



**Groundwater Sample Results,
Level 2 Laboratory Report, Level 4 Laboratory Report,
Electronic Data Deliverable, Data Validation Report,
and the Sample Location Report, SDG 1701353**

*Marine Corps Base Camp Lejeune
North Carolina*

July 2019

November 01, 2017

Vista Work Order No. 1701353

Ms. Bianca Kleist Granger
CH2M Hill
14120 Ballantyne Corporate Place, Suite 200
Charlotte, NC 28277

Dear Ms. Granger,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on September 29, 2017. This sample set was analyzed on a standard turn-around time, under your Project Name 'Site 9 PFAS'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,



Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 1701353

Case Narrative

Sample Condition on Receipt:

Ten aqueous samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. As requested, the sample ID for "MW09-IDW-AQ-092817" was updated to "IR09-IDW-AQ-092817" and the collection time was updated to 12:00.

Analytical Notes:

Modified EPA Method 537

Sample "IR09-IDW-AQ-092817" contained particulate and was centrifuged prior to extraction.

The aqueous samples were extracted and analyzed for a selected list of PFAS using Modified EPA Method 537.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 the LOQ. The OPR recoveries were within the method acceptance criteria

The extracts of all samples except "IR09-IDW-AQ-092717", "TLZP-IDW-AQ-092817" and the OPR and Matrix Spike Duplicate were re-injected because one or more Injection Internal Standard Analyte response areas were outside of criteria. The results were similar in the second injections. The results from the re-injections have been reported.

The extract of sample "TLZP-IDW-AQ-092817" was re-injected because it followed an extract with an analyte with a concentration greater than the highest point in the calibration curve. The results from the re-injection have been reported.

The labeled standard recoveries for all QC and field samples were within the acceptance criteria.

As requested, an MS/MSD was performed on sample "IR09-GW11-17D". The MS/MSD recoveries and/or RPDs were out of the criteria for PFHxS, PFOA and PFOS.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1701353-01	IR09-GW10-17D	26-Sep-17 16:10	29-Sep-17 09:36	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1701353-02	IR09-GW10D-17D	26-Sep-17 16:15	29-Sep-17 09:36	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1701353-03	IR09-FTPGW01-17D	26-Sep-17 17:25	29-Sep-17 09:36	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1701353-04	IR09-GW11-17D	MS/MSD27-Sep-17 13:05	29-Sep-17 09:36	HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1701353-05	IR09-GW09-17D	27-Sep-17 16:00	29-Sep-17 09:36	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1701353-06	IR09-EB-092817	28-Sep-17 16:00	29-Sep-17 09:36	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1701353-07	IR09-FB-092817	28-Sep-17 16:10	29-Sep-17 09:36	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1701353-08	IR09-IDW-AQ-092717	27-Sep-17 14:10	29-Sep-17 09:36	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1701353-09	TLZP-IDW-AQ-092817	28-Sep-17 11:30	29-Sep-17 09:36	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1701353-10	IR09-IDW-AQ-092817	28-Sep-17 12:00	29-Sep-17 09:36	HDPE Bottle, 125 mL HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank
Modified EPA Method 537

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Aqueous	Lab Sample:	B7J0024-BLK1	Column:	BEH C18
Project:	Site 9 PFAS						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	1.79	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFHxA	ND	2.18	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFHpA	ND	0.591	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFHxS	1.60	0.947	5.00	8.00	J	B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFOA	ND	0.651	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFOS	ND	0.807	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFNA	ND	0.810	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFDA	ND	1.49	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
MeFOSAA	ND	1.65	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFOA	ND	1.05	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
EtFOSAA	ND	1.37	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFDoA	ND	0.792	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFTeDA	ND	0.494	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFTeDA	ND	0.755	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
Combined PFOA/PFOS	ND	0.807	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	117	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C2-PFHxA	IS	100	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C4-PFHpA	IS	83.1	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
18O2-PFHxS	IS	99.4	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C2-PFOA	IS	96.5	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C8-PFOS	IS	112	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C5-PFNA	IS	79.7	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C2-PFDA	IS	83.7	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
d3-MeFOSAA	IS	63.7	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C2-PFOA	IS	70.9	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
d5-EtFOSAA	IS	71.1	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C2-PFDoA	IS	70.2	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C2-PFTeDA	IS	87.7	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1

DL - Detection Limit

 LOD - Limit of Detection
 LOQ - Limit of quantitation

 LCL-UCL- Lower control limit - upper control limit
 Results reported to the DL.

 When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
 Only the linear isomer is reported for all other analytes.

Sample ID: OPR

Modified EPA Method 537

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Aqueous	Lab Sample:	B7J0024-BS1	Column:	BEH C18
Project:	Site 9 PFAS						

Analyte	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	84.9	80.0	106	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFHxA	87.1	80.0	109	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFHpA	90.3	80.0	113	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFHxS	77.9	80.0	97.4	70-130	B	B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFOA	86.5	80.0	108	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFOS	82.0	80.0	103	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFNA	83.2	80.0	104	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFDA	81.5	80.0	102	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
MeFOSAA	76.1	80.0	95.1	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFUnA	89.2	80.0	111	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
EtFOSAA	70.6	80.0	88.2	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFDoA	80.7	80.0	101	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFTTrDA	80.5	80.0	101	60-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFTeDA	77.5	80.0	96.9	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1

Labeled Standards	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	125	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C2-PFHxA	IS	103	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C4-PFHpA	IS	80.6	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
18O2-PFHxS	IS	94.4	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C2-PFOA	IS	94.7	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C8-PFOS	IS	104	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C5-PFNA	IS	81.7	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C2-PFDA	IS	78.5	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
d3-MeFOSAA	IS	74.1	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C2-PFUnA	IS	69.4	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
d5-EtFOSAA	IS	72.8	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C2-PFDoA	IS	75.3	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C2-PFTeDA	IS	97.5	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1

Sample ID: IR09-GW10-17D

Modified EPA Method 537

Client Data					Laboratory Data					
Name:	CH2M Hill	Matrix:	Aqueous		Lab Sample:	1701353-01	Column:	BEH C18		
Project:	Site 9 PFAS	Date Collected:	26-Sep-17 16:10		Date Received:	29-Sep-17 09:36				

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	99.4	1.98	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFHxA	1670	2.41	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFHpA	560	0.653	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFHxS	3950	10.5	55.3	88.4	B, D	B7J0024	07-Oct-17	0.113 L	12-Oct-17 06:54	10
PFOA	1190	0.719	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFOS	21300	8.92	55.3	88.4	D	B7J0024	07-Oct-17	0.113 L	12-Oct-17 06:54	10
PFNA	77.9	0.895	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFDA	15.7	1.65	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
MeFOSAA	ND	1.82	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFOA	ND	1.16	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
EtFOSAA	ND	1.51	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFOA	ND	0.875	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFOA	ND	0.546	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFOA	ND	0.834	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
Combined PFOA/PFOS	22500	8.92	55.3	88.4	D	B7J0024	07-Oct-17	0.113 L	12-Oct-17 06:54	10

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	143	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C2-PFHxA	IS	94.7	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C4-PFHpA	IS	87.8	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
18O2-PFHxS	IS	101	50 - 150	D	B7J0024	07-Oct-17	0.113 L	12-Oct-17 06:54	10
13C2-PFOA	IS	84.8	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C8-PFOS	IS	78.8	50 - 150	D	B7J0024	07-Oct-17	0.113 L	12-Oct-17 06:54	10
13C5-PFNA	IS	75.5	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C2-PFDA	IS	72.0	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
d3-MeFOSAA	IS	68.2	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C2-PFOA	IS	56.8	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
d5-EtFOSAA	IS	81.6	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C2-PFOA	IS	73.6	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C2-PFOA	IS	89.1	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: IR09-GW10D-17D

Modified EPA Method 537

Client Data				Laboratory Data			
Name:	C2 HM 2 ill	Matrix:	Aqueous	Lab Sample:	1701353-0H	Column:	BE2 C18
Project:	Site 9 PFAS	Date Collected:	H-Sep-17 16:15	Date Received:	H-Sep-17 09:36		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	96.0	1.90	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PF2 xA	1660	H3H	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PF2 pA	599	0.6H	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PF2 xS	3860	HD.1	106	170	B, D	B700HJ	07-4 ct-17	0.118 L	1H4 ct-17 07:05	HD
PF4 A	1110	0.69H	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PF4 S	30900	17.H	106	170	D	B700HJ	07-4 ct-17	0.118 L	1H4 ct-17 07:05	HD
PFNA	85.8	0.861	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PFDA	11.6	1.58	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
MeF4 SAA	ND	1.75	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PFUnA	ND	1.1H	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
EtF4 SAA	ND	1.J6	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PFDoA	ND	0.8JH	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PFTrDA	ND	0.5H	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PFTeDA	ND	0.803	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
Combined PF4 A/PF4 S	3HD00	17.H	106	170	D	B700HJ	07-4 ct-17	0.118 L	1H4 ct-17 07:05	HD

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	115	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
13CHPF2 xA	IS	86.0	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
13CJ-PF2 pA	IS	7H9	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
184 H-PF2 xS	IS	1H	50 - 150	D	B700HJ	07-4 ct-17	0.118 L	1H4 ct-17 07:05	HD
13CHPF4 A	IS	9H3	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
13C8-PF4 S	IS	75.6	50 - 150	D	B700HJ	07-4 ct-17	0.118 L	1H4 ct-17 07:05	HD
13C5-PFNA	IS	73.6	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
13CHPFDA	IS	67.8	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
d3-MeF4 SAA	IS	7J.7	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
13CHPFUnA	IS	63.5	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
d5-EtF4 SAA	IS	83.3	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
13CHPFDoA	IS	7H6	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
13CHPFTeDA	IS	86.J	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1

DL - Detection Limit

L4 D - Limit of Detection
L4 Q - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit
Results reported to the DL.

When reported, PF2 xS, PF4 A and PF4 S include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: IR09-FTPGW01-17D

Modified EPA Method 537

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Aqueous	Lab Sample:	1701353-03	Column:	BEH C18
Project:	Site 9 PFAS	Date Collected:	26-Sep-17 17:25	Date Received:	29-Sep-17 09:36		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	61.0	1.96	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFHxA	679	2.38	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFHpA	362	0.646	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFHxS	2410	5.18	27.4	43.7	B, D	B7J0024	07-Oct-17	0.114 L	12-Oct-17 07:26	5
PFOA	834	0.712	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFOS	7210	4.41	27.4	43.7	D	B7J0024	07-Oct-17	0.114 L	12-Oct-17 07:26	5
PFNA	64.4	0.885	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFDA	26.6	1.63	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
MeFOSAA	ND	1.80	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFOA	ND	1.15	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
EtFOSAA	ND	1.50	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFDoA	ND	0.866	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFTDA	ND	0.540	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFTeDA	ND	0.825	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
Combined PFOA/PFOS	8040	4.41	27.4	43.7	D	B7J0024	07-Oct-17	0.114 L	12-Oct-17 07:26	5

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	110	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C2-PFHxA	IS	92.0	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C4-PFHpA	IS	81.4	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
18O2-PFHxS	IS	80.5	50 - 150	D	B7J0024	07-Oct-17	0.114 L	12-Oct-17 07:26	5
13C2-PFOA	IS	87.8	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C8-PFOS	IS	98.1	50 - 150	D	B7J0024	07-Oct-17	0.114 L	12-Oct-17 07:26	5
13C5-PFNA	IS	83.4	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C2-PFDA	IS	84.1	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
d3-MeFOSAA	IS	83.2	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C2-PFOA	IS	71.3	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
d5-EtFOSAA	IS	83.9	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C2-PFDoA	IS	82.6	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C2-PFTeDA	IS	95.1	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: IR09-GW11-17D

Modified EPA Method 537

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	As neon6	Lab Sample:	1701353-0H	ColnmB:	E82 C1q
Project:	Site 9 PFAS	Date Collected:	u7-Sep-17 13:05	Date Received:	u9-Sep-17 09:3.		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	134	143	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PF2 xA	135	u45	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PF2 pA	. q7	04 37	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PF2 xS	10H	14u	549	q4 u	E	E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PFOA	u9q	0470u	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PFOS	u. u0	H45	u. 4	H44	D	E7J00uH	07-Oct-17	041. L	1u-Oct-17 07:37	5
PFNA	1145	0473	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PFDA	H4 u	14 1	549	q4 u	J	E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
MeFOSAA	ND	147q	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PF, BA	ND	143	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
8tFOSAA	ND	144	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PFDoA	ND	045H	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PFuDA	ND	04533	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PFuDA	ND	041H	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
CombiBed PFOA PFOS	u9u0	H45	u. 4	H44	D	E7J00uH	07-Oct-17	041. L	1u-Oct-17 07:37	5

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFES	/S	1uH	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
13Cu-PF2 xA	/S	9q4i	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
13CHPF2 pA	/S	q. 4i	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
1qOu-PF2 xS	/S	q34i	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
13Cu-PFOA	/S	10H	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
13Cq-PFOS	/S	9. 4	50 - 150	D	E7J00uH	07-Oct-17	041. L	1u-Oct-17 07:37	5
13C5-PFNA	/S	q94i	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
13Cu-PFDA	/S	7. 4H	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
d3-MeFOSAA	/S	7q45	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
13Cu-PF, BA	/S	q14	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
d5-8tFOSAA	/S	7H4	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
13Cu-PFDoA	/S	774	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
13Cu-PFuDA	/S	9H4	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of Quantitation

LCL-, CL- Lower Control Limit - Upper Control Limit
Result reported to the DL4

h we reported PF2 xS PFOA aBd PFOS iBnde botwliBear aBd braBwed i6omer64
OBly the liBear i6omer i6 reported for all otwer aBlyte64

Sample ID: IR09-GW11-17D

Modified EPA Method 537

Name:	CH2M Hill	Lab Sample:	B7J0024-MS1/B7J0024-MSD1	Source Lab Sample:	1701353-04
Project:	Site 9 PFAS	QC Batch:	B7J0024	Date Extracted:	07-Oct-17
Matrix:	Aqueous	Samp Size:	0.114/0.116 L	Column:	BEH C18

Analyte	Sample (ng/L)	MS (ng/L)	MS Spike Amt	MS % Rec	MS Quals	MSD (ng/L)	MSD Spike Amt	MSD % Rec	RPD	MSD Quals	%Rec Limits	RPD Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
PFBS	13.0	111	87.8	112		98.7	85.9	99.7	11.6		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFHxA	135	228	87.8	106		228	85.9	108	1.87		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFHpA	68.7	164	87.8	109		155	85.9	101	7.62		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFHxS	1040	995	87.8	-52.8	B, H	1140	85.9	113	551	B, H	70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFOA	298	448	87.8	171	H	417	85.9	138	21.4	H	70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFOS	2620	2990	439	84.1	D	2580	429	-10.3	256	D, H	70-130	25	12-Oct-17 06:33	5	12-Oct-17 06:43	5
PFNA	11.5	113	87.8	115		90.5	85.9	91.9	22.3		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFDA	4.62	87.8	87.8	94.8		79.1	85.9	86.7	8.93		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
MeFOSAA	ND	92.7	87.8	106		88.8	85.9	103	2.87		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFUnA	ND	87.5	87.8	99.7		97.1	85.9	113	12.5		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
EtFOSAA	ND	99.7	87.8	114		87.5	85.9	102	11.1		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFDaA	ND	71.5	87.8	81.4		75.0	85.9	87.3	6.99		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFTTrDA	ND	88.4	87.8	101		96.7	85.9	113	11.2		60-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFTeDA	ND	87.0	87.8	99.0		79.7	85.9	92.7	6.57		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1

Labeled Standards	Type	MS % Rec	MS Quals	MSD % Rec	MSD Quals	Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
13C3-PFBS	IS	111		118		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
13C2-PFHxA	IS	93.8		94.3		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
13C4-PFHpA	IS	80.8		82.4		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
18O2-PFHxS	IS	105		92.9		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
13C2-PFOA	IS	80.6		88.2		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
13C8-PFOS	IS	93.6	D	119	D	50-150	12-Oct-17 06:33	5	12-Oct-17 06:43	5
13C5-PFNA	IS	71.6		85.1		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
13C2-PFDA	IS	71.9		79.3		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
d3-MeFOSAA	IS	75.0		89.8		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
13C2-PFUnA	IS	78.3		76.7		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
d5-EtFOSAA	IS	71.7		86.2		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
13C2-PFDaA	IS	81.4		86.5		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
13C2-PFTeDA	IS	92.7		111		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1

Sample ID: IR09-GW09-17D

Modified EPA Method 537

Client Data					Laboratory Data					
Name:	CH2M Hill	Matrix:	Aqueous		Lab Sample:	1701353-05	Column:	BEH C18		
Project:	Site 9 PFAS	Date Collected:	27-Sep-17 16:00		Date Received:	29-Sep-17 09:36				

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	58.6	1.94	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFHxA	3150	47.3	109	173	D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
PFHpA	1070	0.641	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFHxS	4710	20.5	109	173	B, D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
PFOA	3460	14.1	109	173	D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
PFOS	35100	17.5	109	173	D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
PFNA	165	0.878	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFDA	71.6	1.62	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
MeFOSAA	16.2	1.79	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFOA	6.78	1.14	5.43	8.67	J	B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
EtFOSAA	17.1	1.49	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFDoA	ND	0.859	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFTDA	ND	0.536	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFTeDA	ND	0.818	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
Combined PFOA/PFOS	38600	17.5	109	173	D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	141	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
13C2-PFHxA	IS	70.7	50 - 150	D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
13C4-PFHpA	IS	92.1	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
18O2-PFHxS	IS	74.5	50 - 150	D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
13C2-PFOA	IS	86.8	50 - 150	D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
13C8-PFOS	IS	127	50 - 150	D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
13C5-PFNA	IS	86.3	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
13C2-PFDA	IS	84.7	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
d3-MeFOSAA	IS	78.6	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
13C2-PFOA	IS	69.8	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
d5-EtFOSAA	IS	80.4	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
13C2-PFDoA	IS	79.0	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
13C2-PFTeDA	IS	96.8	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: IR09-EB-092817

Modified EPA Method 537

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	As neon6	Lab Sample:	1701353-0H	ColnmB:	E82 C1q
Project:	Site 9 PFAS	Date Collected:	uq-Sep-17 1H00	Date Received:	u9-Sep-17 09:3H		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	1.93	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PF2 xA	ND	u.3O	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PF2 pA	ND	0.HBH	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PF2 xS	ND	1.0u	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PF4 A	ND	0.700	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PF4 S	ND	0.qHq	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PFNA	ND	0.q71	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PFDA	ND	1.HD	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
MeF4 SAA	ND	1.77	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PF, BA	ND	1.13	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
8tF4 SAA	ND	1.O7	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PFDoA	ND	0.q5u	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PFuDA	ND	0.531	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PFuDA	ND	0.q1u	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
CombiBed PF4 A PF4 S	ND	0.qHq	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFES	/S	10H	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13Cu-PF2 xA	/S	9O0	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13CO-PF2 pA	/S	7H3	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
1q4 u-PF2 xS	/S	9O9	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13Cu-PF4 A	/S	q9.7	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13Cq-PF4 S	/S	9u.1	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13C5-PFNA	/S	q1.3	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13Cu-PFDA	/S	HHu	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
d3-MeF4 SAA	/S	H5.1	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13Cu-PF, BA	/S	59.1	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
d5-8tF4 SAA	/S	H1.7	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13Cu-PFDoA	/S	5q.9	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13Cu-PFuDA	/S	q7.3	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1

DL - DetectioBLimit

L4 D - Limit of DetectioB
L4 Q - Limit of snaBitatioB

LCL-, CL- LoI er coBrol limit - npper coBrol limit
Re6nlt6 reported to twe DL.

h weBreportedWPF2 xSWPF4 A aBd PF4 S iB6nde botwliB6ar aBd braBwed i6omer6.
4 Bly twe liB6ar i6omer i6 reported for all otter aBalyte6.

Sample ID: IR09-FB-092817

Modified EPA Method 537

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Aqueous	Lab Sample:	1701353-07	Column:	BEH C18
Project:	Site 9 PFAS	Date Collected:	28-Sep-17 16:10	Date Received:	29-Sep-17 09:36		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	1.85	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PFHxA	ND	2.26	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PFHpA	ND	0.612	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PFHxS	1.95	0.981	5.17	8.29	QB	B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PF4 A	ND	0.67J	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PF4 S	ND	0.836	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PFNA	ND	0.839	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PFDA	ND	1.5J	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
MeF4 SAA	ND	1.71	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PfUnA	ND	1.09	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
EtF4 SAA	ND	1.12	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PfDoA	ND	0.820	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PfTrDA	ND	0.512	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PfTeDA	ND	0.782	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
Combined PF4 A/PF4 S	ND	0.836	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	129	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13C2-PFHxA	IS	99.7	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13CJ-PFHpA	IS	82.6	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
184 2-PFHxS	IS	10J	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13C2-PF4 A	IS	89.3	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13C8-PF4 S	IS	113	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13C5-PFNA	IS	86.3	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13C2-PFDA	IS	68.1	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
d3-MeF4 SAA	IS	51.3	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13C2-PFUnA	IS	61.3	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
d5-EtF4 SAA	IS	66.7	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13C2-PfDoA	IS	65.5	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13C2-PfTeDA	IS	81.J	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1

DL - Detection Limit

L4 D - Limit of Detection
L4 Q - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit
Results reported to the DL.

When reported, PFHxS, PF4 A and PF4 S include both linear and branched isomers.
4 nly the linear isomer is reported for all other analytes.

Sample ID: IR09-IDW-AQ-092717 **Modified EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Aqueous	Lab Sample:	1701353-08	Column:	BEH C18
Project:	Site 9 PFAS	Date Collected:	27-Sep-17 14:10	Date Received:	29-Sep-17 09:36		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFOA	1000	0.704	5.39	8.65		B7J0024	07-Oct-17	0.116 L	10-Oct-17 20:02	1
PFOS	11400	8.73	53.9	86.5	D	B7J0024	07-Oct-17	0.116 L	12-Oct-17 08:09	10
Combined PFOA/PFOS	12400	8.73	53.9	86.5	D	B7J0024	07-Oct-17	0.116 L	12-Oct-17 08:09	10

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFOA	IS	83.7	50 - 150		B7J0024	07-Oct-17	0.116 L	10-Oct-17 20:02	1
13C8-PFOS	IS	76.4	50 - 150	D	B7J0024	07-Oct-17	0.116 L	12-Oct-17 08:09	10

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: TLZP-IDW-AQ-092817 **Modified EPA Method 537**

Client Data				Laboratory Data			
Name:	C8 HM 8 ill	Matrix:	Aq2eo2s	Lab Sample:	1701353-09	Col2mu:	n B8 C1E
Project:	Site 9 PFAS	Date Collected:	HE-Sep-17 11:30	Date 4 eceiRed:	H-Sep-17 09:3v		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PF6 A	ND	0@91	5@0	EO9		n 7J00H	07-6 ct-17	0@1EL	10-6 ct-17 HD:HB	1
PF6 S	7@E	0@E5v	5@0	EO9	J	n 7J00H	07-6 ct-17	0@1EL	10-6 ct-17 HD:HB	1
Combiued PF6 A/PF6 S	7@E	0@E5v	5@0	EO9	J	n 7J00H	07-6 ct-17	0@1EL	10-6 ct-17 HD:HB	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13CH-PF6 A	IS	E9@	50 - 150		n 7J00H	07-6 ct-17	0@1EL	10-6 ct-17 HD:HB	1
13CE-PF6 S	IS	109	50 - 150		n 7J00H	07-6 ct-17	0@1EL	10-6 ct-17 HD:HB	1

DL - Detectiou Limit	L6 D - Limit of Detectiou L6 Q - Limit of q2autitaiou	LCL-UCL- Lower coutrol limit - 2pper coutrol limit 4 es2lts reported to the DLO	Wheu reported, PF8 xS, PF6 A aud PF6 S iucl2de both liuear aud brauched isomersO 6 uly the liuear isomer is reported for all other aualytesO
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Sample ID: IR09-IDW-AQ-092817 **Modified EPA Method 537**

Client Data				Laboratory Data			
Name:	C8 HM 8 ill	Matrix:	Aq2eo2s	Lab Sample:	1701353-10	Col2mu:	n B8 C1E
Project:	Site 9 PFAS	Date Collected:	HE-Sep-17 1H00	Date 4 eceiRed:	H-Sep-17 09:3v		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PF6 A	HHH	0Q7v	5Qll	EQ1		n 7J00H	07-6 ct-17	0QH L	10-6 ct-17 HD:3.	1
PF6 S	Hv300	1vQ	10.	1vv	D	n 7J00H	07-6 ct-17	0QH L	1H-6 ct-17 0E:HD	HD
Combiued PF6 A/PF6 S	HE500	1vQ	10.	1vv	D	n 7J00H	07-6 ct-17	0QH L	1H-6 ct-17 0E:HD	HD

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13CH-PF6 A	IS	90Q	50 - 150		n 7J00H	07-6 ct-17	0QH L	10-6 ct-17 HD:3.	1
13CE-PF6 S	IS	73Q	50 - 150	D	n 7J00H	07-6 ct-17	0QH L	1H-6 ct-17 0E:HD	HD

DL - Detectiou Limit	L6 D - Limit of Detectiou	LCL-UCL- Lower coutrol limit - 2pper coutrol limit	Wheu reported, PF8 xS, PF6 A aud PF6 S iucl2de both liuear aud brauched isomersO
	L6 Q - Limit of q2autitaiou	4 es2lts reported to the DLO	6 uly the liuear isomer is reported for all other aualytesO

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The associated compound concentration exceeded the calibration range of the instrument.
H	Recovery and/or RPD was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Reporting Limit/LOQ.
M	Estimated Maximum Possible Concentration. (CA Region 2 projects only)
*	See Cover Letter
Conc.	Concentration
NA	Not applicable
ND	Not Detected
TEQ	Toxic Equivalency
U	Not Detected (specific projects only)

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
Arkansas Department of Environmental Quality	17-015-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-18
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2016026
Minnesota Department of Health	1175673
New Hampshire Environmental Accreditation Program	207716
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-008
Pennsylvania Department of Environmental Protection	013
Texas Commission on Environmental Quality	T104704189-17-8
Virginia Department of General Services	8621
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope	EPA 1613B

Dilution GC/HRMS	
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 877-345-1113 ♦ (fax) 866-417-0548

32841

Send Results to:		Send Invoice to:		Analysis Requirements:				Lab Use Only:		
Name <u>Bianca</u>		Name _____		<div style="font-size: 1.5em; font-weight: bold;">1701353</div> <div style="font-size: 1.5em; font-weight: bold;">0.6°C</div>				VOA Headspace Y N NA		
Company <u>CH2M</u>		Company _____						Field Filtered Y N NA		
Address _____		Address _____						Correct Containers Y N NA		
City <u>Charlotte</u>		City _____						Discrepancies Y N NA		
State, Zip <u>NC</u>		State, Zip _____						Cust. Seals Intact Y N NA		
Phone _____		Phone _____						Containers Intact Y N NA		
Fax _____		Fax _____		Airbill #: _____						
E-mail <u>Bianca.granger@CH2M.com</u>		E-mail <u>CH2M.com</u>		CAR #: _____						
Project No./Name: <u>Site 9 PFA</u>		Sampler's (Signature): <u>Matt</u>		<div style="font-size: 1.5em; font-weight: bold;">select PFCs</div>						

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix								Comments	No. of Bottles	Lab Use Only Containers/Pres.
	¹⁶¹⁰ 9-26-17	IRO9-GW10-17D	AQ	X								2	
	¹⁶¹⁵ 9-26-17	IRO9-GW10D-17D	AQ	X								2	
	¹⁷²⁵ 9-26-17	IRO9-FTPGW01-17D	AQ	X								2	
	¹³⁰⁵ 9-27-17	IRO9-GW11-17D	AQ	X								2	
	¹³⁰⁵ 9-27-17	IRO9-GW11-17D-MS	AQ	X								2	
	¹³⁰⁵ 9-27-17	IRO9-GW11-17D-SD	AQ	X								2	
	¹³⁰⁵ 9-27-17	IRO9-GW09-17D	AQ	X								2	
	¹⁶⁰⁰ 9-28-17	IRO9-EB-092817	AQ	X								2	
	¹⁶¹⁰ 9-28-17	IRO9-FB-092817	AQ	X								2	
	¹⁴¹⁰ 9-29-17	IRO9-IDW-AQ-092717	AQ	X								2	
	¹¹³⁰ 9-28-17	TL2P-IDW-AQ-092817	AQ	X								2	
	¹²¹⁵ 9-28-17	MW09-IPW-AQ-092817	AQ	X								2	

Sample Kit Prep'd by: (Signature) <u>Matt</u>		Date/Time: 9-26-17	Received By: (Signature) _____		REMARKS:	Details:		
Relinquished by: (Signature) <u>Matt</u>		Date/Time: 9-28-17	Received By: (Signature) <u>Bob Benedict</u>			Page <u>1</u> of <u>1</u>		
Relinquished by: (Signature) _____		Date/Time: _____	Received By: (Signature) _____			Cooler No. <u>1</u> of <u>1</u>		
Received for Laboratory by: (Signature) _____		Date/Time: _____	Temperature: _____			Date Shipped <u>9/27/17</u>		
					Shipped By <u>Matt</u>			
					Turnaround <u>per sow</u>			

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

Sample Log-in Checklist

 Vista Work Order #: 1701353 TAT Std

Samples Arrival:	Date/Time <u>09/29/17 0936</u>		Initials: <u>UBLB</u>		Location: <u>WR-2</u>		
	Shelf/Rack: <u>NA</u>						
Logged In:	Date/Time <u>09/30/17 1039</u>		Initials: <u>UBLB</u>		Location: <u>WR-2</u>		
	Shelf/Rack: <u>F-6</u>						
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac	<input type="checkbox"/> GSO	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice		<input type="checkbox"/> Blue Ice		<input type="checkbox"/> Dry Ice		<input type="checkbox"/> None
Temp °C: <u>6.5</u> (uncorrected)	Time: <u>1047</u>		Thermometer ID: IR-1				
Temp °C: <u>0.6</u> (corrected)	Probe used: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>						

		YES	NO	NA
Adequate Sample Volume Received?		✓		
Holding Time Acceptable?		✓		
Shipping Container(s) Intact?		✓		
Shipping Custody Seals Intact?		✓		
Shipping Documentation Present?		✓		
Airbill	Trk # <u>787885787919</u>	✓		
Sample Container Intact?		✓		
Sample Custody Seals Intact?				✓
Chain of Custody / Sample Documentation Present?		✓		
COC Anomaly/Sample Acceptance Form completed?			✓	✓
If Chlorinated or Drinking Water Samples, Acceptable Preservation?				✓
Preservation Documented:	Na ₂ S ₂ O ₃ Trizma <u>None</u> <u>Yes</u> No NA			
Shipping Container	<u>Vista</u> Client <u>Retain</u> Return Dispose			

Comments:

November 01, 2017

Vista Work Order No. 1701353

Ms. Bianca Kleist Granger
CH2M Hill
14120 Ballantyne Corporate Place, Suite 200
Charlotte, NC 28277

Dear Ms. Granger,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on September 29, 2017. This sample set was analyzed on a standard turn-around time, under your Project Name 'Site 9 PFAS'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,



Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 1701353

Case Narrative

Sample Condition on Receipt:

Ten aqueous samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. As requested, the sample ID for "MW09-IDW-AQ-092817" was updated to "IR09-IDW-AQ-092817" and the collection time was updated to 12:00.

Analytical Notes:

Modified EPA Method 537

Sample "IR09-IDW-AQ-092817" contained particulate and was centrifuged prior to extraction.

The aqueous samples were extracted and analyzed for a selected list of PFAS using Modified EPA Method 537.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 the LOQ. The OPR recoveries were within the method acceptance criteria

The extracts of all samples except "IR09-IDW-AQ-092717", "TLZP-IDW-AQ-092817" and the OPR and Matrix Spike Duplicate were re-injected because one or more Injection Internal Standard Analyte response areas were outside of criteria. The results were similar in the second injections. The results from the re-injections have been reported.

The extract of sample "TLZP-IDW-AQ-092817" was re-injected because it followed an extract with an analyte with a concentration greater than the highest point in the calibration curve. The results from the re-injection have been reported.

The labeled standard recoveries for all QC and field samples were within the acceptance criteria.

As requested, an MS/MSD was performed on sample "IR09-GW11-17D". The MS/MSD recoveries and/or RPDs were out of the criteria for PFHxS, PFOA and PFOS.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1701353-01	IR09-GW10-17D	26-Sep-17 16:10	29-Sep-17 09:36	HDPE Bottle, 125 mL
1701353-02	IR09-GW10D-17D	26-Sep-17 16:15	29-Sep-17 09:36	HDPE Bottle, 125 mL
1701353-03	IR09-FTPGW01-17D	26-Sep-17 17:25	29-Sep-17 09:36	HDPE Bottle, 125 mL
1701353-04	IR09-GW11-17D	MS/MSD27-Sep-17 13:05	29-Sep-17 09:36	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1701353-05	IR09-GW09-17D	27-Sep-17 16:00	29-Sep-17 09:36	HDPE Bottle, 125 mL
1701353-06	IR09-EB-092817	28-Sep-17 16:00	29-Sep-17 09:36	HDPE Bottle, 125 mL
1701353-07	IR09-FB-092817	28-Sep-17 16:10	29-Sep-17 09:36	HDPE Bottle, 125 mL
1701353-08	IR09-IDW-AQ-092717	27-Sep-17 14:10	29-Sep-17 09:36	HDPE Bottle, 125 mL
1701353-09	TLZP-IDW-AQ-092817	28-Sep-17 11:30	29-Sep-17 09:36	HDPE Bottle, 125 mL
1701353-10	IR09-IDW-AQ-092817	28-Sep-17 12:00	29-Sep-17 09:36	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank
Modified EPA Method 537

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Aqueous	Lab Sample:	B7J0024-BLK1	Column:	BEH C18
Project:	Site 9 PFAS						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	1.79	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFHxA	ND	2.18	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFHpA	ND	0.591	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFHxS	1.60	0.947	5.00	8.00	J	B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFOA	ND	0.651	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFOS	ND	0.807	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFNA	ND	0.810	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFDA	ND	1.49	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
MeFOSAA	ND	1.65	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFUnA	ND	1.05	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
EtFOSAA	ND	1.37	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFDoA	ND	0.792	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFTeDA	ND	0.494	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
PFTeDA	ND	0.755	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
Combined PFOA/PFOS	ND	0.807	5.00	8.00		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	117	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C2-PFHxA	IS	100	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C4-PFHpA	IS	83.1	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
18O2-PFHxS	IS	99.4	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C2-PFOA	IS	96.5	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C8-PFOS	IS	112	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C5-PFNA	IS	79.7	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C2-PFDA	IS	83.7	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
d3-MeFOSAA	IS	63.7	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C2-PFUnA	IS	70.9	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
d5-EtFOSAA	IS	71.1	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C2-PFDoA	IS	70.2	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1
13C2-PFTeDA	IS	87.7	50 - 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:53	1

DL - Detection Limit

 LOD - Limit of Detection
 LOQ - Limit of quantitation

 LCL-UCL- Lower control limit - upper control limit
 Results reported to the DL.

 When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
 Only the linear isomer is reported for all other analytes.

Sample ID: OPR

Modified EPA Method 537

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Aqueous	Lab Sample:	B7J0024-BS1	Column:	BEH C18
Project:	Site 9 PFAS						

Analyte	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	84.9	80.0	106	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFHxA	87.1	80.0	109	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFHpA	90.3	80.0	113	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFHxS	77.9	80.0	97.4	70-130	B	B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFOA	86.5	80.0	108	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFOS	82.0	80.0	103	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFNA	83.2	80.0	104	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFDA	81.5	80.0	102	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
MeFOSAA	76.1	80.0	95.1	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFUnA	89.2	80.0	111	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
EtFOSAA	70.6	80.0	88.2	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFDoA	80.7	80.0	101	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFTTrDA	80.5	80.0	101	60-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
PFTeDA	77.5	80.0	96.9	70-130		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1

Labeled Standards	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	125	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C2-PFHxA	IS	103	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C4-PFHpA	IS	80.6	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
18O2-PFHxS	IS	94.4	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C2-PFOA	IS	94.7	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C8-PFOS	IS	104	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C5-PFNA	IS	81.7	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C2-PFDA	IS	78.5	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
d3-MeFOSAA	IS	74.1	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C2-PFUnA	IS	69.4	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
d5-EtFOSAA	IS	72.8	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C2-PFDoA	IS	75.3	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1
13C2-PFTeDA	IS	97.5	50- 150		B7J0024	07-Oct-17	0.125 L	09-Oct-17 17:00	1

Sample ID: IR09-GW10-17D

Modified EPA Method 537

Client Data					Laboratory Data					
Name:	CH2M Hill	Matrix:	Aqueous		Lab Sample:	1701353-01	Column:	BEH C18		
Project:	Site 9 PFAS	Date Collected:	26-Sep-17 16:10		Date Received:	29-Sep-17 09:36				

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	99.4	1.98	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFHxA	1670	2.41	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFHpA	560	0.653	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFHxS	3950	10.5	55.3	88.4	B, D	B7J0024	07-Oct-17	0.113 L	12-Oct-17 06:54	10
PFOA	1190	0.719	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFOS	21300	8.92	55.3	88.4	D	B7J0024	07-Oct-17	0.113 L	12-Oct-17 06:54	10
PFNA	77.9	0.895	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFDA	15.7	1.65	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
MeFOSAA	ND	1.82	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFUnA	ND	1.16	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
EtFOSAA	ND	1.51	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFDoA	ND	0.875	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFTrDA	ND	0.546	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFTeDA	ND	0.834	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
Combined PFOA/PFOS	22500	8.92	55.3	88.4	D	B7J0024	07-Oct-17	0.113 L	12-Oct-17 06:54	10

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	143	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C2-PFHxA	IS	94.7	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C4-PFHpA	IS	87.8	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
18O2-PFHxS	IS	101	50 - 150	D	B7J0024	07-Oct-17	0.113 L	12-Oct-17 06:54	10
13C2-PFOA	IS	84.8	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C8-PFOS	IS	78.8	50 - 150	D	B7J0024	07-Oct-17	0.113 L	12-Oct-17 06:54	10
13C5-PFNA	IS	75.5	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C2-PFDA	IS	72.0	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
d3-MeFOSAA	IS	68.2	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C2-PFUnA	IS	56.8	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
d5-EtFOSAA	IS	81.6	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C2-PFDoA	IS	73.6	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C2-PFTeDA	IS	89.1	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: IR09-GW10D-17D

Modified EPA Method 537

Client Data				Laboratory Data			
Name:	C2 HM 2 ill	Matrix:	Aqueous	Lab Sample:	1701353-0H	Column:	BE2 C18
Project:	Site 9 PFAS	Date Collected:	H-Sep-17 16:15	Date Received:	H-Sep-17 09:36		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	96.0	1.90	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PF2 xA	1660	H3H	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PF2 pA	599	0.6H	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PF2 xS	3860	HD.1	106	170	B, D	B700HJ	07-4 ct-17	0.118 L	1H4 ct-17 07:05	HD
PF4 A	1110	0.69H	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PF4 S	30900	17.H	106	170	D	B700HJ	07-4 ct-17	0.118 L	1H4 ct-17 07:05	HD
PFNA	85.8	0.861	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PFDA	11.6	1.58	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
MeF4 SAA	ND	1.75	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PFUnA	ND	1.1H	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
EtF4 SAA	ND	1.J6	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PFDoA	ND	0.8JH	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PFTrDA	ND	0.5H	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
PFTeDA	ND	0.803	5.30	8.51		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
Combined PF4 A/PF4 S	3HD00	17.H	106	170	D	B700HJ	07-4 ct-17	0.118 L	1H4 ct-17 07:05	HD

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	115	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
13CHPF2 xA	IS	86.0	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
13CJ-PF2 pA	IS	7H9	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
184 H-PF2 xS	IS	1H	50 - 150	D	B700HJ	07-4 ct-17	0.118 L	1H4 ct-17 07:05	HD
13CHPF4 A	IS	9H3	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
13C8-PF4 S	IS	75.6	50 - 150	D	B700HJ	07-4 ct-17	0.118 L	1H4 ct-17 07:05	HD
13C5-PFNA	IS	73.6	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
13CHPFDA	IS	67.8	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
d3-MeF4 SAA	IS	7J.7	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
13CHPFUnA	IS	63.5	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
d5-EtF4 SAA	IS	83.3	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
13CHPFDoA	IS	7H6	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1
13CHPFTeDA	IS	86.J	50 - 150		B700HJ	07-4 ct-17	0.118 L	10-4 ct-17 18:15	1

DL - Detection Limit

L4 D - Limit of Detection
L4 Q - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit
Results reported to the DL.

When reported, PF2 xS, PF4 A and PF4 S include both linear and branched isomers.
4 nly the linear isomer is reported for all other analytes.

Sample ID: IR09-FTPGW01-17D

Modified EPA Method 537

Client Data					Laboratory Data					
Name:	CH2M Hill	Matrix:	Aqueous		Lab Sample:	1701353-03	Column:	BEH C18		
Project:	Site 9 PFAS	Date Collected:	26-Sep-17 17:25		Date Received:	29-Sep-17 09:36				

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	61.0	1.96	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFHxA	679	2.38	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFHpA	362	0.646	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFHxS	2410	5.18	27.4	43.7	B, D	B7J0024	07-Oct-17	0.114 L	12-Oct-17 07:26	5
PFOA	834	0.712	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFOS	7210	4.41	27.4	43.7	D	B7J0024	07-Oct-17	0.114 L	12-Oct-17 07:26	5
PFNA	64.4	0.885	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFDA	26.6	1.63	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
MeFOSAA	ND	1.80	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFOA	ND	1.15	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
EtFOSAA	ND	1.50	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFDoA	ND	0.866	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFTDA	ND	0.540	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFTeDA	ND	0.825	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
Combined PFOA/PFOS	8040	4.41	27.4	43.7	D	B7J0024	07-Oct-17	0.114 L	12-Oct-17 07:26	5

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	110	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C2-PFHxA	IS	92.0	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C4-PFHpA	IS	81.4	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
18O2-PFHxS	IS	80.5	50 - 150	D	B7J0024	07-Oct-17	0.114 L	12-Oct-17 07:26	5
13C2-PFOA	IS	87.8	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C8-PFOS	IS	98.1	50 - 150	D	B7J0024	07-Oct-17	0.114 L	12-Oct-17 07:26	5
13C5-PFNA	IS	83.4	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C2-PFDA	IS	84.1	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
d3-MeFOSAA	IS	83.2	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C2-PFOA	IS	71.3	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
d5-EtFOSAA	IS	83.9	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C2-PFDoA	IS	82.6	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C2-PFTeDA	IS	95.1	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: IR09-GW11-17D

Modified EPA Method 537

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	As neon6	Lab Sample:	1701353-0H	ColnmB:	E82 C1q
Project:	Site 9 PFAS	Date Collected:	u7-Sep-17 13:05	Date Received:	u9-Sep-17 09:3.		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	134	143	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PF2 xA	135	u45	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PF2 pA	. q7	04 37	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PF2 xS	10H	14u	549	q4 u	E	E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PFOA	u9q	0470u	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PFOS	u. u0	H85	u. 4	H4	D	E7J00uH	07-Oct-17	041. L	1u-Oct-17 07:37	5
PFNA	1145	0473	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PFDA	H4 u	14 1	549	q4 u	J	E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
MeFOSAA	ND	147q	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PF, BA	ND	143	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
8tFOSAA	ND	144	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PFDoA	ND	045H	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PFuDA	ND	04533	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
PFuDA	ND	041H	549	q4 u		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
CombiBed PFOA PFOS	u9u0	H85	u. 4	H4	D	E7J00uH	07-Oct-17	041. L	1u-Oct-17 07:37	5

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFES	/S	1uH	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
13Cu-PF2 xA	/S	9q4i	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
13CHPF2 pA	/S	q. 4i	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
1qOu-PF2 xS	/S	q34i	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
13Cu-PFOA	/S	10H	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
13Cq-PFOS	/S	9. 4	50 - 150	D	E7J00uH	07-Oct-17	041. L	1u-Oct-17 07:37	5
13C5-PFNA	/S	q94i	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
13Cu-PFDA	/S	7. 4H	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
d3-MeFOSAA	/S	7q45	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
13Cu-PF, BA	/S	q14	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
d5-8tFOSAA	/S	7H8	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
13Cu-PFDoA	/S	774	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1
13Cu-PFuDA	/S	9H	50 - 150		E7J00uH	07-Oct-17	041. L	10-Oct-17 1q:5q	1

DL - DetectioBLimit

LOD - Limit of DetectioB
LOQ - Limit of snaBitatioB

LCL-, CL- LoI er coBrol limit - npper coBrol limit
Re6nt6 reported to twe DL4

h weBreportedWPF2 xSWPFOA aBd PFOS iB6nde botwliB6ar aBd braBwed i6omer64
OBly twe liB6ar i6omer i6 reported for all otwer aBlyte64

Sample ID: IR09-GW11-17D

Modified EPA Method 537

Name:	CH2M Hill	Lab Sample:	B7J0024-MS1/B7J0024-MSD1	Source Lab Sample:	1701353-04
Project:	Site 9 PFAS	QC Batch:	B7J0024	Date Extracted:	07-Oct-17
Matrix:	Aqueous	Samp Size:	0.114/0.116 L	Column:	BEH C18

Analyte	Sample (ng/L)	MS (ng/L)	MS Spike Amt	MS % Rec	MS Quals	MSD (ng/L)	MSD Spike Amt	MSD % Rec	RPD	MSD Quals	%Rec Limits	RPD Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
PFBS	13.0	111	87.8	112		98.7	85.9	99.7	11.6		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFHxA	135	228	87.8	106		228	85.9	108	1.87		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFHpA	68.7	164	87.8	109		155	85.9	101	7.62		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFHxS	1040	995	87.8	-52.8	B, H	1140	85.9	113	551	B, H	70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFOA	298	448	87.8	171	H	417	85.9	138	21.4	H	70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFOS	2620	2990	439	84.1	D	2580	429	-10.3	256	D, H	70-130	25	12-Oct-17 06:33	5	12-Oct-17 06:43	5
PFNA	11.5	113	87.8	115		90.5	85.9	91.9	22.3		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFDA	4.62	87.8	87.8	94.8		79.1	85.9	86.7	8.93		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
MeFOSAA	ND	92.7	87.8	106		88.8	85.9	103	2.87		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFUnA	ND	87.5	87.8	99.7		97.1	85.9	113	12.5		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
EtFOSAA	ND	99.7	87.8	114		87.5	85.9	102	11.1		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFDaA	ND	71.5	87.8	81.4		75.0	85.9	87.3	6.99		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFTTrDA	ND	88.4	87.8	101		96.7	85.9	113	11.2		60-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1
PFTeDA	ND	87.0	87.8	99.0		79.7	85.9	92.7	6.57		70-130	25	09-Oct-17 18:25	1	10-Oct-17 17:32	1

Labeled Standards	Type	MS % Rec	MS Quals	MSD % Rec	MSD Quals	Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
13C3-PFBS	IS	111		118		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
13C2-PFHxA	IS	93.8		94.3		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
13C4-PFHpA	IS	80.8		82.4		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
18O2-PFHxS	IS	105		92.9		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
13C2-PFOA	IS	80.6		88.2		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
13C8-PFOS	IS	93.6	D	119	D	50-150	12-Oct-17 06:33	5	12-Oct-17 06:43	5
13C5-PFNA	IS	71.6		85.1		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
13C2-PFDA	IS	71.9		79.3		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
d3-MeFOSAA	IS	75.0		89.8		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
13C2-PFUnA	IS	78.3		76.7		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
d5-EtFOSAA	IS	71.7		86.2		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
13C2-PFDaA	IS	81.4		86.5		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1
13C2-PFTeDA	IS	92.7		111		50-150	09-Oct-17 18:25	1	10-Oct-17 17:32	1

Sample ID: IR09-GW09-17D

Modified EPA Method 537

Client Data					Laboratory Data					
Name:	CH2M Hill	Matrix:	Aqueous		Lab Sample:	1701353-05	Column:	BEH C18		
Project:	Site 9 PFAS	Date Collected:	27-Sep-17 16:00		Date Received:	29-Sep-17 09:36				

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	58.6	1.94	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFHxA	3150	47.3	109	173	D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
PFHpA	1070	0.641	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFHxS	4710	20.5	109	173	B, D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
PFOA	3460	14.1	109	173	D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
PFOS	35100	17.5	109	173	D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
PFNA	165	0.878	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFDA	71.6	1.62	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
MeFOSAA	16.2	1.79	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFOA	6.78	1.14	5.43	8.67	J	B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
EtFOSAA	17.1	1.49	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFDoA	ND	0.859	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFTeDA	ND	0.536	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFTeDA	ND	0.818	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
Combined PFOA/PFOS	38600	17.5	109	173	D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	141	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
13C2-PFHxA	IS	70.7	50 - 150	D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
13C4-PFHpA	IS	92.1	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
18O2-PFHxS	IS	74.5	50 - 150	D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
13C2-PFOA	IS	86.8	50 - 150	D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
13C8-PFOS	IS	127	50 - 150	D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
13C5-PFNA	IS	86.3	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
13C2-PFDA	IS	84.7	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
d3-MeFOSAA	IS	78.6	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
13C2-PFOA	IS	69.8	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
d5-EtFOSAA	IS	80.4	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
13C2-PFDoA	IS	79.0	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
13C2-PFTeDA	IS	96.8	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: IR09-EB-092817

Modified EPA Method 537

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	As neon6	Lab Sample:	1701353-OH	ColnmB:	E82 C1q
Project:	Site 9 PFAS	Date Collected:	uq-Sep-17 1H00	Date Received:	u9-Sep-17 09:3H		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	1.93	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PF2 xA	ND	u.3O	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PF2 pA	ND	0.HBH	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PF2 xS	ND	1.0u	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PF4 A	ND	0.700	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PF4 S	ND	0.qHq	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PFNA	ND	0.q71	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PFDA	ND	1.HD	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
MeF4 SAA	ND	1.77	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PF, BA	ND	1.13	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
8tF4 SAA	ND	1.O7	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PFDoA	ND	0.q5u	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PFuDA	ND	0.531	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
PFuDA	ND	0.q1u	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
CombiBed PF4 A PF4 S	ND	0.qHq	5.39	q.HD		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFES	/S	10H	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13Cu-PF2 xA	/S	9O0	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13CO-PF2 pA	/S	7H3	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
1q4 u-PF2 xS	/S	9O9	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13Cu-PF4 A	/S	q9.7	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13Cq-PF4 S	/S	9u.1	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13C5-PFNA	/S	q1.3	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13Cu-PFDA	/S	HHu	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
d3-MeF4 SAA	/S	H5.1	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13Cu-PF, BA	/S	59.1	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
d5-8tF4 SAA	/S	H1.7	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13Cu-PFDoA	/S	5q.9	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1
13Cu-PFuDA	/S	q7.3	50 - 150		E7J00uO	07-4 ct-17	0.11HL	10-4 ct-17 19:0I	1

DL - DetectioBLimit

L4 D - Limit of DetectioB
L4 Q - Limit of snaBitatioB

LCL-, CL- LoI er coBrol limit - npper coBrol limit
Re6nlt6 reported to twe DL.

h weBreportedWPF2 xSWPF4 A aBd PF4 S iB6nde botwliB6ar aBd braBwed i6omer6.
4 Bly twe liB6ar i6omer i6 reported for all otter aBalyte6.

Sample ID: IR09-FB-092817

Modified EPA Method 537

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Aqueous	Lab Sample:	1701353-07	Column:	BEH C18
Project:	Site 9 PFAS	Date Collected:	28-Sep-17 16:10	Date Received:	29-Sep-17 09:36		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	1.85	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PFHxA	ND	2.26	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PFHpA	ND	0.612	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PFHxS	1.95	0.981	5.17	8.29	QB	B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PF4 A	ND	0.67J	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PF4 S	ND	0.836	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PFNA	ND	0.839	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PFDA	ND	1.5J	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
MeF4 SAA	ND	1.71	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PfUnA	ND	1.09	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
EtF4 SAA	ND	1.12	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PFDoA	ND	0.820	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PFTrDA	ND	0.512	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
PFTeDA	ND	0.782	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
Combined PF4 A/PF4 S	ND	0.836	5.17	8.29		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	129	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13C2-PFHxA	IS	99.7	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13CJ-PFHpA	IS	82.6	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
184 2-PFHxS	IS	10J	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13C2-PF4 A	IS	89.3	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13C8-PF4 S	IS	113	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13C5-PFNA	IS	86.3	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13C2-PFDA	IS	68.1	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
d3-MeF4 SAA	IS	51.3	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13C2-PFUnA	IS	61.3	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
d5-EtF4 SAA	IS	66.7	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13C2-PFDoA	IS	65.5	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1
13C2-PFTeDA	IS	81.J	50 - 150		B7002J	07-4 ct-17	0.121 L	10-4 ct-17 19:51	1

DL - Detection Limit

L4 D - Limit of Detection
L4 Q - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit
Results reported to the DL.

When reported, PFHxS, PF4 A and PF4 S include both linear and branched isomers.
4 nly the linear isomer is reported for all other analytes.

Sample ID: IR09-IDW-AQ-092717 **Modified EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Aqueous	Lab Sample:	1701353-08	Column:	BEH C18
Project:	Site 9 PFAS	Date Collected:	27-Sep-17 14:10	Date Received:	29-Sep-17 09:36		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFOA	1000	0.704	5.39	8.65		B7J0024	07-Oct-17	0.116 L	10-Oct-17 20:02	1
PFOS	11400	8.73	53.9	86.5	D	B7J0024	07-Oct-17	0.116 L	12-Oct-17 08:09	10
Combined PFOA/PFOS	12400	8.73	53.9	86.5	D	B7J0024	07-Oct-17	0.116 L	12-Oct-17 08:09	10

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFOA	IS	83.7	50 - 150		B7J0024	07-Oct-17	0.116 L	10-Oct-17 20:02	1
13C8-PFOS	IS	76.4	50 - 150	D	B7J0024	07-Oct-17	0.116 L	12-Oct-17 08:09	10

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: TLZP-IDW-AQ-092817 **Modified EPA Method 537**

Client Data				Laboratory Data			
Name:	C8 HM 8 ill	Matrix:	Aq2eo2s	Lab Sample:	1701353-09	Col2mu:	n B8 C1E
Project:	Site 9 PFAS	Date Collected:	HE-Sep-17 11:30	Date 4 eceiRed:	H-Sep-17 09:3v		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PF6 A	ND	0@91	5@0	EO9		n 7J00H	07-6 ct-17	0@1EL	10-6 ct-17 HD:HB	1
PF6 S	7@E	0@E5v	5@0	EO9	J	n 7J00H	07-6 ct-17	0@1EL	10-6 ct-17 HD:HB	1
Combiued PF6 A/PF6 S	7@E	0@E5v	5@0	EO9	J	n 7J00H	07-6 ct-17	0@1EL	10-6 ct-17 HD:HB	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13CH-PF6 A	IS	E9@	50 - 150		n 7J00H	07-6 ct-17	0@1EL	10-6 ct-17 HD:HB	1
13CE-PF6 S	IS	109	50 - 150		n 7J00H	07-6 ct-17	0@1EL	10-6 ct-17 HD:HB	1

DL - Detectiou Limit	L6 D - Limit of Detectiou L6 Q - Limit of q2autitaiou	LCL-UCL- Lower coutrol limit - 2pper coutrol limit 4 es2lts reported to the DLO	Wheu reported, PF8 xS, PF6 A aud PF6 S iucl2de both liuear aud brauched isomersO 6 uly the liuear isomer is reported for all other aualytesO
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Sample ID: IR09-IDW-AQ-092817 **Modified EPA Method 537**

Client Data				Laboratory Data			
Name:	C8 HM 8 ill	Matrix:	Aq2eo2s	Lab Sample:	1701353-10	Col2mu:	n B8 C1E
Project:	Site 9 PFAS	Date Collected:	HE-Sep-17 1H00	Date 4 eceiRed:	H-Sep-17 09:3v		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PF6 A	HHH	0Q7v	5Qll	EQ1		n 7J00H	07-6 ct-17	0QHD L	10-6 ct-17 HD:3.	1
PF6 S	Hv300	1vQE	10.	1vv	D	n 7J00H	07-6 ct-17	0QHD L	1H-6 ct-17 0E:HD	HD
Combiued PF6 A/PF6 S	HE500	1vQE	10.	1vv	D	n 7J00H	07-6 ct-17	0QHD L	1H-6 ct-17 0E:HD	HD

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13CH-PF6 A	IS	90Q	50 - 150		n 7J00H	07-6 ct-17	0QHD L	10-6 ct-17 HD:3.	1
13CE-PF6 S	IS	73Q	50 - 150	D	n 7J00H	07-6 ct-17	0QHD L	1H-6 ct-17 0E:HD	HD

DL - Detectiou Limit	L6 D - Limit of Detectiou	LCL-UCL- Lower coutrol limit - 2pper coutrol limit	Wheu reported, PF8 xS, PF6 A aud PF6 S iucl2de both liuear aud brauched isomersO
	L6 Q - Limit of q2autitaiou	4 es2lts reported to the DLO	6 uly the liuear isomer is reported for all other aualytesO

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The associated compound concentration exceeded the calibration range of the instrument.
H	Recovery and/or RPD was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Reporting Limit/LOQ.
M	Estimated Maximum Possible Concentration. (CA Region 2 projects only)
*	See Cover Letter
Conc.	Concentration
NA	Not applicable
ND	Not Detected
TEQ	Toxic Equivalency
U	Not Detected (specific projects only)

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
Arkansas Department of Environmental Quality	17-015-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-18
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2016026
Minnesota Department of Health	1175673
New Hampshire Environmental Accreditation Program	207716
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-008
Pennsylvania Department of Environmental Protection	013
Texas Commission on Environmental Quality	T104704189-17-8
Virginia Department of General Services	8621
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope	EPA 1613B

Dilution GC/HRMS	
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 877-345-1113 ♦ (fax) 866-417-0548

32841

Send Results to:		Send Invoice to:		Analysis Requirements:				Lab Use Only:			
Name <u>Bianca</u>		Name _____		<div style="font-size: 24px; font-weight: bold;">1701353</div> <div style="font-size: 24px; font-weight: bold;">0.6°C</div>				VOA Headspace	Y	N	NA
Company <u>CH2M</u>		Company _____						Field Filtered	Y	N	NA
Address _____		Address _____						Correct Containers	Y	N	NA
City <u>Charlotte</u>		City _____						Discrepancies	Y	N	NA
State, Zip <u>NC</u>		State, Zip _____						Cust. Seals Intact	Y	N	NA
Phone _____		Phone _____						Containers Intact	Y	N	NA
Fax _____		Fax _____		Airbill #: _____			CAR #: _____				
E-mail <u>Bianca.granger@CH2M.com</u>		E-mail <u>CH2M.com</u>									
Project No./Name: <u>Site 9 PFA</u>		Sampler's (Signature): <u>Matt</u>									

select PFCs

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix									Comments	No. of Bottles	Lab Use Only Containers/Pres.
	1610 9-26-17	IR09-GW10-17D	AQ	X									2	
	1615 9-26-17	IR09-GW10D-17D	AQ	X									2	
	1725 9-26-17	IR09-FTPGW01-17D	AQ	X									2	
	1305 9-27-17	IR09-GW11-17D	AQ	X									2	
	1305 9-27-17	IR09-GW11-17D-MS	AQ	X									2	
	1305 9-27-17	IR09-GW11-17D-SD	AQ	X									2	
	1305 9-27-17	IR09-GW09-17D	AQ	X									2	
	1600 9-28-17	IR09-EB-092817	AQ	X									2	
	1610 9-28-17	IR09-FB-092817	AQ	X									2	
	1410 9-28-17	IR09-IDW-AQ-092817	AQ	X									2	
	1130 9-28-17	TL2P-IDW-AQ-092817	AQ	X									2	
	1215 9-28-17	MW09-IPW-AQ-092817	AQ	X									2	

Sample Kit Prep'd by: (Signature) <u>Matt</u>	Date/Time 9-26-17	Received By: (Signature) _____	REMARKS:		
Relinquished by: (Signature) <u>Matt</u>	Date/Time 9-28-17	Received By: (Signature) <u>Bob Benedict</u>			
Relinquished by: (Signature)	Date/Time	Received By: (Signature)			
Received for Laboratory by: (Signature)	Date/Time	Temperature			

Details:

Page 1 of 1

Cooler No. 1 of 1

Date Shipped 9/27/17

Shipped By Matt

Turnaround per sow

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

Sample Log-in Checklist

 Vista Work Order #: 1701353 TAT Std

Samples Arrival:	Date/Time 09/29/17 0936	Initials: UBLB	Location: WR-2
			Shelf/Rack: NA
Logged In:	Date/Time 09/30/17 1039	Initials: UBLB	Location: WR-2
			Shelf/Rack: F-6
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> GSO	<input type="checkbox"/> DHL
		<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: 6.5 (uncorrected)	Time: 1047	Thermometer ID: IR-1	
Temp °C: 0.6 (corrected)	Probe used: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill	Trk # 787885787919	✓	
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	✓
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Preservation Documented:	Na ₂ S ₂ O ₃	Trizma	<input checked="" type="checkbox"/> None
			<input checked="" type="checkbox"/> Yes
			No
			NA
Shipping Container	<input checked="" type="checkbox"/> Vista	Client	<input checked="" type="checkbox"/> Retain
			Return
			Dispose

Comments:

EXTRACTION INFORMATION

Process Sheet
Workorder: 1701353

Prep Expiration: 2017-Oct-10
 Client: CH2M Hill

Workorder Due: 27-Oct-17 00:00

TAT: 28

Method: **537M PFAS DOD (LOQ as mRL)**
 Matrix: **Aqueous**

Prep Batch: B750024

Version: 537 (14) + PFOA&PFOS (15 Analytes)
 DoD: **DoD QSM 5.1**

Prep Data Entered: 10-9-17 HC
Date and Initials

Initial Sequence: _____

LabSampleID	A/B	Prep Rec	Spike Rec	ClientSampleID	Comments	Location	Container
1701353-01	A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	IR09-GW10-17D		WR-2 F-6	HDPE Bottle, 125 mL
1701353-02	A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	IR09-GW10D-17D		WR-2 F-6	HDPE Bottle, 125 mL
1701353-03	A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	IR09-FTPGW01-17D		WR-2 F-6	HDPE Bottle, 125 mL
1701353-04	A, B, M	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	IR09-GW11-17D	MS/MSD	WR-2 F-6	HDPE Bottle, 125 mL
1701353-05	A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	IR09-GW09-17D		WR-2 F-6	HDPE Bottle, 125 mL
1701353-06	A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	IR09-EB-092817		WR-2 F-6	HDPE Bottle, 125 mL
1701353-07	A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	IR09-FB-092817		WR-2 F-6	HDPE Bottle, 125 mL

**WO Comments: MS/MSD per batch.
 Combined PFOA/PFOS-run curve.**

Pre-Prep Check Out: KBF 10/4/17
 Pre-Prep Check In: HC 10-9-17

Prep Check Out: HC 10-7-17
 Prep Check In: NA

Prep Reconciled Initials/Date: KBF 10/4/17
 Spike Reconciled Initials/Date: HC 10-7-17
 VialBoxID: Bulbasaur

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537M PFAS DOD (LOQ as mRL)

B7J0024

Chemist: HC
 Prep Date/Time: 04-Oct-17 16:04
 10.7.17 1045
 HC

Prepared using: LCMS - SPE Extraction-LCMS

Date/Initials: 10.4.17 HC BalanceID: HFM3-8

Cen	VISTA Sample ID	pH Before	pH After	Chlorine (Cl)	Drops HCl Added	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	SPE	RS CHEM/WIT DATE
<input type="checkbox"/>	B7J0024-BLK1	5	2	0	2	NA	NA	(0.125) ✓	HC VC 10.7.17	HC 10.7.17	HC VC 10.7.17
<input type="checkbox"/>	B7J0024-BS1	5	2	0	2	↓	↓	↓			
<input type="checkbox"/>	B7J0024-MS1 1701353-04	6	2	0	2	140.94	27.00	0.11394			
<input type="checkbox"/>	B7J0024-MSD1 1701353-04	6	2	0	2	143.26	26.83	0.11643			
<input type="checkbox"/>	1701353-01	6	2	0	2	140.18	27.07	0.11311 ✓			
<input type="checkbox"/>	1701353-02	6	2	0	2	144.50 ^{HC 10.4.17} 144.50	26.97	0.11753 ✓			
<input type="checkbox"/>	1701353-03	6	2	0	2	141.34	26.99	0.11435 ✓			
<input type="checkbox"/>	1701353-04	6	2	0	2	142.90	26.94	0.11596 ✓			
<input type="checkbox"/>	1701353-05	6	2	0	2	142.38	27.07	0.11531 ✓			
<input type="checkbox"/>	1701353-06	5	2	0	2	143.24	27.02	0.11622 ✓			
<input type="checkbox"/>	1701353-07	5	2	0	2	147.50	26.84	0.12066 ✓			
<input type="checkbox"/>	1701353-08	6	2	0	2	142.46	26.85	0.11561 ✓			
<input type="checkbox"/>	1701353-09	5	2	0	2	144.67	26.87	0.11780			
<input checked="" type="checkbox"/>	1701353-10	6	2	0	2	147.19	26.85	0.12034			
<input type="checkbox"/>	1701376-01	5	2	0	2	142.98	29.14	0.11484			
<input type="checkbox"/>	1701376-12	5	2	0	2	145.55	28.00	0.11755			

IS: 17I3002, 10µL (V4)
 IS SUP: NA
 NS: 17G2428, 10µL (V4)
 RS: 17I2619 10µL (V4)
 SPE Chem: Strata X-AW 33µm 200mg
 Ele SOLV: 0.5% NH₄OH in MeOH/MeOH
 Final Volume(s): 1µL

Notes:

Comments: Assume 1 g = 1 mL

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537M PFAS DOD (LOQ as mRL)

B7J0024

Chemist: *AC*

Prep Date/Time: 04-Oct-17 16:04

10-7-17
1045

Prepared using: LCMS - SPE Extraction-LCMS

Cen	VISTA Sample ID	Date/Initials: <i>10-4-17 AC</i>				BalanceID: <i>HRMS-8</i>			IS/NS CHEM/WIT DATE	SPE	RS CHEM/WIT DATE
		pH Before	pH After	Chlorine (Cl)	Drops HCl Added	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)			
<input type="checkbox"/>	1701377-08	<i>6</i>	<i>2</i>	<i>0</i>	<i>2</i>	<i>143.64</i>	<i>28.28</i>	<i>0.11536</i>	<i>7C KC 10-7-17 AC</i>	<i>7C 10-7-17</i>	<i>7C KC 10-7-17</i>
<input type="checkbox"/>	1701377-11	<i>6</i>	<i>2</i>	<i>0</i>	<i>2</i>	<i>146.23</i>	<i>29.13</i>	<i>0.11710</i>	<i>T</i>	<i>T</i>	<i>T</i>
<input type="checkbox"/>	1701377-12	<i>6</i>	<i>2</i>	<i>0</i>	<i>2</i>	<i>145.98</i>	<i>28.08</i>	<i>0.11791</i>	<i>T</i>	<i>T</i>	<i>T</i>
<input type="checkbox"/>	1701378-12	<i>6</i>	<i>2</i>	<i>0</i>	<i>2</i>	<i>148.02</i>	<i>28.16</i>	<i>0.11986</i>	<i>T</i>	<i>T</i>	<i>T</i>

IS: <i>17I 3002, 10µL (V5)</i>	SPE Chem: <i>Strata X-AW 33µm 200mg 6mL</i> Ele SOLV: <i>0.5% NH₄OH in MeOH/MeOH</i> Final Volume(s) <i>1mL</i>	Notes:
IS SUP: <i>NA</i>		
NS: <i>17I 2428, 10µL (V2)</i>		
RS: <i>17I 2619, 10µL (V4)</i>		

Comments: Assume 1 g = 1 mL

Batch: B7J0024

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1701353-01	0.11311 ✓	NA	NA	1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-02	0.11753 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-03	0.11435 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-04	0.11596 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-05	0.11531 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-06	0.11622 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-07	0.12066 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-08	0.11561 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-09	0.1178 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-10	0.12034 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701376-01	0.11484 ✓			1000	07-Oct-17 10:45	HAC			QC Water	537M PFAS DOD (LOQ as
1701376-12	0.11755 ✓			1000	07-Oct-17 10:45	HAC			QC Water	537M PFAS DOD (LOQ as
1701377-08	0.11536 ✓			1000	07-Oct-17 10:45	HAC			Groundwater	537M PFAS DOD (LOQ as
1701377-11	0.1171 ✓			1000	07-Oct-17 10:45	HAC			Groundwater	537M PFAS DOD (LOQ as
1701377-12	0.1179 ✓			1000	07-Oct-17 10:45	HAC			Groundwater	537M PFAS DOD (LOQ as
1701378-12	0.11986 ✓			1000	07-Oct-17 10:45	HAC			Groundwater	537M PFAS DOD (LOQ as
B7J0024-BLK1	0.125			1000	07-Oct-17 10:45	HAC				QC
B7J0024-BS1	0.125			1000	07-Oct-17 10:45	HAC	17G2428 ✓	10		QC
B7J0024-MS1	0.11394 ✓			1000	07-Oct-17 10:45	HAC	17G2428 ✓	10		QC
B7J0024-MSD1	0.11643 ✓			1000	07-Oct-17 10:45	HAC	17G2428 ✓	10		QC

HAC
10-9-17

Process Sheet
 Workorder: **1701353**

Prep Expiration: 2017-Oct-10
 Client: CH2M Hill

Workorder Due: **27-Oct-17 00:00**

TAT: 28

Method: **537M PFAS DOD (LOQ as mRL)**
 Matrix: **Aqueous**

Prep Batch: B750024

Version: PFOA+PFOS + Total PFOA+PFOS (3 Analytes)
 DoD: **DoD QSM 5.1**

Prep Data Entered: 10.9.17 HC
 Date and Initials

Initial Sequence: _____

LabSampID	A/B	Prep Rec	Spike Rec	ClientSampleID	Comments	Location	Container
1701353-08	A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	IR09-IDW-AQ-092717		WR-2 F-6	HDPE Bottle, 125 mL
1701353-09	A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TLZP-IDW-AQ-092817		WR-2 F-6	HDPE Bottle, 125 mL
1701353-10	A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	IR09-IDW-AQ-092817	"nw09-IDW-AQ-092817" HC 10.4.17	WR-2 F-6	HDPE Bottle, 125 mL

WO Comments: **MS/MSD per batch.**
Combined PFOA/PFOS-run curve.

