NAVFAC
Naval Facilities Engineering Command

Off-Base Drinking Water Sample Results, Combined Level 2 and Level 4 Laboratory Report, and the Sample Location Figure, SDG FA42999

Naval Air Station Cecil Field
Jacksonville, Florida

July 2019

N60200_009857
CECIL_FIELD_NAS
SSIC 5000-33c

LABORATORY DATA PACKAGE FA42999 NAS CECIL FIELD FL

04/12/2017

ACCUTEST LABORATORIES

e-Hardcopy 2.0
Automated Report

Technical Report for

Resolution Consultants

NAS Cecil Field PFAS; Jacksonville, FL

0888817799

SGS Accutest Job Number: FA42999

Sampling Date: 04/12/17

Report to:

Resolution Consultants
5724 Summer Trees Dr
Memphis, TN 38134
tcantwell@ensafe.com; kwimble@ensafe.com

ATTN: Kara Wimble

Total number of pages in report: **220**

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), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(L-A-B L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AK, AR, GA, IA, KY, MA, NV, OK, OR, UT, WA

Sections: 1 2 3 4 5 6 7

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Sample Summary

Resolution Consultants

Job No: FA42999

NAS Cecil Field PFAS; Jacksonville, FL
Project No: 0888817799

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA42999-1	04/12/17	09:12	RB	04/13/17	DW	Drinking Water	PW-107-0417
FA42999-2	04/12/17	09:12	RB	04/13/17	DW	Drinking Water	PW-107-0417-D
FA42999-3	04/12/17	09:14	RB	04/13/17	DW	Drinking Water FB	FB-PW-107-0417

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Resolution Consultants **Job No:** FA42999

Site: NAS Cecil Field PFAS; Jacksonville, FL **Report Date:** 5/1/2017 10:08:14 PM

2 Sample(s) and 1 Field Blank(s) were collected on 04/12/2017 and were received at SGS Accutest Southeast (SASE) on 04/13/2017 properly preserved, at 3.8 Deg. C and intact. These Samples received an SASE job number of FA42999. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

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

Extractables by GCMS By Method EPA 537

Matrix: DW **Batch ID:** OP64797

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA43000-1MS, FA43000-1MSD were used as the QC samples indicated.

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

Narrative prepared by:

_____ Date May 1, 2017

Kim Benham, Client Services (signature on file)

Summary of Hits

Job Number: FA42999
Account: Resolution Consultants
Project: NAS Cecil Field PFAS; Jacksonville, FL
Collected: 04/12/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method

FA42999-1 **PW-107-0417**

No hits reported in this sample.

FA42999-2 **PW-107-0417-D**

No hits reported in this sample.

FA42999-3 **FB-PW-107-0417**

No hits reported in this sample.

Sample Results

Report of Analysis

SGS Accutest

Report of Analysis

Client Sample ID: PW-107-0417
Lab Sample ID: FA42999-1 **Date Sampled:** 04/12/17
Matrix: DW - Drinking Water **Date Received:** 04/13/17
Method: EPA 537 EPA 537 **Percent Solids:** n/a
Project: NAS Cecil Field PFAS; Jacksonville, FL

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Q871.D	1	04/28/17	NAF	04/26/17	OP64797	S2Q25
Run #2							

	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS								
335-67-1	Perfluorooctanoic acid	0.0032 U		0.0080	0.0032	0.0020	ug/l	
PERFLUOROALKYLSULFONATES								
375-73-5	Perfluorobutanesulfonic acid	0.0060 U		0.0080	0.0060	0.0040	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0032 U		0.0080	0.0032	0.0020	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	98%		70-130%
	13C2-PFDA	83%		70-130%

U = Not detected LOD = Limit of Detection
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 Accutest

Report of Analysis

Client Sample ID: PW-107-0417-D
Lab Sample ID: FA42999-2
Matrix: DW - Drinking Water
Method: EPA 537 EPA 537
Project: NAS Cecil Field PFAS; Jacksonville, FL

Date Sampled: 04/12/17
Date Received: 04/13/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Q917.D	1	05/01/17	NAF	04/26/17	OP64797	S2Q26
Run #2							

	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS								
335-67-1	Perfluorooctanoic acid	0.0032 U		0.0080	0.0032	0.0020	ug/l	
PERFLUOROALKYLSULFONATES								
375-73-5	Perfluorobutanesulfonic acid	0.0060 U		0.0080	0.0060	0.0040	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0032 U		0.0080	0.0032	0.0020	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	80%		70-130%
	13C2-PFDA	70%		70-130%

U = Not detected LOD = Limit of Detection
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 Accutest

Report of Analysis

Client Sample ID: FB-PW-107-0417
Lab Sample ID: FA42999-3
Matrix: DW - Drinking Water FB
Method: EPA 537 EPA 537
Project: NAS Cecil Field PFAS; Jacksonville, FL

Date Sampled: 04/12/17
Date Received: 04/13/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Q873.D	1	04/28/17	NAF	04/26/17	OP64797	S2Q25
Run #2							

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

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS								
335-67-1	Perfluorooctanoic acid	0.0031 U		0.0077	0.0031	0.0019	ug/l	
PERFLUOROALKYLSULFONATES								
375-73-5	Perfluorobutanesulfonic acid	0.0058 U		0.0077	0.0058	0.0038	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0031 U		0.0077	0.0031	0.0019	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	82%		70-130%
	13C2-PFDA	90%		70-130%

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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5 Limits

FA42999

RESOLUTION CONSULTANTS

CHAIN OF CUSTODY AND ANALYTICAL REQUEST RECORD

COC No. RRB041217-1 | Page 1 of 1

Project Name: Former NAS Cecil Field - Jacksonville, FL - Offsite PFAS Sampling | PO No. 22064 | Project: 0888817799 Phase: FI Task: WS

Site Location: Former NAS Cecil Field - Jacksonville, FL

CTO: JMA8 | RC Task Order Manager: Kara Wimble

Sampler: Robert Bailey | Phone: (904) 301-4504

Lab Name: SGS Accutest | Turnaround Time (specify): 14 Days

Sample Analysis Requested (*Enter number of containers for each test*)

Lab ID	Sample ID (sys_samp_code)	Location ID (sys_loc_code)	Date (mm/dd/yy)	Time (Military) (hhmm)	Matrix Code (1)	Sample Type (2)	Field Filtered (Y/N)	(3)→ Total No. of Containers	Trizma: EPA Method 537 with no modifications*	Extra Volume for MS/MSD	HOLD
1	PW-107-0417	PW-107	04/12/17	0912	WP	N	N	2	2		
2	PW-107-0417-D	PW-107	04/12/17	0912	WQ	FD	N	2	2		
3	FB-PW-107-0417	PW-107	04/12/17	0914	WQ	FB	N	2	2		

***Field* Comments:**

*Analytes include: perfluorooctanesulfonic acid (PFOS), perfluorooctanoic acid (PFOA), and perfluorobutanesulfonic acid (PFBS)

***Lab* Comments:**

Sample Shipment and Delivery Details

Number of coolers in shipment: 1

	Relinquished by (signature)	Date	Time	Received by (signature)	Date	Time
1	Robert Bailey	04/12/17	1531	James Lloyd	4-12-17	1535
2	James Lloyd	4-12-17	1810		04/13/17	800
3						

Samples Iced? Yes X No

Method of Shipment: Accutest Courier

Airbill No: N/A

Date Shipped: 04/12/17

(1) AA=Ambient air, **AQ**=Air quality control, **ASB**=Asbestos, **CK**=Caulk, **DS**=Storm drain sediment, **GS**=Soil gas, **IC**=IDW Concrete, **IDD**=IDW Solid, **IDS**=IDW soil, **IDW**=IDW Water, **LF**=Free Product, **MA**=Mastic, **PC**=Paint Chips, **SC**=Cement/Concrete, **SE**=Sediment, **SL**=Sludge, **SO**=Soil, **SQ**=Soil/Solid quality control, **SSD**=Subsurface sediment, **SU**=Surface soil (<6 in), **SW**=Swab or wipe, **TA**=Animal tissue, **TP**=Plant tissue, **TQ**=Tissue quality control, **WG**=Ground water, **WL**=Leachate, **WO**=Ocean water, **WP**=Drinking water, **WQ**=Water quality control, **WR**=Ground water effluent, **WS**=Surface water, **WU**=Storm water, **WW**=Waste water

(2) Sample Type: AB=Ambient Blk, **EB**=Equipment Blk, **FB**=Field Blk, **FD**=Field Duplicate Sample, **IDW**=Investigative-Derived Waste, **MIS**=Incremental Sampling Methodology, **N**=Normal Environmental Sample, **TB**=Trip Blk

(3) Preservative added: HA=Hydrochloric Acid, **NI**=Nitric Acid, **SH**=Sodium Hydroxide, **SA**=Sulfuric Acid, **ME**=Methanol, **SB**=sodium bisulfate, **ST**=Sodium Thiosulfate If **NO preservative** added leave blank

Rev 5/12

3.8

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SGS ACCUTEST - ORLANDO SAMPLE RECEIPT CONFIRMATION

SGS ACCUTEST'S JOB NUMBER: FA42999 CLIENT: Resolution Cons. PROJECT: Former NAS

DATE/TIME RECEIVED: 04/13/17 800 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: FEDEX UPS (ACCUTEST COURIER) DELIVERY OTHER:

AIRBILL NUMBERS:

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [x] TRIP BLANK NOT PROVIDED
- [x] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR +0.4
- [ ] OBSERVED TEMPS: 3.4
- [ ] CORRECTED TEMPS: 3.8 (USED FOR LIMS)

SAMPLE INFORMATION

- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] 5035 FIELD KITS NOT RECEIVED WITHIN 48 HOURS
- [ ] BULK VOA SOIL JARS NOT RECEIVED WITHIN 48 HOURS
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] RESIDUAL CHLORINE PRESENT LOT#_____

{APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

TEST STRIP LOT#s pH 0-3 230315 pH 10-12 219813A OTHER (specify) _____

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE 04/13/17 REVIEWER SIGNATURE/DATE 4-13-17

NF 02/16 receipt confirmation 020116.xls

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QC Evaluation: DOD QSM5 Limits

Job Number: FA42999
Account: Resolution Consultants
Project: NAS Cecil Field PFAS; Jacksonville, FL
Collected: 04/12/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits

No Exceptions found.

* Sample used for QC is not from job FA42999

GC/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

Method Blank Summary

Job Number: FA42999
Account: RESCTNM Resolution Consultants
Project: NAS Cecil Field PFAS; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP64797-MB	2Q862.D	1	04/28/17	NAF	04/26/17	OP64797	S2Q25

The QC reported here applies to the following samples: **Method:** EPA 537

FA42999-1, FA42999-2, FA42999-3

CAS No.	Compound	Result	RL	MDL	Units	Q
335-67-1	Perfluorooctanoic acid	ND	0.0080	0.0020	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0080	0.0040	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0080	0.0020	ug/l	

CAS No.	Surrogate Recoveries		Limits
	13C2-PFHxA	110%	70-130%
	13C2-PFDA	111%	70-130%

Blank Spike Summary

Job Number: FA42999
Account: RESCTNM Resolution Consultants
Project: NAS Cecil Field PFAS; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP64797-BS	2Q861.D	1	04/28/17	NAF	04/26/17	OP64797	S2Q25

The QC reported here applies to the following samples: **Method:** EPA 537

FA42999-1, FA42999-2, FA42999-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
335-67-1	Perfluorooctanoic acid	0.08	0.0825	103	70-130
375-73-5	Perfluorobutanesulfonic acid	0.08	0.0777	97	70-130
1763-23-1	Perfluorooctanesulfonic acid	0.08	0.0714	89	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
	13C2-PFHxA	105%	70-130%
	13C2-PFDA	105%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA42999
Account: RESCTNM Resolution Consultants
Project: NAS Cecil Field PFAS; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP64797-MS	2Q864.D	1	04/28/17	NAF	04/26/17	OP64797	S2Q25
OP64797-MSD	2Q865.D	1	04/28/17	NAF	04/26/17	OP64797	S2Q25
FA43000-1	2Q863.D	1	04/28/17	NAF	04/26/17	OP64797	S2Q25

The QC reported here applies to the following samples: **Method:** EPA 537

FA42999-1, FA42999-2, FA42999-3

CAS No.	Compound	FA43000-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
335-67-1	Perfluorooctanoic acid	0.0077	U	0.08	0.0738	92	0.08	0.0781	98	6	70-130/30
375-73-5	Perfluorobutanesulfonic acid	0.0077	U	0.08	0.0835	104	0.08	0.0863	108	3	70-130/30
1763-23-1	Perfluorooctanesulfonic acid	0.0077	U	0.08	0.0753	94	0.08	0.0753	94	0	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	FA43000-1	Limits
	13C2-PFHxA	88%	94%	93%	70-130%
	13C2-PFDA	78%	77%	88%	70-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: FA42999
Account: RESCTNM Resolution Consultants
Project: NAS Cecil Field PFAS; Jacksonville, FL

Check Std:	S2Q25-CC18	**Injection Date:**	04/28/17
Lab File ID:	2Q859.D	**Injection Time:**	14:24
Instrument ID:	GCMS2Q	**Method:**	EPA 537

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Initial Cal [a]	77062	4.23	159216	6.65	78218	6.64	57710	7.20	34998	7.47	94157	10.66
Check Std [b]	56182	4.21	133118	6.67	59092	6.66	43394	7.24	26014	7.45	71752	10.88
Upper Limit [c]	115593	5.21	238824	7.67	117327	7.66	86565	8.24	52497	8.45	141236	11.88
Lower Limit [d]	38531	3.21	79608	5.67	39109	5.66	28855	6.24	17499	6.45	47079	9.88
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**	**IS 6 AREA**	**RT**
OP64797-BS	66489	4.21	154462	6.67	68979	6.66	49451	7.24	28788	7.45	80861	10.83
OP64797-MB	61226	4.21	135973	6.67	63693	6.66	45946	7.24	26985	7.45	73370	10.83
FA43000-1	55422	4.21	125242	6.67	57719	6.65	42645	7.24	25302	7.45	70538	10.86
OP64797-MS	64857	4.21	158079	6.67	69338	6.65	50027	7.24	29456	7.45	83608	10.85
OP64797-MSD	64909	4.21	160522	6.67	66713	6.66	51441	7.24	31241	7.45	69896	10.83
ZZZZZZ	63480	4.20	130316	6.66	65180	6.65	48642	7.22	28975	7.44	70108	10.85

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

(a) Initial Cal is: S2Q18-ICC18 2Q655.D 04/20/17 13:13. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to +50% of initial cal area.
(c) Upper Limit = +50% of initial standard area; Retention time +1 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -1 minutes of check standard.

Semivolatile Internal Standard Area Summary

Job Number: FA42999
Account: RESCTNM Resolution Consultants
Project: NAS Cecil Field PFAS; Jacksonville, FL

Check Std:	S2Q25-CC18	**Injection Date:**	04/28/17
Lab File ID:	2Q867.D	**Injection Time:**	17:16
Instrument ID:	GCMS2Q	**Method:**	EPA 537

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Initial Cal [a]	77062	4.23	159216	6.65	78218	6.64	57710	7.20	34998	7.47	94157	10.66
Check Std [b]	55655	4.20	121980	6.66	57261	6.65	42716	7.22	25853	7.44	61580	10.80
Upper Limit [c]	107887	5.20	222902	7.66	109505	7.65	80794	8.22	48997	8.44	131820	11.80
Lower Limit [d]	53943	3.20	111451	5.66	54753	5.65	40397	6.22	24499	6.44	65910	9.80
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**	**IS 6 AREA**	**RT**
ZZZZZZ	59121	4.21	128745	6.67	62781	6.66	48213	7.24	28382	7.45	72203	10.81
ZZZZZZ	56835	4.21	118200	6.67	58905	6.66	45298	7.24	25829	7.45	65328[e]	10.83
FA42999-1	53248[e]	4.21	111734	6.67	55100	6.66	43184	7.24	24810	7.45	61221[e]	10.81
FA42999-3	58176	4.21	120834	6.67	59832	6.66	46938	7.24	27572	7.45	65288[e]	10.83
OP64815-BS	66659	4.21	148305	6.67	70236	6.66	54182	7.24	30623	7.45	77438	10.83
OP64815-MB	70091	4.22	147295	6.67	74209	6.66	57119	7.24	32372	7.45	80649	10.84
ZZZZZZ	78997	4.22	167284	6.68	83589	6.67	65493	7.25	35627	7.46	91031	10.84

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

(a) Initial Cal is: S2Q18-ICC18 2Q655.D 04/20/17 13:13. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to +50% of initial cal area.
(c) Upper Limit = +40% of initial standard area; Retention time +1 minutes of check standard.
(d) Lower Limit = -30% of initial standard area; Retention time -1 minutes of check standard.
(e) Response outside of control limits; ISTD does not reference any reported target analytes.

Semivolatile Internal Standard Area Summary

Job Number: FA42999
Account: RESCTNM Resolution Consultants
Project: NAS Cecil Field PFAS; Jacksonville, FL

Check Std:	S2Q26-CC18	**Injection Date:**	05/01/17
Lab File ID:	2Q909.D	**Injection Time:**	09:57
Instrument ID:	GCMS2Q	**Method:**	EPA 537

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Initial Cal [a]	77062	4.23	159216	6.65	78218	6.64	57710	7.20	34998	7.47	94157	10.66
Check Std [b]	62797	4.31	128184	6.79	65287	6.76	50837	7.36	26936	7.49	73929	11.26
Upper Limit [c]	107887	5.31	222902	7.79	109505	7.76	80794	8.36	48997	8.49	131820	12.26
Lower Limit [d]	53943	3.31	111451	5.79	54753	5.76	40397	6.36	24499	6.49	65910	10.26
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**	**IS 6 AREA**	**RT**
ZZZZZZ	60295	4.27	118756	6.76	58832	6.74	49023	7.33	26172	7.46	57192*	10.85
ZZZZZZ	62709	4.27	120991	6.75	63361	6.74	48774	7.33	26120	7.47	69688	11.14
ZZZZZZ	63504	4.27	120470	6.75	65357	6.74	49267	7.33	25901	7.47	70689	11.16
ZZZZZZ	69764	4.27	137299	6.76	71844	6.74	55487	7.33	27750	7.47	78331	11.11
ZZZZZZ	68884	4.26	135325	6.75	72684	6.73	54074	7.33	28249	7.47	76901	11.14
OP64783-BS	68807	4.26	137725	6.74	72233	6.73	52423	7.31	27926	7.47	76916	11.10
OP64783-MB	63659	4.26	119501	6.74	63206	6.73	48191	7.31	25208	7.47	70450	11.05
FA42999-2	62149	4.26	121015	6.74	66343	6.73	48681	7.31	25754	7.47	71296	11.05

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

(a) Initial Cal is: S2Q18-ICC18 2Q655.D 04/20/17 13:13. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to +50% of initial cal area.
(c) Upper Limit = +40% of initial standard area; Retention time +1 minutes of check standard.
(d) Lower Limit = -30% of initial standard area; Retention time -1 minutes of check standard.

Semivolatile Surrogate Recovery Summary

Job Number: FA42999
Account: RESCTNM Resolution Consultants
Project: NAS Cecil Field PFAS; Jacksonville, FL

Method: EPA 537 **Matrix:** DW

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2
FA42999-1	2Q871.D	98	83
FA42999-2	2Q917.D	80	70
FA42999-3	2Q873.D	82	90
OP64797-BS	2Q861.D	105	105
OP64797-MB	2Q862.D	110	111
OP64797-MS	2Q864.D	88	78
OP64797-MSD	2Q865.D	94	77

Surrogate Compounds	Recovery Limits
S1 = 13C2-PFHxA	70-130%
S2 = 13C2-PFDA	70-130%

Initial Calibration Summary

Job Number: FA42999
Account: RESCTNM Resolution Consultants
Project: NAS Cecil Field PFAS; Jacksonville, FL

Sample: S2Q18-ICC18
Lab FileID: 2Q655.D

Initial Calibration ReSponse Factors - D:\MassHunter\Data\0420_LIST_S2Q18\S2Q18.batch.bin

Level ID : Calibration File
1 : D:\MassHunter\Data\0420_LIST_S2Q18\2Q651.d
2 : D:\MassHunter\Data\0420_LIST_S2Q18\2Q652.d
3 : D:\MassHunter\Data\0420_LIST_S2Q18\2Q653.d
4 : D:\MassHunter\Data\0420_LIST_S2Q18\2Q654.d
5 : D:\MassHunter\Data\0420_LIST_S2Q18\2Q655.d
6 : D:\MassHunter\Data\0420_LIST_S2Q18\2Q656.d
7 : D:\MassHunter\Data\0420_LIST_S2Q18\2Q657.d

Compound	1	2	3	4	5	6	7	AvgRF	%RSD	r^2
1) 13C2-6:2FTS	----------ISTD----------									
8) 4:2FTS	0.5439	0.5459	0.5345	0.5374	0.4892	0.5027	0.5077	0.5230	4.338	0.9995
9) 6:2FTS	-----	1.1352	1.0675	1.0557	0.9739	0.9634	0.9636	1.0266	6.898	0.9993
10) 8:2FTS	1.6663	1.6728	1.6625	1.6921	1.5507	1.5905	1.6117	1.6352	3.163	0.9996
3) 13C2-PFDoDA	----------ISTD----------									
19) PFDoDA	0.9060	0.9297	0.9083	0.9190	0.8505	0.9094	0.9372	0.9086	3.099	0.9996
31) PFTeDA	0.4345	0.4371	0.4318	0.4343	0.3962	0.4245	0.4420	0.4286	3.559	0.9993
32) PFTrDA	0.7809	0.7694	0.7711	0.7818	0.7223	0.7750	0.8091	0.7728	3.354	0.9994
33) PFUnDA	0.9073	0.8879	0.8779	0.8873	0.8215	0.8600	0.8974	0.8770	3.268	0.9985
5) 13C2-PFOA	----------ISTD----------									
2) 13C2-PFDA	1.3869	1.4181	1.3535	1.3743	1.2810	1.3950	1.4227	1.3759	3.507	0.9984
4) 13C2-PFHxA	0.9750	1.0479	1.0267	1.0364	0.9711	1.0614	1.0680	1.0266	3.818	0.9987
16) PFBA	0.4748	0.5318	0.5137	0.5159	0.4818	0.5228	0.5359	0.5110	4.649	0.9984
18) PFDA	1.0186	1.0187	0.9665	0.9766	0.9006	0.9736	1.0136	0.9812	4.293	0.9978
21) PFHpA	1.6423	1.4730	1.4128	1.4109	1.3074	1.4206	1.4665	1.4476	7.013	0.9986
23) PFHxA	0.4742	0.5078	0.4891	0.4767	0.4527	0.4935	0.4989	0.4847	3.794	0.9996
25) PFNA	1.1263	0.9385	0.9201	0.8924	0.8036	0.8867	0.9120	0.9256	10.636	0.9977
27) PFOA	0.9605	0.8457	0.8362	0.8326	0.7694	0.8479	0.8388	0.8473	6.694	0.9985
6) 13C3-PFPeA	----------ISTD----------									
29) PFPeA	1.5154	1.5656	1.4956	1.5117	1.4189	1.5044	1.5422	1.5077	3.048	0.9989
30) PFPeS	0.1734	0.1915	0.1872	0.1883	0.1775	0.1881	0.1940	0.1857	4.029	0.9987
7) 13C4-PFOS	----------ISTD----------									
17) PFBS	0.7614	0.7709	0.7757	0.7798	0.7414	0.7884	0.8143	0.7760	2.917	0.9986
20) PFDS	0.5220	0.5547	0.5462	0.5487	0.5249	0.5573	0.5779	0.5474	3.528	0.9997
22) PFHpS	0.8012	0.8342	0.8168	0.8222	0.7913	0.8358	0.8645	0.8237	2.944	0.9986
24) PFHxS	0.8075	0.8214	0.8108	0.8095	0.7715	0.8190	0.8571	0.8138	3.098	0.9980
26) PFNS	0.4808	0.5040	0.5004	0.4985	0.4714	0.4980	0.5153	0.4955	2.973	0.9987
28) PFOS	1.1322	1.1479	1.1431	1.1299	1.0613	1.1354	1.1823	1.1331	3.205	0.9981
11) d3-MeFOSAA	----------ISTD----------									
12) d5-EtFOSAA	0.8411	0.6125	0.5388	0.5228	0.5075	0.5045	0.5765	0.5862	20.291	0.9954
13) EtFOSAA	-----	0.5259	0.4906	0.4539	0.4378	0.4479	0.5192	0.4792	7.939	0.9942
14) FOSA	1.0873	1.0855	1.1177	1.1044	1.0530	1.0209	1.1121	1.0830	3.218	0.9968
15) MeFOSAA	-----	0.6142	0.5865	0.6084	0.5819	0.5706	0.6565	0.6030	5.130	0.9942

*(value) - Average RF below (value)

Initial Calibration Verification

Job Number: FA42999
Account: RESCTNM Resolution Consultants
Project: NAS Cecil Field PFAS; Jacksonville, FL

Sample: S2Q18-ICV18
Lab FileID: 2Q659.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0420_LIST_S2Q18\S2Q18.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0420_LIST_S2Q18\2Q651.d
2:D:\MassHunter\Data\0420_LIST_S2Q18\2Q652.d
3:D:\MassHunter\Data\0420_LIST_S2Q18\2Q653.d
4:D:\MassHunter\Data\0420_LIST_S2Q18\2Q654.d
5:D:\MassHunter\Data\0420_LIST_S2Q18\2Q655.d
6:D:\MassHunter\Data\0420_LIST_S2Q18\2Q656.d
7:D:\MassHunter\Data\0420_LIST_S2Q18\2Q657.d

Data File: 2Q659
Type : QC
Level : 5

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	0.000	0.0	0.0
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	0.000	0.0	0.0
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	20.000	24.064	20.3	120.3
6:2FTS	20.000	22.507	12.5	112.5
8:2FTS	20.000	22.545	12.7	112.7
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	0.000	0.0	0.0
EtFOSAA	20.000	23.571	17.9	117.9
FOSA	20.000	21.566	7.8	107.8
MeFOSAA	20.000	24.228	21.1	121.1
PFBA	20.000	21.001	5.0	105.0
PFBS	20.000	20.876	4.4	104.4
PFDA	20.000	21.111	5.6	105.6
PFDoDA	20.000	22.315	11.6	111.6
PFDS	20.000	22.350	11.7	111.7
PFHpA	20.000	21.559	7.8	107.8
PFHpS	20.000	21.058	5.3	105.3
PFHxA	20.000	21.933	9.7	109.7
PFHxS	20.000	22.038	10.2	110.2
PFNA	20.000	21.312	6.6	106.6
PFNS	20.000	22.659	13.3	113.3
PFOA	20.000	21.282	6.4	106.4
PFOS	20.000	19.618	-1.9	98.1
PFPeA	20.000	21.052	5.3	105.3
PFPeS	20.000	22.045	10.2	110.2
PFTeDA	20.000	22.537	12.7	112.7
PFTrDA	20.000	22.394	12.0	112.0
PFUnDA	20.000	21.206	6.0	106.0

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA42999
Account: RESCTNM Resolution Consultants
Project: NAS Cecil Field PFAS; Jacksonville, FL

Sample: S2Q25-CC18
Lab FileID: 2Q859.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0428_LIST_S2Q25\2SQ25.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0420_LIST_S2Q18\2Q651.d
2:D:\MassHunter\Data\0420_LIST_S2Q18\2Q652.d
3:D:\MassHunter\Data\0420_LIST_S2Q18\2Q653.d
4:D:\MassHunter\Data\0420_LIST_S2Q18\2Q654.d
5:D:\MassHunter\Data\0420_LIST_S2Q18\2Q655.d
6:D:\MassHunter\Data\0420_LIST_S2Q18\2Q656.d
7:D:\MassHunter\Data\0420_LIST_S2Q18\2Q657.d

Data File: 2Q859
Type : QC
Level : 5

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	21.113	5.6	105.6
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	20.479	2.4	102.4
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	20.000	22.222	11.1	111.1
6:2FTS	20.000	22.168	10.8	110.8
8:2FTS	20.000	22.804	14.0	114.0
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	23.476	17.4	117.4
EtFOSAA	20.000	20.972	4.9	104.9
FOSA	20.000	20.330	1.6	101.6
MeFOSAA	20.000	22.222	11.1	111.1
PFBA	20.000	18.217	-8.9	91.1
PFBS	20.000	19.673	-1.6	98.4
PFDA	20.000	20.445	2.2	102.2
PFDoDA	20.000	22.041	10.2	110.2
PFDS	20.000	22.105	10.5	110.5
PFHpA	20.000	20.534	2.7	102.7
PFHpS	20.000	21.435	7.2	107.2
PFHxA	20.000	21.609	8.0	108.0
PFHxS	20.000	20.628	3.1	103.1
PFNA	20.000	20.442	2.2	102.2
PFNS	20.000	21.229	6.1	106.1
PFOA	20.000	21.510	7.6	107.6
PFOS	20.000	20.330	1.7	101.7
PFPeA	20.000	20.570	2.9	102.9
PFPeS	20.000	21.345	6.7	106.7
PFTeDA	20.000	19.520	-2.4	97.6
PFTrDA	20.000	21.587	7.9	107.9
PFUnDA	20.000	20.475	2.4	102.4

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA42999
Account: RESCTNM Resolution Consultants
Project: NAS Cecil Field PFAS; Jacksonville, FL

Sample: S2Q25-CC18
Lab FileID: 2Q867.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0428_LIST_S2Q25\2SQ25.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0420_LIST_S2Q18\2Q651.d
2:D:\MassHunter\Data\0420_LIST_S2Q18\2Q652.d
3:D:\MassHunter\Data\0420_LIST_S2Q18\2Q653.d
4:D:\MassHunter\Data\0420_LIST_S2Q18\2Q654.d
5:D:\MassHunter\Data\0420_LIST_S2Q18\2Q655.d
6:D:\MassHunter\Data\0420_LIST_S2Q18\2Q656.d
7:D:\MassHunter\Data\0420_LIST_S2Q18\2Q657.d

Data File: 2Q867
Type : QC
Level : 5

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	20.593	3.0	103.0
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	20.247	1.2	101.2
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	20.000	20.932	4.7	104.7
6:2FTS	20.000	22.104	10.5	110.5
8:2FTS	20.000	23.524	17.6	117.6
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	24.375	21.9	121.9
EtFOSAA	20.000	21.545	7.7	107.7
FOSA	20.000	21.428	7.1	107.1
MeFOSAA	20.000	21.912	9.6	109.6
PFBA	20.000	18.160	-9.2	90.8
PFBS	20.000	19.746	-1.3	98.7
PFDA	20.000	20.189	0.9	100.9
PFDoDA	20.000	21.876	9.4	109.4
PFDS	20.000	21.732	8.7	108.7
PFHpA	20.000	21.191	6.0	106.0
PFHpS	20.000	21.404	7.0	107.0
PFHxA	20.000	21.537	7.7	107.7
PFHxS	20.000	22.261	11.3	111.3
PFNA	20.000	20.800	4.0	104.0
PFNS	20.000	21.385	6.9	106.9
PFOA	20.000	21.108	5.5	105.5
PFOS	20.000	20.477	2.4	102.4
PFPeA	20.000	20.149	0.7	100.7
PFPeS	20.000	20.727	3.6	103.6
PFTeDA	20.000	19.408	-3.0	97.0
PFTrDA	20.000	22.228	11.1	111.1
PFUnDA	20.000	19.652	-1.7	98.3

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA42999
Account: RESCTNM Resolution Consultants
Project: NAS Cecil Field PFAS; Jacksonville, FL

Sample: S2Q25-CC18
Lab FileID: 2Q877.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0428_LIST_S2Q25\2SQ25.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0420_LIST_S2Q18\2Q651.d
2:D:\MassHunter\Data\0420_LIST_S2Q18\2Q652.d
3:D:\MassHunter\Data\0420_LIST_S2Q18\2Q653.d
4:D:\MassHunter\Data\0420_LIST_S2Q18\2Q654.d
5:D:\MassHunter\Data\0420_LIST_S2Q18\2Q655.d
6:D:\MassHunter\Data\0420_LIST_S2Q18\2Q656.d
7:D:\MassHunter\Data\0420_LIST_S2Q18\2Q657.d

Data File: 2Q877
Type : QC
Level : 5

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	20.774	3.9	103.9
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	20.027	0.1	100.1
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	20.000	20.863	4.3	104.3
6:2FTS	20.000	22.141	10.7	110.7
8:2FTS	20.000	24.062	20.3	120.3
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	25.056	# 25.3	125.3
EtFOSAA	20.000	20.715	3.6	103.6
FOSA	20.000	21.262	6.3	106.3
MeFOSAA	20.000	21.093	5.5	105.5
PFBA	20.000	18.332	-8.3	91.7
PFBS	20.000	19.560	-2.2	97.8
PFDA	20.000	19.841	-0.8	99.2
PFDoDA	20.000	22.035	10.2	110.2
PFDS	20.000	21.535	7.7	107.7
PFHpA	20.000	21.310	6.5	106.5
PFHpS	20.000	21.353	6.8	106.8
PFHxA	20.000	21.079	5.4	105.4
PFHxS	20.000	20.374	1.9	101.9
PFNA	20.000	19.904	-0.5	99.5
PFNS	20.000	21.038	5.2	105.2
PFOA	20.000	20.762	3.8	103.8
PFOS	20.000	20.785	3.9	103.9
PFPeA	20.000	20.664	3.3	103.3
PFPeS	20.000	21.777	8.9	108.9
PFTeDA	20.000	19.848	-0.8	99.2
PFTrDA	20.000	21.728	8.6	108.6
PFUnDA	20.000	19.014	-4.9	95.1

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA42999
Account: RESCTNM Resolution Consultants
Project: NAS Cecil Field PFAS; Jacksonville, FL

Sample: S2Q26-CC18
Lab FileID: 2Q909.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0501_LIST_S2Q26\S2Q26.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0420_LIST_S2Q18\2Q651.d
2:D:\MassHunter\Data\0420_LIST_S2Q18\2Q652.d
3:D:\MassHunter\Data\0420_LIST_S2Q18\2Q653.d
4:D:\MassHunter\Data\0420_LIST_S2Q18\2Q654.d
5:D:\MassHunter\Data\0420_LIST_S2Q18\2Q655.d
6:D:\MassHunter\Data\0420_LIST_S2Q18\2Q656.d
7:D:\MassHunter\Data\0420_LIST_S2Q18\2Q657.d

Data File: 2Q909
Type : QC
Level : 5

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	18.871	-5.6	94.4
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	18.393	-8.0	92.0
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	20.000	18.167	-9.2	90.8
6:2FTS	20.000	19.625	-1.9	98.1
8:2FTS	20.000	20.634	3.2	103.2
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	19.576	-2.1	97.9
EtFOSAA	20.000	18.011	-9.9	90.1
FOSA	20.000	18.276	-8.6	91.4
MeFOSAA	20.000	19.404	-3.0	97.0
PFBA	20.000	17.023	-14.9	85.1
PFBS	20.000	16.794	-16.0	84.0
PFDA	20.000	17.774	-11.1	88.9
PFDoDA	20.000	19.704	-1.5	98.5
PFDS	20.000	16.297	-18.5	81.5
PFHpA	20.000	18.469	-7.7	92.3
PFHpS	20.000	17.820	-10.9	89.1
PFHxA	20.000	19.558	-2.2	97.8
PFHxS	20.000	17.171	-14.1	85.9
PFNA	20.000	20.346	1.7	101.7
PFNS	20.000	19.347	-3.3	96.7
PFOA	20.000	18.759	-6.2	93.8
PFOS	20.000	17.323	-13.4	86.6
PFPeA	20.000	18.102	-9.5	90.5
PFPeS	20.000	18.665	-6.7	93.3
PFTeDA	20.000	20.327	1.6	101.6
PFTrDA	20.000	19.472	-2.6	97.4
PFUnDA	20.000	18.334	-8.3	91.7

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA42999
Account: RESCTNM Resolution Consultants
Project: NAS Cecil Field PFAS; Jacksonville, FL

Sample: S2Q26-CC18
Lab FileID: 2Q918.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0501_LIST_S2Q26\S2Q26.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0420_LIST_S2Q18\2Q651.d
2:D:\MassHunter\Data\0420_LIST_S2Q18\2Q652.d
3:D:\MassHunter\Data\0420_LIST_S2Q18\2Q653.d
4:D:\MassHunter\Data\0420_LIST_S2Q18\2Q654.d
5:D:\MassHunter\Data\0420_LIST_S2Q18\2Q655.d
6:D:\MassHunter\Data\0420_LIST_S2Q18\2Q656.d
7:D:\MassHunter\Data\0420_LIST_S2Q18\2Q657.d

Data File: 2Q918
Type : QC
Level : 2

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	2.000	1.852	-7.4	92.6
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	2.000	1.801	-9.9	90.1
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	2.000	1.968	-1.6	98.4
6:2FTS	2.000	2.186	9.3	109.3
8:2FTS	2.000	2.146	7.3	107.3
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	2.000	7.000	# 250.0	350.0
EtFOSAA	2.000	3.115	# 55.8	155.8
FOSA	2.000	1.889	-5.5	94.5
MeFOSAA	2.000	3.511	# 75.6	175.6
PFBA	2.000	1.692	-15.4	84.6
PFBS	2.000	1.702	-14.9	85.1
PFDA	2.000	1.904	-4.8	95.2
PFDoDA	2.000	2.098	4.9	104.9
PFDS	2.000	1.711	-14.5	85.5
PFHpA	2.000	2.000	0.0	100.0
PFHpS	2.000	1.836	-8.2	91.8
PFHxA	2.000	2.059	3.0	103.0
PFHxS	2.000	1.767	-11.6	88.4
PFNA	2.000	2.042	2.1	102.1
PFNS	2.000	1.919	-4.0	96.0
PFOA	2.000	1.970	-1.5	98.5
PFOS	2.000	1.785	-10.8	89.2
PFPeA	2.000	1.873	-6.4	93.6
PFPeS	2.000	1.867	-6.6	93.4
PFTeDA	2.000	2.070	3.5	103.5
PFTrDA	2.000	2.080	4.0	104.0
PFUnDA	2.000	1.868	-6.6	93.4

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA42999
Account: RESCTNM Resolution Consultants
Project: NAS Cecil Field PFAS; Jacksonville, FL

Sample: S2Q26-CC18
Lab FileID: 2Q919.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0501_LIST_S2Q26\S2Q26.batch.bin

Level ID:Calibration File
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3:D:\MassHunter\Data\0420_LIST_S2Q18\2Q653.d
4:D:\MassHunter\Data\0420_LIST_S2Q18\2Q654.d
5:D:\MassHunter\Data\0420_LIST_S2Q18\2Q655.d
6:D:\MassHunter\Data\0420_LIST_S2Q18\2Q656.d
7:D:\MassHunter\Data\0420_LIST_S2Q18\2Q657.d

Data File: 2Q919
Type : QC
Level : 5

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	18.254	-8.7	91.3
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	17.855	-10.7	89.3
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	20.000	18.548	-7.3	92.7
6:2FTS	20.000	19.584	-2.1	97.9
8:2FTS	20.000	21.028	5.1	105.1
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	32.352	# 61.8	161.8
EtFOSAA	20.000	29.417	# 47.1	147.1
FOSA	20.000	19.897	-0.5	99.5
MeFOSAA	20.000	31.206	# 56.0	156.0
PFBA	20.000	16.242	-18.8	81.2
PFBS	20.000	17.379	-13.1	86.9
PFDA	20.000	17.833	-10.8	89.2
PFDoDA	20.000	19.686	-1.6	98.4
PFDS	20.000	17.467	-12.7	87.3
PFHpA	20.000	18.065	-9.7	90.3
PFHpS	20.000	18.231	-8.8	91.2
PFHxA	20.000	19.307	-3.5	96.5
PFHxS	20.000	17.578	-12.1	87.9
PFNA	20.000	19.129	-4.4	95.6
PFNS	20.000	19.309	-3.5	96.5
PFOA	20.000	18.777	-6.1	93.9
PFOS	20.000	17.885	-10.6	89.4
PFPeA	20.000	17.928	-10.4	89.6
PFPeS	20.000	18.324	-8.4	91.6
PFTeDA	20.000	19.058	-4.7	95.3
PFTrDA	20.000	19.726	-1.4	98.6
PFUnDA	20.000	17.760	-11.2	88.8

CC Criteria: +/- 25%

GC/MS Semi-volatiles

Raw Data

Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

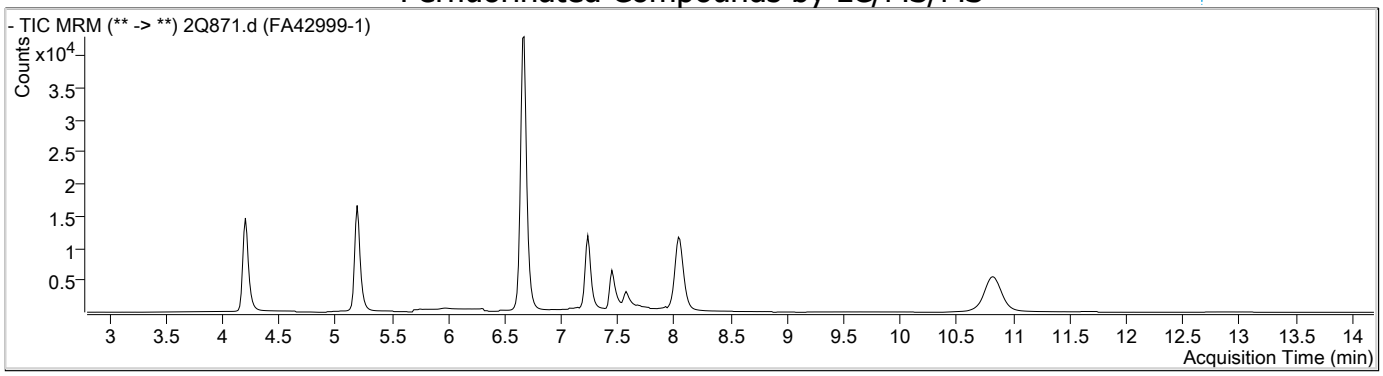
Data File	:	2Q871.d
Operator	:	NANCYF
Acq. Method	:	dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time	:	4/28/2017 6:32:52 PM
Sample Name	:	FA42999-1
Vial	:	Vial 15
DA Method File	:	PFCLISTDW_0420_S2Q18.m
Batch Name	:	2SQ25.batch.bin
Last Calib Update	:	4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
13C2-6:2FTS	6.671	429.0 -> 409.0	111734	20.00	µg/L	0.000
13C2-PFDoDA	10.814	615.0 -> 570.0	61221	20.00	µg/L	0.025
13C2-PFOA	6.662	415.0 -> 370.0	55100	20.00	µg/L	0.000
13C3-PFPeA	4.209	266.0 -> 222.0	53248	20.00	µg/L	-0.013
13C4-PFOS	7.239	503.0 -> 80.0	43184	20.00	µg/L	0.000
d3-MeFOSAA	7.450	573.0 -> 419.0	24810	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-PFDA	8.044	515.0 -> 470.0	63883	16.57	µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 82.8%		
13C2-PFHxA	5.197	315.0 -> 270.0	57315	19.69	µg/L	-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 98.5%		
d5-EtFOSAA	7.572	589.0 -> 419.0	9595	16.01	µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 80.0%		
Target Compounds						**QValue**
4:2FTS	-	327.0 -> 307.0	-	N.D.		
6:2FTS	6.673	427.0 -> 407.0	831	0.15	µg/L	100
8:2FTS	-	527.0 -> 507.0	-	N.D.		
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
FOSA	-	498.0 -> 78.0	-	N.D.		
MeFOSAA	-	570.0 -> 419.0	-	N.D.		
PFBA	-	213.0 -> 169.0	-	N.D.		
PFBS	-	299.0 -> 80.0	-	N.D.		
PFDA	-	513.0 -> 469.0	-	N.D.		
PFDoDA	-	613.0 -> 569.0	-	N.D.		
PFDS	-	599.0 -> 80.0	-	N.D.		
PFHpA	5.973	363.0 -> 319.0	838	0.23	µg/L	85
PFHpS	-	449.0 -> 80.0	-	N.D.		
PFHxA	5.200	313.0 -> 269.0	385	0.31	µg/L	85
PFHxS	-	399.0 -> 80.0	-	N.D.		
PFNA	-	463.0 -> 419.0	-	N.D.		
PFNS	-	549.0 -> 99.0	-	N.D.		
PFOA	6.664	413.0 -> 369.0	350	0.15	µg/L	54
PFOS	-	499.0 -> 80.0	-	N.D.		
PFPeA	4.188	263.0 -> 219.0	375	0.09	µg/L	100
PFPeS	-	349.0 -> 99.0	-	N.D.		
PFTeDA	-	713.0 -> 669.0	-	N.D.		
PFTrDA	-	663.0 -> 619.0	-	N.D.		
PFUnDA	-	563.0 -> 519.0	-	N.D.		

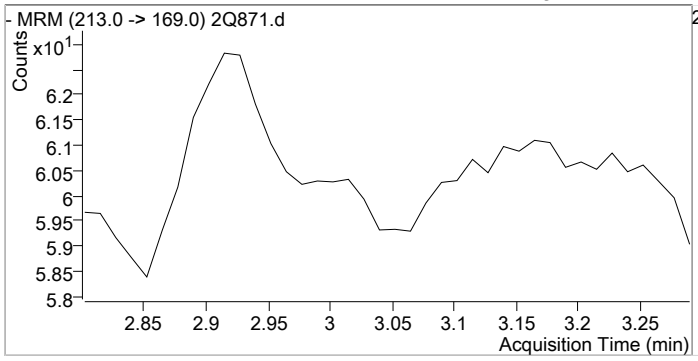
 # = Qualifier out of range, m = manually integrated, + = Area summed

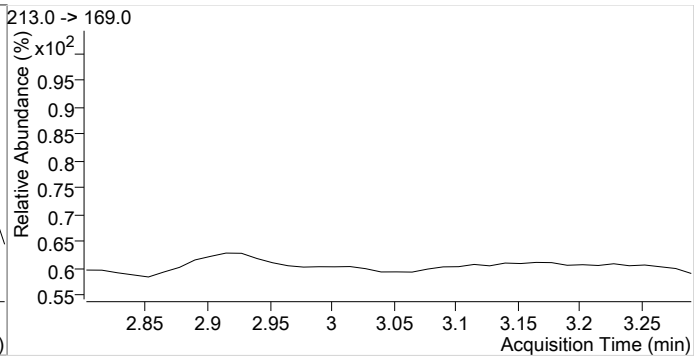
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

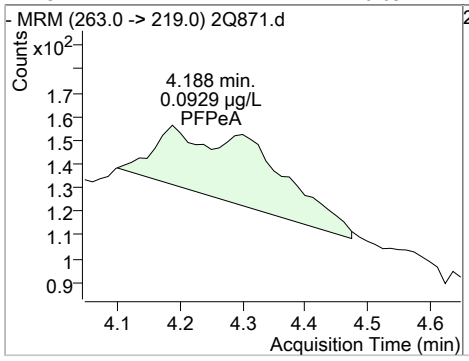


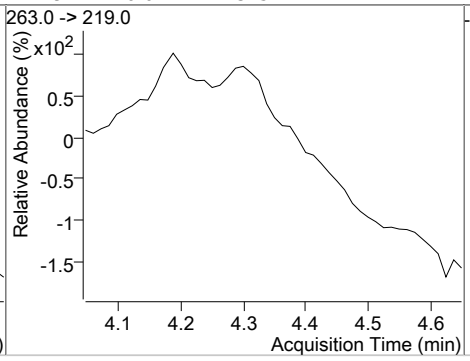
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFBA	N.D.	2.94		

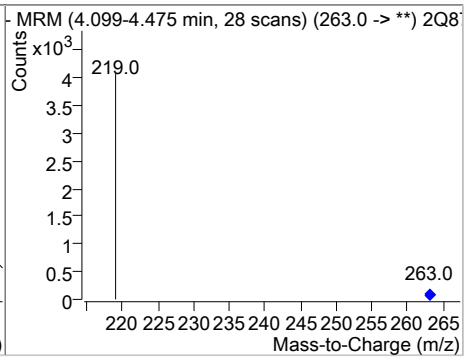




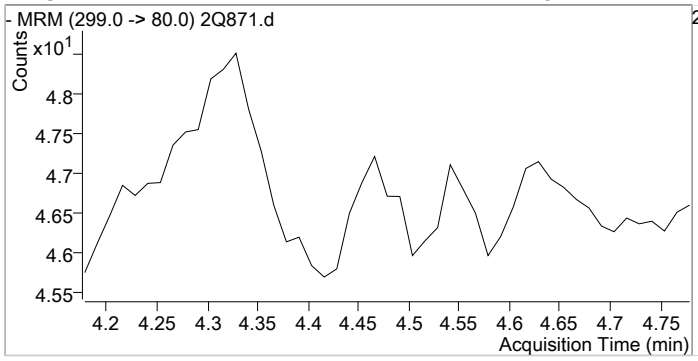
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.09	4.19	-0.04	375				

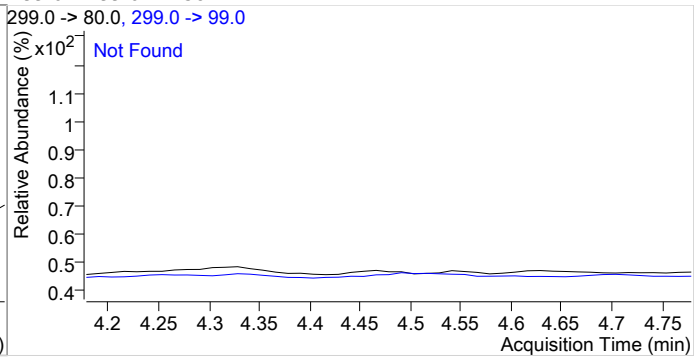






Compound	Conc.	Exp RT	QIon	Exp Ratio
PFBS	N.D.	4.34	299.0 -> 99.0	38.1

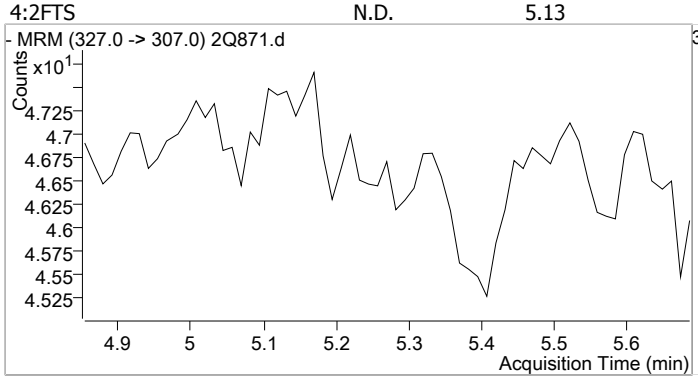


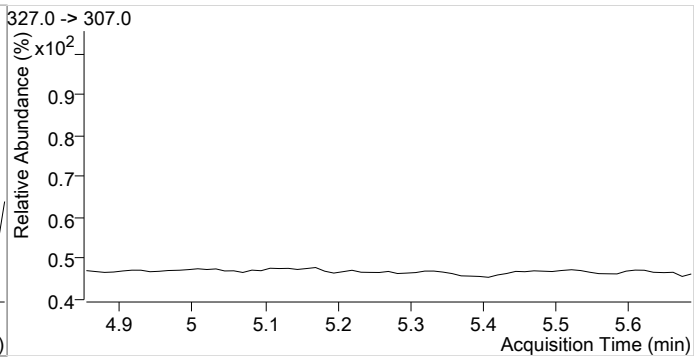


Perfluorinated Compounds by LC/MS/MS

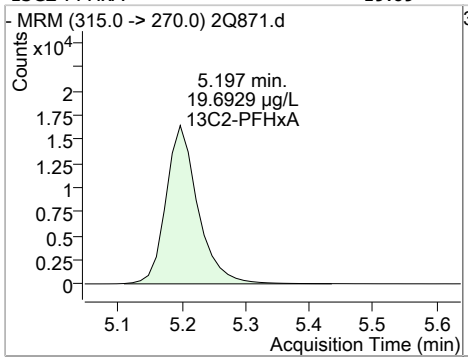
Agilent Technologies

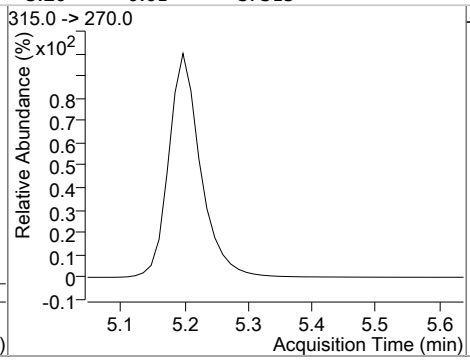
Compound	Conc.	Exp RT	QIon	Exp Ratio
4:2FTS	N.D.	5.13		

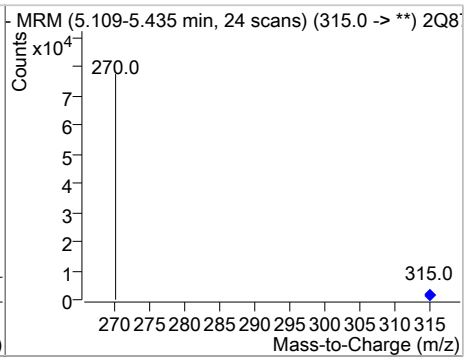




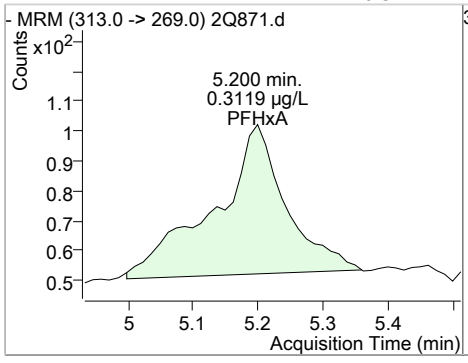
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	19.69	5.20	-0.01	57315				

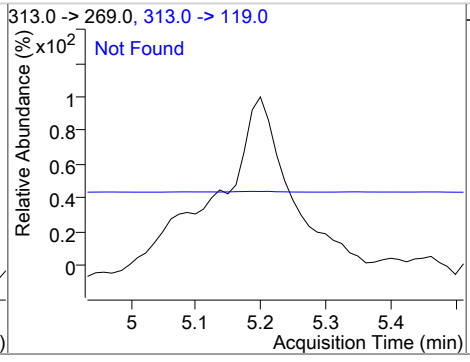


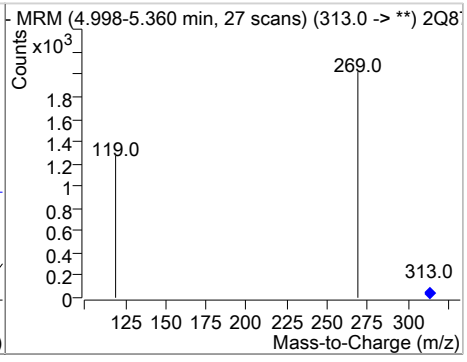




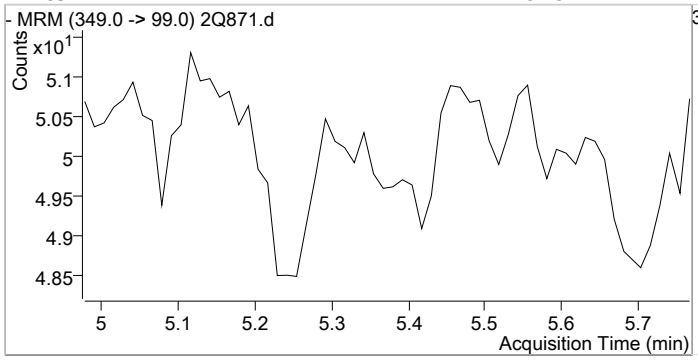
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.31	5.20	-0.01	385	313.0 -> 119.0		4.0	6.0

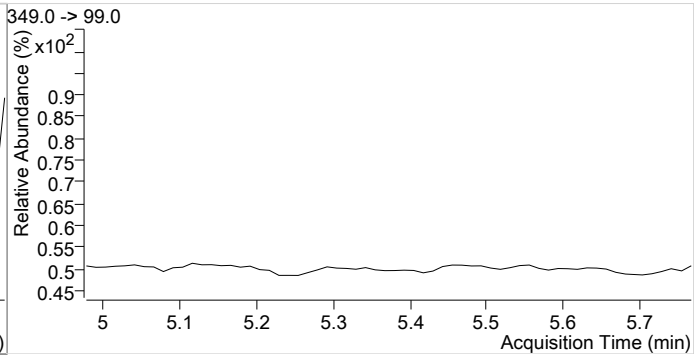






Compound	Conc.	Exp RT	QIon	Exp Ratio
PFPeS	N.D.	5.25		





Perfluorinated Compounds by LC/MS/MS

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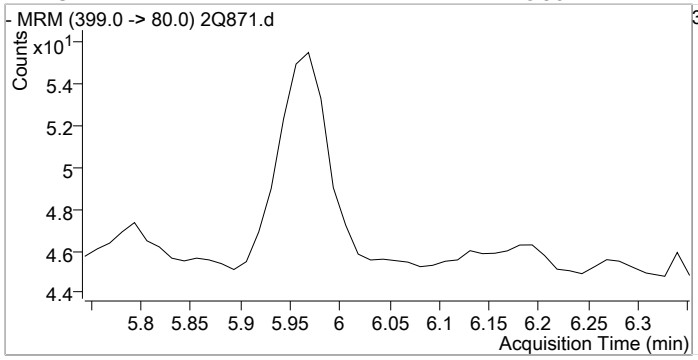
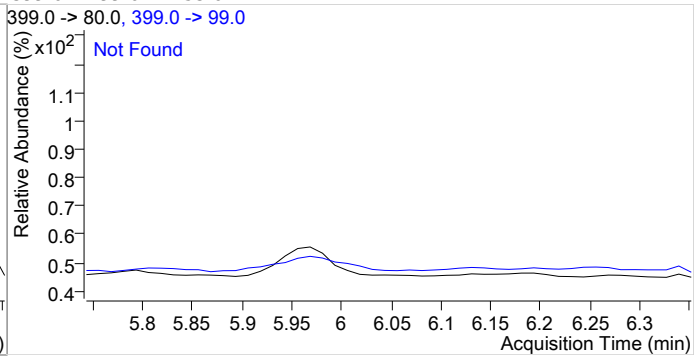
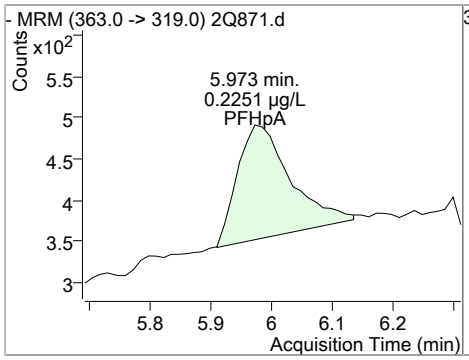
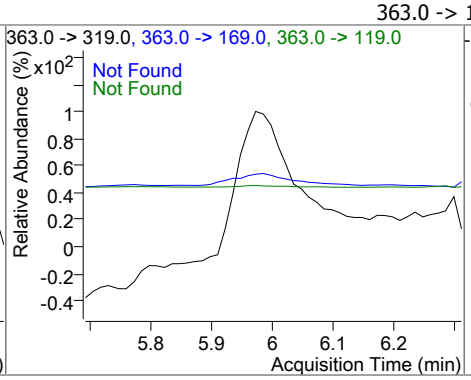
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFHxS	N.D.	5.98	399.0 -> 99.0	53.6

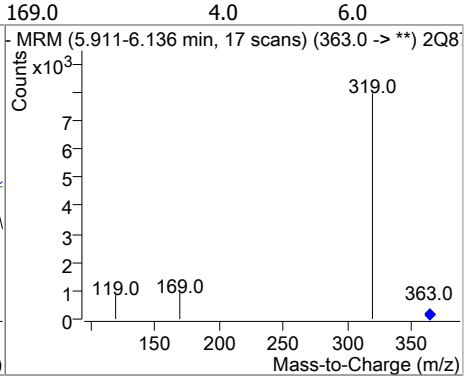




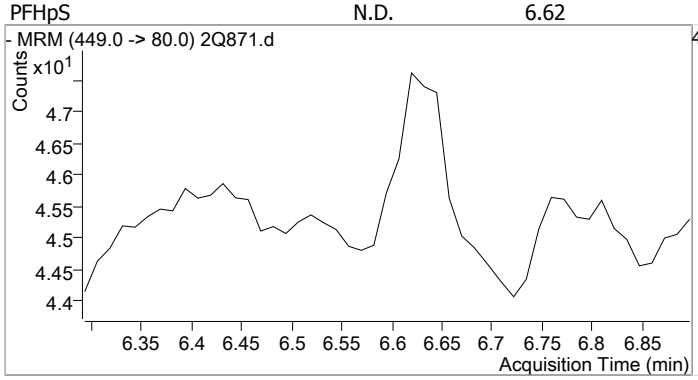
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.23	5.97	-0.01	838	363.0 -> 119.0		4.0	6.0
					363.0 -> 169.0		4.0	6.0

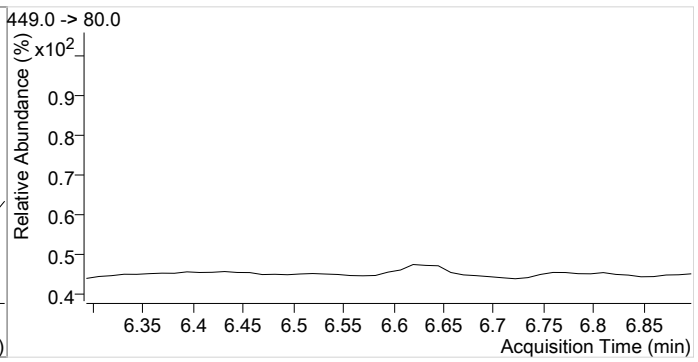




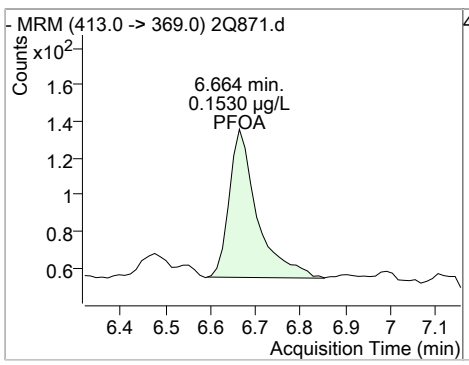


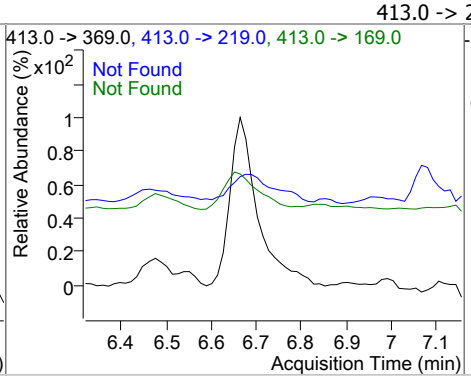
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFHpS	N.D.	6.62		

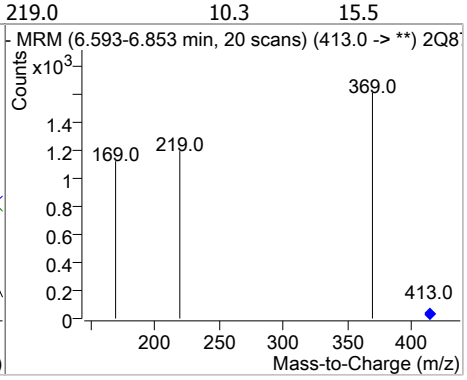




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.15	6.66	0.00	350	413.0 -> 169.0		21.8	32.6
					413.0 -> 219.0		10.3	15.5



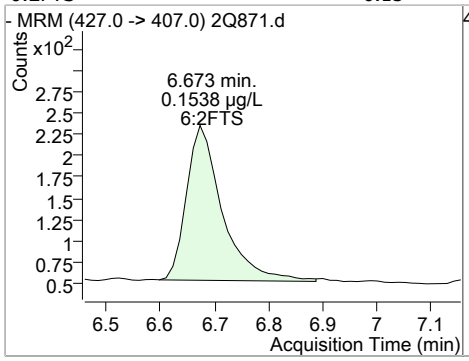


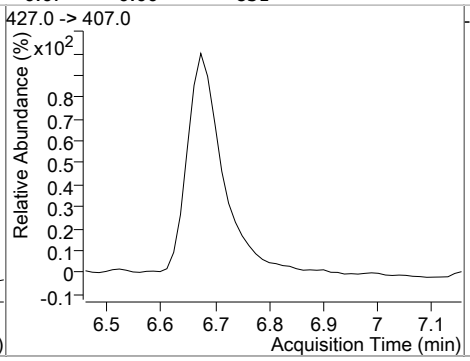


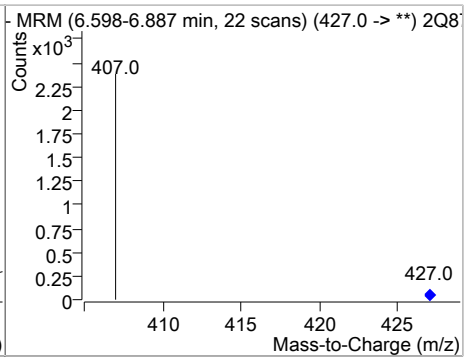
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

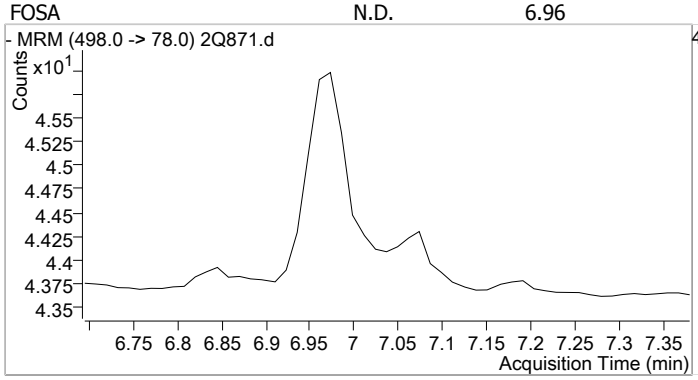
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	0.15	6.67	0.00	831				

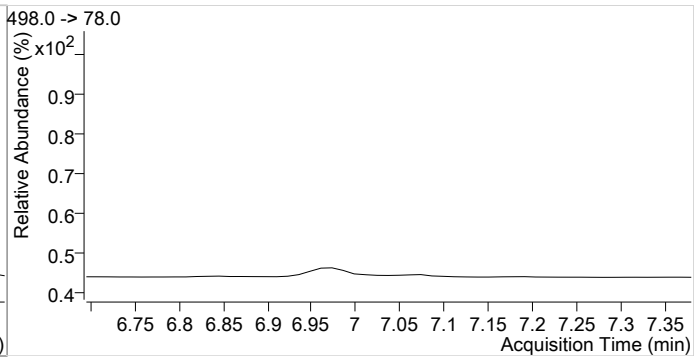




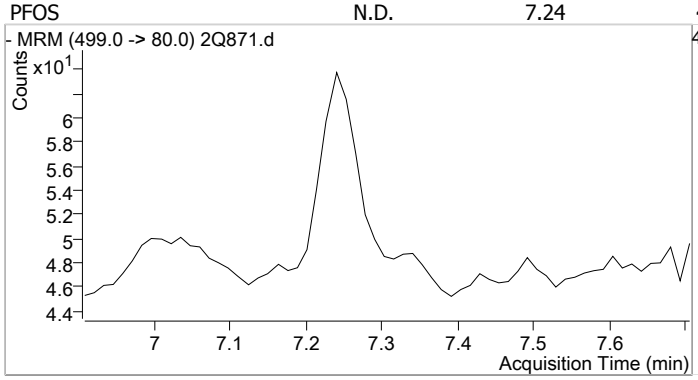


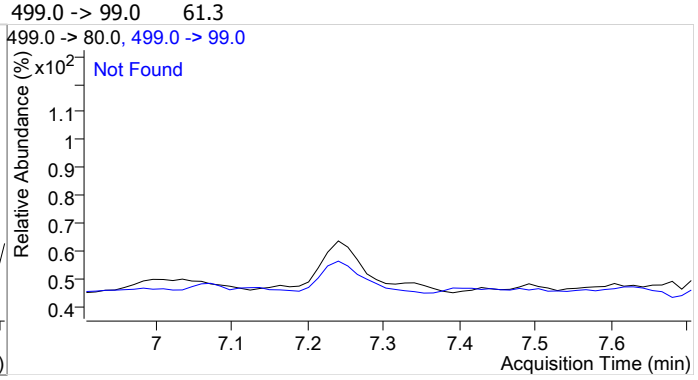
Compound	Conc.	Exp RT	QIon	Exp Ratio
FOSA	N.D.	6.96		



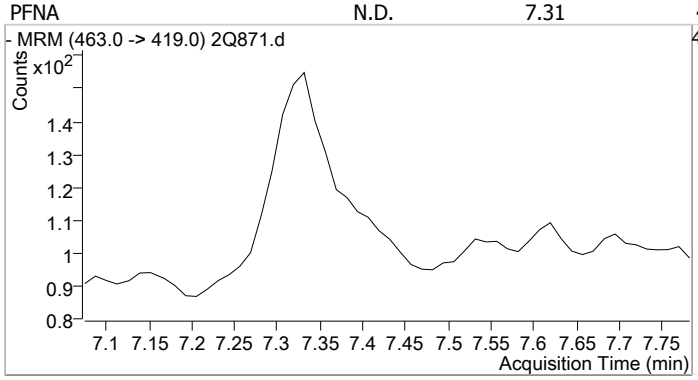


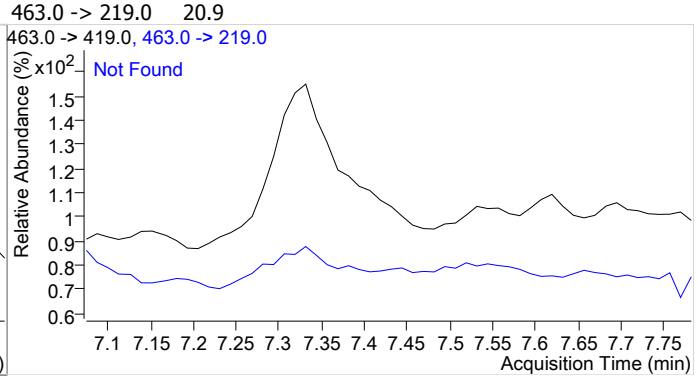
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFOS	N.D.	7.24	499.0 -> 99.0	61.3





Compound	Conc.	Exp RT	QIon	Exp Ratio
PFNA	N.D.	7.31	463.0 -> 219.0	20.9

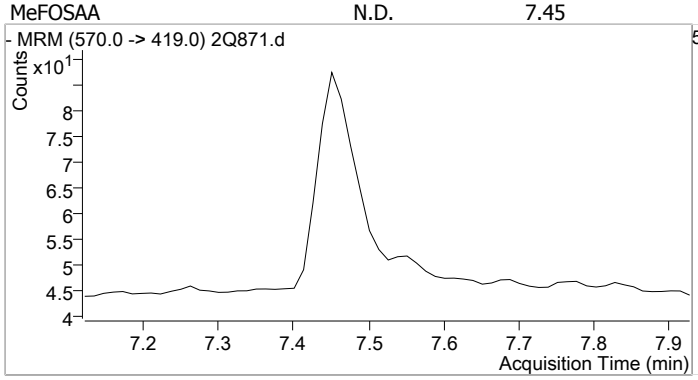


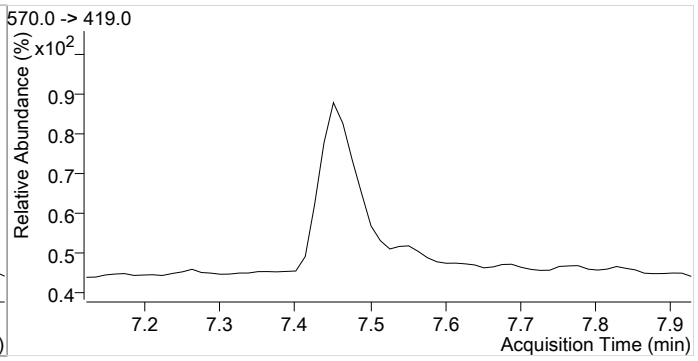


Perfluorinated Compounds by LC/MS/MS

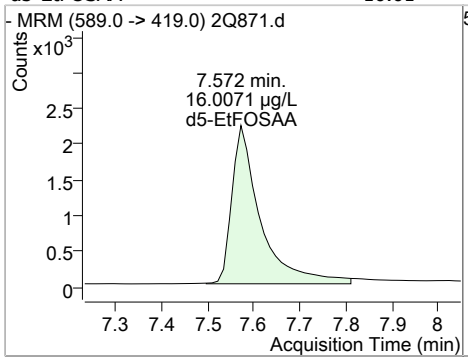
Agilent Technologies

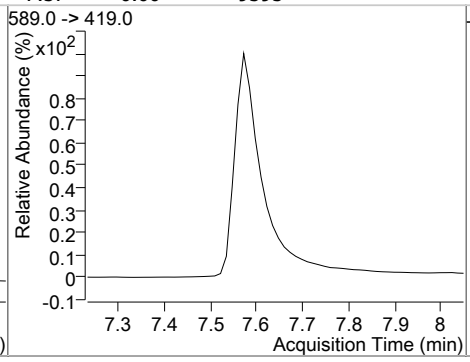
Compound	Conc.	Exp RT	QIon	Exp Ratio
MeFOSAA	N.D.	7.45		

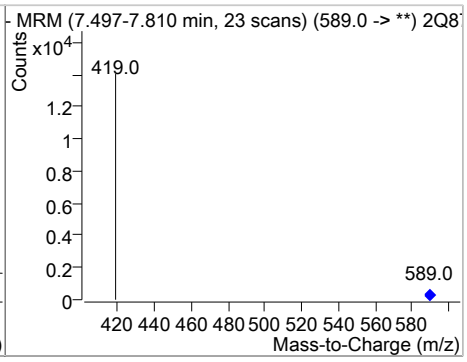




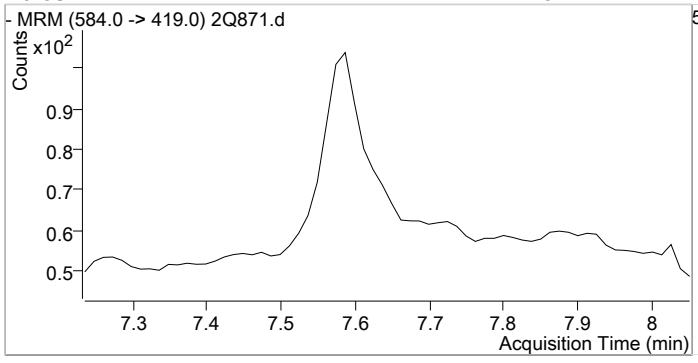
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	16.01	7.57	0.00	9595				

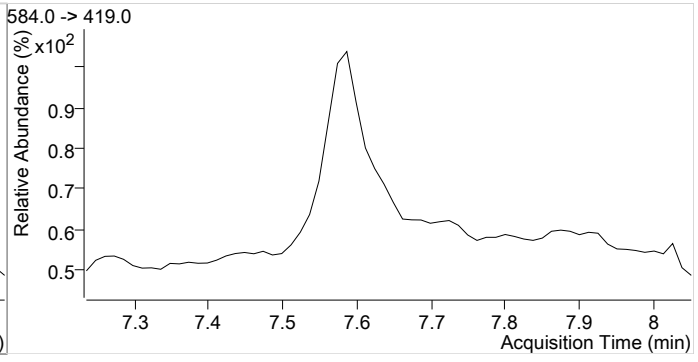




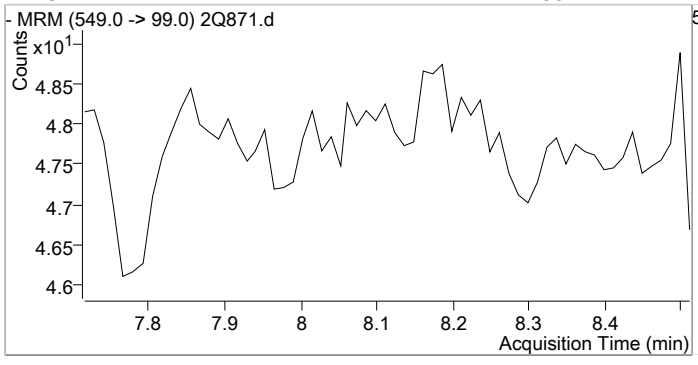


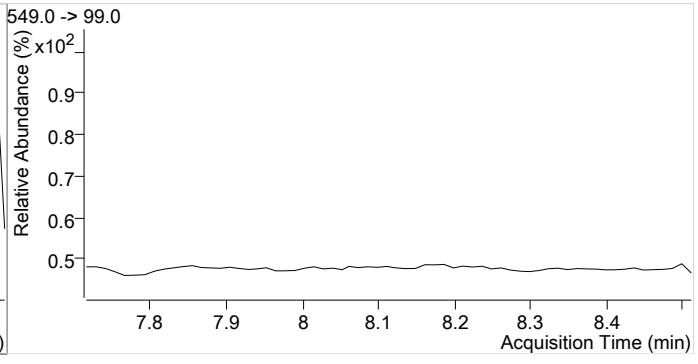
Compound	Conc.	Exp RT	QIon	Exp Ratio
EtFOSAA	N.D.	7.57		





Compound	Conc.	Exp RT	QIon	Exp Ratio
PFNS	N.D.	7.93		

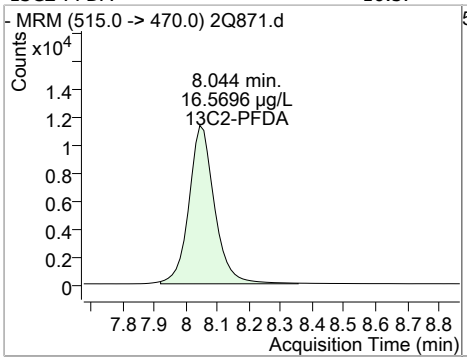


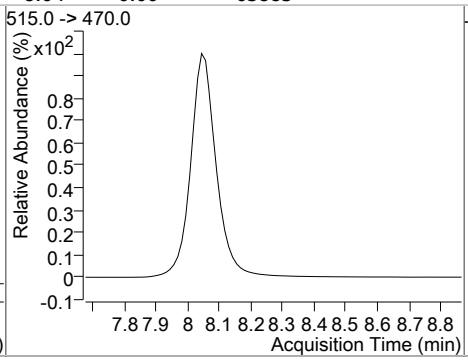


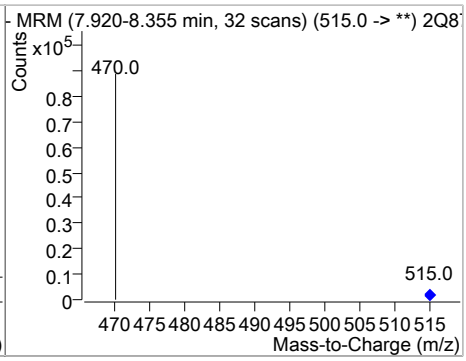
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

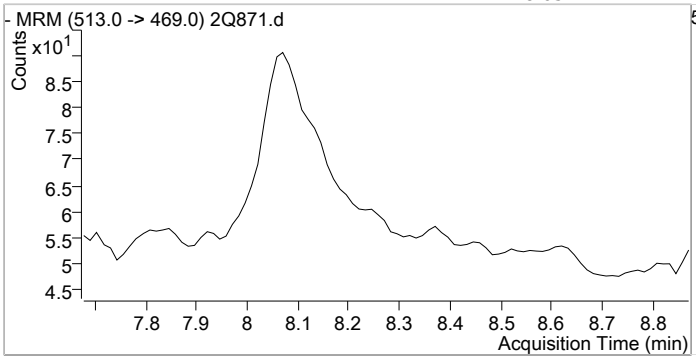
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	16.57	8.04	0.00	63883				

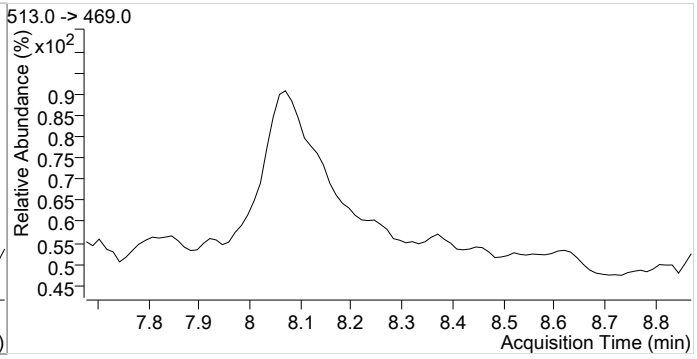




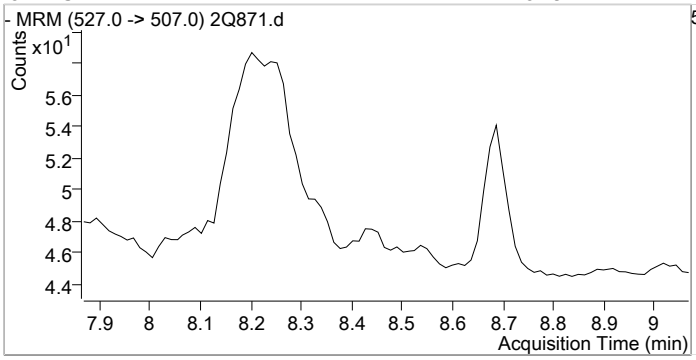


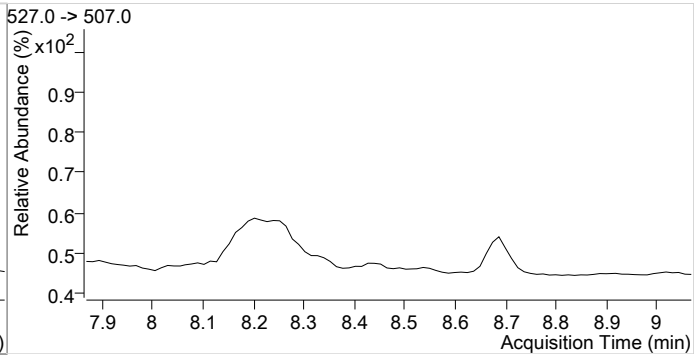
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFDA	N.D.	8.05		



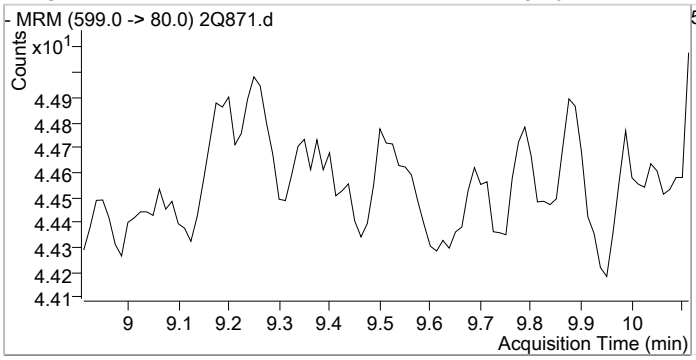


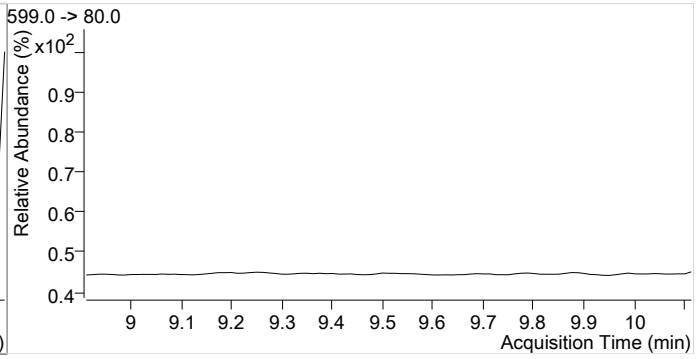
Compound	Conc.	Exp RT	QIon	Exp Ratio
8:2FTS	N.D.	8.19		





Compound	Conc.	Exp RT	QIon	Exp Ratio
PFDS	N.D.	9.16		





7.11.1

Perfluorinated Compounds by LC/MS/MS

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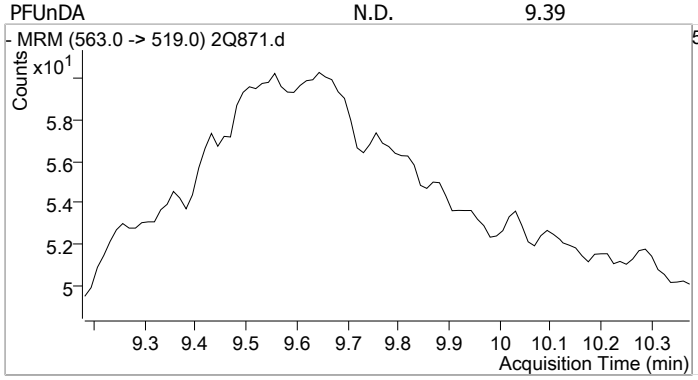
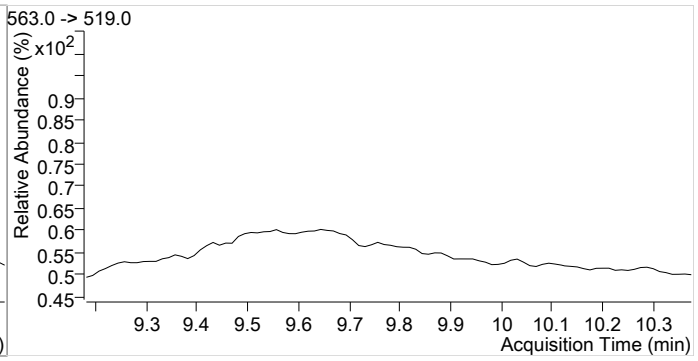
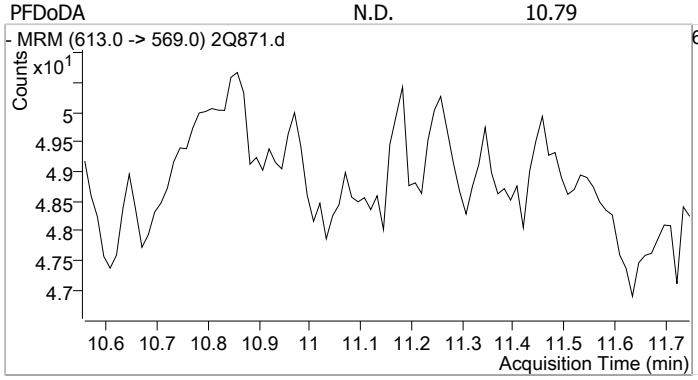
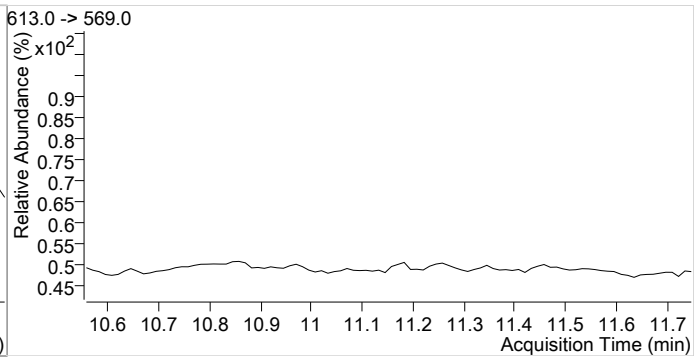
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFUnDA	N.D.	9.39		



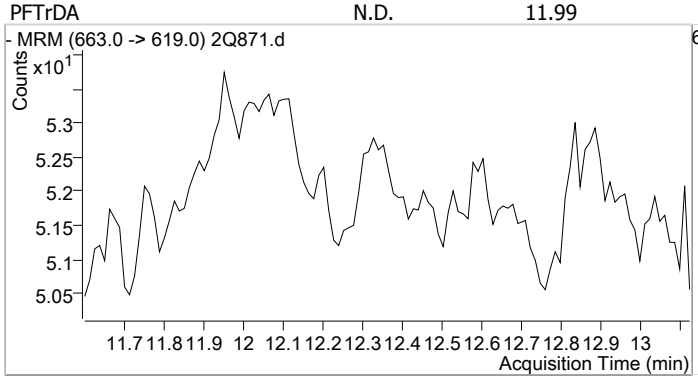


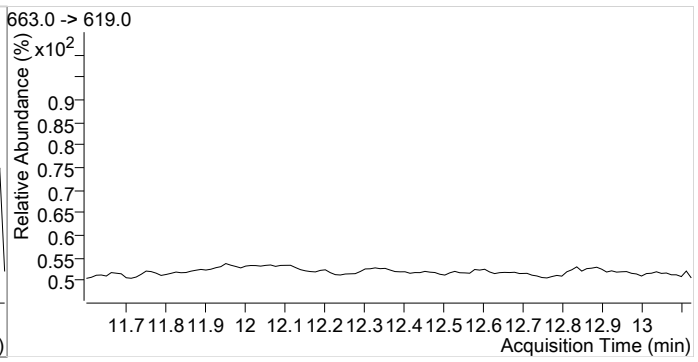
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFDoDA	N.D.	10.79		



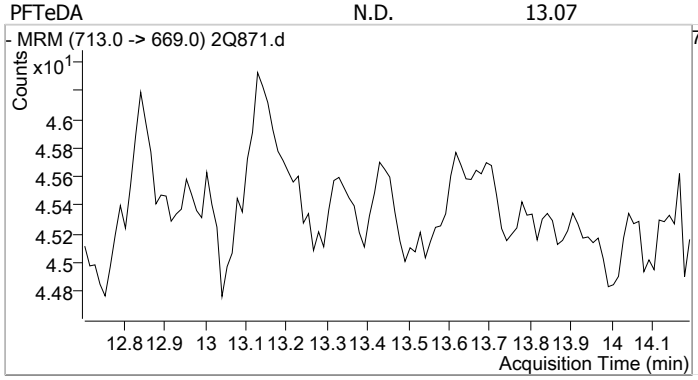


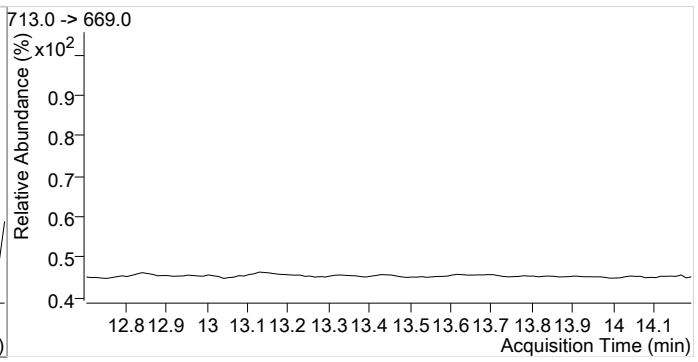
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFTrDA	N.D.	11.99		





Compound	Conc.	Exp RT	QIon	Exp Ratio
PFTeDA	N.D.	13.07		





7.11.1

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
05/01/17 17:04

Perfluorinated Compounds by LC/MS/MS

Data File : 2Q917.d
Operator : NANCYF
Acq. Method : dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time : 5/1/2017 1:04:34 PM
Sample Name : FA42999-2
Vial : Vial 19
DA Method File : PFCLISTDW_0420_S2Q18.m
Batch Name : S2Q26.batch.bin
Last Calib Update : 5/1/2017 4:47:24 PM

Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	6.735	429.0 -> 409.0	121015	20.00	µg/L		-0.050
13C2-PFDoDA	11.051	615.0 -> 570.0	71296	20.00	µg/L		-0.213
13C2-PFOA	6.726	415.0 -> 370.0	66343	20.00	µg/L		-0.038
13C3-PFPeA	4.260	266.0 -> 222.0	62149	20.00	µg/L		-0.050
13C4-PFOS	7.314	503.0 -> 80.0	48681	20.00	µg/L		-0.050
d3-MeFOSAA	7.475	573.0 -> 419.0	25754	20.00	µg/L		-0.013
System Monitoring Compounds							
13C2-PFDA	8.205	515.0 -> 470.0	64688	13.93	µg/L	m	-0.088
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 69.7%			
13C2-PFHxA	5.247	315.0 -> 270.0	55986	15.98	µg/L		-0.050
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 79.9%			
d5-EtFOSAA	7.585	589.0 -> 419.0	11942	18.93	µg/L		-0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 94.7%			
Target Compounds							QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.			
6:2FTS	6.737	427.0 -> 407.0	925	0.16	µg/L		100
8:2FTS	-	527.0 -> 507.0	-	N.D.			
EtFOSAA	7.598	584.0 -> 419.0	808	1.45	µg/L		100
FOSA	-	498.0 -> 78.0	-	N.D.			
MeFOSAA	7.476	570.0 -> 419.0	625	0.95	µg/L		100
PFBA	-	213.0 -> 169.0	-	N.D.			
PFBS	-	299.0 -> 80.0	-	N.D.			
PFDA	8.245	513.0 -> 469.0	548	0.17	µg/L		100
PFDoDA	-	613.0 -> 569.0	-	N.D.			
PFDS	-	599.0 -> 80.0	-	N.D.			
PFHpA	6.048	363.0 -> 319.0	1620	0.36	µg/L		85
PFHpS	-	449.0 -> 80.0	-	N.D.			
PFHxA	5.250	313.0 -> 269.0	393	0.26	µg/L		85
PFHxS	-	399.0 -> 80.0	-	N.D.			
PFNA	7.406	463.0 -> 419.0	466	0.16	µg/L		55
PFNS	-	549.0 -> 99.0	-	N.D.			
PFOA	6.728	413.0 -> 369.0	893	0.32	µg/L		54
PFOS	-	499.0 -> 80.0	-	N.D.			
PFPeA	-	263.0 -> 219.0	-	N.D.			
PFPeS	-	349.0 -> 99.0	-	N.D.			
PFTeDA	-	713.0 -> 669.0	-	N.D.			
PFTrDA	-	663.0 -> 619.0	-	N.D.			
PFUnDA	-	563.0 -> 519.0	-	N.D.			

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

Perfluorinated Compounds by LC/MS/MS

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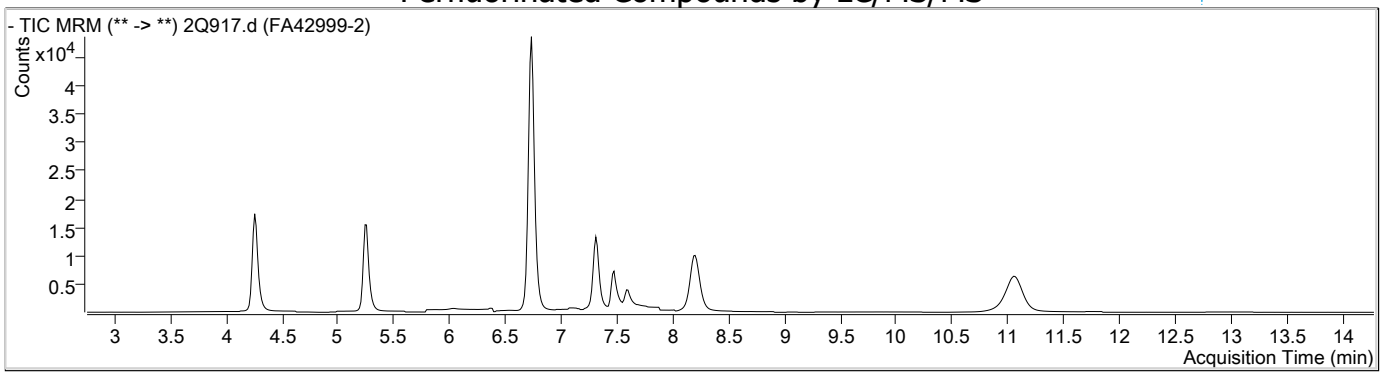
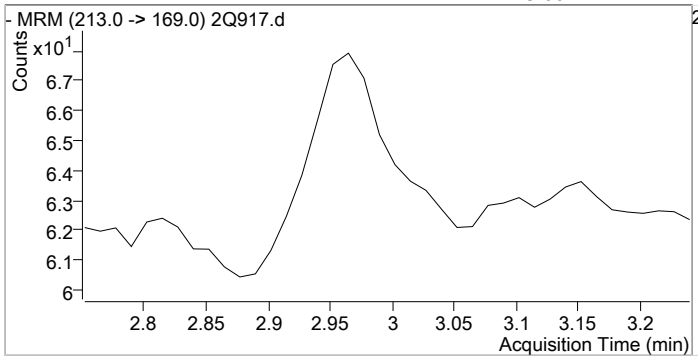
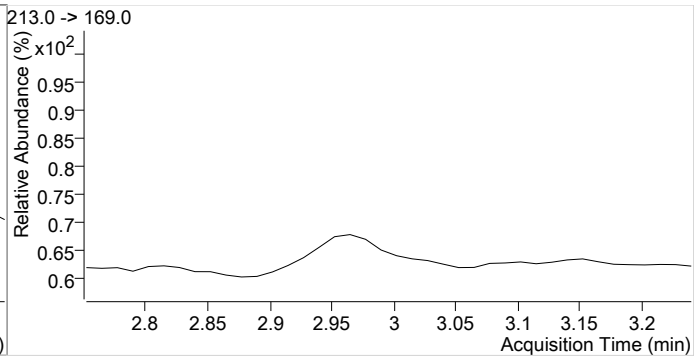
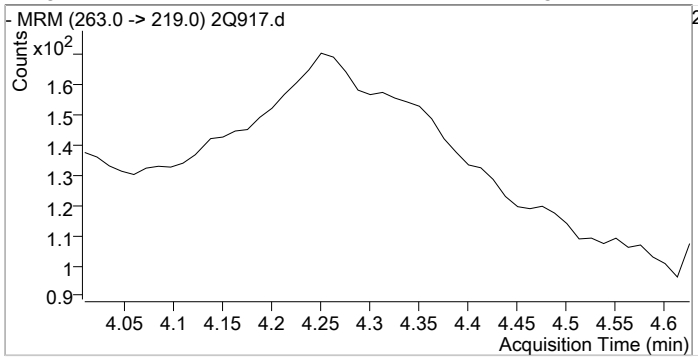


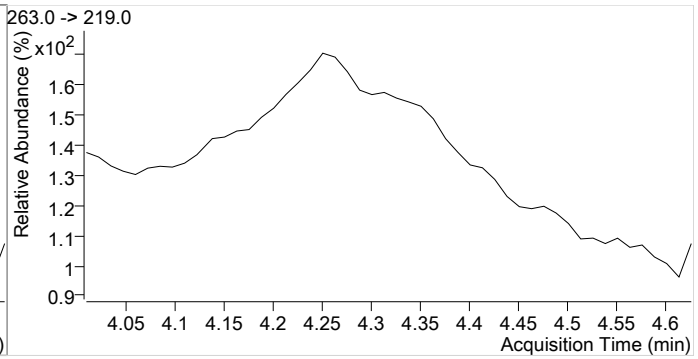
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFBA	N.D.	3.00		



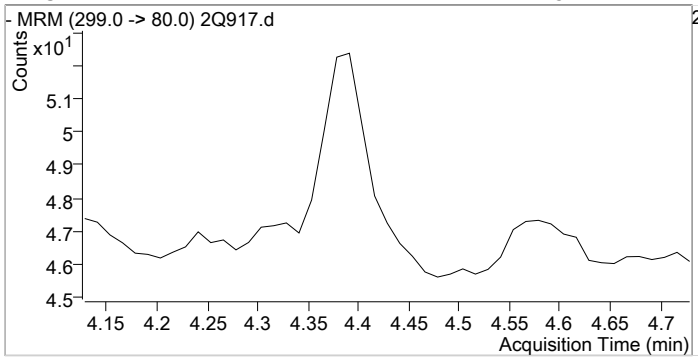


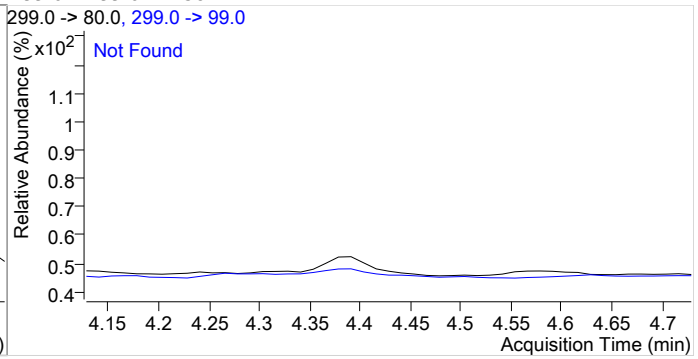
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFPeA	N.D.	4.31		





Compound	Conc.	Exp RT	QIon	Exp Ratio
PFBS	N.D.	4.43	299.0 -> 99.0	38.1





Perfluorinated Compounds by LC/MS/MS

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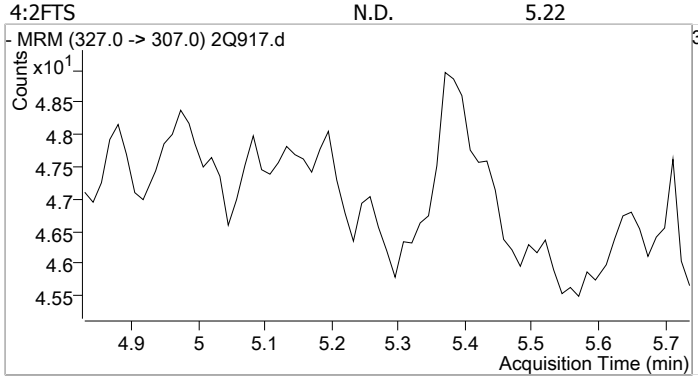
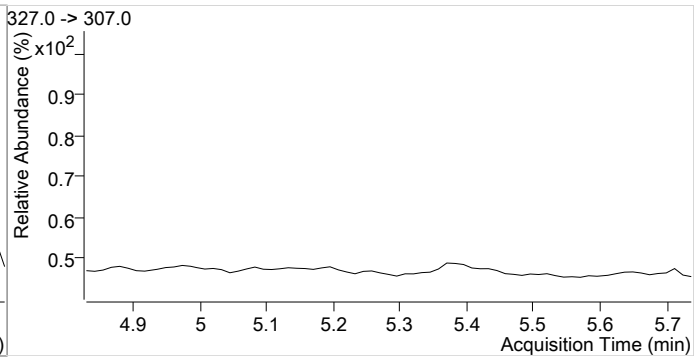
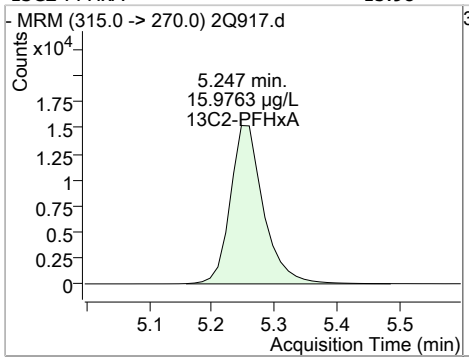
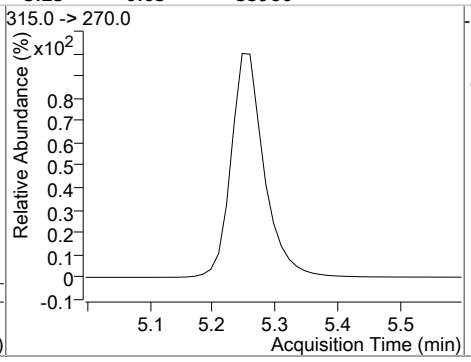
Compound	Conc.	Exp RT	QIon	Exp Ratio
4:2FTS	N.D.	5.22		

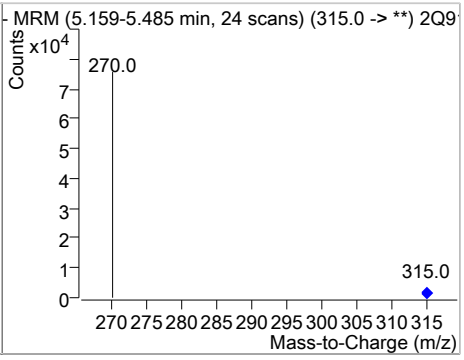




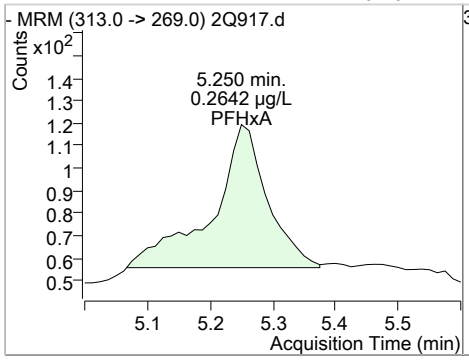
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	15.98	5.25	-0.05	55986				

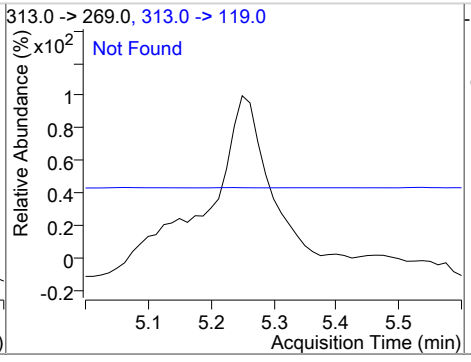


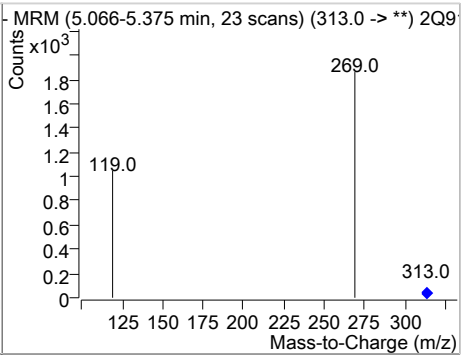




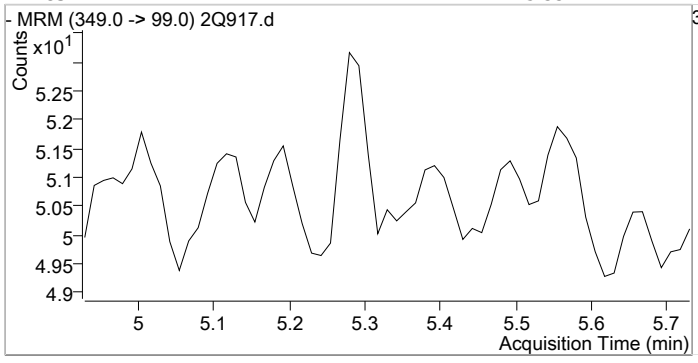
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.26	5.25	-0.05	393	313.0 -> 119.0		4.0	6.0

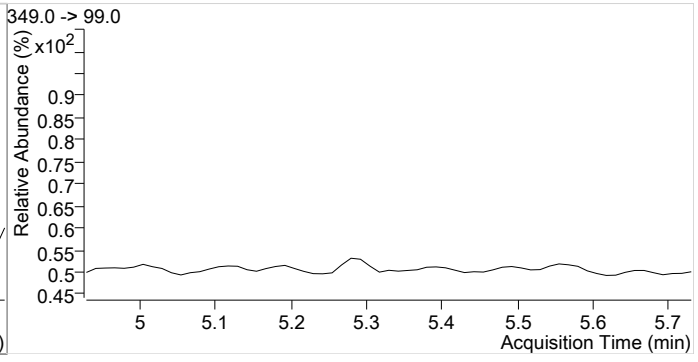






Compound	Conc.	Exp RT	QIon	Exp Ratio
PFPeS	N.D.	5.33		

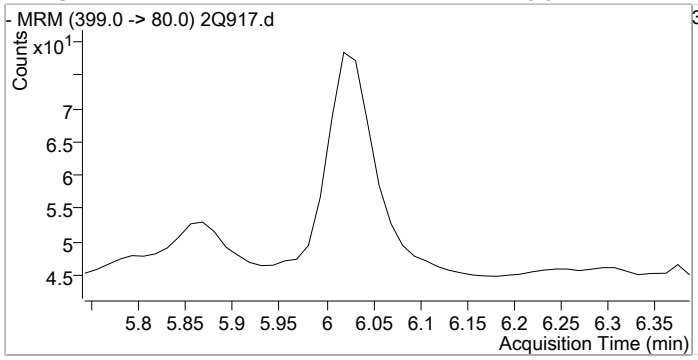


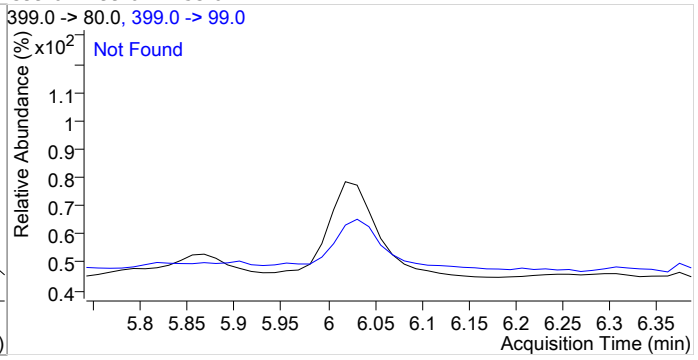


Perfluorinated Compounds by LC/MS/MS

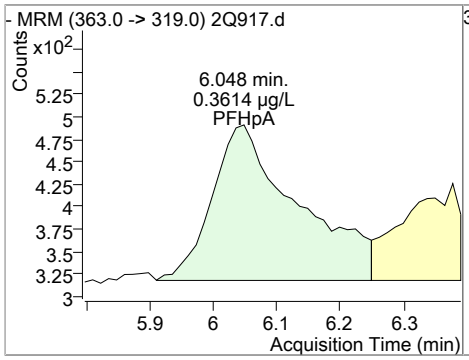
Agilent Technologies

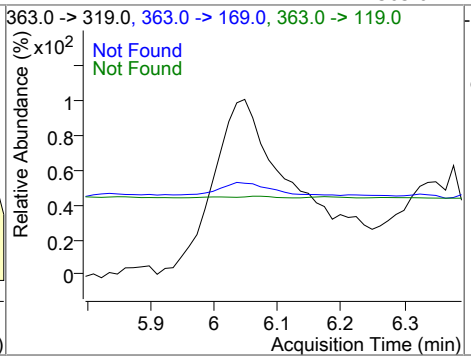
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFHxS	N.D.	6.07	399.0 -> 99.0	53.6

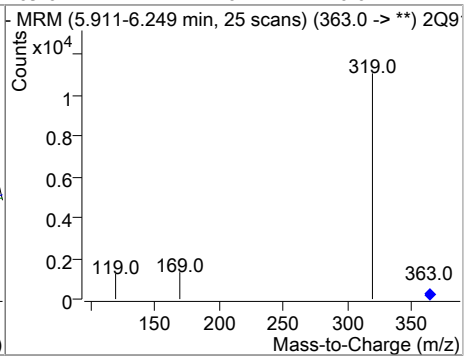




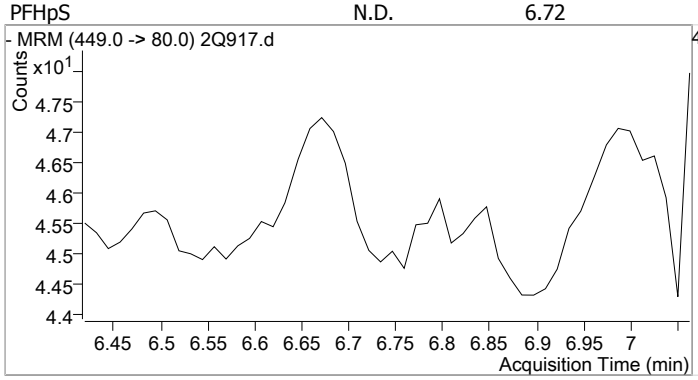
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.36	6.05	-0.04	1620	363.0 -> 119.0		4.0	6.0
					363.0 -> 169.0		4.0	6.0

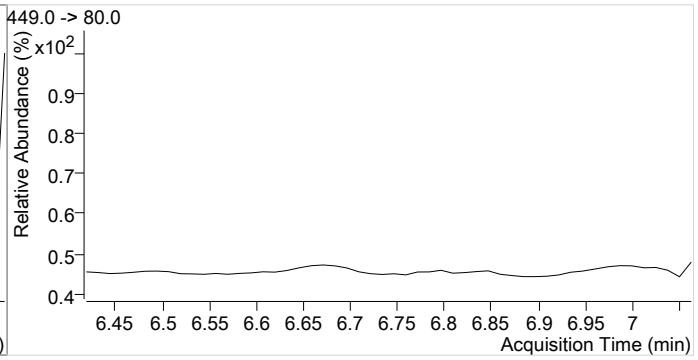




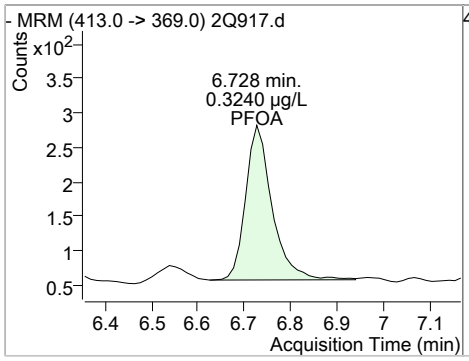


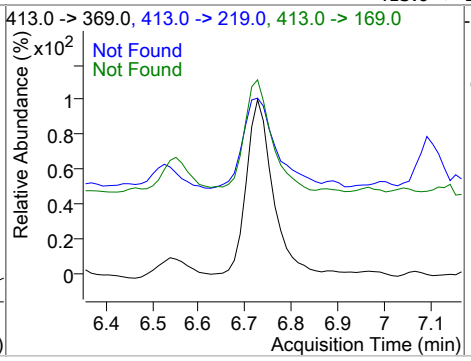
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFHpS	N.D.	6.72		

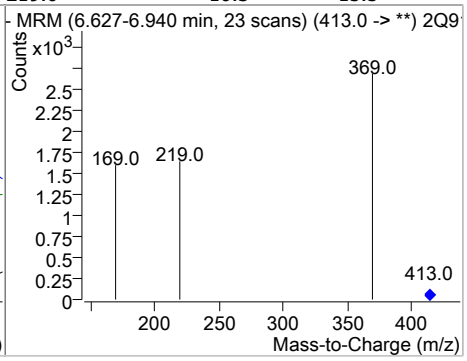




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.32	6.73	-0.04	893	413.0 -> 169.0		21.8	32.6
					413.0 -> 219.0		10.3	15.5







Perfluorinated Compounds by LC/MS/MS

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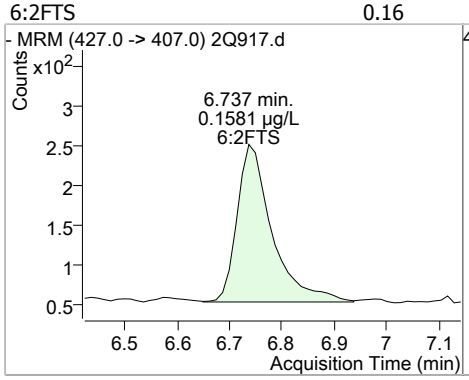
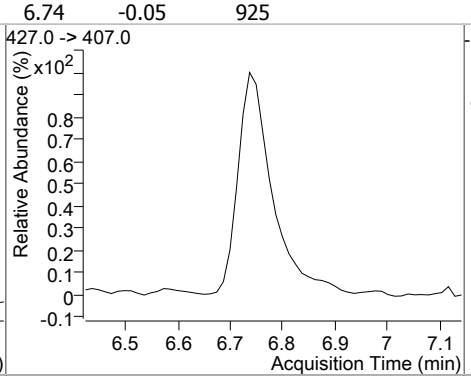
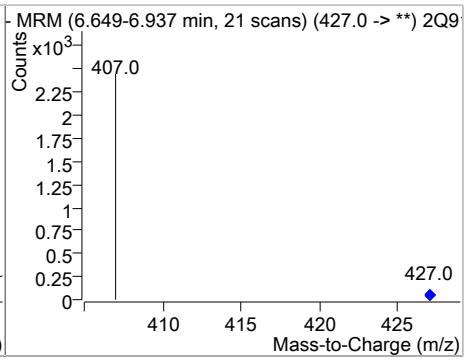
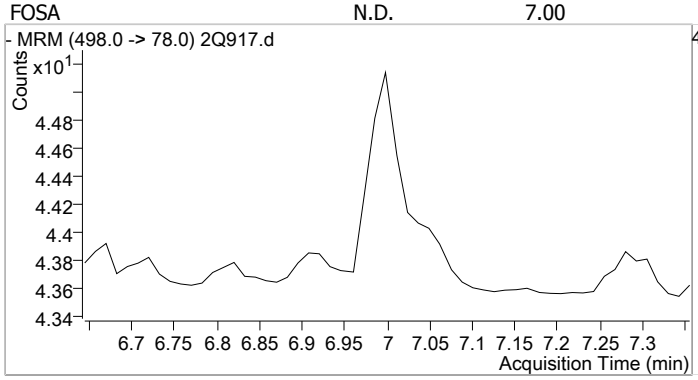
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	0.16	6.74	-0.05	925				

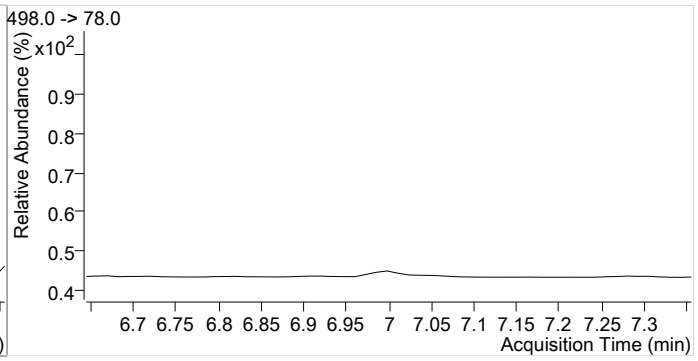




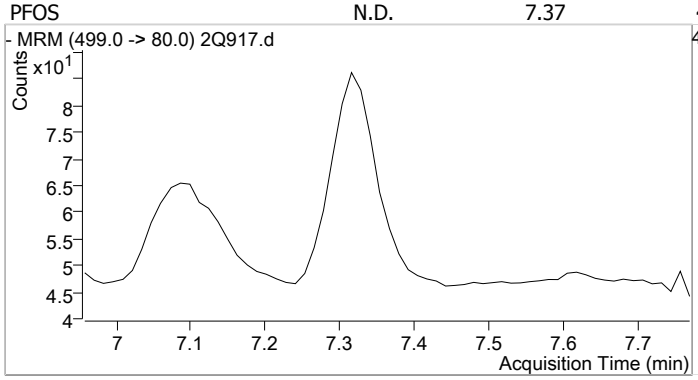


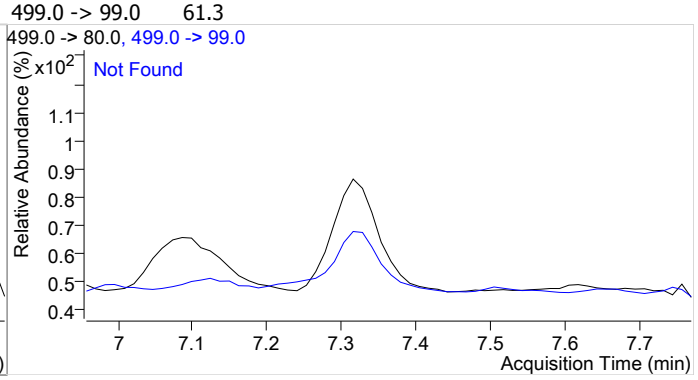
Compound	Conc.	Exp RT	QIon	Exp Ratio
FOSA	N.D.	7.00		



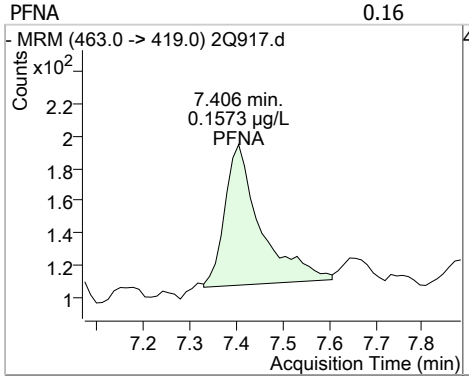


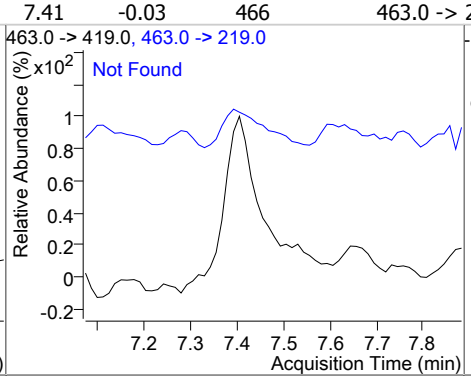
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFOS	N.D.	7.37	499.0 -> 99.0	61.3

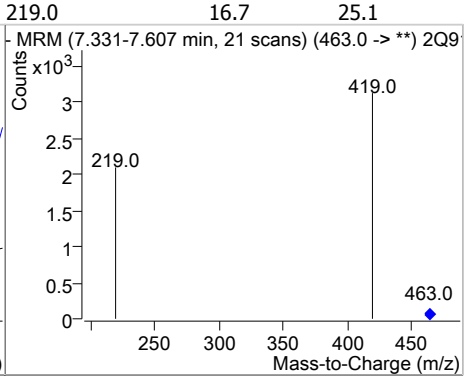




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.16	7.41	-0.03	466	463.0 -> 219.0		16.7	25.1







Perfluorinated Compounds by LC/MS/MS

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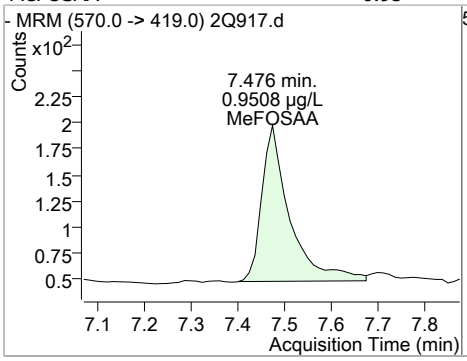
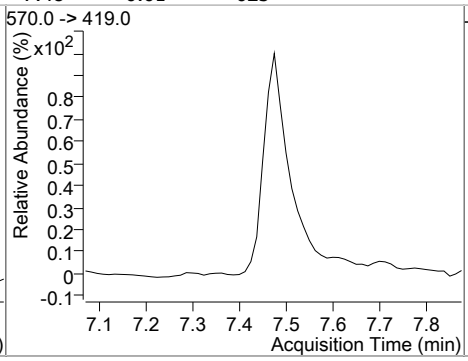
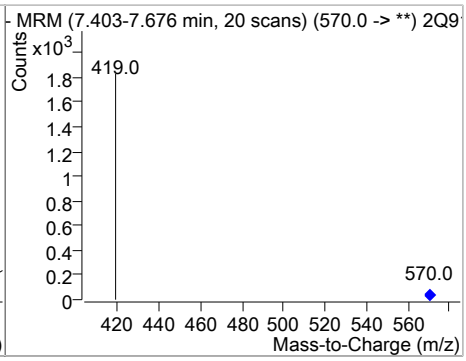
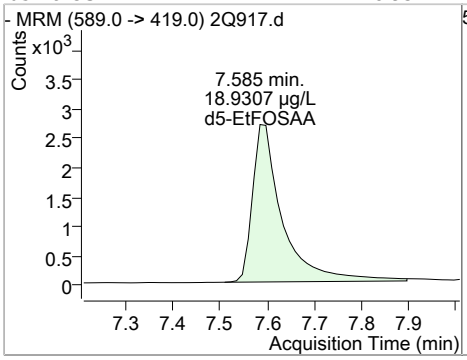
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	0.95	7.48	-0.01	625				

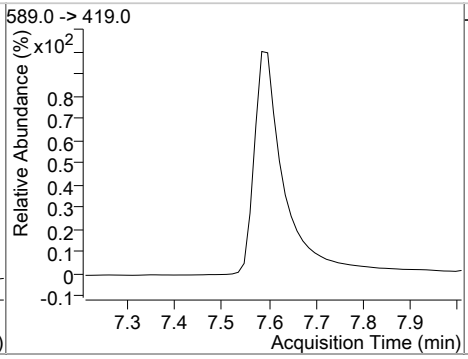


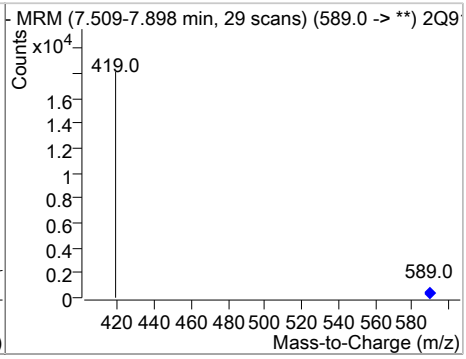




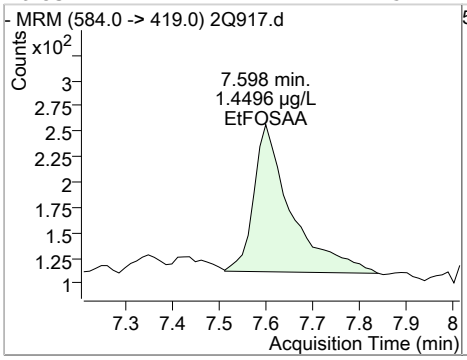
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.93	7.58	-0.03	11942				

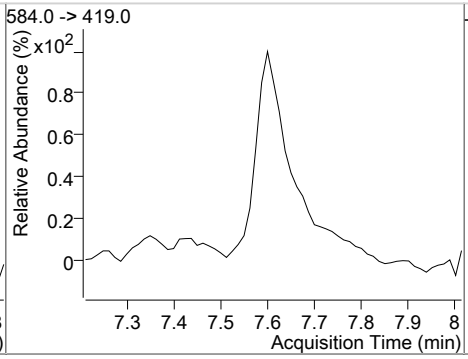


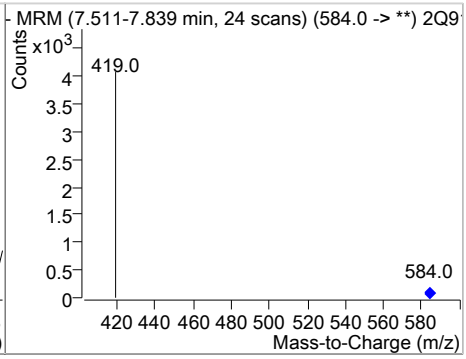




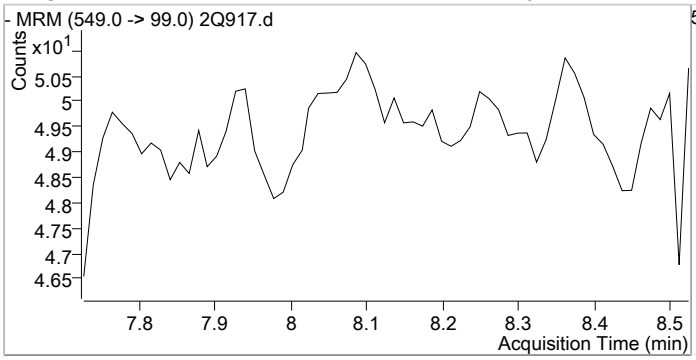
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	1.45	7.60	-0.01	808				

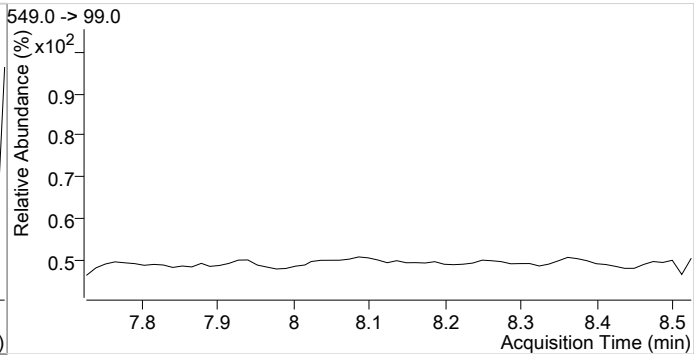






Compound	Conc.	Exp RT	QIon	Exp Ratio
PFNS	N.D.	8.14		

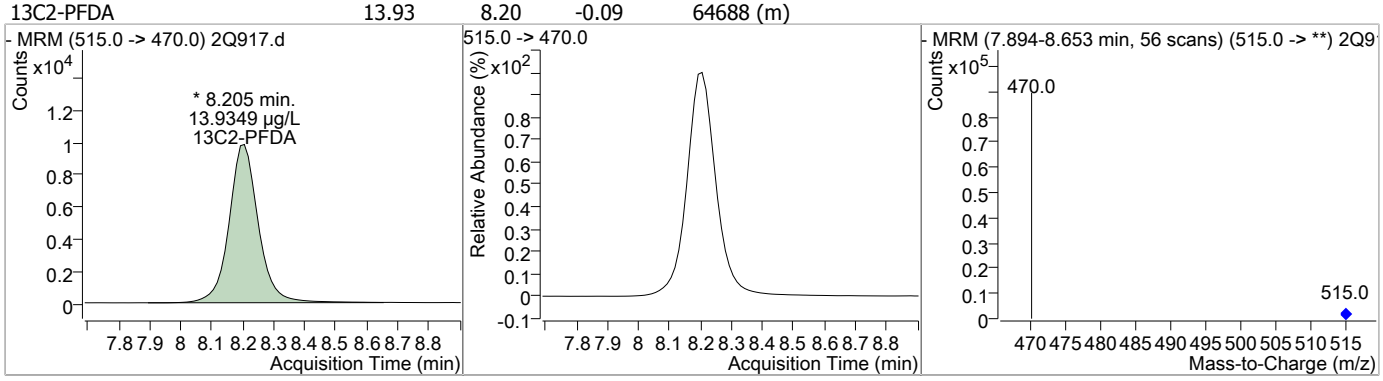




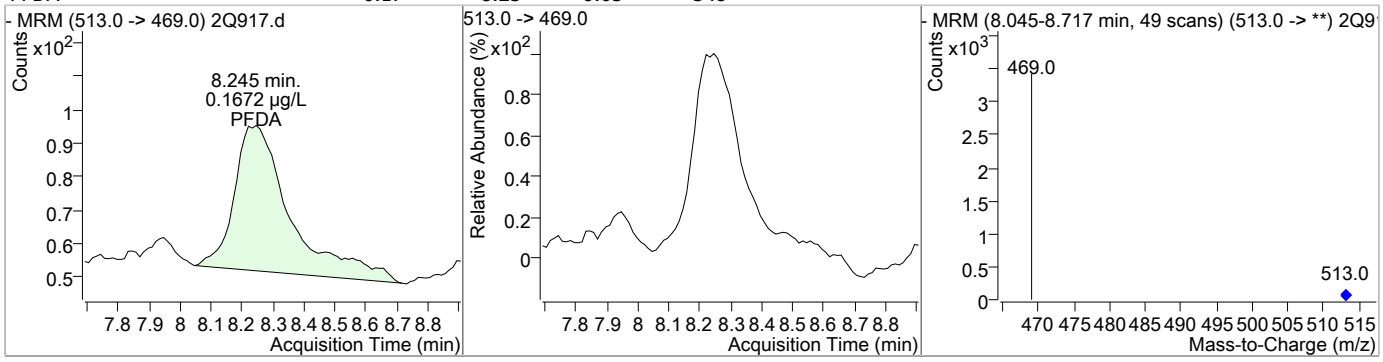
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

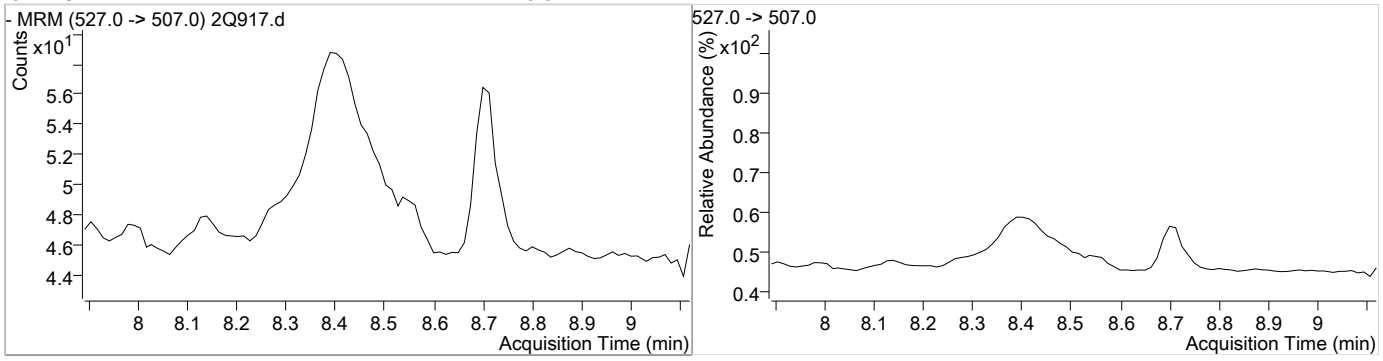
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	13.93	8.20	-0.09	64688 (m)				



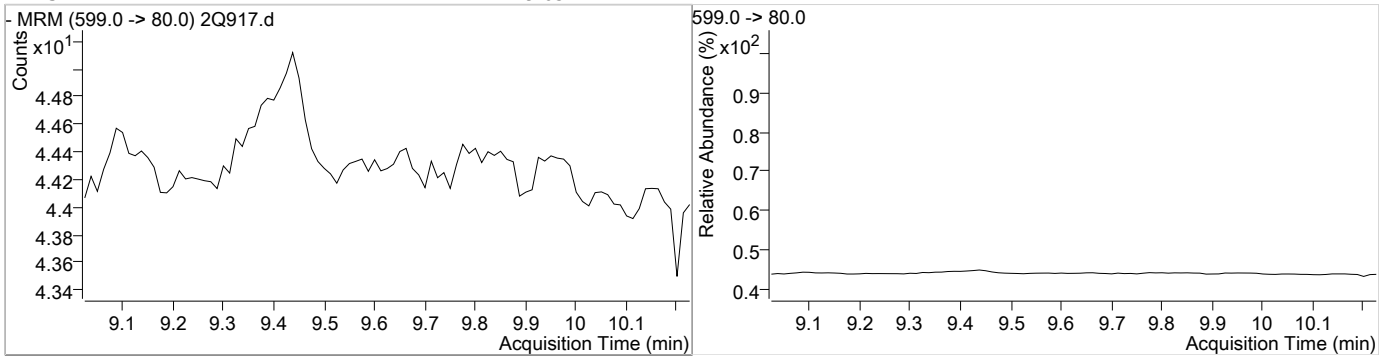
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.17	8.25	-0.05	548				



Compound	Conc.	Exp RT	QIon	Exp Ratio
8:2FTS	N.D.	8.51		



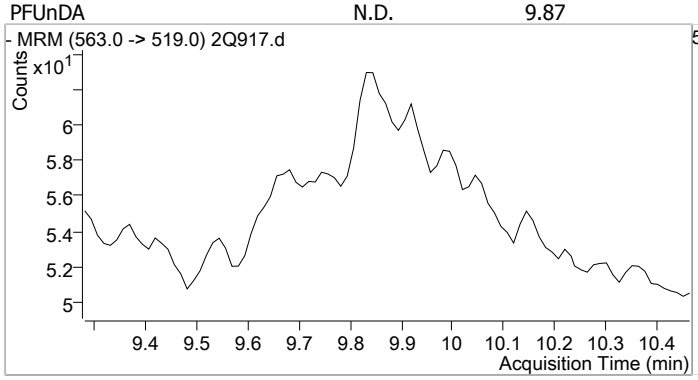
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFDS	N.D.	9.63		

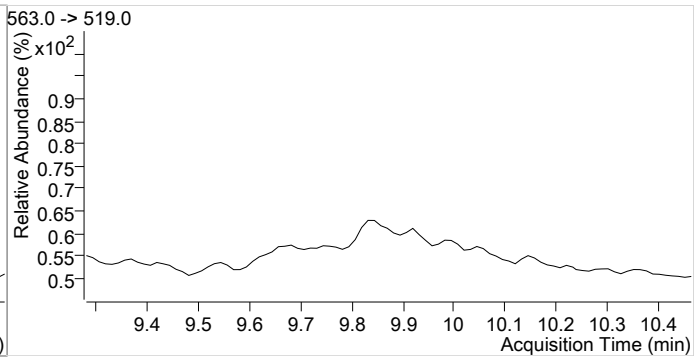


Perfluorinated Compounds by LC/MS/MS

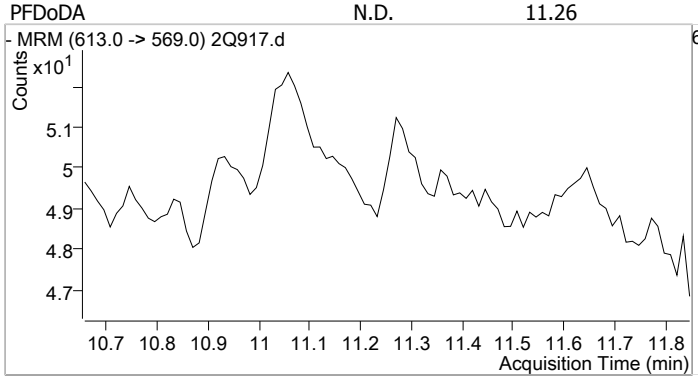
Agilent Technologies

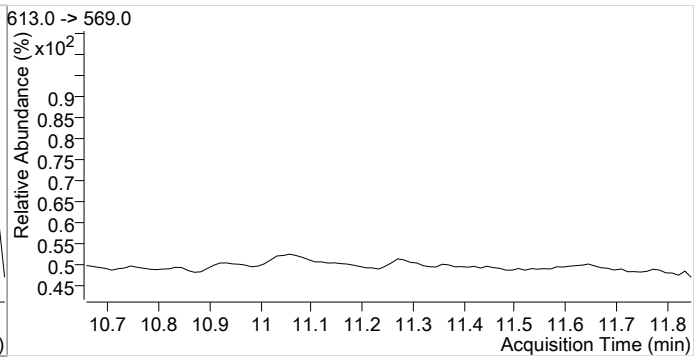
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFUnDA	N.D.	9.87		



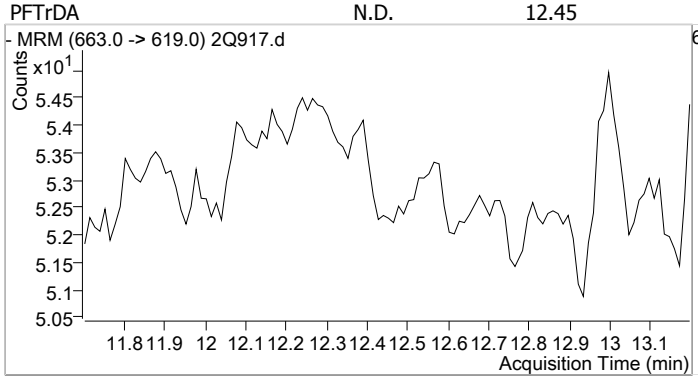


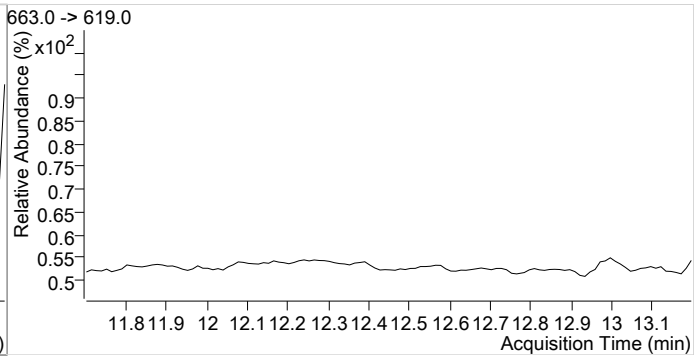
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFDoDA	N.D.	11.26		



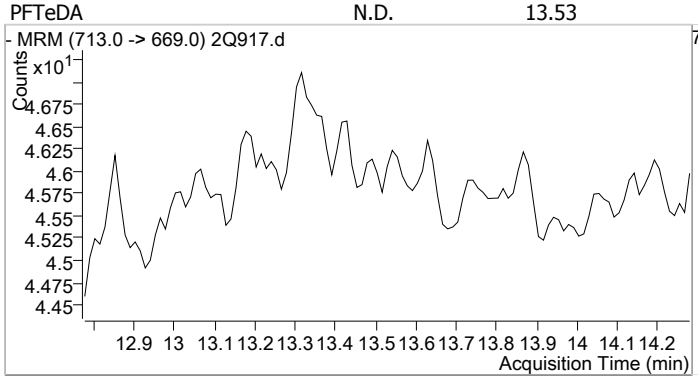


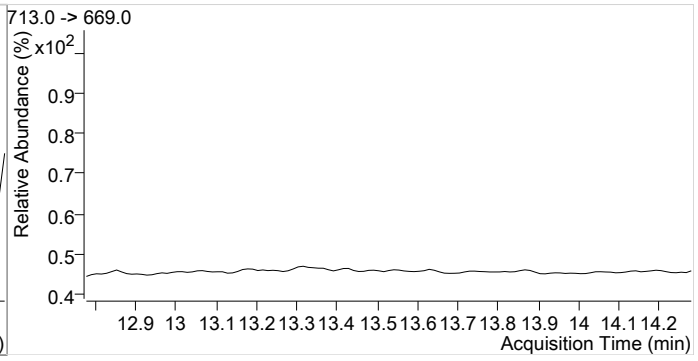
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFTrDA	N.D.	12.45		





Compound	Conc.	Exp RT	QIon	Exp Ratio
PFTeDA	N.D.	13.53		





Manual Integration Approval Summary

Sample Number:	FA42999-2	**Method:**	EPA 537
Lab FileID:	2Q917.D	**Analyst approved:**	05/01/17 17:02 Nancy Saunders
Injection Time:	05/01/17 13:04	**Supervisor approved:**	05/01/17 17:04 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
13C2-PFDA			8.21	Poor instrument integration

Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

Data File	:	2Q873.d
Operator	:	NANCYF
Acq. Method	:	dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time	:	4/28/2017 7:12:21 PM
Sample Name	:	FA42999-3
Vial	:	Vial 17
DA Method File	:	PFCLISTDW_0420_S2Q18.m
Batch Name	:	2SQ25.batch.bin
Last Calib Update	:	4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
13C2-6:2FTS	6.671	429.0 -> 409.0	120834	20.00	µg/L	0.000
13C2-PFDoDA	10.826	615.0 -> 570.0	65288	20.00	µg/L	0.038
13C2-PFOA	6.662	415.0 -> 370.0	59832	20.00	µg/L	0.000
13C3-PFPeA	4.209	266.0 -> 222.0	58176	20.00	µg/L	-0.013
13C4-PFOS	7.239	503.0 -> 80.0	46938	20.00	µg/L	0.000
d3-MeFOSAA	7.450	573.0 -> 419.0	27572	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-PFDA	8.057	515.0 -> 470.0	74944	17.90	µg/L	0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 89.5%		
13C2-PFHxA	5.210	315.0 -> 270.0	51751	16.38	µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 81.9%		
d5-EtFOSAA	7.572	589.0 -> 419.0	12267	18.22	µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 91.1%		
Target Compounds						**QValue**
4:2FTS	-	327.0 -> 307.0	-	N.D.		
6:2FTS	6.686	427.0 -> 407.0	838	0.14	µg/L	100
8:2FTS	-	527.0 -> 507.0	-	N.D.		
EtFOSAA	-	584.0 -> 419.0	-	N.D.		
FOSA	-	498.0 -> 78.0	-	N.D.		
MeFOSAA	-	570.0 -> 419.0	-	N.D.		
PFBA	-	213.0 -> 169.0	-	N.D.		
PFBS	-	299.0 -> 80.0	-	N.D.		
PFDA	8.070	513.0 -> 469.0	382	0.13	µg/L	100
PFDoDA	-	613.0 -> 569.0	-	N.D.		
PFDS	-	599.0 -> 80.0	-	N.D.		
PFHpA	5.986	363.0 -> 319.0	835	0.21	µg/L	85
PFHpS	-	449.0 -> 80.0	-	N.D.		
PFHxA	5.200	313.0 -> 269.0	379	0.28	µg/L	85
PFHxS	-	399.0 -> 80.0	-	N.D.		
PFNA	7.331	463.0 -> 419.0	402	0.15	µg/L	55
PFNS	-	549.0 -> 99.0	-	N.D.		
PFOA	6.677	413.0 -> 369.0	409	0.16	µg/L	54
PFOS	-	499.0 -> 80.0	-	N.D.		
PFPeA	4.213	263.0 -> 219.0	945	0.21	µg/L	100
PFPeS	-	349.0 -> 99.0	-	N.D.		
PFTeDA	-	713.0 -> 669.0	-	N.D.		
PFTrDA	-	663.0 -> 619.0	-	N.D.		
PFUnDA	-	563.0 -> 519.0	-	N.D.		

