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*Automated Report*

## Technical Report for

### Town of Coupeville

#### PFAS Analysis

N44255-21-0-001

SGS Job Number: FC3889

Sampling Date: 03/31/23



#### Report to:

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

ATTN: Joseph Grogan

Total number of pages in report: 344



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

**Norm Farmer**  
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001)  
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Test results relate only to samples analyzed.

# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>3</b>
<b>Section 2: Case Narrative/Conformance Summary .....</b>	<b>5</b>
<b>Section 3: Summary of Hits .....</b>	<b>6</b>
<b>Section 4: Sample Results .....</b>	<b>9</b>
<b>4.1:</b> FC3889-1: FCWTP-INF 001(BOOSTER TAP) .....	10
<b>4.2:</b> FC3889-2: FCWTP-INF 001 FB .....	12
<b>4.3:</b> FC3889-3: FCWTP-INF 100(SA101) .....	13
<b>4.4:</b> FC3889-4: FCWTP-MP 105(SA105) .....	14
<b>4.5:</b> FC3889-5: FCWTP-MP 105 FB .....	15
<b>4.6:</b> FC3889-6: FCWTP-50%MEDIA 50103(SA103) .....	16
<b>4.7:</b> FC3889-7: FCWTP-50%MEDIA 50107(SA107) .....	17
<b>4.8:</b> FC3889-8: FCWTP-EF 109(SA109) .....	18
<b>4.9:</b> FC3889-9: FCWTP-INF 200(SA201) .....	19
<b>4.10:</b> FC3889-10: FCWTP-MP 205(SA205) .....	20
<b>4.11:</b> FC3889-11: FCWTP-MP 205 FB .....	21
<b>4.12:</b> FC3889-12: FCWTP-MP (SA105) .....	22
<b>4.13:</b> FC3889-13: FCWTP-EF 209(SA209) .....	23
<b>4.14:</b> FC3889-14: FCWTP-50%MEDIA 50203(SA203) .....	24
<b>4.15:</b> FC3889-15: FCWTP-50%MEDIA 50207(SA207) .....	25
<b>4.16:</b> FC3889-16: FCWTP-EF 002(EXISTING PLANT EFFLUENT/POST PUMPS) .....	26
<b>4.17:</b> FC3889-17: FCWTP-EF 002 FB (EXISTING PLANT EFFLUENT) .....	27
<b>Section 5: Misc. Forms .....</b>	<b>28</b>
<b>5.1:</b> Chain of Custody .....	29
<b>Section 6: MS Semi-volatiles - QC Data Summaries .....</b>	<b>32</b>
<b>6.1:</b> Method Blank Summary .....	33
<b>6.2:</b> Blank Spike Summary .....	34
<b>6.3:</b> Matrix Spike/Matrix Spike Duplicate Summary .....	35
<b>6.4:</b> Internal Standard Area Summaries .....	36
<b>6.5:</b> Surrogate Recovery Summaries .....	41
<b>6.6:</b> Initial and Continuing Calibration Summaries .....	42
<b>6.7:</b> Run Sequence Reports .....	53
<b>Section 7: MS Semi-volatiles - Raw Data .....</b>	<b>55</b>
<b>7.1:</b> Samples .....	56
<b>7.2:</b> Method Blanks .....	143
<b>7.3:</b> Blank Spikes .....	147
<b>7.4:</b> Matrix Spike/Matrix Spike Duplicates .....	157
<b>7.5:</b> Retention Time Markers .....	177
<b>7.6:</b> Initial and Continuing Calibrations .....	181
<b>7.7:</b> Instrument Run Logs .....	342
<b>7.8:</b> Sample Prep Logs .....	344



## Sample Summary

Town of Coupeville

**Job No:** FC3889

PFAS Analysis

Project No: N44255-21-0-001

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
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This report contains results reported as ND = Not detected. The following applies:  
 Organics ND = Not detected above the MDL

FC3889-1	03/31/23	12:10 JW	04/01/23	DW	Drinking Water	FCWTP-INF 001(BOOSTER TAP)
FC3889-2	03/31/23	12:05 JW	04/01/23	DW	Drinking Water FB	FCWTP-INF 001 FB
FC3889-3	03/31/23	12:15 JW	04/01/23	DW	Drinking Water	FCWTP-INF 100(SA101)
FC3889-4	03/31/23	12:20 JW	04/01/23	DW	Drinking Water	FCWTP-MP 105(SA105)
FC3889-5	03/31/23	12:20 JW	04/01/23	DW	Drinking Water FB	FCWTP-MP 105 FB
FC3889-6	03/31/23	12:30 JW	04/01/23	DW	Drinking Water	FCWTP-50% MEDIA 50103(SA103)
FC3889-7	03/31/23	12:35 JW	04/01/23	DW	Drinking Water	FCWTP-50% MEDIA 50107(SA107)
FC3889-8	03/31/23	12:40 JW	04/01/23	DW	Drinking Water	FCWTP-EF 109(SA109)
FC3889-9	03/31/23	12:50 JW	04/01/23	DW	Drinking Water	FCWTP-INF 200(SA201)
FC3889-10	03/31/23	12:55 JW	04/01/23	DW	Drinking Water	FCWTP-MP 205(SA205)
FC3889-11	03/31/23	12:55 JW	04/01/23	DW	Drinking Water FB	FCWTP-MP 205 FB
FC3889-12	03/31/23	12:20 JW	04/01/23	DW	Drinking Water	FCWTP-MP (SA105)



## Sample Summary

(continued)

Town of Coupeville

**Job No:** FC3889

PFAS Analysis  
 Project No: N44255-21-0-001

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
FC3889-13	03/31/23	13:05 JW	04/01/23	DW	Drinking Water	FCWTP-EF 209(SA209)
FC3889-14	03/31/23	13:10 JW	04/01/23	DW	Drinking Water	FCWTP-50% MEDIA 50203(SA203)
FC3889-15	03/31/23	13:15 JW	04/01/23	DW	Drinking Water	FCWTP-50% MEDIA 50207(SA207)
FC3889-16	03/31/23	13:40 JW	04/01/23	DW	Drinking Water	FCWTP-EF 002(EXISTING PLANT EFFLUENT/POST PUMPS)
FC3889-16D	03/31/23	13:40 JW	04/01/23	DW	Drinking Water Dup.	FCWTP-EF 002(EXISTING PLANT EFFLUENT/POST PUMPS)
FC3889-16S	03/31/23	13:40 JW	04/01/23	DW	Drinking Water MS	FCWTP-EF 002(EXISTING PLANT EFFLUENT/POST PUMPS)
FC3889-17	03/31/23	13:40 JW	04/01/23	DW	Drinking Water FB	FCWTP-EF 002 FB (EXISTING PLANT EFFLUENT)

## SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** Town of Coupeville

**Job No:** FC3889

**Site:** PFAS Analysis

**Report Date:** 4/18/2023 11:10:21 AM

On 04/01/2023, 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 2.3 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC3889 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:** OP96327

Sample(s) FC3889-16MS, FC3889-16MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Perfluorotetradecanoic acid are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Perfluorotetradecanoic acid are outside control limits. Probable cause is due to matrix interference.

FC3889-1 for Perfluorododecanoic acid: Associated BS recovery outside control limits.

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:

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Kim Benham, Client Services (*Signature on File*)

## Summary of Hits

**Job Number:** FC3889  
**Account:** Town of Coupeville  
**Project:** PFAS Analysis  
**Collected:** 03/31/23



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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**FC3889-1 FCWTP-INF 001(BOOSTER TAP)**

Perfluorohexanoic acid	0.0169	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluoroheptanoic acid	0.0052	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid	0.0419	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorobutanesulfonic acid	0.0082	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorohexanesulfonic acid	0.0304	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorooctanesulfonic acid	0.0014 J	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0

**FC3889-2 FCWTP-INF 001 FB**

No hits reported in this sample.

**FC3889-3 FCWTP-INF 100(SA101)**

Perfluorohexanoic acid	0.0156	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluoroheptanoic acid	0.0053	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid	0.0424	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorobutanesulfonic acid	0.0083	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorohexanesulfonic acid	0.0310	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorooctanesulfonic acid	0.0015 J	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0

**FC3889-4 FCWTP-MP 105(SA105)**

No hits reported in this sample.

**FC3889-5 FCWTP-MP 105 FB**

No hits reported in this sample.

**FC3889-6 FCWTP-50%MEDIA 50103(SA103)**

No hits reported in this sample.

**FC3889-7 FCWTP-50%MEDIA 50107(SA107)**

Perfluorohexanoic acid	0.0246	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluoroheptanoic acid	0.0053	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid	0.0188	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorobutanesulfonic acid	0.0110	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorohexanesulfonic acid	0.0099	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0

**FC3889-8 FCWTP-EF 109(SA109)**

Perfluorohexanoic acid	0.0277	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
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## Summary of Hits

**Job Number:** FC3889  
**Account:** Town of Coupeville  
**Project:** PFAS Analysis  
**Collected:** 03/31/23



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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Perfluoroheptanoic acid		0.0047	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid		0.0122	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorobutanesulfonic acid		0.0116	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorohexanesulfonic acid		0.0058	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0

**FC3889-9 FCWTP-INF 200(SA201)**

Perfluorohexanoic acid		0.0162	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluoroheptanoic acid		0.0049	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid		0.0404	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorobutanesulfonic acid		0.0078	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorohexanesulfonic acid		0.0294	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorooctanesulfonic acid		0.0015 J	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0

**FC3889-10 FCWTP-MP 205(SA205)**

No hits reported in this sample.

**FC3889-11 FCWTP-MP 205 FB**

No hits reported in this sample.

**FC3889-12 FCWTP-MP (SA105)**

No hits reported in this sample.

**FC3889-13 FCWTP-EF 209(SA209)**

Perfluorohexanoic acid		0.0278	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluoroheptanoic acid		0.0057	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid		0.0166	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorobutanesulfonic acid		0.0125	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorohexanesulfonic acid		0.0082	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0

**FC3889-14 FCWTP-50%MEDIA 50203(SA203)**

No hits reported in this sample.

**FC3889-15 FCWTP-50%MEDIA 50207(SA207)**

Perfluorohexanoic acid		0.0245	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluoroheptanoic acid		0.0059	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid		0.0235	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorobutanesulfonic acid		0.0112	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorohexanesulfonic acid		0.0122	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0

## Summary of Hits

**Job Number:** FC3889  
**Account:** Town of Coupeville  
**Project:** PFAS Analysis  
**Collected:** 03/31/23



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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**FC3889-16      FCWTP-EF 002(EXISTING PLANT EFFLUENT/POST PUMPS)**

Perfluorohexanoic acid	0.0047	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluoroheptanoic acid	0.00094 J	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid	0.0027	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorobutanesulfonic acid	0.0021	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0
Perfluorohexanesulfonic acid	0.0012 J	0.0019	0.00074	ug/l	EPA 537.1 REV 1.0

**FC3889-17      FCWTP-EF 002 FB (EXISTING PLANT EFFLUENT)**

No hits reported in this sample.



Sample Results

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Report of Analysis

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SGS North America Inc.

## Report of Analysis

Page 1 of 2

<b>Client Sample ID:</b> FCWTP-INF 001(BOOSTER TAP)	<b>Date Sampled:</b> 03/31/23
<b>Lab Sample ID:</b> FC3889-1	<b>Date Received:</b> 04/01/23
<b>Matrix:</b> DW - Drinking Water	<b>Percent Solids:</b> n/a
<b>Method:</b> EPA 537.1 REV 1.0 EPA 537	
<b>Project:</b> PFAS Analysis	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13093.D	1	04/15/23 00:07	AL	04/10/23 11:00	OP96327	S5Q203
Run #2							

Run #1	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
<b>PERFLUOROALKYLCARBOXYLIC ACIDS</b>							
307-24-4	Perfluorohexanoic acid	0.0169		0.0019	0.00074	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0052		0.0019	0.00074	ug/l	
335-67-1	Perfluorooctanoic acid	0.0419		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 <sup>a</sup>	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	

## PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.0082		0.0019	0.00074	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0304		0.0019	0.00074	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0014		0.0019	0.00074	ug/l	J

## PERFLUOROCTANESULFONAMIDOACETIC 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	108%		70-130%
	13C2-PFDA	101%		70-130%
	d5-EtFOSAA	84%		70-130%
	13C3-HFPO-DA	95%		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

## Report of Analysis

<b>Client Sample ID:</b> FCWTP-INF 001(BOOSTER TAP) <b>Lab Sample ID:</b> FC3889-1 <b>Matrix:</b> DW - Drinking Water <b>Method:</b> EPA 537.1 REV 1.0 EPA 537 <b>Project:</b> PFAS Analysis	<b>Date Sampled:</b> 03/31/23 <b>Date Received:</b> 04/01/23 <b>Percent Solids:</b> n/a
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4.1  
4

**Perfluorinated Alkyl Acids**

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
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(a) Associated BS recovery outside control limits.

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ND = Not detected	MDL = Method Detection Limit	J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 141)		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b> FCWTP-INF 001 FB	<b>Date Sampled:</b> 03/31/23
<b>Lab Sample ID:</b> FC3889-2	<b>Date Received:</b> 04/01/23
<b>Matrix:</b> DW - Drinking Water FB	<b>Percent Solids:</b> n/a
<b>Method:</b> EPA 537.1 REV 1.0 EPA 537	
<b>Project:</b> PFAS Analysis	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13096.D	1	04/15/23 00:57	AL	04/10/23 11:00	OP96327	S5Q203
Run #2							

Run #1	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
<b>PERFLUOROALKYLCARBOXYLIC ACIDS</b>							
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		

## PERFLUOROALKYLSULFONIC 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		

## PERFLUOROOCETANESULFONAMIDOACETIC 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	113%		70-130%
	13C2-PFDA	109%		70-130%
	d5-EtFOSAA	92%		70-130%
	13C3-HFPO-DA	100%		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

<b>Client Sample ID:</b> FCWTP-INF 100(SA101)	
<b>Lab Sample ID:</b> FC3889-3	<b>Date Sampled:</b> 03/31/23
<b>Matrix:</b> DW - Drinking Water	<b>Date Received:</b> 04/01/23
<b>Method:</b> EPA 537.1 REV 1.0 EPA 537	<b>Percent Solids:</b> n/a
<b>Project:</b> PFAS Analysis	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13098.D	1	04/15/23 01:31	AL	04/10/23 11:00	OP96327	S5Q203
Run #2							

Run #1	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
<b>PERFLUOROALKYLCARBOXYLIC ACIDS</b>							
307-24-4	Perfluorohexanoic acid	0.0156		0.0019	0.00074	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0053		0.0019	0.00074	ug/l	
335-67-1	Perfluorooctanoic acid	0.0424		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	

## PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.0083		0.0019	0.00074	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0310		0.0019	0.00074	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0015		0.0019	0.00074	ug/l	J

## PERFLUOROCTANESULFONAMIDOACETIC 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	111%		70-130%
	13C2-PFDA	107%		70-130%
	d5-EtFOSAA	89%		70-130%
	13C3-HFPO-DA	99%		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

<b>Client Sample ID:</b> FCWTP-MP 105(SA105)	
<b>Lab Sample ID:</b> FC3889-4	<b>Date Sampled:</b> 03/31/23
<b>Matrix:</b> DW - Drinking Water	<b>Date Received:</b> 04/01/23
<b>Method:</b> EPA 537.1 REV 1.0 EPA 537	<b>Percent Solids:</b> n/a
<b>Project:</b> PFAS Analysis	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13099.D	1	04/15/23 01:48	AL	04/10/23 11:00	OP96327	S5Q203
Run #2							

Run #1	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
<b>PERFLUOROALKYLCARBOXYLIC ACIDS</b>							
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	

## PERFLUOROALKYLSULFONIC 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	

## PERFLUOROOCETANESULFONAMIDOACETIC 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	117%		70-130%
	13C2-PFDA	108%		70-130%
	d5-EtFOSAA	93%		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

<b>Client Sample ID:</b> FCWTP-MP 105 FB	
<b>Lab Sample ID:</b> FC3889-5	<b>Date Sampled:</b> 03/31/23
<b>Matrix:</b> DW - Drinking Water FB	<b>Date Received:</b> 04/01/23
<b>Method:</b> EPA 537.1 REV 1.0 EPA 537	<b>Percent Solids:</b> n/a
<b>Project:</b> PFAS Analysis	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13100.D	1	04/15/23 02:04	AL	04/10/23 11:00	OP96327	S5Q203
Run #2							

Run #1	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
<b>PERFLUOROALKYLCARBOXYLIC ACIDS</b>							
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	

## PERFLUOROALKYLSULFONIC 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	

## PERFLUOROCTANESULFONAMIDOACETIC 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	112%		70-130%
	13C2-PFDA	107%		70-130%
	d5-EtFOSAA	94%		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

<b>Client Sample ID:</b> FCWTP-50% MEDIA 50103(SA103)	<b>Date Sampled:</b> 03/31/23
<b>Lab Sample ID:</b> FC3889-6	<b>Date Received:</b> 04/01/23
<b>Matrix:</b> DW - Drinking Water	<b>Percent Solids:</b> n/a
<b>Method:</b> EPA 537.1 REV 1.0 EPA 537	
<b>Project:</b> PFAS Analysis	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13101.D	1	04/15/23 02:21	AL	04/10/23 11:00	OP96327	S5Q203
Run #2							

Run #1	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
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## PERFLUOROALKYLCARBOXYLIC 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	

## PERFLUOROALKYLSULFONIC 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	

## PERFLUOROCTANESULFONAMIDOACETIC 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
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	13C2-PFHxA	113%		70-130%
	13C2-PFDA	105%		70-130%
	d5-EtFOSAA	93%		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

<b>Client Sample ID:</b> FCWTP-50% MEDIA 50107(SA107)	
<b>Lab Sample ID:</b> FC3889-7	<b>Date Sampled:</b> 03/31/23
<b>Matrix:</b> DW - Drinking Water	<b>Date Received:</b> 04/01/23
<b>Method:</b> EPA 537.1 REV 1.0 EPA 537	<b>Percent Solids:</b> n/a
<b>Project:</b> PFAS Analysis	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13102.D	1	04/15/23 02:38	AL	04/10/23 11:00	OP96327	S5Q203
Run #2							

Run #1	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
<b>PERFLUOROALKYLCARBOXYLIC ACIDS</b>							
307-24-4	Perfluorohexanoic acid	0.0246		0.0019	0.00074	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0053		0.0019	0.00074	ug/l	
335-67-1	Perfluorooctanoic acid	0.0188		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	

## PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.0110		0.0019	0.00074	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0099		0.0019	0.00074	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0019	0.00074	ug/l	

## PERFLUOROOCATANESULFONAMIDOACETIC 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	106%		70-130%
	13C2-PFDA	102%		70-130%
	d5-EtFOSAA	83%		70-130%
	13C3-HFPO-DA	97%		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

<b>Client Sample ID:</b> FCWTP-EF 109(SA109)	
<b>Lab Sample ID:</b> FC3889-8	<b>Date Sampled:</b> 03/31/23
<b>Matrix:</b> DW - Drinking Water	<b>Date Received:</b> 04/01/23
<b>Method:</b> EPA 537.1 REV 1.0 EPA 537	<b>Percent Solids:</b> n/a
<b>Project:</b> PFAS Analysis	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13103.D	1	04/15/23 02:55	AL	04/10/23 11:00	OP96327	S5Q203
Run #2							

Run #1	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
<b>PERFLUOROALKYLCARBOXYLIC ACIDS</b>							
307-24-4	Perfluorohexanoic acid	0.0277		0.0019	0.00074	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0047		0.0019	0.00074	ug/l	
335-67-1	Perfluorooctanoic acid	0.0122		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	

## PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.0116		0.0019	0.00074	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0058		0.0019	0.00074	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0019	0.00074	ug/l	

## PERFLUOROCTANESULFONAMIDOACETIC 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	117%		70-130%
	13C2-PFDA	105%		70-130%
	d5-EtFOSAA	87%		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

<b>Client Sample ID:</b> FCWTP-INF 200(SA201)	<b>Date Sampled:</b> 03/31/23
<b>Lab Sample ID:</b> FC3889-9	<b>Date Received:</b> 04/01/23
<b>Matrix:</b> DW - Drinking Water	<b>Percent Solids:</b> n/a
<b>Method:</b> EPA 537.1 REV 1.0 EPA 537	
<b>Project:</b> PFAS Analysis	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13105.D	1	04/15/23 03:28	AL	04/10/23 11:00	OP96327	S5Q203
Run #2							

Run #1	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
<b>PERFLUOROALKYLCARBOXYLIC ACIDS</b>							
307-24-4	Perfluorohexanoic acid	0.0162		0.0019	0.00074	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0049		0.0019	0.00074	ug/l	
335-67-1	Perfluorooctanoic acid	0.0404		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	
<b>PERFLUOROALKYLSULFONIC ACIDS</b>							
375-73-5	Perfluorobutanesulfonic acid	0.0078		0.0019	0.00074	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0294		0.0019	0.00074	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0015		0.0019	0.00074	ug/l	J
<b>PERFLUOROCTANESULFONAMIDOACETIC ACIDS</b>							
2355-31-9	MeFOSAA	ND		0.0037	0.00093	ug/l	
2991-50-6	EtFOSAA	ND		0.0037	0.00093	ug/l	
<b>NEXT GENERATION PFAS ANALYTES</b>							
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	110%		70-130%
	13C2-PFDA	107%		70-130%
	d5-EtFOSAA	90%		70-130%
	13C3-HFPO-DA	99%		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

<b>Client Sample ID:</b> FCWTP-MP 205(SA205)	<b>Date Sampled:</b> 03/31/23
<b>Lab Sample ID:</b> FC3889-10	<b>Date Received:</b> 04/01/23
<b>Matrix:</b> DW - Drinking Water	<b>Percent Solids:</b> n/a
<b>Method:</b> EPA 537.1 REV 1.0 EPA 537	
<b>Project:</b> PFAS Analysis	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13108.D	1	04/15/23 04:19	AL	04/10/23 11:00	OP96327	S5Q203
Run #2							

Run #1	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
<b>PERFLUOROALKYLCARBOXYLIC ACIDS</b>							
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	
<b>PERFLUOROALKYLSULFONIC ACIDS</b>							
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	
<b>PERFLUOROCTANESULFONAMIDOACETIC ACIDS</b>							
2355-31-9	MeFOSAA	ND		0.0037	0.00093	ug/l	
2991-50-6	EtFOSAA	ND		0.0037	0.00093	ug/l	
<b>NEXT GENERATION PFAS ANALYTES</b>							
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	113%		70-130%
	13C2-PFDA	105%		70-130%
	d5-EtFOSAA	86%		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

<b>Client Sample ID:</b> FCWTP-MP 205 FB	<b>Date Sampled:</b> 03/31/23
<b>Lab Sample ID:</b> FC3889-11	<b>Date Received:</b> 04/01/23
<b>Matrix:</b> DW - Drinking Water FB	<b>Percent Solids:</b> n/a
<b>Method:</b> EPA 537.1 REV 1.0 EPA 537	
<b>Project:</b> PFAS Analysis	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13109.D	1	04/15/23 04:36	AL	04/10/23 11:00	OP96327	S5Q203
Run #2							

Run #1	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
<b>PERFLUOROALKYLCARBOXYLIC ACIDS</b>							
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	

## PERFLUOROALKYLSULFONIC 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	

## PERFLUOROCTANESULFONAMIDOACETIC 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	111%		70-130%
	13C2-PFDA	106%		70-130%
	d5-EtFOSAA	93%		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

<b>Client Sample ID:</b> FCWTP-MP (SA105)	
<b>Lab Sample ID:</b> FC3889-12	<b>Date Sampled:</b> 03/31/23
<b>Matrix:</b> DW - Drinking Water	<b>Date Received:</b> 04/01/23
<b>Method:</b> EPA 537.1 REV 1.0 EPA 537	<b>Percent Solids:</b> n/a
<b>Project:</b> PFAS Analysis	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13111.D	1	04/15/23 05:09	AL	04/10/23 11:00	OP96327	S5Q203
Run #2							

Run #1	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
<b>PERFLUOROALKYLCARBOXYLIC ACIDS</b>							
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	

## PERFLUOROALKYLSULFONIC 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	

## PERFLUOROCTANESULFONAMIDOACETIC 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	111%		70-130%
	13C2-PFDA	101%		70-130%
	d5-EtFOSAA	85%		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

<b>Client Sample ID:</b> FCWTP-EF 209(SA209)	
<b>Lab Sample ID:</b> FC3889-13	<b>Date Sampled:</b> 03/31/23
<b>Matrix:</b> DW - Drinking Water	<b>Date Received:</b> 04/01/23
<b>Method:</b> EPA 537.1 REV 1.0 EPA 537	<b>Percent Solids:</b> n/a
<b>Project:</b> PFAS Analysis	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13113.D	1	04/15/23 05:43	AL	04/10/23 11:00	OP96327	S5Q203
Run #2							

Run #1	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
<b>PERFLUOROALKYLCARBOXYLIC ACIDS</b>							
307-24-4	Perfluorohexanoic acid	0.0278		0.0019	0.00074	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0057		0.0019	0.00074	ug/l	
335-67-1	Perfluorooctanoic acid	0.0166		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	

## PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.0125		0.0019	0.00074	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0082		0.0019	0.00074	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0019	0.00074	ug/l	

## PERFLUOROOCETANESULFONAMIDOACETIC 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	111%		70-130%
	13C2-PFDA	104%		70-130%
	d5-EtFOSAA	86%		70-130%
	13C3-HFPO-DA	106%		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

<b>Client Sample ID:</b> FCWTP-50% MEDIA 50203(SA203)	<b>Date Sampled:</b> 03/31/23
<b>Lab Sample ID:</b> FC3889-14	<b>Date Received:</b> 04/01/23
<b>Matrix:</b> DW - Drinking Water	<b>Percent Solids:</b> n/a
<b>Method:</b> EPA 537.1 REV 1.0 EPA 537	
<b>Project:</b> PFAS Analysis	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13114.D	1	04/15/23 06:00	AL	04/10/23 11:00	OP96327	S5Q203
Run #2							

Run #1	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
<b>PERFLUOROALKYLCARBOXYLIC ACIDS</b>							
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		

## PERFLUOROALKYLSULFONIC 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		

## PERFLUOROCTANESULFONAMIDOACETIC 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	114%		70-130%
	13C2-PFDA	105%		70-130%
	d5-EtFOSAA	86%		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

<b>Client Sample ID:</b> FCWTP-50% MEDIA 50207(SA207)	<b>Date Sampled:</b> 03/31/23
<b>Lab Sample ID:</b> FC3889-15	<b>Date Received:</b> 04/01/23
<b>Matrix:</b> DW - Drinking Water	<b>Percent Solids:</b> n/a
<b>Method:</b> EPA 537.1 REV 1.0 EPA 537	
<b>Project:</b> PFAS Analysis	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13115.D	1	04/15/23 06:17	AL	04/10/23 11:00	OP96327	S5Q203
Run #2							

Run #1	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
<b>PERFLUOROALKYLCARBOXYLIC ACIDS</b>							
307-24-4	Perfluorohexanoic acid	0.0245		0.0019	0.00074	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0059		0.0019	0.00074	ug/l	
335-67-1	Perfluorooctanoic acid	0.0235		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	

## PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.0112		0.0019	0.00074	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0122		0.0019	0.00074	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0019	0.00074	ug/l	

## PERFLUOROOCETANESULFONAMIDOACETIC 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	113%		70-130%
	13C2-PFDA	105%		70-130%
	d5-EtFOSAA	84%		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

<b>Client Sample ID:</b>	FCWTP-EF 002(EXISTING PLANT EFFLUENT/POST PUMPS)		
<b>Lab Sample ID:</b>	FC3889-16	<b>Date Sampled:</b>	03/31/23
<b>Matrix:</b>	DW - Drinking Water	<b>Date Received:</b>	04/01/23
<b>Method:</b>	EPA 537.1 REV 1.0 EPA 537	<b>Percent Solids:</b>	n/a
<b>Project:</b>	PFAS Analysis		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13118.D	1	04/15/23 07:07	AL	04/10/23 11:00	OP96327	S5Q203
Run #2							

Run #1	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
<b>PERFLUOROALKYLCARBOXYLIC ACIDS</b>							
307-24-4	Perfluorohexanoic acid	0.0047		0.0019	0.00074	ug/l	
375-85-9	Perfluoroheptanoic acid	0.00094		0.0019	0.00074	ug/l	J
335-67-1	Perfluorooctanoic acid	0.0027		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	

## PERFLUOROALKYLSULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.0021		0.0019	0.00074	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0012		0.0019	0.00074	ug/l	J
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0019	0.00074	ug/l	

## PERFLUOROCTANESULFONAMIDOACETIC 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	117%		70-130%
	13C2-PFDA	108%		70-130%
	d5-EtFOSAA	86%		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

<b>Client Sample ID:</b>	FCWTP-EF 002 FB (EXISTING PLANT EFFLUENT)	<b>Date Sampled:</b>	03/31/23
<b>Lab Sample ID:</b>	FC3889-17	<b>Date Received:</b>	04/01/23
<b>Matrix:</b>	DW - Drinking Water FB	<b>Percent Solids:</b>	n/a
<b>Method:</b>	EPA 537.1 REV 1.0 EPA 537		
<b>Project:</b>	PFAS Analysis		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13123.D	1	04/15/23 08:31	AL	04/10/23 11:00	OP96327	S5Q203
Run #2							

Run #1	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
<b>PERFLUOROALKYLCARBOXYLIC ACIDS</b>							
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	

## PERFLUOROALKYLSULFONIC 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	

## PERFLUOROCTANESULFONAMIDOACETIC 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	118%		70-130%
	13C2-PFDA	113%		70-130%
	d5-EtFOSAA	97%		70-130%
	13C3-HFPO-DA	114%		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

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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

FC3889

4405 SGS - ORLANDO JOB #:

PAGE 1 OF 2

Client / Reporting Information		Project Information		Analytical Information										Matrix Codes					
Company Name: TOWN OF COUPEVILLE		Project Name FCWTP												GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid MP - Misc					
434 WANNAMAHER RD		Street 434 WANNAMAHER RD																	
COUPEVILLE WA 98277		City COUPEVILLE State WA																	
Project Contact: Joseph Grogan Email: utillities1@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										PFAS EPA 537.1 (MS)	PFAS EPA 537.1 (MSD)	PFAS EPA 537.1 (MSD)	LAB USE ONLY	
		DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NH <sub>4</sub> OH	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NH <sub>4</sub> OH/20%	DI WATER					MECH
1	FCWTP-INF 001 (booster tap)	3/31/23	1210	JW	DW	2												X	
2	FCWTP-INF 001 FB	3/31/23	1205	JW	DW	1												X	
3	FCWTP-INF 100 (SA101)	3/31/23	1215	JW	DW	2												X	
4	FCWTP-MP 105 (SA105)	3/31/23	1220	JW	DW	2												X	
5	FCWTP-MP 105 FB	3/31/23	1220	JW	DW	1												X	
6	FCWTP-50%MEDIA 50103 (SA103)	3/31/23	1230	JW	DW	2												X	
7	FCWTP-50%MEDIA 50107 (SA107)	3/31/23	1235	JW	DW	2												X	
8	FCWTP EF 109 (SA109)	3/31/23	1240	JW	DW	2												X	
9	FCWTP INF 200 (SA201)	3/31/23	1250	JW	DW	2												X	
10	FCWTP MP 205 (SA205)	3/31/23	1255	JW	DW	2												X	
11	FCWTP MP 205 FB	3/31/23	1255	JW	DW	1												X	
12	FCWTP MP (SA105)	3/31/23	1220	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 <i>JMG</i> LABEL VERIFICATION <i>[Signature]</i> 2.4" <i>[Signature]</i>					
7 Day																			
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. 820															
Relinquished by/Sampler/Affiliation		Date Time: 3/31/23		Received By/Affiliation		Date Time: 3/31/23		Relinquished By/Affiliation		Date Time: 4/1/23		Received By/Affiliation		Date Time: 4/1/23		Received By/Affiliation		Date Time: 4/1/23	
1				3				4				5				6			
5				6				7				8				9			

Copy of finished Chain of custody 2-2022 Rev 031318

FC3889: Chain of Custody

Page 1 of 3





SGS North America Inc - Orlando  
Chain of Custody

SGS - ORLANDO JOB # : PAGE 2 OF 2

Vineyard 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 GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe
434 WANNAMAHER RD		Street 434 WANNAMAHER RD												
COUPEVILLE WA 98277		City COUPEVILLE State WA												
Project Contact: Joseph Grogan Email: <del>jjgrogan</del> @townofcoupeville.org		Project # N44255-21-0-001												
Phone #: 360-678-4461 Ext 415-110		Fax #												
Sampler(s) Name(s) (Printed) Sampler 1: Jimmy Sampler 2: Jesse		Client Purchase Order #												

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION		SAMPLED BY:	CONTAINER INFORMATION												PFAS EPA 537.1	PFAS EPA 537.4 (MS)	PFAS EPA 537.4 (MSD)	LAB USE ONLY
		DATE	TIME		MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	PCl	NaOH	PHOS	MSD04	NaOH/DMC	D WATER	MECH					
13	FCWTP EF 209 (SA209)	3/31/23	1305	JW	DW	2												X		
14	FCWTP 50% MEDIA 50203 (SA203)	3/31/23	1310	JW	DW	2												X		
15	FCWTP 50% MEDIA 50207 (SA207)	3/31/23	1315	JW	DW	2												X		
16	FCWTP EF 002 (Existing plant effluent/post pumps)	3/31/23	1340	JW	DW	2												X		
17	FCWTP EF 002 FB (Existing plant effluent)	3/31/23	1340	JW	DW	1												X		
16	FCWTP EF 002 MS (Existing plant effluent/post pumps)	3/31/23	1340	JW	DW	1										X				
16	FCWTP EF 002 MSD(Existing plant effluent/post pump)	3/31/23	1340	JW	DW	1											X			

Turnaround Time ( Business days)	Approved By: / Date:	Data Deliverable Information	Comments / Remarks
10 Day (Business)		<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY)	
7 Day		<input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC)	
5 Day		<input type="checkbox"/> REDT1 (EPA LEVEL 3)	
3 Day RUSH		<input type="checkbox"/> FULLT1 (EPA LEVEL 4)	
2 Day RUSH		<input type="checkbox"/> EDD'S	
1 Day RUSH			
Other			

Sample Custody must be documented below each time samples change possession, including courier delivery.					
Relinquished by Sampler/Affiliation	Date Time: 3-31-23	Received By/Affiliation	Relinquished By/Affiliation	Date Time: 4/1/23	Received By/Affiliation
5		6	3		4
Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
5		6	7		8

5.1  
5

## SGS Sample Receipt Summary

Job Number: FC3889

Client: TOWN OF COUPEVILLE

Project: FCWTP

Date / Time Received: 4/1/2023 8:20:00 AM

Delivery Method: FEDEX

Airbill #'s: 3964 8179 2617

Therm ID: IR 1;

Therm CF: -0.1;

# of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.4);

Cooler Temps (Corrected) °C: Cooler 1: (2.3);

**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>                    |                          |

**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"/> |
|                                | <u>W or S</u>            |                          | <u>N/A</u>                          |
| 3. Type Of TB Received         | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**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"/> |

**Misc. Information**

Number of Encores: 25-Gram \_\_\_\_\_ 5-Gram \_\_\_\_\_  
 Test Strip Lot #: pH 0-3 230320  
 Residual Chlorine Test Strip Lot #: \_\_\_\_\_

Number of 5035 Field Kits: \_\_\_\_\_  
 pH 10-12 25BDH07

Number of Lab Filtered Metals: \_\_\_\_\_  
 Other: (Specify) pH 1.0 - 12.0 222221

Comments

SM001  
Rev. Date 05/24/17

Technician: CARLOSD

Date: 4/1/2023 8:20:00 AM

Reviewer: \_\_\_\_\_

Date: \_\_\_\_\_

**FC3889: 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:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96327-MB	5Q13092.D	1	04/14/23	AL	04/10/23	OP96327	S5Q203

The QC reported here applies to the following samples:

Method: EPA 537.1 REV 1.0

FC3889-1, FC3889-2, FC3889-3, FC3889-4, FC3889-5, FC3889-6, FC3889-7, FC3889-8, FC3889-9, FC3889-10, FC3889-11, FC3889-12, FC3889-13, FC3889-14, FC3889-15, FC3889-16, FC3889-17

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	118%	70-130%
	13C2-PFDA	109%	70-130%
	d5-EtFOSAA	94%	70-130%
	13C3-HFPO-DA	105%	70-130%

**Blank Spike Summary**

**Job Number:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96327-BS	5Q13091.D	1	04/14/23	AL	04/10/23	OP96327	S5Q203

The QC reported here applies to the following samples:

Method: EPA 537.1 REV 1.0

FC3889-1, FC3889-2, FC3889-3, FC3889-4, FC3889-5, FC3889-6, FC3889-7, FC3889-8, FC3889-9, FC3889-10, FC3889-11, FC3889-12, FC3889-13, FC3889-14, FC3889-15, FC3889-16, FC3889-17

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
307-24-4	Perfluorohexanoic acid	0.32	0.311	97	70-130
375-85-9	Perfluoroheptanoic acid	0.32	0.310	97	70-130
335-67-1	Perfluorooctanoic acid	0.32	0.307	96	70-130
375-95-1	Perfluorononanoic acid	0.32	0.306	96	70-130
335-76-2	Perfluorodecanoic acid	0.32	0.299	93	70-130
2058-94-8	Perfluoroundecanoic acid	0.32	0.291	91	70-130
307-55-1	Perfluorododecanoic acid	0.32	0.261	82	70-130
72629-94-8	Perfluorotridecanoic acid	0.32	0.271	85	70-130
376-06-7	Perfluorotetradecanoic acid	0.32	0.255	80	70-130
375-73-5	Perfluorobutanesulfonic acid	0.32	0.310	97	70-130
355-46-4	Perfluorohexanesulfonic acid	0.32	0.280	88	70-130
1763-23-1	Perfluorooctanesulfonic acid	0.32	0.298	93	70-130
2355-31-9	MeFOSAA	0.32	0.286	89	70-130
2991-50-6	EtFOSAA	0.32	0.291	91	70-130
13252-13-6	HFPO-DA (GenX)	0.32	0.289	90	70-130
919005-14-4	ADONA	0.32	0.310	97	70-130
756426-58-19	Cl-PF3ONS (F-53B Major)	0.32	0.291	91	70-130
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.32	0.267	83	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
	13C2-PFHxA	116%	70-130%
	13C2-PFDA	112%	70-130%
	d5-EtFOSAA	106%	70-130%
	13C3-HFPO-DA	107%	70-130%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96327-MS	5Q13119.D	1	04/15/23	AL	04/10/23	OP96327	S5Q203
OP96327-MSD	5Q13121.D	1	04/15/23	AL	04/10/23	OP96327	S5Q203
FC3889-16	5Q13118.D	1	04/15/23	AL	04/10/23	OP96327	S5Q203

The QC reported here applies to the following samples:

Method: EPA 537.1 REV 1.0

FC3889-1, FC3889-2, FC3889-3, FC3889-4, FC3889-5, FC3889-6, FC3889-7, FC3889-8, FC3889-9, FC3889-10, FC3889-11, FC3889-12, FC3889-13, FC3889-14, FC3889-15, FC3889-16, FC3889-17

CAS No.	Compound	FC3889-16 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
307-24-4	Perfluorohexanoic acid	0.0047	0.296	0.291	97	0.296	0.295	98	1	70-130/30
375-85-9	Perfluoroheptanoic acid	0.00094 J	0.296	0.293	99	0.296	0.297	100	1	70-130/30
335-67-1	Perfluorooctanoic acid	0.0027	0.296	0.290	97	0.296	0.293	98	1	70-130/30
375-95-1	Perfluorononanoic acid	ND	0.296	0.286	97	0.296	0.290	98	1	70-130/30
335-76-2	Perfluorodecanoic acid	ND	0.296	0.279	94	0.296	0.284	96	2	70-130/30
2058-94-8	Perfluoroundecanoic acid	ND	0.296	0.258	87	0.296	0.259	87	0	70-130/30
307-55-1	Perfluorododecanoic acid	ND	0.296	0.237	80	0.296	0.234	79	1	70-130/30
72629-94-8	Perfluorotridecanoic acid	ND	0.296	0.223	75	0.296	0.216	73	3	70-130/30
376-06-7	Perfluorotetradecanoic acid	ND	0.296	0.192	65*	0.296	0.176	59*	9	70-130/30
375-73-5	Perfluorobutanesulfonic acid	0.0021	0.296	0.282	94	0.296	0.286	96	1	70-130/30
355-46-4	Perfluorohexanesulfonic acid	0.0012 J	0.296	0.265	89	0.296	0.263	88	1	70-130/30
1763-23-1	Perfluorooctanesulfonic acid	ND	0.296	0.268	90	0.296	0.280	95	4	70-130/30
2355-31-9	MeFOSAA	ND	0.296	0.243	82	0.296	0.249	84	2	70-130/30
2991-50-6	EtFOSAA	ND	0.296	0.245	83	0.296	0.252	85	3	70-130/30
13252-13-6	HFPO-DA (GenX)	ND	0.296	0.293	99	0.296	0.299	101	2	70-130/30
919005-14-4	ADONA	ND	0.296	0.288	97	0.296	0.291	98	1	70-130/30
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.296	0.264	89	0.296	0.272	92	3	70-130/30
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.296	0.243	82	0.296	0.241	81	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	FC3889-16	Limits
	13C2-PFHxA	113%	114%	117%	70-130%
	13C2-PFDA	108%	109%	108%	70-130%
	d5-EtFOSAA	87%	89%	86%	70-130%
	13C3-HFPO-DA	113%	116%	112%	70-130%

\* = Outside of Control Limits.

# Internal Standard Area Summary

**Job Number:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

<b>Check Std:</b> S5Q203-ICC203	<b>Injection Date:</b> 04/14/23
<b>Lab File ID:</b> 5Q13066.D	<b>Injection Time:</b> 16:30
<b>Instrument ID:</b> GCMS5Q	<b>Method:</b> 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 <sup>a</sup>	172634	3.47	157800	6.25	399672	6.26	72140	6.85	176776	7.13
Check Std <sup>b</sup>	177034	3.47	163486	6.25	413140	6.26	74409	6.85	182701	7.13
Upper Limit <sup>c</sup>	247848	4.47	228880	7.25	578396	7.26	104173	7.85	255781	8.13
Lower Limit <sup>d</sup>	123924	2.47	114440	5.25	289198	5.26	52086	5.85	127891	6.13

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
S5Q203-RT	167524	3.47	145676	6.25	391182	6.26	70059	6.85	176747	7.13

- 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: S5Q203-ICC203 5Q13066.D 04/14/23 16:30. 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:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

<b>Check Std:</b> S5Q203-CC203	<b>Injection Date:</b> 04/14/23
<b>Lab File ID:</b> 5Q13083.D	<b>Injection Time:</b> 21:18
<b>Instrument ID:</b> GCMS5Q	<b>Method:</b> 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 <sup>a</sup>	172634	3.47	157800	6.25	399672	6.26	72140	6.85	176776	7.13
Check Std <sup>b</sup>	178445	3.47	168306	6.25	419143	6.25	74373	6.85	195946	7.13
Upper Limit <sup>c</sup>	249823	4.47	235628	7.25	586800	7.25	104122	7.85	274324	8.13
Lower Limit <sup>d</sup>	124912	2.47	117814	5.25	293400	5.25	52061	5.85	137162	6.13

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
ZZZZZZ	130191	3.46	146920	6.25	341720	6.25	61052	6.85	140875	7.13
ZZZZZZ	163860	3.46	153212	6.25	393395	6.25	71442	6.85	181238	7.13
ZZZZZZ	158644	3.47	148052	6.25	373116	6.26	67162	6.85	154522	7.13
ZZZZZZ	156425	3.46	146355	6.25	366604	6.26	65571	6.85	150915	7.13
ZZZZZZ	155096	3.46	140240	6.25	362880	6.26	66060	6.85	150129	7.13
ZZZZZZ	154845	3.47	139735	6.25	359154	6.26	63804	6.85	146765	7.13
OP96327-BS	143839	3.47	151488	6.25	329633	6.25	60651	6.84	150857	7.13
OP96327-MB	138462	3.47	125310	6.25	327340	6.26	58553	6.85	153057	7.13
FC3889-1	136329	3.46	133471	6.25	342858	6.26	60780	6.85	156605	7.13

- 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: S5Q203-ICC203 5Q13066.D 04/14/23 16:30. 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:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

<b>Check Std:</b> S5Q203-CC203	<b>Injection Date:</b> 04/15/23
<b>Lab File ID:</b> 5Q13094.D	<b>Injection Time:</b> 00:23
<b>Instrument ID:</b> GCMS5Q	<b>Method:</b> 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 <sup>a</sup>	172634	3.47	157800	6.25	399672	6.26	72140	6.85	176776	7.13
Check Std <sup>b</sup>	176384	3.47	173571	6.25	403881	6.26	74053	6.85	188673	7.13
Upper Limit <sup>c</sup>	246938	4.47	242999	7.25	565433	7.26	103674	7.85	264142	8.13
Lower Limit <sup>d</sup>	123469	2.47	121500	5.25	282717	5.26	51837	5.85	132071	6.13

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
FC3889-2	139119	3.47	132335	6.25	324473	6.26	57710	6.85	152874	7.13
FC3889-3	122711 <sup>e</sup>	3.46	120621 <sup>e</sup>	6.25	307285	6.26	54964	6.85	143780	7.12
FC3889-4	138062	3.47	125732	6.25	325519	6.26	58483	6.85	151615	7.13
FC3889-5	141299	3.47	135400	6.25	334395	6.26	60084	6.85	158453	7.13
FC3889-6	134620	3.47	124379	6.25	320478	6.26	57453	6.85	147904	7.13
FC3889-7	138388	3.47	136173	6.25	344237	6.26	61649	6.85	165377	7.13
FC3889-8	135141	3.47	130405	6.25	337376	6.26	59861	6.85	155072	7.13
FC3889-9	135654	3.46	134962	6.25	341733	6.26	62531	6.85	161078	7.13

- 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: S5Q203-ICC203 5Q13066.D 04/14/23 16:30. 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.
- (e) Outside control limits. Internal standard does not reference target analyte.

# Internal Standard Area Summary

**Job Number:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

<b>Check Std:</b> S5Q203-CC203	<b>Injection Date:</b> 04/15/23
<b>Lab File ID:</b> 5Q13106.D	<b>Injection Time:</b> 03:45
<b>Instrument ID:</b> GCMS5Q	<b>Method:</b> 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 <sup>a</sup>	172634	3.47	157800	6.25	399672	6.26	72140	6.85	176776	7.13
Check Std <sup>b</sup>	173720	3.47	164237	6.25	407210	6.26	73372	6.85	191154	7.13
Upper Limit <sup>c</sup>	243208	4.47	229932	7.25	570094	7.26	102721	7.85	267616	8.13
Lower Limit <sup>d</sup>	121604	2.47	114966	5.25	285047	5.26	51360	5.85	133808	6.13

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
FC3889-10	147743	3.47	137115	6.25	348665	6.26	63471	6.85	163934	7.13
FC3889-11	157501	3.47	152779	6.25	372375	6.26	66636	6.85	173447	7.13
FC3889-12	140377	3.47	129544	6.25	331656	6.26	60246	6.85	155286	7.13
FC3889-13	134254	3.46	130658	6.25	333316	6.26	60138	6.85	157066	7.13
FC3889-14	141310	3.47	130161	6.25	334304	6.26	60930	6.85	157904	7.13
FC3889-15	143528	3.47	138900	6.25	356805	6.26	64764	6.85	169617	7.13

- 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: S5Q203-ICC203 5Q13066.D 04/14/23 16:30. 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:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

<b>Check Std:</b> S5Q203-CC203	<b>Injection Date:</b> 04/15/23
<b>Lab File ID:</b> 5Q13116.D	<b>Injection Time:</b> 06:33
<b>Instrument ID:</b> GCMS5Q	<b>Method:</b> 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 <sup>a</sup>	172634	3.47	157800	6.25	399672	6.26	72140	6.85	176776	7.13
Check Std <sup>b</sup>	174777	3.47	172489	6.25	396390	6.26	73943	6.85	185495	7.13
Upper Limit <sup>c</sup>	244688	4.47	241485	7.25	554946	7.26	103520	7.85	259693	8.13
Lower Limit <sup>d</sup>	122344	2.47	120742	5.25	277473	5.26	51760	5.85	129847	6.13

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
FC3889-16	140388	3.47	128511	6.25	334101	6.26	59598	6.85	157482	7.13
OP96327-MS	137540	3.47	149279	6.25	314508	6.26	59102	6.85	149889	7.13
OP96327-MSD	147727	3.47	157434	6.25	332015	6.25	62343	6.85	155054	7.13
FC3889-17	140538	3.47	134217	6.25	330686	6.26	59854	6.85	154148	7.13
S5Q203-ECC203	172294	3.47	161238	6.25	401156	6.26	72938	6.85	186378	7.13

- 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: S5Q203-ICC203 5Q13066.D 04/14/23 16:30. 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:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

<b>Method:</b> EPA 537.1 REV 1.0	<b>Matrix:</b> DW
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
FC3889-1	5Q13093.D	108	101	84	95
FC3889-2	5Q13096.D	113	109	92	100
FC3889-3	5Q13098.D	111	107	89	99
FC3889-4	5Q13099.D	117	108	93	105
FC3889-5	5Q13100.D	112	107	94	101
FC3889-6	5Q13101.D	113	105	93	101
FC3889-7	5Q13102.D	106	102	83	97
FC3889-8	5Q13103.D	117	105	87	107
FC3889-9	5Q13105.D	110	107	90	99
FC3889-10	5Q13108.D	113	105	86	103
FC3889-11	5Q13109.D	111	106	93	101
FC3889-12	5Q13111.D	111	101	85	103
FC3889-13	5Q13113.D	111	104	86	106
FC3889-14	5Q13114.D	114	105	86	107
FC3889-15	5Q13115.D	113	105	84	105
FC3889-16	5Q13118.D	117	108	86	112
FC3889-17	5Q13123.D	118	113	97	114
OP96327-BS	5Q13091.D	116	112	106	107
OP96327-MB	5Q13092.D	118	109	94	105
OP96327-MS	5Q13119.D	113	108	87	113
OP96327-MSD	5Q13121.D	114	109	89	116

**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:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

**Sample:** S5Q203-ICC203  
**Lab FileID:** 5Q13066.D

## Initial Calibration Report

Method Path	Method File	Batch Name	Last Calib Update	Calibration Files	Level Name	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
D:\MassHunter\Methods	537_041423_S5Q203_quantmethod.xml	D:\MassHunter\Data\041423_537_S5Q203	4/17/2023 4:12:37 PM	D:\MassHunter\Data\041423_537_S5Q203\QuantResults\5q203_batch.bin	1	Linear	1.1392	1.0307	1.0863	1.1522	1.0900	1.1044	0.9961	0.9262	1.0656	7.175
D:\MassHunter\Data\041423_537_S5Q203\5Q13062.d					2	Linear	1.0606	1.0015	1.0113	1.0823	1.0364	1.0483	0.9489	0.8731	1.0078	6.756
D:\MassHunter\Data\041423_537_S5Q203\5Q13063.d					3	Linear	0.4789	0.4571	0.4791	0.5141	0.5031	0.5237	0.5057	0.5188	0.4976	4.702
D:\MassHunter\Data\041423_537_S5Q203\5Q13064.d					4	Linear	0.3503	0.3319	0.3326	0.3577	0.3483	0.3622	0.3493	0.3579	0.3488	3.240
D:\MassHunter\Data\041423_537_S5Q203\5Q13065.d					5	Linear	0.1097	0.1040	0.1067	0.1129	0.1098	0.1130	0.1093	0.1125	0.1097	2.901
D:\MassHunter\Data\041423_537_S5Q203\5Q13066.d					6	Linear	0.1387	0.1233	0.1269	0.1335	0.1293	0.1327	0.1274	0.1328	0.1306	3.694
D:\MassHunter\Data\041423_537_S5Q203\5Q13067.d					7	Linear	0.9148	0.8595	0.8751	0.9570	0.9322	0.9771	0.9704	1.0492	0.9419	6.455
D:\MassHunter\Data\041423_537_S5Q203\5Q13068.d					8	Linear	1.2503	1.1807	1.2040	1.3234	1.2877	1.3644	1.3677	1.4879	1.3083	7.650
I 13C2-PFOA						Linear	0.9180	0.8578	0.8622	0.9294	0.9112	0.9503	0.9159	0.9860	0.9164	4.623
S 13C2-PFHxA						Linear	1.0406	0.9596	1.0019	1.1025	1.0480	1.1106	1.0882	1.1705	1.0652	6.261
T PFHxA						Linear	0.1273	0.1177	0.1215	0.1349	0.1271	0.1358	0.1349	0.1451	0.1305	6.771
S 13C3-HFO-DA						Linear	1.1536	1.0436	1.0794	1.1666	1.1284	1.1849	1.1424	1.1904	1.1362	4.518
T HFPO-DA						Linear	1.1176	1.1069	1.1351	1.2531	1.2023	1.2578	1.2176	1.2700	1.1951	5.554
T PFHpA						Linear	0.7803	0.7126	0.7363	0.8036	0.7844	0.8345	0.8287	0.8901	0.7963	7.099
T ADONA						Linear	0.3248	0.2870	0.3028	0.3173	0.3099	0.3208	0.3311	0.3364	0.3163	5.071
T PFOA						Linear	1.3822	1.2730	1.3055	1.3909	1.3609	1.4180	1.3809	1.4690	1.3725	4.476
T PFNA						Linear	0.9330	0.8586	0.8903	0.9399	0.9088	0.9386	0.9263	0.9569	0.9191	3.461
T 9Ch-PF3ONS						Linear	0.9648	0.8761	0.9176	0.9802	0.9516	0.9995	0.9917	1.0384	0.9650	5.232
T PFDA						Linear	0.9474	0.8655	0.9051	0.9479	0.9247	0.9602	0.9314	0.9502	0.9290	3.342
S 13C2-PFDA						Linear	1.0907	1.0278	1.0361	1.1329	1.0861	1.1350	1.0841	1.1721	1.0956	4.521
T 11C1-PF3OUds						Linear	6.6390	6.2557	6.5987	7.1141	6.9808	7.2065	7.0527	7.2316	6.8849	5.066
I 13C3-PFPeA						Linear	7.9905	7.4911	7.9593	8.5341	8.4963	8.9020	8.3529	9.0834	8.3512	6.267
T PFBA						Linear	6.6825	6.1662	6.5597	6.9318	6.4192	6.6939	6.9339	7.0396	6.6784	4.398
T PFPeA						Linear										
I 13C4-PFOS						Linear										
T PFBS						Linear										
T PFHxS						Linear										
T PFHpS						Linear										
T PFOS						Linear										
T PFUnDA						Linear										
T PFDoDA						Linear										
T PFTDA						Linear										

Generated at 4:12 PM on 4/17/2023

Page 1 of 3



# Initial Calibration Summary

Job Number: FC3889  
 Account: TOCOUWAC Town of Coupeville  
 Project: PFAS Analysis

Sample: S5Q203-ICC203  
 Lab FileID: 5Q13066.D

## Initial Calibration Report

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
T PFTeDA	Linear	5.6003	5.1717	5.5847	5.9316	5.7777	6.1754	6.0473	6.1559	5.8056	5.922
I d3-MeFOSAA						ISTD					
T MeFOSAA	Linear	1.1238	1.0922	1.0891	1.1872	1.1420	1.2060	1.1645	1.2397	1.1556	4.665
S d5-EFOSAA	Linear	1.0071	0.9688	0.9885	1.0676	1.0231	1.0702	1.0378	1.0895	1.0316	4.120
T EFOSAA	Linear	1.0567	1.0220	1.0632	1.1099	1.0550	1.1126	1.0859	1.1488	1.0818	3.750

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

# Initial Calibration Summary

Job Number: FC3889  
 Account: TOCOUWAC Town of Coupeville  
 Project: PFAS Analysis

Sample: S5Q203-ICC203  
 Lab FileID: 5Q13066.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 = 0.334625 * x	0.999782
T PFPeA	Linear	y = 1.449491 * x	0.999073
T PFBS	Linear	y = 0.950046 * x	0.999727
S 13C2-PFHxA	Linear	y = 0.516271 * x	0.999829
T PFHxA	Linear	y = 0.356302 * x	0.999844
S 13C3-HFPO-DA	Linear	y = 0.111853 * x	0.999800
T HFPO-DA	Linear	y = 0.131740 * x	0.999599
T PFHpA	Linear	y = 1.030707 * x	0.999405
T PFHxS	Linear	y = 1.027422 * x	0.999412
T ADONA	Linear	y = 1.459096 * x	0.998055
T 6:2FTS	Linear	y = 0.946866 * x	0.996845
T PFHpS	Linear	y = 0.946650 * x	0.999892
T PFOA	Linear	y = 0.970738 * x	0.998726
T PFOS	Linear	y = 1.153288 * x	0.998608
T PFNA	Linear	y = 1.151746 * x	0.998659
T MeFOSAA	Linear	y = 1.223366 * x	0.999061
T 9Cl-PF3ONS	Linear	y = 0.142676 * x	0.998576
S d5-EFOSAA	Linear	y = 1.078356 * x	0.999433
T EtFOSAA	Linear	y = 1.134785 * x	0.999213
T PFDA	Linear	y = 1.180462 * x	0.999590
S 13C2-PFDA	Linear	y = 1.258934 * x	0.999571
T 8:2FTS	Linear	y = 0.894732 * x	0.996319
T PFUnDA	Linear	y = 7.194083 * x	0.999841
T 11Cl-PF3OUdS	Linear	y = 0.875591 * x	0.998610
T PFDoDA	Linear	y = 8.931635 * x	0.998425
T PFTiDA	Linear	y = 7.003534 * x	0.999767
T PFTeDA	Linear	y = 6.132049 * x	0.999877

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

## Initial Calibration Verification

Job Number: FC3889  
 Account: TOCOUWAC Town of Coupeville  
 Project: PFAS Analysis

Sample: S5Q203-ICV203  
 Lab FileID: 5Q13070.D

## Continuing Calibration Report

Batch: D:\MassHunter\Data\041423\_537\_S5Q203\s5q203.batch.bin

## Level ID: Calibration File

1:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13061.d  
 2:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13062.d  
 3:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13063.d  
 4:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13064.d  
 5:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13065.d  
 6:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13066.d  
 7:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13067.d  
 8:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13068.d

Data File: 5Q13070  
 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	20.072	0.4	100.4
8:2FTS	20.000	20.400	2.0	102.0
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	40.000	0.000	# -100.0	0.0
EtFOSAA	20.000	17.448	-12.8	87.2
MeFOSAA	20.000	17.701	-11.5	88.5
PFBA	20.000	17.868	-10.7	89.3
PFBS	20.000	15.442	-22.8	77.2
PFDA	20.000	17.560	-12.2	87.8
PFDoDA	20.000	20.626	3.1	103.1
PFHpA	20.000	16.778	-16.1	83.9
PFHpS	20.000	17.320	-13.4	86.6
PFHxA	20.000	17.261	-13.7	86.3
PFHxS	20.000	15.168	-24.2	75.8
PFNA	20.000	15.972	-20.1	79.9
PFOA	20.000	17.676	-11.6	88.4
PFOS	20.000	19.390	-3.0	97.0
PFPeA	20.000	16.669	-16.7	83.3
PFTeDA	20.000	17.411	-12.9	87.1
PFTTrDA	20.000	21.131	5.7	105.7
PFUnDA	20.000	19.132	-4.3	95.7
ADONA	20.000	15.979	-20.1	79.9
9Cl-PF3ONS	20.000	15.923	-20.4	79.6
11Cl-PF3OUdS	20.000	15.444	-22.8	77.2
13C3-HFPO-DA	40.000	0.000	# -100.0	0.0
HFPO-DA	20.000	17.892	-10.5	89.5

CC Criteria: +/- 30%

**Continuing Calibration Summary**

**Job Number:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

**Sample:** S5Q203-CC203  
**Lab FileID:** 5Q13071.D

## Continuing Calibration Report

Batch: D:\MassHunter\Data\041423\_537\_S5Q203\s5q203.batch.bin

## Level ID: Calibration File

1:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13061.d  
 2:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13062.d  
 3:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13063.d  
 4:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13064.d  
 5:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13065.d  
 6:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13066.d  
 7:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13067.d  
 8:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13068.d

Data File: 5Q13071  
 Type : QC  
 Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	19.847	-0.8	99.2
13C2-PFHxA	20.000	20.079	0.4	100.4
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
6:2FTS	20.000	23.214	16.1	116.1
8:2FTS	20.000	23.294	16.5	116.5
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	40.000	39.712	-0.7	99.3
EtFOSAA	20.000	19.672	-1.6	98.4
MeFOSAA	20.000	19.632	-1.8	98.2
PFBA	20.000	19.373	-3.1	96.9
PFBS	20.000	19.935	-0.3	99.7
PFDA	20.000	19.798	-1.0	99.0
PFDoDA	20.000	15.837	-20.8	79.2
PFHpA	20.000	18.879	-5.6	94.4
PFHpS	20.000	20.480	2.4	102.4
PFHxA	20.000	20.132	0.7	100.7
PFHxS	20.000	19.621	-1.9	98.1
PFNA	20.000	19.129	-4.4	95.6
PFOA	20.000	19.611	-1.9	98.1
PFOS	20.000	19.740	-1.3	98.7
PFPeA	20.000	19.528	-2.4	97.6
PFTeDA	20.000	20.358	1.8	101.8
PFTrDA	20.000	20.434	2.2	102.2
PFUnDA	20.000	19.987	-0.1	99.9
ADONA	20.000	18.583	-7.1	92.9
9Cl-PF3ONS	20.000	19.061	-4.7	95.3
11Cl-PF3OUdS	20.000	18.691	-6.5	93.5
13C3-HFPO-DA	40.000	37.894	-5.3	94.7
HFPO-DA	20.000	18.853	-5.7	94.3

CC Criteria: +/- 30%

**Continuing Calibration Summary**

**Job Number:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

**Sample:** S5Q203-CC203  
**Lab FileID:** 5Q13072.D

## Continuing Calibration Report

Batch: D:\MassHunter\Data\041423\_537\_S5Q203\s5q203.batch.bin

## Level ID: Calibration File

1:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13061.d  
 2:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13062.d  
 3:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13063.d  
 4:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13064.d  
 5:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13065.d  
 6:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13066.d  
 7:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13067.d  
 8:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13068.d

Data File: 5Q13072  
 Type : QC  
 Level : 1

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	0.500	0.459	-8.2	91.8
13C2-PFHxA	0.500	0.475	-5.0	95.0
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
6:2FTS	0.500	0.607	21.4	121.4
8:2FTS	0.500	0.602	20.4	120.4
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	1.000	0.934	-6.6	93.4
EtFOSAA	0.500	0.473	-5.3	94.7
MeFOSAA	0.500	0.484	-3.2	96.8
PFBA	0.500	0.507	1.4	101.4
PFBS	0.500	0.490	-2.0	98.0
PFDA	0.500	0.475	-5.0	95.0
PFDoDA	0.500	0.458	-8.5	91.5
PFHpA	0.500	0.444	-11.3	88.7
PFHpS	0.500	0.497	-0.5	99.5
PFHxA	0.500	0.498	-0.3	99.7
PFHxS	0.500	0.449	-10.3	89.7
PFNA	0.500	0.447	-10.6	89.4
PFOA	0.500	0.458	-8.5	91.5
PFOS	0.500	0.464	-7.2	92.8
PFPeA	0.500	0.474	-5.3	94.7
PFTeDA	0.500	0.474	-5.3	94.7
PFTTrDA	0.500	0.483	-3.4	96.6
PFUnDA	0.500	0.478	-4.4	95.6
ADONA	0.500	0.425	-15.1	84.9
9Cl-PF3ONS	0.500	0.483	-3.5	96.5
11Cl-PF3OUdS	0.500	0.432	-13.6	86.4
13C3-HFPO-DA	1.000	0.860	-14.0	86.0
HFPO-DA	0.500	0.457	-8.5	91.5

CC Criteria: +/- 30%

**Continuing Calibration Summary**

**Job Number:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

**Sample:** S5Q203-CC203  
**Lab FileID:** 5Q13083.D

## Continuing Calibration Report

Batch: D:\MassHunter\Data\041423\_537\_S5Q203\s5q203.batch.bin

## Level ID: Calibration File

1:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13061.d  
 2:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13062.d  
 3:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13063.d  
 4:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13064.d  
 5:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13065.d  
 6:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13066.d  
 7:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13067.d  
 8:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13068.d

Data File: 5Q13083  
 Type : QC  
 Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	20.124	0.6	100.6
13C2-PFHxA	20.000	20.185	0.9	100.9
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
6:2FTS	20.000	23.259	16.3	116.3
8:2FTS	20.000	23.519	17.6	117.6
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	40.000	39.373	-1.6	98.4
EtFOSAA	20.000	19.660	-1.7	98.3
MeFOSAA	20.000	19.213	-3.9	96.1
PFBA	20.000	19.345	-3.3	96.7
PFBS	20.000	20.072	0.4	100.4
PFDA	20.000	20.061	0.3	100.3
PFDoDA	20.000	20.441	2.2	102.2
PFHpA	20.000	18.998	-5.0	95.0
PFHpS	20.000	20.261	1.3	101.3
PFHxA	20.000	20.060	0.3	100.3
PFHxS	20.000	19.612	-1.9	98.1
PFNA	20.000	19.458	-2.7	97.3
PFOA	20.000	19.631	-1.8	98.2
PFOS	20.000	19.717	-1.4	98.6
PFPeA	20.000	19.664	-1.7	98.3
PFTeDA	20.000	21.091	5.5	105.5
PFTTrDA	20.000	21.375	6.9	106.9
PFUnDA	20.000	20.387	1.9	101.9
ADONA	20.000	18.679	-6.6	93.4
9Cl-PF3ONS	20.000	18.731	-6.3	93.7
11Cl-PF3OUdS	20.000	19.262	-3.7	96.3
13C3-HFPO-DA	40.000	35.895	-10.3	89.7
HFPO-DA	20.000	17.793	-11.0	89.0

CC Criteria: +/- 30%



## Continuing Calibration Summary

Job Number: FC3889  
 Account: TOCOUWAC Town of Coupeville  
 Project: PFAS Analysis

Sample: S5Q203-CC203  
 Lab FileID: 5Q13094.D

## Continuing Calibration Report

Batch: D:\MassHunter\Data\041423\_537\_S5Q203\s5q203.batch.bin

## Level ID: Calibration File

1:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13061.d  
 2:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13062.d  
 3:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13063.d  
 4:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13064.d  
 5:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13065.d  
 6:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13066.d  
 7:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13067.d  
 8:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13068.d

Data File: 5Q13094  
 Type : QC  
 Level : 7

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	50.000	48.542	-2.9	97.1
13C2-PFHxA	50.000	48.424	-3.2	96.8
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
6:2FTS	50.000	52.756	5.5	105.5
8:2FTS	50.000	53.106	6.2	106.2
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	100.000	95.545	-4.5	95.5
EtFOSAA	50.000	47.999	-4.0	96.0
MeFOSAA	50.000	47.328	-5.3	94.7
PFBA	50.000	46.784	-6.4	93.6
PFBS	50.000	47.774	-4.5	95.5
PFDA	50.000	48.088	-3.8	96.2
PFDoDA	50.000	48.845	-2.3	97.7
PFHpA	50.000	47.499	-5.0	95.0
PFHpS	50.000	48.091	-3.8	96.2
PFHxA	50.000	48.229	-3.5	96.5
PFHxS	50.000	47.195	-5.6	94.4
PFNA	50.000	47.467	-5.1	94.9
PFOA	50.000	46.799	-6.4	93.6
PFOS	50.000	47.916	-4.2	95.8
PFPeA	50.000	48.206	-3.6	96.4
PFTeDA	50.000	49.674	-0.7	99.3
PFTTrDA	50.000	49.793	-0.4	99.6
PFUnDA	50.000	48.240	-3.5	96.5
ADONA	50.000	47.135	-5.7	94.3
9Cl-PF3ONS	50.000	45.994	-8.0	92.0
11Cl-PF3OUdS	50.000	48.048	-3.9	96.1
13C3-HFPO-DA	100.000	88.379	-11.6	88.4
HFPO-DA	50.000	44.418	-11.2	88.8

CC Criteria: +/- 30%

**Continuing Calibration Summary**

**Job Number:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

**Sample:** S5Q203-CC203  
**Lab FileID:** 5Q13106.D

## Continuing Calibration Report

Batch: D:\MassHunter\Data\041423\_537\_S5Q203\s5q203.batch.bin

## Level ID: Calibration File

1:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13061.d  
 2:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13062.d  
 3:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13063.d  
 4:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13064.d  
 5:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13065.d  
 6:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13066.d  
 7:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13067.d  
 8:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13068.d

Data File: 5Q13106  
 Type : QC  
 Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	20.184	0.9	100.9
13C2-PFHxA	20.000	20.027	0.1	100.1
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
6:2FTS	20.000	23.225	16.1	116.1
8:2FTS	20.000	23.740	18.7	118.7
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	40.000	39.125	-2.2	97.8
EtFOSAA	20.000	19.301	-3.5	96.5
MeFOSAA	20.000	19.442	-2.8	97.2
PFBA	20.000	19.137	-4.3	95.7
PFBS	20.000	19.702	-1.5	98.5
PFDA	20.000	19.994	0.0	100.0
PFDoDA	20.000	20.204	1.0	101.0
PFHpA	20.000	19.160	-4.2	95.8
PFHpS	20.000	20.114	0.6	100.6
PFHxA	20.000	19.909	-0.5	99.5
PFHxS	20.000	19.231	-3.8	96.2
PFNA	20.000	19.420	-2.9	97.1
PFOA	20.000	19.532	-2.3	97.7
PFOS	20.000	19.842	-0.8	99.2
PFPeA	20.000	19.739	-1.3	98.7
PFTeDA	20.000	20.534	2.7	102.7
PFTrDA	20.000	20.714	3.6	103.6
PFUnDA	20.000	20.155	0.8	100.8
ADONA	20.000	18.803	-6.0	94.0
9Cl-PF3ONS	20.000	18.446	-7.8	92.2
11Cl-PF3OUdS	20.000	19.490	-2.6	97.4
13C3-HFPO-DA	40.000	36.692	-8.3	91.7
HFPO-DA	20.000	18.048	-9.8	90.2

CC Criteria: +/- 30%

**Continuing Calibration Summary**

**Job Number:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

**Sample:** S5Q203-CC203  
**Lab FileID:** 5Q13116.D

## Continuing Calibration Report

Batch: D:\MassHunter\Data\041423\_537\_S5Q203\s5q203.batch.bin

## Level ID: Calibration File

1:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13061.d  
 2:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13062.d  
 3:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13063.d  
 4:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13064.d  
 5:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13065.d  
 6:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13066.d  
 7:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13067.d  
 8:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13068.d

Data File: 5Q13116  
 Type : QC  
 Level : 7

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	50.000	49.243	-1.5	98.5
13C2-PFHxA	50.000	48.855	-2.3	97.7
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
6:2FTS	50.000	52.322	4.6	104.6
8:2FTS	50.000	53.402	6.8	106.8
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	100.000	96.033	-4.0	96.0
EtFOSAA	50.000	47.841	-4.3	95.7
MeFOSAA	50.000	47.687	-4.6	95.4
PFBA	50.000	46.175	-7.7	92.3
PFBS	50.000	47.259	-5.5	94.5
PFDA	50.000	48.563	-2.9	97.1
PFDoDA	50.000	46.400	-7.2	92.8
PFHpA	50.000	48.170	-3.7	96.3
PFHpS	50.000	47.931	-4.1	95.9
PFHxA	50.000	48.363	-3.3	96.7
PFHxS	50.000	47.030	-5.9	94.1
PFNA	50.000	48.222	-3.6	96.4
PFOA	50.000	47.784	-4.4	95.6
PFOS	50.000	48.037	-3.9	96.1
PFPeA	50.000	48.420	-3.2	96.8
PFTeDA	50.000	48.814	-2.4	97.6
PFTTrDA	50.000	49.205	-1.6	98.4
PFUnDA	50.000	47.849	-4.3	95.7
ADONA	50.000	47.618	-4.8	95.2
9Cl-PF3ONS	50.000	46.816	-6.4	93.6
11Cl-PF3OUdS	50.000	49.002	-2.0	98.0
13C3-HFPO-DA	100.000	93.892	-6.1	93.9
HFPO-DA	50.000	46.812	-6.4	93.6

CC Criteria: +/- 30%

**Continuing Calibration Summary**

**Job Number:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

**Sample:** S5Q203-ECC203  
**Lab FileID:** 5Q13124.D

## Continuing Calibration Report

Batch: D:\MassHunter\Data\041423\_537\_S5Q203\s5q203.batch.bin

## Level ID: Calibration File

1:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13061.d  
 2:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13062.d  
 3:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13063.d  
 4:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13064.d  
 5:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13065.d  
 6:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13066.d  
 7:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13067.d  
 8:D:\MassHunter\Data\041423\_537\_S5Q203\5Q13068.d

Data File: 5Q13124  
 Type : QC  
 Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	20.219	1.1	101.1
13C2-PFHxA	20.000	20.172	0.9	100.9
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
6:2FTS	20.000	23.296	16.5	116.5
8:2FTS	20.000	23.601	18.0	118.0
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	40.000	39.609	-1.0	99.0
EtFOSAA	20.000	19.507	-2.5	97.5
MeFOSAA	20.000	19.301	-3.5	96.5
PFBA	20.000	18.987	-5.1	94.9
PFBS	20.000	19.635	-1.8	98.2
PFDA	20.000	19.953	-0.2	99.8
PFDoDA	20.000	19.718	-1.4	98.6
PFHpA	20.000	19.374	-3.1	96.9
PFHpS	20.000	20.204	1.0	101.0
PFHxA	20.000	20.049	0.2	100.2
PFHxS	20.000	19.292	-3.5	96.5
PFNA	20.000	19.472	-2.6	97.4
PFOA	20.000	19.521	-2.4	97.6
PFOS	20.000	19.072	-4.6	95.4
PFPeA	20.000	19.811	-0.9	99.1
PFTeDA	20.000	20.260	1.3	101.3
PFTTrDA	20.000	20.223	1.1	101.1
PFUnDA	20.000	19.854	-0.7	99.3
ADONA	20.000	18.972	-5.1	94.9
9Cl-PF3ONS	20.000	18.541	-7.3	92.7
11Cl-PF3OUdS	20.000	19.460	-2.7	97.3
13C3-HFPO-DA	40.000	39.720	-0.7	99.3
HFPO-DA	20.000	19.850	-0.7	99.3

CC Criteria: +/- 30%

## Run Sequence Report

**Job Number:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

<b>Run ID:</b> S5Q203	<b>Method:</b> EPA 537.1 REV 1.0	<b>Instrument ID:</b> GCMS5Q
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S5Q203-IC203	5Q13060.D	04/14/23 14:49	n/a	Mass Calibration Verification
S5Q203-IC203	5Q13061.D	04/14/23 15:06	n/a	Initial cal 0.5
S5Q203-IC203	5Q13062.D	04/14/23 15:23	n/a	Initial cal 1
S5Q203-IC203	5Q13063.D	04/14/23 15:40	n/a	Initial cal 2
S5Q203-IC203	5Q13064.D	04/14/23 15:56	n/a	Initial cal 5
S5Q203-IC203	5Q13065.D	04/14/23 16:13	n/a	Initial cal 10
S5Q203-ICC203	5Q13066.D	04/14/23 16:30	n/a	Initial cal 20
S5Q203-IC203	5Q13067.D	04/14/23 16:49	n/a	Initial cal 50
S5Q203-IC203	5Q13068.D	04/14/23 17:06	n/a	Initial cal 100
S5Q203-RT	5Q13069.D	04/14/23 17:23	n/a	Retention Time Marker
S5Q203-ICV203	5Q13070.D	04/14/23 17:39	n/a	Initial cal verification 20
S5Q203-CC203	5Q13071.D	04/14/23 17:56	n/a	Continuing cal 20
S5Q203-CC203	5Q13072.D	04/14/23 18:13	n/a	Continuing cal 0.5LL
OP96215-BS	5Q13073.D	04/14/23 18:30	OP96215	Blank Spike
OP96215-MB	5Q13074.D	04/14/23 18:47	OP96215	Method Blank
ZZZZZZ	5Q13075.D	04/14/23 19:04	OP96215	(unrelated sample)
ZZZZZZ	5Q13076.D	04/14/23 19:21	OP96215	(unrelated sample)
FC3740-2	5Q13077.D	04/14/23 19:37	OP96215	(used for QC only; not part of job FC3889)
OP96215-MS	5Q13078.D	04/14/23 19:54	OP96215	Matrix Spike
OP96215-MSD	5Q13079.D	04/14/23 20:11	OP96215	Matrix Spike Duplicate
ZZZZZZ	5Q13080.D	04/14/23 20:28	OP96215	(unrelated sample)
ZZZZZZ	5Q13082.D	04/14/23 21:01	OP96215	(unrelated sample)
S5Q203-CC203	5Q13083.D	04/14/23 21:18	n/a	Continuing cal 20
ZZZZZZ	5Q13085.D	04/14/23 21:52	OP96215	(unrelated sample)
ZZZZZZ	5Q13086.D	04/14/23 22:09	OP96215	(unrelated sample)
ZZZZZZ	5Q13087.D	04/14/23 22:26	OP96215	(unrelated sample)
ZZZZZZ	5Q13088.D	04/14/23 22:42	OP96215	(unrelated sample)
ZZZZZZ	5Q13089.D	04/14/23 22:59	OP96215	(unrelated sample)
ZZZZZZ	5Q13090.D	04/14/23 23:16	OP96215	(unrelated sample)
OP96327-BS	5Q13091.D	04/14/23 23:33	OP96327	Blank Spike
OP96327-MB	5Q13092.D	04/14/23 23:50	OP96327	Method Blank
FC3889-1	5Q13093.D	04/15/23 00:07	OP96327	FCWTP-INF 001(BOOSTER TAP)
S5Q203-CC203	5Q13094.D	04/15/23 00:23	n/a	Continuing cal 50
FC3889-2	5Q13096.D	04/15/23 00:57	OP96327	FCWTP-INF 001 FB
FC3889-3	5Q13098.D	04/15/23 01:31	OP96327	FCWTP-INF 100(SA101)
FC3889-4	5Q13099.D	04/15/23 01:48	OP96327	FCWTP-MP 105(SA105)
FC3889-5	5Q13100.D	04/15/23 02:04	OP96327	FCWTP-MP 105 FB
FC3889-6	5Q13101.D	04/15/23 02:21	OP96327	FCWTP-50% MEDIA 50103(SA103)
FC3889-7	5Q13102.D	04/15/23 02:38	OP96327	FCWTP-50% MEDIA 50107(SA107)
FC3889-8	5Q13103.D	04/15/23 02:55	OP96327	FCWTP-EF 109(SA109)
FC3889-9	5Q13105.D	04/15/23 03:28	OP96327	FCWTP-INF 200(SA201)
S5Q203-CC203	5Q13106.D	04/15/23 03:45	n/a	Continuing cal 20
FC3889-10	5Q13108.D	04/15/23 04:19	OP96327	FCWTP-MP 205(SA205)
FC3889-11	5Q13109.D	04/15/23 04:36	OP96327	FCWTP-MP 205 FB
FC3889-12	5Q13111.D	04/15/23 05:09	OP96327	FCWTP-MP (SA105)
FC3889-13	5Q13113.D	04/15/23 05:43	OP96327	FCWTP-EF 209(SA209)

# Run Sequence Report

**Job Number:** FC3889  
**Account:** TOCOUWAC Town of Coupeville  
**Project:** PFAS Analysis

<b>Run ID:</b> S5Q203	<b>Method:</b> EPA 537.1 REV 1.0	<b>Instrument ID:</b> GCMS5Q
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
FC3889-14	5Q13114.D	04/15/23 06:00	OP96327	FCWTP-50% MEDIA 50203(SA203)
FC3889-15	5Q13115.D	04/15/23 06:17	OP96327	FCWTP-50% MEDIA 50207(SA207)
S5Q203-CC203	5Q13116.D	04/15/23 06:33	n/a	Continuing cal 50
FC3889-16	5Q13118.D	04/15/23 07:07	OP96327	FCWTP-EF 002(EXISTING PLANT EFFLUENT)
OP96327-MS	5Q13119.D	04/15/23 07:24	OP96327	Matrix Spike
OP96327-MSD	5Q13121.D	04/15/23 07:58	OP96327	Matrix Spike Duplicate
FC3889-17	5Q13123.D	04/15/23 08:31	OP96327	FCWTP-EF 002 FB (EXISTING PLANT EFFLUENT)
S5Q203-ECC203	5Q13124.D	04/15/23 08:48	n/a	Ending cal 20

6.7.1

6

MS Semi-volatiles

Raw Data

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Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13093.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 12:07:09 AM  
 Sample Name : fc3889-1  
 Vial : P3-D3  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)	QValue
<b>Internal Standards</b>							
13C2-6:2FTS	6.250	429.0 -> 409.0	133471	20.00	µg/L	0.000	
13C2-PFOA	6.265	415.0 -> 370.0	342858	20.00	µg/L	0.000	
13C3-PFPeA	3.457	266.0 -> 222.0	136329	20.00	µg/L	-0.012	
13C4-PFOS	6.848	503.0 -> 80.0	60780	20.00	µg/L	0.000	
d3-MeFOSAA	7.130	573.0 -> 419.0	156605	40.00	µg/L	0.000	
<b>System Monitoring Compounds</b>							
13C2-PFDA	7.434	515.0 -> 470.0	435562	20.18	µg/L	0.000	
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 100.9%			
13C2-PFHxA	4.676	315.0 -> 270.0	191437	21.63	µg/L	0.000	
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 108.2%			
d5-EtFOSAA	7.265	589.0 -> 419.0	141617	33.54	µg/L	0.000	
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 83.9%			
13C3-HFPO-DA	4.946	287.0 -> 169.0	73031	38.09	µg/L	0.000	
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 95.2%			
<b>Target Compounds</b>							
6:2FTS	-	427.0 -> 407.0	-	N.D.			
		427.0 -> 81.0					
8:2FTS	-	527.0 -> 507.0	-	N.D.			
		527.0 -> 81.0					
EtFOSAA	-	584.0 -> 419.0	-	N.D.			
		584.0 -> 483.0					
MeFOSAA	-	570.0 -> 419.0	-	N.D.			
		570.0 -> 512.0					
PFBA	1.850	213.0 -> 169.0	621	0.27	µg/L	m	100
PFBS	3.703	299.0 -> 80.0	6402	2.22	µg/L	m	97
		299.0 -> 99.0	2815				
PFDA	-	513.0 -> 469.0	-	N.D.			
		513.0 -> 219.0					
PFDODA	-	613.0 -> 569.0	-	N.D.			
		613.0 -> 169.0					
PFHpA	5.553	363.0 -> 319.0	24862	1.41	µg/L	m	100
		363.0 -> 169.0	2032				
PFHpS	-	449.0 -> 80.0	-	N.D.			
		449.0 -> 99.0					
PFHxA	4.678	313.0 -> 269.0	27839	4.56	µg/L		99
		313.0 -> 119.0	2636				
PFHxS	5.587	399.0 -> 80.0	25665	8.22	µg/L	m	100
		399.0 -> 99.0	13206				
PFNA	-	463.0 -> 419.0	-	N.D.			
		463.0 -> 219.0					
PFOA	6.266	413.0 -> 369.0	188068	11.30	µg/L	m	96
		413.0 -> 169.0	66424				
PFOS	6.661	499.0 -> 80.0	1278	0.36	µg/L	m	86
		499.0 -> 99.0	540				
PFPeA	3.472	263.0 -> 219.0	36339	3.68	µg/L		100



Perfluorinated Compounds by LC/MS/MS

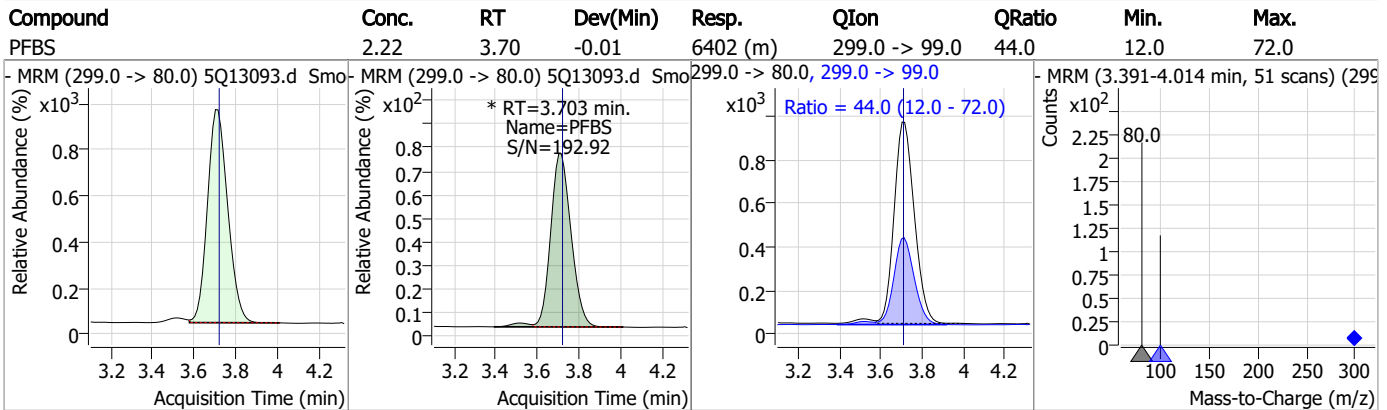
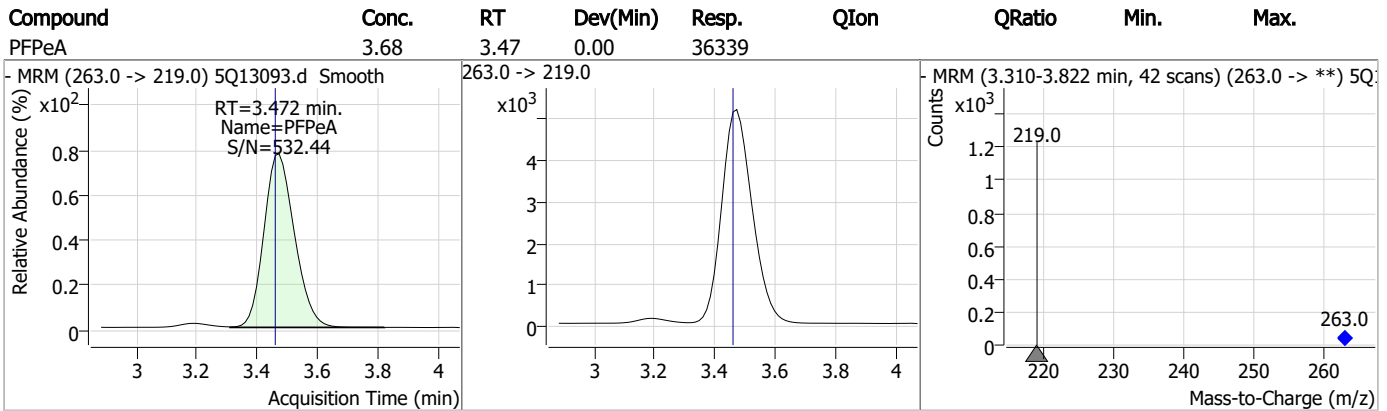
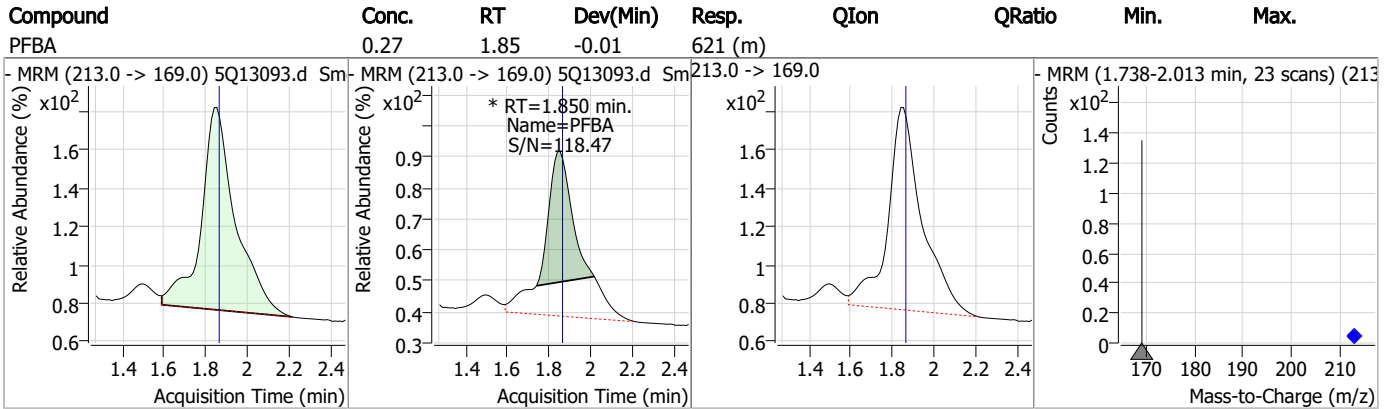
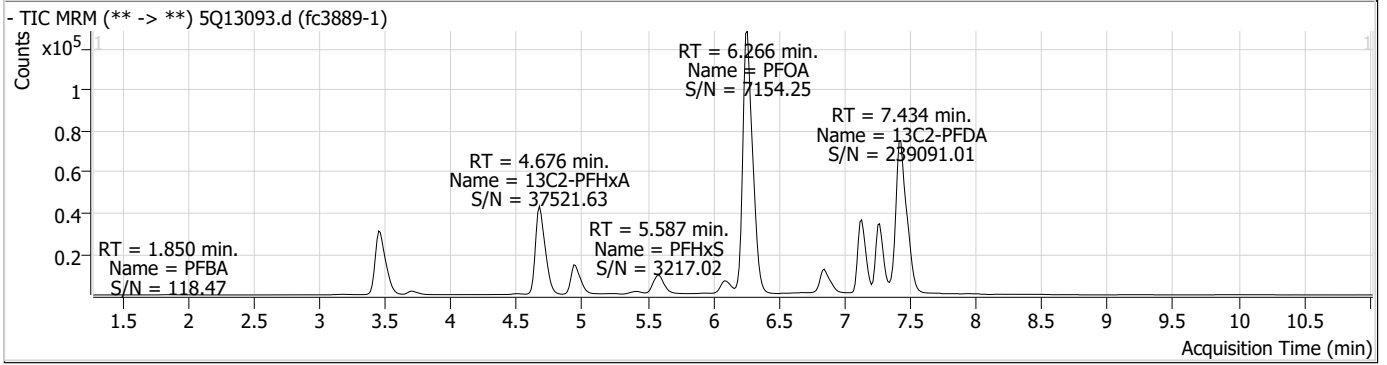
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

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

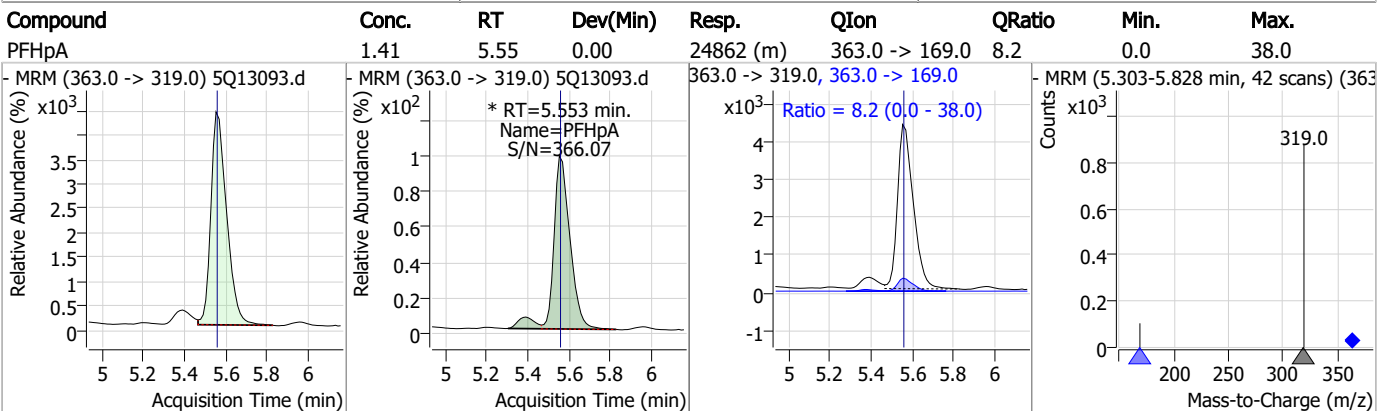
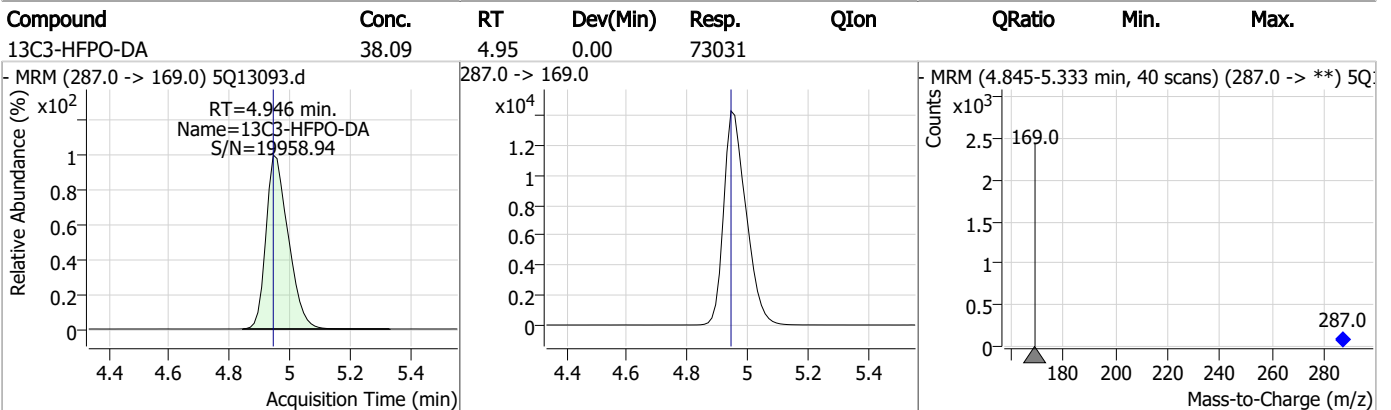
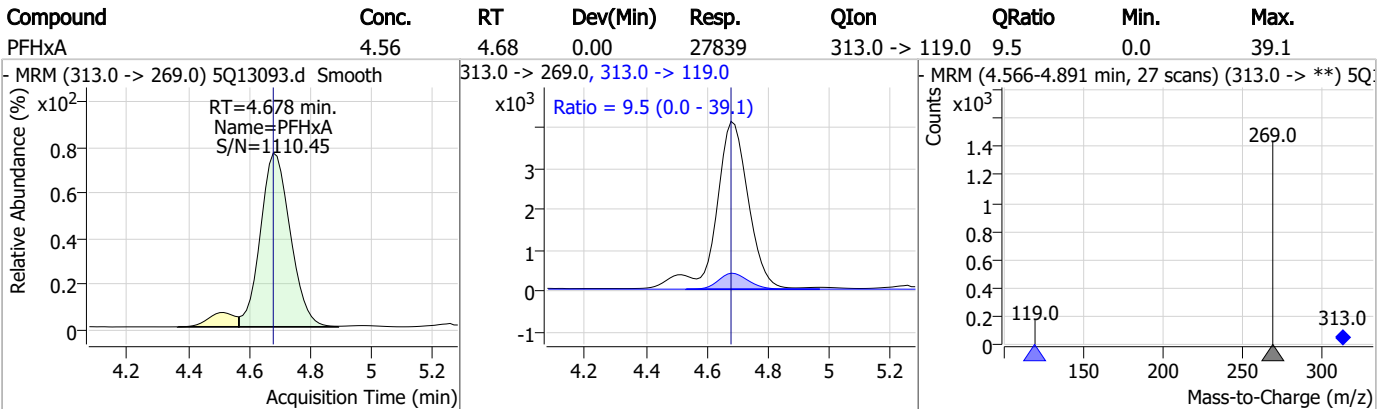
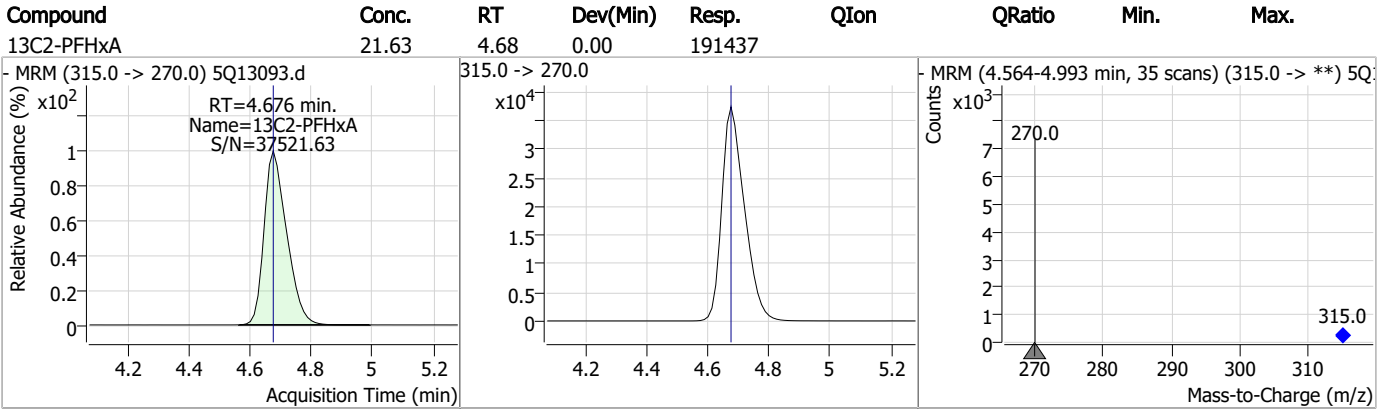
7.1.1

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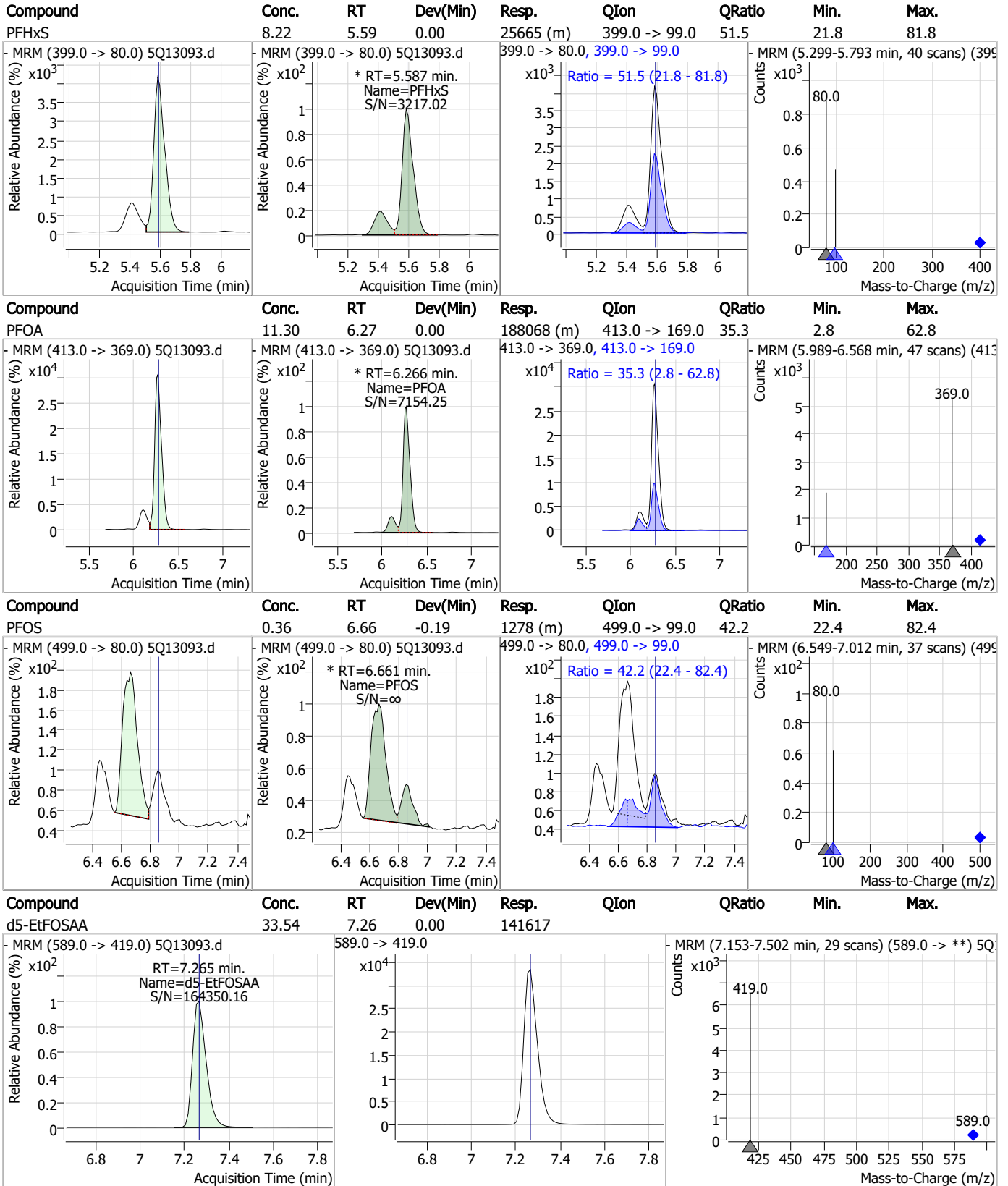
### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS

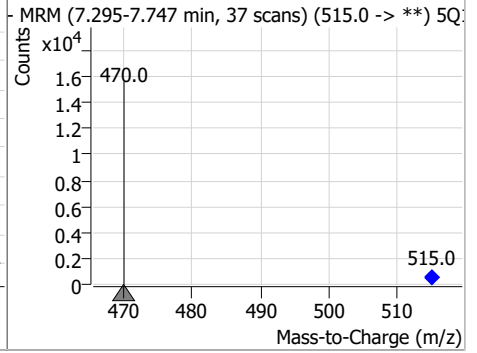
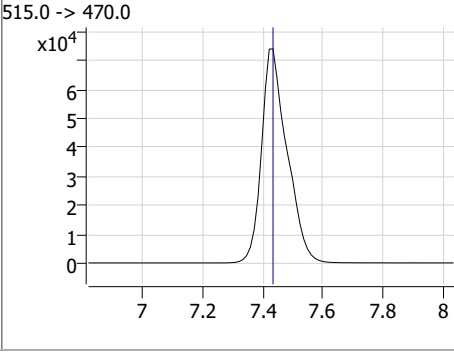
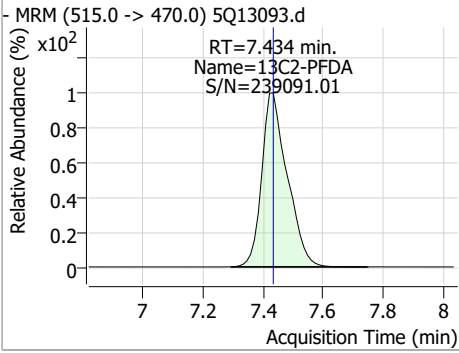


### Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	20.18	7.43	0.00	435562				



7.1.1  
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# Manual Integration Approval Summary

**Sample Number:** FC3889-1                      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13093.D                      **Analyst approved:** 04/17/23 12:41 Natasha Gumtie  
**Injection Time:** 04/15/23 00:07              **Supervisor approved:** 04/17/23 15:07 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorobutanoic acid	375-22-4		1.85	Poor instrument integration
Perfluorobutanesulfonic acid	375-73-5		3.70	Split peak
Perfluoroheptanoic acid	375-85-9		5.55	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanoic acid	335-67-1		6.27	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.66	Split peak

7.1.1.1  
7

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13096.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 12:57:40 AM  
 Sample Name : fc3889-2  
 Vial : P3-D4  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	132335	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	324473	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	139119	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	57710	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	152874	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.422	515.0 -> 470.0	444370	21.76 µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 108.8%		
13C2-PFHxA	4.676	315.0 -> 270.0	188763	22.54 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 112.7%		
d5-EtFOSAA	7.265	589.0 -> 419.0	151663	36.80 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 92.0%		
13C3-HFPO-DA	4.958	287.0 -> 169.0	72907	40.18 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 100.4%		
<b>Target Compounds</b>					
6:2FTS	-	427.0 -> 407.0 427.0 -> 81.0	-	N.D.	QValue
8:2FTS	-	527.0 -> 507.0 527.0 -> 81.0	-	N.D.	
EtFOSAA	-	584.0 -> 419.0 584.0 -> 483.0	-	N.D.	
MeFOSAA	-	570.0 -> 419.0 570.0 -> 512.0	-	N.D.	
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0 299.0 -> 99.0	-	N.D.	
PFDA	-	513.0 -> 469.0 513.0 -> 219.0	-	N.D.	
PFDODA	-	613.0 -> 569.0 613.0 -> 169.0	-	N.D.	
PFHpA	-	363.0 -> 319.0 363.0 -> 169.0	-	N.D.	
PFHpS	-	449.0 -> 80.0 449.0 -> 99.0	-	N.D.	
PFHxA	-	313.0 -> 269.0 313.0 -> 119.0	-	N.D.	
PFHxS	-	399.0 -> 80.0 399.0 -> 99.0	-	N.D.	
PFNA	-	463.0 -> 419.0 463.0 -> 219.0	-	N.D.	
PFOA	-	413.0 -> 369.0 413.0 -> 169.0	-	N.D.	
PFOS	-	499.0 -> 80.0 499.0 -> 99.0	-	N.D.	
PFPeA	-	263.0 -> 219.0	-	N.D.	

7.12  
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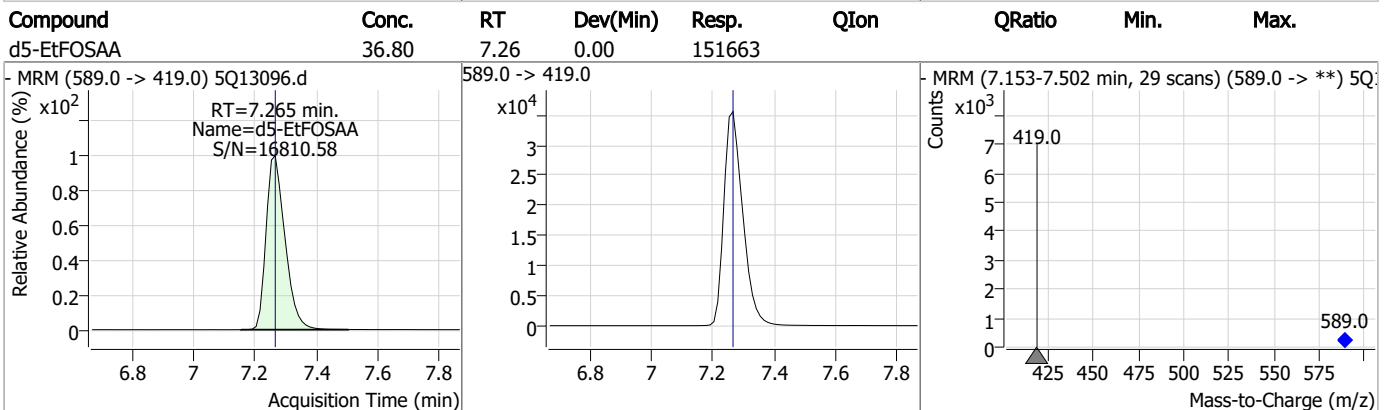
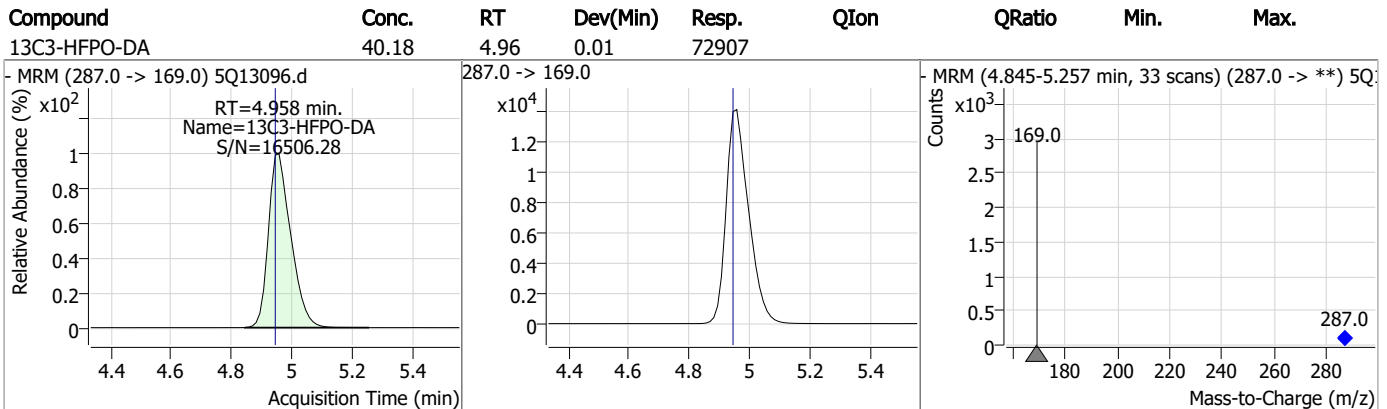
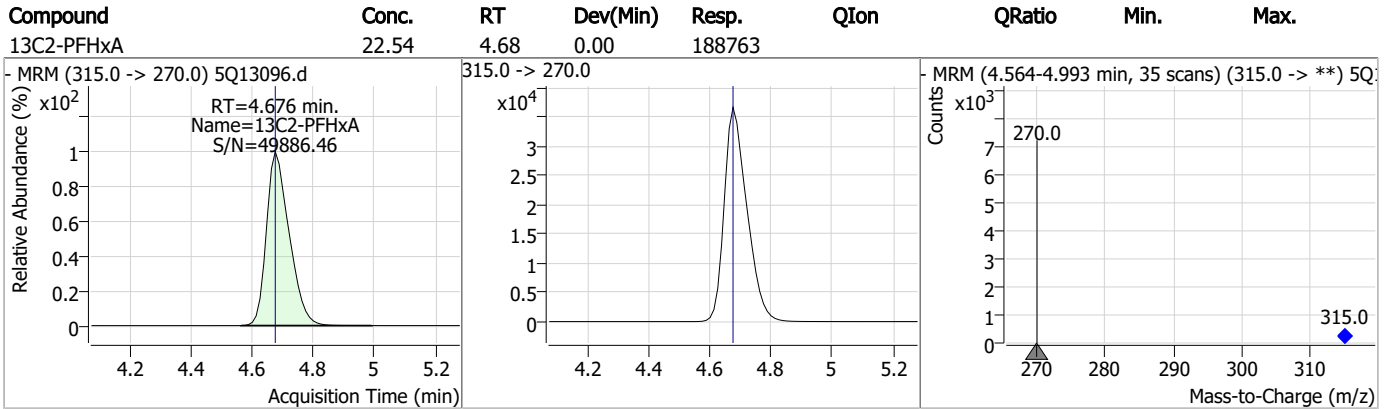
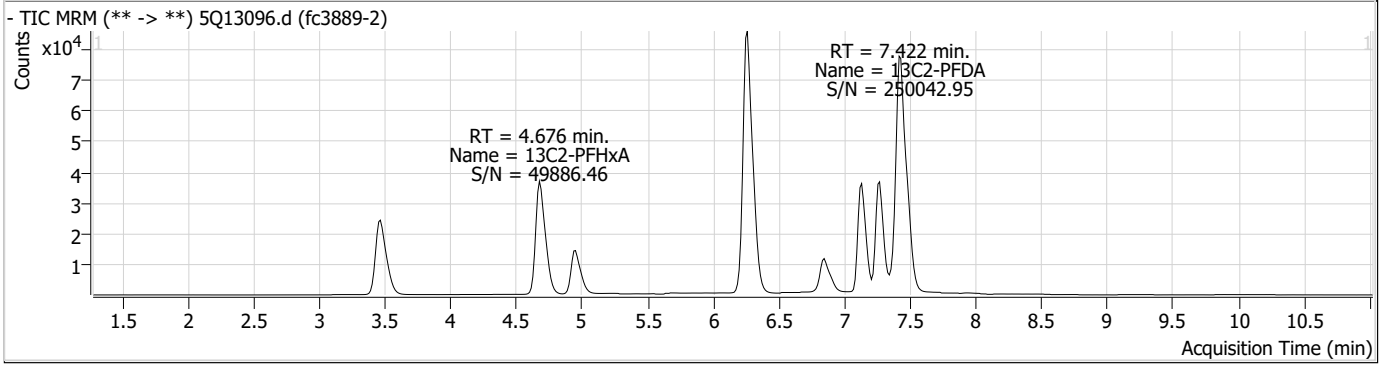
Perfluorinated Compounds by LC/MS/MS

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

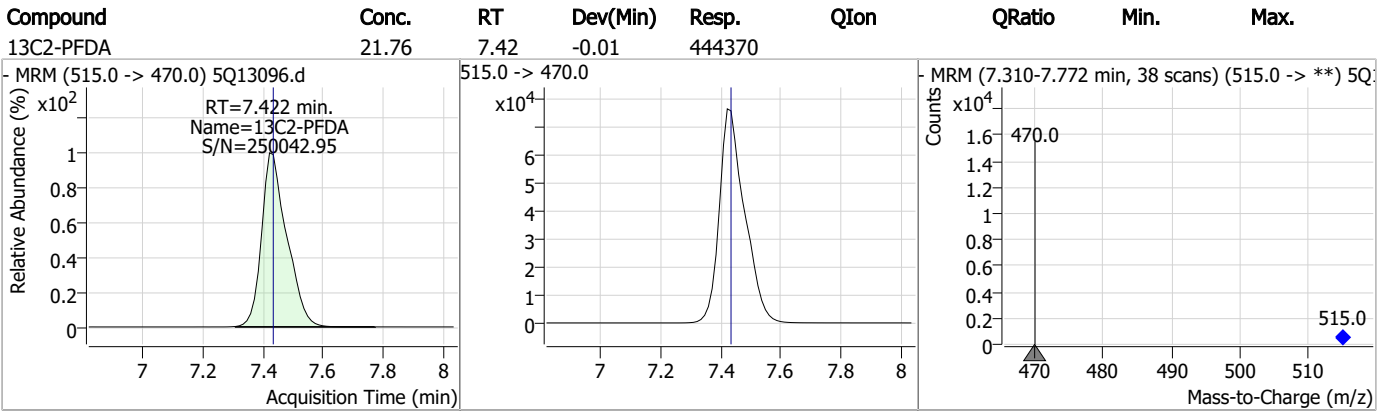
# = Qualifier out of range, m = manually integrated, + = Area summed



### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS



7.12  
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Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13098.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 1:31:17 AM  
 Sample Name : fc3889-3  
 Vial : P3-D6  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)	QValue
<b>Internal Standards</b>							
13C2-6:2FTS	6.250	429.0 -> 409.0	120621	20.00	µg/L	0.000	
13C2-PFOA	6.265	415.0 -> 370.0	307285	20.00	µg/L	0.000	
13C3-PFPeA	3.457	266.0 -> 222.0	122711	20.00	µg/L	-0.012	
13C4-PFOS	6.848	503.0 -> 80.0	54964	20.00	µg/L	0.000	
d3-MeFOSAA	7.117	573.0 -> 419.0	143780	40.00	µg/L	-0.012	
<b>System Monitoring Compounds</b>							
13C2-PFDA	7.422	515.0 -> 470.0	412907	21.35	µg/L	-0.012	
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 106.7%				
13C2-PFHxA	4.676	315.0 -> 270.0	175910	22.18	µg/L	0.000	
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 110.9%				
d5-EtFOSAA	7.265	589.0 -> 419.0	137236	35.41	µg/L	0.000	
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 88.5%				
13C3-HFPO-DA	4.946	287.0 -> 169.0	68306	39.75	µg/L	0.000	
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 99.4%				
<b>Target Compounds</b>							
6:2FTS	-	427.0 -> 407.0	-	N.D.			
		427.0 -> 81.0					
8:2FTS	-	527.0 -> 507.0	-	N.D.			
		527.0 -> 81.0					
EtFOSAA	-	584.0 -> 419.0	-	N.D.			
		584.0 -> 483.0					
MeFOSAA	-	570.0 -> 419.0	-	N.D.			
		570.0 -> 512.0					
PFBA	1.850	213.0 -> 169.0	890	0.43	µg/L	100	
PFBS	3.716	299.0 -> 80.0	5827	2.23	µg/L	m	95
		299.0 -> 99.0	2637				
PFDA	-	513.0 -> 469.0	-	N.D.			
		513.0 -> 219.0					
PFDODA	-	613.0 -> 569.0	-	N.D.			
		613.0 -> 169.0					
PFHpA	5.553	363.0 -> 319.0	22481	1.42	µg/L	m	99
		363.0 -> 169.0	1908				
PFHpS	-	449.0 -> 80.0	-	N.D.			
		449.0 -> 99.0					
PFHxA	4.678	313.0 -> 269.0	23004	4.20	µg/L		97
		313.0 -> 119.0	2337				
PFHxS	5.587	399.0 -> 80.0	23640	8.37	µg/L	m	98
		399.0 -> 99.0	11849				
PFNA	-	463.0 -> 419.0	-	N.D.			
		463.0 -> 219.0					
PFOA	6.266	413.0 -> 369.0	170691	11.44	µg/L	m	96
		413.0 -> 169.0	59723				
PFOS	6.636	499.0 -> 80.0	1323	0.42	µg/L	m	88
		499.0 -> 99.0	580				
PFPeA	3.472	263.0 -> 219.0	32880	3.70	µg/L		100

7.1.3  
7



Perfluorinated Compounds by LC/MS/MS

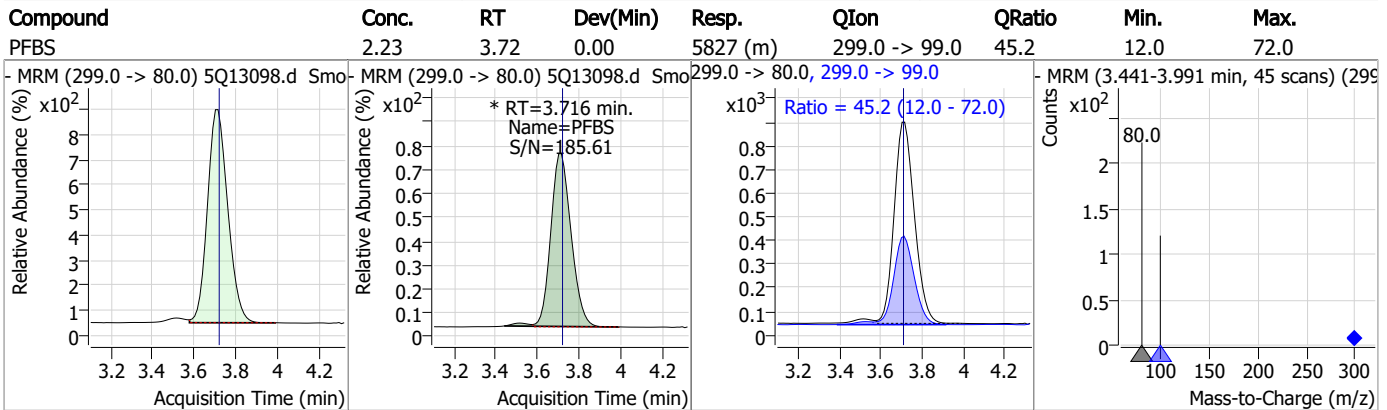
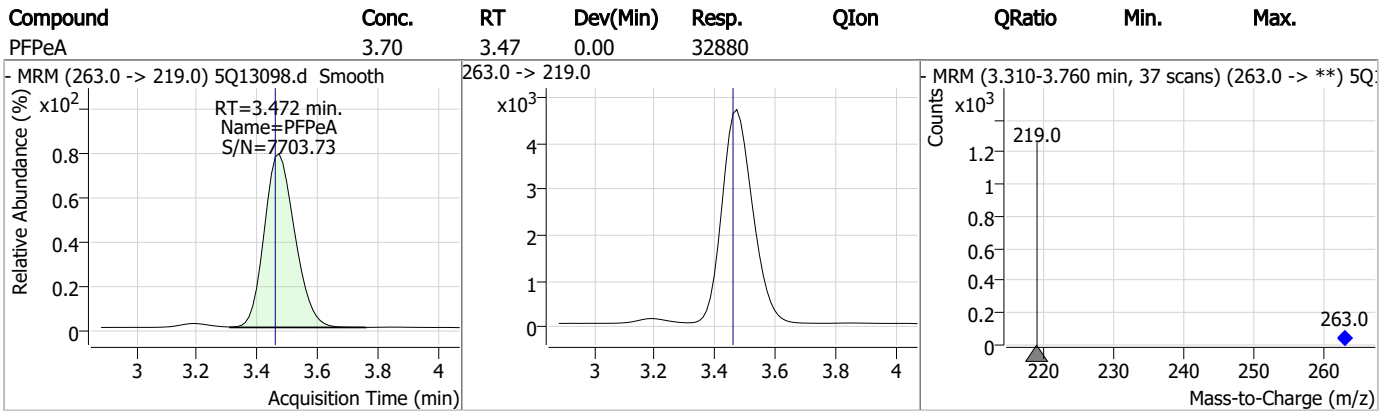
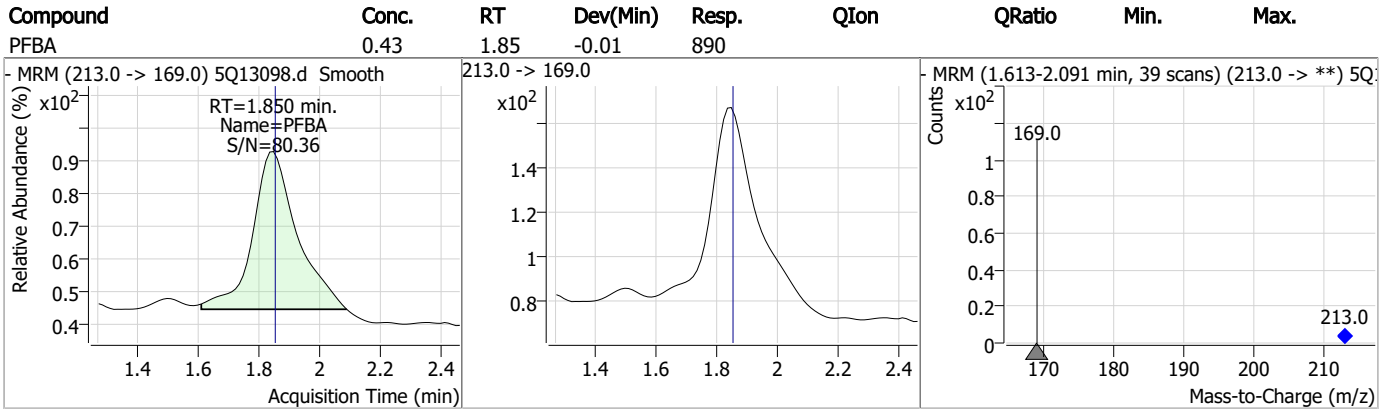
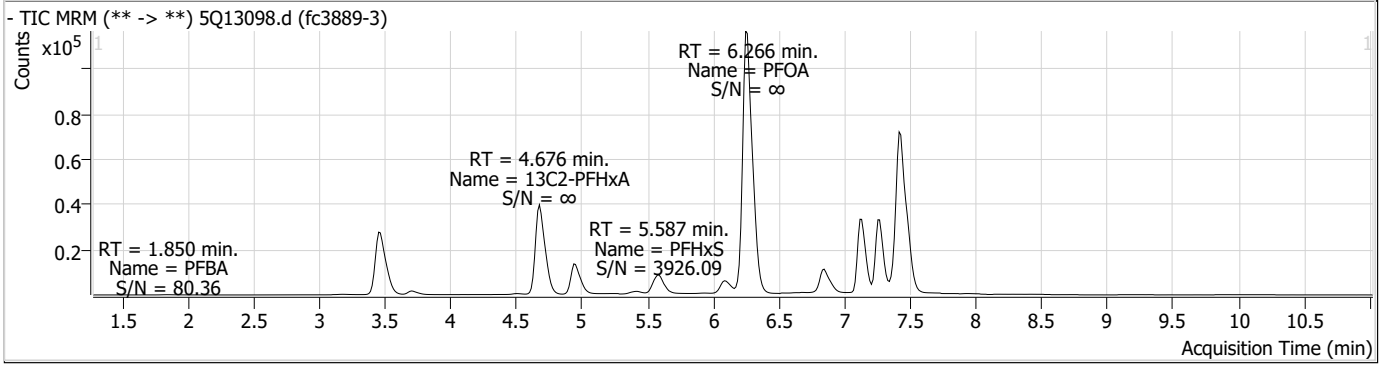
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

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

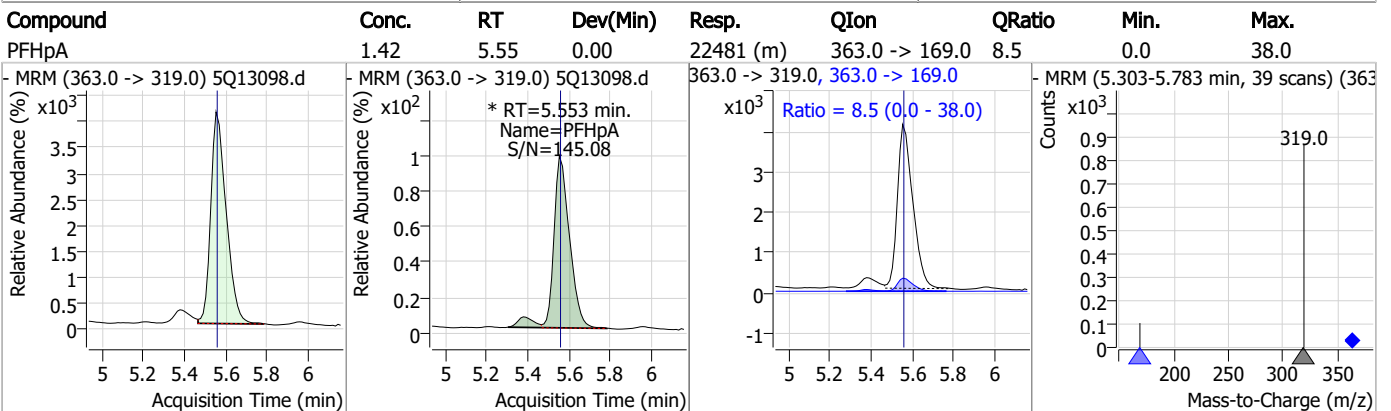
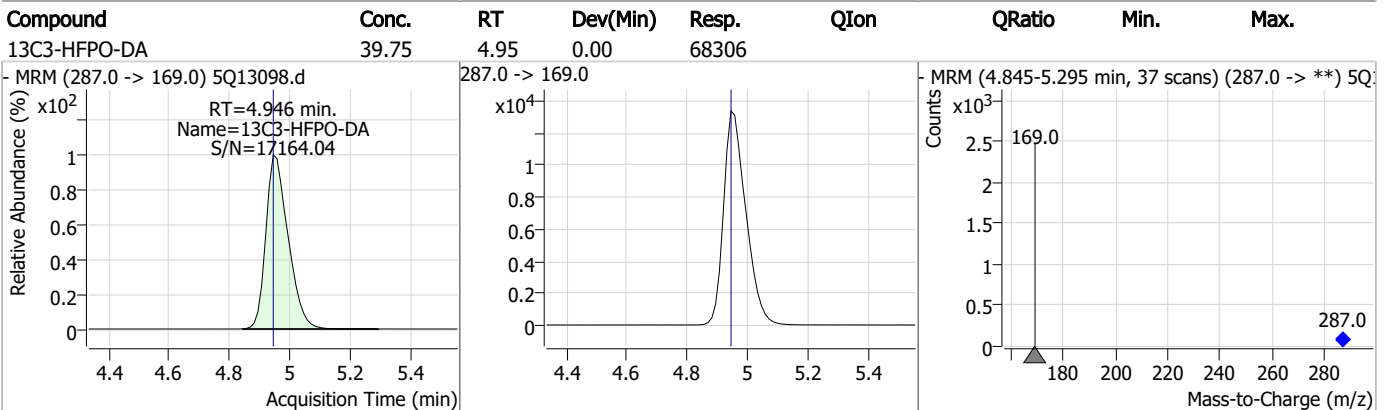
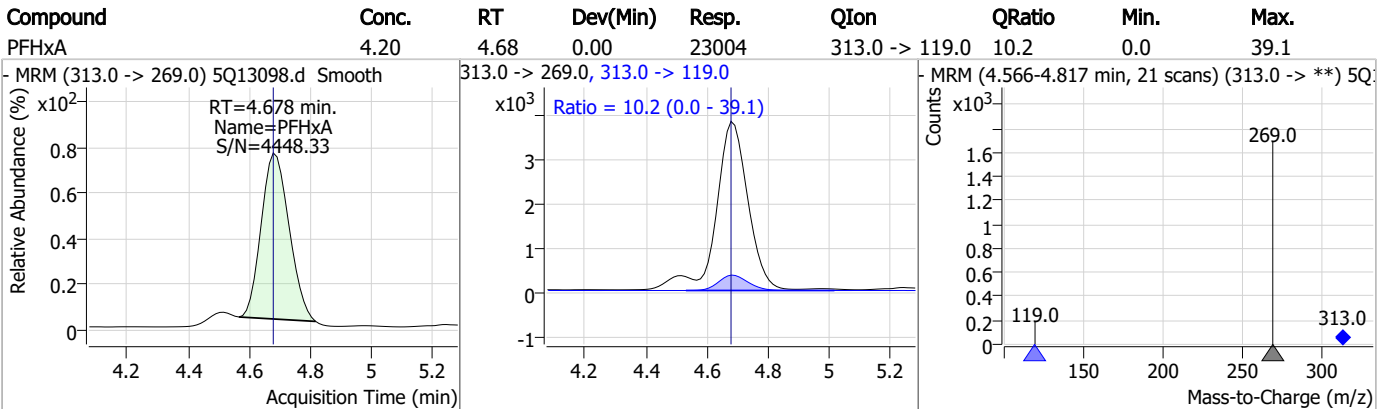
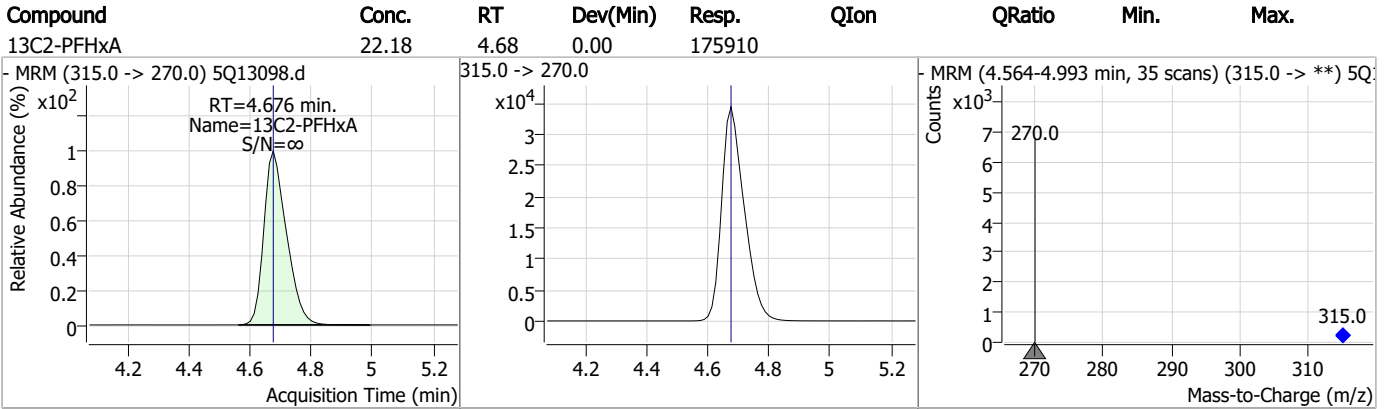
7.1.3

7

### Perfluorinated Compounds by LC/MS/MS



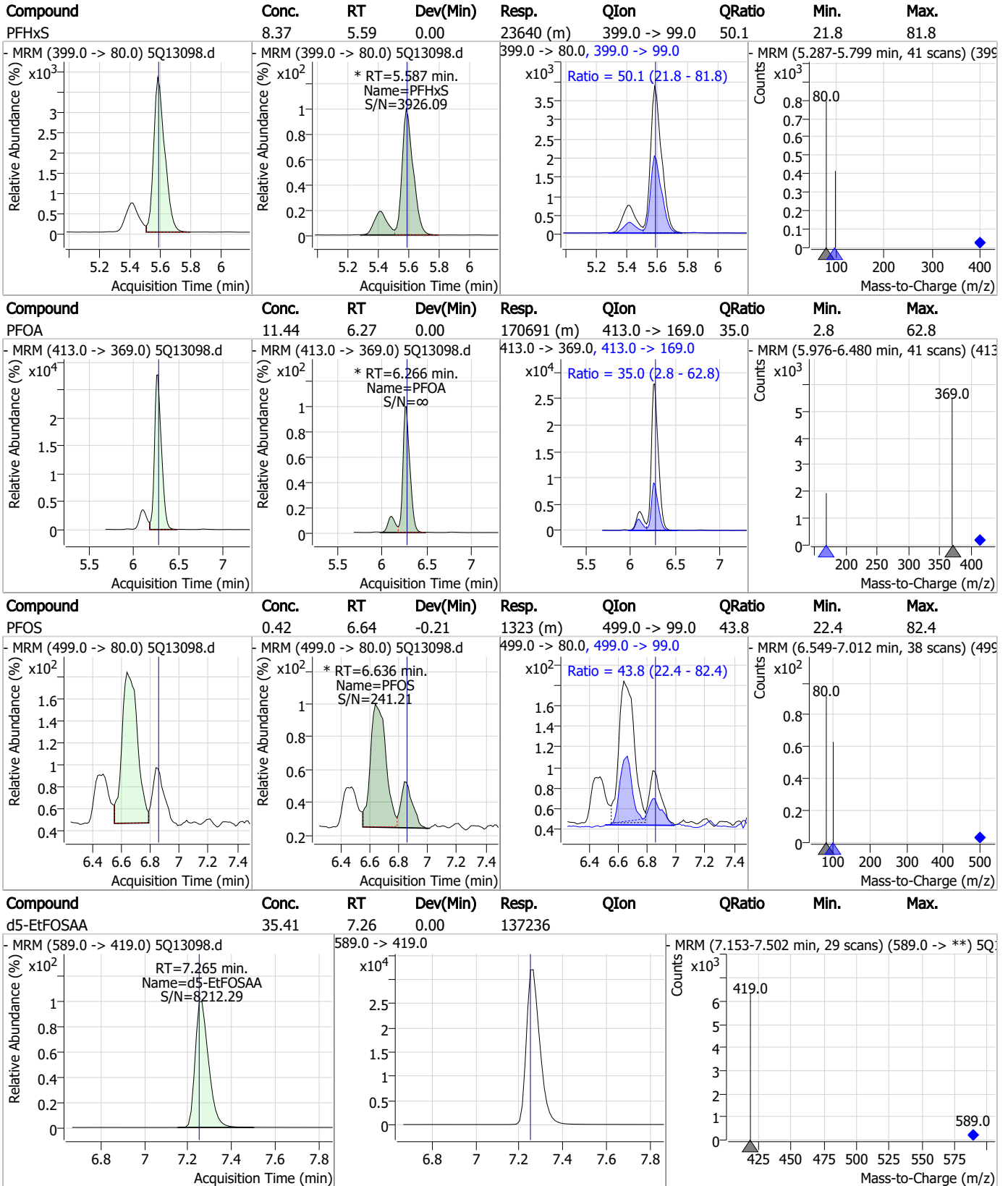
### Perfluorinated Compounds by LC/MS/MS



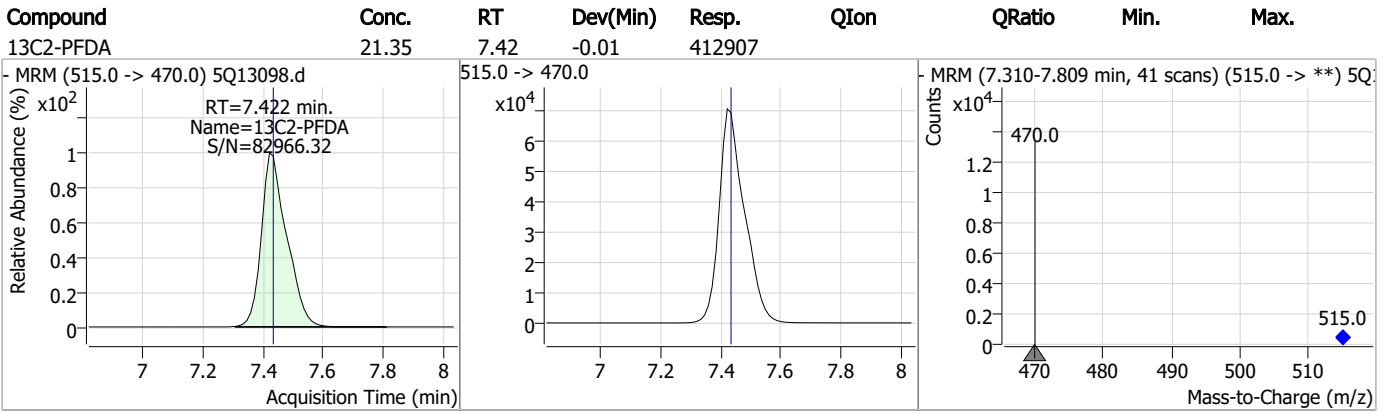
7.1.3

7

### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS



7.1.3

7



# Manual Integration Approval Summary

**Sample Number:** FC3889-3                      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13098.D                      **Analyst approved:** 04/17/23 12:41 Natasha Gumtie  
**Injection Time:** 04/15/23 01:31              **Supervisor approved:** 04/17/23 15:07 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorobutanesulfonic acid	375-73-5		3.72	Split peak
Perfluoroheptanoic acid	375-85-9		5.55	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanoic acid	335-67-1		6.27	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.64	Split peak

7.13.1  
7

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13099.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 1:48:05 AM  
 Sample Name : fc3889-4  
 Vial : P3-D7  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	125732	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	325519	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	138062	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	58483	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	151615	40.00 µg/L	0.000

**System Monitoring Compounds**

13C2-PFDA	7.422	515.0 -> 470.0	441395	21.54 µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 107.7%		
13C2-PFHxA	4.676	315.0 -> 270.0	196836	23.43 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 117.1%		
d5-EtFOSAA	7.252	589.0 -> 419.0	152520	37.32 µg/L	-0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 93.3%		
13C3-HFPO-DA	4.958	287.0 -> 169.0	76198	41.86 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 104.6%		

**Target Compounds**

Compound	RT	Transition	Response	Conc. Units	QValue
6:2FTS	-	427.0 -> 407.0	-	N.D.	
		427.0 -> 81.0			
8:2FTS	-	527.0 -> 507.0	-	N.D.	
		527.0 -> 81.0			
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
		584.0 -> 483.0			
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
		570.0 -> 512.0			
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0	-	N.D.	
		299.0 -> 99.0			
PFDA	-	513.0 -> 469.0	-	N.D.	
		513.0 -> 219.0			
PFDODA	-	613.0 -> 569.0	-	N.D.	
		613.0 -> 169.0			
PFHpA	-	363.0 -> 319.0	-	N.D.	
		363.0 -> 169.0			
PFHpS	-	449.0 -> 80.0	-	N.D.	
		449.0 -> 99.0			
PFHxA	-	313.0 -> 269.0	-	N.D.	
		313.0 -> 119.0			
PFHxS	-	399.0 -> 80.0	-	N.D.	
		399.0 -> 99.0			
PFNA	-	463.0 -> 419.0	-	N.D.	
		463.0 -> 219.0			
PFOA	-	413.0 -> 369.0	-	N.D.	
		413.0 -> 169.0			
PFOS	-	499.0 -> 80.0	-	N.D.	
		499.0 -> 99.0			
PFPeA	-	263.0 -> 219.0	-	N.D.	

Perfluorinated Compounds by LC/MS/MS

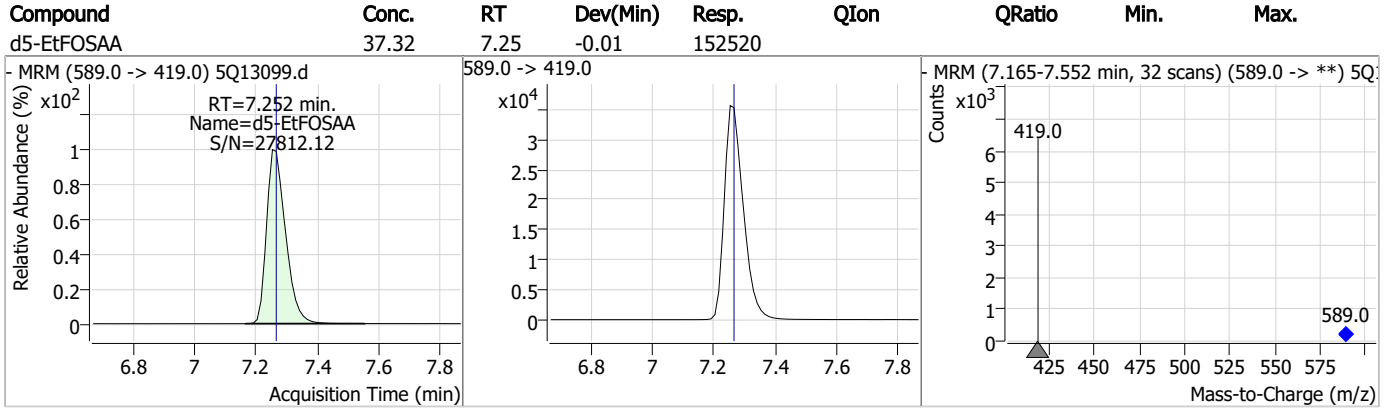
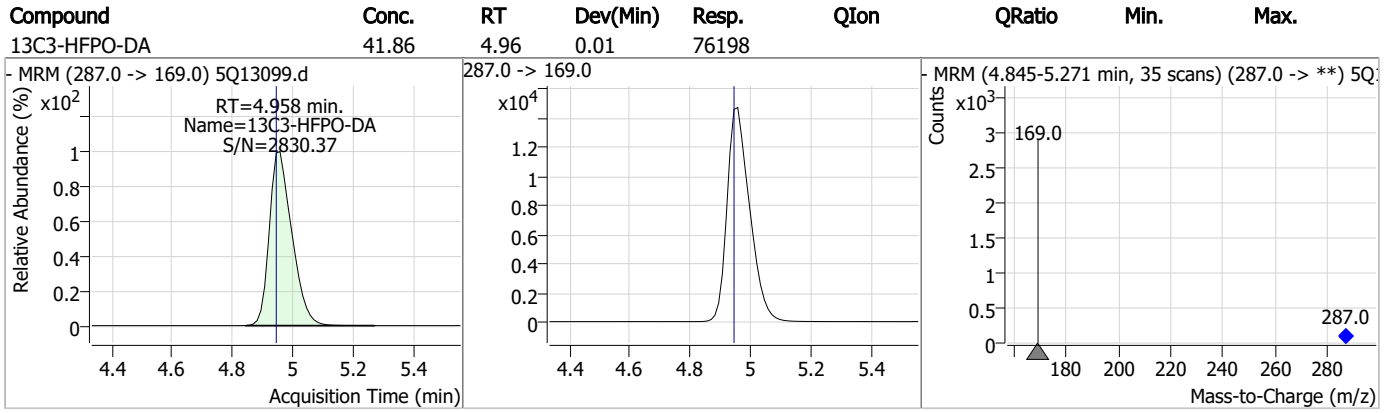
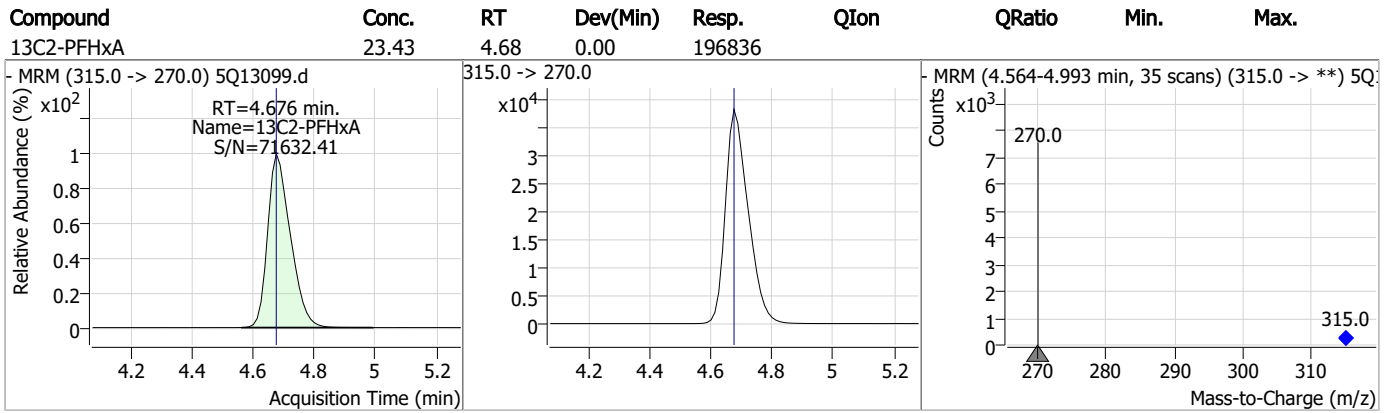
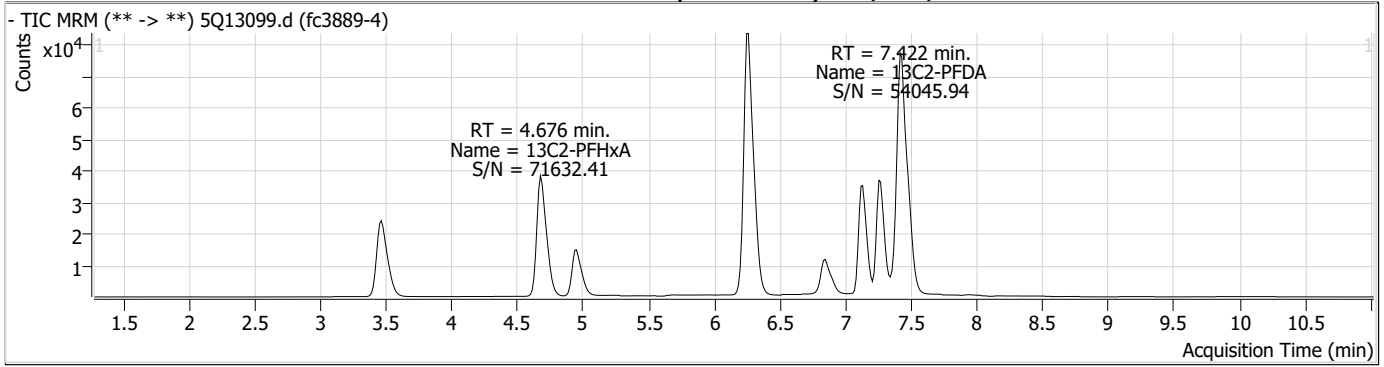
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

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

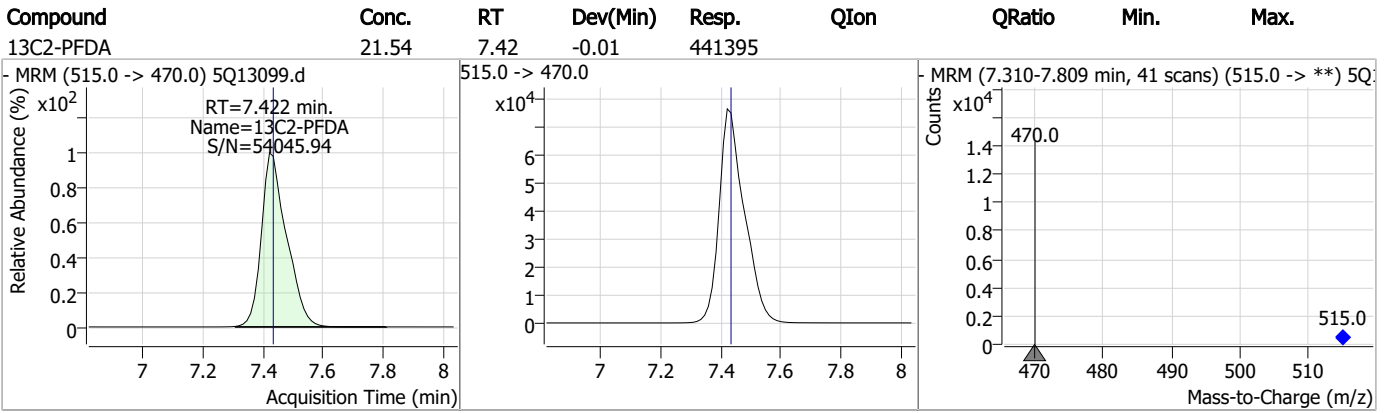
7.1.4  
7



### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS



7.14  
7

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13100.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 2:04:53 AM  
 Sample Name : fc3889-5  
 Vial : P3-D8  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	135400	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	334395	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	141299	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	60084	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	158453	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.422	515.0 -> 470.0	449353	21.35 µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 106.7%		
13C2-PFHxA	4.676	315.0 -> 270.0	193798	22.45 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 112.3%		
d5-EtFOSAA	7.265	589.0 -> 419.0	161444	37.79 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 94.5%		
13C3-HFPO-DA	4.958	287.0 -> 169.0	75514	40.38 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 100.9%		
<b>Target Compounds</b>					
6:2FTS	-	427.0 -> 407.0 427.0 -> 81.0	-	N.D.	
8:2FTS	-	527.0 -> 507.0 527.0 -> 81.0	-	N.D.	
EtFOSAA	-	584.0 -> 419.0 584.0 -> 483.0	-	N.D.	
MeFOSAA	-	570.0 -> 419.0 570.0 -> 512.0	-	N.D.	
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0 299.0 -> 99.0	-	N.D.	
PFDA	-	513.0 -> 469.0 513.0 -> 219.0	-	N.D.	
PFDODA	-	613.0 -> 569.0 613.0 -> 169.0	-	N.D.	
PFHpA	-	363.0 -> 319.0 363.0 -> 169.0	-	N.D.	
PFHpS	-	449.0 -> 80.0 449.0 -> 99.0	-	N.D.	
PFHxA	4.691	313.0 -> 269.0 313.0 -> 119.0	871 97	0.15 µg/L	95
PFHxS	-	399.0 -> 80.0 399.0 -> 99.0	-	N.D.	
PFNA	-	463.0 -> 419.0 463.0 -> 219.0	-	N.D.	
PFOA	-	413.0 -> 369.0 413.0 -> 169.0	-	N.D.	
PFOS	-	499.0 -> 80.0 499.0 -> 99.0	-	N.D.	
PFPeA	-	263.0 -> 219.0	-	N.D.	

