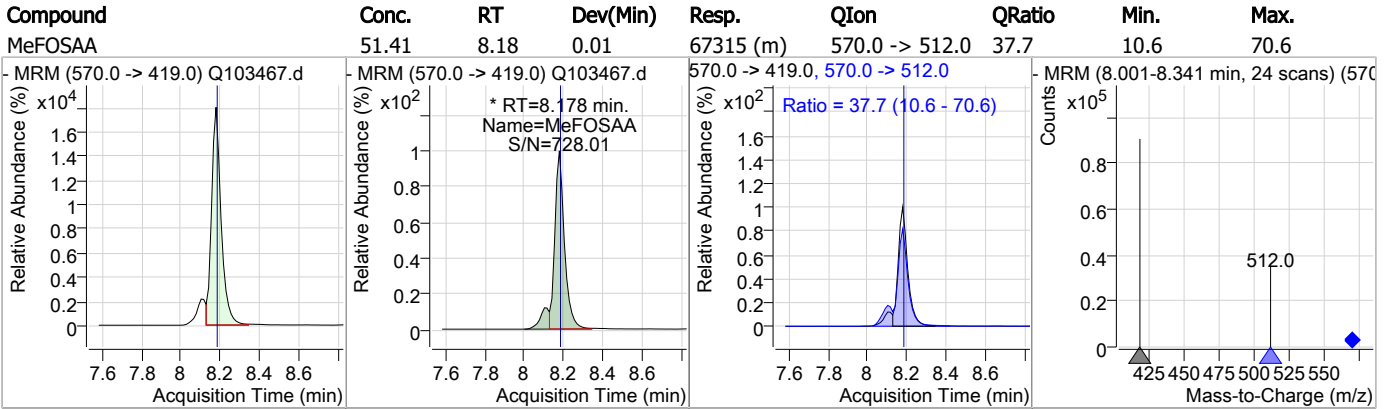
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	52.38	8.14	0.01	433975	513.0 -> 219.0	18.2	0.0	48.4



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.18	0.01	47736				



Perfluorinated Compounds by LC/MS/MS

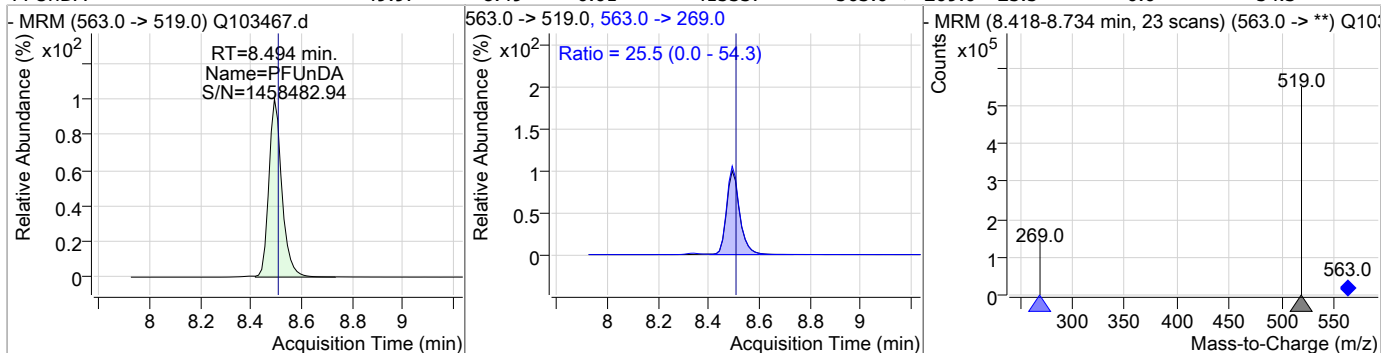


7.6.8

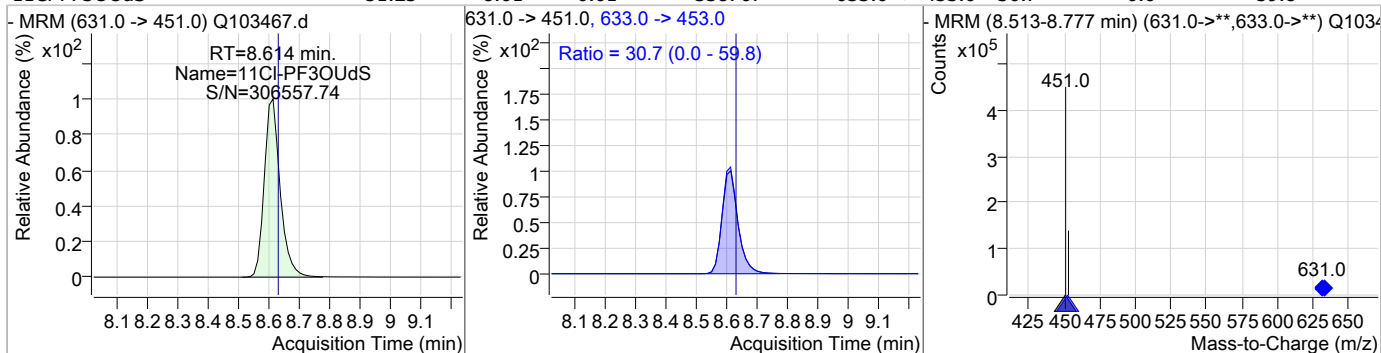
7

Perfluorinated Compounds by LC/MS/MS

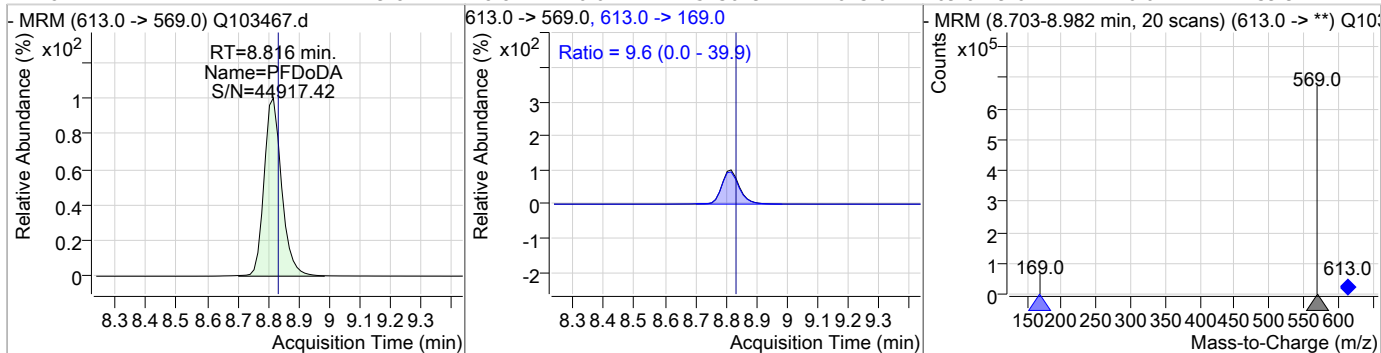
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	49.97	8.49	0.01	415337	563.0 -> 269.0	25.5	0.0	54.3



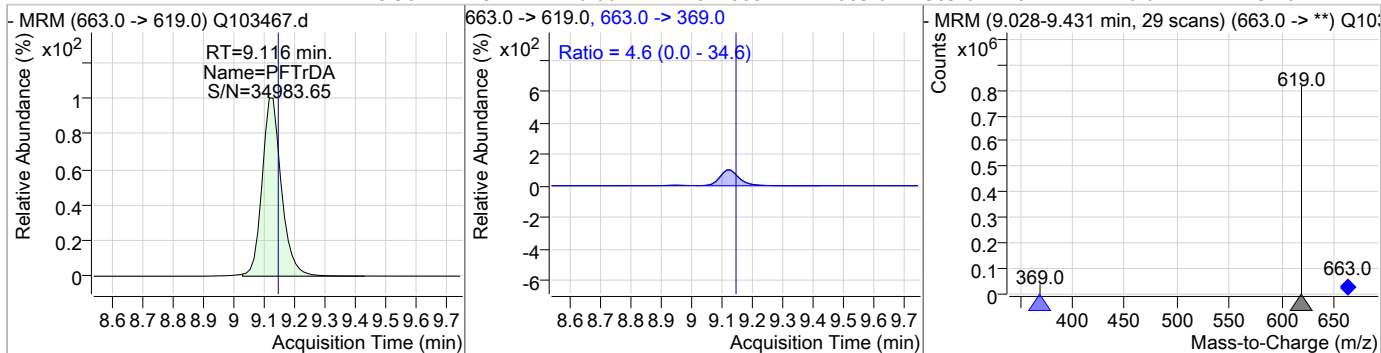
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	51.23	8.61	0.01	338707	633.0 -> 453.0	30.7	0.0	59.8



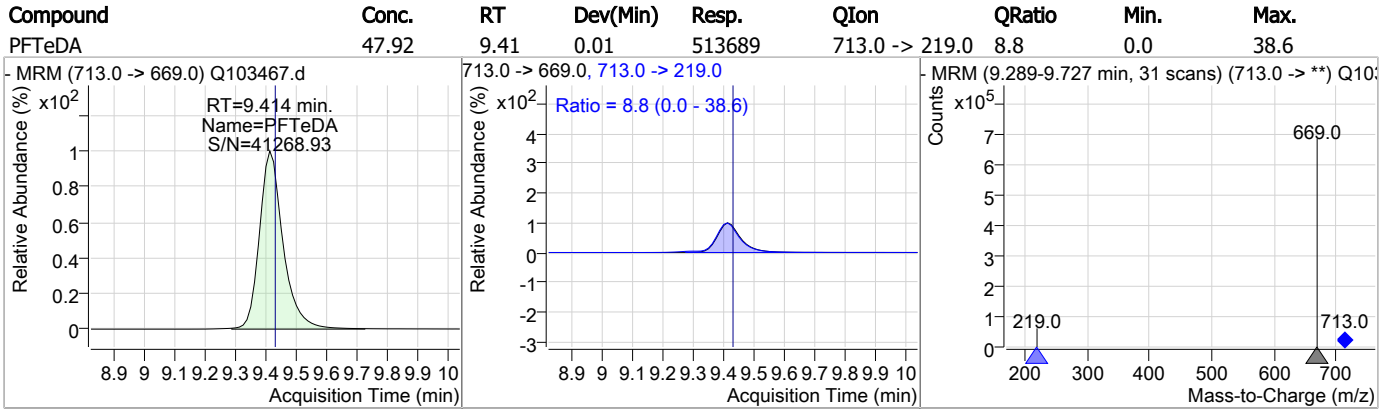
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	49.84	8.82	0.01	523049	613.0 -> 169.0	9.6	0.0	39.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	48.90	9.12	0.00	612865	663.0 -> 369.0	4.6	0.0	34.6



Perfluorinated Compounds by LC/MS/MS



7.6.8
7

Manual Integration Approval Summary

Sample Number: SQ2201-IC2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103467.D Analyst approved: 06/19/23 16:24 Anna Ludwig
Injection Time: 06/18/23 17:50 Supervisor approved: 06/19/23 17:23 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.66	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.74	Split peak
MeFOSAA	2355-31-9		8.18	Split peak
EtFOSAA	2991-50-6		8.29	Split peak

7.6.8.1

7

Perfluorinated Compounds by LC/MS/MS

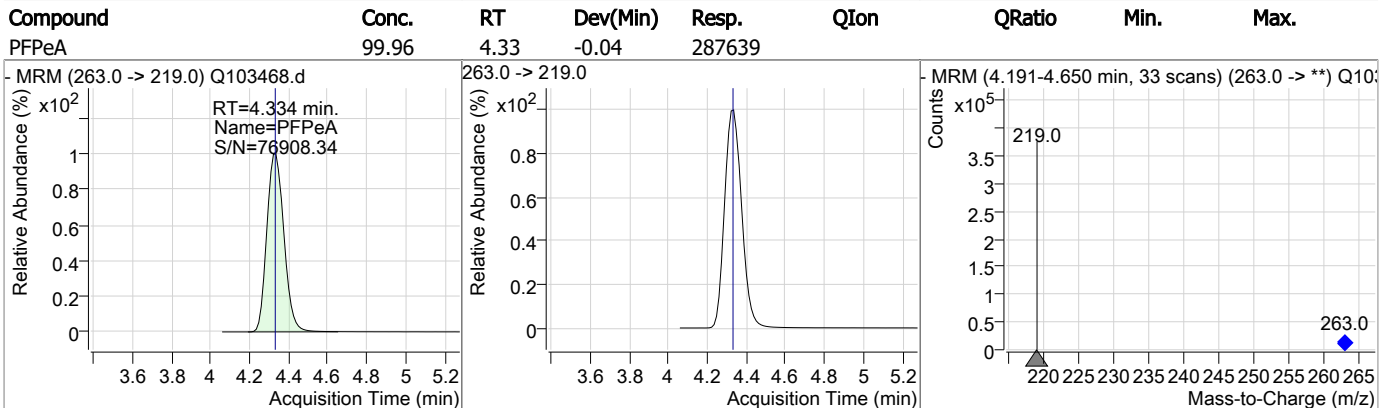
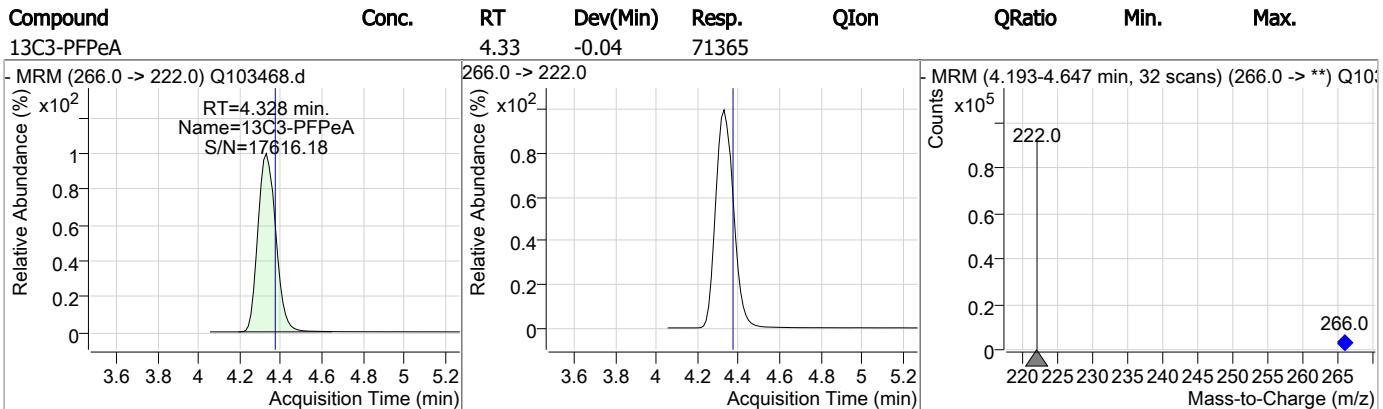
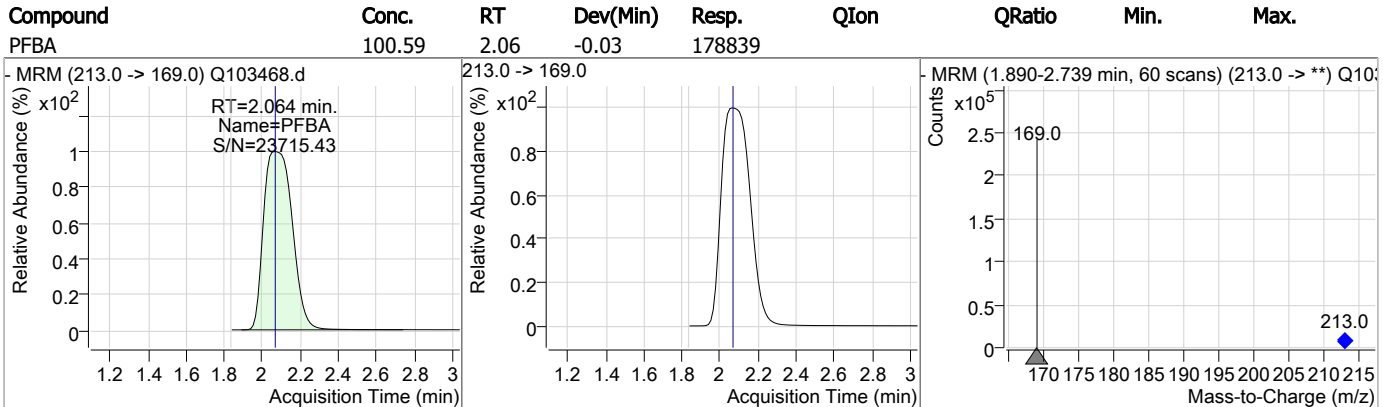
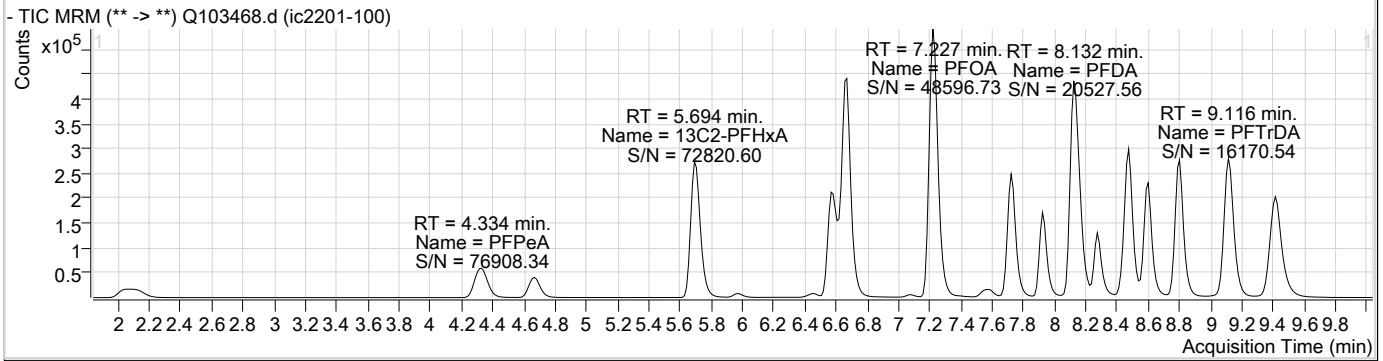
Data File : Q103468.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 6:06:09 PM
 Sample Name : ic2201-100
 Vial : P1-A9
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP96727,SQ2201,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.212	429.0 -> 409.0	49278	20.00 µg/L	-0.013
13C2-PFOA	7.227	415.0 -> 370.0	197174	20.00 µg/L	-0.013
13C3-PFPeA	4.328	266.0 -> 222.0	71365	20.00 µg/L	-0.044
13C4-PFOS	7.715	503.0 -> 80.0	39203	20.00 µg/L	0.000
d3-MeFOSAA	8.165	573.0 -> 419.0	47555	40.00 µg/L	0.000
System Monitoring Compounds					
13C2-PFDA	8.132	515.0 -> 470.0	547068	99.01 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 495.0%	
13C2-PFHxA	5.694	315.0 -> 270.0	604177	99.91 µg/L	-0.038
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 499.6%	
d5-EtFOSAA	8.277	589.0 -> 419.0	268857	191.77 µg/L	0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 479.4%	
13C3-HFPO-DA	5.976	287.0 -> 169.0	15924	199.97 µg/L	-0.038
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 499.9%	
Target Compounds					
6:2FTS	7.213	427.0 -> 407.0	214389	97.46 µg/L	100
8:2FTS	8.156	527.0 -> 507.0	149323	99.82 µg/L	99
EtFOSAA	8.277	584.0 -> 419.0	129738	98.83 µg/L	m 99
MeFOSAA	8.165	570.0 -> 419.0	129764	99.48 µg/L	m 93
PFBA	2.064	213.0 -> 169.0	178839	100.59 µg/L	100
PFBS	4.666	299.0 -> 80.0	144926	100.05 µg/L	100
PFDA	8.132	513.0 -> 469.0	744844	98.54 µg/L	100
PFDoDA	8.804	613.0 -> 569.0	989800	100.07 µg/L	100
PFHpA	6.574	363.0 -> 319.0	648902	99.94 µg/L	99
PFHpS	7.236	449.0 -> 80.0	173487	99.18 µg/L	99
PFHxA	5.696	313.0 -> 269.0	550316	99.93 µg/L	100
PFHxS	6.606	399.0 -> 80.0	188959	100.07 µg/L	m 97
PFNA	7.729	463.0 -> 419.0	500773	99.94 µg/L	99
PFOA	7.227	413.0 -> 369.0	1074801	100.13 µg/L	100
PFOS	7.716	499.0 -> 80.0	225778	100.64 µg/L	m 82
PFPeA	4.334	263.0 -> 219.0	287639	99.96 µg/L	100
PFTeDA	9.414	713.0 -> 669.0	1023662	101.32 µg/L	99
PFTrDA	9.116	663.0 -> 619.0	1190178	100.75 µg/L	100
PFUnDA	8.481	563.0 -> 519.0	781482	99.75 µg/L	98
ADONA	6.672	377.0 -> 251.0	1238604	99.93 µg/L	98
9Cl-PF3ONS	7.929	531.0 -> 351.0	456535	99.18 µg/L	99
11Cl-PF3OUdS	8.602	631.0 -> 451.0	631390	99.42 µg/L	98
HFPO-DA	5.978	285.0 -> 169.0	8941	99.95 µg/L	96

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

7.6.9
7

Perfluorinated Compounds by LC/MS/MS

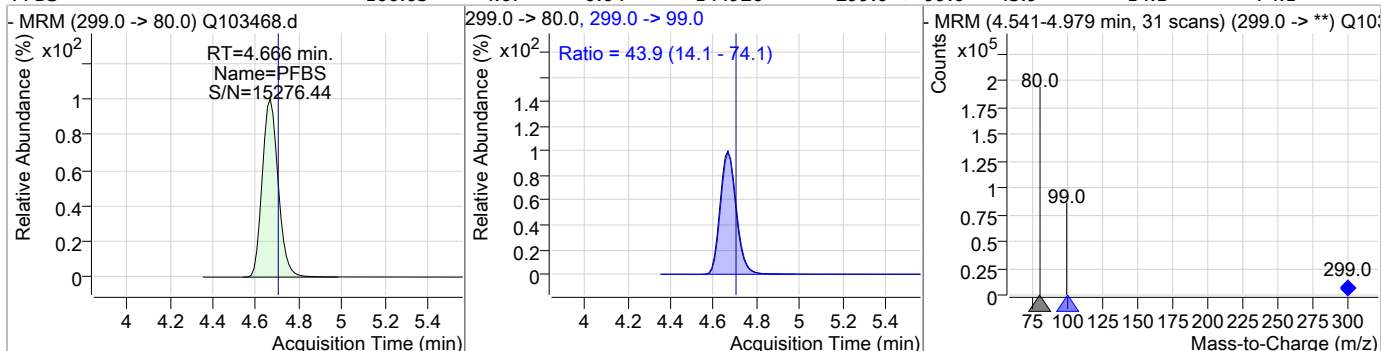


7.6.9

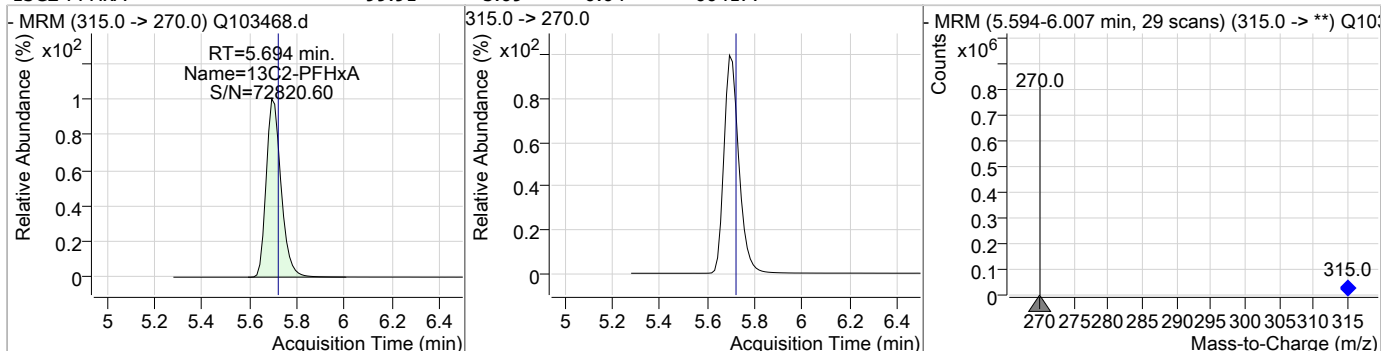


Perfluorinated Compounds by LC/MS/MS

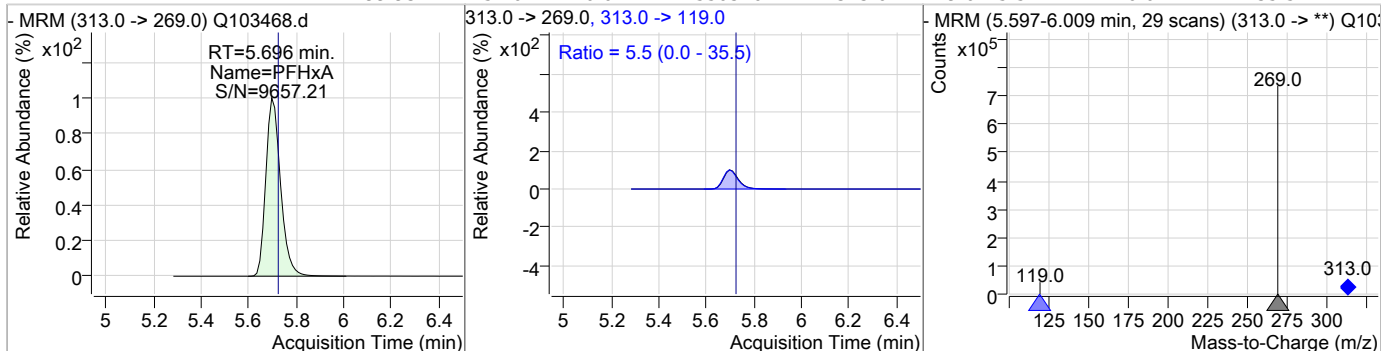
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	100.05	4.67	-0.04	144926	299.0 -> 99.0	43.9	14.1	74.1



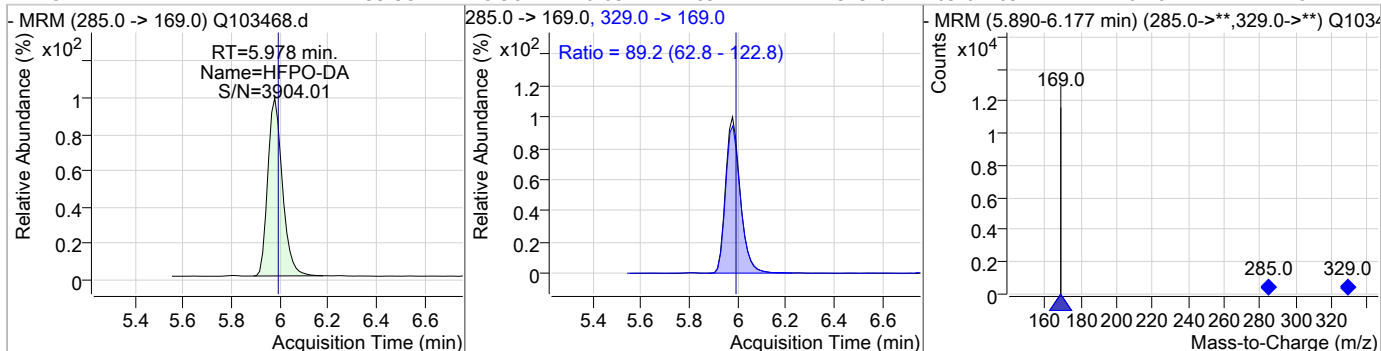
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	99.91	5.69	-0.04	604177				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	99.93	5.70	-0.04	550316	313.0 -> 119.0	5.5	0.0	35.5

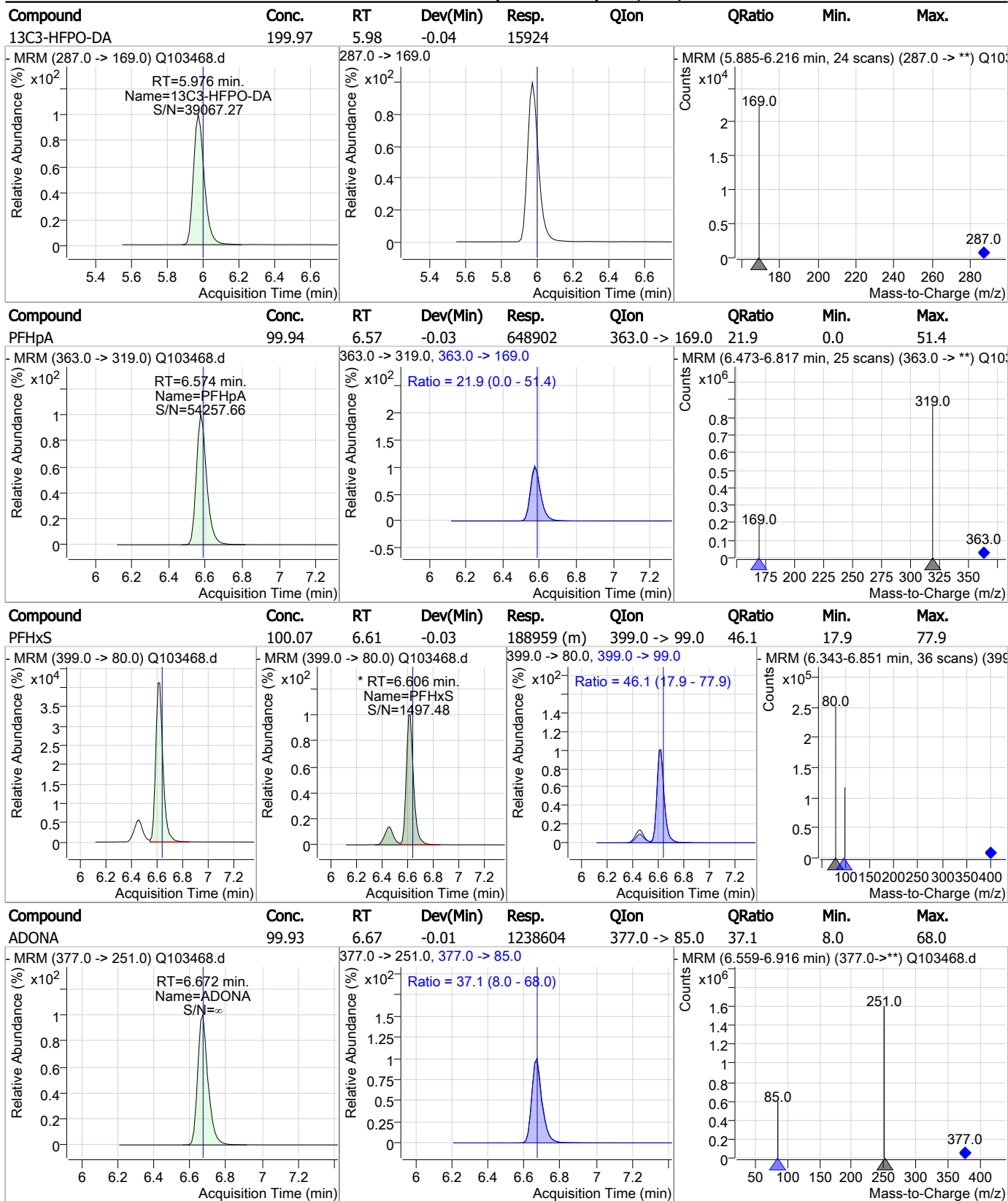


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	99.95	5.98	-0.03	8941	329.0 -> 169.0	89.2	62.8	122.8



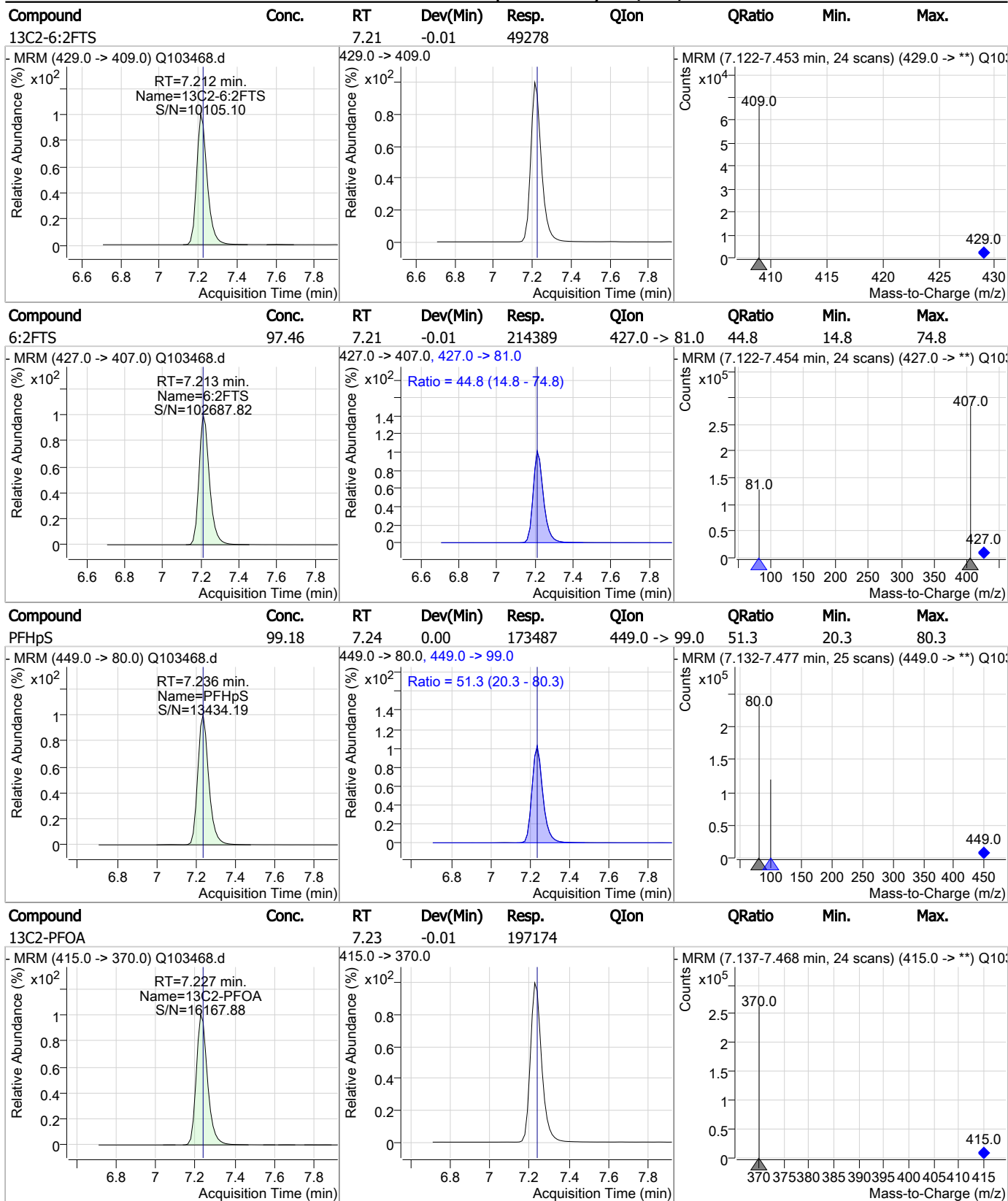
7.6.9
7

Perfluorinated Compounds by LC/MS/MS



7.69
7

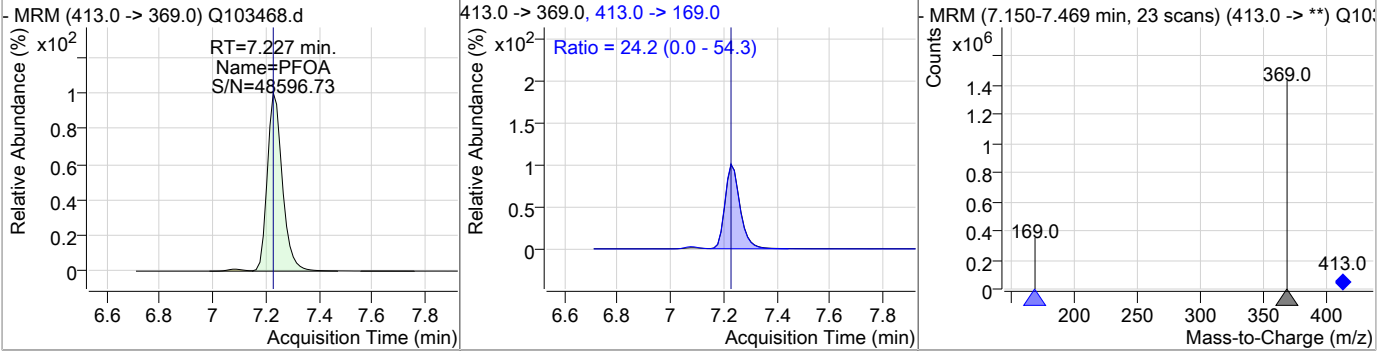
Perfluorinated Compounds by LC/MS/MS



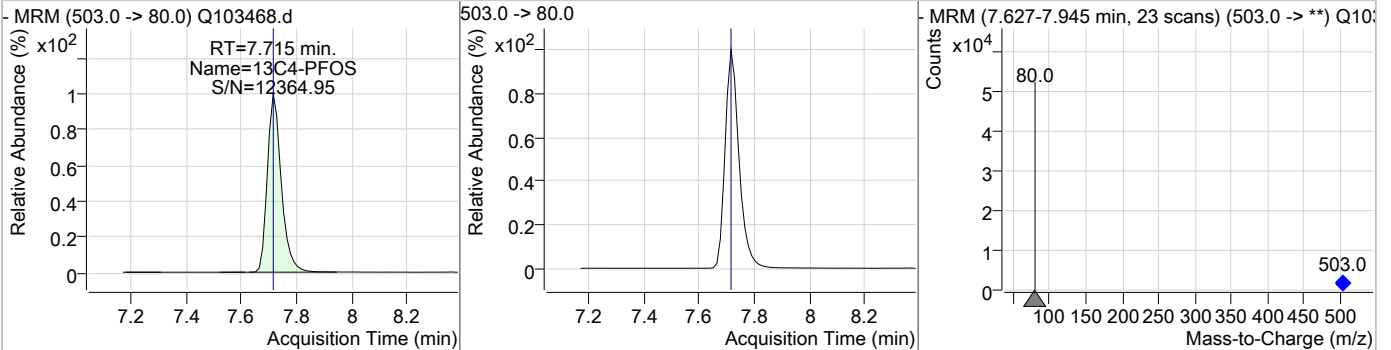
7.6.9

Perfluorinated Compounds by LC/MS/MS

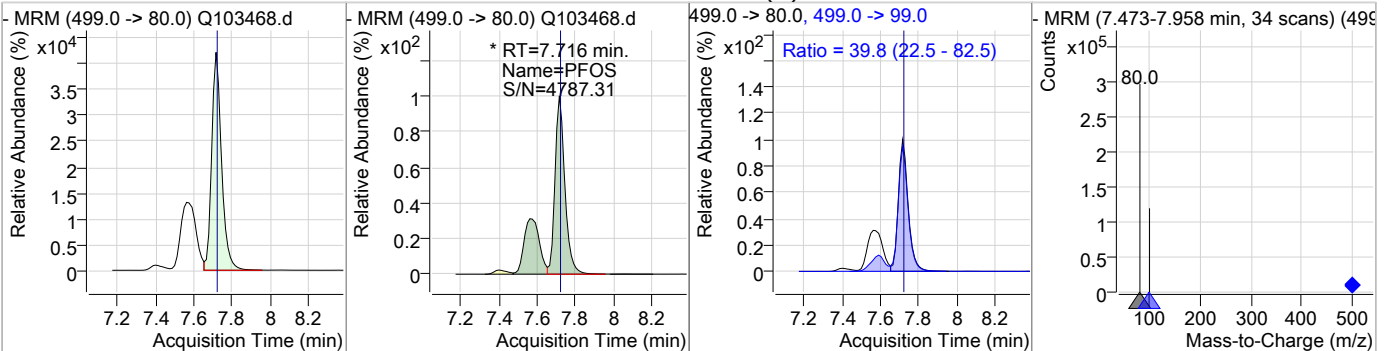
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	100.13	7.23	-0.01	1074801	413.0 -> 169.0	24.2	0.0	54.3



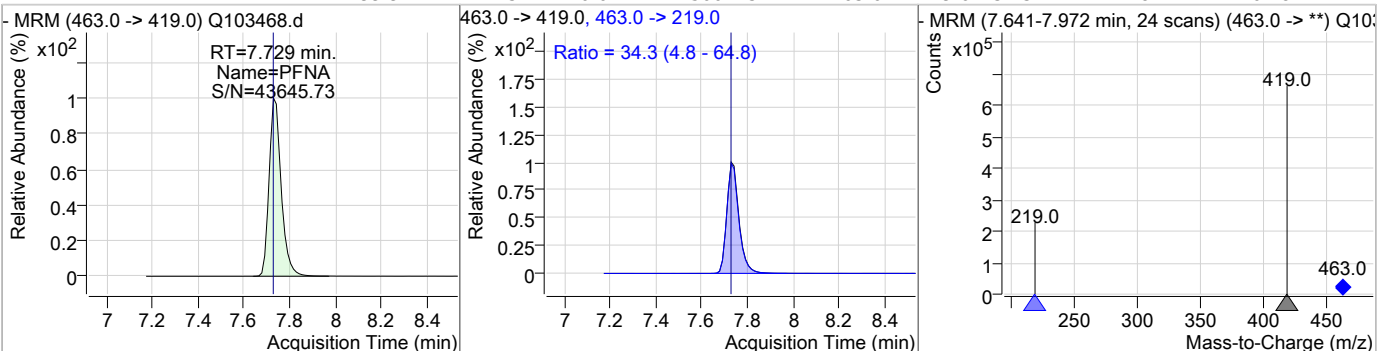
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.72	0.00	39203				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	100.64	7.72	0.00	225778 (m)	499.0 -> 99.0	39.8	22.5	82.5

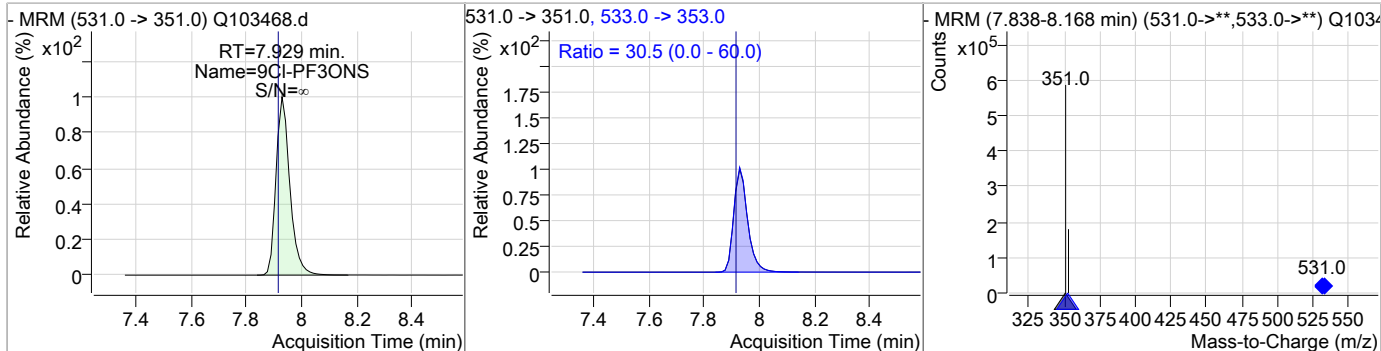


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	99.94	7.73	-0.01	500773	463.0 -> 219.0	34.3	4.8	64.8

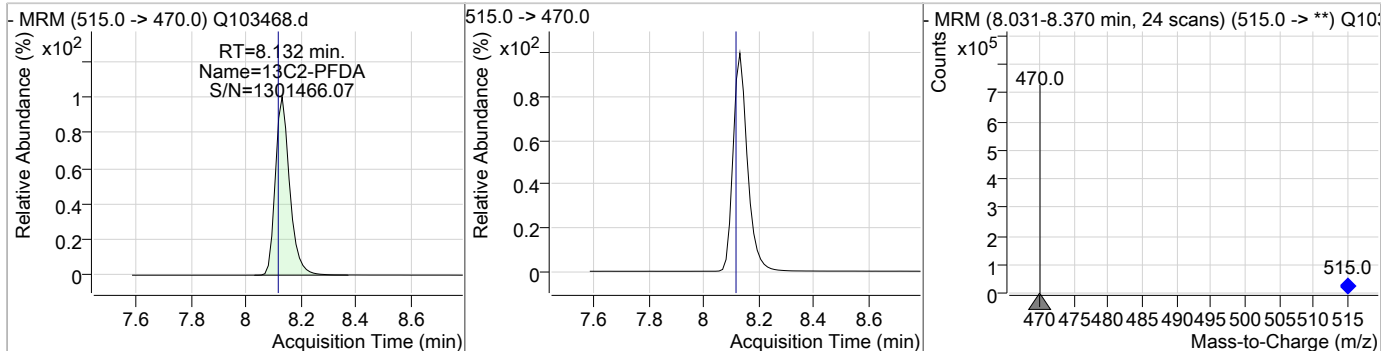


Perfluorinated Compounds by LC/MS/MS

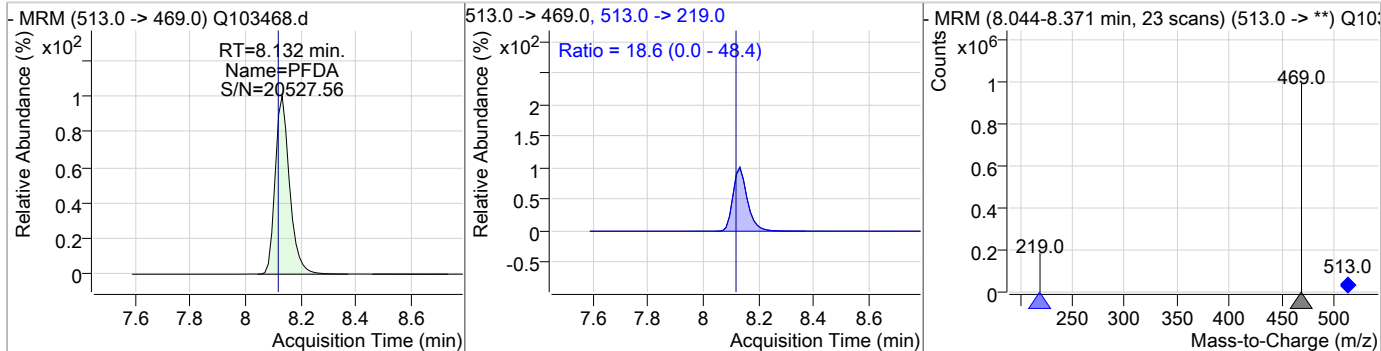
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9CI-PF3ONS	99.18	7.93	0.00	456535	533.0 -> 353.0	30.5	0.0	60.0



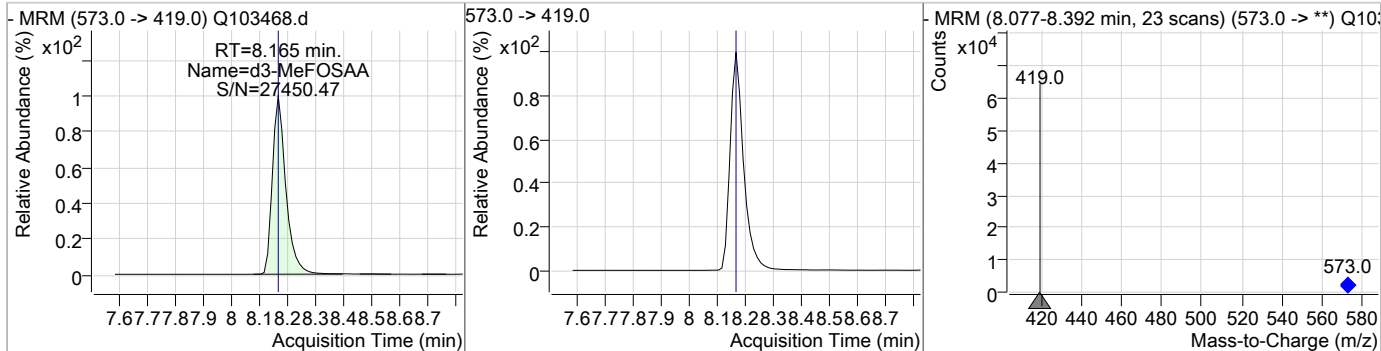
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	99.01	8.13	0.00	547068				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	98.54	8.13	0.00	744844	513.0 -> 219.0	18.6	0.0	48.4

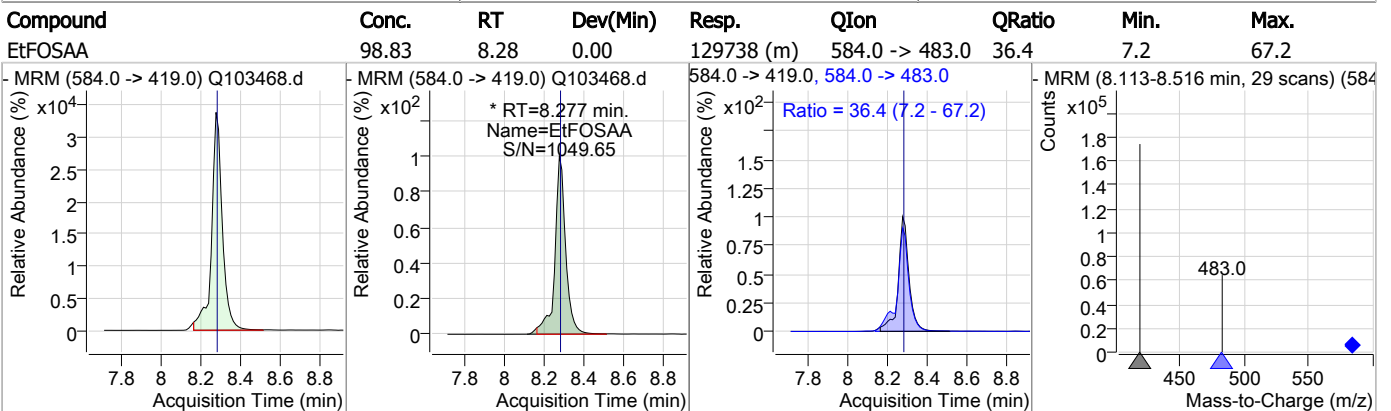
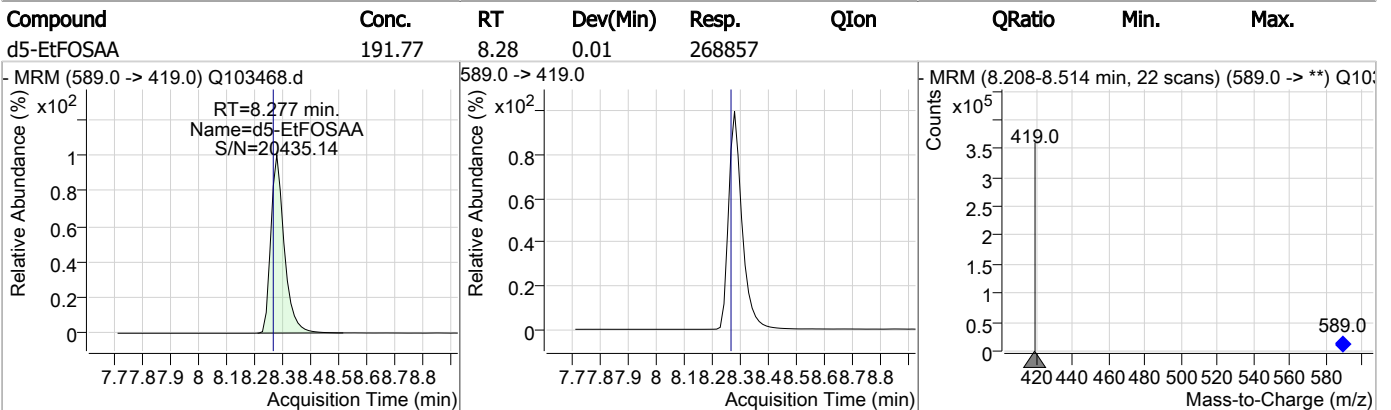
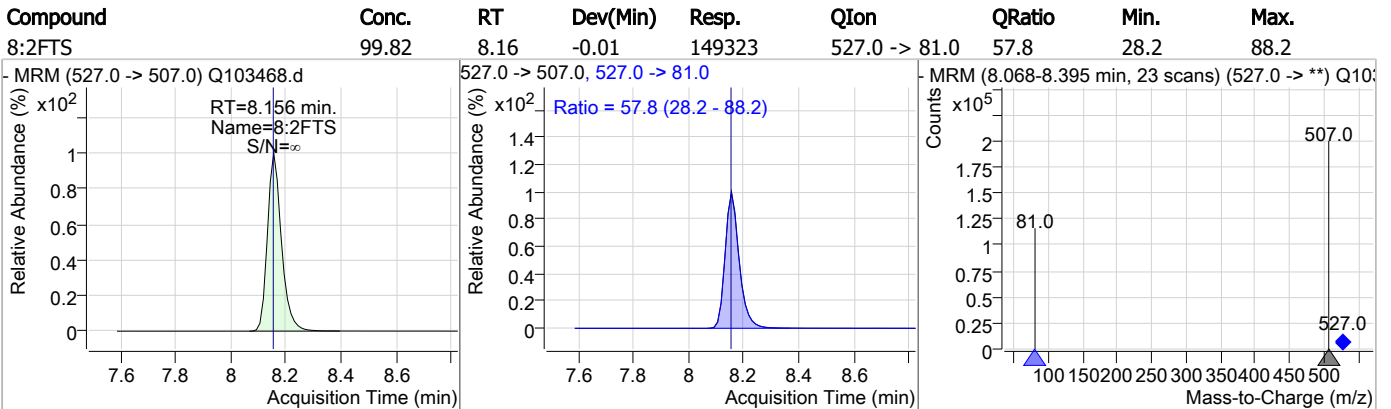
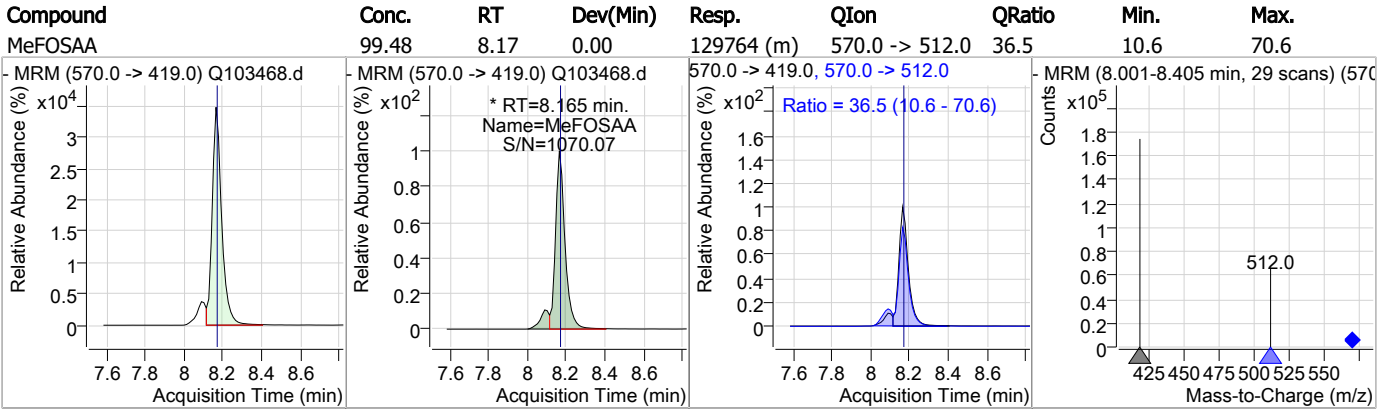


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.16	0.00	47555				



7.6.9

Perfluorinated Compounds by LC/MS/MS



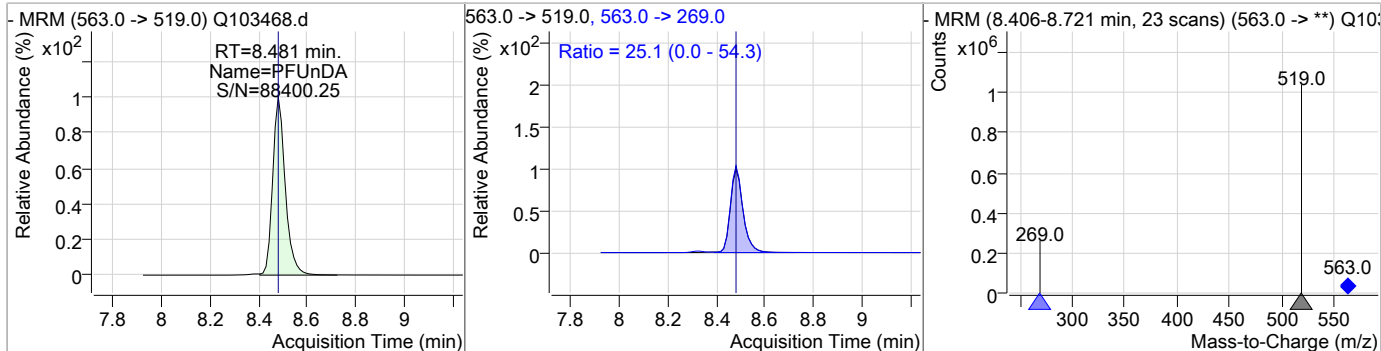
7.6.9

7

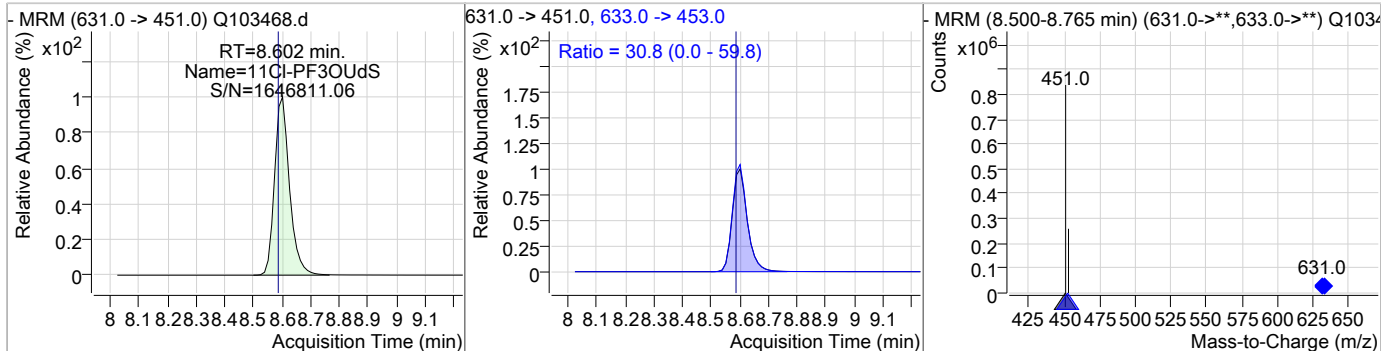


Perfluorinated Compounds by LC/MS/MS

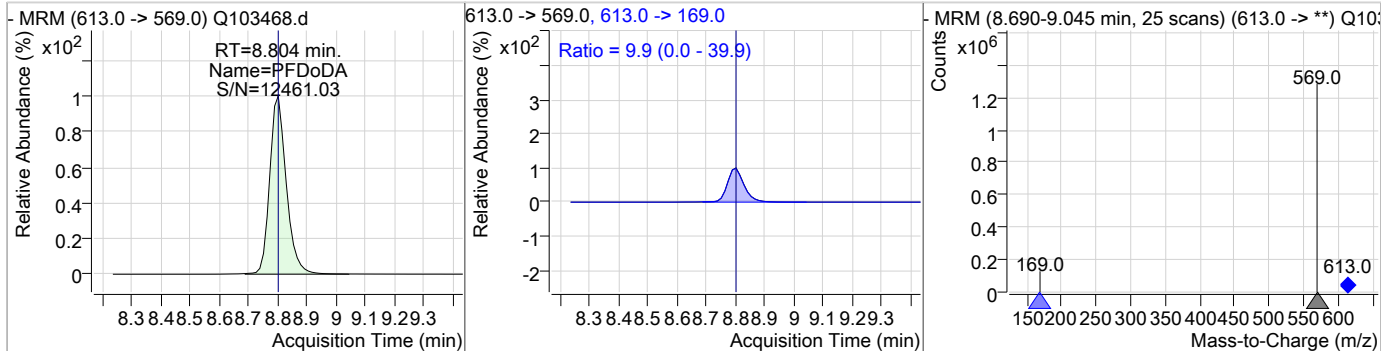
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	99.75	8.48	0.00	781482	563.0 -> 269.0	25.1	0.0	54.3



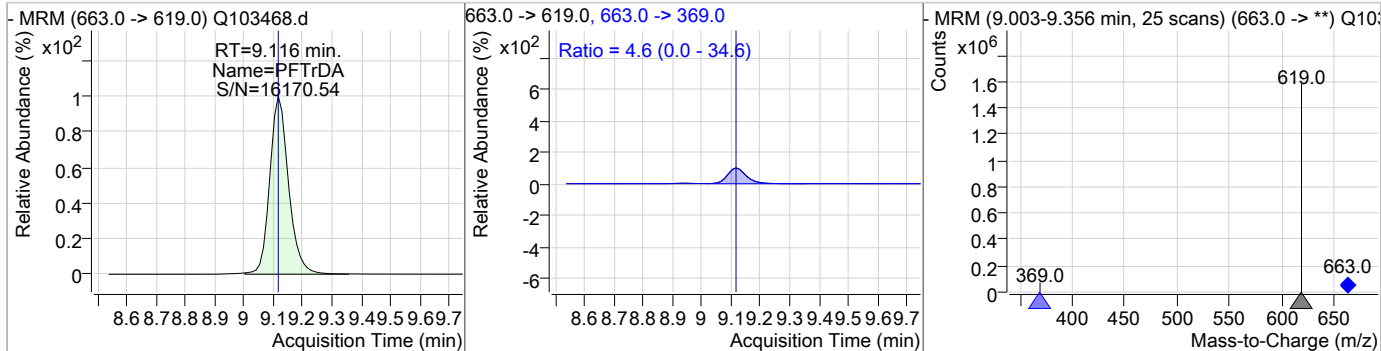
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	99.42	8.60	0.00	631390	633.0 -> 453.0	30.8	0.0	59.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDODA	100.07	8.80	0.00	989800	613.0 -> 169.0	9.9	0.0	39.9

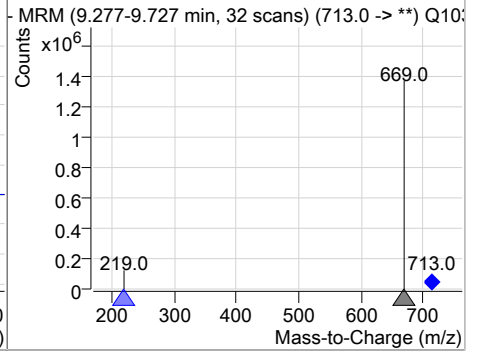
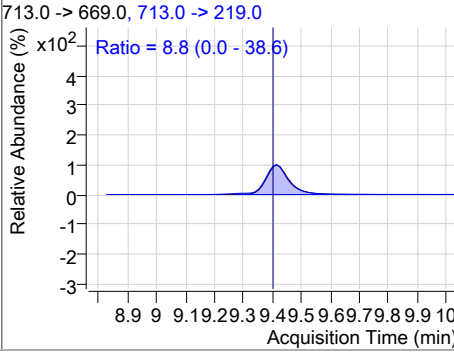
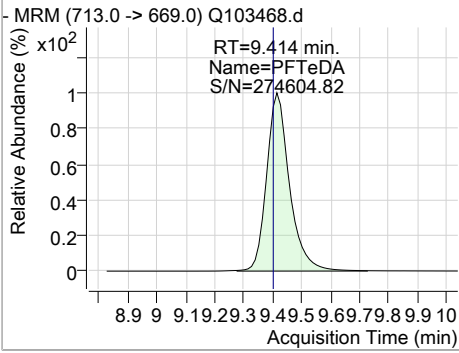


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	100.75	9.12	0.00	1190178	663.0 -> 369.0	4.6	0.0	34.6



Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	101.32	9.41	0.01	1023662	713.0 -> 219.0	8.8	0.0	38.6



7.6.9
7

Manual Integration Approval Summary

Sample Number: SQ2201-IC2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103468.D Analyst approved: 06/19/23 16:24 Anna Ludwig
Injection Time: 06/18/23 18:06 Supervisor approved: 06/19/23 17:23 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.61	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
MeFOSAA	2355-31-9		8.16	Split peak
EtFOSAA	2991-50-6		8.28	Split peak

7.6.9.1
7

Perfluorinated Compounds by LC/MS/MS

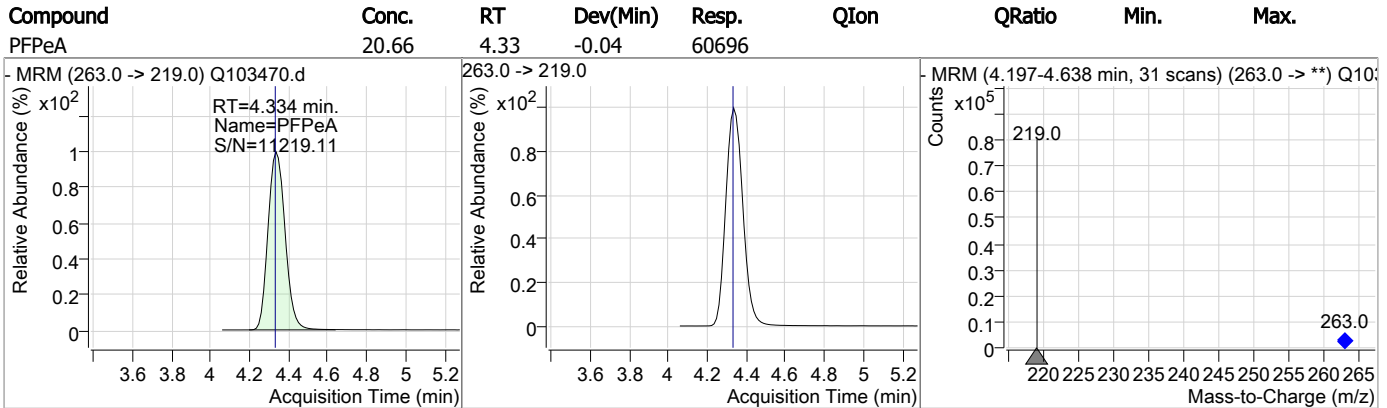
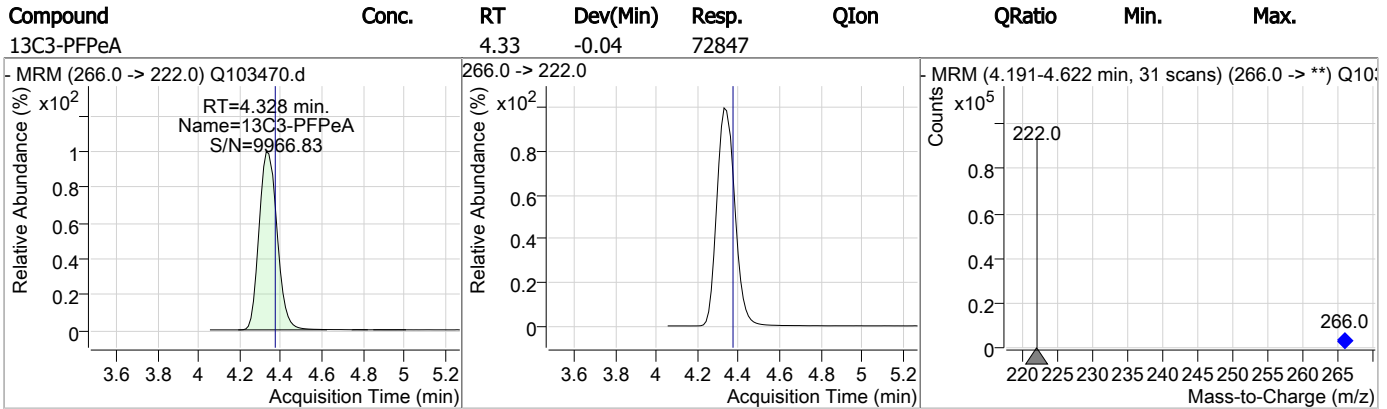
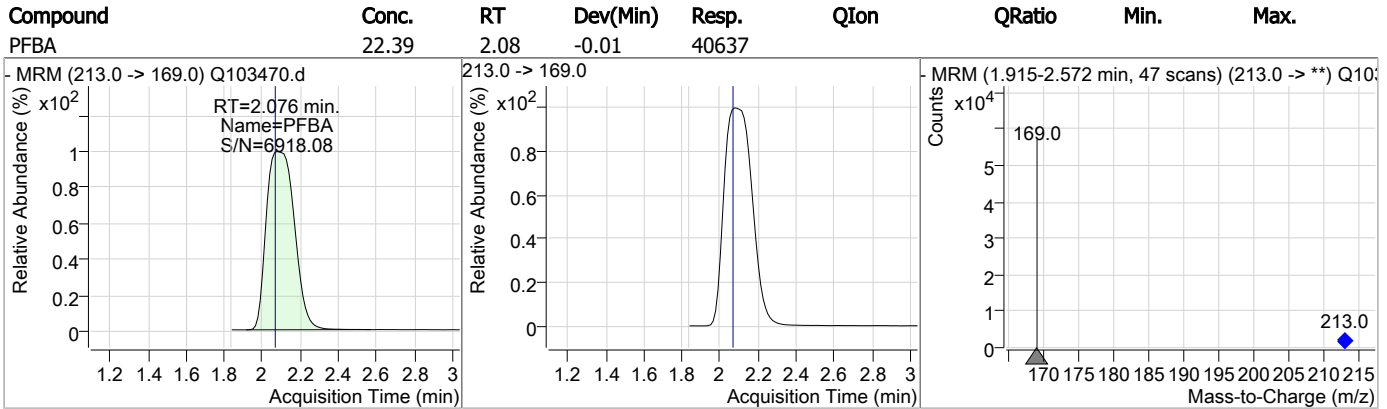
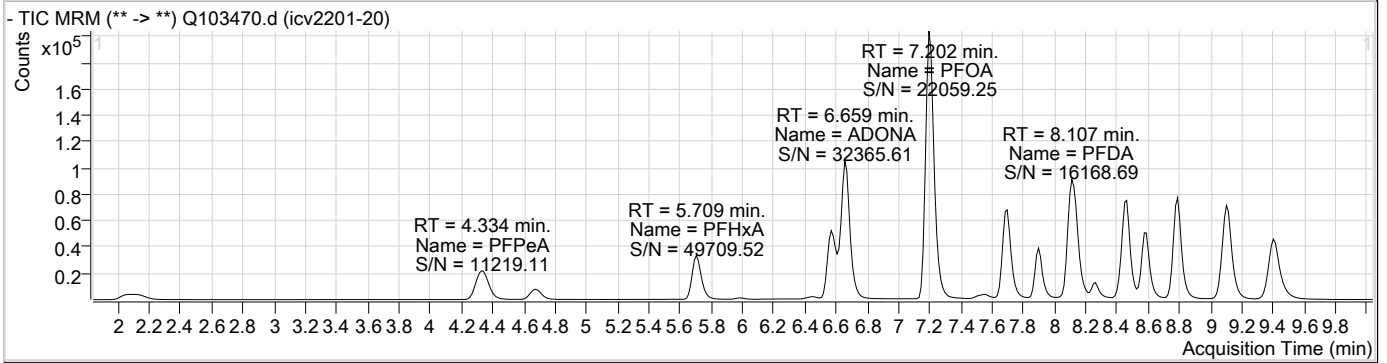
Data File : Q103470.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 6:37:44 PM
 Sample Name : icv2201-20
 Vial : P1-B1
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP96727,SQ2201,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
13C2-6:2FTS	7.200	429.0 -> 409.0	48923	20.00	µg/L	-0.025
13C2-PFOA	7.202	415.0 -> 370.0	234006	20.00	µg/L	-0.038
13C3-PFPeA	4.328	266.0 -> 222.0	72847	20.00	µg/L	-0.044
13C4-PFOS	7.689	503.0 -> 80.0	40590	20.00	µg/L	-0.026
d3-MeFOSAA	8.139	573.0 -> 419.0	53149	40.00	µg/L	-0.025
System Monitoring Compounds						
13C2-PFDA	-	515.0 -> 470.0	-	N.D.		
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = NA%			
13C2-PFHxA	-	315.0 -> 270.0	-	N.D.		
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = NA%			
d5-EtFOSAA	8.264	589.0 -> 419.0	0	0.00	µg/L	m 0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = NA%			
13C3-HFPO-DA	-	287.0 -> 169.0	-	N.D.		
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = NA%			
Target Compounds						
6:2FTS	7.188	427.0 -> 407.0	54416	24.92	µg/L	QValue 99
8:2FTS	8.131	527.0 -> 507.0	39502	22.43	µg/L	98
EtFOSAA	8.265	584.0 -> 419.0	30915	22.43	µg/L	m 99
MeFOSAA	8.140	570.0 -> 419.0	31401	21.54	µg/L	m 95
PFBA	2.076	213.0 -> 169.0	40637	22.39	µg/L	100
PFBS	4.678	299.0 -> 80.0	27690	20.06	µg/L	100
PFDA	8.107	513.0 -> 469.0	212302	23.67	µg/L	100
PFDoDA	8.791	613.0 -> 569.0	266103	25.98	µg/L	99
PFHpA	6.574	363.0 -> 319.0	157189	21.63	µg/L	100
PFHpS	7.211	449.0 -> 80.0	41464	22.90	µg/L	99
PFHxA	5.709	313.0 -> 269.0	130624	21.31	µg/L	100
PFHxS	6.606	399.0 -> 80.0	36737	19.59	µg/L	m 98
PFNA	7.704	463.0 -> 419.0	116948	20.42	µg/L	98
PFOA	7.202	413.0 -> 369.0	287661	22.58	µg/L	99
PFOS	7.690	499.0 -> 80.0	59052	25.42	µg/L	m 86
PFPeA	4.334	263.0 -> 219.0	60696	20.66	µg/L	100
PFTeDA	9.402	713.0 -> 669.0	221416	21.17	µg/L	99
PFTrDA	9.104	663.0 -> 619.0	299729	24.51	µg/L	100
PFUnDA	8.469	563.0 -> 519.0	197683	24.37	µg/L	98
ADONA	6.659	377.0 -> 251.0	283721	21.51	µg/L	99
9Cl-PF3ONS	7.901	531.0 -> 351.0	101293	20.65	µg/L	99
11Cl-PF3OUdS	8.589	631.0 -> 451.0	139862	20.22	µg/L	100
HFPO-DA	5.990	285.0 -> 169.0	2309	22.57	µg/L	99