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

Perfluorinated Compounds by LC/MS/MS

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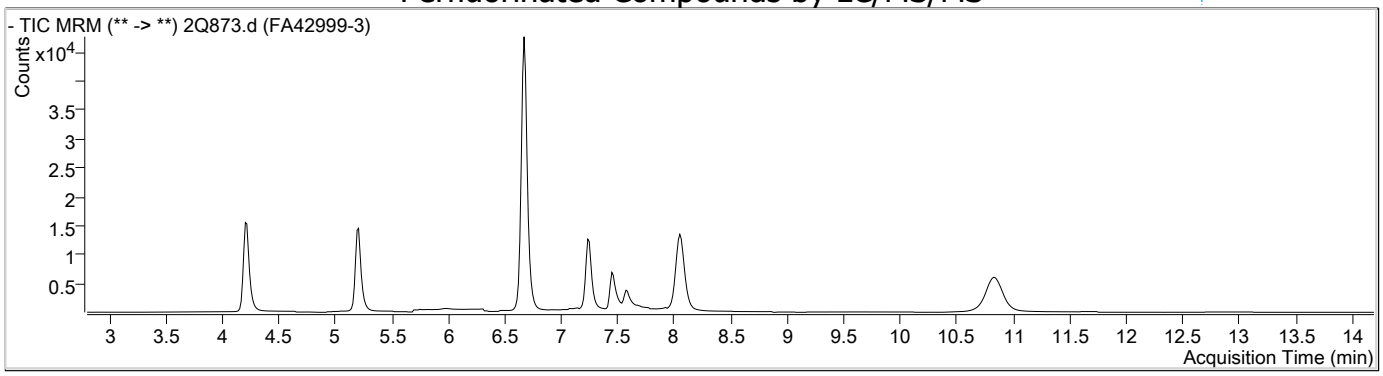
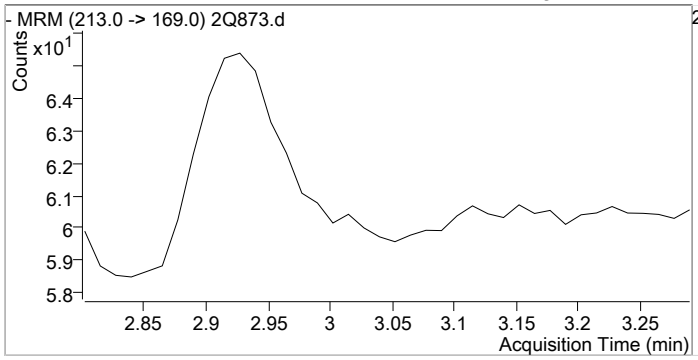
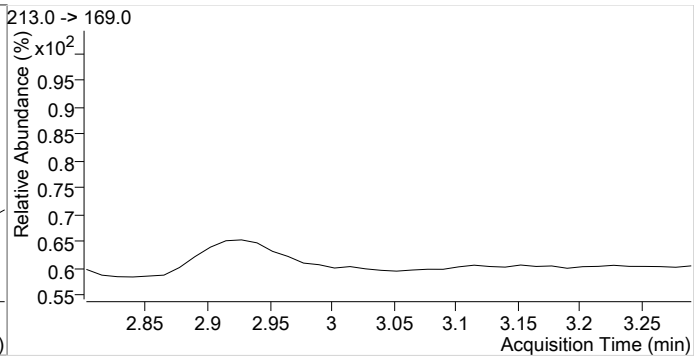
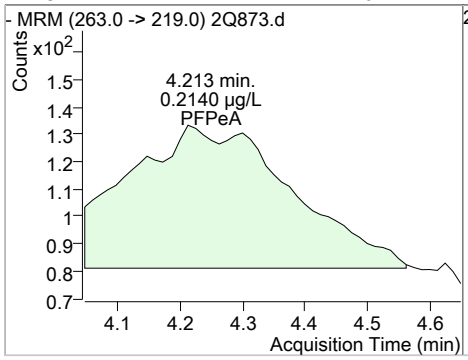


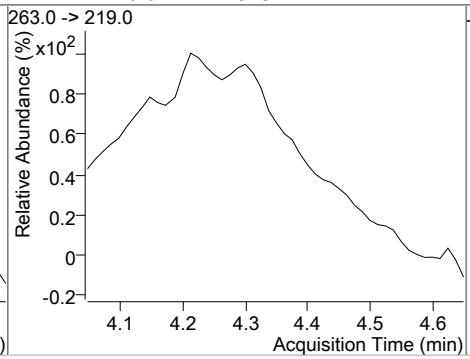
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFBA	N.D.	2.94		

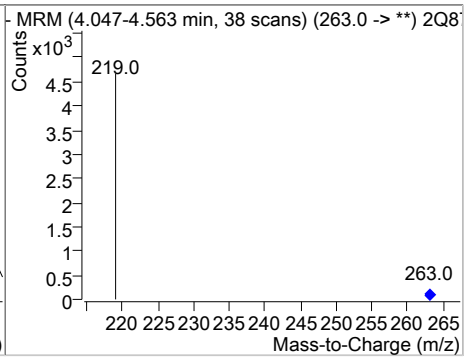




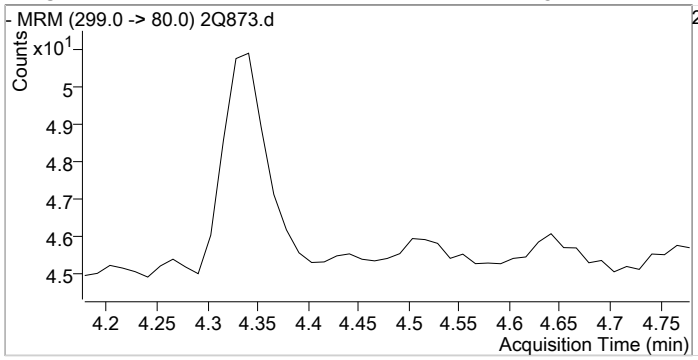
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.21	4.21	-0.01	945				

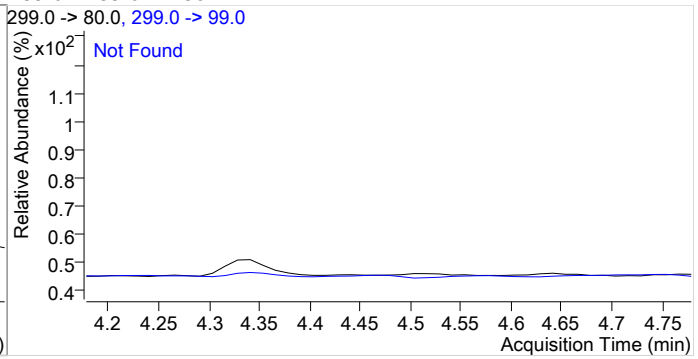






Compound	Conc.	Exp RT	QIon	Exp Ratio
PFBS	N.D.	4.34	299.0 -> 99.0	38.1





Perfluorinated Compounds by LC/MS/MS

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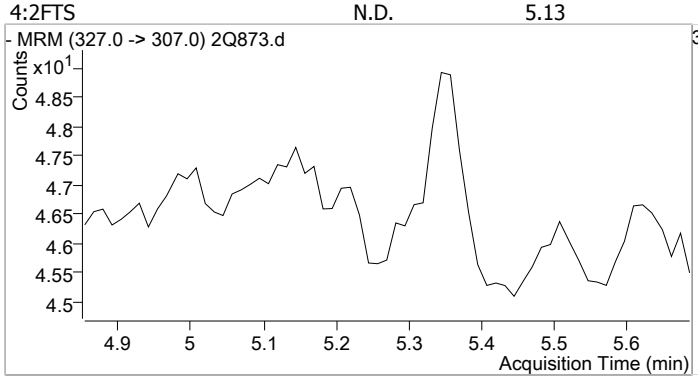
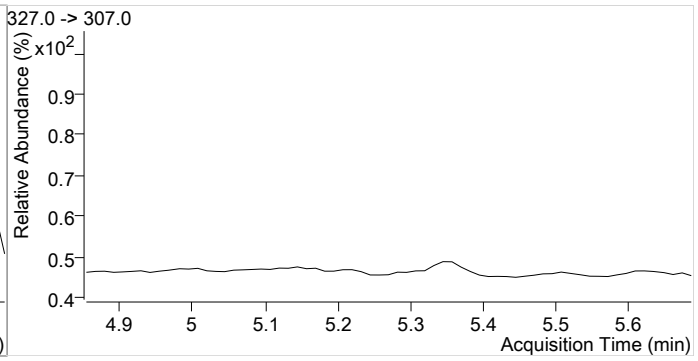
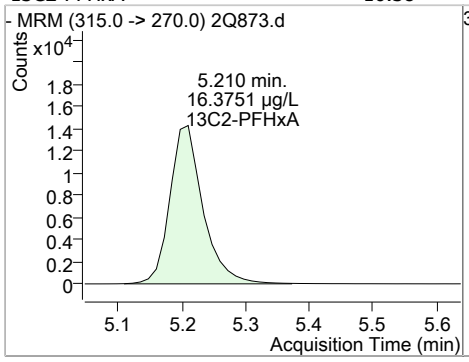
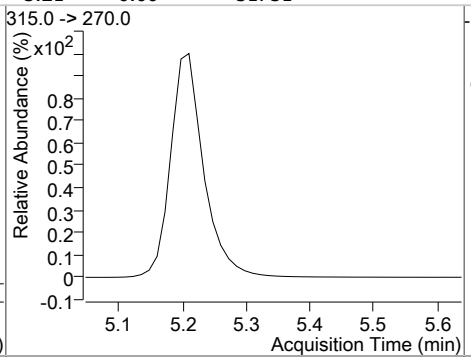
Compound	Conc.	Exp RT	QIon	Exp Ratio
4:2FTS	N.D.	5.13		

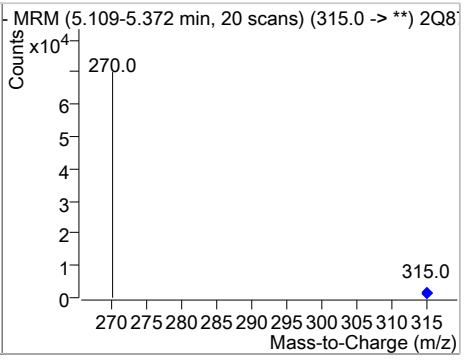




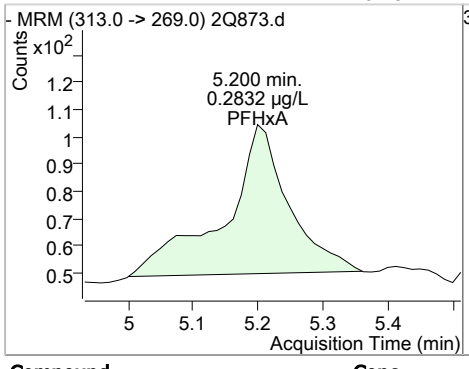
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	16.38	5.21	0.00	51751				

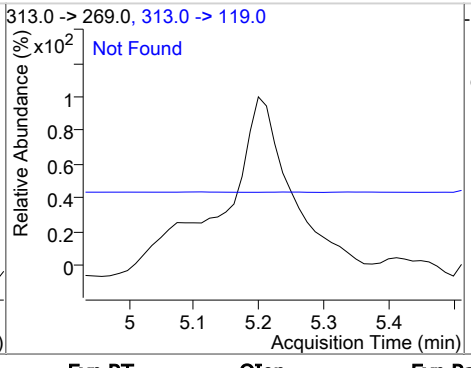


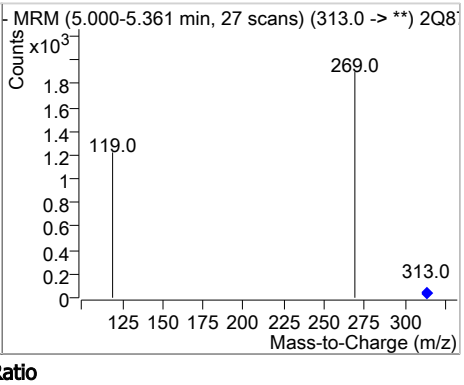




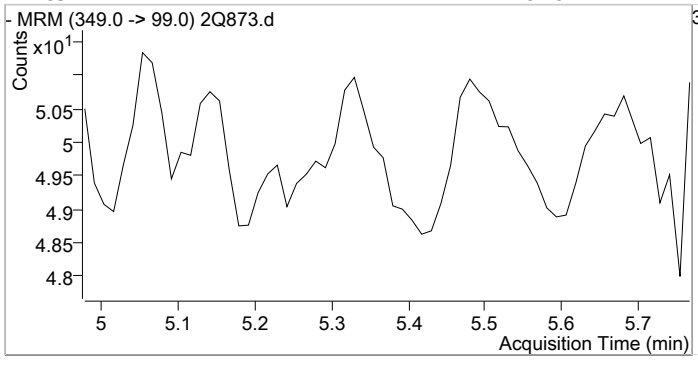
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.28	5.20	-0.01	379	313.0 -> 119.0		4.0	6.0

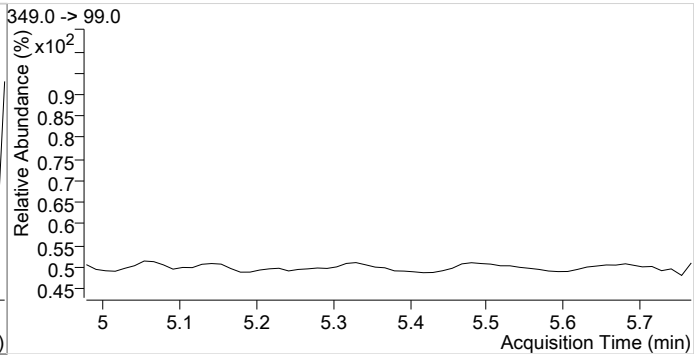






Compound	Conc.	Exp RT	QIon	Exp Ratio
PFPeS	N.D.	5.25		





Perfluorinated Compounds by LC/MS/MS

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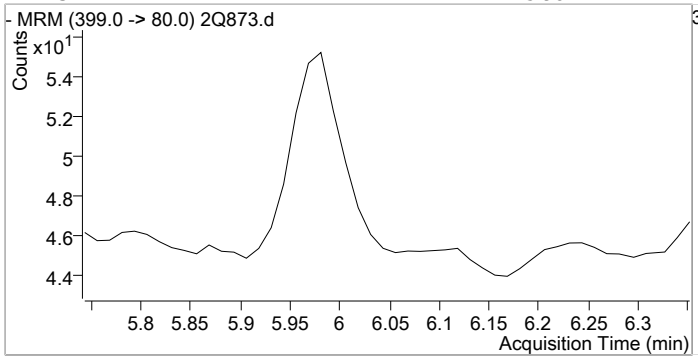
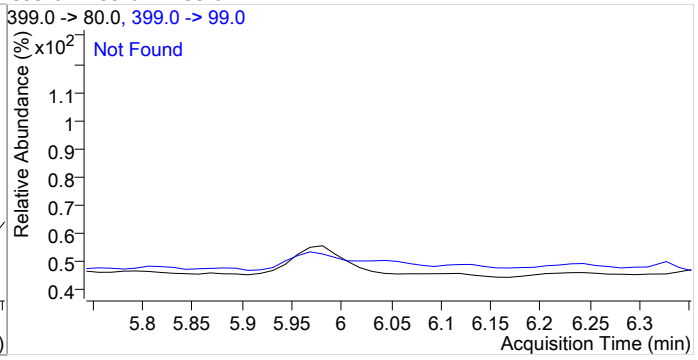
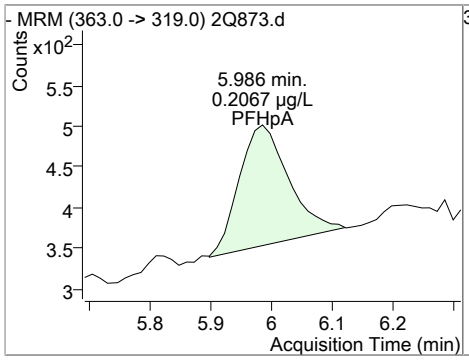
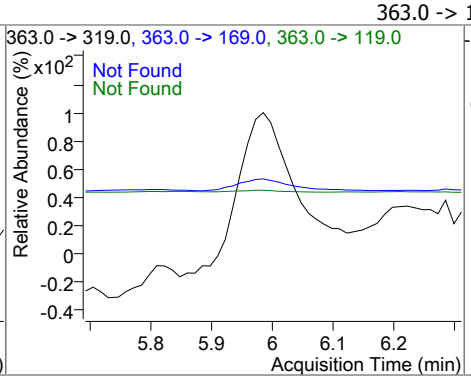
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFHxS	N.D.	5.98	399.0 -> 99.0	53.6

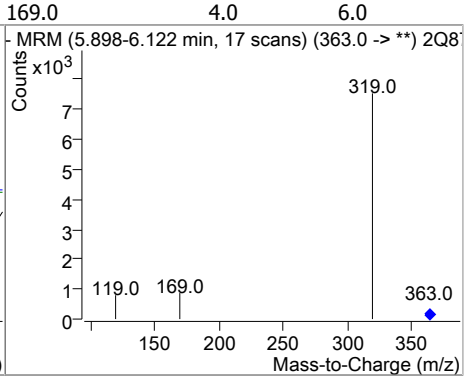




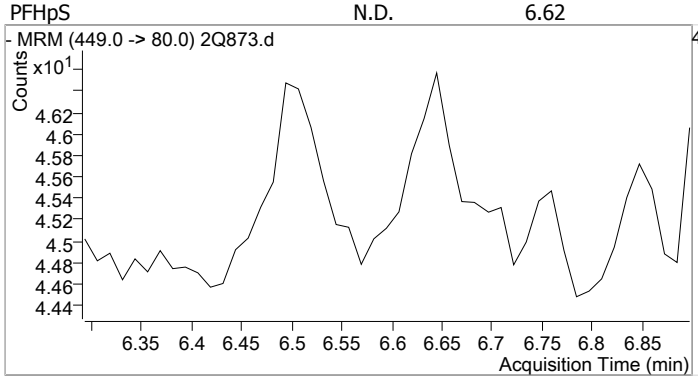
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.21	5.99	0.00	835	363.0 -> 119.0		4.0	6.0
					363.0 -> 169.0		4.0	6.0

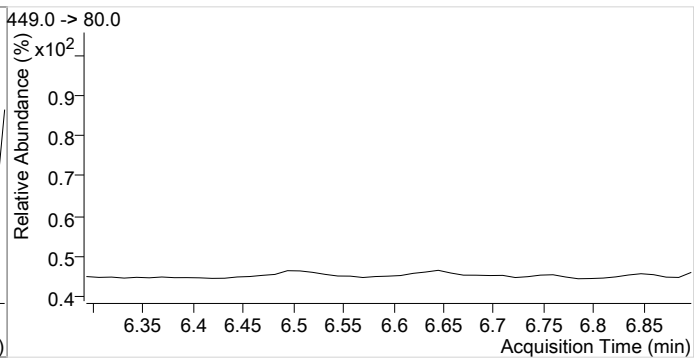




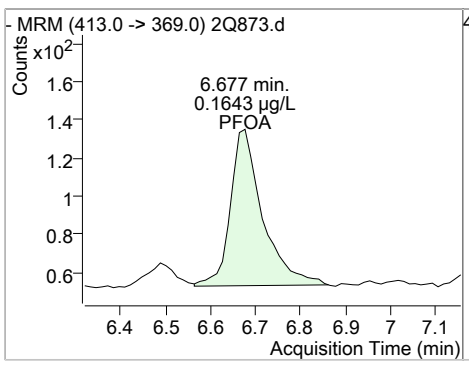


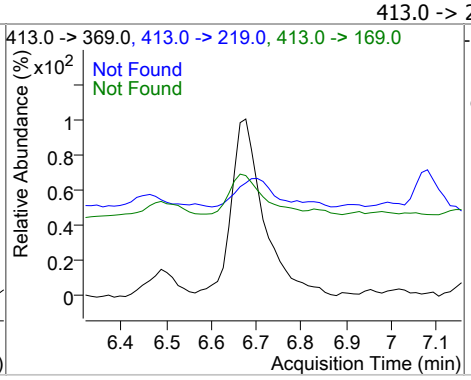
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFHpS	N.D.	6.62		

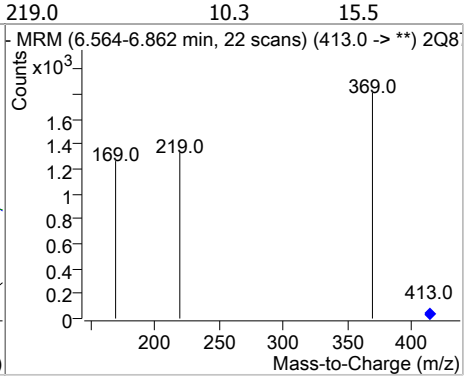




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.16	6.68	0.01	409	413.0 -> 169.0		21.8	32.6
					413.0 -> 219.0		10.3	15.5







Perfluorinated Compounds by LC/MS/MS

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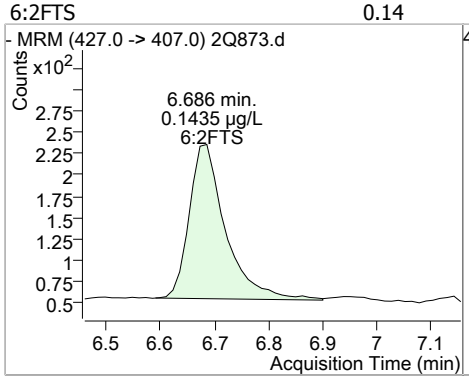
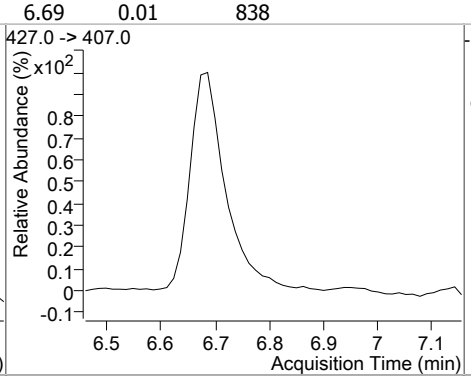
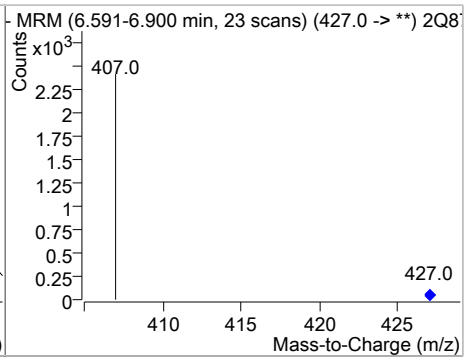
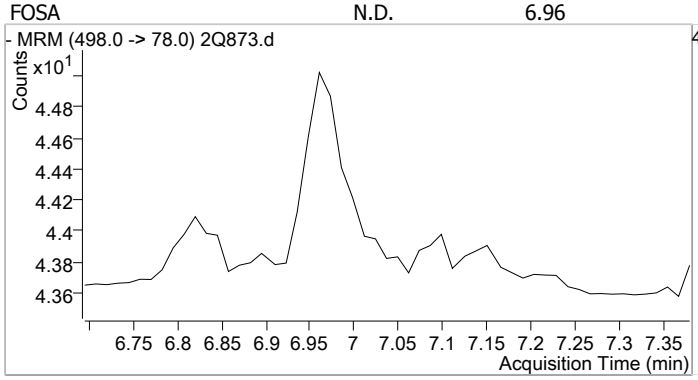
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	0.14	6.69	0.01	838				

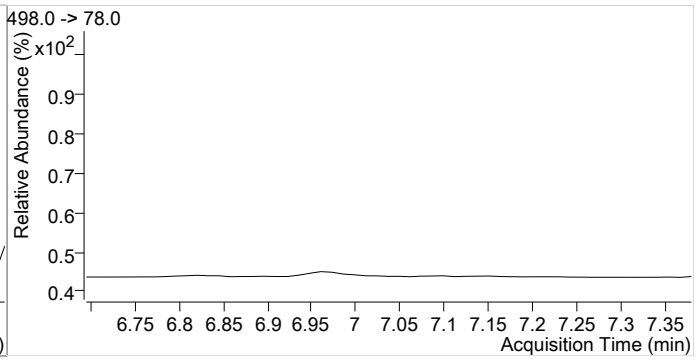




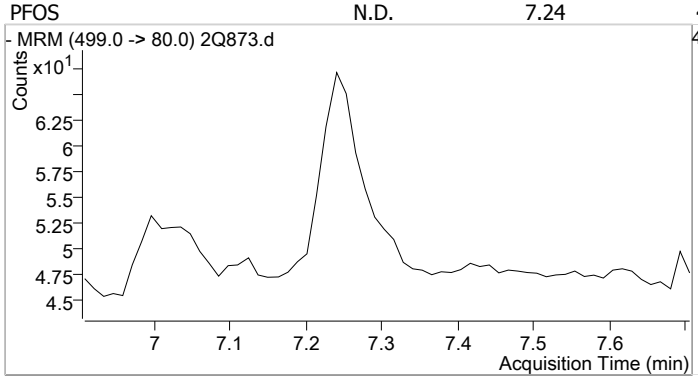


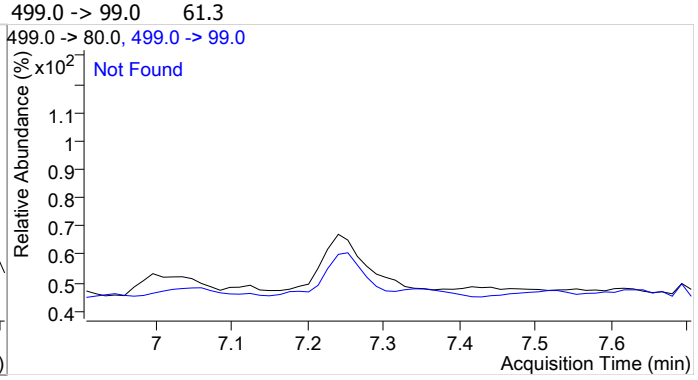
Compound	Conc.	Exp RT	QIon	Exp Ratio
FOSA	N.D.	6.96		



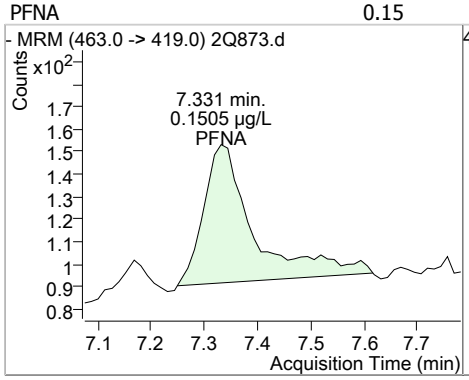


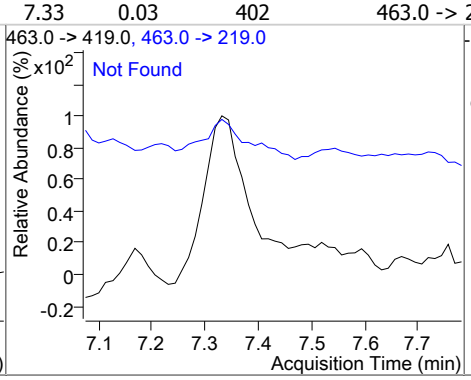
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFOS	N.D.	7.24	499.0 -> 99.0	61.3

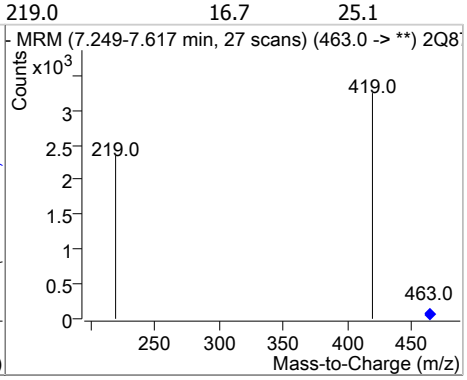




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.15	7.33	0.03	402	463.0 -> 219.0		16.7	25.1







Perfluorinated Compounds by LC/MS/MS

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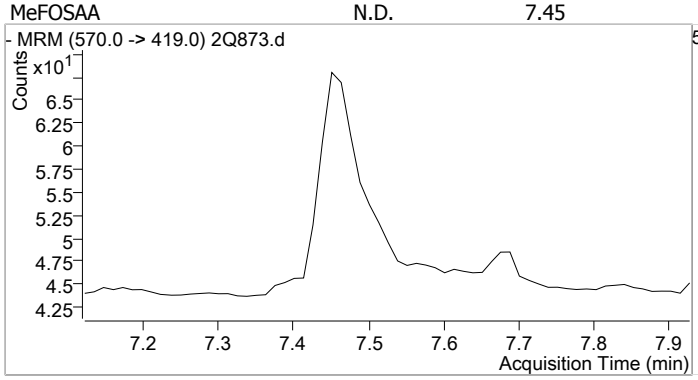
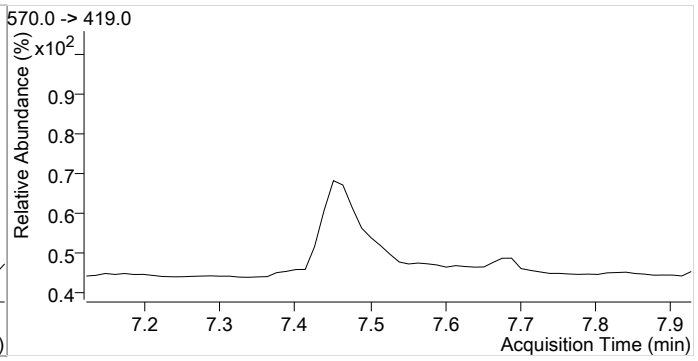
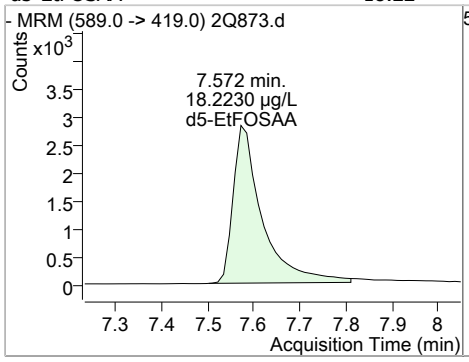
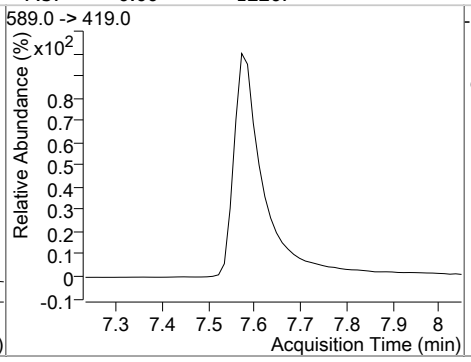
Compound	Conc.	Exp RT	QIon	Exp Ratio
MeFOSAA	N.D.	7.45		

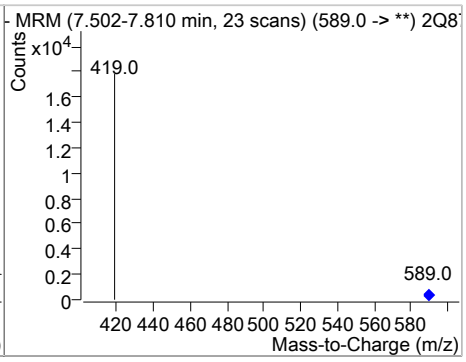




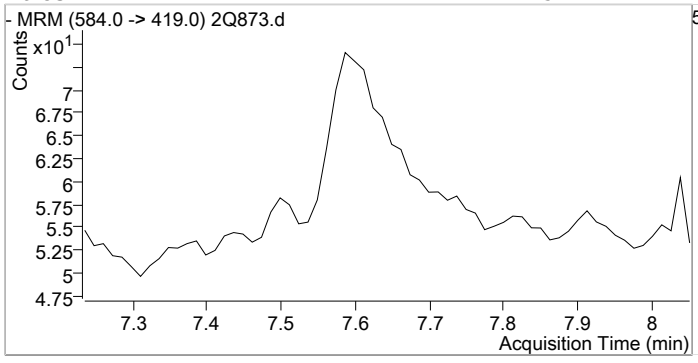
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	18.22	7.57	0.00	12267				

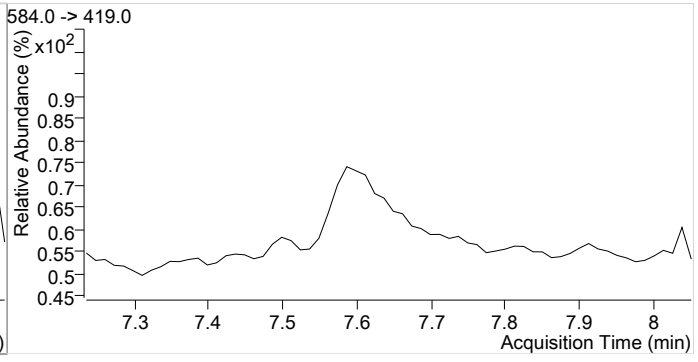




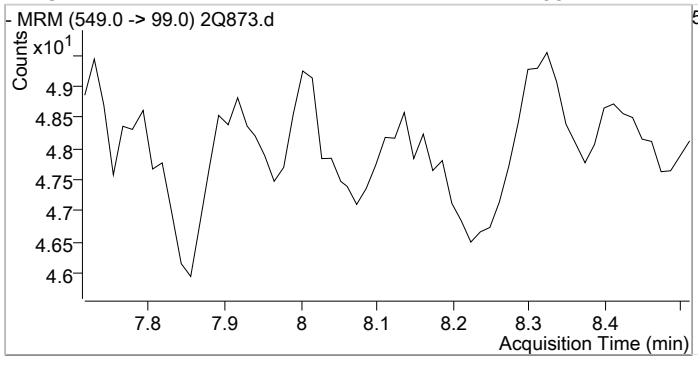


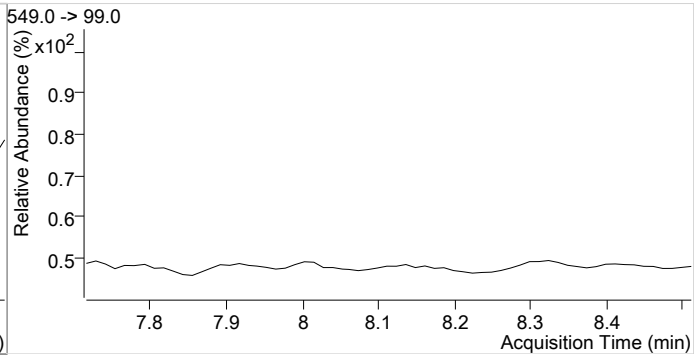
Compound	Conc.	Exp RT	QIon	Exp Ratio
EtFOSAA	N.D.	7.57		





Compound	Conc.	Exp RT	QIon	Exp Ratio
PFNS	N.D.	7.93		





Perfluorinated Compounds by LC/MS/MS

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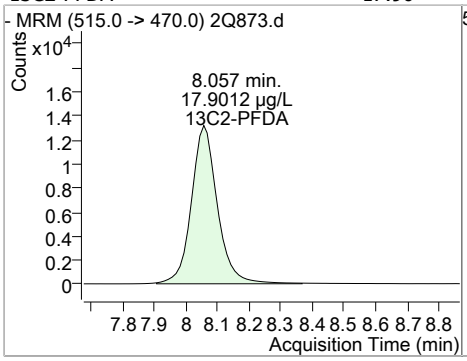
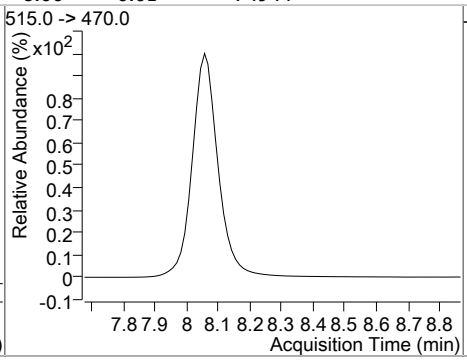
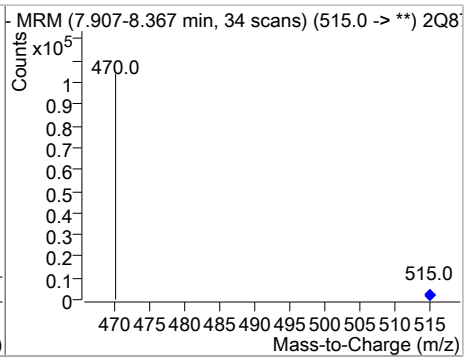
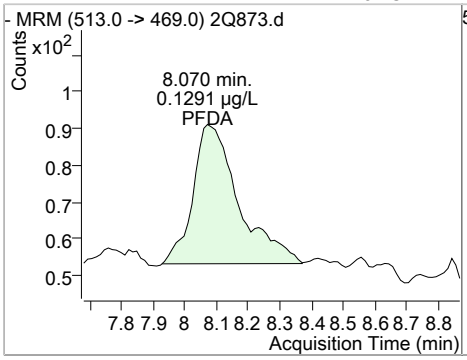
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	17.90	8.06	0.01	74944				

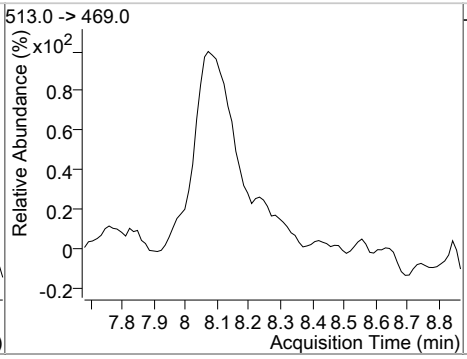


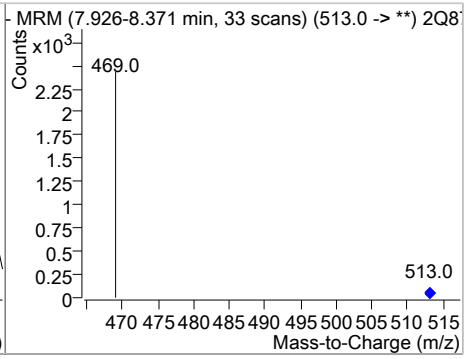




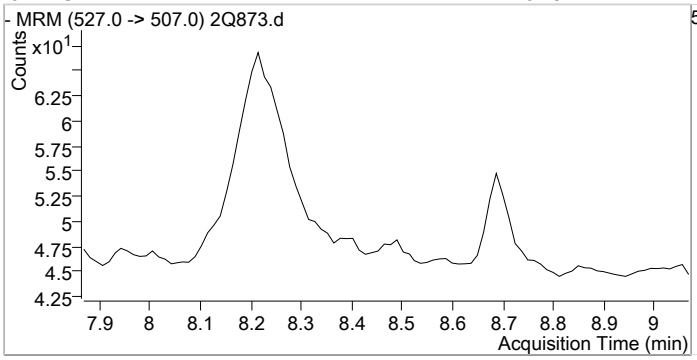
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.13	8.07	0.02	382				

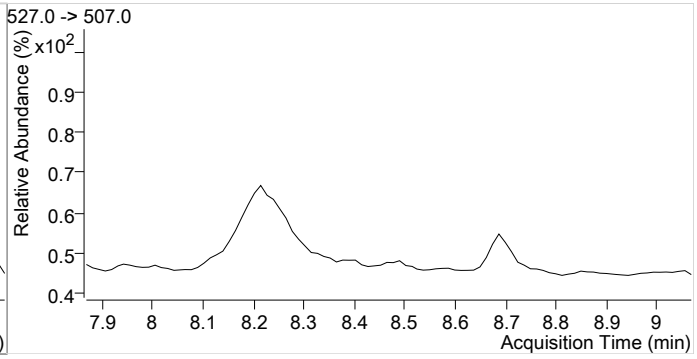




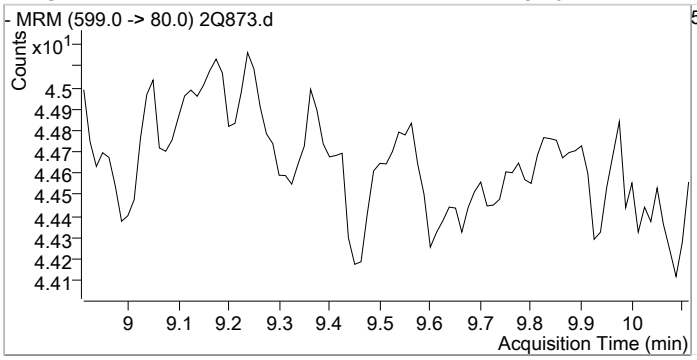


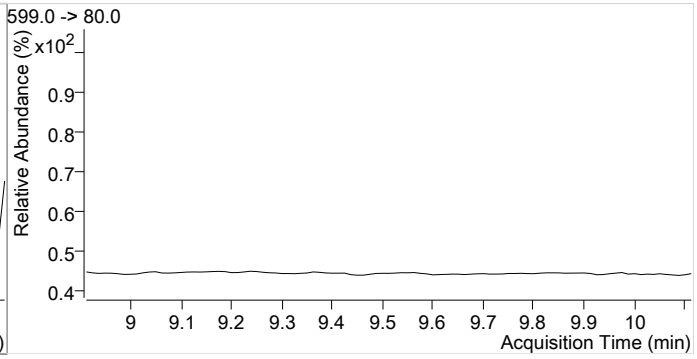
Compound	Conc.	Exp RT	QIon	Exp Ratio
8:2FTS	N.D.	8.19		





Compound	Conc.	Exp RT	QIon	Exp Ratio
PFDS	N.D.	9.16		

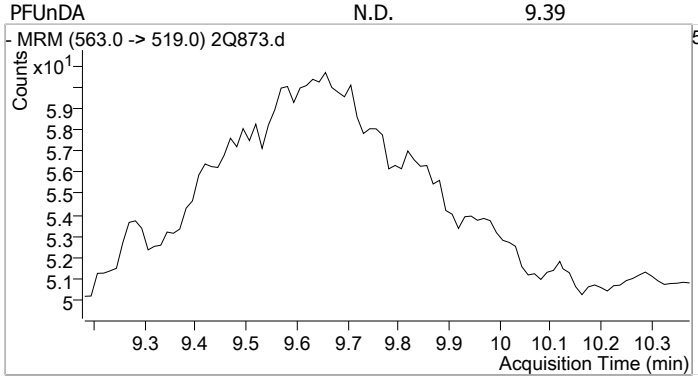


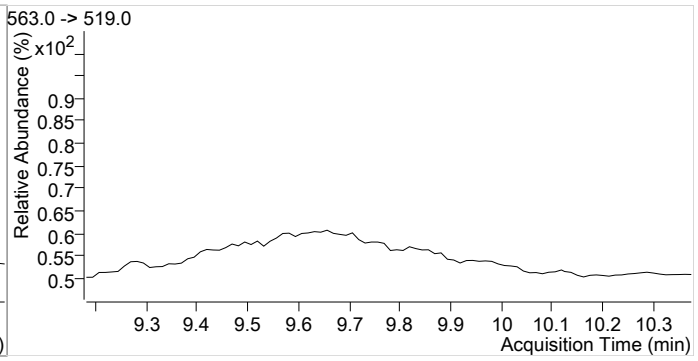


Perfluorinated Compounds by LC/MS/MS

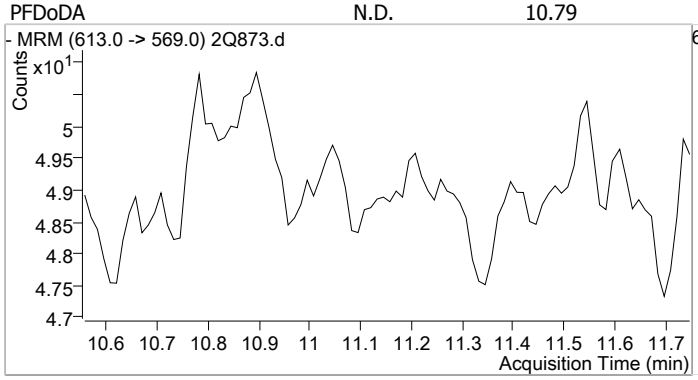
Agilent Technologies

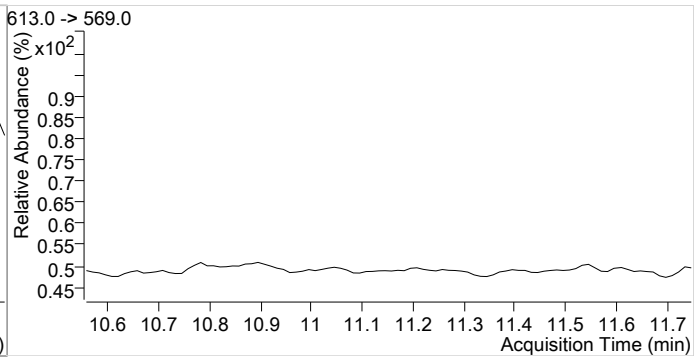
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFUnDA	N.D.	9.39		



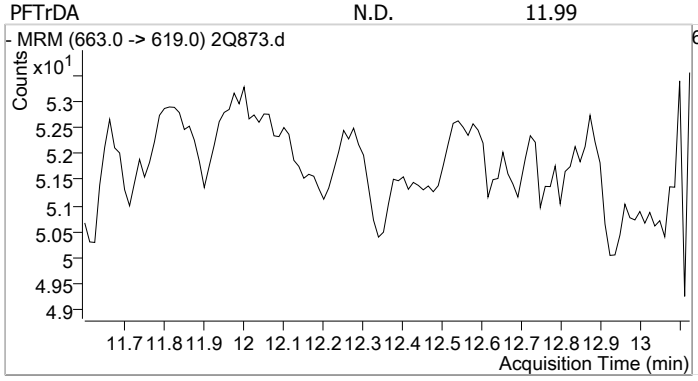


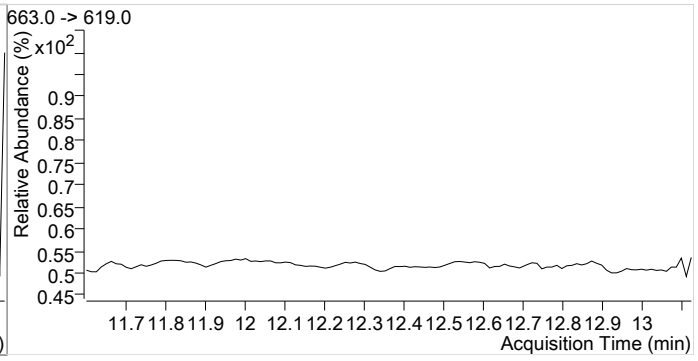
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFDoDA	N.D.	10.79		



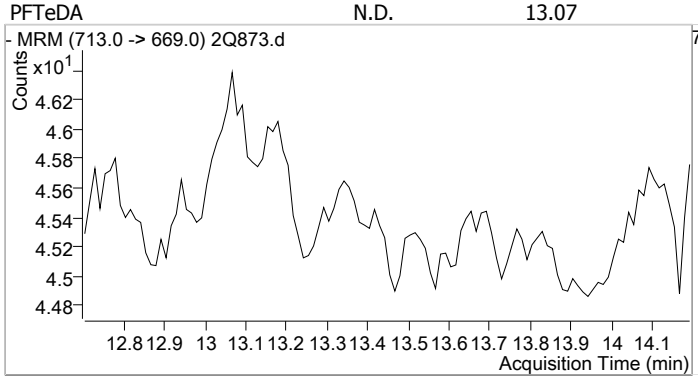


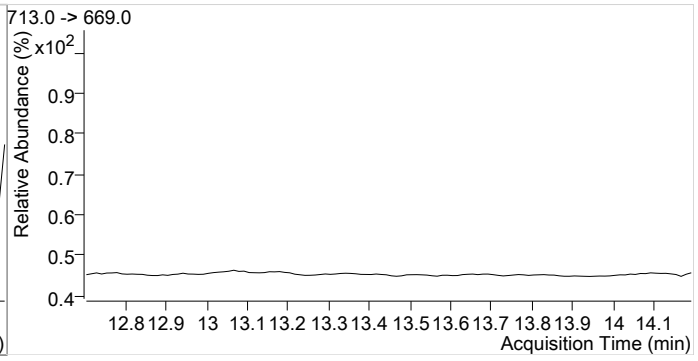
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFTrDA	N.D.	11.99		





Compound	Conc.	Exp RT	QIon	Exp Ratio
PFTeDA	N.D.	13.07		





Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

Data File	:	2Q862.d
Operator	:	NANCYF
Acq. Method	:	dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time	:	4/28/2017 3:23:29 PM
Sample Name	:	OP64797-MB
Vial	:	Vial 8
DA Method File	:	PFCLISTDW_0420_S2Q18.m
Batch Name	:	2SQ25.batch.bin
Last Calib Update	:	4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)
Internal Standards						
13C2-6:2FTS	6.671	429.0 -> 409.0	135973	20.00	µg/L	0.000
13C2-PFDoDA	10.826	615.0 -> 570.0	73370	20.00	µg/L	0.038
13C2-PFOA	6.662	415.0 -> 370.0	63693	20.00	µg/L	0.000
13C3-PFPeA	4.209	266.0 -> 222.0	61226	20.00	µg/L	-0.013
13C4-PFOS	7.239	503.0 -> 80.0	45946	20.00	µg/L	0.000
d3-MeFOSAA	7.450	573.0 -> 419.0	26985	20.00	µg/L	0.000
System Monitoring Compounds						
13C2-PFDA	8.044	515.0 -> 470.0	98745	22.16	µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 110.8%		
13C2-PFHxA	5.197	315.0 -> 270.0	73831	21.95	µg/L	-0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 109.7%		
d5-EtFOSAA	7.572	589.0 -> 419.0	15335	22.79	µg/L	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 113.9%		
Target Compounds						QValue
4:2FTS	-	327.0 -> 307.0	-	N.D.		
6:2FTS	6.673	427.0 -> 407.0	1257	0.19	µg/L	100
8:2FTS	-	527.0 -> 507.0	-	N.D.		
EtFOSAA	7.573	584.0 -> 419.0	2203	3.75	µg/L	100
FOSA	-	498.0 -> 78.0	-	N.D.		
MeFOSAA	7.451	570.0 -> 419.0	2047	2.94	µg/L	100
PFBA	-	213.0 -> 169.0	-	N.D.		
PFBS	-	299.0 -> 80.0	-	N.D.		
PFDA	8.059	513.0 -> 469.0	544	0.17	µg/L	100
PFDoDA	-	613.0 -> 569.0	-	N.D.		
PFDS	-	599.0 -> 80.0	-	N.D.		
PFHpA	5.986	363.0 -> 319.0	754	0.18	µg/L	85
PFHpS	-	449.0 -> 80.0	-	N.D.		
PFHxA	5.200	313.0 -> 269.0	436	0.31	µg/L	85
PFHxS	-	399.0 -> 80.0	-	N.D.		
PFNA	7.319	463.0 -> 419.0	407	0.14	µg/L	55
PFNS	-	549.0 -> 99.0	-	N.D.		
PFOA	6.664	413.0 -> 369.0	435	0.16	µg/L	54
PFOS	-	499.0 -> 80.0	-	N.D.		
PFPeA	4.200	263.0 -> 219.0	752	0.16	µg/L	100
PFPeS	-	349.0 -> 99.0	-	N.D.		
PFTeDA	-	713.0 -> 669.0	-	N.D.		
PFTrDA	-	663.0 -> 619.0	-	N.D.		
PFUnDA	-	563.0 -> 519.0	-	N.D.		

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

Perfluorinated Compounds by LC/MS/MS

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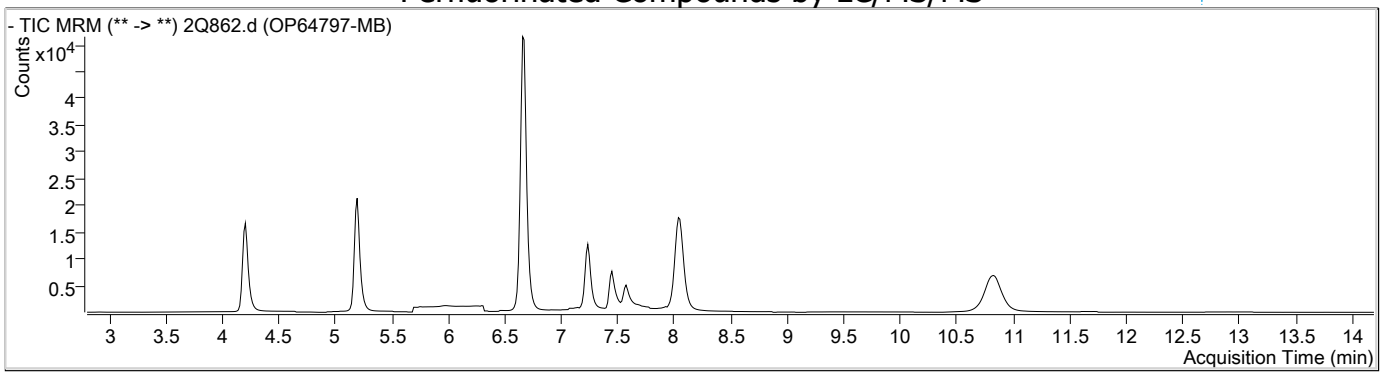
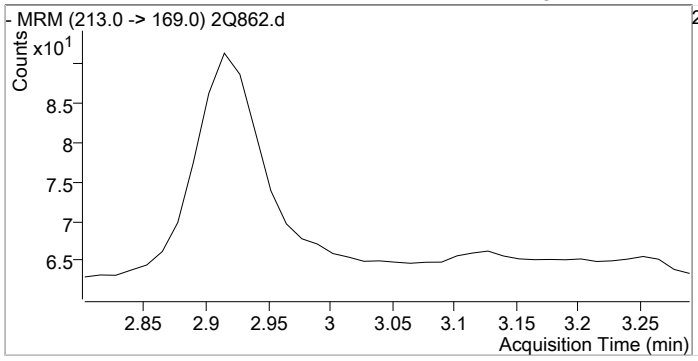
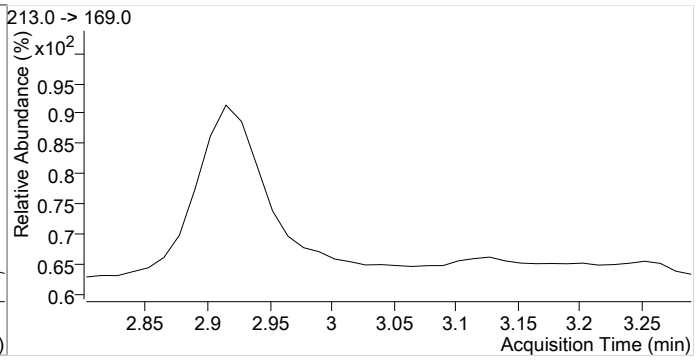
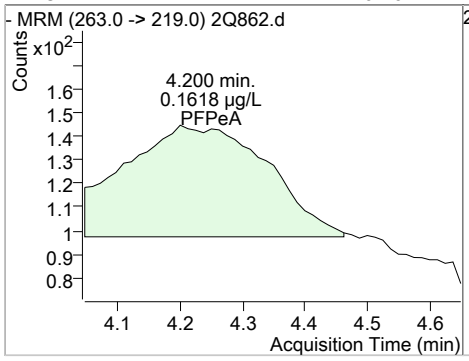


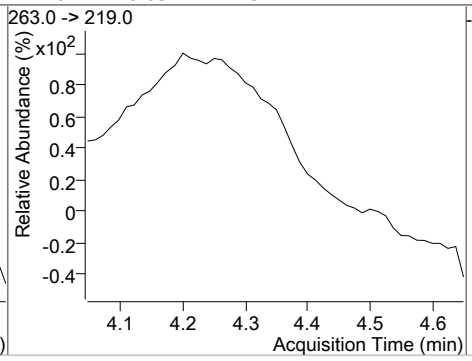
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFBA	N.D.	2.94		

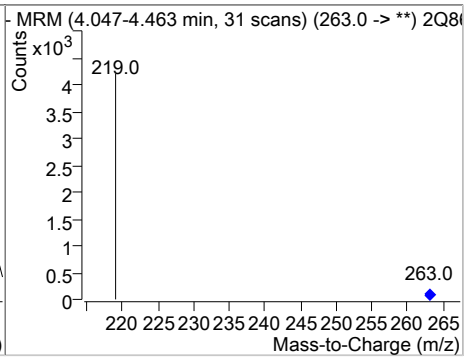




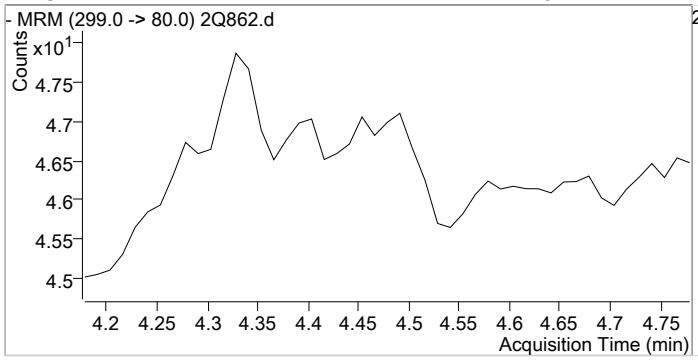
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	0.16	4.20	-0.03	752				

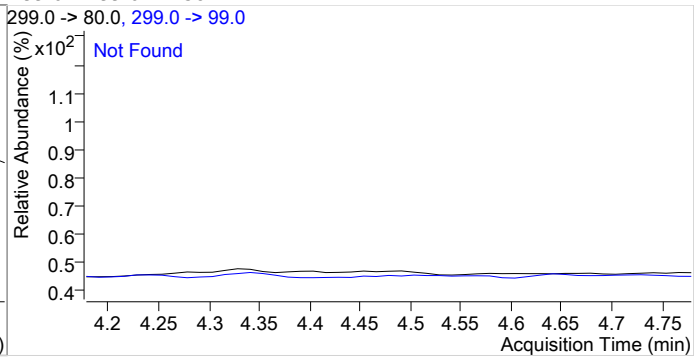






Compound	Conc.	Exp RT	QIon	Exp Ratio
PFBS	N.D.	4.34	299.0 -> 99.0	38.1





Perfluorinated Compounds by LC/MS/MS

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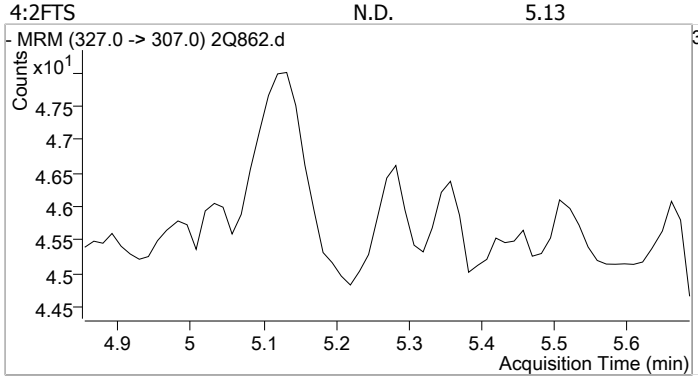
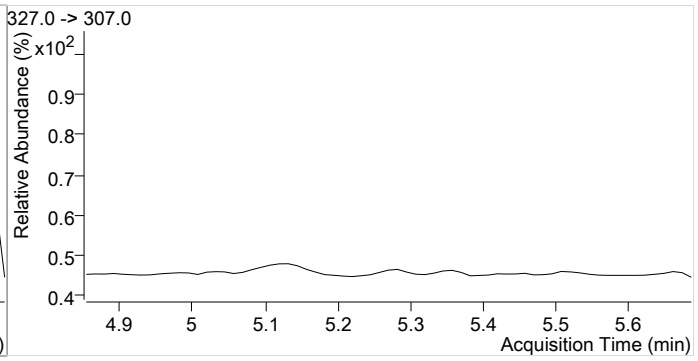
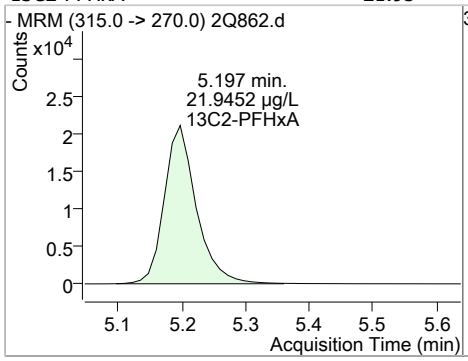
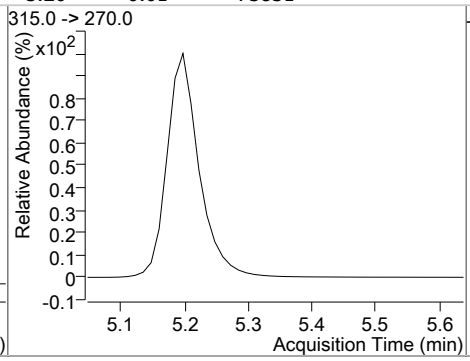
Compound	Conc.	Exp RT	QIon	Exp Ratio
4:2FTS	N.D.	5.13		

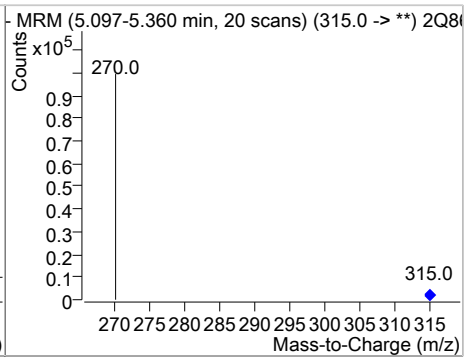




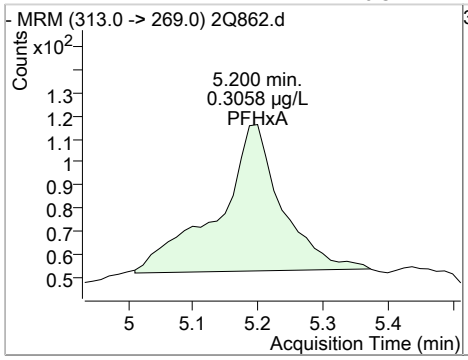
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	21.95	5.20	-0.01	73831				

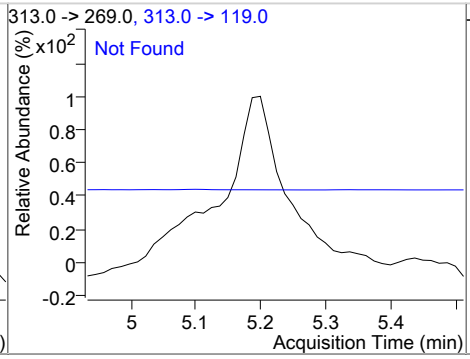


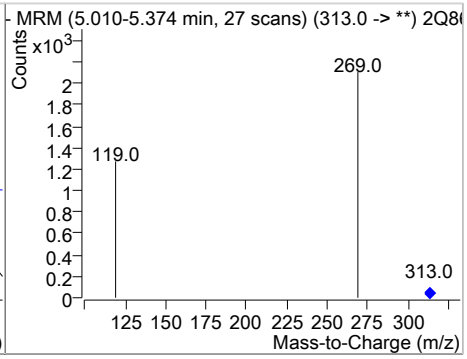




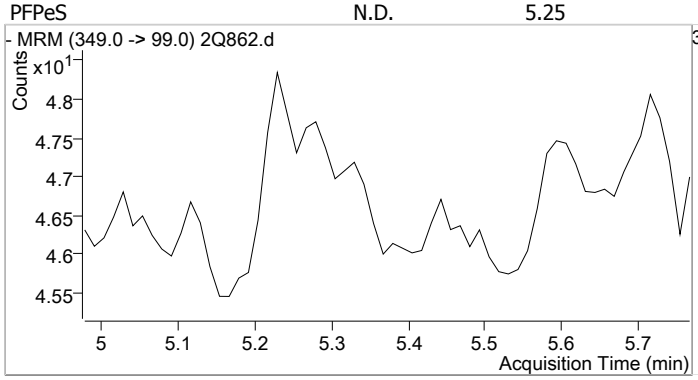
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	0.31	5.20	-0.01	436	313.0 -> 119.0		4.0	6.0

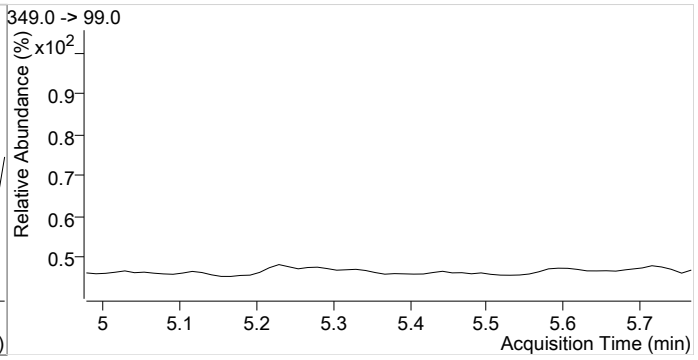






Compound	Conc.	Exp RT	QIon	Exp Ratio
PFPeS	N.D.	5.25		





Perfluorinated Compounds by LC/MS/MS

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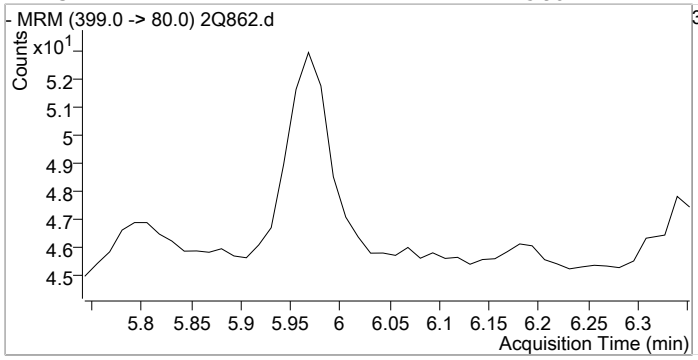
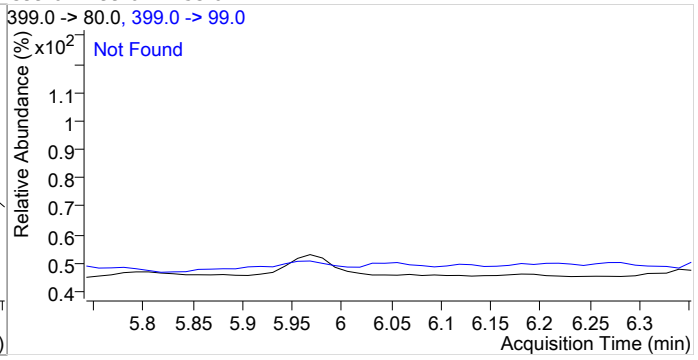
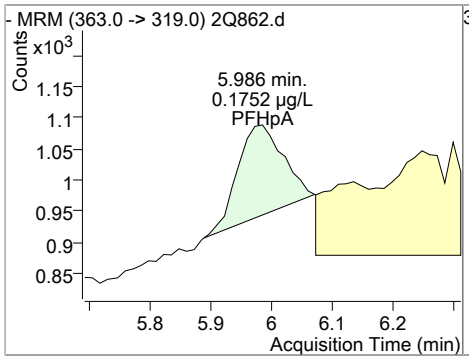
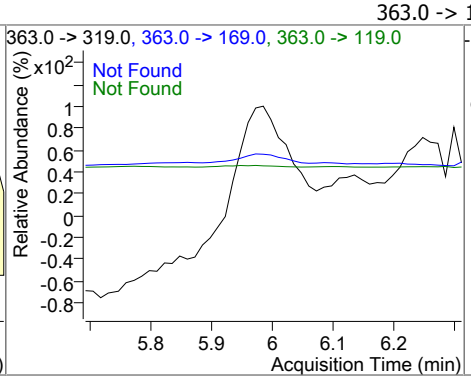
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFHxS	N.D.	5.98	399.0 -> 99.0	53.6

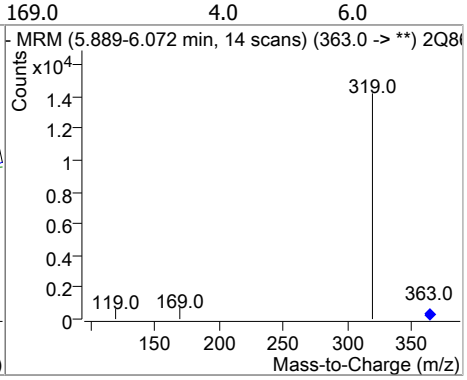




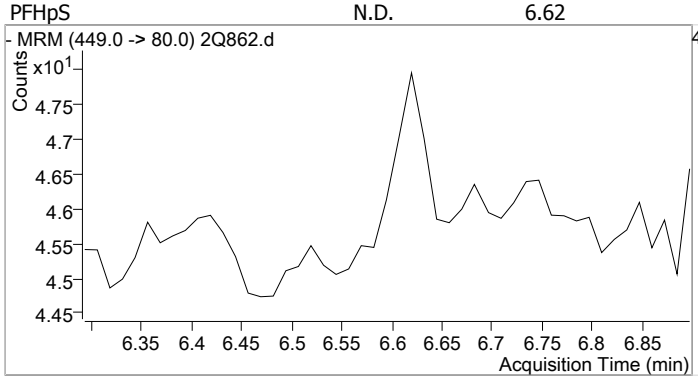
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	0.18	5.99	0.00	754	363.0 -> 119.0		4.0	6.0
					363.0 -> 169.0		4.0	6.0

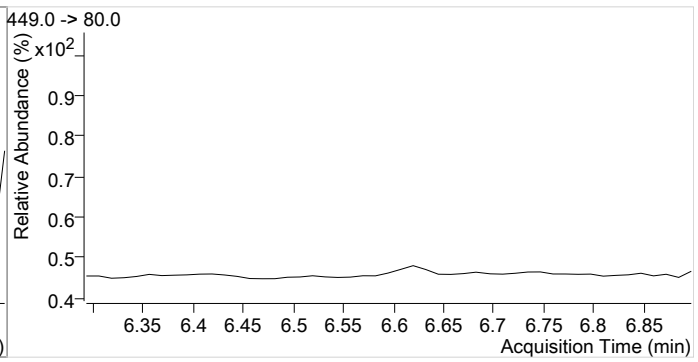




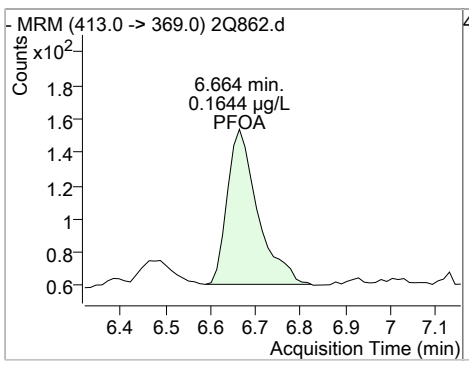


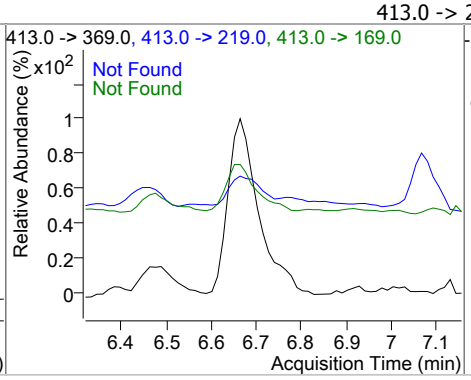
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFHpS	N.D.	6.62		

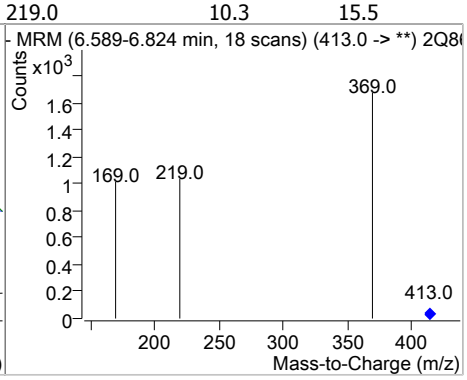




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	0.16	6.66	0.00	435	413.0 -> 169.0		21.8	32.6
					413.0 -> 219.0		10.3	15.5







Perfluorinated Compounds by LC/MS/MS

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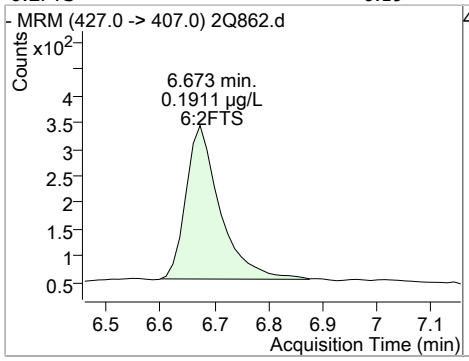
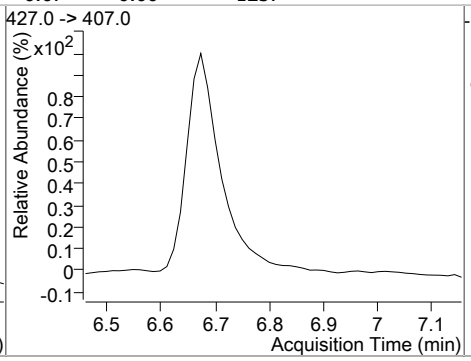
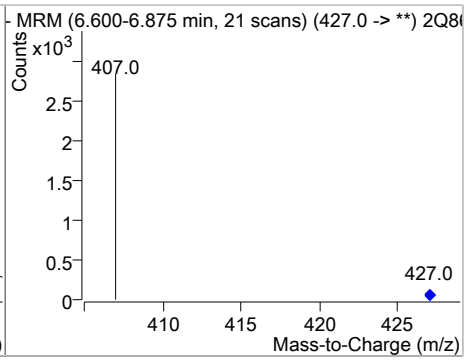
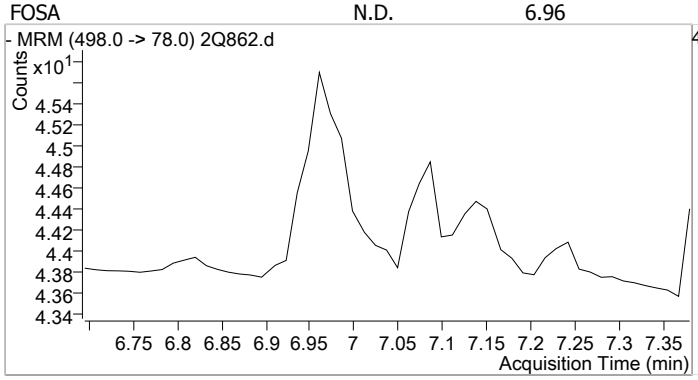
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	0.19	6.67	0.00	1257				

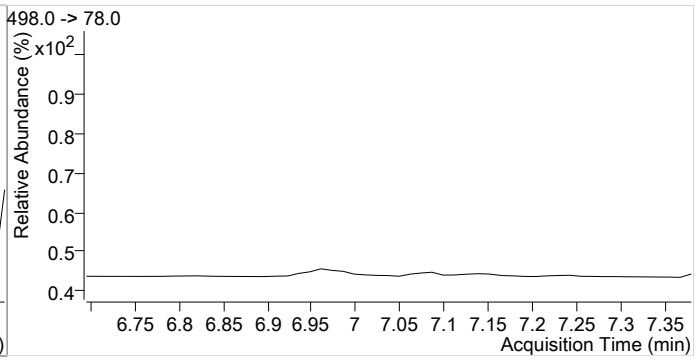




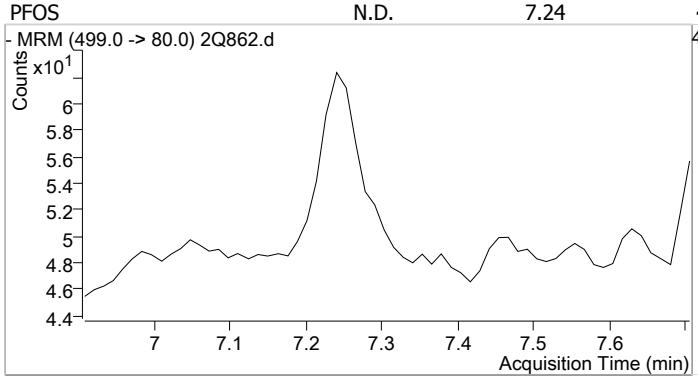


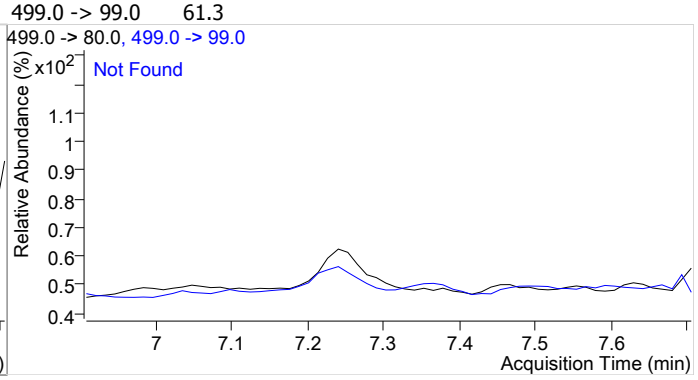
Compound	Conc.	Exp RT	QIon	Exp Ratio
FOSA	N.D.	6.96		



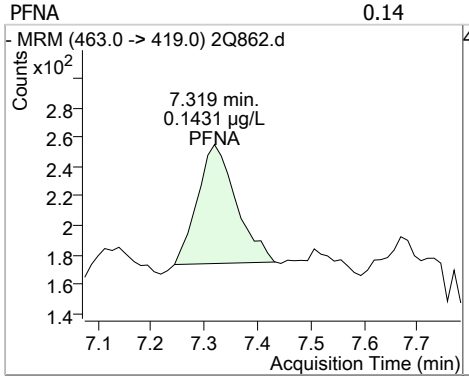


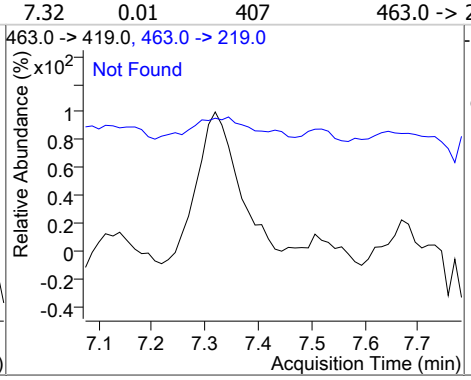
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFOS	N.D.	7.24	499.0 -> 99.0	61.3

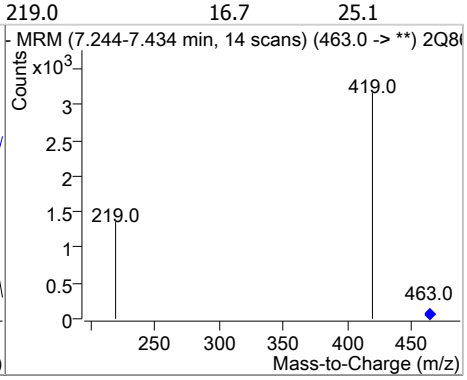




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	0.14	7.32	0.01	407	463.0 -> 219.0		16.7	25.1







Perfluorinated Compounds by LC/MS/MS

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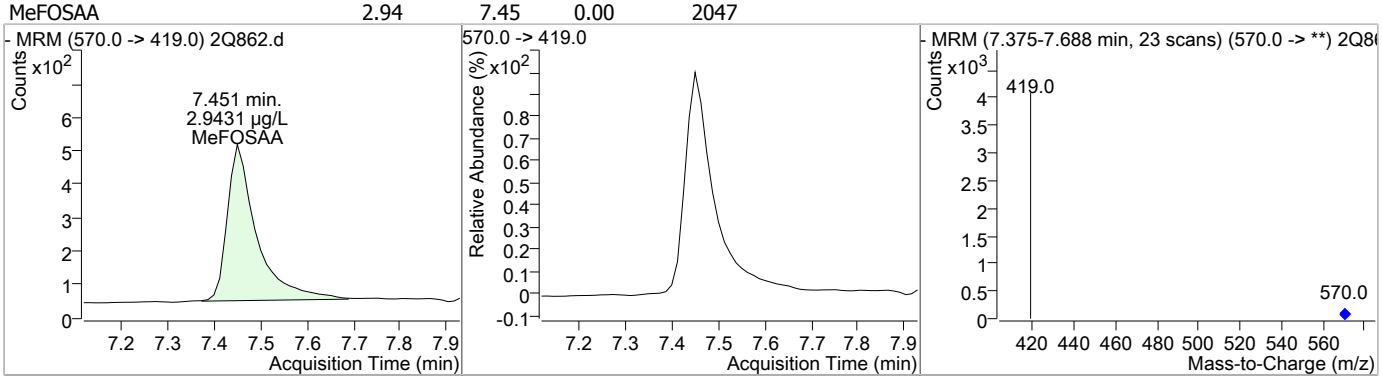
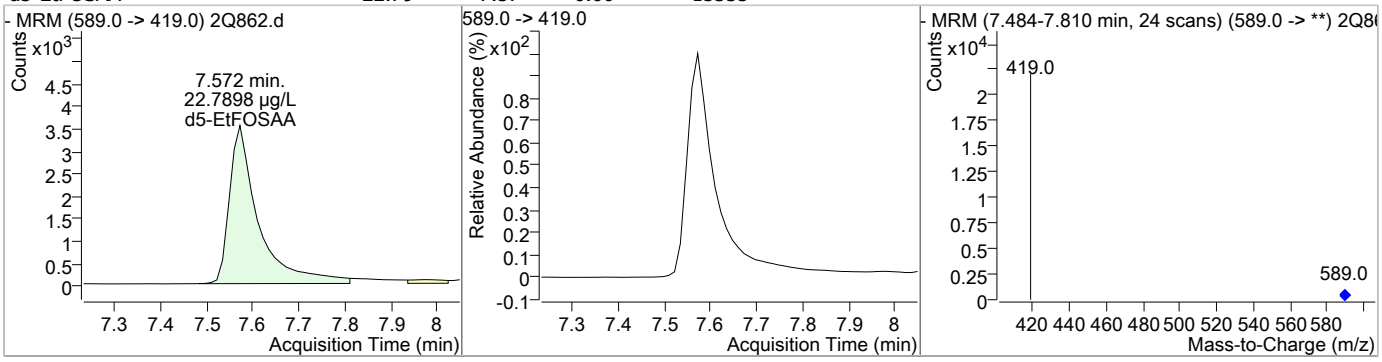
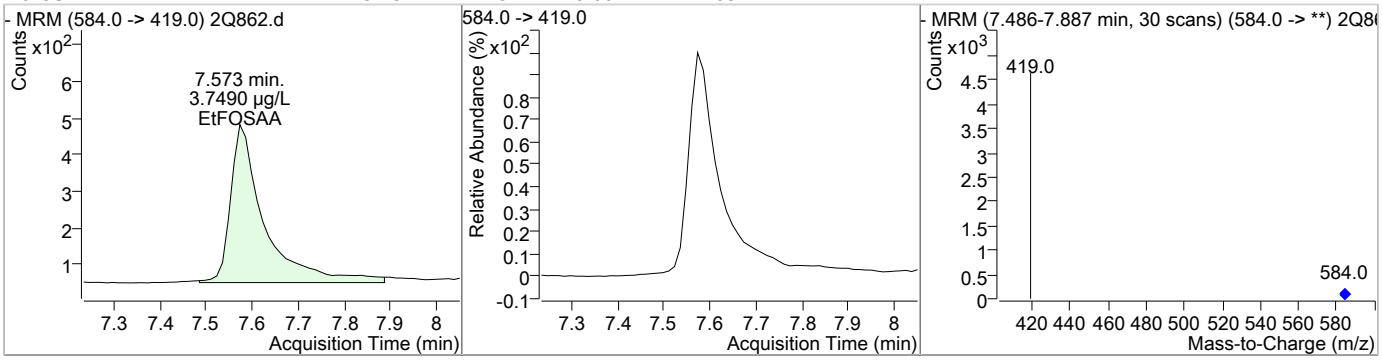
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	2.94	7.45	0.00	2047				



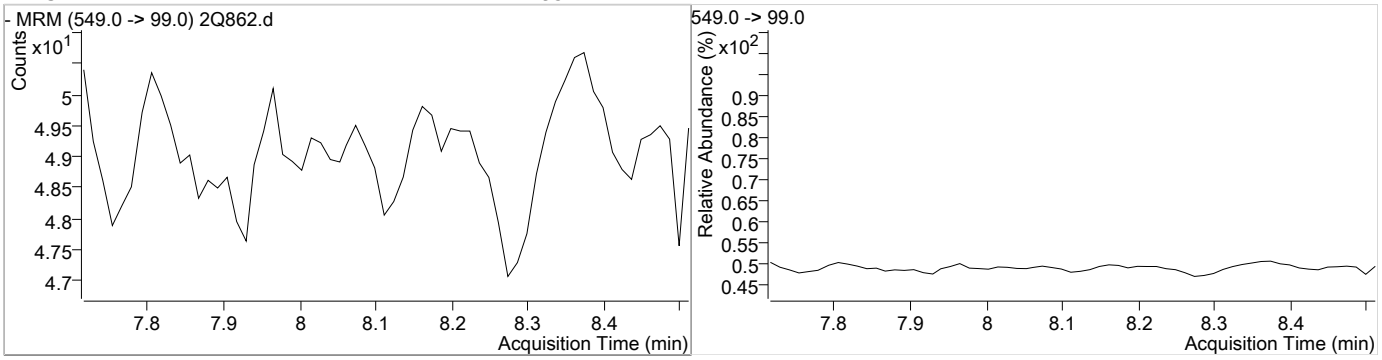
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	22.79	7.57	0.00	15335				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	3.75	7.57	0.00	2203				



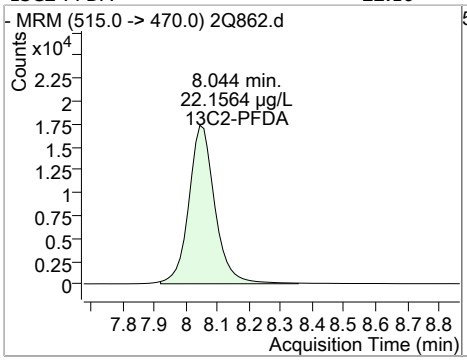
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFNS	N.D.	7.93		

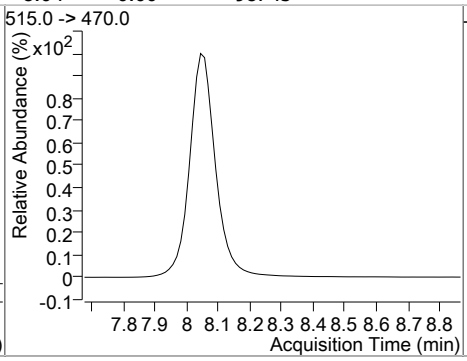


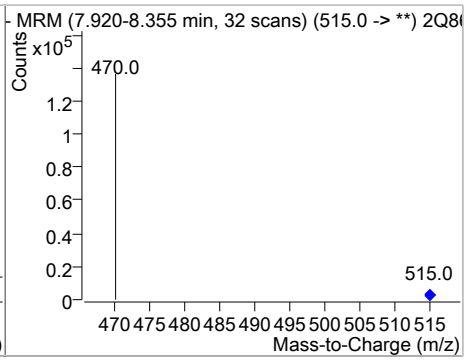
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

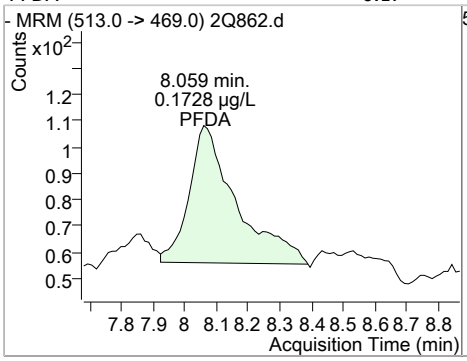
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	22.16	8.04	0.00	98745				

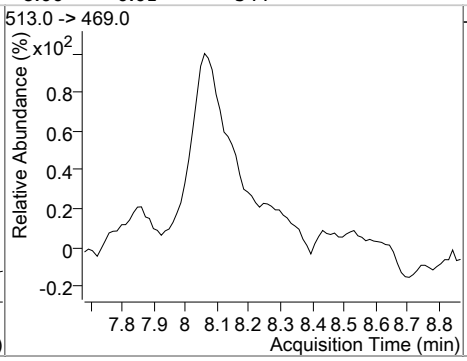


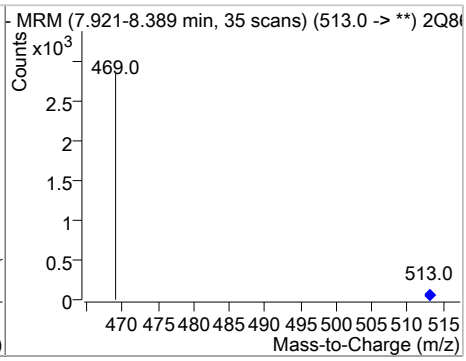




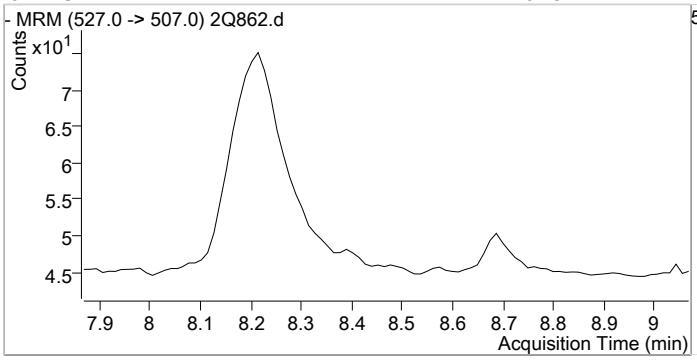
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	0.17	8.06	0.01	544				

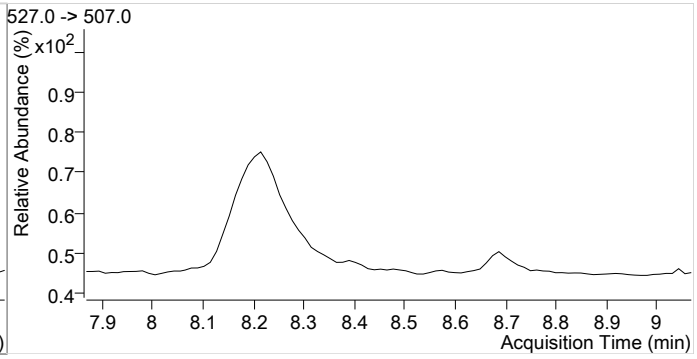




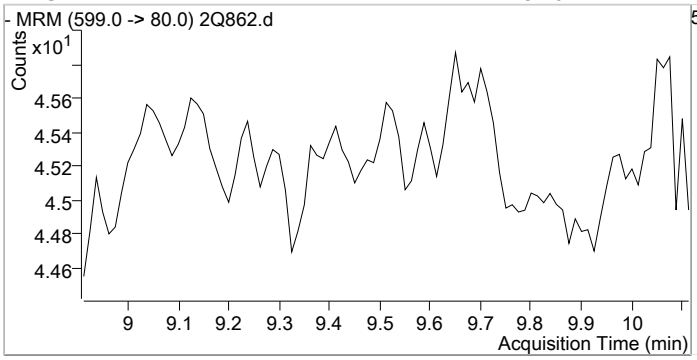


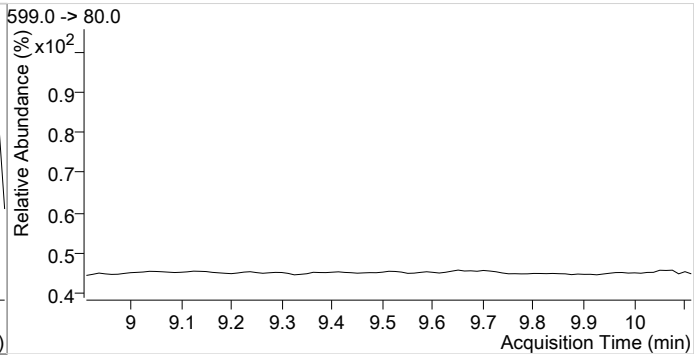
Compound	Conc.	Exp RT	QIon	Exp Ratio
8:2FTS	N.D.	8.19		





Compound	Conc.	Exp RT	QIon	Exp Ratio
PFDS	N.D.	9.16		





Perfluorinated Compounds by LC/MS/MS

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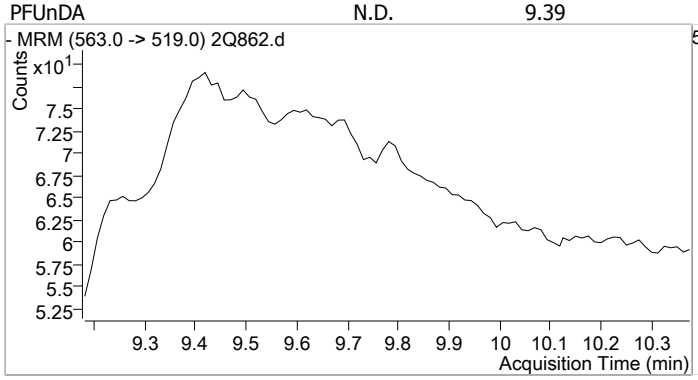
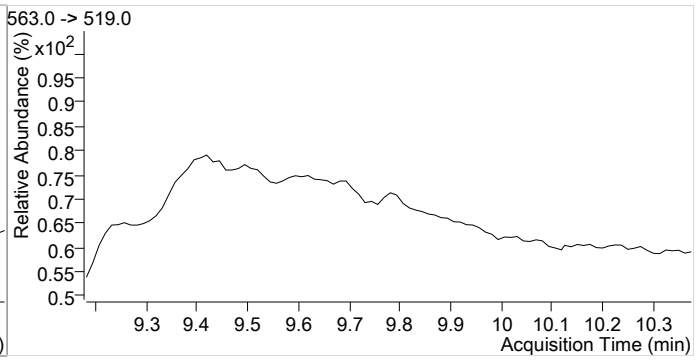
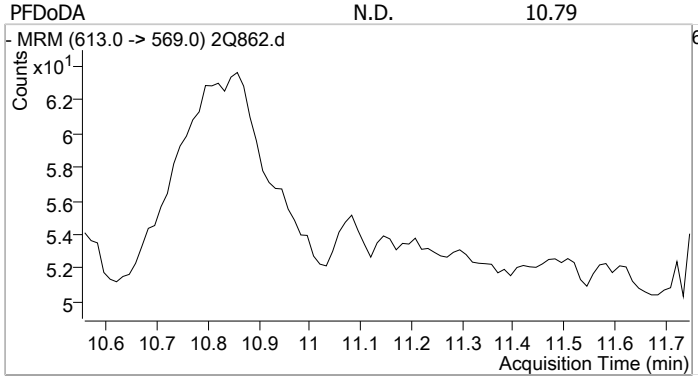
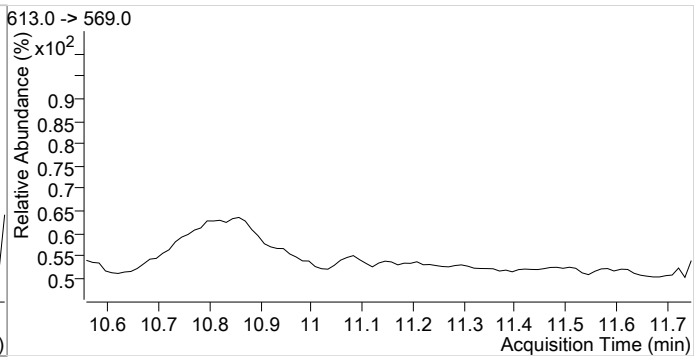
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFUnDA	N.D.	9.39		



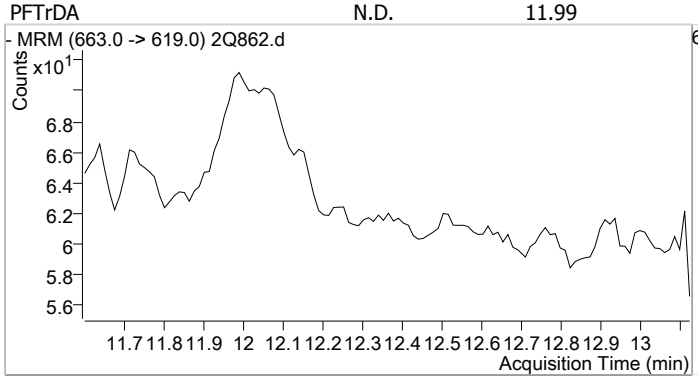


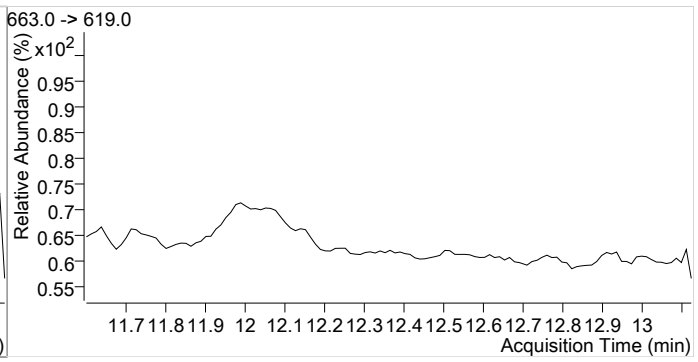
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFDoDA	N.D.	10.79		



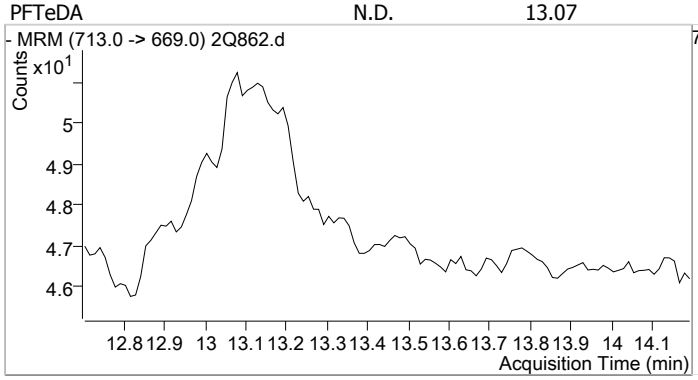


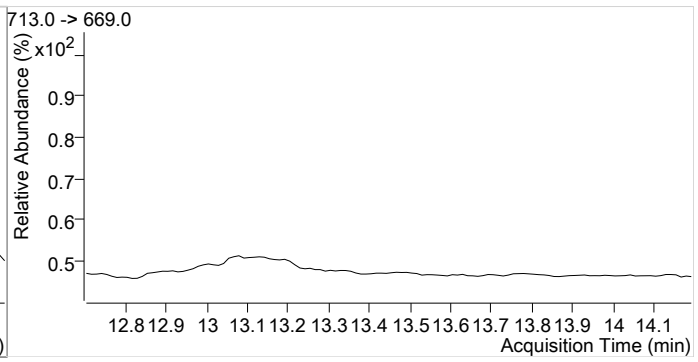
Compound	Conc.	Exp RT	QIon	Exp Ratio
PFTrDA	N.D.	11.99		





Compound	Conc.	Exp RT	QIon	Exp Ratio
PFTeDA	N.D.	13.07		





Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

Data File	:	2Q861.d
Operator	:	NANCYF
Acq. Method	:	dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time	:	4/28/2017 3:03:44 PM
Sample Name	:	OP64797-BS
Vial	:	Vial 7
DA Method File	:	PFCLISTDW_0420_S2Q18.m
Batch Name	:	2SQ25.batch.bin
Last Calib Update	:	4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	6.671	429.0 -> 409.0	154462	20.00	µg/L		0.000
13C2-PFDoDA	10.826	615.0 -> 570.0	80861	20.00	µg/L		0.038
13C2-PFOA	6.662	415.0 -> 370.0	68979	20.00	µg/L		0.000
13C3-PFPeA	4.209	266.0 -> 222.0	66489	20.00	µg/L		-0.013
13C4-PFOS	7.239	503.0 -> 80.0	49451	20.00	µg/L		0.000
d3-MeFOSAA	7.450	573.0 -> 419.0	28788	20.00	µg/L		0.000
System Monitoring Compounds							
13C2-PFDA	8.044	515.0 -> 470.0	101598	21.05	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 105.2%			
13C2-PFHxA	5.197	315.0 -> 270.0	76400	20.97	µg/L		-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 104.8%			
d5-EtFOSAA	7.572	589.0 -> 419.0	13661	19.34	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 96.7%			
Target Compounds							**QValue**
4:2FTS	5.119	327.0 -> 307.0	101048	25.90	µg/L		100
6:2FTS	6.673	427.0 -> 407.0	180610	24.18	µg/L		100
8:2FTS	8.189	527.0 -> 507.0	301395	24.37	µg/L		100
EtFOSAA	7.573	584.0 -> 419.0	12396	18.92	µg/L		100
FOSA	6.961	498.0 -> 78.0	1873	1.21	µg/L		100
MeFOSAA	7.451	570.0 -> 419.0	17264	21.30	µg/L		100
PFBA	2.915	213.0 -> 169.0	29338	16.17	µg/L		100
PFBS	4.328	299.0 -> 80.0	38335	19.43	µg/L		100
PFDA	8.046	513.0 -> 469.0	64829	19.01	µg/L		100
PFDoDA	10.833	613.0 -> 569.0	51079	14.64	µg/L		100
PFDS	9.200	599.0 -> 80.0	19814	15.22	µg/L		100
PFHpA	5.973	363.0 -> 319.0	95267	19.87	µg/L	#	93
PFHpS	6.620	449.0 -> 80.0	47863	22.85	µg/L		100
PFHxA	5.200	313.0 -> 269.0	33357	20.61	µg/L	#	85
PFHxS	5.968	399.0 -> 80.0	44296	21.45	µg/L		93
PFNA	7.306	463.0 -> 419.0	60491	19.63	µg/L		99
PFNS	7.929	549.0 -> 99.0	26204	20.98	µg/L		100
PFOA	6.652	413.0 -> 369.0	59148	20.63	µg/L		99
PFOS	7.240	499.0 -> 80.0	50960	17.86	µg/L		97
PFPeA	4.213	263.0 -> 219.0	99188	19.66	µg/L		100
PFPeS	5.230	349.0 -> 99.0	14248	22.51	µg/L		100
PFTeDA	13.116	713.0 -> 669.0	19985	12.37	µg/L		100
PFTrDA	12.027	663.0 -> 619.0	40233	13.70	µg/L		100
PFUnDA	9.431	563.0 -> 519.0	59865	16.87	µg/L		100

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

Perfluorinated Compounds by LC/MS/MS

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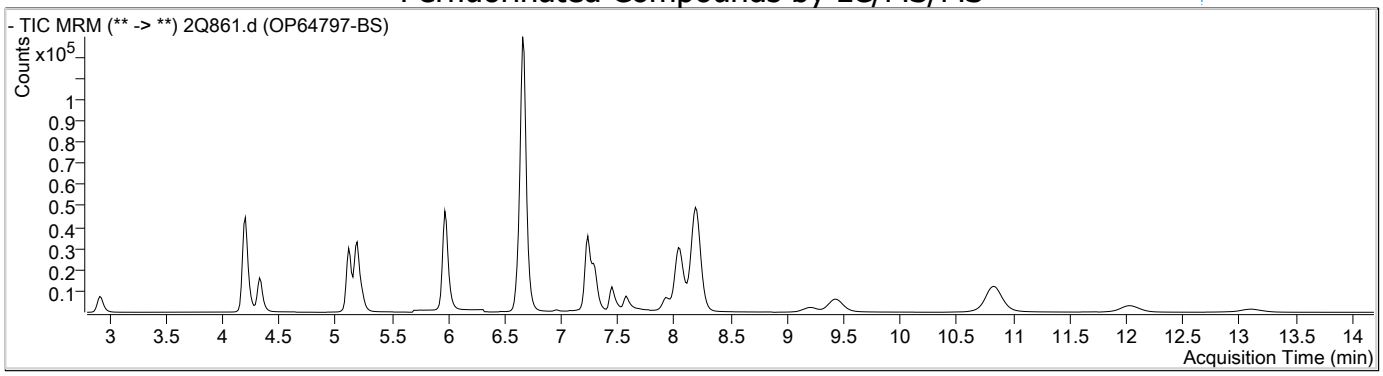
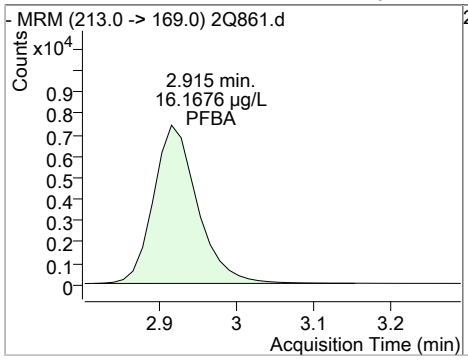
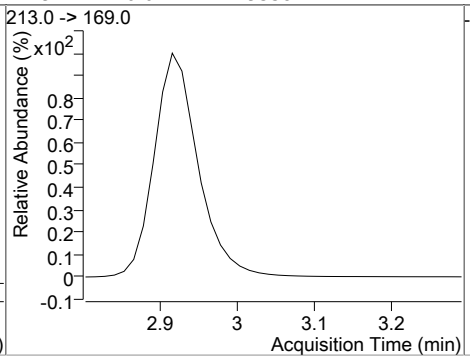
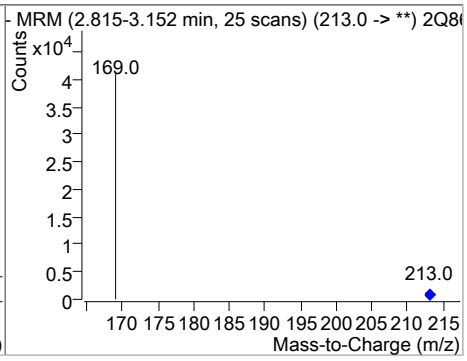


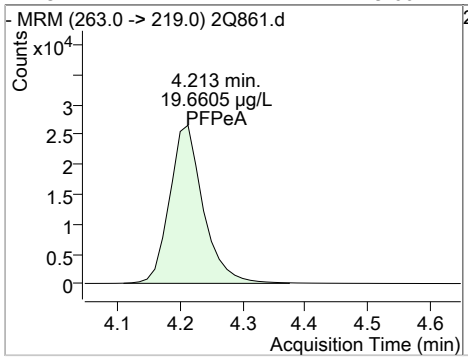
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	16.17	2.91	-0.02	29338				

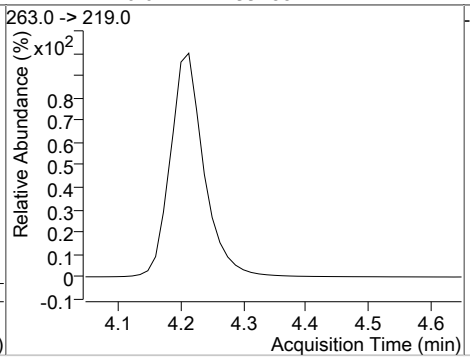


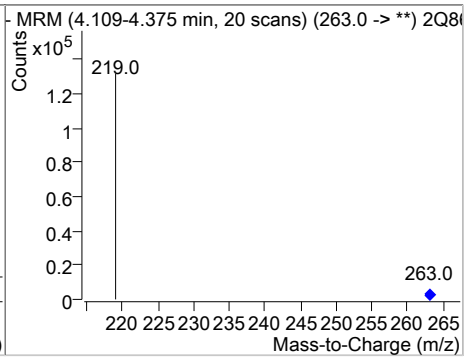




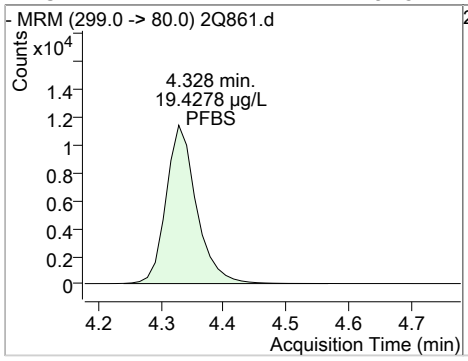
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.66	4.21	-0.01	99188				

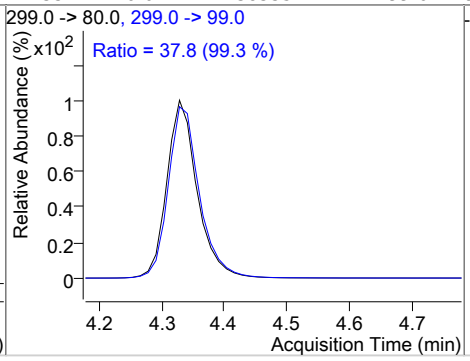


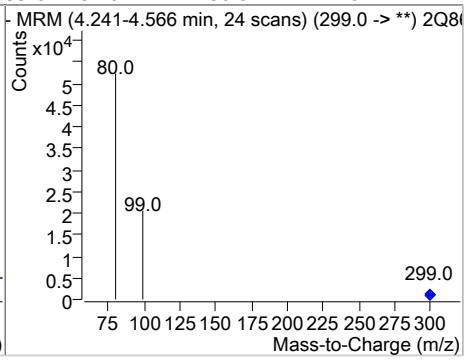




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.43	4.33	-0.01	38335	299.0 -> 99.0	37.8	30.5	45.7







Perfluorinated Compounds by LC/MS/MS

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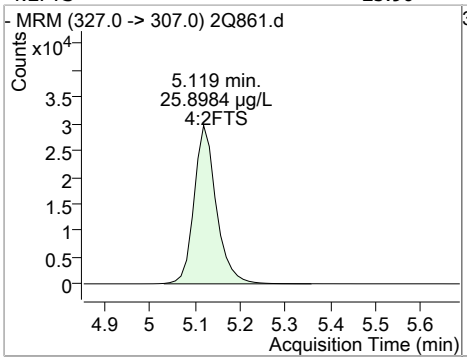
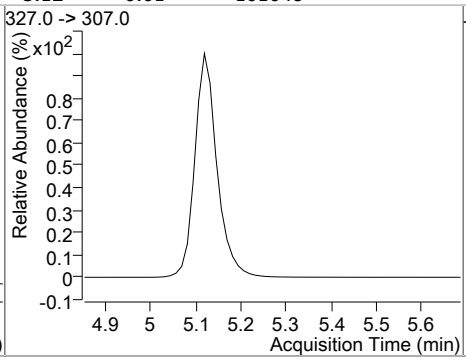
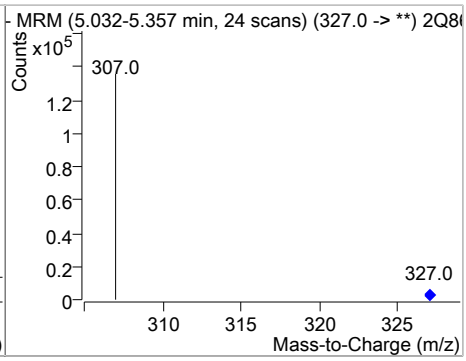
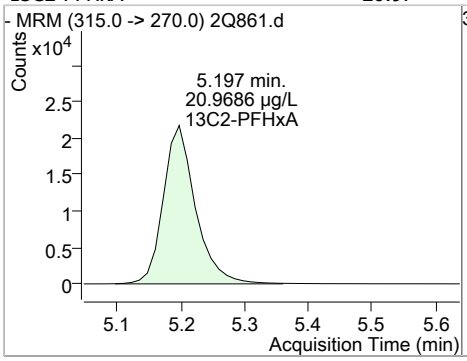
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	25.90	5.12	-0.01	101048				

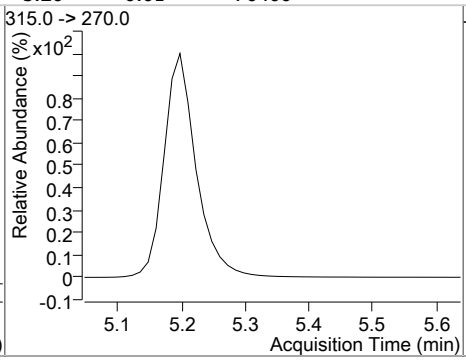


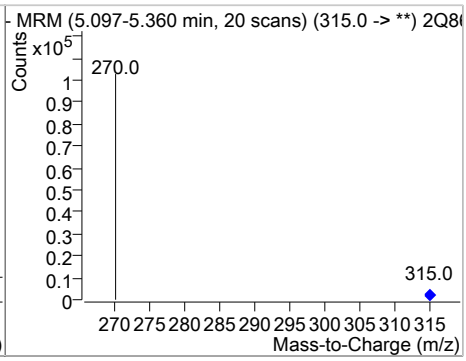




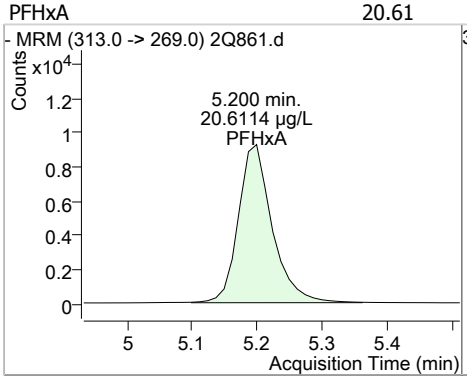
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	20.97	5.20	-0.01	76400				

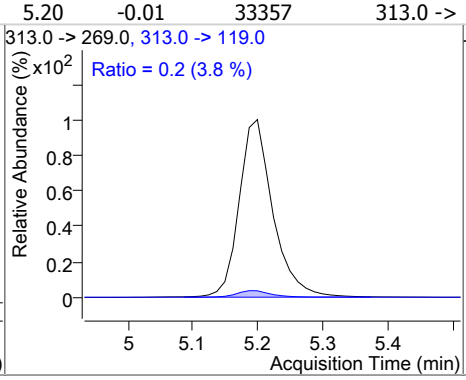


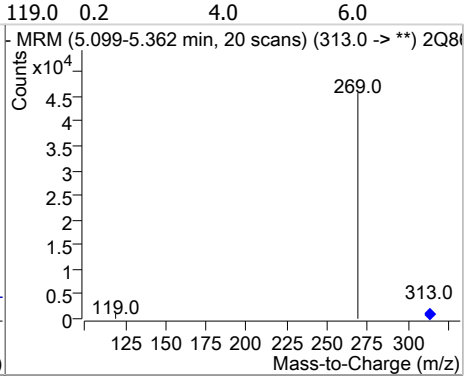




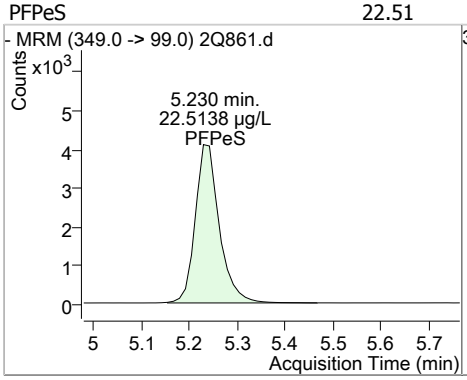
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	20.61	5.20	-0.01	33357	313.0 -> 119.0	0.2	4.0	6.0

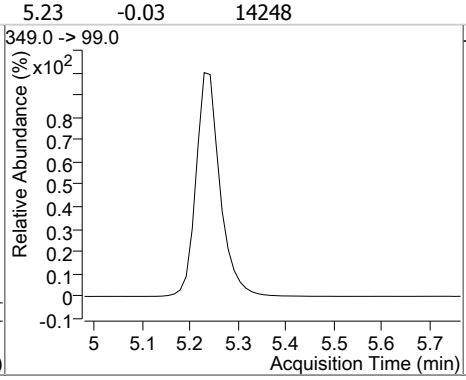


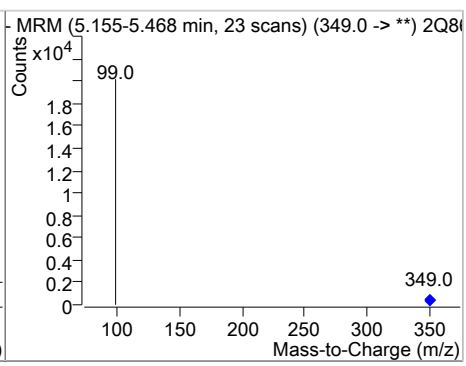




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	22.51	5.23	-0.03	14248				



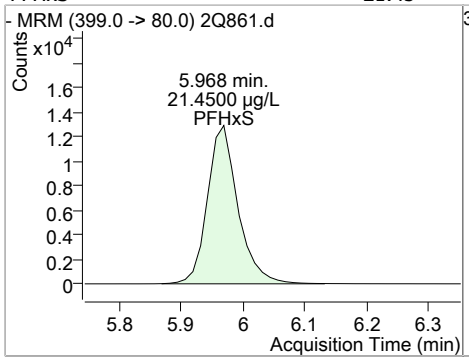


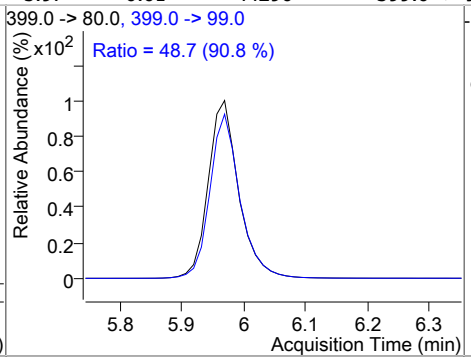


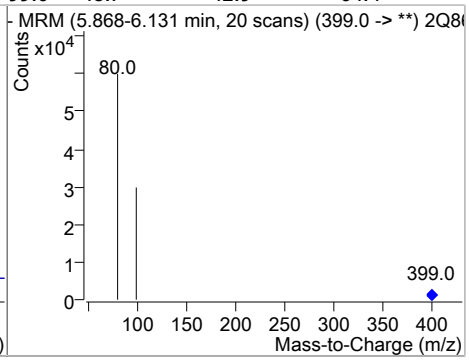
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

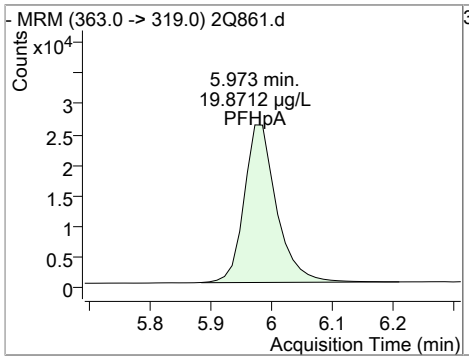
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	21.45	5.97	-0.01	44296	399.0 -> 99.0	48.7	42.9	64.4

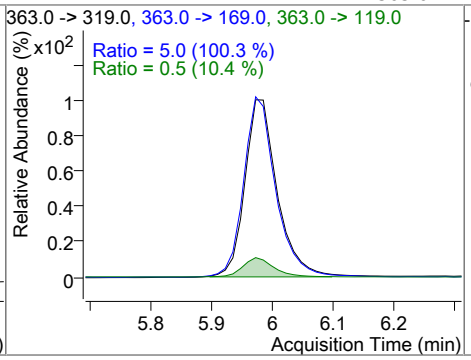


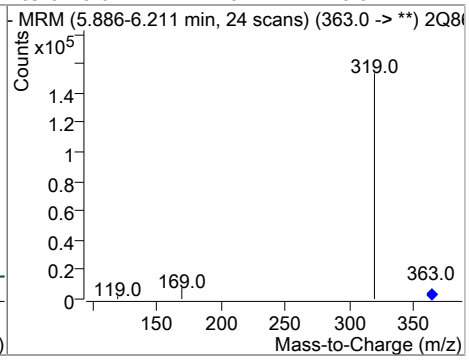




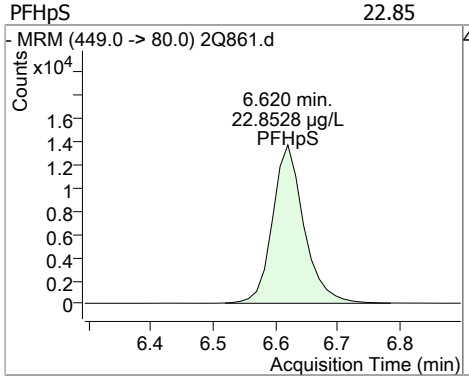
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	19.87	5.97	-0.01	95267	363.0 -> 119.0	0.5	4.0	6.0
					363.0 -> 169.0	5.0	4.0	6.0

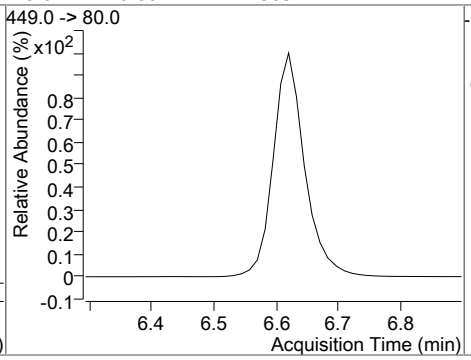


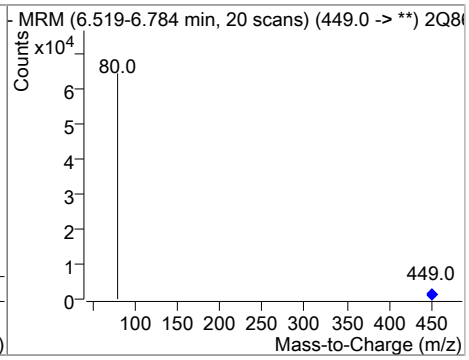




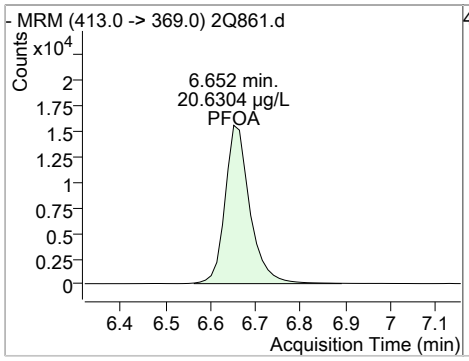
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	22.85	6.62	0.00	47863				

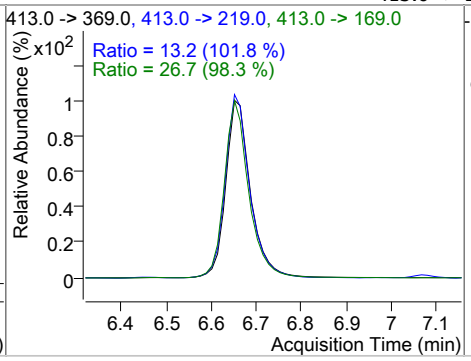


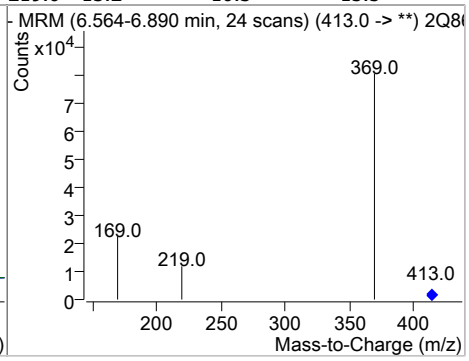




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	20.63	6.65	-0.01	59148	413.0 -> 169.0	26.7	21.8	32.6
					413.0 -> 219.0	13.2	10.3	15.5



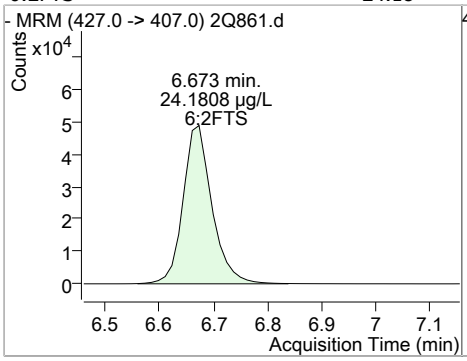


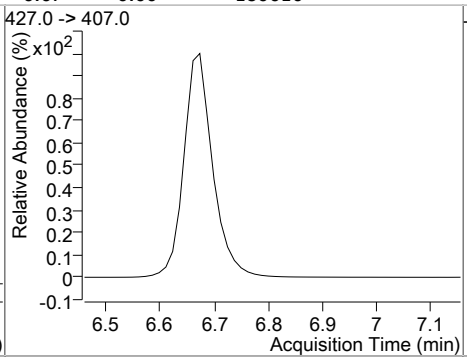


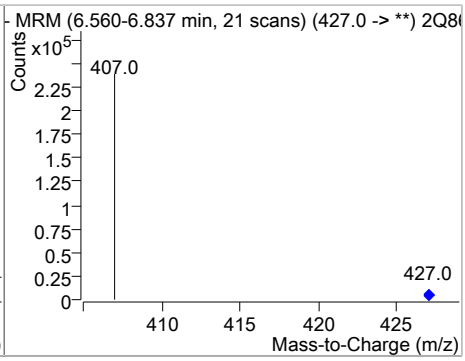
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

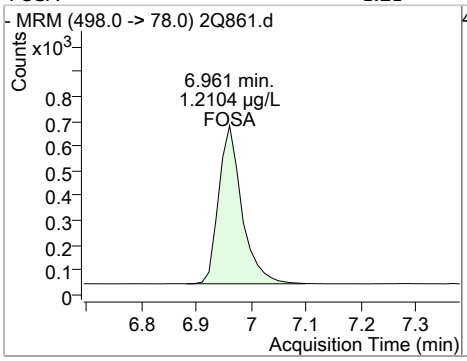
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	24.18	6.67	0.00	180610				

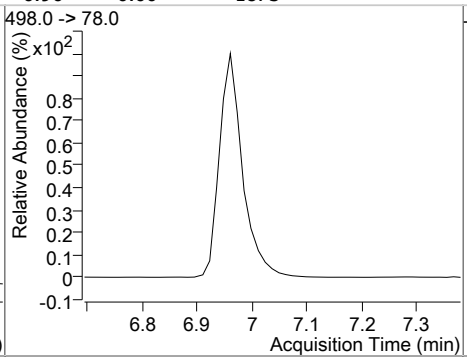


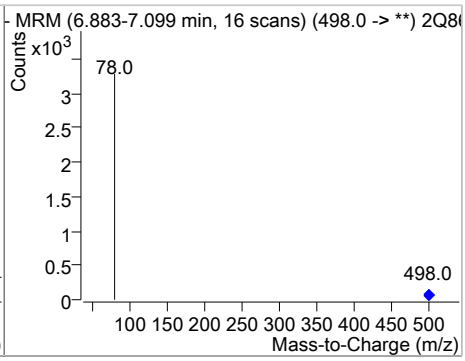




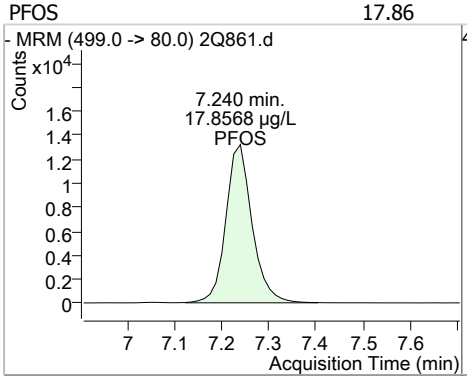
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	1.21	6.96	0.00	1873				

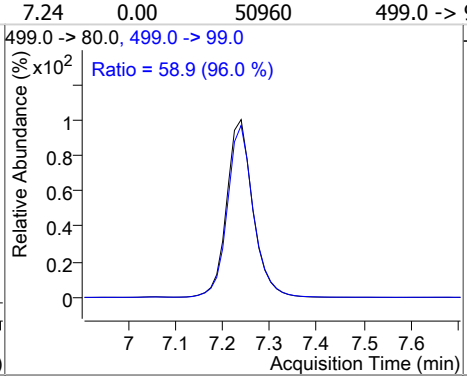


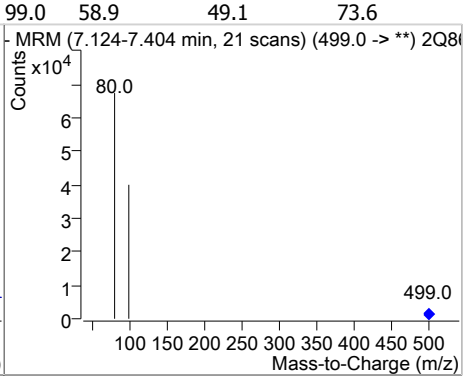




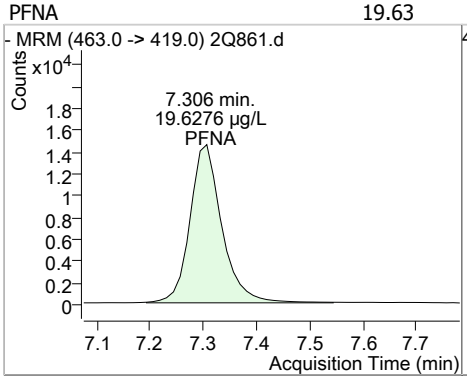
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	17.86	7.24	0.00	50960	499.0 -> 99.0	58.9	49.1	73.6

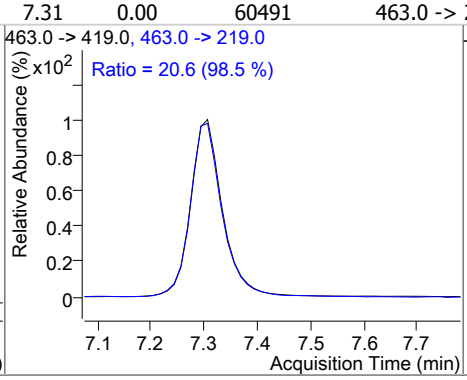


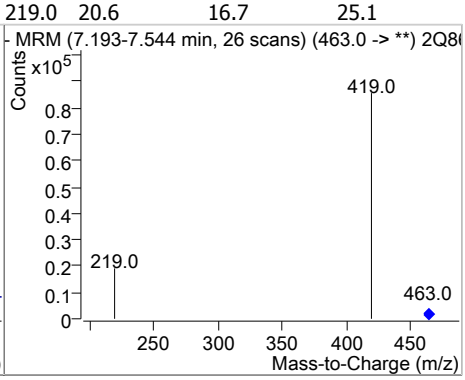




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.63	7.31	0.00	60491	463.0 -> 219.0	20.6	16.7	25.1



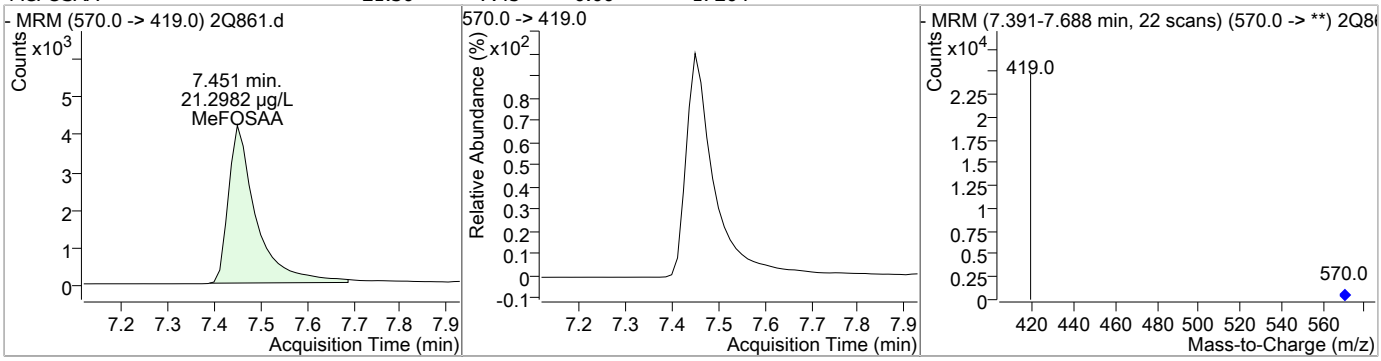




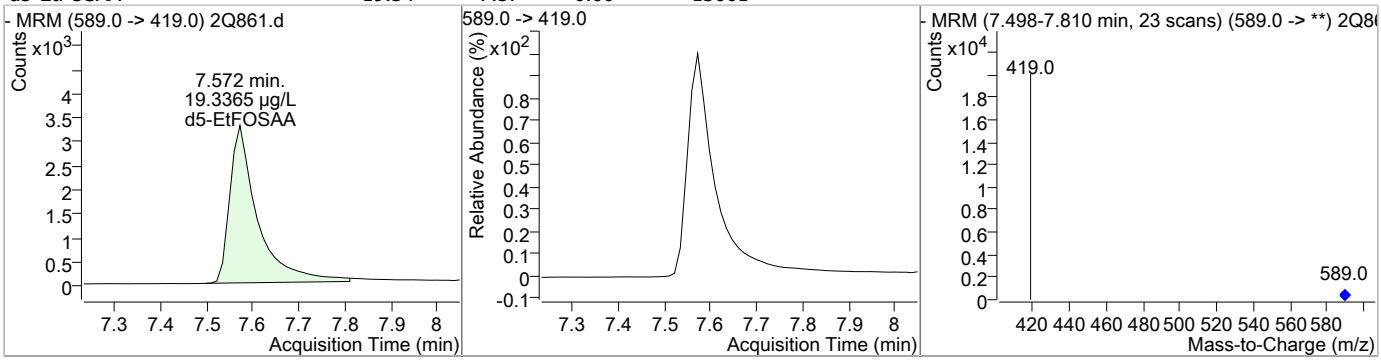
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

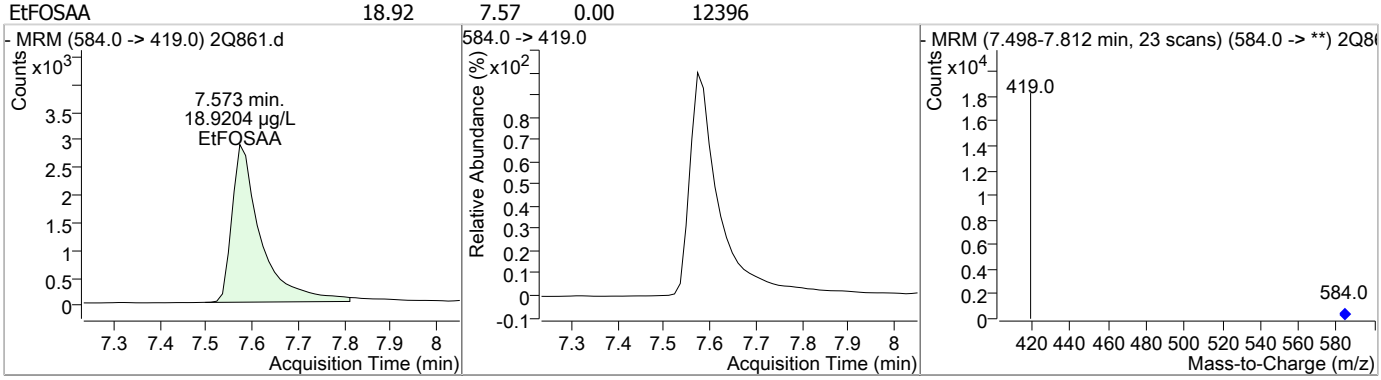
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	21.30	7.45	0.00	17264				



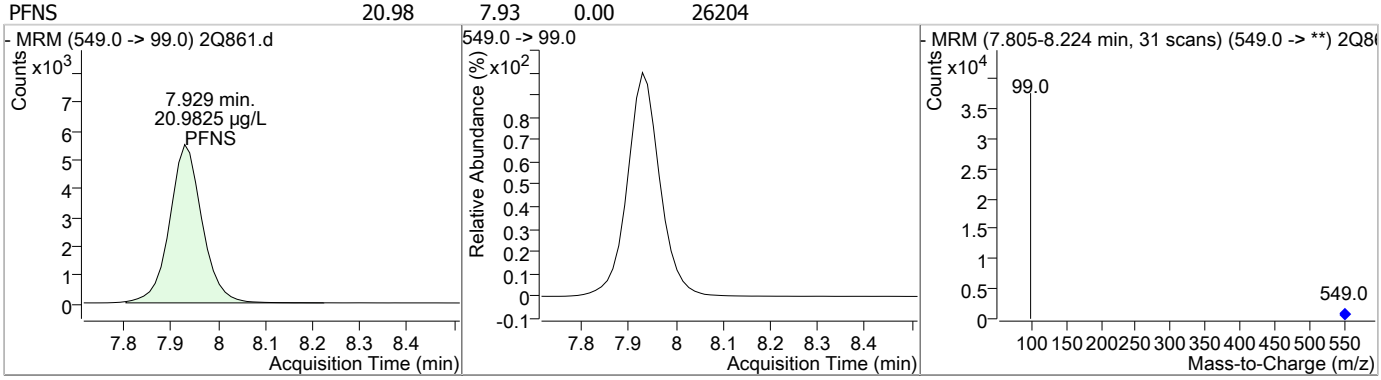
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.34	7.57	0.00	13661				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	18.92	7.57	0.00	12396				



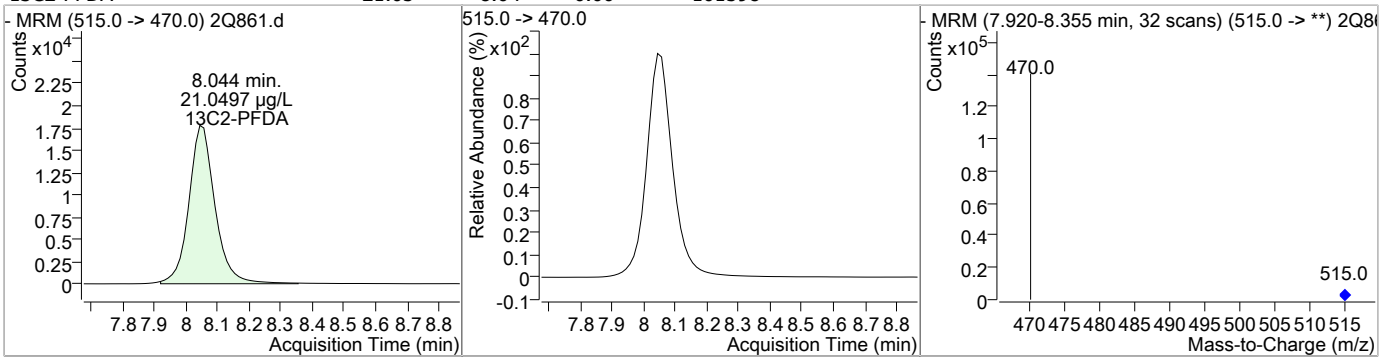
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	20.98	7.93	0.00	26204				



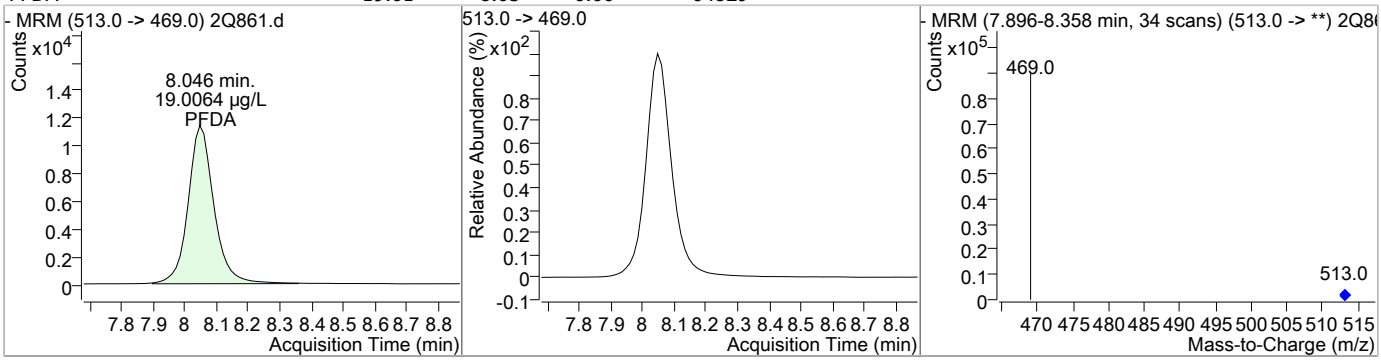
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

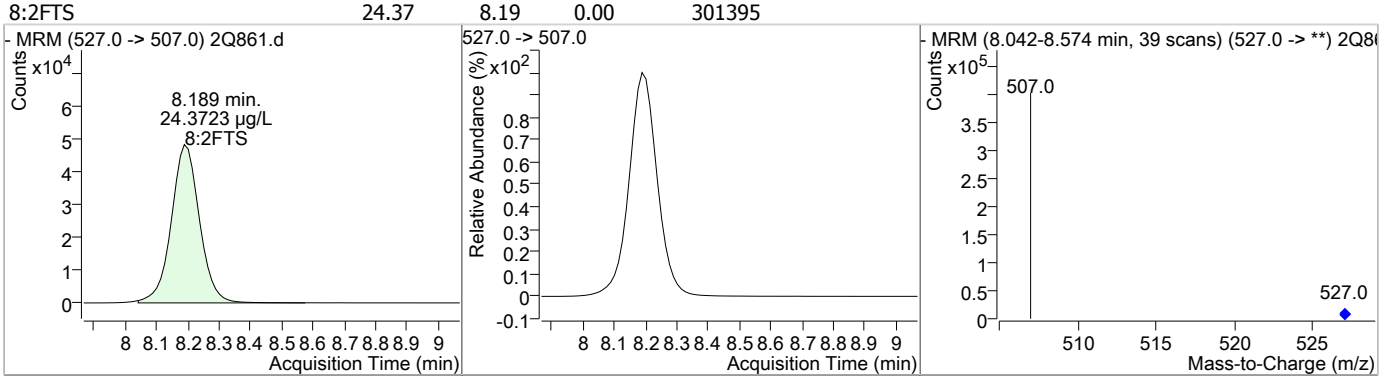
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	21.05	8.04	0.00	101598				



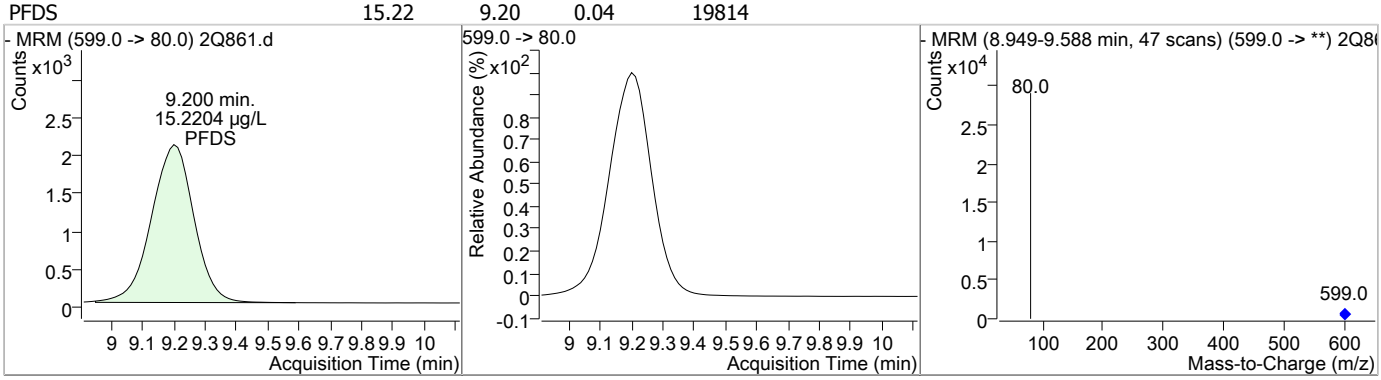
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.01	8.05	0.00	64829				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	24.37	8.19	0.00	301395				



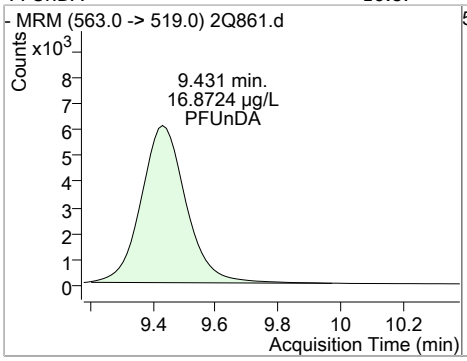
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	15.22	9.20	0.04	19814				

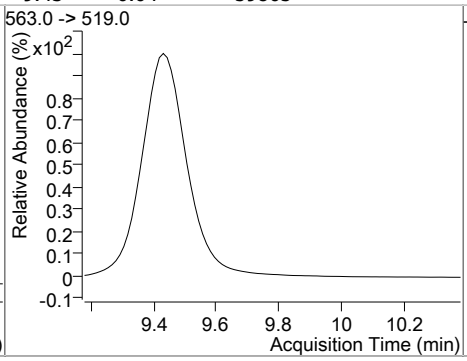


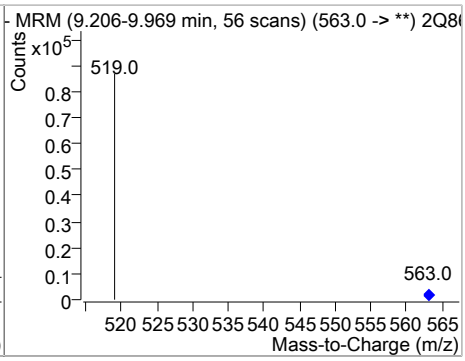
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

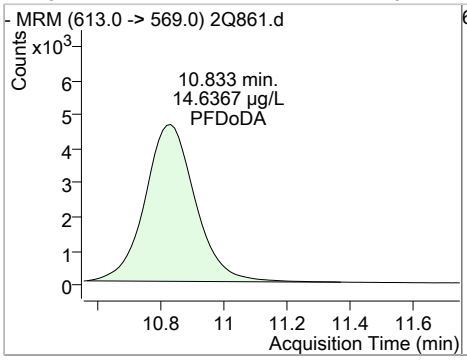
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	16.87	9.43	0.04	59865				

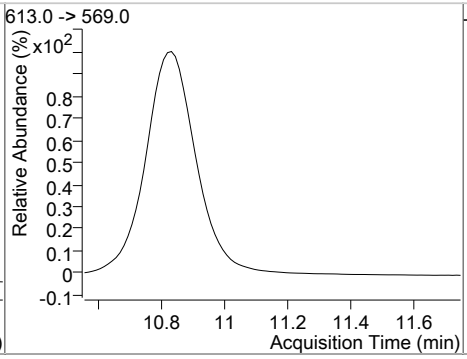


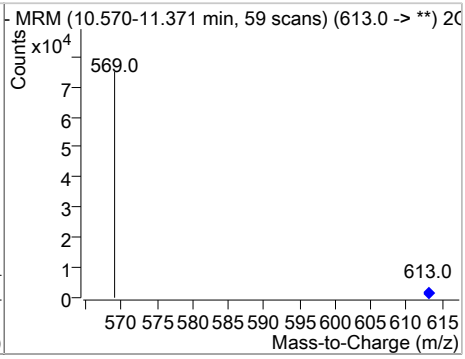




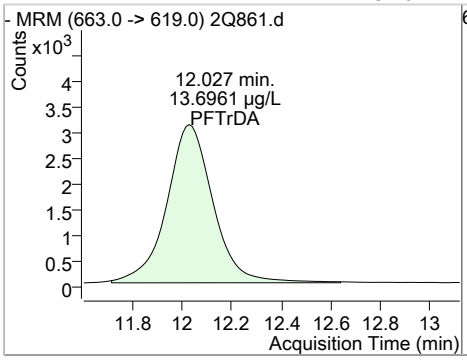
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	14.64	10.83	0.04	51079				

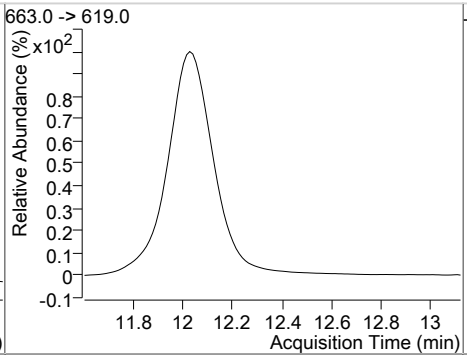


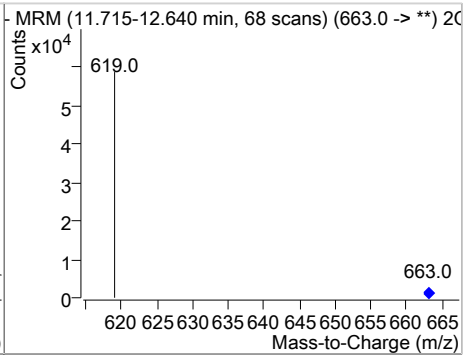




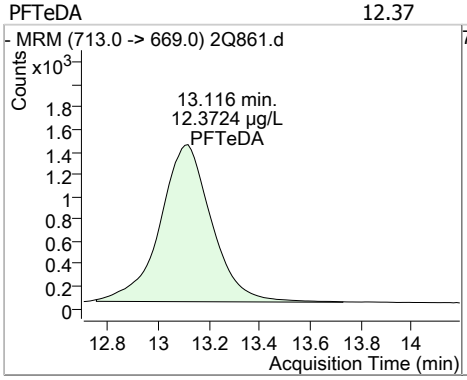
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	13.70	12.03	0.04	40233				

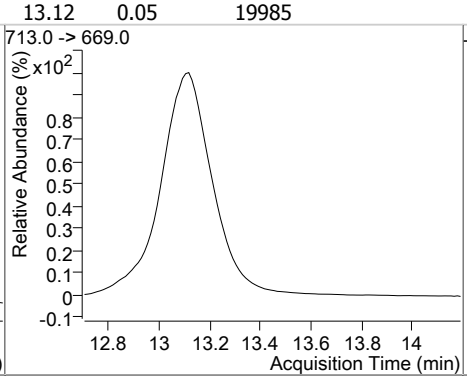


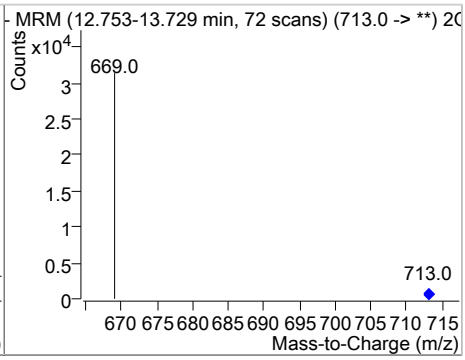




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	12.37	13.12	0.05	19985				







Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

Data File	:	2Q864.d
Operator	:	NANCYF
Acq. Method	:	dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time	:	4/28/2017 4:03:00 PM
Sample Name	:	OP64797-MS
Vial	:	Vial 10
DA Method File	:	PFCLISTDW_0420_S2Q18.m
Batch Name	:	2SQ25.batch.bin
Last Calib Update	:	4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	6.671	429.0 -> 409.0	158079	20.00	µg/L		0.000
13C2-PFDoDA	10.851	615.0 -> 570.0	83608	20.00	µg/L		0.063
13C2-PFOA	6.650	415.0 -> 370.0	69338	20.00	µg/L		-0.013
13C3-PFPeA	4.209	266.0 -> 222.0	64857	20.00	µg/L		-0.013
13C4-PFOS	7.239	503.0 -> 80.0	50027	20.00	µg/L		0.000
d3-MeFOSAA	7.450	573.0 -> 419.0	29456	20.00	µg/L		0.000
System Monitoring Compounds							
13C2-PFDA	8.044	515.0 -> 470.0	75207	15.50	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 77.5%			
13C2-PFHxA	5.197	315.0 -> 270.0	64393	17.58	µg/L		-0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 87.9%			
d5-EtFOSAA	7.572	589.0 -> 419.0	9778	13.88	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 69.4%			
Target Compounds							**QValue**
4:2FTS	5.119	327.0 -> 307.0	97447	24.40	µg/L		100
6:2FTS	6.661	427.0 -> 407.0	176158	23.05	µg/L		100
8:2FTS	8.189	527.0 -> 507.0	282449	22.32	µg/L		100
EtFOSAA	7.573	584.0 -> 419.0	7007	10.70	µg/L		100
FOSA	-	498.0 -> 78.0	-	N.D.			
MeFOSAA	7.451	570.0 -> 419.0	10750	13.45	µg/L		100
PFBA	2.915	213.0 -> 169.0	27700	15.19	µg/L		100
PFBS	4.328	299.0 -> 80.0	41655	20.87	µg/L		100
PFDA	8.046	513.0 -> 469.0	54832	15.99	µg/L		100
PFDoDA	10.858	613.0 -> 569.0	52942	14.67	µg/L		100
PFDS	9.212	599.0 -> 80.0	22158	16.76	µg/L		100
PFHpA	5.973	363.0 -> 319.0	87477	18.20	µg/L	#	93
PFHpS	6.620	449.0 -> 80.0	45864	21.65	µg/L		100
PFHxA	5.187	313.0 -> 269.0	31650	19.50	µg/L	#	86
PFHxS	5.968	399.0 -> 80.0	49346	23.62	µg/L		93
PFNA	7.294	463.0 -> 419.0	52752	17.03	µg/L		99
PFNS	7.929	549.0 -> 99.0	22407	17.74	µg/L		100
PFOA	6.652	413.0 -> 369.0	53146	18.44	µg/L		100
PFOS	7.226	499.0 -> 80.0	54333	18.82	µg/L		98
PFPeA	4.200	263.0 -> 219.0	92732	18.84	µg/L		100
PFPeS	5.230	349.0 -> 99.0	13707	22.20	µg/L		100
PFTeDA	13.128	713.0 -> 669.0	23620	14.08	µg/L		100
PFTrDA	12.052	663.0 -> 619.0	46147	15.13	µg/L		100
PFUnDA	9.444	563.0 -> 519.0	50662	13.81	µg/L		100