7.15

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QValue

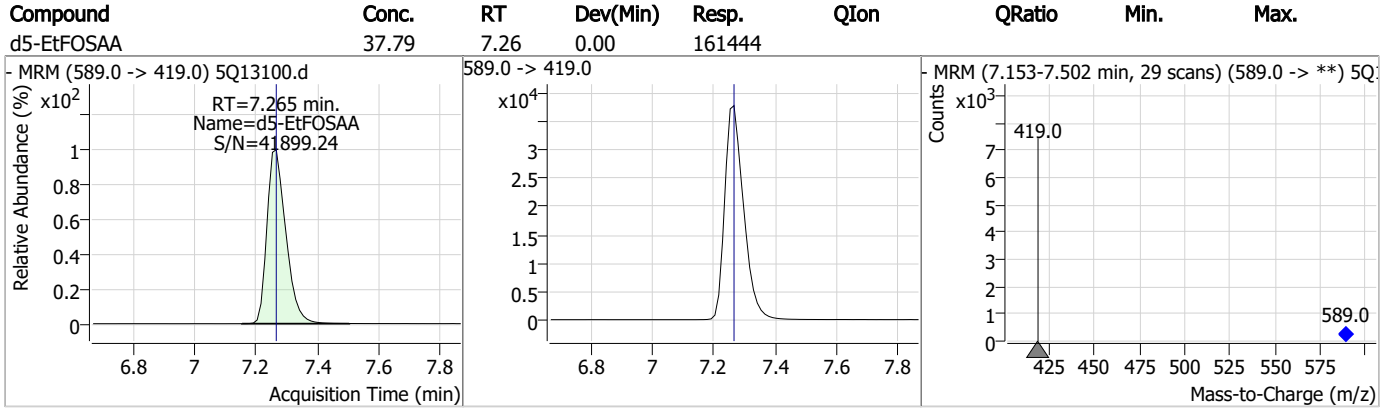
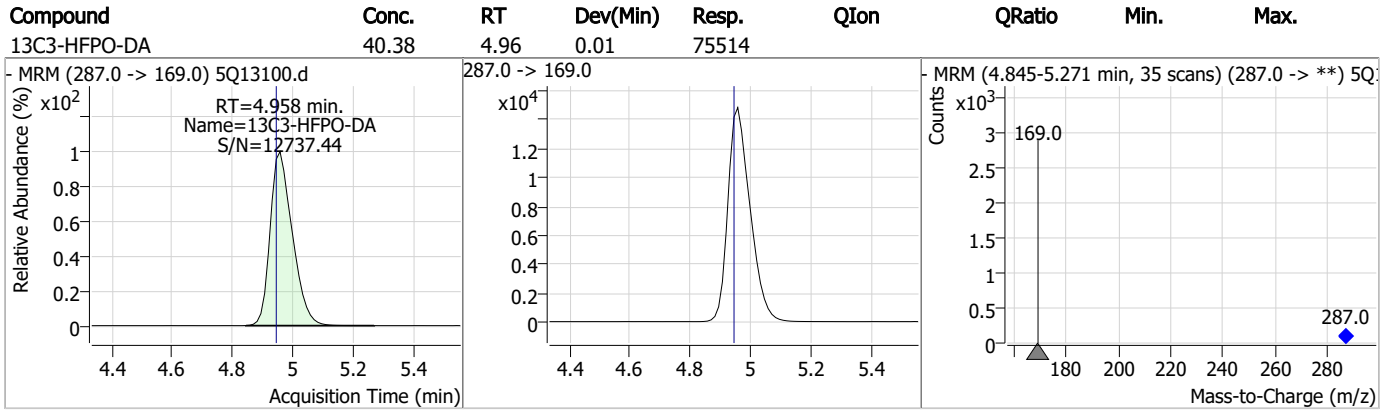
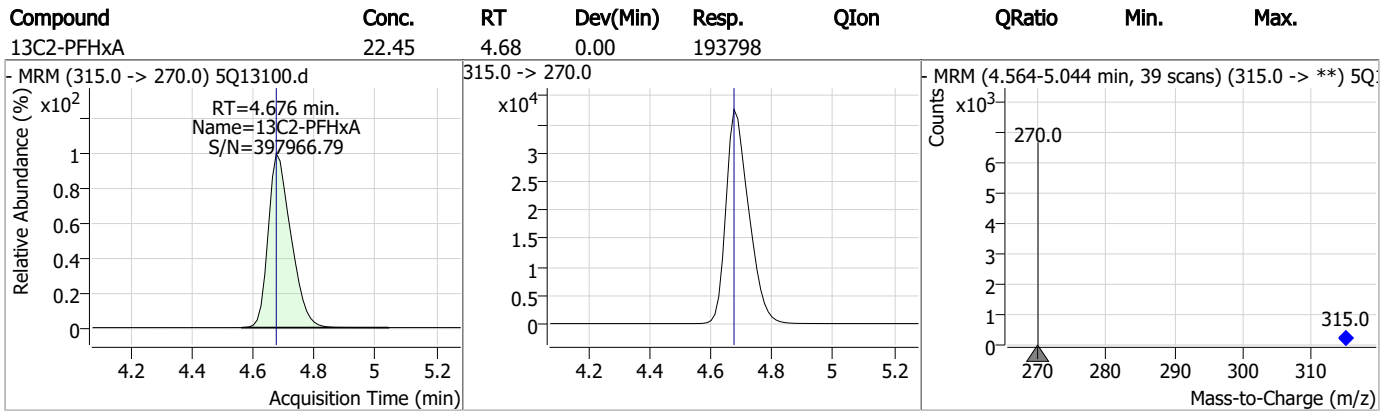
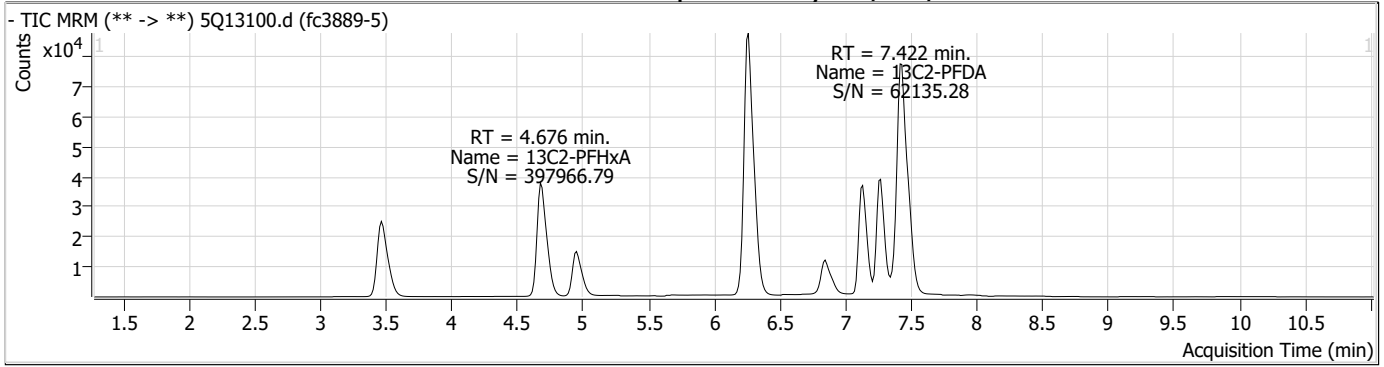


## Perfluorinated Compounds by LC/MS/MS

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

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

### Perfluorinated Compounds by LC/MS/MS

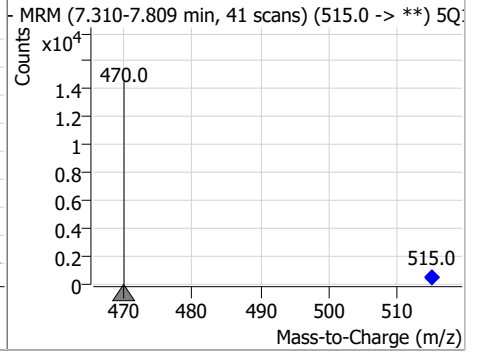
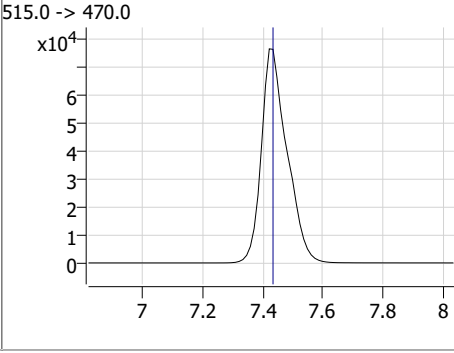
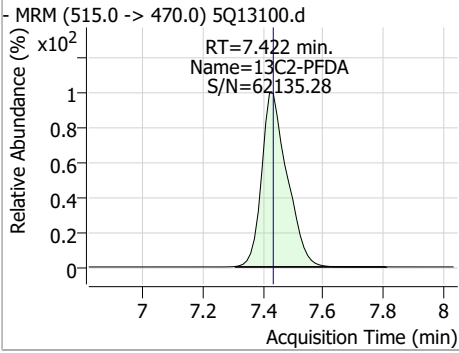


7.1.5  
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### Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	21.35	7.42	-0.01	449353				



7.15  
7

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13101.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 2:21:41 AM  
 Sample Name : fc3889-6  
 Vial : P3-D9  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	124379	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	320478	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	134620	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	57453	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	147904	40.00 µg/L	0.000

**System Monitoring Compounds**

13C2-PFDA	7.422	515.0 -> 470.0	423907	21.01 µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 105.1%		
13C2-PFHxA	4.676	315.0 -> 270.0	187496	22.66 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 113.3%		
d5-EtFOSAA	7.265	589.0 -> 419.0	147654	37.03 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 92.6%		
13C3-HFPO-DA	4.958	287.0 -> 169.0	72218	40.29 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 100.7%		

**Target Compounds**

Compound	RT	Transition	Response	Conc. Units	QValue
6:2FTS	-	427.0 -> 407.0	-	N.D.	
		427.0 -> 81.0			
8:2FTS	-	527.0 -> 507.0	-	N.D.	
		527.0 -> 81.0			
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
		584.0 -> 483.0			
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
		570.0 -> 512.0			
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0	-	N.D.	
		299.0 -> 99.0			
PFDA	-	513.0 -> 469.0	-	N.D.	
		513.0 -> 219.0			
PFDODA	-	613.0 -> 569.0	-	N.D.	
		613.0 -> 169.0			
PFHpA	-	363.0 -> 319.0	-	N.D.	
		363.0 -> 169.0			
PFHpS	-	449.0 -> 80.0	-	N.D.	
		449.0 -> 99.0			
PFHxA	-	313.0 -> 269.0	-	N.D.	
		313.0 -> 119.0			
PFHxS	-	399.0 -> 80.0	-	N.D.	
		399.0 -> 99.0			
PFNA	-	463.0 -> 419.0	-	N.D.	
		463.0 -> 219.0			
PFOA	-	413.0 -> 369.0	-	N.D.	
		413.0 -> 169.0			
PFOS	-	499.0 -> 80.0	-	N.D.	
		499.0 -> 99.0			
PFPeA	-	263.0 -> 219.0	-	N.D.	



Perfluorinated Compounds by LC/MS/MS

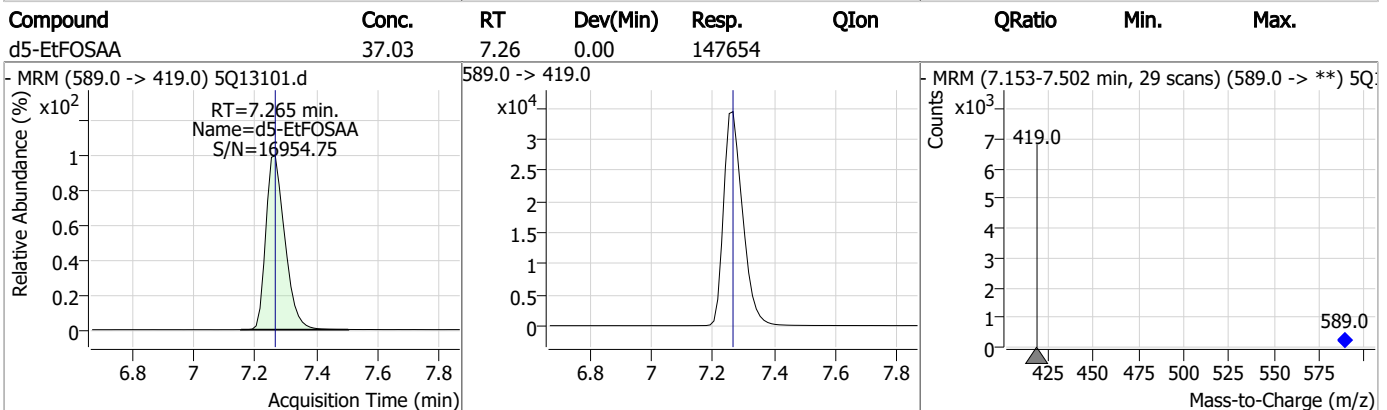
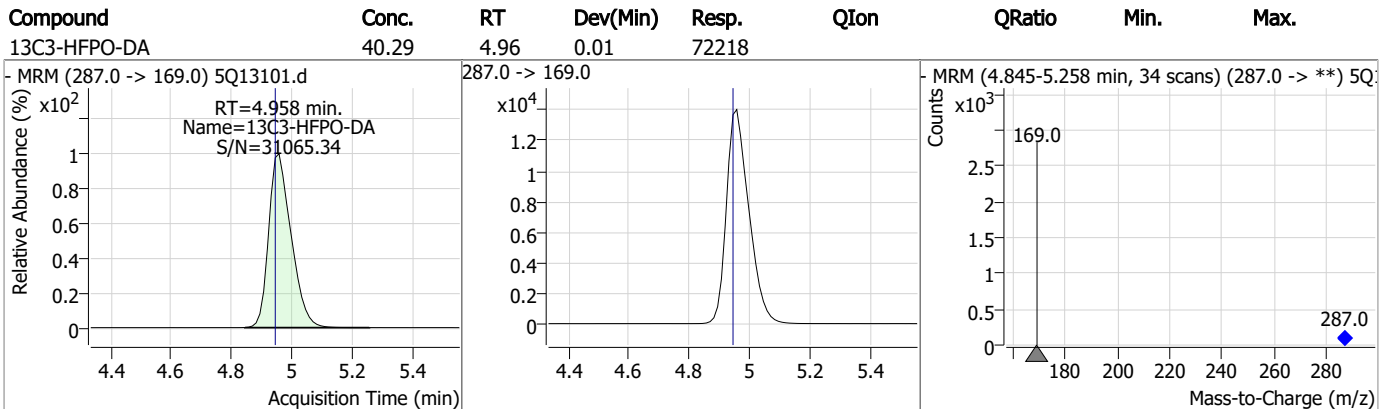
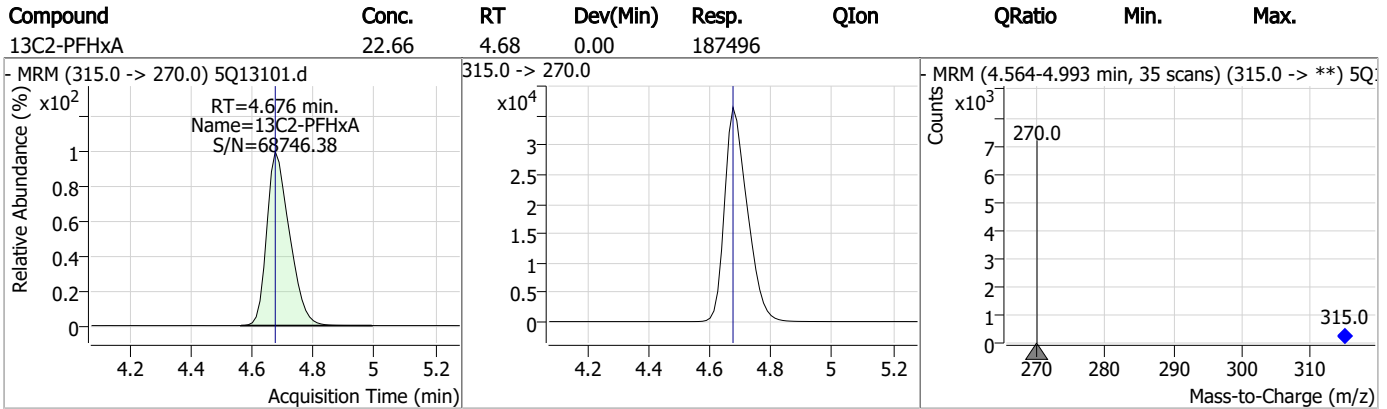
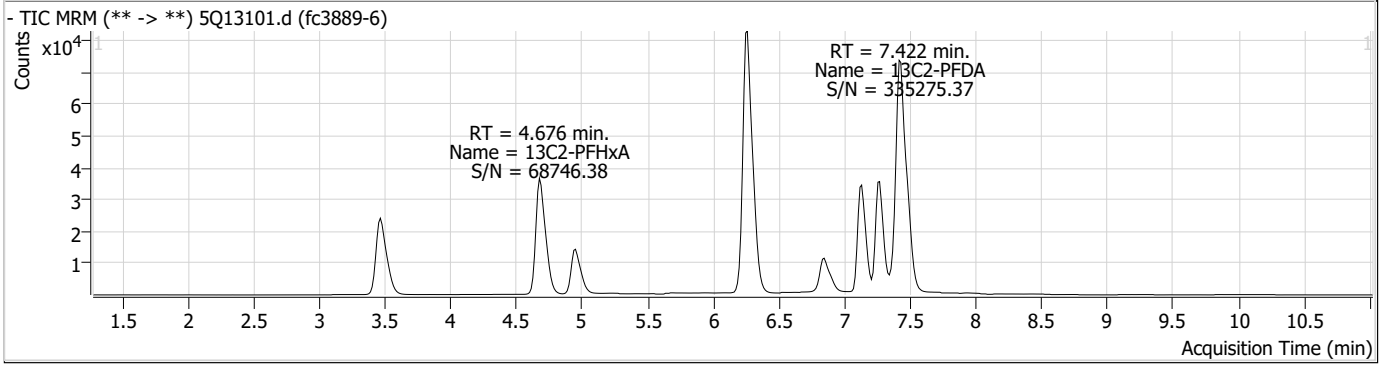
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

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

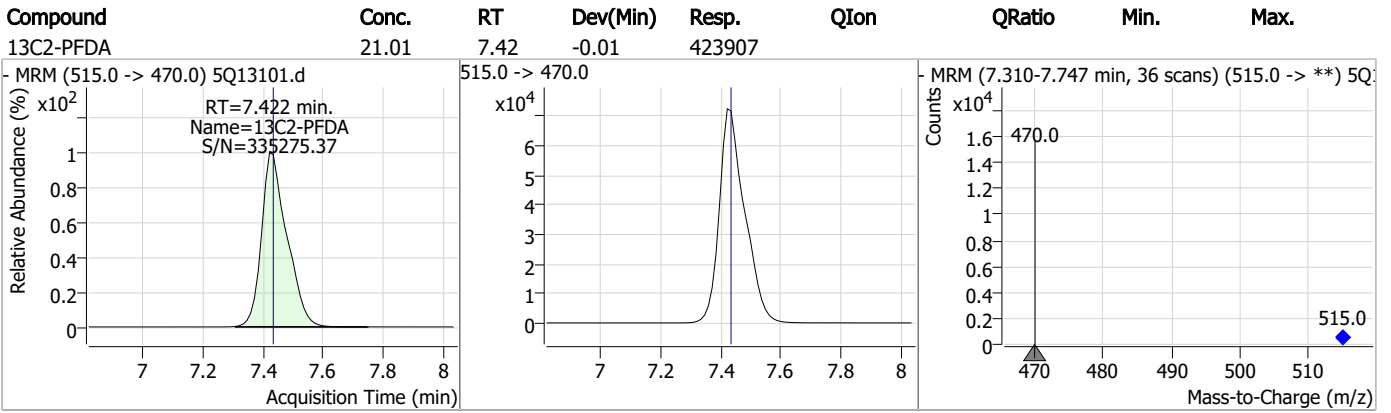
7.1.6

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### Perfluorinated Compounds by LC/MS/MS



Perfluorinated Compounds by LC/MS/MS



7.1.6  
7

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13102.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 2:38:30 AM  
 Sample Name : fc3889-7  
 Vial : P3-E1  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	136173	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	344237	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	138388	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	61649	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	165377	40.00 µg/L	0.000

**System Monitoring Compounds**

13C2-PFDA	7.422	515.0 -> 470.0	440970	20.35 µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 101.8%	
13C2-PFHxA	4.676	315.0 -> 270.0	187995	21.16 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 105.8%	
d5-EtFOSAA	7.265	589.0 -> 419.0	148668	33.35 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 83.4%	
13C3-HFPO-DA	4.958	287.0 -> 169.0	74578	38.74 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 96.8%	

**Target Compounds**

Compound	RT	Transition	Response	Conc. Units	QValue
6:2FTS	-	427.0 -> 407.0	-	N.D.	
		427.0 -> 81.0			
8:2FTS	-	527.0 -> 507.0	-	N.D.	
		527.0 -> 81.0			
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
		584.0 -> 483.0			
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
		570.0 -> 512.0			
PFBA	1.850	213.0 -> 169.0	754	0.33 µg/L	m 100
PFBS	3.716	299.0 -> 80.0	8706	2.97 µg/L	m 98
		299.0 -> 99.0	3782		
PFDA	-	513.0 -> 469.0	-	N.D.	
		513.0 -> 219.0			
PFDODA	-	613.0 -> 569.0	-	N.D.	
		613.0 -> 169.0			
PFHpA	5.553	363.0 -> 319.0	25282	1.43 µg/L	m 99
		363.0 -> 169.0	2142		
PFHpS	-	449.0 -> 80.0	-	N.D.	
		449.0 -> 99.0			
PFHxA	4.678	313.0 -> 269.0	40786	6.65 µg/L	99
		313.0 -> 119.0	3852		
PFHxS	5.587	399.0 -> 80.0	8438	2.66 µg/L	m 94
		399.0 -> 99.0	4008		
PFNA	-	463.0 -> 419.0	-	N.D.	
		463.0 -> 219.0			
PFOA	6.266	413.0 -> 369.0	84818	5.08 µg/L	m 91
		413.0 -> 169.0	32150		
PFOS	-	499.0 -> 80.0	-	N.D.	
		499.0 -> 99.0			
PFPeA	3.472	263.0 -> 219.0	49480	4.93 µg/L	100



Perfluorinated Compounds by LC/MS/MS

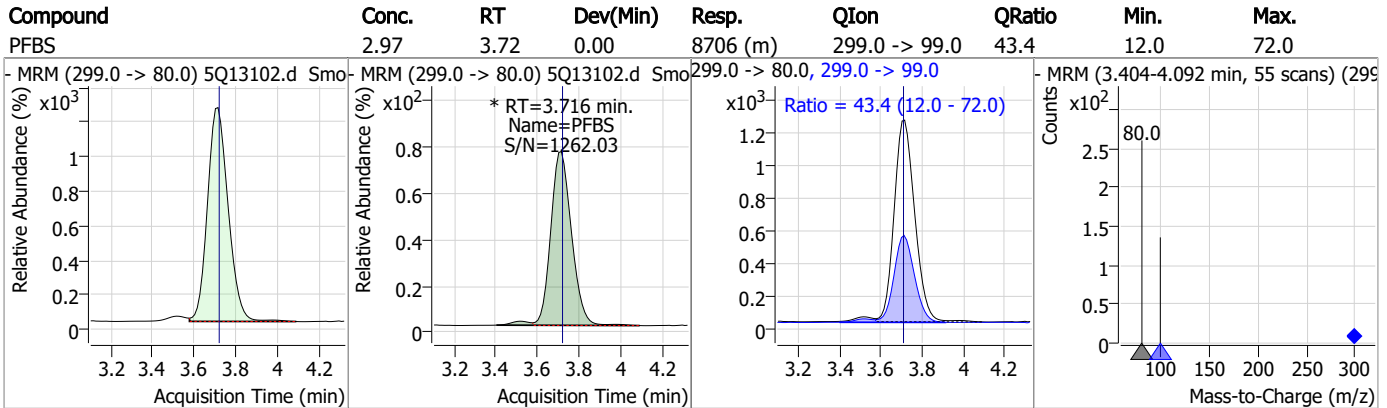
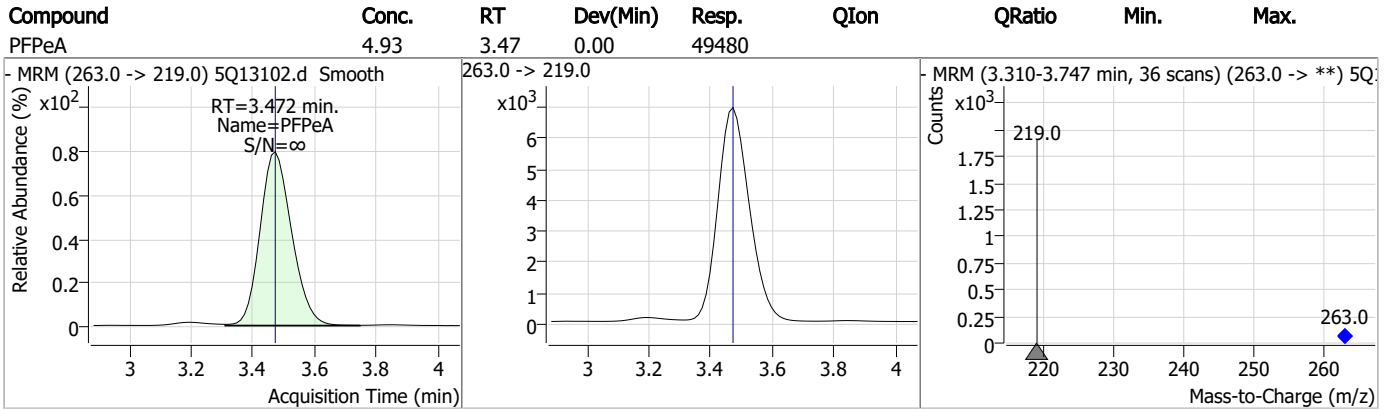
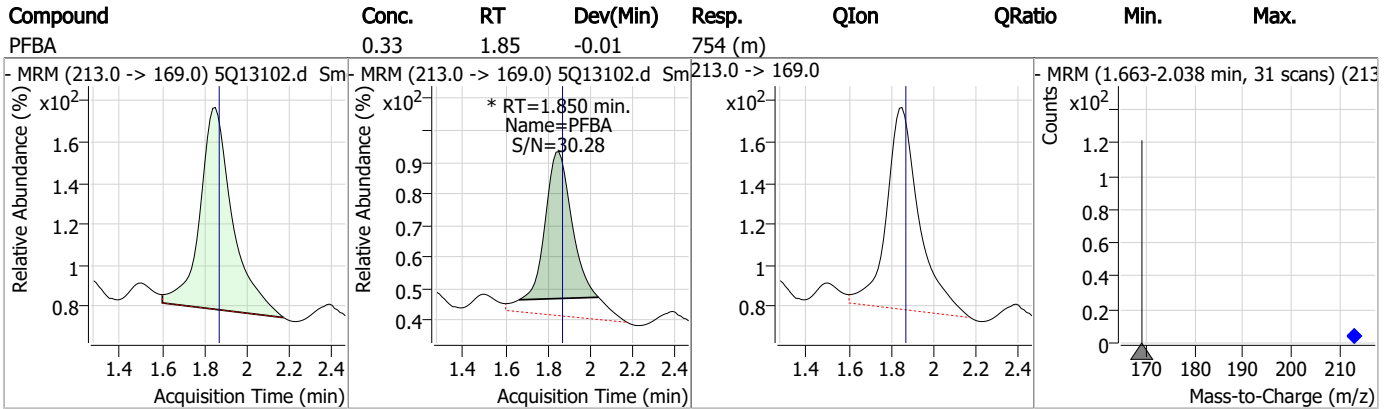
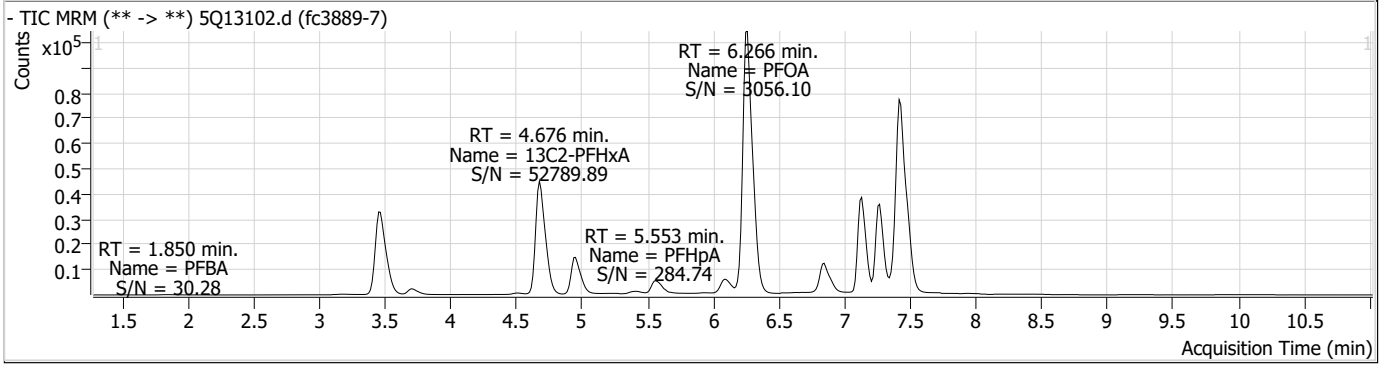
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

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

7.1.7  
7

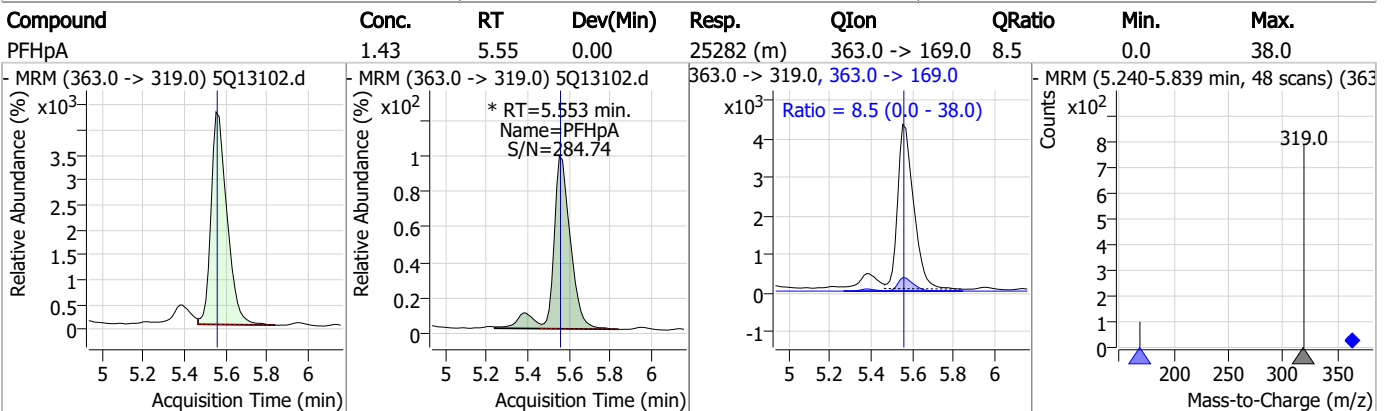
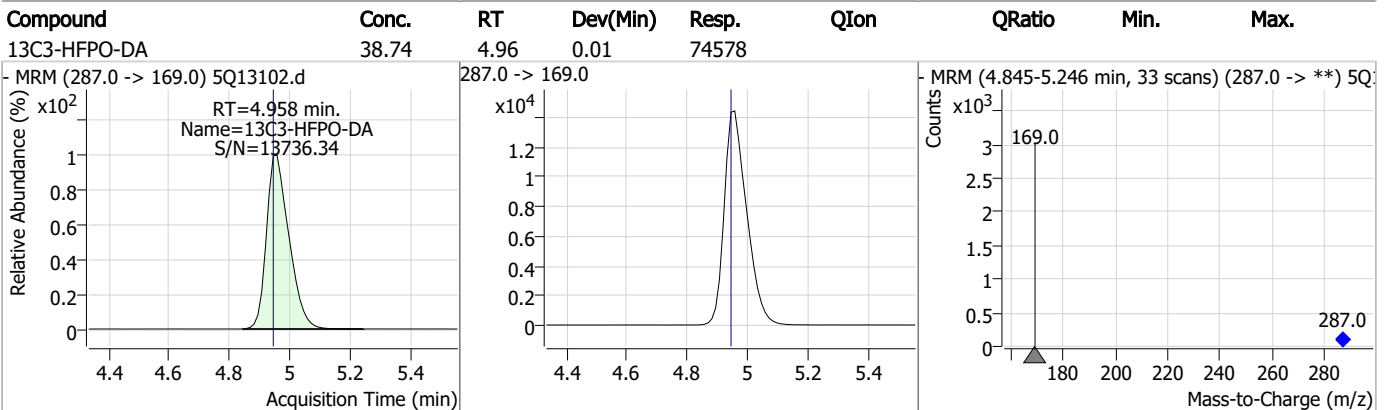
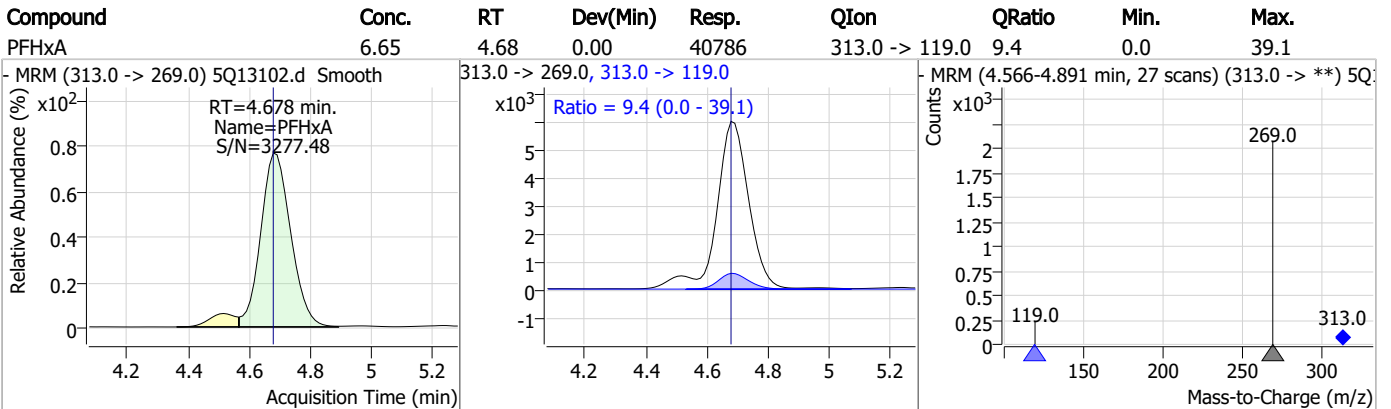
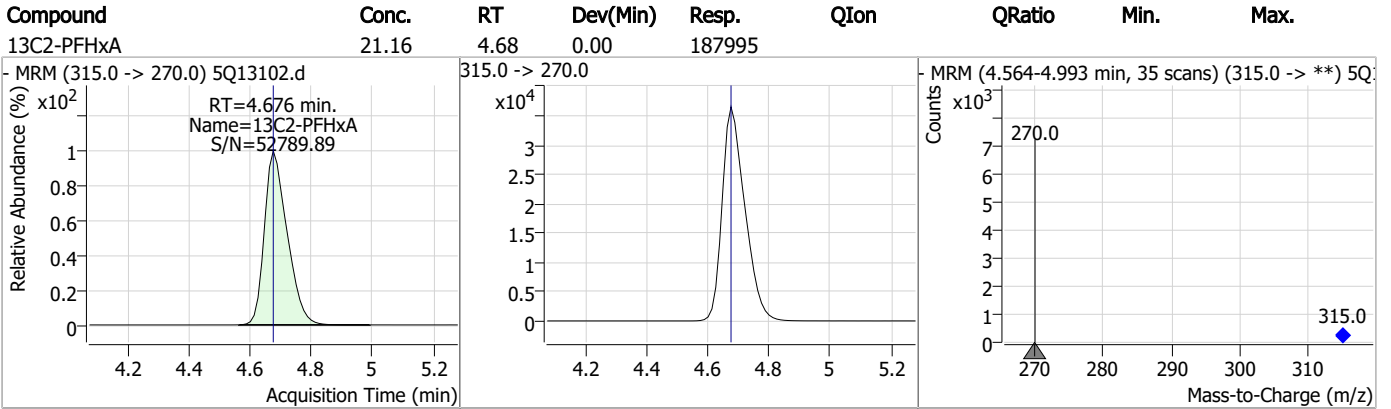


### Perfluorinated Compounds by LC/MS/MS

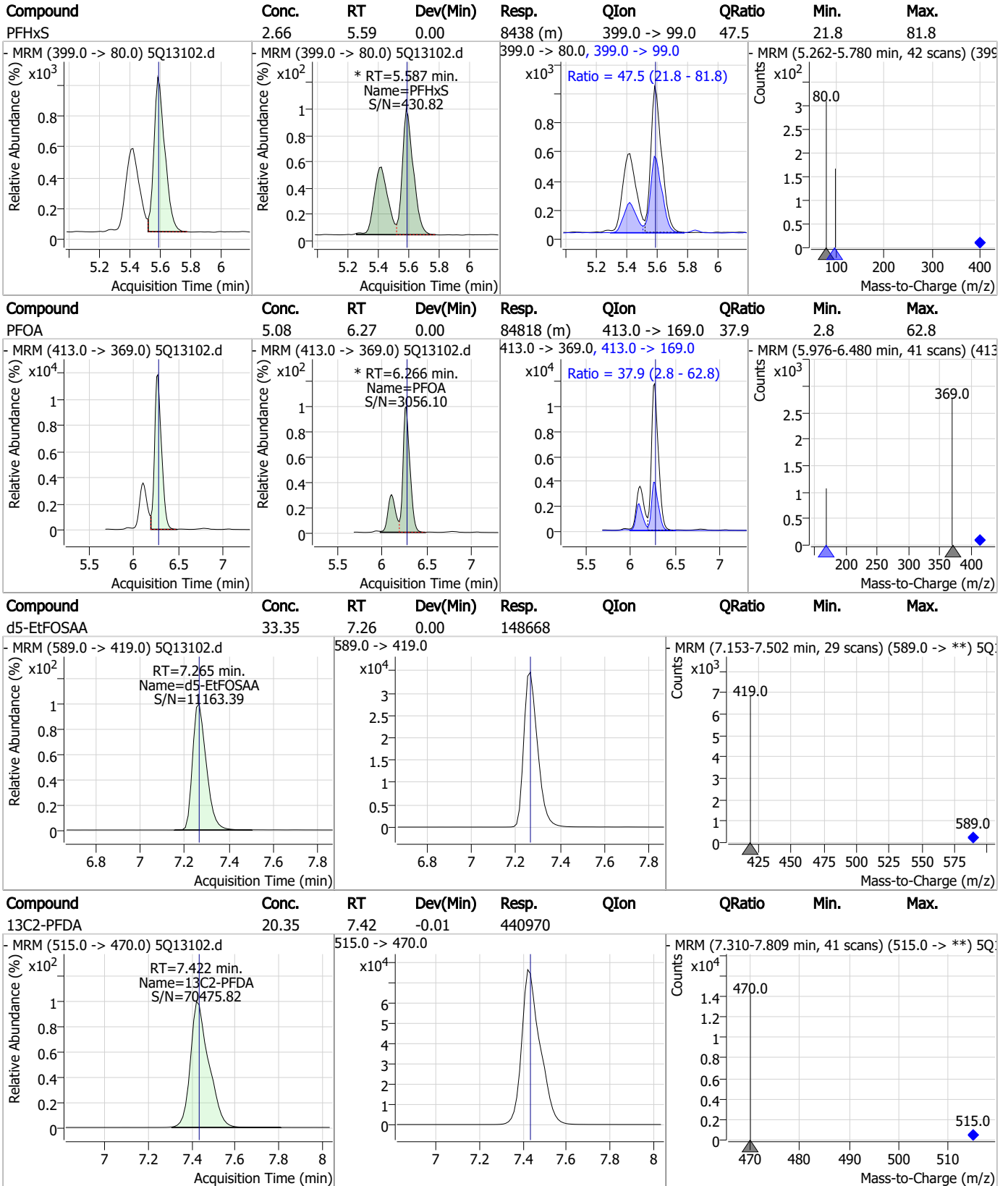




### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS



7.1.7  
7

# Manual Integration Approval Summary

**Sample Number:** FC3889-7                      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13102.D                      **Analyst approved:** 04/17/23 12:41 Natasha Gumtie  
**Injection Time:** 04/15/23 02:38              **Supervisor approved:** 04/17/23 15:07 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorobutanoic acid	375-22-4		1.85	Poor instrument integration
Perfluorobutanesulfonic acid	375-73-5		3.72	Split peak
Perfluoroheptanoic acid	375-85-9		5.55	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanoic acid	335-67-1		6.27	Split peak

7.1.7.1  
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Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13103.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 2:55:21 AM  
 Sample Name : fc3889-8  
 Vial : P3-E2  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	130405	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	337376	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	135141	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	59861	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	155072	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.422	515.0 -> 470.0	447699	21.08 µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 105.4%		
13C2-PFHxA	4.676	315.0 -> 270.0	203927	23.42 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 117.1%		
d5-EtFOSAA	7.265	589.0 -> 419.0	146239	34.98 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 87.5%		
13C3-HFPO-DA	4.958	287.0 -> 169.0	80818	42.83 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 107.1%		
<b>Target Compounds</b>					
6:2FTS	-	427.0 -> 407.0	-	N.D.	
		427.0 -> 81.0			
8:2FTS	-	527.0 -> 507.0	-	N.D.	
		527.0 -> 81.0			
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
		584.0 -> 483.0			
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
		570.0 -> 512.0			
PFBA	1.850	213.0 -> 169.0	1075	0.48 µg/L	100
PFBS	3.716	299.0 -> 80.0	8896	3.13 µg/L	m 96
		299.0 -> 99.0	3976		
PFDA	-	513.0 -> 469.0	-	N.D.	
		513.0 -> 219.0			
PFDODA	-	613.0 -> 569.0	-	N.D.	
		613.0 -> 169.0			
PFHpA	5.553	363.0 -> 319.0	21866	1.26 µg/L	m 99
		363.0 -> 169.0	1823		
PFHpS	-	449.0 -> 80.0	-	N.D.	
		449.0 -> 99.0			
PFHxA	4.678	313.0 -> 269.0	44978	7.48 µg/L	100
		313.0 -> 119.0	4139		
PFHxS	5.587	399.0 -> 80.0	4825	1.57 µg/L	m 93
		399.0 -> 99.0	2247		
PFNA	-	463.0 -> 419.0	-	N.D.	
		463.0 -> 219.0			
PFOA	6.266	413.0 -> 369.0	53999	3.30 µg/L	m 88
		413.0 -> 169.0	21415		
PFOS	-	499.0 -> 80.0	-	N.D.	
		499.0 -> 99.0			
PFPeA	3.472	263.0 -> 219.0	56798	5.80 µg/L	100

7.1.8  
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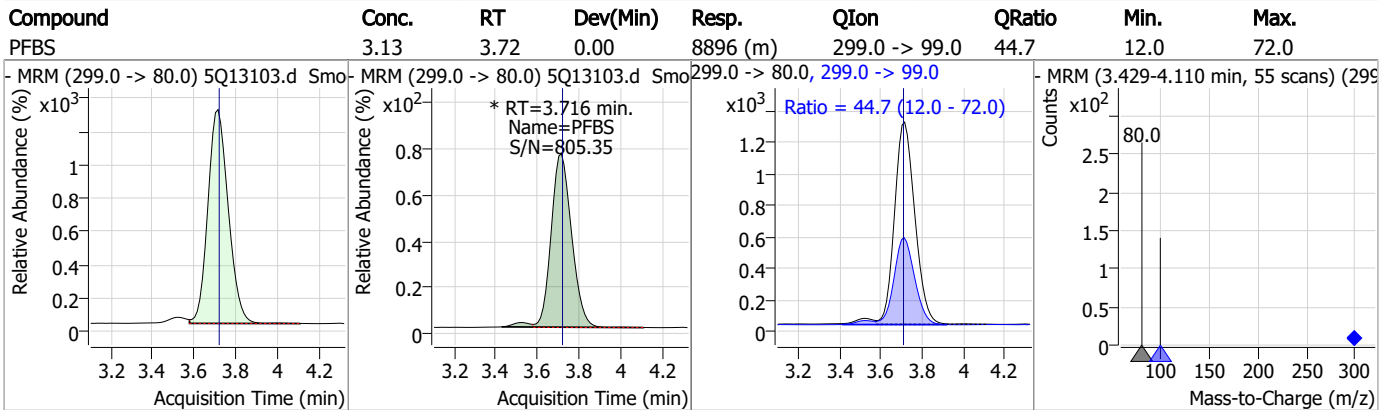
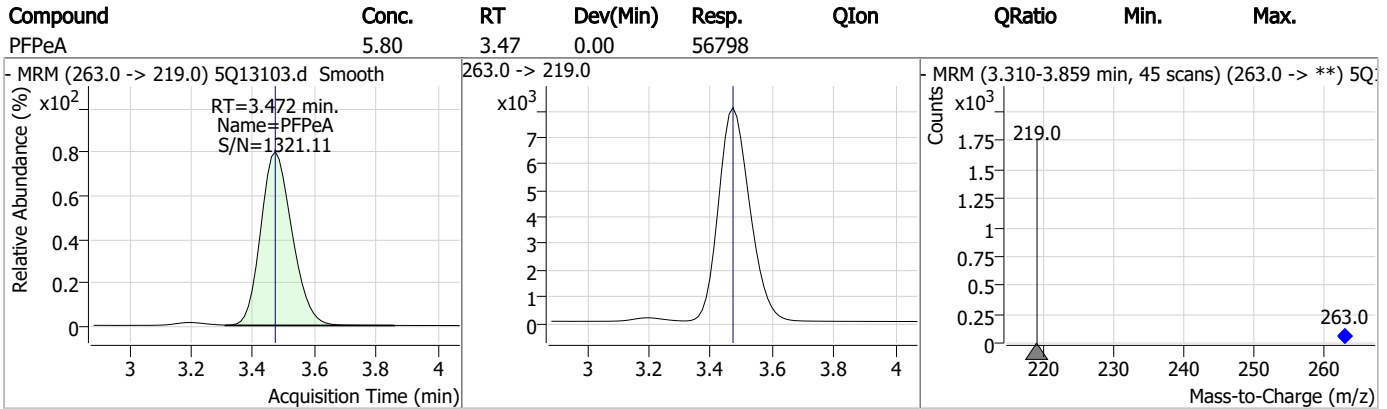
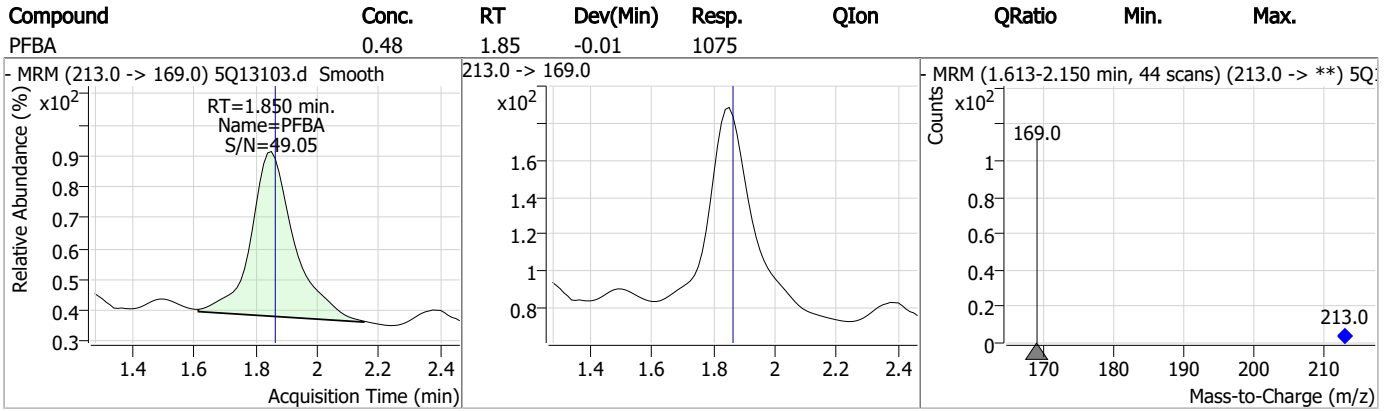
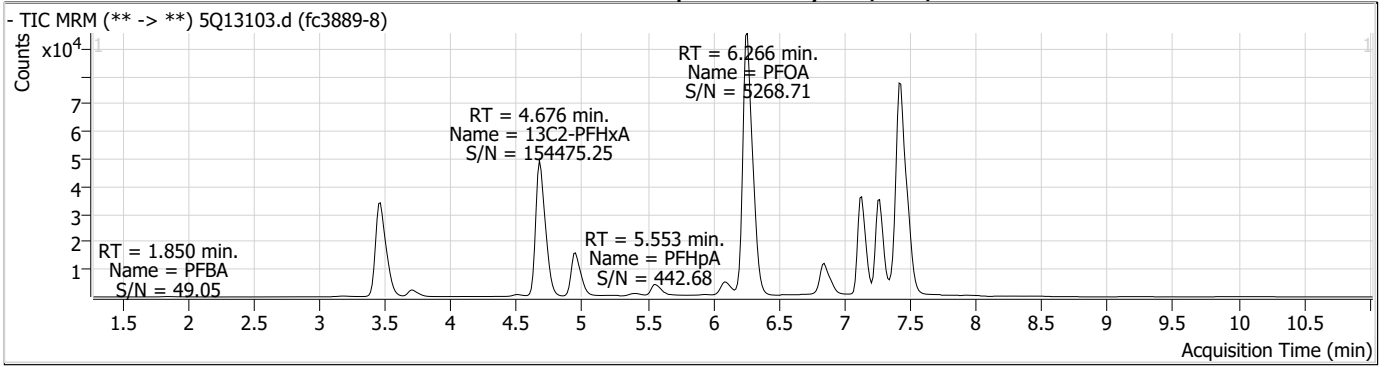


## Perfluorinated Compounds by LC/MS/MS

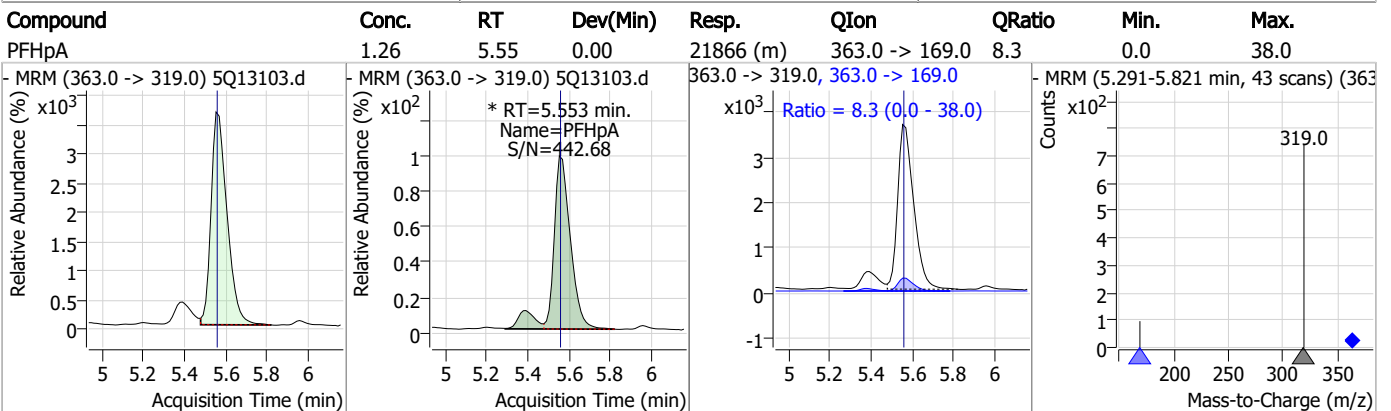
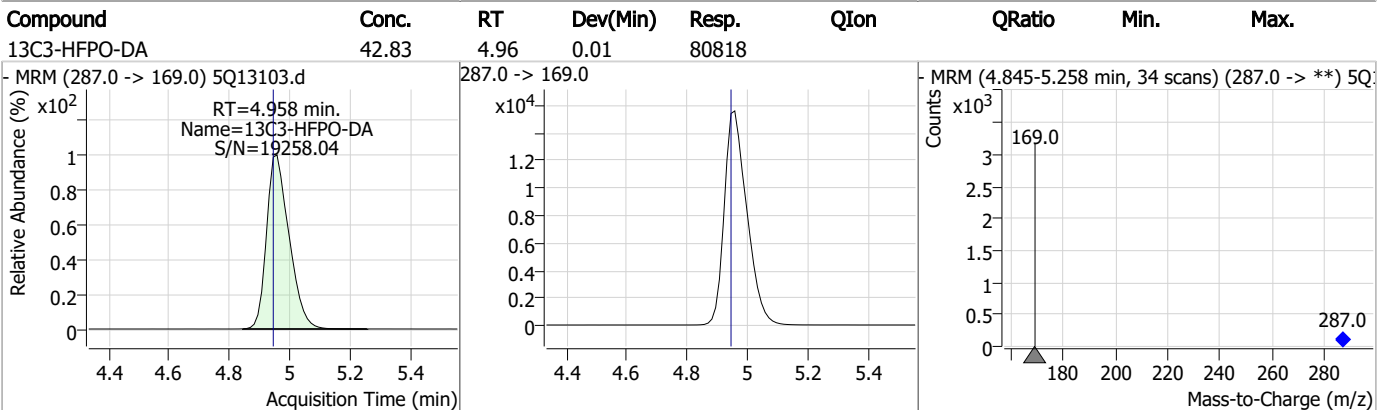
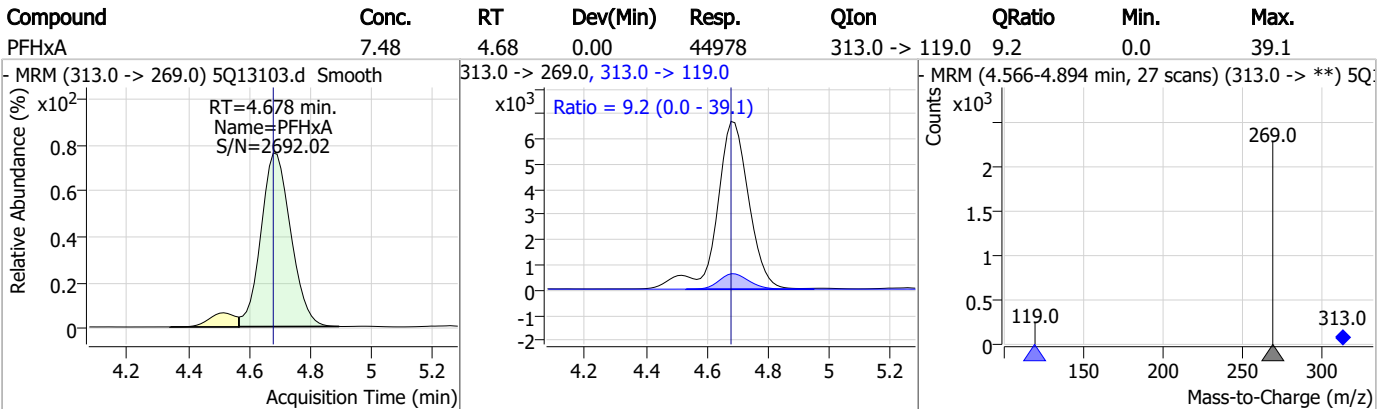
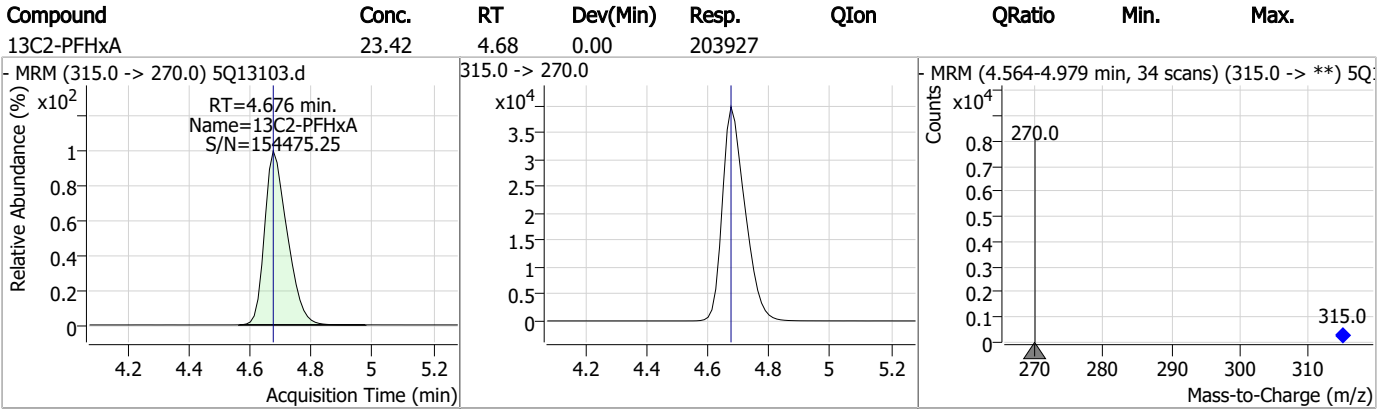
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

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

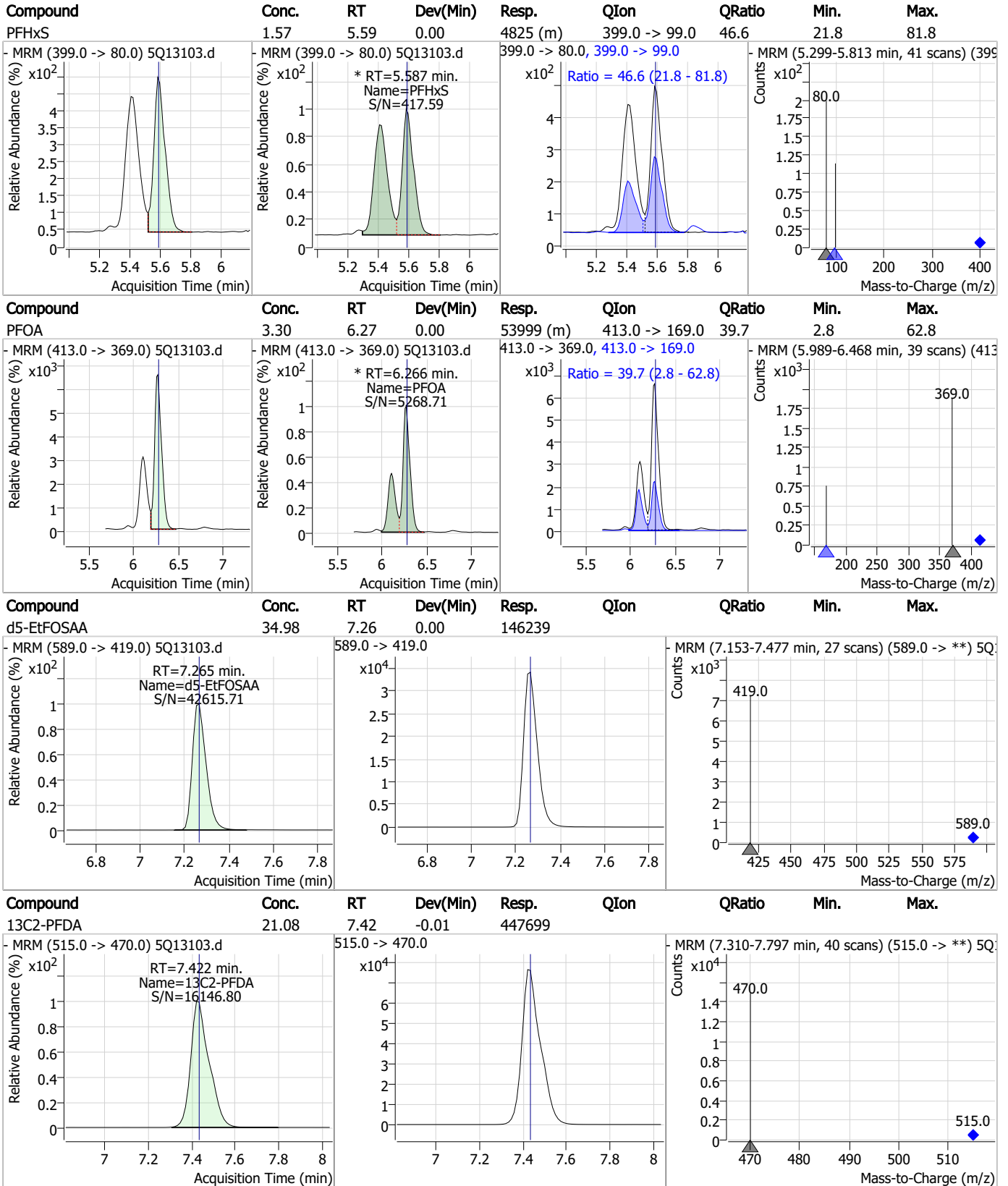
### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS





# Manual Integration Approval Summary

**Sample Number:** FC3889-8                      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13103.D                      **Analyst approved:** 04/17/23 12:41 Natasha Gumtie  
**Injection Time:** 04/15/23 02:55              **Supervisor approved:** 04/17/23 17:33 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorobutanesulfonic acid	375-73-5		3.72	Split peak
Perfluoroheptanoic acid	375-85-9		5.55	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanoic acid	335-67-1		6.27	Split peak

7.18.1

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Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13105.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 3:28:57 AM  
 Sample Name : fc3889-9  
 Vial : P3-E4  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
<b>Internal Standards</b>						
13C2-6:2FTS	6.250	429.0 -> 409.0	134962	20.00	µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	341733	20.00	µg/L	0.000
13C3-PFPeA	3.457	266.0 -> 222.0	135654	20.00	µg/L	-0.012
13C4-PFOS	6.848	503.0 -> 80.0	62531	20.00	µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	161078	40.00	µg/L	0.000
<b>System Monitoring Compounds</b>						
13C2-PFDA	7.422	515.0 -> 470.0	461387	21.45	µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 107.2%			
13C2-PFHxA	4.676	315.0 -> 270.0	194229	22.02	µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 110.1%			
d5-EtFOSAA	7.265	589.0 -> 419.0	156413	36.02	µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 90.0%			
13C3-HFPO-DA	4.946	287.0 -> 169.0	76038	39.79	µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 99.5%			
<b>Target Compounds</b>						
6:2FTS	-	427.0 -> 407.0	-	N.D.		QValue
		427.0 -> 81.0				
8:2FTS	-	527.0 -> 507.0	-	N.D.		
		527.0 -> 81.0				
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
		584.0 -> 483.0				
MeFOSAA	-	570.0 -> 419.0	-	N.D.		
		570.0 -> 512.0				
PFBA	1.838	213.0 -> 169.0	602	0.27	µg/L	m 100
PFBS	3.703	299.0 -> 80.0	6243	2.10	µg/L	m 98
		299.0 -> 99.0	2705			
PFDA	-	513.0 -> 469.0	-	N.D.		
		513.0 -> 219.0				
PFDODA	-	613.0 -> 569.0	-	N.D.		
		613.0 -> 169.0				
PFHpA	5.553	363.0 -> 319.0	23401	1.33	µg/L	m 98
		363.0 -> 169.0	2044			
PFHpS	-	449.0 -> 80.0	-	N.D.		
		449.0 -> 99.0				
PFHxA	4.678	313.0 -> 269.0	26563	4.36	µg/L	99
		313.0 -> 119.0	2530			
PFHxS	5.587	399.0 -> 80.0	25516	7.94	µg/L	m 98
		399.0 -> 99.0	12827			
PFNA	-	463.0 -> 419.0	-	N.D.		
		463.0 -> 219.0				
PFOA	6.266	413.0 -> 369.0	180875	10.90	µg/L	m 95
		413.0 -> 169.0	64115			
PFOS	6.636	499.0 -> 80.0	1480	0.41	µg/L	m 66
		499.0 -> 99.0	417			
PFPeA	3.472	263.0 -> 219.0	35197	3.58	µg/L	100

7.19  
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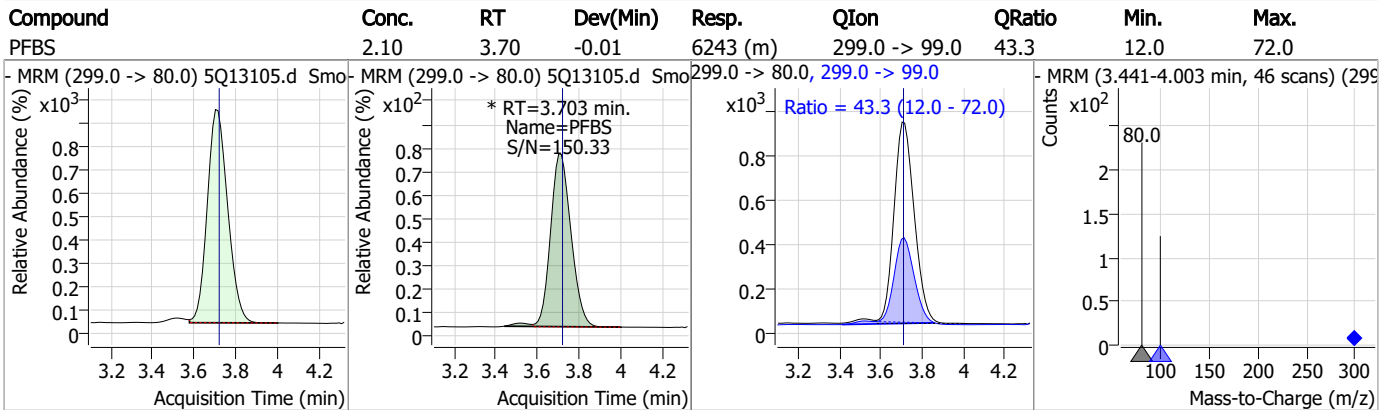
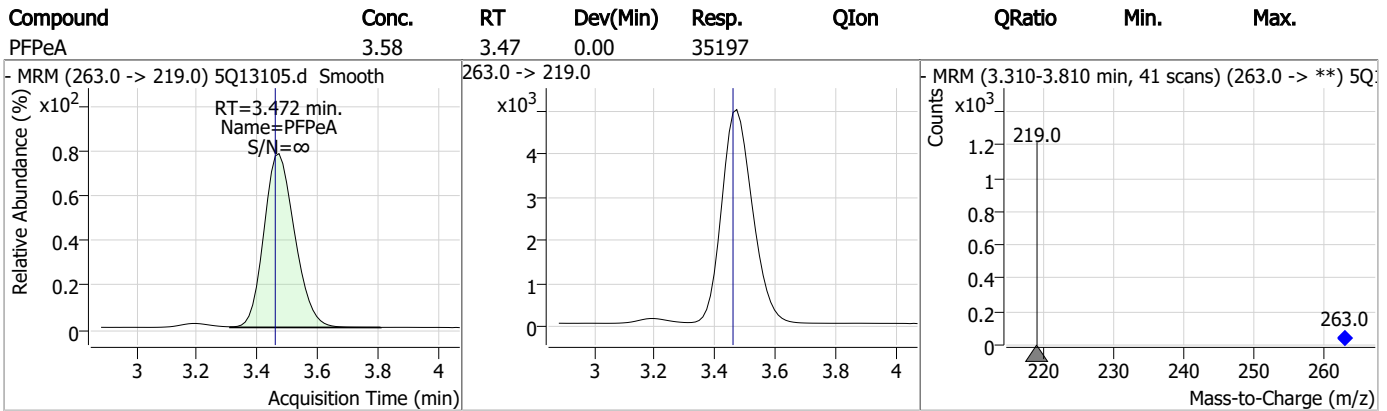
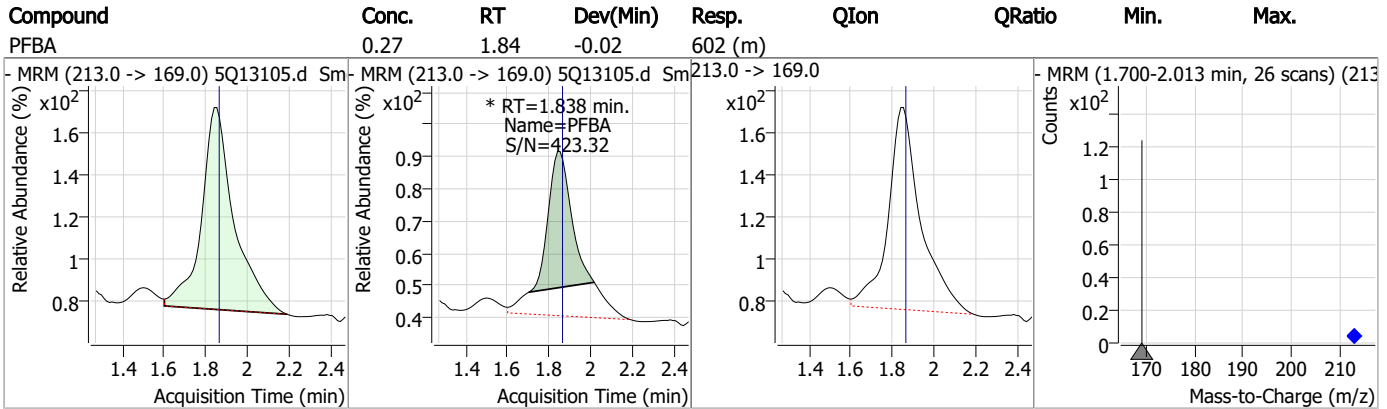
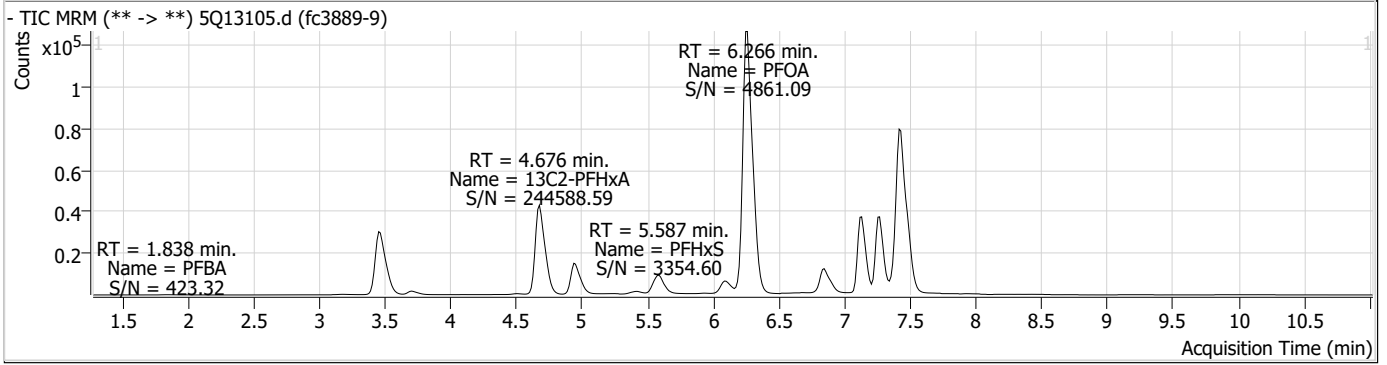


## Perfluorinated Compounds by LC/MS/MS

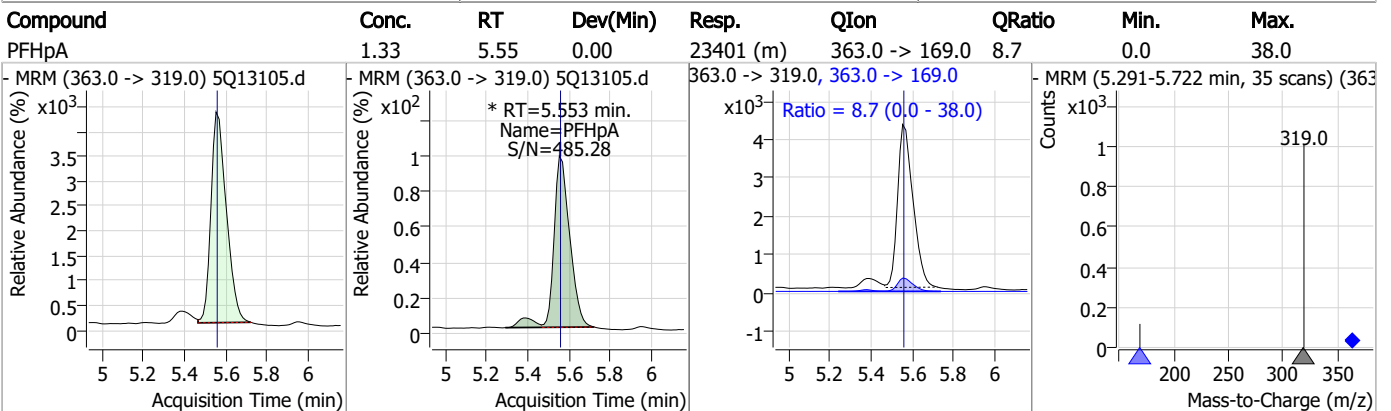
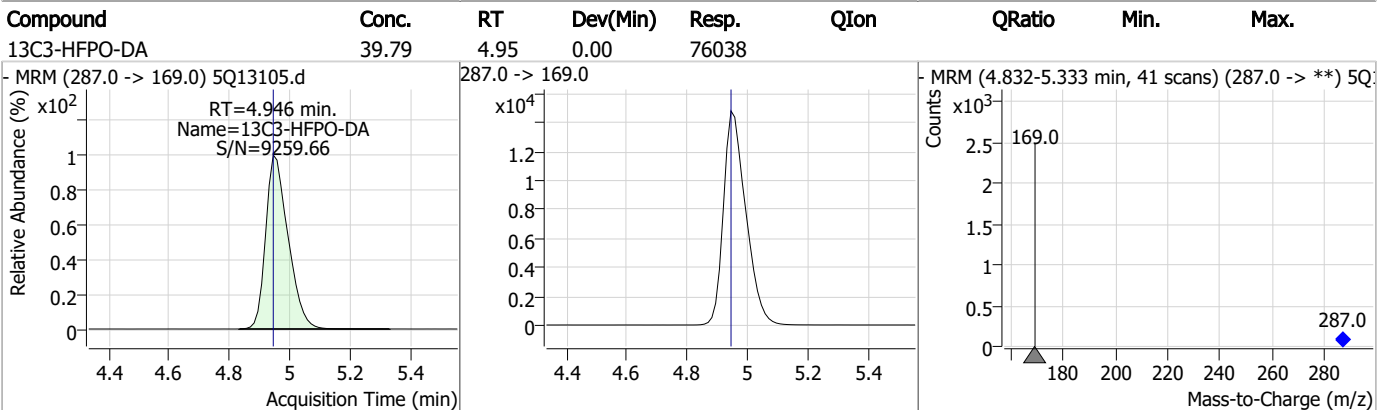
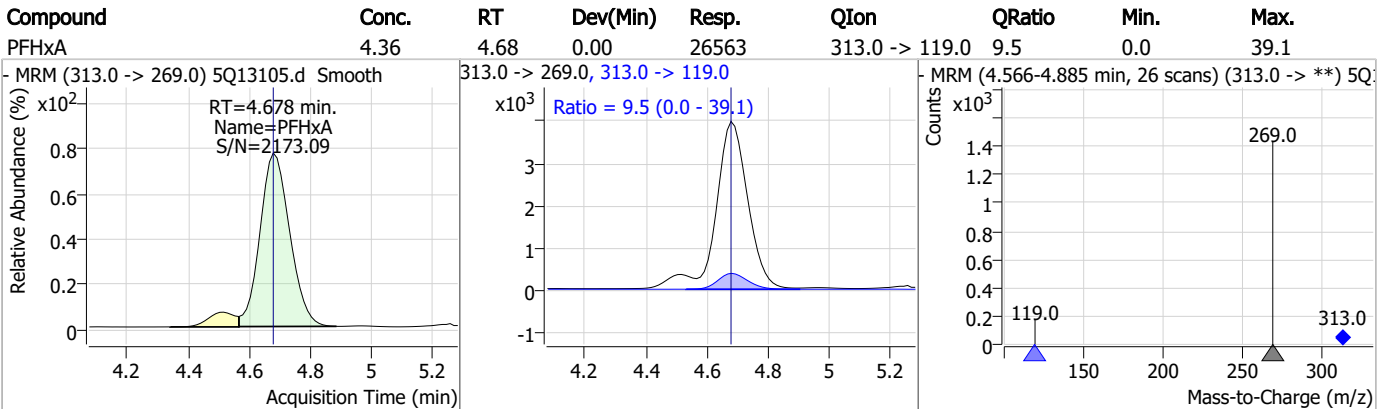
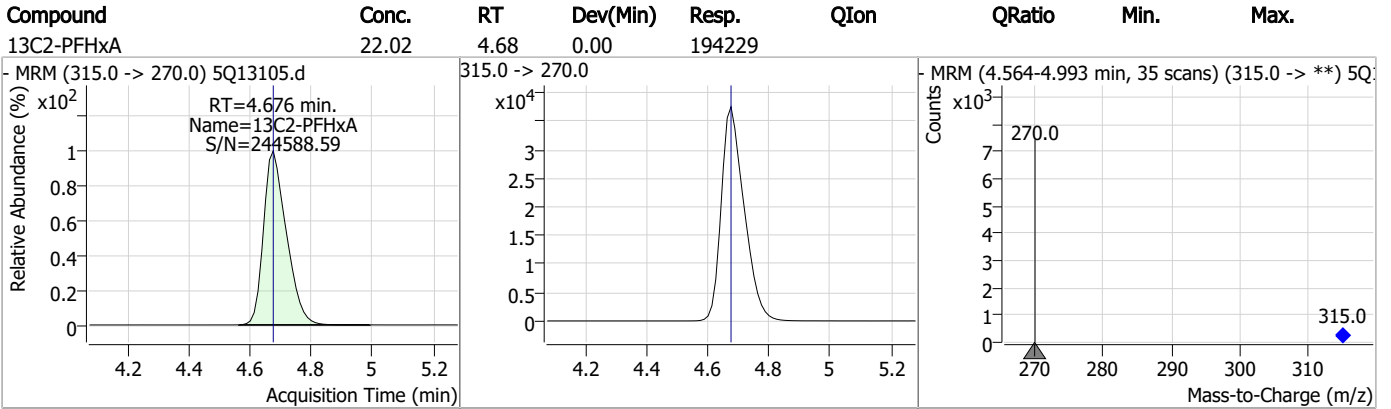
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

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

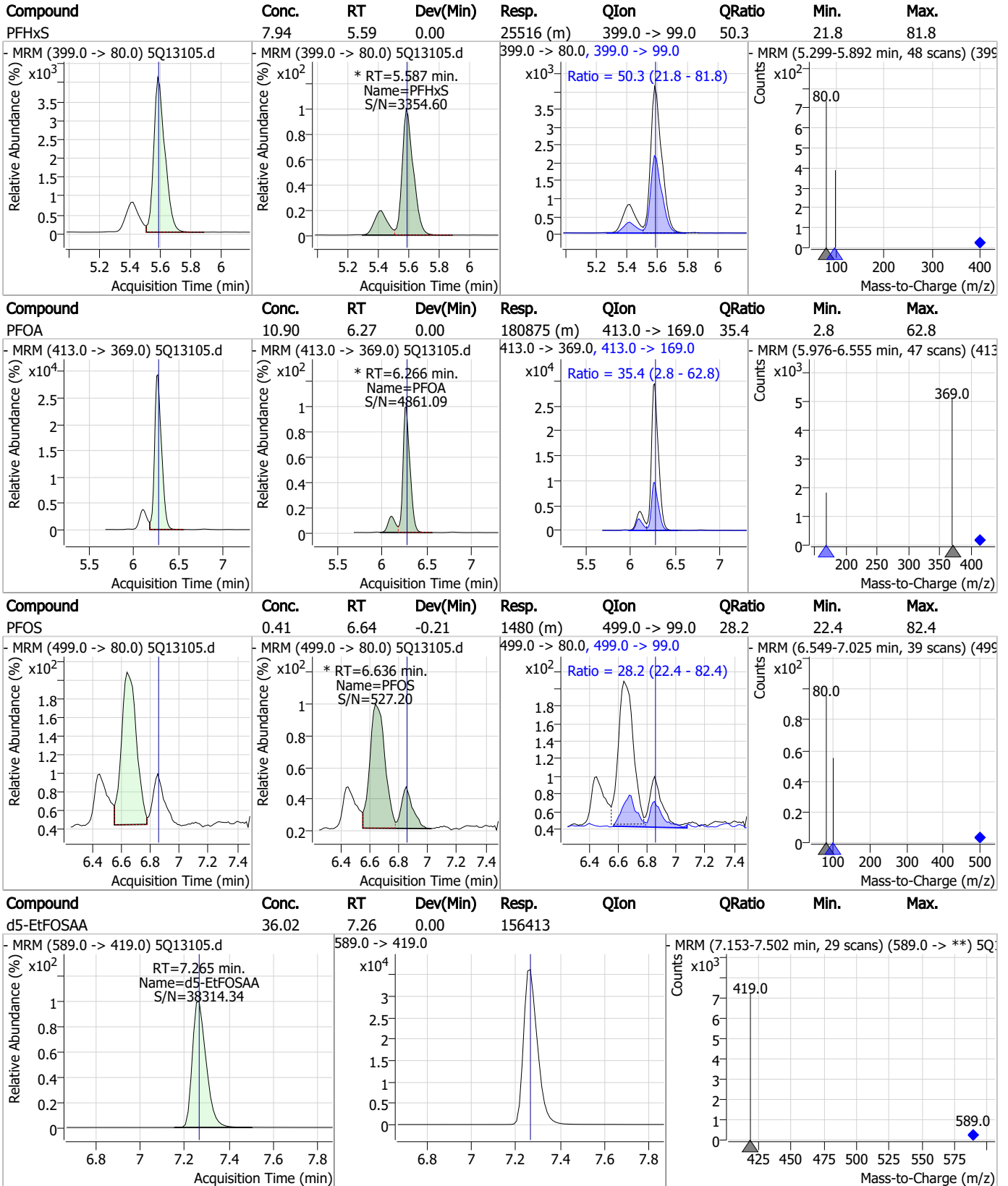
### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS

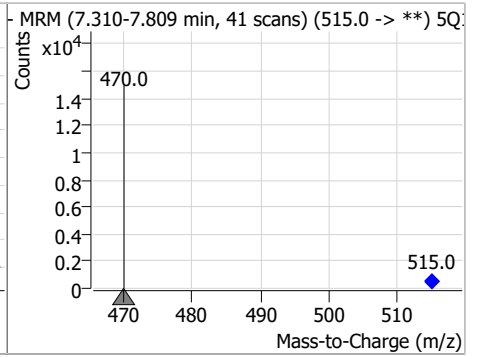
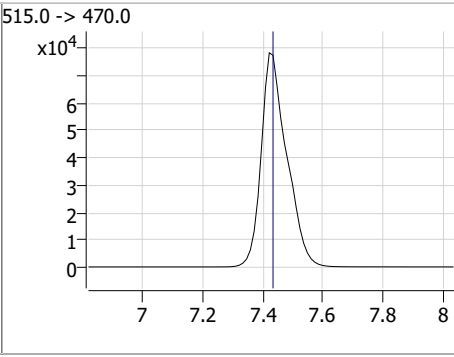
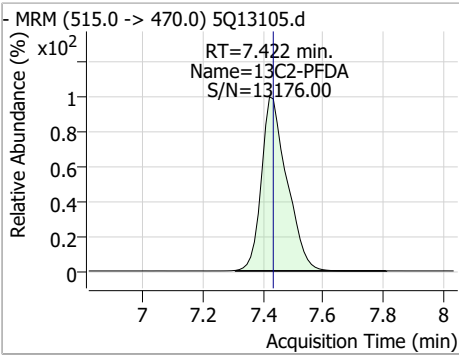


7.1.9

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Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	21.45	7.42	-0.01	461387				



7.1.9  
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# Manual Integration Approval Summary

**Sample Number:** FC3889-9                      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13105.D                      **Analyst approved:** 04/17/23 12:41 Natasha Gumtie  
**Injection Time:** 04/15/23 03:28              **Supervisor approved:** 04/17/23 15:07 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorobutanoic acid	375-22-4		1.84	Poor instrument integration
Perfluorobutanesulfonic acid	375-73-5		3.70	Split peak
Perfluoroheptanoic acid	375-85-9		5.55	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanoic acid	335-67-1		6.27	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.64	Split peak

7.1.9.1  
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Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13108.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 4:19:22 AM  
 Sample Name : fc3889-10  
 Vial : P3-E5  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
<b>Internal Standards</b>						
13C2-6:2FTS	6.250	429.0 -> 409.0	137115	20.00	µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	348665	20.00	µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	147743	20.00	µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	63471	20.00	µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	163934	40.00	µg/L	0.000
<b>System Monitoring Compounds</b>						
13C2-PFDA	7.422	515.0 -> 470.0	459994	20.96	µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 104.8%			
13C2-PFHxA	4.676	315.0 -> 270.0	202517	22.50	µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 112.5%			
d5-EtFOSAA	7.265	589.0 -> 419.0	151890	34.37	µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 85.9%			
13C3-HFPO-DA	4.958	287.0 -> 169.0	80263	41.16	µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 102.9%			
<b>Target Compounds</b>						
6:2FTS	-	427.0 -> 407.0	-	N.D.		QValue
		427.0 -> 81.0				
8:2FTS	-	527.0 -> 507.0	-	N.D.		
		527.0 -> 81.0				
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
		584.0 -> 483.0				
MeFOSAA	-	570.0 -> 419.0	-	N.D.		
		570.0 -> 512.0				
PFBA	1.750	213.0 -> 169.0	0	µg/L	m	1
PFBS	-	299.0 -> 80.0	-	N.D.		
		299.0 -> 99.0				
PFDA	-	513.0 -> 469.0	-	N.D.		
		513.0 -> 219.0				
PFDODA	-	613.0 -> 569.0	-	N.D.		
		613.0 -> 169.0				
PFHpA	-	363.0 -> 319.0	-	N.D.		
		363.0 -> 169.0				
PFHpS	-	449.0 -> 80.0	-	N.D.		
		449.0 -> 99.0				
PFHxA	-	313.0 -> 269.0	-	N.D.		
		313.0 -> 119.0				
PFHxS	-	399.0 -> 80.0	-	N.D.		
		399.0 -> 99.0				
PFNA	-	463.0 -> 419.0	-	N.D.		
		463.0 -> 219.0				
PFOA	-	413.0 -> 369.0	-	N.D.		
		413.0 -> 169.0				
PFOS	-	499.0 -> 80.0	-	N.D.		
		499.0 -> 99.0				
PFPeA	-	263.0 -> 219.0	-	N.D.		

7.1.10  
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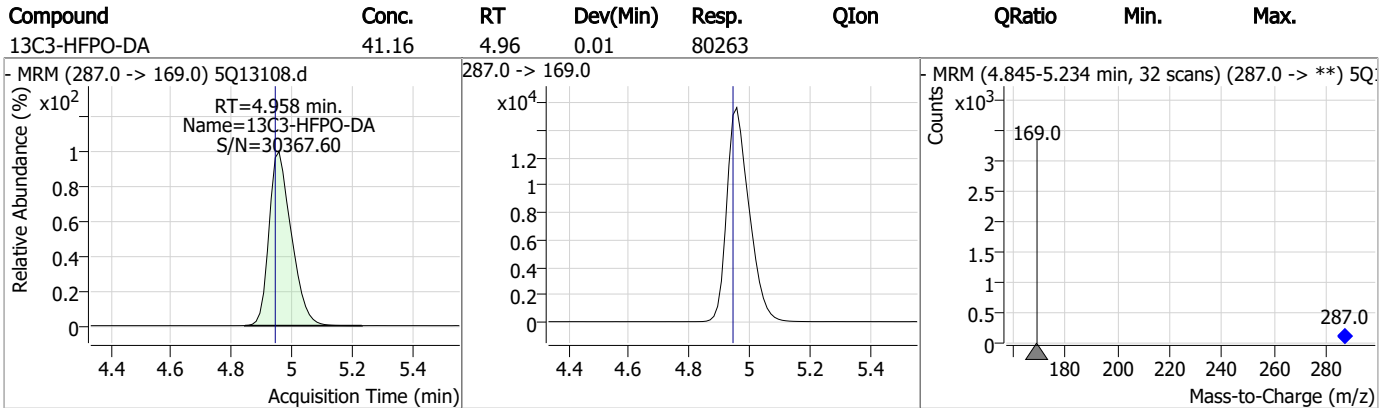
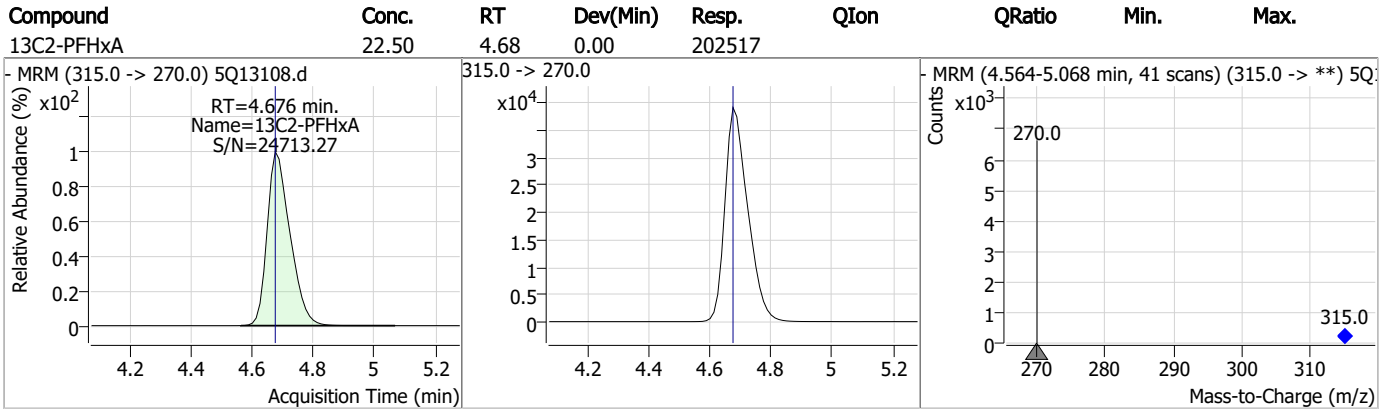
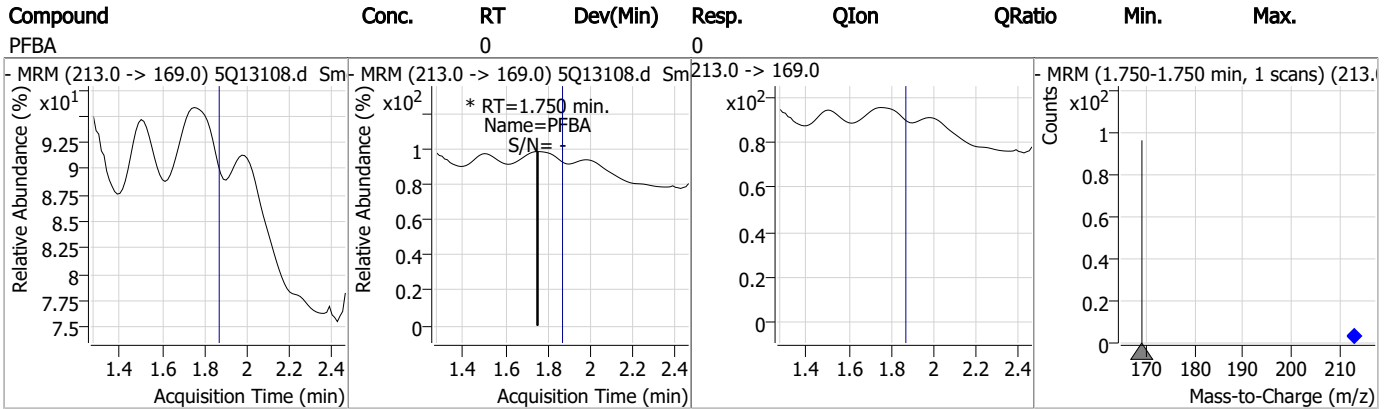
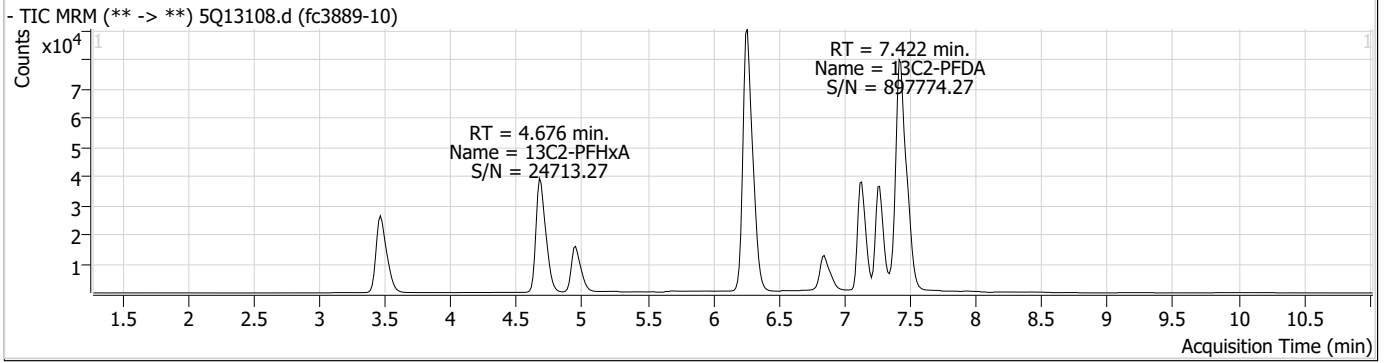


## Perfluorinated Compounds by LC/MS/MS

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

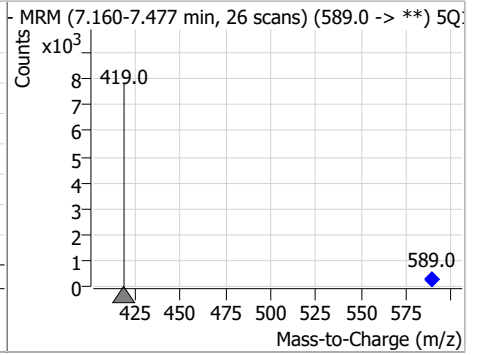
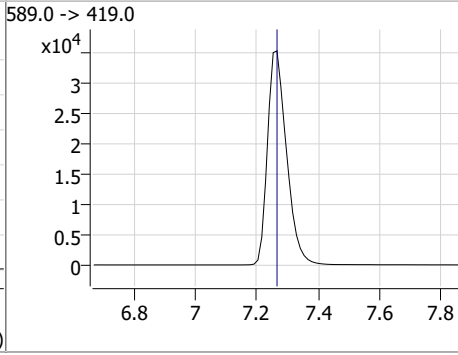
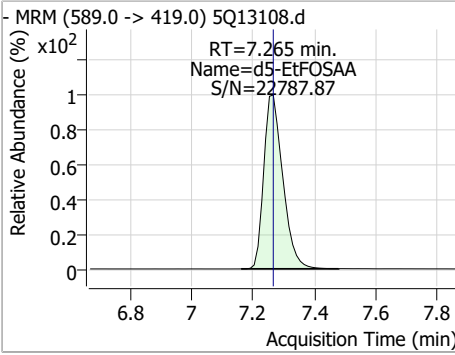
# = Qualifier out of range, m = manually integrated, + = Area summed

### Perfluorinated Compounds by LC/MS/MS

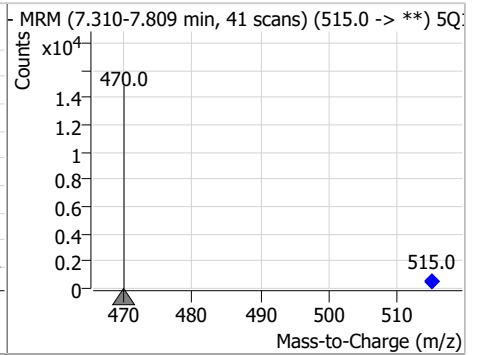
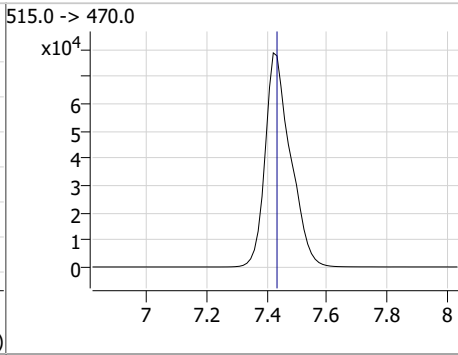
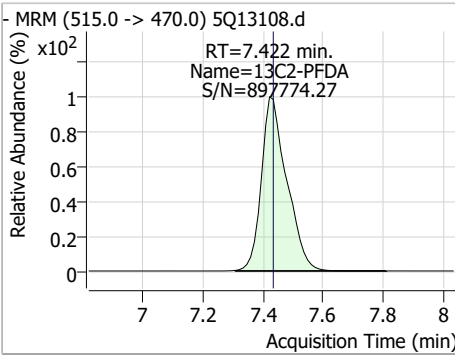


Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	34.37	7.26	0.00	151890				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	20.96	7.42	-0.01	459994				



7.1.10  
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Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13109.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 4:36:10 AM  
 Sample Name : fc3889-11  
 Vial : P3-E6  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	152779	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	372375	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	157501	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	66636	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	173447	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.422	515.0 -> 470.0	496819	21.20 µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 106.0%		
13C2-PFHxA	4.676	315.0 -> 270.0	214184	22.28 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 111.4%		
d5-EtFOSAA	7.252	589.0 -> 419.0	174206	37.26 µg/L	-0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 93.1%		
13C3-HFPO-DA	4.958	287.0 -> 169.0	84220	40.44 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 101.1%		
<b>Target Compounds</b>					
6:2FTS	-	427.0 -> 407.0	-	N.D.	
		427.0 -> 81.0			
8:2FTS	-	527.0 -> 507.0	-	N.D.	
		527.0 -> 81.0			
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
		584.0 -> 483.0			
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
		570.0 -> 512.0			
PFBA	1.750	213.0 -> 169.0	0	µg/L m	1
PFBS	-	299.0 -> 80.0	-	N.D.	
		299.0 -> 99.0			
PFDA	-	513.0 -> 469.0	-	N.D.	
		513.0 -> 219.0			
PFDODA	-	613.0 -> 569.0	-	N.D.	
		613.0 -> 169.0			
PFHpA	-	363.0 -> 319.0	-	N.D.	
		363.0 -> 169.0			
PFHpS	-	449.0 -> 80.0	-	N.D.	
		449.0 -> 99.0			
PFHxA	4.691	313.0 -> 269.0	954	0.14 µg/L	98
		313.0 -> 119.0	92		
PFHxS	-	399.0 -> 80.0	-	N.D.	
		399.0 -> 99.0			
PFNA	-	463.0 -> 419.0	-	N.D.	
		463.0 -> 219.0			
PFOA	-	413.0 -> 369.0	-	N.D.	
		413.0 -> 169.0			
PFOS	-	499.0 -> 80.0	-	N.D.	
		499.0 -> 99.0			
PFPeA	-	263.0 -> 219.0	-	N.D.	

7.1.11  
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Perfluorinated Compounds by LC/MS/MS

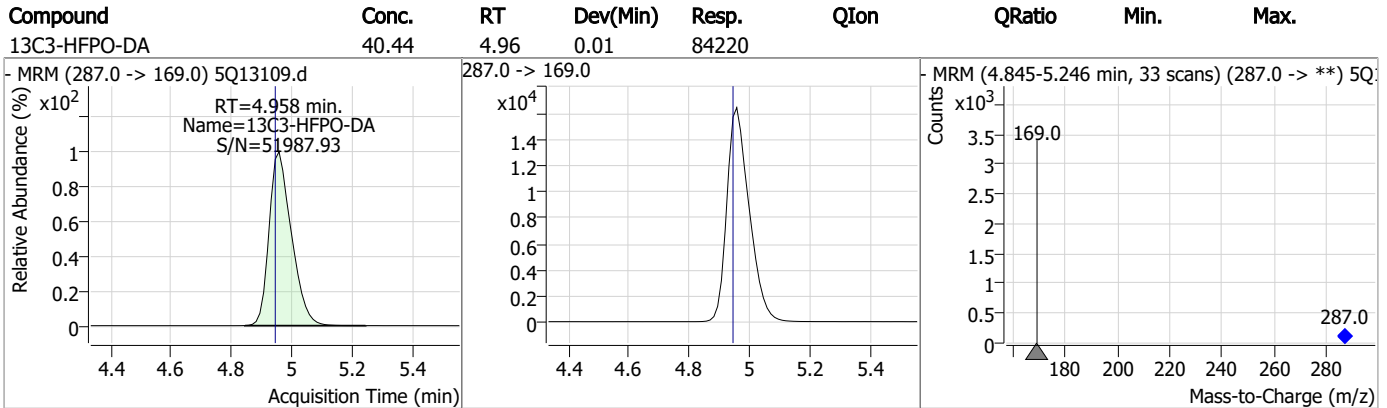
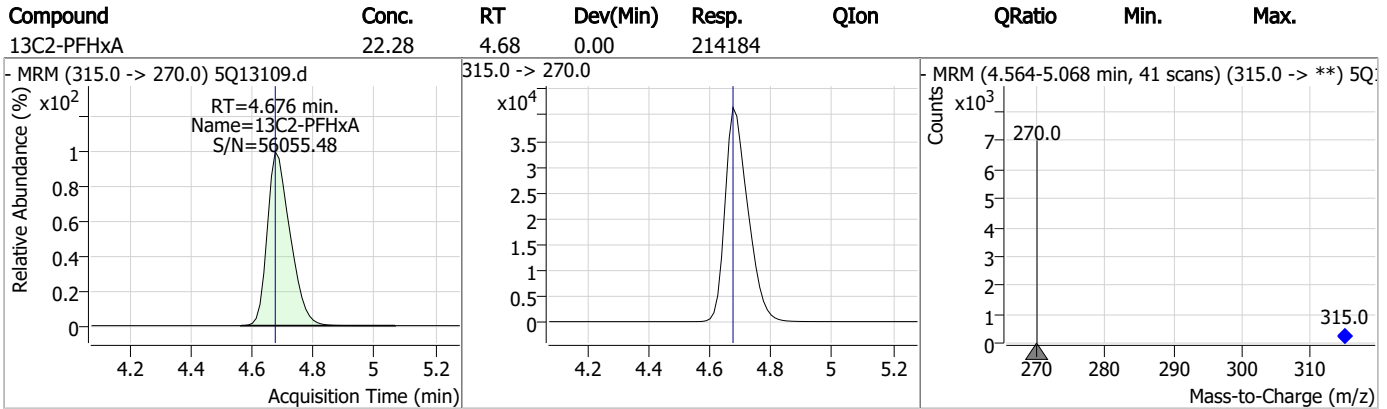
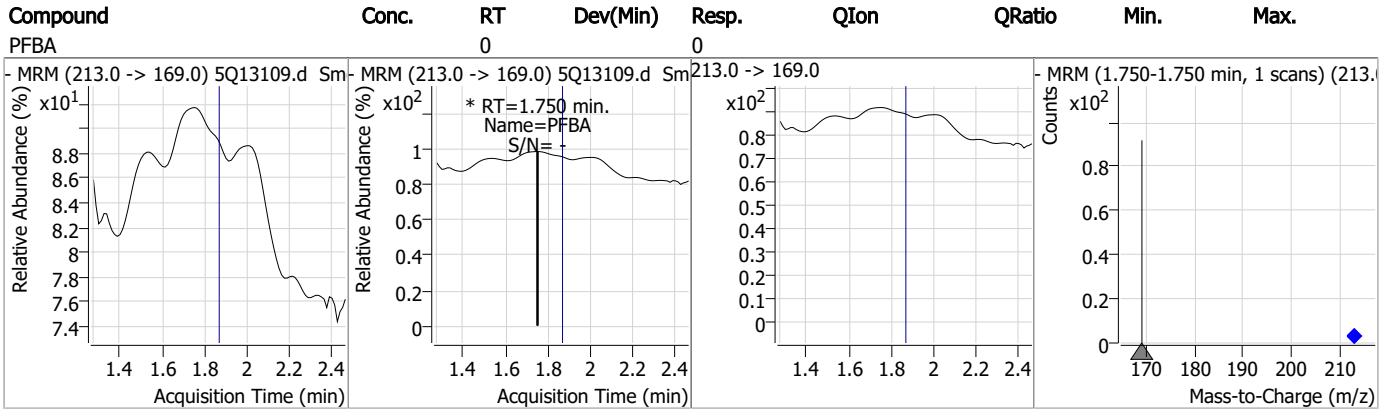
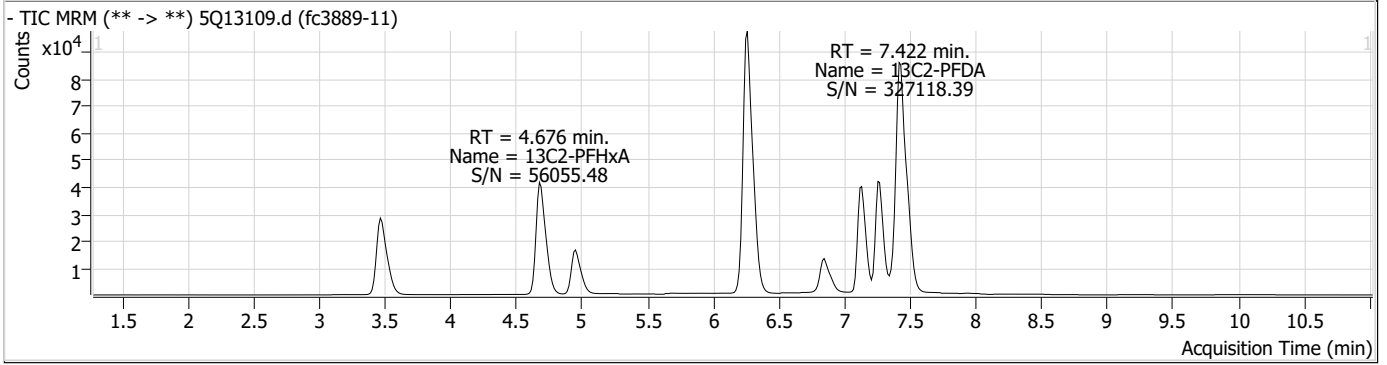
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

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

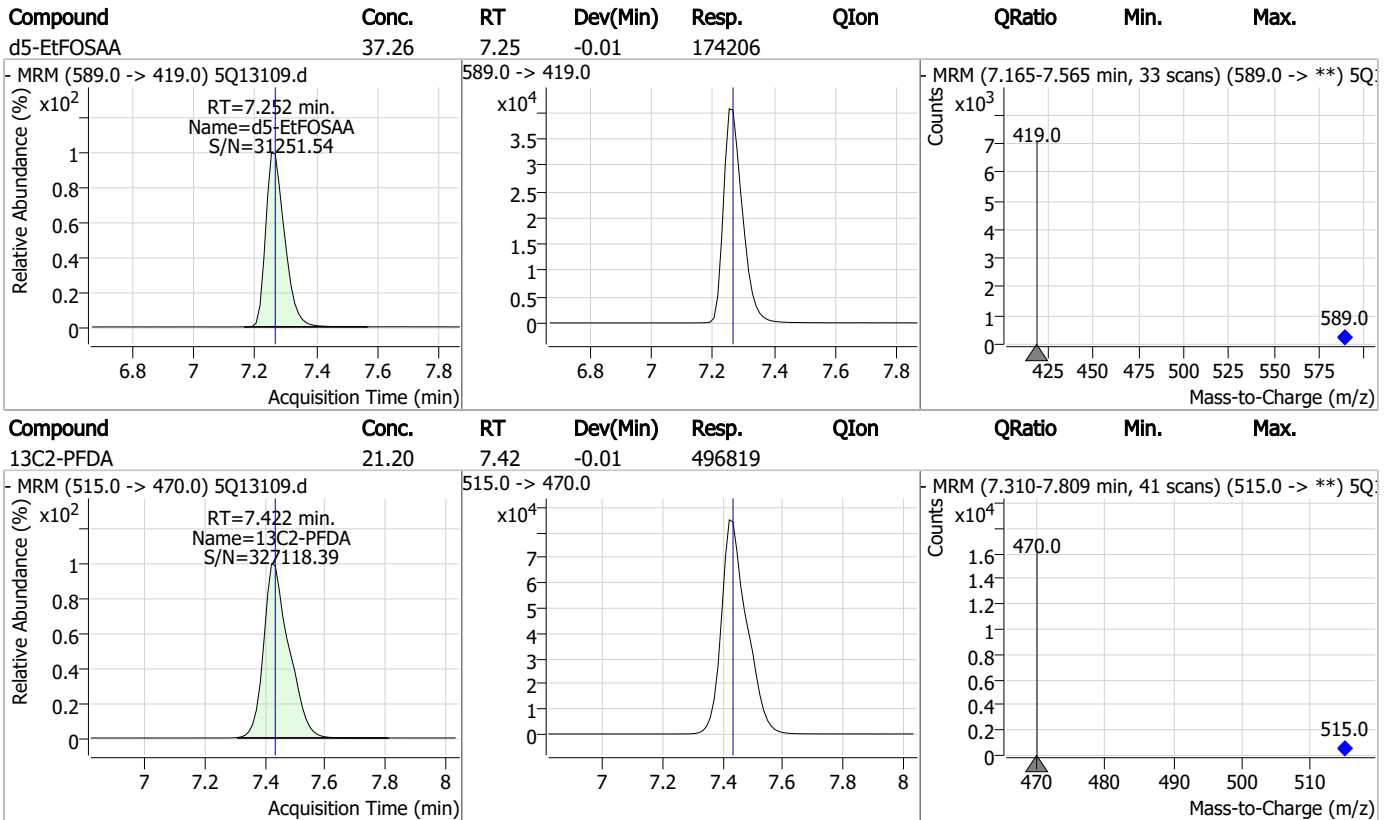
7.1.11

7

### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS



7.1.11  
7



### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13111.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 5:09:46 AM  
 Sample Name : fc3889-12  
 Vial : P3-E8  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	129544	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	331656	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	140377	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	60246	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	155286	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.434	515.0 -> 470.0	421611	20.20 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 101.0%		
13C2-PFHxA	4.676	315.0 -> 270.0	190737	22.28 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 111.4%		
d5-EtFOSAA	7.265	589.0 -> 419.0	142539	34.05 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 85.1%		
13C3-HFPO-DA	4.958	287.0 -> 169.0	76604	41.30 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 103.2%		
<b>Target Compounds</b>					
6:2FTS	-	427.0 -> 407.0	-	N.D.	QValue
		427.0 -> 81.0			
8:2FTS	-	527.0 -> 507.0	-	N.D.	QValue
		527.0 -> 81.0			
EtFOSAA	-	584.0 -> 419.0	-	N.D.	QValue
		584.0 -> 483.0			
MeFOSAA	-	570.0 -> 419.0	-	N.D.	QValue
		570.0 -> 512.0			
PFBA	-	213.0 -> 169.0	-	N.D.	QValue
PFBS	-	299.0 -> 80.0	-	N.D.	
		299.0 -> 99.0			QValue
PFDA	-	513.0 -> 469.0	-	N.D.	
		513.0 -> 219.0			QValue
PFDODA	-	613.0 -> 569.0	-	N.D.	
		613.0 -> 169.0			QValue
PFHpA	-	363.0 -> 319.0	-	N.D.	
		363.0 -> 169.0			QValue
PFHpS	-	449.0 -> 80.0	-	N.D.	
		449.0 -> 99.0			QValue
PFHxA	-	313.0 -> 269.0	-	N.D.	
		313.0 -> 119.0			QValue
PFHxS	-	399.0 -> 80.0	-	N.D.	
		399.0 -> 99.0			QValue
PFNA	-	463.0 -> 419.0	-	N.D.	
		463.0 -> 219.0			QValue
PFOA	-	413.0 -> 369.0	-	N.D.	
		413.0 -> 169.0			QValue
PFOS	-	499.0 -> 80.0	-	N.D.	
		499.0 -> 99.0			QValue
PFPeA	-	263.0 -> 219.0	-	N.D.	

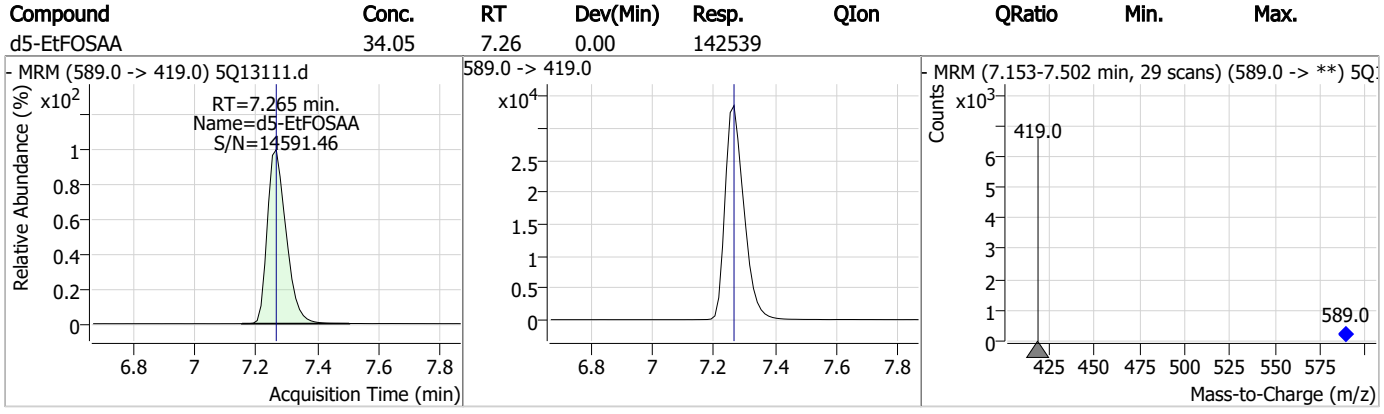
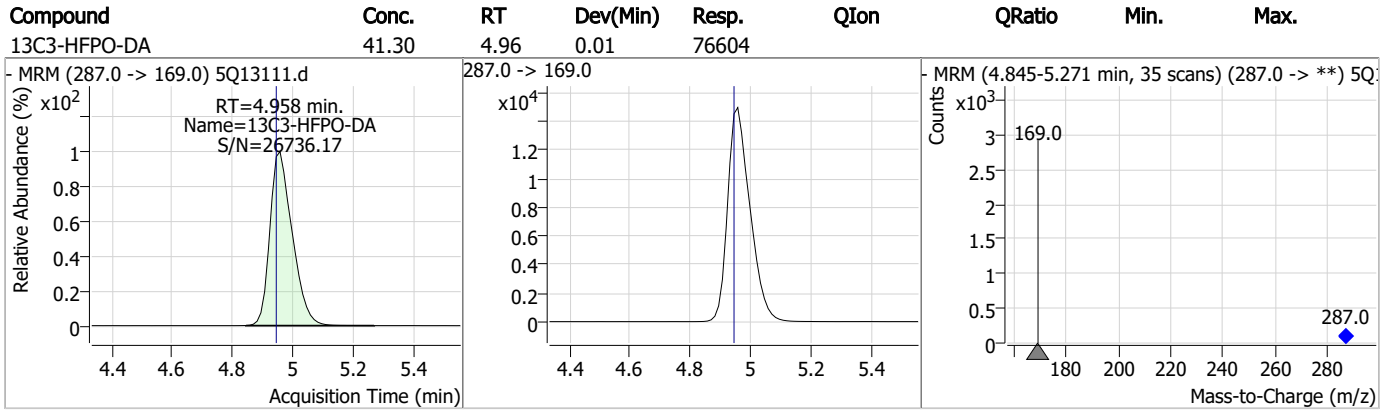
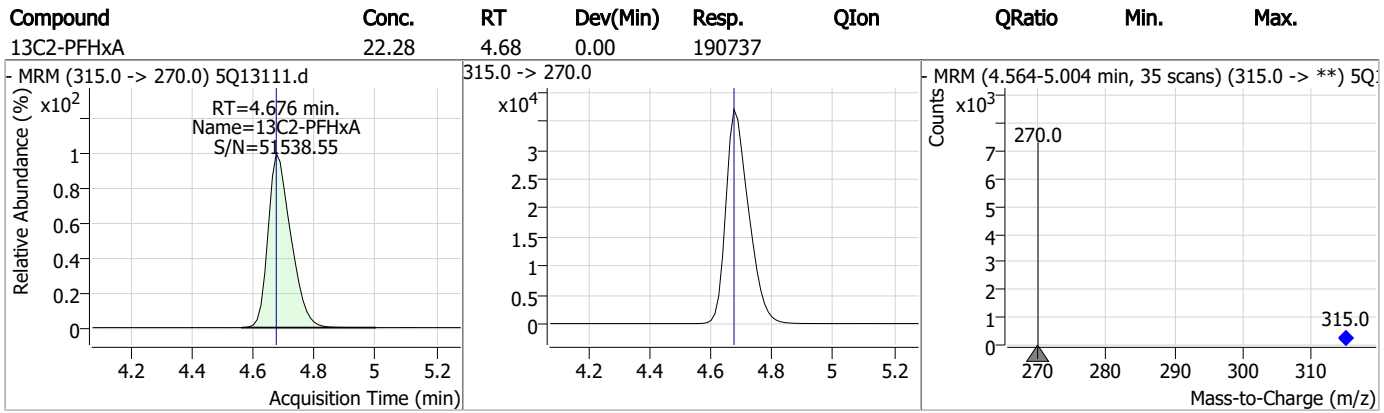
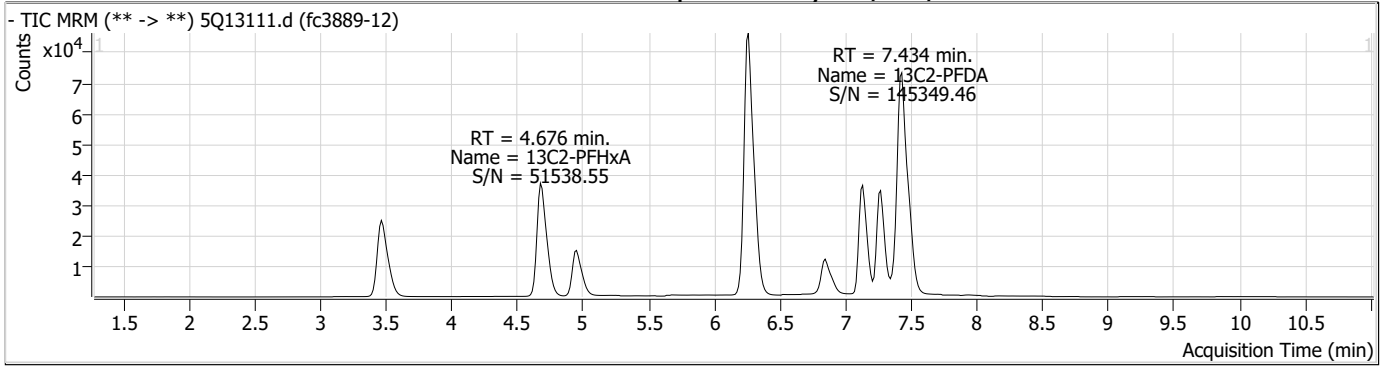
7.1.12  
7

## Perfluorinated Compounds by LC/MS/MS

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

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

### Perfluorinated Compounds by LC/MS/MS

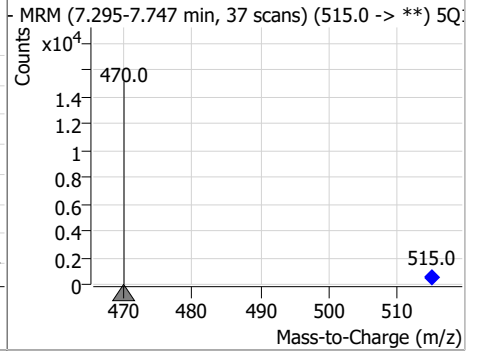
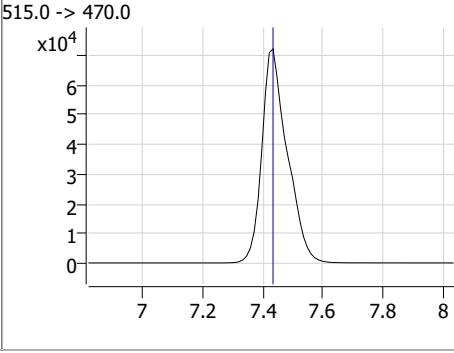
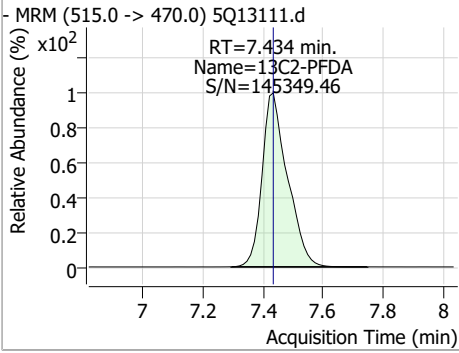


7.1.12  
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Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	20.20	7.43	0.00	421611				



7.1.12  
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Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13113.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 5:43:26 AM  
 Sample Name : fc3889-13  
 Vial : P3-F1  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
<b>Internal Standards</b>						
13C2-6:2FTS	6.250	429.0 -> 409.0	130658	20.00	µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	333316	20.00	µg/L	0.000
13C3-PFPeA	3.457	266.0 -> 222.0	134254	20.00	µg/L	-0.012
13C4-PFOS	6.848	503.0 -> 80.0	60138	20.00	µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	157066	40.00	µg/L	0.000
<b>System Monitoring Compounds</b>						
13C2-PFDA	7.434	515.0 -> 470.0	437811	20.87	µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 104.3%			
13C2-PFHxA	4.676	315.0 -> 270.0	191485	22.26	µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 111.3%			
d5-EtFOSAA	7.265	589.0 -> 419.0	145661	34.40	µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 86.0%			
13C3-HFPO-DA	4.958	287.0 -> 169.0	78786	42.26	µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 105.7%			
<b>Target Compounds</b>						
6:2FTS	-	427.0 -> 407.0	-	N.D.		QValue
		427.0 -> 81.0				
8:2FTS	-	527.0 -> 507.0	-	N.D.		
		527.0 -> 81.0				
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
		584.0 -> 483.0				
MeFOSAA	-	570.0 -> 419.0	-	N.D.		
		570.0 -> 512.0				
PFBA	1.850	213.0 -> 169.0	1078	0.48	µg/L	100
PFBS	3.716	299.0 -> 80.0	9649	3.38	µg/L	m 97
		299.0 -> 99.0	4247			
PFDA	-	513.0 -> 469.0	-	N.D.		
		513.0 -> 219.0				
PFDODA	-	613.0 -> 569.0	-	N.D.		
		613.0 -> 169.0				
PFHpA	5.553	363.0 -> 319.0	26394	1.54	µg/L	m 100
		363.0 -> 169.0	2122			
PFHpS	-	449.0 -> 80.0	-	N.D.		
		449.0 -> 99.0				
PFHxA	4.678	313.0 -> 269.0	44510	7.50	µg/L	99
		313.0 -> 119.0	4140			
PFHxS	5.587	399.0 -> 80.0	6811	2.20	µg/L	m 91
		399.0 -> 99.0	3096			
PFNA	-	463.0 -> 419.0	-	N.D.		
		463.0 -> 219.0				
PFOA	6.266	413.0 -> 369.0	72587	4.49	µg/L	m 89
		413.0 -> 169.0	28231			
PFOS	-	499.0 -> 80.0	-	N.D.		
		499.0 -> 99.0				
PFPeA	3.472	263.0 -> 219.0	50079	5.15	µg/L	100

7.1.13  
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Perfluorinated Compounds by LC/MS/MS

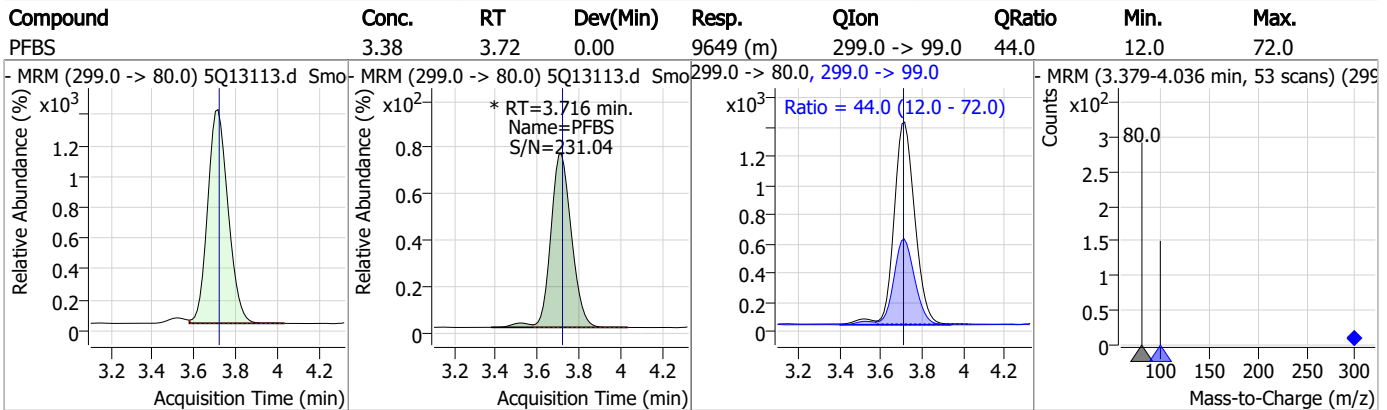
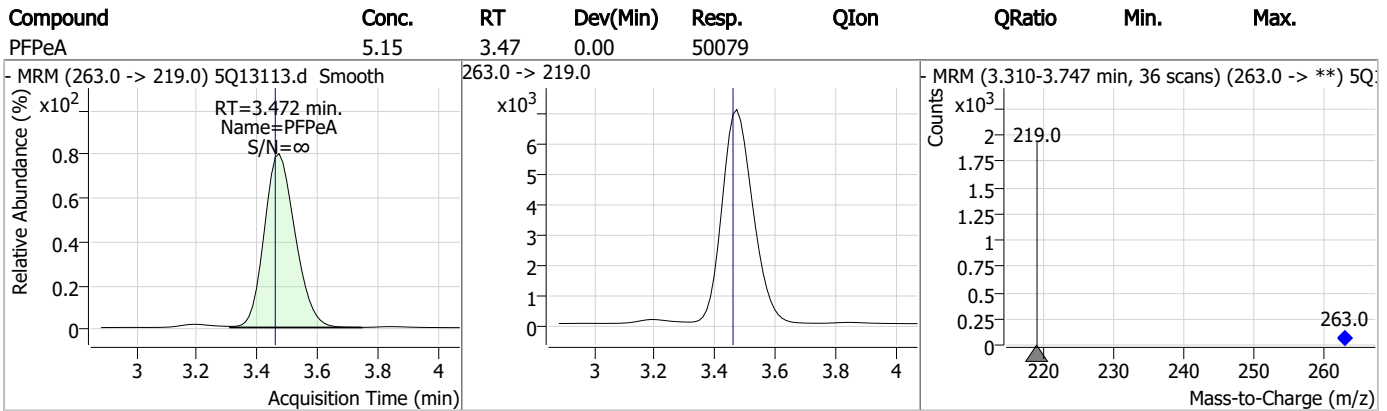
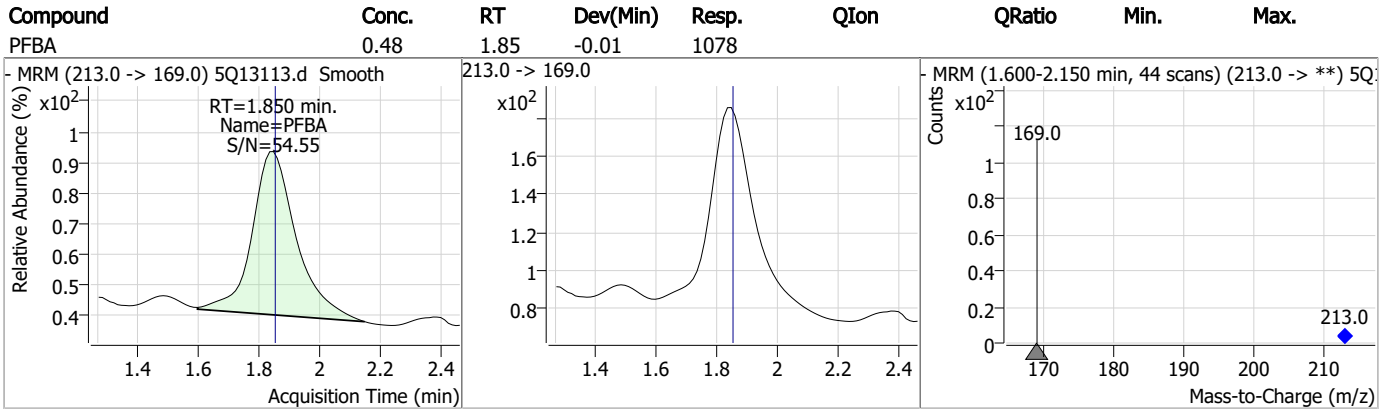
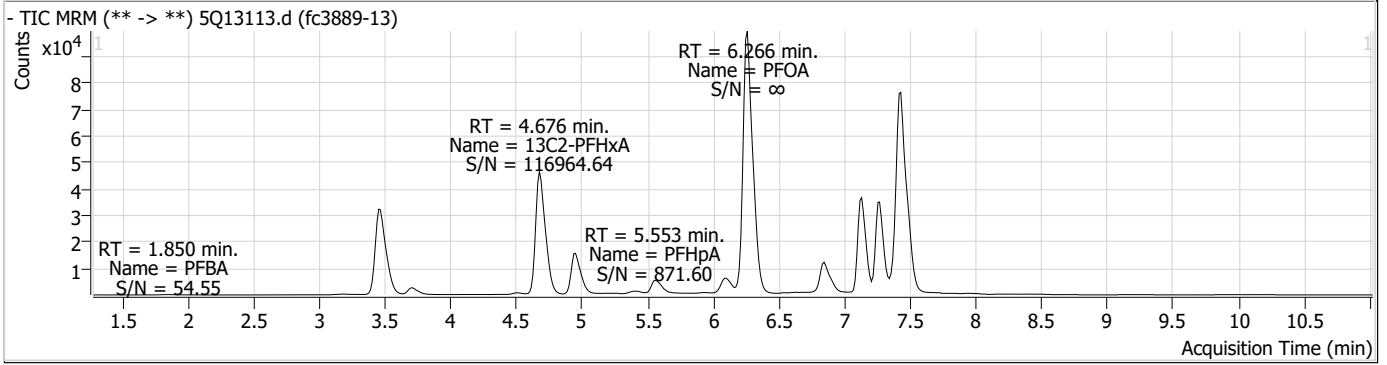
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

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

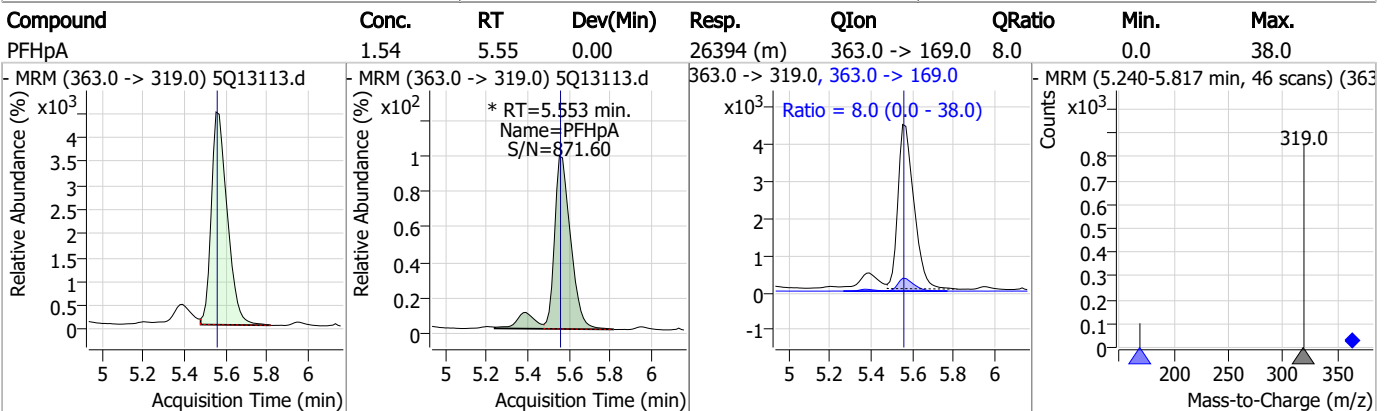
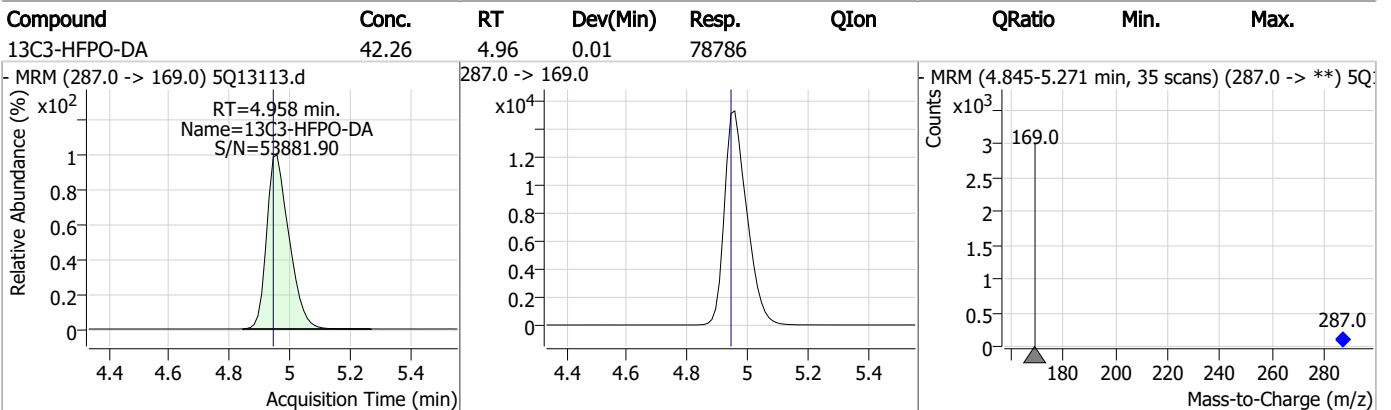
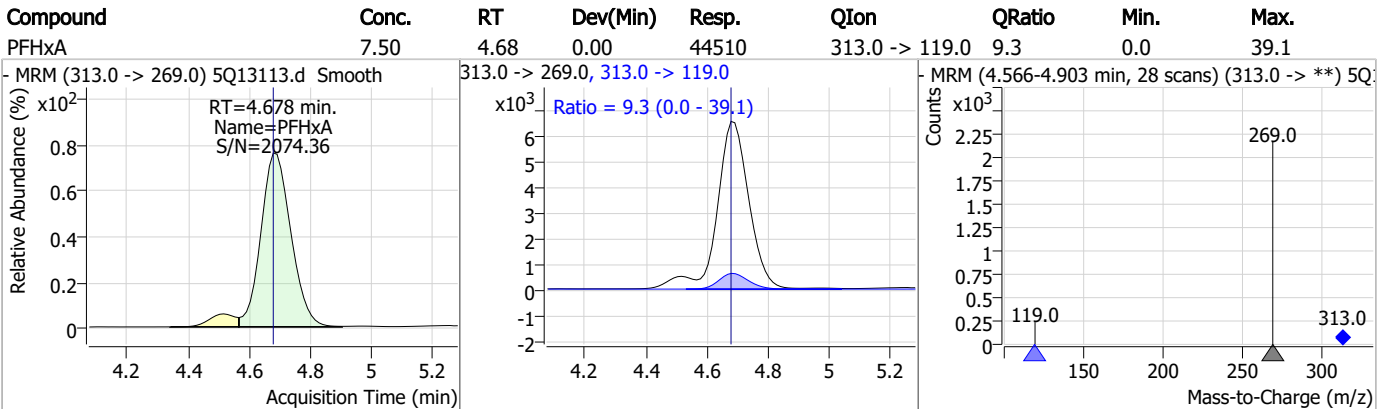
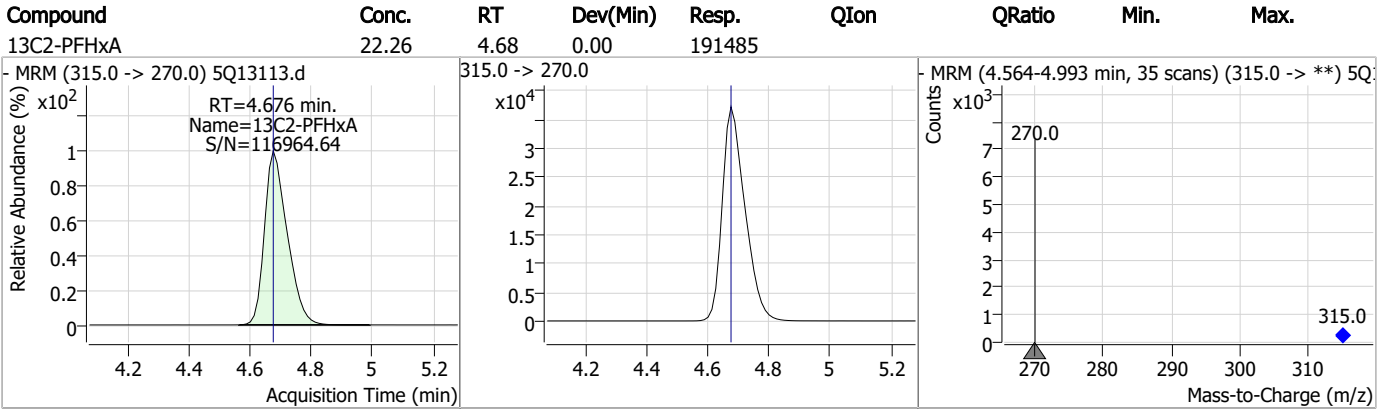
7.1.13

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### Perfluorinated Compounds by LC/MS/MS

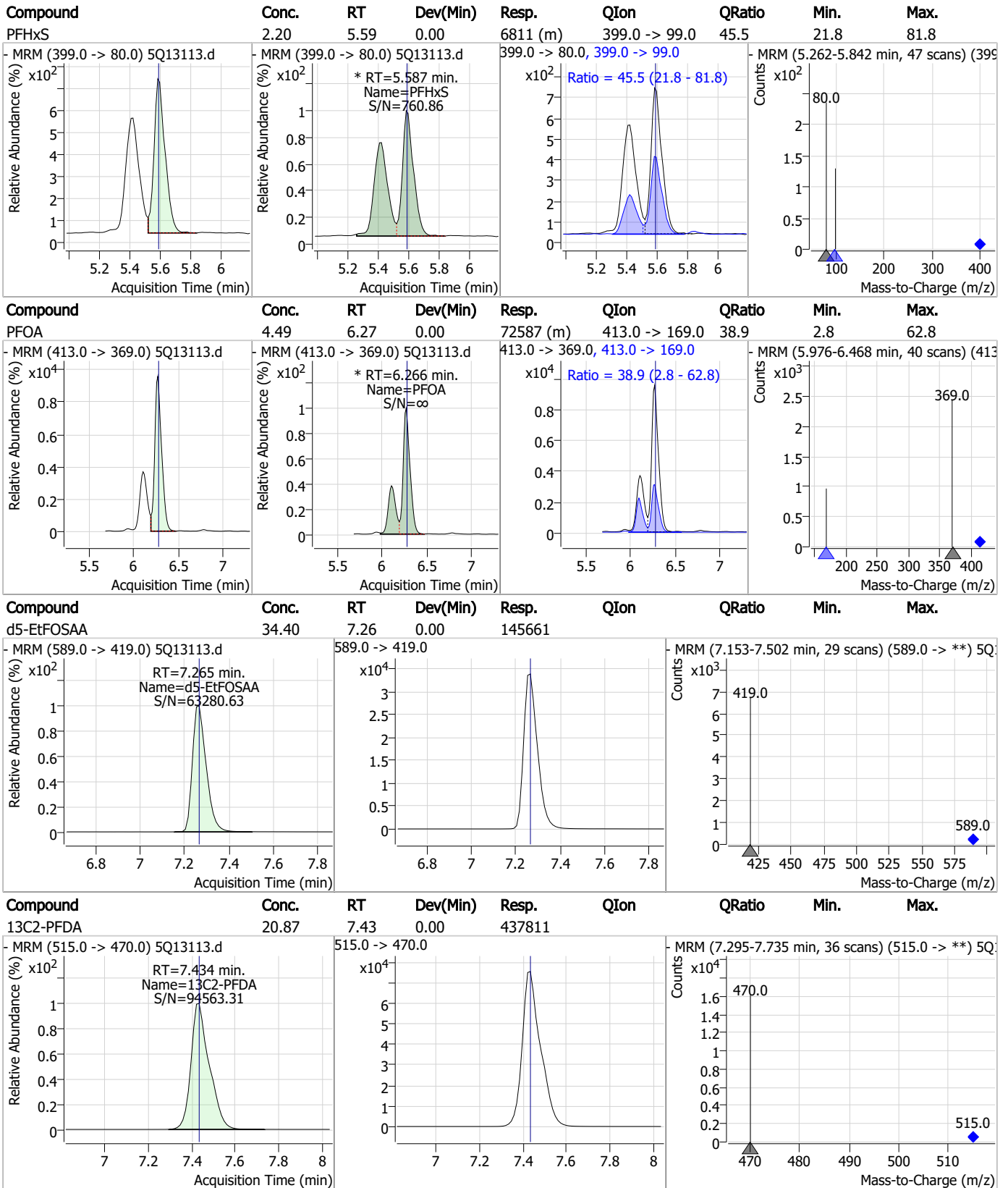


### Perfluorinated Compounds by LC/MS/MS





### Perfluorinated Compounds by LC/MS/MS



7.1.13  
7

# Manual Integration Approval Summary

**Sample Number:** FC3889-13      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13113.D      **Analyst approved:** 04/17/23 12:41 Natasha Gumtie  
**Injection Time:** 04/15/23 05:43      **Supervisor approved:** 04/17/23 17:33 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorobutanesulfonic acid	375-73-5		3.72	Split peak
Perfluoroheptanoic acid	375-85-9		5.55	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanoic acid	335-67-1		6.27	Split peak

7.1.13.1

7

Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13114.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 6:00:14 AM  
 Sample Name : fc3889-14  
 Vial : P3-F2  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	130161	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	334304	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	141310	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	60930	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	157904	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.434	515.0 -> 470.0	441397	20.98 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 104.9%		
13C2-PFHxA	4.676	315.0 -> 270.0	197001	22.83 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 114.1%		
d5-EtFOSAA	7.265	589.0 -> 419.0	146615	34.44 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 86.1%		
13C3-HFPO-DA	4.958	287.0 -> 169.0	79949	42.76 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 106.9%		
<b>Target Compounds</b>					
6:2FTS	-	427.0 -> 407.0 427.0 -> 81.0	-	N.D.	QValue
8:2FTS	-	527.0 -> 507.0 527.0 -> 81.0	-	N.D.	
EtFOSAA	-	584.0 -> 419.0 584.0 -> 483.0	-	N.D.	
MeFOSAA	-	570.0 -> 419.0 570.0 -> 512.0	-	N.D.	
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0 299.0 -> 99.0	-	N.D.	
PFDA	-	513.0 -> 469.0 513.0 -> 219.0	-	N.D.	
PFDODA	-	613.0 -> 569.0 613.0 -> 169.0	-	N.D.	
PFHpA	-	363.0 -> 319.0 363.0 -> 169.0	-	N.D.	
PFHpS	-	449.0 -> 80.0 449.0 -> 99.0	-	N.D.	
PFHxA	-	313.0 -> 269.0 313.0 -> 119.0	-	N.D.	
PFHxS	-	399.0 -> 80.0 399.0 -> 99.0	-	N.D.	
PFNA	-	463.0 -> 419.0 463.0 -> 219.0	-	N.D.	
PFOA	-	413.0 -> 369.0 413.0 -> 169.0	-	N.D.	
PFOS	-	499.0 -> 80.0 499.0 -> 99.0	-	N.D.	
PFPeA	-	263.0 -> 219.0	-	N.D.	