Pre-Prep Check Out: KBF 10/4/17 Prep Check Out: HC 10.7.17 Prep Reconciled Inits/Date: KBF 10/4/17
 Pre-Prep Check In: HC 10.4.17 Prep Check In: NA Spike Reconciled Inits/Date: HC 10.7.17
 VialBoxID: Bulbasaur

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537M PFAS DOD (LOQ as mL)

B7J0024

Chemist: HC
 Prep Date/Time: 04-Oct-17 16:04
 10-7-17 1045
 HC

Prepared using: LCMS - SPE Extraction-LCMS

Date/Initials: 10-4-17 HC BalanceID: HPM5-8

Cen	VISTA Sample ID	pH Before	pH After	Chlorine (Cl)	Drops HCl Added	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	SPE	RS CHEM/WIT DATE
<input type="checkbox"/>	B7J0024-BLK1	5	2	0	2	NA	NA	(0.125)	HC VC 10-7-17	HC 10-7-17	HC VC 10-7-17
<input type="checkbox"/>	B7J0024-BS1	5	2	0	2	↓	↓	↓			
<input type="checkbox"/>	B7J0024-MS1 1701353-04	6	2	0	2	140.94	27.00	0.11394			
<input type="checkbox"/>	B7J0024-MSD1 1701353-04	6	2	0	2	143.26	26.83	0.11643			
<input type="checkbox"/>	1701353-01	6	2	0	2	140.18	27.07	0.11311			
<input type="checkbox"/>	1701353-02	6	2	0	2	144.50 ^{HC 10-4-17} 144.50	26.97	0.11753			
<input type="checkbox"/>	1701353-03	6	2	0	2	141.34	26.99	0.11435			
<input type="checkbox"/>	1701353-04	6	2	0	2	142.90	26.94	0.11596			
<input type="checkbox"/>	1701353-05	6	2	0	2	142.38	27.07	0.11531			
<input type="checkbox"/>	1701353-06	5	2	0	2	143.24	27.02	0.11622			
<input type="checkbox"/>	1701353-07	5	2	0	2	147.50	26.84	0.12066			
<input type="checkbox"/>	1701353-08	6	2	0	2	142.46	26.85	0.11561			
<input type="checkbox"/>	1701353-09	5	2	0	2	144.67	26.87	0.11780			
<input checked="" type="checkbox"/>	1701353-10	6	2	0	2	147.19	26.85	0.12034			
<input type="checkbox"/>	1701376-01	5	2	0	2	142.98	29.14	0.11484			
<input type="checkbox"/>	1701376-12	5	2	0	2	145.55	28.00	0.11755			

IS: 17I3002, 10µL (V5) SPE Chem: Strata X-AW 33µm 200mg
 IS SUP: NA Ele SOLV: 0.5% NH₄OH in MeOH/MeOH
 NS: 17G2428, 10µL (V4) Final Volume(s) 1µL
 RS: 17I2619 10µL (V4)

Notes:

Comments: Assume 1 g = 1 mL
 Cen = Centrifuged
 Work Order 1701353

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537M PFAS DOD (LOQ as mRL)

B7J0024

Chemist: AC
 Prep Date/Time: 04-Oct-17 16:04
 10-7-17
 1045

Prepared using: LCMS - SPE Extraction-LCMS

Date/Initials: 10-4-17 AC BalanceID: HRMS-8

Cen	VISTA Sample ID	pH Before	pH After	Chlorine (Cl)	Drops HCl Added	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	SPE	RS CHEM/WIT DATE
<input type="checkbox"/>	1701377-08	6	2	0	2	143.64	28.28	0.11536	7Hc VC 10-7-17	7Hc 10-7-17	7Hc VC 10-7-17
<input type="checkbox"/>	1701377-11	6	2	0	2	146.23	29.13	0.11710	T	T	T
<input type="checkbox"/>	1701377-12	6	2	0	2	145.98	28.08	0.11791	T	T	T
<input type="checkbox"/>	1701378-12	6	2	0	2	148.02	28.16	0.11986	T	T	T

IS: <u>17I 3002, 10µL (V5)</u>	SPE Chem: <u>Strata X-AW 33µm 200mg 6mL</u>	Notes:
IS SUP: <u>NA</u>	Ele SOLV: <u>0.5% NH₄OH in MeOH/MeOH</u>	
NS: <u>17I 2428, 10µL (V2)</u>	Final Volume(s) <u>1mL</u>	
RS: <u>17I 2619 10µL (V4)</u>		

Comments: Assume 1 g = 1 mL

Cen = Centrifuged

Batch: B7J0024

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1701353-01	0.11311 ✓	NA	NA	1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-02	0.11753 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-03	0.11435 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-04	0.11596 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-05	0.11531 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-06	0.11622 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-07	0.12066 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-08	0.11561 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-09	0.1178 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701353-10	0.12034 ✓			1000	07-Oct-17 10:45	HAC			Aqueous	537M PFAS DOD (LOQ as
1701376-01	0.11484 ✓			1000	07-Oct-17 10:45	HAC			QC Water	537M PFAS DOD (LOQ as
1701376-12	0.11755 ✓			1000	07-Oct-17 10:45	HAC			QC Water	537M PFAS DOD (LOQ as
1701377-08	0.11536 ✓			1000	07-Oct-17 10:45	HAC			Groundwater	537M PFAS DOD (LOQ as
1701377-11	0.1171 ✓			1000	07-Oct-17 10:45	HAC			Groundwater	537M PFAS DOD (LOQ as
1701377-12	0.1179 ✓			1000	07-Oct-17 10:45	HAC			Groundwater	537M PFAS DOD (LOQ as
1701378-12	0.11986 ✓			1000	07-Oct-17 10:45	HAC			Groundwater	537M PFAS DOD (LOQ as
B7J0024-BLK1	0.125			1000	07-Oct-17 10:45	HAC				QC
B7J0024-BS1	0.125			1000	07-Oct-17 10:45	HAC	17G2428	✓ 10		QC
B7J0024-MS1	0.11394 ✓			1000	07-Oct-17 10:45	HAC	17G2428	✓ 10		QC
B7J0024-MSD1	0.11643 ✓			1000	07-Oct-17 10:45	HAC	17G2428	✓ 10		QC

Hc
10-9-17

SAMPLE DATA – MODIFIED EPA METHOD 537

Dataset: U:\Q4.PRO\results\171009M1\171009M1-10.qld

Last Altered: Thursday, October 26, 2017 10:36:39 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 16:47:15 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 09 Oct 2017 08:29:43

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171008M1_10, Date: 09-Oct-2017, Time: 17:53:55, ID: B7J0024-BLK1 Method Blank 0.125, Description: Method Blank

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299.1 > 79.9		9.98e3	0.1250		3.09				
2	4	PFHxA	313.2 > 268.9		1.45e4	0.1250		3.31				
3	5	PFHpA	363.1 > 319.1		6.03e4	0.1250		3.56				
4	6	L-PFHxS	399.0 > 80.0	4.69e0	3.99e3	0.1250		3.63	3.58	0.0147	1.595	
5	9	L-PFOA	413 > 368.7	8.14e2	4.54e4	0.1250		3.77	3.72	0.224		
6	12	PFNA	463.1 > 419.1		3.30e4	0.1250		3.96				
7	14	L-PFOS	499 > 79.9	3.99e1	1.00e4	0.1250		4.01	3.96	0.0498	0.550	
8	16	PFDA	513 > 468.8		2.76e4	0.1250		4.14				
9	18	N-MeFOSAA	570.1 > 419		5.97e3	0.1250		4.17				
10	19	N-EtFOSAA	584.2 > 419		6.82e3	0.1250		4.23				
11	20	PFUnA	562.9 > 518.9		2.91e4	0.1250		4.31				
12	22	PFDoA	613.0 > 569.1		2.79e4	0.1250		4.49				

Total PFOA and PFOS: 0.550

Dataset: U:\Q4.PRO\results\171009M1\171009M1-10.qld

Last Altered: Thursday, October 26, 2017 10:36:39 Pacific Daylight Time
Printed: Wednesday, November 01, 2017 16:47:35 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 09 Oct 2017 08:29:43
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171008M1_10, Date: 09-Oct-2017, Time: 17:53:55, ID: B7J0024-BLK1 Method Blank 0.125, Description: Method Blank

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	24	PFTrDA	662.9 > 618.9	2.79e4	0.1250		4.68				
2	25	PFTeDA	712.9 > 668.8	3.25e4	0.1250		4.88				
3	33	13C3-PFBS	302.1 > 79.9	9.98e3	4.91e4	0.1250	0.070	3.09	3.02	1.02	116.890
4	34	13C2-PFHxA	315 > 269.8	1.45e4	4.91e4	0.1250	0.295	3.31	3.25	1.48	40.151
5	35	13C4-PFHpA	367 > 322.1	6.03e4	4.91e4	0.1250	0.592	3.56	3.52	6.15	83.075
6	36	18O2-PFHxS	403 > 103.0	3.99e3	8.08e3	0.1250	0.497	3.63	3.59	6.17	99.402
7	37	13C2-6:2 FTS	429.1 > 408.9	5.03e3	4.23e4	0.1250	0.156	3.76	3.71	1.48	76.033
8	38	13C2-PFOA	414.9 > 369.7	4.54e4	4.23e4	0.1250	1.111	3.77	3.72	13.4	96.521
9	39	13C5-PFNA	468.1 > 423.1	3.30e4	4.43e4	0.1250	0.934	3.96	3.91	9.31	79.699
10	40	13C8-PFOA	506.1 > 78.0	2.82e3	3.65e4	0.1250	0.129	3.96	3.92	0.964	59.797
11	41	13C8-PFOS	507 > 79.9	1.00e4	8.96e3	0.1250	0.995	4.01	3.96	14.0	112.318
12	42	13C2-PFDA	515.1 > 469.9	2.76e4	3.46e4	0.1250	0.954	4.14	4.09	9.98	83.703
13	43	13C2-8:2 FTS	529.1 > 508.7	3.25e3	3.46e4	0.1250	0.116	4.14	4.08	1.18	81.240
14	44	d3-N-MeFOSAA	573.3 > 419	5.97e3	3.65e4	0.1250	0.020	4.17	4.12	2.04	828.659
15	45	d5-N-EtFOSAA	589.3 > 419	6.82e3	3.65e4	0.1250	0.020	4.23	4.19	2.33	924.523
16	46	13C2-PFUnA	565 > 519.8	2.91e4	3.65e4	0.1250	1.124	4.31	4.25	9.97	70.937
17	47	13C2-PFDoA	615.1 > 570.1	2.79e4	3.65e4	0.1250	1.087	4.49	4.42	9.54	70.246
18	49	13C2-PFTeDA	714.8 > 669.6	3.25e4	3.65e4	0.1250	1.014	4.88	4.79	11.1	87.716
19	55	13C5-PFHxA	318 > 272.9	4.91e4	4.91e4	0.1250	1.000	3.31	3.26	5.00	40.000
20	56	13C3-PFHxS	402.1 > 80.0	8.08e3	8.08e3	0.1250	1.000	3.63	3.59	12.5	100.000
21	57	13C8-PFOA	421.3 > 376	4.23e4	4.23e4	0.1250	1.000	3.77	3.72	12.5	100.000
22	58	13C9-PFNA	472.1 > 427.1	4.43e4	4.43e4	0.1250	1.000	3.96	3.90	12.5	100.000
23	59	13C4-PFOS	503 > 79.9	8.96e3	8.96e3	0.1250	1.000	4.01	3.96	12.5	100.000
24	60	13C6-PFDA	519.1 > 473.7	3.46e4	3.46e4	0.1250	1.000	4.14	4.09	12.5	100.000
25	61	13C7-PFUnA	570.1 > 524.8	3.65e4	3.65e4	0.1250	1.000	4.31	4.25	12.5	100.000
26	62	Total PFHxS	399.0 > 80.0	4.69e0	3.99e3	0.1250		3.63		0.0147	1.595
27	63	Total PFOA	413 > 368.7	8.14e2	4.54e4	0.1250		3.77		0.000	
28	64	Total PFOS	499 > 79.9	3.99e1	1.00e4	0.1250		4.01		0.0498	0.550
29	65	Total N-MeFOSAA	570.1 > 419	0.00e0	5.97e3	0.1250		4.17		0.000	
30	66	Total N-EtFOSAA	584.2 > 419	0.00e0	6.82e3	0.1250		4.23		0.000	

Vista Analytical Laboratory

Rev'd: MM 11/1/17

Dataset: U:\Q4.PRO\results\171009M1\171009M1-10.qld

Last Altered: Thursday, October 26, 2017 10:36:39 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 16:47:35 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 09 Oct 2017 08:29:43

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171008M1_10, Date: 09-Oct-2017, Time: 17:53:55, ID: B7J0024-BLK1 Method Blank 0.125, Description: Method Blank

Total PFHxS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6 L-PFHxS	399.0 > 80.0	3.58	4.687	3988.121	0.015	MM	1.6

Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	9 L-PFOA	413 > 368.7	3.72	814.339	45388.059	0.224	MMI	

Total PFOS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14 L-PFOS	499 > 79.9	3.96	39.858	10012.755	0.050	MM	0.6

Total N-Me-FOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1								

Total N-EtFOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1								

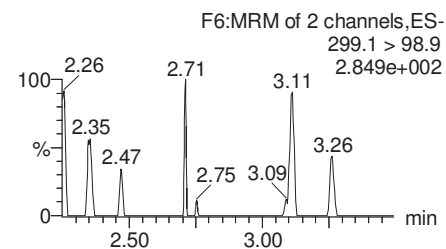
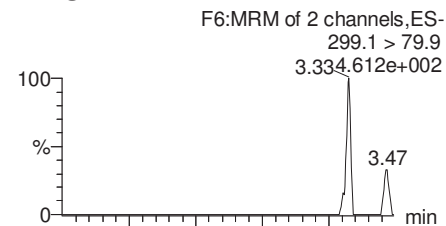
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Printed: Wednesday, November 01, 2017 16:47:35 Pacific Daylight Time

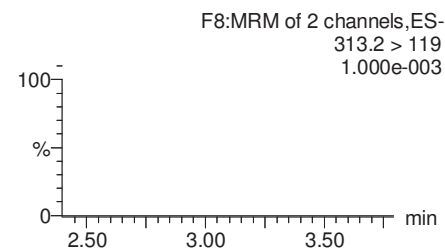
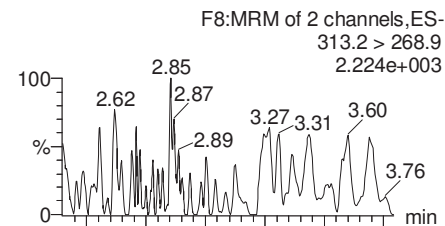
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Name: 171008M1_10, Date: 09-Oct-2017, Time: 17:53:55, ID: B7J0024-BLK1 Method Blank 0.125, Description: Method Blank

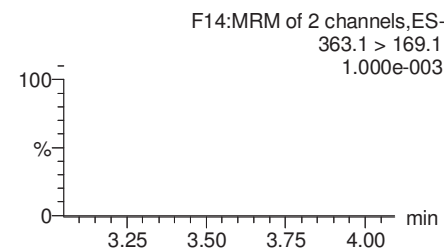
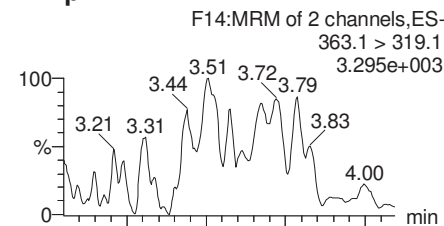
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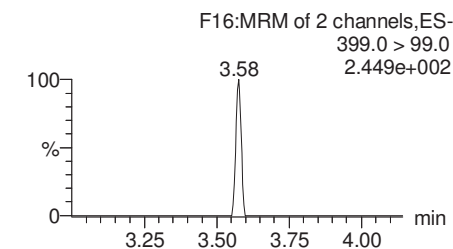
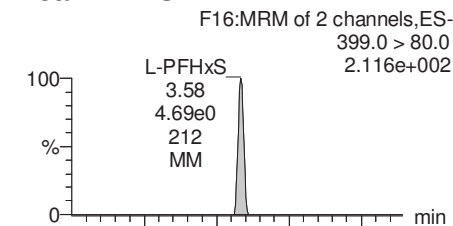
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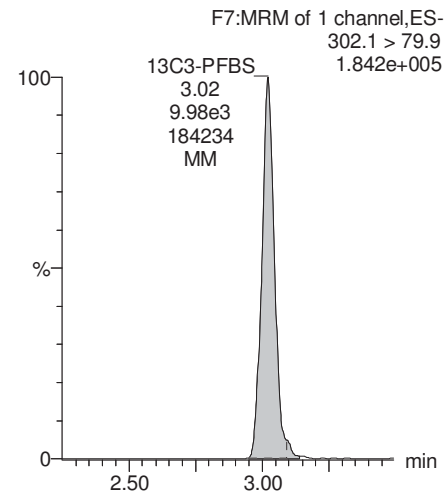
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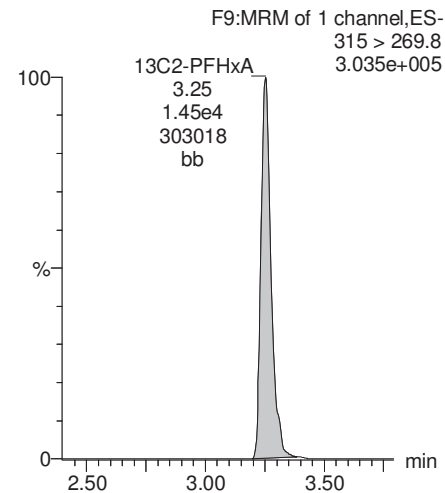
Total PFHxS



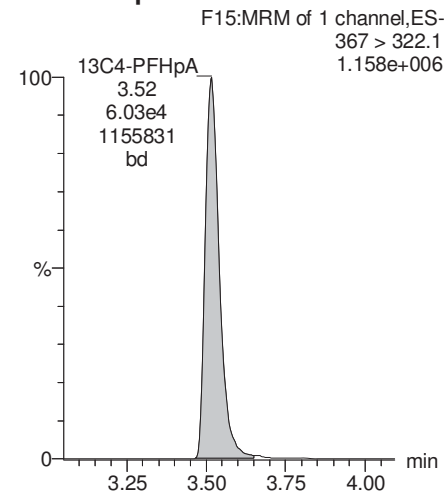
13C3-PFBS



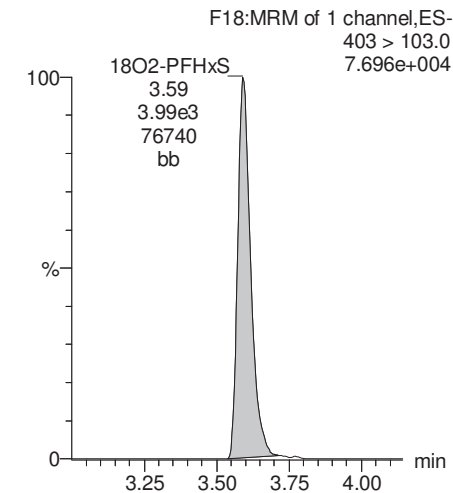
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13C4-PFHpA



18O2-PFHxS

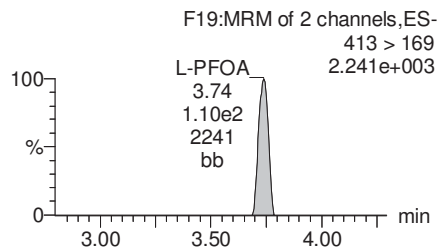
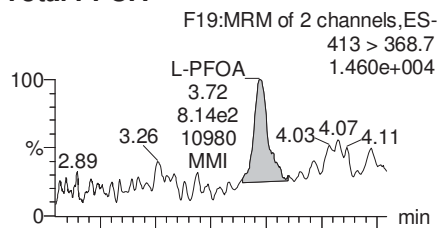


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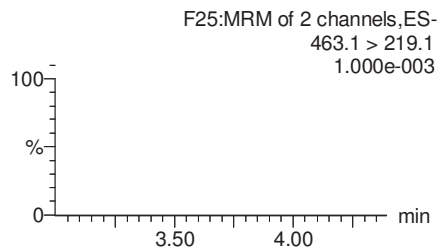
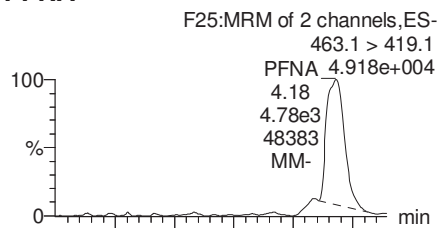
Last Altered: Thursday, October 26, 2017 10:36:39 Pacific Daylight Time
Printed: Wednesday, November 01, 2017 16:47:35 Pacific Daylight Time

Name: 171008M1_10, Date: 09-Oct-2017, Time: 17:53:55, ID: B7J0024-BLK1 Method Blank 0.125, Description: Method Blank

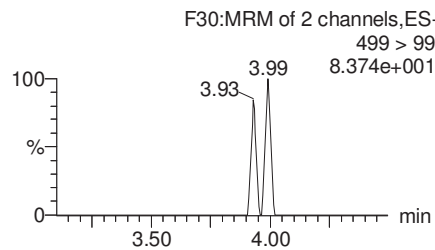
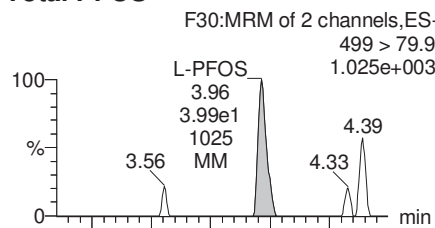
Total PFOA



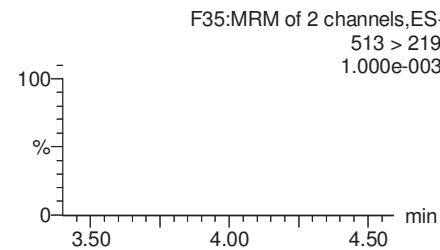
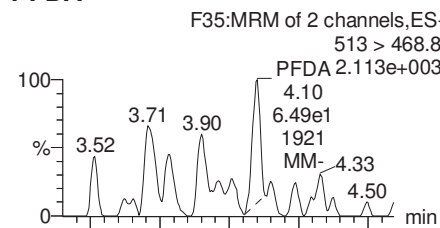
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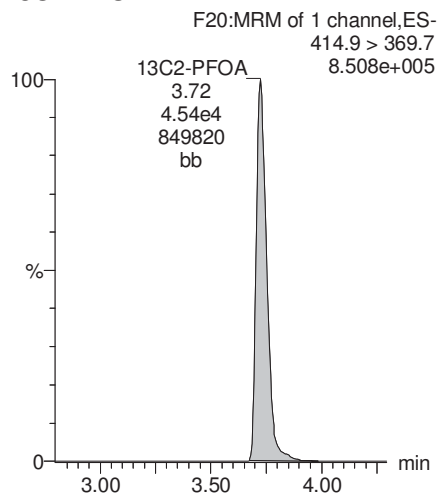
Total PFOS



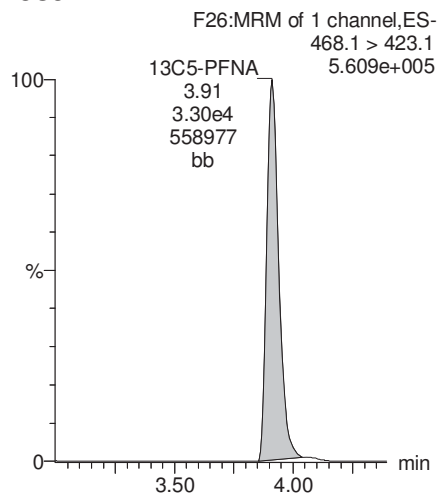
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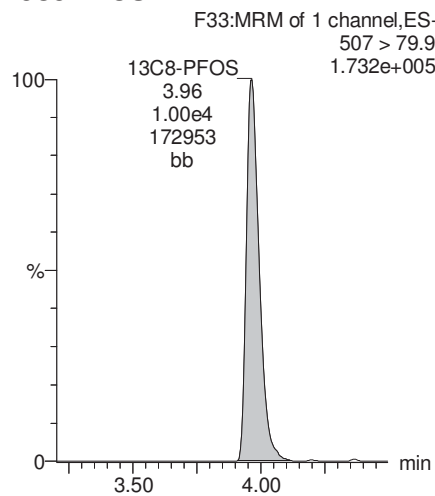
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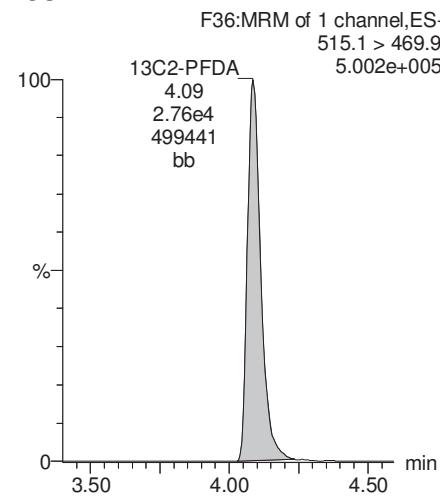
13C5-PFNA



13C8-PFOS



13C2-PFDA



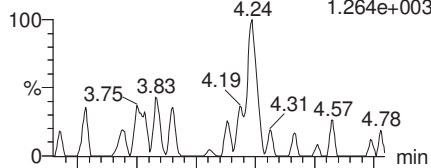
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Last Altered: Thursday, October 26, 2017 10:36:39 Pacific Daylight Time
Printed: Wednesday, November 01, 2017 16:47:35 Pacific Daylight Time

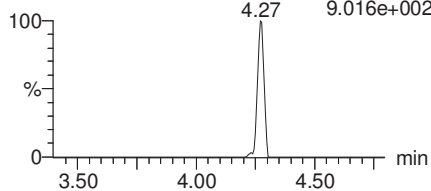
Name: 171008M1_10, Date: 09-Oct-2017, Time: 17:53:55, ID: B7J0024-BLK1 Method Blank 0.125, Description: Method Blank

PFUnA

F43:MRM of 2 channels,ES-
562.9 > 518.9
1.264e+003

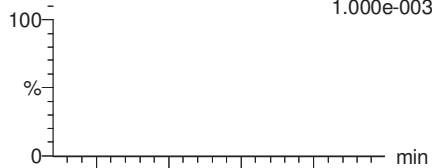


F43:MRM of 2 channels,ES-
562.9 > 269
9.016e+002

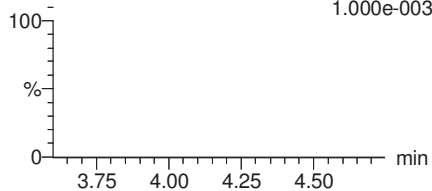


N-MeFOSAA

F45:MRM of 3 channels,ES-
570.1 > 419
1.000e-003

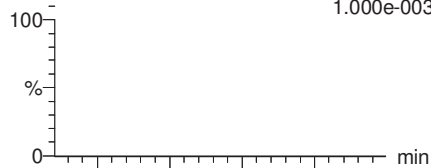


F45:MRM of 3 channels,ES-
570.1 > 483.1
1.000e-003

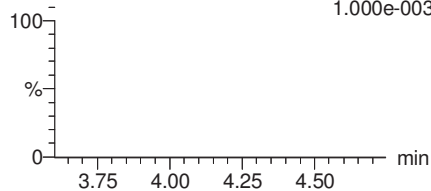


N-EtFOSAA

F48:MRM of 3 channels,ES-
584.2 > 419
1.000e-003

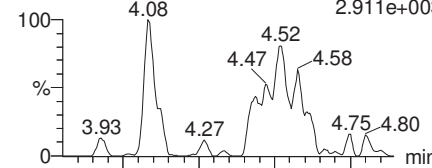


F48:MRM of 3 channels,ES-
584.1 > 526.1
1.000e-003

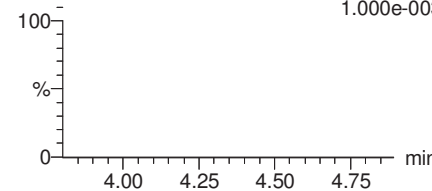


PFDaA

F51:MRM of 4 channels,ES-
613.0 > 569.1
2.911e+003

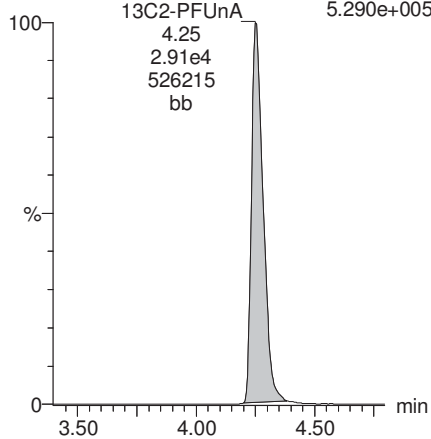


F51:MRM of 4 channels,ES-
613.0 > 319.1
1.000e-003



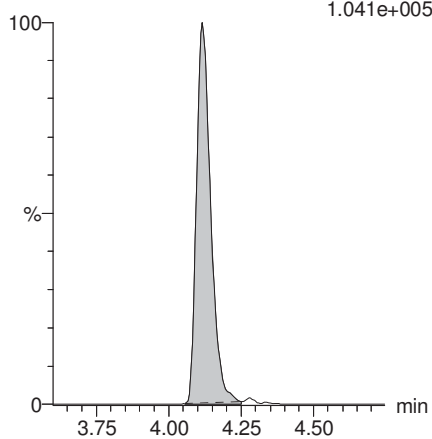
13C2-PFUnA

F44:MRM of 1 channel,ES-
565 > 519.8
5.290e+005



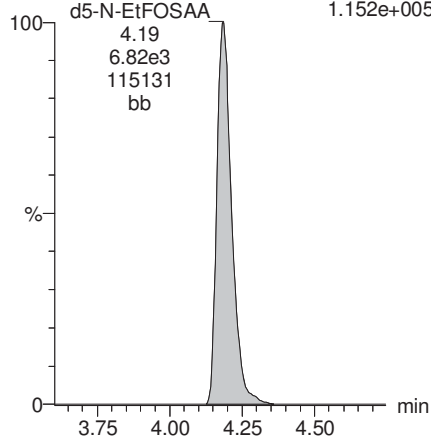
d3-N-MeFOSAA

F47:MRM of 1 channel,ES-
573.3 > 419
1.041e+005



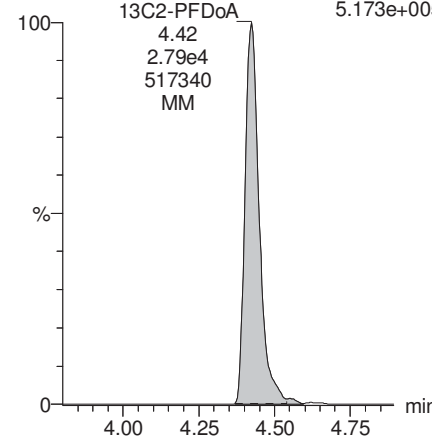
d5-N-EtFOSAA

F49:MRM of 1 channel,ES-
589.3 > 419
1.152e+005



13C2-PFDaA

F52:MRM of 2 channels,ES-
615.1 > 570.1
5.173e+005

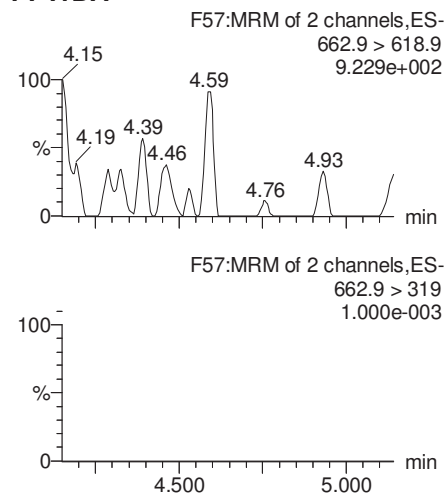


Dataset: U:\Q4.PRO\results\171009M1\171009M1-10.qld

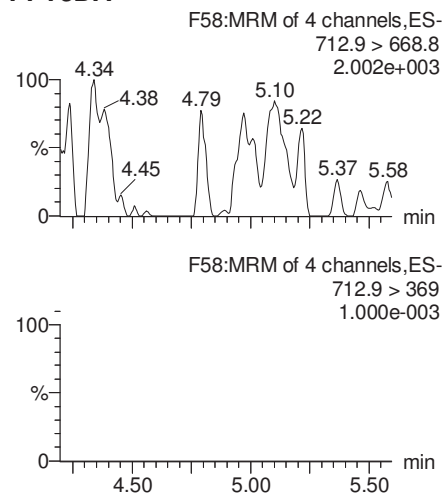
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Printed: Wednesday, November 01, 2017 16:47:35 Pacific Daylight Time

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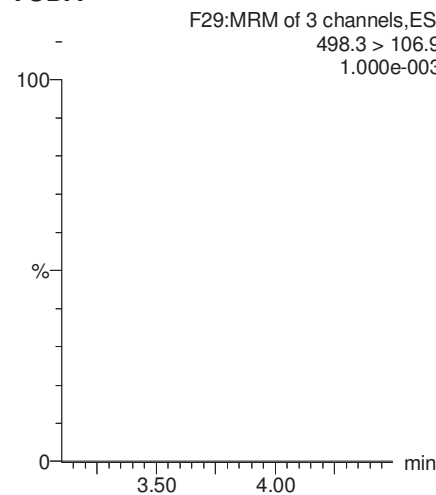
PFTrDA



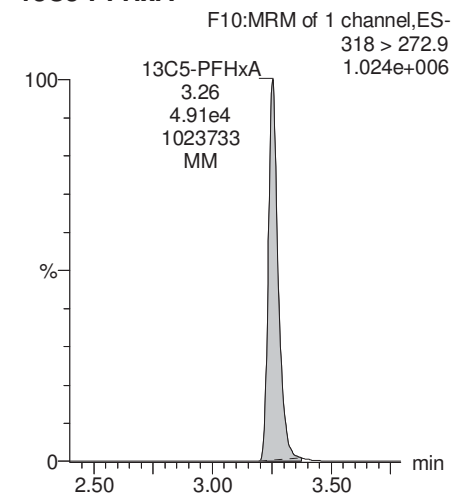
PFTeDA



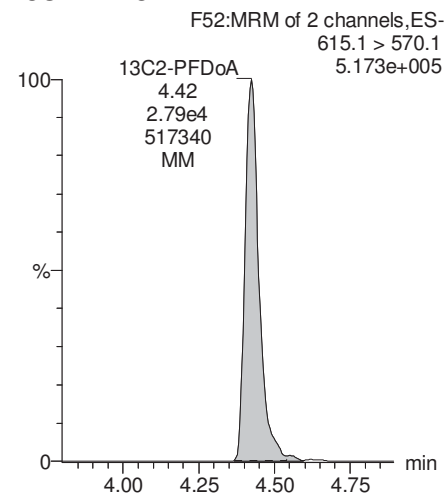
TCDA



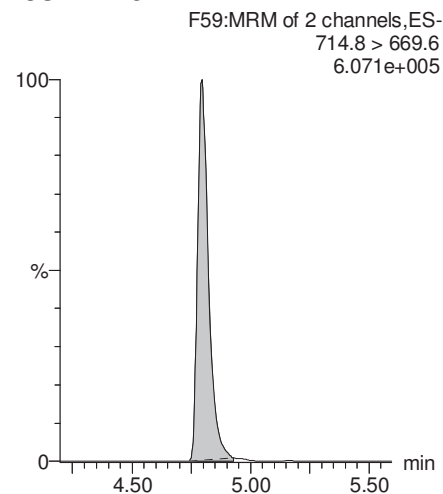
13C5-PFHxA



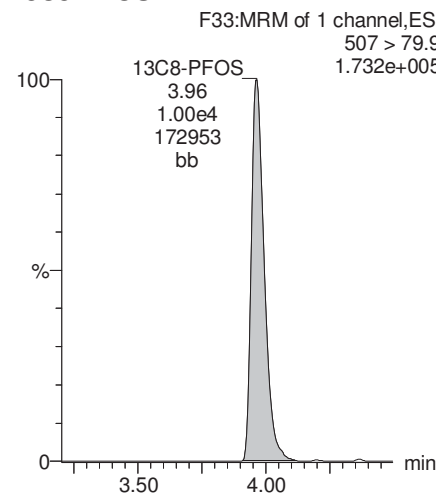
13C2-PFDoA



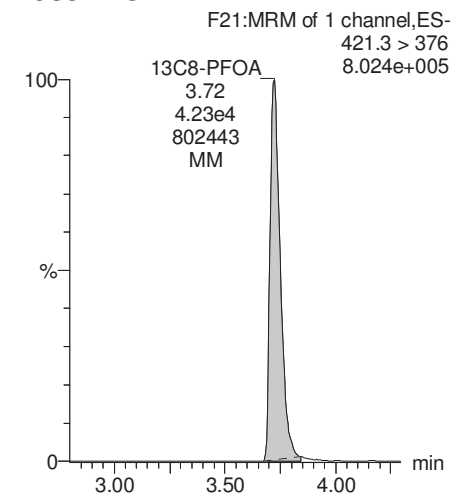
13C2-PFTeDA



13C8-PFOS



13C8-PFOA

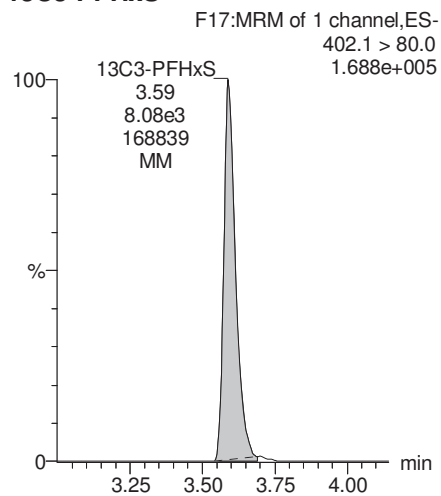


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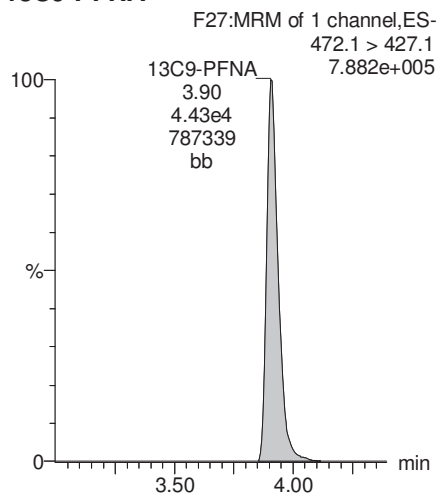
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Printed: Wednesday, November 01, 2017 16:47:35 Pacific Daylight Time

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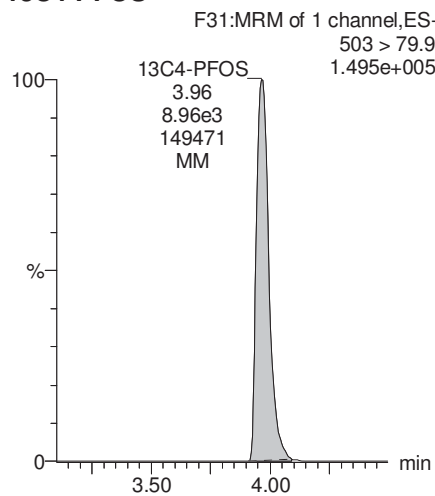
13C3-PFHxS



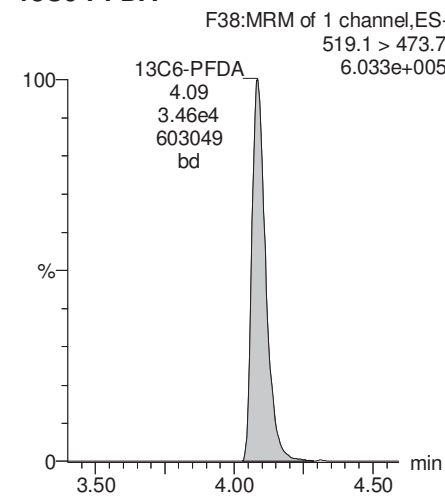
13C9-PFNA



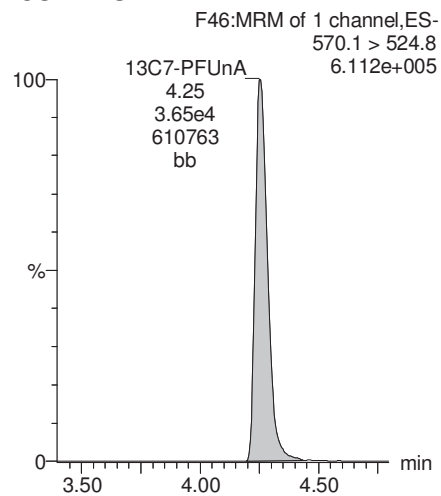
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Dataset: U:\Q4.PRO\results\171009M1\171009M1-5.qld

Last Altered: Thursday, October 26, 2017 11:00:56 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 16:44:37 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 09 Oct 2017 08:29:43

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171008M1_5, Date: 09-Oct-2017, Time: 17:00:35, ID: B7J0024-BS1 OPR 0.125, Description: OPR

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3 PFBS	299.1 > 79.9	6.68e3	8.20e3	0.1250		3.09	3.02	10.2	84.921	106.2
2	4 PFHxA	313.2 > 268.9	3.64e4	1.14e4	0.1250		3.31	3.26	16.0	87.061	108.8
3	5 PFHpA	363.1 > 319.1	3.88e4	4.48e4	0.1250		3.56	3.52	10.8	90.306	112.9
4	6 L-PFHxS	399.0 > 80.0	5.28e3	3.09e3	0.1250		3.63	3.59	21.4	77.887	97.4
5	9 L-PFOA	413 > 368.7	2.91e4	3.51e4	0.1250		3.77	3.72	10.4	86.482	108.1
6	12 PFNA	463.1 > 419.1	2.41e4	2.62e4	0.1250		3.96	3.91	11.5	83.204	104.0
7	14 L-PFOS	499 > 79.9	6.01e3	6.92e3	0.1250		4.01	3.96	10.8	82.008	102.5
8	16 PFDA	513 > 468.8	2.58e4	2.18e4	0.1250		4.14	4.08	14.8	81.510	101.9
9	18 N-MeFOSAA	570.1 > 419	6.21e3	5.60e3	0.1250		4.17	4.11	180	76.054	95.1
10	19 N-EtFOSAA	584.2 > 419	4.53e3	5.63e3	0.1250		4.23	4.18	131	70.559	88.2
11	20 PFUnA	562.9 > 518.9	2.10e4	2.30e4	0.1250		4.31	4.25	11.4	89.159	111.4
12	22 PFDoA	613.0 > 569.1	2.24e4	2.41e4	0.1250		4.49	4.42	11.6	80.686	100.9

Total PFOA and PFOS: 168

Dataset: U:\Q4.PRO\results\171009M1\171009M1-5.qld

Last Altered: Thursday, October 26, 2017 11:00:56 Pacific Daylight Time
Printed: Wednesday, November 01, 2017 16:44:56 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 09 Oct 2017 08:29:43
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171008M1_5, Date: 09-Oct-2017, Time: 17:00:35, ID: B7J0024-BS1 OPR 0.125, Description: OPR

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	24 PFTrDA	662.9 > 618.9	3.05e4	2.41e4	0.1250		4.68	4.60	15.8	80.456	100.6
2	25 PFTeDA	712.9 > 668.8	2.57e4	2.92e4	0.1250		4.88	4.79	11.0	77.493	96.9
3	31 13C3-PFBA	216.1 > 172.1	2.69e4	2.74e4	0.1250	0.944	1.76	1.63	12.3	104.019	104.0
4	32 13C3-PFPeA	266.1 > 222.1	3.39e4	3.75e4	0.1250	0.299	2.91	2.83	4.52	121.058	121.1
5	33 13C3-PFBS	302.1 > 79.9	8.20e3	3.75e4	0.1250	0.070	3.09	3.02	1.09	125.375	125.4
6	34 13C2-PFHxA	315 > 269.8	1.14e4	3.75e4	0.1250	0.295	3.31	3.25	1.52	41.074	102.7
7	35 13C4-PFHpA	367 > 322.1	4.48e4	3.75e4	0.1250	0.592	3.56	3.52	5.97	80.641	80.6
8	36 18O2-PFHxS	403 > 103.0	3.09e3	6.58e3	0.1250	0.497	3.63	3.59	5.86	94.392	94.4
9	37 13C2-6:2 FTS	429.1 > 408.9	4.17e3	3.34e4	0.1250	0.156	3.76	3.71	1.56	80.045	80.0
10	38 13C2-PFOA	414.9 > 369.7	3.51e4	3.34e4	0.1250	1.111	3.77	3.72	13.1	94.667	94.7
11	39 13C5-PFNA	468.1 > 423.1	2.62e4	3.44e4	0.1250	0.934	3.96	3.91	9.55	81.748	81.7
12	40 13C8-PFOSA	506.1 > 78.0	2.08e3	2.95e4	0.1250	0.129	3.96	3.92	0.881	54.672	54.7
13	41 13C8-PFOS	507 > 79.9	6.92e3	6.69e3	0.1250	0.995	4.01	3.96	12.9	103.927	103.9
14	42 13C2-PFDA	515.1 > 469.9	2.18e4	2.91e4	0.1250	0.954	4.14	4.08	9.36	78.498	78.5
15	43 13C2-8:2 FTS	529.1 > 508.7	3.07e3	2.91e4	0.1250	0.116	4.14	4.07	1.32	91.103	91.1
16	44 d3-N-MeFOSAA	573.3 > 419	5.60e3	2.95e4	0.1250	0.020	4.17	4.11	2.37	963.507	74.1
17	45 d5-N-EtFOSAA	589.3 > 419	5.63e3	2.95e4	0.1250	0.020	4.23	4.18	2.39	946.491	72.8
18	46 13C2-PFUnA	565 > 519.8	2.30e4	2.95e4	0.1250	1.124	4.31	4.25	9.76	69.447	69.4
19	47 13C2-PFDoA	615.1 > 570.1	2.41e4	2.95e4	0.1250	1.087	4.49	4.42	10.2	75.331	75.3
20	49 13C2-PFTeDA	714.8 > 669.6	2.92e4	2.95e4	0.1250	1.014	4.88	4.79	12.4	97.477	97.5
21	54 13C4-PFBA	217.1 > 172.1	2.74e4	2.74e4	0.1250	1.000	1.76	1.62	12.5	100.000	100.0
22	55 13C5-PFHxA	318 > 272.9	3.75e4	3.75e4	0.1250	1.000	3.31	3.25	5.00	40.000	100.0
23	56 13C3-PFHxS	402.1 > 80.0	6.58e3	6.58e3	0.1250	1.000	3.63	3.59	12.5	100.000	100.0
24	57 13C8-PFOA	421.3 > 376	3.34e4	3.34e4	0.1250	1.000	3.77	3.72	12.5	100.000	100.0
25	58 13C9-PFNA	472.1 > 427.1	3.44e4	3.44e4	0.1250	1.000	3.96	3.91	12.5	100.000	100.0
26	59 13C4-PFOS	503 > 79.9	6.69e3	6.69e3	0.1250	1.000	4.01	3.96	12.5	100.000	100.0
27	60 13C6-PFDA	519.1 > 473.7	2.91e4	2.91e4	0.1250	1.000	4.14	4.08	12.5	100.000	100.0
28	61 13C7-PFUnA	570.1 > 524.8	2.95e4	2.95e4	0.1250	1.000	4.31	4.24	12.5	100.000	100.0
29	62 Total PFHxS	399.0 > 80.0	5.28e3	3.09e3	0.1250		3.63		21.4	77.887	
30	63 Total PFOA	413 > 368.7	2.91e4	3.51e4	0.1250		3.77		10.4	86.482	
31	64 Total PFOS	499 > 79.9	6.01e3	6.92e3	0.1250		4.01		10.8	82.008	
32	65 Total N-MeFOSAA	570.1 > 419	6.21e3	5.60e3	0.1250		4.17		180	76.054	

Dataset: U:\Q4.PRO\results\171009M1\171009M1-5.qld

Last Altered: Thursday, October 26, 2017 11:00:56 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 16:44:56 Pacific Daylight Time

Name: 171008M1_5, Date: 09-Oct-2017, Time: 17:00:35, ID: B7J0024-BS1 OPR 0.125, Description: OPR

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	66 Total N-EtFOSAA	584.2 > 419	4.53e3	5.63e3	0.1250		4.23		131	70.559	

Dataset: U:\Q4.PRO\results\171009M1\171009M1-5.qld

Last Altered: Thursday, October 26, 2017 11:00:56 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 16:44:37 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 09 Oct 2017 08:29:43

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171008M1_5, Date: 09-Oct-2017, Time: 17:00:35, ID: B7J0024-BS1 OPR 0.125, Description: OPR

Total PFHxS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6 L-PFHxS	399.0 > 80.0	3.59	5275.985	3086.988	21.364	MM	77.9
2	7 Br-PFHxS	399.0 > 80.0			3086.988		MM-	

Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	9 L-PFOA	413 > 368.7	3.72	29090.203	35112.770	10.356	bb	86.5

Total PFOS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14 L-PFOS	499 > 79.9	3.96	6005.501	6921.815	10.845	MM	82.0

Total N-Me-FOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	18 N-MeFOSAA	570.1 > 419	4.11	6213.785	5598.348	180.364	bb	76.1

Total N-EtFOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	19 N-EtFOSAA	584.2 > 419	4.18	4529.651	5634.809	130.629	bb	70.6

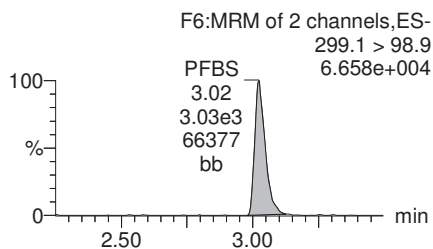
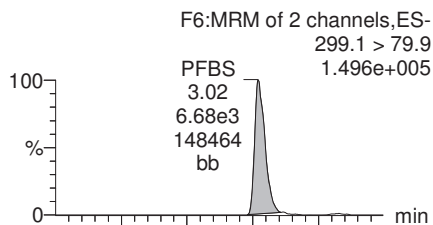
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Printed: Wednesday, November 01, 2017 16:44:37 Pacific Daylight Time

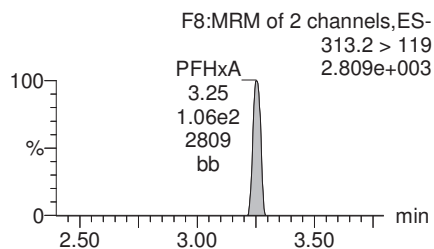
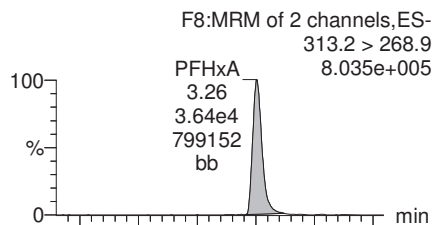
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Name: 171008M1_5, Date: 09-Oct-2017, Time: 17:00:35, ID: B7J0024-BS1 OPR 0.125, Description: OPR

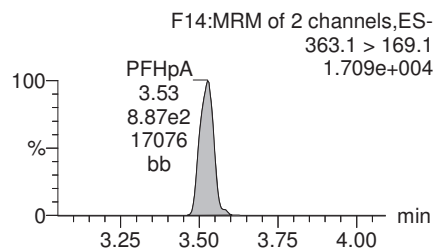
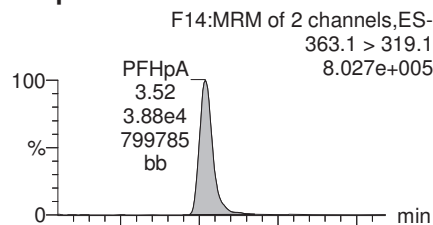
PFBS



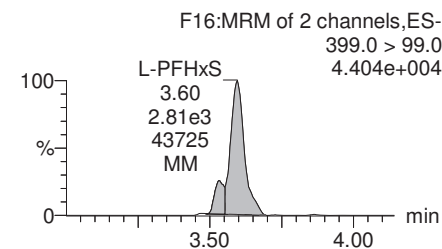
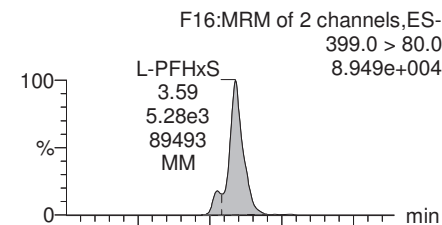
PFHxA



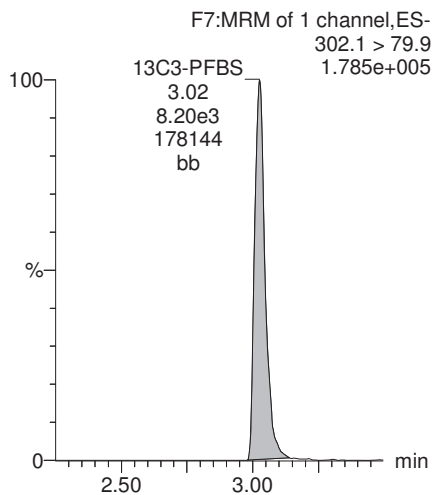
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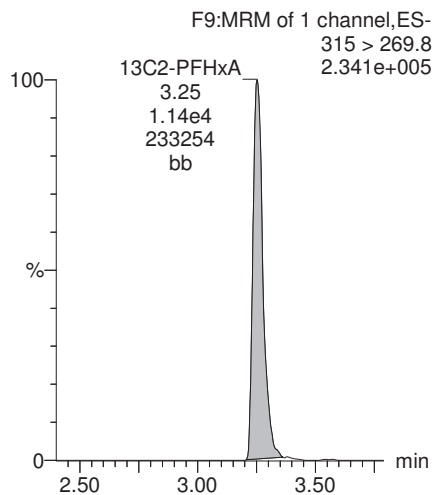
Total PFHxS



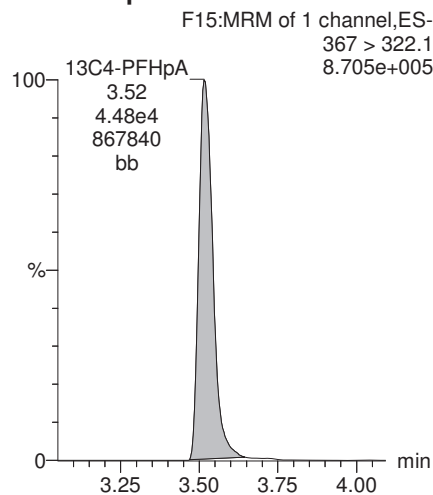
13C3-PFBS



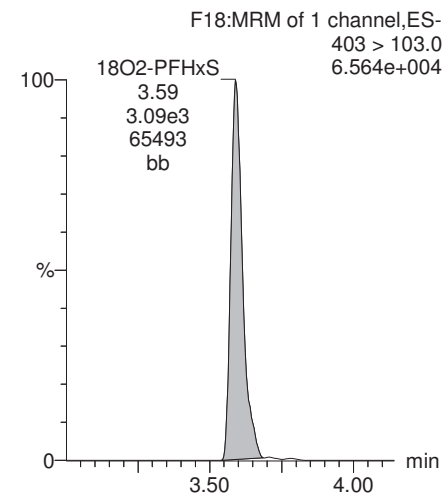
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS

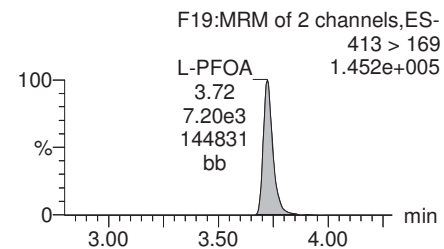
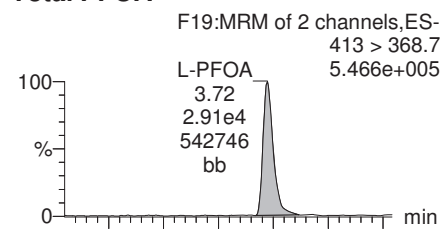


Dataset: U:\Q4.PRO\results\171009M1\171009M1-5.qld

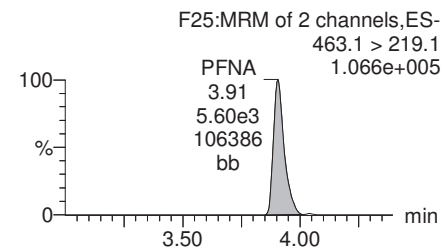
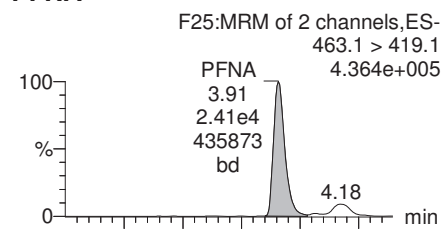
Last Altered: Thursday, October 26, 2017 11:00:56 Pacific Daylight Time
Printed: Wednesday, November 01, 2017 16:44:37 Pacific Daylight Time

Name: 171008M1_5, Date: 09-Oct-2017, Time: 17:00:35, ID: B7J0024-BS1 OPR 0.125, Description: OPR

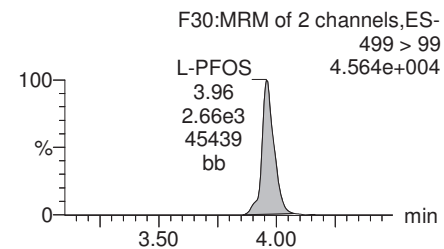
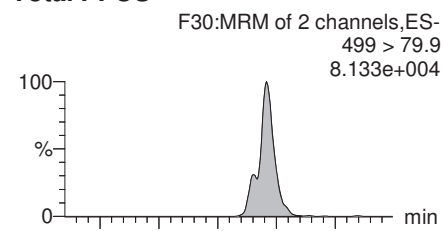
Total PFOA



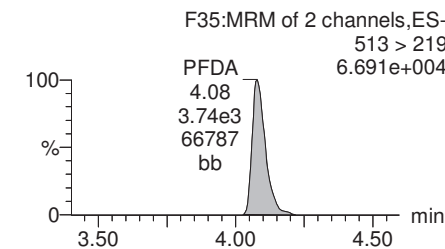
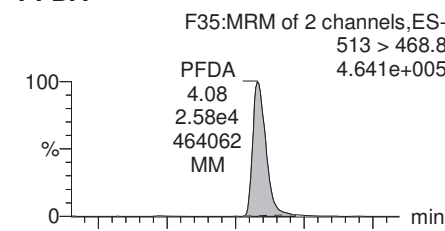
PFNA



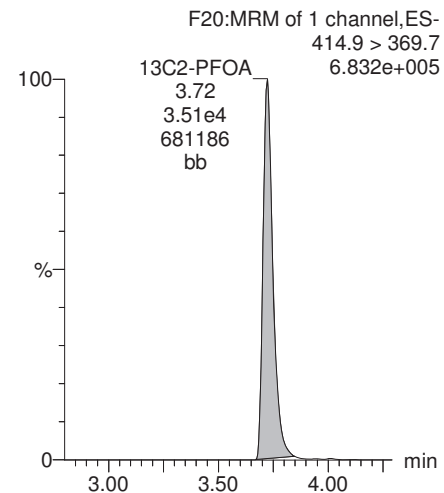
Total PFOS



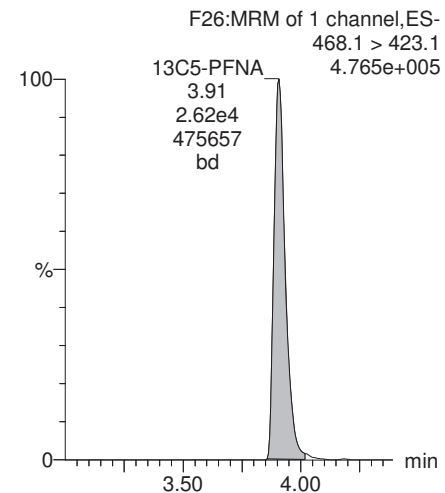
PFDA



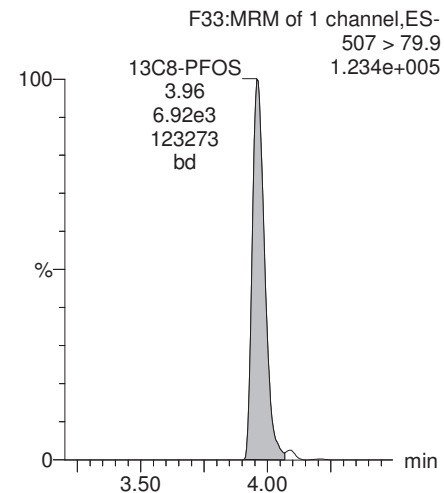
13C2-PFOA



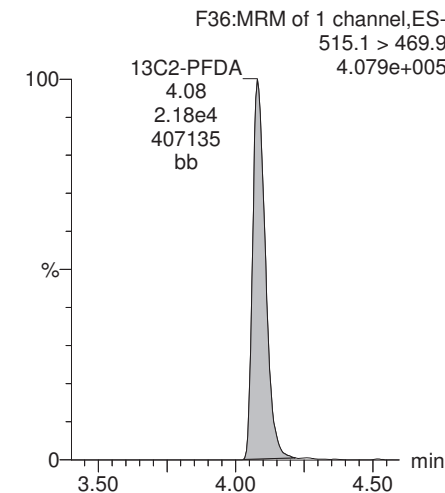
13C5-PFNA



13C8-PFOS



13C2-PFDA

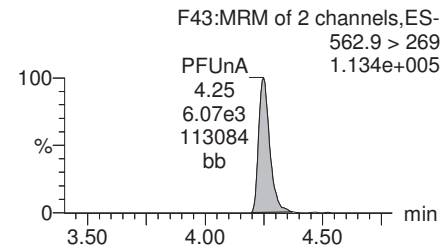
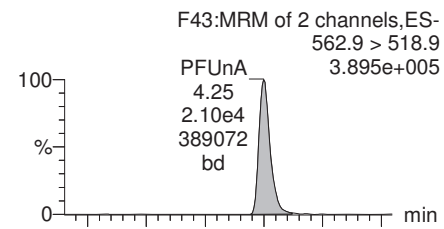


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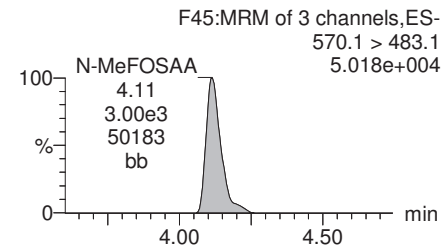
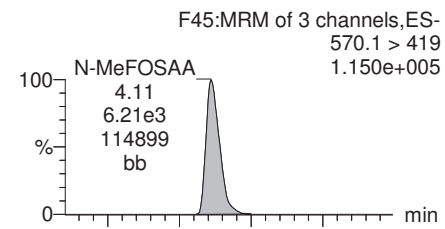
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Printed: Wednesday, November 01, 2017 16:44:37 Pacific Daylight Time

Name: 171008M1_5, Date: 09-Oct-2017, Time: 17:00:35, ID: B7J0024-BS1 OPR 0.125, Description: OPR

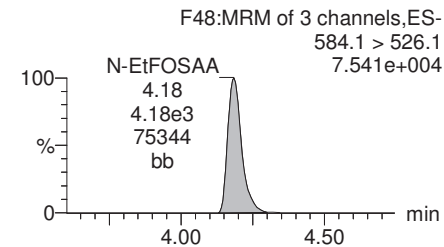
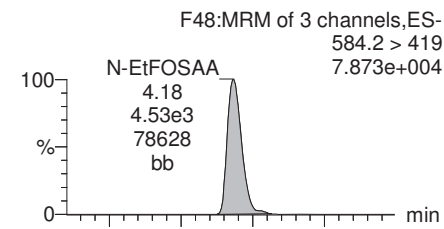
PFUnA



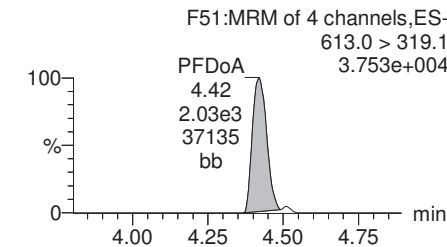
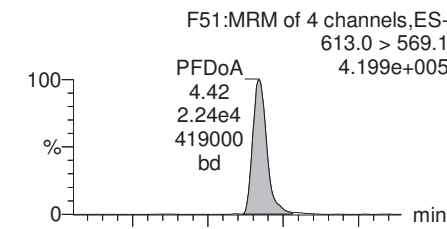
N-MeFOSAA



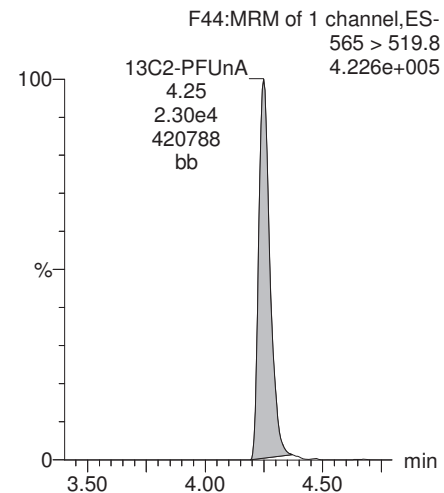
N-EtFOSAA



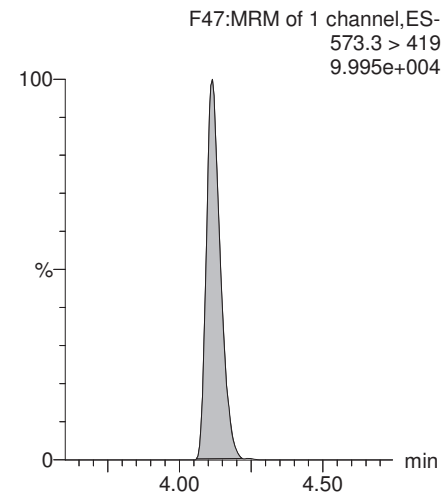
PFDoA



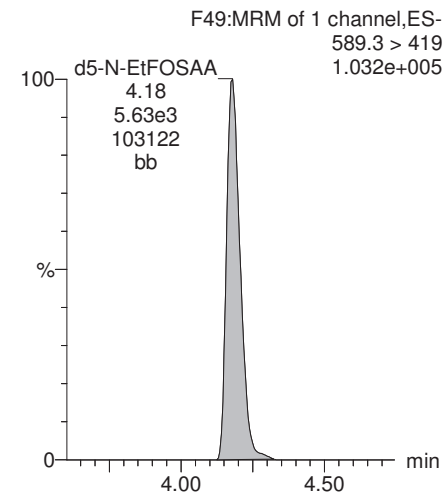
13C2-PFUnA



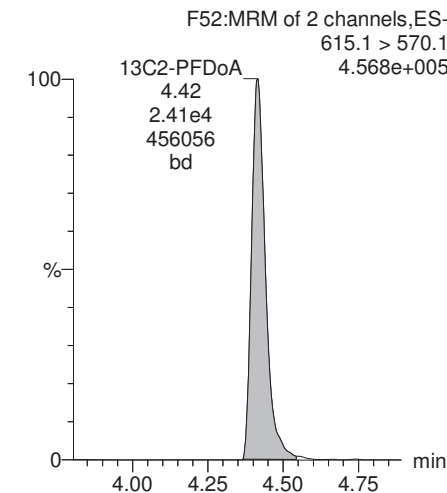
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA