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

Perfluorinated Compounds by LC/MS/MS

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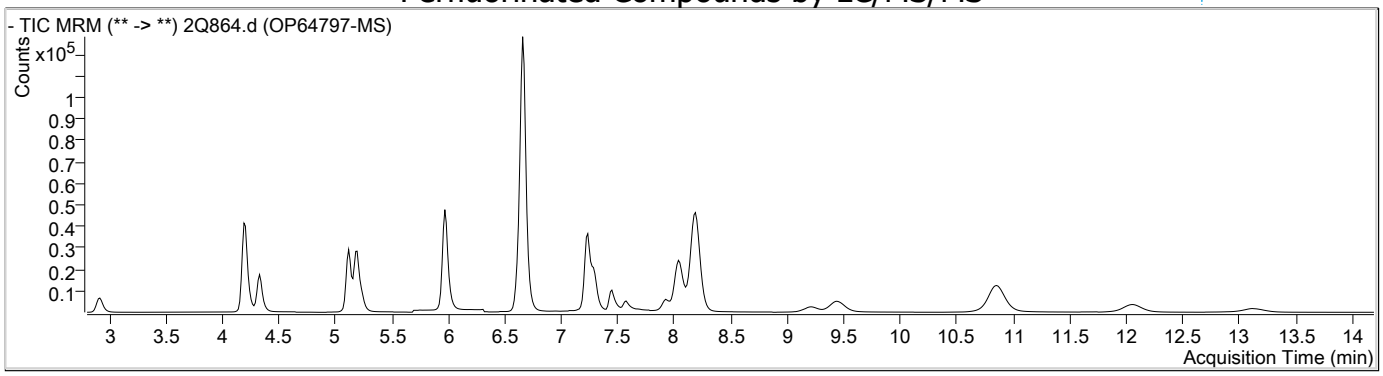
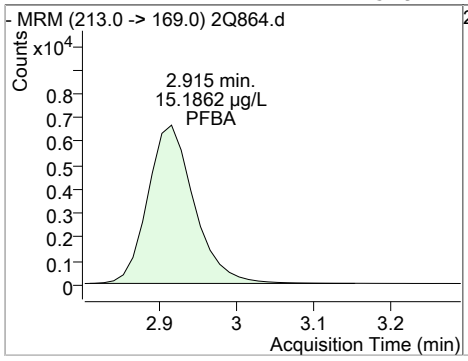
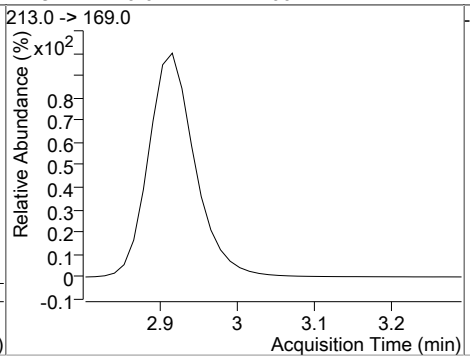
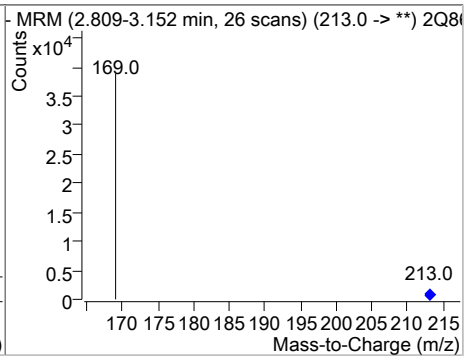


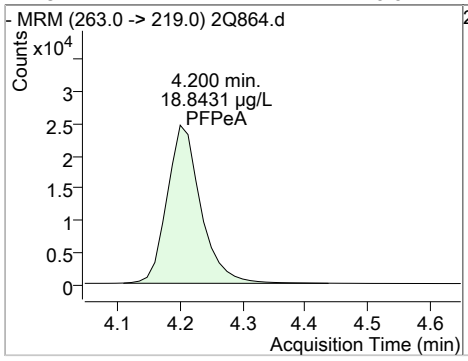
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	15.19	2.91	-0.02	27700				

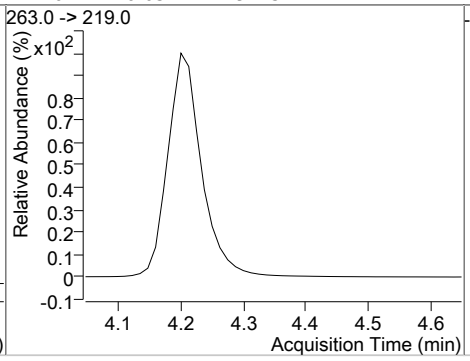


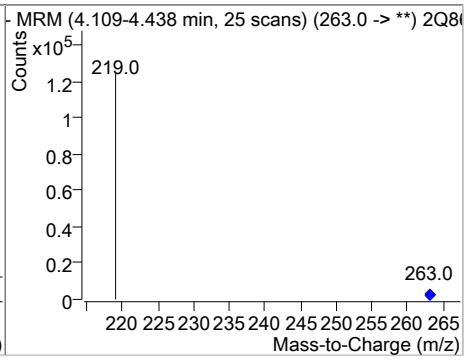




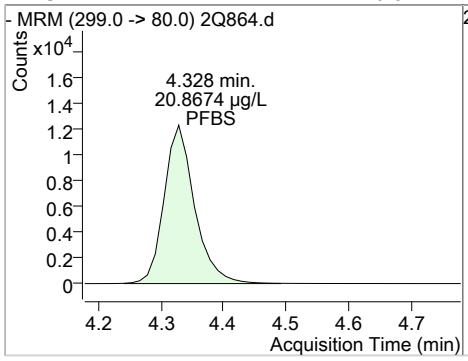
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	18.84	4.20	-0.03	92732				

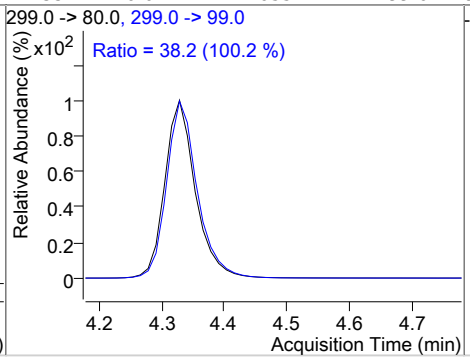


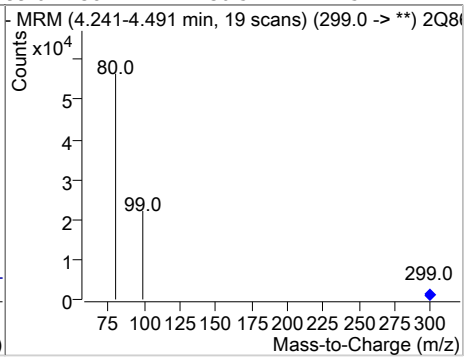




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	20.87	4.33	-0.01	41655	299.0 -> 99.0	38.2	30.5	45.7







Perfluorinated Compounds by LC/MS/MS

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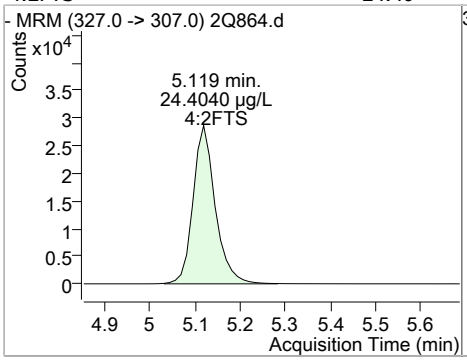
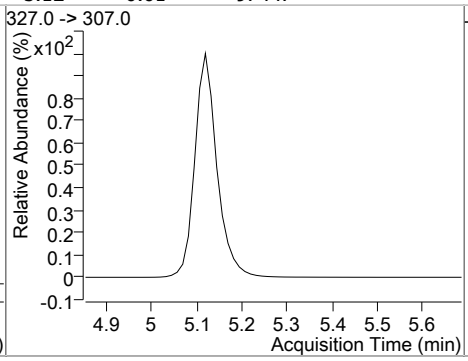
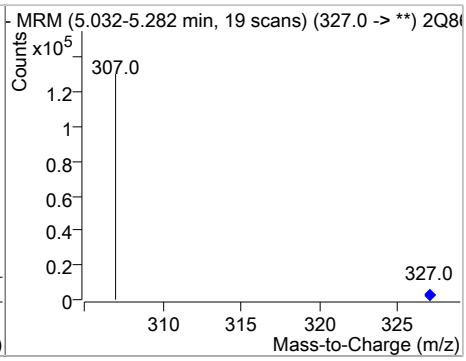
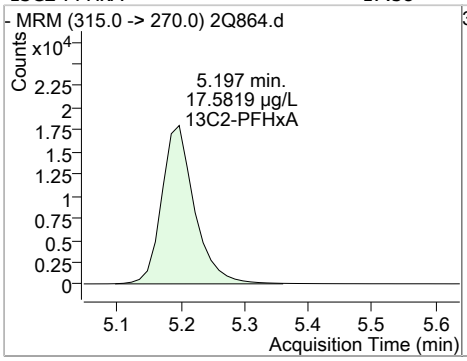
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	24.40	5.12	-0.01	97447				

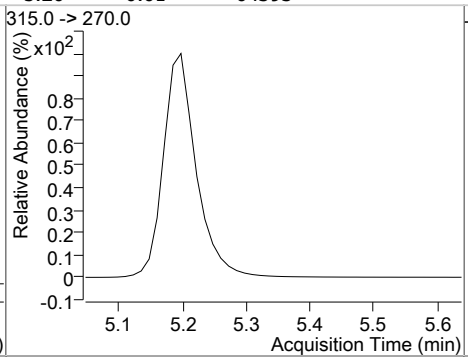


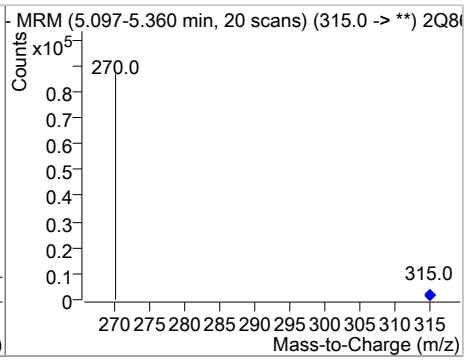




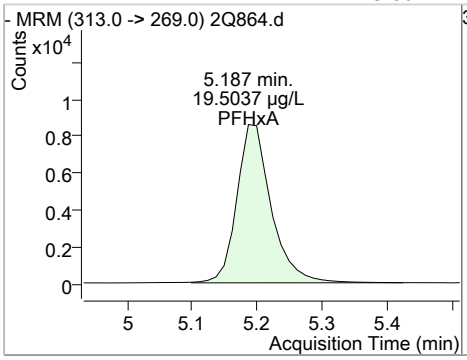
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	17.58	5.20	-0.01	64393				

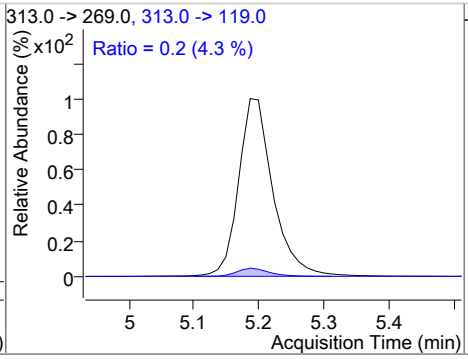


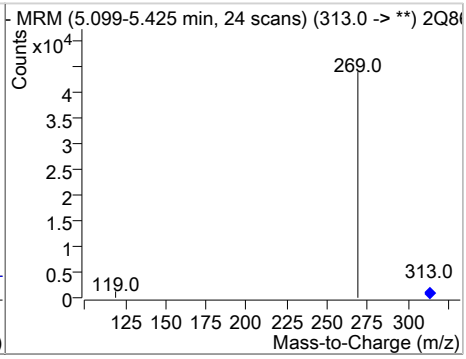




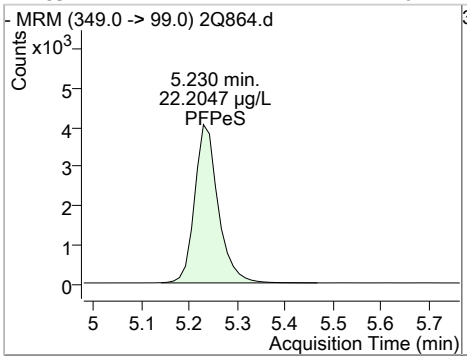
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.50	5.19	-0.03	31650	313.0 -> 119.0	0.2	4.0	6.0

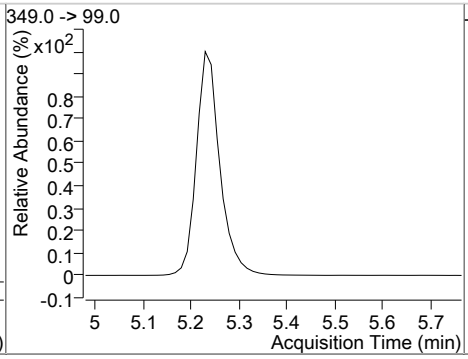


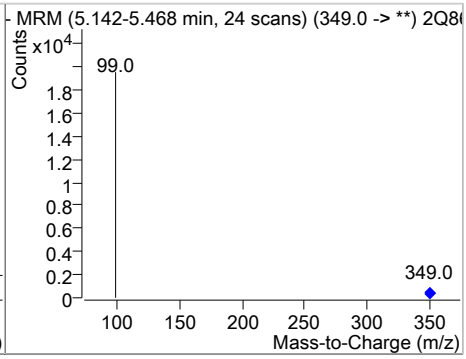




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	22.20	5.23	-0.03	13707				







Perfluorinated Compounds by LC/MS/MS

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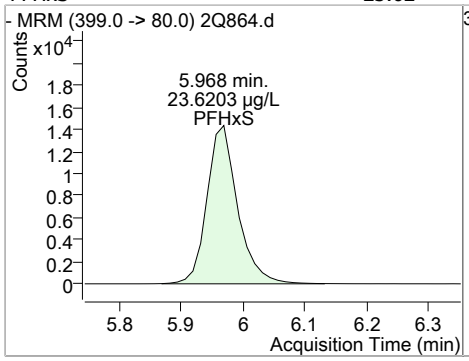
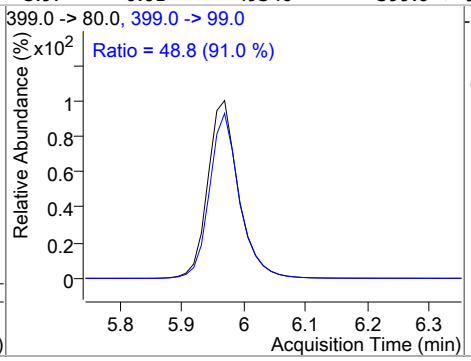
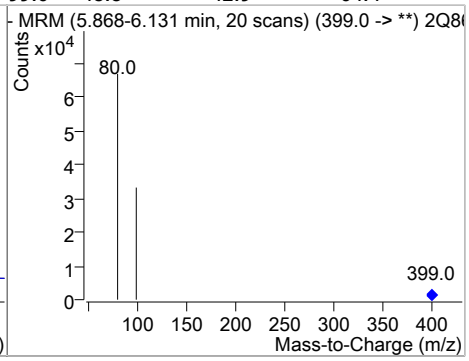
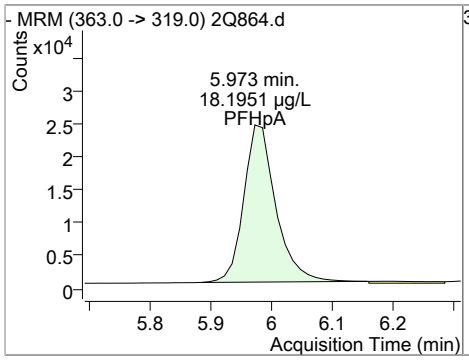
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	23.62	5.97	-0.01	49346	399.0 -> 99.0	48.8	42.9	64.4

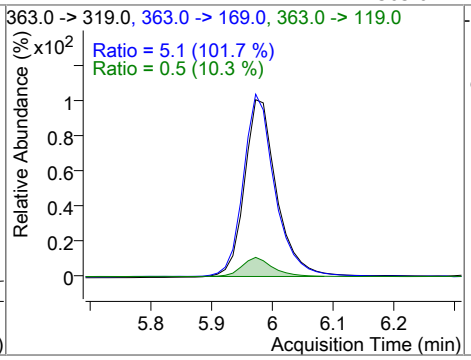


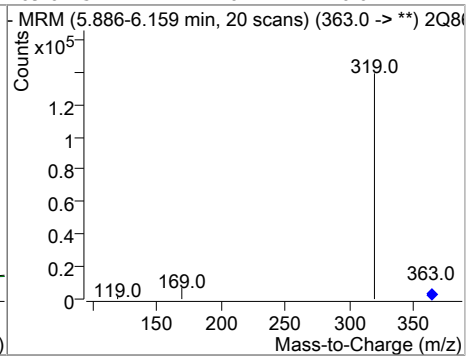




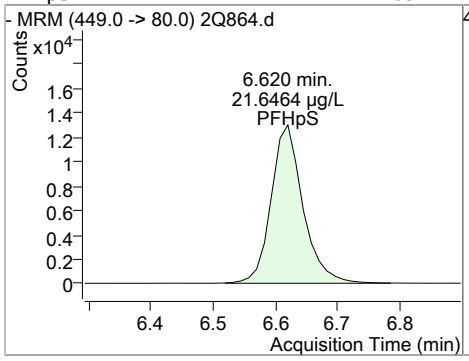
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	18.20	5.97	-0.01	87477	363.0 -> 119.0	0.5	4.0	6.0
					363.0 -> 169.0	5.1	4.0	6.0

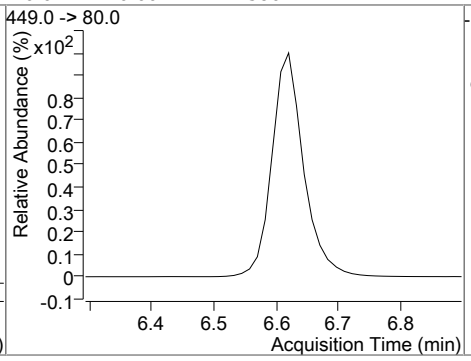


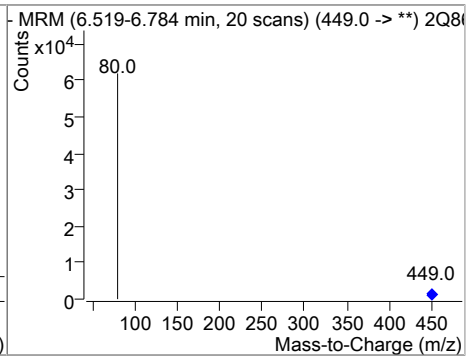




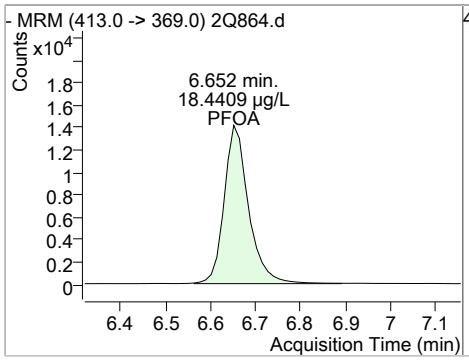
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	21.65	6.62	0.00	45864				

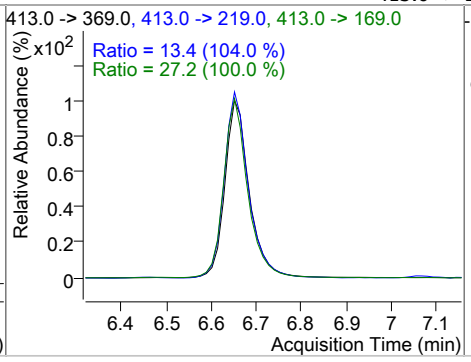


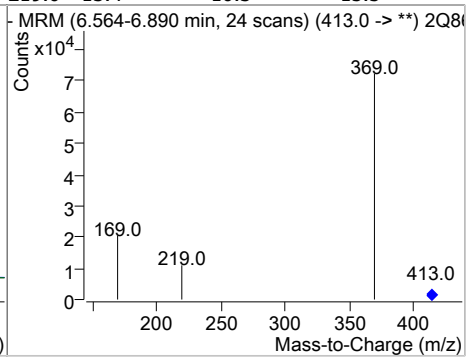




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	18.44	6.65	-0.01	53146	413.0 -> 169.0	27.2	21.8	32.6
					413.0 -> 219.0	13.4	10.3	15.5



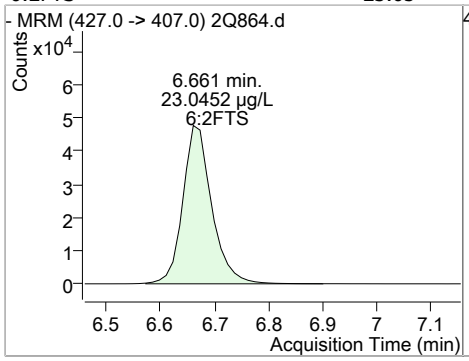


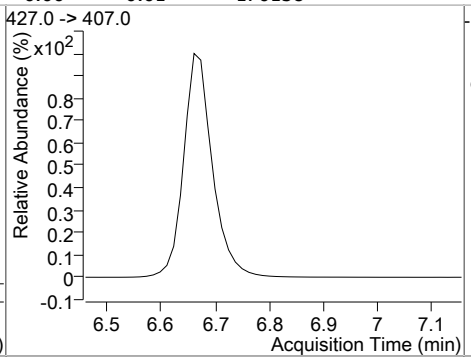


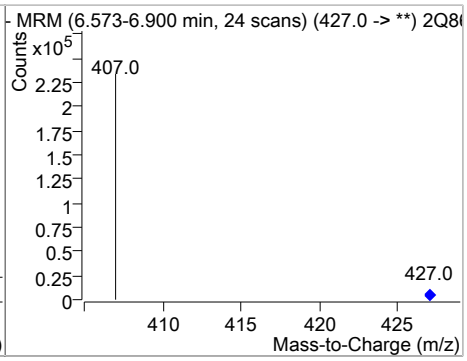
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

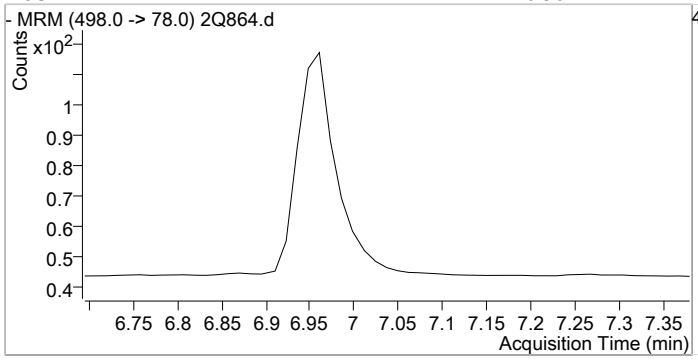
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	23.05	6.66	-0.01	176158				

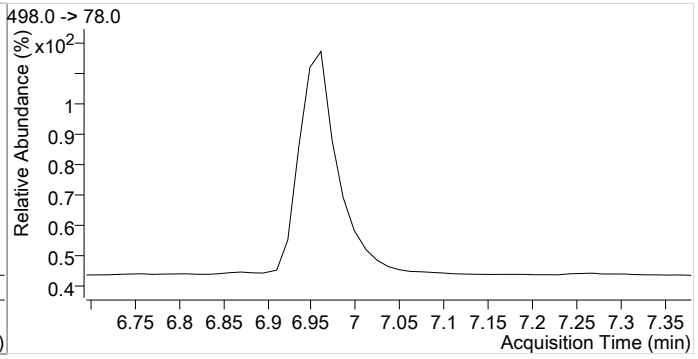




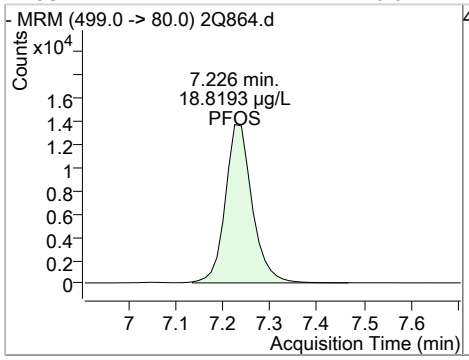


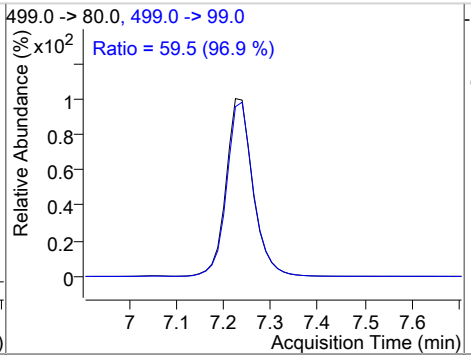
Compound	Conc.	Exp RT	QIon	Exp Ratio
FOSA	N.D.	6.96		

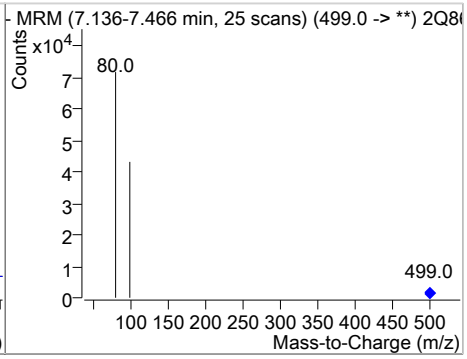




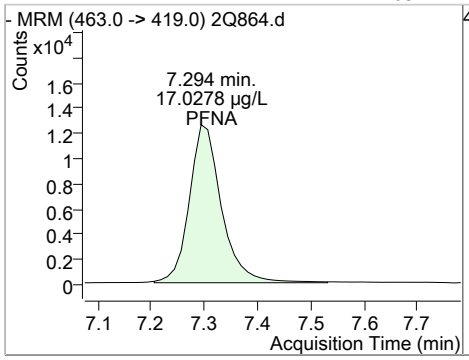
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	18.82	7.23	-0.01	54333	499.0 -> 99.0	59.5	49.1	73.6

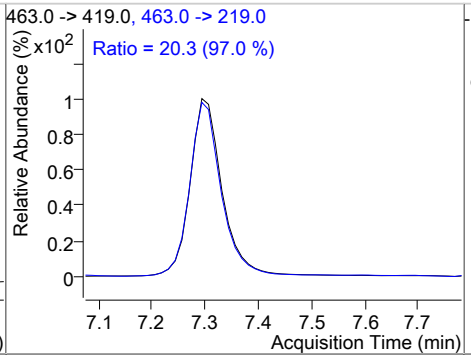


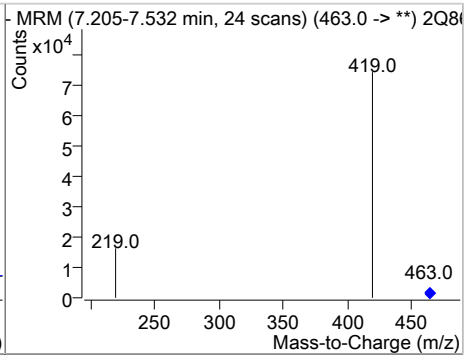




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	17.03	7.29	-0.01	52752	463.0 -> 219.0	20.3	16.7	25.1



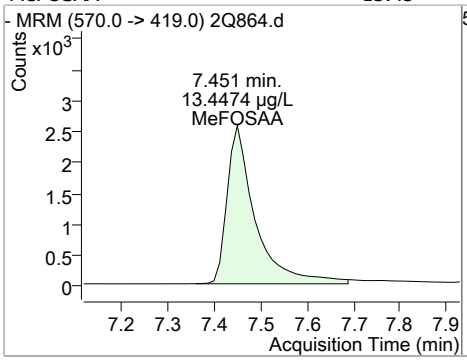


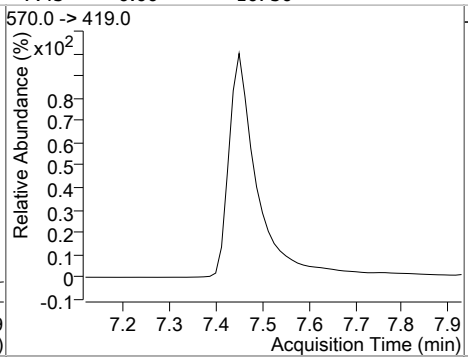


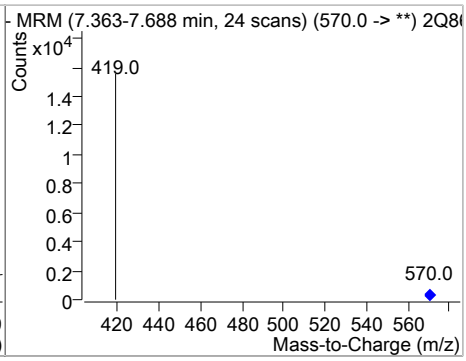
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

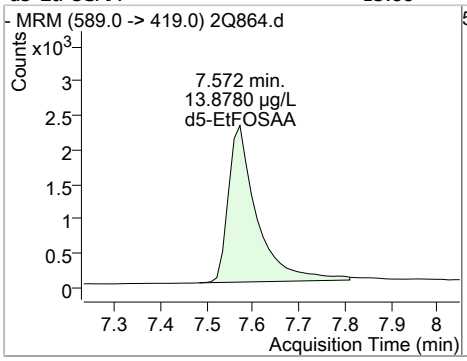
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	13.45	7.45	0.00	10750				

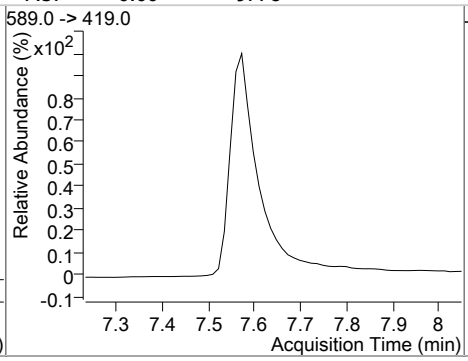


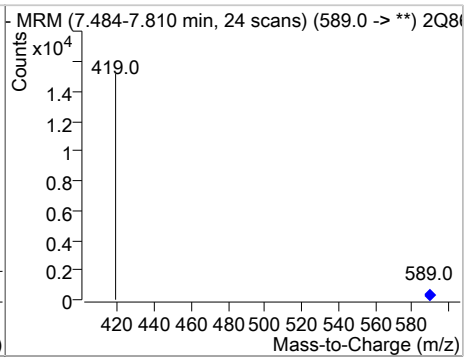




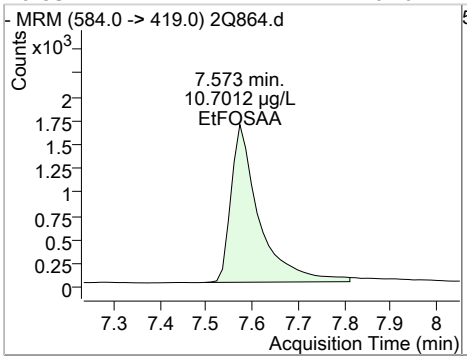
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	13.88	7.57	0.00	9778				

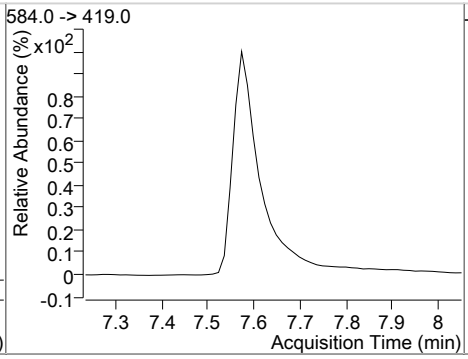


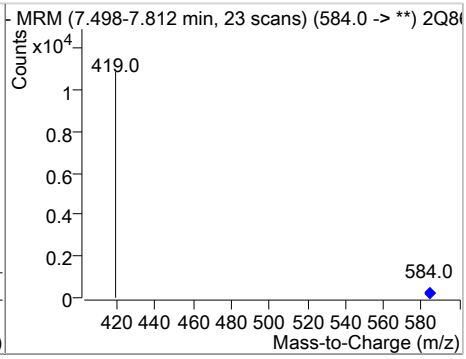




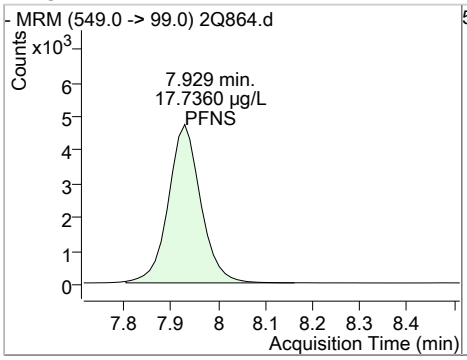
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	10.70	7.57	0.00	7007				

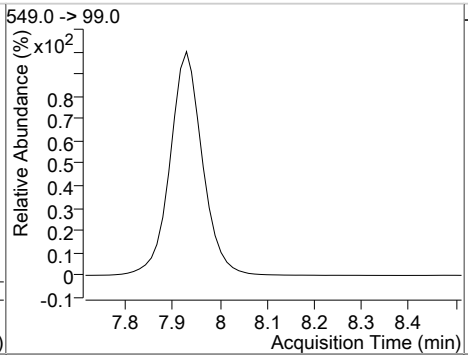


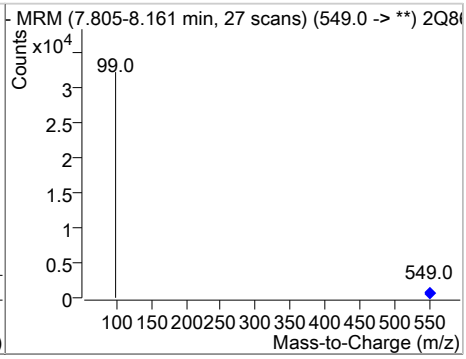




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	17.74	7.93	0.00	22407				



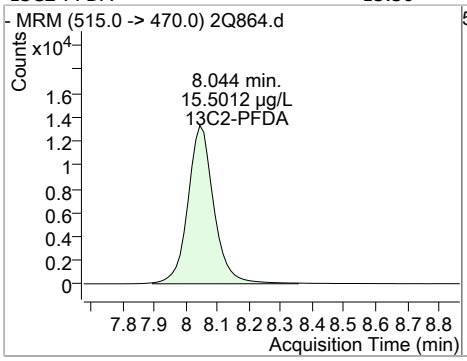


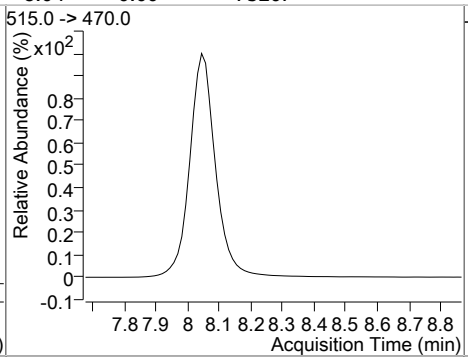


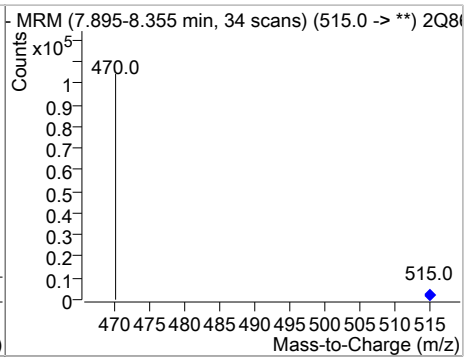
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

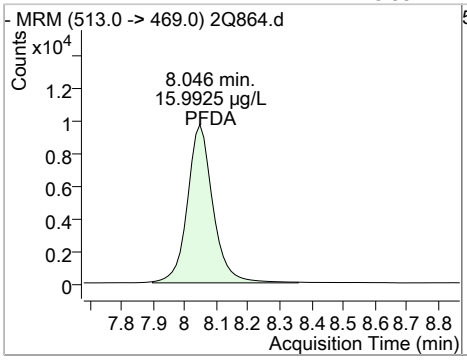
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	15.50	8.04	0.00	75207				

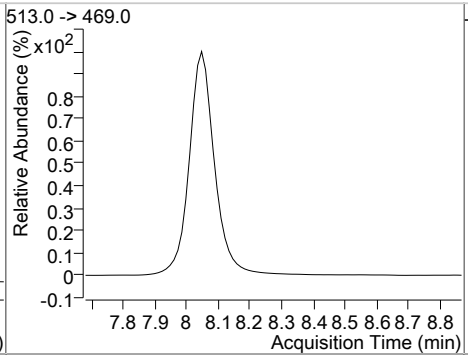


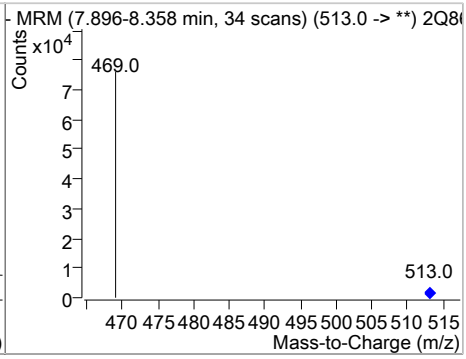




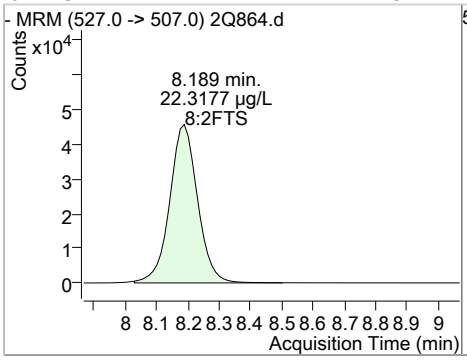
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	15.99	8.05	0.00	54832				

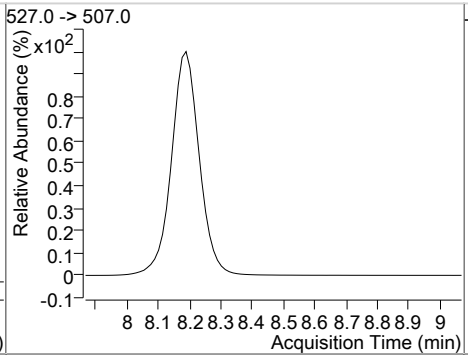


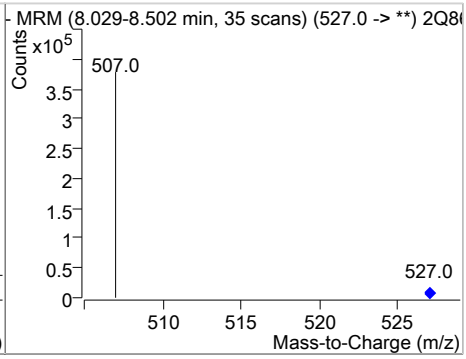




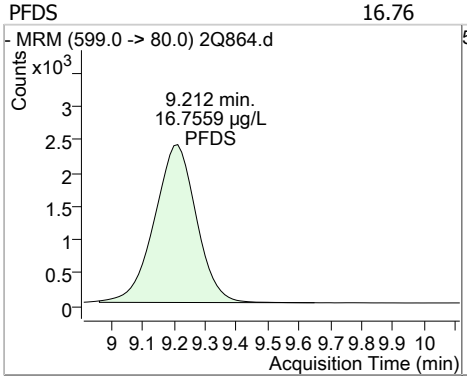
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	22.32	8.19	0.00	282449				

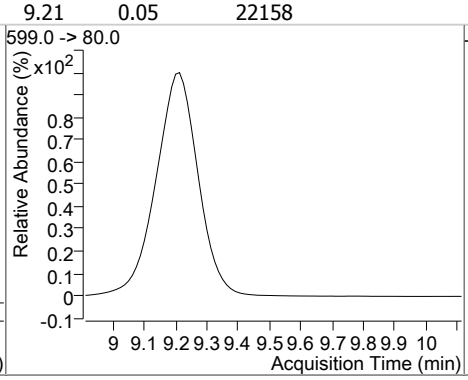


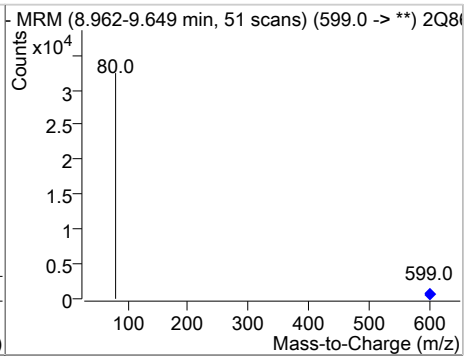




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	16.76	9.21	0.05	22158				



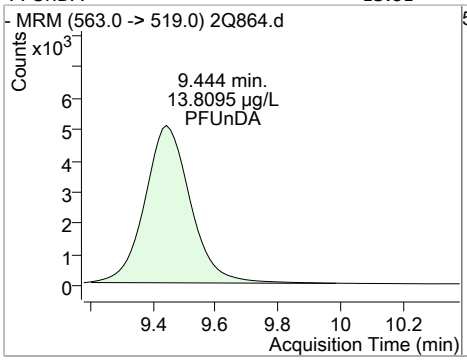


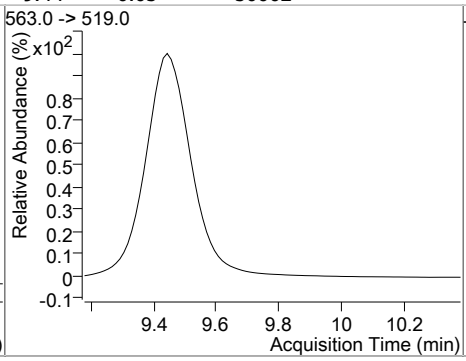


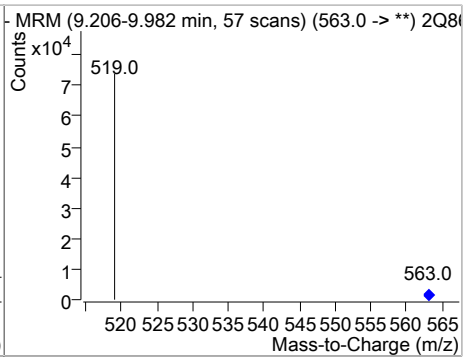
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

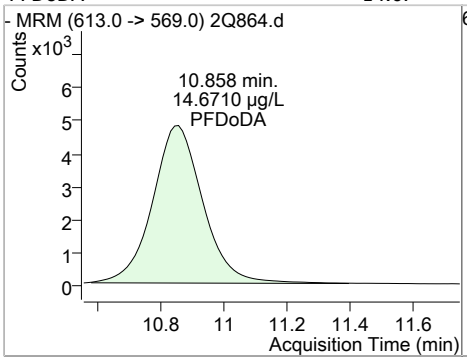
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	13.81	9.44	0.05	50662				

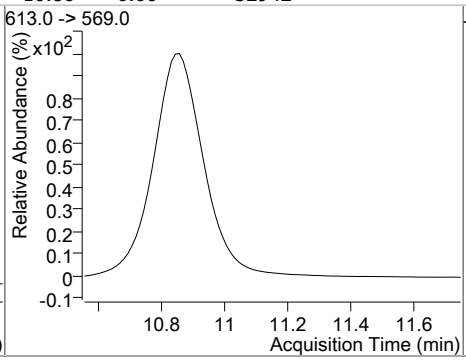


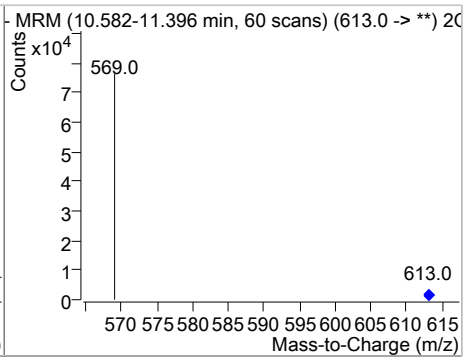




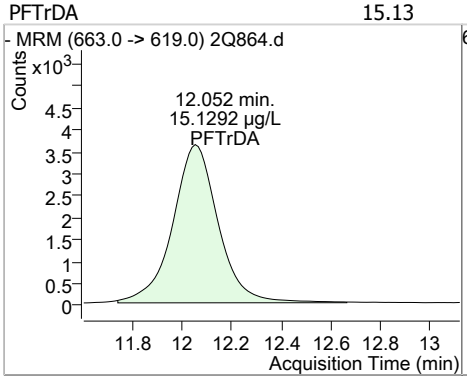
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	14.67	10.86	0.06	52942				

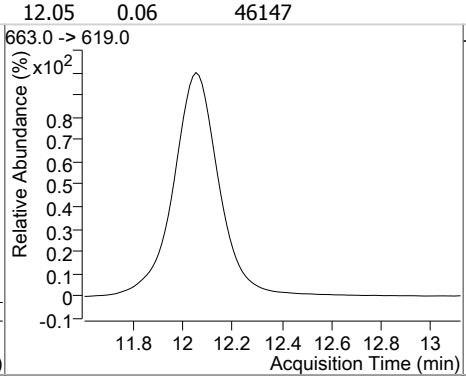


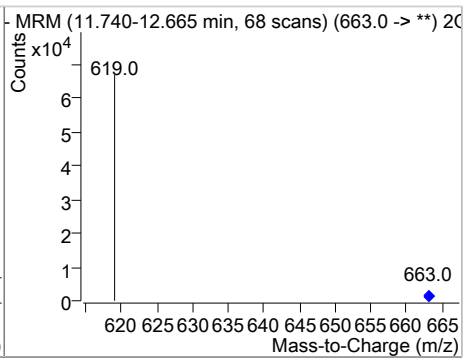




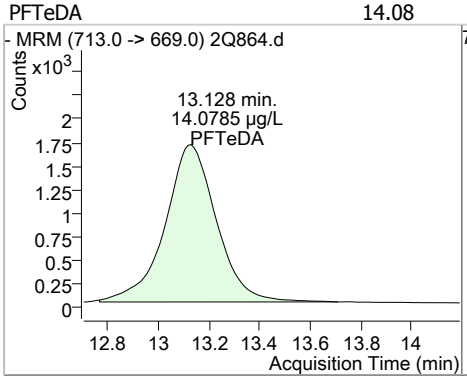
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	15.13	12.05	0.06	46147				

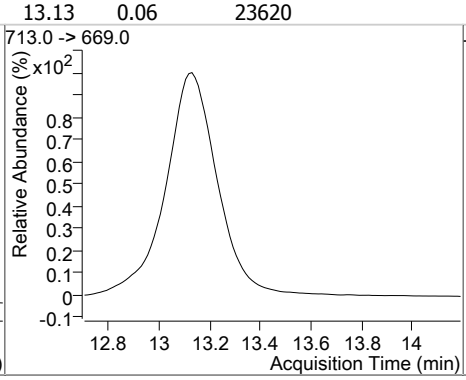


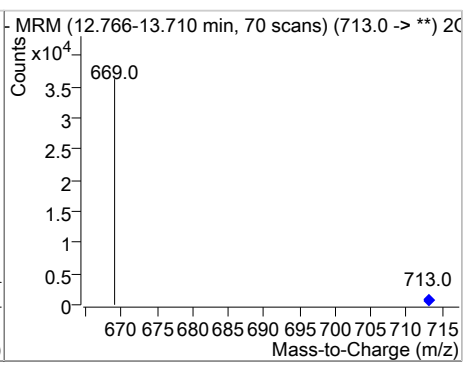




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	14.08	13.13	0.06	23620				







Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

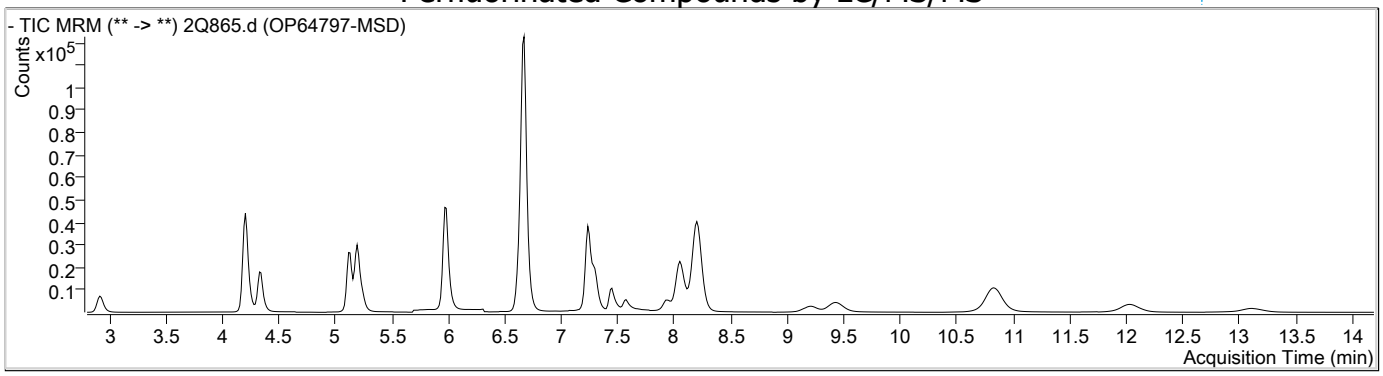
Data File	:	2Q865.d
Operator	:	NANCYF
Acq. Method	:	dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time	:	4/28/2017 4:37:06 PM
Sample Name	:	OP64797-MSD
Vial	:	Vial 11
DA Method File	:	PFCLISTDW_0420_S2Q18.m
Batch Name	:	2SQ25.batch.bin
Last Calib Update	:	4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	6.671	429.0 -> 409.0	160522	20.00	µg/L		0.000
13C2-PFDoDA	10.826	615.0 -> 570.0	69896	20.00	µg/L		0.038
13C2-PFOA	6.662	415.0 -> 370.0	66713	20.00	µg/L		0.000
13C3-PFPeA	4.209	266.0 -> 222.0	64909	20.00	µg/L		-0.013
13C4-PFOS	7.239	503.0 -> 80.0	51441	20.00	µg/L		0.000
d3-MeFOSAA	7.450	573.0 -> 419.0	31241	20.00	µg/L		0.000
System Monitoring Compounds							
13C2-PFDA	8.057	515.0 -> 470.0	71957	15.41	µg/L		0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 77.1%			
13C2-PFHxA	5.197	315.0 -> 270.0	66594	18.90	µg/L		-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 94.5%			
d5-EtFOSAA	7.572	589.0 -> 419.0	10703	14.30	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 71.5%			
Target Compounds							**QValue**
4:2FTS	5.119	327.0 -> 307.0	92786	22.88	µg/L		100
6:2FTS	6.673	427.0 -> 407.0	167529	21.58	µg/L		100
8:2FTS	8.202	527.0 -> 507.0	248294	19.32	µg/L		100
EtFOSAA	7.573	584.0 -> 419.0	7919	11.38	µg/L		100
FOSA	-	498.0 -> 78.0	-	N.D.			
MeFOSAA	7.451	570.0 -> 419.0	11241	13.27	µg/L		100
PFBA	2.915	213.0 -> 169.0	29876	17.02	µg/L		100
PFBS	4.328	299.0 -> 80.0	44296	21.58	µg/L		100
PFDA	8.059	513.0 -> 469.0	50709	15.37	µg/L		100
PFDoDA	10.833	613.0 -> 569.0	50132	16.55	µg/L		100
PFDS	9.200	599.0 -> 80.0	23895	17.54	µg/L		100
PFHpA	5.986	363.0 -> 319.0	87128	18.82	µg/L	#	93
PFHpS	6.620	449.0 -> 80.0	42808	19.65	µg/L		100
PFHxA	5.200	313.0 -> 269.0	31675	20.25	µg/L	#	86
PFHxS	5.968	399.0 -> 80.0	50950	23.72	µg/L		94
PFNA	7.306	463.0 -> 419.0	50956	17.10	µg/L		97
PFNS	7.940	549.0 -> 99.0	21456	16.52	µg/L		100
PFOA	6.664	413.0 -> 369.0	54156	19.53	µg/L		99
PFOS	7.240	499.0 -> 80.0	55897	18.83	µg/L		98
PFPeA	4.213	263.0 -> 219.0	97902	19.88	µg/L		100
PFPeS	5.242	349.0 -> 99.0	13242	21.43	µg/L		100
PFTeDA	13.116	713.0 -> 669.0	23933	16.94	µg/L		100
PFTrDA	12.027	663.0 -> 619.0	45405	17.67	µg/L		100
PFUnDA	9.431	563.0 -> 519.0	43397	14.15	µg/L		100

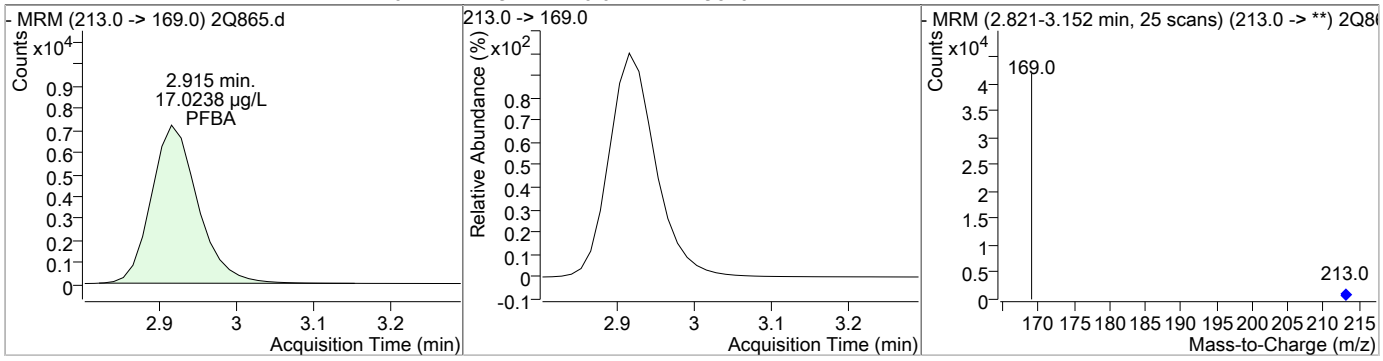
 # = Qualifier out of range, m = manually integrated, + = Area summed

Perfluorinated Compounds by LC/MS/MS

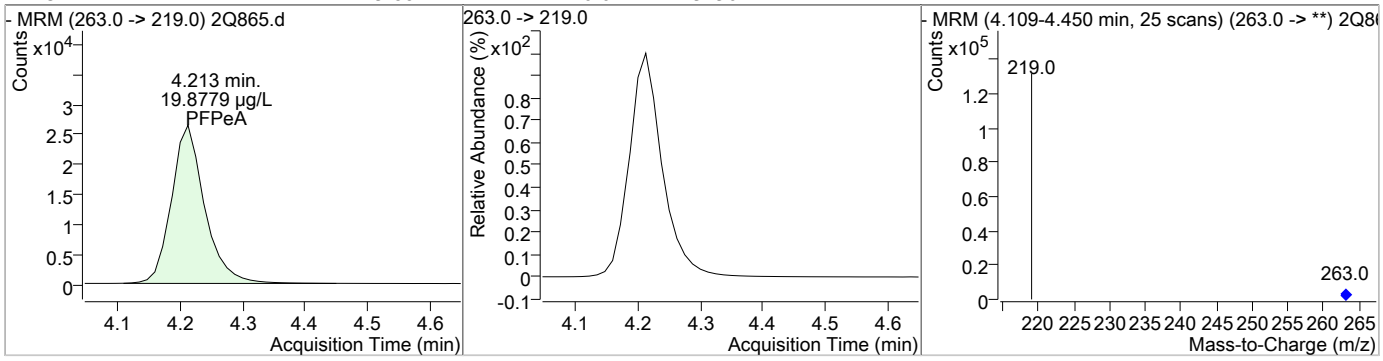
Agilent Technologies



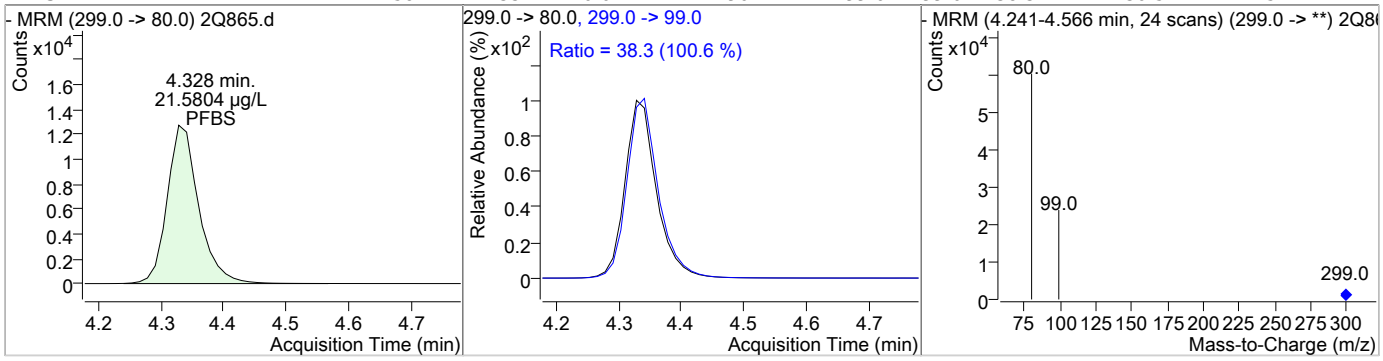
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	17.02	2.91	-0.02	29876				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	19.88	4.21	-0.01	97902				



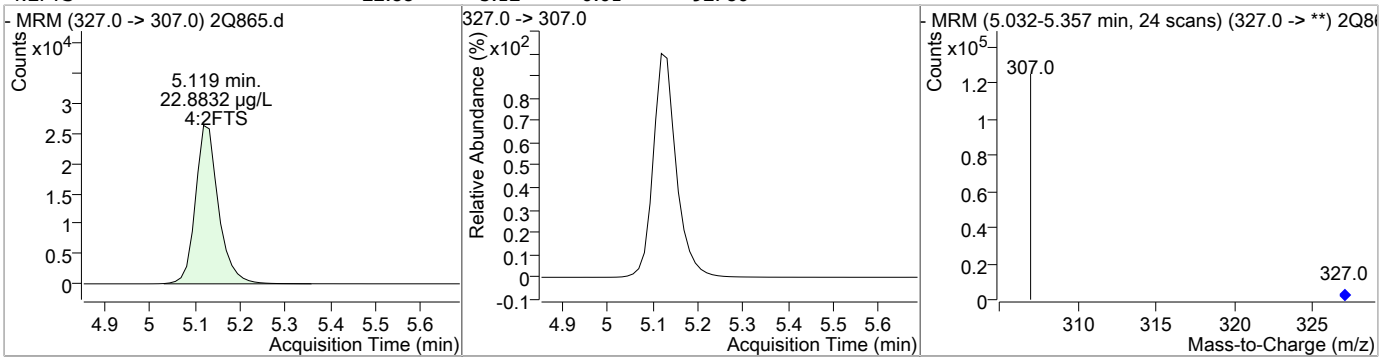
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	21.58	4.33	-0.01	44296	299.0 -> 99.0	38.3	30.5	45.7



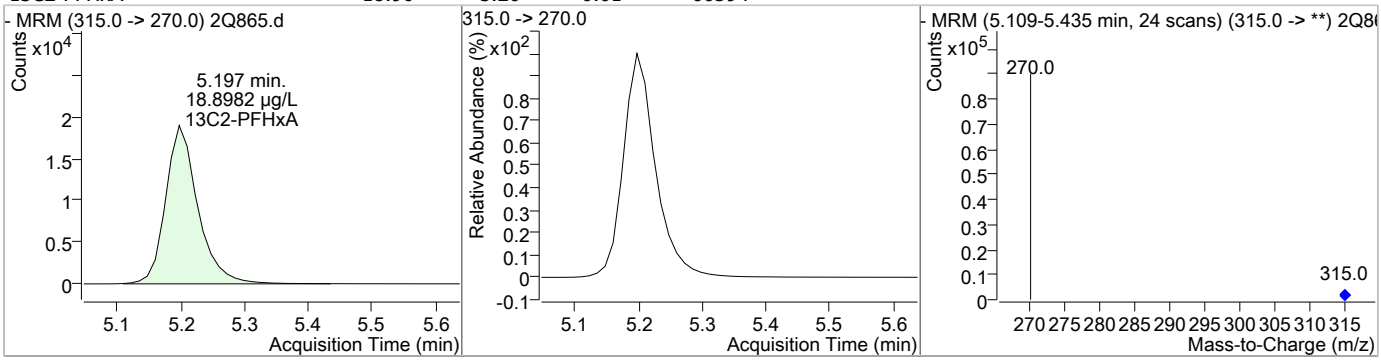
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

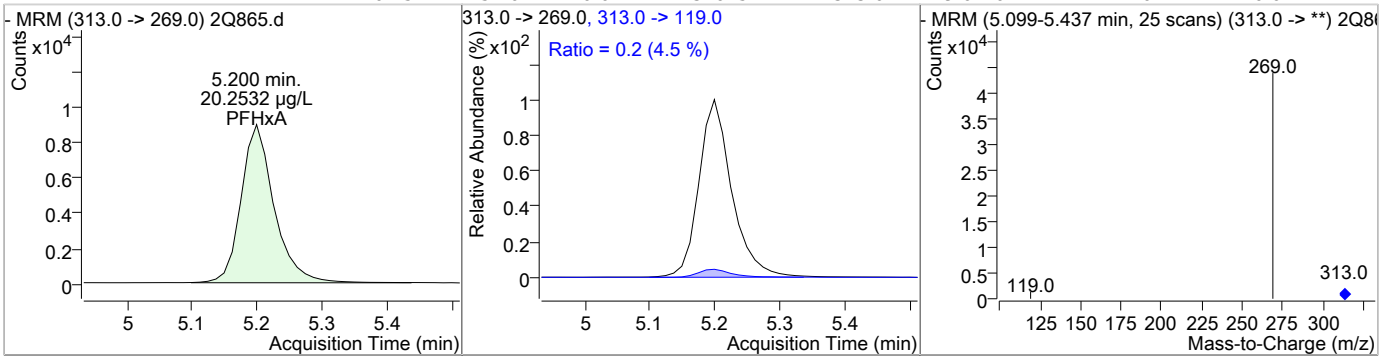
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	22.88	5.12	-0.01	92786				



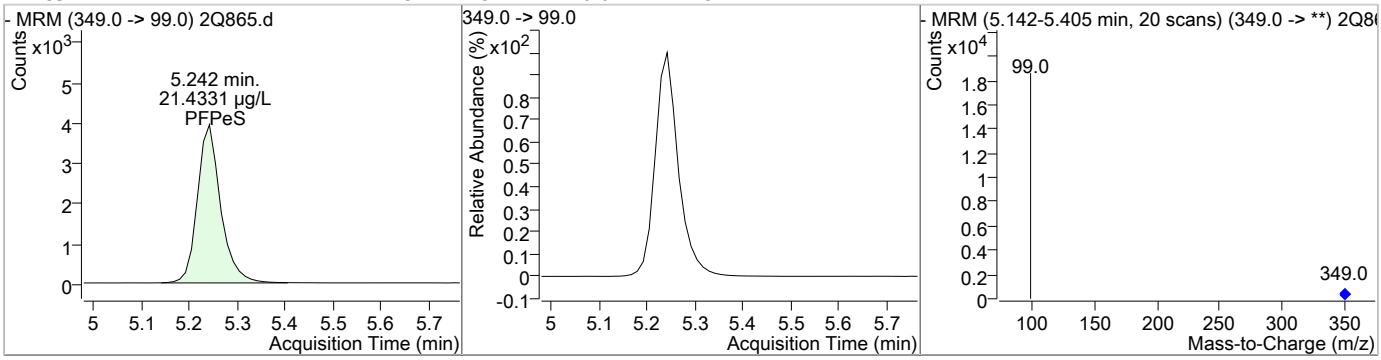
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	18.90	5.20	-0.01	66594				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	20.25	5.20	-0.01	31675	313.0 -> 119.0	0.2	4.0	6.0



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	21.43	5.24	-0.01	13242				



Perfluorinated Compounds by LC/MS/MS

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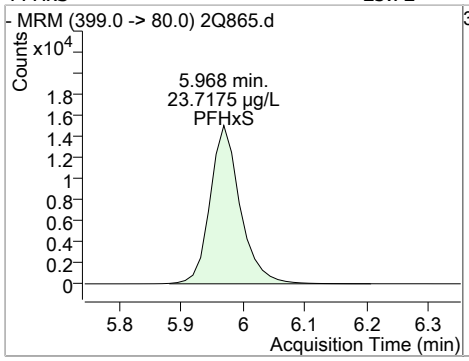
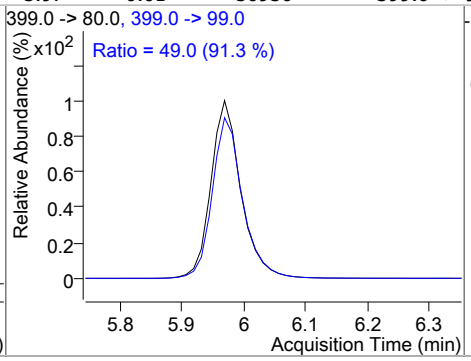
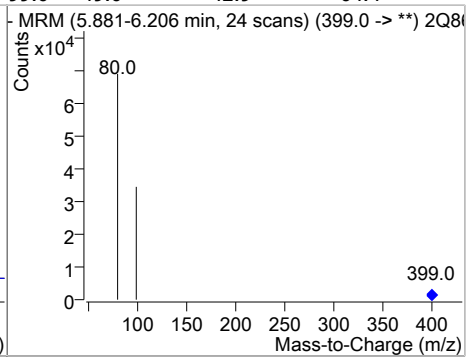
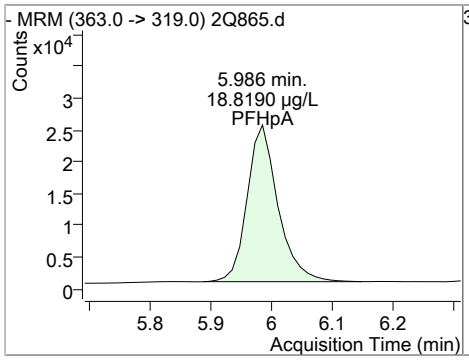
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	23.72	5.97	-0.01	50950	399.0 -> 99.0	49.0	42.9	64.4

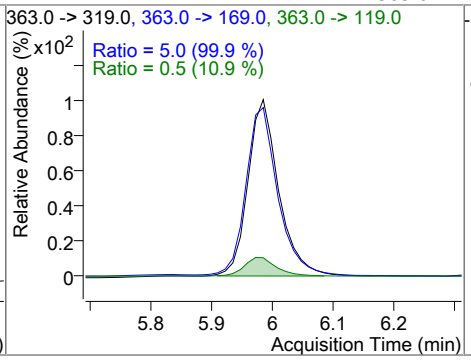


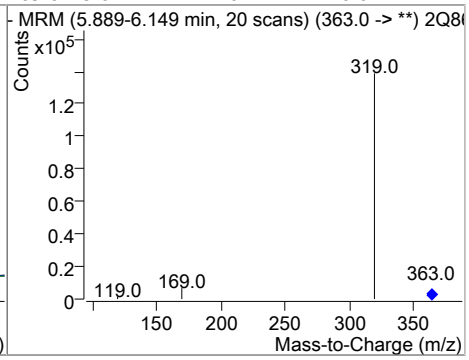




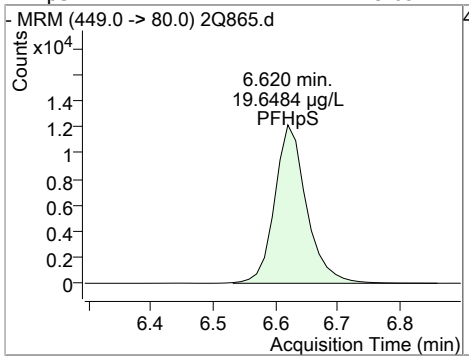
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	18.82	5.99	0.00	87128	363.0 -> 119.0	0.5	4.0	6.0
					363.0 -> 169.0	5.0	4.0	6.0

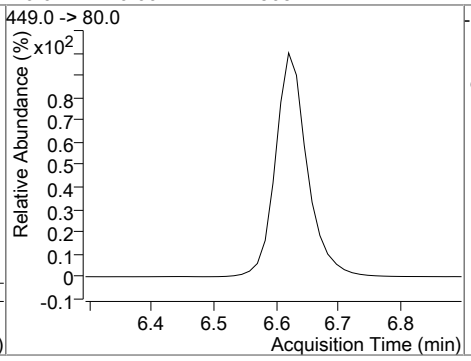


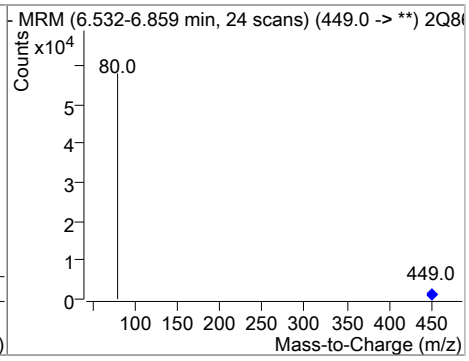




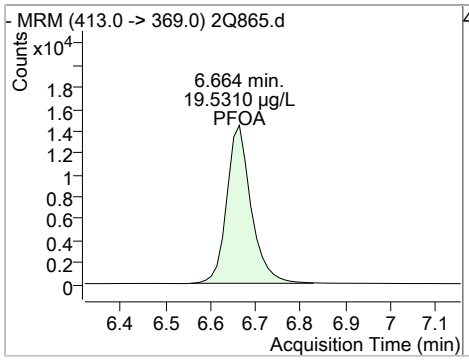
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	19.65	6.62	0.00	42808				

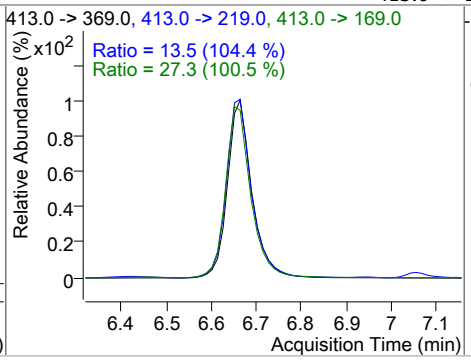


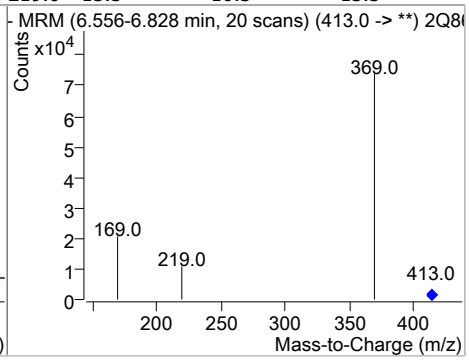




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	19.53	6.66	0.00	54156	413.0 -> 169.0	27.3	21.8	32.6
					413.0 -> 219.0	13.5	10.3	15.5







Perfluorinated Compounds by LC/MS/MS

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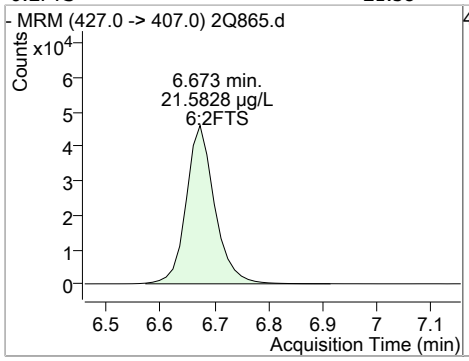
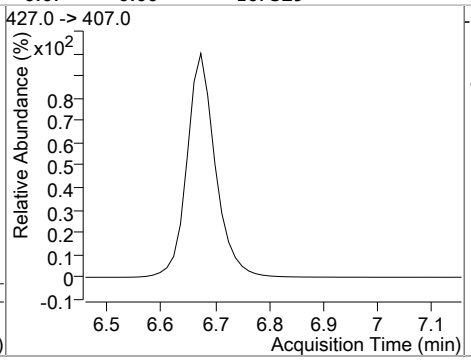
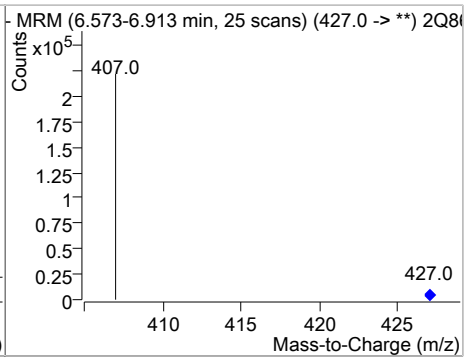
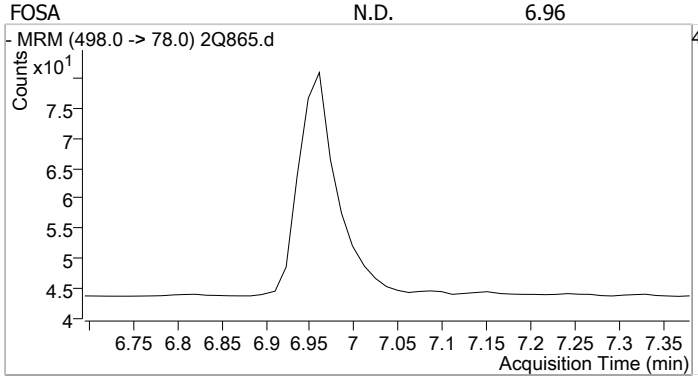
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	21.58	6.67	0.00	167529				

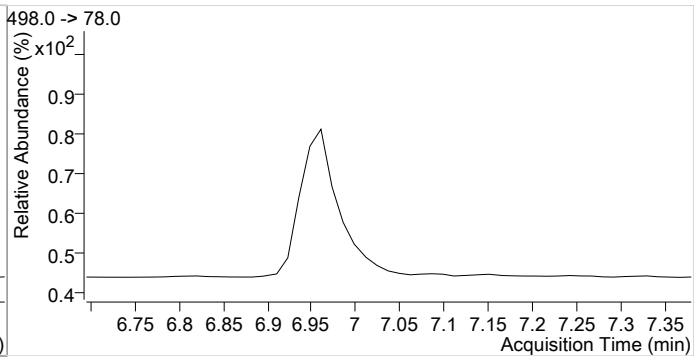




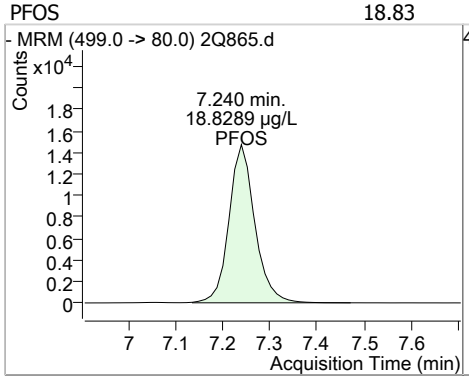


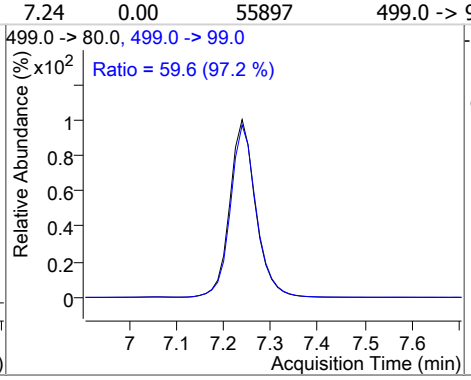
Compound	Conc.	Exp RT	QIon	Exp Ratio
FOSA	N.D.	6.96		

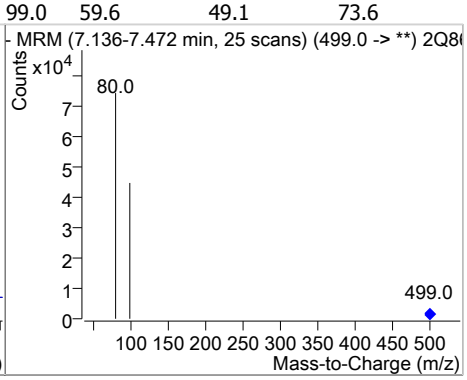




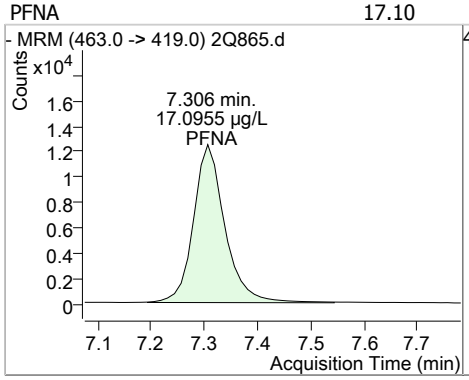
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	18.83	7.24	0.00	55897	499.0 -> 99.0	59.6	49.1	73.6

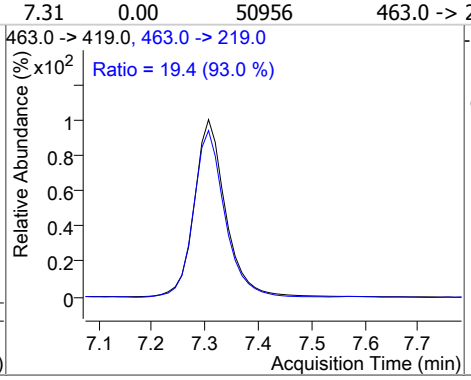


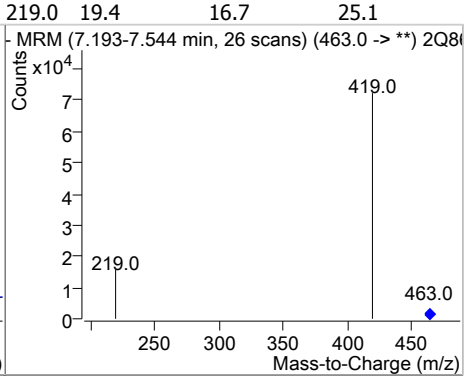




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	17.10	7.31	0.00	50956	463.0 -> 219.0	19.4	16.7	25.1







Perfluorinated Compounds by LC/MS/MS

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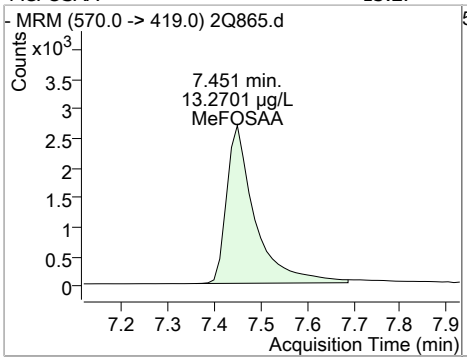
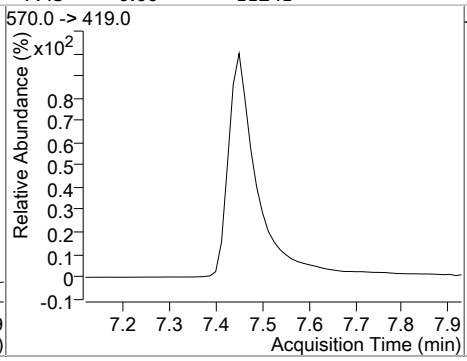
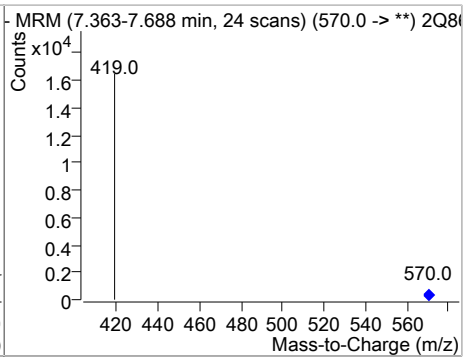
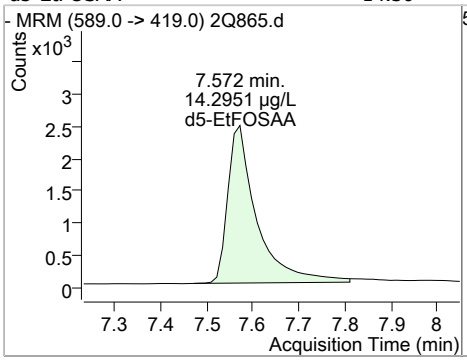
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	13.27	7.45	0.00	11241				

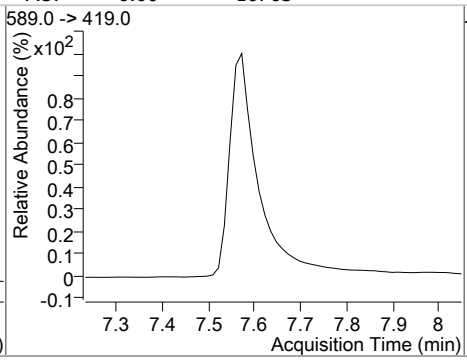


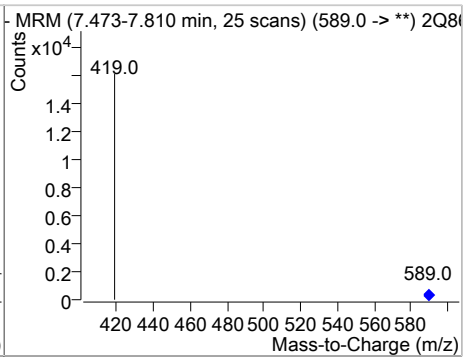




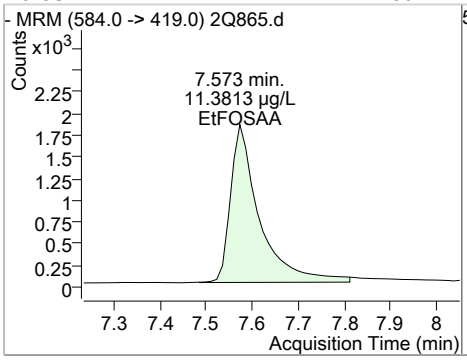
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	14.30	7.57	0.00	10703				

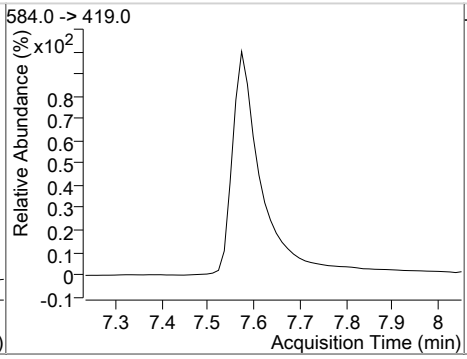


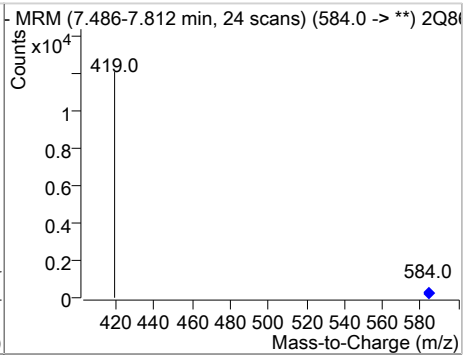




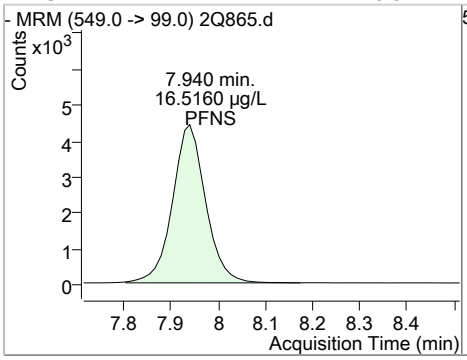
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	11.38	7.57	0.00	7919				

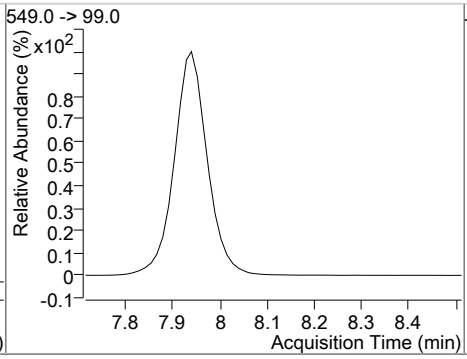


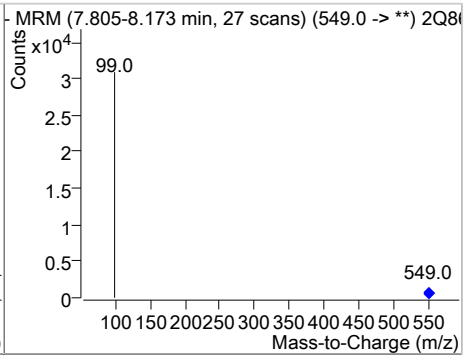




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	16.52	7.94	0.01	21456				







Perfluorinated Compounds by LC/MS/MS

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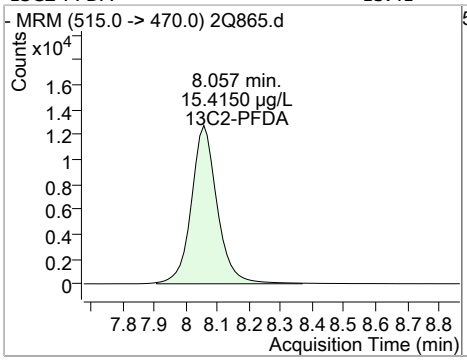
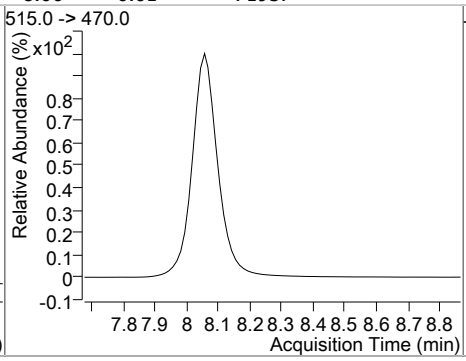
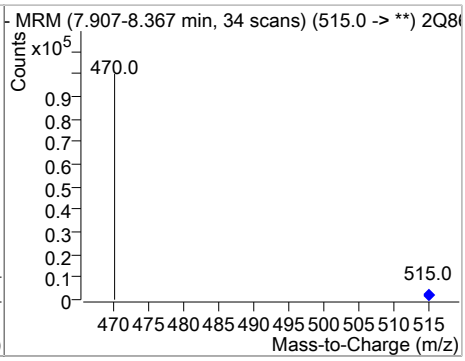
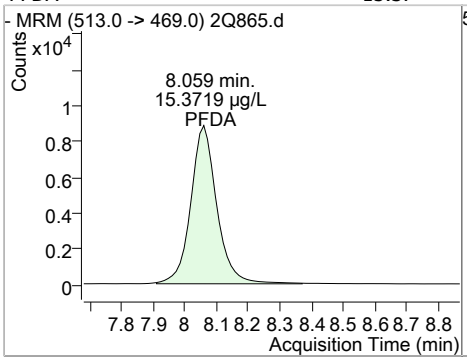
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	15.41	8.06	0.01	71957				

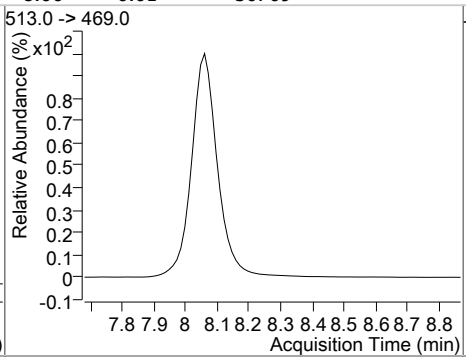


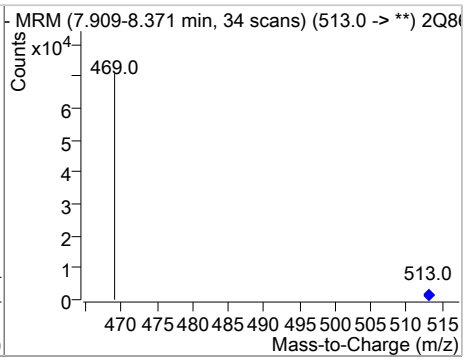




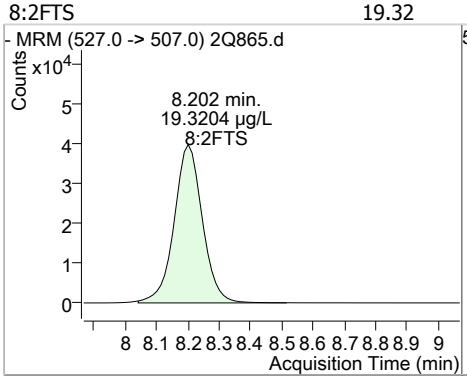
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	15.37	8.06	0.01	50709				

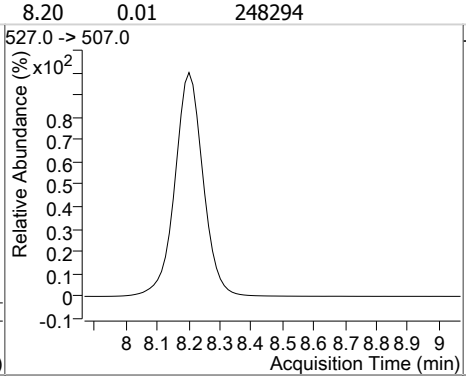


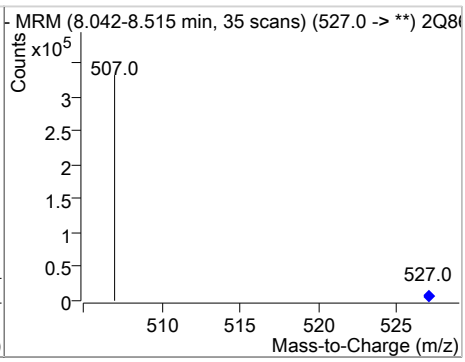




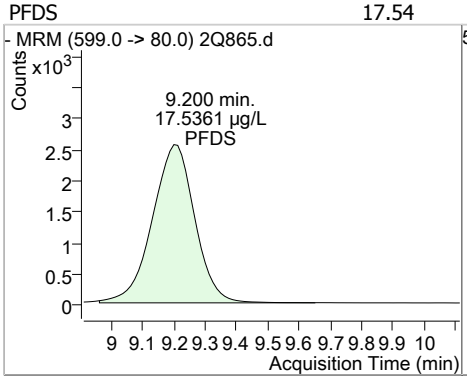
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	19.32	8.20	0.01	248294				

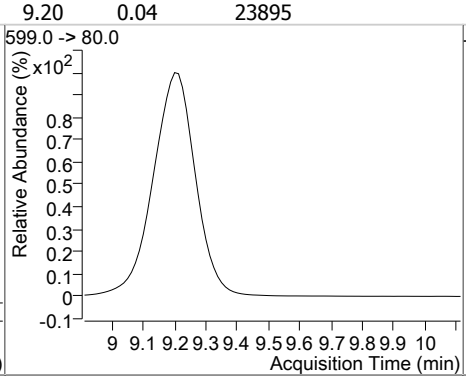


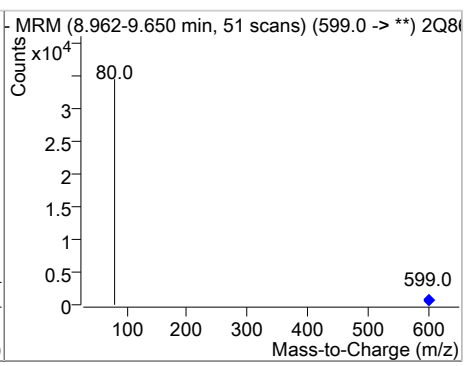




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	17.54	9.20	0.04	23895				



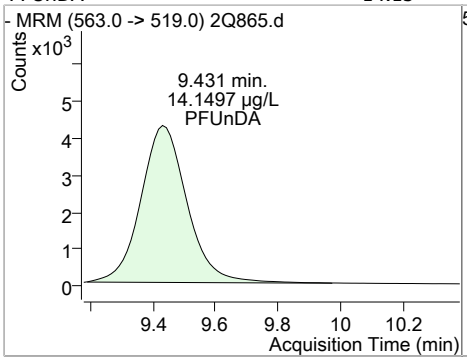


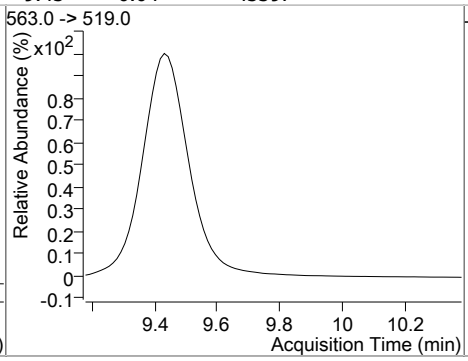


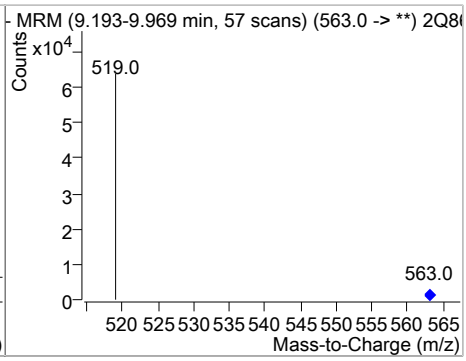
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

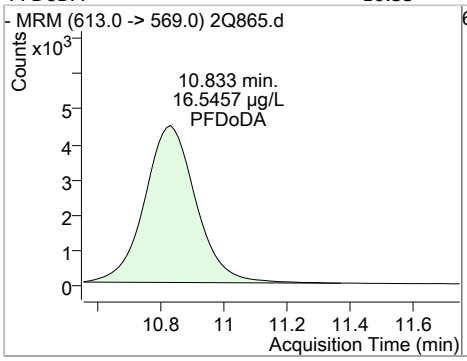
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	14.15	9.43	0.04	43397				

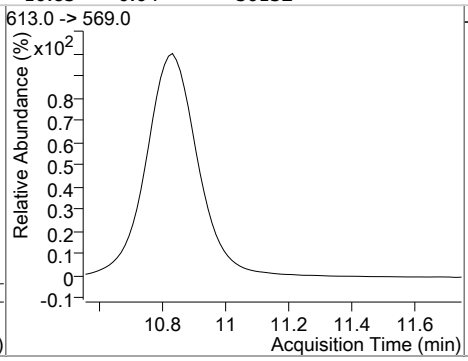


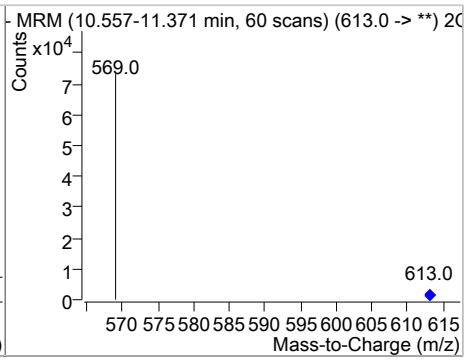




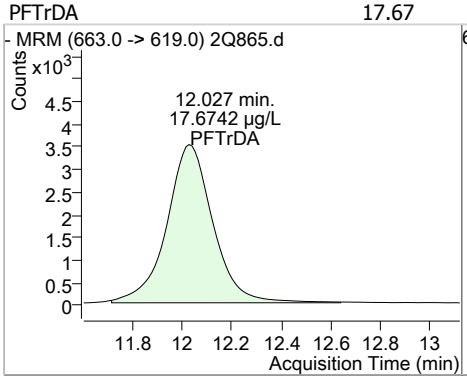
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	16.55	10.83	0.04	50132				

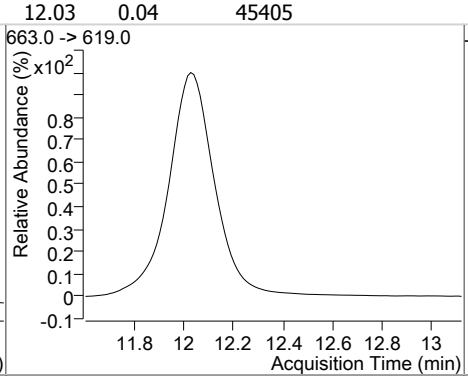


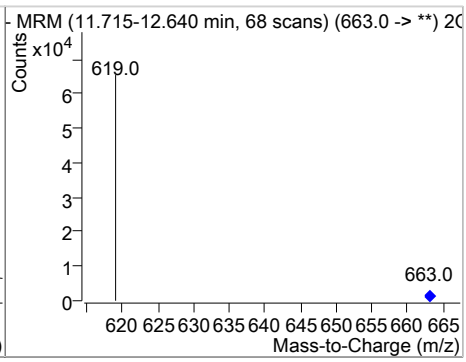




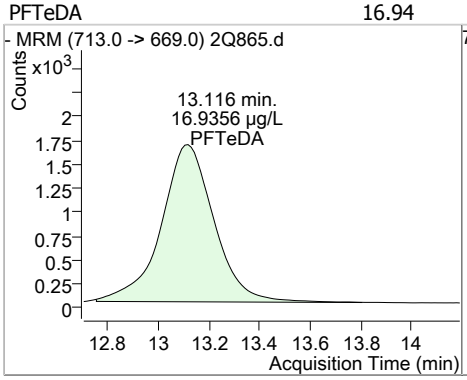
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	17.67	12.03	0.04	45405				

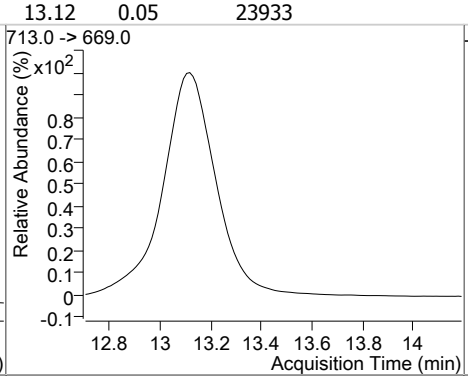


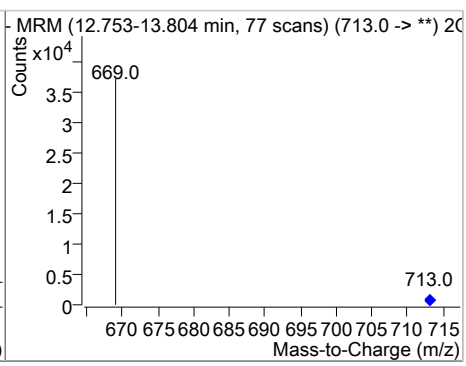




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	16.94	13.12	0.05	23933				







Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/21/17 11:22

Perfluorinated Compounds by LC/MS/MS

Data File : 2Q651.d
Operator : NANCYF
Acq. Method : dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time : 4/20/2017 11:54:23 AM
Sample Name : IC18-1
Vial : Vial 2
DA Method File : PFCLISTDW_0420_S2Q18.m
Batch Name : S2Q18.batch.bin
Last Calib Update : 4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	6.660	429.0 -> 409.0	146593	20.00	µg/L		0.013
13C2-PFDoDA	10.714	615.0 -> 570.0	95399	20.00	µg/L		0.050
13C2-PFOA	6.651	415.0 -> 370.0	81433	20.00	µg/L		0.013
13C3-PFPeA	4.247	266.0 -> 222.0	77778	20.00	µg/L		0.013
13C4-PFOS	7.214	503.0 -> 80.0	57060	20.00	µg/L		0.014
d3-MeFOSAA	7.474	573.0 -> 419.0	34386	20.00	µg/L		0.000
System Monitoring Compounds							
13C2-PFDA	7.994	515.0 -> 470.0	5647	0.99	µg/L		0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 5.0%			
13C2-PFHxA	5.222	315.0 -> 270.0	3970	0.92	µg/L		0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 4.6%			
d5-EtFOSAA	7.597	589.0 -> 419.0	1446	1.87	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 9.3%			
Target Compounds							**QValue**
4:2FTS	5.144	327.0 -> 307.0	3987	1.08	µg/L		100
6:2FTS	6.662	427.0 -> 407.0	10182	1.44	µg/L		100
8:2FTS	8.114	527.0 -> 507.0	12214	1.04	µg/L		100
EtFOSAA	7.598	584.0 -> 419.0	1377	1.85	µg/L		100
FOSA	6.986	498.0 -> 78.0	1869	1.01	µg/L		100
MeFOSAA	7.475	570.0 -> 419.0	1515	1.72	µg/L		100
PFBA	2.952	213.0 -> 169.0	1933	0.90	µg/L		100
PFBS	4.366	299.0 -> 80.0	2172	0.95	µg/L		98
PFDA	7.996	513.0 -> 469.0	4148	1.03	µg/L		100
PFDoDA	10.707	613.0 -> 569.0	4321	1.08	µg/L		100
PFDS	9.062	599.0 -> 80.0	1489	1.03	µg/L		100
PFHpA	5.986	363.0 -> 319.0	6687	1.21	µg/L	#m	93
PFHpS	6.620	449.0 -> 80.0	2286	0.95	µg/L		100
PFHxA	5.225	313.0 -> 269.0	1931	1.06	µg/L	#	86
PFHxS	5.981	399.0 -> 80.0	2304	0.97	µg/L	m	92
PFNA	7.281	463.0 -> 419.0	4586	1.26	µg/L		97
PFNS	7.879	549.0 -> 99.0	1372	0.95	µg/L		100
PFOA	6.652	413.0 -> 369.0	3911	1.16	µg/L	#	96
PFOS	7.215	499.0 -> 80.0	3230	0.98	µg/L	m	86
PFPeA	4.250	263.0 -> 219.0	5893	1.00	µg/L		100
PFPeS	5.255	349.0 -> 99.0	674	0.91	µg/L		100
PFTeDA	12.978	713.0 -> 669.0	2073	1.12	µg/L		100
PFTrDA	11.915	663.0 -> 619.0	3725	1.12	µg/L		100
PFUnDA	9.306	563.0 -> 519.0	4328	1.03	µg/L		100

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

Perfluorinated Compounds by LC/MS/MS

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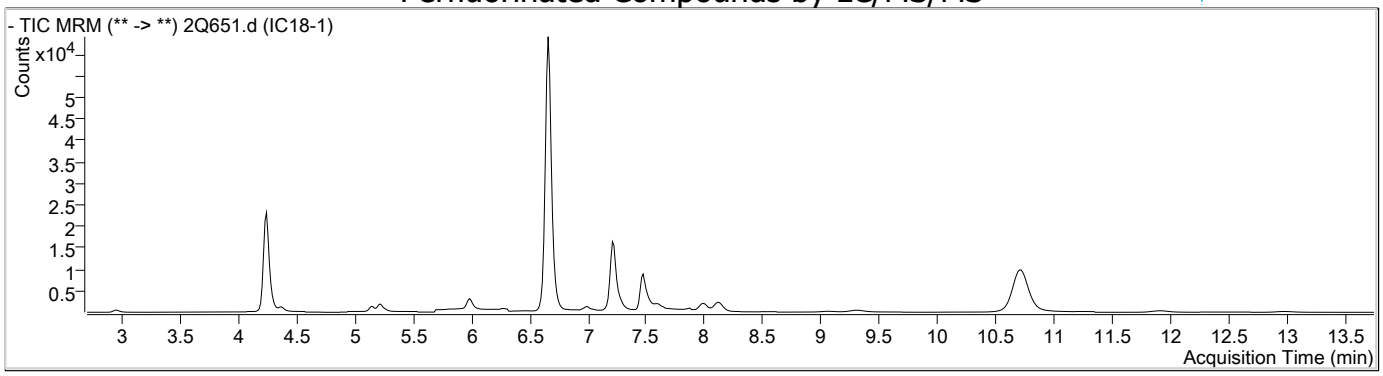
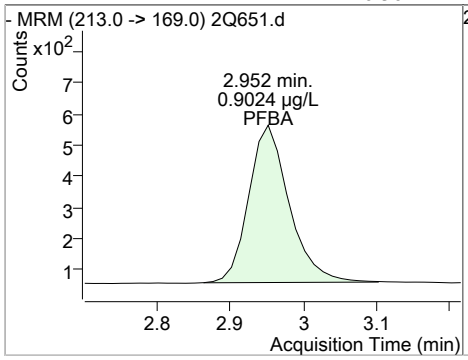
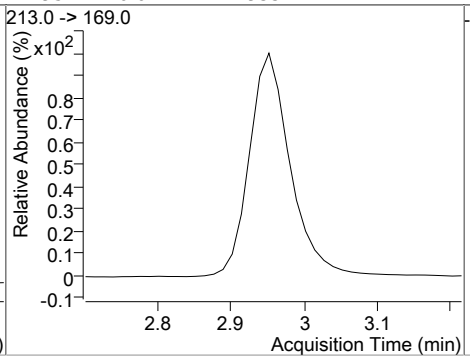
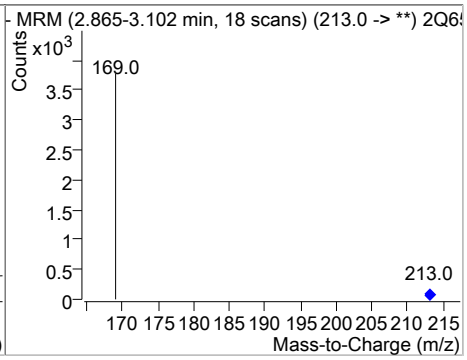


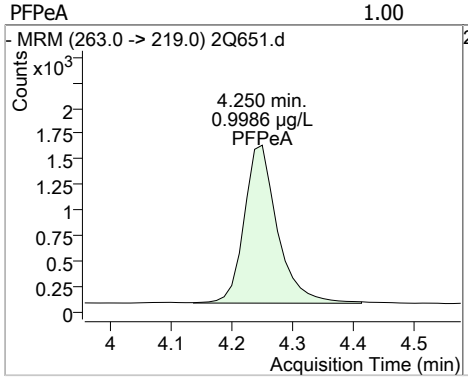
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	0.90	2.95	0.01	1933				

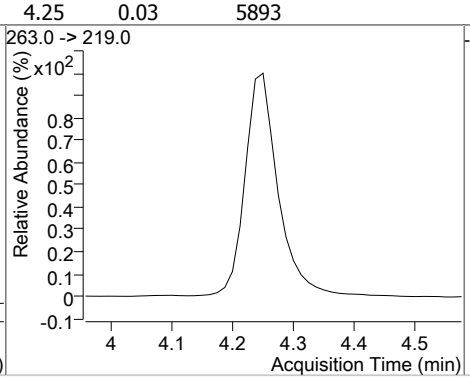


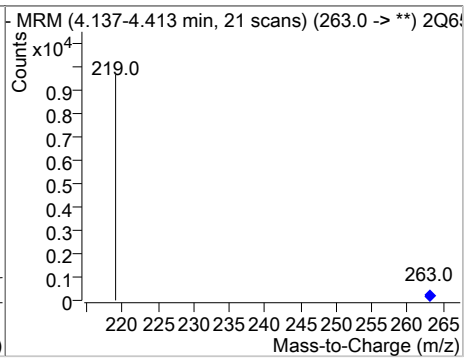




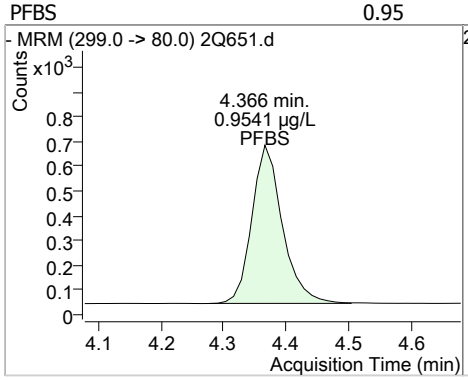
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	1.00	4.25	0.03	5893				

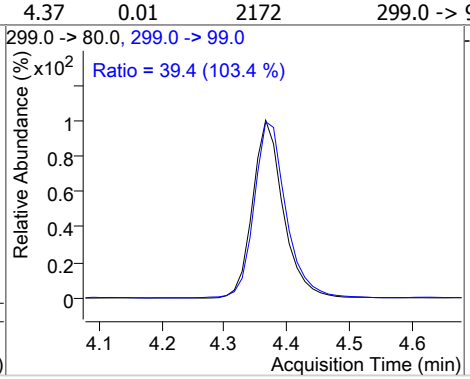


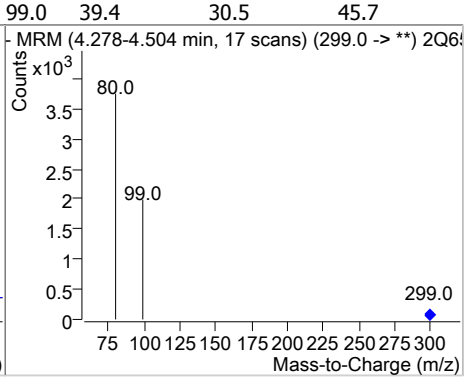




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	0.95	4.37	0.01	2172	299.0 -> 99.0	39.4	30.5	45.7







Perfluorinated Compounds by LC/MS/MS

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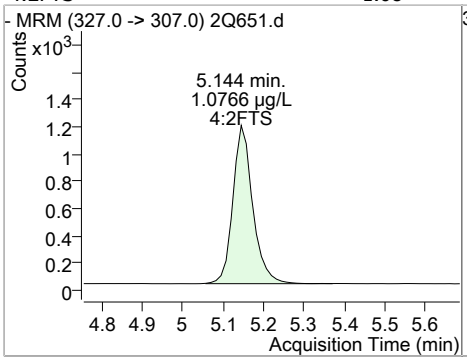
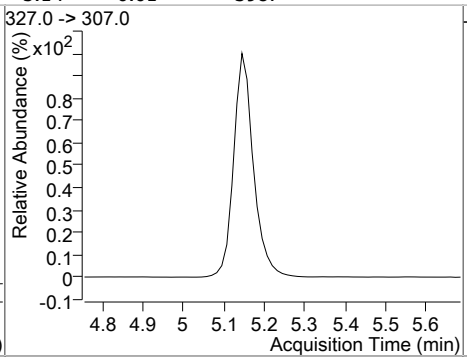
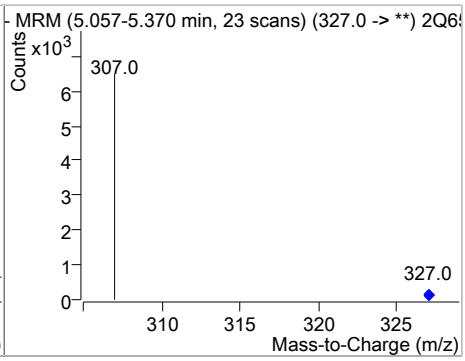
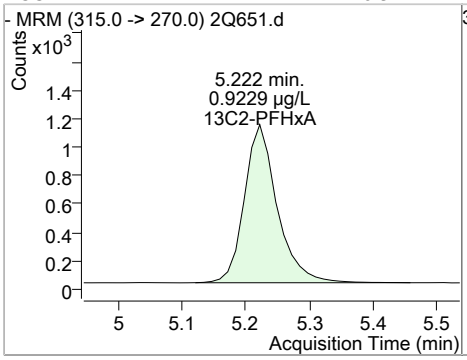
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	1.08	5.14	0.01	3987				

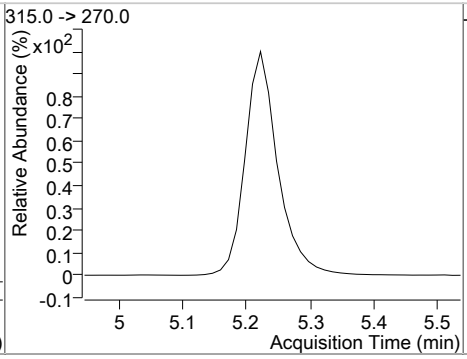


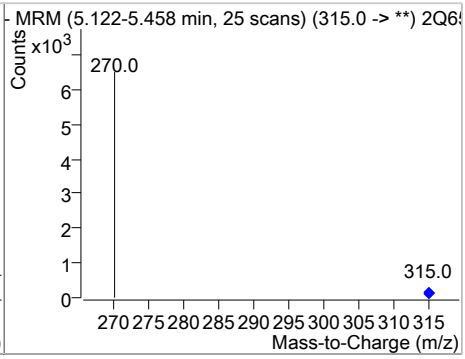




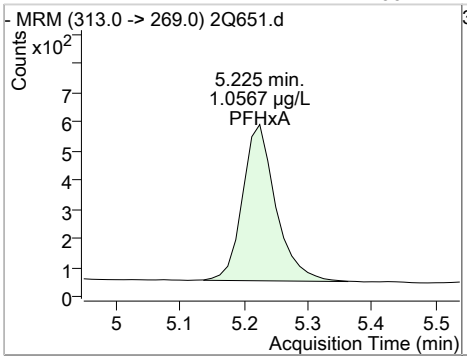
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	0.92	5.22	0.01	3970				

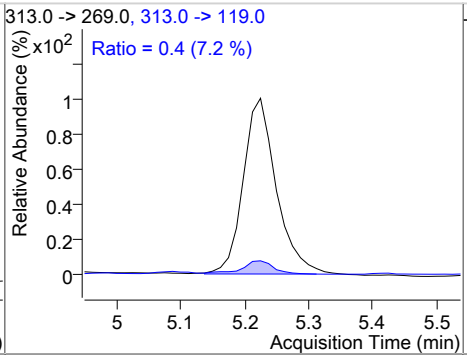


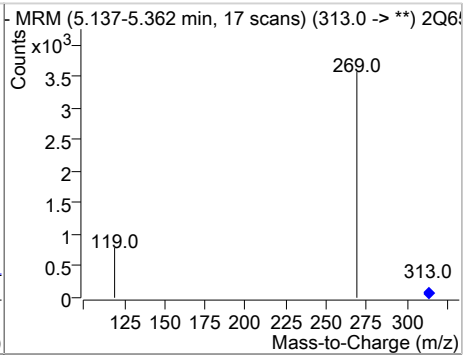




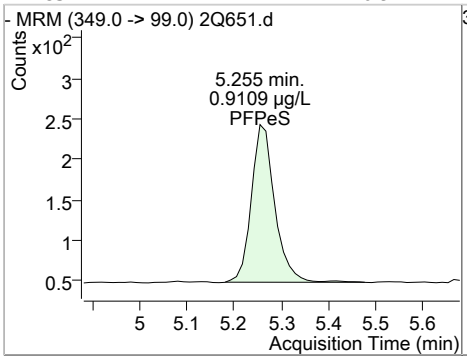
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	1.06	5.22	0.01	1931	313.0 -> 119.0	0.4	4.0	6.0

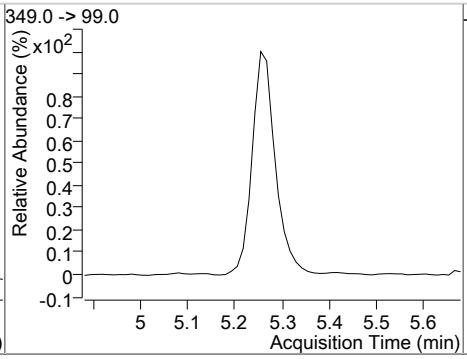


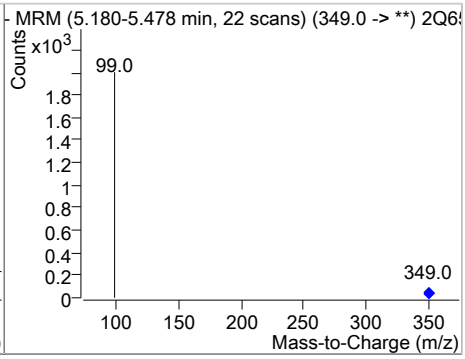




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	0.91	5.25	0.01	674				



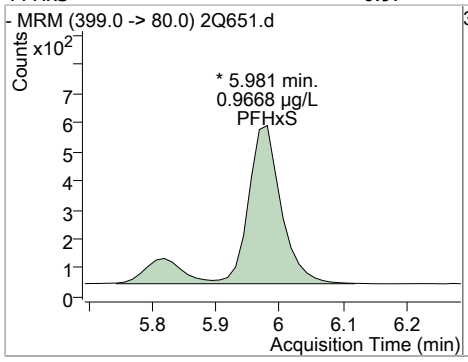


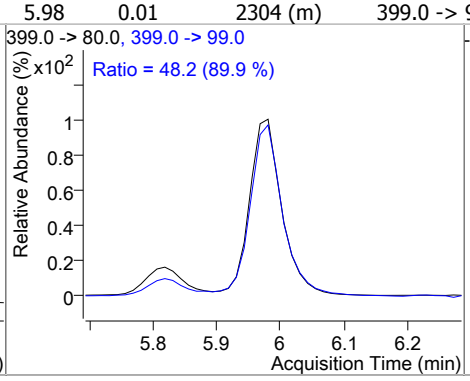


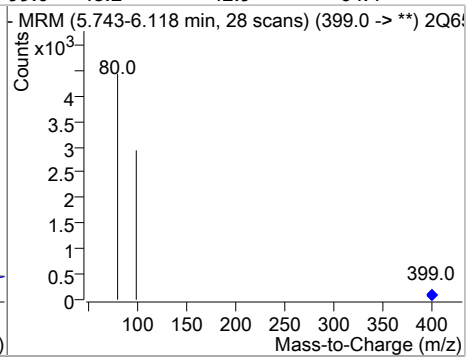
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

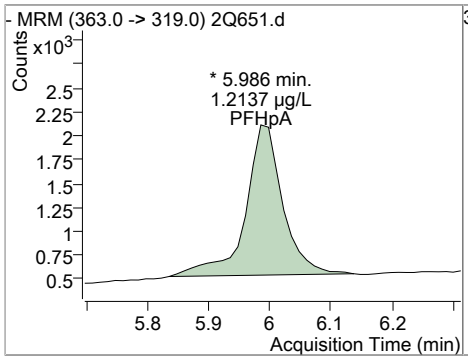
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	0.97	5.98	0.01	2304 (m)	399.0 -> 99.0	48.2	42.9	64.4

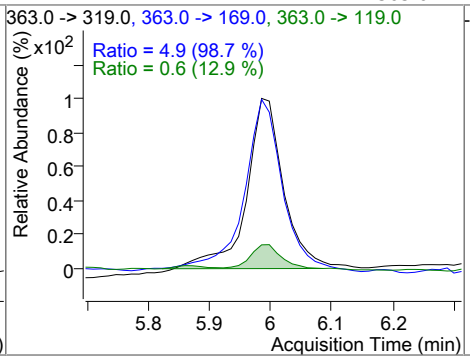


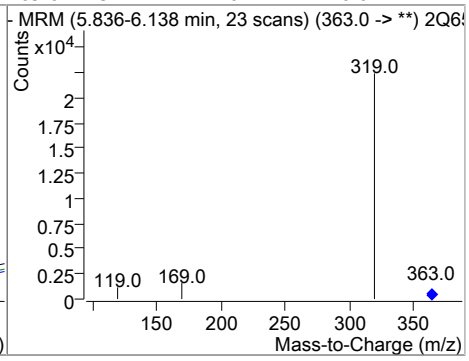




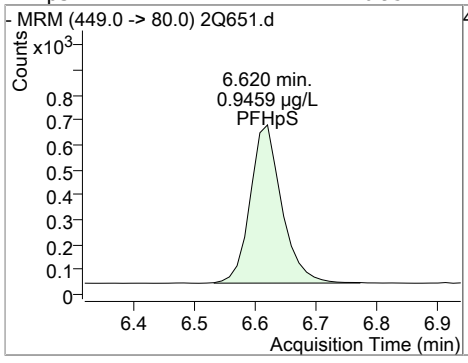
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	1.21	5.99	0.00	6687 (m)	363.0 -> 119.0	0.6	4.0	6.0
					363.0 -> 169.0	4.9	4.0	6.0

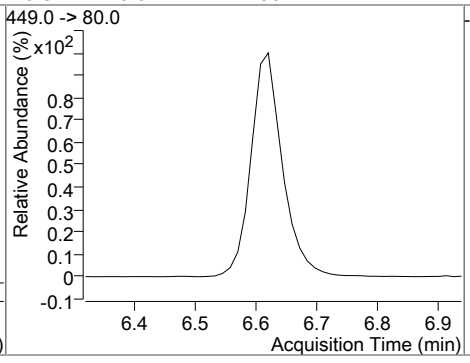


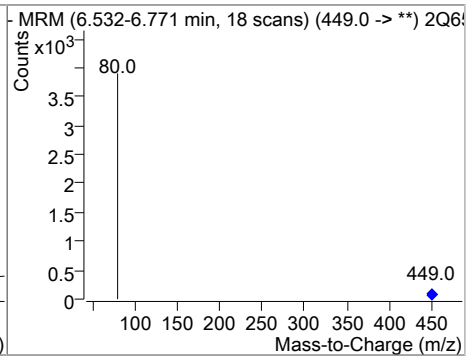




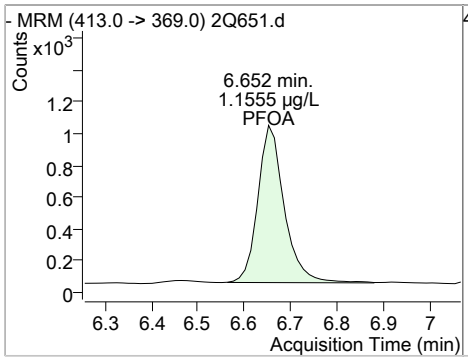
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	0.95	6.62	0.01	2286				

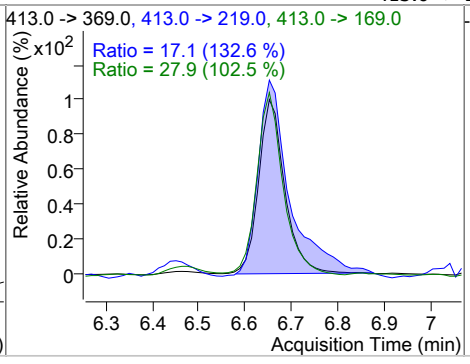


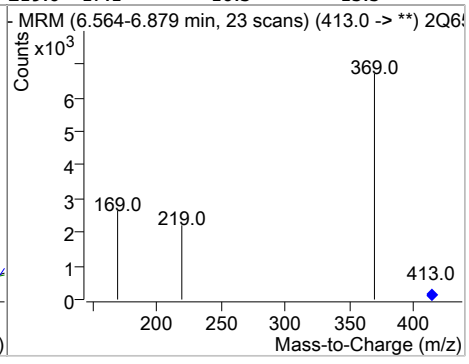




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	1.16	6.65	0.01	3911	413.0 -> 169.0	27.9	21.8	32.6
					413.0 -> 219.0	17.1	10.3	15.5



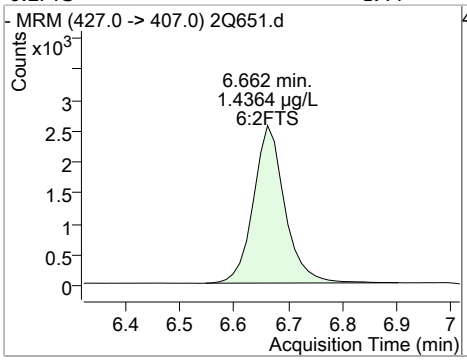


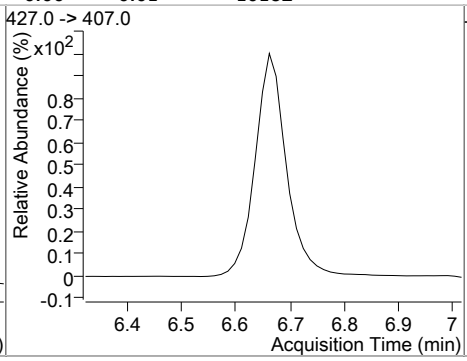


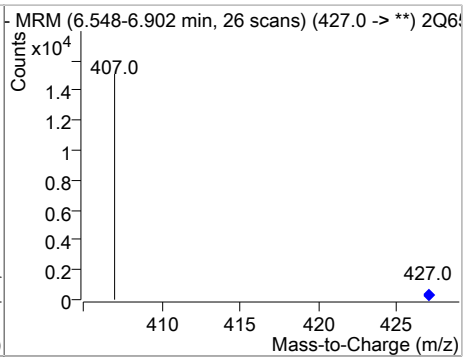
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

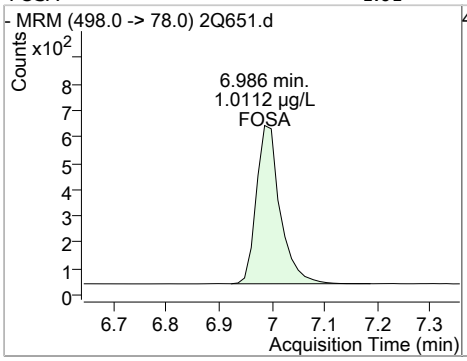
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	1.44	6.66	0.01	10182				

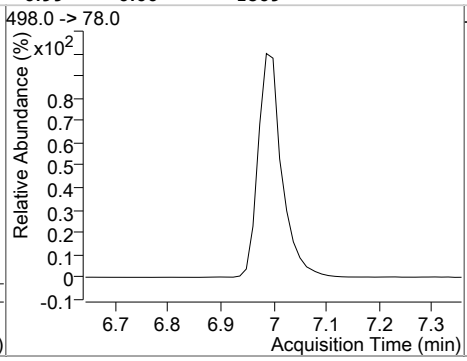


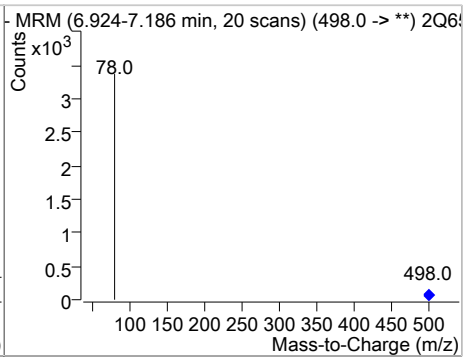




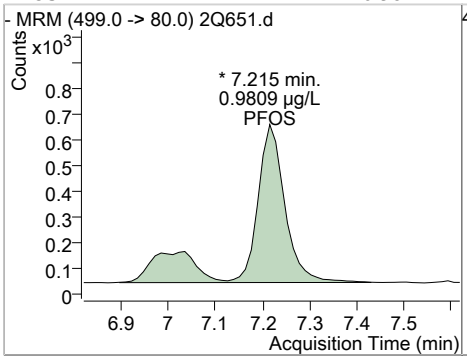
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	1.01	6.99	0.00	1869				

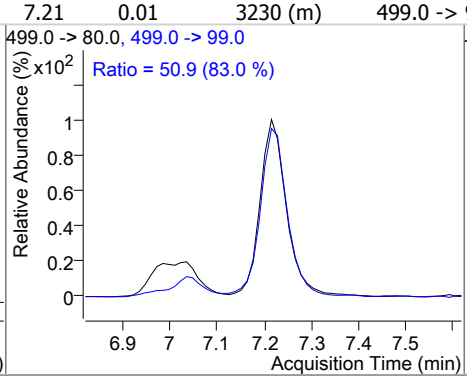


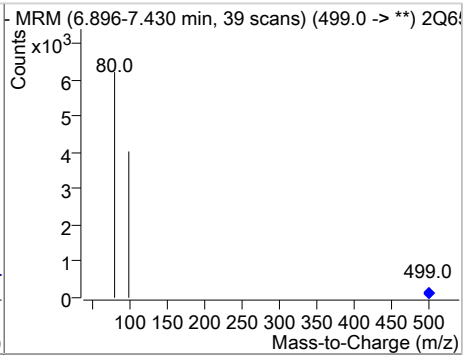




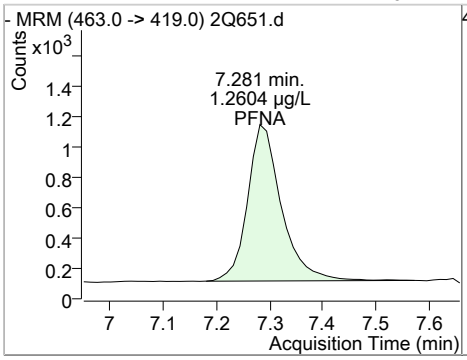
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	0.98	7.21	0.01	3230 (m)	499.0 -> 99.0	50.9	49.1	73.6

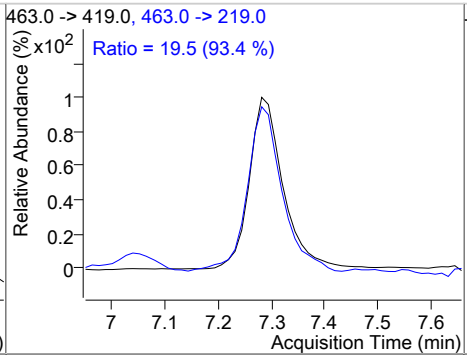


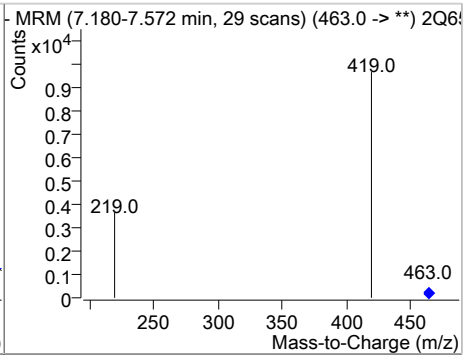




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	1.26	7.28	0.01	4586	463.0 -> 219.0	19.5	16.7	25.1



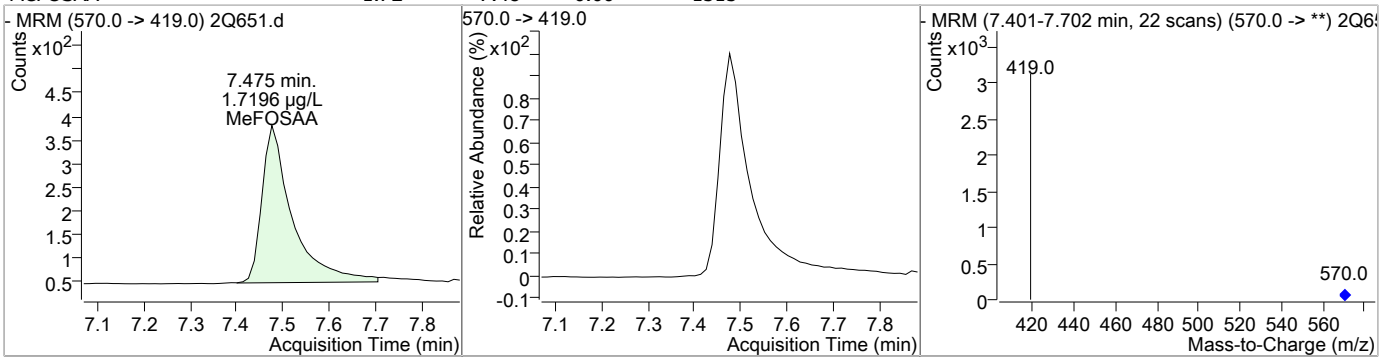




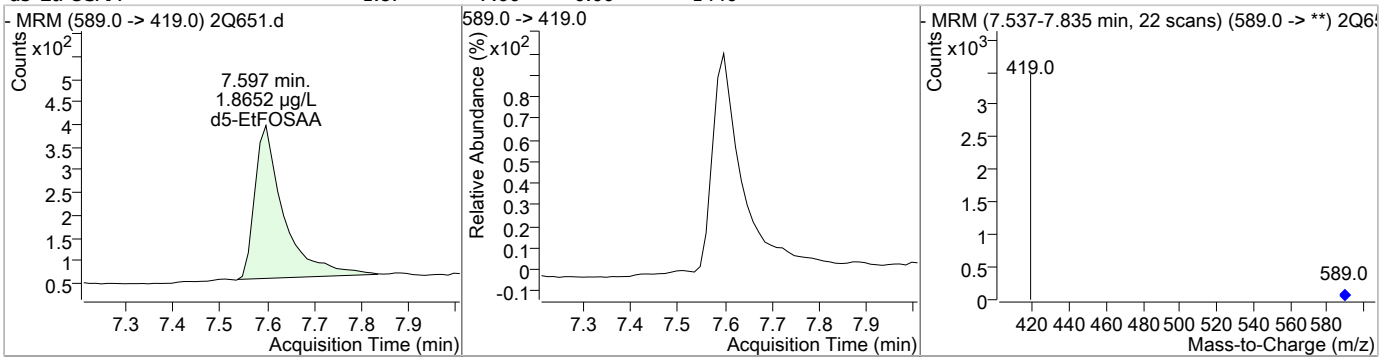
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

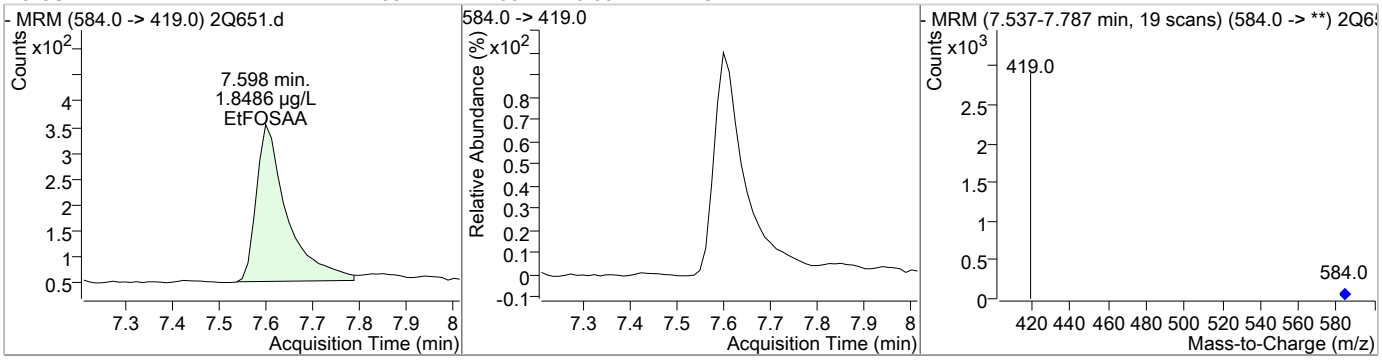
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	1.72	7.48	0.00	1515				



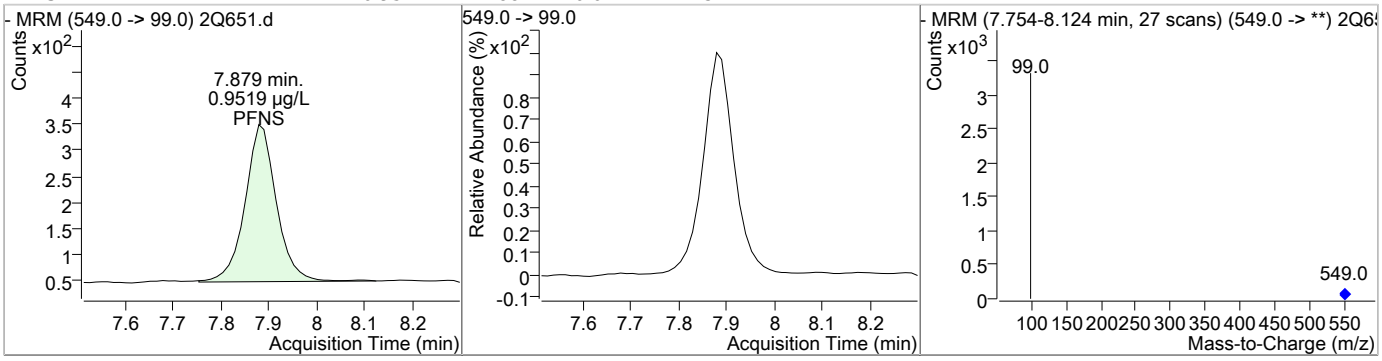
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	1.87	7.60	0.00	1446				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	1.85	7.60	0.00	1377				



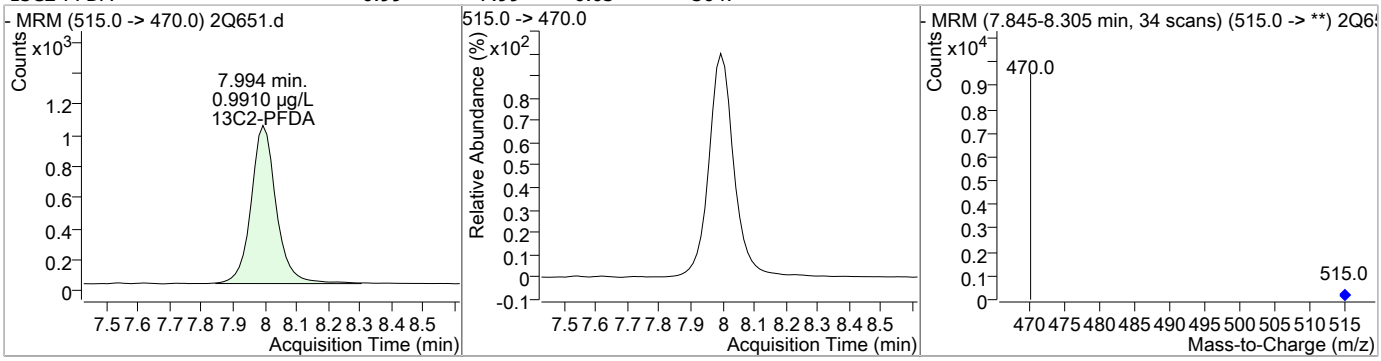
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	0.95	7.88	0.01	1372				



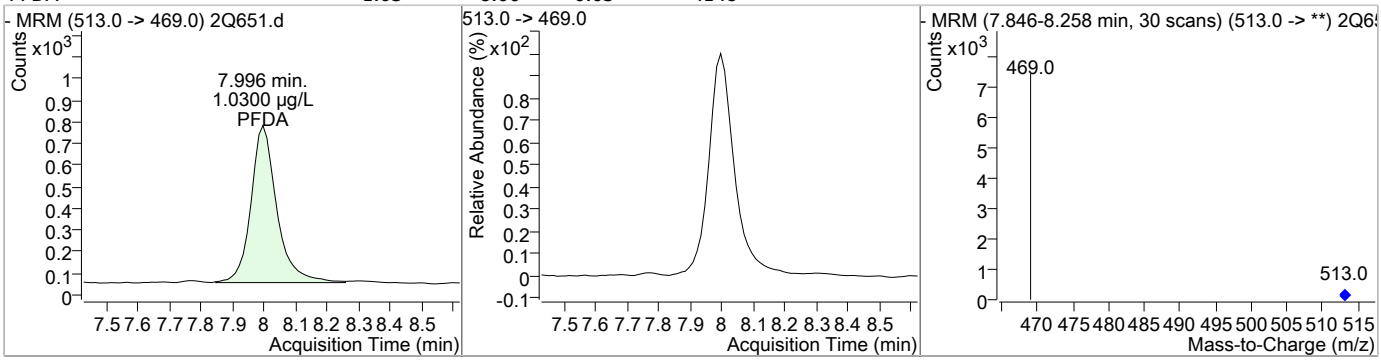
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

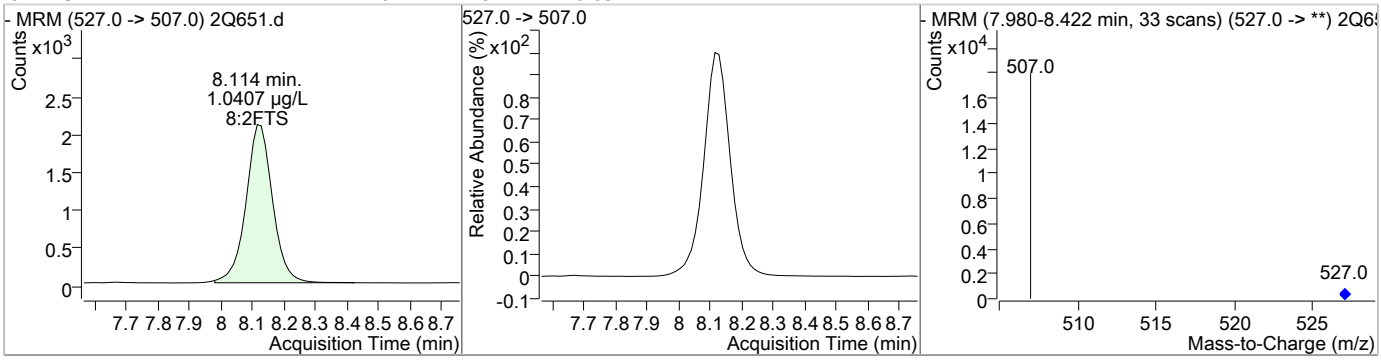
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	0.99	7.99	0.03	5647				



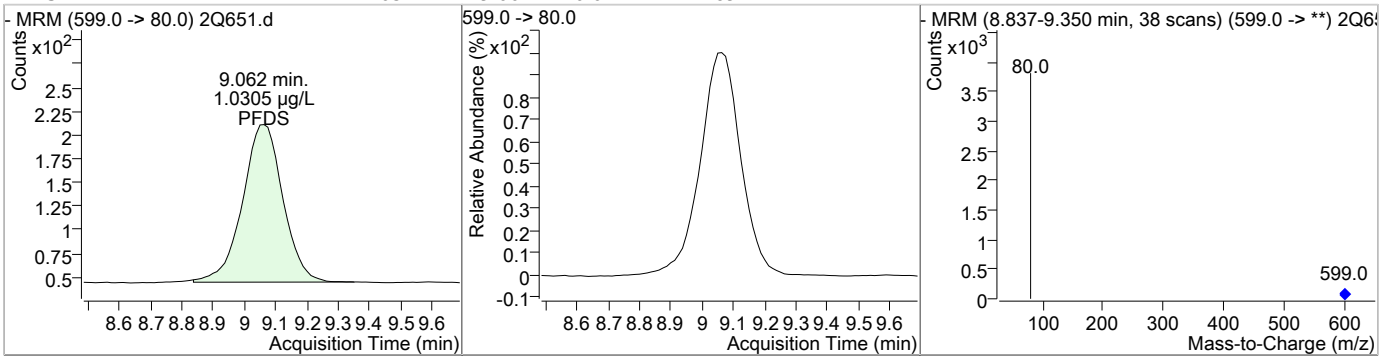
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	1.03	8.00	0.03	4148				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	1.04	8.11	0.03	12214				



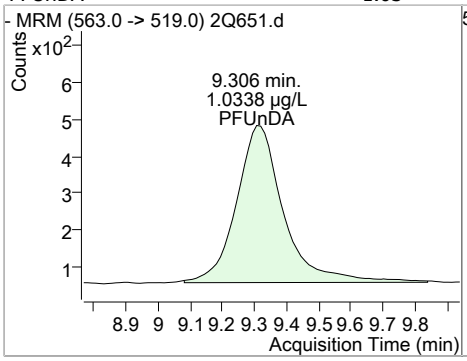
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	1.03	9.06	0.04	1489				

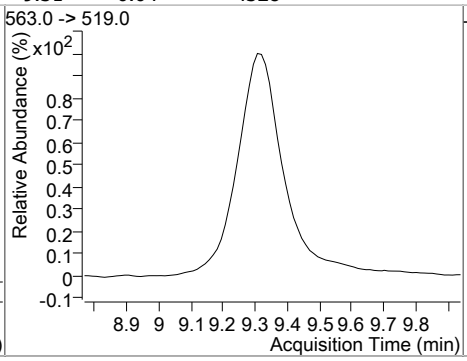


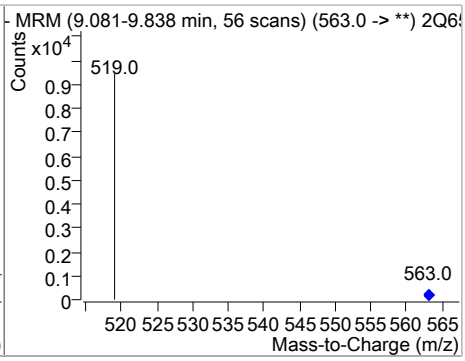
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

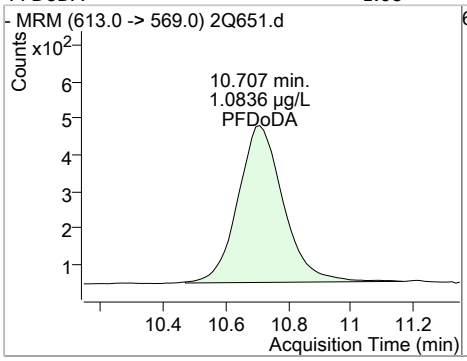
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	1.03	9.31	0.04	4328				

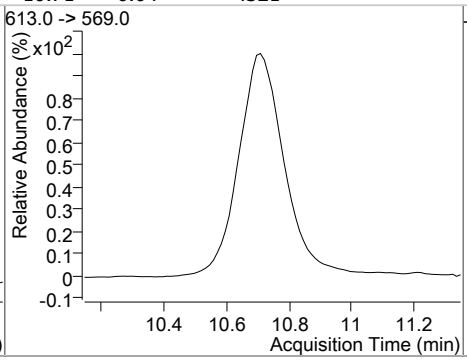


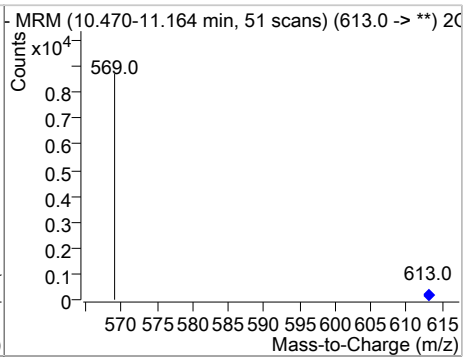




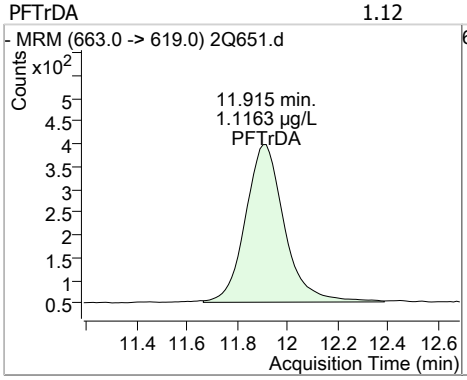
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	1.08	10.71	0.04	4321				