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

7.6.10
7

Perfluorinated Compounds by LC/MS/MS

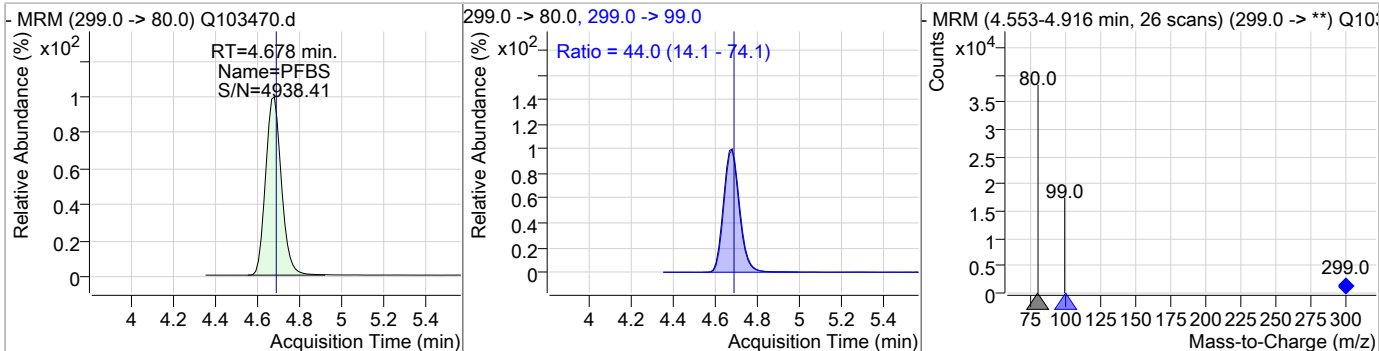


7.6-10
7

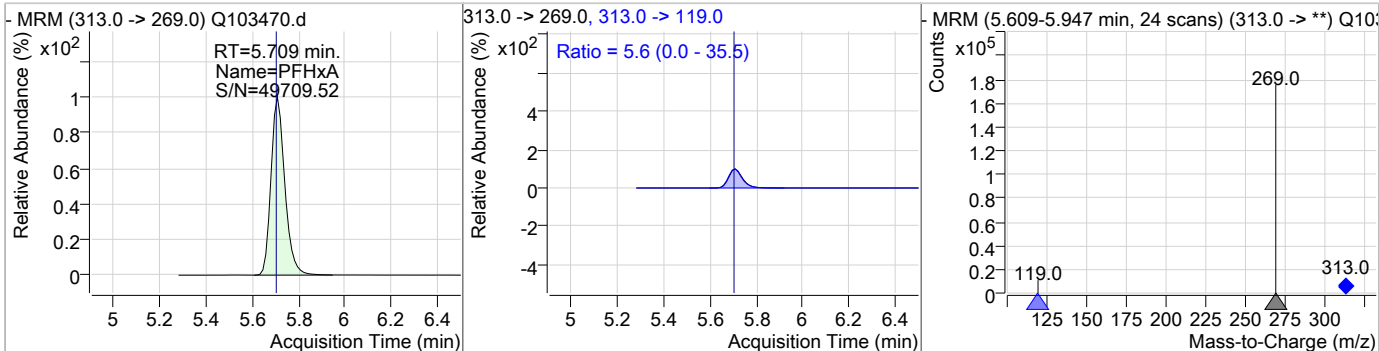


Perfluorinated Compounds by LC/MS/MS

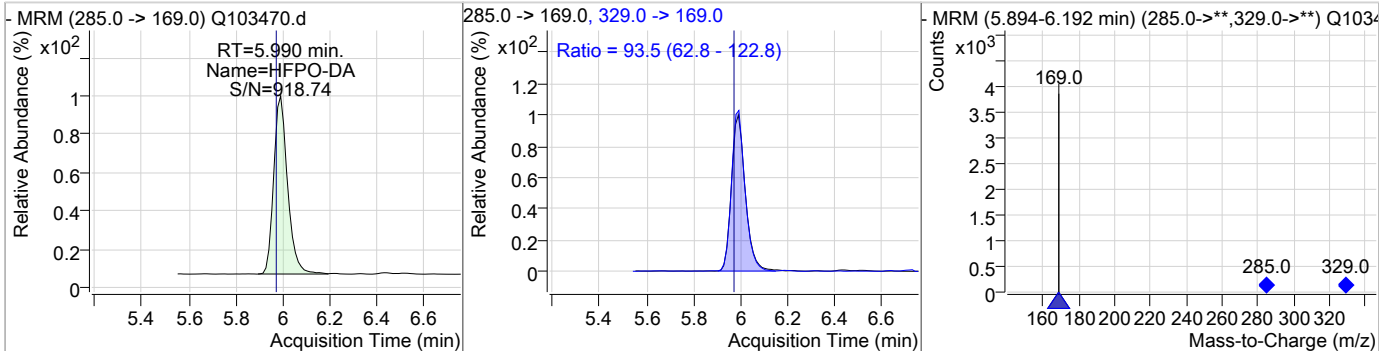
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	20.06	4.68	-0.03	27690	299.0 -> 99.0	44.0	14.1	74.1



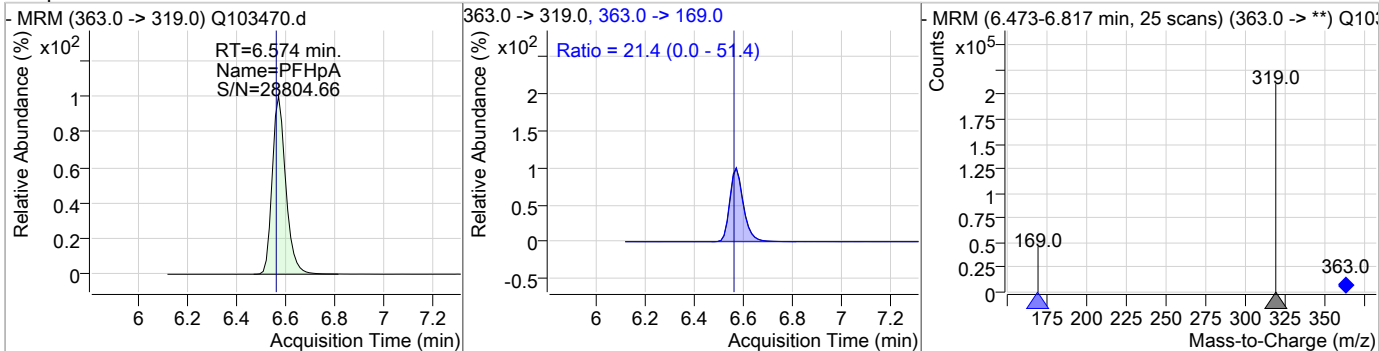
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	21.31	5.71	-0.03	130624	313.0 -> 119.0	5.6	0.0	35.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	22.57	5.99	-0.01	2309	329.0 -> 169.0	93.5	62.8	122.8

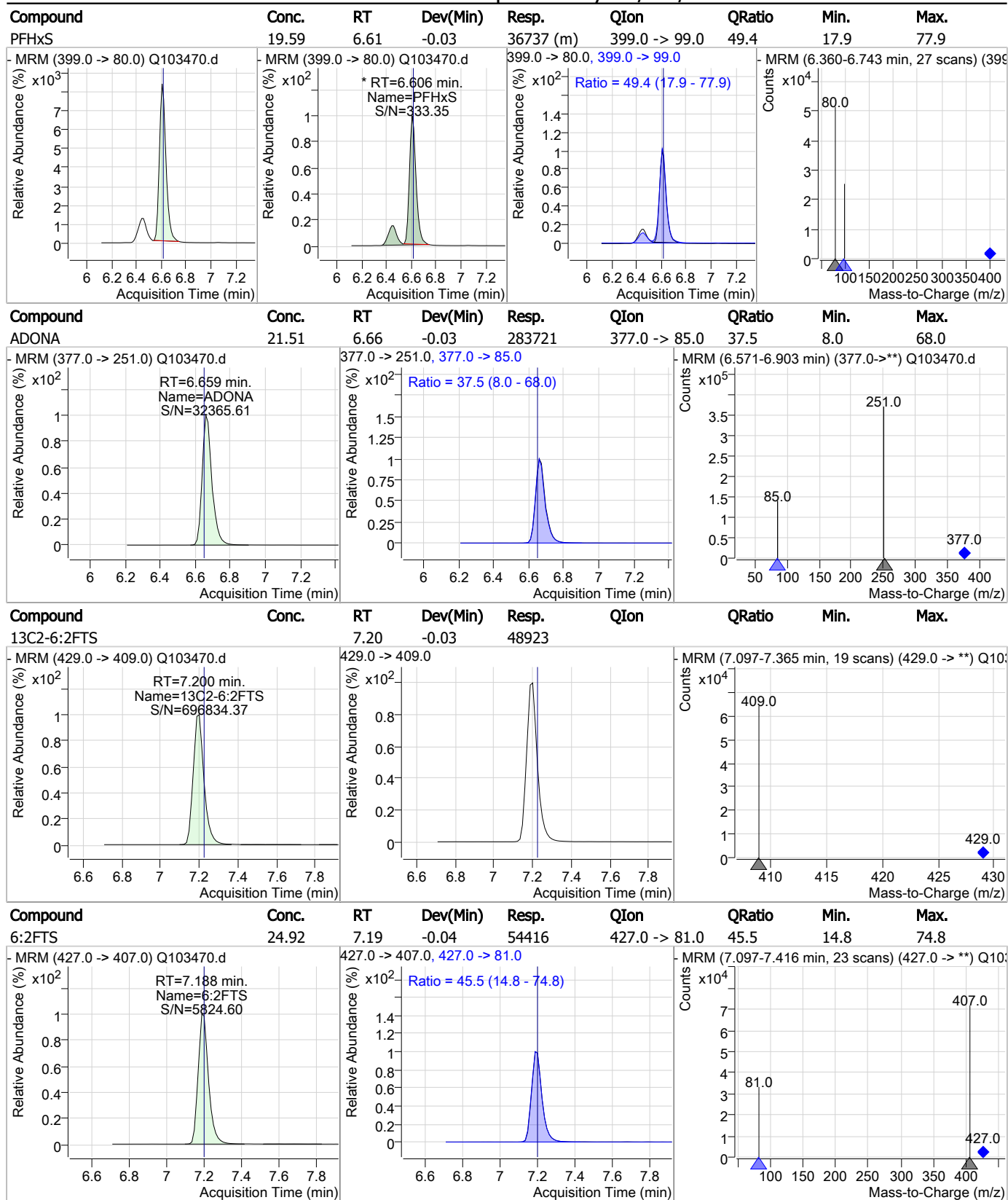


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	21.63	6.57	-0.03	157189	363.0 -> 169.0	21.4	0.0	51.4



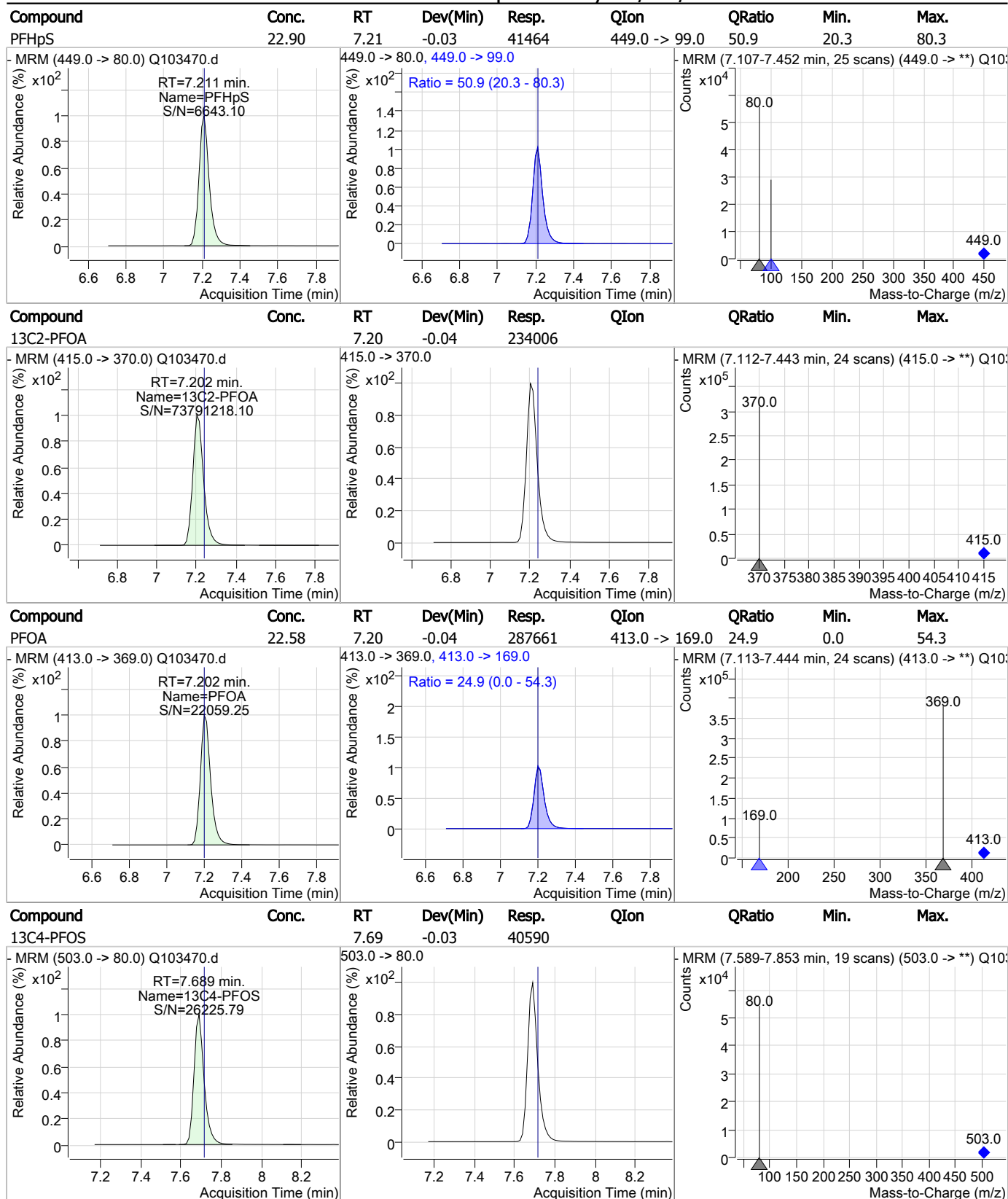
7.6.10
7

Perfluorinated Compounds by LC/MS/MS



7.6-10
7

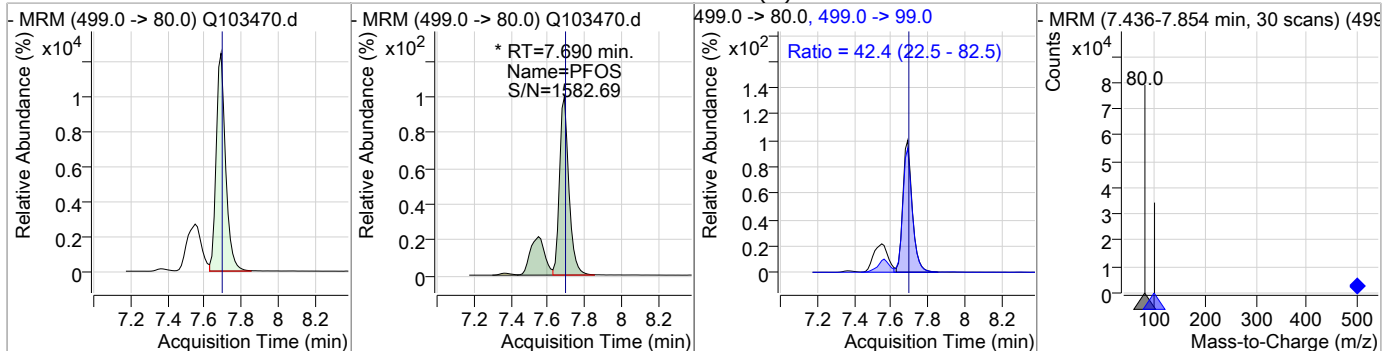
Perfluorinated Compounds by LC/MS/MS



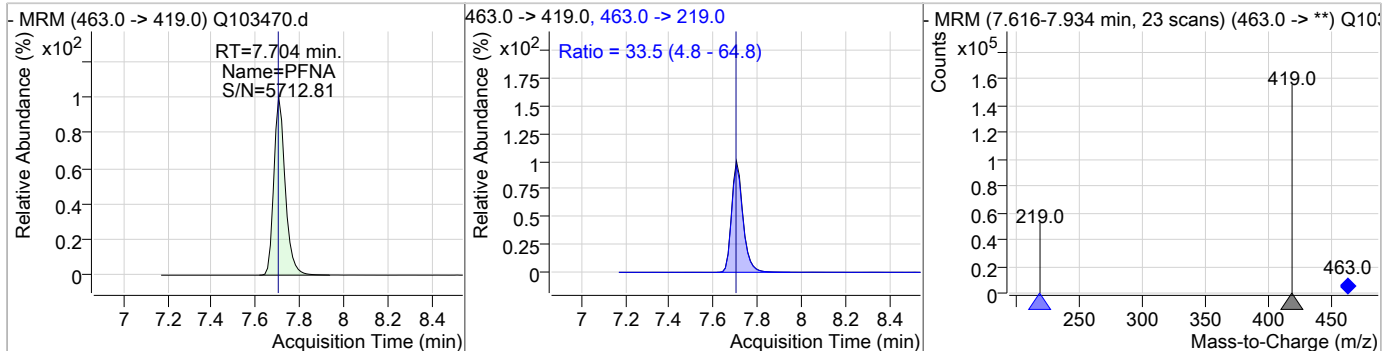
7.6.10
7

Perfluorinated Compounds by LC/MS/MS

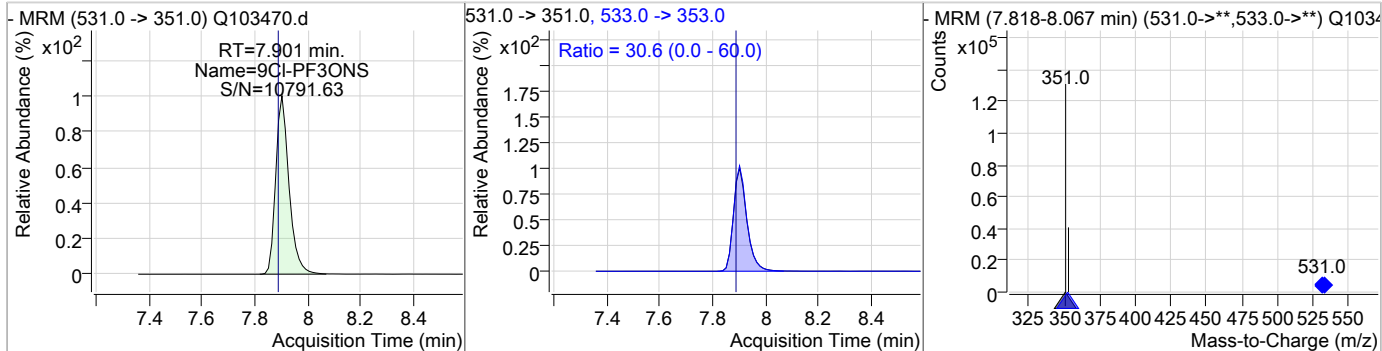
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	25.42	7.69	-0.03	59052 (m)	499.0 -> 99.0	42.4	22.5	82.5



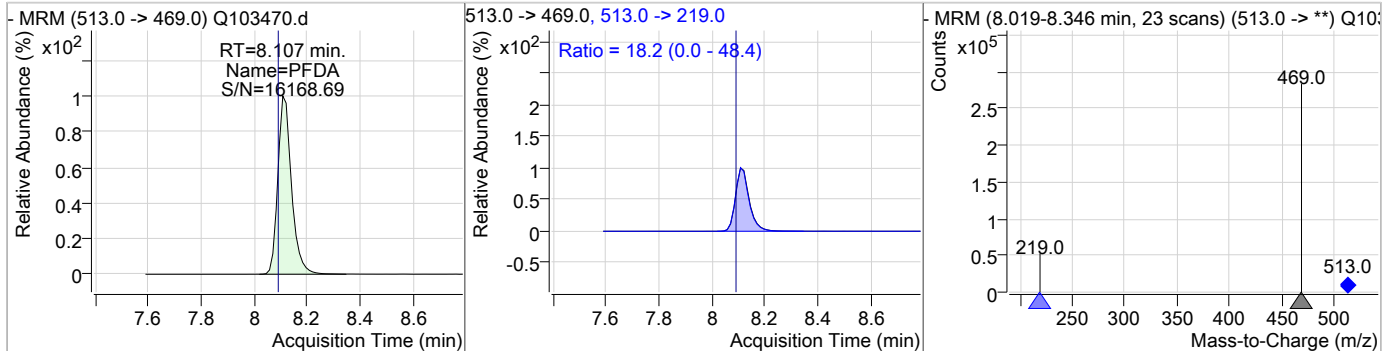
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	20.42	7.70	-0.04	116948	463.0 -> 219.0	33.5	4.8	64.8



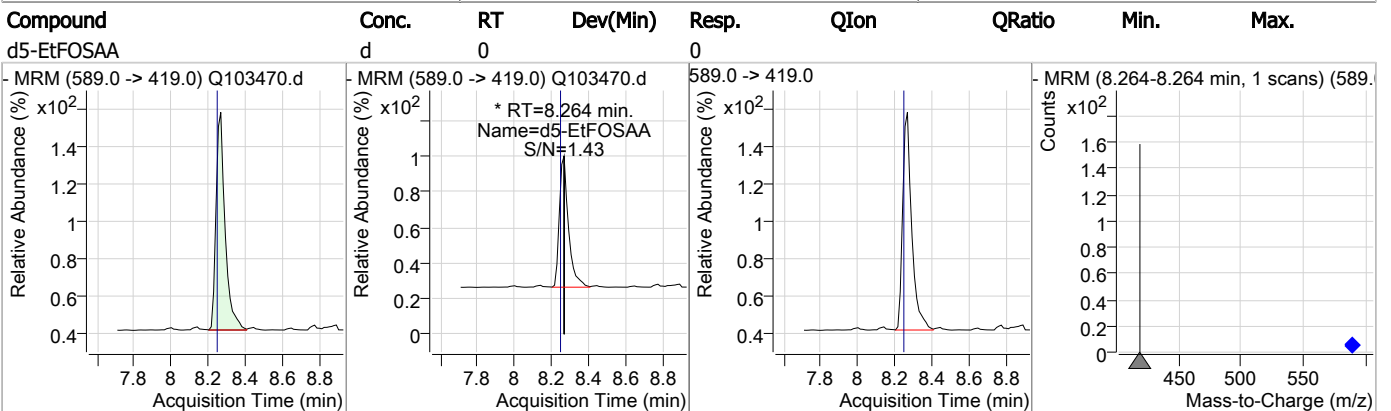
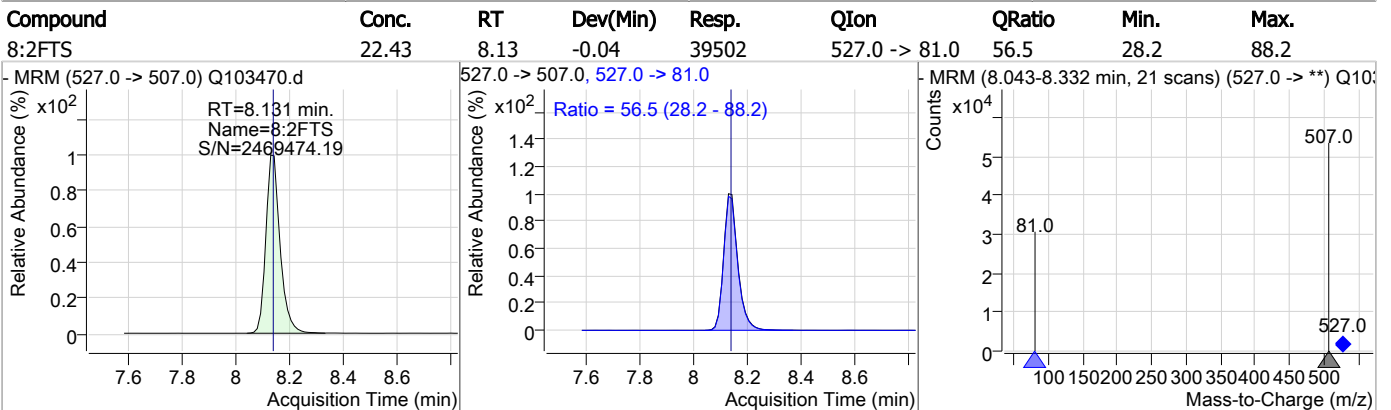
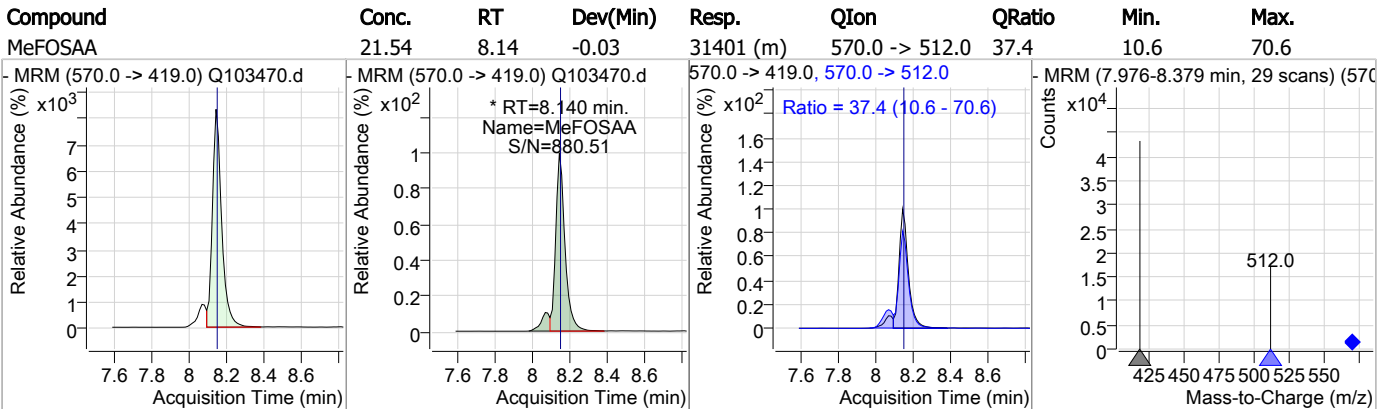
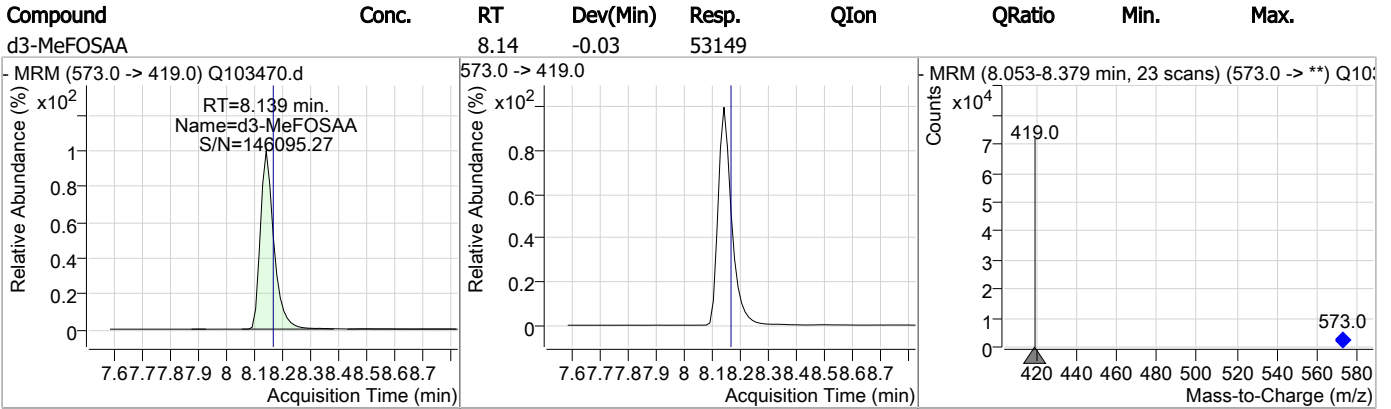
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9Cl-PF3ONS	20.65	7.90	-0.03	101293	533.0 -> 353.0	30.6	0.0	60.0



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	23.67	8.11	-0.03	212302	513.0 -> 219.0	18.2	0.0	48.4

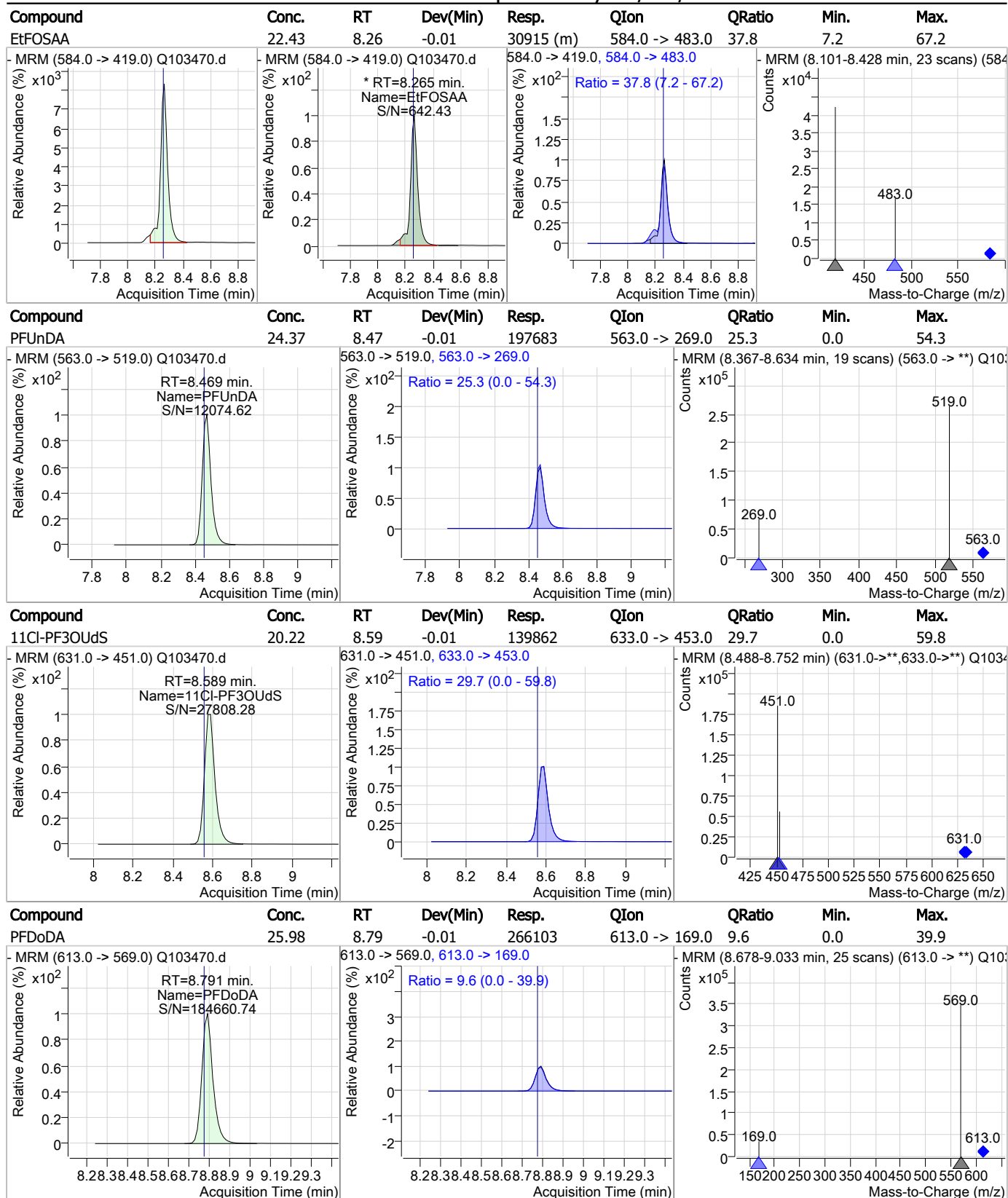


Perfluorinated Compounds by LC/MS/MS



7.6.10
7

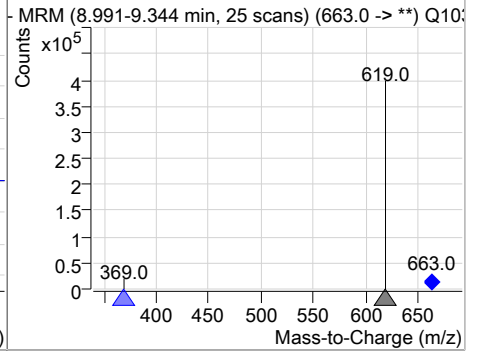
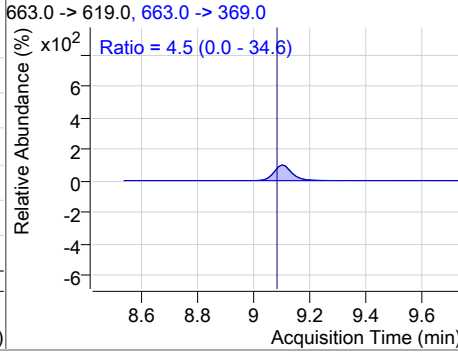
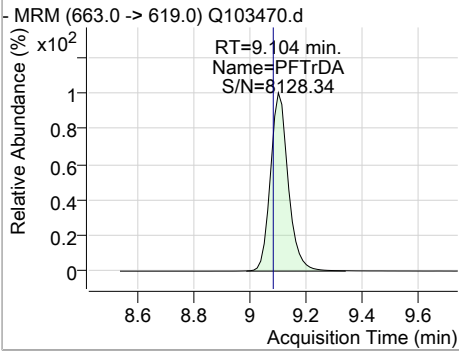
Perfluorinated Compounds by LC/MS/MS



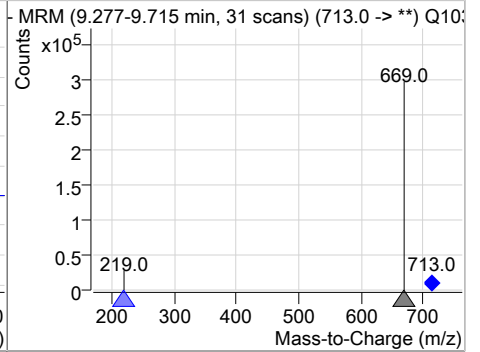
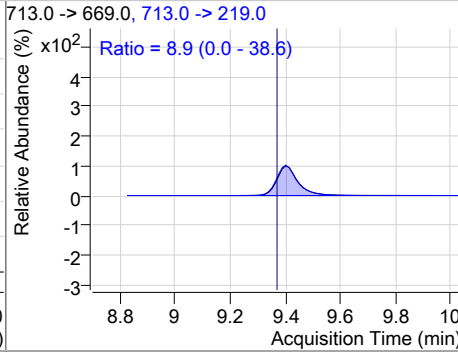
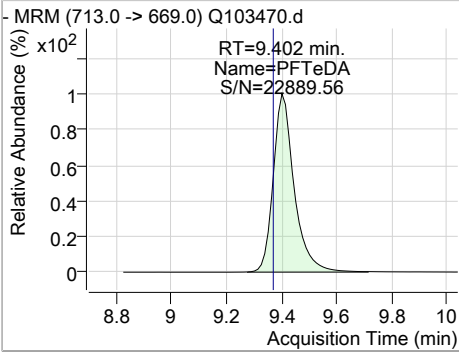
7.6.10
7

Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	24.51	9.10	-0.01	299729	663.0 -> 369.0	4.5	0.0	34.6



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTeDA	21.17	9.40	0.00	221416	713.0 -> 219.0	8.9	0.0	38.6



7.6.10
7

Manual Integration Approval Summary

Sample Number: SQ2201-ICV2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103470.D Analyst approved: 06/19/23 16:24 Anna Ludwig
Injection Time: 06/18/23 18:37 Supervisor approved: 06/19/23 17:23 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.61	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.69	Split peak
MeFOSAA	2355-31-9		8.14	Split peak
EtFOSAA	2991-50-6		8.27	Split peak

7.6.10.1

7

Perfluorinated Compounds by LC/MS/MS

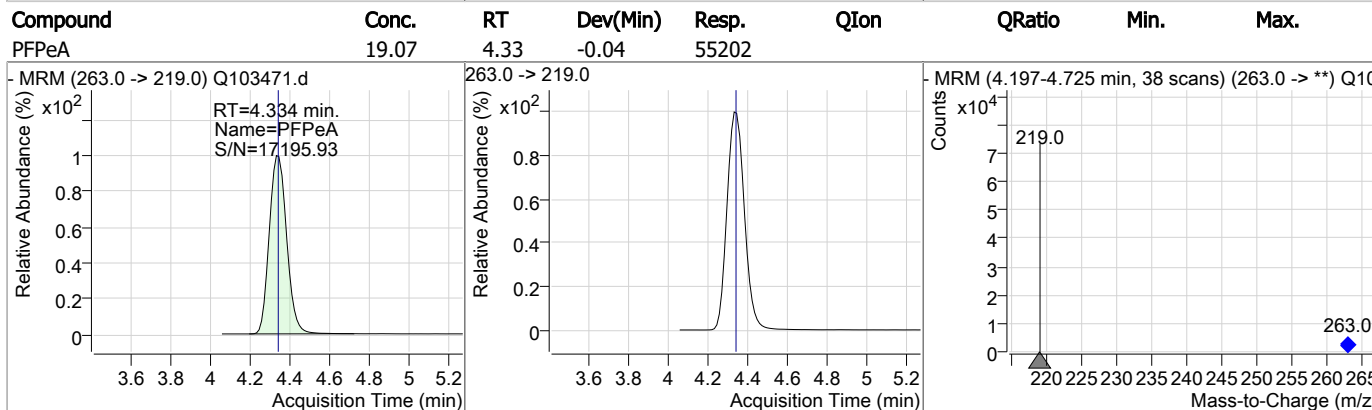
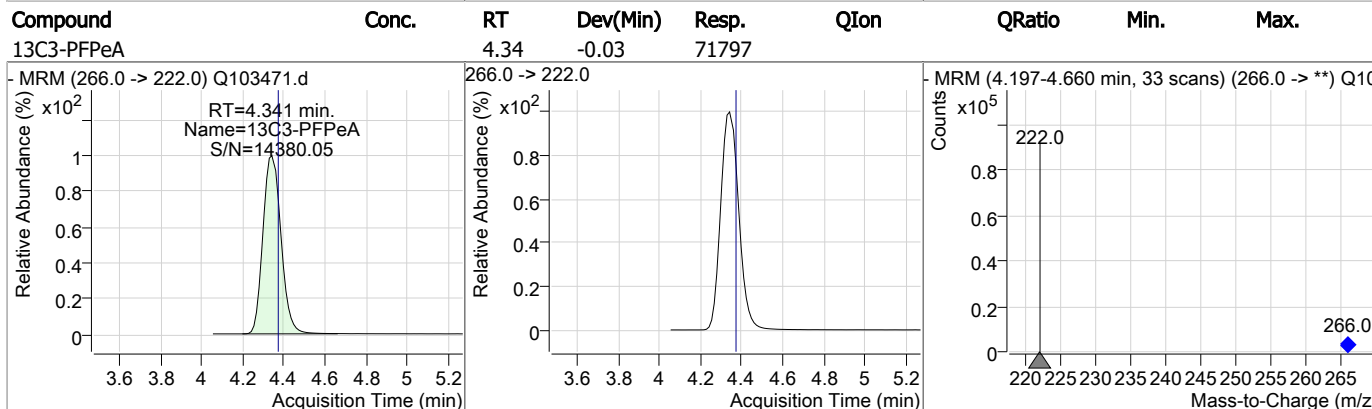
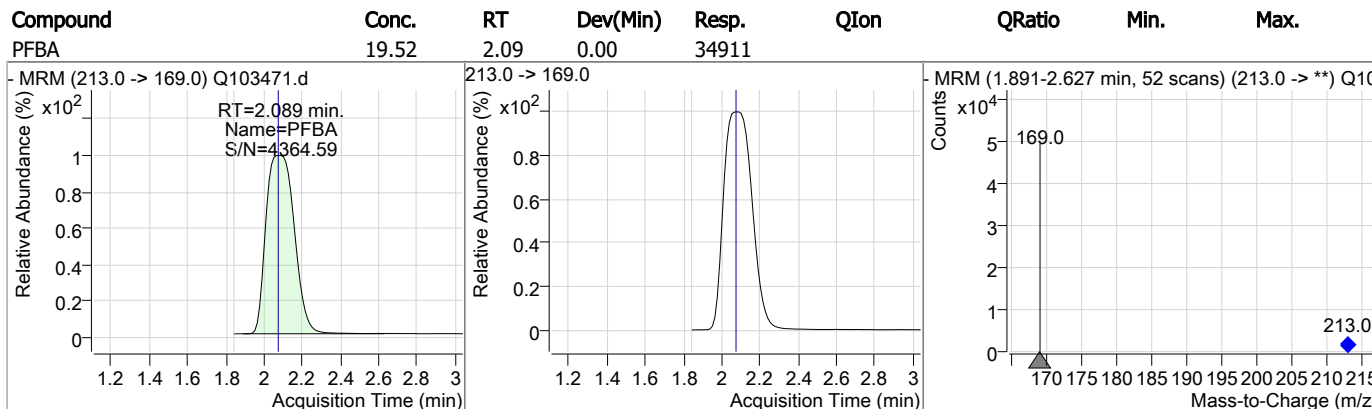
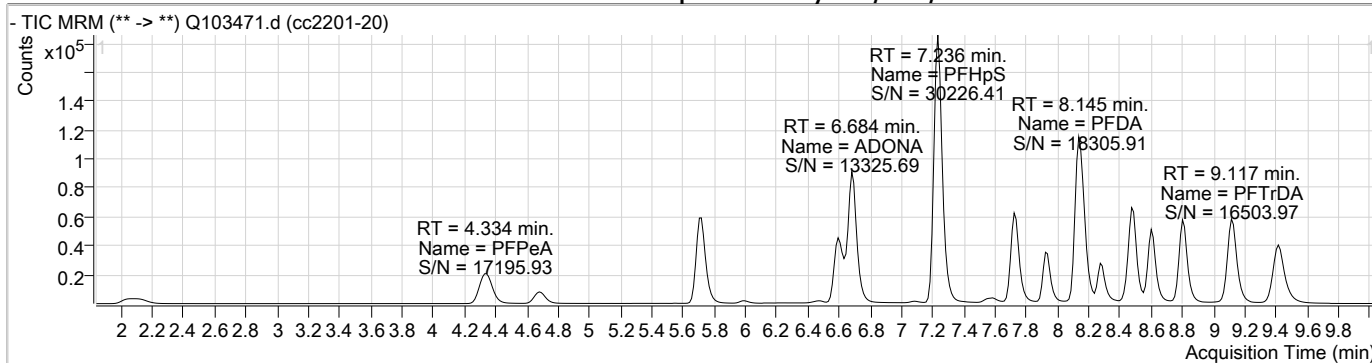
Data File : Q103471.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 6:53:31 PM
 Sample Name : cc2201-20
 Vial : P1-A7
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP96727,SQ2201,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.225	429.0 -> 409.0	47583	20.00 µg/L	0.000
13C2-PFOA	7.239	415.0 -> 370.0	226661	20.00 µg/L	0.000
13C3-PFPeA	4.341	266.0 -> 222.0	71797	20.00 µg/L	-0.031
13C4-PFOS	7.715	503.0 -> 80.0	39710	20.00 µg/L	0.000
d3-MeFOSAA	8.165	573.0 -> 419.0	51839	40.00 µg/L	0.000
System Monitoring Compounds					
13C2-PFDA	8.144	515.0 -> 470.0	130320	20.52 µg/L	0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 102.6%	
13C2-PFHxA	5.719	315.0 -> 270.0	128912	19.67 µg/L	-0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 98.3%	
d5-EtFOSAA	8.277	589.0 -> 419.0	56114	41.37 µg/L	0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 103.4%	
13C3-HFPO-DA	6.001	287.0 -> 169.0	3381	38.62 µg/L	-0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 96.5%	
Target Compounds					
6:2FTS	7.225	427.0 -> 407.0	47868	22.53 µg/L	QValue 97
8:2FTS	8.168	527.0 -> 507.0	34274	19.91 µg/L	98
EtFOSAA	8.290	584.0 -> 419.0	25323	18.89 µg/L	96
MeFOSAA	8.165	570.0 -> 419.0	26768	18.83 µg/L	m 94
PFBA	2.089	213.0 -> 169.0	34911	19.52 µg/L	100
PFBS	4.678	299.0 -> 80.0	28148	20.83 µg/L	100
PFDA	8.145	513.0 -> 469.0	180674	20.79 µg/L	100
PFDoDA	8.804	613.0 -> 569.0	202454	20.21 µg/L	100
PFHpA	6.599	363.0 -> 319.0	136575	19.44 µg/L	99
PFHpS	7.236	449.0 -> 80.0	38172	21.54 µg/L	99
PFHxA	5.709	313.0 -> 269.0	116932	19.72 µg/L	100
PFHxS	6.631	399.0 -> 80.0	38545	20.99 µg/L	m 97
PFNA	7.742	463.0 -> 419.0	109046	19.67 µg/L	98
PFOA	7.240	413.0 -> 369.0	242008	19.61 µg/L	100
PFOS	7.716	499.0 -> 80.0	46676	20.54 µg/L	m 83
PFPeA	4.334	263.0 -> 219.0	55202	19.07 µg/L	100
PFTeDA	9.414	713.0 -> 669.0	200449	19.59 µg/L	100
PFTrDA	9.117	663.0 -> 619.0	241836	20.21 µg/L	100
PFUnDA	8.494	563.0 -> 519.0	172111	21.69 µg/L	99
ADONA	6.684	377.0 -> 251.0	247971	19.47 µg/L	99
9Cl-PF3ONS	7.929	531.0 -> 351.0	95274	20.07 µg/L	100
11Cl-PF3OUdS	8.602	631.0 -> 451.0	136122	20.32 µg/L	98
HFPO-DA	5.990	285.0 -> 169.0	1946	19.66 µg/L	100

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

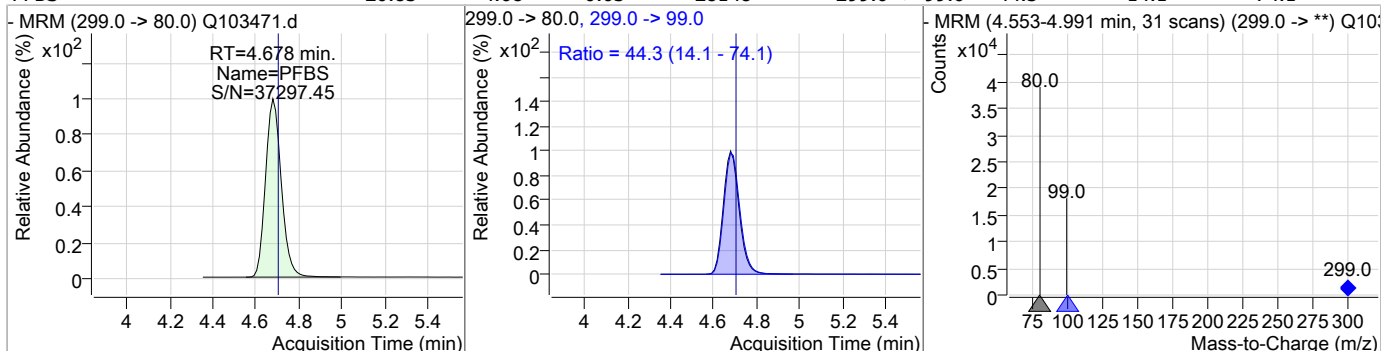
7.6.11
7

Perfluorinated Compounds by LC/MS/MS

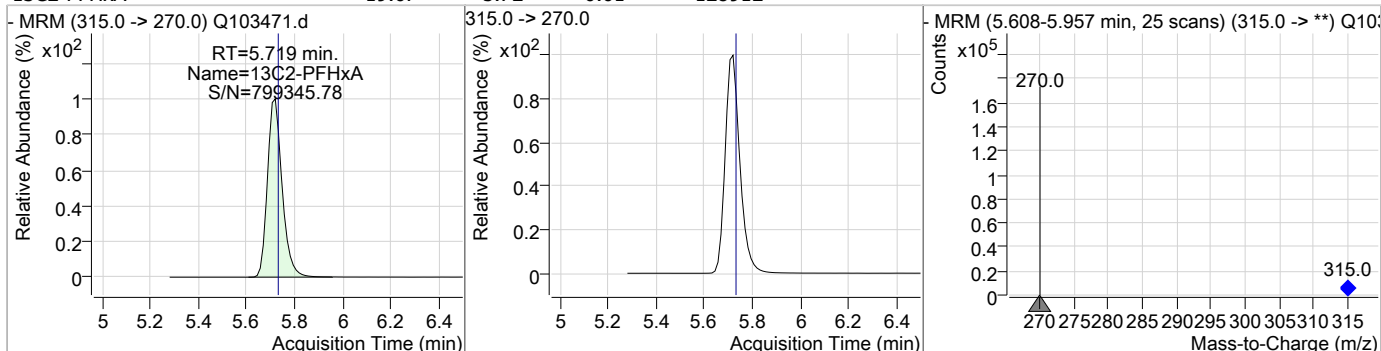


Perfluorinated Compounds by LC/MS/MS

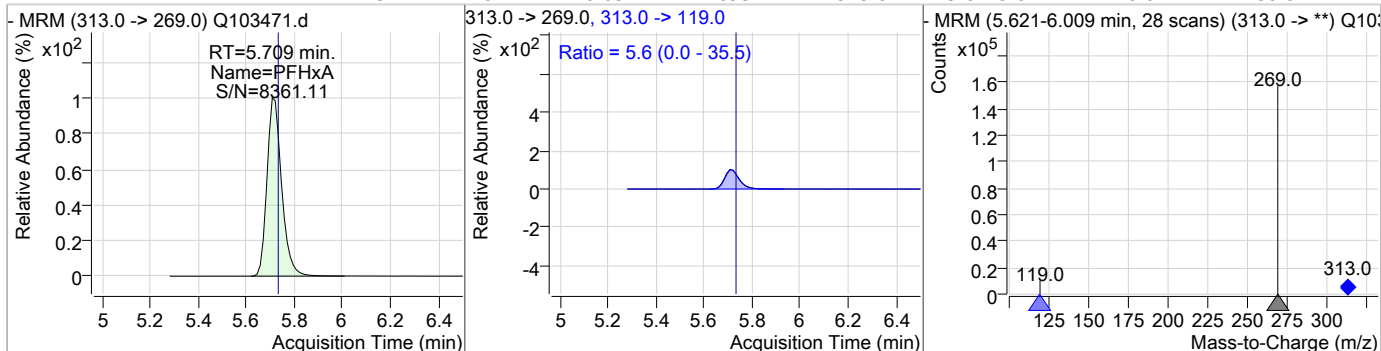
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	20.83	4.68	-0.03	28148	299.0 -> 99.0	44.3	14.1	74.1



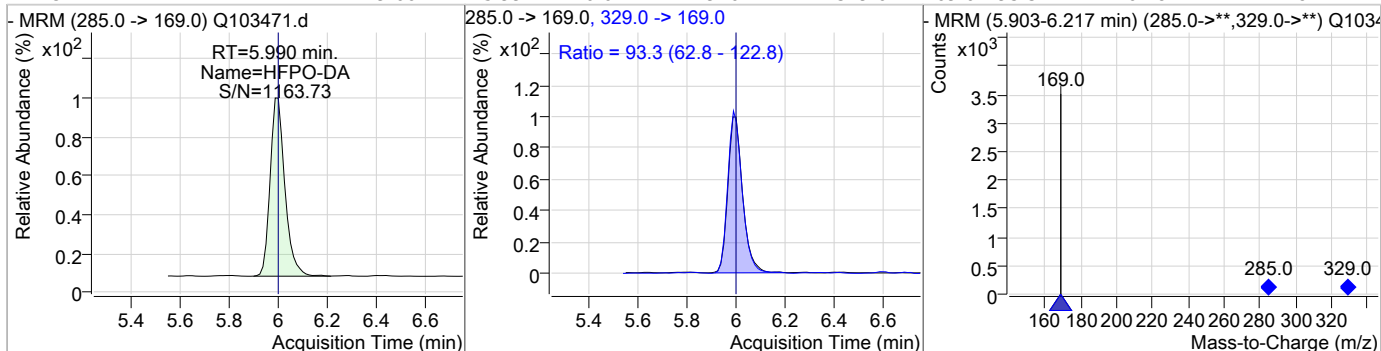
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	19.67	5.72	-0.01	128912				



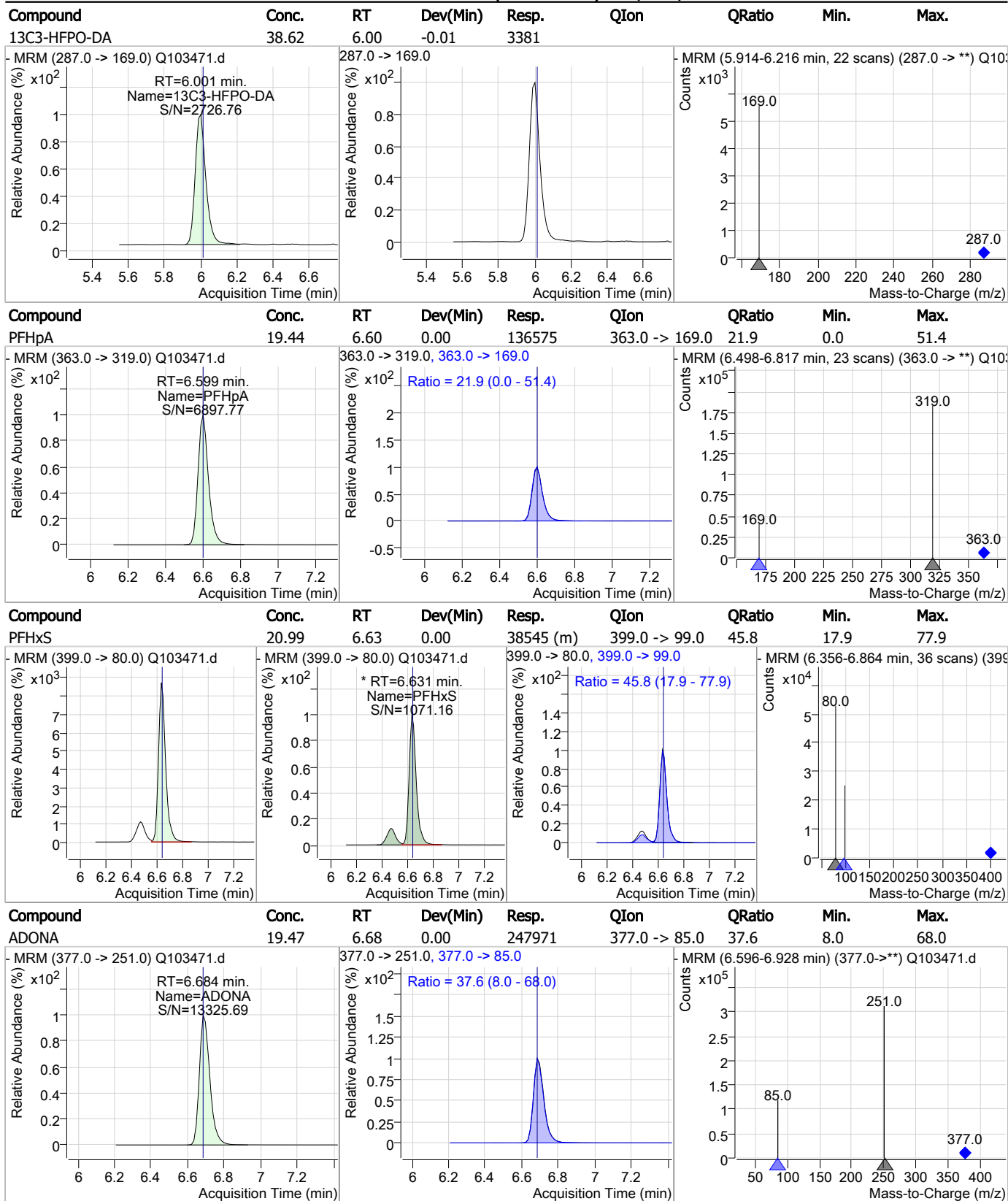
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.72	5.71	-0.03	116932	313.0 -> 119.0	5.6	0.0	35.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	19.66	5.99	-0.01	1946	329.0 -> 169.0	93.3	62.8	122.8



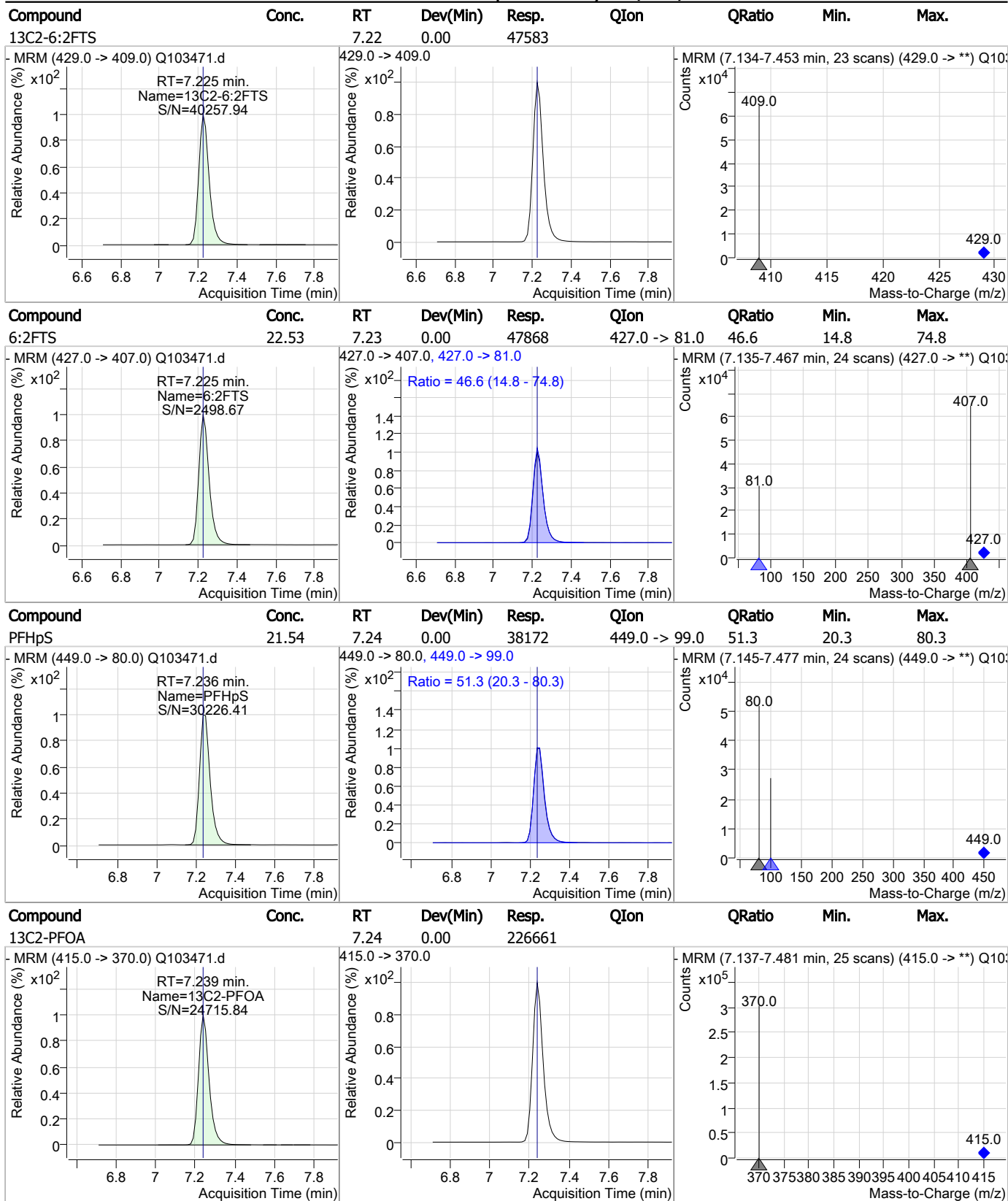
Perfluorinated Compounds by LC/MS/MS



7.6.11

7

Perfluorinated Compounds by LC/MS/MS

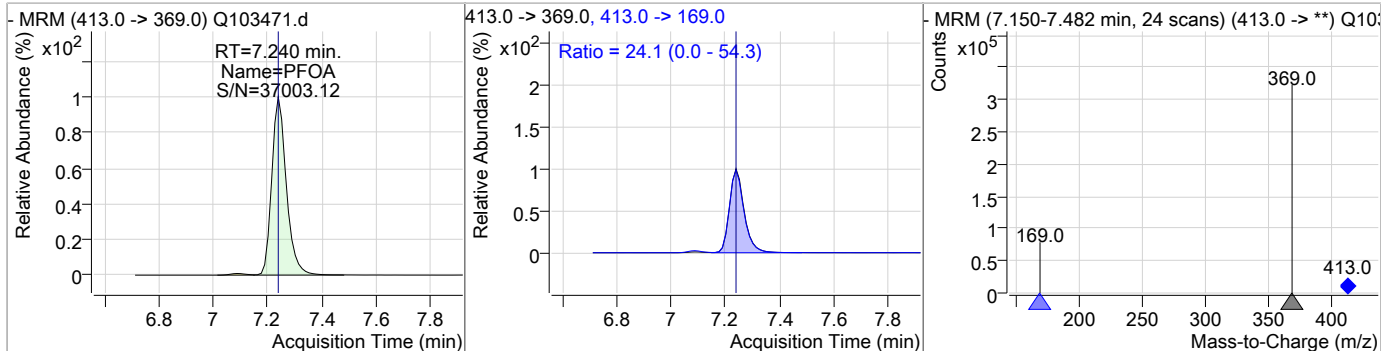


7.6.11

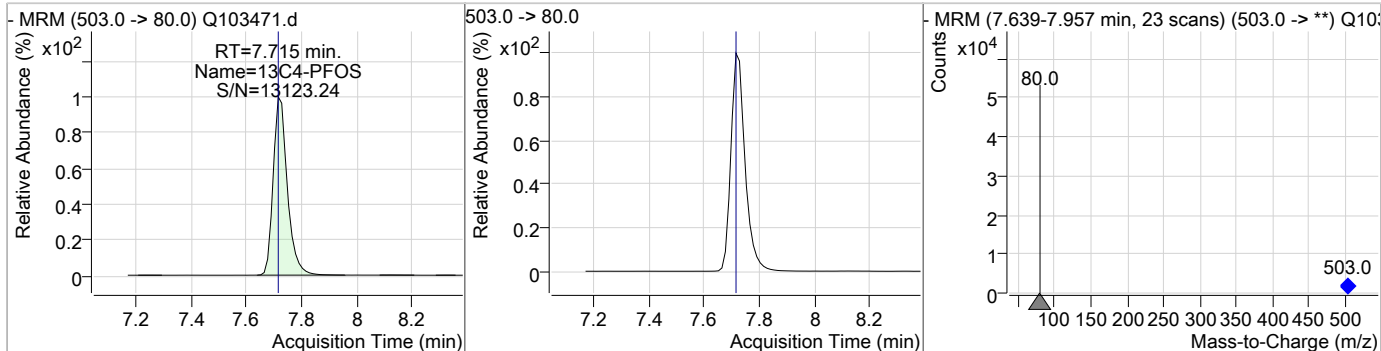
7

Perfluorinated Compounds by LC/MS/MS

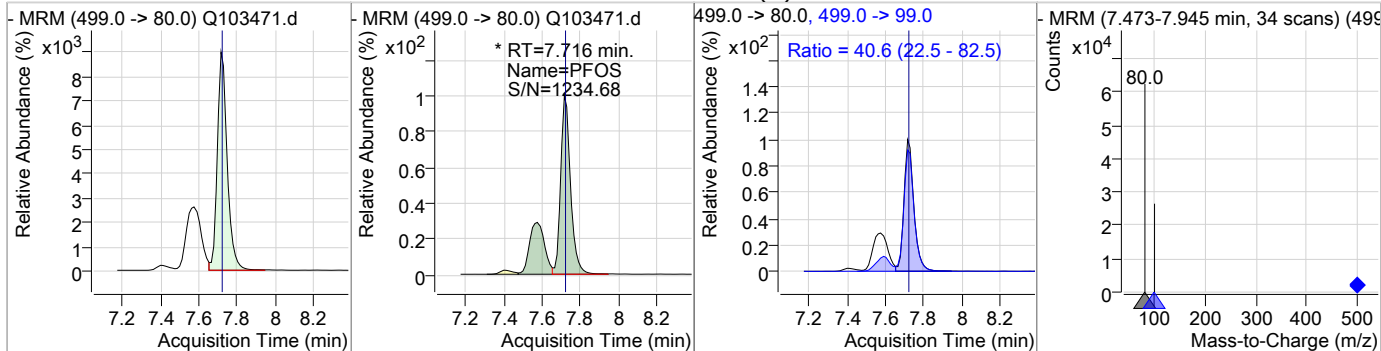
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.61	7.24	0.00	242008	413.0 -> 169.0	24.1	0.0	54.3



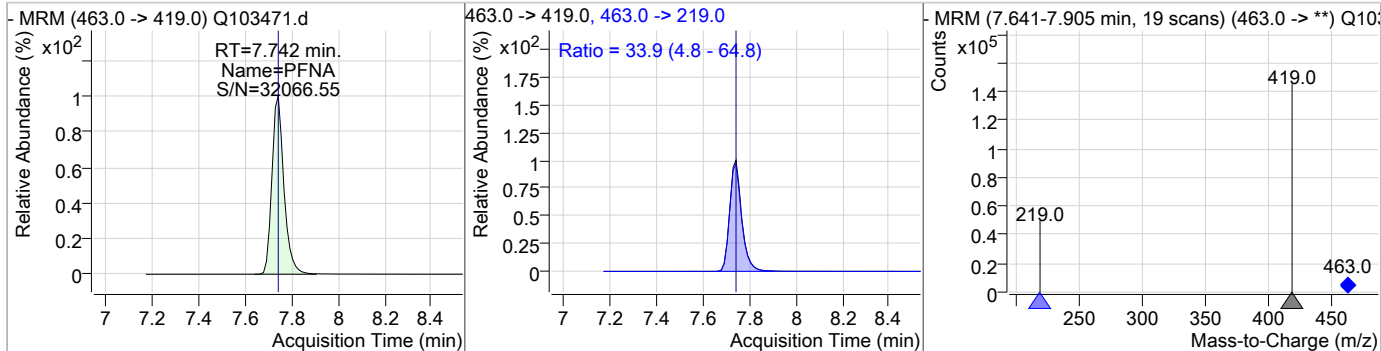
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.72	0.00	39710				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	20.54	7.72	0.00	46676 (m)	499.0 -> 99.0	40.6	22.5	82.5

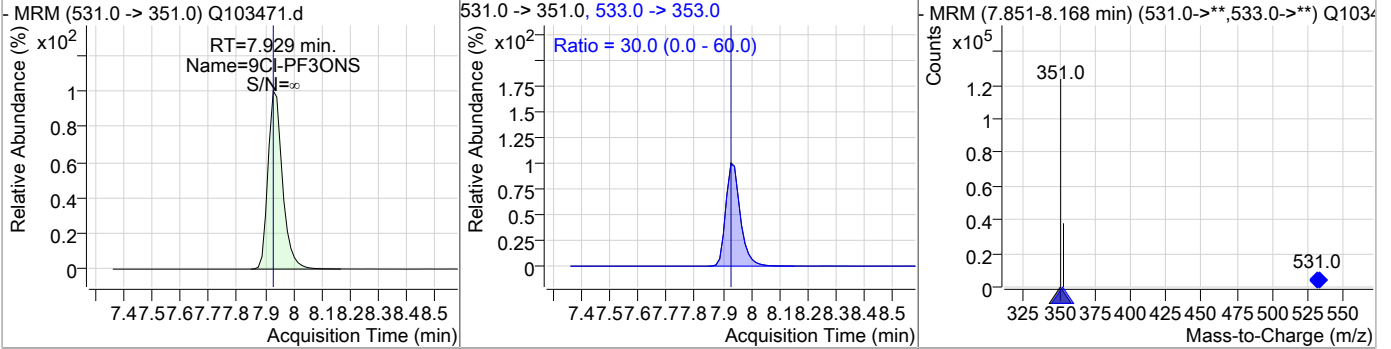


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.67	7.74	0.00	109046	463.0 -> 219.0	33.9	4.8	64.8

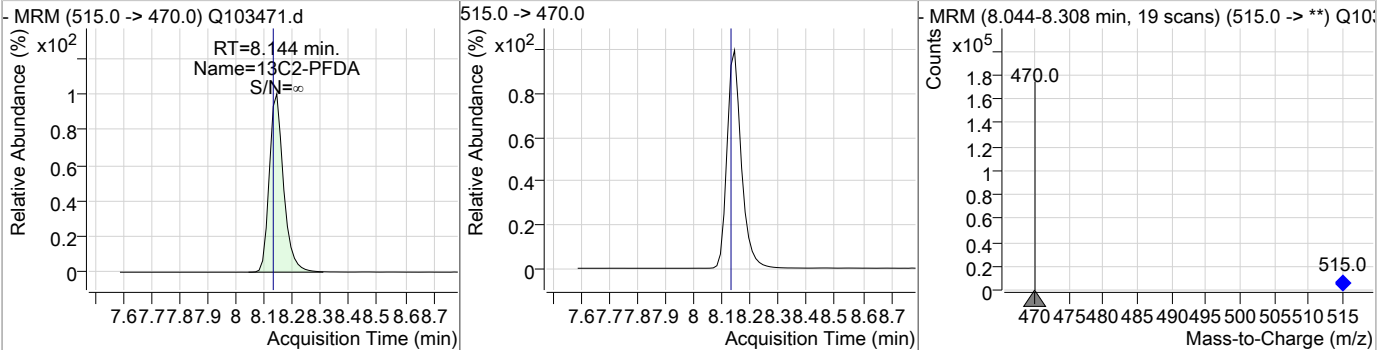


Perfluorinated Compounds by LC/MS/MS

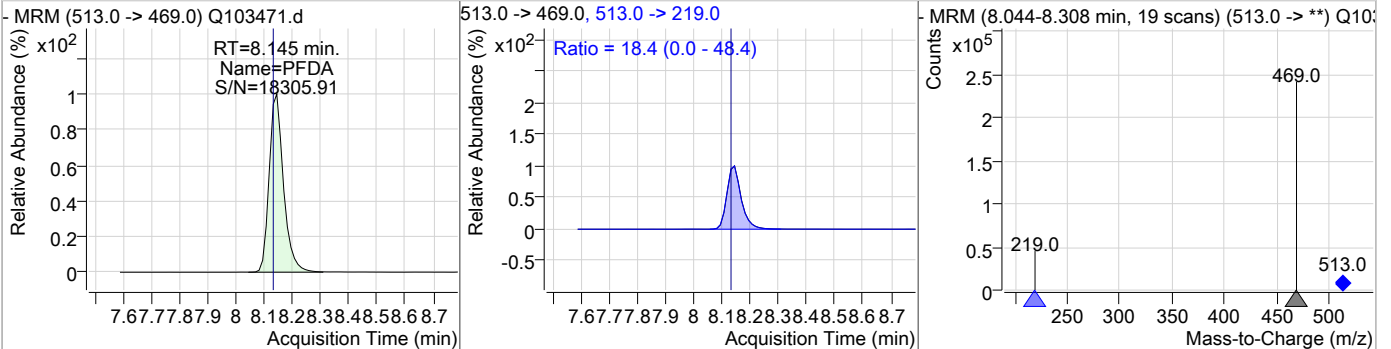
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9CI-PF3ONS	20.07	7.93	0.00	95274	533.0 -> 353.0	30.0	0.0	60.0



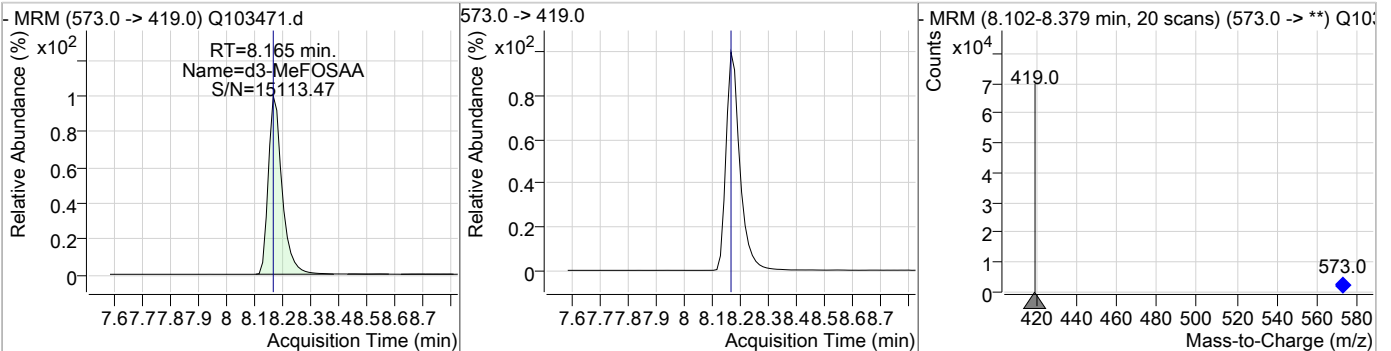
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	20.52	8.14	0.01	130320				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	20.79	8.14	0.01	180674	513.0 -> 219.0	18.4	0.0	48.4