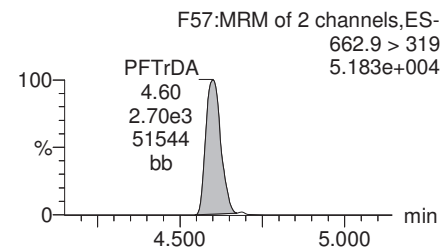
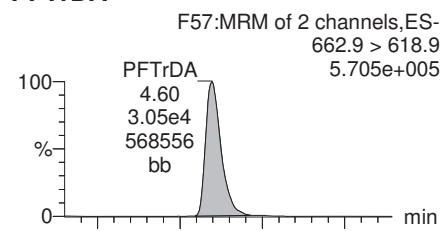


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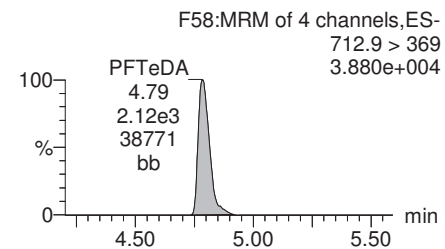
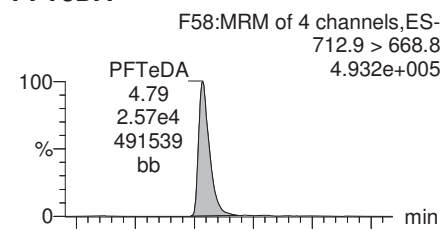
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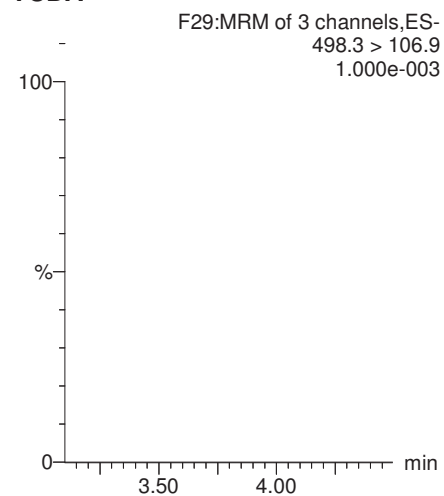
PFTrDA



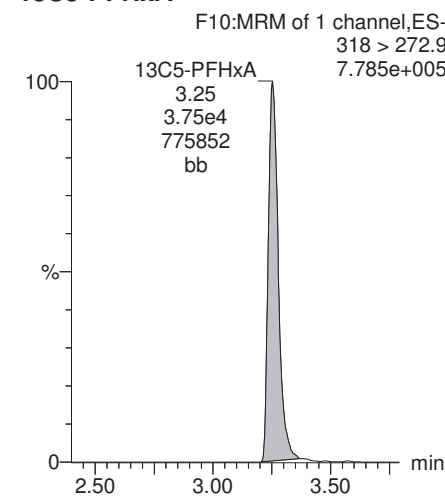
PFTeDA



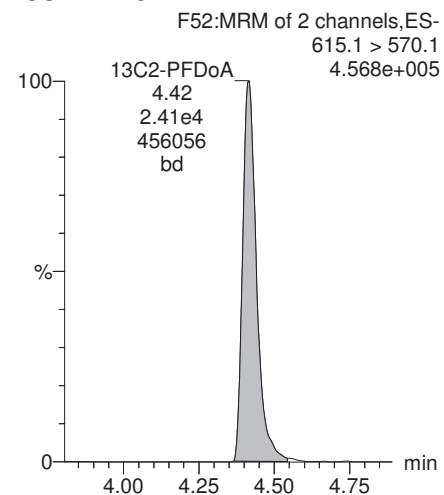
TCDA



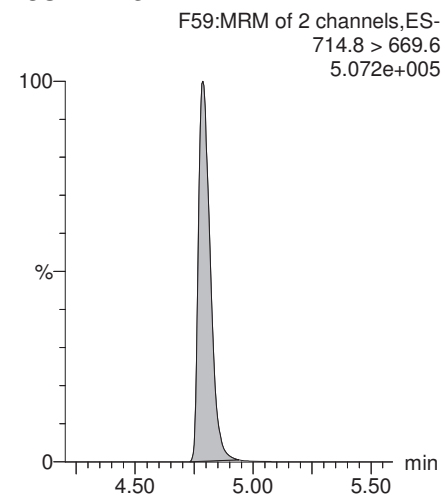
13C5-PFHxA



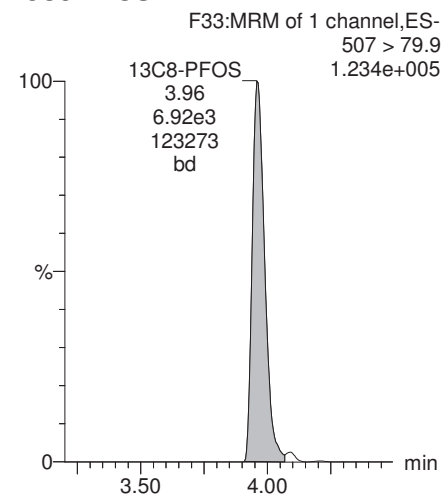
13C2-PFDoA



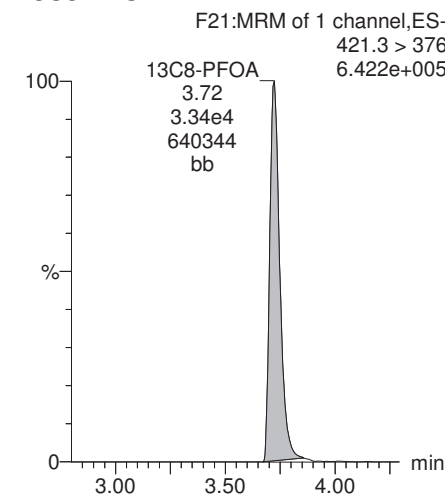
13C2-PFTeDA



13C8-PFOS



13C8-PFOA



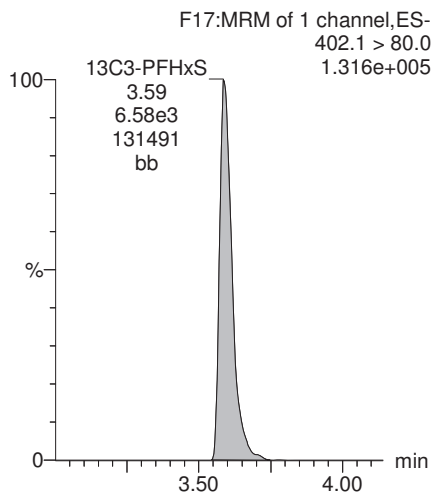
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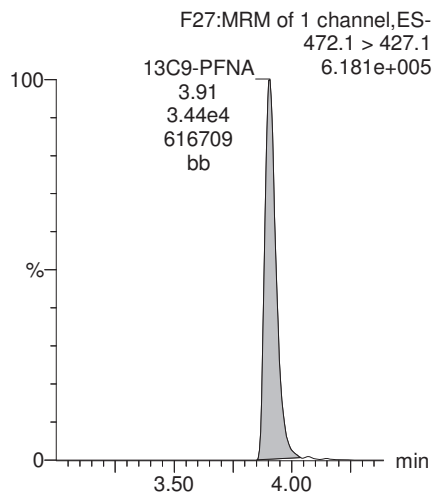
Printed: Wednesday, November 01, 2017 16:44:37 Pacific Daylight Time

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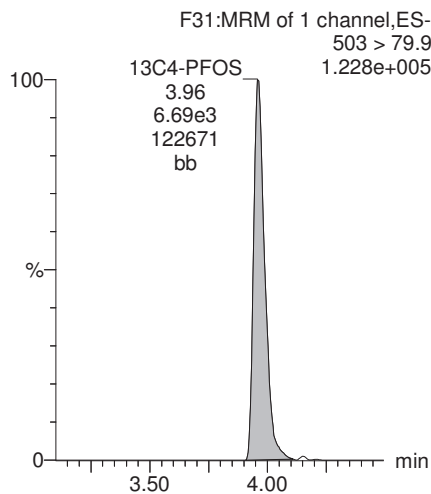
13C3-PFHxS



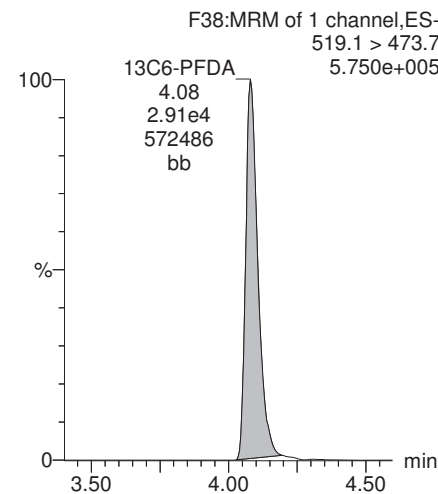
13C9-PFNA



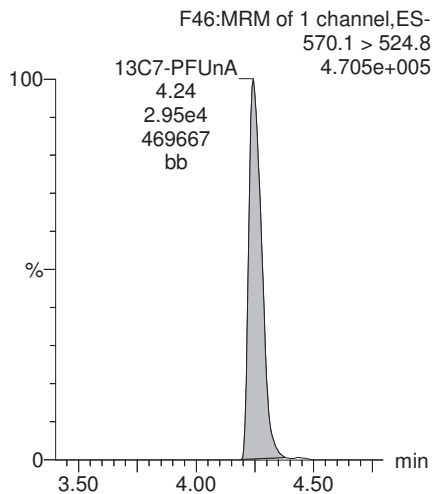
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Dataset: U:\Q4.PRO\results\171010M1\171010M1-9.qld

Last Altered: Wednesday, November 01, 2017 09:09:07 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:09:37 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_9, Date: 10-Oct-2017, Time: 17:54:14, ID: 1701353-01 IR09-GW10-17D 0.11311, Description: IR09-GW10-17D

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3 PFBS	299.1 > 79.9	7.66e3	8.88e3	0.1131		3.09	3.03	10.8	99.361	
2	4 PFHxA	313.2 > 268.9	5.52e5	9.96e3	0.1131		3.31	3.25	277	1673.844	
3	5 PFHpA	363.1 > 319.1	2.24e5	4.63e4	0.1131		3.56	3.52	60.4	560.483	
4	6 L-PFHxS	399.0 > 80.0	2.75e5	2.51e3	0.1131		3.63	3.58	1370	5750.148	E
5	9 L-PFOA	413 > 368.7	2.95e5	3.23e4	0.1131		3.68	3.72	114	1088.615	
6	12 PFNA	463.1 > 419.1	1.87e4	2.40e4	0.1131		3.96	3.90	9.74	77.920	
7	14 L-PFOS	499 > 79.9	8.83e5	3.94e3	0.1131		4.01	3.95	2800	23380.136	E
8	16 PFDA	513 > 468.8	4.74e3	2.30e4	0.1131		4.14	4.07	2.57	15.683	
9	18 N-MeFOSAA	570.1 > 419		6.39e3	0.1131		4.17				
10	19 N-EtFOSAA	584.2 > 419		7.82e3	0.1131		4.23				
11	20 PFUnA	562.9 > 518.9		2.33e4	0.1131		4.31				
12	22 PFDoA	613.0 > 569.1		2.93e4	0.1131		4.49				

Dataset: U:\Q4.PRO\results\171010M1\171010M1-9.qld

Last Altered: Wednesday, November 01, 2017 09:09:07 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:09:52 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_9, Date: 10-Oct-2017, Time: 17:54:14, ID: 1701353-01 IR09-GW10-17D 0.11311, Description: IR09-GW10-17D

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	24	PFTrDA	662.9 > 618.9	2.93e4	0.1131		4.68					
2	25	PFTeDA	712.9 > 668.8	3.30e4	0.1131		4.88					
3	31	13C3-PFBA	216.1 > 172.1	2.39e4	2.61e4	0.1131	0.944	1.76	1.63	11.4	107.013	96.8
4	32	13C3-PFPeA	266.1 > 222.1	3.34e4	3.56e4	0.1131	0.299	2.91	2.83	4.69	138.739	125.5
5	33	13C3-PFBS	302.1 > 79.9	8.88e3	3.56e4	0.1131	0.070	3.09	3.03	1.25	158.183	143.1
6	34	13C2-PFHxA	315 > 269.8	9.96e3	3.56e4	0.1131	0.295	3.31	3.25	1.40	41.881	94.7
7	35	13C4-PFHpA	367 > 322.1	4.63e4	3.56e4	0.1131	0.592	3.56	3.52	6.50	97.053	87.8
8	36	18O2-PFHxS	403 > 103.0	2.51e3	5.36e3	0.1131	0.497	3.63	3.59	5.84	104.017	94.1
9	37	13C2-6:2 FTS	429.1 > 408.9	7.62e3	3.43e4	0.1131	0.156	3.76	3.71	2.77	157.010	142.1
10	38	13C2-PFOA	414.9 > 369.7	3.23e4	3.43e4	0.1131	1.111	3.77	3.71	11.8	93.718	84.8
11	39	13C5-PFNA	468.1 > 423.1	2.40e4	3.40e4	0.1131	0.934	3.96	3.90	8.81	83.408	75.5
12	40	13C8-PFOSA	506.1 > 78.0	2.09e3	3.66e4	0.1131	0.129	3.96	3.91	0.715	49.010	44.3
13	41	13C8-PFOS	507 > 79.9	3.94e3	4.22e3	0.1131	0.995	4.01	3.95	11.7	103.672	93.8
14	42	13C2-PFDA	515.1 > 469.9	2.30e4	3.35e4	0.1131	0.954	4.14	4.07	8.59	79.595	72.0
15	43	13C2-8:2 FTS	529.1 > 508.7	3.34e3	3.35e4	0.1131	0.116	4.14	4.06	1.24	94.938	85.9
16	44	d3-N-MeFOSAA	573.3 > 419	6.39e3	3.66e4	0.1131	0.020	4.17	4.10	2.18	980.456	68.2
17	45	d5-N-EtFOSAA	589.3 > 419	7.82e3	3.66e4	0.1131	0.020	4.23	4.16	2.67	1171.614	81.6
18	46	13C2-PFUnA	565 > 519.8	2.33e4	3.66e4	0.1131	1.124	4.31	4.24	7.98	62.722	56.8
19	47	13C2-PFDoA	615.1 > 570.1	2.93e4	3.66e4	0.1131	1.087	4.49	4.40	10.0	81.370	73.6
20	49	13C2-PFTeDA	714.8 > 669.6	3.30e4	3.66e4	0.1131	1.014	4.88	4.75	11.3	98.457	89.1
21	54	13C4-PFBA	217.1 > 172.1	2.61e4	2.61e4	0.1131	1.000	1.76	1.63	12.5	110.512	100.0
22	55	13C5-PFHxA	318 > 272.9	3.56e4	3.56e4	0.1131	1.000	3.31	3.25	5.00	44.205	100.0
23	56	13C3-PFHxS	402.1 > 80.0	5.36e3	5.36e3	0.1131	1.000	3.63	3.59	12.5	110.512	100.0
24	57	13C8-PFOA	421.3 > 376	3.43e4	3.43e4	0.1131	1.000	3.77	3.71	12.5	110.512	100.0
25	58	13C9-PFNA	472.1 > 427.1	3.40e4	3.40e4	0.1131	1.000	3.96	3.90	12.5	110.512	100.0
26	59	13C4-PFOS	503 > 79.9	4.22e3	4.22e3	0.1131	1.000	4.01	3.95	12.5	110.512	100.0
27	60	13C6-PFDA	519.1 > 473.7	3.35e4	3.35e4	0.1131	1.000	4.14	4.07	12.5	110.512	100.0
28	61	13C7-PFUnA	570.1 > 524.8	3.66e4	3.66e4	0.1131	1.000	4.31	4.23	12.5	110.512	100.0
29	62	Total PFHxS	399.0 > 80.0	2.75e5	2.51e3	0.1131		3.63		1370	5750.148	
30	63	Total PFOA	413 > 368.7	3.23e5		0.1131		3.68		125	1185.836	
31	64	Total PFOS	499 > 79.9	8.83e5		0.1131		4.01		2800	23380.136	
32	65	Total N-MeFOSAA	570.1 > 419	0.00e0	6.39e3	0.1131		4.17		0.000		

Dataset: U:\Q4.PRO\results\171010M1\171010M1-9.qld

Last Altered: Wednesday, November 01, 2017 09:09:07 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:09:52 Pacific Daylight Time

Name: 171010M1_9, Date: 10-Oct-2017, Time: 17:54:14, ID: 1701353-01 IR09-GW10-17D 0.11311, Description: IR09-GW10-17D

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	66 Total N-EtFOSAA	584.2 > 419	0.00e0	7.82e3	0.1131		4.23		0.000		
34	68 Total PFOA+PFOS	413 > 368.7;4...	1.21e6		0.1131		0.00		2930	24565.972	22,500

Dataset: U:\Q4.PRO\results\171010M1\171010M1-9.qld

Last Altered: Wednesday, November 01, 2017 09:09:07 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:09:52 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_9, Date: 10-Oct-2017, Time: 17:54:14, ID: 1701353-01 IR09-GW10-17D 0.11311, Description: IR09-GW10-17D

Total PFHxS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7 Br-PFHxS	399.0 > 80.0			2508.550		MM-	
2	6 L-PFHxS	399.0 > 80.0	3.58	274731.375	2508.550	1368.975	MM	5750.1

Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	9 L-PFOA	413 > 368.7	3.72	295431.000	32327.484	114.234	MM	1088.6
2	10 Br-PFOA	413 > 368.7	3.66	27228.463	32327.484	10.528	MM	97.2

Total PFOS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14 L-PFOS	499 > 79.9	3.95	882808.375	3935.801	2803.776	MM	23380.1

Total N-Me-FOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	18 N-MeFOSAA	570.1 > 419			6388.924		MM-I	

Total N-EtFOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1								

Total PFOA+PFOS,Total PFOS,Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	9 L-PFOA	413 > 368.7	3.72	295431.000	32327.484	114.234	MM	1088.6
2	10 Br-PFOA	413 > 368.7	3.66	27228.463	32327.484	10.528	MM	97.2
3	14 L-PFOS	499 > 79.9	3.95	882808.375	3935.801	2803.776	MM	23380.1

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Last Altered: Wednesday, November 01, 2017 09:09:07 Pacific Daylight Time

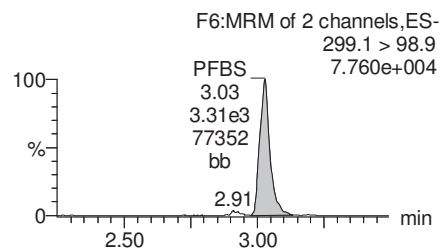
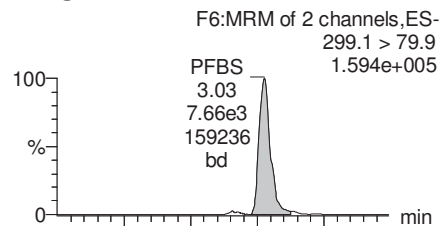
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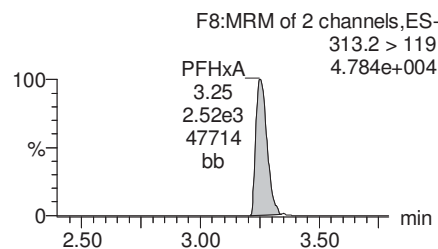
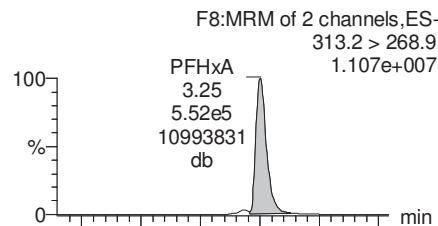
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Name: 171010M1_9, Date: 10-Oct-2017, Time: 17:54:14, ID: 1701353-01 IR09-GW10-17D 0.11311, Description: IR09-GW10-17D

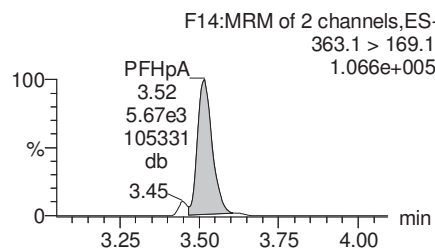
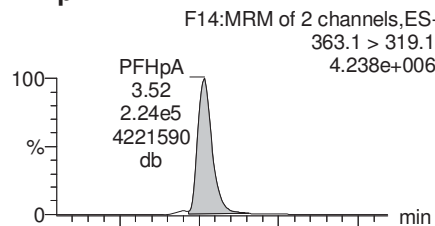
PFBS



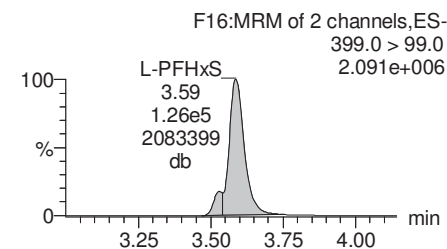
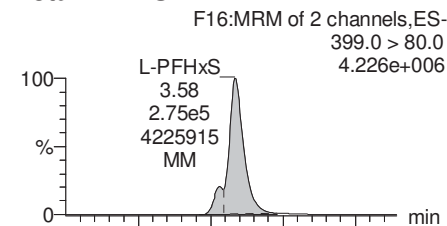
PFHxA



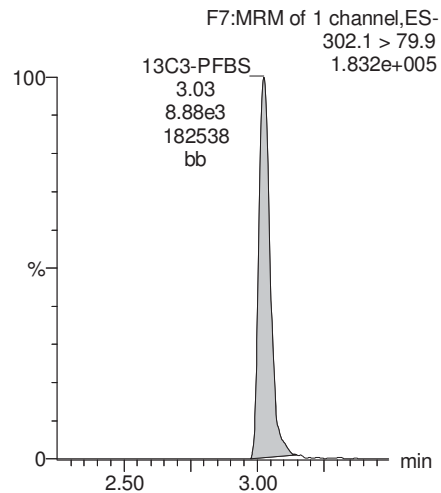
PFHpA



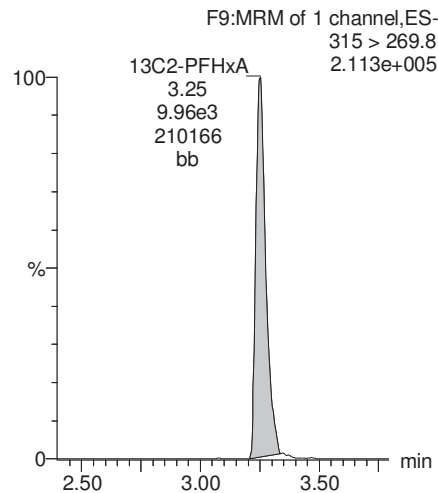
Total PFHxS



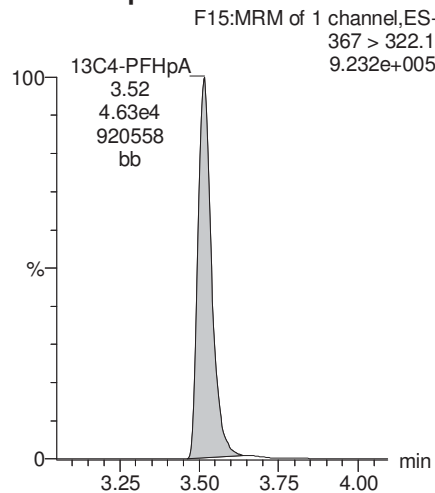
13C3-PFBS



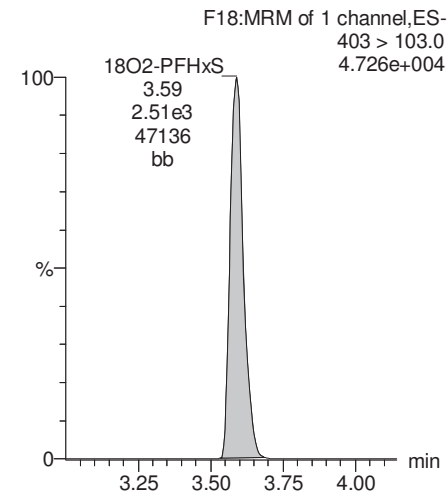
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



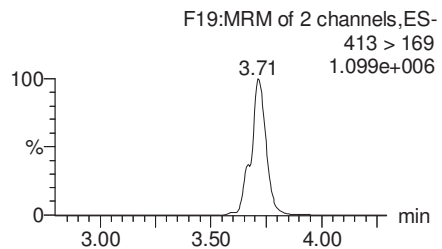
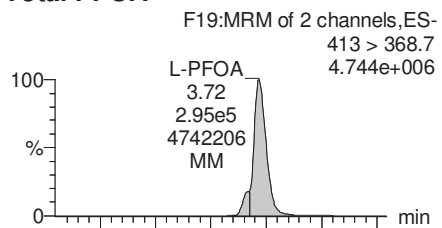
Dataset: U:\Q4.PRO\results\171010M1\171010M1-9.qld

Last Altered: Wednesday, November 01, 2017 09:09:07 Pacific Daylight Time

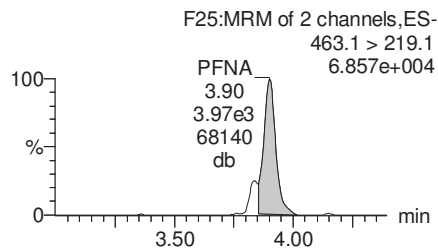
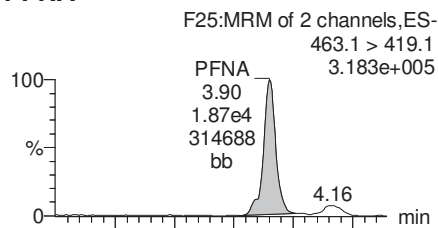
Printed: Wednesday, November 01, 2017 09:09:52 Pacific Daylight Time

Name: 171010M1_9, Date: 10-Oct-2017, Time: 17:54:14, ID: 1701353-01 IR09-GW10-17D 0.11311, Description: IR09-GW10-17D

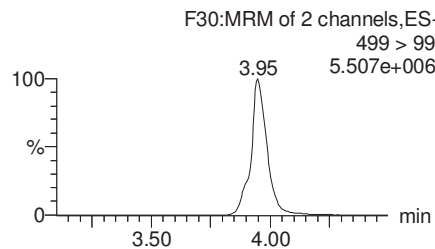
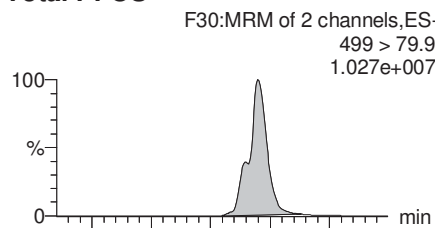
Total PFOA



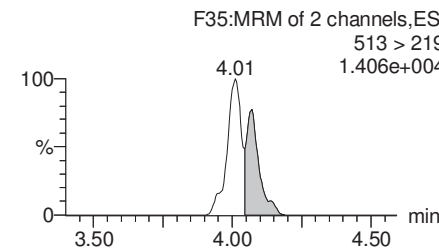
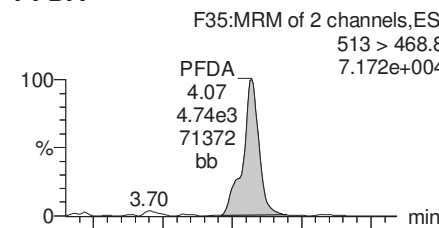
PFNA



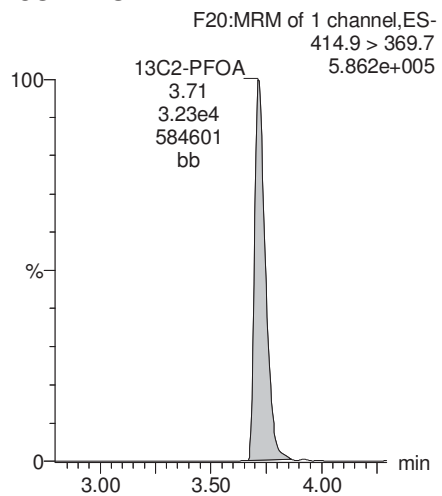
Total PFOS



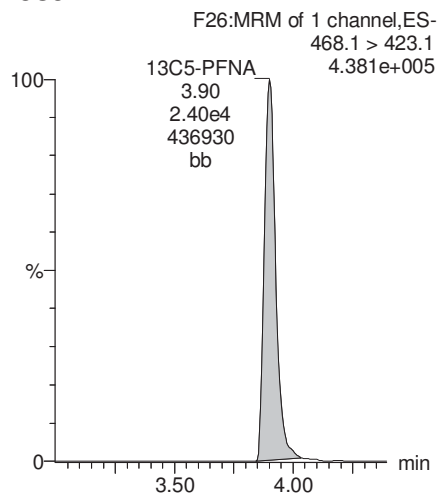
PFDA



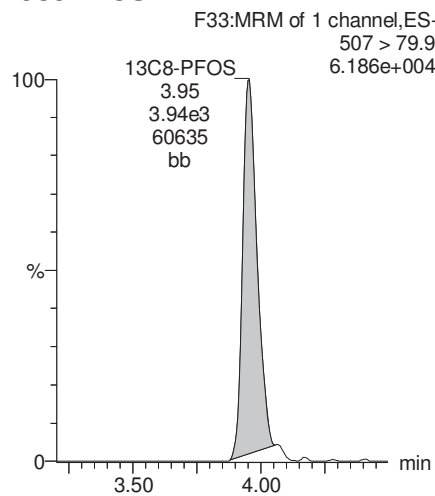
13C2-PFOA



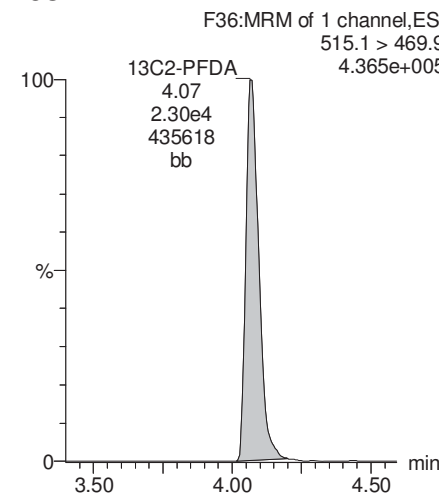
13C5-PFNA



13C8-PFOS



13C2-PFDA



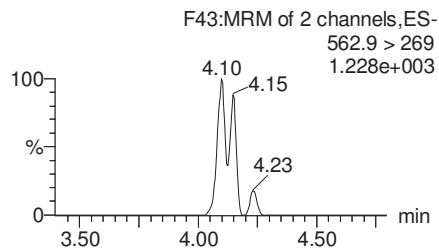
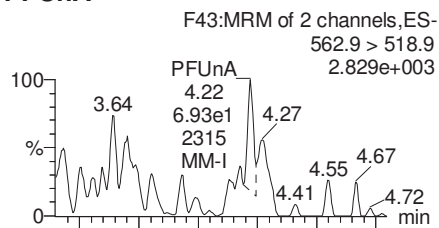
Dataset: U:\Q4.PRO\results\171010M1\171010M1-9.qld

Last Altered: Wednesday, November 01, 2017 09:09:07 Pacific Daylight Time

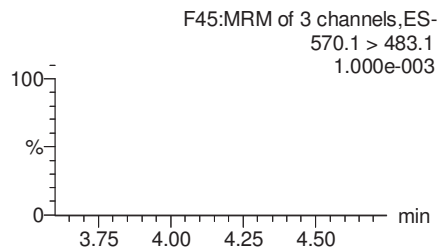
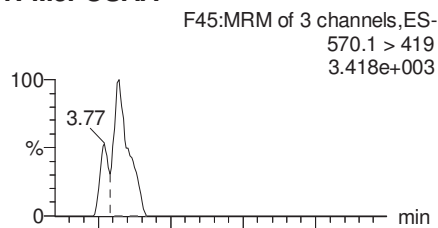
Printed: Wednesday, November 01, 2017 09:09:52 Pacific Daylight Time

Name: 171010M1_9, Date: 10-Oct-2017, Time: 17:54:14, ID: 1701353-01 IR09-GW10-17D 0.11311, Description: IR09-GW10-17D

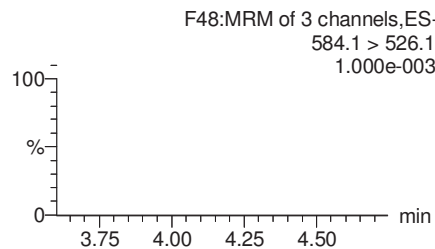
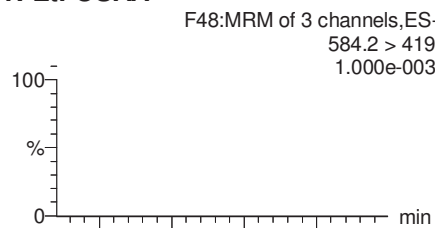
PFUnA



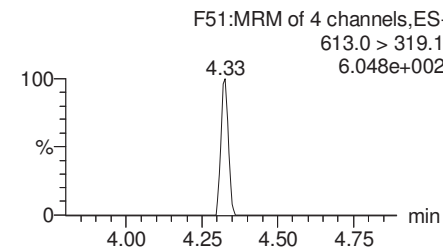
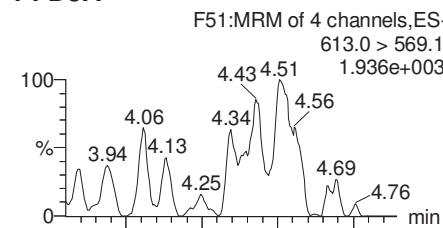
N-MeFOSAA



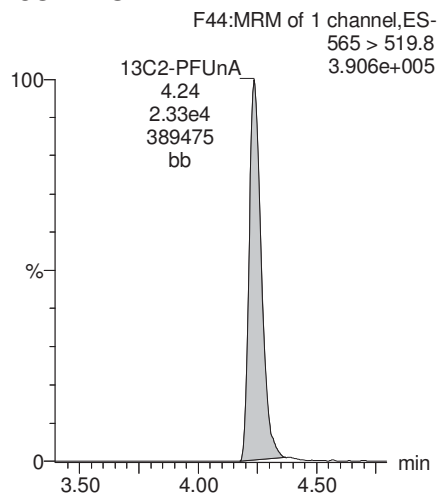
N-EtFOSAA



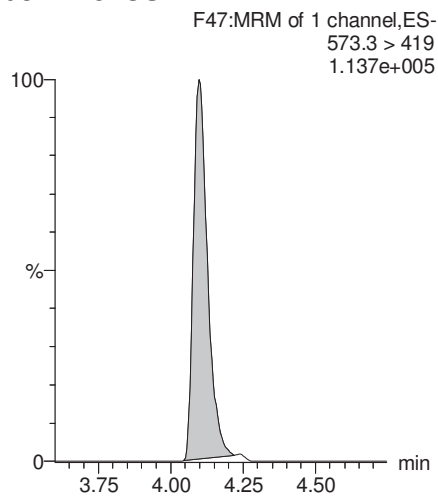
PFDaA



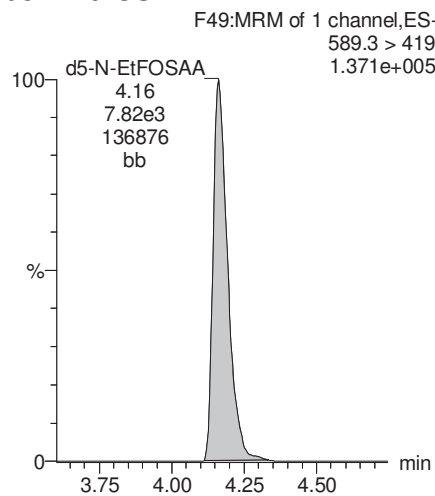
13C2-PFUnA



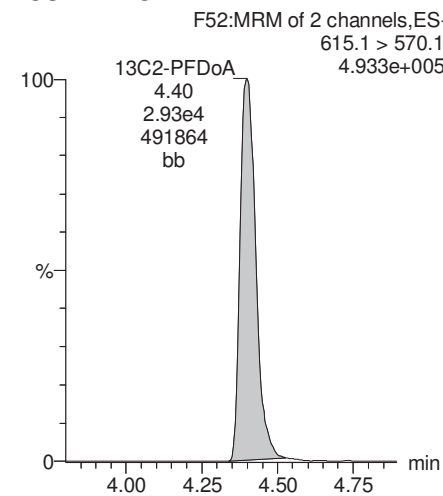
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDaA



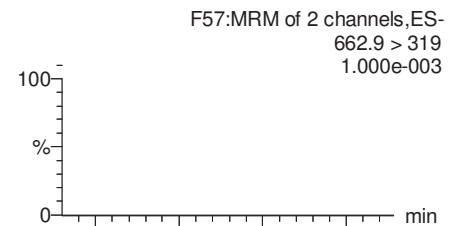
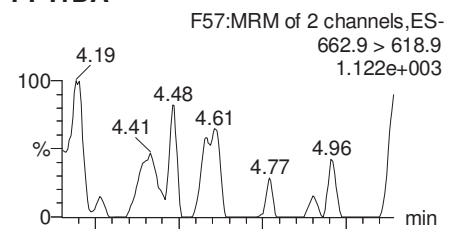
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Last Altered: Wednesday, November 01, 2017 09:09:07 Pacific Daylight Time

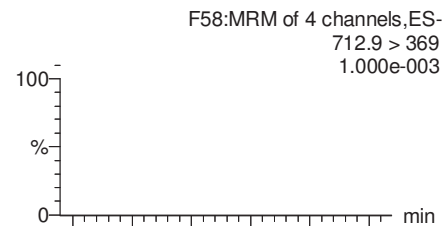
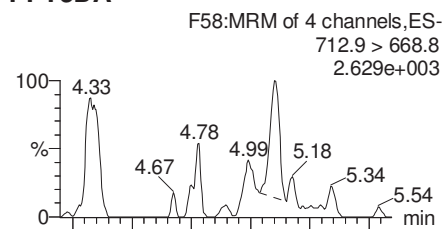
Printed: Wednesday, November 01, 2017 09:09:52 Pacific Daylight Time

Name: 171010M1_9, Date: 10-Oct-2017, Time: 17:54:14, ID: 1701353-01 IR09-GW10-17D 0.11311, Description: IR09-GW10-17D

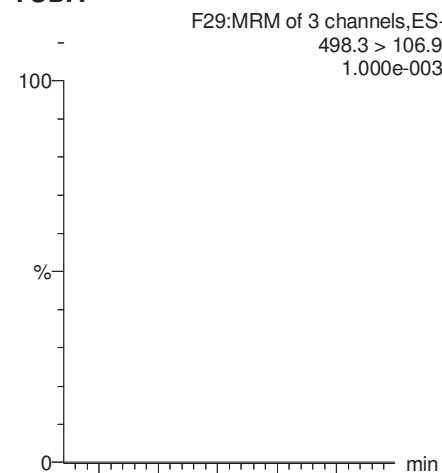
PFTrDA



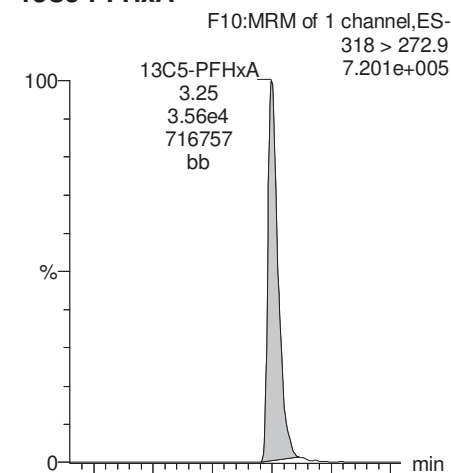
PFTeDA



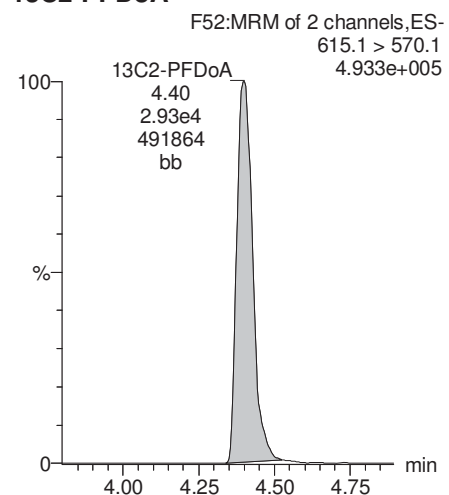
TCDA



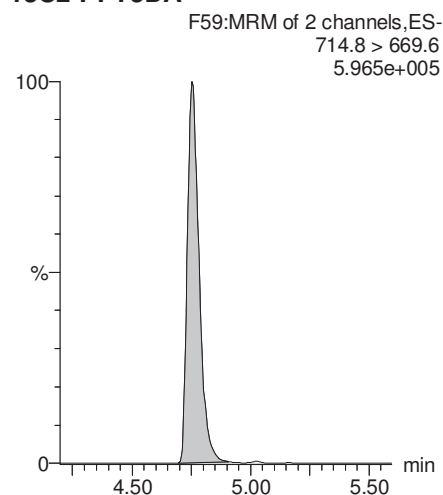
13C5-PFHxA



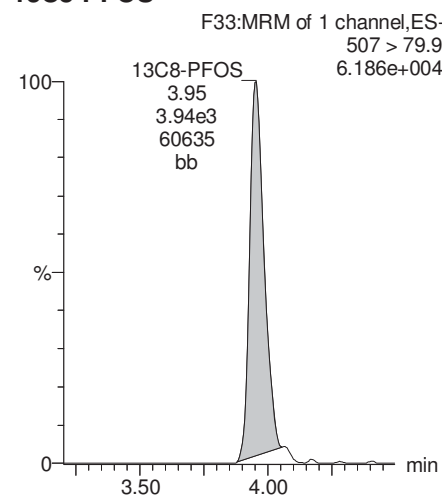
13C2-PFDoA



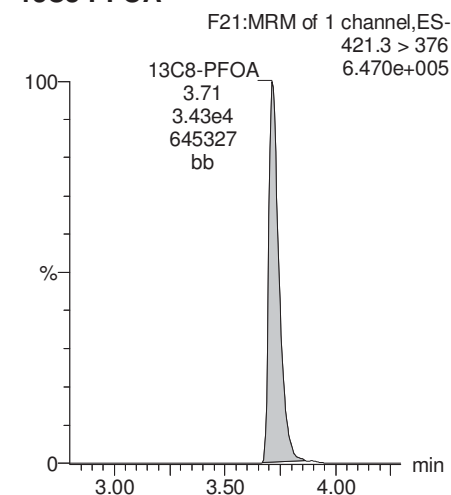
13C2-PFTeDA



13C8-PFOS



13C8-PFOA

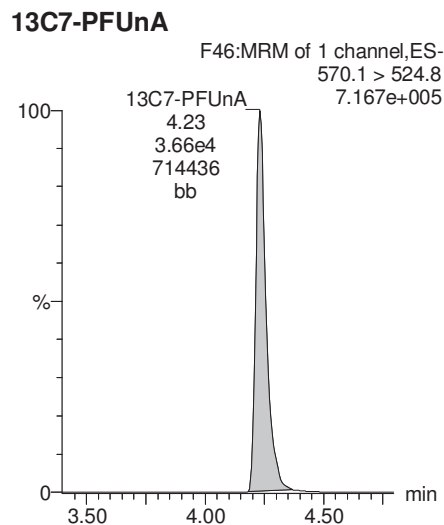
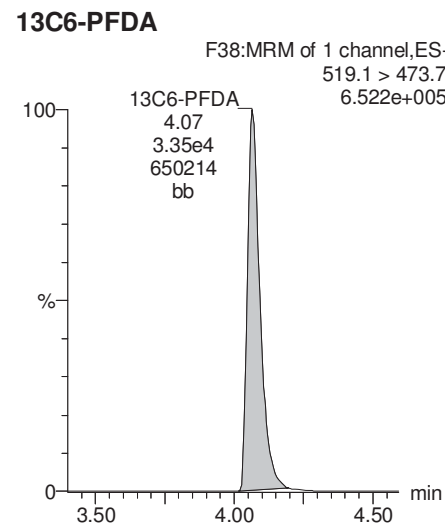
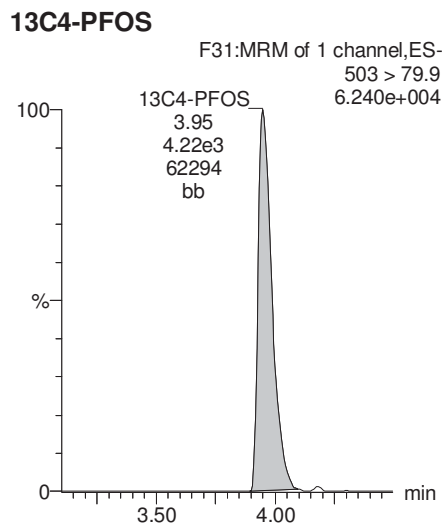
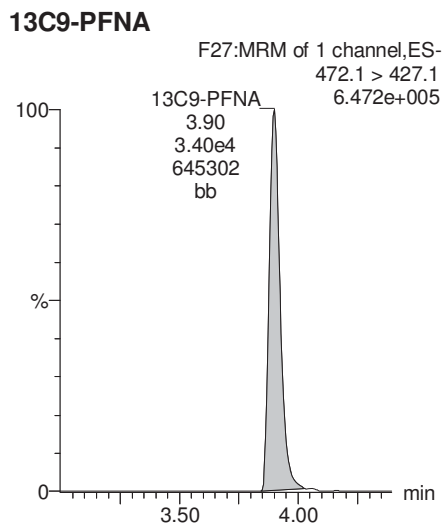
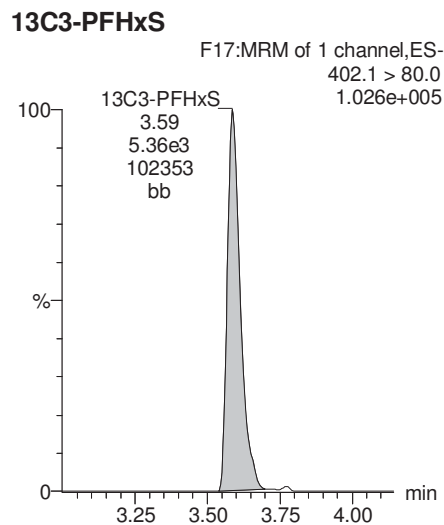


Dataset: U:\Q4.PRO\results\171010M1\171010M1-9.qld

Last Altered: Wednesday, November 01, 2017 09:09:07 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:09:52 Pacific Daylight Time

Name: 171010M1_9, Date: 10-Oct-2017, Time: 17:54:14, ID: 1701353-01 IR09-GW10-17D 0.11311, Description: IR09-GW10-17D



Dataset: U:\Q4.PRO\results\171011M1\171011M1-118.qld

Last Altered: Wednesday, November 01, 2017 10:36:28 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:38:48 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-11-17-FULL.cdb 12 Oct 2017 09:33:10

Name: 171011M1_118, Date: 12-Oct-2017, Time: 06:54:36, ID: 1701353-01@10X IR09-GW10-17D 0.11311, Description: IR09-GW10-17D

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	6 L-PFHxS	399.0 > 80.0	3.88e4	4.02e2	0.1131		3.63	3.54	1200	3560	
2	14 L-PFOS	499 > 79.9	1.63e5	7.20e2	0.1131		4.01	3.90	2830	21300	
3	36 18O2-PFHxS	403 > 103.0	4.02e2	8.27e2	0.1131	0.483	3.63	3.53	6.08	111	100.7
4	41 13C8-PFOS	507 > 79.9	7.20e2	8.68e2	0.1131	1.053	4.01	3.91	10.4	87.0	78.8
5	56 13C3-PFHxS	402.1 > 80.0	8.27e2	8.27e2	0.1131	1.000	3.63	3.54	12.5	111	100.0
6	59 13C4-PFOS	503 > 79.9	8.68e2	8.68e2	0.1131	1.000	4.01	3.91	12.5	111	100.0
7	62 Total PFHxS	399.0 > 80.0	4.19e4	4.02e2	0.1131		3.63		1300	3950	
8	64 Total PFOS	499 > 79.9	1.63e5		0.1131		4.01		2830	21300	

Dataset: U:\Q4.PRO\results\171011M1\171011M1-118.qld

Last Altered: Wednesday, November 01, 2017 10:36:28 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:38:48 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

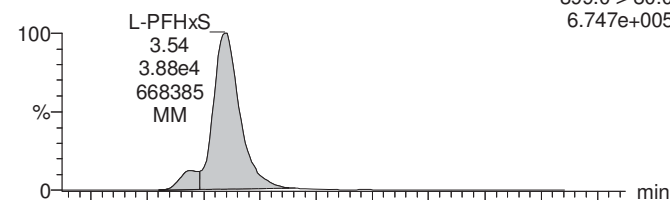
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-11-17-FULL.cdb 12 Oct 2017 09:33:10

Name: 171011M1_118, Date: 12-Oct-2017, Time: 06:54:36, ID: 1701353-01@10X IR09-GW10-17D 0.11311, Description: IR09-GW10-17D

Total PFHxS

171011M1_118 Smooth(Mn,1x2)

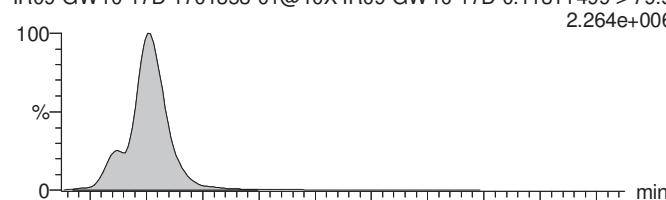
F16:MRM of 2 channels,ES-
399.0 > 80.0
6.747e+005



Total PFOS

171011M1_118 Smooth(Mn,1x2)

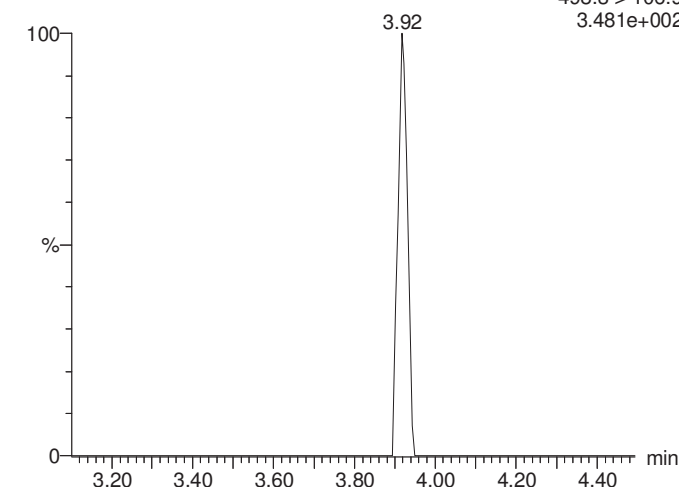
F30:MRM of 2 channels,ES-
IR09-GW10-17D 1701353-01@10X IR09-GW10-17D 0.11311499 > 79.9
2.264e+006



TCDA

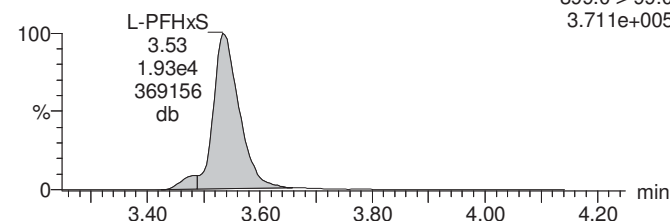
171011M1_118 Smooth(Mn,1x2)

F29:MRM of 3 channels,ES-
498.3 > 106.9
3.481e+002



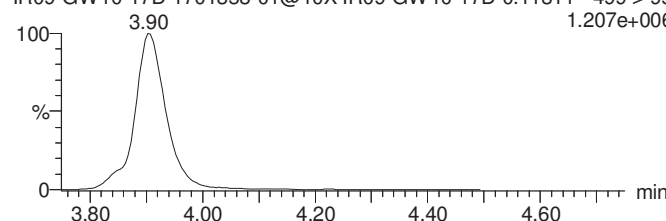
171011M1_118 Smooth(Mn,1x2)

F16:MRM of 2 channels,ES-
399.0 > 99.0
3.711e+005



171011M1_118 Smooth(Mn,1x2)

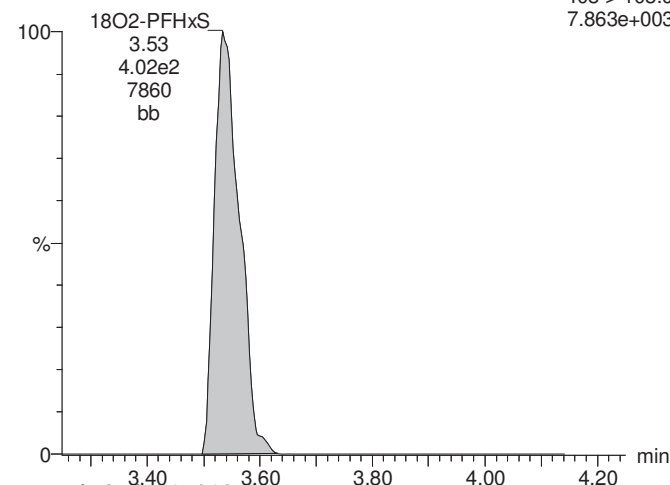
F30:MRM of 2 channels,ES-
IR09-GW10-17D 1701353-01@10X IR09-GW10-17D 0.11311 499 > 99
1.207e+006



18O2-PFHxS

171011M1_118 Smooth(Mn,1x2)

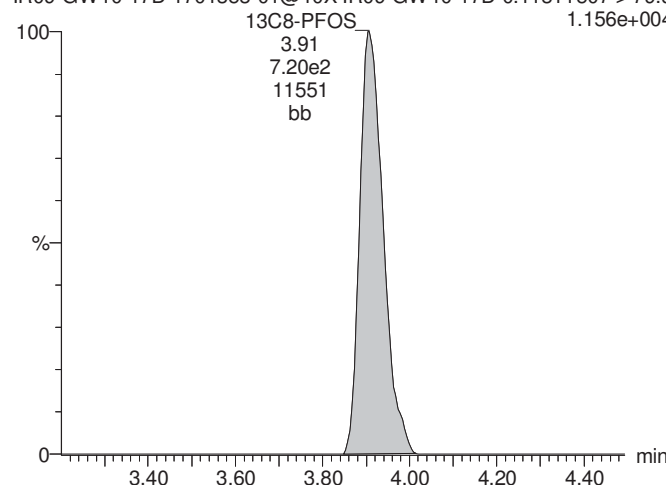
F18:MRM of 1 channel,ES-
403 > 103.0
7.863e+003



13C8-PFOS

171011M1_118 Smooth(Mn,1x2)

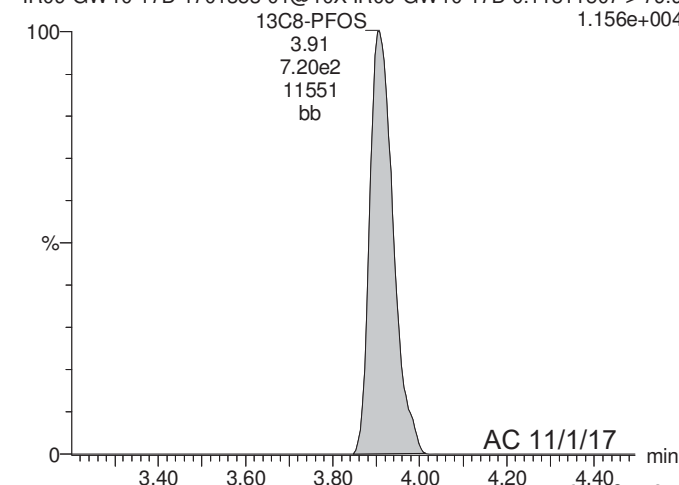
F33:MRM of 1 channel,ES-
IR09-GW10-17D 1701353-01@10X IR09-GW10-17D 0.11311507 > 79.9
1.156e+004



13C8-PFOS

171011M1_118 Smooth(Mn,1x2)

F33:MRM of 1 channel,ES-
IR09-GW10-17D 1701353-01@10X IR09-GW10-17D 0.11311507 > 79.9
1.156e+004



Dataset: U:\Q4.PRO\results\171011M1\171011M1-118.qld

Last Altered: Wednesday, November 01, 2017 10:36:28 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:38:48 Pacific Daylight Time

Name: 171011M1_118, Date: 12-Oct-2017, Time: 06:54:36, ID: 1701353-01@10X IR09-GW10-17D 0.11311, Description: IR09-GW10-17D

13C3-PFHxS

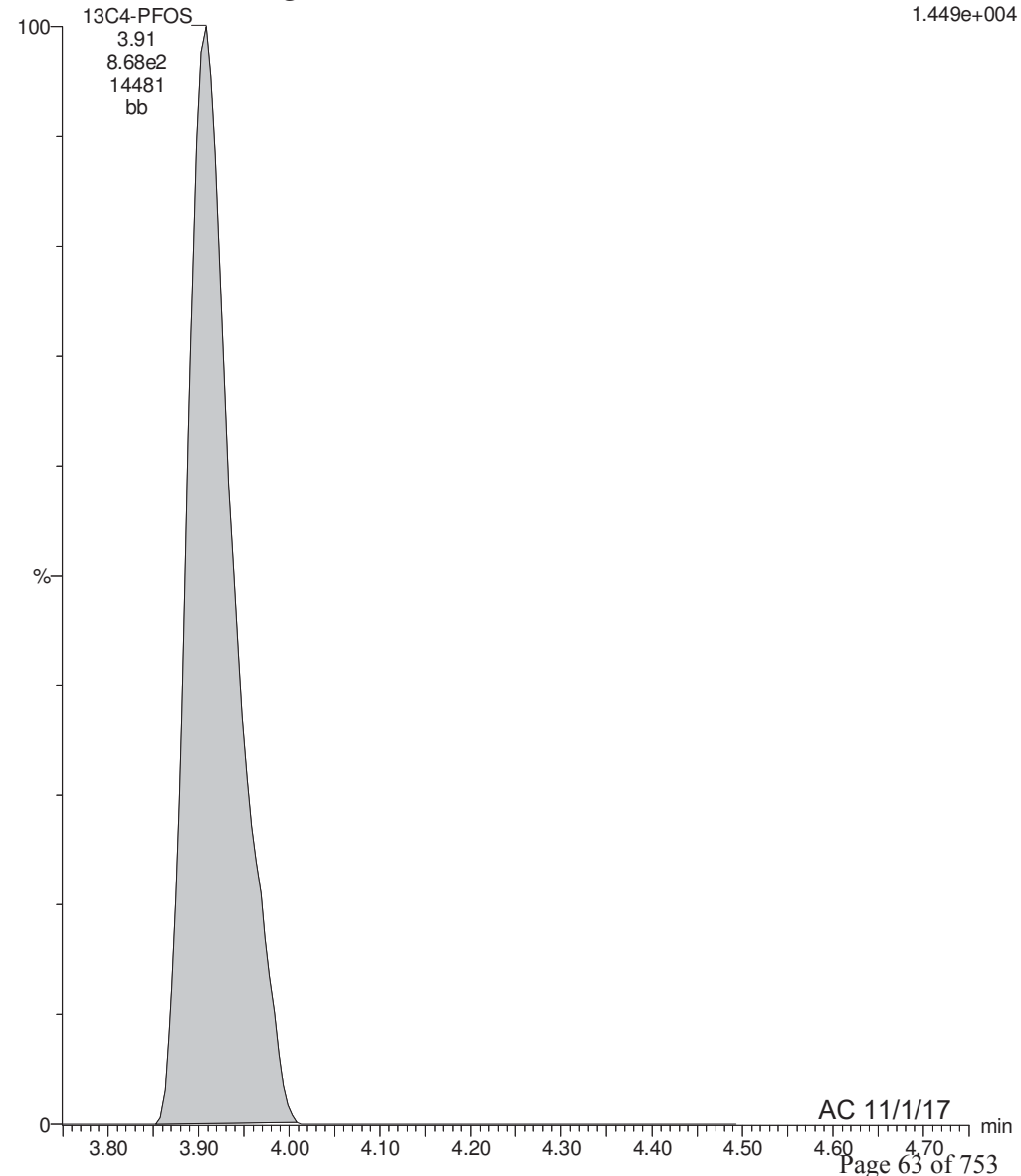
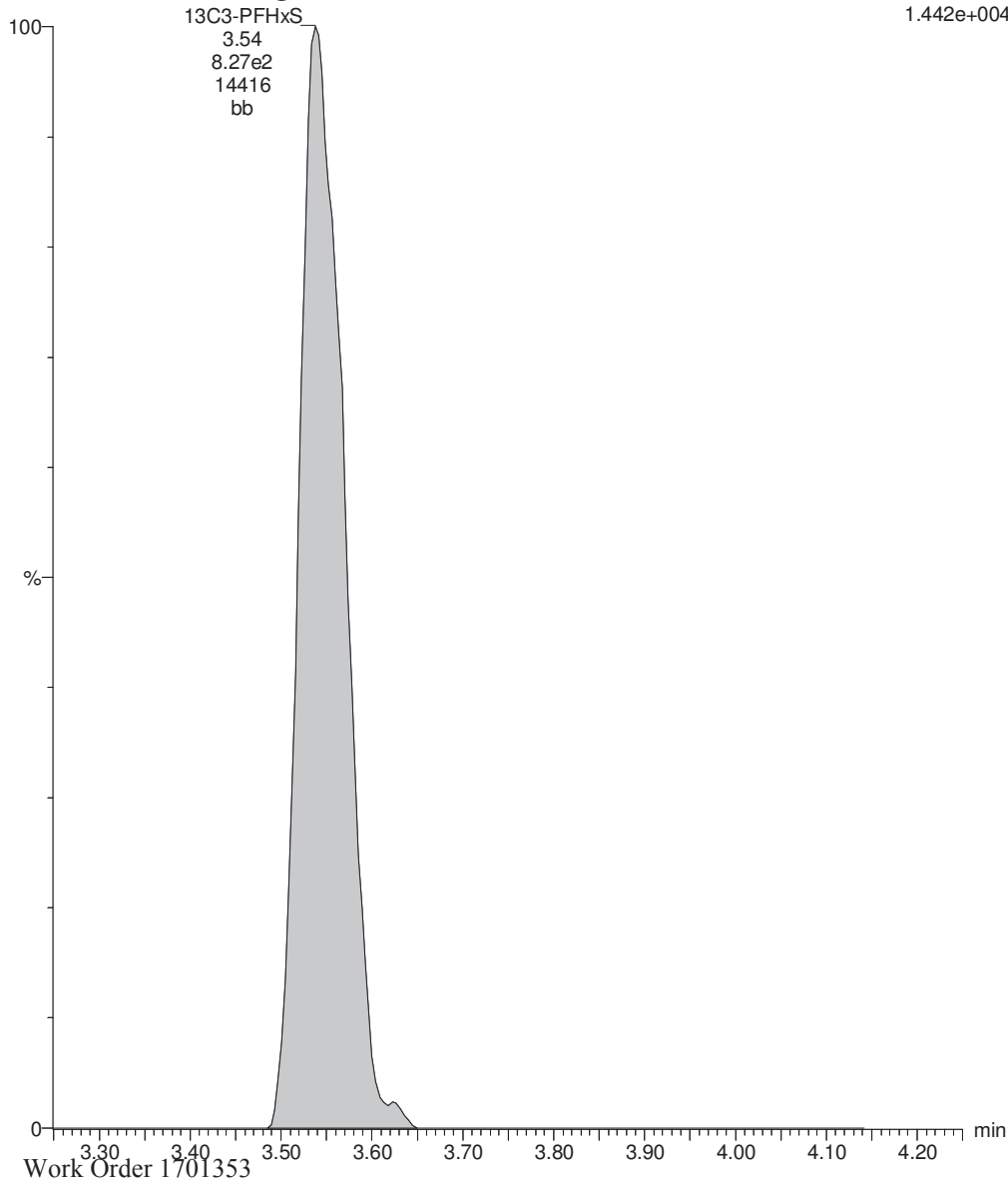
171011M1_118 Smooth(Mn,1x2)
IR09-GW10-17D 1701353-01@10X IR09-GW10-17D 0.11311

F17:MRM of 1 channel,ES-
402.1 > 80.0
1.442e+004

13C4-PFOS

171011M1_118 Smooth(Mn,1x2)
IR09-GW10-17D 1701353-01@10X IR09-GW10-17D 0.11311

F31:MRM of 1 channel,ES-
503 > 79.9
1.449e+004



Dataset: U:\Q4.PRO\results\171010M1\171010M1-11.qld

Last Altered: Wednesday, November 01, 2017 09:14:46 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:15:21 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_11, Date: 10-Oct-2017, Time: 18:15:39, ID: 1701353-02 IR09-GW10D-17D 0.11753, Description: IR09-GW10D-17D

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299.1 > 79.9	6.54e3	7.55e3	0.1175		3.09	3.03	10.8	96.015	
2	4	PFHxA	313.2 > 268.9	5.46e5	9.60e3	0.1175		3.31	3.25	285	1656.625	
3	5	PFHpA	363.1 > 319.1	2.19e5	4.08e4	0.1175		3.56	3.51	67.1	598.714	
4	6	L-PFHxS	399.0 > 80.0	2.80e5	2.36e3	0.1175		3.63	3.58	1480	6035.675	E
5	9	L-PFOA	413 > 368.7	3.05e5	3.44e4	0.1175		3.68	3.72	111	1015.551	
6	12	PFNA	463.1 > 419.1	2.06e4	2.31e4	0.1175		3.96	3.90	11.1	85.847	
7	14	L-PFOS	499 > 79.9	9.10e5	4.11e3	0.1175		4.01	3.95	2770	22226.224	E
8	16	PFDA	513 > 468.8	3.63e3	2.30e4	0.1175		4.14	4.07	1.97	11.630	
9	18	N-MeFOSAA	570.1 > 419		6.66e3	0.1175		4.17				
10	19	N-EtFOSAA	584.2 > 419		7.61e3	0.1175		4.23				
11	20	PFUnA	562.9 > 518.9		2.48e4	0.1175		4.31				
12	22	PFDoA	613.0 > 569.1		2.75e4	0.1175		4.49				

Dataset: U:\Q4.PRO\results\171010M1\171010M1-11.qld

Last Altered: Wednesday, November 01, 2017 09:14:46 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:15:37 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_11, Date: 10-Oct-2017, Time: 18:15:39, ID: 1701353-02 IR09-GW10D-17D 0.11753, Description: IR09-GW10D-17D