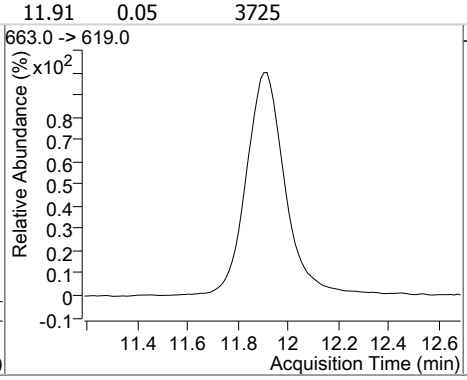


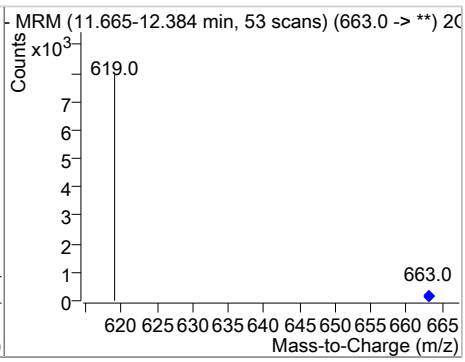




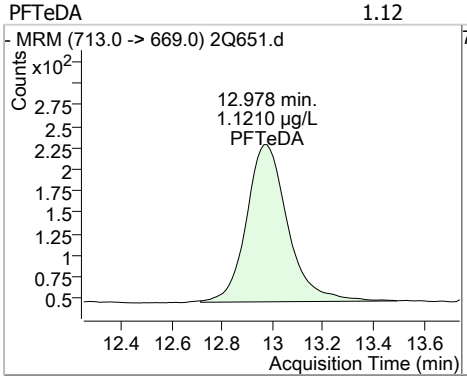
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	1.12	11.91	0.05	3725				

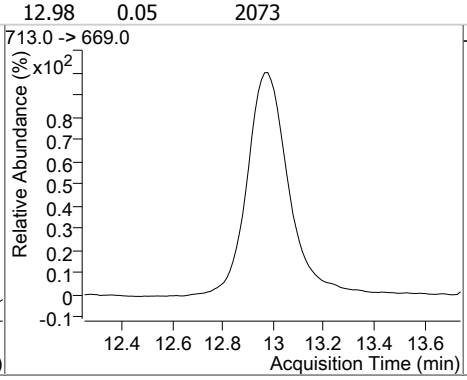


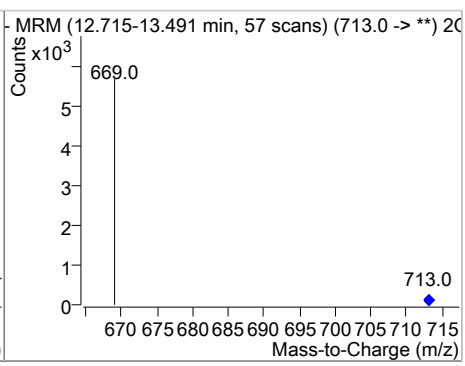




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	1.12	12.98	0.05	2073				







Manual Integration Approval Summary

Sample Number:	S2Q18-IC18	**Method:**	EPA 537 MOD	
Lab FileID:	2Q651.D	**Analyst approved:**	04/21/17 09:46	Nancy Saunders
Injection Time:	04/20/17 11:54	**Supervisor approved:**	04/21/17 11:22	Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.98	Split peak
Perfluoroheptanoic acid	375-85-9		5.99	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.21	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 04/21/17 11:22

Perfluorinated Compounds by LC/MS/MS

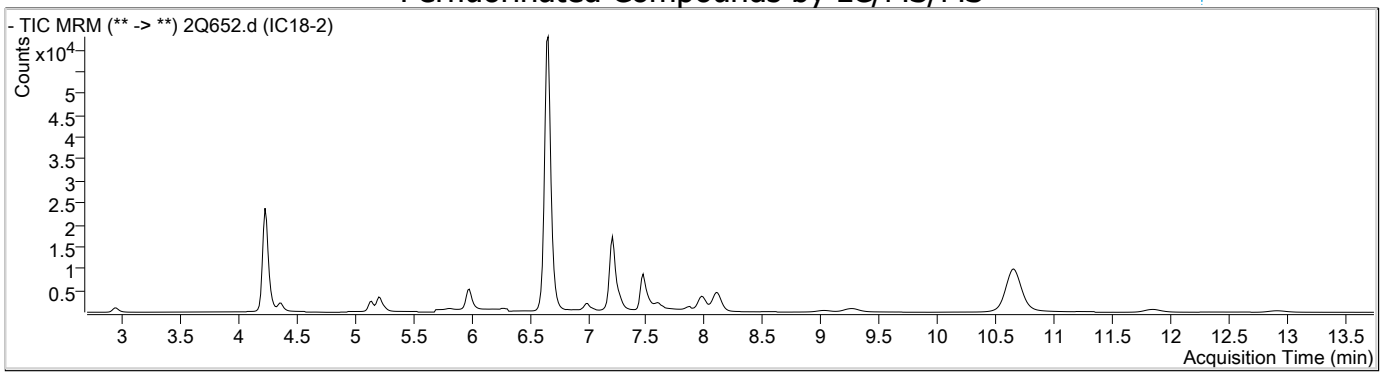
Data File : 2Q652.d
Operator : NANCYF
Acq. Method : dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time : 4/20/2017 12:14:08 PM
Sample Name : IC18-2
Vial : Vial 3
DA Method File : PFCLISTDW_0420_S2Q18.m
Batch Name : S2Q18.batch.bin
Last Calib Update : 4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	6.660	429.0 -> 409.0	145491	20.00	µg/L		0.013
13C2-PFDoDA	10.651	615.0 -> 570.0	90132	20.00	µg/L		-0.013
13C2-PFOA	6.651	415.0 -> 370.0	73705	20.00	µg/L		0.013
13C3-PFPeA	4.234	266.0 -> 222.0	73997	20.00	µg/L		0.000
13C4-PFOS	7.214	503.0 -> 80.0	55828	20.00	µg/L		0.014
d3-MeFOSAA	7.474	573.0 -> 419.0	34397	20.00	µg/L		0.000
System Monitoring Compounds							
13C2-PFDA	7.982	515.0 -> 470.0	10452	2.03	µg/L		0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 10.1%			
13C2-PFHxA	5.210	315.0 -> 270.0	7723	1.98	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 9.9%			
d5-EtFOSAA	7.597	589.0 -> 419.0	2107	2.71	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 13.5%			
Target Compounds							**QValue**
4:2FTS	5.144	327.0 -> 307.0	7942	2.16	µg/L		100
6:2FTS	6.662	427.0 -> 407.0	16517	2.35	µg/L		100
8:2FTS	8.102	527.0 -> 507.0	24338	2.09	µg/L		100
EtFOSAA	7.598	584.0 -> 419.0	1809	2.42	µg/L		100
FOSA	6.999	498.0 -> 78.0	3734	2.02	µg/L		100
MeFOSAA	7.475	570.0 -> 419.0	2113	2.39	µg/L		100
PFBA	2.940	213.0 -> 169.0	3920	2.02	µg/L		100
PFBS	4.366	299.0 -> 80.0	4304	1.93	µg/L		99
PFDA	7.984	513.0 -> 469.0	7508	2.06	µg/L		100
PFDoDA	10.645	613.0 -> 569.0	8380	2.22	µg/L		100
PFDS	9.025	599.0 -> 80.0	3097	2.18	µg/L		100
PFHpA	5.986	363.0 -> 319.0	10857	2.17	µg/L	#	93
PFHpS	6.607	449.0 -> 80.0	4657	1.97	µg/L		100
PFHxA	5.212	313.0 -> 269.0	3743	2.26	µg/L	#	85
PFHxS	5.968	399.0 -> 80.0	4586	1.97	µg/L	m	94
PFNA	7.281	463.0 -> 419.0	6918	2.10	µg/L		98
PFNS	7.879	549.0 -> 99.0	2814	2.00	µg/L		100
PFOA	6.652	413.0 -> 369.0	6233	2.03	µg/L		96
PFOS	7.215	499.0 -> 80.0	6408	1.99	µg/L	#m	82
PFPeA	4.238	263.0 -> 219.0	11585	2.06	µg/L		100
PFPeS	5.255	349.0 -> 99.0	1417	2.01	µg/L		100
PFTeDA	12.903	713.0 -> 669.0	3940	2.25	µg/L		100
PFTrDA	11.840	663.0 -> 619.0	6935	2.19	µg/L		100
PFUnDA	9.269	563.0 -> 519.0	8003	2.02	µg/L		100

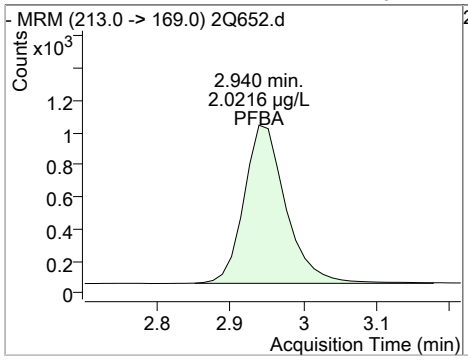
 # = Qualifier out of range, m = manually integrated, + = Area summed

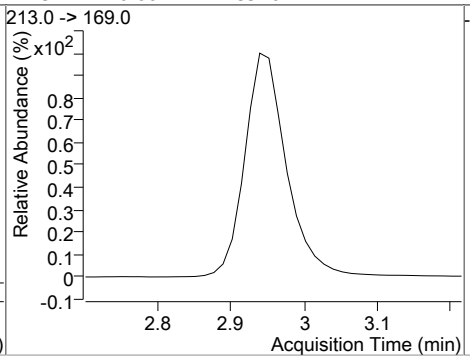
Perfluorinated Compounds by LC/MS/MS

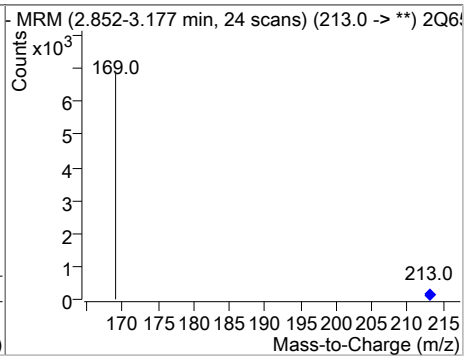
Agilent Technologies



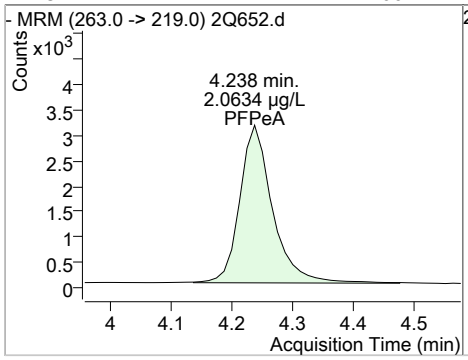
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	2.02	2.94	0.00	3920				

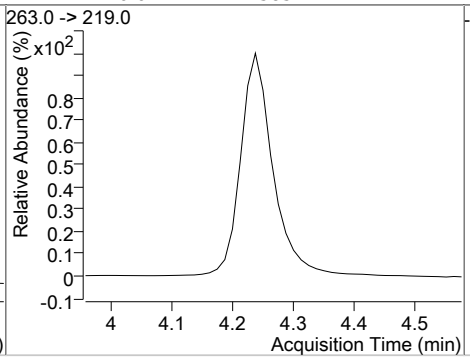


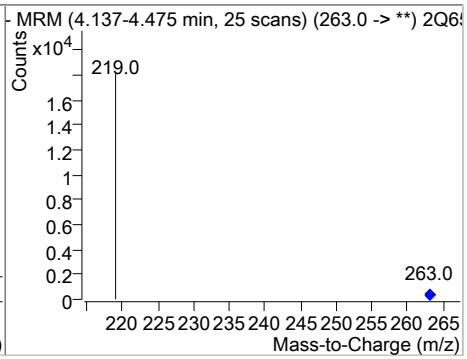




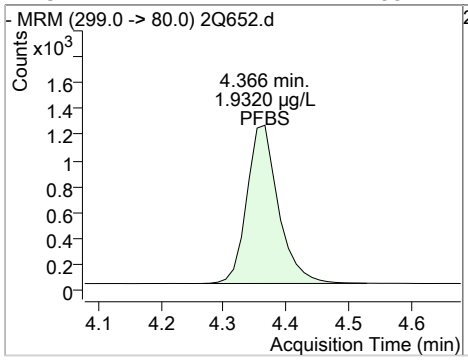
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	2.06	4.24	0.01	11585				

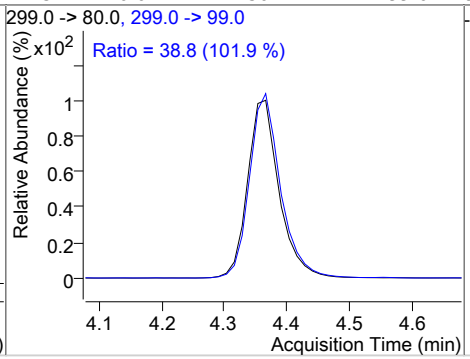


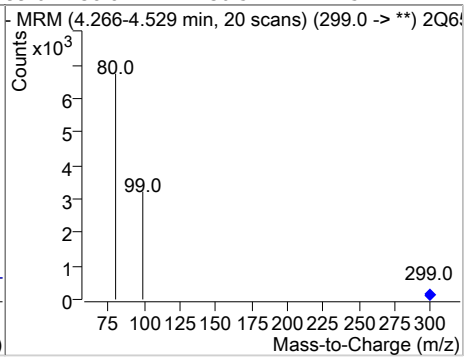




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	1.93	4.37	0.01	4304	299.0 -> 99.0	38.8	30.5	45.7



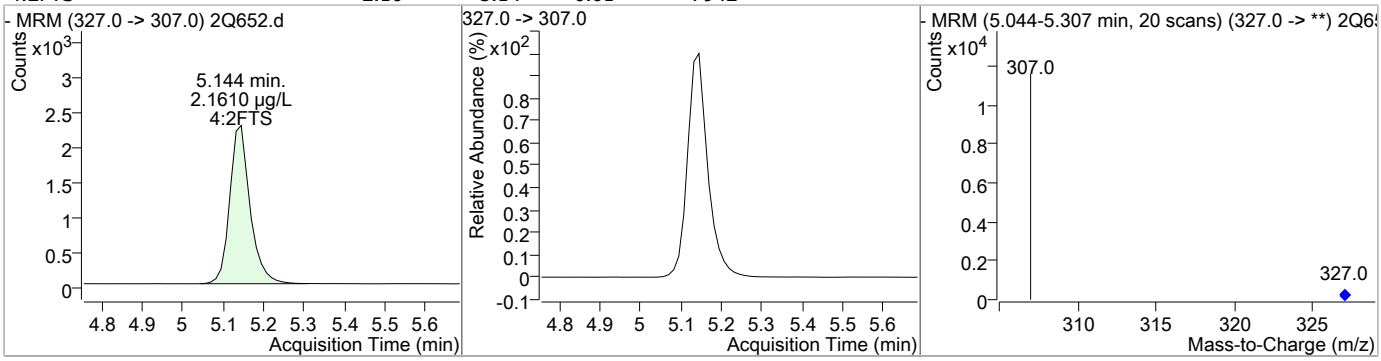




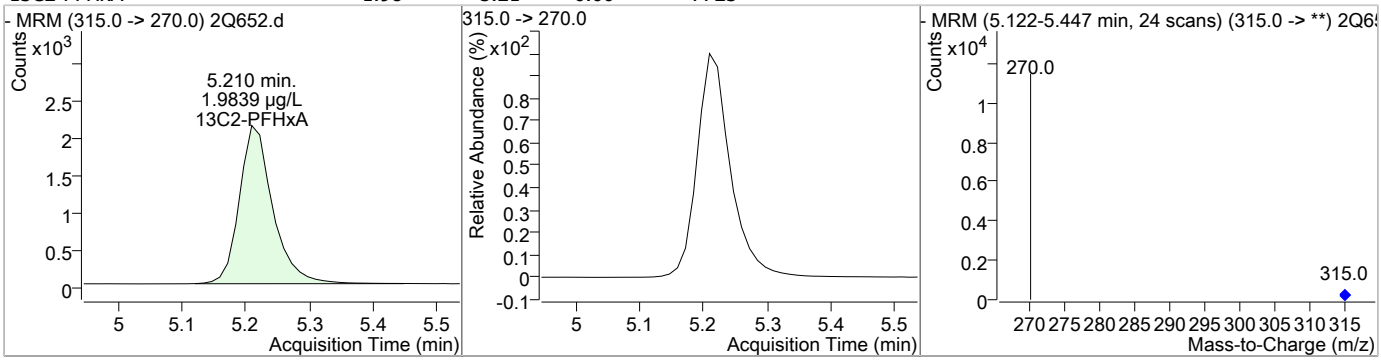
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

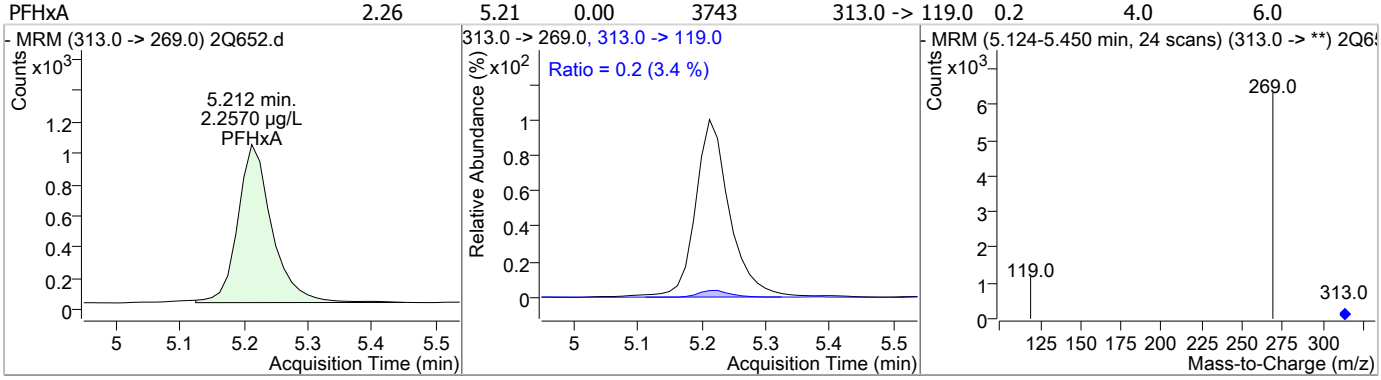
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	2.16	5.14	0.01	7942				



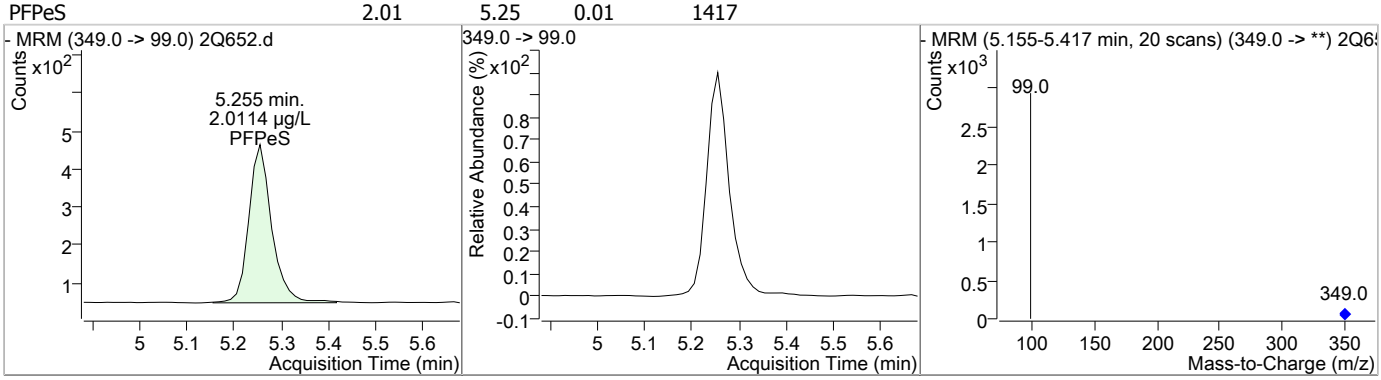
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	1.98	5.21	0.00	7723				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	2.26	5.21	0.00	3743	313.0 -> 119.0	0.2	4.0	6.0



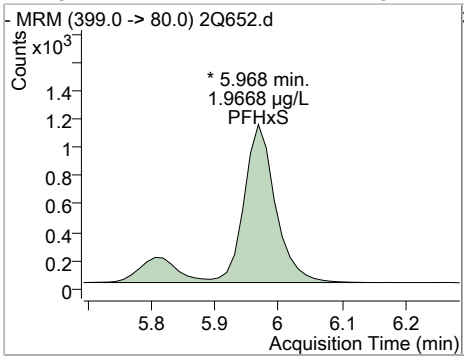
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	2.01	5.25	0.01	1417				

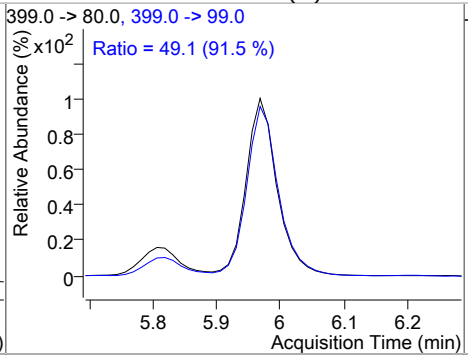


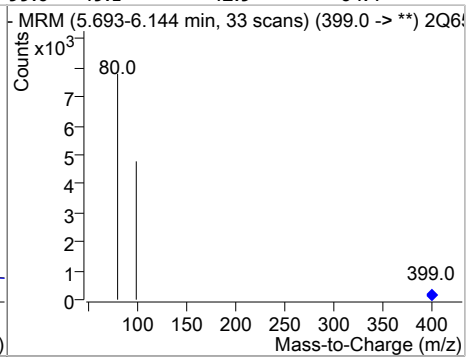
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

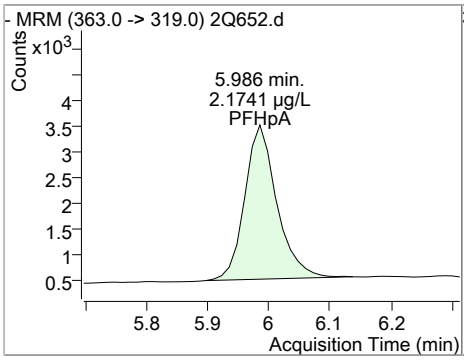
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	1.97	5.97	0.00	4586 (m)	399.0 -> 99.0	49.1	42.9	64.4

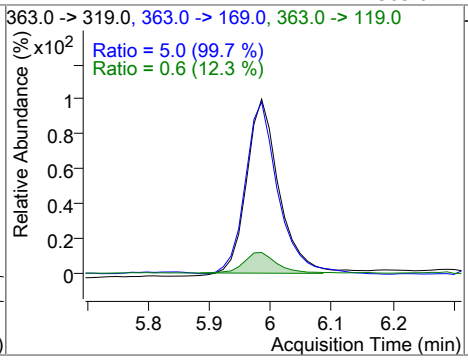


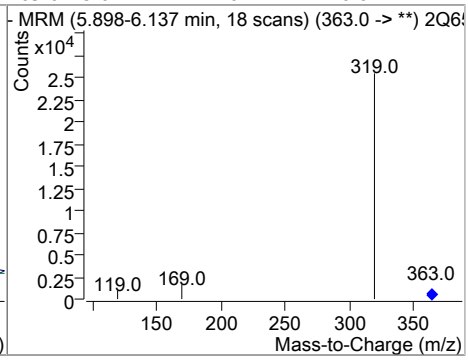




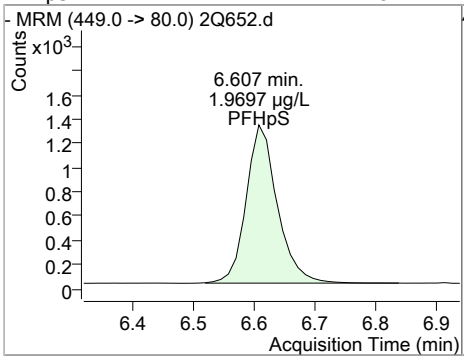
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	2.17	5.99	0.00	10857	363.0 -> 119.0	0.6	4.0	6.0
					363.0 -> 169.0	5.0	4.0	6.0

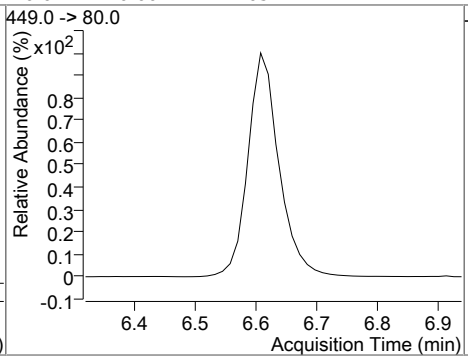


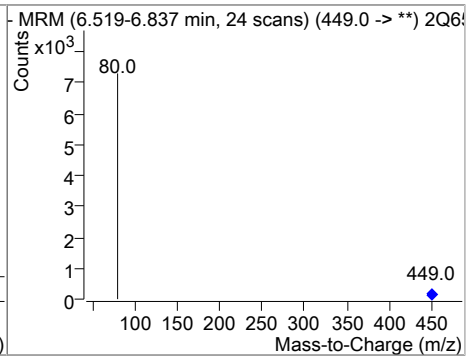




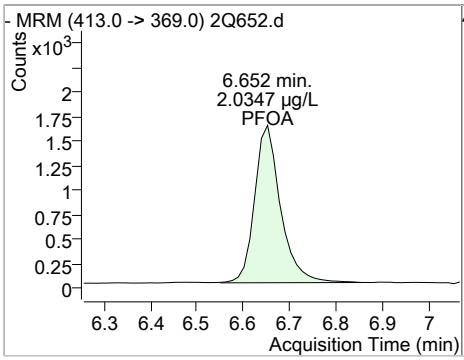
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	1.97	6.61	0.00	4657				

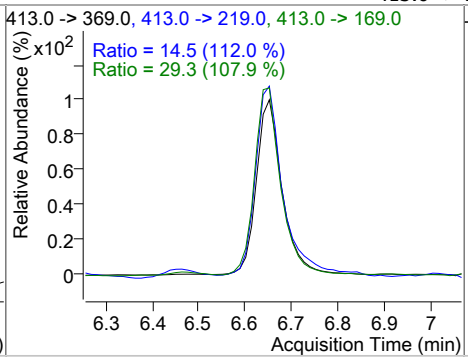


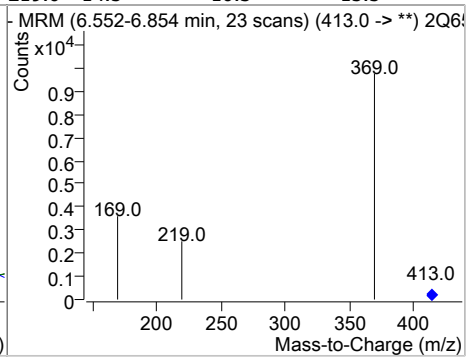




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	2.03	6.65	0.01	6233	413.0 -> 169.0	29.3	21.8	32.6
					413.0 -> 219.0	14.5	10.3	15.5



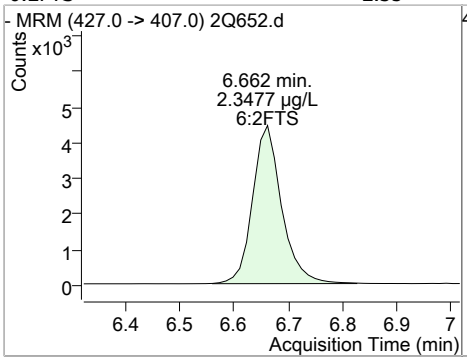


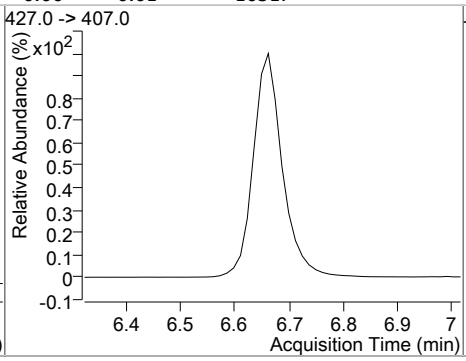


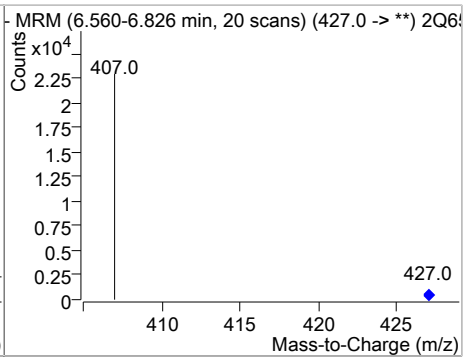
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

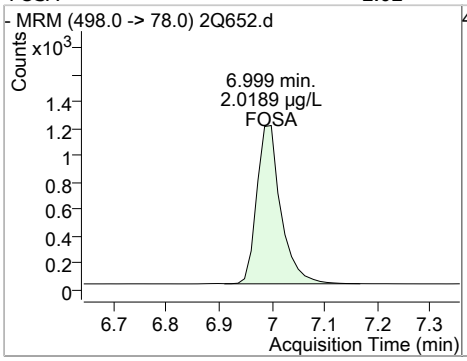
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	2.35	6.66	0.01	16517				

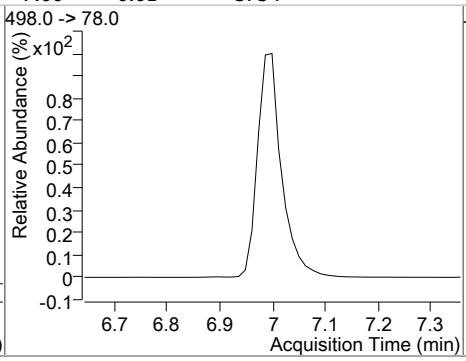


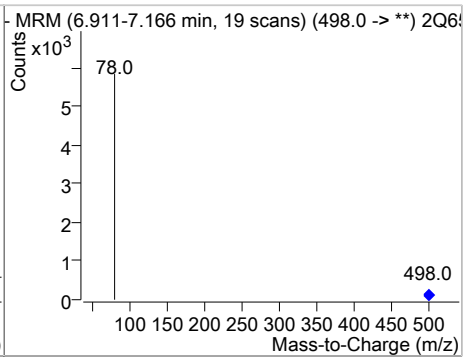




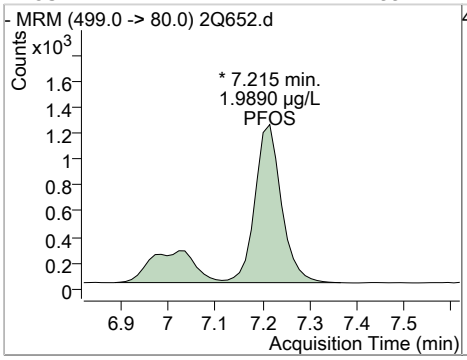
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	2.02	7.00	0.01	3734				

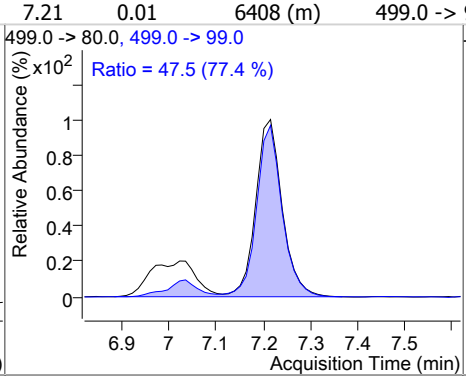


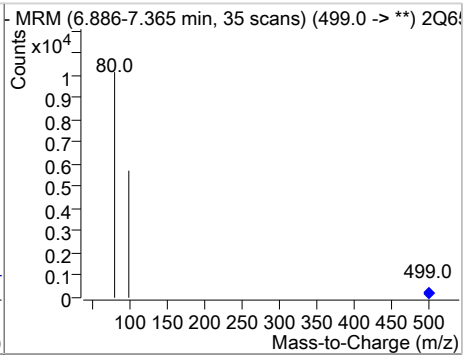




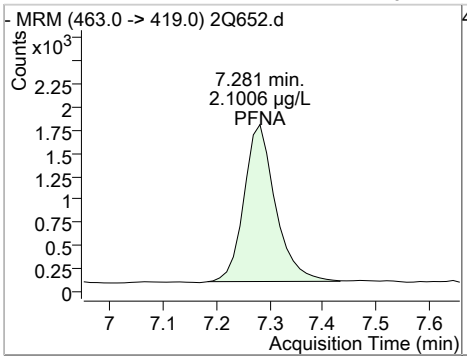
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	1.99	7.21	0.01	6408 (m)	499.0 -> 99.0	47.5	49.1	73.6

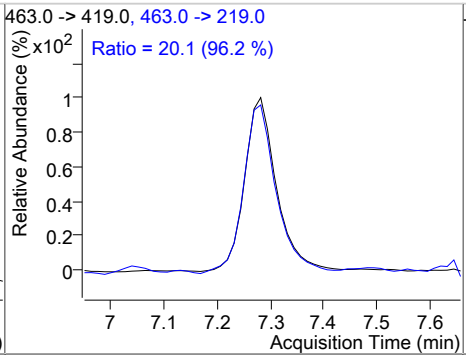


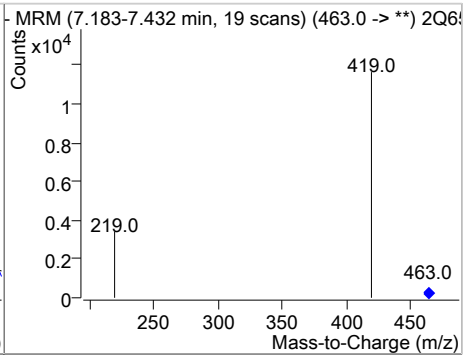




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	2.10	7.28	0.01	6918	463.0 -> 219.0	20.1	16.7	25.1



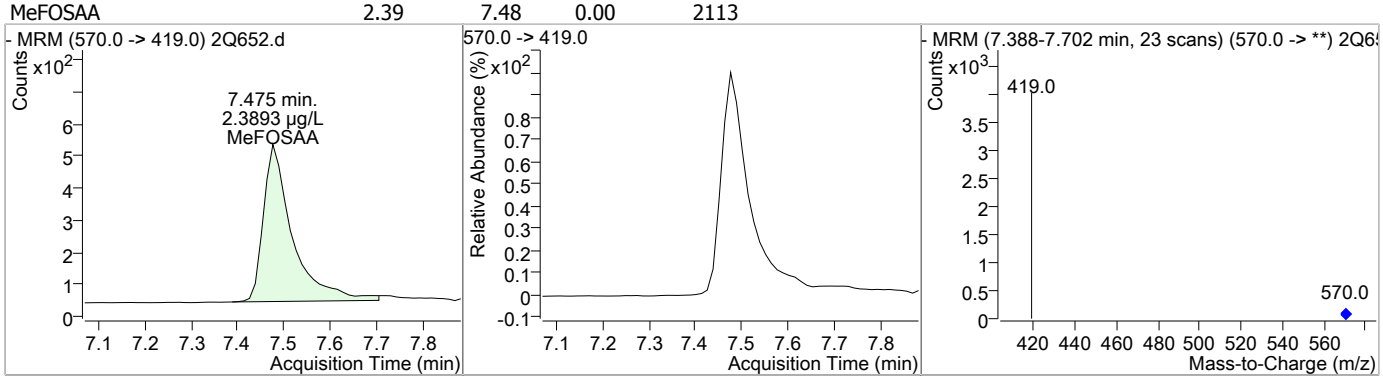




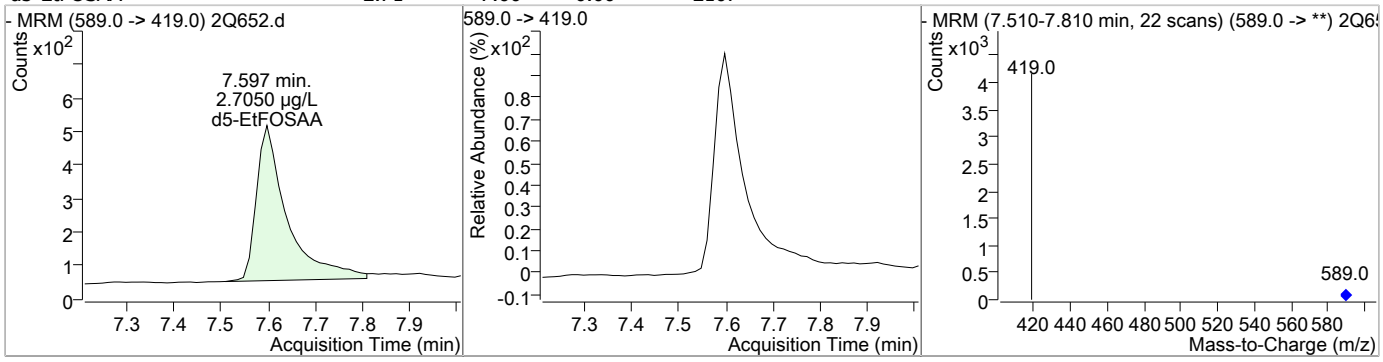
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

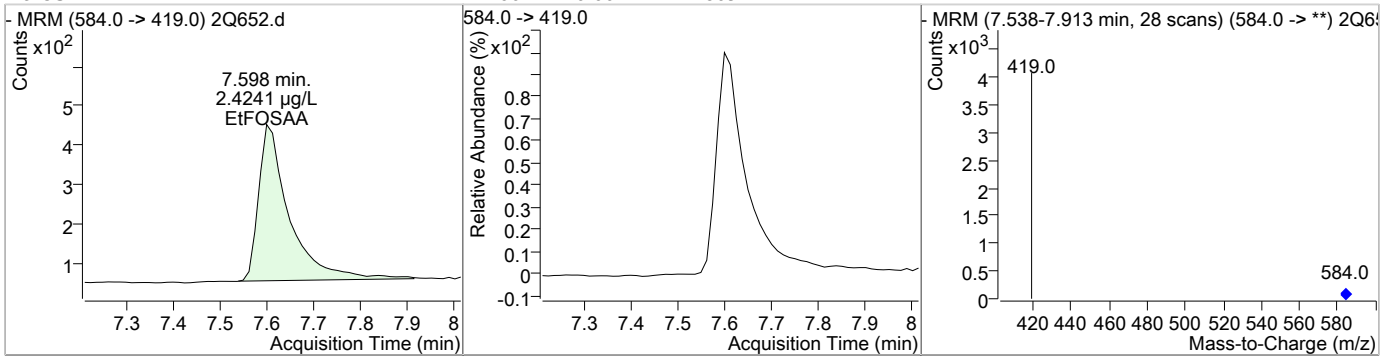
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	2.39	7.48	0.00	2113				



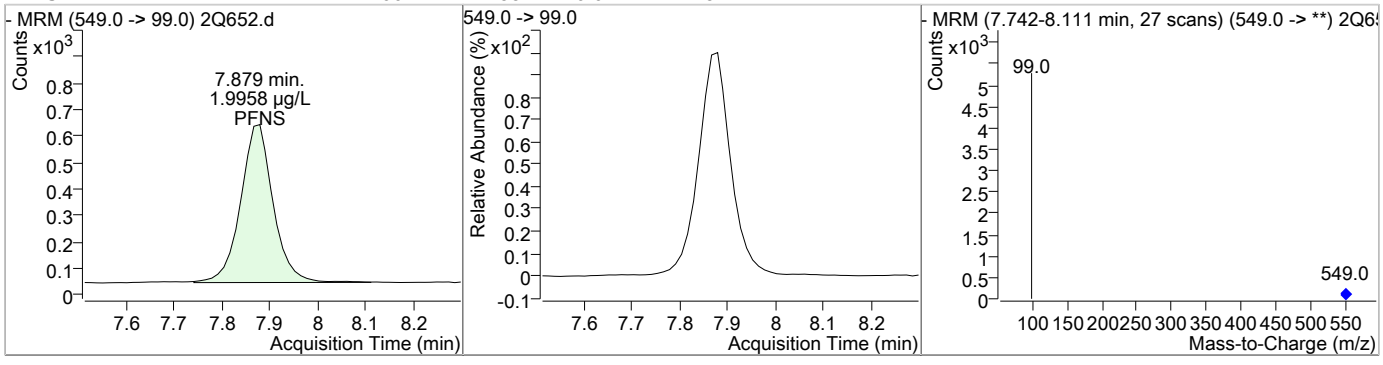
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	2.71	7.60	0.00	2107				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	2.42	7.60	0.00	1809				



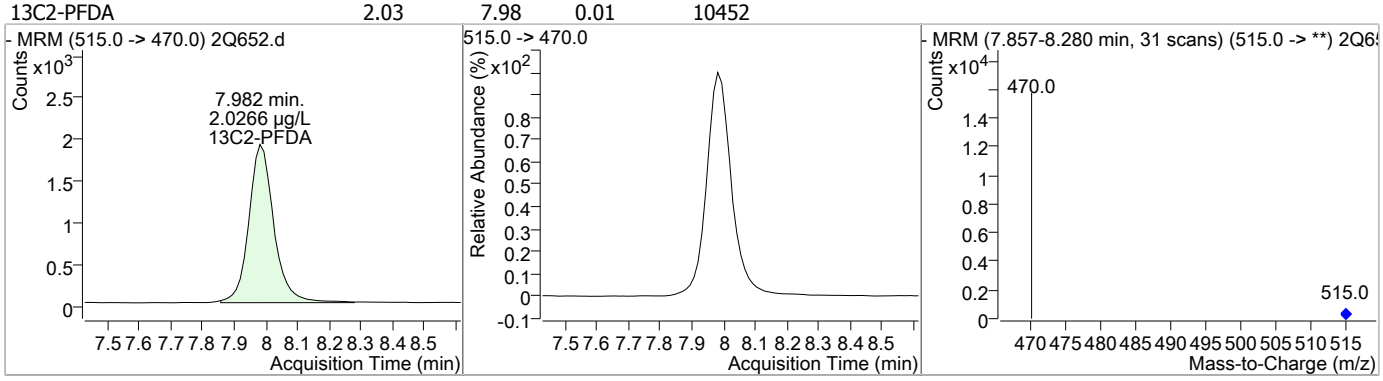
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	2.00	7.88	0.01	2814				



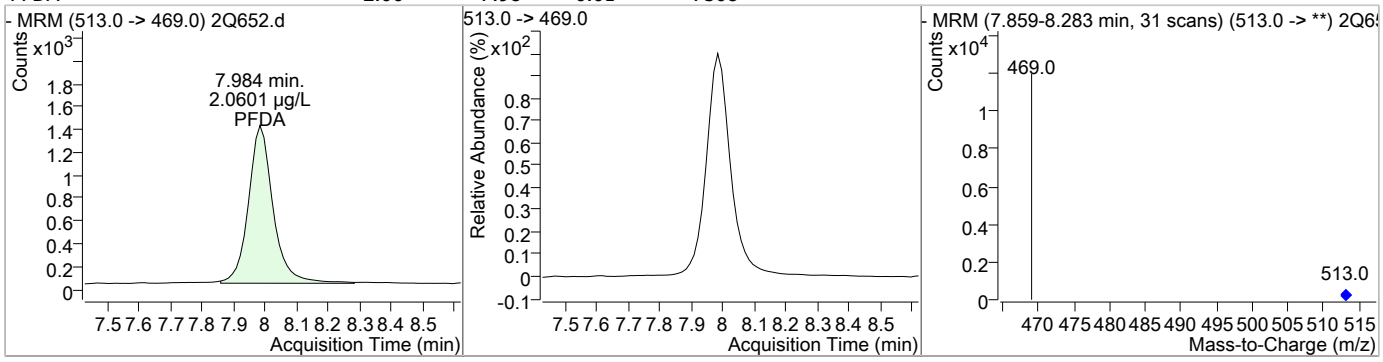
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

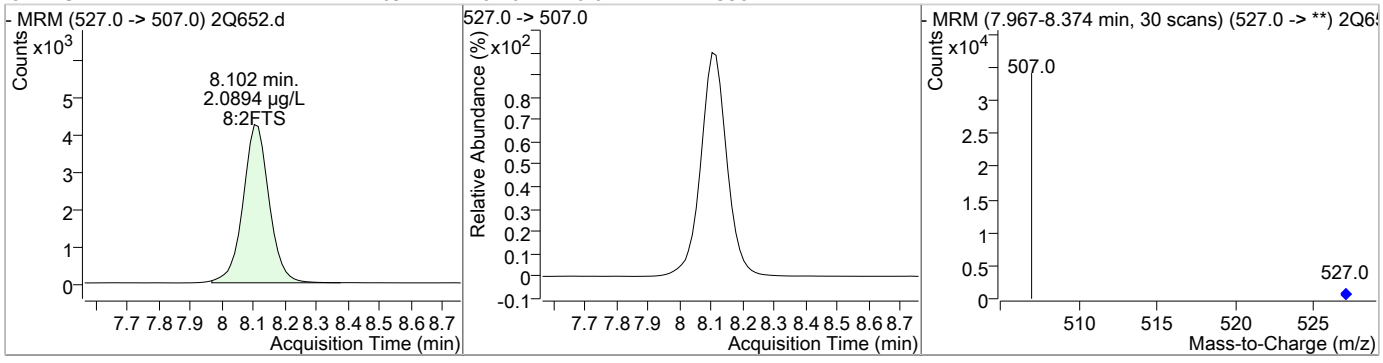
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	2.03	7.98	0.01	10452				



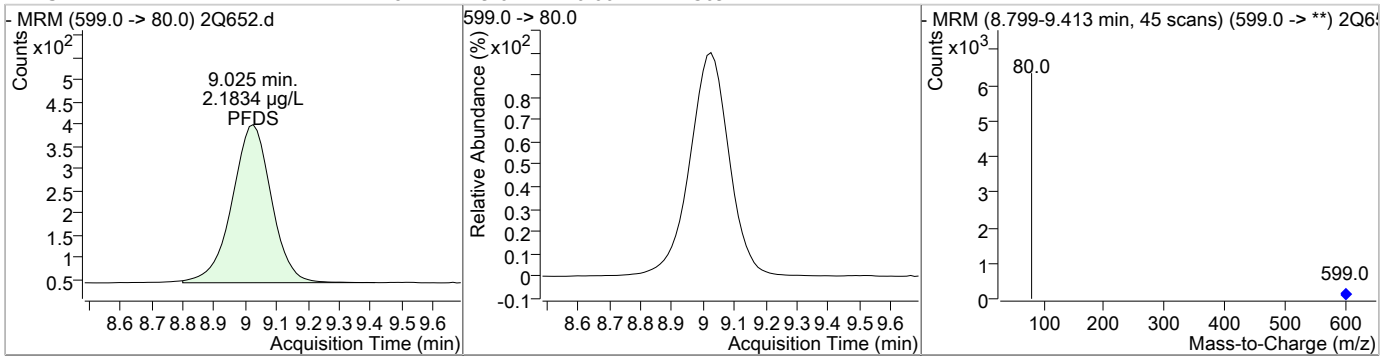
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	2.06	7.98	0.01	7508				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	2.09	8.10	0.01	24338				



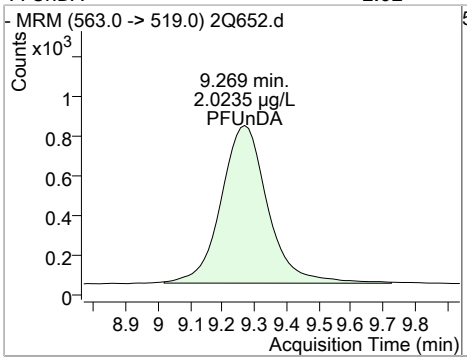
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	2.18	9.02	0.00	3097				

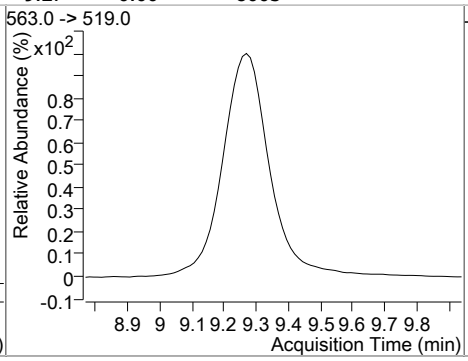


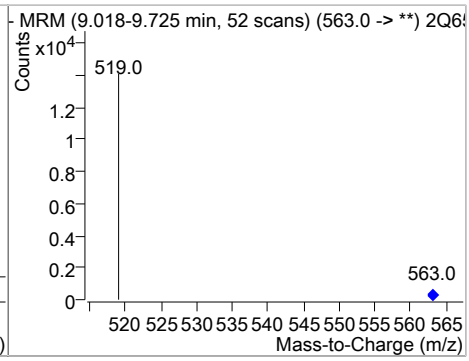
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

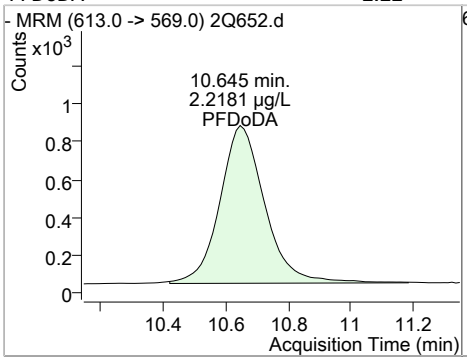
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	2.02	9.27	0.00	8003				

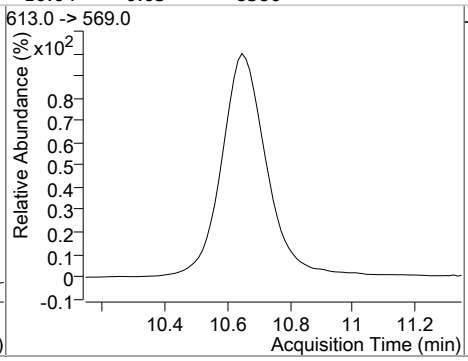


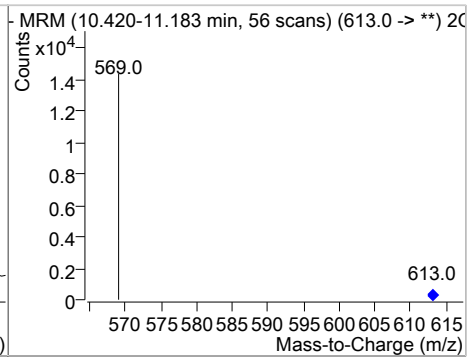




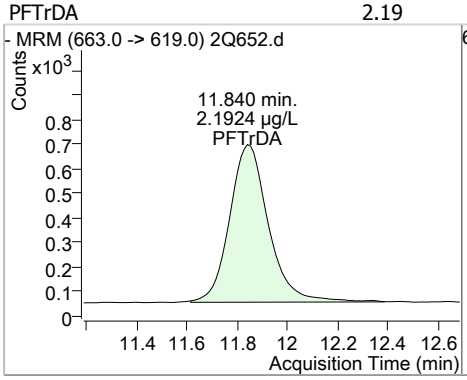
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	2.22	10.64	-0.03	8380				

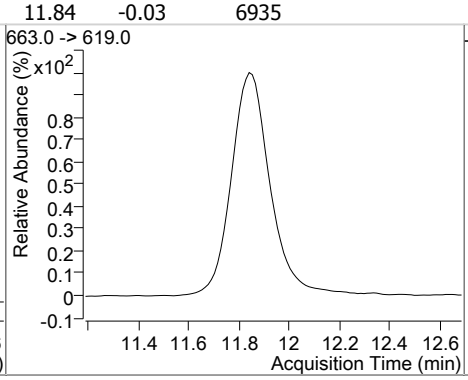


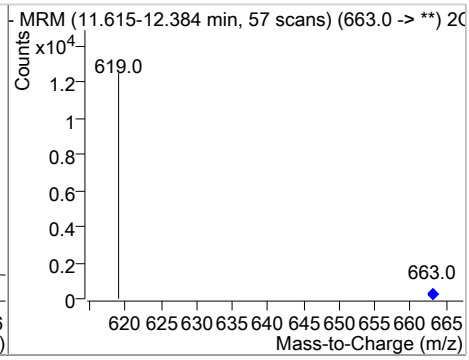




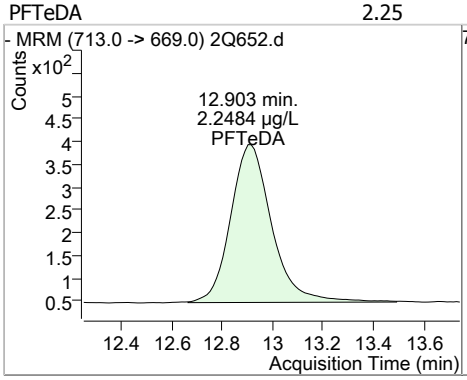
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	2.19	11.84	-0.03	6935				

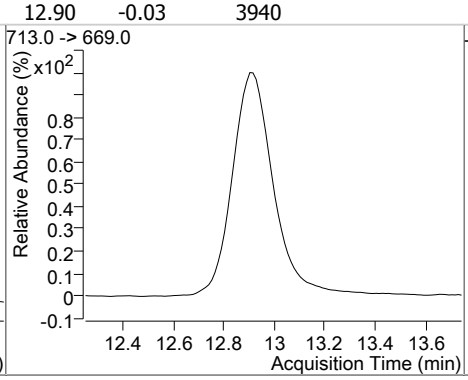


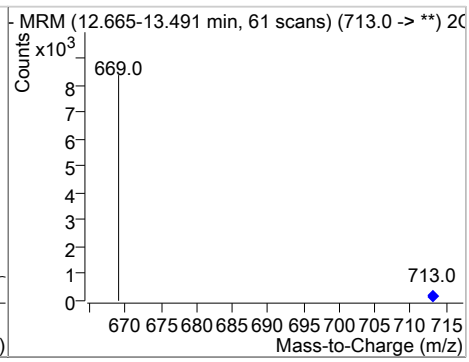




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	2.25	12.90	-0.03	3940				







Manual Integration Approval Summary

Sample Number:	S2Q18-IC18	**Method:**	EPA 537 MOD	
Lab FileID:	2Q652.D	**Analyst approved:**	04/21/17 09:46	Nancy Saunders
Injection Time:	04/20/17 12:14	**Supervisor approved:**	04/21/17 11:22	Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.97	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.21	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/21/17 11:22

Perfluorinated Compounds by LC/MS/MS

Data File : 2Q653.d
Operator : NANCYF
Acq. Method : dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time : 4/20/2017 12:33:51 PM
Sample Name : IC18-5
Vial : Vial 4
DA Method File : PFCLISTDW_0420_S2Q18.m
Batch Name : S2Q18.batch.bin
Last Calib Update : 4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	6.660	429.0 -> 409.0	149408	20.00	µg/L		0.013
13C2-PFDoDA	10.651	615.0 -> 570.0	89183	20.00	µg/L		-0.013
13C2-PFOA	6.651	415.0 -> 370.0	74588	20.00	µg/L		0.013
13C3-PFPeA	4.234	266.0 -> 222.0	74514	20.00	µg/L		0.000
13C4-PFOS	7.214	503.0 -> 80.0	56334	20.00	µg/L		0.014
d3-MeFOSAA	7.474	573.0 -> 419.0	32584	20.00	µg/L		0.000
System Monitoring Compounds							
13C2-PFDA	7.982	515.0 -> 470.0	25239	4.84	µg/L		0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 24.2%			
13C2-PFHxA	5.210	315.0 -> 270.0	19144	4.86	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 24.3%			
d5-EtFOSAA	7.597	589.0 -> 419.0	4389	5.86	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 29.3%			
Target Compounds							**QValue**
4:2FTS	5.132	327.0 -> 307.0	19964	5.29	µg/L		100
6:2FTS	6.649	427.0 -> 407.0	39875	5.52	µg/L		100
8:2FTS	8.102	527.0 -> 507.0	62098	5.19	µg/L		100
EtFOSAA	7.598	584.0 -> 419.0	3997	5.60	µg/L		100
FOSA	6.986	498.0 -> 78.0	9105	5.20	µg/L		100
MeFOSAA	7.475	570.0 -> 419.0	4778	5.61	µg/L		100
PFBA	2.940	213.0 -> 169.0	9579	4.88	µg/L		100
PFBS	4.353	299.0 -> 80.0	10925	4.86	µg/L		100
PFDA	7.971	513.0 -> 469.0	18022	4.89	µg/L		100
PFDoDA	10.645	613.0 -> 569.0	20252	5.38	µg/L		100
PFDS	9.025	599.0 -> 80.0	7692	5.33	µg/L		100
PFHpA	5.986	363.0 -> 319.0	26345	5.19	µg/L	#	93
PFHpS	6.607	449.0 -> 80.0	11503	4.82	µg/L		100
PFHxA	5.212	313.0 -> 269.0	9120	5.39	µg/L	#	86
PFHxS	5.968	399.0 -> 80.0	11419	4.85	µg/L	m	93
PFNA	7.269	463.0 -> 419.0	17156	5.15	µg/L		97
PFNS	7.867	549.0 -> 99.0	7047	4.95	µg/L		100
PFOA	6.652	413.0 -> 369.0	15593	5.03	µg/L		99
PFOS	7.201	499.0 -> 80.0	16099	4.95	µg/L	m	85
PFPeA	4.238	263.0 -> 219.0	27861	4.93	µg/L		100
PFPeS	5.255	349.0 -> 99.0	3487	4.92	µg/L		100
PFTeDA	12.903	713.0 -> 669.0	9627	5.50	µg/L		100
PFTrDA	11.840	663.0 -> 619.0	17193	5.44	µg/L		100
PFUnDA	9.269	563.0 -> 519.0	19572	5.00	µg/L		100

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

Perfluorinated Compounds by LC/MS/MS

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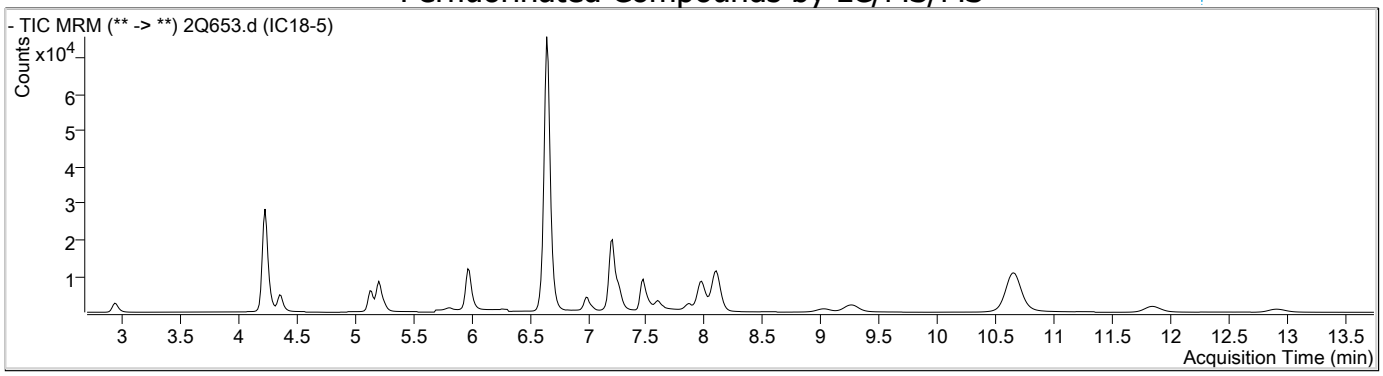
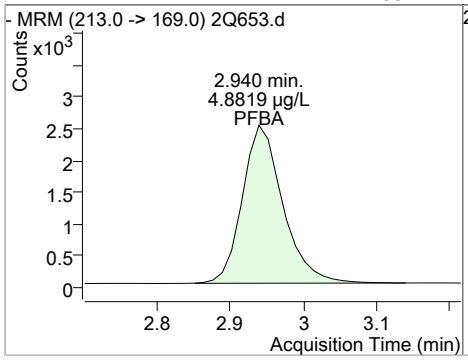
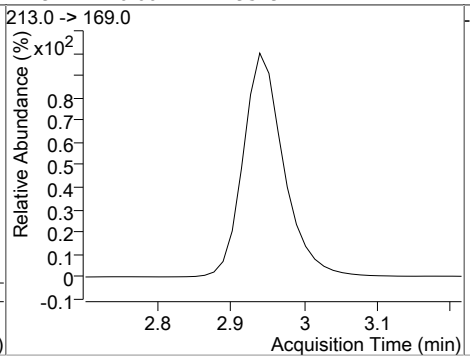
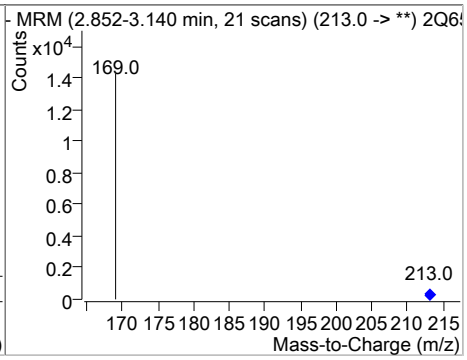


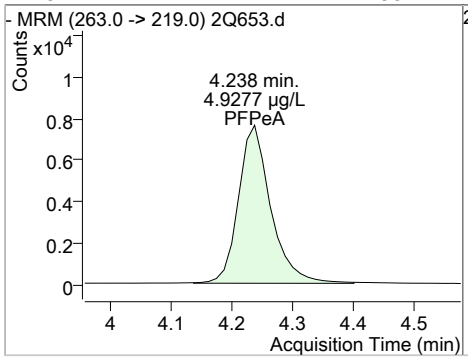
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	4.88	2.94	0.00	9579				

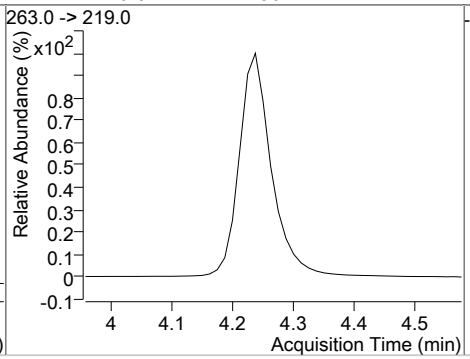


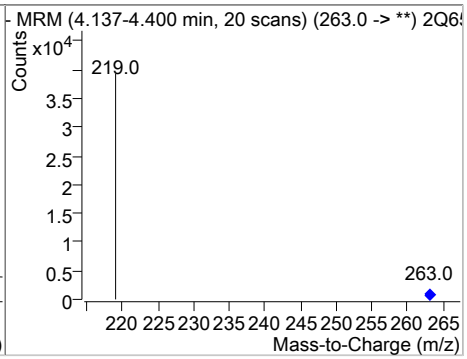




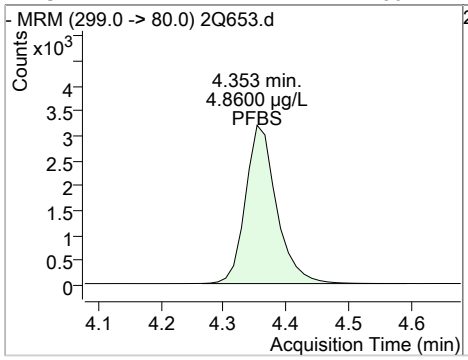
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	4.93	4.24	0.01	27861				

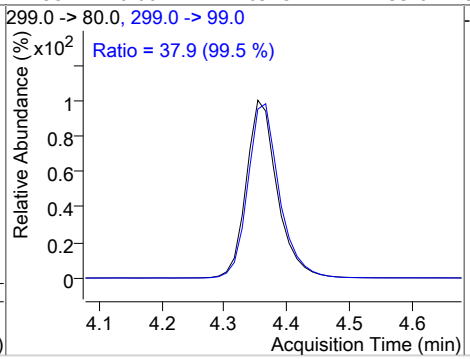


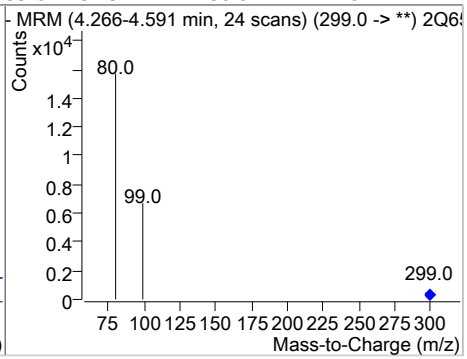




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	4.86	4.35	0.00	10925	299.0 -> 99.0	37.9	30.5	45.7







Perfluorinated Compounds by LC/MS/MS

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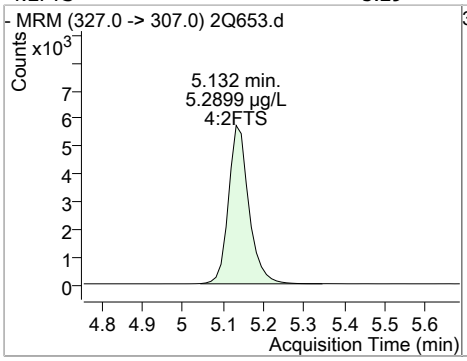
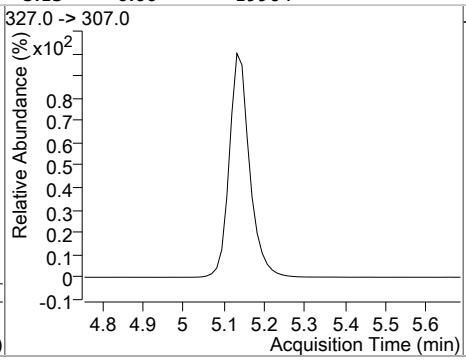
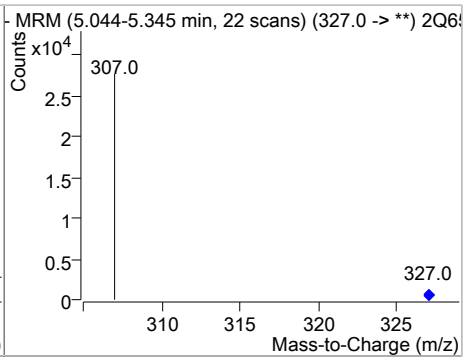
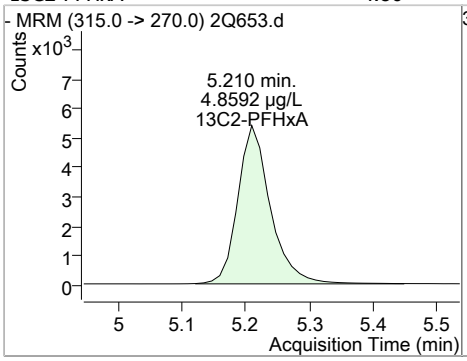
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	5.29	5.13	0.00	19964				

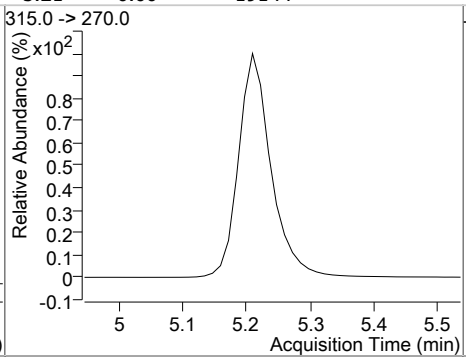


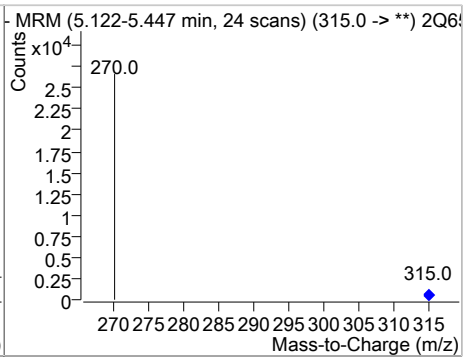




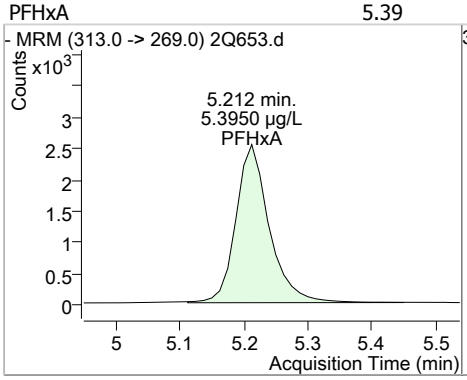
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	4.86	5.21	0.00	19144				

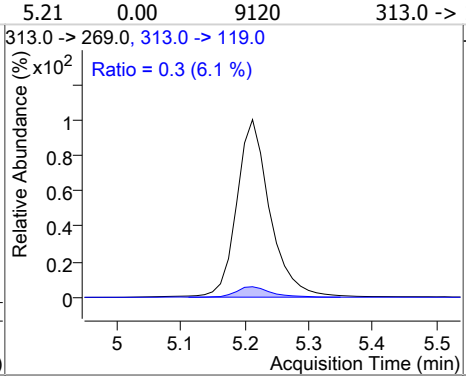


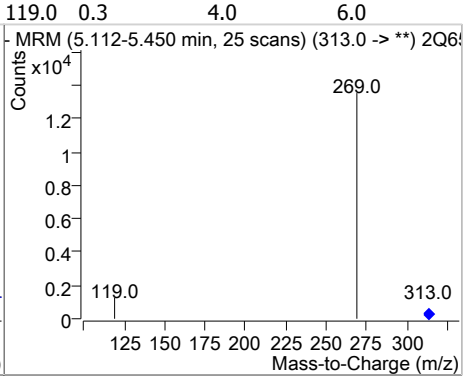




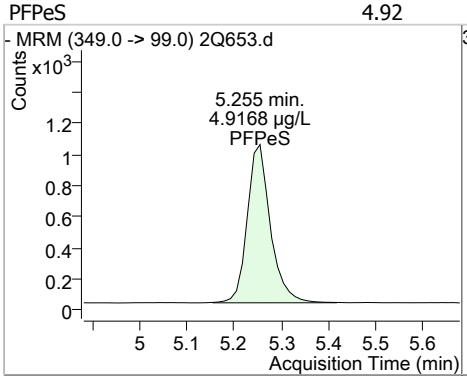
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	5.39	5.21	0.00	9120	313.0 -> 119.0	0.3	4.0	6.0

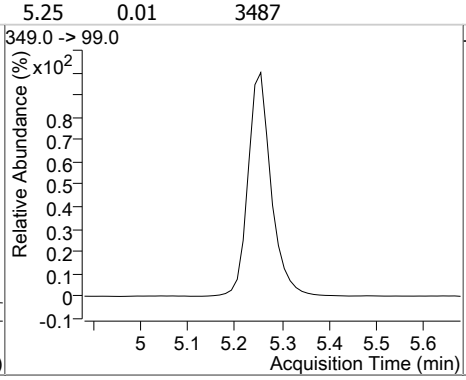


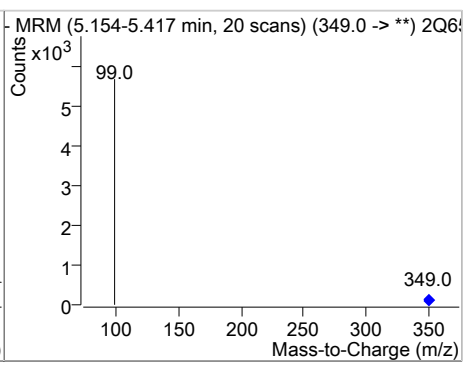




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	4.92	5.25	0.01	3487				







Perfluorinated Compounds by LC/MS/MS

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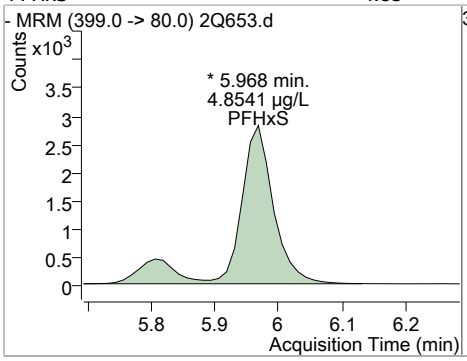
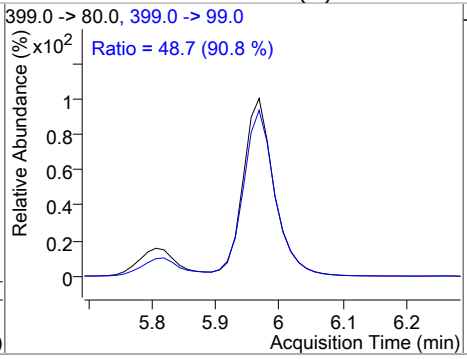
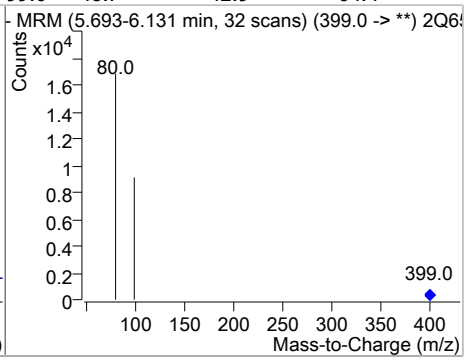
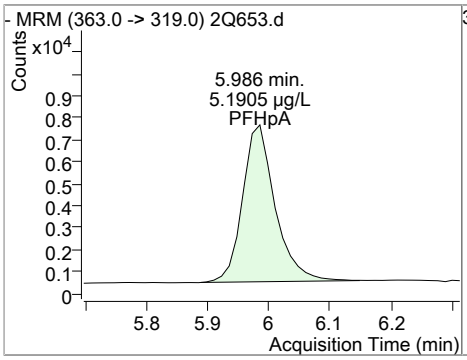
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	4.85	5.97	0.00	11419 (m)	399.0 -> 99.0	48.7	42.9	64.4

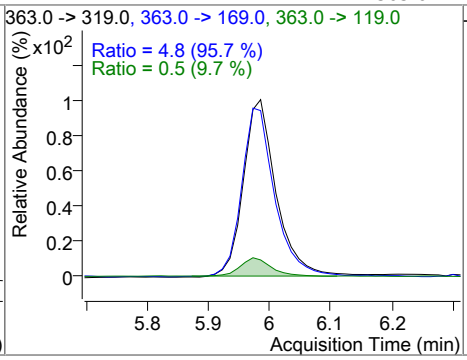


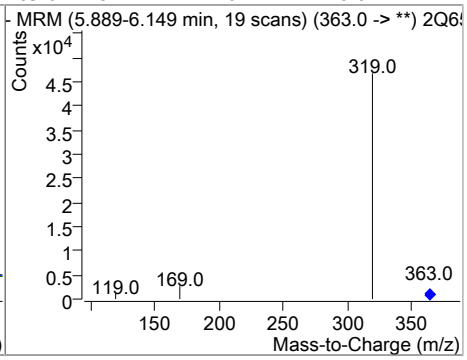




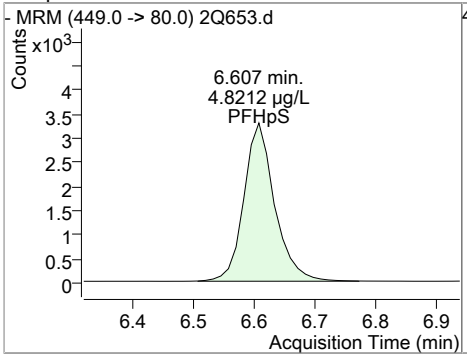
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	5.19	5.99	0.00	26345	363.0 -> 119.0	0.5	4.0	6.0
					363.0 -> 169.0	4.8	4.0	6.0

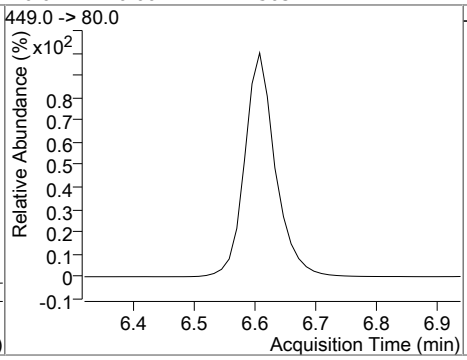


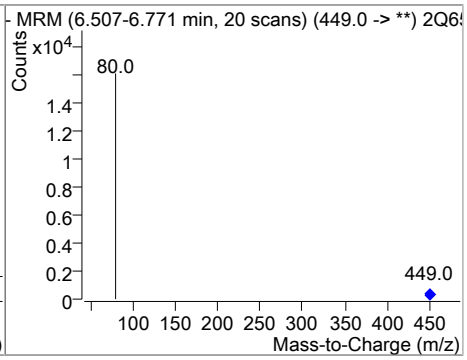




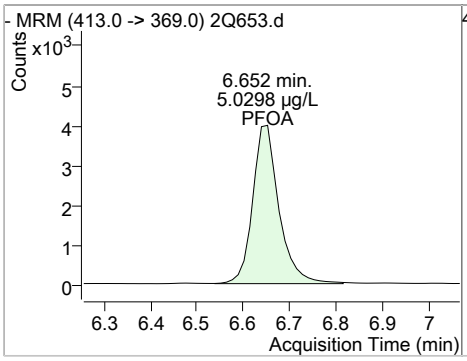
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	4.82	6.61	0.00	11503				

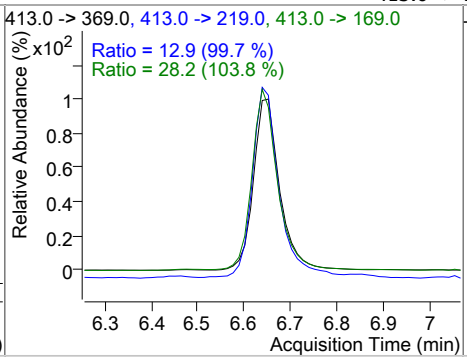


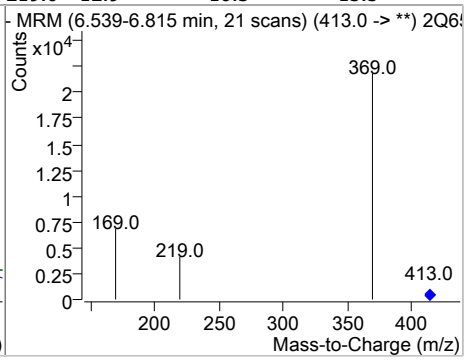




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	5.03	6.65	0.01	15593	413.0 -> 169.0	28.2	21.8	32.6
					413.0 -> 219.0	12.9	10.3	15.5







Perfluorinated Compounds by LC/MS/MS

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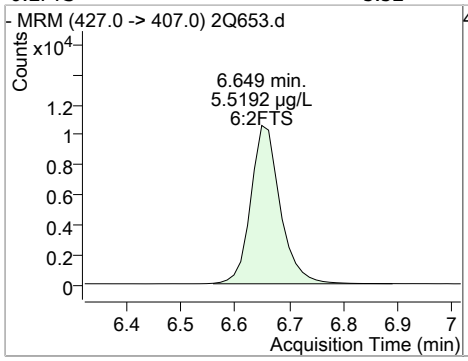
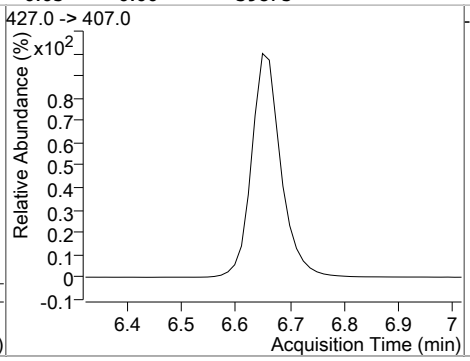
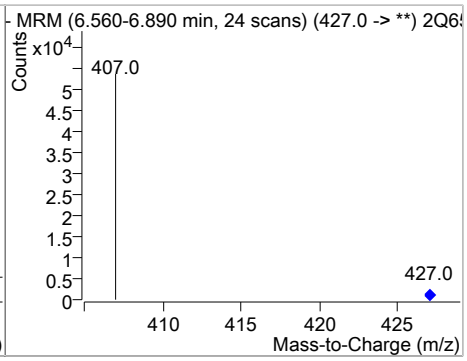
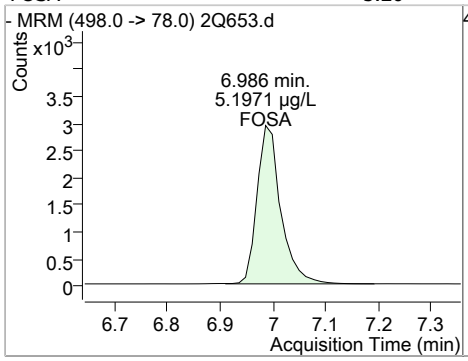
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	5.52	6.65	0.00	39875				

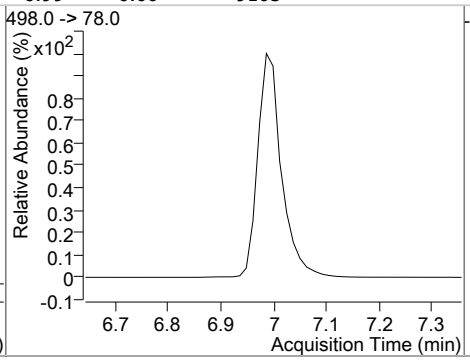


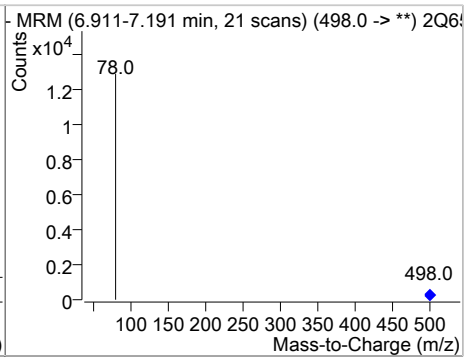




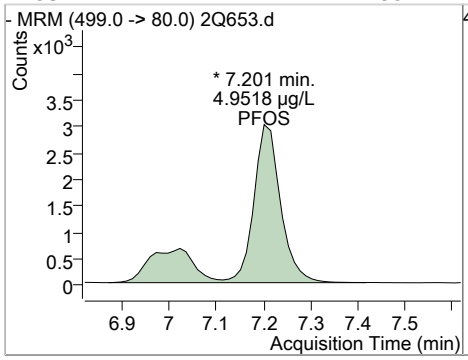
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	5.20	6.99	0.00	9105				

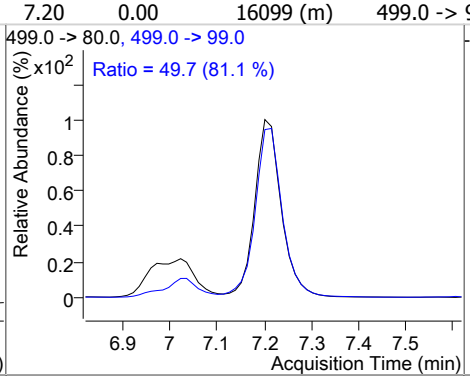


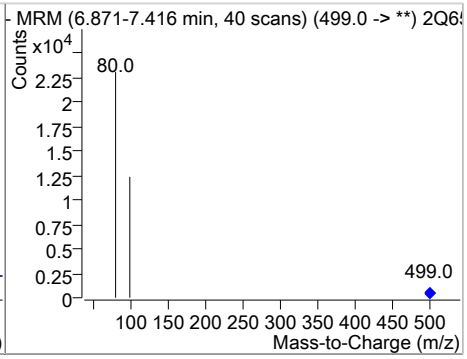




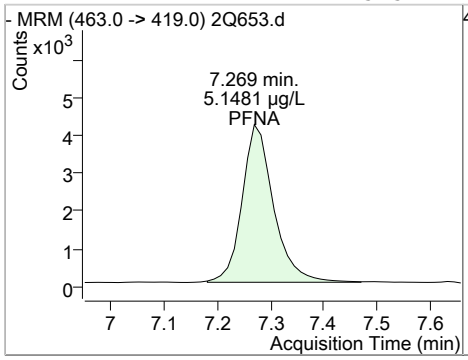
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	4.95	7.20	0.00	16099 (m)	499.0 -> 99.0	49.7	49.1	73.6

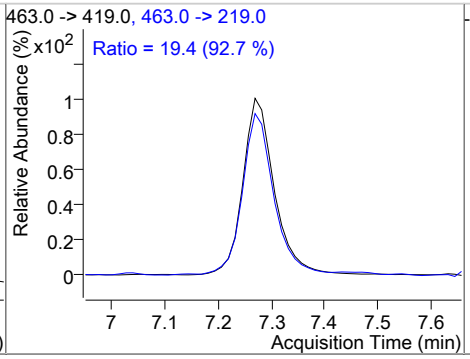


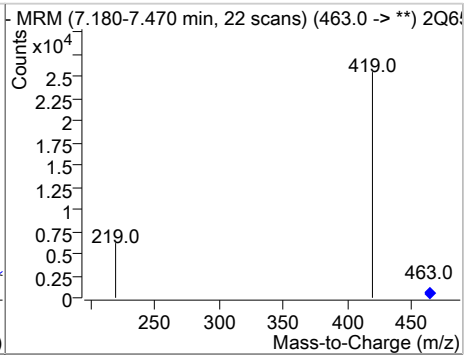




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	5.15	7.27	0.00	17156	463.0 -> 219.0	19.4	16.7	25.1



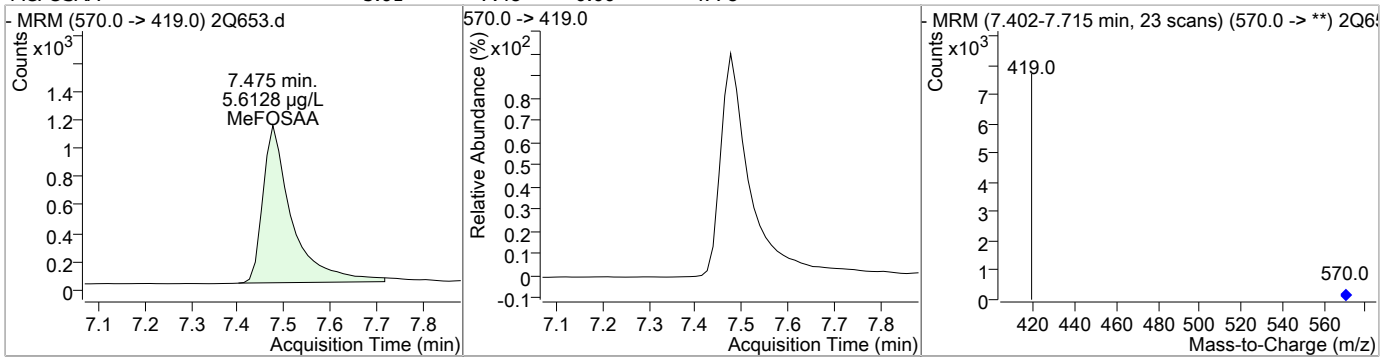




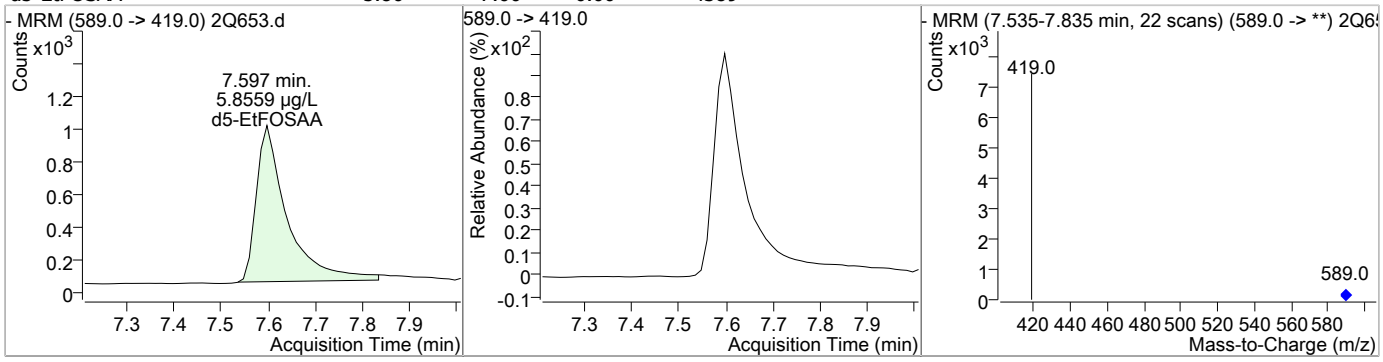
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

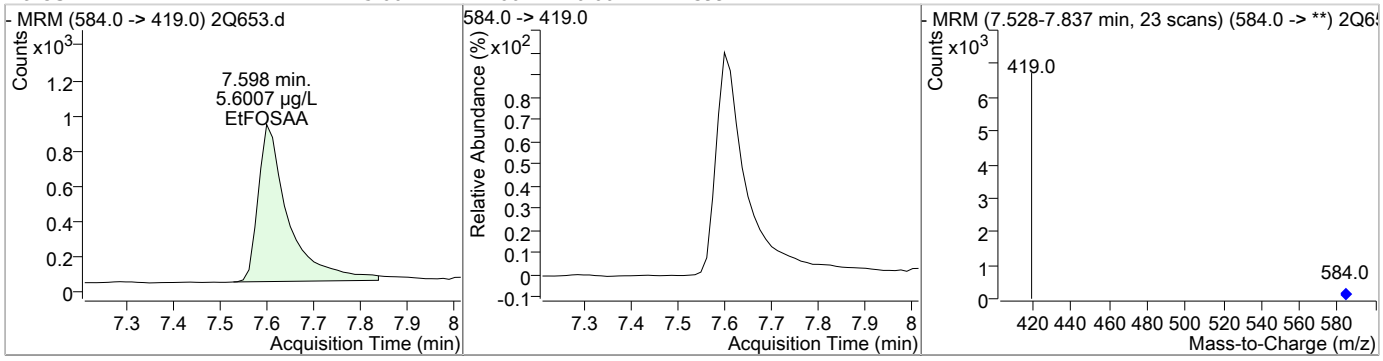
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	5.61	7.48	0.00	4778				



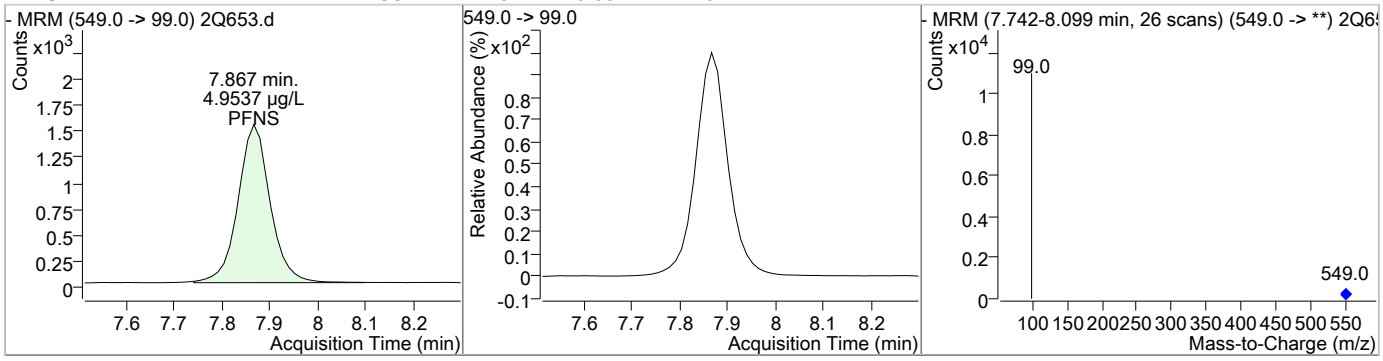
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	5.86	7.60	0.00	4389				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	5.60	7.60	0.00	3997				



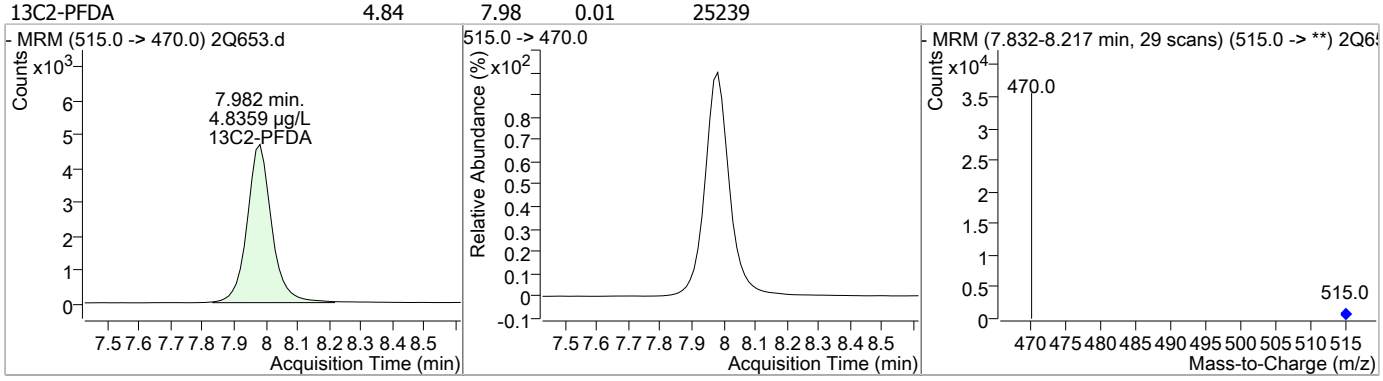
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	4.95	7.87	0.00	7047				



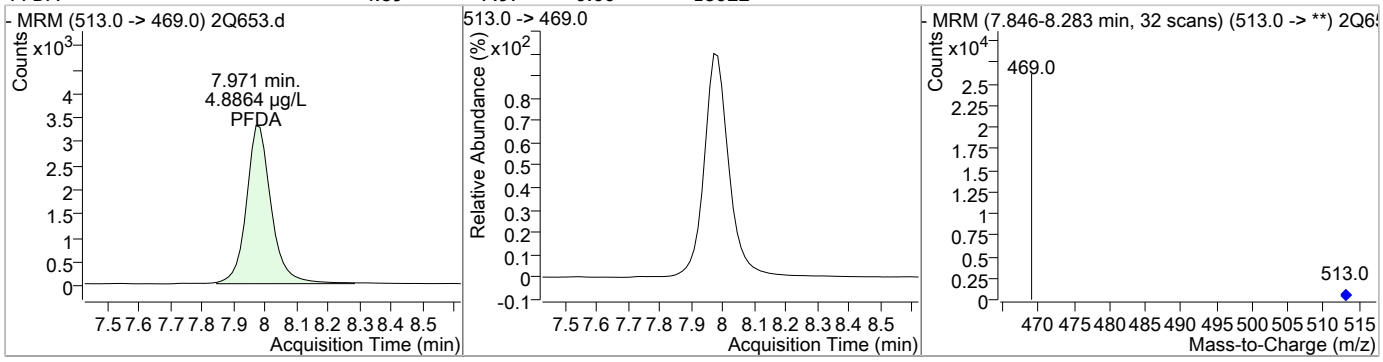
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

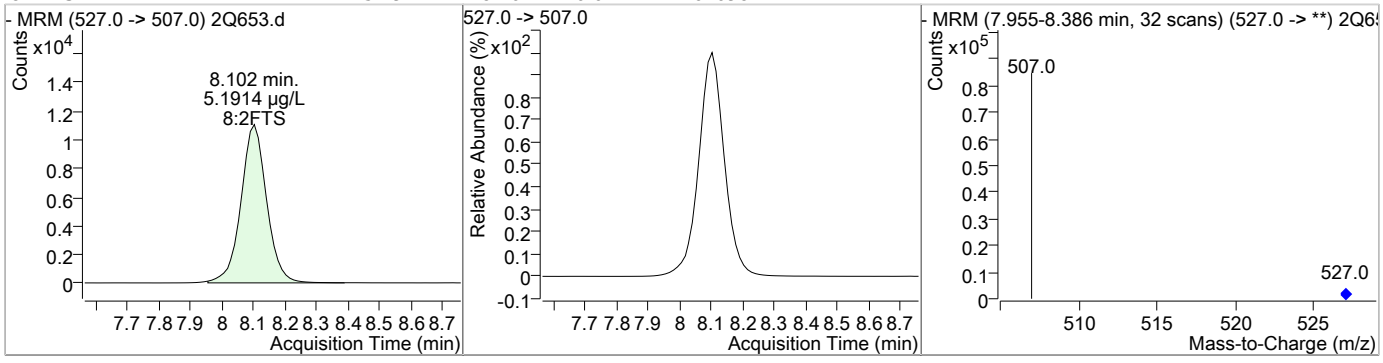
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	4.84	7.98	0.01	25239				



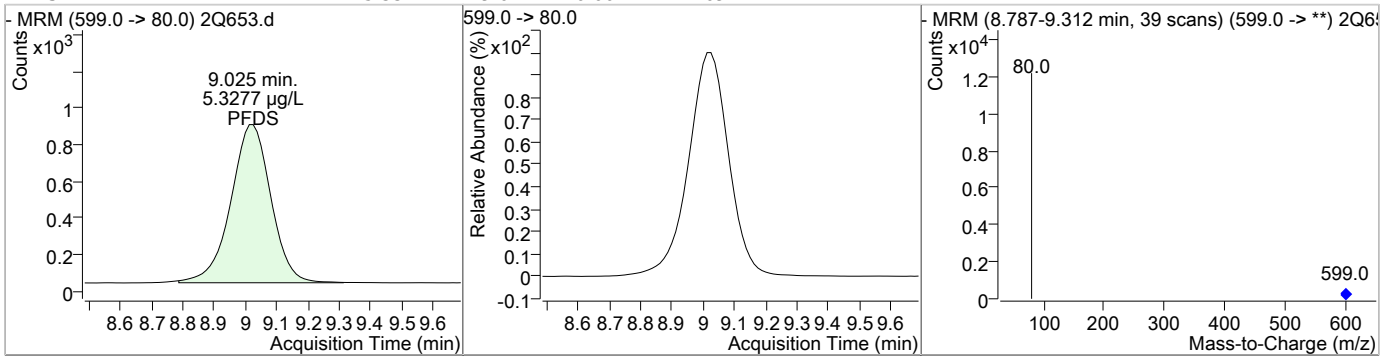
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	4.89	7.97	0.00	18022				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	5.19	8.10	0.01	62098				



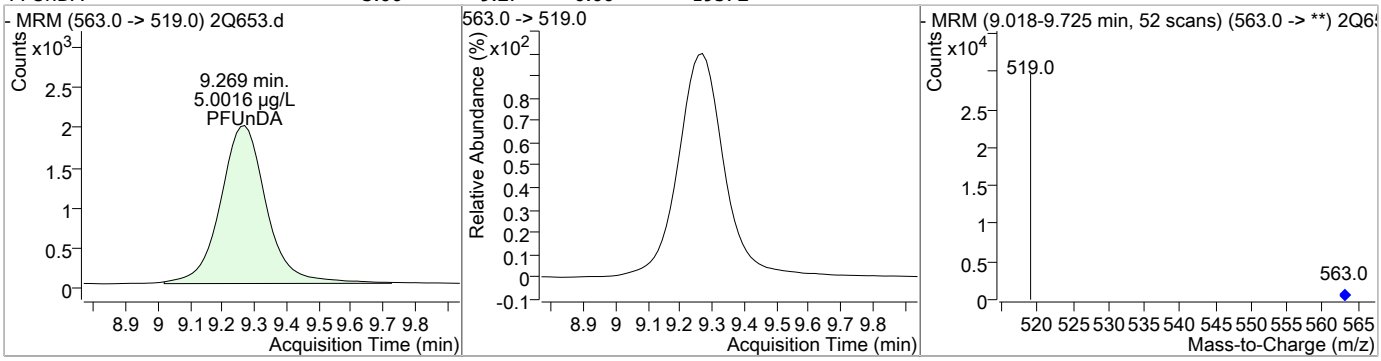
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	5.33	9.02	0.00	7692				



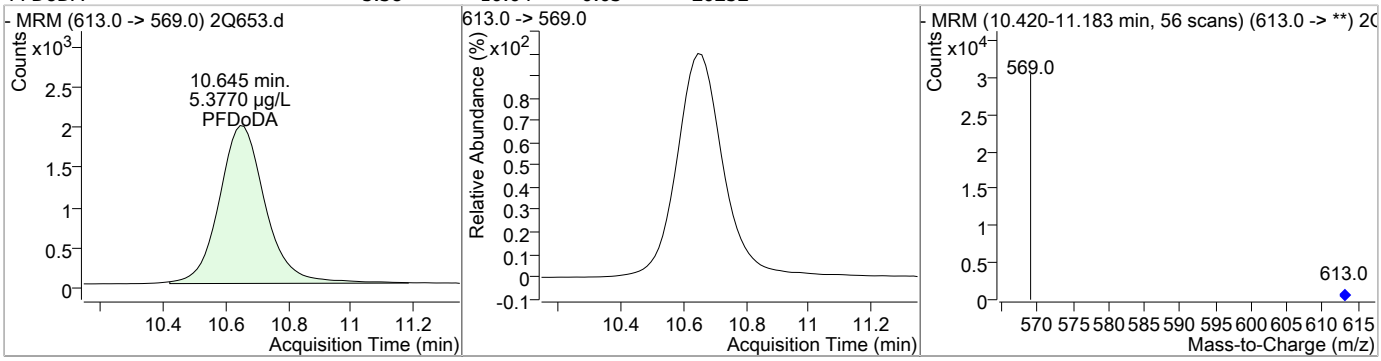
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

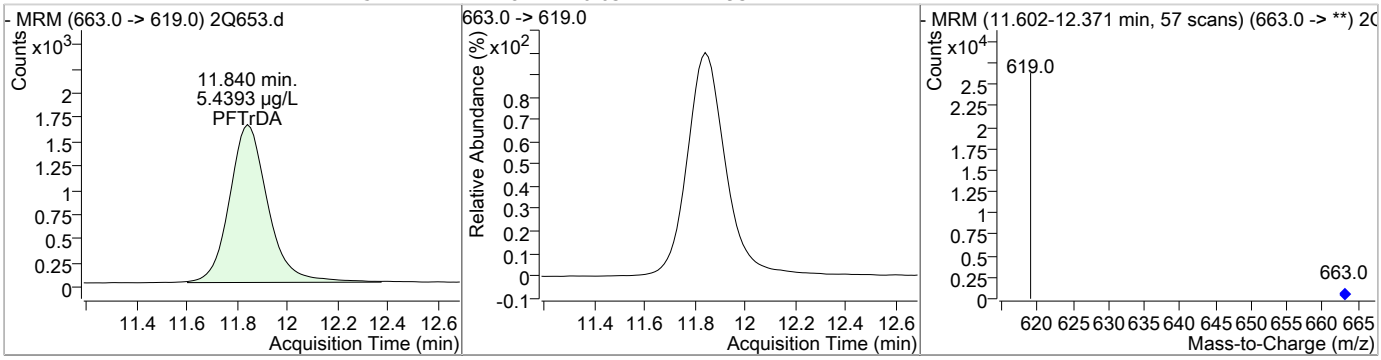
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	5.00	9.27	0.00	19572				



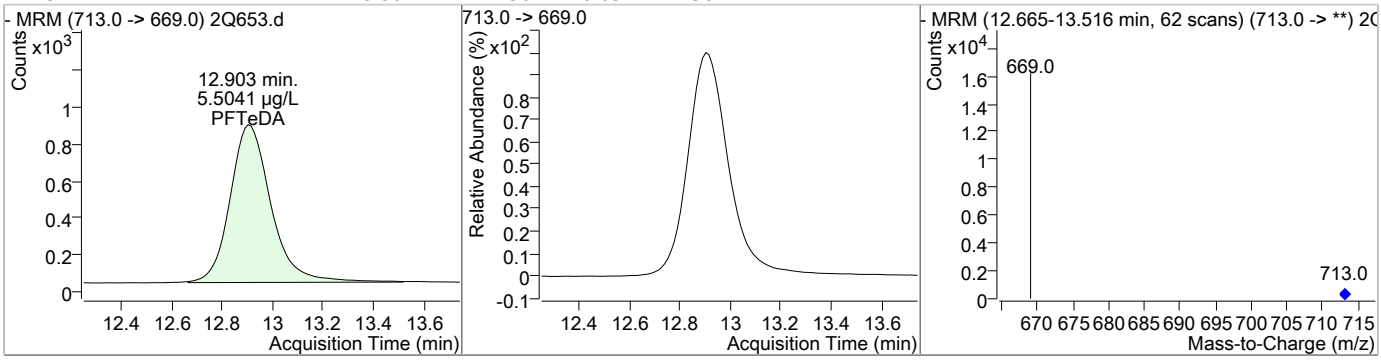
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	5.38	10.64	-0.03	20252				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	5.44	11.84	-0.03	17193				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	5.50	12.90	-0.03	9627				



Manual Integration Approval Summary

Sample Number:	S2Q18-IC18	**Method:**	EPA 537 MOD	
Lab FileID:	2Q653.D	**Analyst approved:**	04/21/17 09:46	Nancy Saunders
Injection Time:	04/20/17 12:33	**Supervisor approved:**	04/21/17 11:22	Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.97	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.20	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/21/17 11:22

Perfluorinated Compounds by LC/MS/MS

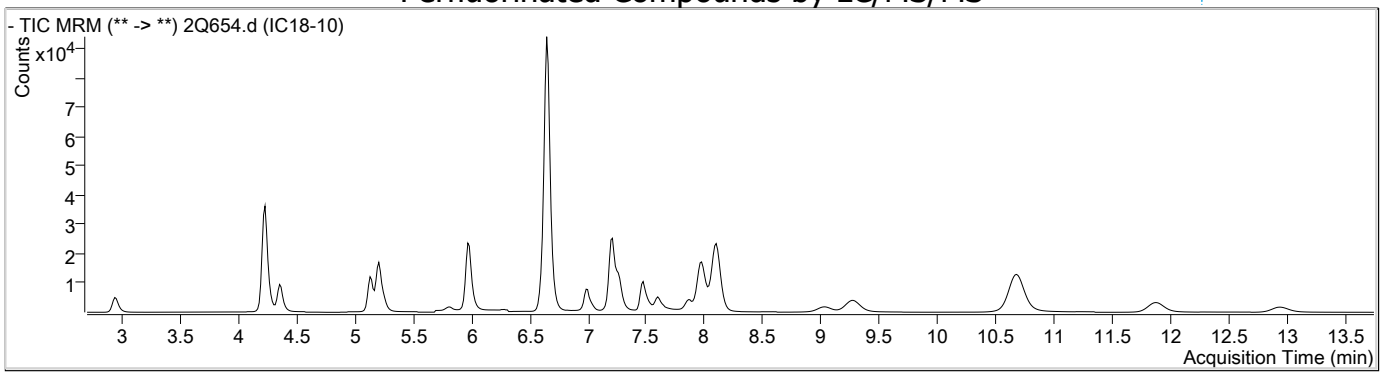
Data File : 2Q654.d
Operator : NANCYF
Acq. Method : dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time : 4/20/2017 12:53:35 PM
Sample Name : IC18-10
Vial : Vial 5
DA Method File : PFCLISTDW_0420_S2Q18.m
Batch Name : S2Q18.batch.bin
Last Calib Update : 4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	6.660	429.0 -> 409.0	151398	20.00	µg/L		0.013
13C2-PFDoDA	10.676	615.0 -> 570.0	90119	20.00	µg/L		0.013
13C2-PFOA	6.651	415.0 -> 370.0	75500	20.00	µg/L		0.013
13C3-PFPeA	4.234	266.0 -> 222.0	74532	20.00	µg/L		0.000
13C4-PFOS	7.214	503.0 -> 80.0	56977	20.00	µg/L		0.014
d3-MeFOSAA	7.474	573.0 -> 419.0	34214	20.00	µg/L		0.000
System Monitoring Compounds							
13C2-PFDA	7.982	515.0 -> 470.0	51879	9.82	µg/L		0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 49.1%			
13C2-PFHxA	5.210	315.0 -> 270.0	39125	9.81	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 49.1%			
d5-EtFOSAA	7.597	589.0 -> 419.0	8943	11.08	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 55.4%			
Target Compounds							**QValue**
4:2FTS	5.132	327.0 -> 307.0	40678	10.64	µg/L		100
6:2FTS	6.649	427.0 -> 407.0	79916	10.92	µg/L		100
8:2FTS	8.102	527.0 -> 507.0	128092	10.57	µg/L		100
EtFOSAA	7.598	584.0 -> 419.0	7765	10.22	µg/L		100
FOSA	6.986	498.0 -> 78.0	18892	10.27	µg/L		100
MeFOSAA	7.475	570.0 -> 419.0	10408	11.32	µg/L		100
PFBA	2.940	213.0 -> 169.0	19476	9.81	µg/L		100
PFBS	4.353	299.0 -> 80.0	22215	9.77	µg/L		100
PFDA	7.971	513.0 -> 469.0	36869	9.88	µg/L		100
PFDoDA	10.670	613.0 -> 569.0	41408	10.74	µg/L		100
PFDS	9.025	599.0 -> 80.0	15632	10.55	µg/L		100
PFHpA	5.986	363.0 -> 319.0	53261	10.29	µg/L	#	93
PFHpS	6.607	449.0 -> 80.0	23423	9.71	µg/L		100
PFHxA	5.212	313.0 -> 269.0	17995	10.40	µg/L	#	86
PFHxS	5.968	399.0 -> 80.0	23060	9.69	µg/L	m	94
PFNA	7.269	463.0 -> 419.0	33687	9.99	µg/L		98
PFNS	7.867	549.0 -> 99.0	14200	9.87	µg/L		100
PFOA	6.639	413.0 -> 369.0	31431	10.02	µg/L		99
PFOS	7.201	499.0 -> 80.0	32188	9.79	µg/L	m	85
PFPeA	4.238	263.0 -> 219.0	56336	9.96	µg/L		100
PFPeS	5.242	349.0 -> 99.0	7019	9.89	µg/L		100
PFTeDA	12.928	713.0 -> 669.0	19571	10.91	µg/L		100
PFTrDA	11.865	663.0 -> 619.0	35228	10.85	µg/L		100
PFUnDA	9.269	563.0 -> 519.0	39980	10.11	µg/L		100

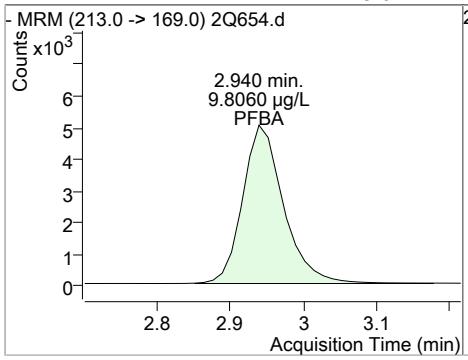
 # = Qualifier out of range, m = manually integrated, + = Area summed

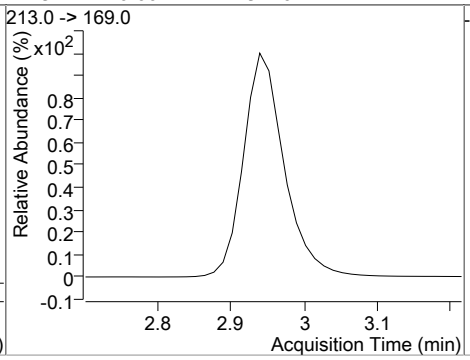
Perfluorinated Compounds by LC/MS/MS

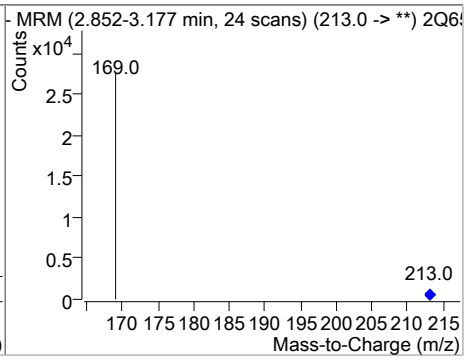
Agilent Technologies



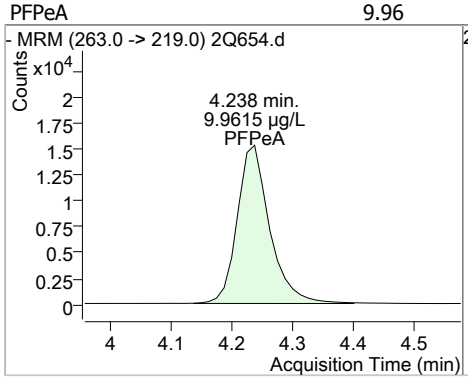
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	9.81	2.94	0.00	19476				

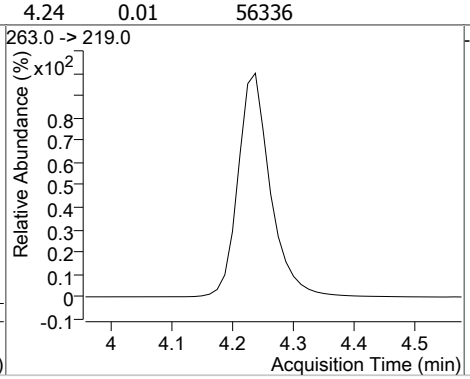


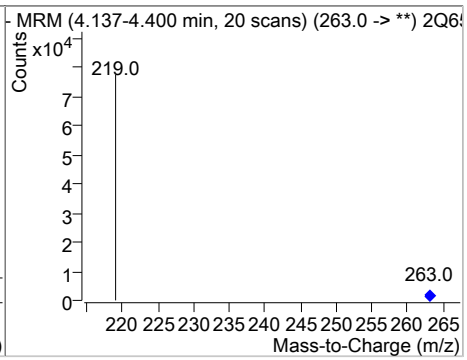




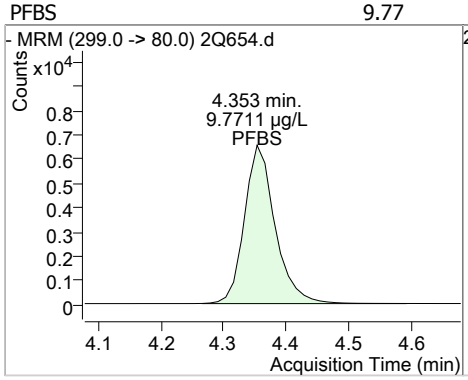
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	9.96	4.24	0.01	56336				

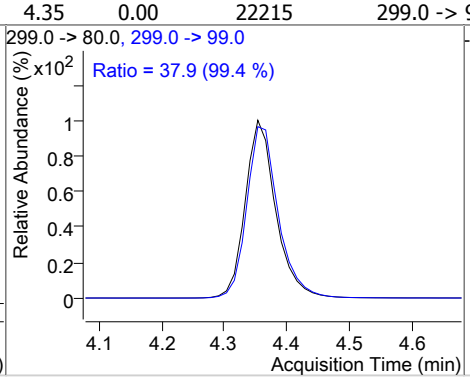


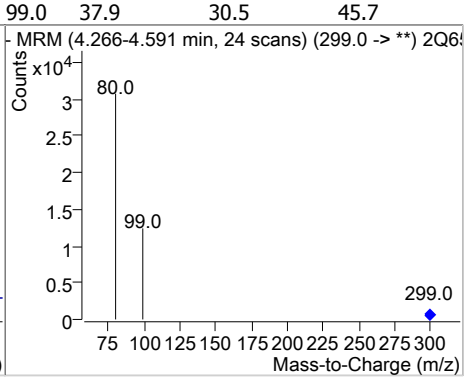




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	9.77	4.35	0.00	22215	299.0 -> 99.0	37.9	30.5	45.7



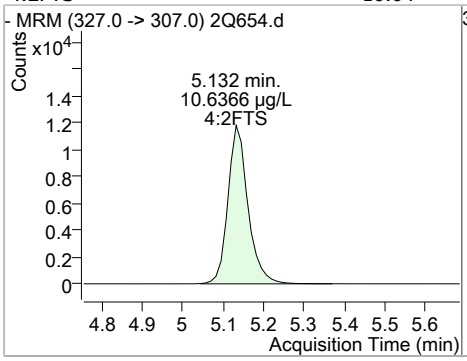


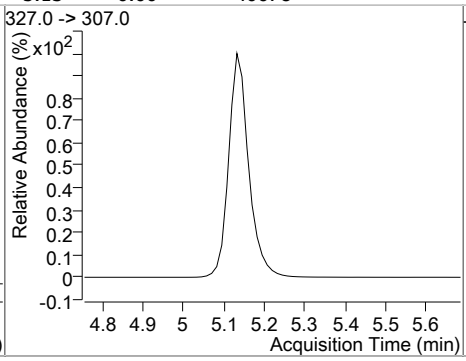


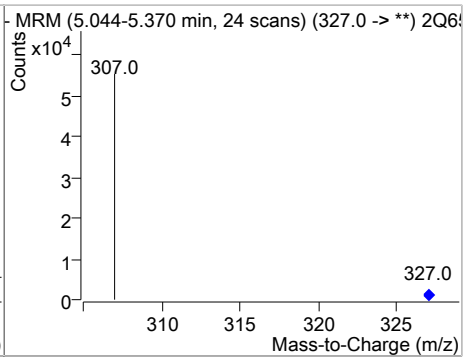
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

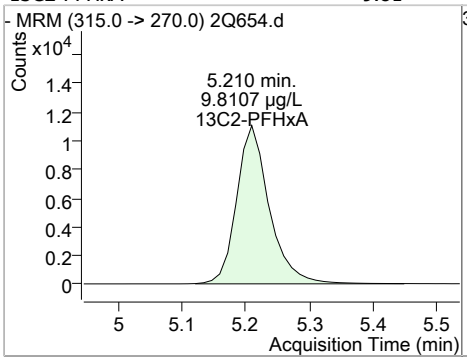
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	10.64	5.13	0.00	40678				

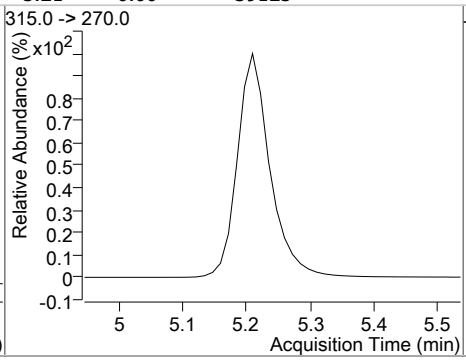


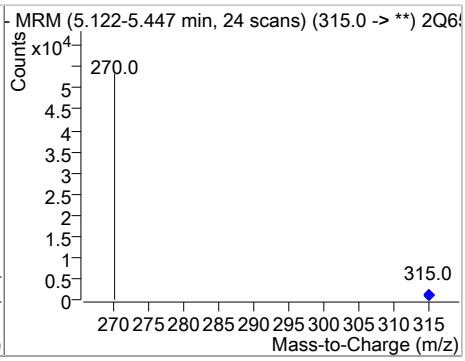




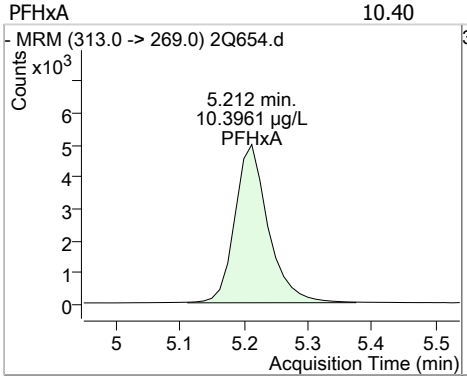
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	9.81	5.21	0.00	39125				

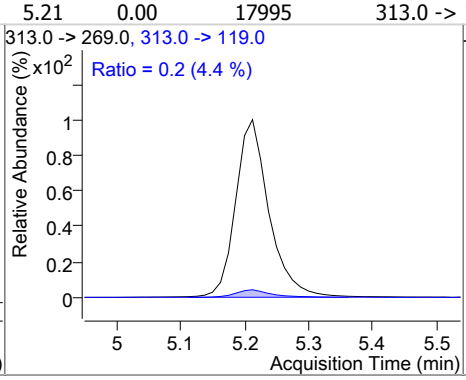


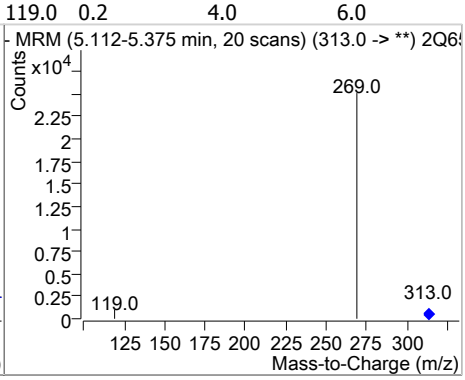




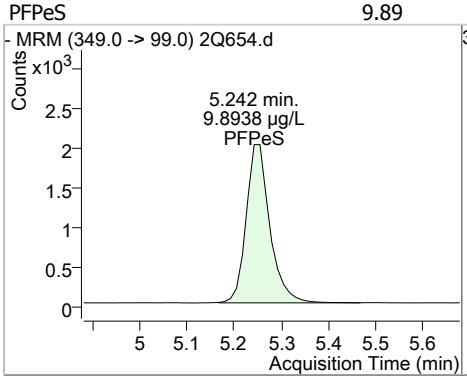
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	10.40	5.21	0.00	17995	313.0 -> 119.0	0.2	4.0	6.0

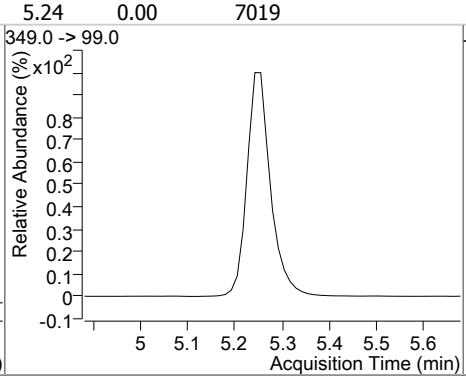


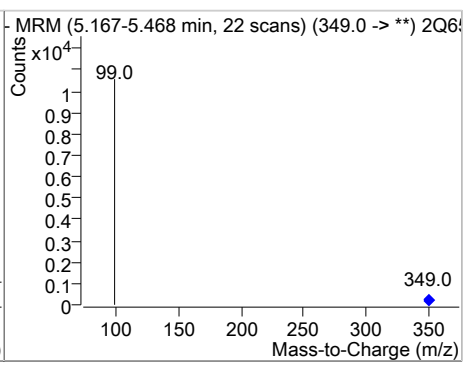




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	9.89	5.24	0.00	7019				



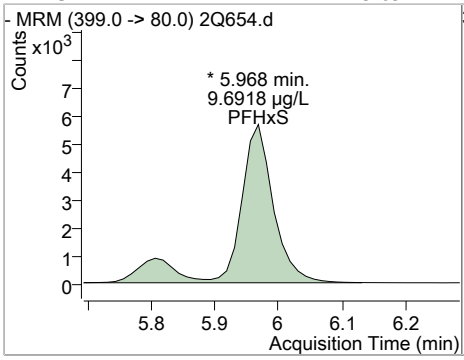


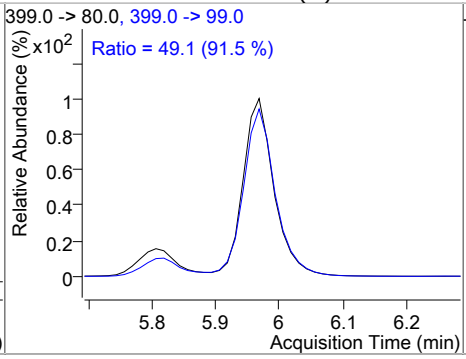


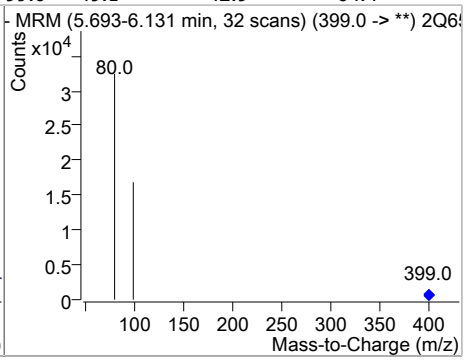
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

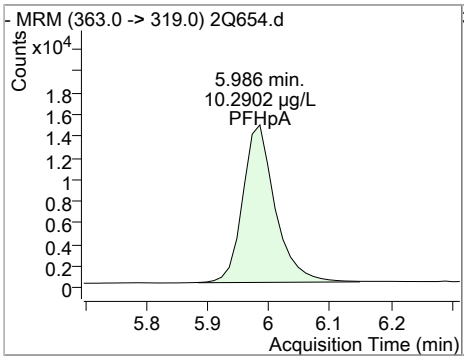
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	9.69	5.97	0.00	23060 (m)	399.0 -> 99.0	49.1	42.9	64.4

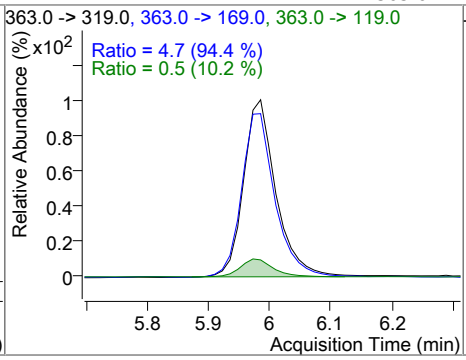


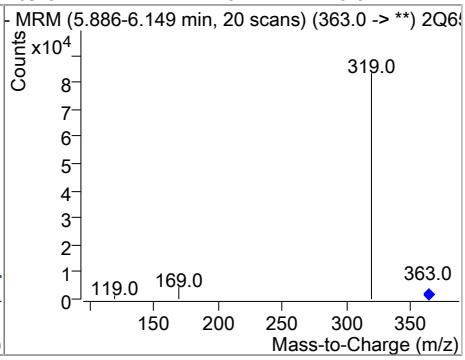




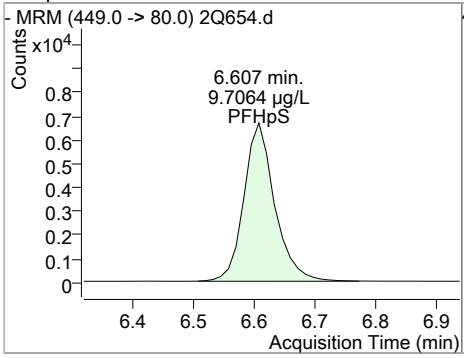
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	10.29	5.99	0.00	53261	363.0 -> 119.0	0.5	4.0	6.0
					363.0 -> 169.0	4.7	4.0	6.0

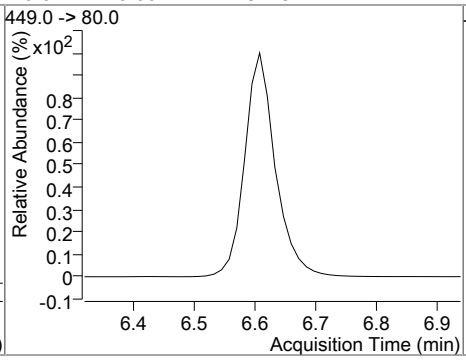


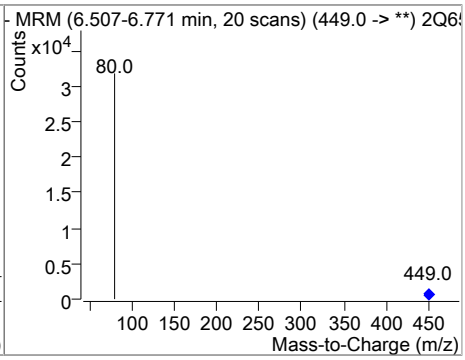




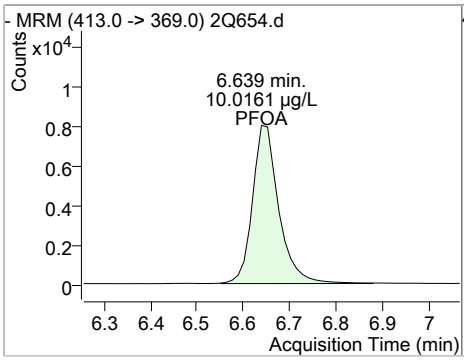
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	9.71	6.61	0.00	23423				

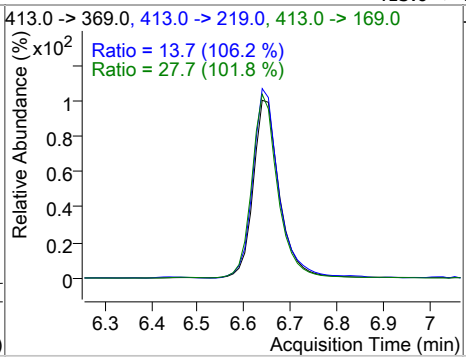


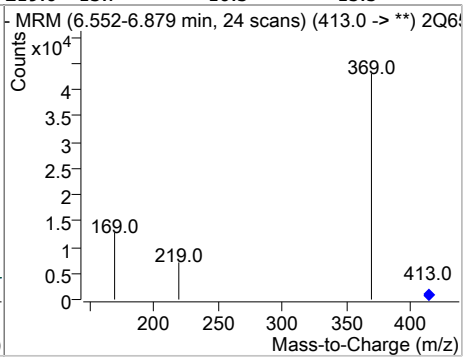




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	10.02	6.64	0.00	31431	413.0 -> 169.0	27.7	21.8	32.6
					413.0 -> 219.0	13.7	10.3	15.5



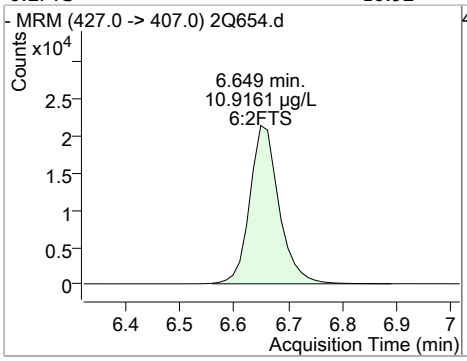


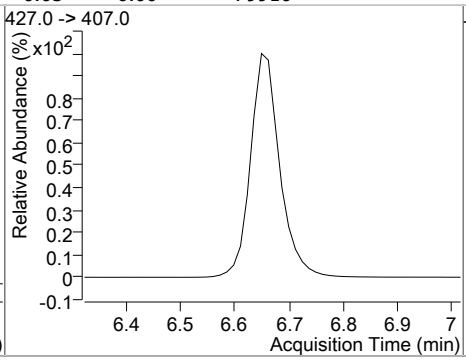


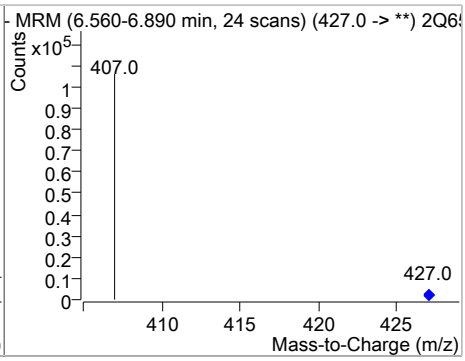
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

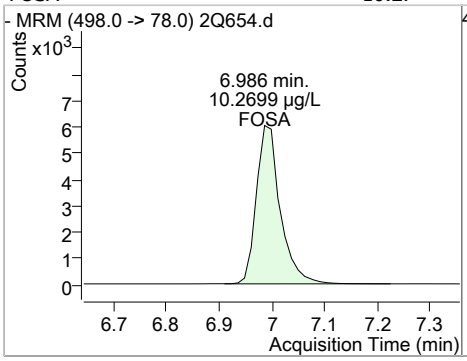
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	10.92	6.65	0.00	79916				

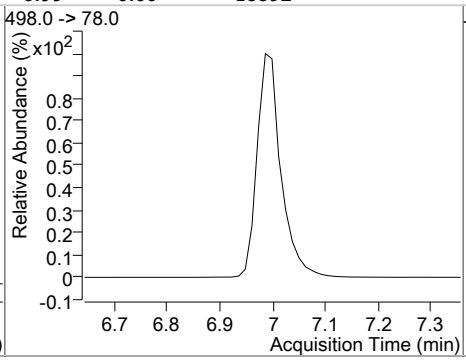


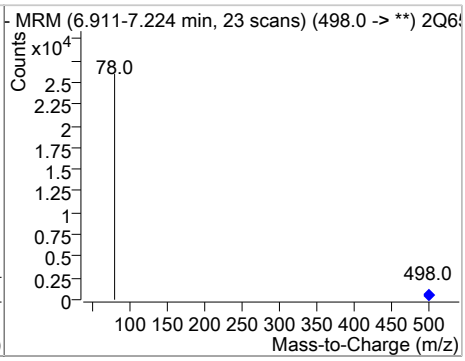




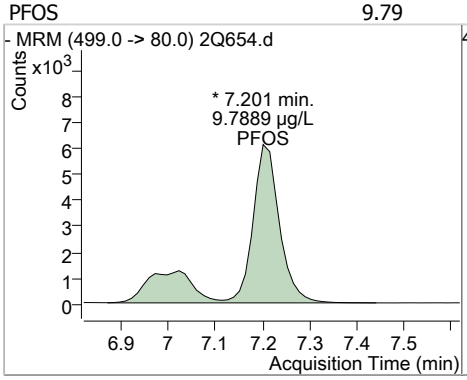
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	10.27	6.99	0.00	18892				

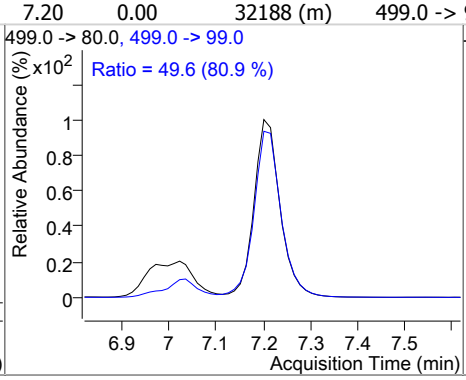


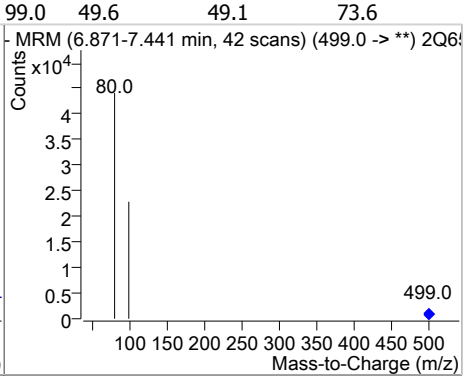




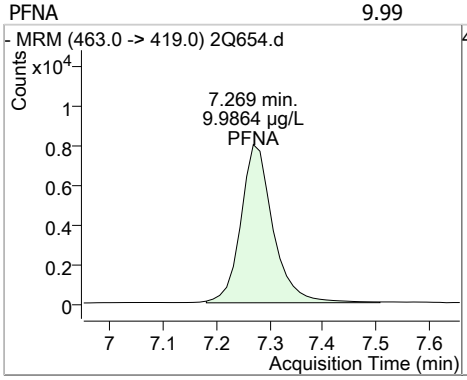
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	9.79	7.20	0.00	32188 (m)	499.0 -> 99.0	49.6	49.1	73.6

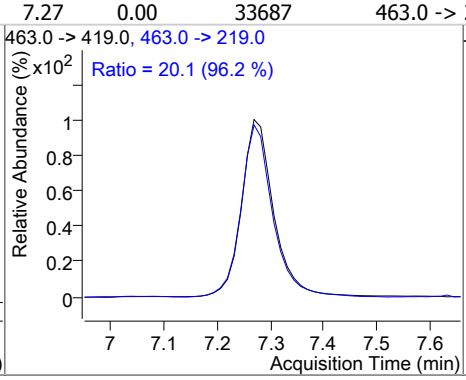


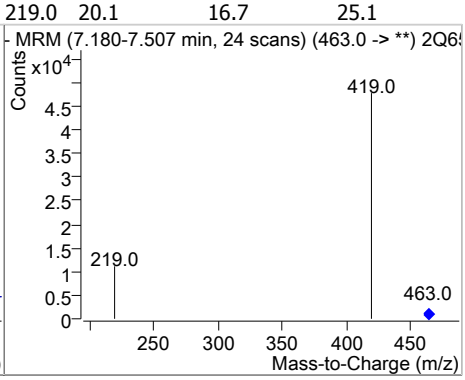




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	9.99	7.27	0.00	33687	463.0 -> 219.0	20.1	16.7	25.1



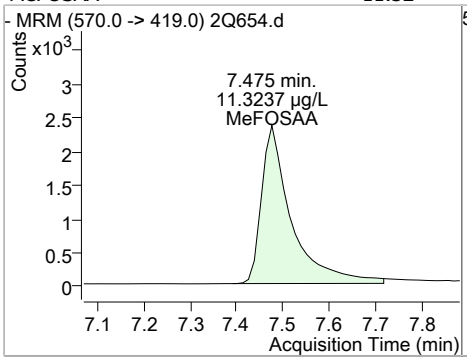


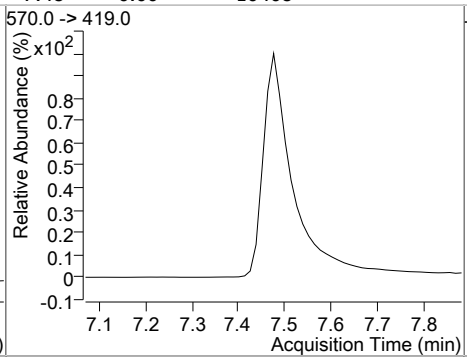


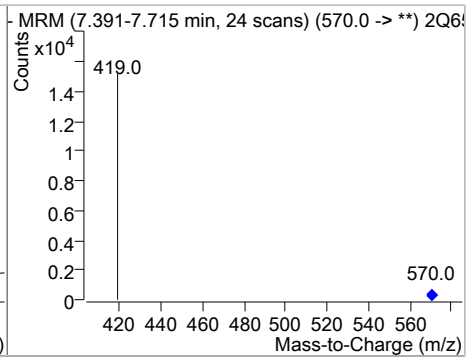
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

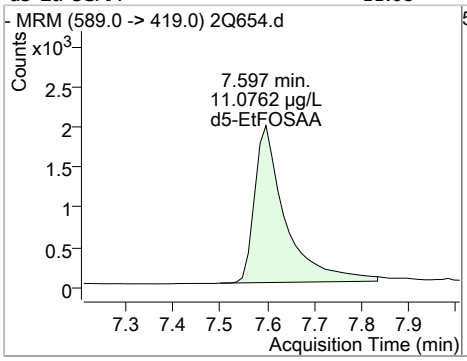
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	11.32	7.48	0.00	10408				

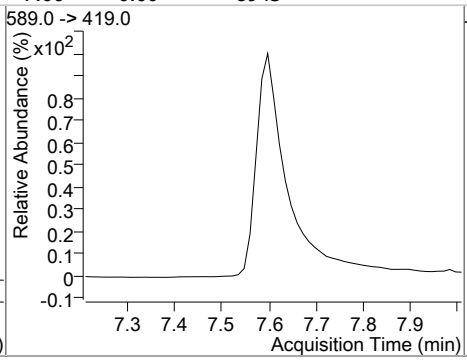


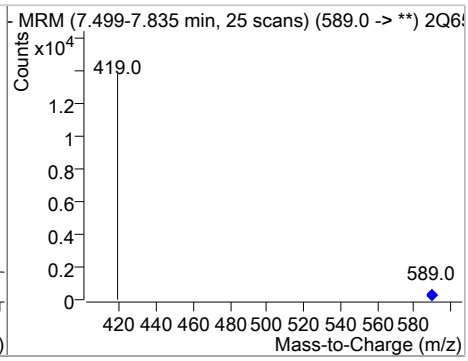




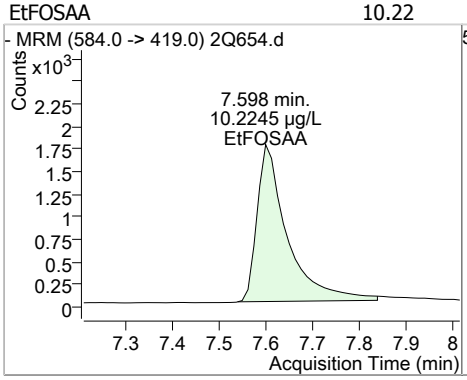
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	11.08	7.60	0.00	8943				

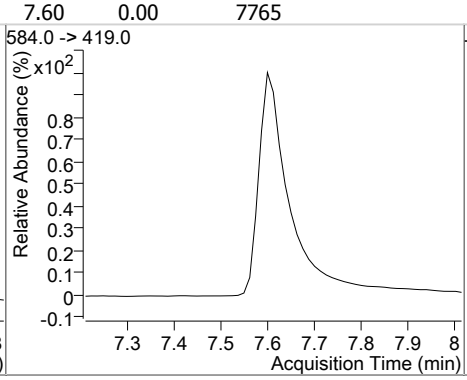


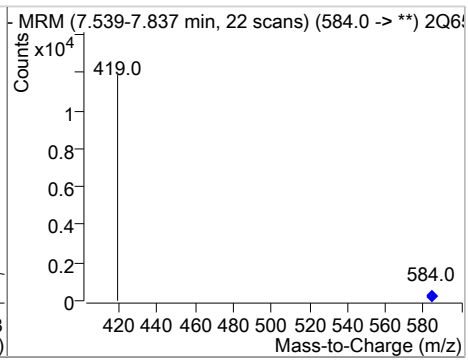




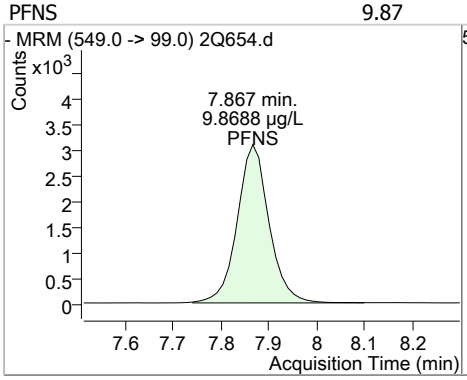
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	10.22	7.60	0.00	7765				

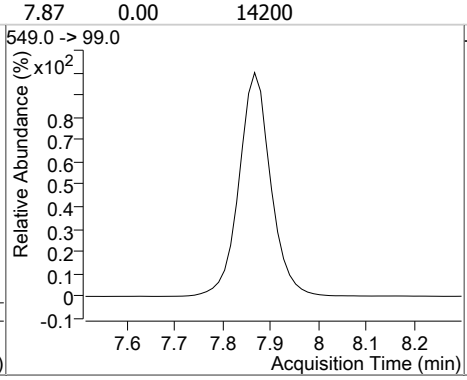


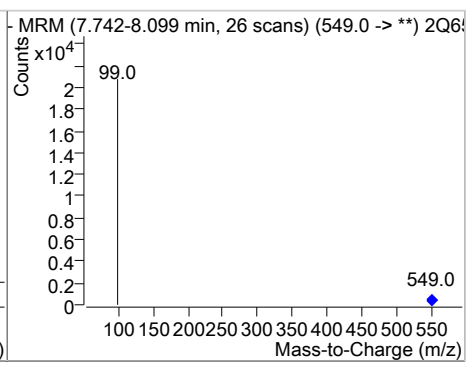




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	9.87	7.87	0.00	14200				



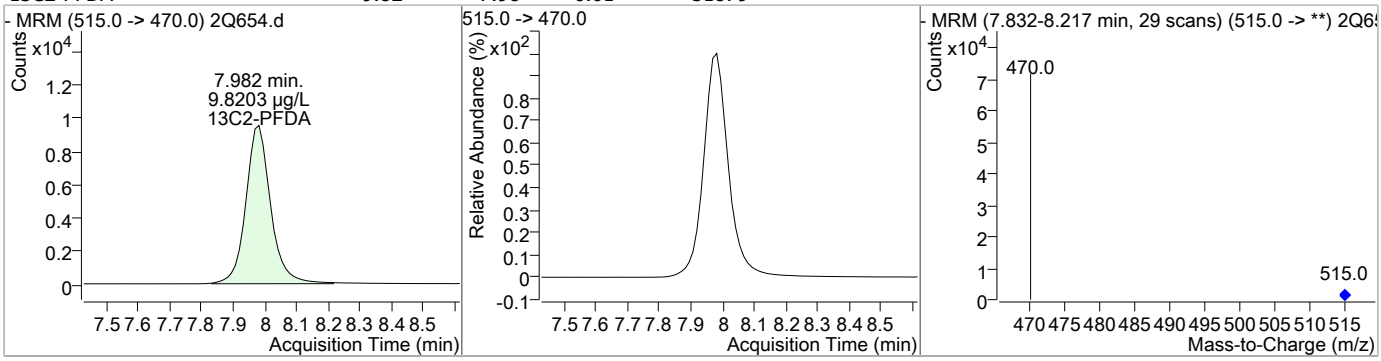




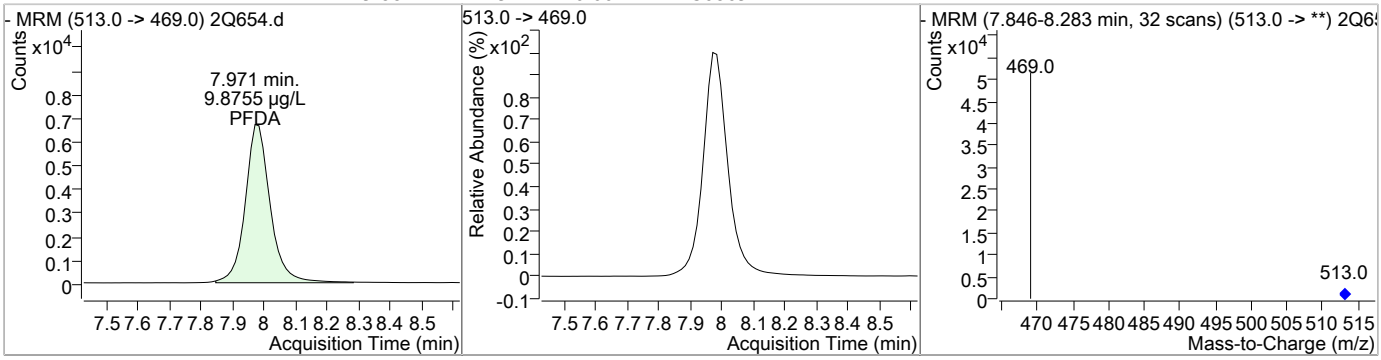
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

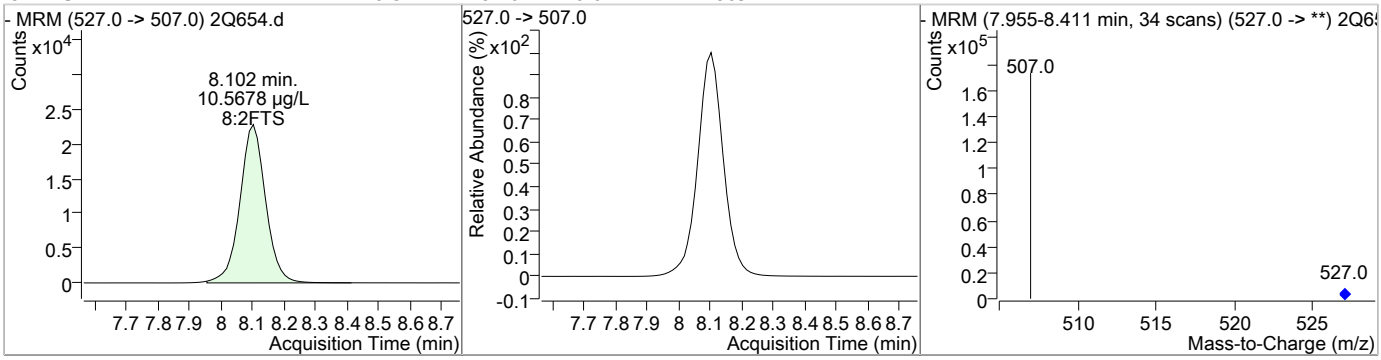
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	9.82	7.98	0.01	51879				



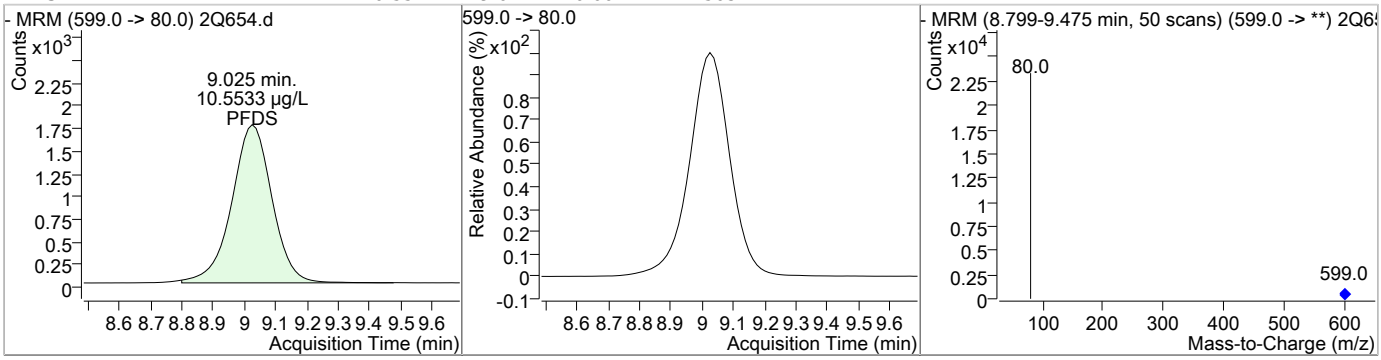
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	9.88	7.97	0.00	36869				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	10.57	8.10	0.01	128092				