7.1.14  
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Perfluorinated Compounds by LC/MS/MS

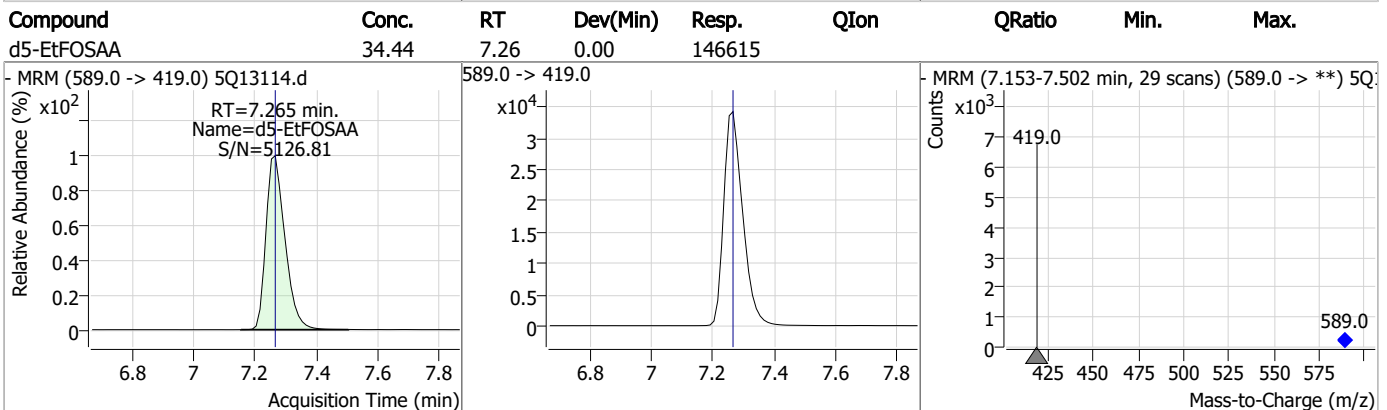
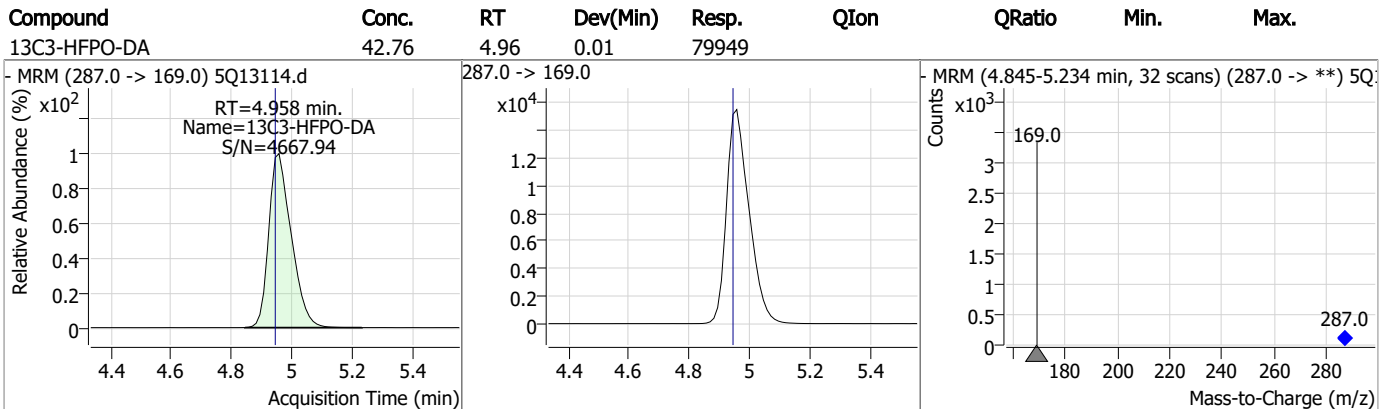
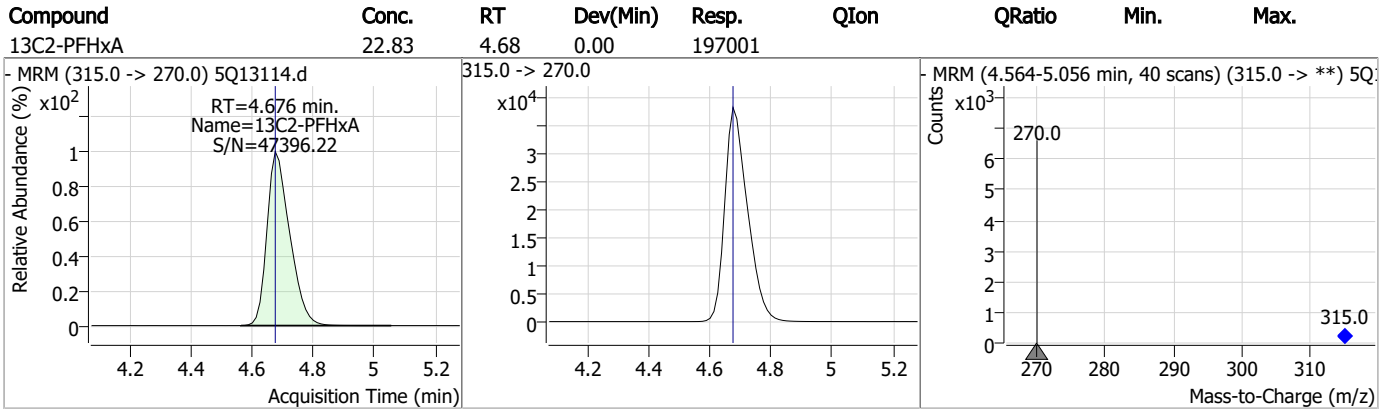
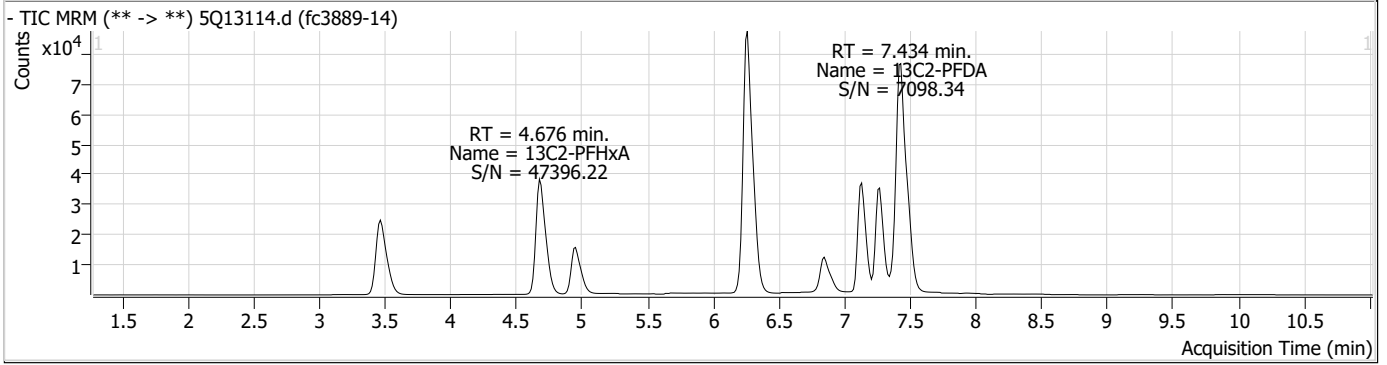
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

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

7.1.14  
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### Perfluorinated Compounds by LC/MS/MS

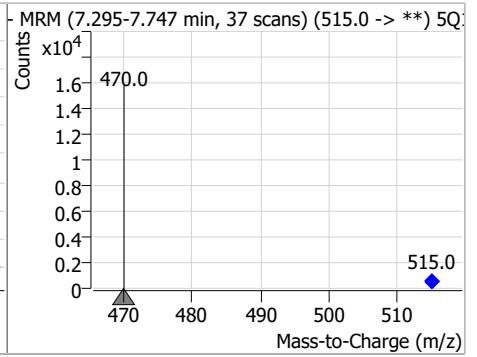
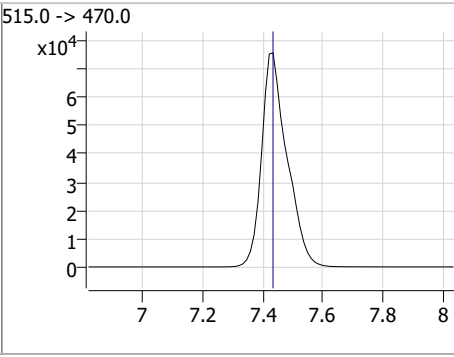
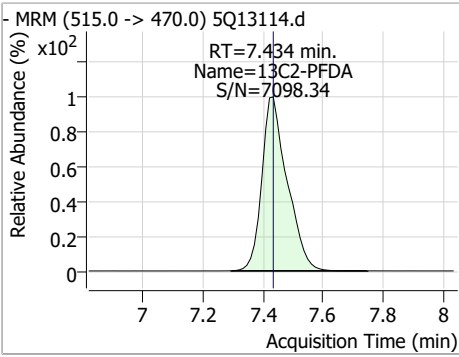


7.1.14

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### Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	20.98	7.43	0.00	441397				



7.1.14  
7

Manual Integrations  
**APPROVED**  
 (compounds with "m" flag)  
 Norman Farmer  
 04/17/23 15:07

### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13115.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 6:17:11 AM  
 Sample Name : fc3889-15  
 Vial : P3-F3  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	138900	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	356805	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	143528	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	64764	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	169617	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.422	515.0 -> 470.0	472050	21.02 µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 105.1%		
13C2-PFHxA	4.676	315.0 -> 270.0	208118	22.60 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 113.0%		
d5-EtFOSAA	7.265	589.0 -> 419.0	153543	33.58 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 83.9%		
13C3-HFPO-DA	4.946	287.0 -> 169.0	84181	42.19 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 105.5%		
<b>Target Compounds</b>					
6:2FTS	-	427.0 -> 407.0	-	N.D.	<b>QValue</b>
		427.0 -> 81.0			
8:2FTS	-	527.0 -> 507.0	-	N.D.	
		527.0 -> 81.0			
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
		584.0 -> 483.0			
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
		570.0 -> 512.0			
PFBA	1.850	213.0 -> 169.0	1006	0.42 µg/L	100
PFBS	3.716	299.0 -> 80.0	9326	3.03 µg/L	m 97
		299.0 -> 99.0	4118		
PFDA	-	513.0 -> 469.0	-	N.D.	
		513.0 -> 219.0			
PFDODA	-	613.0 -> 569.0	-	N.D.	
		613.0 -> 169.0			
PFHpA	5.553	363.0 -> 319.0	29148	1.59 µg/L	m 99
		363.0 -> 169.0	2443		
PFHpS	-	449.0 -> 80.0	-	N.D.	
		449.0 -> 99.0			
PFHxA	4.678	313.0 -> 269.0	42007	6.61 µg/L	100
		313.0 -> 119.0	3887		
PFHxS	5.587	399.0 -> 80.0	11002	3.31 µg/L	m 95
		399.0 -> 99.0	5302		
PFNA	-	463.0 -> 419.0	-	N.D.	
		463.0 -> 219.0			
PFOA	6.266	413.0 -> 369.0	109847	6.34 µg/L	m 91
		413.0 -> 169.0	41301		
PFOS	-	499.0 -> 80.0	-	N.D.	
		499.0 -> 99.0			
PFPeA	3.472	263.0 -> 219.0	46114	4.43 µg/L	100

7.1.15  
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Perfluorinated Compounds by LC/MS/MS

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

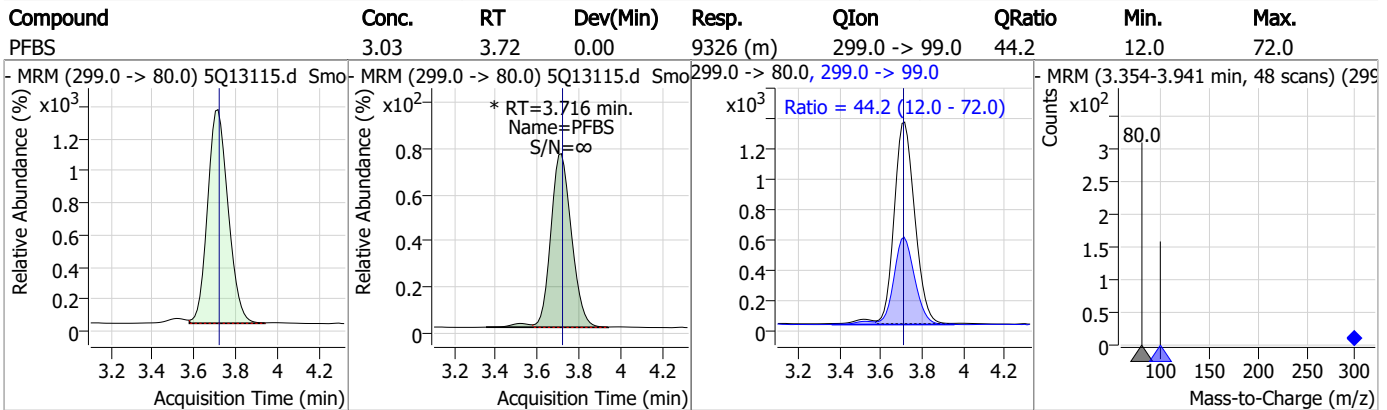
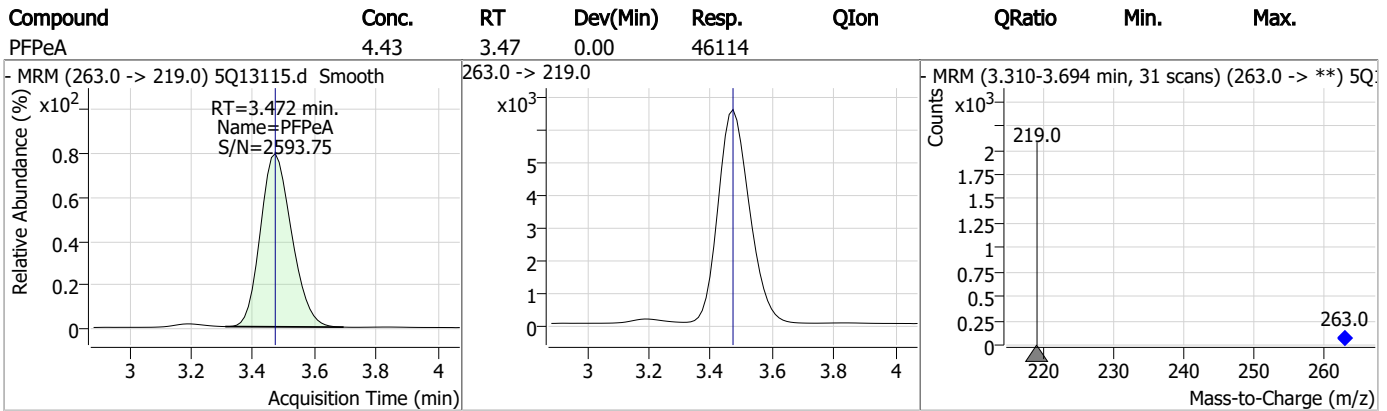
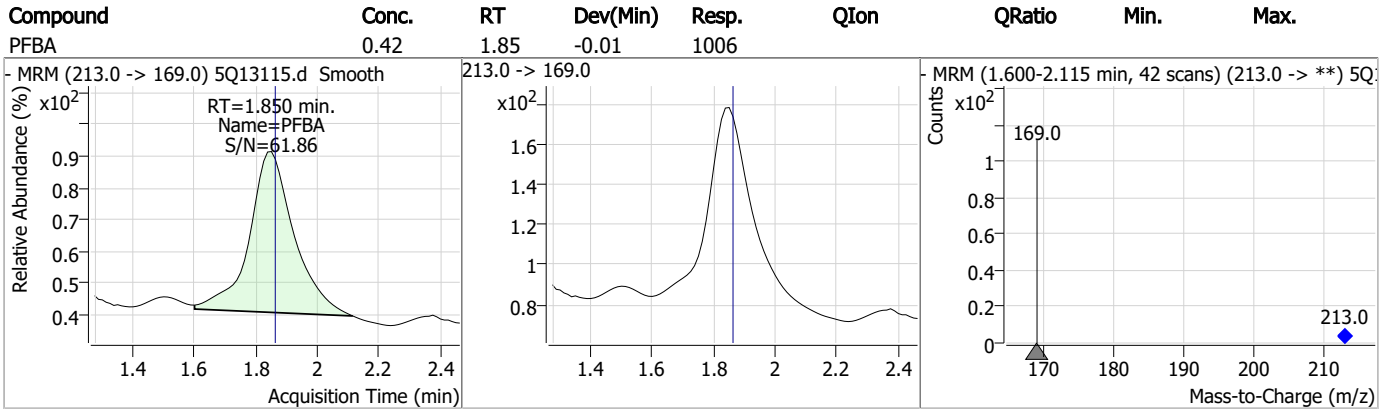
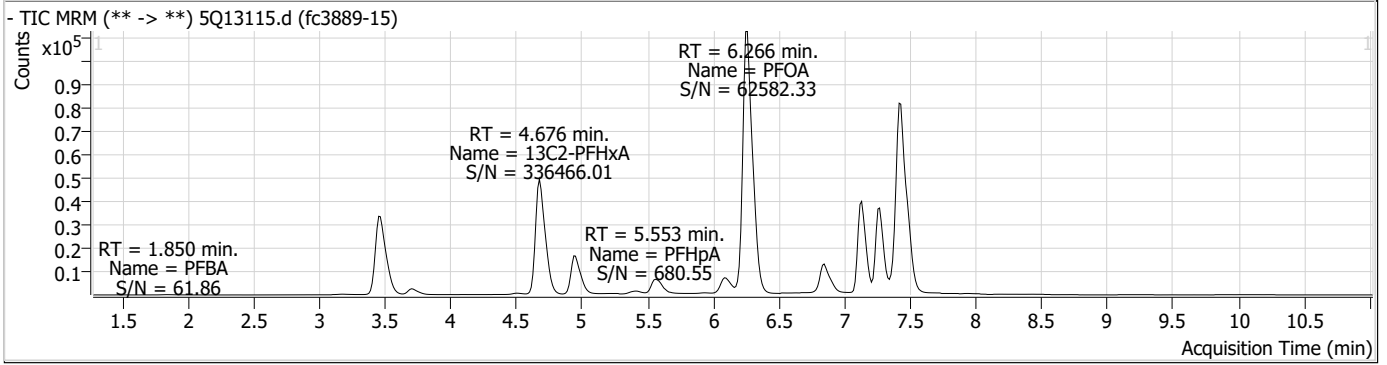
# = Qualifier out of range, m = manually integrated, + = Area summed

7.1.15

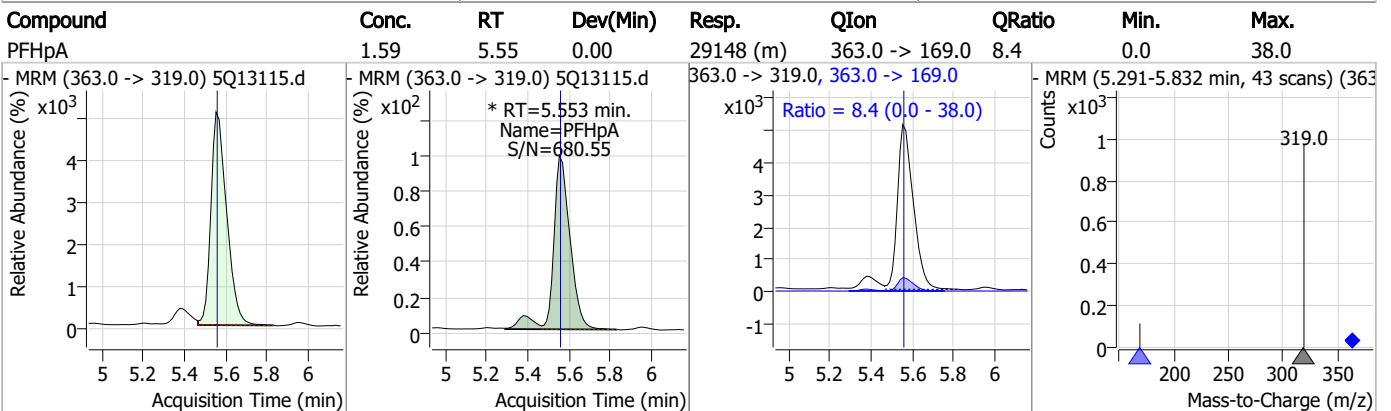
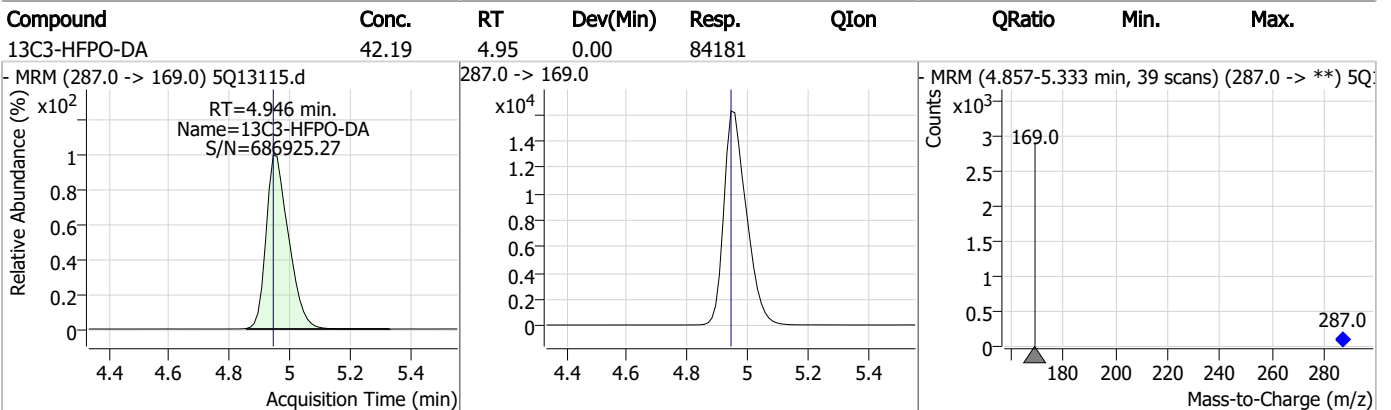
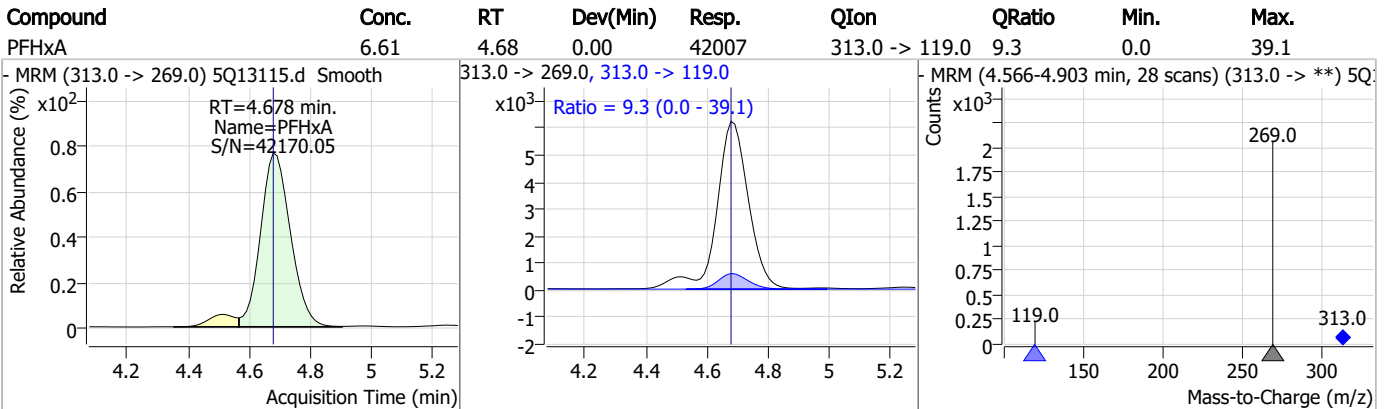
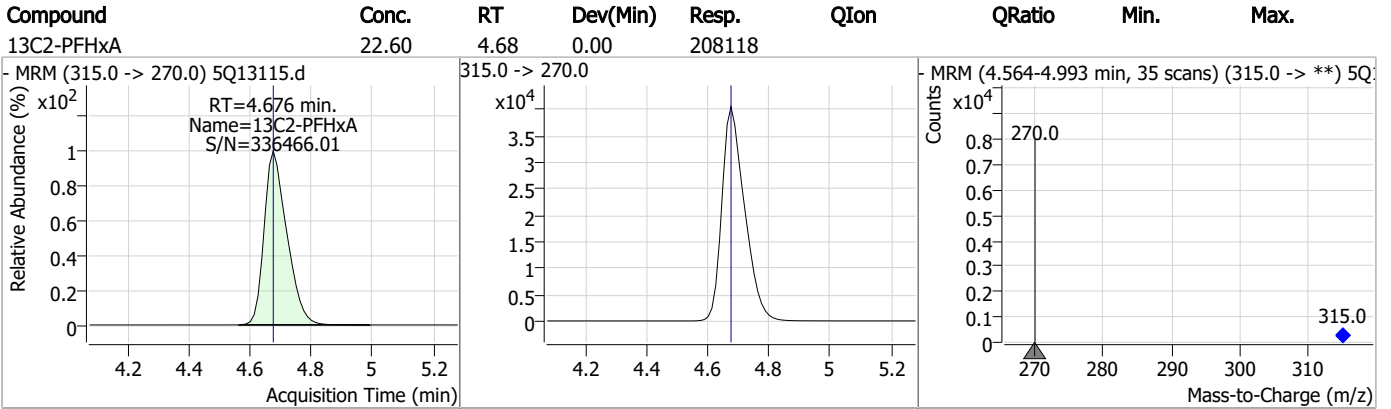
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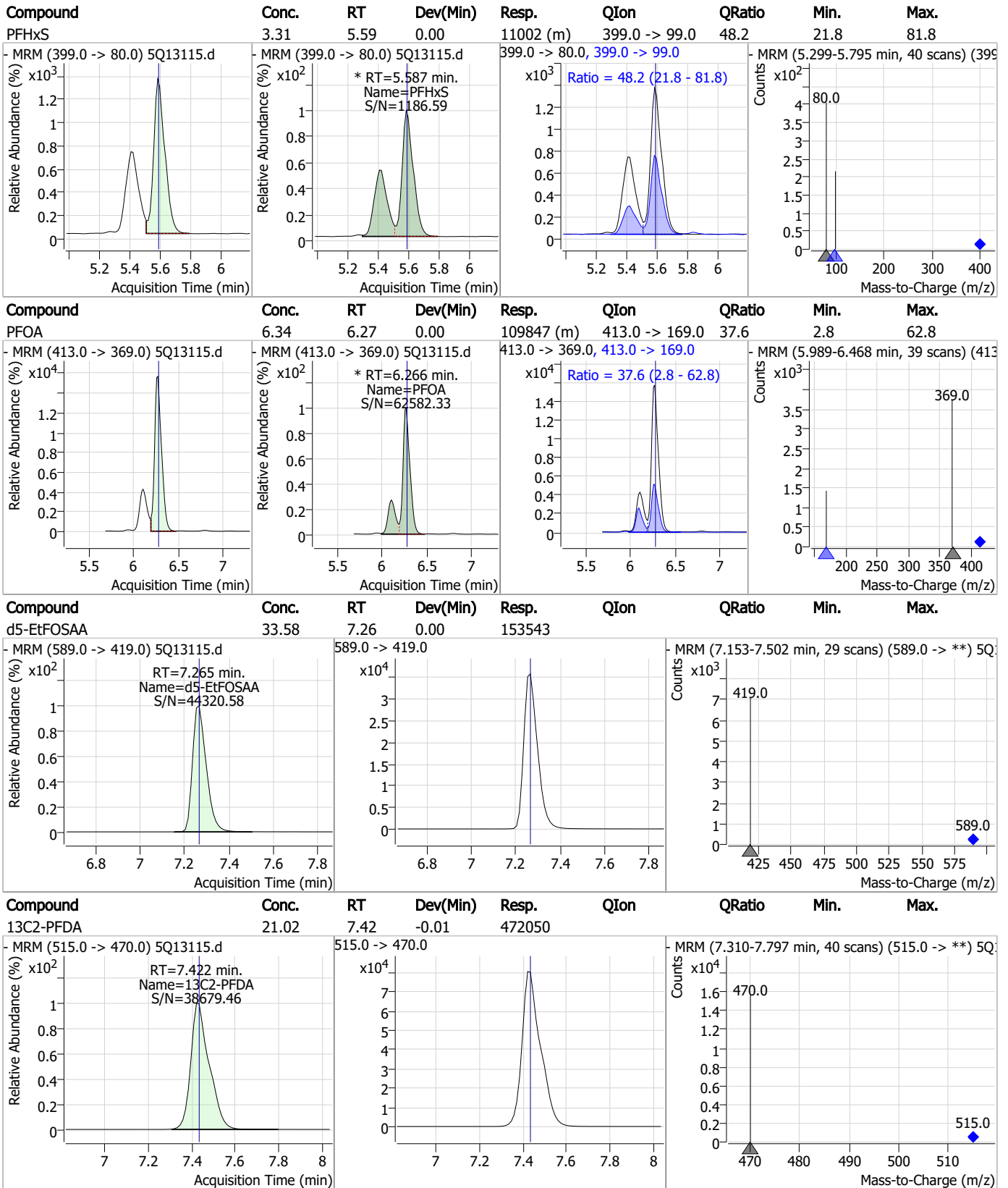
### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS



7.1.15  
7



# Manual Integration Approval Summary

**Sample Number:** FC3889-15      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13115.D      **Analyst approved:** 04/17/23 12:41 Natasha Gumtie  
**Injection Time:** 04/15/23 06:17      **Supervisor approved:** 04/17/23 15:07 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorobutanesulfonic acid	375-73-5		3.72	Split peak
Perfluoroheptanoic acid	375-85-9		5.55	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanoic acid	335-67-1		6.27	Split peak

7.1.15.1

7

Manual Integrations  
**APPROVED**  
 (compounds with "m" flag)  
 Norman Farmer  
 04/17/23 15:07

### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13118.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 7:07:36 AM  
 Sample Name : fc3889-16  
 Vial : P3-F4  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	128511	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	334101	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	140388	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	59598	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	157482	40.00 µg/L	0.000

**System Monitoring Compounds**

13C2-PFDA	7.434	515.0 -> 470.0	455069	21.64 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 108.2%	
13C2-PFHxA	4.676	315.0 -> 270.0	202403	23.47 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 117.3%	
d5-EtFOSAA	7.265	589.0 -> 419.0	145218	34.20 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 85.5%	
13C3-HFPO-DA	4.958	287.0 -> 169.0	83407	44.64 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%			Recovery = 111.6%	

**Target Compounds**

Compound	RT	Transition	Response	Conc. Units	QValue
6:2FTS	-	427.0 -> 407.0	-	N.D.	
		427.0 -> 81.0			
8:2FTS	-	527.0 -> 507.0	-	N.D.	
		527.0 -> 81.0			
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
		584.0 -> 483.0			
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
		570.0 -> 512.0			
PFBA	1.838	213.0 -> 169.0	0	µg/L m	1
PFBS	3.716	299.0 -> 80.0	1625	0.57 µg/L m	98
		299.0 -> 99.0	700		
PFDA	-	513.0 -> 469.0	-	N.D.	
		513.0 -> 219.0			
PFDODA	-	613.0 -> 569.0	-	N.D.	
		613.0 -> 169.0			
PFHpA	5.568	363.0 -> 319.0	4368	0.25 µg/L m	98
		363.0 -> 169.0	386		
PFHpS	-	449.0 -> 80.0	-	N.D.	
		449.0 -> 99.0			
PFHxA	4.691	313.0 -> 269.0	7502	1.26 µg/L	100
		313.0 -> 119.0	689		
PFHxS	5.587	399.0 -> 80.0	995	0.33 µg/L m	99
		399.0 -> 99.0	510		
PFNA	-	463.0 -> 419.0	-	N.D.	
		463.0 -> 219.0			
PFOA	6.266	413.0 -> 369.0	11863	0.73 µg/L m	89
		413.0 -> 169.0	4635		
PFOS	-	499.0 -> 80.0	-	N.D.	
		499.0 -> 99.0			
PFPeA	3.472	263.0 -> 219.0	9019	0.89 µg/L	100



Perfluorinated Compounds by LC/MS/MS

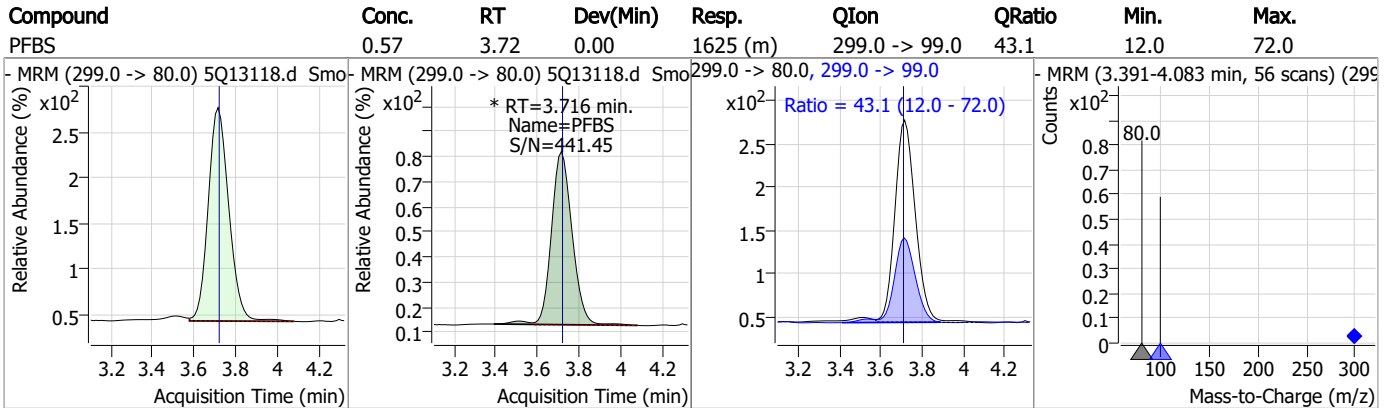
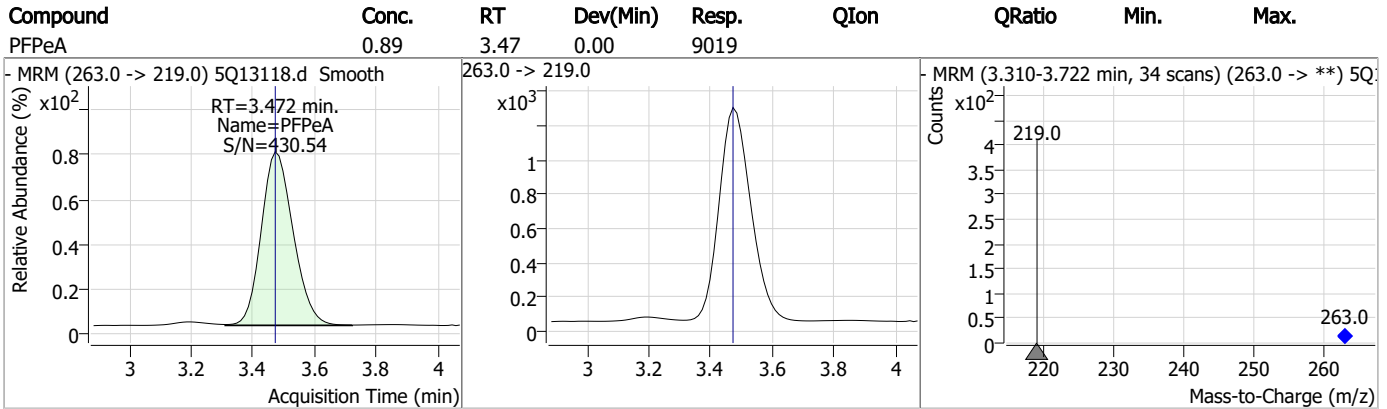
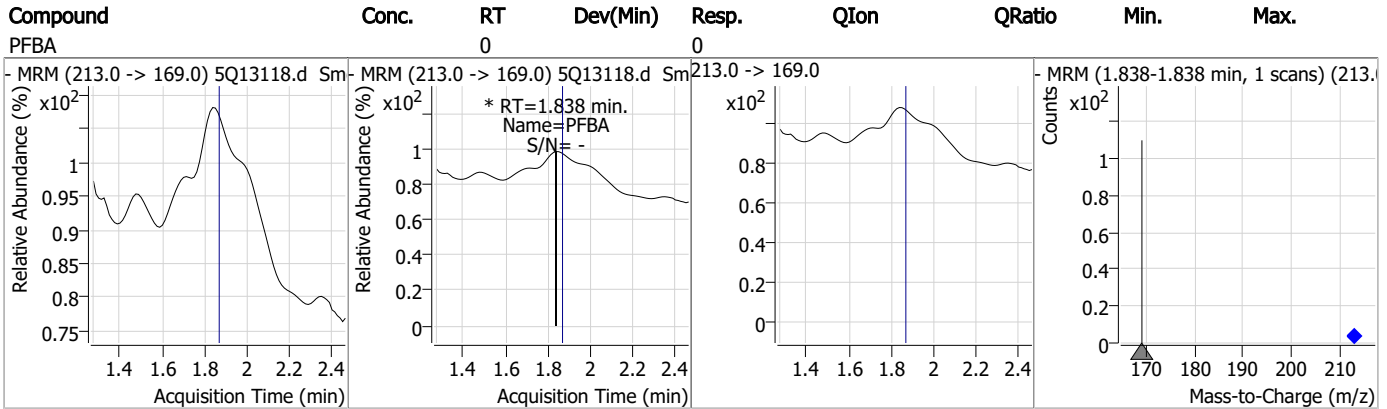
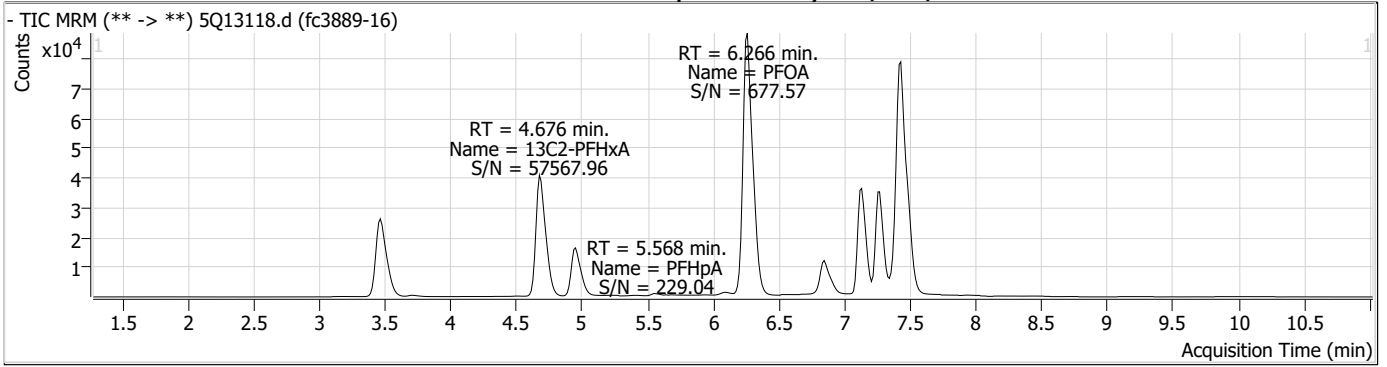
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

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

7.1.16  
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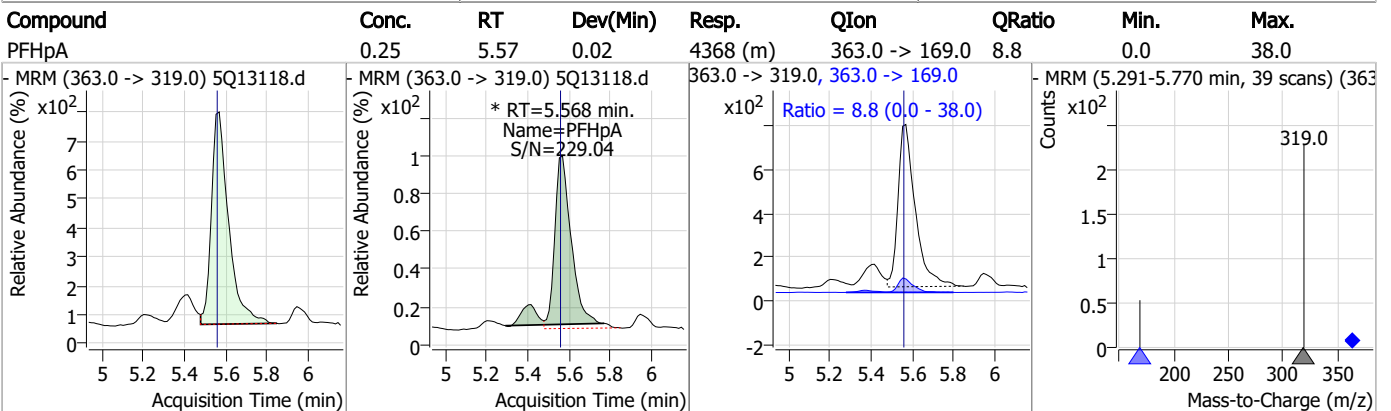
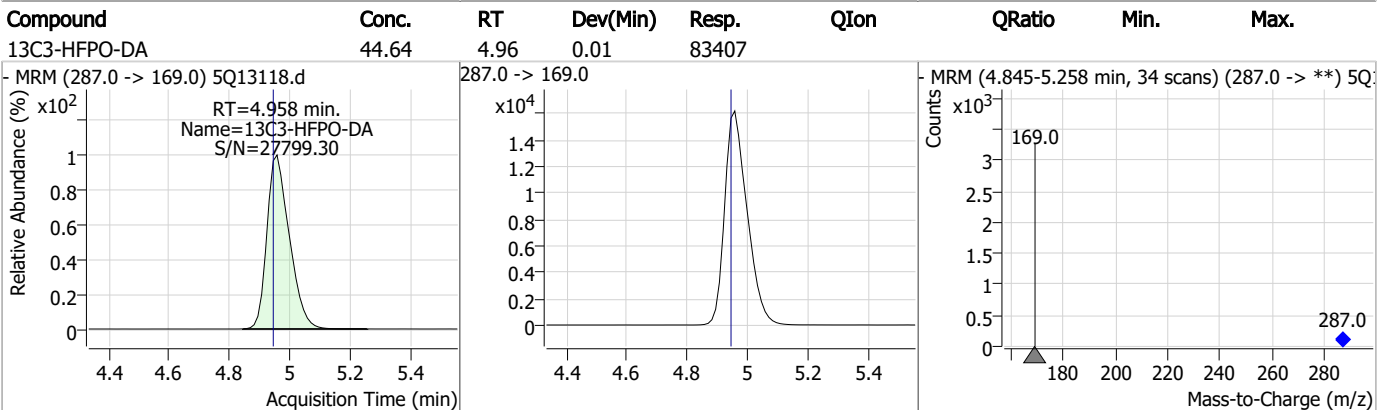
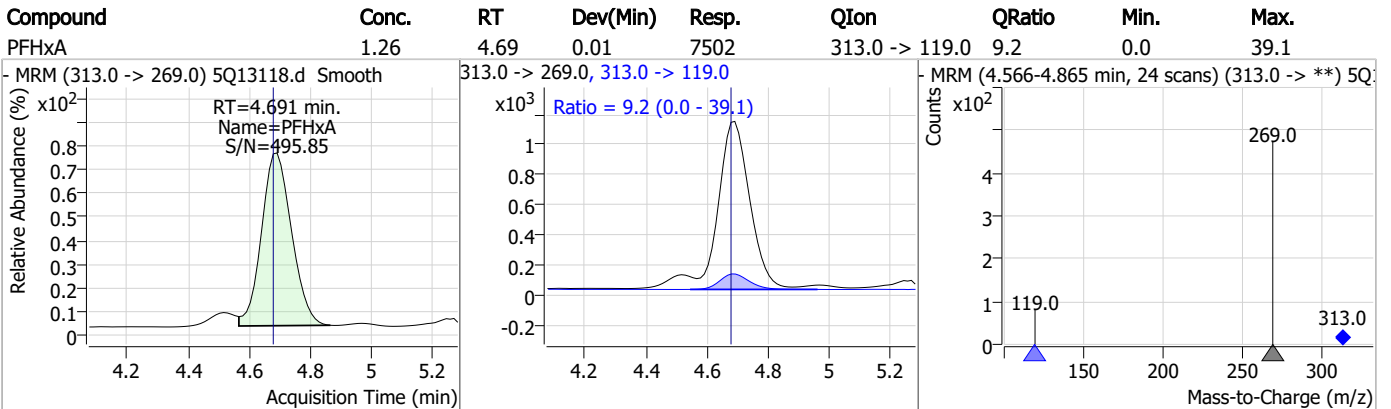
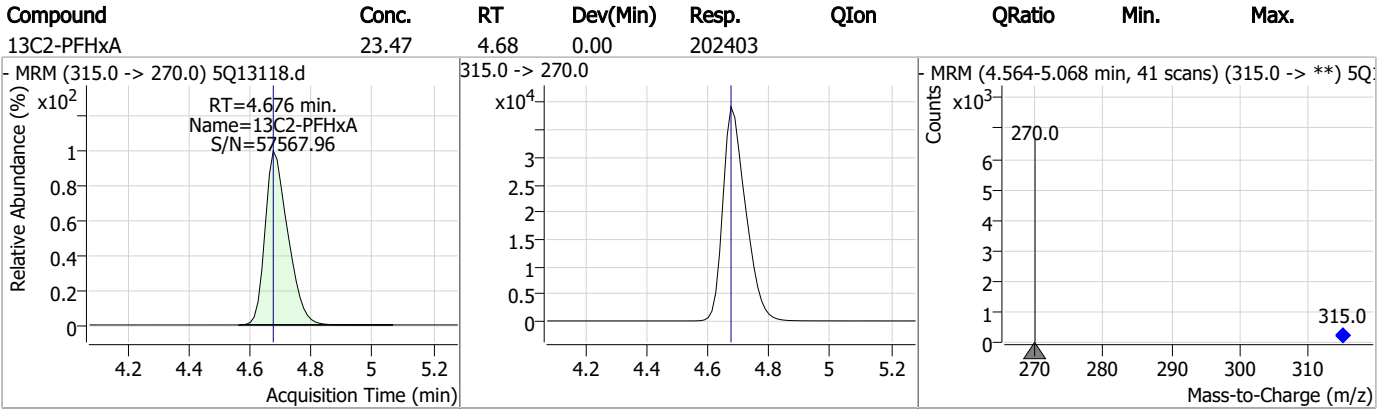


### Perfluorinated Compounds by LC/MS/MS



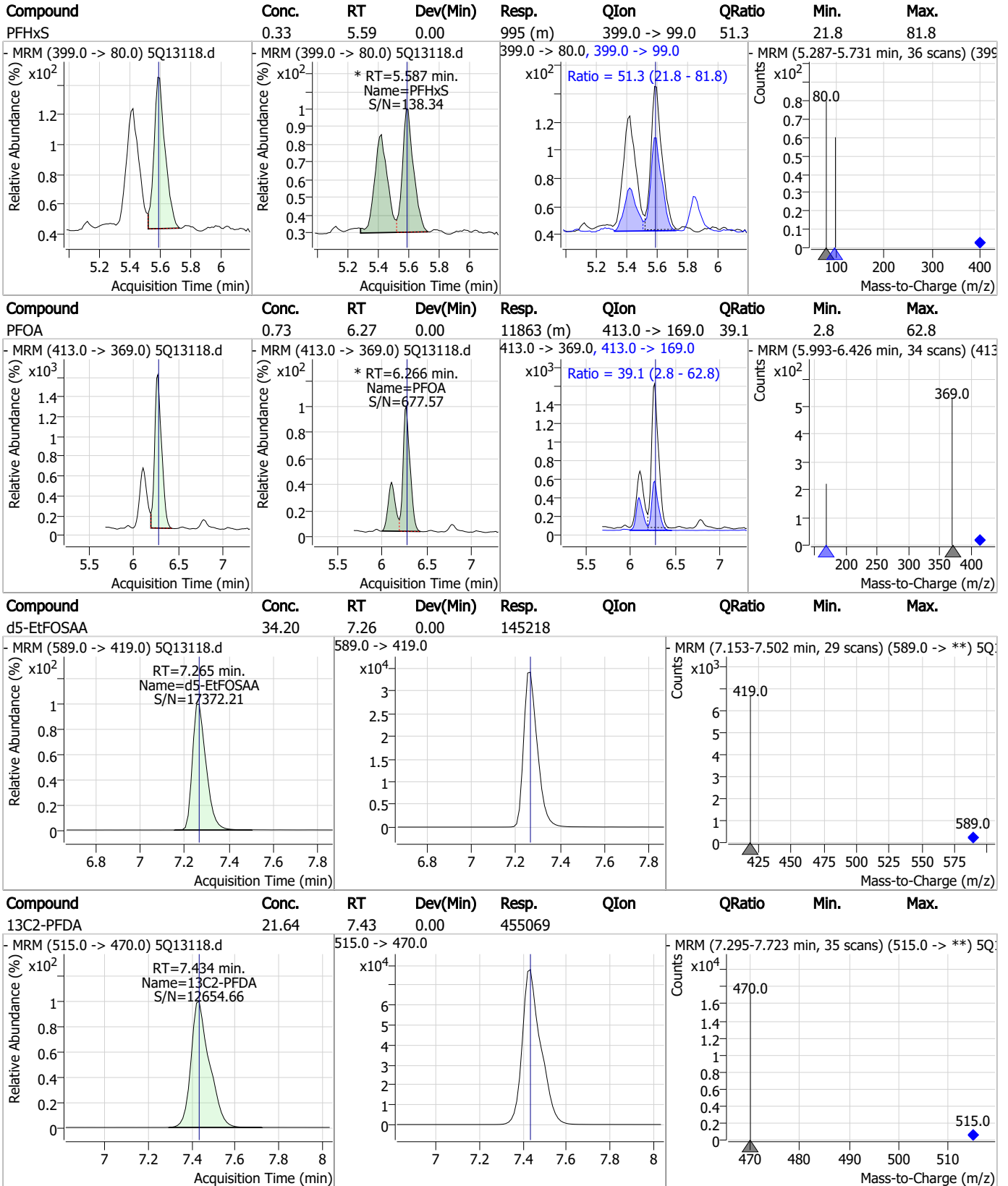
7.1.16  
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### Perfluorinated Compounds by LC/MS/MS





### Perfluorinated Compounds by LC/MS/MS



7.1.16  
7

# Manual Integration Approval Summary

**Sample Number:** FC3889-16      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13118.D      **Analyst approved:** 04/17/23 12:41 Natasha Gumtie  
**Injection Time:** 04/15/23 07:07      **Supervisor approved:** 04/17/23 15:07 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorobutanesulfonic acid	375-73-5		3.72	Split peak
Perfluoroheptanoic acid	375-85-9		5.57	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanoic acid	335-67-1		6.27	Split peak

7.1.16.1

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Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13123.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 8:31:39 AM  
 Sample Name : fc3889-17  
 Vial : P3-F9  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	134217	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	330686	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	140538	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	59854	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	154148	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.434	515.0 -> 470.0	470158	22.59 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 112.9%		
13C2-PFHxA	4.676	315.0 -> 270.0	201765	23.64 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 118.2%		
d5-EtFOSAA	7.265	589.0 -> 419.0	160439	38.61 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 96.5%		
13C3-HFPO-DA	4.958	287.0 -> 169.0	84483	45.68 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 114.2%		
<b>Target Compounds</b>					
6:2FTS	-	427.0 -> 407.0 427.0 -> 81.0	-	N.D.	
8:2FTS	-	527.0 -> 507.0 527.0 -> 81.0	-	N.D.	
EtFOSAA	-	584.0 -> 419.0 584.0 -> 483.0	-	N.D.	
MeFOSAA	-	570.0 -> 419.0 570.0 -> 512.0	-	N.D.	
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0 299.0 -> 99.0	-	N.D.	
PFDA	-	513.0 -> 469.0 513.0 -> 219.0	-	N.D.	
PFDODA	-	613.0 -> 569.0 613.0 -> 169.0	-	N.D.	
PFHpA	-	363.0 -> 319.0 363.0 -> 169.0	-	N.D.	
PFHpS	-	449.0 -> 80.0 449.0 -> 99.0	-	N.D.	
PFHxA	4.691	313.0 -> 269.0 313.0 -> 119.0	834 93	0.14 µg/L	94
PFHxS	-	399.0 -> 80.0 399.0 -> 99.0	-	N.D.	
PFNA	-	463.0 -> 419.0 463.0 -> 219.0	-	N.D.	
PFOA	-	413.0 -> 369.0 413.0 -> 169.0	-	N.D.	
PFOS	-	499.0 -> 80.0 499.0 -> 99.0	-	N.D.	
PFPeA	-	263.0 -> 219.0	-	N.D.	

7.1.17  
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QValue

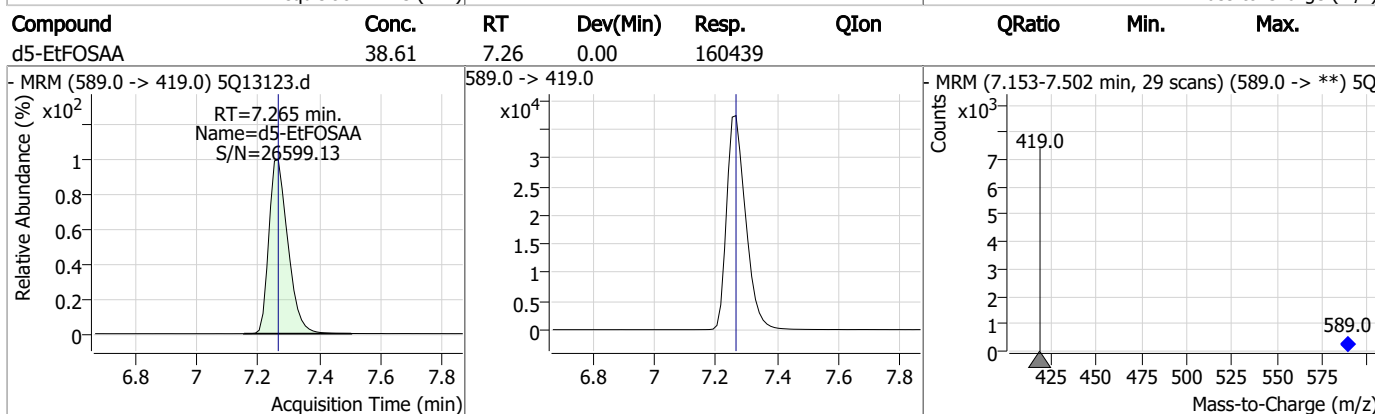
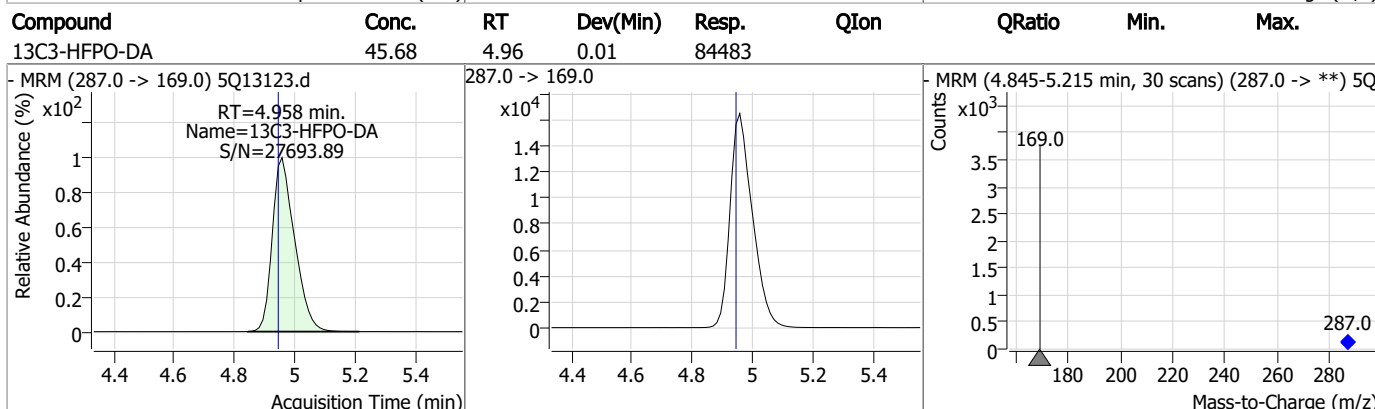
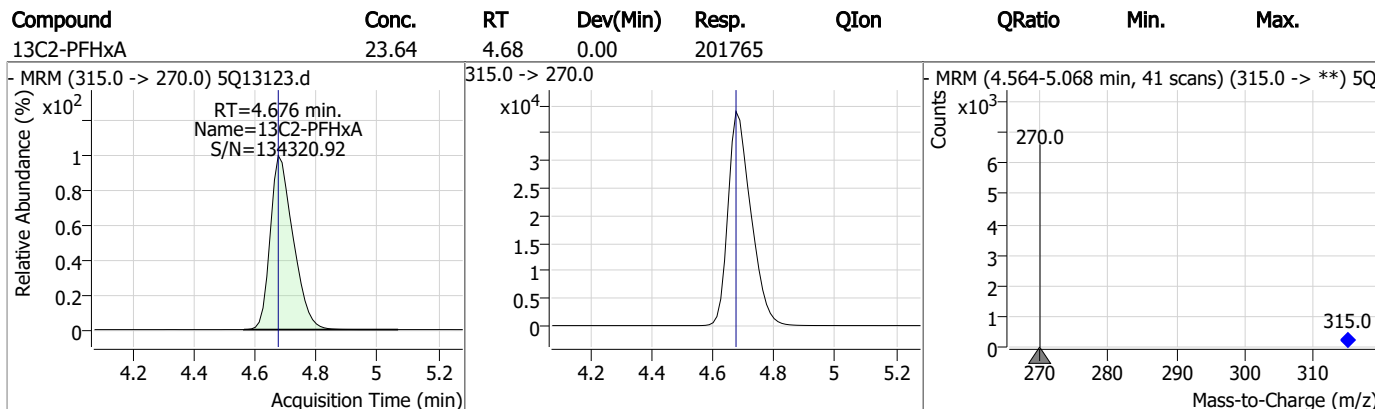
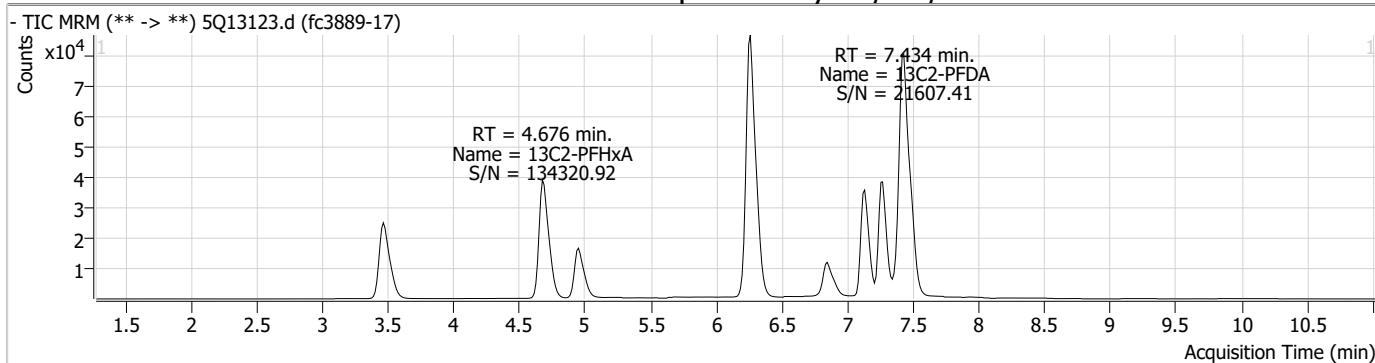


## Perfluorinated Compounds by LC/MS/MS

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

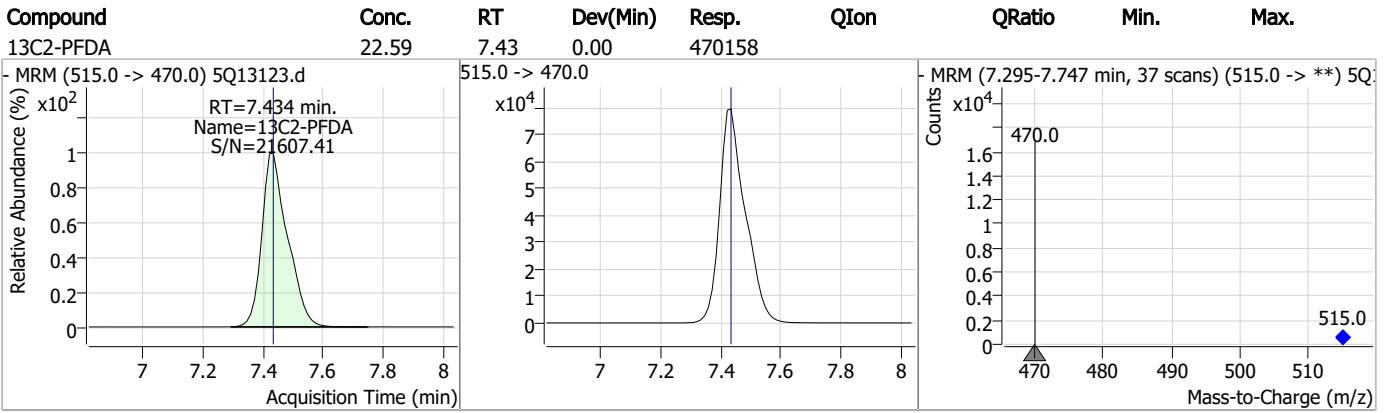
# = Qualifier out of range, m = manually integrated, + = Area summed

### Perfluorinated Compounds by LC/MS/MS



7.1.17

### Perfluorinated Compounds by LC/MS/MS



7.1.17  
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## Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13092.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/14/2023 11:50:12 PM  
 Sample Name : op96327-mb  
 Vial : P3-D2  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	125310	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	327340	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	138462	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	58553	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	153057	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.434	515.0 -> 470.0	447439	21.72 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 108.6%		
13C2-PFHxA	4.676	315.0 -> 270.0	199749	23.64 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 118.2%		
d5-EtFOSAA	7.265	589.0 -> 419.0	155620	37.71 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 94.3%		
13C3-HFPO-DA	4.958	287.0 -> 169.0	77016	42.07 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 105.2%		
<b>Target Compounds</b>					
6:2FTS	-	427.0 -> 407.0 427.0 -> 81.0	-	N.D.	QValue
8:2FTS	-	527.0 -> 507.0 527.0 -> 81.0	-	N.D.	
EtFOSAA	-	584.0 -> 419.0 584.0 -> 483.0	-	N.D.	
MeFOSAA	-	570.0 -> 419.0 570.0 -> 512.0	-	N.D.	
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0 299.0 -> 99.0	-	N.D.	
PFDA	-	513.0 -> 469.0 513.0 -> 219.0	-	N.D.	
PFDODA	-	613.0 -> 569.0 613.0 -> 169.0	-	N.D.	
PFHpA	-	363.0 -> 319.0 363.0 -> 169.0	-	N.D.	
PFHpS	-	449.0 -> 80.0 449.0 -> 99.0	-	N.D.	
PFHxA	-	313.0 -> 269.0 313.0 -> 119.0	-	N.D.	
PFHxS	-	399.0 -> 80.0 399.0 -> 99.0	-	N.D.	
PFNA	-	463.0 -> 419.0 463.0 -> 219.0	-	N.D.	
PFOA	-	413.0 -> 369.0 413.0 -> 169.0	-	N.D.	
PFOS	-	499.0 -> 80.0 499.0 -> 99.0	-	N.D.	
PFPeA	-	263.0 -> 219.0	-	N.D.	

7.2.1  
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Perfluorinated Compounds by LC/MS/MS

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

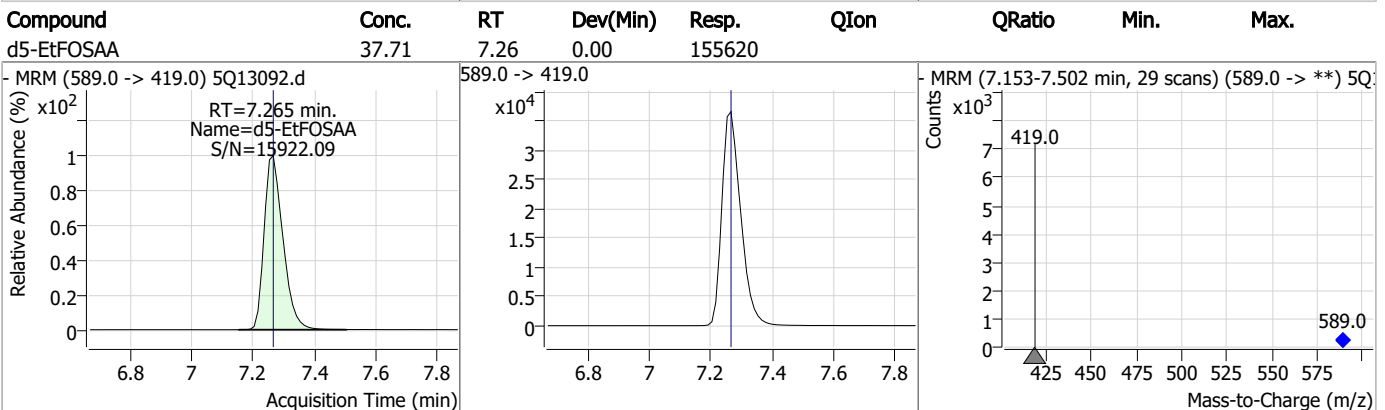
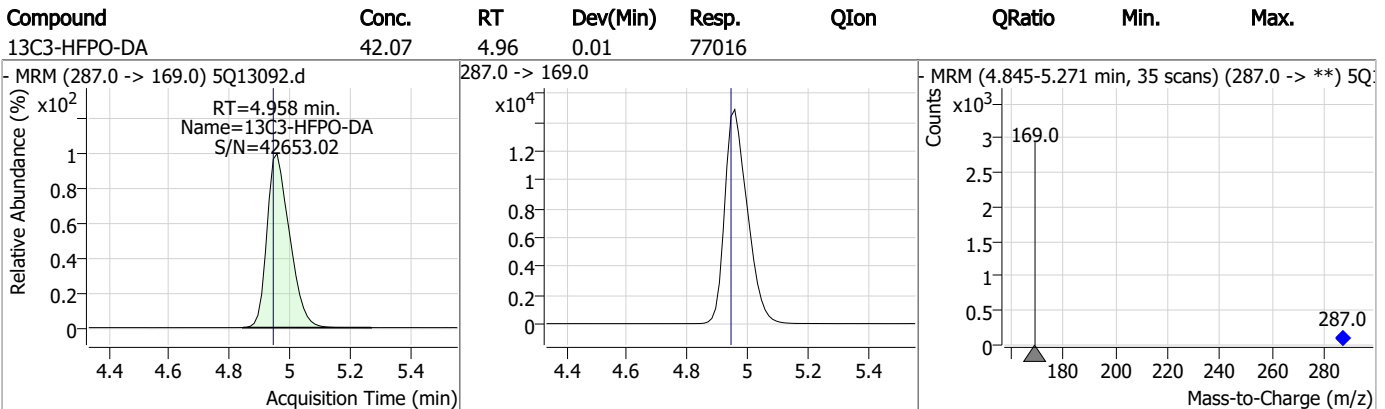
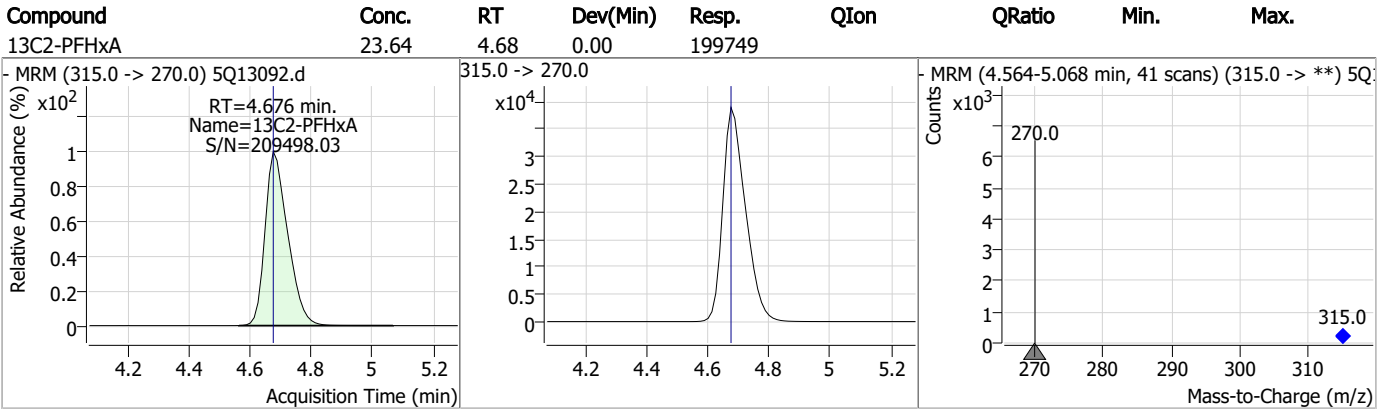
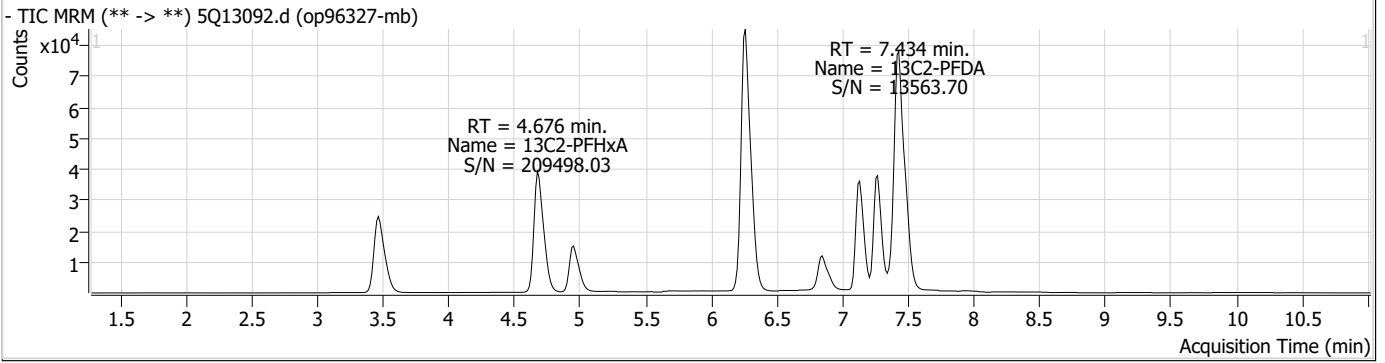
# = Qualifier out of range, m = manually integrated, + = Area summed

7.2.1

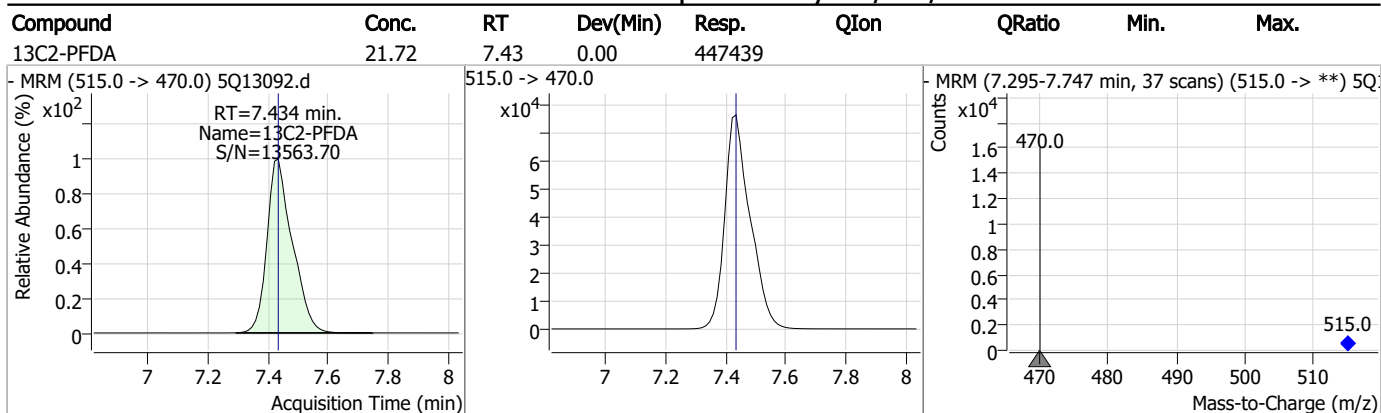
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### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS



7.2.1  
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### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13091.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/14/2023 11:33:24 PM  
 Sample Name : op96327-bs:80  
 Vial : P3-D1  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	151488	20.00 µg/L	0.000
13C2-PFOA	6.253	415.0 -> 370.0	329633	20.00 µg/L	-0.012
13C3-PFPeA	3.469	266.0 -> 222.0	143839	20.00 µg/L	0.000
13C4-PFOS	6.836	503.0 -> 80.0	60651	20.00 µg/L	-0.012
d3-MeFOSAA	7.130	573.0 -> 419.0	150857	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.422	515.0 -> 470.0	465845	22.45 µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 112.3%		
13C2-PFHxA	4.676	315.0 -> 270.0	197210	23.18 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 115.9%		
d5-EtFOSAA	7.265	589.0 -> 419.0	173057	42.55 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 106.4%		
13C3-HFPO-DA	4.946	287.0 -> 169.0	78742	42.71 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 106.8%		
<b>Target Compounds</b>					
6:2FTS	6.251	427.0 -> 407.0 427.0 -> 81.0	570712 241029	79.58 µg/L	100
8:2FTS	7.471	527.0 -> 507.0 527.0 -> 81.0	526807 258927	77.73 µg/L	99
EtFOSAA	7.266	584.0 -> 419.0 584.0 -> 483.0	311587 165434	72.81 µg/L	m 99
MeFOSAA	7.131	570.0 -> 419.0 570.0 -> 512.0	329540 79418	71.42 µg/L	m 99
PFBA	1.850	213.0 -> 169.0	50936	21.17 µg/L	100
PFBS	3.716	299.0 -> 80.0 299.0 -> 99.0	222953 93540	77.39 µg/L	100
PFDA	7.422	513.0 -> 469.0 513.0 -> 219.0	1454760 273914	74.77 µg/L	99
PFDoDA	8.729	613.0 -> 569.0 613.0 -> 169.0	1766954 88453	65.24 µg/L	m 98
PFHpA	5.553	363.0 -> 319.0 363.0 -> 169.0	1316130 105166	77.48 µg/L	100
PFHpS	6.261	449.0 -> 80.0 449.0 -> 99.0	219494 118927	76.46 µg/L	100
PFHxA	4.678	313.0 -> 269.0 313.0 -> 119.0	457201 42030	77.86 µg/L	100
PFHxS	5.587	399.0 -> 80.0 399.0 -> 99.0	218469 123734	70.12 µg/L	m 93
PFNA	6.864	463.0 -> 419.0 463.0 -> 219.0	1452323 333521	76.51 µg/L	100
PFOA	6.254	413.0 -> 369.0 413.0 -> 169.0	1227161 405742	76.70 µg/L	100
PFOS	6.837	499.0 -> 80.0 499.0 -> 99.0	260765 135219	74.56 µg/L	m 99
PFPeA	3.472	263.0 -> 219.0	823535	79.00 µg/L	100

7.3.1  
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Perfluorinated Compounds by LC/MS/MS

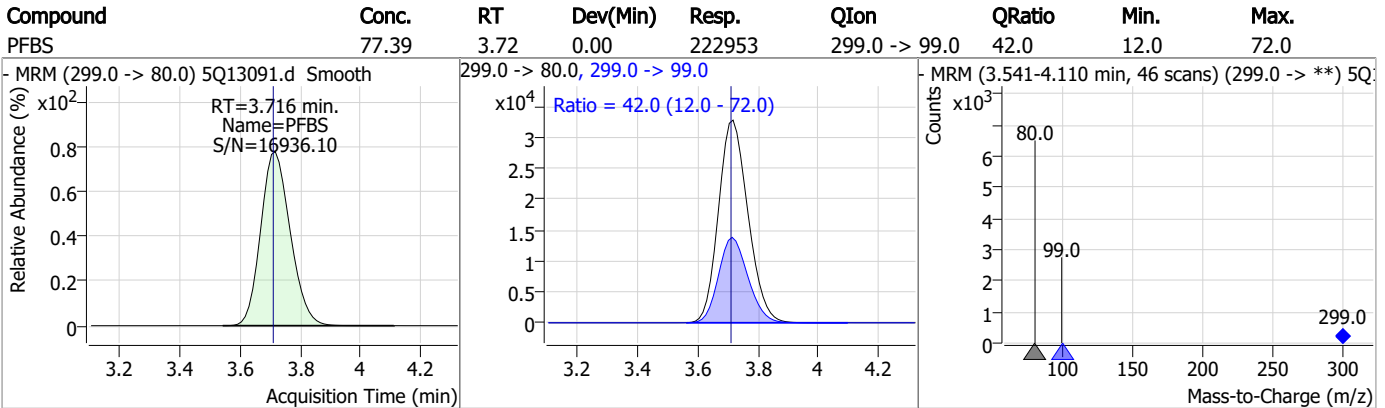
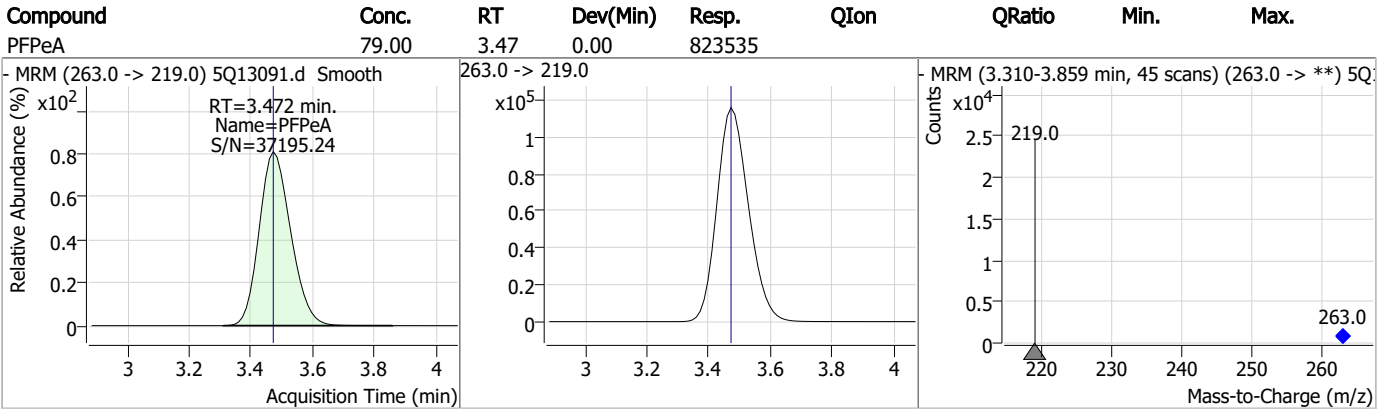
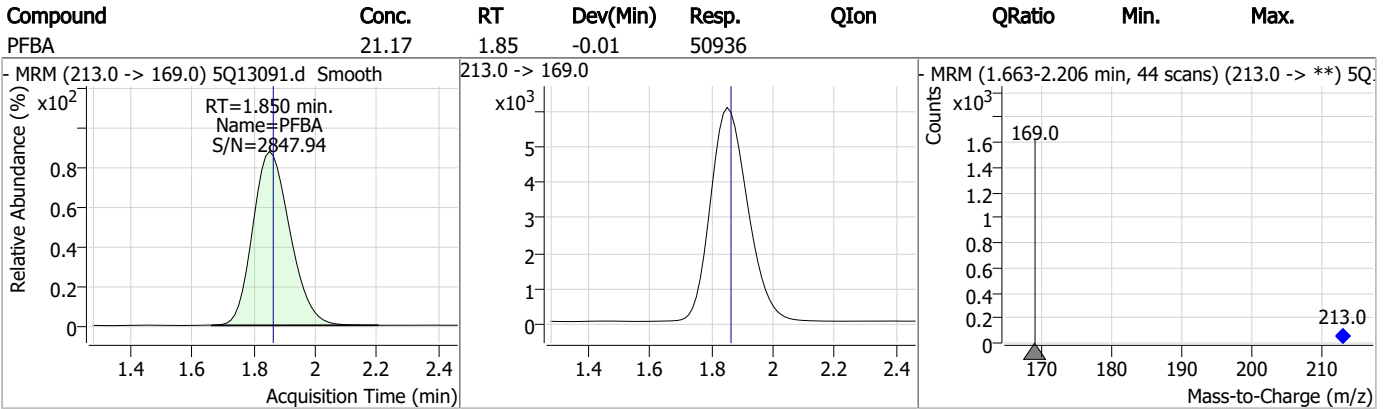
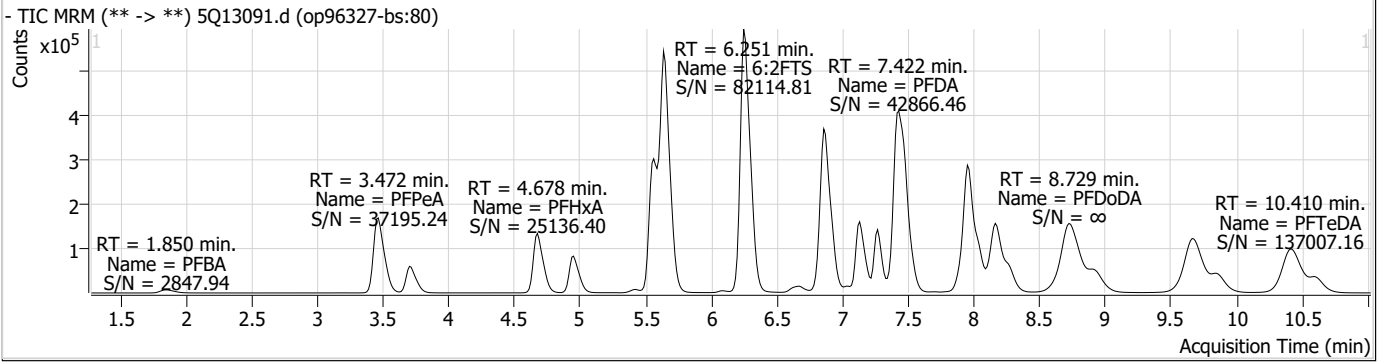
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	10.410	713.0 -> 669.0	1184986	63.72 µg/L	100
		713.0 -> 219.0	93990		
PFTrDA	9.660	663.0 -> 619.0	1440928	67.85 µg/L	98
		663.0 -> 369.0	117955		
PFUnDA	7.954	563.0 -> 519.0	1584672	72.64 µg/L	100
		563.0 -> 269.0	255176		
ADONA	5.655	377.0 -> 251.0	1866017	77.59 µg/L	100
		377.0 -> 85.0	679955		
9CI-PF3ONS	7.132	531.0 -> 351.0	171077	72.75 µg/L	99
		533.0 -> 353.0	54200		
11CI-PF3OUdS	8.163	631.0 -> 451.0	963050	66.73 µg/L	100
		633.0 -> 453.0	297072		
HFPO-DA	4.960	285.0 -> 169.0	156942	72.28 µg/L	98
		329.0 -> 169.0	200295		

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

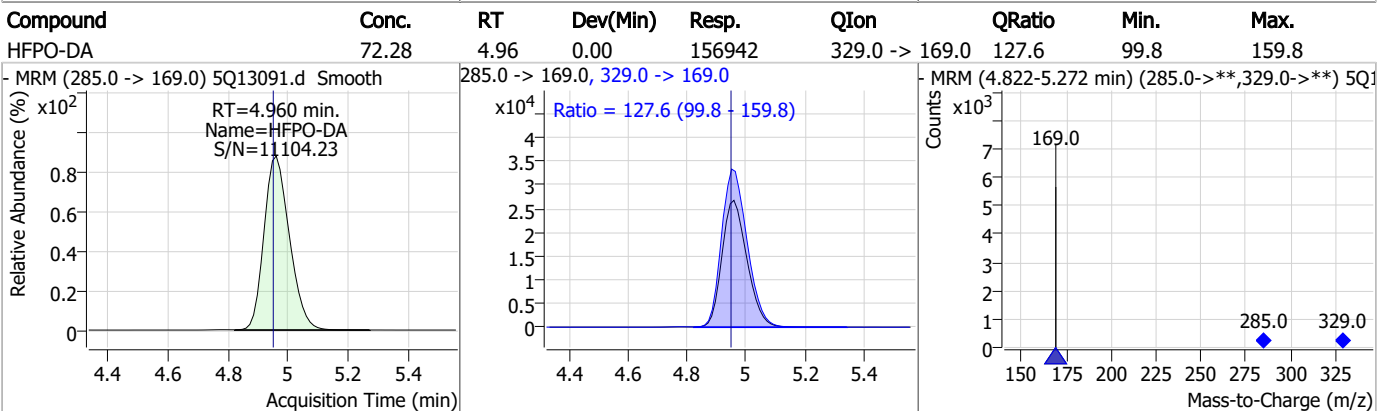
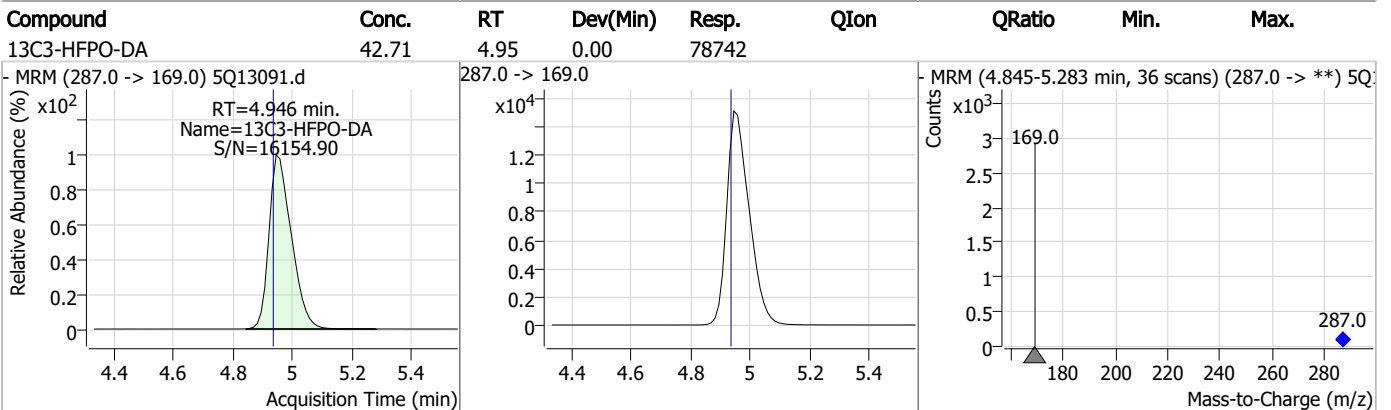
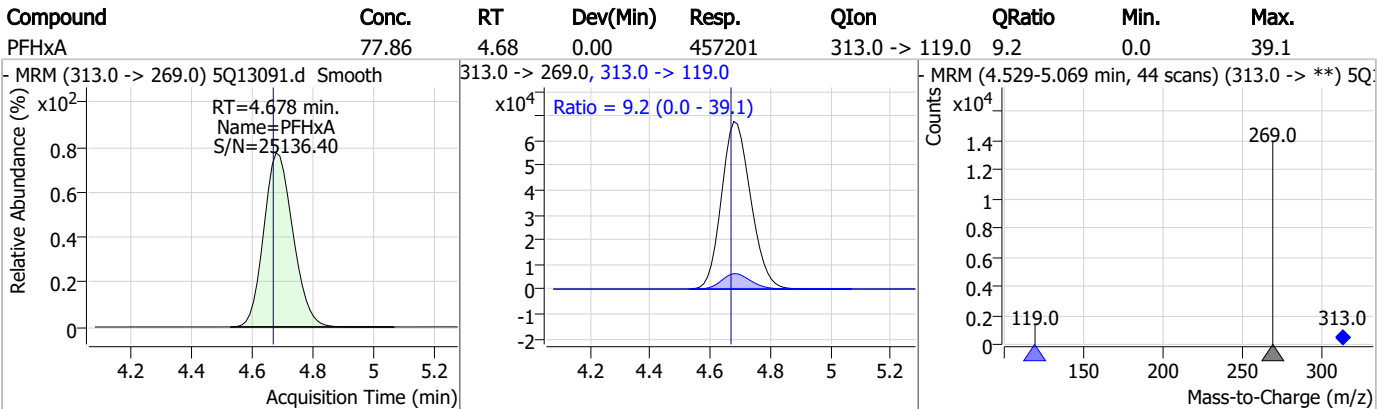
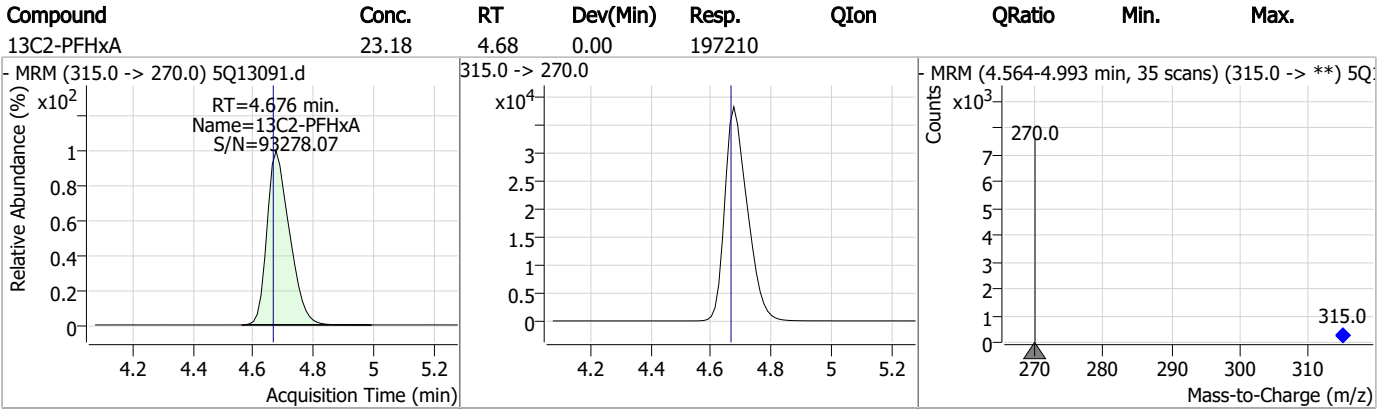
7.3.1

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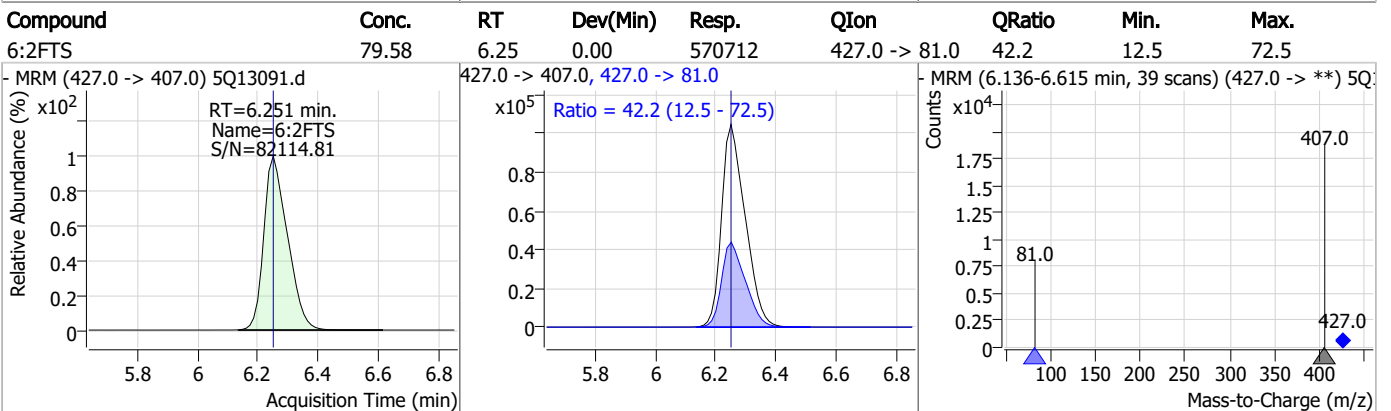
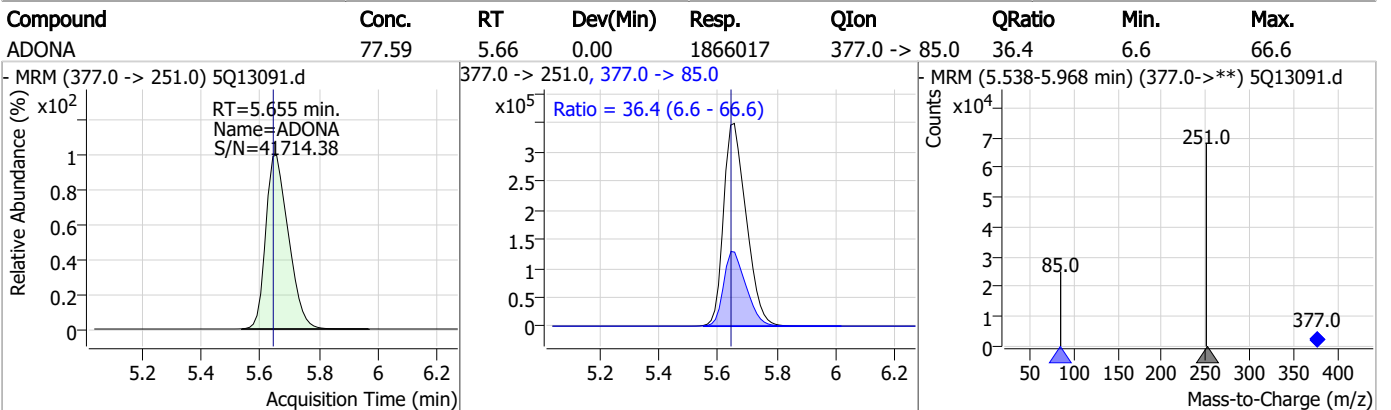
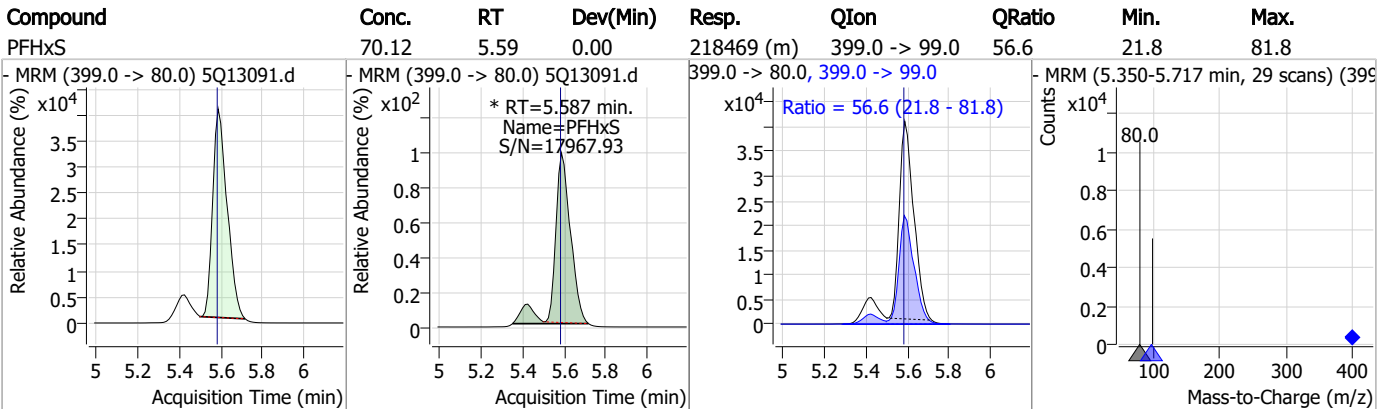
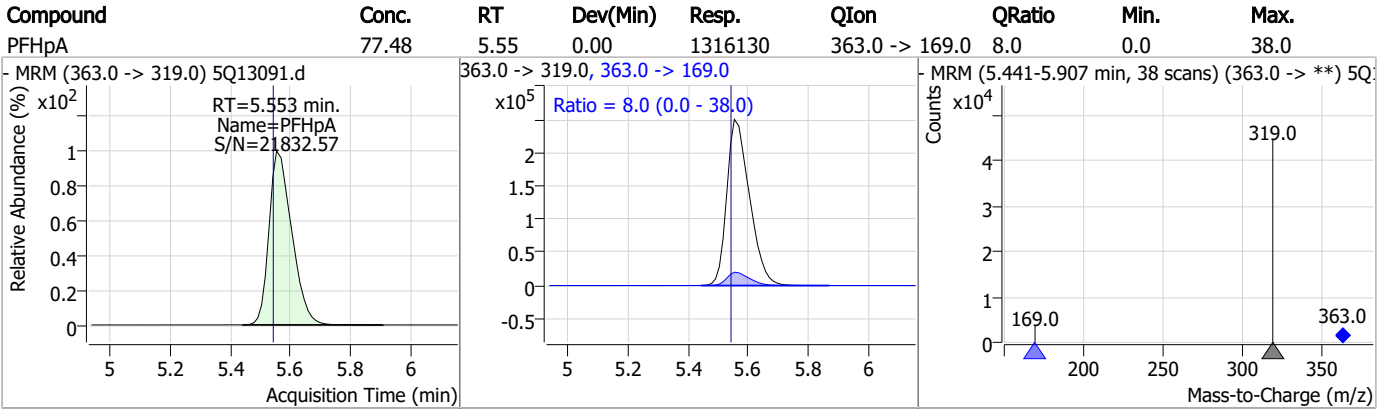
### Perfluorinated Compounds by LC/MS/MS



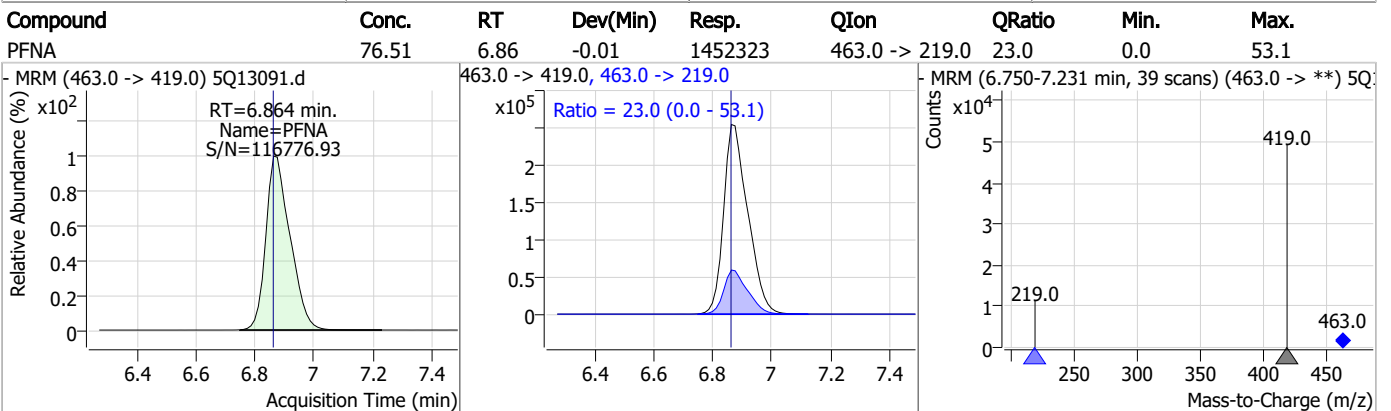
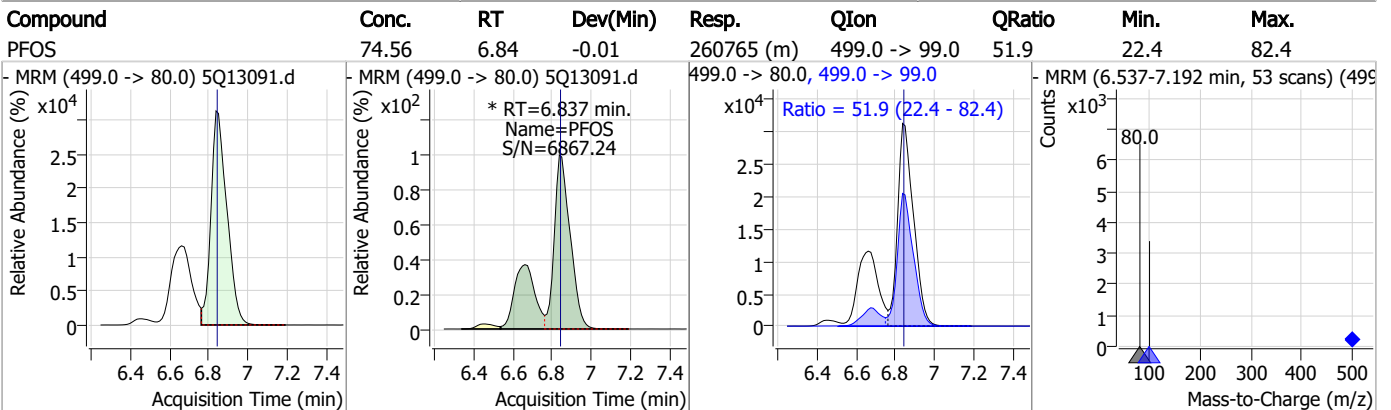
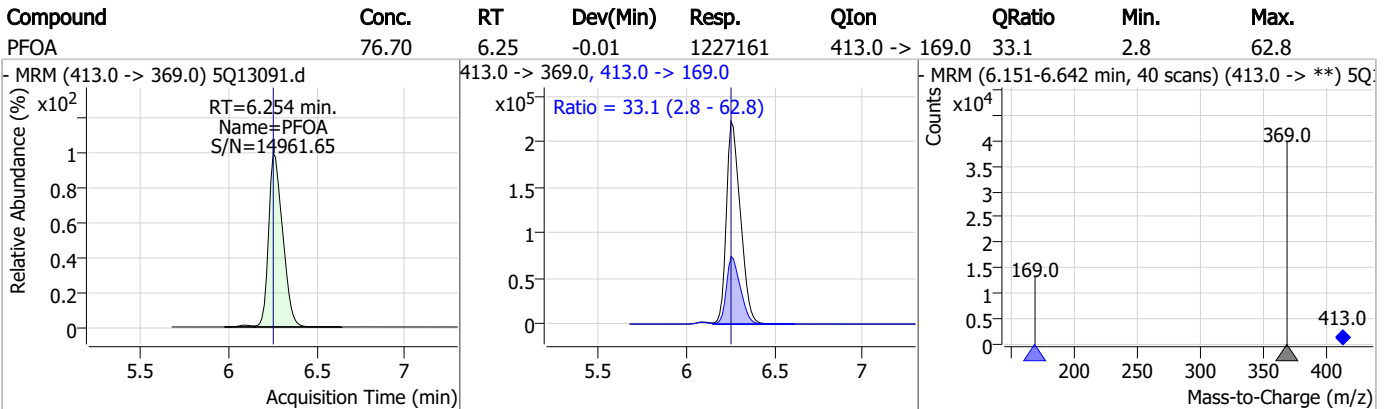
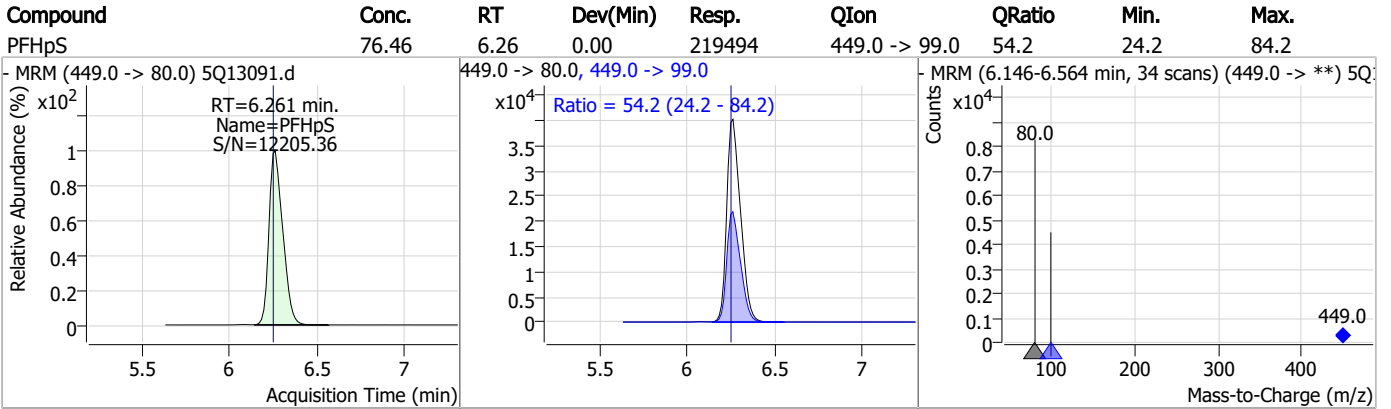
### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS

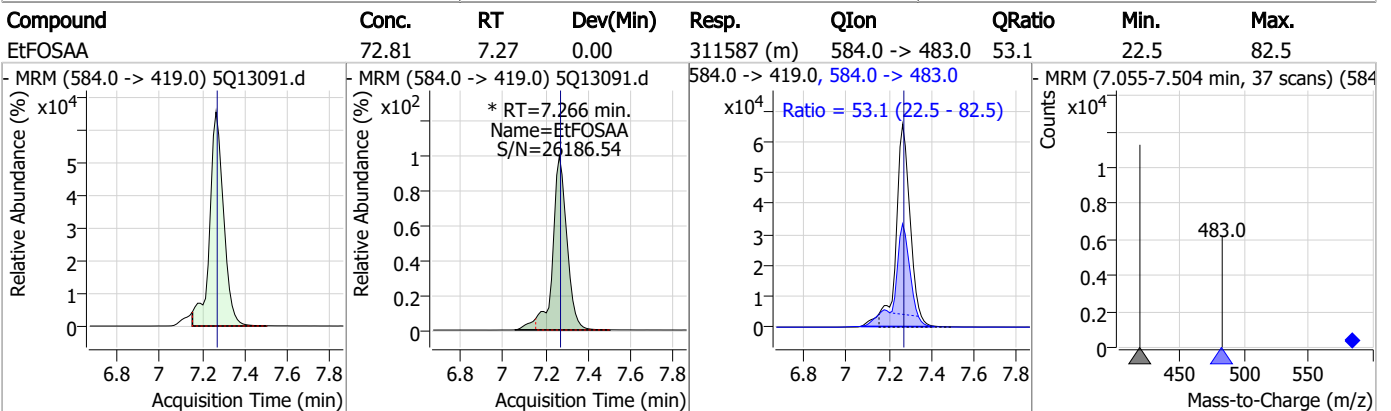
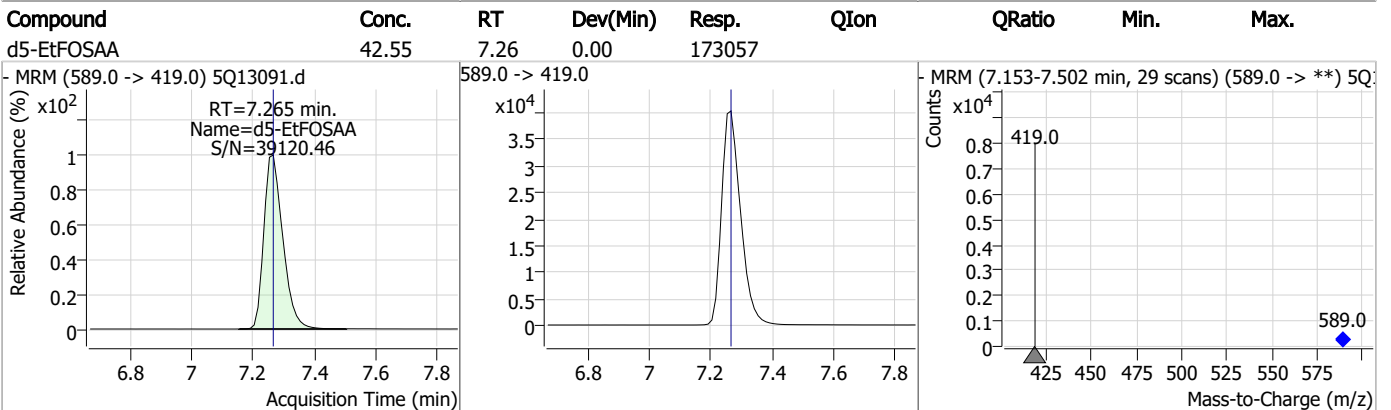
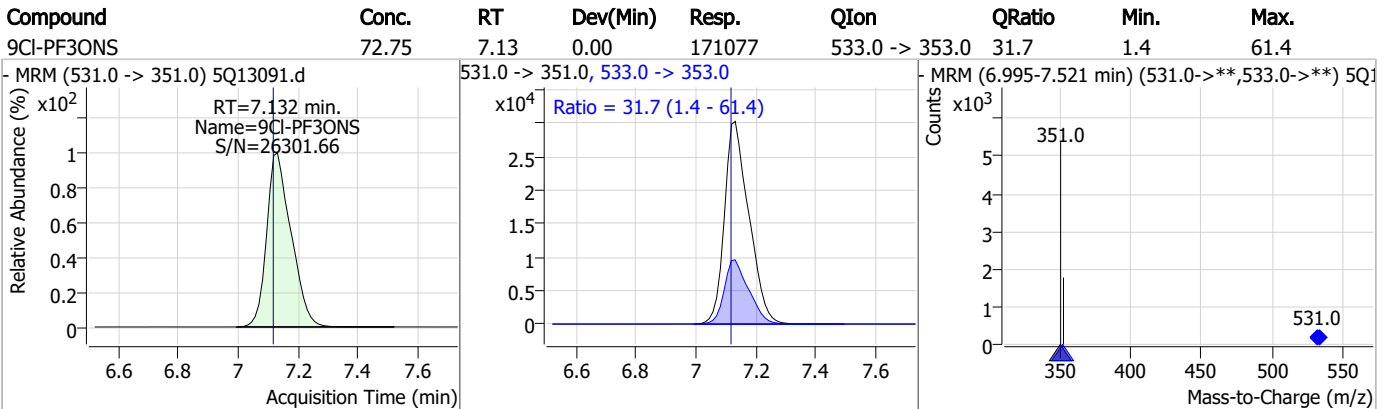
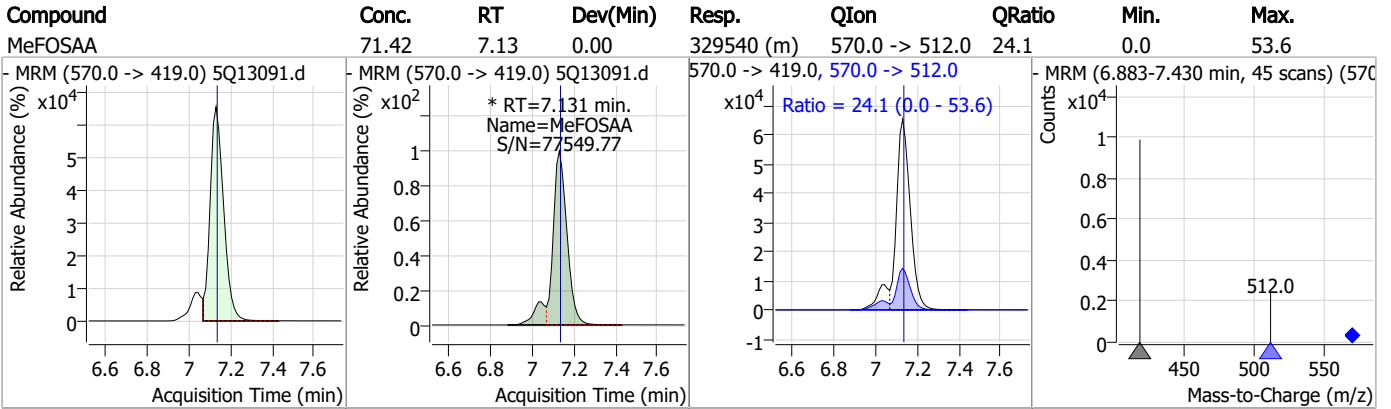


### Perfluorinated Compounds by LC/MS/MS

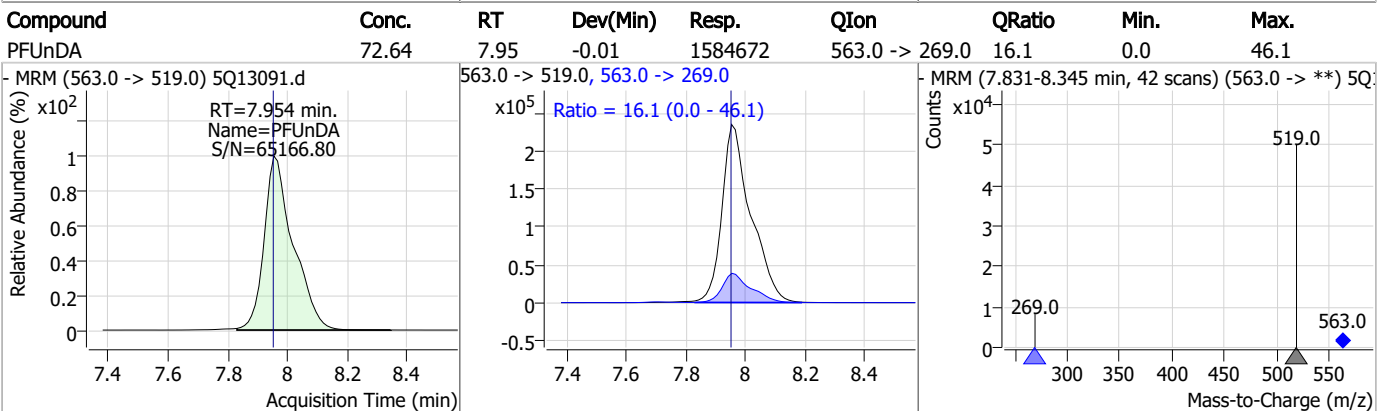
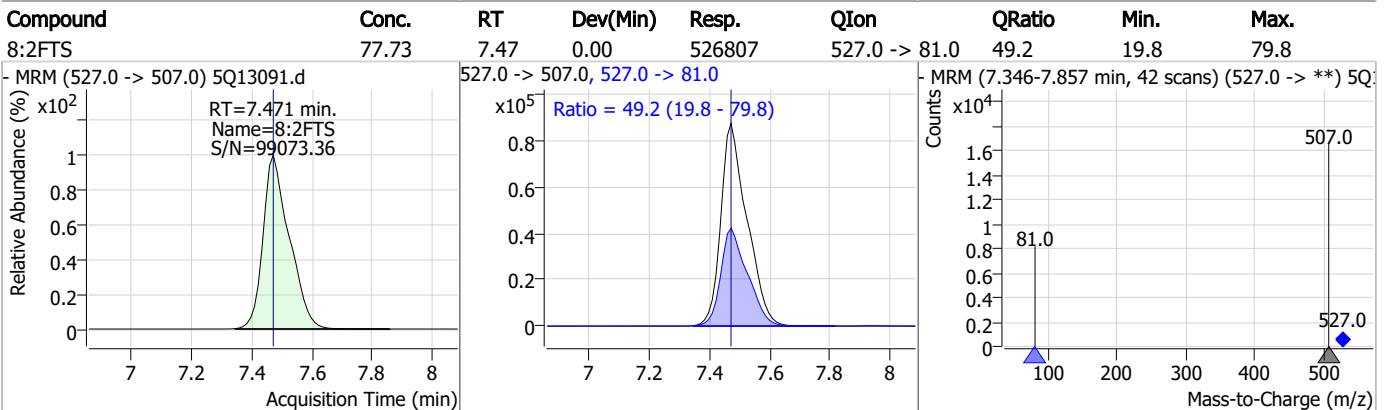
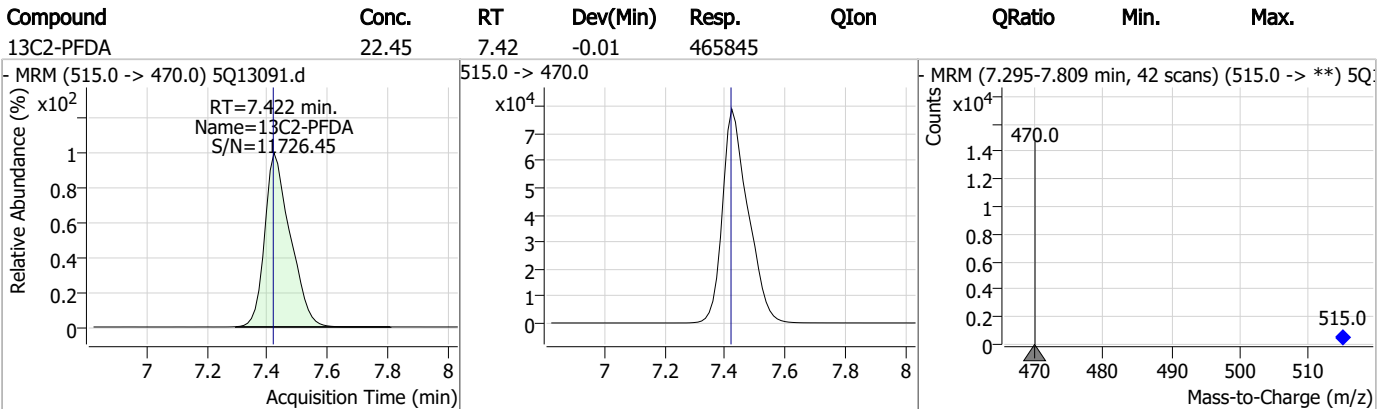
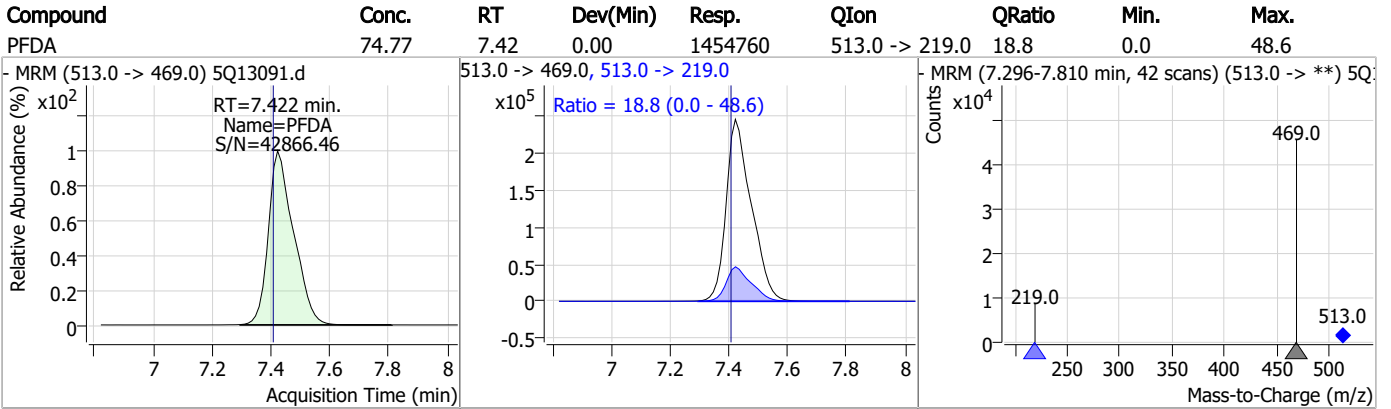




### Perfluorinated Compounds by LC/MS/MS

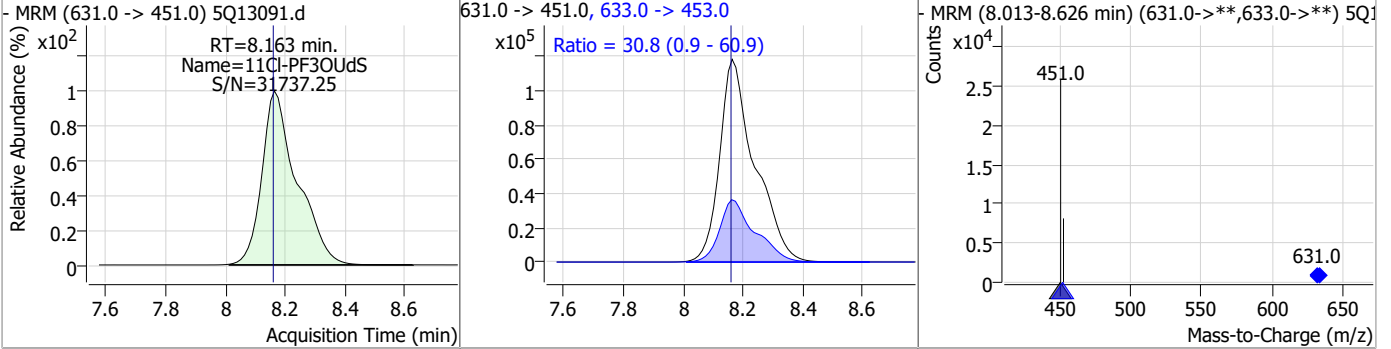


### Perfluorinated Compounds by LC/MS/MS

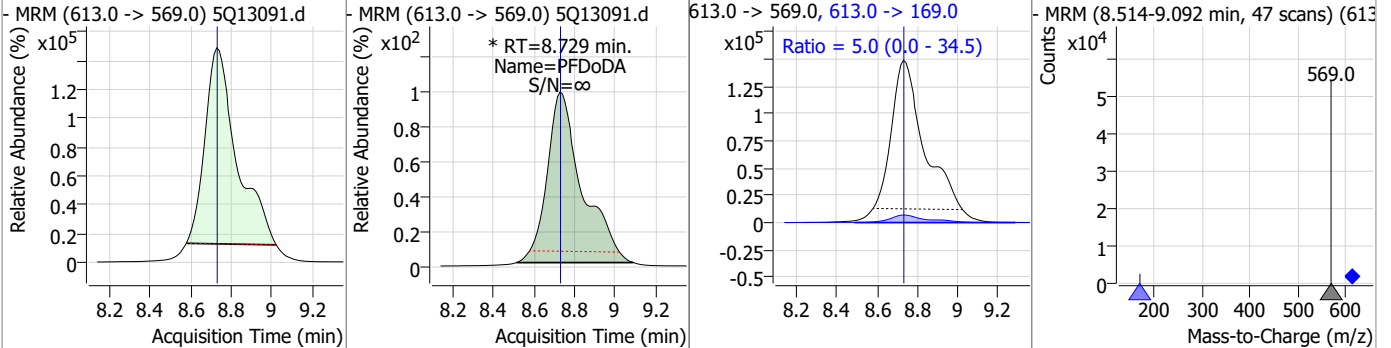


### Perfluorinated Compounds by LC/MS/MS

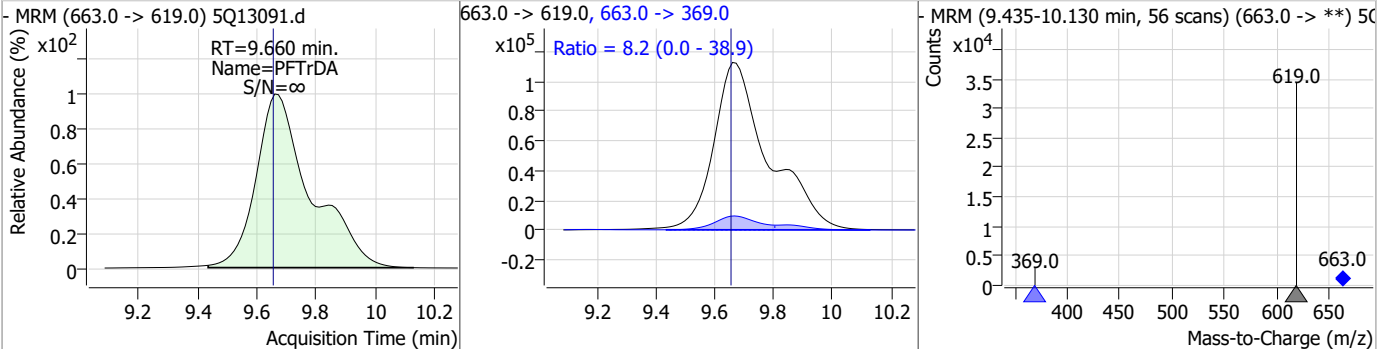
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11CI-PF3OUdS	66.73	8.16	-0.01	963050	633.0 -> 453.0	30.8	0.9	60.9



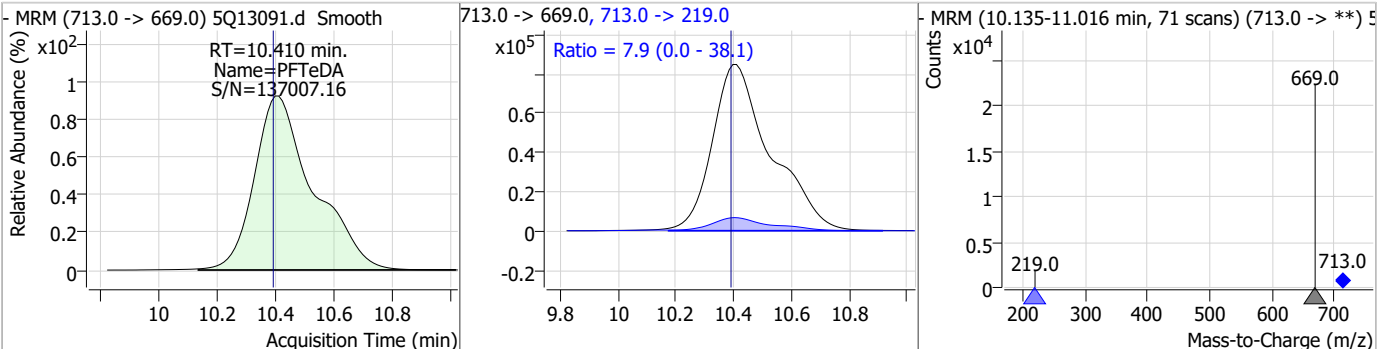
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	65.24	8.73	-0.01	1766954 (m)	613.0 -> 169.0	5.0	0.0	34.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	67.85	9.66	-0.01	1440928	663.0 -> 369.0	8.2	0.0	38.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	63.72	10.41	0.00	1184986	713.0 -> 219.0	7.9	0.0	38.1



# Manual Integration Approval Summary

**Sample Number:** OP96327-BS      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13091.D      **Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Injection Time:** 04/14/23 23:33      **Supervisor approved:** 04/17/23 16:35 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.84	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorododecanoic acid	307-55-1		8.73	Poor instrument integration

7.3.1.1

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## Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13119.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 7:24:23 AM  
 Sample Name : op96327-ms:80  
 Vial : P3-F5  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	149279	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	314508	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	137540	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	59102	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	149889	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.422	515.0 -> 470.0	427517	21.59 µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 108.0%		
13C2-PFHxA	4.676	315.0 -> 270.0	182912	22.53 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 112.7%		
d5-EtFOSAA	7.265	589.0 -> 419.0	140167	34.69 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 86.7%		
13C3-HFPO-DA	4.958	287.0 -> 169.0	79819	45.38 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 113.4%		
<b>Target Compounds</b>					
6:2FTS	6.251	427.0 -> 407.0	559836	79.21 µg/L	99
		427.0 -> 81.0	235649		
8:2FTS	7.471	527.0 -> 507.0	496153	74.29 µg/L	99
		527.0 -> 81.0	244170		
EtFOSAA	7.266	584.0 -> 419.0	280775	66.03 µg/L	m 98
		584.0 -> 483.0	151678		
MeFOSAA	7.131	570.0 -> 419.0	300963	65.65 µg/L	m 99
		570.0 -> 512.0	72664		
PFBA	1.850	213.0 -> 169.0	31696	13.77 µg/L	100
PFBS	3.716	299.0 -> 80.0	213931	76.20 µg/L	100
		299.0 -> 99.0	90262		
PFDA	7.422	513.0 -> 469.0	1397319	75.27 µg/L	99
		513.0 -> 219.0	264227		
PFDoDA	8.729	613.0 -> 569.0	1691984	64.10 µg/L	99
		613.0 -> 169.0	79937		
PFHpA	5.553	363.0 -> 319.0	1284209	79.23 µg/L	100
		363.0 -> 169.0	102386		
PFHpS	6.261	449.0 -> 80.0	213099	76.18 µg/L	99
		449.0 -> 99.0	114720		
PFHxA	4.678	313.0 -> 269.0	440167	78.56 µg/L	99
		313.0 -> 119.0	41013		
PFHxS	5.587	399.0 -> 80.0	216953	71.46 µg/L	m 95
		399.0 -> 99.0	120010		
PFNA	6.876	463.0 -> 419.0	1397311	77.15 µg/L	100
		463.0 -> 219.0	324728		
PFOA	6.254	413.0 -> 369.0	1195310	78.30 µg/L	m 98
		413.0 -> 169.0	403552		
PFOS	6.849	499.0 -> 80.0	246768	72.41 µg/L	m 92
		499.0 -> 99.0	115648		
PFPeA	3.472	263.0 -> 219.0	781234	78.37 µg/L	100

7.4.1  
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Perfluorinated Compounds by LC/MS/MS

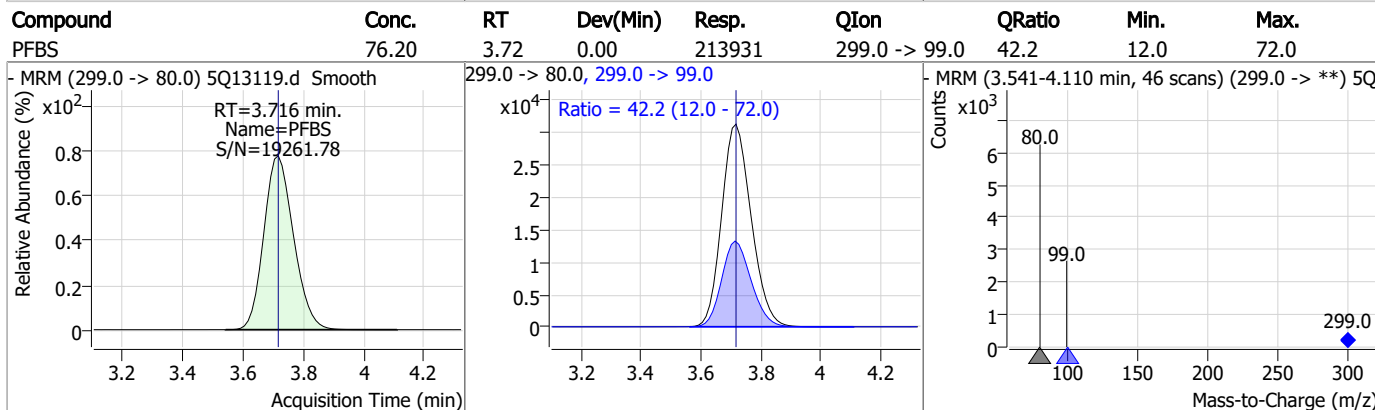
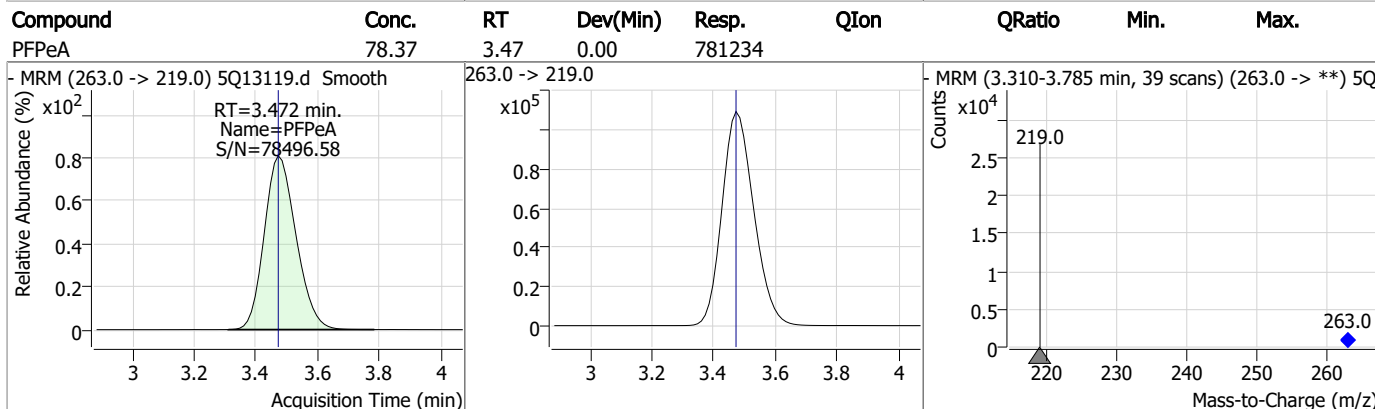
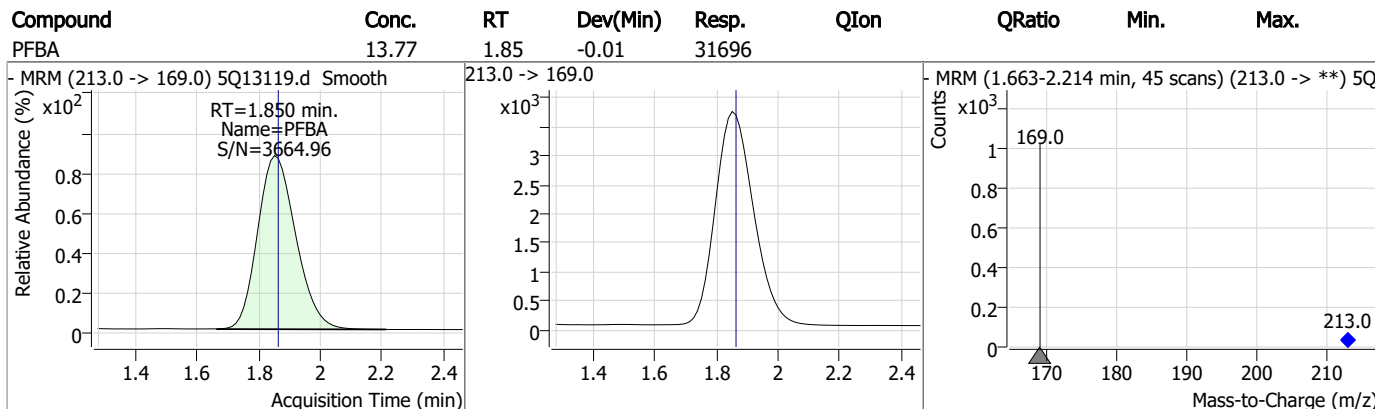
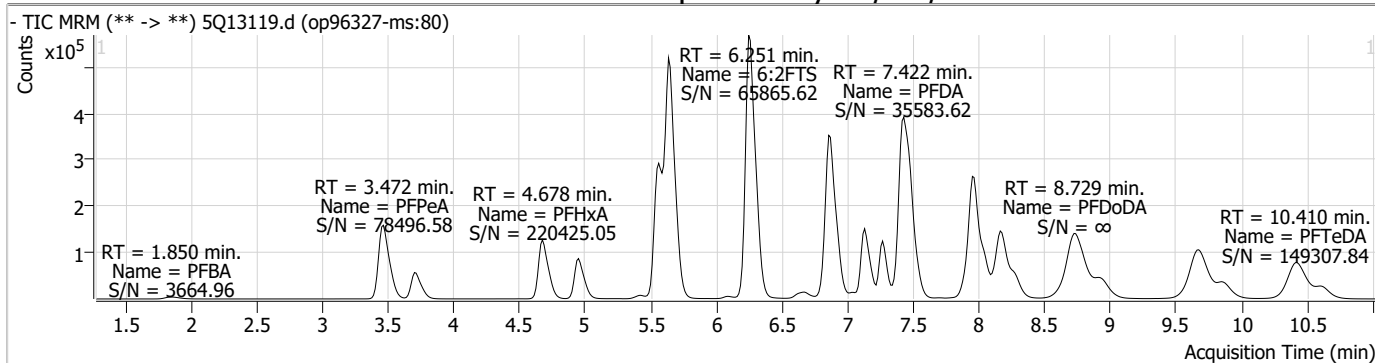
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
PFTeDA	10.410	713.0 -> 669.0	938018	51.76	µg/L	100
		713.0 -> 219.0	74657			
PFTrDA	9.673	663.0 -> 619.0	1248533	60.33	µg/L	m
		663.0 -> 369.0	102387			
PFUnDA	7.954	563.0 -> 519.0	1482068	69.71	µg/L	100
		563.0 -> 269.0	237793			
ADONA	5.655	377.0 -> 251.0	1784822	77.79	µg/L	99
		377.0 -> 85.0	647555			
9Cl-PF3ONS	7.132	531.0 -> 351.0	160017	71.32	µg/L	99
		533.0 -> 353.0	50736			
11Cl-PF3OUdS	8.163	631.0 -> 451.0	901812	65.50	µg/L	100
		633.0 -> 453.0	279100			
HFPO-DA	4.960	285.0 -> 169.0	163636	78.99	µg/L	98
		329.0 -> 169.0	208796			

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

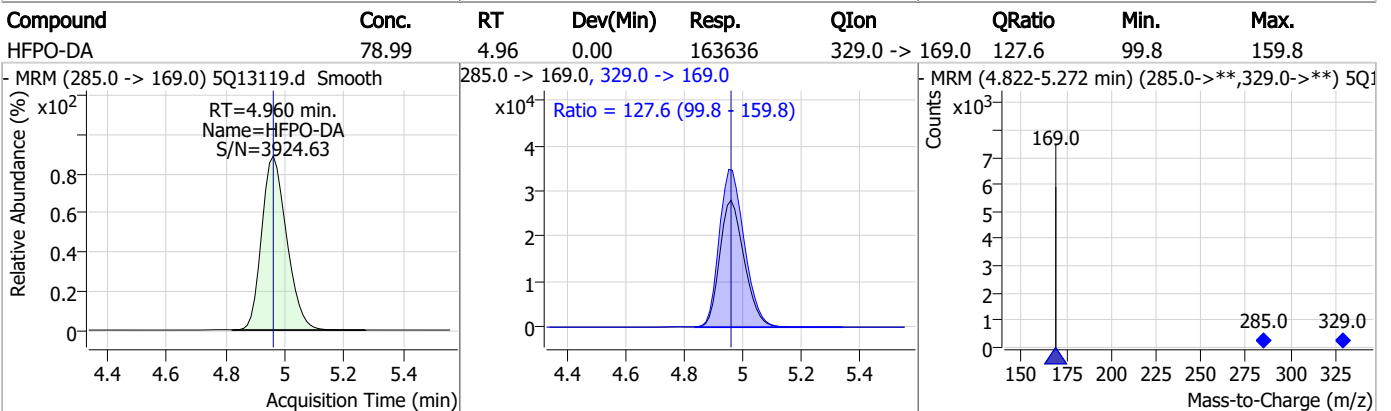
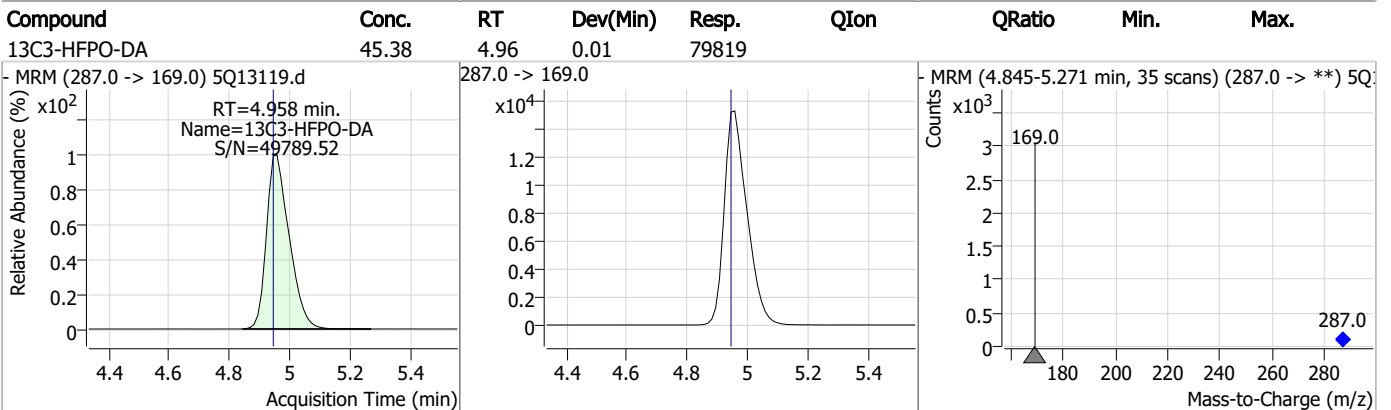
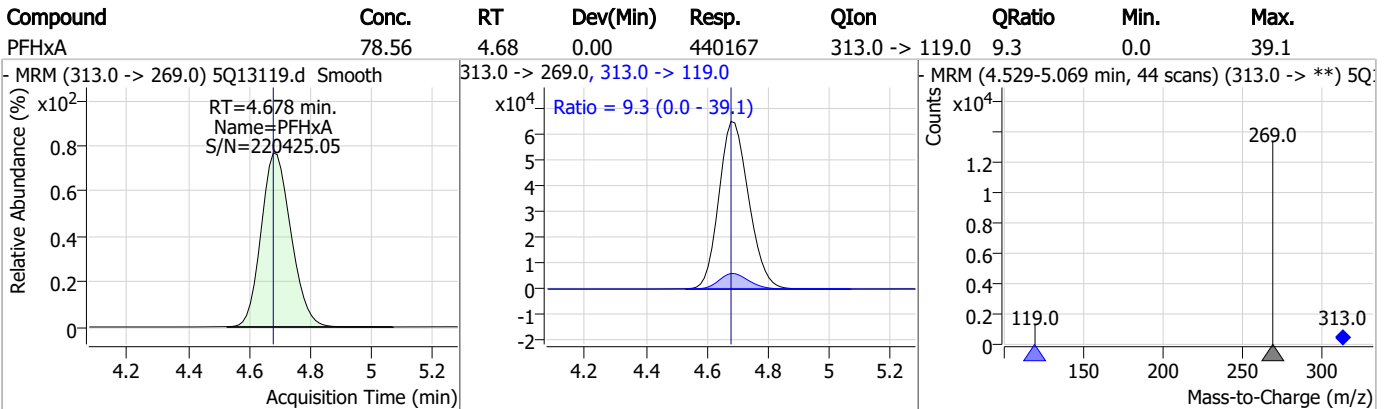
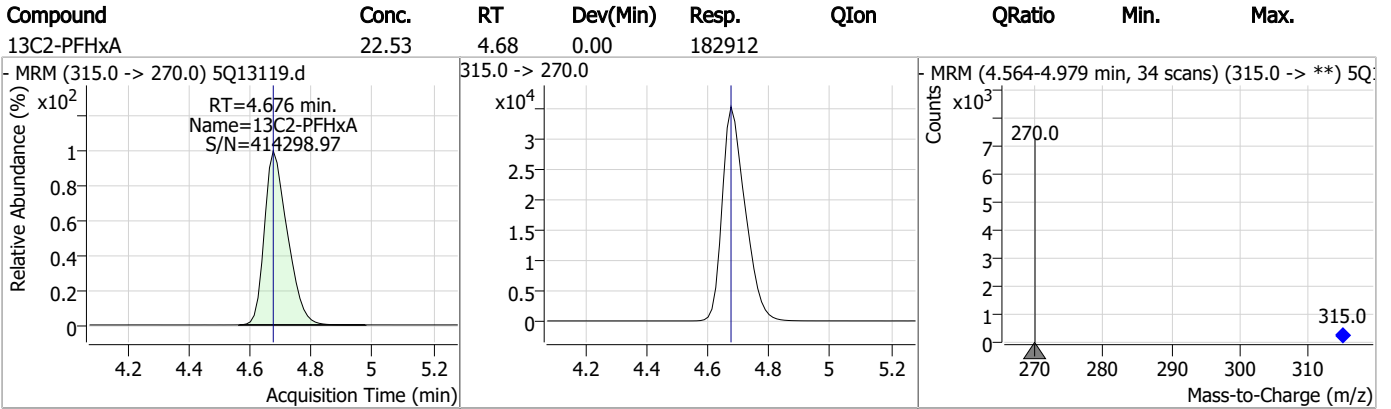
7.4.1

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### Perfluorinated Compounds by LC/MS/MS

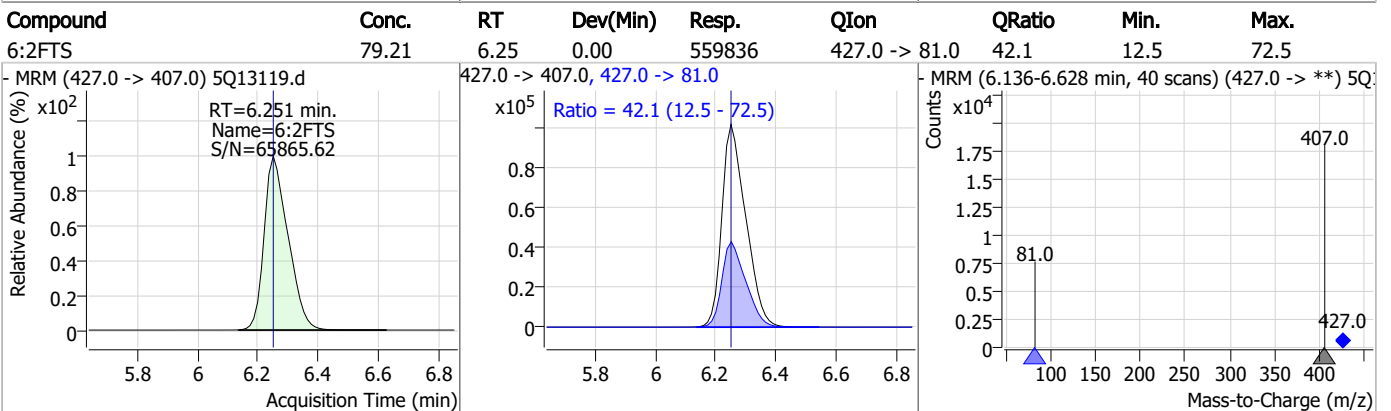
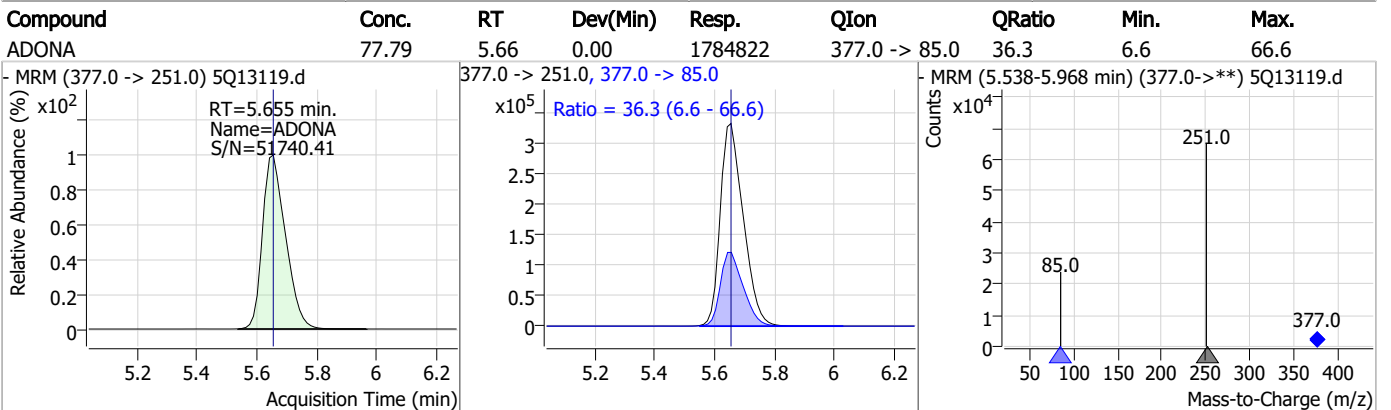
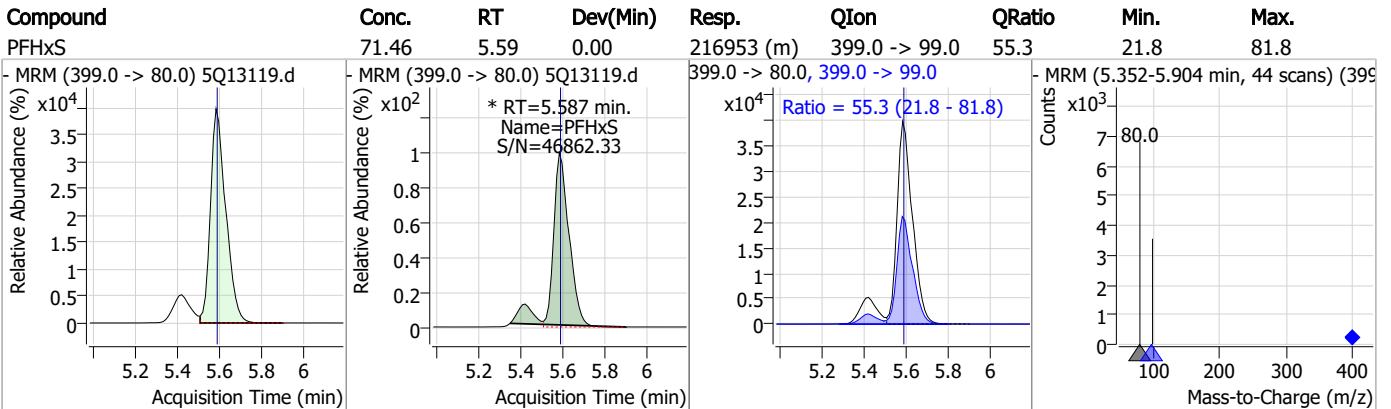
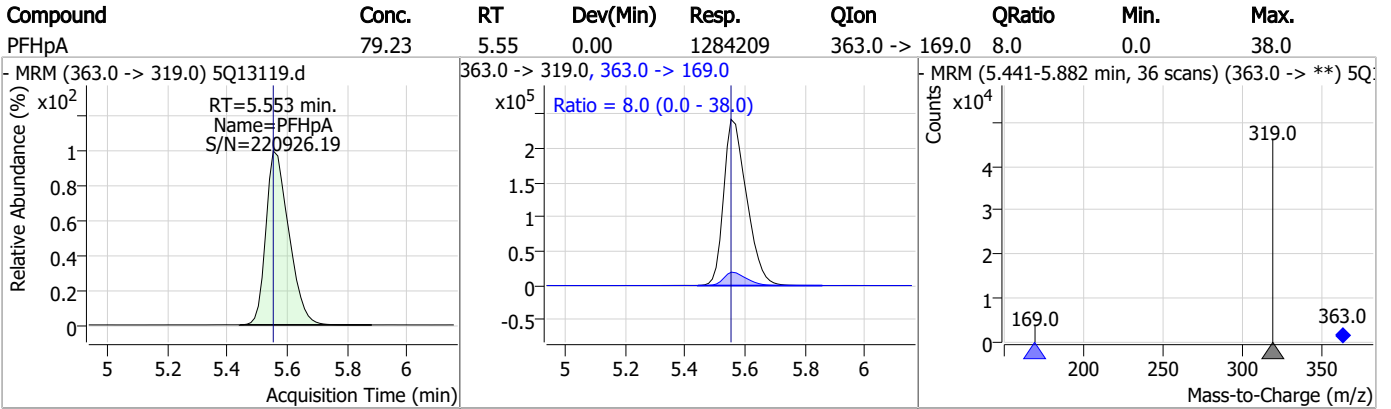


### Perfluorinated Compounds by LC/MS/MS

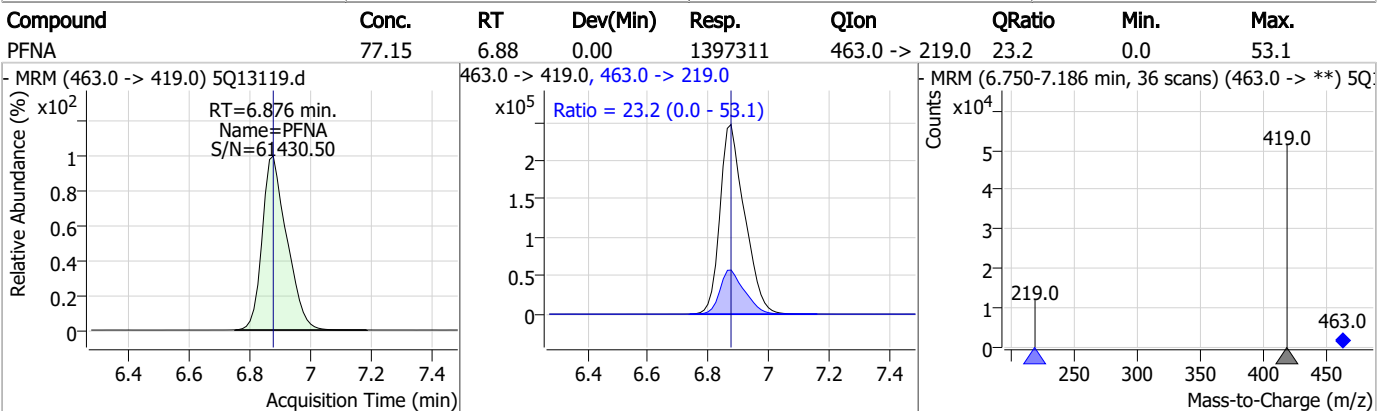
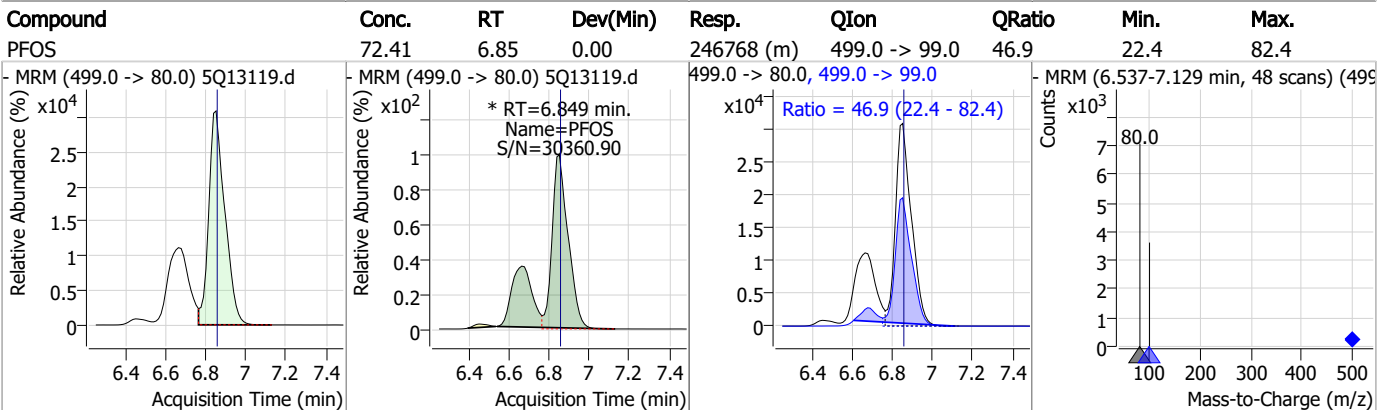
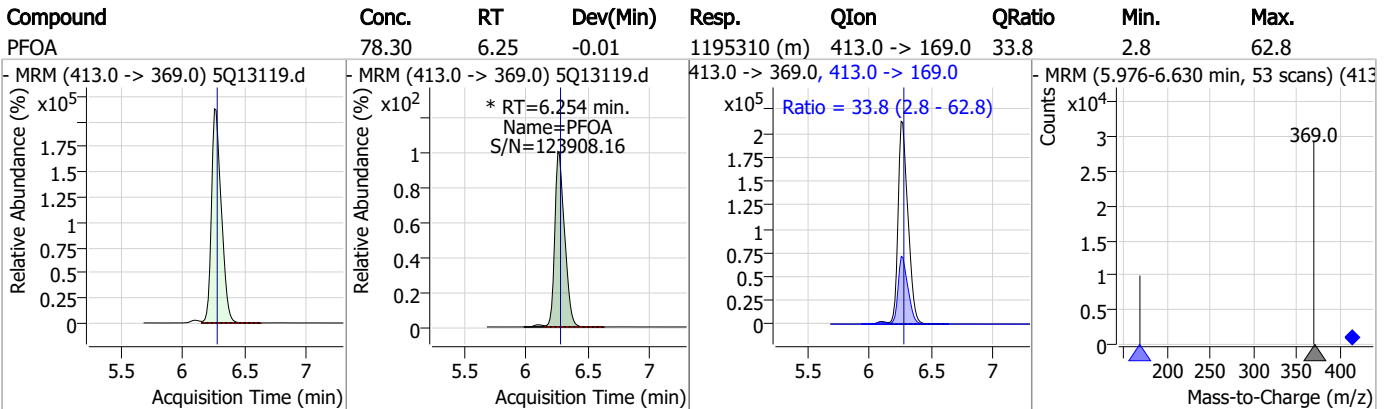
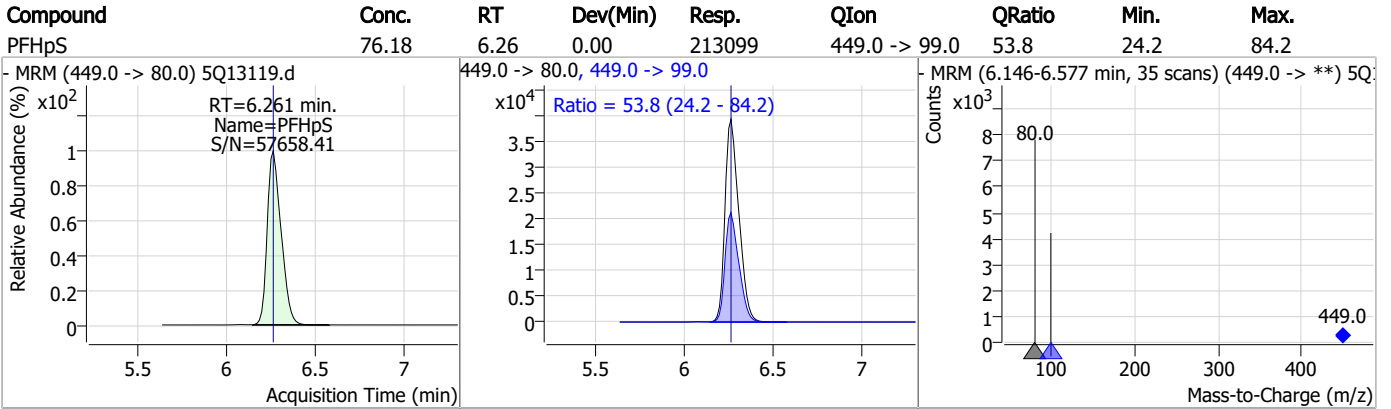