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	24	PFTrDA	662.9 > 618.9	2.75e4	0.1175		4.68					
2	25	PFTeDA	712.9 > 668.8	3.05e4	0.1175		4.88					
3	31	13C3-PFBA	216.1 > 172.1	2.35e4	2.61e4	0.1175	0.944	1.76	1.63	11.3	101.766	95.7
4	32	13C3-PFPeA	266.1 > 222.1	3.11e4	3.78e4	0.1175	0.299	2.91	2.83	4.11	117.091	110.1
5	33	13C3-PFBS	302.1 > 79.9	7.55e3	3.78e4	0.1175	0.070	3.09	3.03	0.998	121.971	114.7
6	34	13C2-PFHxA	315 > 269.8	9.60e3	3.78e4	0.1175	0.295	3.31	3.26	1.27	36.587	86.0
7	35	13C4-PFHpA	367 > 322.1	4.08e4	3.78e4	0.1175	0.592	3.56	3.51	5.39	77.534	72.9
8	36	18O2-PFHxS	403 > 103.0	2.36e3	4.74e3	0.1175	0.497	3.63	3.59	6.21	106.385	100.0
9	37	13C2-6:2 FTS	429.1 > 408.9	6.99e3	3.36e4	0.1175	0.156	3.76	3.71	2.60	141.609	133.1
10	38	13C2-PFOA	414.9 > 369.7	3.44e4	3.36e4	0.1175	1.111	3.77	3.72	12.8	98.178	92.3
11	39	13C5-PFNA	468.1 > 423.1	2.31e4	3.36e4	0.1175	0.934	3.96	3.90	8.60	78.328	73.6
12	40	13C8-PFOA	506.1 > 78.0	2.10e3	3.48e4	0.1175	0.129	3.96	3.91	0.754	49.744	46.8
13	41	13C8-PFOS	507 > 79.9	4.11e3	3.67e3	0.1175	0.995	4.01	3.95	14.0	119.533	112.4
14	42	13C2-PFDA	515.1 > 469.9	2.30e4	3.55e4	0.1175	0.954	4.14	4.07	8.08	72.120	67.8
15	43	13C2-8:2 FTS	529.1 > 508.7	2.78e3	3.55e4	0.1175	0.116	4.14	4.07	0.978	71.854	67.6
16	44	d3-N-MeFOSAA	573.3 > 419	6.66e3	3.48e4	0.1175	0.020	4.17	4.10	2.39	1032.458	74.7
17	45	d5-N-EtFOSAA	589.3 > 419	7.61e3	3.48e4	0.1175	0.020	4.23	4.16	2.73	1151.998	83.3
18	46	13C2-PFUnA	565 > 519.8	2.48e4	3.48e4	0.1175	1.124	4.31	4.24	8.92	67.504	63.5
19	47	13C2-PFDoA	615.1 > 570.1	2.75e4	3.48e4	0.1175	1.087	4.49	4.39	9.86	77.225	72.6
20	49	13C2-PFTeDA	714.8 > 669.6	3.05e4	3.48e4	0.1175	1.014	4.88	4.75	11.0	91.875	86.4
21	54	13C4-PFBA	217.1 > 172.1	2.61e4	2.61e4	0.1175	1.000	1.76	1.63	12.5	106.356	100.0
22	55	13C5-PFHxA	318 > 272.9	3.78e4	3.78e4	0.1175	1.000	3.31	3.25	5.00	42.542	100.0
23	56	13C3-PFHxS	402.1 > 80.0	4.74e3	4.74e3	0.1175	1.000	3.63	3.58	12.5	106.356	100.0
24	57	13C8-PFOA	421.3 > 376	3.36e4	3.36e4	0.1175	1.000	3.77	3.72	12.5	106.356	100.0
25	58	13C9-PFNA	472.1 > 427.1	3.36e4	3.36e4	0.1175	1.000	3.96	3.89	12.5	106.356	100.0
26	59	13C4-PFOS	503 > 79.9	3.67e3	3.67e3	0.1175	1.000	4.01	3.95	12.5	106.356	100.0
27	60	13C6-PFDA	519.1 > 473.7	3.55e4	3.55e4	0.1175	1.000	4.14	4.07	12.5	106.356	100.0
28	61	13C7-PFUnA	570.1 > 524.8	3.48e4	3.48e4	0.1175	1.000	4.31	4.24	12.5	106.356	100.0
29	62	Total PFHxS	399.0 > 80.0	2.80e5	2.36e3	0.1175		3.63		1480	6035.675	
30	63	Total PFOA	413 > 368.7	3.35e5		0.1175		3.68		121	1110.853	
31	64	Total PFOS	499 > 79.9	9.10e5		0.1175		4.01		2770	22226.224	
32	65	Total N-MeFOSAA	570.1 > 419	0.00e0	6.66e3	0.1175		4.17		0.000		

Dataset: U:\Q4.PRO\results\171010M1\171010M1-11.qld

Last Altered: Wednesday, November 01, 2017 09:14:46 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:15:37 Pacific Daylight Time

Name: 171010M1_11, Date: 10-Oct-2017, Time: 18:15:39, ID: 1701353-02 IR09-GW10D-17D 0.11753, Description: IR09-GW10D-17D

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	66 Total N-EtFOSAA	584.2 > 419	0.00e0	7.61e3	0.1175		4.23		0.000		
34	68 Total PFOA+PFOS	413 > 368.7;4...	1.25e6		0.1175		0.00		2890	23337.078	32,000

Dataset: U:\Q4.PRO\results\171010M1\171010M1-11.qld

Last Altered: Wednesday, November 01, 2017 09:14:46 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:15:37 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_11, Date: 10-Oct-2017, Time: 18:15:39, ID: 1701353-02 IR09-GW10D-17D 0.11753, Description: IR09-GW10D-17D

Total PFHxS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7 Br-PFHxS	399.0 > 80.0			2356.347		MM-	
2	6 L-PFHxS	399.0 > 80.0	3.58	279829.125	2356.347	1484.444	MM	6035.7

Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	10 Br-PFOA	413 > 368.7	3.66	29530.641	34443.113	10.717	MM	95.3
2	9 L-PFOA	413 > 368.7	3.72	305144.125	34443.113	110.742	MM	1015.6

Total PFOS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14 L-PFOS	499 > 79.9	3.95	910419.875	4109.056	2769.553	MM	22226.2

Total N-Me-FOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1								

Total N-EtFOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1								

Total PFOA+PFOS,Total PFOS,Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	10 Br-PFOA	413 > 368.7	3.66	29530.641	34443.113	10.717	MM	95.3
2	9 L-PFOA	413 > 368.7	3.72	305144.125	34443.113	110.742	MM	1015.6
3	14 L-PFOS	499 > 79.9	3.95	910419.875	4109.056	2769.553	MM	22226.2

Dataset: U:\Q4.PRO\results\171010M1\171010M1-11.qld

Last Altered: Wednesday, November 01, 2017 09:14:46 Pacific Daylight Time

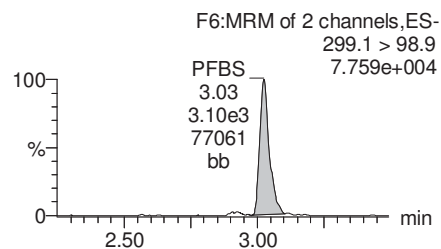
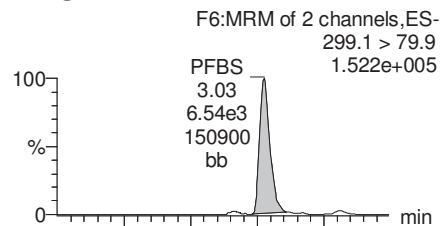
Printed: Wednesday, November 01, 2017 09:15:37 Pacific Daylight Time

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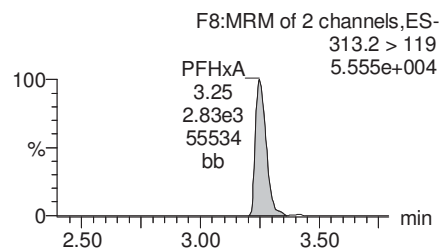
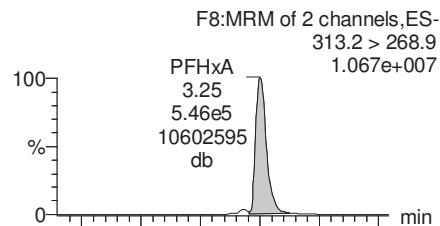
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Name: 171010M1_11, Date: 10-Oct-2017, Time: 18:15:39, ID: 1701353-02 IR09-GW10D-17D 0.11753, Description: IR09-GW10D-17D

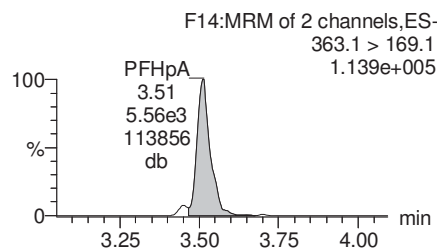
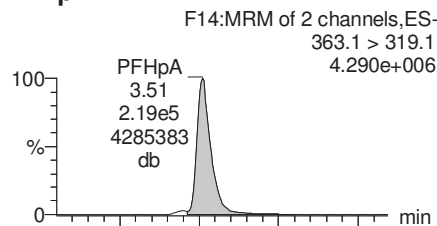
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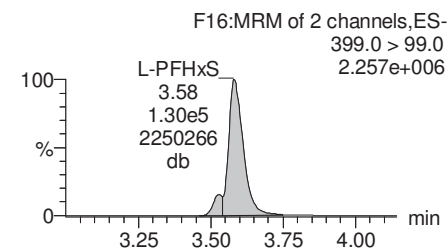
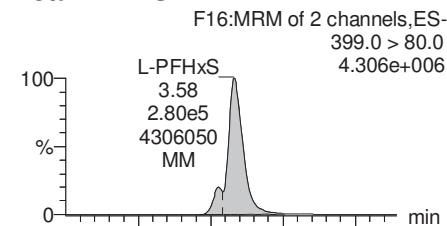
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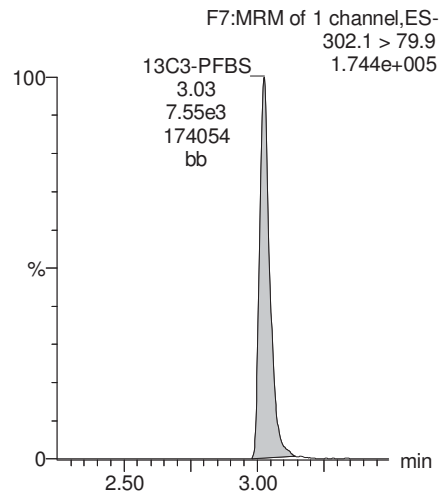
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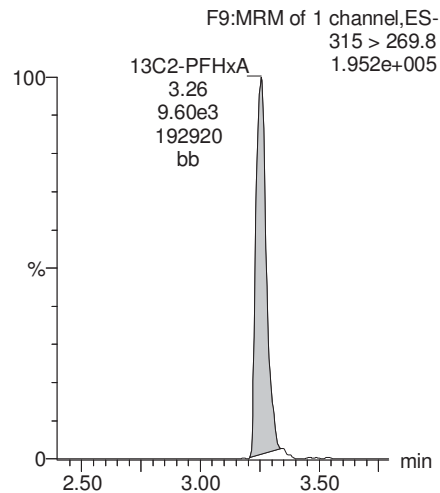
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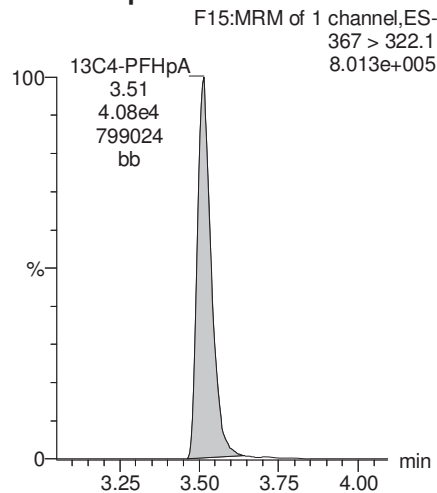
13C3-PFBS



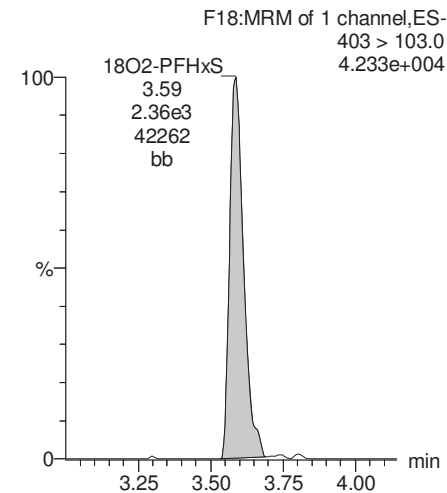
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



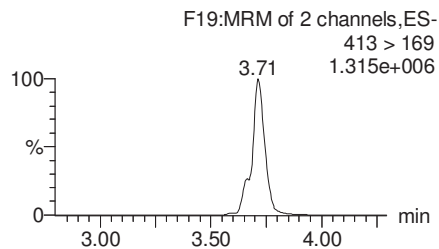
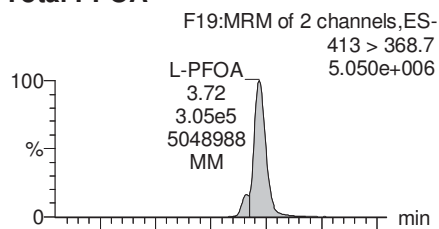
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Last Altered: Wednesday, November 01, 2017 09:14:46 Pacific Daylight Time

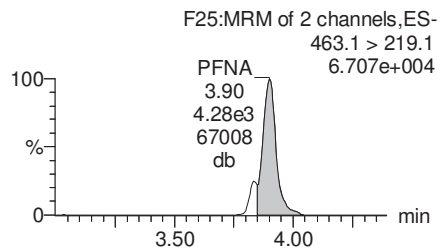
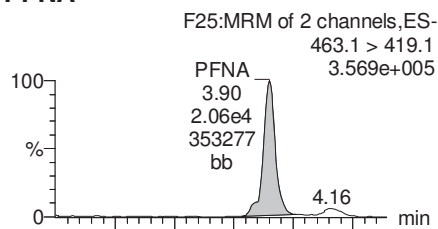
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Name: 171010M1_11, Date: 10-Oct-2017, Time: 18:15:39, ID: 1701353-02 IR09-GW10D-17D 0.11753, Description: IR09-GW10D-17D

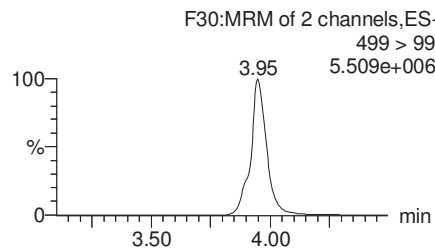
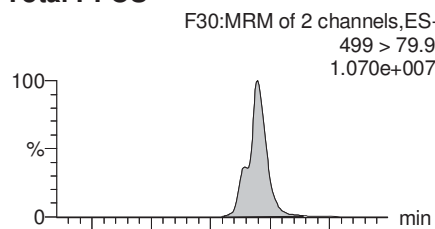
Total PFOA



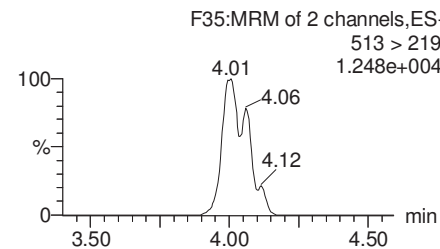
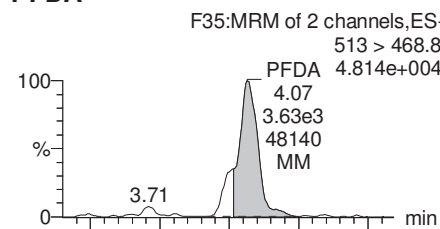
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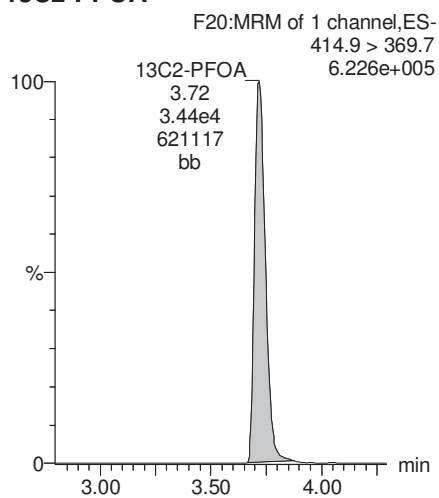
Total PFOS



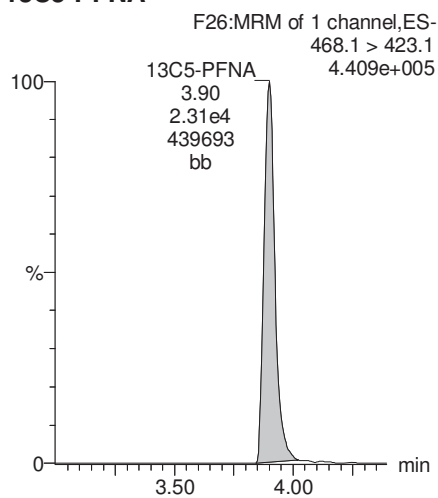
PFDA



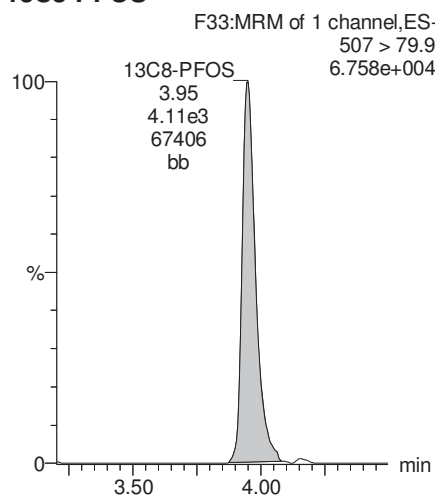
13C2-PFOA



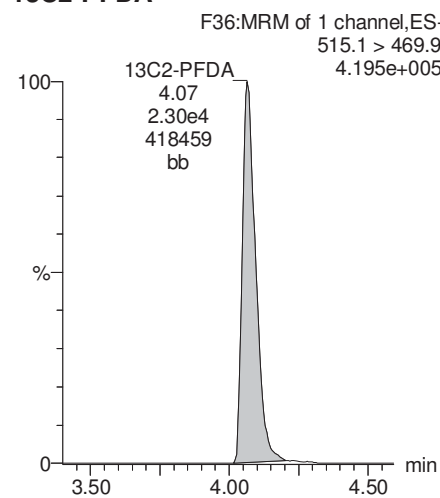
13C5-PFNA



13C8-PFOS



13C2-PFDA



Dataset: U:\Q4.PRO\results\171010M1\171010M1-11.qld

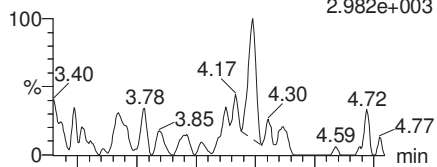
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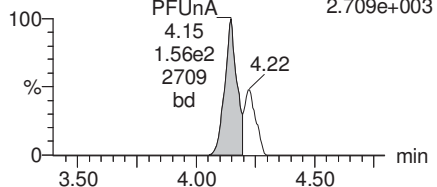
Name: 171010M1_11, Date: 10-Oct-2017, Time: 18:15:39, ID: 1701353-02 IR09-GW10D-17D 0.11753, Description: IR09-GW10D-17D

PFUnA

F43:MRM of 2 channels,ES-
562.9 > 518.9
2.982e+003

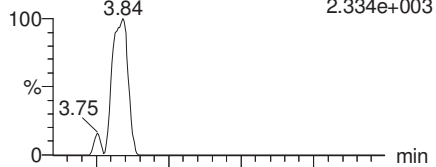


F43:MRM of 2 channels,ES-
562.9 > 269
2.709e+003

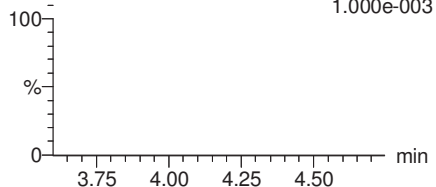


N-MeFOSAA

F45:MRM of 3 channels,ES-
570.1 > 419
2.334e+003

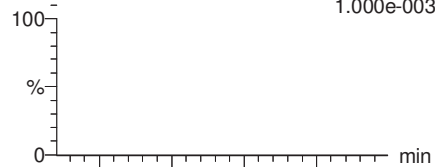


F45:MRM of 3 channels,ES-
570.1 > 483.1
1.000e-003

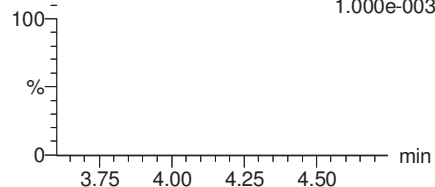


N-EtFOSAA

F48:MRM of 3 channels,ES-
584.2 > 419
1.000e-003

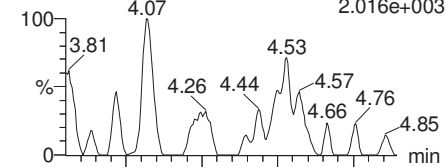


F48:MRM of 3 channels,ES-
584.1 > 526.1
1.000e-003

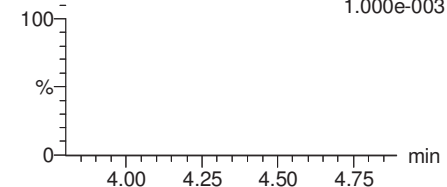


PFDaA

F51:MRM of 4 channels,ES-
613.0 > 569.1
2.016e+003

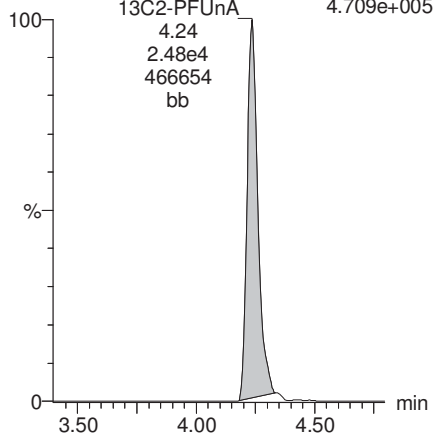


F51:MRM of 4 channels,ES-
613.0 > 319.1
1.000e-003



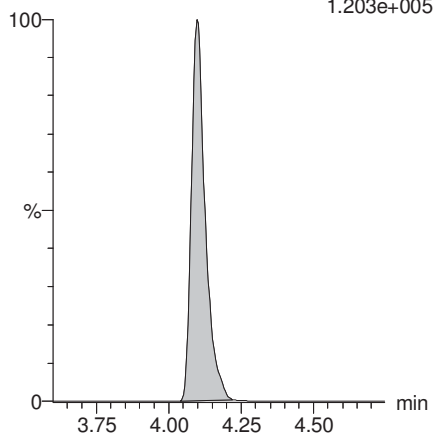
13C2-PFUnA

F44:MRM of 1 channel,ES-
565 > 519.8
4.709e+005



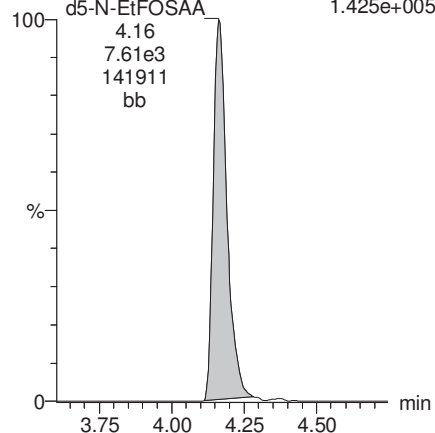
d3-N-MeFOSAA

F47:MRM of 1 channel,ES-
573.3 > 419
1.203e+005



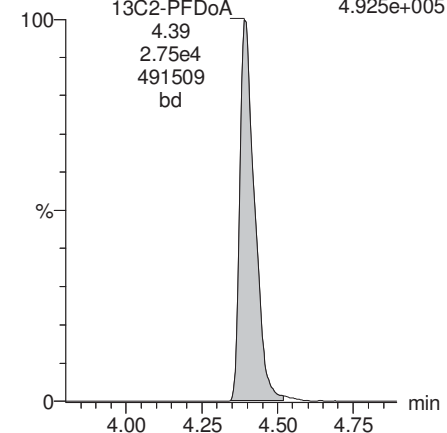
d5-N-EtFOSAA

F49:MRM of 1 channel,ES-
589.3 > 419
1.425e+005



13C2-PFDaA

F52:MRM of 2 channels,ES-
615.1 > 570.1
4.925e+005



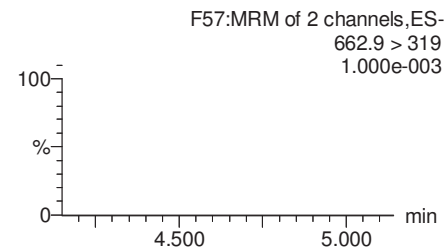
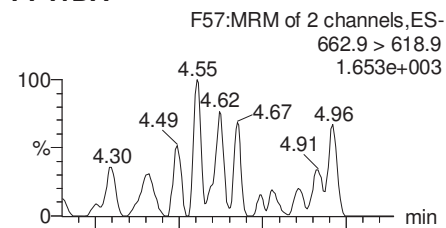
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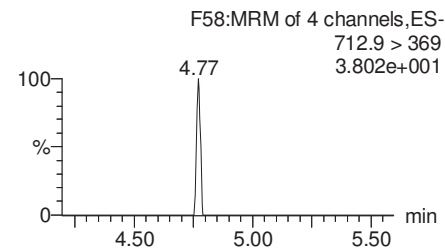
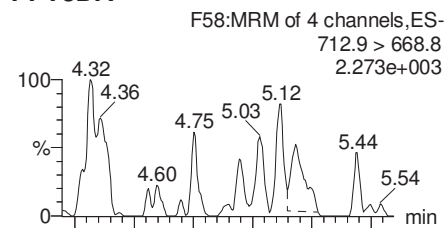
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Name: 171010M1_11, Date: 10-Oct-2017, Time: 18:15:39, ID: 1701353-02 IR09-GW10D-17D 0.11753, Description: IR09-GW10D-17D

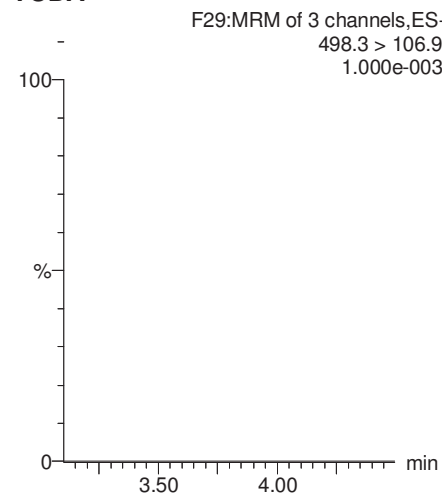
PFTrDA



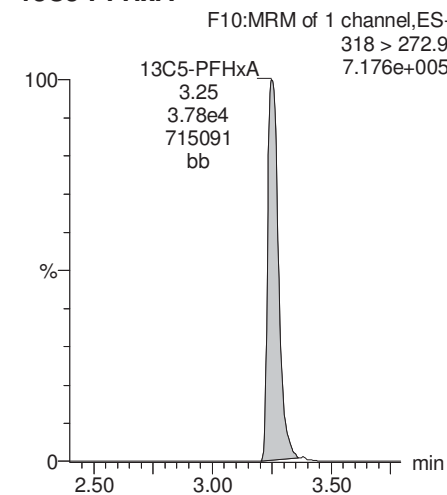
PFTeDA



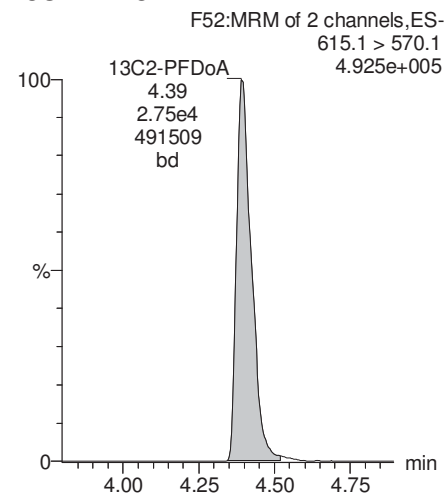
TCDA



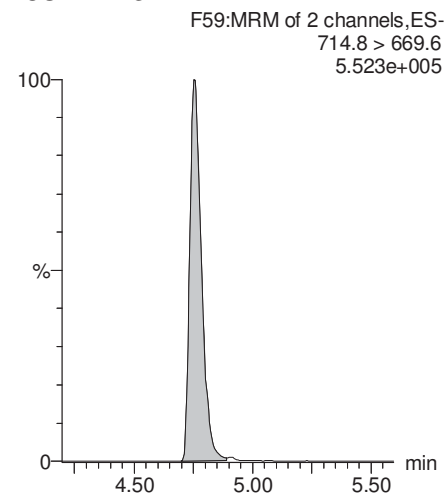
13C5-PFHxA



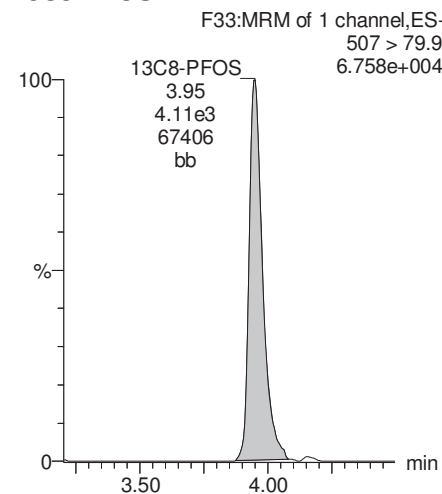
13C2-PFDoA



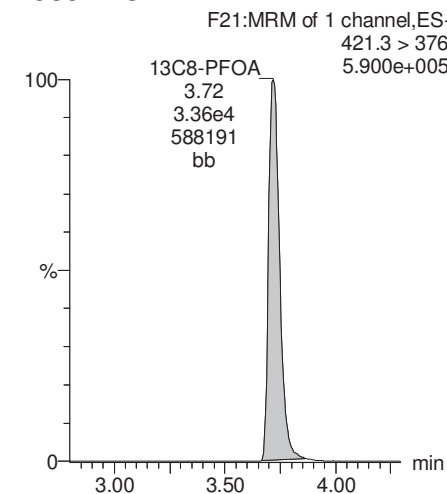
13C2-PFTeDA



13C8-PFOS



13C8-PFOA



Dataset: U:\Q4.PRO\results\171010M1\171010M1-11.qld

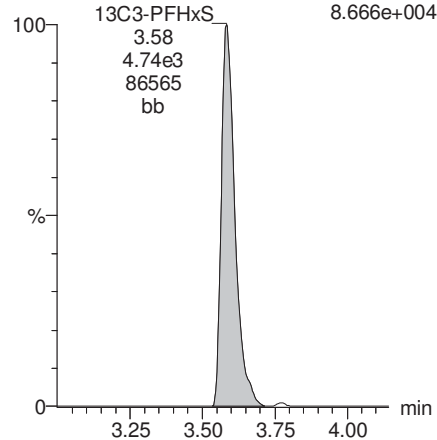
Last Altered: Wednesday, November 01, 2017 09:14:46 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:15:37 Pacific Daylight Time

Name: 171010M1_11, Date: 10-Oct-2017, Time: 18:15:39, ID: 1701353-02 IR09-GW10D-17D 0.11753, Description: IR09-GW10D-17D

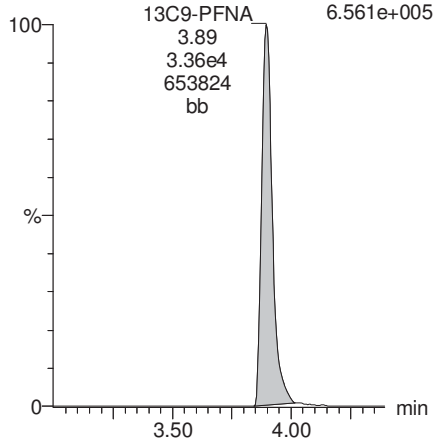
13C3-PFHxS

F17:MRM of 1 channel,ES-
402.1 > 80.0
8.666e+004



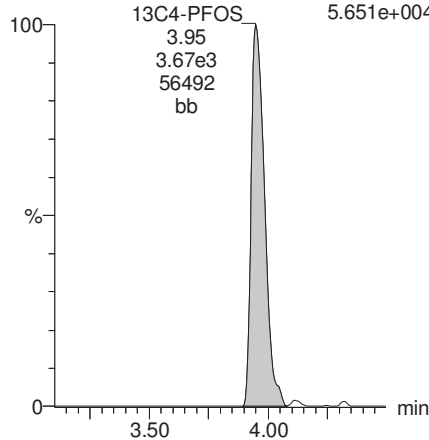
13C9-PFNA

F27:MRM of 1 channel,ES-
472.1 > 427.1
6.561e+005



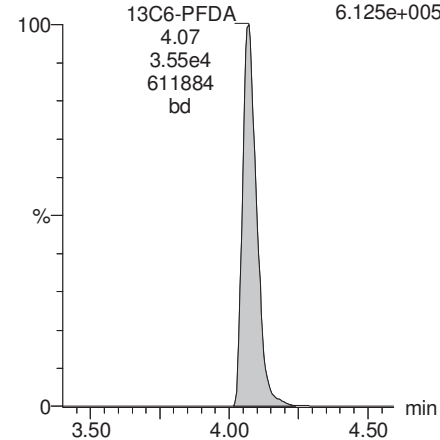
13C4-PFOS

F31:MRM of 1 channel,ES-
503 > 79.9
5.651e+004



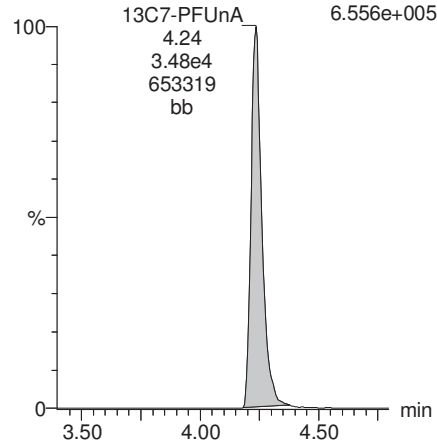
13C6-PFDA

F38:MRM of 1 channel,ES-
519.1 > 473.7
6.125e+005



13C7-PFUnA

F46:MRM of 1 channel,ES-
570.1 > 524.8
6.556e+005



Dataset: U:\Q4.PRO\results\171011M1\171011M1-119.qld

Last Altered: Wednesday, November 01, 2017 10:41:03 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:42:16 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-11-17-FULL.cdb 12 Oct 2017 09:33:10

Name: 171011M1_119, Date: 12-Oct-2017, Time: 07:05:22, ID: 1701353-02@20X IR09-GW10D-17D 0.11753, Description: IR09-GW10D-17D

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	6 L-PFHxS	399.0 > 80.0	1.77e4	1.57e2	0.1175		3.63	3.54	1410	3860	
2	14 L-PFOS	499 > 79.9	8.20e4	2.41e2	0.1175		4.01	3.90	4260	30900	
3	36 18O2-PFHxS	403 > 103.0	1.57e2	2.66e2	0.1175	0.483	3.63	3.54	7.37	130	122.1
4	41 13C8-PFOS	507 > 79.9	2.41e2	3.03e2	0.1175	1.053	4.01	3.90	9.95	80.4	75.6
5	56 13C3-PFHxS	402.1 > 80.0	2.66e2	2.66e2	0.1175	1.000	3.63	3.54	12.5	106	100.0
6	59 13C4-PFOS	503 > 79.9	3.03e2	3.03e2	0.1175	1.000	4.01	3.91	12.5	106	100.0
7	62 Total PFHxS	399.0 > 80.0	1.77e4	1.57e2	0.1175		3.63		1410	3860	
8	64 Total PFOS	499 > 79.9	8.20e4		0.1175		4.01		4260	30900	

Dataset: U:\Q4.PRO\results\171011M1\171011M1-119.qld

Last Altered: Wednesday, November 01, 2017 10:41:03 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:42:16 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

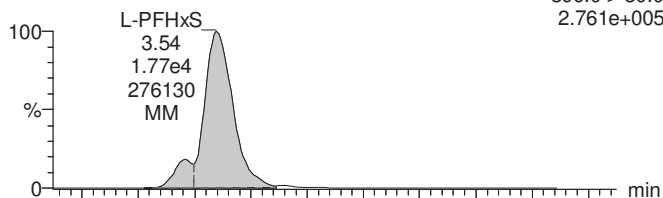
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-11-17-FULL.cdb 12 Oct 2017 09:33:10

Name: 171011M1_119, Date: 12-Oct-2017, Time: 07:05:22, ID: 1701353-02@20X IR09-GW10D-17D 0.11753, Description: IR09-GW10D-17D

Total PFHxS

171011M1_119 Smooth(Mn,1x2)

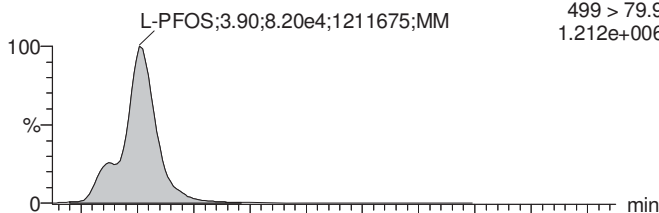
F16:MRM of 2 channels,ES-
399.0 > 80.0
2.761e+005



Total PFOS

171011M1_119 Smooth(Mn,1x2)

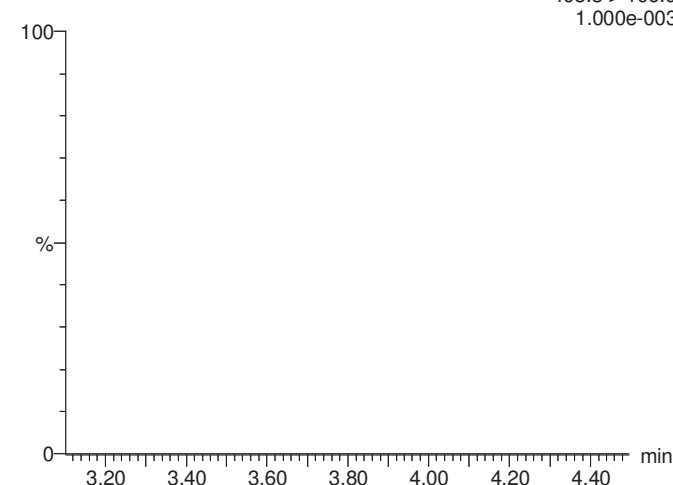
F30:MRM of 2 channels,ES-
499 > 79.9
1.212e+006



TCDA

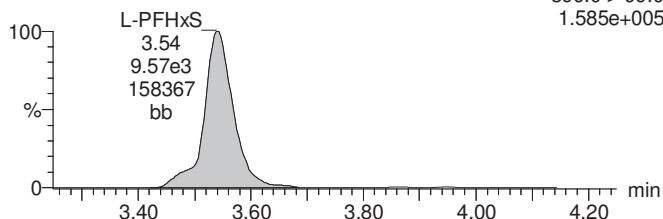
171011M1_119 Smooth(Mn,1x2)

F29:MRM of 3 channels,ES-
498.3 > 106.9
1.000e-003



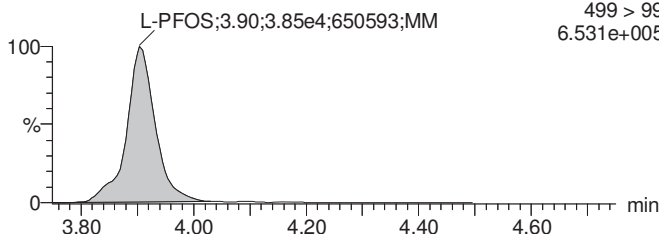
171011M1_119 Smooth(Mn,1x2)

F16:MRM of 2 channels,ES-
399.0 > 99.0
1.585e+005



171011M1_119 Smooth(Mn,1x2)

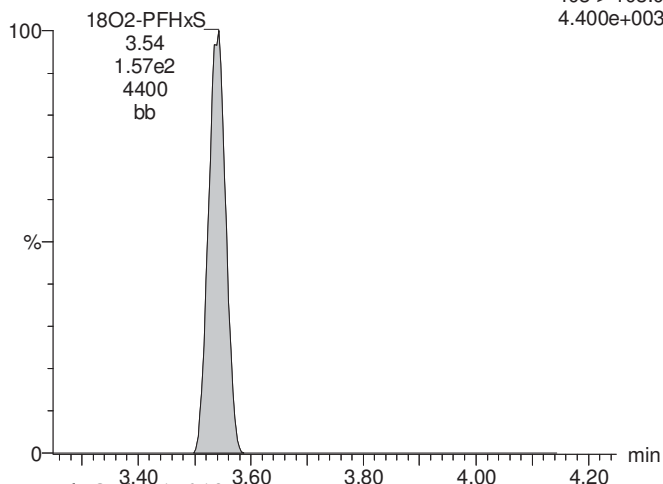
F30:MRM of 2 channels,ES-
499 > 99
6.531e+005



18O2-PFHxS

171011M1_119 Smooth(Mn,1x2)

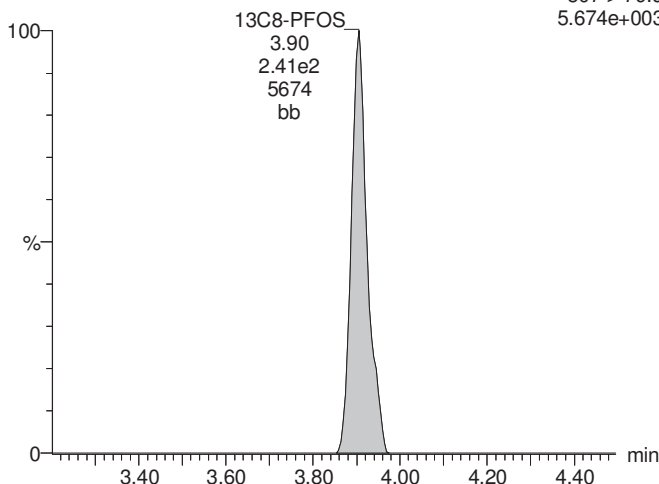
F18:MRM of 1 channel,ES-
403 > 103.0
4.400e+003



13C8-PFOS

171011M1_119 Smooth(Mn,1x2)

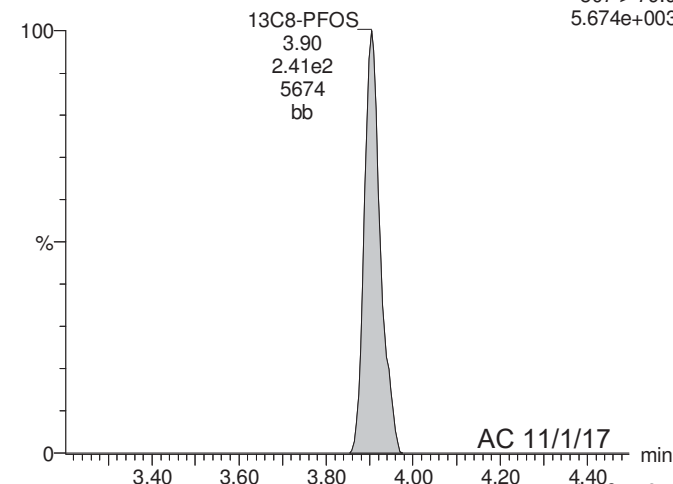
F33:MRM of 1 channel,ES-
507 > 79.9
5.674e+003



13C8-PFOS

171011M1_119 Smooth(Mn,1x2)

F33:MRM of 1 channel,ES-
507 > 79.9
5.674e+003



AC 11/1/17

Dataset: U:\Q4.PRO\results\171011M1\171011M1-119.qld

Last Altered: Wednesday, November 01, 2017 10:41:03 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:42:16 Pacific Daylight Time

Name: 171011M1_119, Date: 12-Oct-2017, Time: 07:05:22, ID: 1701353-02@20X IR09-GW10D-17D 0.11753, Description: IR09-GW10D-17D

13C3-PFHxS

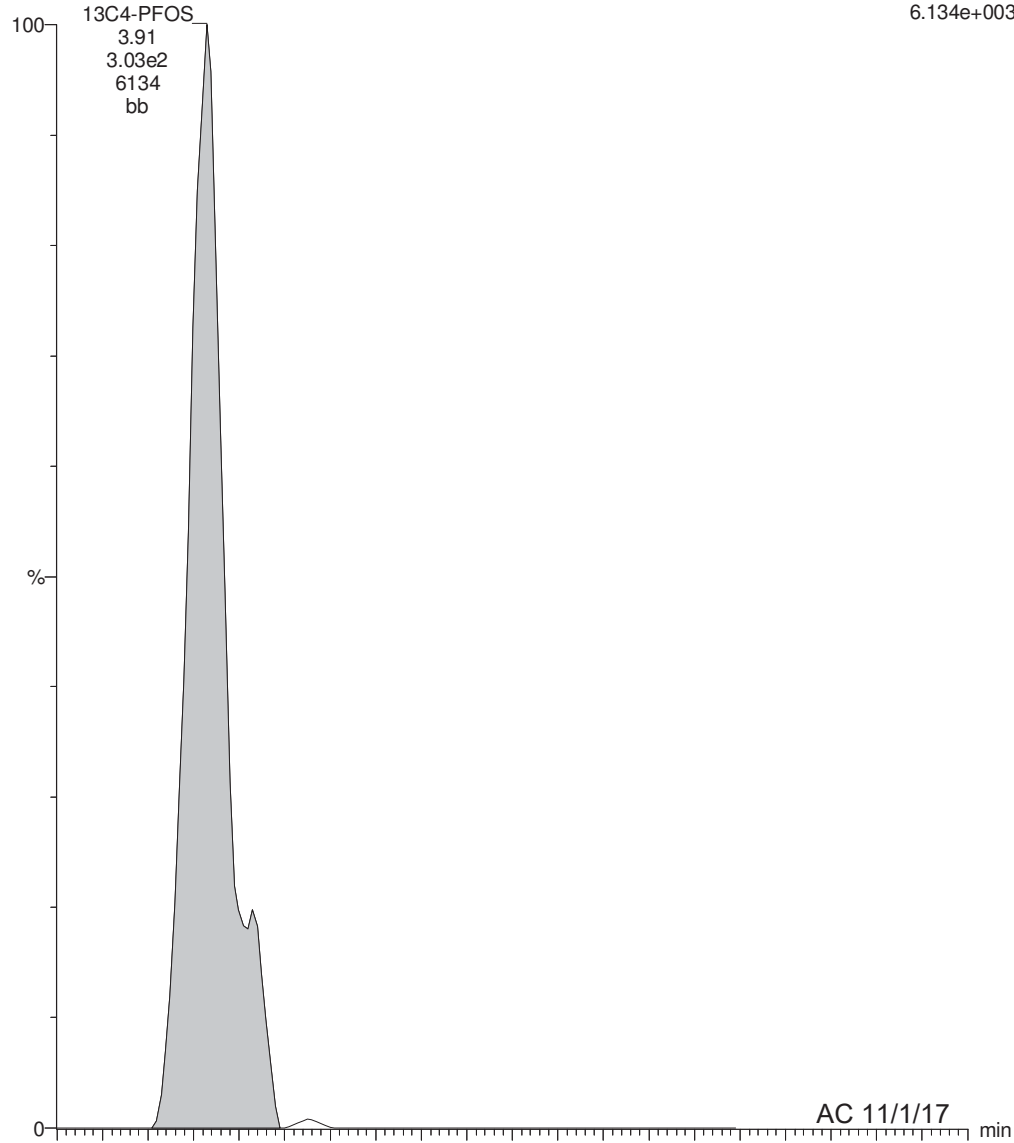
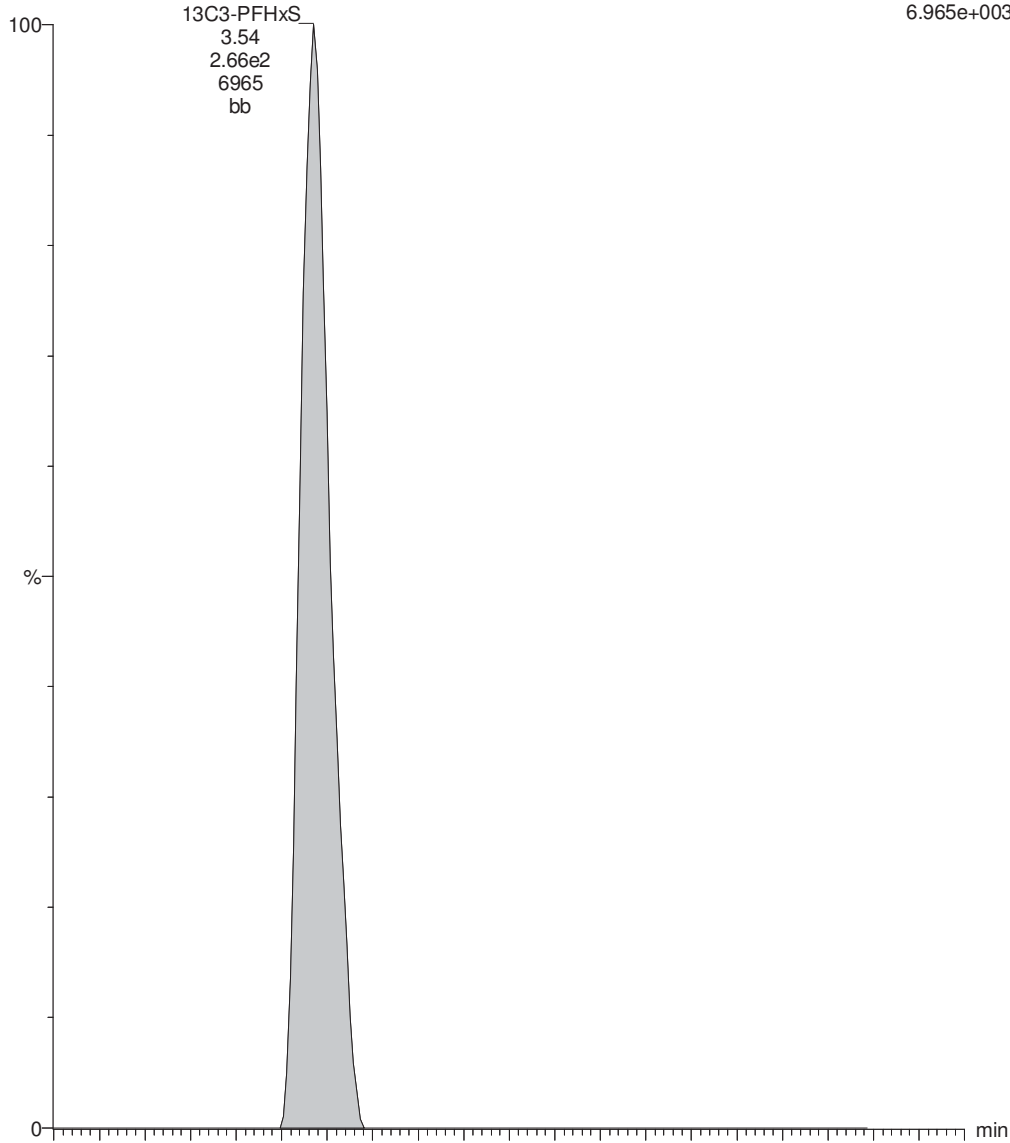
171011M1_119 Smooth(Mn,1x2)
IR09-GW10D-17D 1701353-02@20X IR09-GW10D-17D 0.11753

F17:MRM of 1 channel,ES-
402.1 > 80.0
6.965e+003

13C4-PFOS

171011M1_119 Smooth(Mn,1x2)
IR09-GW10D-17D 1701353-02@20X IR09-GW10D-17D 0.11753

F31:MRM of 1 channel,ES-
503 > 79.9
6.134e+003



Dataset: U:\Q4.PRO\results\171010M1\171010M1-13.qld

Last Altered: Wednesday, November 01, 2017 09:19:37 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:20:15 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_13, Date: 10-Oct-2017, Time: 18:37:04, ID: 1701353-03 IR09-FTPGW01-17D 0.11435, Description: IR09-FTPGW01-17D

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299.1 > 79.9	4.11e3	7.71e3	0.1143		3.09	3.03	6.67	61.020	
2	4	PFHxA	313.2 > 268.9	2.48e5	1.09e4	0.1143		3.31	3.25	114	678.828	
3	5	PFHpA	363.1 > 319.1	1.53e5	4.85e4	0.1143		3.56	3.51	39.5	362.056	
4	6	L-PFHxS	399.0 > 80.0	1.45e5	2.75e3	0.1143		3.63	3.59	658	2644.897	E
5	9	L-PFOA	413 > 368.7	1.89e5	3.18e4	0.1143		3.68	3.71	74.3	699.663	
6	12	PFNA	463.1 > 419.1	1.75e4	2.69e4	0.1143		3.96	3.90	8.14	64.432	
7	14	L-PFOS	499 > 79.9	4.15e5	5.18e3	0.1143		4.01	3.95	1000	8250.443	E
8	16	PFDA	513 > 468.8	7.45e3	2.10e4	0.1143		4.14	4.07	4.43	26.624	
9	18	N-MeFOSAA	570.1 > 419		6.49e3	0.1143		4.17				
10	19	N-EtFOSAA	584.2 > 419		6.71e3	0.1143		4.23				
11	20	PFUnA	562.9 > 518.9		2.44e4	0.1143		4.31				
12	22	PFDoA	613.0 > 569.1		2.73e4	0.1143		4.49				

Dataset: U:\Q4.PRO\results\171010M1\171010M1-13.qld

Last Altered: Wednesday, November 01, 2017 09:19:37 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:20:46 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_13, Date: 10-Oct-2017, Time: 18:37:04, ID: 1701353-03 IR09-FTPGW01-17D 0.11435, Description: IR09-FTPGW01-17D

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	24	PFTrDA	662.9 > 618.9	2.73e4	0.1143		4.68					
2	25	PFTeDA	712.9 > 668.8	2.94e4	0.1143		4.88					
3	31	13C3-PFBA	216.1 > 172.1	2.30e4	2.50e4	0.1143	0.944	1.76	1.63	11.5	106.721	97.6
4	32	13C3-PFPeA	266.1 > 222.1	3.18e4	4.02e4	0.1143	0.299	2.91	2.83	3.95	115.811	105.9
5	33	13C3-PFBS	302.1 > 79.9	7.71e3	4.02e4	0.1143	0.070	3.09	3.02	0.958	120.289	110.0
6	34	13C2-PFHxA	315 > 269.8	1.09e4	4.02e4	0.1143	0.295	3.31	3.25	1.36	40.241	92.0
7	35	13C4-PFHpA	367 > 322.1	4.85e4	4.02e4	0.1143	0.592	3.56	3.51	6.02	88.949	81.4
8	36	18O2-PFHxS	403 > 103.0	2.75e3	5.71e3	0.1143	0.497	3.63	3.59	6.01	105.820	96.8
9	37	13C2-6:2 FTS	429.1 > 408.9	4.70e3	3.26e4	0.1143	0.156	3.76	3.71	1.80	100.811	92.2
10	38	13C2-PFOA	414.9 > 369.7	3.18e4	3.26e4	0.1143	1.111	3.77	3.72	12.2	95.936	87.8
11	39	13C5-PFNA	468.1 > 423.1	2.69e4	3.45e4	0.1143	0.934	3.96	3.90	9.74	91.176	83.4
12	40	13C8-PFOSA	506.1 > 78.0	2.66e3	3.05e4	0.1143	0.129	3.96	3.91	1.09	74.101	67.8
13	41	13C8-PFOS	507 > 79.9	5.18e3	5.23e3	0.1143	0.995	4.01	3.95	12.4	108.796	99.5
14	42	13C2-PFDA	515.1 > 469.9	2.10e4	2.62e4	0.1143	0.954	4.14	4.07	10.0	91.912	84.1
15	43	13C2-8:2 FTS	529.1 > 508.7	3.16e3	2.62e4	0.1143	0.116	4.14	4.07	1.50	113.571	103.9
16	44	d3-N-MeFOSAA	573.3 > 419	6.49e3	3.05e4	0.1143	0.020	4.17	4.10	2.66	1181.965	83.2
17	45	d5-N-EtFOSAA	589.3 > 419	6.71e3	3.05e4	0.1143	0.020	4.23	4.16	2.75	1191.943	83.9
18	46	13C2-PFUnA	565 > 519.8	2.44e4	3.05e4	0.1143	1.124	4.31	4.23	10.0	77.922	71.3
19	47	13C2-PFDoA	615.1 > 570.1	2.73e4	3.05e4	0.1143	1.087	4.49	4.39	11.2	90.265	82.6
20	49	13C2-PFTeDA	714.8 > 669.6	2.94e4	3.05e4	0.1143	1.014	4.88	4.76	12.1	103.964	95.1
21	54	13C4-PFBA	217.1 > 172.1	2.50e4	2.50e4	0.1143	1.000	1.76	1.62	12.5	109.314	100.0
22	55	13C5-PFHxA	318 > 272.9	4.02e4	4.02e4	0.1143	1.000	3.31	3.25	5.00	43.725	100.0
23	56	13C3-PFHxS	402.1 > 80.0	5.71e3	5.71e3	0.1143	1.000	3.63	3.58	12.5	109.314	100.0
24	57	13C8-PFOA	421.3 > 376	3.26e4	3.26e4	0.1143	1.000	3.77	3.72	12.5	109.314	100.0
25	58	13C9-PFNA	472.1 > 427.1	3.45e4	3.45e4	0.1143	1.000	3.96	3.90	12.5	109.314	100.0
26	59	13C4-PFOS	503 > 79.9	5.23e3	5.23e3	0.1143	1.000	4.01	3.95	12.5	109.314	100.0
27	60	13C6-PFDA	519.1 > 473.7	2.62e4	2.62e4	0.1143	1.000	4.14	4.07	12.5	109.314	100.0
28	61	13C7-PFUnA	570.1 > 524.8	3.05e4	3.05e4	0.1143	1.000	4.31	4.23	12.5	109.314	100.0
29	62	Total PFHxS	399.0 > 80.0	1.45e5	2.75e3	0.1143		3.63		658	2644.897	
30	63	Total PFOA	413 > 368.7	2.26e5		0.1143		3.68		89.0	834.432	
31	64	Total PFOS	499 > 79.9	4.15e5		0.1143		4.01		1000	8250.443	
32	65	Total N-MeFOSAA	570.1 > 419	0.00e0	6.49e3	0.1143		4.17		0.000		

Dataset: U:\Q4.PRO\results\171010M1\171010M1-13.qld

Last Altered: Wednesday, November 01, 2017 09:19:37 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:20:46 Pacific Daylight Time

Name: 171010M1_13, Date: 10-Oct-2017, Time: 18:37:04, ID: 1701353-03 IR09-FTPGW01-17D 0.11435, Description: IR09-FTPGW01-17D

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	66 Total N-EtFOSAA	584.2 > 419	0.00e0	6.71e3	0.1143		4.23		0.000		
34	68 Total PFOA+PFOS	413 > 368.7;4...	6.41e5		0.1143		0.00		1090	9084.875	

8040

Dataset: U:\Q4.PRO\results\171010M1\171010M1-13.qld

Last Altered: Wednesday, November 01, 2017 09:19:37 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:20:46 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_13, Date: 10-Oct-2017, Time: 18:37:04, ID: 1701353-03 IR09-FTPGW01-17D 0.11435, Description: IR09-FTPGW01-17D

Total PFHxS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7 Br-PFHxS	399.0 > 80.0			2746.895		MM-	
2	6 L-PFHxS	399.0 > 80.0	3.59	144650.125	2746.895	658.244	MM	2644.9

Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	10 Br-PFOA	413 > 368.7	3.66	37161.676	31793.373	14.611	MM	134.8
2	9 L-PFOA	413 > 368.7	3.71	189105.703	31793.373	74.349	MM	699.7

Total PFOS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14 L-PFOS	499 > 79.9	3.95	414541.438	5180.548	1000.235	MM	8250.4

Total N-Me-FOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	18 N-MeFOSAA	570.1 > 419			6489.880		MM-I	

Total N-EtFOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1								

Total PFOA+PFOS,Total PFOS,Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	10 Br-PFOA	413 > 368.7	3.66	37161.676	31793.373	14.611	MM	134.8
2	9 L-PFOA	413 > 368.7	3.71	189105.703	31793.373	74.349	MM	699.7
3	14 L-PFOS	499 > 79.9	3.95	414541.438	5180.548	1000.235	MM	8250.4

Dataset: U:\Q4.PRO\results\171010M1\171010M1-13.qld

Last Altered: Wednesday, November 01, 2017 09:19:37 Pacific Daylight Time

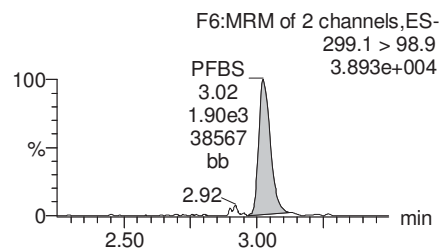
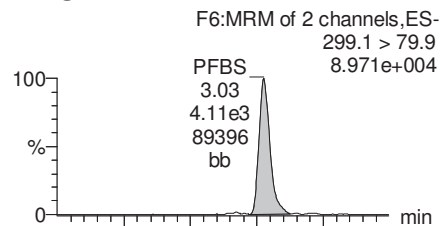
Printed: Wednesday, November 01, 2017 09:20:46 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

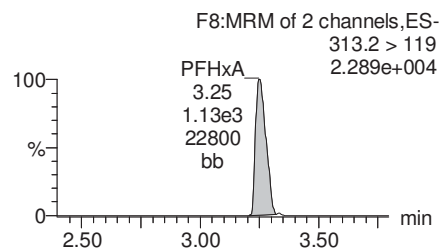
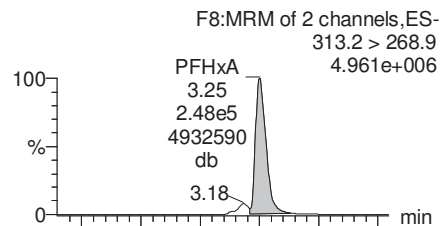
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_13, Date: 10-Oct-2017, Time: 18:37:04, ID: 1701353-03 IR09-FTPGW01-17D 0.11435, Description: IR09-FTPGW01-17D

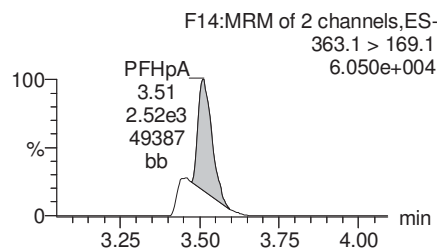
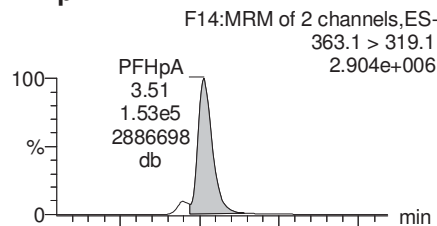
PFBS



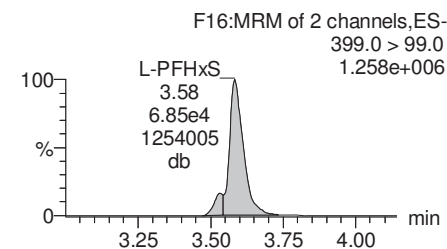
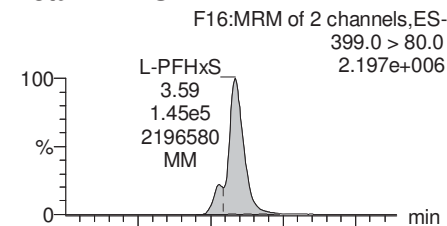
PFHxA



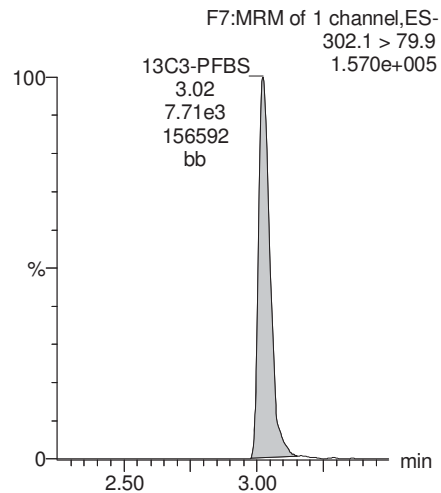
PFHpA



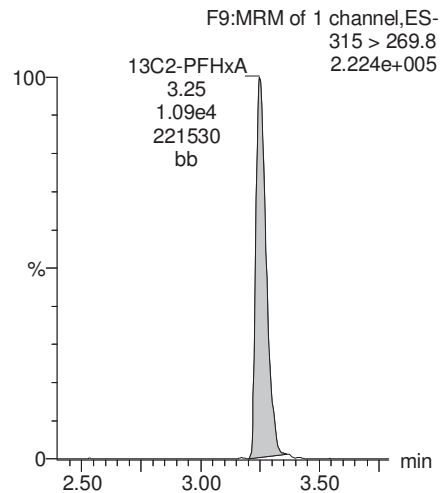
Total PFHxS



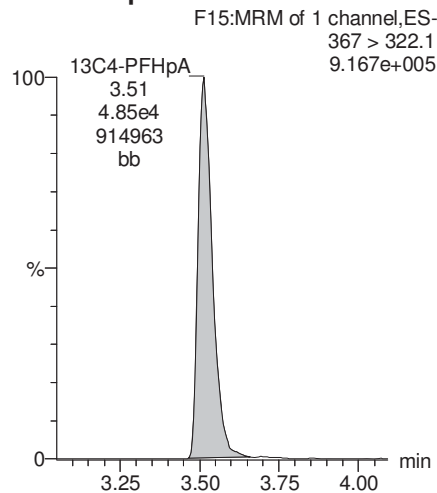
13C3-PFBS



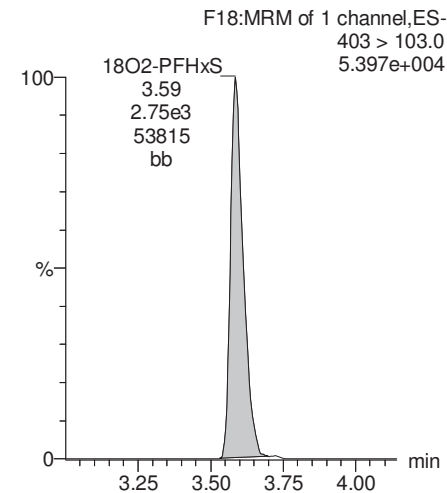
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



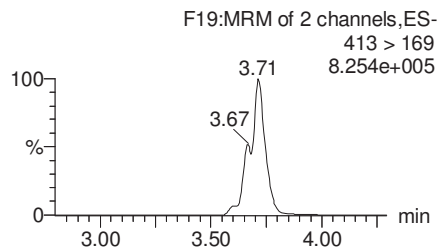
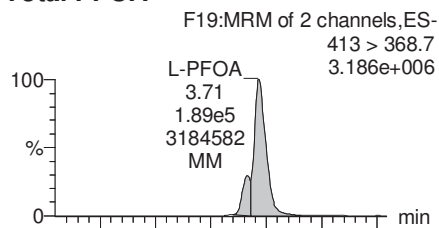
Dataset: U:\Q4.PRO\results\171010M1\171010M1-13.qld

Last Altered: Wednesday, November 01, 2017 09:19:37 Pacific Daylight Time

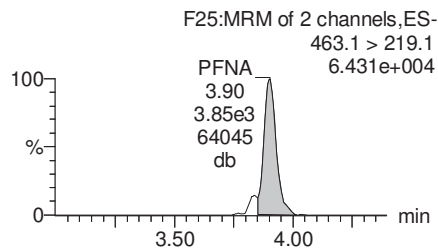
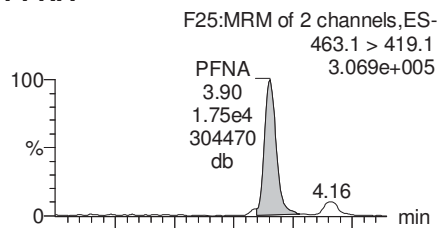
Printed: Wednesday, November 01, 2017 09:20:46 Pacific Daylight Time

Name: 171010M1_13, Date: 10-Oct-2017, Time: 18:37:04, ID: 1701353-03 IR09-FTPGW01-17D 0.11435, Description: IR09-FTPGW01-17D

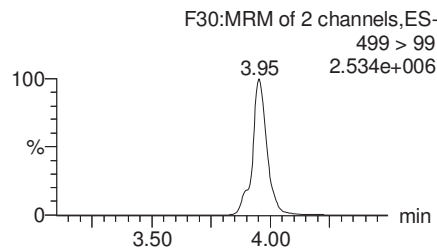
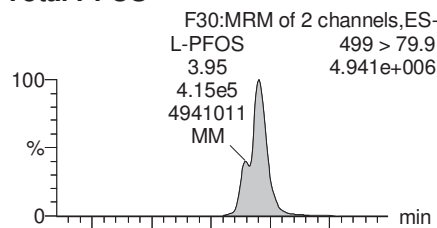
Total PFOA



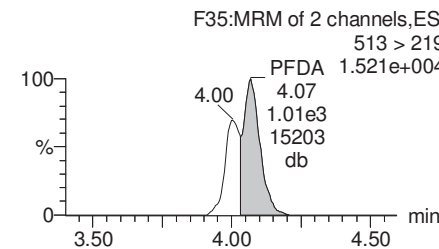
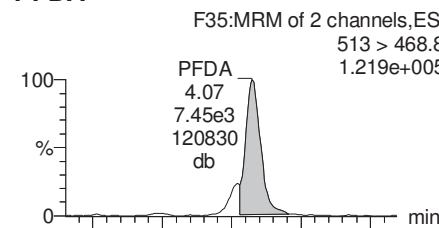
PFNA