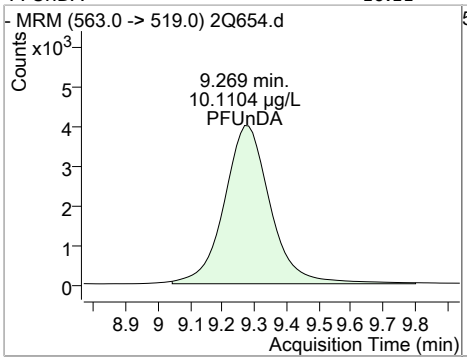
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	10.55	9.02	0.00	15632				

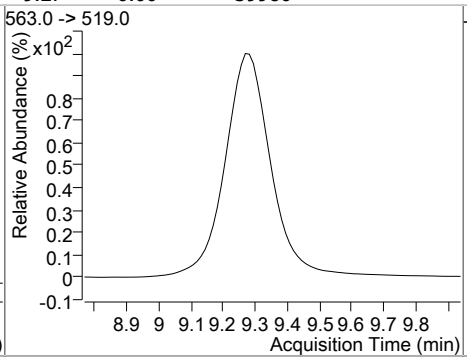


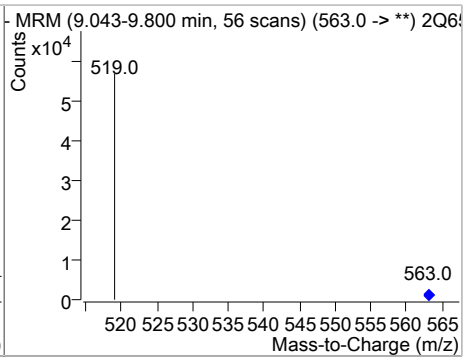
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

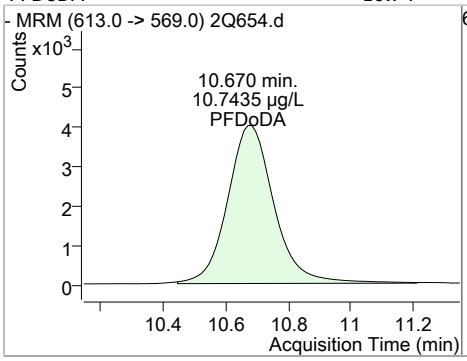
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	10.11	9.27	0.00	39980				

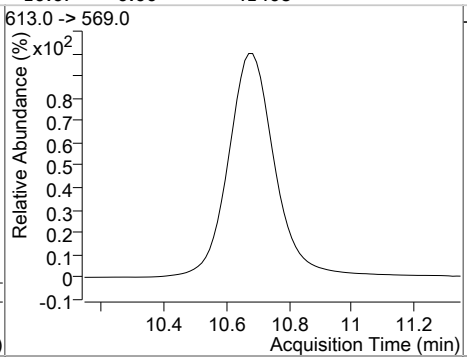


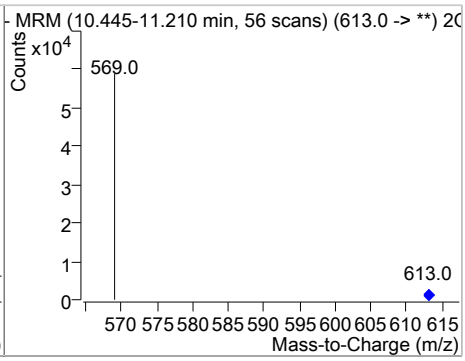




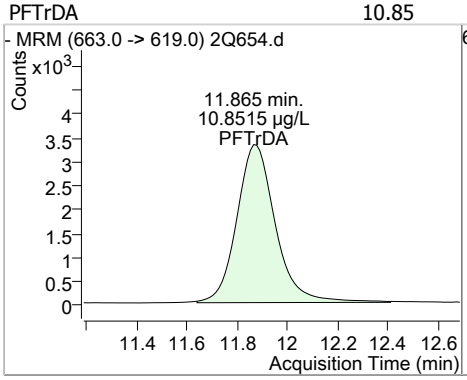
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	10.74	10.67	0.00	41408				

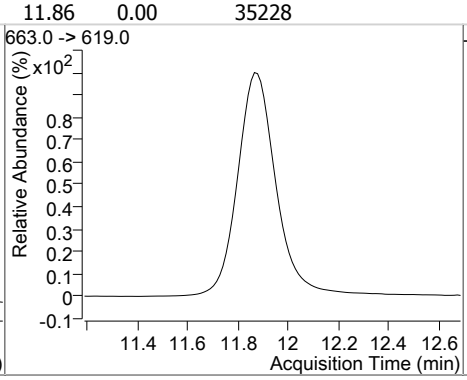


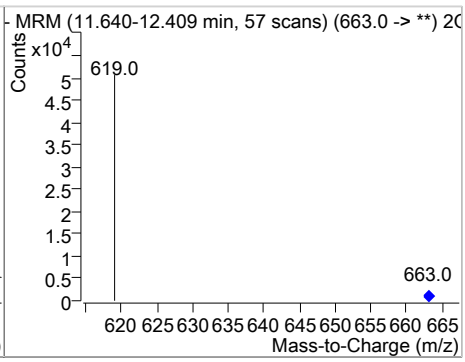




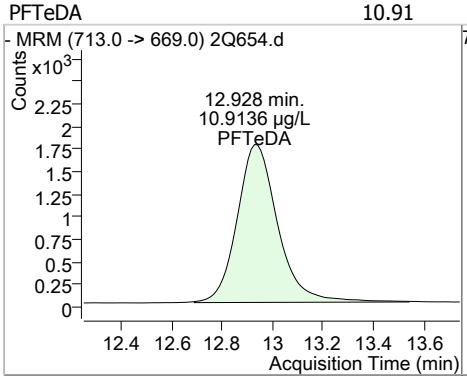
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	10.85	11.86	0.00	35228				

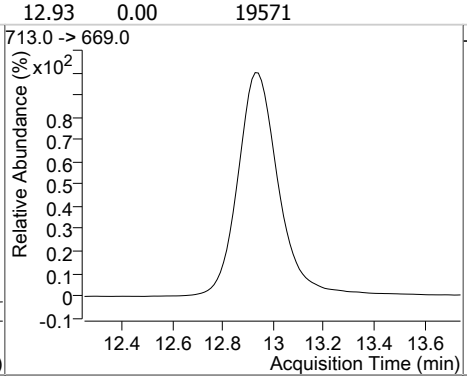


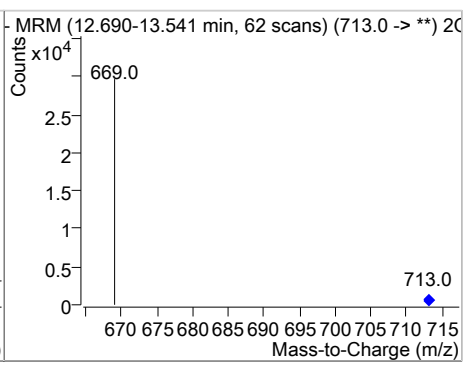




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	10.91	12.93	0.00	19571				







Manual Integration Approval Summary

Sample Number:	S2Q18-IC18	**Method:**	EPA 537 MOD
Lab FileID:	2Q654.D	**Analyst approved:**	04/21/17 09:46 Nancy Saunders
Injection Time:	04/20/17 12:53	**Supervisor approved:**	04/21/17 11:22 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.97	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.20	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/21/17 11:22

Perfluorinated Compounds by LC/MS/MS

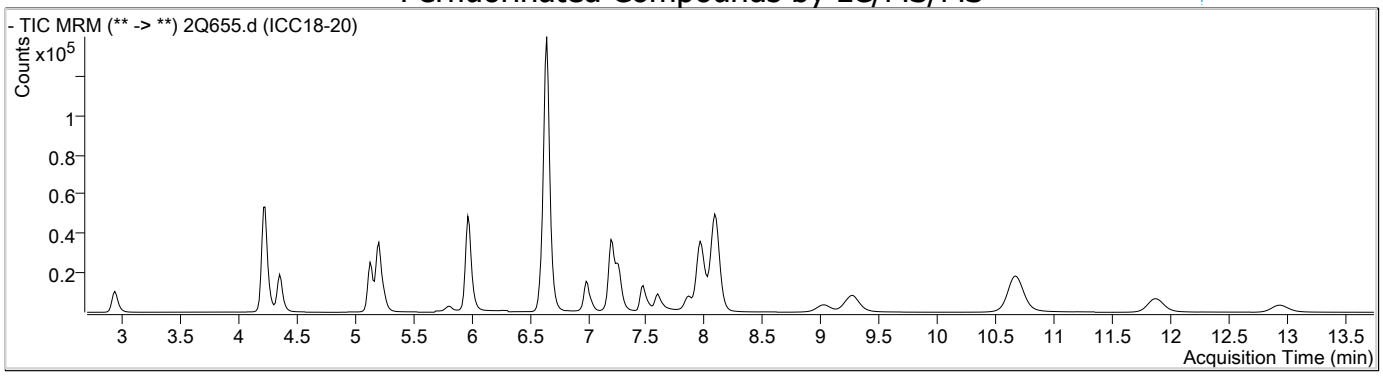
Data File : 2Q655.d
Operator : NANCYF
Acq. Method : dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time : 4/20/2017 1:13:18 PM
Sample Name : ICC18-20
Vial : Vial 6
DA Method File : PFCLISTDW_0420_S2Q18.m
Batch Name : S2Q18.batch.bin
Last Calib Update : 4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	6.648	429.0 -> 409.0	174056	20.00	µg/L		0.000
13C2-PFDoDA	10.664	615.0 -> 570.0	101125	20.00	µg/L		0.000
13C2-PFOA	6.637	415.0 -> 370.0	84279	20.00	µg/L		0.000
13C3-PFPeA	4.234	266.0 -> 222.0	82762	20.00	µg/L		0.000
13C4-PFOS	7.199	503.0 -> 80.0	61486	20.00	µg/L		0.000
d3-MeFOSAA	7.474	573.0 -> 419.0	36374	20.00	µg/L		0.000
System Monitoring Compounds							
13C2-PFDA	7.969	515.0 -> 470.0	107957	18.31	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 91.5%			
13C2-PFHxA	5.210	315.0 -> 270.0	81843	18.38	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 91.9%			
d5-EtFOSAA	7.597	589.0 -> 419.0	18459	20.56	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 102.8%			
Target Compounds							QValue
4:2FTS	5.132	327.0 -> 307.0	85144	19.37	µg/L		100
6:2FTS	6.649	427.0 -> 407.0	169510	20.14	µg/L		100
8:2FTS	8.089	527.0 -> 507.0	269915	19.37	µg/L		100
EtFOSAA	7.598	584.0 -> 419.0	15926	19.22	µg/L		100
FOSA	6.986	498.0 -> 78.0	38302	19.58	µg/L		100
MeFOSAA	7.475	570.0 -> 419.0	21165	20.72	µg/L		100
PFBA	2.940	213.0 -> 169.0	40607	18.32	µg/L		100
PFBS	4.353	299.0 -> 80.0	45584	18.58	µg/L		99
PFDA	7.971	513.0 -> 469.0	75901	18.21	µg/L		100
PFDoDA	10.670	613.0 -> 569.0	86004	19.49	µg/L		100
PFDS	9.025	599.0 -> 80.0	32276	19.70	µg/L		100
PFHpA	5.986	363.0 -> 319.0	110187	18.84	µg/L	#	93
PFHpS	6.607	449.0 -> 80.0	48655	18.68	µg/L		100
PFHxA	5.212	313.0 -> 269.0	38157	19.35	µg/L	#	86
PFHxS	5.968	399.0 -> 80.0	47438	18.47	µg/L	m	95
PFNA	7.269	463.0 -> 419.0	67724	17.99	µg/L		98
PFNS	7.867	549.0 -> 99.0	28984	18.67	µg/L		100
PFOA	6.639	413.0 -> 369.0	64840	18.51	µg/L		98
PFOS	7.201	499.0 -> 80.0	65253	18.39	µg/L	m	86
PFPeA	4.225	263.0 -> 219.0	117428	18.70	µg/L		100
PFPeS	5.242	349.0 -> 99.0	14687	18.64	µg/L		100
PFTeDA	12.928	713.0 -> 669.0	40066	19.47	µg/L		100
PFTrDA	11.865	663.0 -> 619.0	73047	19.55	µg/L		100
PFUnDA	9.269	563.0 -> 519.0	83071	18.72	µg/L		100

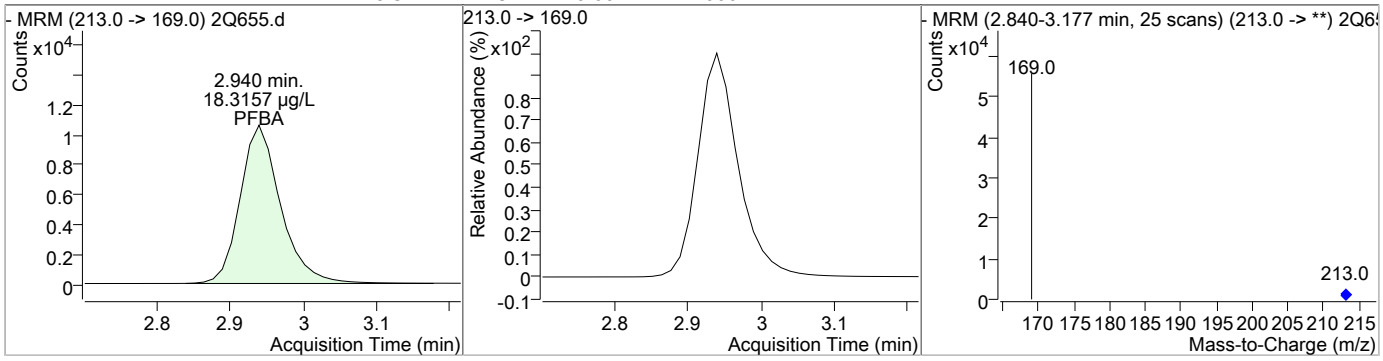
 # = Qualifier out of range, m = manually integrated, + = Area summed

Perfluorinated Compounds by LC/MS/MS

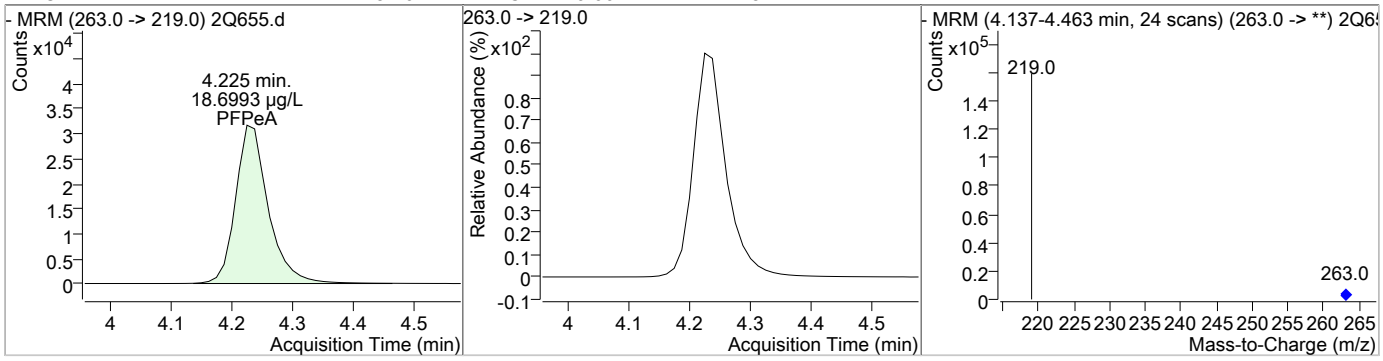
Agilent Technologies



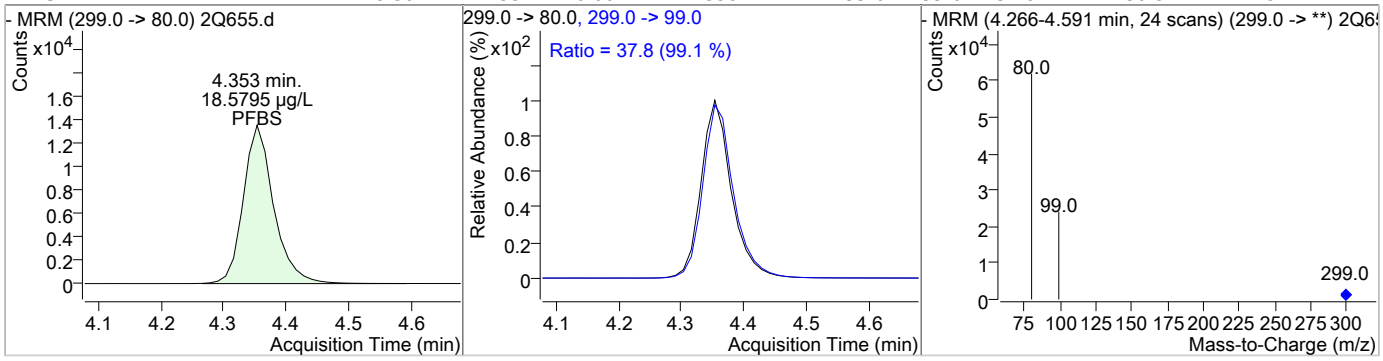
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	18.32	2.94	0.00	40607				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	18.70	4.23	0.00	117428				



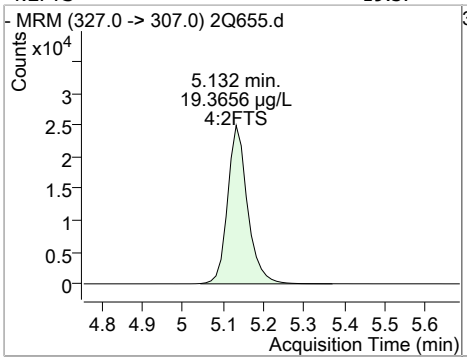
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	18.58	4.35	0.00	45584	299.0 -> 99.0	37.8	30.5	45.7

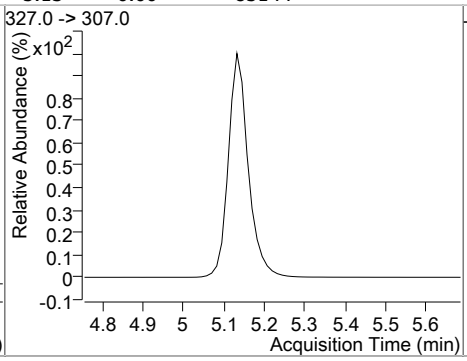


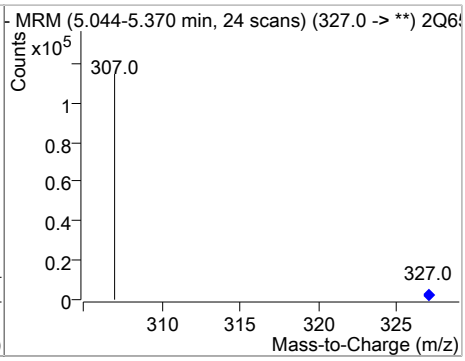
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

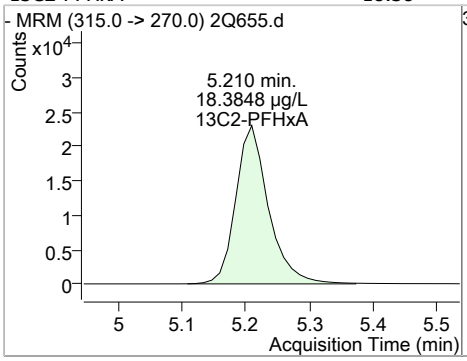
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	19.37	5.13	0.00	85144				

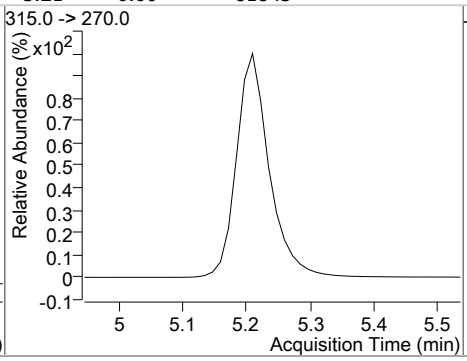


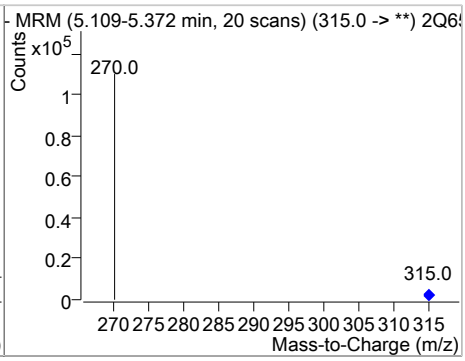




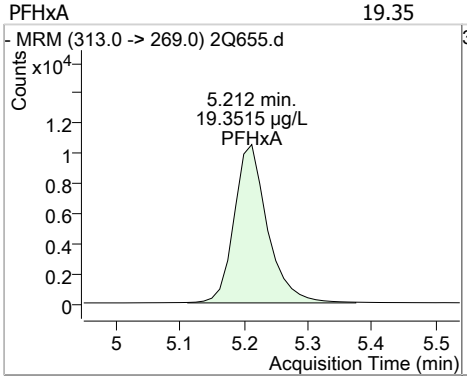
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	18.38	5.21	0.00	81843				

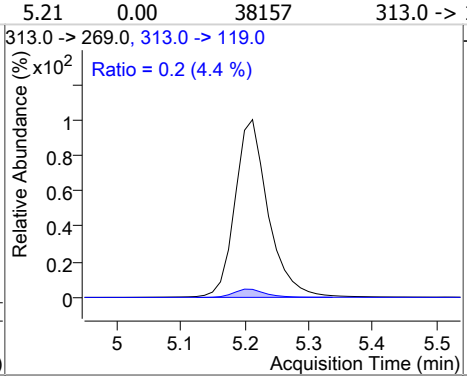


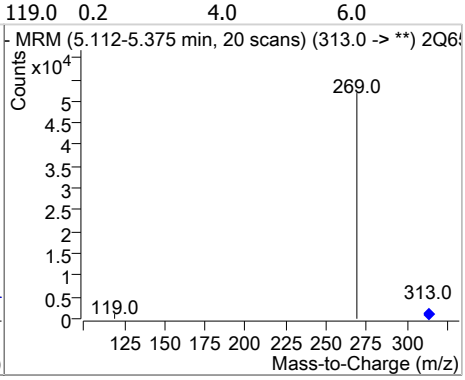




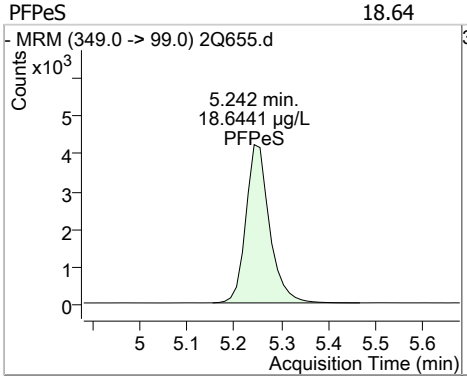
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.35	5.21	0.00	38157	313.0 -> 119.0	0.2	4.0	6.0

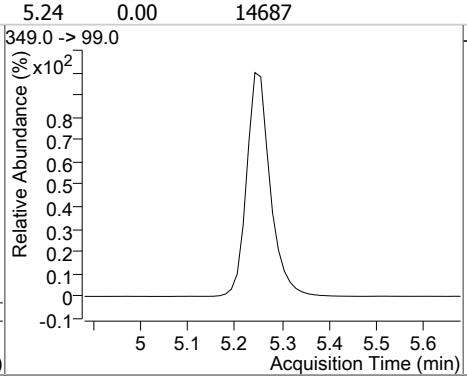


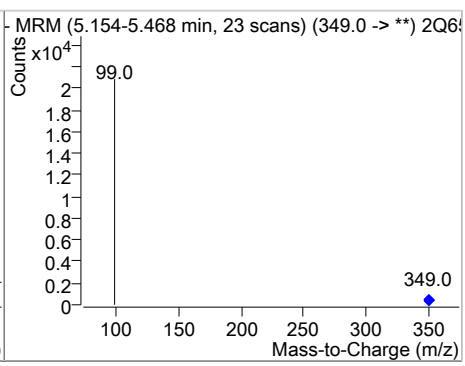




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	18.64	5.24	0.00	14687				



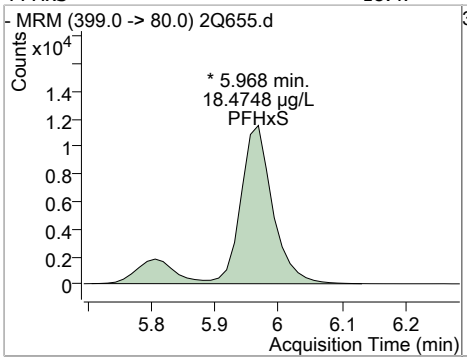


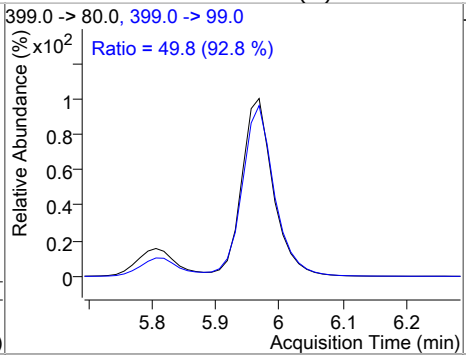


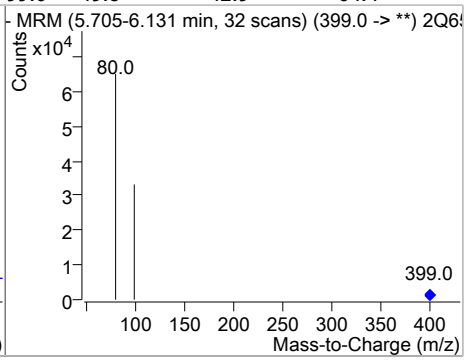
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

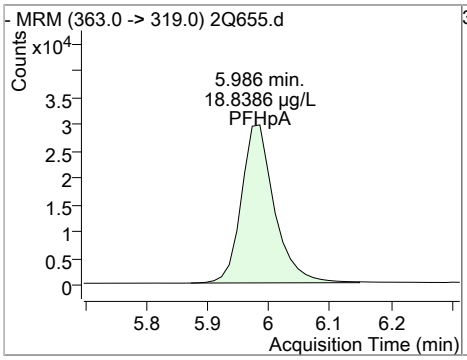
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	18.47	5.97	0.00	47438 (m)	399.0 -> 99.0	49.8	42.9	64.4

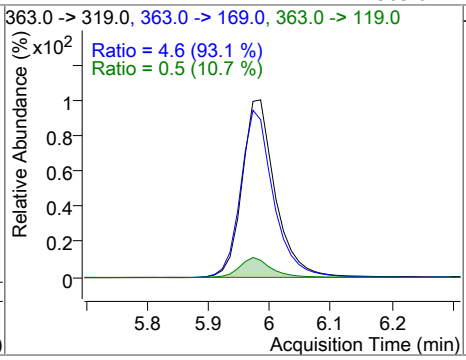


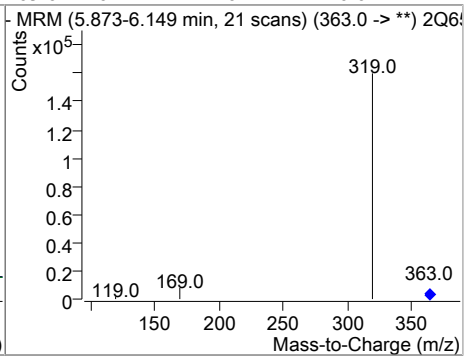




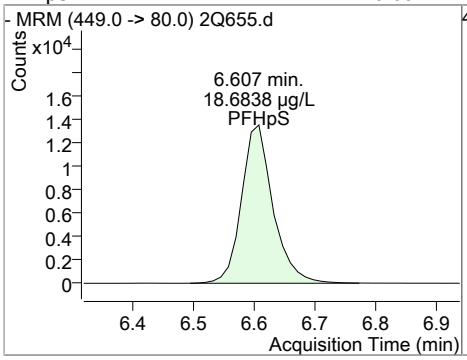
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	18.84	5.99	0.00	110187	363.0 -> 119.0	0.5	4.0	6.0
					363.0 -> 169.0	4.6	4.0	6.0

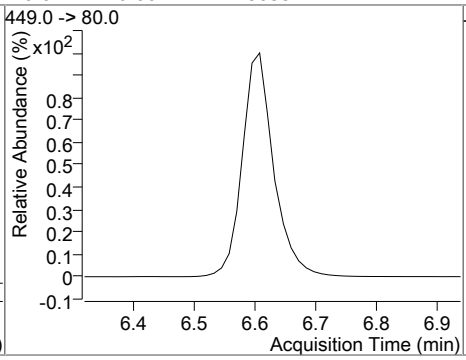


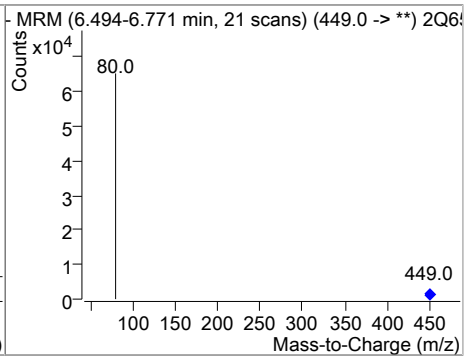




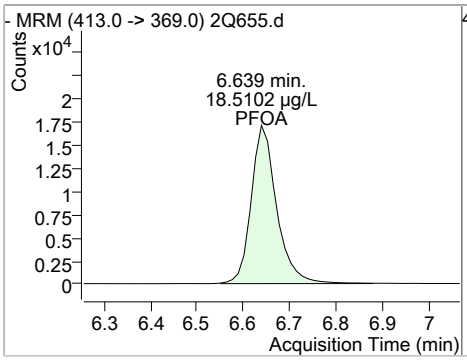
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	18.68	6.61	0.00	48655				

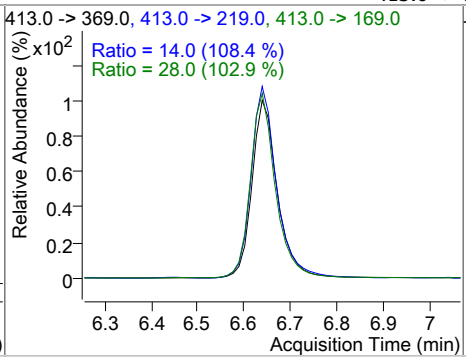


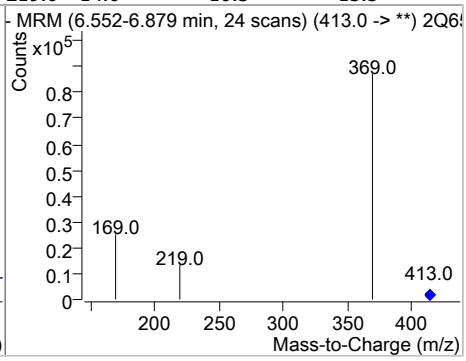




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	18.51	6.64	0.00	64840	413.0 -> 169.0	28.0	21.8	32.6
					413.0 -> 219.0	14.0	10.3	15.5



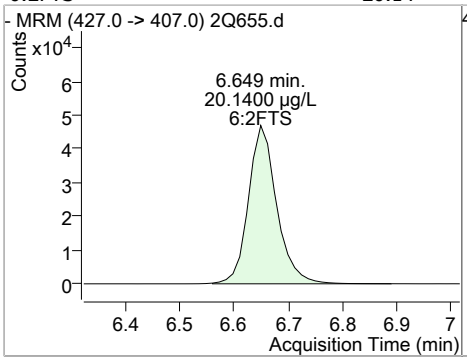


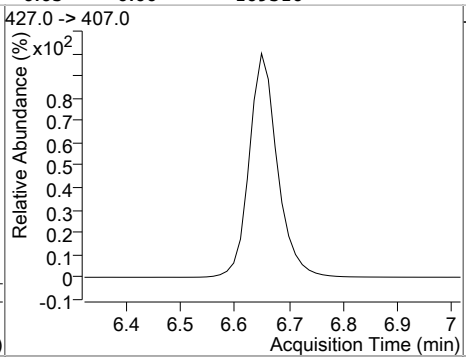


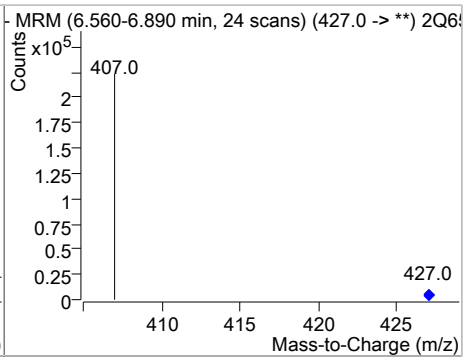
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

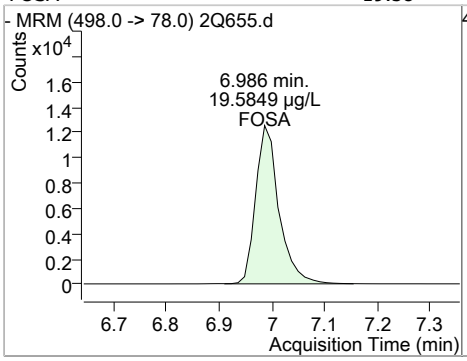
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	20.14	6.65	0.00	169510				

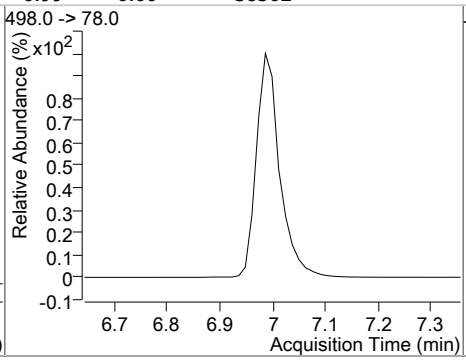


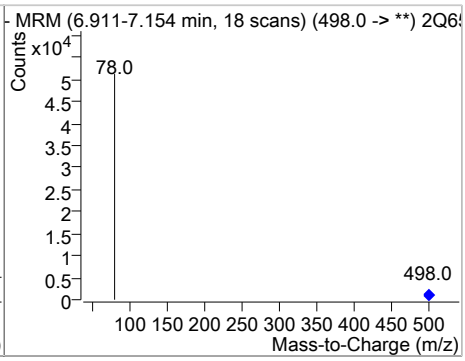




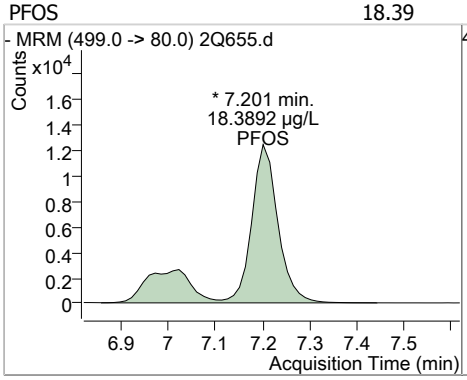
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	19.58	6.99	0.00	38302				

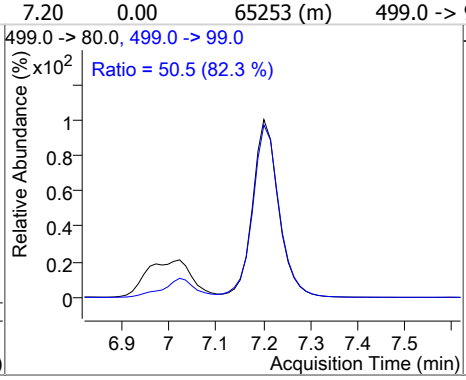


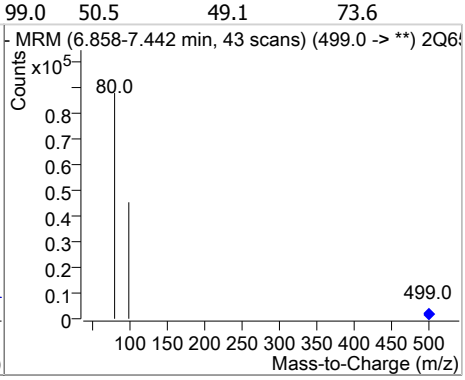




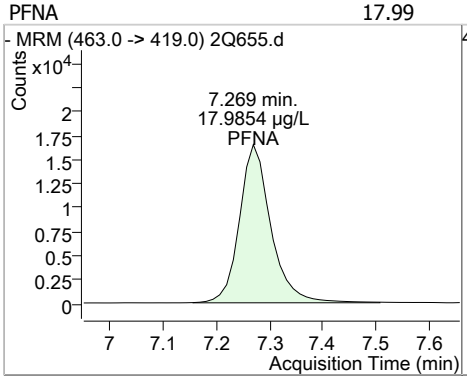
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	18.39	7.20	0.00	65253 (m)	499.0 -> 99.0	50.5	49.1	73.6

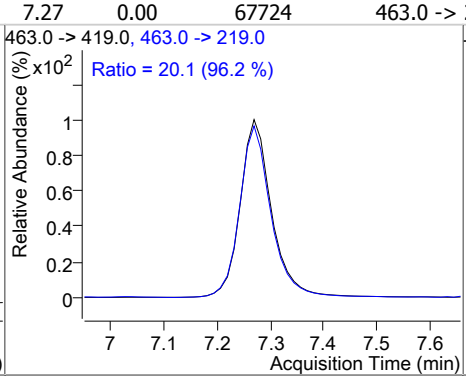


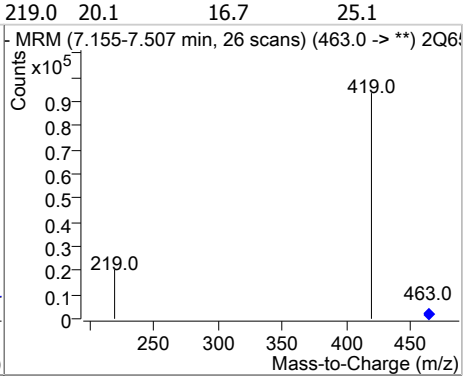




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	17.99	7.27	0.00	67724	463.0 -> 219.0	20.1	16.7	25.1



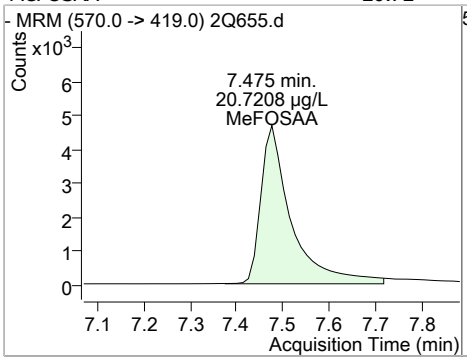


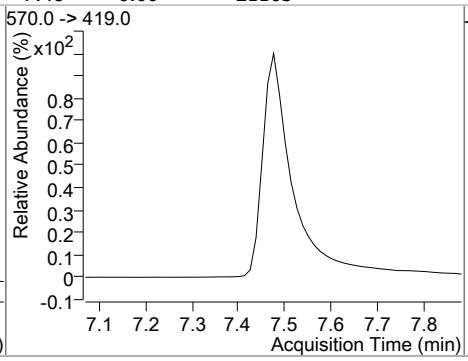


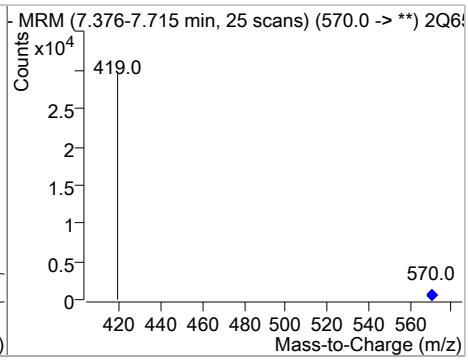
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

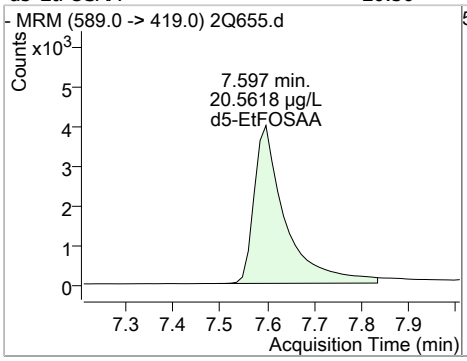
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	20.72	7.48	0.00	21165				

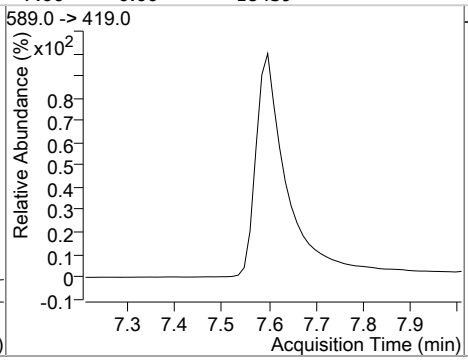


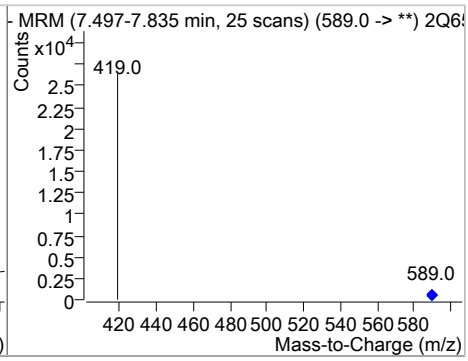




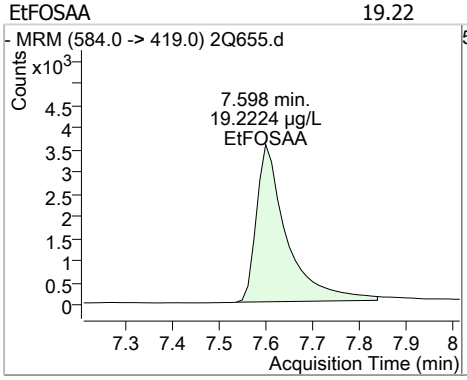
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	20.56	7.60	0.00	18459				

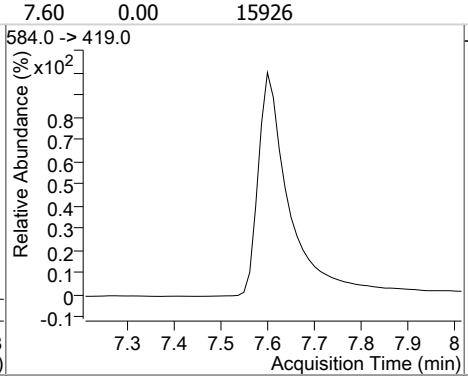


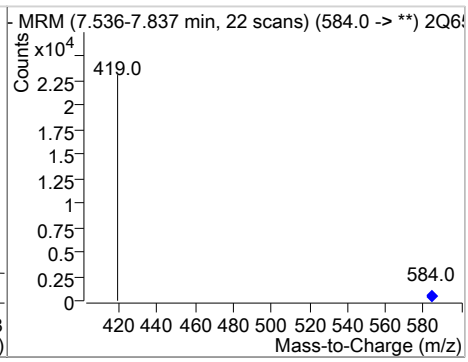




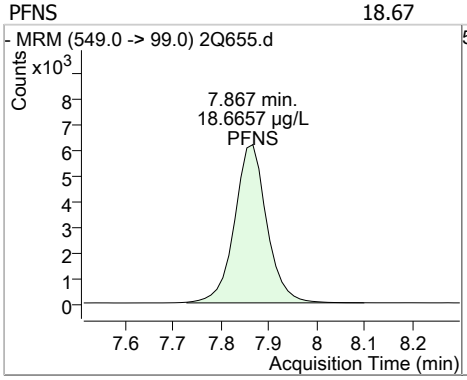
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	19.22	7.60	0.00	15926				

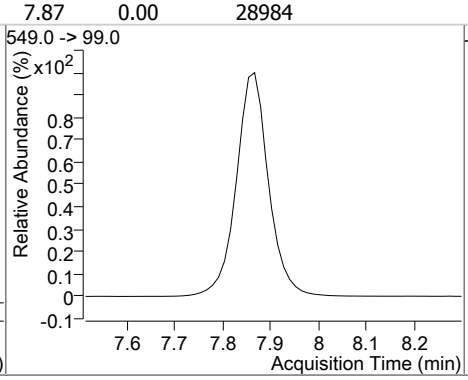


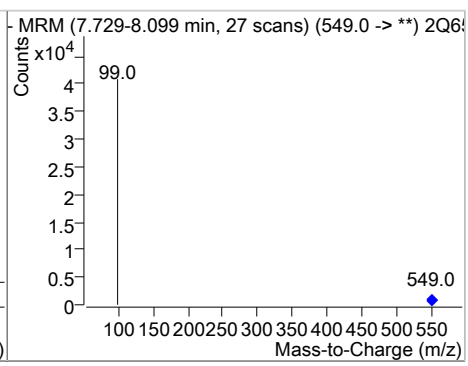




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	18.67	7.87	0.00	28984				



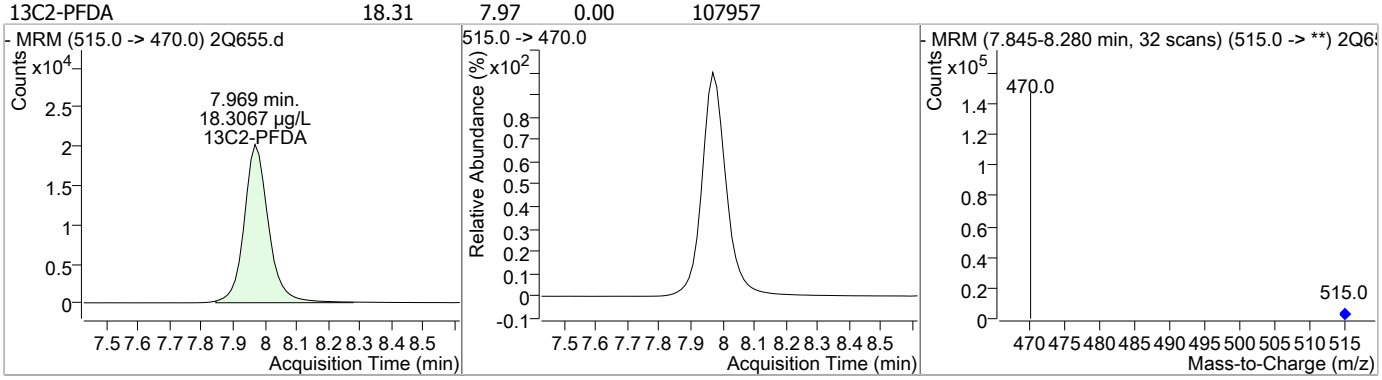




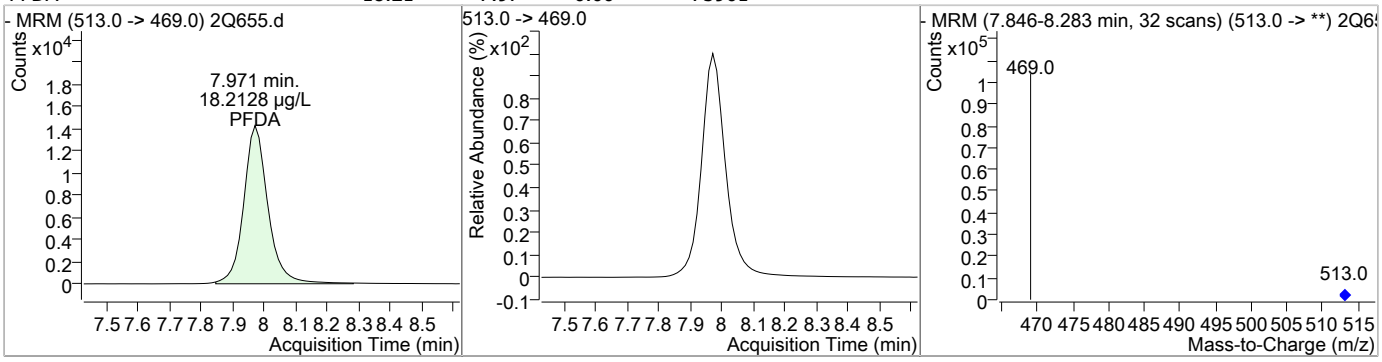
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

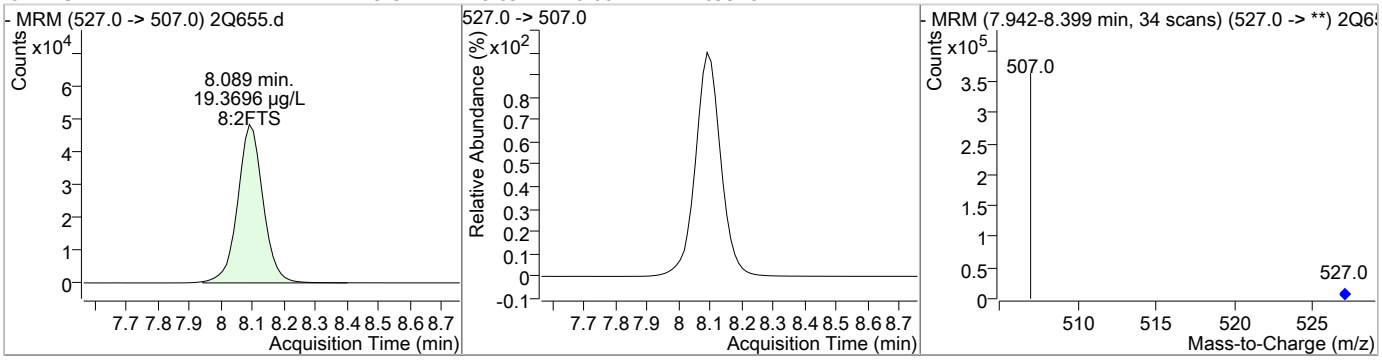
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	18.31	7.97	0.00	107957				



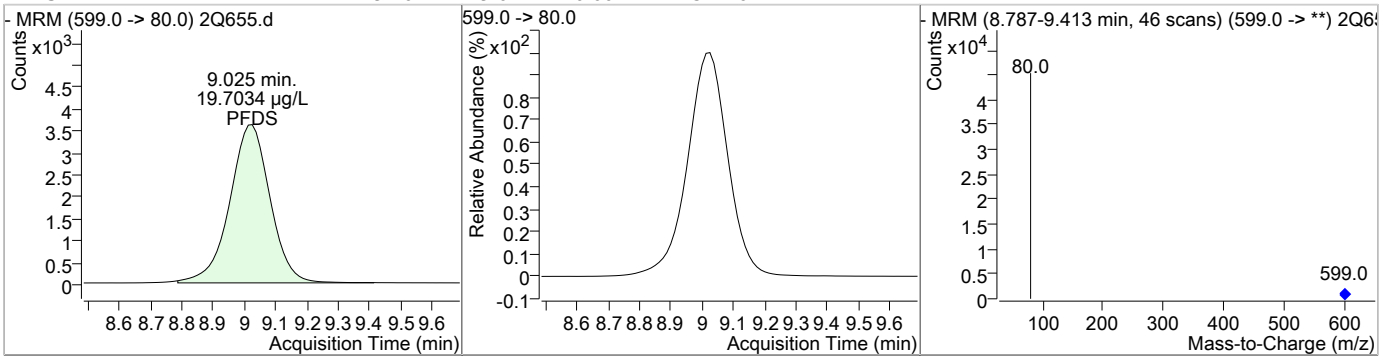
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	18.21	7.97	0.00	75901				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	19.37	8.09	0.00	269915				



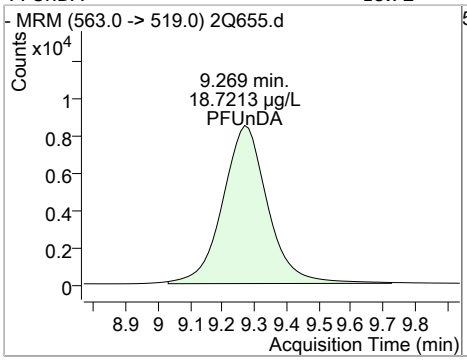
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	19.70	9.02	0.00	32276				

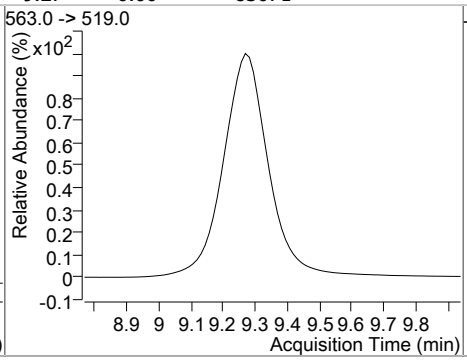


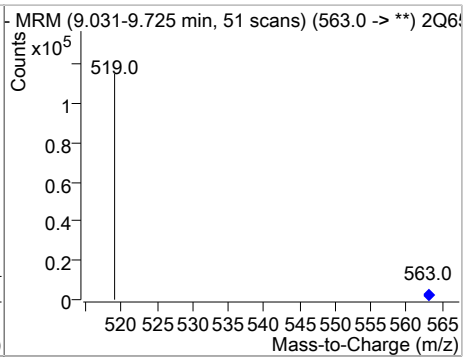
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

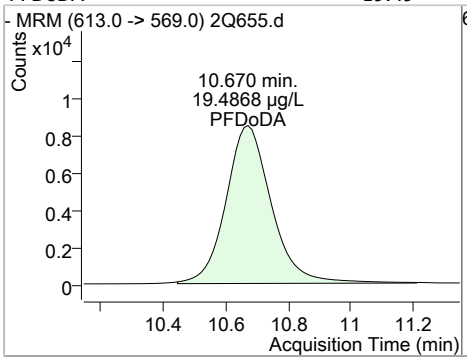
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	18.72	9.27	0.00	83071				

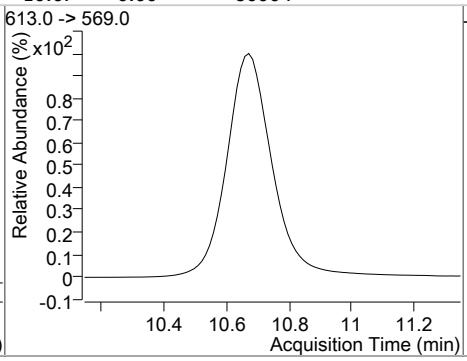


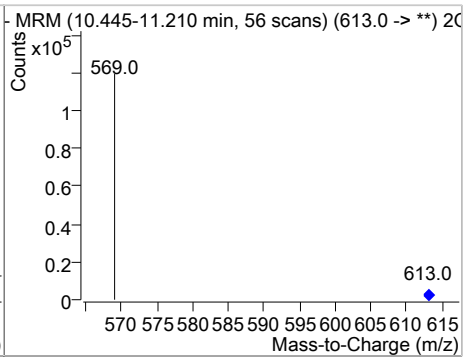




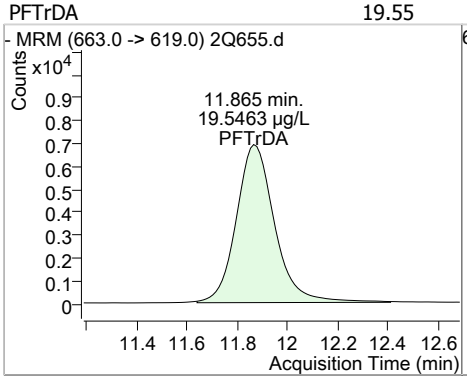
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	19.49	10.67	0.00	86004				

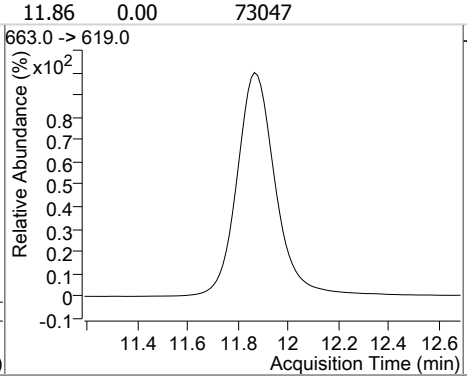


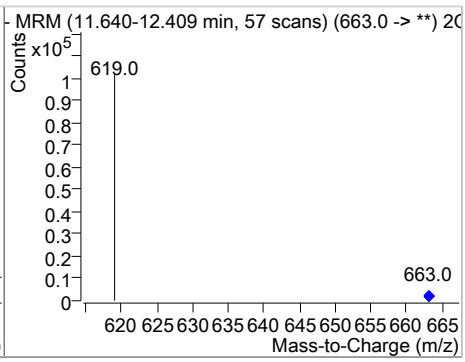




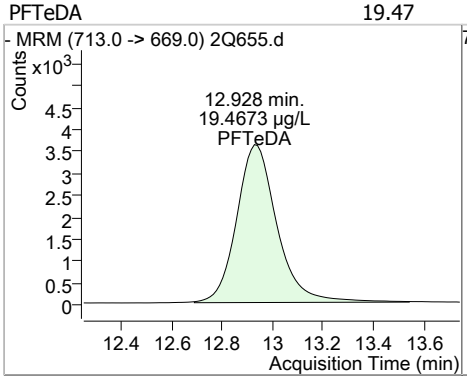
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	19.55	11.86	0.00	73047				

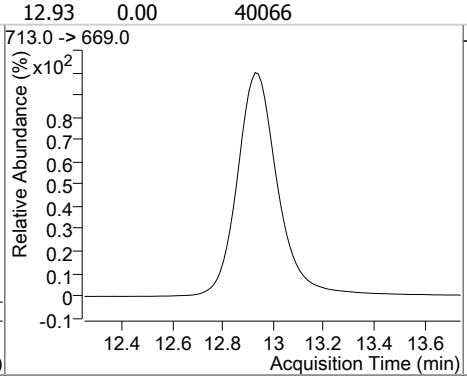


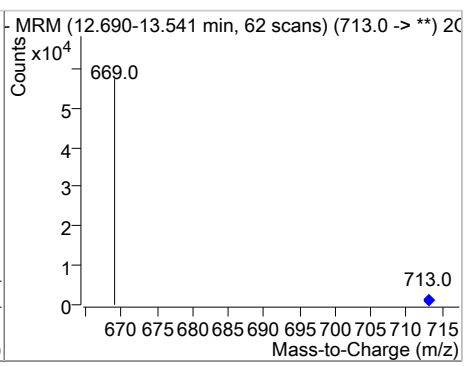




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	19.47	12.93	0.00	40066				







Manual Integration Approval Summary

Sample Number:	S2Q18-ICC18	**Method:**	EPA 537 MOD	
Lab FileID:	2Q655.D	**Analyst approved:**	04/21/17 09:46	Nancy Saunders
Injection Time:	04/20/17 13:13	**Supervisor approved:**	04/21/17 11:22	Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.97	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.20	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
04/21/17 11:22

Perfluorinated Compounds by LC/MS/MS

Data File : 2Q656.d
Operator : NANCYF
Acq. Method : dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time : 4/20/2017 1:33:02 PM
Sample Name : IC18-40
Vial : Vial 7
DA Method File : PFCLISTDW_0420_S2Q18.m
Batch Name : S2Q18.batch.bin
Last Calib Update : 4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	6.648	429.0 -> 409.0	169693	20.00	µg/L		0.000
13C2-PFDoDA	10.664	615.0 -> 570.0	95637	20.00	µg/L		0.000
13C2-PFOA	6.637	415.0 -> 370.0	77698	20.00	µg/L		0.000
13C3-PFPeA	4.222	266.0 -> 222.0	77130	20.00	µg/L		-0.013
13C4-PFOS	7.199	503.0 -> 80.0	57707	20.00	µg/L		0.000
d3-MeFOSAA	7.462	573.0 -> 419.0	37333	20.00	µg/L		-0.013
System Monitoring Compounds							
13C2-PFDA	7.969	515.0 -> 470.0	216770	39.87	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 199.4%			
13C2-PFHxA	5.210	315.0 -> 270.0	164933	40.19	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 200.9%			
d5-EtFOSAA	7.597	589.0 -> 419.0	37670	37.86	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 189.3%			
Target Compounds							QValue
4:2FTS	5.132	327.0 -> 307.0	170604	39.80	µg/L		100
6:2FTS	6.649	427.0 -> 407.0	326949	39.84	µg/L		100
8:2FTS	8.089	527.0 -> 507.0	539797	39.73	µg/L		100
EtFOSAA	7.598	584.0 -> 419.0	33444	37.40	µg/L		100
FOSA	6.986	498.0 -> 78.0	76229	37.98	µg/L		100
MeFOSAA	7.475	570.0 -> 419.0	42603	37.69	µg/L		100
PFBA	2.940	213.0 -> 169.0	81236	39.74	µg/L		100
PFBS	4.353	299.0 -> 80.0	90994	39.52	µg/L		99
PFDA	7.959	513.0 -> 469.0	151294	39.38	µg/L		100
PFDoDA	10.657	613.0 -> 569.0	173937	39.82	µg/L		100
PFDS	9.012	599.0 -> 80.0	64318	39.73	µg/L		100
PFHpA	5.973	363.0 -> 319.0	220762	39.75	µg/L	#	93
PFHpS	6.594	449.0 -> 80.0	96459	39.47	µg/L		100
PFHxA	5.200	313.0 -> 269.0	76691	40.30	µg/L	#	86
PFHxS	5.956	399.0 -> 80.0	94522	39.22	µg/L	m	94
PFNA	7.269	463.0 -> 419.0	137792	39.69	µg/L		98
PFNS	7.854	549.0 -> 99.0	57477	39.44	µg/L		100
PFOA	6.639	413.0 -> 369.0	131759	40.80	µg/L		98
PFOS	7.201	499.0 -> 80.0	131036	39.35	µg/L	m	85
PFPeA	4.225	263.0 -> 219.0	232061	39.65	µg/L		100
PFPeS	5.242	349.0 -> 99.0	29023	39.53	µg/L		100
PFTeDA	12.916	713.0 -> 669.0	81191	39.63	µg/L		100
PFTrDA	11.852	663.0 -> 619.0	148239	39.63	µg/L		100
PFUnDA	9.256	563.0 -> 519.0	164495	39.20	µg/L		100

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

Perfluorinated Compounds by LC/MS/MS

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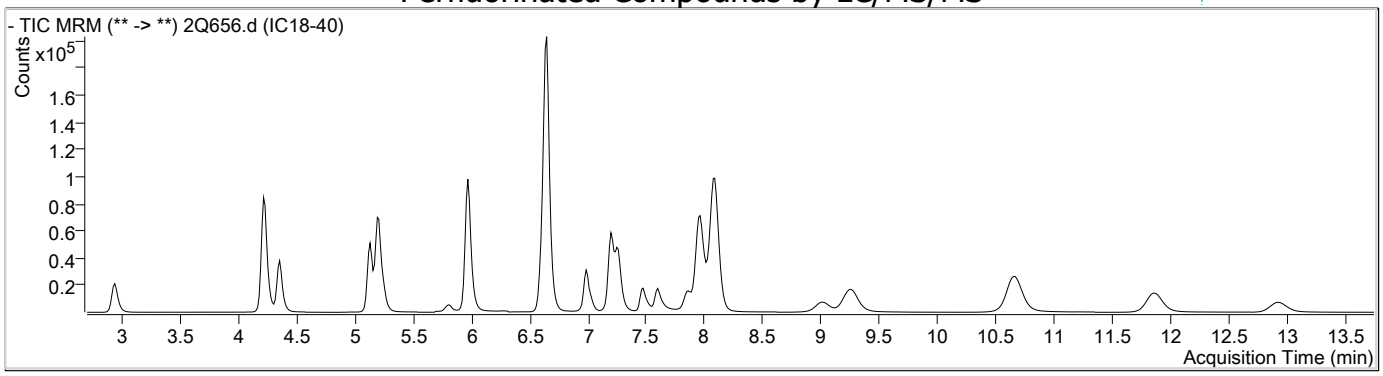
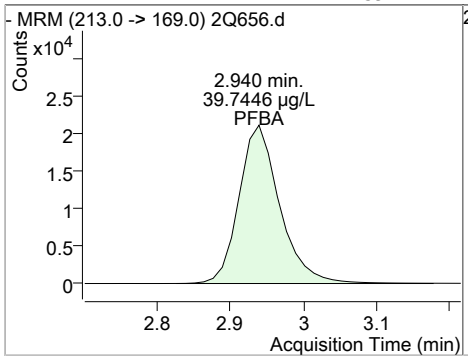
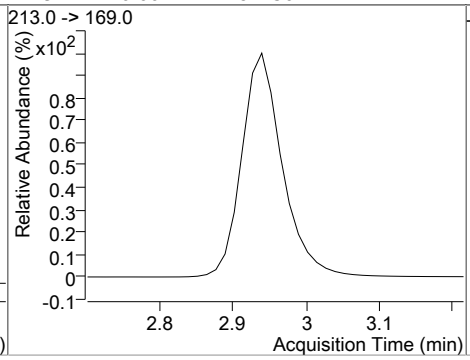
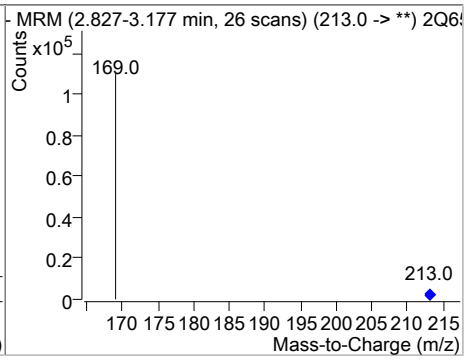


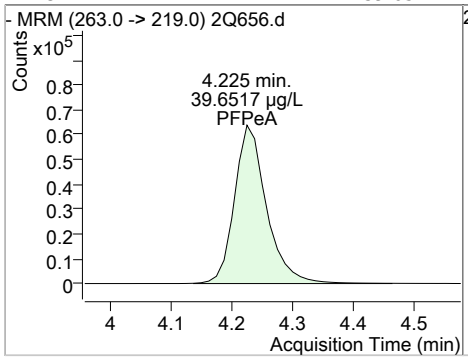
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	39.74	2.94	0.00	81236				

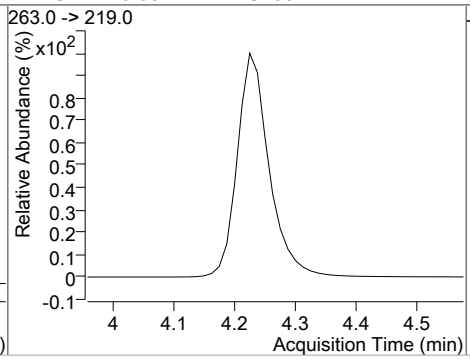


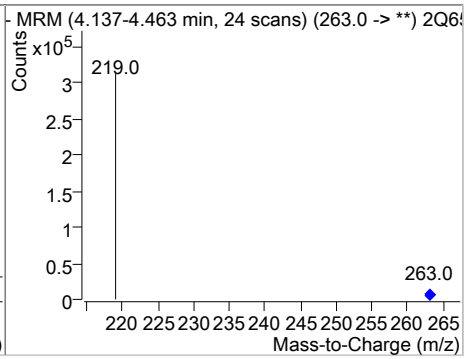




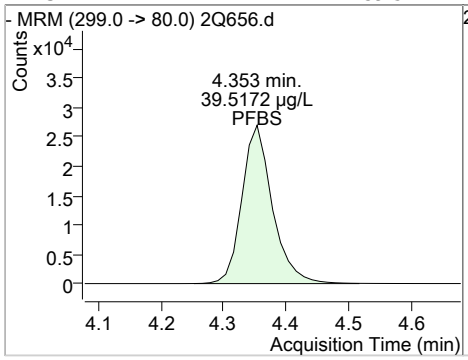
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	39.65	4.23	0.00	232061				

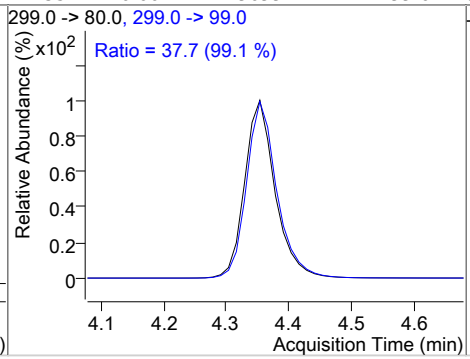


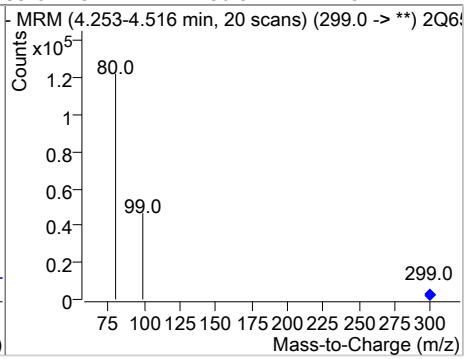




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	39.52	4.35	0.00	90994	299.0 -> 99.0	37.7	30.5	45.7



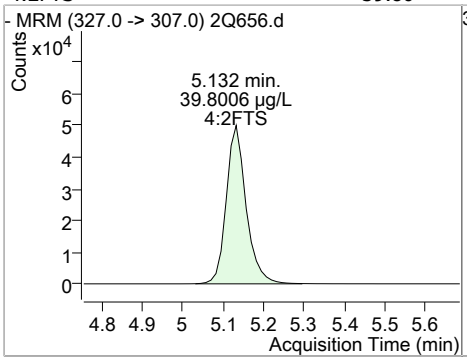


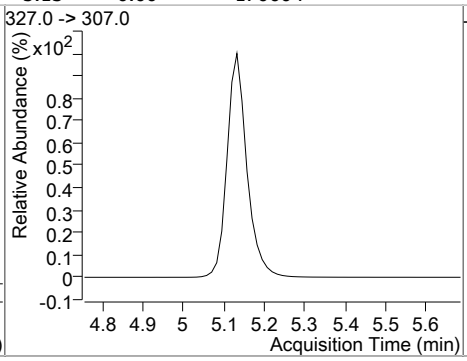


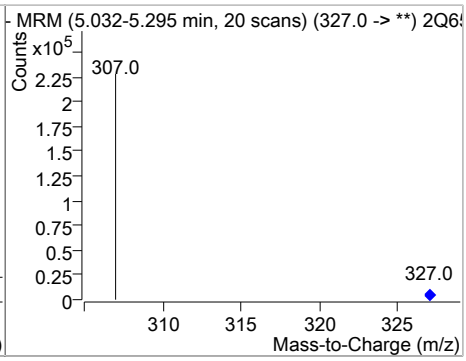
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

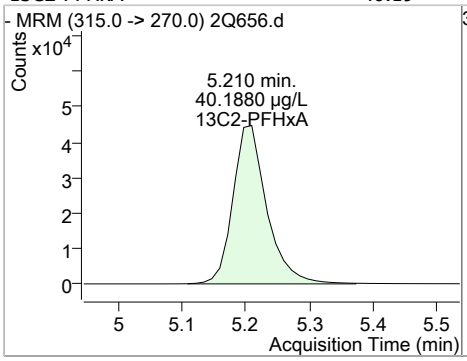
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	39.80	5.13	0.00	170604				

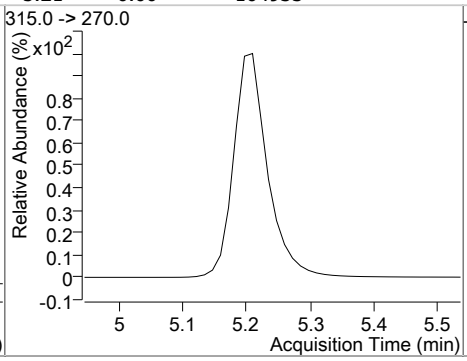


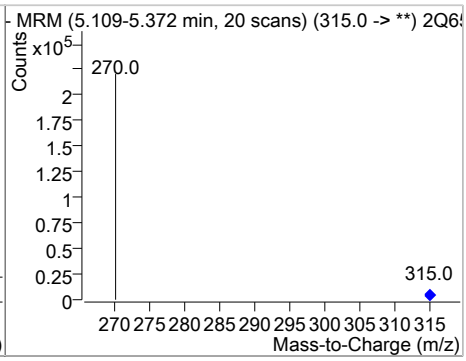




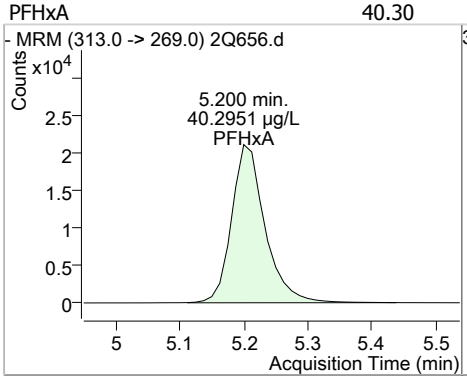
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	40.19	5.21	0.00	164933				

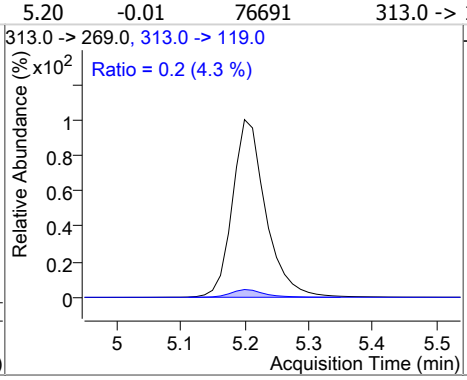


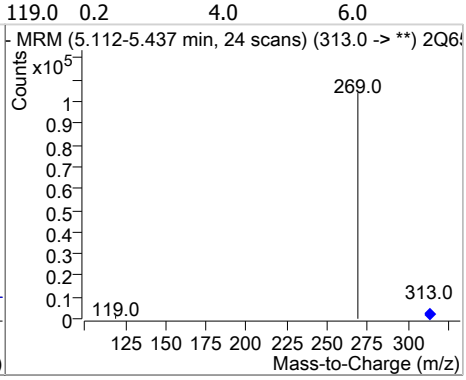




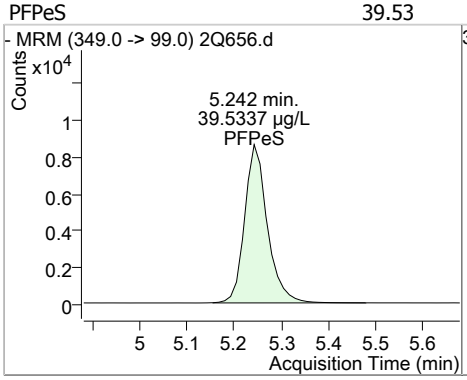
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	40.30	5.20	-0.01	76691	313.0 -> 119.0	0.2	4.0	6.0

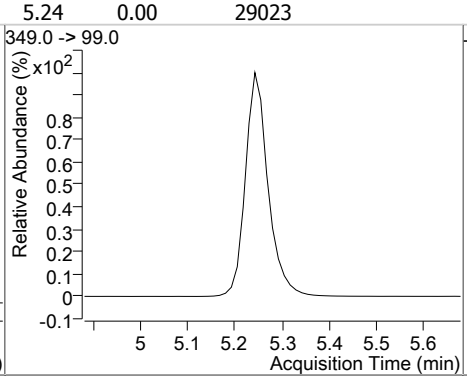


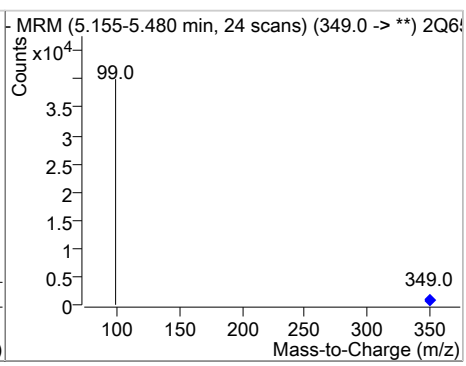




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	39.53	5.24	0.00	29023				



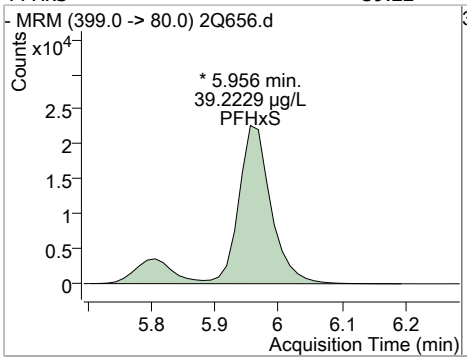


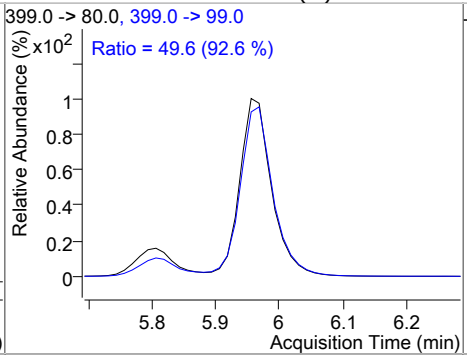


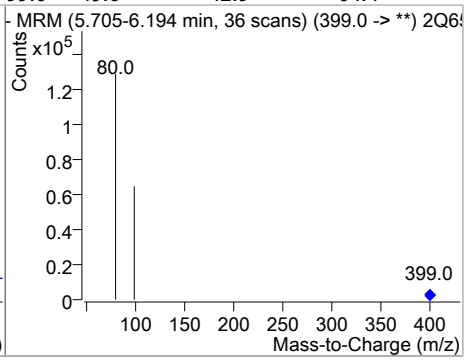
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

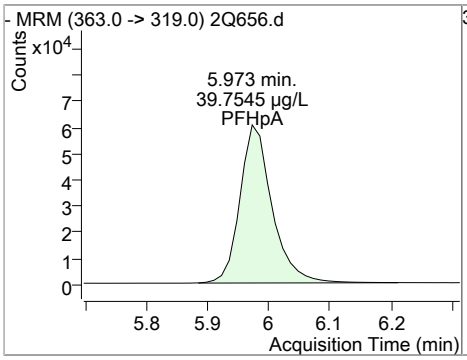
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	39.22	5.96	-0.01	94522 (m)	399.0 -> 99.0	49.6	42.9	64.4

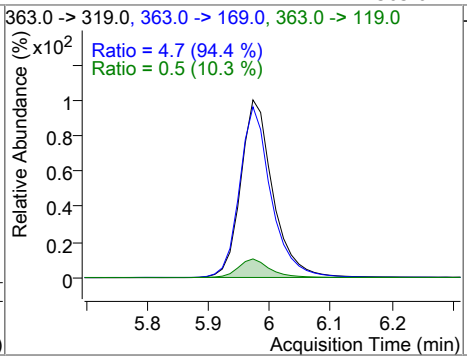


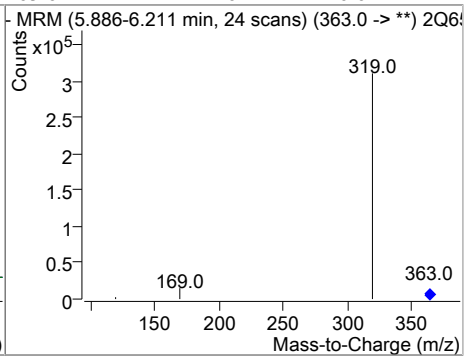




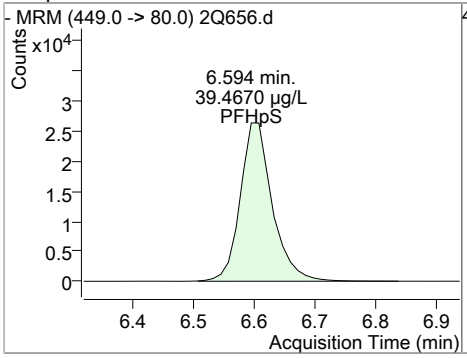
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	39.75	5.97	-0.01	220762	363.0 -> 119.0	0.5	4.0	6.0
					363.0 -> 169.0	4.7	4.0	6.0

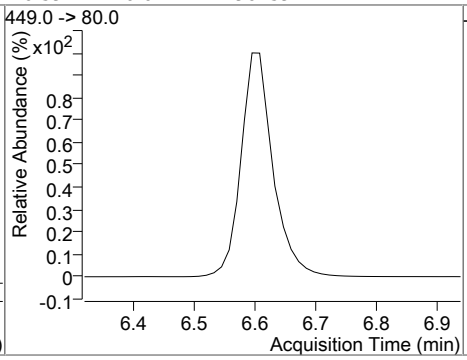


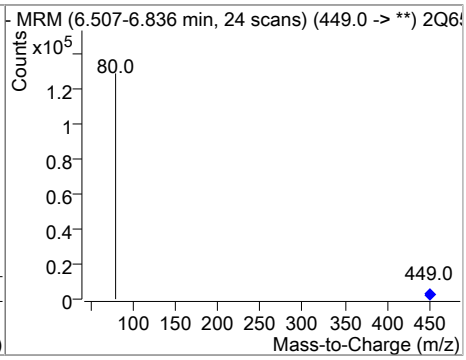




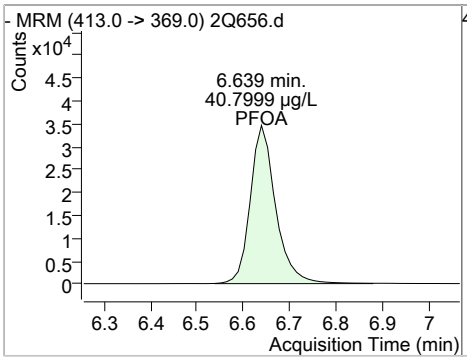
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	39.47	6.59	-0.01	96459				

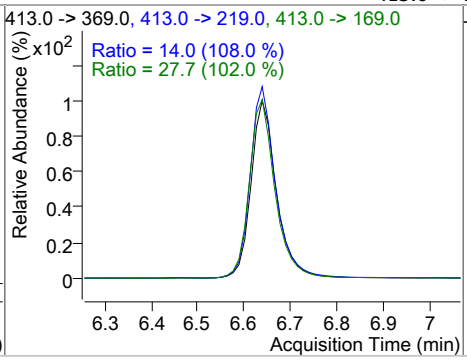


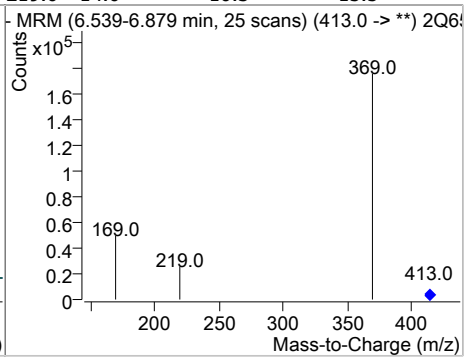




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	40.80	6.64	0.00	131759	413.0 -> 169.0	27.7	21.8	32.6
					413.0 -> 219.0	14.0	10.3	15.5



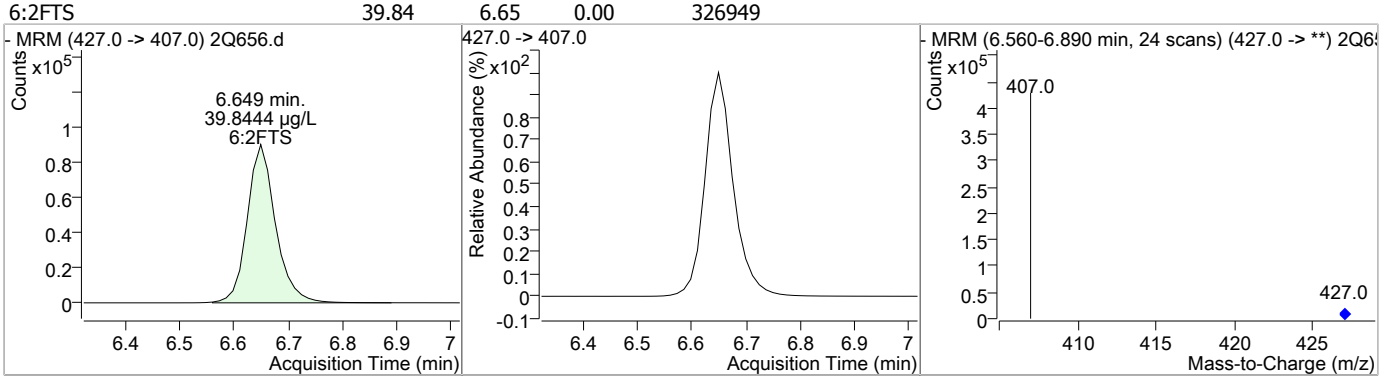




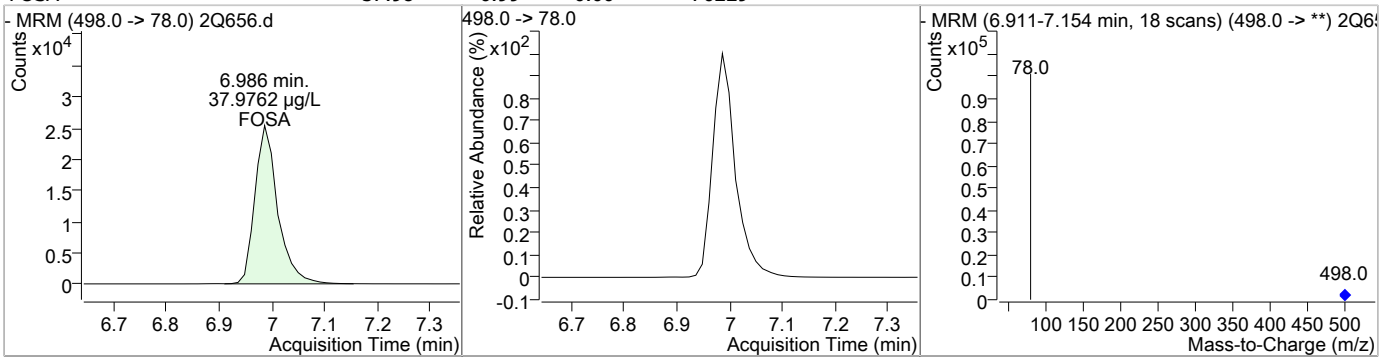
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

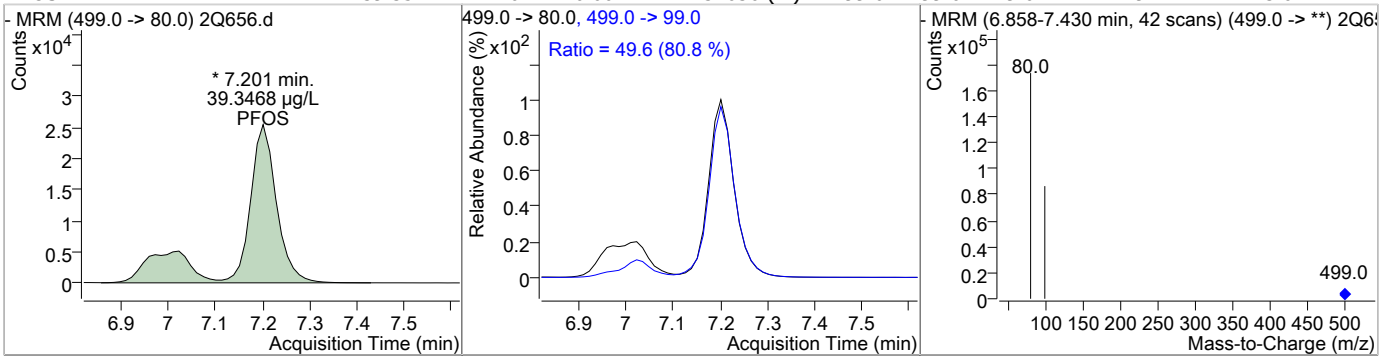
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	39.84	6.65	0.00	326949				



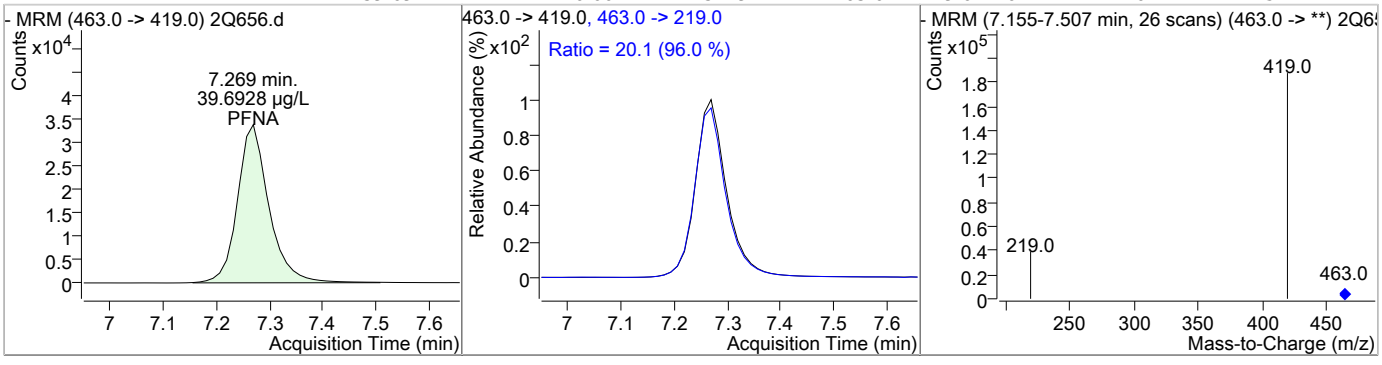
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	37.98	6.99	0.00	76229				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	39.35	7.20	0.00	131036 (m)	499.0 -> 99.0	49.6	49.1	73.6



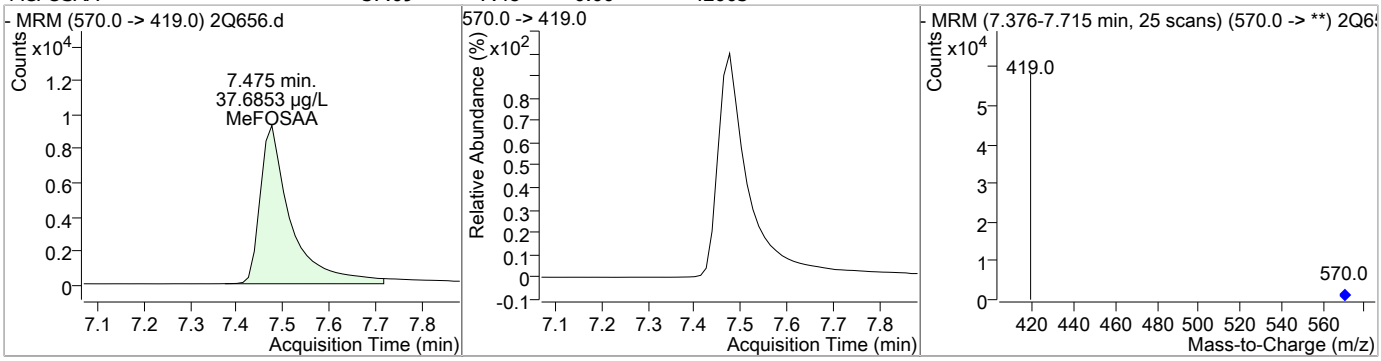
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	39.69	7.27	0.00	137792	463.0 -> 219.0	20.1	16.7	25.1



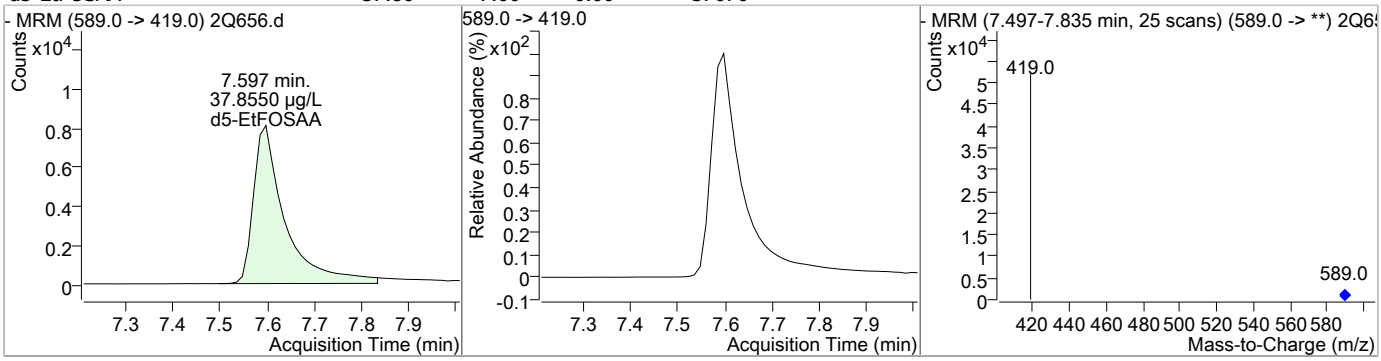
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

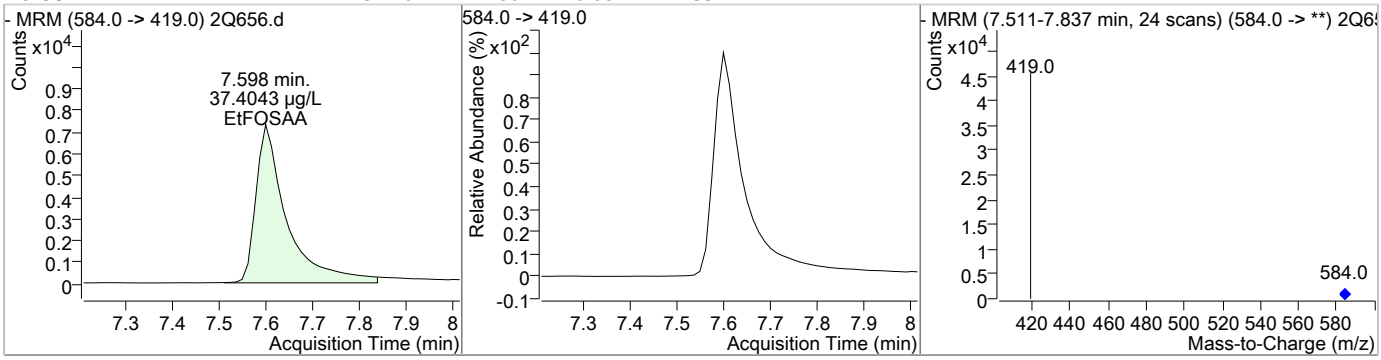
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	37.69	7.48	0.00	42603				



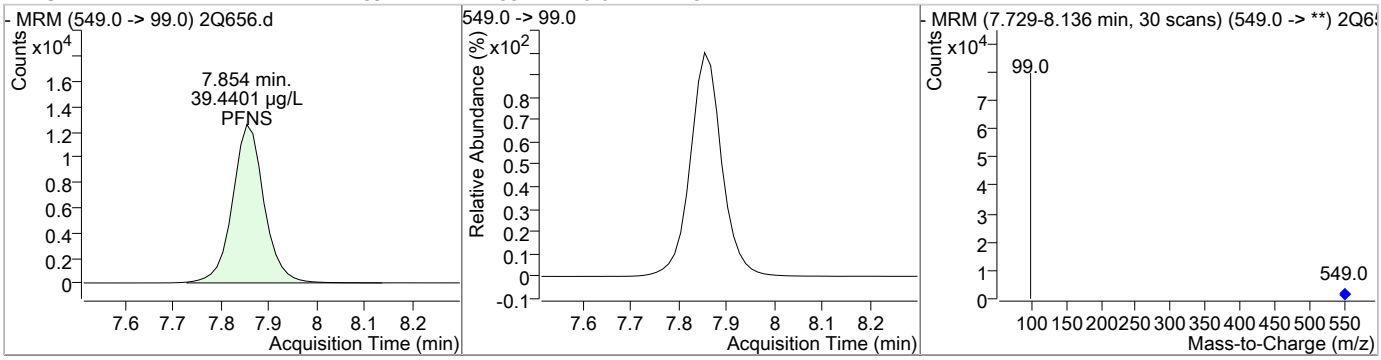
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	37.86	7.60	0.00	37670				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	37.40	7.60	0.00	33444				



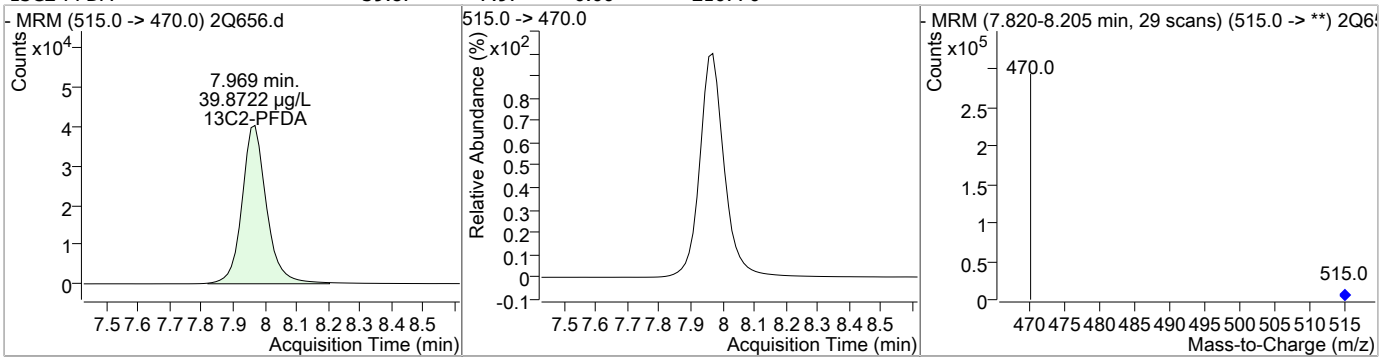
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	39.44	7.85	-0.01	57477				



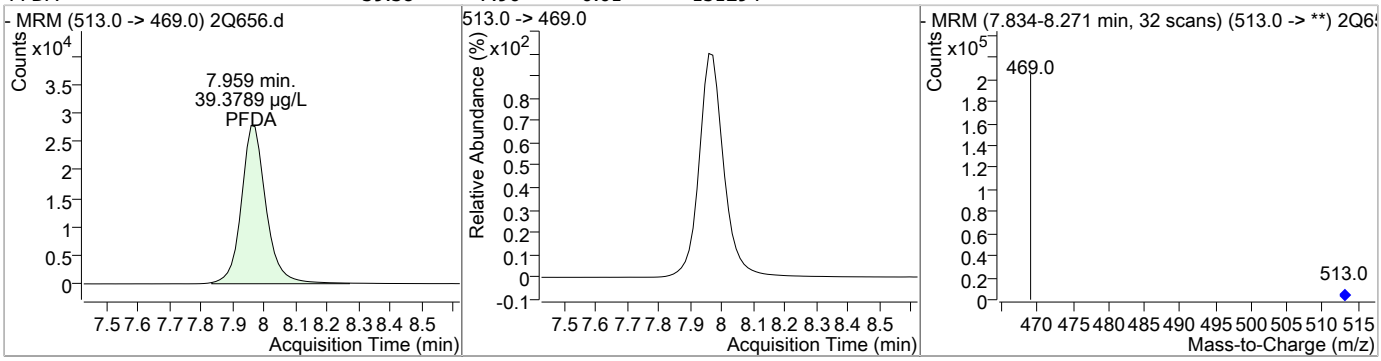
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

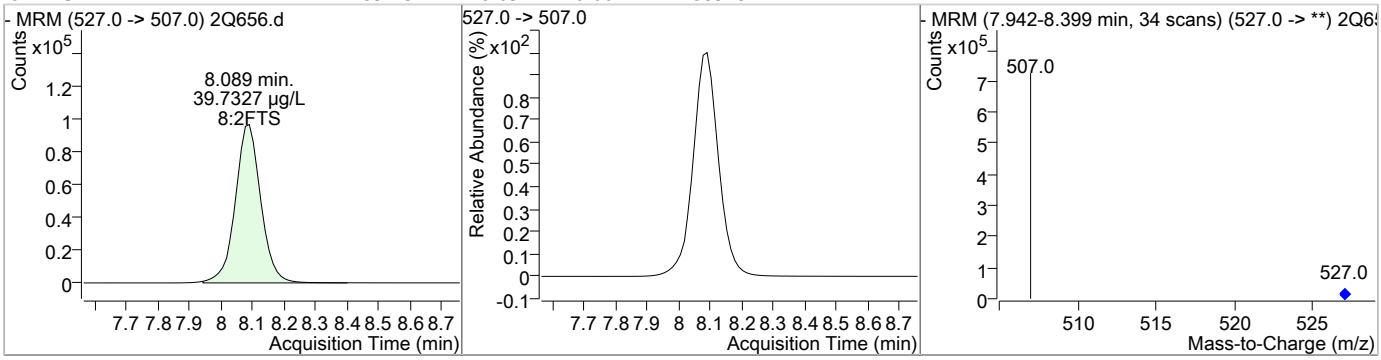
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	39.87	7.97	0.00	216770				



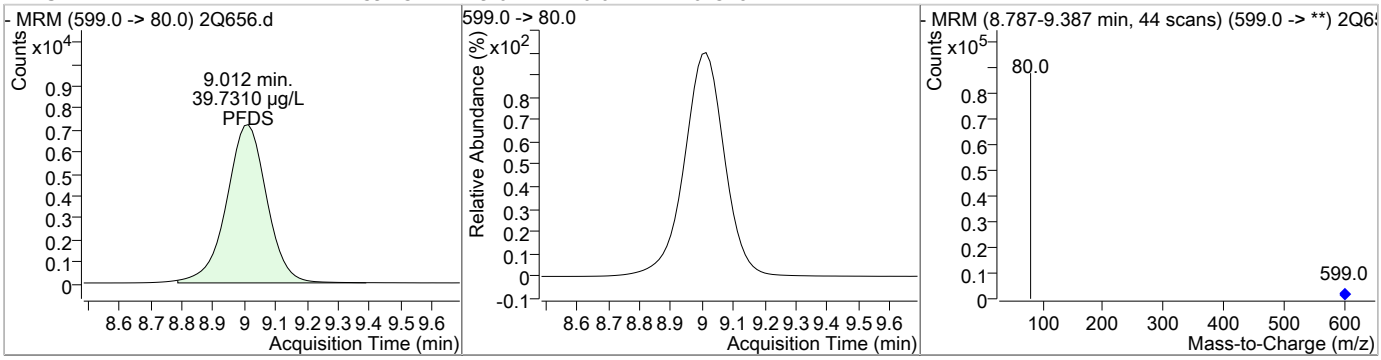
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	39.38	7.96	-0.01	151294				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	39.73	8.09	0.00	539797				



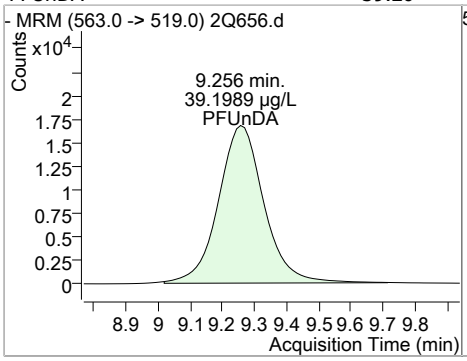
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	39.73	9.01	-0.01	64318				

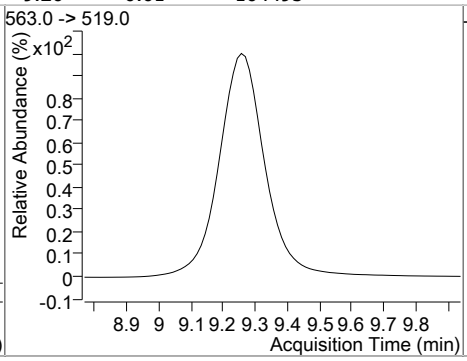


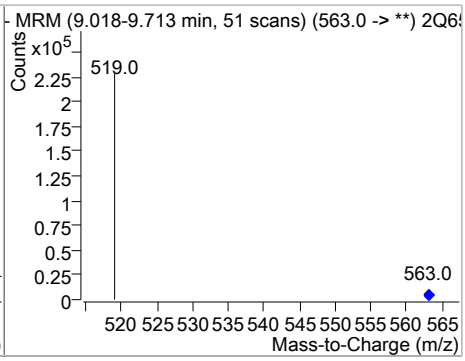
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

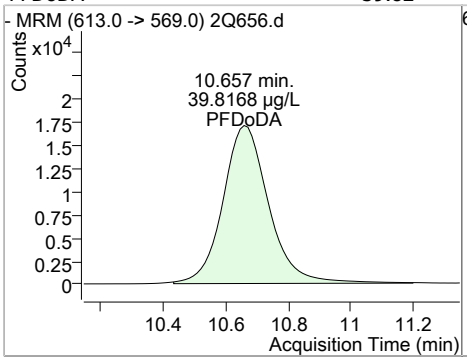
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	39.20	9.26	-0.01	164495				

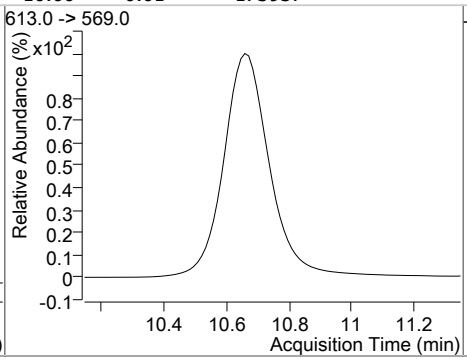


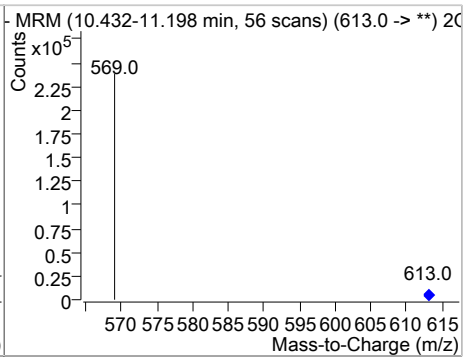




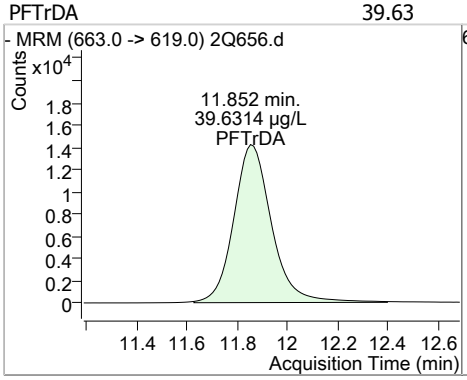
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	39.82	10.66	-0.01	173937				

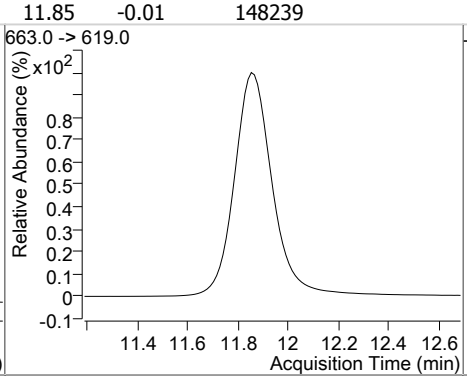


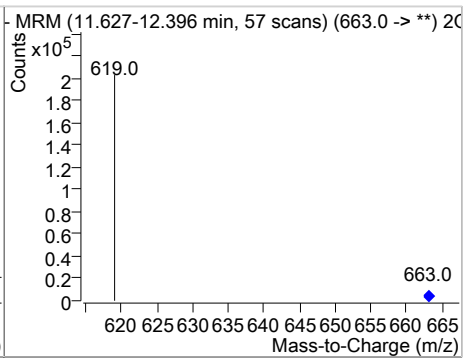




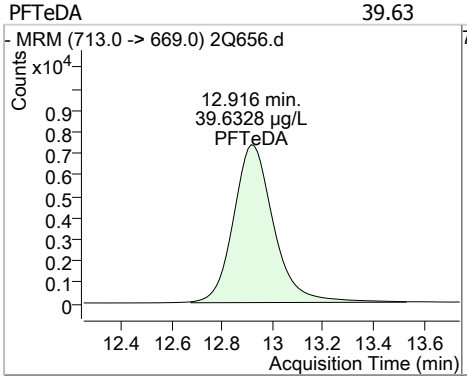
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	39.63	11.85	-0.01	148239				

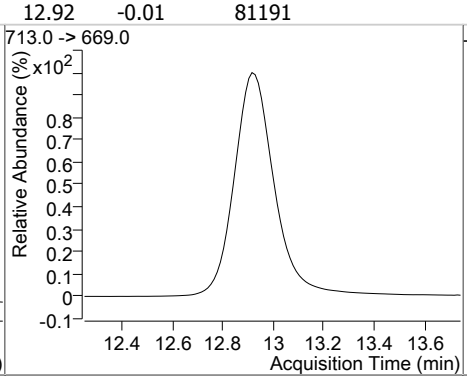


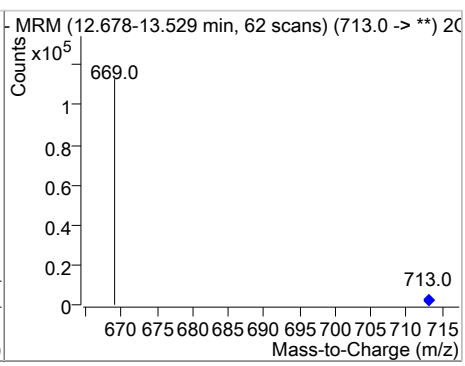




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	39.63	12.92	-0.01	81191				







Manual Integration Approval Summary

Sample Number:	S2Q18-IC18	**Method:**	EPA 537 MOD
Lab FileID:	2Q656.D	**Analyst approved:**	04/21/17 09:46 Nancy Saunders
Injection Time:	04/20/17 13:33	**Supervisor approved:**	04/21/17 11:22 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.96	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.20	Split peak

2Q657.D

Manual Integrations APPROVED (compounds with "m" flag)

Mike Eger 04/21/17 11:22

Perfluorinated Compounds by LC/MS/MS

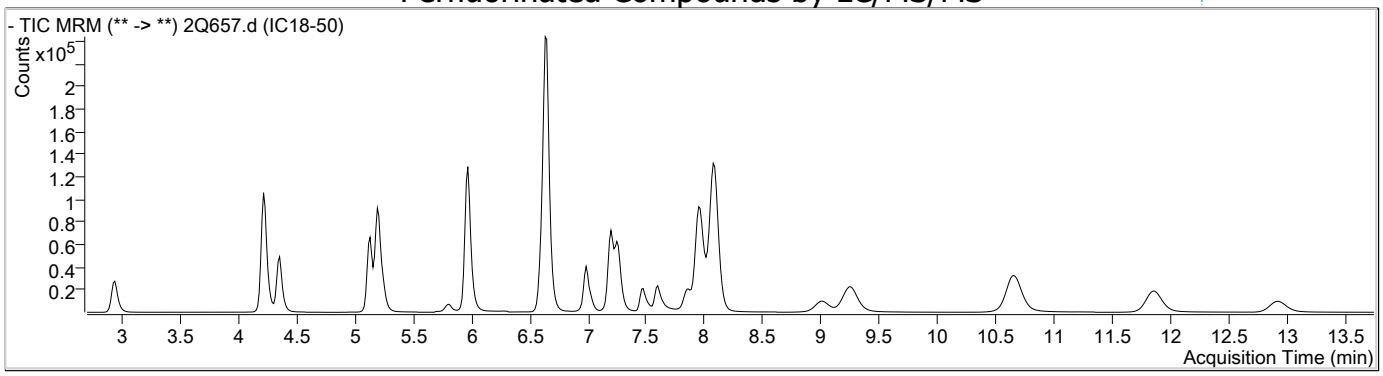
Data File	:	2Q657.d
Operator	:	NANCYF
Acq. Method	:	dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time	:	4/20/2017 1:53:01 PM
Sample Name	:	IC18-50
Vial	:	Vial 8
DA Method File	:	PFCLISTDW_0420_S2Q18.m
Batch Name	:	S2Q18.batch.bin
Last Calib Update	:	4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	6.648	429.0 -> 409.0	177873	20.00	µg/L		0.000
13C2-PFDoDA	10.651	615.0 -> 570.0	97502	20.00	µg/L		-0.013
13C2-PFOA	6.637	415.0 -> 370.0	80320	20.00	µg/L		0.000
13C3-PFPeA	4.222	266.0 -> 222.0	78721	20.00	µg/L		-0.013
13C4-PFOS	7.199	503.0 -> 80.0	58581	20.00	µg/L		0.000
d3-MeFOSAA	7.462	573.0 -> 419.0	35696	20.00	µg/L		-0.013
System Monitoring Compounds							
13C2-PFDA	7.957	515.0 -> 470.0	285676	50.83	µg/L		-0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 254.2%			
13C2-PFHxA	5.197	315.0 -> 270.0	214460	50.55	µg/L		-0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 252.7%			
d5-EtFOSAA	7.597	589.0 -> 419.0	51446	51.16	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 255.8%			
Target Compounds							QValue
4:2FTS	5.132	327.0 -> 307.0	225772	50.25	µg/L		100
6:2FTS	6.649	427.0 -> 407.0	428504	49.82	µg/L		100
8:2FTS	8.077	527.0 -> 507.0	716709	50.33	µg/L		100
EtFOSAA	7.598	584.0 -> 419.0	46332	52.13	µg/L		100
FOSA	6.986	498.0 -> 78.0	99247	51.71	µg/L		100
MeFOSAA	7.475	570.0 -> 419.0	58587	51.23	µg/L		100
PFBA	2.940	213.0 -> 169.0	107611	50.93	µg/L		100
PFBS	4.353	299.0 -> 80.0	119255	51.02	µg/L		99
PFDA	7.959	513.0 -> 469.0	203528	51.25	µg/L		100
PFDoDA	10.657	613.0 -> 569.0	228436	50.16	µg/L		100
PFDS	9.000	599.0 -> 80.0	84636	50.18	µg/L		100
PFHpA	5.973	363.0 -> 319.0	294462	50.54	µg/L	#	93
PFHpS	6.594	449.0 -> 80.0	126613	51.03	µg/L		100
PFHxA	5.200	313.0 -> 269.0	100182	49.89	µg/L	#	86
PFHxS	5.956	399.0 -> 80.0	125523	51.31	µg/L	m	94
PFNA	7.269	463.0 -> 419.0	183128	51.03	µg/L		98
PFNS	7.854	549.0 -> 99.0	75469	51.01	µg/L		100
PFOA	6.639	413.0 -> 369.0	168435	50.45	µg/L		97
PFOS	7.201	499.0 -> 80.0	173143	51.21	µg/L	#m	84
PFPeA	4.225	263.0 -> 219.0	303509	50.81	µg/L		100
PFPeS	5.242	349.0 -> 99.0	38173	50.95	µg/L		100
PFTeDA	12.916	713.0 -> 669.0	107737	50.26	µg/L		100
PFTrDA	11.852	663.0 -> 619.0	197227	50.26	µg/L		100
PFUnDA	9.256	563.0 -> 519.0	218740	51.13	µg/L		100

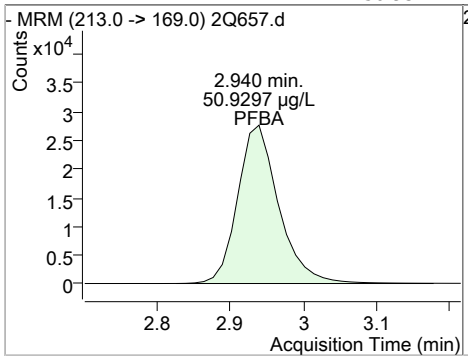
 # = Qualifier out of range, m = manually integrated, + = Area summed

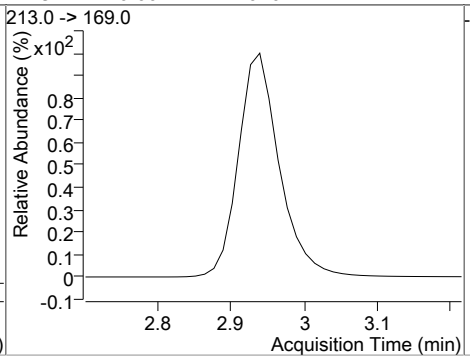
Perfluorinated Compounds by LC/MS/MS

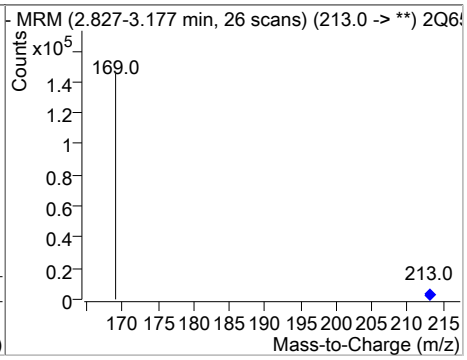
Agilent Technologies



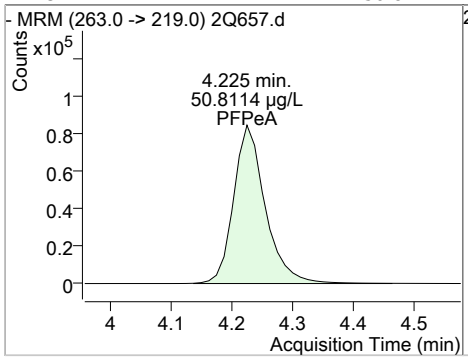
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	50.93	2.94	0.00	107611				

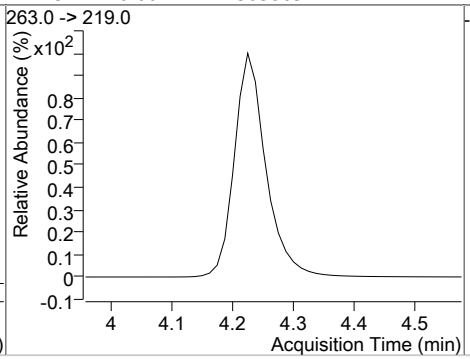


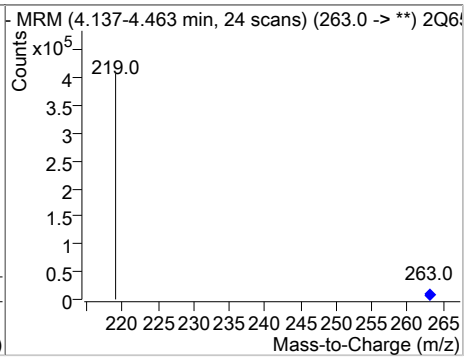




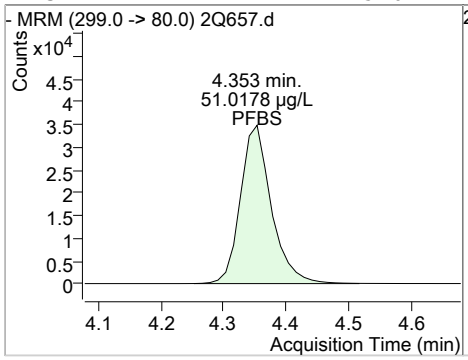
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	50.81	4.23	0.00	303509				

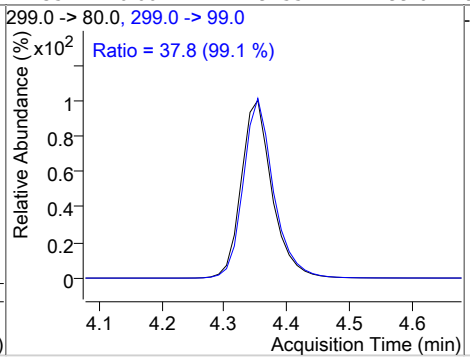


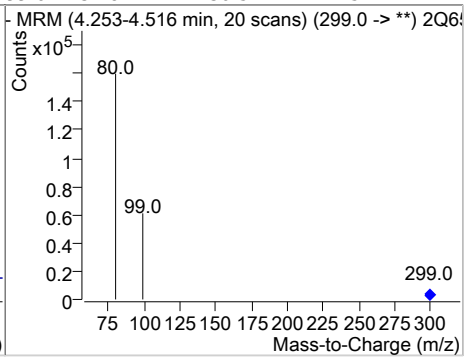




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	51.02	4.35	0.00	119255	299.0 -> 99.0	37.8	30.5	45.7



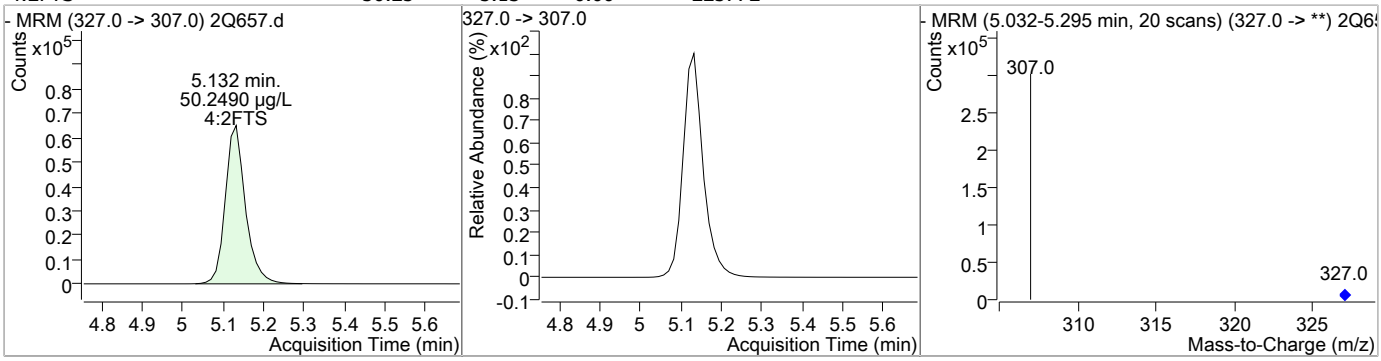




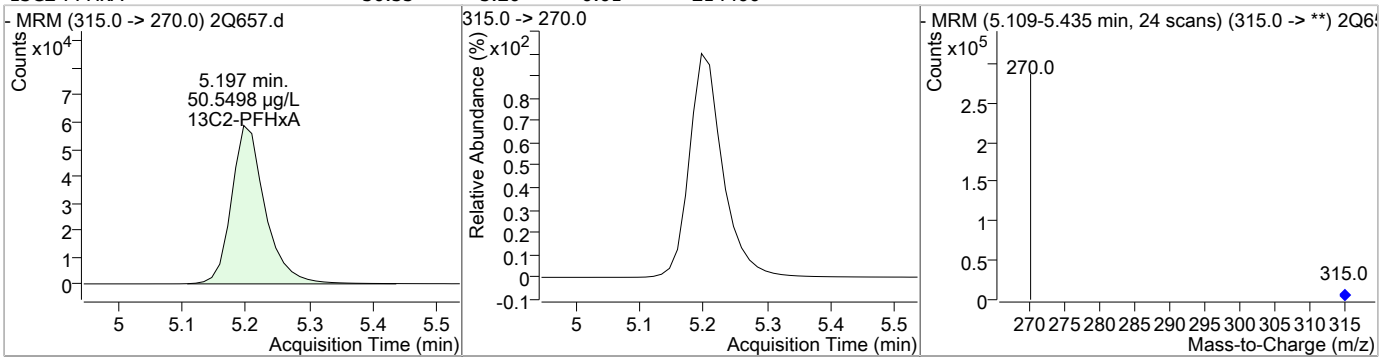
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

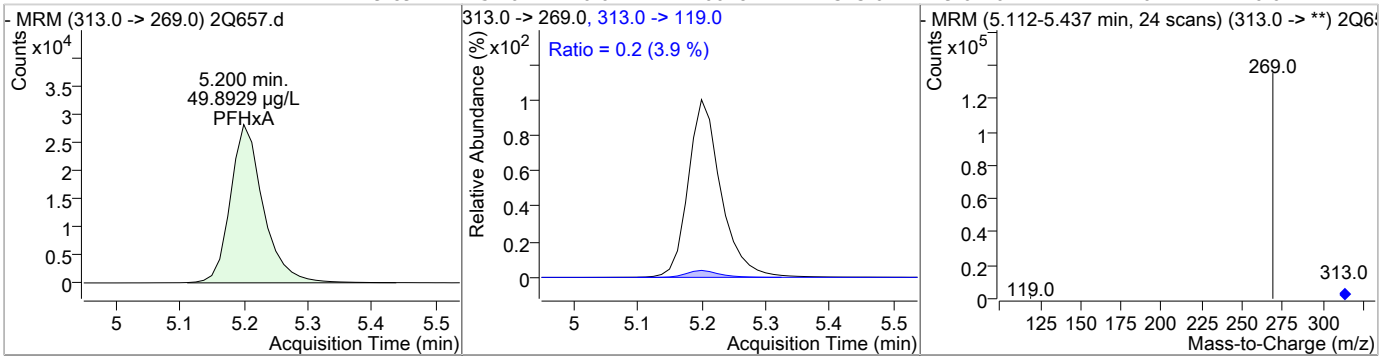
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	50.25	5.13	0.00	225772				



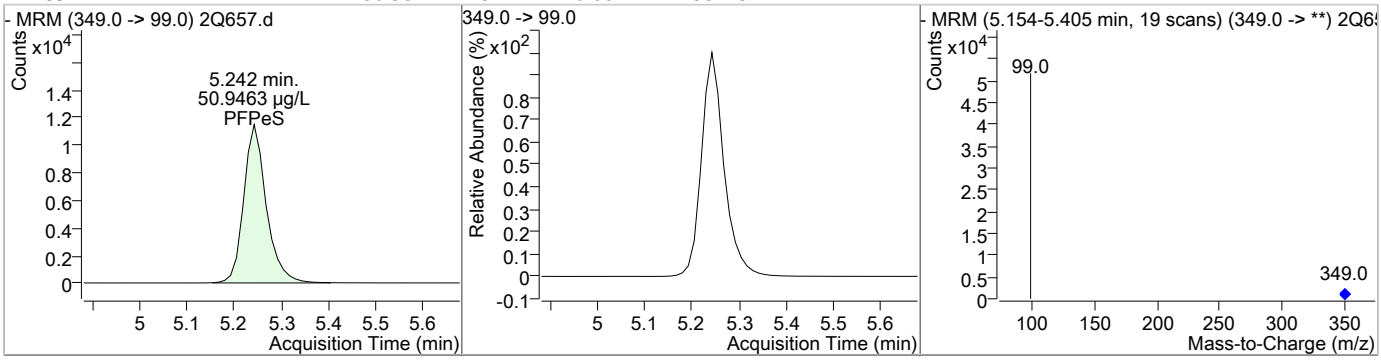
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	50.55	5.20	-0.01	214460				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	49.89	5.20	-0.01	100182	313.0 -> 119.0	0.2	4.0	6.0



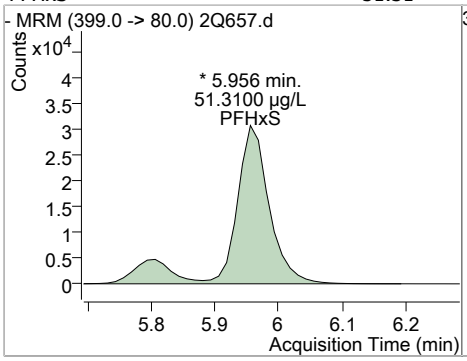
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	50.95	5.24	0.00	38173				

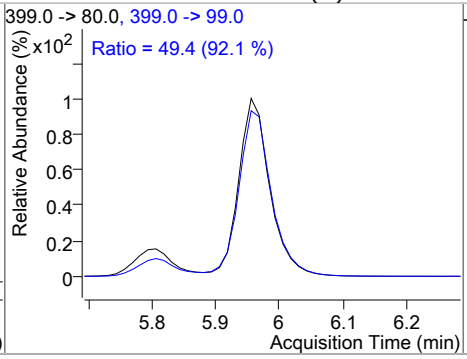


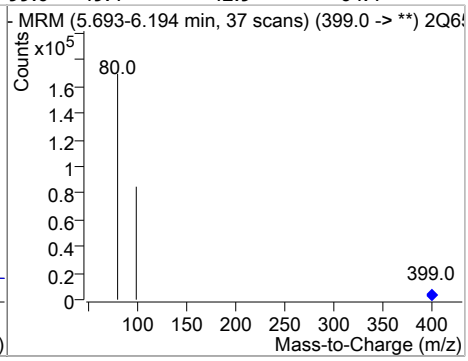
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

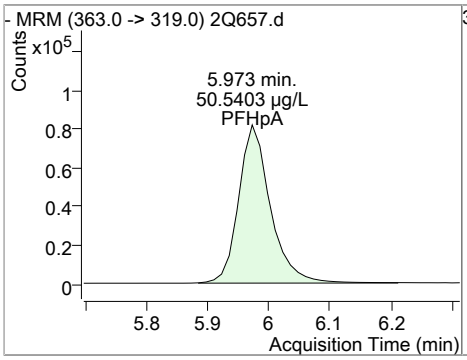
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	51.31	5.96	-0.01	125523 (m)	399.0 -> 99.0	49.4	42.9	64.4

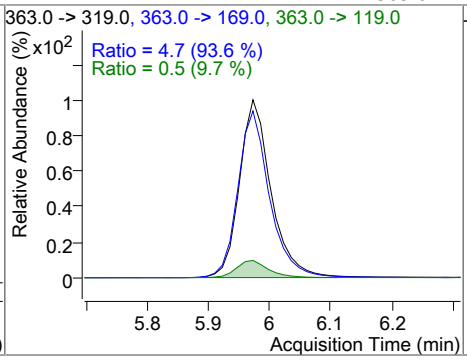


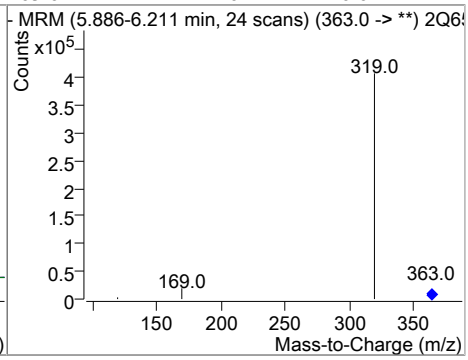




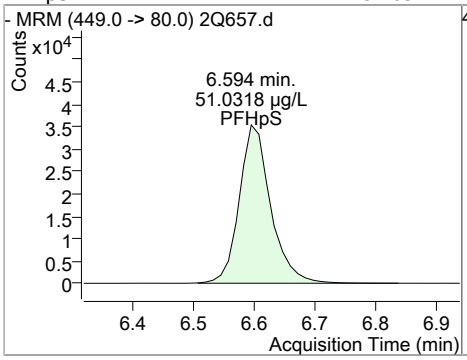
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	50.54	5.97	-0.01	294462	363.0 -> 119.0	0.5	4.0	6.0
					363.0 -> 169.0	4.7	4.0	6.0

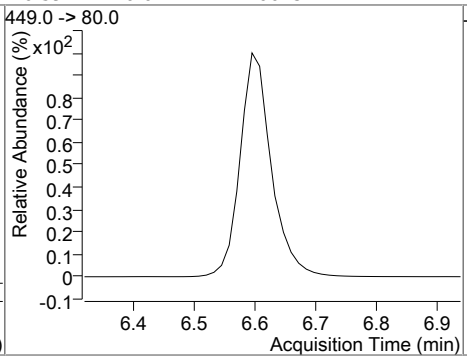


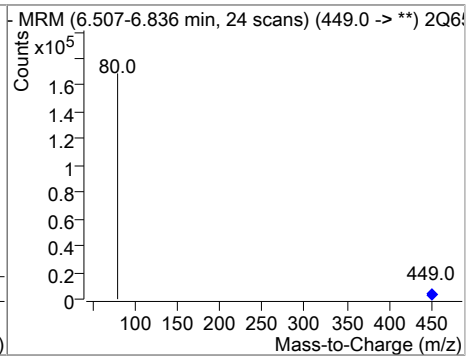




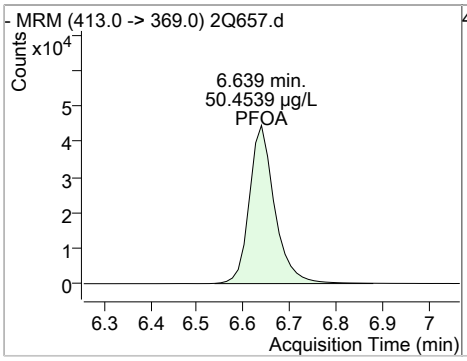
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	51.03	6.59	-0.01	126613				

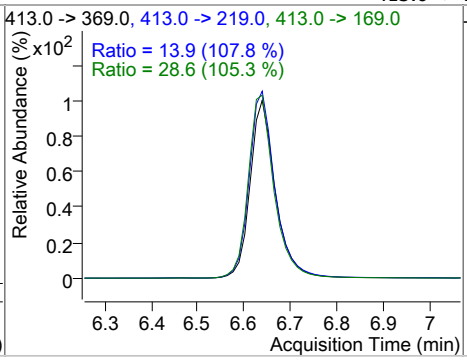


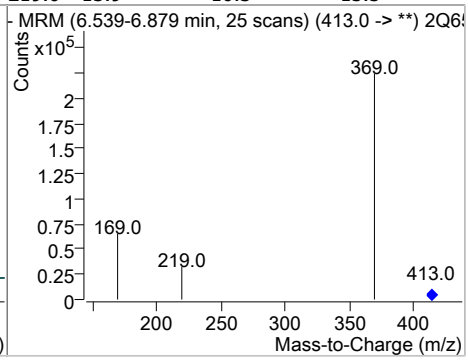




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	50.45	6.64	0.00	168435	413.0 -> 169.0	28.6	21.8	32.6
					413.0 -> 219.0	13.9	10.3	15.5



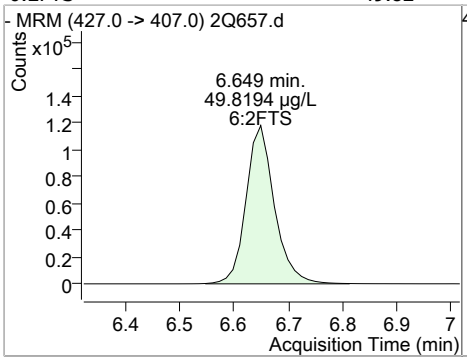


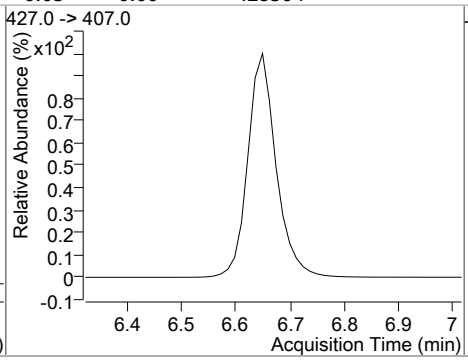


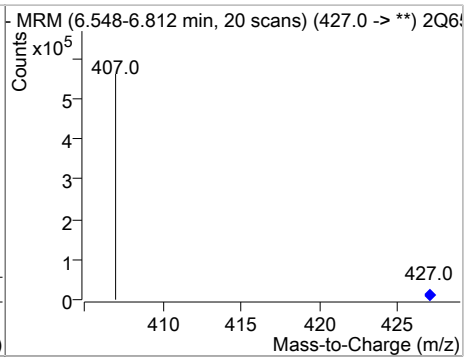
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

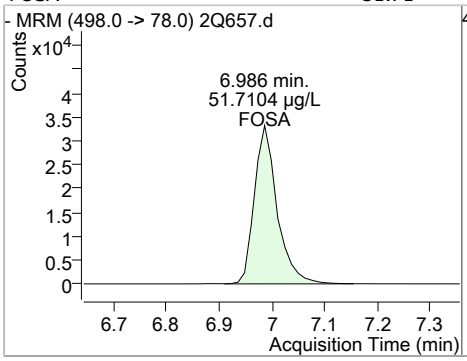
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	49.82	6.65	0.00	428504				

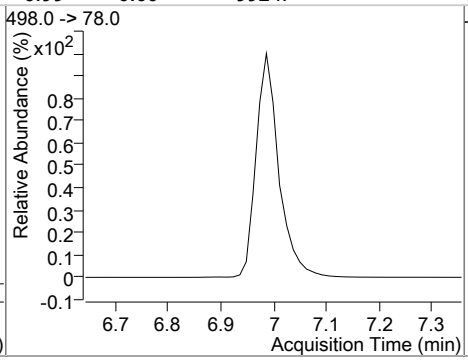


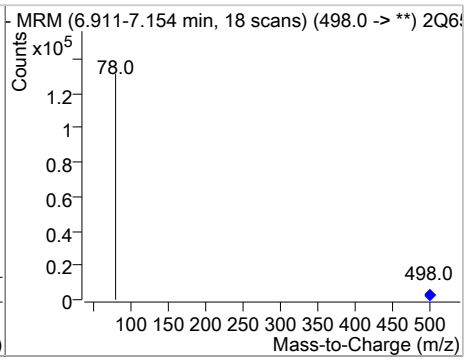




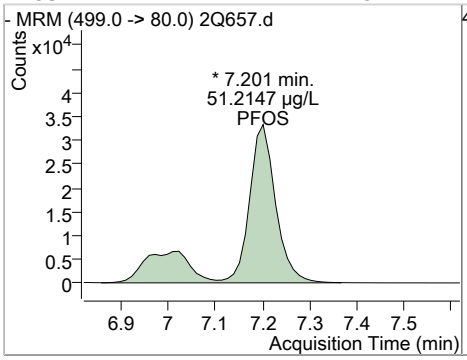
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	51.71	6.99	0.00	99247				

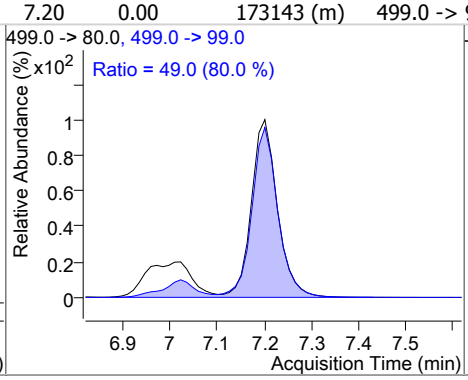


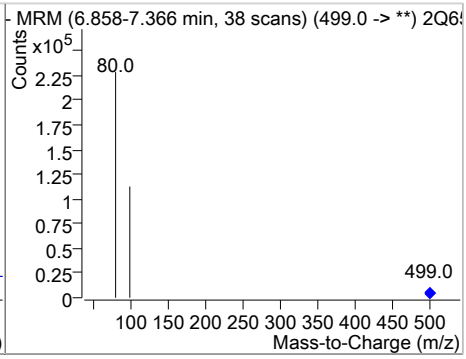




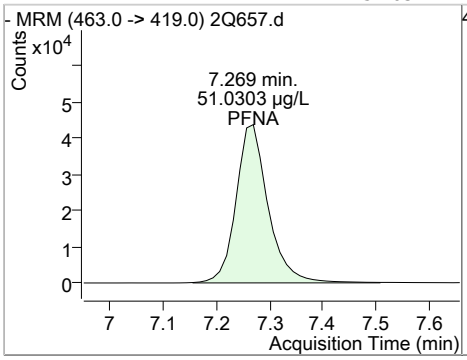
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	51.21	7.20	0.00	173143 (m)	499.0 -> 99.0	49.0	49.1	73.6

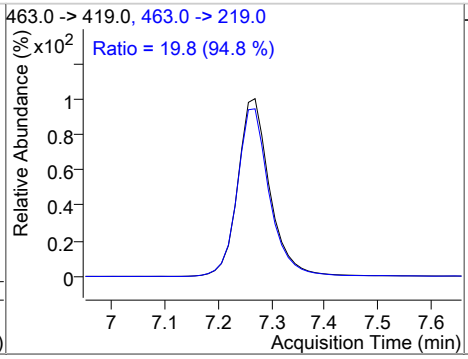


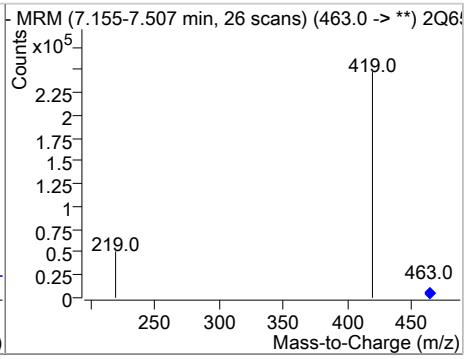




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	51.03	7.27	0.00	183128	463.0 -> 219.0	19.8	16.7	25.1



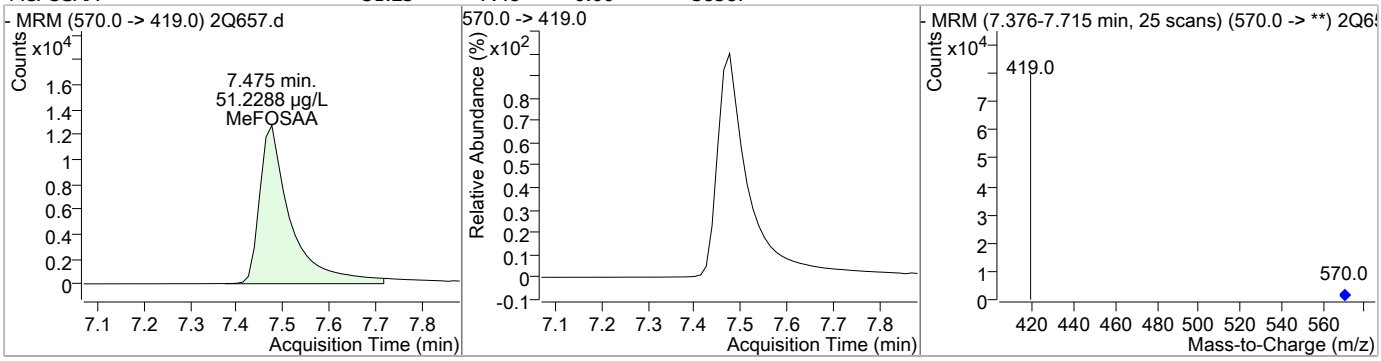




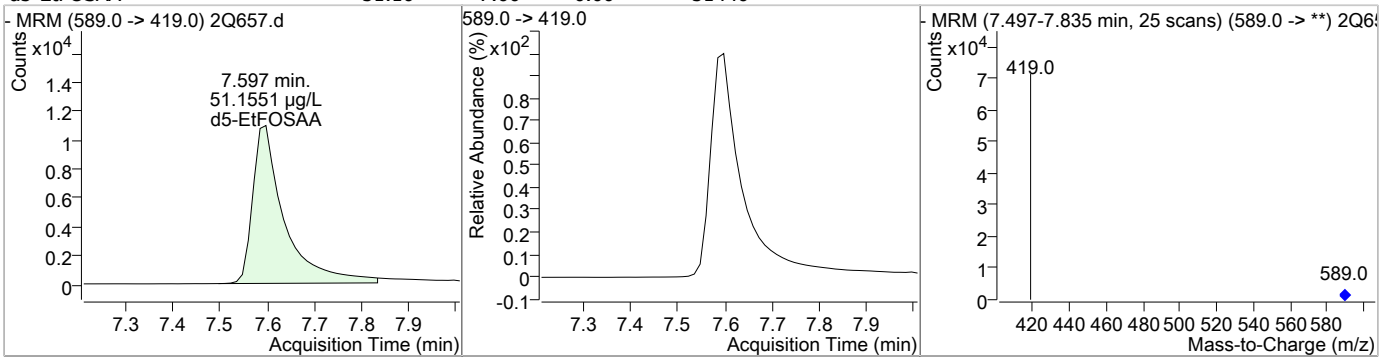
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

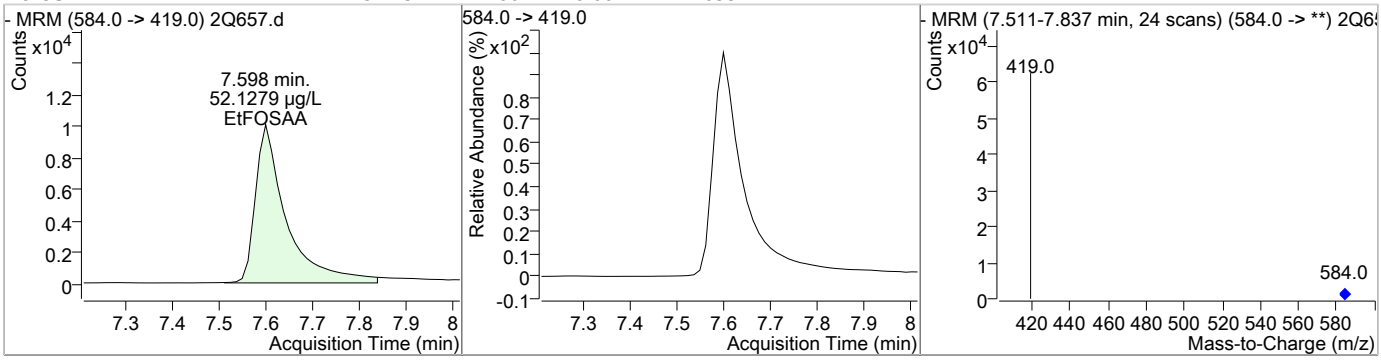
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	51.23	7.48	0.00	58587				



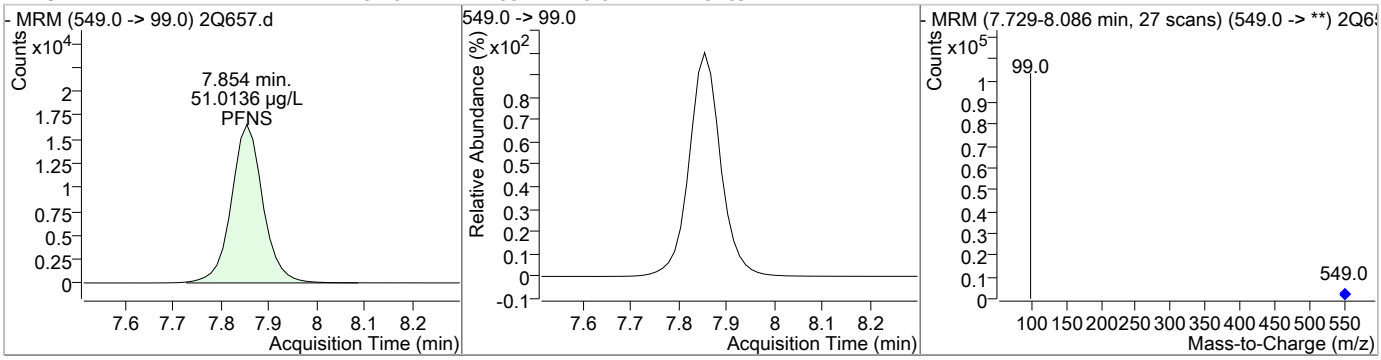
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	51.16	7.60	0.00	51446				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	52.13	7.60	0.00	46332				



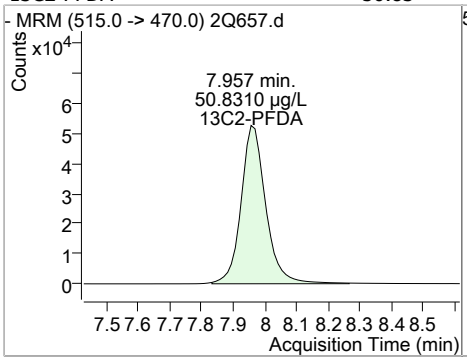
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	51.01	7.85	-0.01	75469				

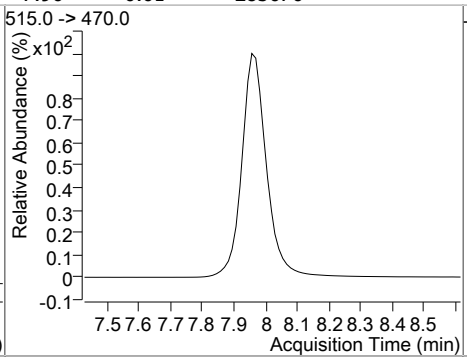


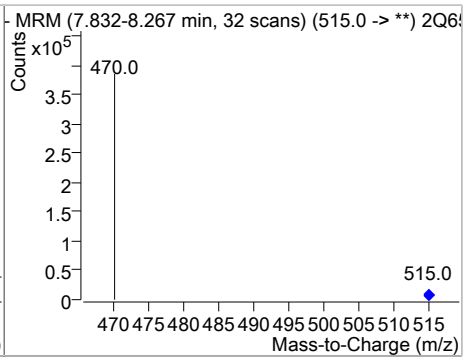
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