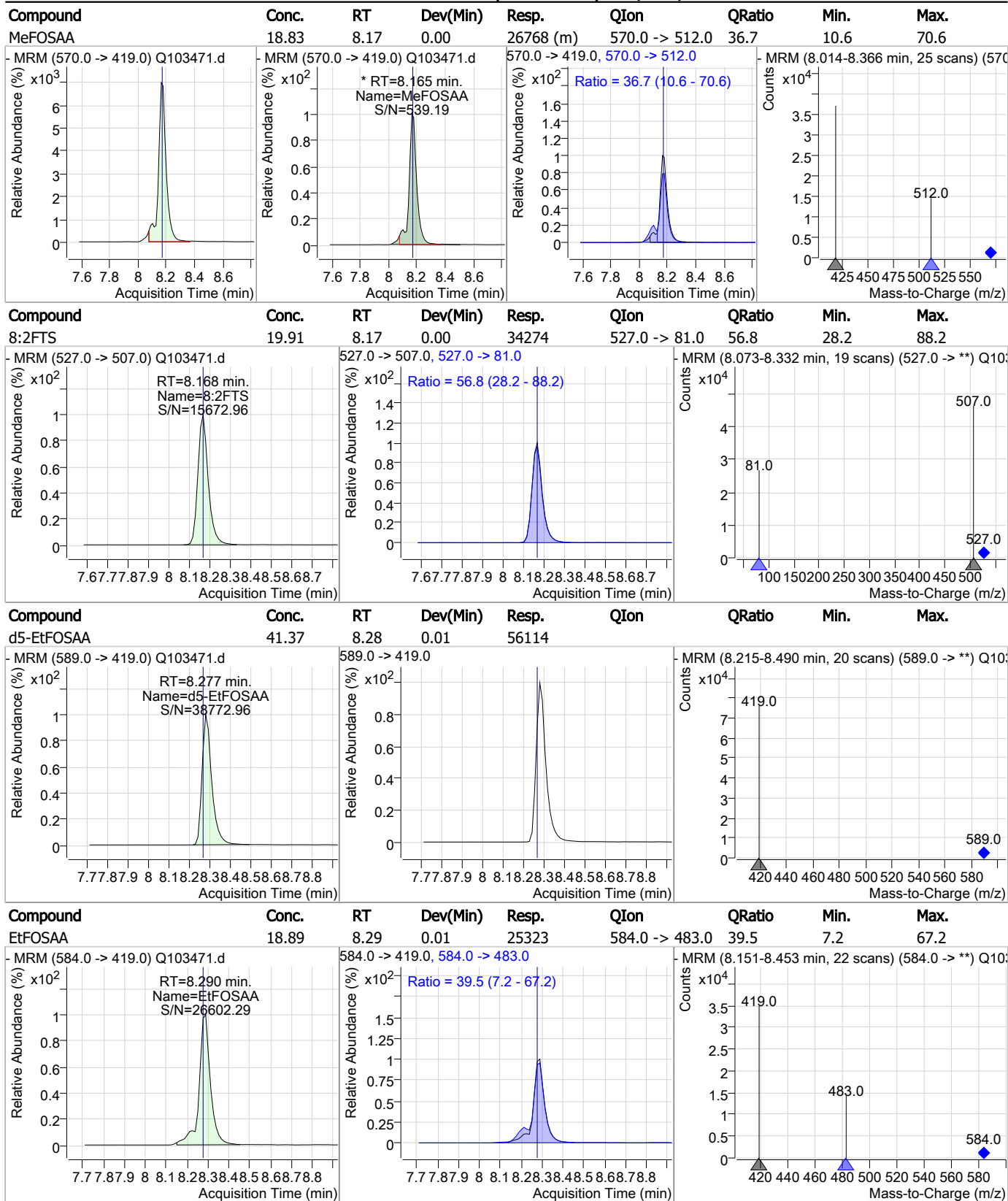


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.16	0.00	51839				



7.6.11 7

Perfluorinated Compounds by LC/MS/MS

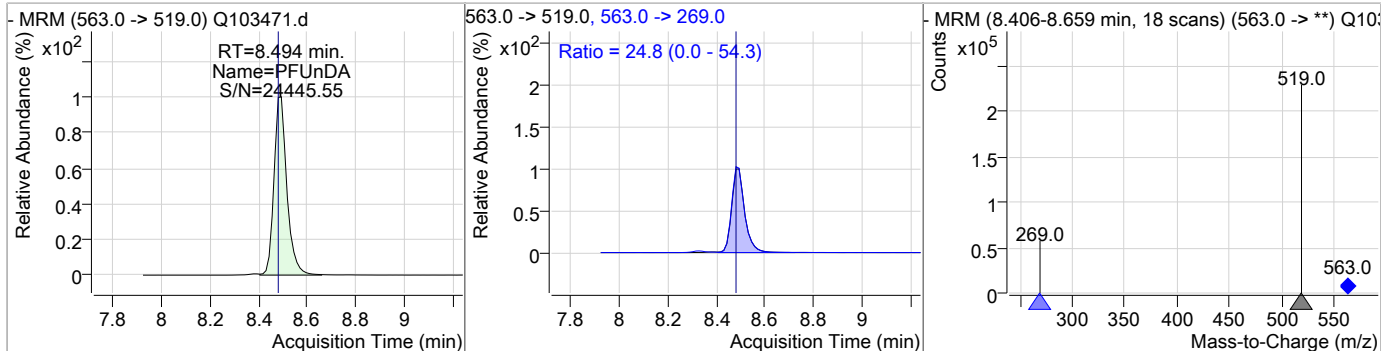


7.6.11

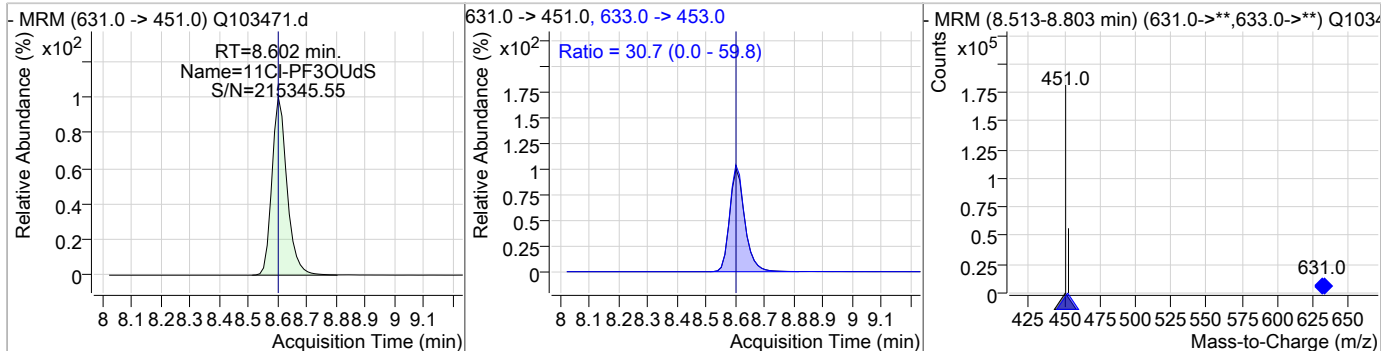
7

Perfluorinated Compounds by LC/MS/MS

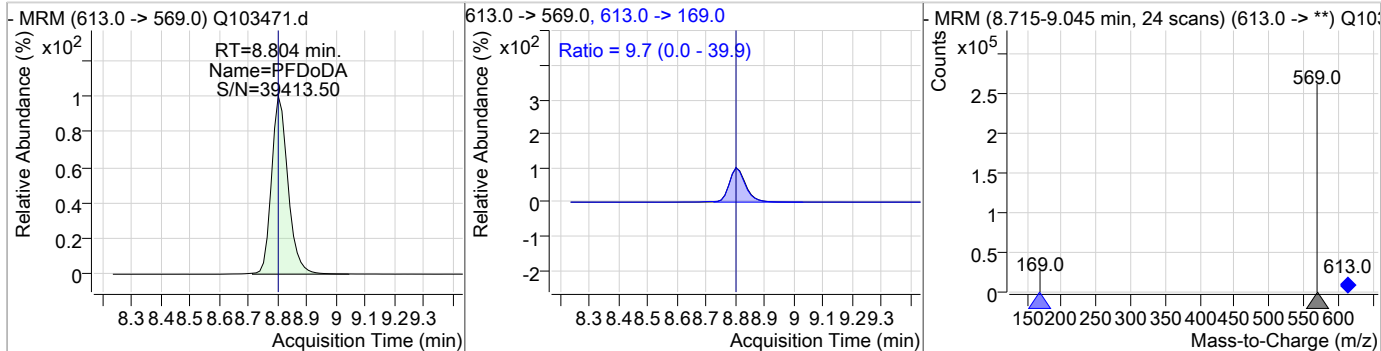
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	21.69	8.49	0.01	172111	563.0 -> 269.0	24.8	0.0	54.3



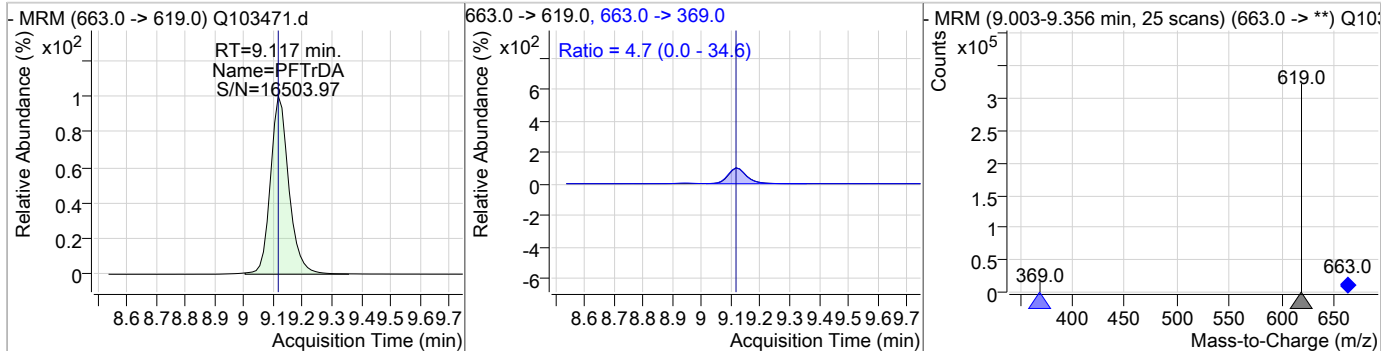
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	20.32	8.60	0.00	136122	633.0 -> 453.0	30.7	0.0	59.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDODA	20.21	8.80	0.00	202454	613.0 -> 169.0	9.7	0.0	39.9

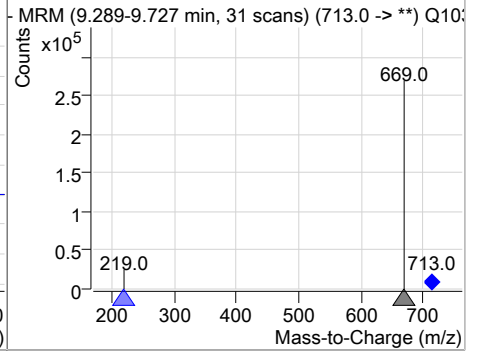
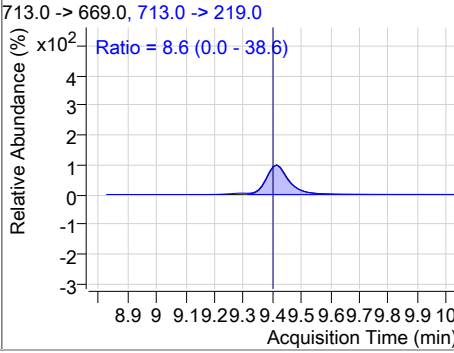
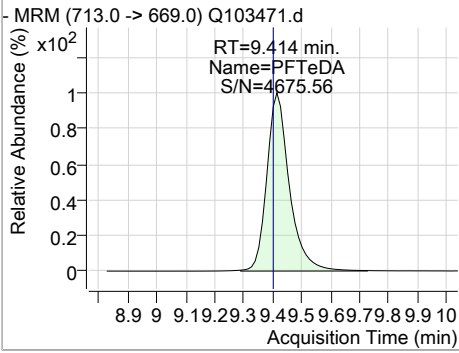


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	20.21	9.12	0.00	241836	663.0 -> 369.0	4.7	0.0	34.6



Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	19.59	9.41	0.01	200449	713.0 -> 219.0	8.6	0.0	38.6



7.6.11

7

Manual Integration Approval Summary

Sample Number: SQ2201-CC2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103471.D Analyst approved: 06/19/23 16:24 Anna Ludwig
Injection Time: 06/18/23 18:53 Supervisor approved: 06/19/23 17:23 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.63	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
MeFOSAA	2355-31-9		8.16	Split peak

7.6.11.1

7

Perfluorinated Compounds by LC/MS/MS

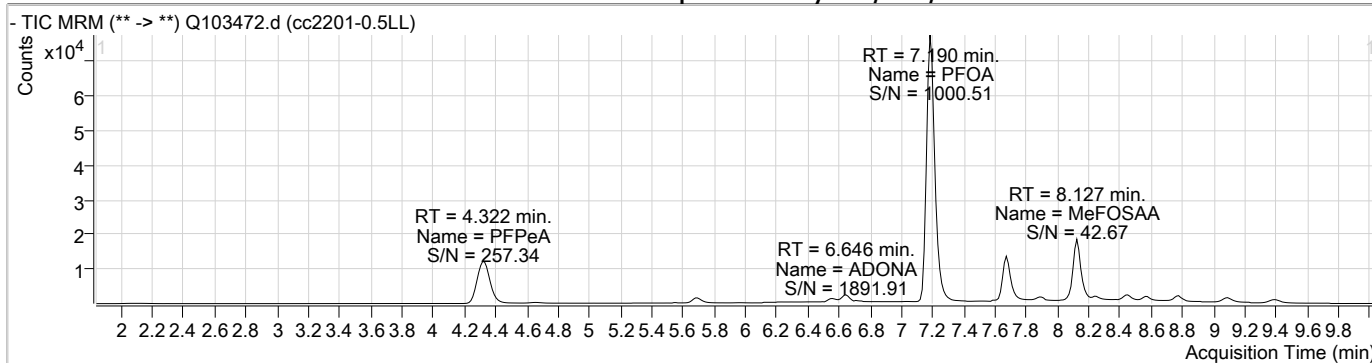
Data File : Q103472.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 7:09:18 PM
 Sample Name : cc2201-0.5LL
 Vial : P1-A2
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP96727,SQ2201,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.175	429.0 -> 409.0	47637	20.00 µg/L	-0.050
13C2-PFOA	7.189	415.0 -> 370.0	236509	20.00 µg/L	-0.050
13C3-PFPeA	4.316	266.0 -> 222.0	72104	20.00 µg/L	-0.056
13C4-PFOS	7.677	503.0 -> 80.0	40684	20.00 µg/L	-0.039
d3-MeFOSAA	8.127	573.0 -> 419.0	53629	40.00 µg/L	-0.038
System Monitoring Compounds					
13C2-PFDA	8.106	515.0 -> 470.0	3038	0.46 µg/L	-0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 2.3%	
13C2-PFHxA	5.694	315.0 -> 270.0	3070	0.46 µg/L	-0.038
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 2.3%	
d5-EtFOSAA	8.252	589.0 -> 419.0	1602	1.18 µg/L	-0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 3.0%	
13C3-HFPO-DA	5.976	287.0 -> 169.0	97	1.08 µg/L	m -0.038
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 2.7%	
Target Compounds					
6:2FTS	7.175	427.0 -> 407.0	1144	0.54 µg/L	QValue 92
8:2FTS	8.131	527.0 -> 507.0	1009	0.56 µg/L	81
EtFOSAA	8.252	584.0 -> 419.0	981	0.72 µg/L	m 92
MeFOSAA	8.127	570.0 -> 419.0	869	0.59 µg/L	m 94
PFBA	2.101	213.0 -> 169.0	822	0.46 µg/L	100
PFBS	4.653	299.0 -> 80.0	654	0.48 µg/L	99
PFDA	8.107	513.0 -> 469.0	4141	0.46 µg/L	97
PFDoDA	8.778	613.0 -> 569.0	4851	0.47 µg/L	98
PFHpA	6.549	363.0 -> 319.0	3529	0.49 µg/L	99
PFHpS	7.198	449.0 -> 80.0	942	0.52 µg/L	93
PFHxA	5.684	313.0 -> 269.0	2855	0.47 µg/L	97
PFHxS	6.581	399.0 -> 80.0	952	0.51 µg/L	m 96
PFNA	7.691	463.0 -> 419.0	2322	0.41 µg/L	89
PFOA	7.190	413.0 -> 369.0	5558	0.43 µg/L	95
PFOS	7.677	499.0 -> 80.0	1097	0.47 µg/L	m 89
PFPeA	4.322	263.0 -> 219.0	1323	0.45 µg/L	100
PFTeDA	9.389	713.0 -> 669.0	4787	0.46 µg/L	100
PFTTrDA	9.091	663.0 -> 619.0	5548	0.45 µg/L	100
PFUnDA	8.456	563.0 -> 519.0	4005	0.49 µg/L	91
ADONA	6.646	377.0 -> 251.0	5678	0.44 µg/L	96
9Cl-PF3ONS	7.889	531.0 -> 351.0	2108	0.44 µg/L	96
11Cl-PF3OUdS	8.564	631.0 -> 451.0	3098	0.45 µg/L	100
HFPO-DA	5.978	285.0 -> 169.0	58	0.57 µg/L	84

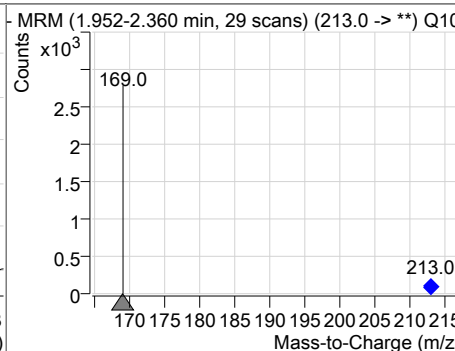
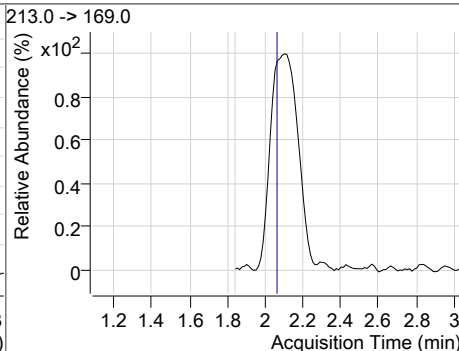
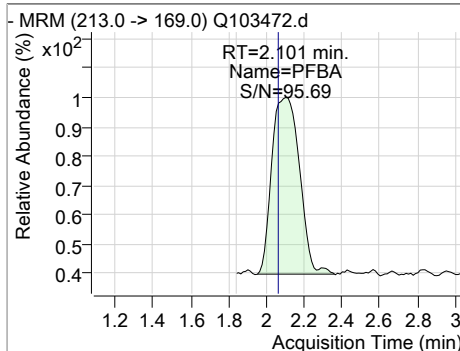
= Qualifier out of range, m = manually integrated, + = Area summed

7.6.12
7

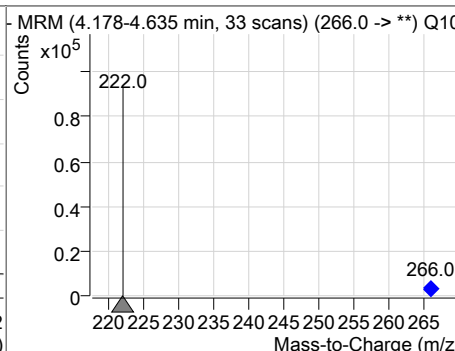
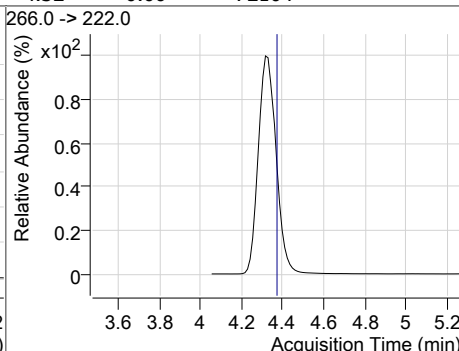
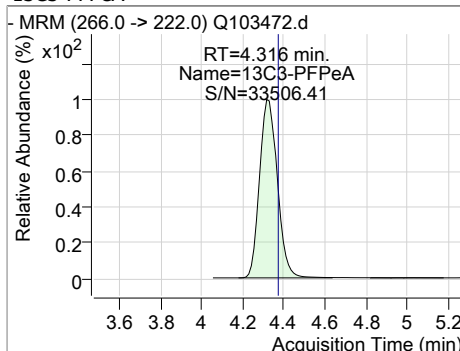
Perfluorinated Compounds by LC/MS/MS



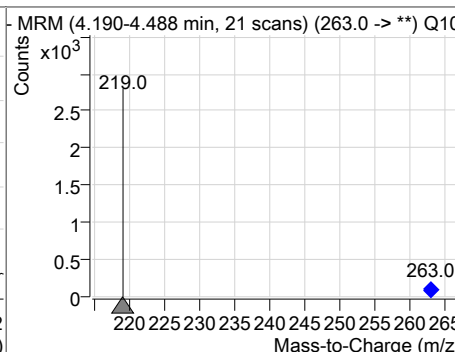
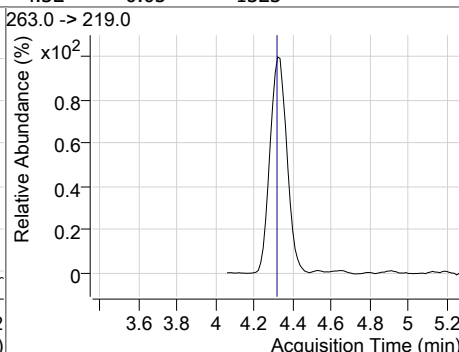
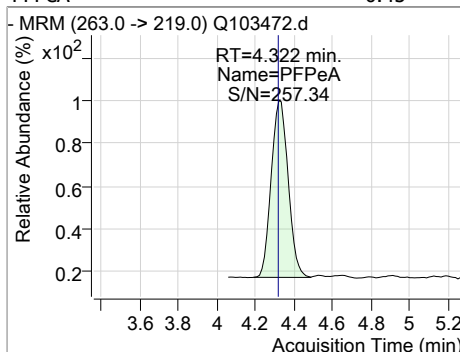
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.46	2.10	0.01	822				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFPeA		4.32	-0.06	72104				

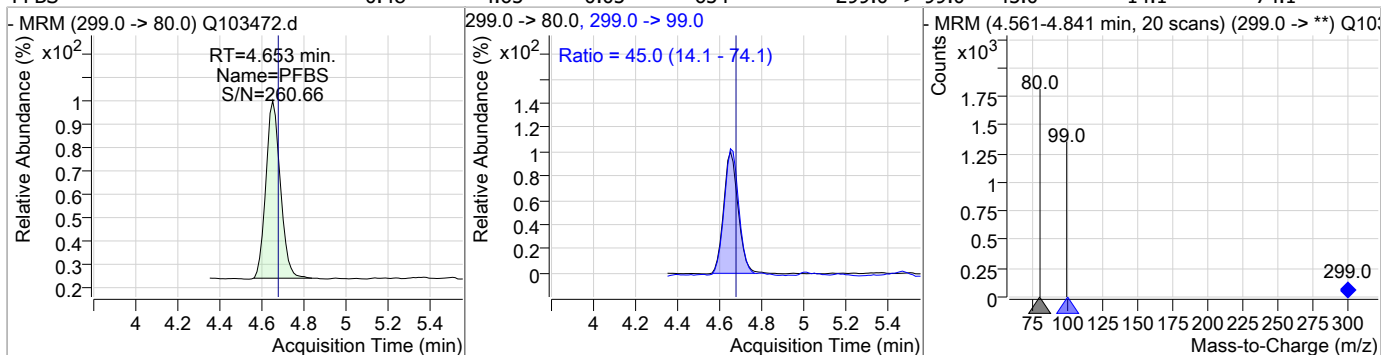


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.45	4.32	-0.05	1323				

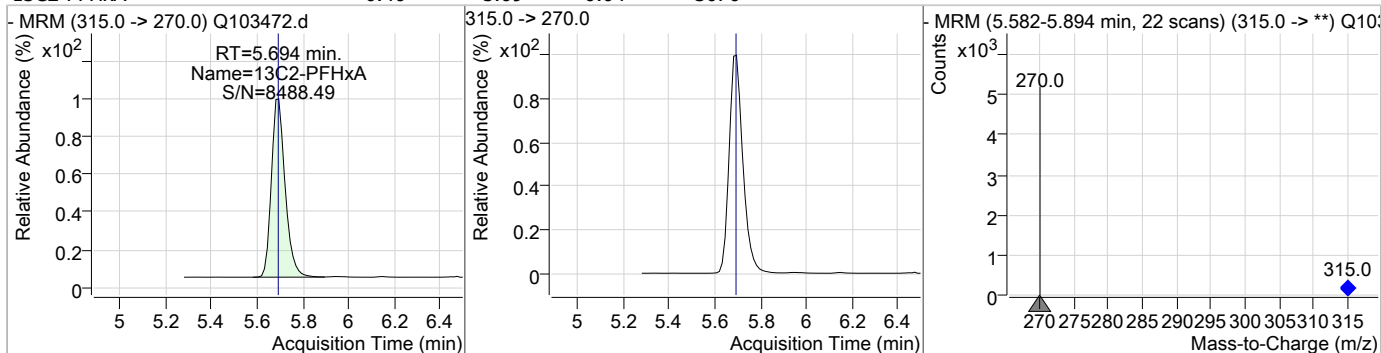


Perfluorinated Compounds by LC/MS/MS

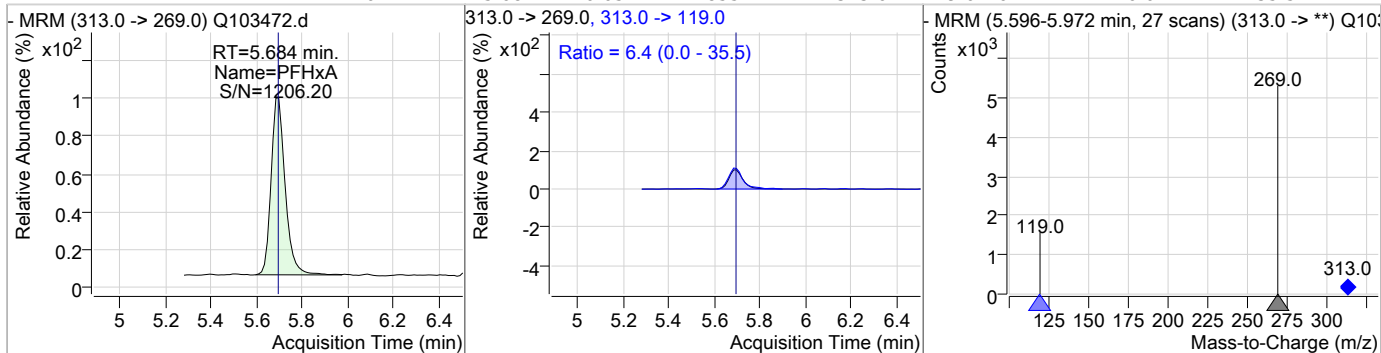
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.48	4.65	-0.05	654	299.0 -> 99.0	45.0	14.1	74.1



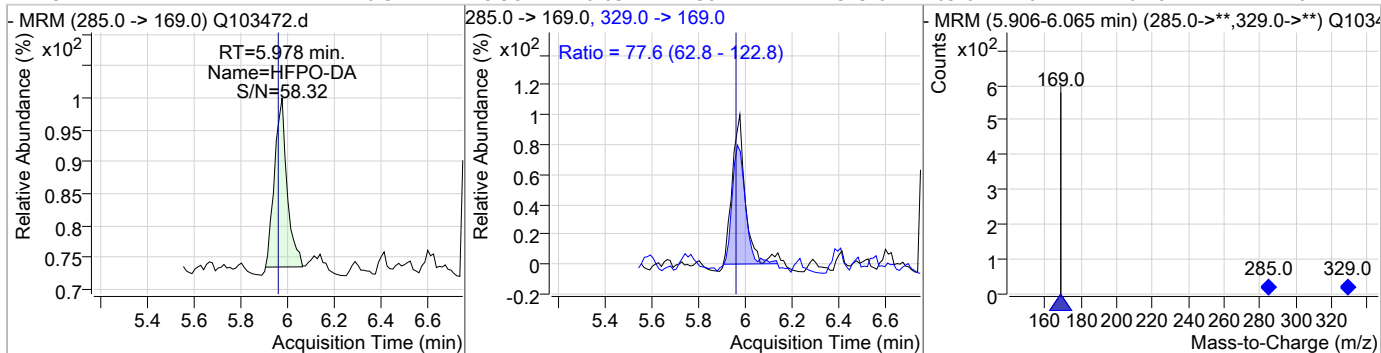
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	0.46	5.69	-0.04	3070				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.47	5.68	-0.05	2855	313.0 -> 119.0	6.4	0.0	35.5

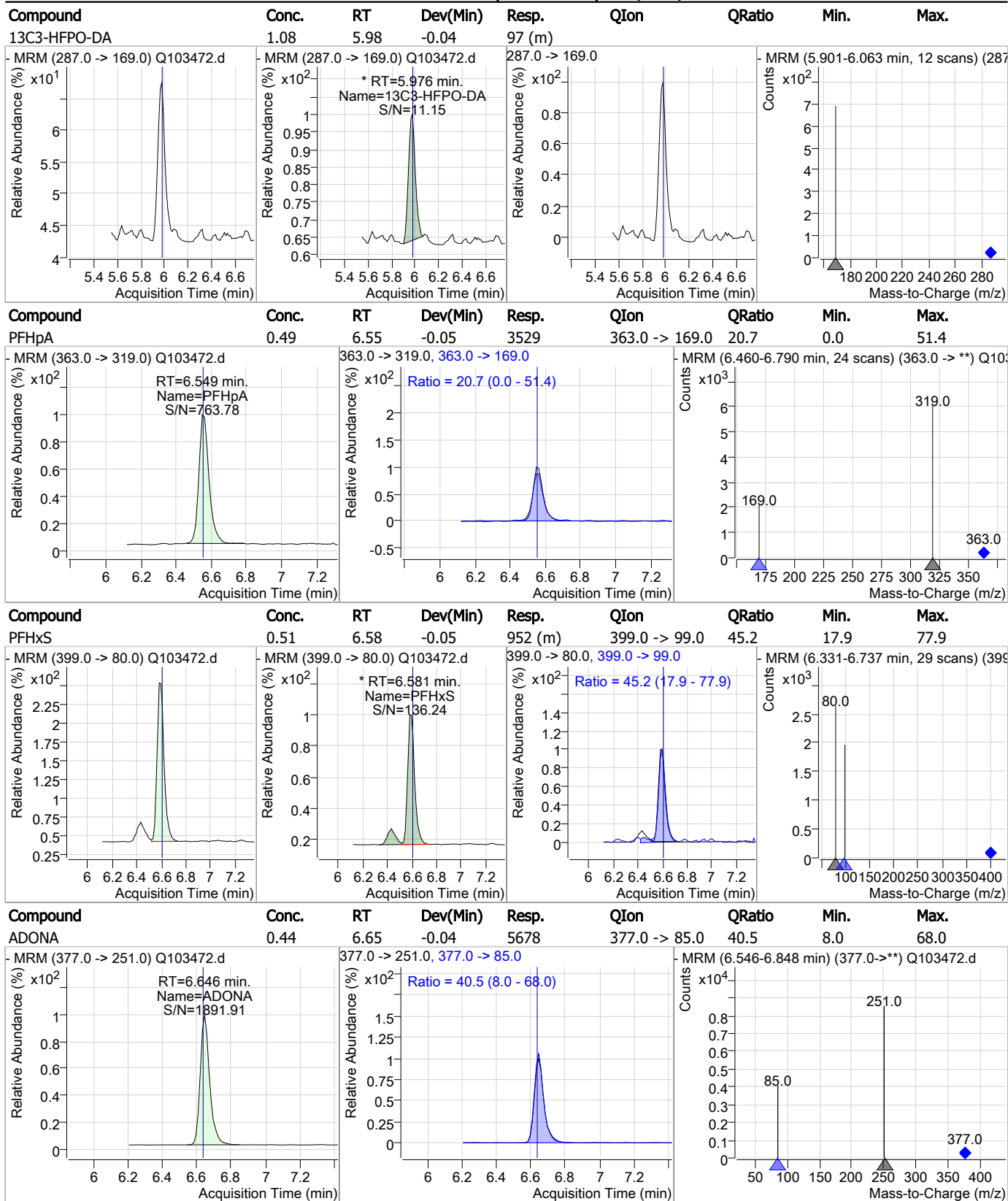


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.57	5.98	-0.03	58	329.0 -> 169.0	77.6	62.8	122.8



7.6.12
7

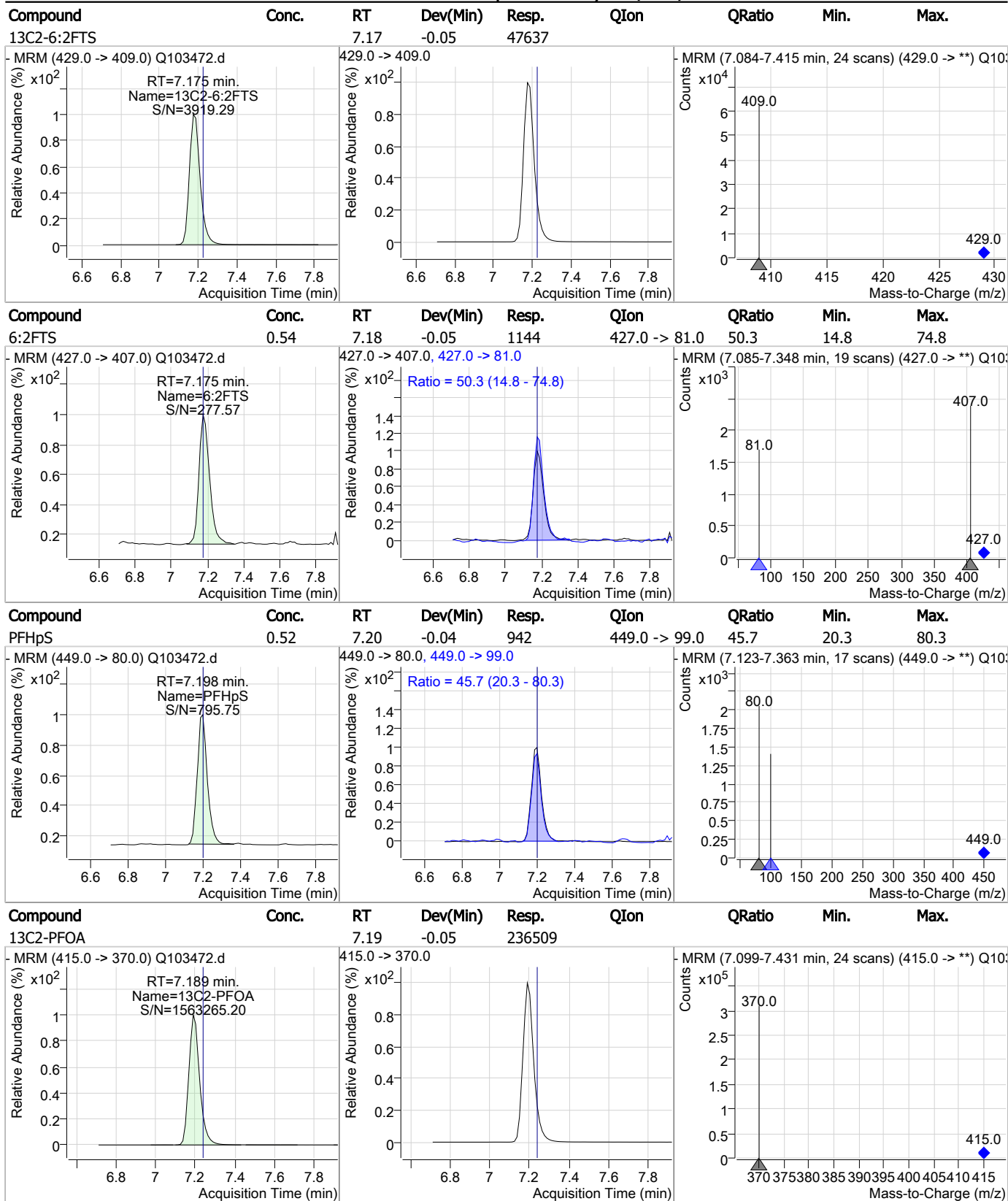
Perfluorinated Compounds by LC/MS/MS



7.6.12

7

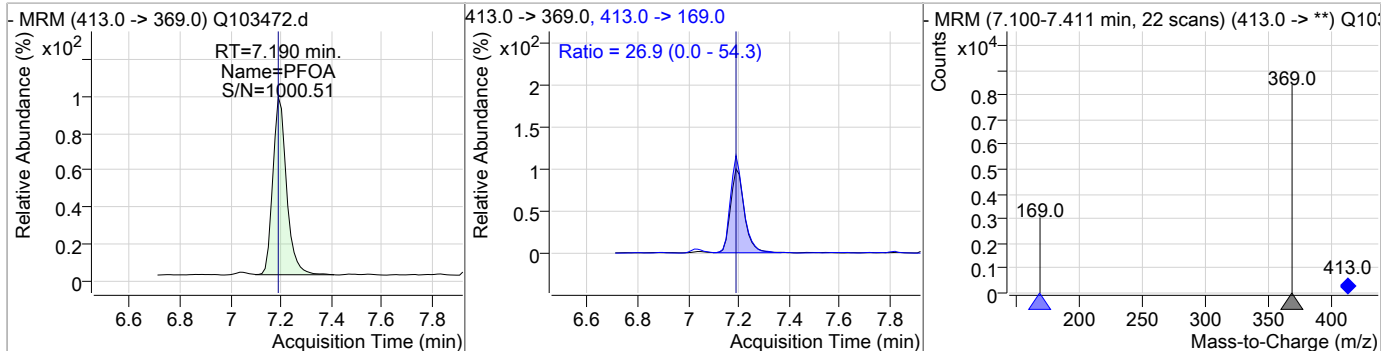
Perfluorinated Compounds by LC/MS/MS



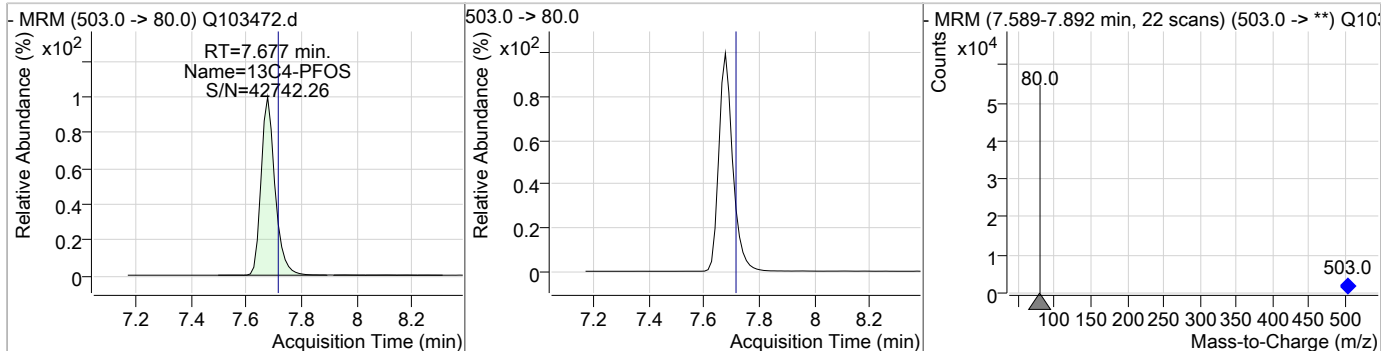
7.6.12
7

Perfluorinated Compounds by LC/MS/MS

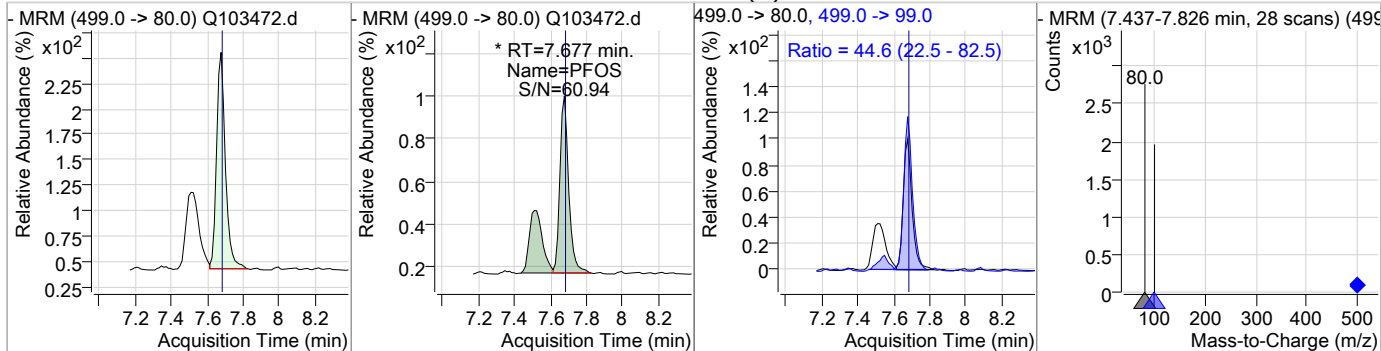
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.43	7.19	-0.05	5558	413.0 -> 169.0	26.9	0.0	54.3



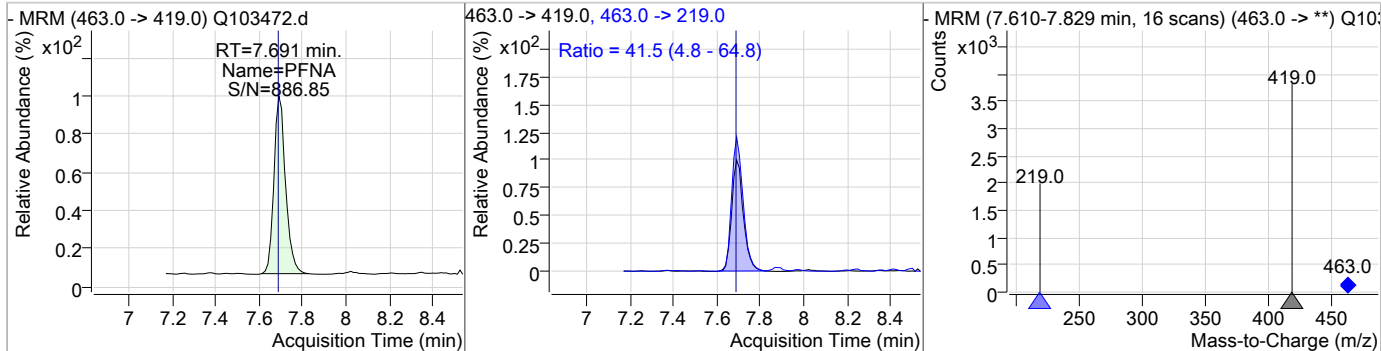
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.68	-0.04	40684				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.47	7.68	-0.04	1097 (m)	499.0 -> 99.0	44.6	22.5	82.5



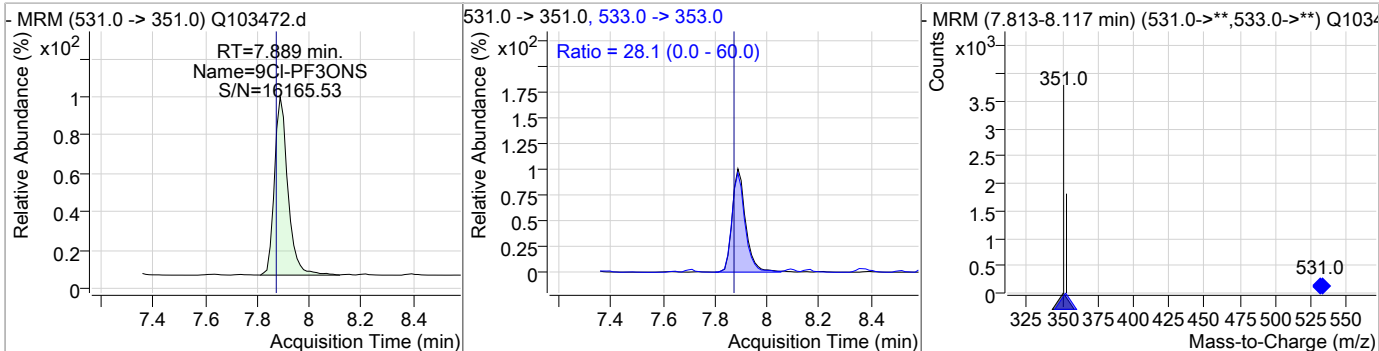
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.41	7.69	-0.05	2322	463.0 -> 219.0	41.5	4.8	64.8



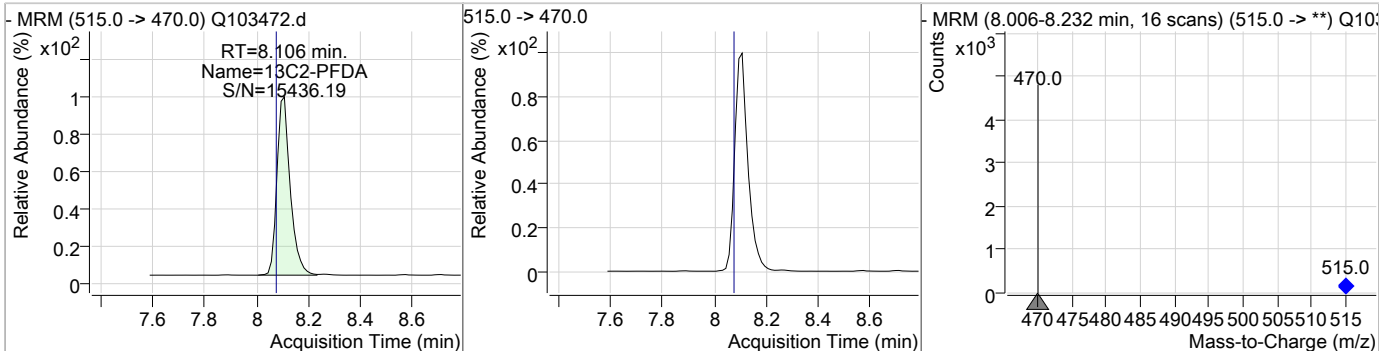
7.6.12
7

Perfluorinated Compounds by LC/MS/MS

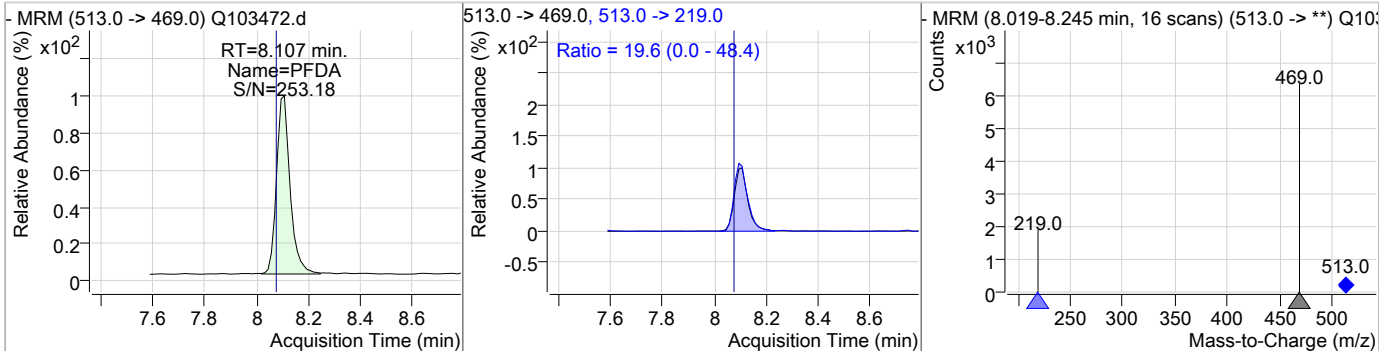
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9CI-PF3ONS	0.44	7.89	-0.04	2108	533.0 -> 353.0	28.1	0.0	60.0



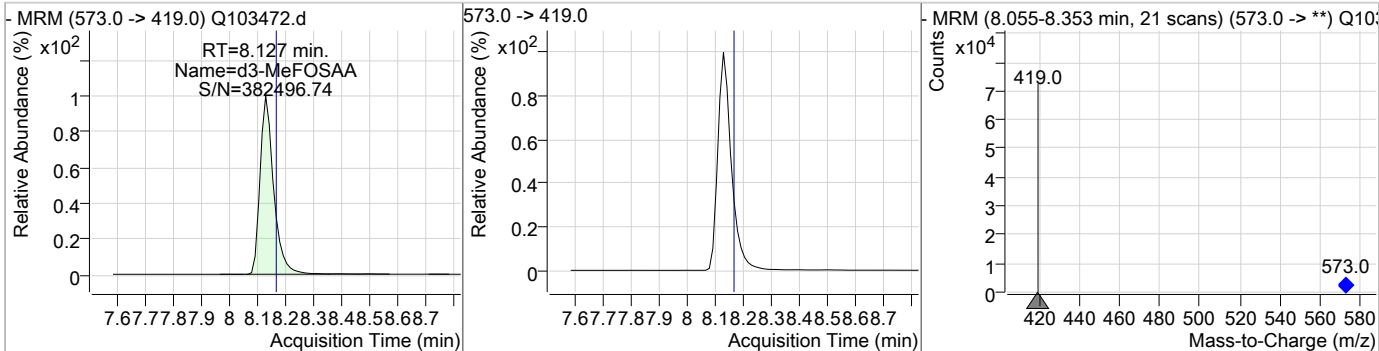
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	0.46	8.11	-0.03	3038				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.46	8.11	-0.03	4141	513.0 -> 219.0	19.6	0.0	48.4



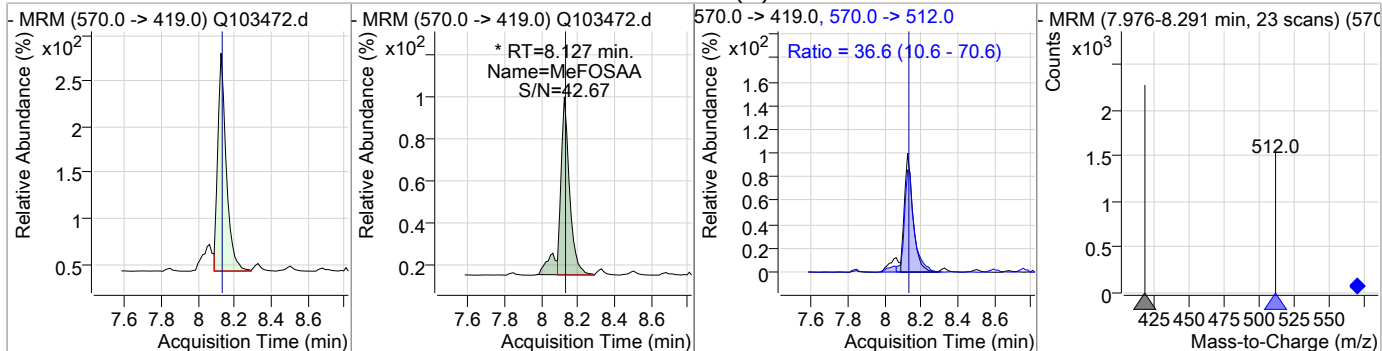
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.13	-0.04	53629				



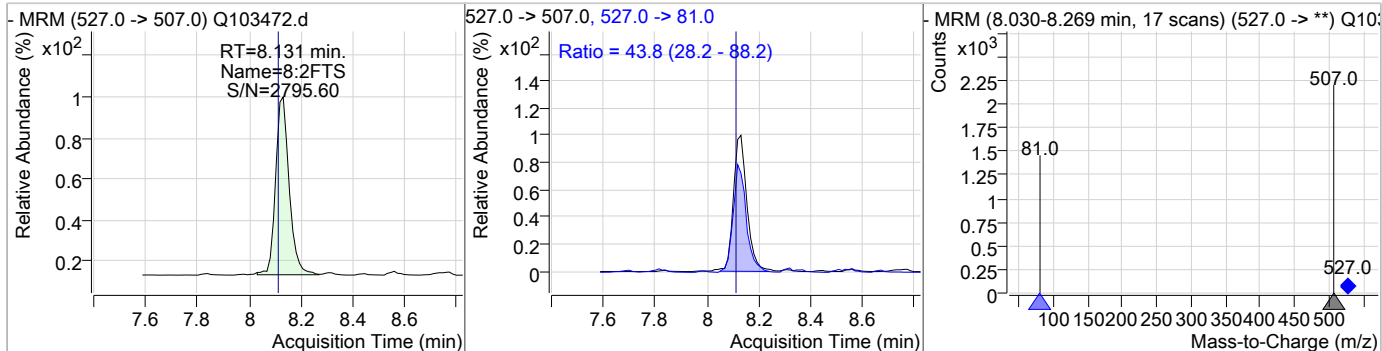
7.6.12
7

Perfluorinated Compounds by LC/MS/MS

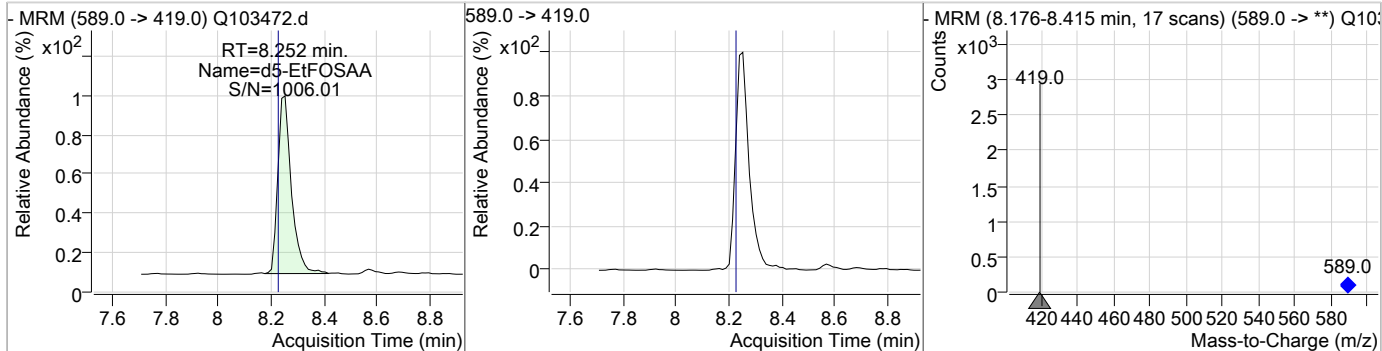
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.59	8.13	-0.04	869 (m)	570.0 -> 512.0	36.6	10.6	70.6



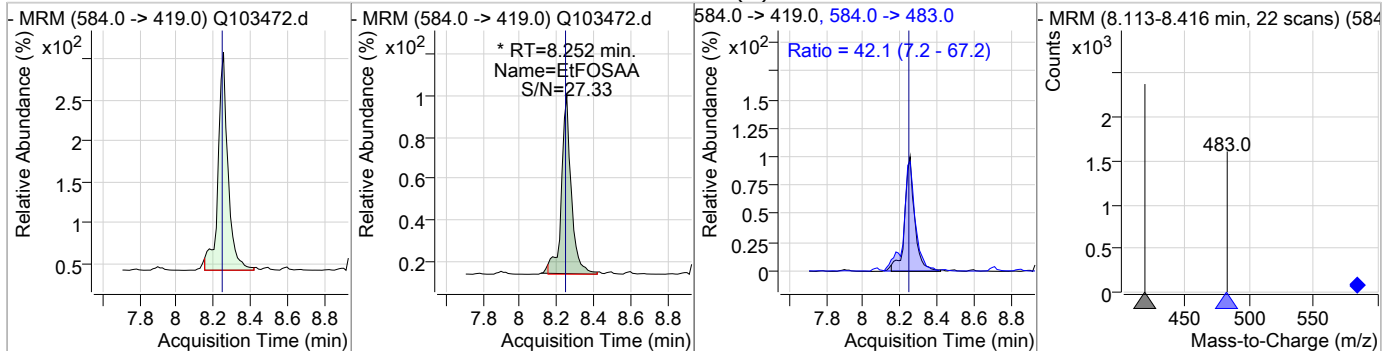
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	0.56	8.13	-0.04	1009	527.0 -> 81.0	43.8	28.2	88.2



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	1.18	8.25	-0.01	1602	589.0 -> 419.0	42.1	7.2	67.2



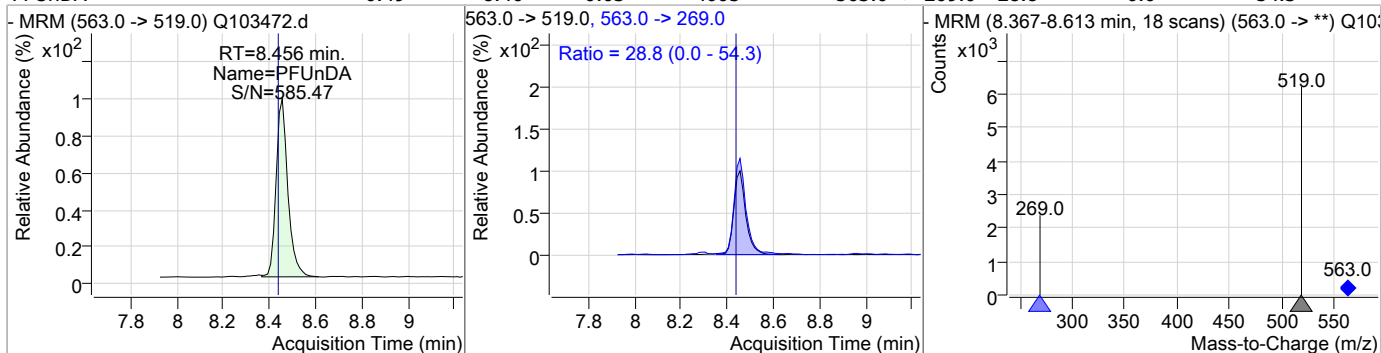
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	0.72	8.25	-0.03	981 (m)	584.0 -> 483.0	42.1	7.2	67.2



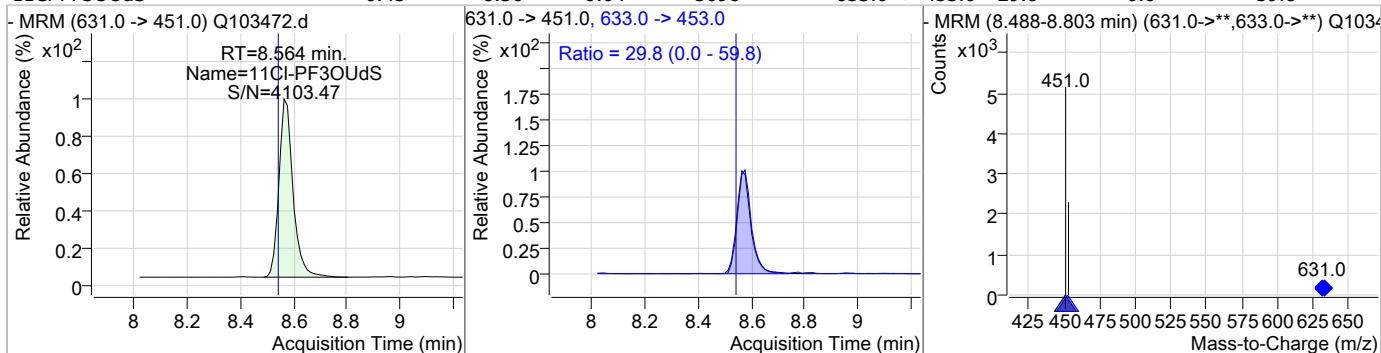
7.6.12
7

Perfluorinated Compounds by LC/MS/MS

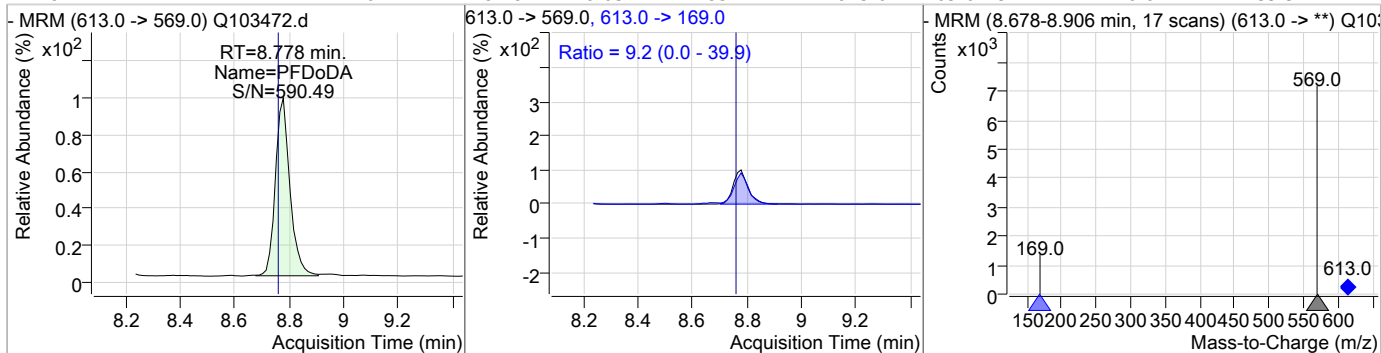
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.49	8.46	-0.03	4005	563.0 -> 269.0	28.8	0.0	54.3



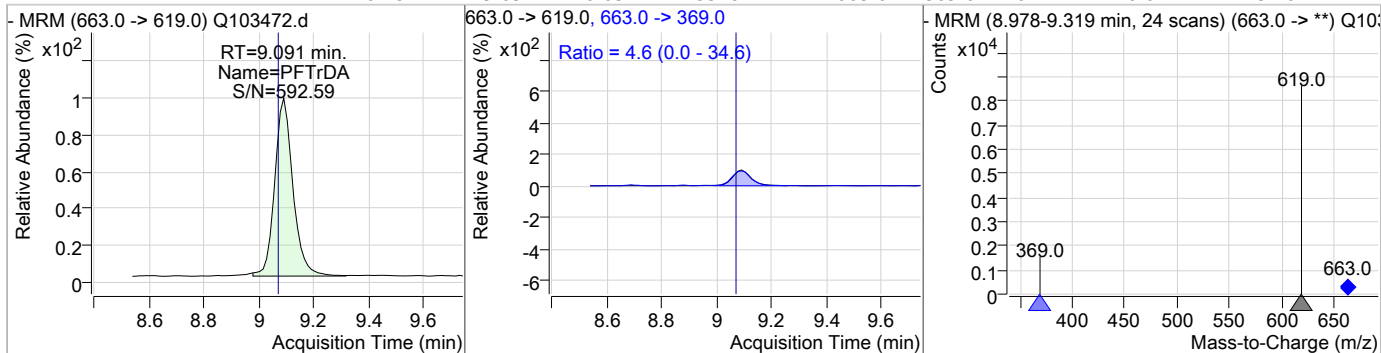
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.45	8.56	-0.04	3098	633.0 -> 453.0	29.8	0.0	59.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDODA	0.47	8.78	-0.03	4851	613.0 -> 169.0	9.2	0.0	39.9

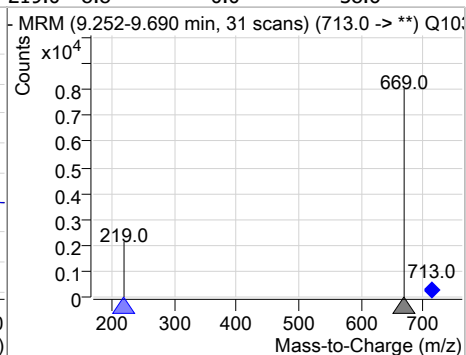
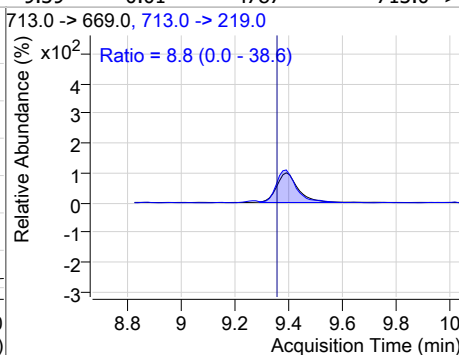
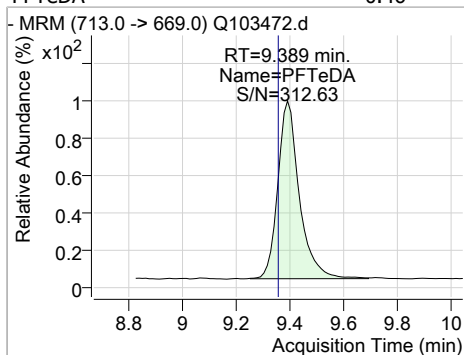


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	0.45	9.09	-0.03	5548	663.0 -> 369.0	4.6	0.0	34.6



Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.46	9.39	-0.01	4787	713.0 -> 219.0	8.8	0.0	38.6



7.6.12

7

Manual Integration Approval Summary

Sample Number: SQ2201-CC2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103472.D Analyst approved: 06/19/23 16:24 Anna Ludwig
Injection Time: 06/18/23 19:09 Supervisor approved: 06/19/23 17:33 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
13C3-HFPO-DA			5.98	Missed peak
Perfluorohexanesulfonic acid	355-46-4		6.58	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.68	Split peak
MeFOSAA	2355-31-9		8.13	Split peak
EtFOSAA	2991-50-6		8.25	Split peak

7.6.12.1

7

Perfluorinated Compounds by LC/MS/MS

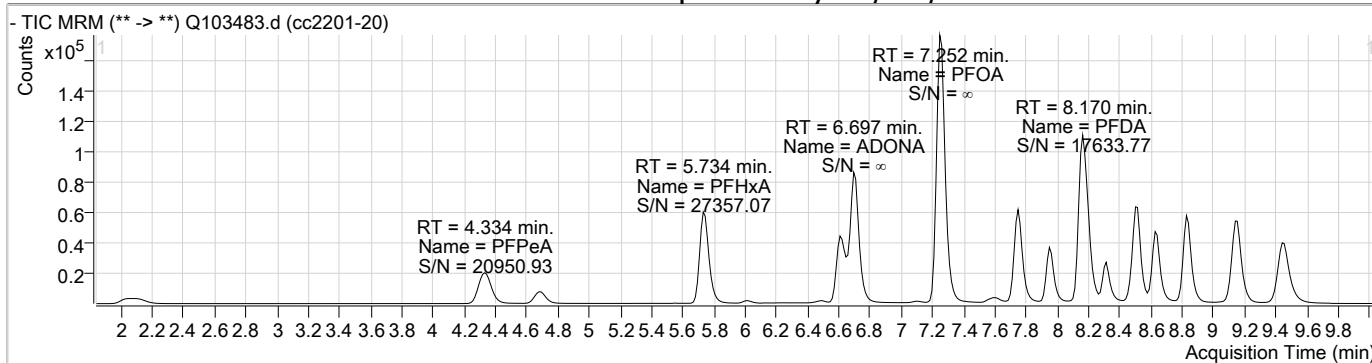
Data File : Q103483.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/18/2023 10:02:55 PM
 Sample Name : cc2201-20
 Vial : P1-A7
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP96727,SQ2201,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.250	429.0 -> 409.0	47329	20.00 µg/L	0.025
13C2-PFOA	7.252	415.0 -> 370.0	219878	20.00 µg/L	0.013
13C3-PFPeA	4.328	266.0 -> 222.0	69876	20.00 µg/L	-0.044
13C4-PFOS	7.741	503.0 -> 80.0	38607	20.00 µg/L	0.025
d3-MeFOSAA	8.202	573.0 -> 419.0	50774	40.00 µg/L	0.038
System Monitoring Compounds					
13C2-PFDA	8.169	515.0 -> 470.0	127461	20.69 µg/L	0.038
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 103.4%	
13C2-PFHxA	5.732	315.0 -> 270.0	127747	20.08 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 100.4%	
d5-EtFOSAA	8.315	589.0 -> 419.0	53349	40.19 µg/L	0.050
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 100.5%	
13C3-HFPO-DA	6.013	287.0 -> 169.0	3420	40.25 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 100.6%	
Target Compounds					
6:2FTS	7.238	427.0 -> 407.0	47578	22.52 µg/L	QValue 99
8:2FTS	8.193	527.0 -> 507.0	33719	19.68 µg/L	100
EtFOSAA	8.315	584.0 -> 419.0	25790	19.63 µg/L	m 97
MeFOSAA	8.203	570.0 -> 419.0	26761	19.22 µg/L	m 95
PFBA	2.076	213.0 -> 169.0	34462	19.80 µg/L	100
PFBS	4.678	299.0 -> 80.0	27569	20.98 µg/L	100
PFDA	8.170	513.0 -> 469.0	180684	21.44 µg/L	98
PFDoDA	8.831	613.0 -> 569.0	199708	20.50 µg/L	100
PFHpA	6.612	363.0 -> 319.0	134155	19.68 µg/L	100
PFHpS	7.261	449.0 -> 80.0	37410	21.72 µg/L	100
PFHxA	5.734	313.0 -> 269.0	116333	20.22 µg/L	100
PFHxS	6.644	399.0 -> 80.0	38079	21.33 µg/L	m 96
PFNA	7.755	463.0 -> 419.0	104589	19.45 µg/L	99
PFOA	7.252	413.0 -> 369.0	234654	19.60 µg/L	100
PFOS	7.741	499.0 -> 80.0	44232	20.02 µg/L	m 86
PFPeA	4.334	263.0 -> 219.0	52767	18.73 µg/L	100
PFTeDA	9.440	713.0 -> 669.0	199635	20.06 µg/L	99
PFTrDA	9.142	663.0 -> 619.0	232092	19.95 µg/L	100
PFUnDA	8.519	563.0 -> 519.0	165621	21.47 µg/L	98
ADONA	6.697	377.0 -> 251.0	238771	19.33 µg/L	99
9CI-PF3ONS	7.954	531.0 -> 351.0	97188	21.08 µg/L	98
11CI-PF3OUdS	8.627	631.0 -> 451.0	128665	19.81 µg/L	99
HFPO-DA	6.015	285.0 -> 169.0	1805	18.81 µg/L	99

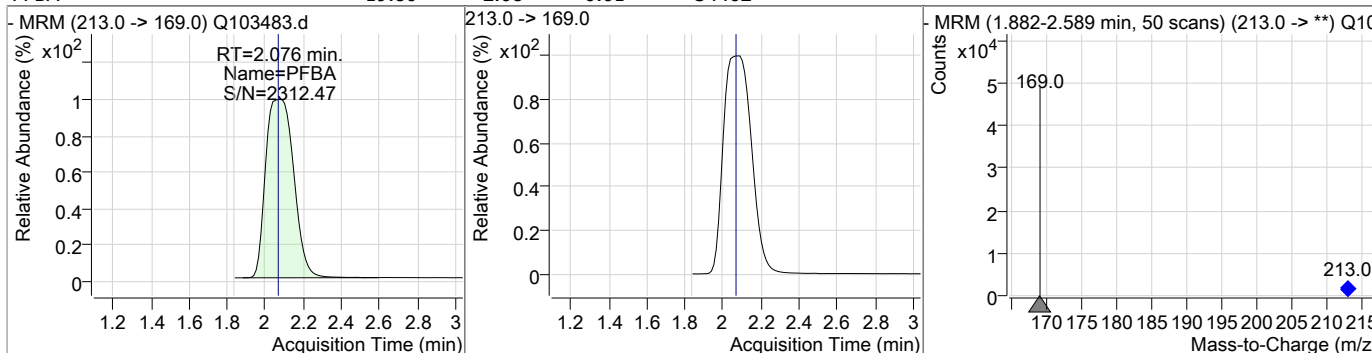
= Qualifier out of range, m = manually integrated, + = Area summed

7.6.13
7

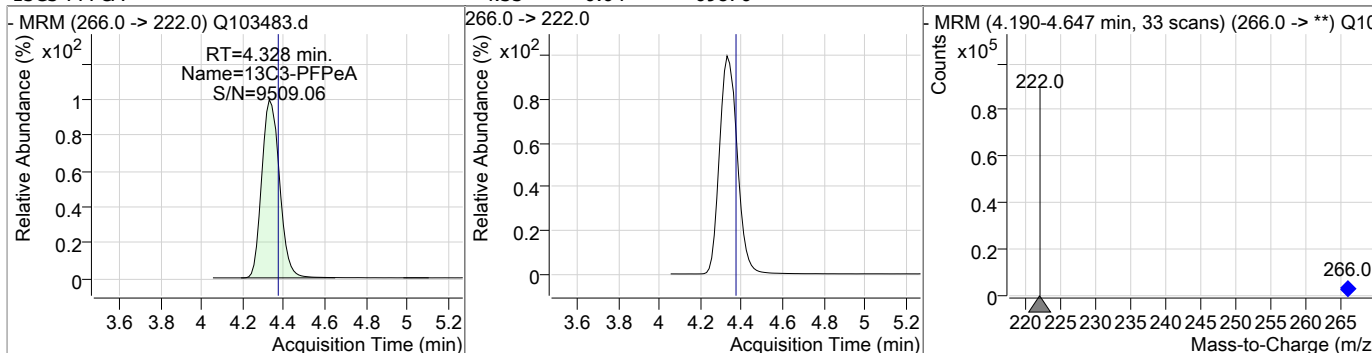
Perfluorinated Compounds by LC/MS/MS



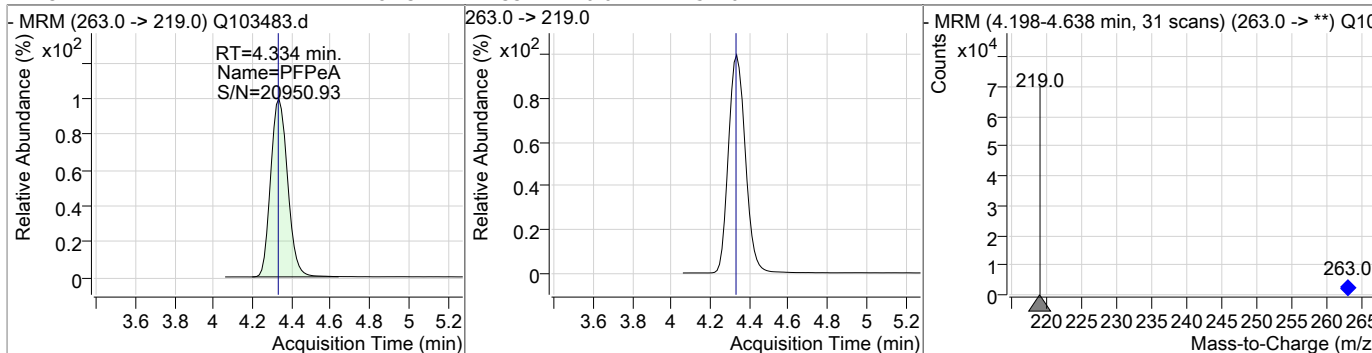
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.80	2.08	-0.01	34462				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFPeA		4.33	-0.04	69876				