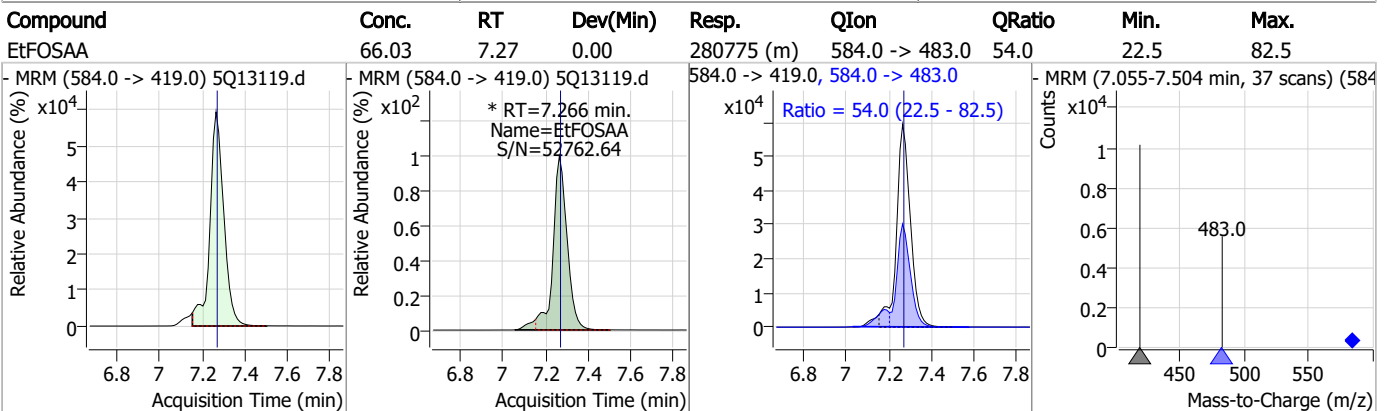
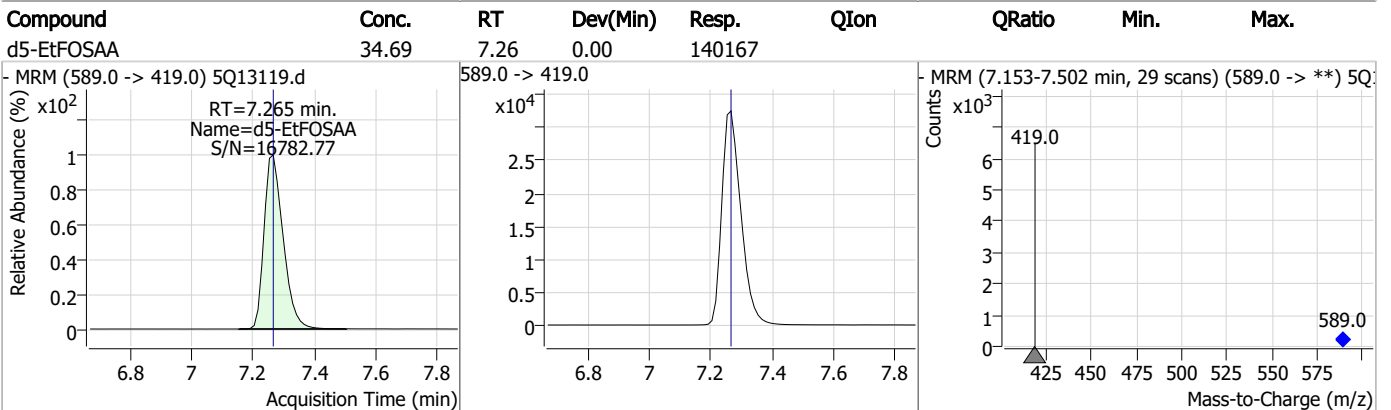
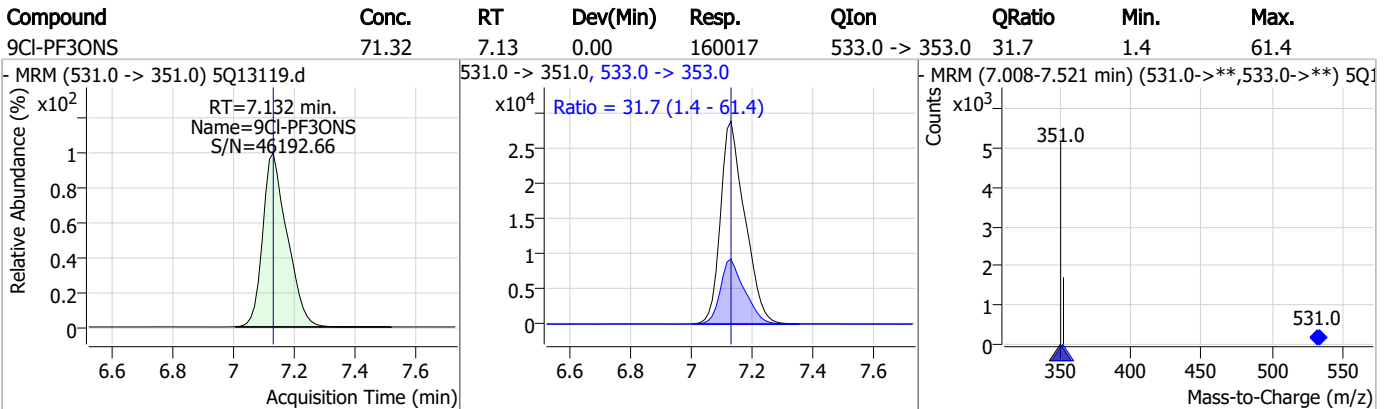
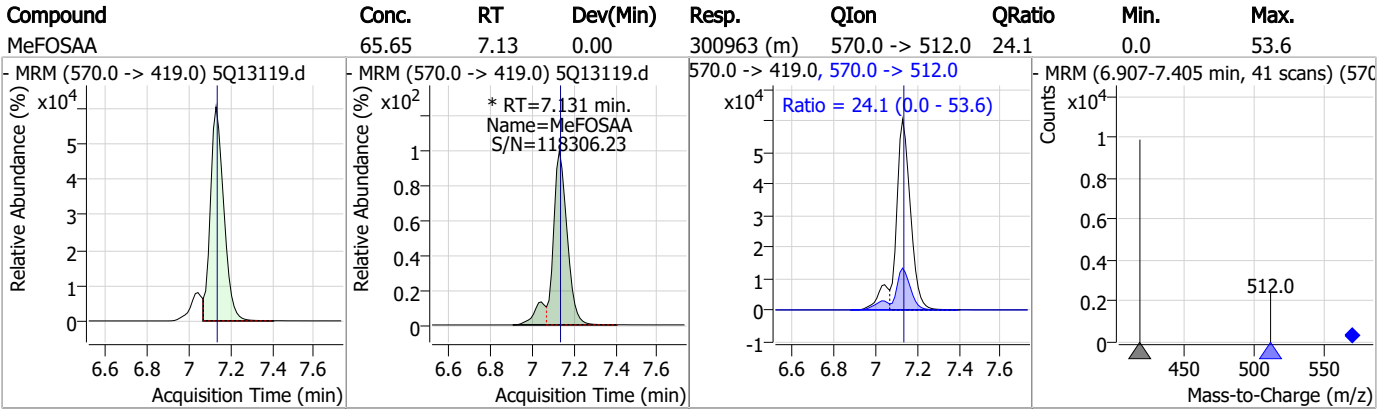
### Perfluorinated Compounds by LC/MS/MS



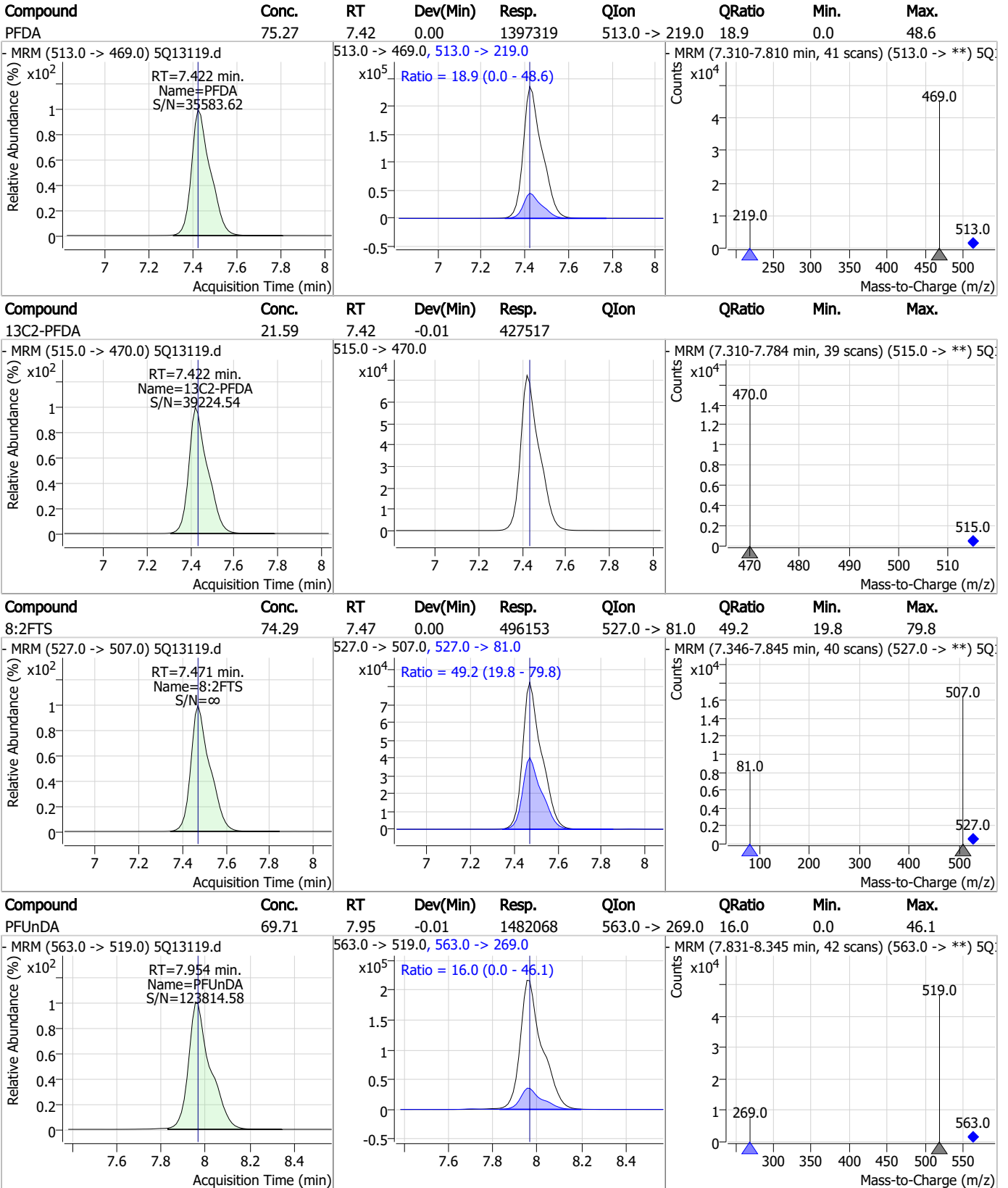
### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS

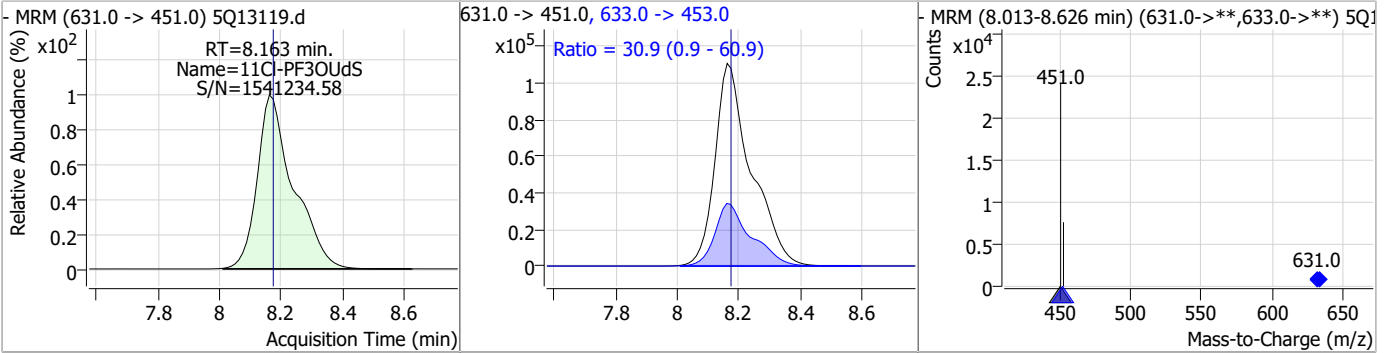


7.4.1

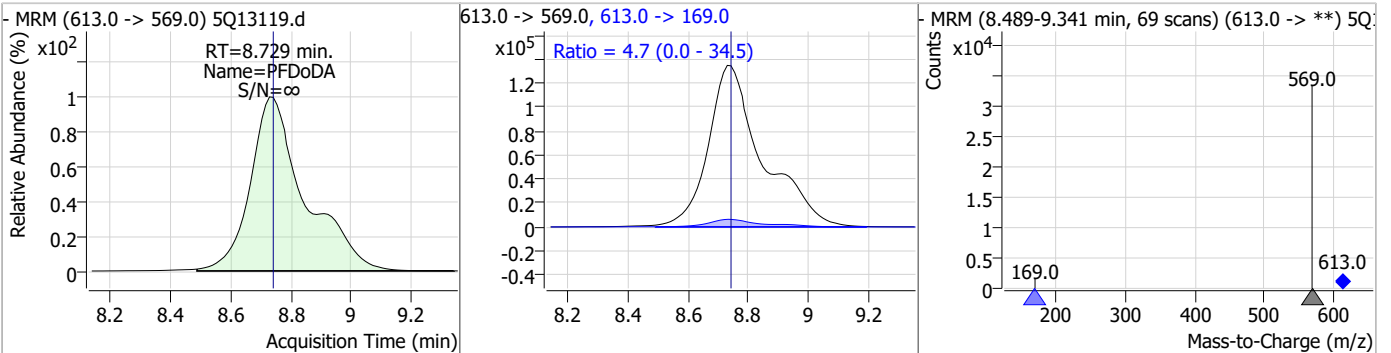
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### Perfluorinated Compounds by LC/MS/MS

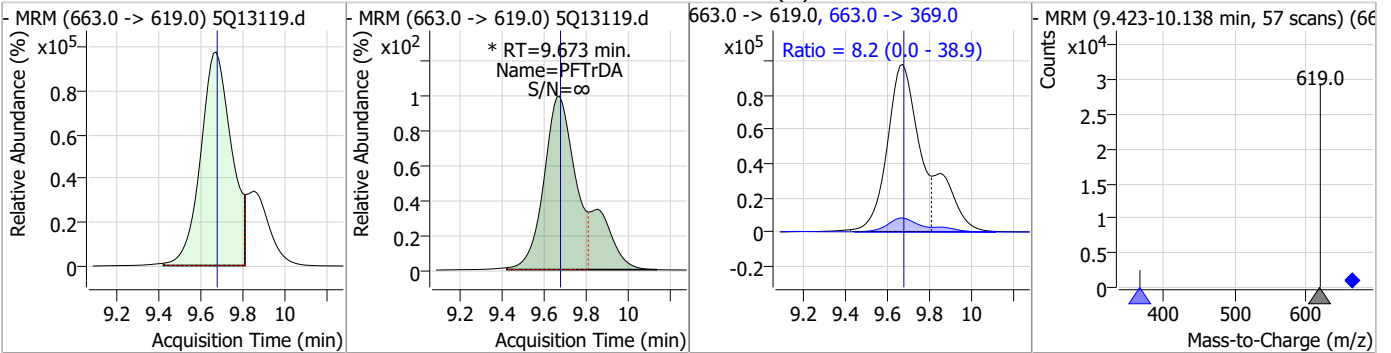
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11CI-PF3OUdS	65.50	8.16	-0.01	901812	633.0 -> 453.0	30.9	0.9	60.9



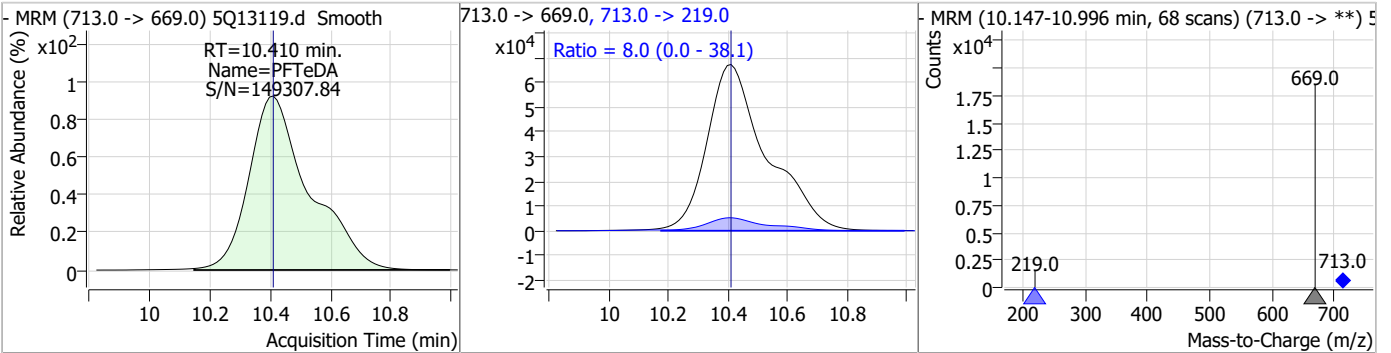
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	64.10	8.73	-0.01	1691984	613.0 -> 169.0	4.7	0.0	34.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	60.33	9.67	0.00	1248533 (m)	663.0 -> 369.0	8.2	0.0	38.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	51.76	10.41	0.00	938018	713.0 -> 219.0	8.0	0.0	38.1



# Manual Integration Approval Summary

**Sample Number:** OP96327-MS      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13119.D      **Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Injection Time:** 04/15/23 07:24      **Supervisor approved:** 04/17/23 16:35 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanoic acid	335-67-1		6.25	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.85	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorotridecanoic acid	72629-94-8		9.67	Poor instrument integration

7.4.1.1  
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### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13121.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 7:58:00 AM  
 Sample Name : op96327-msd:80  
 Vial : P3-F7  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,270,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)	QValue
<b>Internal Standards</b>						
13C2-6:2FTS	6.250	429.0 -> 409.0	157434	20.00 µg/L	0.000	
13C2-PFOA	6.253	415.0 -> 370.0	332015	20.00 µg/L	-0.012	
13C3-PFPeA	3.469	266.0 -> 222.0	147727	20.00 µg/L	0.000	
13C4-PFOS	6.848	503.0 -> 80.0	62343	20.00 µg/L	0.000	
d3-MeFOSAA	7.130	573.0 -> 419.0	155054	40.00 µg/L	0.000	
<b>System Monitoring Compounds</b>						
13C2-PFDA	7.422	515.0 -> 470.0	453592	21.70 µg/L	-0.012	
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 108.5%			
13C2-PFHxA	4.676	315.0 -> 270.0	194760	22.72 µg/L	0.000	
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 113.6%			
d5-EtFOSAA	7.265	589.0 -> 419.0	149207	35.69 µg/L	0.000	
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 89.2%			
13C3-HFPO-DA	4.958	287.0 -> 169.0	86265	46.46 µg/L	0.012	
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 116.1%			
<b>Target Compounds</b>						
6:2FTS	6.251	427.0 -> 407.0 427.0 -> 81.0	590240 251489	79.19 µg/L		100
8:2FTS	7.471	527.0 -> 507.0 527.0 -> 81.0	525574 261418	74.62 µg/L		100
EtFOSAA	7.266	584.0 -> 419.0 584.0 -> 483.0	299293 162201	68.04 µg/L	m	98
MeFOSAA	7.131	570.0 -> 419.0 570.0 -> 512.0	319341 77187	67.34 µg/L	m	99
PFBA	1.850	213.0 -> 169.0	31098	12.58 µg/L		100
PFBS	3.716	299.0 -> 80.0 299.0 -> 99.0	228532 96161	77.17 µg/L		100
PFDA	7.422	513.0 -> 469.0 513.0 -> 219.0	1500354 283175	76.56 µg/L		99
PFDoDA	8.729	613.0 -> 569.0 613.0 -> 169.0	1761522 67627	63.27 µg/L		98
PFHpA	5.553	363.0 -> 319.0 363.0 -> 169.0	1371883 108790	80.18 µg/L		100
PFHpS	6.261	449.0 -> 80.0 449.0 -> 99.0	227094 122958	76.96 µg/L		100
PFHxA	4.678	313.0 -> 269.0 313.0 -> 119.0	471407 44029	79.70 µg/L		99
PFHxS	5.587	399.0 -> 80.0 399.0 -> 99.0	227104 121329	70.91 µg/L	m	98
PFNA	6.876	463.0 -> 419.0 463.0 -> 219.0	1495640 346715	78.22 µg/L		100
PFOA	6.254	413.0 -> 369.0 413.0 -> 169.0	1273015 428413	79.00 µg/L	m	98
PFOS	6.849	499.0 -> 80.0 499.0 -> 99.0	272076 140280	75.68 µg/L	m	99
PFPeA	3.472	263.0 -> 219.0	842661	78.71 µg/L		100

7.4.2  
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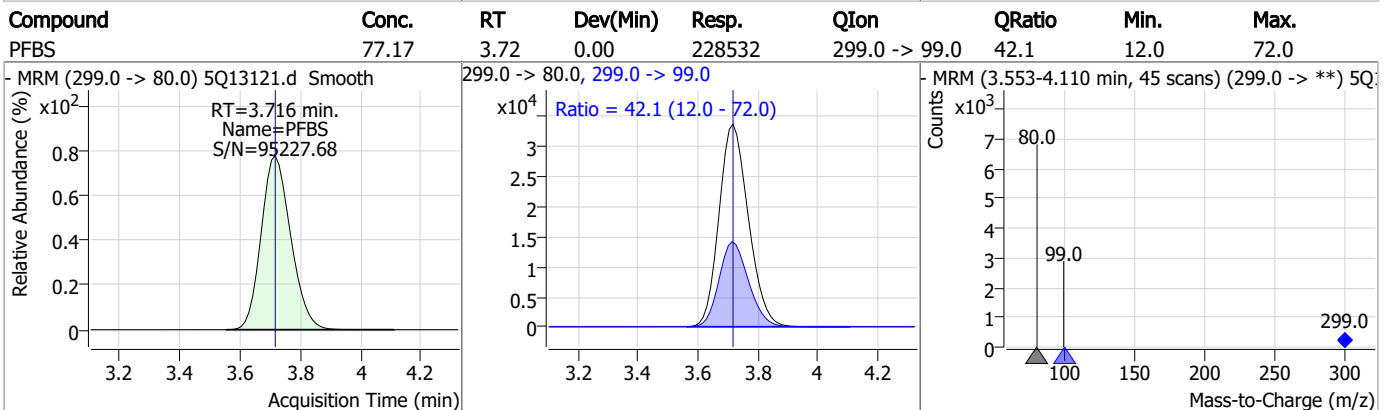
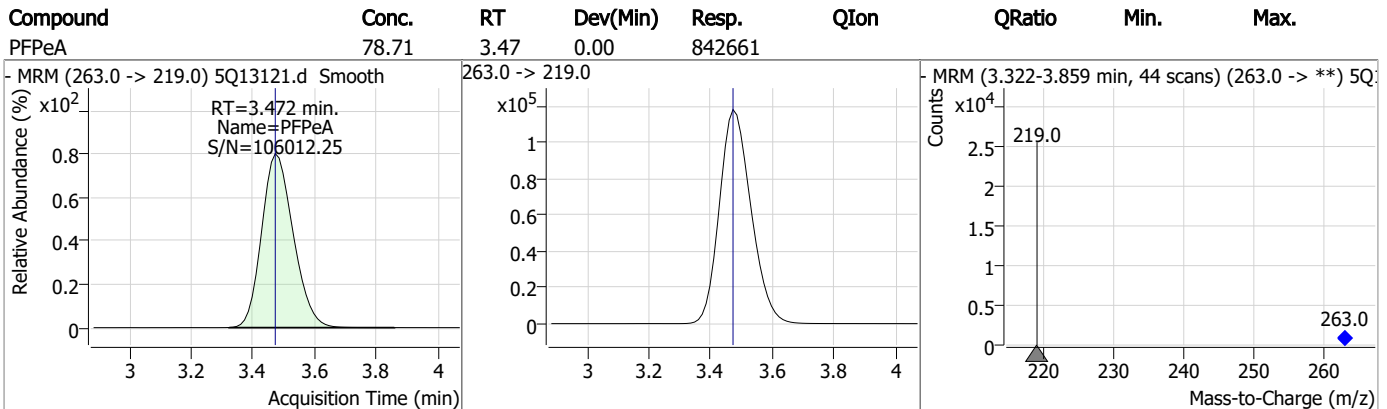
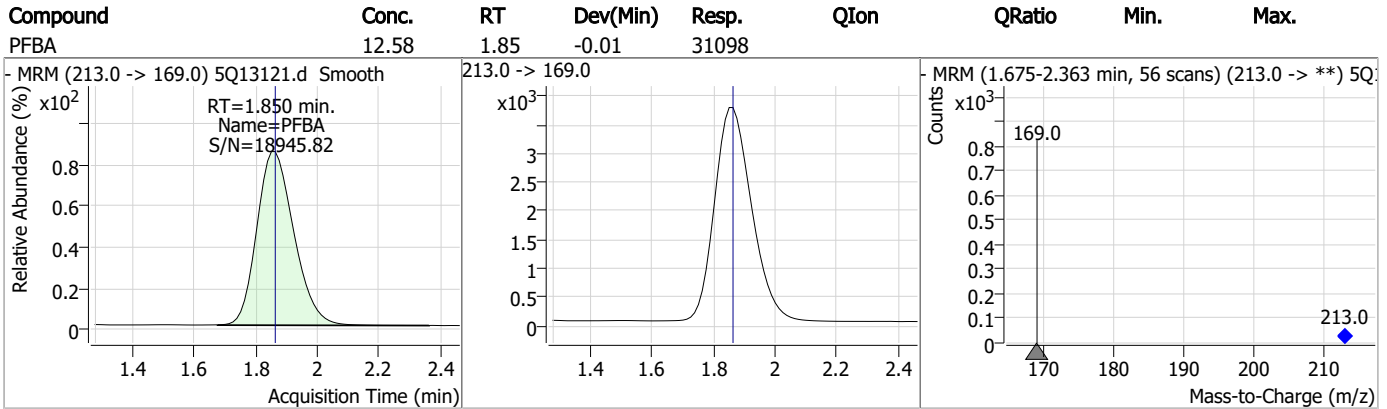
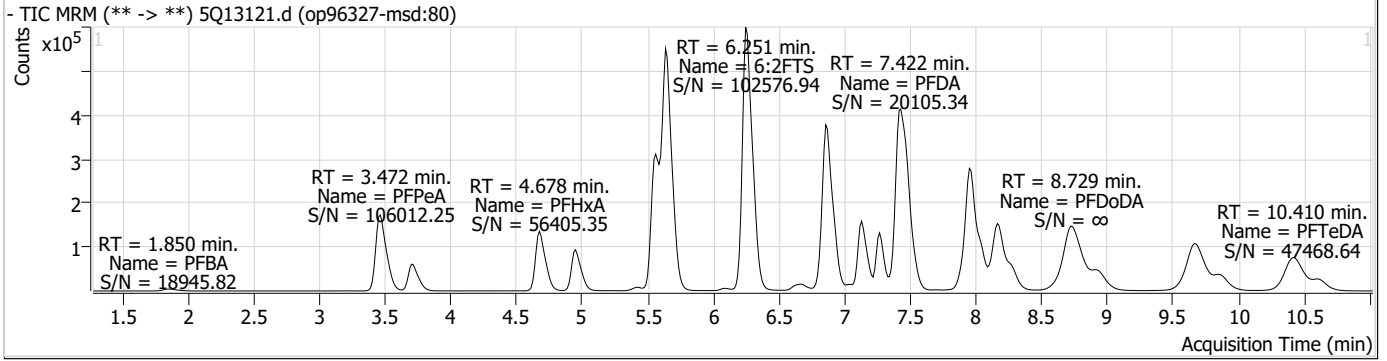
## Perfluorinated Compounds by LC/MS/MS

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	10.410	713.0 -> 669.0	907751	47.49 µg/L	97
		713.0 -> 219.0	65325		
PFTrDA	9.673	663.0 -> 619.0	1275452	58.42 µg/L	98
		663.0 -> 369.0	105068		
PFUnDA	7.954	563.0 -> 519.0	1571125	70.06 µg/L	99
		563.0 -> 269.0	258055		
ADONA	5.655	377.0 -> 251.0	1905210	78.66 µg/L	100
		377.0 -> 85.0	693718		
9Cl-PF3ONS	7.132	531.0 -> 351.0	174220	73.56 µg/L	99
		533.0 -> 353.0	53990		
11Cl-PF3OUdS	8.163	631.0 -> 451.0	944916	65.01 µg/L	100
		633.0 -> 453.0	293313		
HFPO-DA	4.960	285.0 -> 169.0	176634	80.77 µg/L	98
		329.0 -> 169.0	225638		

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



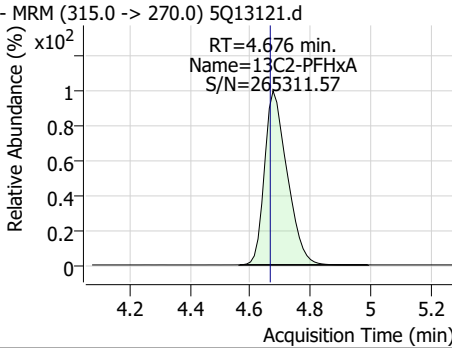
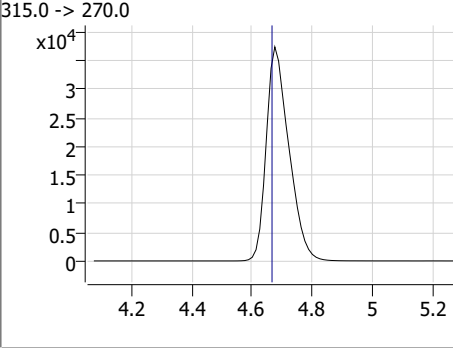
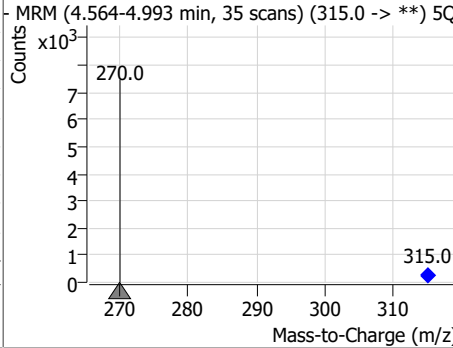
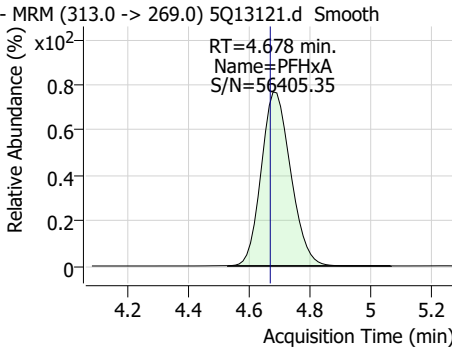
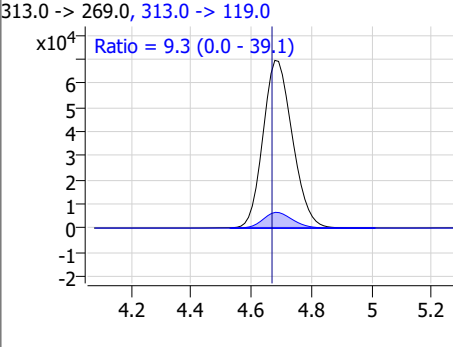
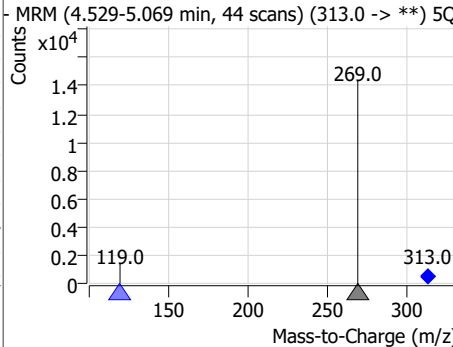
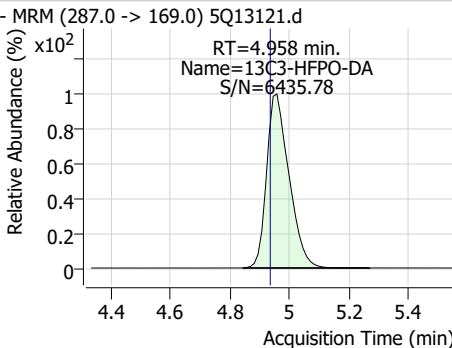
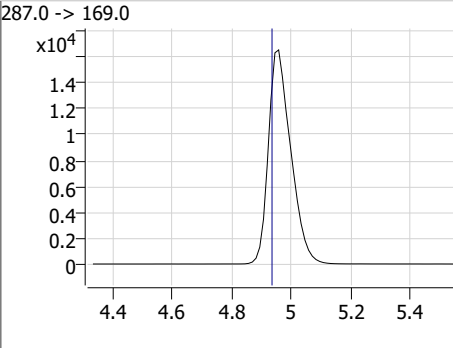
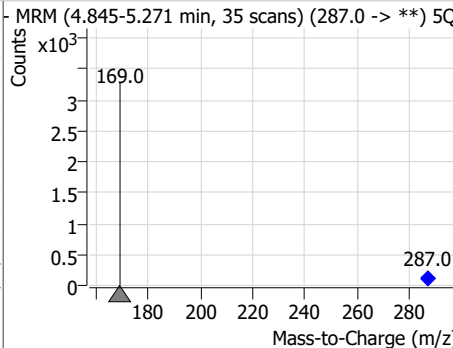
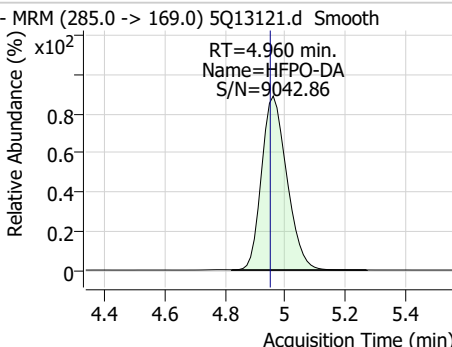
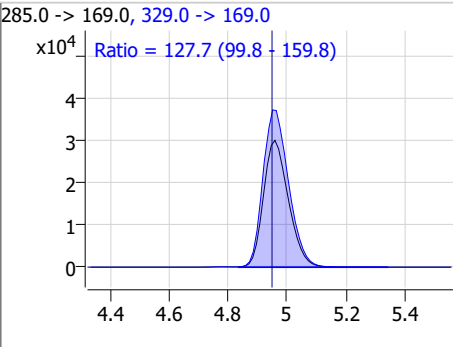
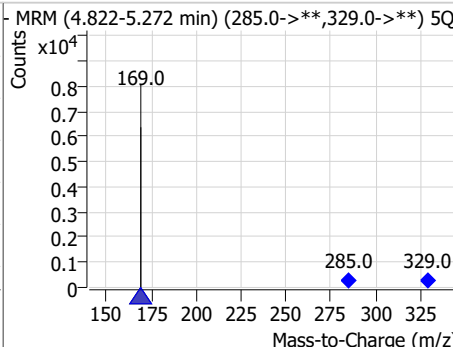
### Perfluorinated Compounds by LC/MS/MS



7.4.2

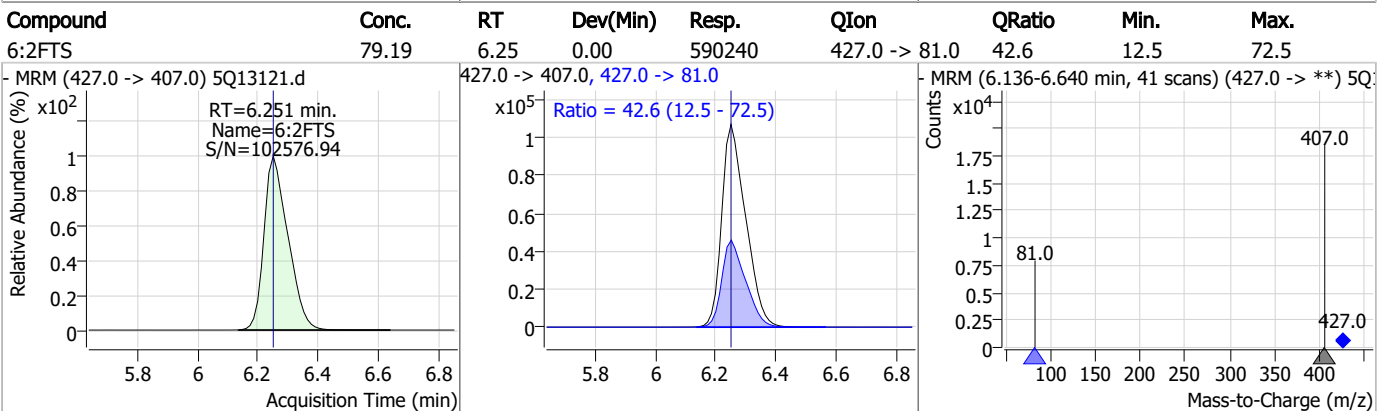
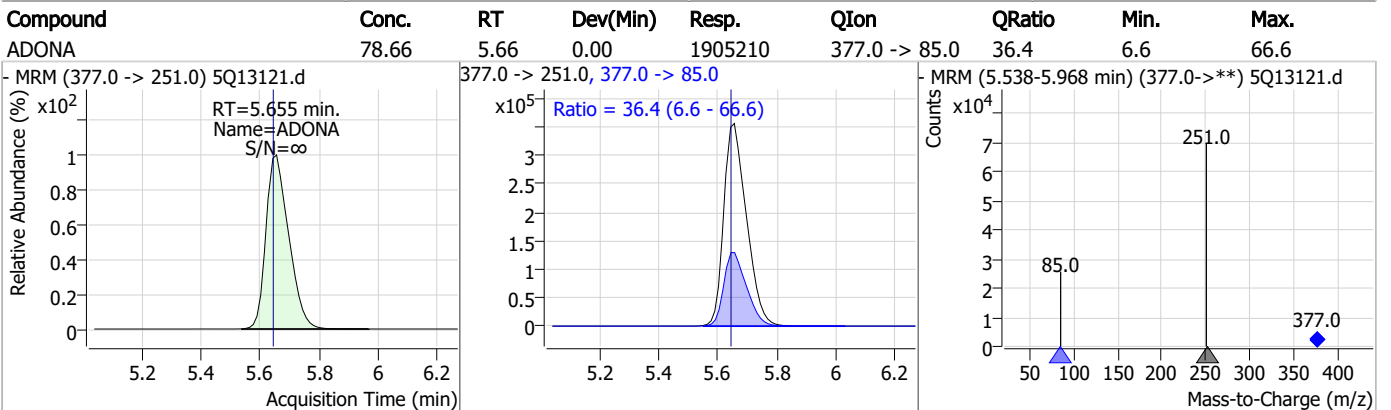
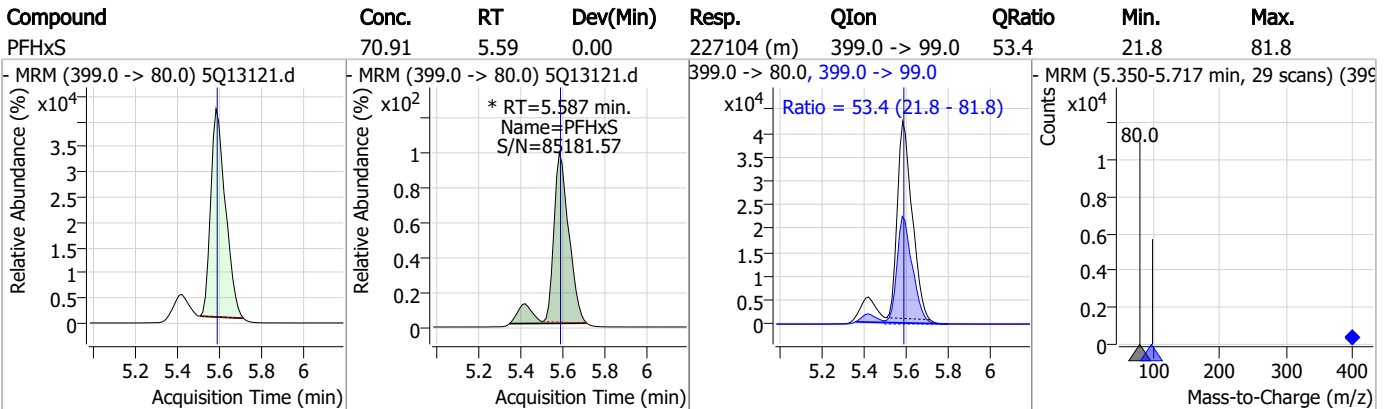
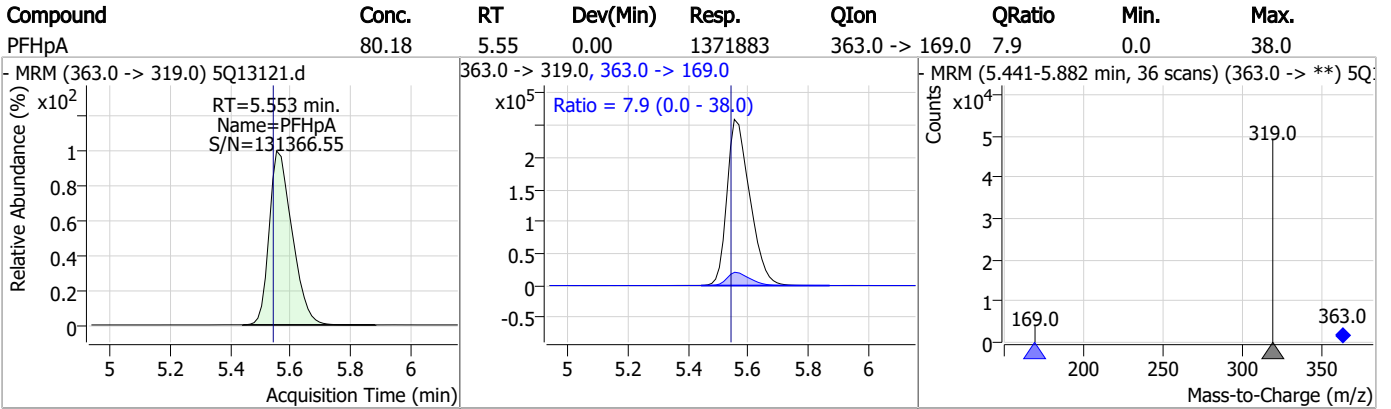
7

### Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	22.72	4.68	0.00	194760				
								
PFHxA	79.70	4.68	0.00	471407	313.0 ->	119.0 9.3	0.0	39.1
								
13C3-HFPO-DA	46.46	4.96	0.01	86265				
								
HFPO-DA	80.77	4.96	0.00	176634	329.0 ->	169.0 127.7	99.8	159.8
								

7.4.2  
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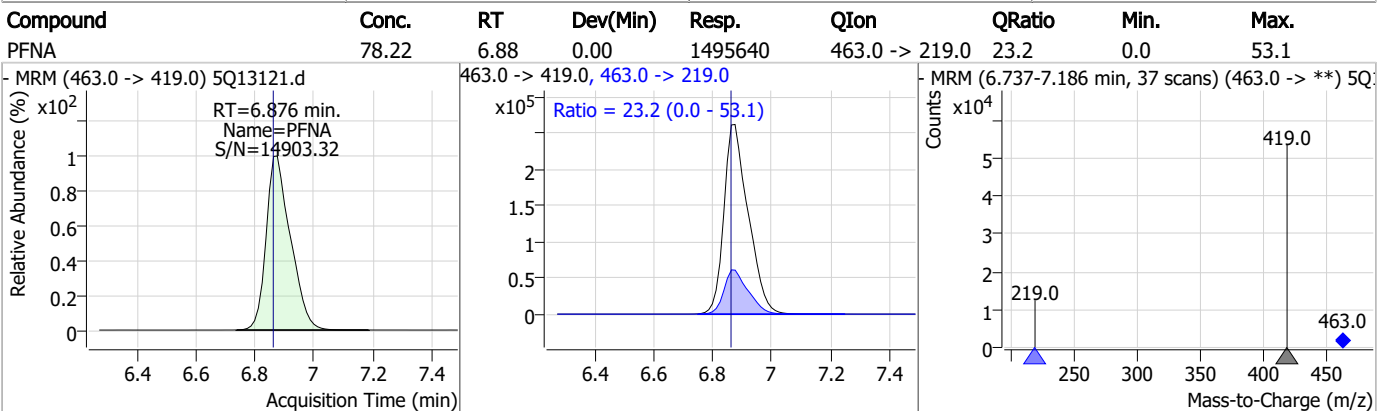
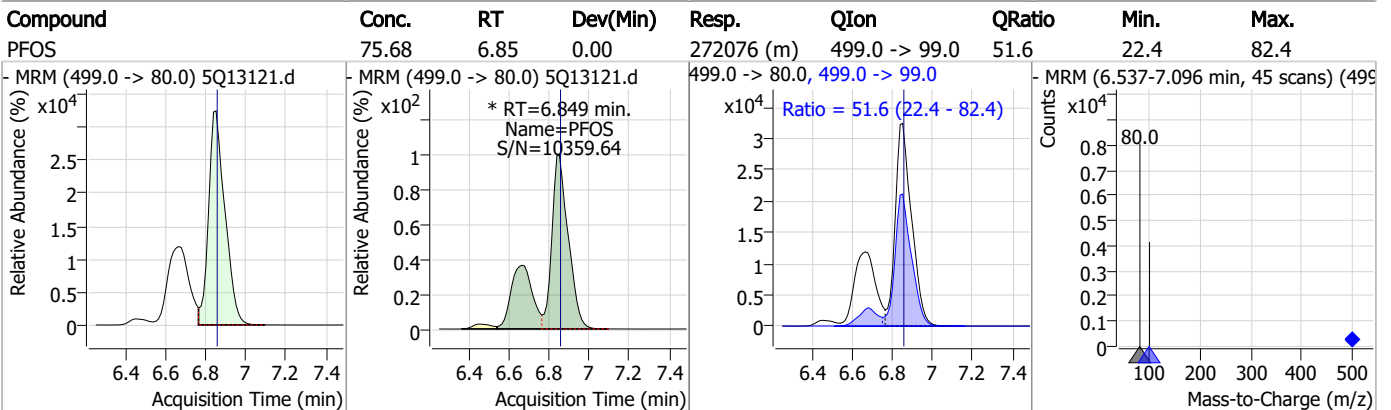
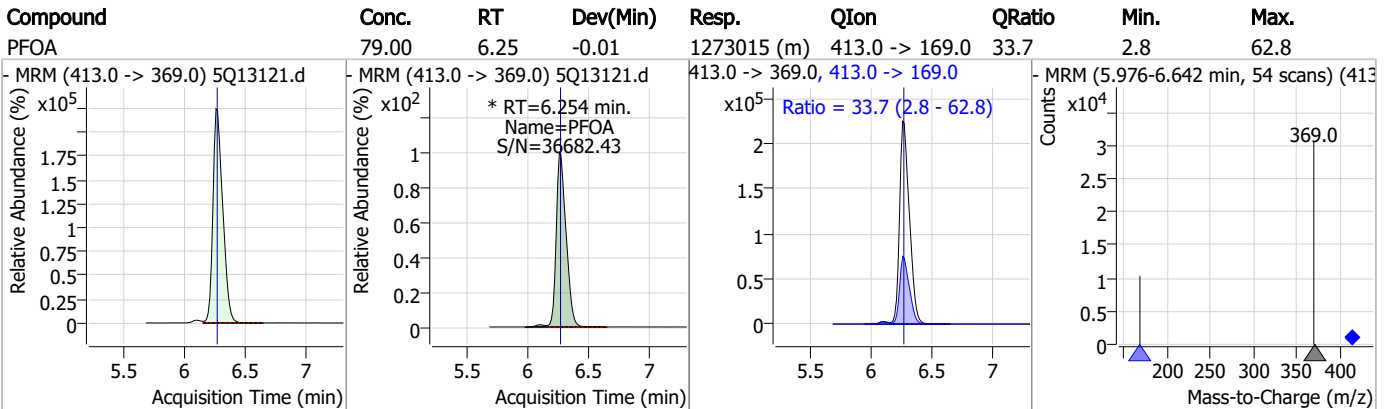
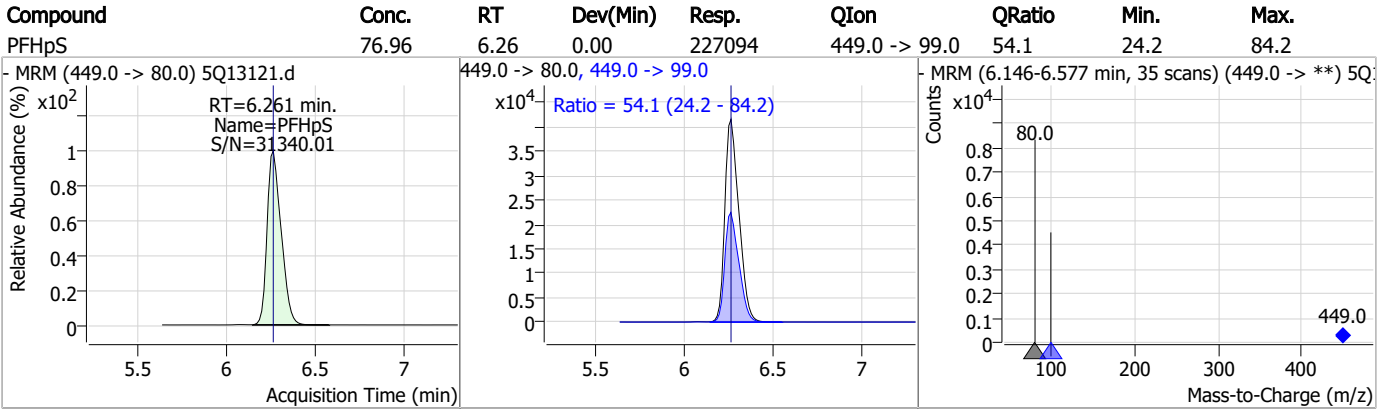
### Perfluorinated Compounds by LC/MS/MS



7.4.2

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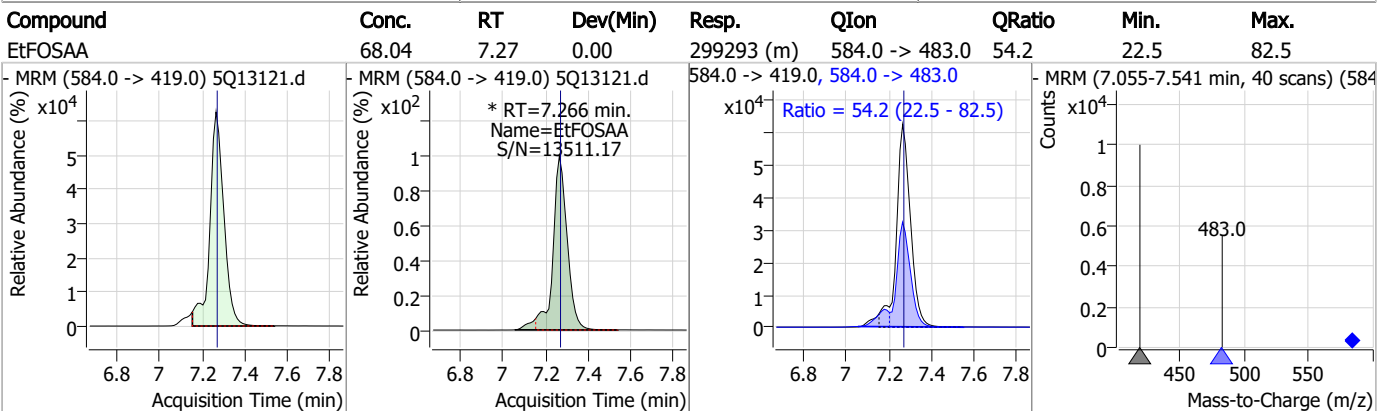
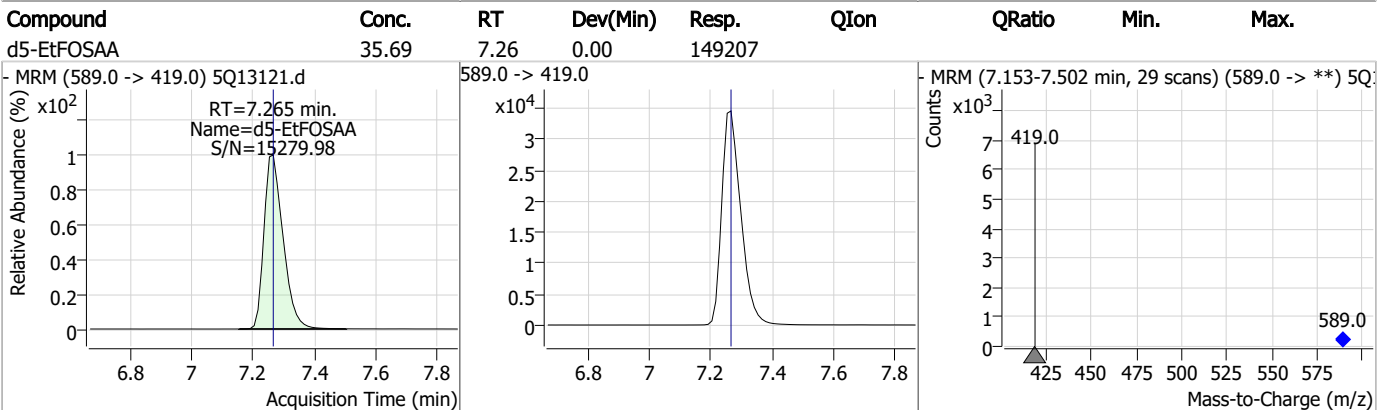
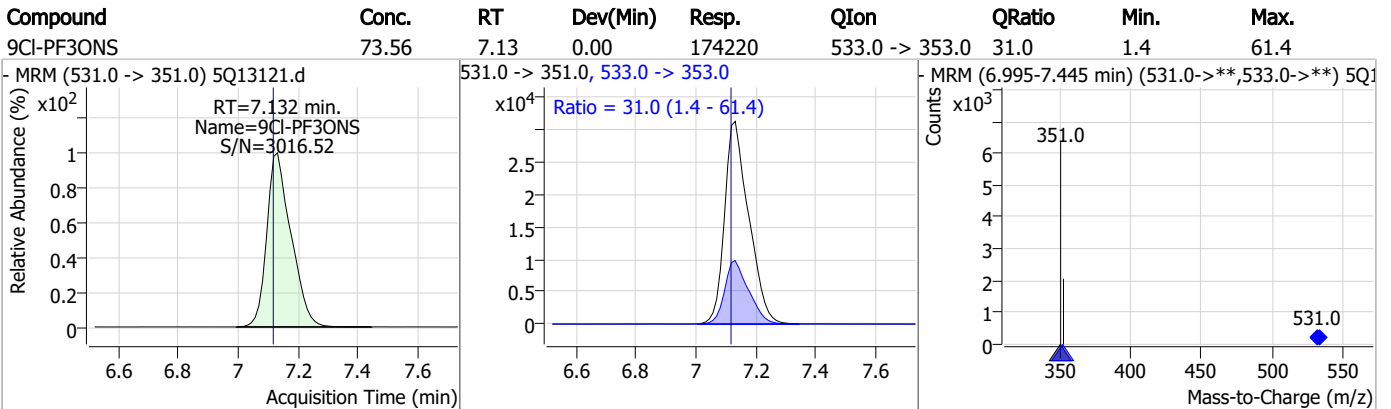
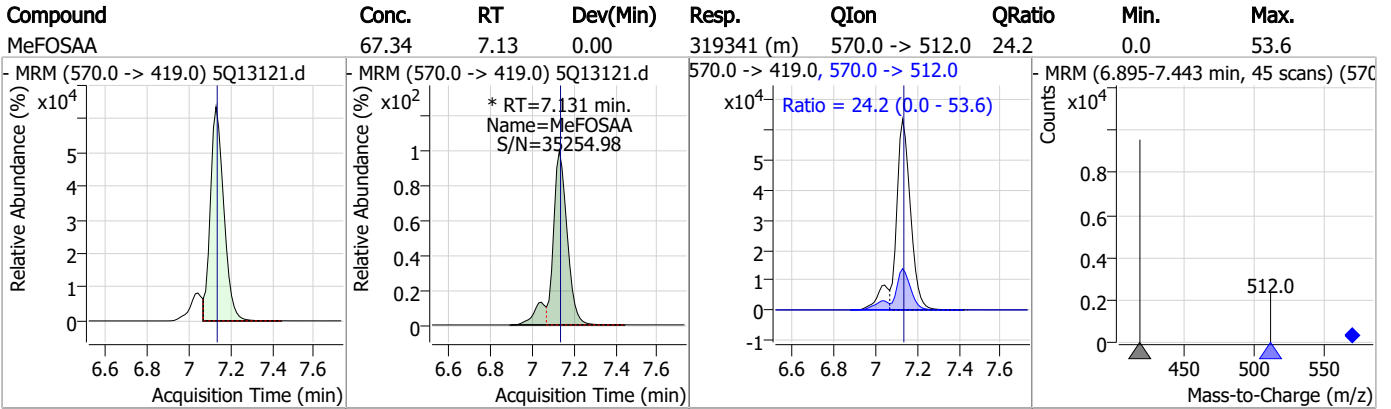
### Perfluorinated Compounds by LC/MS/MS



7.4.2

7

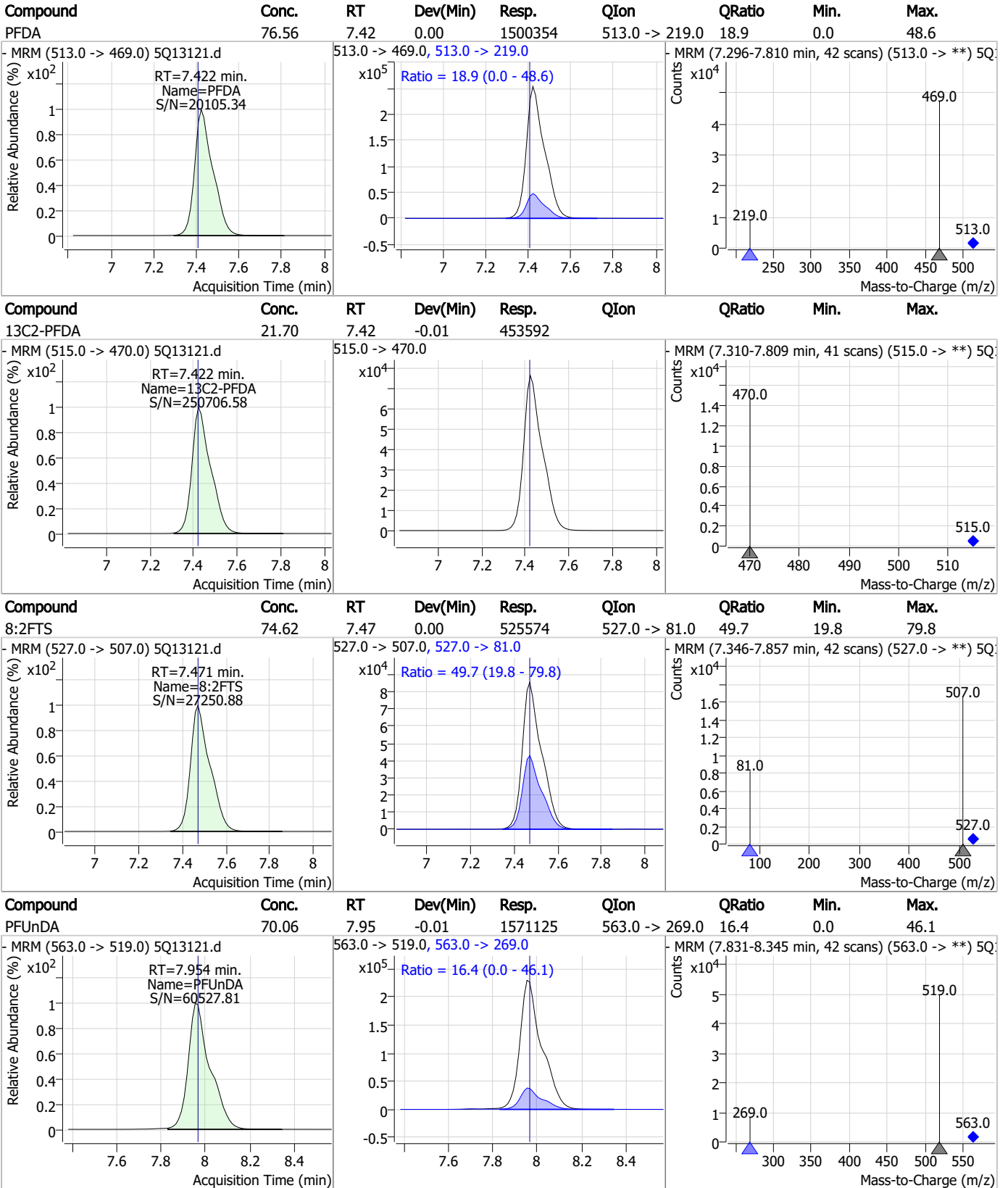
### Perfluorinated Compounds by LC/MS/MS



7.4.2

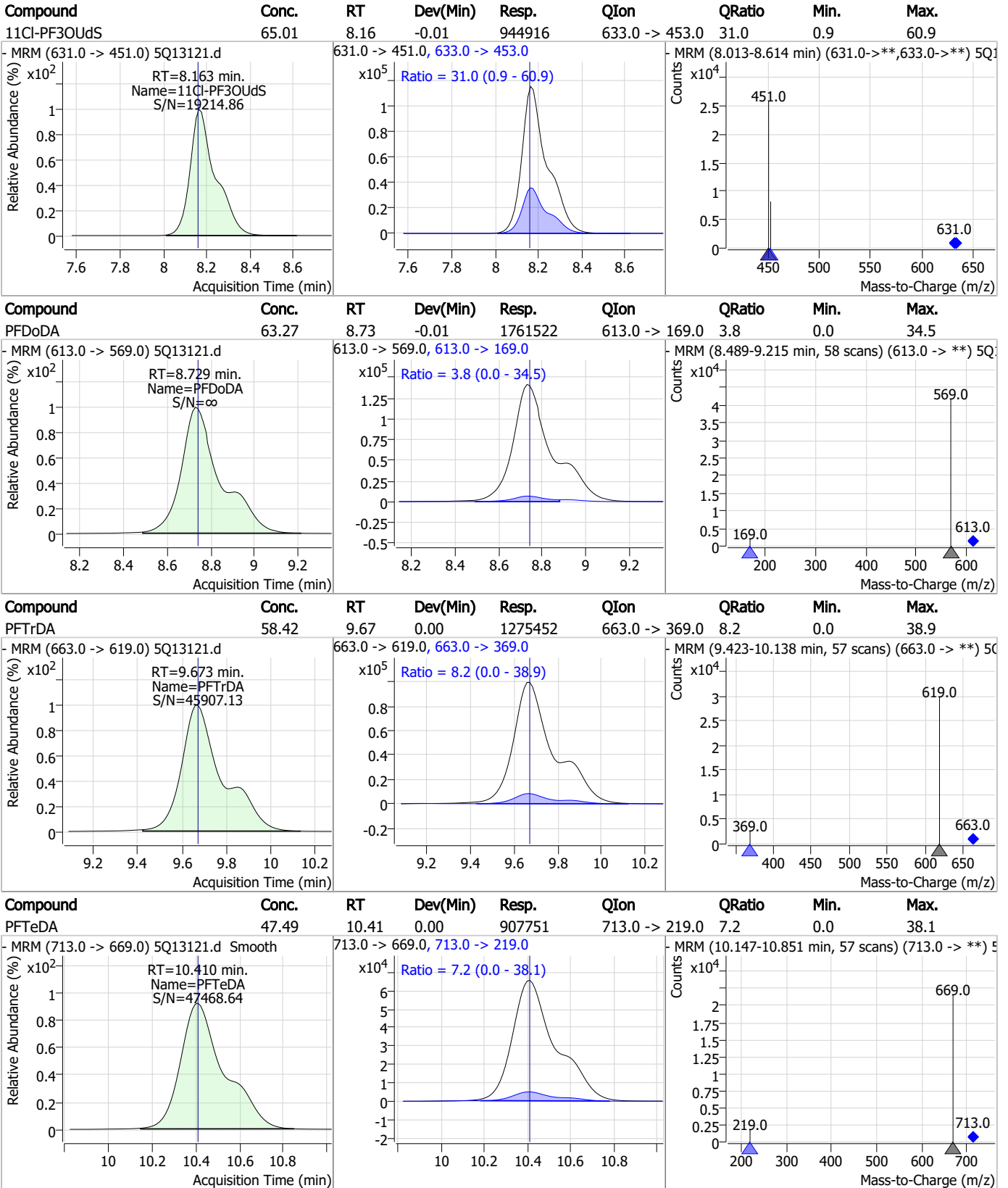
7

### Perfluorinated Compounds by LC/MS/MS



7.4.2  
7

### Perfluorinated Compounds by LC/MS/MS



7.4.2

7

# Manual Integration Approval Summary

**Sample Number:** OP96327-MSD      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13121.D      **Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Injection Time:** 04/15/23 07:58      **Supervisor approved:** 04/17/23 16:35 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanoic acid	335-67-1		6.25	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.85	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak

7.4.2.1

7



## Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13069.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/14/2023 5:23:04 PM  
 Sample Name : RT  
 Vial : P3-B1  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	145676	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	391182	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	167524	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	70059	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	176747	40.00 µg/L	0.000

**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	7.265	589.0 -> 419.0	0	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**

Compound	RT	Transition	Response	Conc. Units	QValue
6:2FTS	-	427.0 -> 407.0	-	N.D.	
		427.0 -> 81.0			
8:2FTS	-	527.0 -> 507.0	-	N.D.	
		527.0 -> 81.0			
EtFOSAA	-	584.0 -> 419.0	-	N.D.	
		584.0 -> 483.0			
MeFOSAA	-	570.0 -> 419.0	-	N.D.	
		570.0 -> 512.0			
PFBA	-	213.0 -> 169.0	-	N.D.	
PFBS	-	299.0 -> 80.0	-	N.D.	
		299.0 -> 99.0			
PFDA	-	513.0 -> 469.0	-	N.D.	
		513.0 -> 219.0			
PFDODA	-	613.0 -> 569.0	-	N.D.	
		613.0 -> 169.0			
PFHpA	5.553	363.0 -> 319.0	0	µg/L	m 1
		363.0 -> 169.0	0		
PFHpS	-	449.0 -> 80.0	-	N.D.	
		449.0 -> 99.0			
PFHxA	-	313.0 -> 269.0	-	N.D.	
		313.0 -> 119.0			
PFHxS	-	399.0 -> 80.0	-	N.D.	
		399.0 -> 99.0			
PFNA	-	463.0 -> 419.0	-	N.D.	
		463.0 -> 219.0			
PFOA	6.266	413.0 -> 369.0	294177	15.49 µg/L	m 96
		413.0 -> 169.0	102924		
PFOS	-	499.0 -> 80.0	-	N.D.	
		499.0 -> 99.0			
PFPeA	-	263.0 -> 219.0	-	N.D.	

7.5.1  
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Perfluorinated Compounds by LC/MS/MS

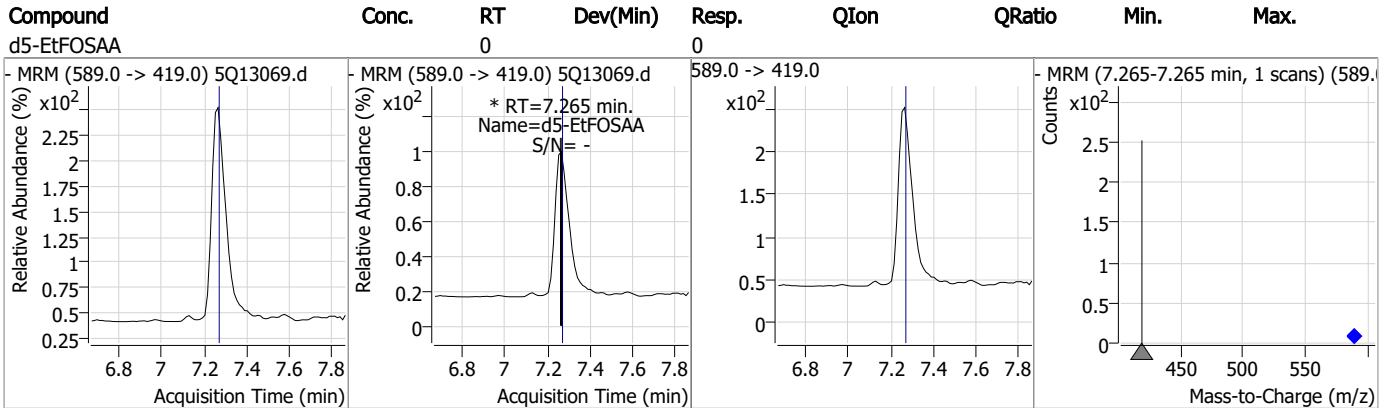
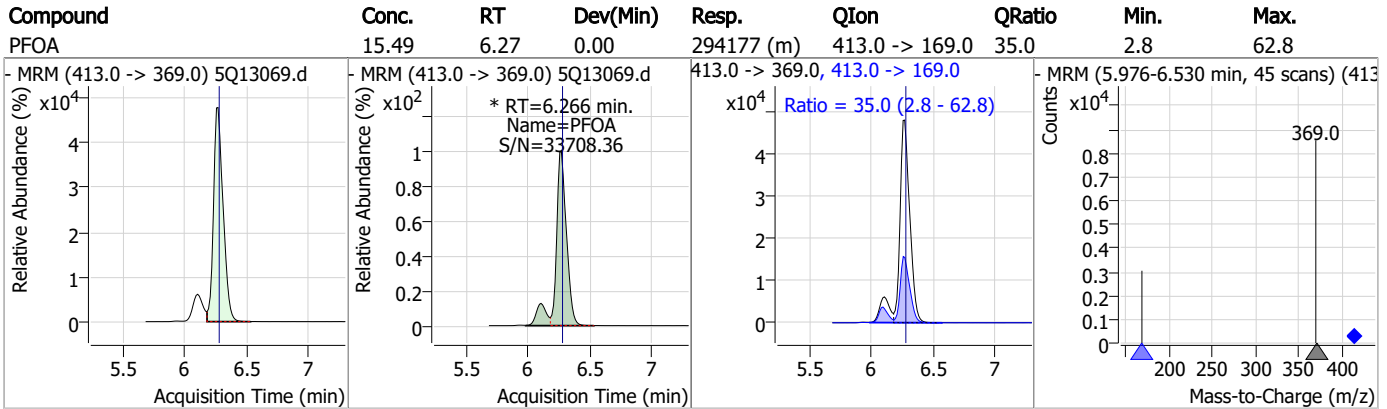
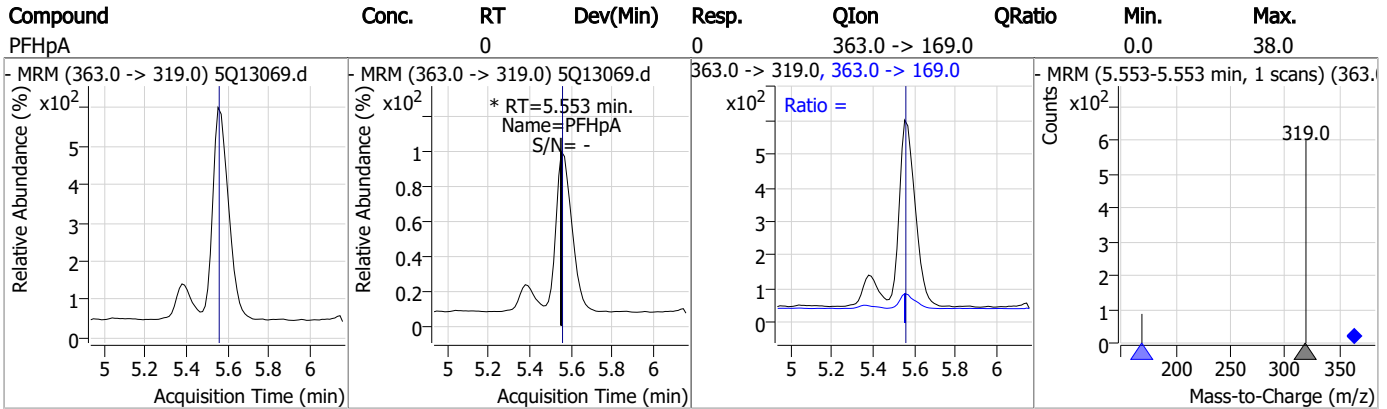
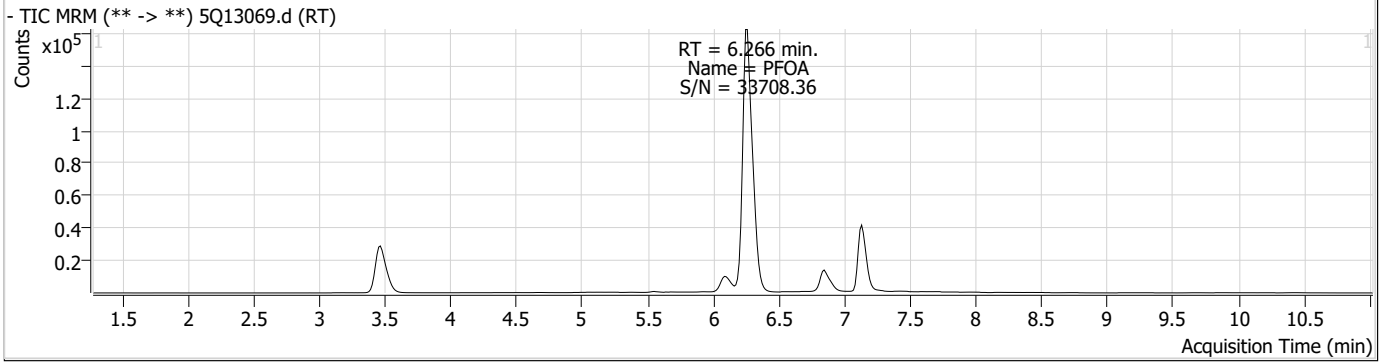
Compound	RT	Transition	Response	Conc. Units	Dev(Min)
PFTeDA	-	713.0 -> 669.0	-	N.D.	
		713.0 -> 219.0			
PFTrDA	-	663.0 -> 619.0	-	N.D.	
		663.0 -> 369.0			
PFUnDA	-	563.0 -> 519.0	-	N.D.	
		563.0 -> 269.0			
ADONA	-	377.0 -> 251.0	-	N.D.	
		377.0 -> 85.0			
9Cl-PF3ONS	-	531.0 -> 351.0	-	N.D.	
		533.0 -> 353.0			
11Cl-PF3OUdS	-	631.0 -> 451.0	-	N.D.	
		633.0 -> 453.0			
HFPO-DA	-	285.0 -> 169.0	-	N.D.	
		329.0 -> 169.0			

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

7.5.1

7

# Perfluorinated Compounds by LC/MS/MS



7.5.1  
7

# Manual Integration Approval Summary

**Sample Number:** S5Q203-RT      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13069.D      **Analyst approved:** 04/17/23 12:02 Natasha Gumtie  
**Injection Time:** 04/14/23 17:23      **Supervisor approved:** 04/17/23 13:18 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanoic acid	335-67-1		6.27	Split peak

## QQQ Check Tune Report



**Instrument Name** LCMS5Q  
**MS Model** G6470B  
**MS Instrument Serial** SG2221G211  
**Software\_Firmware Version** 10.1.67, FW: A.00.08.112  
**Tune Date & Time** 10 April 2023 10:35:01  
**File Path** D:\MassHunter\Tune\QQQ\G6470B\atunes.TUNE.XML  
**Ion Source** AJS ESI  
**Ionization Mode** AJS ESI  
**Tuned Resolution** All  
**Vacuum Pressure** 1.33E+0 [R] (Torr); 4.31E-5 [H] (Torr)

**Source Parameters**

Parameter	Negative
Gas Temp (°C)	300
Gas Flow (l/min)	8
Nebulizer (psi)	15
Capillary (V)	3500
Nozzle Voltage (V)	1500
Sheath Gas Temp (°C)	250
Sheath Gas Flow (l/min)	7

### QQQ Check Tune Report



#### 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	112.97	-0.02	Pass	0.70	0.75	0.05	Pass	353191
302.00	301.94	-0.06	Pass	0.70	0.76	0.06	Pass	140291
601.98	601.89	-0.09	Pass	0.70	0.72	0.02	Pass	535442
1033.99	1033.89	-0.10	Pass	0.70	0.71	0.01	Pass	784684
1633.95	1633.75	-0.20	Pass	0.70	0.72	0.02	Pass	1542564
2233.91	2233.66	-0.25	Pass	0.70	0.73	0.03	Pass	914879

**Analyzer: MS2 Polarity: Negative Width: Unit**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.07	0.07	Pass	0.70	0.59	-0.11	Pass	61087
112.99	112.99	0.00	Pass	0.70	0.66	-0.04	Pass	201848
302.00	301.96	-0.04	Pass	0.70	0.72	0.02	Pass	81357
601.98	601.90	-0.08	Pass	0.70	0.75	0.05	Pass	219059
1033.99	1033.87	-0.12	Pass	0.70	0.76	0.06	Pass	258334
1633.95	1633.82	-0.13	Pass	0.70	0.74	0.04	Pass	495227
2233.91	2233.77	-0.14	Pass	0.70	0.76	0.06	Pass	275464

**Analyzer: MS1 Polarity: Negative Width: Wide**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.95	-0.04	Pass	1.20	1.21	0.01	Pass	439937
302.00	301.91	-0.09	Pass	1.20	1.49	0.29	Pass	169647
601.98	601.85	-0.13	Pass	1.20	1.56	0.36	Pass	752500
1033.99	1033.84	-0.15	Pass	1.20	1.48	0.28	Pass	1462683
1633.95	1633.73	-0.22	Pass	1.20	1.33	0.13	Pass	3143914
2233.91	2233.57	-0.34	Pass	1.20	1.13	-0.07	Pass	1897363

**Analyzer: MS2 Polarity: Negative Width: Wide**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.06	0.06	Pass	1.20	1.17	-0.03	Pass	85648
112.99	112.96	-0.03	Pass	1.20	1.20	0.00	Pass	321456
302.00	301.97	-0.03	Pass	1.20	1.31	0.11	Pass	124895
601.98	601.88	-0.10	Pass	1.20	1.43	0.23	Pass	441723
1033.99	1033.87	-0.12	Pass	1.20	1.42	0.22	Pass	746136
1633.95	1633.79	-0.16	Pass	1.20	1.41	0.21	Pass	1532499
2233.91	2233.80	-0.11	Pass	1.20	1.30	0.10	Pass	815125

**Analyzer: MS1 Polarity: Negative Width: Widest**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.96	-0.03	Pass	2.50	2.48	-0.02	Pass	536685
302.00	301.89	-0.11	Pass	2.50	2.73	0.23	Pass	214318
601.98	601.83	-0.15	Pass	2.50	2.89	0.39	Pass	992435
1033.99	1033.85	-0.14	Pass	2.50	2.87	0.37	Pass	2432206
1633.95	1633.73	-0.22	Pass	2.50	2.81	0.31	Pass	6395496
2233.91	2233.61	-0.30	Pass	2.50	2.72	0.22	Pass	5453649

**Analyzer: MS2 Polarity: Negative Width: Widest**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.04	0.04	Pass	2.50	2.38	-0.12	Pass	112110
112.99	112.98	-0.01	Pass	2.50	2.48	-0.02	Pass	444245
302.00	301.97	-0.03	Pass	2.50	2.53	0.03	Pass	168229
601.98	601.94	-0.04	Pass	2.50	2.60	0.10	Pass	691925
1033.99	1033.86	-0.13	Pass	2.50	2.53	0.03	Pass	1462466
1633.95	1633.83	-0.12	Pass	2.50	2.49	-0.01	Pass	3857012
2233.91	2233.69	-0.22	Pass	2.50	2.40	-0.10	Pass	2695851

7.6.1  
7

### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13061.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/14/2023 3:06:23 PM  
 Sample Name : ic203-0.5  
 Vial : P3-A2  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	139864	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	379264	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	163352	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	68260	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	167910	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.434	515.0 -> 470.0	10597	0.44 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 2.2%		
13C2-PFHxA	4.676	315.0 -> 270.0	4541	0.46 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 2.3%		
d5-EtFOSAA	7.265	589.0 -> 419.0	4227	0.93 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 2.3%		
13C3-HFPO-DA	4.958	287.0 -> 169.0	2079	0.98 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 2.5%		
<b>Target Compounds</b>					
6:2FTS	6.251	427.0 -> 407.0	3983	0.60 µg/L	96
		427.0 -> 81.0	1804		
8:2FTS	7.483	527.0 -> 507.0	3708	0.59 µg/L	96
		527.0 -> 81.0	1939		
EtFOSAA	7.266	584.0 -> 419.0	2218	0.47 µg/L	m 95
		584.0 -> 483.0	1241		
MeFOSAA	7.131	570.0 -> 419.0	2359	0.46 µg/L	m 100
		570.0 -> 512.0	556		
PFBA	1.863	213.0 -> 169.0	1327	0.49 µg/L	100
PFBS	3.716	299.0 -> 80.0	1592	0.49 µg/L	97
		299.0 -> 99.0	697		
PFDA	7.435	513.0 -> 469.0	10938	0.49 µg/L	98
		513.0 -> 219.0	1948		
PFDoDA	8.754	613.0 -> 569.0	13636	0.45 µg/L	99
		613.0 -> 169.0	585		
PFHpA	5.553	363.0 -> 319.0	8674	0.44 µg/L	98
		363.0 -> 169.0	744		
PFHpS	6.261	449.0 -> 80.0	1617	0.50 µg/L	99
		449.0 -> 99.0	867		
PFHxA	4.678	313.0 -> 269.0	3322	0.49 µg/L	99
		313.0 -> 119.0	317		
PFHxS	5.587	399.0 -> 80.0	1646	0.47 µg/L	m 99
		399.0 -> 99.0	844		
PFNA	6.876	463.0 -> 419.0	9866	0.45 µg/L	97
		463.0 -> 219.0	2420		
PFOA	6.266	413.0 -> 369.0	8704	0.47 µg/L	100
		413.0 -> 169.0	2856		
PFOS	6.849	499.0 -> 80.0	1861	0.47 µg/L	m 95
		499.0 -> 99.0	1038		
PFPeA	3.472	263.0 -> 219.0	5645	0.48 µg/L	100

7.6.2  
7

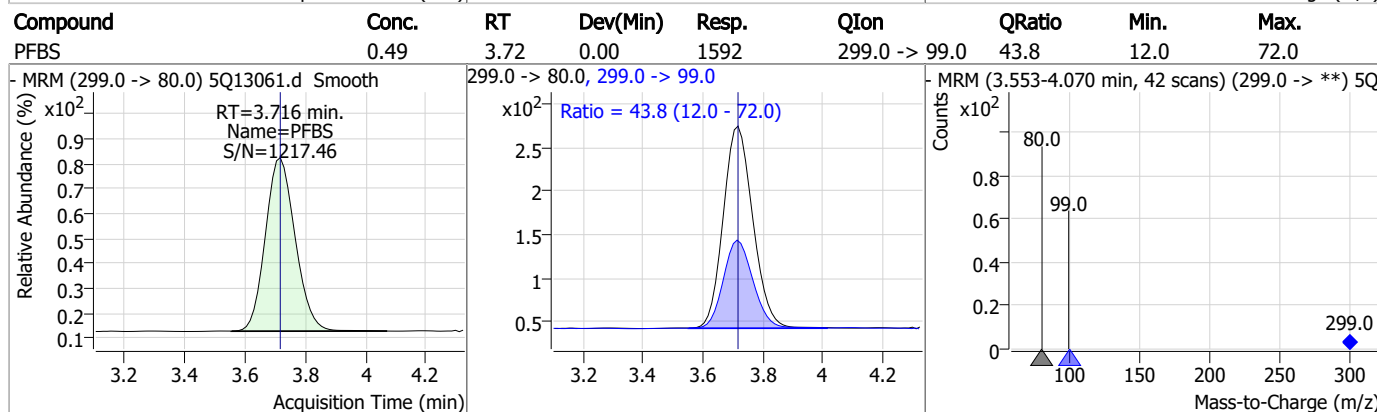
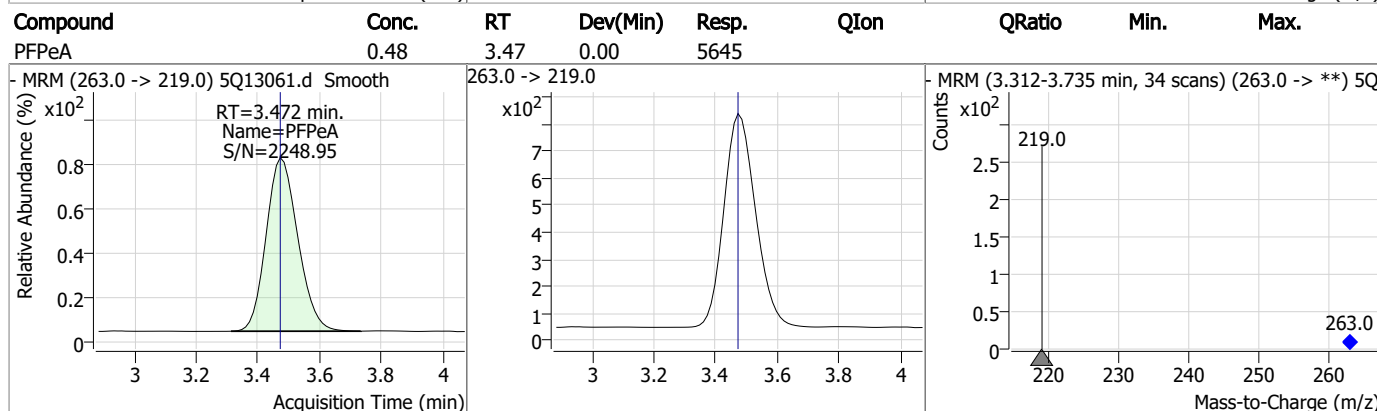
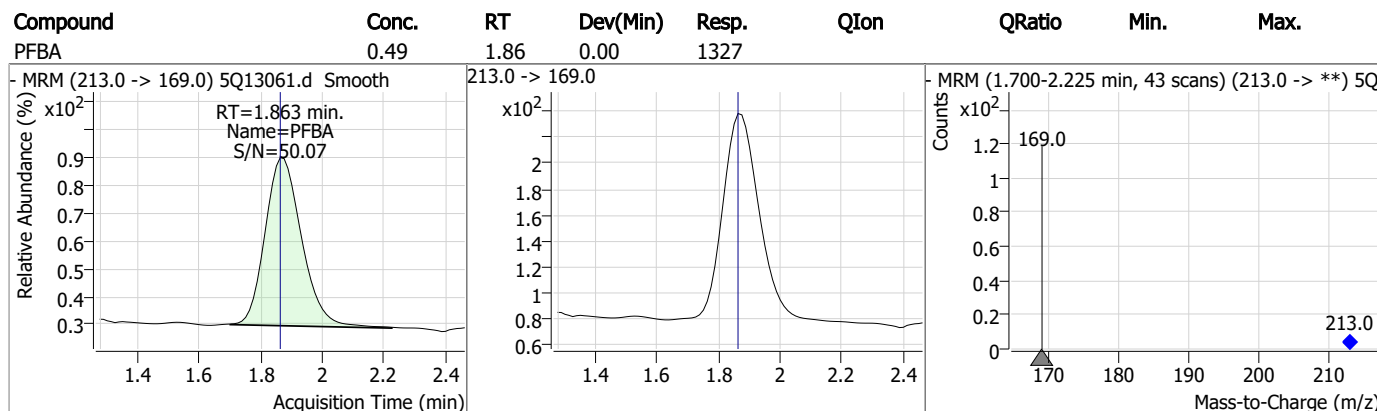
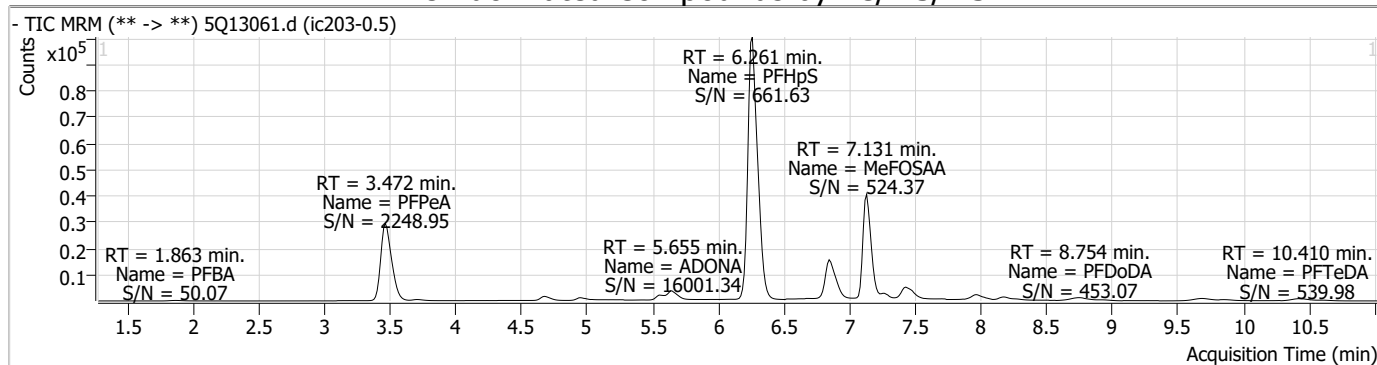
## Perfluorinated Compounds by LC/MS/MS

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
PFTeDA	10.410	713.0 -> 669.0	9557	0.46	µg/L	99
		713.0 -> 219.0	817			
PFTrDA	9.685	663.0 -> 619.0	11404	0.48	µg/L	98
		663.0 -> 369.0	948			
PFUnDA	7.966	563.0 -> 519.0	11329	0.46	µg/L	98
		563.0 -> 269.0	1912			
ADONA	5.655	377.0 -> 251.0	11855	0.43	µg/L	98
		377.0 -> 85.0	4479			
9Cl-PF3ONS	7.132	531.0 -> 351.0	1207	0.45	µg/L	94
		533.0 -> 353.0	417			
11Cl-PF3OUdS	8.175	631.0 -> 451.0	7398	0.45	µg/L	100
		633.0 -> 453.0	2273			
HFPO-DA	4.960	285.0 -> 169.0	1315	0.53	µg/L	95
		329.0 -> 169.0	1632			

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

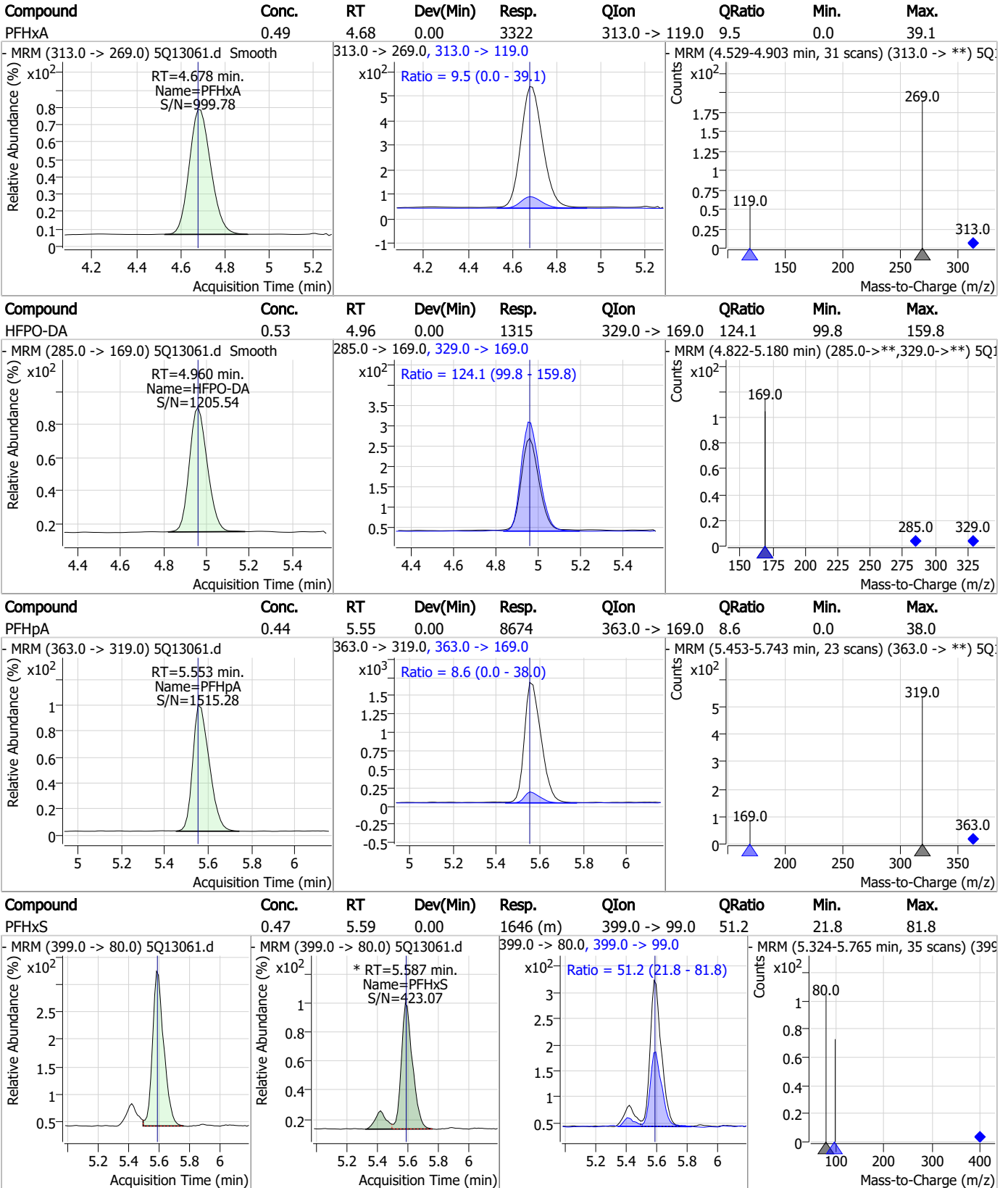


### Perfluorinated Compounds by LC/MS/MS

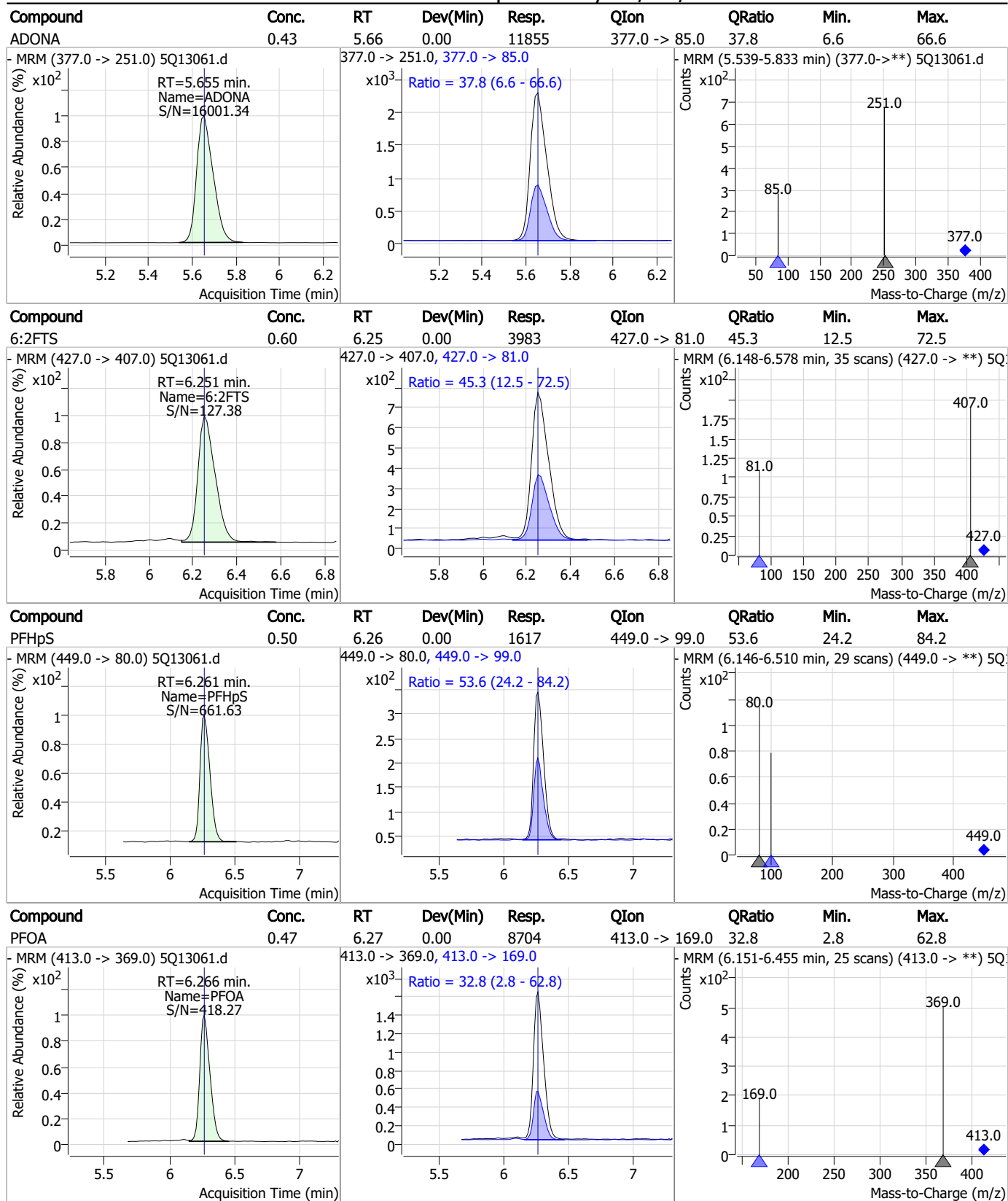


7.6.2  
7

### Perfluorinated Compounds by LC/MS/MS



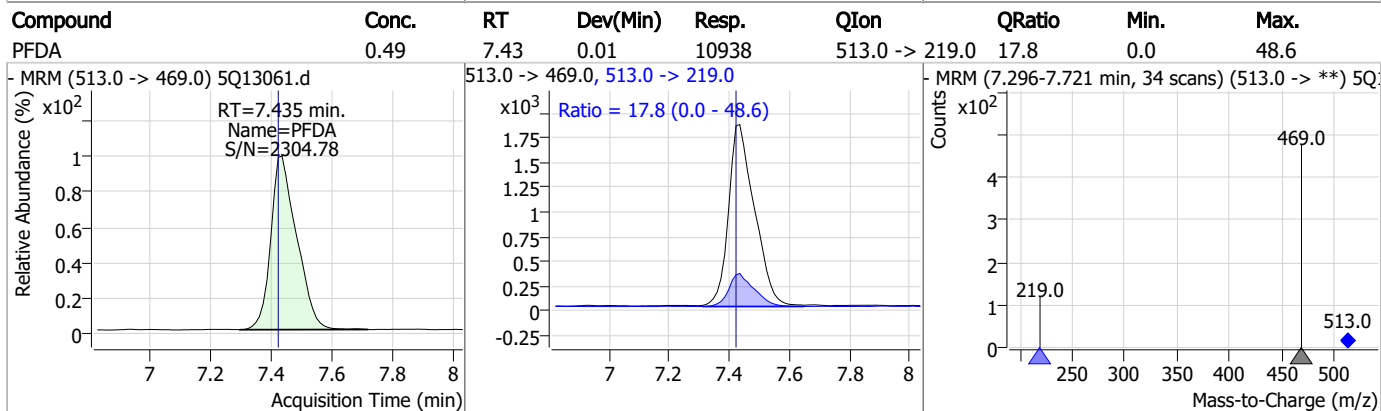
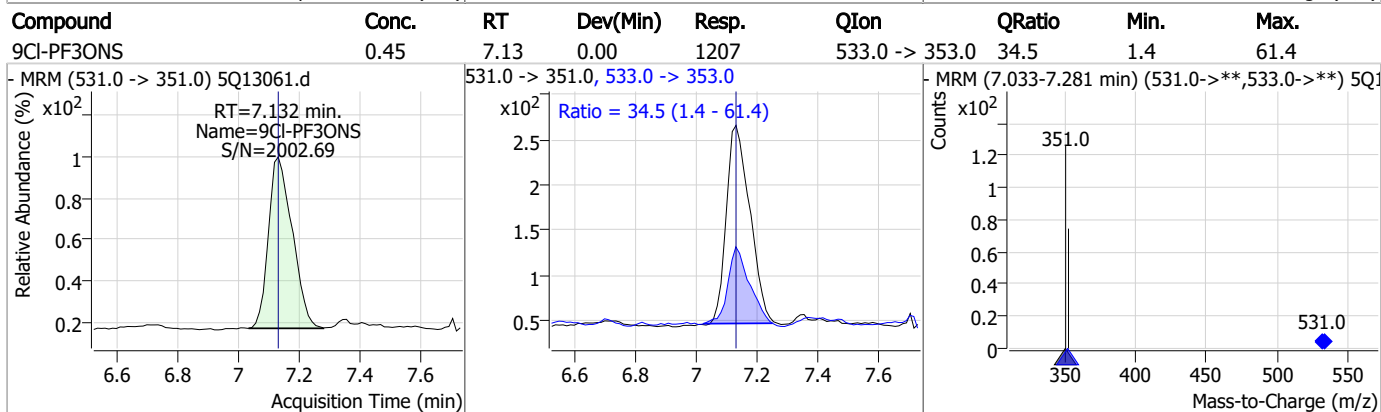
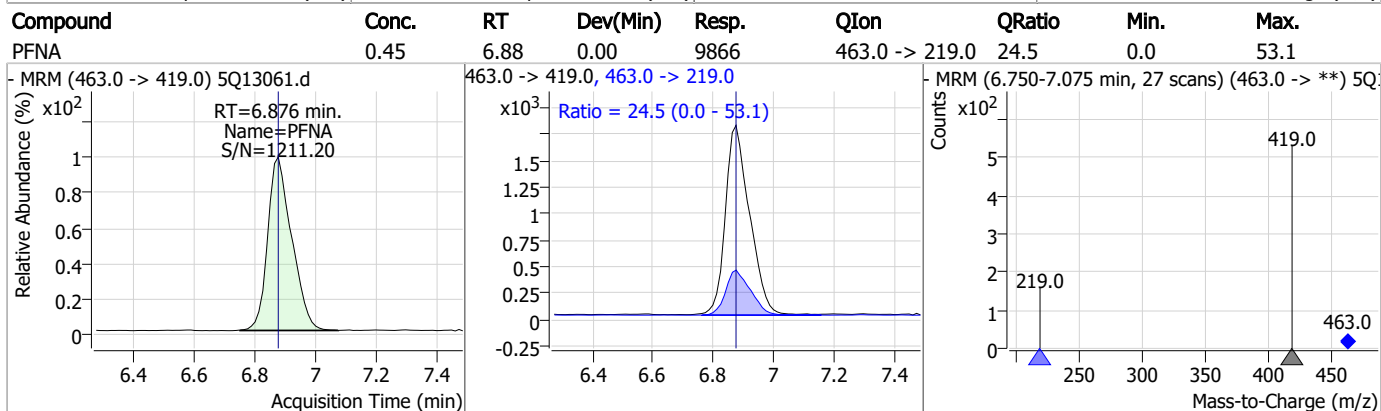
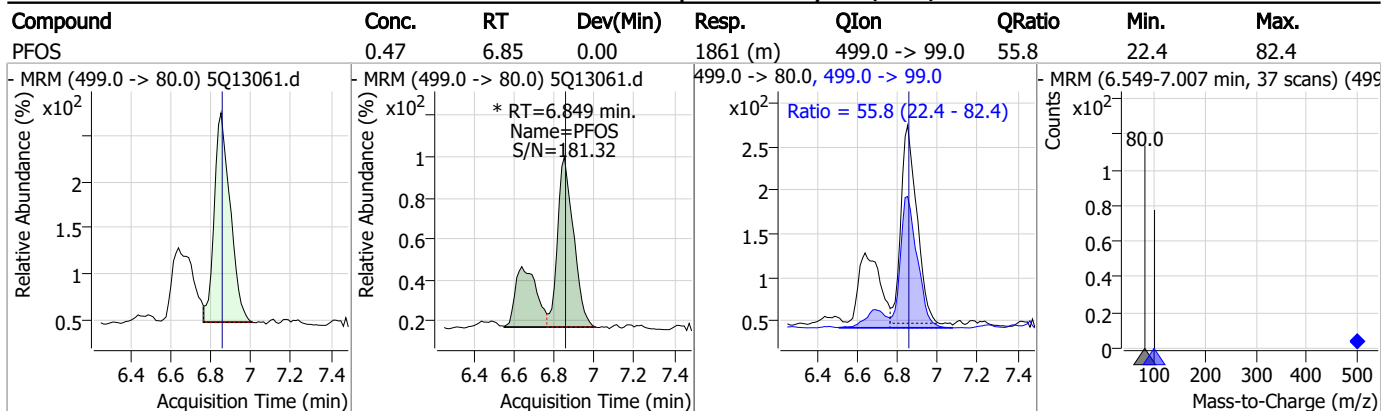
### Perfluorinated Compounds by LC/MS/MS



7.6.2

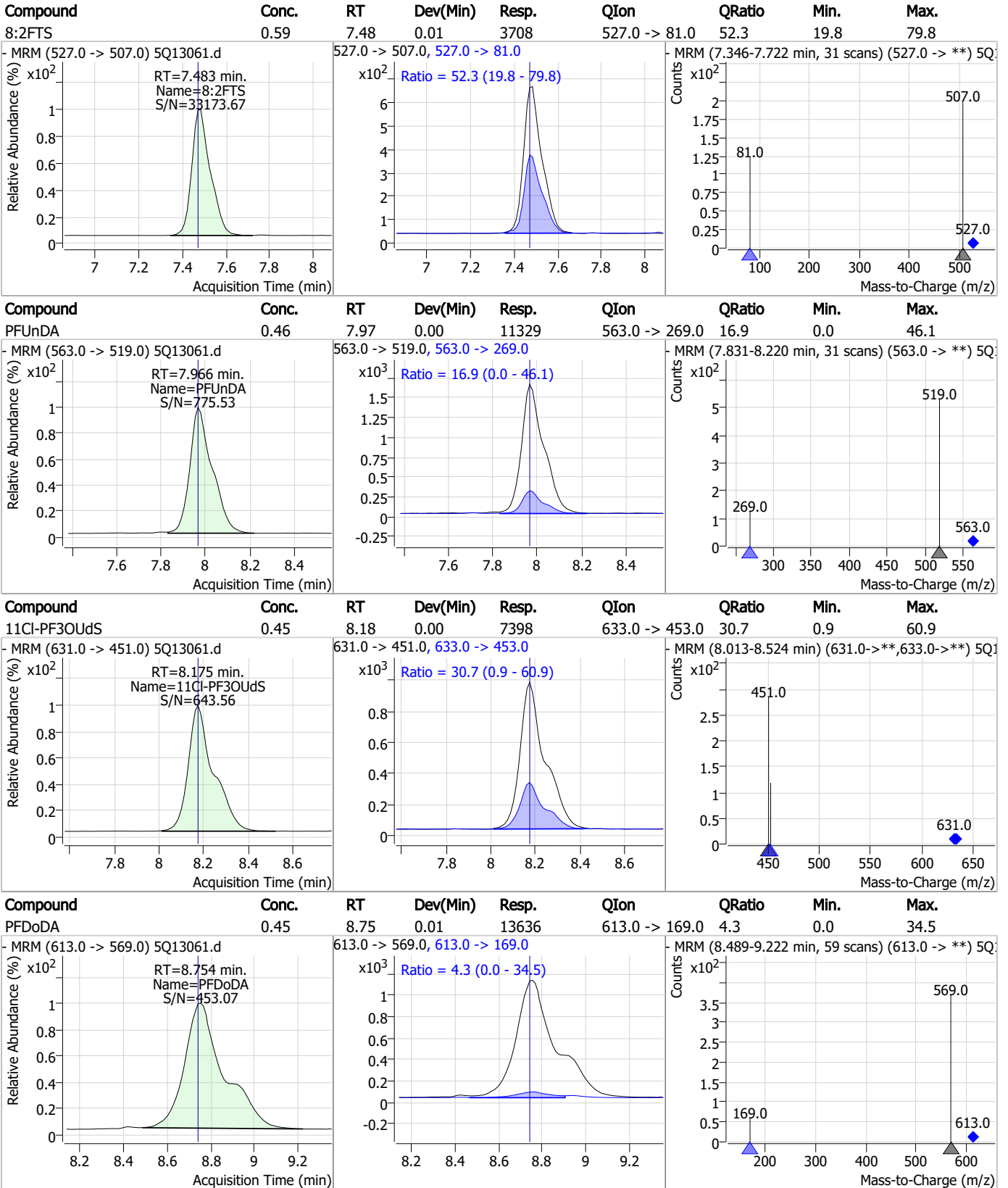
7

### Perfluorinated Compounds by LC/MS/MS



7.6.2  
7

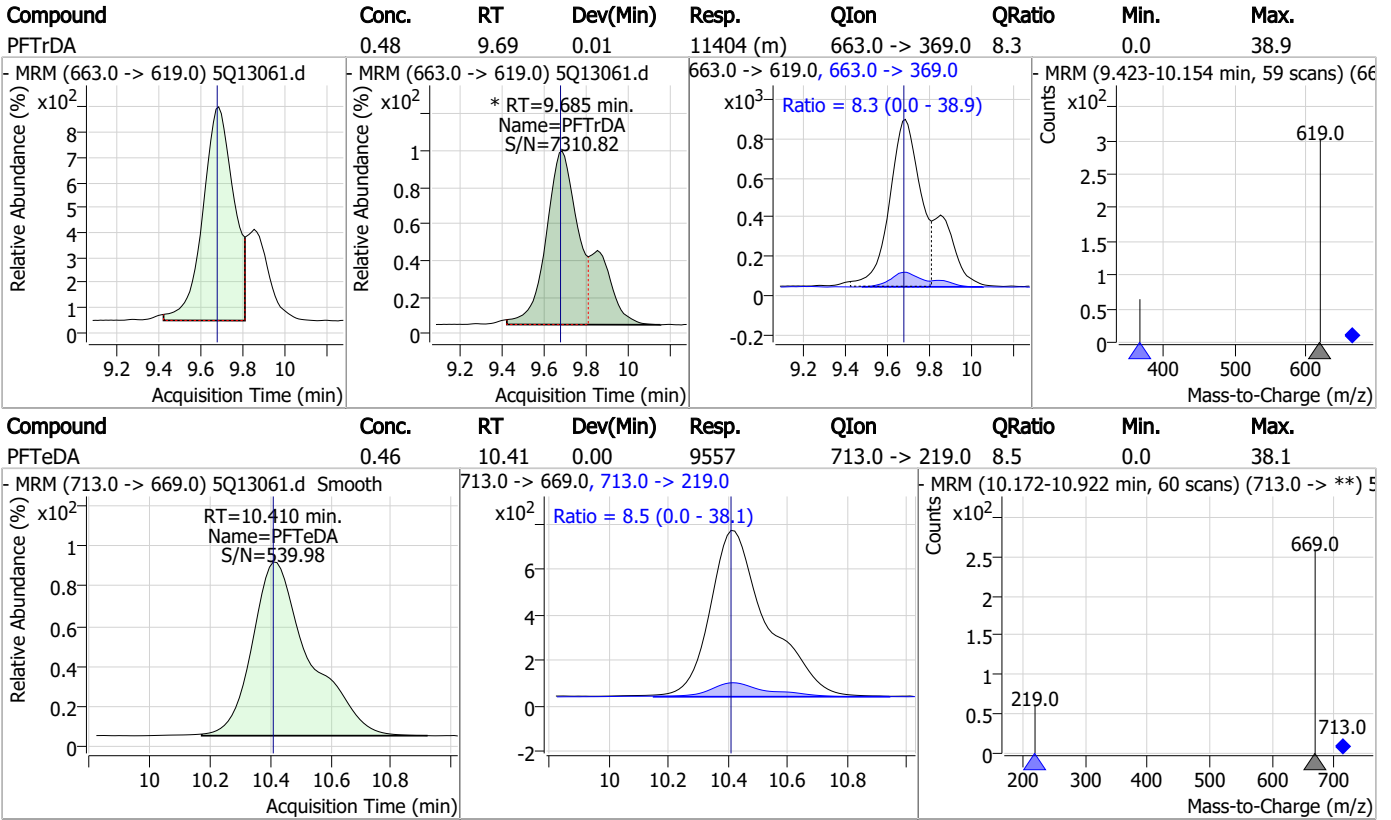
Perfluorinated Compounds by LC/MS/MS



7.6.2

7

### Perfluorinated Compounds by LC/MS/MS



7.6.2

7

# Manual Integration Approval Summary

**Sample Number:** S5Q203-IC203      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13061.D      **Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Injection Time:** 04/14/23 15:06      **Supervisor approved:** 04/17/23 16:32 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.85	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorotridecanoic acid	72629-94-8		9.69	Poor instrument integration

7.6.2.1  
7

### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13062.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/14/2023 3:23:11 PM  
 Sample Name : ic203-1  
 Vial : P3-A3  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	162848	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	434982	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	187356	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	79060	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	191448	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.434	515.0 -> 470.0	24075	0.88 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 4.4%		
13C2-PFHxA	4.676	315.0 -> 270.0	9941	0.89 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 4.4%		
d5-EtFOSAA	7.265	589.0 -> 419.0	9274	1.80 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 4.5%		
13C3-HFPO-DA	4.958	287.0 -> 169.0	4522	1.86 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 4.6%		
<b>Target Compounds</b>					
6:2FTS	6.251	427.0 -> 407.0	8392	1.09 µg/L	93
		427.0 -> 81.0	3949		
8:2FTS	7.483	527.0 -> 507.0	8154	1.12 µg/L	99
		527.0 -> 81.0	4143		
EtFOSAA	7.266	584.0 -> 419.0	4891	0.90 µg/L	m 99
		584.0 -> 483.0	2590		
MeFOSAA	7.131	570.0 -> 419.0	5227	0.89 µg/L	m 97
		570.0 -> 512.0	1306		
PFBA	1.863	213.0 -> 169.0	2688	0.86 µg/L	100
PFBS	3.716	299.0 -> 80.0	3394	0.90 µg/L	98
		299.0 -> 99.0	1459		
PFDA	7.435	513.0 -> 469.0	22696	0.88 µg/L	99
		513.0 -> 219.0	4336		
PFDoDA	8.754	613.0 -> 569.0	29612	0.84 µg/L	98
		613.0 -> 169.0	1168		
PFHpA	5.553	363.0 -> 319.0	18693	0.83 µg/L	98
		363.0 -> 169.0	1622		
PFHpS	6.261	449.0 -> 80.0	3421	0.91 µg/L	98
		449.0 -> 99.0	1800		
PFHxA	4.678	313.0 -> 269.0	7217	0.93 µg/L	99
		313.0 -> 119.0	632		
PFHxS	5.587	399.0 -> 80.0	3463	0.85 µg/L	m 98
		399.0 -> 99.0	1834		
PFNA	6.876	463.0 -> 419.0	20871	0.83 µg/L	99
		463.0 -> 219.0	4756		
PFOA	6.266	413.0 -> 369.0	18657	0.88 µg/L	98
		413.0 -> 169.0	5959		
PFOS	6.849	499.0 -> 80.0	4063	0.89 µg/L	m 99
		499.0 -> 99.0	2155		
PFPeA	3.472	263.0 -> 219.0	11925	0.88 µg/L	100

7.6.3  
7

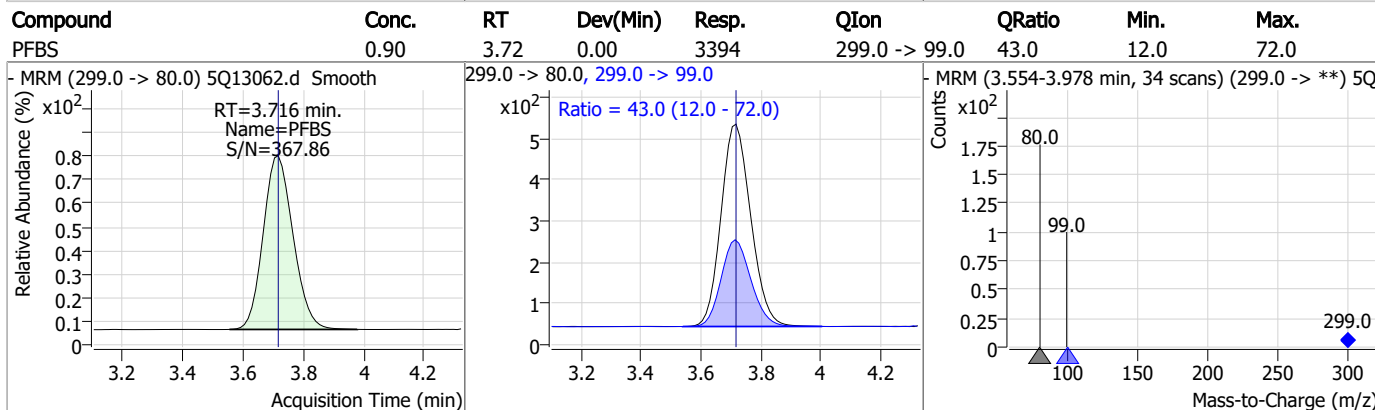
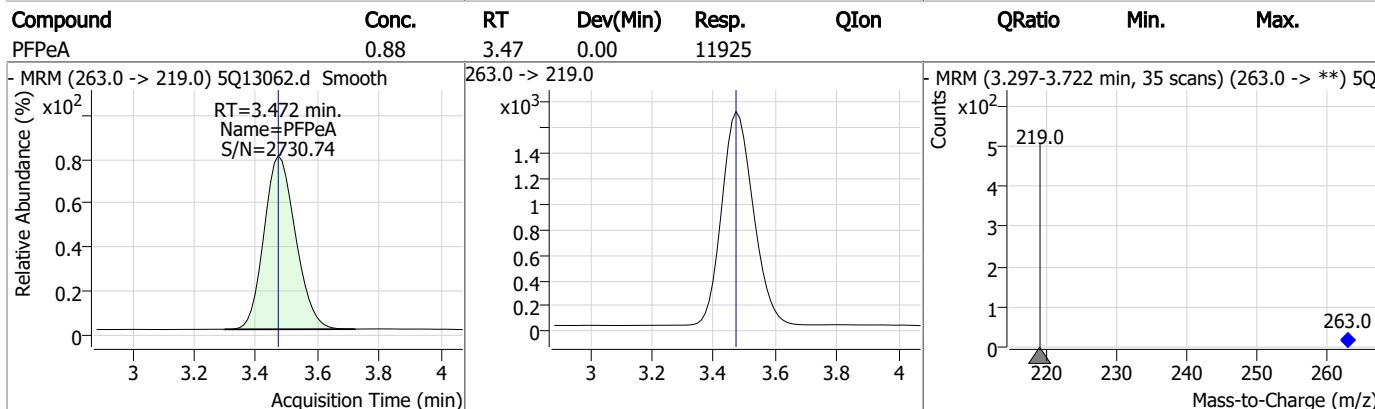
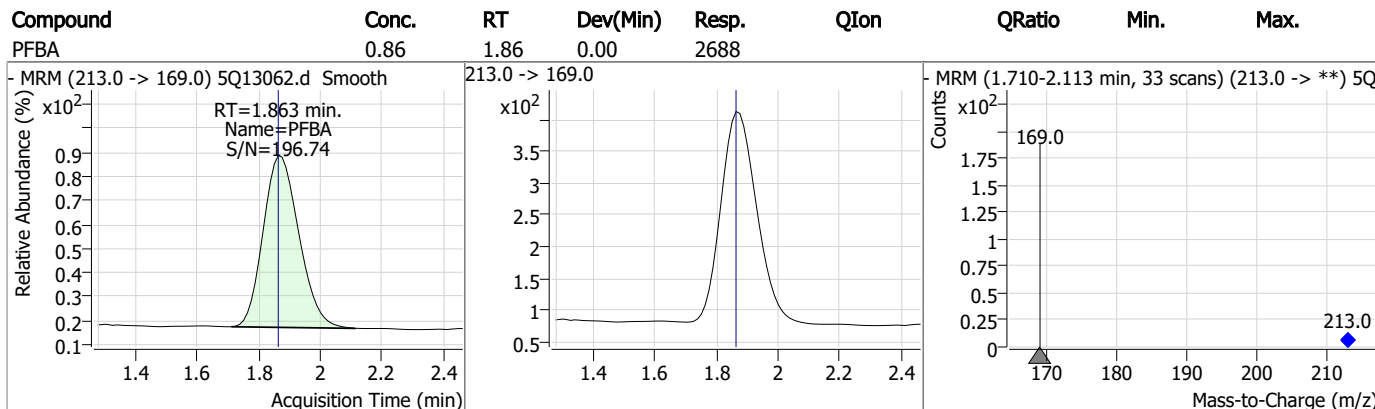
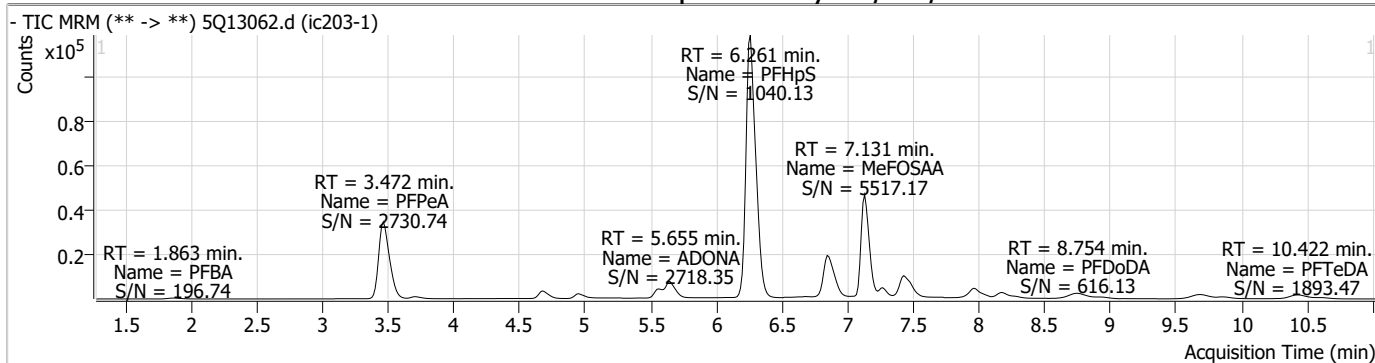


## Perfluorinated Compounds by LC/MS/MS

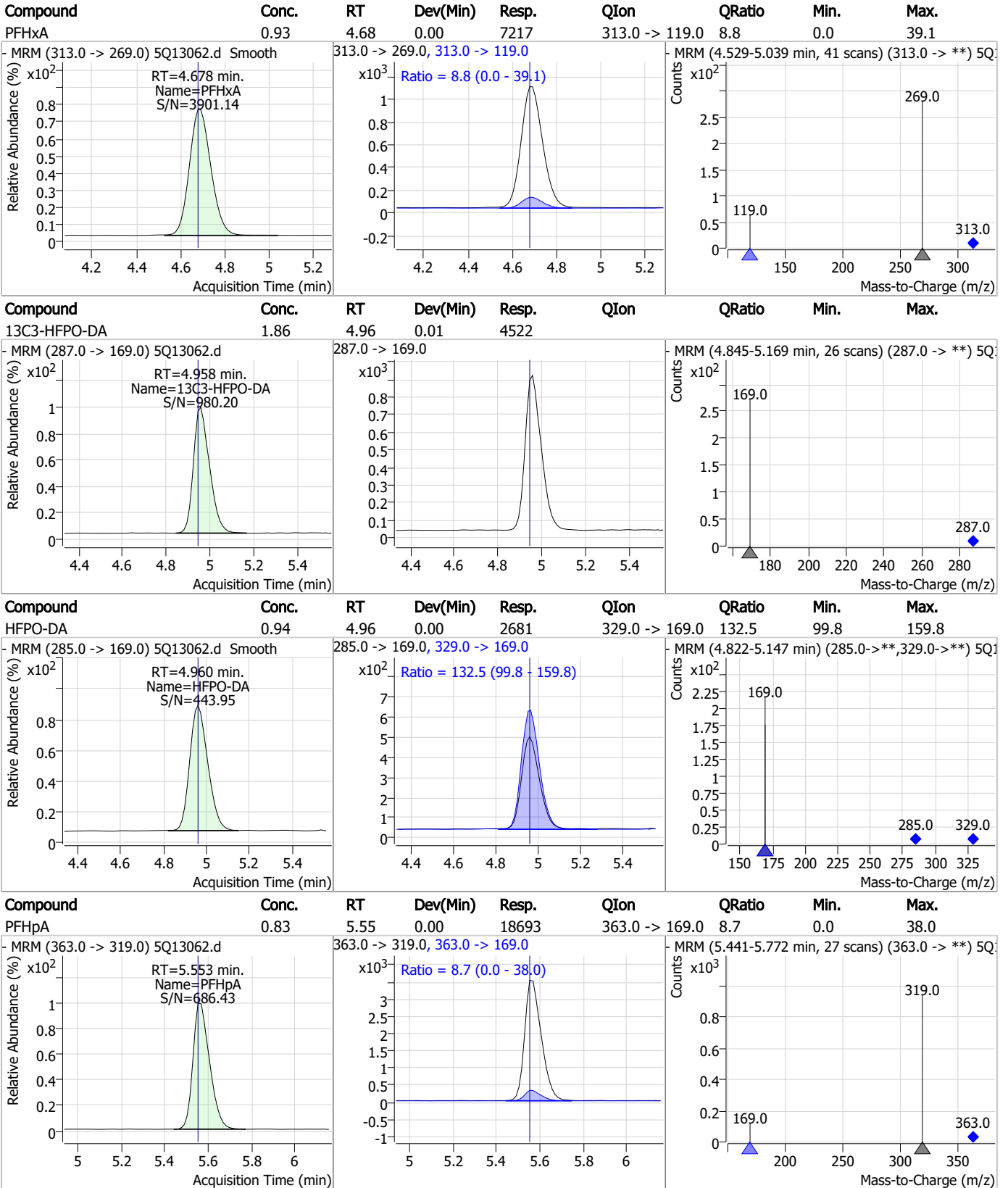
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
PFTeDA	10.422	713.0 -> 669.0	20444	0.84	µg/L	99
		713.0 -> 219.0	1709			
PFTrDA	9.685	663.0 -> 619.0	24375	0.88	µg/L	m
		663.0 -> 369.0	2038			
PFUnDA	7.966	563.0 -> 519.0	24729	0.87	µg/L	100
		563.0 -> 269.0	3956			
ADONA	5.655	377.0 -> 251.0	25680	0.81	µg/L	99
		377.0 -> 85.0	9533			
9Cl-PF3ONS	7.132	531.0 -> 351.0	2559	0.82	µg/L	98
		533.0 -> 353.0	839			
11Cl-PF3OUdS	8.175	631.0 -> 451.0	15498	0.81	µg/L	97
		633.0 -> 453.0	5018			
HFPO-DA	4.960	285.0 -> 169.0	2681	0.94	µg/L	98
		329.0 -> 169.0	3552			

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

### Perfluorinated Compounds by LC/MS/MS



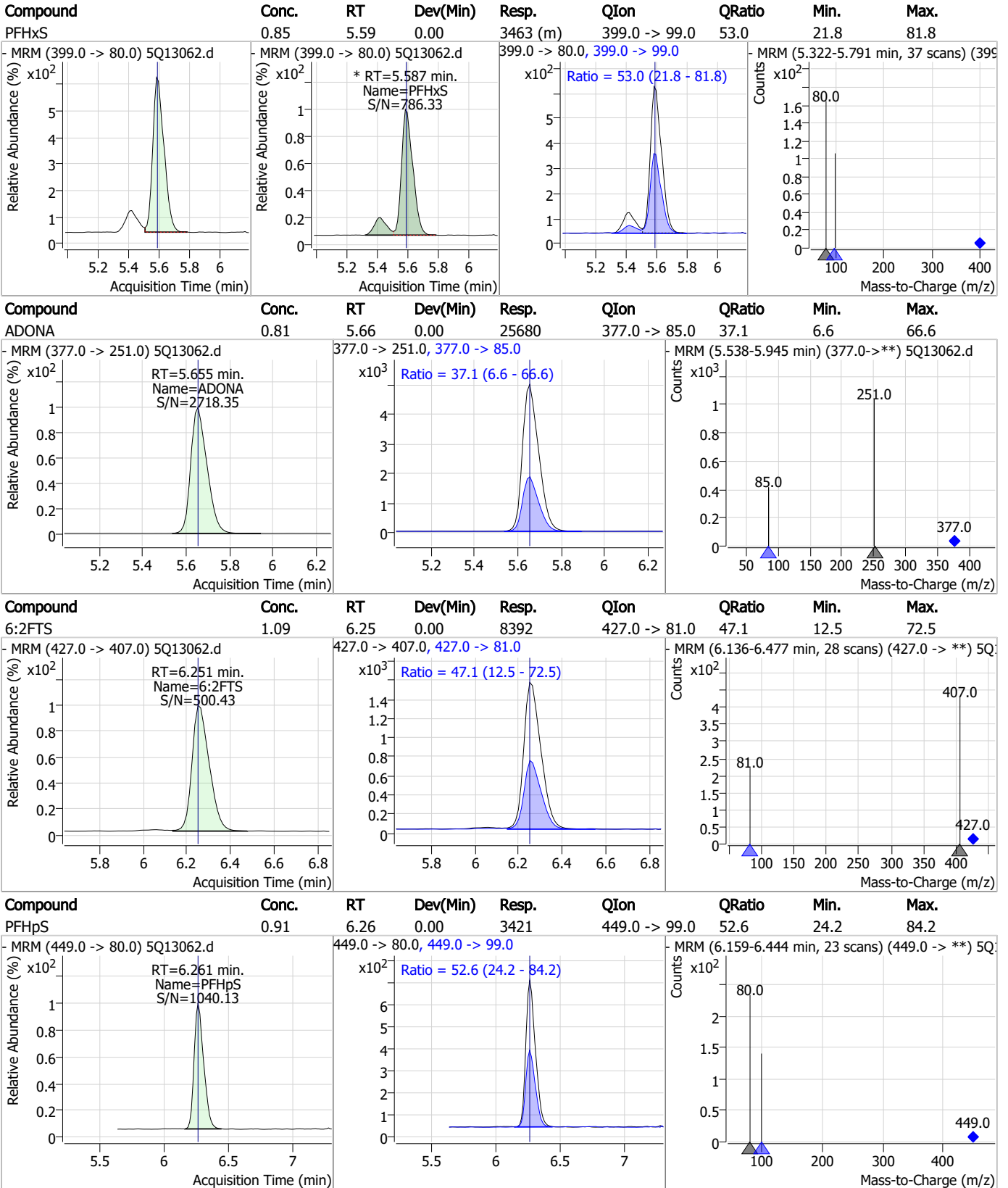
### Perfluorinated Compounds by LC/MS/MS



7.6.3

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### Perfluorinated Compounds by LC/MS/MS

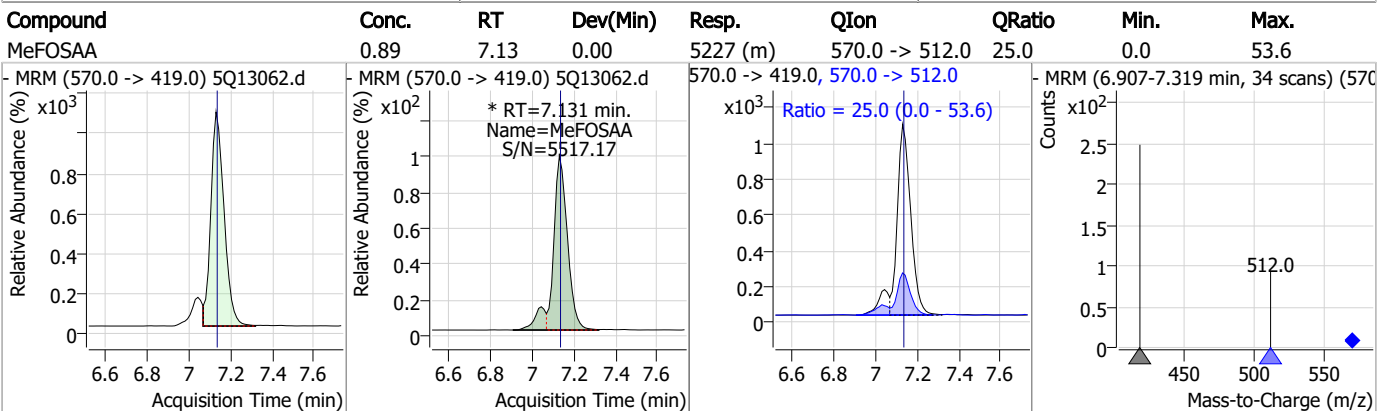
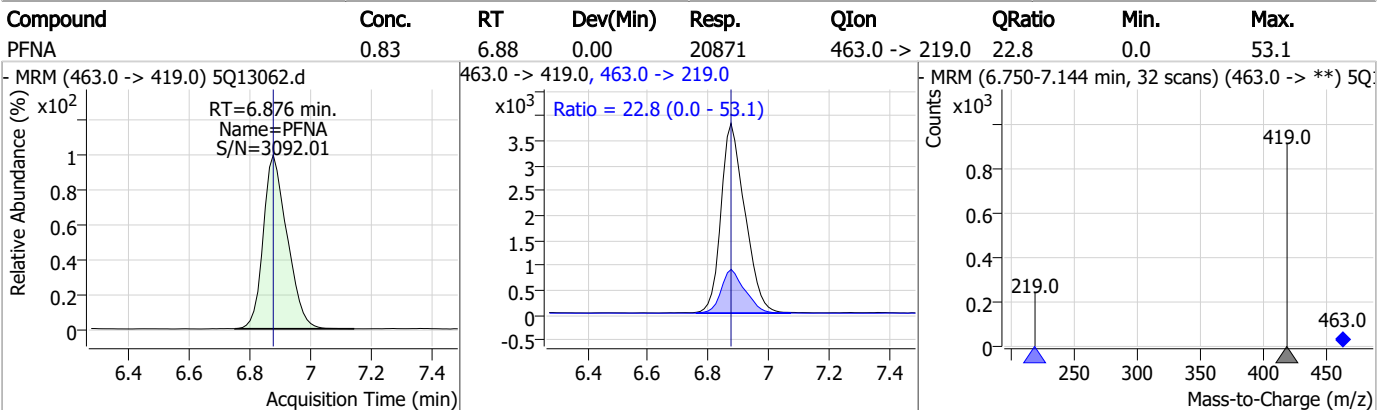
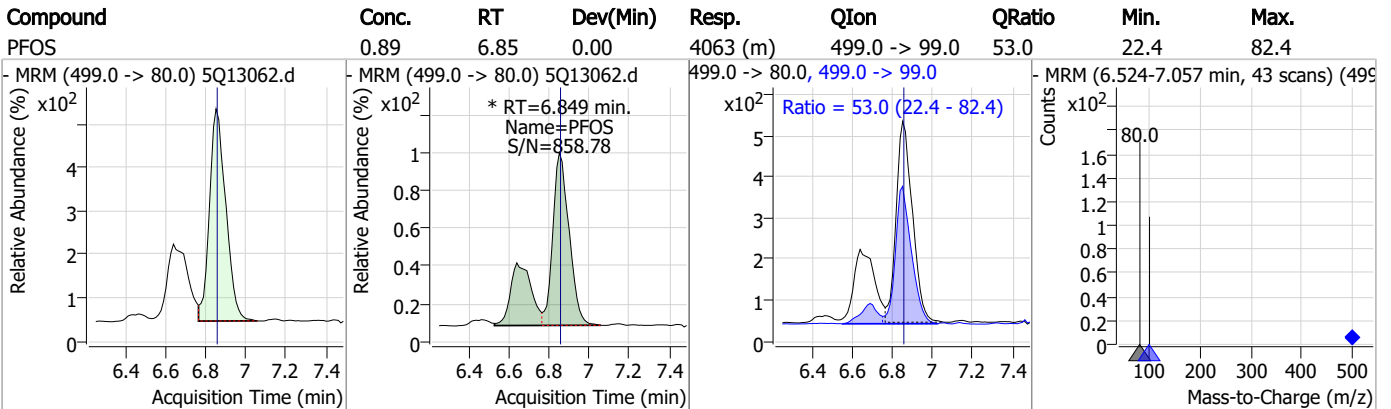
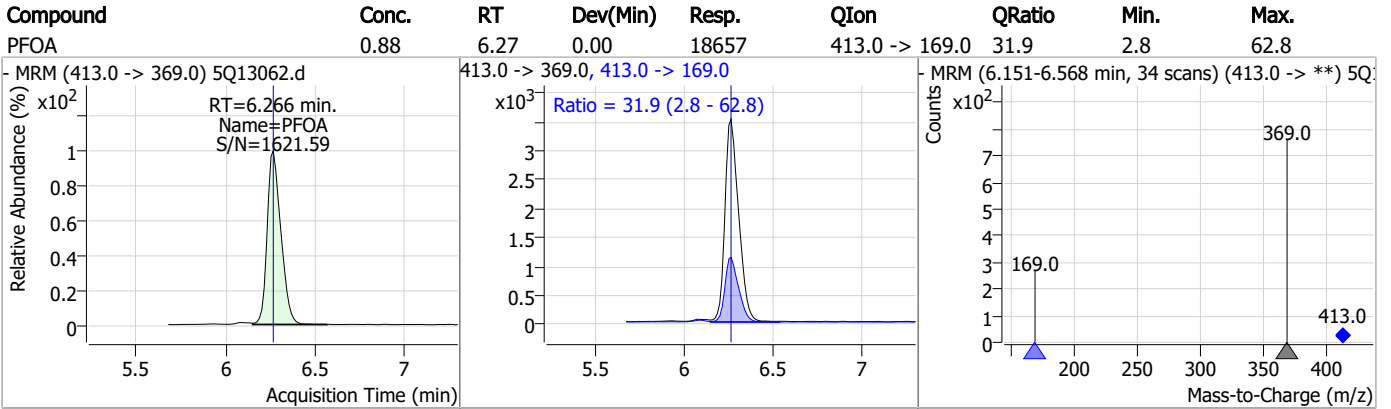


7.6.3

7



### Perfluorinated Compounds by LC/MS/MS

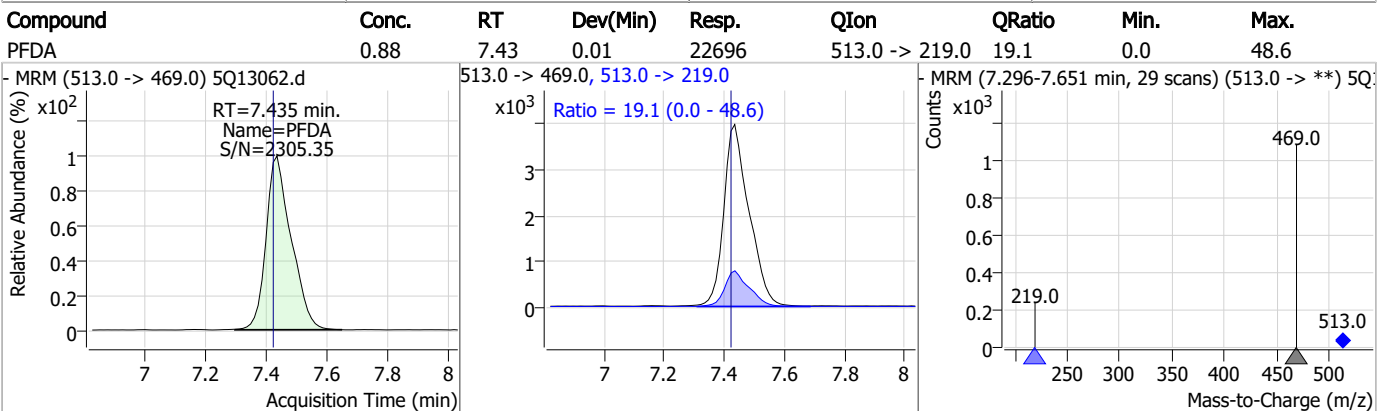
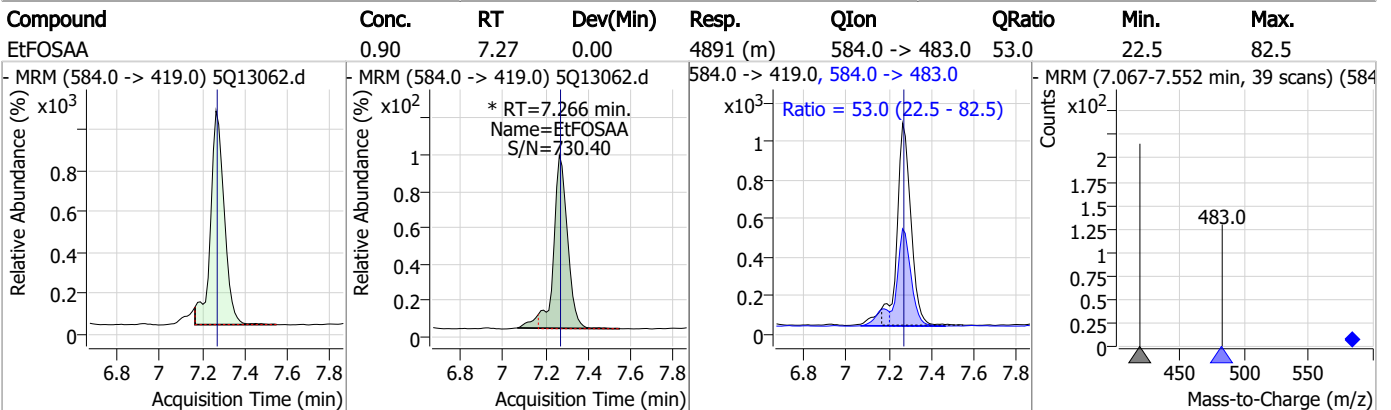
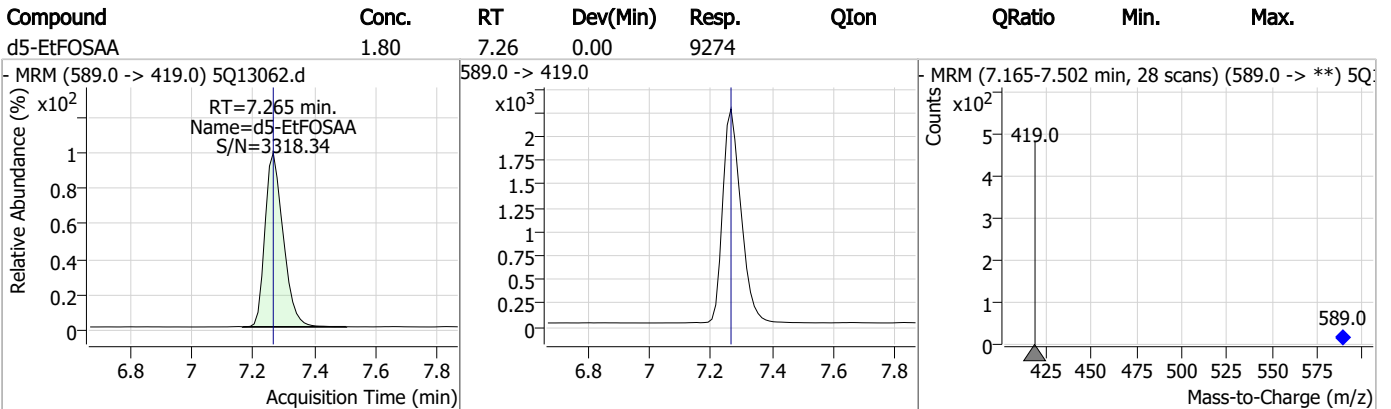
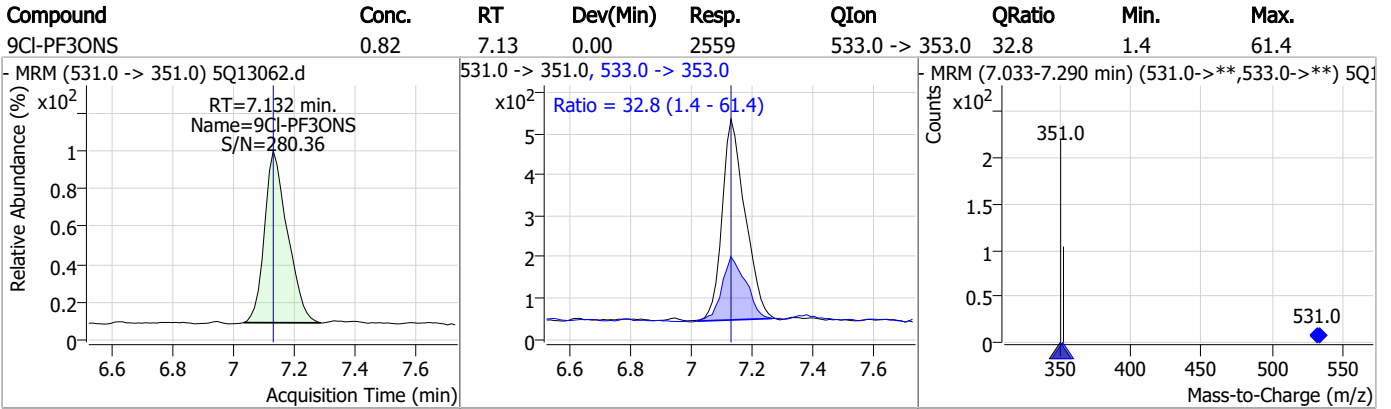


7.6.3

7



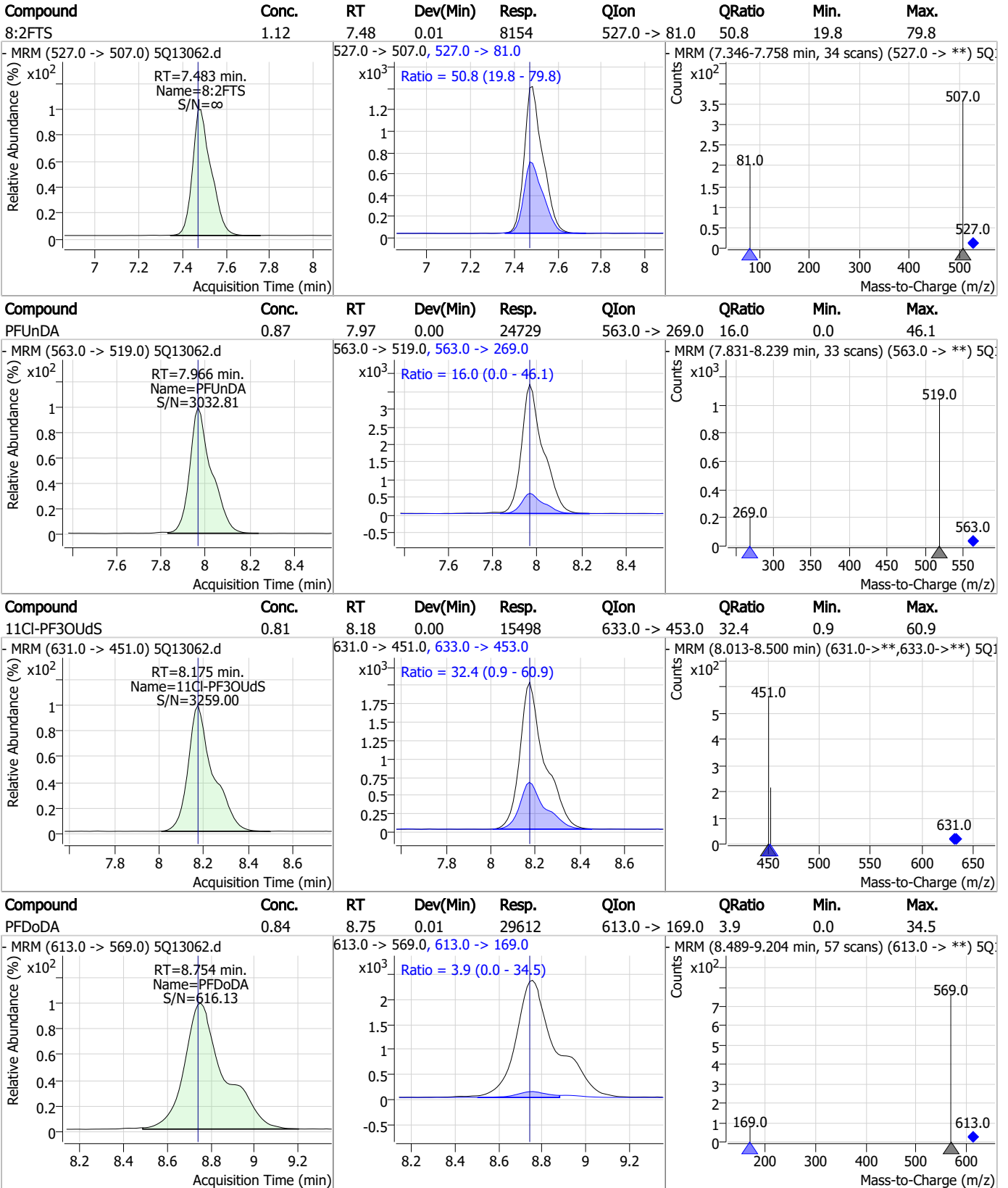
### Perfluorinated Compounds by LC/MS/MS



7.6.3

7

### Perfluorinated Compounds by LC/MS/MS

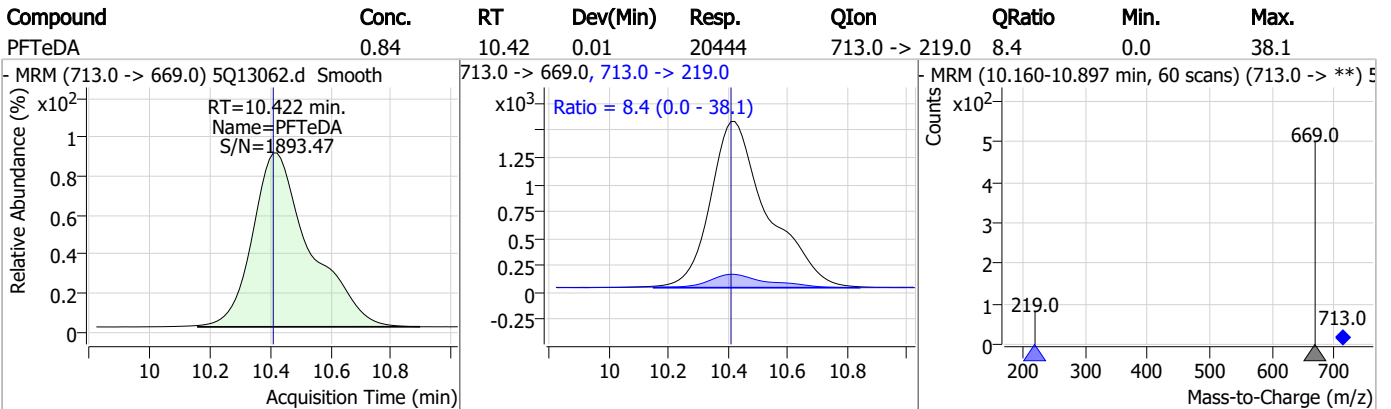
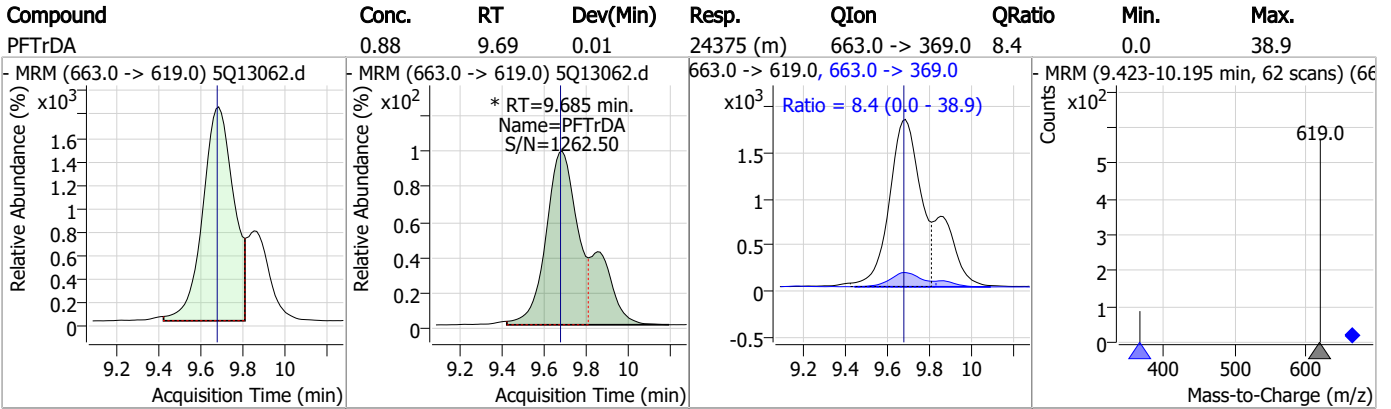


7.6.3

7



### Perfluorinated Compounds by LC/MS/MS



7.6.3

7



# Manual Integration Approval Summary

**Sample Number:** S5Q203-IC203      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13062.D      **Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Injection Time:** 04/14/23 15:23      **Supervisor approved:** 04/17/23 16:32 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.85	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorotridecanoic acid	72629-94-8		9.69	Poor instrument integration