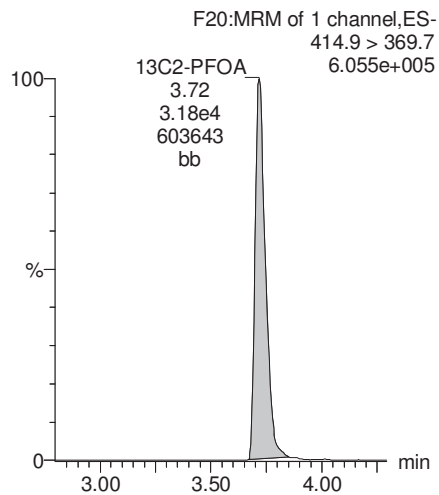
Total PFOS



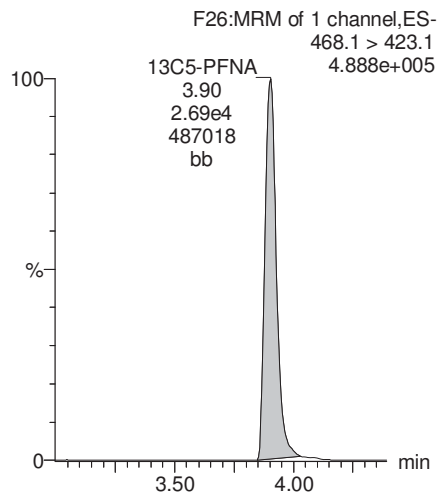
PFDA



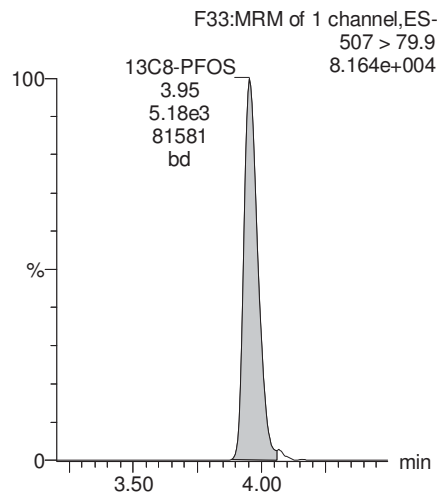
13C2-PFOA



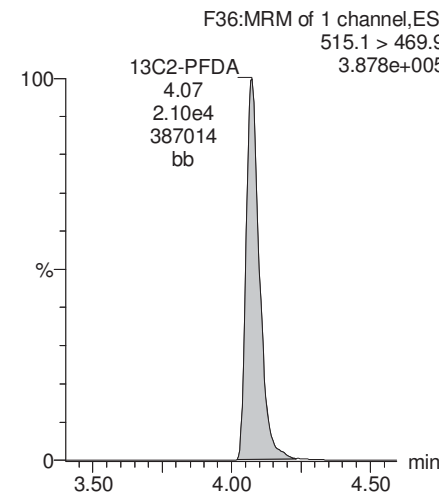
13C5-PFNA



13C8-PFOS



13C2-PFDA



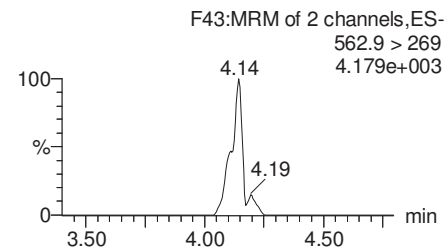
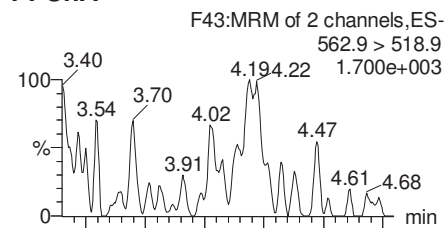
Dataset: U:\Q4.PRO\results\171010M1\171010M1-13.qld

Last Altered: Wednesday, November 01, 2017 09:19:37 Pacific Daylight Time

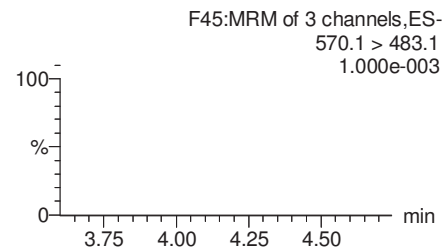
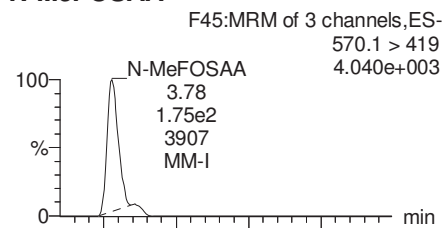
Printed: Wednesday, November 01, 2017 09:20:46 Pacific Daylight Time

Name: 171010M1_13, Date: 10-Oct-2017, Time: 18:37:04, ID: 1701353-03 IR09-FTPGW01-17D 0.11435, Description: IR09-FTPGW01-17D

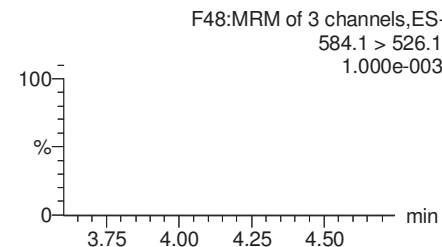
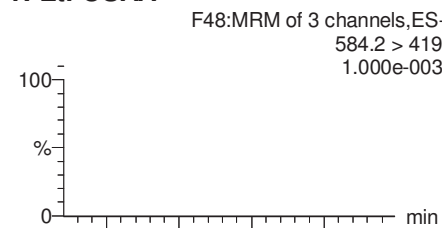
PFUnA



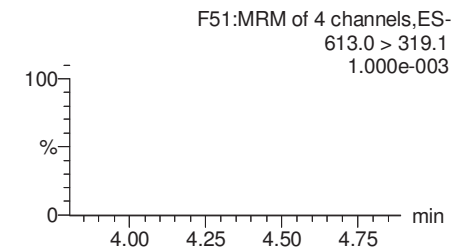
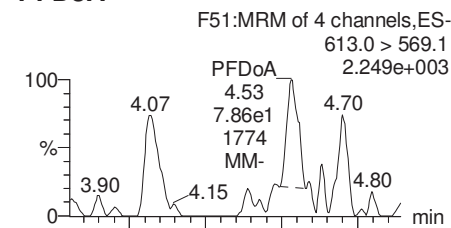
N-MeFOSAA



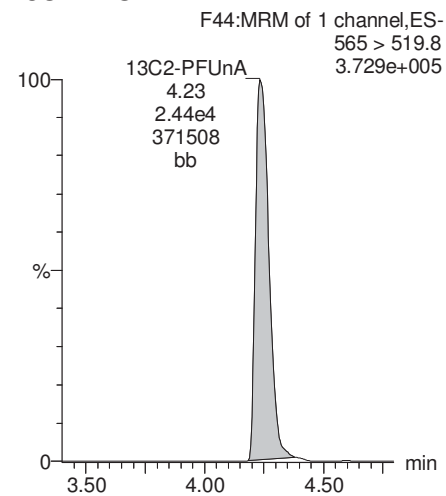
N-EtFOSAA



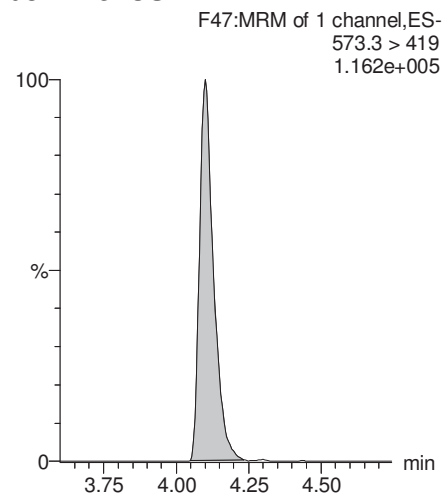
PFDoA



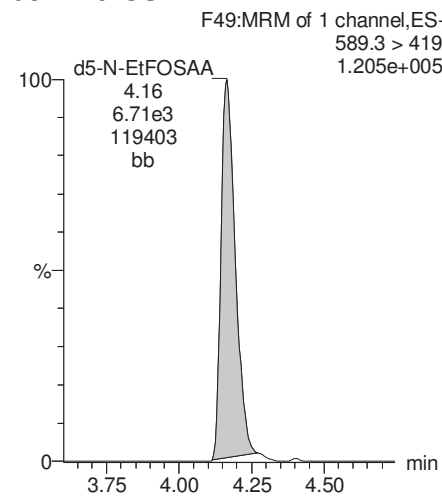
13C2-PFUnA



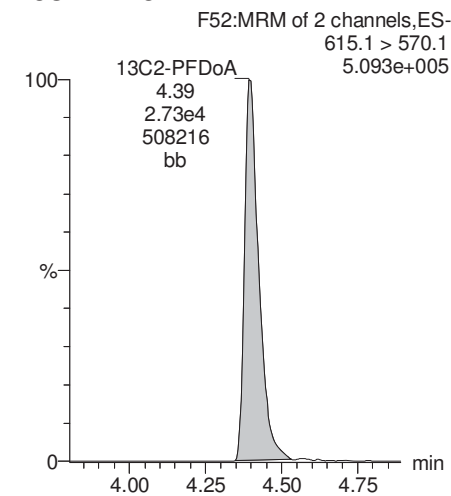
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



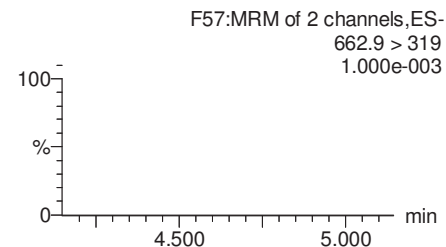
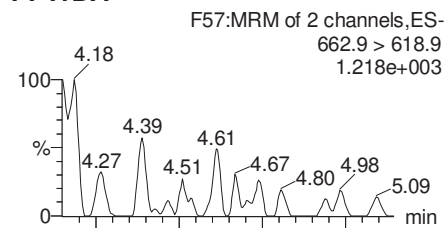
Dataset: U:\Q4.PRO\results\171010M1\171010M1-13.qld

Last Altered: Wednesday, November 01, 2017 09:19:37 Pacific Daylight Time

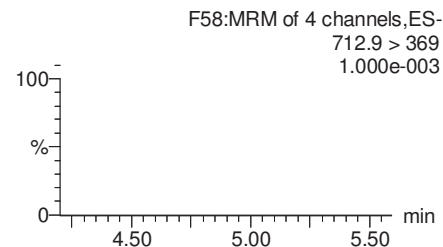
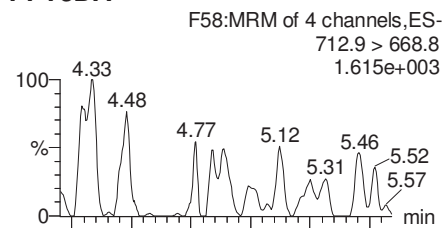
Printed: Wednesday, November 01, 2017 09:20:46 Pacific Daylight Time

Name: 171010M1_13, Date: 10-Oct-2017, Time: 18:37:04, ID: 1701353-03 IR09-FTPGW01-17D 0.11435, Description: IR09-FTPGW01-17D

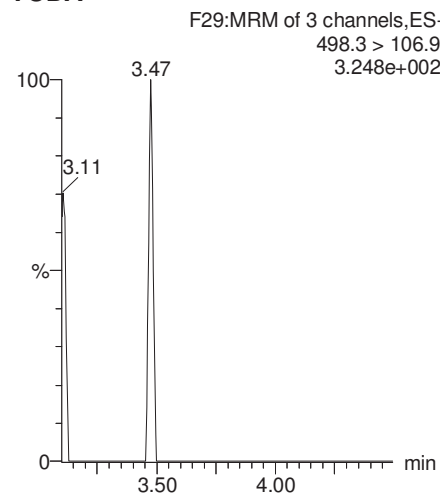
PFTrDA



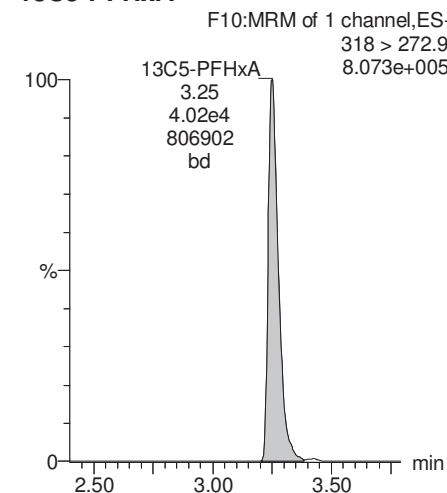
PFTeDA



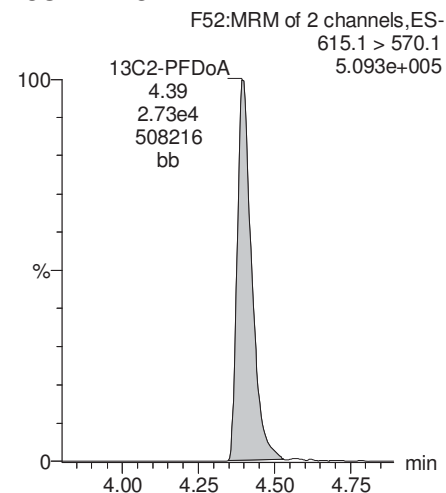
TCDA



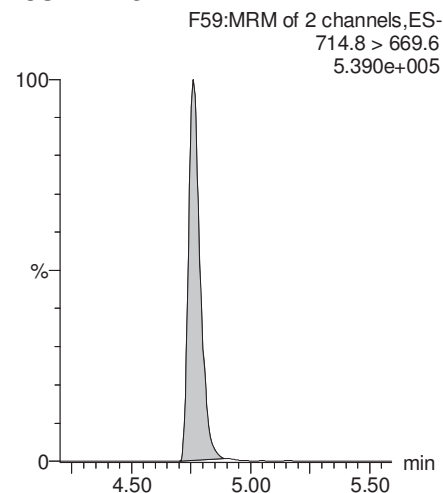
13C5-PFHxA



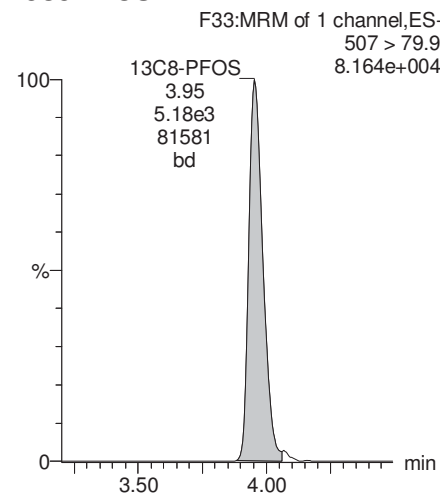
13C2-PFDoA



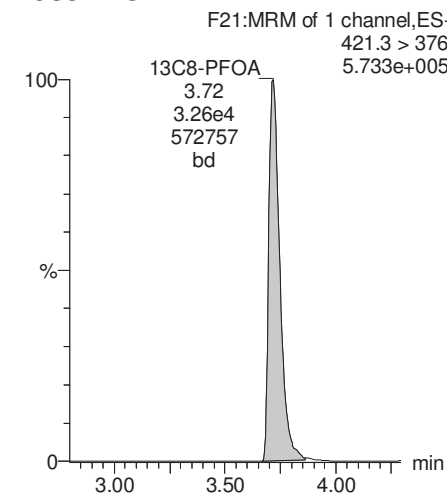
13C2-PFTeDA



13C8-PFOS



13C8-PFOA



Dataset: U:\Q4.PRO\results\171010M1\171010M1-13.qld

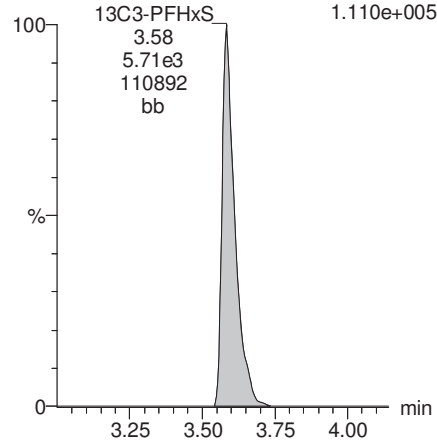
Last Altered: Wednesday, November 01, 2017 09:19:37 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:20:46 Pacific Daylight Time

Name: 171010M1_13, Date: 10-Oct-2017, Time: 18:37:04, ID: 1701353-03 IR09-FTPGW01-17D 0.11435, Description: IR09-FTPGW01-17D

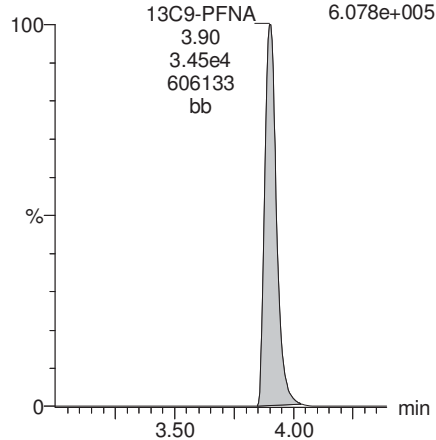
13C3-PFHxS

F17:MRM of 1 channel,ES-
402.1 > 80.0
1.110e+005



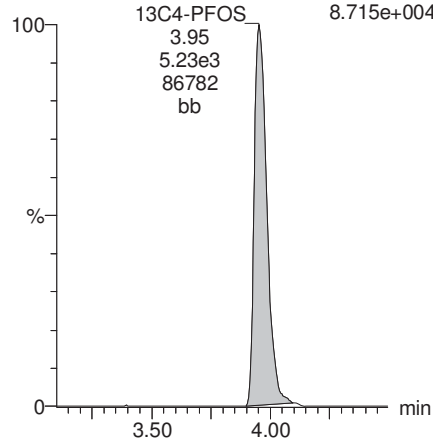
13C9-PFNA

F27:MRM of 1 channel,ES-
472.1 > 427.1
6.078e+005



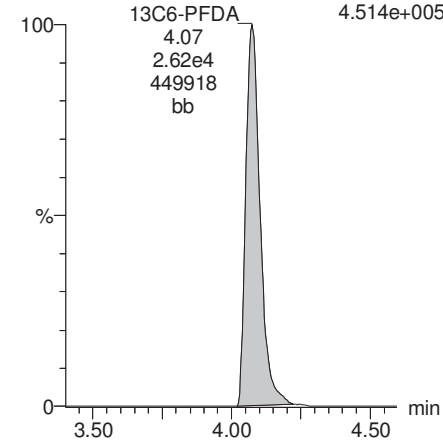
13C4-PFOS

F31:MRM of 1 channel,ES-
503 > 79.9
8.715e+004



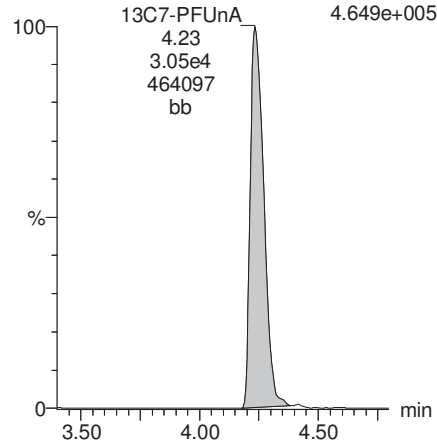
13C6-PFDA

F38:MRM of 1 channel,ES-
519.1 > 473.7
4.514e+005



13C7-PFUnA

F46:MRM of 1 channel,ES-
570.1 > 524.8
4.649e+005



Dataset: U:\Q4.PRO\results\171011M1\171011M1-121.qld

Last Altered: Wednesday, November 01, 2017 10:43:44 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:44:09 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-11-17-FULL.cdb 12 Oct 2017 09:33:10

Name: 171011M1_121, Date: 12-Oct-2017, Time: 07:26:56, ID: 1701353-03@5X IR09-FTPGW01-17D 0.11435, Description: IR09-FTPGW01-17D

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	6 L-PFHxS	399.0 > 80.0	3.55e4	5.96e2	0.1143		3.63	3.54	746	2410	
2	14 L-PFOS	499 > 79.9	1.10e5	1.42e3	0.1143		4.01	3.90	966	7210	
3	36 18O2-PFHxS	403 > 103.0	5.96e2	1.53e3	0.1143	0.483	3.63	3.54	4.86	88.0	80.5
4	41 13C8-PFOS	507 > 79.9	1.42e3	1.38e3	0.1143	1.053	4.01	3.90	12.9	107	98.1
5	56 13C3-PFHxS	402.1 > 80.0	1.53e3	1.53e3	0.1143	1.000	3.63	3.54	12.5	109	100.0
6	59 13C4-PFOS	503 > 79.9	1.38e3	1.38e3	0.1143	1.000	4.01	3.90	12.5	109	100.0
7	62 Total PFHxS	399.0 > 80.0	3.55e4	5.96e2	0.1143		3.63		746	2410	
8	64 Total PFOS	499 > 79.9	1.10e5		0.1143		4.01		966	7210	

Dataset: U:\Q4.PRO\results\171011M1\171011M1-121.qld

Last Altered: Wednesday, November 01, 2017 10:43:44 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:44:09 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

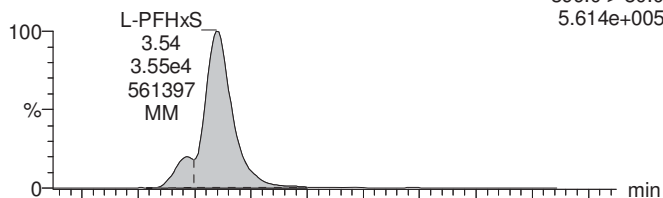
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-11-17-FULL.cdb 12 Oct 2017 09:33:10

Name: 171011M1_121, Date: 12-Oct-2017, Time: 07:26:56, ID: 1701353-03@5X IR09-FTPGW01-17D 0.11435, Description: IR09-FTPGW01-17D

Total PFHxS

171011M1_121 Smooth(Mn,1x2)

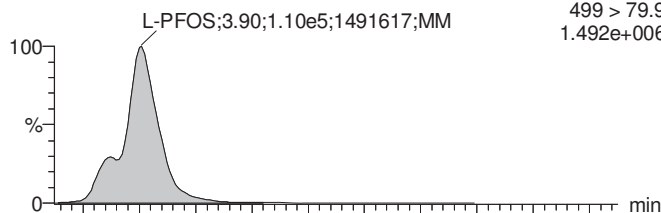
F16:MRM of 2 channels,ES-
399.0 > 80.0
5.614e+005



Total PFOS

171011M1_121 Smooth(Mn,1x2)

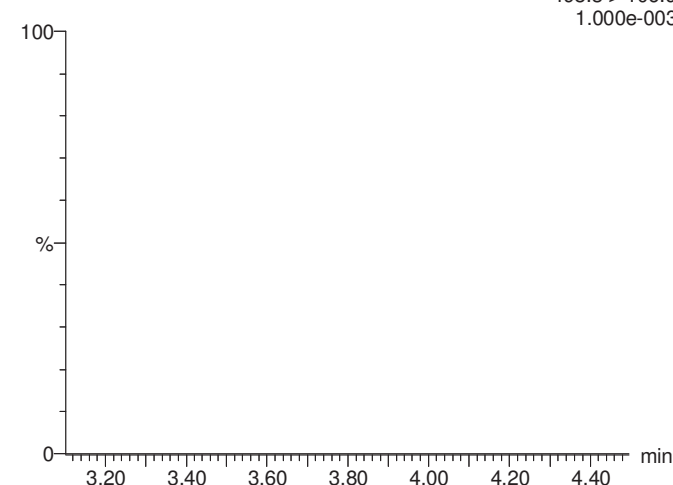
F30:MRM of 2 channels,ES-
499 > 79.9
1.492e+006



TCDA

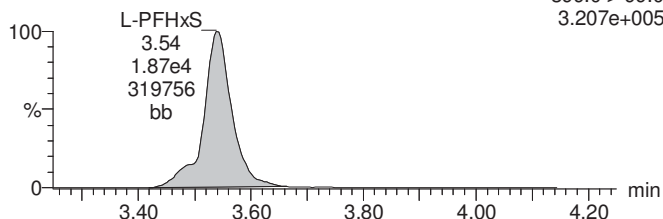
171011M1_121 Smooth(Mn,1x2)

F29:MRM of 3 channels,ES-
498.3 > 106.9
1.000e-003



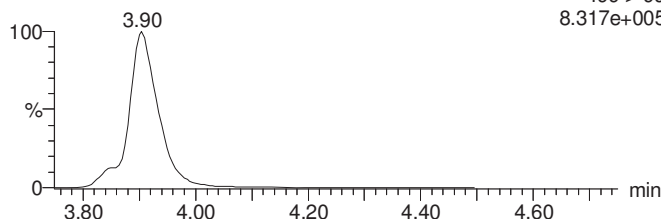
171011M1_121 Smooth(Mn,1x2)

F16:MRM of 2 channels,ES-
399.0 > 99.0
3.207e+005



171011M1_121 Smooth(Mn,1x2)

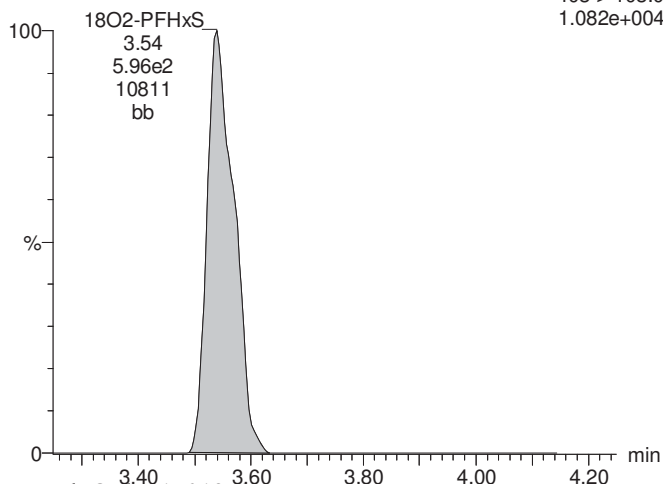
F30:MRM of 2 channels,ES-
499 > 99
8.317e+005



18O2-PFHxS

171011M1_121 Smooth(Mn,1x2)

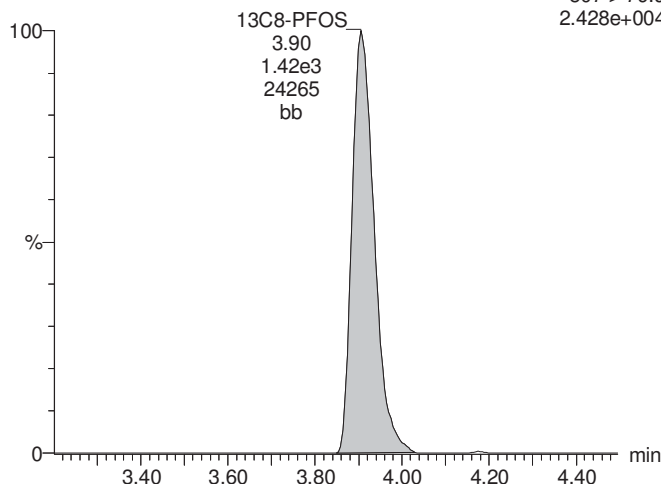
F18:MRM of 1 channel,ES-
403 > 103.0
1.082e+004



13C8-PFOS

171011M1_121 Smooth(Mn,1x2)

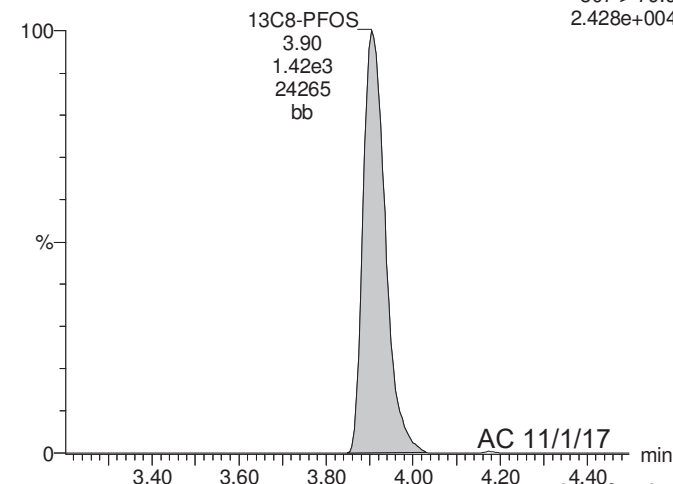
F33:MRM of 1 channel,ES-
507 > 79.9
2.428e+004



13C8-PFOS

171011M1_121 Smooth(Mn,1x2)

F33:MRM of 1 channel,ES-
507 > 79.9
2.428e+004



AC 11/1/17

Dataset: U:\Q4.PRO\results\171011M1\171011M1-121.qld

Last Altered: Wednesday, November 01, 2017 10:43:44 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:44:09 Pacific Daylight Time

Name: 171011M1_121, Date: 12-Oct-2017, Time: 07:26:56, ID: 1701353-03@5X IR09-FTPGW01-17D 0.11435, Description: IR09-FTPGW01-17D

13C3-PFHxS

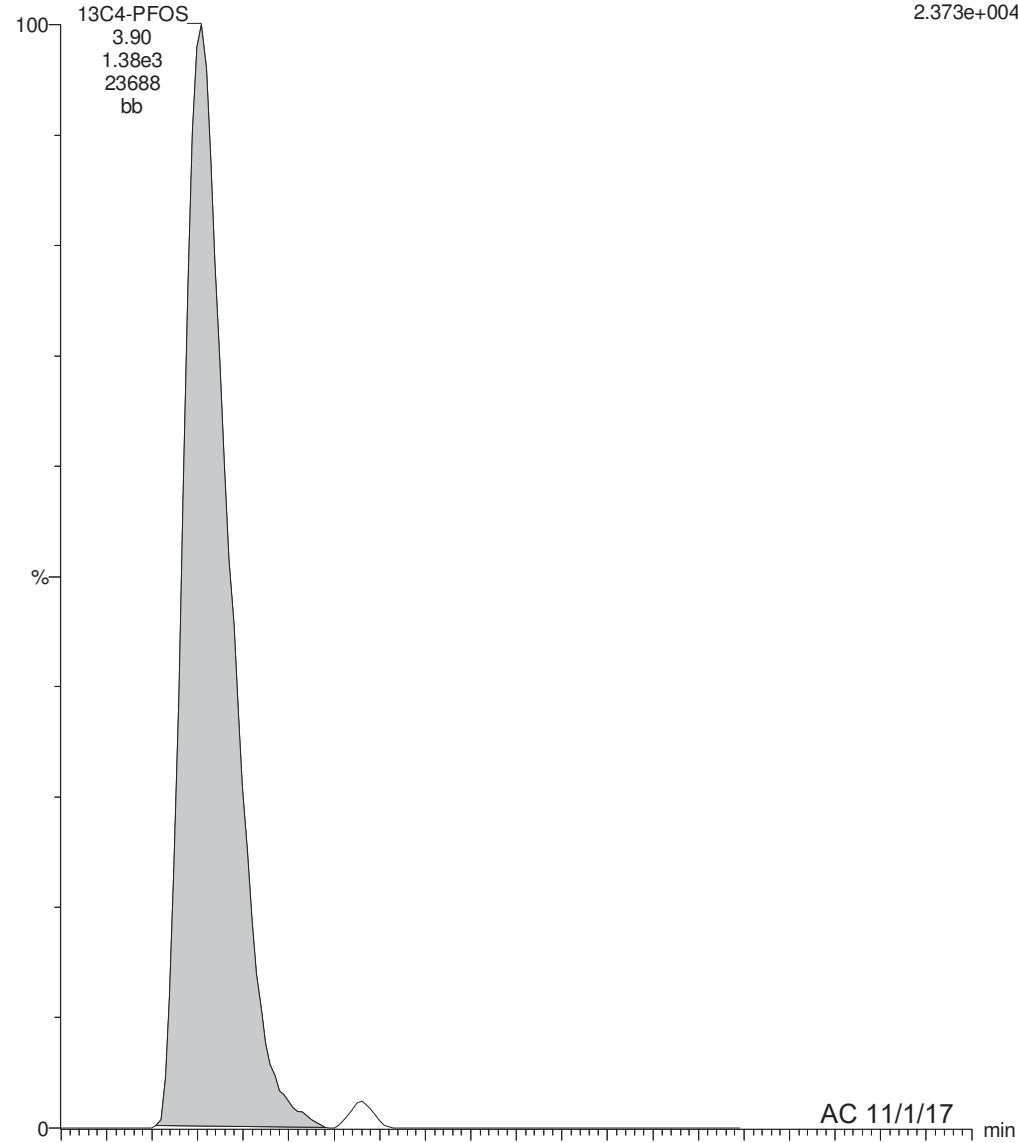
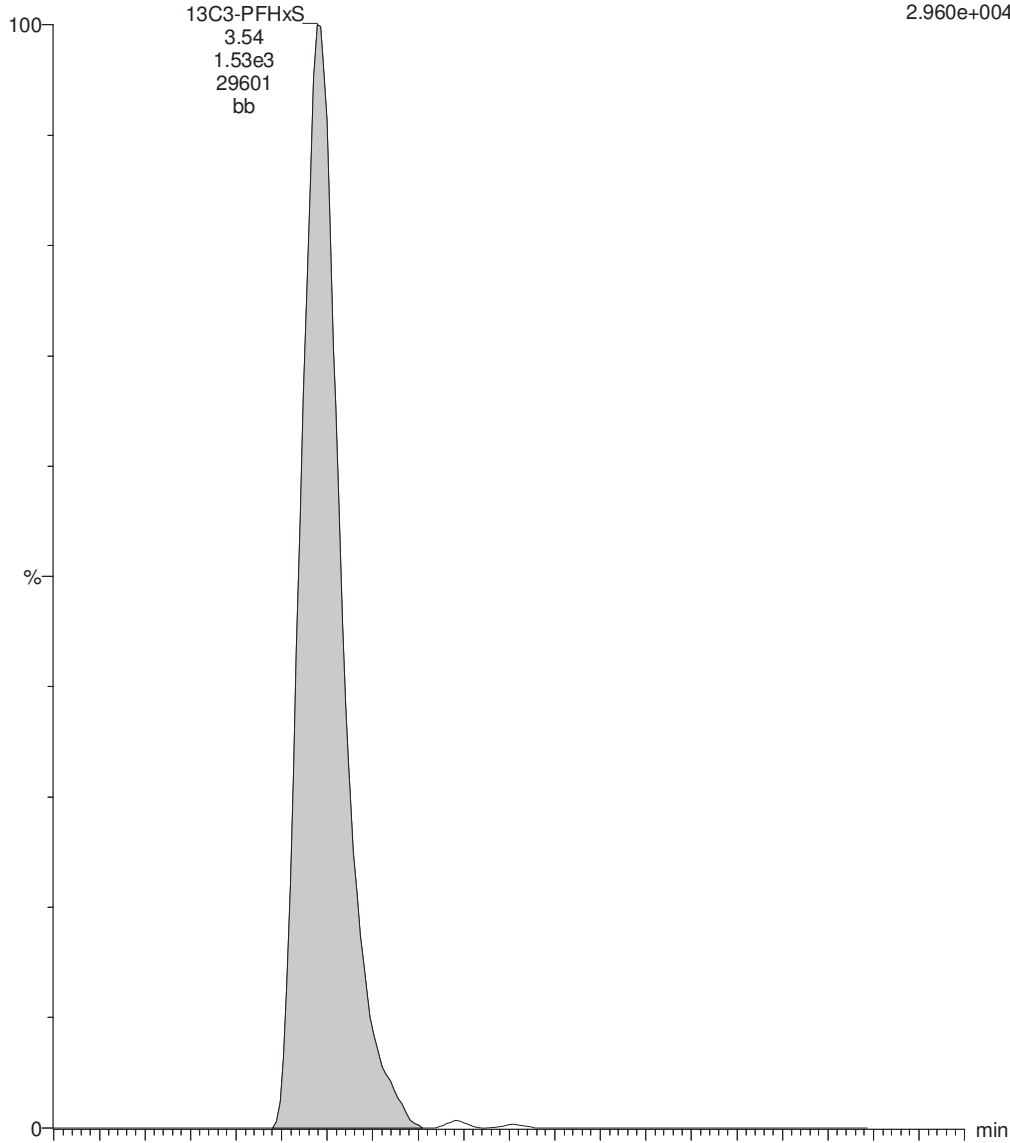
171011M1_121 Smooth(Mn,1x2)
IR09-FTPGW01-17D 1701353-03@5X IR09-FTPGW01-17D 0.11435

F17:MRM of 1 channel,ES-
402.1 > 80.0
2.960e+004

13C4-PFOS

171011M1_121 Smooth(Mn,1x2)
IR09-FTPGW01-17D 1701353-03@5X IR09-FTPGW01-17D 0.11435

F31:MRM of 1 channel,ES-
503 > 79.9
2.373e+004



Dataset: U:\Q4.PRO\results\171010M1\171010M1-15.qld

Last Altered: Wednesday, November 01, 2017 09:27:50 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:38:27 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_15, Date: 10-Oct-2017, Time: 18:58:28, ID: 1701353-04 IR09-GW11-17D 0.11596, Description: IR09-GW11-17D

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299.1 > 79.9	9.62e2	8.61e3	0.1160		3.09	3.03	1.40	13.046	
2	4	PFHxA	313.2 > 268.9	5.29e4	1.15e4	0.1160		3.31	3.25	22.9	134.581	
3	5	PFHpA	363.1 > 319.1	3.13e4	5.12e4	0.1160		3.56	3.51	7.66	68.724	
4	6	L-PFHxS	399.0 > 80.0	5.94e4	2.78e3	0.1160		3.63	3.59	267	1041.530	
5	9	L-PFOA	413 > 368.7	8.47e4	3.60e4	0.1160		3.68	3.72	29.4	270.753	
6	12	PFNA	463.1 > 419.1	3.26e3	2.77e4	0.1160		3.96	3.90	1.47	11.544	
7	14	L-PFOS	499 > 79.9	1.88e5	6.69e3	0.1160		4.01	3.95	352	2861.429 E	
8	16	PFDA	513 > 468.8	1.31e3	2.16e4	0.1160		4.14	4.07	0.758	4.616	
9	18	N-MeFOSAA	570.1 > 419		6.82e3	0.1160		4.17				
10	19	N-EtFOSAA	584.2 > 419		6.61e3	0.1160		4.23				
11	20	PFUnA	562.9 > 518.9	4.67e1	3.12e4	0.1160		4.31	4.16	0.0187		
12	22	PFDoA	613.0 > 569.1		2.85e4	0.1160		4.49				

Dataset: U:\Q4.PRO\results\171010M1\171010M1-15.qld

Last Altered: Wednesday, November 01, 2017 09:27:50 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:38:44 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_15, Date: 10-Oct-2017, Time: 18:58:28, ID: 1701353-04 IR09-GW11-17D 0.11596, Description: IR09-GW11-17D

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	24	PFTrDA	662.9 > 618.9	2.85e4	0.1160		4.68					
2	25	PFTeDA	712.9 > 668.8	3.26e4	0.1160		4.88					
3	31	13C3-PFBA	216.1 > 172.1	2.42e4	2.68e4	0.1160	0.944	1.76	1.62	11.3	103.252	95.8
4	32	13C3-PFPeA	266.1 > 222.1	3.43e4	3.98e4	0.1160	0.299	2.91	2.83	4.31	124.355	115.4
5	33	13C3-PFBS	302.1 > 79.9	8.61e3	3.98e4	0.1160	0.070	3.09	3.03	1.08	133.799	124.1
6	34	13C2-PFHxA	315 > 269.8	1.15e4	3.98e4	0.1160	0.295	3.31	3.26	1.45	42.340	98.2
7	35	13C4-PFHpA	367 > 322.1	5.12e4	3.98e4	0.1160	0.592	3.56	3.51	6.42	93.522	86.8
8	36	18O2-PFHxS	403 > 103.0	2.78e3	6.73e3	0.1160	0.497	3.63	3.59	5.17	89.670	83.2
9	37	13C2-6:2 FTS	429.1 > 408.9	4.21e3	3.12e4	0.1160	0.156	3.76	3.71	1.69	93.072	86.3
10	38	13C2-PFOA	414.9 > 369.7	3.60e4	3.12e4	0.1160	1.111	3.77	3.72	14.4	112.036	103.9
11	39	13C5-PFNA	468.1 > 423.1	2.77e4	3.30e4	0.1160	0.934	3.96	3.90	10.5	96.792	89.8
12	40	13C8-PFOSA	506.1 > 78.0	2.39e3	3.39e4	0.1160	0.129	3.96	3.91	0.879	58.746	54.5
13	41	13C8-PFOS	507 > 79.9	6.69e3	6.31e3	0.1160	0.995	4.01	3.95	13.3	114.869	106.6
14	42	13C2-PFDA	515.1 > 469.9	2.16e4	2.96e4	0.1160	0.954	4.14	4.07	9.10	82.319	76.4
15	43	13C2-8:2 FTS	529.1 > 508.7	2.95e3	2.96e4	0.1160	0.116	4.14	4.07	1.25	92.857	86.1
16	44	d3-N-MeFOSAA	573.3 > 419	6.82e3	3.39e4	0.1160	0.020	4.17	4.10	2.51	1100.184	78.5
17	45	d5-N-EtFOSAA	589.3 > 419	6.61e3	3.39e4	0.1160	0.020	4.23	4.17	2.44	1040.536	74.3
18	46	13C2-PFUnA	565 > 519.8	3.12e4	3.39e4	0.1160	1.124	4.31	4.24	11.5	88.232	81.9
19	47	13C2-PFDoA	615.1 > 570.1	2.85e4	3.39e4	0.1160	1.087	4.49	4.40	10.5	83.276	77.3
20	49	13C2-PFTeDA	714.8 > 669.6	3.26e4	3.39e4	0.1160	1.014	4.88	4.76	12.0	101.983	94.6
21	54	13C4-PFBA	217.1 > 172.1	2.68e4	2.68e4	0.1160	1.000	1.76	1.63	12.5	107.796	100.0
22	55	13C5-PFHxA	318 > 272.9	3.98e4	3.98e4	0.1160	1.000	3.31	3.25	5.00	43.118	100.0
23	56	13C3-PFHxS	402.1 > 80.0	6.73e3	6.73e3	0.1160	1.000	3.63	3.59	12.5	107.796	100.0
24	57	13C8-PFOA	421.3 > 376	3.12e4	3.12e4	0.1160	1.000	3.77	3.72	12.5	107.796	100.0
25	58	13C9-PFNA	472.1 > 427.1	3.30e4	3.30e4	0.1160	1.000	3.96	3.90	12.5	107.796	100.0
26	59	13C4-PFOS	503 > 79.9	6.31e3	6.31e3	0.1160	1.000	4.01	3.95	12.5	107.796	100.0
27	60	13C6-PFDA	519.1 > 473.7	2.96e4	2.96e4	0.1160	1.000	4.14	4.07	12.5	107.796	100.0
28	61	13C7-PFUnA	570.1 > 524.8	3.39e4	3.39e4	0.1160	1.000	4.31	4.24	12.5	107.796	100.0
29	62	Total PFHxS	399.0 > 80.0	5.94e4	2.78e3	0.1160		3.63		267	1041.530	
30	63	Total PFOA	413 > 368.7	9.43e4		0.1160		3.68		32.7	298.470	
31	64	Total PFOS	499 > 79.9	1.88e5		0.1160		4.01		352	2861.429	
32	65	Total N-MeFOSAA	570.1 > 419	0.00e0	6.82e3	0.1160		4.17		0.000		

Dataset: U:\Q4.PRO\results\171010M1\171010M1-15.qld

Last Altered: Wednesday, November 01, 2017 09:27:50 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:38:44 Pacific Daylight Time

Name: 171010M1_15, Date: 10-Oct-2017, Time: 18:58:28, ID: 1701353-04 IR09-GW11-17D 0.11596, Description: IR09-GW11-17D

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	66 Total N-EtFOSAA	584.2 > 419	0.00e0	6.61e3	0.1160		4.23		0.000		
34	68 Total PFOA+PFOS	413 > 368.7;4...	2.82e5		0.1160		0.00		384	3159.899	2920

Dataset: U:\Q4.PRO\results\171010M1\171010M1-15.qld

Last Altered: Wednesday, November 01, 2017 09:27:50 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:38:44 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_15, Date: 10-Oct-2017, Time: 18:58:28, ID: 1701353-04 IR09-GW11-17D 0.11596, Description: IR09-GW11-17D

Total PFHxS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7 Br-PFHxS	399.0 > 80.0			2779.709		MM-	
2	6 L-PFHxS	399.0 > 80.0	3.59	59410.484	2779.709	267.161	MM	1041.5

Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	10 Br-PFOA	413 > 368.7	3.66	9593.851	36002.539	3.331	MM	27.7
2	9 L-PFOA	413 > 368.7	3.72	84661.719	36002.539	29.394	MM	270.8

Total PFOS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14 L-PFOS	499 > 79.9	3.95	188197.063	6687.463	351.772	MM	2861.4

Total N-Me-FOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1								

Total N-EtFOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1								

Total PFOA+PFOS,Total PFOS,Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	10 Br-PFOA	413 > 368.7	3.66	9593.851	36002.539	3.331	MM	27.7
2	9 L-PFOA	413 > 368.7	3.72	84661.719	36002.539	29.394	MM	270.8
3	14 L-PFOS	499 > 79.9	3.95	188197.063	6687.463	351.772	MM	2861.4

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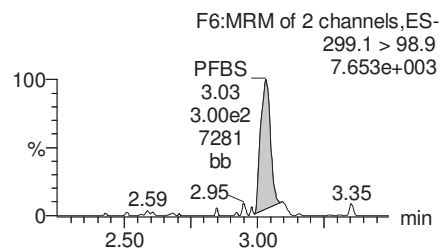
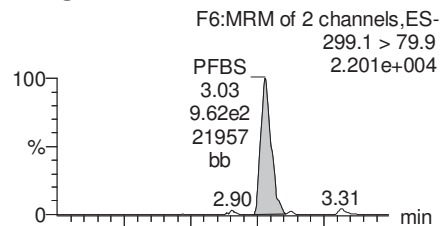
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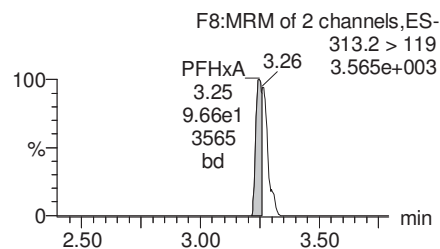
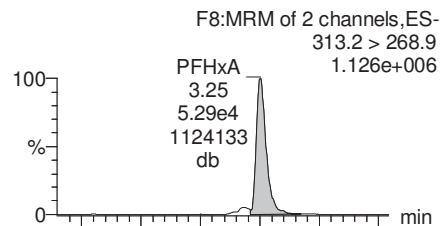
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Name: 171010M1_15, Date: 10-Oct-2017, Time: 18:58:28, ID: 1701353-04 IR09-GW11-17D 0.11596, Description: IR09-GW11-17D

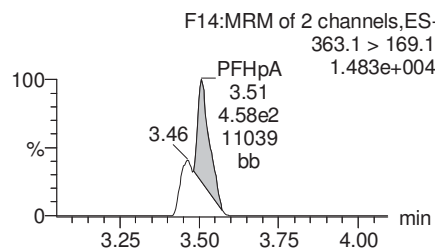
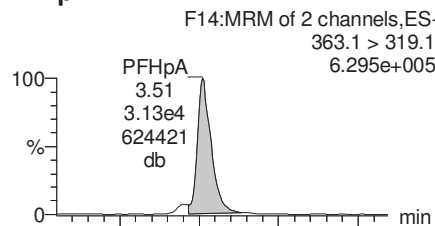
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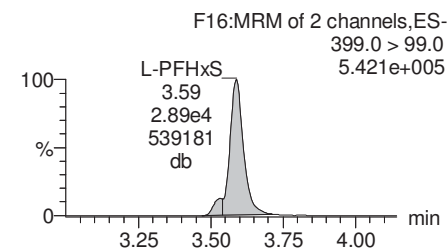
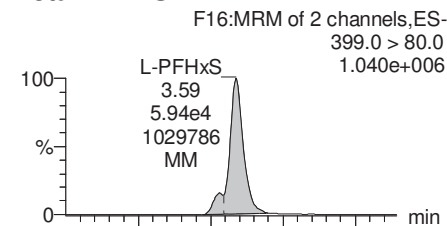
PFHxA



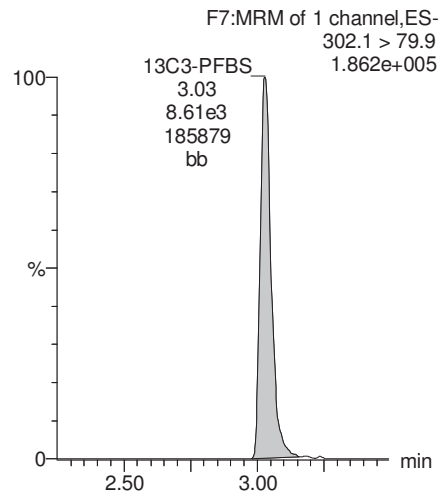
PFHpA



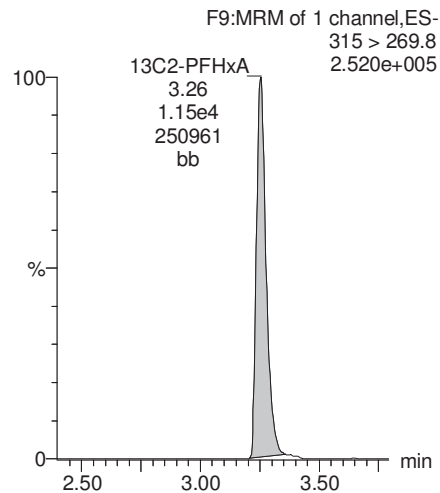
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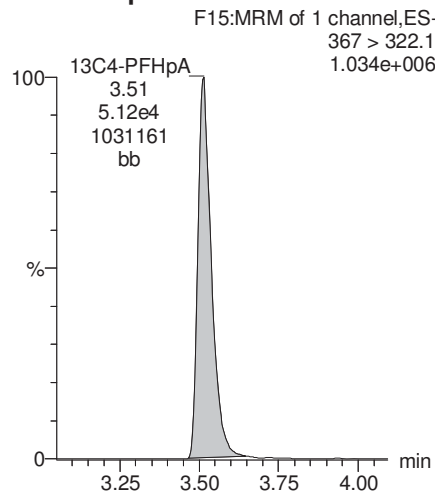
13C3-PFBS



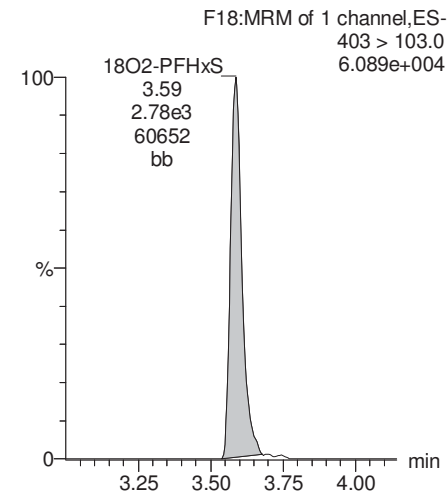
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



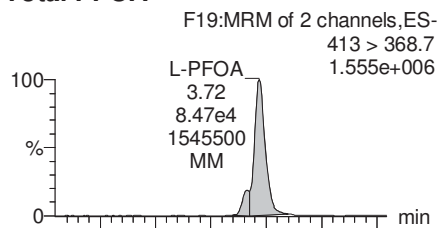
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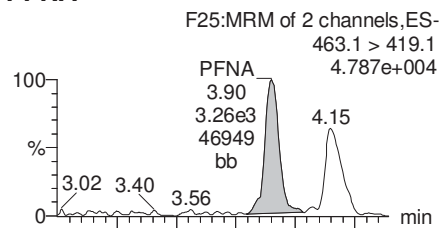
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Name: 171010M1_15, Date: 10-Oct-2017, Time: 18:58:28, ID: 1701353-04 IR09-GW11-17D 0.11596, Description: IR09-GW11-17D

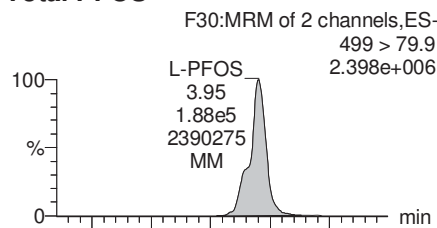
Total PFOA



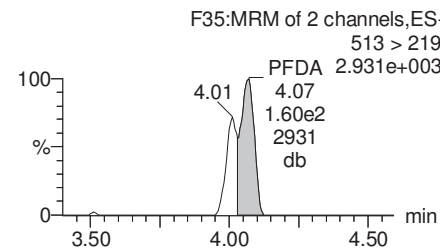
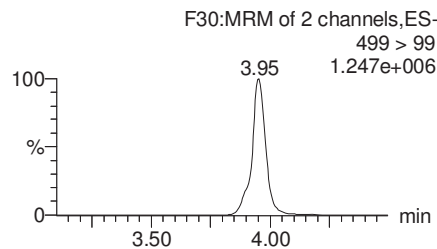
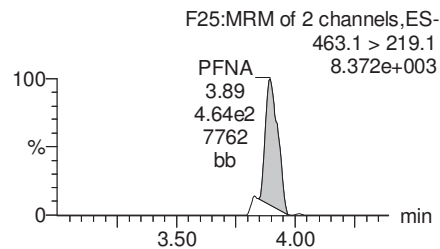
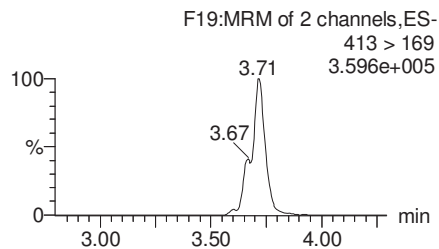
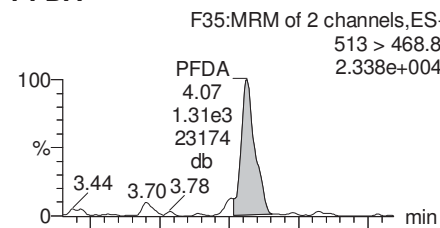
PFNA



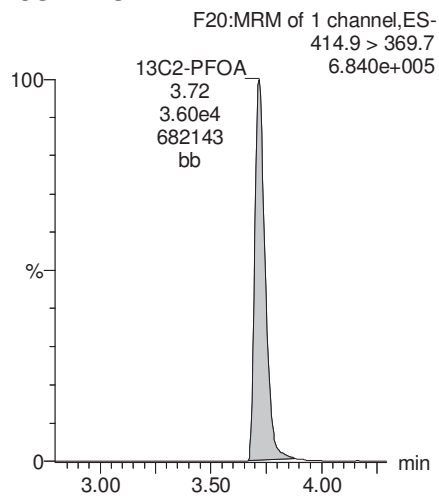
Total PFOS



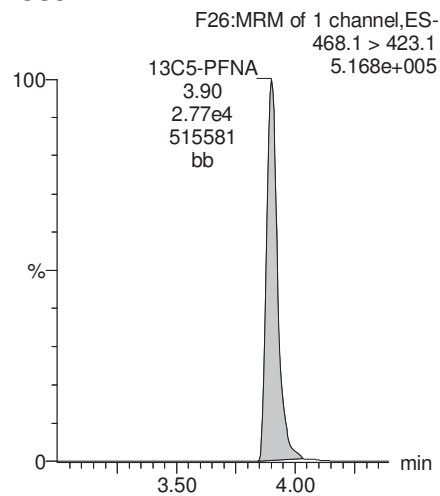
PFDA



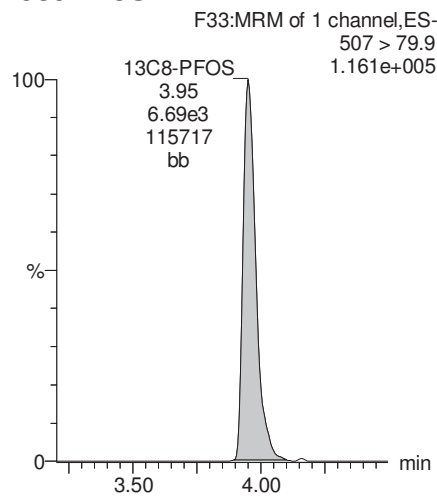
13C2-PFOA



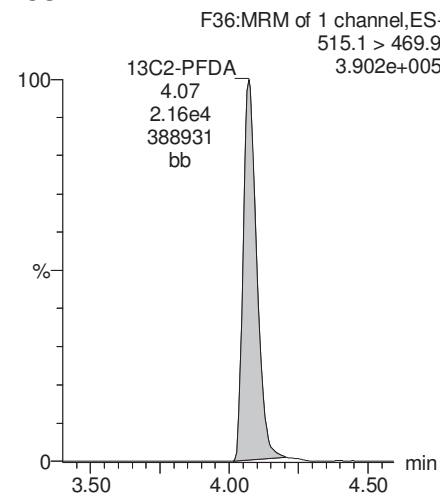
13C5-PFNA



13C8-PFOS



13C2-PFDA



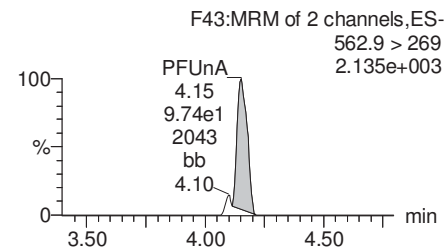
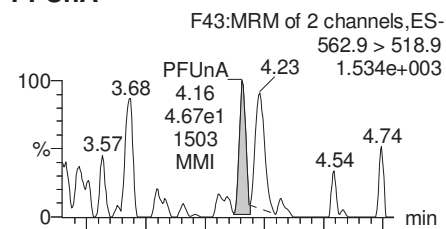
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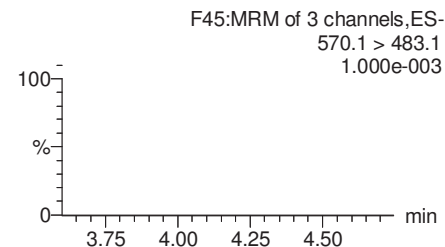
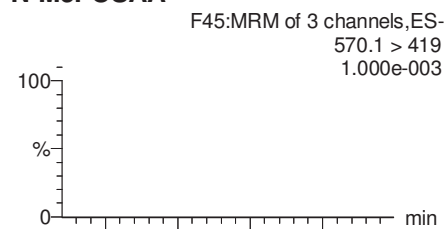
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Name: 171010M1_15, Date: 10-Oct-2017, Time: 18:58:28, ID: 1701353-04 IR09-GW11-17D 0.11596, Description: IR09-GW11-17D

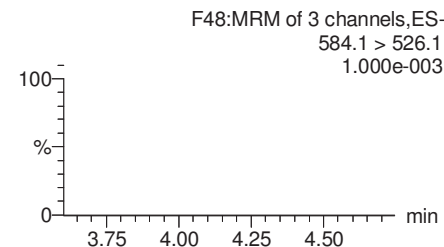
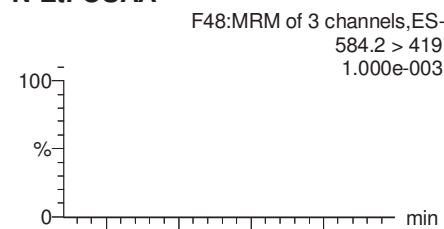
PFUnA



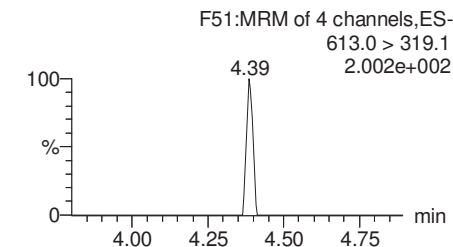
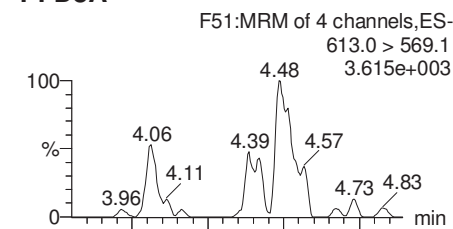
N-MeFOSAA



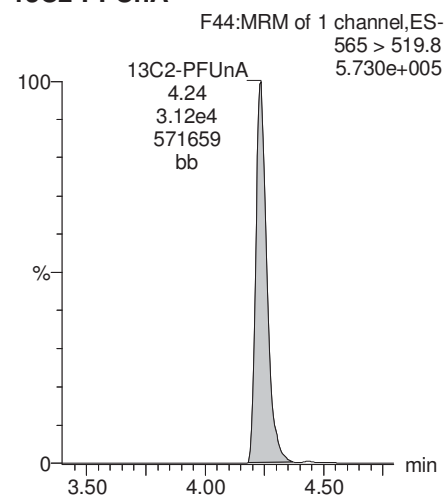
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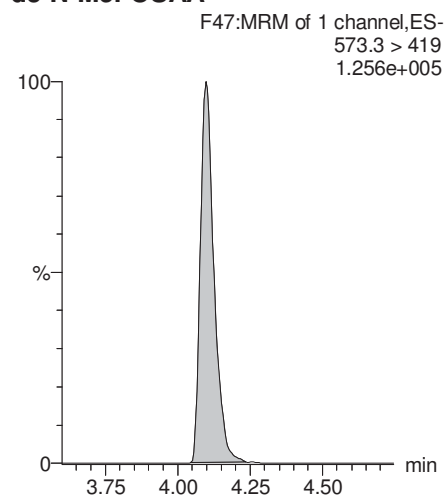
PFDaA



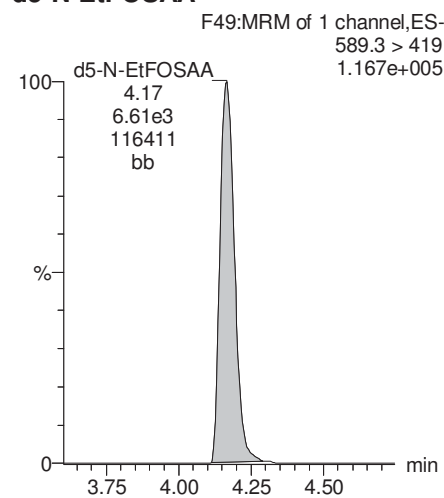
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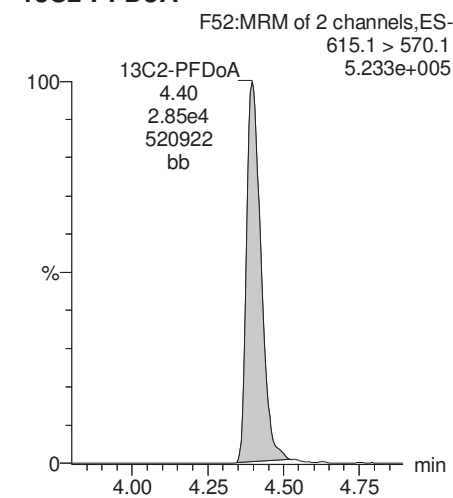
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDaA



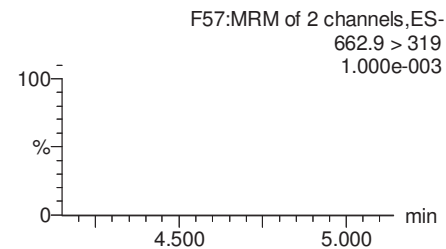
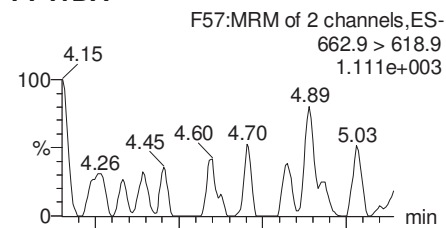
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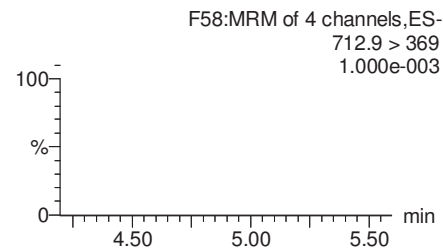
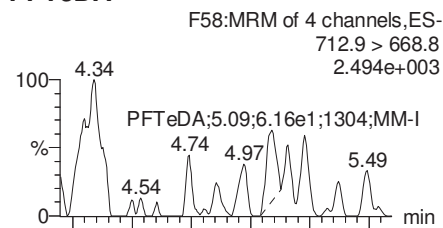
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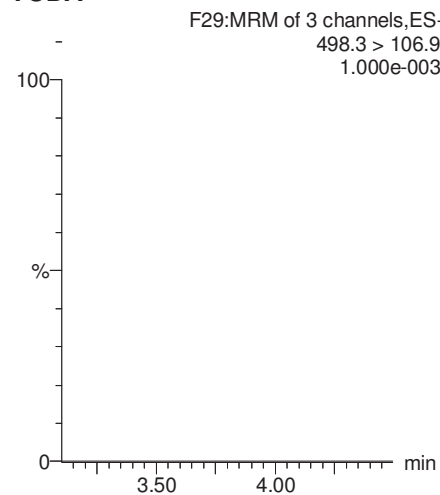
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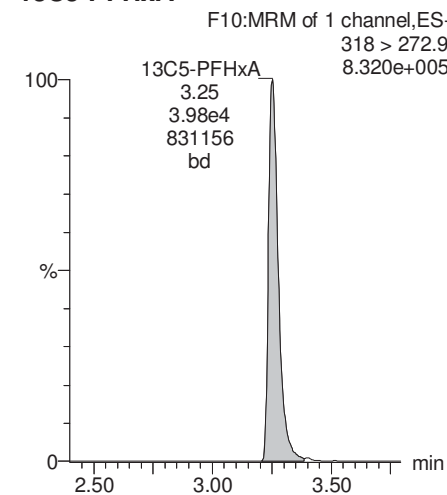
PFTeDA



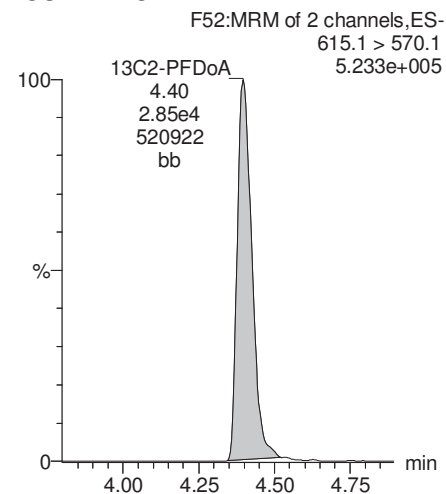
TCDA



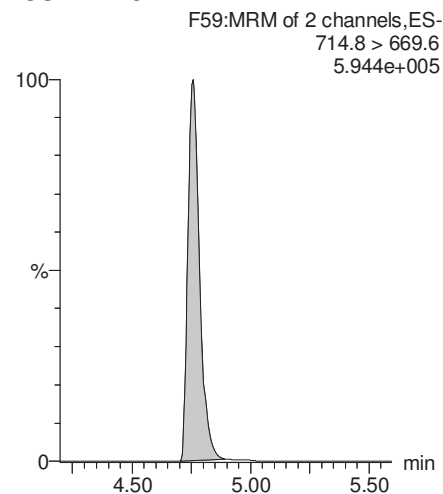
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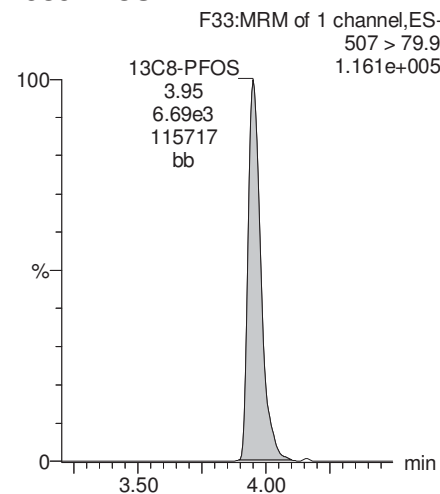
13C2-PFDoA