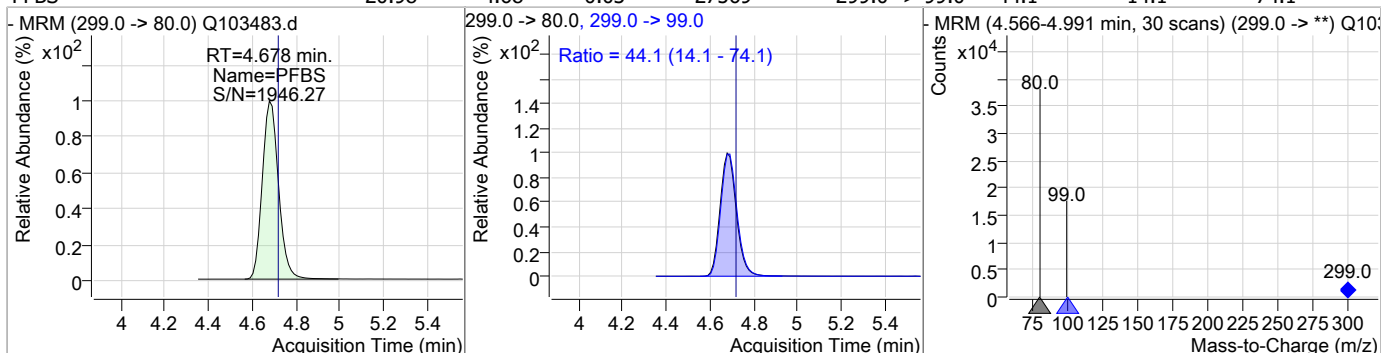


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	18.73	4.33	-0.04	52767				

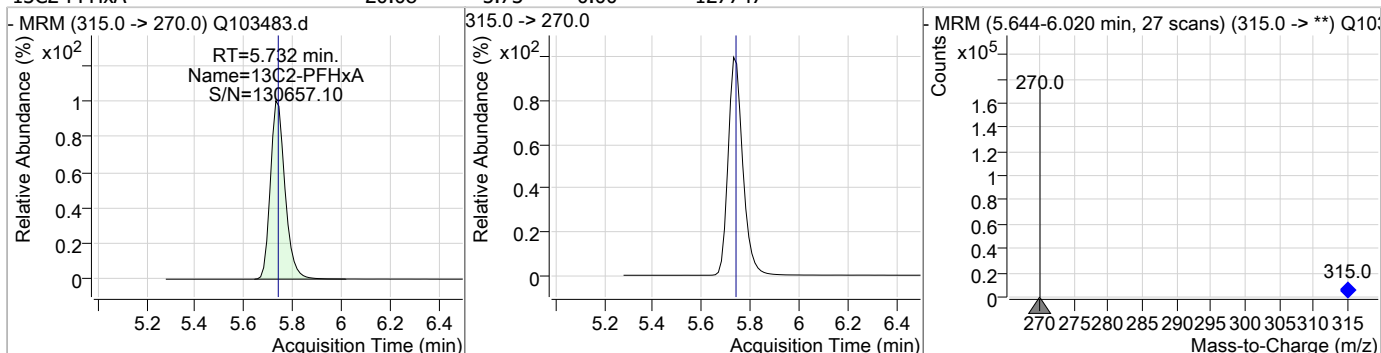


Perfluorinated Compounds by LC/MS/MS

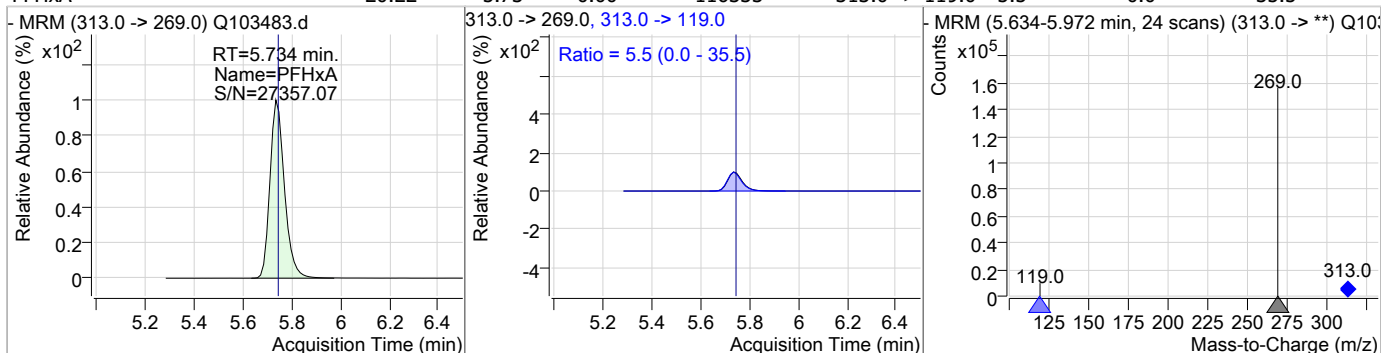
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	20.98	4.68	-0.03	27569	299.0 -> 99.0	44.1	14.1	74.1



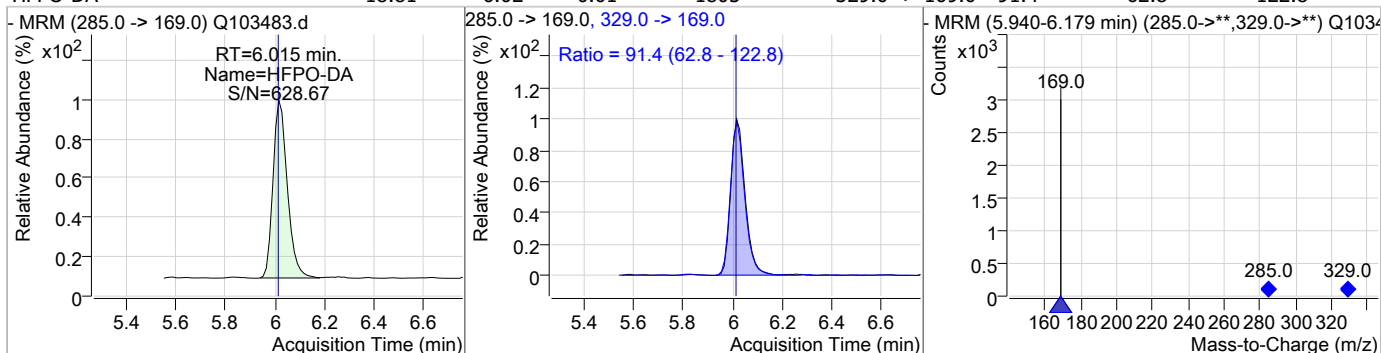
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	20.08	5.73	0.00	127747				



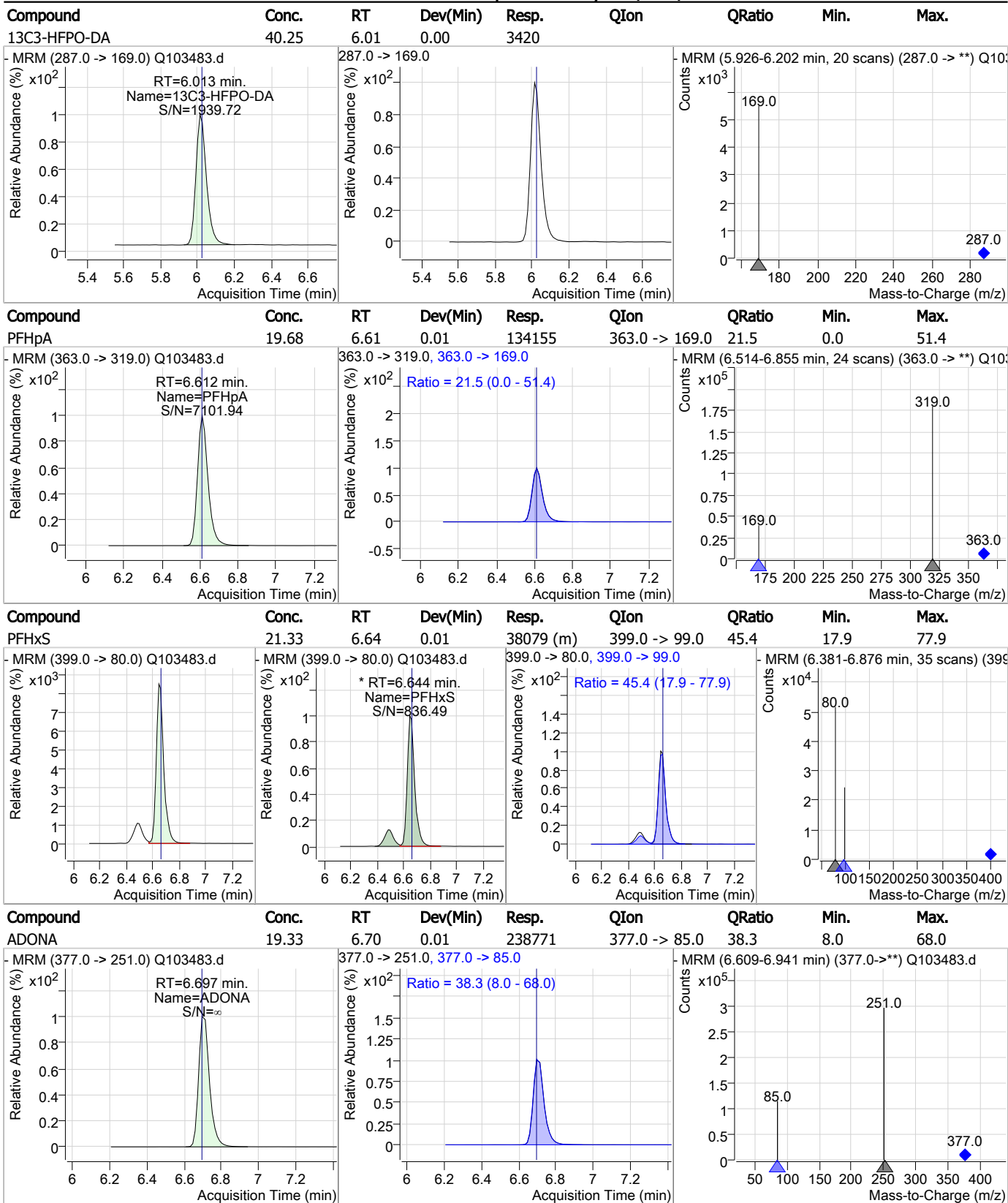
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	20.22	5.73	0.00	116333	313.0 -> 119.0	5.5	0.0	35.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	18.81	6.02	0.01	1805	329.0 -> 169.0	91.4	62.8	122.8

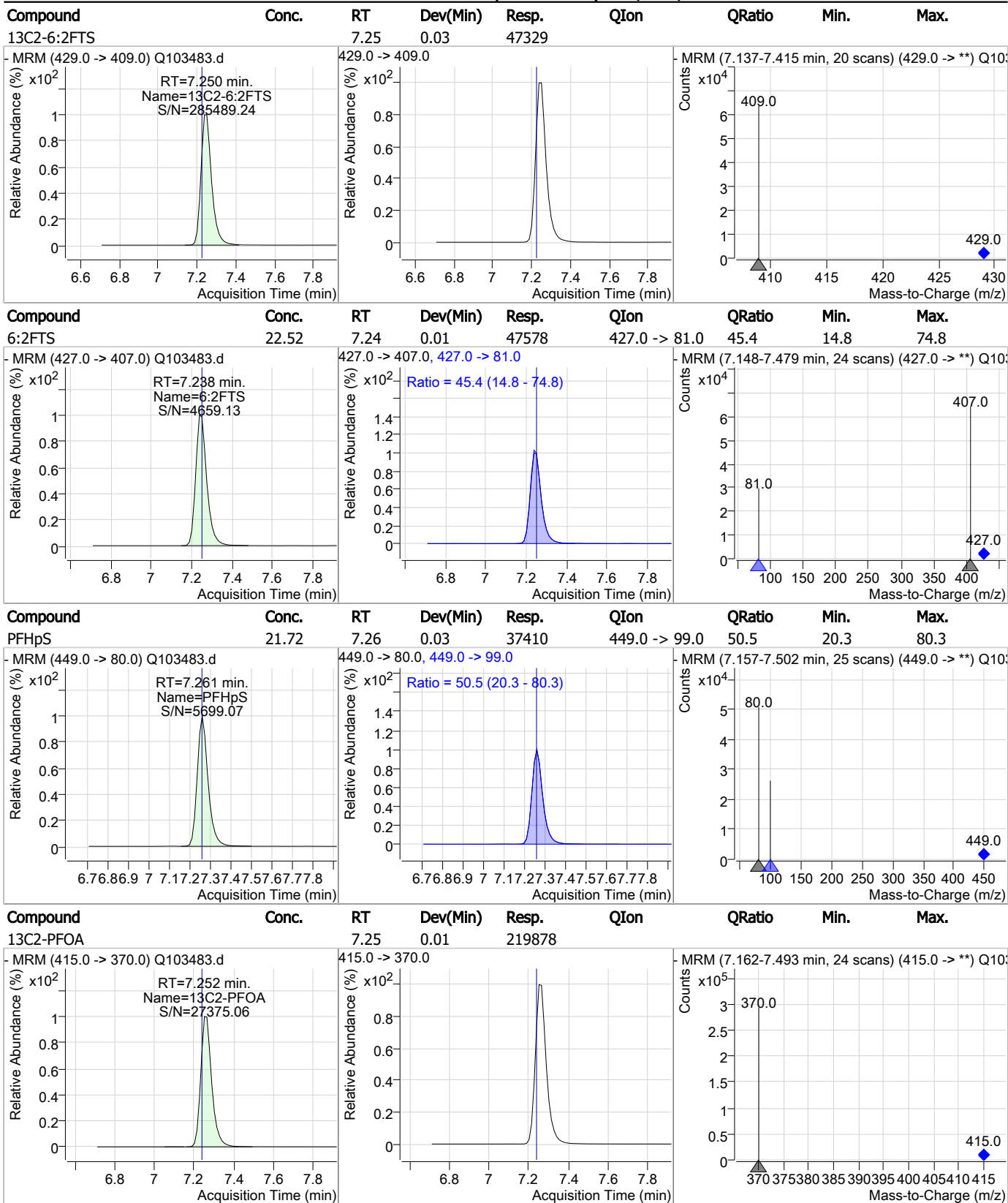


Perfluorinated Compounds by LC/MS/MS



7.6.13
7

Perfluorinated Compounds by LC/MS/MS

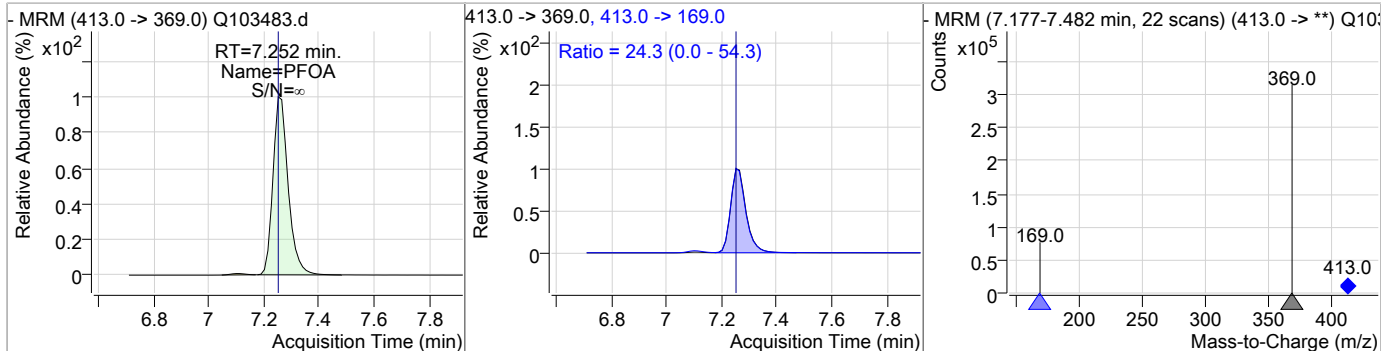


7.6.13

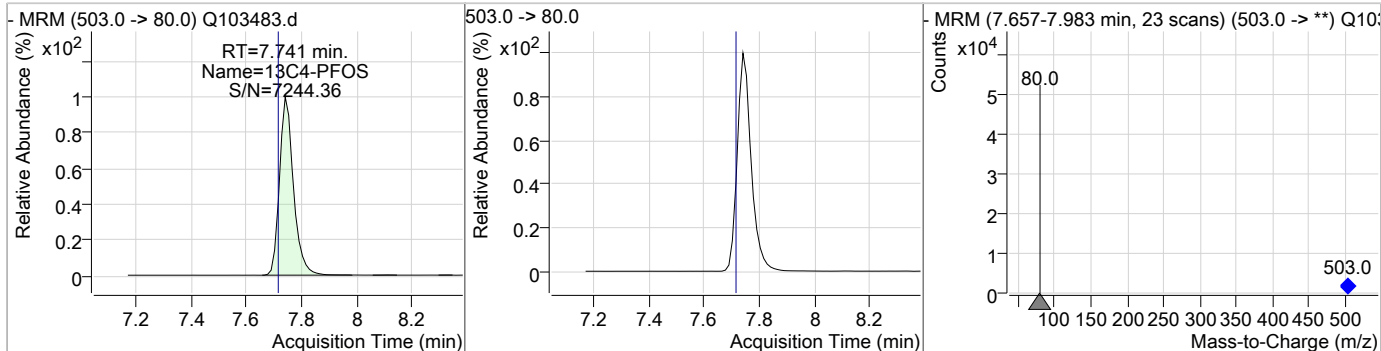
7

Perfluorinated Compounds by LC/MS/MS

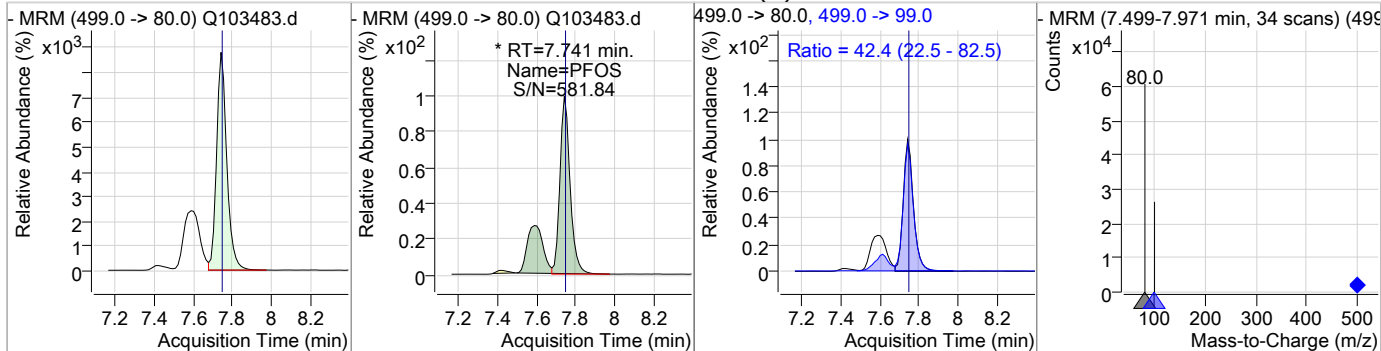
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.60	7.25	0.01	234654	413.0 -> 169.0	24.3	0.0	54.3



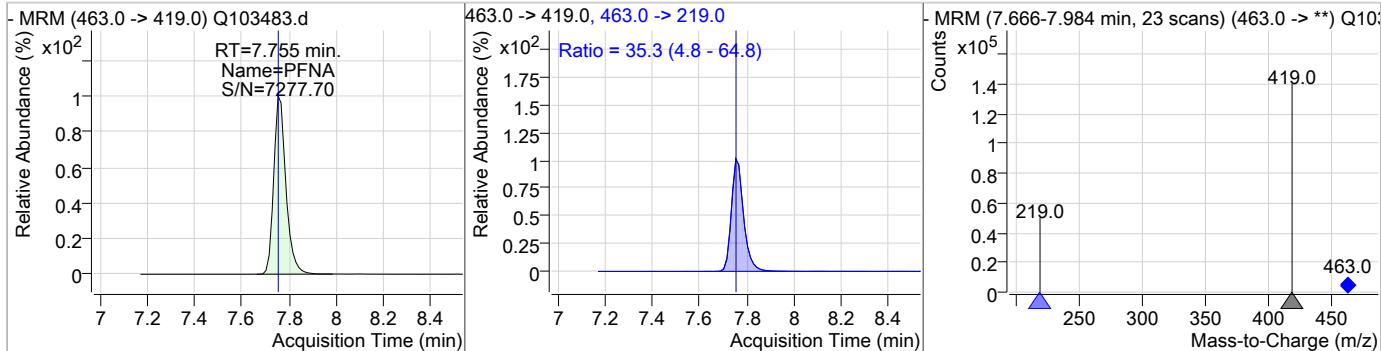
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.74	0.03	38607				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	20.02	7.74	0.03	44232 (m)	499.0 -> 99.0	42.4	22.5	82.5



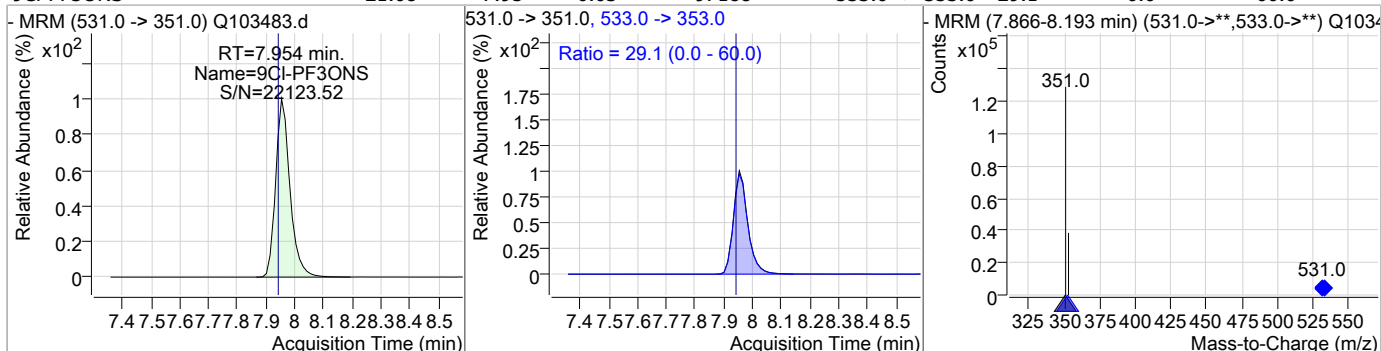
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.45	7.75	0.01	104589	463.0 -> 219.0	35.3	4.8	64.8



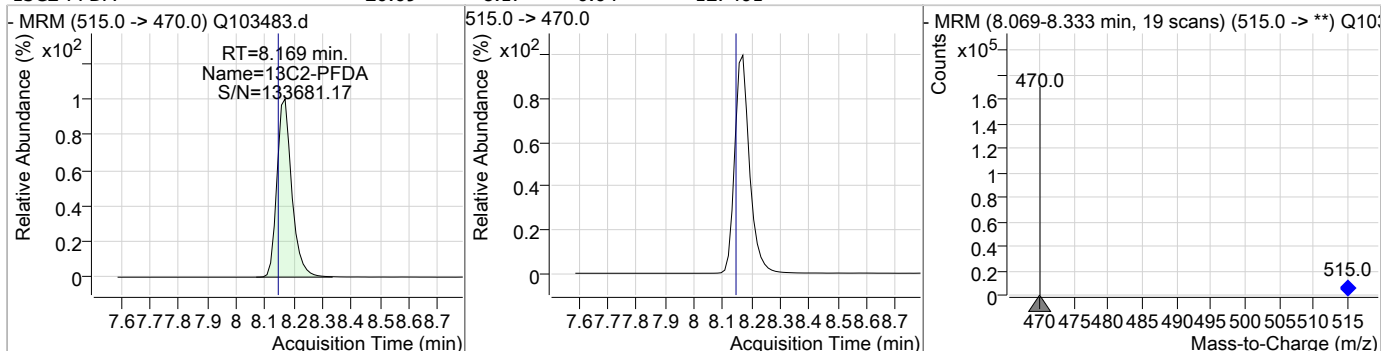
7.6.13
7

Perfluorinated Compounds by LC/MS/MS

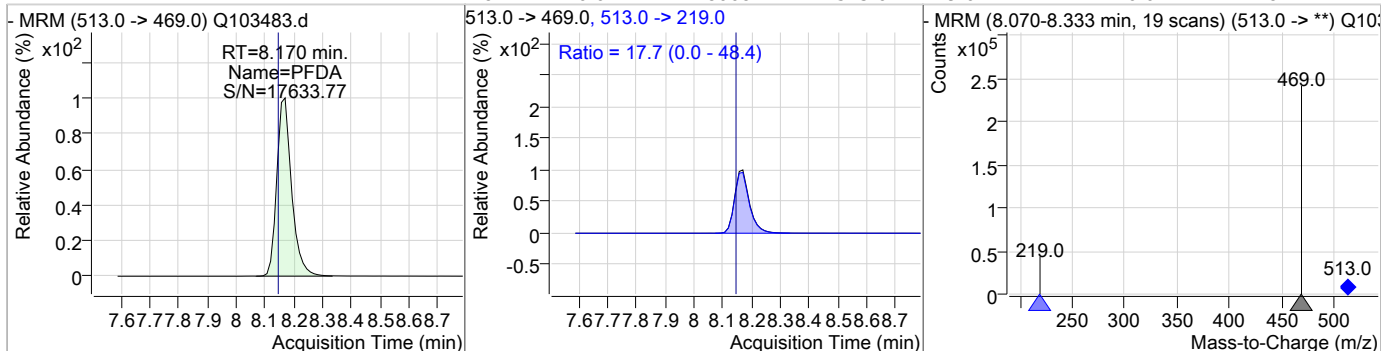
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9CI-PF3ONS	21.08	7.95	0.03	97188	533.0 -> 353.0	29.1	0.0	60.0



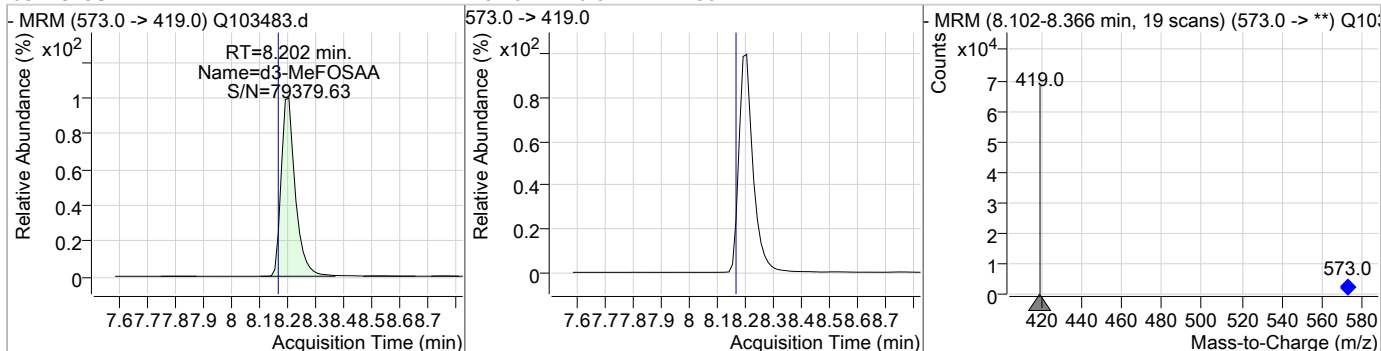
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	20.69	8.17	0.04	127461				



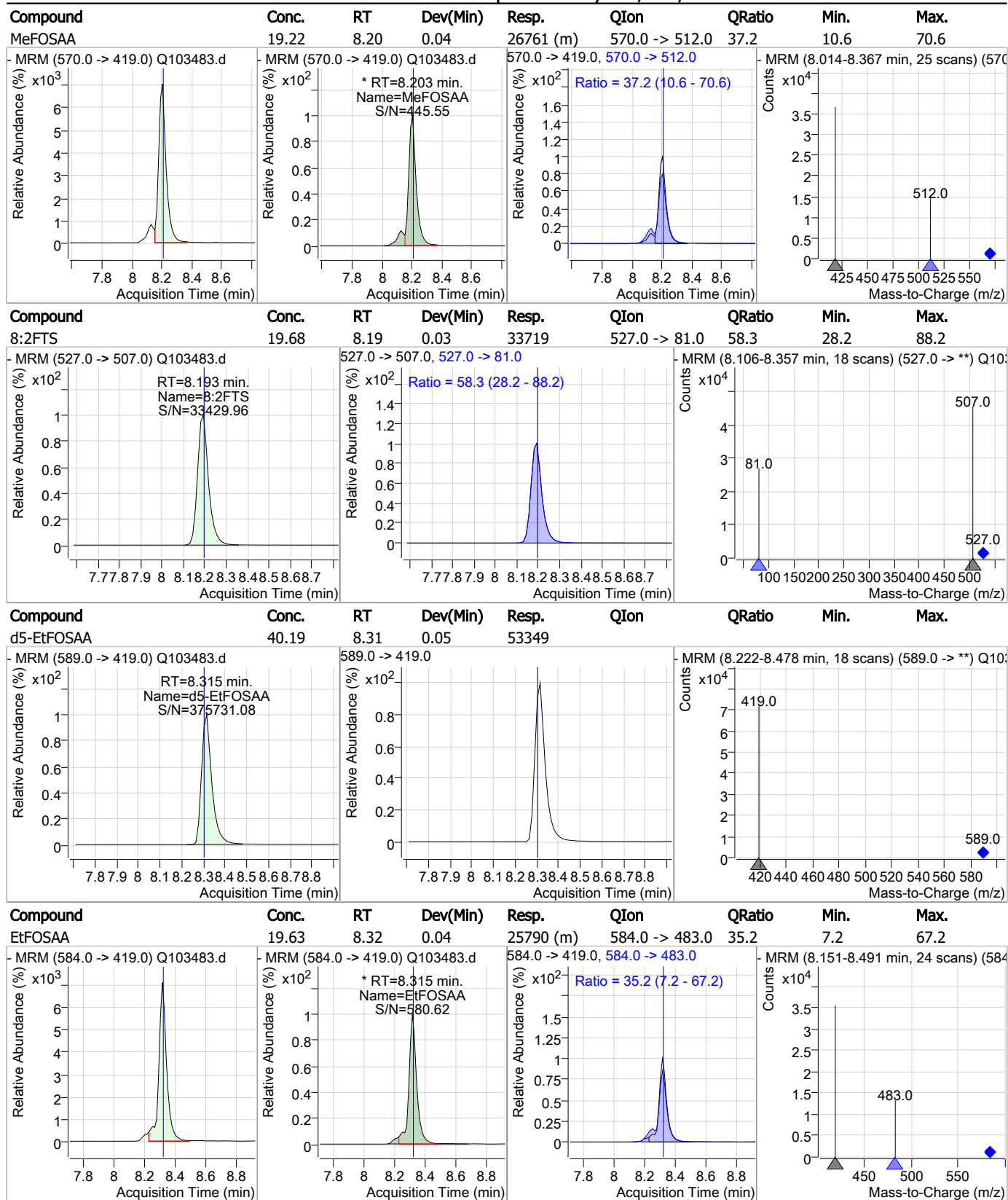
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	21.44	8.17	0.04	180684	513.0 -> 219.0	17.7	0.0	48.4



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.20	0.04	50774				



Perfluorinated Compounds by LC/MS/MS

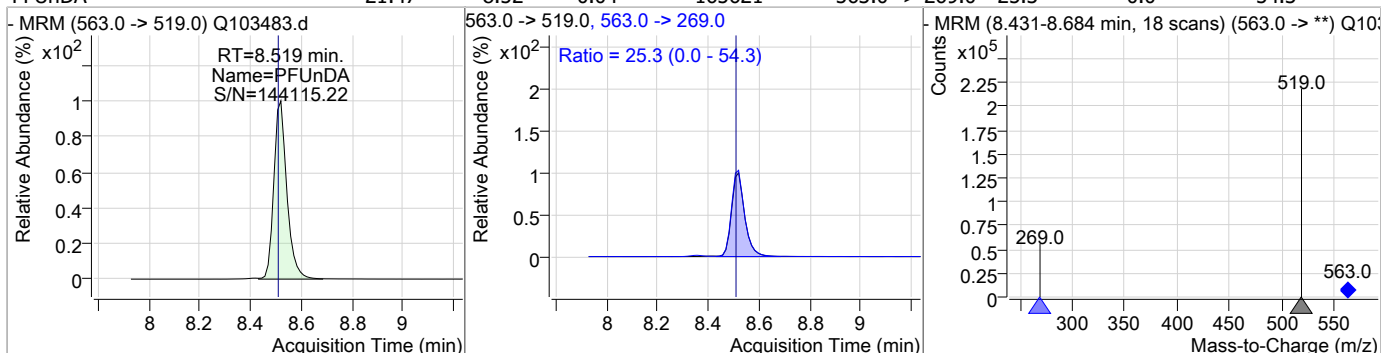


7.6.13

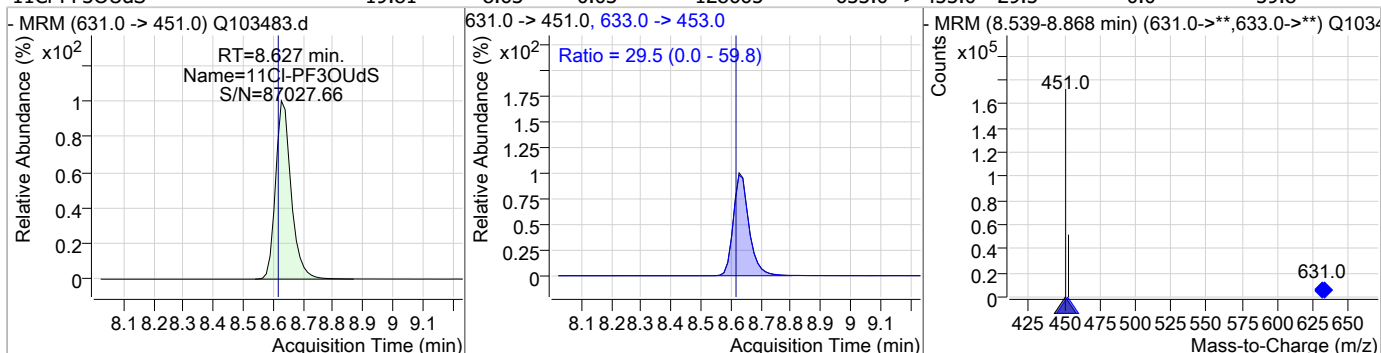
7

Perfluorinated Compounds by LC/MS/MS

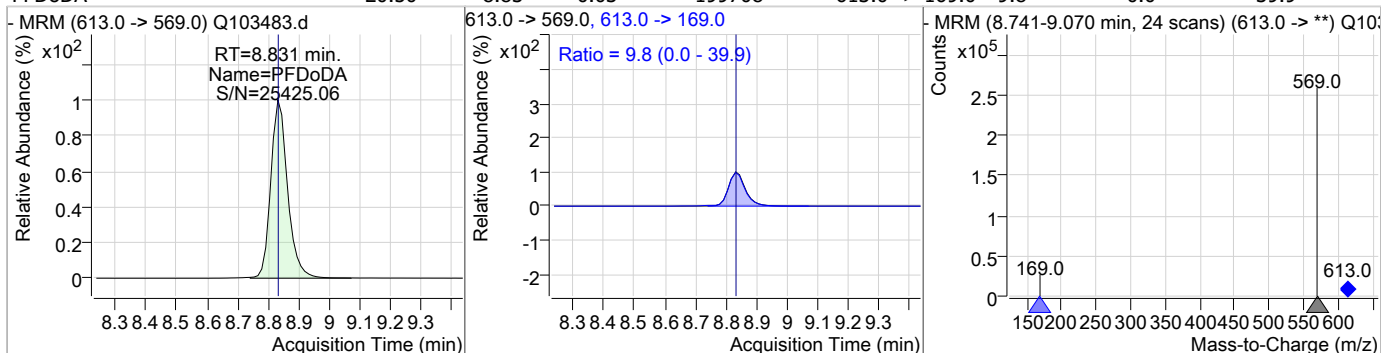
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	21.47	8.52	0.04	165621	563.0 -> 269.0	25.3	0.0	54.3



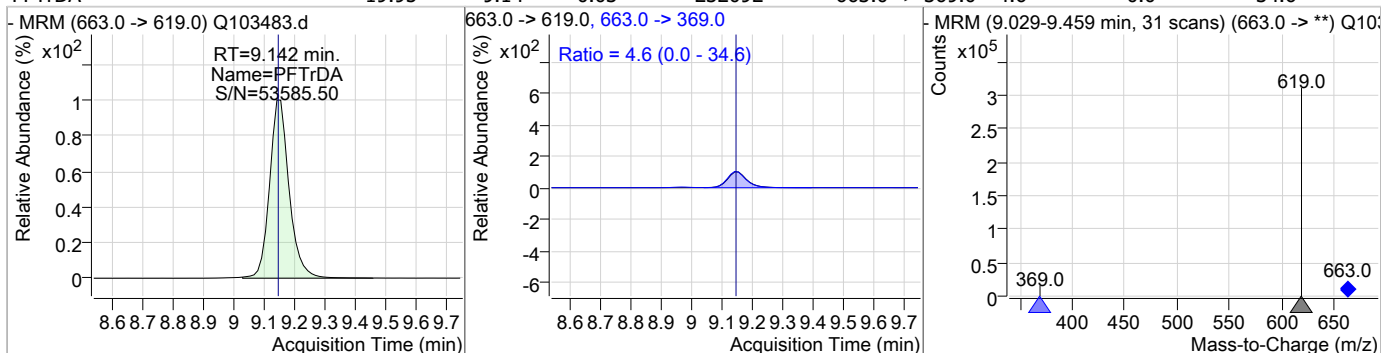
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	19.81	8.63	0.03	128665	633.0 -> 453.0	29.5	0.0	59.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	20.50	8.83	0.03	199708	613.0 -> 169.0	9.8	0.0	39.9

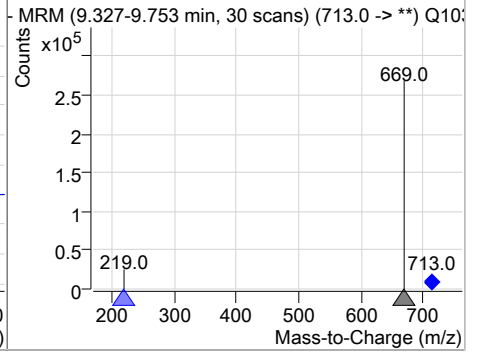
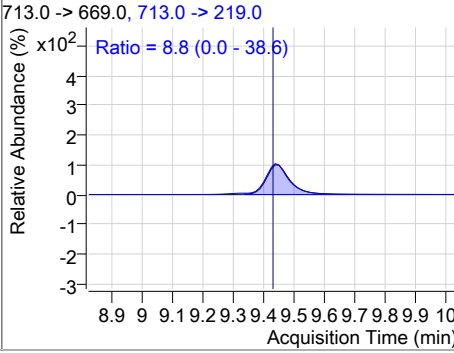
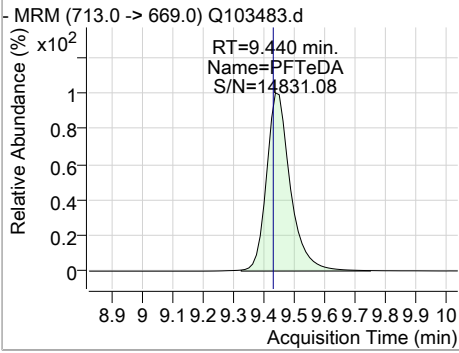


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	19.95	9.14	0.03	232092	663.0 -> 369.0	4.6	0.0	34.6



Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	20.06	9.44	0.04	199635	713.0 -> 219.0	8.8	0.0	38.6



7.6.13
7

Manual Integration Approval Summary

Sample Number: SQ2201-CC2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103483.D Analyst approved: 06/19/23 16:24 Anna Ludwig
Injection Time: 06/18/23 22:02 Supervisor approved: 06/19/23 17:25 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.64	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.74	Split peak
MeFOSAA	2355-31-9		8.20	Split peak
EtFOSAA	2991-50-6		8.31	Split peak

7.6.13.1

7

Perfluorinated Compounds by LC/MS/MS

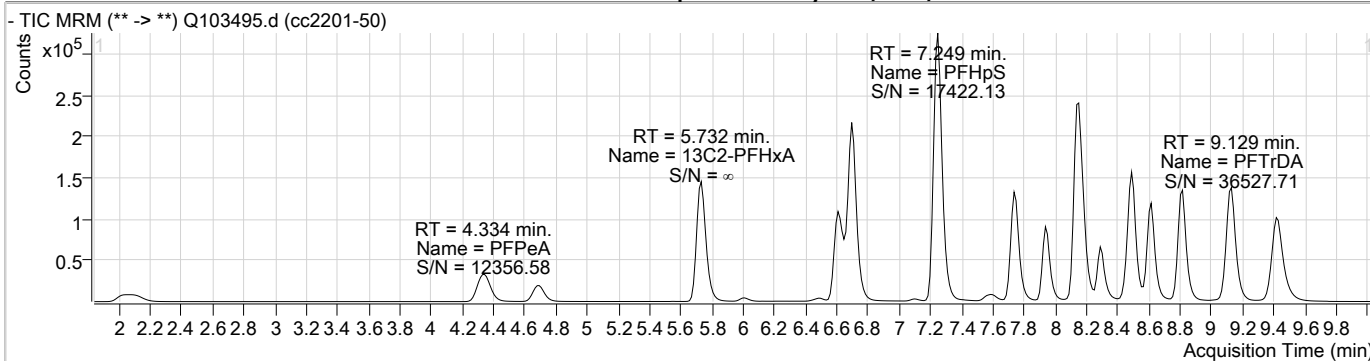
Data File : Q103495.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/19/2023 1:12:20 AM
 Sample Name : cc2201-50
 Vial : P1-A8
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP96727,SQ2201,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.237	429.0 -> 409.0	47139	20.00 µg/L	0.013
13C2-PFOA	7.252	415.0 -> 370.0	203081	20.00 µg/L	0.013
13C3-PFPeA	4.341	266.0 -> 222.0	68322	20.00 µg/L	-0.031
13C4-PFOS	7.728	503.0 -> 80.0	38518	20.00 µg/L	0.013
d3-MeFOSAA	8.177	573.0 -> 419.0	47624	40.00 µg/L	0.013
System Monitoring Compounds					
13C2-PFDA	8.144	515.0 -> 470.0	288179	50.64 µg/L	0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 253.2%	
13C2-PFHxA	5.732	315.0 -> 270.0	310506	51.63 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 258.1%	
d5-EtFOSAA	8.289	589.0 -> 419.0	134429	102.58 µg/L	0.025
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 256.5%	
13C3-HFPO-DA	6.013	287.0 -> 169.0	8426	105.44 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 263.6%	
Target Compounds					
6:2FTS	7.238	427.0 -> 407.0	113653	54.01 µg/L	QValue
8:2FTS	8.168	527.0 -> 507.0	78787	49.08 µg/L	100
EtFOSAA	8.290	584.0 -> 419.0	63594	50.30 µg/L	m 98
MeFOSAA	8.178	570.0 -> 419.0	66504	50.91 µg/L	m 92
PFBA	2.064	213.0 -> 169.0	87026	51.13 µg/L	100
PFBS	4.678	299.0 -> 80.0	69545	51.35 µg/L	99
PFDA	8.145	513.0 -> 469.0	411169	52.82 µg/L	100
PFDoDA	8.816	613.0 -> 569.0	475460	48.92 µg/L	99
PFHpA	6.612	363.0 -> 319.0	325208	50.44 µg/L	98
PFHpS	7.249	449.0 -> 80.0	89778	52.24 µg/L	98
PFHxA	5.734	313.0 -> 269.0	283970	52.04 µg/L	100
PFHxS	6.644	399.0 -> 80.0	95375	52.67 µg/L	m 97
PFNA	7.755	463.0 -> 419.0	248329	49.28 µg/L	98
PFOA	7.252	413.0 -> 369.0	570773	51.63 µg/L	99
PFOS	7.729	499.0 -> 80.0	114637	52.01 µg/L	m 83
PFPeA	4.334	263.0 -> 219.0	135821	49.30 µg/L	100
PFTeDA	9.415	713.0 -> 669.0	497511	50.12 µg/L	99
PFTrDA	9.129	663.0 -> 619.0	574463	49.49 µg/L	100
PFUnDA	8.494	563.0 -> 519.0	401046	52.10 µg/L	97
ADONA	6.697	377.0 -> 251.0	595045	49.90 µg/L	99
9Cl-PF3ONS	7.942	531.0 -> 351.0	240650	53.94 µg/L	100
11Cl-PF3OUdS	8.615	631.0 -> 451.0	319655	51.44 µg/L	99
HFPO-DA	6.015	285.0 -> 169.0	4722	52.43 µg/L	94

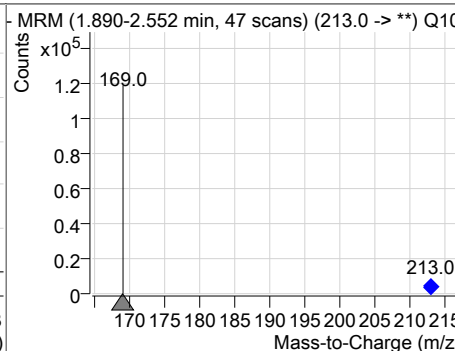
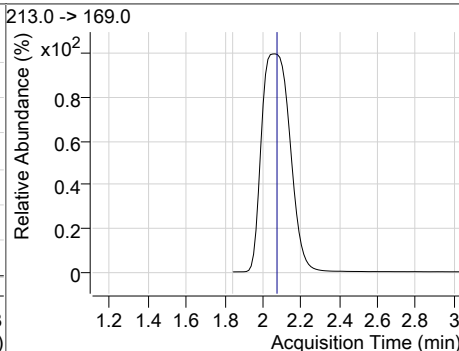
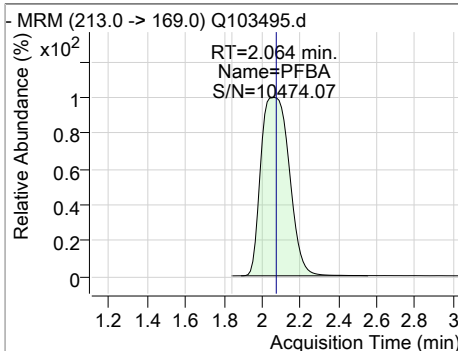
= Qualifier out of range, m = manually integrated, + = Area summed

7.6.14
7

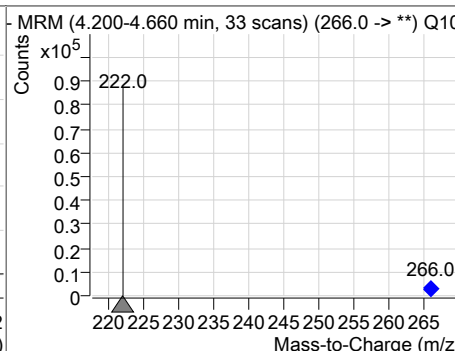
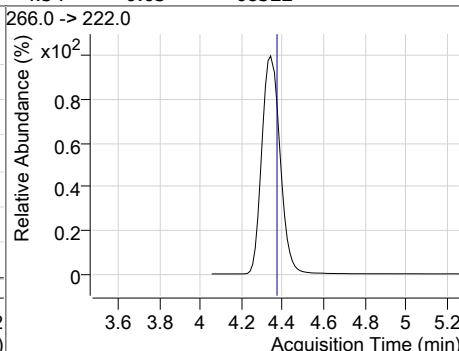
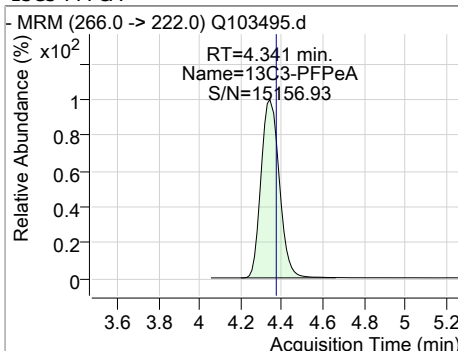
Perfluorinated Compounds by LC/MS/MS



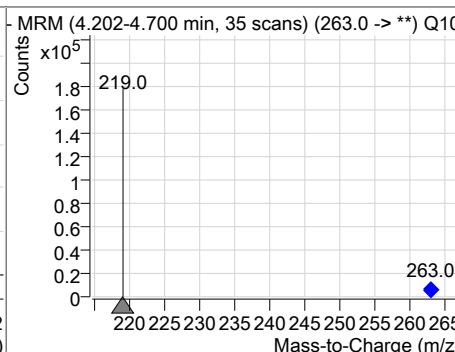
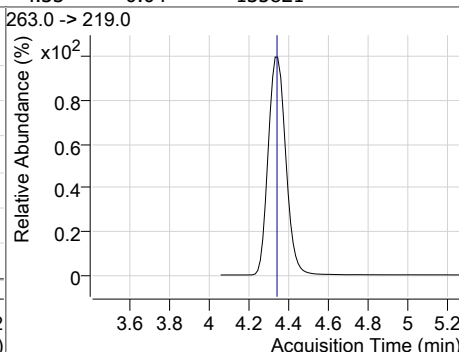
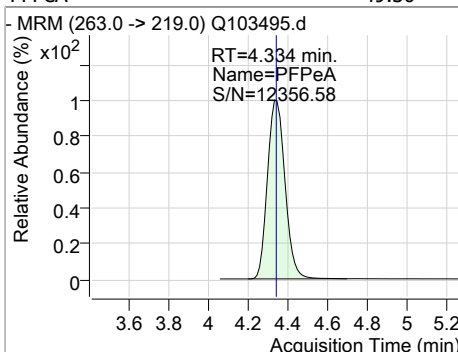
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	51.13	2.06	-0.03	87026				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFPeA		4.34	-0.03	68322				

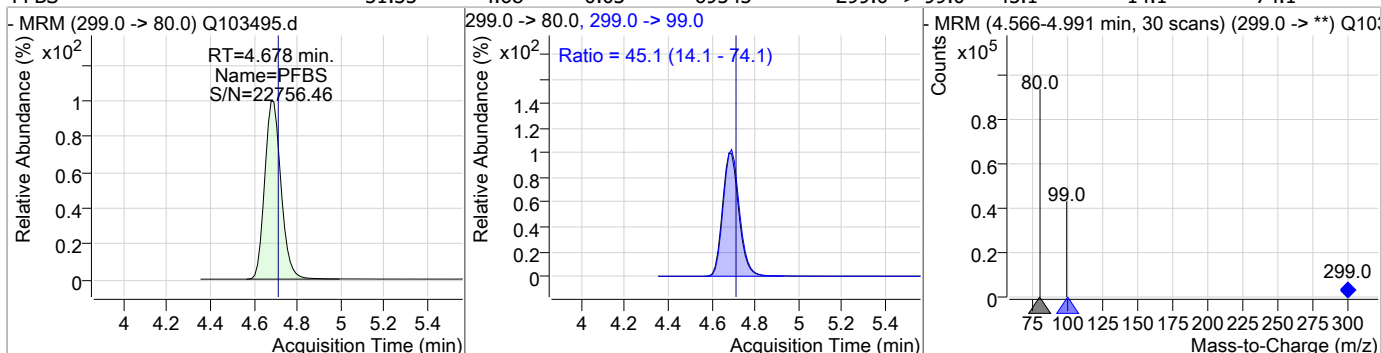


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	49.30	4.33	-0.04	135821				

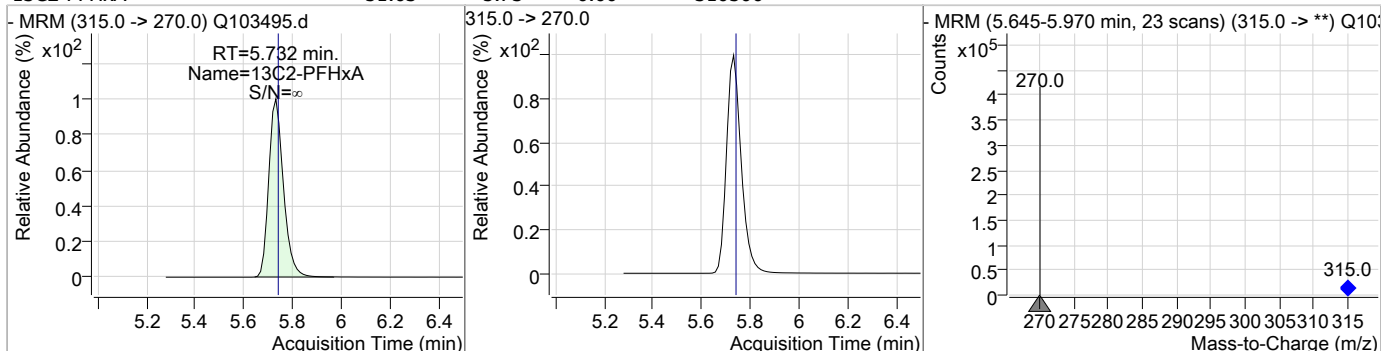


Perfluorinated Compounds by LC/MS/MS

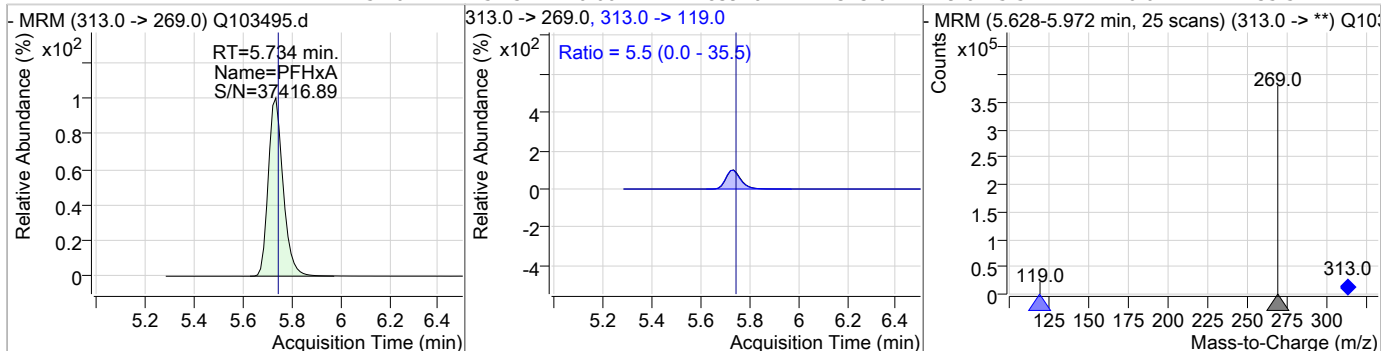
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	51.35	4.68	-0.03	69545	299.0 -> 99.0	45.1	14.1	74.1



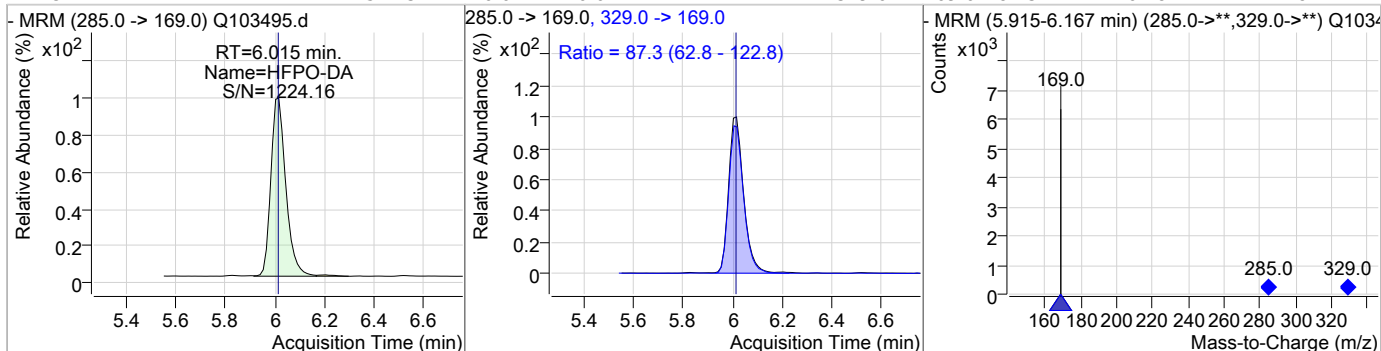
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	51.63	5.73	0.00	310506				



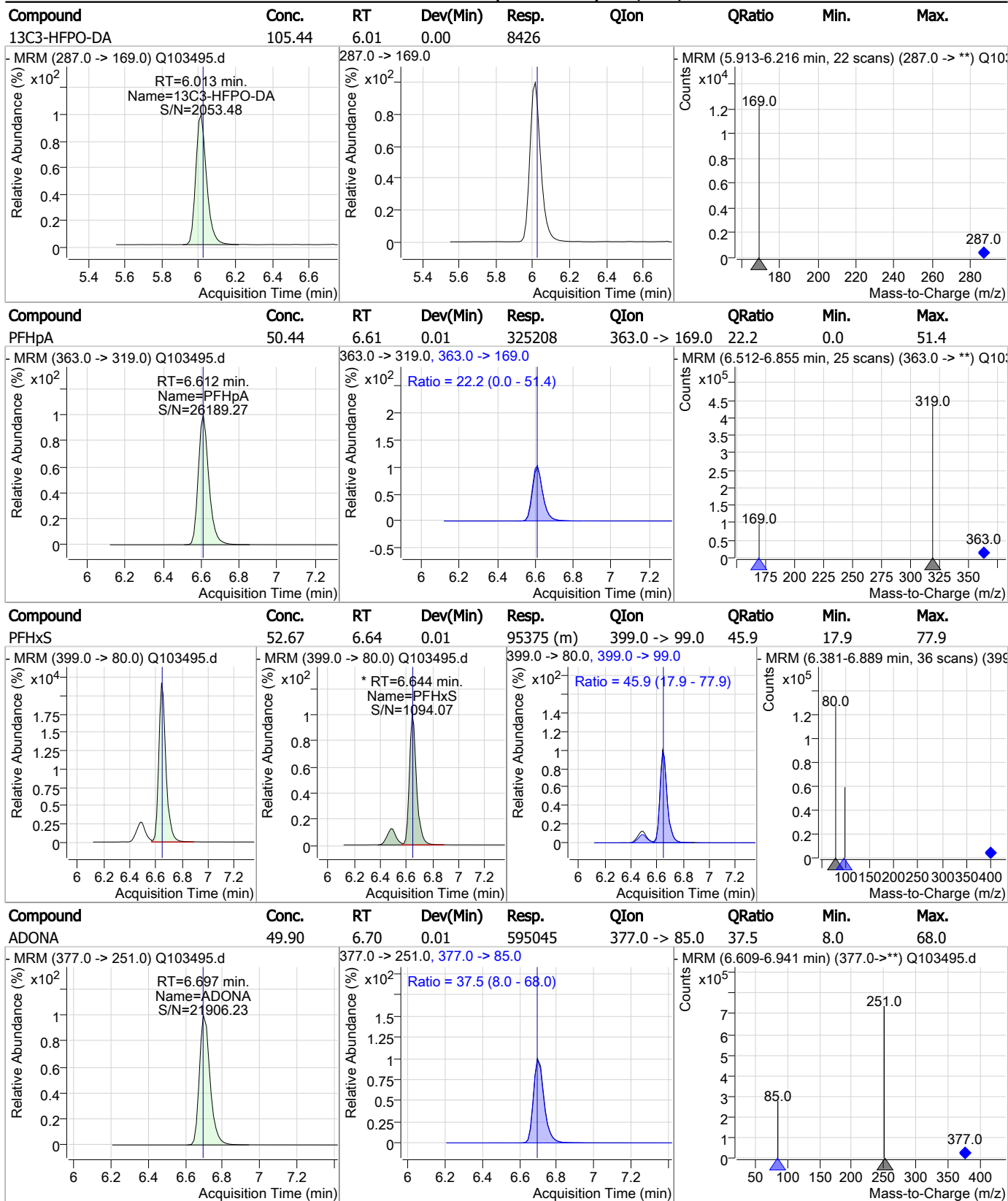
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	52.04	5.73	0.00	283970	313.0 -> 119.0	5.5	0.0	35.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	52.43	6.02	0.01	4722	329.0 -> 169.0	87.3	62.8	122.8



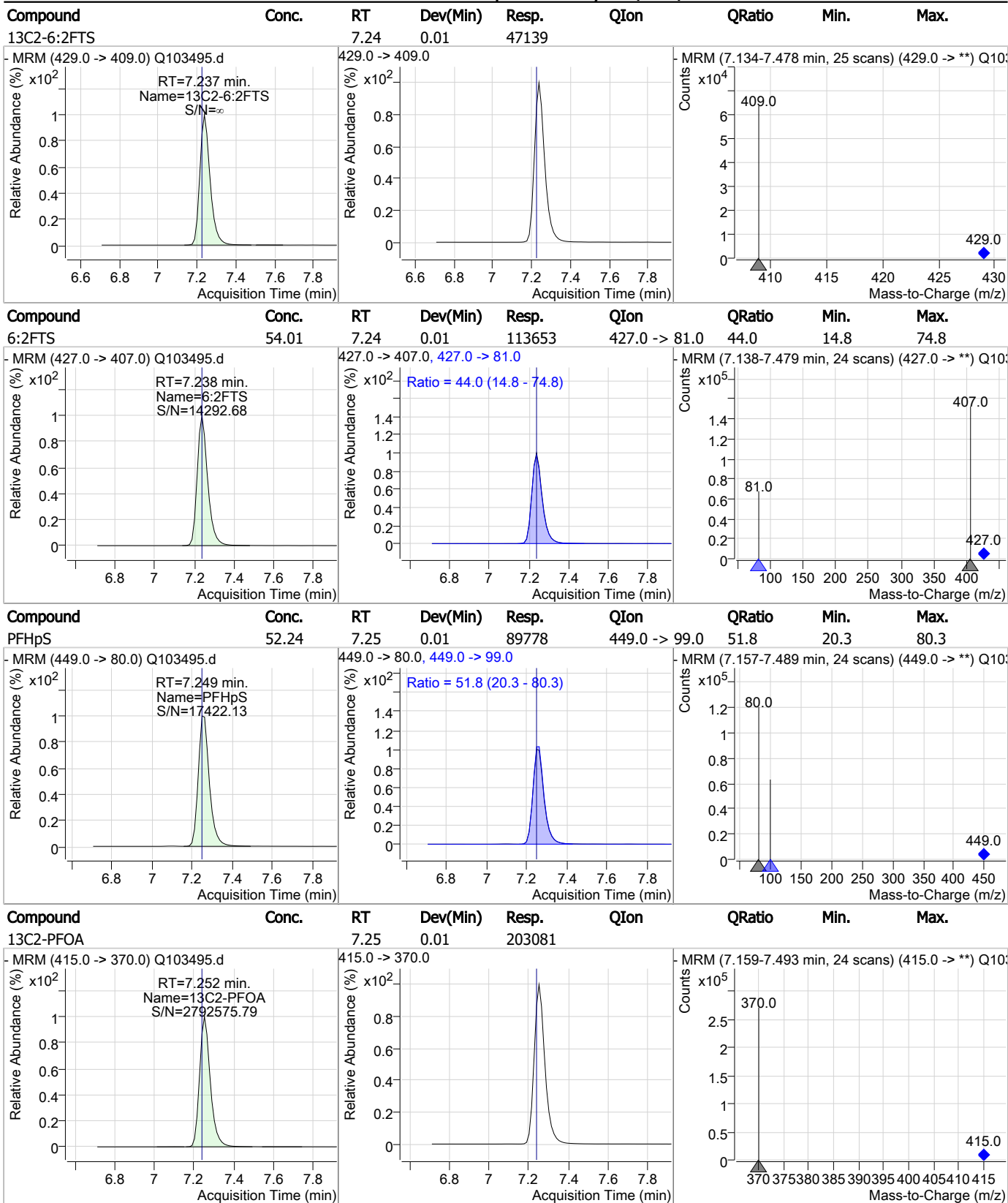
Perfluorinated Compounds by LC/MS/MS



7.6.14

7

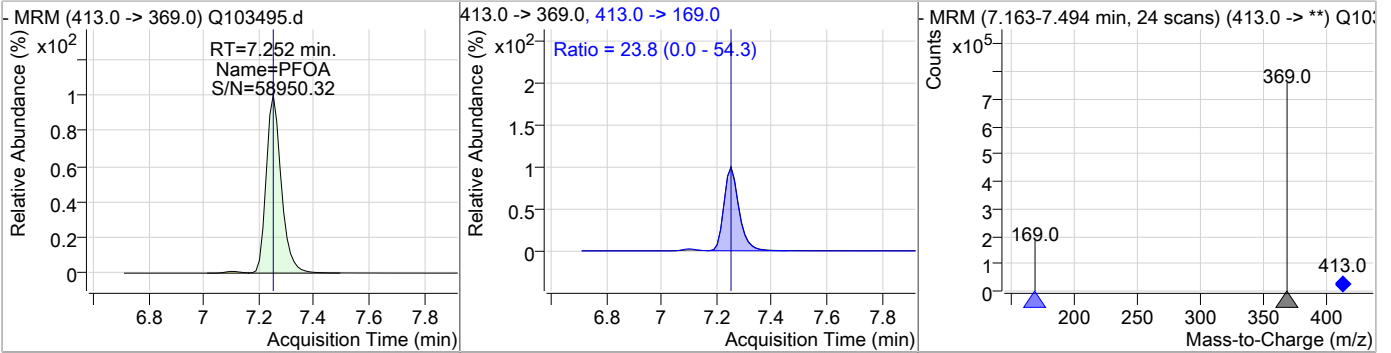
Perfluorinated Compounds by LC/MS/MS



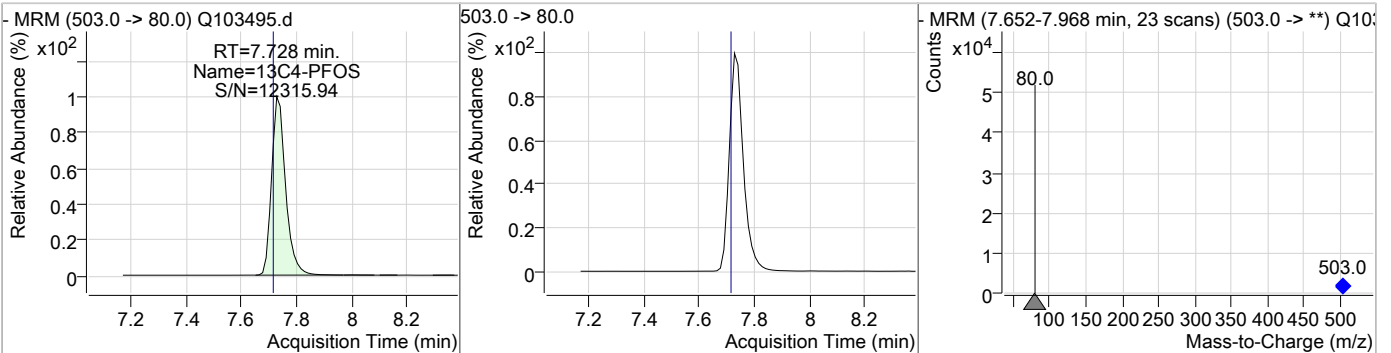
7.6.14

Perfluorinated Compounds by LC/MS/MS

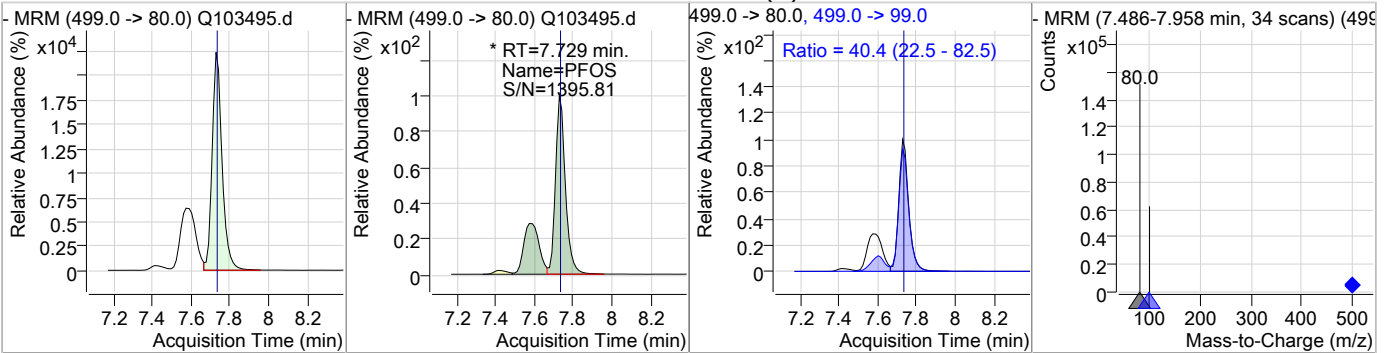
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	51.63	7.25	0.01	570773	413.0 -> 169.0	23.8	0.0	54.3



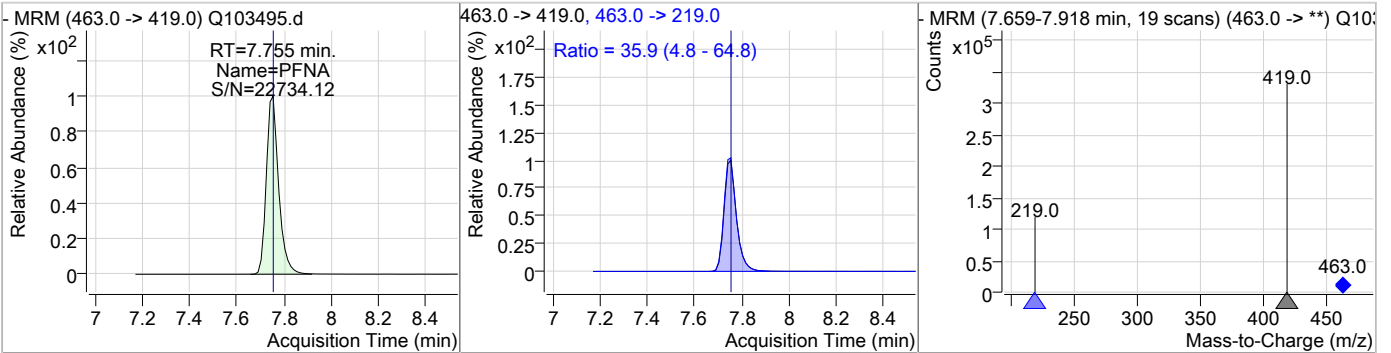
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.73	0.01	38518				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	52.01	7.73	0.01	114637 (m)	499.0 -> 99.0	40.4	22.5	82.5

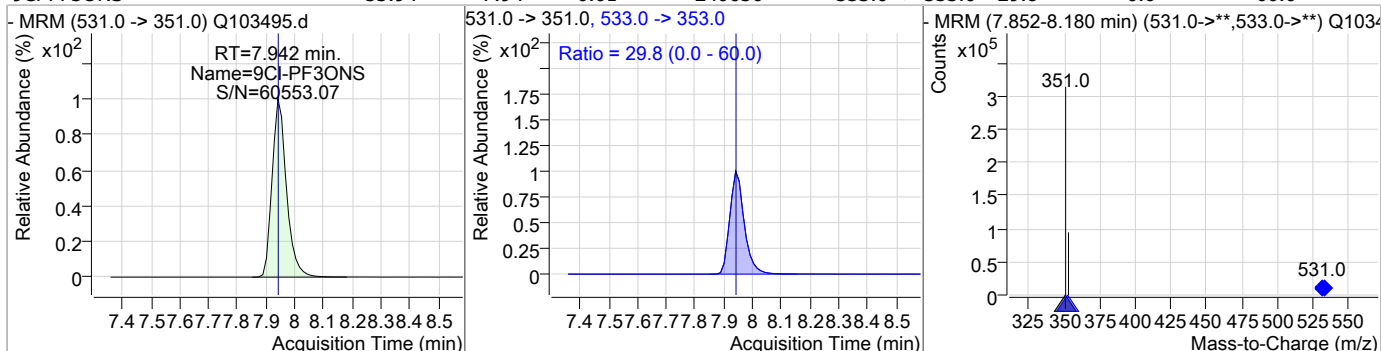


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	49.28	7.75	0.01	248329	463.0 -> 219.0	35.9	4.8	64.8

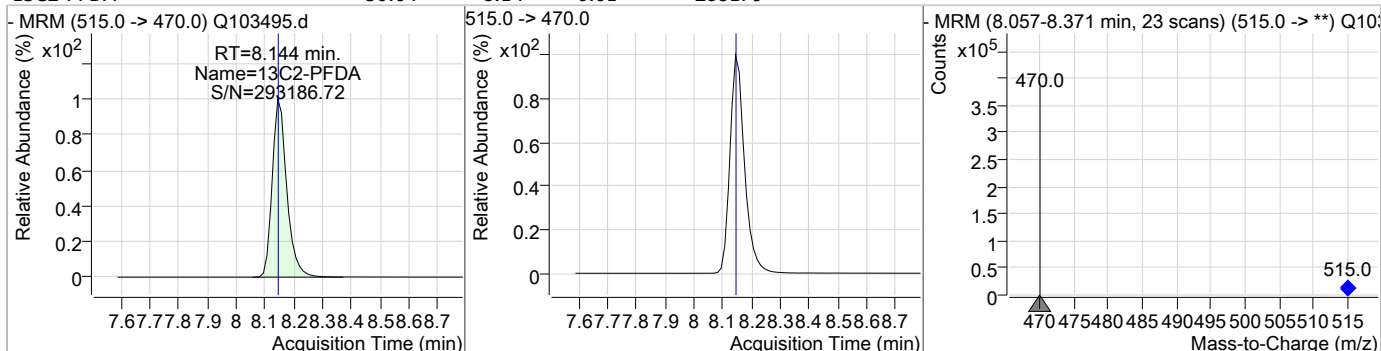


Perfluorinated Compounds by LC/MS/MS

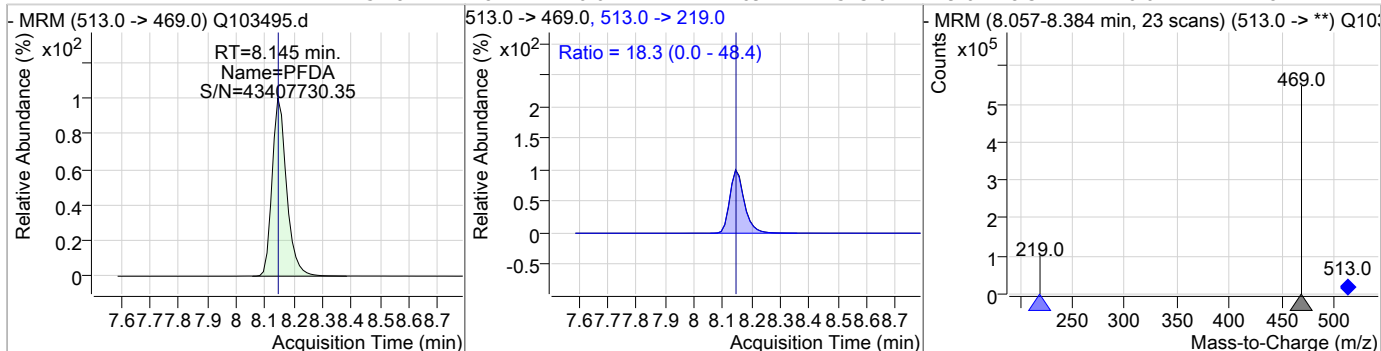
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9CI-PF3ONS	53.94	7.94	0.01	240650	533.0 -> 353.0	29.8	0.0	60.0