7.6.3.1  
7

Manual Integrations  
**APPROVED**  
 (compounds with "m" flag)

**Norman Farmer**  
 04/17/23 16:32

## Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13063.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/14/2023 3:40:02 PM  
 Sample Name : ic203-2  
 Vial : P3-A4  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	147927	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	398931	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	168950	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	71242	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	176268	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.434	515.0 -> 470.0	45284	1.80 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 9.0%		
13C2-PFHxA	4.676	315.0 -> 270.0	19114	1.86 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 9.3%		
d5-EtFOSAA	7.265	589.0 -> 419.0	17425	3.67 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 9.2%		
13C3-HFPO-DA	4.946	287.0 -> 169.0	8516	3.82 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 9.5%		
<b>Target Compounds</b>					
6:2FTS	6.251	427.0 -> 407.0	16070	2.29 µg/L	99
		427.0 -> 81.0	6973		
8:2FTS	7.471	527.0 -> 507.0	14960	2.26 µg/L	98
		527.0 -> 81.0	7687		
EtFOSAA	7.266	584.0 -> 419.0	9370	1.87 µg/L	m 99
		584.0 -> 483.0	4958		
MeFOSAA	7.131	570.0 -> 419.0	9599	1.78 µg/L	m 96
		570.0 -> 512.0	2472		
PFBA	1.863	213.0 -> 169.0	5115	1.81 µg/L	100
PFBS	3.716	299.0 -> 80.0	6343	1.87 µg/L	100
		299.0 -> 99.0	2659		
PFDA	7.435	513.0 -> 469.0	43061	1.83 µg/L	100
		513.0 -> 219.0	8095		
PFDoDA	8.754	613.0 -> 569.0	56703	1.78 µg/L	99
		613.0 -> 169.0	2696		
PFHpA	5.553	363.0 -> 319.0	34910	1.70 µg/L	99
		363.0 -> 169.0	2958		
PFHpS	6.261	449.0 -> 80.0	6448	1.91 µg/L	99
		449.0 -> 99.0	3443		
PFHxA	4.678	313.0 -> 269.0	13268	1.87 µg/L	100
		313.0 -> 119.0	1201		
PFHxS	5.587	399.0 -> 80.0	6537	1.79 µg/L	m 100
		399.0 -> 99.0	3381		
PFNA	6.876	463.0 -> 419.0	39970	1.74 µg/L	99
		463.0 -> 219.0	9386		
PFOA	6.266	413.0 -> 369.0	34398	1.78 µg/L	99
		413.0 -> 169.0	11401		
PFOS	6.849	499.0 -> 80.0	7382	1.80 µg/L	m 96
		499.0 -> 99.0	4054		
PFPeA	3.472	263.0 -> 219.0	22056	1.80 µg/L	100

7.6.4  
7



## Perfluorinated Compounds by LC/MS/MS

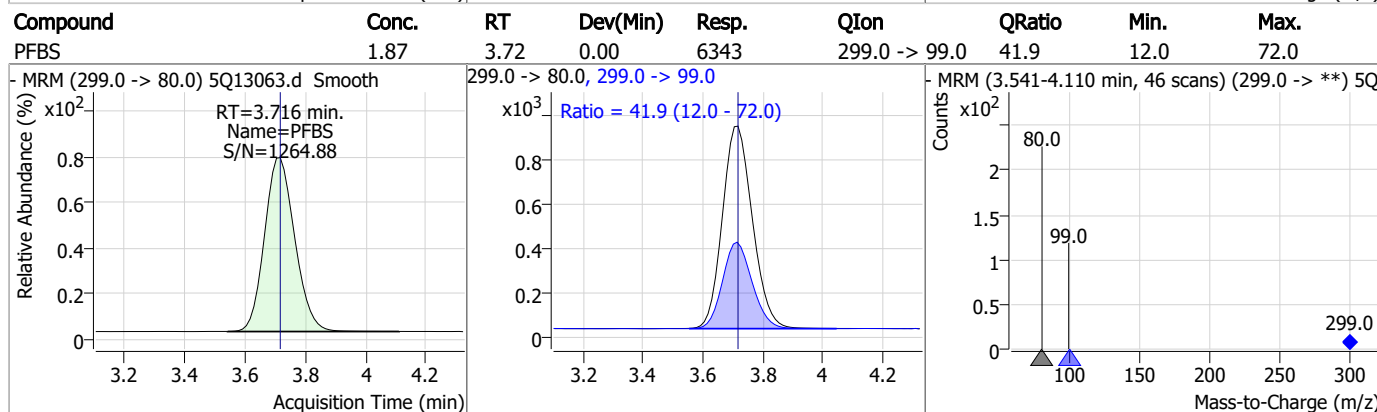
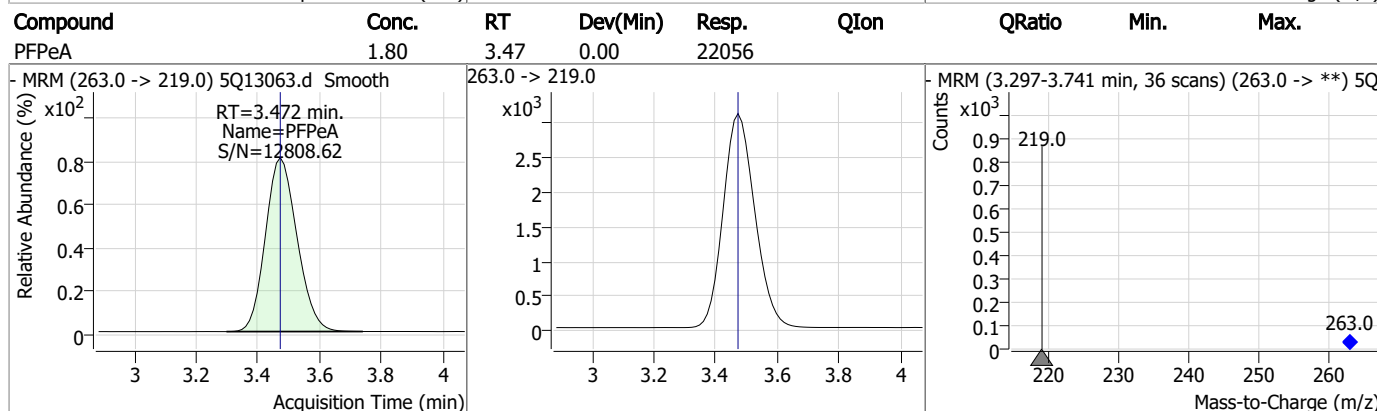
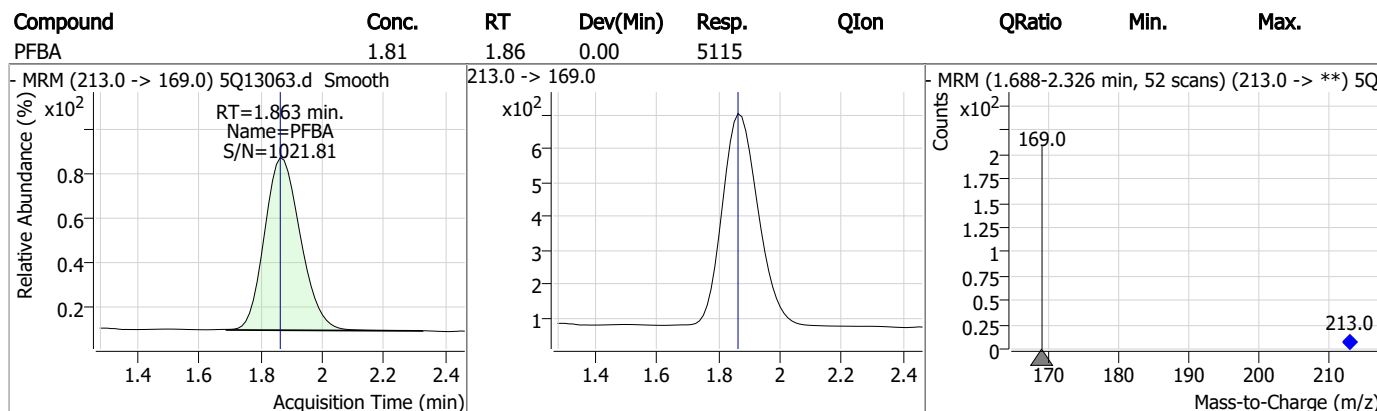
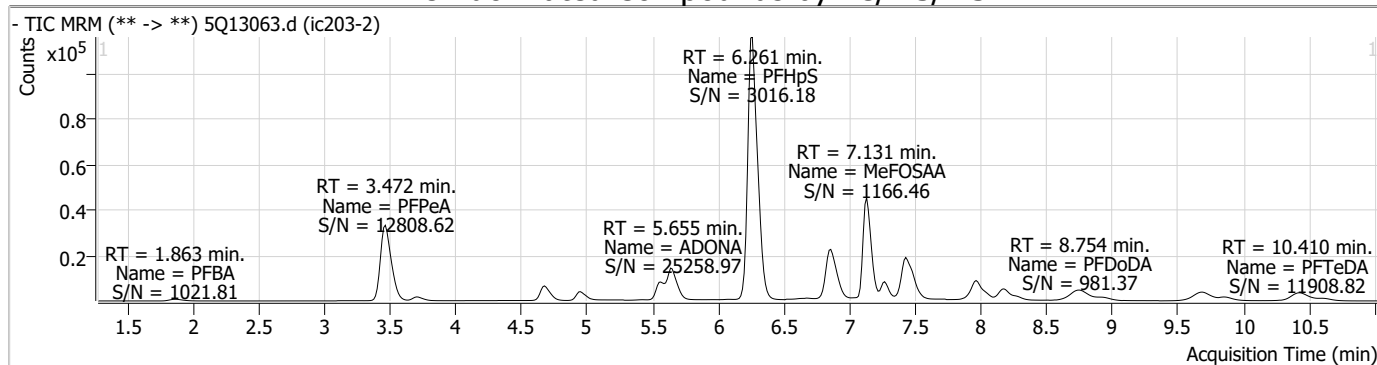
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
PFTeDA	10.410	713.0 -> 669.0	39786	1.82	µg/L	99
		713.0 -> 219.0	3315			
PFTrDA	9.685	663.0 -> 619.0	46733	1.87	µg/L	m
		663.0 -> 369.0	3931			
PFUnDA	7.966	563.0 -> 519.0	47011	1.83	µg/L	99
		563.0 -> 269.0	7761			
ADONA	5.655	377.0 -> 251.0	48030	1.65	µg/L	100
		377.0 -> 85.0	17485			
9Cl-PF3ONS	7.132	531.0 -> 351.0	4849	1.70	µg/L	93
		533.0 -> 353.0	1710			
11Cl-PF3OUdS	8.175	631.0 -> 451.0	29374	1.68	µg/L	98
		633.0 -> 453.0	9430			
HFPO-DA	4.960	285.0 -> 169.0	5063	1.93	µg/L	97
		329.0 -> 169.0	6394			

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

7.6.4

7

### Perfluorinated Compounds by LC/MS/MS



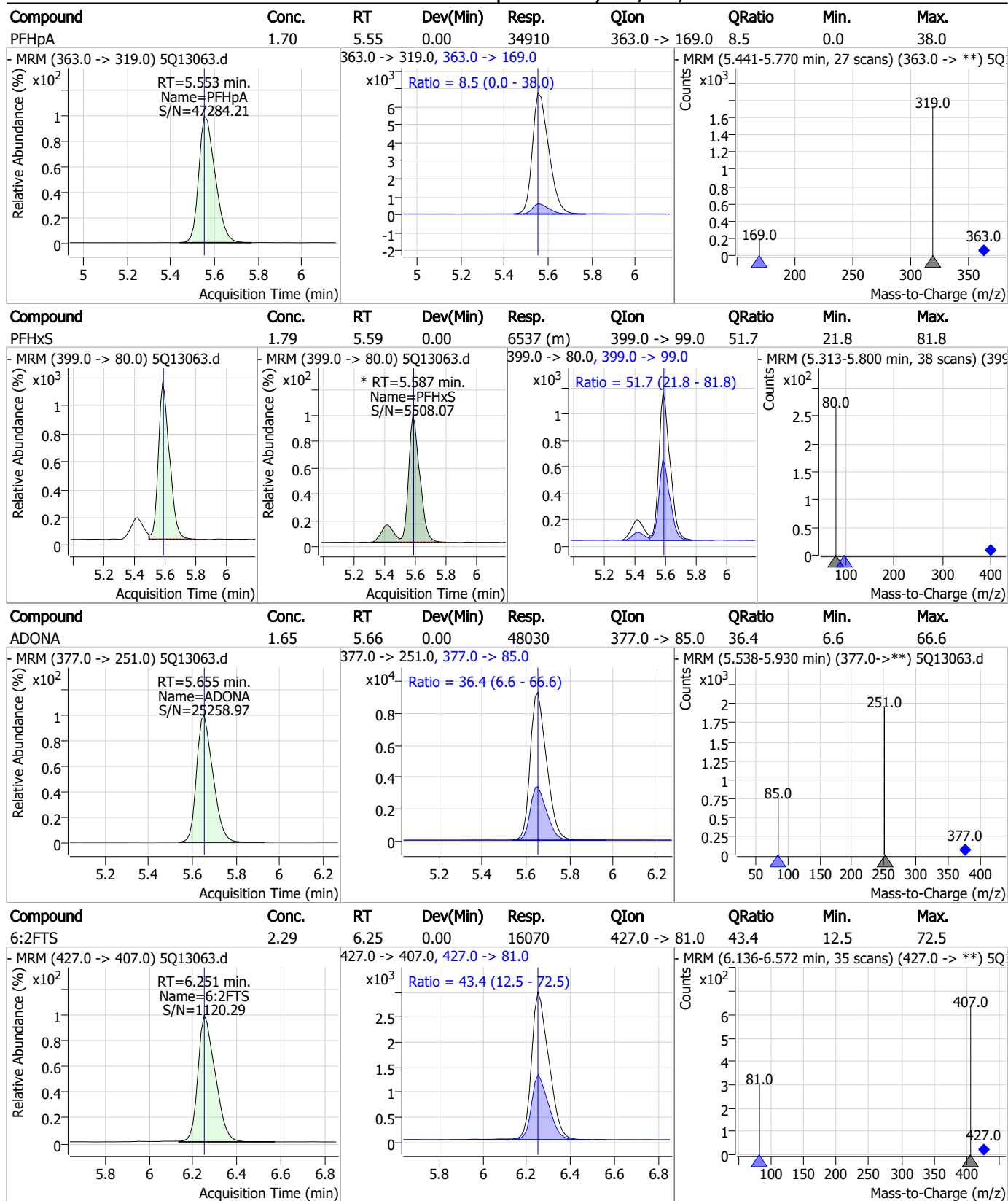
### Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	1.86	4.68	0.00	19114				
PFHxA	1.87	4.68	0.00	13268	313.0 ->	119.0	9.0	0.0
13C3-HFPO-DA	3.82	4.95	0.00	8516				
HFPO-DA	1.93	4.96	0.00	5063	329.0 ->	169.0	126.3	99.8

7.6.4

7

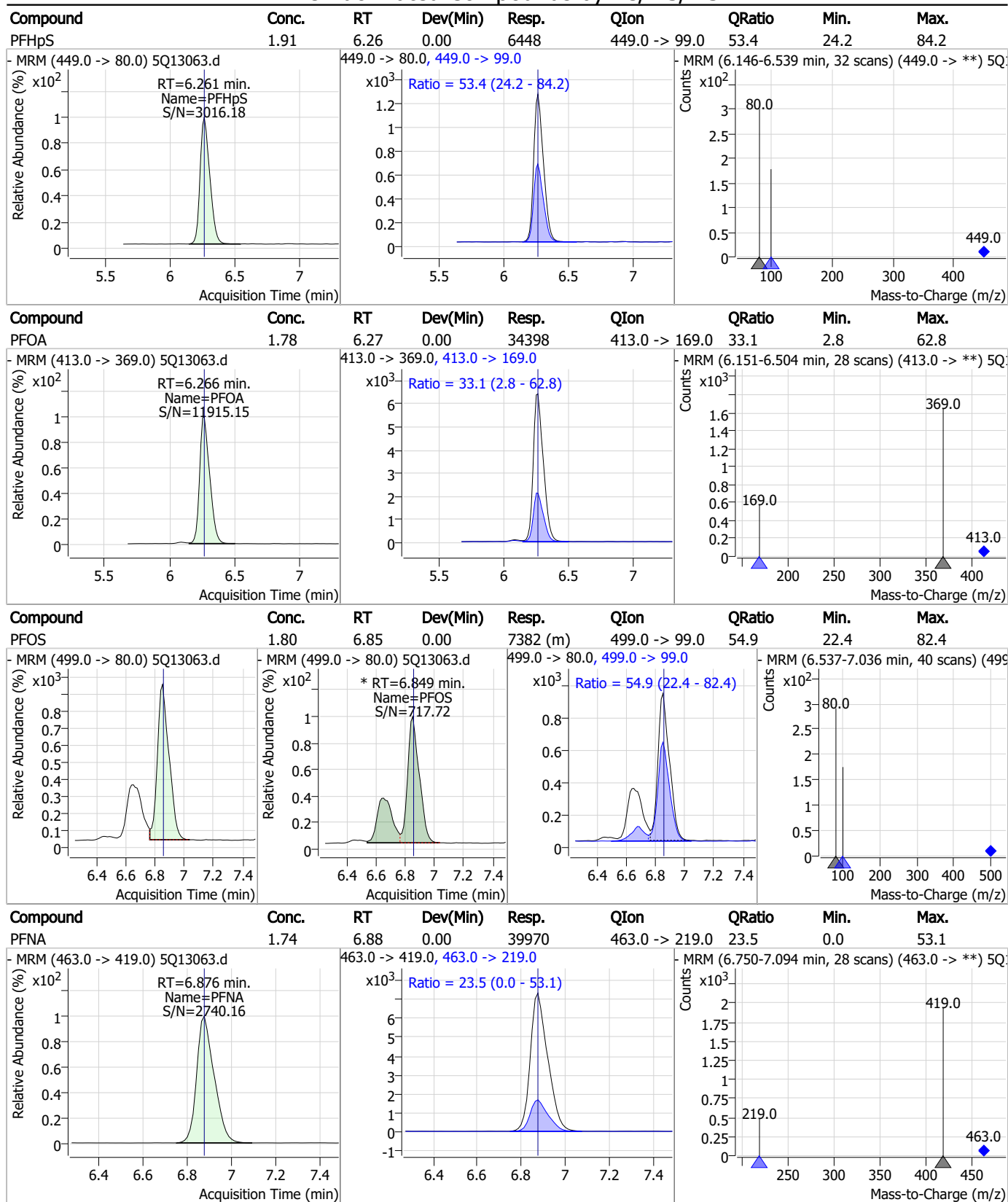
### Perfluorinated Compounds by LC/MS/MS



7.6.4

7

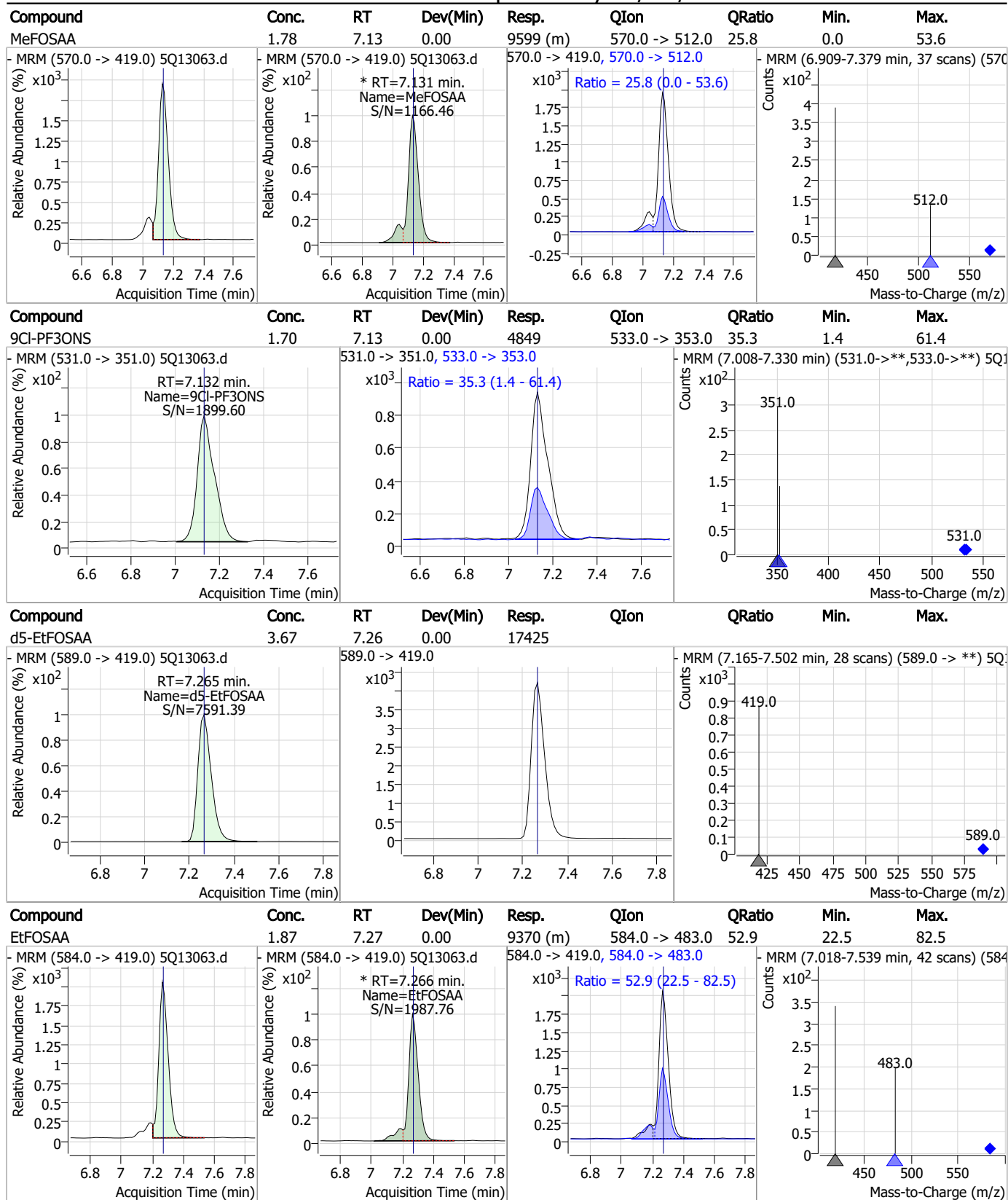
### Perfluorinated Compounds by LC/MS/MS



7.6.4

7

### Perfluorinated Compounds by LC/MS/MS

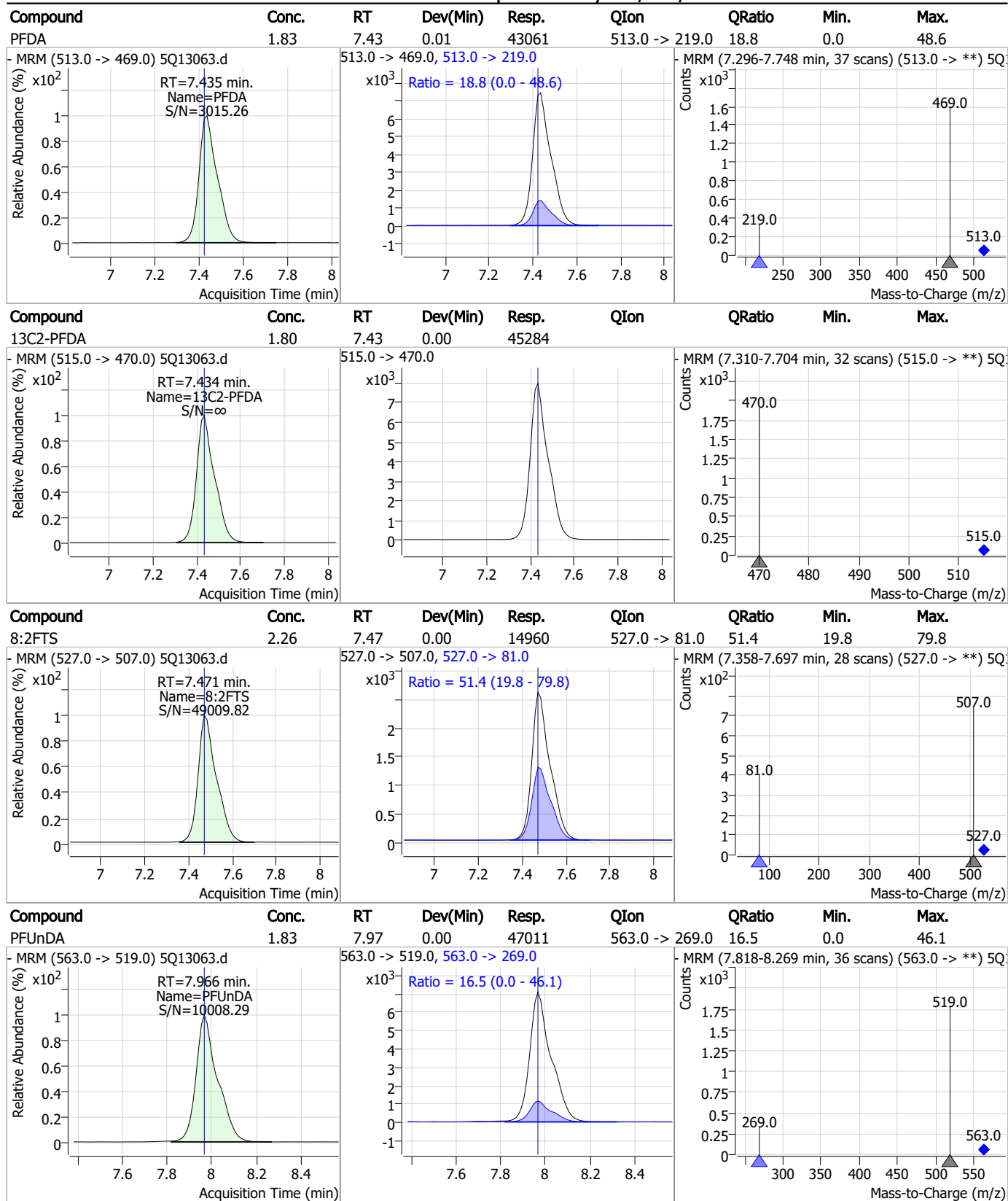


7.6.4

7



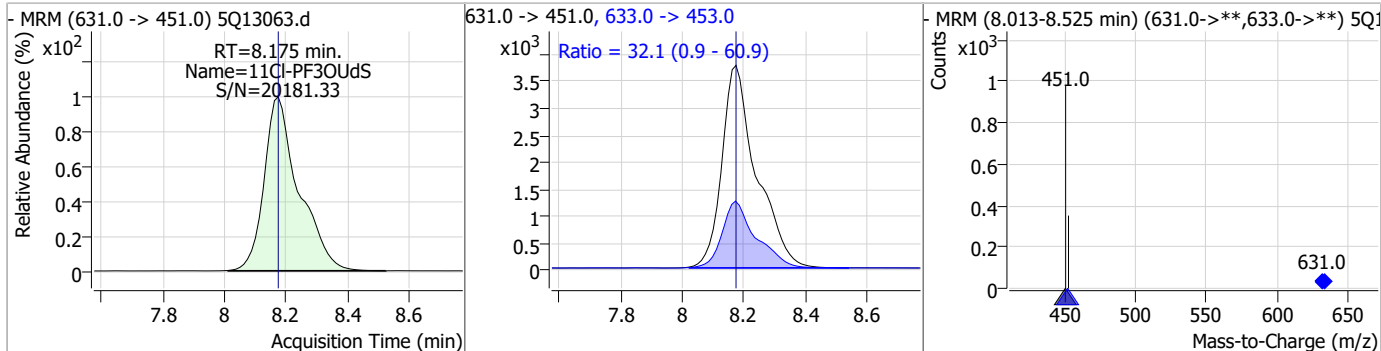
### Perfluorinated Compounds by LC/MS/MS



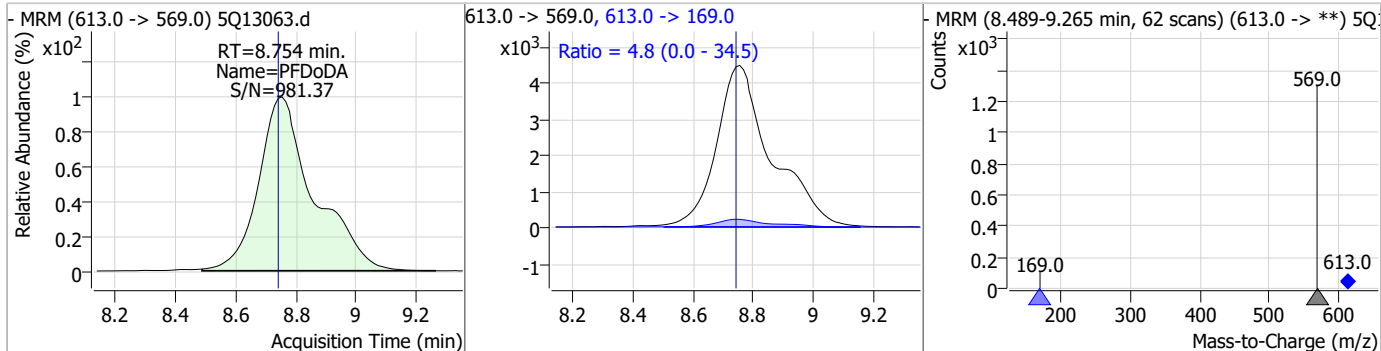
7.6.4

### Perfluorinated Compounds by LC/MS/MS

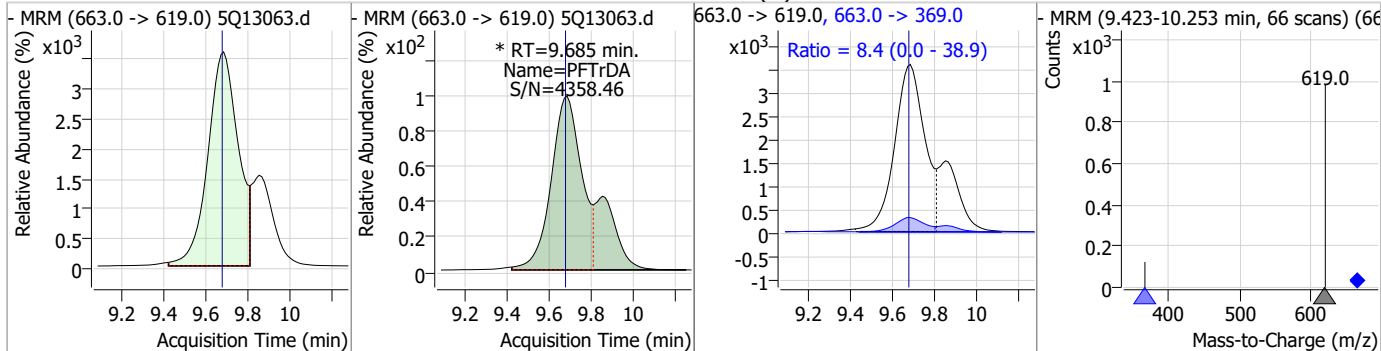
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11CI-PF3OUdS	1.68	8.18	0.00	29374	633.0 -> 453.0	32.1	0.9	60.9



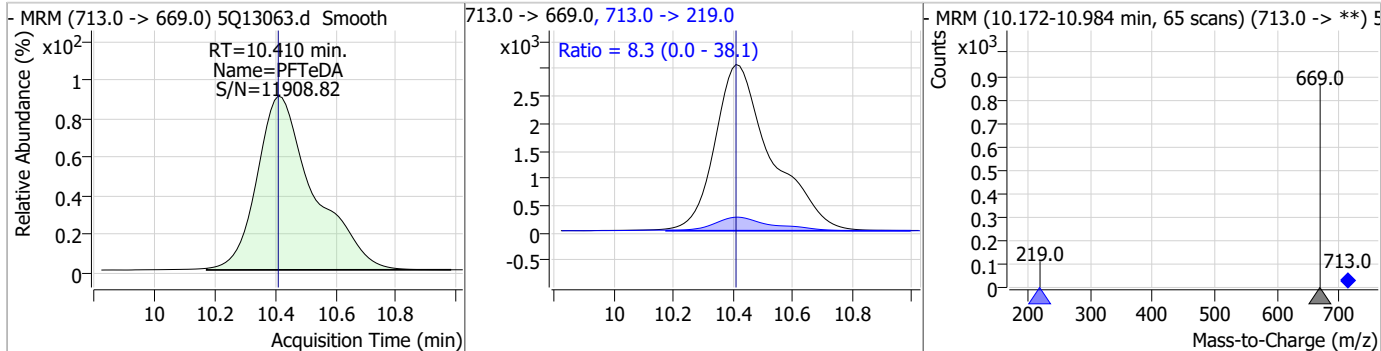
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDODA	1.78	8.75	0.01	56703	613.0 -> 169.0	4.8	0.0	34.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	1.87	9.69	0.01	46733 (m)	663.0 -> 369.0	8.4	0.0	38.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	1.82	10.41	0.00	39786	713.0 -> 219.0	8.3	0.0	38.1



7.6.4  
7

# Manual Integration Approval Summary

**Sample Number:** S5Q203-IC203      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13063.D      **Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Injection Time:** 04/14/23 15:40      **Supervisor approved:** 04/17/23 16:32 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.85	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorotridecanoic acid	72629-94-8		9.69	Poor instrument integration

7.6.4.1

7

Manual Integrations  
**APPROVED**  
 (compounds with "m" flag)

**Norman Farmer**  
 04/17/23 16:32

### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13064.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/14/2023 3:56:50 PM  
 Sample Name : ic203-5  
 Vial : P3-A5  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	147270	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	391147	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	167304	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	70275	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	170124	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.434	515.0 -> 470.0	122539	4.98 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 24.9%		
13C2-PFHxA	4.676	315.0 -> 270.0	50273	4.98 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 24.9%		
d5-EtFOSAA	7.265	589.0 -> 419.0	45406	9.90 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 24.8%		
13C3-HFPO-DA	4.958	287.0 -> 169.0	22084	10.10 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 25.2%		
<b>Target Compounds</b>					
6:2FTS	6.251	427.0 -> 407.0 427.0 -> 81.0	42422 18087	6.08 µg/L	100
8:2FTS	7.471	527.0 -> 507.0 527.0 -> 81.0	39847 19623	6.05 µg/L	99
EtFOSAA	7.266	584.0 -> 419.0 584.0 -> 483.0	23602 12454	4.89 µg/L	m 100
MeFOSAA	7.131	570.0 -> 419.0 570.0 -> 512.0	25247 6190	4.85 µg/L	m 98
PFBA	1.863	213.0 -> 169.0	13273	4.74 µg/L	100
PFBS	3.716	299.0 -> 80.0 299.0 -> 99.0	16513 6926	4.95 µg/L	100
PFDA	7.435	513.0 -> 469.0 513.0 -> 219.0	114075 21386	4.94 µg/L	100
PFDoDA	8.754	613.0 -> 569.0 613.0 -> 169.0	149934 7386	4.78 µg/L	99
PFHpA	5.553	363.0 -> 319.0 363.0 -> 169.0	93584 7538	4.64 µg/L	100
PFHpS	6.261	449.0 -> 80.0 449.0 -> 99.0	16654 8947	5.01 µg/L	99
PFHxA	4.678	313.0 -> 269.0 313.0 -> 119.0	34983 3206	5.02 µg/L	100
PFHxS	5.587	399.0 -> 80.0 399.0 -> 99.0	17222 8971	4.77 µg/L	m 100
PFNA	6.876	463.0 -> 419.0 463.0 -> 219.0	107813 24408	4.79 µg/L	99
PFOA	6.266	413.0 -> 369.0 413.0 -> 169.0	90887 30198	4.79 µg/L	99
PFOS	6.849	499.0 -> 80.0 499.0 -> 99.0	19903 10649	4.91 µg/L	m 98
PFPeA	3.472	263.0 -> 219.0	58175	4.80 µg/L	100

7.65  
7



## Perfluorinated Compounds by LC/MS/MS

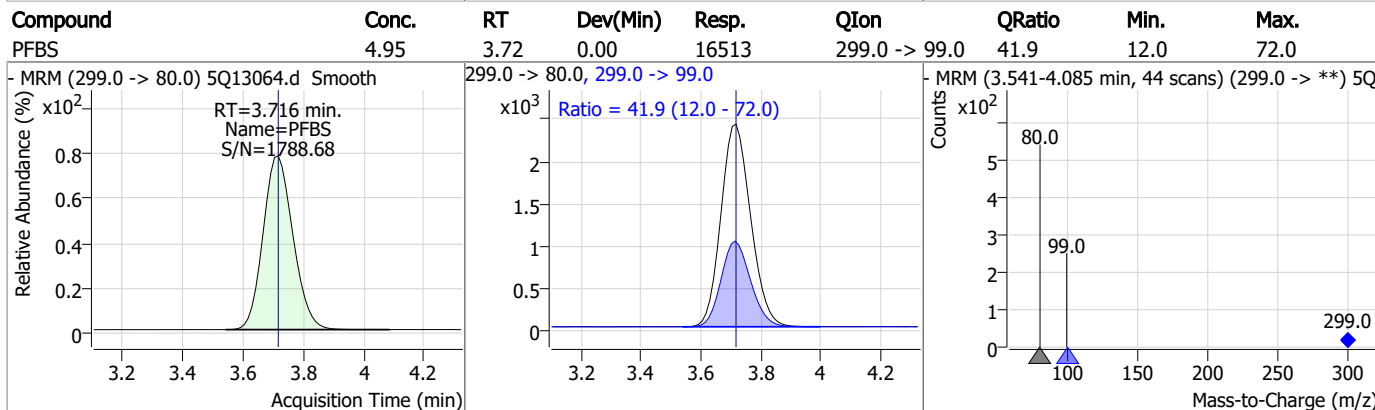
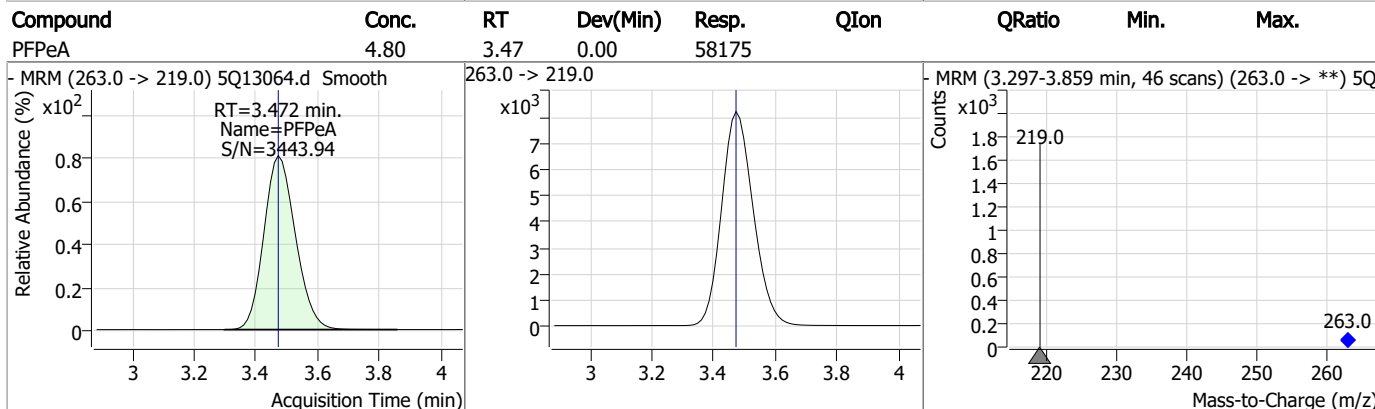
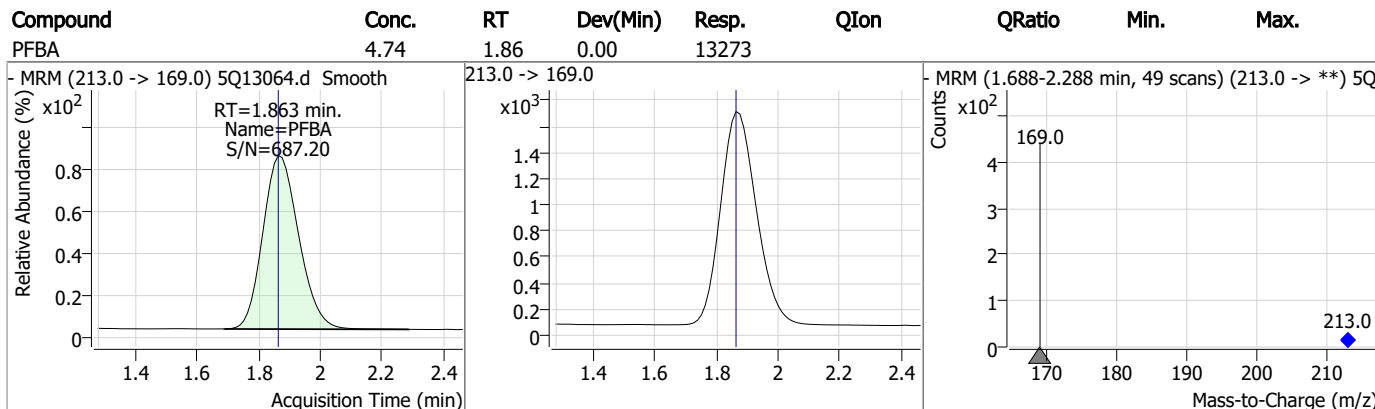
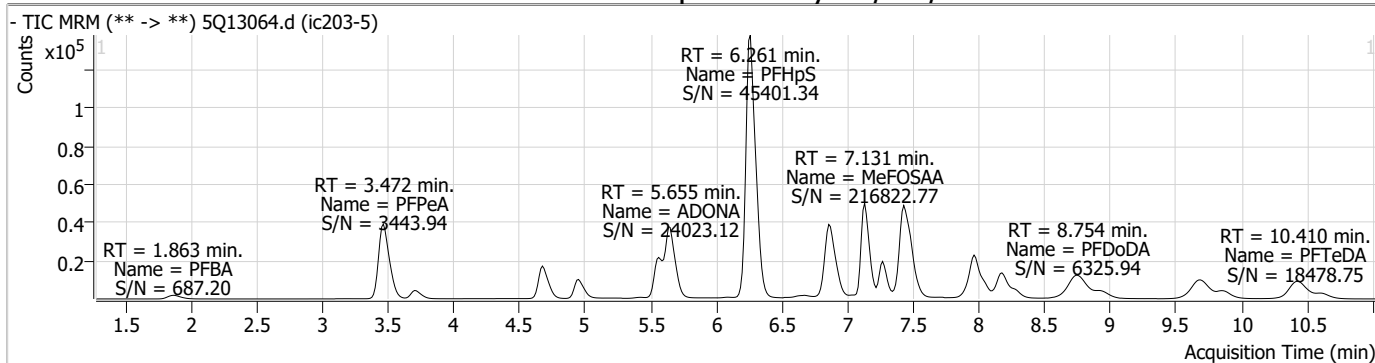
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
PFTeDA	10.410	713.0 -> 669.0	104212	4.84	µg/L	99
		713.0 -> 219.0	8645			
PFTTrDA	9.685	663.0 -> 619.0	121784	4.95	µg/L	m 98
		663.0 -> 369.0	10104			
PFUnDA	7.966	563.0 -> 519.0	124986	4.94	µg/L	99
		563.0 -> 269.0	19824			
ADONA	5.655	377.0 -> 251.0	129409	4.53	µg/L	100
		377.0 -> 85.0	47196			
9Cl-PF3ONS	7.132	531.0 -> 351.0	13195	4.73	µg/L	99
		533.0 -> 353.0	4041			
11Cl-PF3OUdS	8.175	631.0 -> 451.0	78584	4.59	µg/L	99
		633.0 -> 453.0	24608			
HFPO-DA	4.960	285.0 -> 169.0	13057	5.07	µg/L	100
		329.0 -> 169.0	16966			

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

7.6.5

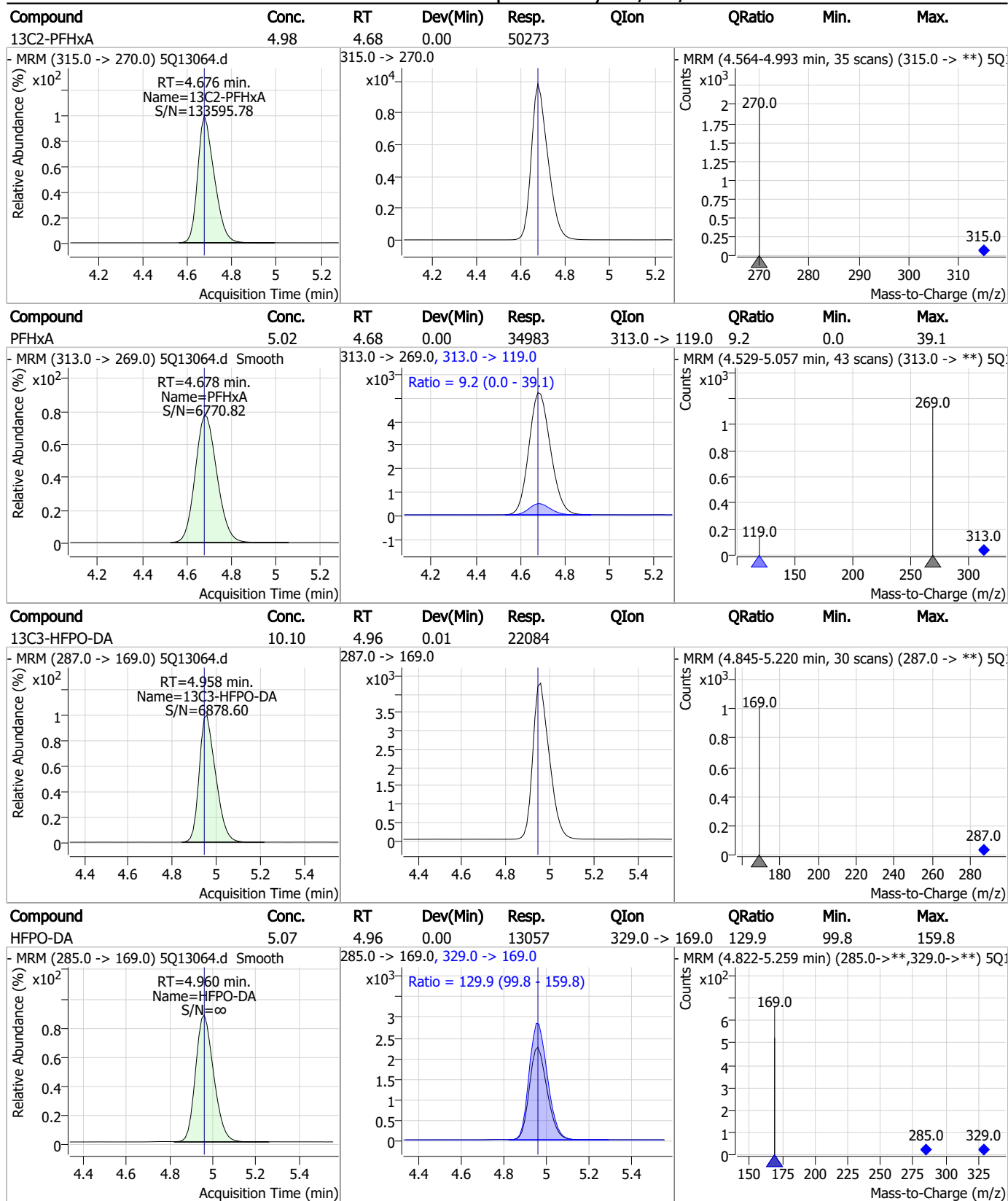
7

### Perfluorinated Compounds by LC/MS/MS



7.6.5

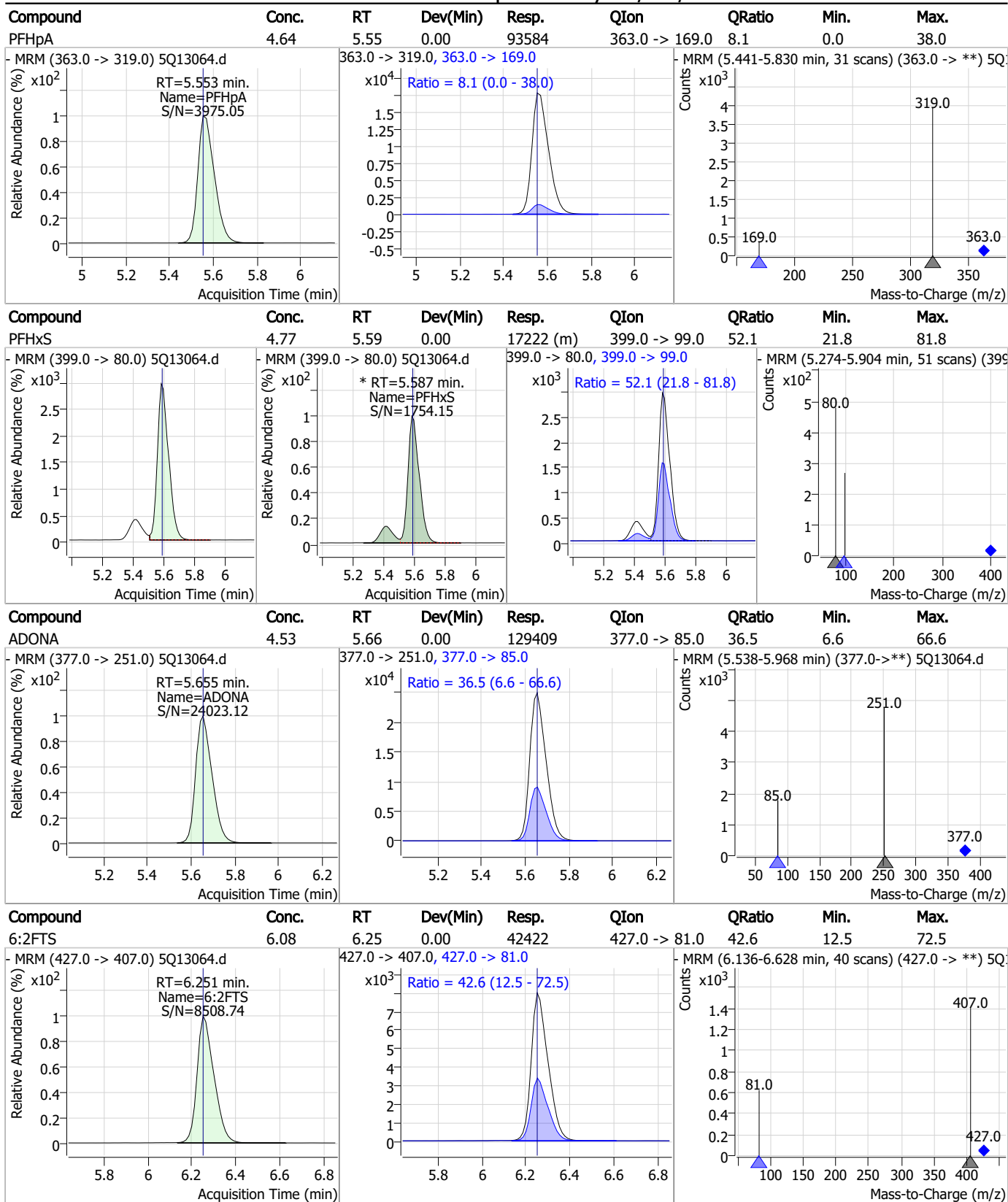
### Perfluorinated Compounds by LC/MS/MS



7.6.5

7

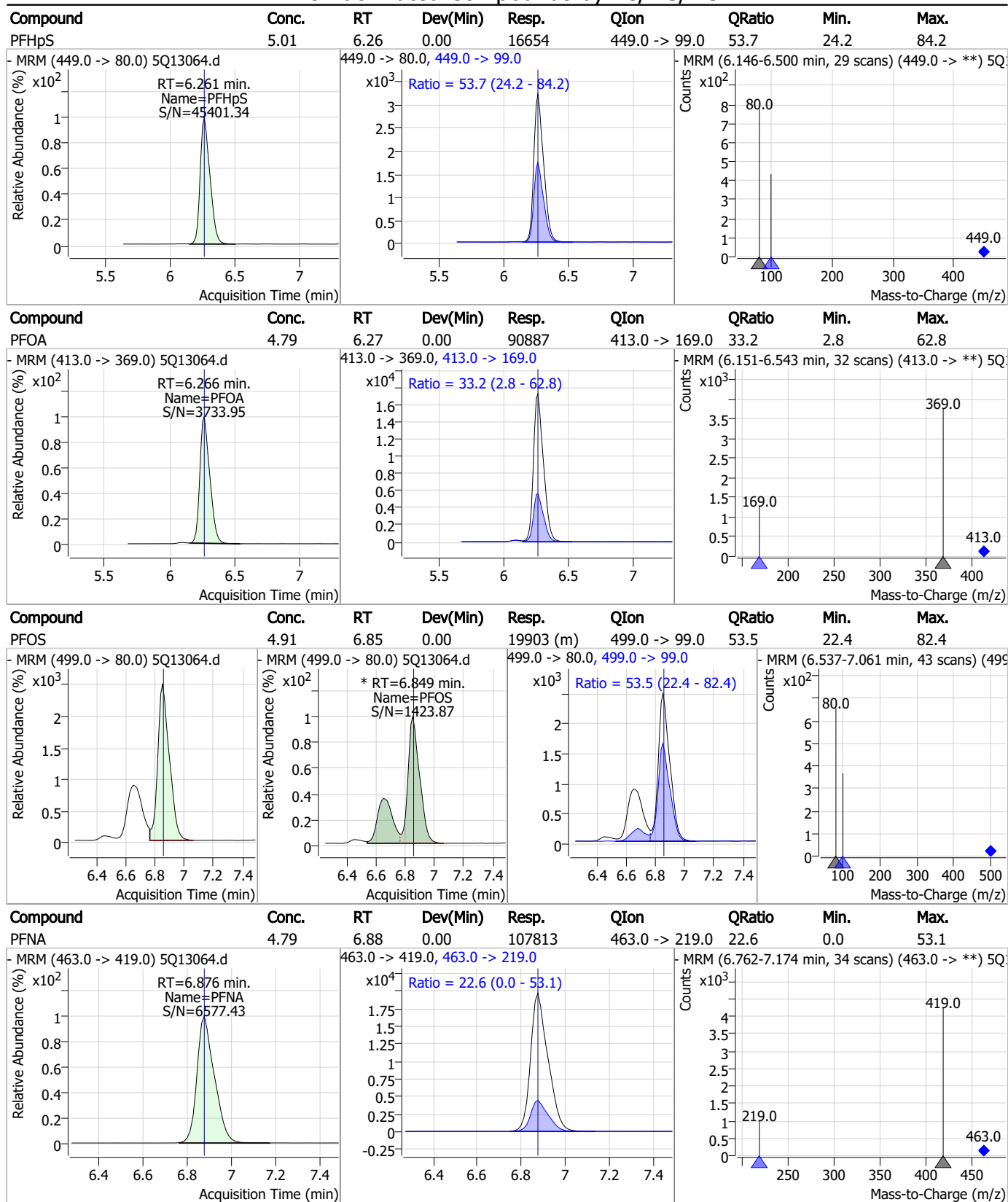
### Perfluorinated Compounds by LC/MS/MS



7.6.5  
7

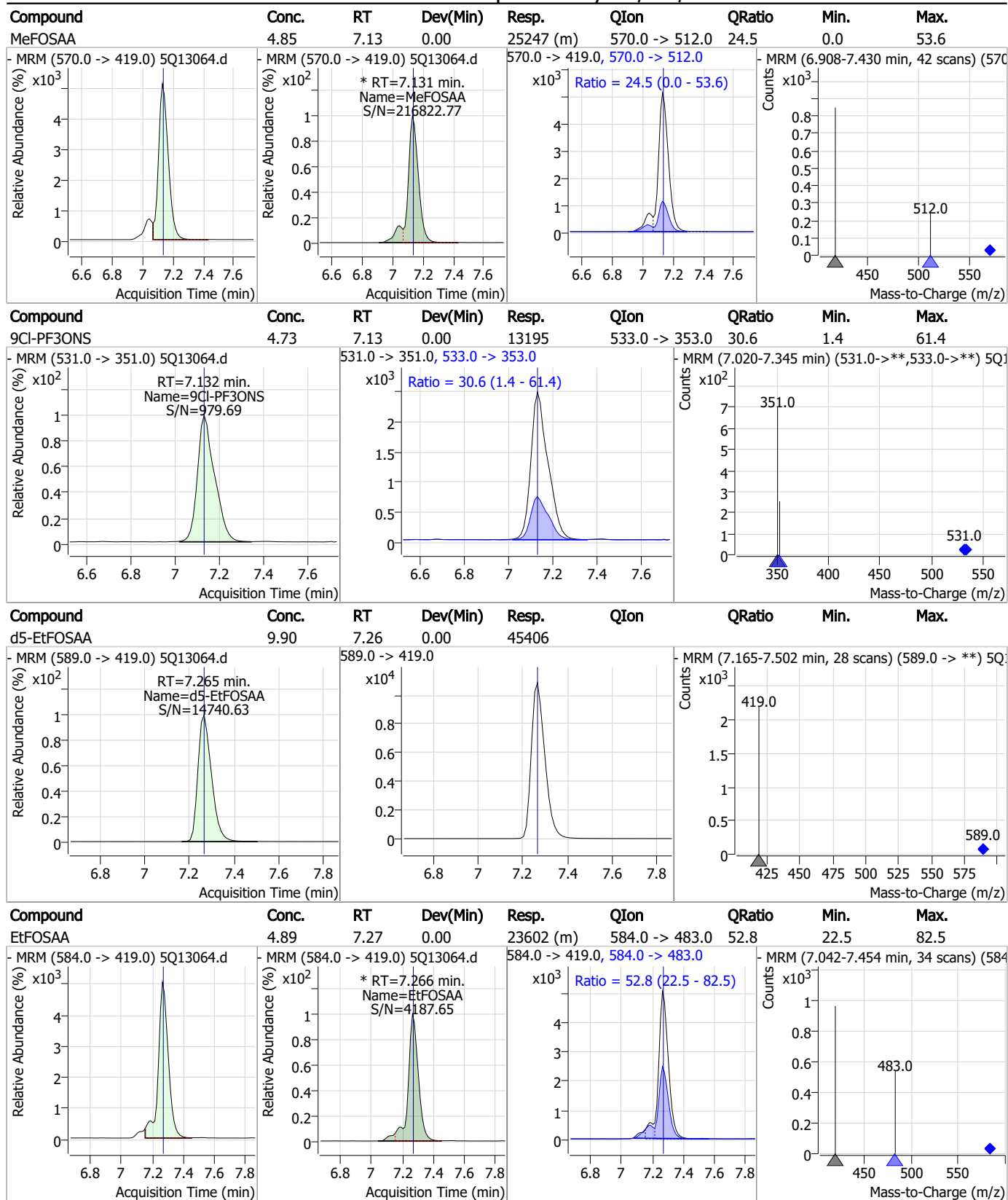


### Perfluorinated Compounds by LC/MS/MS



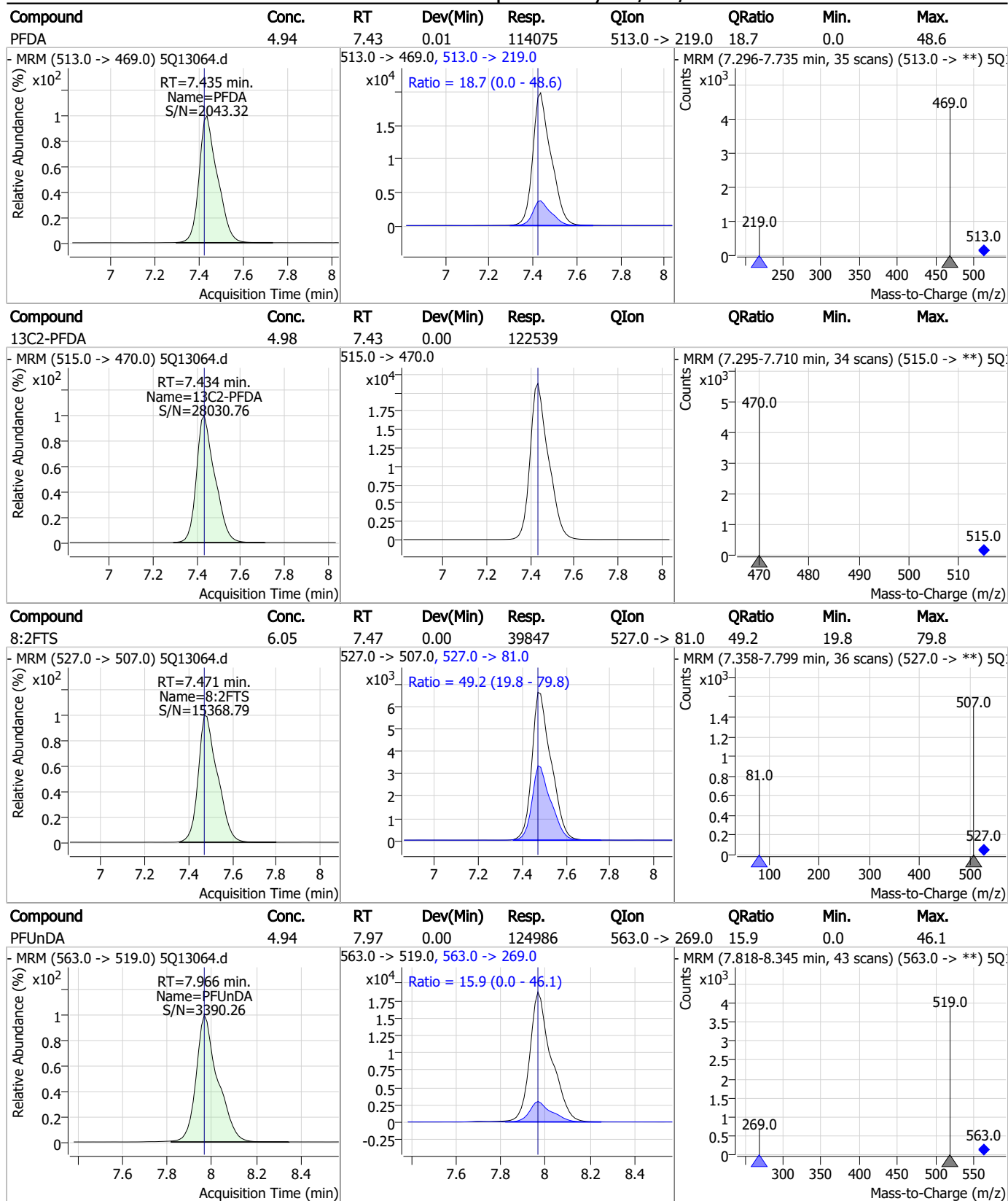
7.6.5  
7

### Perfluorinated Compounds by LC/MS/MS



7.6.5  
7

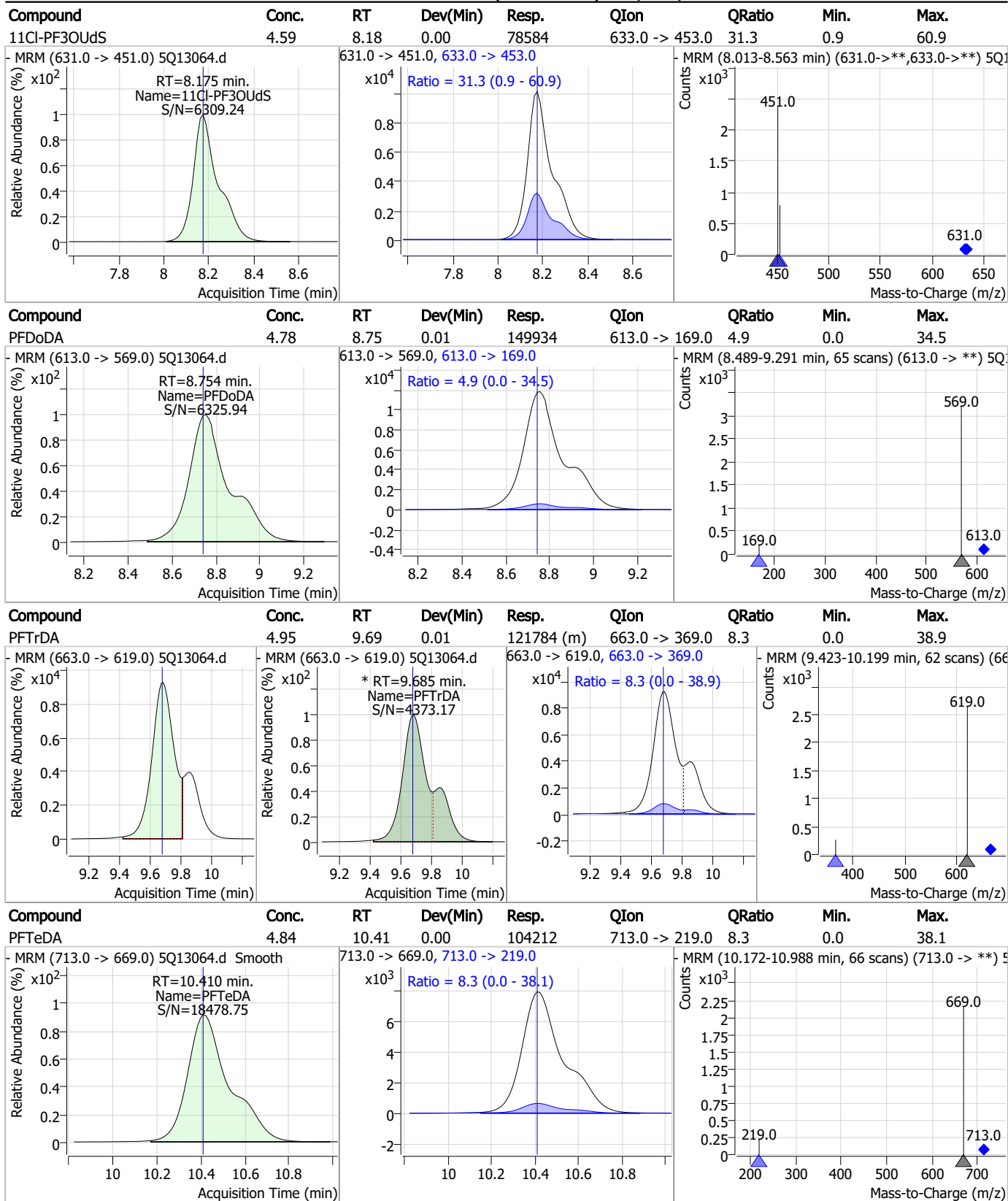
### Perfluorinated Compounds by LC/MS/MS



7.6.5

7

### Perfluorinated Compounds by LC/MS/MS



7.6.5  
7

# Manual Integration Approval Summary

**Sample Number:** S5Q203-IC203      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13064.D      **Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Injection Time:** 04/14/23 15:56      **Supervisor approved:** 04/17/23 16:32 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.85	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorotridecanoic acid	72629-94-8		9.69	Poor instrument integration

7.6.5.1  
7

Manual Integrations  
**APPROVED**  
 (compounds with "m" flag)

**Norman Farmer**  
 04/17/23 16:32

### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13065.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/14/2023 4:13:39 PM  
 Sample Name : ic203-10  
 Vial : P3-A6  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	153909	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	405482	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	172330	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	72071	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	179806	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.434	515.0 -> 470.0	243763	9.55 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 47.8%		
13C2-PFHxA	4.676	315.0 -> 270.0	102006	9.75 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 48.7%		
d5-EtFOSAA	7.265	589.0 -> 419.0	91978	18.97 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 47.4%		
13C3-HFPO-DA	4.946	287.0 -> 169.0	44520	19.63 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 49.1%		
<b>Target Compounds</b>					
6:2FTS	6.251	427.0 -> 407.0 427.0 -> 81.0	83878 36540	11.51 µg/L	98
8:2FTS	7.471	527.0 -> 507.0 527.0 -> 81.0	79753 39990	11.58 µg/L	100
EtFOSAA	7.266	584.0 -> 419.0 584.0 -> 483.0	47424 25507	9.30 µg/L	m 98
MeFOSAA	7.131	570.0 -> 419.0 570.0 -> 512.0	51332 12746	9.33 µg/L	m 97
PFBA	1.863	213.0 -> 169.0	26703	9.26 µg/L	100
PFBS	3.716	299.0 -> 80.0 299.0 -> 99.0	32748 13793	9.57 µg/L	100
PFDA	7.435	513.0 -> 469.0 513.0 -> 219.0	228778 42918	9.56 µg/L	100
PFDoDA	8.742	613.0 -> 569.0 613.0 -> 169.0	306166 14054	9.51 µg/L	100
PFHpA	5.553	363.0 -> 319.0 363.0 -> 169.0	189005 15357	9.04 µg/L	100
PFHpS	6.261	449.0 -> 80.0 449.0 -> 99.0	33324 18084	9.77 µg/L	100
PFHxA	4.678	313.0 -> 269.0 313.0 -> 119.0	70623 6467	9.78 µg/L	100
PFHxS	5.587	399.0 -> 80.0 399.0 -> 99.0	34292 17909	9.26 µg/L	m 99
PFNA	6.876	463.0 -> 419.0 463.0 -> 219.0	212478 49007	9.10 µg/L	100
PFOA	6.266	413.0 -> 369.0 413.0 -> 169.0	184737 60633	9.39 µg/L	100
PFOS	6.849	499.0 -> 80.0 499.0 -> 99.0	39139 20260	9.42 µg/L	m 99
PFPeA	3.472	263.0 -> 219.0	117262	9.39 µg/L	100

7.6.6  
7



## Perfluorinated Compounds by LC/MS/MS

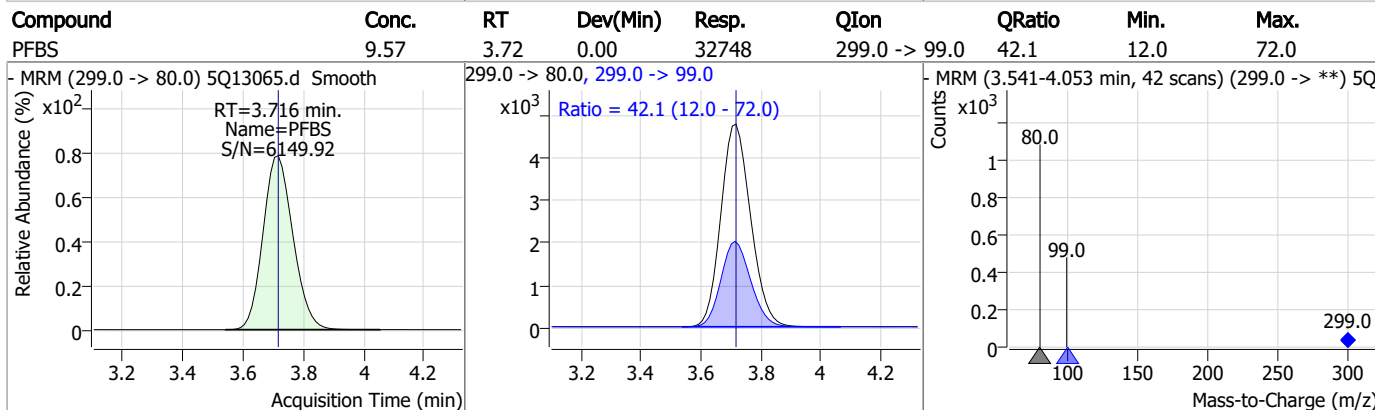
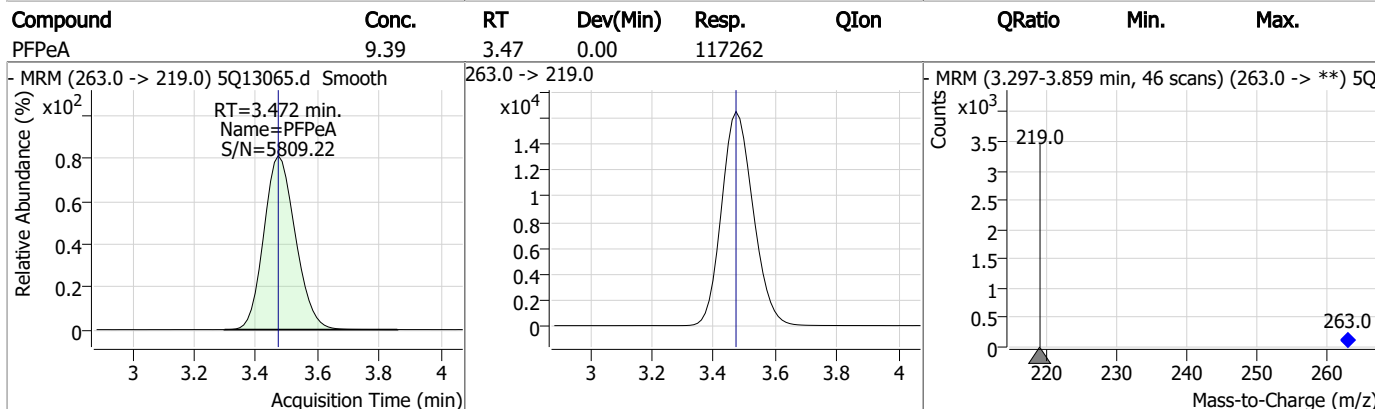
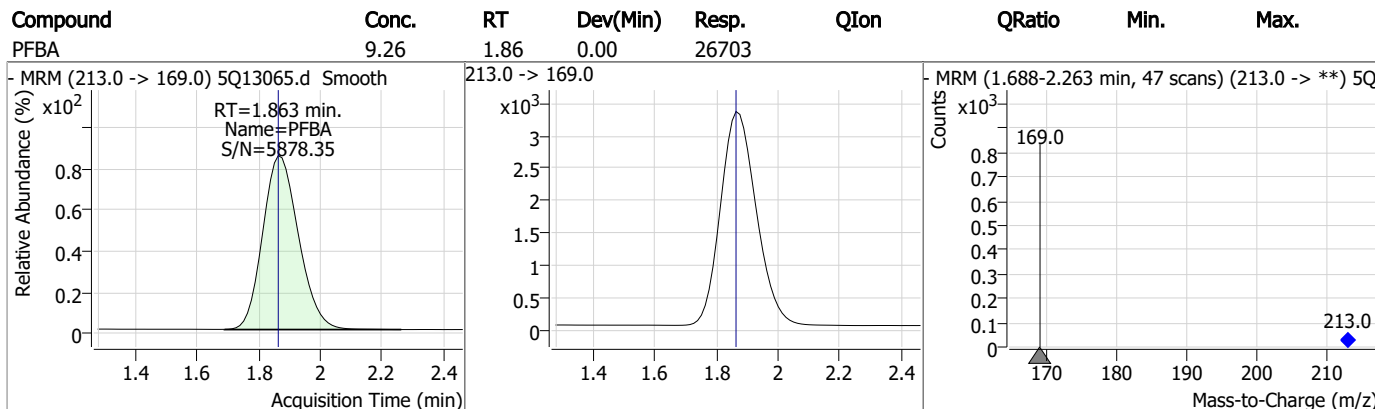
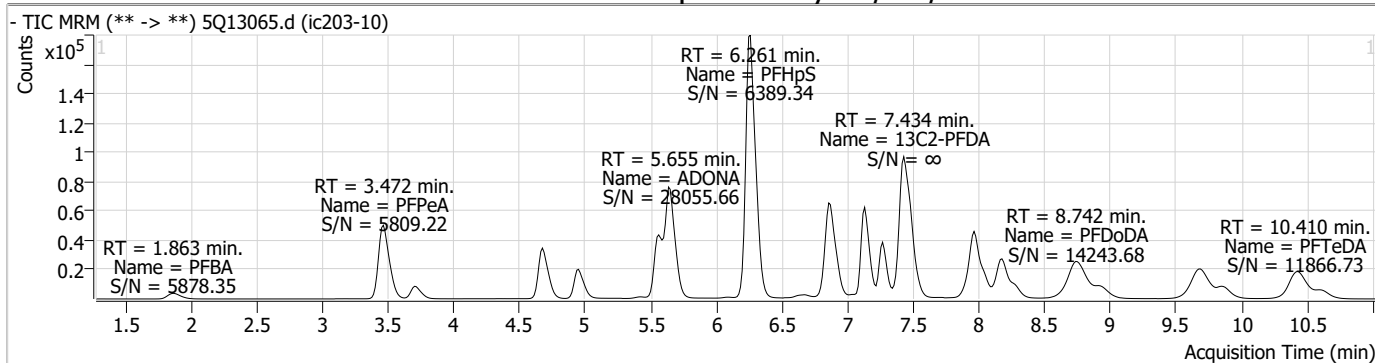
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
PFTeDA	10.410	713.0 -> 669.0	208200	9.42	µg/L	100
		713.0 -> 219.0	17124			
PFTTrDA	9.685	663.0 -> 619.0	231318	9.17	µg/L	m 100
		663.0 -> 369.0	20913			
PFUnDA	7.966	563.0 -> 519.0	251556	9.70	µg/L	100
		563.0 -> 269.0	40379			
ADONA	5.655	377.0 -> 251.0	261073	8.83	µg/L	100
		377.0 -> 85.0	95635			
9Cl-PF3ONS	7.132	531.0 -> 351.0	25761	8.91	µg/L	100
		533.0 -> 353.0	8121			
11Cl-PF3OUdS	8.175	631.0 -> 451.0	159032	8.96	µg/L	100
		633.0 -> 453.0	49037			
HFPO-DA	4.960	285.0 -> 169.0	26219	9.82	µg/L	98
		329.0 -> 169.0	33311			

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

7.6.6

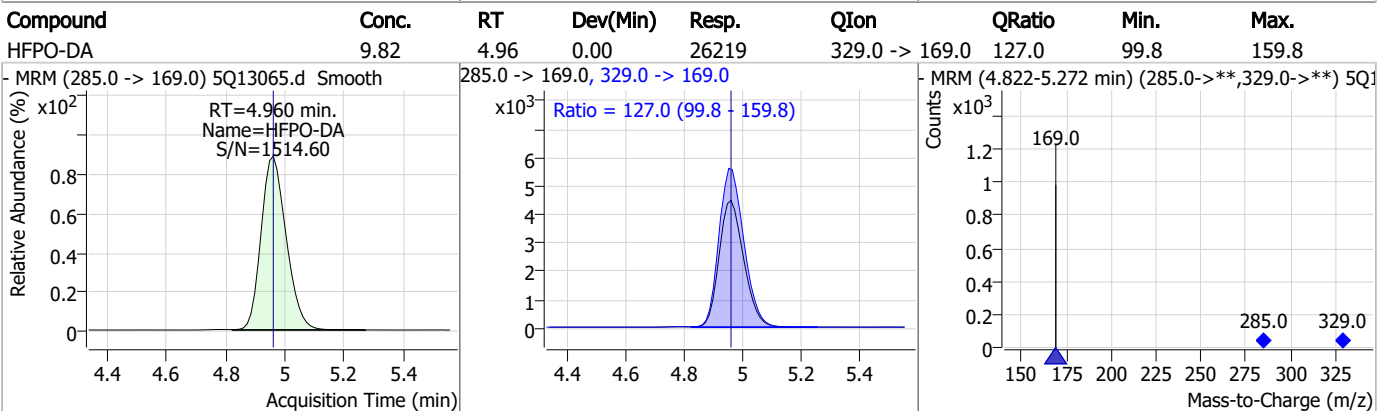
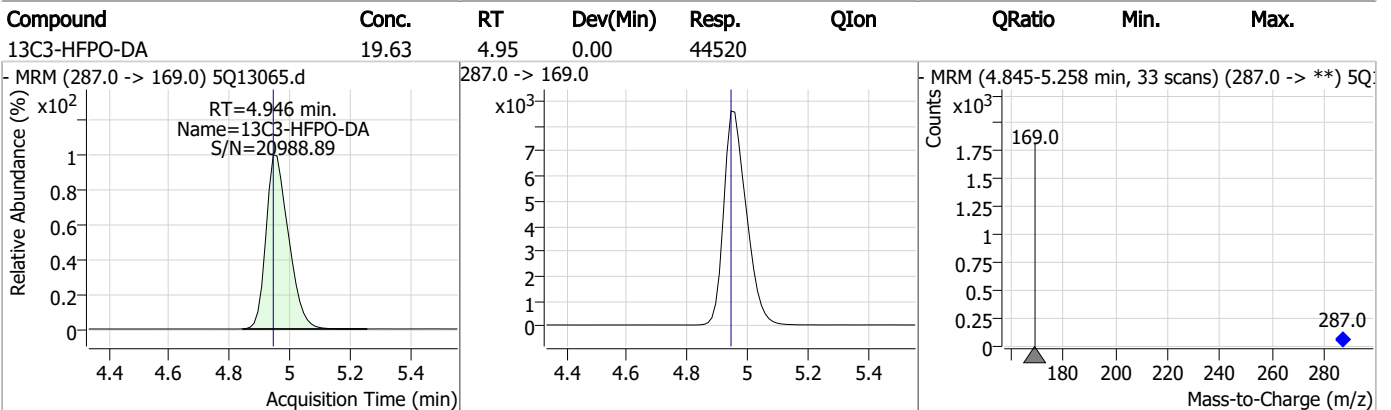
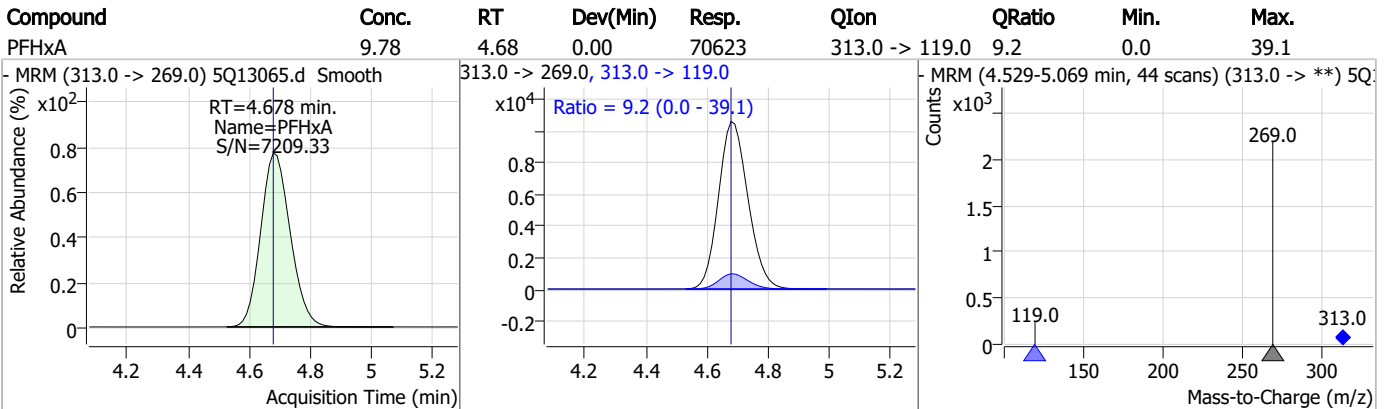
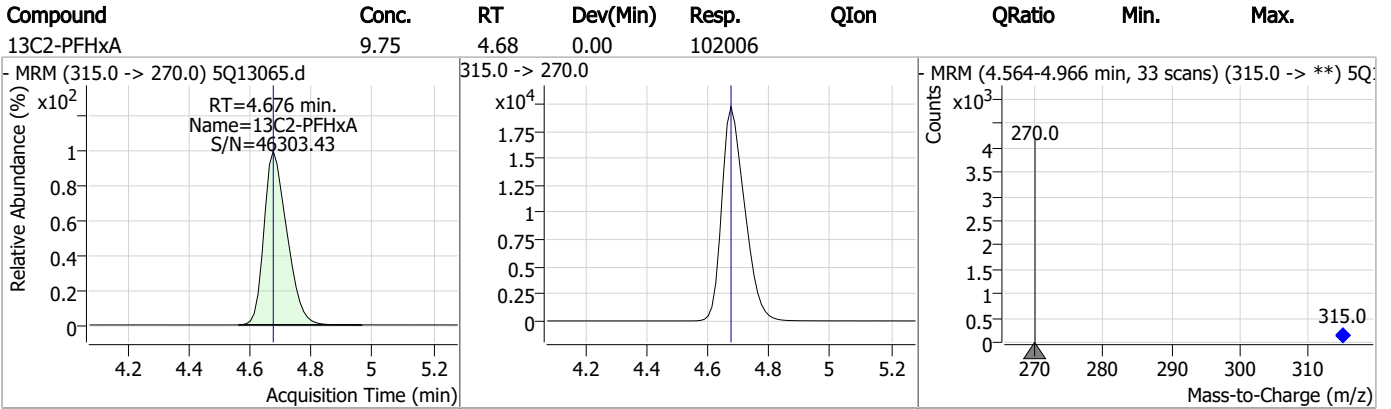
7

### Perfluorinated Compounds by LC/MS/MS





### Perfluorinated Compounds by LC/MS/MS

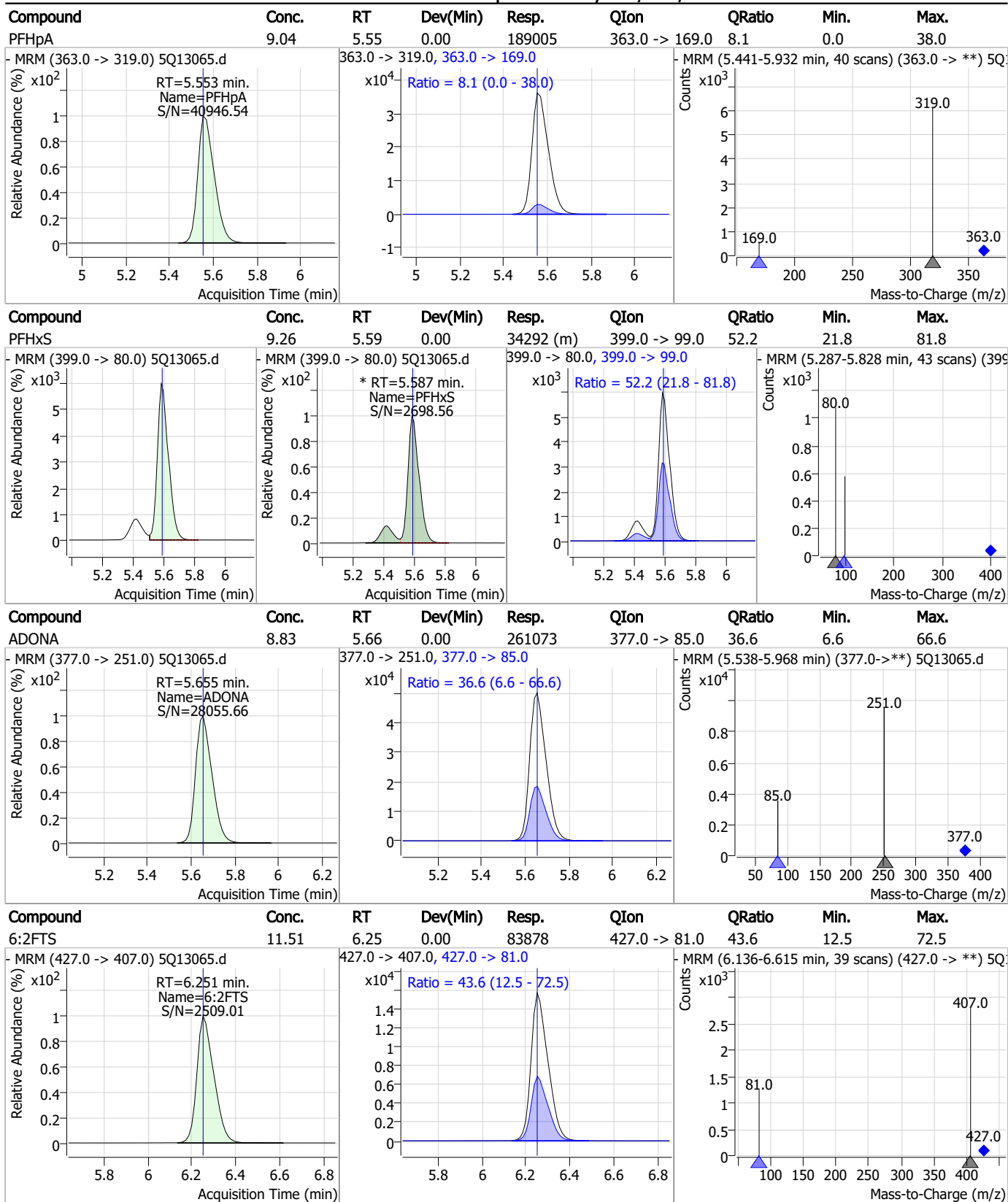


7.6.6

7



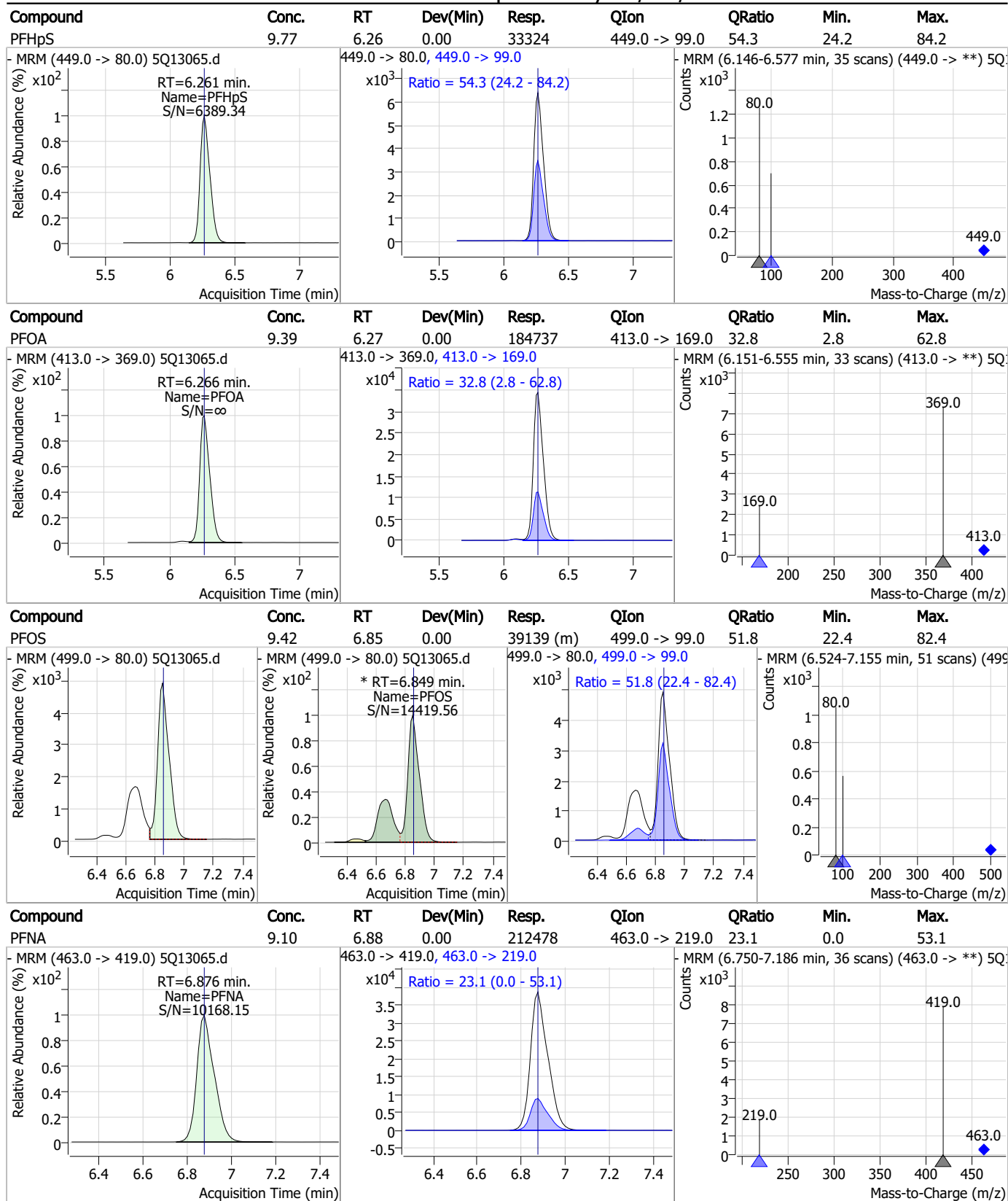
### Perfluorinated Compounds by LC/MS/MS



7.6.6

7

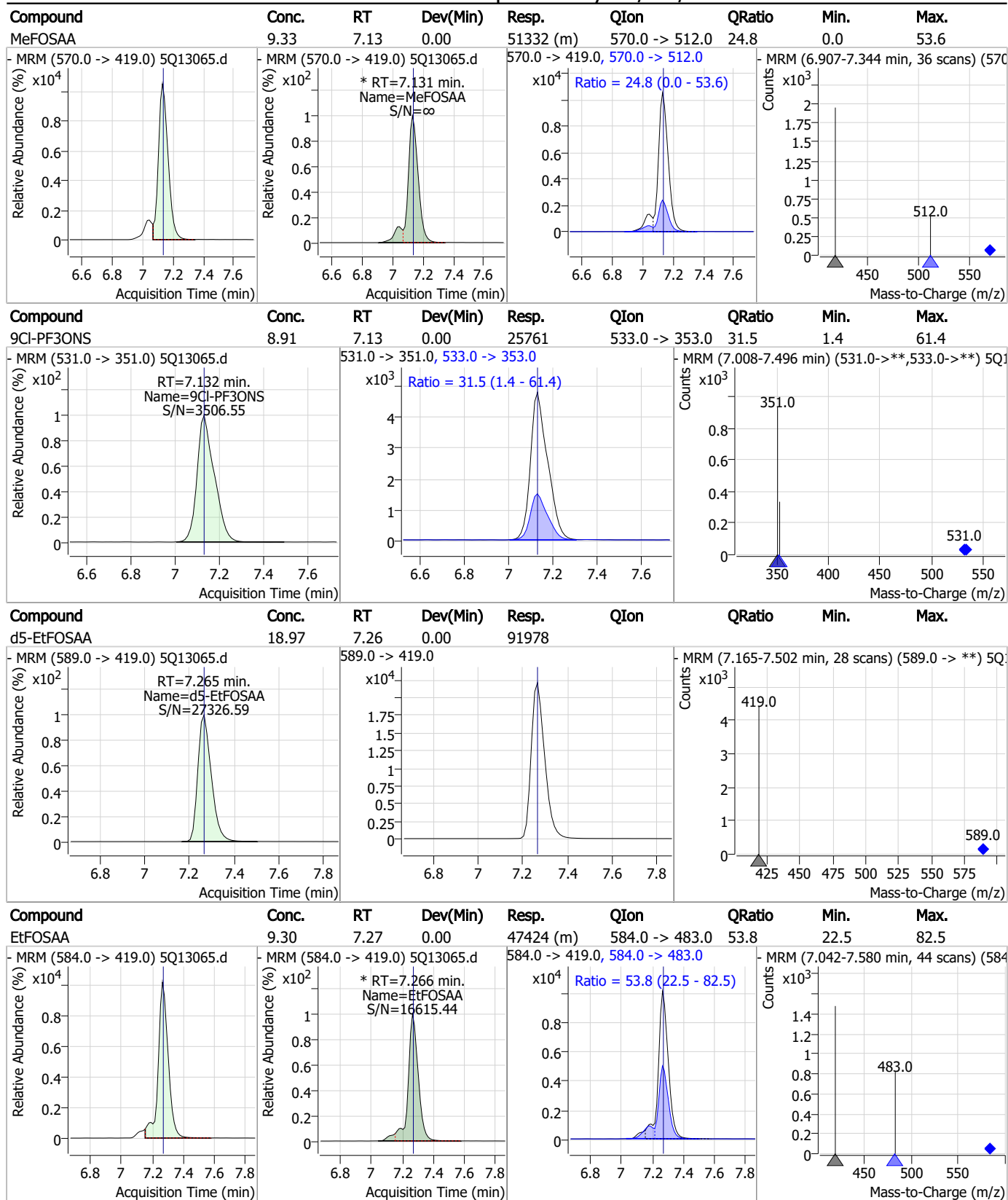
### Perfluorinated Compounds by LC/MS/MS



7.6.6  
7

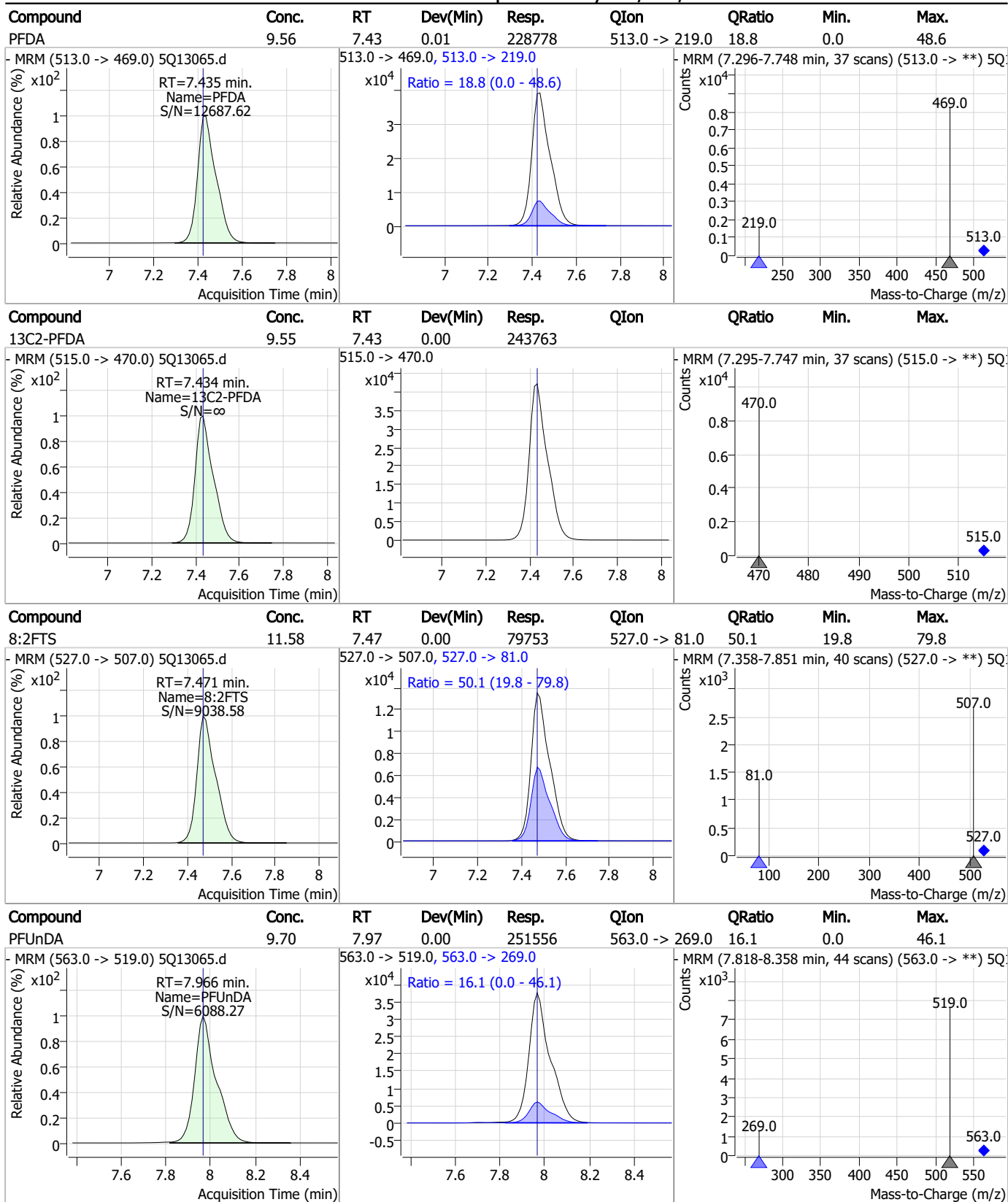


### Perfluorinated Compounds by LC/MS/MS



7.6.6  
7

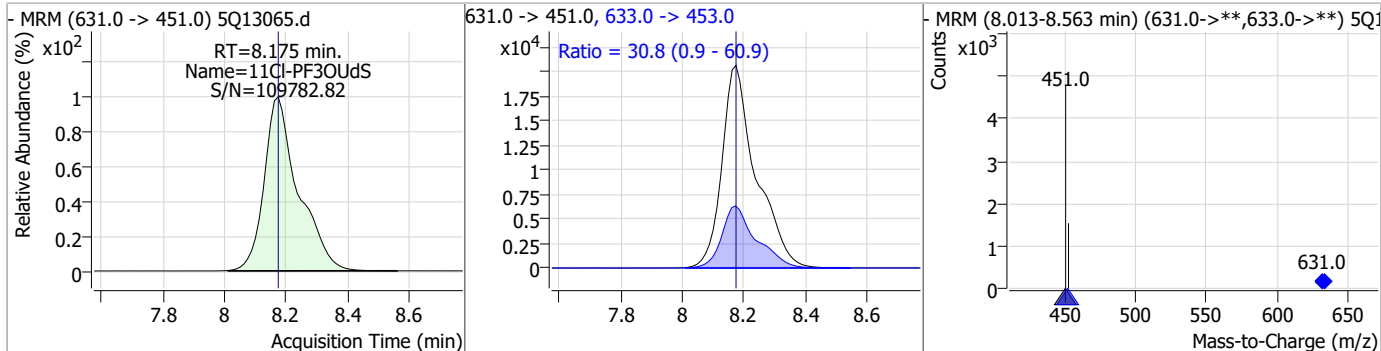
### Perfluorinated Compounds by LC/MS/MS



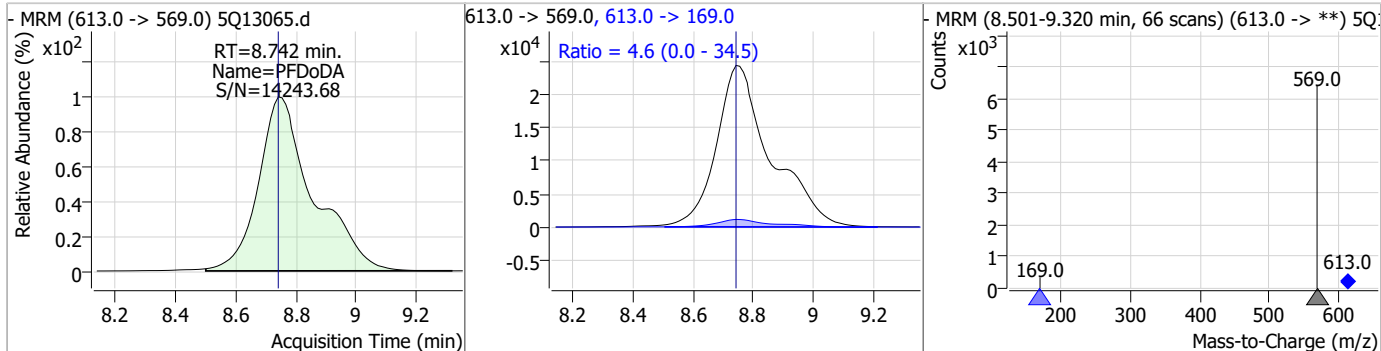
7.6.6  
7

### Perfluorinated Compounds by LC/MS/MS

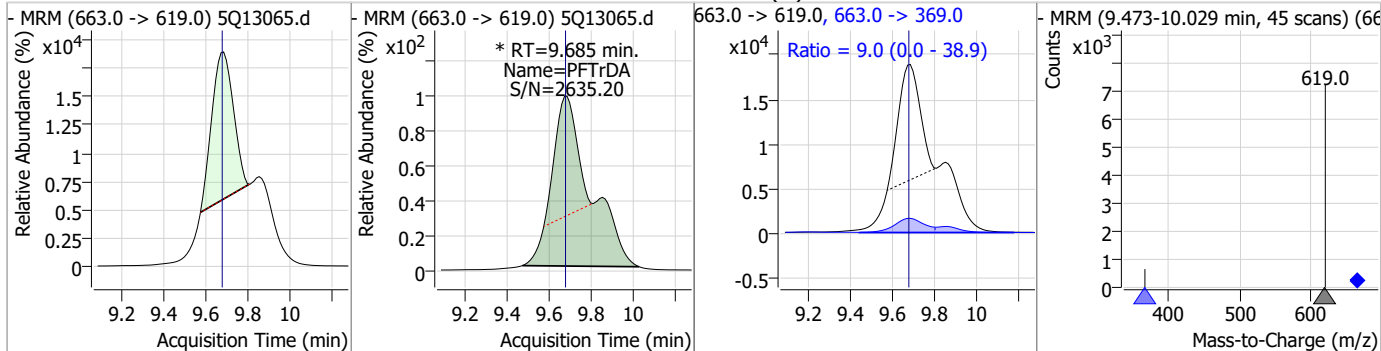
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11CI-PF3OUdS	8.96	8.18	0.00	159032	633.0 -> 453.0	30.8	0.9	60.9



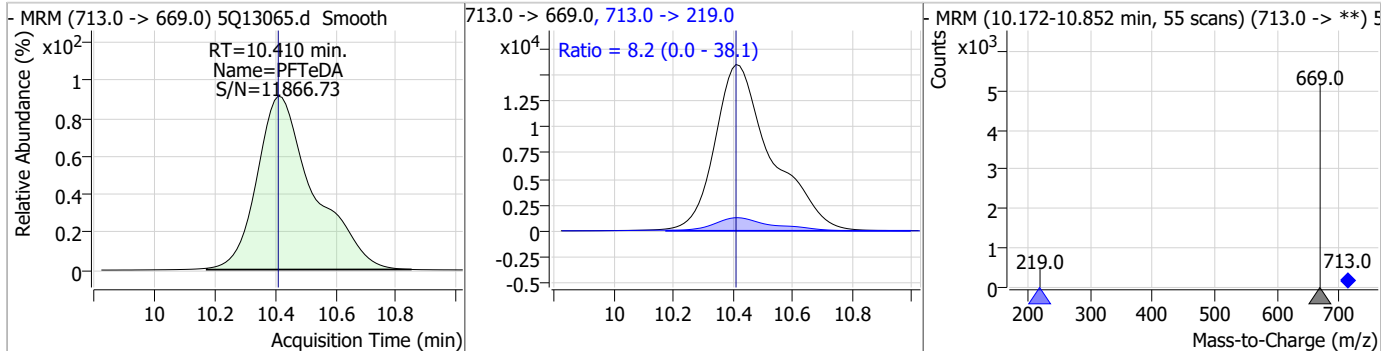
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	9.51	8.74	0.00	306166	613.0 -> 169.0	4.6	0.0	34.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	9.17	9.69	0.01	231318 (m)	663.0 -> 369.0	9.0	0.0	38.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	9.42	10.41	0.00	208200	713.0 -> 219.0	8.2	0.0	38.1



# Manual Integration Approval Summary

**Sample Number:** S5Q203-IC203      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13065.D      **Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Injection Time:** 04/14/23 16:13      **Supervisor approved:** 04/17/23 16:32 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.85	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorotridecanoic acid	72629-94-8		9.69	Poor instrument integration

7.6.6.1

7

## Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13066.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/14/2023 4:30:27 PM  
 Sample Name : icc203-20  
 Vial : P3-A7  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,,1.0,1,water

Compound	RT	QIon	Resp.	Symmetry	Conc.	Units	Dev(Min)
<b>Internal Standards</b>							
13C2-6:2FTS	6.250	429.0 -> 409.0	163486	1.73	20.00	µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	413140	1.46	20.00	µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	177034	1.42	20.00	µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	74409	1.57	20.00	µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	182701	1.46	40.00	µg/L	0.000
<b>System Monitoring Compounds</b>							
13C2-PFDA	7.434	515.0 -> 470.0	519661		19.98	µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%				Recovery = 99.9%		
13C2-PFHxA	4.676	315.0 -> 270.0	216356		20.29	µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%				Recovery = 101.4%		
d5-EtFOSAA	7.265	589.0 -> 419.0	195529		39.70	µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%				Recovery = 99.2%		
13C3-HFPO-DA	4.946	287.0 -> 169.0	93386		40.42	µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%				Recovery = 101.0%		
<b>Target Compounds</b>							
6:2FTS	6.251	427.0 -> 407.0	180555		23.33	µg/L	100
8:2FTS	7.471	527.0 -> 507.0	171375		23.43	µg/L	100
EtFOSAA	7.266	584.0 -> 419.0	101639		19.61	µg/L	m 100
MeFOSAA	7.131	570.0 -> 419.0	110168		19.72	µg/L	m 100
PFBA	1.863	213.0 -> 169.0	56787	1.31	19.17	µg/L	100
PFBS	3.716	299.0 -> 80.0	69841	1.10	19.76	µg/L	100
PFDA	7.422	513.0 -> 469.0	489533		20.08	µg/L	100
PFDoDA	8.742	613.0 -> 569.0	662388		19.93	µg/L	100
PFHpA	5.553	363.0 -> 319.0	403679		18.96	µg/L	100
PFHpS	6.261	449.0 -> 80.0	71446		20.29	µg/L	100
PFHxA	4.678	313.0 -> 269.0	149624	1.31	20.33	µg/L	100
PFHxS	5.587	399.0 -> 80.0	74369		19.46	µg/L	m 100
PFNA	6.876	463.0 -> 419.0	458835		19.29	µg/L	100
PFOA	6.266	413.0 -> 369.0	392609		19.58	µg/L	100
PFOS	6.849	499.0 -> 80.0	84455		19.68	µg/L	m 100
PFPeA	3.472	263.0 -> 219.0	251028	1.23	19.56	µg/L	100
PFTeDA	10.410	713.0 -> 669.0	459506		20.14	µg/L	100
PFTrDA	9.673	663.0 -> 619.0	498087		19.12	µg/L	m 100
PFUnDA	7.966	563.0 -> 519.0	536229		20.03	µg/L	100
ADONA	5.655	377.0 -> 251.0	563674		18.70	µg/L	100
9Cl-PF3ONS	7.132	531.0 -> 351.0	56120		19.04	µg/L	100
11Cl-PF3OUdS	8.175	631.0 -> 451.0	344751		19.06	µg/L	100
HFPO-DA	4.960	285.0 -> 169.0	54817		20.14	µg/L	100

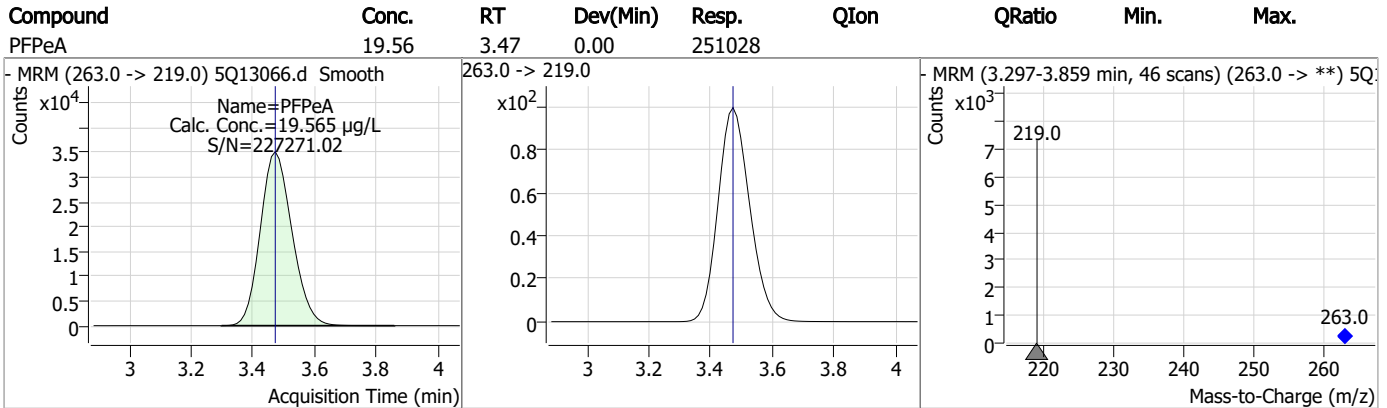
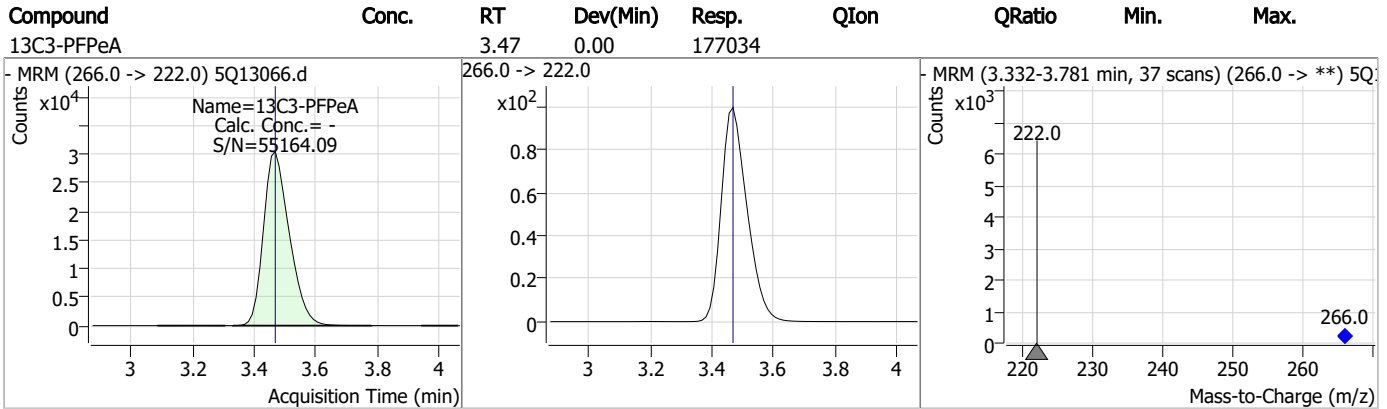
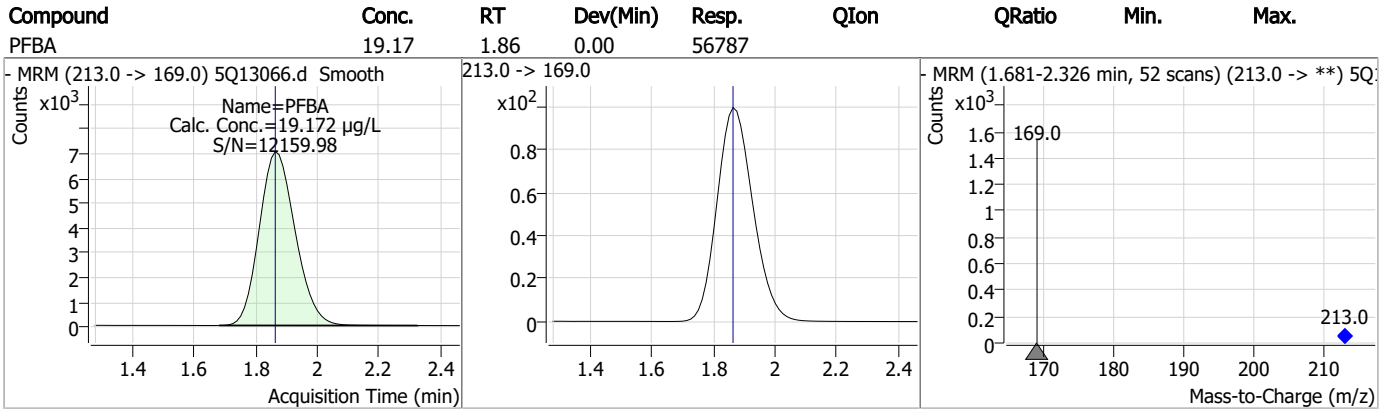
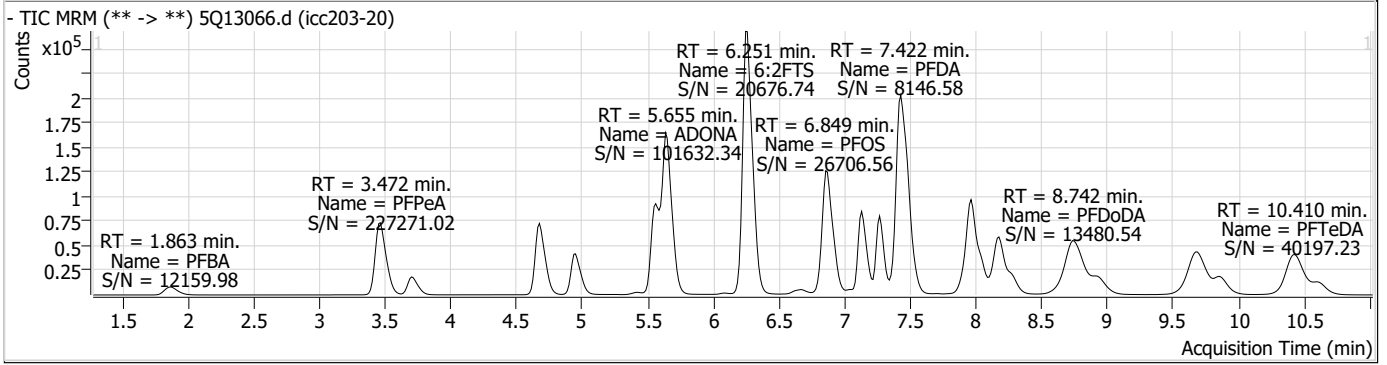
# = Qualifier out of range, m = manually integrated, + = Area summed

7.6.7  
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### Perfluorinated Compounds by LC/MS/MS

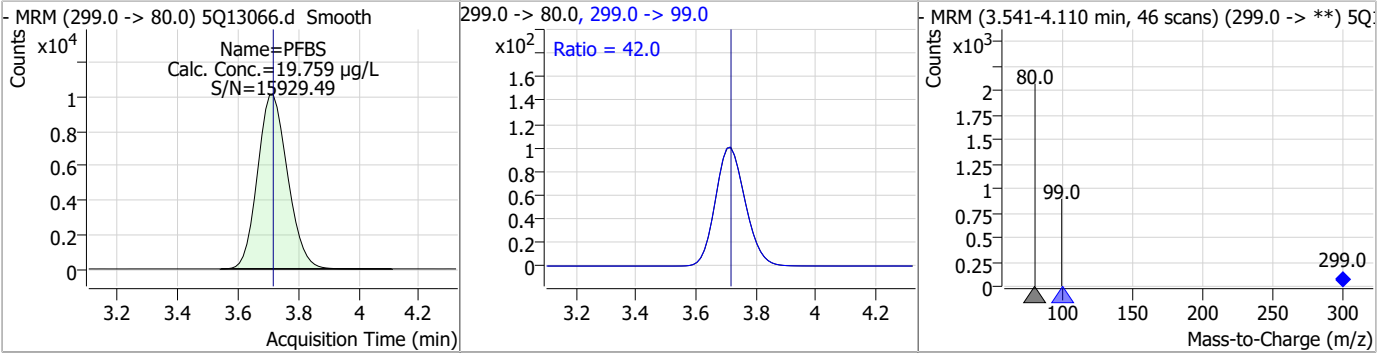


7.6.7

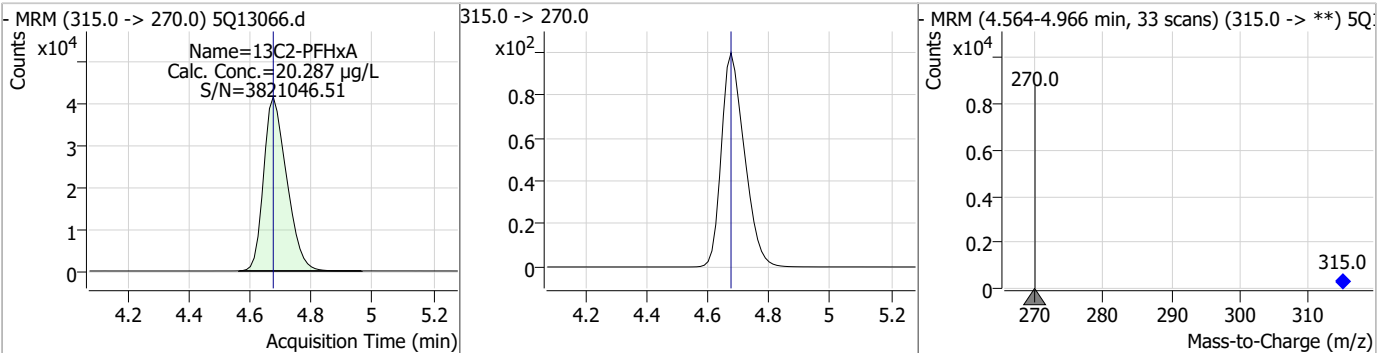
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### Perfluorinated Compounds by LC/MS/MS

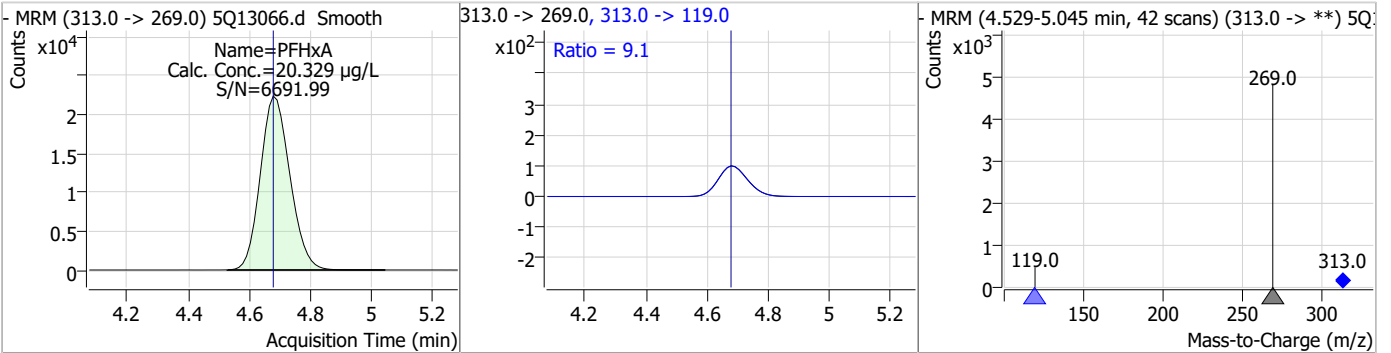
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.76	3.72	0.00	69841	299.0 -> 99.0	42.0	12.0	72.0



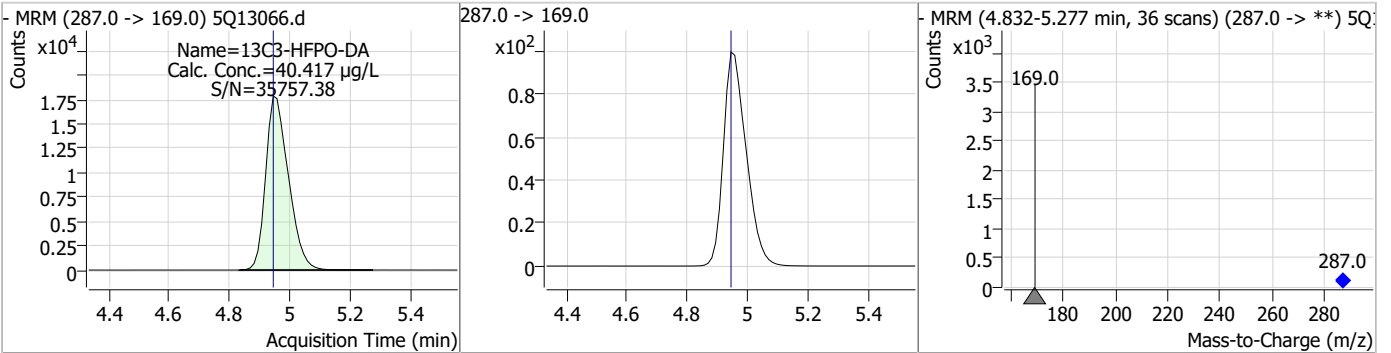
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	20.29	4.68	0.00	216356	315.0 -> 270.0	9.1	0.0	39.1



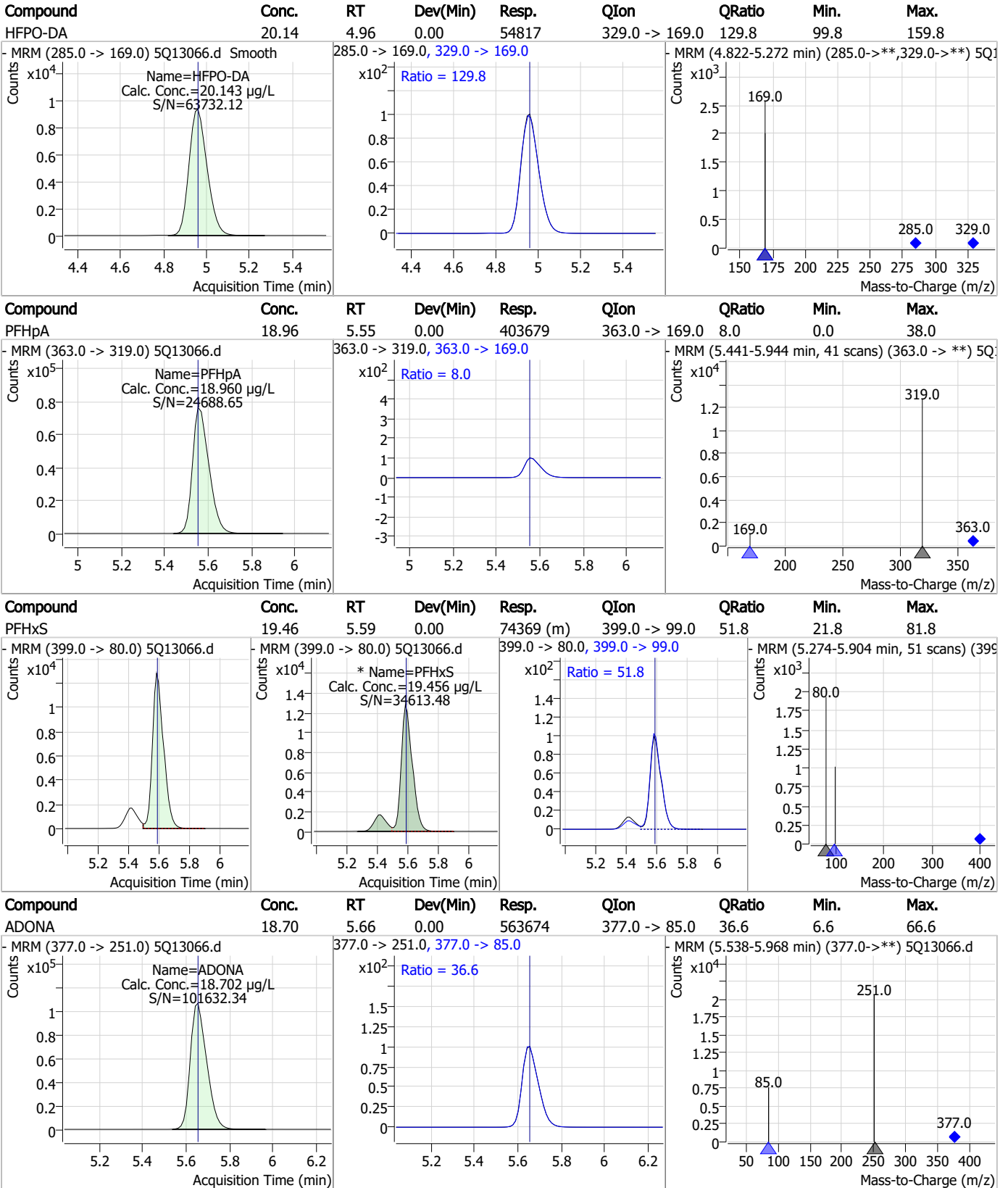
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	20.33	4.68	0.00	149624	313.0 -> 119.0	9.1	0.0	39.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C3-HFPO-DA	40.42	4.95	0.00	93386	287.0 -> 169.0	9.1	0.0	39.1



### Perfluorinated Compounds by LC/MS/MS

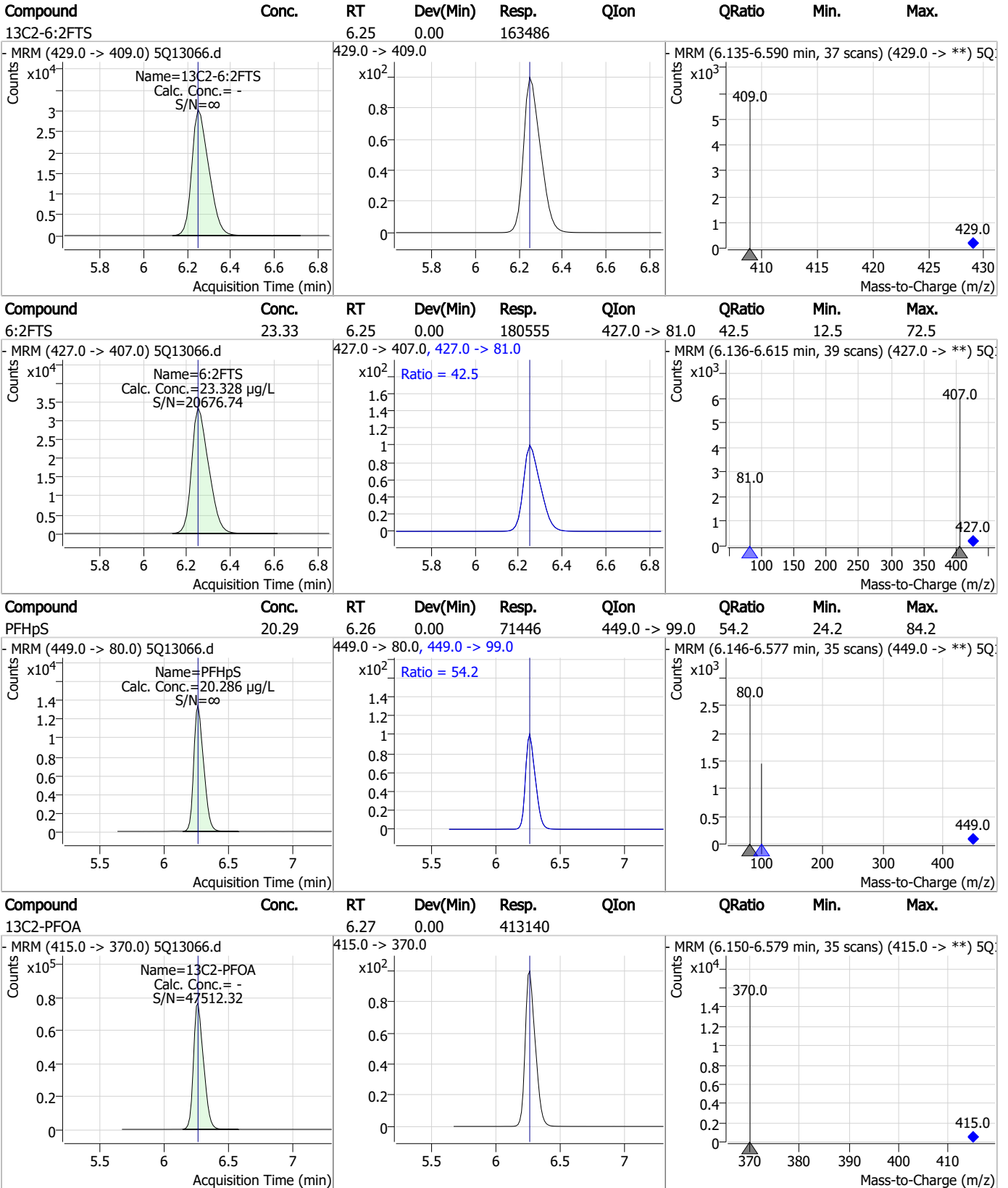


7.6.7

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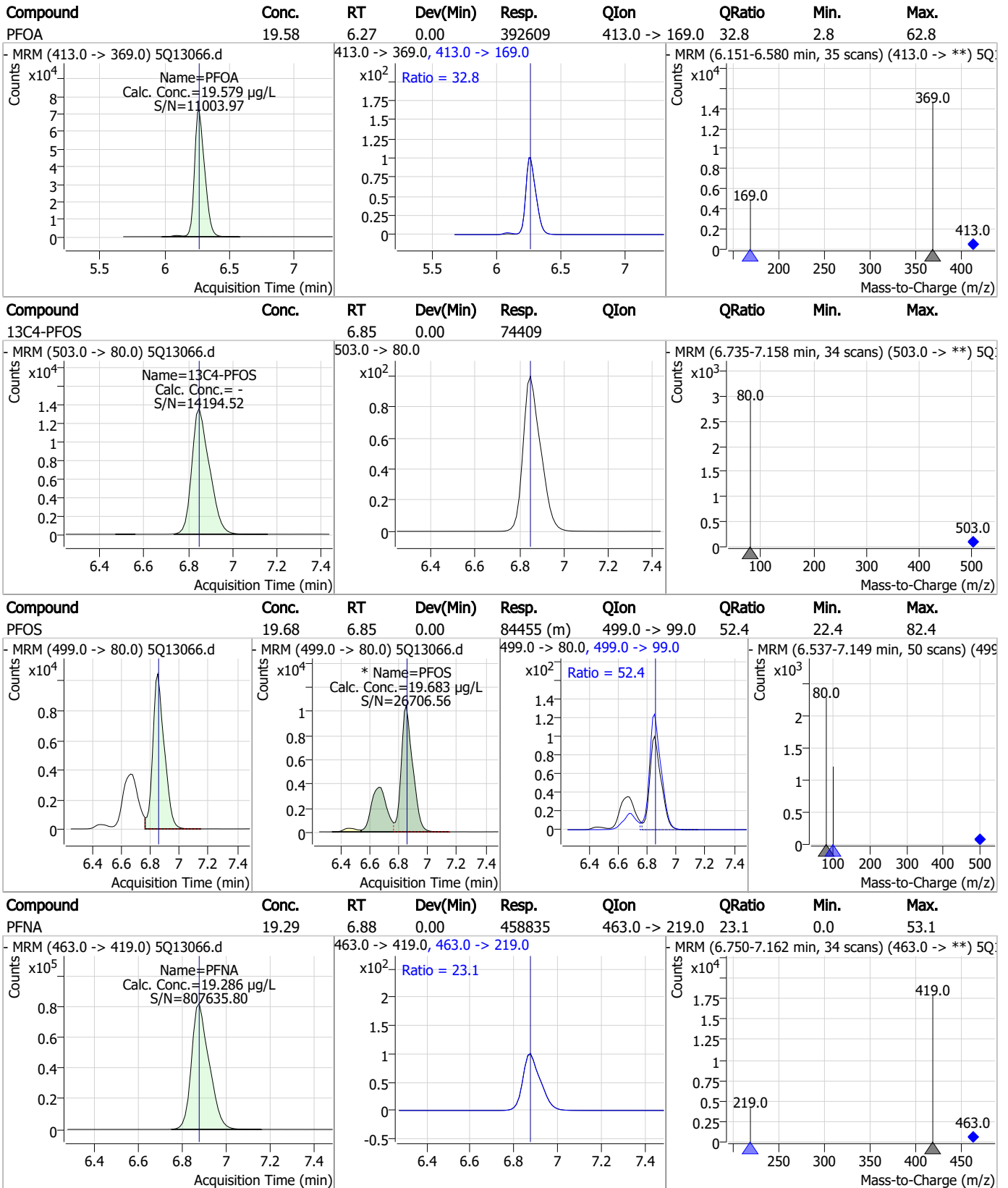
### Perfluorinated Compounds by LC/MS/MS



7.67

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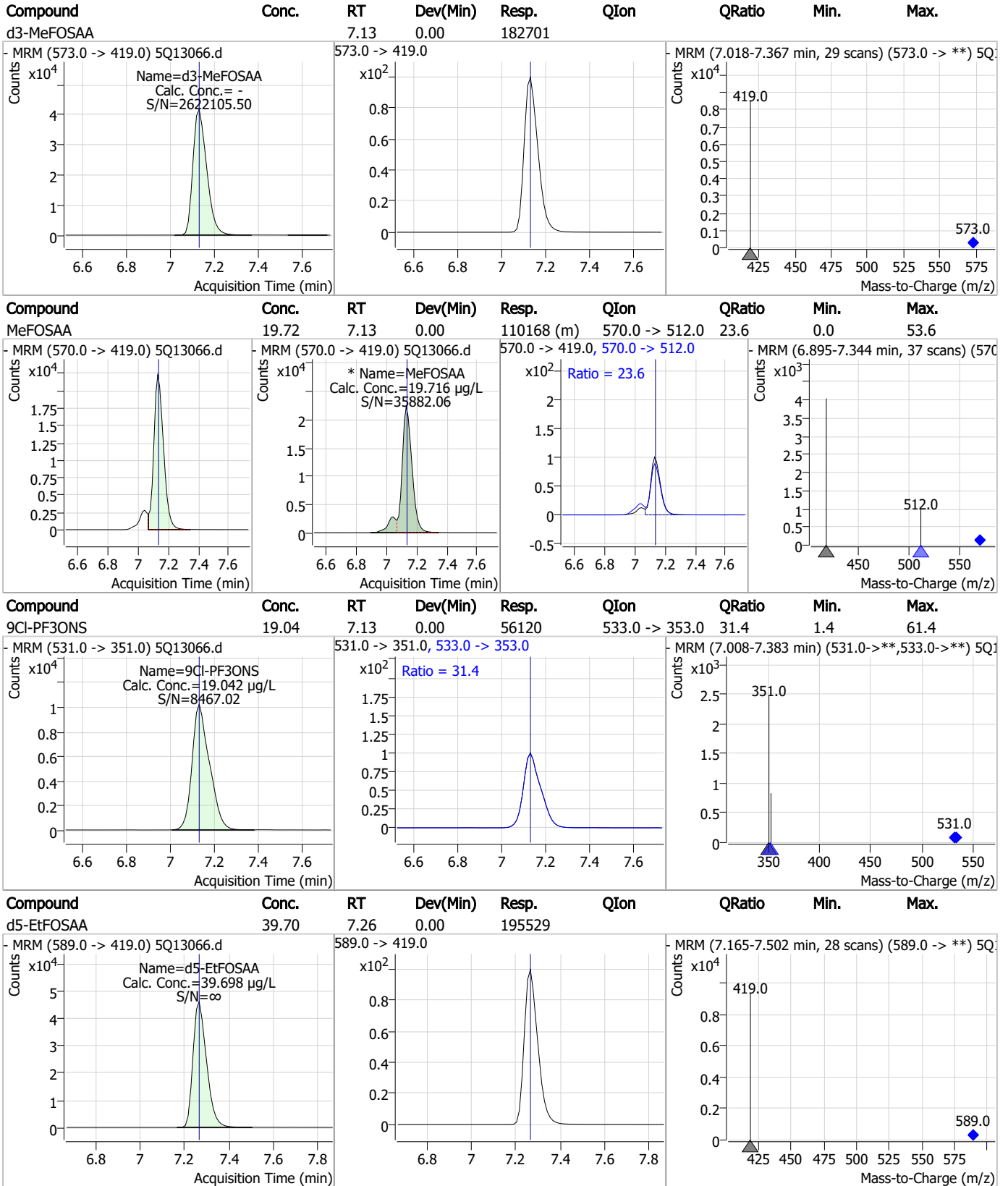
### Perfluorinated Compounds by LC/MS/MS



7.6.7

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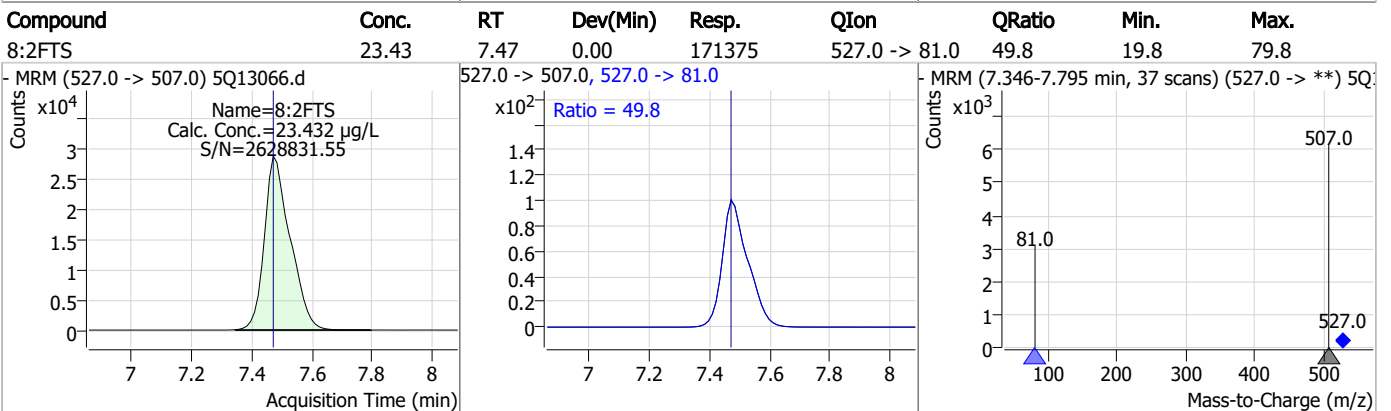
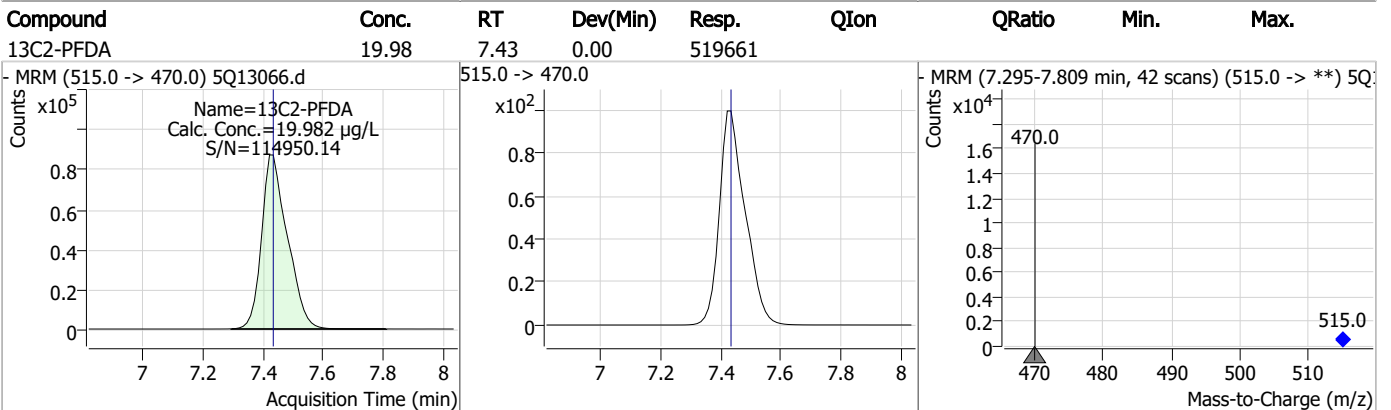
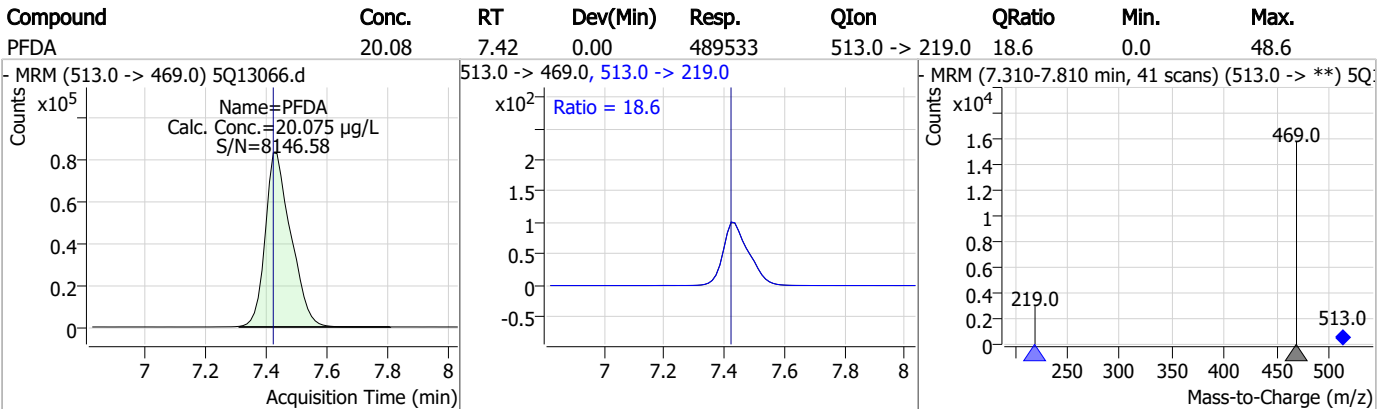
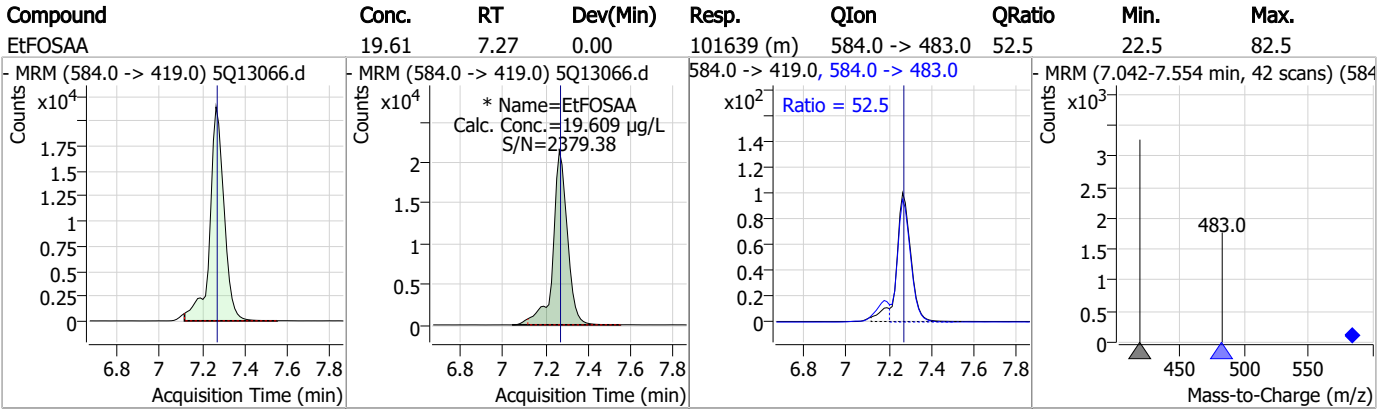
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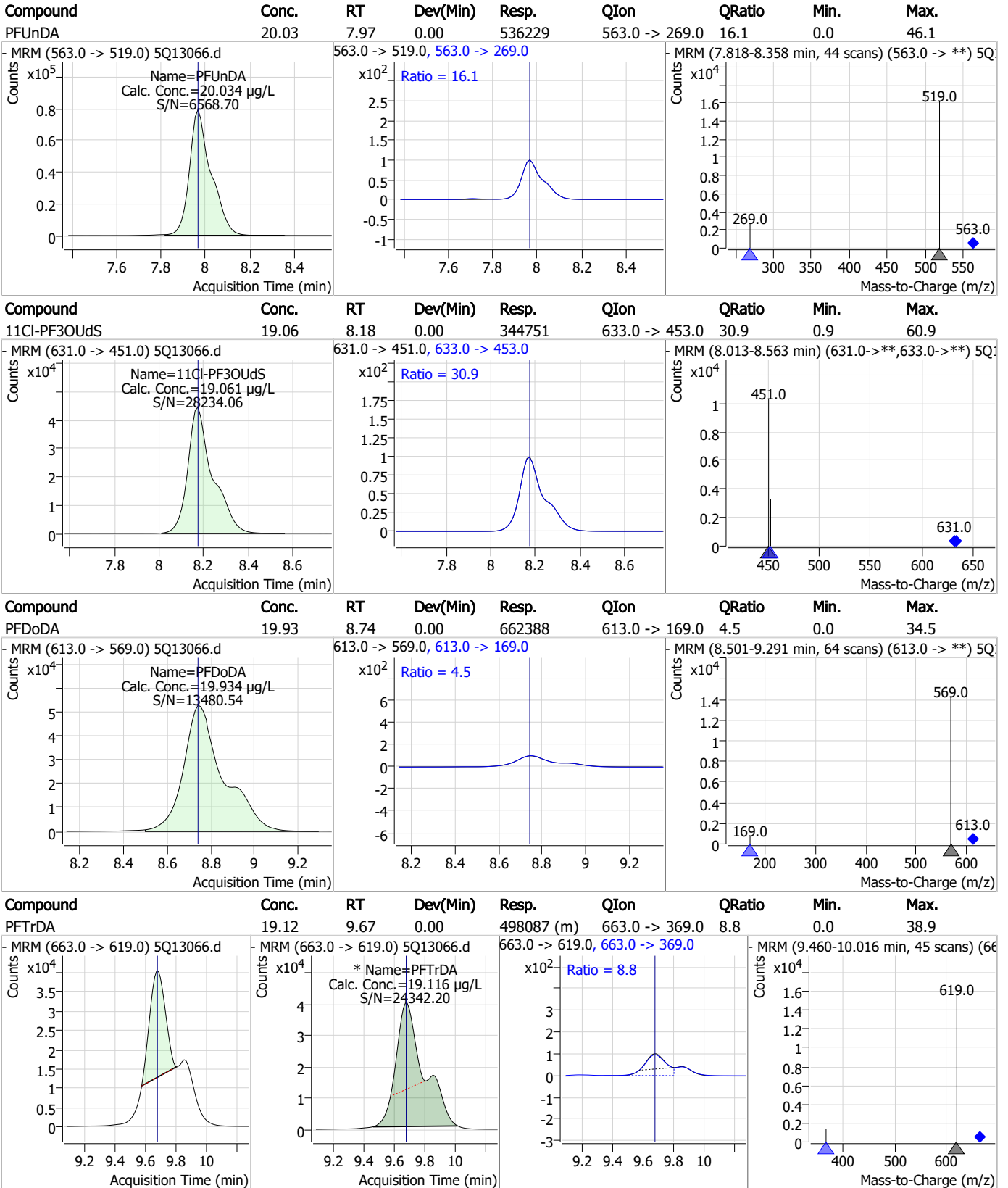
7.67

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### Perfluorinated Compounds by LC/MS/MS



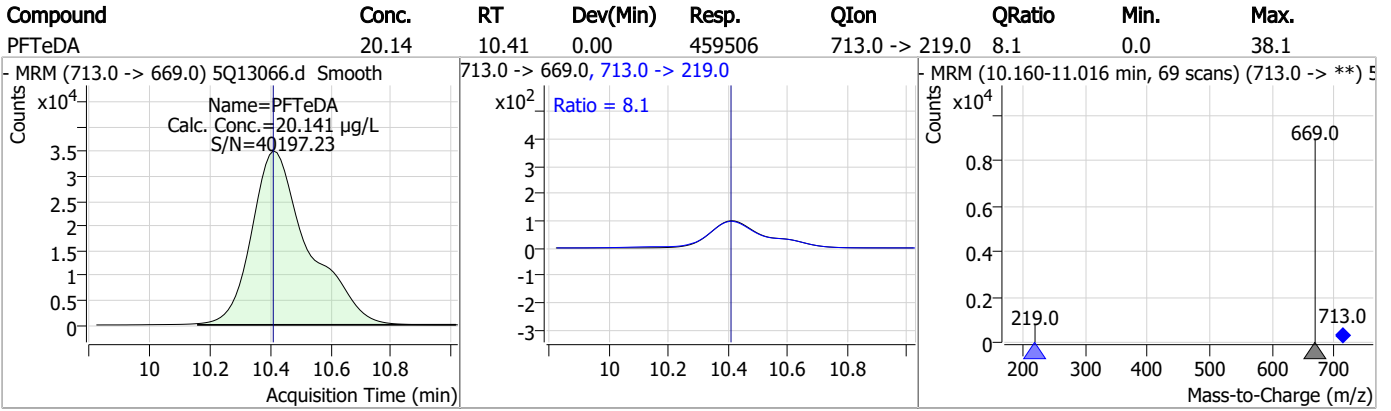
### Perfluorinated Compounds by LC/MS/MS



7.67  
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### Perfluorinated Compounds by LC/MS/MS