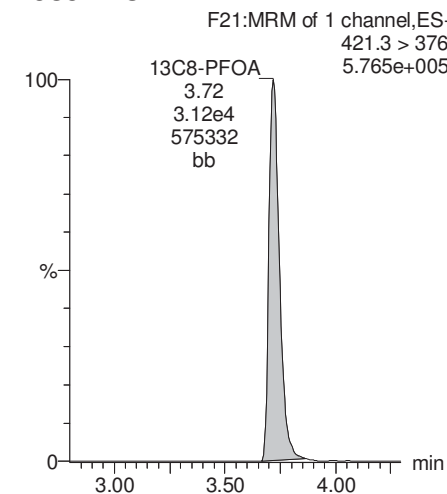
13C2-PFTeDA



13C8-PFOS



13C8-PFOA



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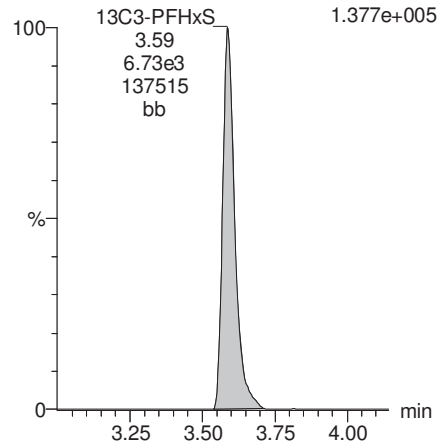
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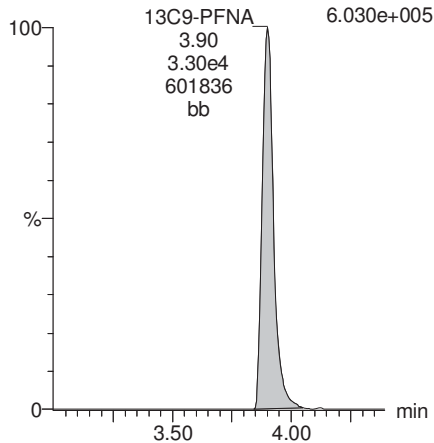
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F17:MRM of 1 channel,ES-
402.1 > 80.0
1.377e+005



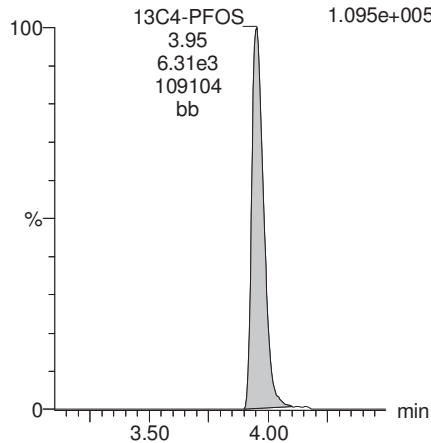
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6.030e+005



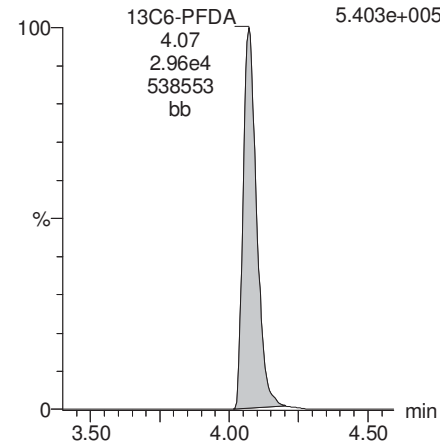
13C4-PFOS

F31:MRM of 1 channel,ES-
503 > 79.9
1.095e+005



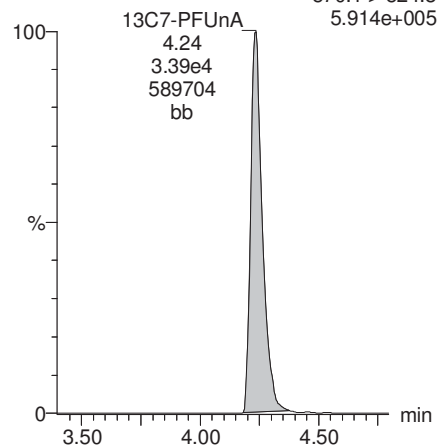
13C6-PFDA

F38:MRM of 1 channel,ES-
519.1 > 473.7
5.403e+005



13C7-PFUnA

F46:MRM of 1 channel,ES-
570.1 > 524.8
5.914e+005



Dataset: U:\Q4.PRO\results\171011M1\171011M1-122.qld

Last Altered: Wednesday, November 01, 2017 10:46:17 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:46:53 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-11-17-FULL.cdb 12 Oct 2017 09:33:10

Name: 171011M1_122, Date: 12-Oct-2017, Time: 07:37:44, ID: 1701353-04@5X IR09-GW11-17D 0.11596, Description: IR09-GW11-17D

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	14 L-PFOS	499 > 79.9	5.13e4	1.80e3	0.1160		4.01	3.91	357	2620	
2	41 13C8-PFOS	507 > 79.9	1.80e3	1.77e3	0.1160	1.053	4.01	3.91	12.7	104	96.3
3	59 13C4-PFOS	503 > 79.9	1.77e3	1.77e3	0.1160	1.000	4.01	3.91	12.5	108	100.0
4	64 Total PFOS	499 > 79.9	5.13e4		0.1160		4.01		357	2620	

Dataset: U:\Q4.PRO\results\171011M1\171011M1-122.qld

Last Altered: Wednesday, November 01, 2017 10:46:17 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:46:53 Pacific Daylight Time

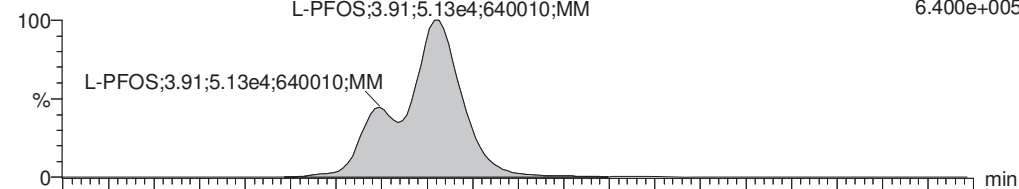
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Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-11-17-FULL.cdb 12 Oct 2017 09:33:10

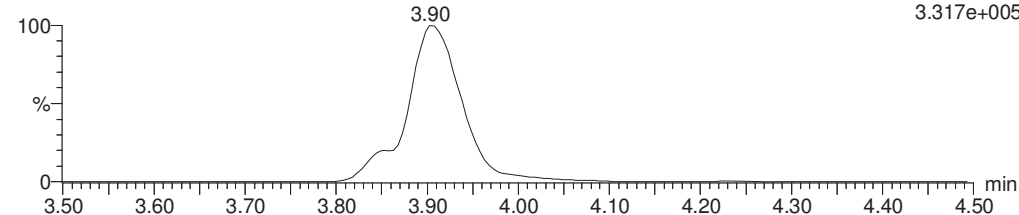
Name: 171011M1_122, Date: 12-Oct-2017, Time: 07:37:44, ID: 1701353-04@5X IR09-GW11-17D 0.11596, Description: IR09-GW11-17D

Total PFOS

171011M1_122 Smooth(Mn,1x2)
IR09-GW11-17D 1701353-04@5X IR09-GW11-17D 0.11596
L-PFOS;3.91;5.13e4;640010;MM
F30:MRM of 2 channels,ES-
499 > 79.9
6.400e+005

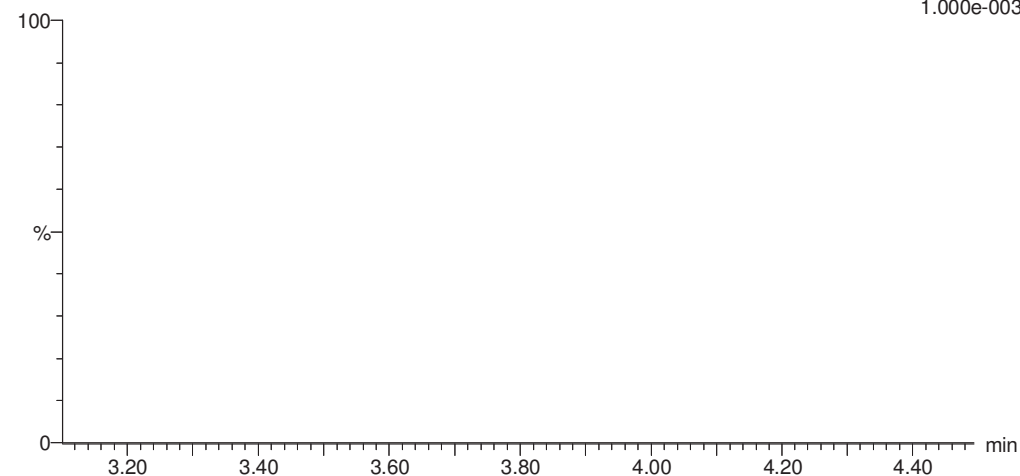


171011M1_122 Smooth(Mn,1x2)
IR09-GW11-17D 1701353-04@5X IR09-GW11-17D 0.11596
3.90
F30:MRM of 2 channels,ES-
499 > 99
3.317e+005



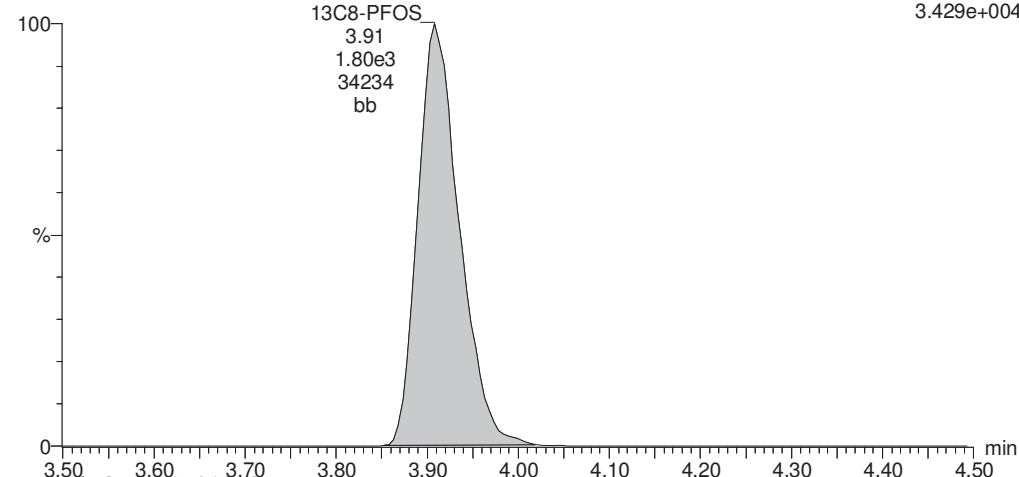
TCDA

171011M1_122 Smooth(Mn,1x2)
IR09-GW11-17D 1701353-04@5X IR09-GW11-17D 0.11596
F29:MRM of 3 channels,ES-
498.3 > 106.9
1.000e-003



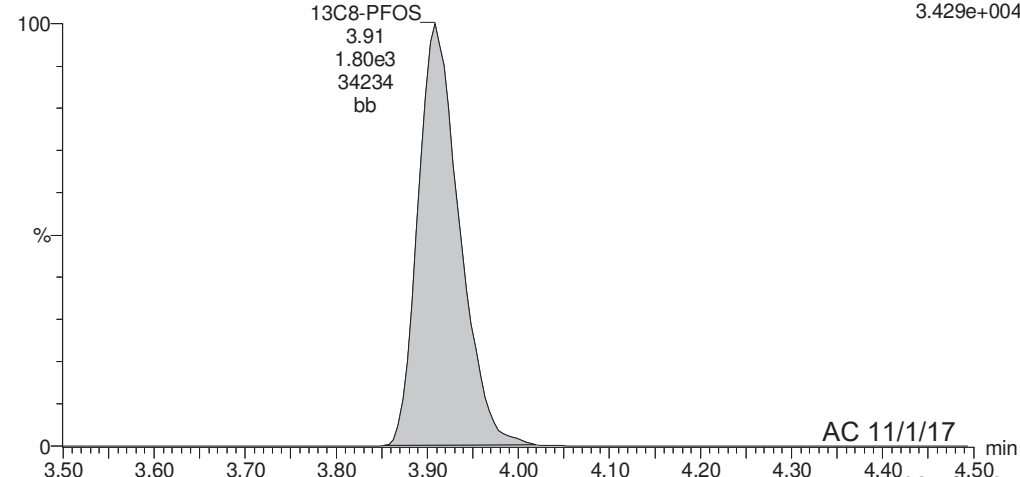
13C8-PFOS

171011M1_122 Smooth(Mn,1x2)
IR09-GW11-17D 1701353-04@5X IR09-GW11-17D 0.11596
13C8-PFOS
3.91
1.80e3
34234
bb
F33:MRM of 1 channel,ES-
507 > 79.9
3.429e+004



13C8-PFOS

171011M1_122 Smooth(Mn,1x2)
IR09-GW11-17D 1701353-04@5X IR09-GW11-17D 0.11596
13C8-PFOS
3.91
1.80e3
34234
bb
F33:MRM of 1 channel,ES-
507 > 79.9
3.429e+004



Dataset: U:\Q4.PRO\results\171011M1\171011M1-122.qld

Last Altered: Wednesday, November 01, 2017 10:46:17 Pacific Daylight Time

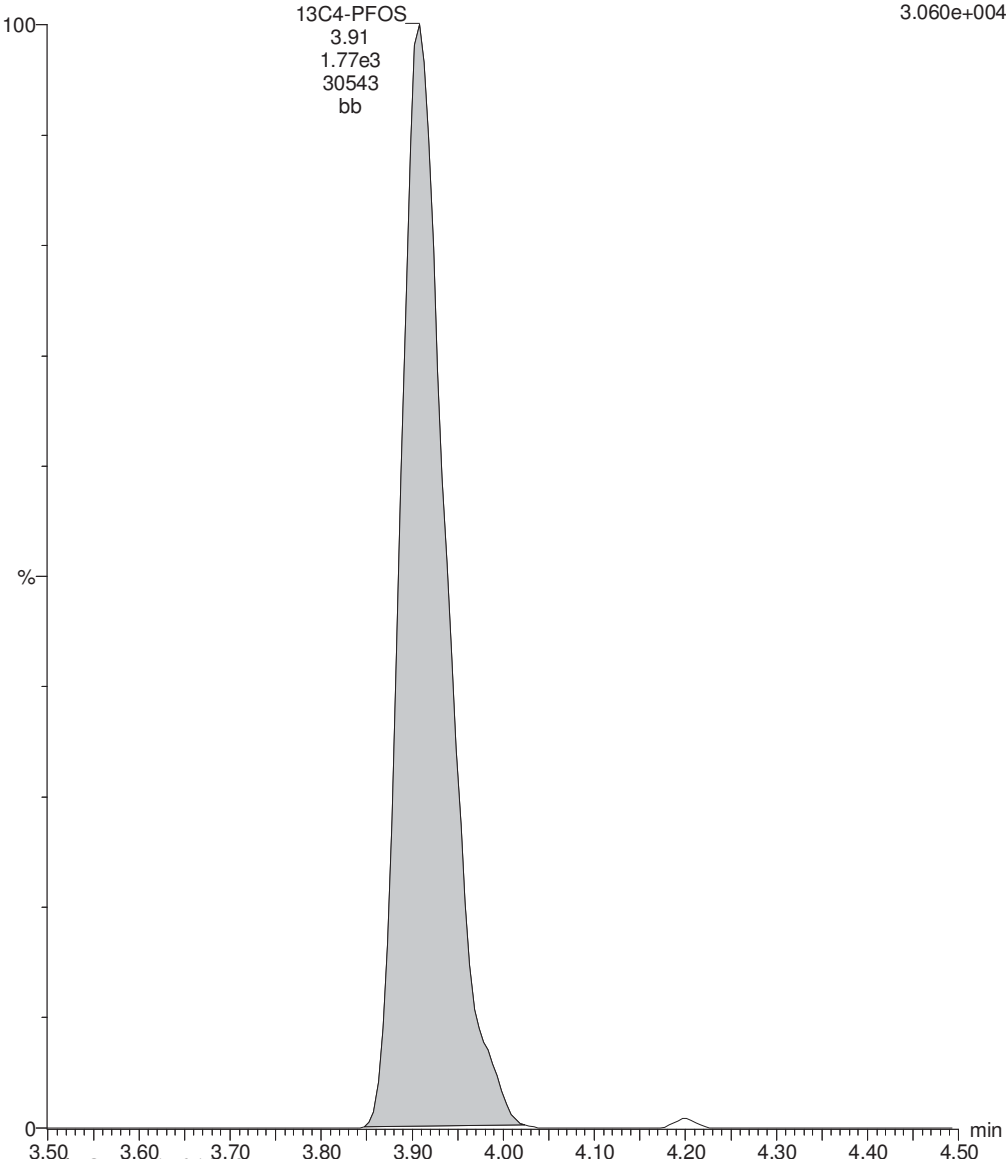
Printed: Wednesday, November 01, 2017 10:46:53 Pacific Daylight Time

Name: 171011M1_122, Date: 12-Oct-2017, Time: 07:37:44, ID: 1701353-04@5X IR09-GW11-17D 0.11596, Description: IR09-GW11-17D

13C4-PFOS

171011M1_122 Smooth(Mn,1x2)
IR09-GW11-17D 1701353-04@5X IR09-GW11-17D 0.11596

F31:MRM of 1 channel,ES-
503 > 79.9
3.060e+004



Dataset: U:\Q4.PRO\results\171009M1\171009M1-13.qld

Last Altered: Wednesday, November 01, 2017 10:19:43 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:20:55 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171009M1_13, Date: 09-Oct-2017, Time: 18:25:59, ID: B7J0024-MS1 Matrix Spike 0.11394, Description: Matrix Spike

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3 PFBS	299.1 > 79.9	6.69e3	6.86e3	0.1139		3.09	3.02	12.2	111.363	
2	4 PFHxA	313.2 > 268.9	7.48e4	9.83e3	0.1139		3.31	3.25	38.1	227.965	
3	5 PFHpA	363.1 > 319.1	6.07e4	4.25e4	0.1139		3.56	3.51	17.9	164.037	
4	6 L-PFHxS	399.0 > 80.0	5.56e4	2.77e3	0.1139		3.63	3.59	251	995.204	
5	9 L-PFOA	413 > 368.7	1.02e5	2.91e4	0.1139		3.68	3.71	43.9	413.214	
6	12 PFNA	463.1 > 419.1	2.36e4	2.08e4	0.1139		3.96	3.90	14.2	112.608	
7	14 L-PFOS	499 > 79.9	1.58e5	5.68e3	0.1139		4.01	3.95	348	2880.769	E
8	16 PFDA	513 > 468.8	2.46e4	2.11e4	0.1139		4.14	4.07	14.6	87.847	
9	18 N-MeFOSAA	570.1 > 419	6.98e3	5.66e3	0.1139		4.17	4.11	200	92.719	
10	19 N-EtFOSAA	584.2 > 419	5.75e3	5.55e3	0.1139		4.23	4.17	168	99.683	
11	20 PFUnA	562.9 > 518.9	2.12e4	2.59e4	0.1139		4.31	4.24	10.2	87.505	
12	22 PFDaA	613.0 > 569.1	1.96e4	2.61e4	0.1139		4.49	4.40	9.38	71.484	

Dataset: U:\Q4.PRO\results\171009M1\171009M1-13.qld

Last Altered: Wednesday, November 01, 2017 10:19:43 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:21:19 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171009M1_13, Date: 09-Oct-2017, Time: 18:25:59, ID: B7J0024-MS1 Matrix Spike 0.11394, Description: Matrix Spike

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	24	PFTrDA	662.9 > 618.9	3.30e4	2.61e4	0.1139		4.68	4.58	15.8	88.400	
2	25	PFTeDA	712.9 > 668.8	2.50e4	2.77e4	0.1139		4.88	4.76	11.3	86.955	
3	31	13C3-PFBA	216.1 > 172.1	2.16e4	2.41e4	0.1139	0.944	1.76	1.62	11.2	104.189	95.0
4	32	13C3-PFPeA	266.1 > 222.1	2.91e4	3.55e4	0.1139	0.299	2.91	2.82	4.10	120.492	109.8
5	33	13C3-PFBS	302.1 > 79.9	6.86e3	3.55e4	0.1139	0.070	3.09	3.02	0.966	121.804	111.0
6	34	13C2-PFHxA	315 > 269.8	9.83e3	3.55e4	0.1139	0.295	3.31	3.25	1.38	41.158	93.8
7	35	13C4-PFHpA	367 > 322.1	4.25e4	3.55e4	0.1139	0.592	3.56	3.52	5.98	88.664	80.8
8	36	18O2-PFHxS	403 > 103.0	2.77e3	5.33e3	0.1139	0.497	3.63	3.58	6.50	114.872	104.7
9	37	13C2-6:2 FTS	429.1 > 408.9	3.68e3	3.25e4	0.1139	0.156	3.76	3.71	1.42	79.631	72.6
10	38	13C2-PFOA	414.9 > 369.7	2.91e4	3.25e4	0.1139	1.111	3.77	3.72	11.2	88.469	80.6
11	39	13C5-PFNA	468.1 > 423.1	2.08e4	3.11e4	0.1139	0.934	3.96	3.90	8.36	78.518	71.6
12	40	13C8-PFOSA	506.1 > 78.0	2.12e3	2.95e4	0.1139	0.129	3.96	3.91	0.898	61.122	55.7
13	41	13C8-PFOS	507 > 79.9	5.68e3	5.30e3	0.1139	0.995	4.01	3.95	13.4	118.179	107.7
14	42	13C2-PFDA	515.1 > 469.9	2.11e4	3.07e4	0.1139	0.954	4.14	4.08	8.58	78.914	71.9
15	43	13C2-8:2 FTS	529.1 > 508.7	2.59e3	3.07e4	0.1139	0.116	4.14	4.07	1.06	79.949	72.9
16	44	d3-N-MeFOSAA	573.3 > 419	5.66e3	2.95e4	0.1139	0.020	4.17	4.10	2.40	1069.418	75.0
17	45	d5-N-EtFOSAA	589.3 > 419	5.55e3	2.95e4	0.1139	0.020	4.23	4.17	2.35	1022.969	71.7
18	46	13C2-PFUnA	565 > 519.8	2.59e4	2.95e4	0.1139	1.124	4.31	4.24	11.0	85.887	78.3
19	47	13C2-PFDoA	615.1 > 570.1	2.61e4	2.95e4	0.1139	1.087	4.49	4.40	11.1	89.350	81.4
20	49	13C2-PFTeDA	714.8 > 669.6	2.77e4	2.95e4	0.1139	1.014	4.88	4.76	11.8	101.746	92.7
21	54	13C4-PFBA	217.1 > 172.1	2.41e4	2.41e4	0.1139	1.000	1.76	1.62	12.5	109.707	100.0
22	55	13C5-PFHxA	318 > 272.9	3.55e4	3.55e4	0.1139	1.000	3.31	3.25	5.00	43.883	100.0
23	56	13C3-PFHxS	402.1 > 80.0	5.33e3	5.33e3	0.1139	1.000	3.63	3.58	12.5	109.707	100.0
24	57	13C8-PFOA	421.3 > 376	3.25e4	3.25e4	0.1139	1.000	3.77	3.72	12.5	109.707	100.0
25	58	13C9-PFNA	472.1 > 427.1	3.11e4	3.11e4	0.1139	1.000	3.96	3.90	12.5	109.707	100.0
26	59	13C4-PFOS	503 > 79.9	5.30e3	5.30e3	0.1139	1.000	4.01	3.96	12.5	109.707	100.0
27	60	13C6-PFDA	519.1 > 473.7	3.07e4	3.07e4	0.1139	1.000	4.14	4.07	12.5	109.707	100.0
28	61	13C7-PFUnA	570.1 > 524.8	2.95e4	2.95e4	0.1139	1.000	4.31	4.24	12.5	109.707	100.0
29	62	Total PFHxS	399.0 > 80.0	5.56e4	2.77e3	0.1139		3.63		251	995.204	
30	63	Total PFOA	413 > 368.7	1.12e5		0.1139		3.68		48.0	448.427	
31	64	Total PFOS	499 > 79.9	1.58e5		0.1139		4.01		348	2880.769	
32	65	Total N-MeFOSAA	570.1 > 419	6.98e3	5.66e3	0.1139		4.17		200	92.719	

Dataset: U:\Q4.PRO\results\171009M1\171009M1-13.qld

Last Altered: Wednesday, November 01, 2017 10:19:43 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:21:19 Pacific Daylight Time

Name: 171009M1_13, Date: 09-Oct-2017, Time: 18:25:59, ID: B7J0024-MS1 Matrix Spike 0.11394, Description: Matrix Spike

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	66 Total N-EtFOSAA	584.2 > 419	5.75e3	5.55e3	0.1139		4.23		168	99.683	
34	68 Total PFOA+PFOS	413 > 368.7;4...	2.70e5		0.1139		0.00		396	3329.196	3,440

Dataset: U:\Q4.PRO\results\171009M1\171009M1-13.qld

Last Altered: Wednesday, November 01, 2017 10:19:43 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:21:19 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171009M1_13, Date: 09-Oct-2017, Time: 18:25:59, ID: B7J0024-MS1 Matrix Spike 0.11394, Description: Matrix Spike

Total PFHxS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7 Br-PFHxS	399.0 > 80.0			2771.123		MM-	
2	6 L-PFHxS	399.0 > 80.0	3.59	55639.551	2771.123	250.979	MM	995.2

Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	10 Br-PFOA	413 > 368.7	3.66	9464.682	29075.645	4.069	MM	35.2
2	9 L-PFOA	413 > 368.7	3.71	102114.164	29075.645	43.900	MM	413.2

Total PFOS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14 L-PFOS	499 > 79.9	3.95	158162.625	5681.451	347.980	MM	2880.8

Total N-Me-FOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	18 N-MeFOSAA	570.1 > 419	4.11	6979.304	5659.172	200.407	bb	92.7

Total N-EtFOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	19 N-EtFOSAA	584.2 > 419	4.17	5745.083	5546.584	168.315	bb	99.7

Total PFOA+PFOS,Total PFOS,Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	10 Br-PFOA	413 > 368.7	3.66	9464.682	29075.645	4.069	MM	35.2
2	9 L-PFOA	413 > 368.7	3.71	102114.164	29075.645	43.900	MM	413.2
3	14 L-PFOS	499 > 79.9	3.95	158162.625	5681.451	347.980	MM	2880.8

Dataset: U:\Q4.PRO\results\171009M1\171009M1-13.qld

Last Altered: Wednesday, November 01, 2017 10:19:43 Pacific Daylight Time

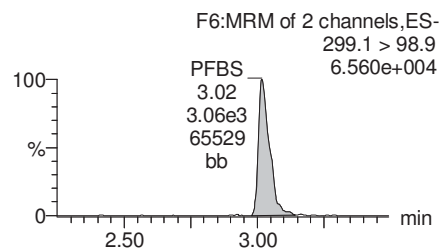
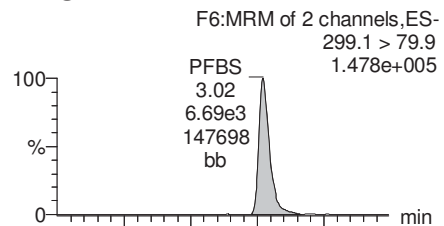
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Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

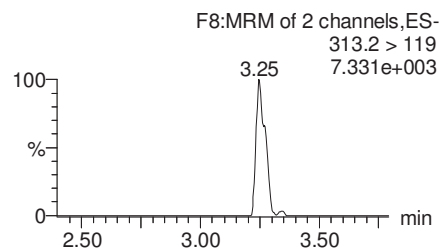
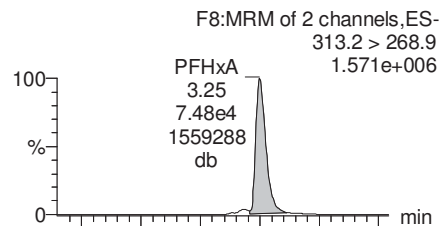
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Name: 171009M1_13, Date: 09-Oct-2017, Time: 18:25:59, ID: B7J0024-MS1 Matrix Spike 0.11394, Description: Matrix Spike

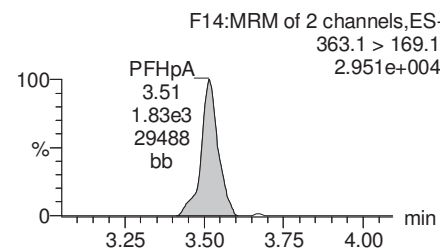
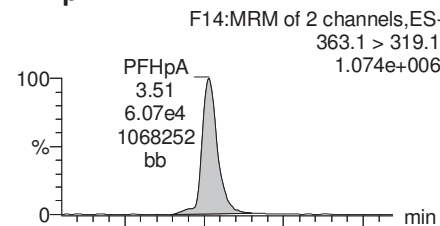
PFBS



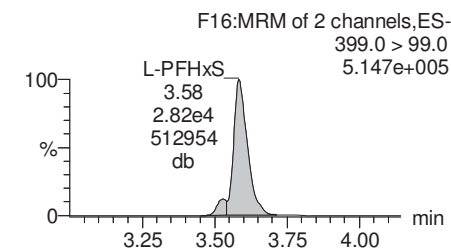
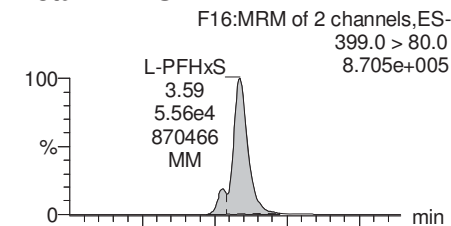
PFHxA



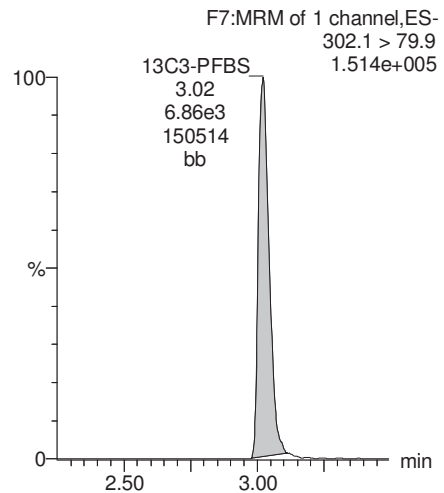
PFHpA



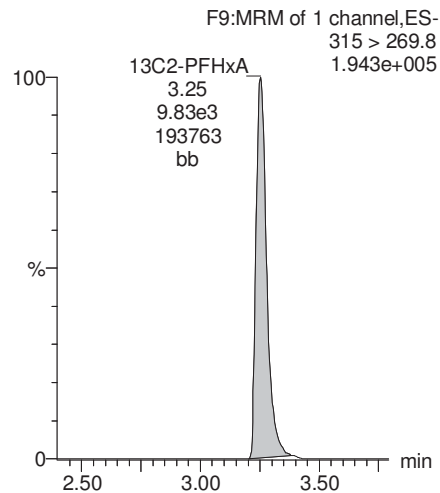
Total PFHxS



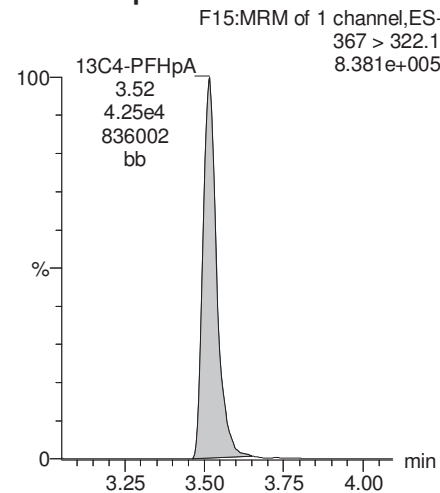
13C3-PFBS



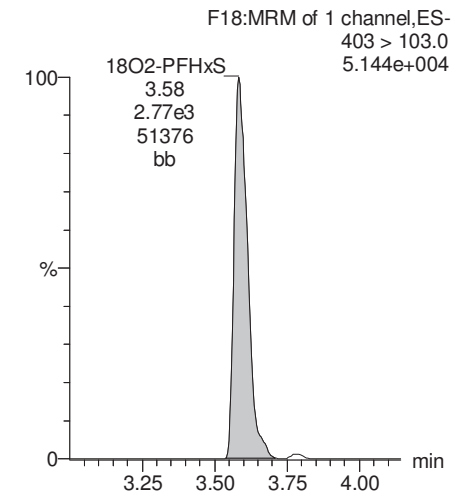
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



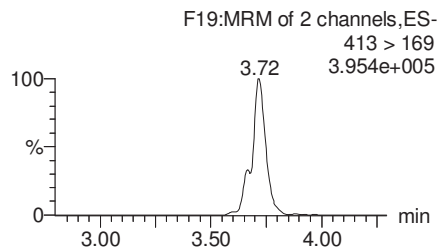
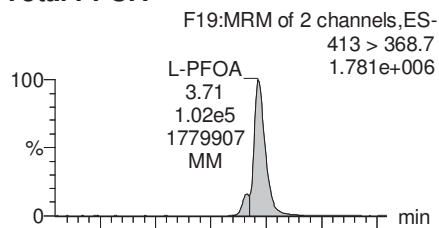
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Last Altered: Wednesday, November 01, 2017 10:19:43 Pacific Daylight Time

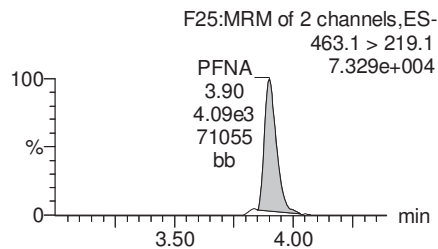
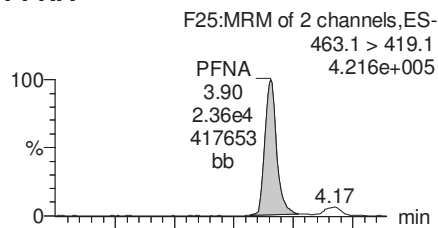
Printed: Wednesday, November 01, 2017 10:21:19 Pacific Daylight Time

Name: 171009M1_13, Date: 09-Oct-2017, Time: 18:25:59, ID: B7J0024-MS1 Matrix Spike 0.11394, Description: Matrix Spike

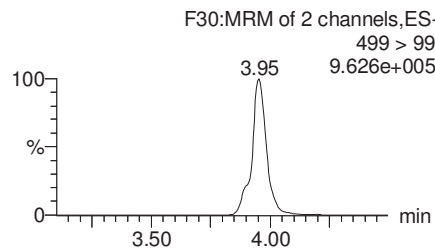
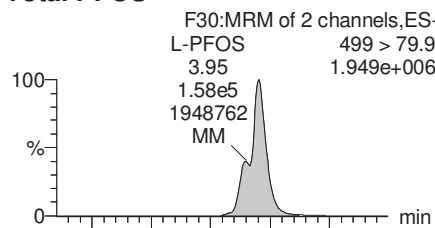
Total PFOA



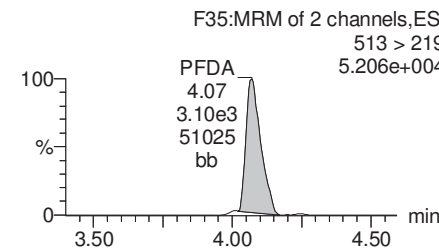
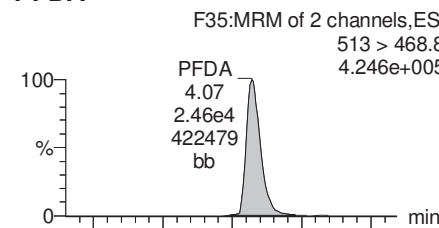
PFNA



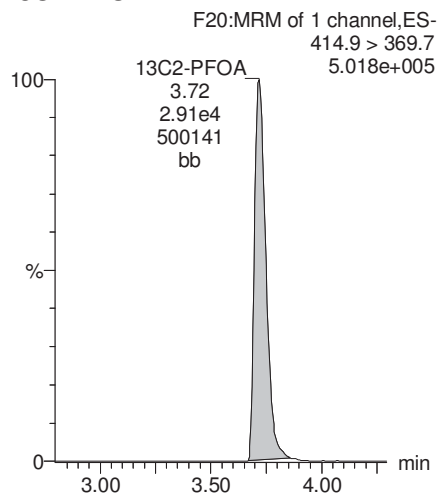
Total PFOS



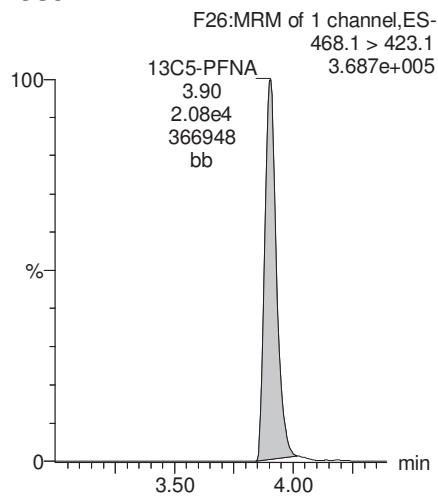
PFDA



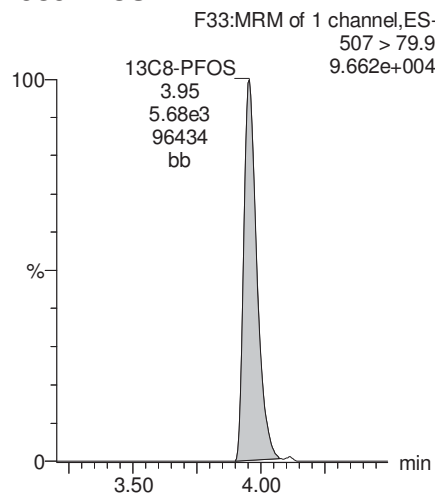
13C2-PFOA



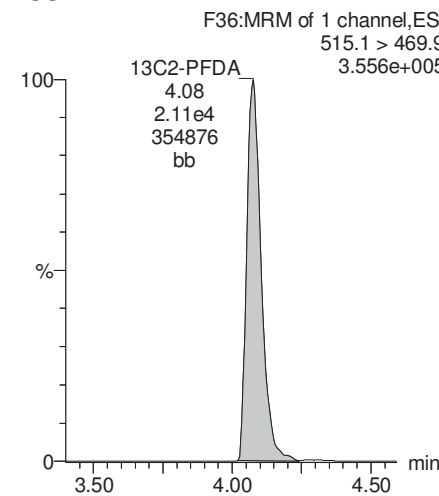
13C5-PFNA



13C8-PFOS



13C2-PFDA



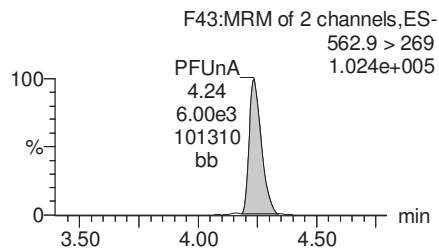
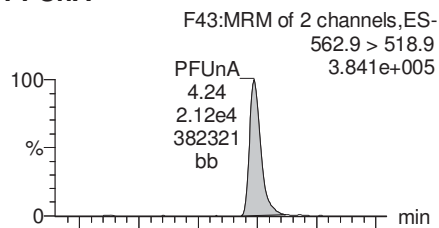
Dataset: U:\Q4.PRO\results\171009M1\171009M1-13.qld

Last Altered: Wednesday, November 01, 2017 10:19:43 Pacific Daylight Time

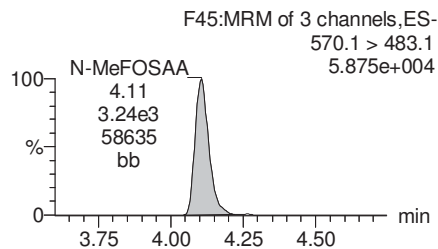
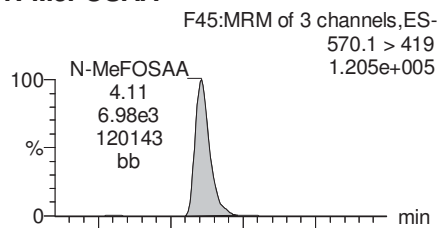
Printed: Wednesday, November 01, 2017 10:21:19 Pacific Daylight Time

Name: 171009M1_13, Date: 09-Oct-2017, Time: 18:25:59, ID: B7J0024-MS1 Matrix Spike 0.11394, Description: Matrix Spike

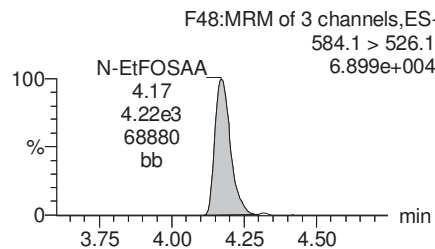
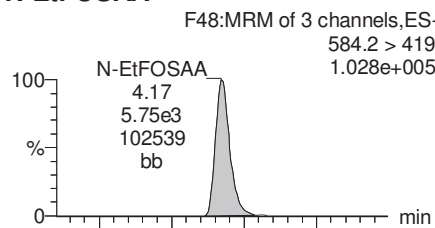
PFUnA



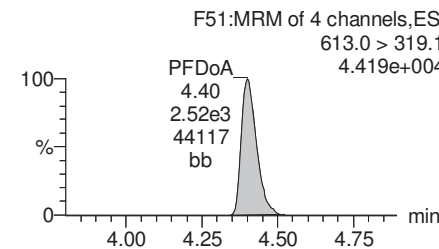
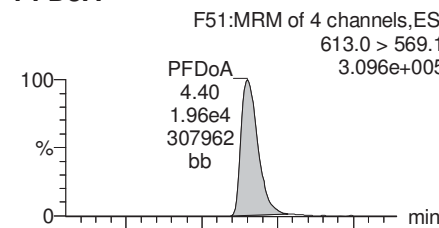
N-MeFOSAA



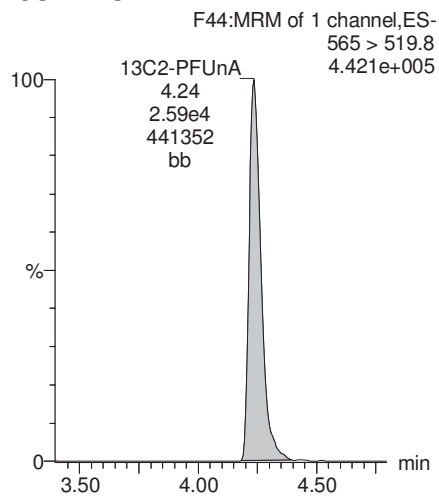
N-EtFOSAA



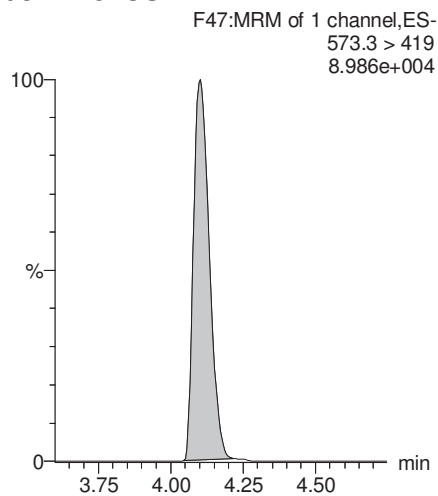
PFDoA



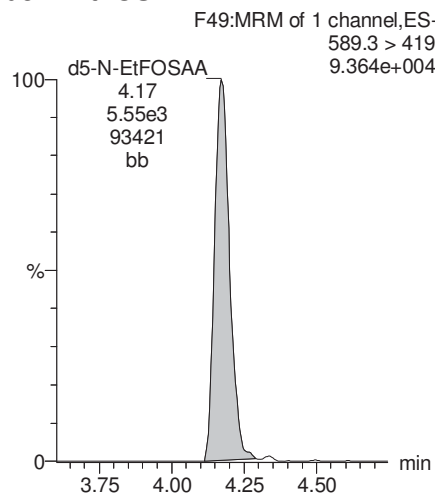
13C2-PFUnA



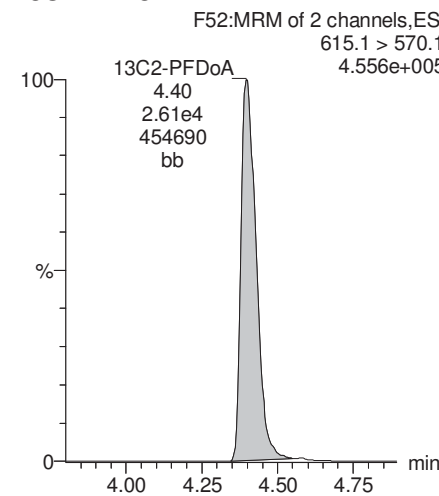
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



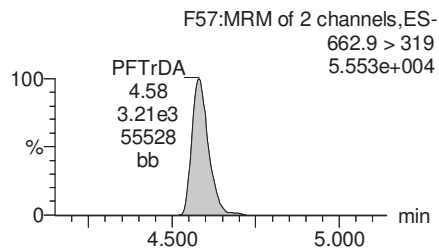
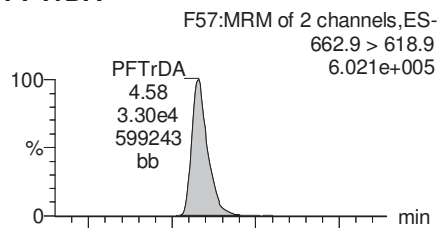
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Last Altered: Wednesday, November 01, 2017 10:19:43 Pacific Daylight Time

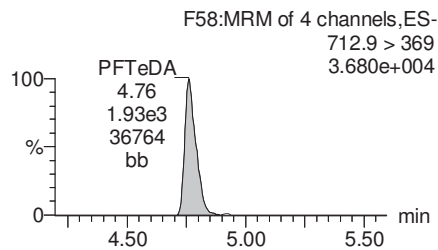
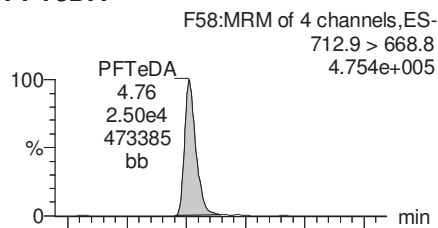
Printed: Wednesday, November 01, 2017 10:21:19 Pacific Daylight Time

Name: 171009M1_13, Date: 09-Oct-2017, Time: 18:25:59, ID: B7J0024-MS1 Matrix Spike 0.11394, Description: Matrix Spike

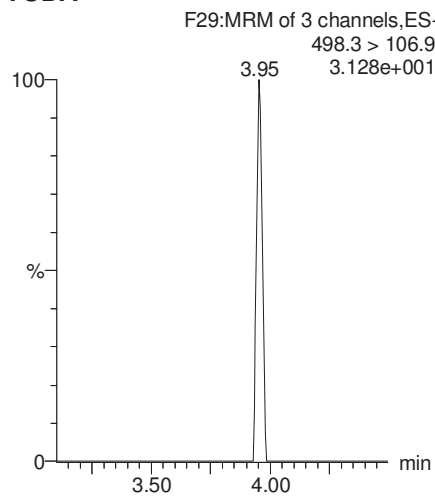
PFTrDA



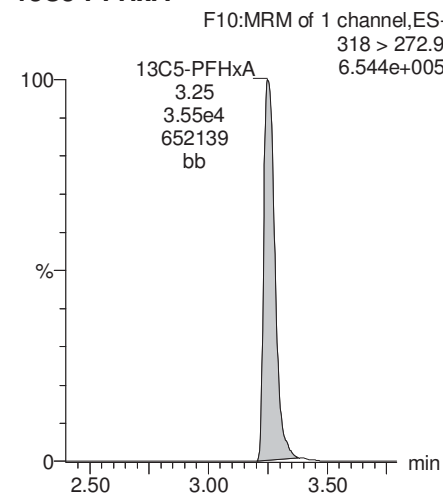
PFTeDA



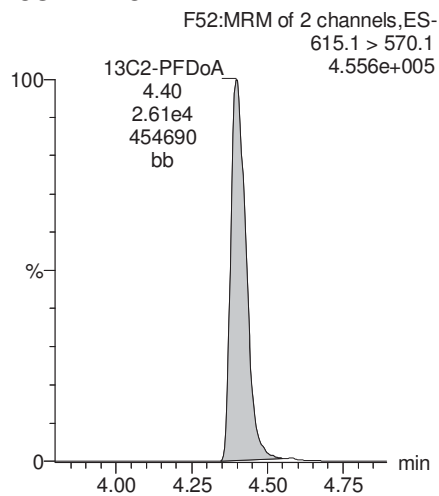
TCDA



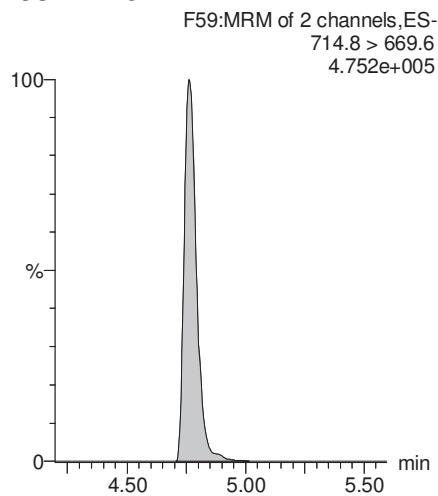
13C5-PFHxA



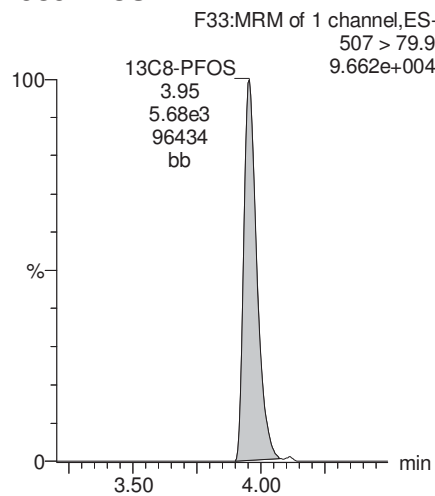
13C2-PFDoA



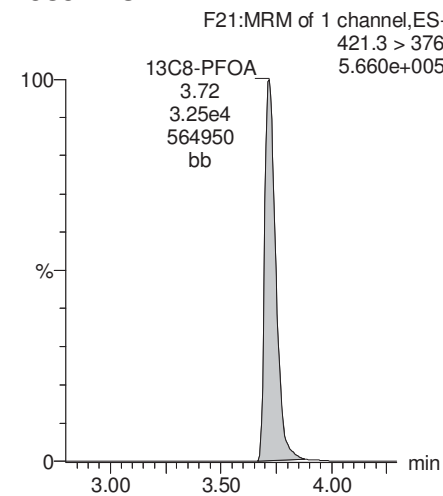
13C2-PFTeDA



13C8-PFOS



13C8-PFOA



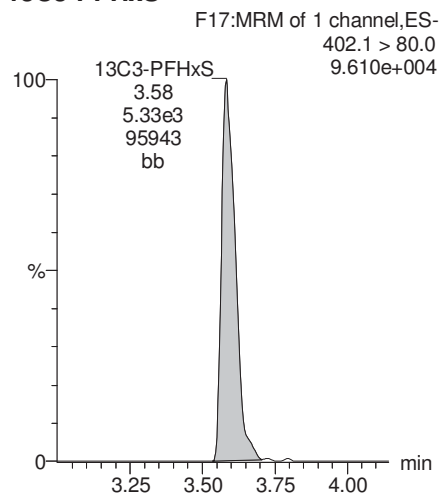
Dataset: U:\Q4.PRO\results\171009M1\171009M1-13.qld

Last Altered: Wednesday, November 01, 2017 10:19:43 Pacific Daylight Time

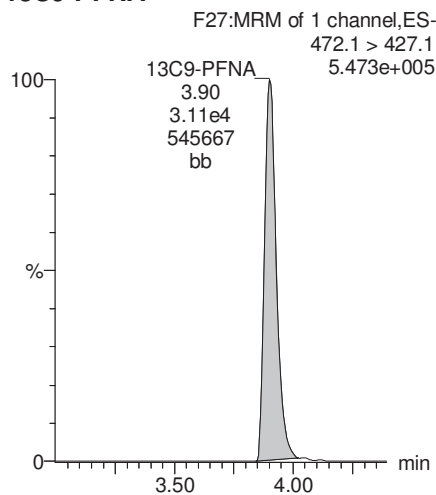
Printed: Wednesday, November 01, 2017 10:21:19 Pacific Daylight Time

Name: 171009M1_13, Date: 09-Oct-2017, Time: 18:25:59, ID: B7J0024-MS1 Matrix Spike 0.11394, Description: Matrix Spike

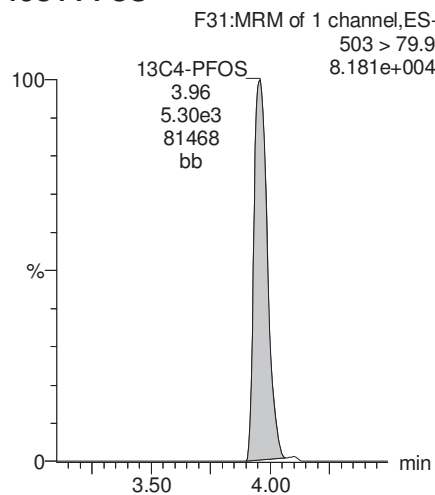
13C3-PFHxS



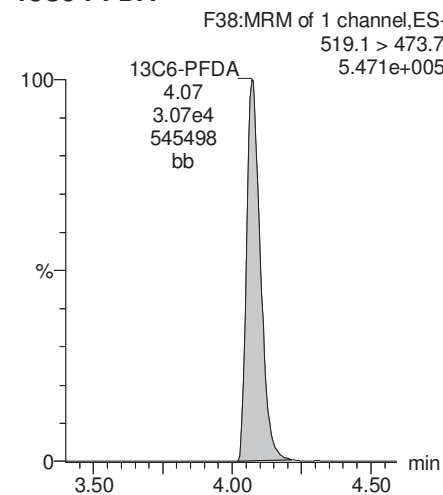
13C9-PFNA



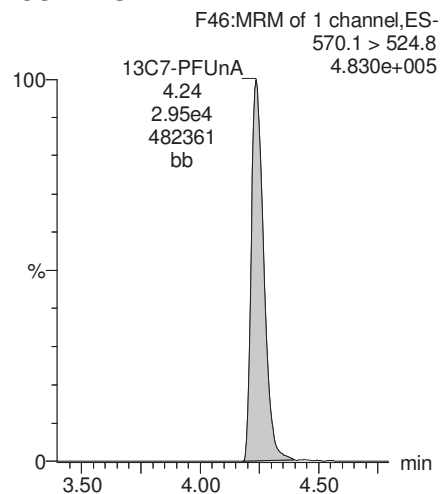
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Dataset: U:\Q4.PRO\results\171011M1\171011M1-116.qld

Last Altered: Wednesday, November 01, 2017 10:32:41 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:32:53 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-11-17-FULL.cdb 12 Oct 2017 09:33:10

Name: 171011M1_116, Date: 12-Oct-2017, Time: 06:33:03, ID: B7J0024-MS1@5X Matrix Spike 0.11394, Description: Matrix Spike

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	14 L-PFOS	499 > 79.9	4.68e4	1.46e3	0.1139		4.01	3.91	400	2990	
2	41 13C8-PFOS	507 > 79.9	1.46e3	1.49e3	0.1139	1.053	4.01	3.91	12.3	103	93.6
3	59 13C4-PFOS	503 > 79.9	1.49e3	1.49e3	0.1139	1.000	4.01	3.91	12.5	110	100.0
4	64 Total PFOS	499 > 79.9	4.68e4		0.1139		4.01		400	2990	

Dataset: U:\Q4.PRO\results\171011M1\171011M1-116.qld

Last Altered: Wednesday, November 01, 2017 10:32:41 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:32:53 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-11-17-FULL.cdb 12 Oct 2017 09:33:10

Name: 171011M1_116, Date: 12-Oct-2017, Time: 06:33:03, ID: B7J0024-MS1@5X Matrix Spike 0.11394, Description: Matrix Spike

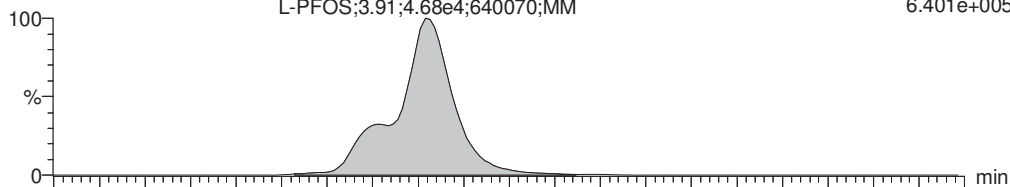
Total PFOS

171011M1_116 Smooth(Mn,1x2)

Matrix Spike B7J0024-MS1@5X Matrix Spike 0.11394

L-PFOS;3.91;4.68e4;640070;MM

F30:MRM of 2 channels,ES-
499 > 79.9
6.401e+005

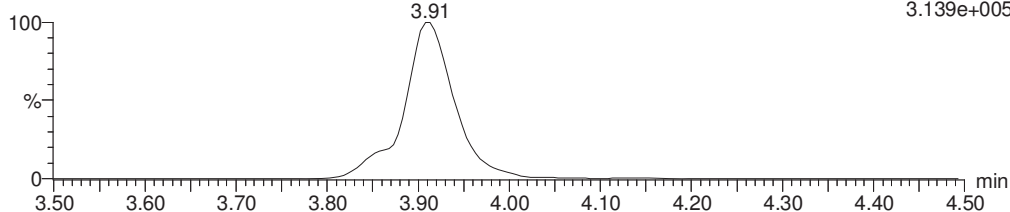


171011M1_116 Smooth(Mn,1x2)

Matrix Spike B7J0024-MS1@5X Matrix Spike 0.11394

3.91

F30:MRM of 2 channels,ES-
499 > 99
3.139e+005

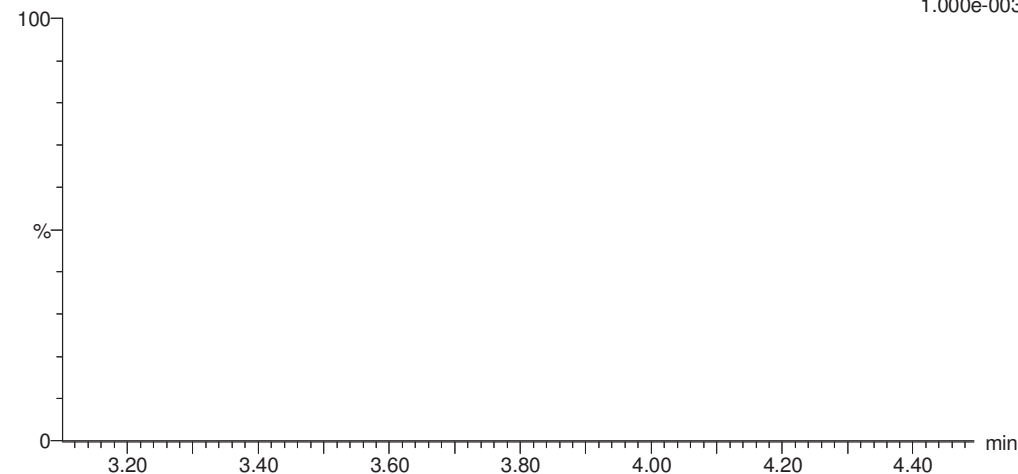


TCDA

171011M1_116 Smooth(Mn,1x2)

Matrix Spike B7J0024-MS1@5X Matrix Spike 0.11394

F29:MRM of 3 channels,ES-
498.3 > 106.9
1.000e-003



13C8-PFOS

171011M1_116 Smooth(Mn,1x2)

Matrix Spike B7J0024-MS1@5X Matrix Spike 0.11394

13C8-PFOS

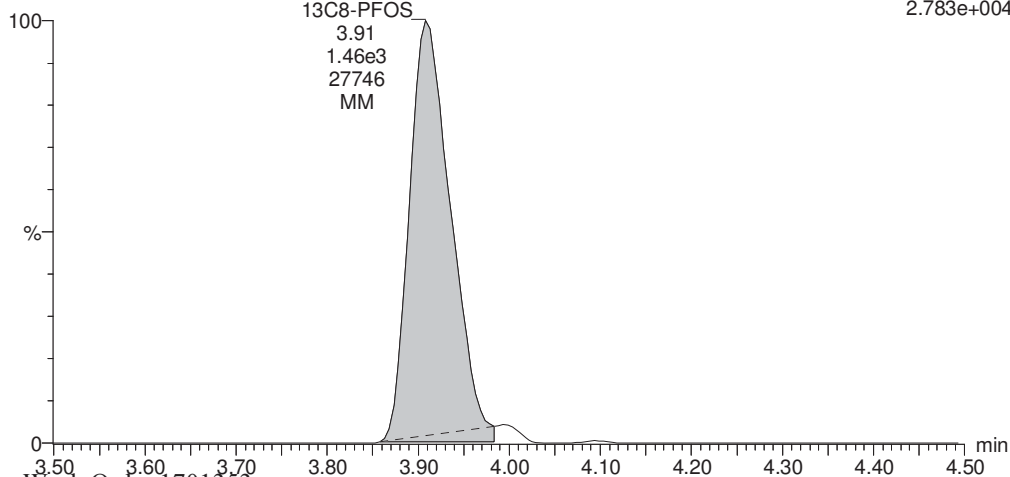
3.91

1.46e3

27746

MM

F33:MRM of 1 channel,ES-
507 > 79.9
2.783e+004



13C8-PFOS

171011M1_116 Smooth(Mn,1x2)

Matrix Spike B7J0024-MS1@5X Matrix Spike 0.11394

F33:MRM of 1 channel,ES-
507 > 79.9
2.783e+004

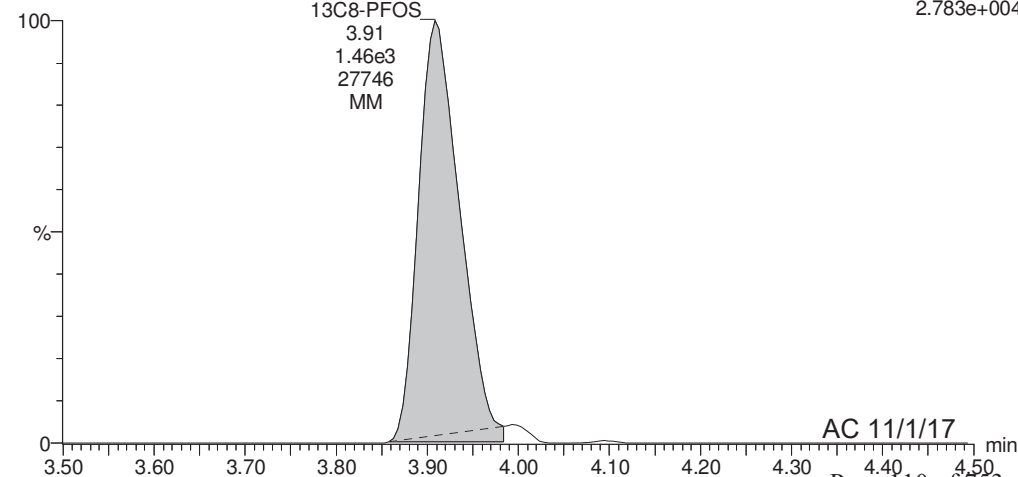
13C8-PFOS

3.91

1.46e3

27746

MM



Dataset: U:\Q4.PRO\results\171011M1\171011M1-116.qld

Last Altered: Wednesday, November 01, 2017 10:32:41 Pacific Daylight Time

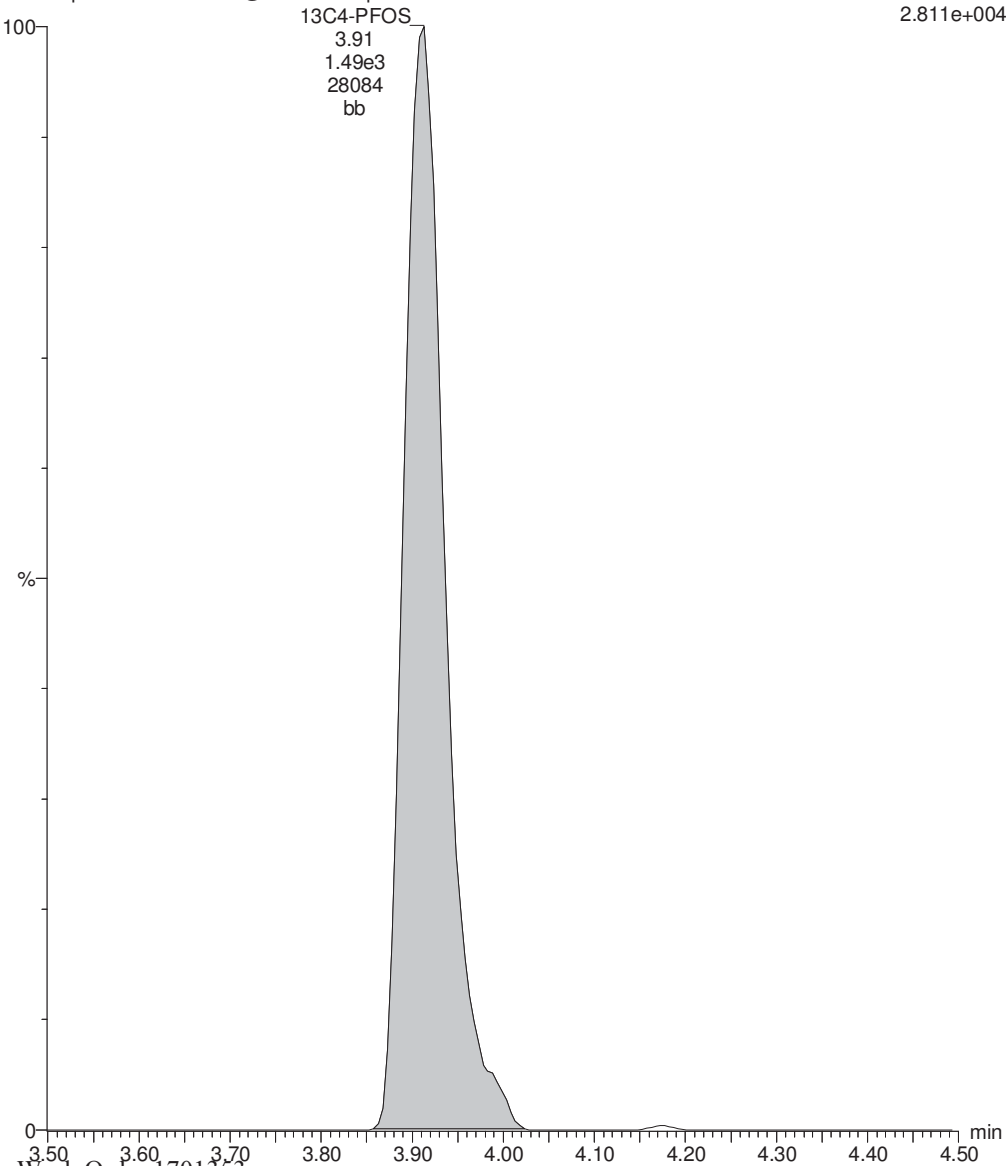
Printed: Wednesday, November 01, 2017 10:32:53 Pacific Daylight Time

Name: 171011M1_116, Date: 12-Oct-2017, Time: 06:33:03, ID: B7J0024-MS1@5X Matrix Spike 0.11394, Description: Matrix Spike

13C4-PFOS

171011M1_116 Smooth(Mn,1x2)
Matrix Spike B7J0024-MS1@5X Matrix Spike 0.11394

F31:MRM of 1 channel,ES-
503 > 79.9
2.811e+004



Dataset: U:\Q4.PRO\results\171010M1\171010M1-7.qld

Last Altered: Tuesday, October 31, 2017 13:53:13 Pacific Daylight Time

Printed: Tuesday, October 31, 2017 13:54:11 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_7, Date: 10-Oct-2017, Time: 17:32:47, ID: B7J0024-MSD1 Matrix Spike Dup 0.11643, Description: Matrix Spike Dup

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3 PFBS	299.1 > 79.9	7.33e3	8.31e3	0.1164		3.09	3.02	11.0	98.679	
2	4 PFHxA	313.2 > 268.9	8.73e4	1.12e4	0.1164		3.31	3.24	38.8	227.518	
3	5 PFHpA	363.1 > 319.1	6.82e4	4.93e4	0.1164		3.56	3.51	17.3	155.469	
4	6 L-PFHxS	399.0 > 80.0	6.37e4	2.72e3	0.1164		3.63	3.58	293	1138.528	
5	9 L-PFOA	413 > 368.7	1.15e5	3.39e4	0.1164		3.68	3.71	42.5	391.246	
6	12 PFNA	463.1 > 419.1	2.64e4	2.84e4	0.1164		3.96	3.89	11.6	90.452	
7	14 L-PFOS	499 > 79.9	1.97e5	6.88e3	0.1164		4.01	3.95	358	2903.541 ^E	
8	16 PFDA	513 > 468.8	2.50e4	2.33e4	0.1164		4.14	4.06	13.4	79.068	
9	18 N-MeFOSAA	570.1 > 419	8.10e3	6.72e3	0.1164		4.17	4.09	196	88.763	
10	19 N-EtFOSAA	584.2 > 419	6.13e3	6.61e3	0.1164		4.23	4.16	151	87.468	
11	20 PFUnA	562.9 > 518.9	2.33e4	2.52e4	0.1164		4.31	4.23	11.6	97.066	
12	22 PFDoA	613.0 > 569.1	2.21e4	2.75e4	0.1164		4.49	4.39	10.0	74.966	