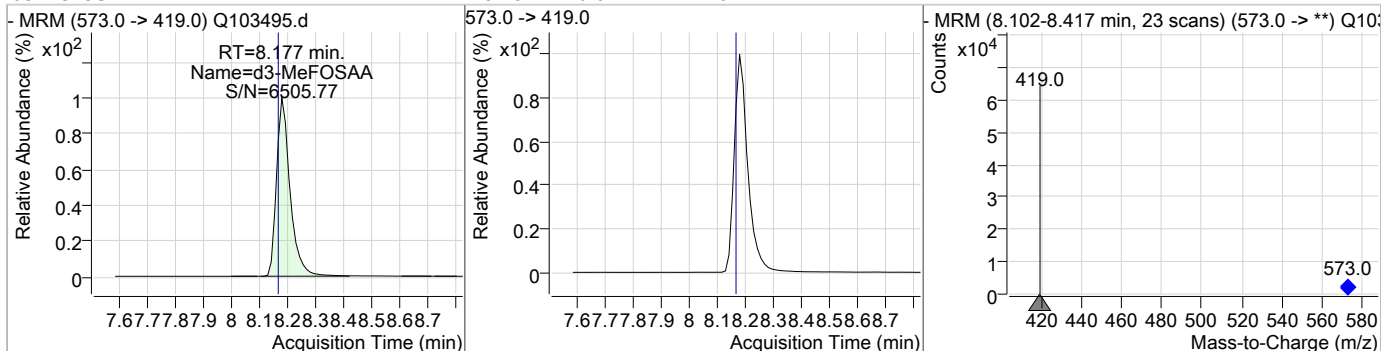
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	50.64	8.14	0.01	288179				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	52.82	8.14	0.01	411169	513.0 -> 219.0	18.3	0.0	48.4



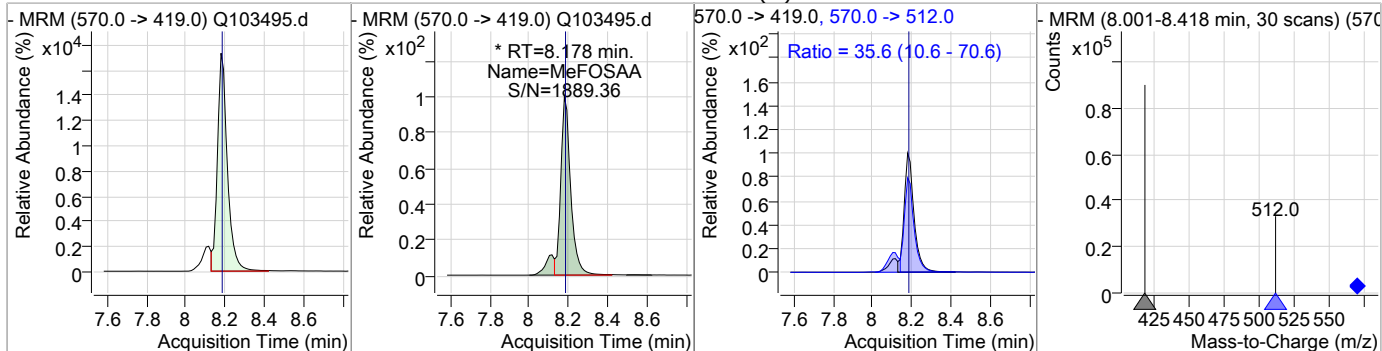
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.18	0.01	47624				



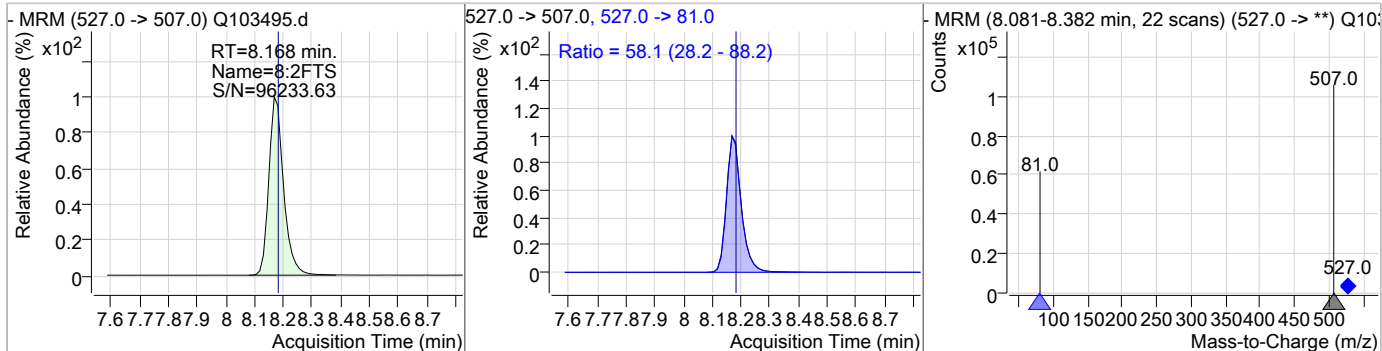
7.6.14
7

Perfluorinated Compounds by LC/MS/MS

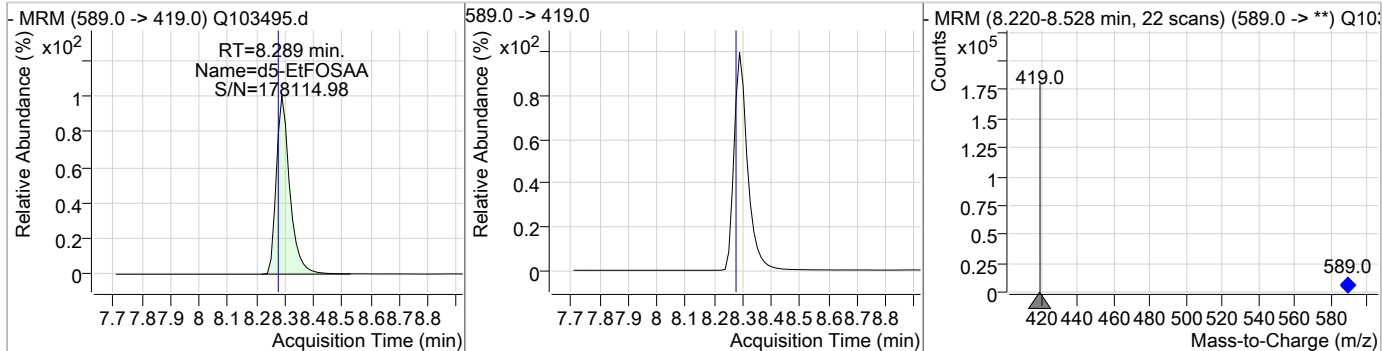
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	50.91	8.18	0.01	66504 (m)	570.0 -> 512.0	35.6	10.6	70.6



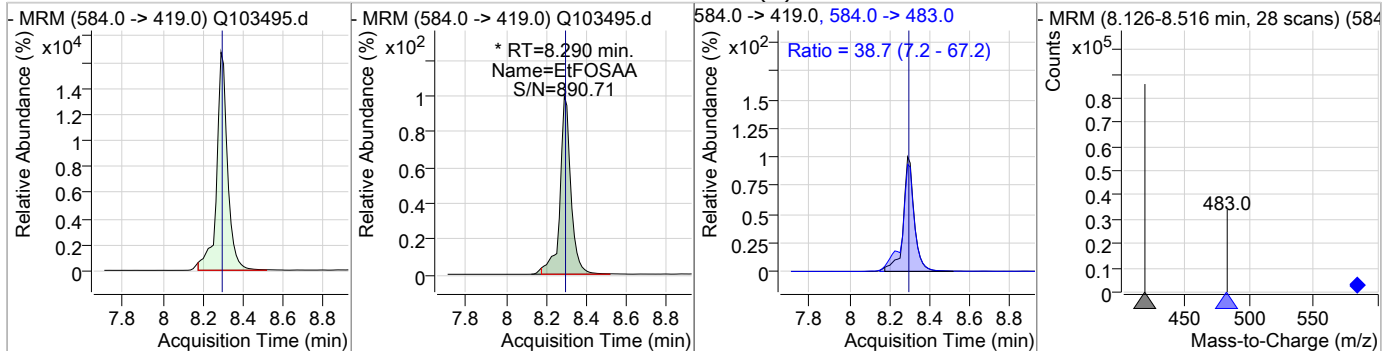
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	49.08	8.17	0.00	78787	527.0 -> 81.0	58.1	28.2	88.2



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	102.58	8.29	0.03	134429	589.0 -> 419.0	38.7	7.2	67.2



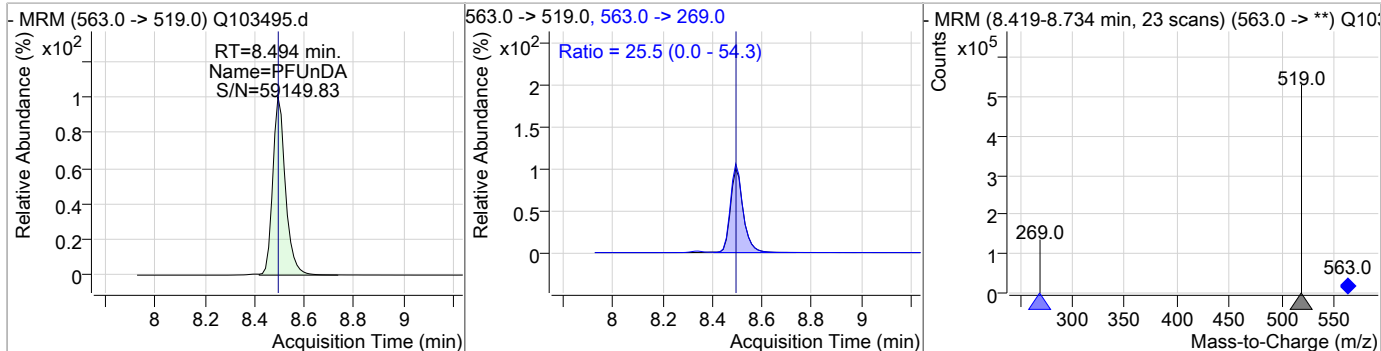
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	50.30	8.29	0.01	63594 (m)	584.0 -> 483.0	38.7	7.2	67.2



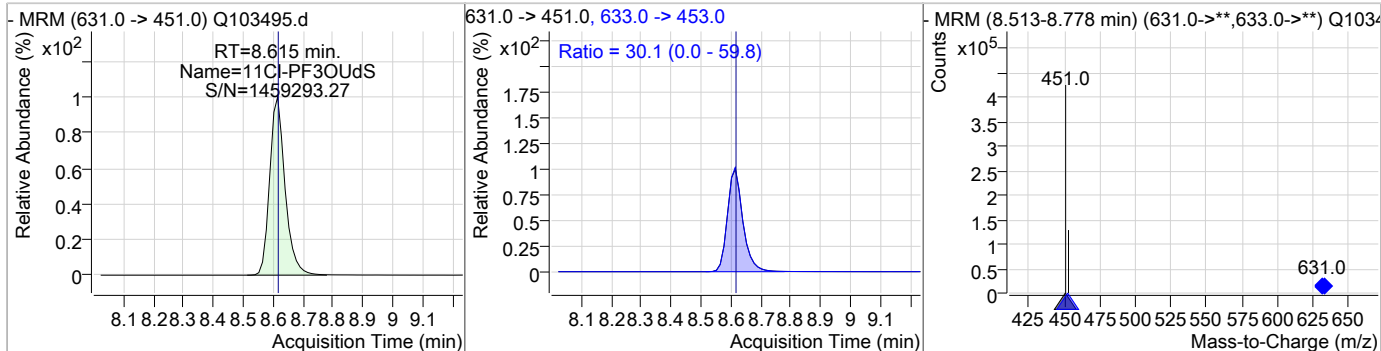
7.6.14
7

Perfluorinated Compounds by LC/MS/MS

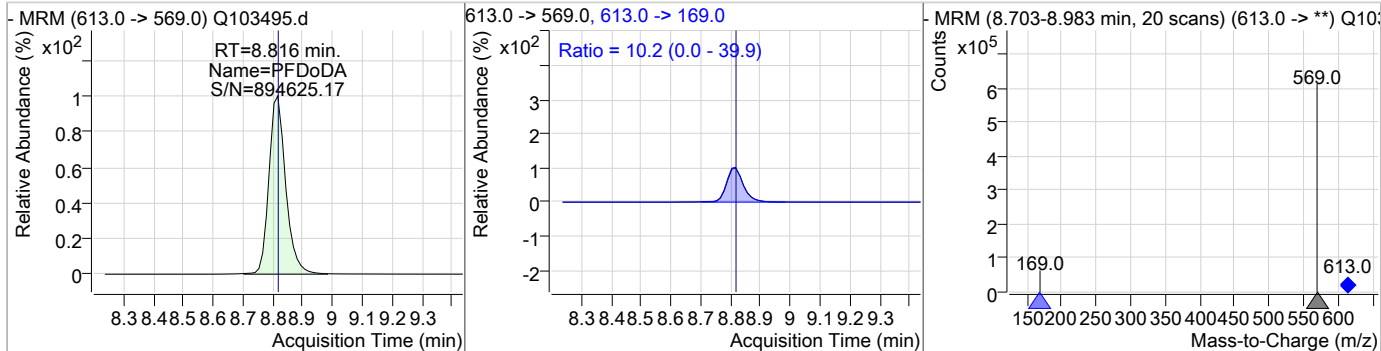
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	52.10	8.49	0.01	401046	563.0 -> 269.0	25.5	0.0	54.3



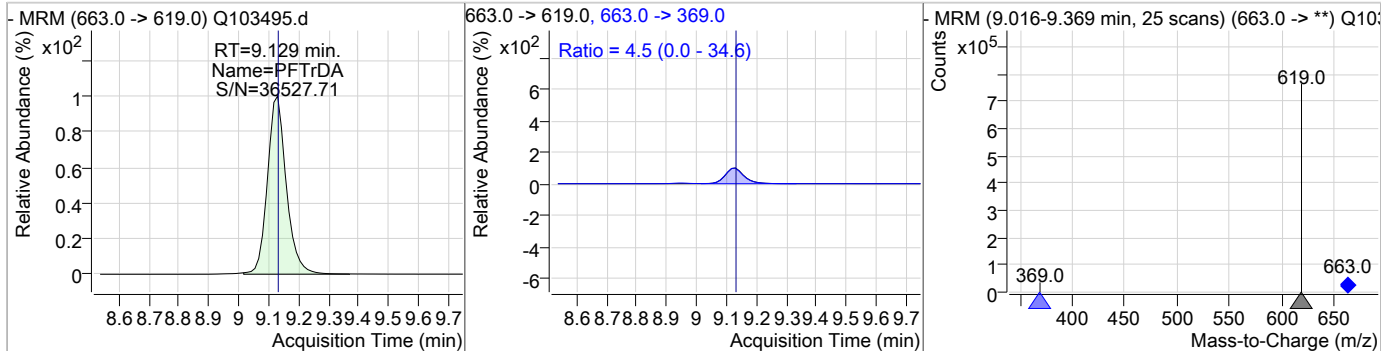
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	51.44	8.61	0.01	319655	633.0 -> 453.0	30.1	0.0	59.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	48.92	8.82	0.01	475460	613.0 -> 169.0	10.2	0.0	39.9

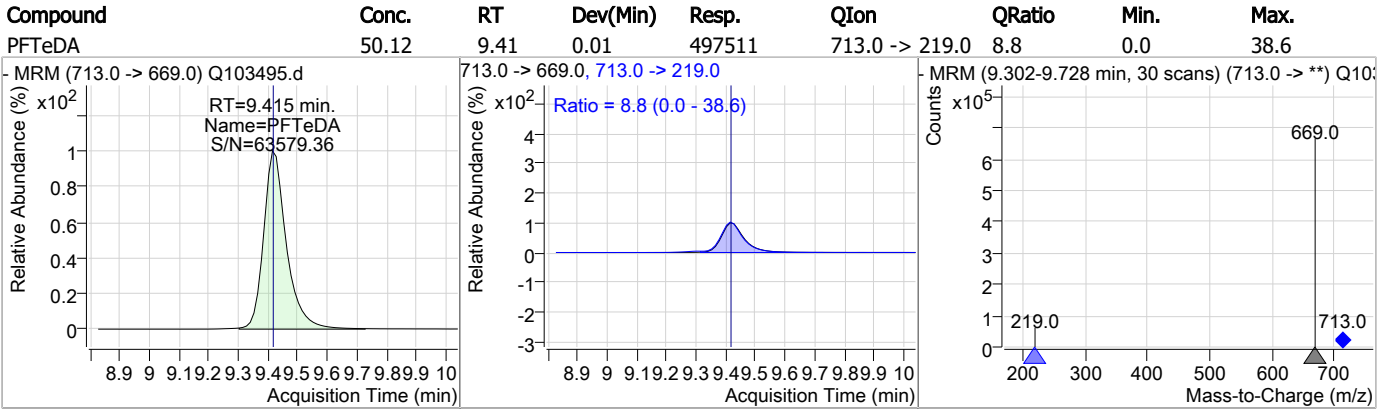


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	49.49	9.13	0.01	574463	663.0 -> 369.0	4.5	0.0	34.6



7.6.14
7

Perfluorinated Compounds by LC/MS/MS



7.6.14

7

Manual Integration Approval Summary

Sample Number: SQ2201-CC2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103495.D Analyst approved: 06/19/23 16:24 Anna Ludwig
Injection Time: 06/19/23 01:12 Supervisor approved: 06/19/23 17:25 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.64	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.73	Split peak
MeFOSAA	2355-31-9		8.18	Split peak
EtFOSAA	2991-50-6		8.29	Split peak

7.6.14.1

7

Perfluorinated Compounds by LC/MS/MS

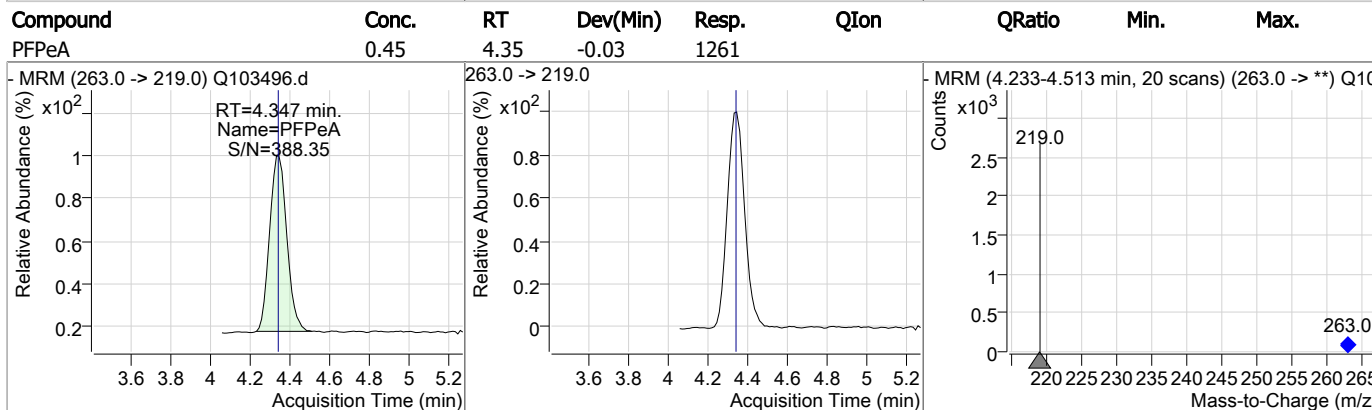
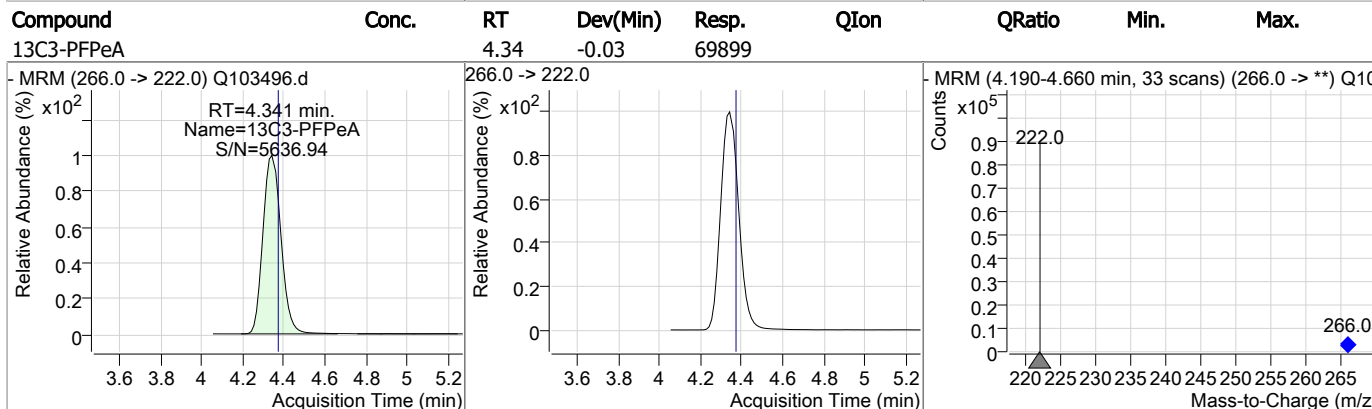
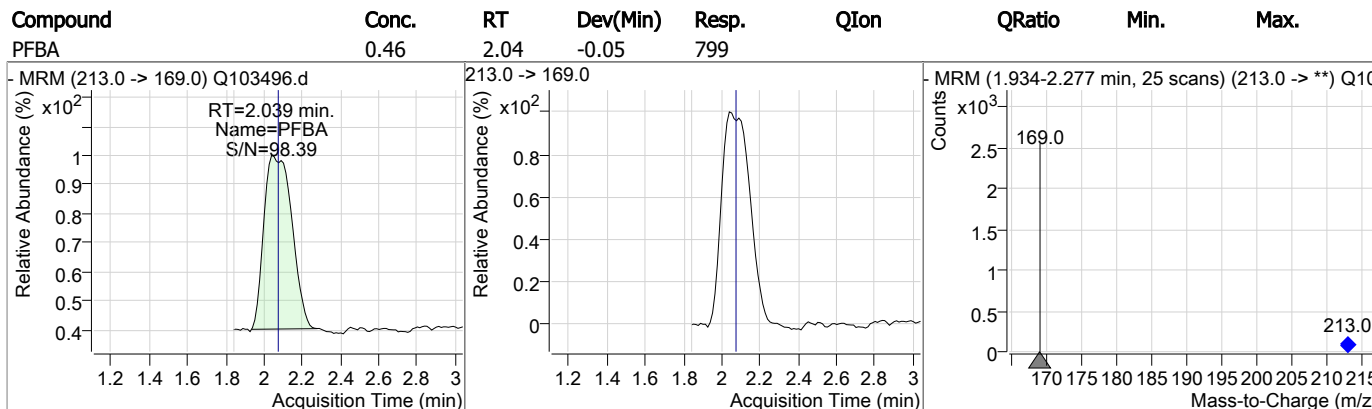
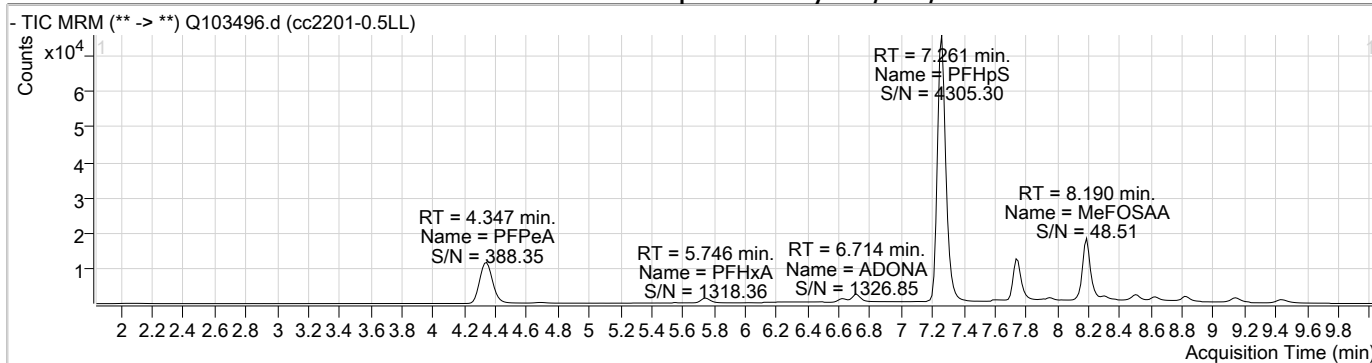
Data File : Q103496.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/19/2023 1:28:07 AM
 Sample Name : cc2201-0.5LL
 Vial : P1-A2
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP96727,SQ2201,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.250	429.0 -> 409.0	46717	20.00 µg/L	0.025
13C2-PFOA	7.264	415.0 -> 370.0	227873	20.00 µg/L	0.025
13C3-PFPeA	4.341	266.0 -> 222.0	69899	20.00 µg/L	-0.031
13C4-PFOS	7.741	503.0 -> 80.0	37266	20.00 µg/L	0.025
d3-MeFOSAA	8.190	573.0 -> 419.0	52370	40.00 µg/L	0.025
System Monitoring Compounds					
13C2-PFDA	8.157	515.0 -> 470.0	3382	0.53 µg/L	0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 2.6%	
13C2-PFHxA	5.744	315.0 -> 270.0	2831	0.44 µg/L	0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 2.2%	
d5-EtFOSAA	8.302	589.0 -> 419.0	1813	1.37 µg/L	0.038
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 3.4%	
13C3-HFPO-DA	6.026	287.0 -> 169.0	77	0.88 µg/L m	0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 2.2%	
Target Compounds					
6:2FTS	7.250	427.0 -> 407.0	1406	0.67 µg/L	QValue 94
8:2FTS	8.193	527.0 -> 507.0	917	0.52 µg/L	99
EtFOSAA	8.303	584.0 -> 419.0	813	0.61 µg/L m	88
MeFOSAA	8.190	570.0 -> 419.0	955	0.66 µg/L m	91
PFBA	2.039	213.0 -> 169.0	799	0.46 µg/L	100
PFBS	4.678	299.0 -> 80.0	637	0.51 µg/L	91
PFDA	8.157	513.0 -> 469.0	4351	0.50 µg/L	100
PFDoDA	8.831	613.0 -> 569.0	4829	0.51 µg/L	96
PFHpA	6.624	363.0 -> 319.0	3425	0.49 µg/L	99
PFHpS	7.261	449.0 -> 80.0	807	0.49 µg/L	87
PFHxA	5.746	313.0 -> 269.0	2763	0.47 µg/L	100
PFHxS	6.656	399.0 -> 80.0	876	0.51 µg/L m	98
PFNA	7.755	463.0 -> 419.0	2237	0.40 µg/L	83
PFOA	7.265	413.0 -> 369.0	5627	0.45 µg/L	98
PFOS	7.741	499.0 -> 80.0	1245	0.58 µg/L m	82
PFPeA	4.347	263.0 -> 219.0	1261	0.45 µg/L	100
PFTeDA	9.440	713.0 -> 669.0	4833	0.50 µg/L	98
PFTrDA	9.142	663.0 -> 619.0	5423	0.48 µg/L	98
PFUnDA	8.506	563.0 -> 519.0	4023	0.54 µg/L	96
ADONA	6.714	377.0 -> 251.0	5531	0.44 µg/L	98
9CI-PF3ONS	7.954	531.0 -> 351.0	2165	0.47 µg/L	97
11CI-PF3OUdS	8.627	631.0 -> 451.0	2897	0.44 µg/L	97
HFPO-DA	6.028	285.0 -> 169.0	45	0.46 µg/L	74

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

7.6.15
7

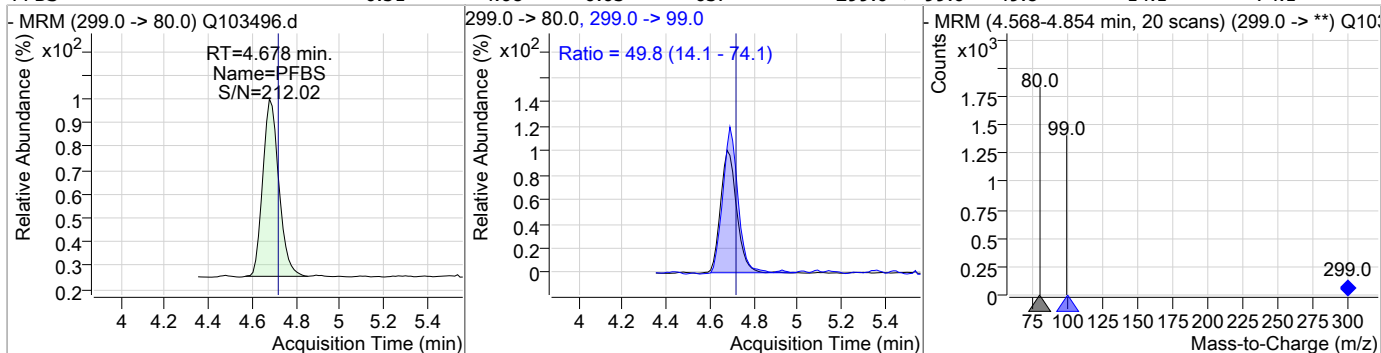
Perfluorinated Compounds by LC/MS/MS



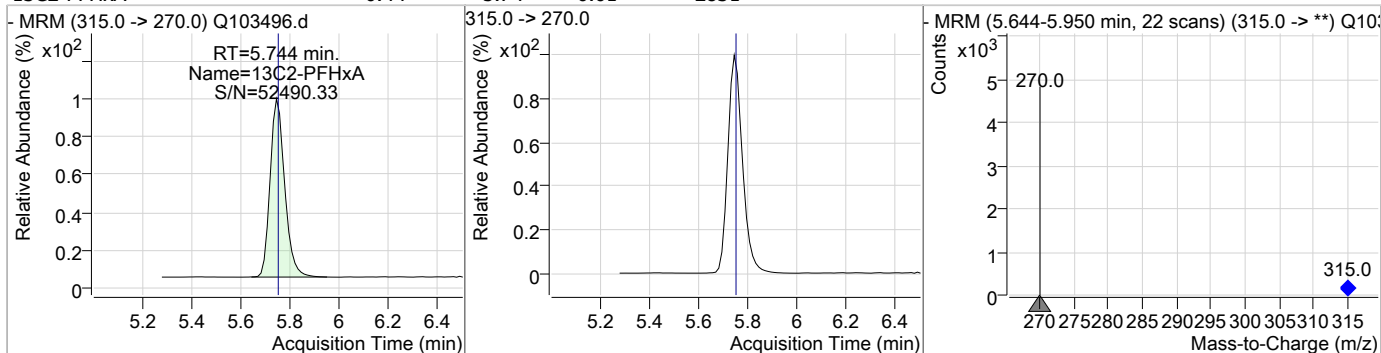
7.6.15
7

Perfluorinated Compounds by LC/MS/MS

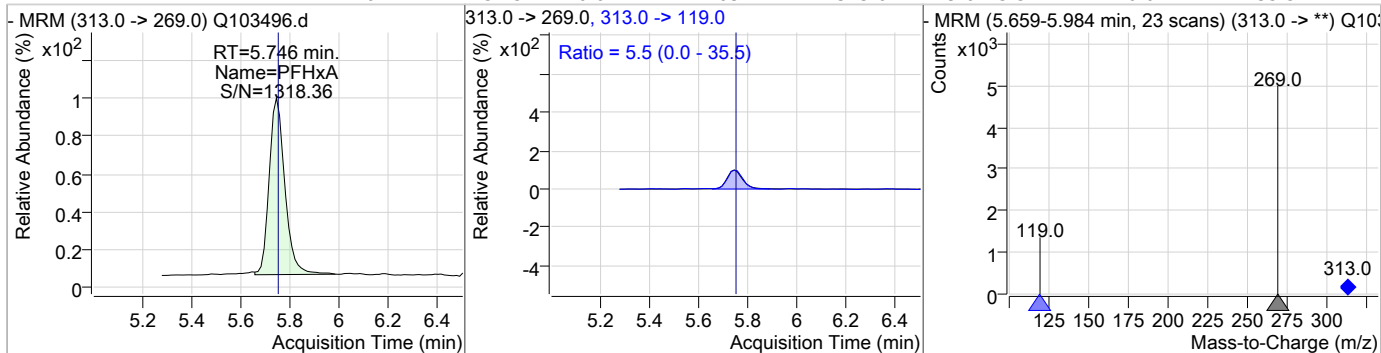
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.51	4.68	-0.03	637	299.0 -> 99.0	49.8	14.1	74.1



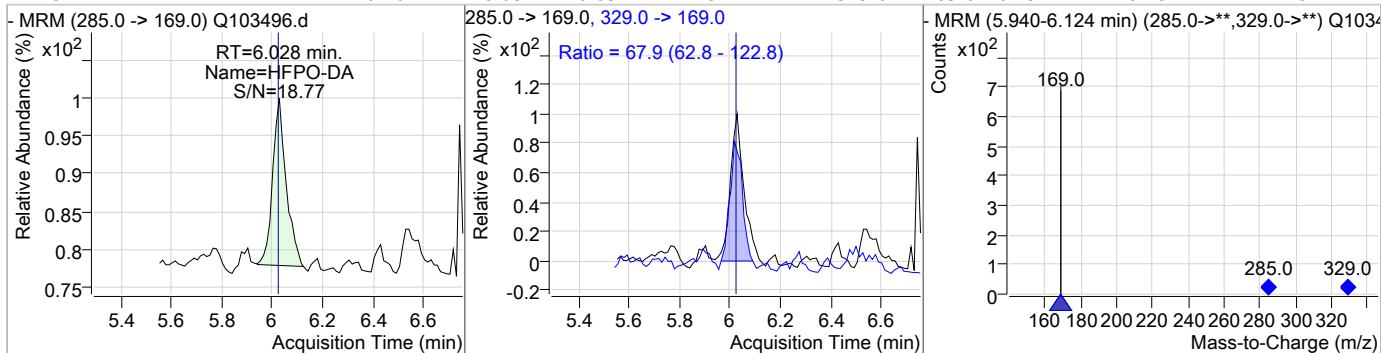
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	0.44	5.74	0.01	2831				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.47	5.75	0.01	2763	313.0 -> 119.0	5.5	0.0	35.5

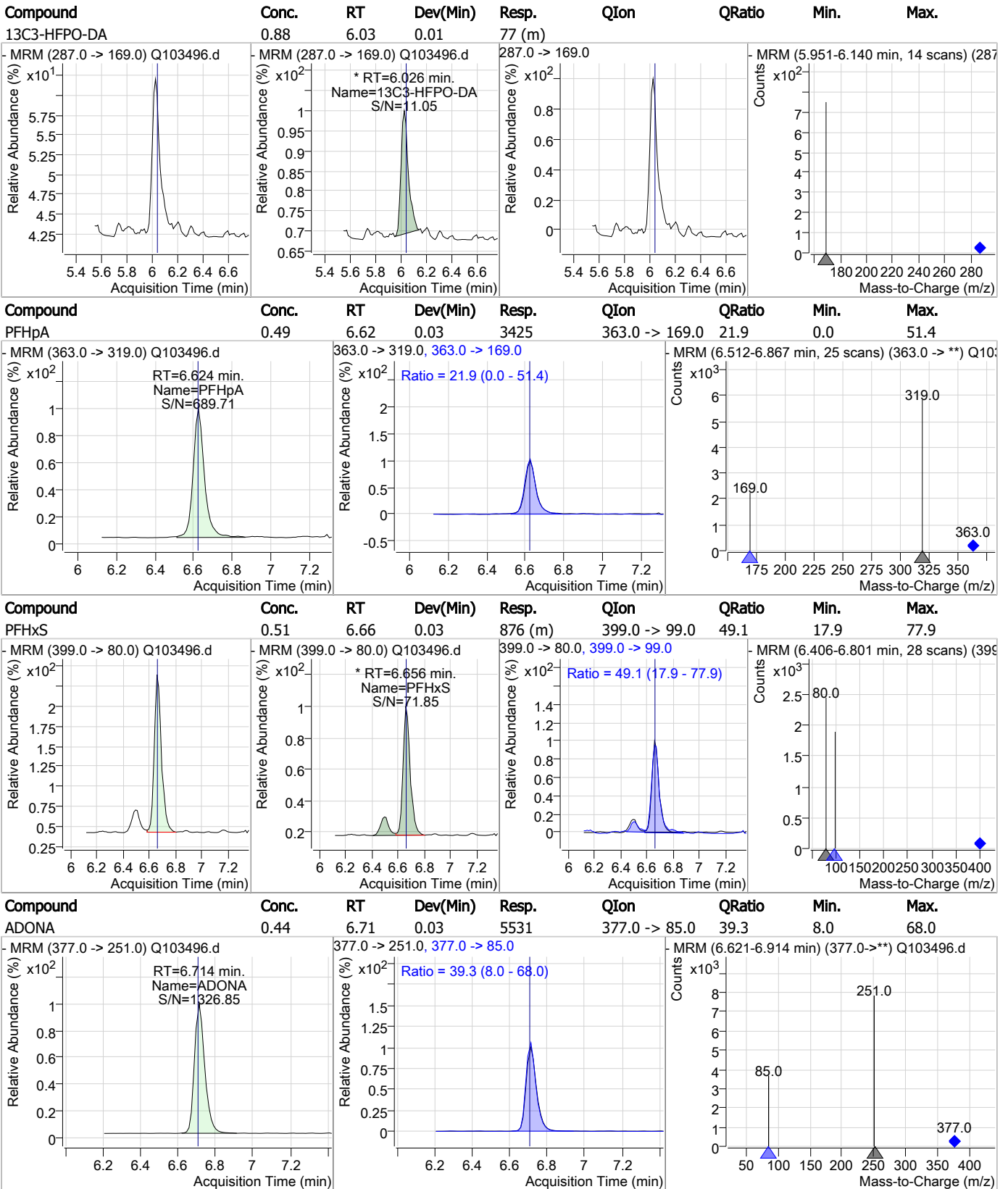


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.46	6.03	0.03	45	329.0 -> 169.0	67.9	62.8	122.8



7.6.15
7

Perfluorinated Compounds by LC/MS/MS

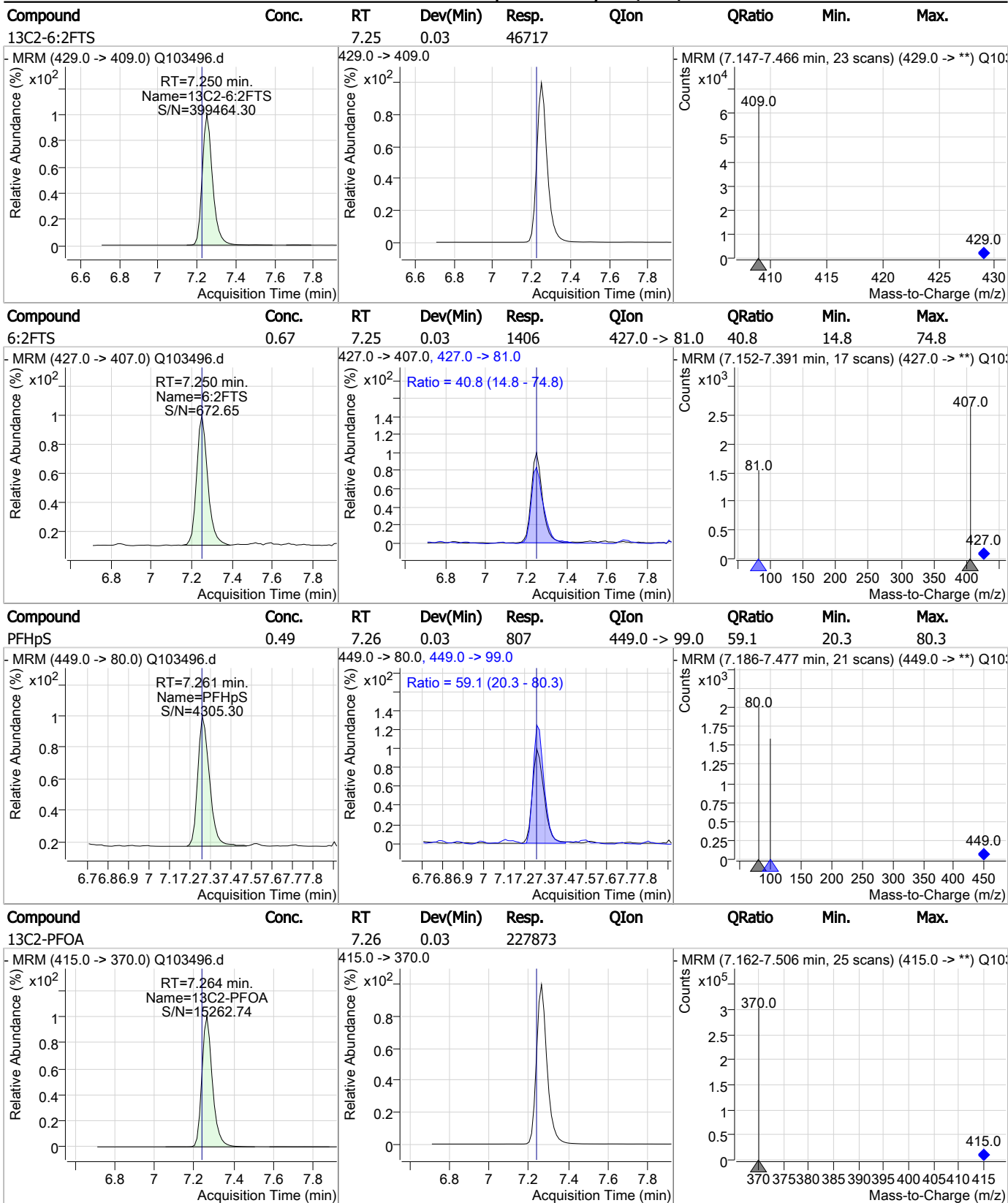


7.6.15

7



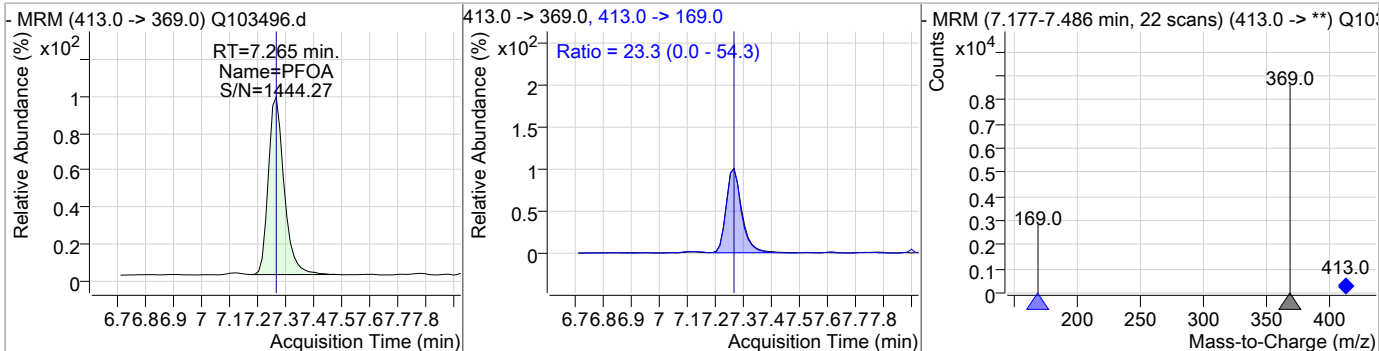
Perfluorinated Compounds by LC/MS/MS



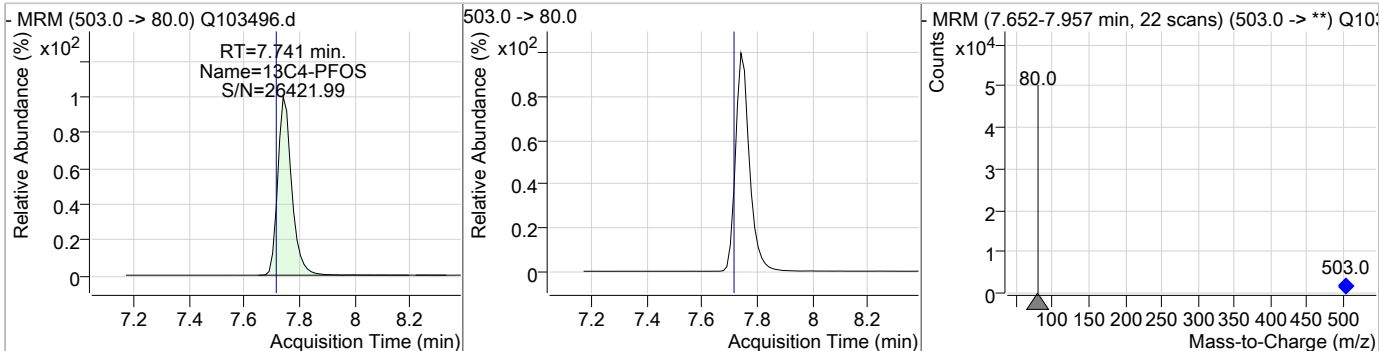
7.6.15
7

Perfluorinated Compounds by LC/MS/MS

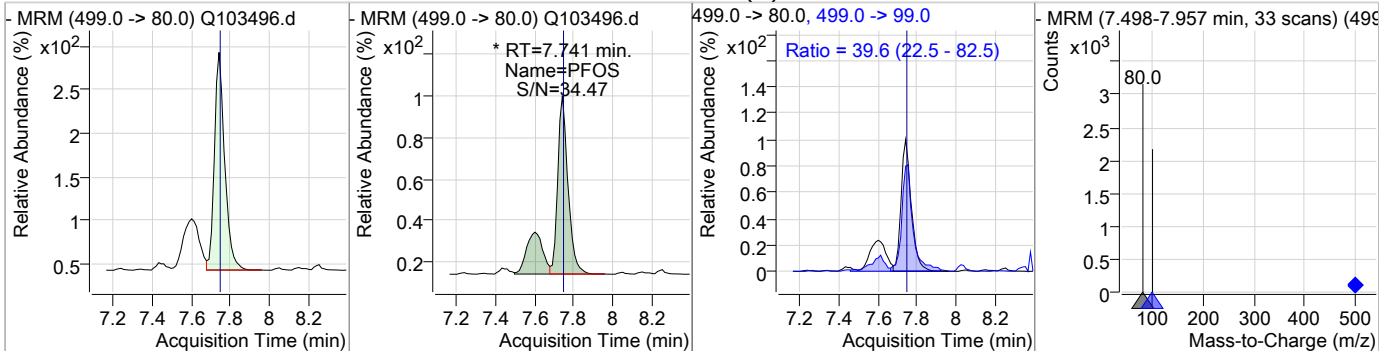
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.45	7.27	0.03	5627	413.0 -> 169.0	23.3	0.0	54.3



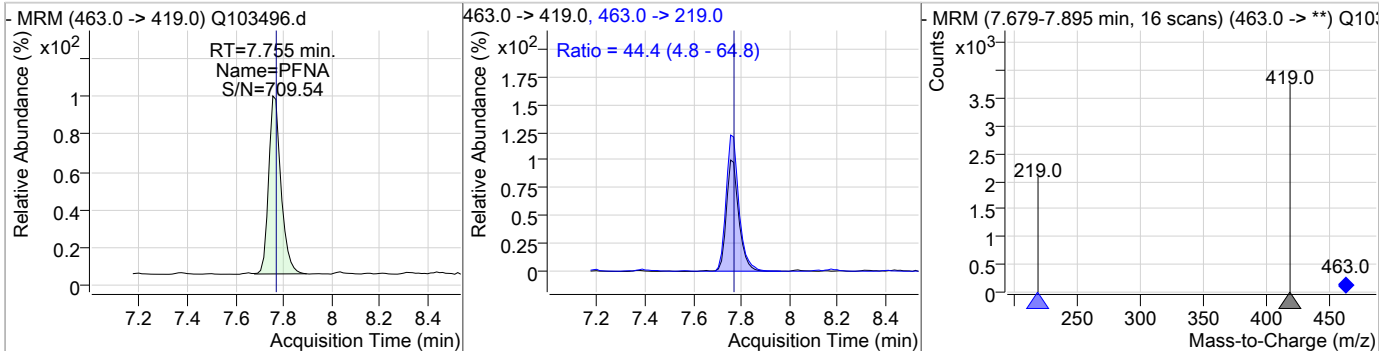
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.74	0.03	37266				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.58	7.74	0.03	1245 (m)	499.0 -> 99.0	39.6	22.5	82.5



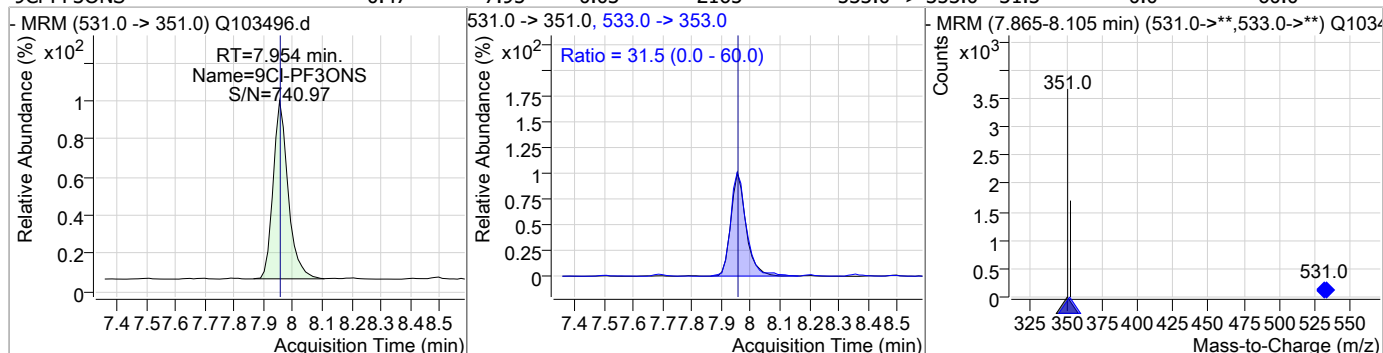
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.40	7.75	0.01	2237	463.0 -> 219.0	44.4	4.8	64.8



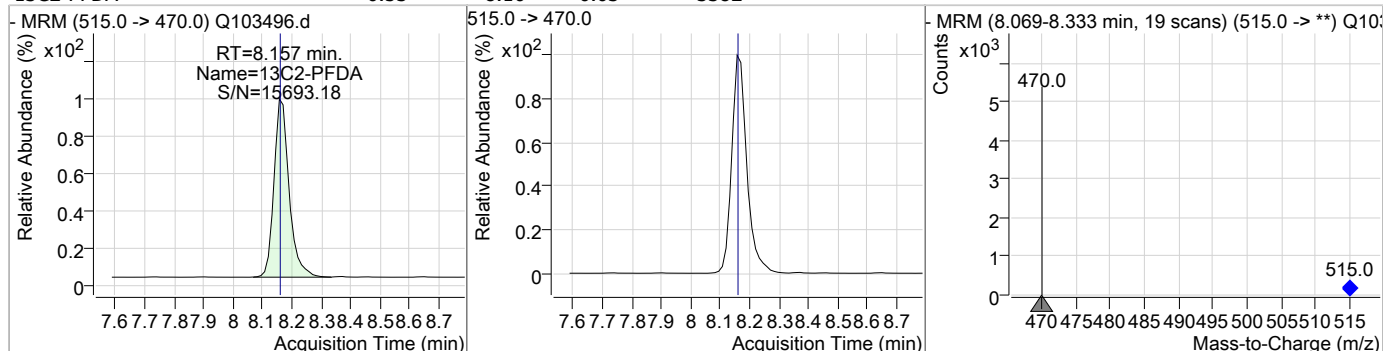
7.6.15
7

Perfluorinated Compounds by LC/MS/MS

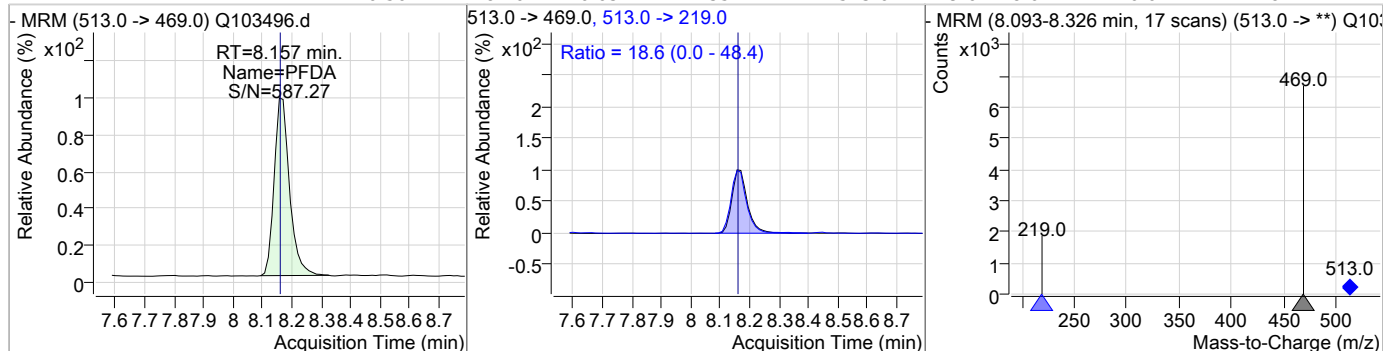
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9CI-PF3ONS	0.47	7.95	0.03	2165	533.0 -> 353.0	31.5	0.0	60.0



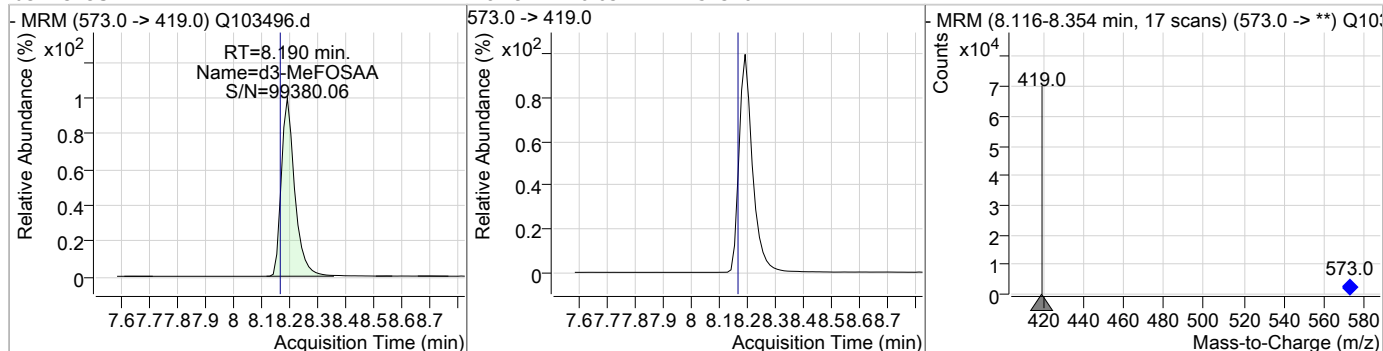
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	0.53	8.16	0.03	3382				



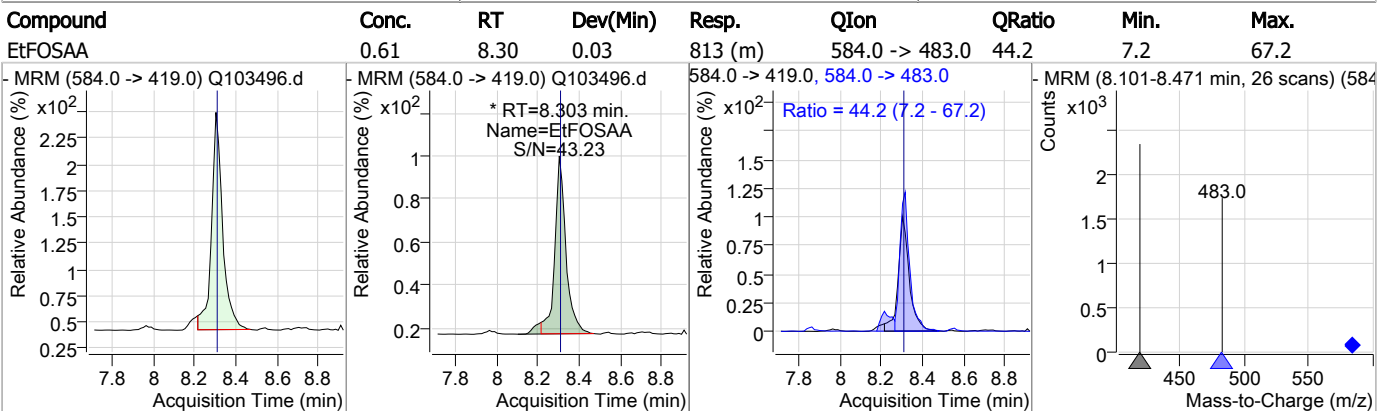
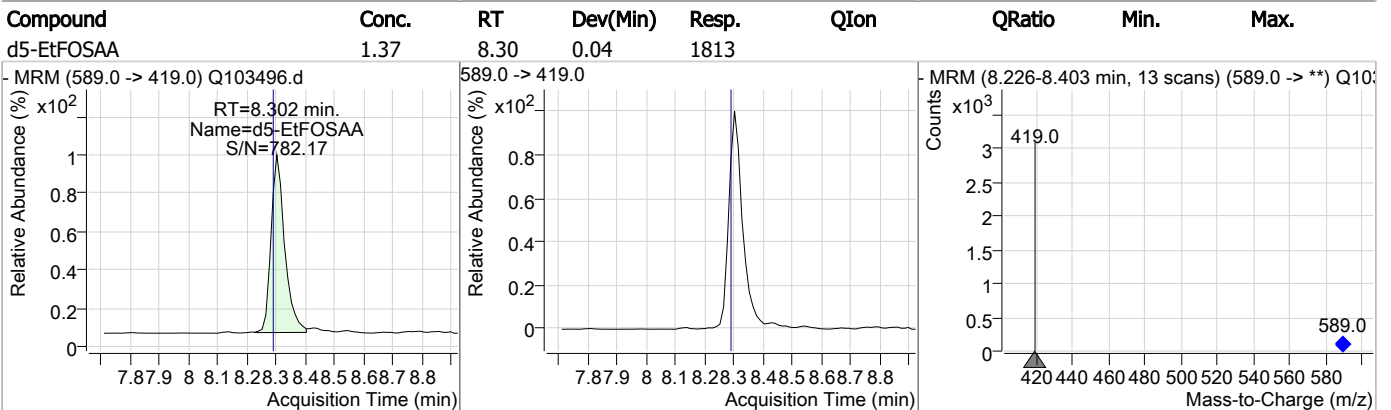
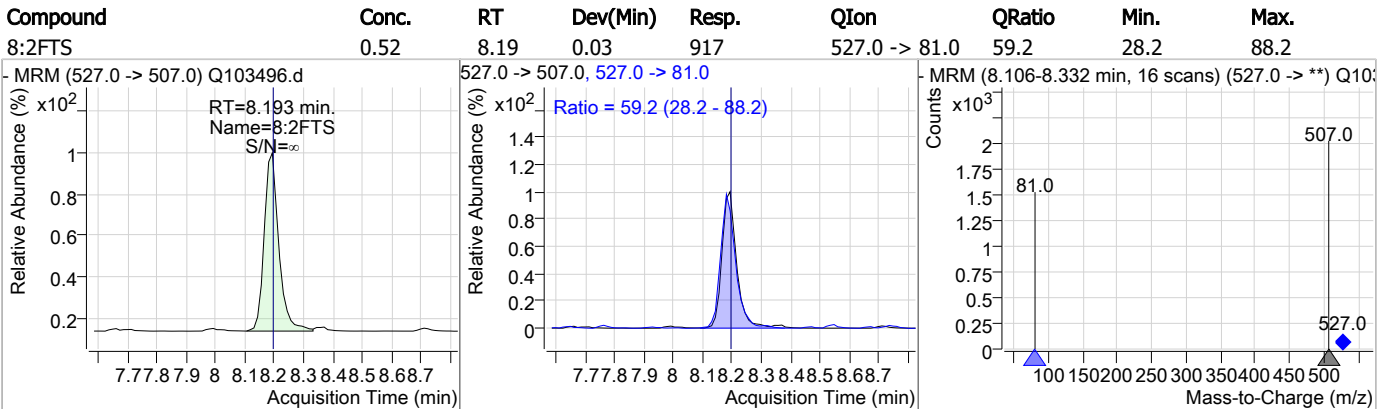
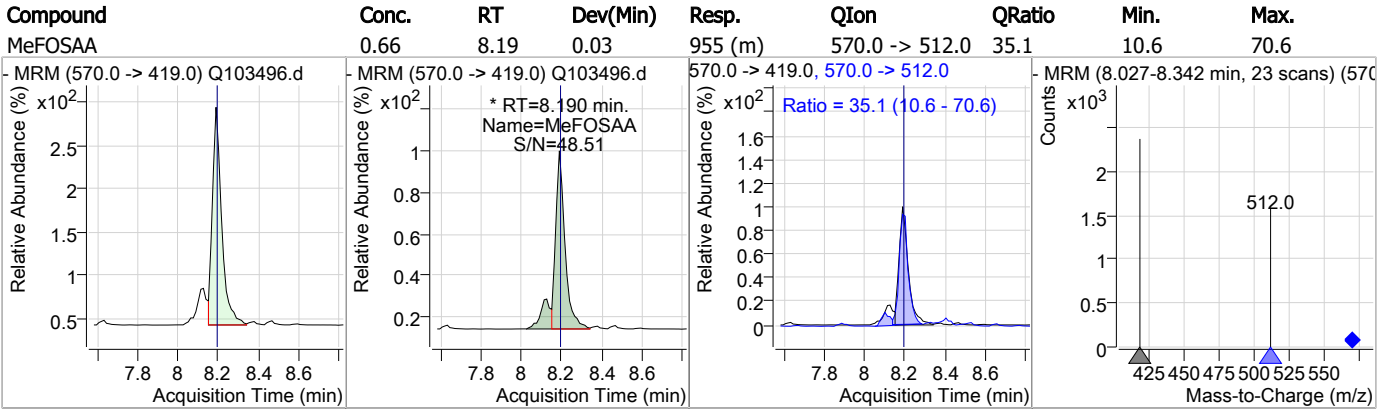
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.50	8.16	0.03	4351	513.0 -> 219.0	18.6	0.0	48.4



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.19	0.03	52370				



Perfluorinated Compounds by LC/MS/MS

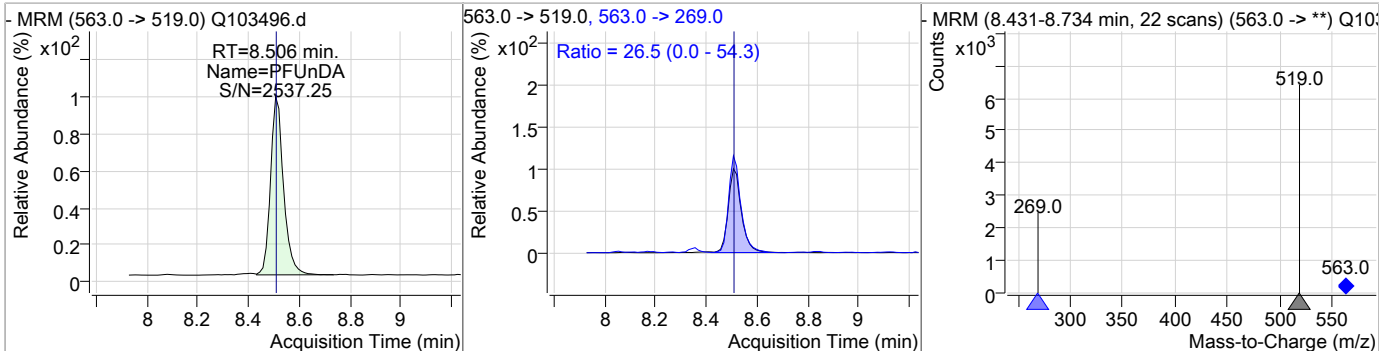


7.6.15
7

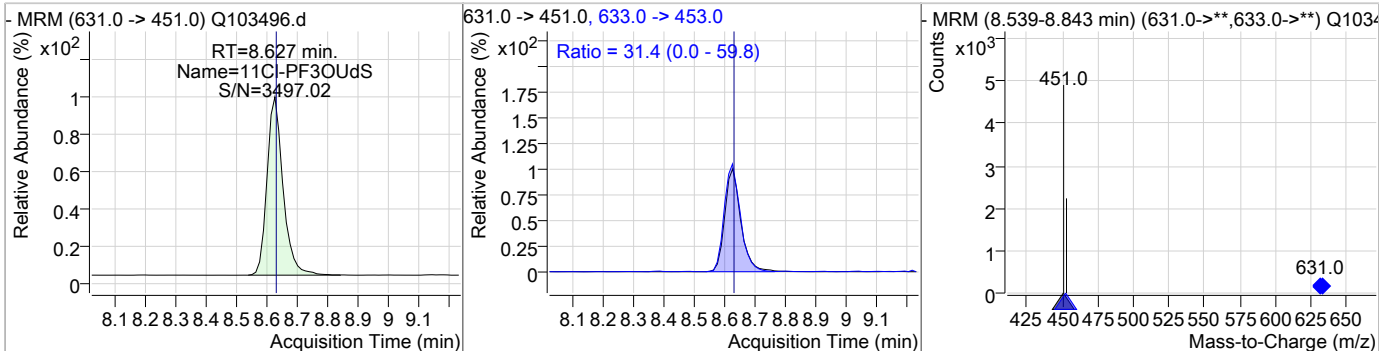


Perfluorinated Compounds by LC/MS/MS

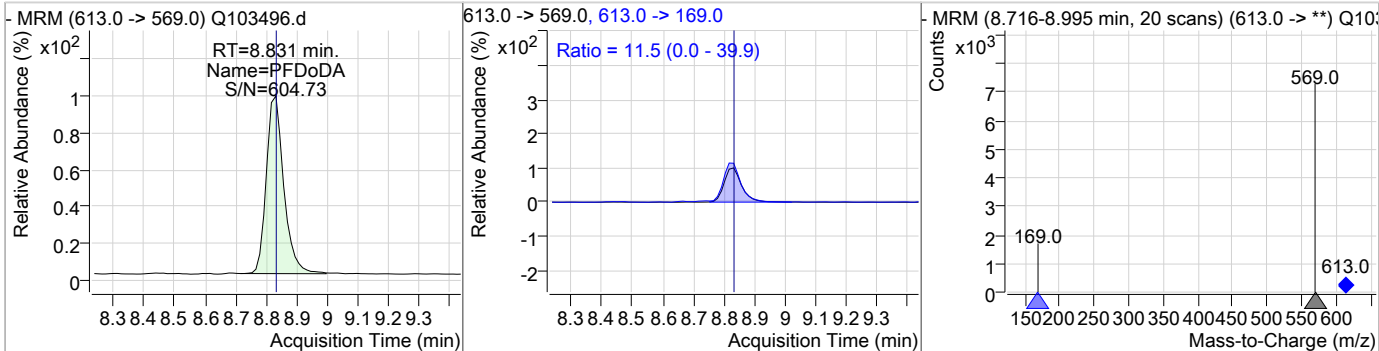
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.54	8.51	0.03	4023	563.0 -> 269.0	26.5	0.0	54.3



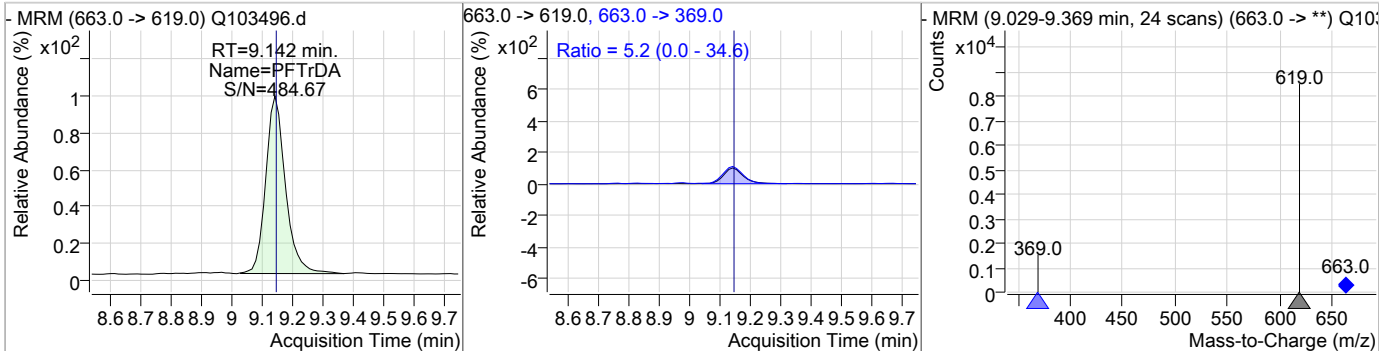
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.44	8.63	0.03	2897	633.0 -> 453.0	31.4	0.0	59.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	0.51	8.83	0.03	4829	613.0 -> 169.0	11.5	0.0	39.9



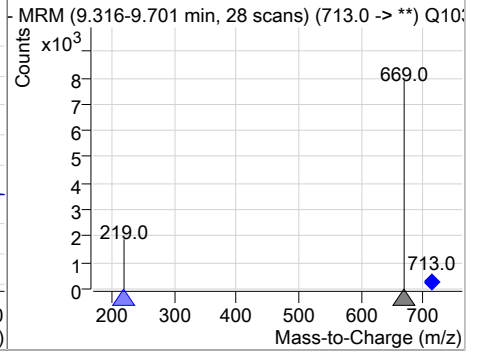
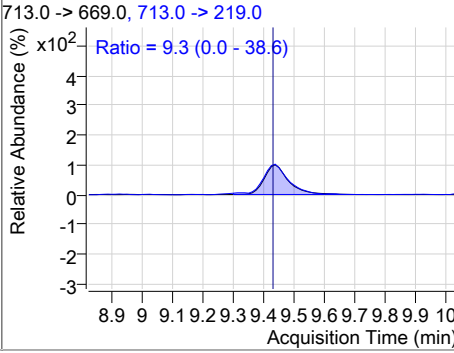
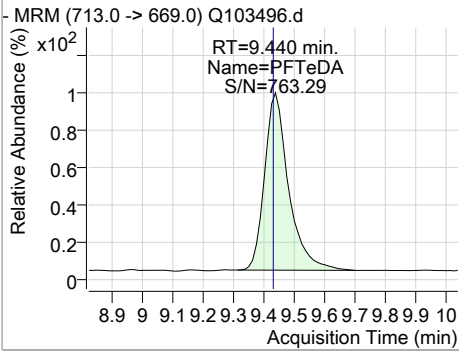
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	0.48	9.14	0.03	5423	663.0 -> 369.0	5.2	0.0	34.6



7.6.15
7

Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	0.50	9.44	0.04	4833	713.0 -> 219.0	9.3	0.0	38.6



7.6.15
7

Manual Integration Approval Summary

Sample Number: SQ2201-CC2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103496.D Analyst approved: 06/19/23 16:24 Anna Ludwig
Injection Time: 06/19/23 01:28 Supervisor approved: 06/19/23 17:33 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
13C3-HFPO-DA			6.03	Missed peak
Perfluorohexanesulfonic acid	355-46-4		6.66	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.74	Split peak
MeFOSAA	2355-31-9		8.19	Split peak
EtFOSAA	2991-50-6		8.30	Split peak

7.6.15.1
7

Perfluorinated Compounds by LC/MS/MS

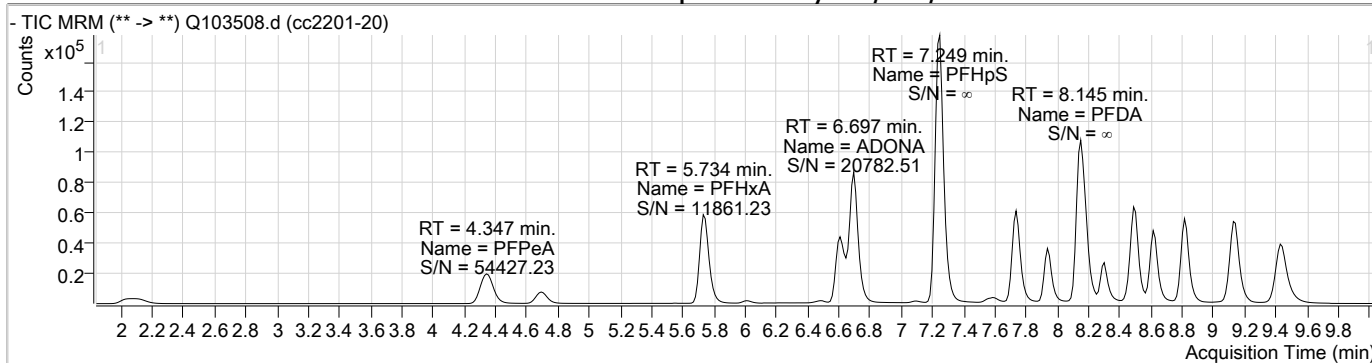
Data File : Q103508.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/19/2023 4:37:30 AM
 Sample Name : cc2201-20
 Vial : P1-A7
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2201.batch.bin
 Sample Information : OP96727,SQ2201,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.237	429.0 -> 409.0	47851	20.00 µg/L	0.013
13C2-PFOA	7.252	415.0 -> 370.0	215629	20.00 µg/L	0.013
13C3-PFPeA	4.341	266.0 -> 222.0	68588	20.00 µg/L	-0.031
13C4-PFOS	7.728	503.0 -> 80.0	37435	20.00 µg/L	0.013
d3-MeFOSAA	8.177	573.0 -> 419.0	49778	40.00 µg/L	0.013
System Monitoring Compounds					
13C2-PFDA	8.144	515.0 -> 470.0	123537	20.44 µg/L	0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 102.2%	
13C2-PFHxA	5.732	315.0 -> 270.0	124244	19.92 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 99.6%	
d5-EtFOSAA	8.302	589.0 -> 419.0	54062	41.50 µg/L	0.038
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 103.8%	
13C3-HFPO-DA	6.013	287.0 -> 169.0	3388	40.66 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 101.7%	
Target Compounds					
6:2FTS	7.238	427.0 -> 407.0	47806	22.38 µg/L	100
8:2FTS	8.168	527.0 -> 507.0	33723	19.46 µg/L	99
EtFOSAA	8.303	584.0 -> 419.0	25252	19.61 µg/L	m 99
MeFOSAA	8.190	570.0 -> 419.0	26832	19.65 µg/L	m 93
PFBA	2.076	213.0 -> 169.0	33666	19.70 µg/L	100
PFBS	4.691	299.0 -> 80.0	26937	21.14 µg/L	99
PFDA	8.145	513.0 -> 469.0	175928	21.28 µg/L	100
PFDoDA	8.816	613.0 -> 569.0	193916	20.53 µg/L	100
PFHpA	6.612	363.0 -> 319.0	131061	19.60 µg/L	98
PFHpS	7.249	449.0 -> 80.0	37489	22.45 µg/L	99
PFHxA	5.734	313.0 -> 269.0	114332	20.26 µg/L	100
PFHxS	6.644	399.0 -> 80.0	37398	21.60 µg/L	m 97
PFNA	7.742	463.0 -> 419.0	103492	19.62 µg/L	98
PFOA	7.252	413.0 -> 369.0	237518	20.23 µg/L	100
PFOS	7.729	499.0 -> 80.0	45442	21.21 µg/L	m 86
PFPeA	4.347	263.0 -> 219.0	52058	18.82 µg/L	100
PFTeDA	9.427	713.0 -> 669.0	197227	20.44 µg/L	99
PFTrDA	9.129	663.0 -> 619.0	230534	20.44 µg/L	100
PFUnDA	8.494	563.0 -> 519.0	163205	21.82 µg/L	98
ADONA	6.697	377.0 -> 251.0	237951	19.63 µg/L	99
9CI-PF3ONS	7.942	531.0 -> 351.0	95108	21.03 µg/L	99
11CI-PF3OUdS	8.615	631.0 -> 451.0	128782	20.21 µg/L	100
HFPO-DA	6.015	285.0 -> 169.0	1890	20.08 µg/L	96