7.6.7

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# Manual Integration Approval Summary

**Sample Number:** S5Q203-ICC203      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13066.D      **Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Injection Time:** 04/14/23 16:30      **Supervisor approved:** 04/17/23 16:32 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.85	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorotridecanoic acid	72629-94-8		9.67	Poor instrument integration

7.6.7.1

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Manual Integrations  
**APPROVED**  
 (compounds with "m" flag)

**Norman Farmer**  
 04/17/23 16:32

### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13067.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/14/2023 4:49:27 PM  
 Sample Name : ic203-50  
 Vial : P3-A8  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	171014	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	403876	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	177581	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	72890	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	181488	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.422	515.0 -> 470.0	1229391	48.36 µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 241.8%		
13C2-PFHxA	4.676	315.0 -> 270.0	510562	48.97 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 244.9%		
d5-EtFOSAA	7.265	589.0 -> 419.0	470868	96.24 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 240.6%		
13C3-HFPO-DA	4.946	287.0 -> 169.0	220671	97.70 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 244.2%		
<b>Target Compounds</b>					
6:2FTS	6.251	427.0 -> 407.0	425878	52.60 µg/L	99
		427.0 -> 81.0	183019		
8:2FTS	7.471	527.0 -> 507.0	405678	53.03 µg/L	100
		527.0 -> 81.0	201278		
EtFOSAA	7.266	584.0 -> 419.0	246341	47.84 µg/L	m 99
		584.0 -> 483.0	131218		
MeFOSAA	7.131	570.0 -> 419.0	264187	47.60 µg/L	m 99
		570.0 -> 512.0	63174		
PFBA	1.863	213.0 -> 169.0	147005	49.48 µg/L	100
PFBS	3.703	299.0 -> 80.0	168789	48.75 µg/L	100
		299.0 -> 99.0	70949		
PFDA	7.422	513.0 -> 469.0	1153505	48.39 µg/L	99
		513.0 -> 219.0	218364		
PFDoDA	8.742	613.0 -> 569.0	1522126	46.76 µg/L	m 99
		613.0 -> 169.0	75822		
PFHpA	5.553	363.0 -> 319.0	979796	47.07 µg/L	100
		363.0 -> 169.0	79975		
PFHpS	6.261	449.0 -> 80.0	169733	49.20 µg/L	100
		449.0 -> 99.0	91775		
PFHxA	4.678	313.0 -> 269.0	352702	49.02 µg/L	100
		313.0 -> 119.0	32146		
PFHxS	5.587	399.0 -> 80.0	180720	48.26 µg/L	m 100
		399.0 -> 99.0	94056		
PFNA	6.876	463.0 -> 419.0	1098707	47.24 µg/L	99
		463.0 -> 219.0	257232		
PFOA	6.254	413.0 -> 369.0	924767	47.17 µg/L	99
		413.0 -> 169.0	307992		
PFOS	6.849	499.0 -> 80.0	197558	47.00 µg/L	m 100
		499.0 -> 99.0	103709		
PFPeA	3.472	263.0 -> 219.0	613032	47.63 µg/L	100

7.6.8  
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## Perfluorinated Compounds by LC/MS/MS

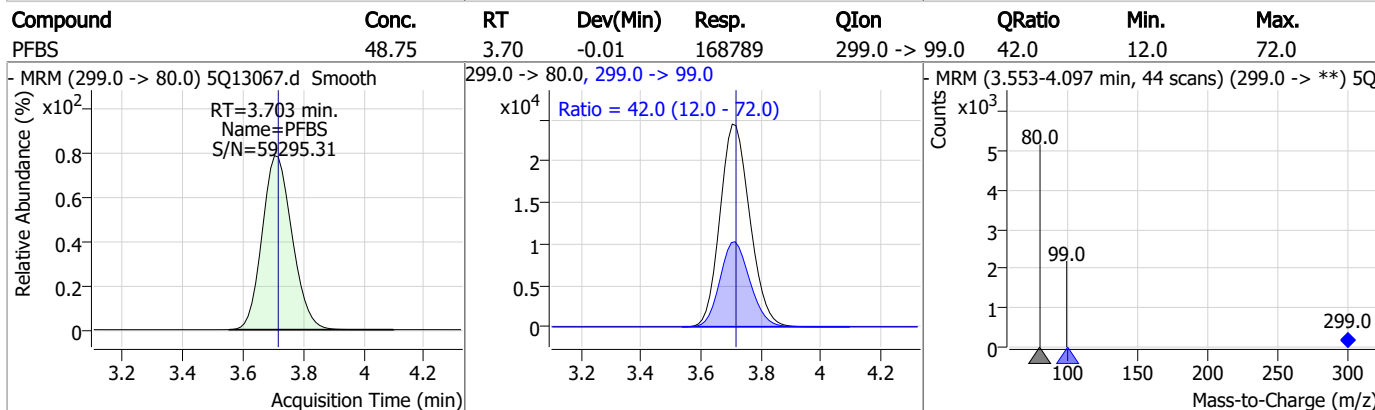
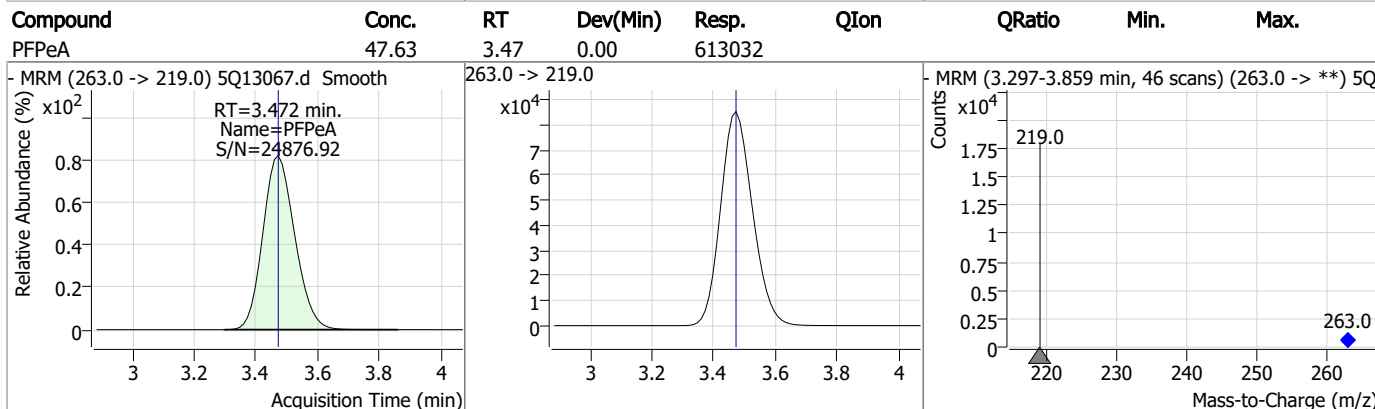
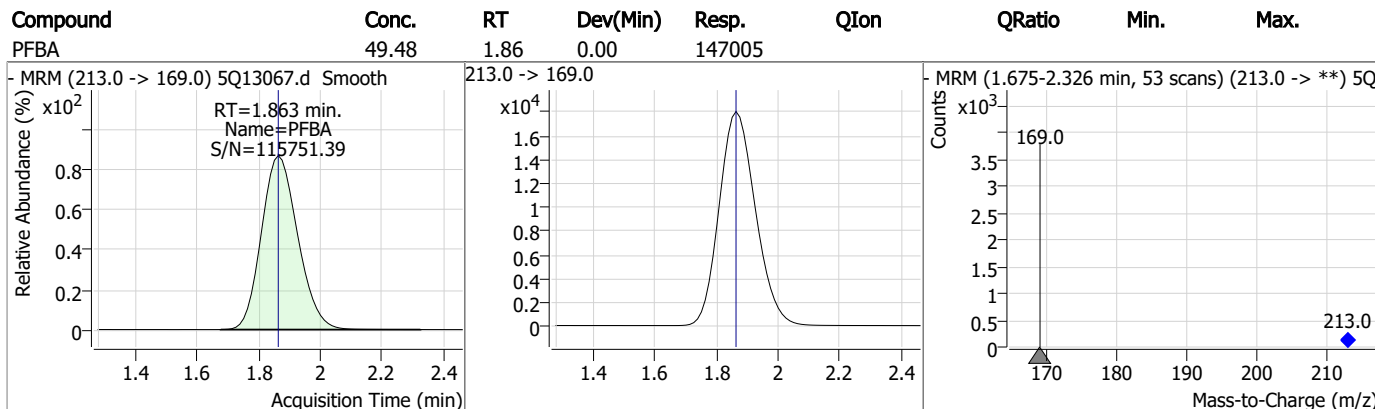
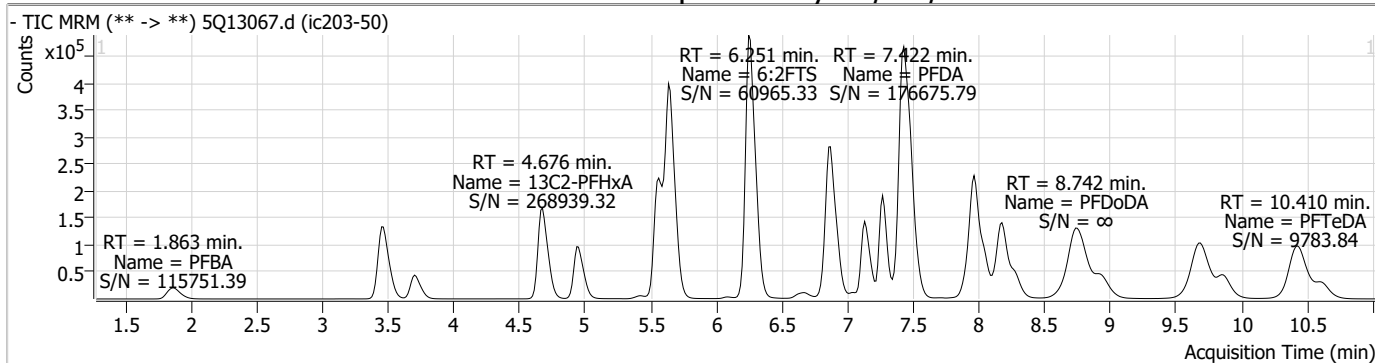
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
PFTeDA	10.410	713.0 -> 669.0	1101970	49.31	µg/L	100
		713.0 -> 219.0	88919			
PFTTrDA	9.685	663.0 -> 619.0	1263535	49.50	µg/L	m 98
		663.0 -> 369.0	102319			
PFUnDA	7.966	563.0 -> 519.0	1285194	49.02	µg/L	99
		563.0 -> 269.0	210021			
ADONA	5.655	377.0 -> 251.0	1380915	46.87	µg/L	100
		377.0 -> 85.0	505845			
9Cl-PF3ONS	7.132	531.0 -> 351.0	136234	47.28	µg/L	99
		533.0 -> 353.0	43404			
11Cl-PF3OUdS	8.175	631.0 -> 451.0	836703	47.32	µg/L	100
		633.0 -> 453.0	258258			
HFPO-DA	4.960	285.0 -> 169.0	128620	48.35	µg/L	99
		329.0 -> 169.0	168966			

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

7.6.8

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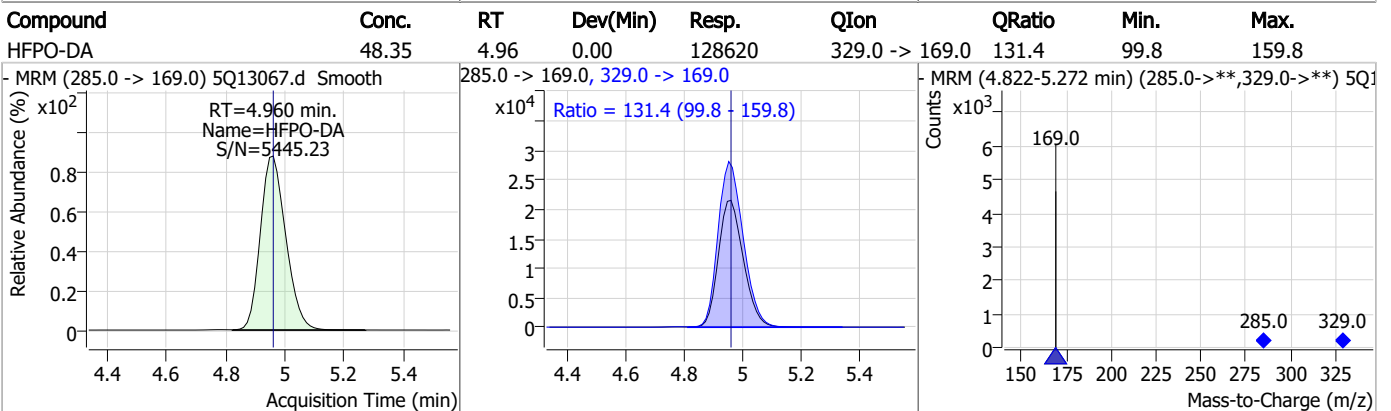
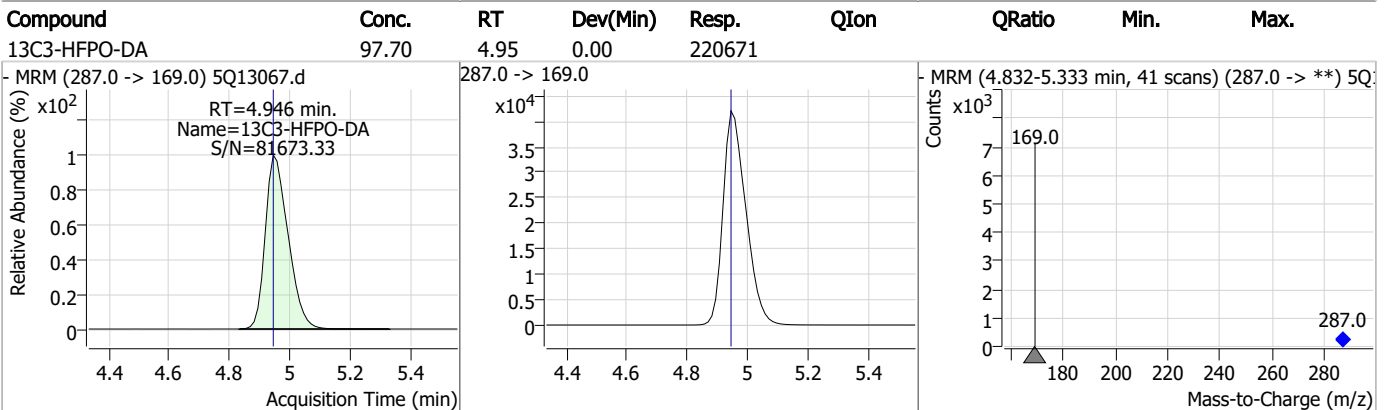
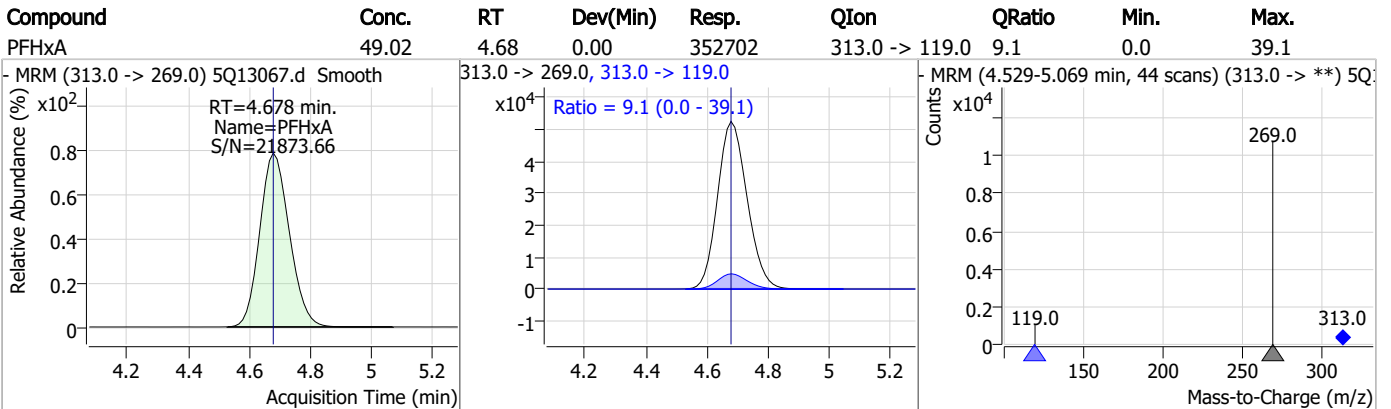
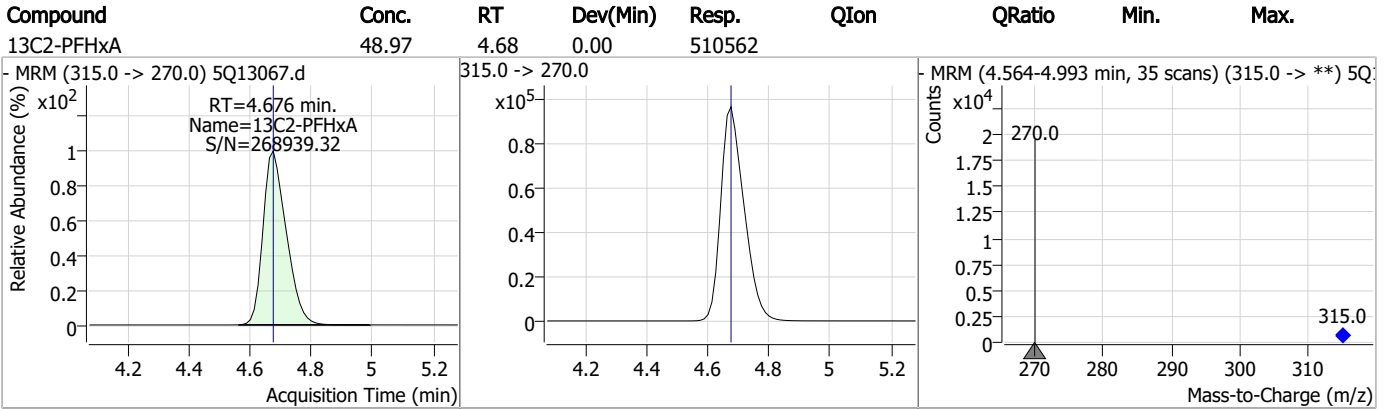
### Perfluorinated Compounds by LC/MS/MS



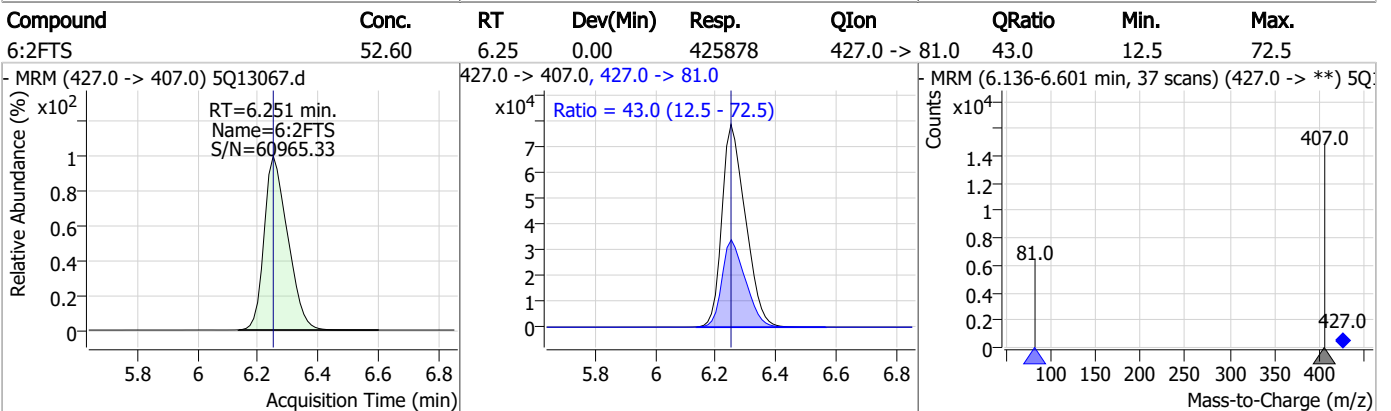
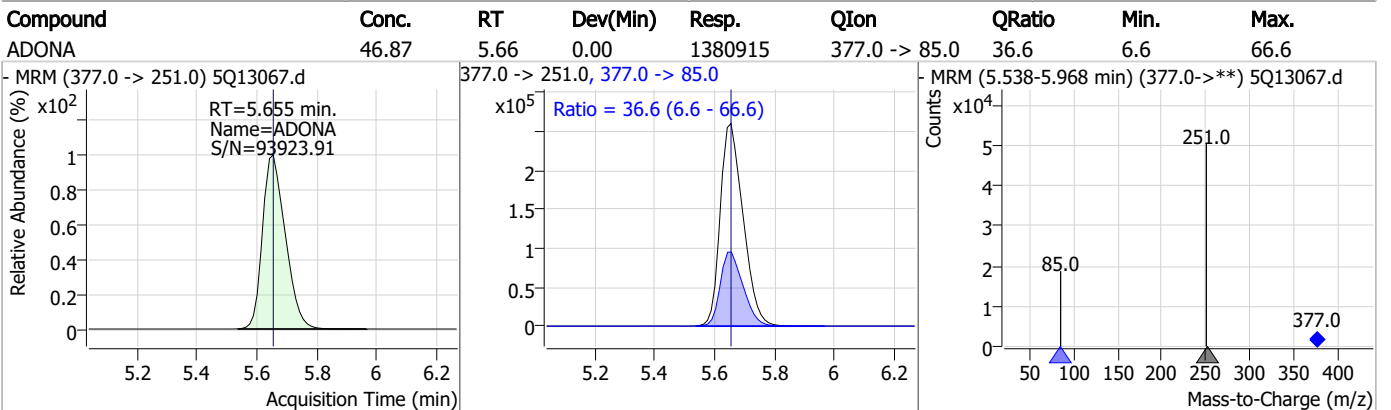
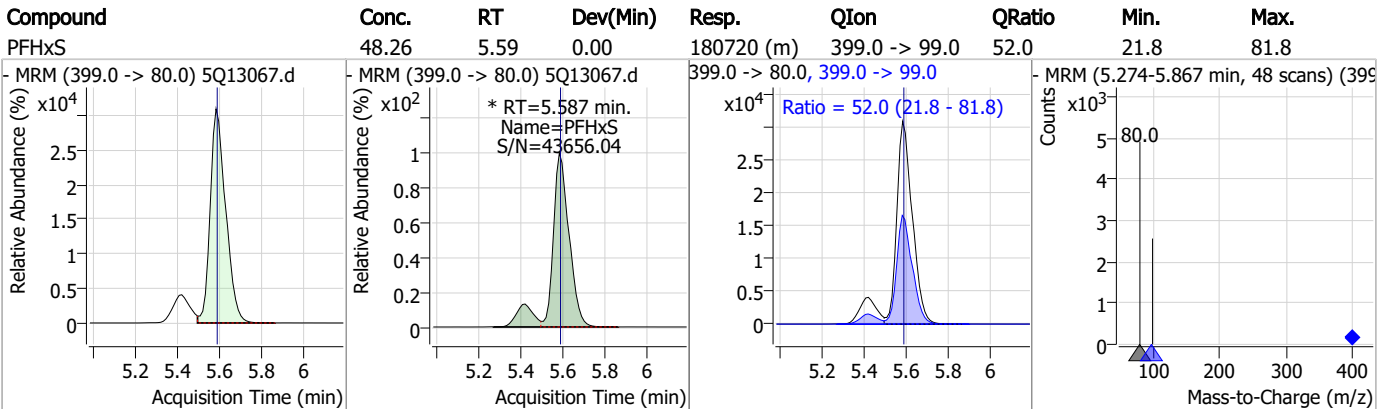
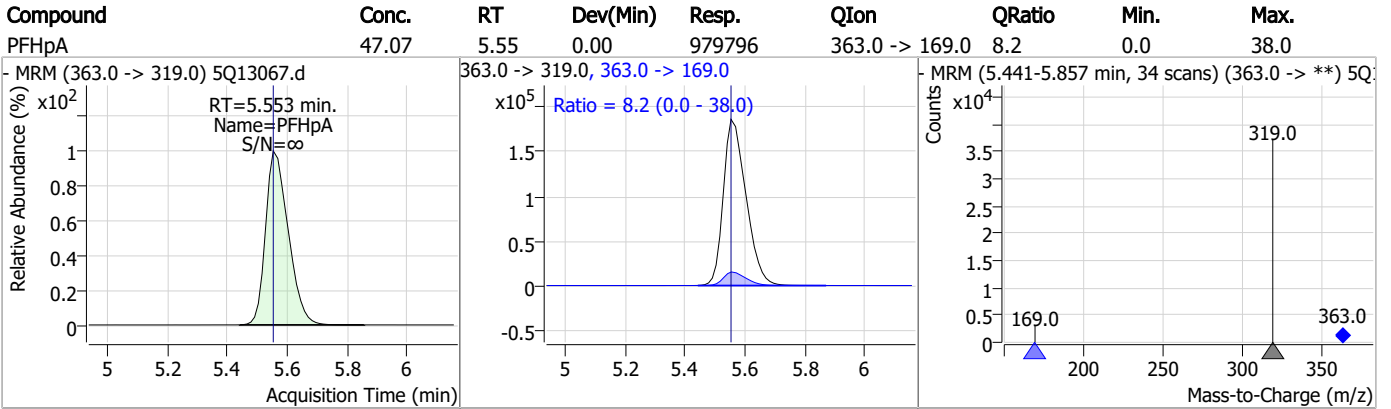
7.6.8  
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### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS

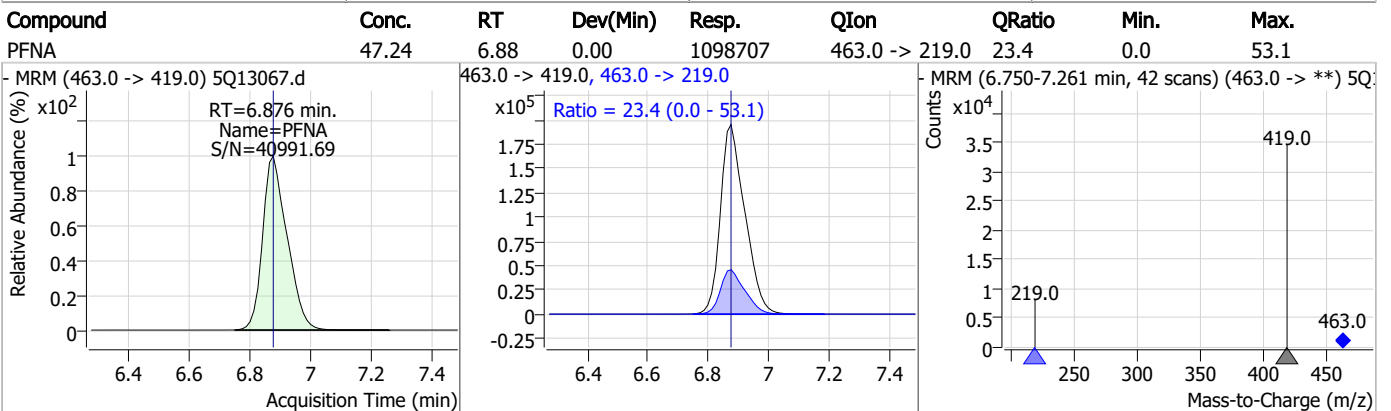
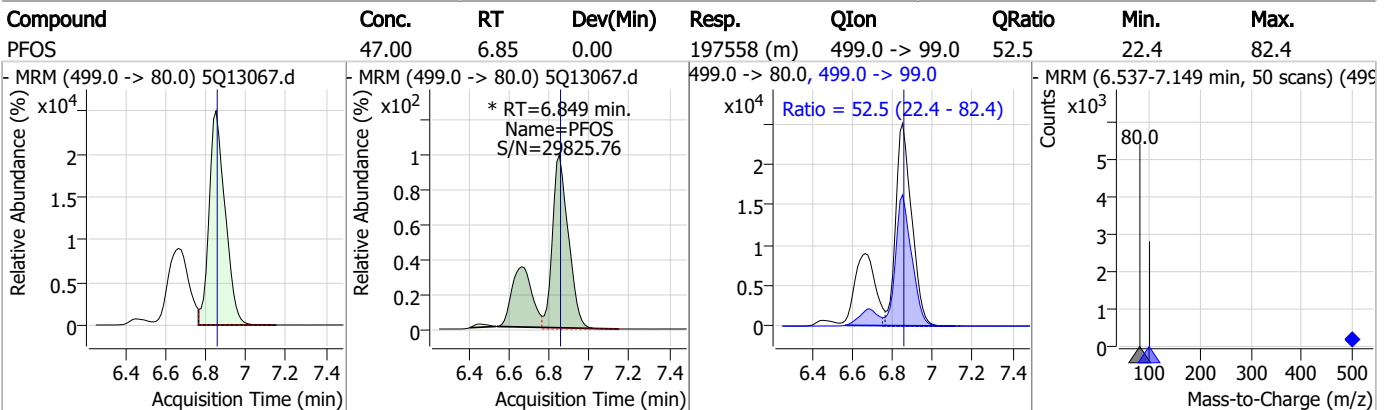
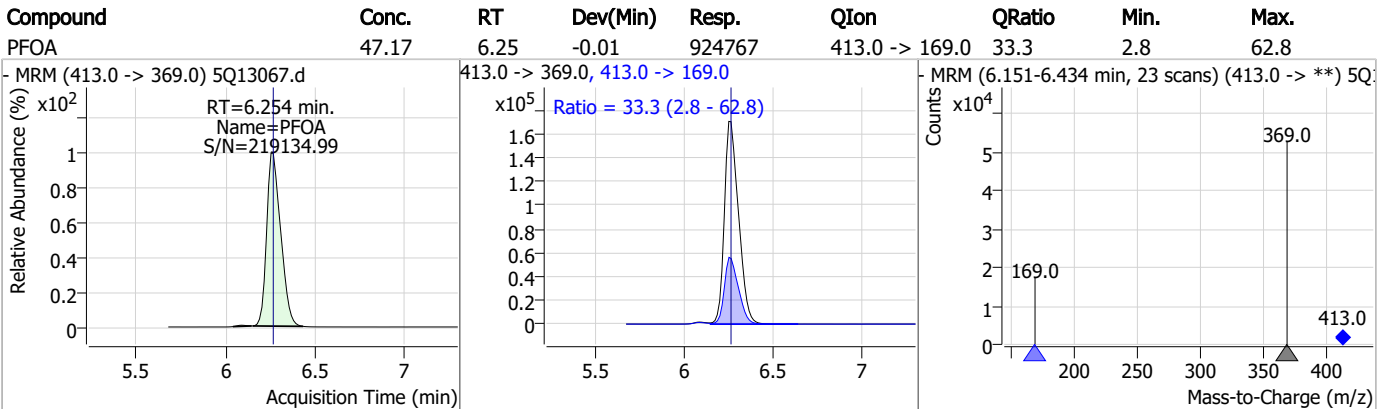
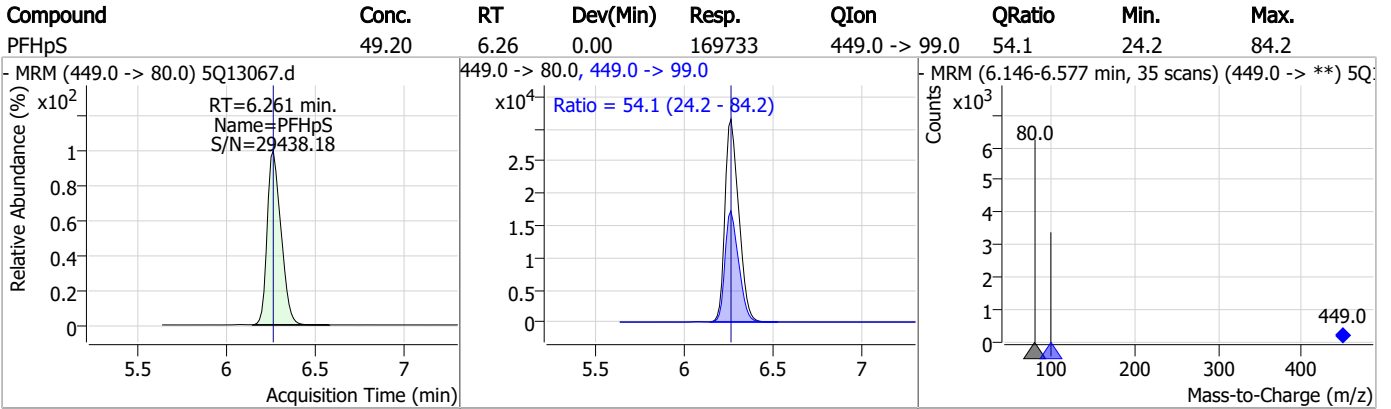


7.6.8

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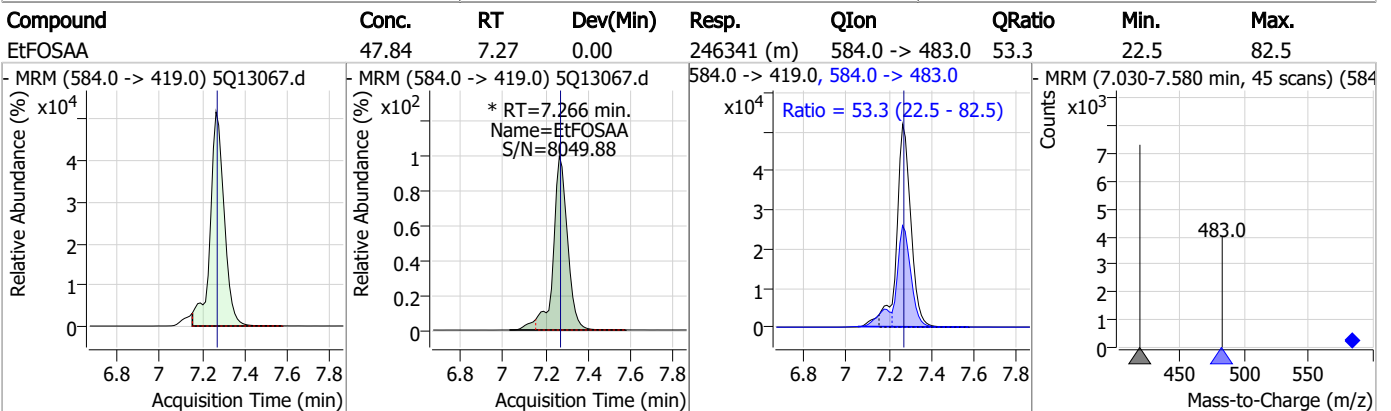
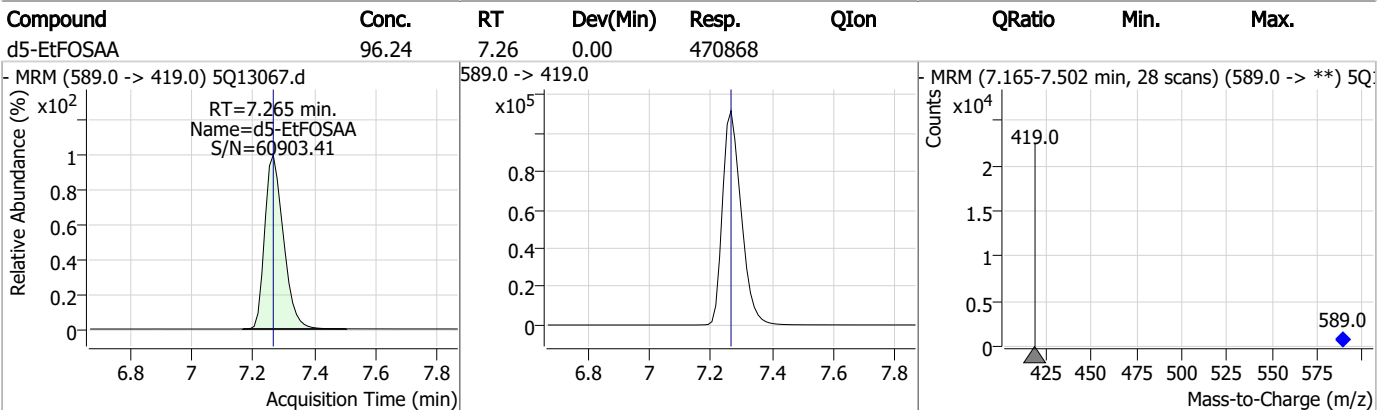
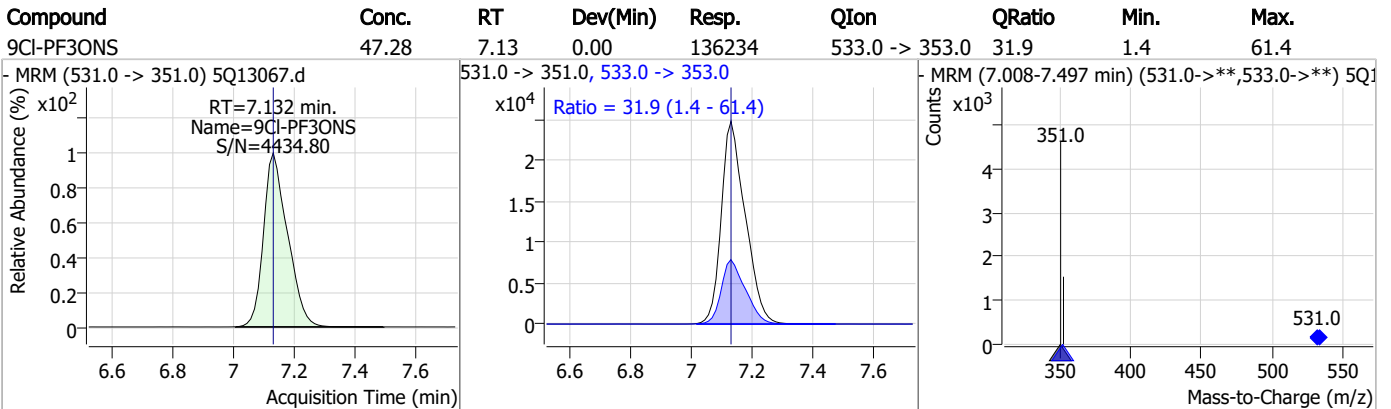
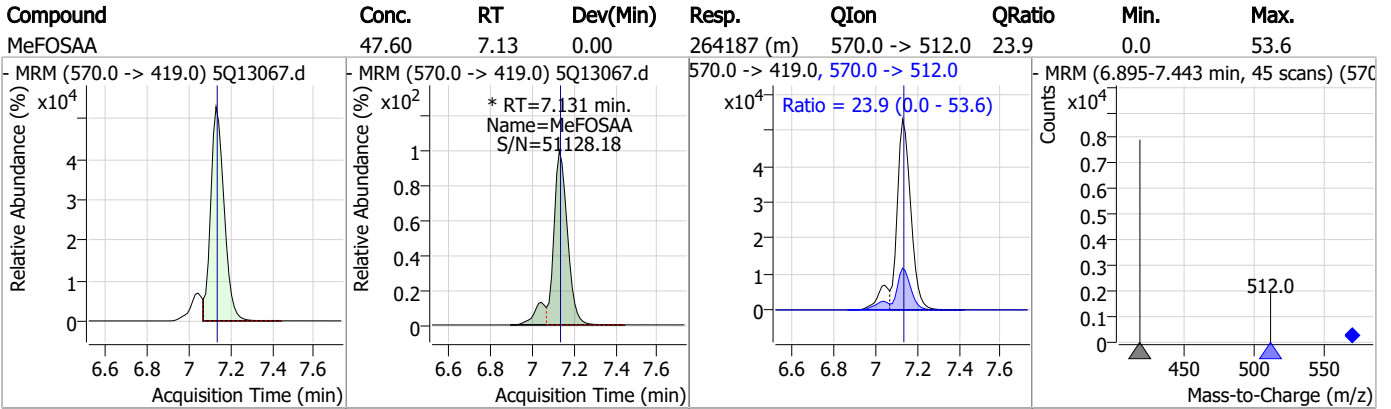


### Perfluorinated Compounds by LC/MS/MS





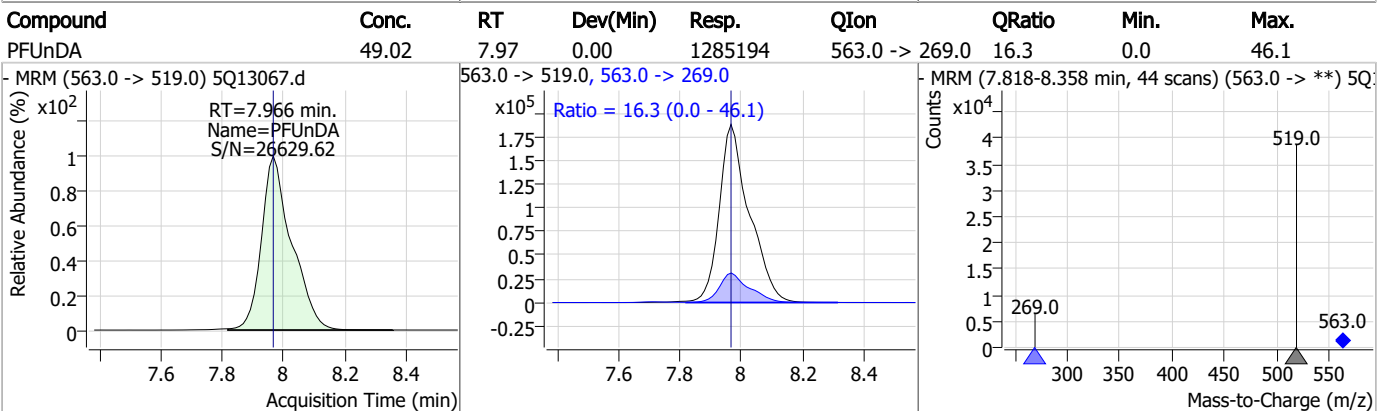
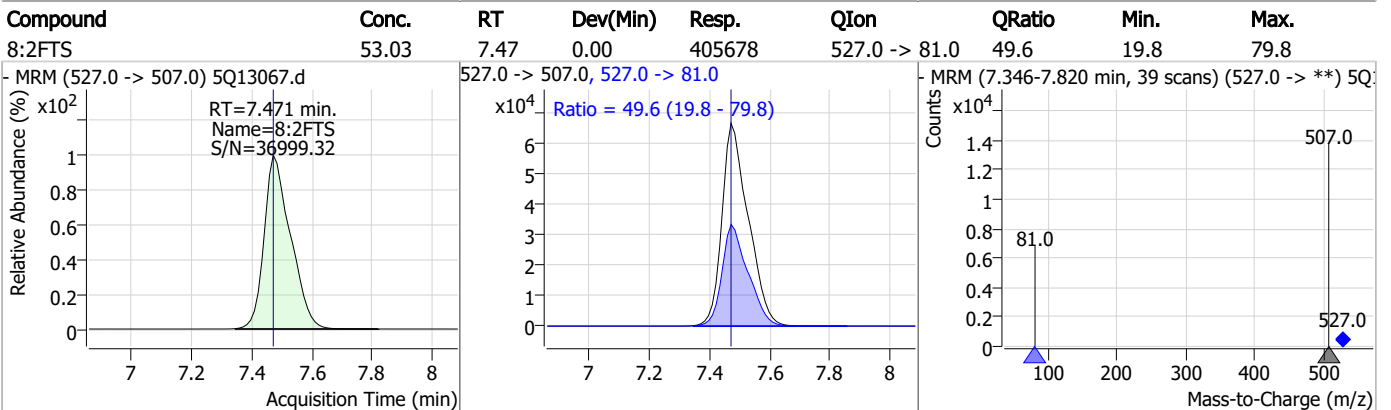
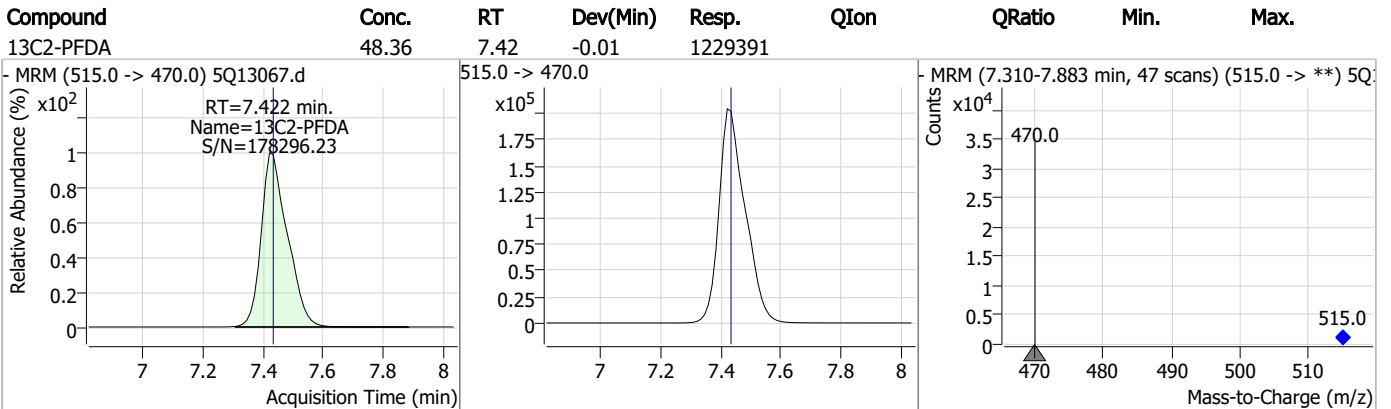
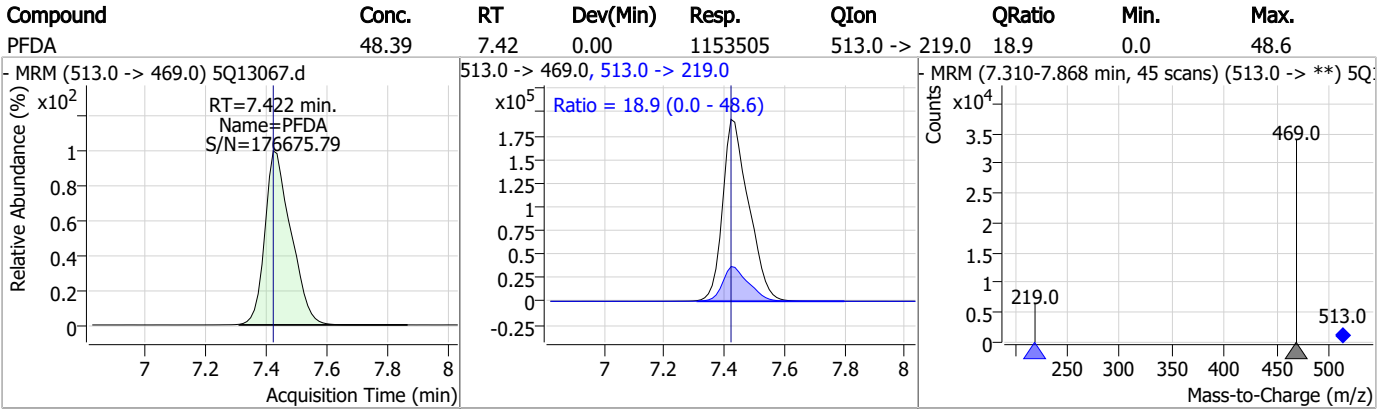
### Perfluorinated Compounds by LC/MS/MS



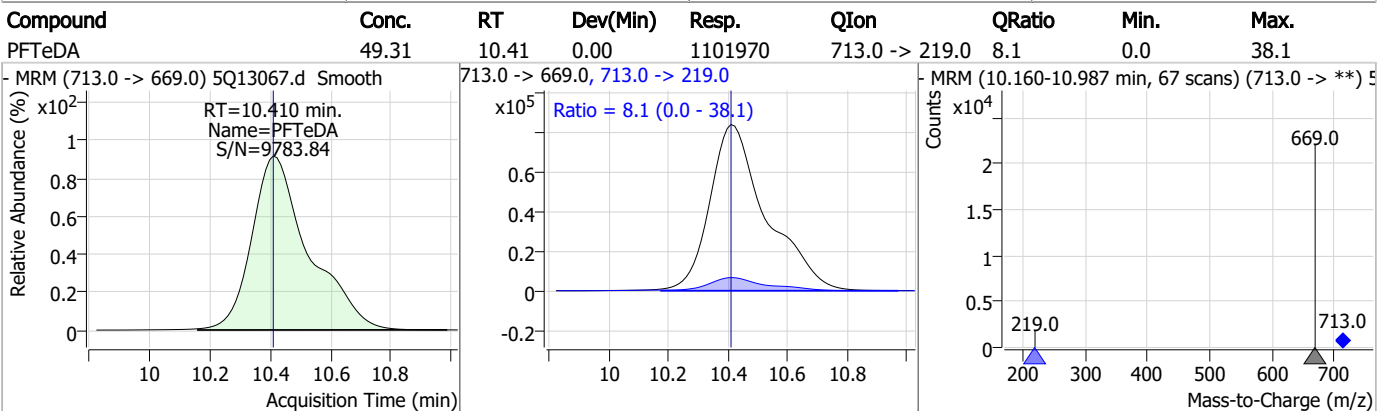
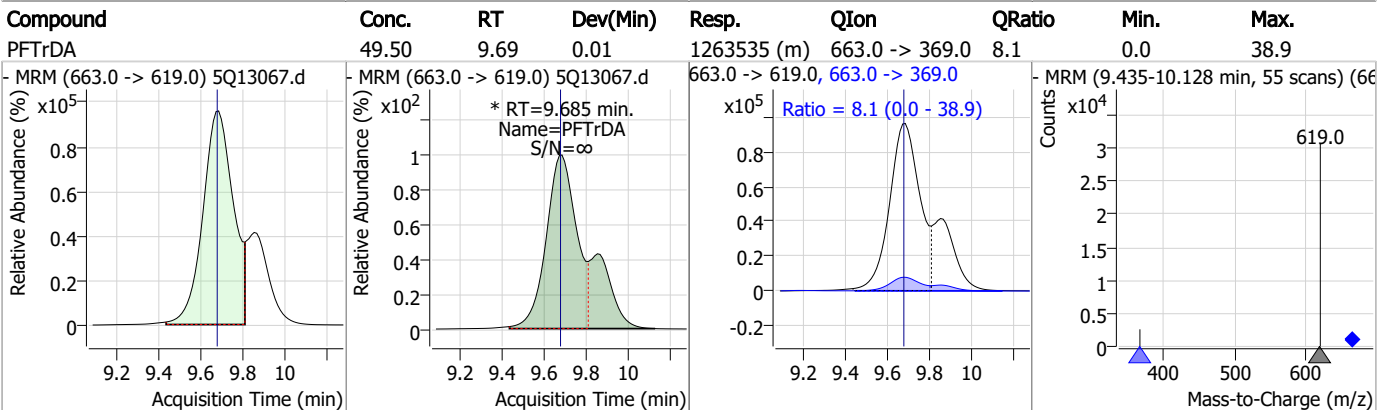
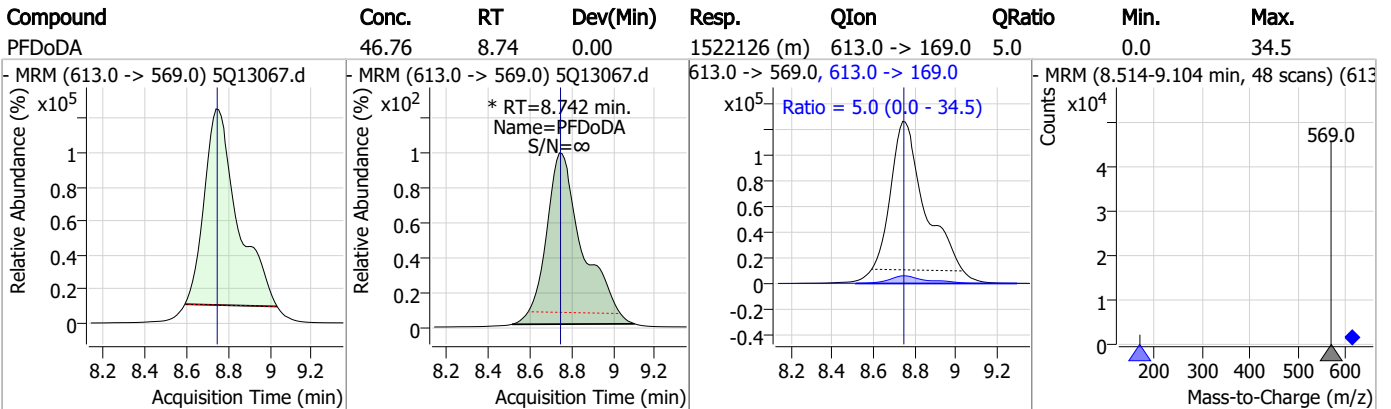
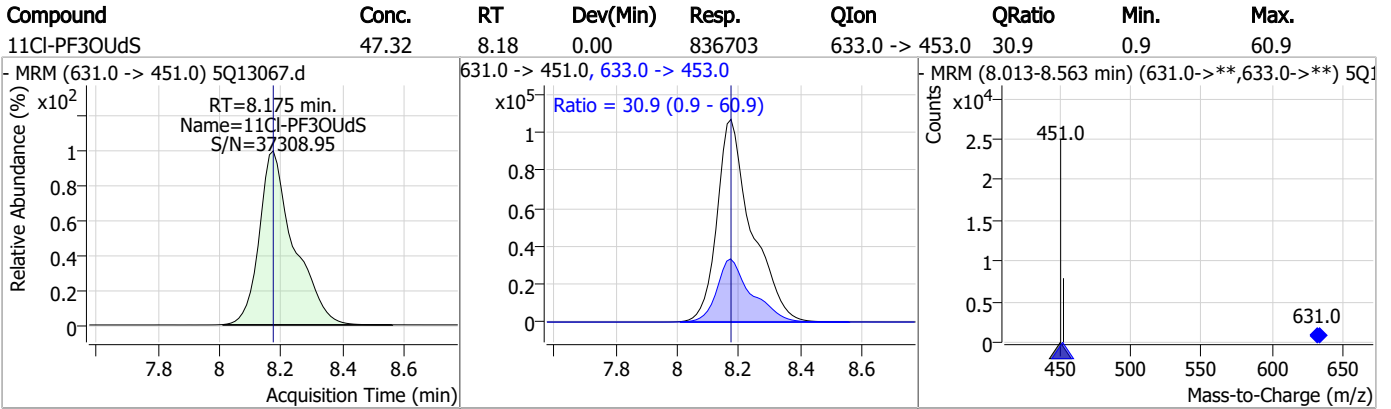
7.6.8

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### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS



7.6.8  
7

# Manual Integration Approval Summary

**Sample Number:** S5Q203-IC203      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13067.D      **Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Injection Time:** 04/14/23 16:49      **Supervisor approved:** 04/17/23 16:32 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.85	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorododecanoic acid	307-55-1		8.74	Poor instrument integration
Perfluorotridecanoic acid	72629-94-8		9.69	Poor instrument integration

7.6.8.1  
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### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13068.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/14/2023 5:06:16 PM  
 Sample Name : ic203-100  
 Vial : P3-A9  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)	QValue
<b>Internal Standards</b>						
13C2-6:2FTS	6.250	429.0 -> 409.0	176085	20.00 µg/L	0.000	
13C2-PFOA	6.253	415.0 -> 370.0	370555	20.00 µg/L	-0.012	
13C3-PFPeA	3.457	266.0 -> 222.0	167168	20.00 µg/L	-0.012	
13C4-PFOS	6.836	503.0 -> 80.0	68911	20.00 µg/L	-0.012	
d3-MeFOSAA	7.130	573.0 -> 419.0	164466	40.00 µg/L	0.000	
<b>System Monitoring Compounds</b>						
13C2-PFDA	7.422	515.0 -> 470.0	2352953	100.88 µg/L	-0.012	
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 504.4%			
13C2-PFHxA	4.664	315.0 -> 270.0	961192	100.49 µg/L	-0.012	
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 502.4%			
d5-EtFOSAA	7.265	589.0 -> 419.0	895890	202.06 µg/L	0.000	
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 505.1%			
13C3-HFPO-DA	4.946	287.0 -> 169.0	416769	201.11 µg/L	0.000	
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 502.8%			
<b>Target Compounds</b>						
6:2FTS	6.251	427.0 -> 407.0	815481	97.82 µg/L		100
		427.0 -> 81.0	346047			
8:2FTS	7.471	527.0 -> 507.0	768705	97.58 µg/L		100
		527.0 -> 81.0	385304			
EtFOSAA	7.266	584.0 -> 419.0	472348	101.24 µg/L	m	99
		584.0 -> 483.0	250264			
MeFOSAA	7.131	570.0 -> 419.0	509740	101.34 µg/L	m	99
		570.0 -> 512.0	123315			
PFBA	1.863	213.0 -> 169.0	281144	100.52 µg/L		100
PFBS	3.703	299.0 -> 80.0	329710	100.72 µg/L		100
		299.0 -> 99.0	138145			
PFDA	7.422	513.0 -> 469.0	2205546	100.84 µg/L		99
		513.0 -> 219.0	416918			
PFDoDA	8.742	613.0 -> 569.0	3129710	101.70 µg/L		99
		613.0 -> 169.0	150518			
PFHpA	5.553	363.0 -> 319.0	1943896	101.79 µg/L		99
		363.0 -> 169.0	159339			
PFHpS	6.249	449.0 -> 80.0	327378	100.37 µg/L		100
		449.0 -> 99.0	177589			
PFHxA	4.678	313.0 -> 269.0	663111	100.45 µg/L		100
		313.0 -> 119.0	60548			
PFHxS	5.587	399.0 -> 80.0	357783	101.07 µg/L	m	100
		399.0 -> 99.0	185858			
PFNA	6.864	463.0 -> 419.0	2168728	101.63 µg/L		100
		463.0 -> 219.0	503682			
PFOA	6.254	413.0 -> 369.0	1826877	101.57 µg/L		100
		413.0 -> 169.0	600019			
PFOS	6.837	499.0 -> 80.0	403847	101.63 µg/L	m	99
		499.0 -> 99.0	207880			
PFPeA	3.472	263.0 -> 219.0	1227864	101.35 µg/L		100

7.6.9  
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Perfluorinated Compounds by LC/MS/MS

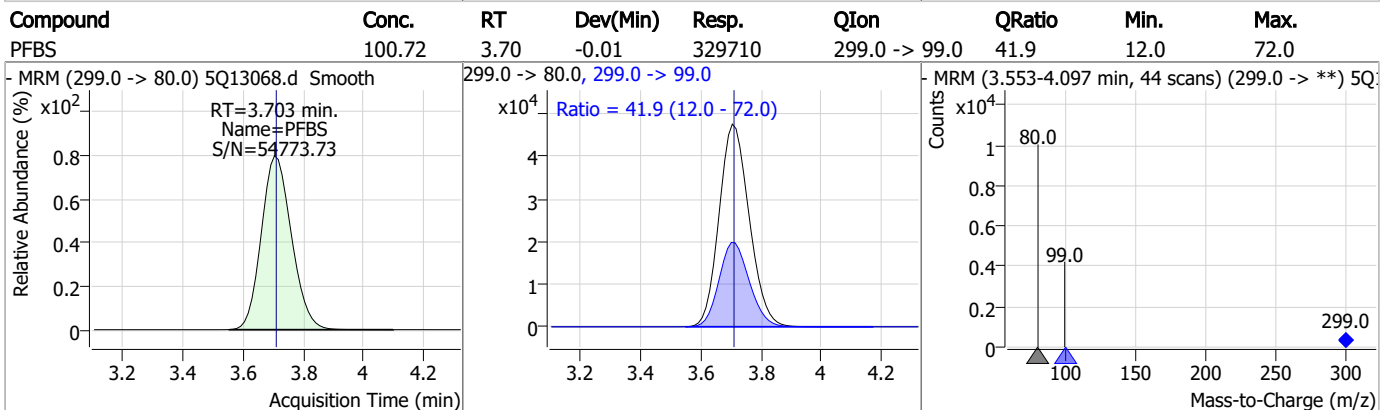
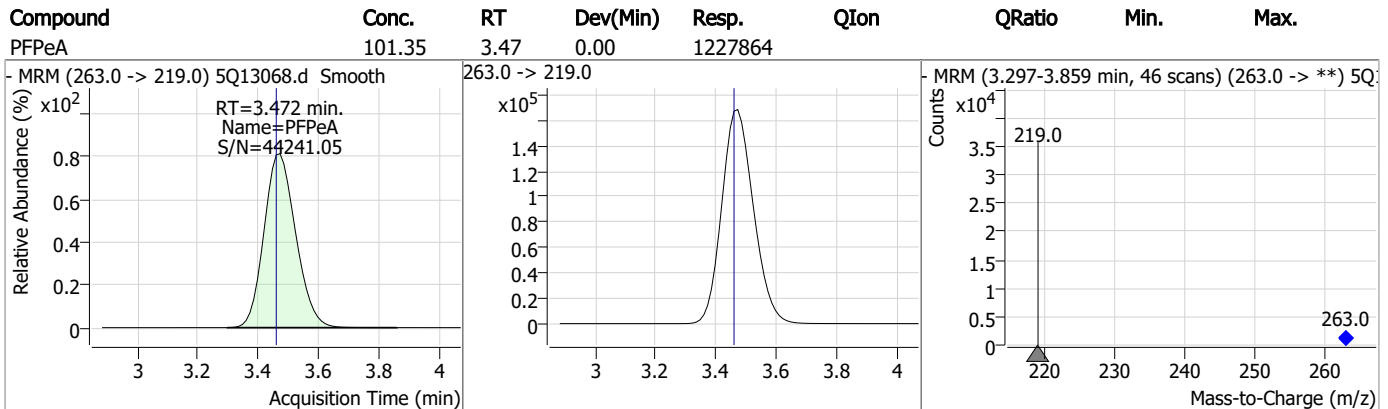
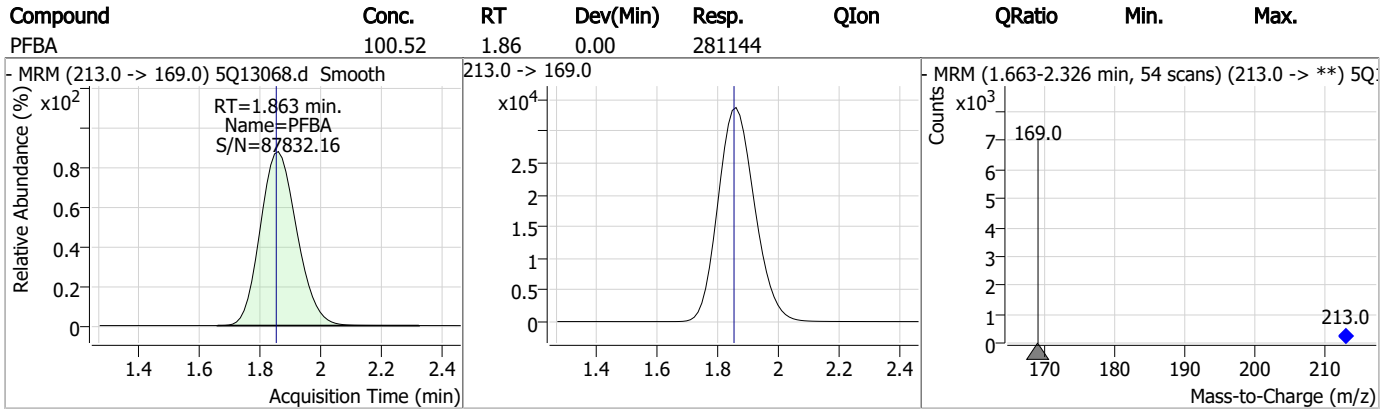
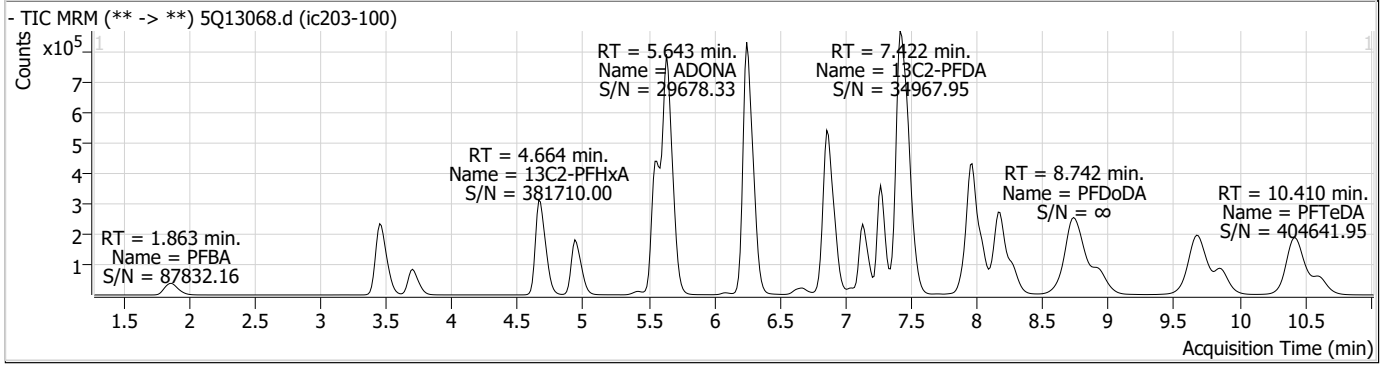
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
PFTeDA	10.410	713.0 -> 669.0	2121027	100.39	µg/L	100
		713.0 -> 219.0	172604			
PFTrDA	9.673	663.0 -> 619.0	2425522	100.52	µg/L	m
		663.0 -> 369.0	196744			
PFUnDA	7.966	563.0 -> 519.0	2491668	100.52	µg/L	100
		563.0 -> 269.0	402998			
ADONA	5.643	377.0 -> 251.0	2756802	101.98	µg/L	100
		377.0 -> 85.0	1007327			
9Cl-PF3ONS	7.132	531.0 -> 351.0	268789	101.68	µg/L	99
		533.0 -> 353.0	85201			
11Cl-PF3OUdS	8.163	631.0 -> 451.0	1649215	101.66	µg/L	100
		633.0 -> 453.0	511190			
HFPO-DA	4.947	285.0 -> 169.0	246072	100.81	µg/L	99
		329.0 -> 169.0	321357			

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

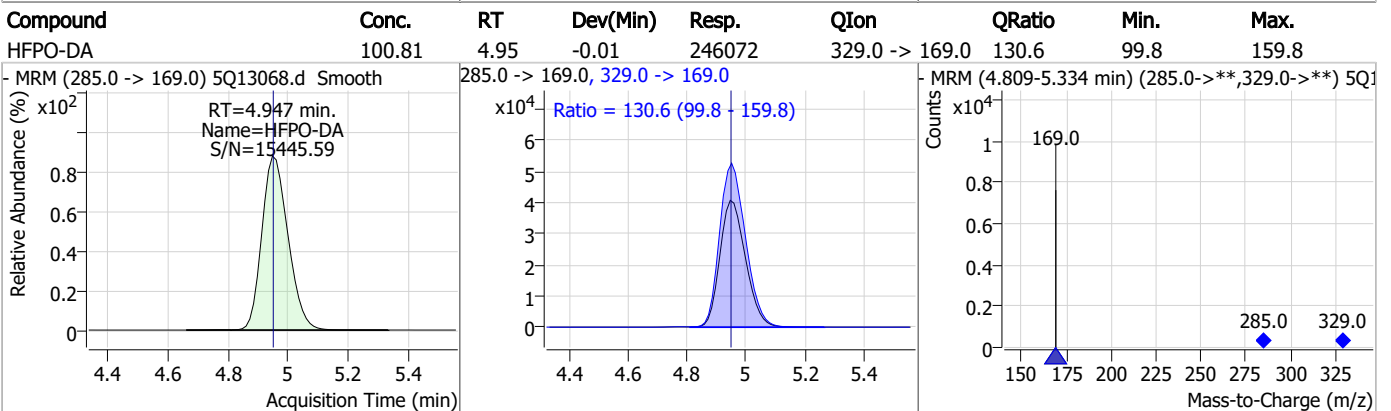
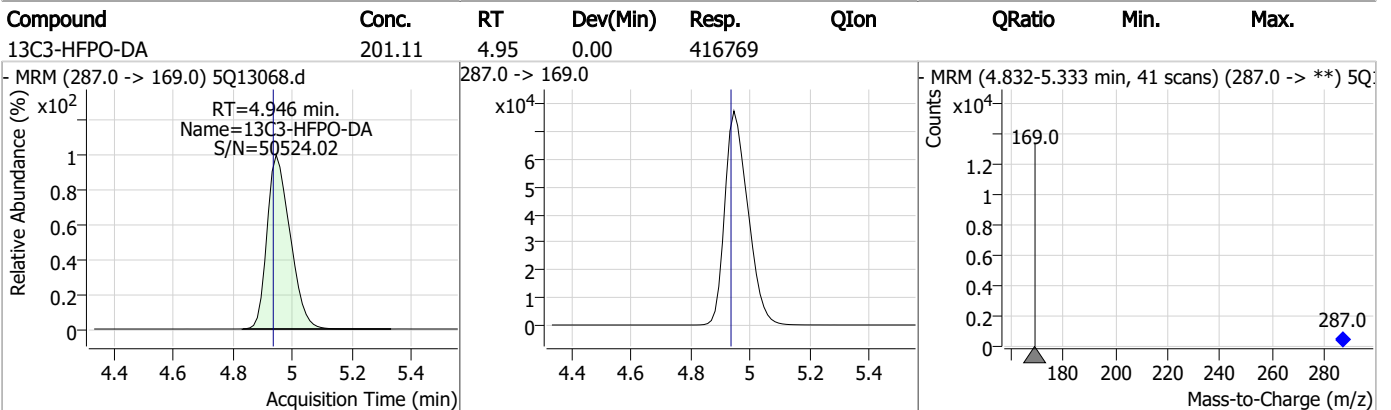
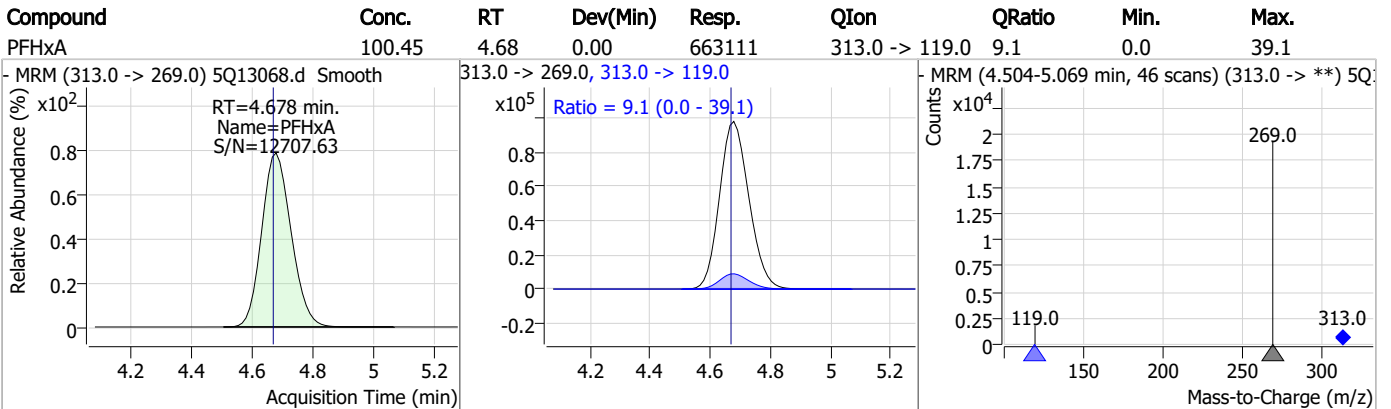
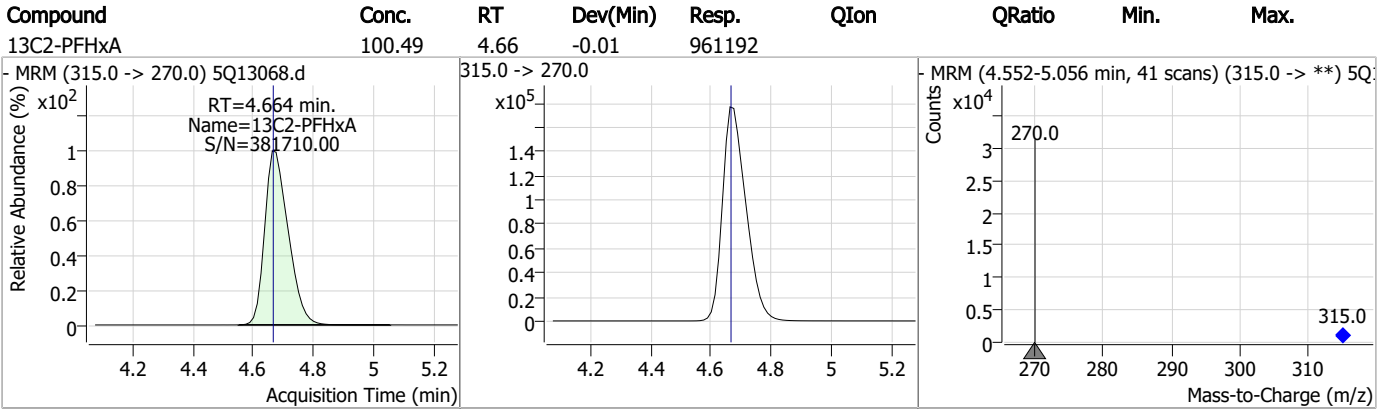
7.6.9

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### Perfluorinated Compounds by LC/MS/MS

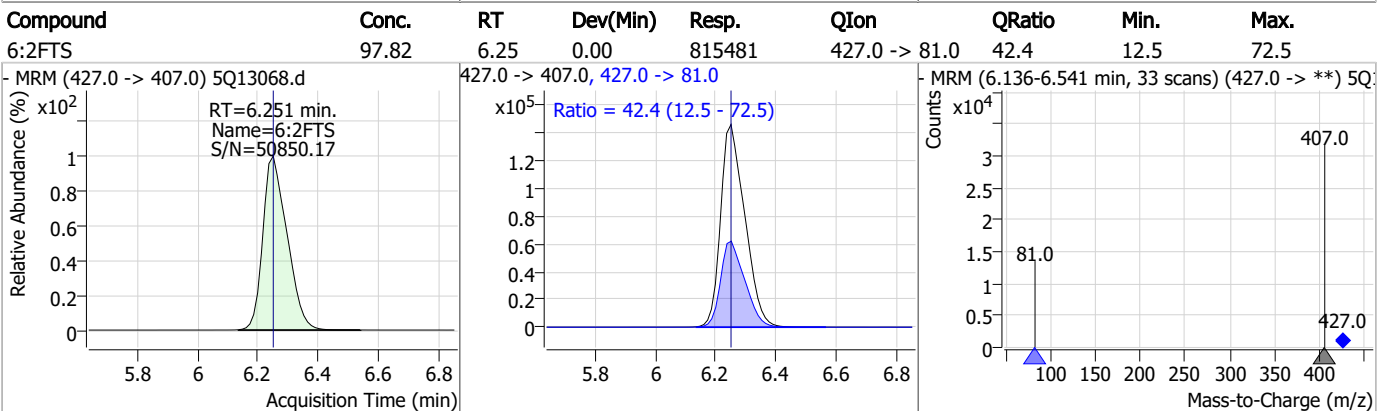
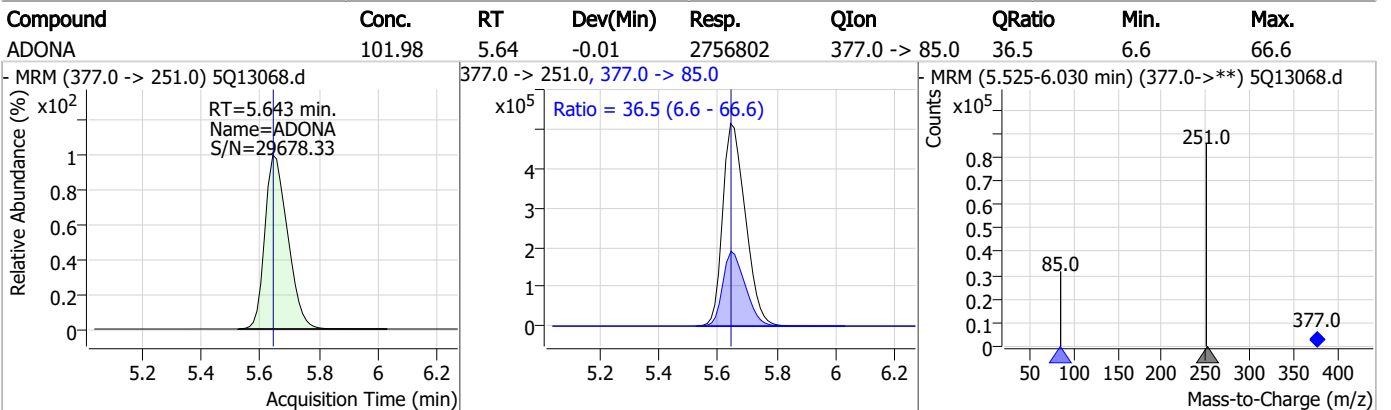
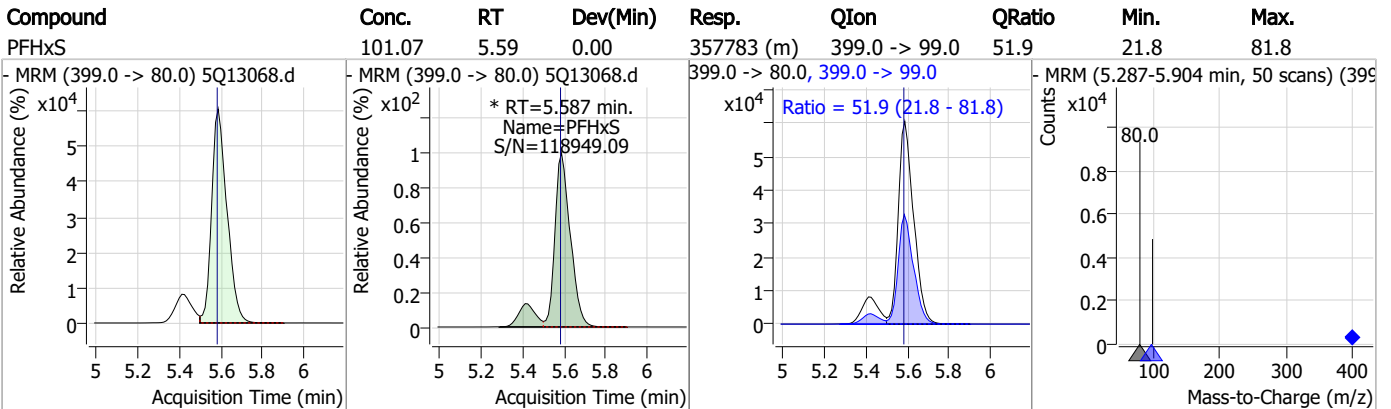
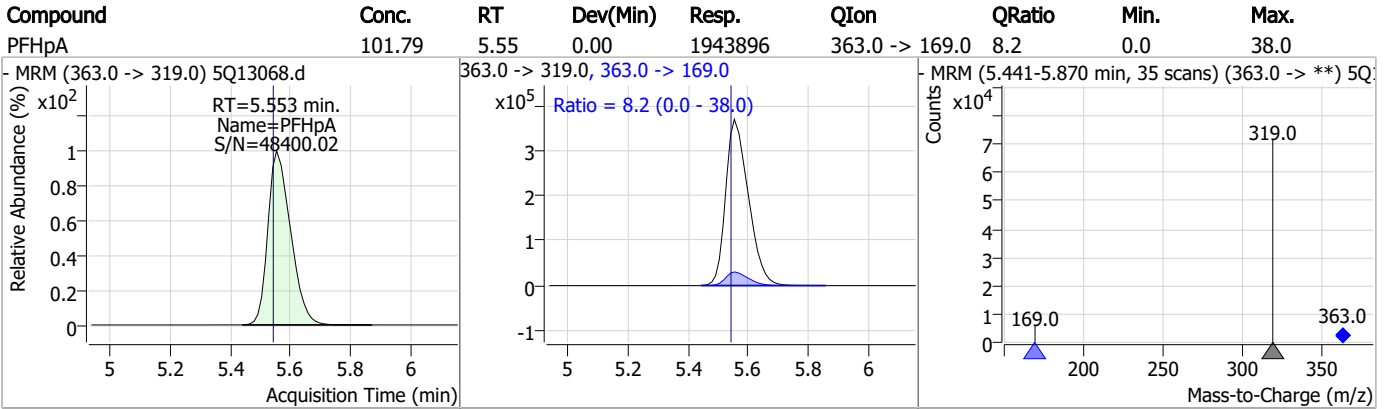


### Perfluorinated Compounds by LC/MS/MS

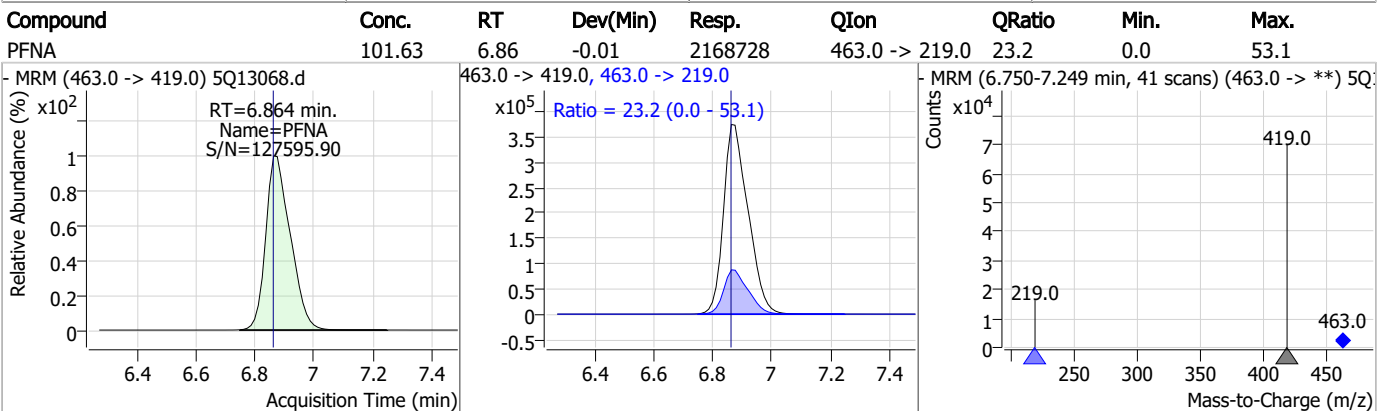
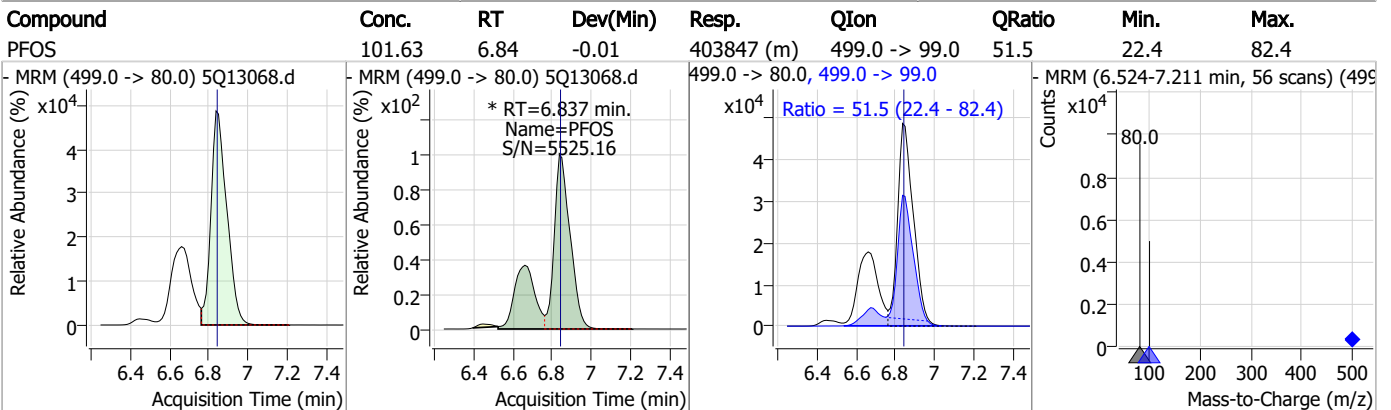
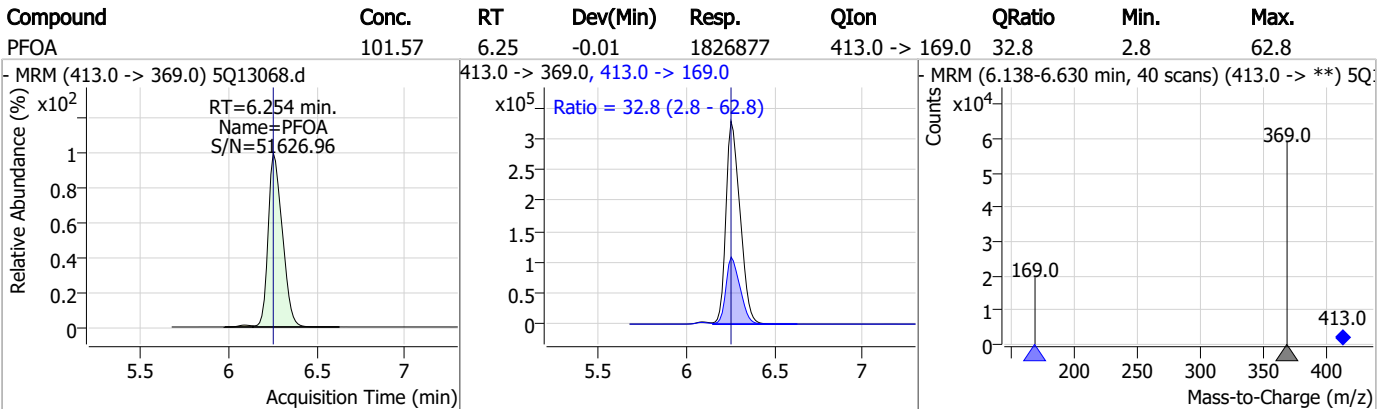
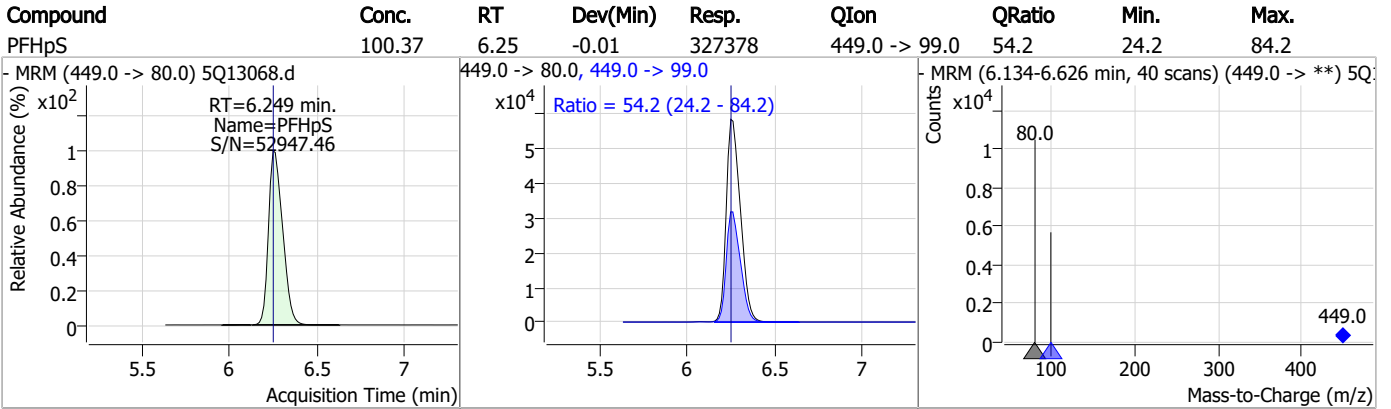




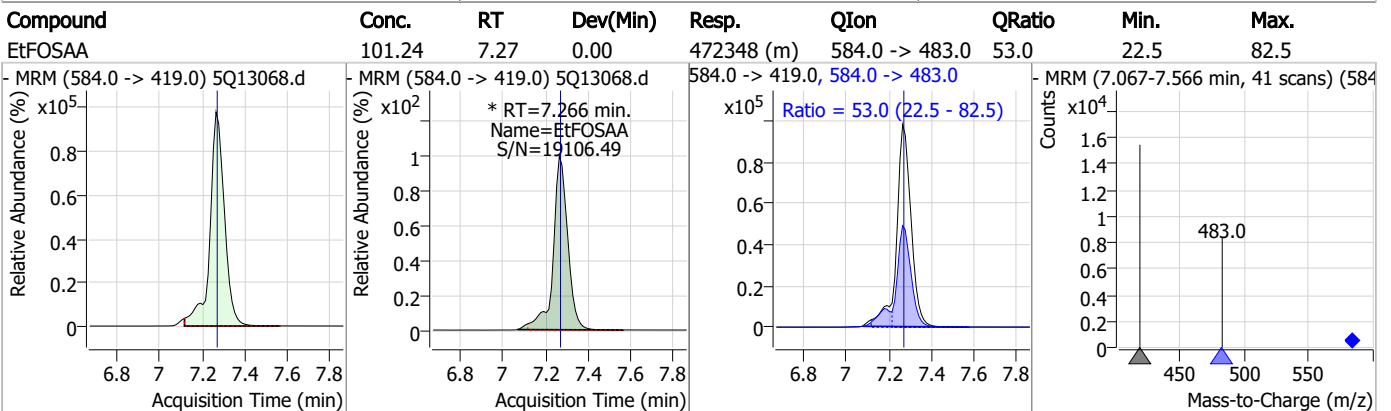
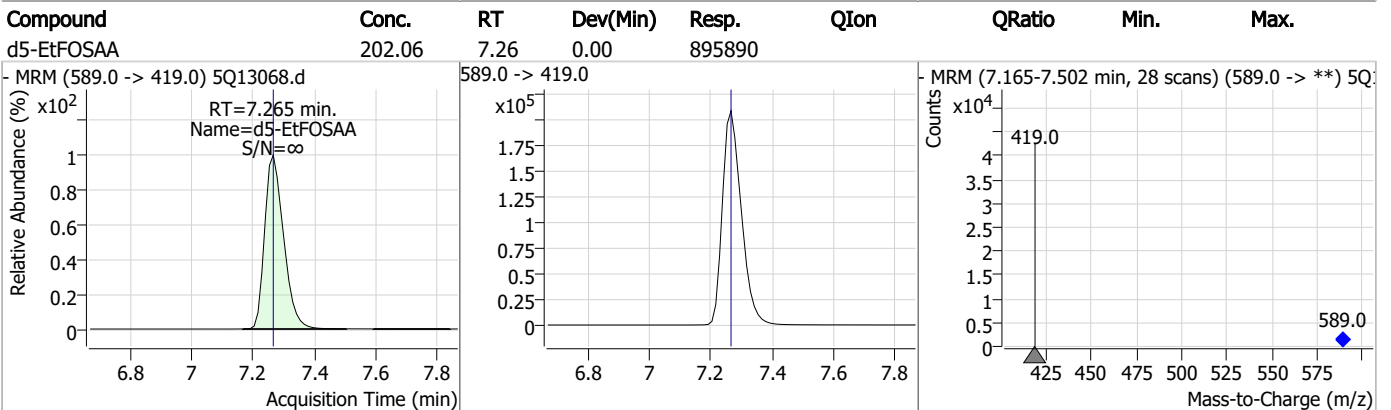
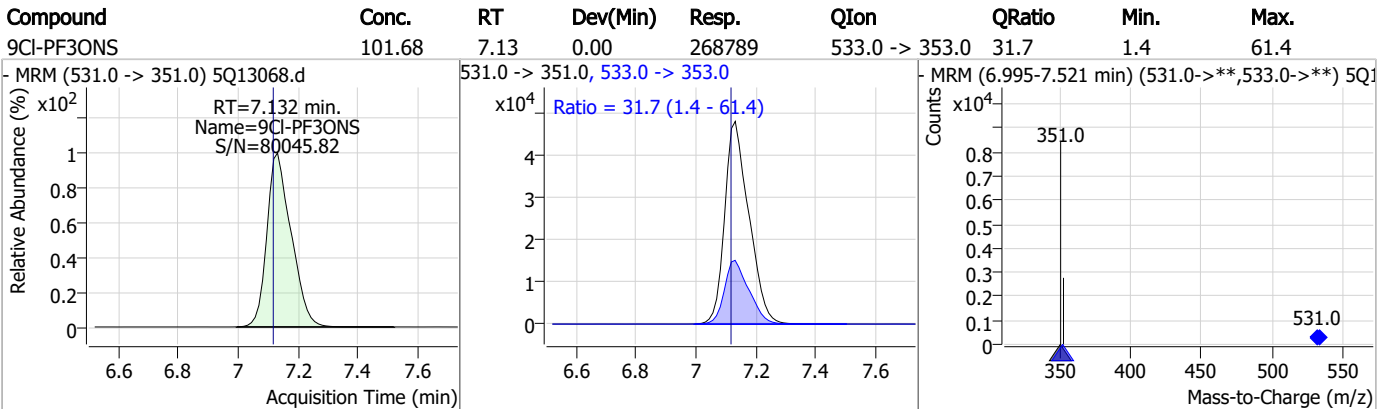
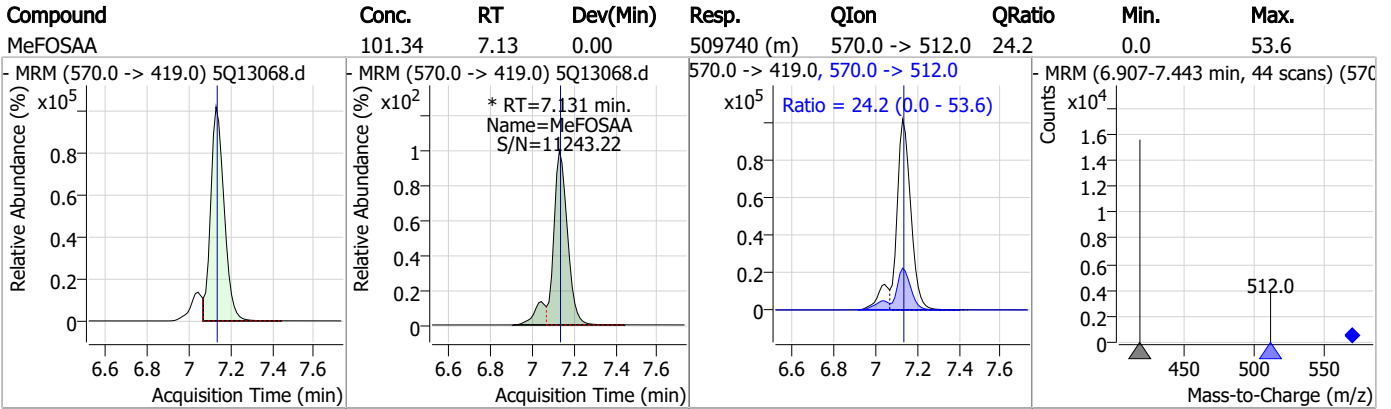
### Perfluorinated Compounds by LC/MS/MS



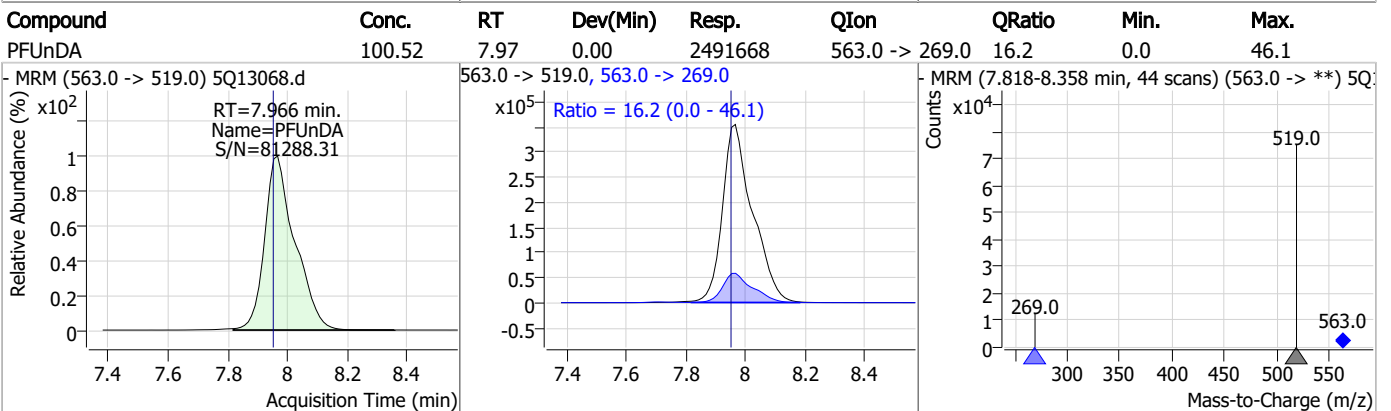
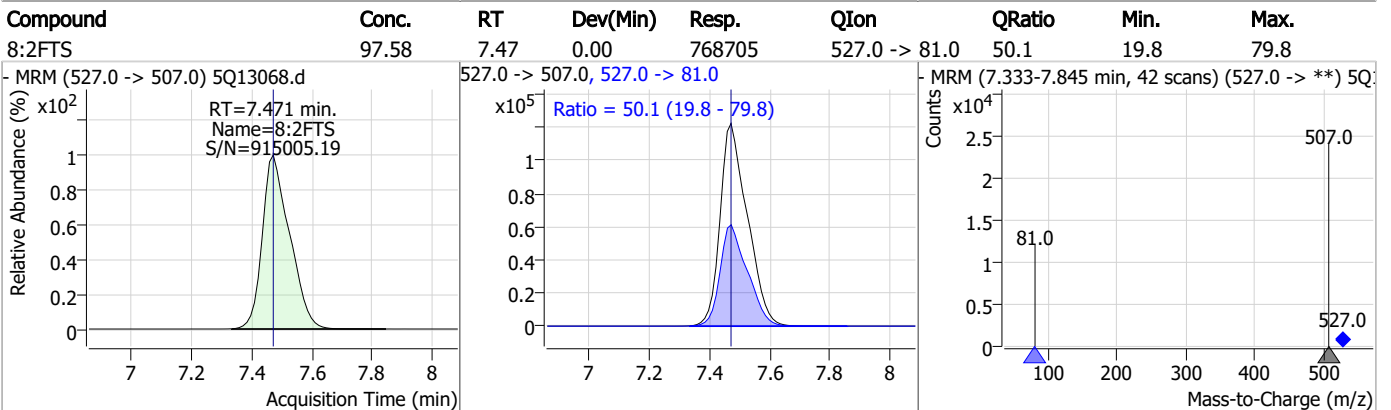
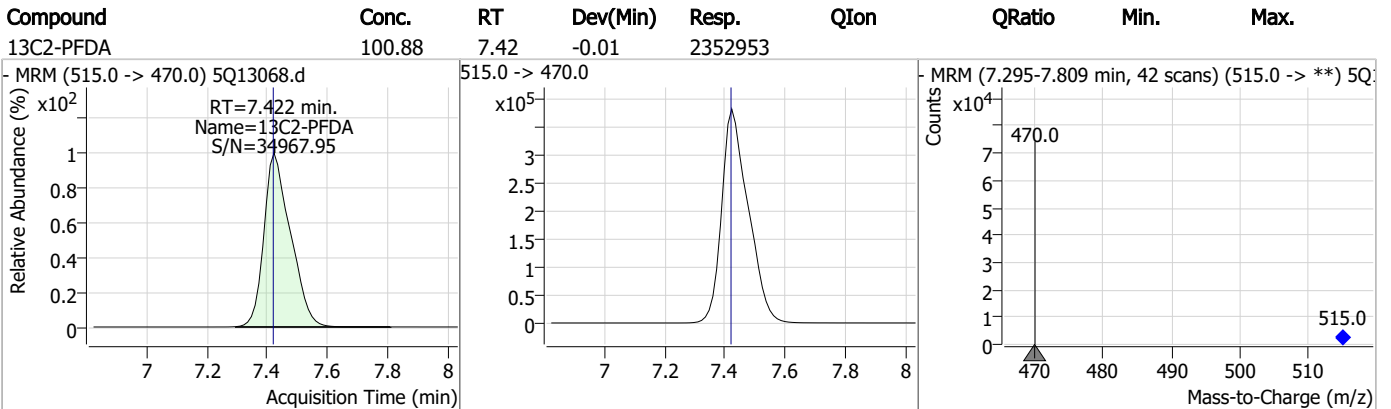
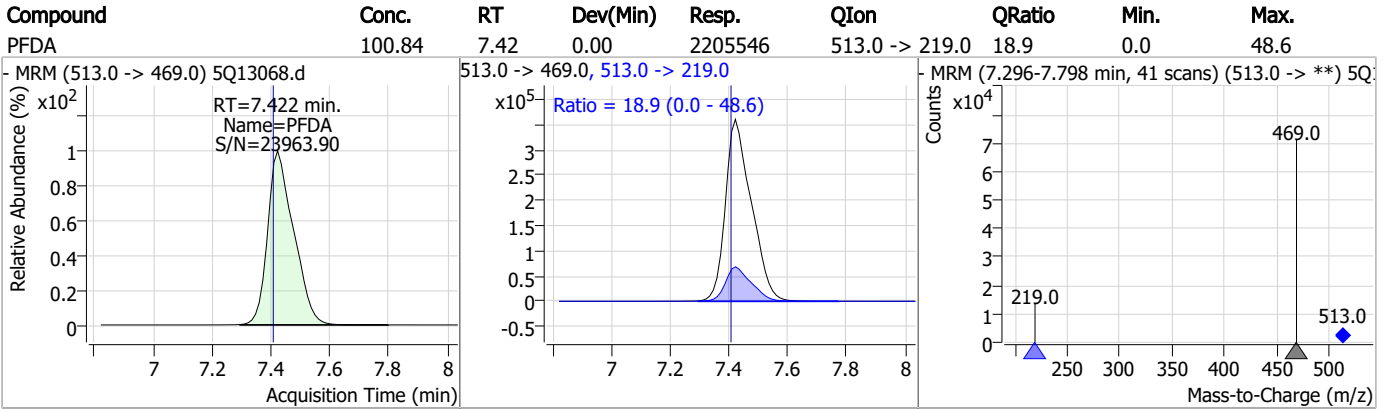
### Perfluorinated Compounds by LC/MS/MS



## Perfluorinated Compounds by LC/MS/MS

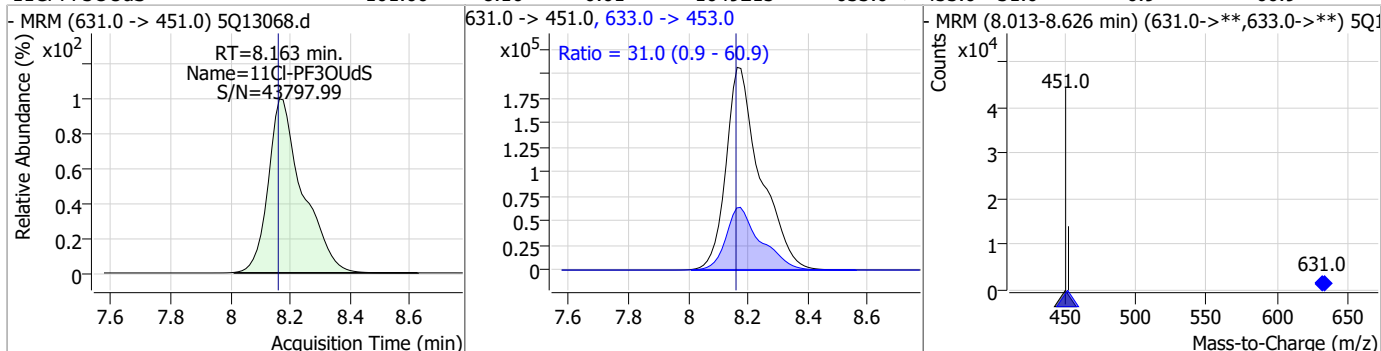


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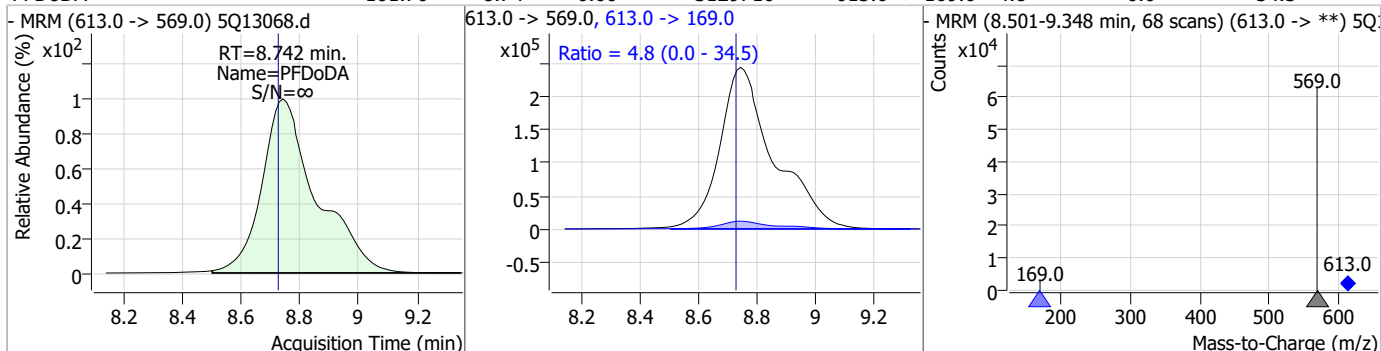


### Perfluorinated Compounds by LC/MS/MS

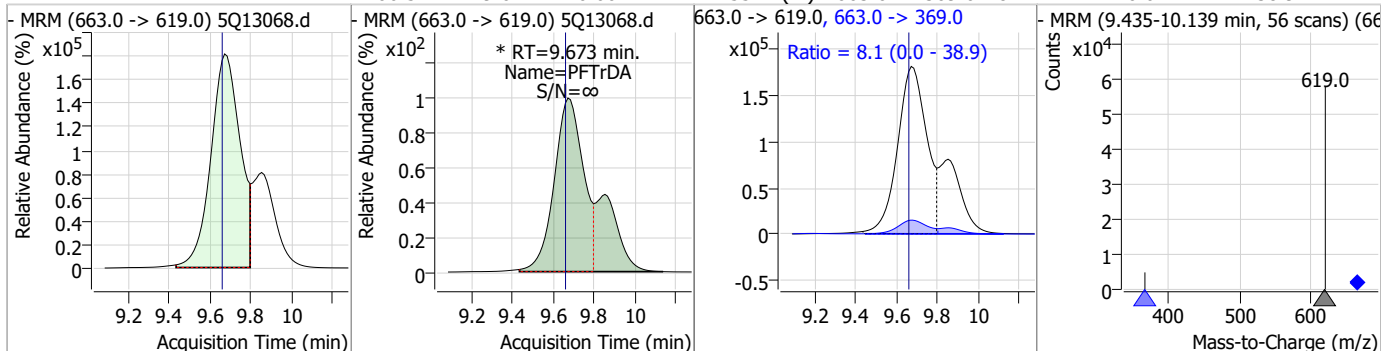
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	101.66	8.16	-0.01	1649215	633.0 -> 453.0	31.0	0.9	60.9



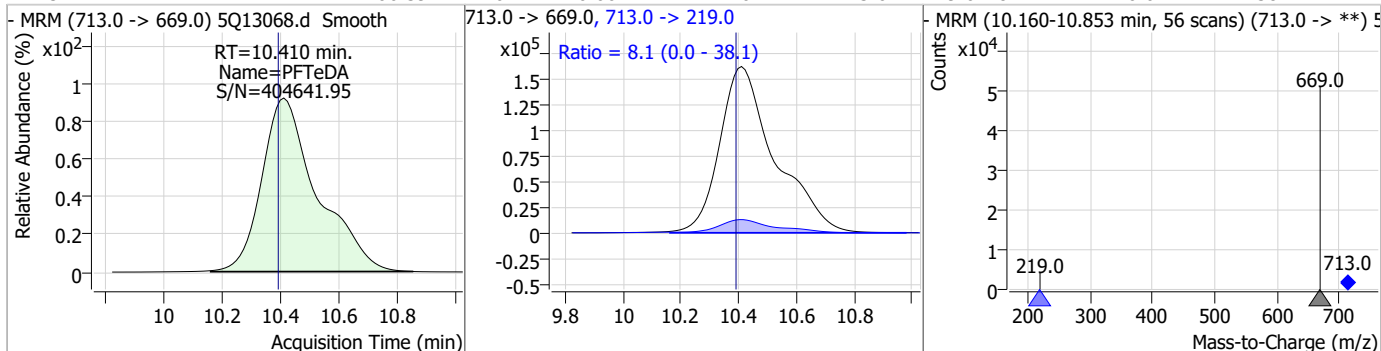
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	101.70	8.74	0.00	3129710	613.0 -> 169.0	4.8	0.0	34.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	100.52	9.67	0.00	2425522 (m)	663.0 -> 369.0	8.1	0.0	38.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	100.39	10.41	0.00	2121027	713.0 -> 219.0	8.1	0.0	38.1



# Manual Integration Approval Summary

**Sample Number:** S5Q203-IC203      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13068.D      **Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Injection Time:** 04/14/23 17:06      **Supervisor approved:** 04/17/23 16:32 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.84	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorotridecanoic acid	72629-94-8		9.67	Poor instrument integration

7.6.9.1  
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### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13070.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/14/2023 5:39:54 PM  
 Sample Name : icv203-20  
 Vial : P3-B2  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)	QValue
<b>Internal Standards</b>							
13C2-6:2FTS	6.250	429.0 -> 409.0	154301	20.00	µg/L	0.000	
13C2-PFOA	6.253	415.0 -> 370.0	396274	20.00	µg/L	-0.012	
13C3-PFPeA	3.469	266.0 -> 222.0	167842	20.00	µg/L	0.000	
13C4-PFOS	6.848	503.0 -> 80.0	68997	20.00	µg/L	0.000	
d3-MeFOSAA	7.130	573.0 -> 419.0	174620	40.00	µg/L	0.000	
<b>System Monitoring Compounds</b>							
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	7.265	589.0 -> 419.0	0	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%				
<b>Target Compounds</b>							
6:2FTS	6.251	427.0 -> 407.0	146630	20.07	µg/L		100
		427.0 -> 81.0	62773				
8:2FTS	7.471	527.0 -> 507.0	140819	20.40	µg/L		100
		527.0 -> 81.0	70493				
EtFOSAA	7.266	584.0 -> 419.0	86437	17.45	µg/L	m	97
		584.0 -> 483.0	47342				
MeFOSAA	7.131	570.0 -> 419.0	94533	17.70	µg/L	m	99
		570.0 -> 512.0	22818				
PFBA	1.863	213.0 -> 169.0	50178	17.87	µg/L		100
PFBS	3.703	299.0 -> 80.0	50611	15.44	µg/L		99
		299.0 -> 99.0	21516				
PFDA	7.435	513.0 -> 469.0	410709	17.56	µg/L		100
		513.0 -> 219.0	76516				
PFDoDA	8.742	613.0 -> 569.0	635551	20.63	µg/L		99
		613.0 -> 169.0	29801				
PFHpA	5.553	363.0 -> 319.0	342635	16.78	µg/L		100
		363.0 -> 169.0	27900				
PFHpS	6.261	449.0 -> 80.0	56565	17.32	µg/L		100
		449.0 -> 99.0	30490				
PFHxA	4.678	313.0 -> 269.0	121857	17.26	µg/L		100
		313.0 -> 119.0	11038				
PFHxS	5.587	399.0 -> 80.0	53764	15.17	µg/L	m	99
		399.0 -> 99.0	28353				
PFNA	6.876	463.0 -> 419.0	364492	15.97	µg/L		99
		463.0 -> 219.0	82933				
PFOA	6.254	413.0 -> 369.0	339979	17.68	µg/L		100
		413.0 -> 169.0	111048				
PFOS	6.849	499.0 -> 80.0	77148	19.39	µg/L	m	95
		499.0 -> 99.0	42884				
PFPeA	3.472	263.0 -> 219.0	202771	16.67	µg/L		100

7.6.10  
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Perfluorinated Compounds by LC/MS/MS

Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
PFTeDA	10.410	713.0 -> 669.0	368318	17.41	µg/L	100
		713.0 -> 219.0	29200			
PFTrDA	9.685	663.0 -> 619.0	510561	21.13	µg/L	m
		663.0 -> 369.0	42497			
PFUnDA	7.966	563.0 -> 519.0	474829	19.13	µg/L	100
		563.0 -> 269.0	76953			
ADONA	5.643	377.0 -> 251.0	461965	15.98	µg/L	100
		377.0 -> 85.0	169688			
9Cl-PF3ONS	7.132	531.0 -> 351.0	45013	15.92	µg/L	99
		533.0 -> 353.0	14304			
11Cl-PF3OUdS	8.175	631.0 -> 451.0	267939	15.44	µg/L	100
		633.0 -> 453.0	82585			
HFPO-DA	4.960	285.0 -> 169.0	46702	17.89	µg/L	100
		329.0 -> 169.0	60410			

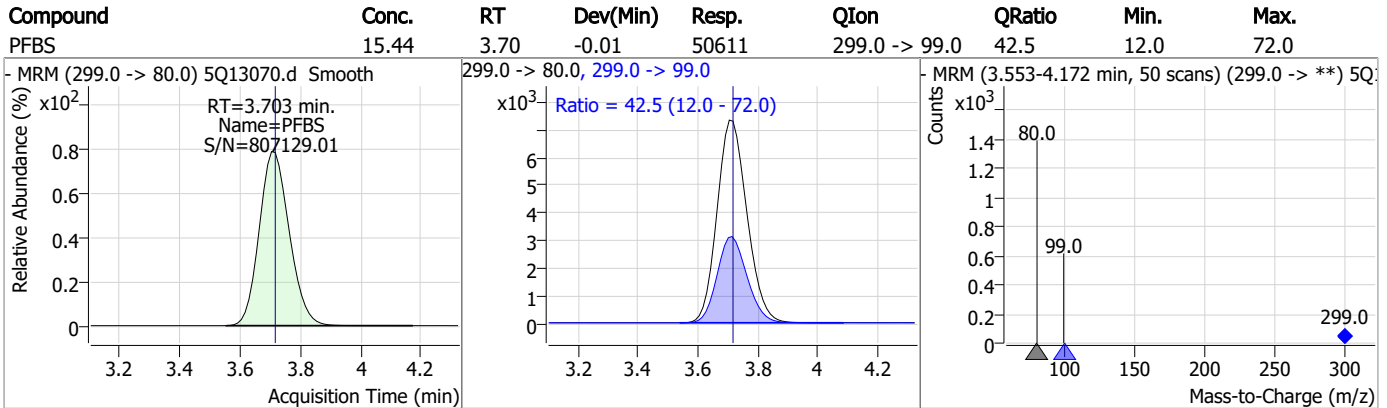
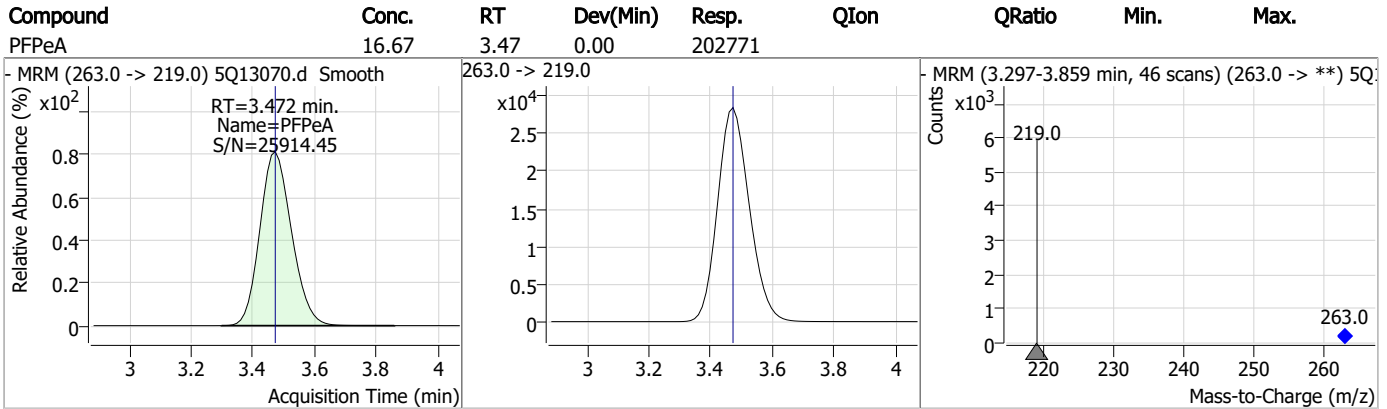
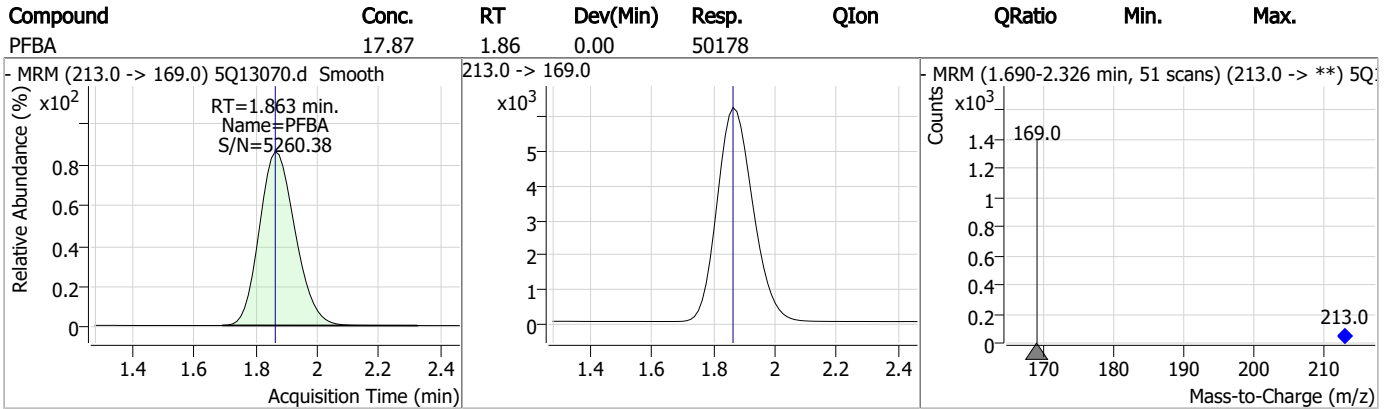
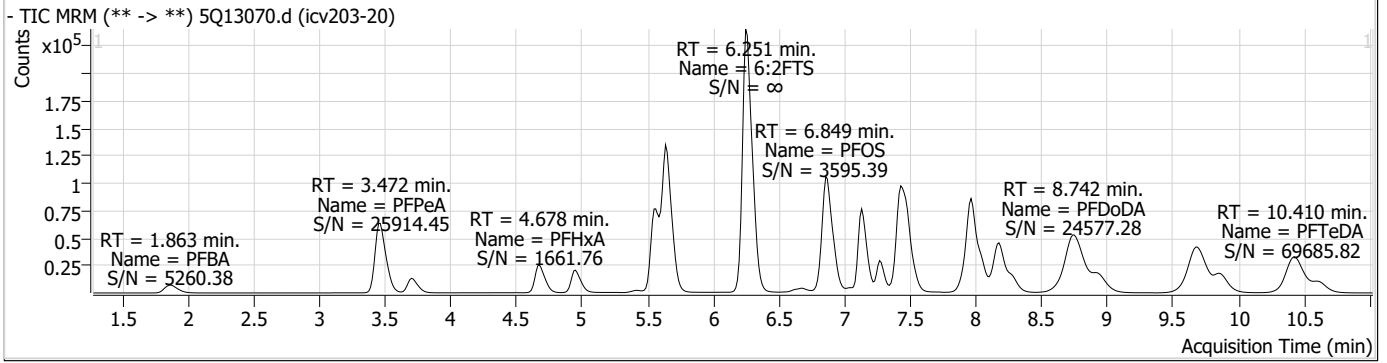
# = Qualifier out of range, m = manually integrated, + = Area summed

7.6.10

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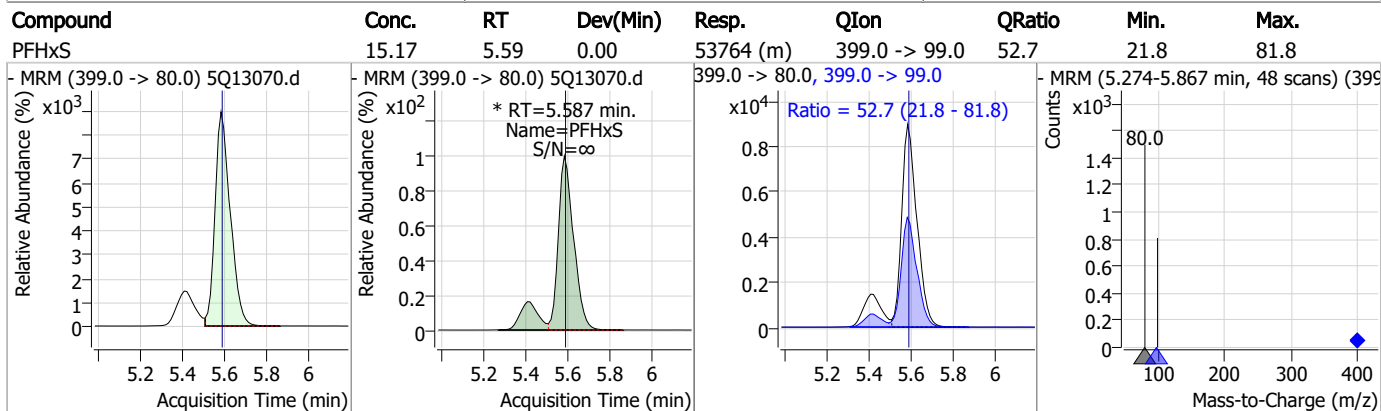
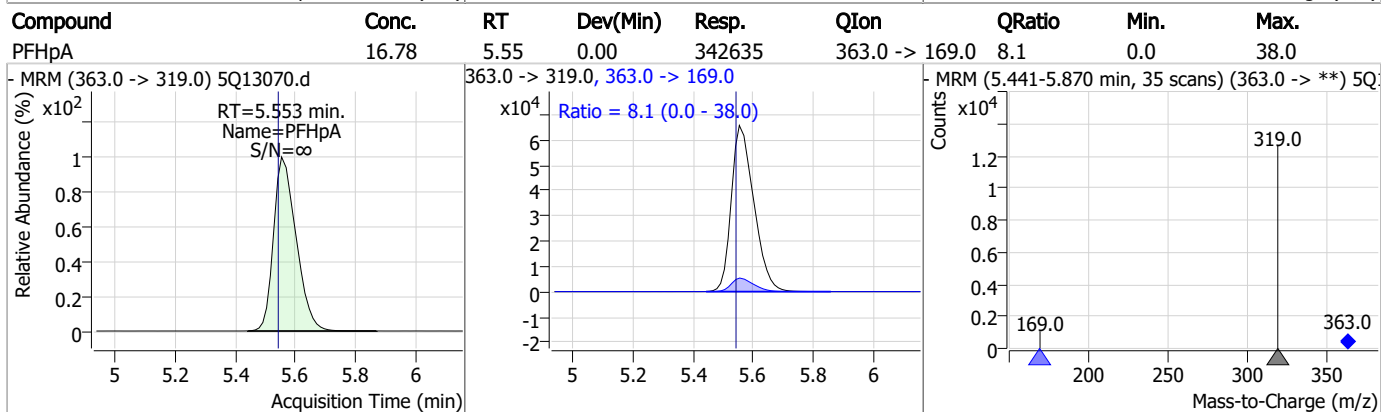
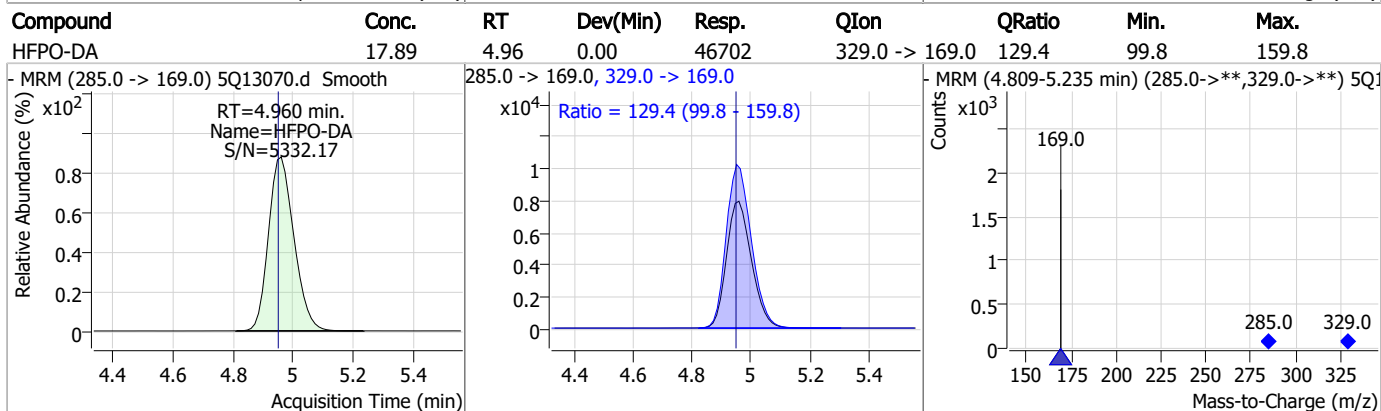
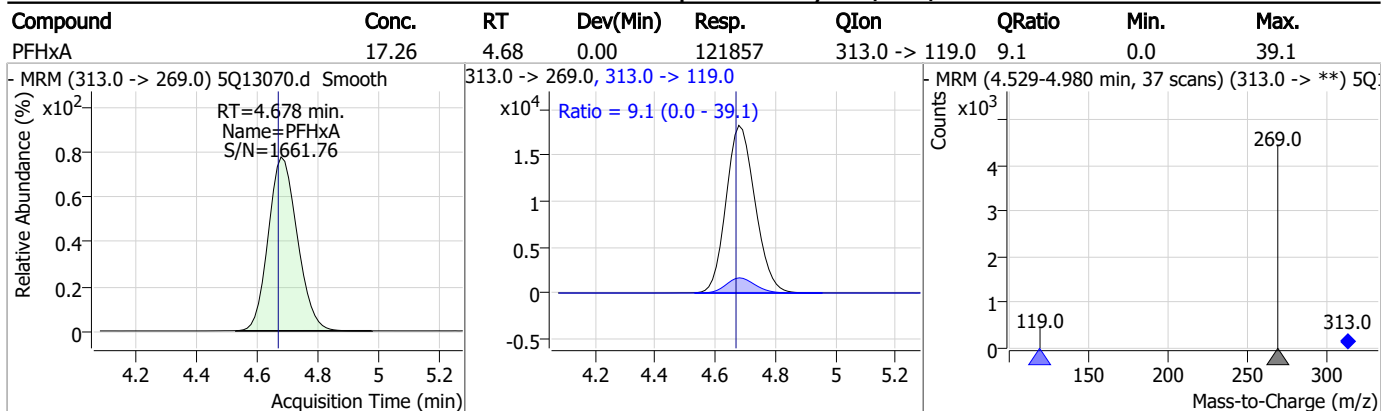
### Perfluorinated Compounds by LC/MS/MS



7.6.10  
7

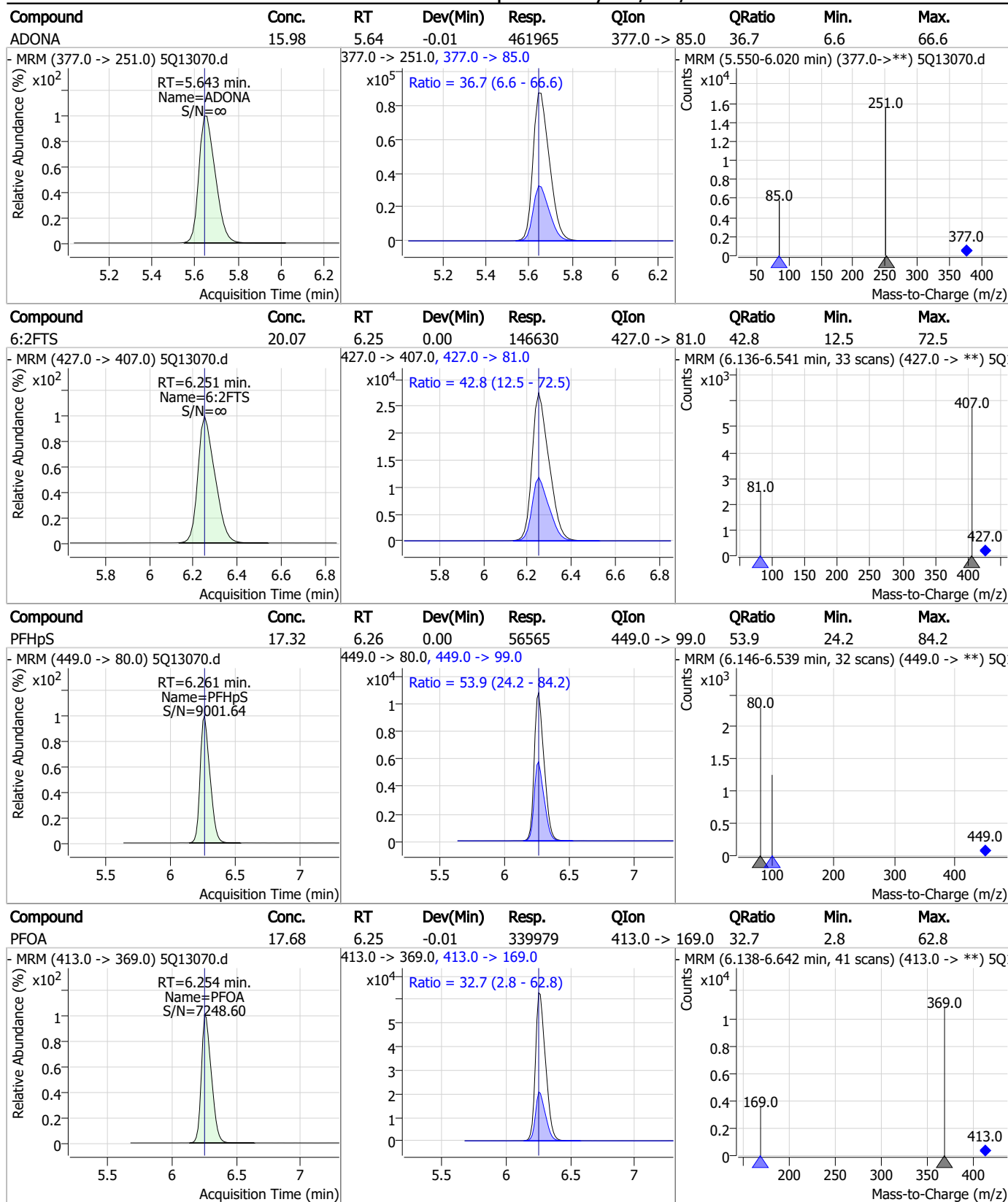


### Perfluorinated Compounds by LC/MS/MS



7.6.10  
7

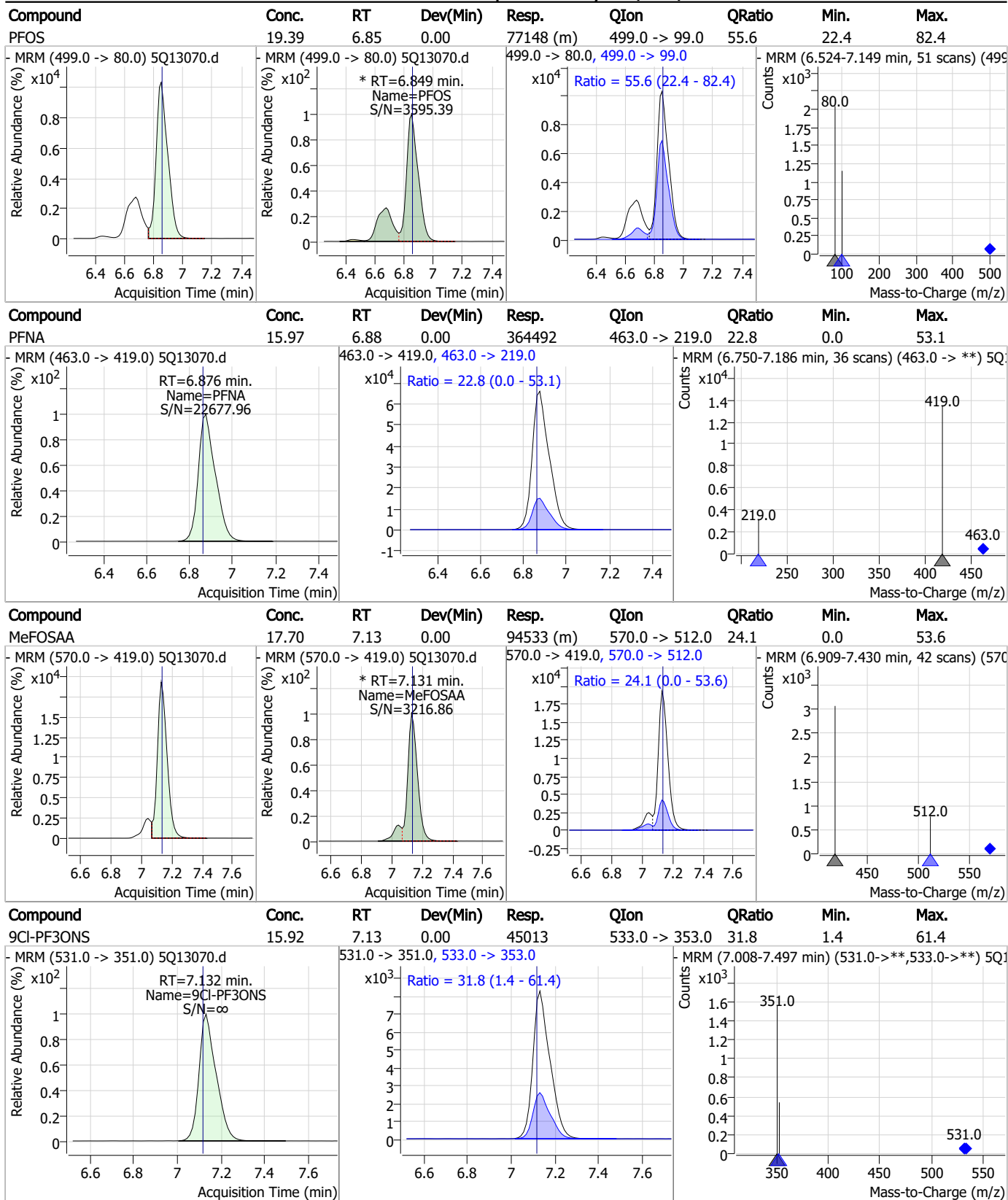
### Perfluorinated Compounds by LC/MS/MS



7.6.10

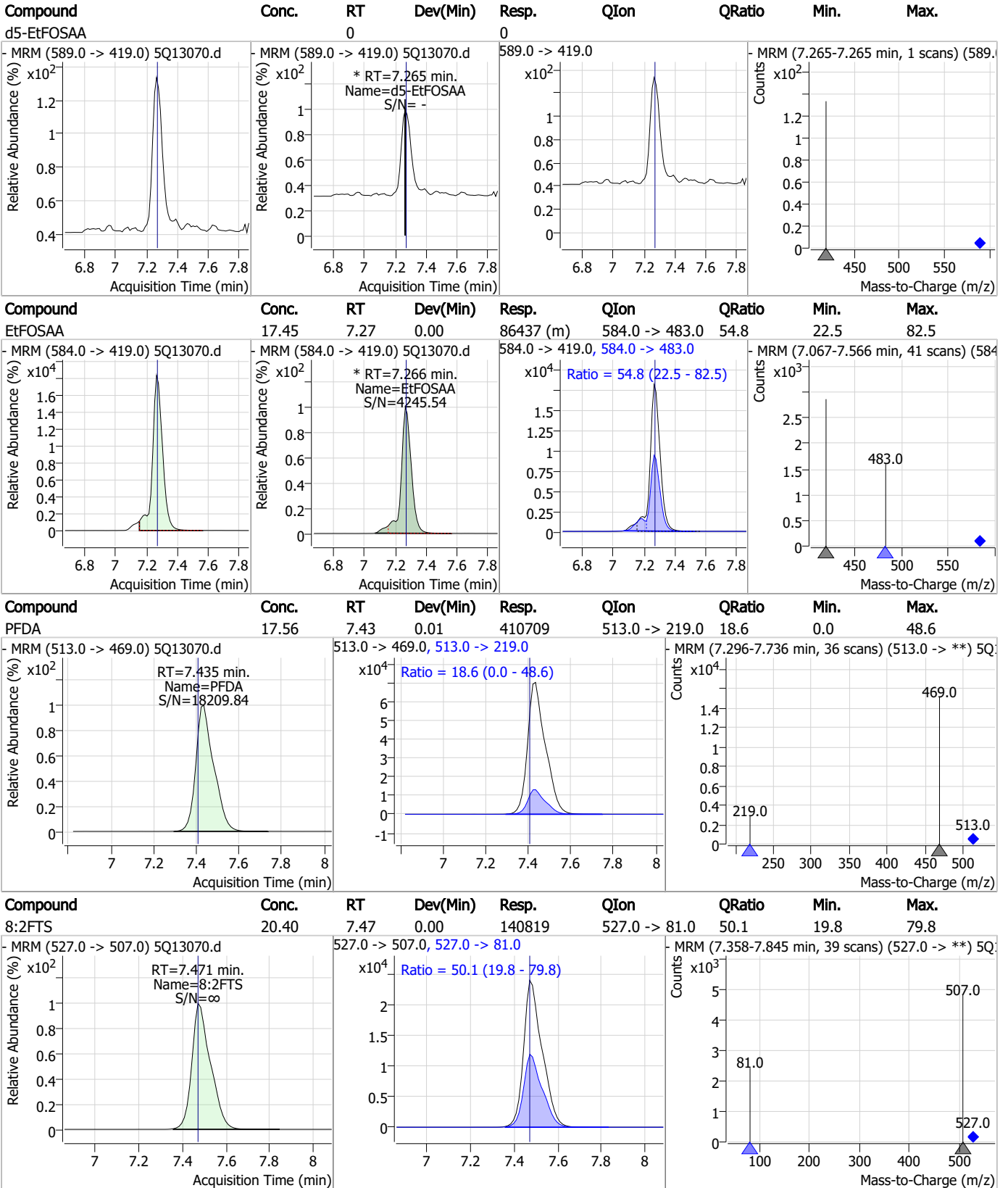
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### Perfluorinated Compounds by LC/MS/MS



7.6-10  
7

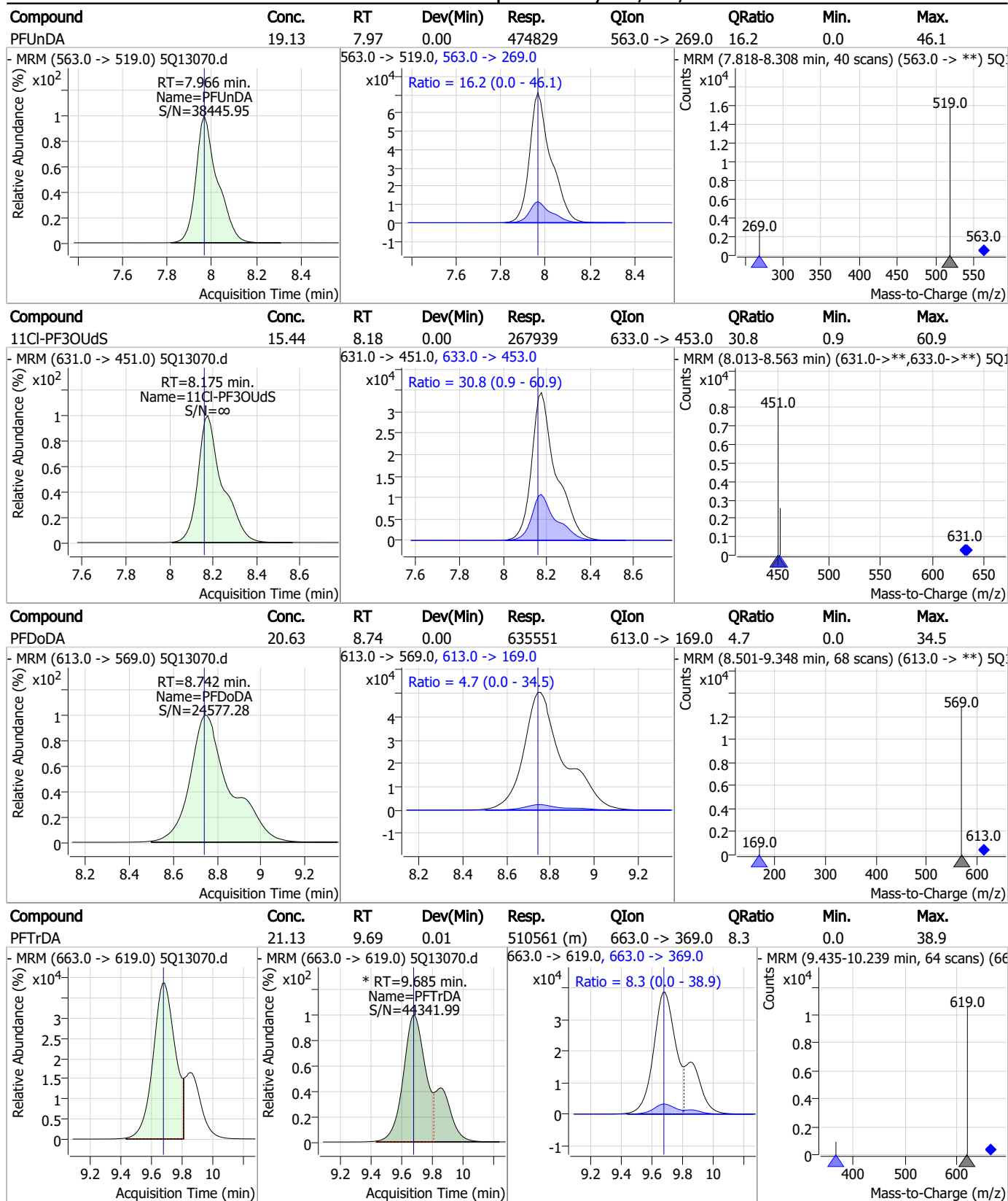
## Perfluorinated Compounds by LC/MS/MS



7.6.10  
7

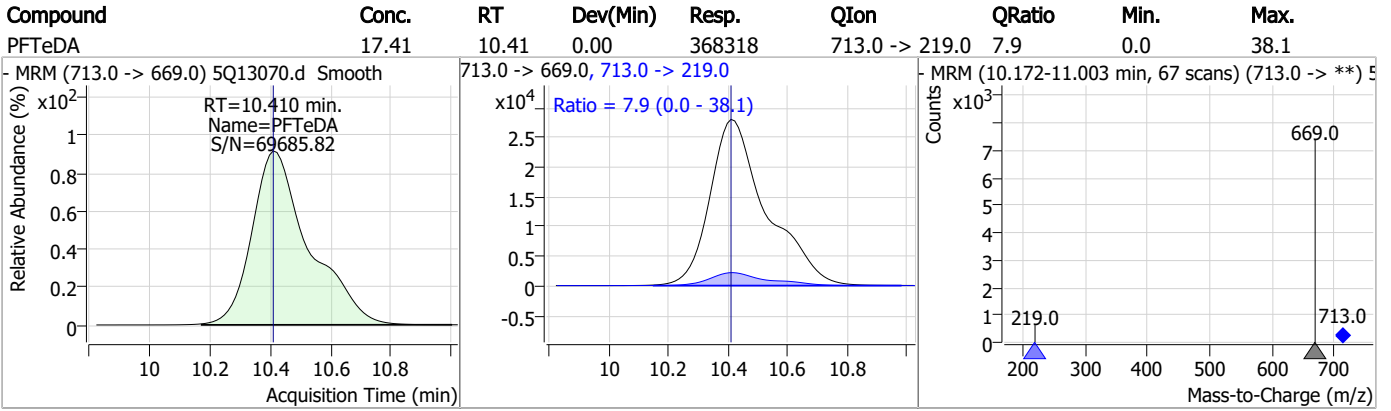


### Perfluorinated Compounds by LC/MS/MS



7.6.10  
7

### Perfluorinated Compounds by LC/MS/MS



7.6.10 7

# Manual Integration Approval Summary

**Sample Number:** S5Q203-ICV203      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13070.D      **Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Injection Time:** 04/14/23 17:39      **Supervisor approved:** 04/17/23 16:32 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.85	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorotridecanoic acid	72629-94-8		9.69	Poor instrument integration

7.6.10.1  
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### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13071.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/14/2023 5:56:43 PM  
 Sample Name : cc203-20  
 Vial : P3-A7  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	168021	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	422380	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	180064	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	74821	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	188301	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.434	515.0 -> 470.0	527676	19.85 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 99.2%		
13C2-PFHxA	4.676	315.0 -> 270.0	218923	20.08 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 100.4%		
d5-EtFOSAA	7.265	589.0 -> 419.0	201591	39.71 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 99.3%		
13C3-HFPO-DA	4.946	287.0 -> 169.0	89515	37.89 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 94.7%		
<b>Target Compounds</b>					
6:2FTS	6.251	427.0 -> 407.0	184656	23.21 µg/L	100
		427.0 -> 81.0	78288		
8:2FTS	7.471	527.0 -> 507.0	175097	23.29 µg/L	100
		527.0 -> 81.0	86923		
EtFOSAA	7.266	584.0 -> 419.0	105087	19.67 µg/L	m 99
		584.0 -> 483.0	55848		
MeFOSAA	7.131	570.0 -> 419.0	113062	19.63 µg/L	m 100
		570.0 -> 512.0	26938		
PFBA	1.863	213.0 -> 169.0	58365	19.37 µg/L	100
PFBS	3.703	299.0 -> 80.0	70853	19.94 µg/L	100
		299.0 -> 99.0	29842		
PFDA	7.435	513.0 -> 469.0	493562	19.80 µg/L	100
		513.0 -> 219.0	92615		
PFDoDA	8.742	613.0 -> 569.0	529168	15.84 µg/L	96
		613.0 -> 169.0	30352		
PFHpA	5.553	363.0 -> 319.0	410946	18.88 µg/L	100
		363.0 -> 169.0	33235		
PFHpS	6.261	449.0 -> 80.0	72528	20.48 µg/L	100
		449.0 -> 99.0	39434		
PFHxA	4.678	313.0 -> 269.0	151491	20.13 µg/L	100
		313.0 -> 119.0	13800		
PFHxS	5.587	399.0 -> 80.0	75416	19.62 µg/L	m 99
		399.0 -> 99.0	39340		
PFNA	6.876	463.0 -> 419.0	465285	19.13 µg/L	100
		463.0 -> 219.0	107432		
PFOA	6.266	413.0 -> 369.0	402052	19.61 µg/L	100
		413.0 -> 169.0	130974		
PFOS	6.849	499.0 -> 80.0	85170	19.74 µg/L	m 100
		499.0 -> 99.0	44393		
PFPeA	3.472	263.0 -> 219.0	254844	19.53 µg/L	100

7.6.11  
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Perfluorinated Compounds by LC/MS/MS

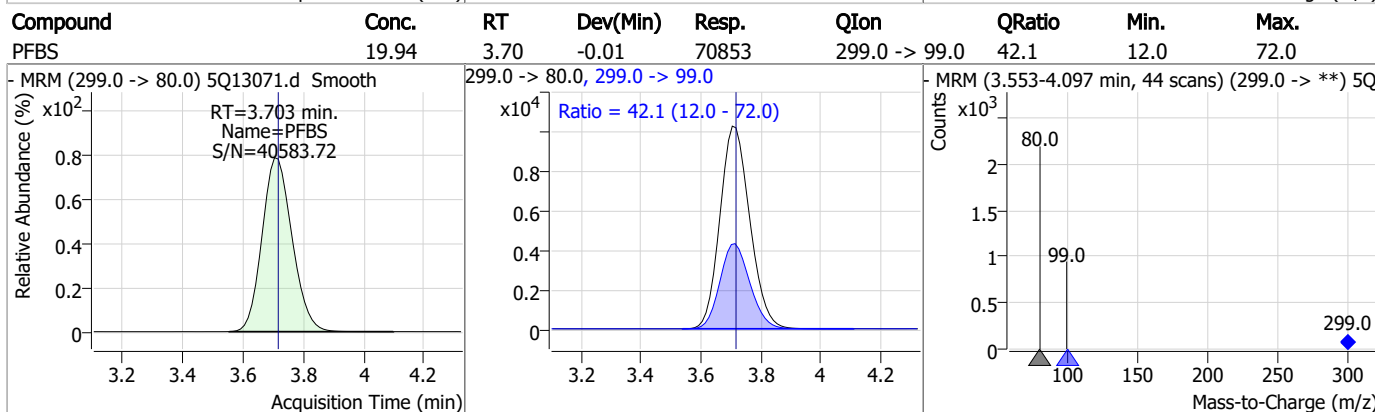
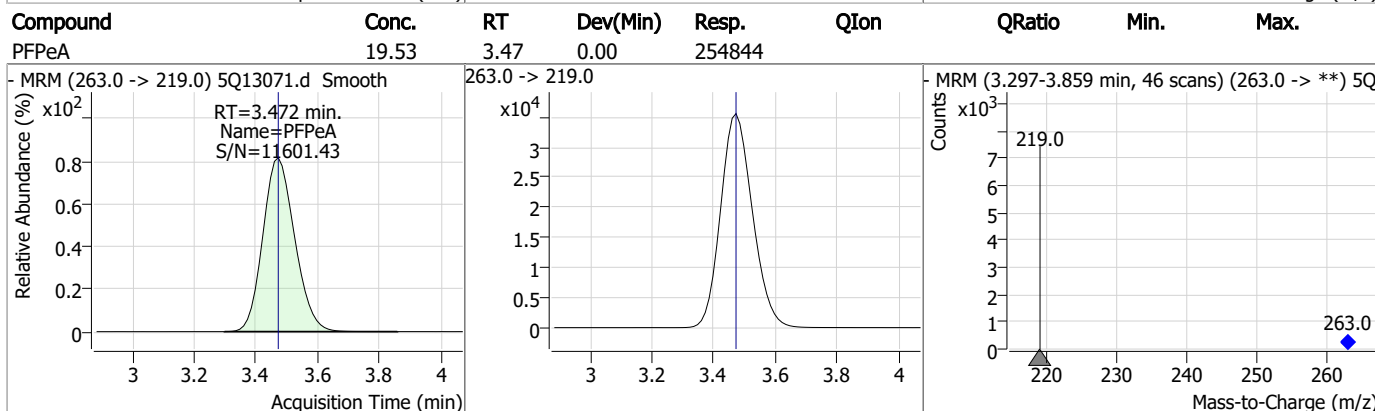
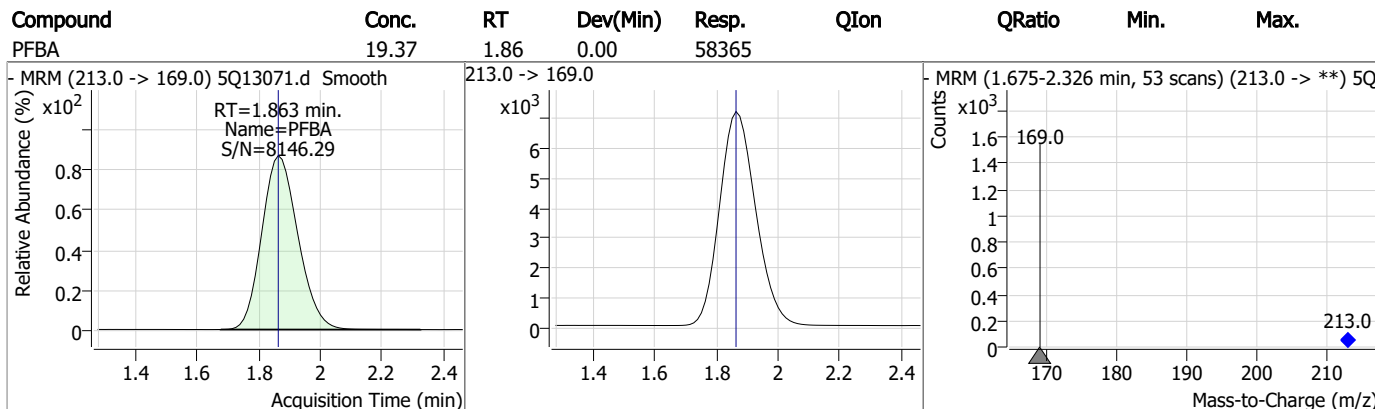
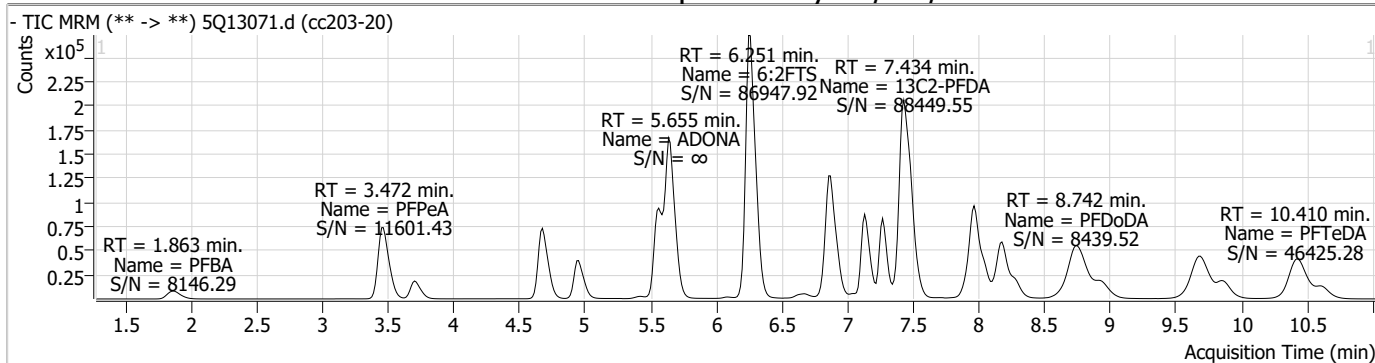
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
PFTeDA	10.410	713.0 -> 669.0	467011	20.36	µg/L	100
		713.0 -> 219.0	37499			
PFTrDA	9.685	663.0 -> 619.0	535385	20.43	µg/L	m
		663.0 -> 369.0	44277			
PFUnDA	7.966	563.0 -> 519.0	537904	19.99	µg/L	99
		563.0 -> 269.0	88334			
ADONA	5.655	377.0 -> 251.0	572629	18.58	µg/L	100
		377.0 -> 85.0	209370			
9Cl-PF3ONS	7.132	531.0 -> 351.0	57435	19.06	µg/L	100
		533.0 -> 353.0	18191			
11Cl-PF3OUdS	8.175	631.0 -> 451.0	345625	18.69	µg/L	100
		633.0 -> 453.0	106464			
HFPO-DA	4.960	285.0 -> 169.0	52453	18.85	µg/L	99
		329.0 -> 169.0	67255			