Dataset: U:\Q4.PRO\results\171010M1\171010M1-7.qld

Last Altered: Tuesday, October 31, 2017 13:53:13 Pacific Daylight Time

Printed: Tuesday, October 31, 2017 13:54:27 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_7, Date: 10-Oct-2017, Time: 17:32:47, ID: B7J0024-MSD1 Matrix Spike Dup 0.11643, Description: Matrix Spike Dup

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	24	PFTrDA	662.9 > 618.9	3.88e4	2.75e4	0.1164		4.68	4.57	17.7	96.713	
2	25	PFTeDA	712.9 > 668.8	2.78e4	3.29e4	0.1164		4.88	4.75	10.6	79.667	
3	31	13C3-PFBA	216.1 > 172.1	2.48e4	2.71e4	0.1164	0.944	1.76	1.64	11.5	104.300	97.1
4	32	13C3-PFPeA	266.1 > 222.1	3.30e4	4.04e4	0.1164	0.299	2.91	2.82	4.08	117.480	109.4
5	33	13C3-PFBS	302.1 > 79.9	8.31e3	4.04e4	0.1164	0.070	3.09	3.02	1.03	126.831	118.1
6	34	13C2-PFHxA	315 > 269.8	1.12e4	4.04e4	0.1164	0.295	3.31	3.25	1.39	40.484	94.3
7	35	13C4-PFHpA	367 > 322.1	4.93e4	4.04e4	0.1164	0.592	3.56	3.51	6.10	88.456	82.4
8	36	18O2-PFHxS	403 > 103.0	2.72e3	5.89e3	0.1164	0.497	3.63	3.57	5.77	99.696	92.9
9	37	13C2-6:2 FTS	429.1 > 408.9	4.70e3	3.46e4	0.1164	0.156	3.76	3.70	1.70	93.262	86.9
10	38	13C2-PFOA	414.9 > 369.7	3.39e4	3.46e4	0.1164	1.111	3.77	3.71	12.2	94.713	88.2
11	39	13C5-PFNA	468.1 > 423.1	2.84e4	3.57e4	0.1164	0.934	3.96	3.89	9.94	91.415	85.1
12	40	13C8-PFOSA	506.1 > 78.0	2.37e3	2.92e4	0.1164	0.129	3.96	3.91	1.02	67.597	63.0
13	41	13C8-PFOS	507 > 79.9	6.88e3	5.96e3	0.1164	0.995	4.01	3.95	14.4	124.497	116.0
14	42	13C2-PFDA	515.1 > 469.9	2.33e4	3.08e4	0.1164	0.954	4.14	4.06	9.46	85.189	79.3
15	43	13C2-8:2 FTS	529.1 > 508.7	3.59e3	3.08e4	0.1164	0.116	4.14	4.05	1.45	107.843	100.4
16	44	d3-N-MeFOSAA	573.3 > 419	6.72e3	2.92e4	0.1164	0.020	4.17	4.10	2.87	1252.928	89.8
17	45	d5-N-EtFOSAA	589.3 > 419	6.61e3	2.92e4	0.1164	0.020	4.23	4.16	2.83	1202.887	86.2
18	46	13C2-PFUnA	565 > 519.8	2.52e4	2.92e4	0.1164	1.124	4.31	4.23	10.8	82.304	76.7
19	47	13C2-PFDoA	615.1 > 570.1	2.75e4	2.92e4	0.1164	1.087	4.49	4.39	11.8	92.892	86.5
20	49	13C2-PFTeDA	714.8 > 669.6	3.29e4	2.92e4	0.1164	1.014	4.88	4.76	14.1	119.131	111.0
21	54	13C4-PFBA	217.1 > 172.1	2.71e4	2.71e4	0.1164	1.000	1.76	1.64	12.5	107.361	100.0
22	55	13C5-PFHxA	318 > 272.9	4.04e4	4.04e4	0.1164	1.000	3.31	3.25	5.00	42.944	100.0
23	56	13C3-PFHxS	402.1 > 80.0	5.89e3	5.89e3	0.1164	1.000	3.63	3.58	12.5	107.361	100.0
24	57	13C8-PFOA	421.3 > 376	3.46e4	3.46e4	0.1164	1.000	3.77	3.71	12.5	107.361	100.0
25	58	13C9-PFNA	472.1 > 427.1	3.57e4	3.57e4	0.1164	1.000	3.96	3.89	12.5	107.361	100.0
26	59	13C4-PFOS	503 > 79.9	5.96e3	5.96e3	0.1164	1.000	4.01	3.95	12.5	107.361	100.0
27	60	13C6-PFDA	519.1 > 473.7	3.08e4	3.08e4	0.1164	1.000	4.14	4.06	12.5	107.361	100.0
28	61	13C7-PFUnA	570.1 > 524.8	2.92e4	2.92e4	0.1164	1.000	4.31	4.23	12.5	107.361	100.0
29	62	Total PFHxS	399.0 > 80.0	6.37e4	2.72e3	0.1164		3.63		293	1138.528	
30	63	Total PFOA	413 > 368.7	1.24e5		0.1164		3.68		45.7	417.316	
31	64	Total PFOS	499 > 79.9	1.97e5		0.1164		4.01		358	2903.541	
32	65	Total N-MeFOSAA	570.1 > 419	8.10e3	6.72e3	0.1164		4.17		196	88.763	

Dataset: U:\Q4.PRO\results\171010M1\171010M1-7.qld

Last Altered: Tuesday, October 31, 2017 13:53:13 Pacific Daylight Time

Printed: Tuesday, October 31, 2017 13:54:27 Pacific Daylight Time

Name: 171010M1_7, Date: 10-Oct-2017, Time: 17:32:47, ID: B7J0024-MSD1 Matrix Spike Dup 0.11643, Description: Matrix Spike Dup

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	66 Total N-EtFOSAA	584.2 > 419	6.13e3	6.61e3	0.1164		4.23		151	87.468	
34	68 Total PFOA+PFOS	413 > 368.7;4...	3.21e5		0.1164		0.00		404	3320.857	

3,000

Dataset: U:\Q4.PRO\results\171010M1\171010M1-7.qld

Last Altered: Tuesday, October 31, 2017 13:53:13 Pacific Daylight Time

Printed: Tuesday, October 31, 2017 13:54:27 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_7, Date: 10-Oct-2017, Time: 17:32:47, ID: B7J0024-MSD1 Matrix Spike Dup 0.11643, Description: Matrix Spike Dup

Total PFHxS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7 Br-PFHxS	399.0 > 80.0			2718.198		MM-	
2	6 L-PFHxS	399.0 > 80.0	3.58	63702.234	2718.198	292.943	MM	1138.5

Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	9 L-PFOA	413 > 368.7	3.71	115375.930	33945.055	42.486	MM	391.2
2	10 Br-PFOA	413 > 368.7	3.66	8596.713	33945.055	3.166	MM	26.1

Total PFOS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14 L-PFOS	499 > 79.9	3.95	197336.828	6882.631	358.396	MM	2903.5

Total N-Me-FOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	18 N-MeFOSAA	570.1 > 419	4.09	8103.138	6716.343	196.053	bb	88.8

Total N-EtFOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	19 N-EtFOSAA	584.2 > 419	4.16	6134.596	6606.771	150.886	bb	87.5

Total PFOA+PFOS,Total PFOS,Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	9 L-PFOA	413 > 368.7	3.71	115375.930	33945.055	42.486	MM	391.2
2	10 Br-PFOA	413 > 368.7	3.66	8596.713	33945.055	3.166	MM	26.1
3	14 L-PFOS	499 > 79.9	3.95	197336.828	6882.631	358.396	MM	2903.5

Dataset: U:\Q4.PRO\results\171010M1\171010M1-7.qld

Last Altered: Tuesday, October 31, 2017 13:53:13 Pacific Daylight Time

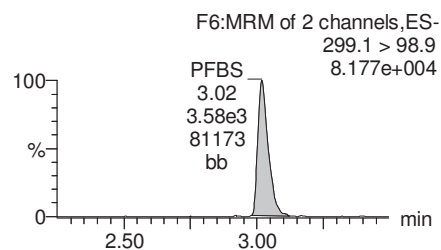
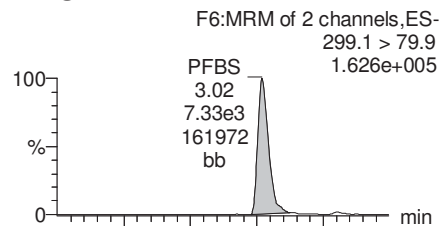
Printed: Tuesday, October 31, 2017 13:54:27 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

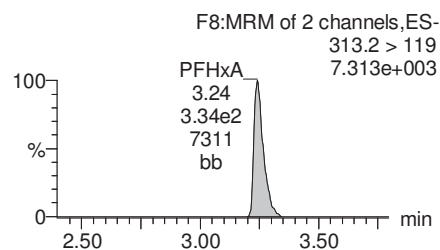
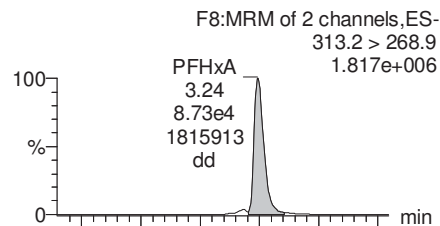
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_7, Date: 10-Oct-2017, Time: 17:32:47, ID: B7J0024-MSD1 Matrix Spike Dup 0.11643, Description: Matrix Spike Dup

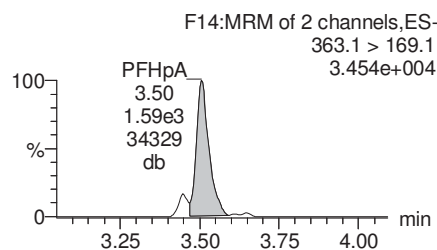
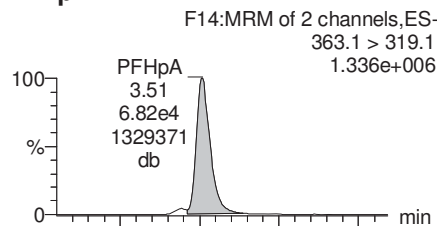
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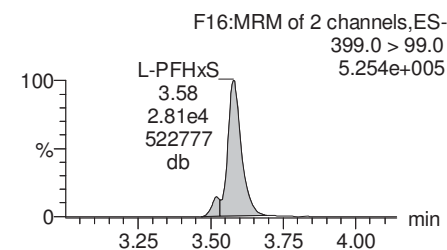
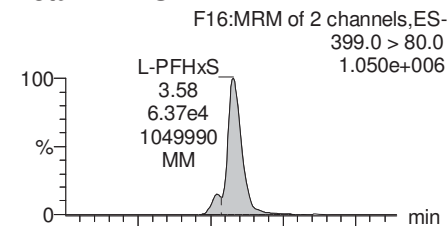
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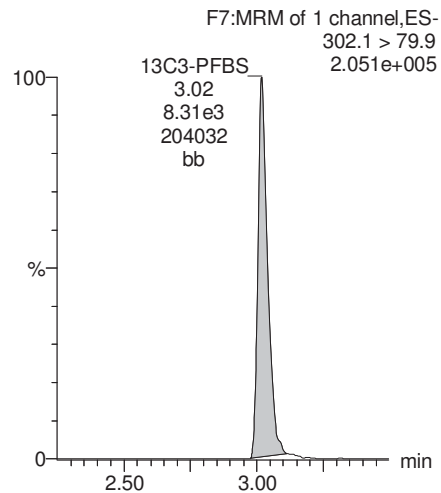
PFHpA



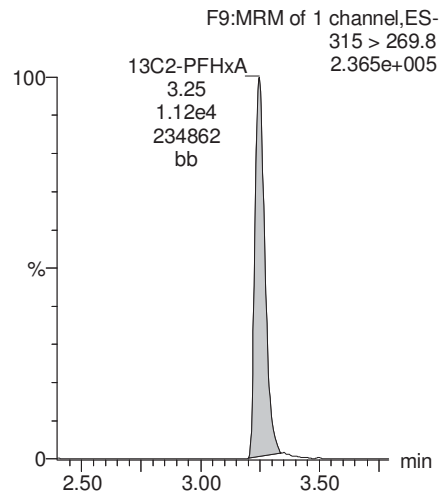
Total PFHxS



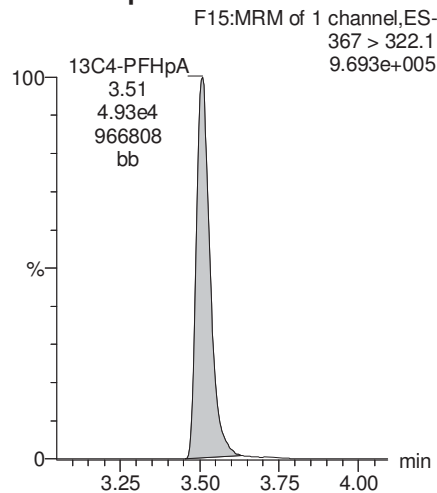
13C3-PFBS



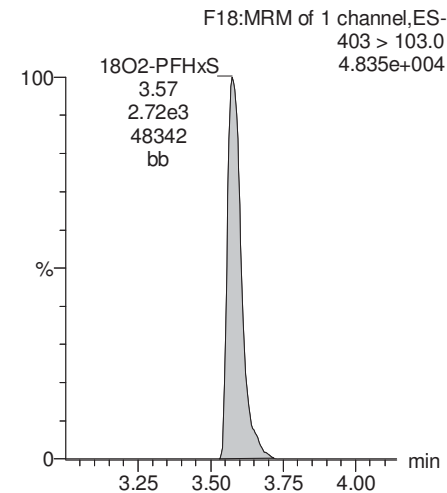
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



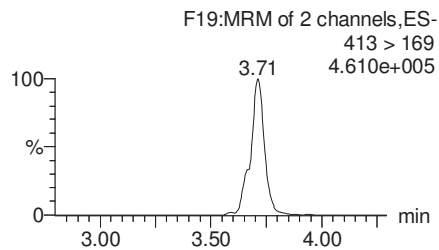
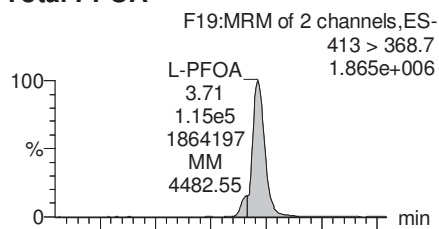
Dataset: U:\Q4.PRO\results\171010M1\171010M1-7.qld

Last Altered: Tuesday, October 31, 2017 13:53:13 Pacific Daylight Time

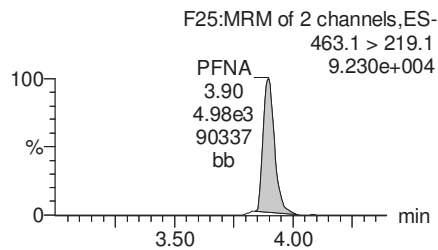
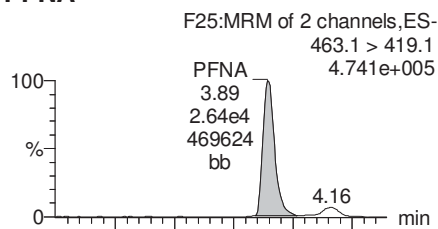
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Name: 171010M1_7, Date: 10-Oct-2017, Time: 17:32:47, ID: B7J0024-MSD1 Matrix Spike Dup 0.11643, Description: Matrix Spike Dup

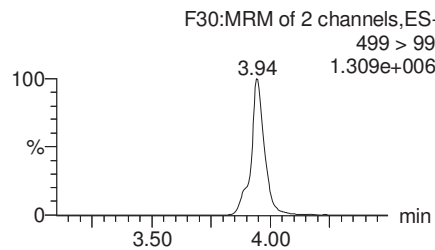
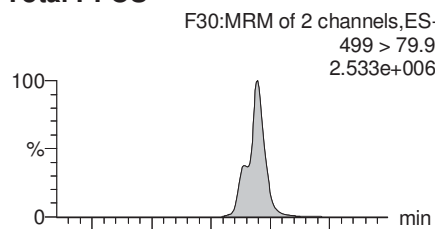
Total PFOA



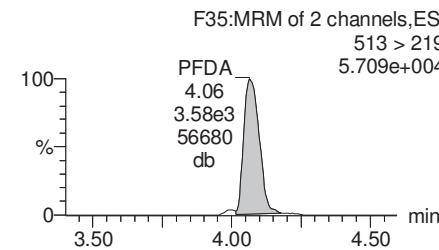
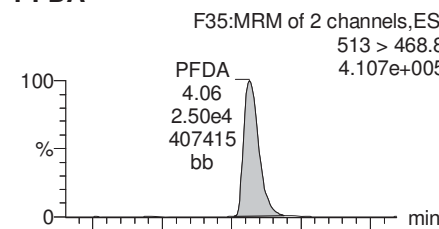
PFNA



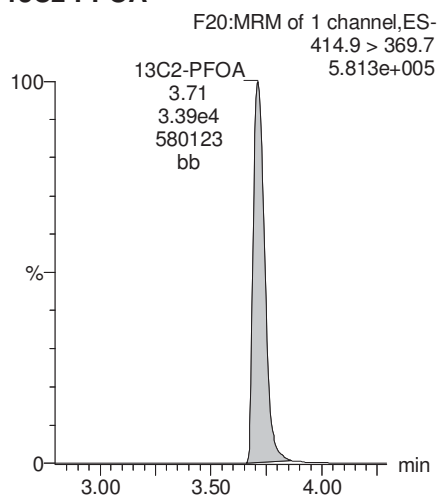
Total PFOS



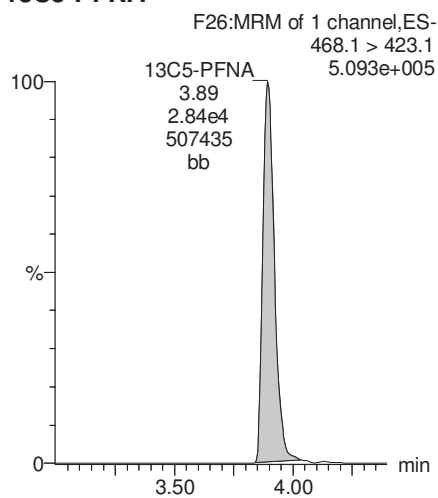
PFDA



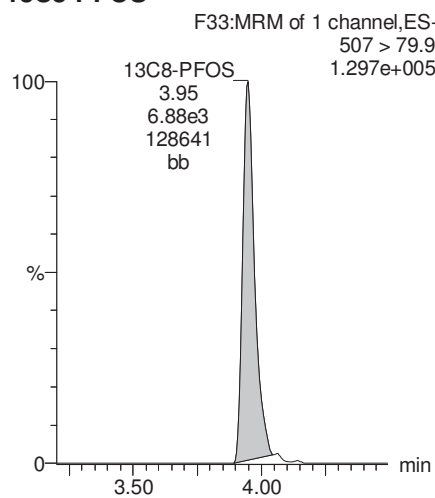
13C2-PFOA



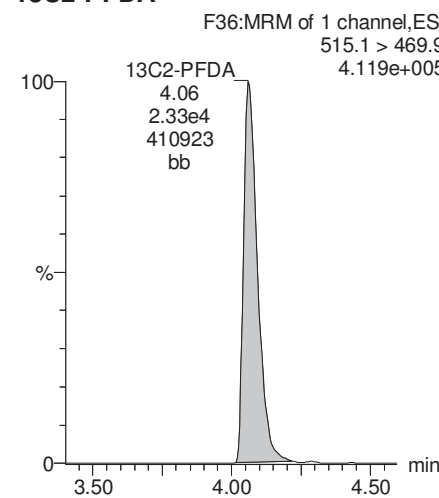
13C5-PFNA



13C8-PFOS



13C2-PFDA



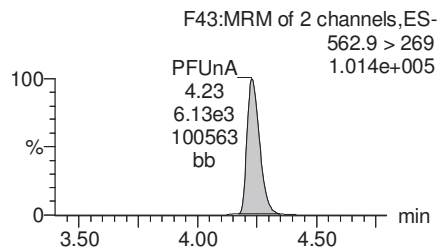
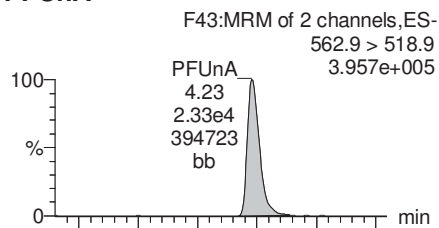
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Last Altered: Tuesday, October 31, 2017 13:53:13 Pacific Daylight Time

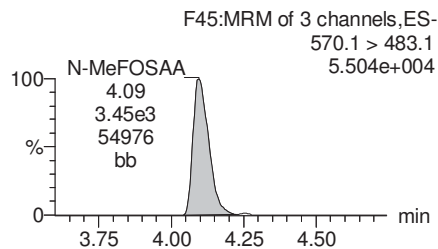
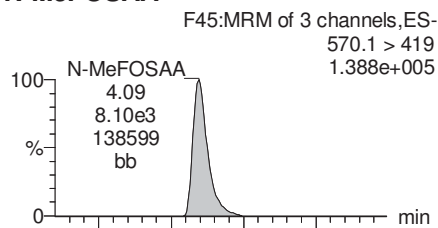
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Name: 171010M1_7, Date: 10-Oct-2017, Time: 17:32:47, ID: B7J0024-MSD1 Matrix Spike Dup 0.11643, Description: Matrix Spike Dup

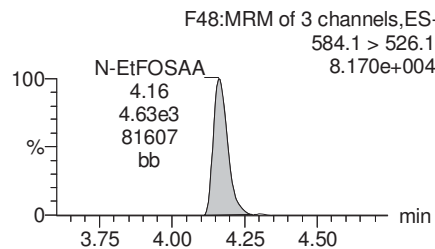
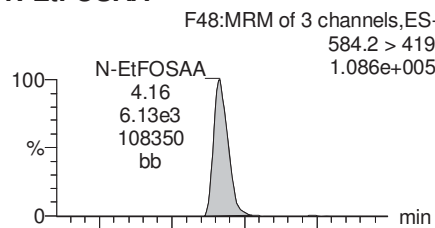
PFUnA



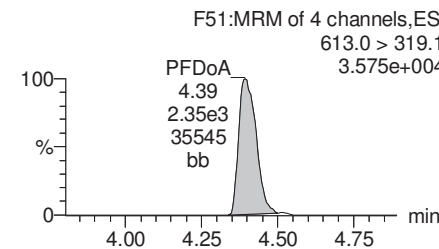
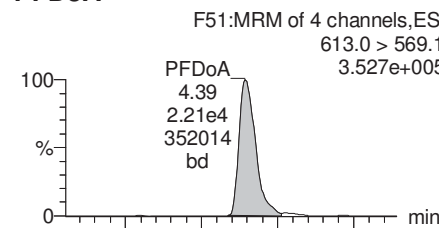
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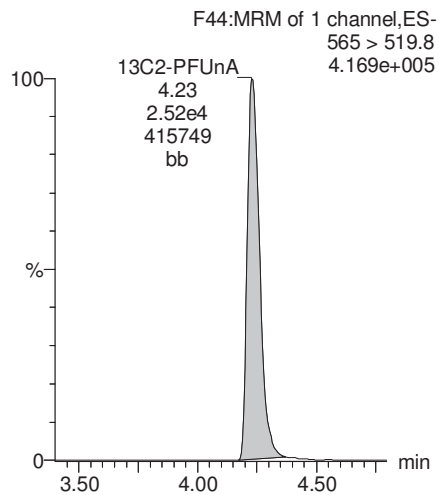
N-EtFOSAA



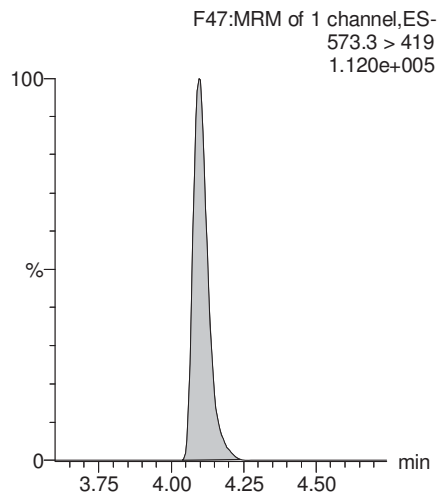
PFDoA



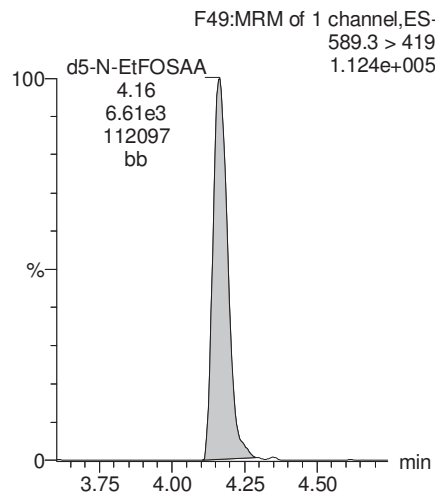
13C2-PFUnA



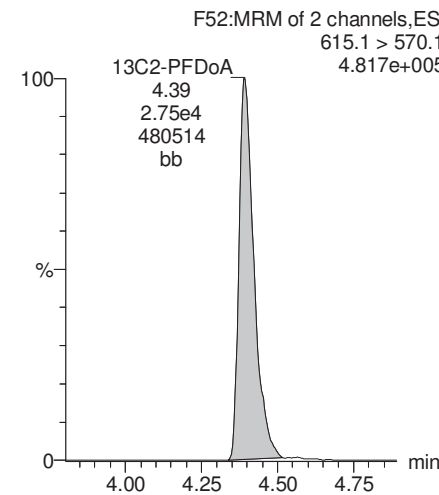
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



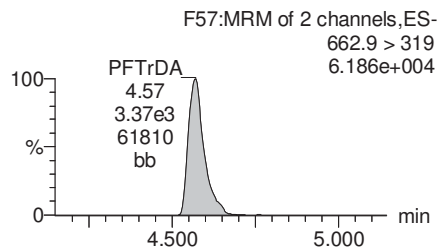
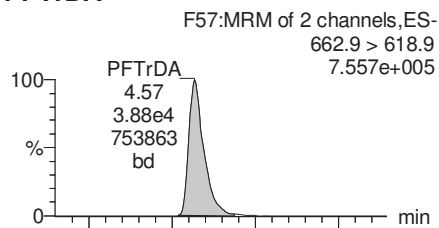
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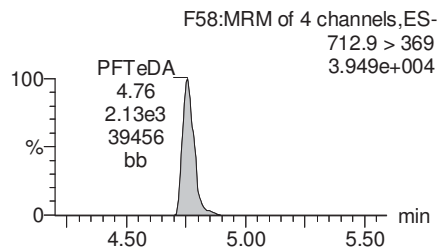
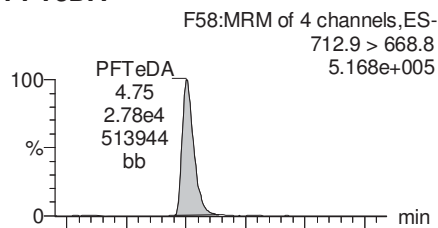
Printed: Tuesday, October 31, 2017 13:54:27 Pacific Daylight Time

Name: 171010M1_7, Date: 10-Oct-2017, Time: 17:32:47, ID: B7J0024-MSD1 Matrix Spike Dup 0.11643, Description: Matrix Spike Dup

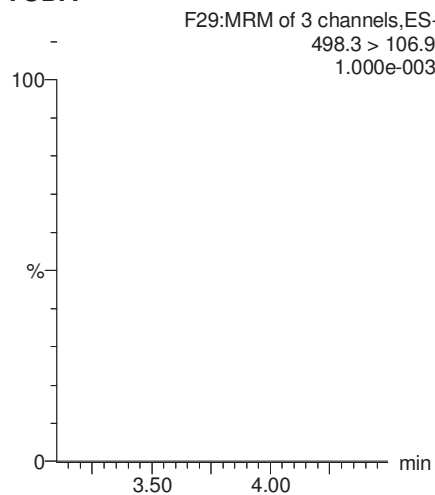
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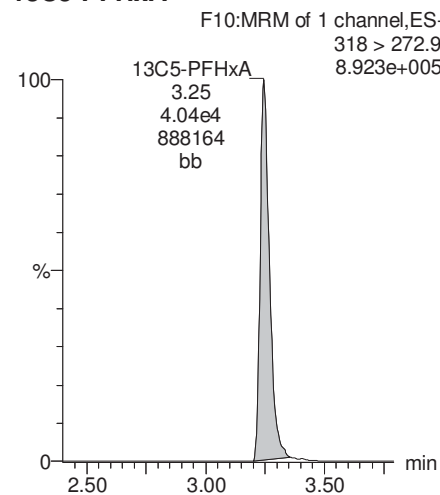
PFTeDA



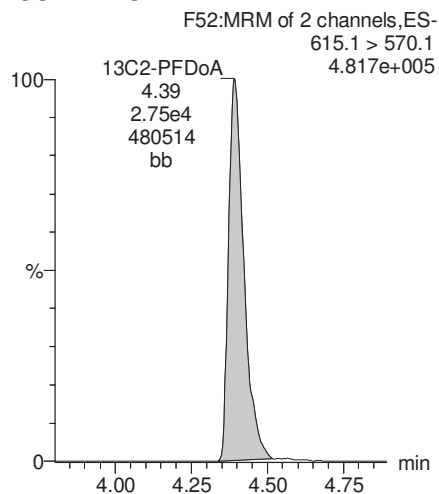
TCDA



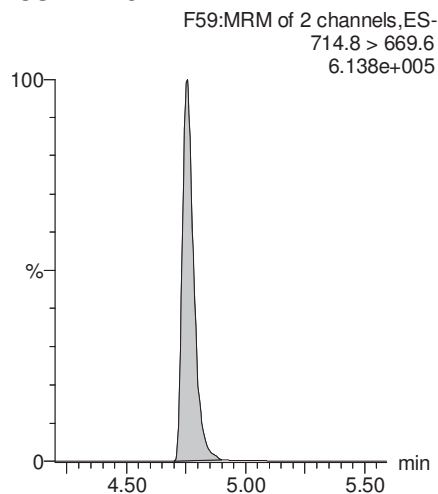
13C5-PFHxA



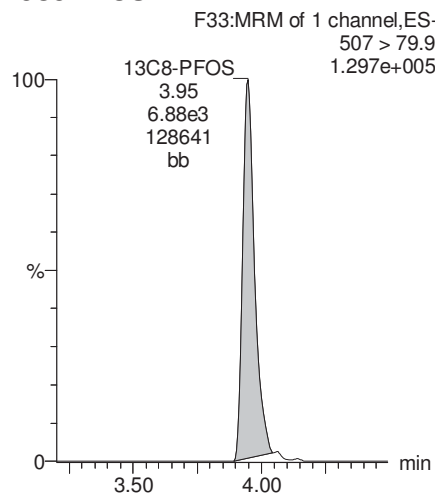
13C2-PFDoA



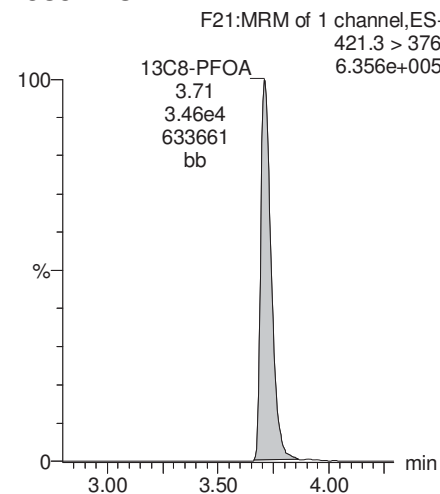
13C2-PFTeDA



13C8-PFOS



13C8-PFOA



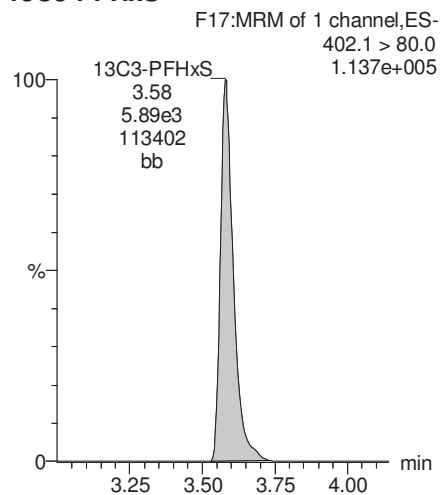
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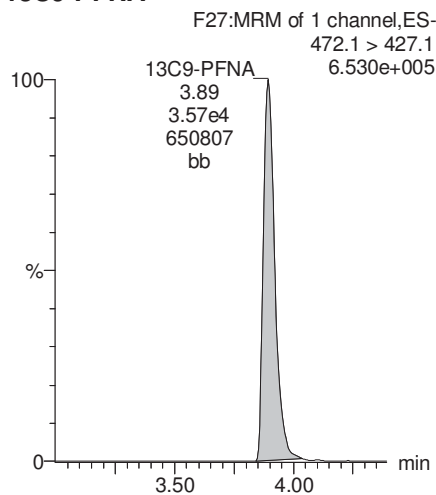
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Name: 171010M1_7, Date: 10-Oct-2017, Time: 17:32:47, ID: B7J0024-MSD1 Matrix Spike Dup 0.11643, Description: Matrix Spike Dup

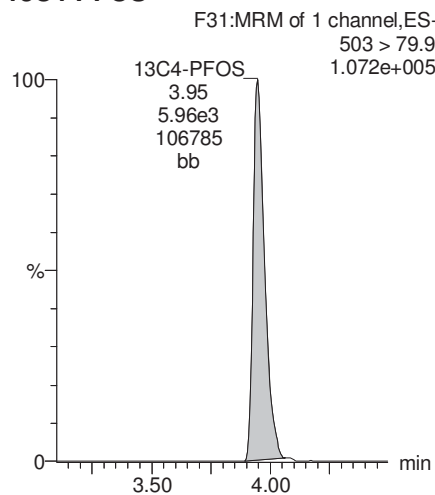
13C3-PFHxS



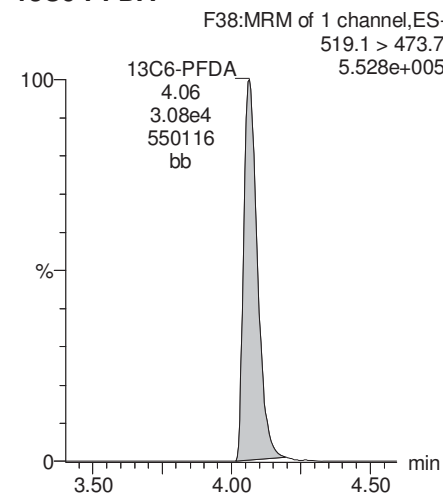
13C9-PFNA



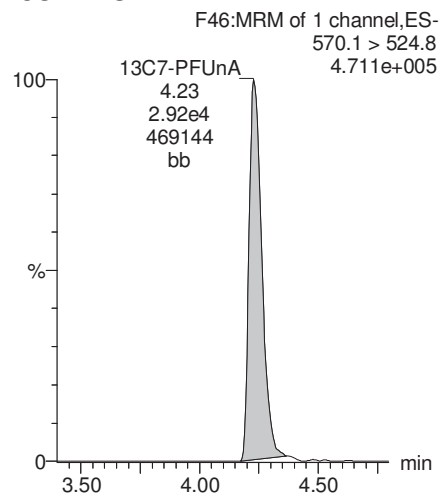
13C4-PFOS



13C6-PFDA



13C7-PFUnA



Dataset: U:\Q4.PRO\results\171011M1\171011M1-117.qld

Last Altered: Wednesday, November 01, 2017 10:34:21 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:34:44 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-11-17-FULL.cdb 12 Oct 2017 09:33:10

Name: 171011M1_117, Date: 12-Oct-2017, Time: 06:43:49, ID: B7J0024-MSD1@5X Matrix Spike Dup 0.11643, Description: Matrix Spike Dup

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	14 L-PFOS	499 > 79.9	5.07e4	1.80e3	0.1164		4.01	3.91	352	2580	
2	41 13C8-PFOS	507 > 79.9	1.80e3	1.43e3	0.1164	1.053	4.01	3.91	15.7	128	119.4
3	59 13C4-PFOS	503 > 79.9	1.43e3	1.43e3	0.1164	1.000	4.01	3.92	12.5	107	100.0
4	64 Total PFOS	499 > 79.9	5.07e4		0.1164		4.01		352	2580	

Dataset: U:\Q4.PRO\results\171011M1\171011M1-117.qld

Last Altered: Wednesday, November 01, 2017 10:34:21 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:34:44 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

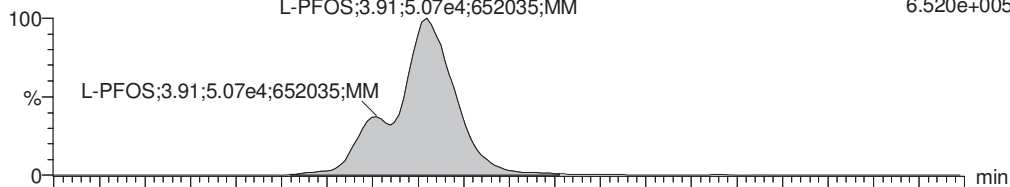
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-11-17-FULL.cdb 12 Oct 2017 09:33:10

Name: 171011M1_117, Date: 12-Oct-2017, Time: 06:43:49, ID: B7J0024-MSD1@5X Matrix Spike Dup 0.11643, Description: Matrix Spike Dup

Total PFOS

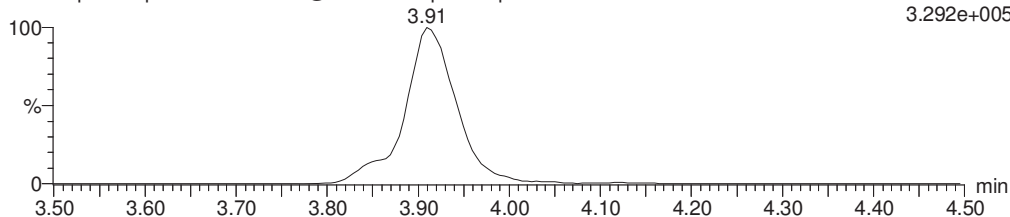
171011M1_117 Smooth(Mn,1x2)
Matrix Spike Dup B7J0024-MSD1@5X Matrix Spike Dup 0.11643
L-PFOS;3.91;5.07e4;652035;MM

F30:MRM of 2 channels,ES-
499 > 79.9
6.520e+005



171011M1_117 Smooth(Mn,1x2)
Matrix Spike Dup B7J0024-MSD1@5X Matrix Spike Dup 0.11643

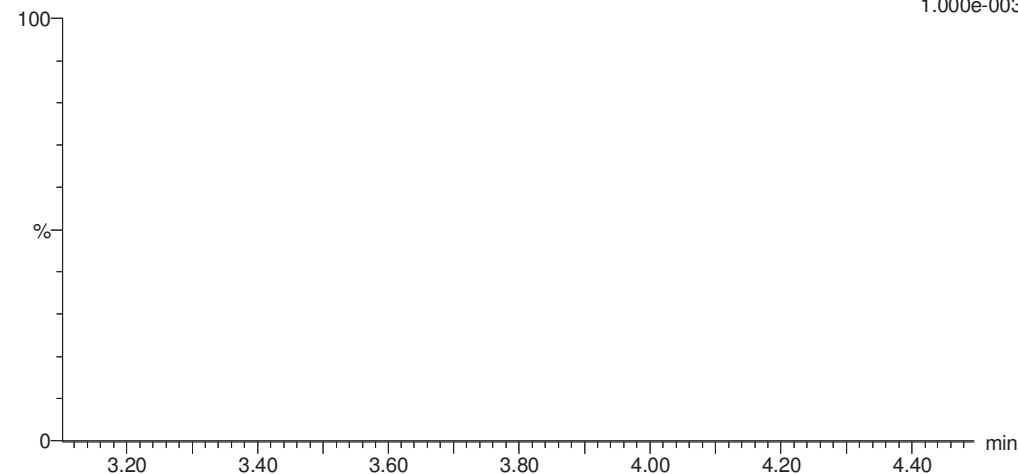
F30:MRM of 2 channels,ES-
499 > 99
3.292e+005



TCDA

171011M1_117 Smooth(Mn,1x2)
Matrix Spike Dup B7J0024-MSD1@5X Matrix Spike Dup 0.11643

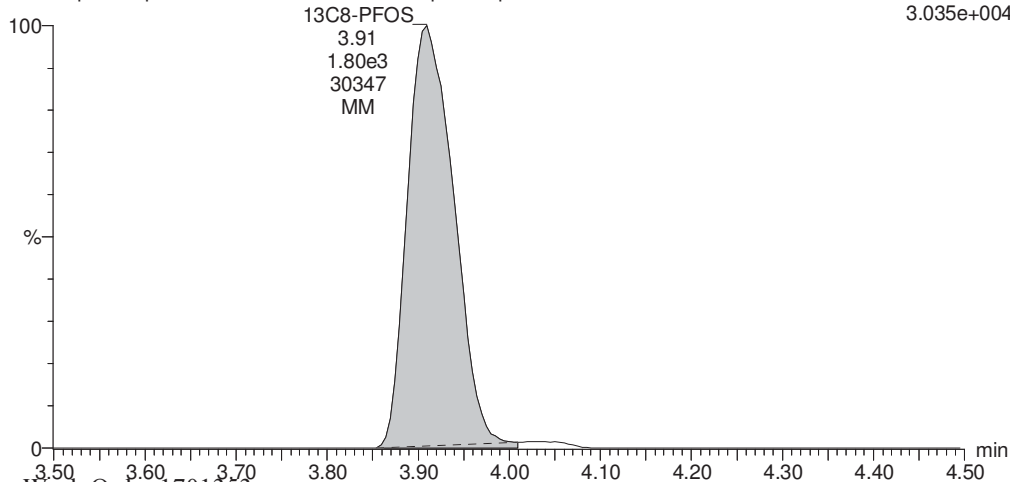
F29:MRM of 3 channels,ES-
498.3 > 106.9
1.000e-003



13C8-PFOS

171011M1_117 Smooth(Mn,1x2)
Matrix Spike Dup B7J0024-MSD1@5X Matrix Spike Dup 0.11643

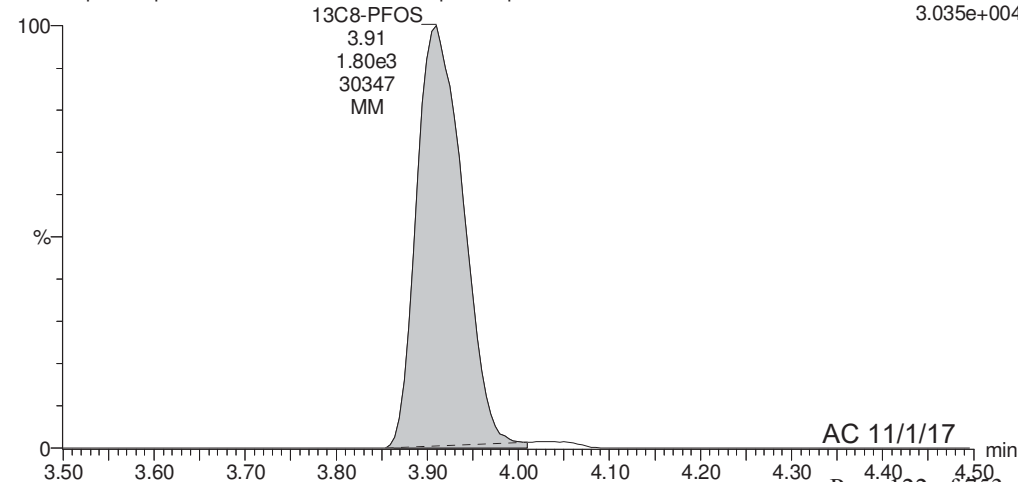
F33:MRM of 1 channel,ES-
507 > 79.9
3.035e+004



13C8-PFOS

171011M1_117 Smooth(Mn,1x2)
Matrix Spike Dup B7J0024-MSD1@5X Matrix Spike Dup 0.11643

F33:MRM of 1 channel,ES-
507 > 79.9
3.035e+004



Dataset: U:\Q4.PRO\results\171011M1\171011M1-117.qld

Last Altered: Wednesday, November 01, 2017 10:34:21 Pacific Daylight Time

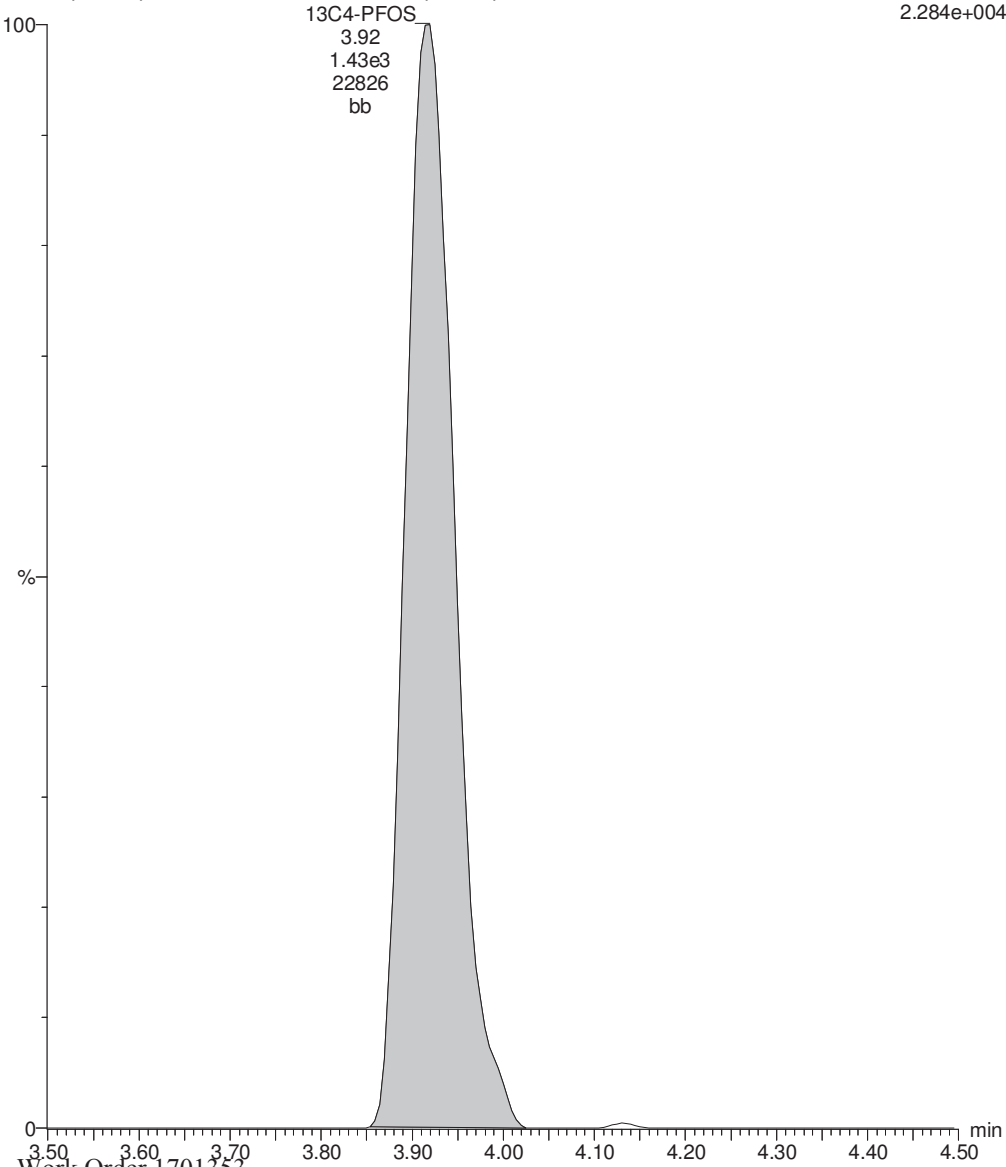
Printed: Wednesday, November 01, 2017 10:34:44 Pacific Daylight Time

Name: 171011M1_117, Date: 12-Oct-2017, Time: 06:43:49, ID: B7J0024-MSD1@5X Matrix Spike Dup 0.11643, Description: Matrix Spike Dup

13C4-PFOS

171011M1_117 Smooth(Mn,1x2)
Matrix Spike Dup B7J0024-MSD1@5X Matrix Spike Dup 0.11643

F31:MRM of 1 channel,ES-
503 > 79.9
2.284e+004



Dataset: U:\Q4.PRO\results\171010M1\171010M1-17.qld

Last Altered: Wednesday, November 01, 2017 09:44:36 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:45:06 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_17, Date: 10-Oct-2017, Time: 19:19:45, ID: 1701353-05 IR09-GW09-17D 0.11531, Description: IR09-GW09-17D

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299.1 > 79.9	4.52e3	8.75e3	0.1153		3.09	3.03	6.46	58.629	
2	4	PFHxA	313.2 > 268.9	8.35e5	1.11e4	0.1153		3.31	3.25	377	2233.995	E
3	5	PFHpA	363.1 > 319.1	4.59e5	4.87e4	0.1153		3.56	3.51	118	1073.653	
4	6	L-PFHxS	399.0 > 80.0	2.15e5	2.58e3	0.1153		3.63	3.59	1040	4223.015	E
5	9	L-PFOA	413 > 368.7	9.46e5	3.54e4	0.1153		3.68	3.71	334	3133.329	E
6	12	PFNA	463.1 > 419.1	4.02e4	2.39e4	0.1153		3.96	3.89	21.0	165.081	
7	14	L-PFOS	499 > 79.9	1.49e6	3.77e3	0.1153		4.01	3.95	4950	40460.801	E
8	16	PFDA	513 > 468.8	2.18e4	2.27e4	0.1153		4.14	4.08	12.0	71.628	
9	18	N-MeFOSAA	570.1 > 419	1.53e3	6.96e3	0.1153		4.17	4.10	35.6	16.248	
10	19	N-EtFOSAA	584.2 > 419	1.30e3	7.30e3	0.1153		4.23	4.18	28.8	17.120	
11	20	PFUnA	562.9 > 518.9	1.80e3	2.72e4	0.1153		4.31	4.23	0.827	6.782	
12	22	PFDoA	613.0 > 569.1		2.97e4	0.1153		4.49				

Dataset: U:\Q4.PRO\results\171010M1\171010M1-17.qld

Last Altered: Wednesday, November 01, 2017 09:44:36 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:45:47 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_17, Date: 10-Oct-2017, Time: 19:19:45, ID: 1701353-05 IR09-GW09-17D 0.11531, Description: IR09-GW09-17D

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	24	PFTTrDA	662.9 > 618.9	2.97e4	0.1153		4.68					
2	25	PFTeDA	712.9 > 668.8	3.40e4	0.1153		4.88					
3	31	13C3-PFBA	216.1 > 172.1	2.34e4	2.53e4	0.1153	0.944	1.76	1.63	11.6	106.128	97.9
4	32	13C3-PFPeA	266.1 > 222.1	3.13e4	3.57e4	0.1153	0.299	2.91	2.83	4.39	127.505	117.6
5	33	13C3-PFBS	302.1 > 79.9	8.75e3	3.57e4	0.1153	0.070	3.09	3.03	1.23	152.594	140.8
6	34	13C2-PFHxA	315 > 269.8	1.11e4	3.57e4	0.1153	0.295	3.31	3.25	1.55	45.612	105.2
7	35	13C4-PFHpA	367 > 322.1	4.87e4	3.57e4	0.1153	0.592	3.56	3.51	6.82	99.841	92.1
8	36	18O2-PFHxS	403 > 103.0	2.58e3	5.08e3	0.1153	0.497	3.63	3.58	6.34	110.701	102.1
9	37	13C2-6:2 FTS	429.1 > 408.9	1.23e4	3.14e4	0.1153	0.156	3.76	3.71	4.88	271.094	250.1
10	38	13C2-PFOA	414.9 > 369.7	3.54e4	3.14e4	0.1153	1.111	3.77	3.72	14.1	110.001	101.5
11	39	13C5-PFNA	468.1 > 423.1	2.39e4	2.96e4	0.1153	0.934	3.96	3.89	10.1	93.599	86.3
12	40	13C8-PFOSA	506.1 > 78.0	1.52e3	3.46e4	0.1153	0.129	3.96	3.91	0.548	36.862	34.0
13	41	13C8-PFOS	507 > 79.9	3.77e3	3.93e3	0.1153	0.995	4.01	3.95	12.0	104.561	96.5
14	42	13C2-PFDA	515.1 > 469.9	2.27e4	2.81e4	0.1153	0.954	4.14	4.08	10.1	91.780	84.7
15	43	13C2-8:2 FTS	529.1 > 508.7	9.93e3	2.81e4	0.1153	0.116	4.14	4.07	4.42	330.906	305.3
16	44	d3-N-MeFOSAA	573.3 > 419	6.96e3	3.46e4	0.1153	0.020	4.17	4.10	2.51	1107.174	78.6
17	45	d5-N-EtFOSAA	589.3 > 419	7.30e3	3.46e4	0.1153	0.020	4.23	4.17	2.64	1133.403	80.4
18	46	13C2-PFUnA	565 > 519.8	2.72e4	3.46e4	0.1153	1.124	4.31	4.24	9.81	75.678	69.8
19	47	13C2-PFDoA	615.1 > 570.1	2.97e4	3.46e4	0.1153	1.087	4.49	4.40	10.7	85.689	79.0
20	49	13C2-PFTeDA	714.8 > 669.6	3.40e4	3.46e4	0.1153	1.014	4.88	4.76	12.3	104.960	96.8
21	54	13C4-PFBA	217.1 > 172.1	2.53e4	2.53e4	0.1153	1.000	1.76	1.64	12.5	108.403	100.0
22	55	13C5-PFHxA	318 > 272.9	3.57e4	3.57e4	0.1153	1.000	3.31	3.25	5.00	43.361	100.0
23	56	13C3-PFHxS	402.1 > 80.0	5.08e3	5.08e3	0.1153	1.000	3.63	3.58	12.5	108.403	100.0
24	57	13C8-PFOA	421.3 > 376	3.14e4	3.14e4	0.1153	1.000	3.77	3.71	12.5	108.403	100.0
25	58	13C9-PFNA	472.1 > 427.1	2.96e4	2.96e4	0.1153	1.000	3.96	3.89	12.5	108.403	100.0
26	59	13C4-PFOS	503 > 79.9	3.93e3	3.93e3	0.1153	1.000	4.01	3.95	12.5	108.403	100.0
27	60	13C6-PFDA	519.1 > 473.7	2.81e4	2.81e4	0.1153	1.000	4.14	4.08	12.5	108.403	100.0
28	61	13C7-PFUnA	570.1 > 524.8	3.46e4	3.46e4	0.1153	1.000	4.31	4.24	12.5	108.403	100.0
29	62	Total PFHxS	399.0 > 80.0	2.15e5	2.58e3	0.1153		3.63		1040	4223.015	
30	63	Total PFOA	413 > 368.7	1.02e6		0.1153		3.68		362	3390.381	
31	64	Total PFOS	499 > 79.9	1.49e6		0.1153		4.01		4950	40460.801	
32	65	Total N-MeFOSAA	570.1 > 419	1.77e3	6.96e3	0.1153		4.17		41.2	18.758	

Dataset: U:\Q4.PRO\results\171010M1\171010M1-17.qld

Last Altered: Wednesday, November 01, 2017 09:44:36 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:45:47 Pacific Daylight Time

Name: 171010M1_17, Date: 10-Oct-2017, Time: 19:19:45, ID: 1701353-05 IR09-GW09-17D 0.11531, Description: IR09-GW09-17D

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	66 Total N-EtFOSAA	584.2 > 419	1.41e3	7.30e3	0.1153		4.23		31.3	18.885	
34	68 Total PFOA+PFOS	413 > 368.7;4...	2.52e6		0.1153		0.00		5310	43851.182	38,600

Dataset: U:\Q4.PRO\results\171010M1\171010M1-17.qld

Last Altered: Wednesday, November 01, 2017 09:44:36 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:45:47 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_17, Date: 10-Oct-2017, Time: 19:19:45, ID: 1701353-05 IR09-GW09-17D 0.11531, Description: IR09-GW09-17D

Total PFHxS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	7 Br-PFHxS	399.0 > 80.0			2575.108		MM-	
2	6 L-PFHxS	399.0 > 80.0	3.59	214536.938	2575.108	1041.398	MM	4223.0

Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	10 Br-PFOA	413 > 368.7	3.66	78570.398	35365.844	27.771	MM	257.1
2	9 L-PFOA	413 > 368.7	3.71	946382.000	35365.844	334.497	MM	3133.3

Total PFOS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	14 L-PFOS	499 > 79.9	3.95	1493293.125	3773.608	4946.503	MM	40460.8

Total N-Me-FOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	18 N-MeFOSAA	570.1 > 419	4.10	1526.605	6962.936	35.628	MM	16.2
2	65 Total N-MeFOSAA	570.1 > 419	4.03	238.794	6962.936	5.573	MM	2.5

Total N-EtFOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	19 N-EtFOSAA	584.2 > 419	4.18	1295.778	7303.285	28.831	MM	17.1
2	66 Total N-EtFOSAA	584.2 > 419	4.12	110.901	7303.285	2.468	MM	1.8

Total PFOA+PFOS,Total PFOS,Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	10 Br-PFOA	413 > 368.7	3.66	78570.398	35365.844	27.771	MM	257.1
2	9 L-PFOA	413 > 368.7	3.71	946382.000	35365.844	334.497	MM	3133.3
3	14 L-PFOS	499 > 79.9	3.95	1493293.125	3773.608	4946.503	MM	40460.8

Dataset: U:\Q4.PRO\results\171010M1\171010M1-17.qld

Last Altered: Wednesday, November 01, 2017 09:44:36 Pacific Daylight Time

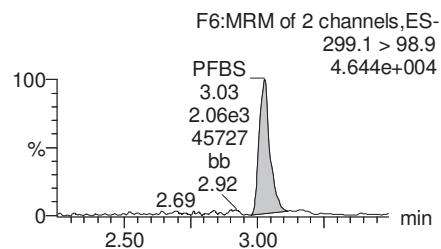
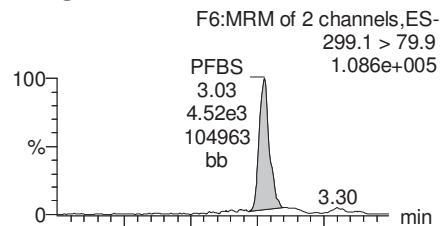
Printed: Wednesday, November 01, 2017 09:45:47 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

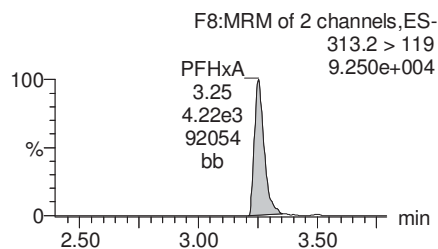
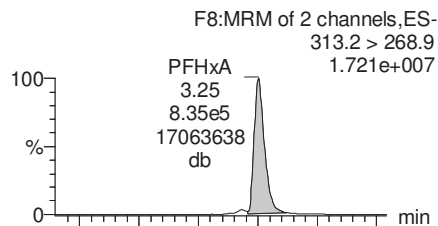
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Name: 171010M1_17, Date: 10-Oct-2017, Time: 19:19:45, ID: 1701353-05 IR09-GW09-17D 0.11531, Description: IR09-GW09-17D

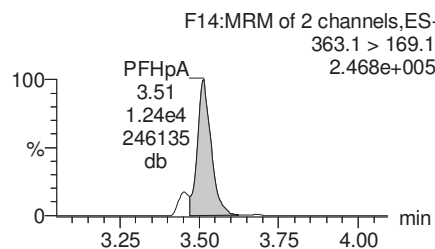
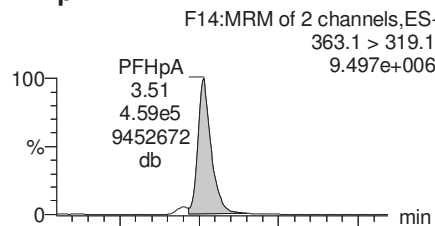
PFBS



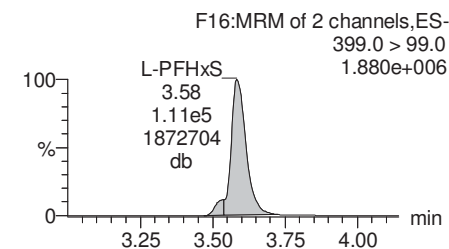
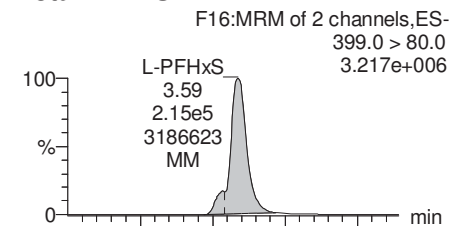
PFHxA



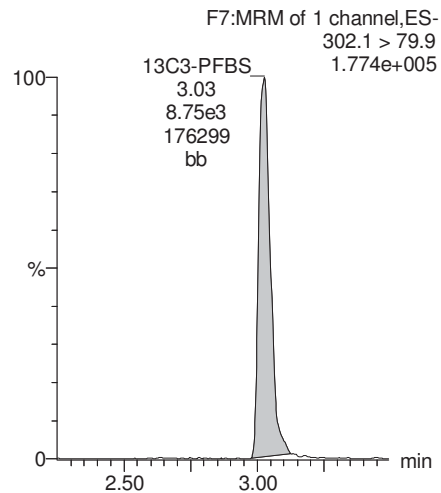
PFHpA



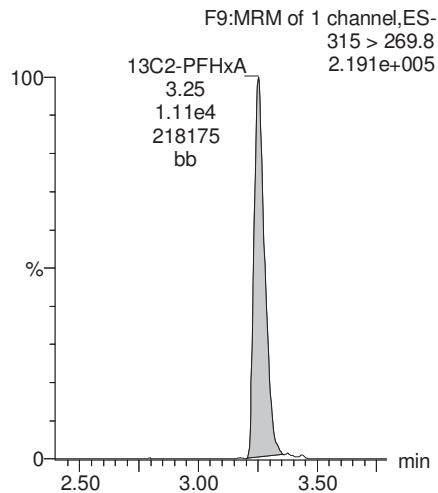
Total PFHxS



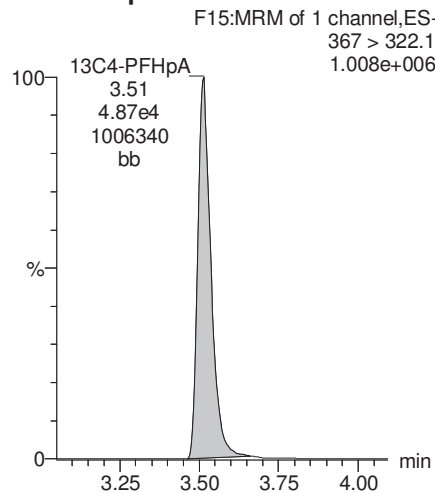
13C3-PFBS



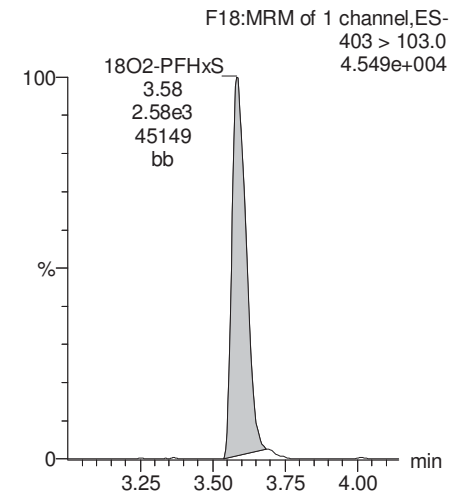
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



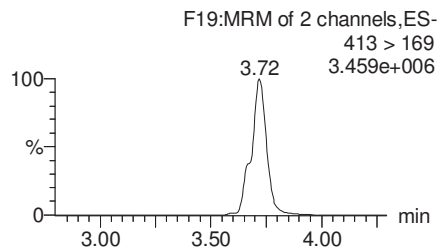
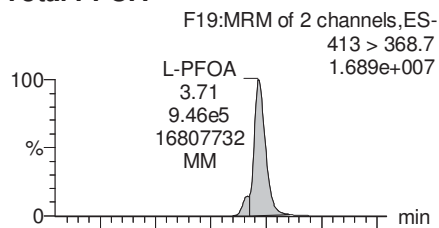
Dataset: U:\Q4.PRO\results\171010M1\171010M1-17.qld

Last Altered: Wednesday, November 01, 2017 09:44:36 Pacific Daylight Time

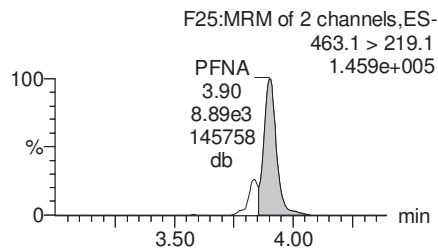
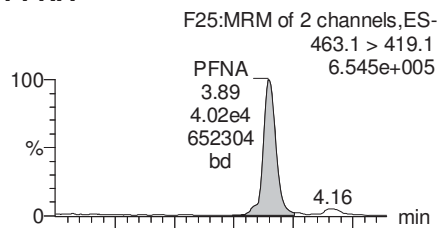
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Name: 171010M1_17, Date: 10-Oct-2017, Time: 19:19:45, ID: 1701353-05 IR09-GW09-17D 0.11531, Description: IR09-GW09-17D

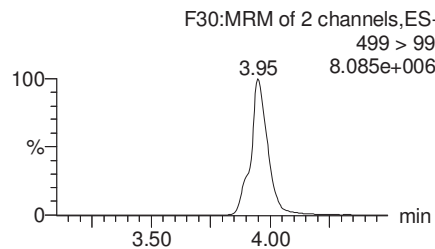
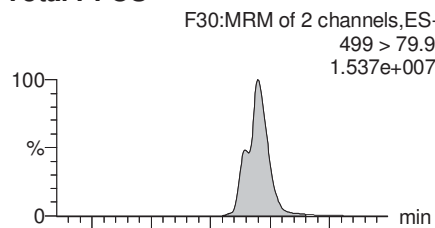
Total PFOA



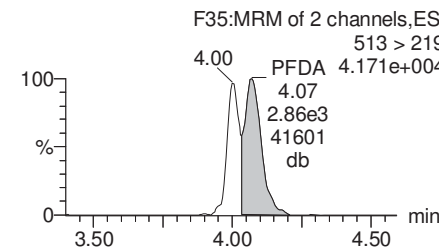
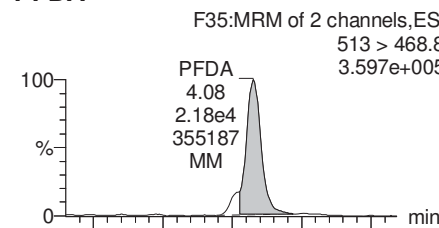
PFNA