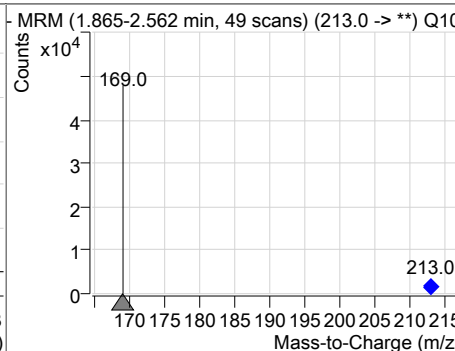
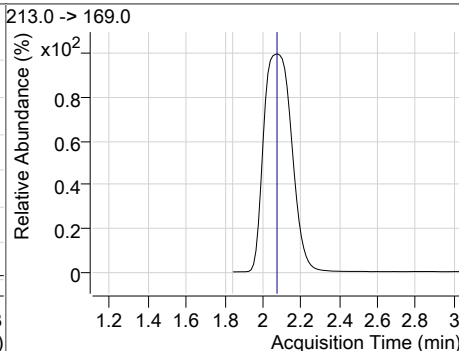
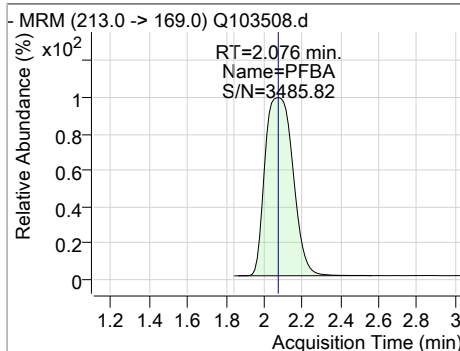
= Qualifier out of range, m = manually integrated, + = Area summed

7.6.16
7

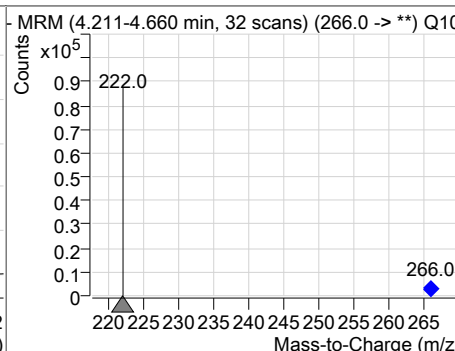
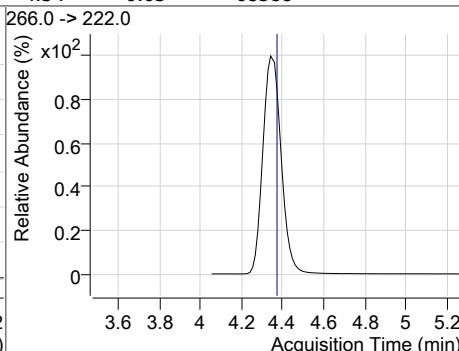
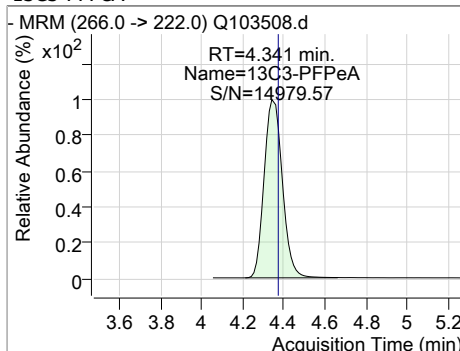
Perfluorinated Compounds by LC/MS/MS



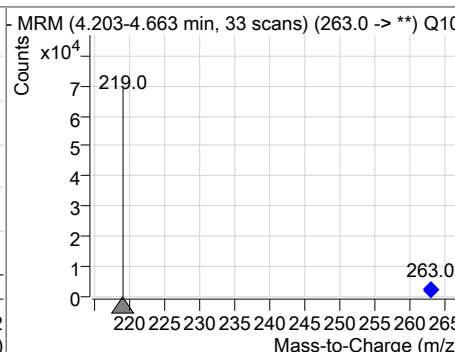
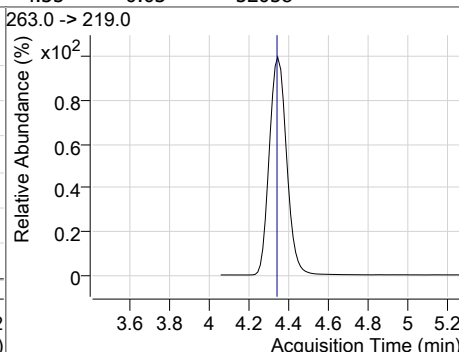
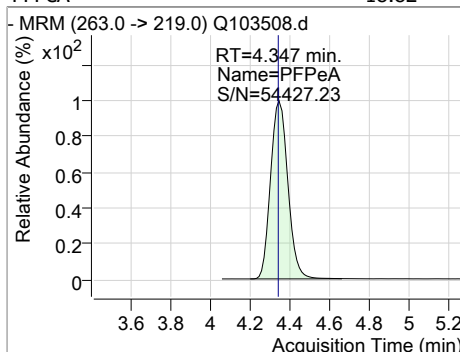
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	19.70	2.08	-0.01	33666				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-PFPeA		4.34	-0.03	68588				

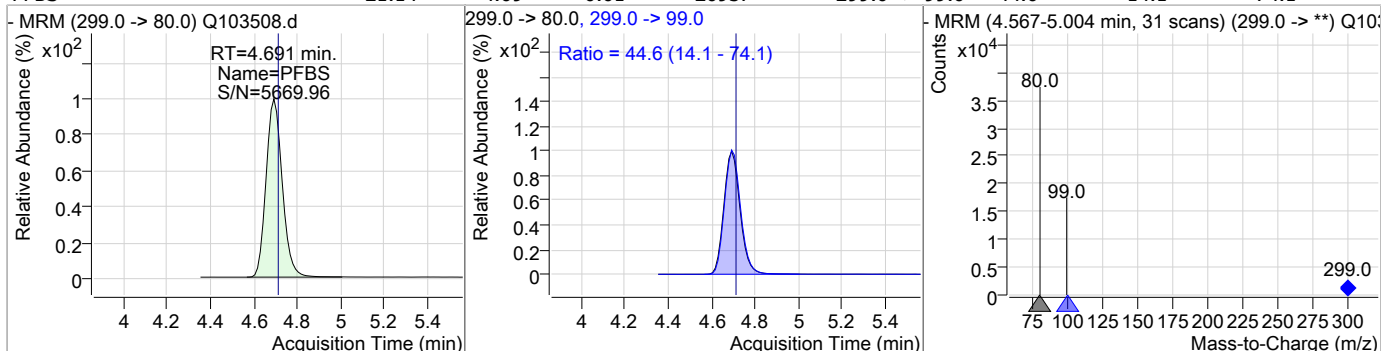


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	18.82	4.35	-0.03	52058				

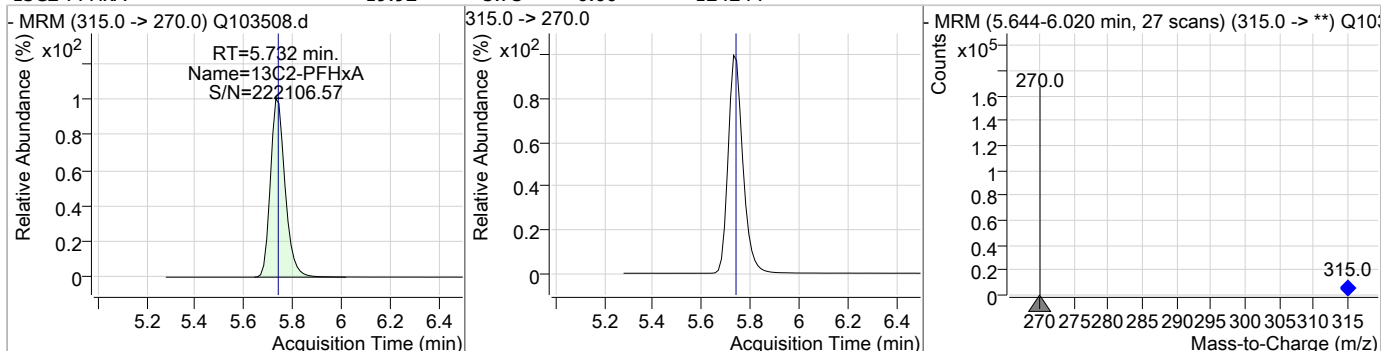


Perfluorinated Compounds by LC/MS/MS

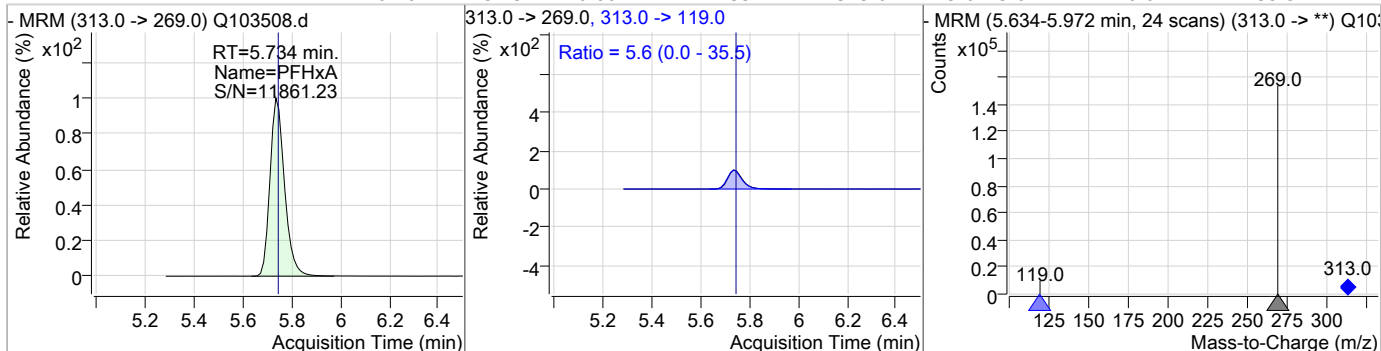
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	21.14	4.69	-0.01	26937	299.0 -> 99.0	44.6	14.1	74.1



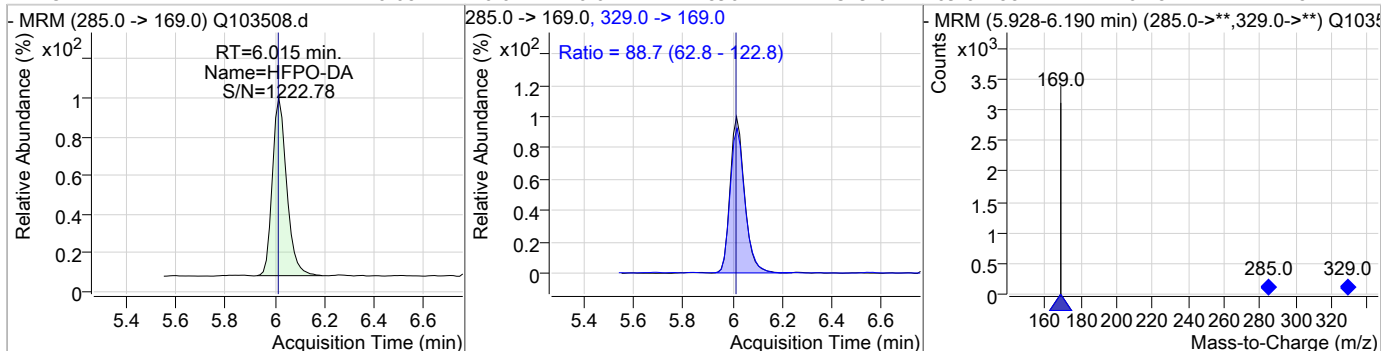
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	19.92	5.73	0.00	124244				



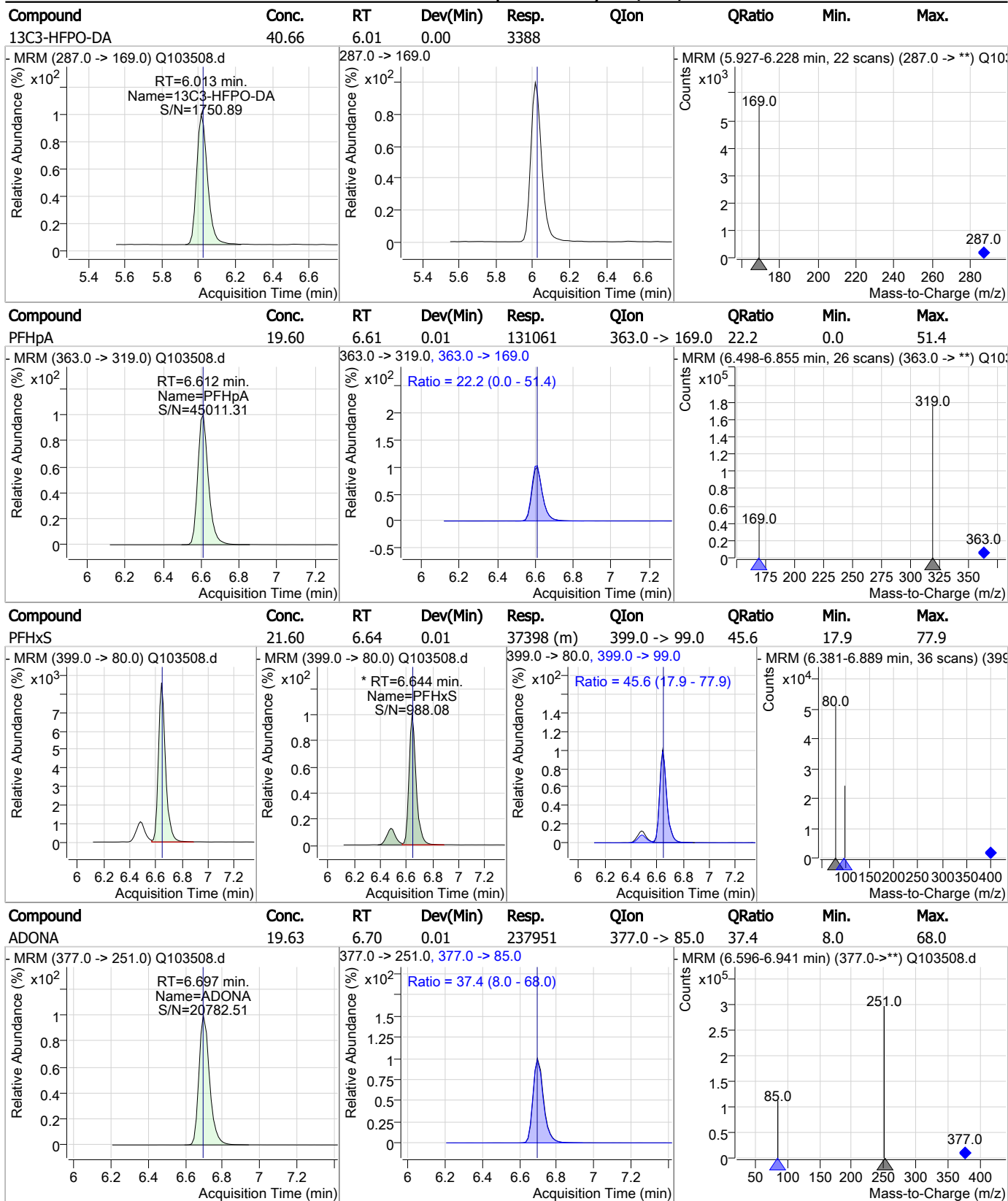
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	20.26	5.73	0.00	114332	313.0 -> 119.0	5.6	0.0	35.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	20.08	6.02	0.01	1890	329.0 -> 169.0	88.7	62.8	122.8



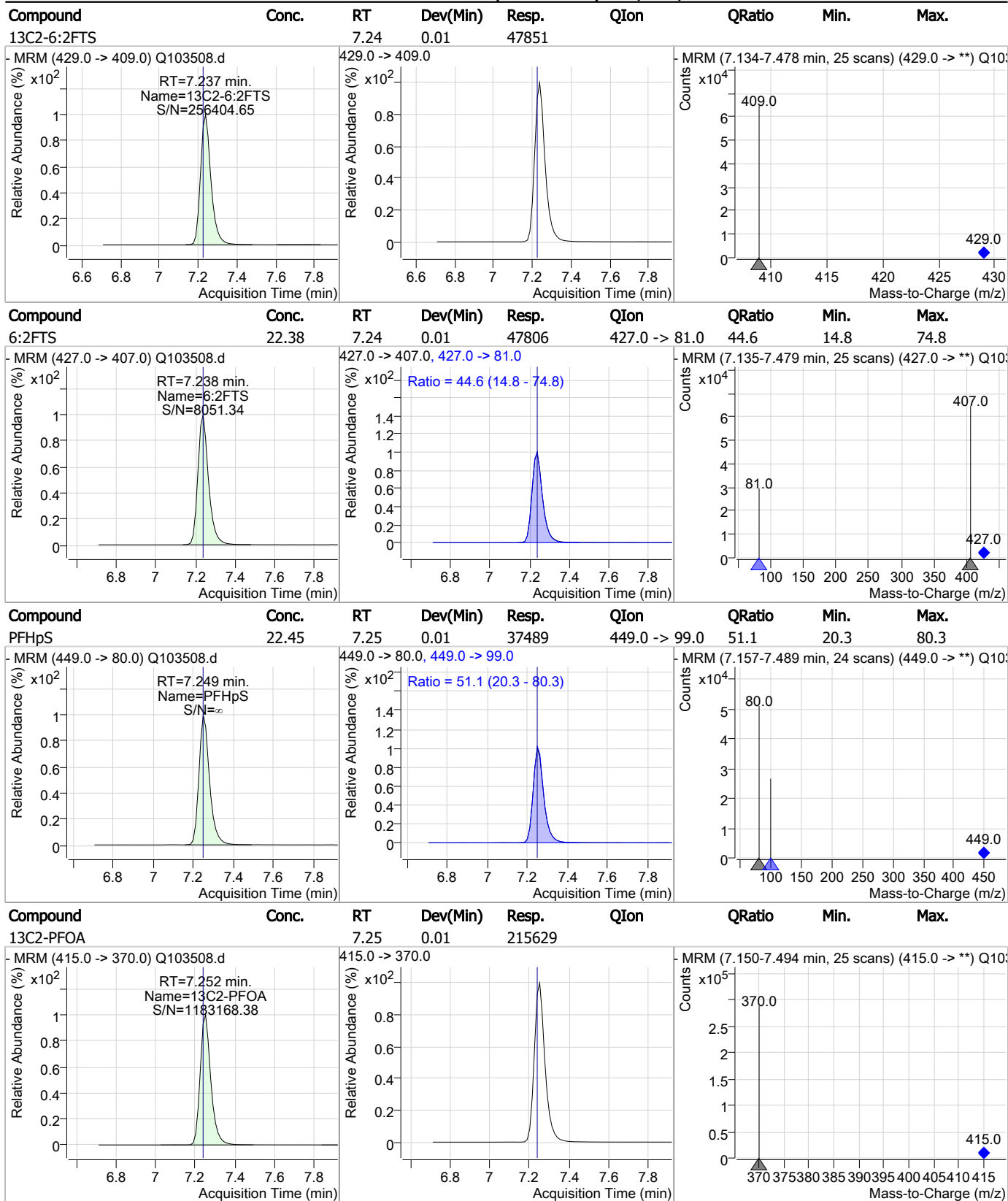
Perfluorinated Compounds by LC/MS/MS



7.6.16

7

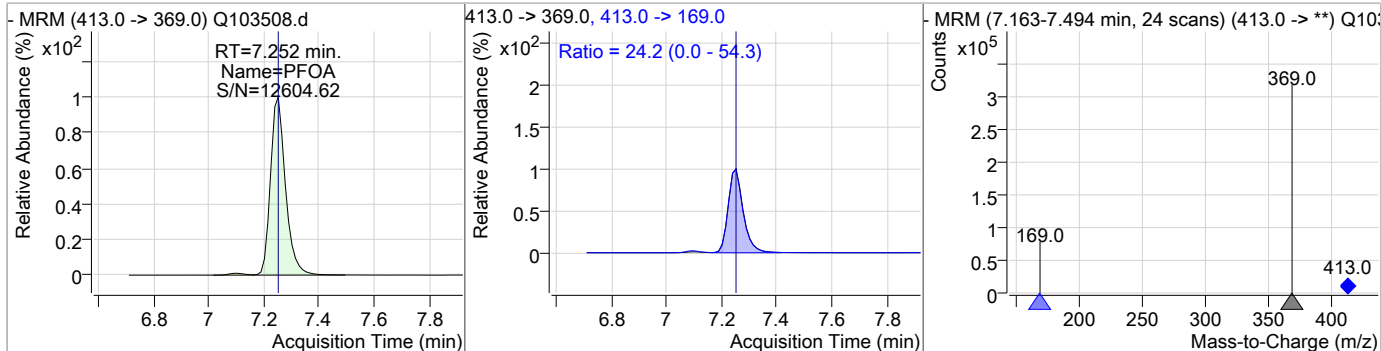
Perfluorinated Compounds by LC/MS/MS



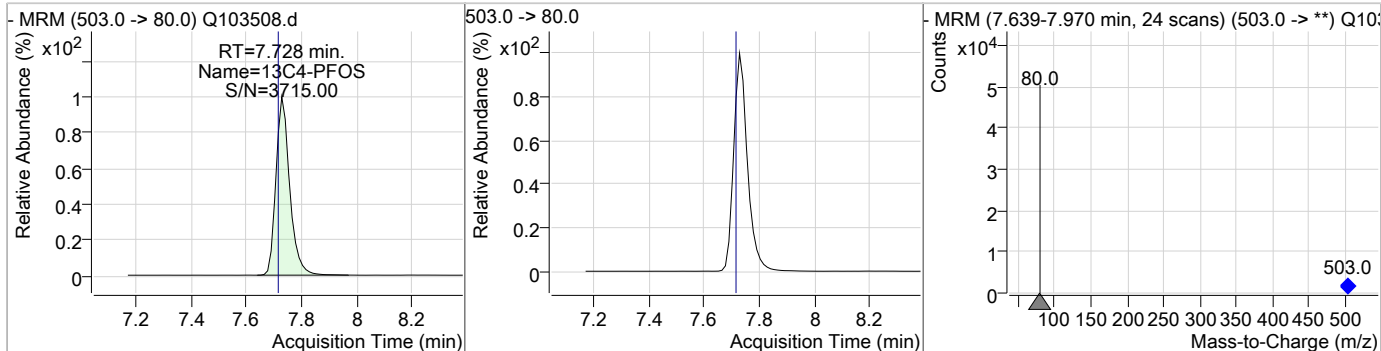
7.6.16
7

Perfluorinated Compounds by LC/MS/MS

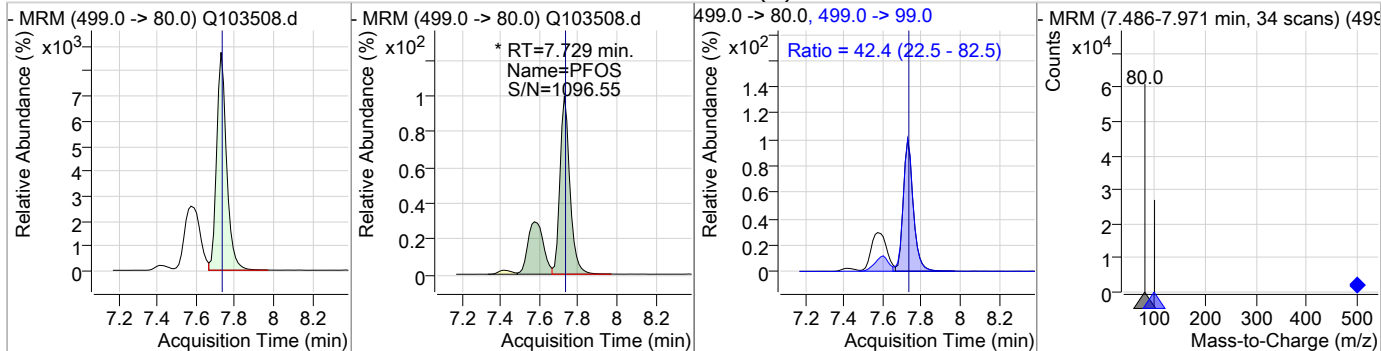
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	20.23	7.25	0.01	237518	413.0 -> 169.0	24.2	0.0	54.3



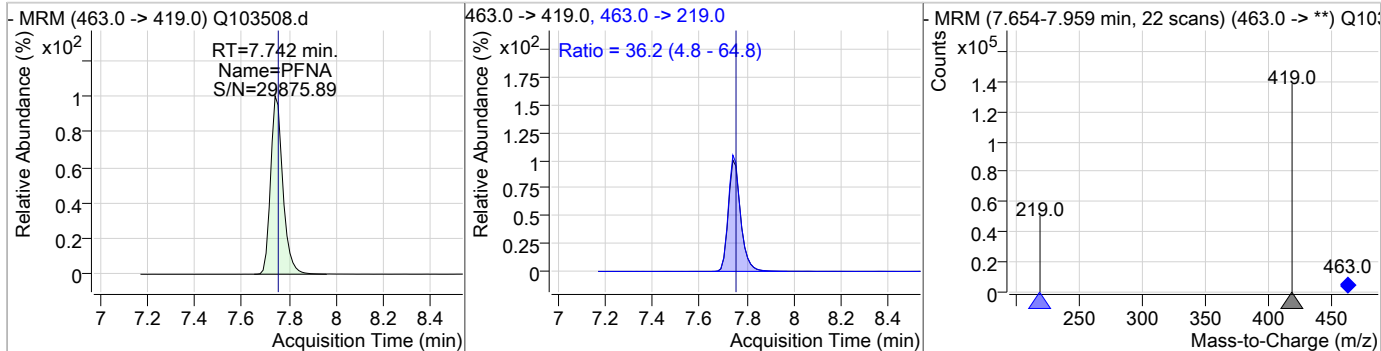
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.73	0.01	37435				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	21.21	7.73	0.01	45442 (m)	499.0 -> 99.0	42.4	22.5	82.5



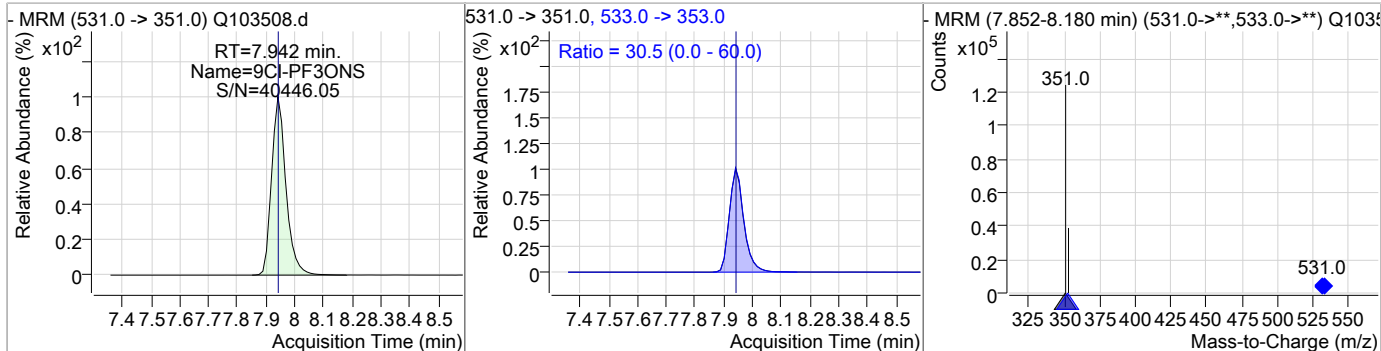
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.62	7.74	0.00	103492	463.0 -> 219.0	36.2	4.8	64.8



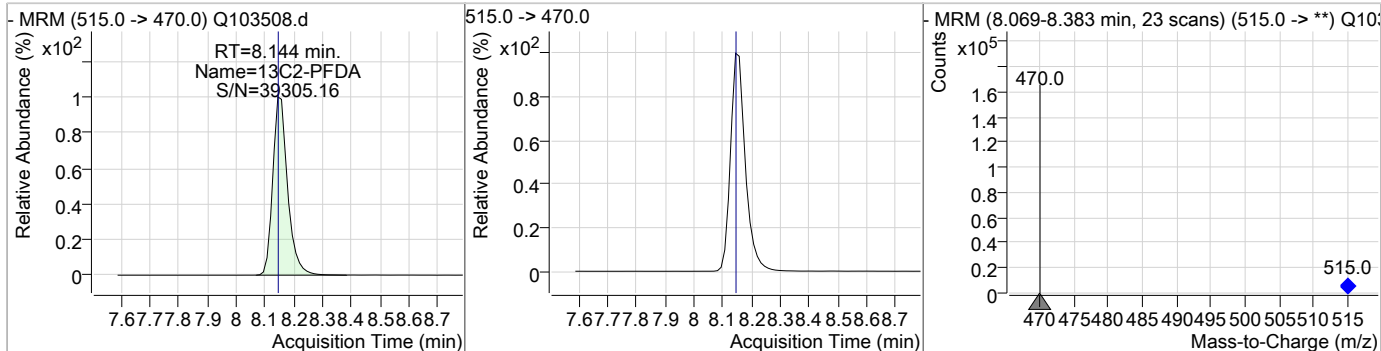
7.6.16
7

Perfluorinated Compounds by LC/MS/MS

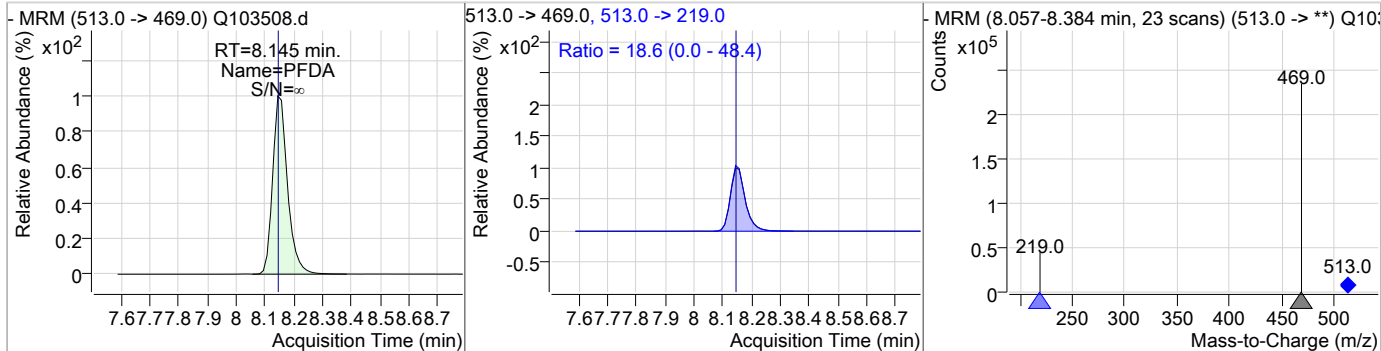
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9CI-PF3ONS	21.03	7.94	0.01	95108	533.0 -> 353.0	30.5	0.0	60.0



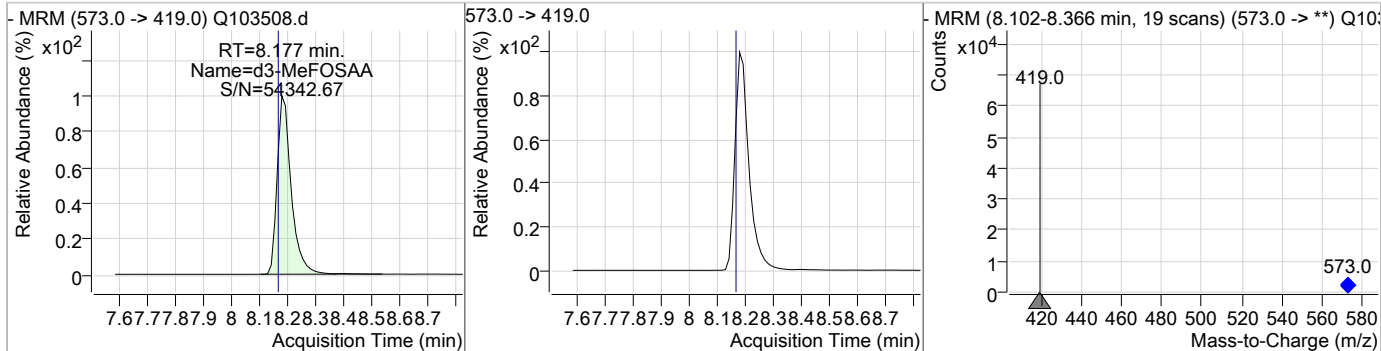
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	20.44	8.14	0.01	123537				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	21.28	8.14	0.01	175928	513.0 -> 219.0	18.6	0.0	48.4

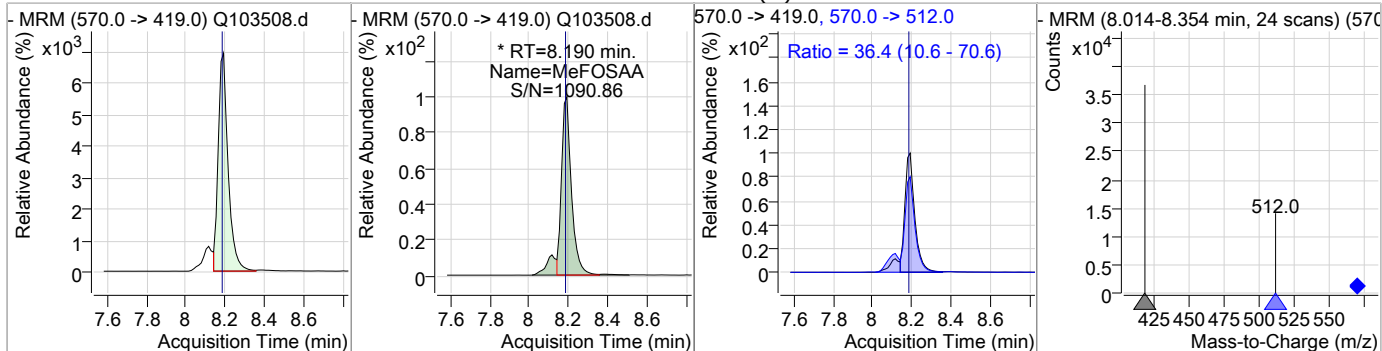


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.18	0.01	49778				

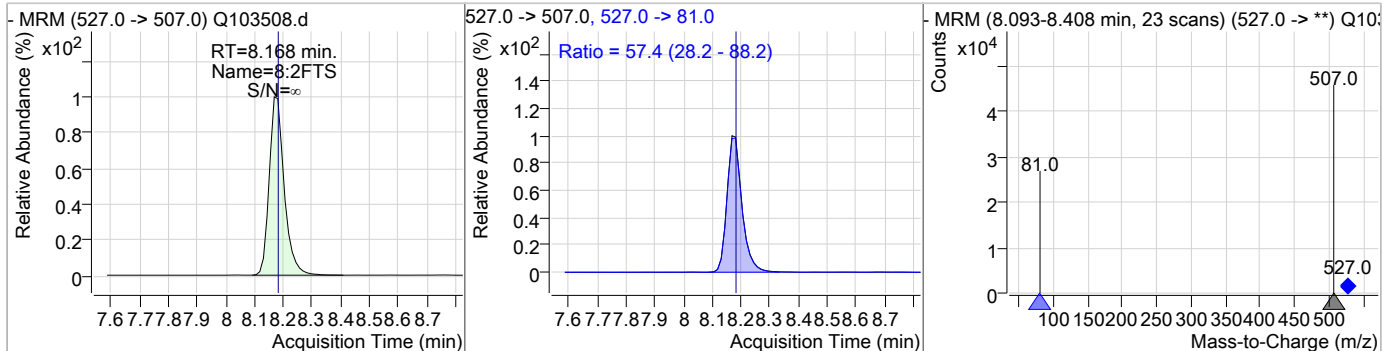


Perfluorinated Compounds by LC/MS/MS

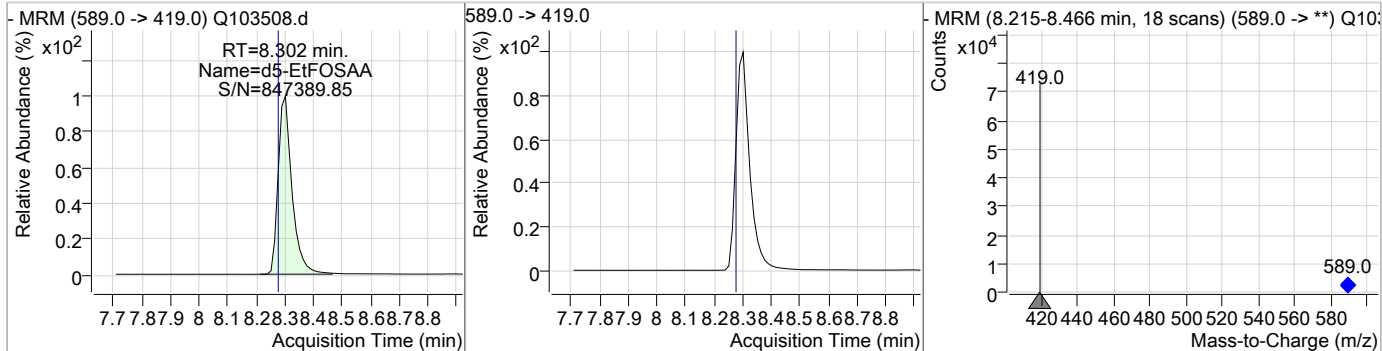
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	19.65	8.19	0.03	26832 (m)	570.0 -> 512.0	36.4	10.6	70.6



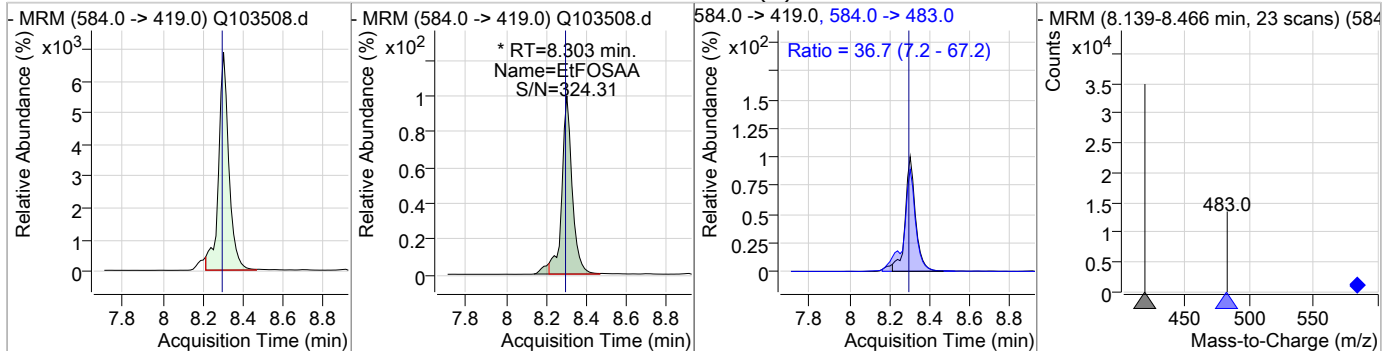
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	19.46	8.17	0.00	33723	527.0 -> 81.0	57.4	28.2	88.2



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	41.50	8.30	0.04	54062	589.0 -> 419.0	36.7	7.2	67.2



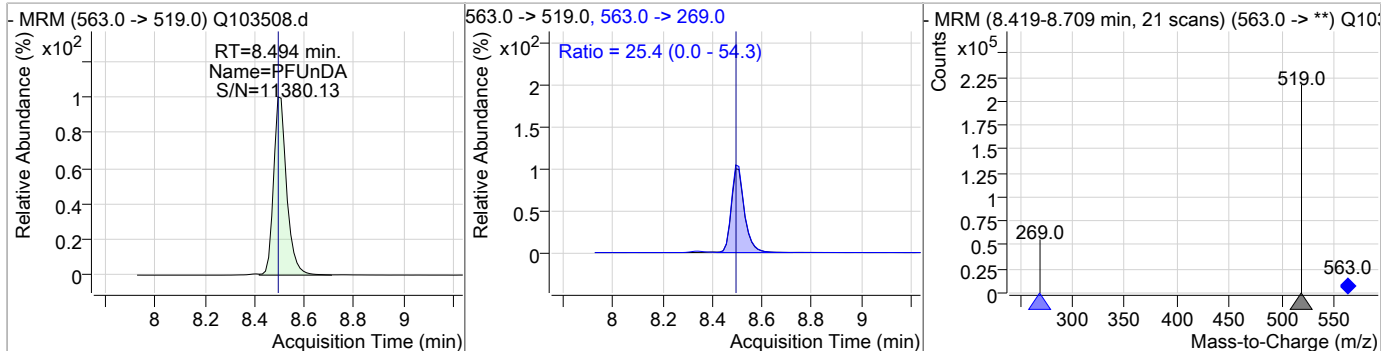
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	19.61	8.30	0.03	25252 (m)	584.0 -> 483.0	36.7	7.2	67.2



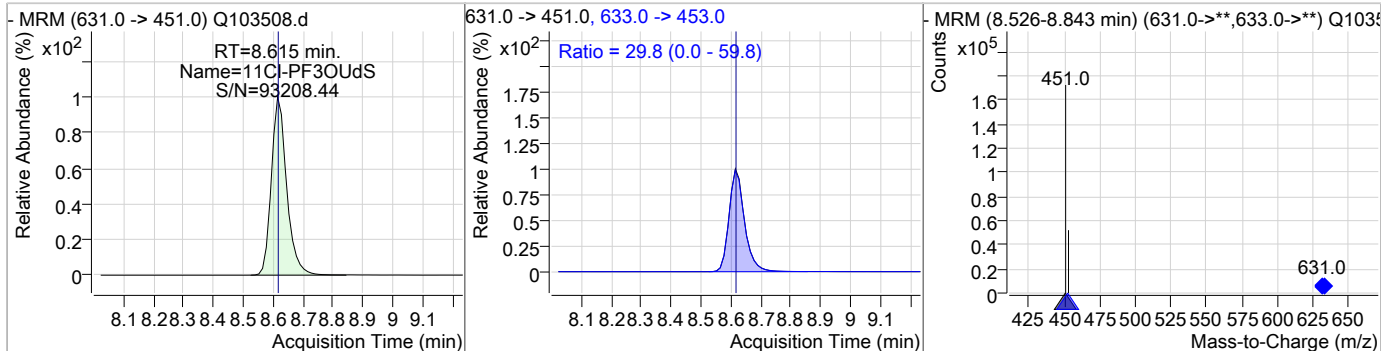
7.6.16
7

Perfluorinated Compounds by LC/MS/MS

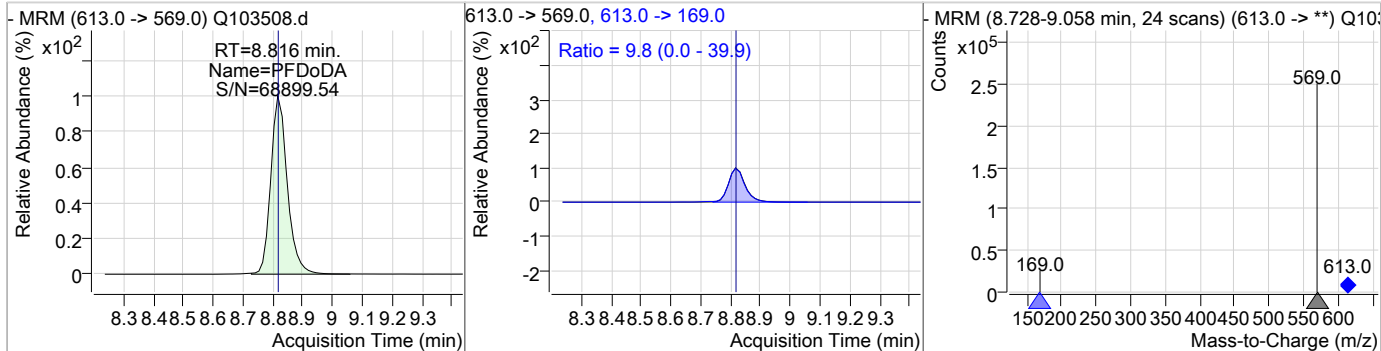
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	21.82	8.49	0.01	163205	563.0 -> 269.0	25.4	0.0	54.3



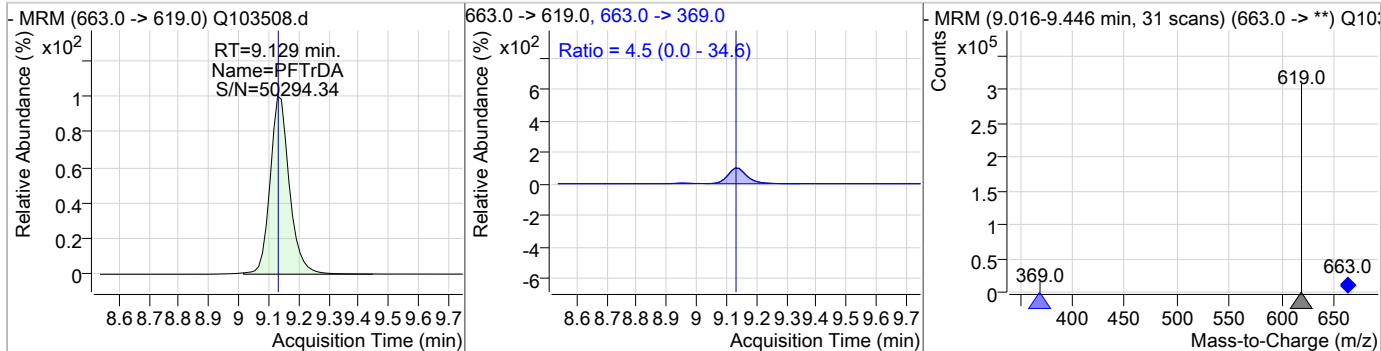
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	20.21	8.61	0.01	128782	633.0 -> 453.0	29.8	0.0	59.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	20.53	8.82	0.01	193916	613.0 -> 169.0	9.8	0.0	39.9



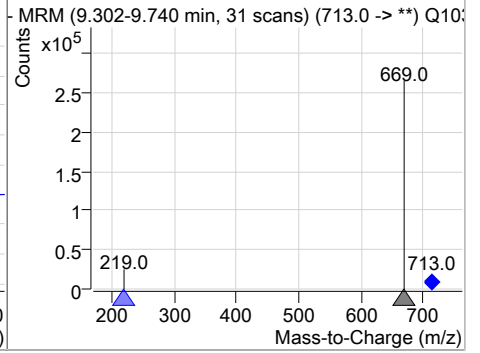
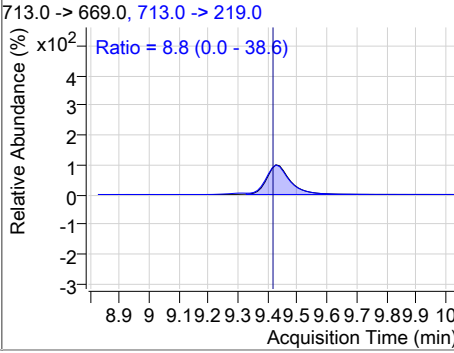
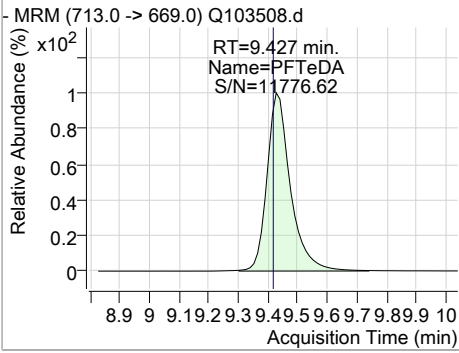
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	20.44	9.13	0.01	230534	663.0 -> 369.0	4.5	0.0	34.6



7.6.16
7

Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	20.44	9.43	0.03	197227	713.0 -> 219.0	8.8	0.0	38.6



7.6.16
7



Manual Integration Approval Summary

Sample Number: SQ2201-CC2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103508.D Analyst approved: 06/19/23 17:07 Anna Ludwig
Injection Time: 06/19/23 04:37 Supervisor approved: 06/19/23 17:25 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.64	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.73	Split peak
MeFOSAA	2355-31-9		8.19	Split peak
EtFOSAA	2991-50-6		8.30	Split peak

7.6.16.1

7

Perfluorinated Compounds by LC/MS/MS

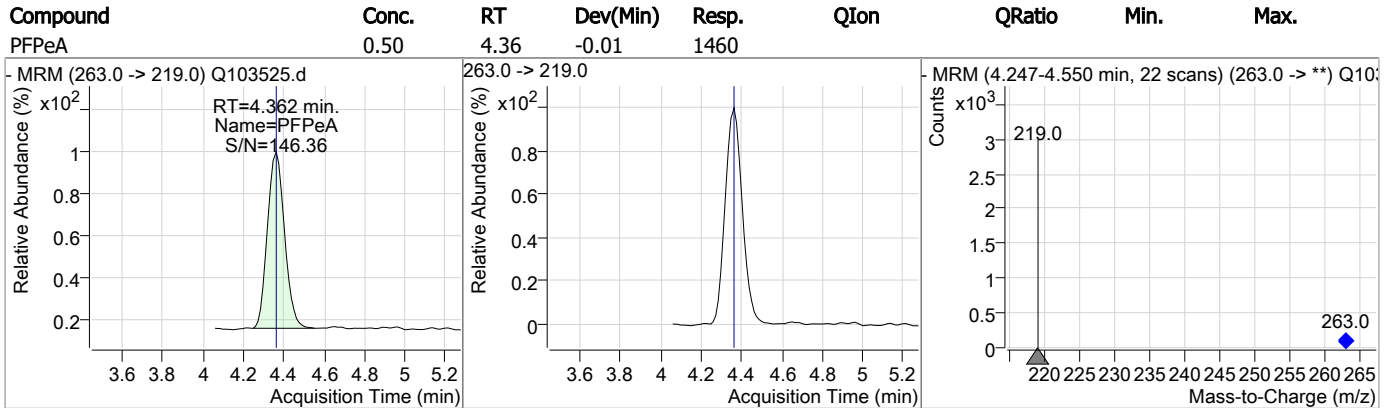
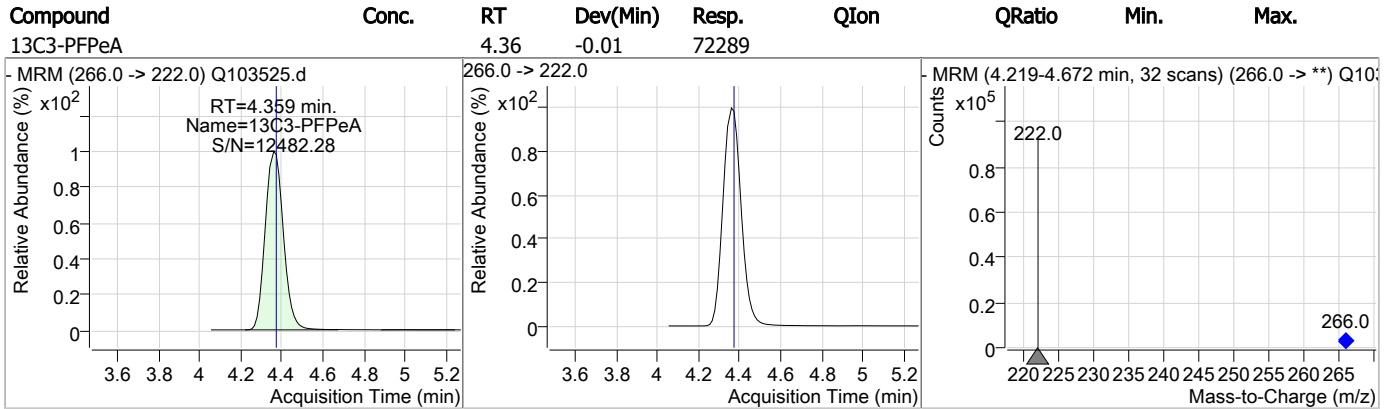
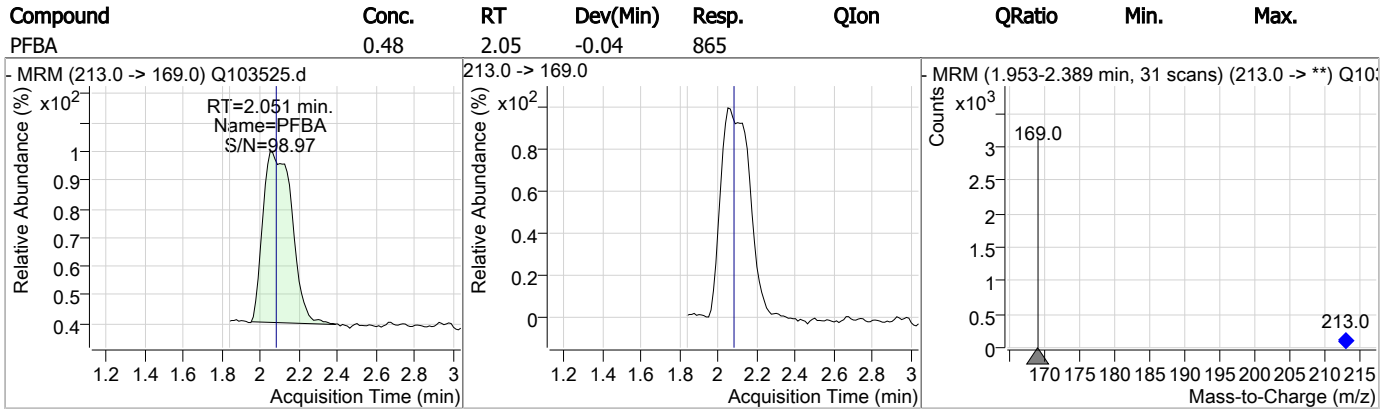
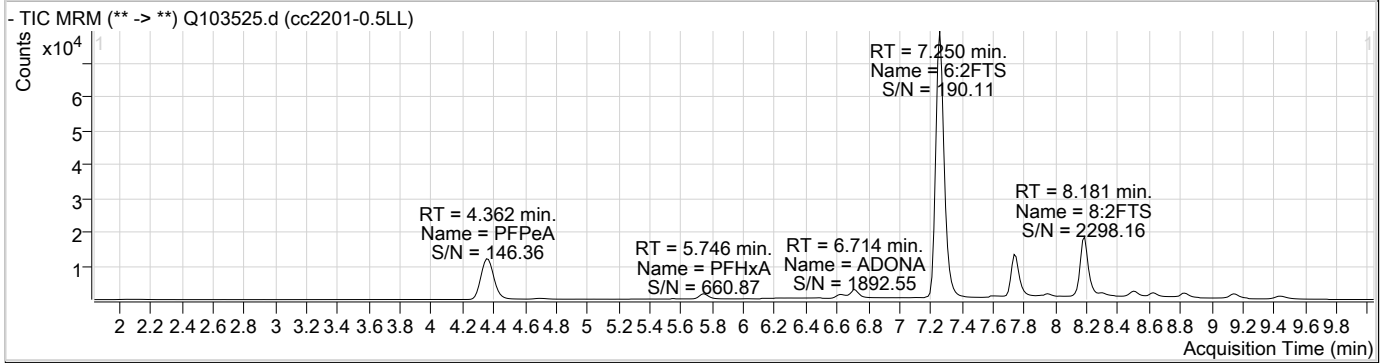
Data File : Q103525.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/19/2023 5:55:07 PM
 Sample Name : cc2201-0.5LL
 Vial : P1-A2
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2202.batch.bin
 Sample Information : OP96727,SQ2202,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)	QValue
Internal Standards							
13C2-6:2FTS	7.250	429.0 -> 409.0	48940	20.00	µg/L	0.025	
13C2-PFOA	7.264	415.0 -> 370.0	236284	20.00	µg/L	0.025	
13C3-PFPeA	4.359	266.0 -> 222.0	72289	20.00	µg/L	-0.013	
13C4-PFOS	7.741	503.0 -> 80.0	39348	20.00	µg/L	0.025	
d3-MeFOSAA	8.190	573.0 -> 419.0	54110	40.00	µg/L	0.025	
System Monitoring Compounds							
13C2-PFDA	8.169	515.0 -> 470.0	3262	0.49	µg/L	0.038	
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 2.5%			
13C2-PFHxA	5.744	315.0 -> 270.0	3248	0.48	µg/L	0.013	
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 2.4%			
d5-EtFOSAA	8.302	589.0 -> 419.0	1491	1.09	µg/L	0.038	
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 2.7%			
13C3-HFPO-DA	6.038	287.0 -> 169.0	87	0.97	µg/L	m 0.025	
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 2.4%			
Target Compounds							
6:2FTS	7.250	427.0 -> 407.0	1651	0.76	µg/L		97
8:2FTS	8.181	527.0 -> 507.0	842	0.46	µg/L		99
EtFOSAA	8.302	584.0 -> 419.0	823	0.60	µg/L	m	92
MeFOSAA	8.190	570.0 -> 419.0	784	0.53	µg/L	m	98
PFBA	2.051	213.0 -> 169.0	865	0.48	µg/L		100
PFBS	4.691	299.0 -> 80.0	860	0.66	µg/L		97
PFDA	8.157	513.0 -> 469.0	4603	0.51	µg/L		99
PFDoDA	8.831	613.0 -> 569.0	4772	0.48	µg/L		98
PFHpA	6.624	363.0 -> 319.0	3679	0.51	µg/L		98
PFHpS	7.274	449.0 -> 80.0	1079	0.61	µg/L		100
PFHxA	5.746	313.0 -> 269.0	2929	0.48	µg/L		99
PFHxS	6.656	399.0 -> 80.0	1233	0.68	µg/L	m	95
PFNA	7.767	463.0 -> 419.0	2365	0.41	µg/L		92
PFOA	7.265	413.0 -> 369.0	6029	0.47	µg/L		95
PFOS	7.741	499.0 -> 80.0	1571	0.70	µg/L	m	79
PFPeA	4.362	263.0 -> 219.0	1460	0.50	µg/L		100
PFTeDA	9.440	713.0 -> 669.0	4619	0.46	µg/L		97
PFTrDA	9.142	663.0 -> 619.0	5707	0.48	µg/L		99
PFUnDA	8.506	563.0 -> 519.0	4011	0.51	µg/L		92
ADONA	6.714	377.0 -> 251.0	6327	0.49	µg/L		99
9Cl-PF3ONS	7.954	531.0 -> 351.0	2262	0.47	µg/L		98
11Cl-PF3OUdS	8.627	631.0 -> 451.0	3144	0.46	µg/L		93
HFPO-DA	6.028	285.0 -> 169.0	48	0.47	µg/L		81

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

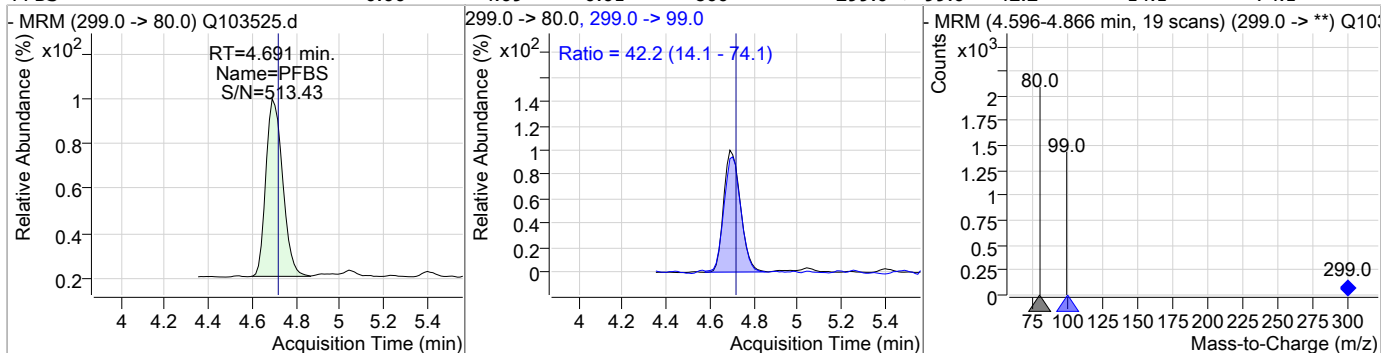
7.6.17
7

Perfluorinated Compounds by LC/MS/MS

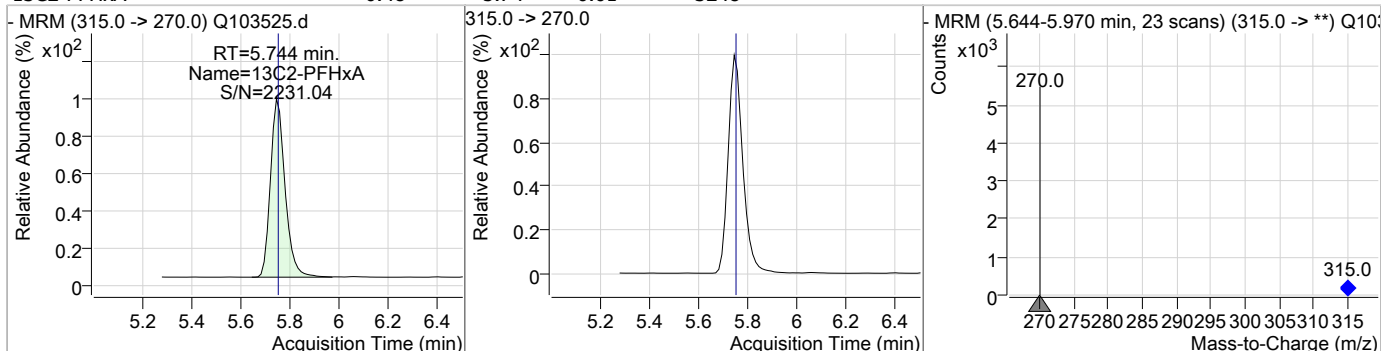


Perfluorinated Compounds by LC/MS/MS

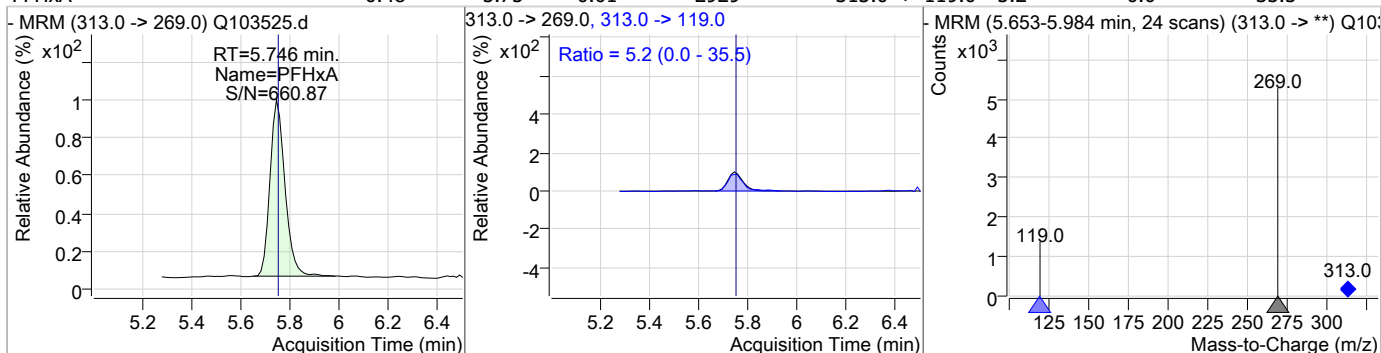
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.66	4.69	-0.01	860	299.0 -> 99.0	42.2	14.1	74.1



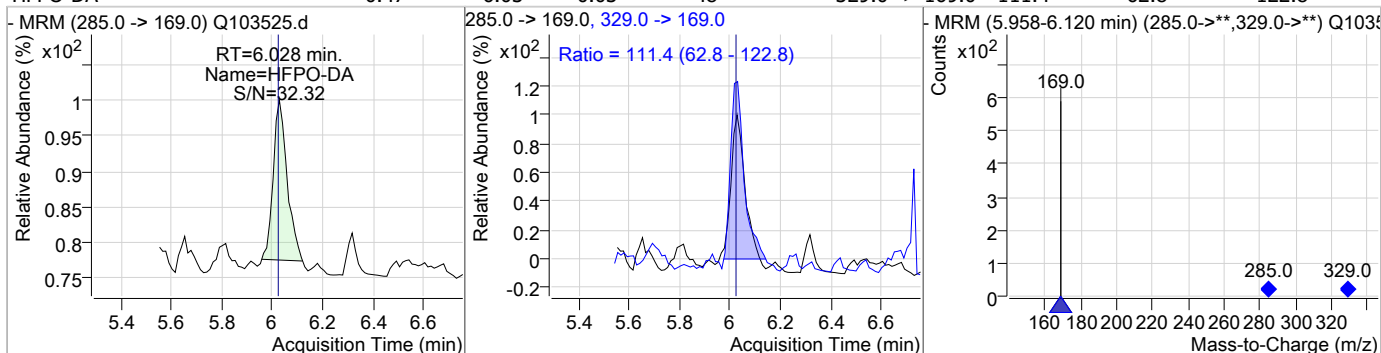
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	0.48	5.74	0.01	3248				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.48	5.75	0.01	2929	313.0 -> 119.0	5.2	0.0	35.5

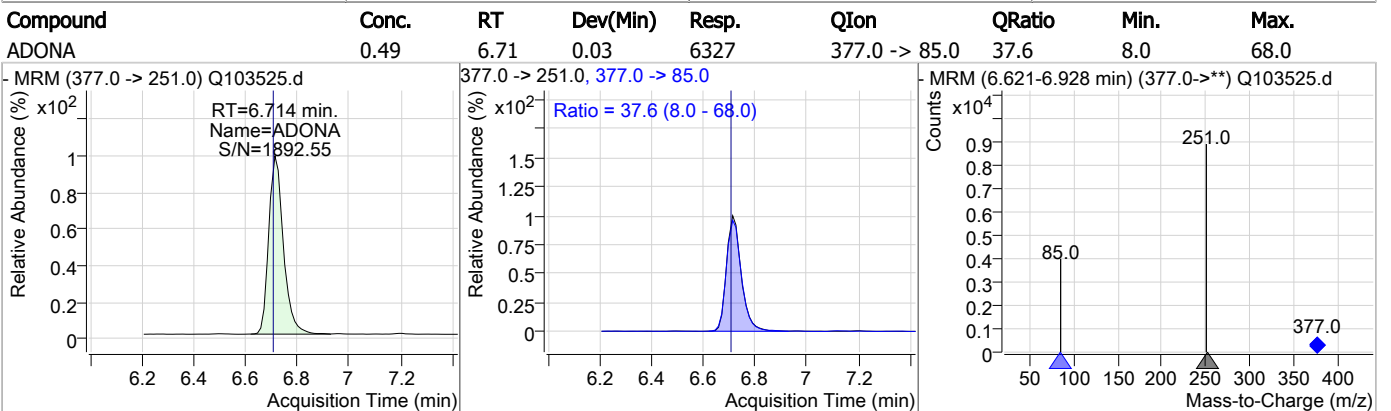
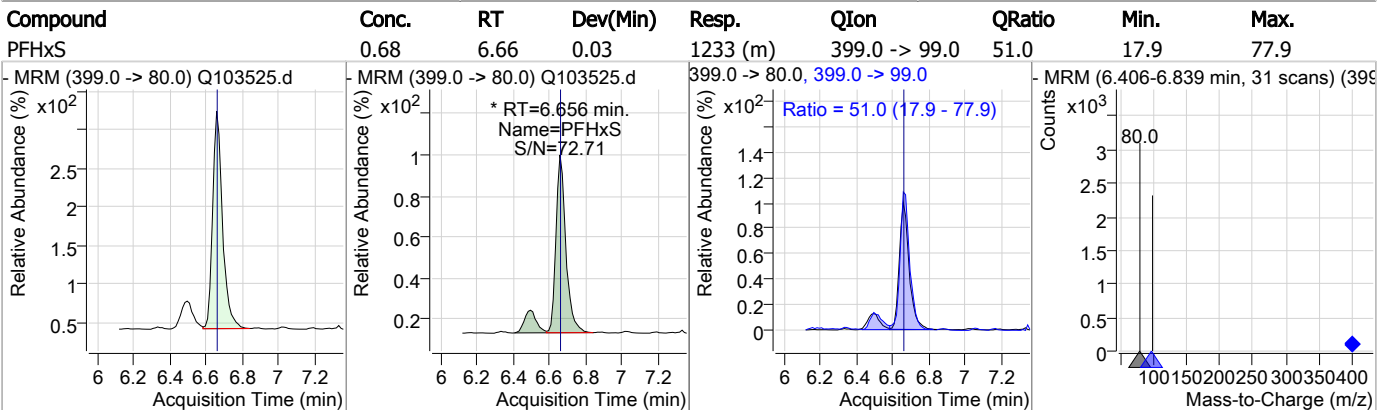
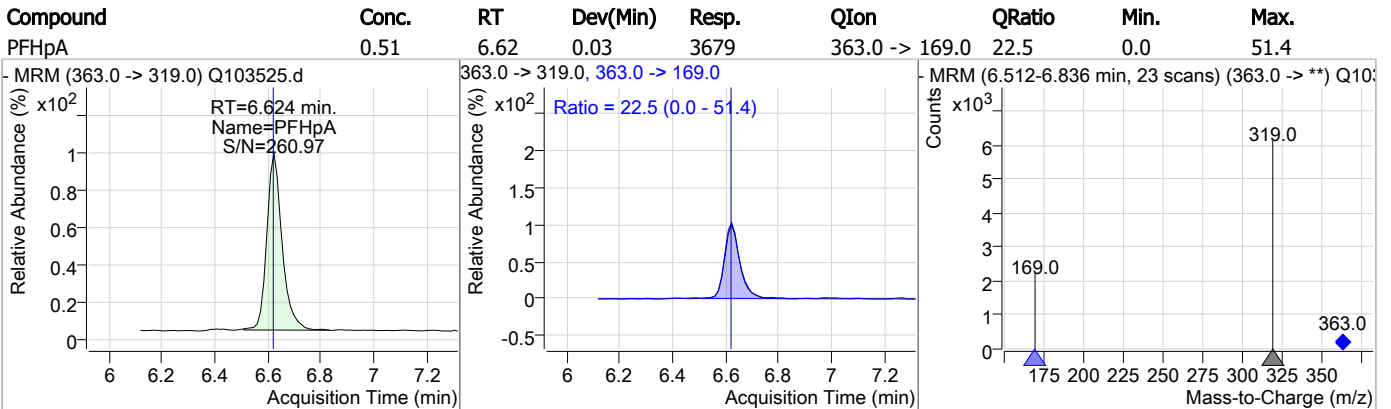
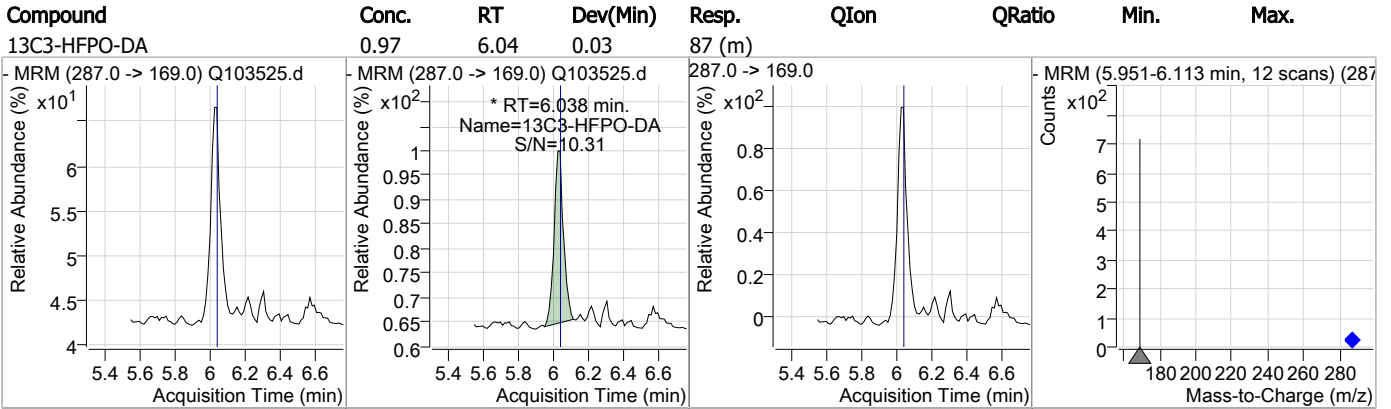


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	0.47	6.03	0.03	48	329.0 -> 169.0	111.4	62.8	122.8