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

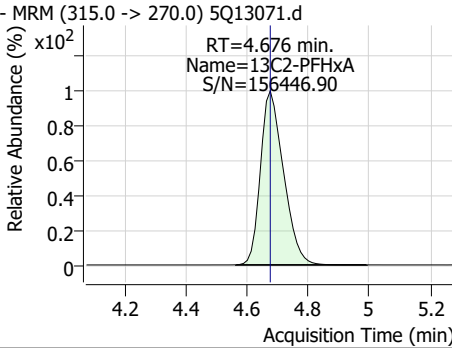
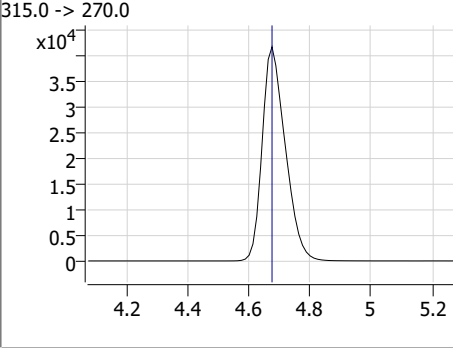
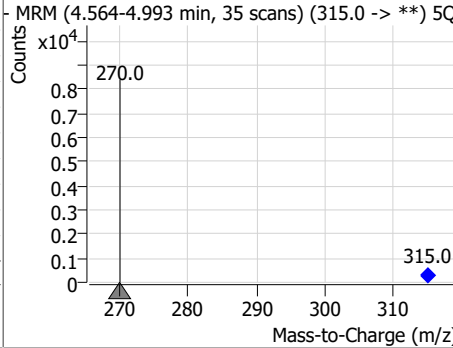
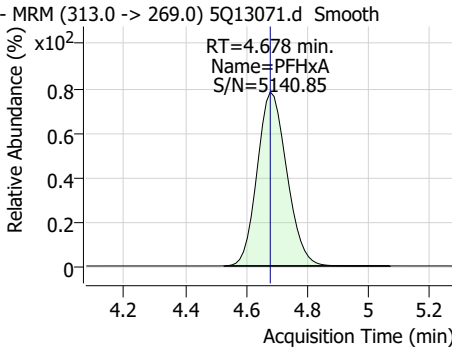
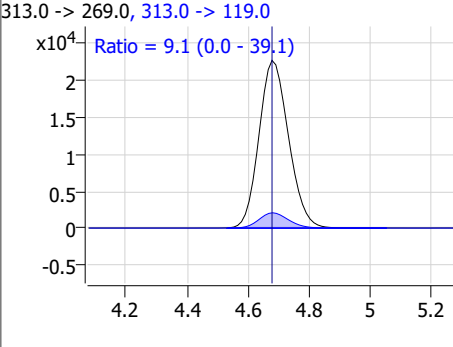
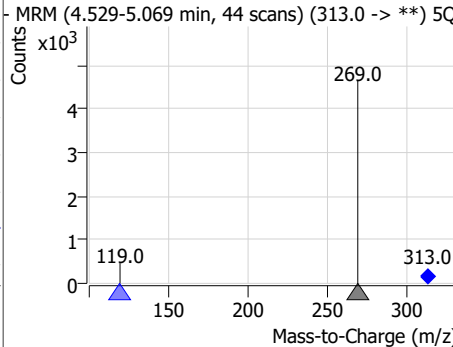
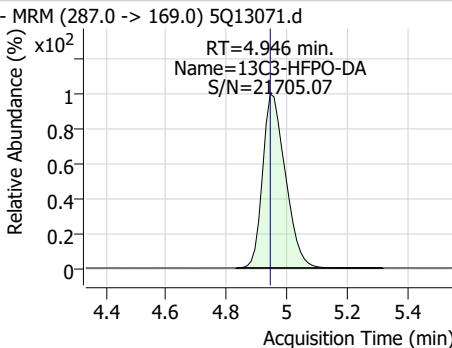
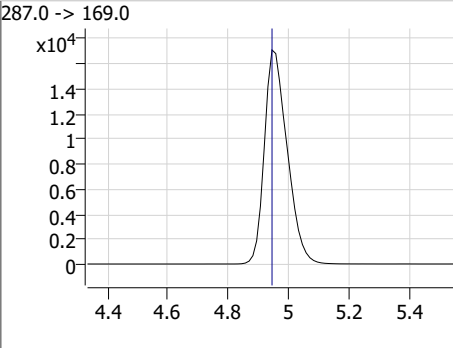
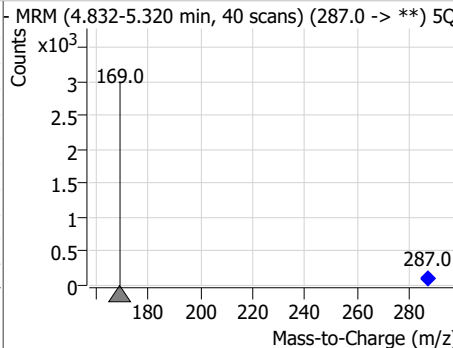
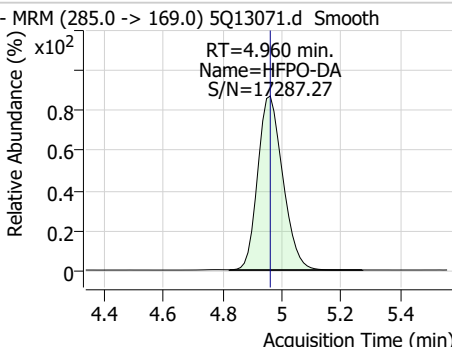
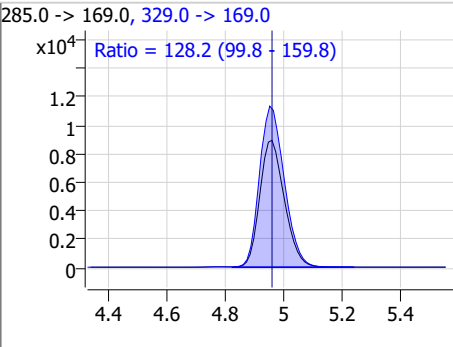
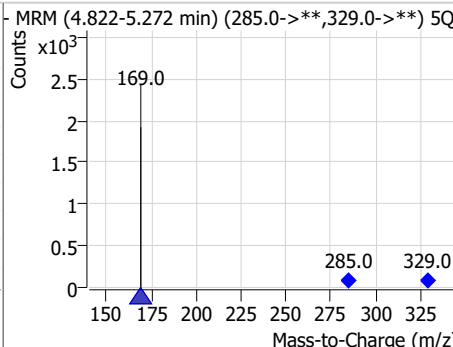
7.6.11

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### Perfluorinated Compounds by LC/MS/MS



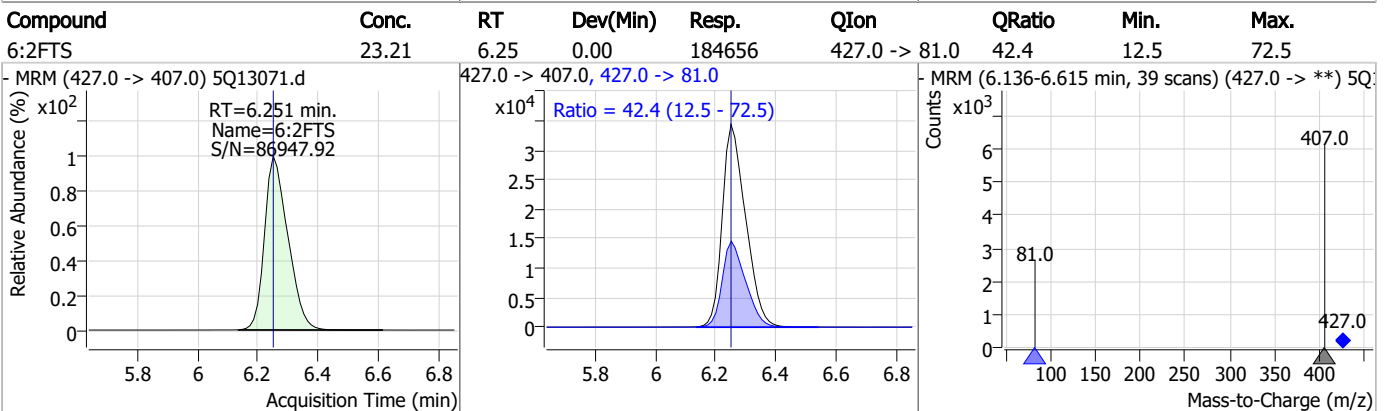
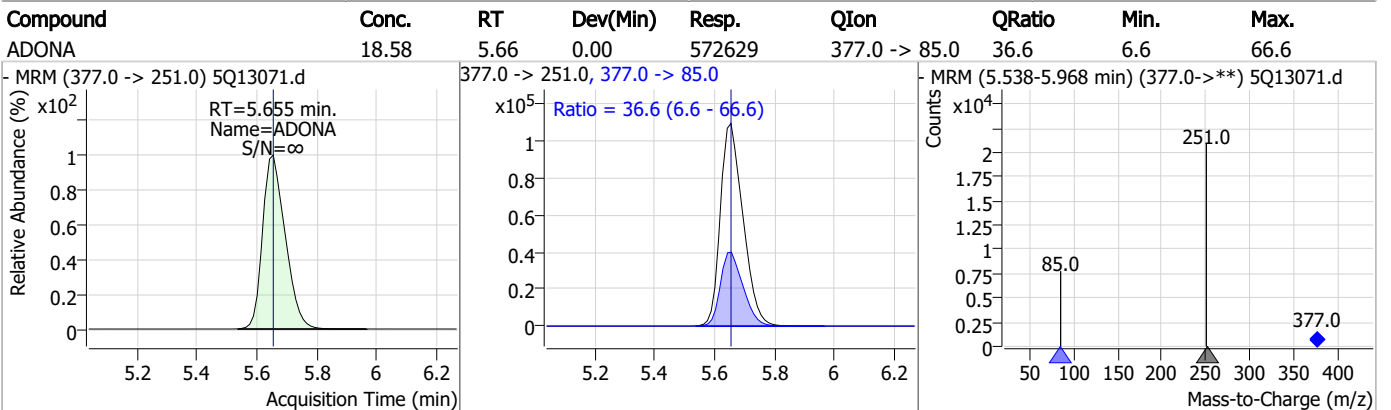
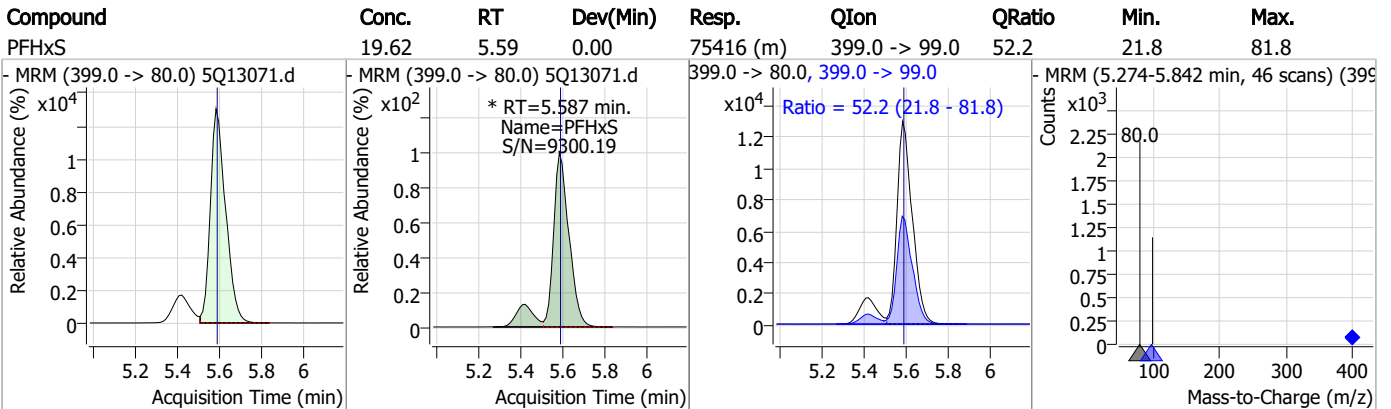
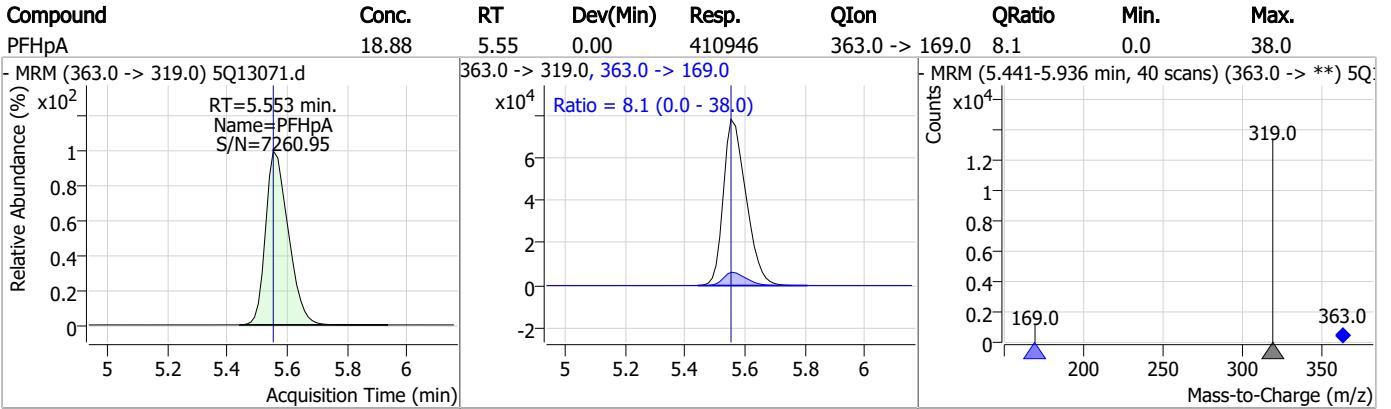
### Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.	
13C2-PFHxA	20.08	4.68	0.00	218923					
									
PFHxA	20.13	4.68	0.00	151491	313.0 ->	119.0	9.1	0.0	39.1
									
13C3-HFPO-DA	37.89	4.95	0.00	89515					
									
HFPO-DA	18.85	4.96	0.00	52453	329.0 ->	169.0	128.2	99.8	159.8
									

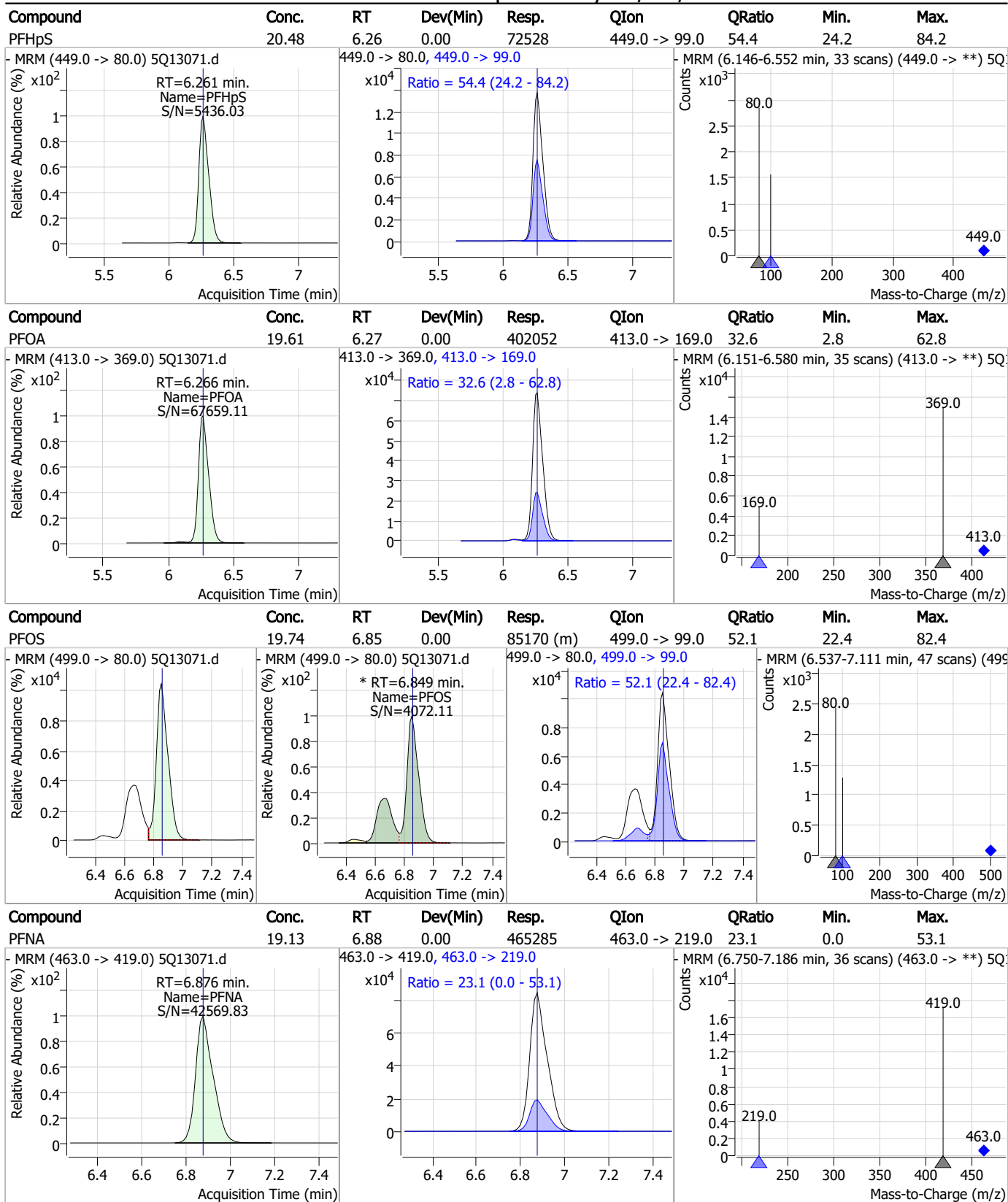
7.6.11

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### Perfluorinated Compounds by LC/MS/MS



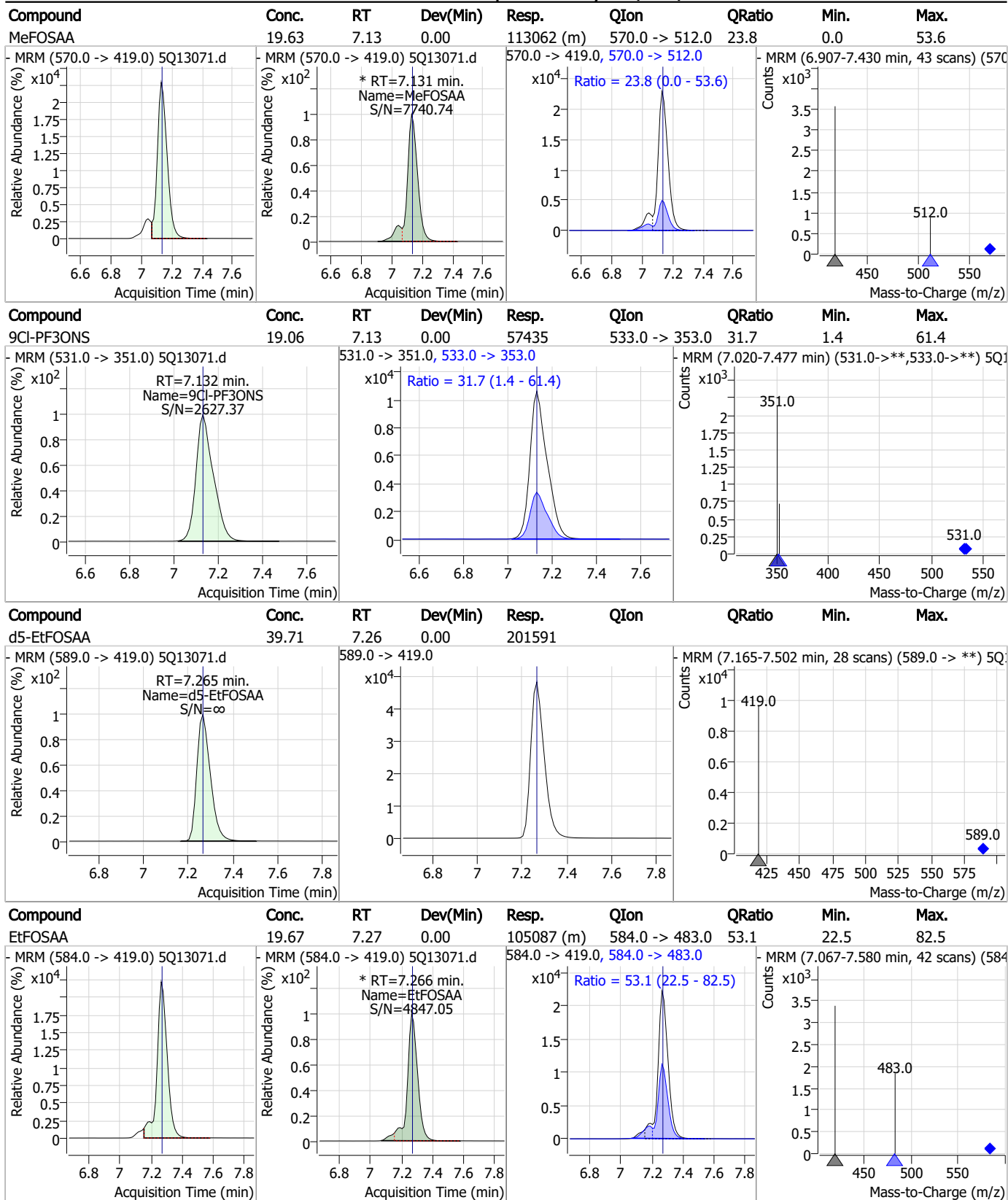
### Perfluorinated Compounds by LC/MS/MS



7.6.11

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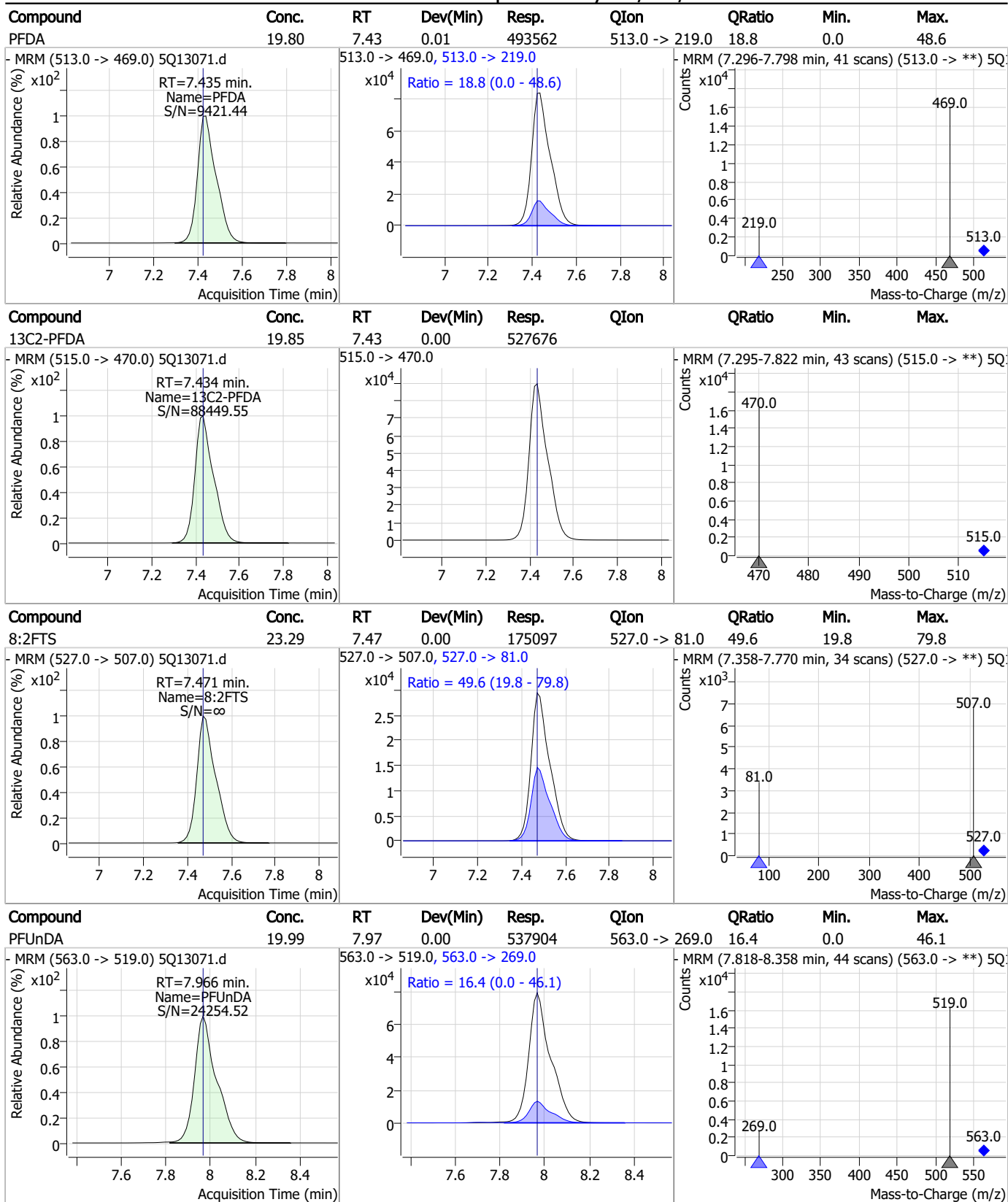
### Perfluorinated Compounds by LC/MS/MS



7.6.11

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### Perfluorinated Compounds by LC/MS/MS



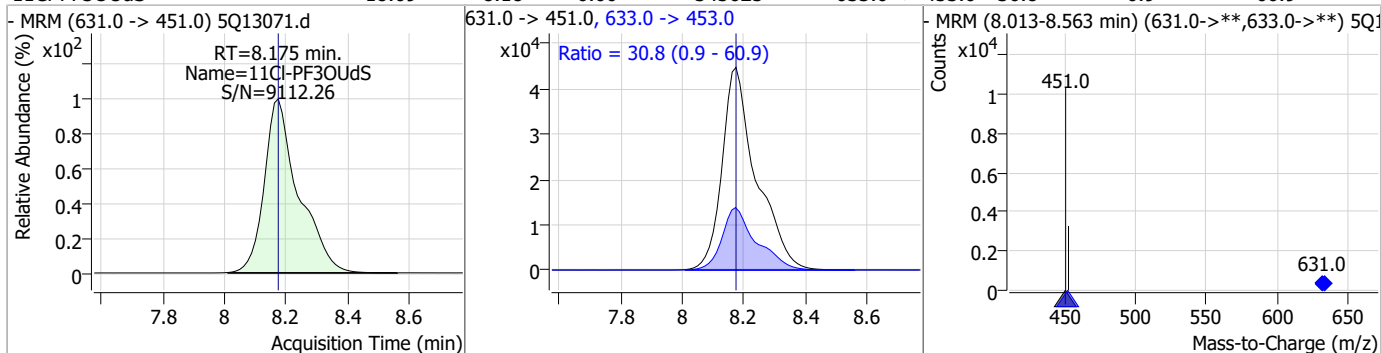
7.6.11

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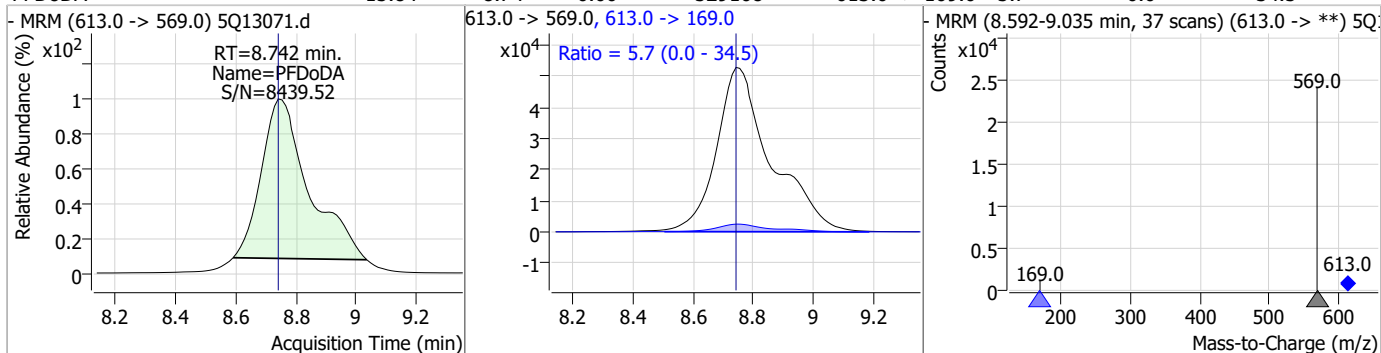


### Perfluorinated Compounds by LC/MS/MS

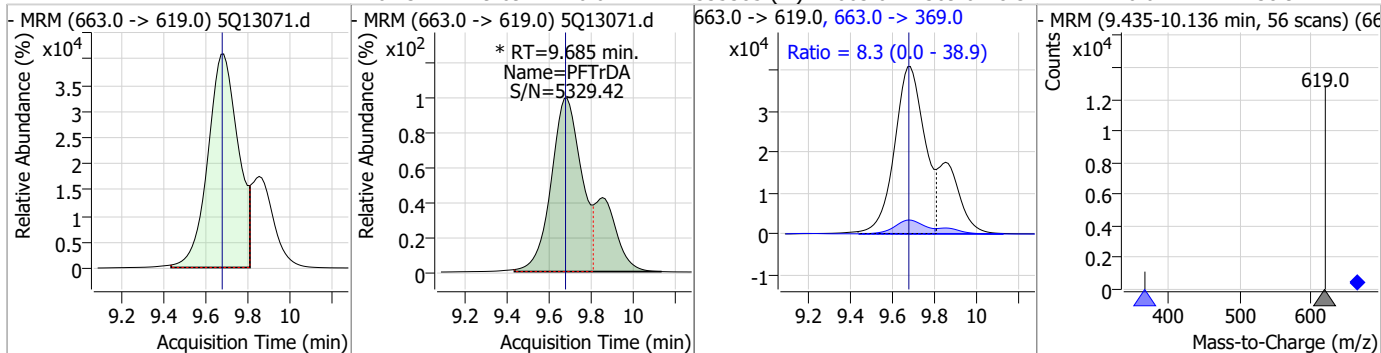
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11CI-PF3OUdS	18.69	8.18	0.00	345625	633.0 -> 453.0	30.8	0.9	60.9



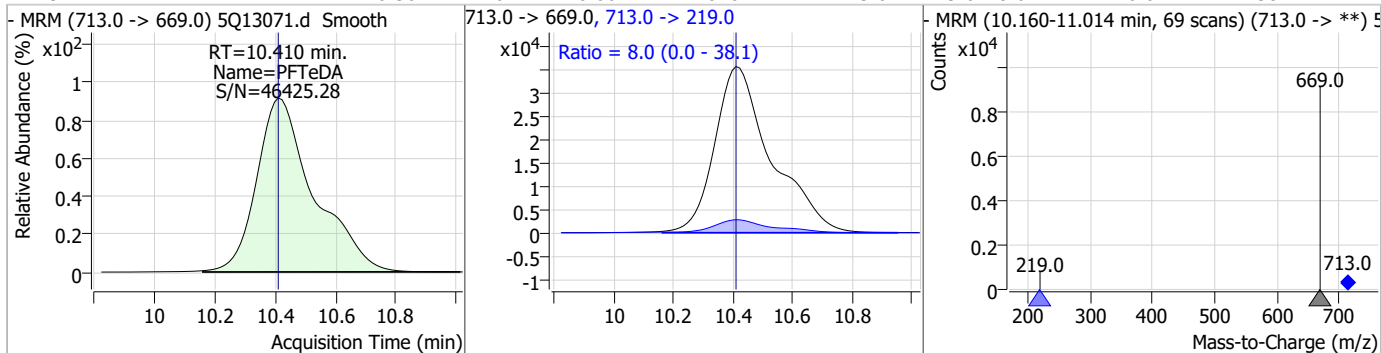
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	15.84	8.74	0.00	529168	613.0 -> 169.0	5.7	0.0	34.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	20.43	9.69	0.01	535385 (m)	663.0 -> 369.0	8.3	0.0	38.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	20.36	10.41	0.00	467011	713.0 -> 219.0	8.0	0.0	38.1



# Manual Integration Approval Summary

**Sample Number:** S5Q203-CC203  
**Lab FileID:** 5Q13071.D  
**Injection Time:** 04/14/23 17:56

**Method:** EPA 537.1 REV 1.0  
**Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Supervisor approved:** 04/17/23 16:32 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.85	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorotridecanoic acid	72629-94-8		9.69	Poor instrument integration

7.6.11.1

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### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13072.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/14/2023 6:13:32 PM  
 Sample Name : cc203-0.5LL  
 Vial : P3-A2  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	146549	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	389244	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	167096	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	69552	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	178409	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.434	515.0 -> 470.0	11248	0.46 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 2.3%		
13C2-PFHxA	4.676	315.0 -> 270.0	4771	0.47 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 2.4%		
d5-EtFOSAA	7.265	589.0 -> 419.0	4492	0.93 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 2.3%		
13C3-HFPO-DA	4.958	287.0 -> 169.0	1872	0.86 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 2.1%		
<b>Target Compounds</b>					
6:2FTS	6.251	427.0 -> 407.0	4210	0.61 µg/L	93
		427.0 -> 81.0	1964		
8:2FTS	7.471	527.0 -> 507.0	3945	0.60 µg/L	100
		527.0 -> 81.0	1960		
EtFOSAA	7.266	584.0 -> 419.0	2396	0.47 µg/L	m 96
		584.0 -> 483.0	1196		
MeFOSAA	7.131	570.0 -> 419.0	2641	0.48 µg/L	m 99
		570.0 -> 512.0	632		
PFBA	1.863	213.0 -> 169.0	1417	0.51 µg/L	100
PFBS	3.716	299.0 -> 80.0	1618	0.49 µg/L	100
		299.0 -> 99.0	681		
PFDA	7.435	513.0 -> 469.0	10918	0.48 µg/L	99
		513.0 -> 219.0	2089		
PFDoDA	8.742	613.0 -> 569.0	14214	0.46 µg/L	100
		613.0 -> 169.0	652		
PFHpA	5.553	363.0 -> 319.0	8900	0.44 µg/L	99
		363.0 -> 169.0	745		
PFHpS	6.261	449.0 -> 80.0	1637	0.50 µg/L	98
		449.0 -> 99.0	912		
PFHxA	4.678	313.0 -> 269.0	3457	0.50 µg/L	99
		313.0 -> 119.0	325		
PFHxS	5.587	399.0 -> 80.0	1603	0.45 µg/L	m 99
		399.0 -> 99.0	840		
PFNA	6.876	463.0 -> 419.0	10016	0.45 µg/L	99
		463.0 -> 219.0	2287		
PFOA	6.266	413.0 -> 369.0	8648	0.46 µg/L	96
		413.0 -> 169.0	3040		
PFOS	6.849	499.0 -> 80.0	1861	0.46 µg/L	m 93
		499.0 -> 99.0	1062		
PFPeA	3.472	263.0 -> 219.0	5735	0.47 µg/L	100

7.6.12  
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Perfluorinated Compounds by LC/MS/MS

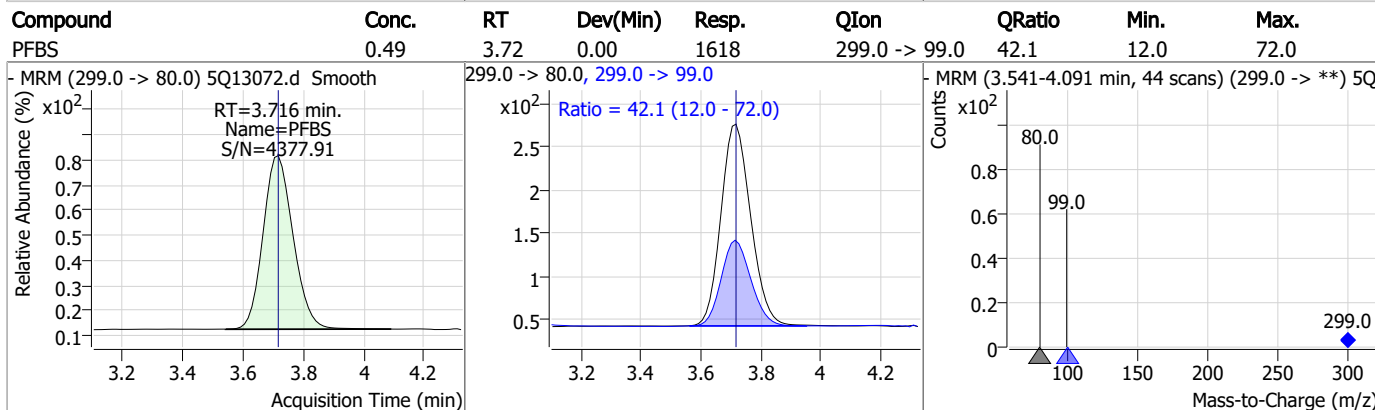
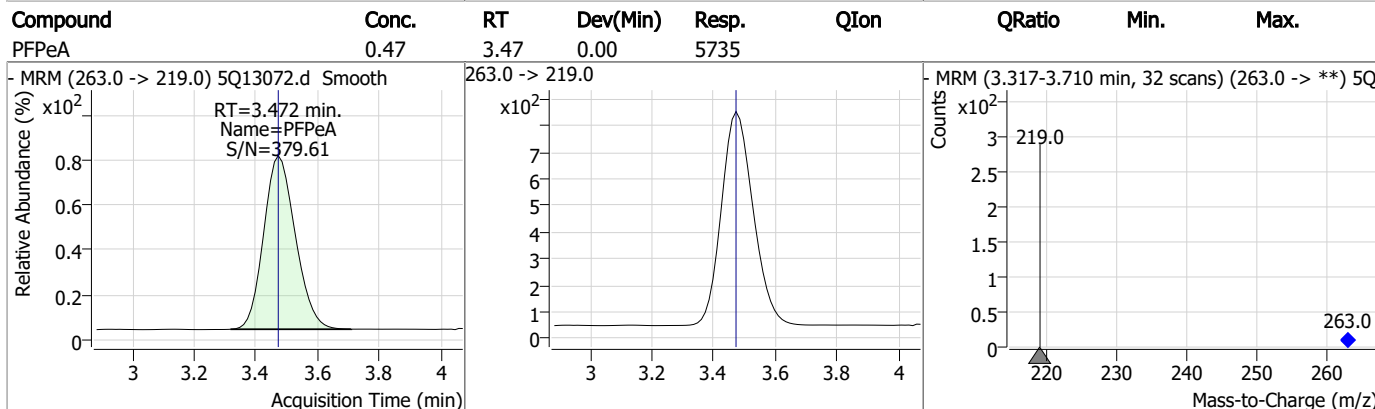
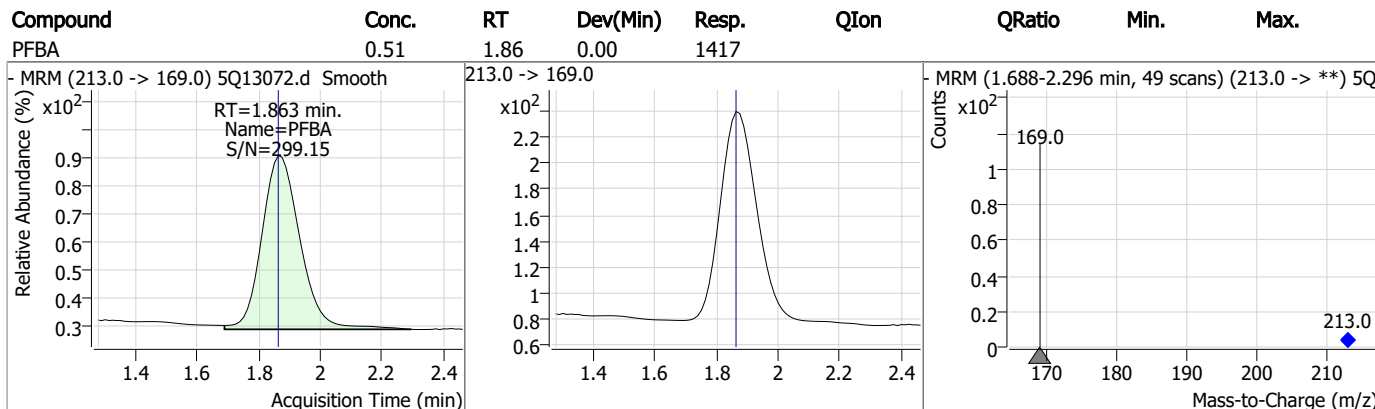
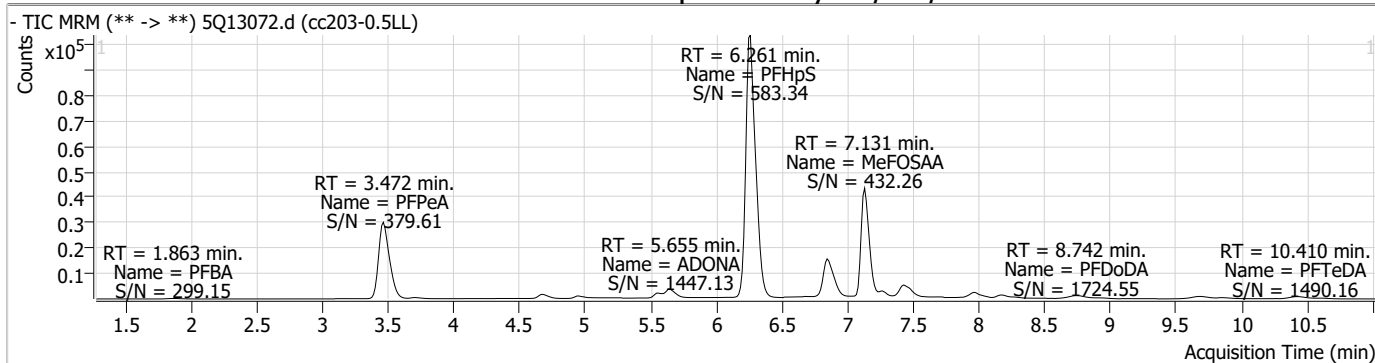
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
PFTeDA	10.410	713.0 -> 669.0	10101	0.47	µg/L	98
		713.0 -> 219.0	878			
PFTrDA	9.685	663.0 -> 619.0	11761	0.48	µg/L	m
		663.0 -> 369.0	1013			
PFUnDA	7.966	563.0 -> 519.0	11953	0.48	µg/L	99
		563.0 -> 269.0	1995			
ADONA	5.655	377.0 -> 251.0	12061	0.42	µg/L	98
		377.0 -> 85.0	4553			
9Cl-PF3ONS	7.132	531.0 -> 351.0	1340	0.48	µg/L	98
		533.0 -> 353.0	438			
11Cl-PF3OUdS	8.175	631.0 -> 451.0	7364	0.43	µg/L	97
		633.0 -> 453.0	2391			
HFPO-DA	4.960	285.0 -> 169.0	1173	0.46	µg/L	97
		329.0 -> 169.0	1563			

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

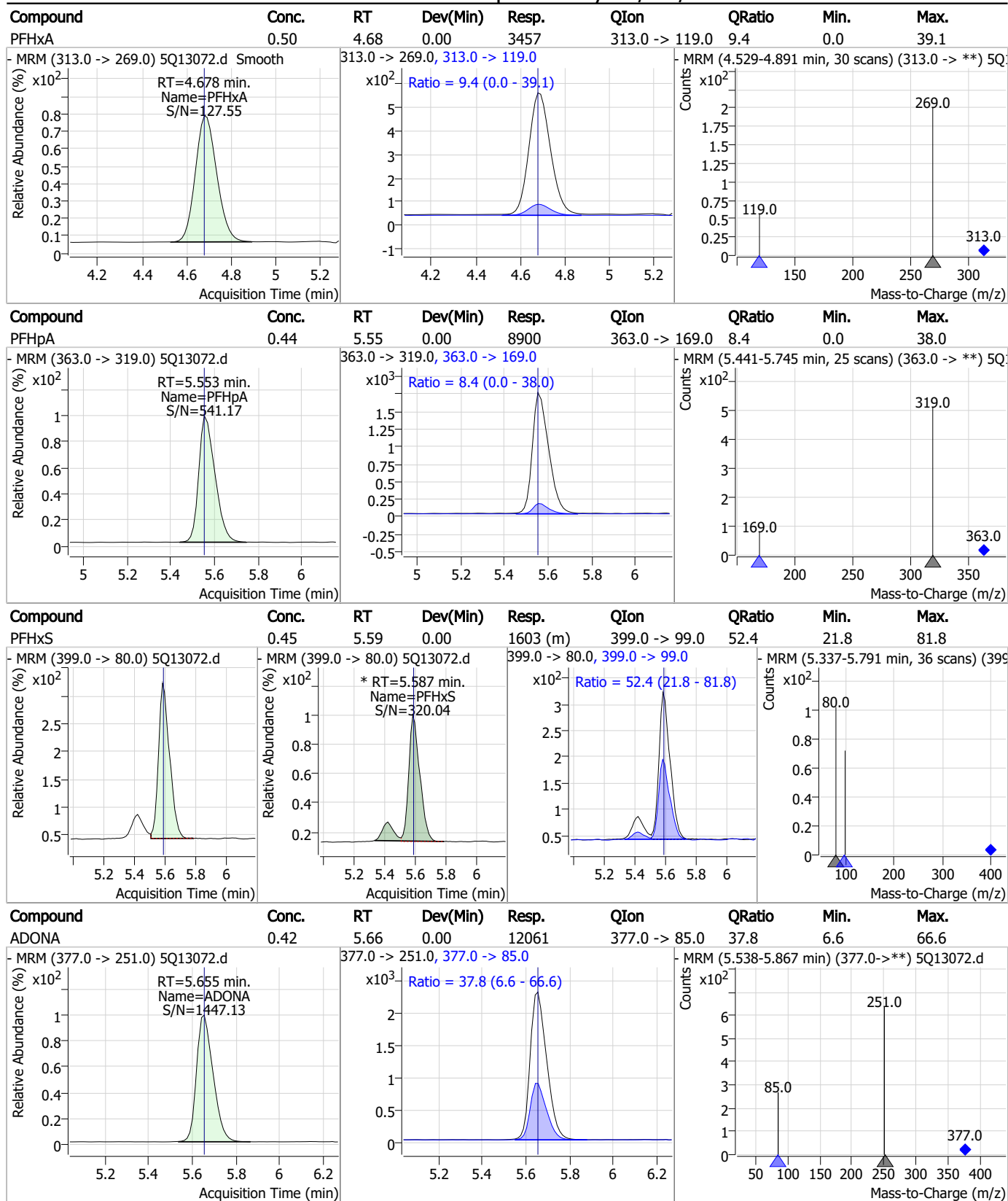
7.6.12

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### Perfluorinated Compounds by LC/MS/MS



### Perfluorinated Compounds by LC/MS/MS

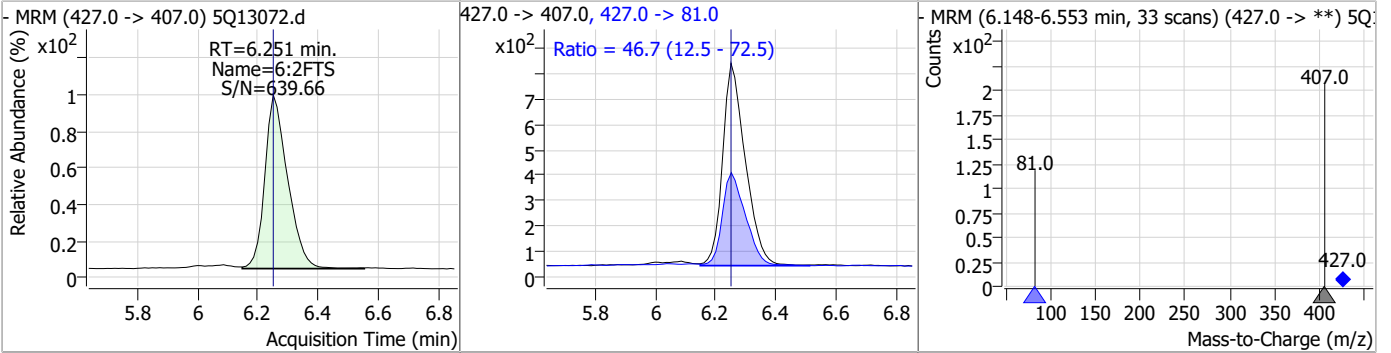


7.6.12

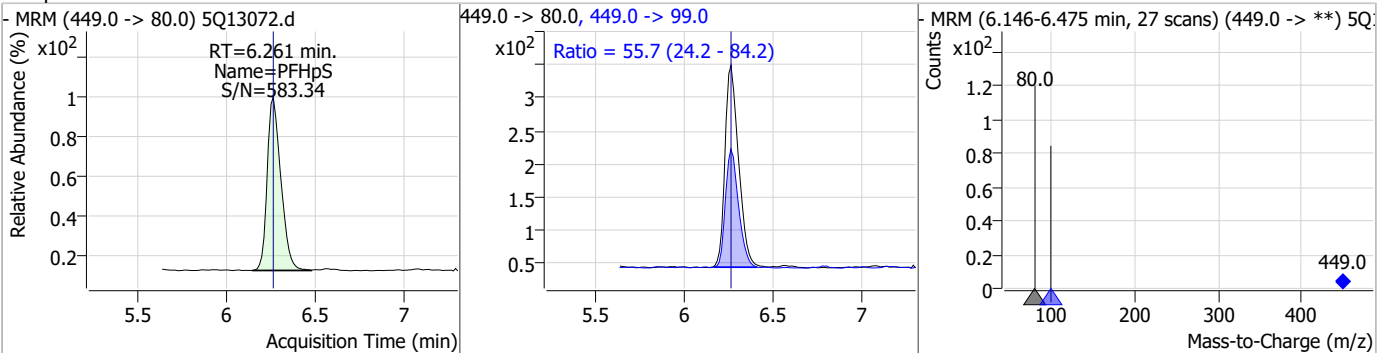
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### Perfluorinated Compounds by LC/MS/MS

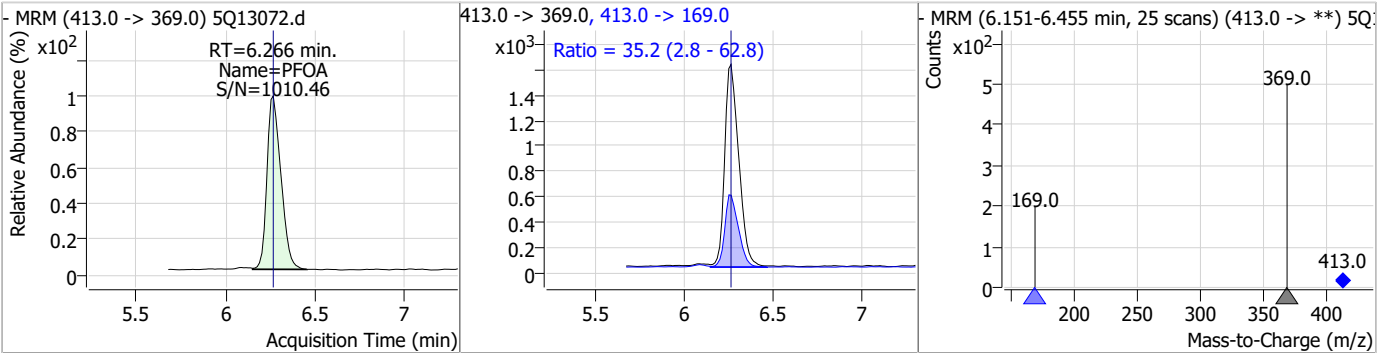
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	0.61	6.25	0.00	4210	427.0 -> 81.0	46.7	12.5	72.5



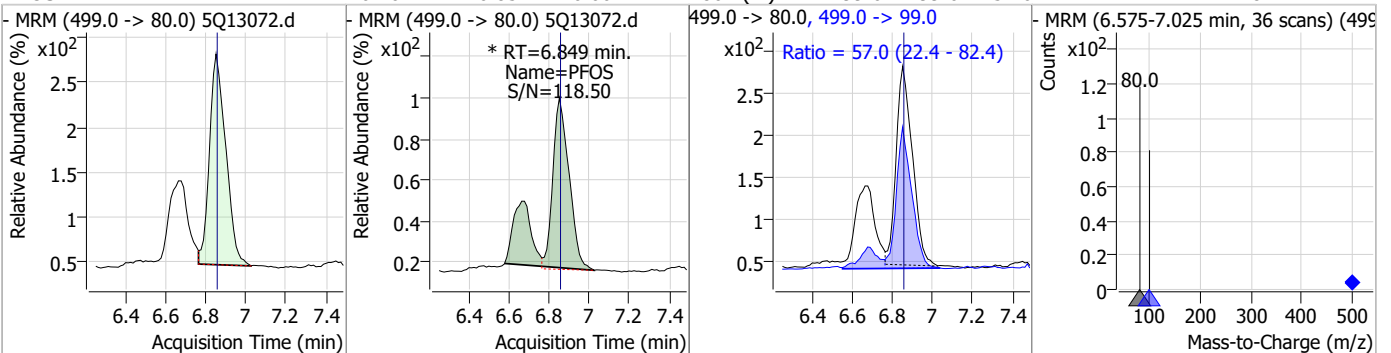
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	0.50	6.26	0.00	1637	449.0 -> 99.0	55.7	24.2	84.2



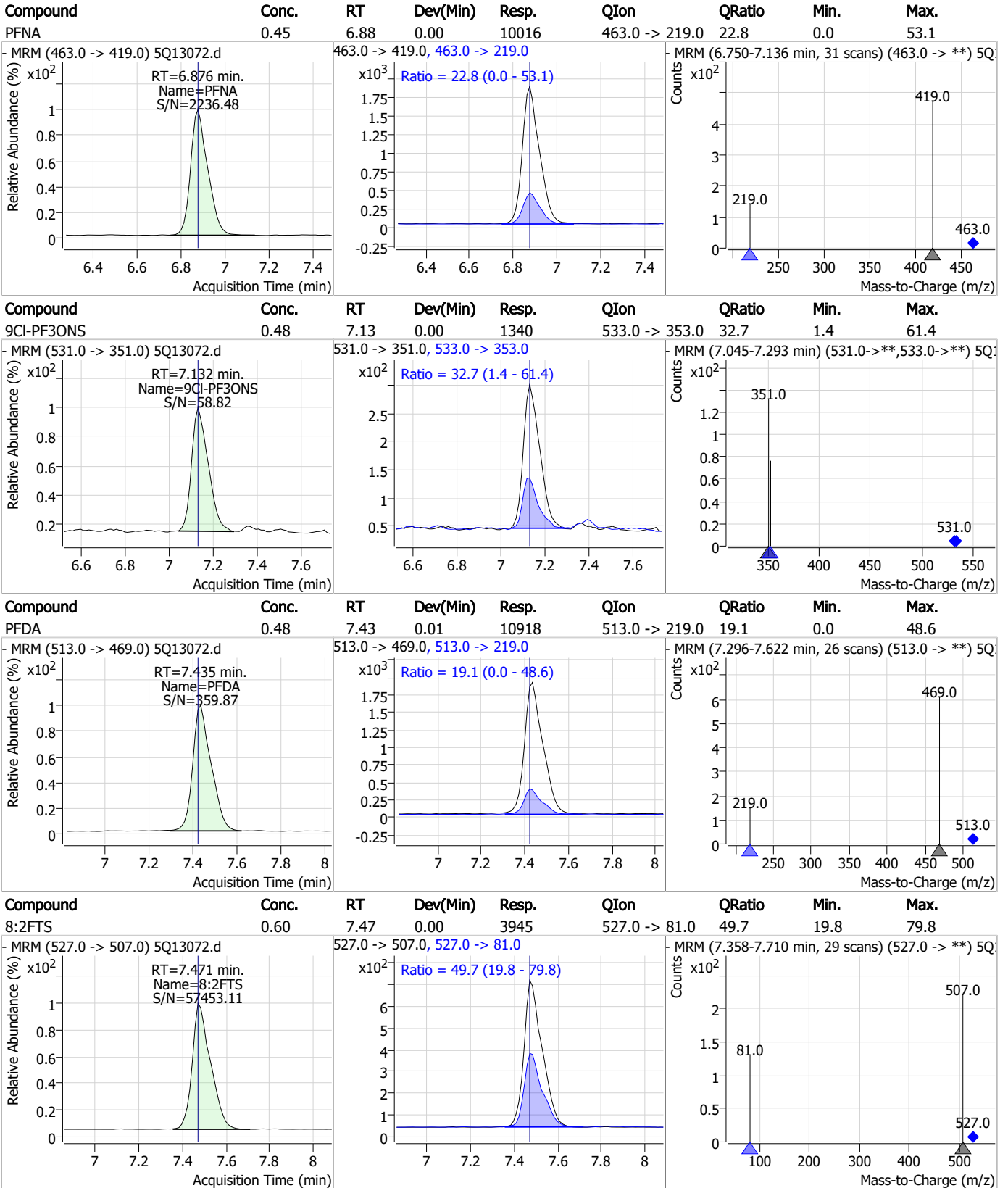
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.46	6.27	0.00	8648	413.0 -> 169.0	35.2	2.8	62.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.46	6.85	0.00	1861 (m)	499.0 -> 99.0	57.0	22.4	82.4



### Perfluorinated Compounds by LC/MS/MS

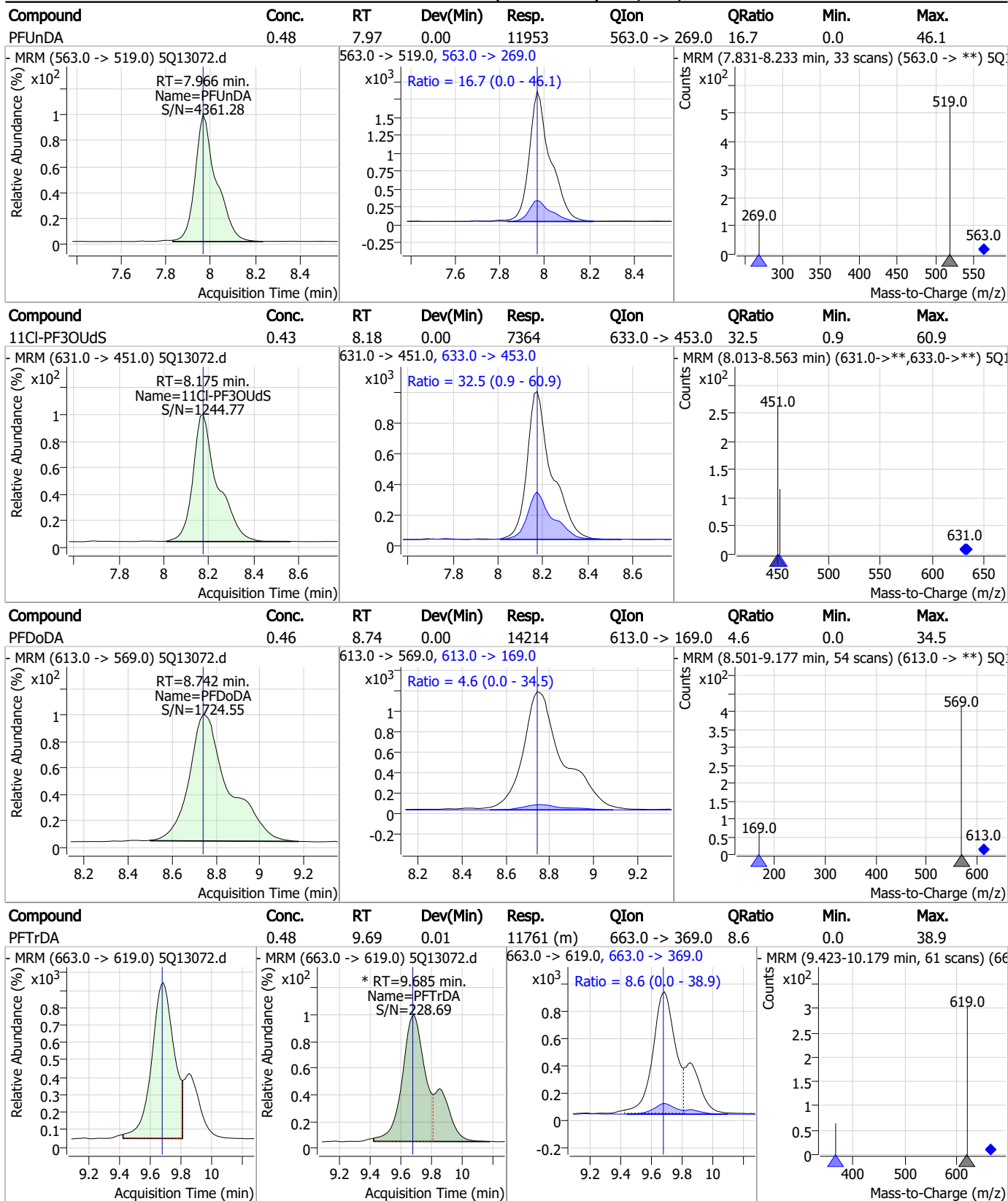


7.6.12 7



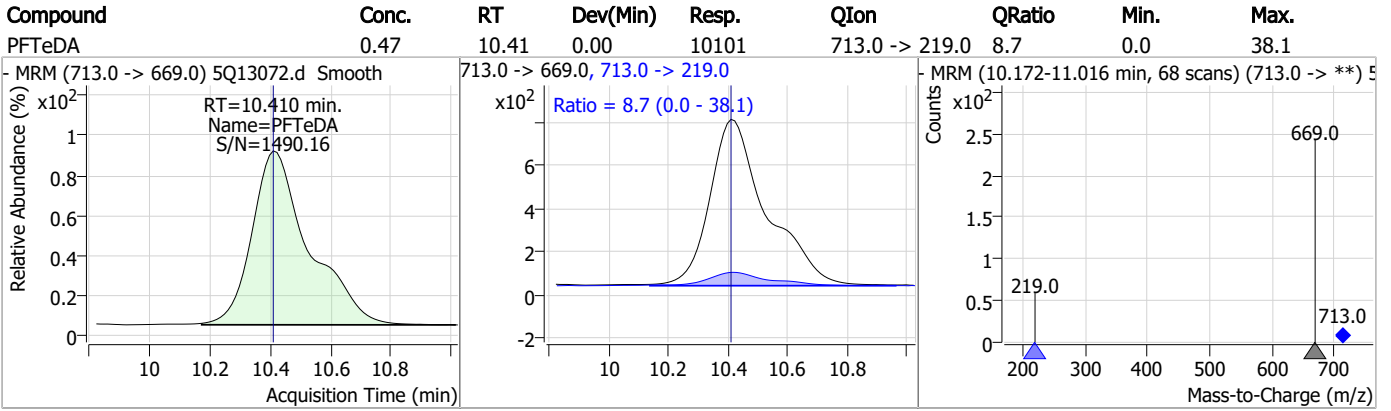


### Perfluorinated Compounds by LC/MS/MS



7.6.12  
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### Perfluorinated Compounds by LC/MS/MS



7.6.12  
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# Manual Integration Approval Summary

**Sample Number:** S5Q203-CC203      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13072.D      **Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Injection Time:** 04/14/23 18:13      **Supervisor approved:** 04/17/23 16:32 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.85	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorotridecanoic acid	72629-94-8		9.69	Poor instrument integration

7.6.12.1

7

### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13083.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/14/2023 9:18:49 PM  
 Sample Name : cc203-20  
 Vial : P3-A7  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)	QValue
<b>Internal Standards</b>						
13C2-6:2FTS	6.250	429.0 -> 409.0	168306	20.00 µg/L	0.000	
13C2-PFOA	6.253	415.0 -> 370.0	419143	20.00 µg/L	-0.012	
13C3-PFPeA	3.469	266.0 -> 222.0	178445	20.00 µg/L	0.000	
13C4-PFOS	6.848	503.0 -> 80.0	74373	20.00 µg/L	0.000	
d3-MeFOSAA	7.130	573.0 -> 419.0	195946	40.00 µg/L	0.000	
<b>System Monitoring Compounds</b>						
13C2-PFDA	7.422	515.0 -> 470.0	530953	20.12 µg/L	-0.012	
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 100.6%			
13C2-PFHxA	4.676	315.0 -> 270.0	218388	20.18 µg/L	0.000	
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 100.9%			
d5-EtFOSAA	7.265	589.0 -> 419.0	207988	39.37 µg/L	0.000	
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 98.4%			
13C3-HFPO-DA	4.946	287.0 -> 169.0	84143	35.90 µg/L	0.000	
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 89.7%			
<b>Target Compounds</b>						
6:2FTS	6.251	427.0 -> 407.0	185328	23.26 µg/L		100
		427.0 -> 81.0	78406			
8:2FTS	7.471	527.0 -> 507.0	177084	23.52 µg/L		99
		527.0 -> 81.0	87359			
EtFOSAA	7.266	584.0 -> 419.0	109289	19.66 µg/L	m	100
		584.0 -> 483.0	57321			
MeFOSAA	7.131	570.0 -> 419.0	115140	19.21 µg/L	m	100
		570.0 -> 512.0	27415			
PFBA	1.863	213.0 -> 169.0	57755	19.34 µg/L		100
PFBS	3.716	299.0 -> 80.0	70912	20.07 µg/L		100
		299.0 -> 99.0	29647			
PFDA	7.422	513.0 -> 469.0	496279	20.06 µg/L		100
		513.0 -> 219.0	91429			
PFDoDA	8.742	613.0 -> 569.0	678924	20.44 µg/L		99
		613.0 -> 169.0	31755			
PFHpA	5.553	363.0 -> 319.0	410379	19.00 µg/L		100
		363.0 -> 169.0	32765			
PFHpS	6.261	449.0 -> 80.0	71323	20.26 µg/L		100
		449.0 -> 99.0	38910			
PFHxA	4.678	313.0 -> 269.0	149787	20.06 µg/L		100
		313.0 -> 119.0	13803			
PFHxS	5.587	399.0 -> 80.0	74931	19.61 µg/L	m	100
		399.0 -> 99.0	38833			
PFNA	6.876	463.0 -> 419.0	469662	19.46 µg/L		99
		463.0 -> 219.0	106865			
PFOA	6.254	413.0 -> 369.0	399364	19.63 µg/L		100
		413.0 -> 169.0	129935			
PFOS	6.849	499.0 -> 80.0	84558	19.72 µg/L	m	99
		499.0 -> 99.0	43563			
PFPeA	3.472	263.0 -> 219.0	254304	19.66 µg/L		100

7.6.13  
7



Perfluorinated Compounds by LC/MS/MS

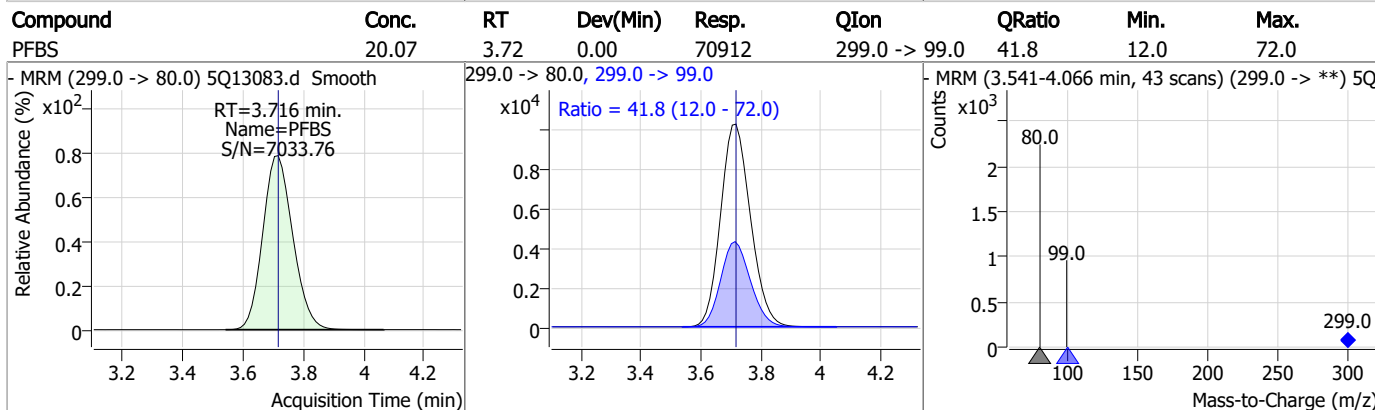
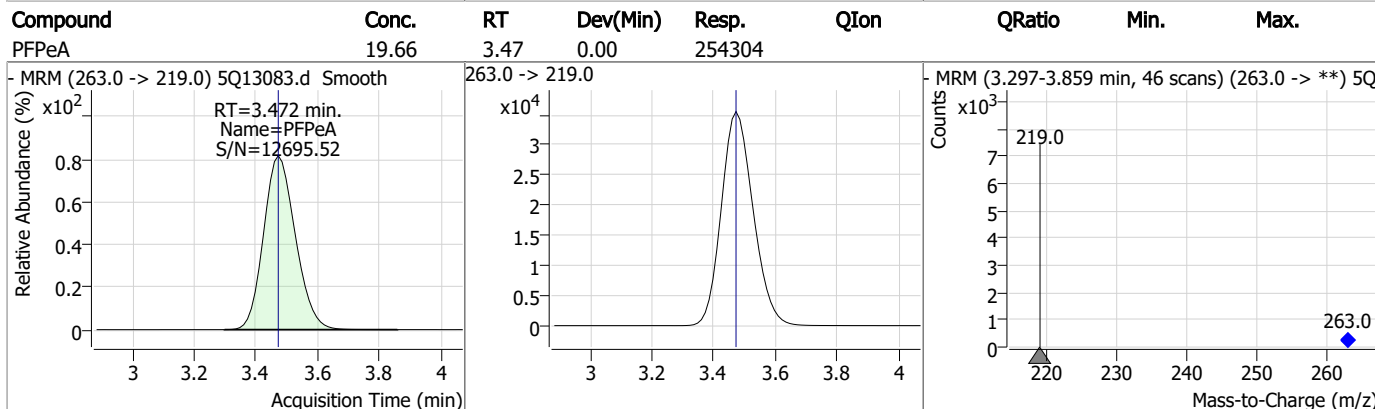
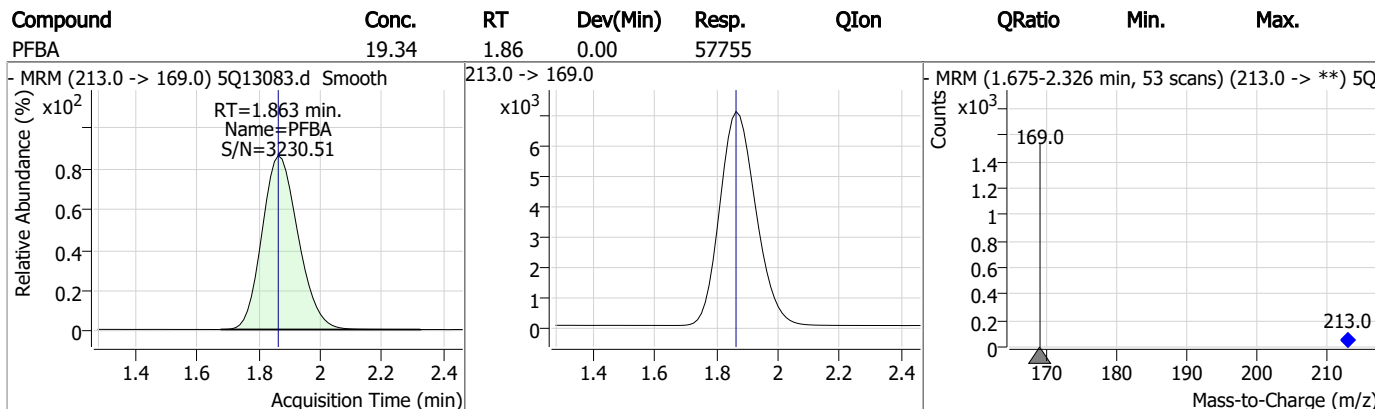
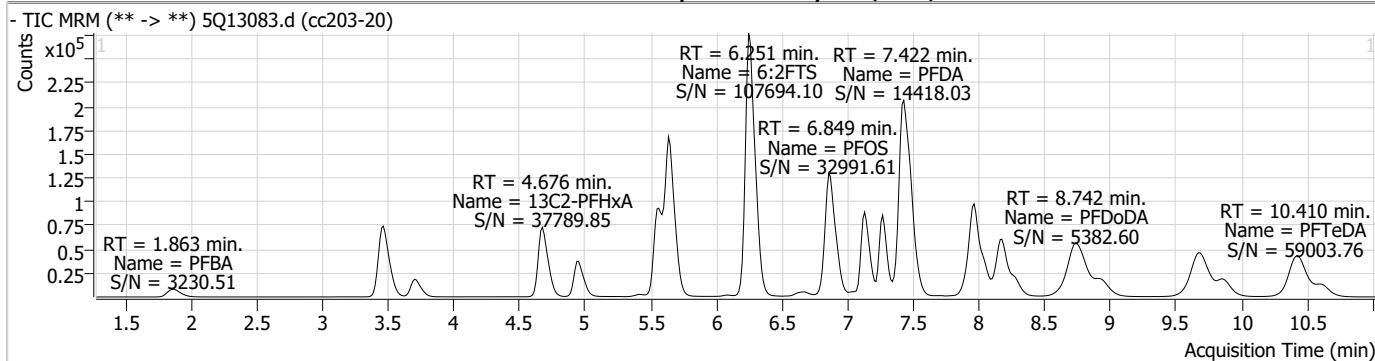
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
PFTeDA	10.410	713.0 -> 669.0	480932	21.09	µg/L	99
		713.0 -> 219.0	37915			
PFTrDA	9.673	663.0 -> 619.0	556684	21.38	µg/L	m
		663.0 -> 369.0	45471			
PFUnDA	7.966	563.0 -> 519.0	545390	20.39	µg/L	100
		563.0 -> 269.0	87782			
ADONA	5.643	377.0 -> 251.0	571167	18.68	µg/L	100
		377.0 -> 85.0	208168			
9Cl-PF3ONS	7.132	531.0 -> 351.0	56007	18.73	µg/L	99
		533.0 -> 353.0	17792			
11Cl-PF3OUdS	8.175	631.0 -> 451.0	353453	19.26	µg/L	100
		633.0 -> 453.0	109534			
HFPO-DA	4.960	285.0 -> 169.0	49125	17.79	µg/L	99
		329.0 -> 169.0	63208			

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

7.6.13

7

### Perfluorinated Compounds by LC/MS/MS



7.6.13  
7

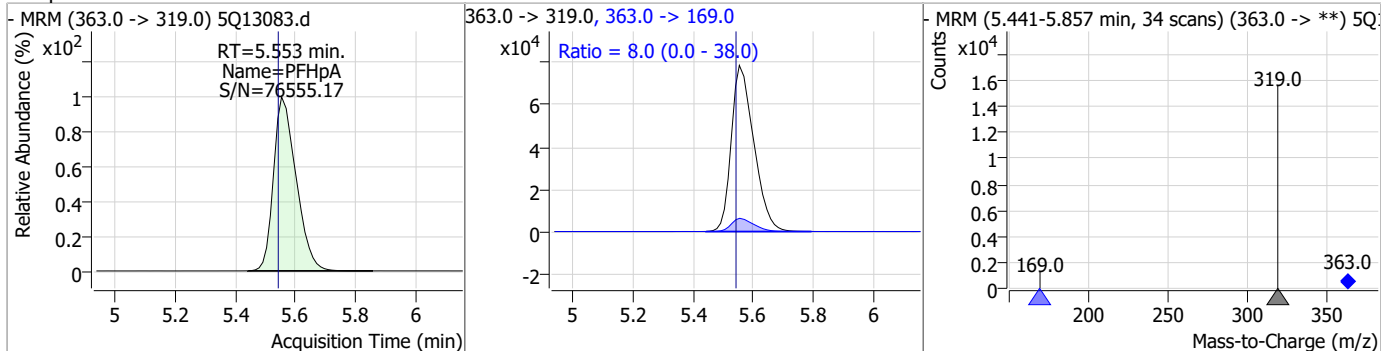
### Perfluorinated Compounds by LC/MS/MS

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	20.18	4.68	0.00	218388				
PFHxA	20.06	4.68	0.00	149787	313.0 ->	119.0	9.2	0.0
13C3-HFPO-DA	35.90	4.95	0.00	84143				
HFPO-DA	17.79	4.96	0.00	49125	329.0 ->	169.0	128.7	99.8

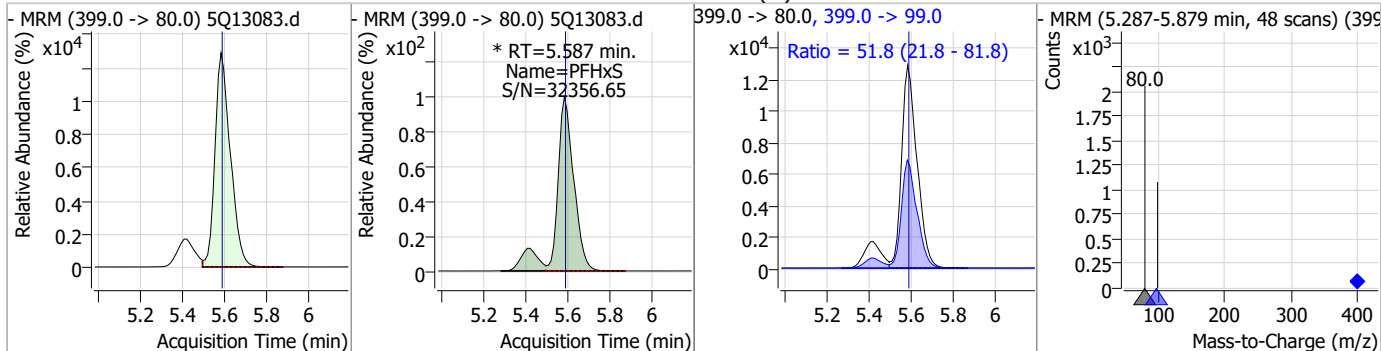
7.6.13  
7

### Perfluorinated Compounds by LC/MS/MS

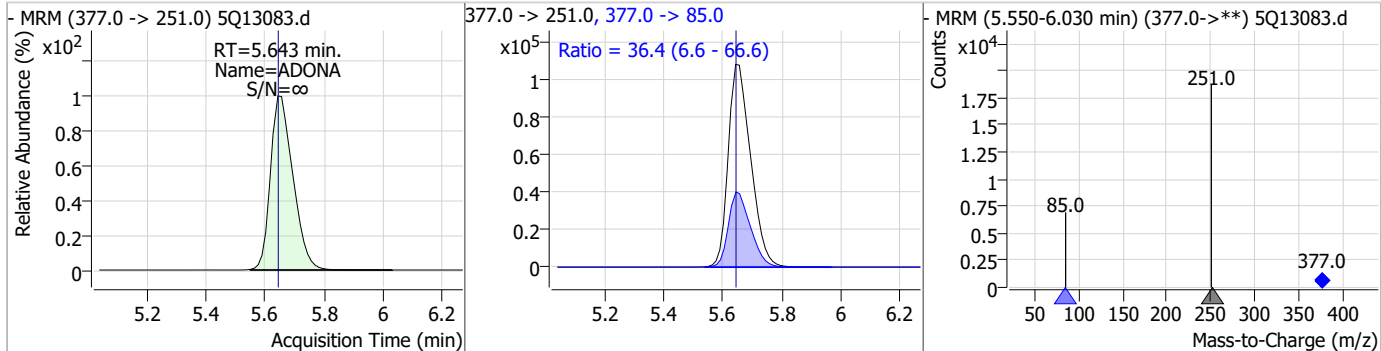
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	19.00	5.55	0.00	410379	363.0 -> 169.0	8.0	0.0	38.0



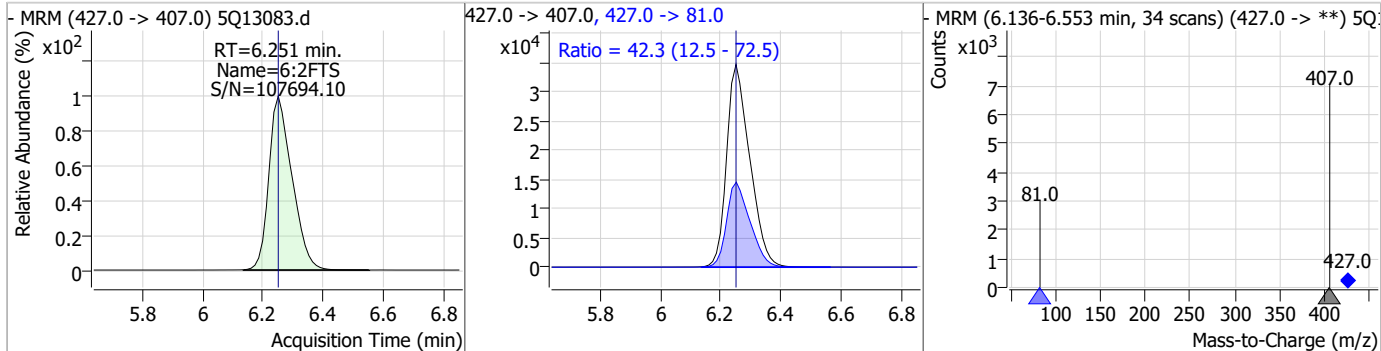
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	19.61	5.59	0.00	74931 (m)	399.0 -> 99.0	51.8	21.8	81.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	18.68	5.64	-0.01	571167	377.0 -> 85.0	36.4	6.6	66.6

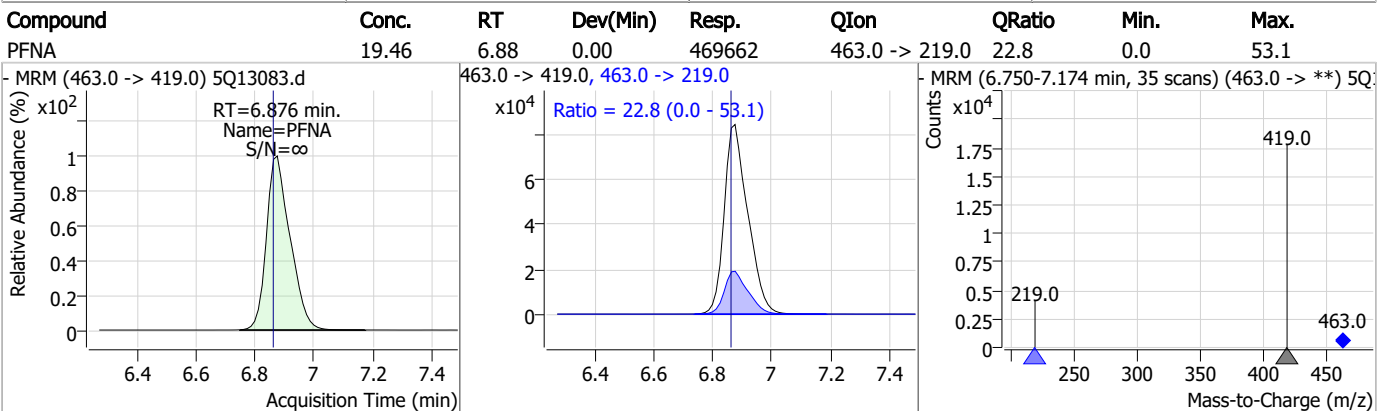
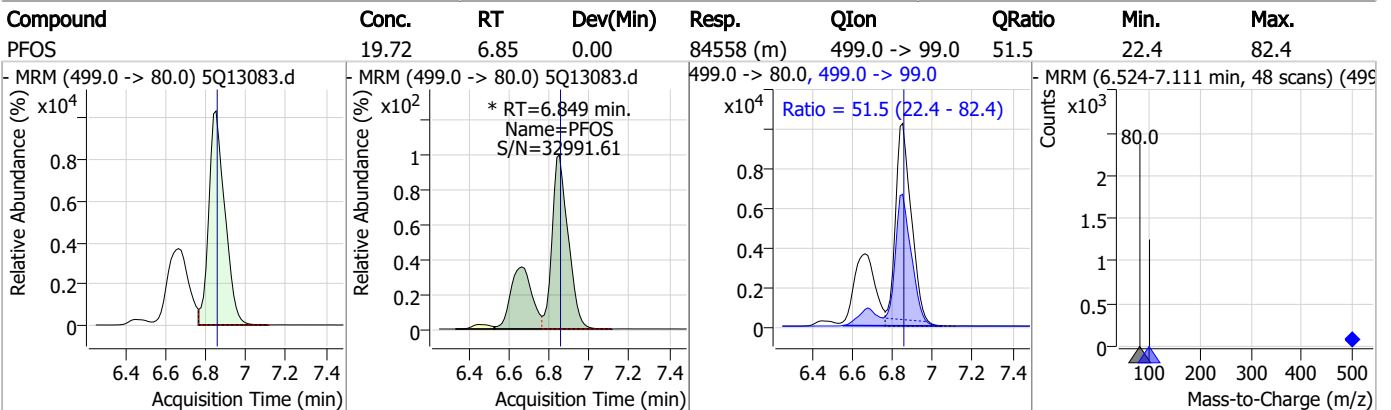
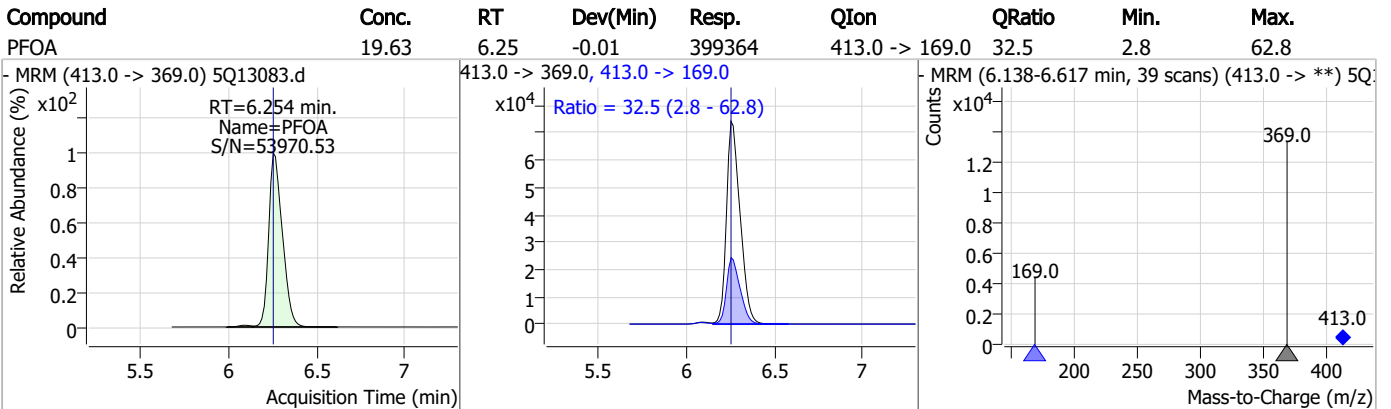
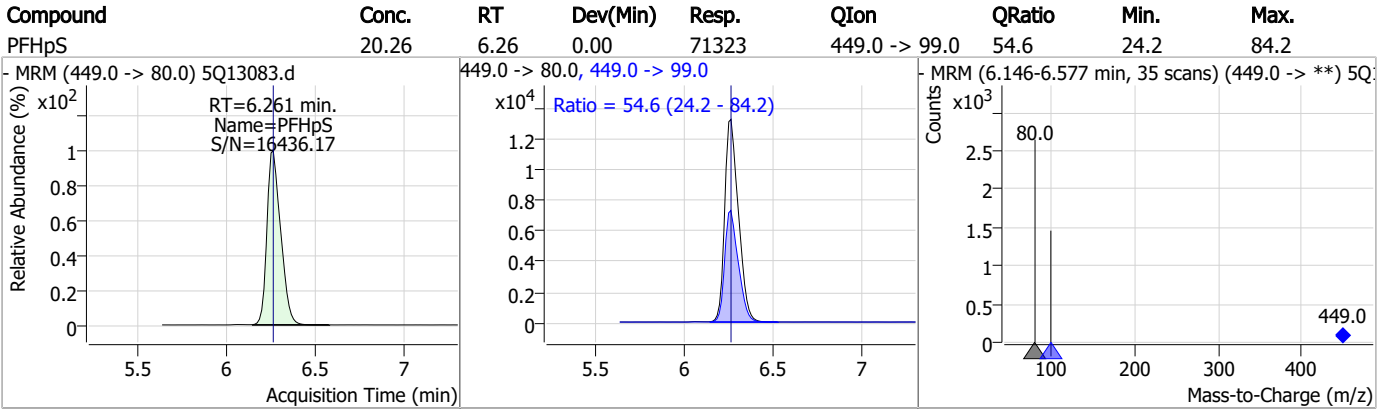


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	23.26	6.25	0.00	185328	427.0 -> 81.0	42.3	12.5	72.5

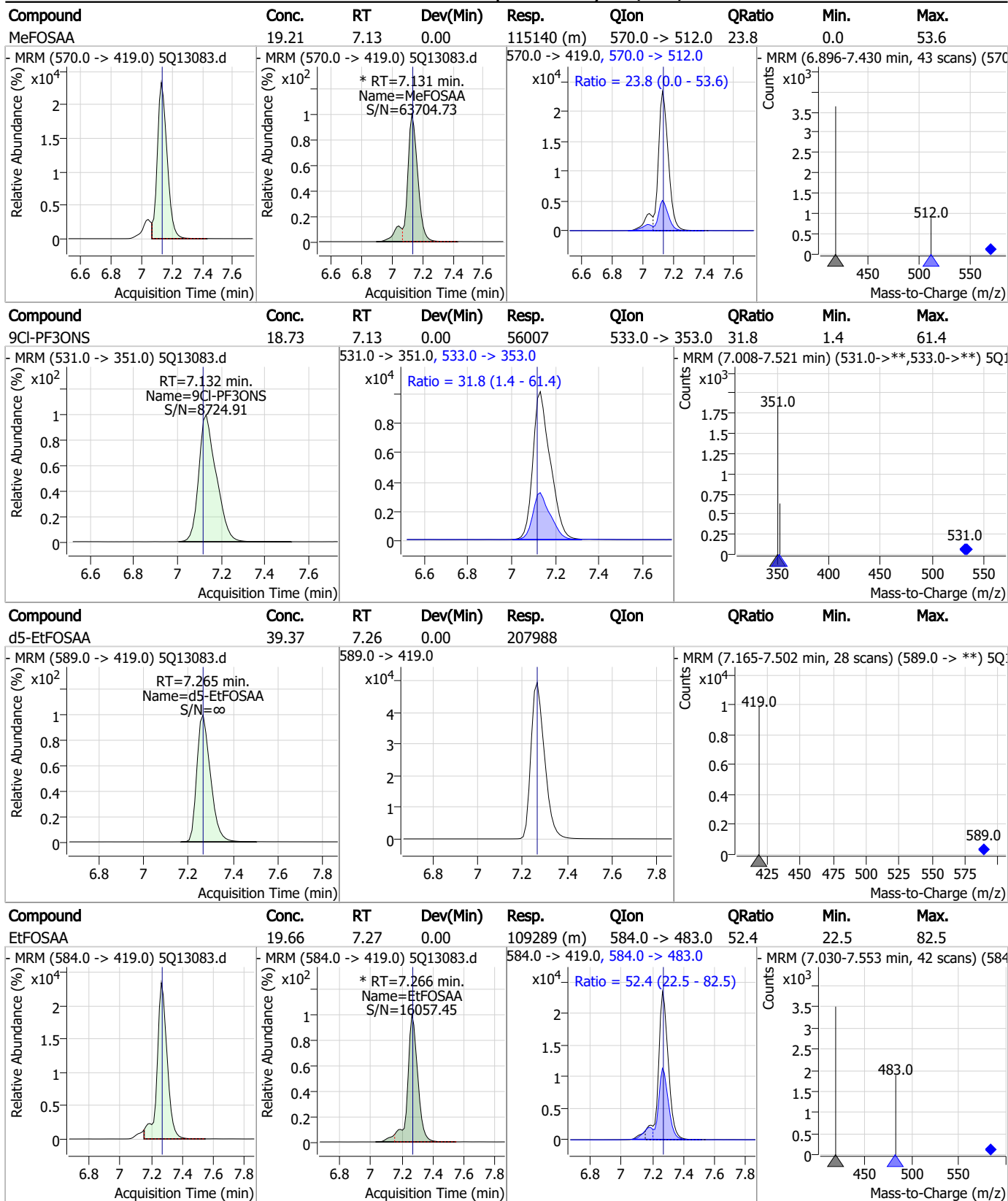




### Perfluorinated Compounds by LC/MS/MS

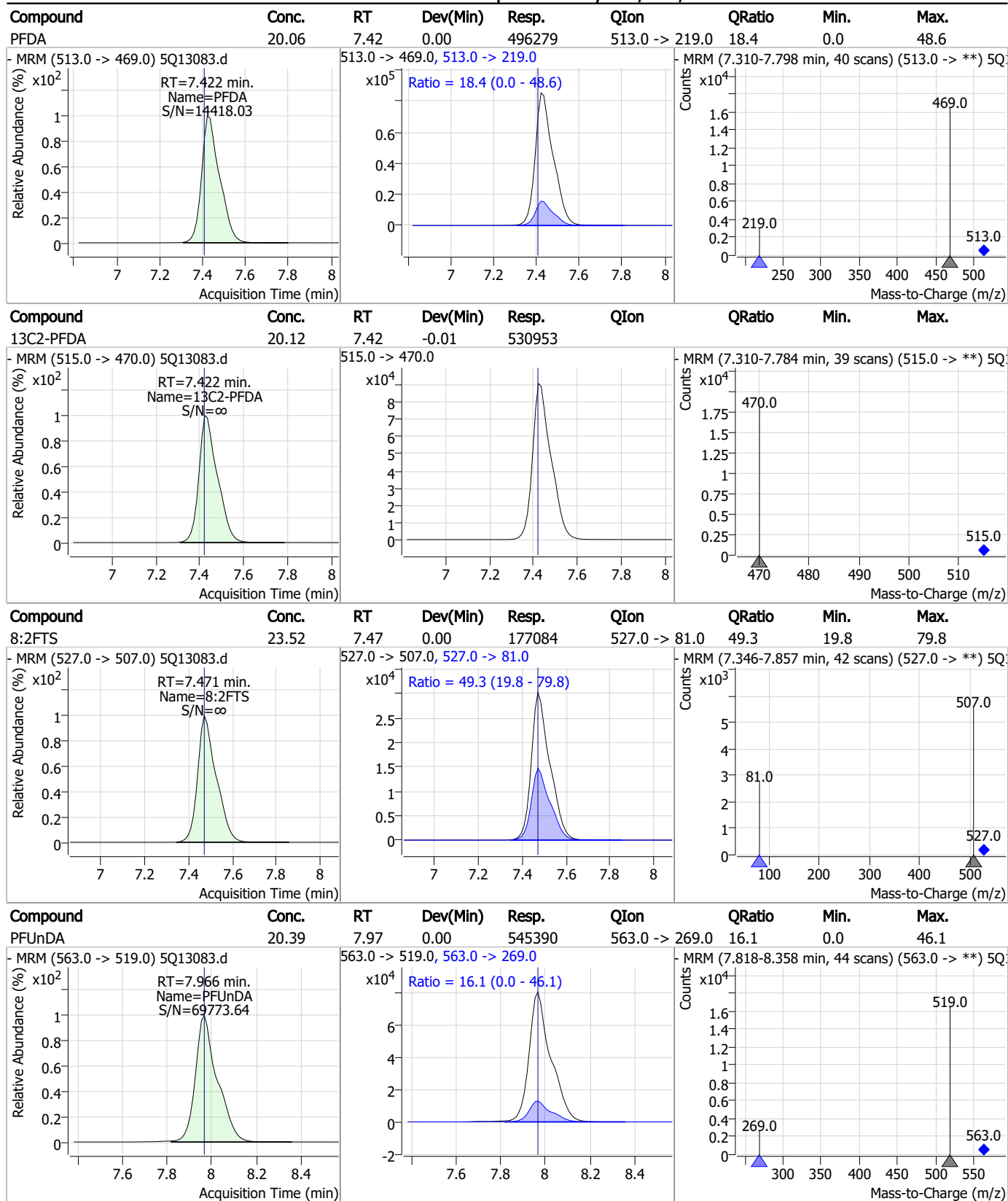


### Perfluorinated Compounds by LC/MS/MS



7.6.13  
7

### Perfluorinated Compounds by LC/MS/MS

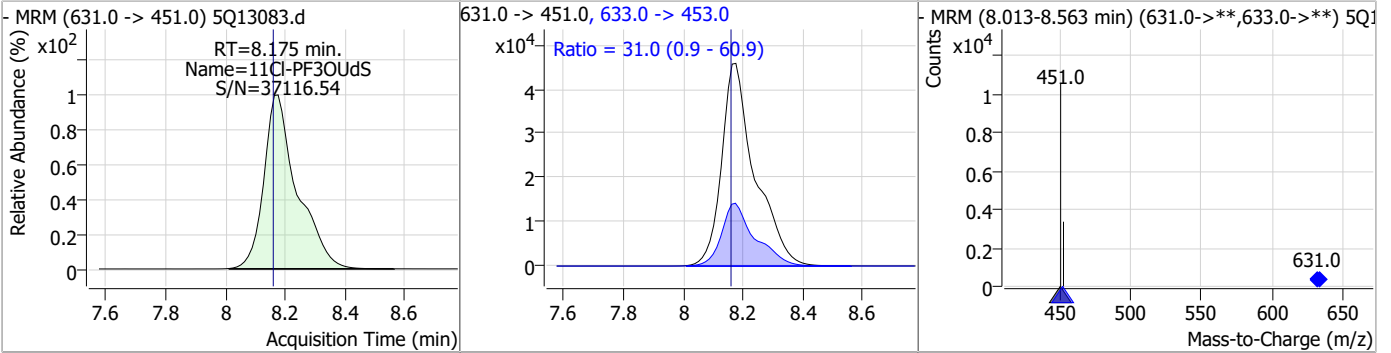


7.6.13

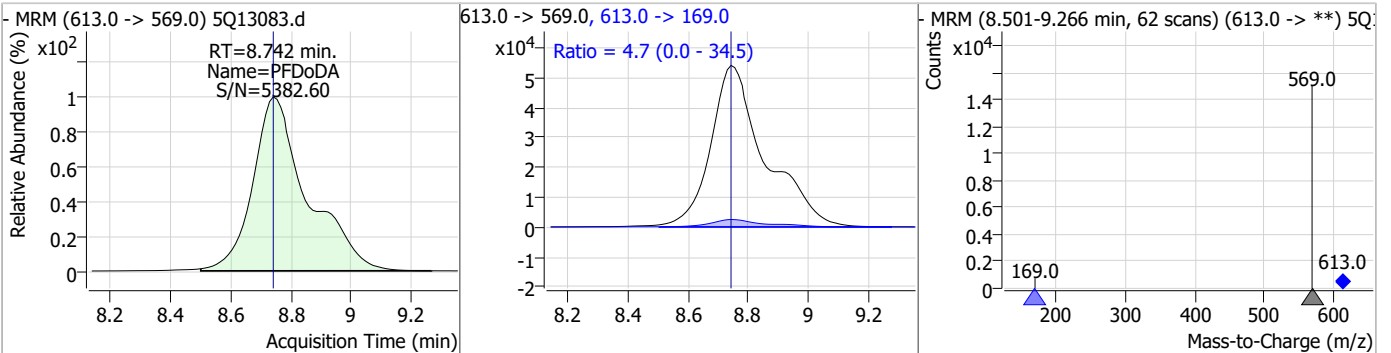
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### Perfluorinated Compounds by LC/MS/MS

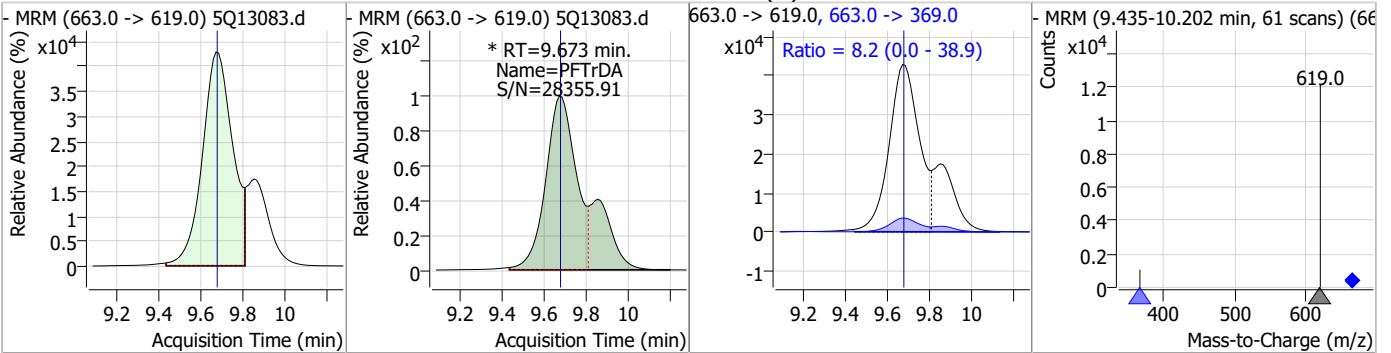
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	19.26	8.18	0.00	353453	633.0 -> 453.0	31.0	0.9	60.9



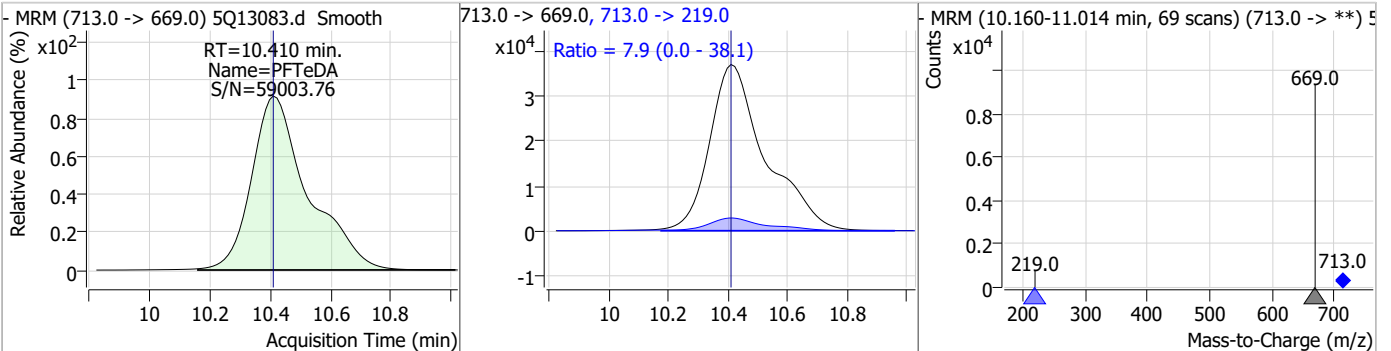
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	20.44	8.74	0.00	678924	613.0 -> 169.0	4.7	0.0	34.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	21.38	9.67	0.00	556684 (m)	663.0 -> 369.0	8.2	0.0	38.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	21.09	10.41	0.00	480932	713.0 -> 219.0	7.9	0.0	38.1



# Manual Integration Approval Summary

**Sample Number:** S5Q203-CC203      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13083.D      **Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Injection Time:** 04/14/23 21:18      **Supervisor approved:** 04/17/23 16:32 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.85	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorotridecanoic acid	72629-94-8		9.67	Poor instrument integration

7.6.13.1

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### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13094.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 12:23:57 AM  
 Sample Name : cc203-50  
 Vial : P3-A8  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	173571	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	403881	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	176384	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	74053	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	188673	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.422	515.0 -> 470.0	1234073	48.54 µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 242.7%		
13C2-PFHxA	4.676	315.0 -> 270.0	504847	48.42 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 242.1%		
d5-EtFOSAA	7.265	589.0 -> 419.0	485983	95.55 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 238.9%		
13C3-HFPO-DA	4.946	287.0 -> 169.0	199627	88.38 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 220.9%		
<b>Target Compounds</b>					
6:2FTS	6.251	427.0 -> 407.0 427.0 -> 81.0	433523 185043	52.76 µg/L	100
8:2FTS	7.471	527.0 -> 507.0 527.0 -> 81.0	412368 205716	53.11 µg/L	100
EtFOSAA	7.266	584.0 -> 419.0 584.0 -> 483.0	256921 137048	48.00 µg/L	m 99
MeFOSAA	7.131	570.0 -> 419.0 570.0 -> 512.0	273099 65505	47.33 µg/L	m 99
PFBA	1.863	213.0 -> 169.0	138067	46.78 µg/L	100
PFBS	3.716	299.0 -> 80.0 299.0 -> 99.0	168053 70477	47.77 µg/L	100
PFDA	7.422	513.0 -> 469.0 513.0 -> 219.0	1146342 215479	48.09 µg/L	100
PFDoDA	8.742	613.0 -> 569.0 613.0 -> 169.0	1615344 76510	48.85 µg/L	99
PFHpA	5.553	363.0 -> 319.0 363.0 -> 169.0	988655 79555	47.50 µg/L	100
PFHpS	6.261	449.0 -> 80.0 449.0 -> 99.0	168562 91675	48.09 µg/L	100
PFHxA	4.678	313.0 -> 269.0 313.0 -> 119.0	347015 31961	48.23 µg/L	100
PFHxS	5.587	399.0 -> 80.0 399.0 -> 99.0	179539 93261	47.20 µg/L	m 100
PFNA	6.876	463.0 -> 419.0 463.0 -> 219.0	1104014 254888	47.47 µg/L	100
PFOA	6.254	413.0 -> 369.0 413.0 -> 169.0	917404 309657	46.80 µg/L	98
PFOS	6.849	499.0 -> 80.0 499.0 -> 99.0	204610 106139	47.92 µg/L	m 99
PFPeA	3.472	263.0 -> 219.0	616232	48.21 µg/L	100

7.6.14  
7

Perfluorinated Compounds by LC/MS/MS

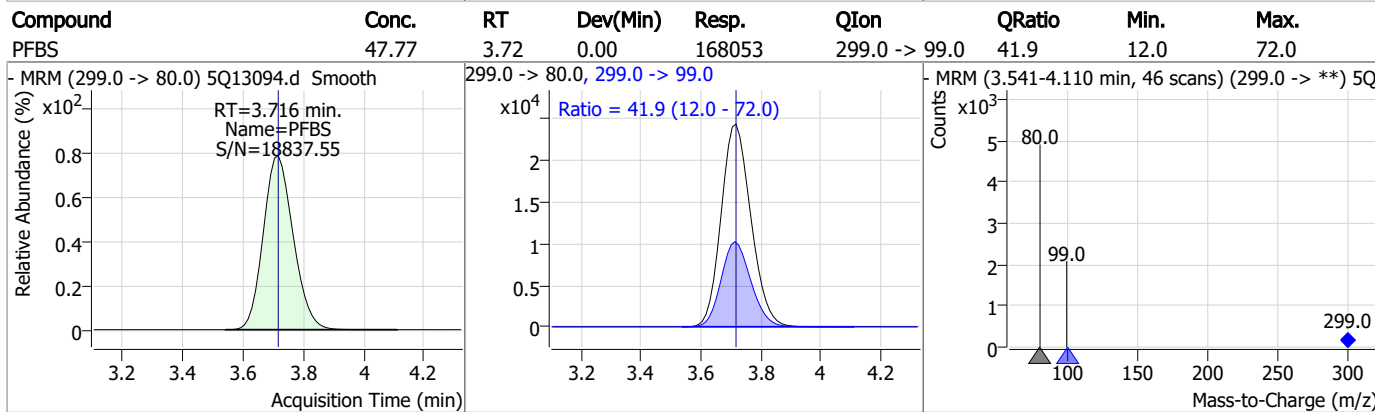
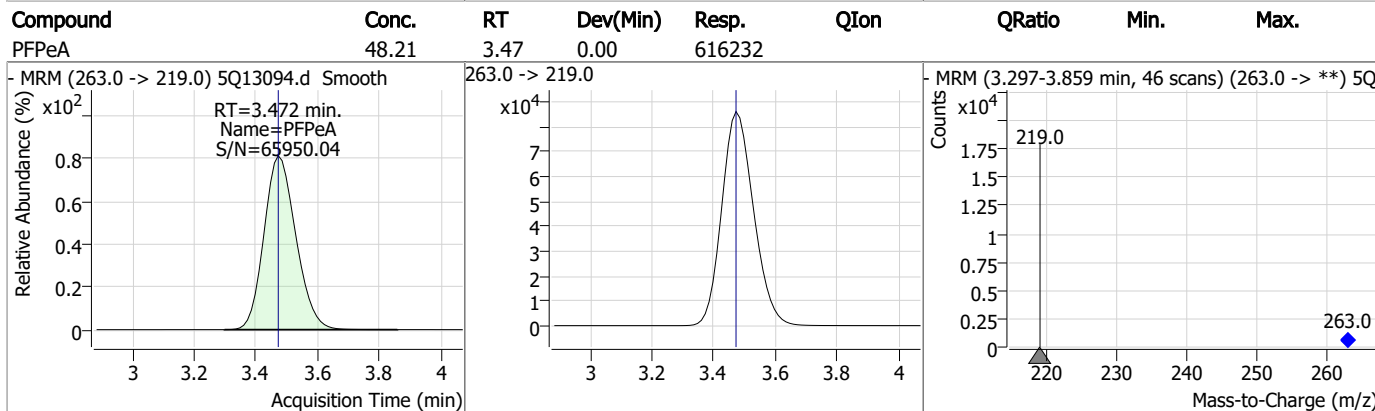
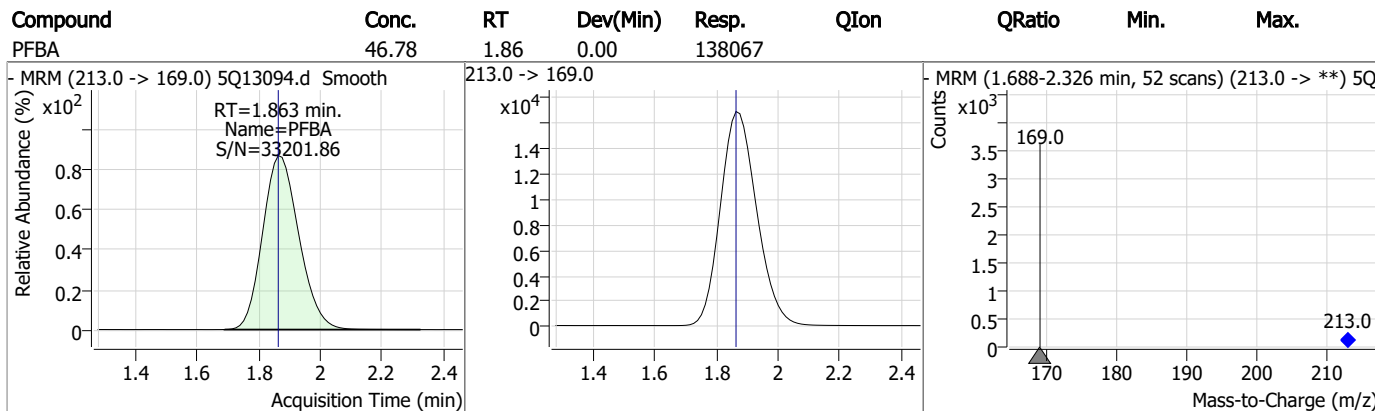
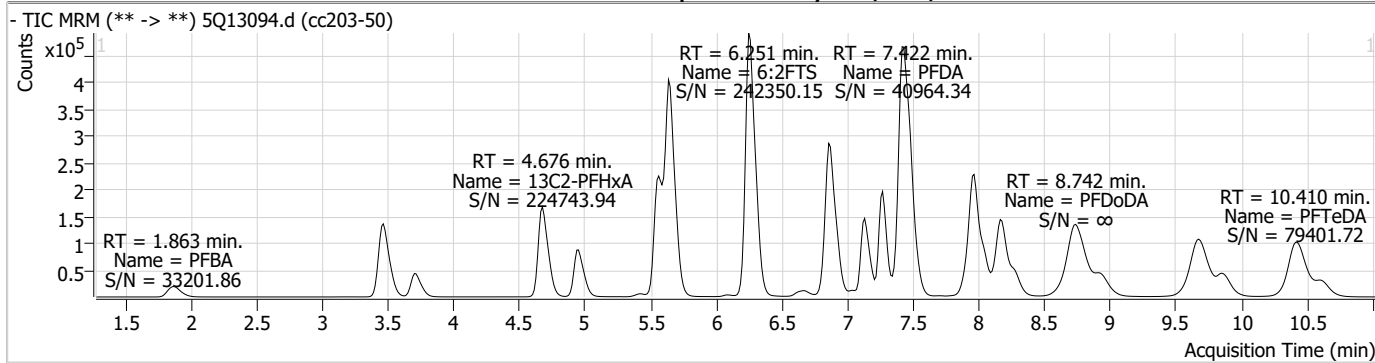
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
PFTeDA	10.410	713.0 -> 669.0	1127826	49.67	µg/L	100
		713.0 -> 219.0	90282			
PFTrDA	9.673	663.0 -> 619.0	1291215	49.79	µg/L	m
		663.0 -> 369.0	108374			
PFUnDA	7.966	563.0 -> 519.0	1284975	48.24	µg/L	100
		563.0 -> 269.0	208318			
ADONA	5.655	377.0 -> 251.0	1388847	47.14	µg/L	100
		377.0 -> 85.0	507081			
9Cl-PF3ONS	7.132	531.0 -> 351.0	132517	45.99	µg/L	99
		533.0 -> 353.0	42086			
11Cl-PF3OUdS	8.163	631.0 -> 451.0	849568	48.05	µg/L	100
		633.0 -> 453.0	262375			
HFPO-DA	4.960	285.0 -> 169.0	118167	44.42	µg/L	98
		329.0 -> 169.0	151285			

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

7.6.14

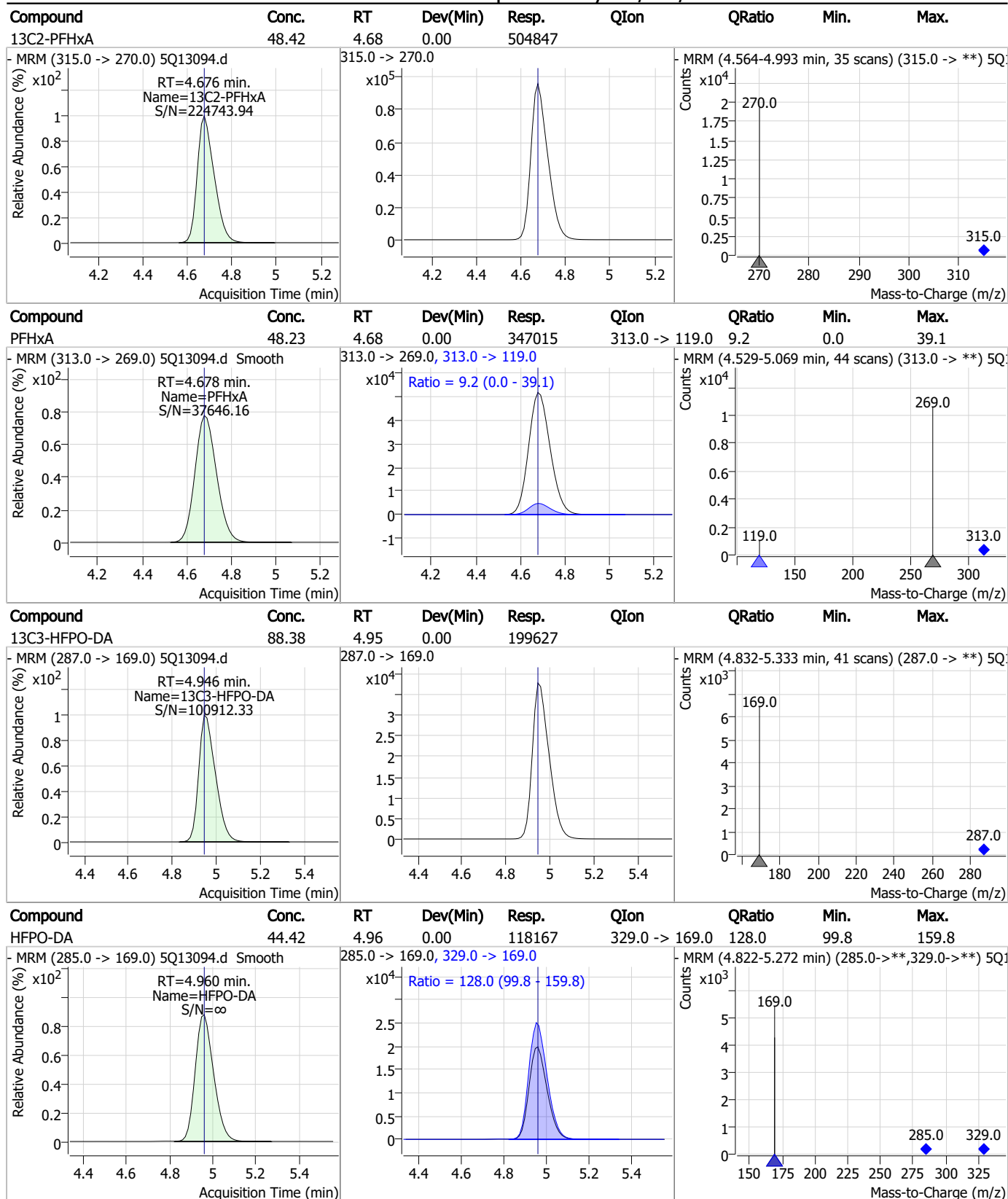
7

### Perfluorinated Compounds by LC/MS/MS





### Perfluorinated Compounds by LC/MS/MS

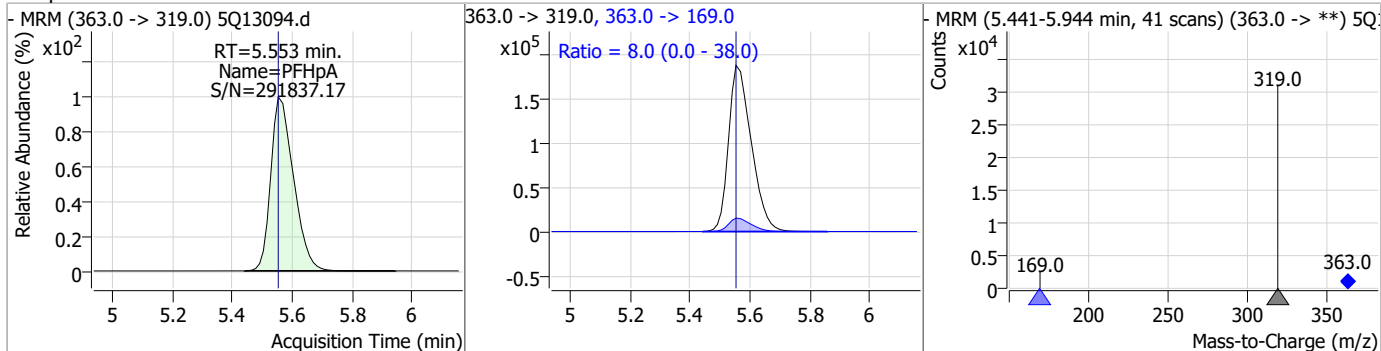


7.6.14

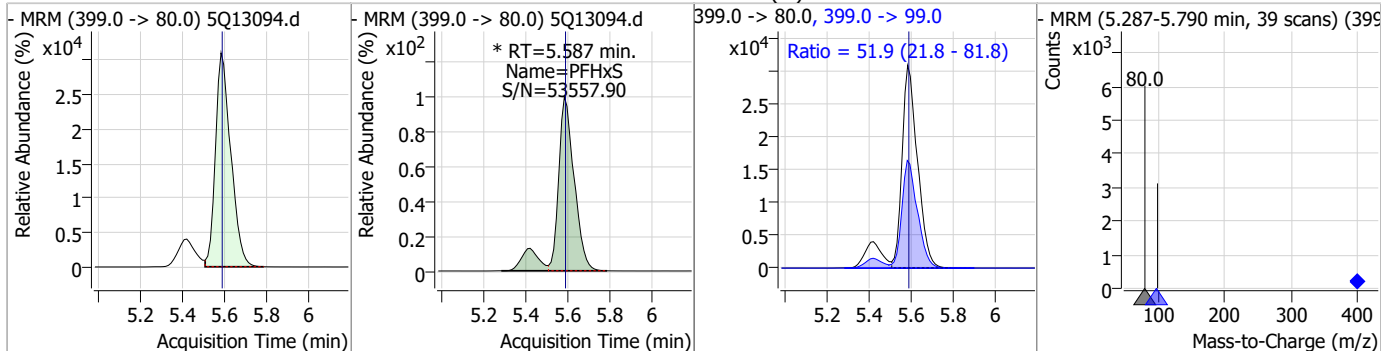
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### Perfluorinated Compounds by LC/MS/MS

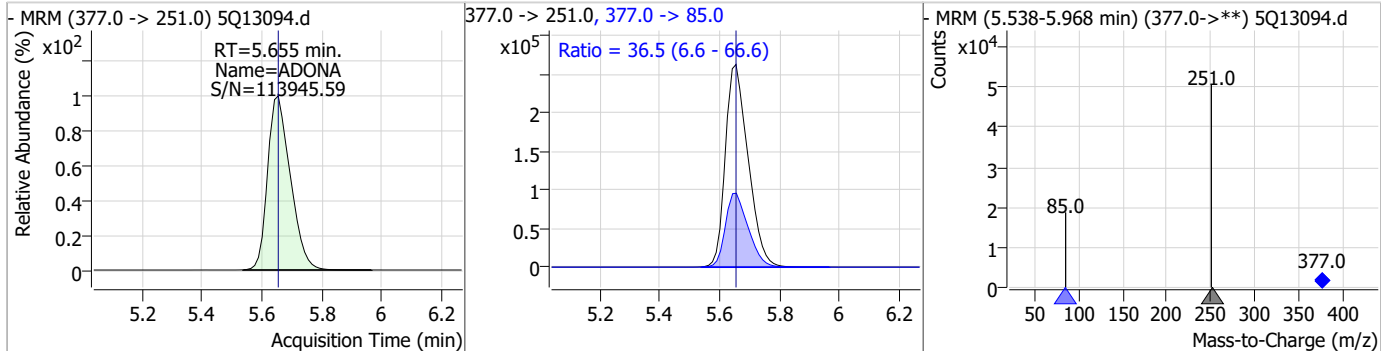
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	47.50	5.55	0.00	988655	363.0 -> 169.0	8.0	0.0	38.0



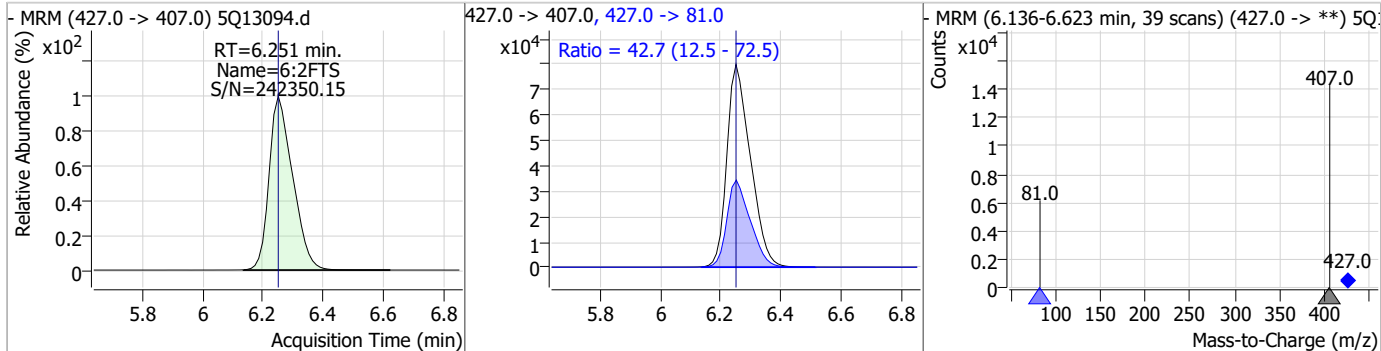
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	47.20	5.59	0.00	179539 (m)	399.0 -> 99.0	51.9	21.8	81.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	47.14	5.66	0.00	1388847	377.0 -> 85.0	36.5	6.6	66.6

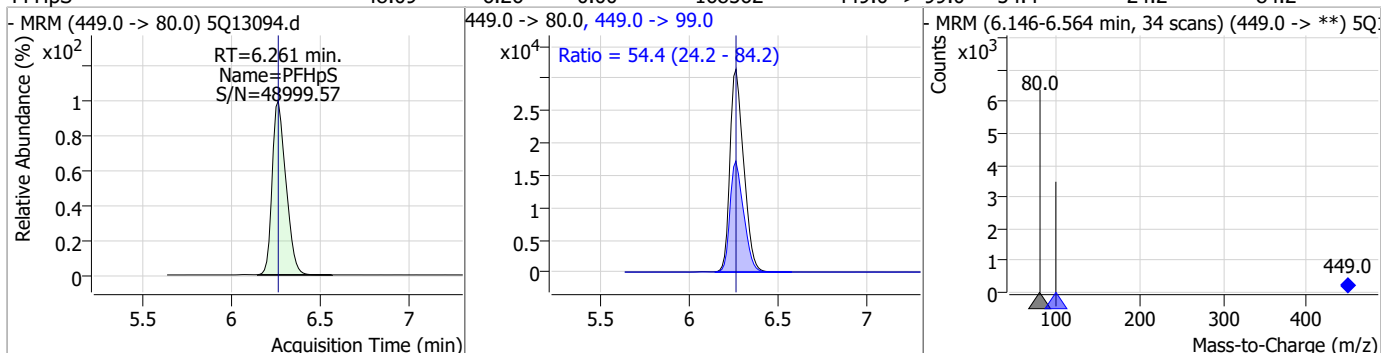


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	52.76	6.25	0.00	433523	427.0 -> 81.0	42.7	12.5	72.5

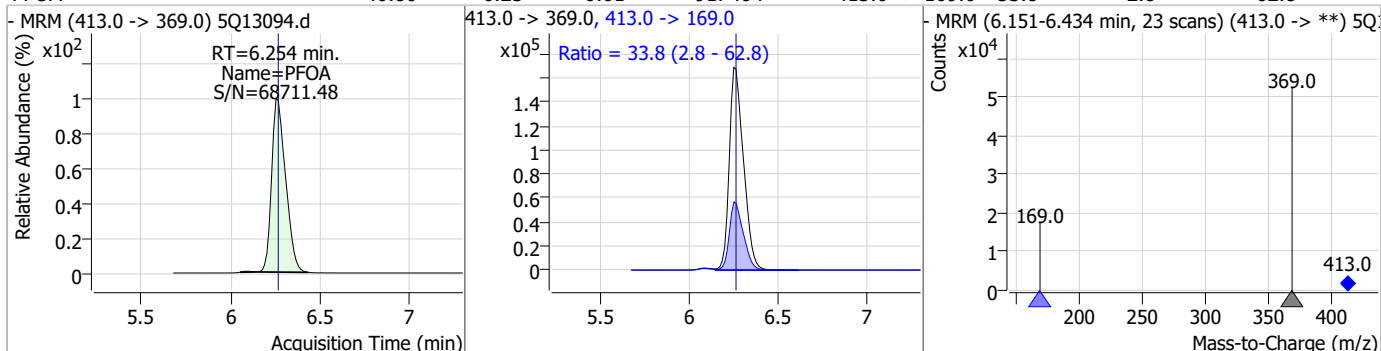


### Perfluorinated Compounds by LC/MS/MS

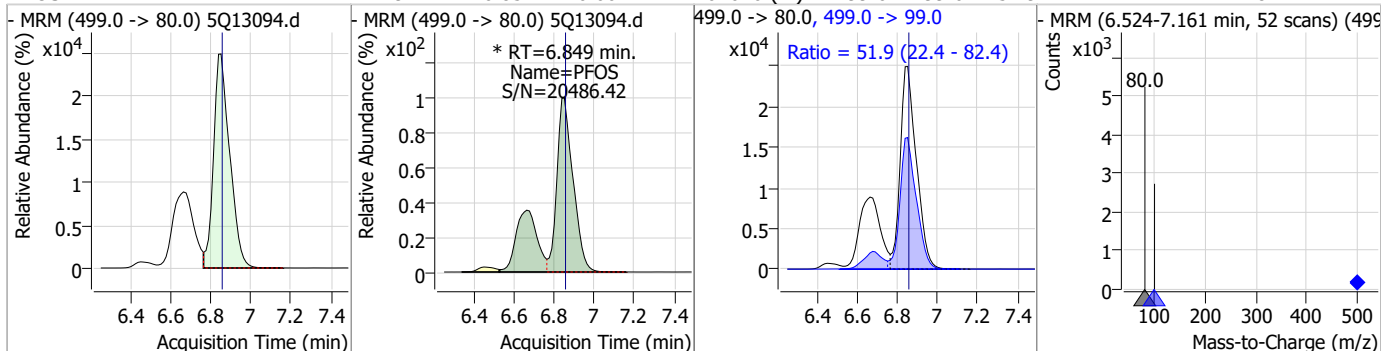
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	48.09	6.26	0.00	168562	449.0 -> 99.0	54.4	24.2	84.2



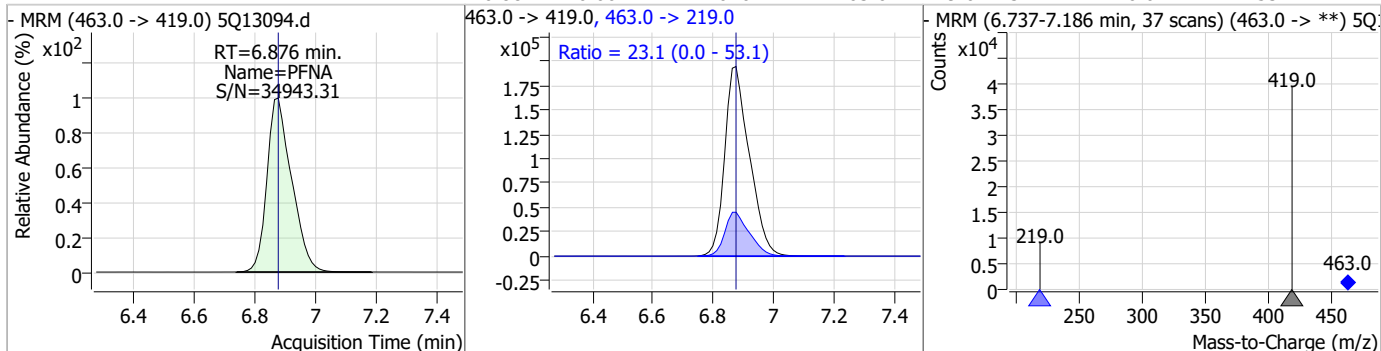
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	46.80	6.25	-0.01	917404	413.0 -> 169.0	33.8	2.8	62.8



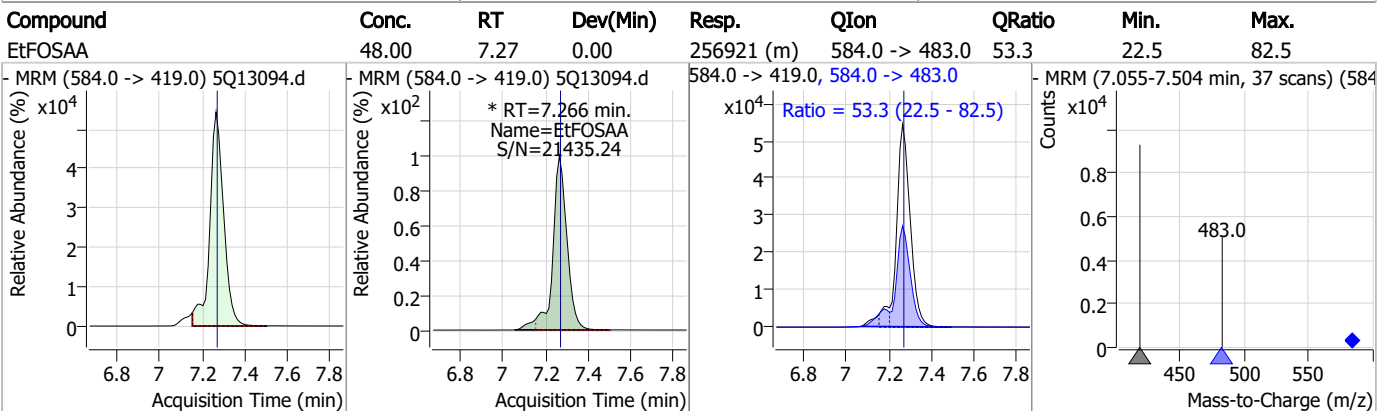
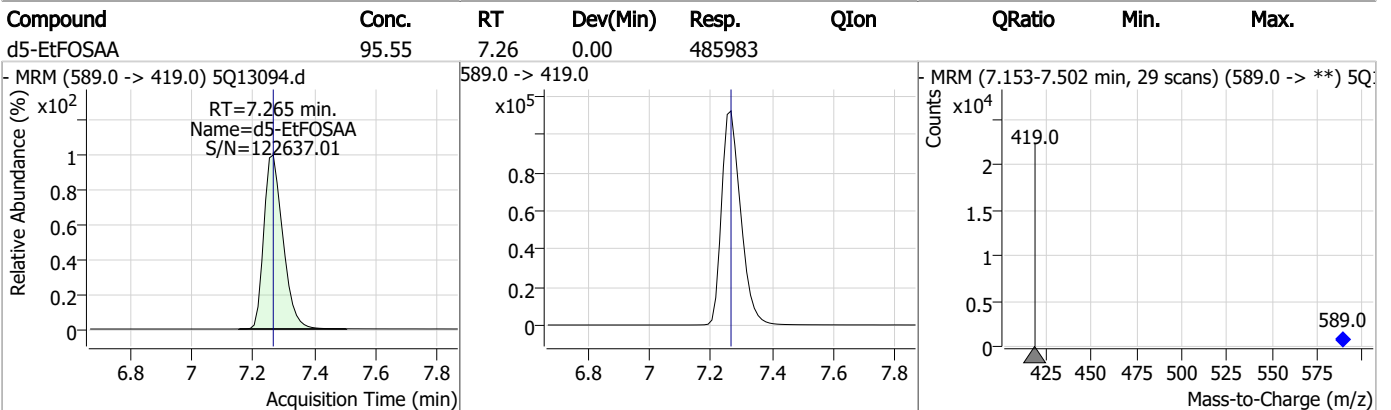
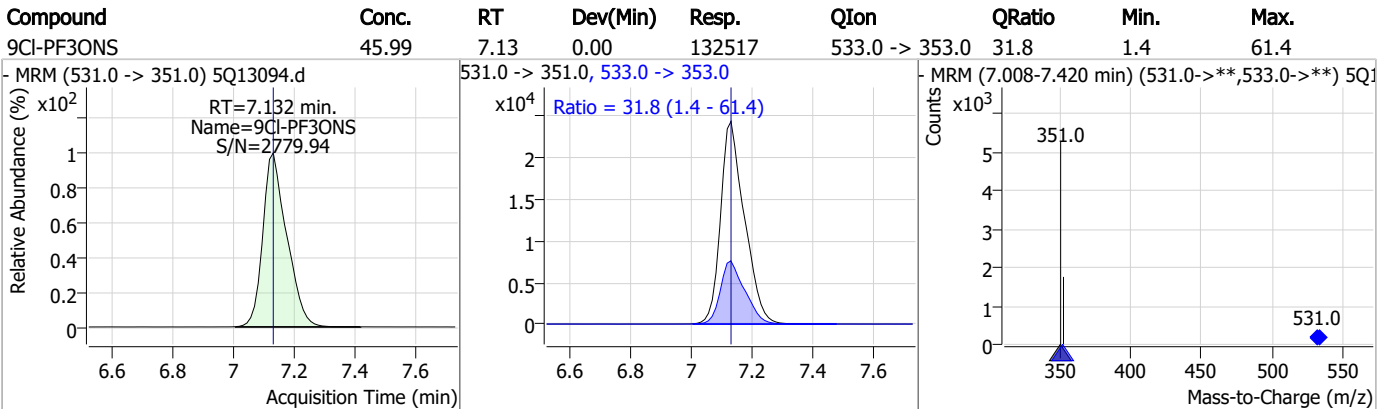
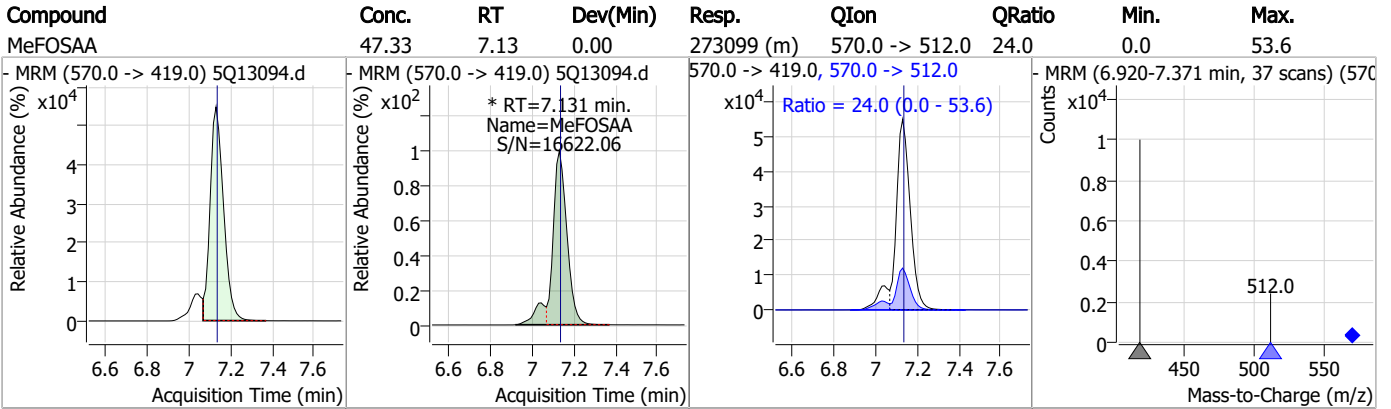
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	47.92	6.85	0.00	204610 (m)	499.0 -> 99.0	51.9	22.4	82.4



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	47.47	6.88	0.00	1104014	463.0 -> 219.0	23.1	0.0	53.1



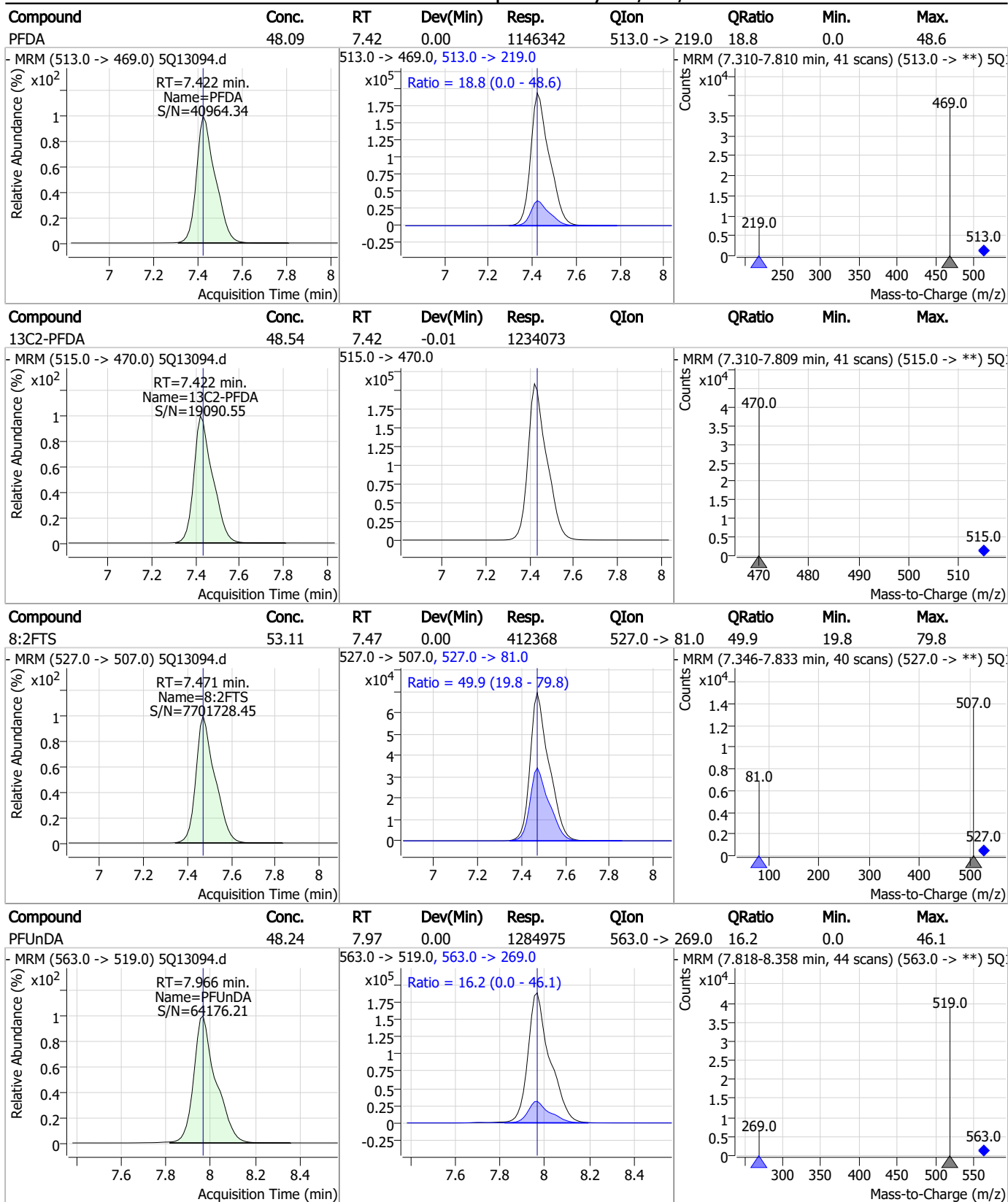
### Perfluorinated Compounds by LC/MS/MS



7.6.14



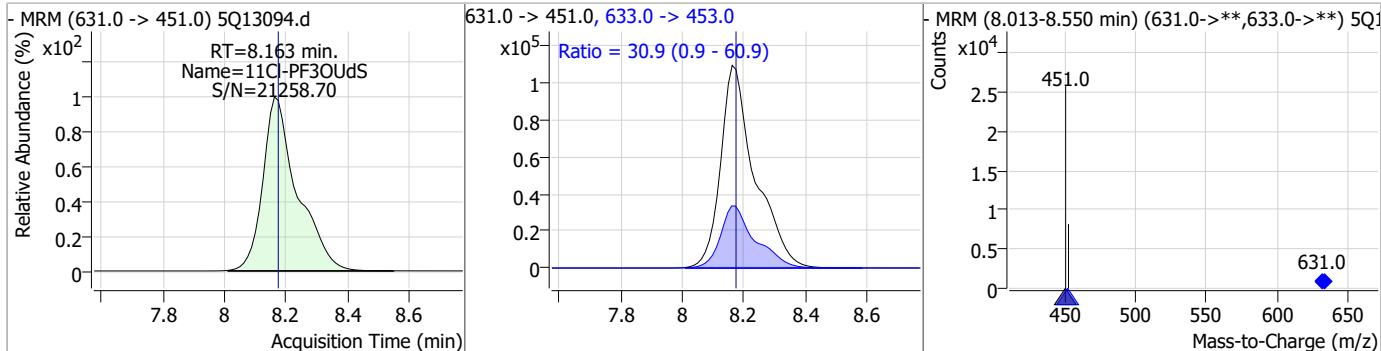
### Perfluorinated Compounds by LC/MS/MS



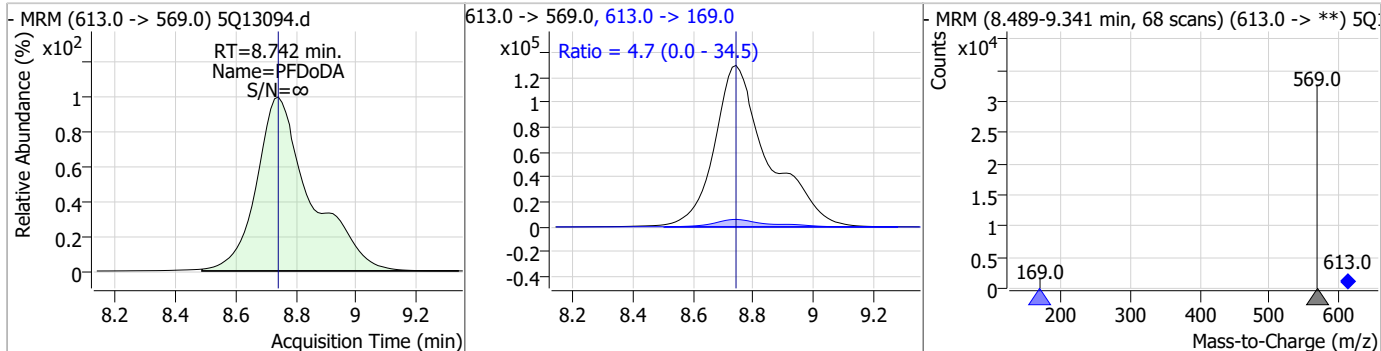
7.6.14

### Perfluorinated Compounds by LC/MS/MS

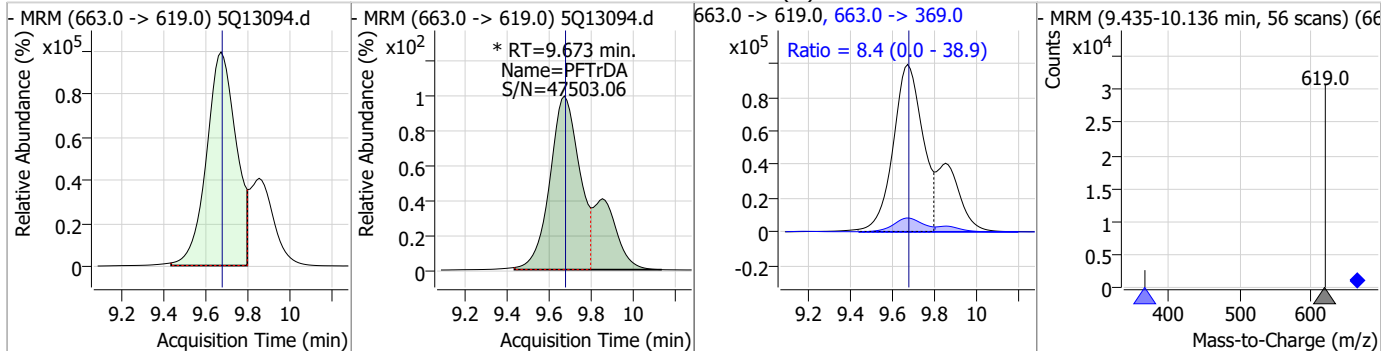
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11Cl-PF3OUdS	48.05	8.16	-0.01	849568	633.0 -> 453.0	30.9	0.9	60.9



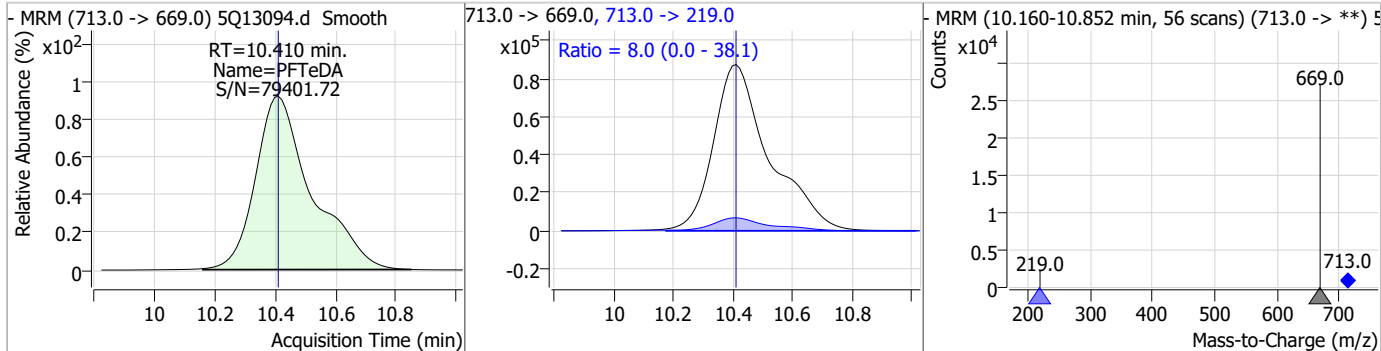
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	48.85	8.74	0.00	1615344	613.0 -> 169.0	4.7	0.0	34.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	49.79	9.67	0.00	1291215 (m)	663.0 -> 369.0	8.4	0.0	38.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	49.67	10.41	0.00	1127826	713.0 -> 219.0	8.0	0.0	38.1



# Manual Integration Approval Summary

**Sample Number:** S5Q203-CC203      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13094.D      **Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Injection Time:** 04/15/23 00:23      **Supervisor approved:** 04/17/23 16:35 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.85	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorotridecanoic acid	72629-94-8		9.67	Poor instrument integration