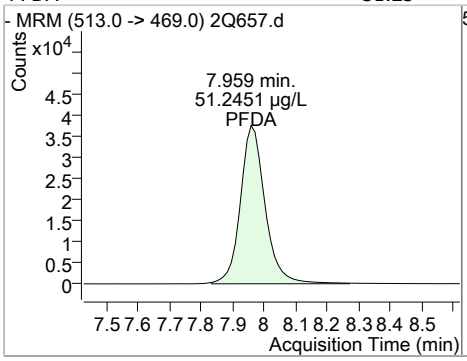
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	50.83	7.96	-0.01	285676				

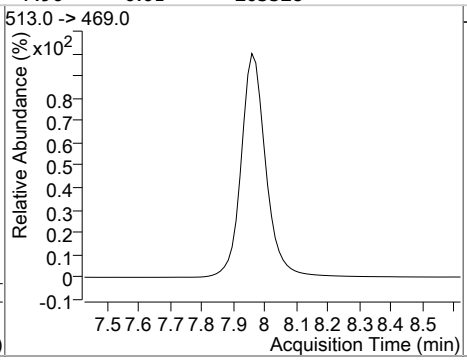


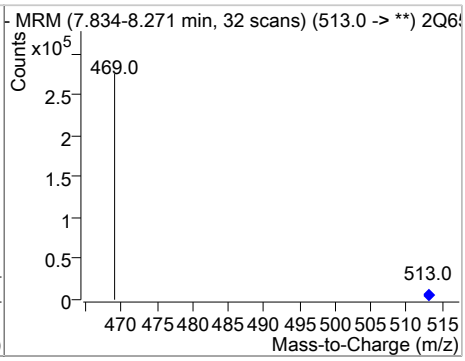




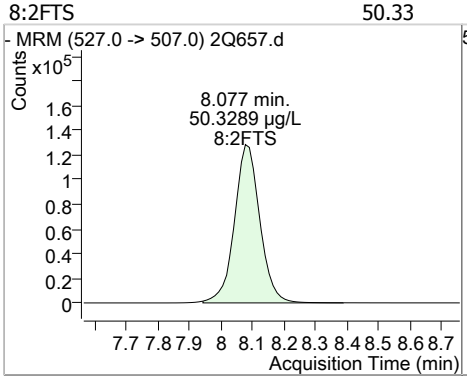
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	51.25	7.96	-0.01	203528				

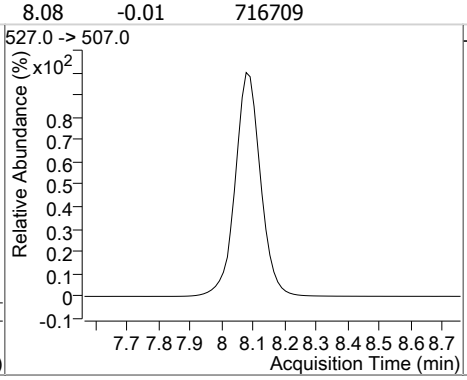


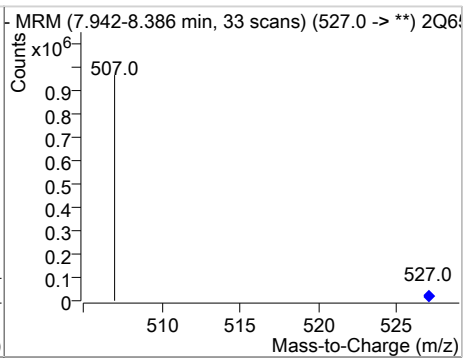




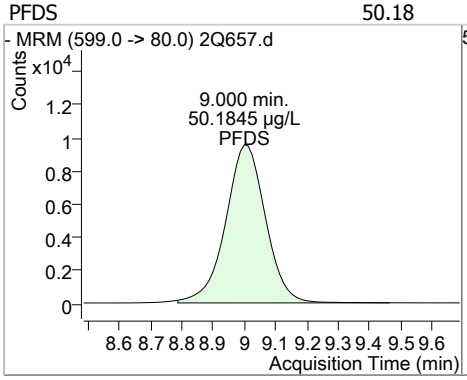
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	50.33	8.08	-0.01	716709				

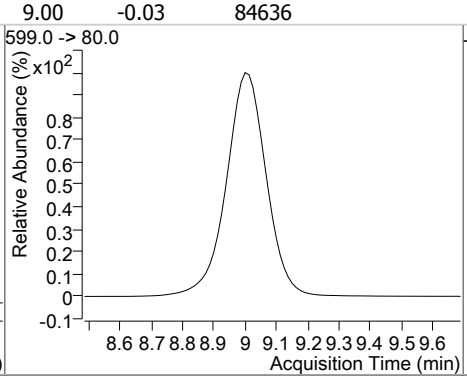


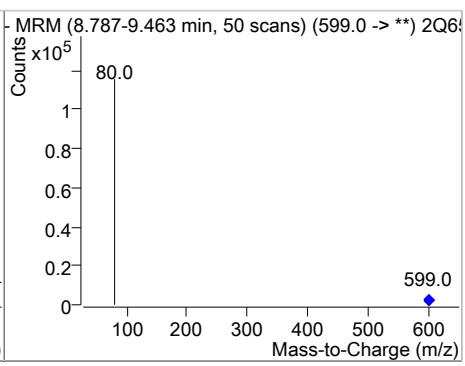




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	50.18	9.00	-0.03	84636				



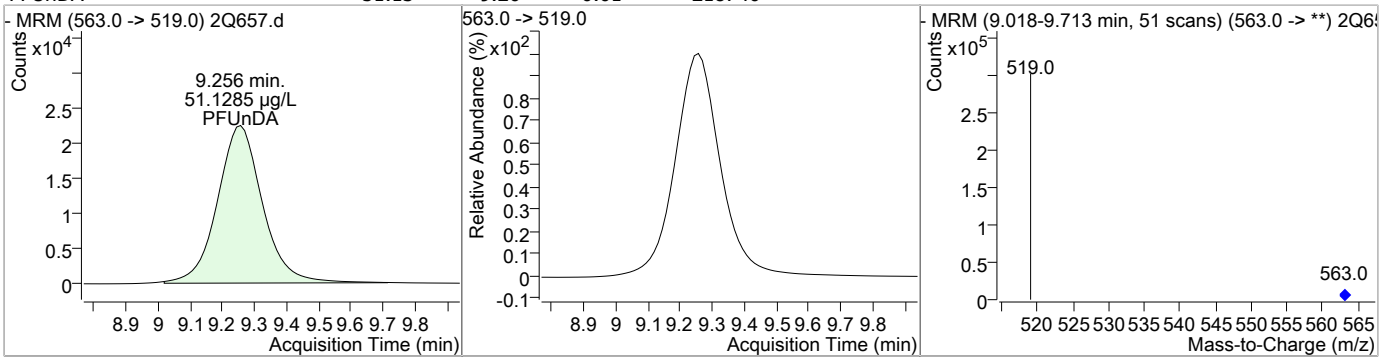




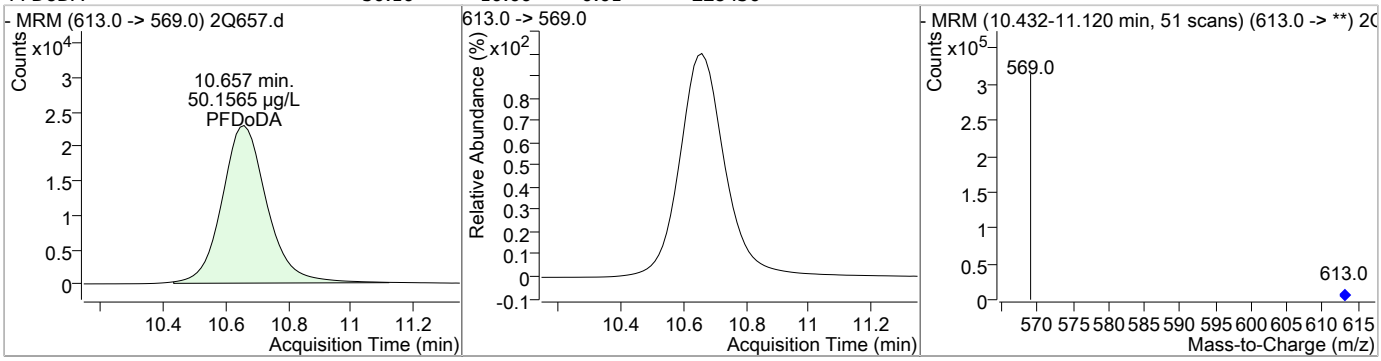
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

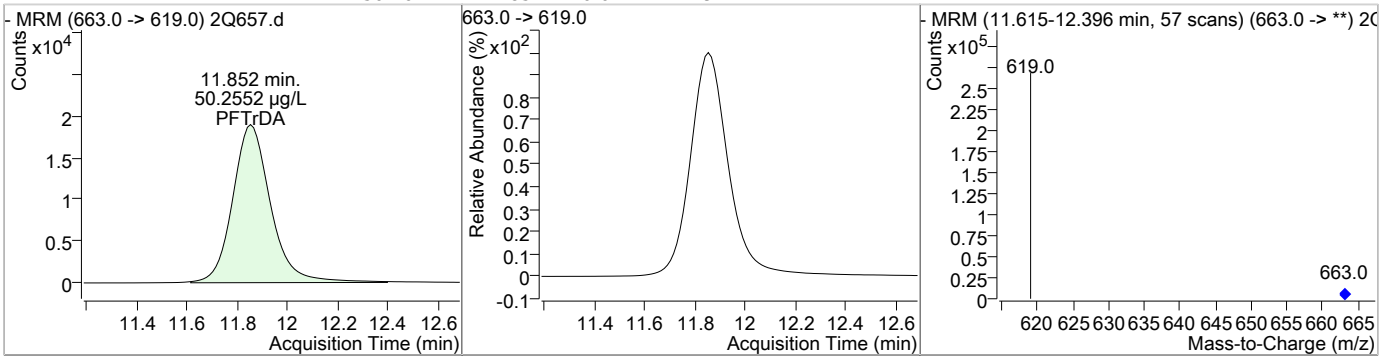
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	51.13	9.26	-0.01	218740				



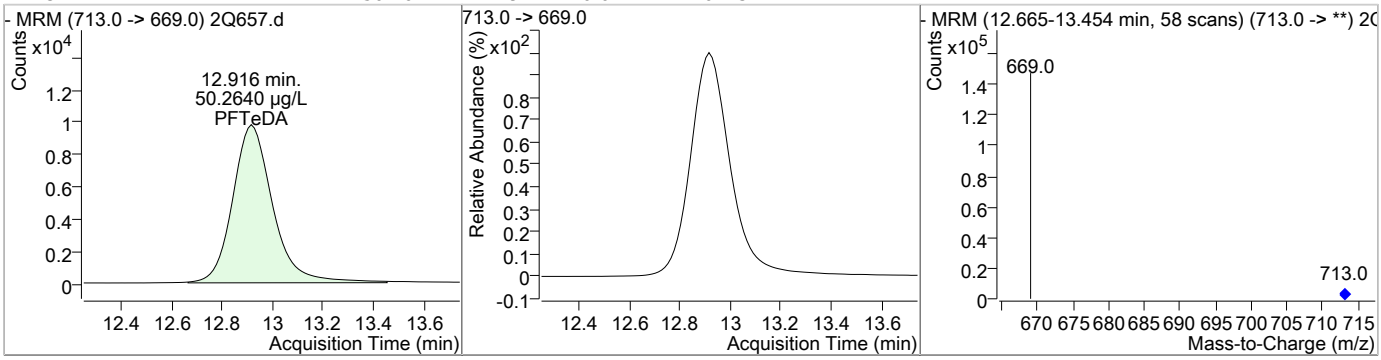
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	50.16	10.66	-0.01	228436				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	50.26	11.85	-0.01	197227				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	50.26	12.92	-0.01	107737				



Manual Integration Approval Summary

Sample Number:	S2Q18-IC18	**Method:**	EPA 537 MOD
Lab FileID:	2Q657.D	**Analyst approved:**	04/21/17 09:46 Nancy Saunders
Injection Time:	04/20/17 13:53	**Supervisor approved:**	04/21/17 11:22 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.96	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.20	Split peak

Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

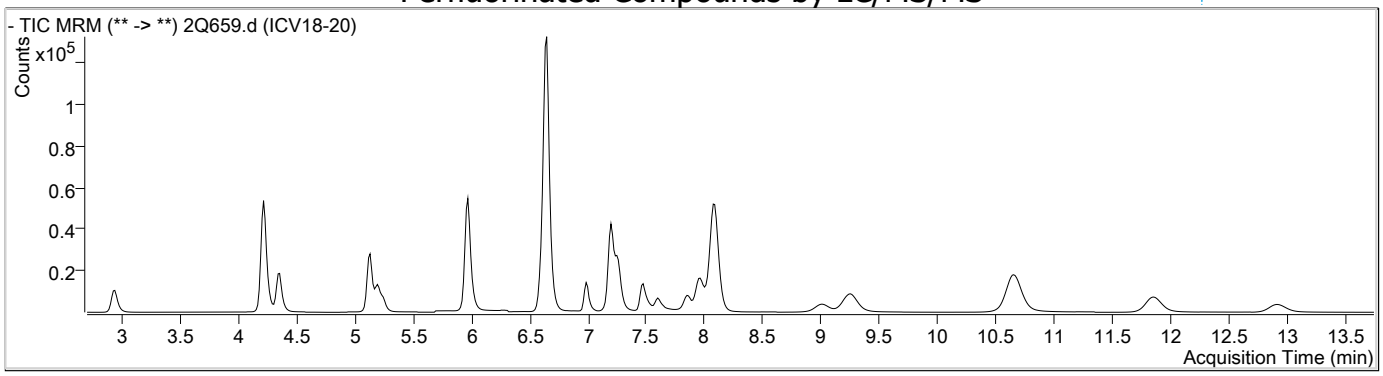
Data File	:	2Q659.d
Operator	:	NANCYF
Acq. Method	:	dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time	:	4/20/2017 2:34:37 PM
Sample Name	:	ICV18-20
Vial	:	Vial 9
DA Method File	:	PFCLISTDW_0420_S2Q18.m
Batch Name	:	S2Q18.batch.bin
Last Calib Update	:	4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	6.648	429.0 -> 409.0	158830	20.00	µg/L		0.000
13C2-PFDoDA	10.651	615.0 -> 570.0	91721	20.00	µg/L		-0.013
13C2-PFOA	6.637	415.0 -> 370.0	75324	20.00	µg/L		0.000
13C3-PFPeA	4.222	266.0 -> 222.0	74004	20.00	µg/L		-0.013
13C4-PFOS	7.199	503.0 -> 80.0	55296	20.00	µg/L		0.000
d3-MeFOSAA	7.474	573.0 -> 419.0	34720	20.00	µg/L		0.000
System Monitoring Compounds							
13C2-PFDA	7.969	515.0 -> 470.0	0	0.00	µg/L	m	0.000
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	7.597	589.0 -> 419.0	0	0.00	µg/L	m	0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = NA%			
Target Compounds							**QValue**
4:2FTS	5.132	327.0 -> 307.0	96548	24.06	µg/L		100
6:2FTS	6.649	427.0 -> 407.0	172861	22.51	µg/L		100
8:2FTS	8.077	527.0 -> 507.0	286680	22.54	µg/L		100
EtFOSAA	7.598	584.0 -> 419.0	18871	23.57	µg/L		100
FOSA	6.986	498.0 -> 78.0	40260	21.57	µg/L		100
MeFOSAA	7.475	570.0 -> 419.0	24006	24.23	µg/L		100
PFBA	2.940	213.0 -> 169.0	41613	21.00	µg/L		100
PFBS	4.341	299.0 -> 80.0	46062	20.88	µg/L		100
PFDA	7.959	513.0 -> 469.0	78630	21.11	µg/L		100
PFDoDA	10.657	613.0 -> 569.0	89904	22.31	µg/L		100
PFDS	9.000	599.0 -> 80.0	33156	22.35	µg/L		100
PFHpA	5.973	363.0 -> 319.0	113139	21.56	µg/L	#	93
PFHpS	6.594	449.0 -> 80.0	49317	21.06	µg/L		100
PFHxA	5.200	313.0 -> 269.0	38876	21.93	µg/L	#	86
PFHxS	5.956	399.0 -> 80.0	50890	22.04	µg/L		94
PFNA	7.269	463.0 -> 419.0	71725	21.31	µg/L		97
PFNS	7.854	549.0 -> 99.0	31642	22.66	µg/L		100
PFOA	6.639	413.0 -> 369.0	66629	21.28	µg/L		99
PFOS	7.201	499.0 -> 80.0	62605	19.62	µg/L		96
PFPeA	4.225	263.0 -> 219.0	118214	21.05	µg/L		100
PFPeS	5.242	349.0 -> 99.0	15528	22.05	µg/L		100
PFTeDA	12.916	713.0 -> 669.0	42406	22.54	µg/L		100
PFTrDA	11.852	663.0 -> 619.0	76534	22.39	µg/L		100
PFUnDA	9.256	563.0 -> 519.0	85345	21.21	µg/L		100

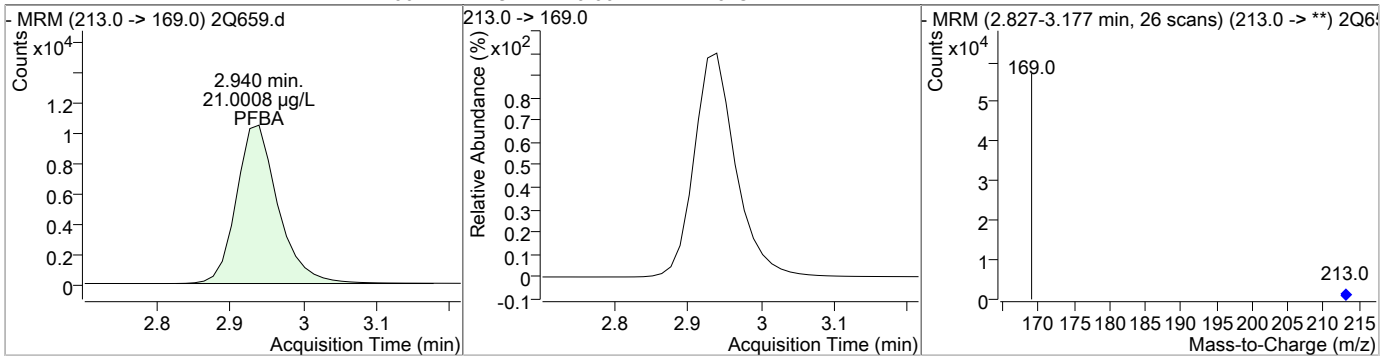
 # = Qualifier out of range, m = manually integrated, + = Area summed

Perfluorinated Compounds by LC/MS/MS

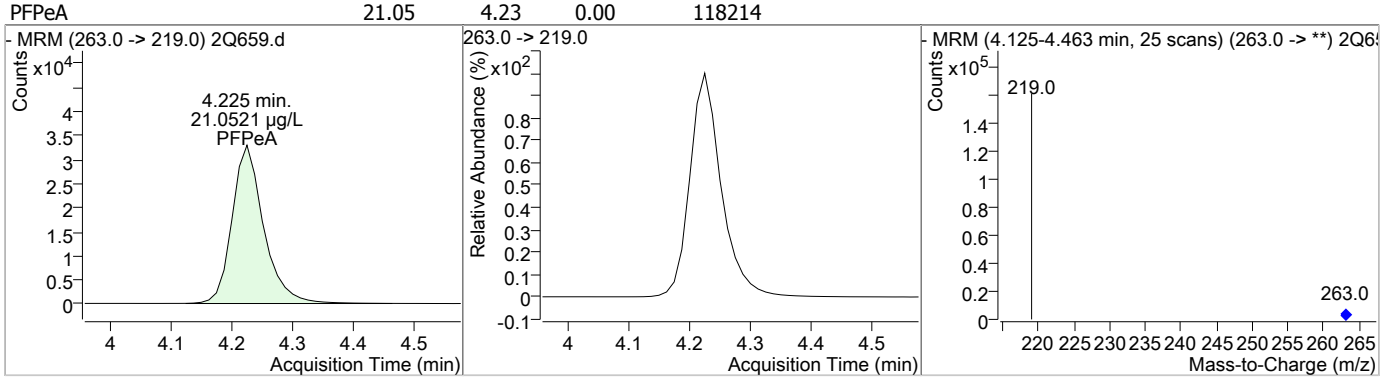
Agilent Technologies



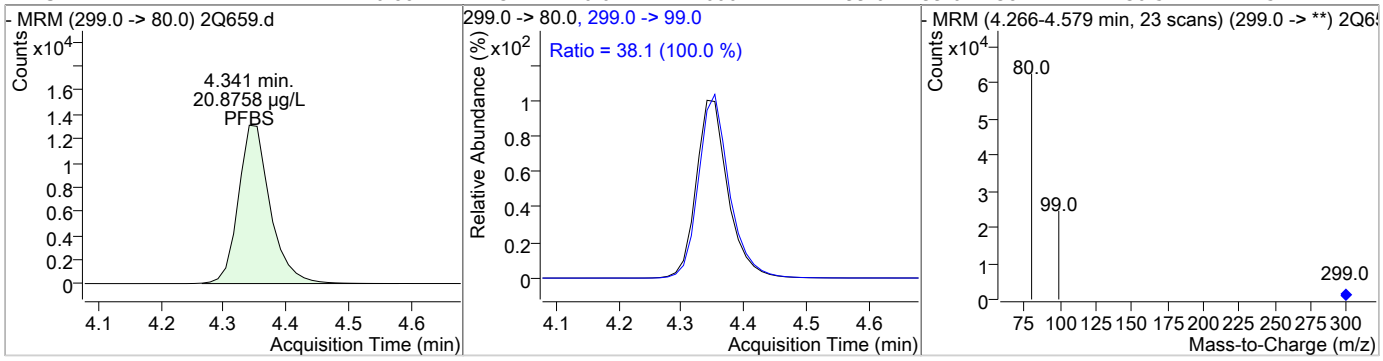
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	21.00	2.94	0.00	41613				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	21.05	4.23	0.00	118214				



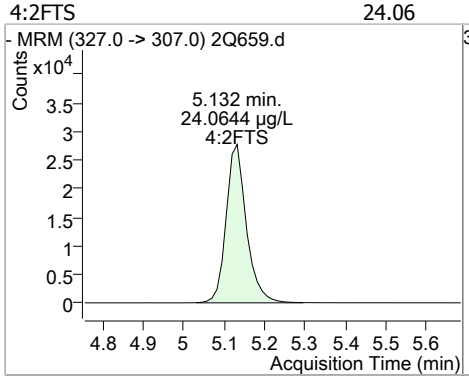
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	20.88	4.34	-0.01	46062	299.0 -> 99.0	38.1	30.5	45.7

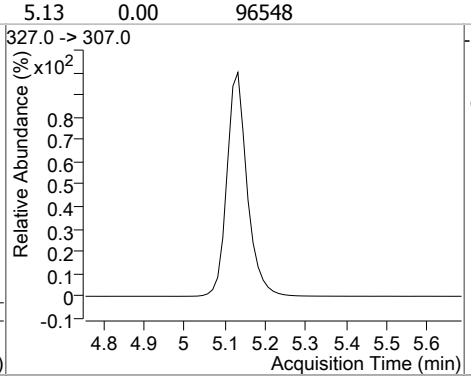


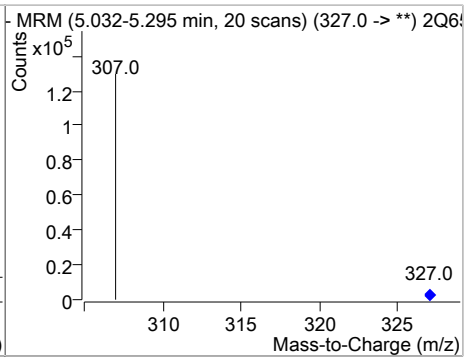
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

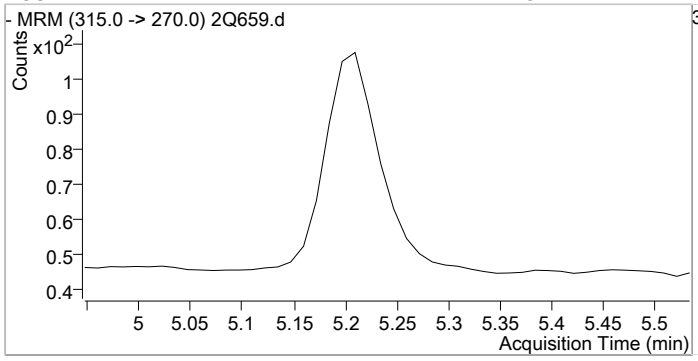
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	24.06	5.13	0.00	96548				

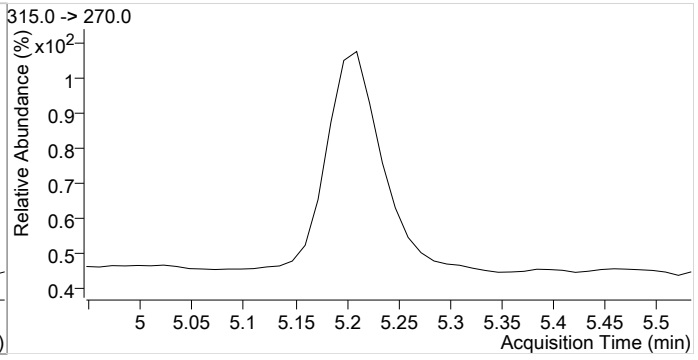




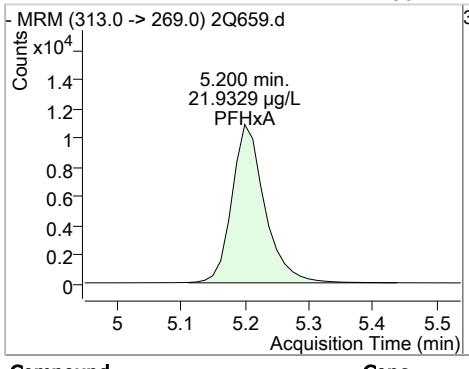


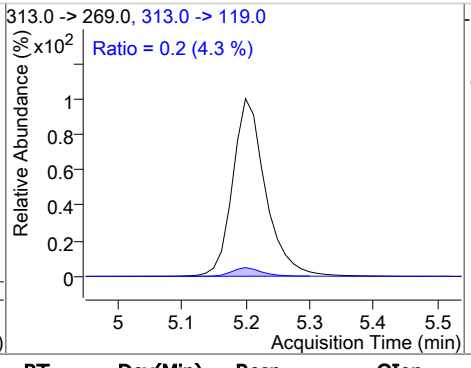
Compound	Conc.	Exp RT	QIon	Exp Ratio
13C2-PFHxA	N.D.	5.21		

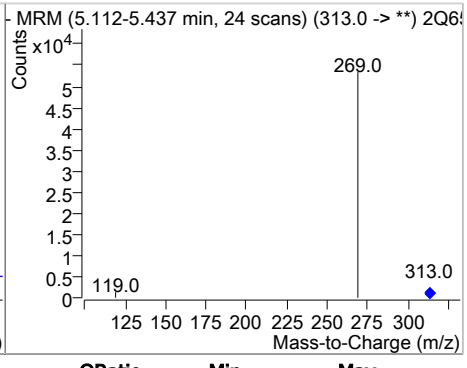




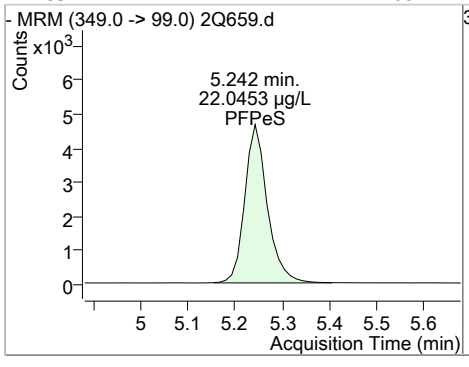
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	21.93	5.20	-0.01	38876	313.0 -> 119.0	0.2	4.0	6.0

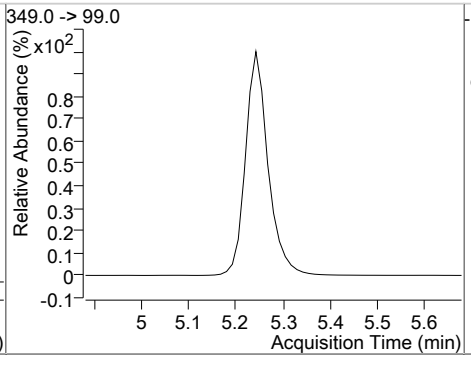


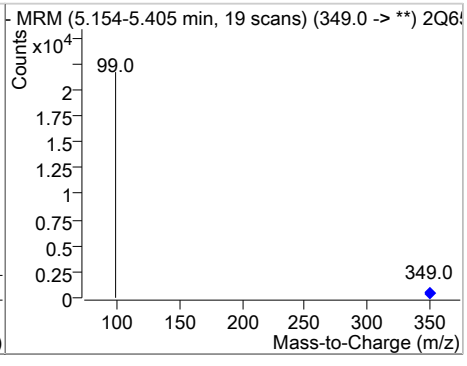




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	22.05	5.24	0.00	15528				



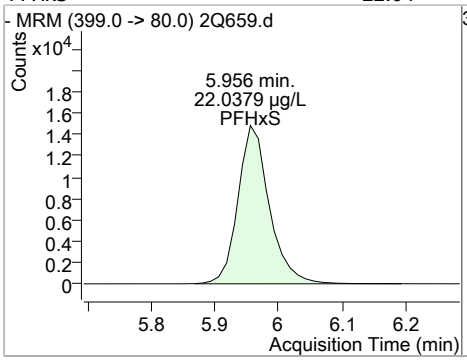


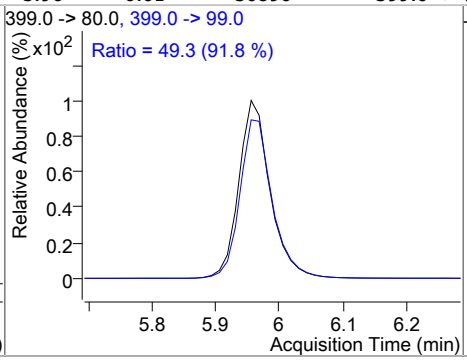


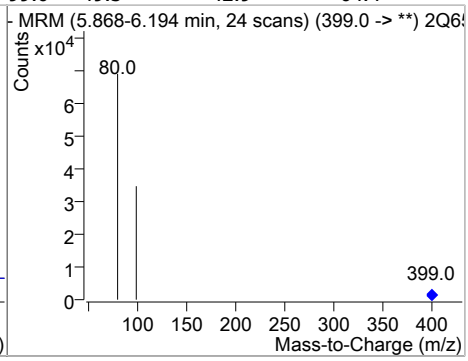
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

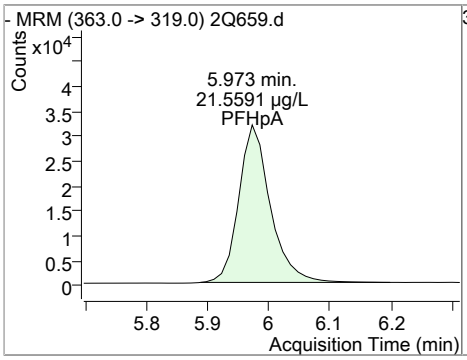
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	22.04	5.96	-0.01	50890	399.0 -> 99.0	49.3	42.9	64.4

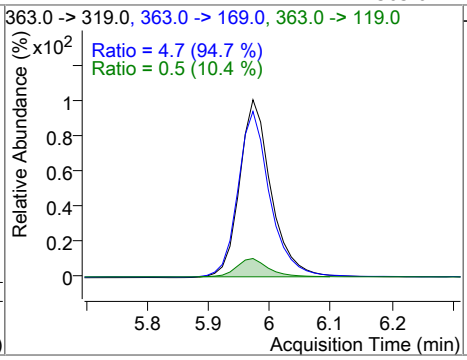


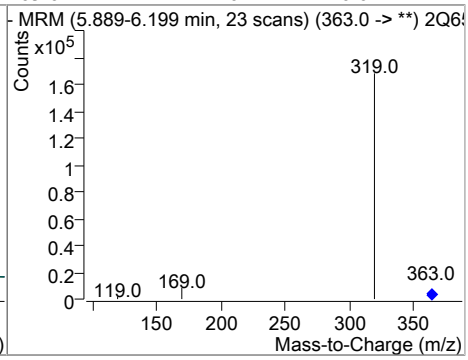




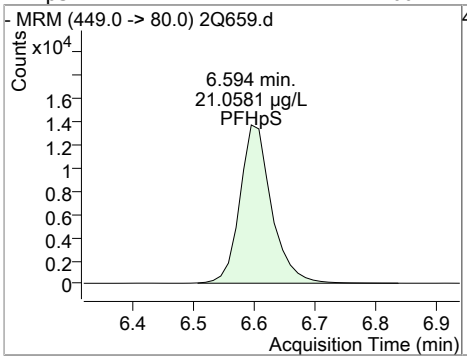
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	21.56	5.97	-0.01	113139	363.0 -> 119.0	0.5	4.0	6.0
					363.0 -> 169.0	4.7	4.0	6.0

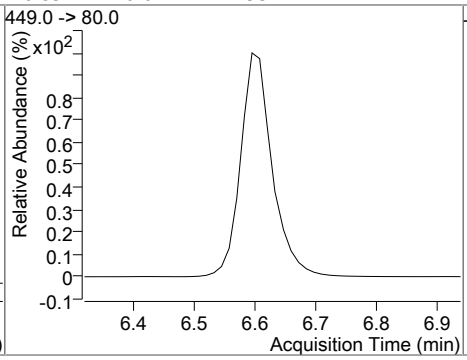


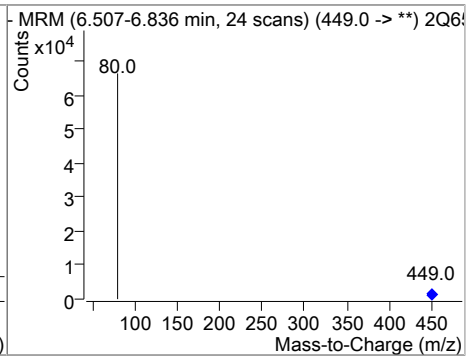




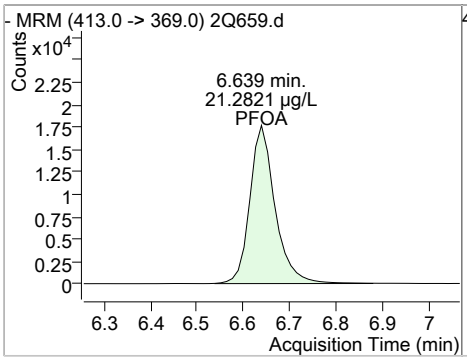
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	21.06	6.59	-0.01	49317				

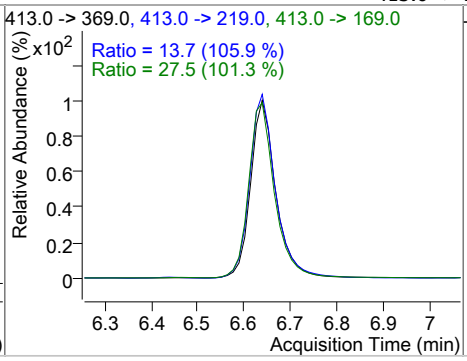


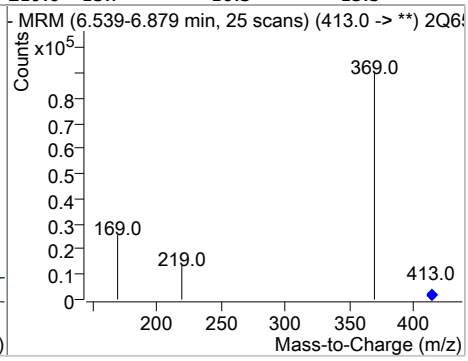




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	21.28	6.64	0.00	66629	413.0 -> 169.0	27.5	21.8	32.6
					413.0 -> 219.0	13.7	10.3	15.5



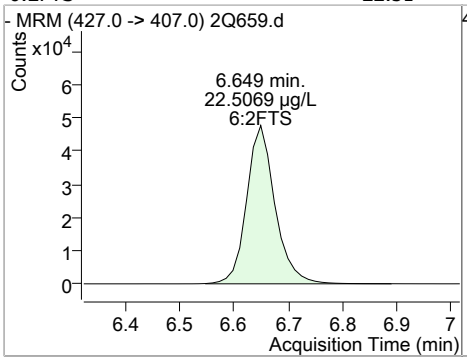


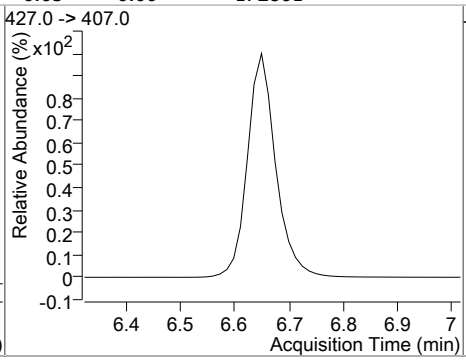


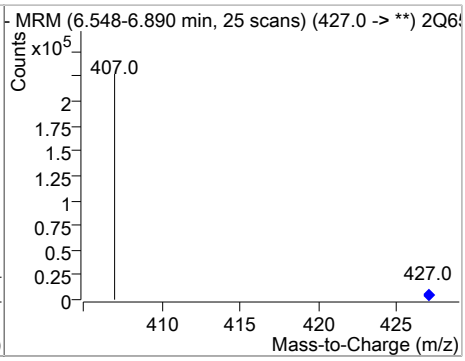
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

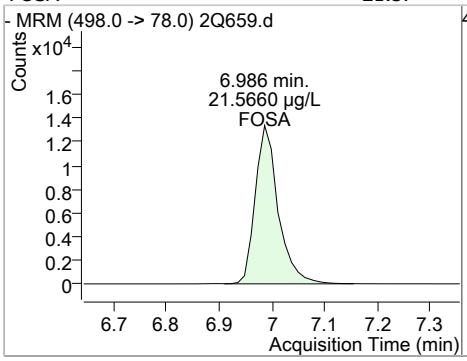
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	22.51	6.65	0.00	172861				

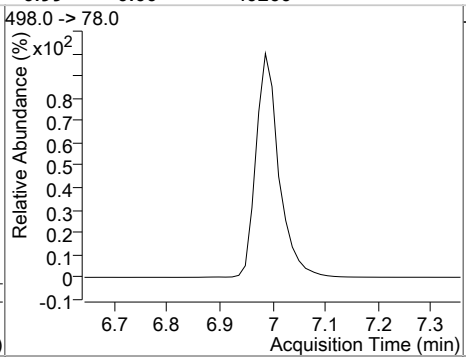


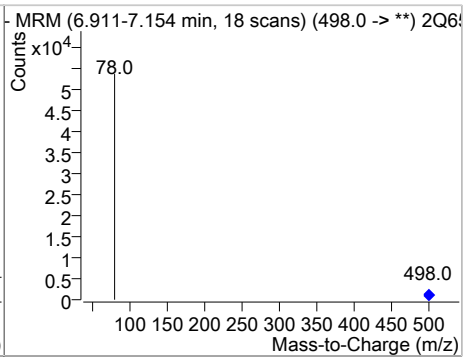




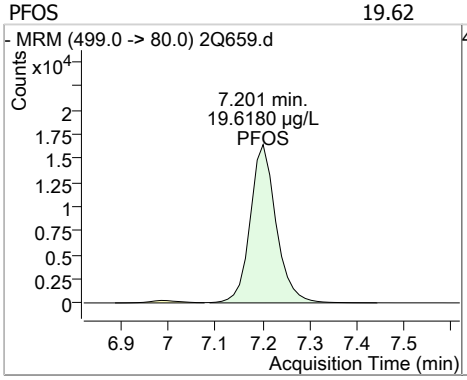
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	21.57	6.99	0.00	40260				

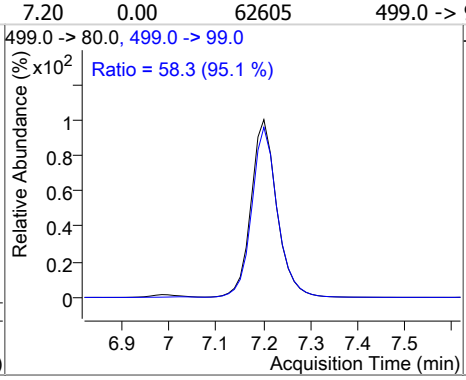


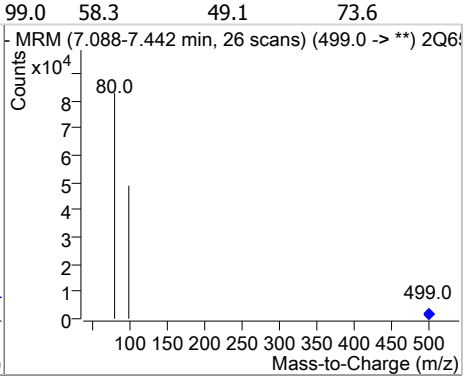




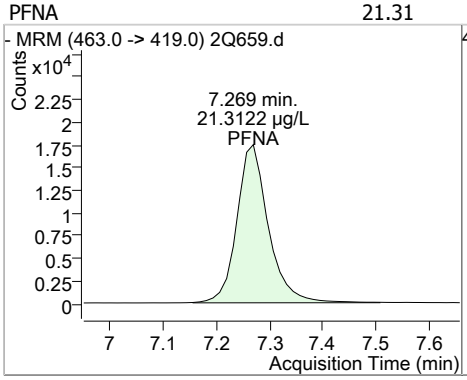
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	19.62	7.20	0.00	62605	499.0 -> 99.0	58.3	49.1	73.6

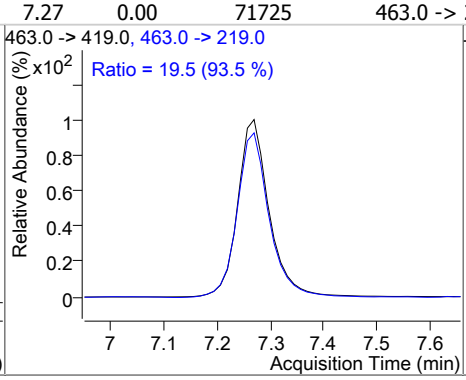


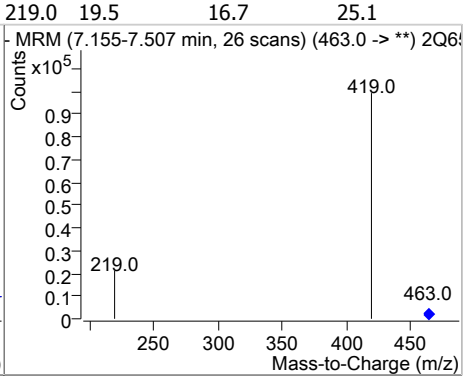




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	21.31	7.27	0.00	71725	463.0 -> 219.0	19.5	16.7	25.1



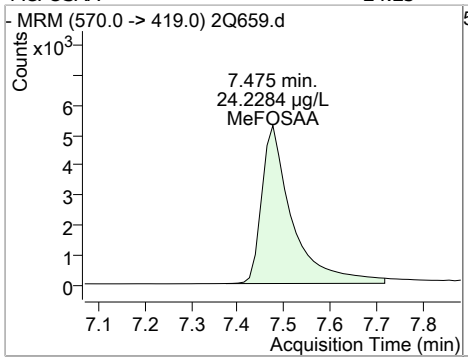


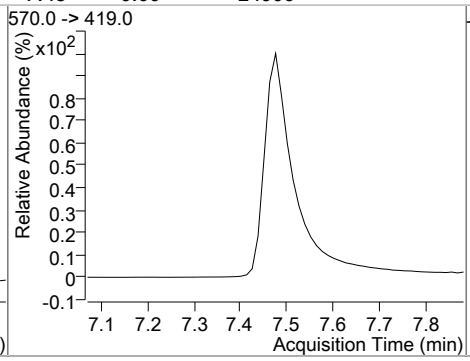


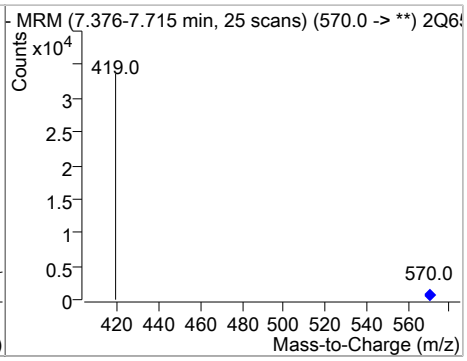
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

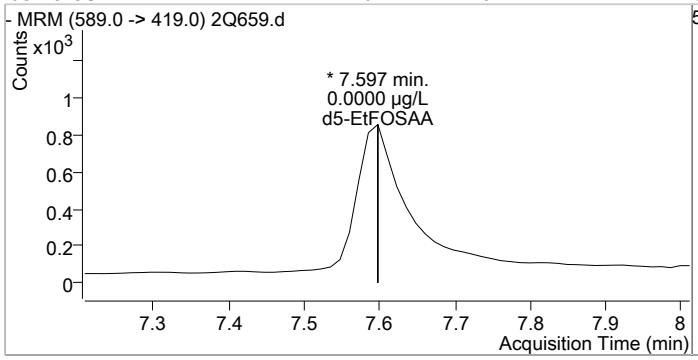
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	24.23	7.48	0.00	24006				

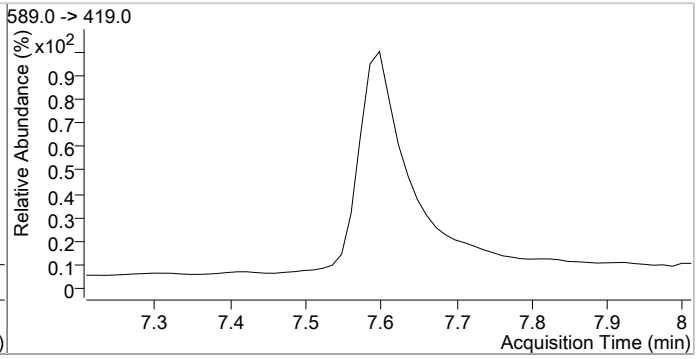




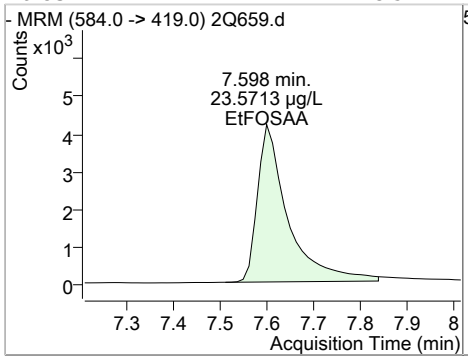


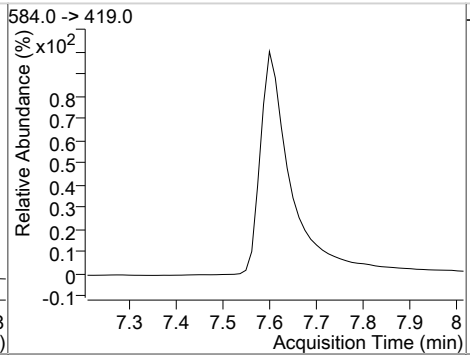
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	d	0		0				

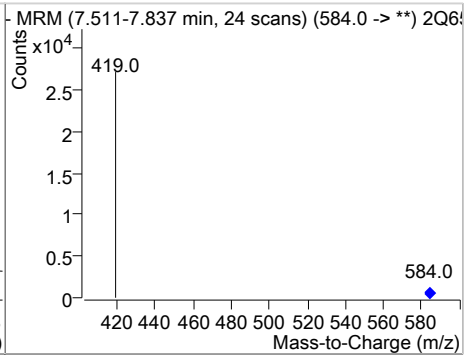




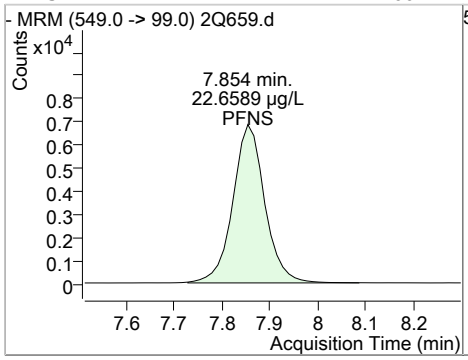
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	23.57	7.60	0.00	18871				

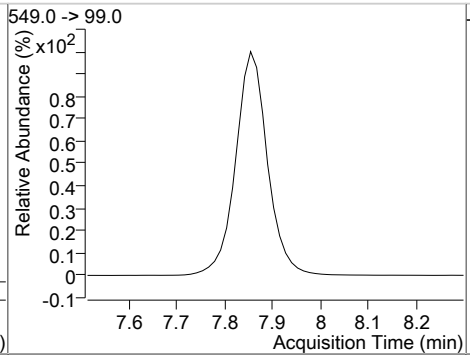


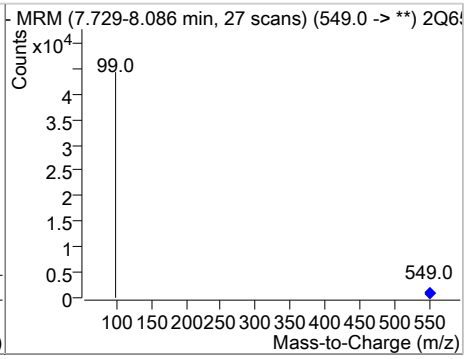




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	22.66	7.85	-0.01	31642				







Perfluorinated Compounds by LC/MS/MS

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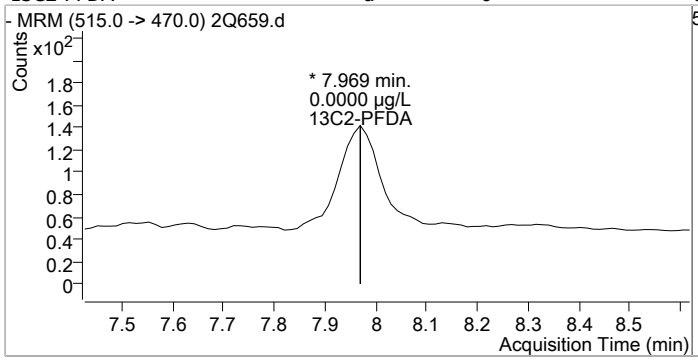
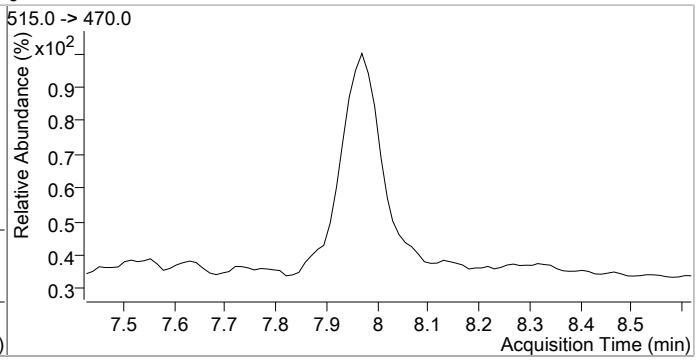
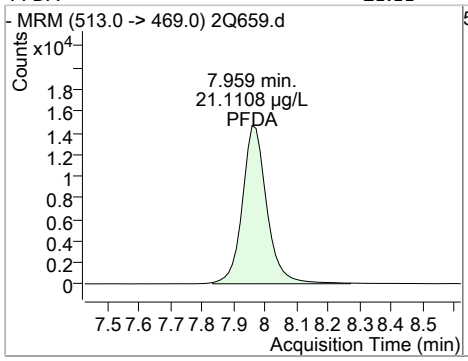
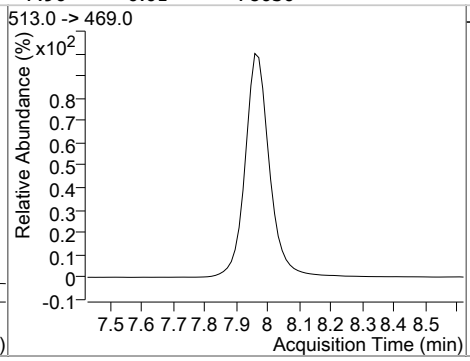
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	d	0		0				

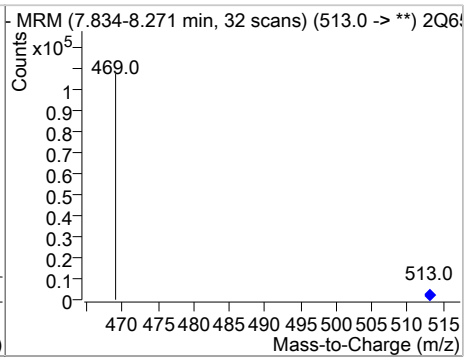




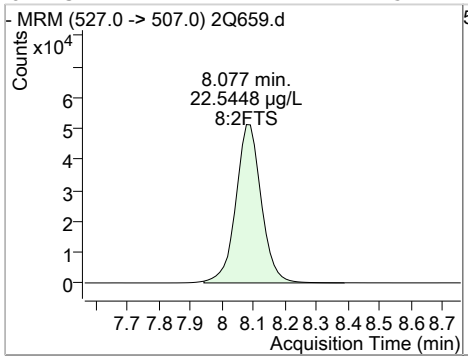
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	21.11	7.96	-0.01	78630				

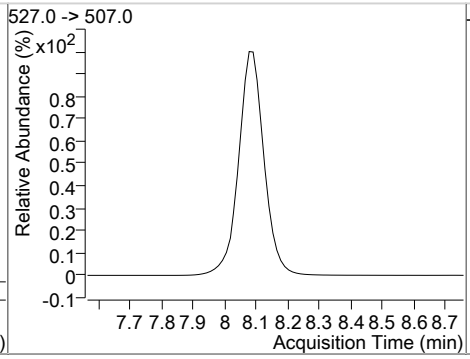


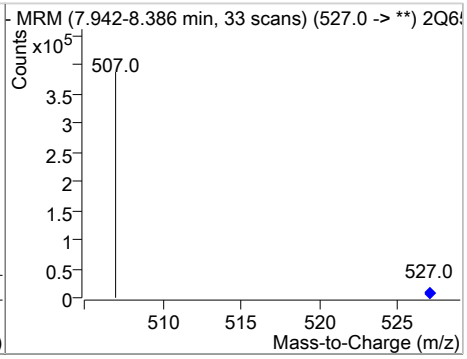




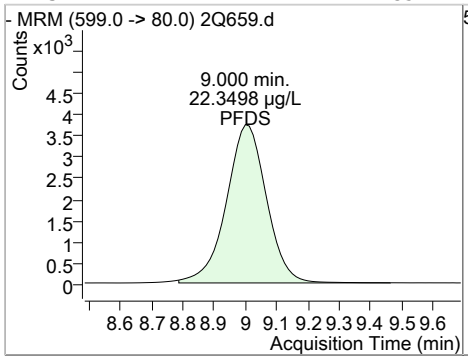
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	22.54	8.08	-0.01	286680				

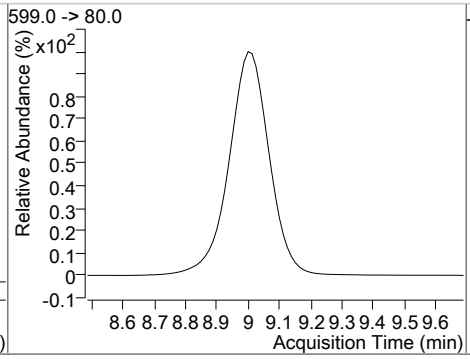


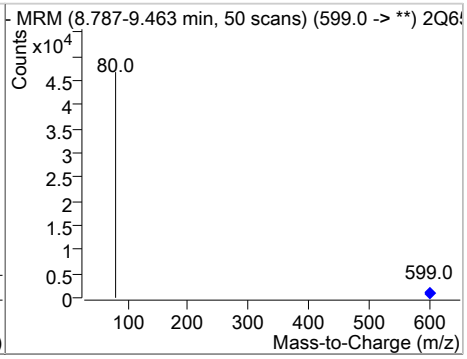




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	22.35	9.00	-0.03	33156				



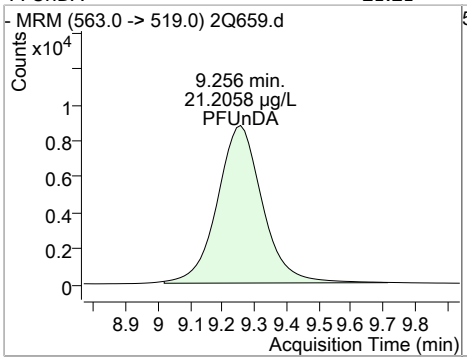


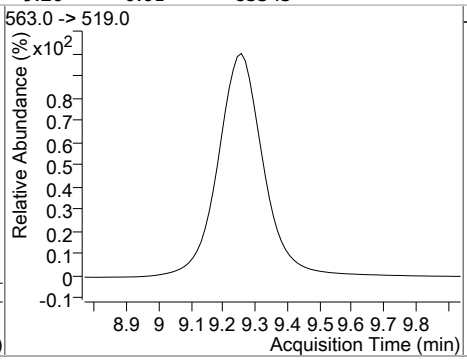


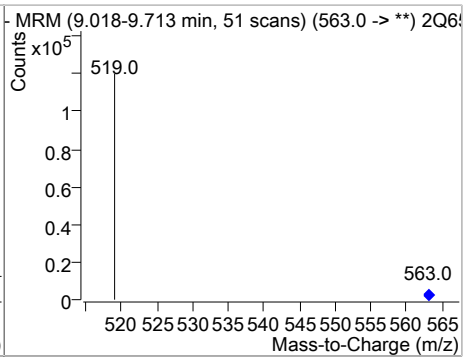
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

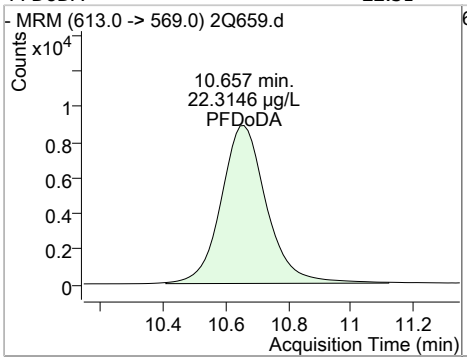
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	21.21	9.26	-0.01	85345				

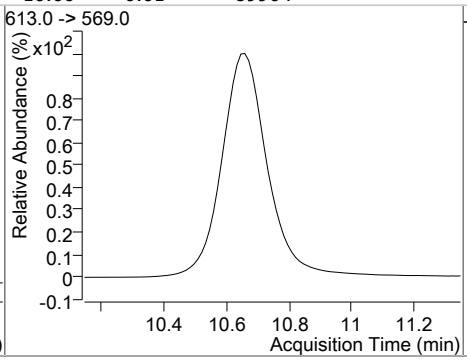


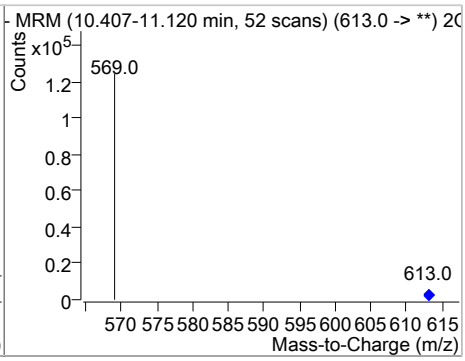




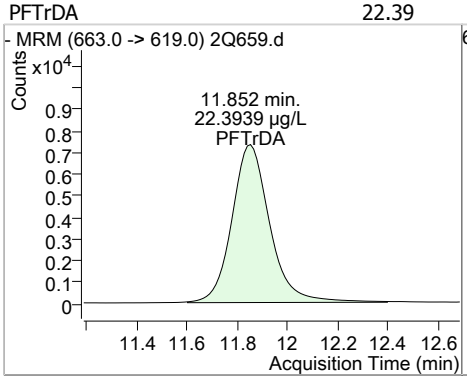
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	22.31	10.66	-0.01	89904				

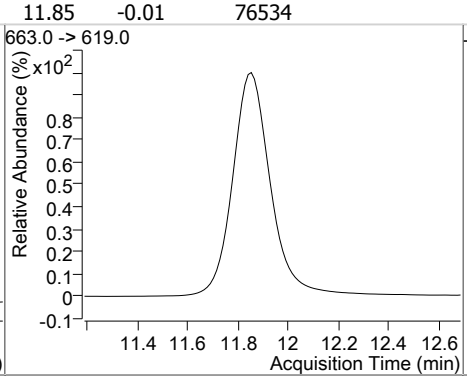


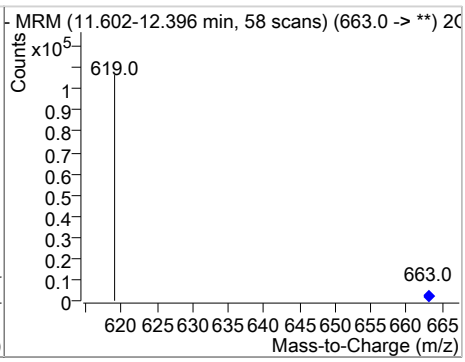




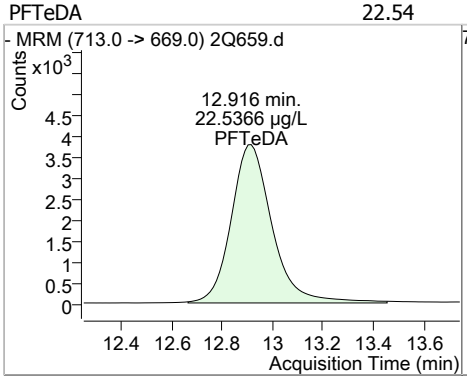
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	22.39	11.85	-0.01	76534				

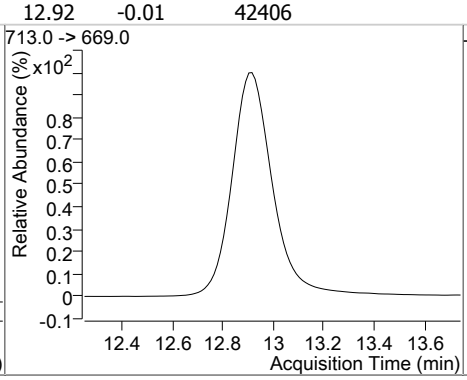


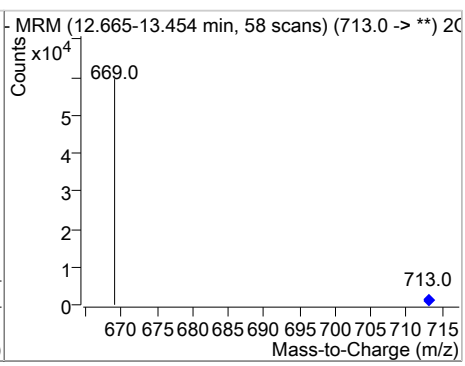




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	22.54	12.92	-0.01	42406				







Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
05/01/17 12:10

Perfluorinated Compounds by LC/MS/MS

Data File : 2Q859.d
Operator : NANCYF
Acq. Method : dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time : 4/28/2017 2:24:17 PM
Sample Name : CC18-20
Vial : Vial 2
DA Method File : PFCLISTDW_0420_S2Q18.m
Batch Name : 2SQ25.batch.bin
Last Calib Update : 4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	6.671	429.0 -> 409.0	133118	20.00	µg/L		0.000
13C2-PFDoDA	10.876	615.0 -> 570.0	71752	20.00	µg/L		0.088
13C2-PFOA	6.662	415.0 -> 370.0	59092	20.00	µg/L		0.000
13C3-PFPeA	4.209	266.0 -> 222.0	56182	20.00	µg/L		-0.013
13C4-PFOS	7.239	503.0 -> 80.0	43394	20.00	µg/L		0.000
d3-MeFOSAA	7.450	573.0 -> 419.0	26014	20.00	µg/L		0.000
System Monitoring Compounds							
13C2-PFDA	8.057	515.0 -> 470.0	87298	21.11	µg/L		0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 105.6%			
13C2-PFHxA	5.197	315.0 -> 270.0	63921	20.48	µg/L		-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 102.4%			
d5-EtFOSAA	7.572	589.0 -> 419.0	15276	23.48	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 117.4%			
Target Compounds							**QValue**
4:2FTS	5.132	327.0 -> 307.0	74724	22.22	µg/L		100
6:2FTS	6.673	427.0 -> 407.0	142697	22.17	µg/L		100
8:2FTS	8.202	527.0 -> 507.0	243037	22.80	µg/L		100
EtFOSAA	7.586	584.0 -> 419.0	12489	20.97	µg/L		100
FOSA	6.961	498.0 -> 78.0	28435	20.33	µg/L		100
MeFOSAA	7.451	570.0 -> 419.0	16347	22.22	µg/L		100
PFBA	2.927	213.0 -> 169.0	28318	18.22	µg/L		100
PFBS	4.341	299.0 -> 80.0	34065	19.67	µg/L		100
PFDA	8.059	513.0 -> 469.0	59739	20.44	µg/L		100
PFDoDA	10.883	613.0 -> 569.0	69426	22.04	µg/L		100
PFDS	9.225	599.0 -> 80.0	25718	22.10	µg/L		100
PFHpA	5.986	363.0 -> 319.0	84414	20.53	µg/L	#	93
PFHpS	6.620	449.0 -> 80.0	39396	21.44	µg/L		100
PFHxA	5.200	313.0 -> 269.0	30026	21.61	µg/L	#	86
PFHxS	5.968	399.0 -> 80.0	37381	20.63	µg/L	m	93
PFNA	7.306	463.0 -> 419.0	53971	20.44	µg/L		99
PFNS	7.940	549.0 -> 99.0	23264	21.23	µg/L		100
PFOA	6.664	413.0 -> 369.0	52831	21.51	µg/L		100
PFOS	7.240	499.0 -> 80.0	50914	20.33	µg/L	m	85
PFPeA	4.213	263.0 -> 219.0	87692	20.57	µg/L		100
PFPeS	5.242	349.0 -> 99.0	11414	21.34	µg/L		100
PFTeDA	13.153	713.0 -> 669.0	28509	19.52	µg/L		100
PFTrDA	12.077	663.0 -> 619.0	57580	21.59	µg/L		100
PFUnDA	9.469	563.0 -> 519.0	64462	20.47	µg/L		100

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

Perfluorinated Compounds by LC/MS/MS

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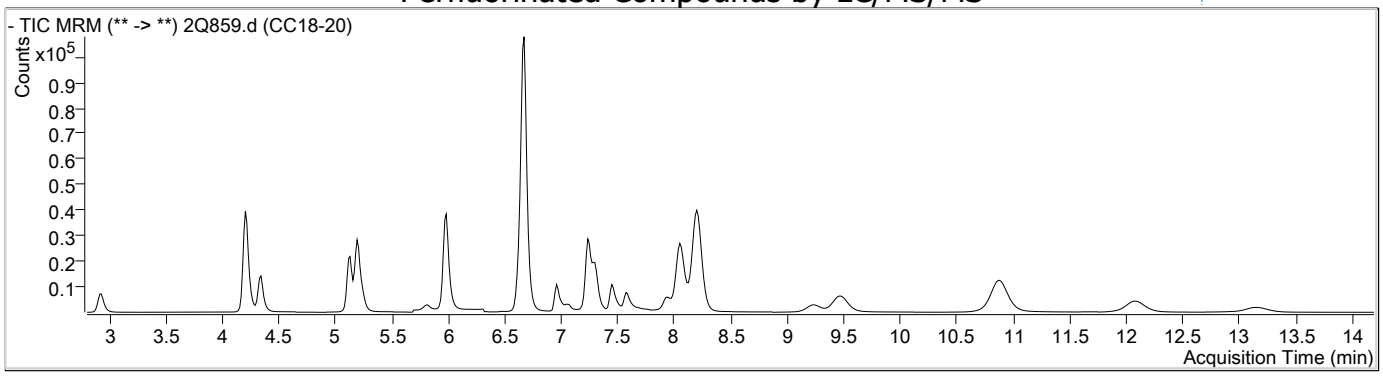
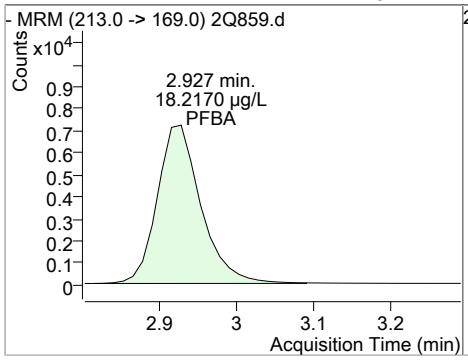
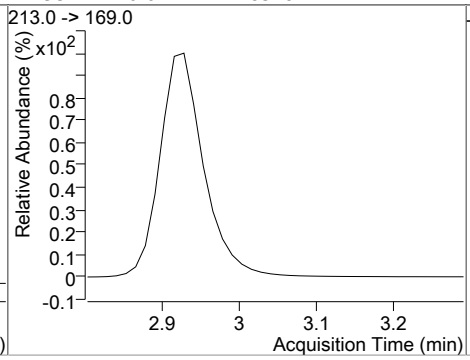
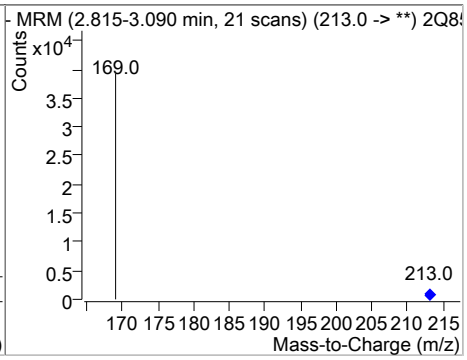


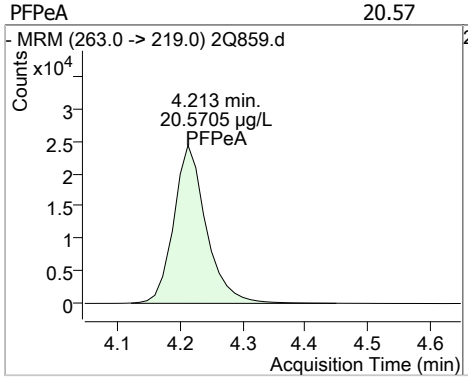
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	18.22	2.93	-0.01	28318				

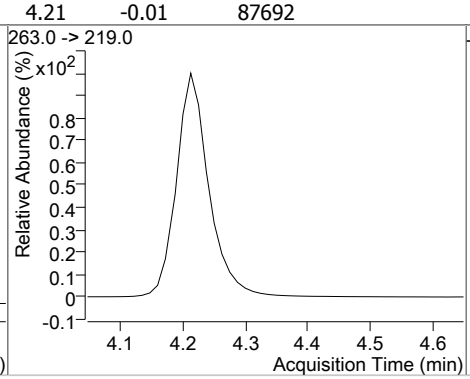


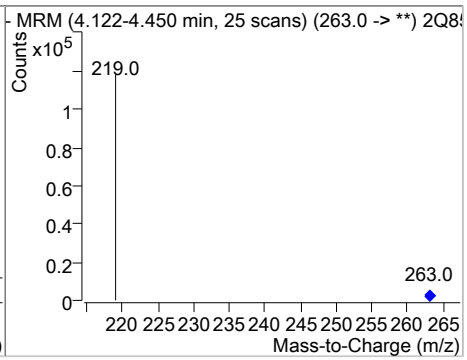




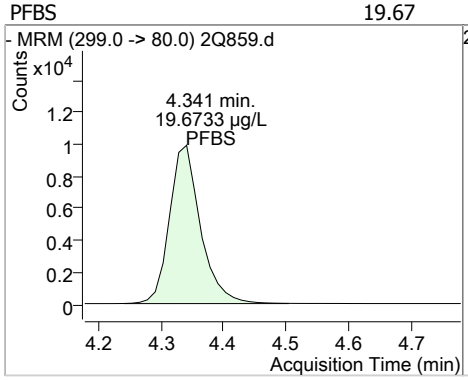
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	20.57	4.21	-0.01	87692				

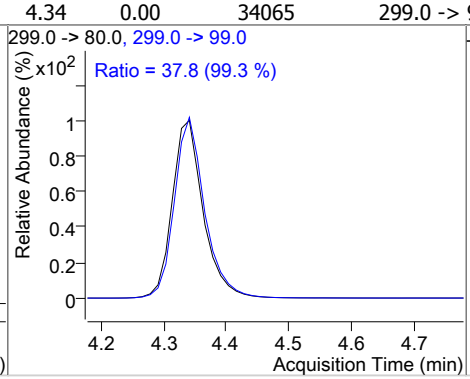


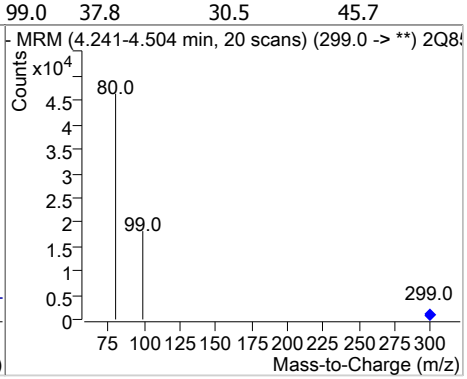




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.67	4.34	0.00	34065	299.0 -> 99.0	37.8	30.5	45.7



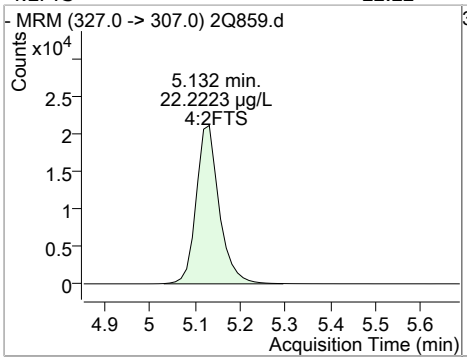


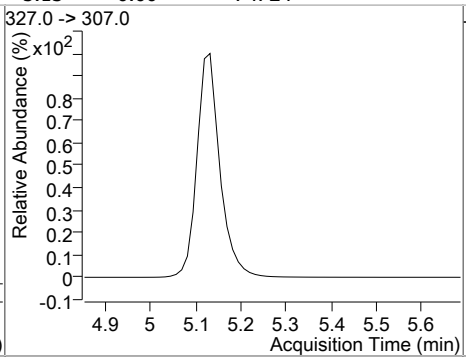


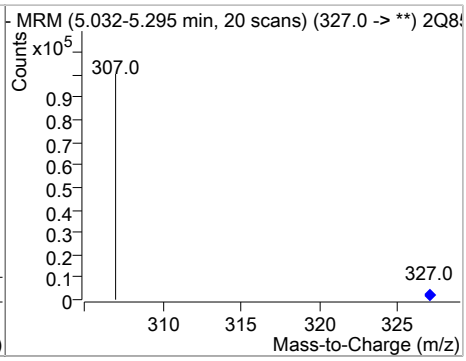
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

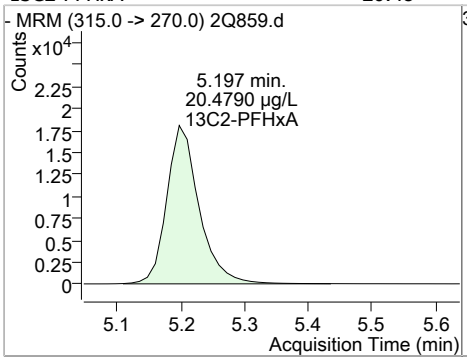
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	22.22	5.13	0.00	74724				

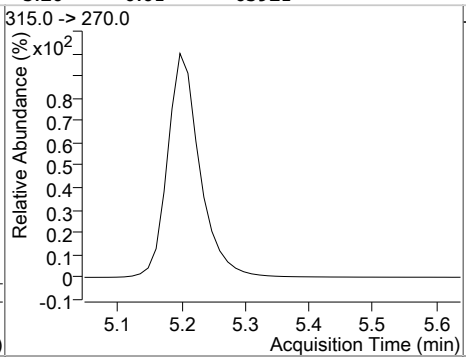


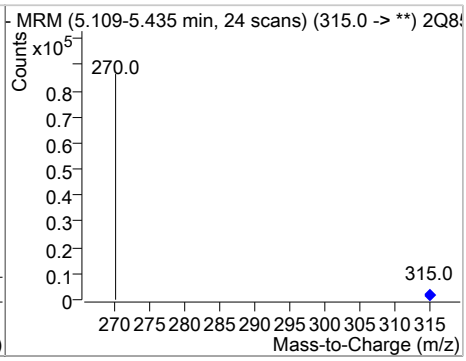




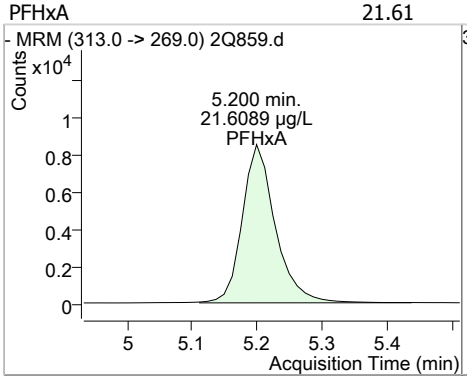
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	20.48	5.20	-0.01	63921				

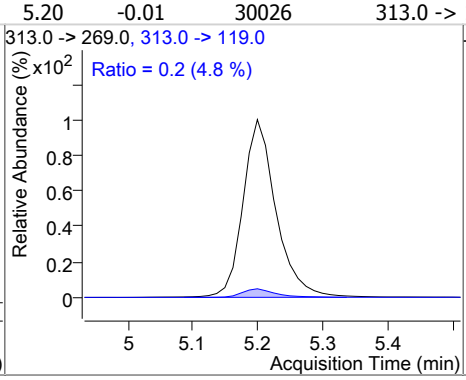


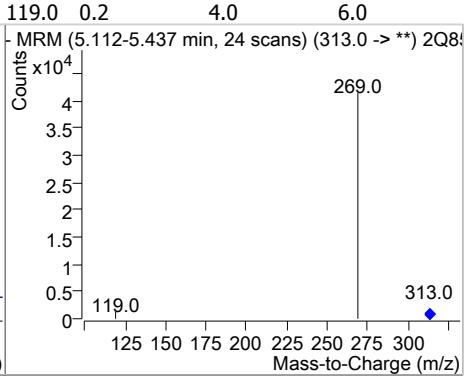




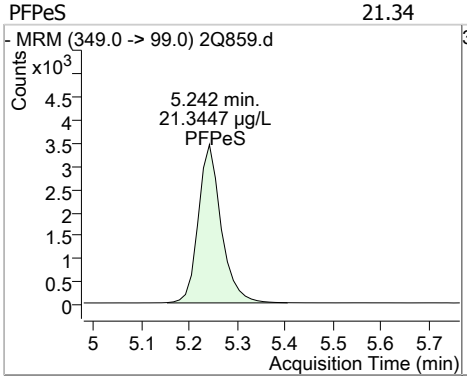
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	21.61	5.20	-0.01	30026	313.0 -> 119.0	0.2	4.0	6.0

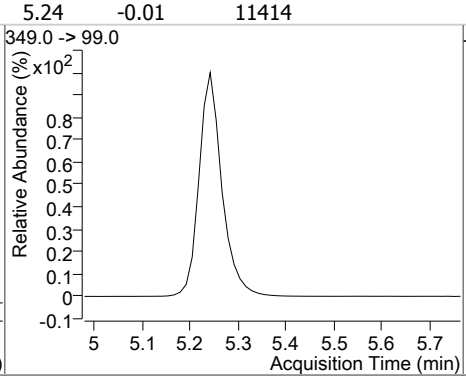


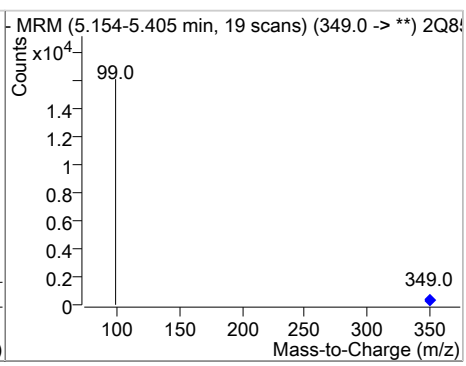




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	21.34	5.24	-0.01	11414				



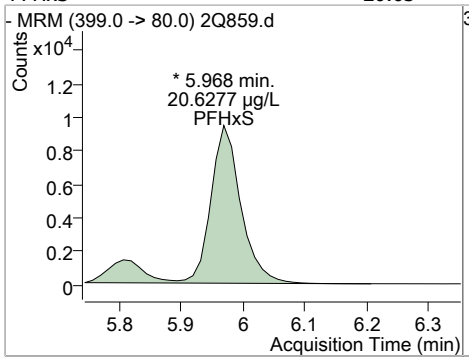


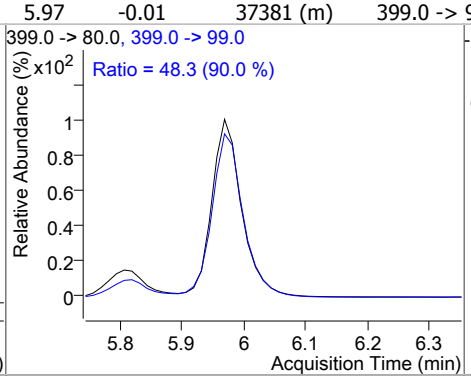


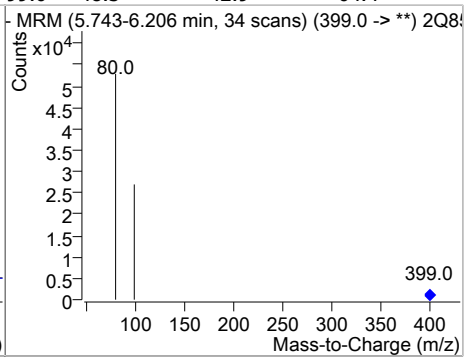
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

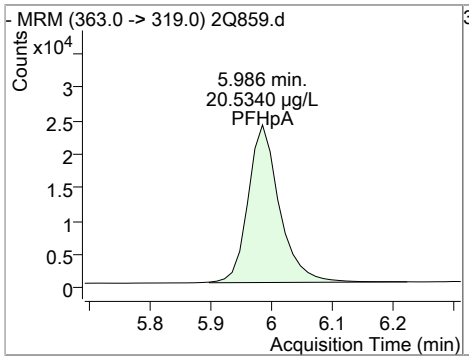
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	20.63	5.97	-0.01	37381 (m)	399.0 -> 99.0	48.3	42.9	64.4

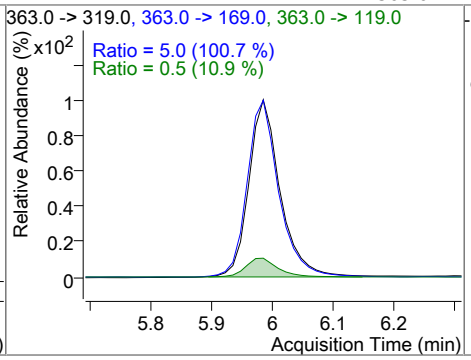


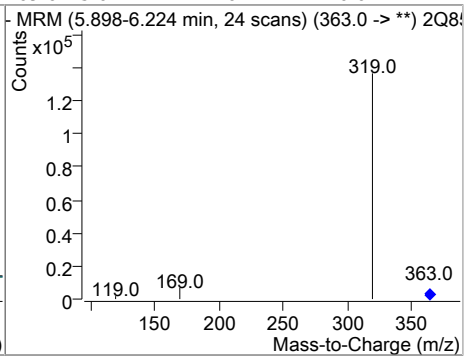




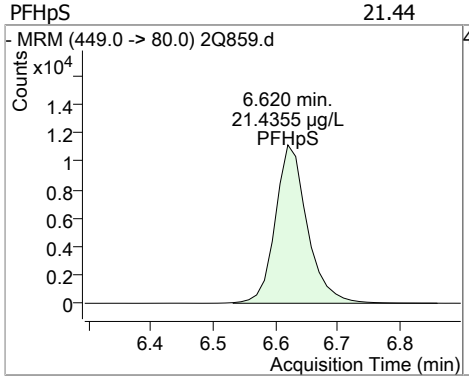
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	20.53	5.99	0.00	84414	363.0 -> 119.0	0.5	4.0	6.0
					363.0 -> 169.0	5.0	4.0	6.0

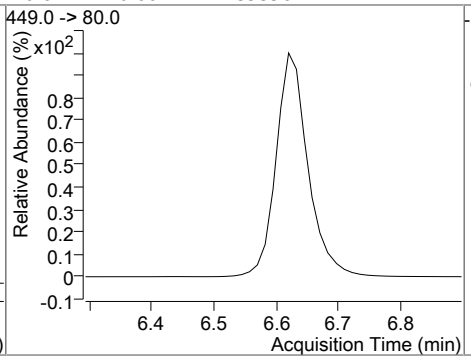


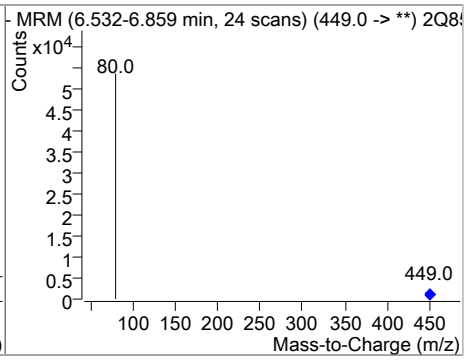




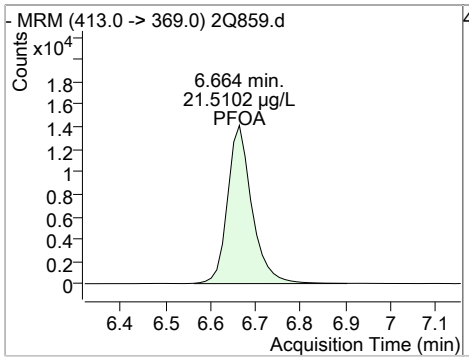
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	21.44	6.62	0.00	39396				

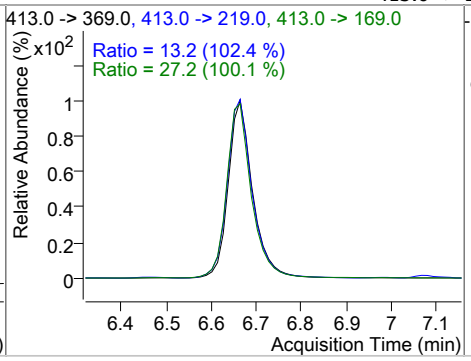


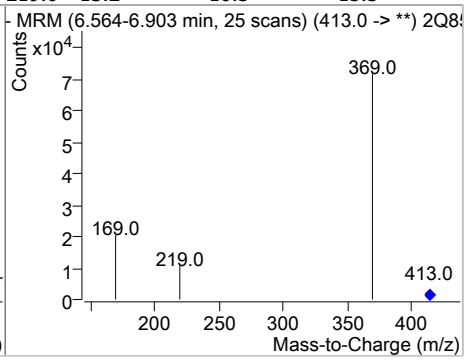




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	21.51	6.66	0.00	52831	413.0 -> 169.0	27.2	21.8	32.6
					413.0 -> 219.0	13.2	10.3	15.5



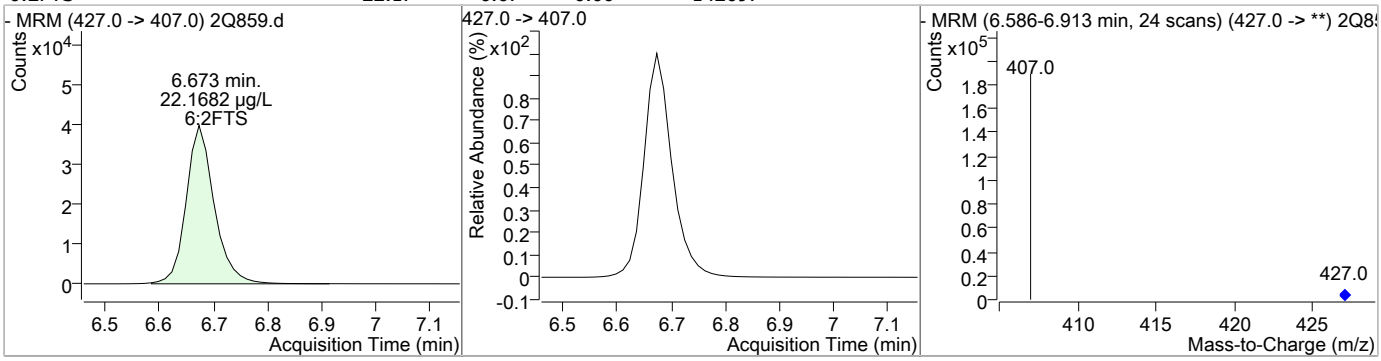




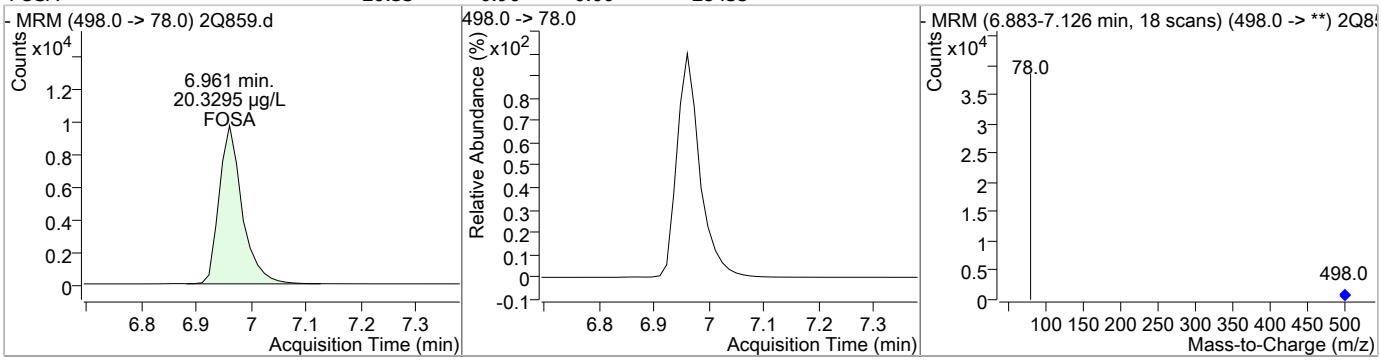
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

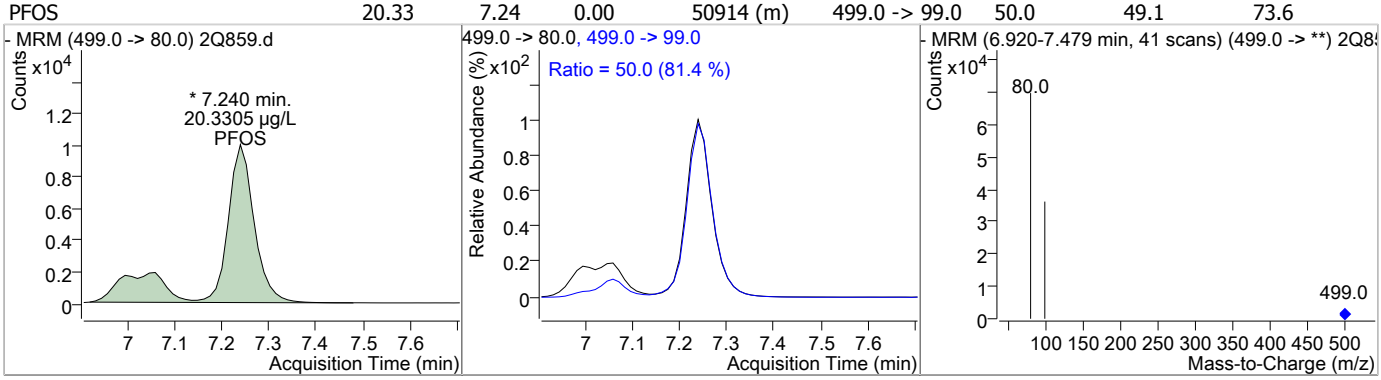
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	22.17	6.67	0.00	142697				



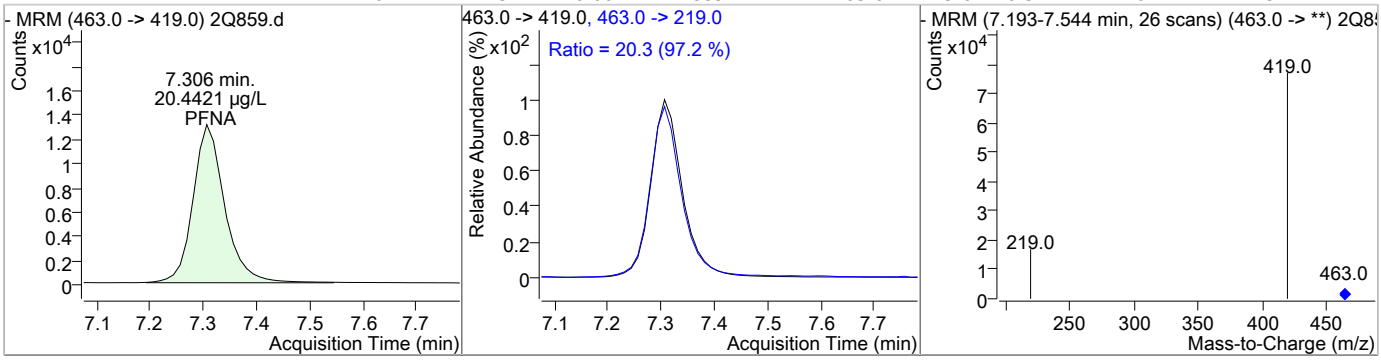
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	20.33	6.96	0.00	28435				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	20.33	7.24	0.00	50914 (m)	499.0 -> 99.0	50.0	49.1	73.6



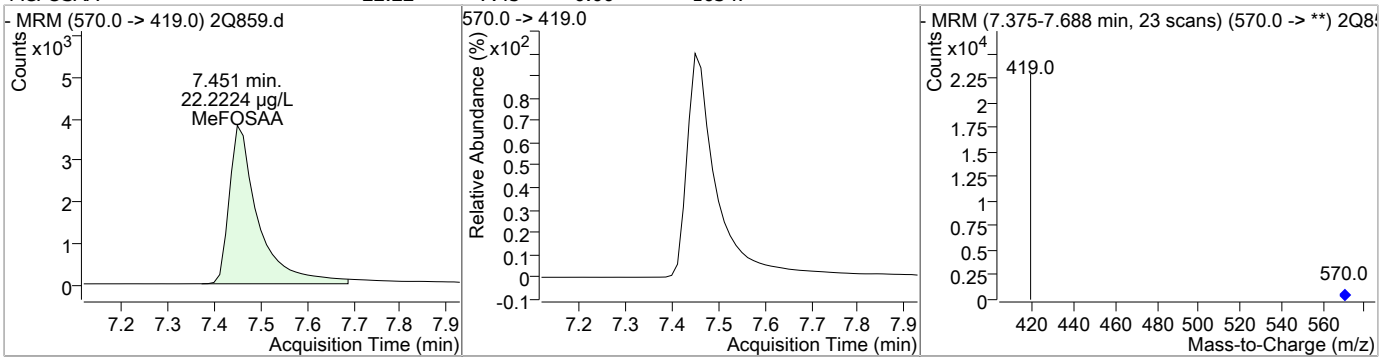
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	20.44	7.31	0.00	53971	463.0 -> 219.0	20.3	16.7	25.1



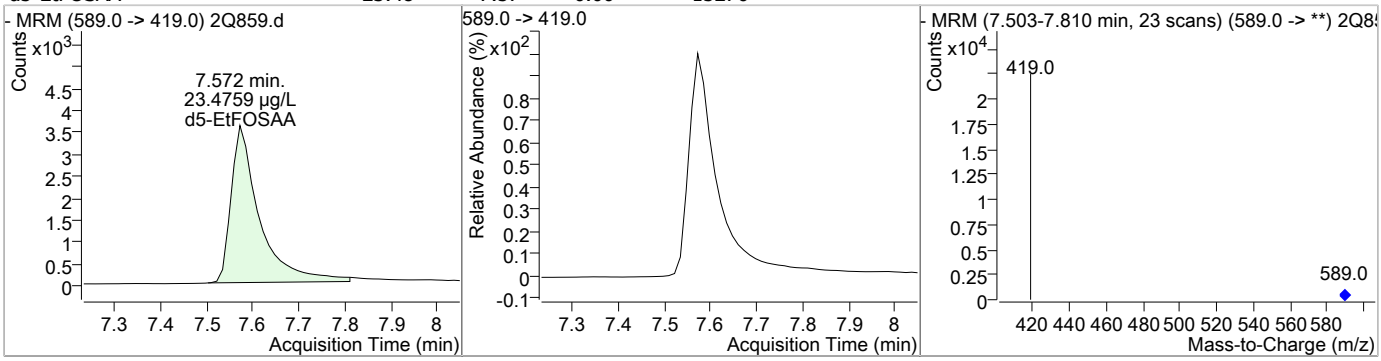
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

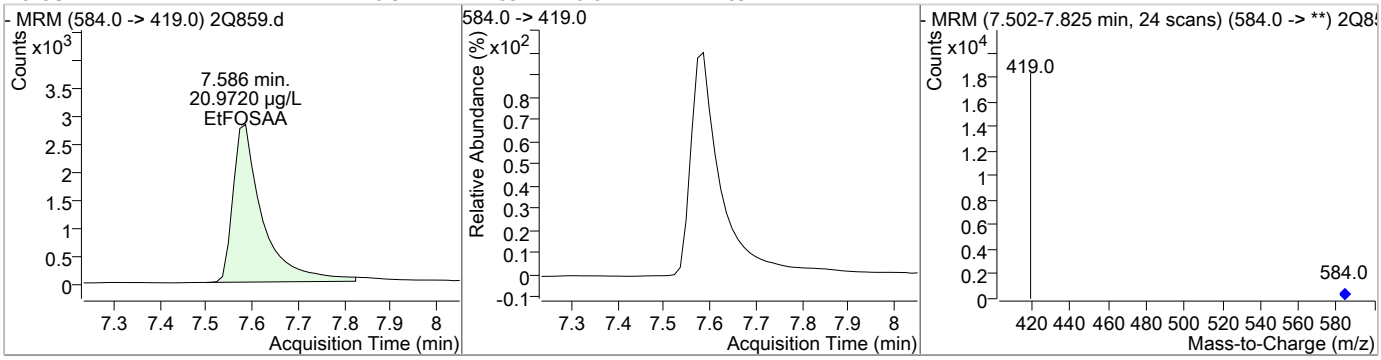
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	22.22	7.45	0.00	16347				



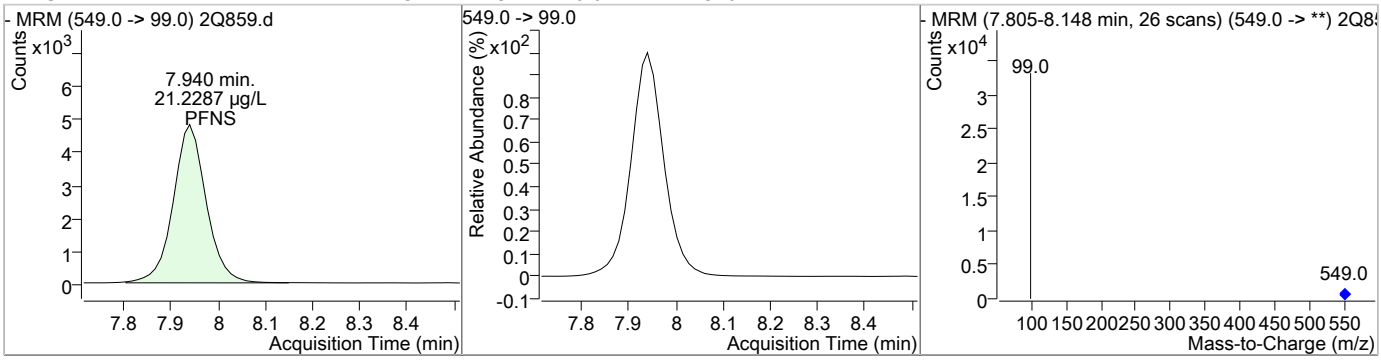
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	23.48	7.57	0.00	15276				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	20.97	7.59	0.01	12489				



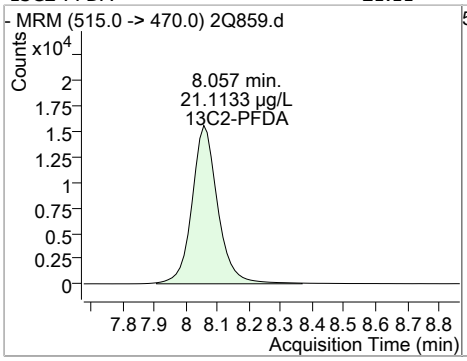
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	21.23	7.94	0.01	23264				

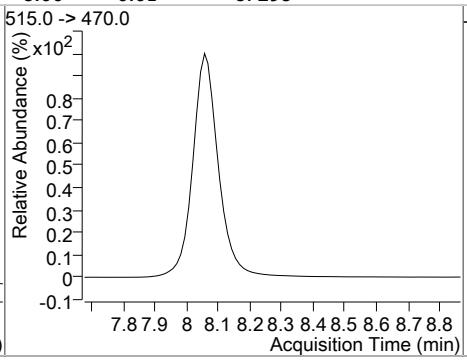


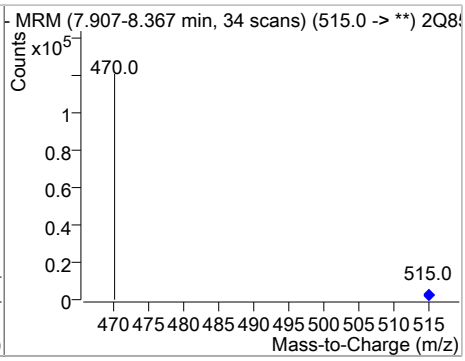
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

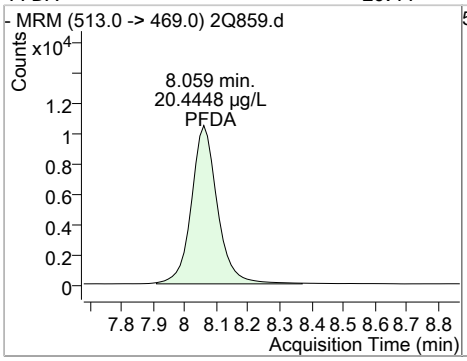
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	21.11	8.06	0.01	87298				

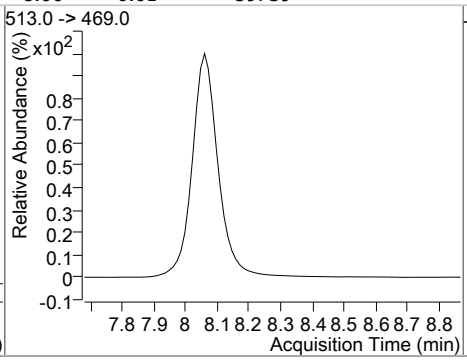


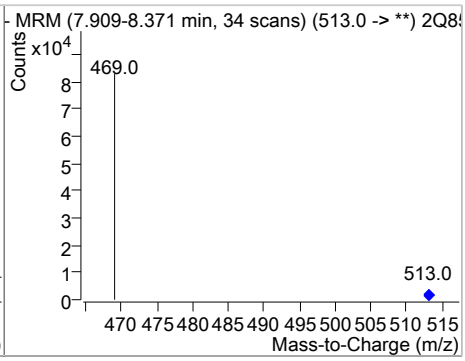




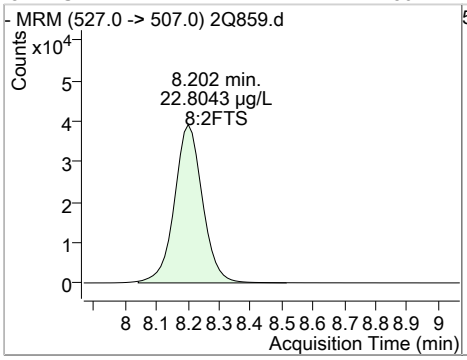
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	20.44	8.06	0.01	59739				

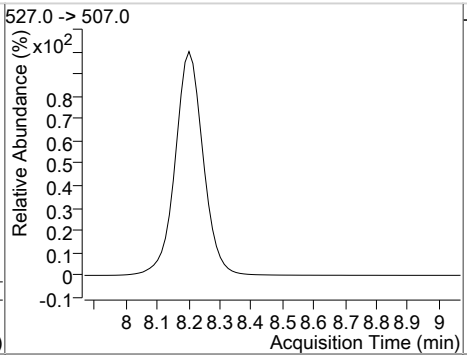


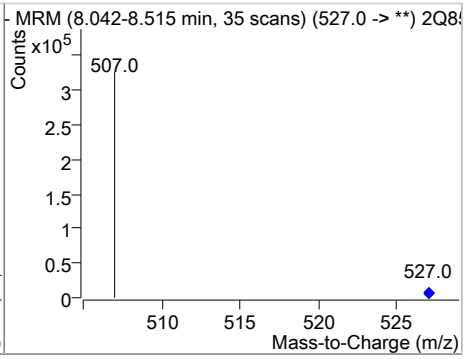




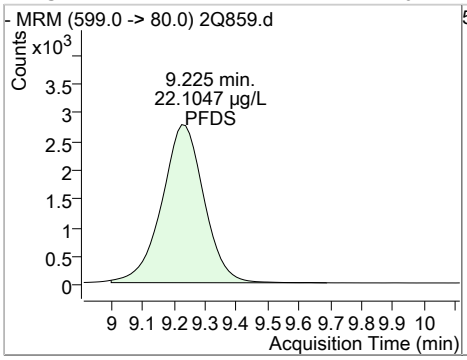
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	22.80	8.20	0.01	243037				

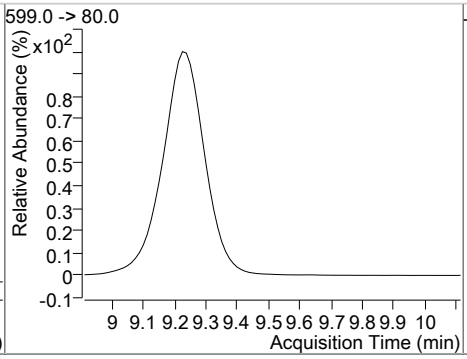


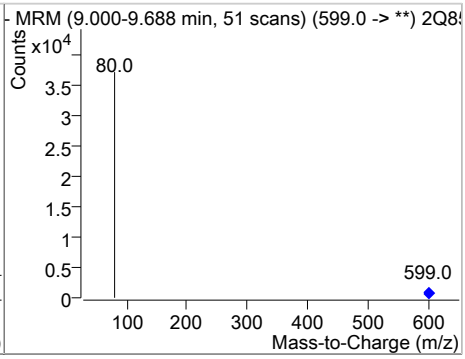




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	22.10	9.22	0.06	25718				



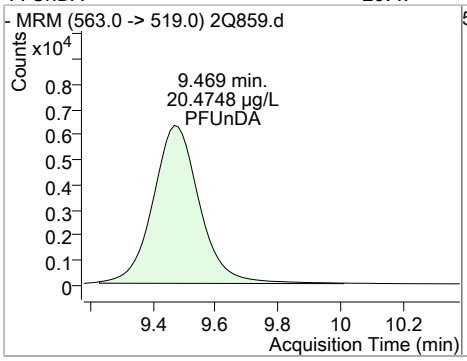


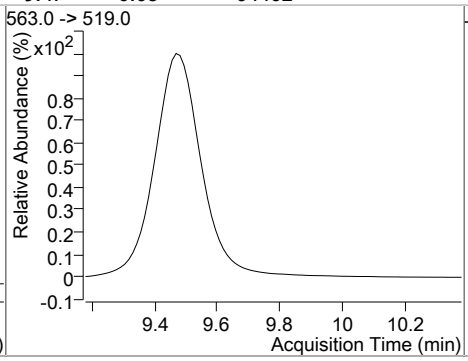


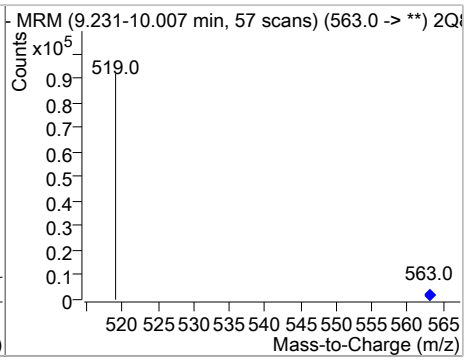
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

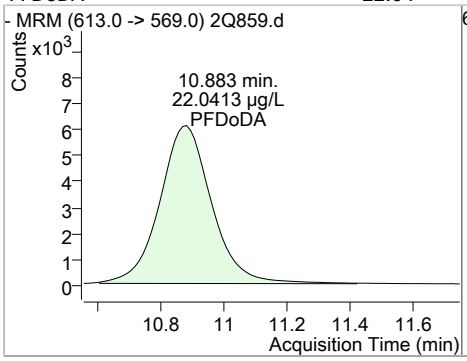
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	20.47	9.47	0.08	64462				

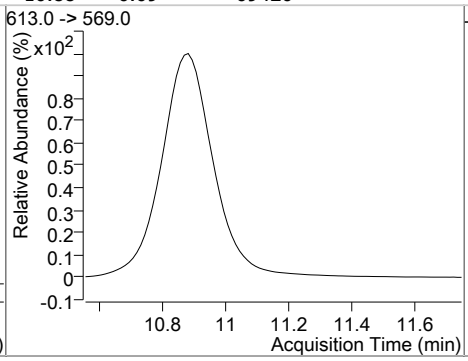


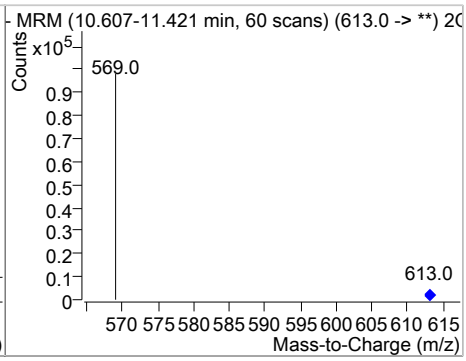




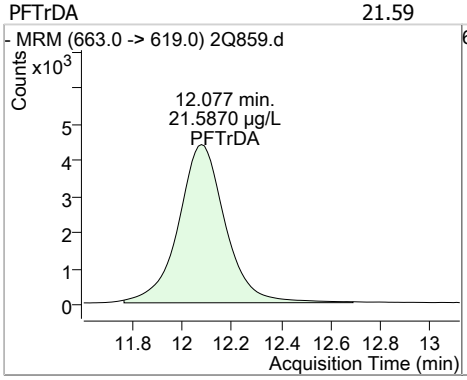
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	22.04	10.88	0.09	69426				

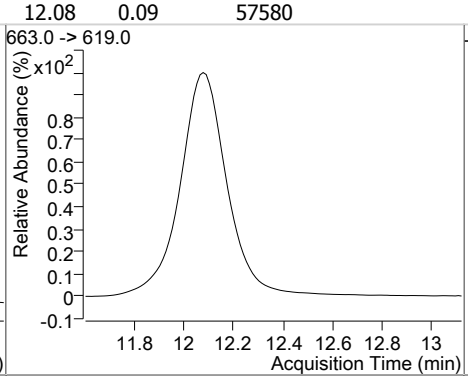


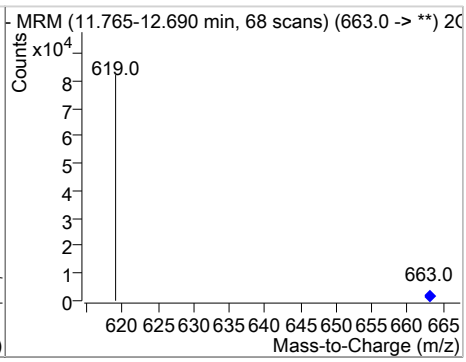




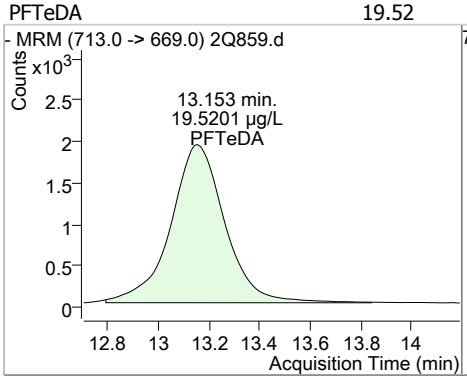
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	21.59	12.08	0.09	57580				

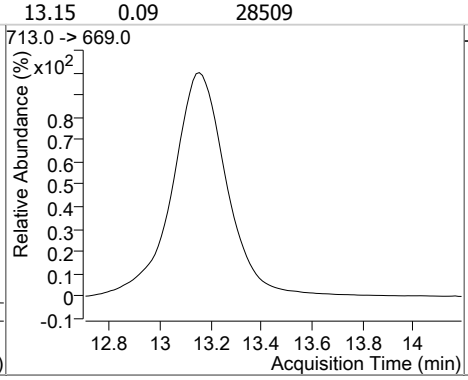


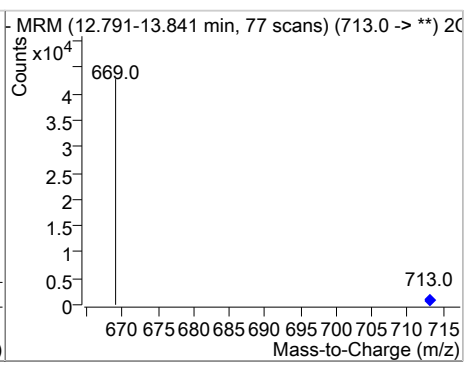




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	19.52	13.15	0.09	28509				







Manual Integration Approval Summary

Sample Number:	S2Q25-CC18	**Method:**	EPA 537 MOD
Lab FileID:	2Q859.D	**Analyst approved:**	05/01/17 09:23 Nancy Saunders
Injection Time:	04/28/17 14:24	**Supervisor approved:**	05/01/17 12:10 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.97	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.24	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
05/01/17 12:10

Perfluorinated Compounds by LC/MS/MS

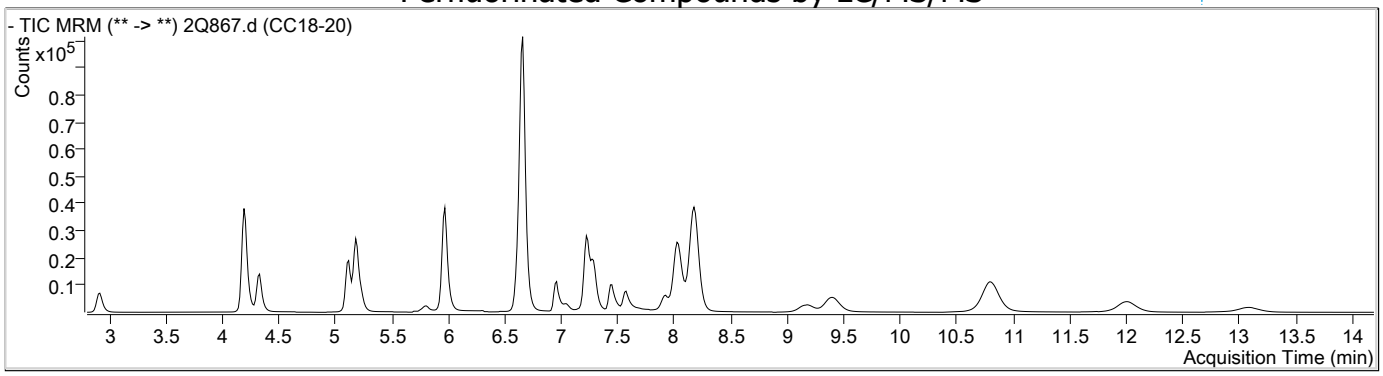
Data File : 2Q867.d
Operator : NANCYF
Acq. Method : dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time : 4/28/2017 5:16:36 PM
Sample Name : CC18-20
Vial : Vial 2
DA Method File : PFCLISTDW_0420_S2Q18.m
Batch Name : 2SQ25.batch.bin
Last Calib Update : 4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	6.659	429.0 -> 409.0	121980	20.00	µg/L		-0.012
13C2-PFDoDA	10.801	615.0 -> 570.0	61580	20.00	µg/L		0.013
13C2-PFOA	6.650	415.0 -> 370.0	57261	20.00	µg/L		-0.012
13C3-PFPeA	4.197	266.0 -> 222.0	55655	20.00	µg/L		-0.025
13C4-PFOS	7.224	503.0 -> 80.0	42716	20.00	µg/L		-0.014
d3-MeFOSAA	7.437	573.0 -> 419.0	25853	20.00	µg/L		-0.012
System Monitoring Compounds							
13C2-PFDA	8.032	515.0 -> 470.0	82509	20.59	µg/L		-0.012
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 103.0%			
13C2-PFHxA	5.185	315.0 -> 270.0	61239	20.25	µg/L		-0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 101.2%			
d5-EtFOSAA	7.572	589.0 -> 419.0	15827	24.37	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 121.9%			
Target Compounds							**QValue**
4:2FTS	5.119	327.0 -> 307.0	64495	20.93	µg/L		100
6:2FTS	6.661	427.0 -> 407.0	130379	22.10	µg/L		100
8:2FTS	8.177	527.0 -> 507.0	229729	23.52	µg/L		100
EtFOSAA	7.573	584.0 -> 419.0	12771	21.55	µg/L		100
FOSA	6.961	498.0 -> 78.0	29785	21.43	µg/L		100
MeFOSAA	7.451	570.0 -> 419.0	15995	21.91	µg/L		100
PFBA	2.915	213.0 -> 169.0	27355	18.16	µg/L		100
PFBS	4.328	299.0 -> 80.0	33657	19.75	µg/L		100
PFDA	8.034	513.0 -> 469.0	57165	20.19	µg/L		100
PFDoDA	10.795	613.0 -> 569.0	59116	21.88	µg/L		100
PFDS	9.162	599.0 -> 80.0	24865	21.73	µg/L		100
PFHpA	5.973	363.0 -> 319.0	84493	21.19	µg/L	#	93
PFHpS	6.607	449.0 -> 80.0	38723	21.40	µg/L		100
PFHxA	5.187	313.0 -> 269.0	28995	21.54	µg/L	#	86
PFHxS	5.956	399.0 -> 80.0	39710	22.26	µg/L	m	88
PFNA	7.294	463.0 -> 419.0	53215	20.80	µg/L		97
PFNS	7.917	549.0 -> 99.0	23070	21.39	µg/L		100
PFOA	6.652	413.0 -> 369.0	50237	21.11	µg/L		98
PFOS	7.226	499.0 -> 80.0	50479	20.48	µg/L	m	86
PFPeA	4.200	263.0 -> 219.0	85091	20.15	µg/L		100
PFPeS	5.230	349.0 -> 99.0	10980	20.73	µg/L		100
PFTeDA	13.078	713.0 -> 669.0	24320	19.41	µg/L		100
PFTrDA	12.002	663.0 -> 619.0	50978	22.23	µg/L		100
PFUnDA	9.406	563.0 -> 519.0	53102	19.65	µg/L		100

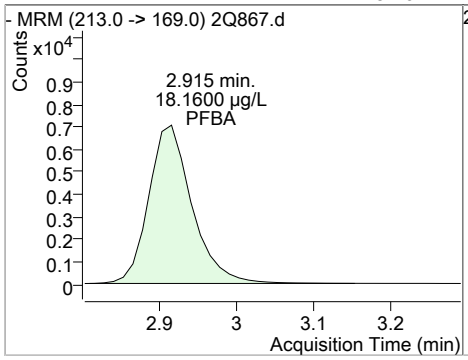
 # = Qualifier out of range, m = manually integrated, + = Area summed

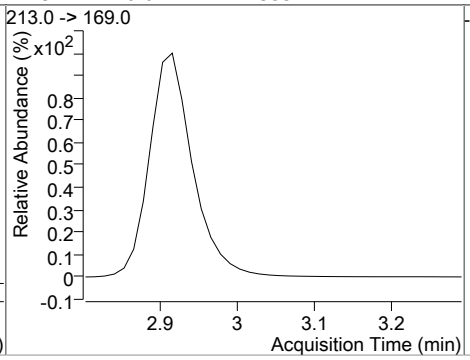
Perfluorinated Compounds by LC/MS/MS

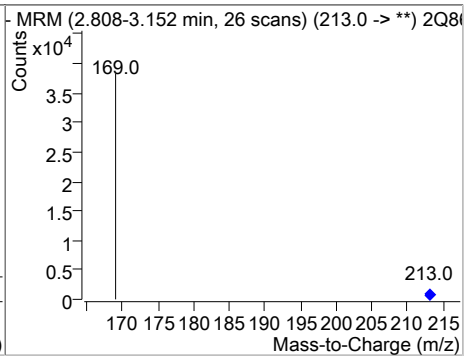
Agilent Technologies



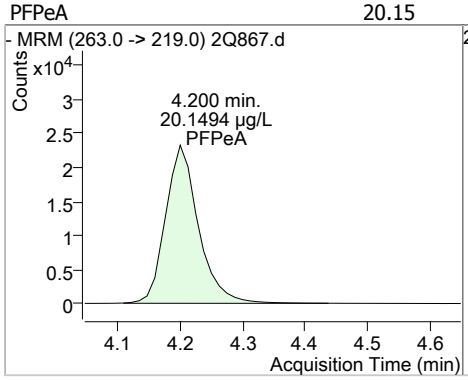
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	18.16	2.91	-0.02	27355				

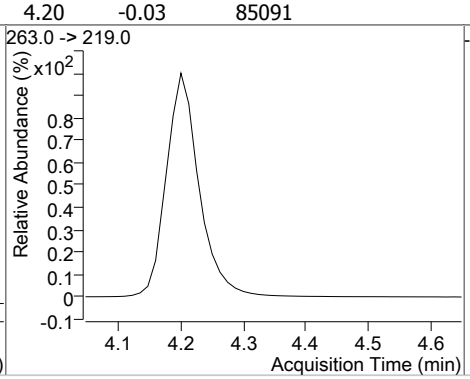


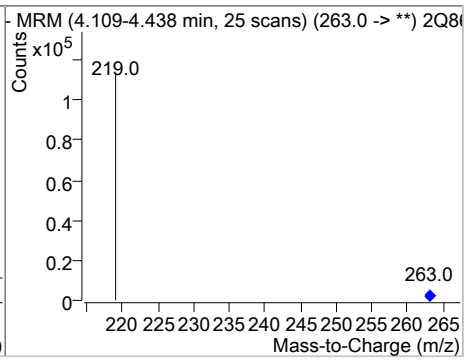




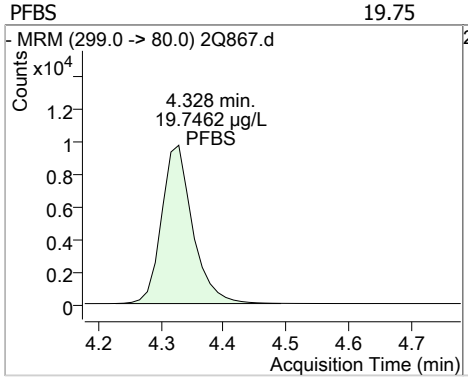
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	20.15	4.20	-0.03	85091				

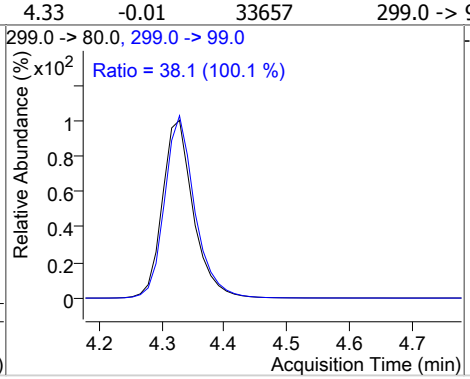


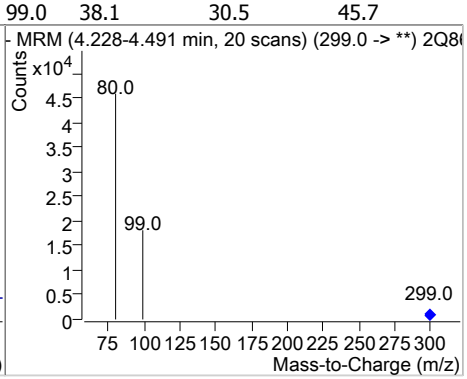




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.75	4.33	-0.01	33657	299.0 -> 99.0	38.1	30.5	45.7







Perfluorinated Compounds by LC/MS/MS

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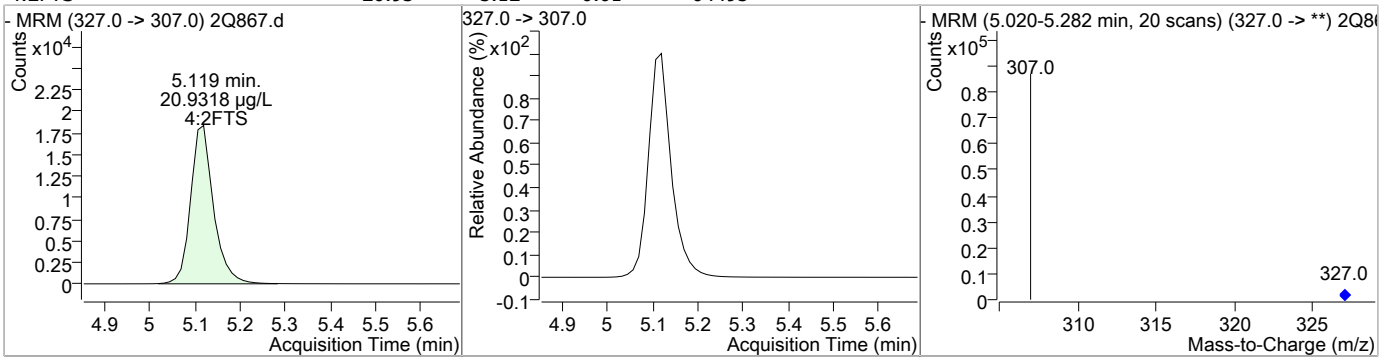
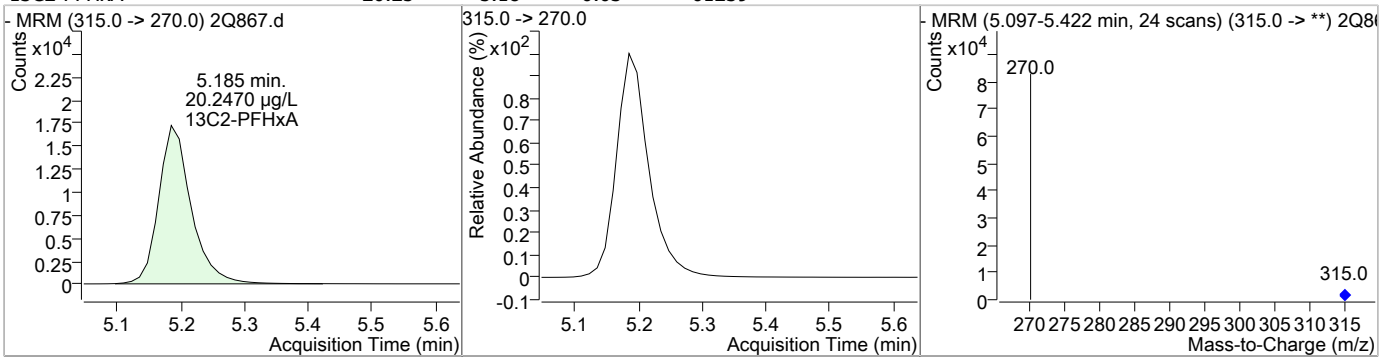
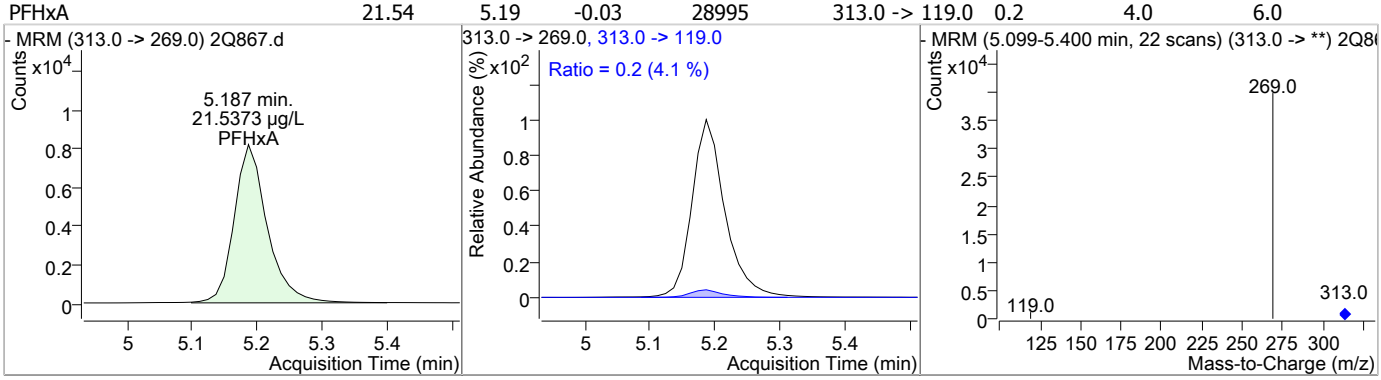
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.93	5.12	-0.01	64495				



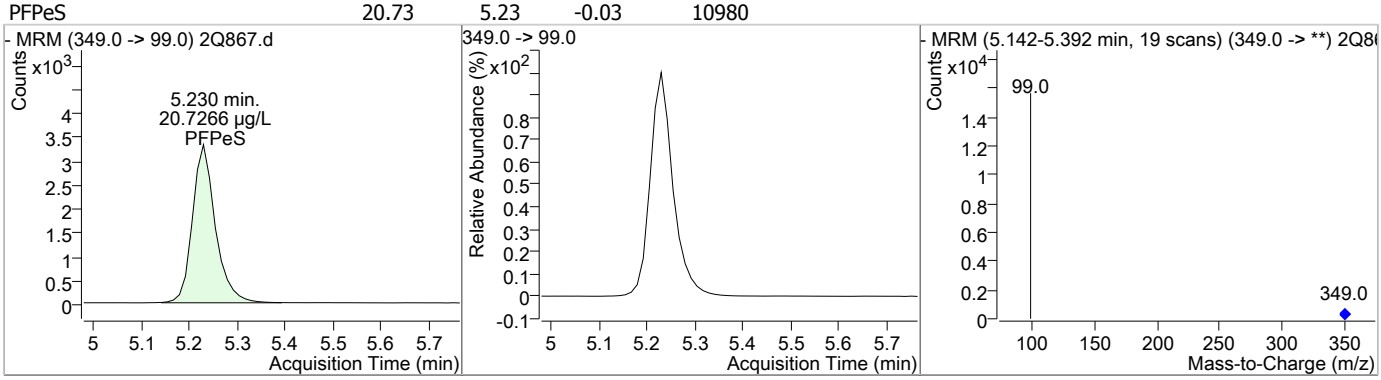
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	20.25	5.18	-0.03	61239				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	21.54	5.19	-0.03	28995	313.0 -> 119.0	0.2	4.0	6.0



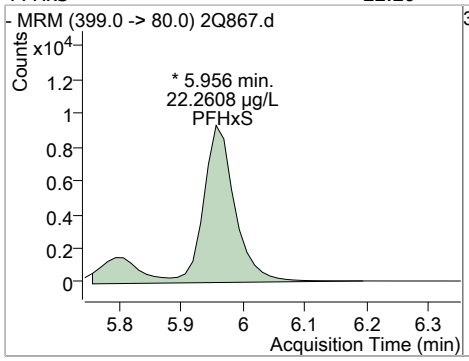
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	20.73	5.23	-0.03	10980				

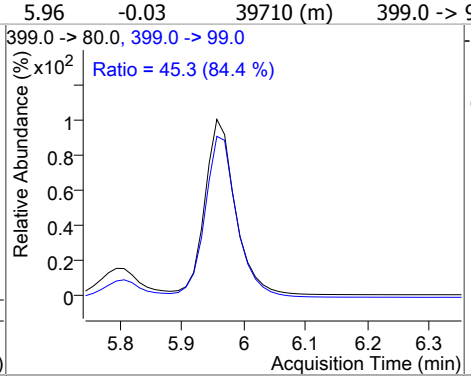


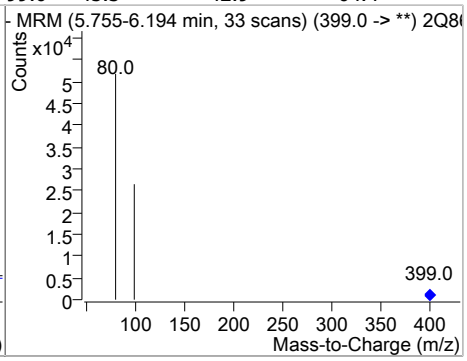
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

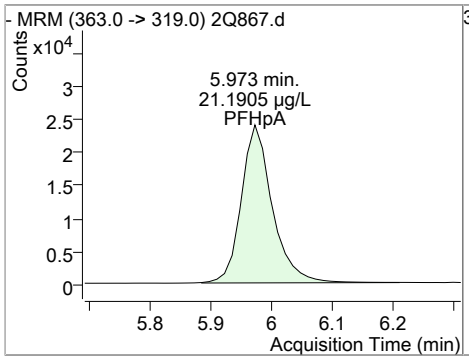
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	22.26	5.96	-0.03	39710 (m)	399.0 -> 99.0	45.3	42.9	64.4

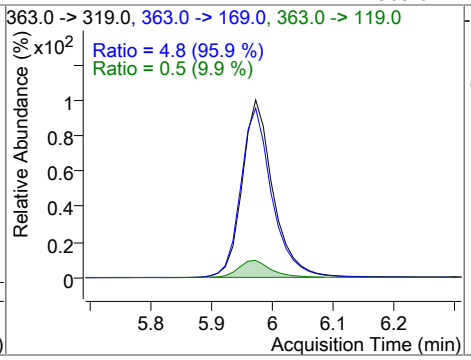


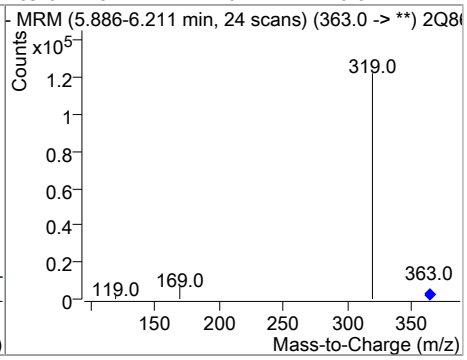




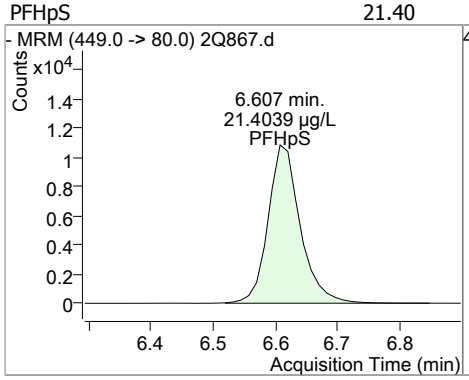
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	21.19	5.97	-0.01	84493	363.0 -> 119.0	0.5	4.0	6.0
					363.0 -> 169.0	4.8	4.0	6.0

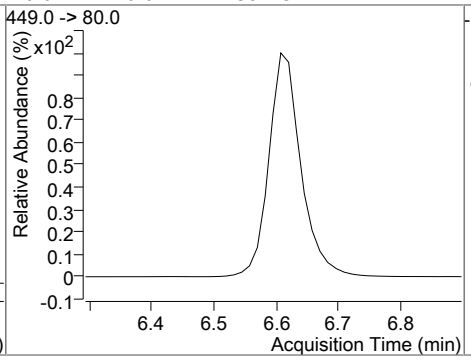


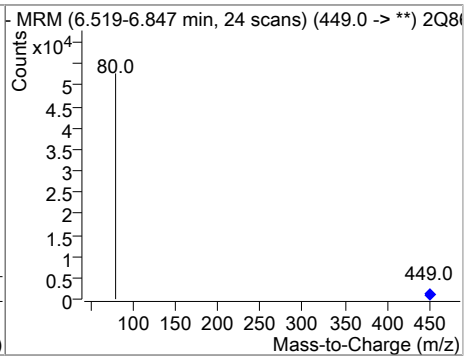




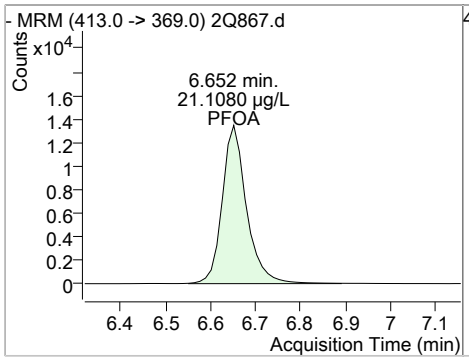
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	21.40	6.61	-0.01	38723				

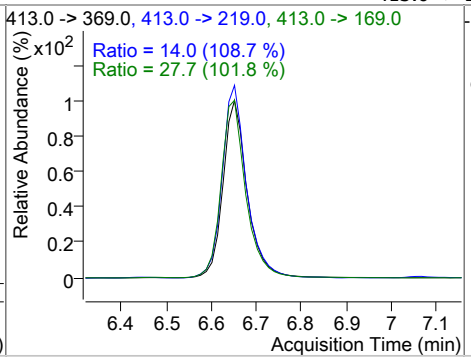


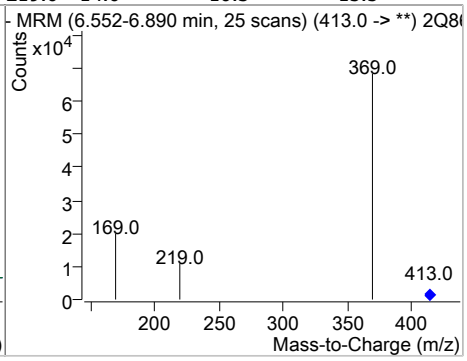




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	21.11	6.65	-0.01	50237	413.0 -> 169.0	27.7	21.8	32.6
					413.0 -> 219.0	14.0	10.3	15.5



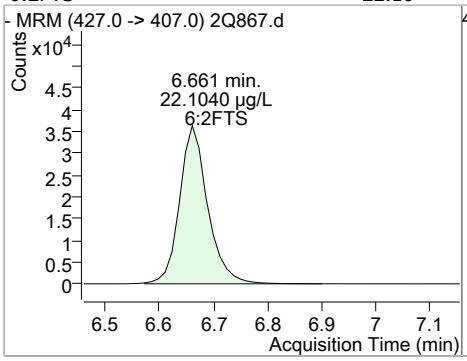


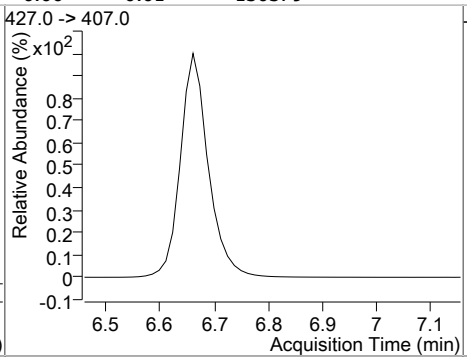


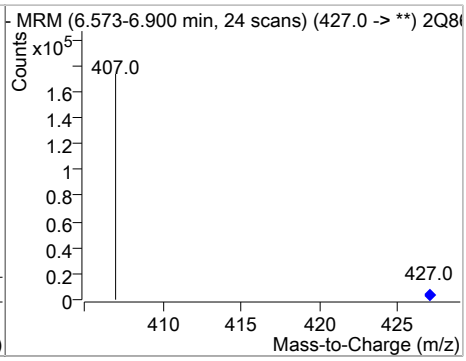
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

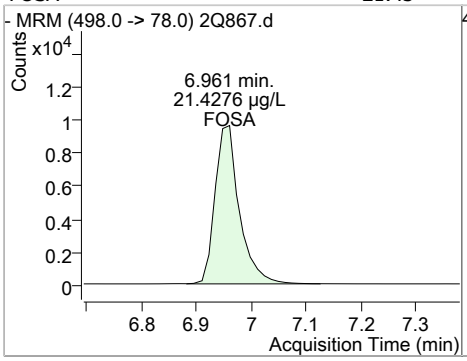
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	22.10	6.66	-0.01	130379				

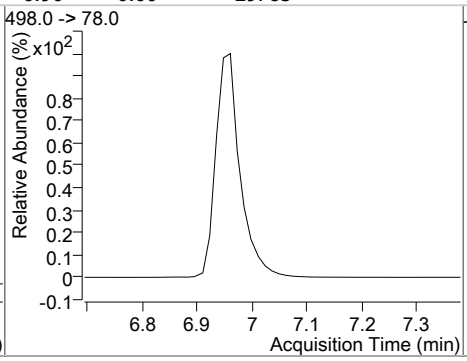


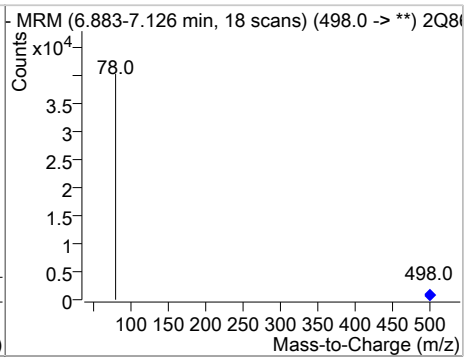




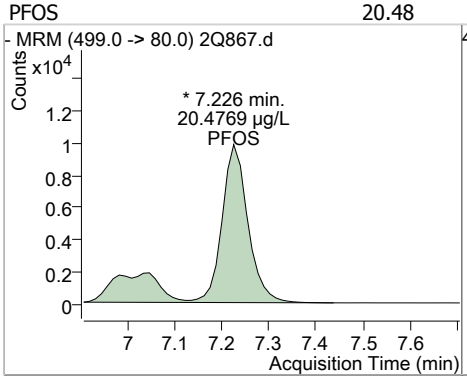
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	21.43	6.96	0.00	29785				

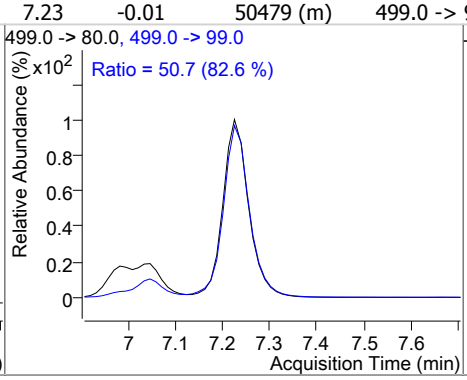


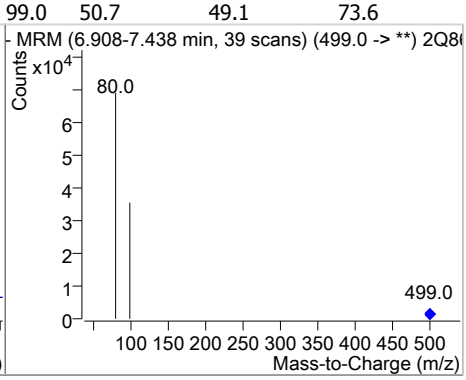




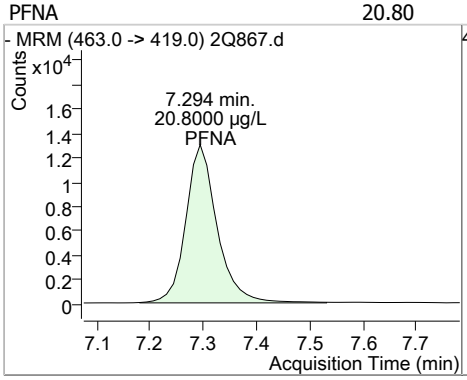
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	20.48	7.23	-0.01	50479 (m)	499.0 -> 99.0	50.7	49.1	73.6

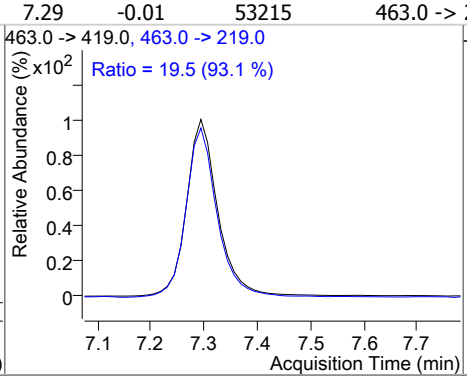


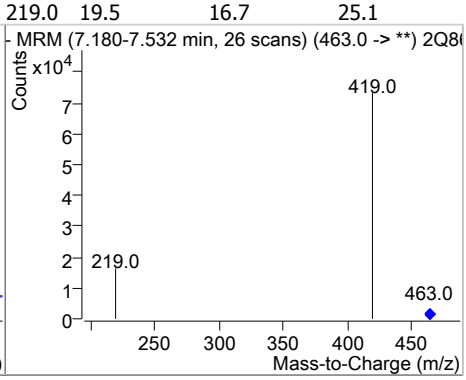




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	20.80	7.29	-0.01	53215	463.0 -> 219.0	19.5	16.7	25.1



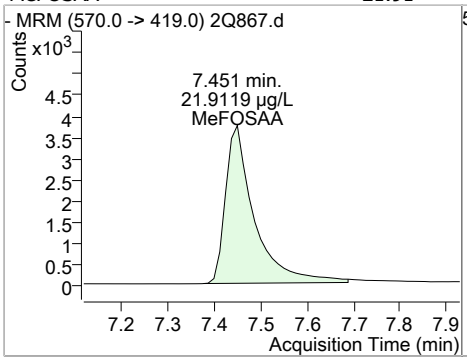


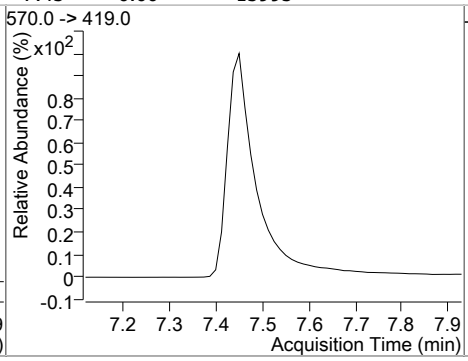


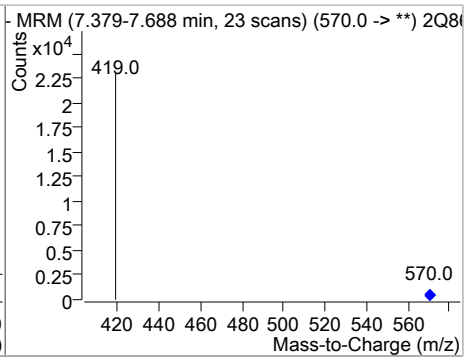
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

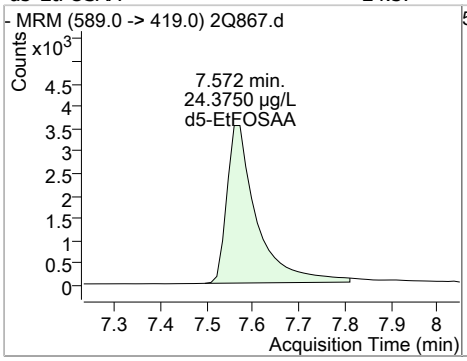
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	21.91	7.45	0.00	15995				