7.6.17

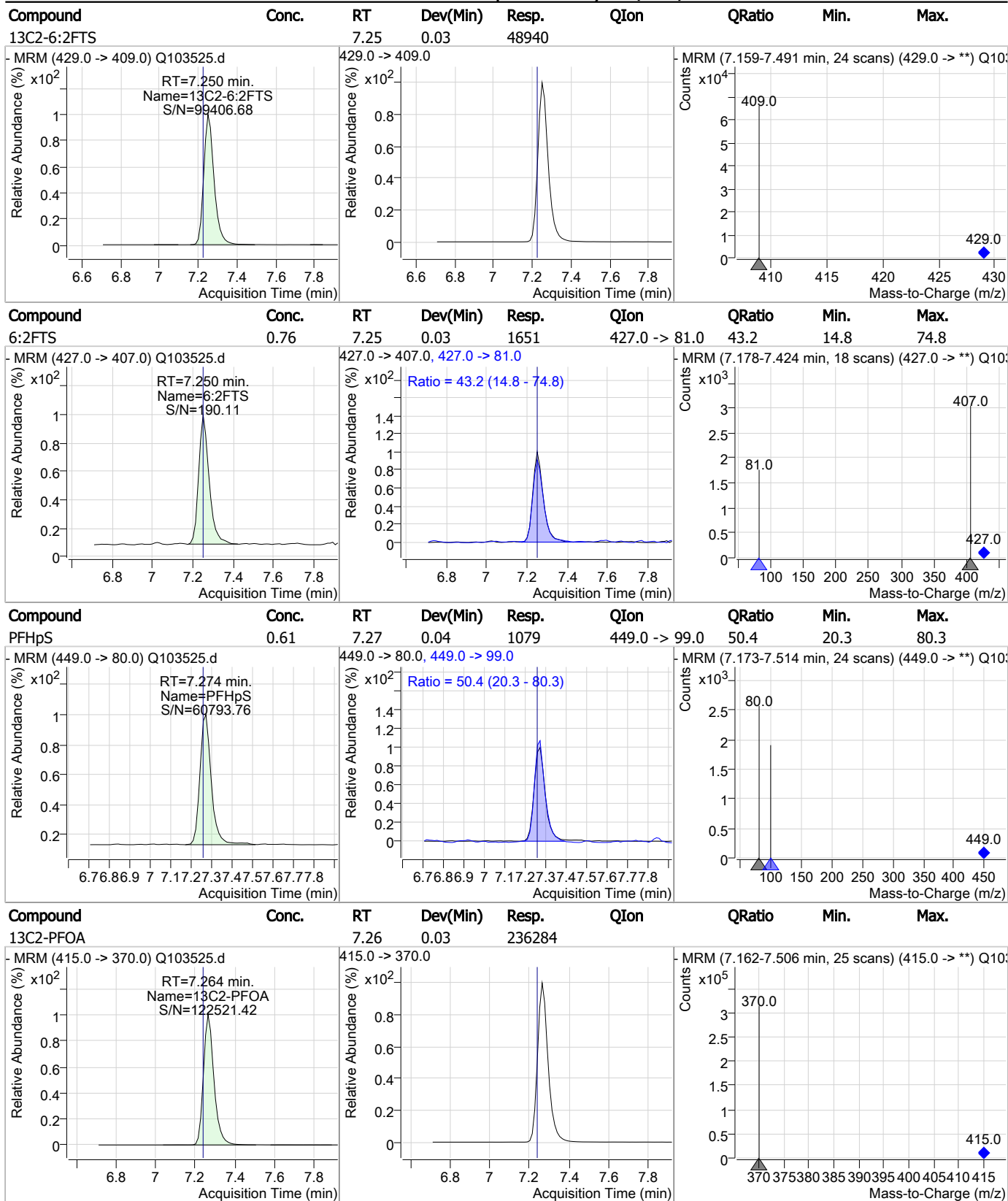
Perfluorinated Compounds by LC/MS/MS



7.6.17



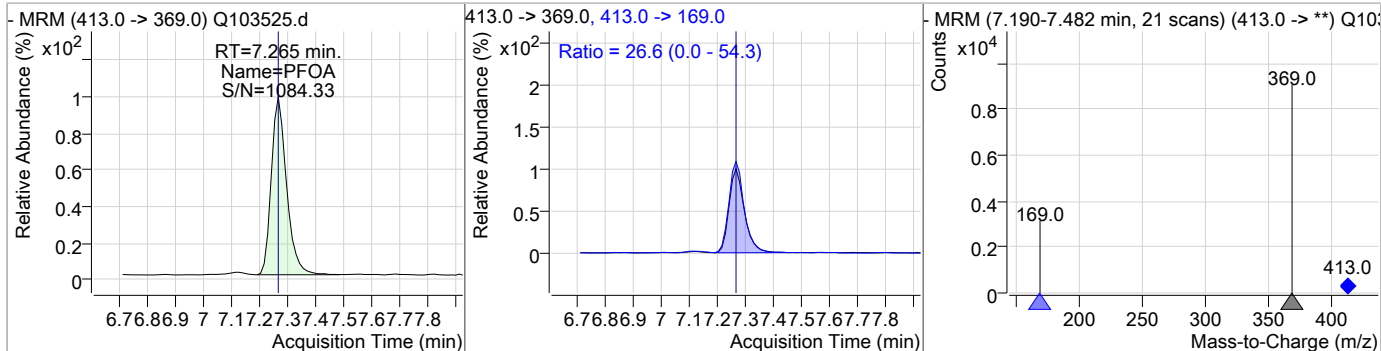
Perfluorinated Compounds by LC/MS/MS



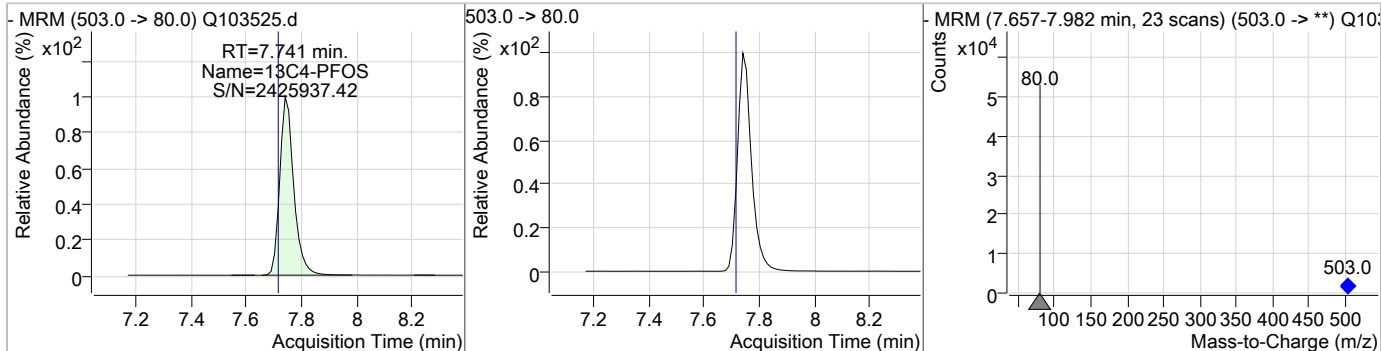
7.6.17

Perfluorinated Compounds by LC/MS/MS

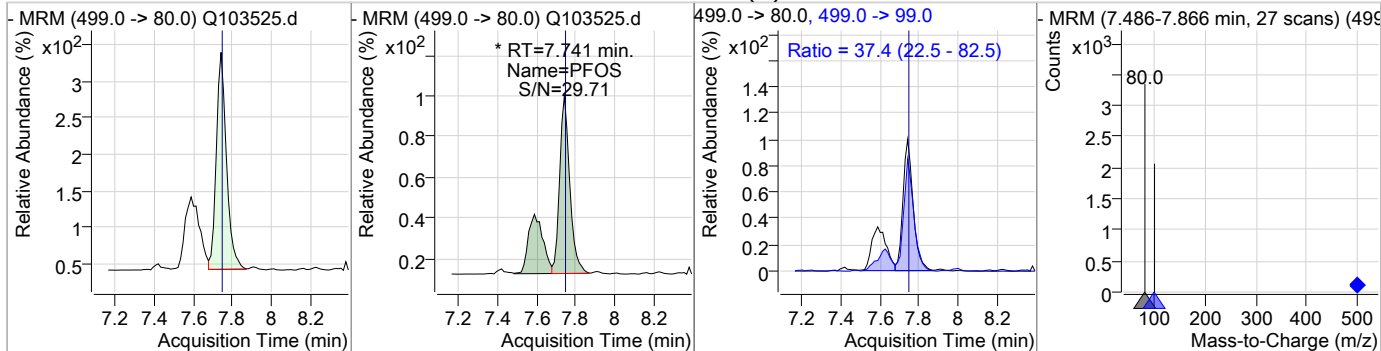
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.47	7.26	0.03	6029	413.0 -> 169.0	26.6	0.0	54.3



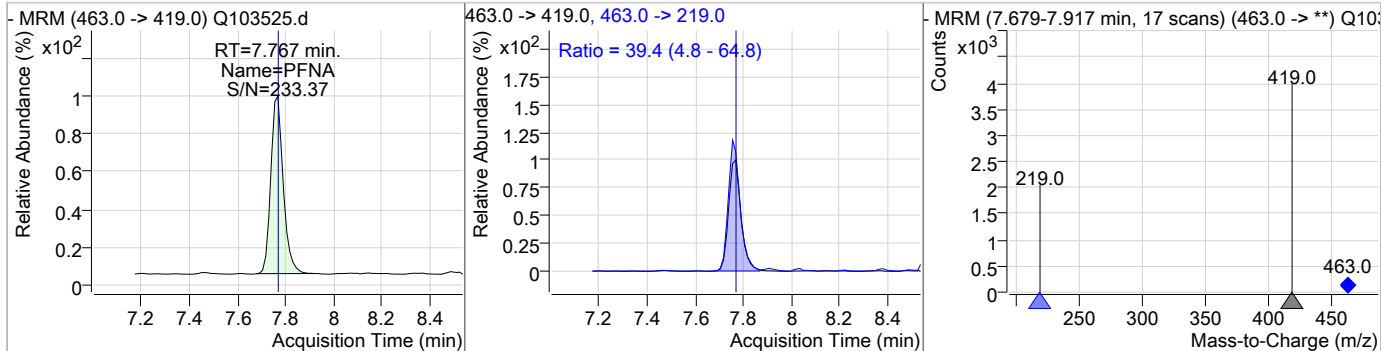
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS	0.70	7.74	0.03	39348	499.0 -> 99.0	37.4	22.5	82.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.41	7.77	0.03	2365	463.0 -> 219.0	39.4	4.8	64.8

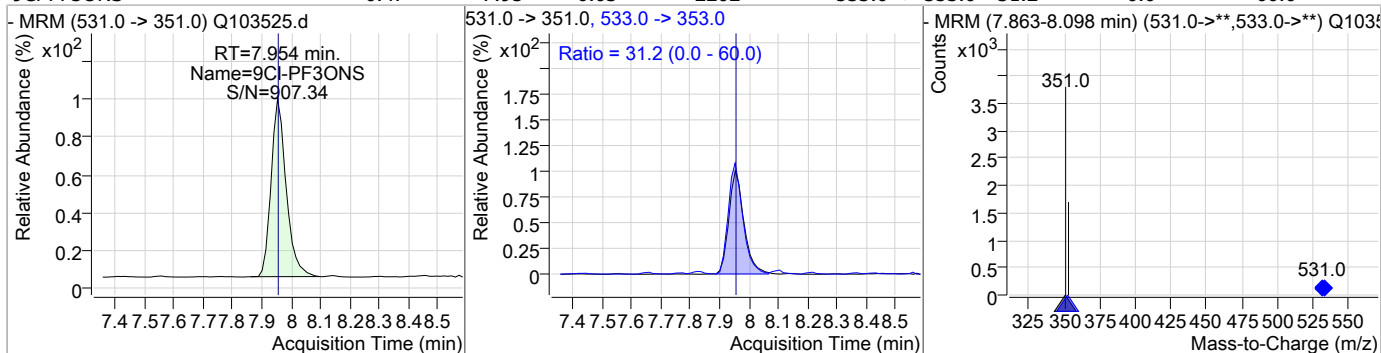


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.41	7.77	0.03	2365	463.0 -> 219.0	39.4	4.8	64.8

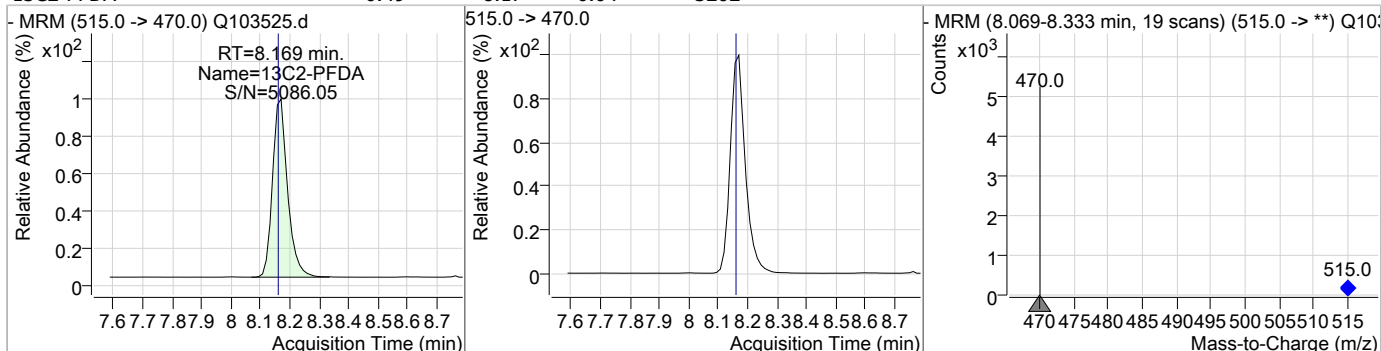


Perfluorinated Compounds by LC/MS/MS

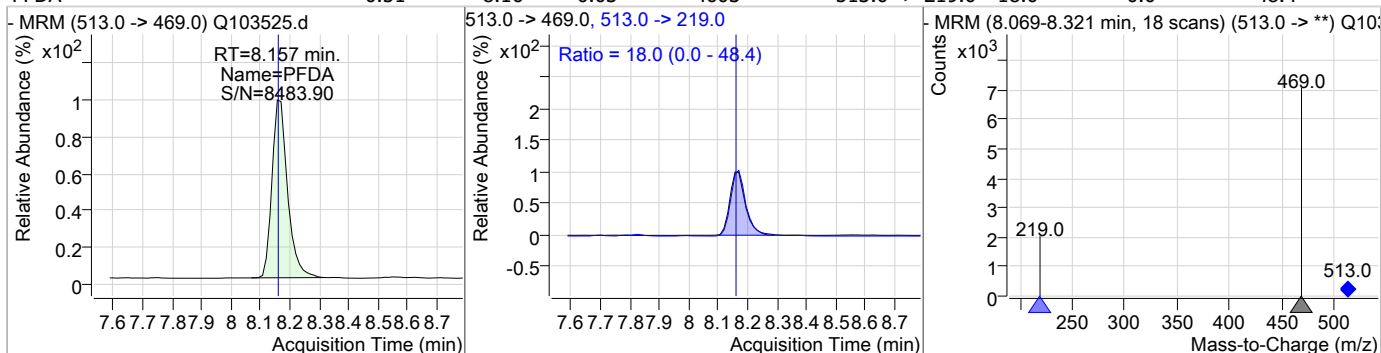
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9CI-PF3ONS	0.47	7.95	0.03	2262	533.0 -> 353.0	31.2	0.0	60.0



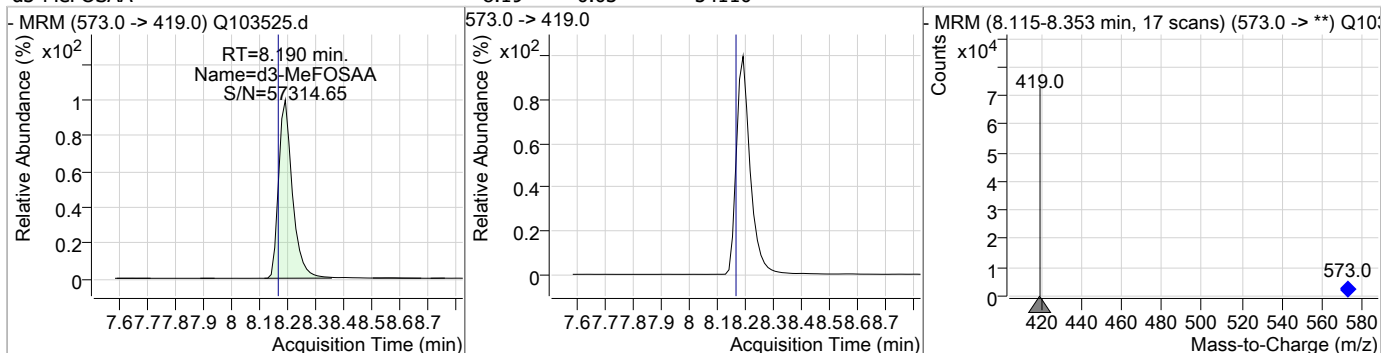
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	0.49	8.17	0.04	3262				



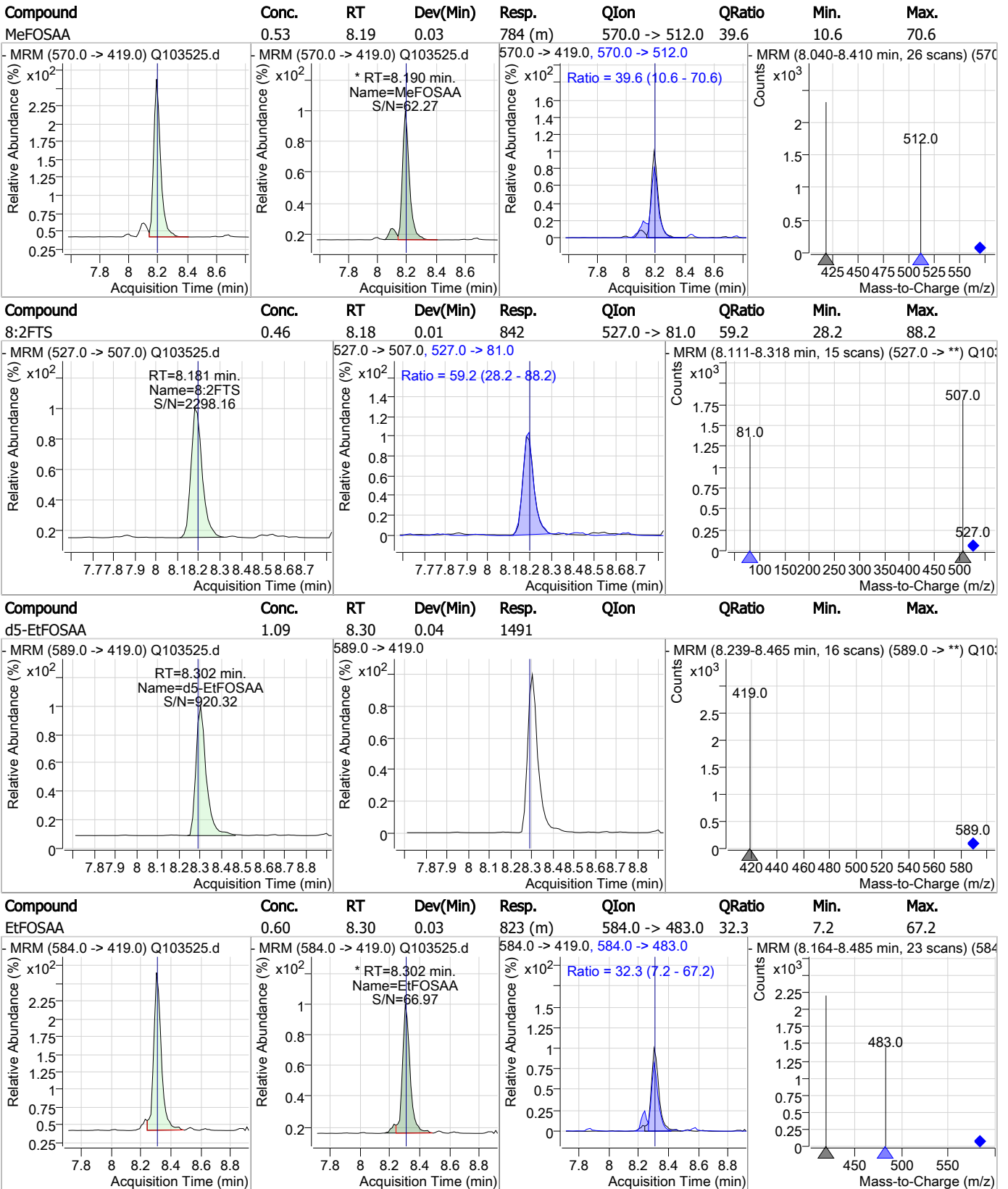
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.51	8.16	0.03	4603	513.0 -> 219.0	18.0	0.0	48.4



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.19	0.03	54110				



Perfluorinated Compounds by LC/MS/MS

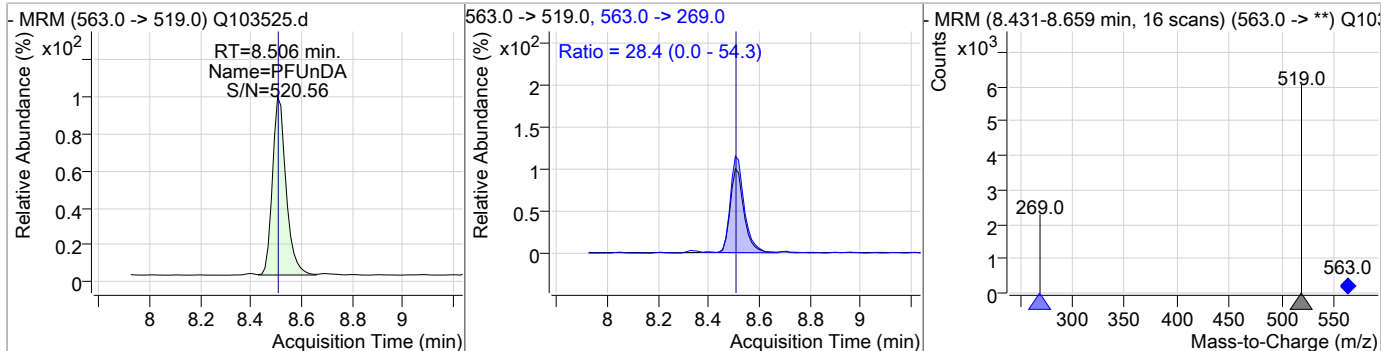


7.6.17
7

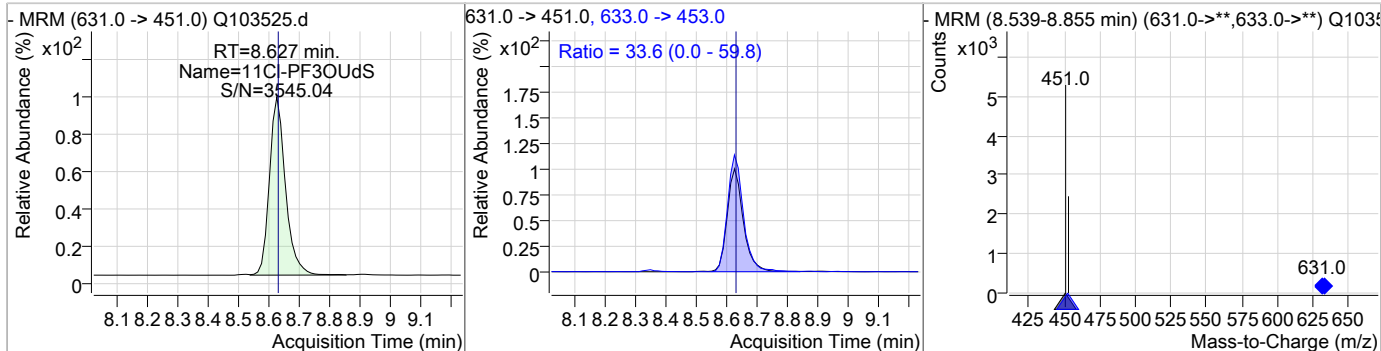


Perfluorinated Compounds by LC/MS/MS

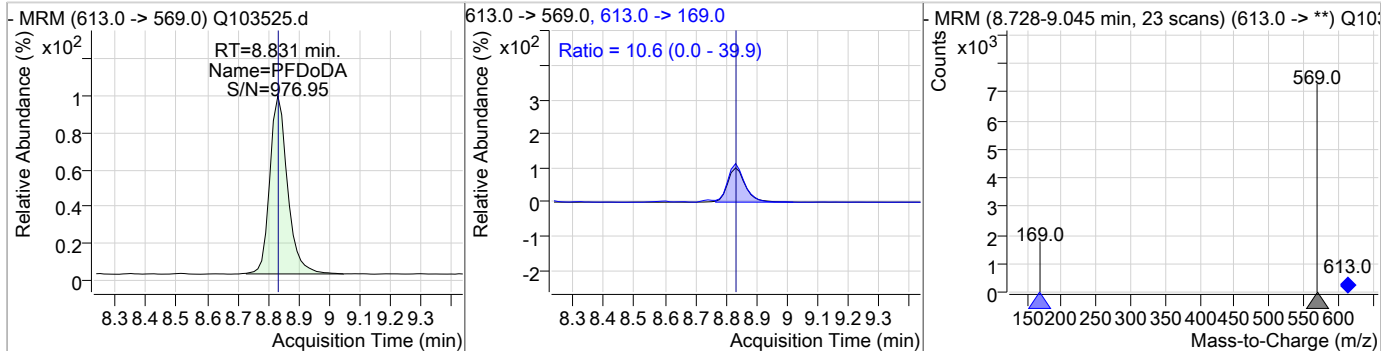
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	0.51	8.51	0.03	4011	563.0 -> 269.0	28.4	0.0	54.3



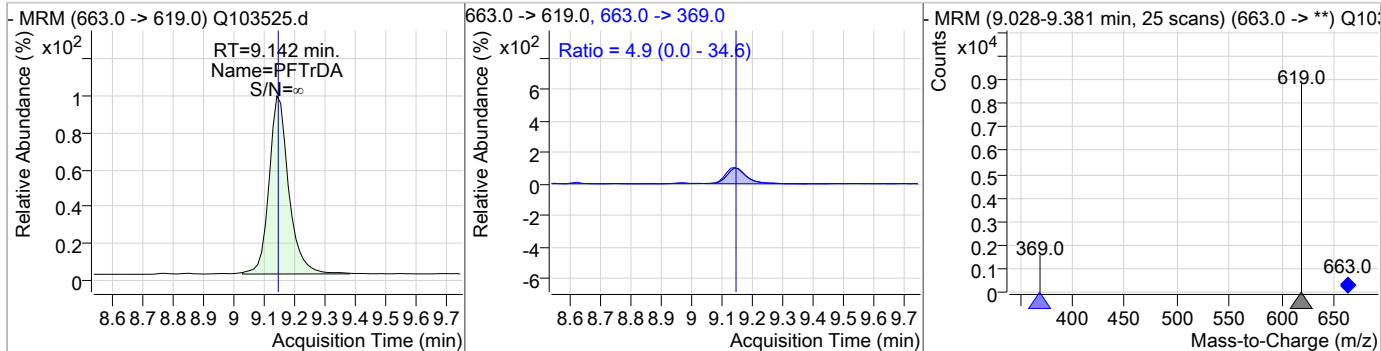
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	0.46	8.63	0.03	3144	633.0 -> 453.0	33.6	0.0	59.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDODA	0.48	8.83	0.03	4772	613.0 -> 169.0	10.6	0.0	39.9

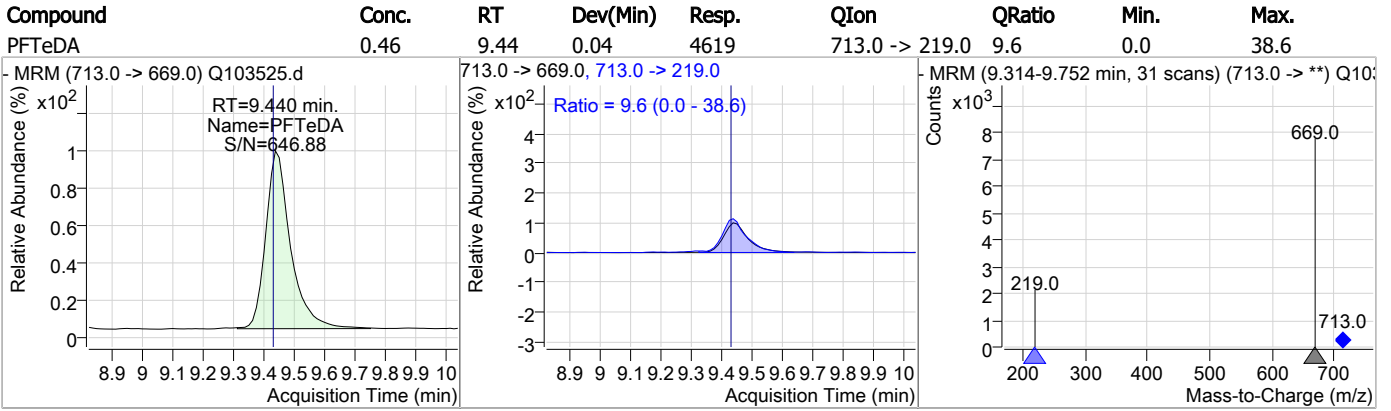


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	0.48	9.14	0.03	5707	663.0 -> 369.0	4.9	0.0	34.6



7.6.17
7

Perfluorinated Compounds by LC/MS/MS



7.6.17

7

Manual Integration Approval Summary

Sample Number: SQ2202-CC2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103525.D Analyst approved: 06/20/23 16:38 Anna Ludwig
Injection Time: 06/19/23 17:55 Supervisor approved: 06/21/23 09:45 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
13C3-HFPO-DA			6.04	Missed peak
Perfluorohexanesulfonic acid	355-46-4		6.66	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.74	Split peak
MeFOSAA	2355-31-9		8.19	Split peak
EtFOSAA	2991-50-6		8.30	Split peak

7.6.17.1
7

Perfluorinated Compounds by LC/MS/MS

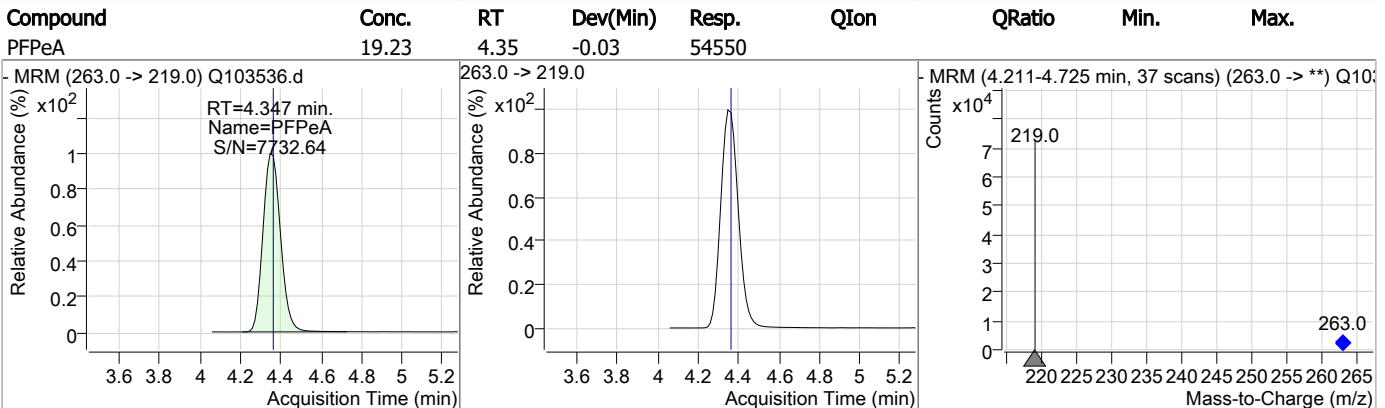
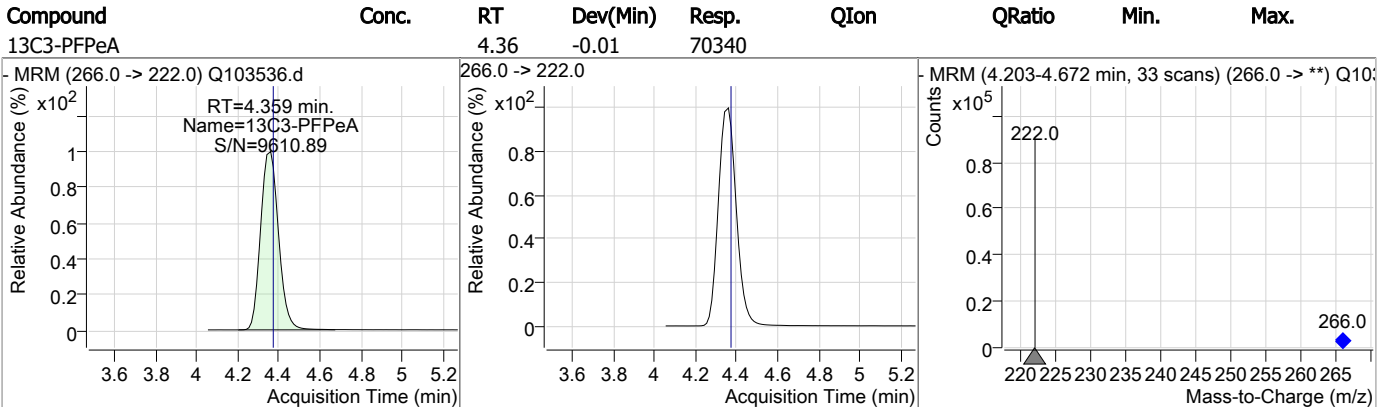
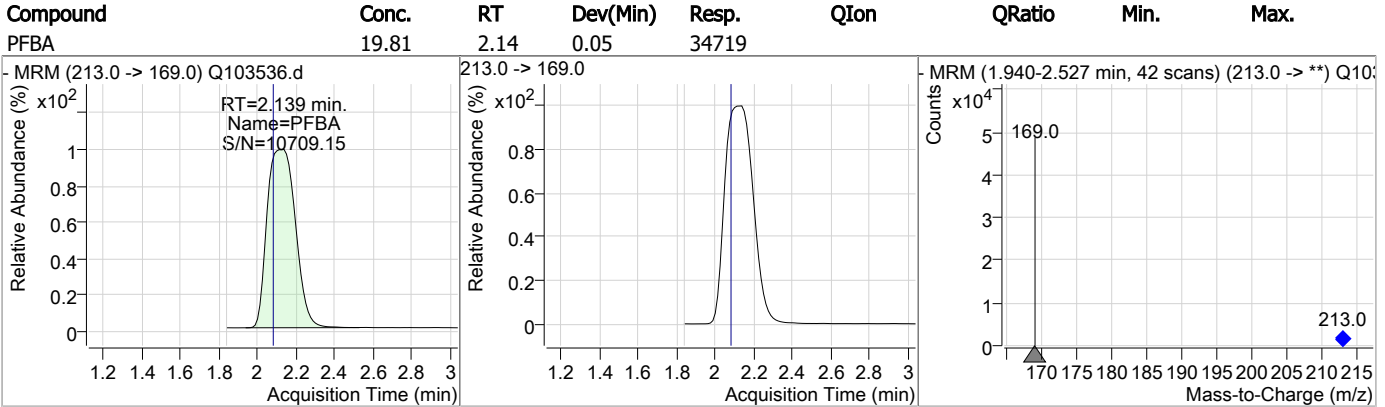
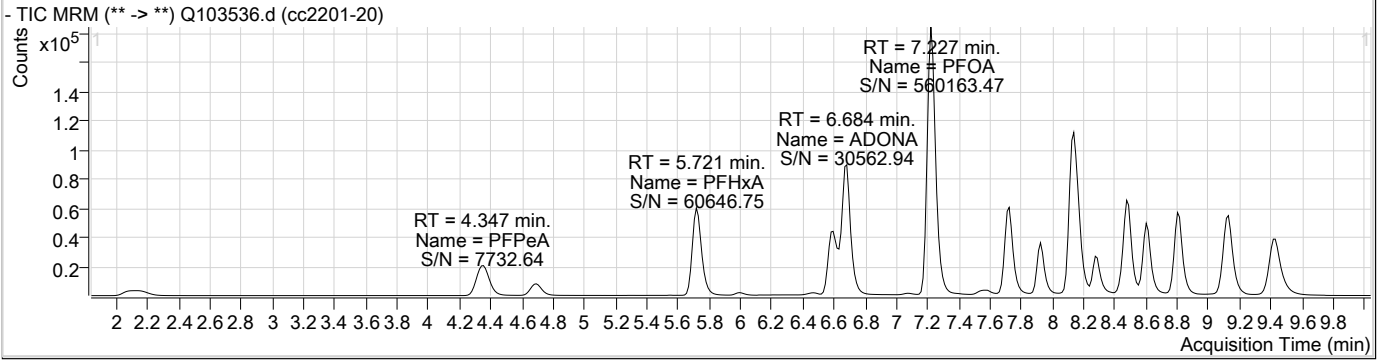
Data File : Q103536.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/19/2023 8:48:40 PM
 Sample Name : cc2201-20
 Vial : P1-A7
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2202.batch.bin
 Sample Information : OP96727,SQ2202,250,,,1,1,water

Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.212	429.0 -> 409.0	49050	20.00 µg/L	-0.013
13C2-PFOA	7.227	415.0 -> 370.0	219758	20.00 µg/L	-0.013
13C3-PFPeA	4.359	266.0 -> 222.0	70340	20.00 µg/L	-0.013
13C4-PFOS	7.715	503.0 -> 80.0	37839	20.00 µg/L	0.000
d3-MeFOSAA	8.165	573.0 -> 419.0	50766	40.00 µg/L	0.000
System Monitoring Compounds					
13C2-PFDA	8.132	515.0 -> 470.0	126325	20.51 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 102.6%	
13C2-PFHxA	5.719	315.0 -> 270.0	126157	19.85 µg/L	-0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 99.2%	
d5-EtFOSAA	8.277	589.0 -> 419.0	54752	41.22 µg/L	0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 103.1%	
13C3-HFPO-DA	6.001	287.0 -> 169.0	3623	42.64 µg/L	-0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 106.6%	
Target Compounds					
6:2FTS	7.213	427.0 -> 407.0	48836	22.30 µg/L	QValue 99
8:2FTS	8.156	527.0 -> 507.0	35056	19.75 µg/L	98
EtFOSAA	8.290	584.0 -> 419.0	26517	20.18 µg/L	m 100
MeFOSAA	8.165	570.0 -> 419.0	27235	19.56 µg/L	m 96
PFBA	2.139	213.0 -> 169.0	34719	19.81 µg/L	100
PFBS	4.691	299.0 -> 80.0	28194	21.87 µg/L	99
PFDA	8.132	513.0 -> 469.0	183320	21.76 µg/L	99
PFDoDA	8.804	613.0 -> 569.0	199650	20.91 µg/L	99
PFHpA	6.587	363.0 -> 319.0	133157	19.54 µg/L	99
PFHpS	7.236	449.0 -> 80.0	37684	22.32 µg/L	97
PFHxA	5.721	313.0 -> 269.0	116654	20.28 µg/L	100
PFHxS	6.631	399.0 -> 80.0	38476	21.98 µg/L	m 96
PFNA	7.729	463.0 -> 419.0	104781	19.49 µg/L	100
PFOA	7.227	413.0 -> 369.0	241530	20.19 µg/L	99
PFOS	7.716	499.0 -> 80.0	45699	21.10 µg/L	m 78
PFPeA	4.347	263.0 -> 219.0	54550	19.23 µg/L	100
PFTeDA	9.427	713.0 -> 669.0	197263	20.23 µg/L	99
PFTrDA	9.129	663.0 -> 619.0	233395	20.47 µg/L	100
PFUnDA	8.481	563.0 -> 519.0	169010	22.35 µg/L	100
ADONA	6.684	377.0 -> 251.0	244859	19.82 µg/L	100
9Cl-PF3ONS	7.929	531.0 -> 351.0	94306	20.48 µg/L	100
11Cl-PF3OUdS	8.602	631.0 -> 451.0	132860	20.45 µg/L	100
HFPO-DA	6.003	285.0 -> 169.0	1906	19.86 µg/L	97

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

7.6.18
7

Perfluorinated Compounds by LC/MS/MS

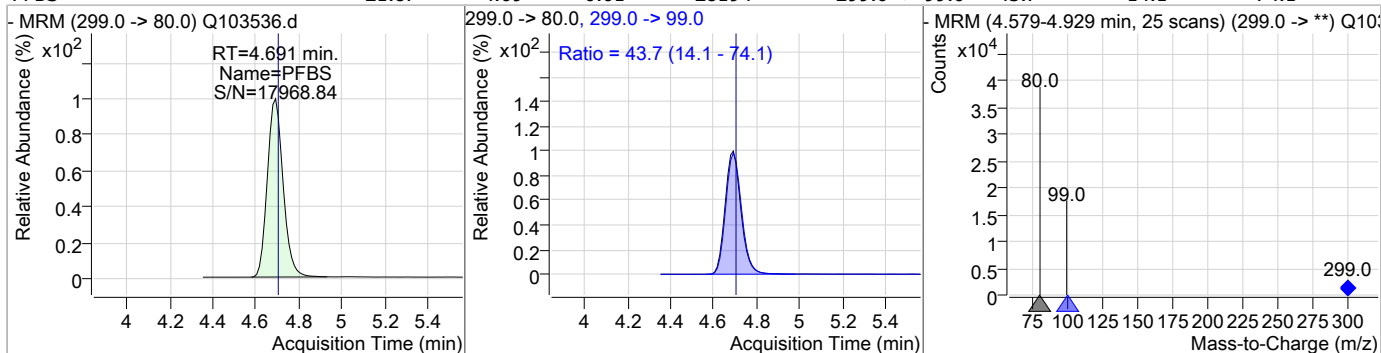


7.6.18

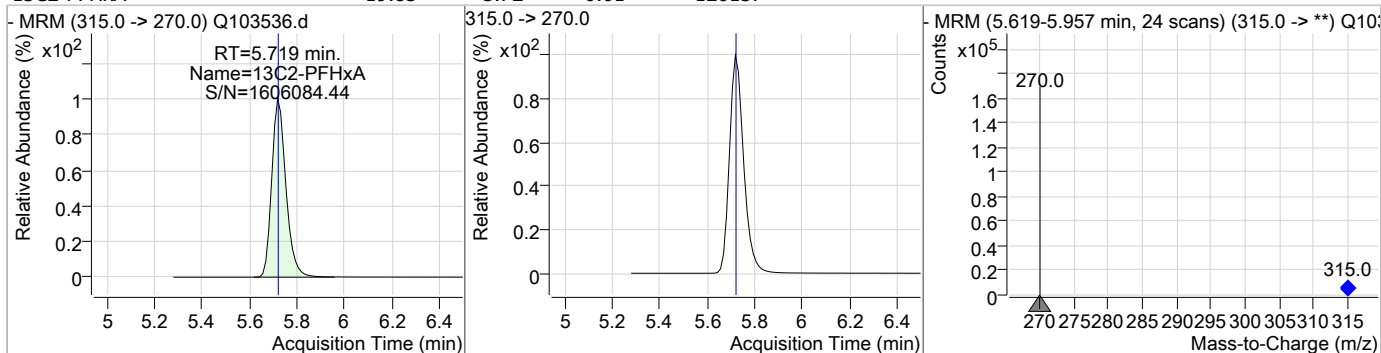
7

Perfluorinated Compounds by LC/MS/MS

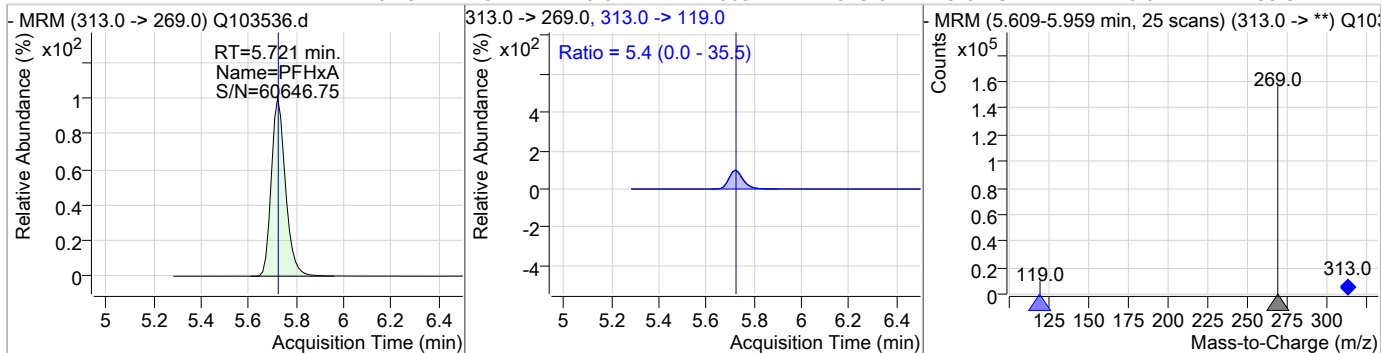
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	21.87	4.69	-0.01	28194	299.0 -> 99.0	43.7	14.1	74.1



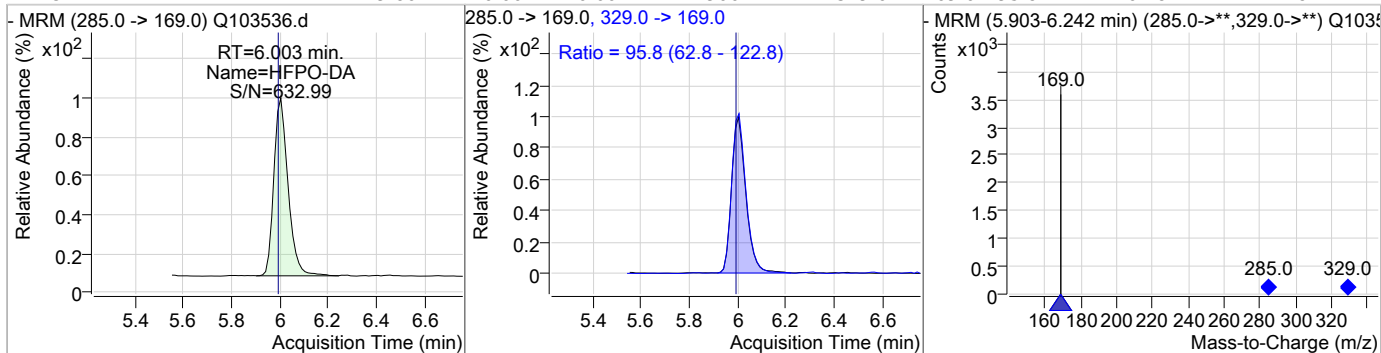
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	19.85	5.72	-0.01	126157				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	20.28	5.72	-0.01	116654	313.0 -> 119.0	5.4	0.0	35.5

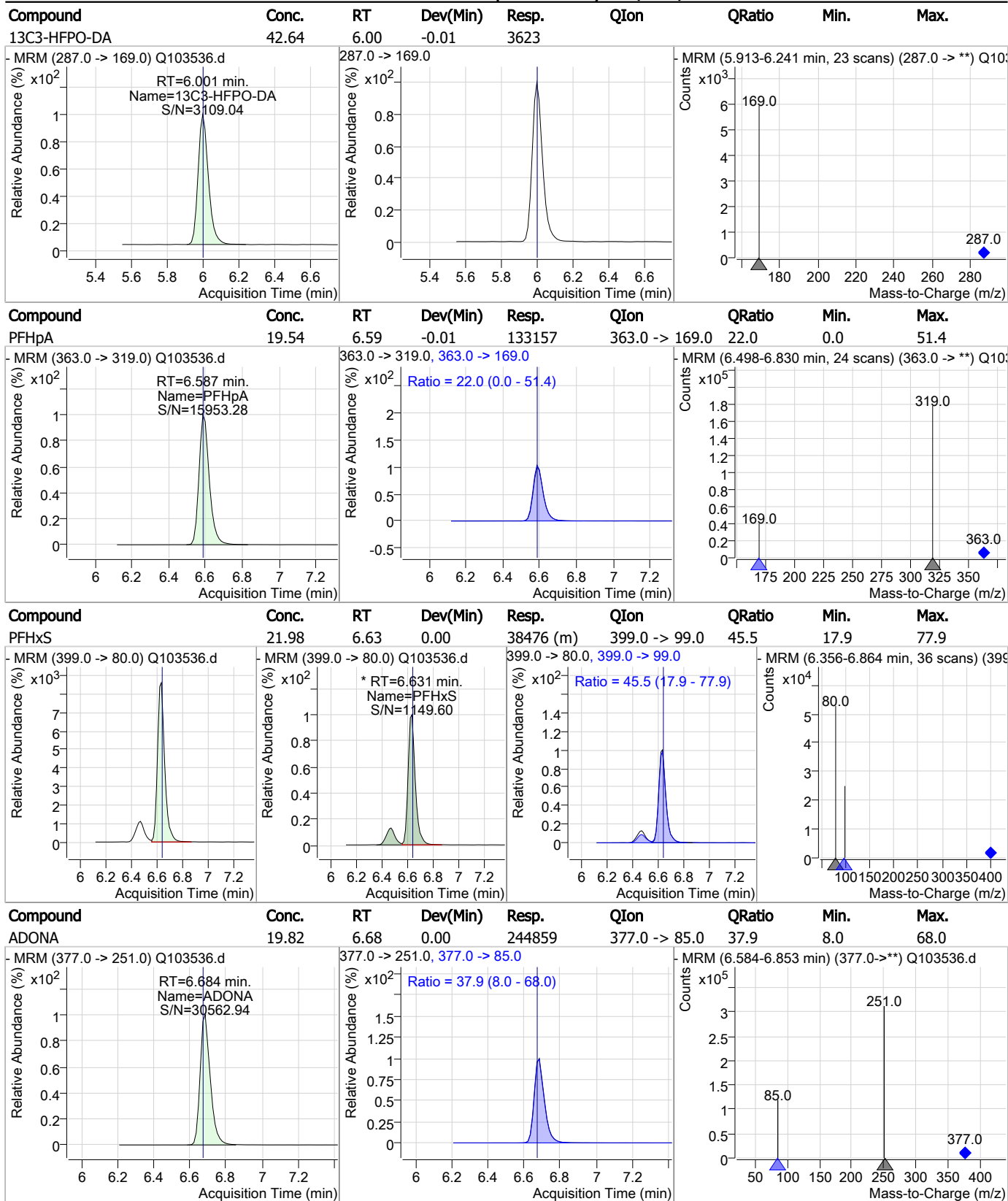


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	19.86	6.00	0.00	1906	329.0 -> 169.0	95.8	62.8	122.8



7.6.18
7

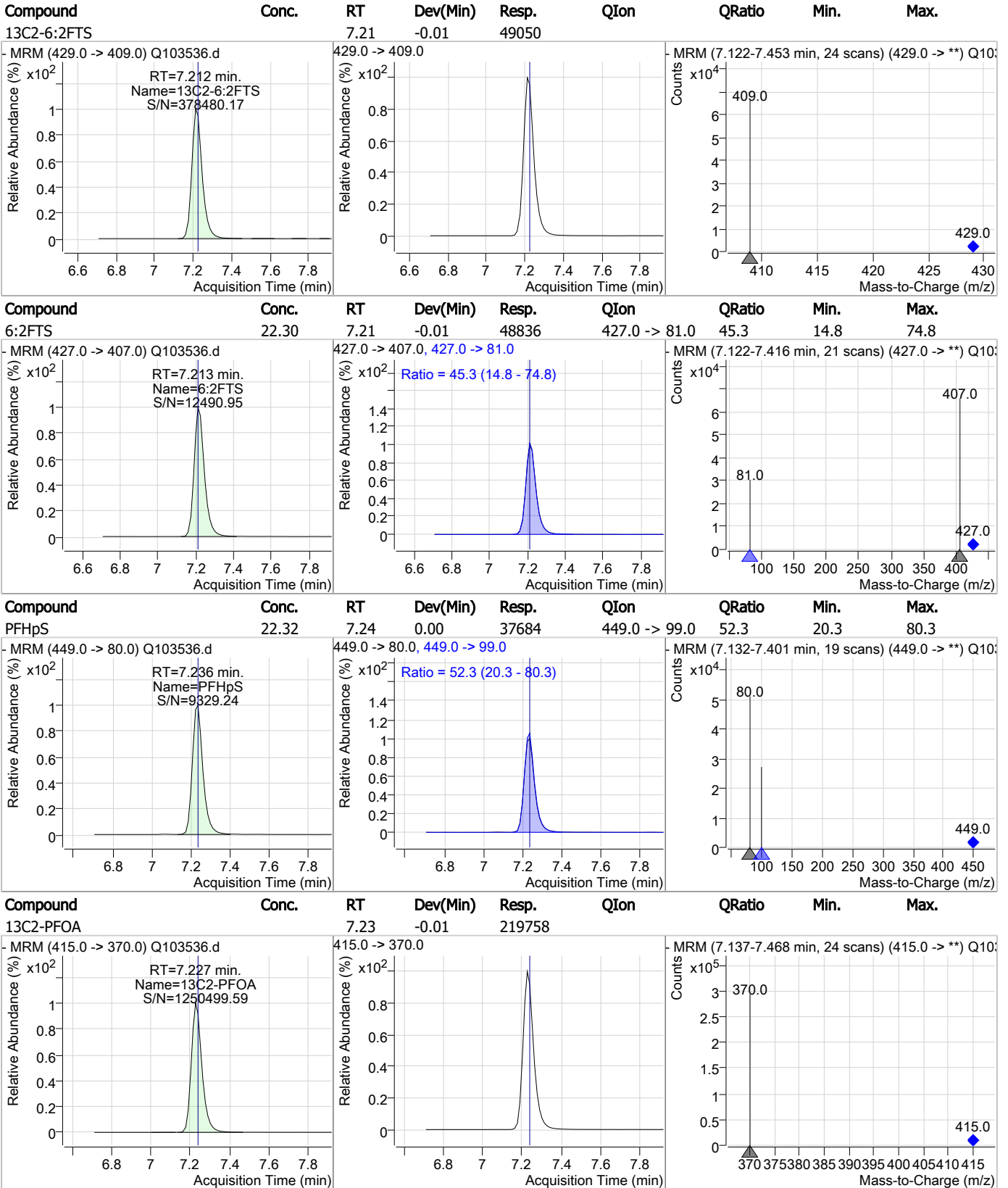
Perfluorinated Compounds by LC/MS/MS



7.6.18

7

Perfluorinated Compounds by LC/MS/MS

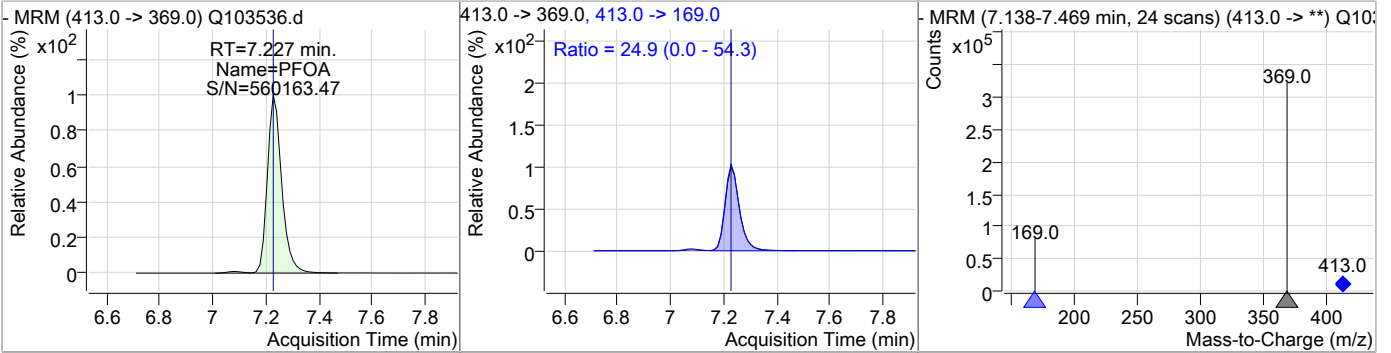


7.6.18 7

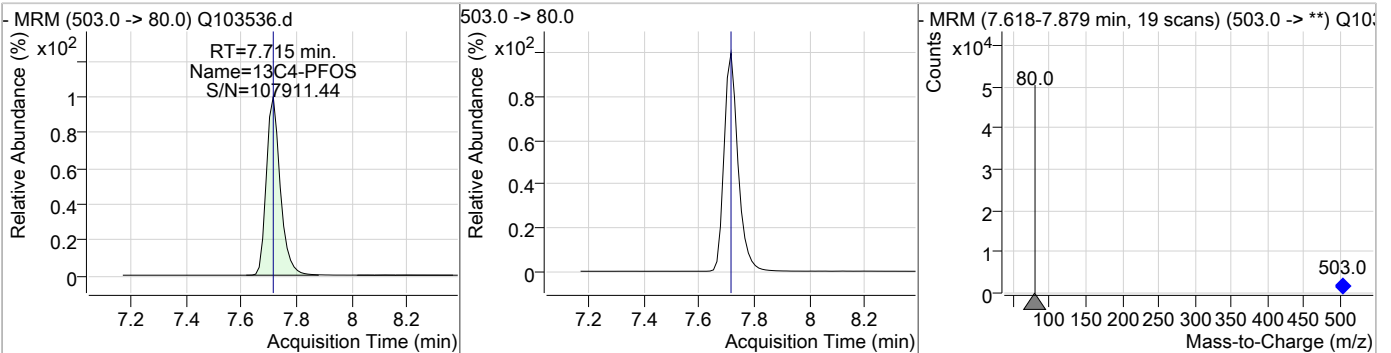


Perfluorinated Compounds by LC/MS/MS

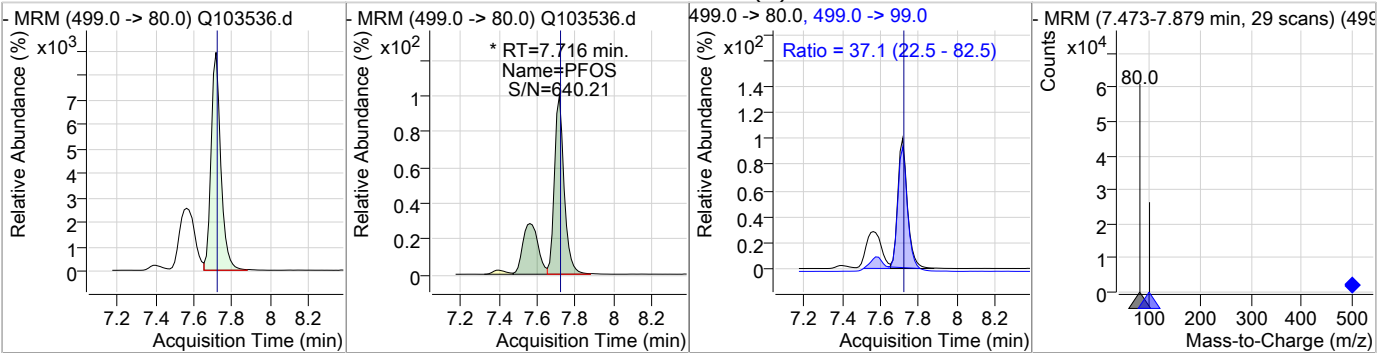
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	20.19	7.23	-0.01	241530	413.0 -> 169.0	24.9	0.0	54.3



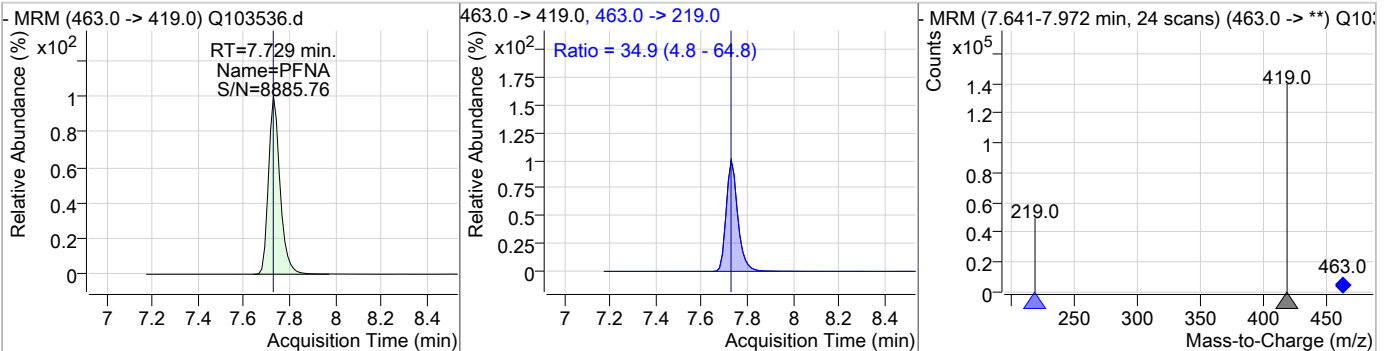
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.72	0.00	37839				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	21.10	7.72	0.00	45699 (m)	499.0 -> 99.0	37.1	22.5	82.5

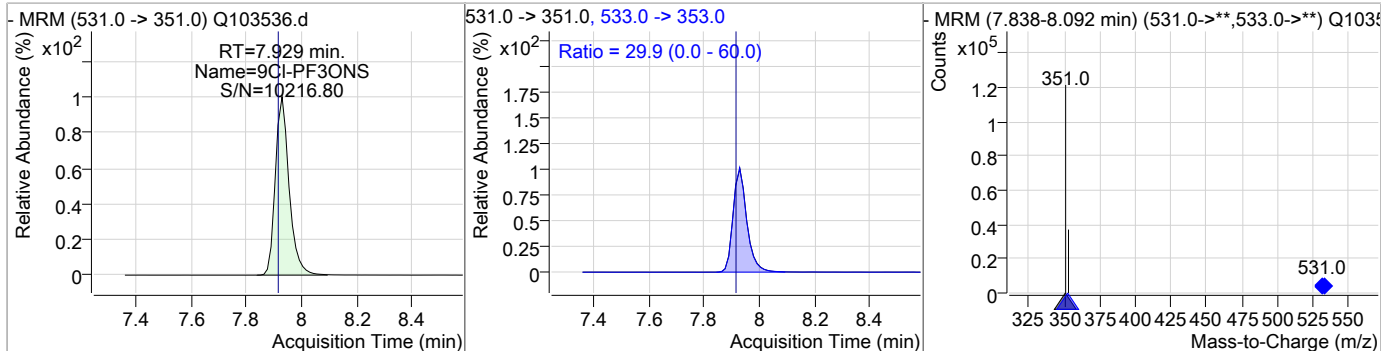


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.49	7.73	-0.01	104781	463.0 -> 219.0	34.9	4.8	64.8

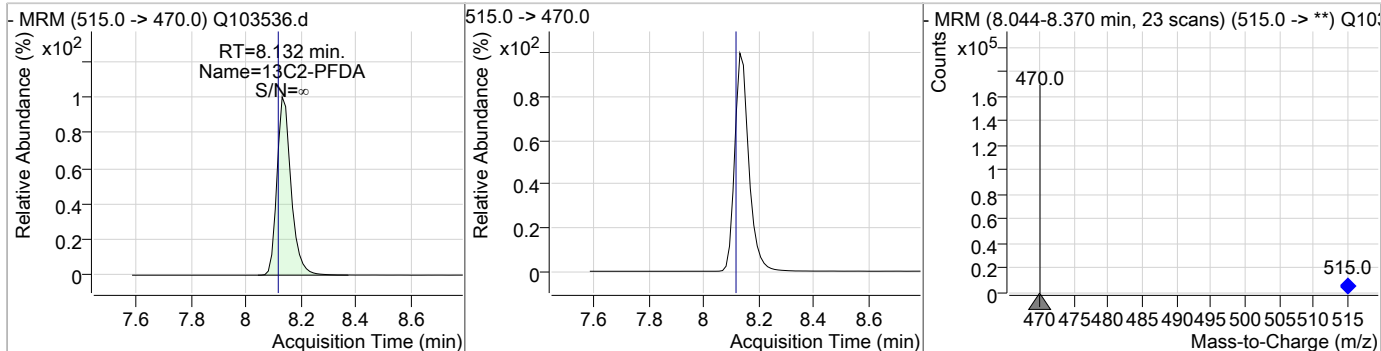


Perfluorinated Compounds by LC/MS/MS

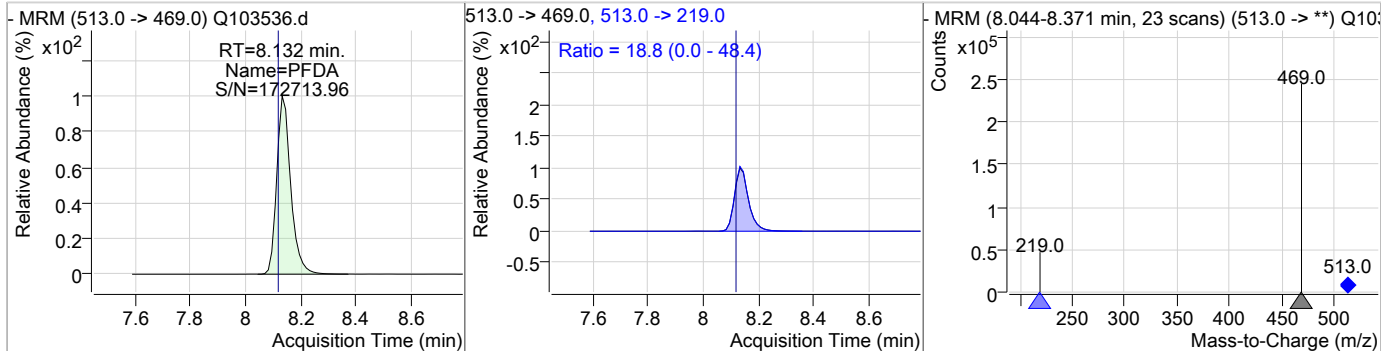
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9CI-PF3ONS	20.48	7.93	0.00	94306	533.0 -> 353.0	29.9	0.0	60.0



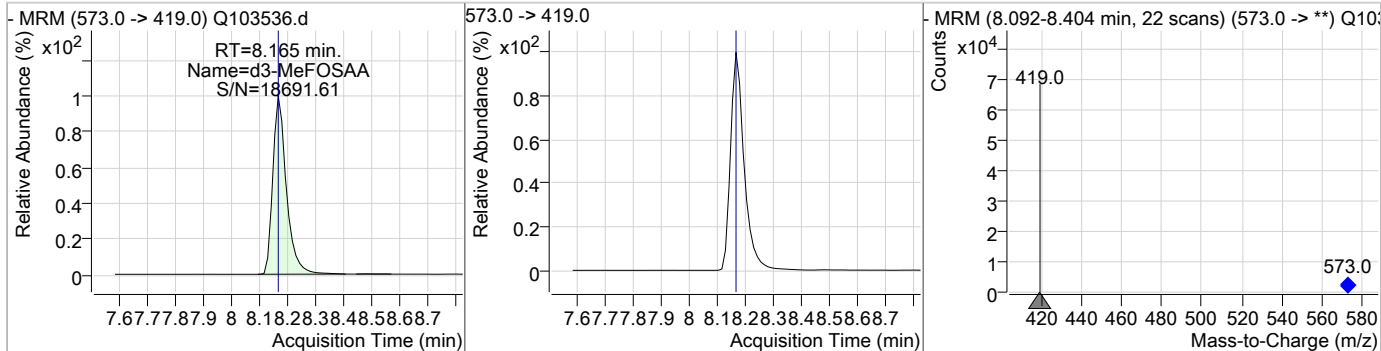
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	20.51	8.13	0.00	126325				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	21.76	8.13	0.00	183320	513.0 -> 219.0	18.8	0.0	48.4

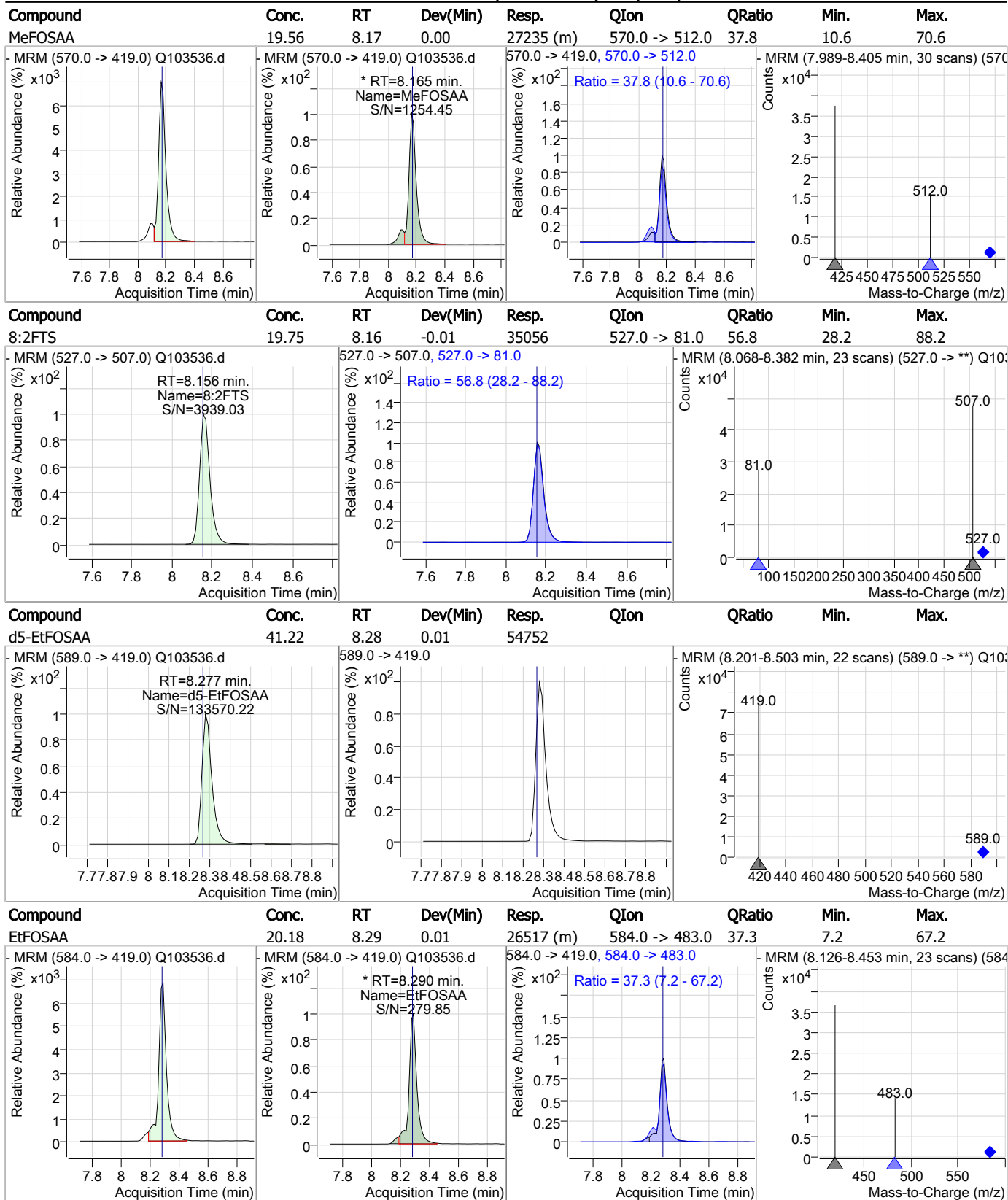


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.16	0.00	50766				



7.6.18
7

Perfluorinated Compounds by LC/MS/MS

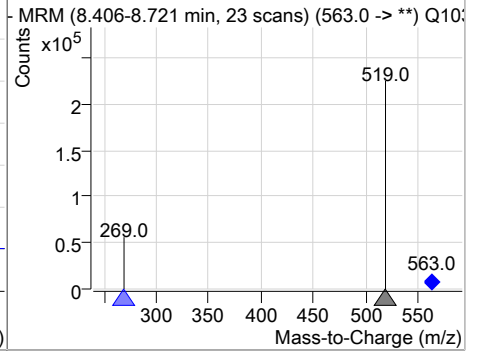
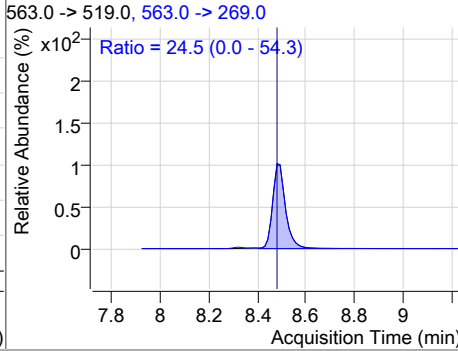
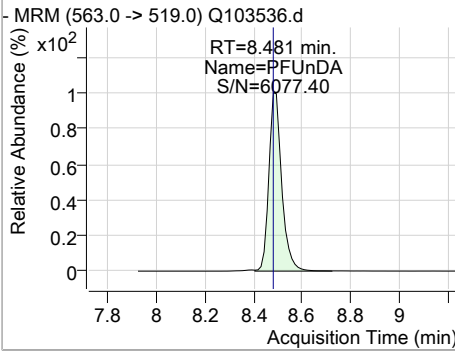


7.6.18

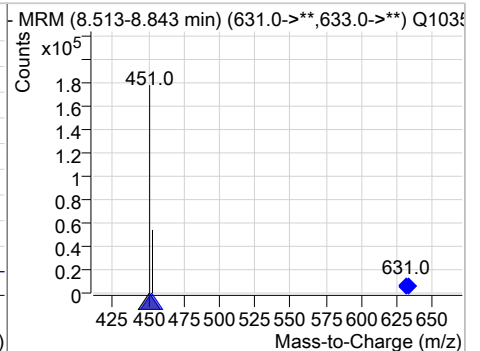
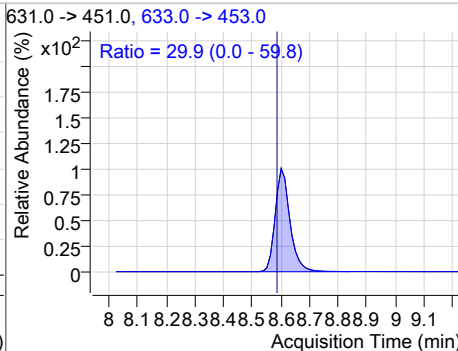
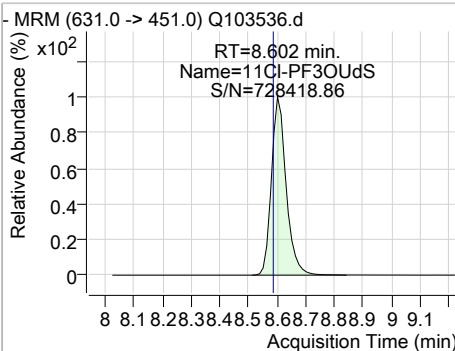
7