7.6.14.1  
7

### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13106.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 3:45:45 AM  
 Sample Name : cc203-20  
 Vial : P3-A7  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	164237	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	407210	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	173720	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	73372	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	191154	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.422	515.0 -> 470.0	517374	20.18 µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 100.9%		
13C2-PFHxA	4.676	315.0 -> 270.0	210513	20.03 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 100.1%		
d5-EtFOSAA	7.265	589.0 -> 419.0	201624	39.13 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 97.8%		
13C3-HFPO-DA	4.958	287.0 -> 169.0	83562	36.69 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 91.7%		
<b>Target Compounds</b>					
6:2FTS	6.251	427.0 -> 407.0 427.0 -> 81.0	180590 76747	23.23 µg/L	100
8:2FTS	7.471	527.0 -> 507.0 527.0 -> 81.0	174425 86020	23.74 µg/L	99
EtFOSAA	7.266	584.0 -> 419.0 584.0 -> 483.0	104671 56688	19.30 µg/L	m 98
MeFOSAA	7.131	570.0 -> 419.0 570.0 -> 512.0	113662 27414	19.44 µg/L	m 99
PFBA	1.863	213.0 -> 169.0	55624	19.14 µg/L	100
PFBS	3.716	299.0 -> 80.0 299.0 -> 99.0	68669 28764	19.70 µg/L	100
PFDA	7.422	513.0 -> 469.0 513.0 -> 219.0	480550 88798	19.99 µg/L	100
PFDODA	8.742	613.0 -> 569.0 613.0 -> 169.0	662003 31107	20.20 µg/L	99
PFHpA	5.553	363.0 -> 319.0 363.0 -> 169.0	402082 32175	19.16 µg/L	100
PFHpS	6.261	449.0 -> 80.0 449.0 -> 99.0	69855 37946	20.11 µg/L	100
PFHxA	4.678	313.0 -> 269.0 313.0 -> 119.0	144432 13303	19.91 µg/L	100
PFHxS	5.587	399.0 -> 80.0 399.0 -> 99.0	72485 37756	19.23 µg/L	m 100
PFNA	6.876	463.0 -> 419.0 463.0 -> 219.0	455413 103846	19.42 µg/L	99
PFOA	6.266	413.0 -> 369.0 413.0 -> 169.0	386045 127330	19.53 µg/L	100
PFOS	6.849	499.0 -> 80.0 499.0 -> 99.0	83950 36268	19.84 µg/L	m 87
PFPeA	3.472	263.0 -> 219.0	248522	19.74 µg/L	100

7.6.15  
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Perfluorinated Compounds by LC/MS/MS

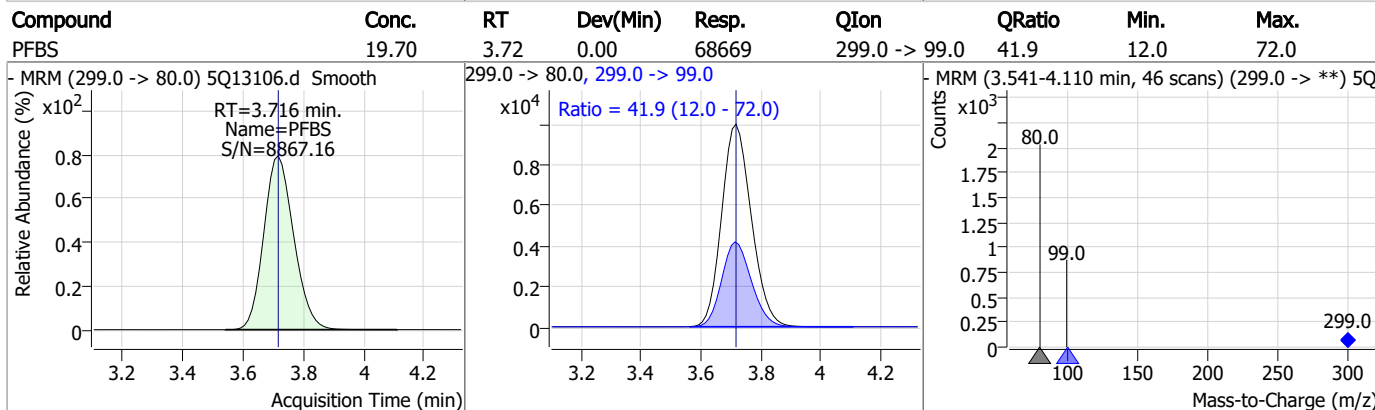
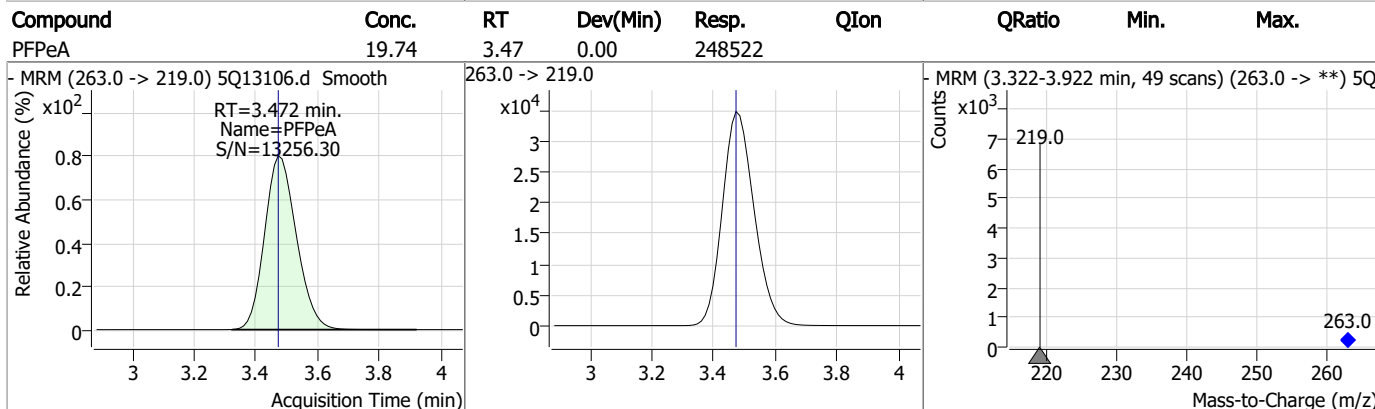
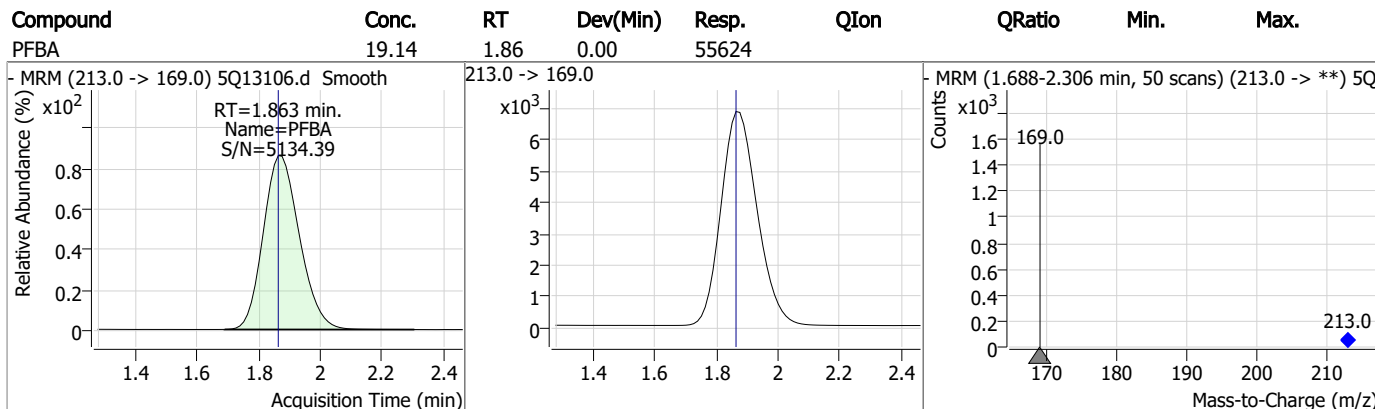
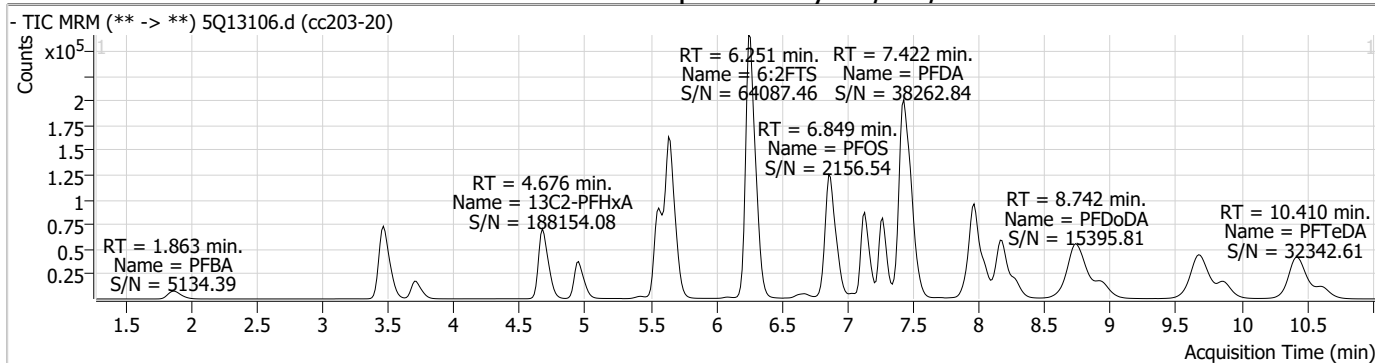
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
PFTeDA	10.410	713.0 -> 669.0	461935	20.53	µg/L	99
		713.0 -> 219.0	36562			
PFTrDA	9.673	663.0 -> 619.0	532221	20.71	µg/L	m
		663.0 -> 369.0	45181			
PFUnDA	7.966	563.0 -> 519.0	531938	20.16	µg/L	100
		563.0 -> 269.0	85675			
ADONA	5.655	377.0 -> 251.0	558606	18.80	µg/L	100
		377.0 -> 85.0	203543			
9Cl-PF3ONS	7.132	531.0 -> 351.0	53584	18.45	µg/L	100
		533.0 -> 353.0	16852			
11Cl-PF3OUdS	8.163	631.0 -> 451.0	347455	19.49	µg/L	100
		633.0 -> 453.0	107128			
HFPO-DA	4.960	285.0 -> 169.0	48411	18.05	µg/L	98
		329.0 -> 169.0	64089			

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

7.6.15

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### Perfluorinated Compounds by LC/MS/MS



7.6.15  
7

### Perfluorinated Compounds by LC/MS/MS

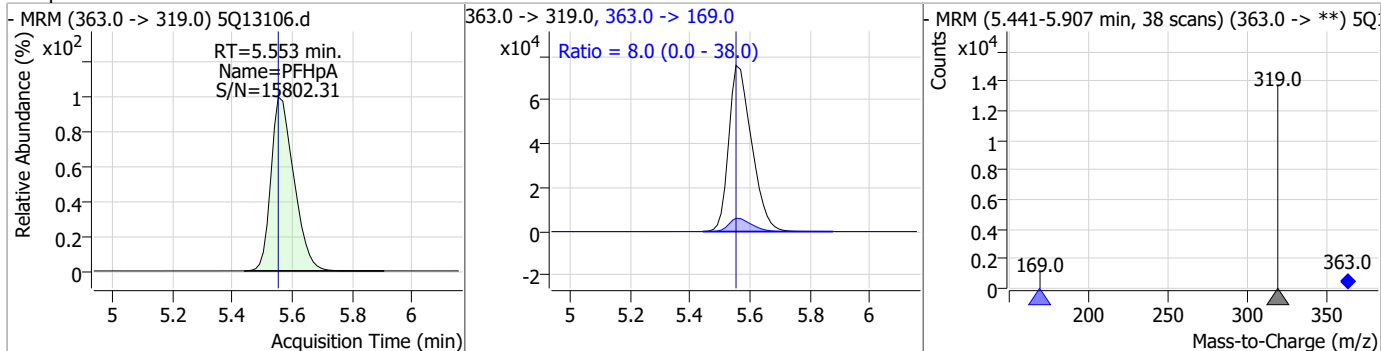
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	20.03	4.68	0.00	210513				
PFHxA	19.91	4.68	0.00	144432	313.0 ->	119.0	9.2	0.0
13C3-HFPO-DA	36.69	4.96	0.01	83562				
HFPO-DA	18.05	4.96	0.00	48411	329.0 ->	169.0	132.4	99.8

7.6.15

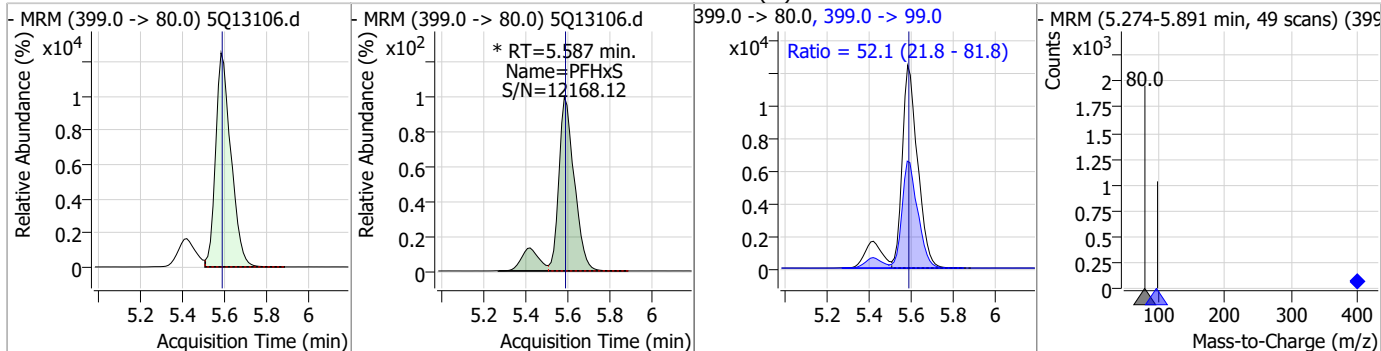
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### Perfluorinated Compounds by LC/MS/MS

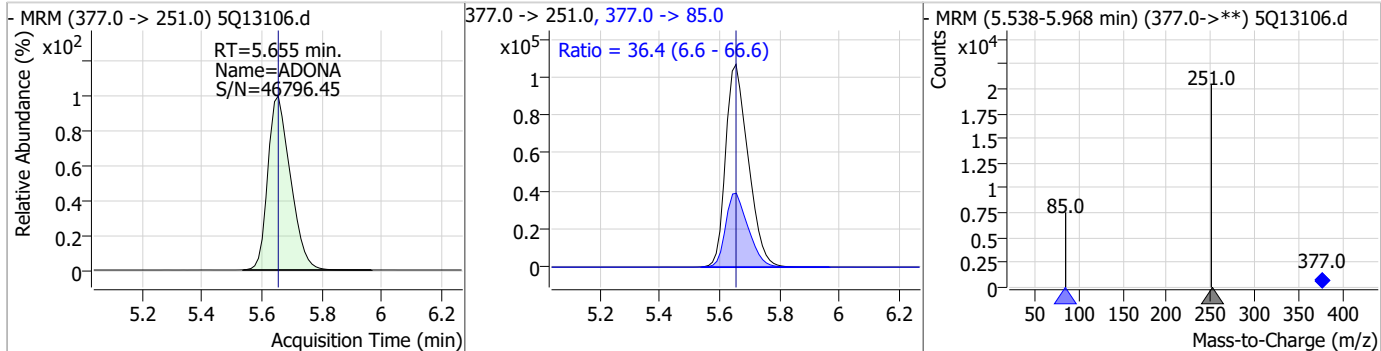
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	19.16	5.55	0.00	402082	363.0 -> 169.0	8.0	0.0	38.0



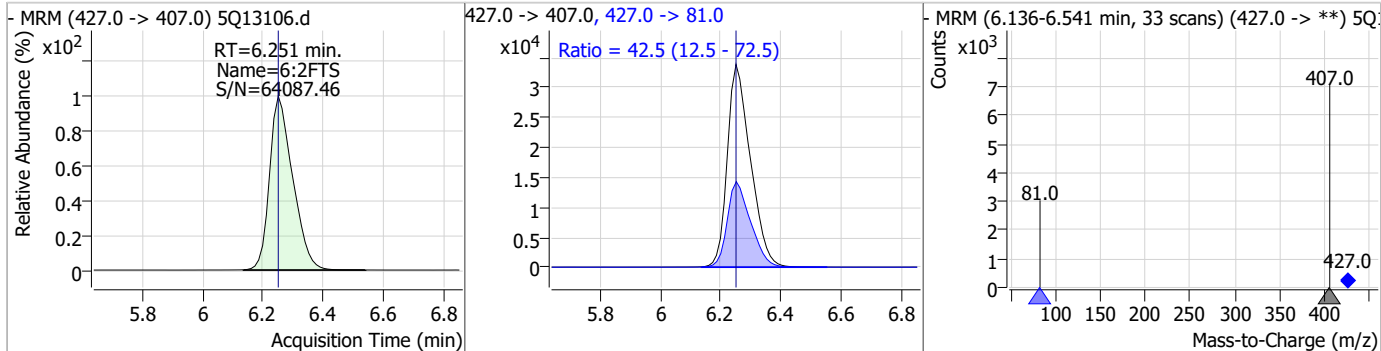
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	19.23	5.59	0.00	72485 (m)	399.0 -> 99.0	52.1	21.8	81.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	18.80	5.66	0.00	558606	377.0 -> 85.0	36.4	6.6	66.6

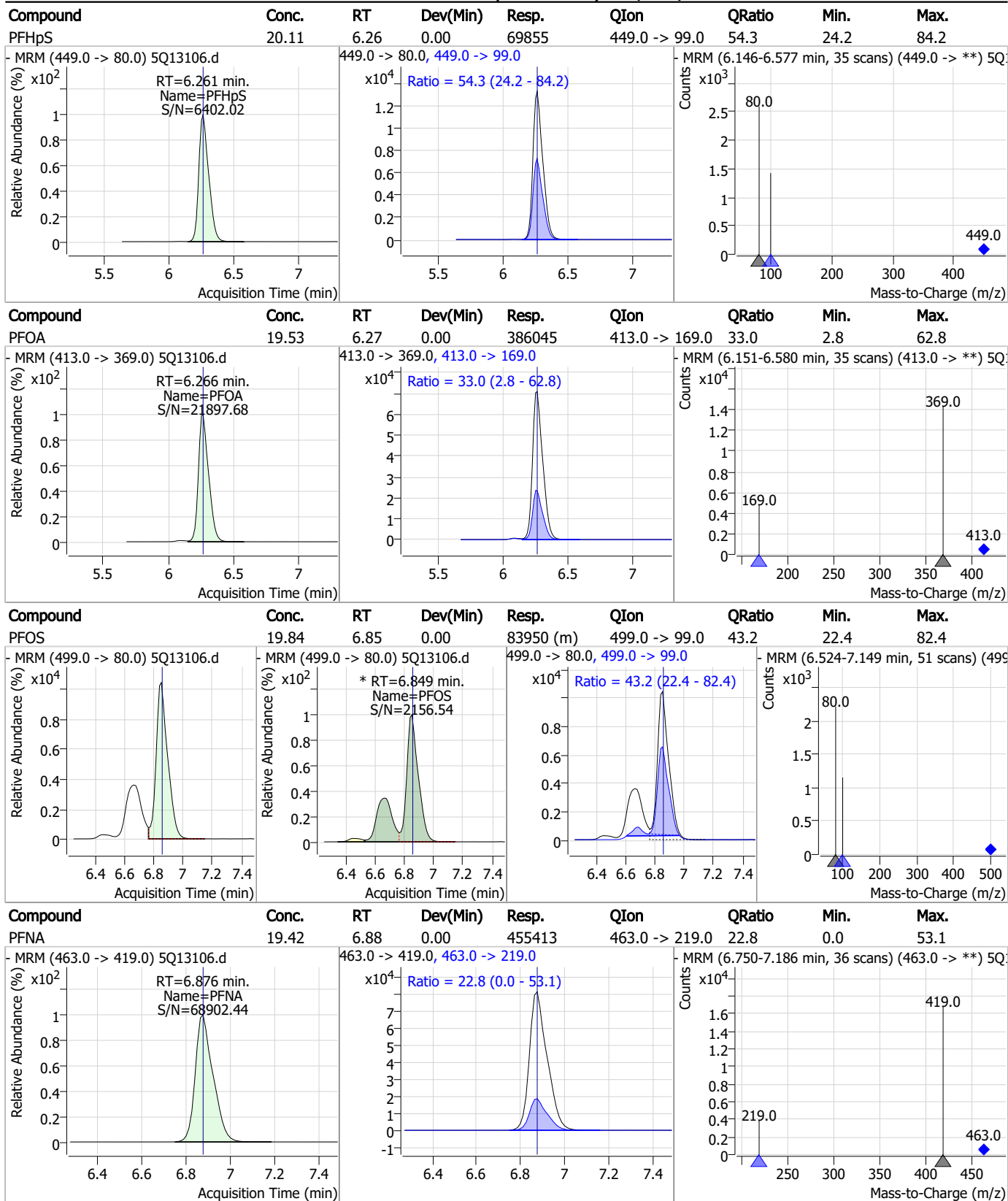


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	23.23	6.25	0.00	180590	427.0 -> 81.0	42.5	12.5	72.5



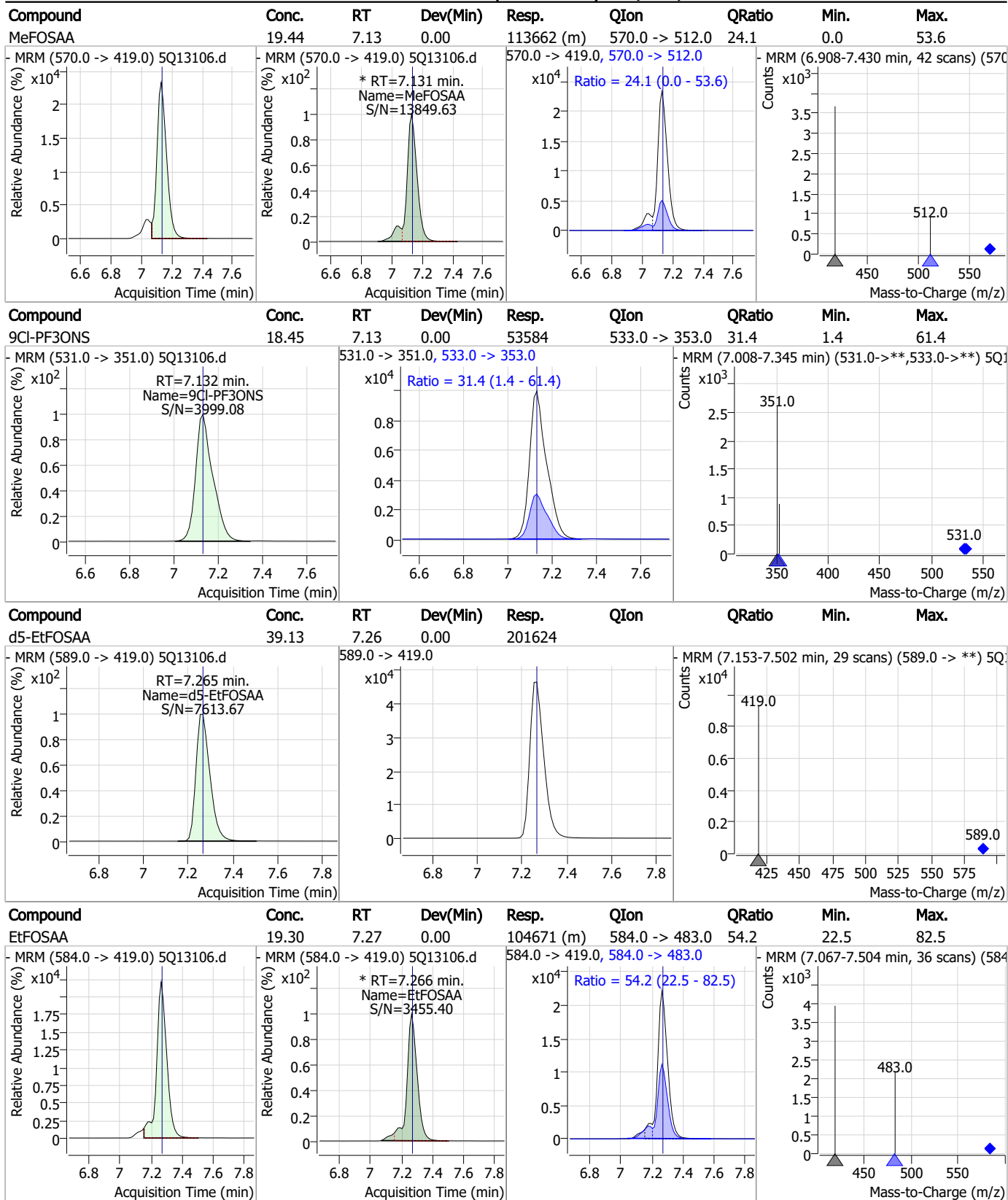
7.6.15  
7

### Perfluorinated Compounds by LC/MS/MS



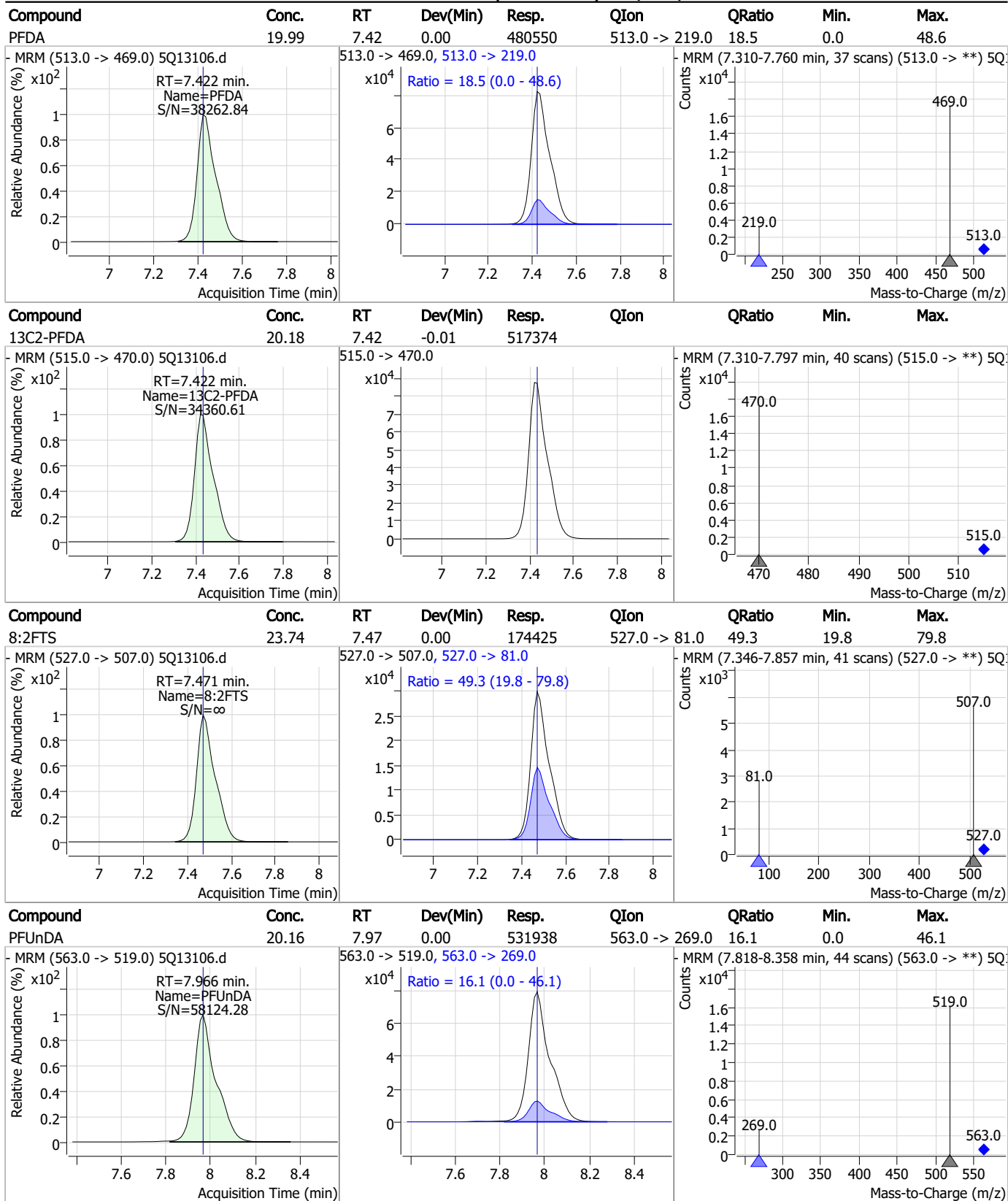
7.6.15  
7

### Perfluorinated Compounds by LC/MS/MS



7.6.15  
7

### Perfluorinated Compounds by LC/MS/MS

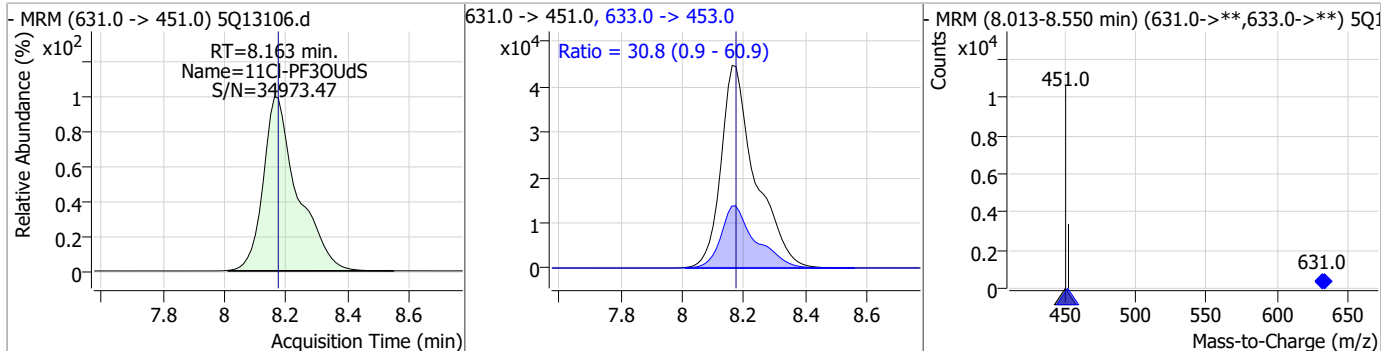


7.6.15

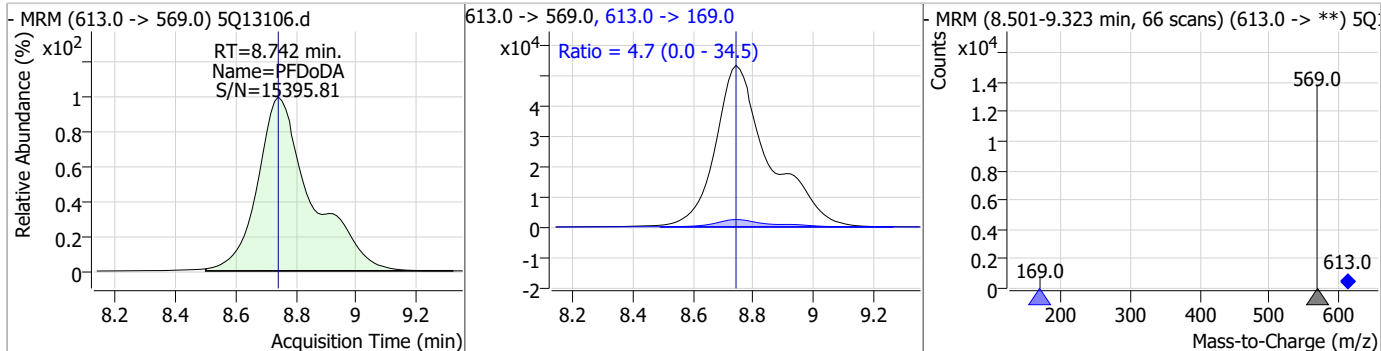
7

### Perfluorinated Compounds by LC/MS/MS

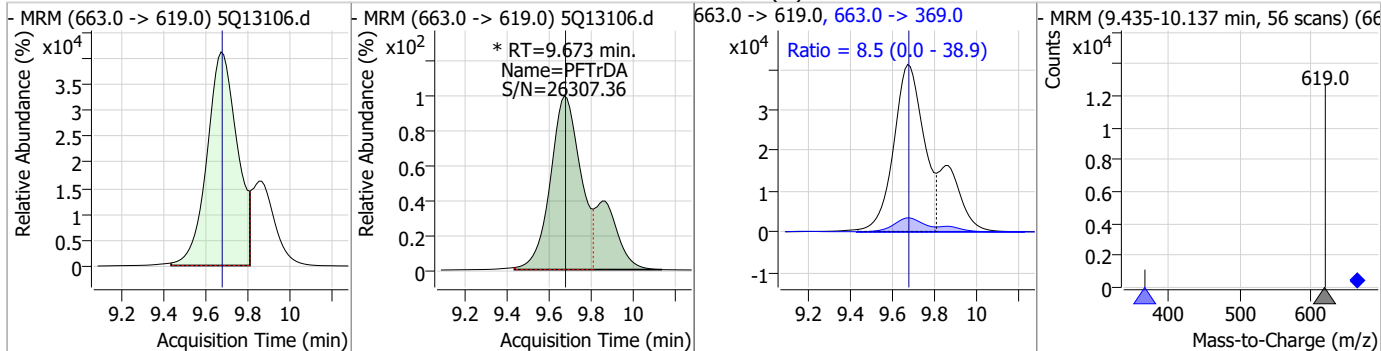
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11CI-PF3OUdS	19.49	8.16	-0.01	347455	633.0 -> 453.0	30.8	0.9	60.9



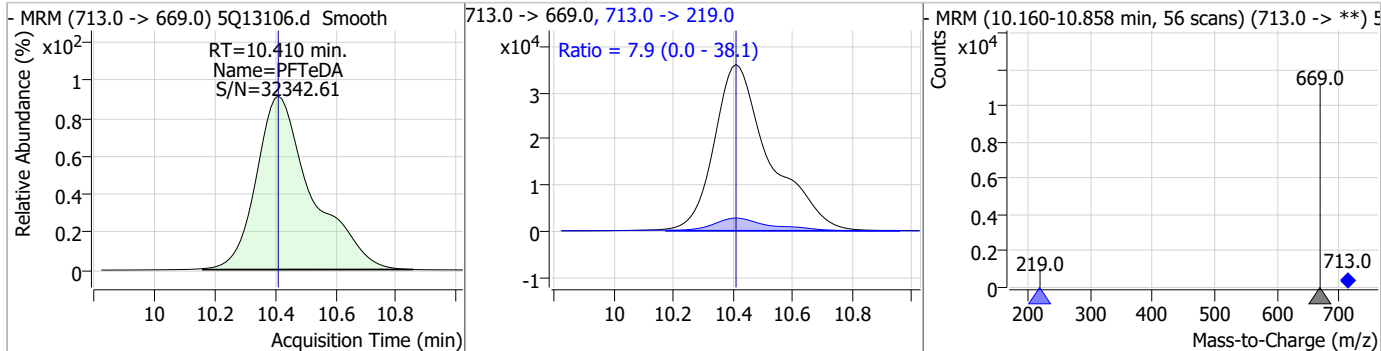
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	20.20	8.74	0.00	662003	613.0 -> 169.0	4.7	0.0	34.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	20.71	9.67	0.00	532221 (m)	663.0 -> 369.0	8.5	0.0	38.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	20.53	10.41	0.00	461935	713.0 -> 219.0	7.9	0.0	38.1



7.6.15  
7



# Manual Integration Approval Summary

**Sample Number:** S5Q203-CC203  
**Lab FileID:** 5Q13106.D  
**Injection Time:** 04/15/23 03:45

**Method:** EPA 537.1 REV 1.0  
**Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Supervisor approved:** 04/17/23 16:35 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.85	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorotridecanoic acid	72629-94-8		9.67	Poor instrument integration

7.6.15.1

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## Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13116.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 6:33:59 AM  
 Sample Name : cc203-50  
 Vial : P3-A8  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	172489	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	396390	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	174777	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	73943	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	185495	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.422	515.0 -> 470.0	1228671	49.24 µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 246.2%		
13C2-PFHxA	4.676	315.0 -> 270.0	499893	48.85 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 244.3%		
d5-EtFOSAA	7.265	589.0 -> 419.0	480238	96.03 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 240.1%		
13C3-HFPO-DA	4.946	287.0 -> 169.0	208147	93.89 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 234.7%		
<b>Target Compounds</b>					
6:2FTS	6.251	427.0 -> 407.0 427.0 -> 81.0	427272 182102	52.32 µg/L	100
8:2FTS	7.471	527.0 -> 507.0 527.0 -> 81.0	412082 203540	53.40 µg/L	99
EtFOSAA	7.266	584.0 -> 419.0 584.0 -> 483.0	251760 135750	47.84 µg/L	m 98
MeFOSAA	7.131	570.0 -> 419.0 570.0 -> 512.0	270540 64361	47.69 µg/L	m 100
PFBA	1.863	213.0 -> 169.0	135025	46.17 µg/L	100
PFBS	3.716	299.0 -> 80.0 299.0 -> 99.0	165997 69435	47.26 µg/L	100
PFDA	7.422	513.0 -> 469.0 513.0 -> 219.0	1136189 215593	48.56 µg/L	99
PFDoDA	8.742	613.0 -> 569.0 613.0 -> 169.0	1532196 75775	46.40 µg/L	m 99
PFHpA	5.553	363.0 -> 319.0 363.0 -> 169.0	984030 78450	48.17 µg/L	100
PFHpS	6.261	449.0 -> 80.0 449.0 -> 99.0	167756 90997	47.93 µg/L	100
PFHxA	4.678	313.0 -> 269.0 313.0 -> 119.0	341525 31650	48.36 µg/L	100
PFHxS	5.587	399.0 -> 80.0 399.0 -> 99.0	178647 92541	47.03 µg/L	m 100
PFNA	6.876	463.0 -> 419.0 463.0 -> 219.0	1100764 253453	48.22 µg/L	100
PFOA	6.254	413.0 -> 369.0 413.0 -> 169.0	919343 305682	47.78 µg/L	99
PFOS	6.849	499.0 -> 80.0 499.0 -> 99.0	204825 105075	48.04 µg/L	m 98
PFPeA	3.472	263.0 -> 219.0	613327	48.42 µg/L	100

7.6.16  
7

Perfluorinated Compounds by LC/MS/MS

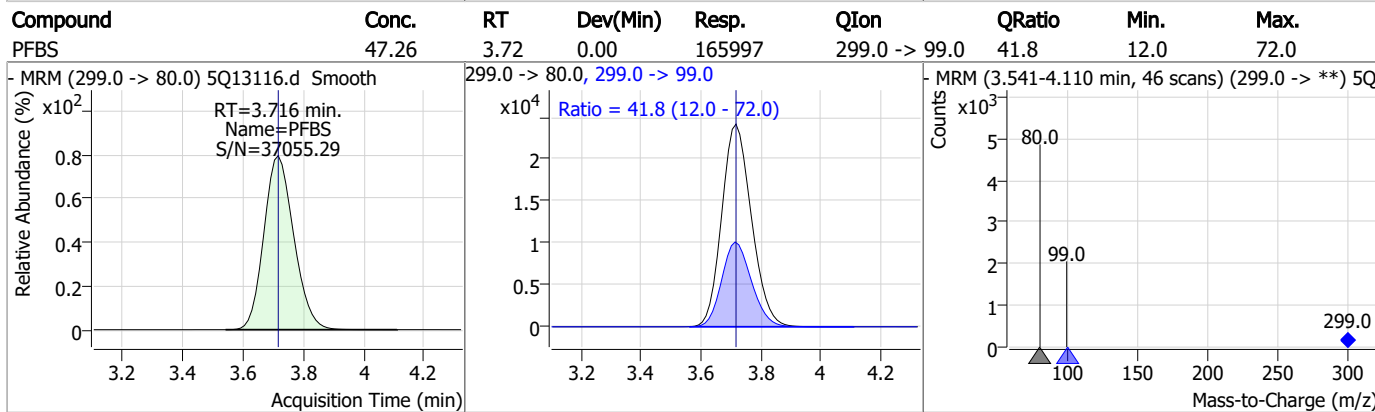
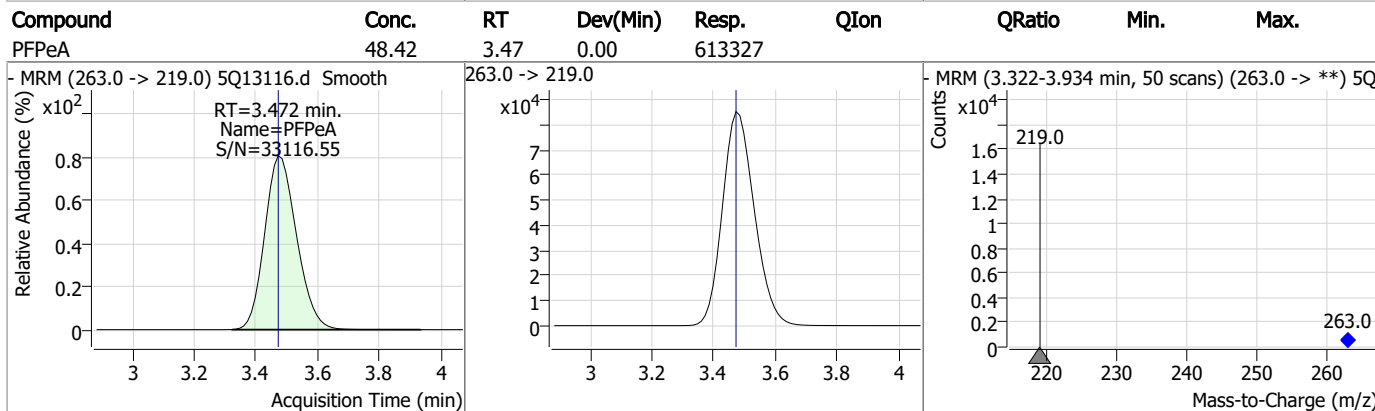
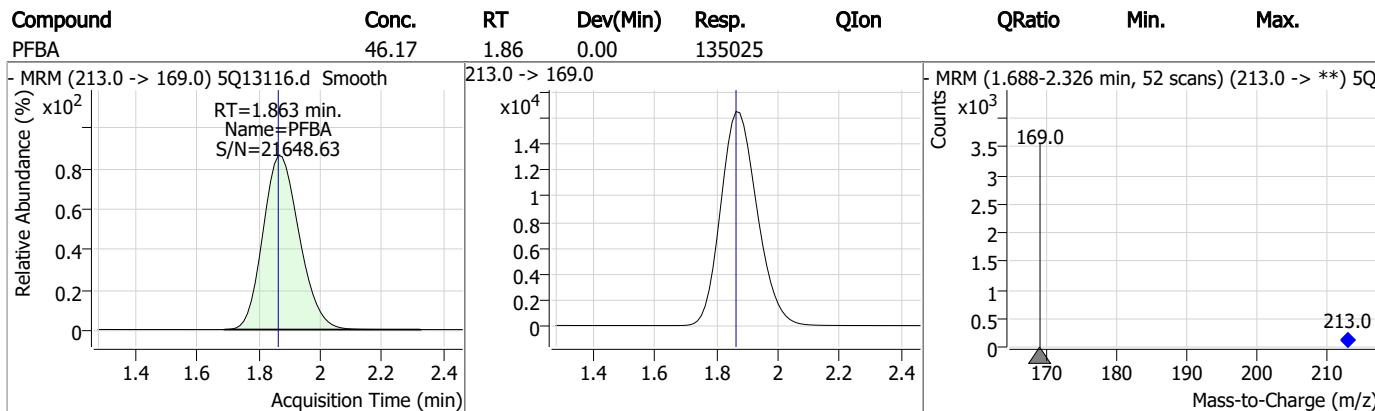
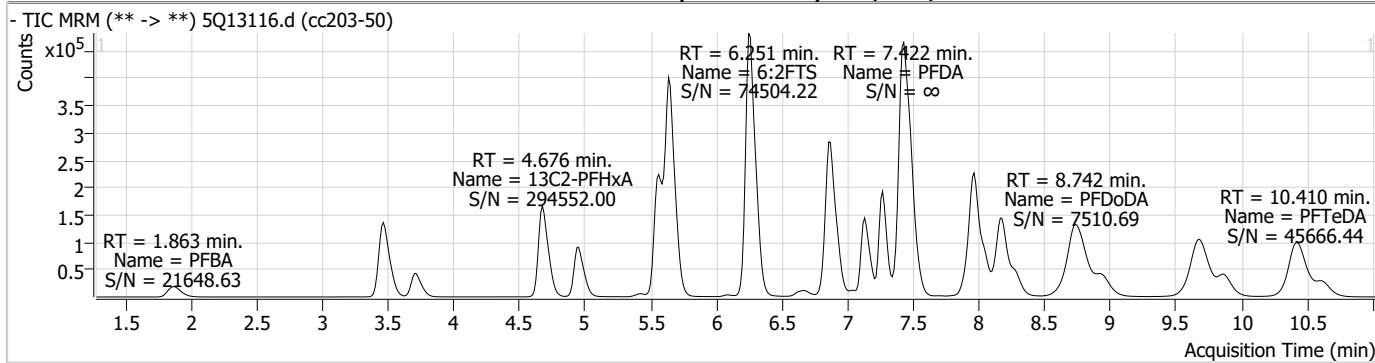
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
PFTeDA	10.410	713.0 -> 669.0	1106674	48.81	µg/L	99
		713.0 -> 219.0	87265			
PFTrDA	9.673	663.0 -> 619.0	1274081	49.21	µg/L	m
		663.0 -> 369.0	104428			
PFUnDA	7.966	563.0 -> 519.0	1272687	47.85	µg/L	99
		563.0 -> 269.0	208509			
ADONA	5.655	377.0 -> 251.0	1377041	47.62	µg/L	100
		377.0 -> 85.0	500080			
9CI-PF3ONS	7.132	531.0 -> 351.0	132384	46.82	µg/L	99
		533.0 -> 353.0	42110			
11CI-PF3OUdS	8.163	631.0 -> 451.0	850379	49.00	µg/L	100
		633.0 -> 453.0	263089			
HFPO-DA	4.960	285.0 -> 169.0	122227	46.81	µg/L	99
		329.0 -> 169.0	156634			

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

7.6.16

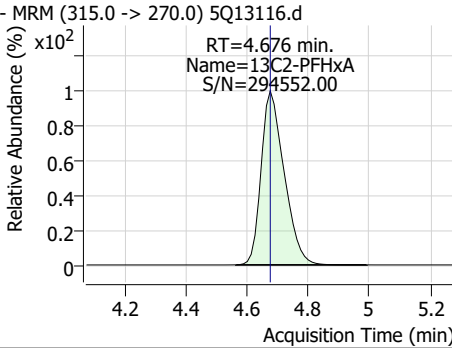
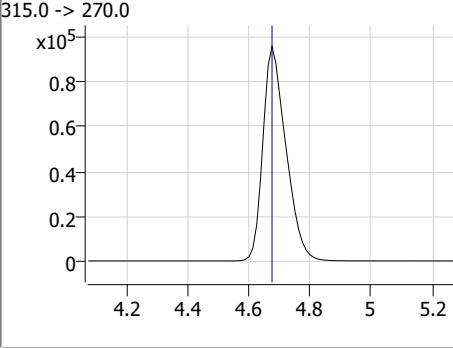
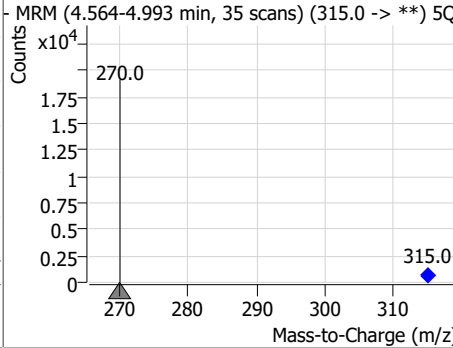
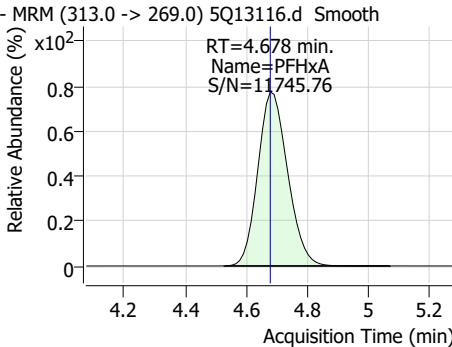
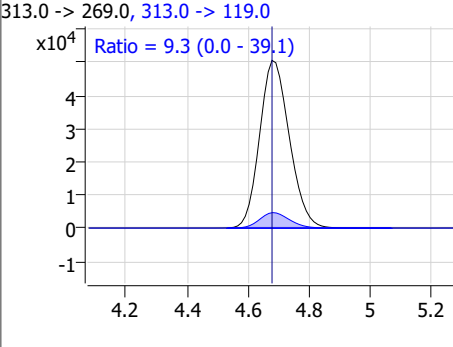
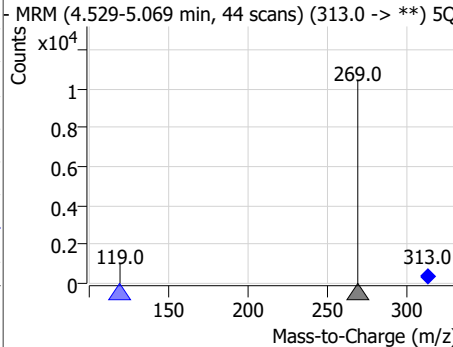
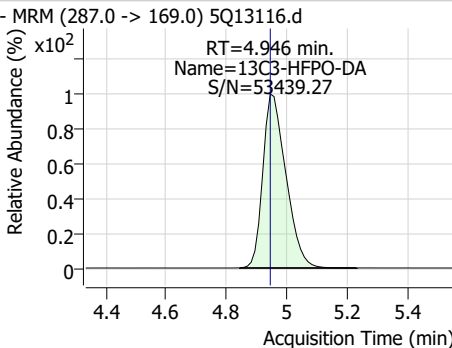
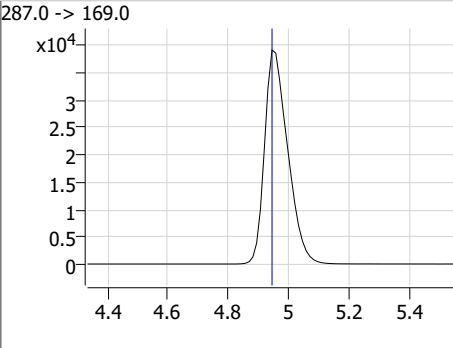
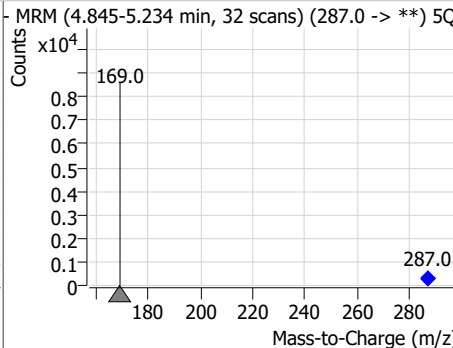
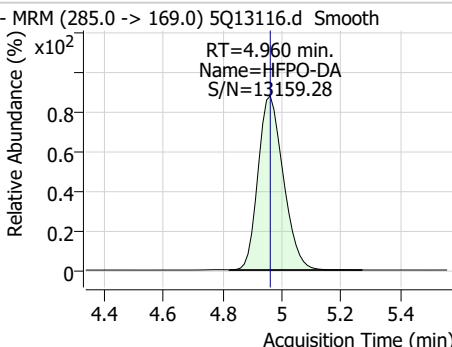
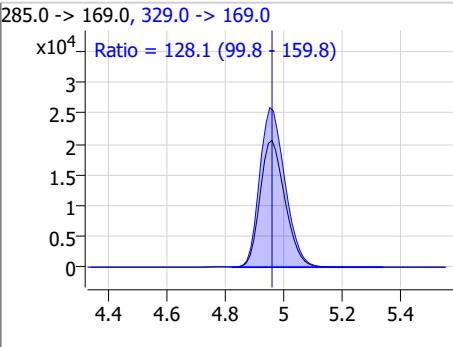
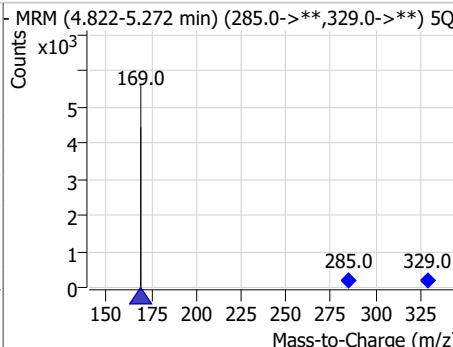
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### Perfluorinated Compounds by LC/MS/MS



7.6.16  
7

### Perfluorinated Compounds by LC/MS/MS

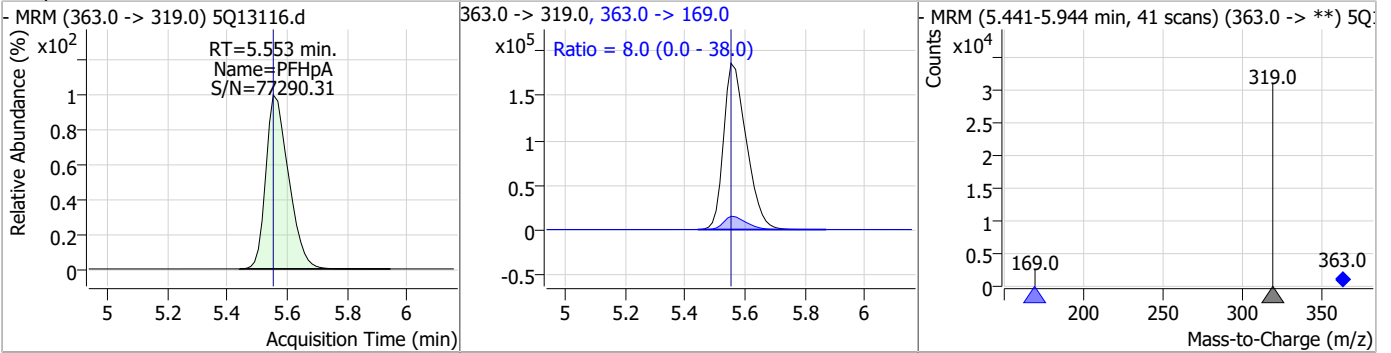
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	48.85	4.68	0.00	499893				
								
PFHxA	48.36	4.68	0.00	341525	313.0 ->	119.0	9.3	0.0
								
13C3-HFPO-DA	93.89	4.95	0.00	208147				
								
HFPO-DA	46.81	4.96	0.00	122227	329.0 ->	169.0	128.1	99.8
								

7.6.16

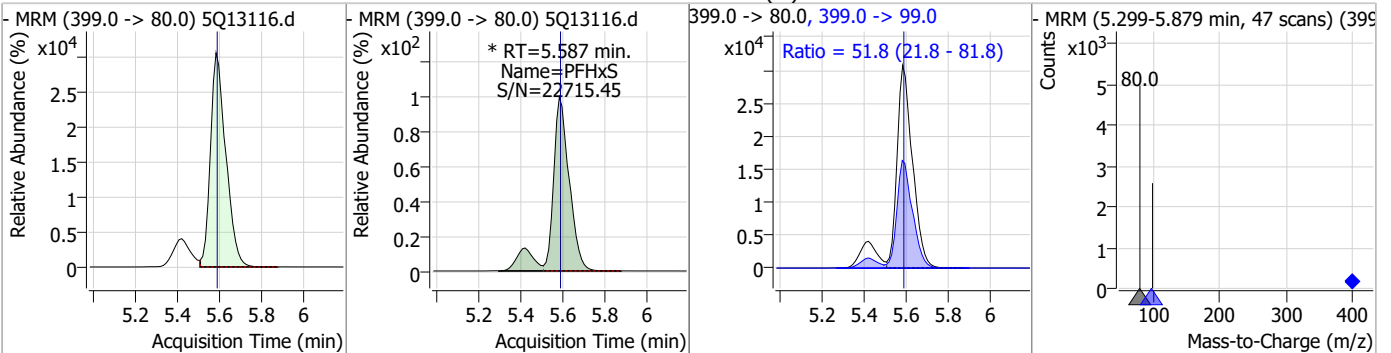
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### Perfluorinated Compounds by LC/MS/MS

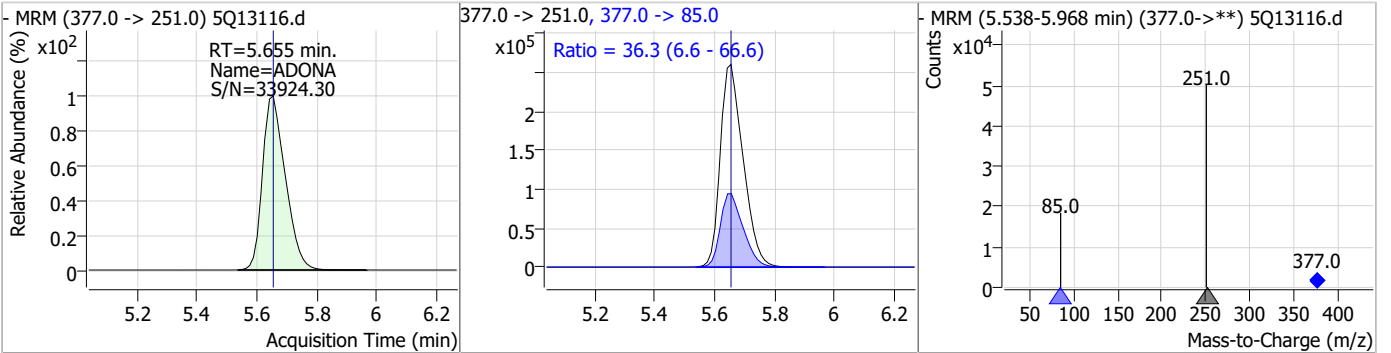
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	48.17	5.55	0.00	984030	363.0 -> 169.0	8.0	0.0	38.0



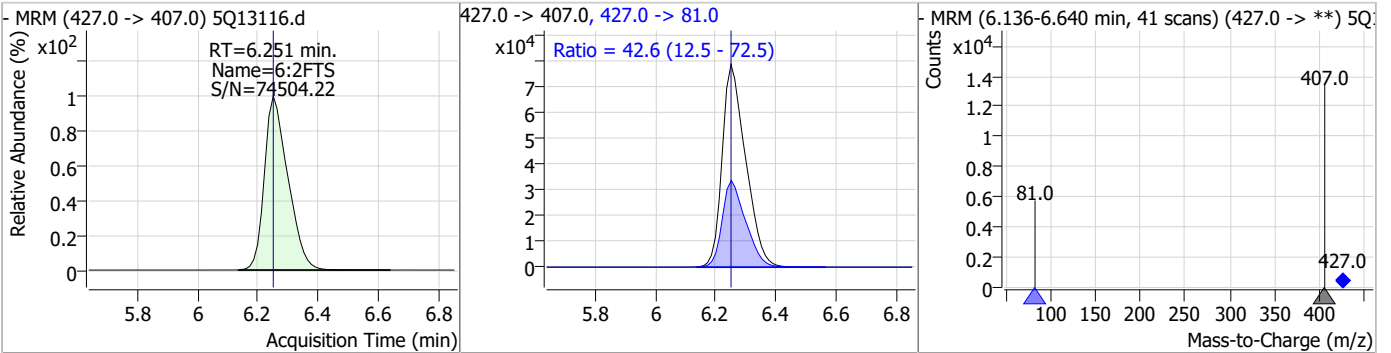
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	47.03	5.59	0.00	178647 (m)	399.0 -> 99.0	51.8	21.8	81.8



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
ADONA	47.62	5.66	0.00	1377041	377.0 -> 85.0	36.3	6.6	66.6

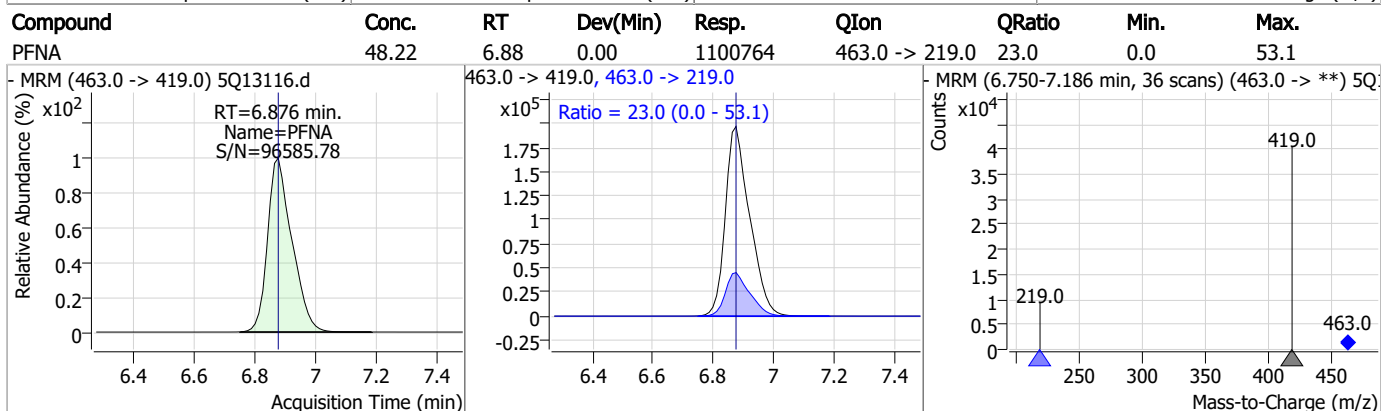
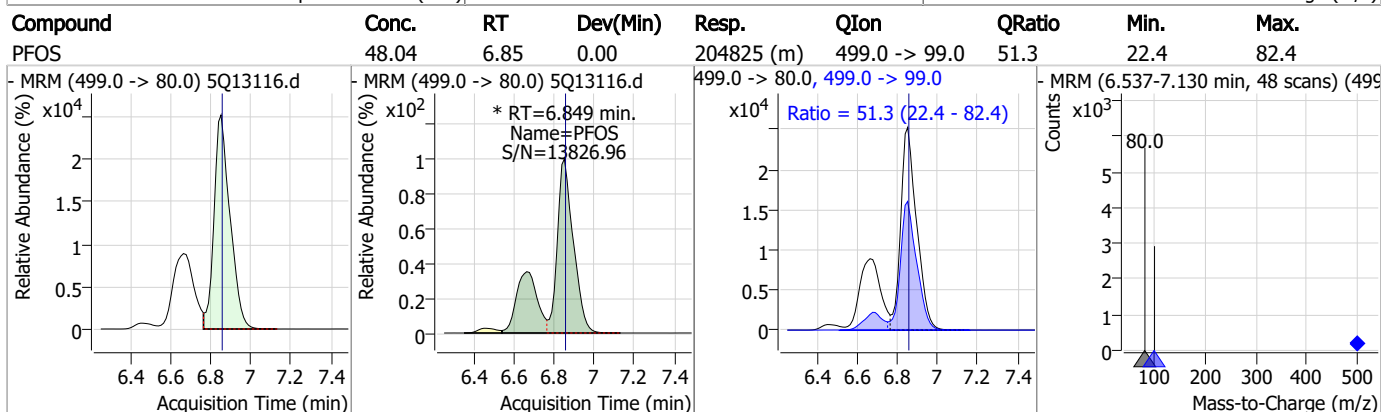
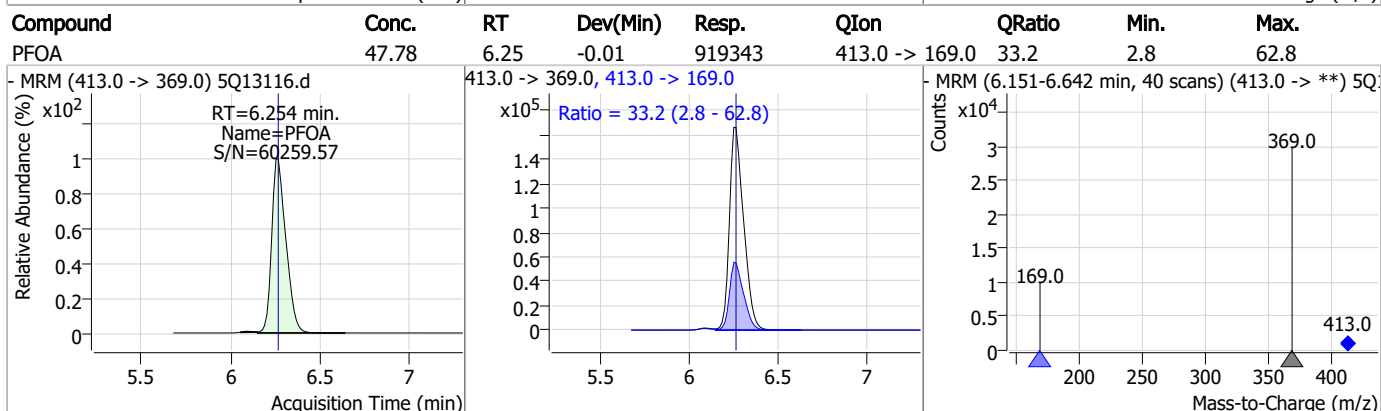
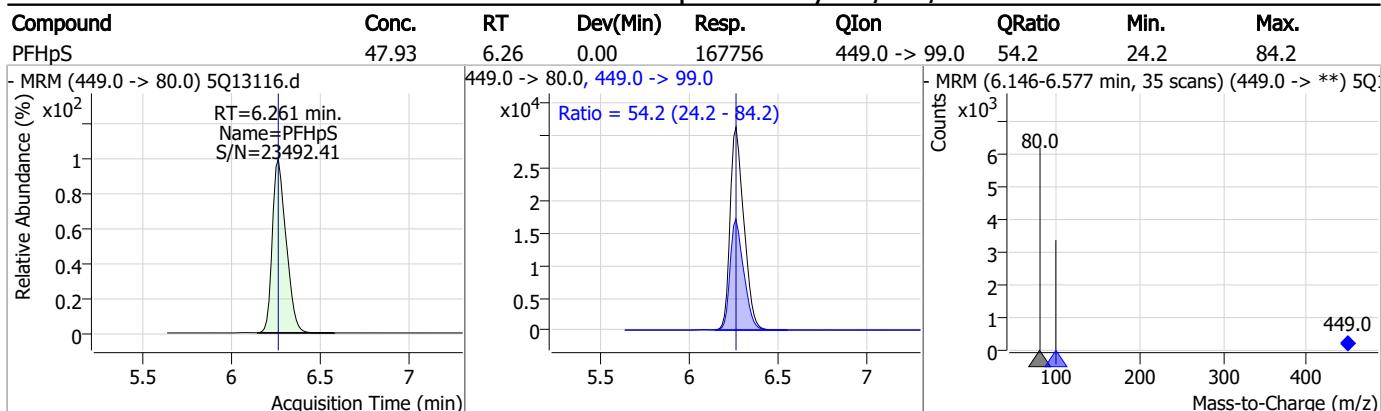


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2F7S	52.32	6.25	0.00	427272	427.0 -> 81.0	42.6	12.5	72.5



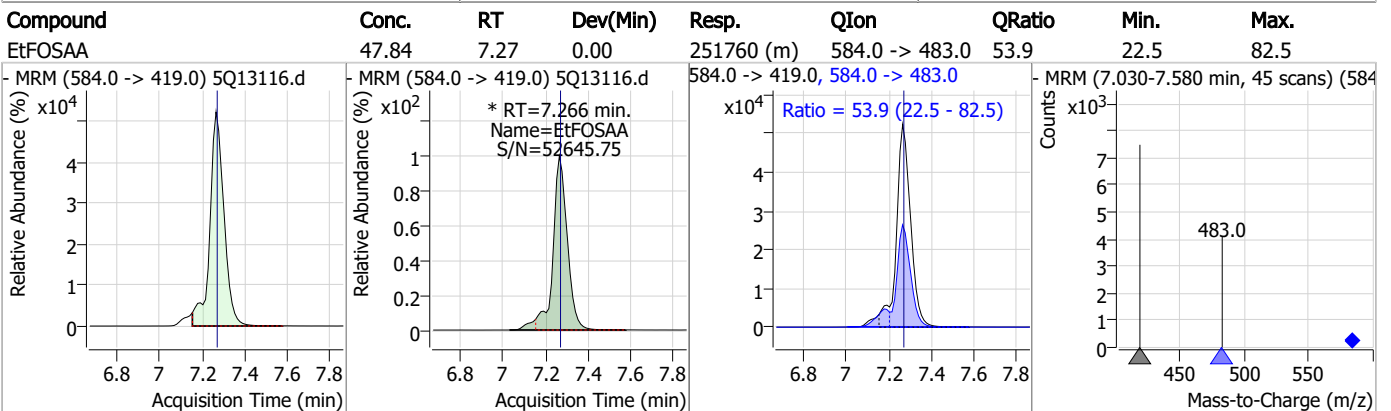
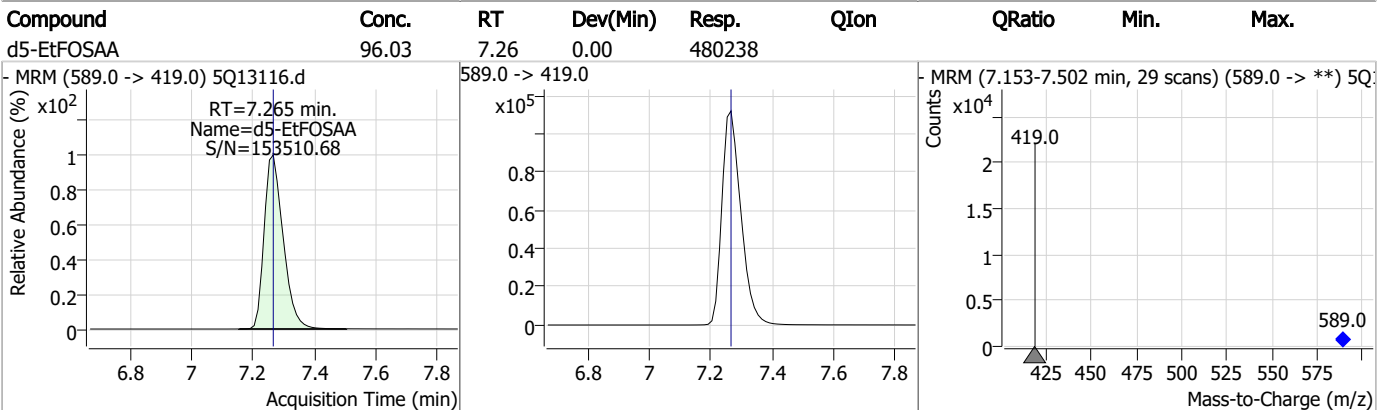
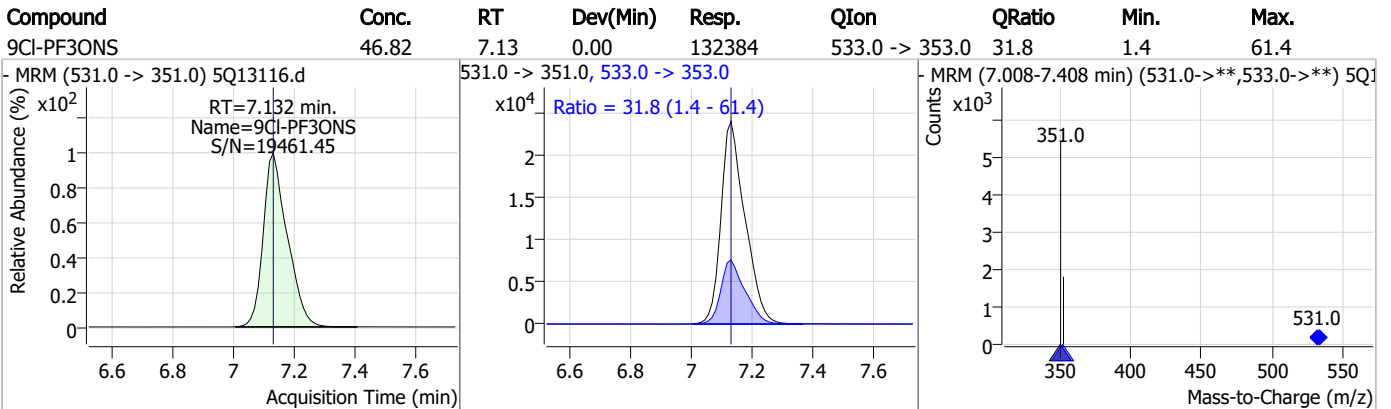
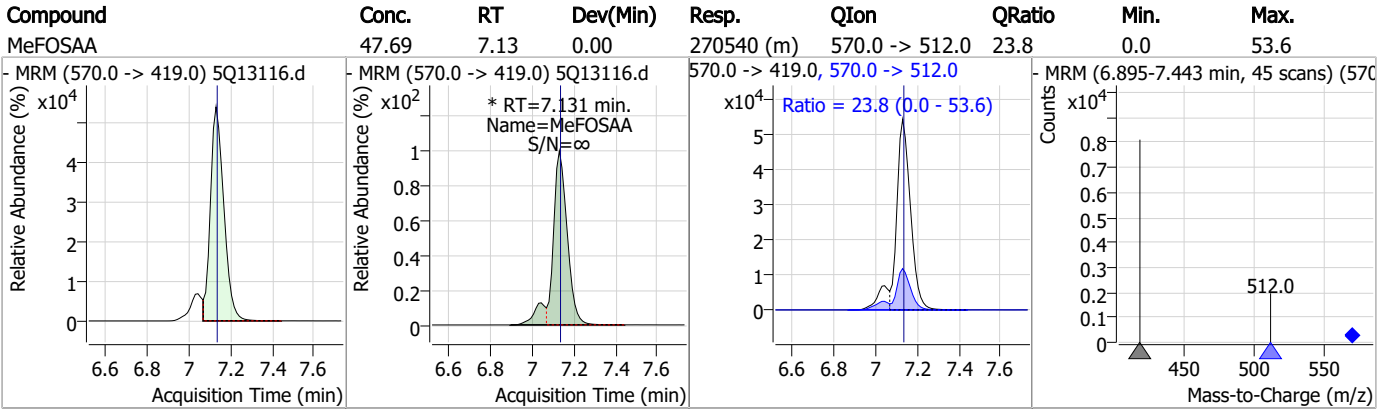
7.6.16 7

### Perfluorinated Compounds by LC/MS/MS



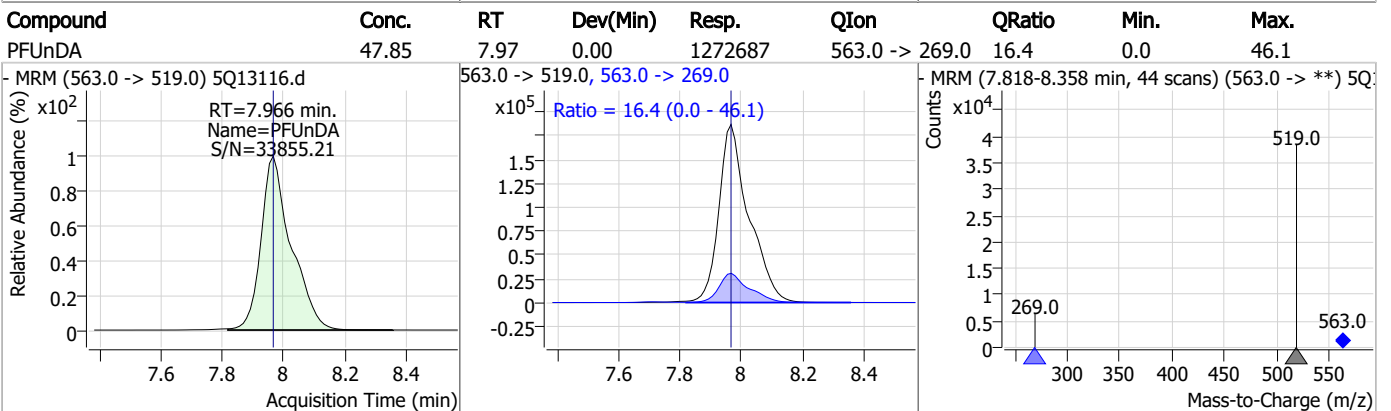
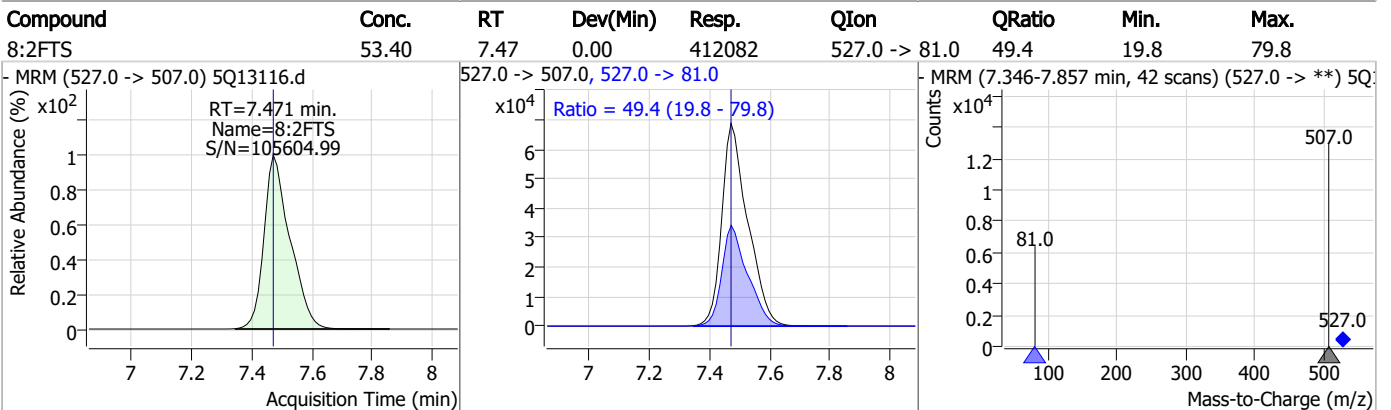
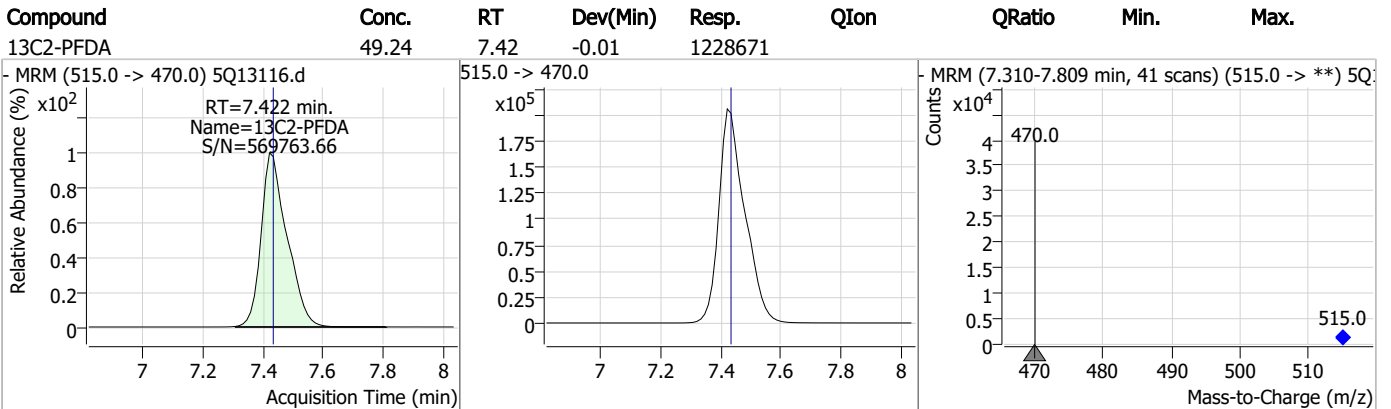
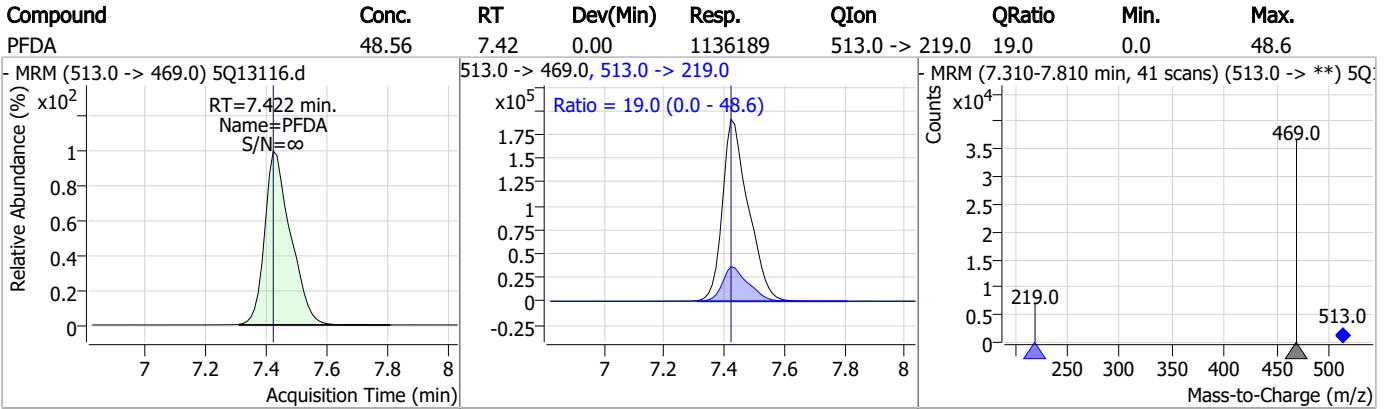
7.6.16  
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### Perfluorinated Compounds by LC/MS/MS





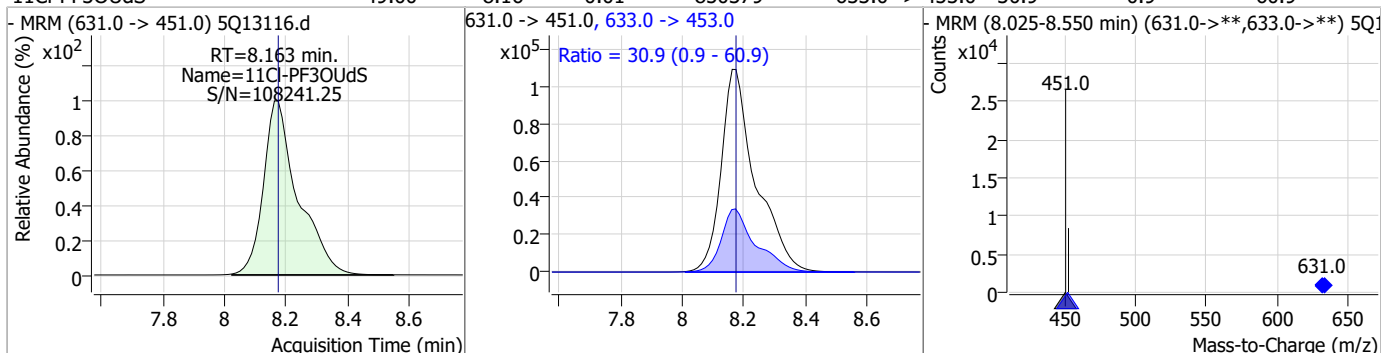
### Perfluorinated Compounds by LC/MS/MS



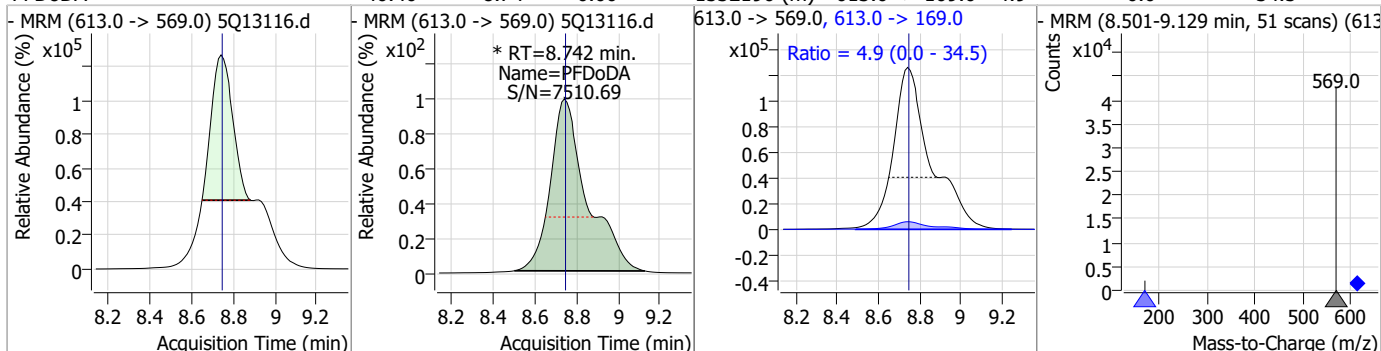
7.6.16  
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### Perfluorinated Compounds by LC/MS/MS

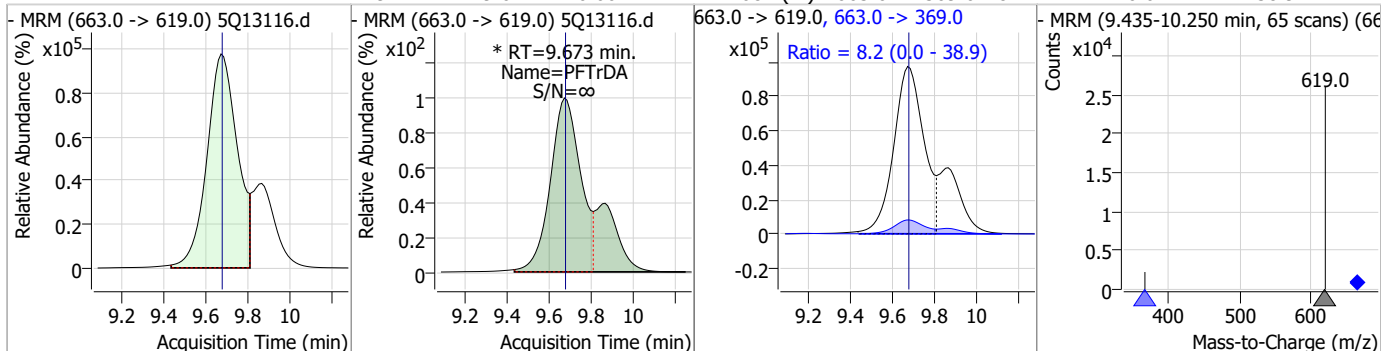
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11CI-PF3OUdS	49.00	8.16	-0.01	850379	633.0 -> 453.0	30.9	0.9	60.9



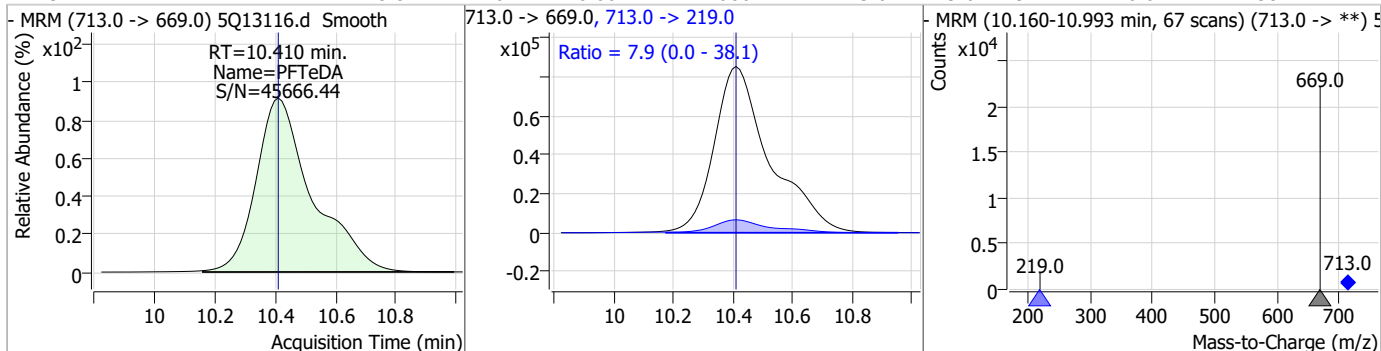
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	46.40	8.74	0.00	1532196 (m)	613.0 -> 169.0	4.9	0.0	34.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	49.21	9.67	0.00	1274081 (m)	663.0 -> 369.0	8.2	0.0	38.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	48.81	10.41	0.00	1106674	713.0 -> 219.0	7.9	0.0	38.1



7.6.16  
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# Manual Integration Approval Summary

**Sample Number:** S5Q203-CC203  
**Lab FileID:** 5Q13116.D  
**Injection Time:** 04/15/23 06:33

**Method:** EPA 537.1 REV 1.0  
**Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Supervisor approved:** 04/17/23 16:35 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.85	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorododecanoic acid	307-55-1		8.74	Poor instrument integration
Perfluorotridecanoic acid	72629-94-8		9.67	Poor instrument integration

7.6.16.1

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### Perfluorinated Compounds by LC/MS/MS

Data File : 5Q13124.d  
 Operator : annal  
 Acq. Method : 537.m  
 Acq. Date-Time : 4/15/2023 8:48:27 AM  
 Sample Name : ecc203-20  
 Vial : P3-A7  
 DA Method File : 537\_041423\_S5Q203.quantmethod.xml  
 Batch Name : s5q203.batch.bin  
 Sample Information : OP96327,S5Q203,250,,,1.0,1,water

Compound	RT	Transition	Response	Conc. Units	Dev(Min)
<b>Internal Standards</b>					
13C2-6:2FTS	6.250	429.0 -> 409.0	161238	20.00 µg/L	0.000
13C2-PFOA	6.265	415.0 -> 370.0	401156	20.00 µg/L	0.000
13C3-PFPeA	3.469	266.0 -> 222.0	172294	20.00 µg/L	0.000
13C4-PFOS	6.848	503.0 -> 80.0	72938	20.00 µg/L	0.000
d3-MeFOSAA	7.130	573.0 -> 419.0	186378	40.00 µg/L	0.000
<b>System Monitoring Compounds</b>					
13C2-PFDA	7.422	515.0 -> 470.0	510565	20.22 µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 101.1%		
13C2-PFHxA	4.676	315.0 -> 270.0	208890	20.17 µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%		Recovery = 100.9%		
d5-EtFOSAA	7.265	589.0 -> 419.0	199016	39.61 µg/L	0.000
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 99.0%		
13C3-HFPO-DA	4.958	287.0 -> 169.0	89113	39.72 µg/L	0.012
Spiked Amount: 40.00	Range: 70.0 - 130.0%		Recovery = 99.3%		
<b>Target Compounds</b>					
6:2FTS	6.251	427.0 -> 407.0	177831	23.30 µg/L	99
		427.0 -> 81.0	76466		
8:2FTS	7.471	527.0 -> 507.0	170240	23.60 µg/L	100
		527.0 -> 81.0	84530		
EtFOSAA	7.266	584.0 -> 419.0	103145	19.51 µg/L	m 99
		584.0 -> 483.0	55057		
MeFOSAA	7.131	570.0 -> 419.0	110021	19.30 µg/L	m 98
		570.0 -> 512.0	26797		
PFBA	1.875	213.0 -> 169.0	54733	18.99 µg/L	100
PFBS	3.716	299.0 -> 80.0	68032	19.64 µg/L	100
		299.0 -> 99.0	28701		
PFDA	7.422	513.0 -> 469.0	472425	19.95 µg/L	99
		513.0 -> 219.0	90168		
PFDoDA	8.742	613.0 -> 569.0	642261	19.72 µg/L	100
		613.0 -> 169.0	29925		
PFHpA	5.553	363.0 -> 319.0	400522	19.37 µg/L	100
		363.0 -> 169.0	31734		
PFHpS	6.261	449.0 -> 80.0	69750	20.20 µg/L	99
		449.0 -> 99.0	37536		
PFHxA	4.678	313.0 -> 269.0	143281	20.05 µg/L	100
		313.0 -> 119.0	13283		
PFHxS	5.587	399.0 -> 80.0	72287	19.29 µg/L	m 100
		399.0 -> 99.0	37456		
PFNA	6.876	463.0 -> 419.0	449831	19.47 µg/L	100
		463.0 -> 219.0	103263		
PFOA	6.266	413.0 -> 369.0	380087	19.52 µg/L	100
		413.0 -> 169.0	124859		
PFOS	6.849	499.0 -> 80.0	80215	19.07 µg/L	m 98
		499.0 -> 99.0	42931		
PFPeA	3.472	263.0 -> 219.0	247377	19.81 µg/L	100

7.6.17  
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## Perfluorinated Compounds by LC/MS/MS

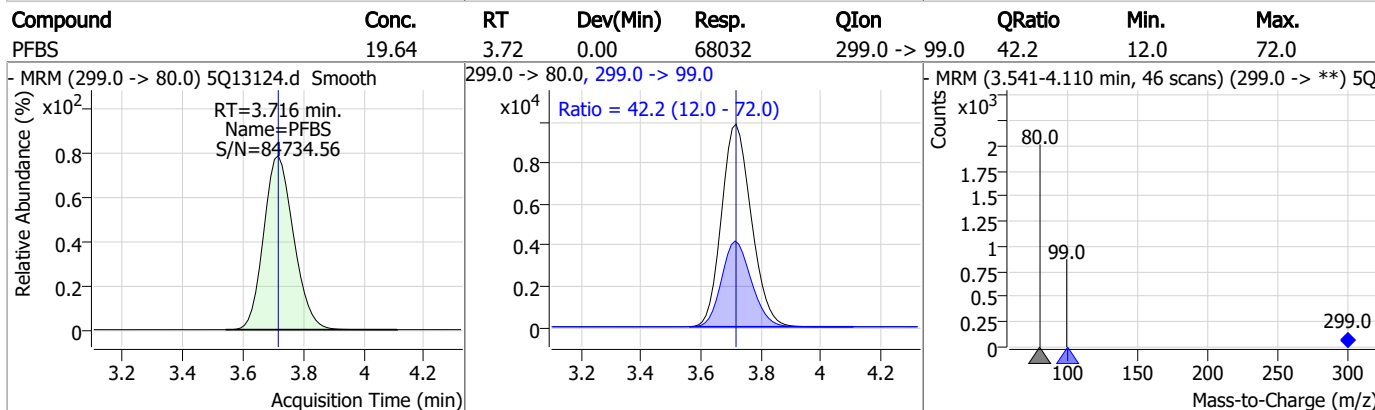
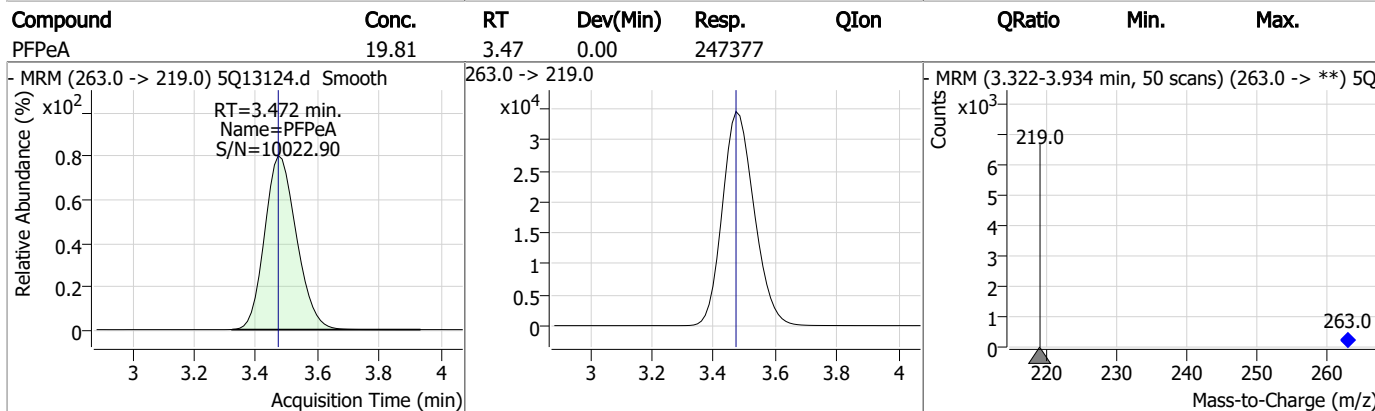
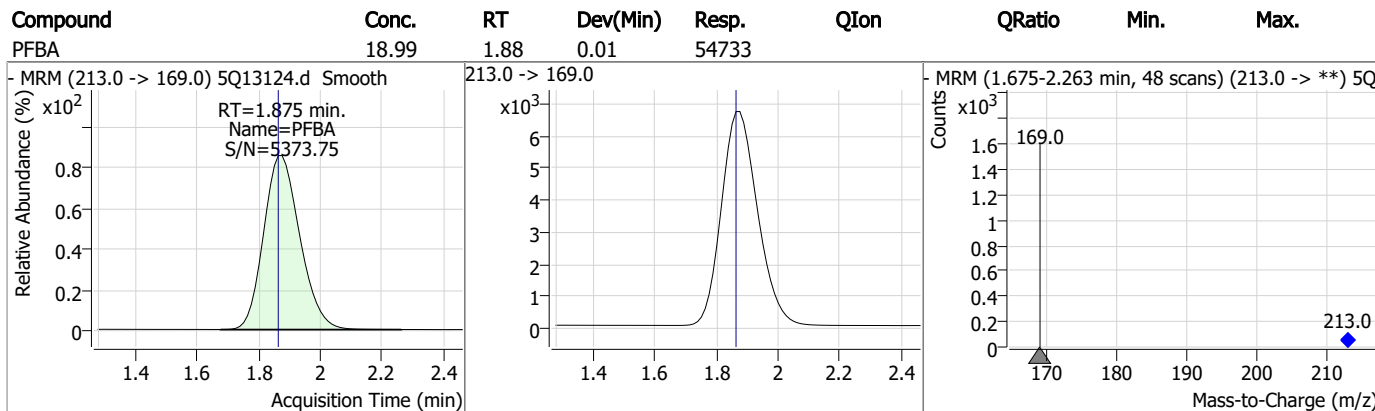
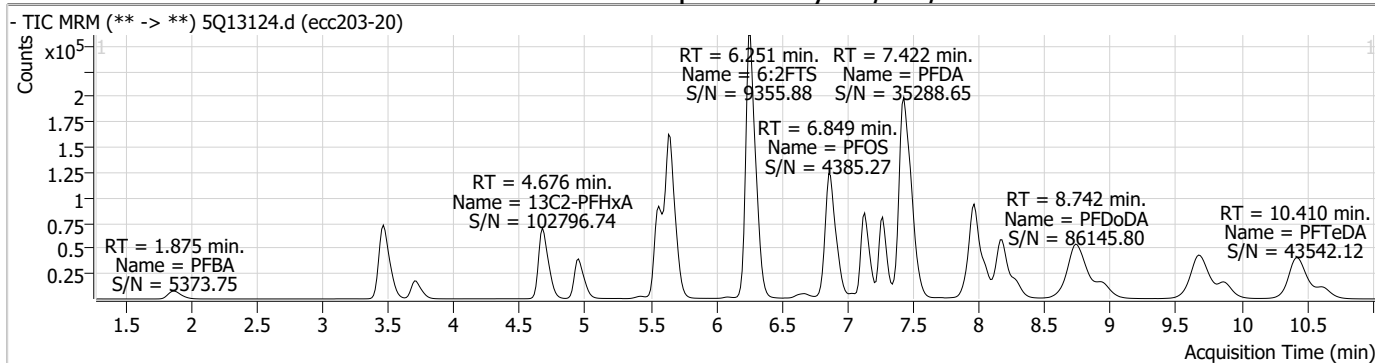
Compound	RT	Transition	Response	Conc.	Units	Dev(Min)
PFTeDA	10.410	713.0 -> 669.0	453071	20.26	µg/L	100
		713.0 -> 219.0	36046			
PFTrDA	9.673	663.0 -> 619.0	516530	20.22	µg/L	m 99
		663.0 -> 369.0	43898			
PFUnDA	7.966	563.0 -> 519.0	520892	19.85	µg/L	99
		563.0 -> 269.0	85627			
ADONA	5.655	377.0 -> 251.0	555248	18.97	µg/L	100
		377.0 -> 85.0	202799			
9Cl-PF3ONS	7.132	531.0 -> 351.0	53061	18.54	µg/L	99
		533.0 -> 353.0	17090			
11Cl-PF3OUdS	8.175	631.0 -> 451.0	341766	19.46	µg/L	100
		633.0 -> 453.0	106508			
HFPO-DA	4.960	285.0 -> 169.0	52453	19.85	µg/L	96
		329.0 -> 169.0	65727			

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

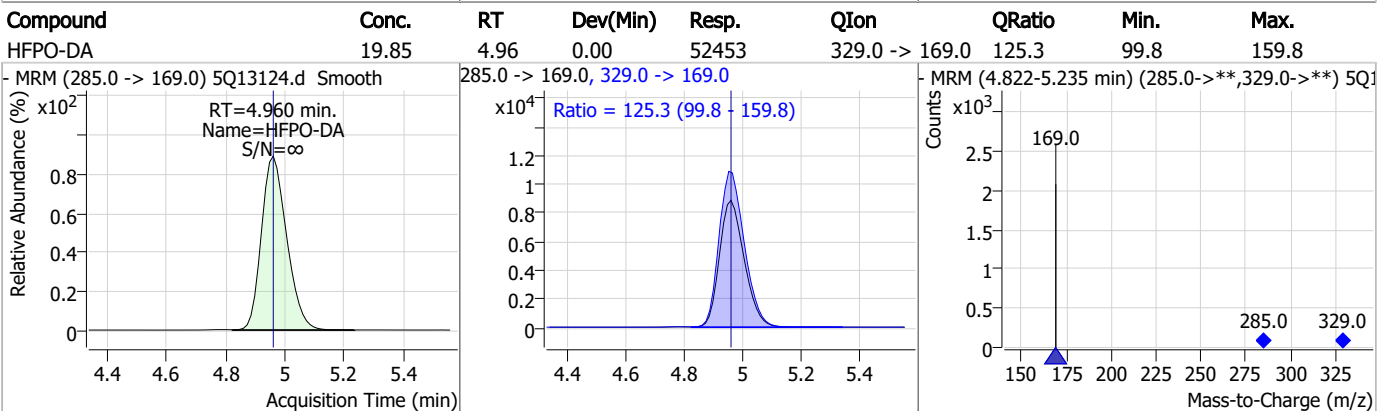
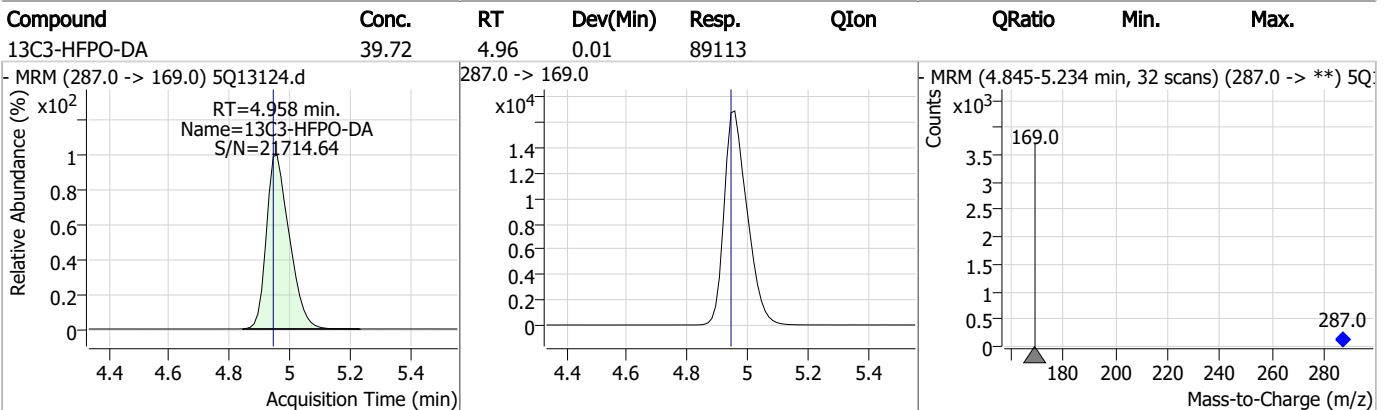
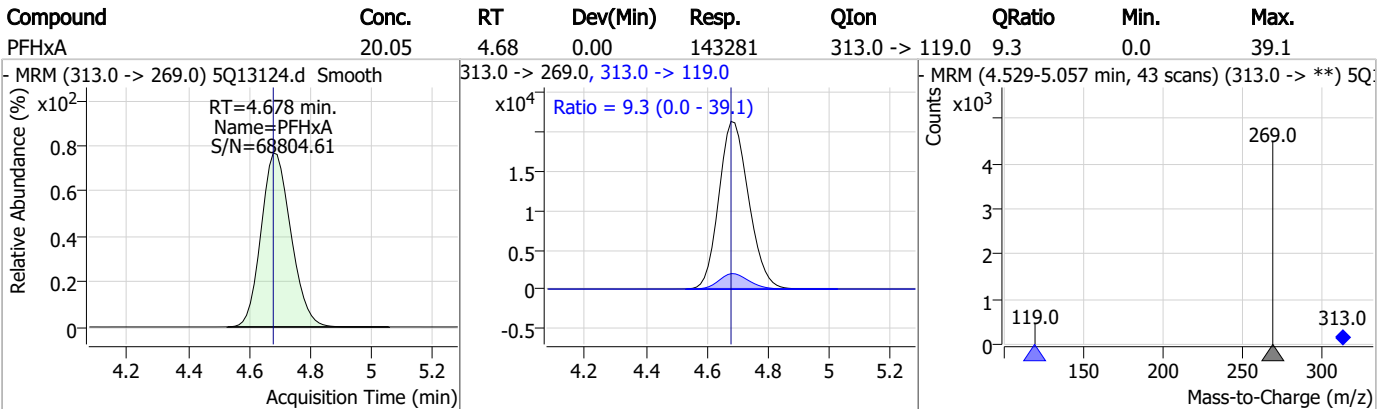
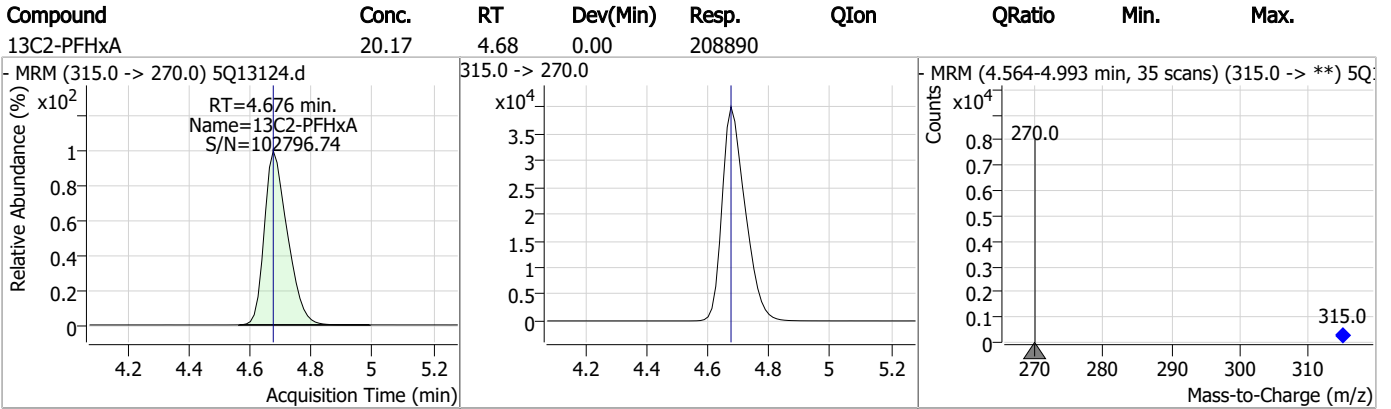
7.6.17

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### Perfluorinated Compounds by LC/MS/MS

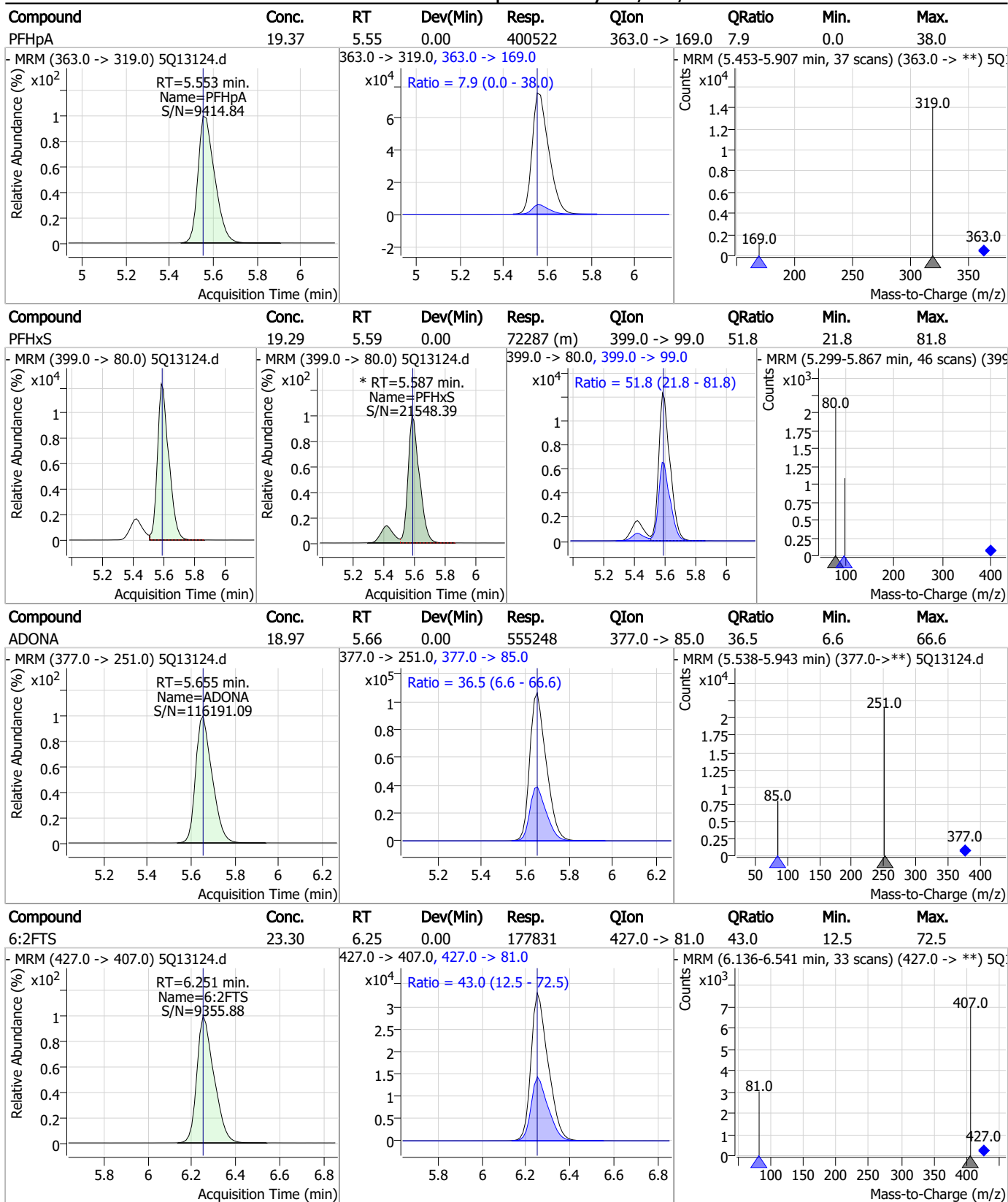


### Perfluorinated Compounds by LC/MS/MS



7.6.17 7

### Perfluorinated Compounds by LC/MS/MS

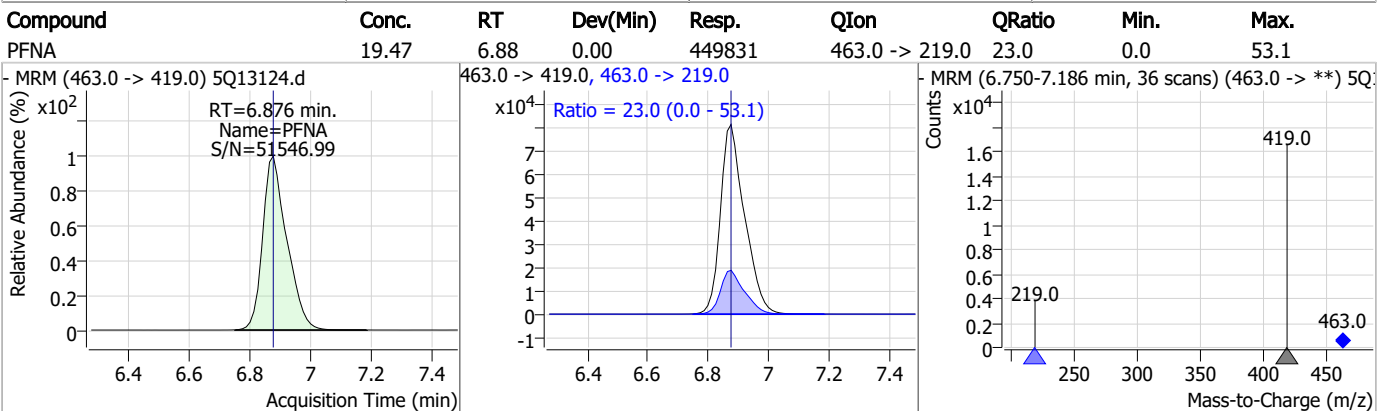
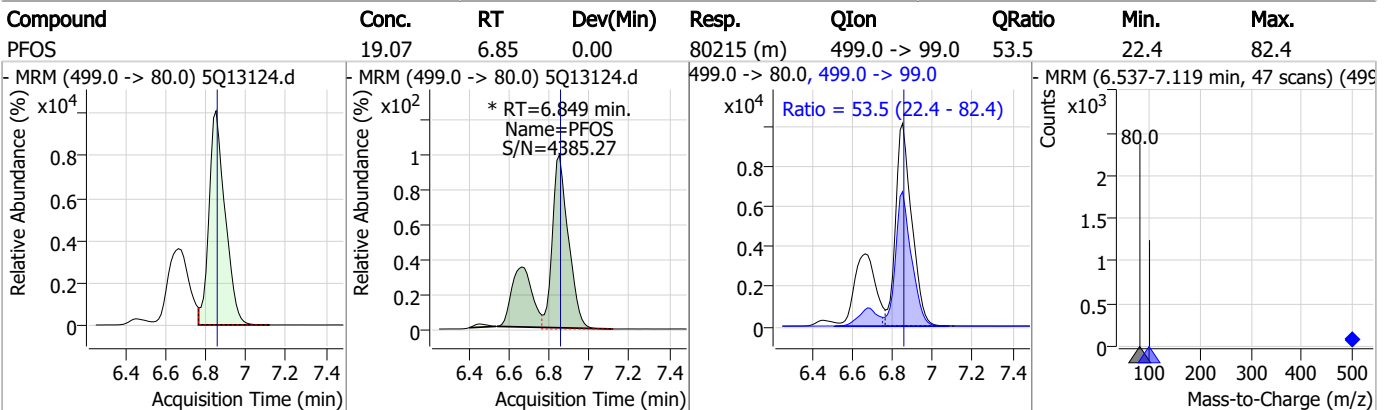
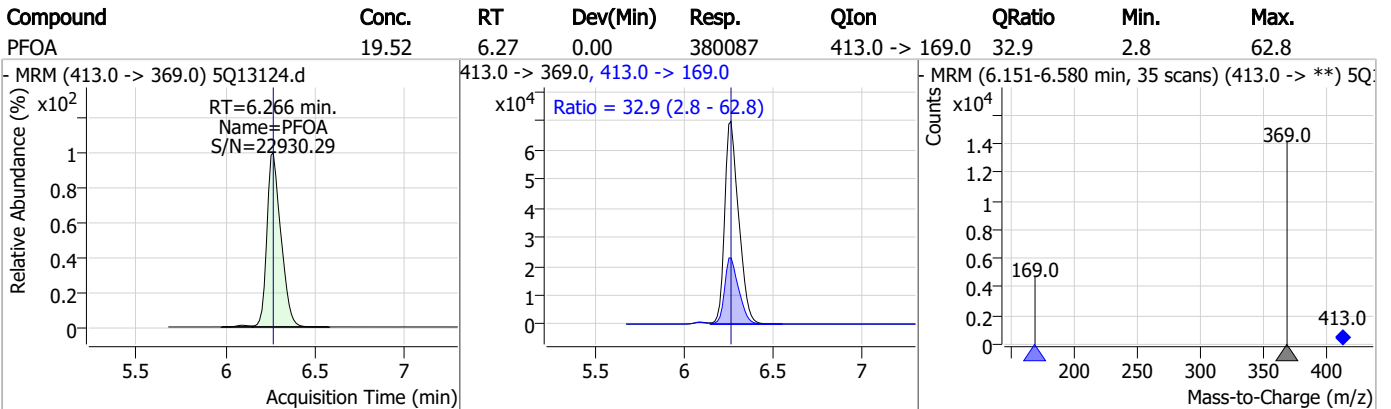
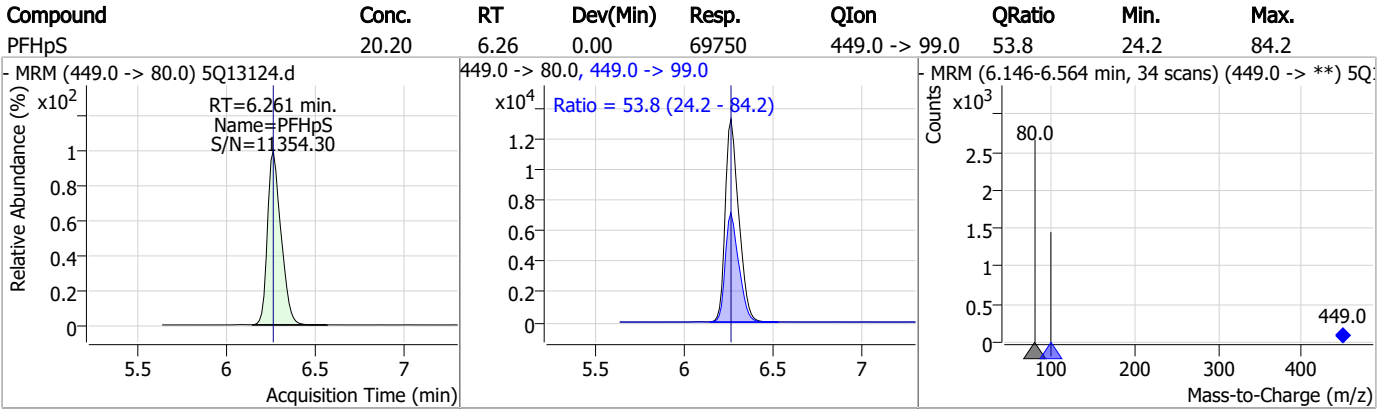


7.6.17

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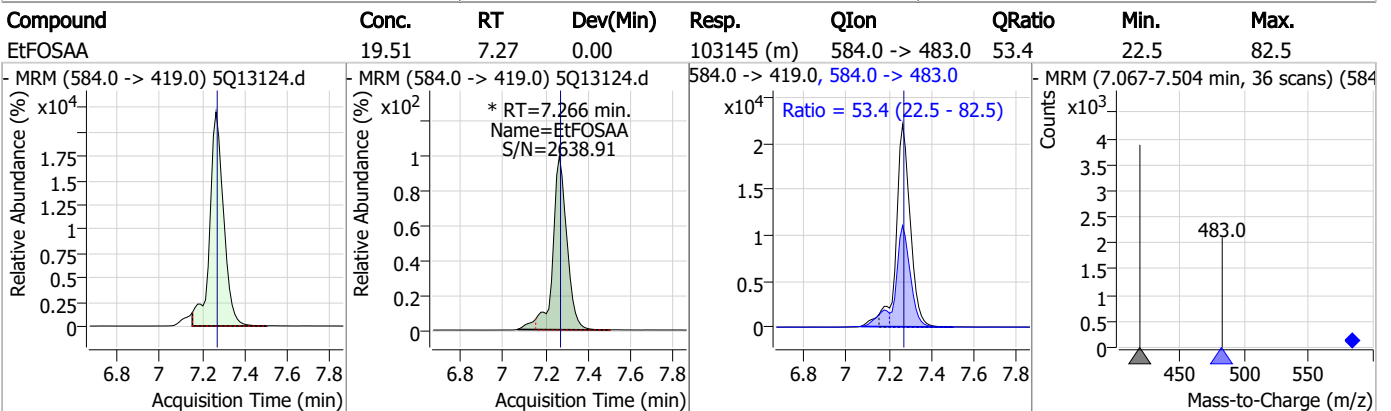
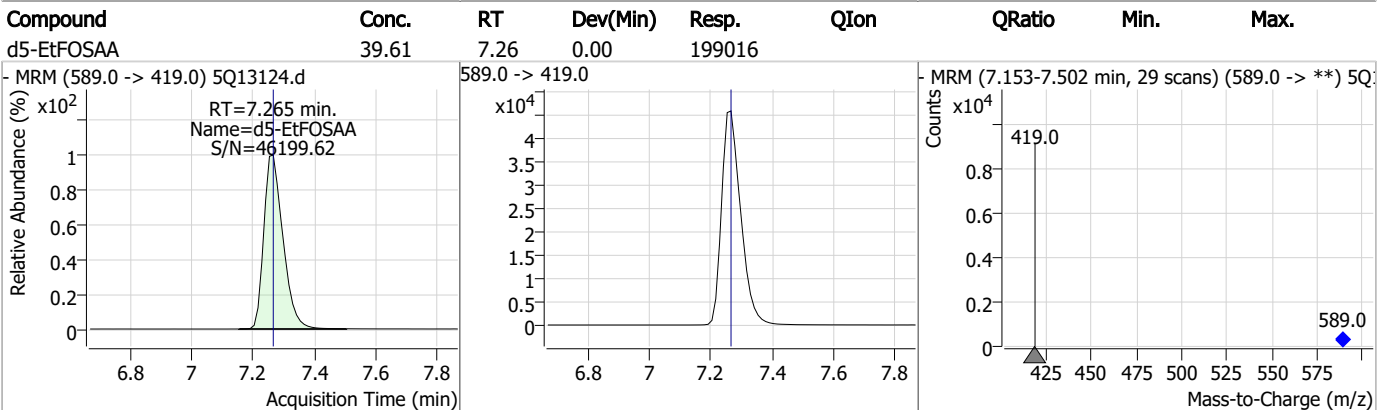
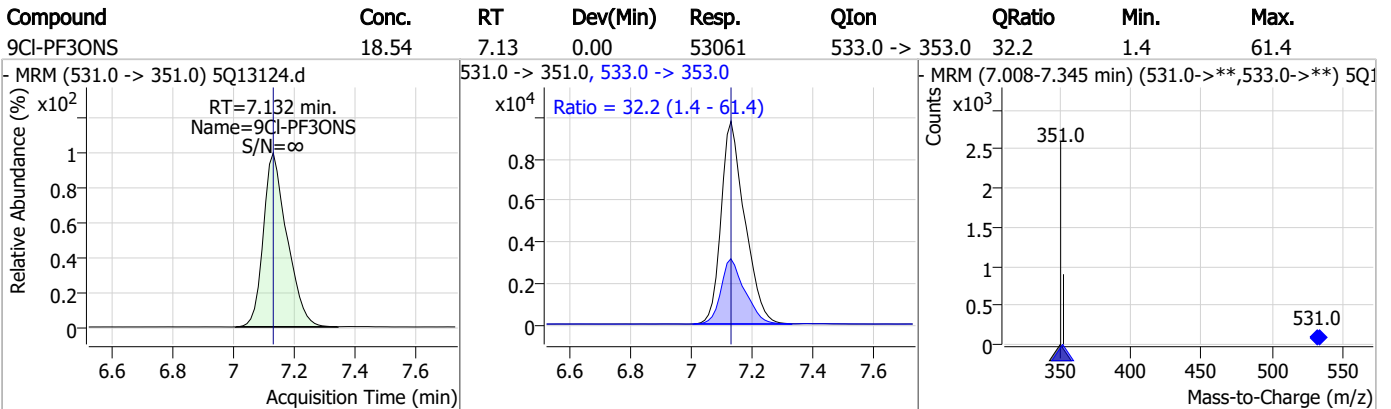
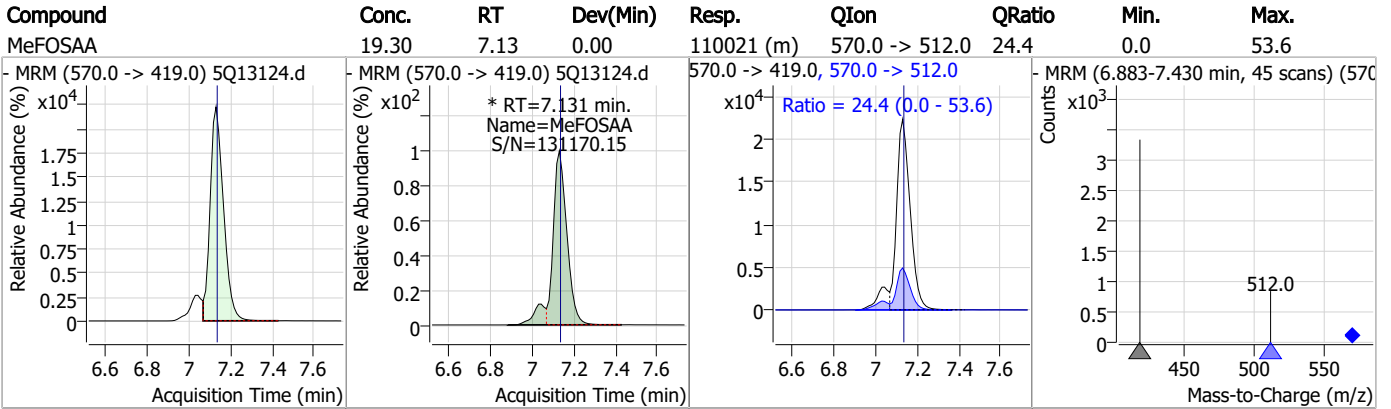


### Perfluorinated Compounds by LC/MS/MS



7.6.17  
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### Perfluorinated Compounds by LC/MS/MS

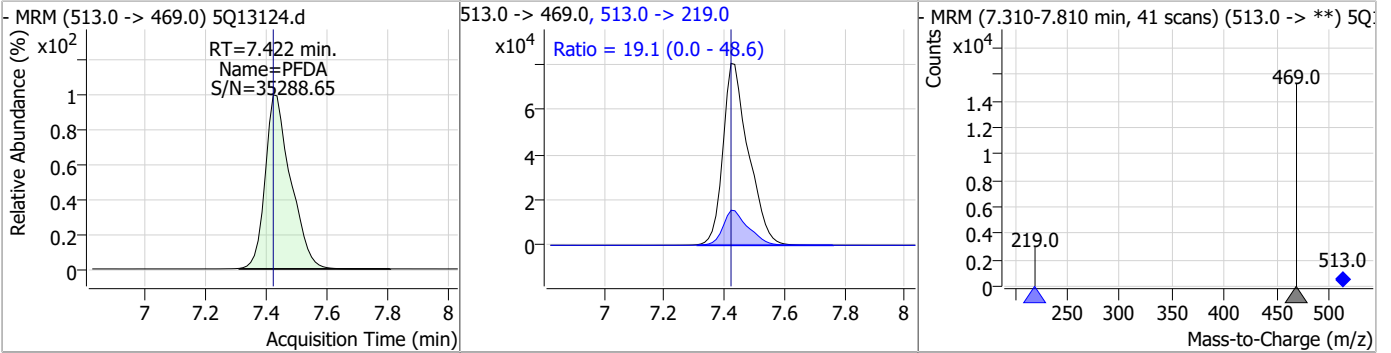


7.6.17

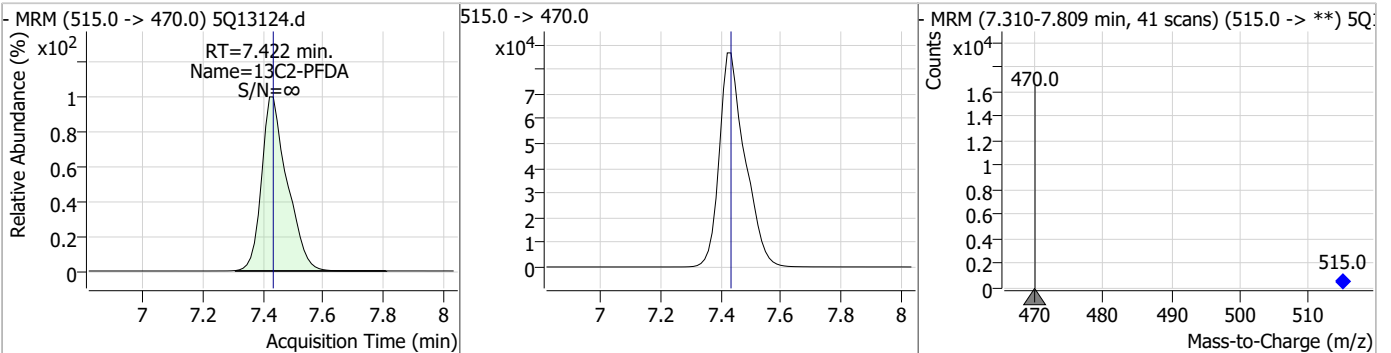


### Perfluorinated Compounds by LC/MS/MS

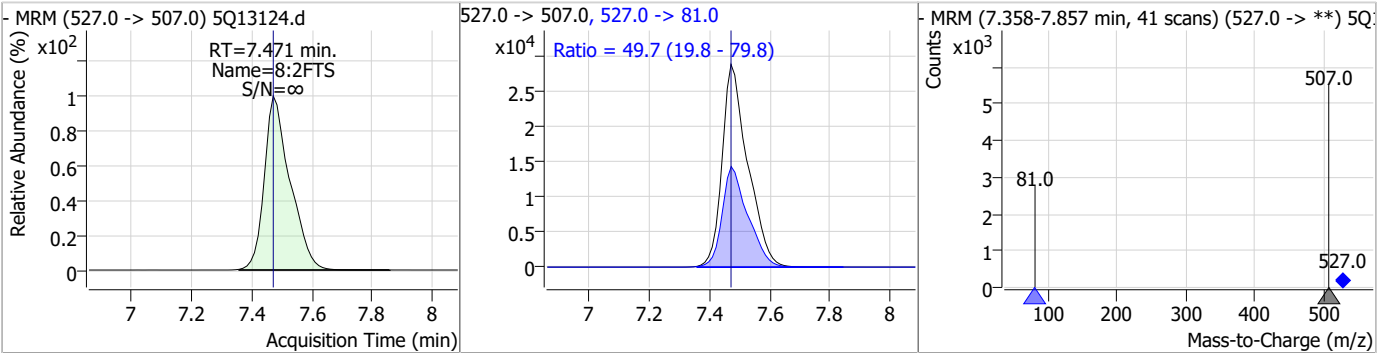
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.95	7.42	0.00	472425	513.0 -> 219.0	19.1	0.0	48.6



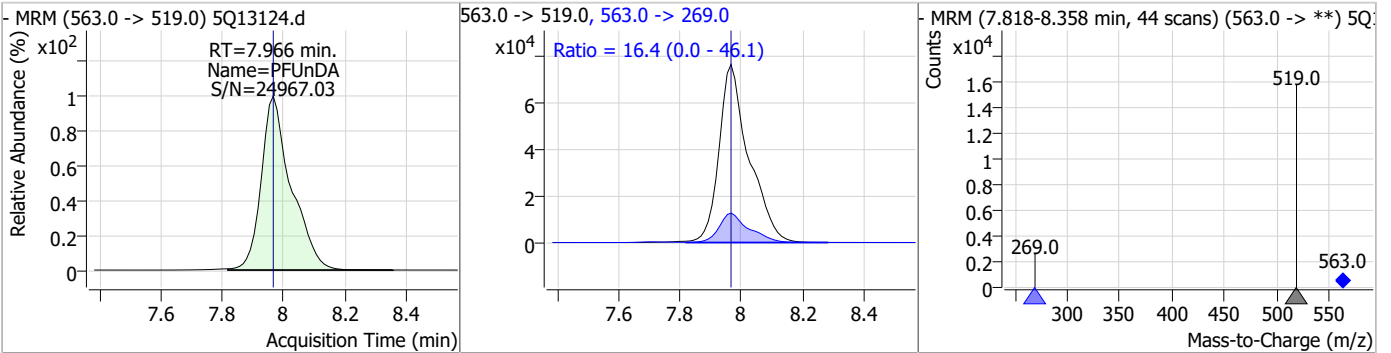
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	20.22	7.42	-0.01	510565				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	23.60	7.47	0.00	170240	527.0 -> 81.0	49.7	19.8	79.8



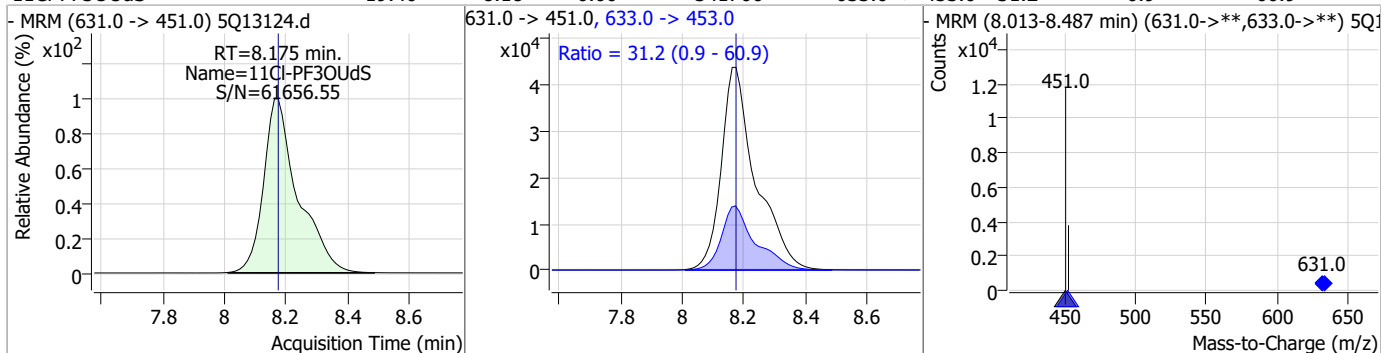
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	19.85	7.97	0.00	520892	563.0 -> 269.0	16.4	0.0	46.1



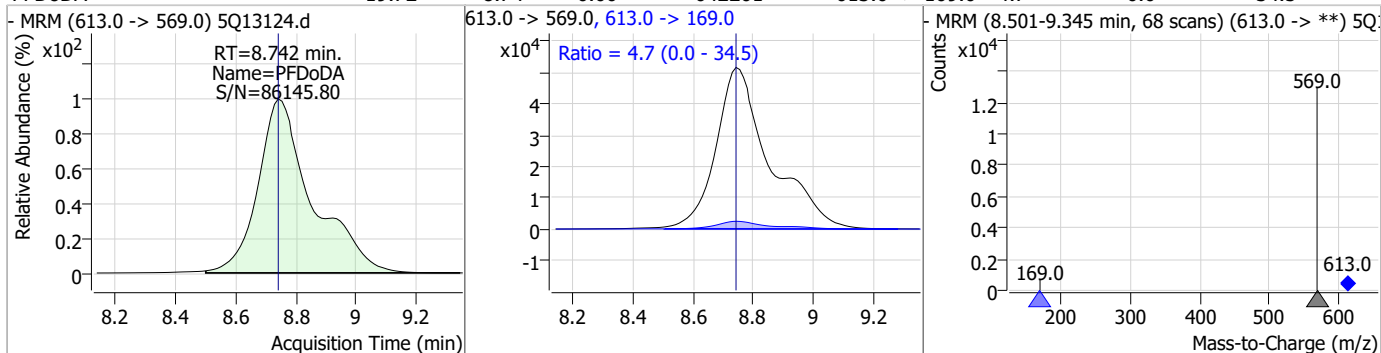
7.6.17

### Perfluorinated Compounds by LC/MS/MS

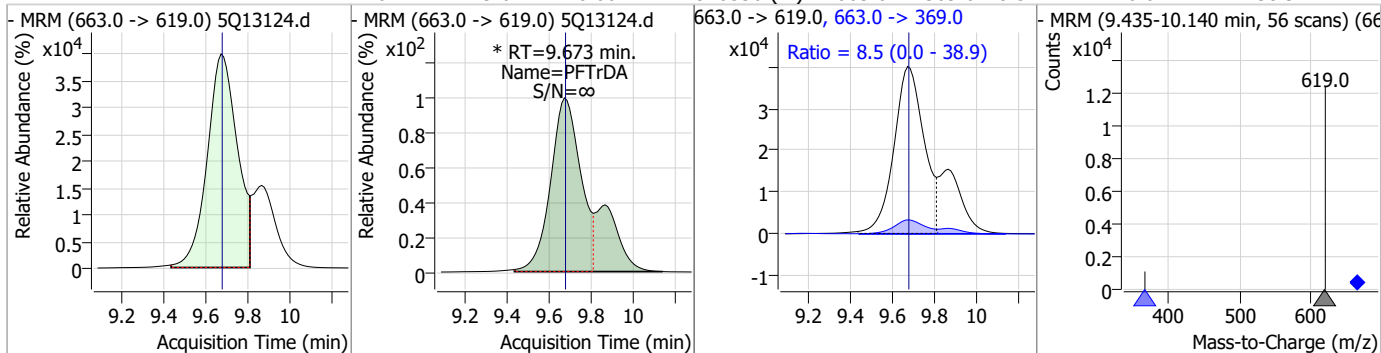
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
11CI-PF3OUdS	19.46	8.18	0.00	341766	633.0 -> 453.0	31.2	0.9	60.9



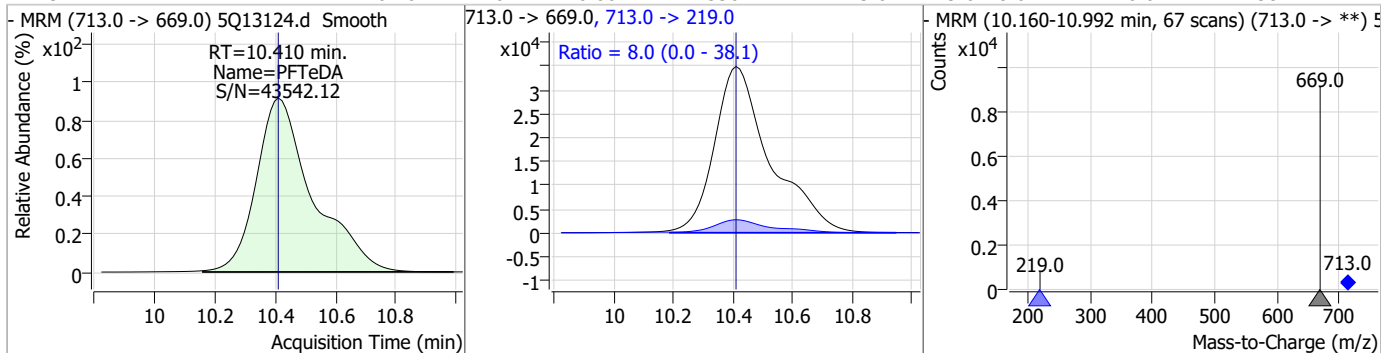
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	19.72	8.74	0.00	642261	613.0 -> 169.0	4.7	0.0	34.5



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTTrDA	20.22	9.67	0.00	516530 (m)	663.0 -> 369.0	8.5	0.0	38.9



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	20.26	10.41	0.00	453071	713.0 -> 219.0	8.0	0.0	38.1



# Manual Integration Approval Summary

**Sample Number:** S5Q203-ECC203      **Method:** EPA 537.1 REV 1.0  
**Lab FileID:** 5Q13124.D      **Analyst approved:** 04/17/23 16:19 Natasha Gumtie  
**Injection Time:** 04/15/23 08:48      **Supervisor approved:** 04/17/23 16:35 Norman Farmer

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.59	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.85	Split peak
MeFOSAA	2355-31-9		7.13	Split peak
EtFOSAA	2991-50-6		7.27	Split peak
Perfluorotridecanoic acid	72629-94-8		9.67	Poor instrument integration

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7

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DATE:	04/14/23
COLUMN TYPE:	Poroshell EC18
AMOUNT INJ:	4 ul
INSTRUMENT:	LCMS5-5Q

LCMS2-2Q ANALYSIS LOG

METHODS:	537.1
PROC. METH:	537_041423_S5Q203
CAL DATE:	04/14/23
ANALYST:	NG
RUN BATCH:	S5Q203

ELUENT A LOT #:	217582 w/0.1% AA 194003
ELUENT B LOT #:	216542 w/0.1% AA 194003
IC/CC STD LOT #:	LCMS 2081
ICV STD LOT #:	11331/11325A
ISTD/ID STD LOT #:	LCMS 2099

	Data File	Sample	Sample Name	Method	Sample Type	Level	Misc. Info	Comments
1	5Q13050.d	P3-A8	ccb	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	update RTs
2	5Q13051.d	P3-A8	ccb	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	update RTs
3	5Q13052.d	P3-A8	retention time	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	update RTs
4	5Q13053.d	P3-A8	retention time	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	update RTs
5	5Q13054.d	P3-A8	retention time	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	update RTs
6	5Q13055.d	P3-A8	retention time	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	update RTs
7	5Q13056.d	P3-A8	retention time	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	update RTs
8	5Q13057.d	P3-A8	retention time	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	update RTs
9	5Q13058.d	P3-A8	retention time	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	update RTs
10	5Q13059.d	P3-A1	ccb	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	ND
11	5Q13060.d	P3-A1	ic203-0	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	Check Tune File
12	5Q13061.d	P3-A2	ic203-0.5	537.m	Calibration	2.5/500	OP96327,S5Q203,250,,,1.0,1,water	PASS
13	5Q13062.d	P3-A3	ic203-1	537.m	Calibration	5/500	OP96327,S5Q203,250,,,1.0,1,water	PASS
14	5Q13063.d	P3-A4	ic203-2	537.m	Calibration	10/500	OP96327,S5Q203,250,,,1.0,1,water	PASS
15	5Q13064.d	P3-A5	ic203-5	537.m	Calibration	25/500	OP96327,S5Q203,250,,,1.0,1,water	PASS
16	5Q13065.d	P3-A6	ic203-10	537.m	Calibration	100/500	OP96327,S5Q203,250,,,1.0,1,water	PASS
17	5Q13066.d	P3-A7	icc203-20	537.m	Calibration	100/500	OP96327,S5Q203,250,,,1.0,1,water	PASS
18	5Q13067.d	P3-A8	ic203-50	537.m	Calibration	250/500	OP96327,S5Q203,250,,,1.0,1,water	PASS
19	5Q13068.d	P3-A9	ic203-100	537.m	Calibration	1x	OP96327,S5Q203,250,,,1.0,1,water	PASS
20	5Q13069.d	P3-B1	RT	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	✓
21	5Q13070.d	P3-B2	icv203-20	537.m	QC	10/500	OP96327,S5Q203,250,,,1.0,1,water	PASS
22	5Q13071.d	P3-A7	cc203-20	537.m	QC	100/500	OP96327,S5Q203,250,,,1.0,1,water	PASS
23	5Q13072.d	P3-A2	cc203-0.5LL	537.m	QC	2.5/500	OP96327,S5Q203,250,,,1.0,1,water	PASS
24	5Q13073.d	P3-B3	op96215-bs	537.m	Sample		OP96215,S5Q203,250,,,1.0,1,water	teda, 11cl low
25	5Q13074.d	P3-B4	op96215-mb	537.m	Sample		OP96215,S5Q203,250,,,1.0,1,water	ND
26	5Q13075.d	P3-B5	fc3739-3	537.m	Sample		OP96215,S5Q203,260,,,1.0,1,water	✓
27	5Q13076.d	P3-B6	fc3739-5	537.m	Sample		OP96215,S5Q203,260,,,1.0,1,water	✓
28	5Q13077.d	P3-B7	fc3740-2	537.m	Sample		OP96215,S5Q203,250,,,1.0,1,water	✓
29	5Q13078.d	P3-B8	op96215-ms	537.m	Sample		OP96215,S5Q203,270,,,1.0,1,water	✓
30	5Q13079.d	P3-B9	op96215-msd	537.m	Sample		OP96215,S5Q203,270,,,1.0,1,water	✓
31	5Q13080.d	P3-C1	fc3740-3	537.m	Sample		OP96215,S5Q203,270,,,1.0,1,water	✓
32	5Q13081.d	P3-C2	fc3740-3	537.m	Sample	50/500	OP96215,S5Q203,270,,,1.0,10,water	✓
33	5Q13082.d	P3-C3	fc3740-6	537.m	Sample		OP96215,S5Q203,250,,,1.0,1,water	✓
34	5Q13083.d	P3-A7	cc203-20	537.m	QC	100/500	OP96327,S5Q203,250,,,1.0,1,water	PASS
35	5Q13084.d	P3-A1	ccb	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	ND

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LCMS2-2Q ANALYSIS LOG

36	5Q13085.d	P3-C4	fc3741-1	537.m	Sample	100/500	OP96215,S5Q203,250,,,1.0,1,water	✓
37	5Q13086.d	P3-C5	fc3741-1	537.m	Sample	100/500	OP96215,S5Q203,250,,,1.0,5,water	✓
38	5Q13087.d	P3-C6	fc3741-2	537.m	Sample		OP96215,S5Q203,250,,,1.0,1,water	✓
39	5Q13088.d	P3-C7	fc3741-3	537.m	Sample		OP96215,S5Q203,270,,,1.0,1,water	✓
40	5Q13089.d	P3-C8	fc3741-4	537.m	Sample		OP96215,S5Q203,225,,,1.0,1,water	✓
41	5Q13090.d	P3-C9	fc3741-5	537.m	Sample		OP96215,S5Q203,235,,,1.0,1,water	✓
42	5Q13091.d	P3-D1	op96327-bs:80	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	data low
43	5Q13092.d	P3-D2	op96327-mb	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	ND
44	5Q13093.d	P3-D3	fc3889-1	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
45	5Q13094.d	P3-A8	cc203-50	537.m	QC	250/500	OP96327,S5Q203,250,,,1.0,1,water	PASS
46	5Q13095.d	P3-A1	ccb	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	ND
47	5Q13096.d	P3-D4	fc3889-2	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
48	5Q13097.d	P3-D5	fc3889-2	537.m	Sample	50/500	OP96327,S5Q203,270,,,1.0,10,water	✓
49	5Q13098.d	P3-D6	fc3889-3	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
50	5Q13099.d	P3-D7	fc3889-4	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
51	5Q13100.d	P3-D8	fc3889-5	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
52	5Q13101.d	P3-D9	fc3889-6	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
53	5Q13102.d	P3-E1	fc3889-7	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
54	5Q13103.d	P3-E2	fc3889-8	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
55	5Q13104.d	P3-E3	fc3889-8	537.m	Sample	50/500	OP96327,S5Q203,270,,,1.0,10,water	✓
56	5Q13105.d	P3-E4	fc3889-9	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
57	5Q13106.d	P3-A7	cc203-20	537.m	QC	100/500	OP96327,S5Q203,250,,,1.0,1,water	PASS
58	5Q13107.d	P3-A1	ccb	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	ND
59	5Q13108.d	P3-E5	fc3889-10	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
60	5Q13109.d	P3-E6	fc3889-11	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
61	5Q13110.d	P3-E7	fc3889-11	537.m	Sample	50/500	OP96327,S5Q203,270,,,1.0,10,water	✓
62	5Q13111.d	P3-E8	fc3889-12	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
63	5Q13112.d	P3-E9	fc3889-12	537.m	Sample	50/500	OP96327,S5Q203,270,,,1.0,10,water	✓
64	5Q13113.d	P3-F1	fc3889-13	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
65	5Q13114.d	P3-F2	fc3889-14	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
66	5Q13115.d	P3-F3	fc3889-15	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
67	5Q13116.d	P3-A8	cc203-50	537.m	QC	250/500	OP96327,S5Q203,250,,,1.0,1,water	PASS
68	5Q13117.d	P3-A1	ccb	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	ND
69	5Q13118.d	P3-F4	fc3889-16	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
70	5Q13119.d	P3-F5	op96327-ms:80	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
71	5Q13120.d	P3-F6	op96327-ms:80	537.m	Sample	50/500	OP96327,S5Q203,270,,,1.0,10,water	✓
72	5Q13121.d	P3-F7	op96327-nsd:80	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
73	5Q13122.d	P3-F8	op96327-nsd:80	537.m	Sample	50/500	OP96327,S5Q203,270,,,1.0,10,water	✓
74	5Q13123.d	P3-F9	fc3889-17	537.m	Sample		OP96327,S5Q203,270,,,1.0,1,water	✓
75	5Q13124.d	P3-A7	ecc203-20	537.m	QC	100/500	OP96327,S5Q203,250,,,1.0,1,water	PASS
76	5Q13125.d	P3-A1	ccb	537.m	Sample		OP96327,S5Q203,250,,,1.0,1,water	ND

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SPE LIQUID SAMPLE PREP REPORT

Date/Time: 04/10/23 11:00  
 Started (mm/dd/yy 24:00)

Prep Method: 3535A or 537 or 537MOD (circle)

Date/Time: 4/11/23 11:55  
 Finished (mm/dd/yy 24:00)

Analytical Method: LC537(DW)

Batch#: OP94327 Ext. By: GH Conc. By: EA Viald By: \_\_\_\_\_

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Manifold ID	Comments
OP 96327 MB	/	250	7.0	N/A	20		1.0 ml	A4	
OP 96327 BS	/	250	7.0	N/A		400			
FC 3889-1	1	270	7.0	N/A					
2	1	270							
3	1	270							
4	1	270							
5	1	270							
6	1	270							
7	1	270							
8	1	270						A4	
9	1	270						A6	
10	1	270							
11	1	270							
12	1	270							
13	1	270							
14	1	270							
15	1	270							
16	1	270	✓	✓	✓			✓	
17	1	270	7.0	N/A	20			A6	
FC 3889-16 MS	2	270	7.0	N/A	20	400	1.0 ml	A4	
FC 3889-16 MSD	3	270	7.0	N/A	20	400	↓	A4	
DUP									

Comments:

Surr. 1 ID: LCMS 2080 Conc: 2.0/1.0 PPM Exp. Date: 09/06/23 Inj. By: GH Ver. By: CM  
 Spk. 1 ID: LCMS 2082 Conc: 200 PPM Exp. Date: 09/06/23 Inj. By: GH Ver. By: CM  
 Spk. 2 ID: \_\_\_\_\_ Conc: \_\_\_\_\_ Exp. Date: \_\_\_\_\_ Inj. By: \_\_\_\_\_ Ver. By: \_\_\_\_\_  
 Spk. 3 ID: \_\_\_\_\_ Conc: \_\_\_\_\_ Exp. Date: \_\_\_\_\_ Inj. By: \_\_\_\_\_ Ver. By: \_\_\_\_\_

TurboVap Temp (Therm ID): xcel vap 1 N-Evap Temp (Therm ID): \_\_\_\_\_  
 Observed Temp °C: 55 Corr. Temp °C: \_\_\_\_\_ Observed Temp °C: \_\_\_\_\_ Corr. Temp °C: \_\_\_\_\_

Methanol Lot # 224231 SPE Lot # 6598296-02 pH Paper # 211718B  
 Acetonitrile Lot # \_\_\_\_\_ Syringe filter Lot # \_\_\_\_\_ Reagent # \_\_\_\_\_  
 Water Lot# OP96255 Pre-filter Lot# \_\_\_\_\_ Reagent # \_\_\_\_\_  
 Solvent# \_\_\_\_\_ Carbon Lot# \_\_\_\_\_ Other \_\_\_\_\_

Relinquished By: EA Date: 4/11/23  
 Accepted By: JE Date: 4/11/23

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7