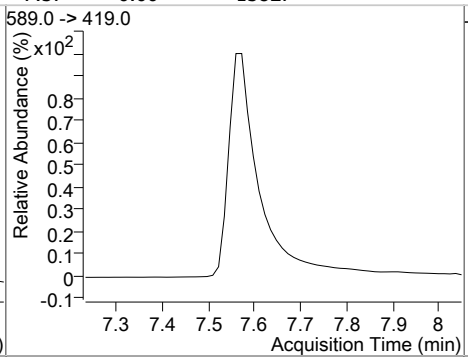


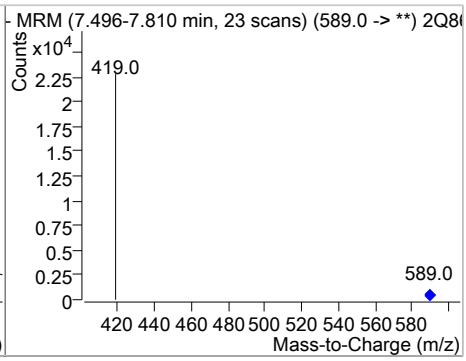




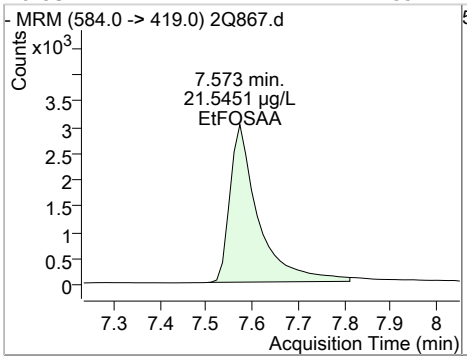
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	24.37	7.57	0.00	15827				

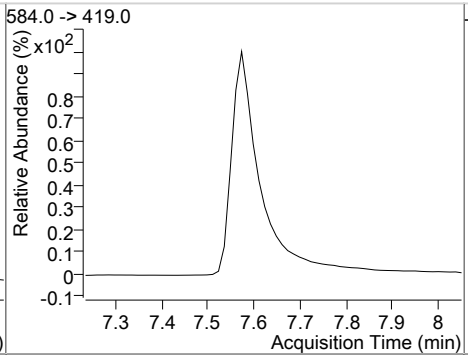


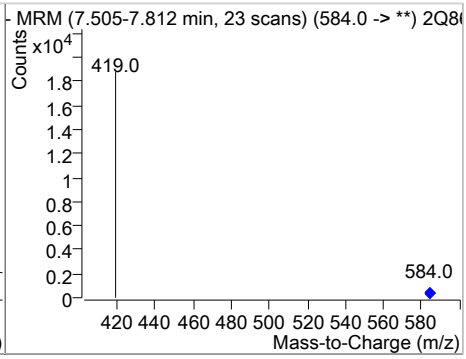




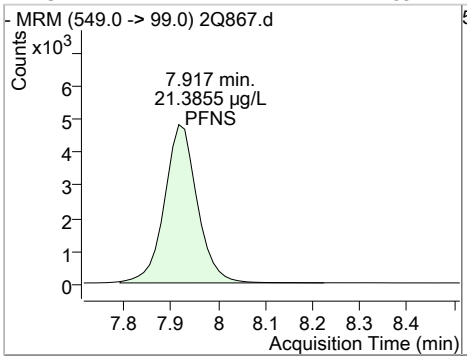
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	21.55	7.57	0.00	12771				

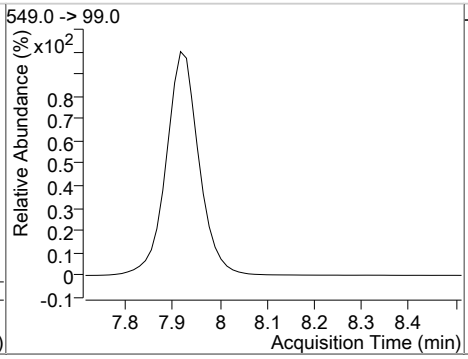


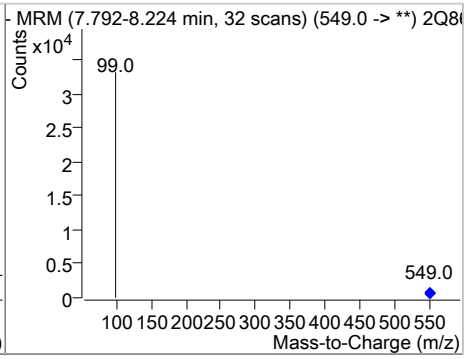




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	21.39	7.92	-0.01	23070				



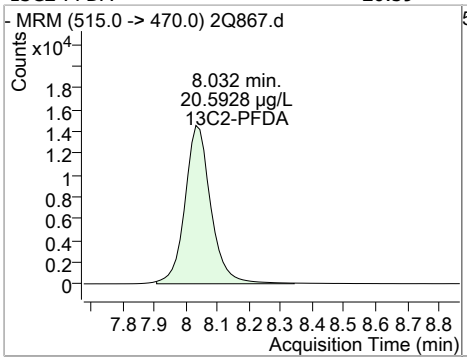


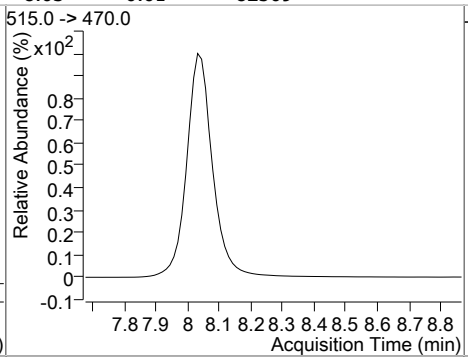


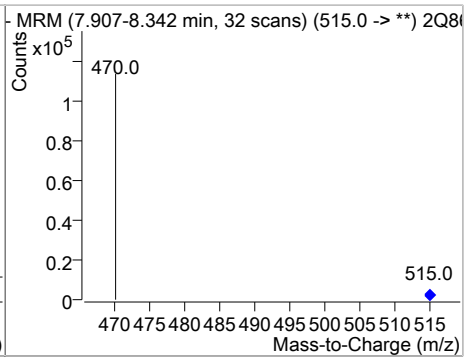
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

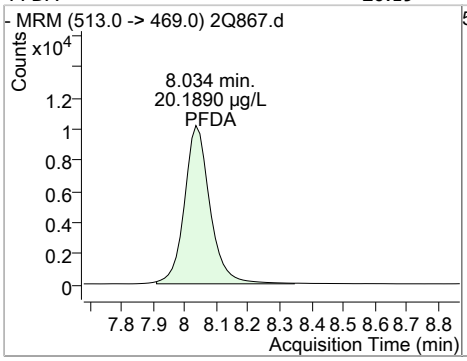
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	20.59	8.03	-0.01	82509				

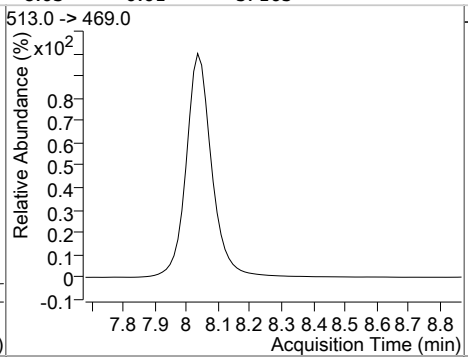


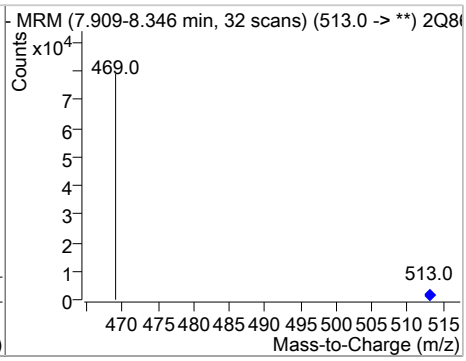




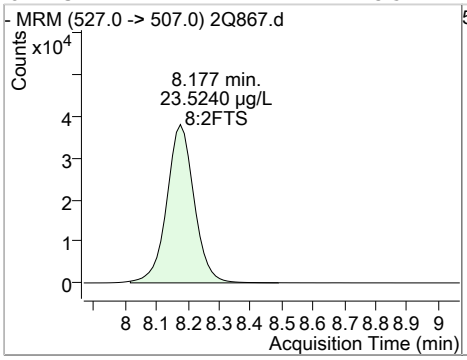
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	20.19	8.03	-0.01	57165				

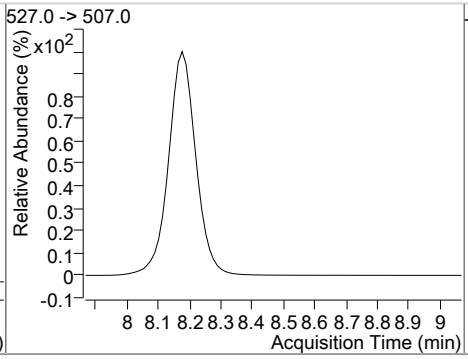


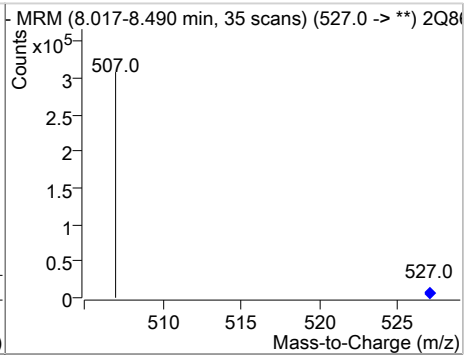




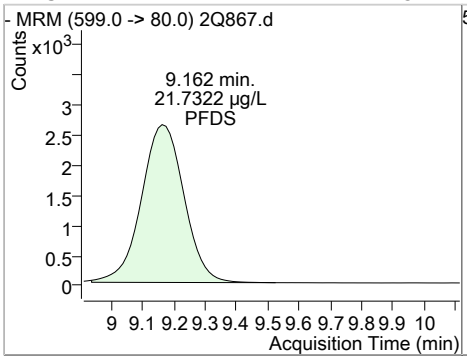
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	23.52	8.18	-0.01	229729				

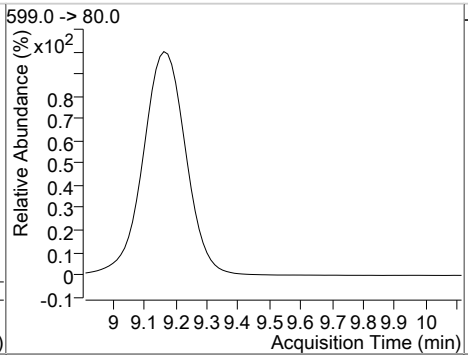


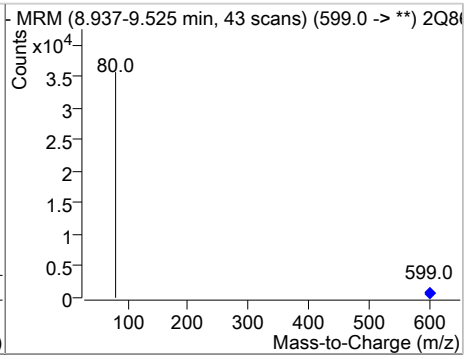




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	21.73	9.16	0.00	24865				



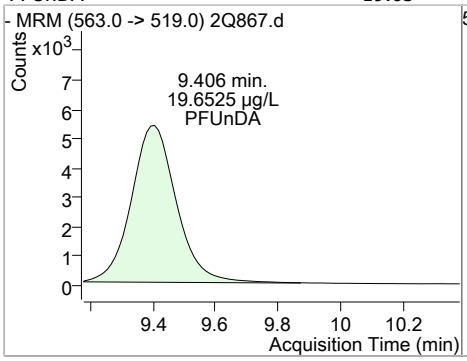


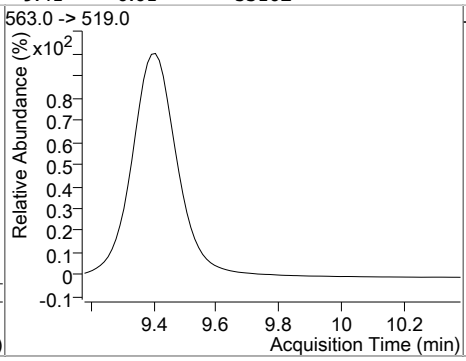


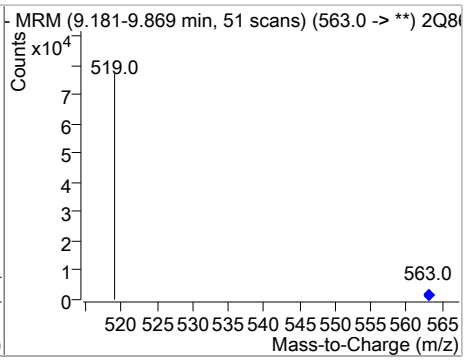
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

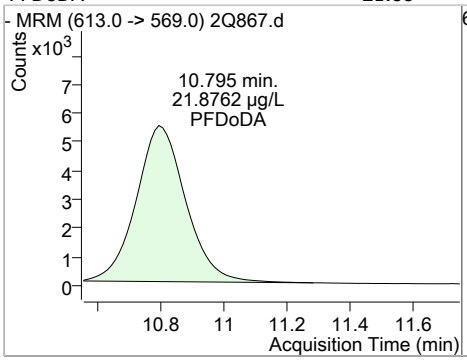
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	19.65	9.41	0.01	53102				

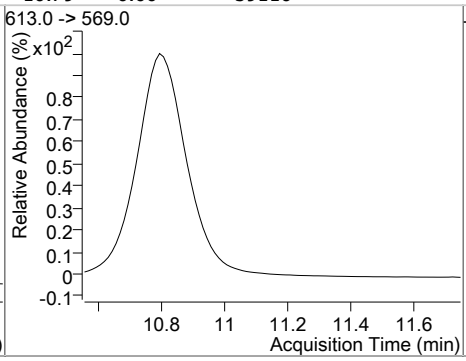


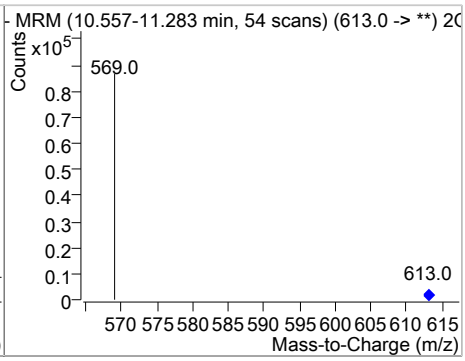




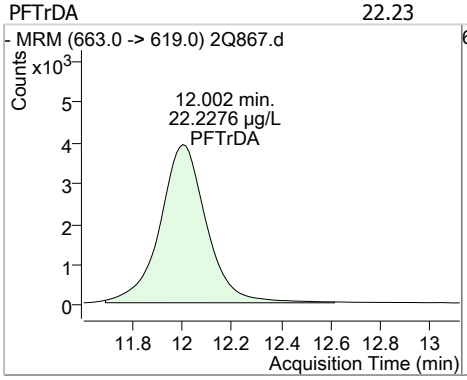
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	21.88	10.79	0.00	59116				

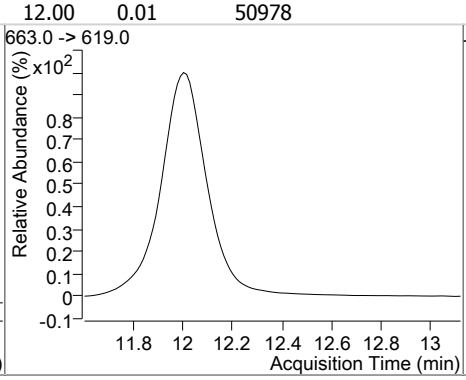


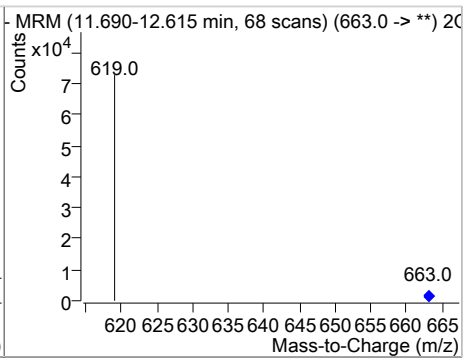




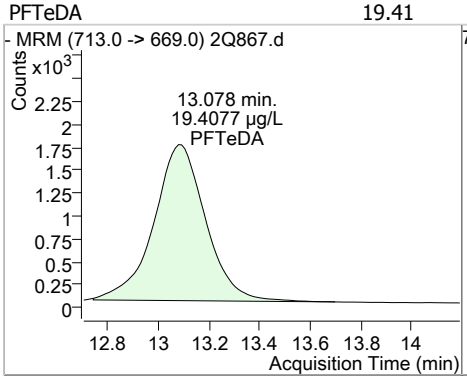
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	22.23	12.00	0.01	50978				

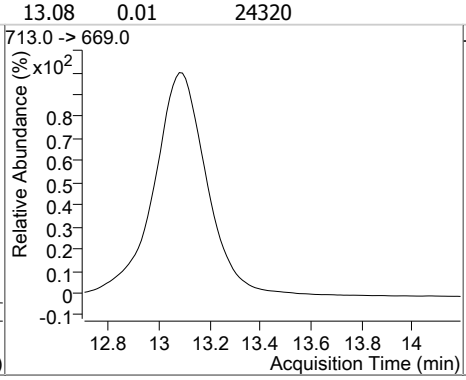


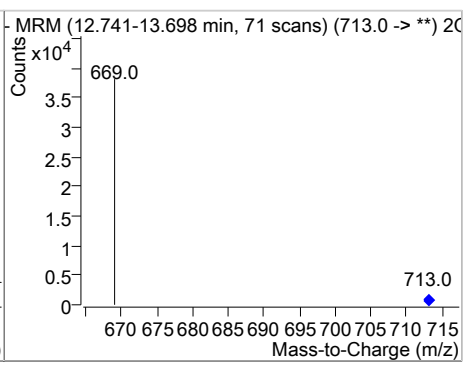




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	19.41	13.08	0.01	24320				







Manual Integration Approval Summary

Sample Number:	S2Q25-CC18	**Method:**	EPA 537
Lab FileID:	2Q867.D	**Analyst approved:**	05/01/17 09:23 Nancy Saunders
Injection Time:	04/28/17 17:16	**Supervisor approved:**	05/01/17 12:10 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.96	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.23	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
05/01/17 12:10

Perfluorinated Compounds by LC/MS/MS

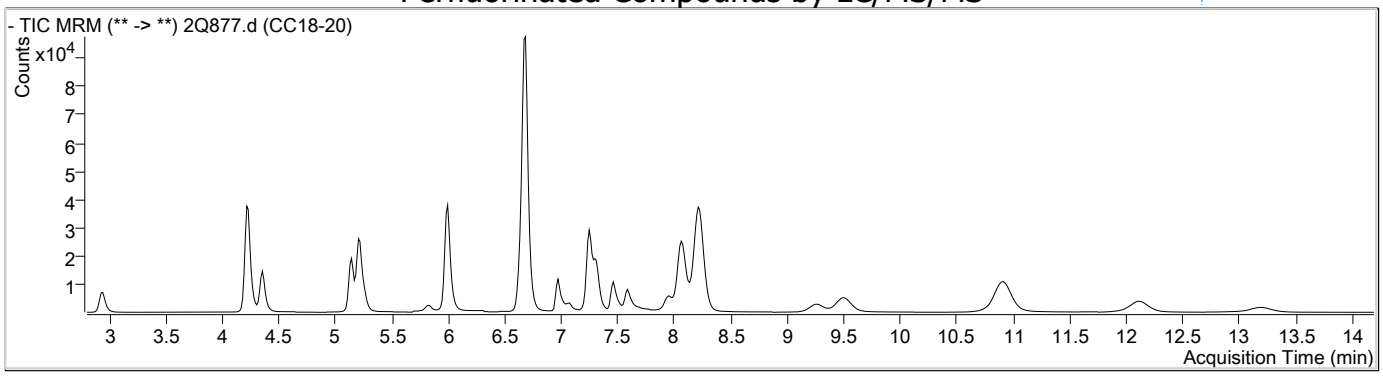
Data File : 2Q877.d
Operator : NANCYF
Acq. Method : dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time : 4/28/2017 8:31:19 PM
Sample Name : CC18-20
Vial : Vial 2
DA Method File : PFCLISTDW_0420_S2Q18.m
Batch Name : 2SQ25.batch.bin
Last Calib Update : 4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc. Units		Dev(Min)
Internal Standards						
13C2-6:2FTS	6.684	429.0 -> 409.0	120852	20.00 µg/L		0.013
13C2-PFDoDA	10.914	615.0 -> 570.0	63694	20.00 µg/L		0.125
13C2-PFOA	6.675	415.0 -> 370.0	57148	20.00 µg/L		0.013
13C3-PFPeA	4.234	266.0 -> 222.0	53826	20.00 µg/L		0.013
13C4-PFOS	7.251	503.0 -> 80.0	43891	20.00 µg/L		0.013
d3-MeFOSAA	7.462	573.0 -> 419.0	26723	20.00 µg/L		0.013
System Monitoring Compounds						
13C2-PFDA	8.067	515.0 -> 470.0	83070	20.77 µg/L		0.023
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 103.9%		
13C2-PFHxA	5.210	315.0 -> 270.0	60455	20.03 µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 100.1%		
d5-EtFOSAA	7.585	589.0 -> 419.0	16869	25.06 µg/L		0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 125.3%		
Target Compounds						QValue
4:2FTS	5.144	327.0 -> 307.0	63688	20.86 µg/L		100
6:2FTS	6.686	427.0 -> 407.0	129390	22.14 µg/L		100
8:2FTS	8.214	527.0 -> 507.0	232811	24.06 µg/L		100
EtFOSAA	7.586	584.0 -> 419.0	12662	20.72 µg/L		100
FOSA	6.973	498.0 -> 78.0	30550	21.26 µg/L		100
MeFOSAA	7.463	570.0 -> 419.0	15856	21.09 µg/L		100
PFBA	2.940	213.0 -> 169.0	27559	18.33 µg/L		100
PFBS	4.353	299.0 -> 80.0	34256	19.56 µg/L		99
PFDA	8.070	513.0 -> 469.0	56069	19.84 µg/L		100
PFDoDA	10.908	613.0 -> 569.0	61611	22.04 µg/L		100
PFDS	9.262	599.0 -> 80.0	25304	21.53 µg/L		100
PFHpA	5.998	363.0 -> 319.0	84815	21.31 µg/L	#	93
PFHpS	6.632	449.0 -> 80.0	39694	21.35 µg/L		100
PFHxA	5.212	313.0 -> 269.0	28292	21.08 µg/L	#	86
PFHxS	5.981	399.0 -> 80.0	37345	20.37 µg/L	m	95
PFNA	7.319	463.0 -> 419.0	50821	19.90 µg/L		100
PFNS	7.952	549.0 -> 99.0	23319	21.04 µg/L		100
PFOA	6.677	413.0 -> 369.0	49314	20.76 µg/L		98
PFOS	7.252	499.0 -> 80.0	52648	20.78 µg/L	m	85
PFPeA	4.225	263.0 -> 219.0	84397	20.66 µg/L		100
PFPeS	5.255	349.0 -> 99.0	11157	21.78 µg/L		100
PFTeDA	13.191	713.0 -> 669.0	25755	19.85 µg/L		100
PFTrDA	12.115	663.0 -> 619.0	51469	21.73 µg/L		100
PFUnDA	9.506	563.0 -> 519.0	53140	19.01 µg/L		100

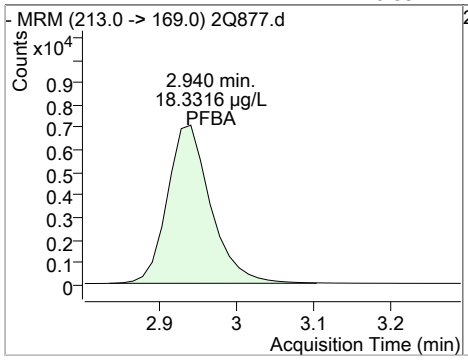
 # = Qualifier out of range, m = manually integrated, + = Area summed

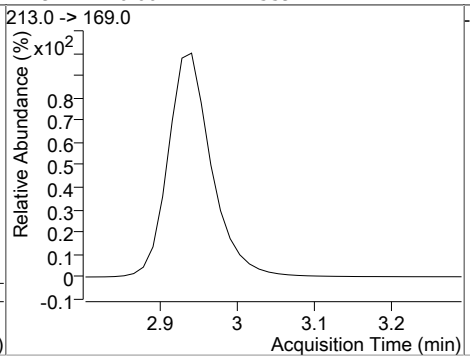
Perfluorinated Compounds by LC/MS/MS

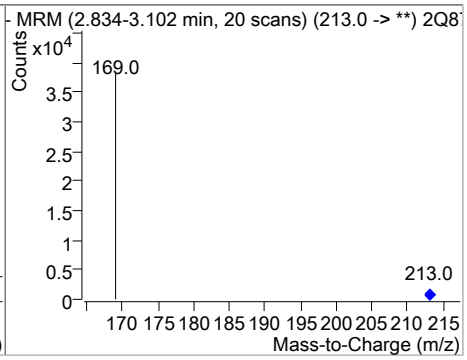
Agilent Technologies



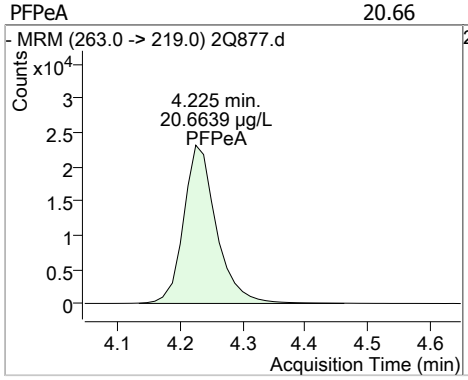
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	18.33	2.94	0.00	27559				

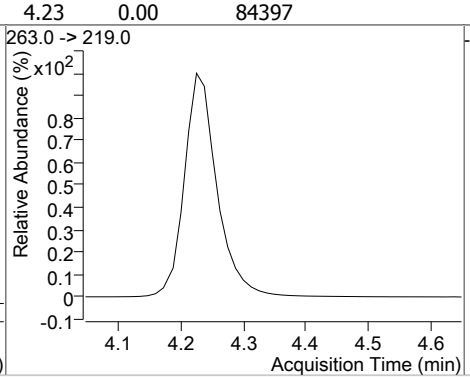


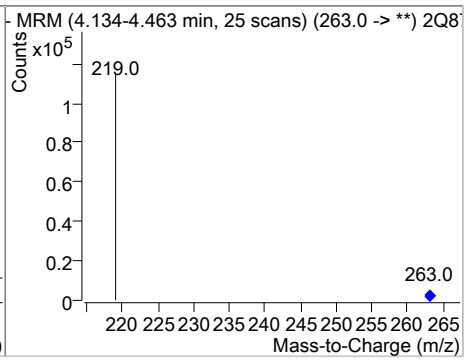




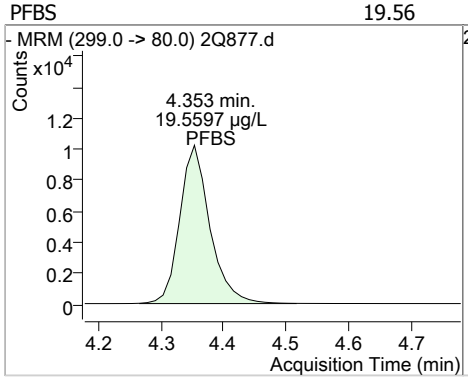
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	20.66	4.23	0.00	84397				

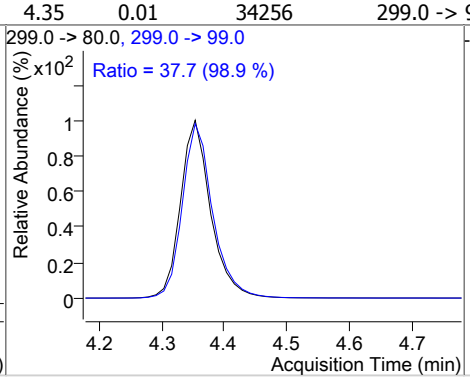


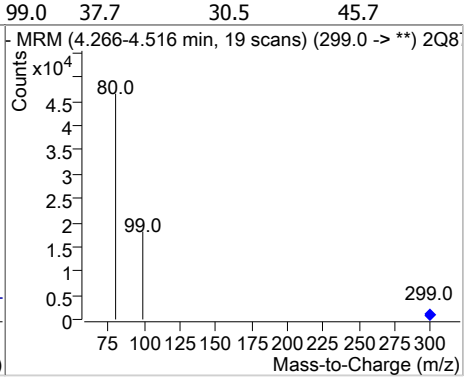




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	19.56	4.35	0.01	34256	299.0 -> 99.0	37.7	30.5	45.7



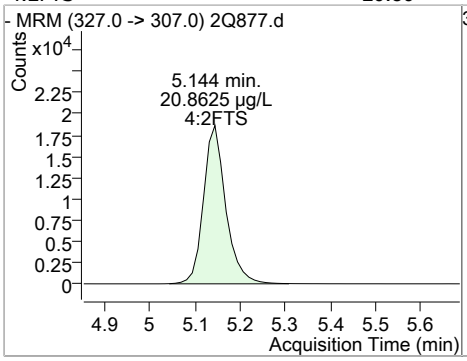


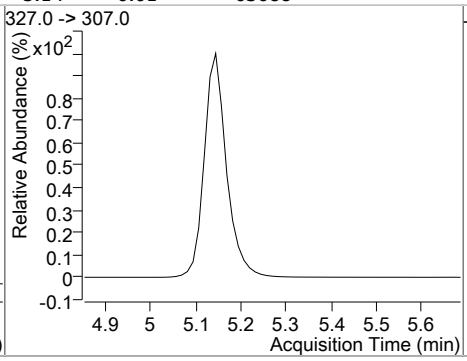


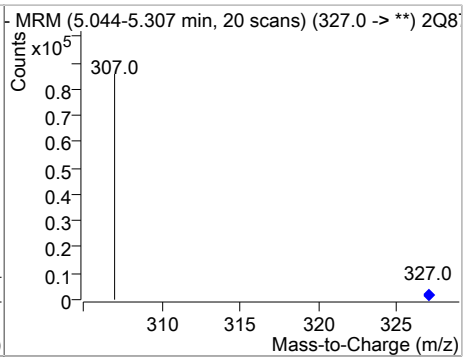
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

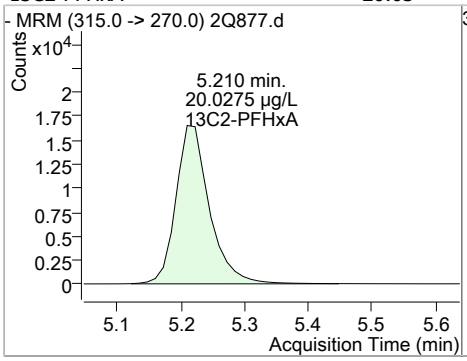
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	20.86	5.14	0.01	63688				

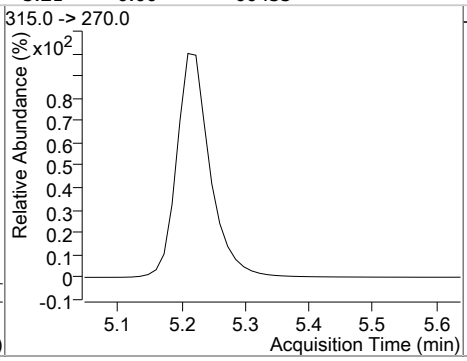


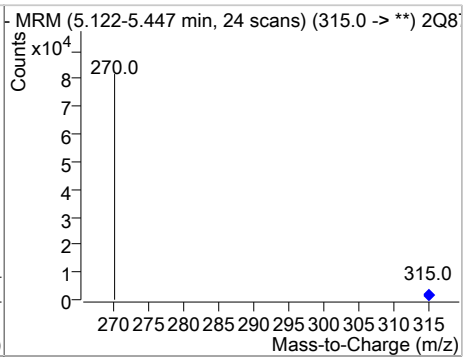




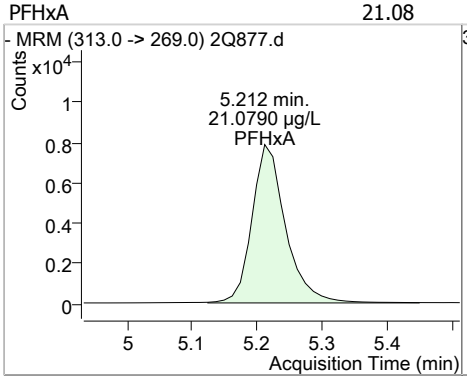
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	20.03	5.21	0.00	60455				

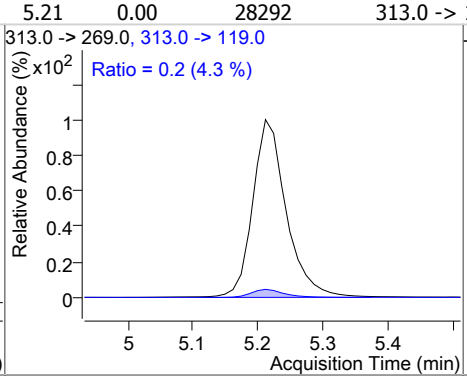


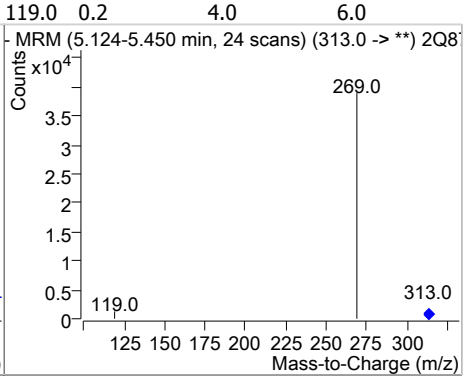




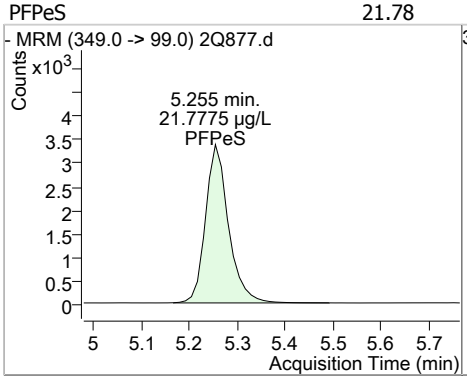
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	21.08	5.21	0.00	28292	313.0 -> 119.0	0.2	4.0	6.0

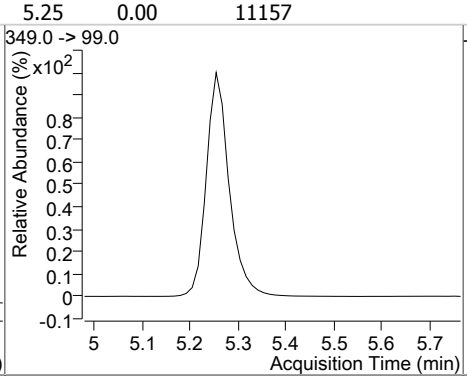


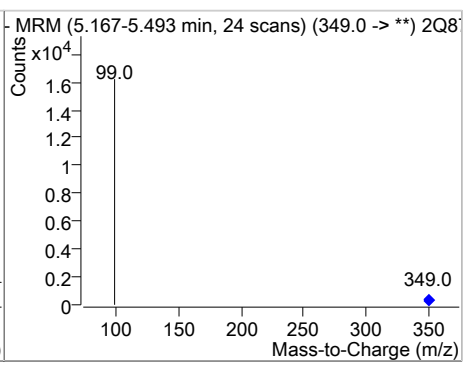




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	21.78	5.25	0.00	11157				



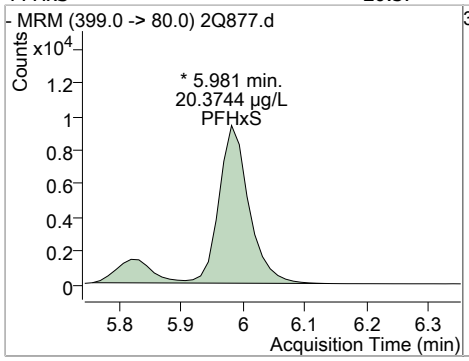


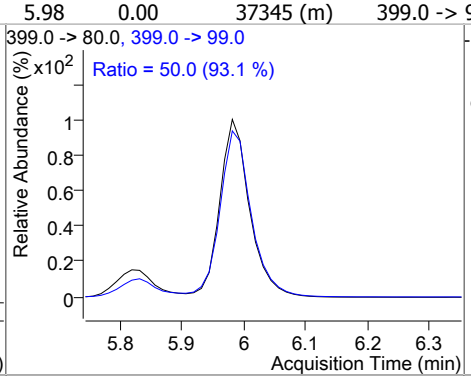


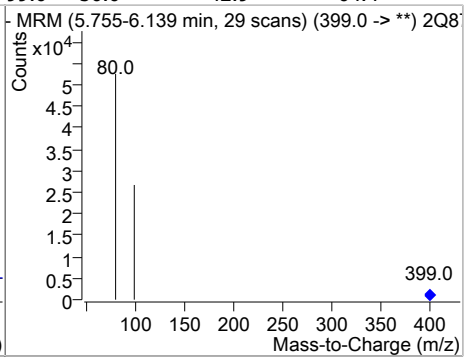
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

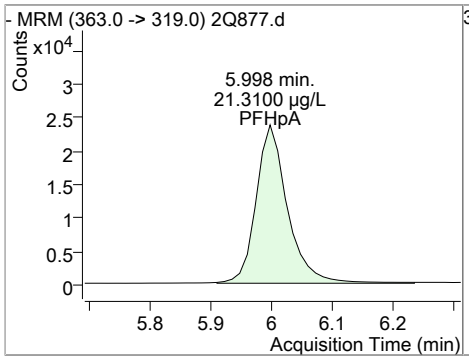
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	20.37	5.98	0.00	37345 (m)	399.0 -> 99.0	50.0	42.9	64.4

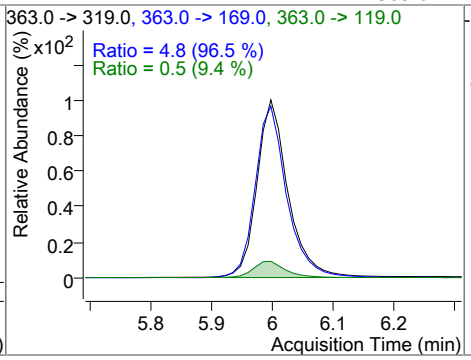


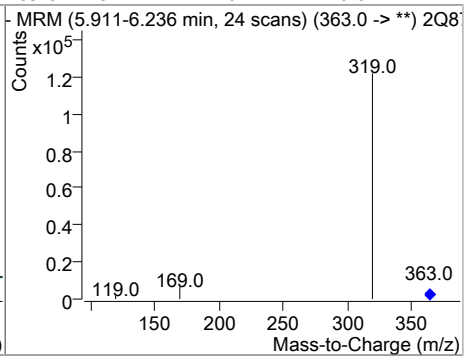




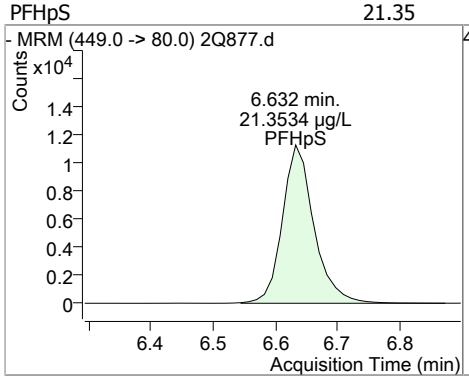
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	21.31	6.00	0.01	84815	363.0 -> 119.0	0.5	4.0	6.0
					363.0 -> 169.0	4.8	4.0	6.0

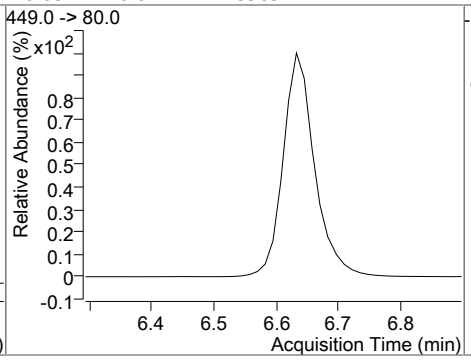


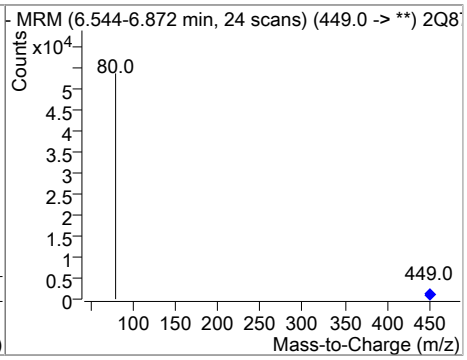




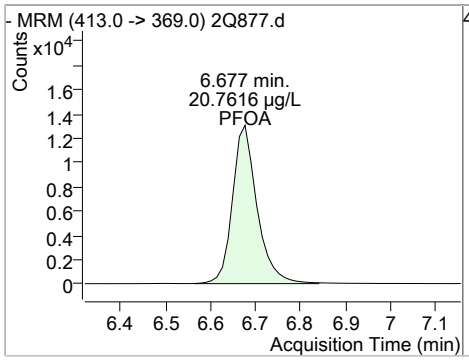
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	21.35	6.63	0.01	39694				

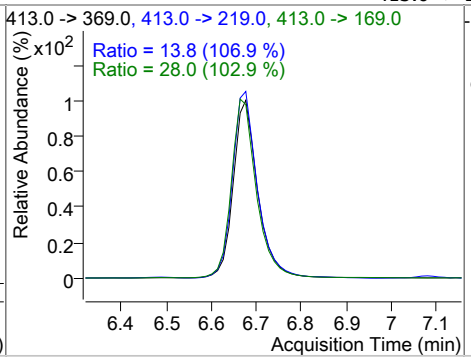


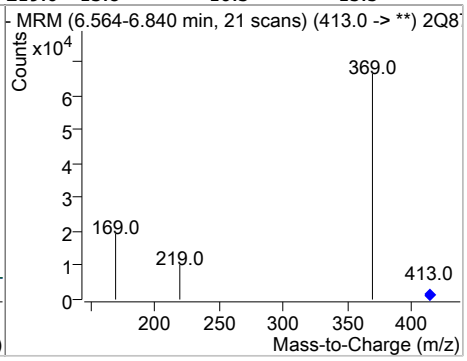




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	20.76	6.68	0.01	49314	413.0 -> 169.0	28.0	21.8	32.6
					413.0 -> 219.0	13.8	10.3	15.5



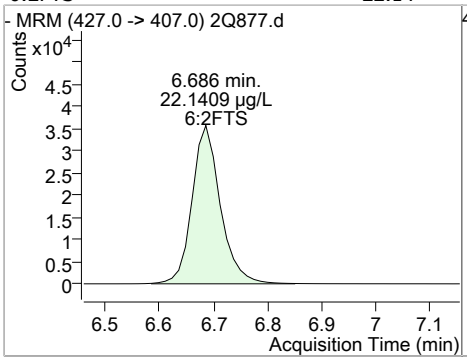


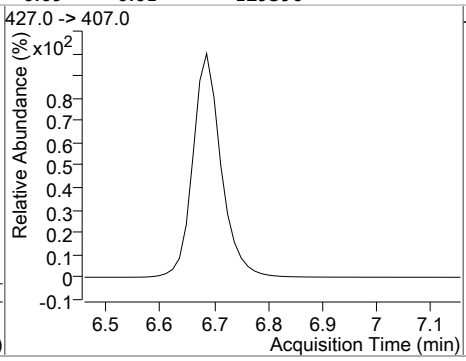


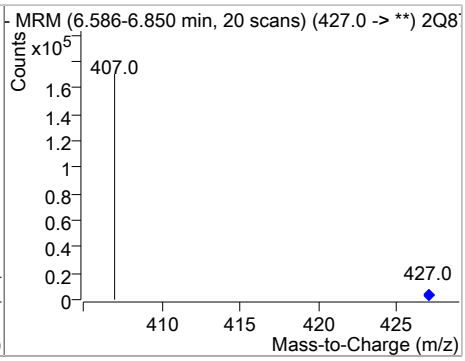
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

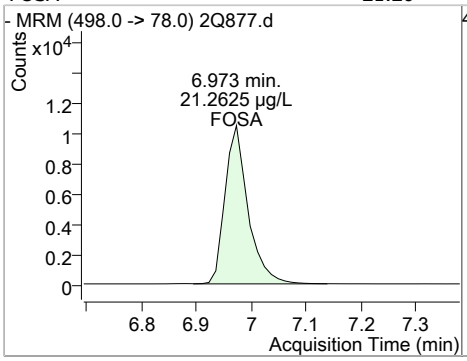
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	22.14	6.69	0.01	129390				

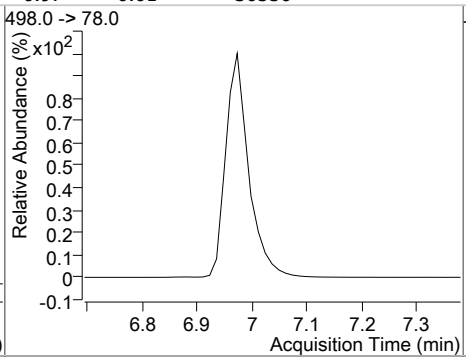


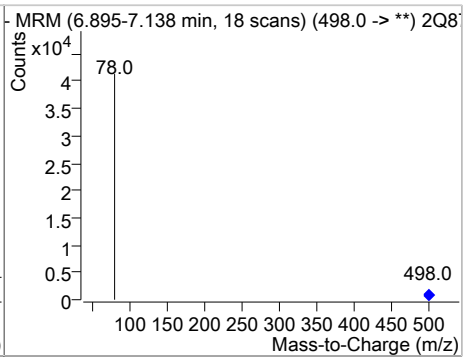




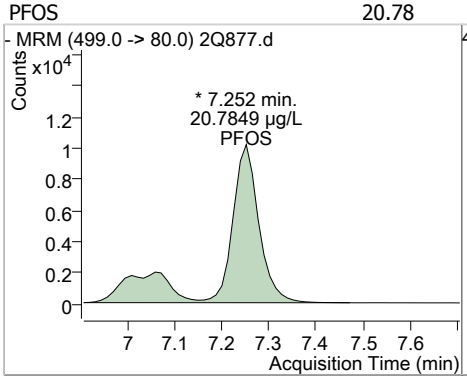
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	21.26	6.97	0.01	30550				

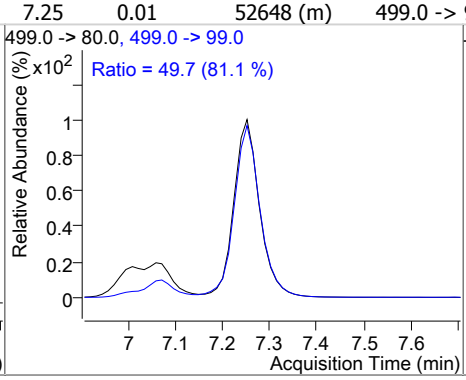


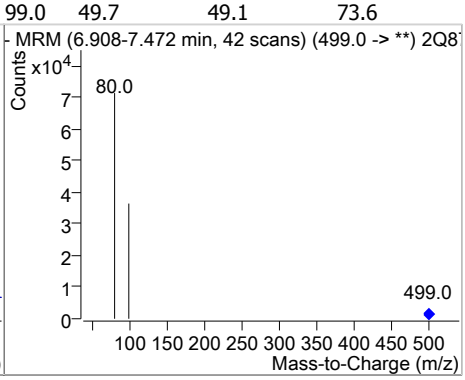




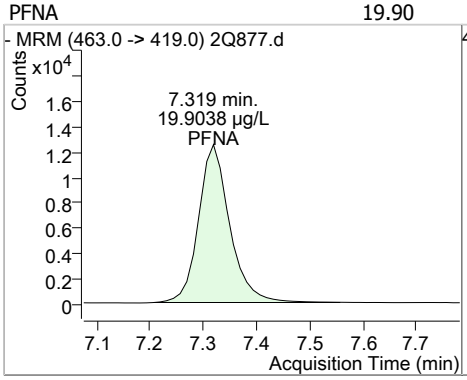
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	20.78	7.25	0.01	52648 (m)	499.0 -> 99.0	49.7	49.1	73.6

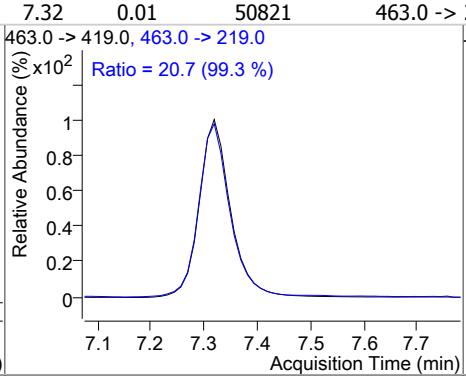


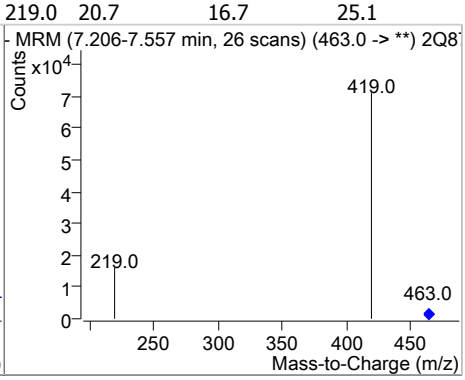




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.90	7.32	0.01	50821	463.0 -> 219.0	20.7	16.7	25.1







Perfluorinated Compounds by LC/MS/MS

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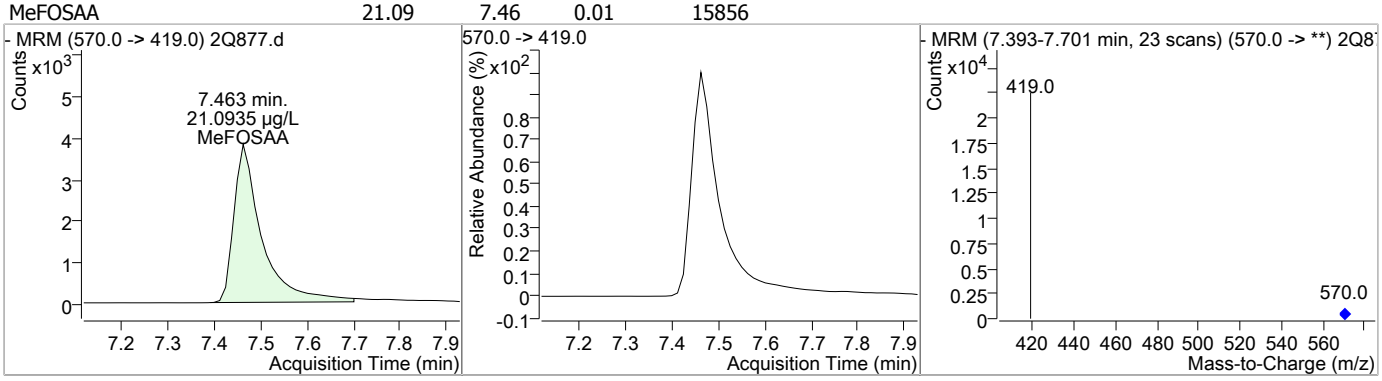
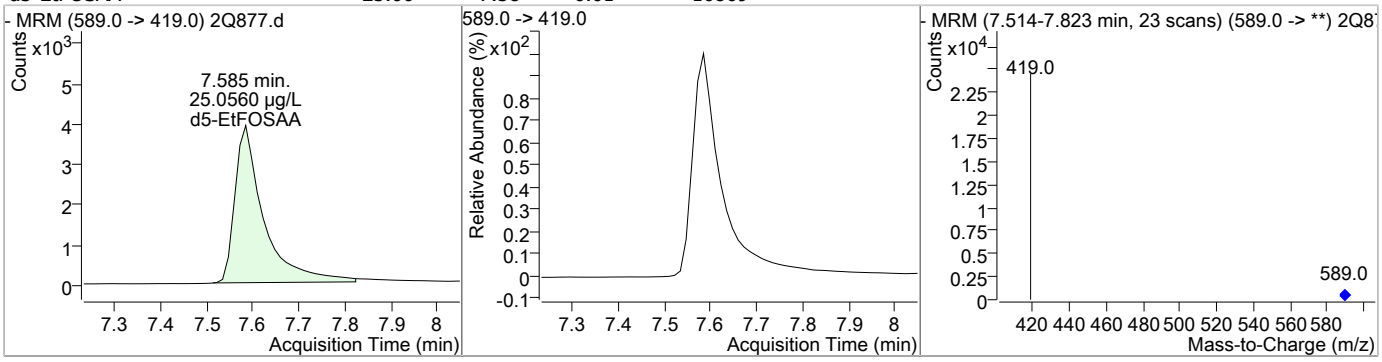
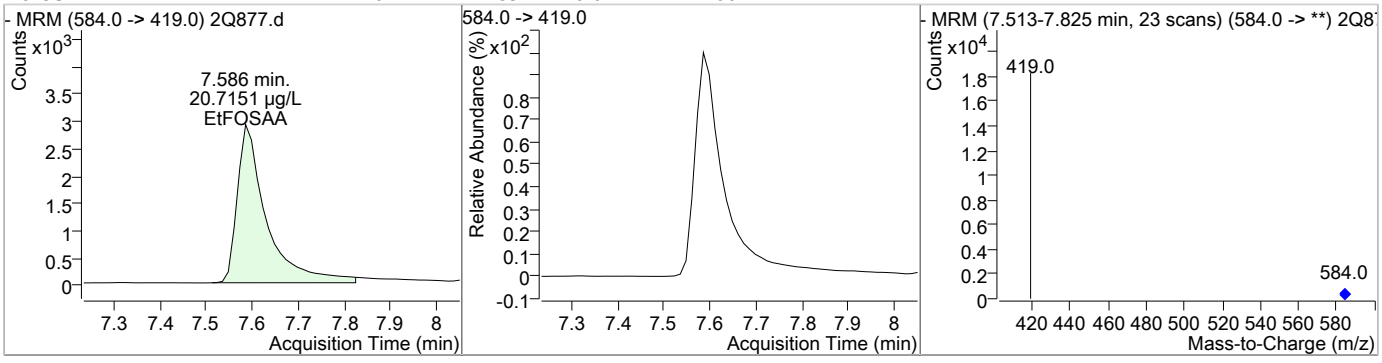
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	21.09	7.46	0.01	15856				



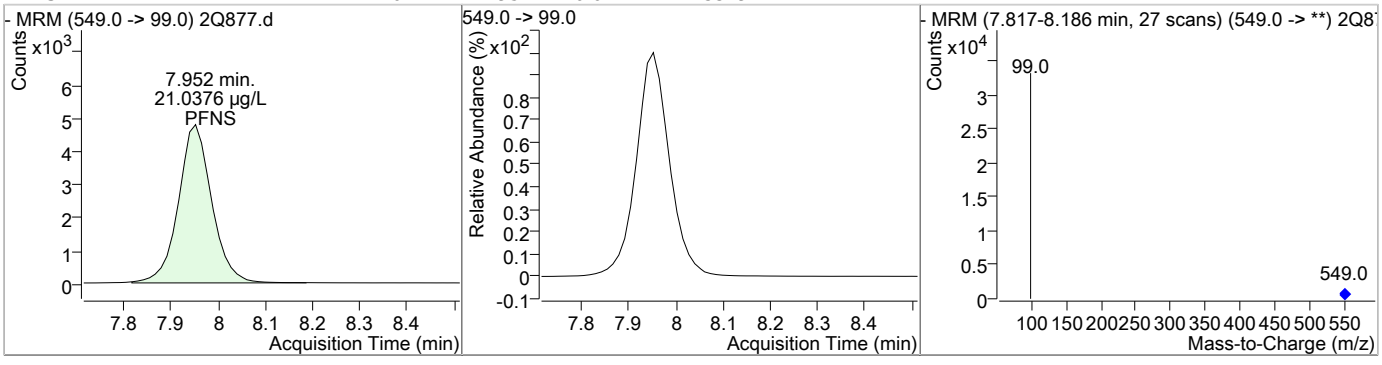
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	25.06	7.58	0.01	16869				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	20.72	7.59	0.01	12662				



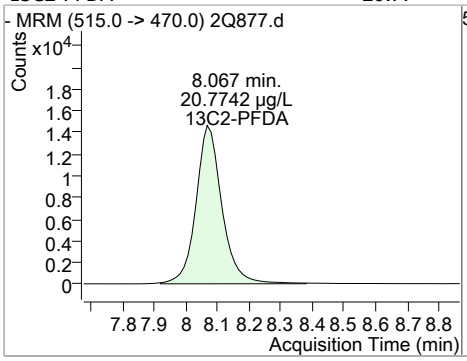
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	21.04	7.95	0.02	23319				

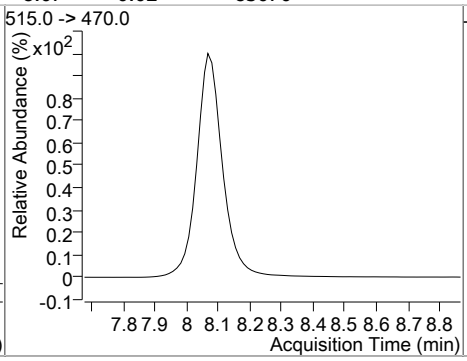


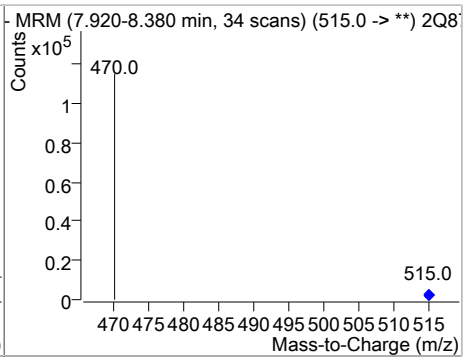
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

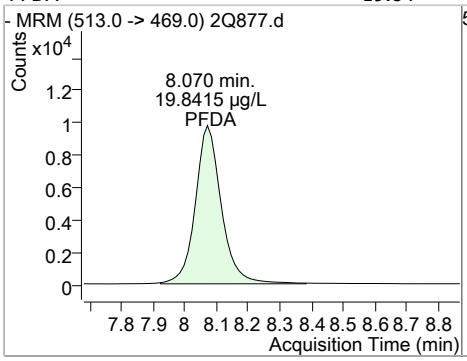
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	20.77	8.07	0.02	83070				

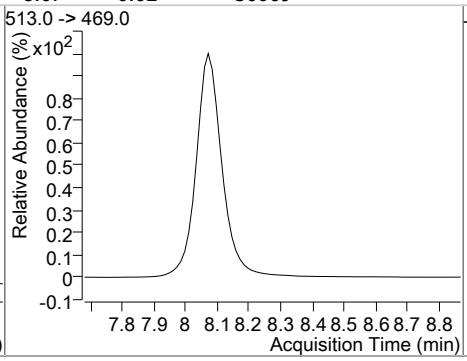


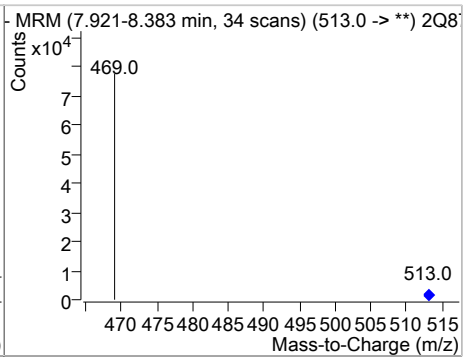




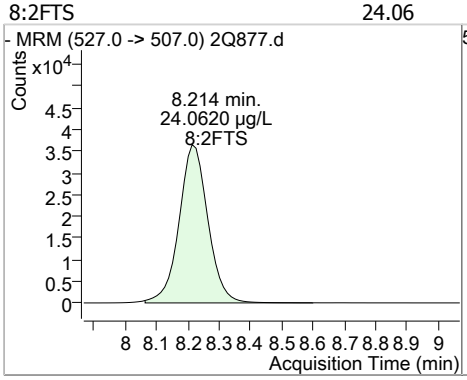
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	19.84	8.07	0.02	56069				

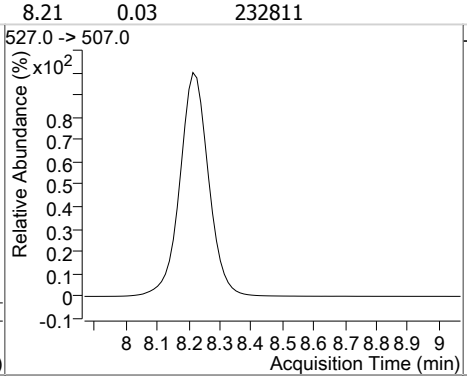


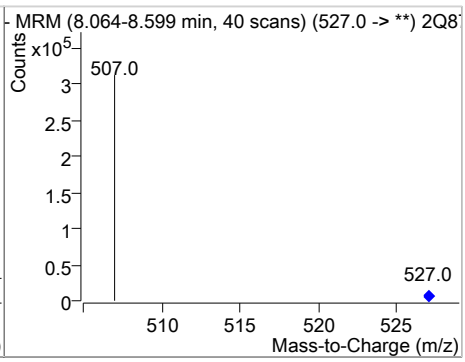




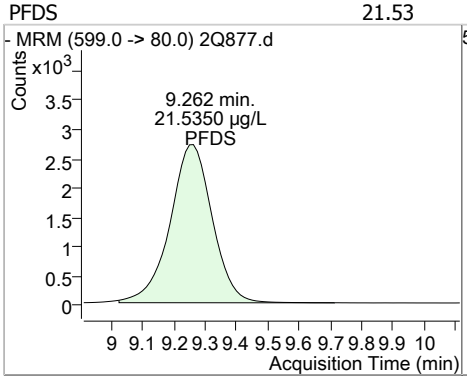
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	24.06	8.21	0.03	232811				

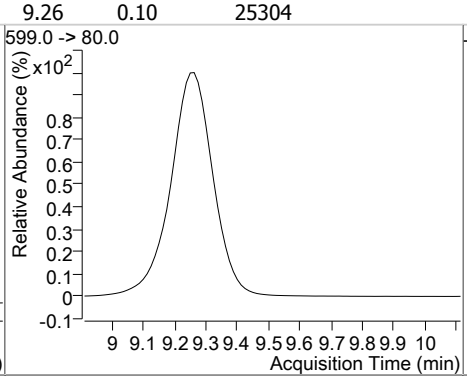


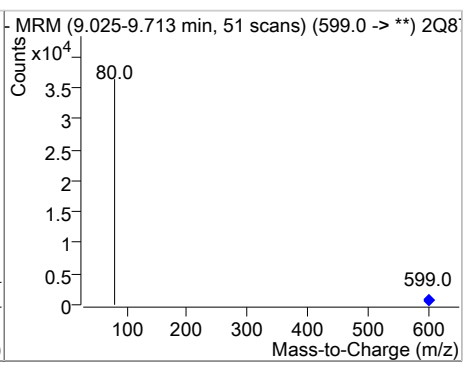




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	21.53	9.26	0.10	25304				



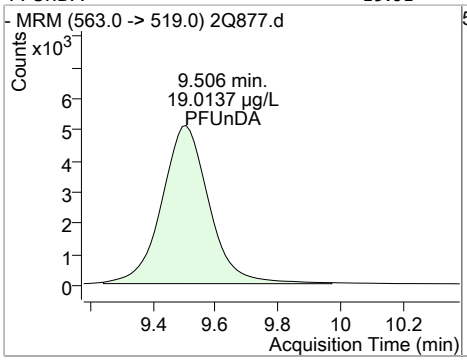


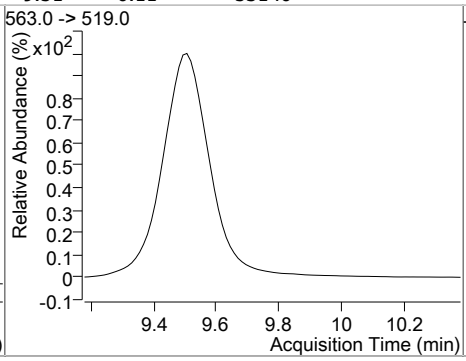


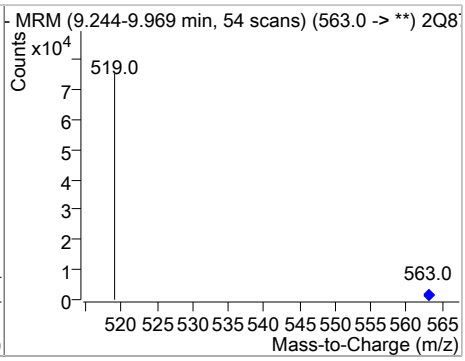
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

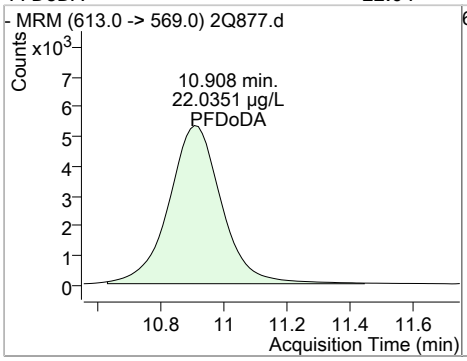
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	19.01	9.51	0.11	53140				

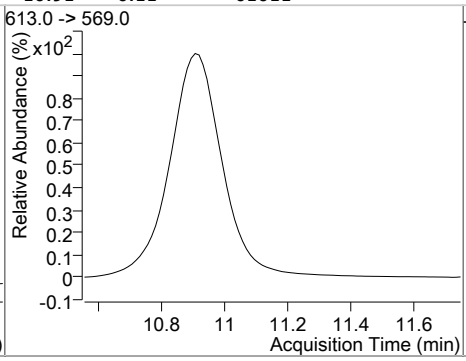


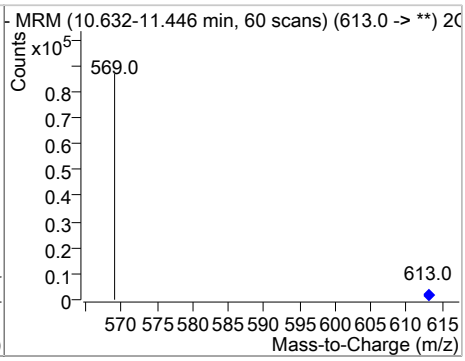




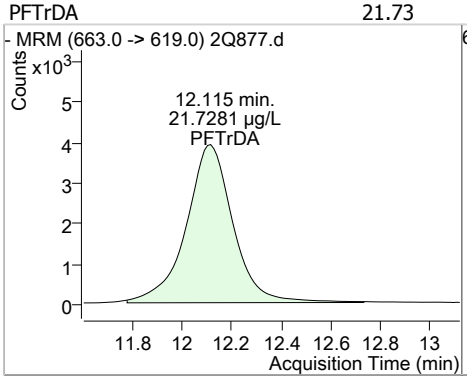
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	22.04	10.91	0.11	61611				

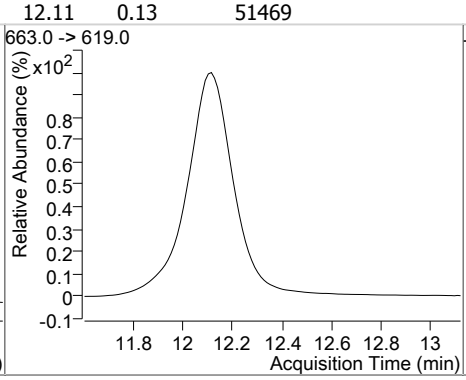


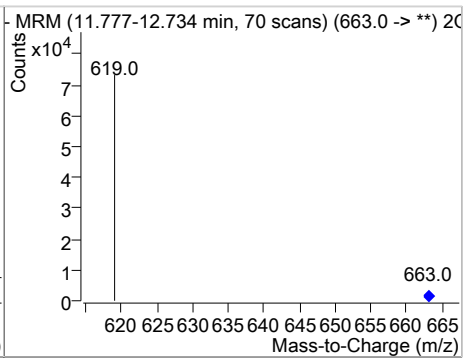




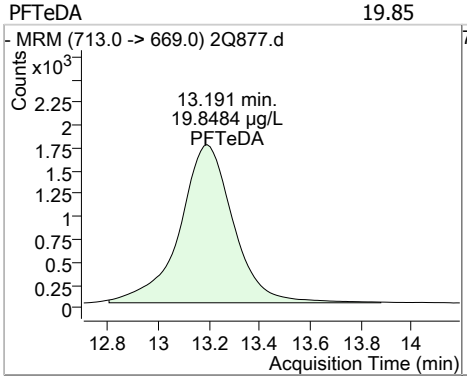
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	21.73	12.11	0.13	51469				

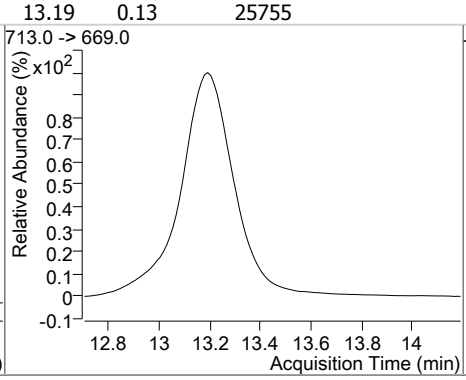


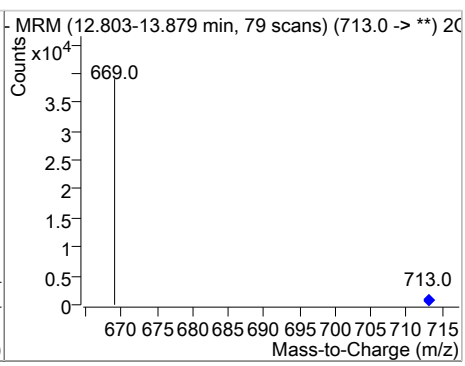




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	19.85	13.19	0.13	25755				







Manual Integration Approval Summary

Sample Number:	S2Q25-CC18	**Method:**	EPA 537
Lab FileID:	2Q877.D	**Analyst approved:**	05/01/17 09:23 Nancy Saunders
Injection Time:	04/28/17 20:31	**Supervisor approved:**	05/01/17 12:10 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.98	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.25	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
05/01/17 17:04

Perfluorinated Compounds by LC/MS/MS

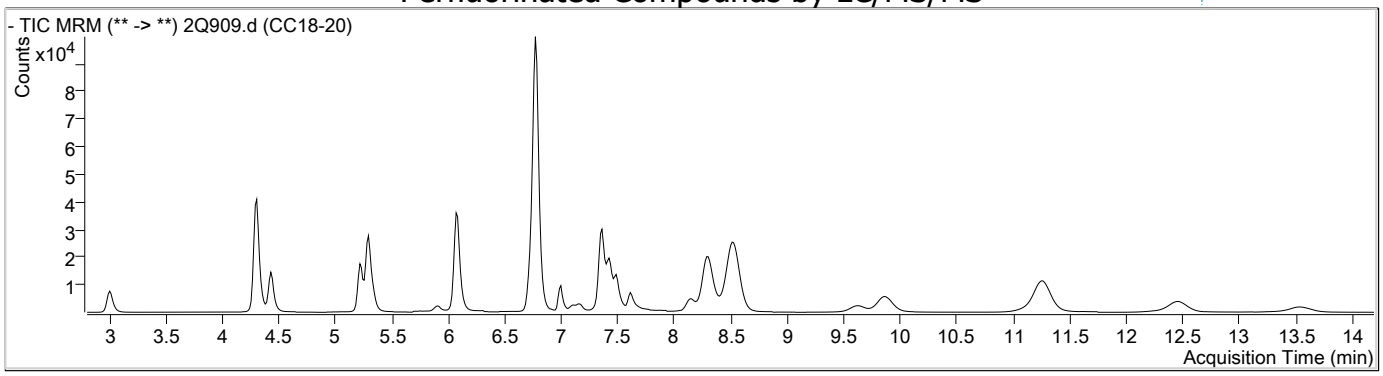
Data File : 2Q909.d
Operator : NANCYF
Acq. Method : dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time : 5/1/2017 9:57:18 AM
Sample Name : CC18-20
Vial : Vial 2
DA Method File : PFCLISTDW_0420_S2Q18.m
Batch Name : S2Q26.batch.bin
Last Calib Update : 4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	6.786	429.0 -> 409.0	128184	20.00	µg/L		0.000
13C2-PFDoDA	11.264	615.0 -> 570.0	73929	20.00	µg/L		0.000
13C2-PFOA	6.764	415.0 -> 370.0	65287	20.00	µg/L		0.000
13C3-PFPeA	4.310	266.0 -> 222.0	62797	20.00	µg/L		0.000
13C4-PFOS	7.364	503.0 -> 80.0	50837	20.00	µg/L		0.000
d3-MeFOSAA	7.487	573.0 -> 419.0	26936	20.00	µg/L		0.000
System Monitoring Compounds							
13C2-PFDA	8.292	515.0 -> 470.0	86209	18.87	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 94.4%			
13C2-PFHxA	5.297	315.0 -> 270.0	63428	18.39	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 92.0%			
d5-EtFOSAA	7.610	589.0 -> 419.0	12955	19.58	µg/L		0.000
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 97.9%			
Target Compounds							QValue
4:2FTS	5.220	327.0 -> 307.0	58825	18.17	µg/L		100
6:2FTS	6.787	427.0 -> 407.0	121642	19.62	µg/L		100
8:2FTS	8.515	527.0 -> 507.0	211753	20.63	µg/L		100
EtFOSAA	7.611	584.0 -> 419.0	11012	18.01	µg/L		100
FOSA	6.998	498.0 -> 78.0	26469	18.28	µg/L		100
MeFOSAA	7.489	570.0 -> 419.0	14588	19.40	µg/L		100
PFBA	3.002	213.0 -> 169.0	29236	17.02	µg/L		100
PFBS	4.428	299.0 -> 80.0	34067	16.79	µg/L		100
PFDA	8.296	513.0 -> 469.0	57379	17.77	µg/L		100
PFDoDA	11.258	613.0 -> 569.0	63606	19.70	µg/L		100
PFDS	9.625	599.0 -> 80.0	21873	16.30	µg/L		100
PFHpA	6.086	363.0 -> 319.0	83639	18.47	µg/L	#	93
PFHpS	6.721	449.0 -> 80.0	38369	17.82	µg/L		100
PFHxA	5.300	313.0 -> 269.0	29888	19.56	µg/L		85
PFHxS	6.068	399.0 -> 80.0	36453	17.17	µg/L	m	94
PFNA	7.431	463.0 -> 419.0	59348	20.35	µg/L		98
PFNS	8.136	549.0 -> 99.0	24839	19.35	µg/L		100
PFOA	6.765	413.0 -> 369.0	50905	18.76	µg/L		98
PFOS	7.365	499.0 -> 80.0	50821	17.32	µg/L	m	89
PFPeA	4.313	263.0 -> 219.0	86254	18.10	µg/L		100
PFPeS	5.330	349.0 -> 99.0	11156	18.66	µg/L		100
PFTeDA	13.529	713.0 -> 669.0	30653	20.33	µg/L		100
PFTrDA	12.453	663.0 -> 619.0	53186	19.47	µg/L		100
PFUnDA	9.869	563.0 -> 519.0	59474	18.33	µg/L		100

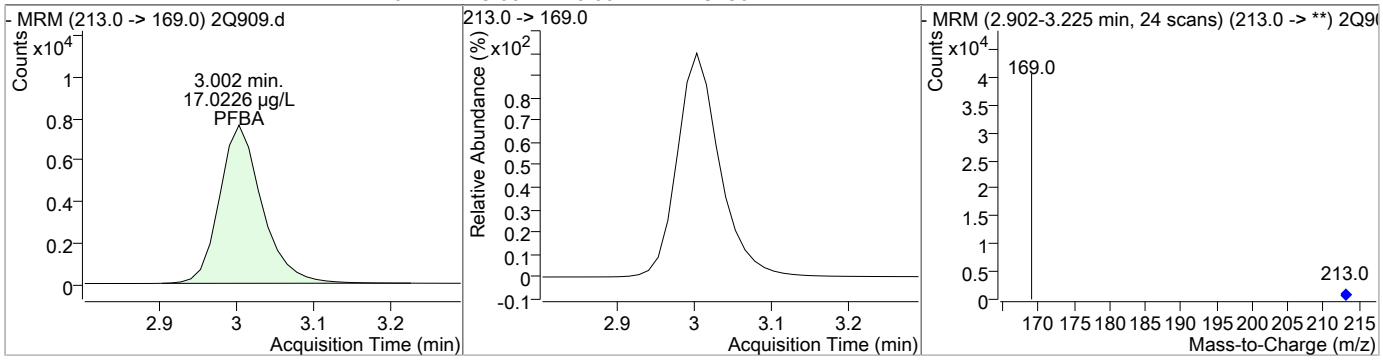
 # = Qualifier out of range, m = manually integrated, + = Area summed

Perfluorinated Compounds by LC/MS/MS

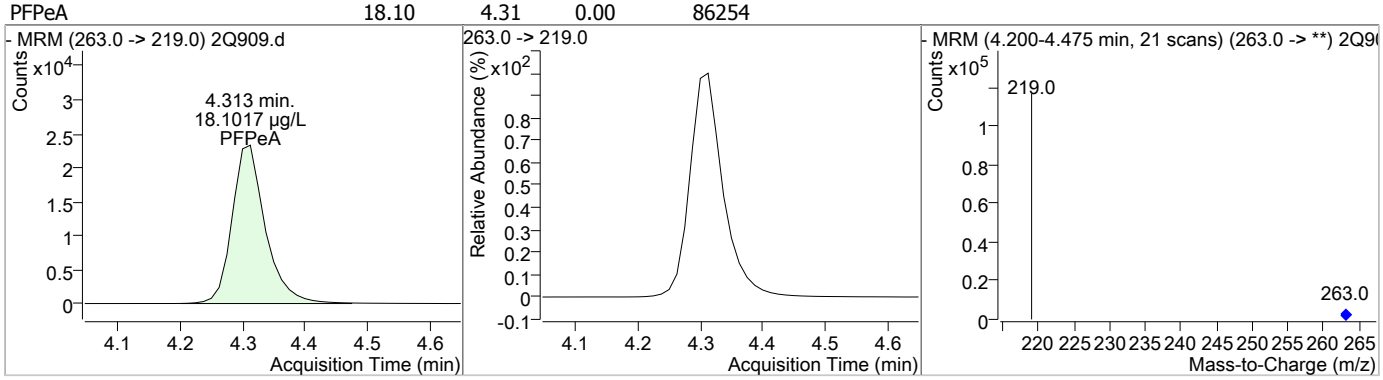
Agilent Technologies



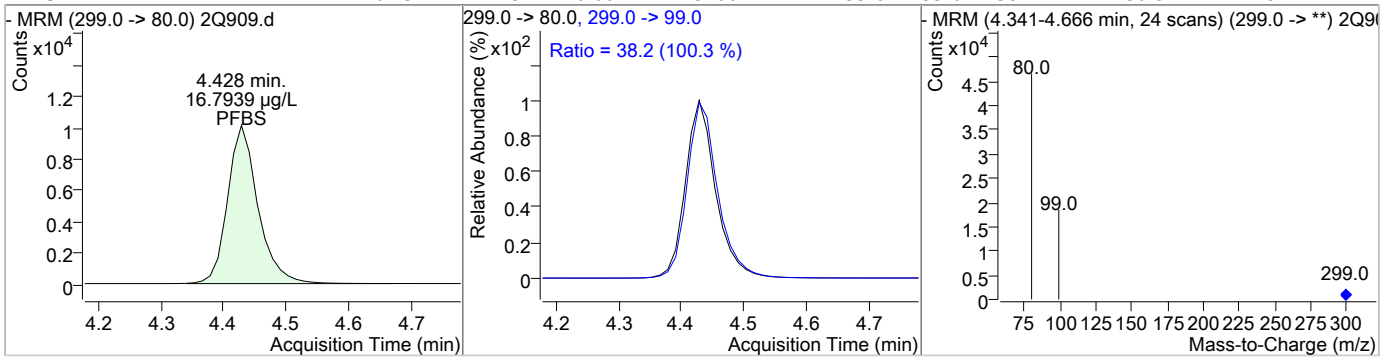
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	17.02	3.00	0.00	29236				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	18.10	4.31	0.00	86254				



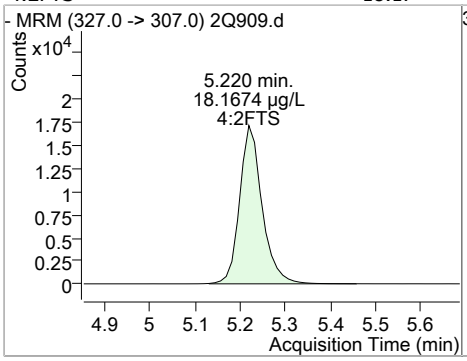
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	16.79	4.43	0.00	34067	299.0 -> 99.0	38.2	30.5	45.7

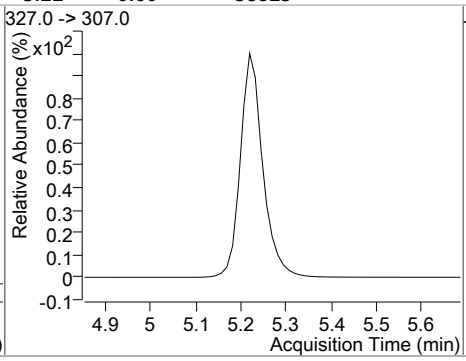


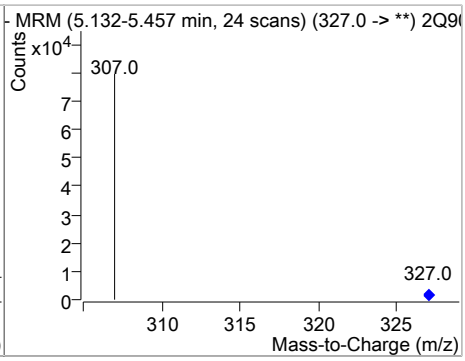
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

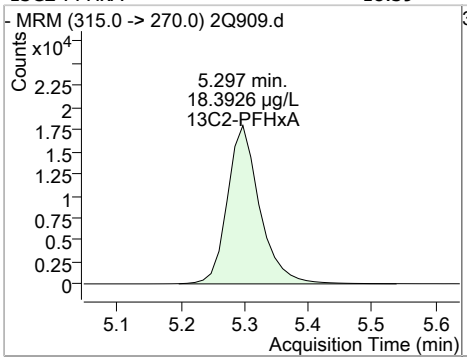
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	18.17	5.22	0.00	58825				

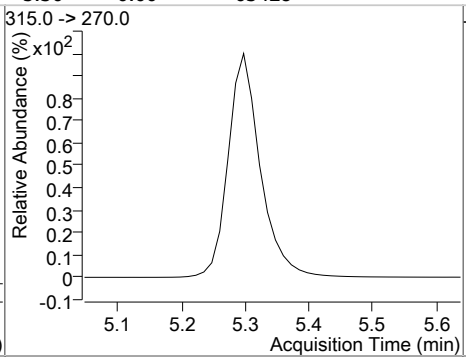


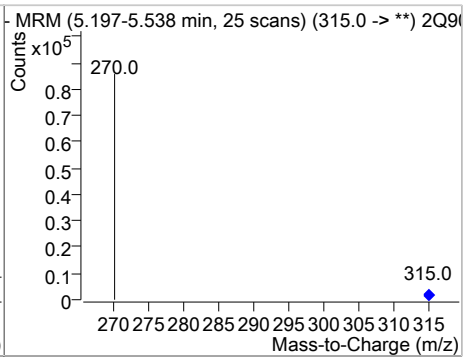




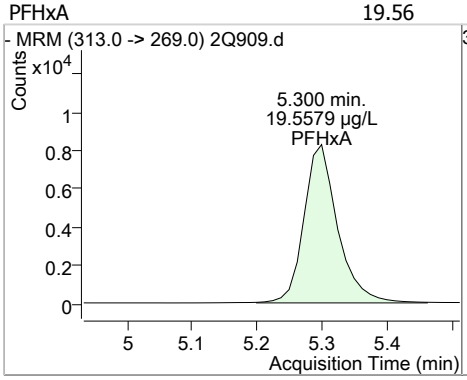
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	18.39	5.30	0.00	63428				

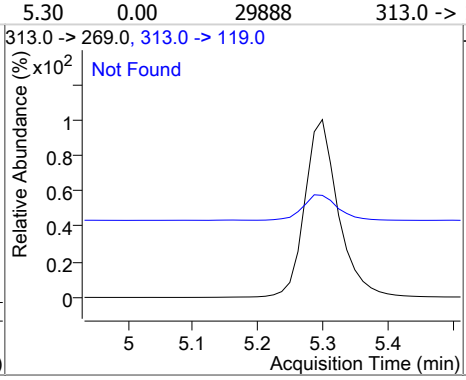


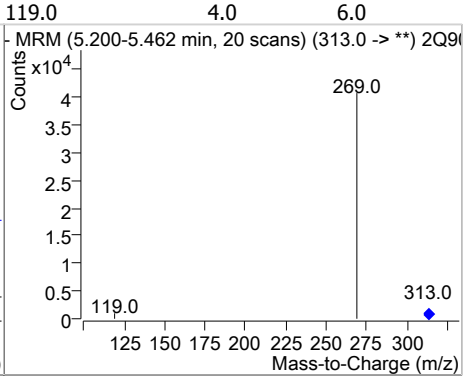




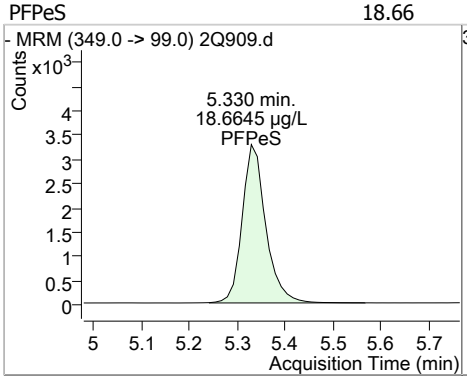
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.56	5.30	0.00	29888	313.0 -> 119.0		4.0	6.0

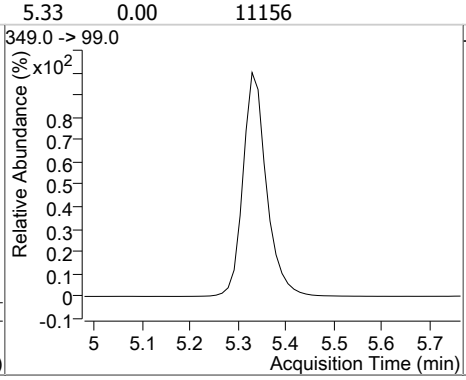


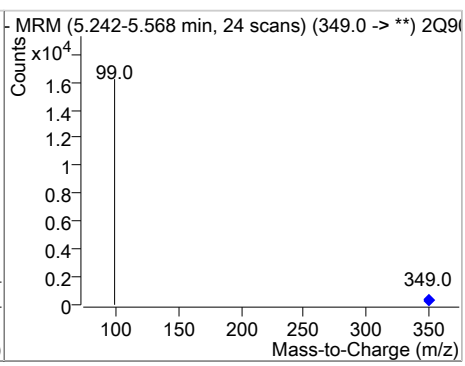




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	18.66	5.33	0.00	11156				



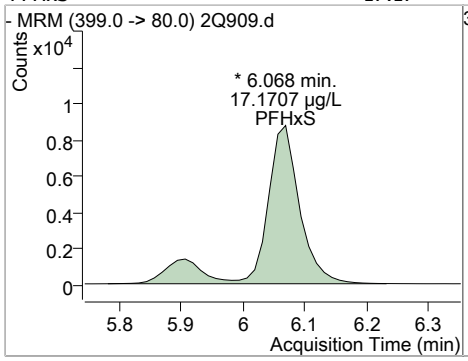


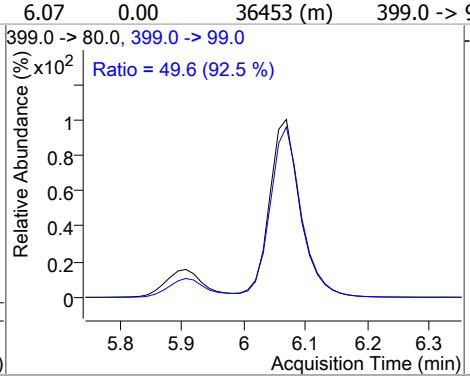


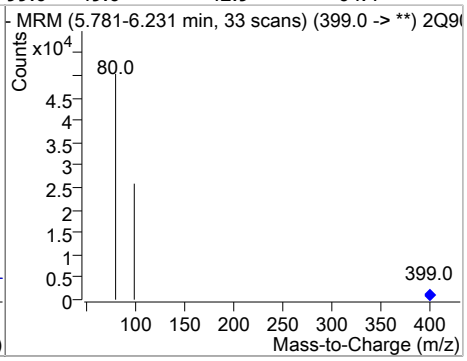
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

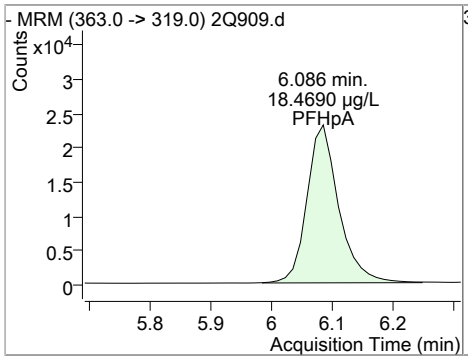
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	17.17	6.07	0.00	36453 (m)	399.0 -> 99.0	49.6	42.9	64.4

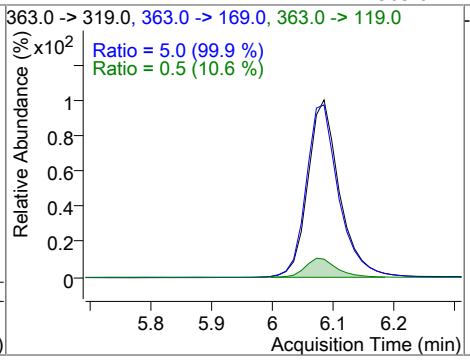


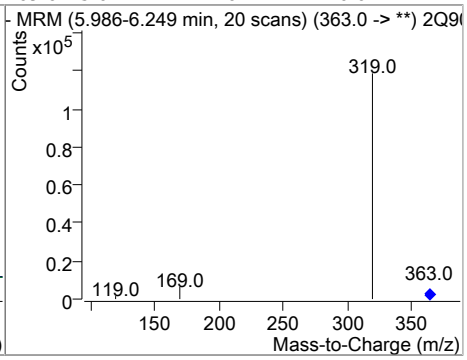




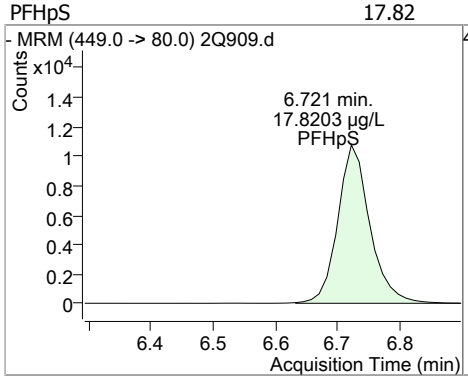
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	18.47	6.09	0.00	83639	363.0 -> 119.0	0.5	4.0	6.0
					363.0 -> 169.0	5.0	4.0	6.0

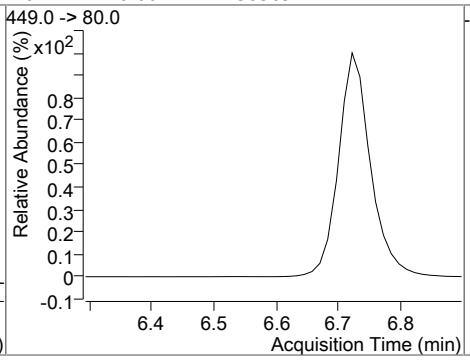


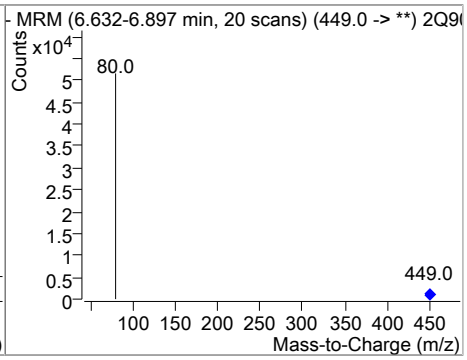




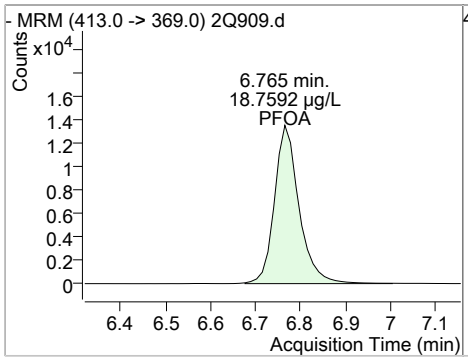
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	17.82	6.72	0.00	38369				

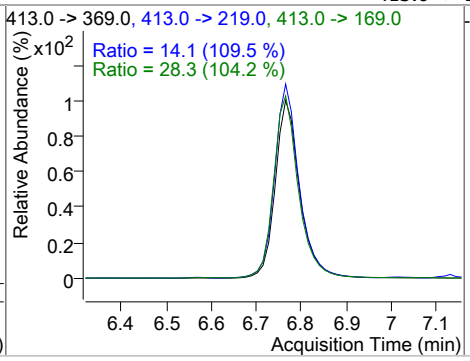


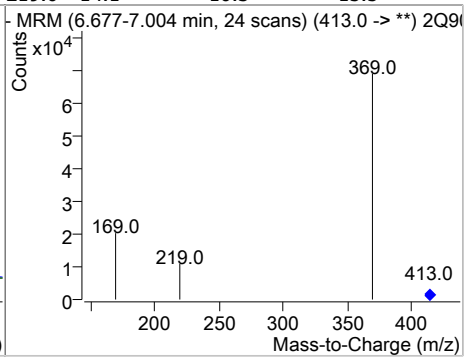




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	18.76	6.77	0.00	50905	413.0 -> 169.0	28.3	21.8	32.6
					413.0 -> 219.0	14.1	10.3	15.5







Perfluorinated Compounds by LC/MS/MS

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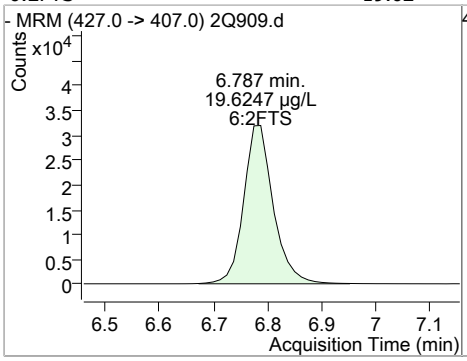
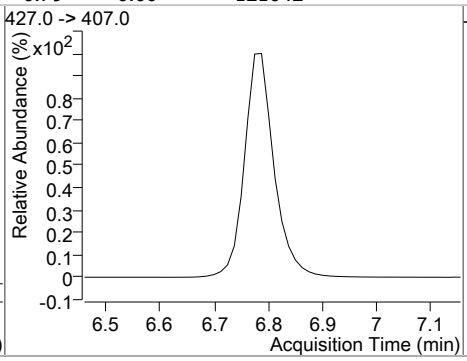
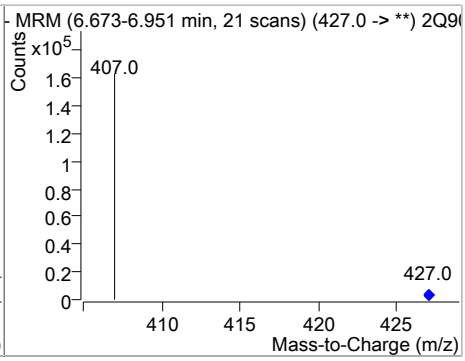
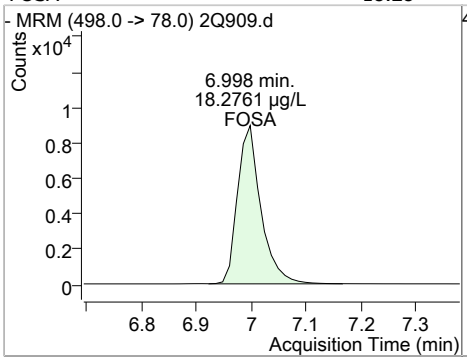
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	19.62	6.79	0.00	121642				

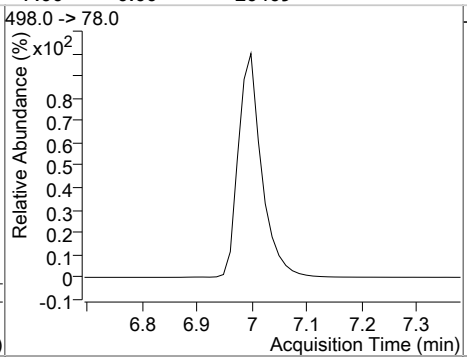


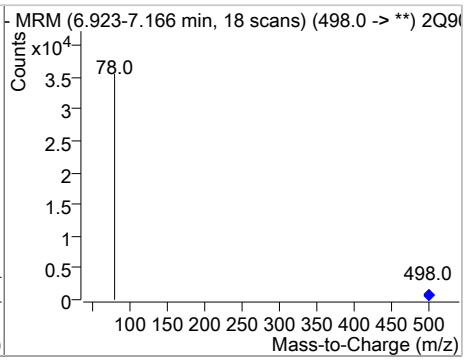




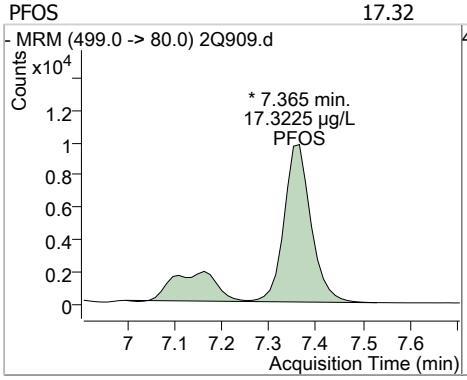
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	18.28	7.00	0.00	26469				

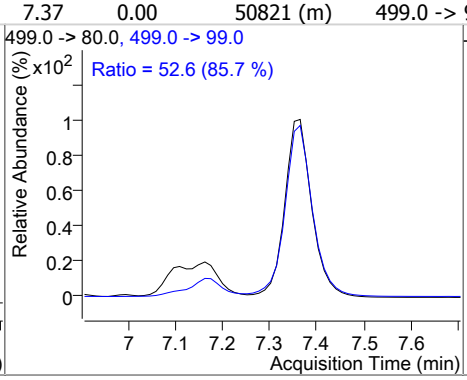


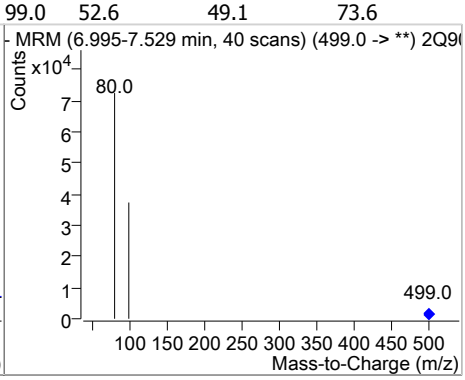




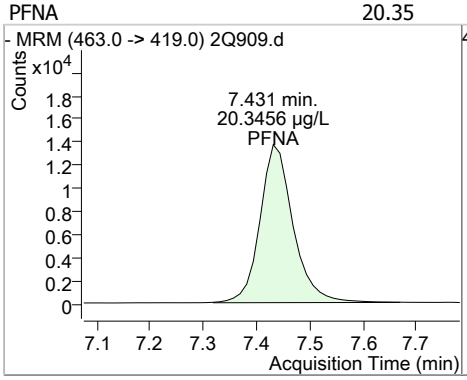
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	17.32	7.37	0.00	50821 (m)	499.0 -> 99.0	52.6	49.1	73.6

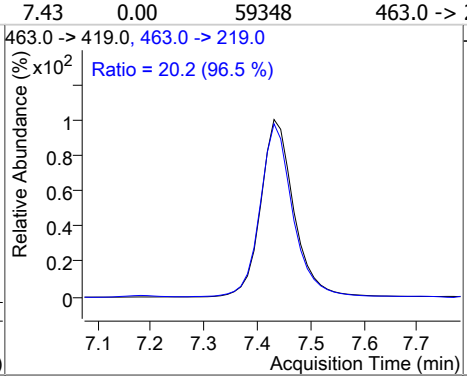


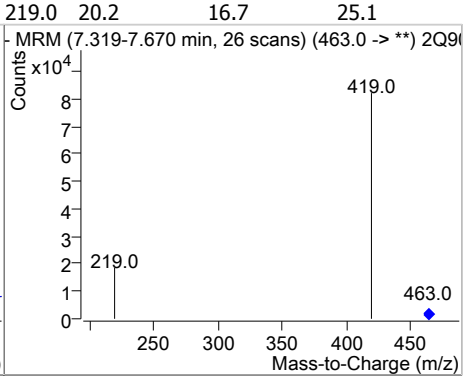




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	20.35	7.43	0.00	59348	463.0 -> 219.0	20.2	16.7	25.1







Perfluorinated Compounds by LC/MS/MS

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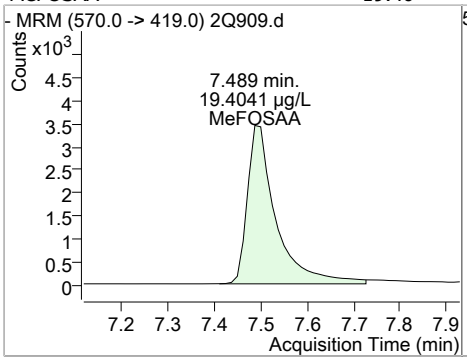
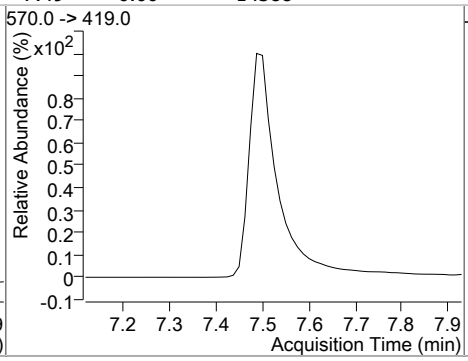
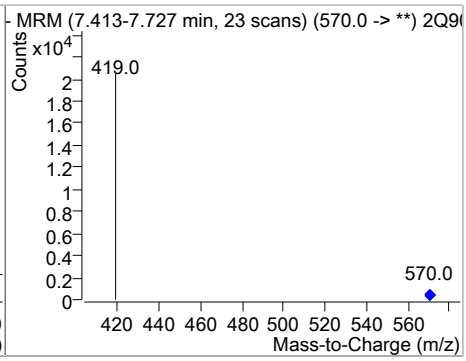
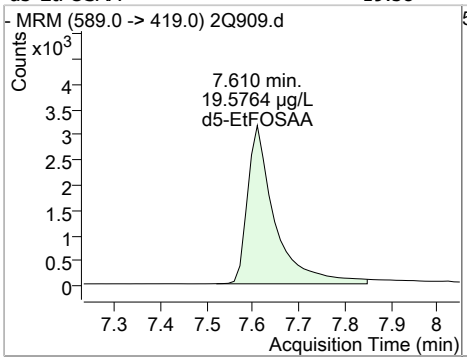
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	19.40	7.49	0.00	14588				

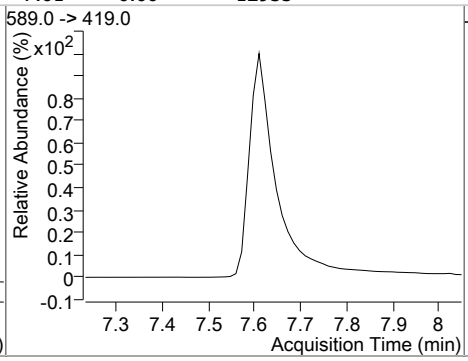


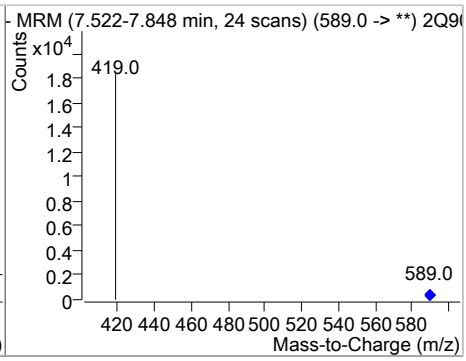




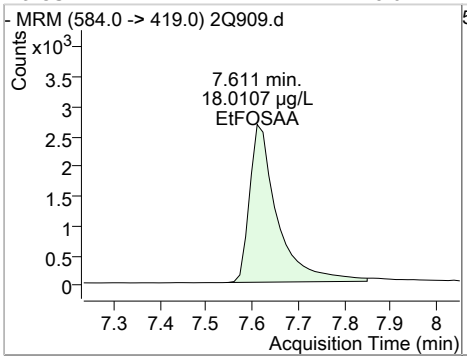
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	19.58	7.61	0.00	12955				

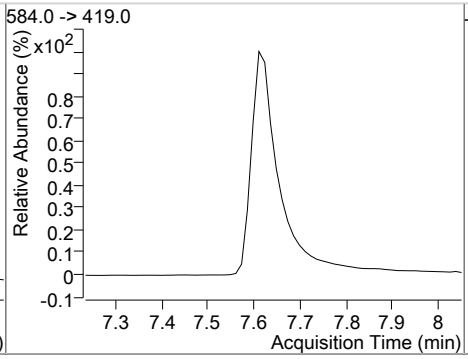


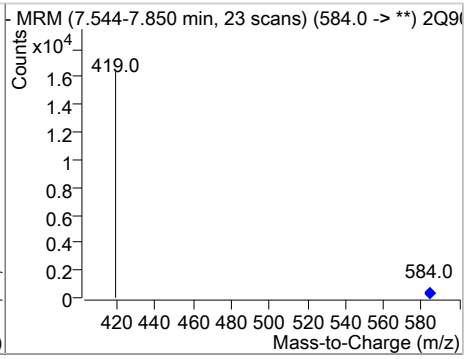




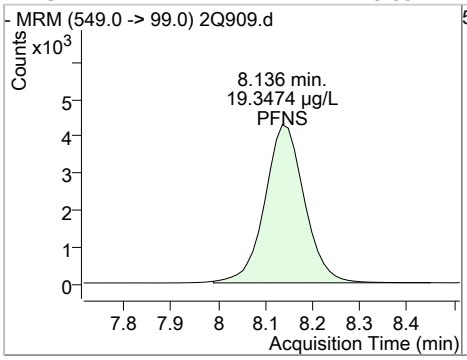
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	18.01	7.61	0.00	11012				

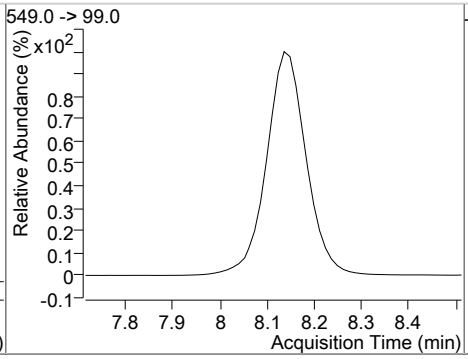


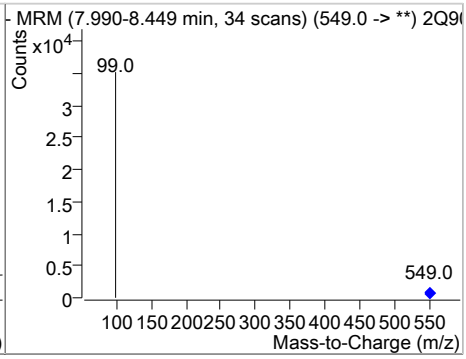




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	19.35	8.14	0.00	24839				







Perfluorinated Compounds by LC/MS/MS

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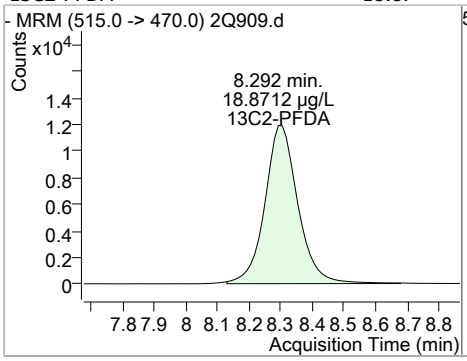
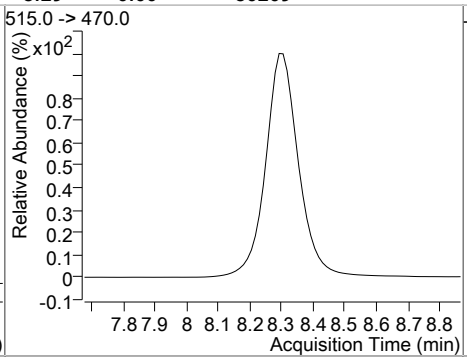
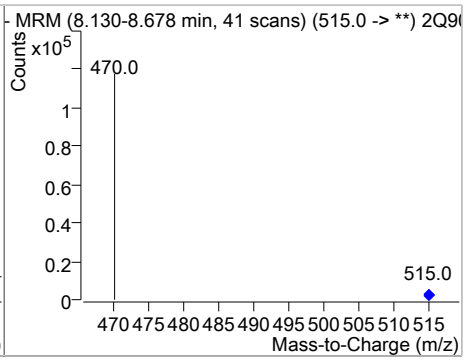
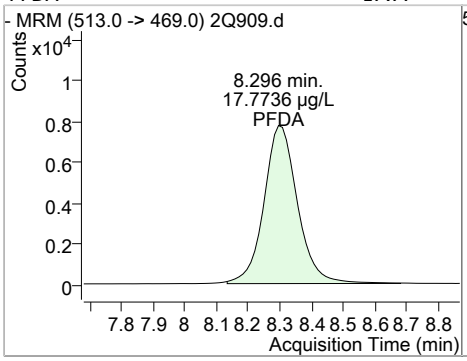
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	18.87	8.29	0.00	86209				

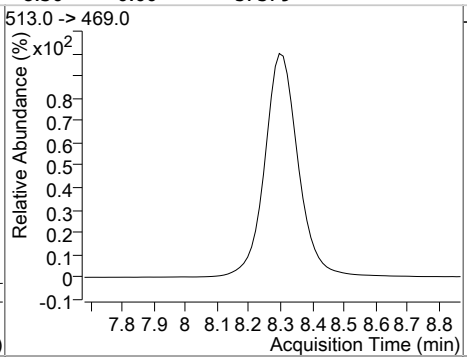


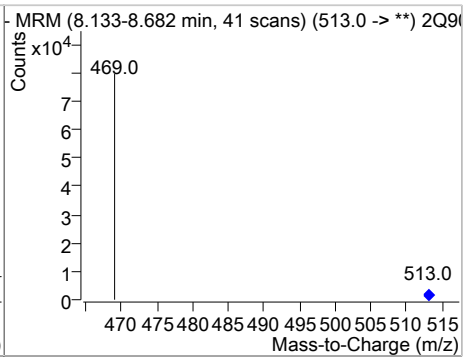




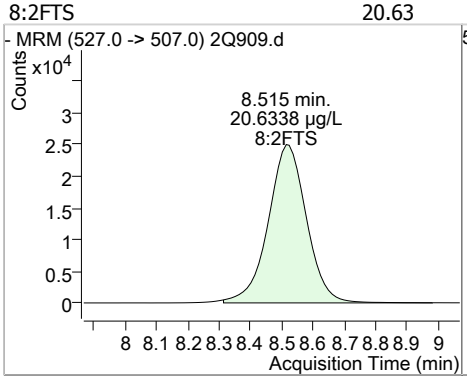
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	17.77	8.30	0.00	57379				

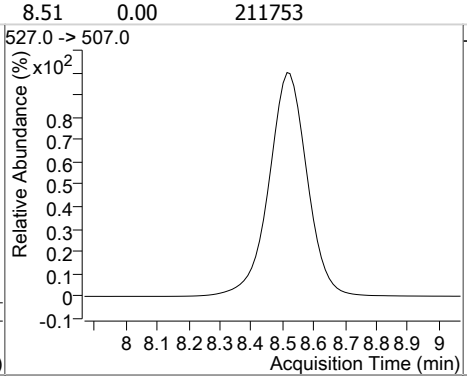


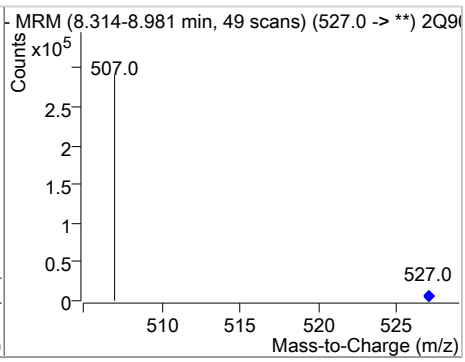




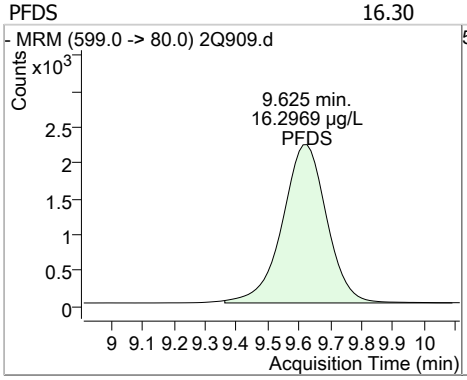
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	20.63	8.51	0.00	211753				

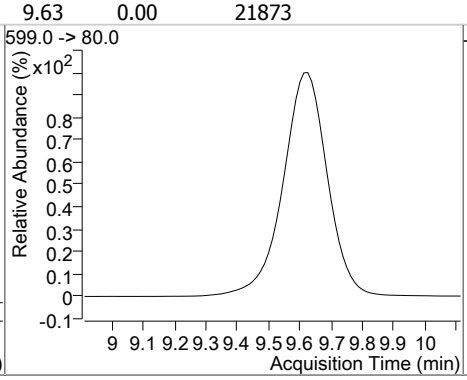


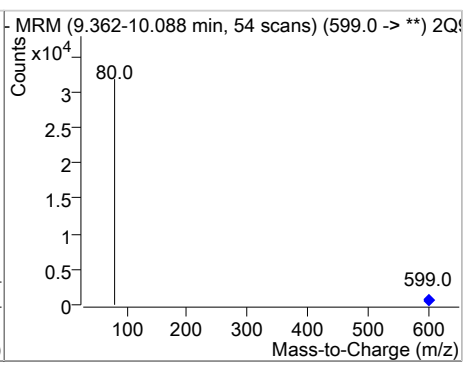




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	16.30	9.63	0.00	21873				



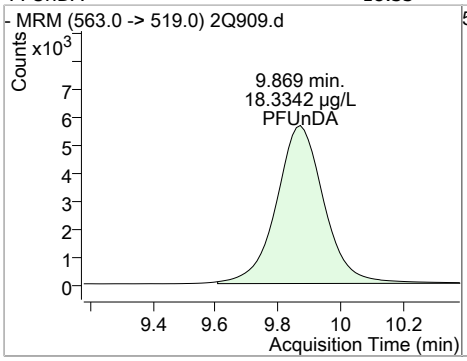


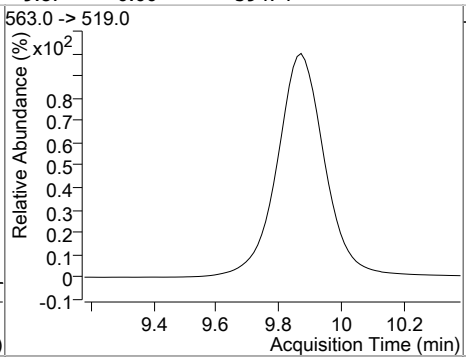


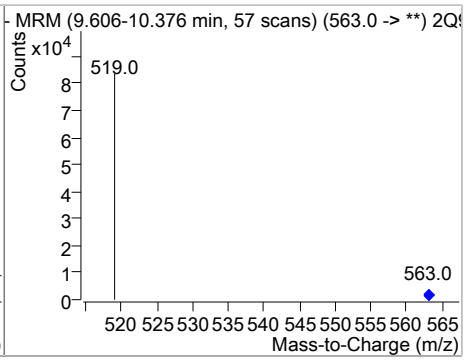
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

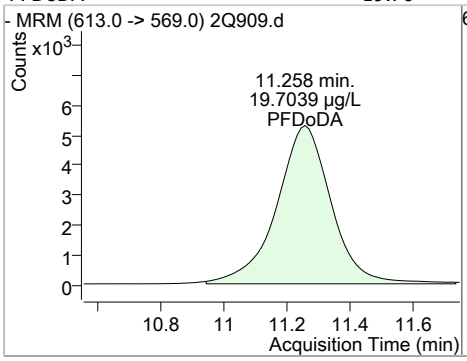
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	18.33	9.87	0.00	59474				

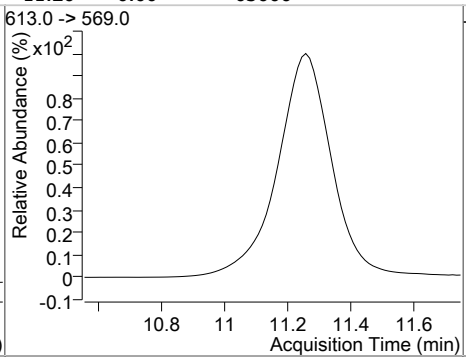


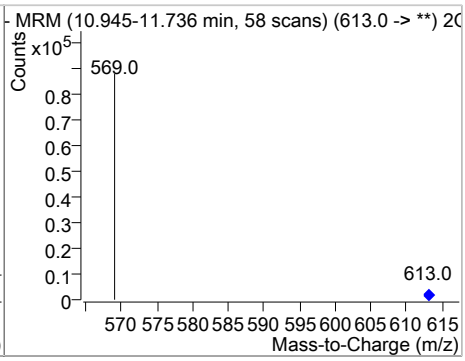




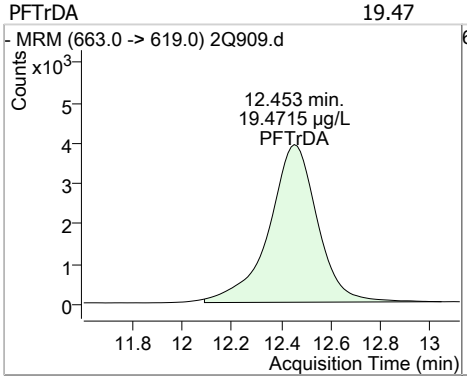
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	19.70	11.26	0.00	63606				

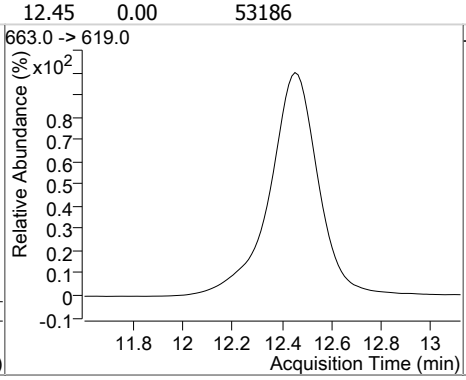


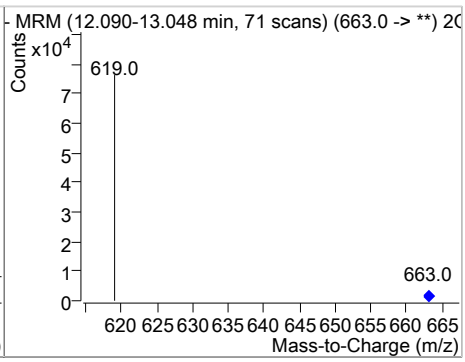




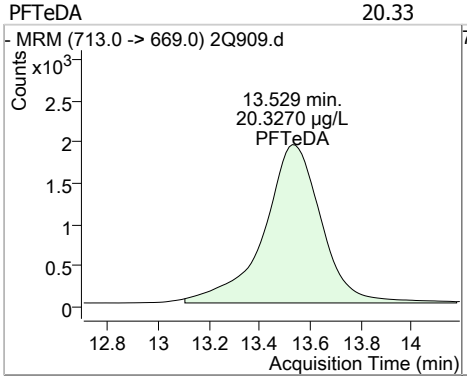
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	19.47	12.45	0.00	53186				

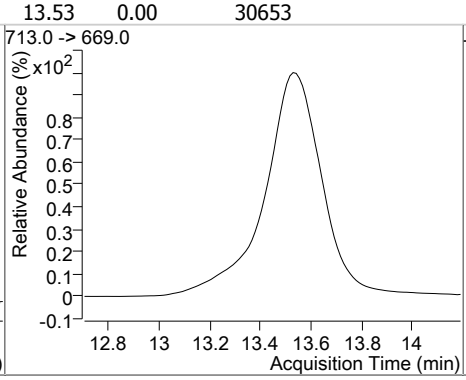


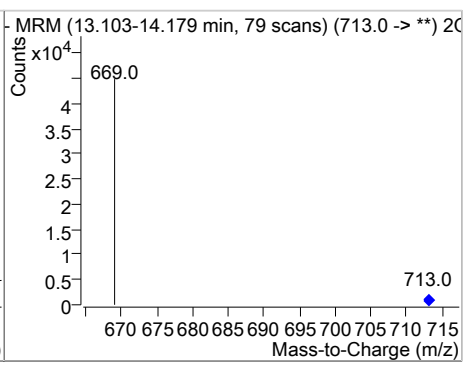




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	20.33	13.53	0.00	30653				







Manual Integration Approval Summary

Sample Number:	S2Q26-CC18	**Method:**	EPA 537
Lab FileID:	2Q909.D	**Analyst approved:**	05/01/17 16:00 Nancy Saunders
Injection Time:	05/01/17 09:57	**Supervisor approved:**	05/01/17 17:04 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.07	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.37	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
05/01/17 17:04

Perfluorinated Compounds by LC/MS/MS

Data File : 2Q918.d
Operator : NANCYF
Acq. Method : dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time : 5/1/2017 1:24:20 PM
Sample Name : CC18-2
Vial : Vial 20
DA Method File : PFCLISTDW_0420_S2Q18.m
Batch Name : S2Q26.batch.bin
Last Calib Update : 4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	6.735	429.0 -> 409.0	123192	20.00	µg/L		-0.050
13C2-PFDoDA	11.101	615.0 -> 570.0	73725	20.00	µg/L		-0.163
13C2-PFOA	6.726	415.0 -> 370.0	67565	20.00	µg/L		-0.038
13C3-PFPeA	4.260	266.0 -> 222.0	63600	20.00	µg/L		-0.050
13C4-PFOS	7.314	503.0 -> 80.0	49309	20.00	µg/L		-0.050
d3-MeFOSAA	7.475	573.0 -> 419.0	28359	20.00	µg/L		-0.013
System Monitoring Compounds							
13C2-PFDA	8.192	515.0 -> 470.0	8754	1.85	µg/L		-0.100
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 9.3%			
13C2-PFHxA	5.247	315.0 -> 270.0	6428	1.80	µg/L		-0.050
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 9.0%			
d5-EtFOSAA	7.597	589.0 -> 419.0	4592	7.00	µg/L		-0.013
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 35.0%			
Target Compounds							QValue
4:2FTS	5.182	327.0 -> 307.0	6125	1.97	µg/L		100
6:2FTS	6.737	427.0 -> 407.0	13022	2.19	µg/L		100
8:2FTS	8.377	527.0 -> 507.0	21170	2.15	µg/L		100
EtFOSAA	7.598	584.0 -> 419.0	1920	3.12	µg/L		100
FOSA	6.973	498.0 -> 78.0	2881	1.89	µg/L		100
MeFOSAA	7.476	570.0 -> 419.0	2574	3.51	µg/L		100
PFBA	2.965	213.0 -> 169.0	3008	1.69	µg/L		100
PFBS	4.378	299.0 -> 80.0	3348	1.70	µg/L		100
PFDA	8.195	513.0 -> 469.0	6360	1.90	µg/L		100
PFDoDA	11.095	613.0 -> 569.0	6481	2.10	µg/L		100
PFDS	9.475	599.0 -> 80.0	2141	1.71	µg/L		100
PFHpA	6.036	363.0 -> 319.0	9153	2.00	µg/L	#	93
PFHpS	6.684	449.0 -> 80.0	3834	1.84	µg/L		100
PFHxA	5.250	313.0 -> 269.0	3129	2.06	µg/L	#	85
PFHxS	6.018	399.0 -> 80.0	3639	1.77	µg/L	m	92
PFNA	7.381	463.0 -> 419.0	6164	2.04	µg/L		99
PFNS	8.061	549.0 -> 99.0	2390	1.92	µg/L		100
PFOA	6.728	413.0 -> 369.0	5531	1.97	µg/L		96
PFOS	7.315	499.0 -> 80.0	5079	1.78	µg/L	m	89
PFPeA	4.263	263.0 -> 219.0	9038	1.87	µg/L		100
PFPeS	5.292	349.0 -> 99.0	1130	1.87	µg/L		100
PFTeDA	13.379	713.0 -> 669.0	2965	2.07	µg/L		100
PFTrDA	12.290	663.0 -> 619.0	5379	2.08	µg/L		100
PFUnDA	9.719	563.0 -> 519.0	6043	1.87	µg/L		100

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

Perfluorinated Compounds by LC/MS/MS

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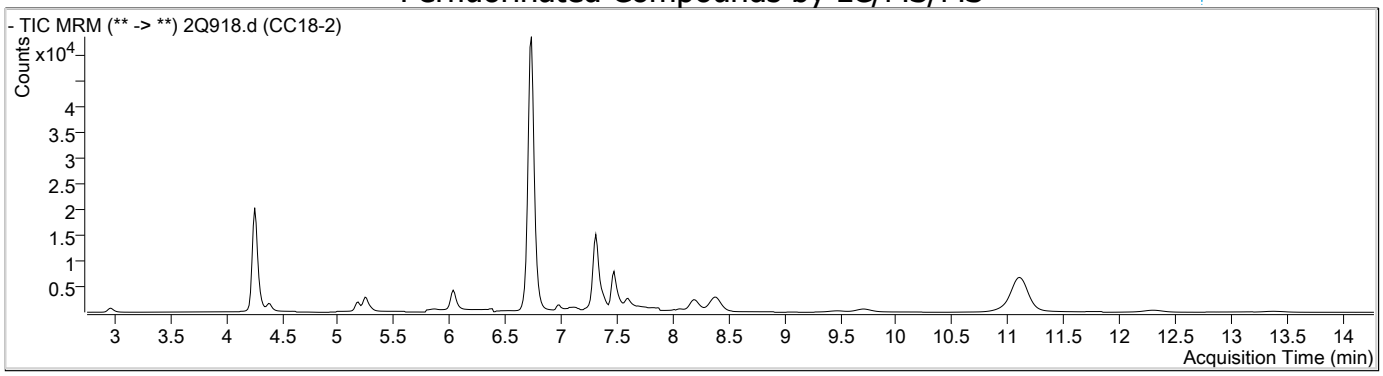
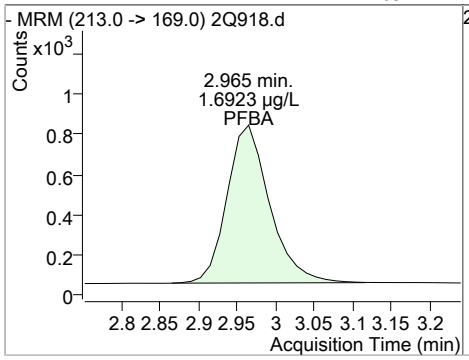
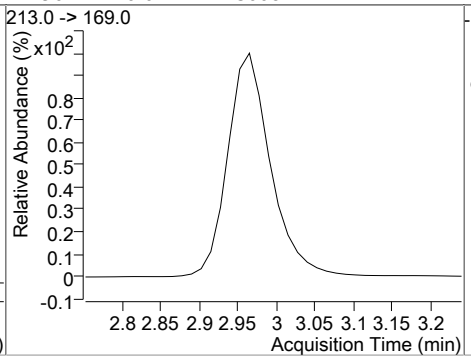
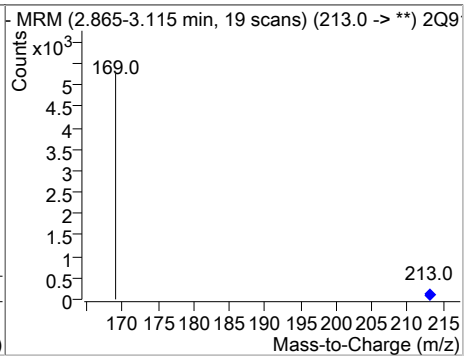


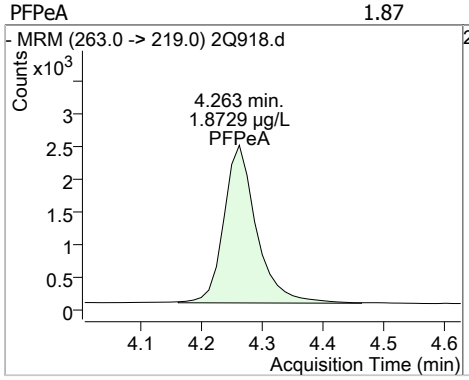
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	1.69	2.96	-0.04	3008				

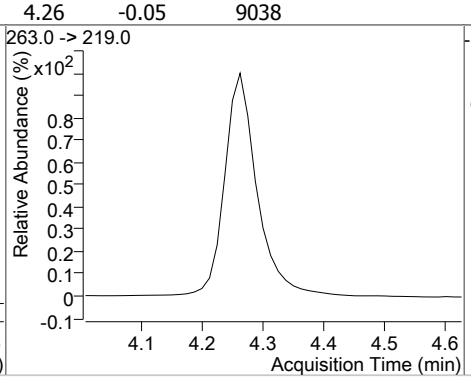


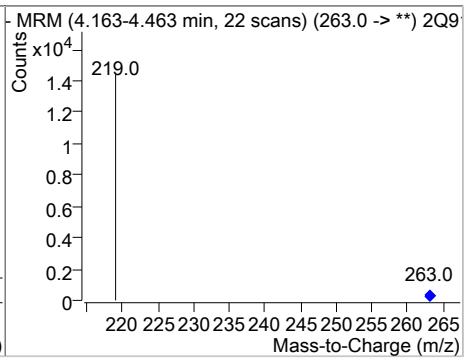




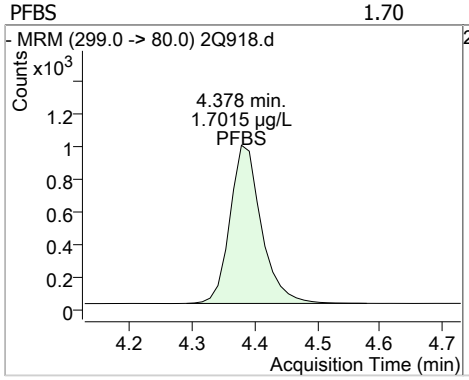
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	1.87	4.26	-0.05	9038				

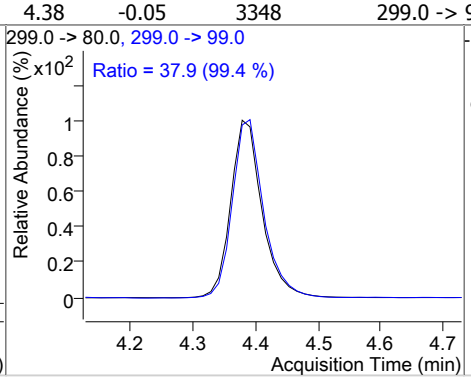


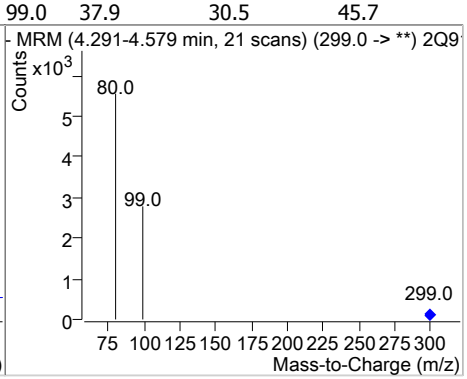




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	1.70	4.38	-0.05	3348	299.0 -> 99.0	37.9	30.5	45.7







Perfluorinated Compounds by LC/MS/MS

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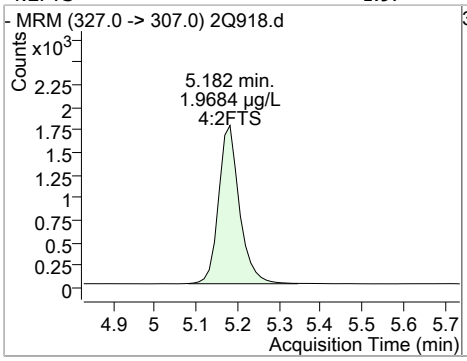
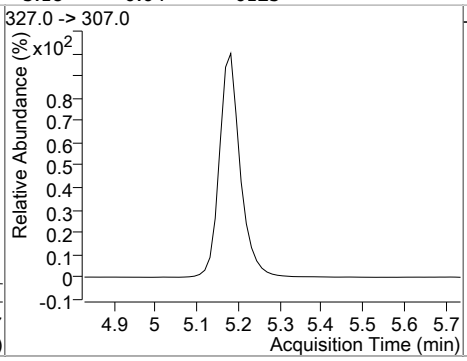
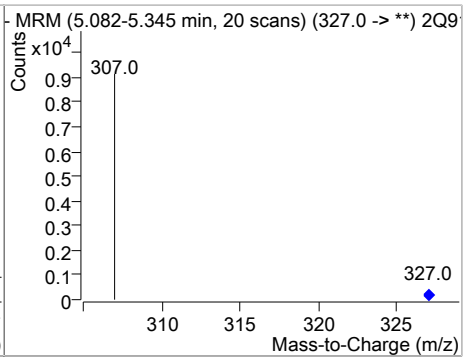
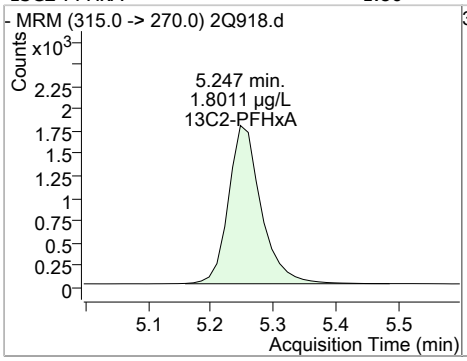
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	1.97	5.18	-0.04	6125				

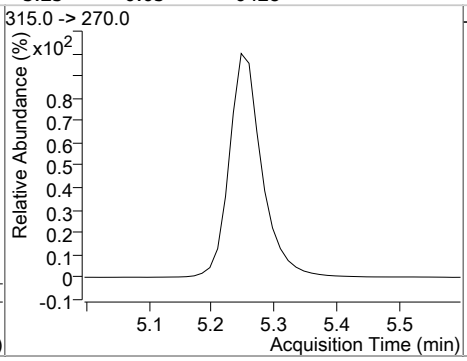


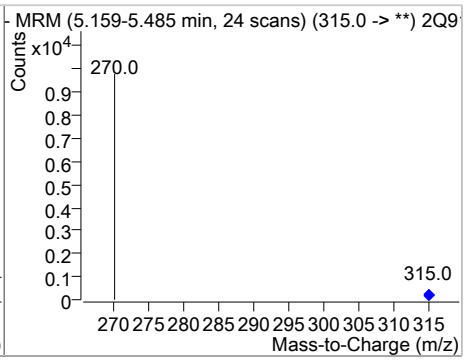




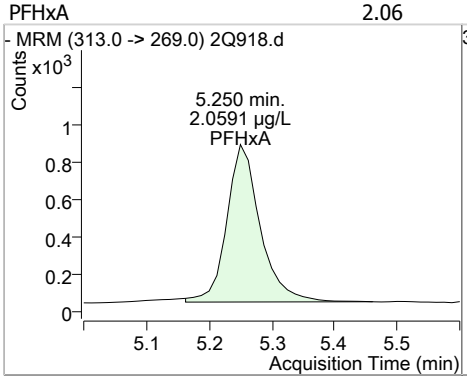
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	1.80	5.25	-0.05	6428				

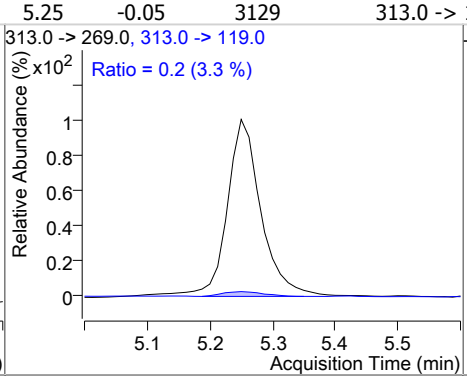


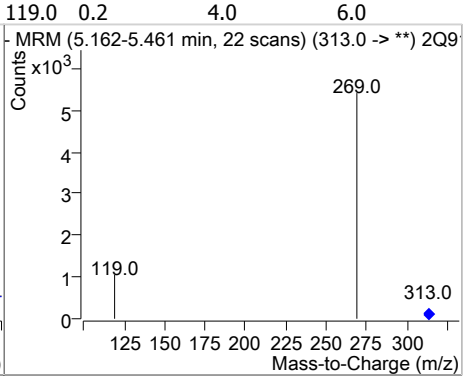




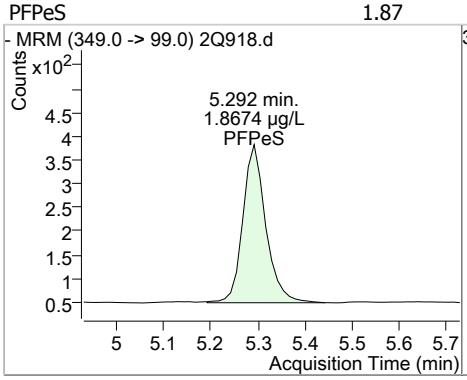
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	2.06	5.25	-0.05	3129	313.0 -> 119.0	0.2	4.0	6.0

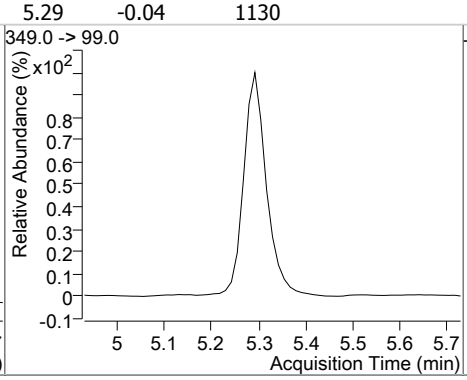


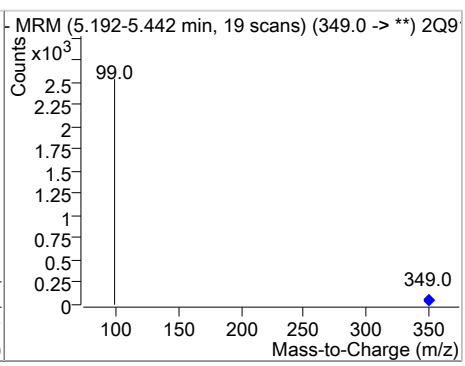




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	1.87	5.29	-0.04	1130				







Perfluorinated Compounds by LC/MS/MS

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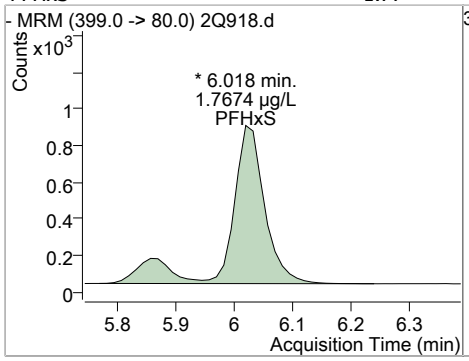
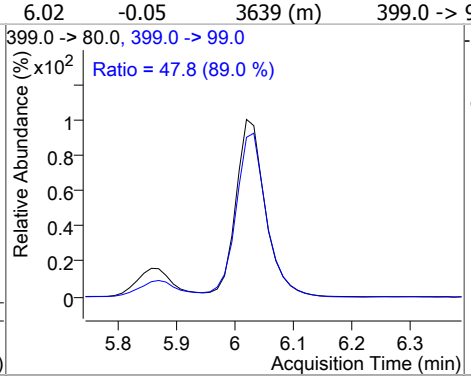
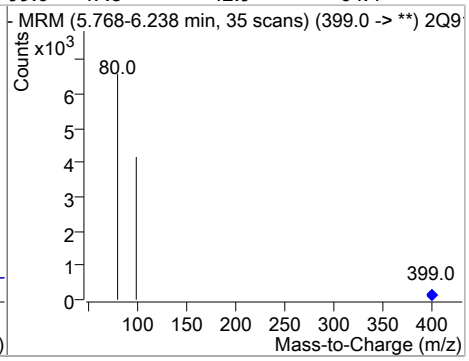
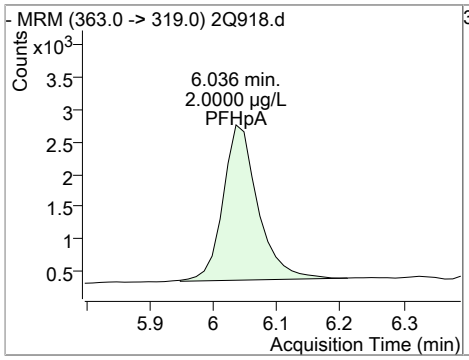
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	1.77	6.02	-0.05	3639 (m)	399.0 -> 99.0	47.8	42.9	64.4

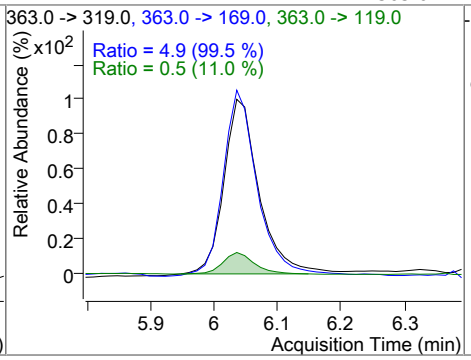


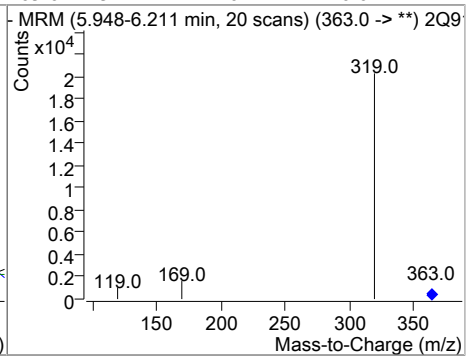




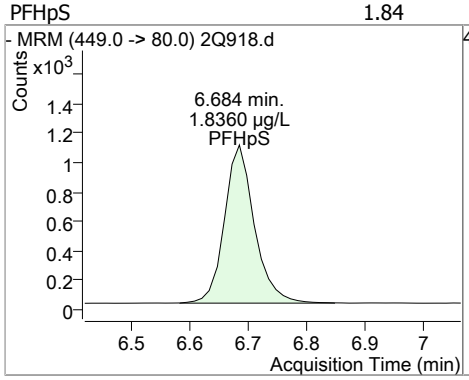
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	2.00	6.04	-0.05	9153	363.0 -> 119.0	0.5	4.0	6.0
					363.0 -> 169.0	4.9	4.0	6.0

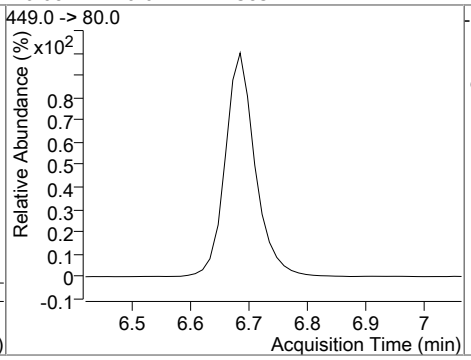


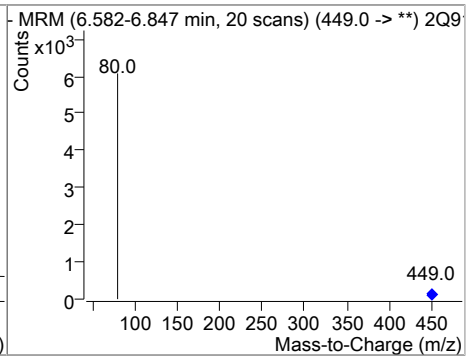




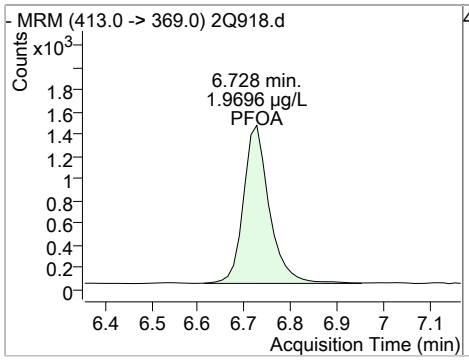
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	1.84	6.68	-0.04	3834				

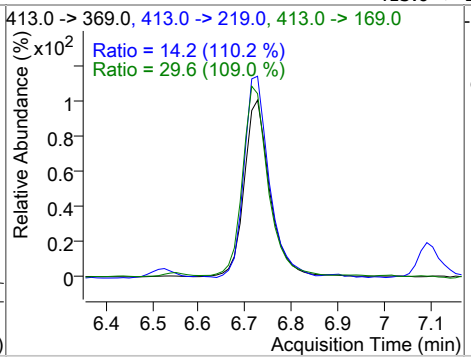


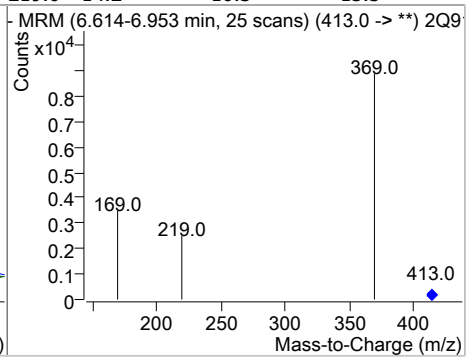




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	1.97	6.73	-0.04	5531	413.0 -> 169.0	29.6	21.8	32.6
					413.0 -> 219.0	14.2	10.3	15.5







Perfluorinated Compounds by LC/MS/MS

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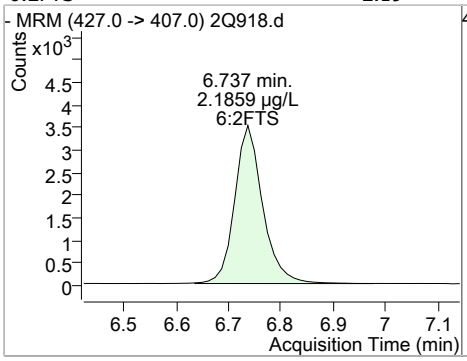
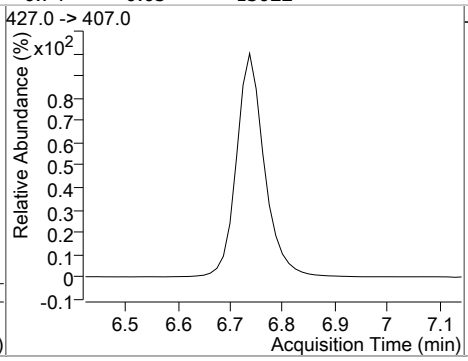
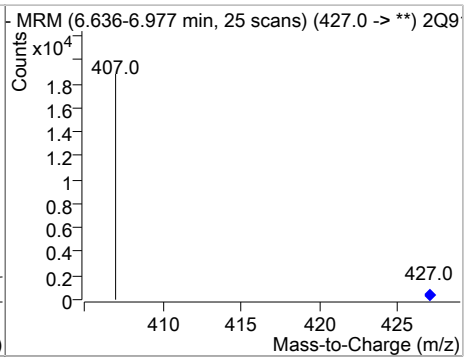
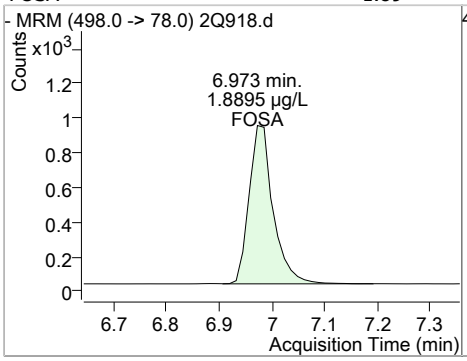
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	2.19	6.74	-0.05	13022				