Perfluorinated Compounds by LC/MS/MS

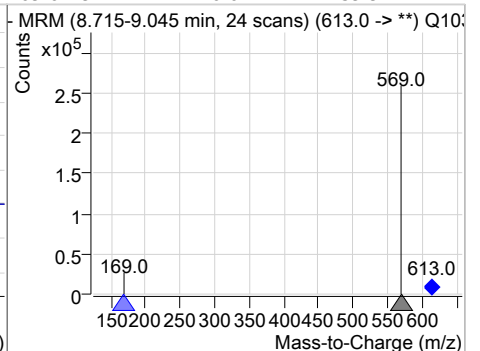
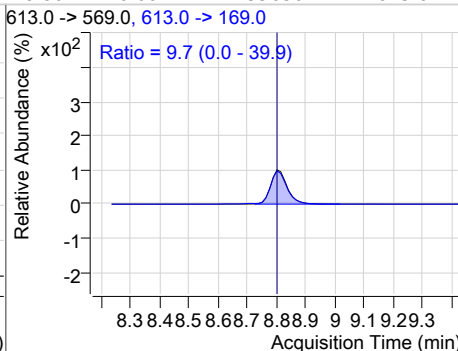
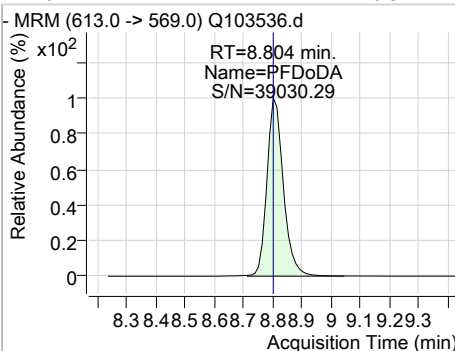
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	22.35	8.48	0.00	169010	563.0 -> 269.0	24.5	0.0	54.3



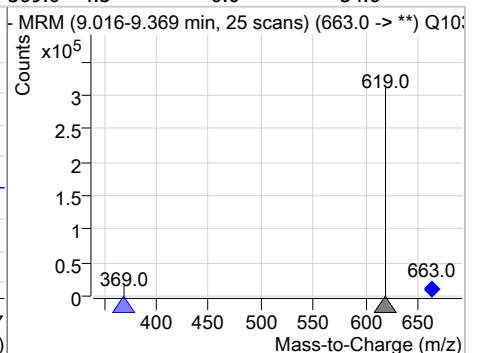
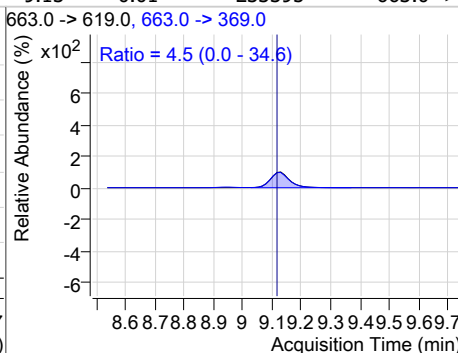
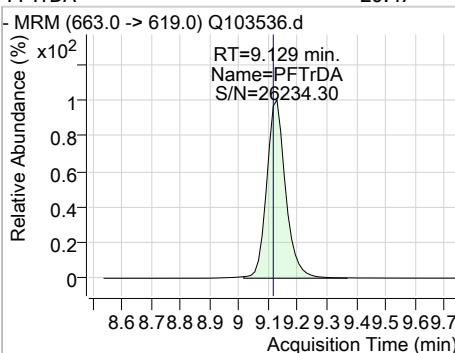
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	20.45	8.60	0.00	132860	633.0 -> 453.0	29.9	0.0	59.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDODA	20.91	8.80	0.00	199650	613.0 -> 169.0	9.7	0.0	39.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	20.47	9.13	0.01	233395	663.0 -> 369.0	4.5	0.0	34.6

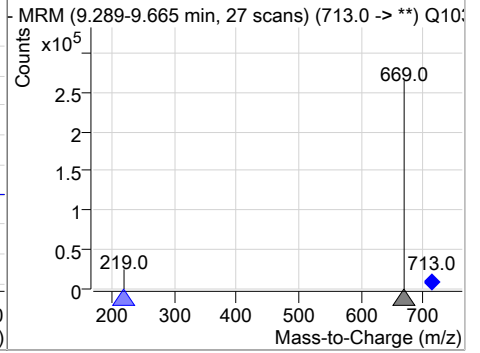
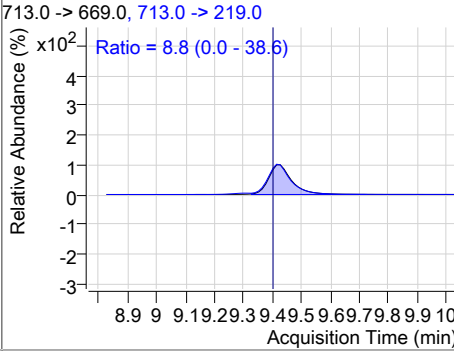
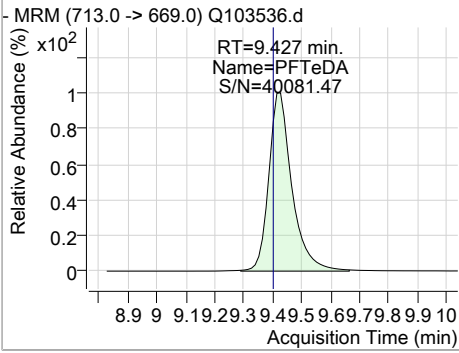


7.6.18
7



Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	20.23	9.43	0.03	197263	713.0 -> 219.0	8.8	0.0	38.6



7.6.18
7

Manual Integration Approval Summary

Sample Number: SQ2202-CC2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103536.D Analyst approved: 06/20/23 16:38 Anna Ludwig
Injection Time: 06/19/23 20:48 Supervisor approved: 06/21/23 09:45 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.63	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.72	Split peak
MeFOSAA	2355-31-9		8.16	Split peak
EtFOSAA	2991-50-6		8.29	Split peak

7.6.18.1

7

Perfluorinated Compounds by LC/MS/MS

Data File : Q103540.d
 Operator : annal
 Acq. Method : 537.m
 Acq. Date-Time : 6/19/2023 9:36:00 PM
 Sample Name : cc2201-50
 Vial : P1-A8
 DA Method File : 537_061823_SQ2201.quantmethod.xml
 Batch Name : sq2202.batch.bin
 Sample Information : OP96727,SQ2202,250,,,1,1,water

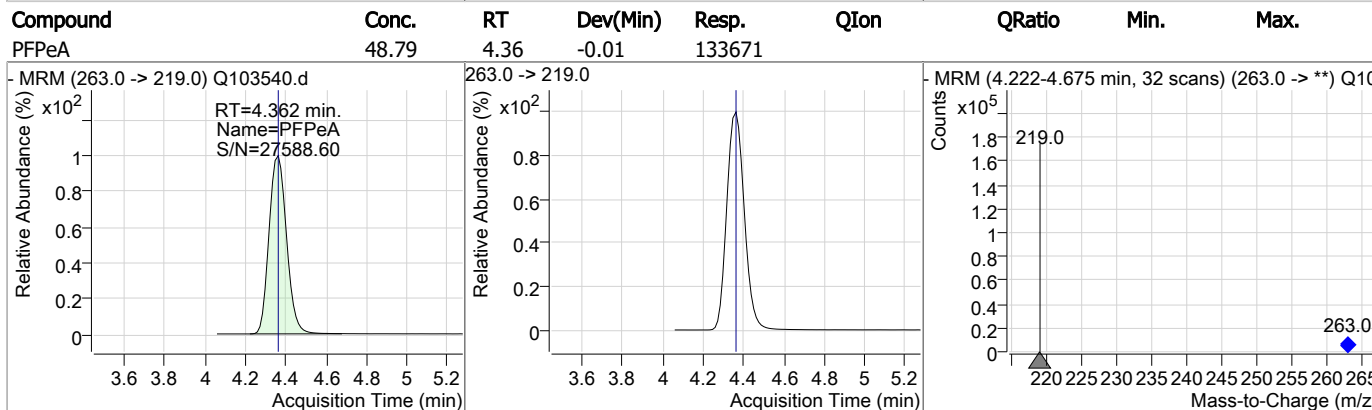
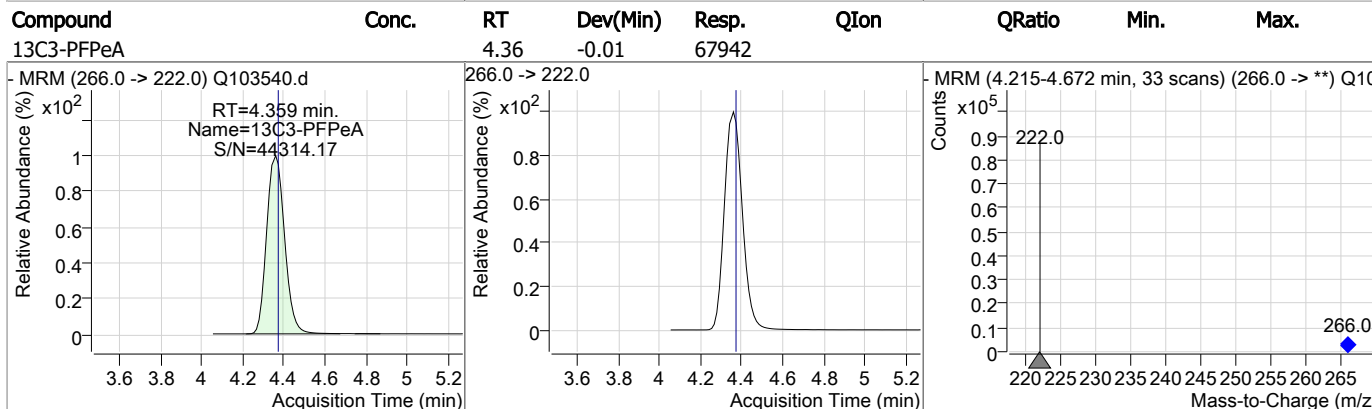
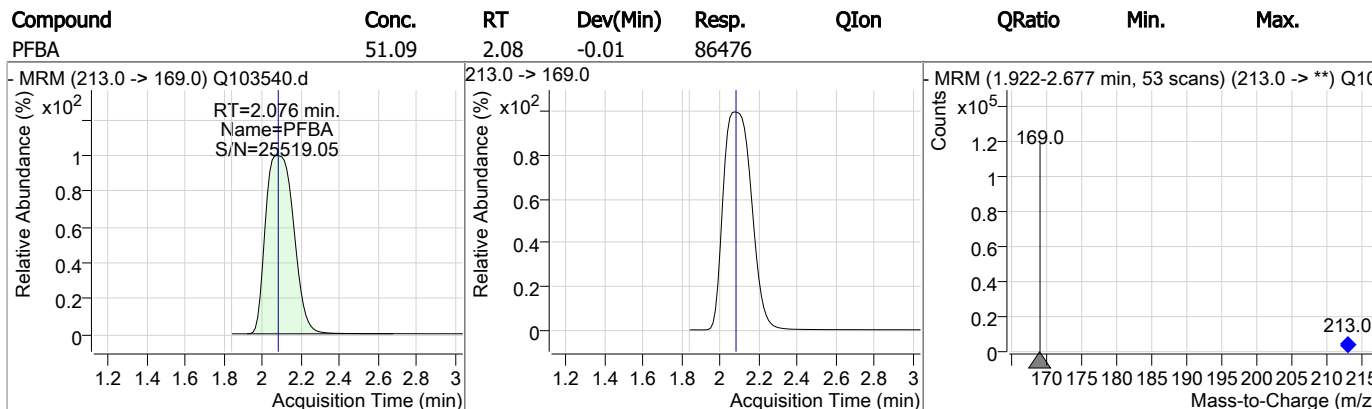
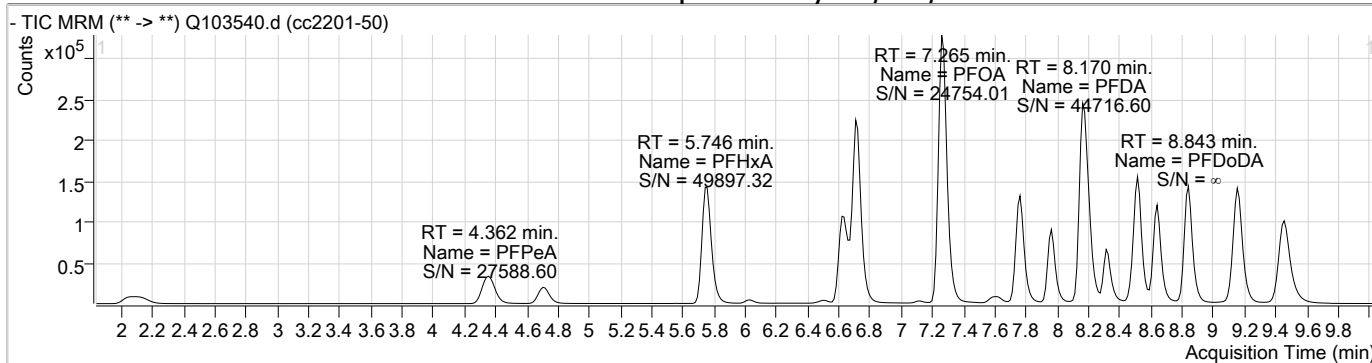
Compound	RT	QIon	Resp.	Conc. Units	Dev(Min)
Internal Standards					
13C2-6:2FTS	7.250	429.0 -> 409.0	46850	20.00 µg/L	0.025
13C2-PFOA	7.264	415.0 -> 370.0	209045	20.00 µg/L	0.025
13C3-PFPeA	4.359	266.0 -> 222.0	67942	20.00 µg/L	-0.013
13C4-PFOS	7.753	503.0 -> 80.0	36640	20.00 µg/L	0.038
d3-MeFOSAA	8.202	573.0 -> 419.0	49046	40.00 µg/L	0.038
System Monitoring Compounds					
13C2-PFDA	8.169	515.0 -> 470.0	292434	49.92 µg/L	0.038
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 249.6%	
13C2-PFHxA	5.757	315.0 -> 270.0	308471	49.89 µg/L	0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 249.5%	
d5-EtFOSAA	8.314	589.0 -> 419.0	136607	101.33 µg/L	0.050
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 253.3%	
13C3-HFPO-DA	6.026	287.0 -> 169.0	8397	102.17 µg/L	0.013
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 255.4%	
Target Compounds					
6:2FTS	7.250	427.0 -> 407.0	115401	55.18 µg/L	100
8:2FTS	8.193	527.0 -> 507.0	81388	51.25 µg/L	99
EtFOSAA	8.327	584.0 -> 419.0	65721	50.47 µg/L	99
MeFOSAA	8.203	570.0 -> 419.0	66998	49.80 µg/L	m 93
PFBA	2.076	213.0 -> 169.0	86476	51.09 µg/L	100
PFBS	4.703	299.0 -> 80.0	69698	53.96 µg/L	99
PFDA	8.170	513.0 -> 469.0	414973	51.78 µg/L	100
PFDoDA	8.843	613.0 -> 569.0	501053	54.20 µg/L	100
PFHpA	6.624	363.0 -> 319.0	324961	49.02 µg/L	98
PFHpS	7.274	449.0 -> 80.0	90573	55.40 µg/L	99
PFHxA	5.746	313.0 -> 269.0	283765	50.58 µg/L	100
PFHxS	6.669	399.0 -> 80.0	94925	55.04 µg/L	m 97
PFNA	7.767	463.0 -> 419.0	250517	48.32 µg/L	99
PFOA	7.265	413.0 -> 369.0	575230	50.55 µg/L	100
PFOS	7.754	499.0 -> 80.0	113942	54.34 µg/L	m 84
PFPeA	4.362	263.0 -> 219.0	133671	48.79 µg/L	100
PFTeDA	9.452	713.0 -> 669.0	507597	53.76 µg/L	99
PFTrDA	9.154	663.0 -> 619.0	586181	53.09 µg/L	100
PFUnDA	8.519	563.0 -> 519.0	396510	54.15 µg/L	97
ADONA	6.714	377.0 -> 251.0	616148	50.17 µg/L	100
9CI-PF3ONS	7.966	531.0 -> 351.0	239238	52.22 µg/L	100
11CI-PF3OUdS	8.640	631.0 -> 451.0	322495	50.47 µg/L	98
HFPO-DA	6.028	285.0 -> 169.0	4720	50.94 µg/L	98

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

7.6.19
7

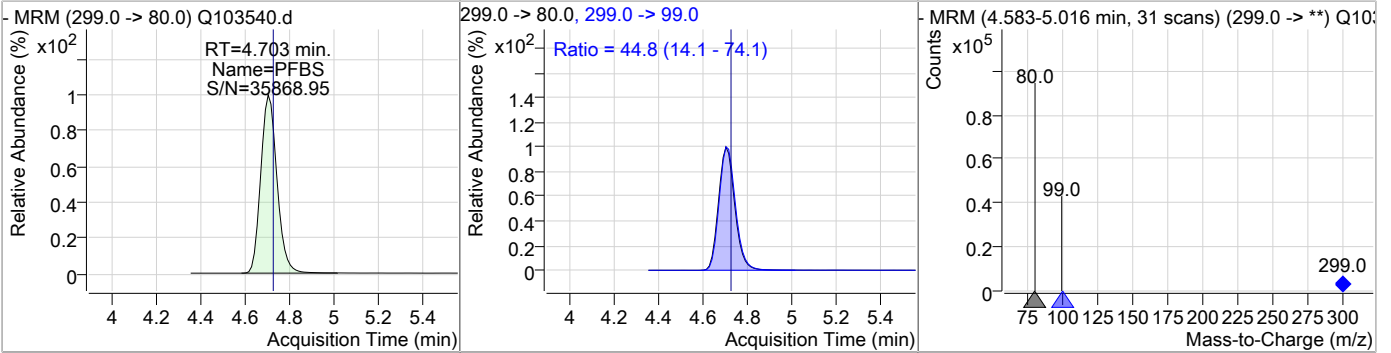


Perfluorinated Compounds by LC/MS/MS

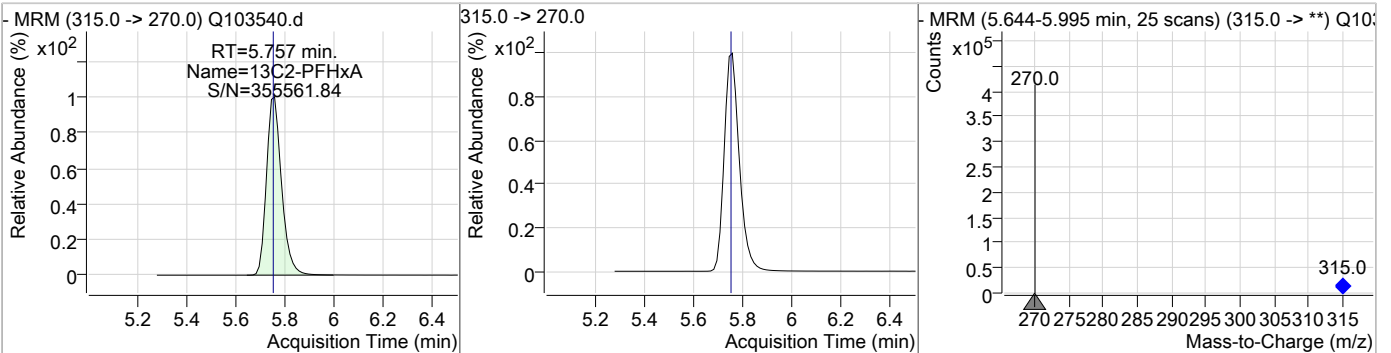


Perfluorinated Compounds by LC/MS/MS

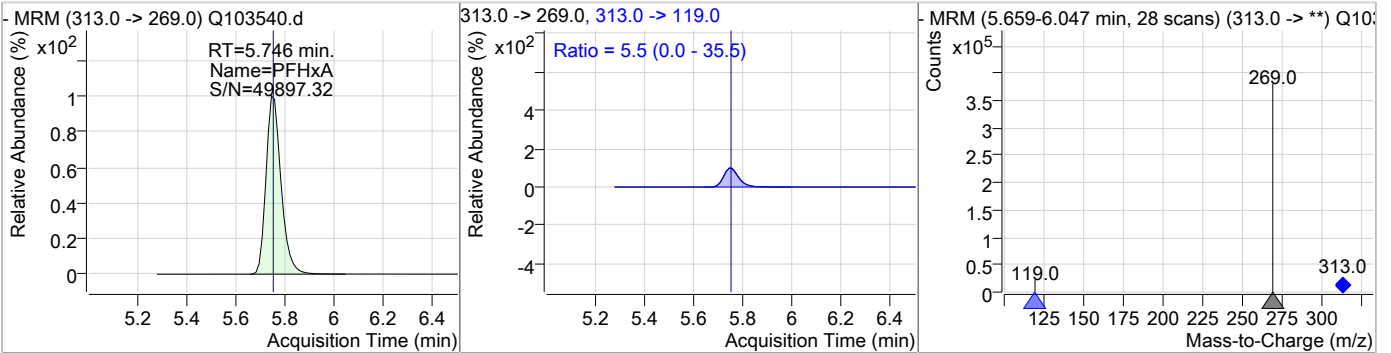
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	53.96	4.70	0.00	69698	299.0 -> 99.0	44.8	14.1	74.1



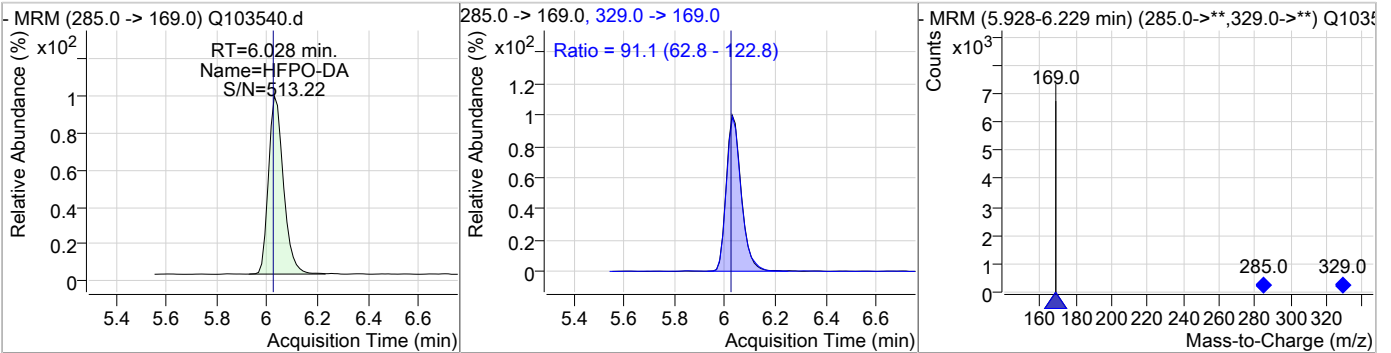
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	49.89	5.76	0.03	308471				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	50.58	5.75	0.01	283765	313.0 -> 119.0	5.5	0.0	35.5

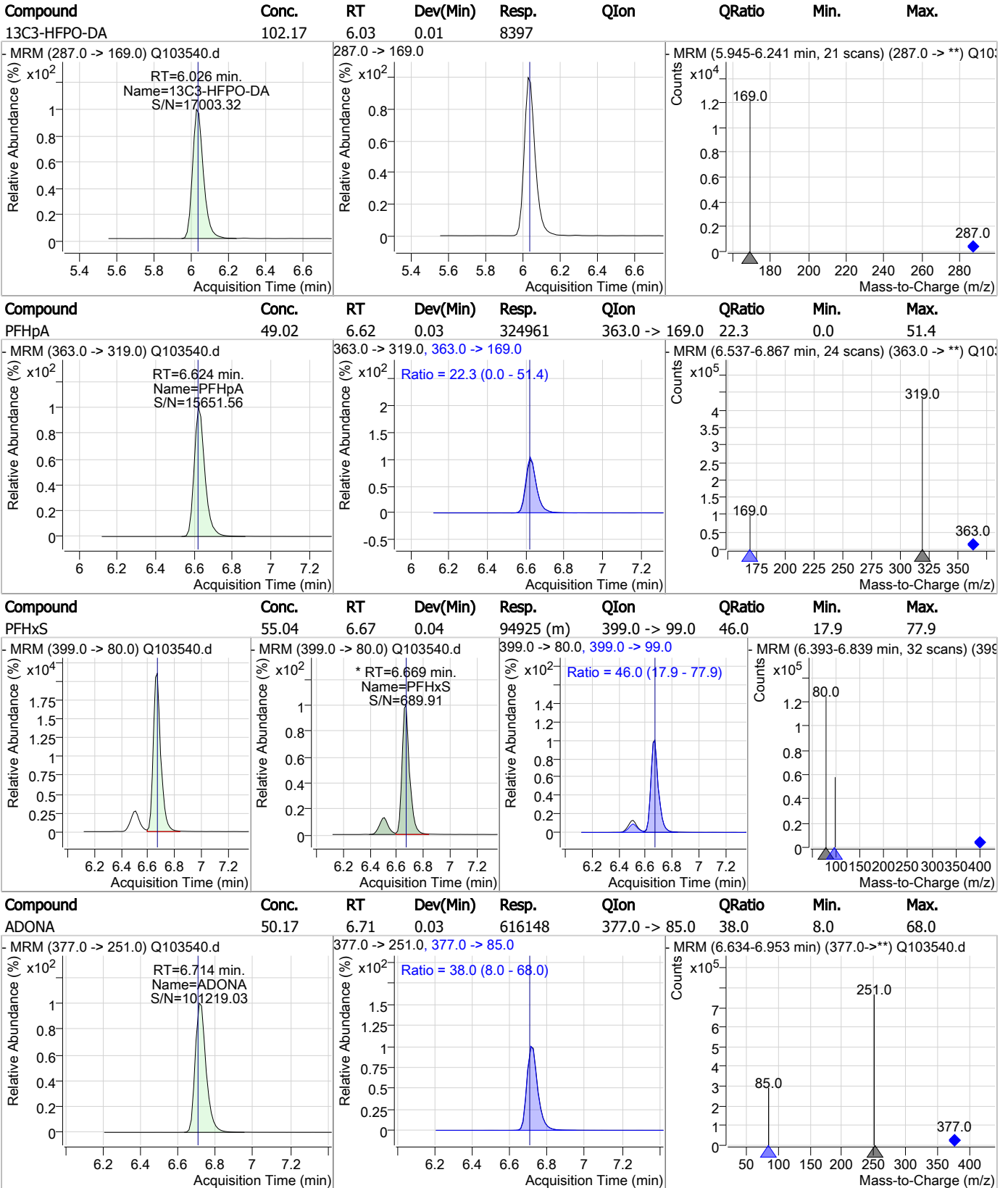


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
HFPO-DA	50.94	6.03	0.03	4720	329.0 -> 169.0	91.1	62.8	122.8



7.6.19
7

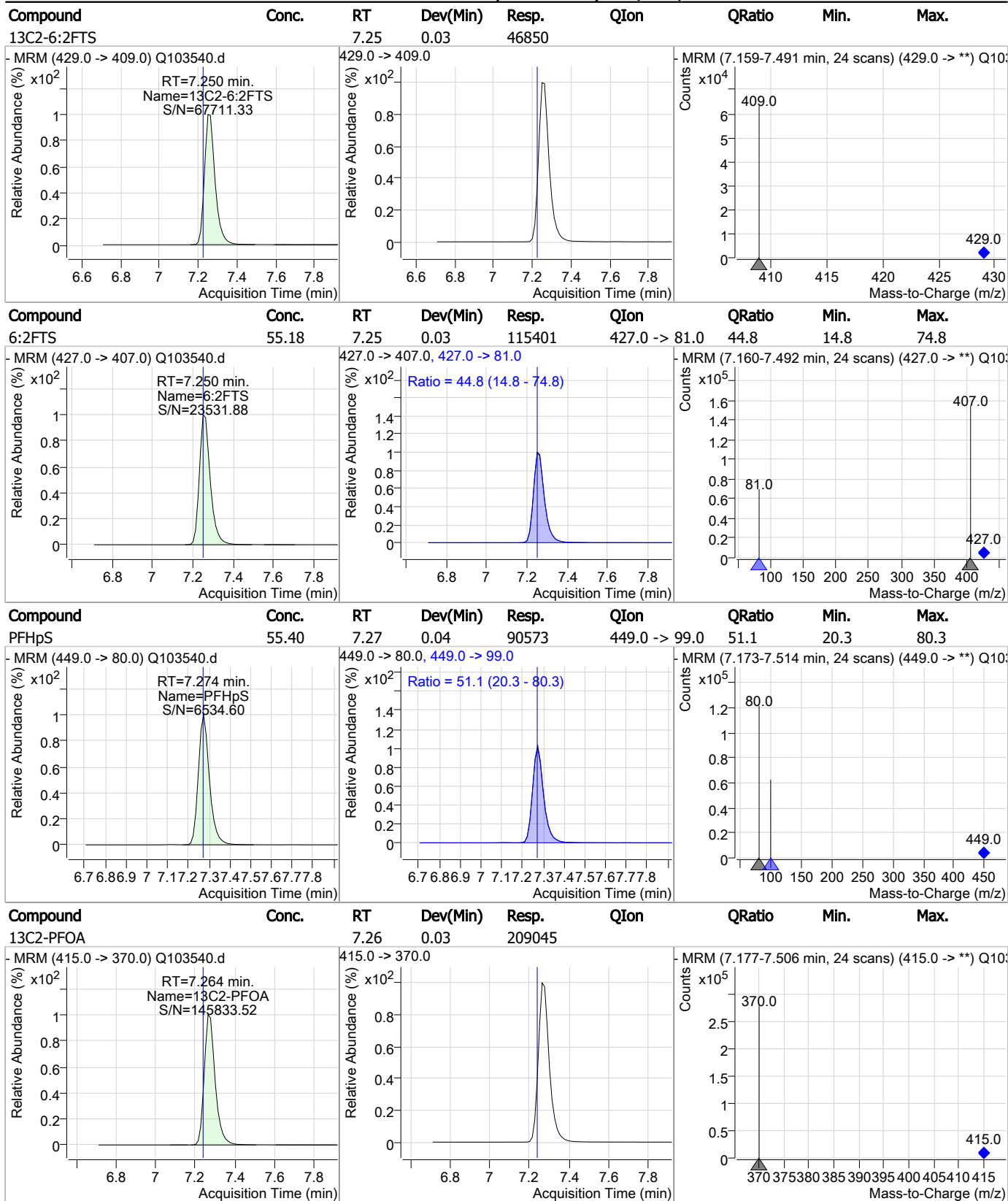
Perfluorinated Compounds by LC/MS/MS



7.6.19 7



Perfluorinated Compounds by LC/MS/MS

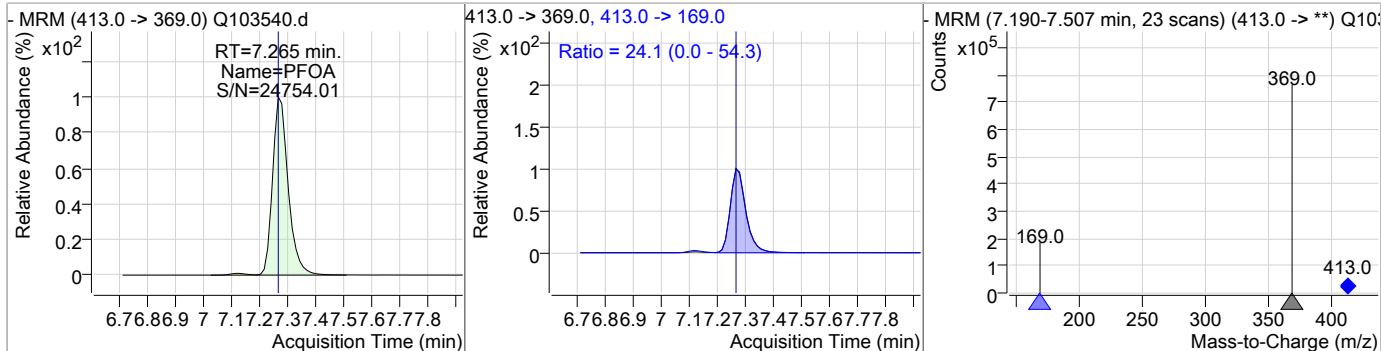


7.6.19

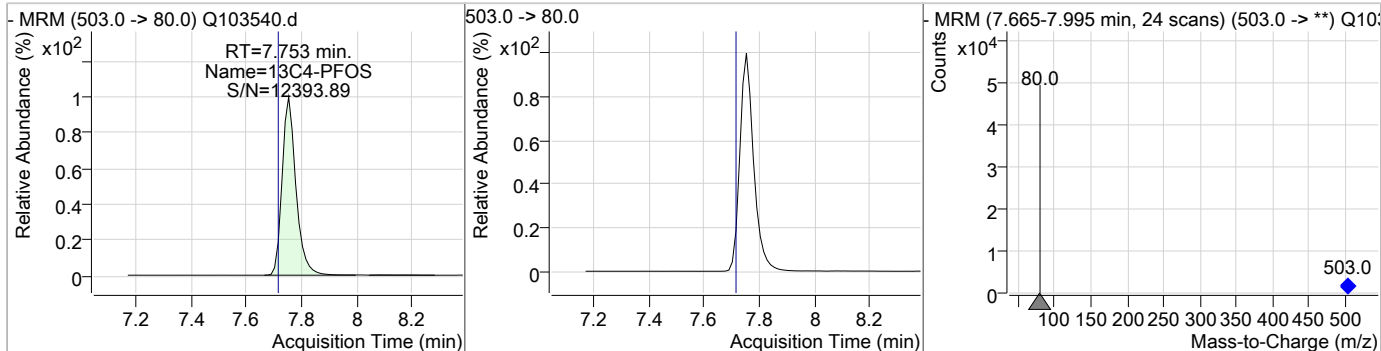
7

Perfluorinated Compounds by LC/MS/MS

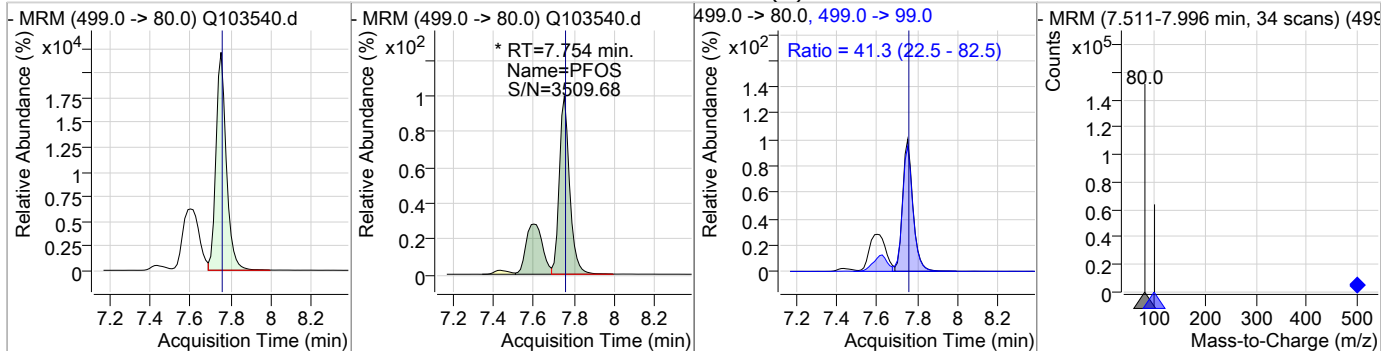
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	50.55	7.26	0.03	575230	413.0 -> 169.0	24.1	0.0	54.3



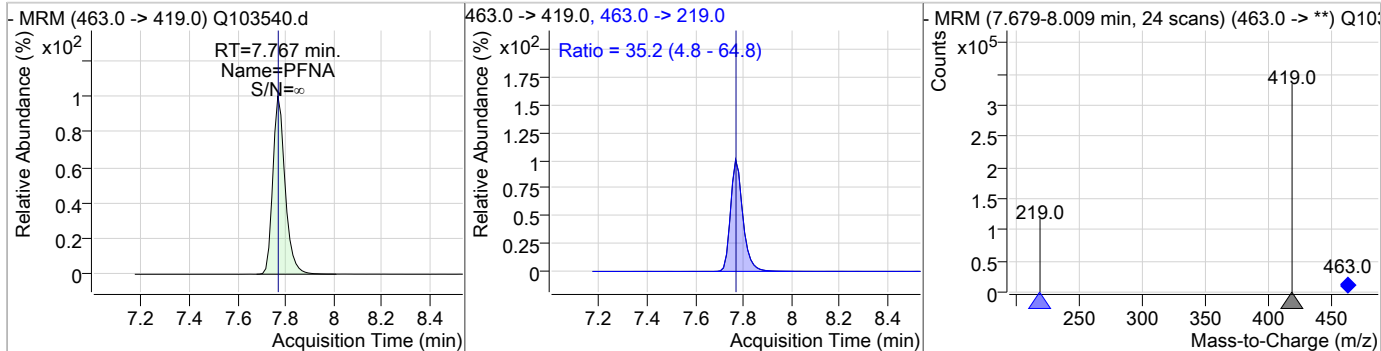
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C4-PFOS		7.75	0.04	36640				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	54.34	7.75	0.04	113942 (m)	499.0 -> 99.0	41.3	22.5	82.5



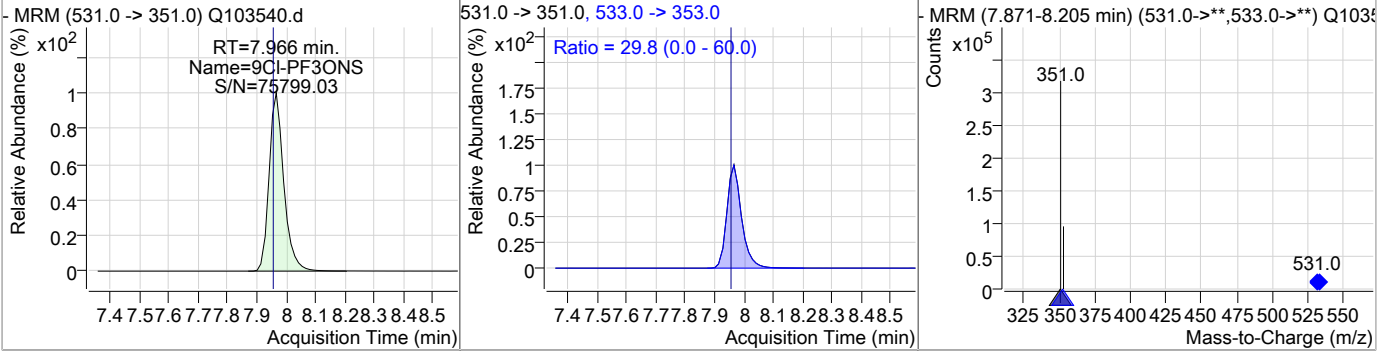
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	48.32	7.77	0.03	250517	463.0 -> 219.0	35.2	4.8	64.8



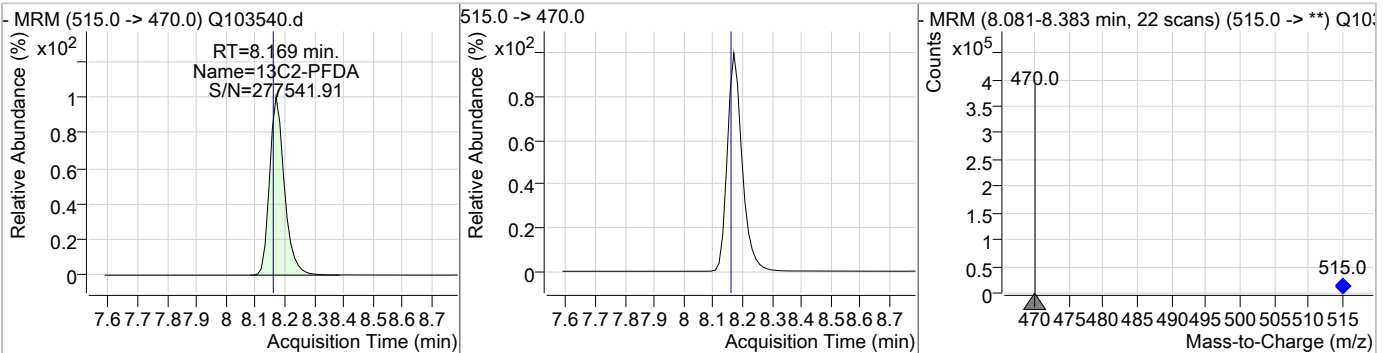
7.6.19
7

Perfluorinated Compounds by LC/MS/MS

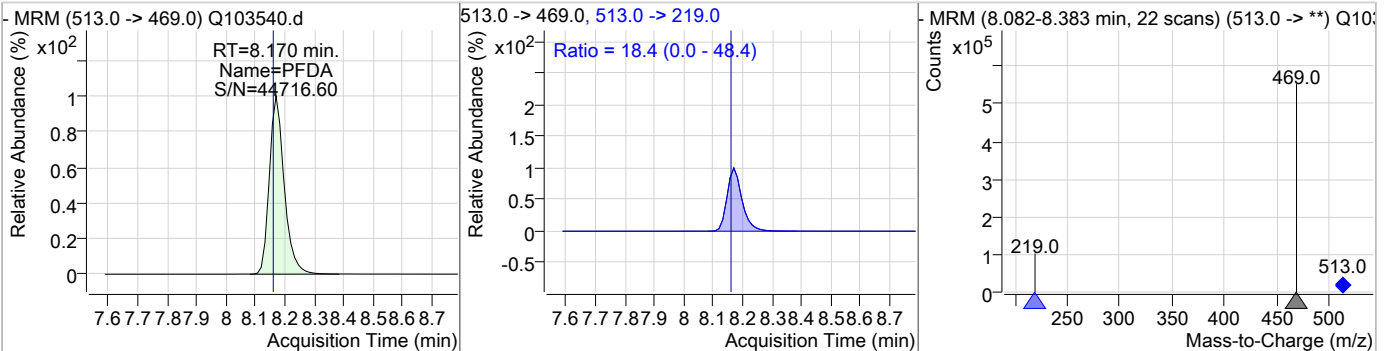
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
9CI-PF3ONS	52.22	7.97	0.04	239238	533.0 -> 353.0	29.8	0.0	60.0



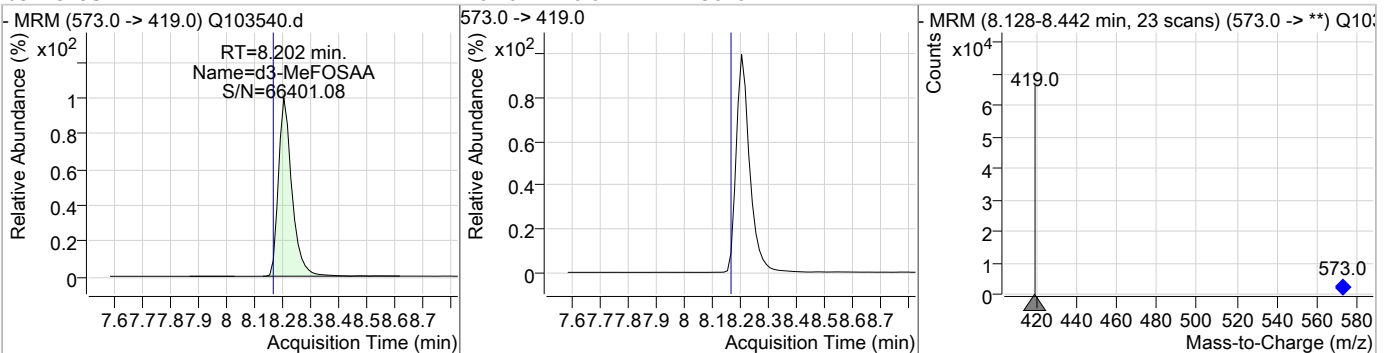
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	49.92	8.17	0.04	292434				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	51.78	8.17	0.04	414973	513.0 -> 219.0	18.4	0.0	48.4



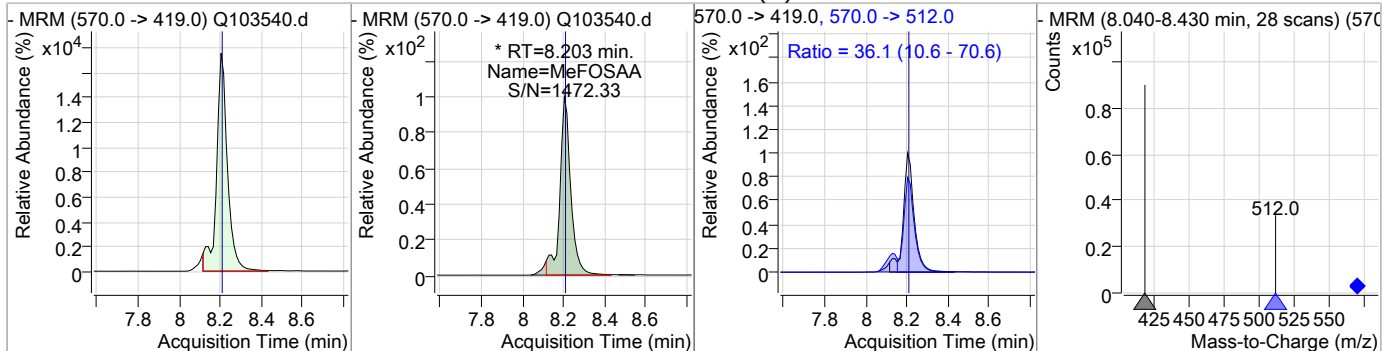
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d3-MeFOSAA		8.20	0.04	49046				



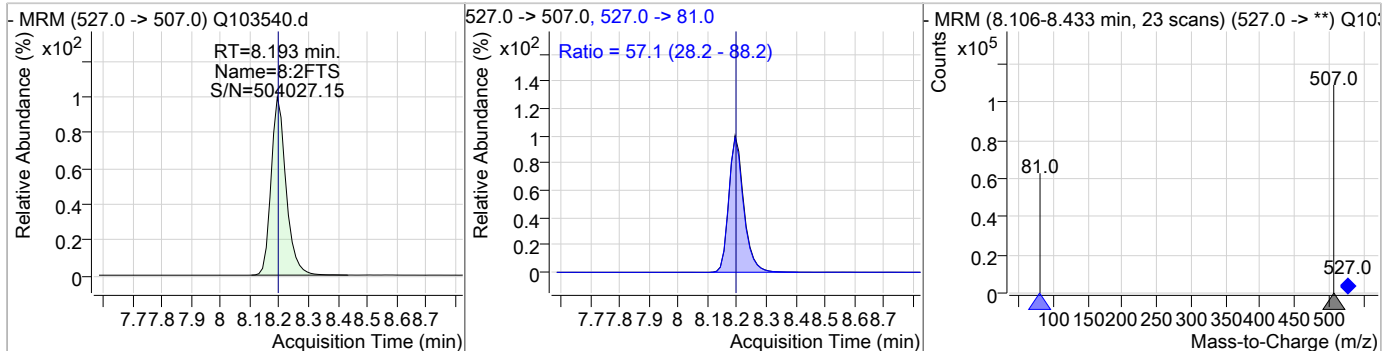
7.6.19
7

Perfluorinated Compounds by LC/MS/MS

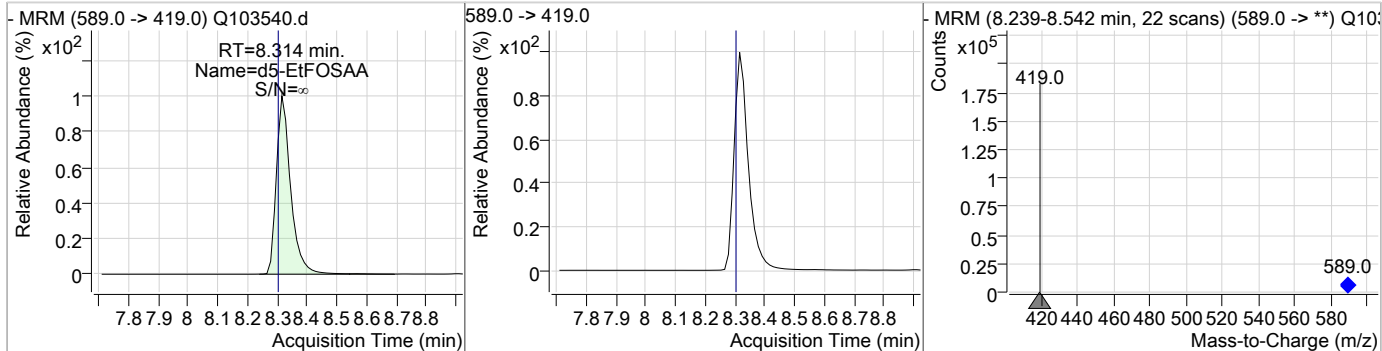
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	49.80	8.20	0.04	66998 (m)	570.0 -> 512.0	36.1	10.6	70.6



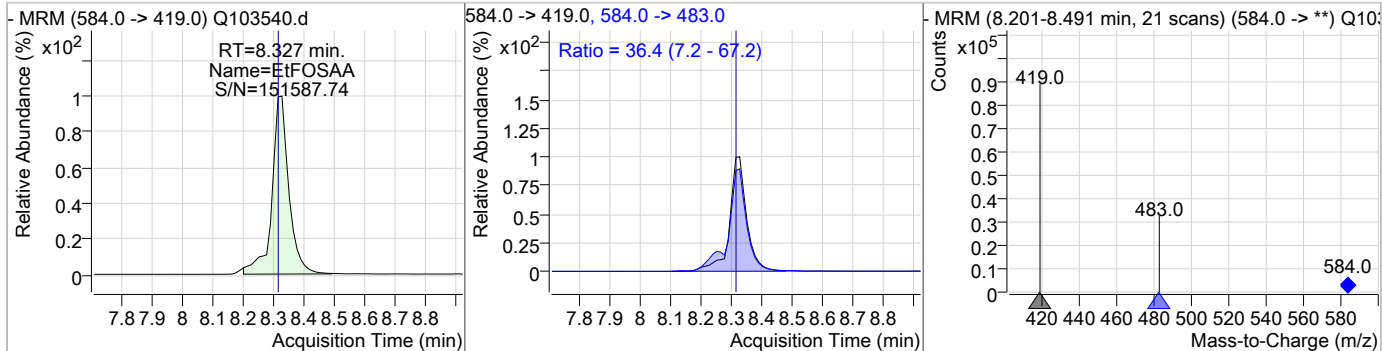
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	51.25	8.19	0.03	81388	527.0 -> 81.0	57.1	28.2	88.2



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	101.33	8.31	0.05	136607				

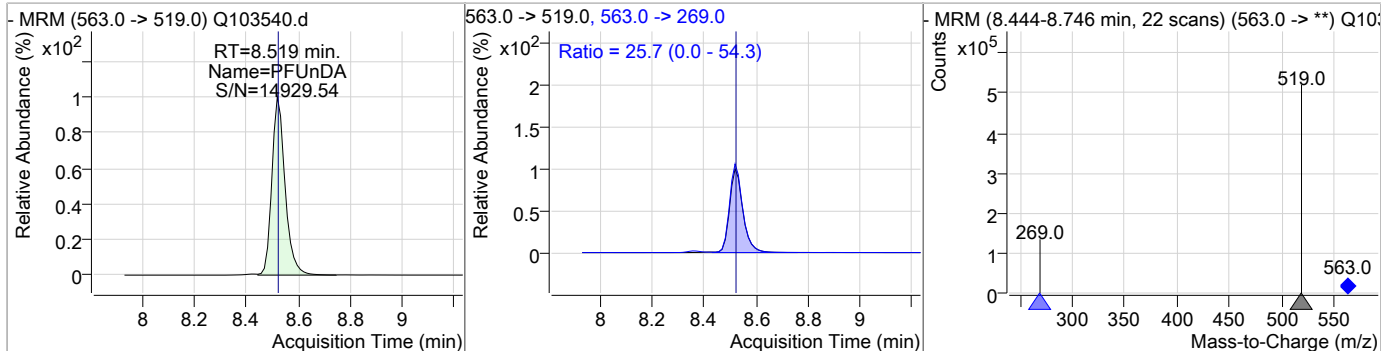


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	50.47	8.33	0.05	65721	584.0 -> 483.0	36.4	7.2	67.2

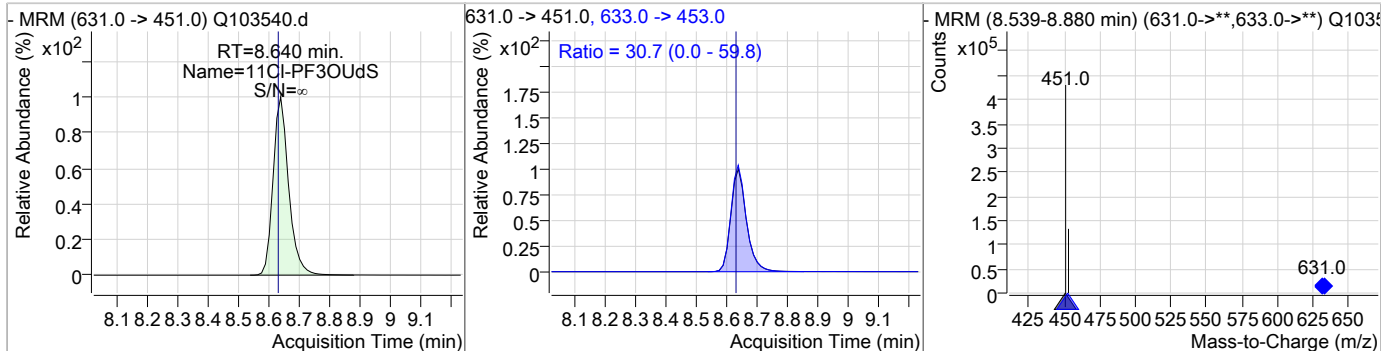


Perfluorinated Compounds by LC/MS/MS

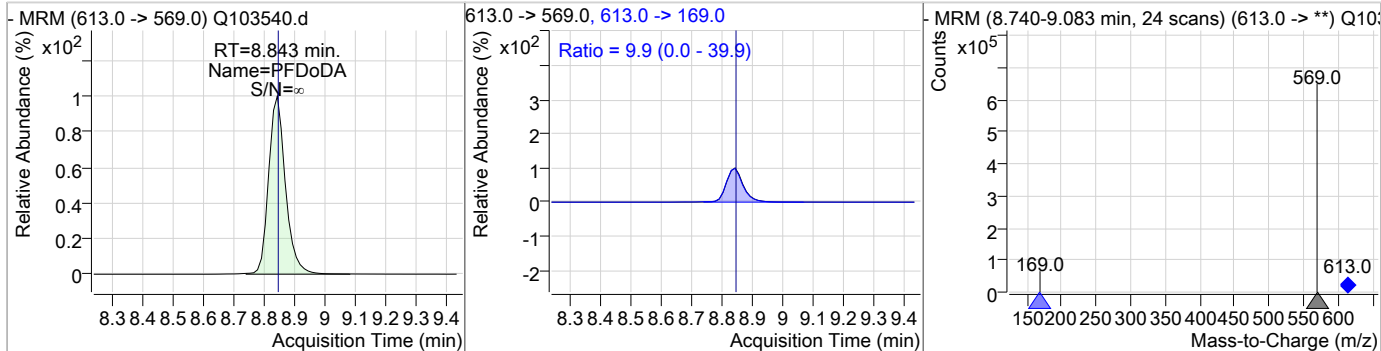
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	54.15	8.52	0.04	396510	563.0 -> 269.0	25.7	0.0	54.3



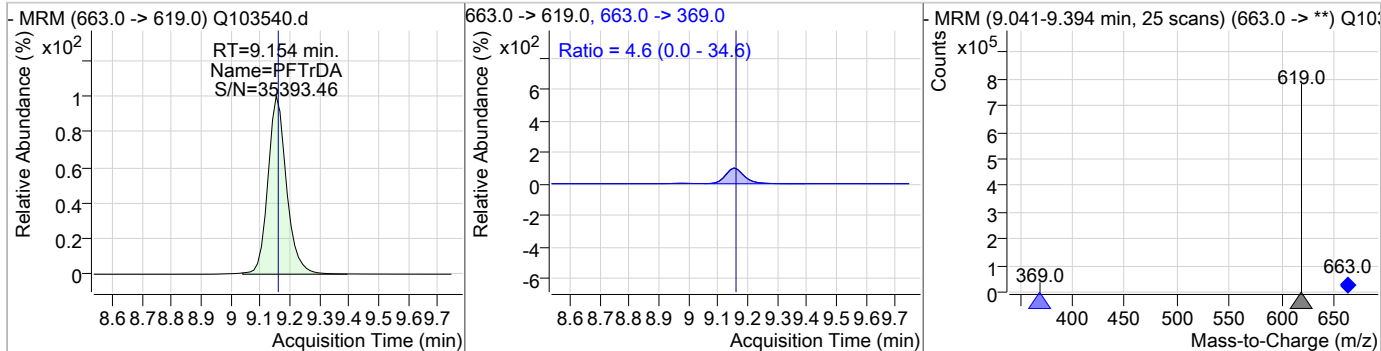
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	50.47	8.64	0.04	322495	633.0 -> 453.0	30.7	0.0	59.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	54.20	8.84	0.04	501053	613.0 -> 169.0	9.9	0.0	39.9



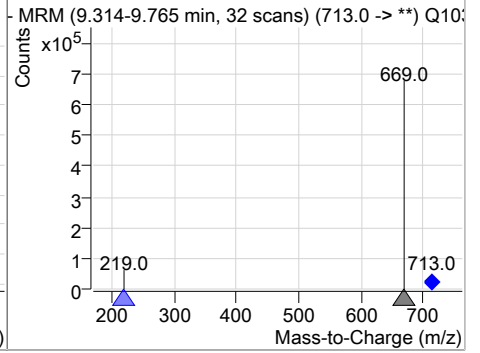
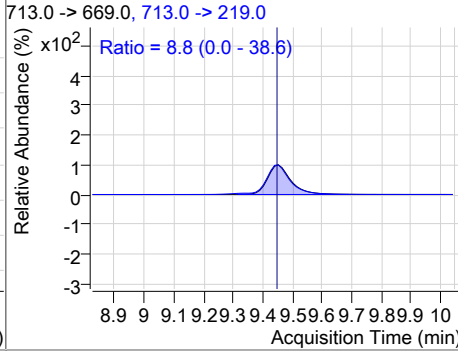
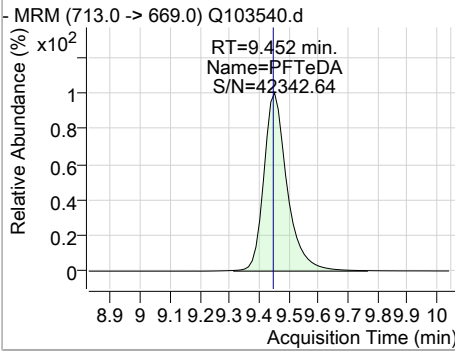
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	53.09	9.15	0.04	586181	663.0 -> 369.0	4.6	0.0	34.6



7.6.19
7

Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	53.76	9.45	0.05	507597	713.0 -> 219.0	8.8	0.0	38.6



7.6.19
7

Manual Integration Approval Summary

Sample Number: SQ2202-CC2201 Method: EPA 537.1 REV 1.0
Lab FileID: Q103540.D Analyst approved: 06/20/23 16:38 Anna Ludwig
Injection Time: 06/19/23 21:36 Supervisor approved: 06/21/23 09:45 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.67	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.75	Split peak
MeFOSAA	2355-31-9		8.20	Split peak

7.6.19.1

7

SGS ORLANDO

DATE:	06/18/23
COLUMN TYPE:	Poroshell EC18
AMOUNT INJ:	4 ul
INSTRUMENT:	LCMS1-Q

LCMS1-Q ANALYSIS LOG

METHODS:	DW
PROC. METH:	DW_061823_SQ2201
CAL DATE:	06/18/23
ANALYST:	AL
RUN BATCH:	SQ2201

ELUENT A LOT #:	225380 W/0.1% AA 194003
ELUENT B LOT #:	224231 W/0.1% AA 194003
IC/CC STD LOT #:	LCMS 2109
ICV STD LOT #:	11331
ISTD/ID STD LOT #:	LCMS 2099

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	Q103455.d	P1-A7	test	537.m	Sample		OP96727.SQ2201,250,,,1,1,water	updated rt
2	Q103456.d	P1-A1	ccb	537.m	Sample		OP96727.SQ2201,250,,,1,1,water	nd
3	Q103457.d	P1-A1	ccb	537.m	Sample		OP96727.SQ2201,250,,,1,1,water	nd
4	Q103458.d	P1-A1	ccb	537.m	Sample		OP96727.SQ2201,250,,,1,1,water	nd
5	Q103459.d	P1-A1	ccb	537.m	Sample		OP96727.SQ2201,250,,,1,1,water	nd
6	Q103460.d	P1-A1	icc2201-0	537.m	Sample		OP96727.SQ2201,250,,,1,1,water	check tune file
7	Q103461.d	P1-A2	icc2201-0.5	537.m	Calibration	2.5/500	OP96727.SQ2201,250,,,1,1,water	pass
8	Q103462.d	P1-A3	icc2201-1	537.m	Calibration	5/500	OP96727.SQ2201,250,,,1,1,water	pass
9	Q103463.d	P1-A4	icc2201-2	537.m	Calibration	10/500	OP96727.SQ2201,250,,,1,1,water	pass
10	Q103464.d	P1-A5	icc2201-5	537.m	Calibration	25/500	OP96727.SQ2201,250,,,1,1,water	pass
11	Q103465.d	P1-A6	icc2201-10	537.m	Calibration	50/500	OP96727.SQ2201,250,,,1,1,water	pass
12	Q103466.d	P1-A7	icc2201-20	537.m	Calibration	100/500	OP96727.SQ2201,250,,,1,1,water	pass
13	Q103467.d	P1-A8	icc2201-50	537.m	Calibration	250/500	OP96727.SQ2201,250,,,1,1,water	pass
14	Q103468.d	P1-A9	icc2201-100	537.m	Calibration	1x	OP96727.SQ2201,250,,,1,1,water	pass
15	Q103469.d	P1-B2	RT	537.m	Sample		OP96727.SQ2201,250,,,1,1,water	pass
16	Q103470.d	P1-B1	icv2201-20	537.m	QC	100/500	OP96727.SQ2201,250,,,1,1,water	pass
17	Q103471.d	P1-A7	cc2201-20	537.m	QC	100/500	OP96727.SQ2201,250,,,1,1,water	pass
18	Q103472.d	P1-A2	cc2201-0.5LL	537.m	QC	2.5/500	OP96727.SQ2201,250,,,1,1,water	etofsa pass within 50%
19	Q103473.d	P1-B3	op97324-bs:1	537.m	Sample		OP97324.SQ2201,250,,,1,1,water	✓
20	Q103474.d	P1-B4	op97324-mb	537.m	Sample		OP97324.SQ2201,250,,,1,1,water	✓
21	Q103475.d	P1-B5	fc6520-1	537.m	Sample		OP97324.SQ2201,280,,,1,1,water	rr 1x, 2x etofsa low
22	Q103476.d	P1-B6	fc6520-2	537.m	Sample		OP97324.SQ2201,280,,,1,1,water	✓
23	Q103477.d	P1-B7	fc6520-3	537.m	Sample		OP97324.SQ2201,280,,,1,1,water	✓
24	Q103478.d	P1-B8	fc6520-4	537.m	Sample		OP97324.SQ2201,280,,,1,1,water	✓
25	Q103479.d	P1-B9	fc6520-5	537.m	Sample		OP97324.SQ2201,280,,,1,1,water	✓
26	Q103480.d	P1-C1	fc6520-6	537.m	Sample		OP97324.SQ2201,280,,,1,1,water	✓
27	Q103481.d	P1-C2	fc6520-7	537.m	Sample		OP97324.SQ2201,280,,,1,1,water	✓
28	Q103482.d	P1-C3	fc6520-8	537.m	Sample		OP97324.SQ2201,280,,,1,1,water	✓
29	Q103483.d	P1-A7	cc2201-20	537.m	QC	100/500	OP96727.SQ2201,250,,,1,1,water	pass
30	Q103484.d	P1-A1	ccb	537.m	Sample		OP96727.SQ2201,250,,,1,1,water	nd
31	Q103485.d	P1-C4	fc6520-9	537.m	Sample		OP97324.SQ2201,280,,,1,1,water	✓
32	Q103486.d	P1-C5	fc6520-10	537.m	Sample		OP97324.SQ2201,280,,,1,1,water	✓
33	Q103487.d	P1-C6	fc6520-11	537.m	Sample		OP97324.SQ2201,280,,,1,1,water	✓
34	Q103488.d	P1-C7	fc6520-12	537.m	Sample		OP97324.SQ2201,280,,,1,1,water	✓
35	Q103489.d	P1-C8	fc6520-13	537.m	Sample		OP97324.SQ2201,280,,,1,1,water	✓

LCMS1-Q ANALYSIS LOG

SGS ORLANDO

36	Q103490.d	P1-C9	fc6520-14	537.m	Sample	OP97324,SQ2201,280,,,1,1,water	✓
37	Q103491.d	P1-D1	fc6520-15	537.m	Sample	OP97324,SQ2201,280,,,1,1,water	✓
38	Q103492.d	P1-D2	fc6520-16	537.m	Sample	OP97324,SQ2201,270,,,1,1,water	✓
39	Q103493.d	P1-D3	op97324-ms:1	537.m	Sample	OP97324,SQ2201,280,,,1,1,water	✓
40	Q103494.d	P1-D4	op97324-msd:1	537.m	Sample	OP97324,SQ2201,280,,,1,1,water	✓
41	Q103495.d	P1-A8	cc2201-50	537.m	QC	OP96727,SQ2201,250,,,1,1,water	pass
42	Q103496.d	P1-A2	cc2201-0.5LL	537.m	QC	OP96727,SQ2201,250,,,1,1,water	mefosaa&6:2 pass within 50%
43	Q103497.d	P1-A1	ccb	537.m	Sample	OP96727,SQ2201,250,,,1,1,water	nd
44	Q103498.d	P1-D5	fc6520-17	537.m	Sample	OP97324,SQ2201,280,,,1,1,water	✓
45	Q103499.d	P1-D6	op97367-bs	537.m	Sample	OP97367,SQ2201,250,,,1,1,water	tri&tada targets low
46	Q103500.d	P1-D7	op97367-mb	537.m	Sample	OP97367,SQ2201,250,,,1,1,water	✓
47	Q103501.d	P1-D8	fc6595-1	537.m	Sample	OP97367,SQ2201,280,,,1,1,water	✓
48	Q103502.d	P1-D9	op97367-ms1	537.m	Sample	OP97367,SQ2201,280,,,1,1,water	✓
49	Q103503.d	P1-E1	op97367-msd1	537.m	Sample	OP97367,SQ2201,280,,,1,1,water	✓
50	Q103504.d	P1-E2	fc6595-2	537.m	Sample	OP97367,SQ2201,280,,,1,1,water	rr 2x efosaa low
51	Q103505.d	P1-E3	fc6595-3	537.m	Sample	OP97367,SQ2201,280,,,1,1,water	rr 5x low eis
52	Q103506.d	P1-E4	fc6597-1	537.m	Sample	OP97367,SQ2201,280,,,1,1,water	✓
53	Q103507.d	P1-E5	op97367-ms2	537.m	Sample	OP97367,SQ2201,280,,,1,1,water	✓
54	Q103508.d	P1-A7	ecc2201-20	537.m	QC	OP96727,SQ2201,250,,,1,1,water	pass
55	Q103509.d	P1-A1	ccb	537.m	Sample	OP96727,SQ2201,250,,,1,1,water	nd
56	Q103510.d	P1-E6	op97367-msd2	537.m	Sample	OP97367,SQ2201,270,,,1,1,water	rr - didn't alternate bracket with cc50
57	Q103511.d	P1-E7	fc6597-2	537.m	Sample	OP97367,SQ2201,270,,,1,1,water	rr - didn't alternate bracket with cc51
58	Q103512.d	P1-E8	fc6597-3	537.m	Sample	OP97367,SQ2201,280,,,1,1,water	rr - didn't alternate bracket with cc52
59	Q103513.d	P1-E9	fc6743-1	537.m	Sample	OP97367,SQ2201,270,,,1,1,water	rr - didn't alternate bracket with cc53
60	Q103514.d	P1-F1	fc6743-2	537.m	Sample	OP97367,SQ2201,270,,,1,1,water	rr - didn't alternate bracket with cc54
61	Q103515.d	P1-F2	fc6743-3	537.m	Sample	OP97367,SQ2201,270,,,1,1,water	rr - didn't alternate bracket with cc55
62	Q103516.d	P1-F3	fc6743-4	537.m	Sample	OP97367,SQ2201,270,,,1,1,water	rr - didn't alternate bracket with cc56
63	Q103517.d	P1-F4	fc6743-5	537.m	Sample	OP97367,SQ2201,270,,,1,1,water	rr - didn't alternate bracket with cc57
64	Q103518.d	P1-A7	ecc2201-20	537.m	QC	OP96727,SQ2201,250,,,1,1,water	rr - didn't alternate bracket with cc58
65	Q103519.d	P1-A1	ccb	537.m	Sample	OP96727,SQ2201,250,,,1,1,water	rr - didn't alternate bracket with cc59



SGS ORLANDO

DATE:	06/19/23
COLUMN TYPE:	Poroshell EC18
AMOUNT INJ:	4 ul
INSTRUMENT:	LCMS1-Q

LCMS1-Q ANALYSIS LOG

METHODS:	DW
PROC. METH:	DW_061823_SQ2201
CAL DATE:	06/18/23
ANALYST:	AL
RUN BATCH:	SQ2202

ELUENT A LOT #:	225380 W/0.1% AA 194003
ELUENT B LOT #:	224231 W/0.1% AA 194003
IC/CC STD LOT #:	LCMS 2109
ICV STD LOT #:	11331
ISTD/ID STD LOT #:	LCMS 2099

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	Q103520.d	P1-A1	ccb	537.m	Sample		OP96727.SQ2202.250,,,1,1,water	nd
2	Q103521.d	P1-A1	ccb	537.m	Sample		OP96727.SQ2202.250,,,1,1,water	nd
3	Q103522.d	P1-A1	ccb	537.m	Sample		OP96727.SQ2202.250,,,1,1,water	nd
4	Q103523.d	P1-B2	RT	537.m	Sample		OP96727.SQ2202.250,,,1,1,water	pass
5	Q103524.d	P1-A7	cc2201-20	537.m	QC	100/500	OP96727.SQ2202.250,,,1,1,water	pass
6	Q103525.d	P1-A2	cc2201-0.5LL	537.m	QC	2.5/500	OP96727.SQ2202.250,,,1,1,water	6:2 higher than 50% - samples nd
7	Q103526.d	P1-D6	op97367-bs	537.m	Sample		OP97367.SQ2202.250,,,1,1,water	tri and teda tar low
8	Q103527.d	P1-D7	op97367-mb	537.m	Sample		OP97367.SQ2202.250,,,1,1,water	✓
9	Q103528.d	P1-E6	op97367-msd2	537.m	Sample		OP97367.SQ2202.270,,,1,1,water	report original
10	Q103529.d	P1-E7	fc6597-2	537.m	Sample		OP97367.SQ2202.270,,,1,1,water	report original
11	Q103530.d	P1-E8	fc6597-3	537.m	Sample		OP97367.SQ2202.280,,,1,1,water	report original
12	Q103531.d	P1-E9	fc6743-1	537.m	Sample		OP97367.SQ2202.270,,,1,1,water	report original
13	Q103532.d	P1-F1	fc6743-2	537.m	Sample		OP97367.SQ2202.270,,,1,1,water	report original
14	Q103533.d	P1-F2	fc6743-3	537.m	Sample		OP97367.SQ2202.270,,,1,1,water	report original
15	Q103534.d	P1-F3	fc6743-4	537.m	Sample		OP97367.SQ2202.270,,,1,1,water	report original
16	Q103535.d	P1-F4	fc6743-5	537.m	Sample		OP97367.SQ2202.270,,,1,1,water	report original
17	Q103536.d	P1-A7	cc2201-20	537.m	QC	100/500	OP96727.SQ2202.250,,,1,1,water	pass
18	Q103537.d	P1-A1	ccb	537.m	Sample		OP96727.SQ2202.250,,,1,1,water	nd
19	Q103538.d	P1-B5	fc6520-1	537.m	Sample		OP97324.SQ2202.280,,,1,1,water	redo
20	Q103539.d	P1-F5	fc6520-1	537.m	Sample	250/500	OP97324.SQ2202.280,,,1,2,water	redo
21	Q103540.d	P1-A8	cc2201-50	537.m	QC	250/500	OP96727.SQ2202.250,,,1,1,water	pass
22	Q103541.d	P1-A1	ccb	537.m	Sample		OP96727.SQ2201.250,,,1,1,water	nd
23	Q103542.d	P1-F6	fc6595-2	537.m	Sample	250/500	OP97367.SQ2201.280,,,1,2,water	redo
24	Q103543.d	P1-F7	fc6595-3	537.m	Sample	100/500	OP97367.SQ2201.280,,,1,5,water	redo
25	Q103544.d	P1-A7	ecc2201-20	537.m	QC	100/500	OP96727.SQ2202.250,,,1,1,water	pass
26	Q103545.d	P1-A1	ccb	537.m	Sample		OP96727.SQ2202.250,,,1,1,water	nd

SGS - ORLANDO

SPE LIQUID SAMPLE PREP REPORT

Date/Time: 06/13/23 13:00
 Started (mm/dd/yy 24:00)

Prep Method: 3535A or 537 or 537MOD (circle)

Date/Time: 6/14/23 7:45
 Finished (mm/dd/yy 24:00)

Analytical Method: LC537(DW)

Batch#: OP97324 Ext. By: GH

Conc. By: PM Viald By: _____

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Manifold ID	Comments
OP 97324 MB	/	250	7	N/A	20		1.0mL	E	
OP 97324 BS	/	250	7	N/A		5			
FC6520-1	1	280	7.0						
2	1	280							
3	1	280							
4	1	280							
5	1	280							
6	1	280							
7	1	280							
8	1	280							EV
9	1	280							F
10	1	280							
11	1	280							
12	1	280							
13	1	280							
14	1	280							
15	1	280							
16	1	270	∇	∇	∇				
17	1	280	7.0	N/A	20		∇	F	
FC6520-16MS	3	280	7.0	N/A	20	5	1.0mL	E	
FC6520-16MSD	4	280	7.0	N/A	20	5	∇	E	
DUP									

Comments:

Surr. 1 ID: LEMS 2080 Conc: 2.0/1.0 PPM Exp. Date: 09/06/23 Inj. By: GH Ver. By: AG
 Spk. 1 ID: LEMS all 4 Conc: 200 PPB Exp. Date: 11/04/23 Inj. By: GH Ver. By: AG
 Spk. 2 ID: _____ Conc: _____ Exp. Date: _____ Inj. By: _____ Ver. By: _____
 Spk. 3 ID: _____ Conc: _____ Exp. Date: _____ Inj. By: _____ Ver. By: _____

TurboVap Temp (Therm ID): TV 18 N-Evap Temp (Therm ID): _____
 Observed Temp °C: 55 Corr. Temp °C: — Observed Temp °C: — Corr. Temp °C: —

Methanol Lot # 224279 SPE Lot # 6691273-03 pH Paper # 211718B
 Acetonitrile Lot # _____ Syringe filter Lot # _____ Reagent # _____
 Water Lot# OP97000 Pre-filter Lot# _____ Reagent # _____
 Solvent# _____ Carbon Lot# _____ Other _____

Relinquished By: Patricio Machado
 Accepted By: [Signature]

Date: 6/14/23
 Date: 6/14/23

ORLD-EXT-0001-3-08-FORM-extwater_spe.xls 032718