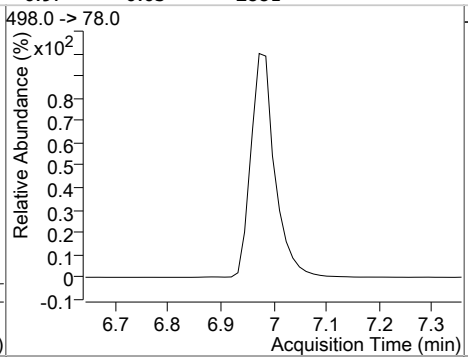


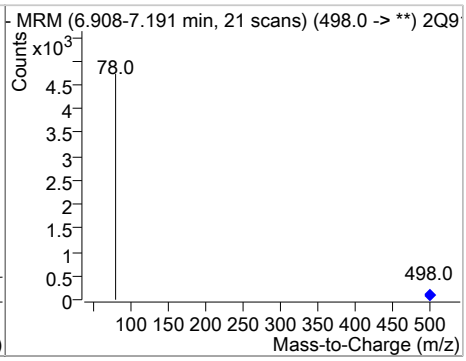




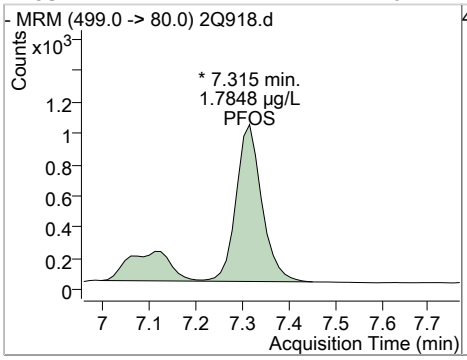
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	1.89	6.97	-0.03	2881				

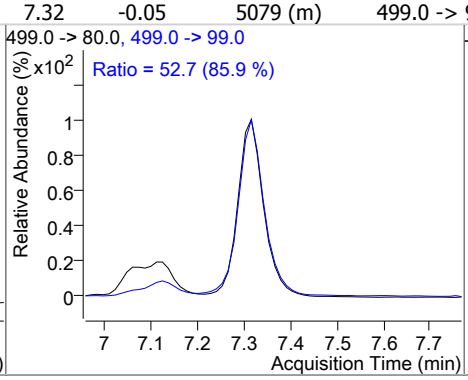


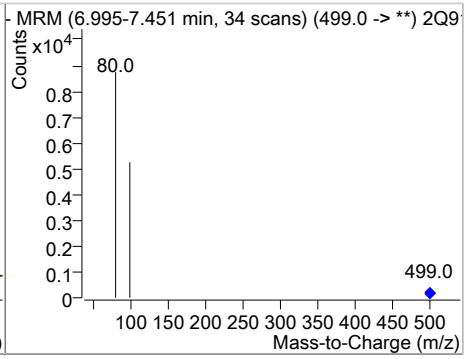




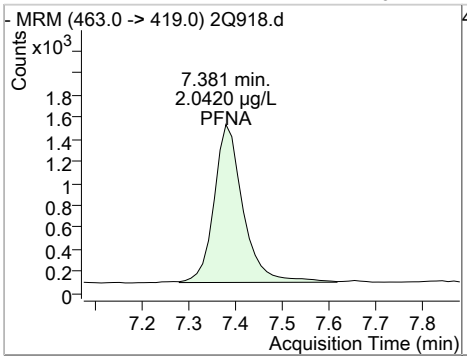
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	1.78	7.32	-0.05	5079 (m)	499.0 -> 99.0	52.7	49.1	73.6

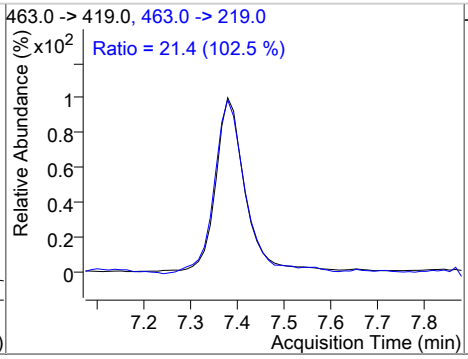


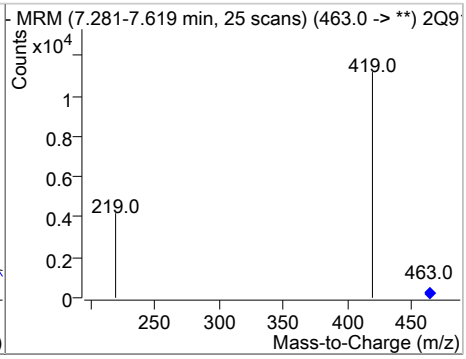




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	2.04	7.38	-0.05	6164	463.0 -> 219.0	21.4	16.7	25.1



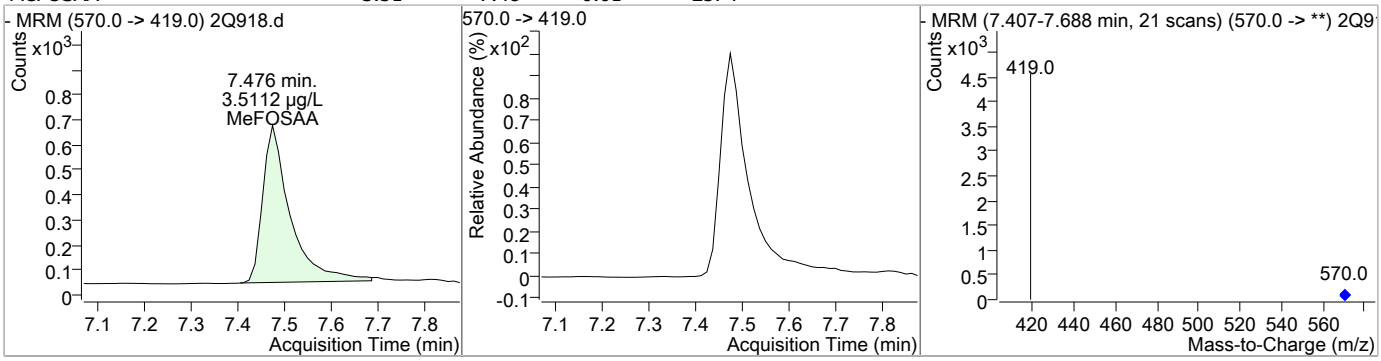




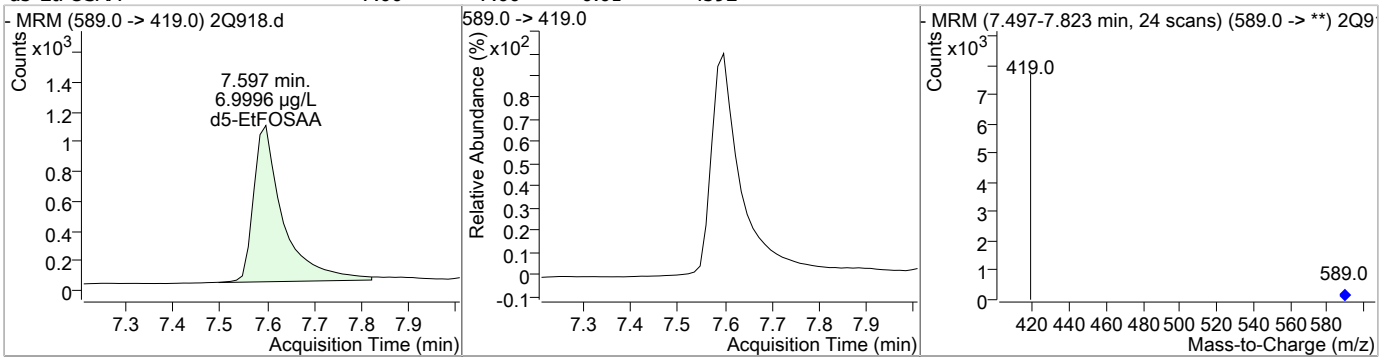
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

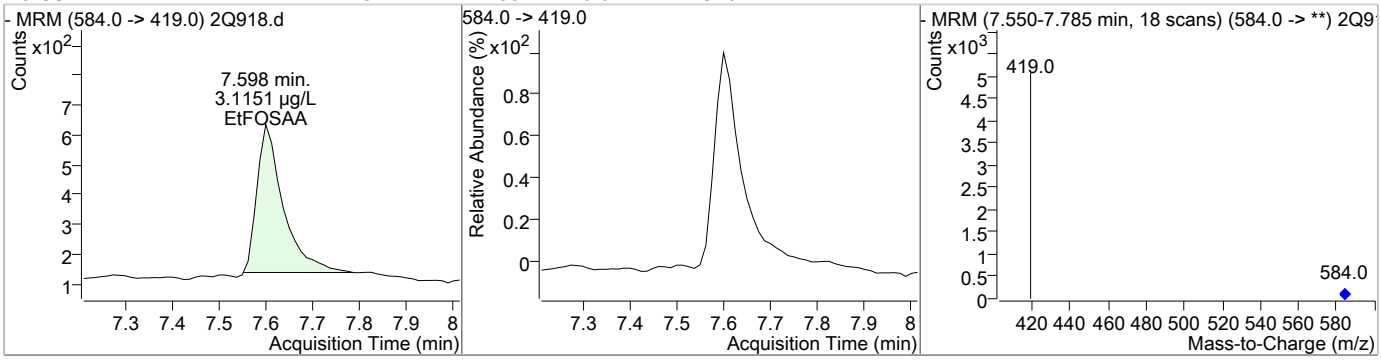
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	3.51	7.48	-0.01	2574				



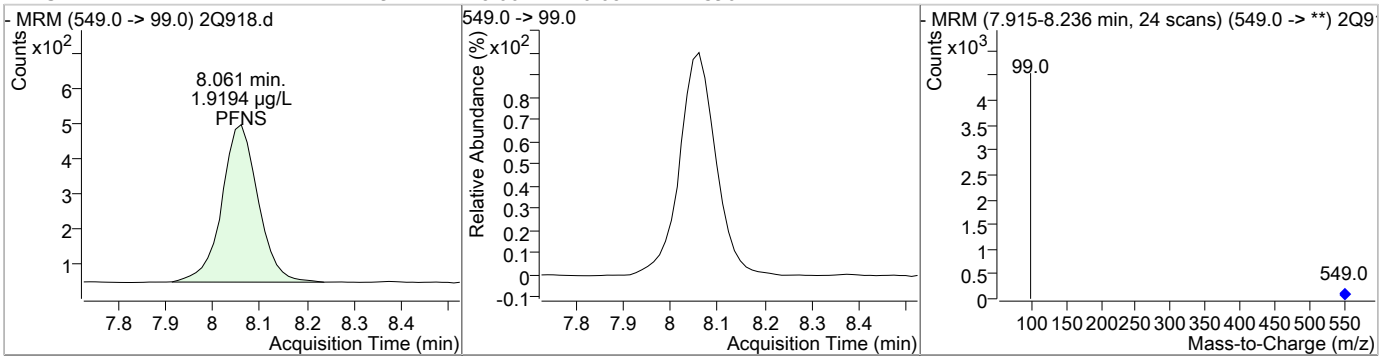
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	7.00	7.60	-0.01	4592				



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	3.12	7.60	-0.01	1920				



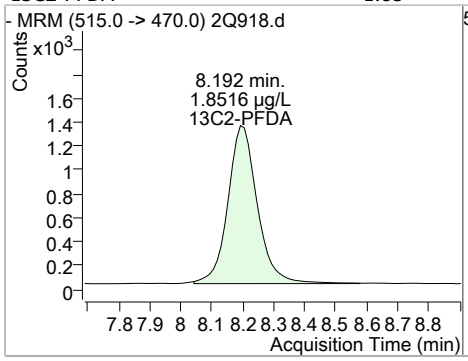
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	1.92	8.06	-0.08	2390				

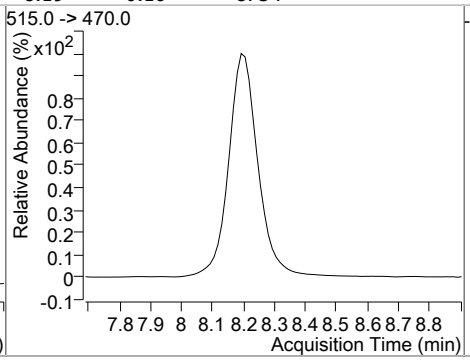


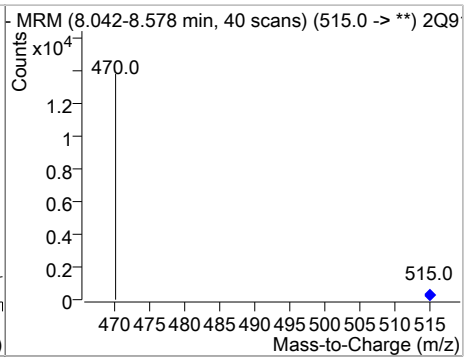
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

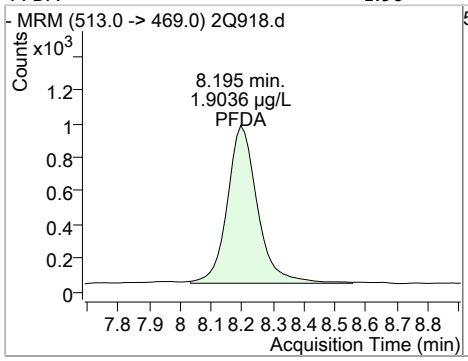
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	1.85	8.19	-0.10	8754				

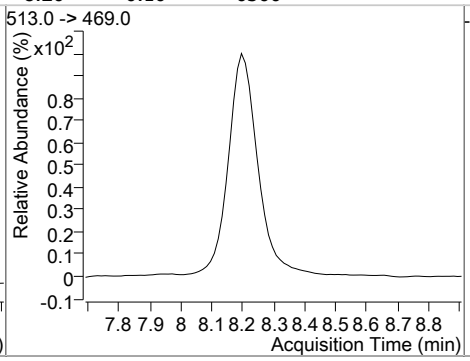


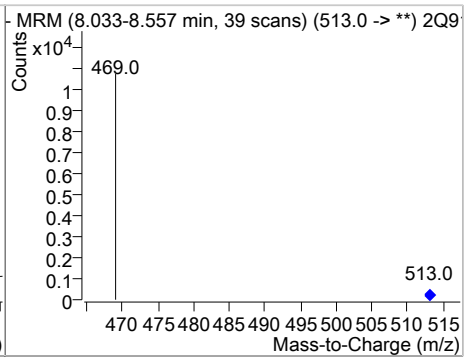




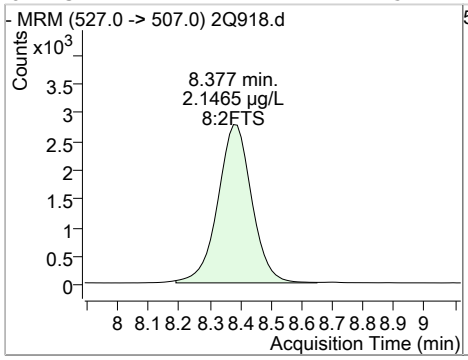
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	1.90	8.20	-0.10	6360				

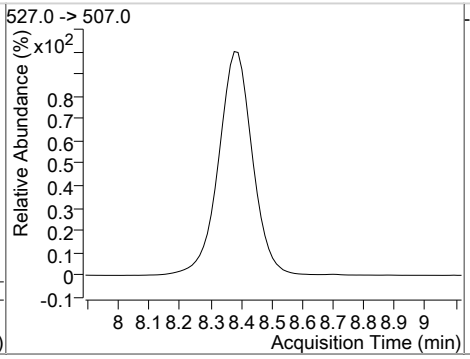


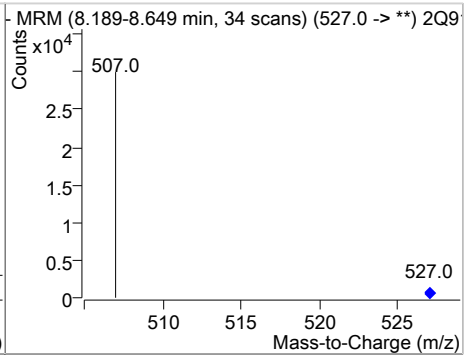




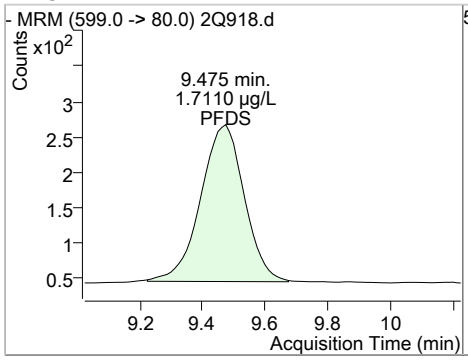
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	2.15	8.38	-0.14	21170				

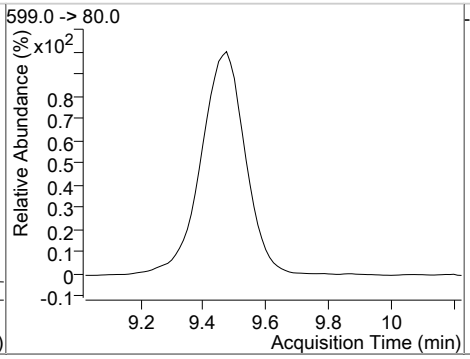


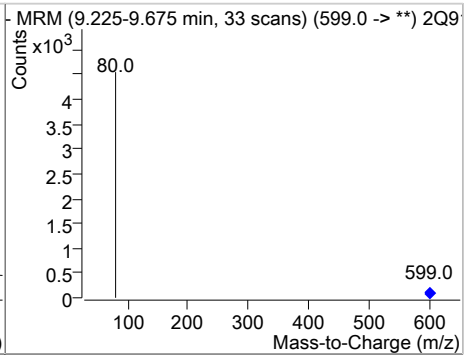




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	1.71	9.47	-0.15	2141				



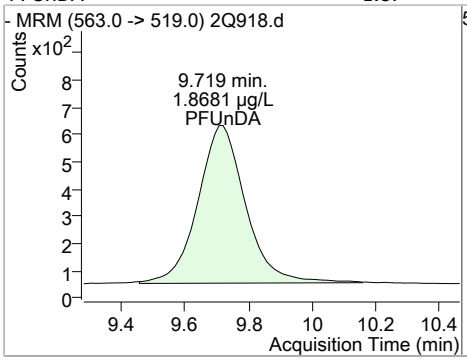


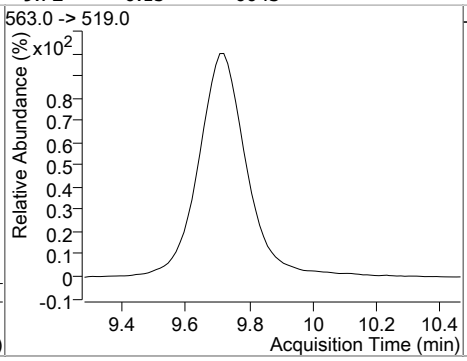


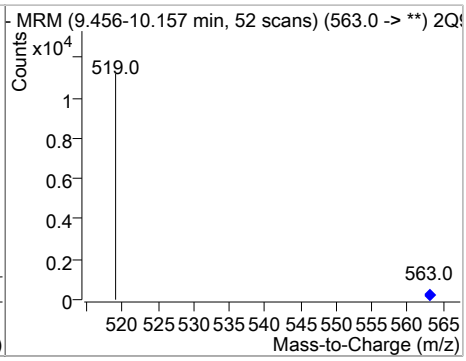
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

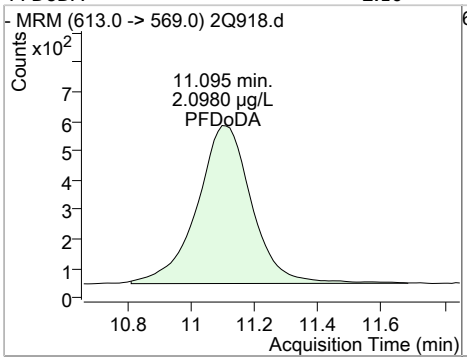
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	1.87	9.72	-0.15	6043				

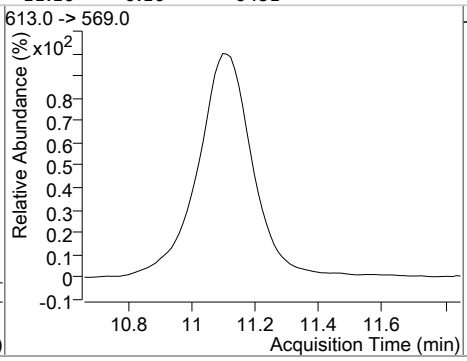


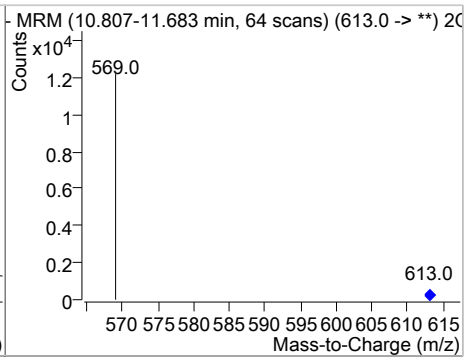




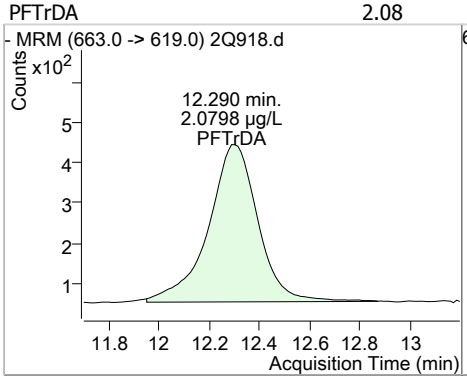
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	2.10	11.10	-0.16	6481				

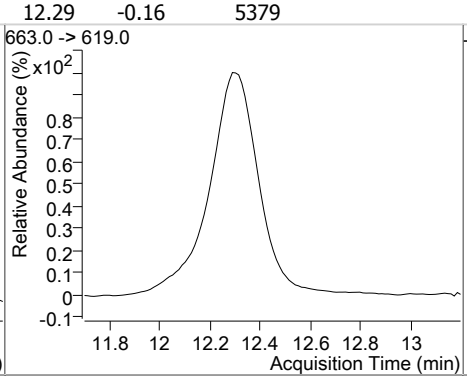


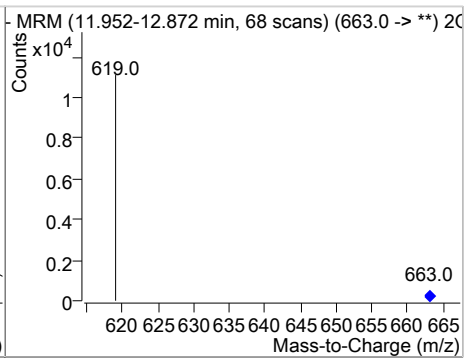




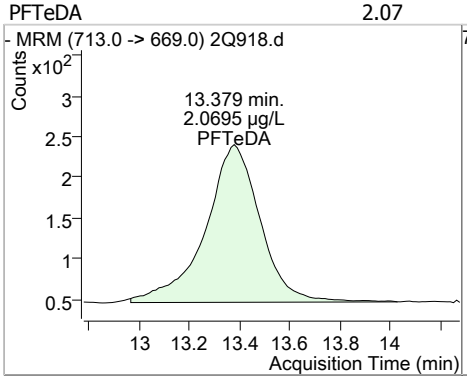
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	2.08	12.29	-0.16	5379				

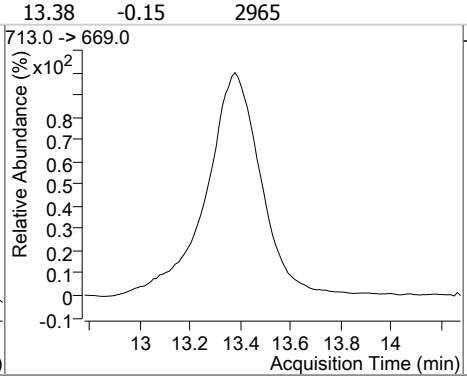


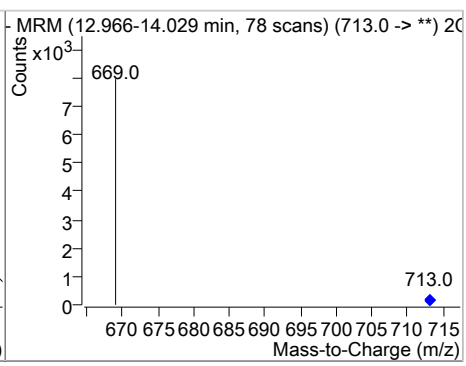




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	2.07	13.38	-0.15	2965				







Manual Integration Approval Summary

Sample Number:	S2Q26-CC18	**Method:**	EPA 537
Lab FileID:	2Q918.D	**Analyst approved:**	05/01/17 16:58 Nancy Saunders
Injection Time:	05/01/17 13:24	**Supervisor approved:**	05/01/17 17:04 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.02	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.32	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
05/01/17 17:04

Perfluorinated Compounds by LC/MS/MS

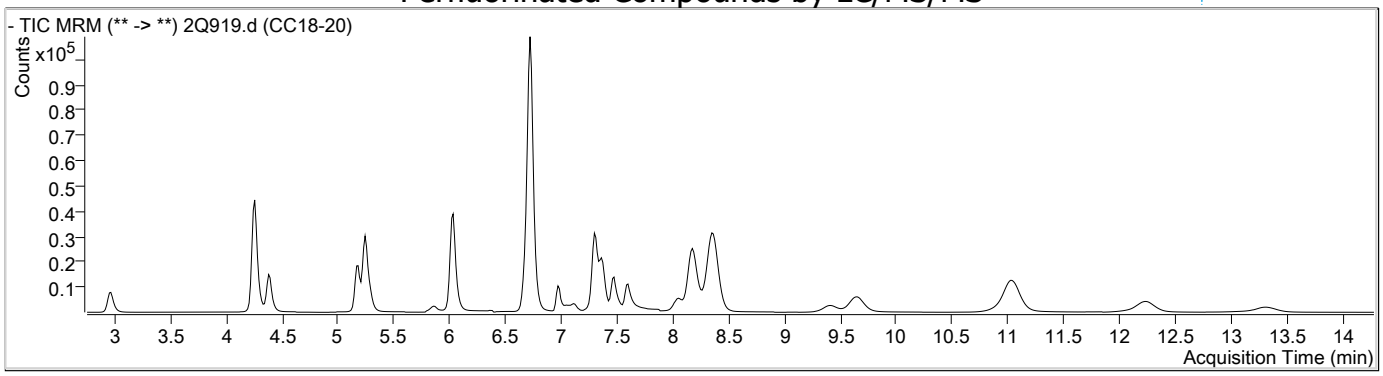
Data File : 2Q919.d
Operator : NANCYF
Acq. Method : dMRM_PFOA_PFOS_LIST.m
Acq. Date-Time : 5/1/2017 1:44:05 PM
Sample Name : CC18-20
Vial : Vial 2
DA Method File : PFCLISTDW_0420_S2Q18.m
Batch Name : S2Q26.batch.bin
Last Calib Update : 4/21/2017 7:57:04 AM

Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
13C2-6:2FTS	6.735	429.0 -> 409.0	136064	20.00	µg/L		-0.050
13C2-PFDoDA	11.039	615.0 -> 570.0	78969	20.00	µg/L		-0.225
13C2-PFOA	6.713	415.0 -> 370.0	72533	20.00	µg/L		-0.050
13C3-PFPeA	4.260	266.0 -> 222.0	67864	20.00	µg/L		-0.050
13C4-PFOS	7.301	503.0 -> 80.0	51249	20.00	µg/L		-0.063
d3-MeFOSAA	7.475	573.0 -> 419.0	27836	20.00	µg/L		-0.013
System Monitoring Compounds							
13C2-PFDA	8.180	515.0 -> 470.0	92645	18.25	µg/L		-0.113
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 91.3%			
13C2-PFHxA	5.247	315.0 -> 270.0	68408	17.86	µg/L		-0.050
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 89.3%			
d5-EtFOSAA	7.585	589.0 -> 419.0	23438	32.35	µg/L		-0.025
Spiked Amount: 20.00	Range: 70.0 - 130.0%			Recovery = 161.8%			
Target Compounds							QValue
4:2FTS	5.170	327.0 -> 307.0	63749	18.55	µg/L		100
6:2FTS	6.724	427.0 -> 407.0	128854	19.58	µg/L		100
8:2FTS	8.352	527.0 -> 507.0	229068	21.03	µg/L		100
EtFOSAA	7.598	584.0 -> 419.0	19190	29.42	µg/L		100
FOSA	6.973	498.0 -> 78.0	29779	19.90	µg/L		100
MeFOSAA	7.476	570.0 -> 419.0	25575	31.21	µg/L		100
PFBA	2.965	213.0 -> 169.0	30991	16.24	µg/L		100
PFBS	4.378	299.0 -> 80.0	35541	17.38	µg/L		100
PFDA	8.183	513.0 -> 469.0	63960	17.83	µg/L		100
PFDoDA	11.033	613.0 -> 569.0	67877	19.69	µg/L		100
PFDS	9.400	599.0 -> 80.0	23708	17.47	µg/L		100
PFHpA	6.036	363.0 -> 319.0	90834	18.06	µg/L	#	93
PFHpS	6.671	449.0 -> 80.0	39571	18.23	µg/L		100
PFHxA	5.250	313.0 -> 269.0	32761	19.31	µg/L	#	86
PFHxS	6.018	399.0 -> 80.0	37620	17.58	µg/L	m	95
PFNA	7.369	463.0 -> 419.0	61990	19.13	µg/L		98
PFNS	8.048	549.0 -> 99.0	24991	19.31	µg/L		100
PFOA	6.715	413.0 -> 369.0	56607	18.78	µg/L		100
PFOS	7.303	499.0 -> 80.0	52897	17.88	µg/L	m	87
PFPeA	4.263	263.0 -> 219.0	92319	17.93	µg/L		100
PFPeS	5.292	349.0 -> 99.0	11836	18.32	µg/L		100
PFTeDA	13.303	713.0 -> 669.0	30598	19.06	µg/L		100
PFTrDA	12.228	663.0 -> 619.0	57597	19.73	µg/L		100
PFUnDA	9.656	563.0 -> 519.0	61538	17.76	µg/L		100

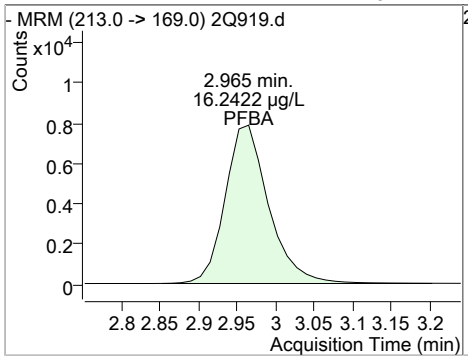
 # = Qualifier out of range, m = manually integrated, + = Area summed

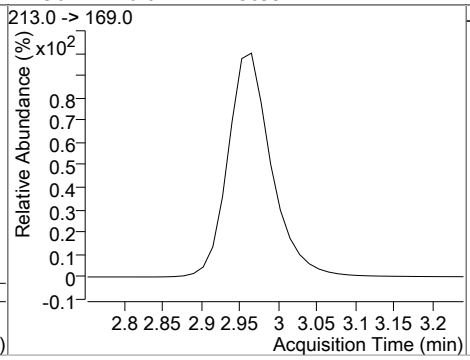
Perfluorinated Compounds by LC/MS/MS

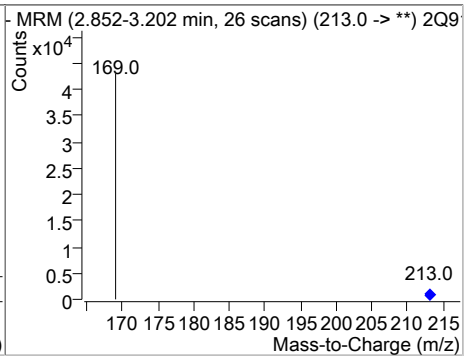
Agilent Technologies



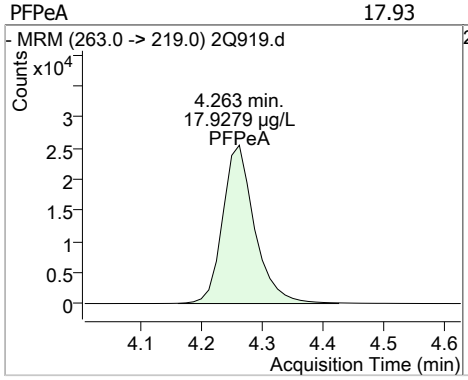
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBA	16.24	2.96	-0.04	30991				

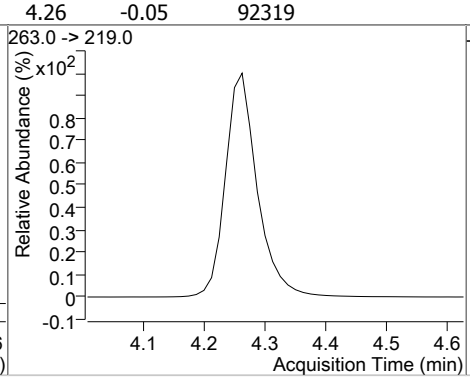


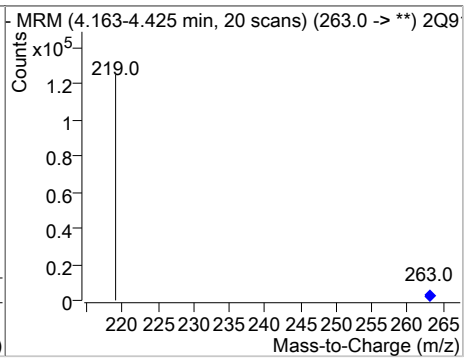




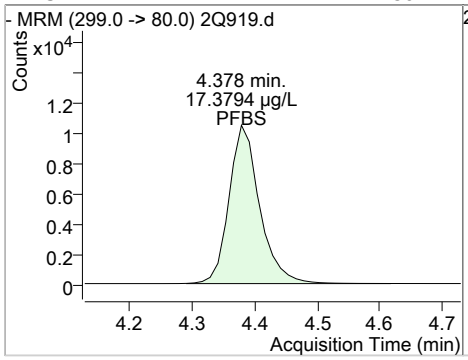
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeA	17.93	4.26	-0.05	92319				

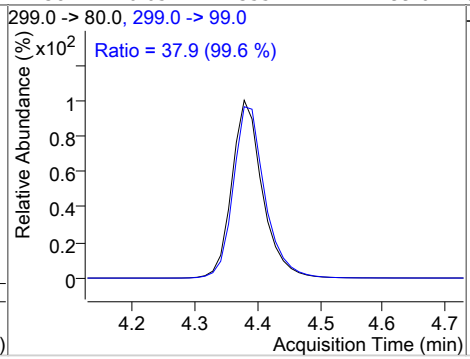


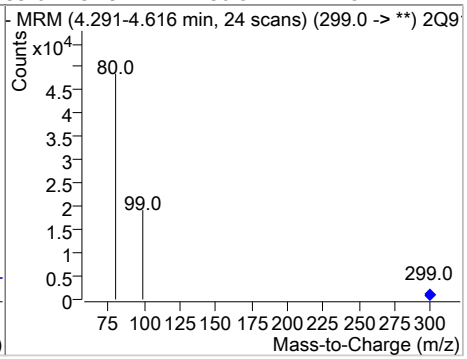




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFBS	17.38	4.38	-0.05	35541	299.0 -> 99.0	37.9	30.5	45.7



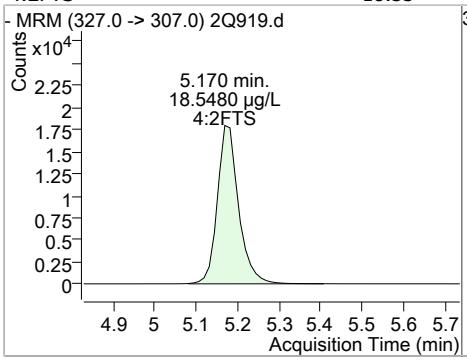


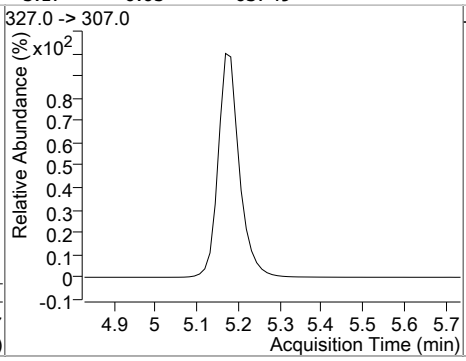


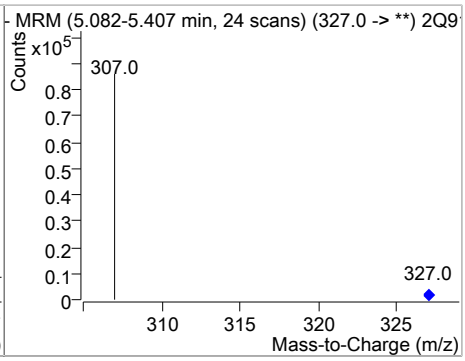
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

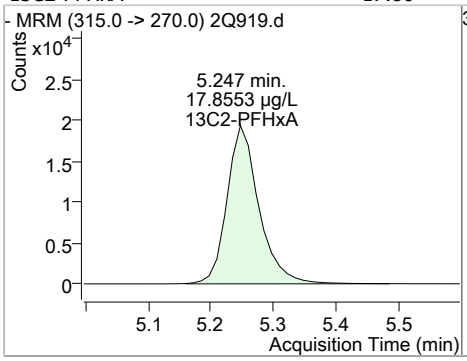
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
4:2FTS	18.55	5.17	-0.05	63749				

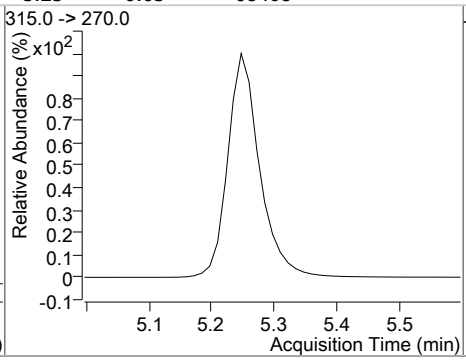


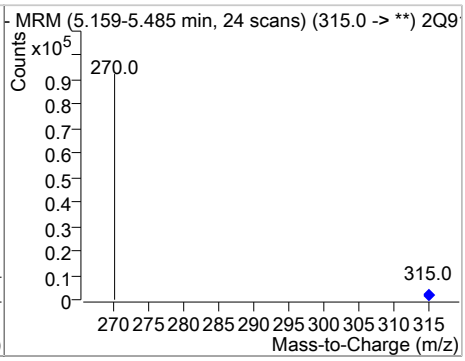




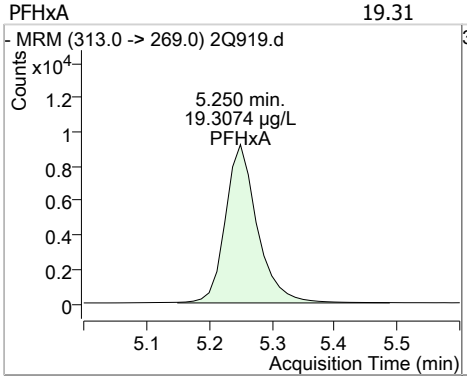
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFHxA	17.86	5.25	-0.05	68408				

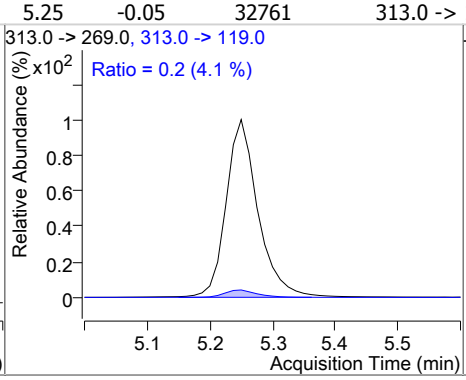


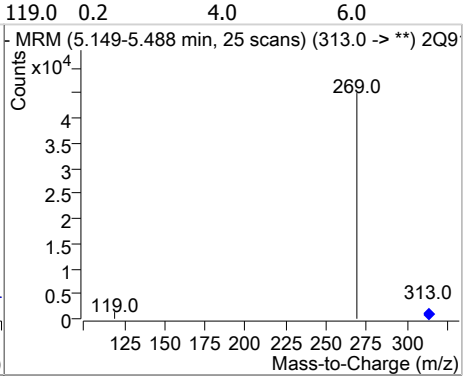




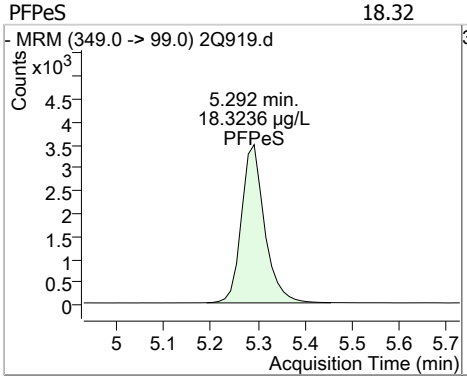
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxA	19.31	5.25	-0.05	32761	313.0 -> 119.0	0.2	4.0	6.0

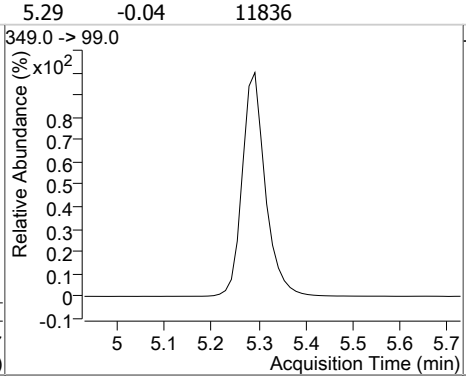


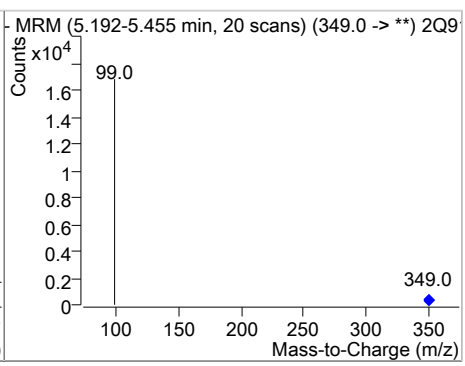




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFPeS	18.32	5.29	-0.04	11836				



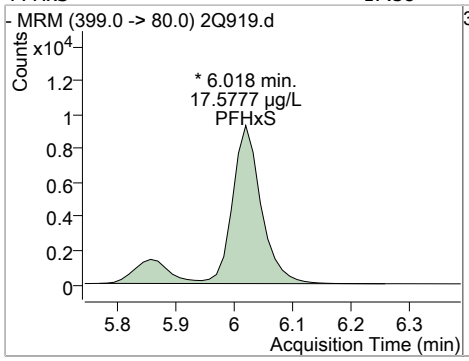


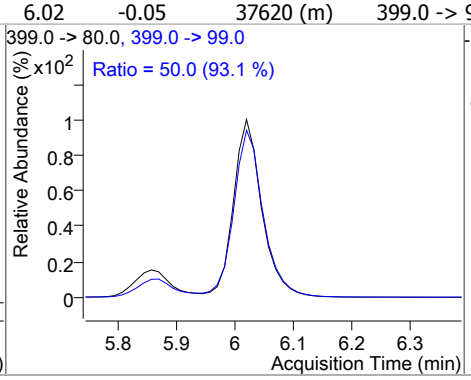


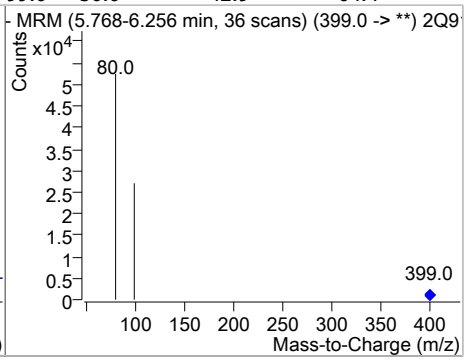
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

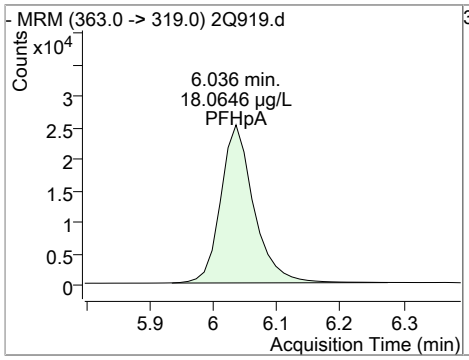
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHxS	17.58	6.02	-0.05	37620 (m)	399.0 -> 99.0	50.0	42.9	64.4

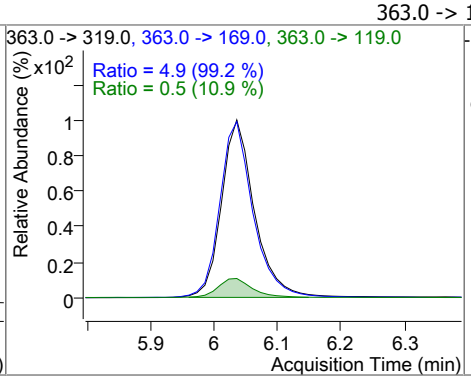


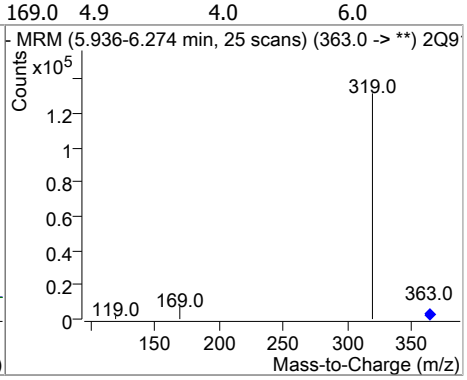




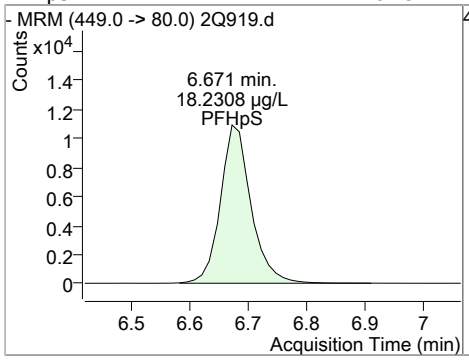
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpA	18.06	6.04	-0.05	90834	363.0 -> 119.0	0.5	4.0	6.0
					363.0 -> 169.0	4.9	4.0	6.0

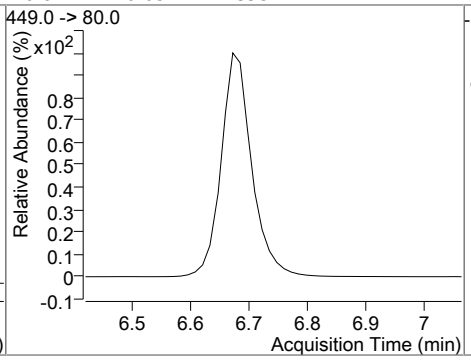


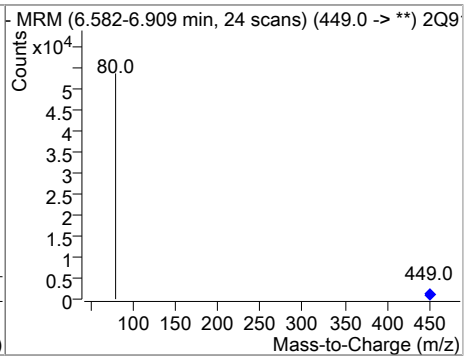




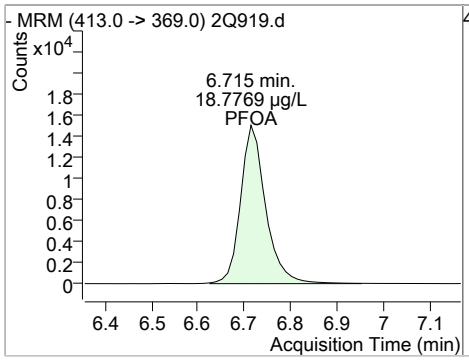
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFHpS	18.23	6.67	-0.05	39571				

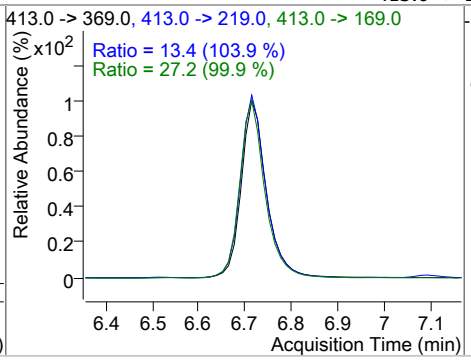


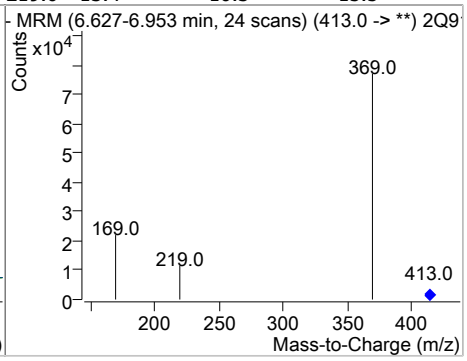




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOA	18.78	6.71	-0.05	56607	413.0 -> 169.0	27.2	21.8	32.6
					413.0 -> 219.0	13.4	10.3	15.5



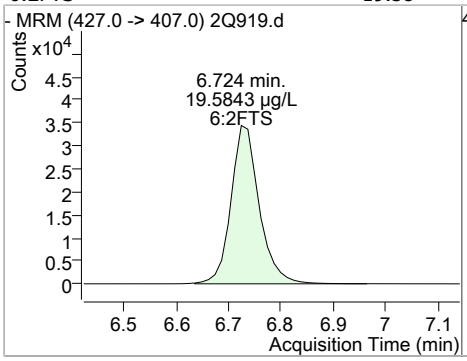


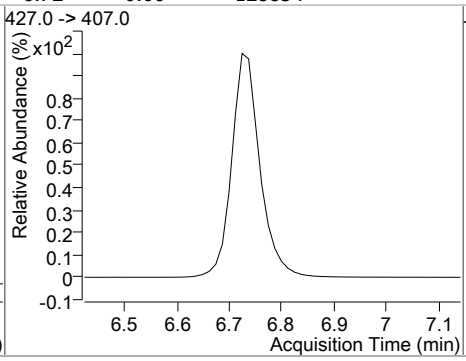


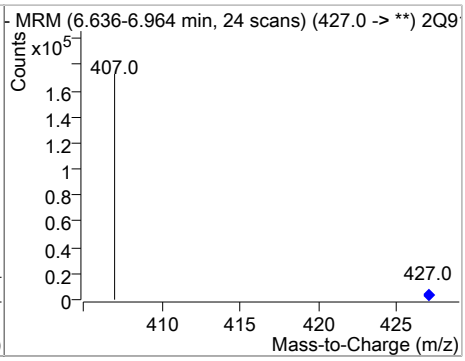
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

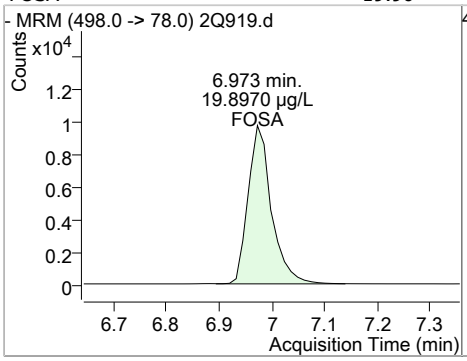
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
6:2FTS	19.58	6.72	-0.06	128854				

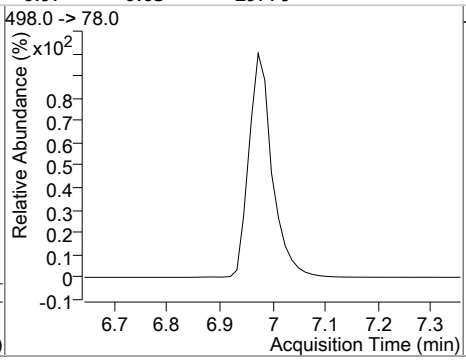


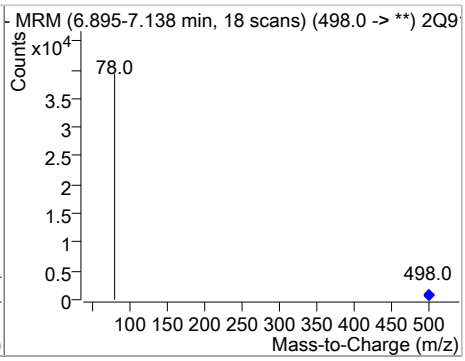




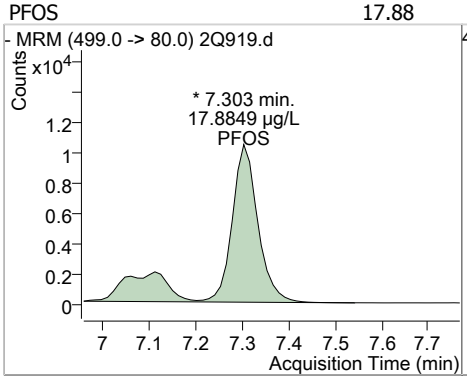
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
FOSA	19.90	6.97	-0.03	29779				

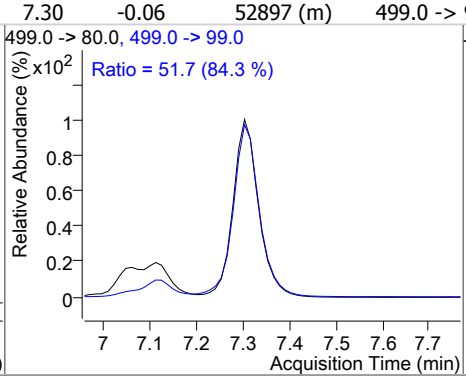


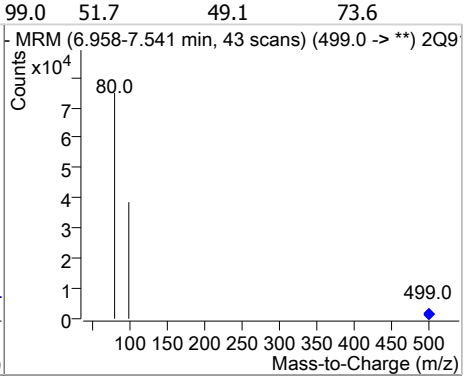




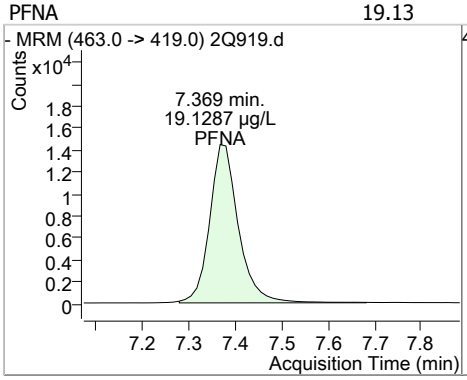
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFOS	17.88	7.30	-0.06	52897 (m)	499.0 -> 99.0	51.7	49.1	73.6

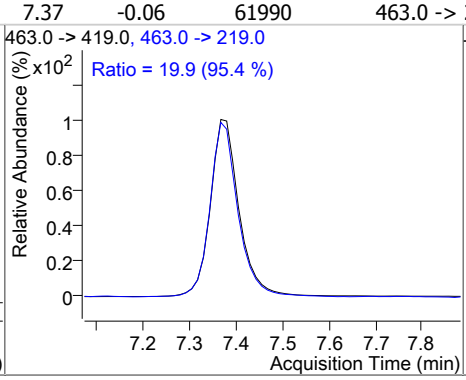


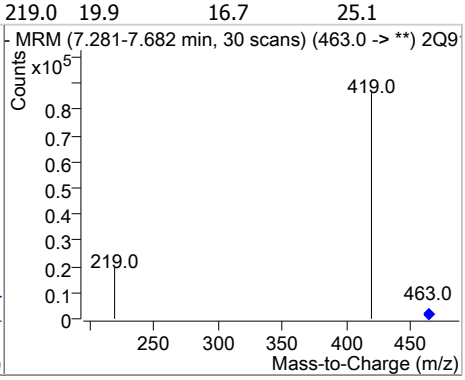




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNA	19.13	7.37	-0.06	61990	463.0 -> 219.0	19.9	16.7	25.1



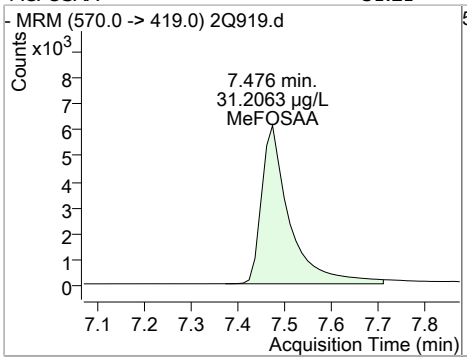


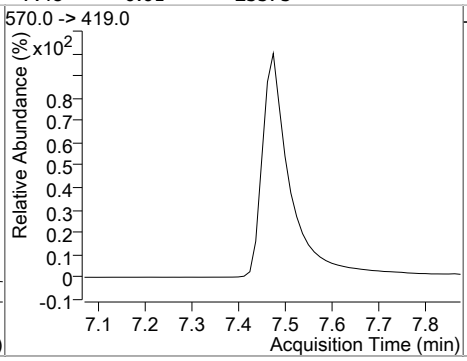


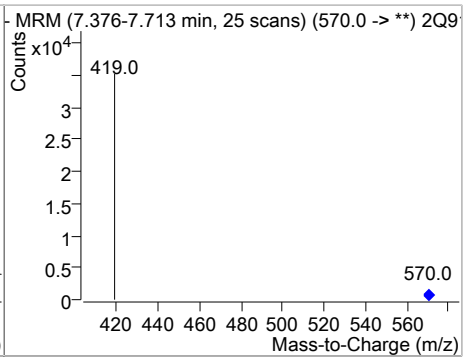
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

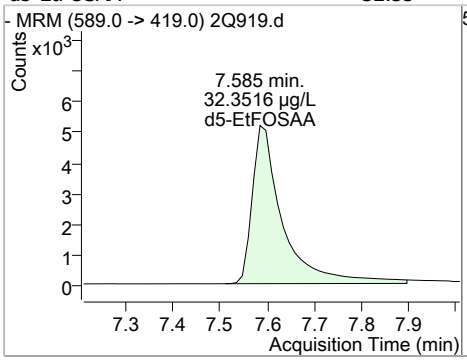
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
MeFOSAA	31.21	7.48	-0.01	25575				

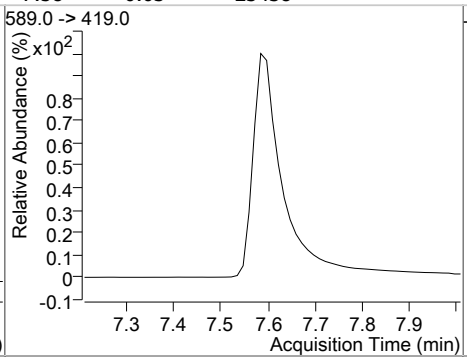


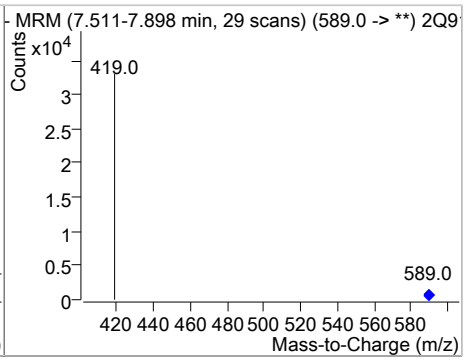




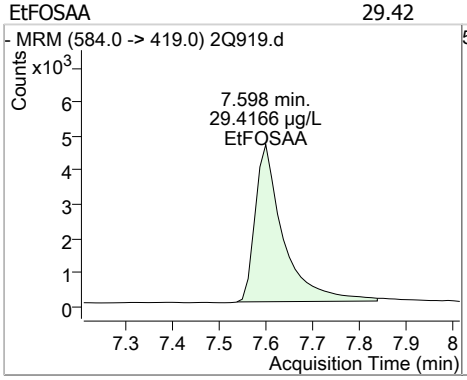
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
d5-EtFOSAA	32.35	7.58	-0.03	23438				

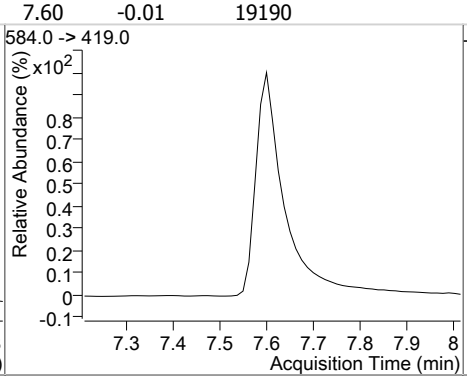


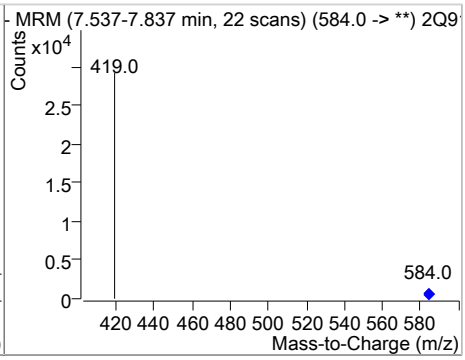




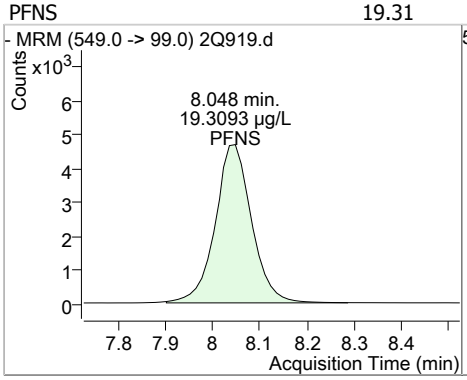
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
EtFOSAA	29.42	7.60	-0.01	19190				

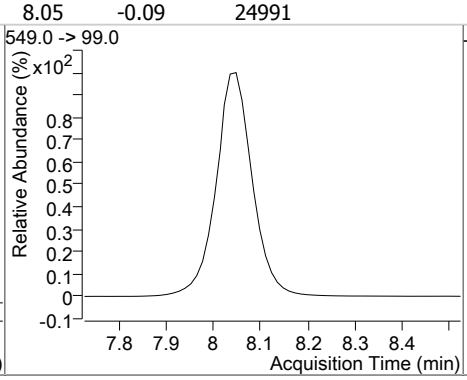


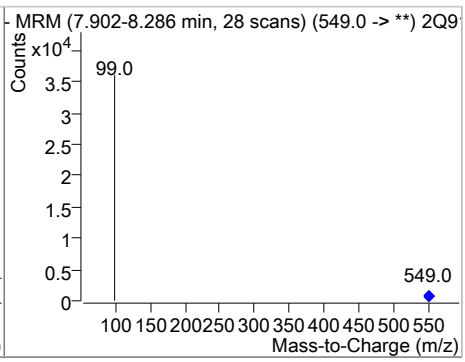




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFNS	19.31	8.05	-0.09	24991				



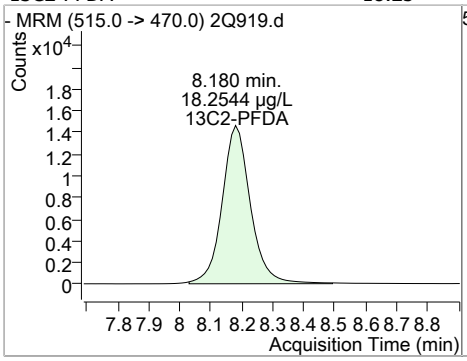


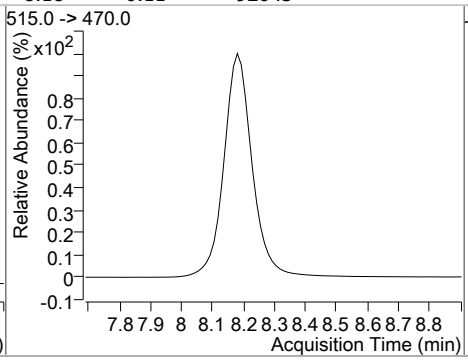


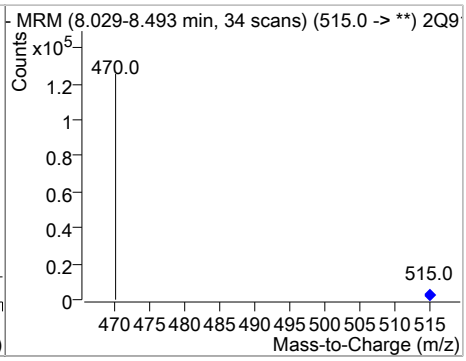
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

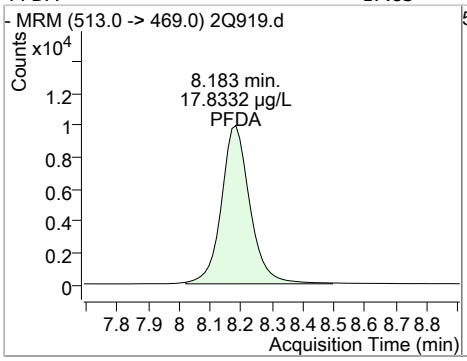
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
13C2-PFDA	18.25	8.18	-0.11	92645				

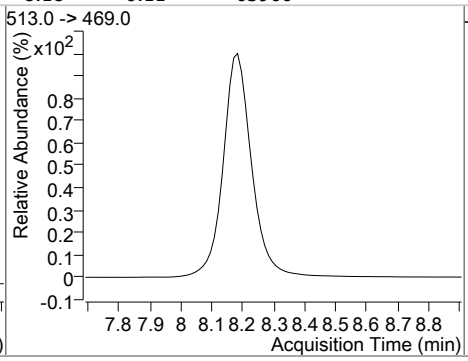


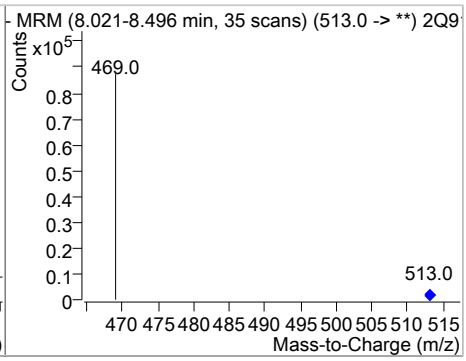




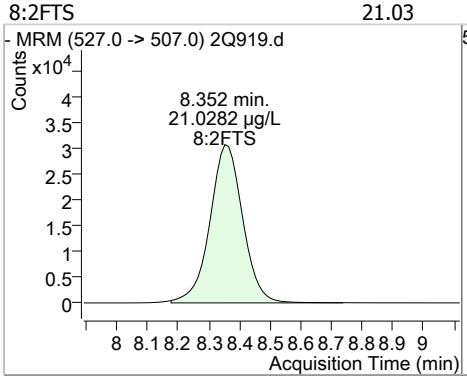
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDA	17.83	8.18	-0.11	63960				

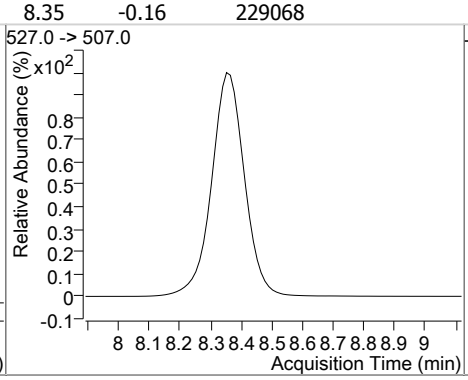


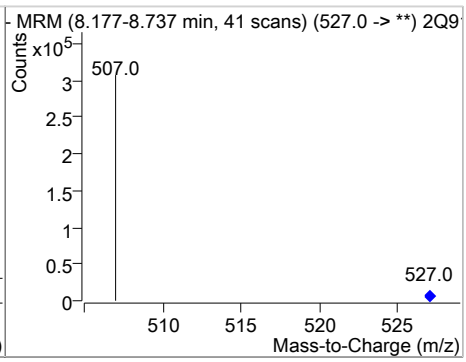




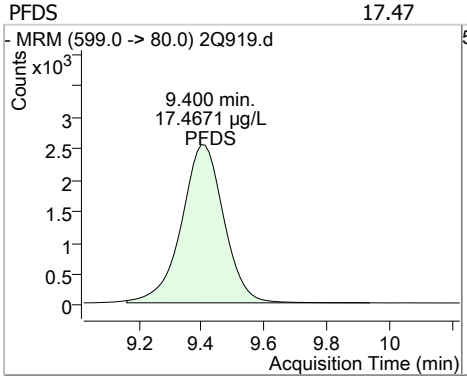
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
8:2FTS	21.03	8.35	-0.16	229068				

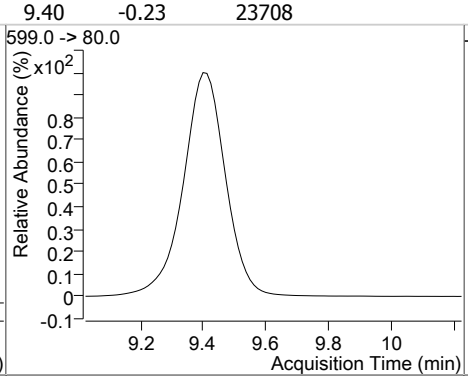


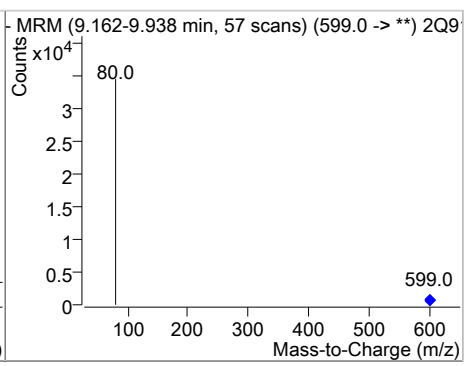




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDS	17.47	9.40	-0.23	23708				



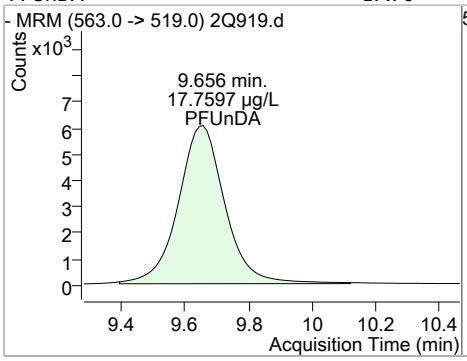


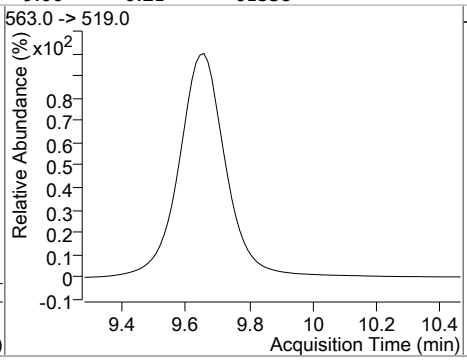


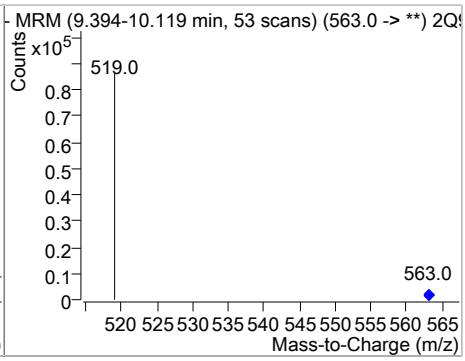
Perfluorinated Compounds by LC/MS/MS

Agilent Technologies

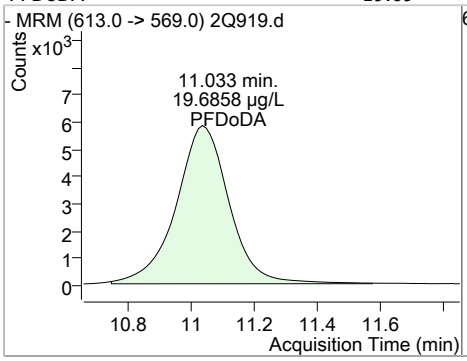
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFUnDA	17.76	9.66	-0.21	61538				

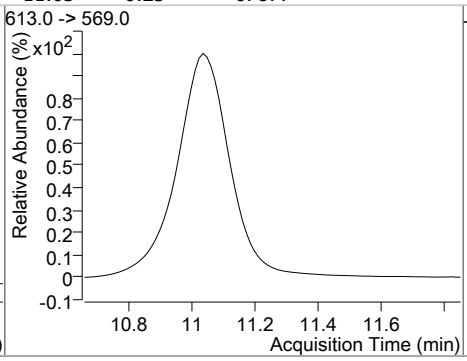


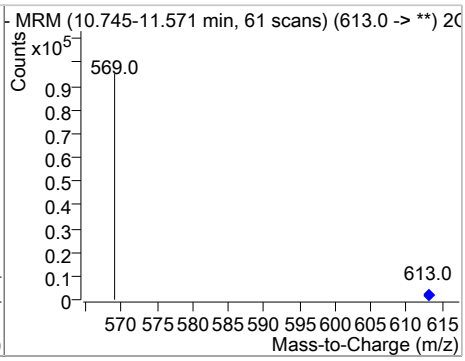




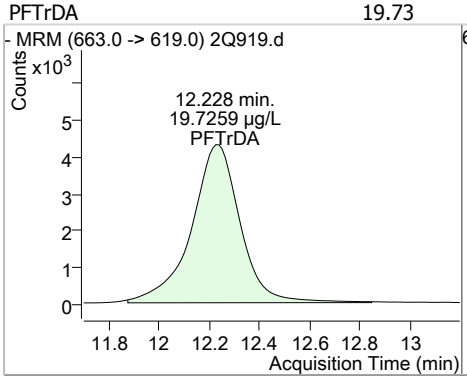
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFDoDA	19.69	11.03	-0.23	67877				

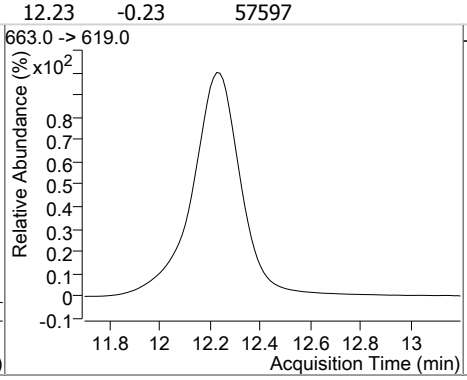


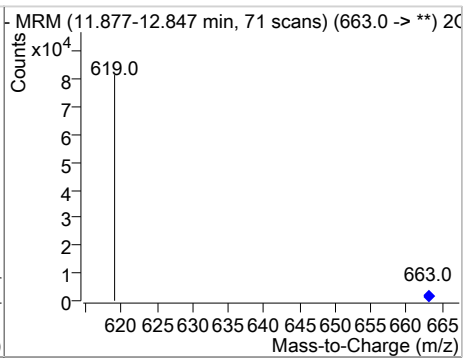




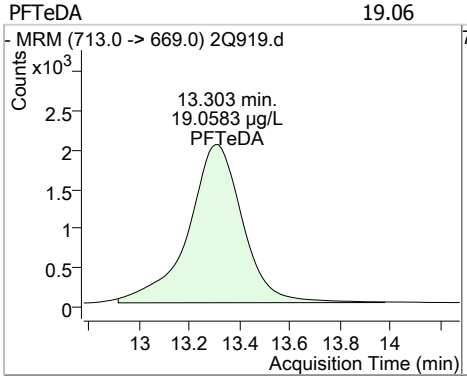
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTrDA	19.73	12.23	-0.23	57597				

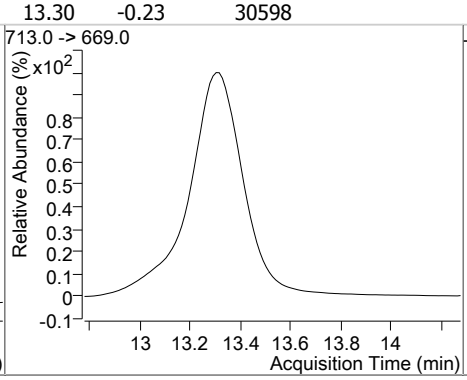


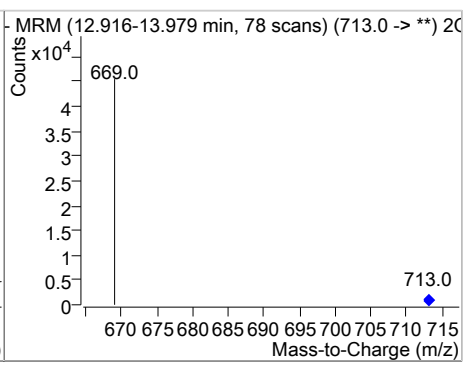




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Min.	Max.
PFTeDA	19.06	13.30	-0.23	30598				







Manual Integration Approval Summary

Sample Number:	S2Q26-CC18	**Method:**	EPA 537
Lab FileID:	2Q919.D	**Analyst approved:**	05/01/17 16:00 Nancy Saunders
Injection Time:	05/01/17 13:44	**Supervisor approved:**	05/01/17 17:04 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		6.02	Split peak
Perfluorooctanesulfonic acid	1763-23-1		7.30	Split peak

SGS ACCUTEST-ORLANDO

LCMS2-2Q ANALYSIS LOG

DATE:	04-20-17
COLUMN TYPE:	Poroshell EC18
AMOUNT INJECTED:	5 ul
INSTRUMENT:	LCMS2-2Q
HEAD PRESSURE:	330

METHODS:	537 MOD
ACQ. METHOD:	dMAM PRVA PFOS LIST
PROC. METHOD:	PFC List DW 04202018
CALIB. DATE:	04-20-17
RUN BATCH:	S2Q 18

ANALYST:	MAS
ELUENT A LOT #:	~~167421~~ 167421
ELUENT B LOT #:	166751
WATER LOT #:	167421
ISTD Lot #:	LL836

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	ION RATIO	MANUAL INTS RATIONALE, PK #	SCON <CL*	COMMENTS
2Q 644	1	CCB	PFC	—	—				✓
2Q 45	1	CCB	↓	—	—				✓
2Q 46	1	CCB		—	—				✓
2Q 47	2	CC16-20		LL838	100/500				SS ↓ Am Curve
2Q 48	1	CCB		—	—				✓
2Q 49	1	CCB		—	—				✓
2Q 50	2	ICI8-1		LL838	5/500				X Fix AT RR
2Q 51	2	-1		↓	↓		SP		✓
2Q 52	3	-2			10/500		SP		✓
2Q 53	4	-5			25/500		SP		✓
2Q 54	5	-10			50/500		SP		✓
2Q 55	6	ICC18-20			100/500		SP		✓
2Q 56	7	IC18-40			200/500		SP		✓
2Q 57	8	-50		↓	250/500		SP		✓
2Q 58	1	CCB		—	—				✓
2Q 59	9	ICV18-20		LL817/819 840613	5/100 5/500				Pass
2Q 60	10	OP64645-BS		OP64645	1X				✓
2Q 61	11	FA42757-3			10X		SP		✓ Report Etime from 1X
2Q 62	12	-25			10X		SP ±		✓ ↓
2Q 63	13	-4	↓	↓	1X		SP		✓

*< Conductivity Limit For Perchlorate by SW846 6850

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

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Analyst's Signature: [signature]

SGS ACCUTEST-ORLANDO

LCMS2-2Q ANALYSIS LOG

DATE:	04-20-17
COLUMN TYPE:	Poroshell EC18
AMOUNT INJECTED:	5 ul
INSTRUMENT:	LCMS2-2Q
HEAD PRESSURE:	330

METHODS:	537 MOD
ACQ. METHOD:	AMAM PFOA PFOS LIST
PROC. METHOD:	PFCLIST DW 0420 S2Q18
CALIB. DATE:	04-2017
RUN BATCH:	S2Q 18

ANALYST:	NAS
ELUENT A LOT #:	167421 w AcetATE
ELUENT B LOT #:	166751
WATER LOT #:	167421
ISTD Lot #:	LC836

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	ION RATIO	MANUAL INTS RATIONALE, PK #	SCON <CL*	COMMENTS
2Q 664	14	OP64707-BS	PFC	OP64707	1x				✓
2Q 65	15	-MB							✓ ME, ETHAR
2Q 66	15	-MB							BDL
2Q 67	16	FA43168-1							BDL
2Q 68	17	-2					SP		✓
2Q 69	18	-3					SP		✓
2Q 70	19	-4					SP		✓
2Q 71	6	CC18-20		LC838	100/500		SP		Pass
2Q 72	1	CCB							✓
2Q 73	1	CCB							✓
2Q 74	20	FA42877-1		OP64707	1x		SP		✓
2Q 75	24	-3					SP		✓ RR 10x, 100x
2Q 76	25	-4					SP		✓ RR 5x
2Q 77	26	-5					SP		✓ RR 5x
2Q 78	27	-6					SP		✓ RR 10x, 50x
2Q 79	28	-8					SP OP I		✓ RR 20x
2Q 80	29	-9					SP		✓ RR 20x, 50x
2Q 81	21	-2					SP		✓ RR 5x
2Q 82	22	OP64707-MS					SP		
2Q 83	23	MSD					SP		

*< Conductivity Limit For Perchlorate by SW846 6850
Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
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LCMS2_2Q_log.xls ME rev. 06/16

Analyst's Signature: [signature]

SGS ACCUTEST-ORLANDO

DATE:	04-20-17
COLUMN TYPE:	Poroshell II EC18
AMOUNT INJECTED:	5 ul
INSTRUMENT:	LCMS2-2Q
HEAD PRESSURE:	330

LCMS2-2Q ANALYSIS LOG

METHODS:	537 mod
ACQ. METHOD:	dmam PFOA PFOS List
PROC. METHOD:	PFC List 0420 S2Q18
CALIB. DATE:	04-20-17
RUN BATCH: S2Q	18

ANALYST:	MAS
ELUENT A LOT #:	167421 10 mM Acetic
ELUENT B LOT #:	166751 L
WATER LOT #:	167421
ISTD Lot #:	LL936

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	ION RATIO	MANUAL INTS RATIONALE, PK #	SCON <CL*	COMMENTS
2Q 684	6	CCIB-20	PFC	LL938	100/TW		SP		PASS
2Q 85	1	CCB		—	—				✓
2Q 86	1	CCB		—	—				✓
2Q 87	30	FA 42877-11		OP64707	1X		SP		✓ RA 20X
2Q 88	31	-16		"	"				BDL
2Q 89	6	ECCIB-20		LL938	100/TW		SP		PASS
2Q 90	1	CCB		—	—				✓
2Q									
2Q									
2Q									
2Q									
2Q									
2Q									
2Q									
2Q									
2Q							MAS 04-21-17		
2Q									
2Q									
2Q									
2Q									
2Q									

*< Conductivity Limit For Perchlorate by SW846 6850

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

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SGS ACCUTEST-ORLANDO

DATE:	04-28-17
COLUMN TYPE:	Poroshell EC18
AMOUNT INJECTED:	5 ul
INSTRUMENT:	LCMS2-2Q
HEAD PRESSURE:	318

LCMS2-2Q ANALYSIS LOG

METHODS:	537 mod
ACQ. METHOD:	4mm PFOA PFOS List
PROC. METHOD:	PFCList4ow 0420 S2Q15
CALIB. DATE:	04-20-17
RUN BATCH:	S2Q 25

ANALYST:	MRE MAS
ELUENT A LOT #:	167424 + Additive
ELUENT B LOT #:	166771 +
WATER LOT #:	167421
ISTD Lot #:	LC8536

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	ION RATIO	MANUAL INTS RATIONALE, PK #	SCON <CL*	COMMENTS
2Q 050	1	CCB	PFC						✓
2Q 51	1	CCB							✓
2Q 52	1	CCB							✓
2Q 53	2	CC18-20		LC8536	1W/TW		SP		Pass
2Q 54	3	FA 43036-3		OP64760	2X				X ISTD WAR
2Q 55	4	FA 43116-9			5X		SP		✓ Run 10x
2Q 56	5	-10			1X				✓
2Q 57	6	-12			5X				✓ Run 10x
2Q 58	3	FA 43036-3			2X				✓ matrix ISTDs
2Q 59	2	CC18-20		LC8536	1W/TW		SP		Pass
2Q 60	1	CCB							✓
2Q 61	7	OP64797-BS		OP64797	1X				✓
2Q 62	8	-MD							✓ Ret. Time
2Q 63	9	FA 43000-1							ANC
2Q 64	10	OP64797-MS							✓
2Q 65	11	-MSD							✓
2Q 66	12	FA43 000-2							BDL
2Q 67	2	CC18-20		LC8536	1W/TW		SP		Pass
2Q 68	1	CCB							✓
2Q 69	13	FA42998-7		OP64797	1X				BDL.

*< Conductivity Limit For Perchlorate by SW846 6850

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

SGS ACCUTEST-ORLANDO

DATE:	04-28-17
COLUMN TYPE:	Perkin Elmer
AMOUNT INJECTED:	5 ul
INSTRUMENT:	LCMS2-2Q
HEAD PRESSURE:	3100

LCMS2-2Q ANALYSIS LOG

METHODS:	537 mod
ACQ. METHOD:	Amam PFOA PFOS List
PROC. METHOD:	PFC List 0430 S2 0.15
CALIB. DATE:	04-20-17
RUN BATCH: S2Q	25

ANALYST:	ME MS
ELUENT A LOT #:	167421 w Acetic
ELUENT B LOT #:	166771
WATER LOT #:	167421
ISTD Lot #:	LCB36

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	ION RATIO	MANUAL INTS RATIONALE, PK #	SCON <CL*	COMMENTS
2Q 070	14	FA42446-2	PFC	OP64747	1		SP		✓ IS Area ↓
2Q 71	15	FA42999-1							BDL IS Area ↓
2Q 72	16	-2							BDL
2Q 73	17	-3							BDL IS Area ↓
2Q 74	18	OP64815-BS		OP64815					✓
2Q 75	19	-MB							✓ Fr
2Q 76	20	MC50152-4							BDL
2Q 77	2	CCV8-20		LCB36	100/100		SP		Poss diff ↑
2Q 78	1	CCV3		—	—				✓
2Q 79	21	MC50152-5		OP64815	1				BDL
2Q 80	22	OP64815-MS							✓
2Q 81	23	-MSD							✓
2Q 82	24	MC50152-6					SP		✓
2Q 83	25	-9					SP		✓
2Q 84	26	-10					SP		✓
2Q 85	27	-11					SP		BDL
2Q 86	28	-14							BDL
2Q 87	2	CCV8-20		LCB36	100/100		SP		Poss
2Q 88	1	CCV3		—	—				✓
2Q 89	29	MC50152-15		OP64815	1				BDL

*< Conductivity Limit For Perchlorate by SW846 6850

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

SGS ACCUTEST-ORLANDO

DATE:	04-28-17
COLUMN TYPE:	Ascentis Exp C18
AMOUNT INJECTED:	5 ul
INSTRUMENT:	LCMS2-2Q
HEAD PRESSURE:	318

LCMS2-2Q ANALYSIS LOG

METHODS:	537 MOD
ACQ. METHOD:	1MRM PFOA PFOS LIST
PROC. METHOD:	PFC LIST DW 0420 S2Q16
CALIB. DATE:	04-20-17
RUN BATCH:	S2Q 25

ANALYST:	MGE NAS
ELUENT A LOT #:	167421 w/ Acetate
ELUENT B LOT #:	166781
WATER LOT #:	167421
ISTD Lot #:	LL836

DATA FILE 405-0117	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	ION RATIO	MANUAL INTS RATIONALE, PK #	SCON <CL*	COMMENTS
2Q 0890	30	MC 50152-16	PFC	OP64815	1X		SP		BDL
2Q 91	31	-17	↓	↓	↓		SP		BDL
2Q 92	32	-18					~~SP~~ NO 50117		BDL
2Q 93	2	CC18-20		LL838	100/ITW		SP		Pass
2Q 94	1	CCB		—	—				✓
2Q 95	33	FA42153-1		OP64815	1X		SP		✓ Run 2X
2Q 96	34	-2		↓	↓		SP		✓ Run 2X
2Q 97	35	-3					SP		✓
2Q 98	36	-4							✓ DODA ISTD missing
2Q 99	37	-5					SP		✓ ↓
2Q 900	38	-6					SP		✓
2Q 01	39	-7					SP		✓
2Q 02	40	-8							BDL
2Q 03	41	-9					SP		✓
2Q MG0117 04	2X	CC18-20		LL838	100/ITW		SP		Pass IT-E+T
2Q 05	1	CCB	↓	—	—				✓
2Q									
2Q									
2Q									
2Q					NAS 05-01-17				

*< Conductivity Limit For Perchlorate by SW846 6850

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

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Analyst's Signature: [signature]

SGS ACCUTEST-ORLANDO

LCMS2-2Q ANALYSIS LOG

DATE:	05-01-17
COLUMN TYPE:	[illegible] C18
AMOUNT INJECTED:	5 ul
INSTRUMENT:	LCMS2-2Q
HEAD PRESSURE:	303

METHODS:	537 MOD
ACQ. METHOD:	[illegible] PFOA PFOS [illegible]
PROC. METHOD:	PFCLIST-DW 04202017
CALIB. DATE:	4-21-17
RUN BATCH:	S2Q 26

ANALYST:	NAK
ELUENT A LOT #:	167 [illegible]
ELUENT B LOT #:	166 [illegible]
WATER LOT #:	167 [illegible]
ISTD Lot #:	LC636

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	ION RATIO	MANUAL INTS RATIONALE, PK #	SCON <CL*	COMMENTS
2Q 906	1	CCB	PFC	—					/
~~2Q 07~~	~~1~~	~~CCB~~		—					/
2Q 08	1	CCB		—					/
2Q 09	2	CC18-20		LC638					Pass
2Q 10	3	FA43116-2		OP64760	2x				RR 4X DONA 2STAL
2Q 11	4	-9		↓	10x				✓
2Q 12	5	-12		↓	↓				✓
2Q 13	6	FA43153-1		OP64815	2x				✓
2Q 14	7	-2		↓	↓				✓
2Q 15	8	OP64783-BS		OP64783	1x				✓
2Q 16	9	-MB		↓	↓				BDL
2Q 17	14	FA42999-2CFS		OP64760	↓				✓ SSL
2Q 18	20	LCC18-2		LC638	10/500				Pass
2Q 19	2	CC18-20		↓	10/500				Pass Et, Me, ds EtA
2Q									
2Q									
2Q									
2Q									
2Q									
2Q									

*< Conductivity Limit For Perchlorate by SW846 6850

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

LCMS2_2Q_log.xls ME rev. 06/16

Analyst's Signature: [signature]

SGS ACCUTEST - ORLANDO **SPE LIQUID SAMPLE PREP REPORT**

Date/Time: 04/26/17 1000
Started (mm/dd/yy 24:00)

Date/Time: 04/26/17
Finished (mm/dd/yy 24:00)

Prep Method: 3535A or Method (circle)

Analytical Method: LC537 DW

Batch#: OP64797 Ext. By: MB Conc. By: KL Vialed By: MB

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP64797 MB	X	250	6	N/A	20ul		1 ml	
OP64797 BS	X	250	↓	↓	↓	10+10ul	1 ml	10 ul MB 04/26/17
FA42998-1	1	260					↓	
-2	1	260						
FA42999-1	1	250						
-2	1	250						
-3	1	260						
FA43000-1	1	260						
-2	1	250						
FA43000-1MS	2	250	6	N/A	20ul	10+10ul		
-1MSD	3	250	↓	↓	↓	↓		
DUP								

MB 04/26/17

Comments:

Surr.1 ID: LC834 Conc: 1ppm Exp. Date: 10/05/17 Inj. By: MB Ver. By MB
Surr.2 ID: — Conc: — Exp. Date: — Inj. By: — Ver. By —
Spk.1 ID: LC839 Conc: 2ppm Exp. Date: 08/25/17 Inj. By: MB Ver. By MB
Spk.2 ID: 8487A Conc: 2ppm Exp. Date: 04/19/18 Inj. By: MB Ver. By MB

Initial Bath Temp (Therm ID): ___ Exchange Bath/N-Evap Temp (Therm ID): ___
Observed Temp ℃: ___ Corr. Temp ℃: ___ Observed Temp ℃: ___ Corr. Temp ℃: ___

Methanol Lot # 170294 SPE Lot # 5308-0072 pH Paper # 230016
Acetonitrile Lot # — SPE Lot # — Reagent # —
Water Lot# OP64208 Syringe Filter Lot# — Solvent # —

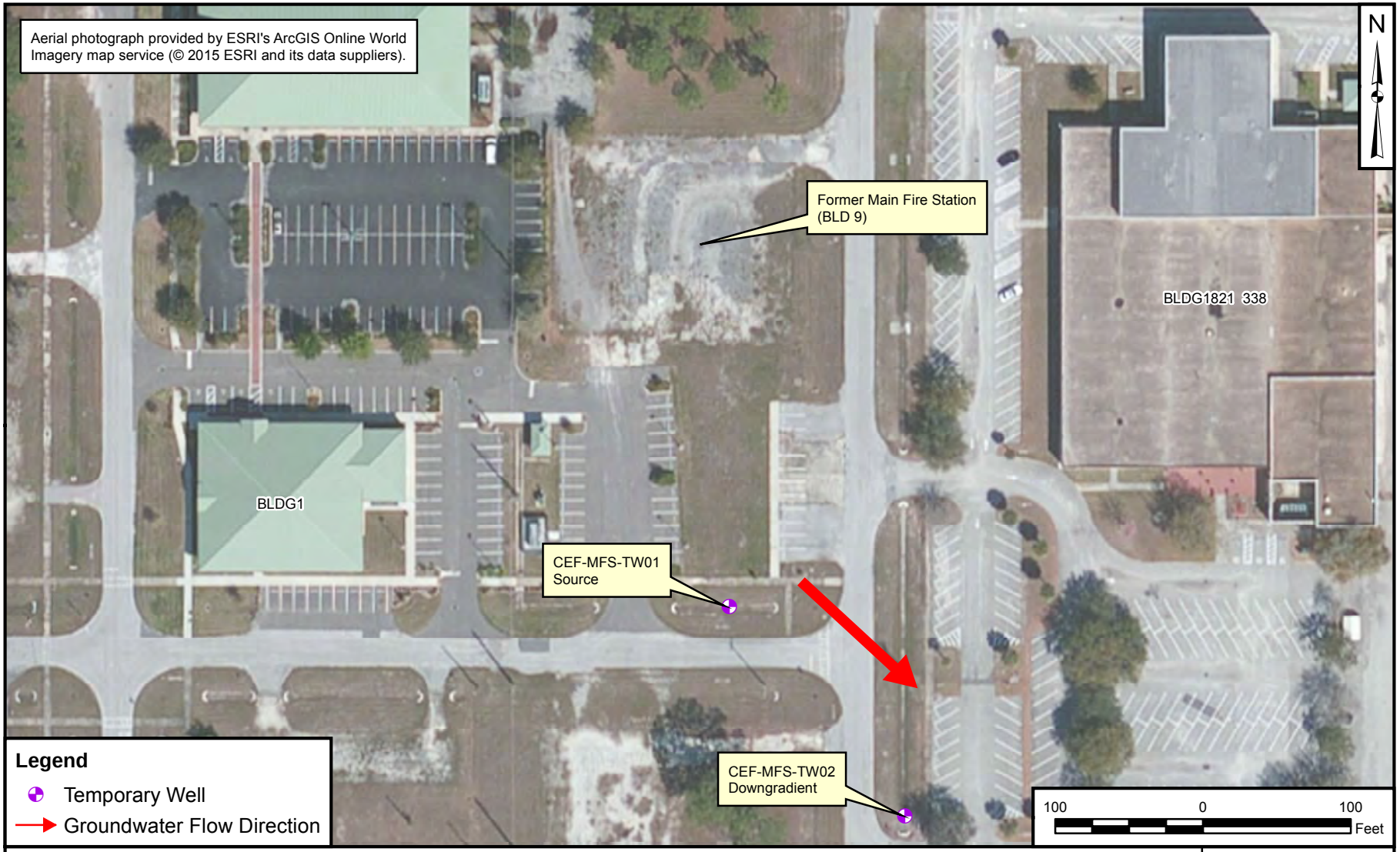
Relinquished By:* [signature] Date: 4/26/17
Accepted By: [signature] Date: 4/28/17

NF 02/16 extwater_spe 020116.xls

7.7.1

7

PGH P:\GIS\CECILFIELD_NAS\MAPDOCS\FORMER_FIRE_STATION_SITE_MAP.MXD 03/27/17 JEE

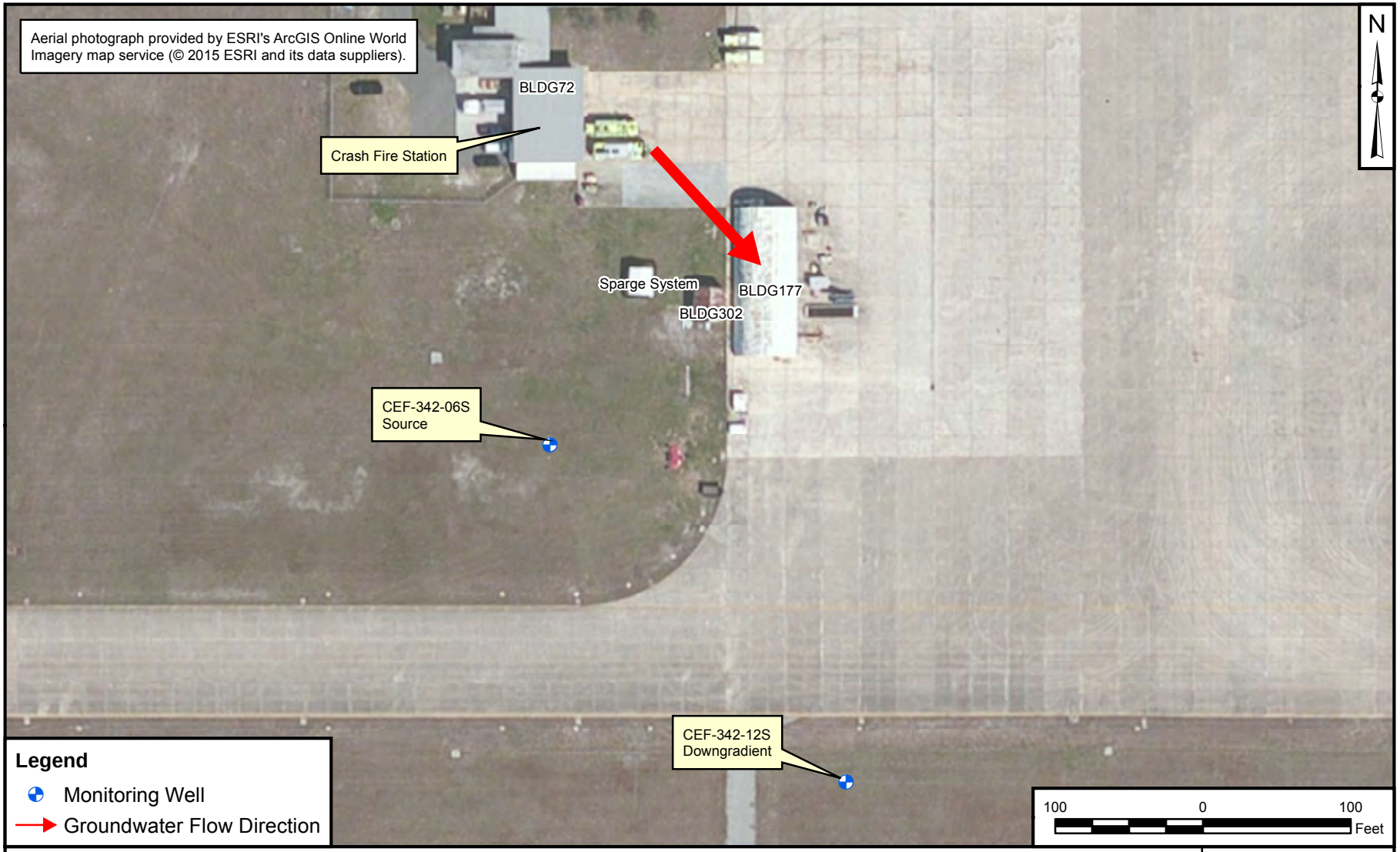


NAVFAC

SITE LOCATION
FORMER FIRE STATION
NAS CECIL FIELD
CECIL FIELD, FLORIDA

CTO	
JM10	
DRAWN BY	DATE
K. MOORE	02/21/17
CHECKED BY	DATE
T. JOHNSTON	03/27/17
FIGURE NUMBER	
17-1	

PGH P:\GIS\CECILFIELD_NAS\MAPDOCS\CRASH_FIRE_STATION_SITE_MAP.MXD 03/27/17 JEE

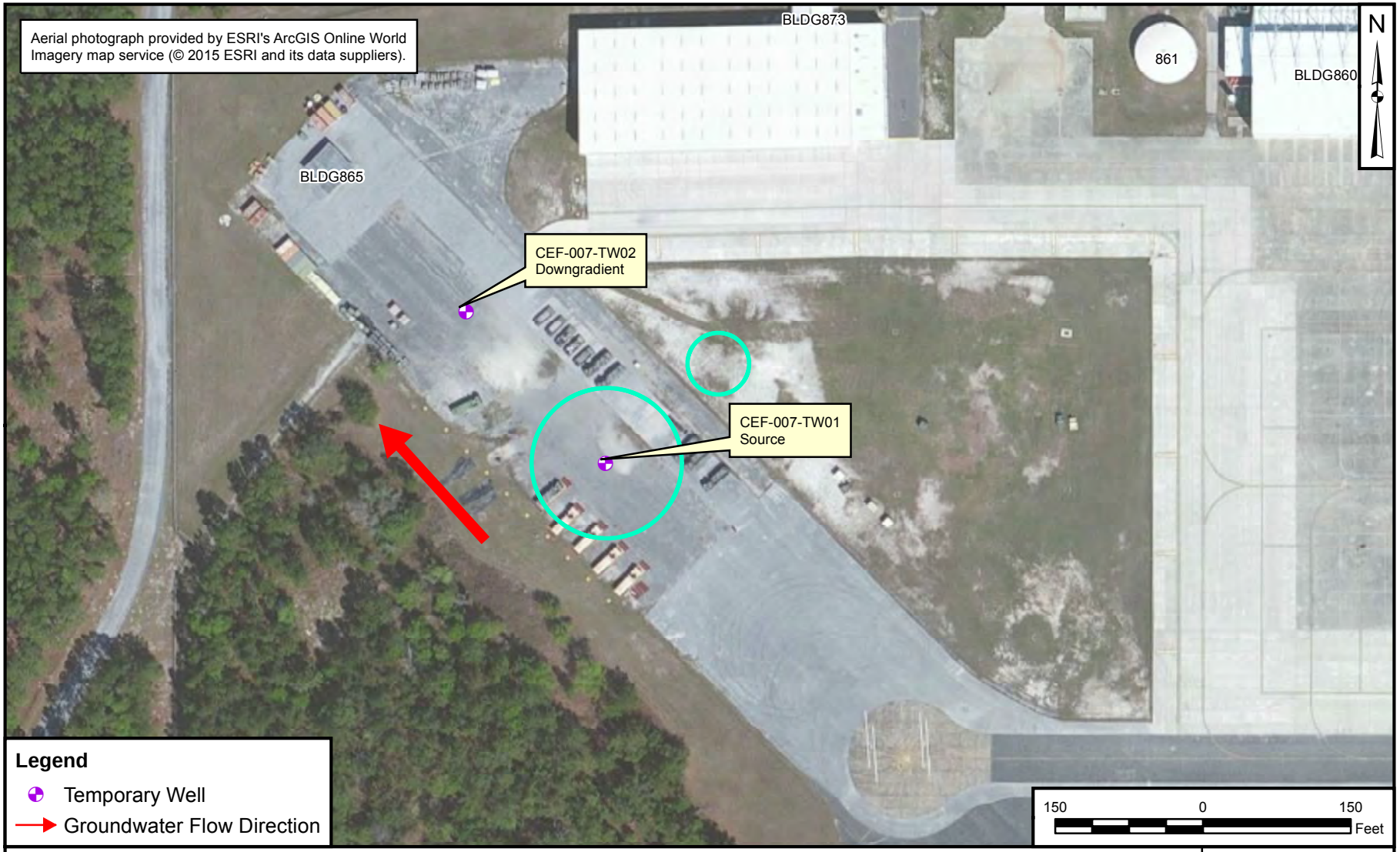


NAVFAC

SITE LOCATION
CRASH FIRE STATION
NAS CECIL FIELD
CECIL FIELD, FLORIDA

CTO	
JM10	
DRAWN BY	DATE
K. MOORE	02/21/17
CHECKED BY	DATE
T. JOHNSTON	03/27/17
FIGURE NUMBER	
17-2	

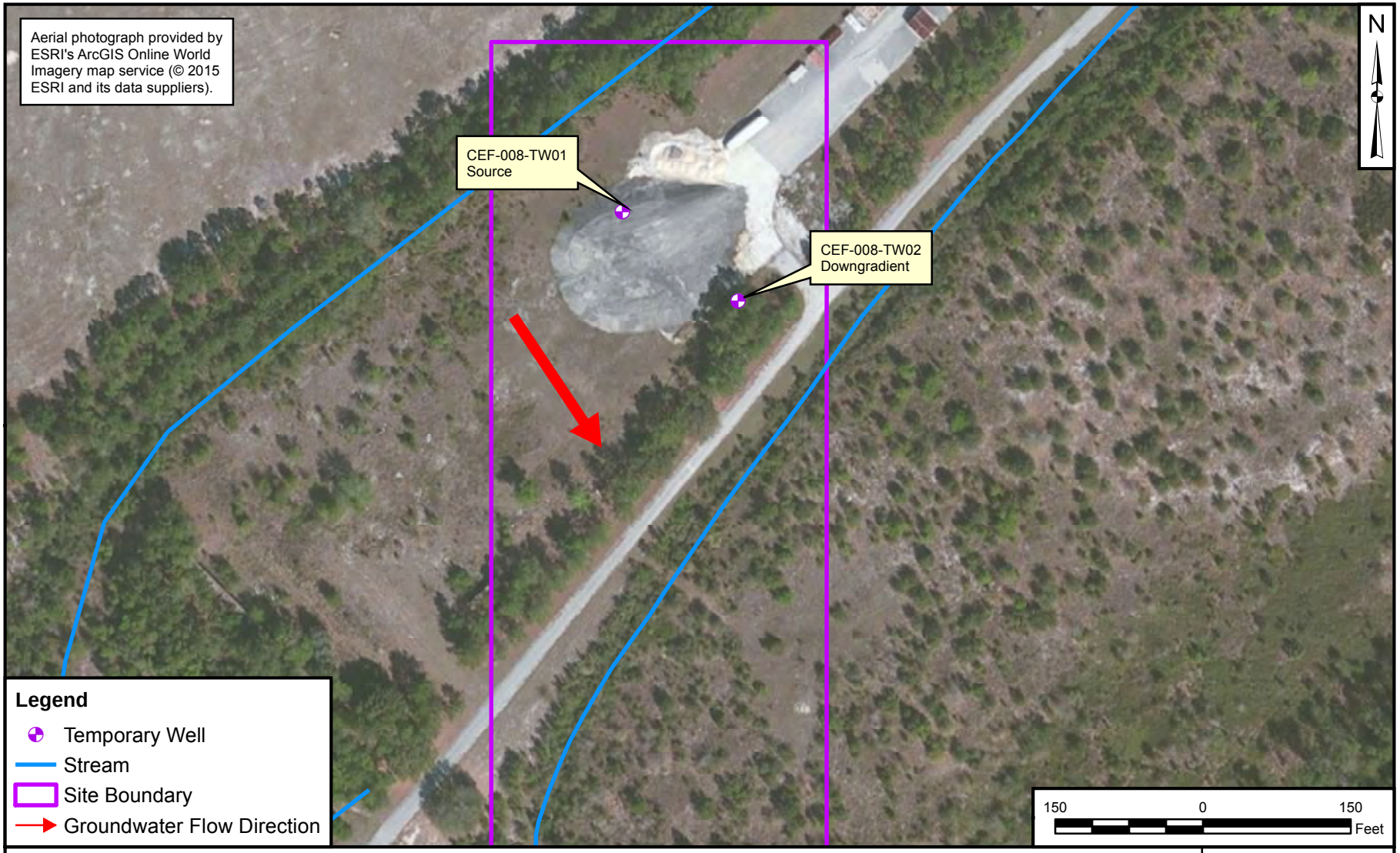
PGH P:\GIS\CECILFIELD_NAS\MAPDOCS\SITE07_SITE_MAP.MXD 03/27/17 JEE



SITE LOCATION
SITE 7
NAS CECIL FIELD
CECIL FIELD, FLORIDA

CTO	JM10
DRAWN BY	K. MOORE
DATE	02/21/17
CHECKED BY	T. JOHNSTON
DATE	03/27/17
FIGURE NUMBER	17-3

PGH P:\GIS\CECILFIELD_NAS\MAPDOCS\SITE08_SITE_MAP.MXD 03/27/17 JEE

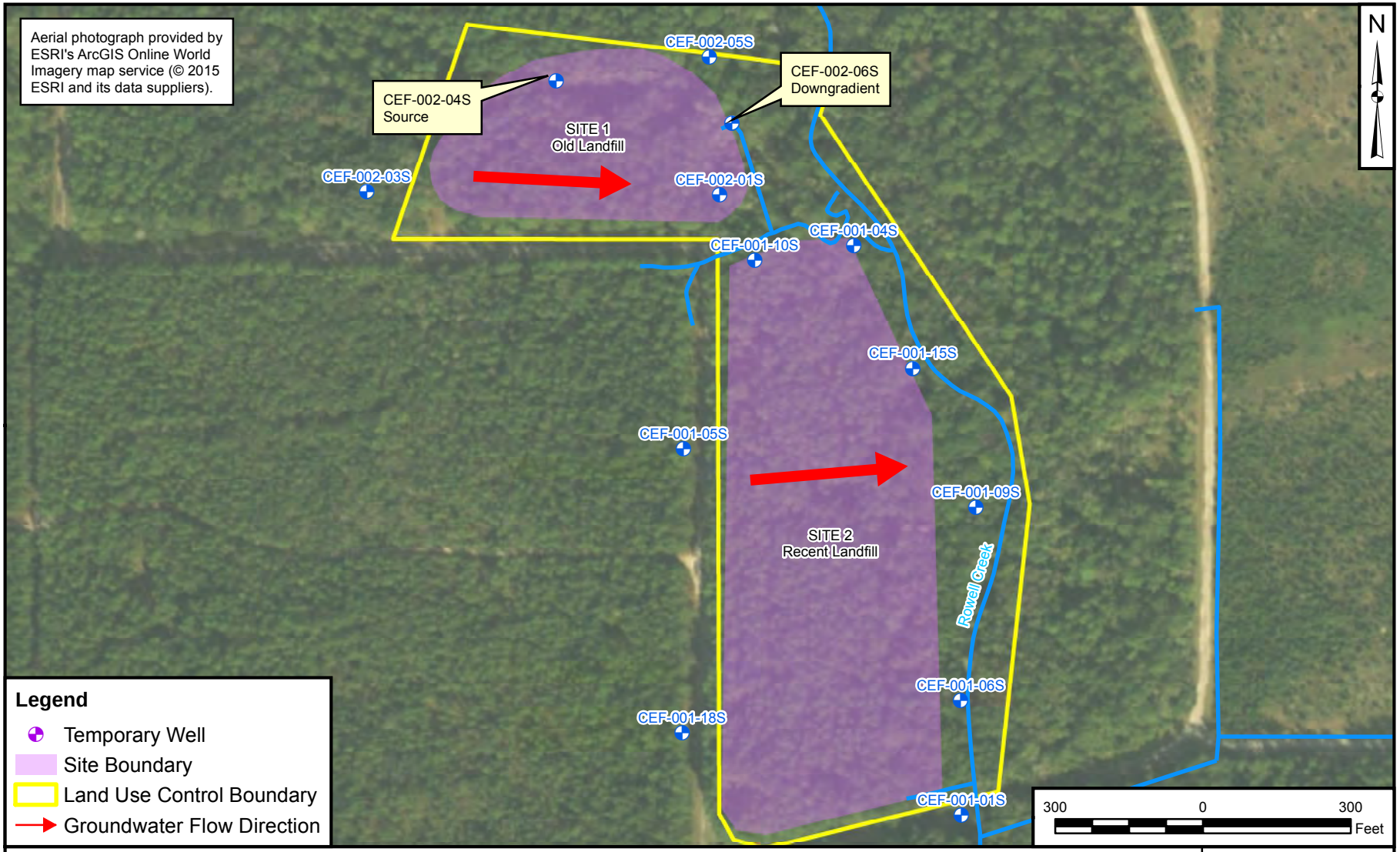


NAVFAC

SITE LOCATION
SITE 8
NAS CECIL FIELD
CECIL FIELD, FLORIDA

CTO	
JM10	
DRAWN BY	DATE
K. MOORE	02/21/17
CHECKED BY	DATE
T. JOHNSTON	03/27/17
FIGURE NUMBER	
17-4	

PGH P:\GIS\CECILFIELD_NAS\MAPDOCS\SITE01-02_SITE_MAP.MXD 03/27/17 JEE

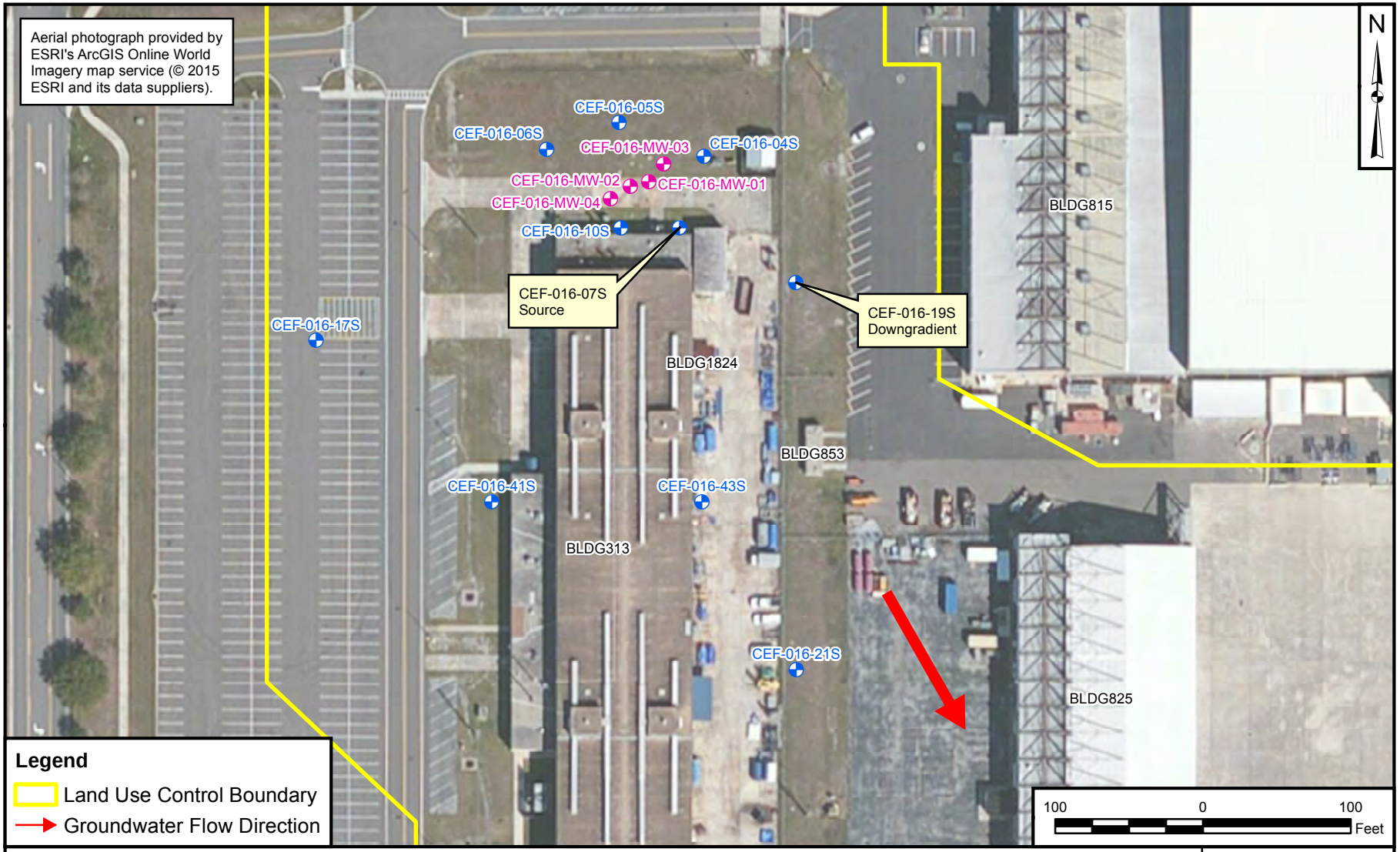


NAVFAC

SITE LOCATION
SITES 1 & 2
NAS CECIL FIELD
CECIL FIELD, FLORIDA

CTO	
JM10	
DRAWN BY	DATE
K. MOORE	02/21/17
CHECKED BY	DATE
T. JOHNSTON	03/27/17
FIGURE NUMBER	
17-5	

PGH P:\GIS\CECILFIELD_NAS\MAPDOCS\SITE16_SITE_MAP.MXD 03/27/17 JEE

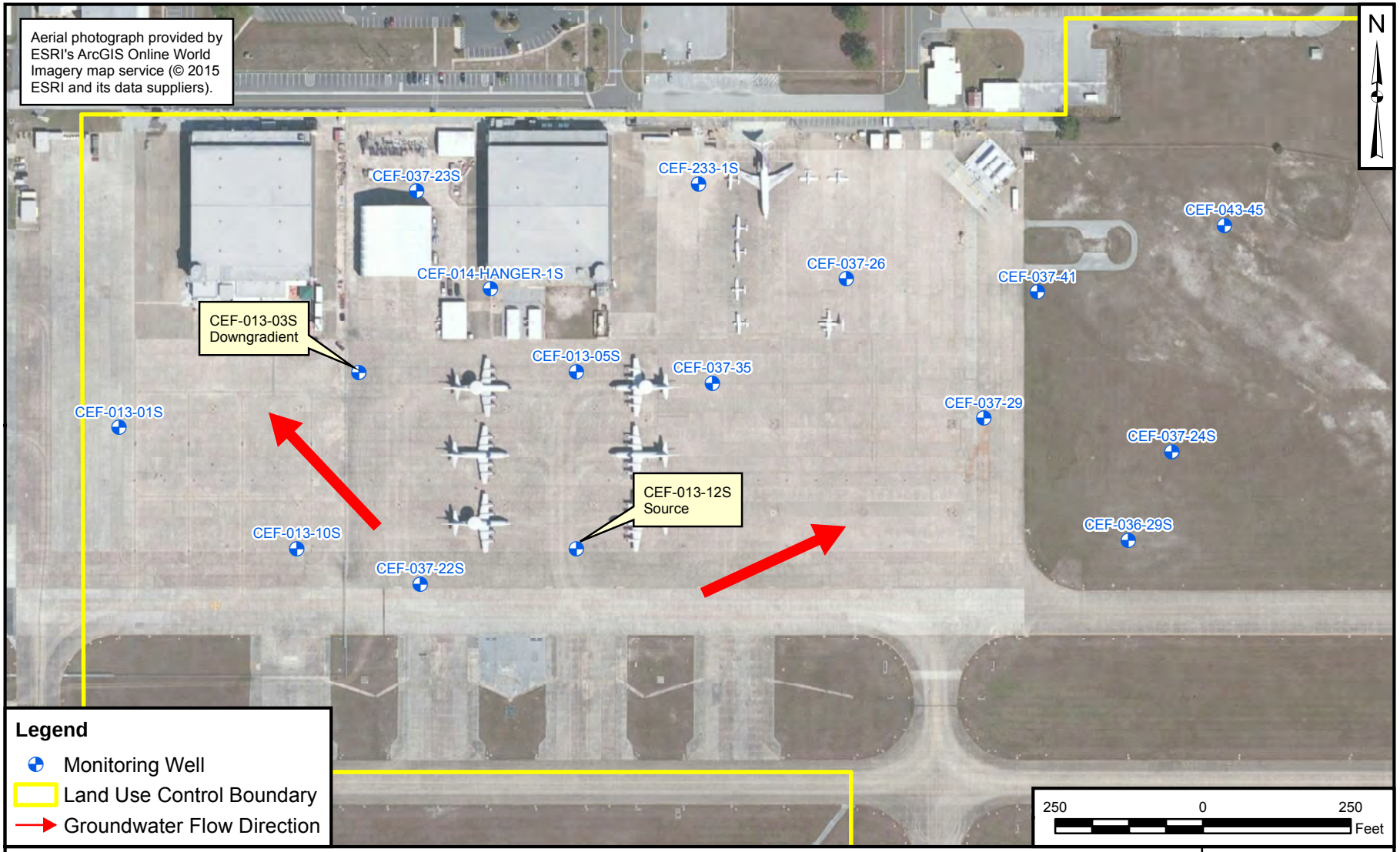


NAVFAC

SITE LOCATION
SITE 16
NAS CECIL FIELD
CECIL FIELD, FLORIDA

CTO	
JM10	
DRAWN BY	DATE
K. MOORE	02/21/17
CHECKED BY	DATE
T. JOHNSTON	03/27/17
FIGURE NUMBER	
17-6	

PGH P:\GIS\CECILFIELD_NAS\MAPDOCS\SITE36-37_SITE_MAP.MXD 03/27/17 JEE

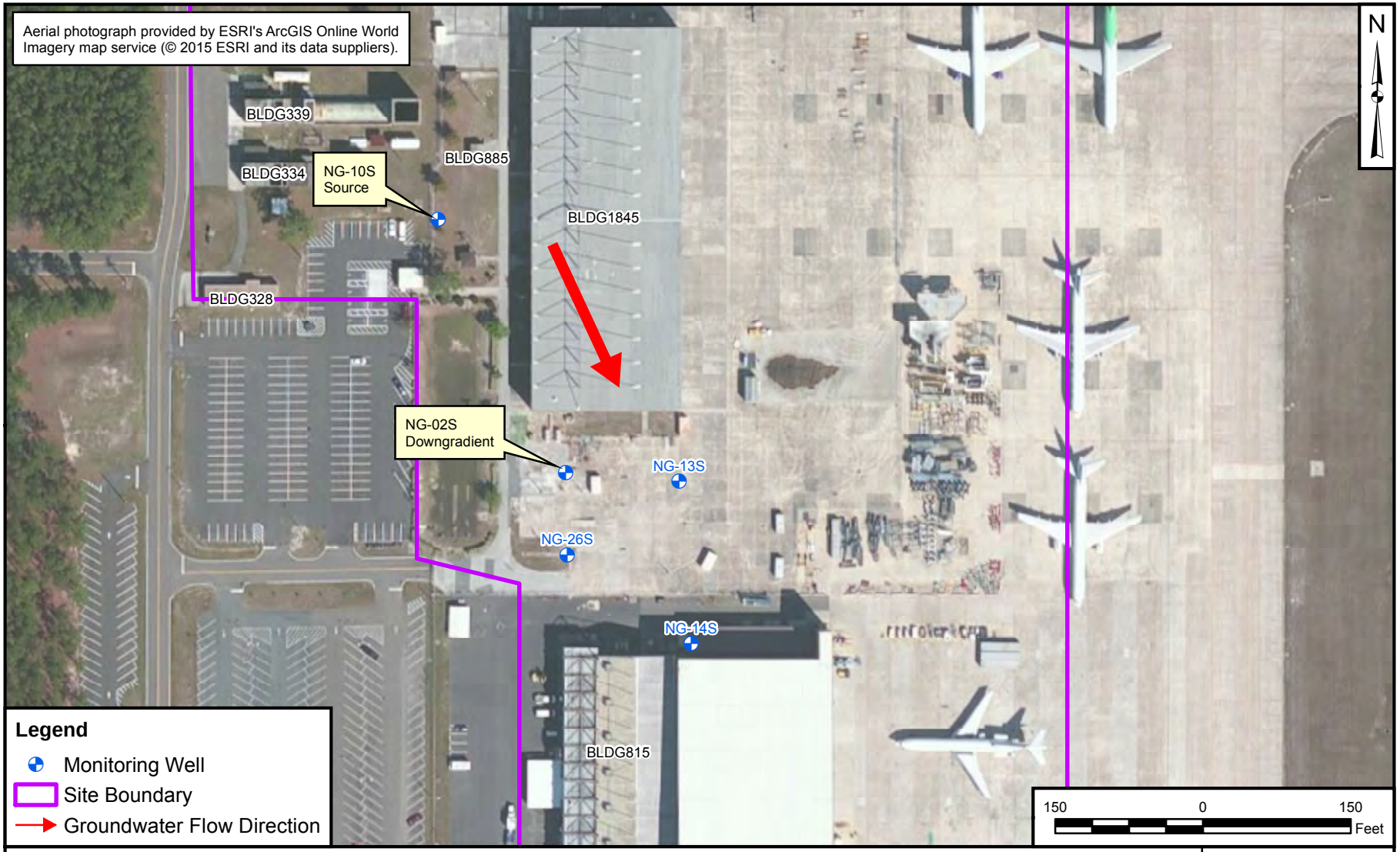


NAVFAC

SITE LOCATION
SITES 36 & 37
NAS CECIL FIELD
CECIL FIELD, FLORIDA

CTO	
JM10	
DRAWN BY	DATE
K. MOORE	02/21/17
CHECKED BY	DATE
T. JOHNSTON	03/27/17
FIGURE NUMBER	
17-7	

PGH P:\GIS\CECILFIELD_NAS\MAPDOCS\SITE59_SITE_MAP.MXD 03/27/17 JEE

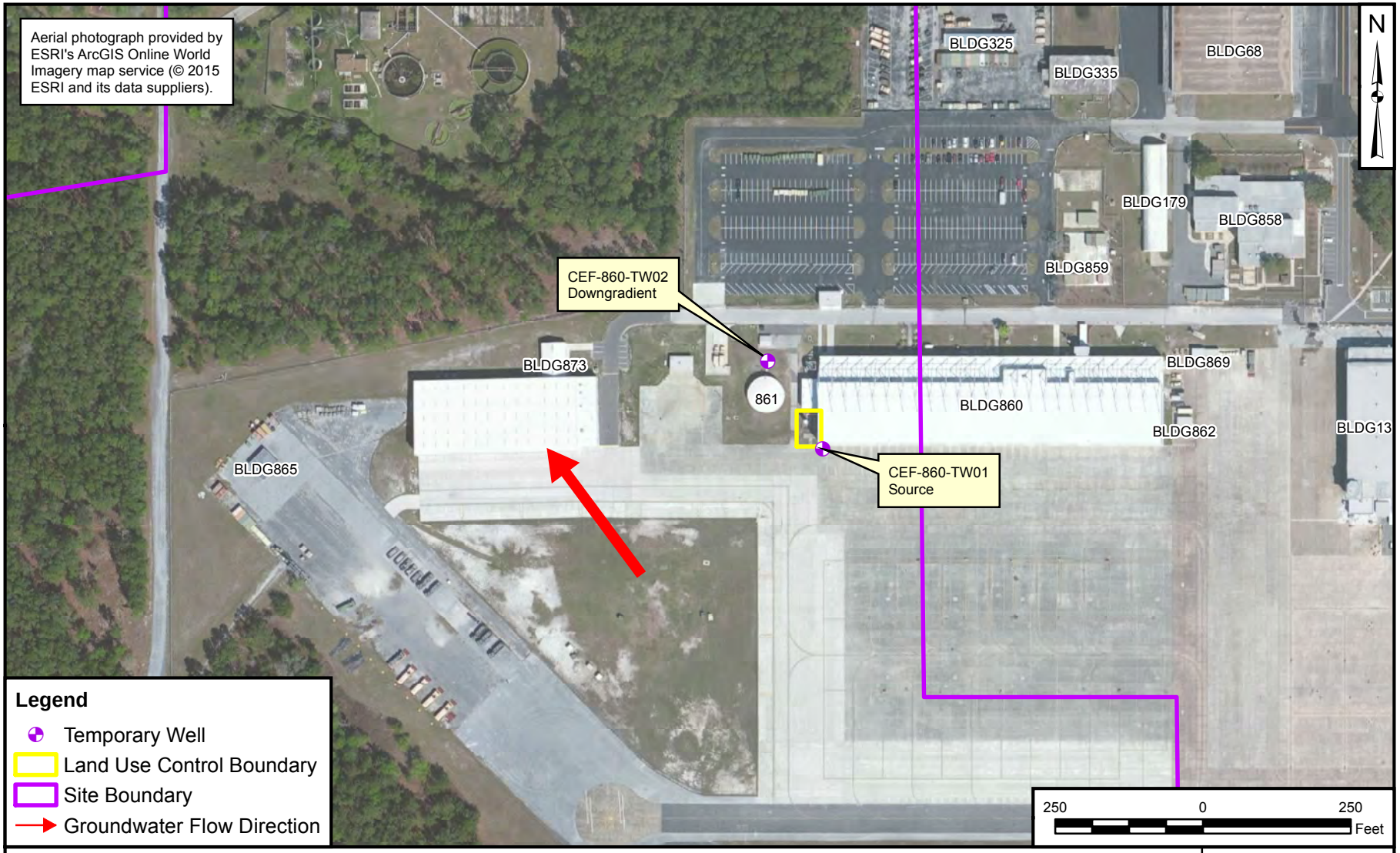


NAVFAC

SITE LOCATION
SITE 59
NAS CECIL FIELD
CECIL FIELD, FLORIDA

CTO	
JM10	
DRAWN BY	DATE
K. MOORE	02/21/17
CHECKED BY	DATE
T. JOHNSTON	03/27/17
FIGURE NUMBER	
17-8	

PGH P:\GIS\CECILFIELD_NAS\MAPDOCS\BULDING860_SITE_MAP.MXD 03/27/17 JEE

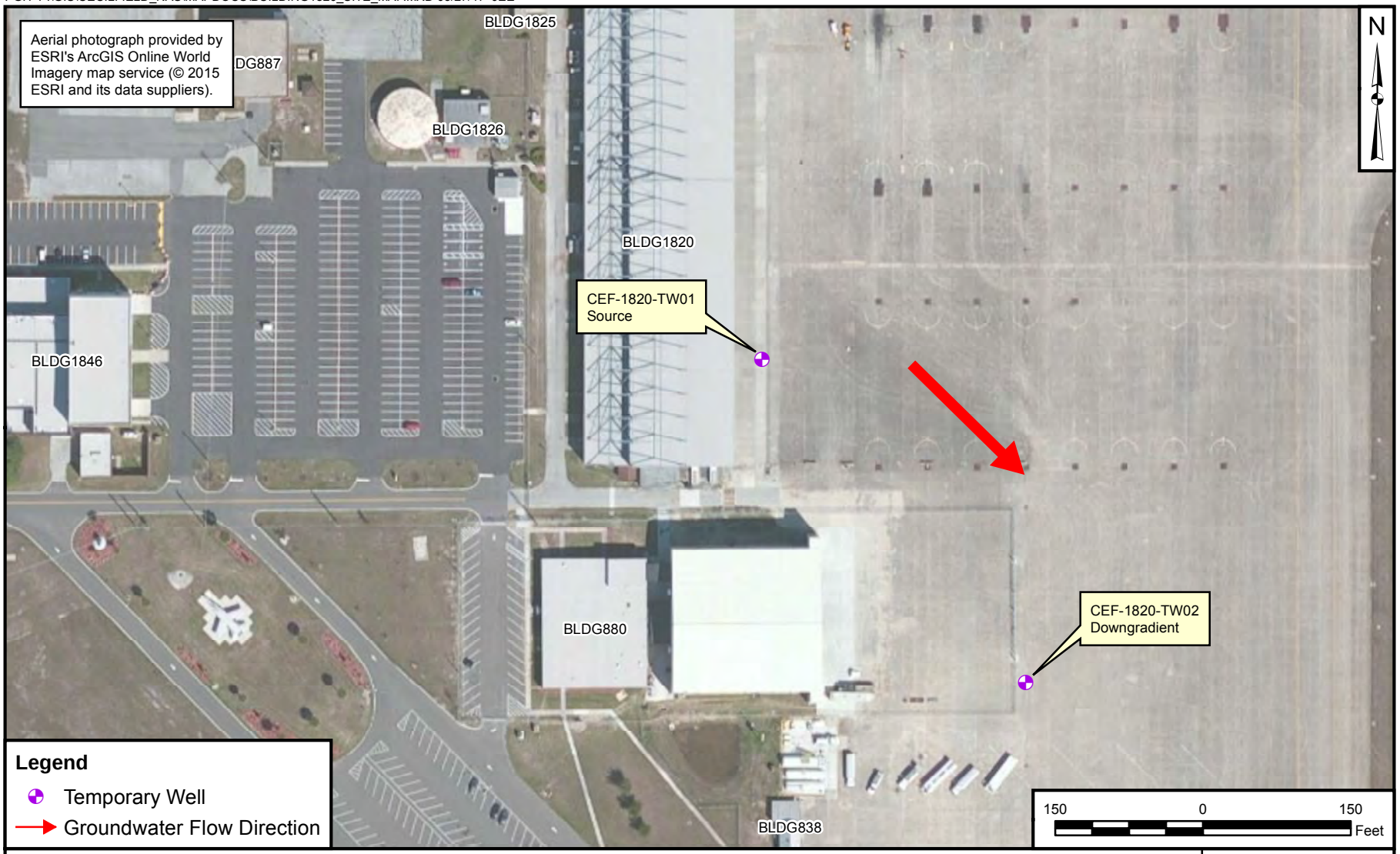


NAVFAC

SITE LOCATION
BUILDING 860
NAS CECIL FIELD
CECIL FIELD, FLORIDA

CTO	
JM10	
DRAWN BY	DATE
K. MOORE	02/21/17
CHECKED BY	DATE
T. JOHNSTON	03/27/17
FIGURE NUMBER	
17-9	

PGH P:\GIS\CECILFIELD_NAS\MAPDOCS\BUILDING1820_SITE_MAP.MXD 03/27/17 JEE

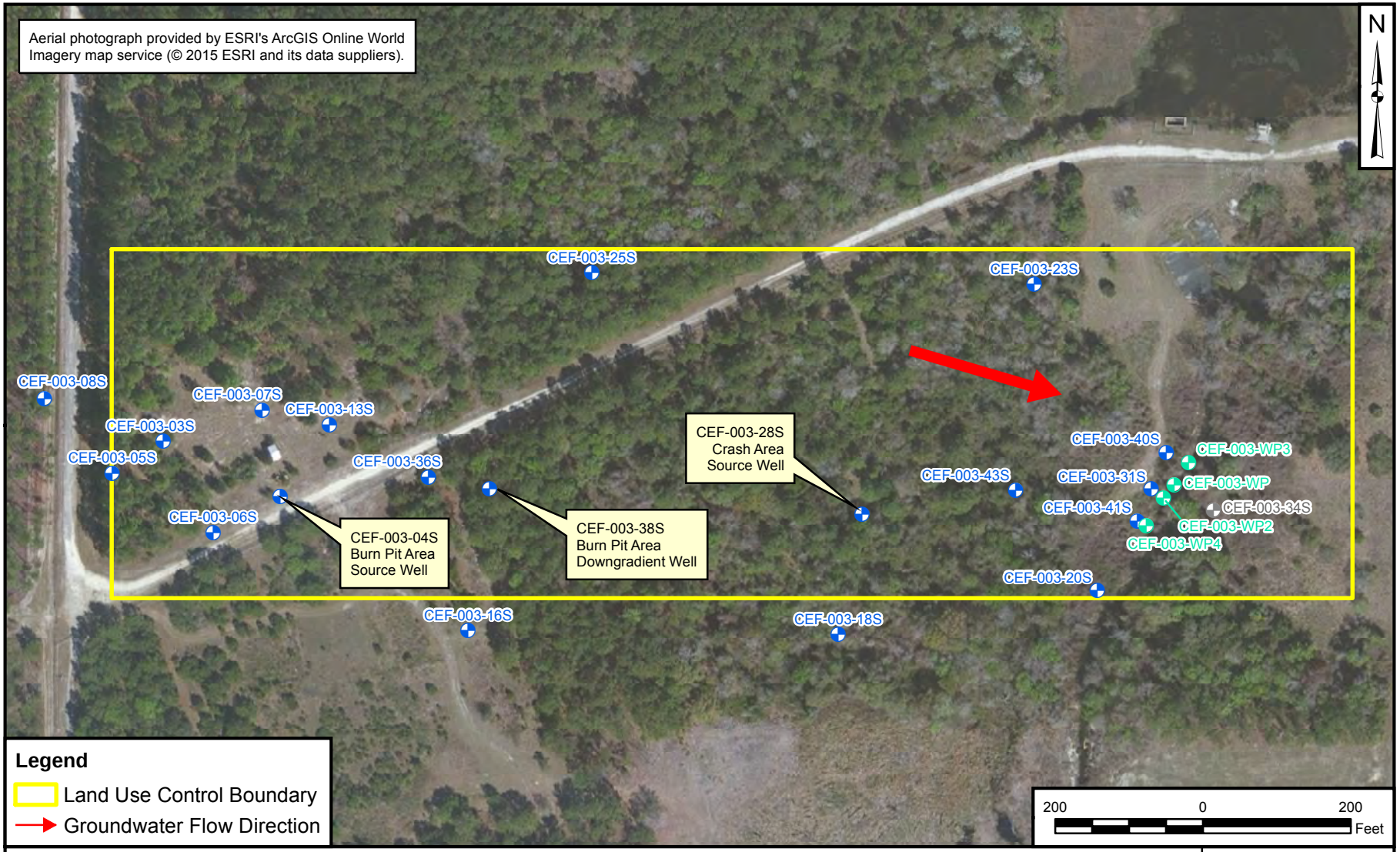


NAVFAC

SITE LOCATION
BUILDING 1820
NAS CECIL FIELD
CECIL FIELD, FLORIDA

CTO	
JM10	
DRAWN BY	DATE
K. MOORE	02/21/17
CHECKED BY	DATE
T. JOHNSTON	03/27/17
FIGURE NUMBER	
17-10	

PGH P:\GIS\CECILFIELD_NAS\MAPDOCS\SITE03_SITE_MAP.MXD 03/27/17 JEE



NAVFAC

SITE LOCATION
NORTH FUEL FARM
NAS CECIL FIELD
CECIL FIELD, FLORIDA

CTO	
JM10	
DRAWN BY	DATE
K. MOORE	02/21/17
CHECKED BY	DATE
T. JOHNSTON	03/27/17
FIGURE NUMBER	
17-11	

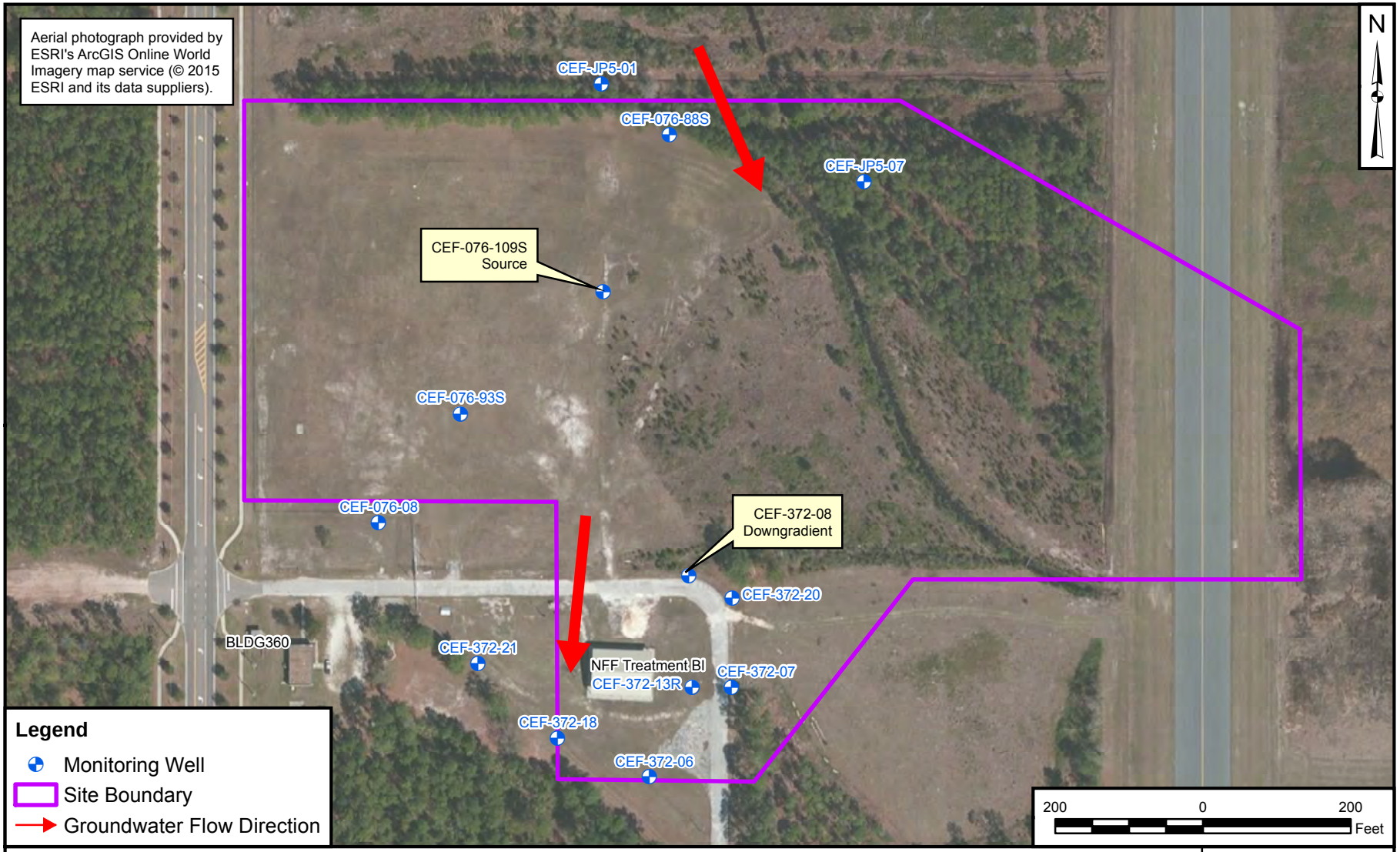
PGH P:\GIS\CECILFIELD_NAS\MAPDOCS\OCALA_CRASH_SITE_MAP.MXD 03/27/17 JEE

NAVFAC

SITE LOCATION
OCALA CRASH SITE
NAS CECIL FIELD
CECIL FIELD, FLORIDA

CTO	JM10
DRAWN BY	K. MOORE
DATE	02/21/17
CHECKED BY	T. JOHNSTON
DATE	03/27/17
FIGURE NUMBER	17-12

PGH P:\GIS\CECILFIELD_NAS\MAPDOCS\NORTH_FUEL_FARM_SITE_MAP.MXD 03/27/17 JEE

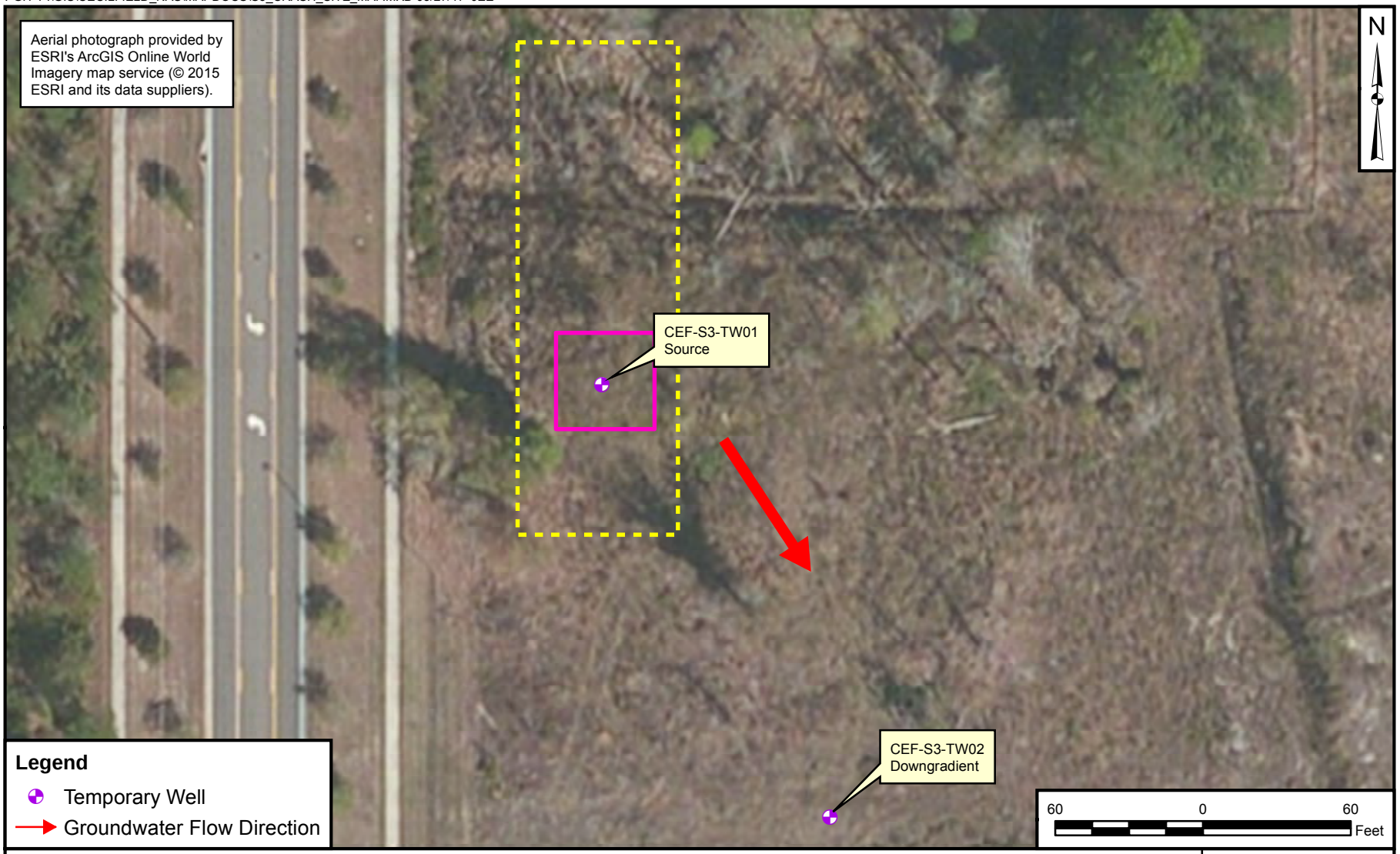


NAVFAC

SITE LOCATION
NORTH FUEL FARM
NAS CECIL FIELD
CECIL FIELD, FLORIDA

CTO	
JM10	
DRAWN BY	DATE
K. MOORE	02/21/17
CHECKED BY	DATE
T. JOHNSTON	03/27/17
FIGURE NUMBER	
17-13	

PGH P:\GIS\CECILFIELD_NAS\MAPDOCS\S3_CRASH_SITE_MAP.MXD 03/27/17 JEE



NAVFAC

SITE LOCATION
S-3 CRASH SITE
NAS CECIL FIELD
CECIL FIELD, FLORIDA

CTO	
JM10	
DRAWN BY	DATE
K. MOORE	02/21/17
CHECKED BY	DATE
T. JOHNSTON	03/27/17
FIGURE NUMBER	
17-14	