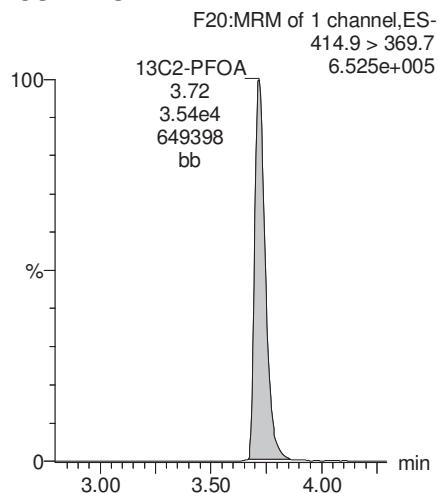
Total PFOS



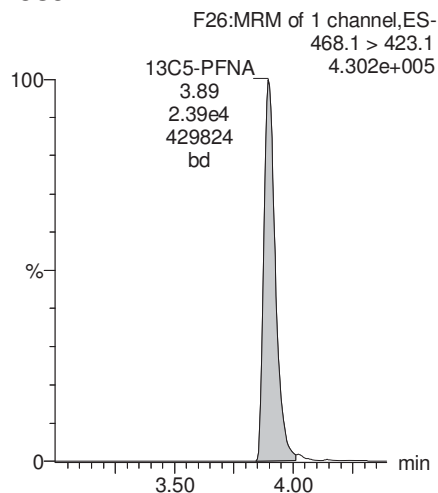
PFDA



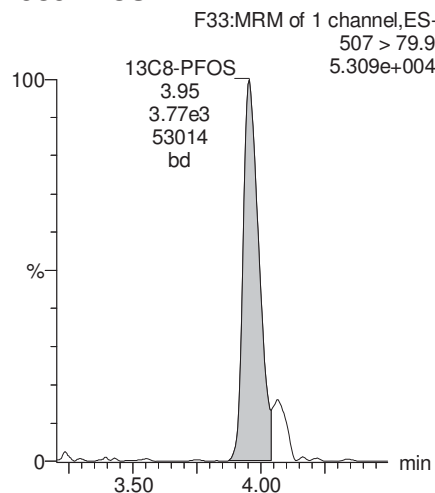
13C2-PFOA



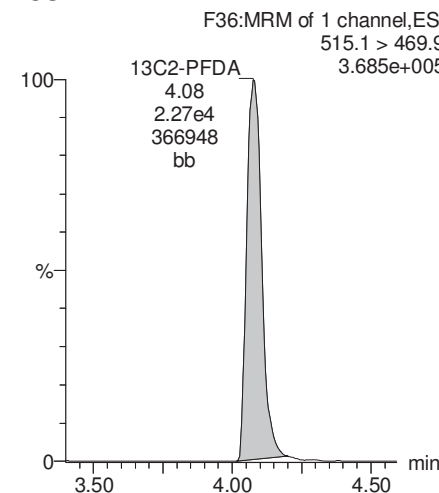
13C5-PFNA



13C8-PFOS



13C2-PFDA



Dataset: U:\Q4.PRO\results\171010M1\171010M1-17.qld

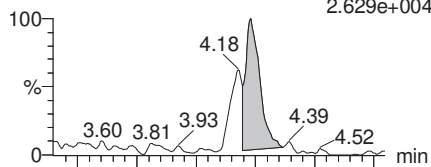
Last Altered: Wednesday, November 01, 2017 09:44:36 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:45:47 Pacific Daylight Time

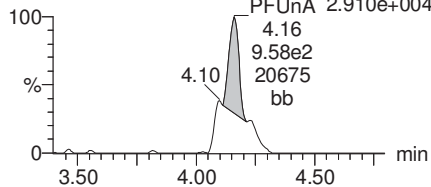
Name: 171010M1_17, Date: 10-Oct-2017, Time: 19:19:45, ID: 1701353-05 IR09-GW09-17D 0.11531, Description: IR09-GW09-17D

PFUnA

F43:MRM of 2 channels,ES-
562.9 > 518.9
2.629e+004

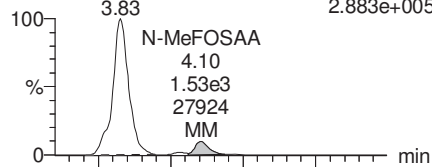


F43:MRM of 2 channels,ES-
562.9 > 269
2.910e+004

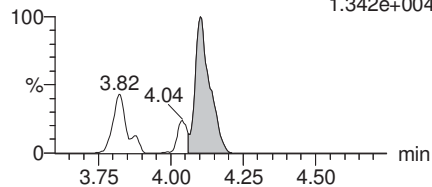


N-MeFOSAA

F45:MRM of 3 channels,ES-
570.1 > 419
2.883e+005

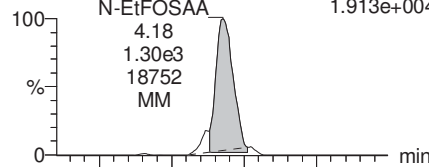


F45:MRM of 3 channels,ES-
570.1 > 483.1
1.342e+004

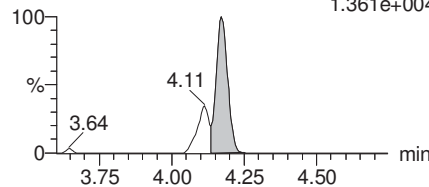


N-EtFOSAA

F48:MRM of 3 channels,ES-
584.2 > 419
1.913e+004

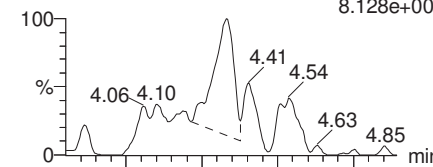


F48:MRM of 3 channels,ES-
584.1 > 526.1
1.361e+004

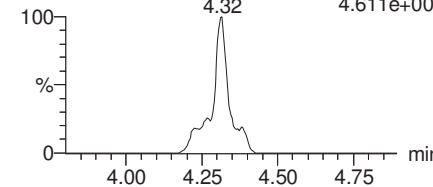


PFDaA

F51:MRM of 4 channels,ES-
613.0 > 569.1
8.128e+003

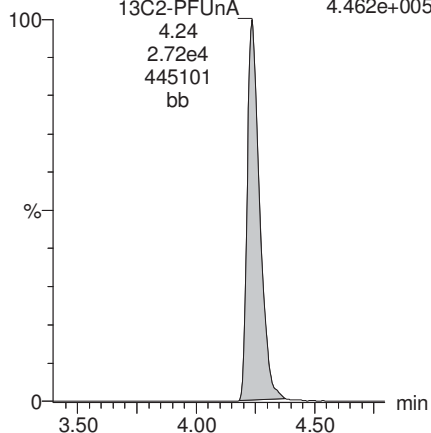


F51:MRM of 4 channels,ES-
613.0 > 319.1
4.611e+003



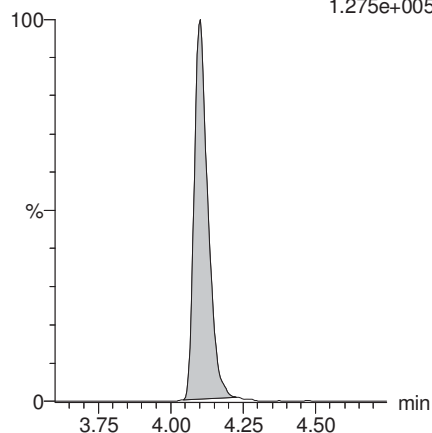
13C2-PFUnA

F44:MRM of 1 channel,ES-
565 > 519.8
4.462e+005



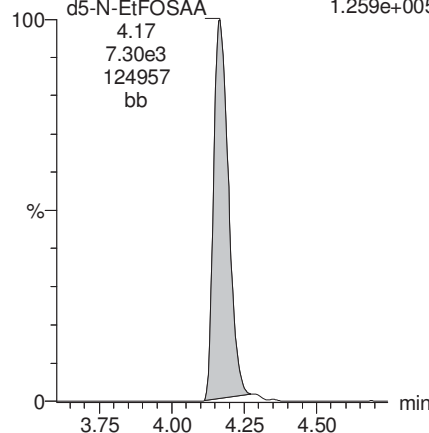
d3-N-MeFOSAA

F47:MRM of 1 channel,ES-
573.3 > 419
1.275e+005



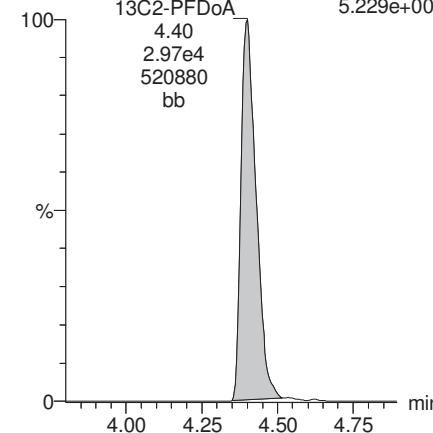
d5-N-EtFOSAA

F49:MRM of 1 channel,ES-
589.3 > 419
1.259e+005



13C2-PFDaA

F52:MRM of 2 channels,ES-
615.1 > 570.1
5.229e+005



Dataset: U:\Q4.PRO\results\171010M1\171010M1-17.qld

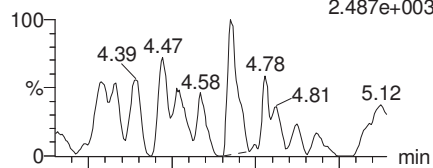
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Printed: Wednesday, November 01, 2017 09:45:47 Pacific Daylight Time

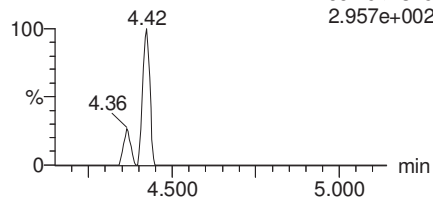
Name: 171010M1_17, Date: 10-Oct-2017, Time: 19:19:45, ID: 1701353-05 IR09-GW09-17D 0.11531, Description: IR09-GW09-17D

PFTrDA

F57:MRM of 2 channels,ES-
662.9 > 618.9
2.487e+003

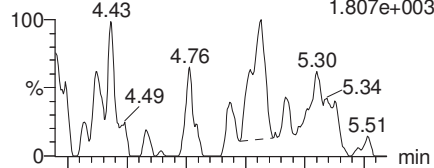


F57:MRM of 2 channels,ES-
662.9 > 319
2.957e+002

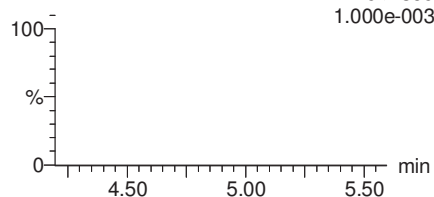


PFTeDA

F58:MRM of 4 channels,ES-
712.9 > 668.8
1.807e+003

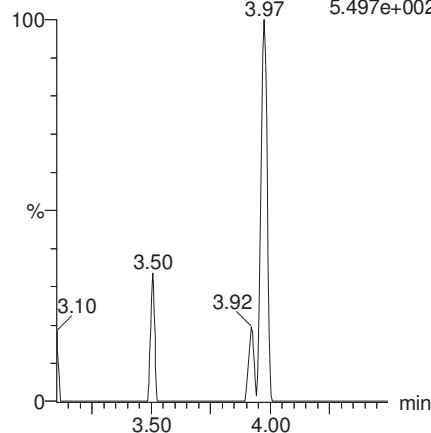


F58:MRM of 4 channels,ES-
712.9 > 369
1.000e-003



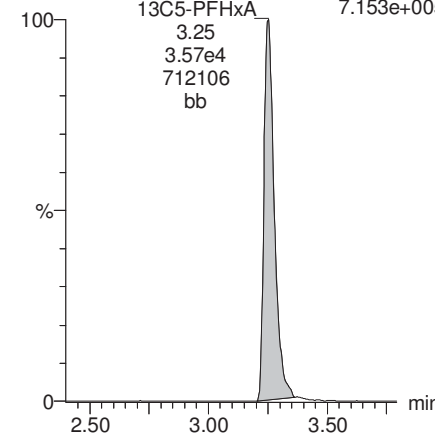
TCDA

F29:MRM of 3 channels,ES-
498.3 > 106.9
5.497e+002



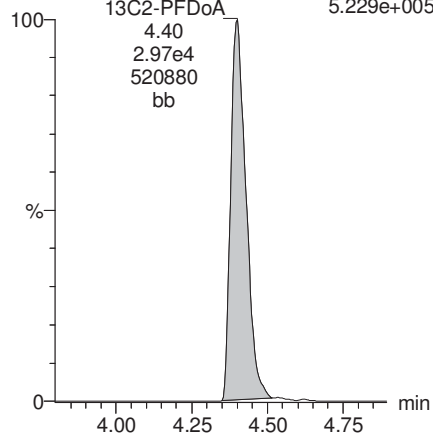
13C5-PFHxA

F10:MRM of 1 channel,ES-
318 > 272.9
7.153e+005



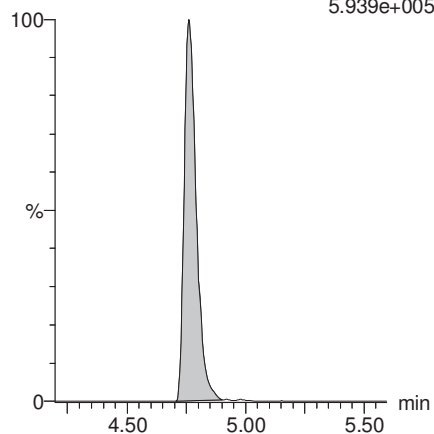
13C2-PFDoA

F52:MRM of 2 channels,ES-
615.1 > 570.1
5.229e+005



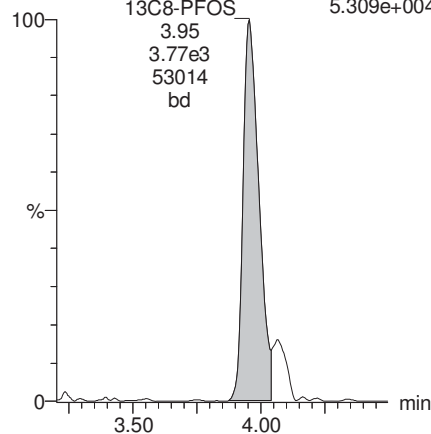
13C2-PFTeDA

F59:MRM of 2 channels,ES-
714.8 > 669.6
5.939e+005



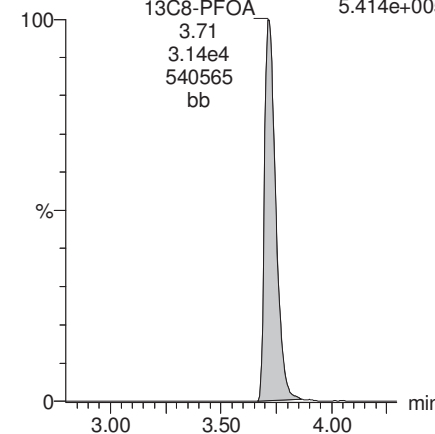
13C8-PFOS

F33:MRM of 1 channel,ES-
507 > 79.9
5.309e+004



13C8-PFOA

F21:MRM of 1 channel,ES-
421.3 > 376
5.414e+005



Dataset: U:\Q4.PRO\results\171010M1\171010M1-17.qld

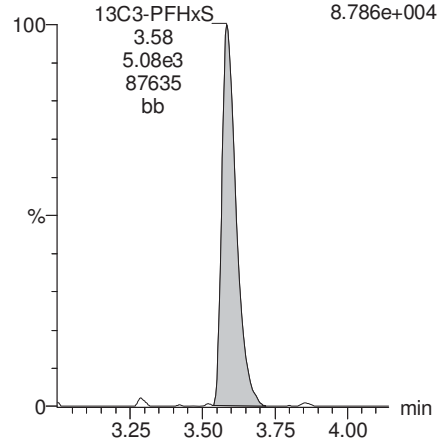
Last Altered: Wednesday, November 01, 2017 09:44:36 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:45:47 Pacific Daylight Time

Name: 171010M1_17, Date: 10-Oct-2017, Time: 19:19:45, ID: 1701353-05 IR09-GW09-17D 0.11531, Description: IR09-GW09-17D

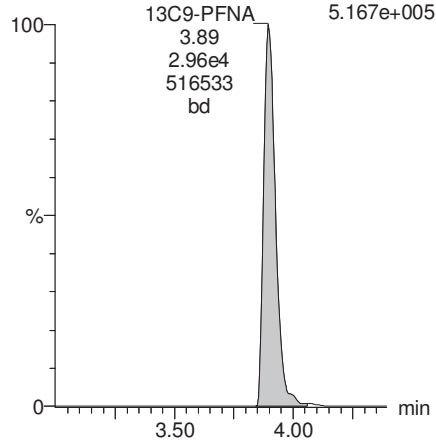
13C3-PFHxS

F17:MRM of 1 channel,ES-
402.1 > 80.0
8.786e+004



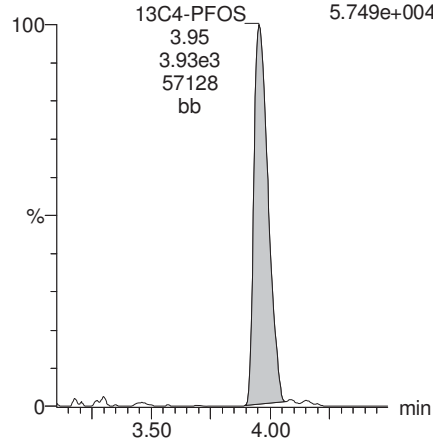
13C9-PFNA

F27:MRM of 1 channel,ES-
472.1 > 427.1
5.167e+005



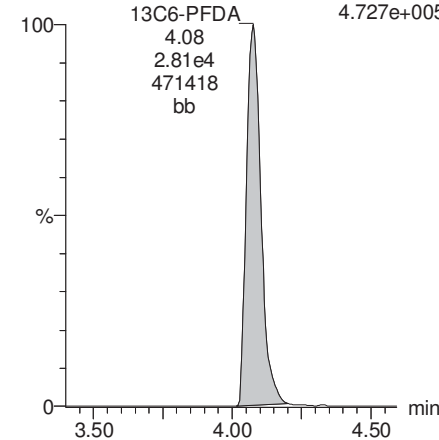
13C4-PFOS

F31:MRM of 1 channel,ES-
503 > 79.9
5.749e+004



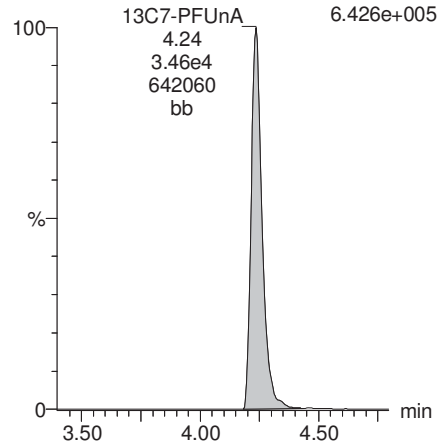
13C6-PFDA

F38:MRM of 1 channel,ES-
519.1 > 473.7
4.727e+005



13C7-PFUnA

F46:MRM of 1 channel,ES-
570.1 > 524.8
6.426e+005



Dataset: U:\Q4.PRO\results\171011M1\171011M1-123.qld

Last Altered: Wednesday, November 01, 2017 10:52:38 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:52:53 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-11-17-FULL.cdb 12 Oct 2017 09:33:10

Name: 171011M1_123, Date: 12-Oct-2017, Time: 07:48:32, ID: 1701353-05@20X IR09-GW09-17D 0.11531, Description: IR09-GW09-17D

	# Name	Trace	Area	IS Area	RRF	Divisor1	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	4 PFHxA	313.2 > 268.9	3.77e4	3.09e2		0.1153	3.31	3.20	610	3150	
2	6 L-PFHxS	399.0 > 80.0	1.28e4	8.94e1		0.1153	3.63	3.54	1790	4710	
3	9 L-PFOA	413 > 368.7	5.56e4	1.68e3		0.1153	3.68	3.67	413	3230	
4	14 L-PFOS	499 > 79.9	1.25e5	3.28e2		0.1153	4.01	3.90	4750	35100	
5	34 13C2-PFHxA	315 > 269.8	3.09e2	1.50e3	0.292	0.1153	3.31	3.21	1.03	30.6	70.7
6	35 13C4-PFHpA	367 > 322.1	2.29e3	1.50e3	0.589	0.1153	3.56	3.47	7.64	113	103.8
7	36 18O2-PFHxS	403 > 103.0	8.94e1	2.48e2	0.483	0.1153	3.63	3.56	4.50	80.8	74.5
8	37 13C2-6:2 FTS	429.1 > 408.9	6.95e2	1.75e3	0.146	0.1153	3.76	3.67	4.96	294	271.4
9	38 13C2-PFOA	414.9 > 369.7	1.68e3	1.75e3	1.106	0.1153	3.77	3.68	12.0	94.1	86.8
10	39 13C5-PFNA	468.1 > 423.1	1.37e3	1.66e3	0.918	0.1153	3.96	3.85	10.3	97.5	90.0
11	40 13C8-PFOA	506.1 > 78.0	1.12e2	1.67e3	0.111	0.1153	3.96	3.86	0.843	66.1	61.0
12	41 13C8-PFOS	507 > 79.9	3.28e2	2.46e2	1.053	0.1153	4.01	3.91	16.7	137	126.6
13	55 13C5-PFHxA	318 > 272.9	1.50e3	1.50e3	1.000	0.1153	3.31	3.21	5.00	43.4	100.0
14	56 13C3-PFHxS	402.1 > 80.0	2.48e2	2.48e2	1.000	0.1153	3.63	3.54	12.5	108	100.0
15	57 13C8-PFOA	421.3 > 376	1.75e3	1.75e3	1.000	0.1153	3.77	3.68	12.5	108	100.0
16	58 13C9-PFNA	472.1 > 427.1	1.66e3	1.66e3	1.000	0.1153	3.96	3.86	12.5	108	100.0
17	59 13C4-PFOS	503 > 79.9	2.46e2	2.46e2	1.000	0.1153	4.01	3.91	12.5	108	100.0
18	60 13C6-PFDA	519.1 > 473.7	1.43e3	1.43e3	1.000	0.1153	4.14	4.03	12.5	108	100.0
19	61 13C7-PFUnA	570.1 > 524.8	1.67e3	1.67e3	1.000	0.1153	4.31	4.19	12.5	108	100.0
20	62 Total PFHxS	399.0 > 80.0	1.28e4	8.94e1		0.1153	3.63		1790	4710	
21	63 Total PFOA	413 > 368.7	5.97e4			0.1153	3.68		443	3460	
22	64 Total PFOS	499 > 79.9	1.25e5			0.1153	4.01		4750	35100	
23	68 Total PFOA+PFOS	413 > 368.7;4...	1.84e5			0.1153	0.00		5190	38600	

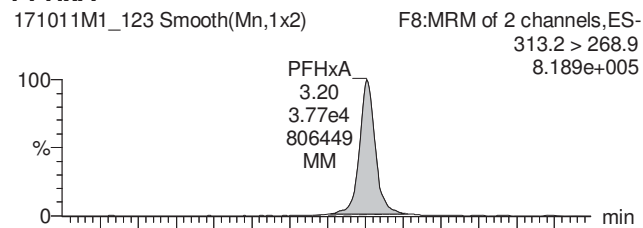
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Last Altered: Wednesday, November 01, 2017 10:52:38 Pacific Daylight Time

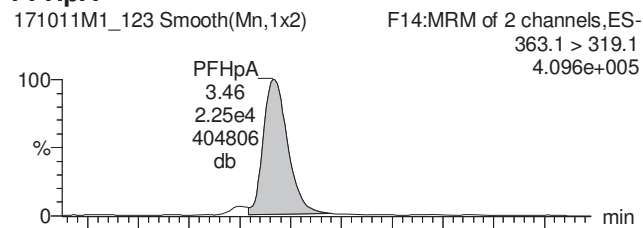
Printed: Wednesday, November 01, 2017 10:52:53 Pacific Daylight Time

Name: 171011M1_123, Date: 12-Oct-2017, Time: 07:48:32, ID: 1701353-05@20X IR09-GW09-17D 0.11531, Description: IR09-GW09-17D

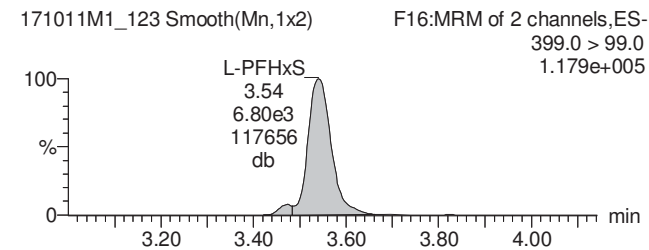
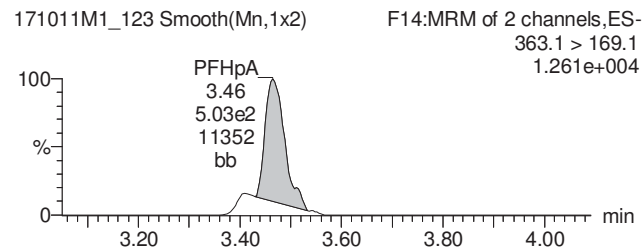
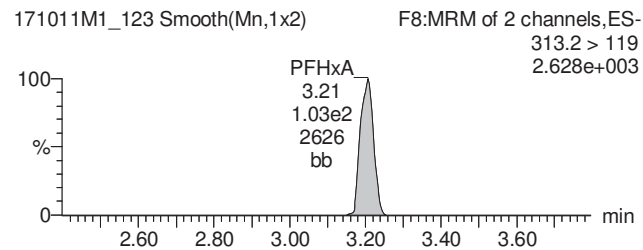
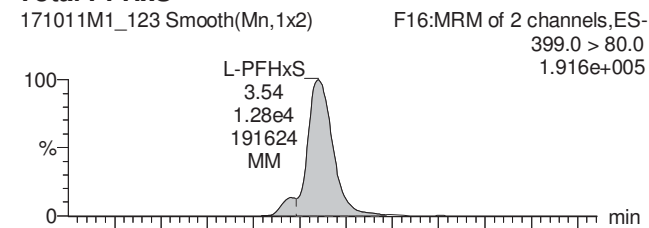
PFHxA



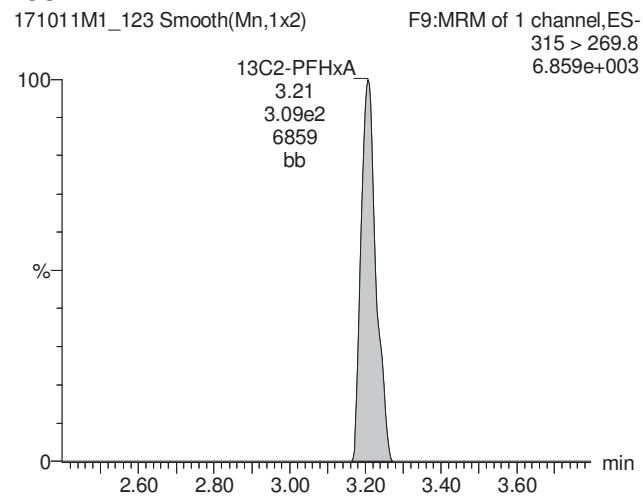
PFHpA



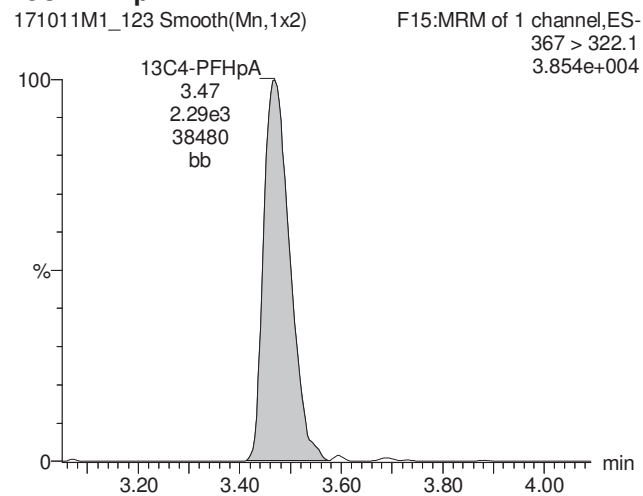
Total PFHxS



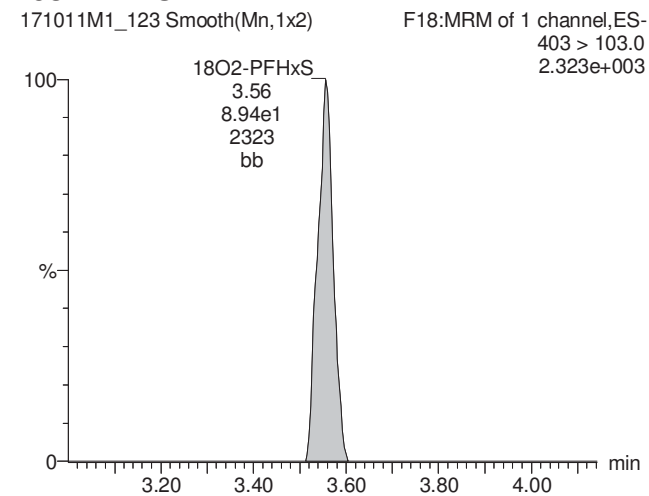
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



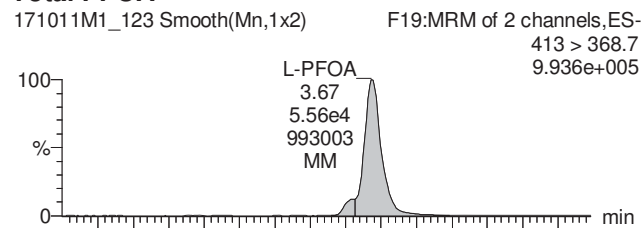
Dataset: U:\Q4.PRO\results\171011M1\171011M1-123.qld

Last Altered: Wednesday, November 01, 2017 10:52:38 Pacific Daylight Time

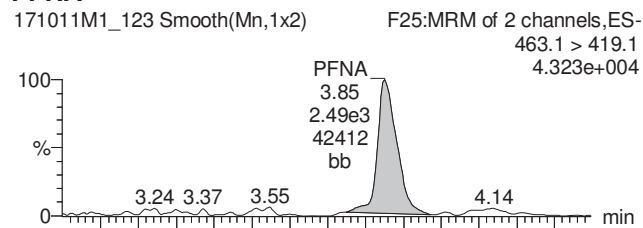
Printed: Wednesday, November 01, 2017 10:52:53 Pacific Daylight Time

Name: 171011M1_123, Date: 12-Oct-2017, Time: 07:48:32, ID: 1701353-05@20X IR09-GW09-17D 0.11531, Description: IR09-GW09-17D

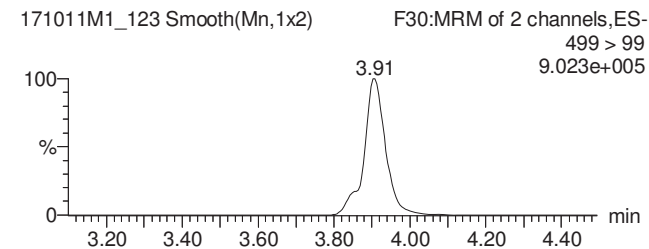
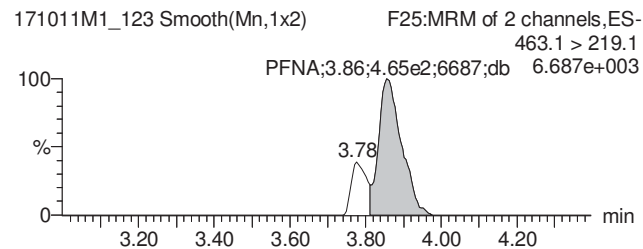
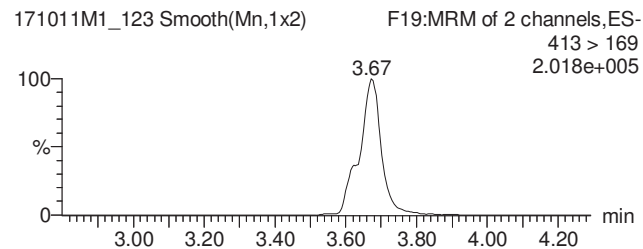
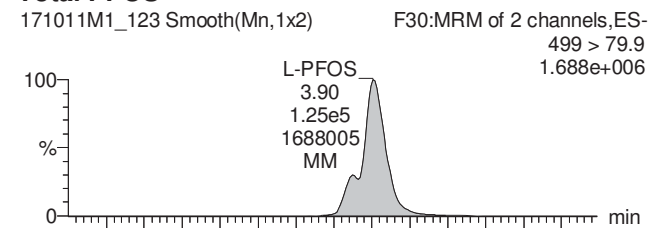
Total PFOA



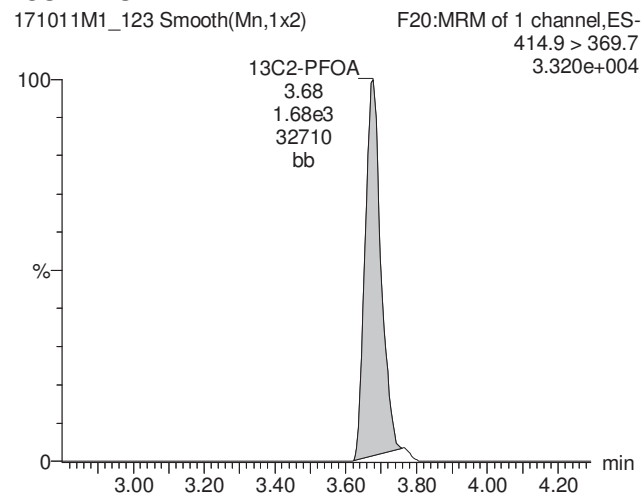
PFNA



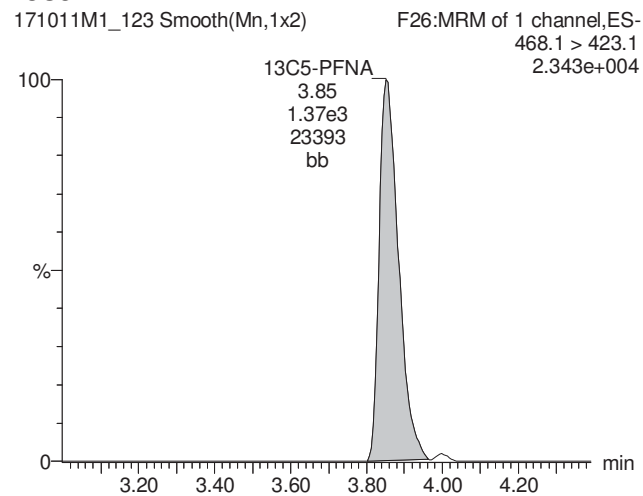
Total PFOS



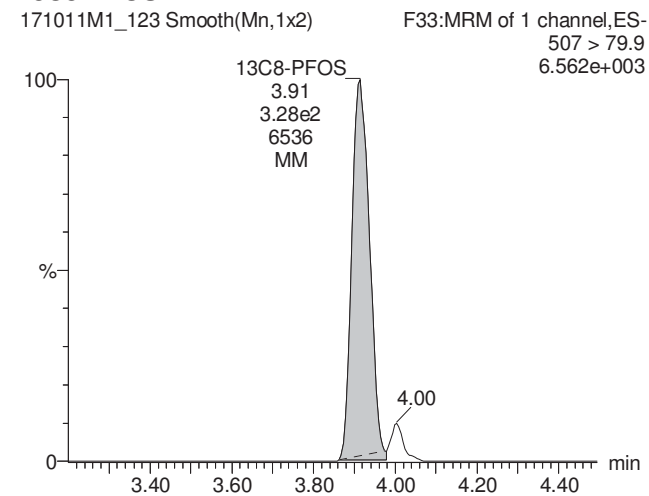
13C2-PFOA



13C5-PFNA



13C8-PFOS



Dataset: U:\Q4.PRO\results\171011M1\171011M1-123.qld

Last Altered: Wednesday, November 01, 2017 10:52:38 Pacific Daylight Time

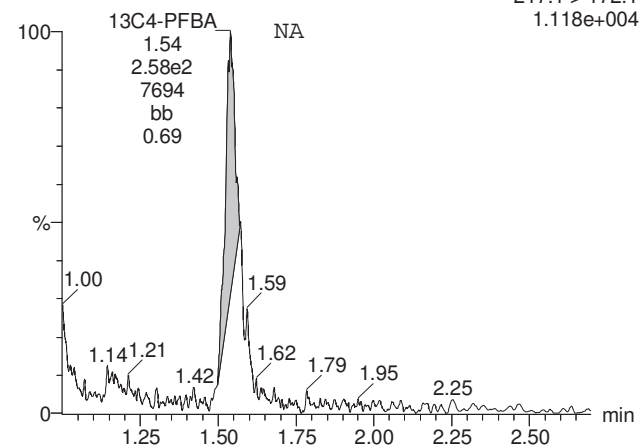
Printed: Wednesday, November 01, 2017 10:52:53 Pacific Daylight Time

Name: 171011M1_123, Date: 12-Oct-2017, Time: 07:48:32, ID: 1701353-05@20X IR09-GW09-17D 0.11531, Description: IR09-GW09-17D

13C4-PFBA

171011M1_123 Smooth(Mn,1x2)

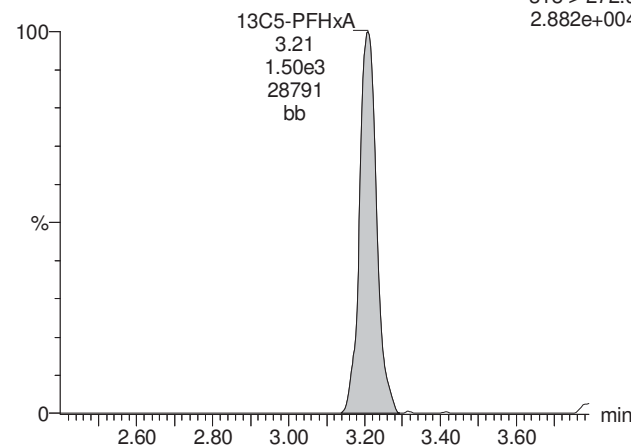
F3:MRM of 1 channel,ES-
217.1 > 172.1
1.118e+004



13C5-PFHxA

171011M1_123 Smooth(Mn,1x2)

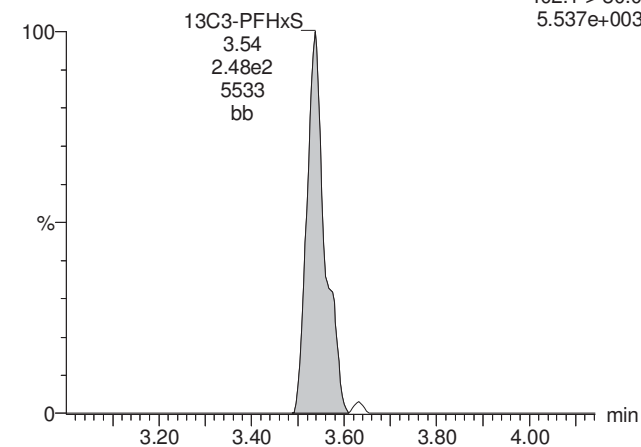
F10:MRM of 1 channel,ES-
318 > 272.9
2.882e+004



13C3-PFHxS

171011M1_123 Smooth(Mn,1x2)

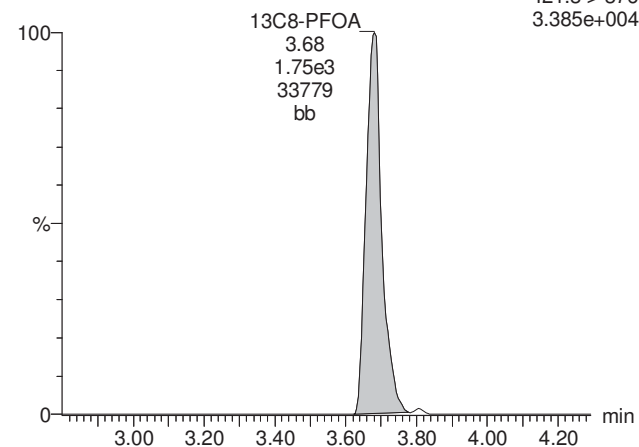
F17:MRM of 1 channel,ES-
402.1 > 80.0
5.537e+003



13C8-PFOA

171011M1_123 Smooth(Mn,1x2)

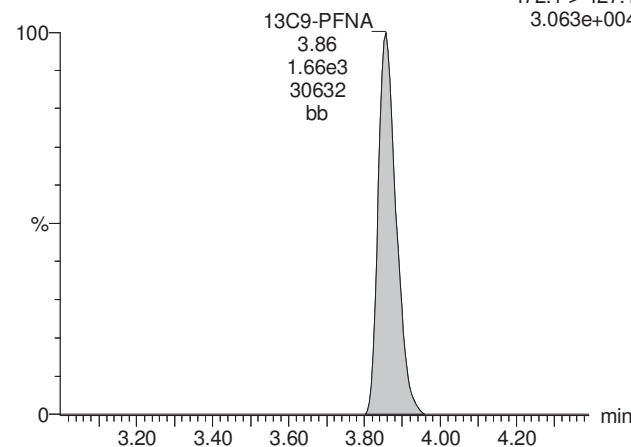
F21:MRM of 1 channel,ES-
421.3 > 376
3.385e+004



13C9-PFNA

171011M1_123 Smooth(Mn,1x2)

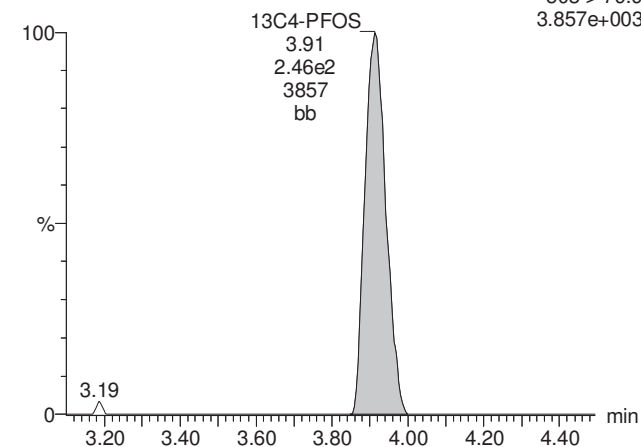
F27:MRM of 1 channel,ES-
472.1 > 427.1
3.063e+004



13C4-PFOS

171011M1_123 Smooth(Mn,1x2)

F31:MRM of 1 channel,ES-
503 > 79.9
3.857e+003



Dataset: U:\Q4.PRO\results\171010M1\171010M1-19.qld

Last Altered: Wednesday, November 01, 2017 09:51:01 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:51:44 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_19, Date: 10-Oct-2017, Time: 19:41:02, ID: 1701353-06 IR09-EB-092817 0.11622, Description: IR09-EB-092817

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299.1 > 79.9		7.86e3	0.1162		3.09				
2	4	PFHxA	313.2 > 268.9		1.18e4	0.1162		3.31				
3	5	PFHpA	363.1 > 319.1		4.81e4	0.1162		3.56				
4	6	L-PFHxS	399.0 > 80.0		3.16e3	0.1162		3.63				
5	9	L-PFOA	413 > 368.7	5.49e2	3.18e4	0.1162		3.68	3.72	0.216		
6	12	PFNA	463.1 > 419.1		2.85e4	0.1162		3.96				
7	14	L-PFOS	499 > 79.9		7.23e3	0.1162		4.01				
8	16	PFDA	513 > 468.8		2.01e4	0.1162		4.14				
9	18	N-MeFOSAA	570.1 > 419		5.69e3	0.1162		4.17				
10	19	N-EtFOSAA	584.2 > 419		5.53e3	0.1162		4.23				
11	20	PFUnA	562.9 > 518.9		2.27e4	0.1162		4.31				
12	22	PFDoA	613.0 > 569.1		2.18e4	0.1162		4.49				

Dataset: U:\Q4.PRO\results\171010M1\171010M1-19.qld

Last Altered: Wednesday, November 01, 2017 09:51:01 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:51:57 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_19, Date: 10-Oct-2017, Time: 19:41:02, ID: 1701353-06 IR09-EB-092817 0.11622, Description: IR09-EB-092817

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	24	PFTrDA	662.9 > 618.9	2.18e4	0.1162		4.68					
2	25	PFTeDA	712.9 > 668.8	3.02e4	0.1162		4.88					
3	31	13C3-PFBA	216.1 > 172.1	2.53e4	2.81e4	0.1162	0.944	1.76	1.64	11.3	102.658	95.4
4	32	13C3-PFPeA	266.1 > 222.1	3.50e4	4.25e4	0.1162	0.299	2.91	2.83	4.11	118.505	110.2
5	33	13C3-PFBS	302.1 > 79.9	7.86e3	4.25e4	0.1162	0.070	3.09	3.02	0.924	114.119	106.1
6	34	13C2-PFHxA	315 > 269.8	1.18e4	4.25e4	0.1162	0.295	3.31	3.25	1.39	40.441	94.0
7	35	13C4-PFHpA	367 > 322.1	4.81e4	4.25e4	0.1162	0.592	3.56	3.52	5.65	82.117	76.3
8	36	18O2-PFHxS	403 > 103.0	3.16e3	6.71e3	0.1162	0.497	3.63	3.59	5.89	102.039	94.9
9	37	13C2-6:2 FTS	429.1 > 408.9	4.00e3	3.19e4	0.1162	0.156	3.76	3.71	1.56	86.198	80.1
10	38	13C2-PFOA	414.9 > 369.7	3.18e4	3.19e4	0.1162	1.111	3.77	3.72	12.5	96.470	89.7
11	39	13C5-PFNA	468.1 > 423.1	2.85e4	3.75e4	0.1162	0.934	3.96	3.90	9.49	87.446	81.3
12	40	13C8-PFOA	506.1 > 78.0	2.27e3	3.41e4	0.1162	0.129	3.96	3.92	0.832	55.529	51.6
13	41	13C8-PFOS	507 > 79.9	7.23e3	7.89e3	0.1162	0.995	4.01	3.96	11.5	99.084	92.1
14	42	13C2-PFDA	515.1 > 469.9	2.01e4	3.18e4	0.1162	0.954	4.14	4.07	7.89	71.197	66.2
15	43	13C2-8:2 FTS	529.1 > 508.7	3.24e3	3.18e4	0.1162	0.116	4.14	4.07	1.27	94.546	87.9
16	44	d3-N-MeFOSAA	573.3 > 419	5.69e3	3.41e4	0.1162	0.020	4.17	4.10	2.08	910.112	65.1
17	45	d5-N-EtFOSAA	589.3 > 419	5.53e3	3.41e4	0.1162	0.020	4.23	4.17	2.02	862.934	61.7
18	46	13C2-PFUnA	565 > 519.8	2.27e4	3.41e4	0.1162	1.124	4.31	4.24	8.31	63.561	59.1
19	47	13C2-PFDoA	615.1 > 570.1	2.18e4	3.41e4	0.1162	1.087	4.49	4.40	8.00	63.308	58.9
20	49	13C2-PFTeDA	714.8 > 669.6	3.02e4	3.41e4	0.1162	1.014	4.88	4.77	11.1	93.851	87.3
21	54	13C4-PFBA	217.1 > 172.1	2.81e4	2.81e4	0.1162	1.000	1.76	1.64	12.5	107.555	100.0
22	55	13C5-PFHxA	318 > 272.9	4.25e4	4.25e4	0.1162	1.000	3.31	3.26	5.00	43.022	100.0
23	56	13C3-PFHxS	402.1 > 80.0	6.71e3	6.71e3	0.1162	1.000	3.63	3.59	12.5	107.555	100.0
24	57	13C8-PFOA	421.3 > 376	3.19e4	3.19e4	0.1162	1.000	3.77	3.72	12.5	107.555	100.0
25	58	13C9-PFNA	472.1 > 427.1	3.75e4	3.75e4	0.1162	1.000	3.96	3.91	12.5	107.555	100.0
26	59	13C4-PFOS	503 > 79.9	7.89e3	7.89e3	0.1162	1.000	4.01	3.96	12.5	107.555	100.0
27	60	13C6-PFDA	519.1 > 473.7	3.18e4	3.18e4	0.1162	1.000	4.14	4.07	12.5	107.555	100.0
28	61	13C7-PFUnA	570.1 > 524.8	3.41e4	3.41e4	0.1162	1.000	4.31	4.24	12.5	107.555	100.0
29	62	Total PFHxS	399.0 > 80.0	0.00e0	3.16e3	0.1162		3.63		0.000		
30	63	Total PFOA	413 > 368.7	5.49e2		0.1162		3.68		0.000		
31	64	Total PFOS	499 > 79.9	0.00e0		0.1162		4.01		0.000		
32	65	Total N-MeFOSAA	570.1 > 419	0.00e0	5.69e3	0.1162		4.17		0.000		

Dataset: U:\Q4.PRO\results\171010M1\171010M1-19.qld

Last Altered: Wednesday, November 01, 2017 09:51:01 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:51:57 Pacific Daylight Time

Name: 171010M1_19, Date: 10-Oct-2017, Time: 19:41:02, ID: 1701353-06 IR09-EB-092817 0.11622, Description: IR09-EB-092817

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	66 Total N-EtFOSAA	584.2 > 419	0.00e0	5.53e3	0.1162		4.23		0.000		
34	68 Total PFOA+PFOS	413 > 368.7;4...	5.49e2		0.1162		0.00		0.000		

Dataset: U:\Q4.PRO\results\171010M1\171010M1-19.qld

Last Altered: Wednesday, November 01, 2017 09:51:01 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:51:57 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_19, Date: 10-Oct-2017, Time: 19:41:02, ID: 1701353-06 IR09-EB-092817 0.11622, Description: IR09-EB-092817

Total PFHxS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1								

Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	9 L-PFOA	413 > 368.7	3.72	549.075	31820.172	0.216	MMI	

Total PFOS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1								

Total N-Me-FOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1								

Total N-EtFOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1								

Total PFOA+PFOS,Total PFOS,Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	9 L-PFOA	413 > 368.7	3.72	549.075	31820.172	0.216	MMI	

Dataset: U:\Q4.PRO\results\171010M1\171010M1-19.qld

Last Altered: Wednesday, November 01, 2017 09:51:01 Pacific Daylight Time

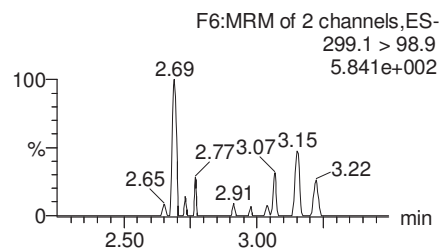
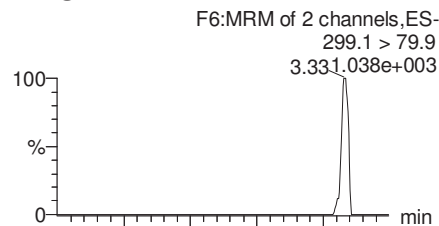
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Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

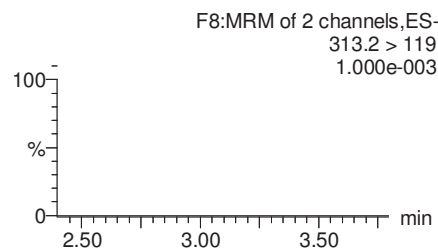
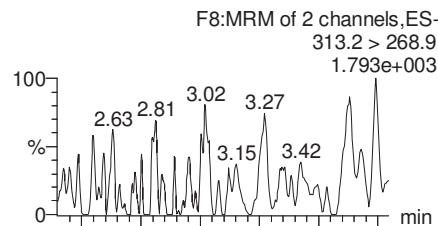
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Name: 171010M1_19, Date: 10-Oct-2017, Time: 19:41:02, ID: 1701353-06 IR09-EB-092817 0.11622, Description: IR09-EB-092817

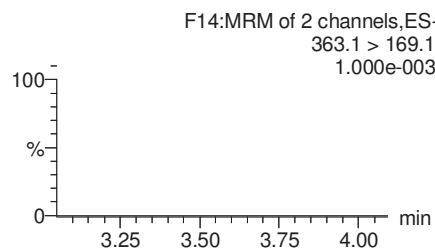
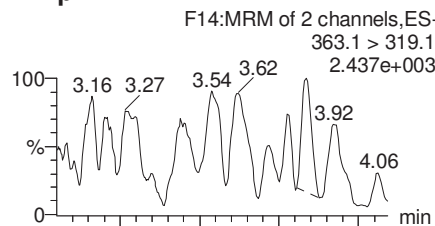
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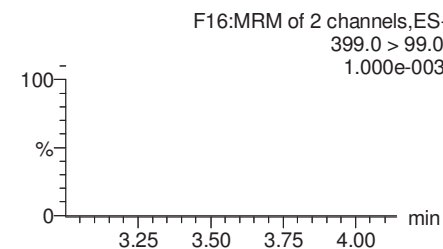
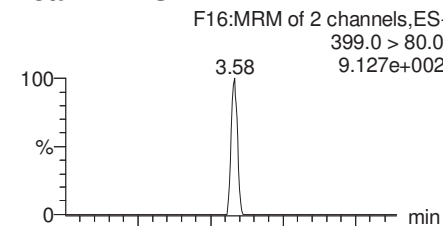
PFHxA



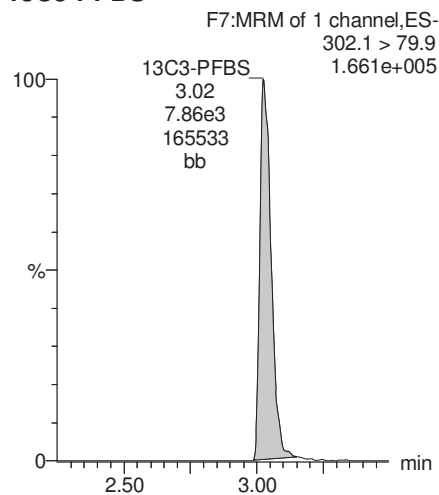
PFHpA



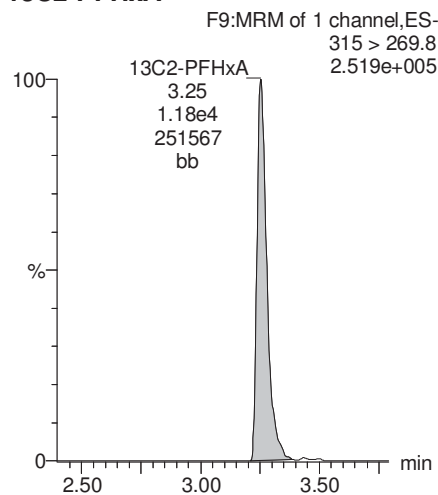
Total PFHxS



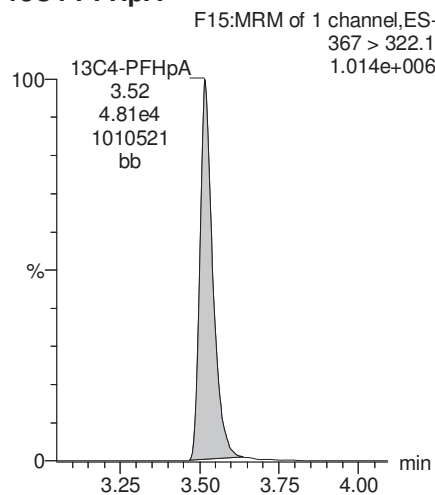
13C3-PFBS



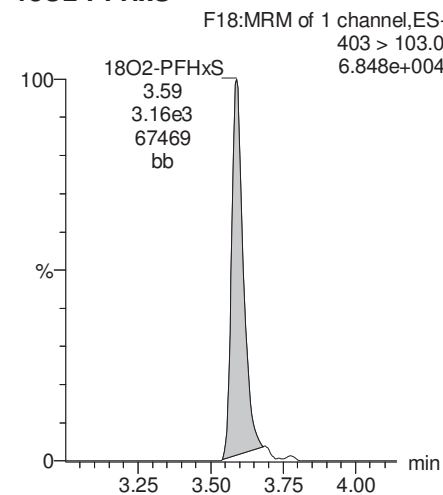
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



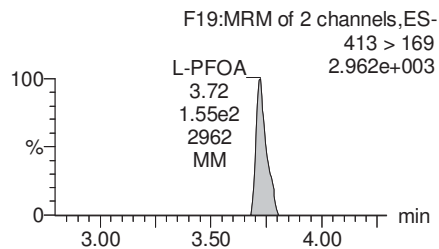
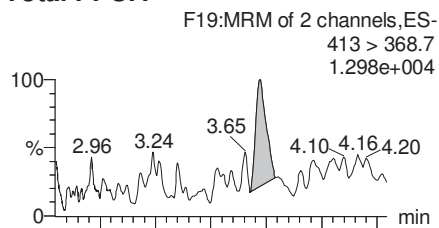
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Last Altered: Wednesday, November 01, 2017 09:51:01 Pacific Daylight Time

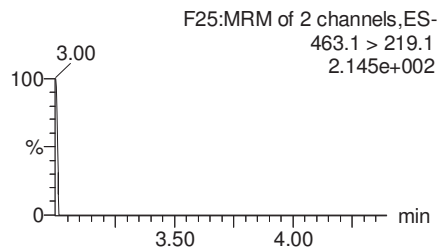
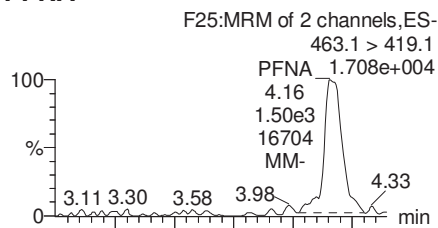
Printed: Wednesday, November 01, 2017 09:51:57 Pacific Daylight Time

Name: 171010M1_19, Date: 10-Oct-2017, Time: 19:41:02, ID: 1701353-06 IR09-EB-092817 0.11622, Description: IR09-EB-092817

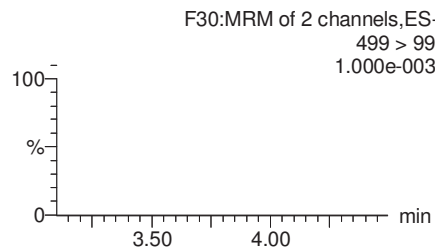
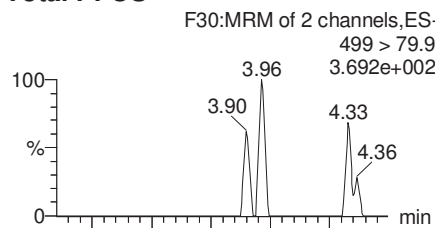
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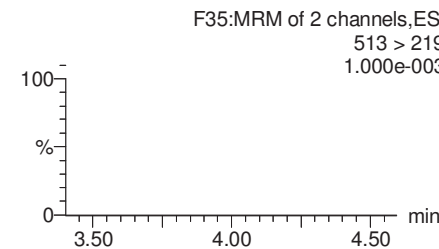
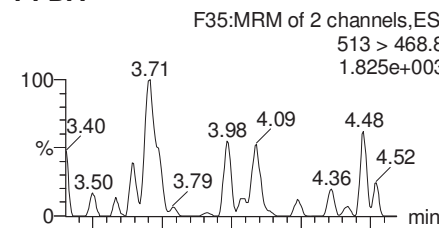
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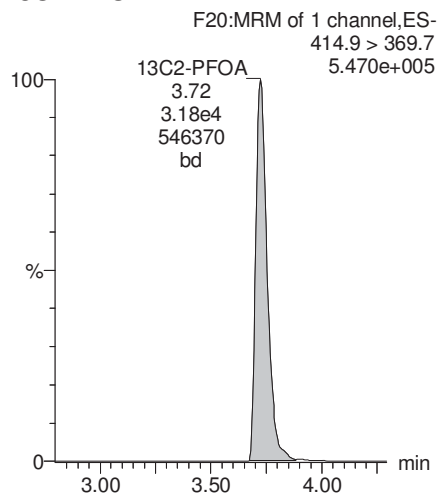
Total PFOS



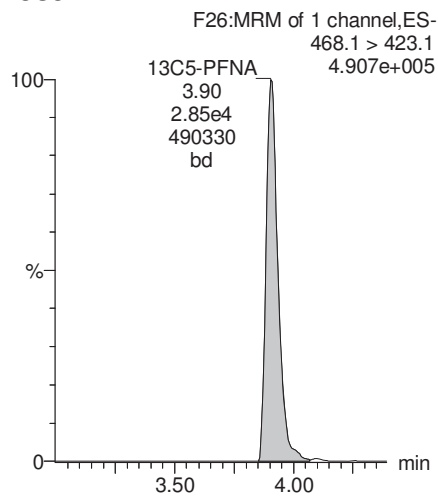
PFDA



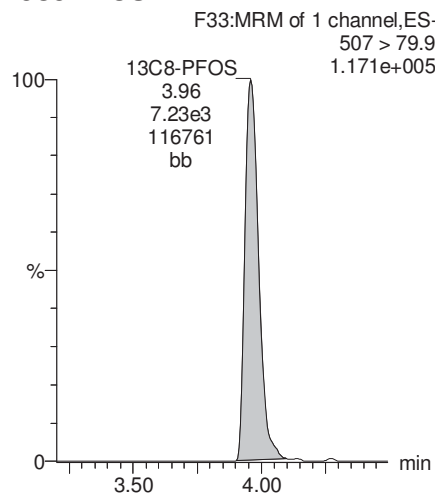
13C2-PFOA



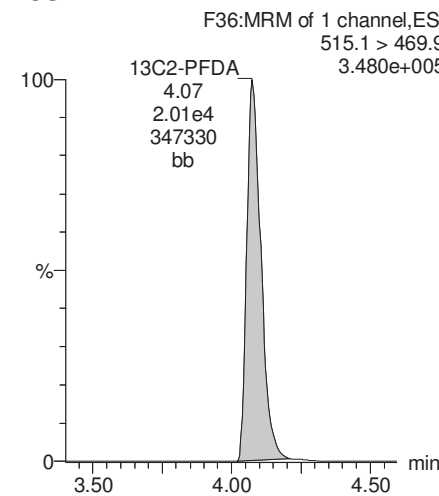
13C5-PFNA



13C8-PFOS



13C2-PFDA



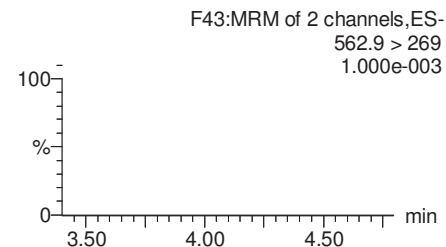
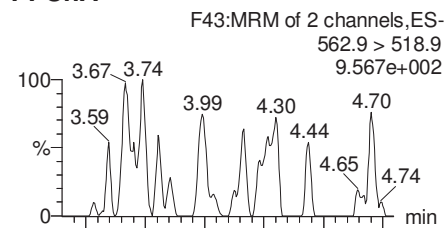
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Last Altered: Wednesday, November 01, 2017 09:51:01 Pacific Daylight Time

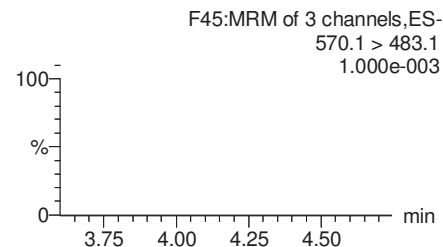
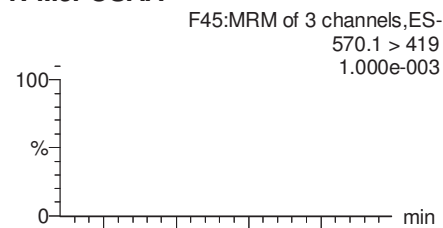
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Name: 171010M1_19, Date: 10-Oct-2017, Time: 19:41:02, ID: 1701353-06 IR09-EB-092817 0.11622, Description: IR09-EB-092817

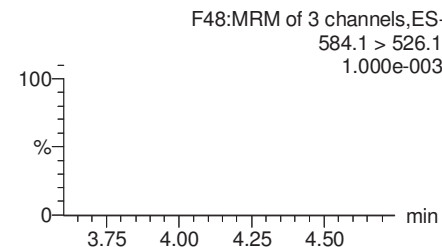
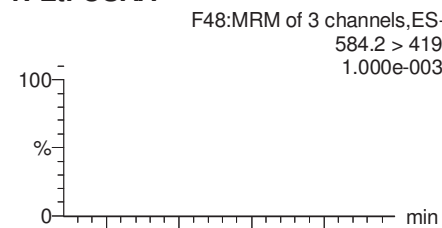
PFUnA



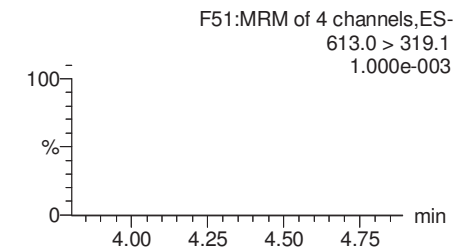
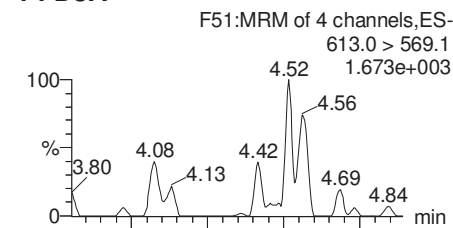
N-MeFOSAA



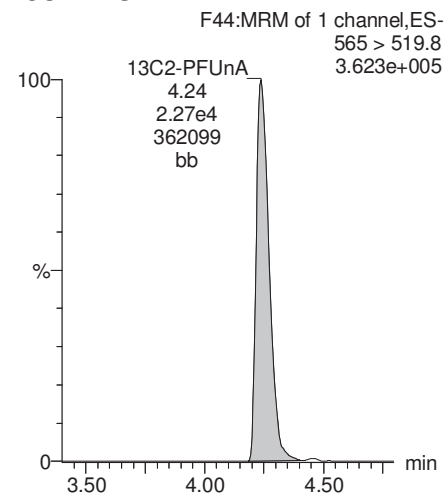
N-EtFOSAA



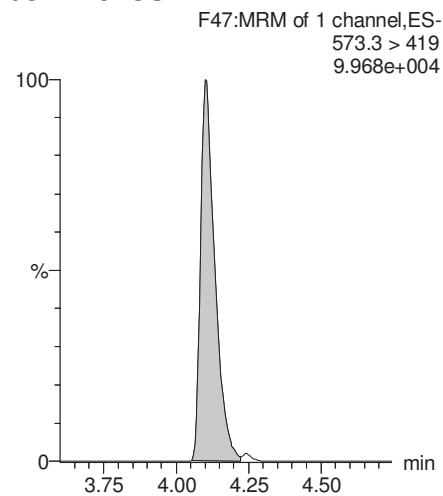
PFDoA



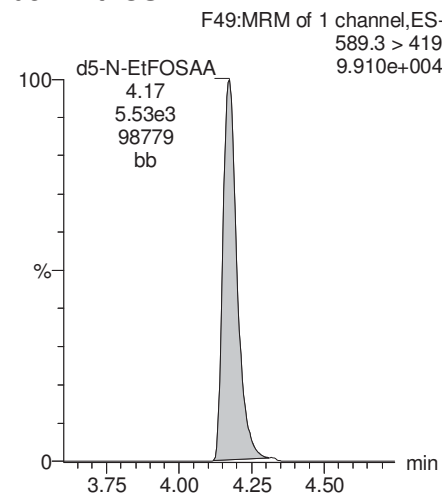
13C2-PFUnA



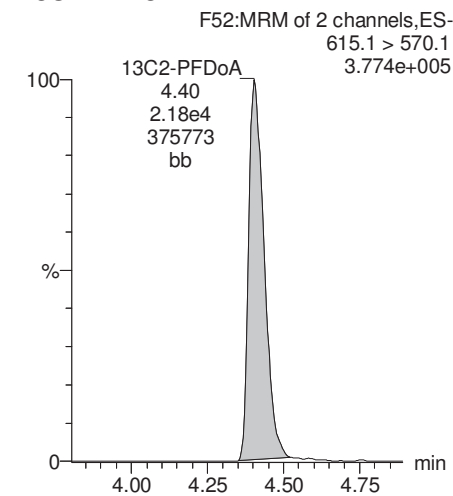
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDoA



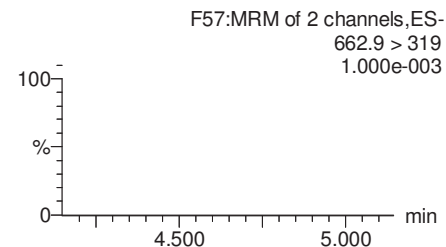
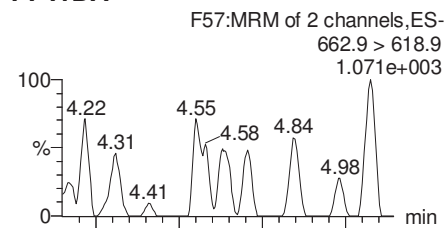
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Last Altered: Wednesday, November 01, 2017 09:51:01 Pacific Daylight Time

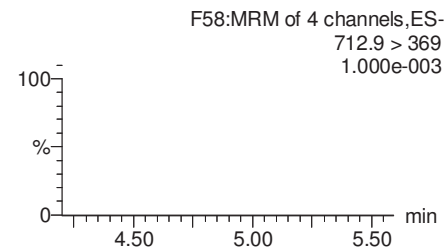
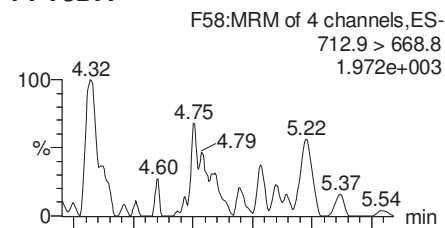
Printed: Wednesday, November 01, 2017 09:51:57 Pacific Daylight Time

Name: 171010M1_19, Date: 10-Oct-2017, Time: 19:41:02, ID: 1701353-06 IR09-EB-092817 0.11622, Description: IR09-EB-092817

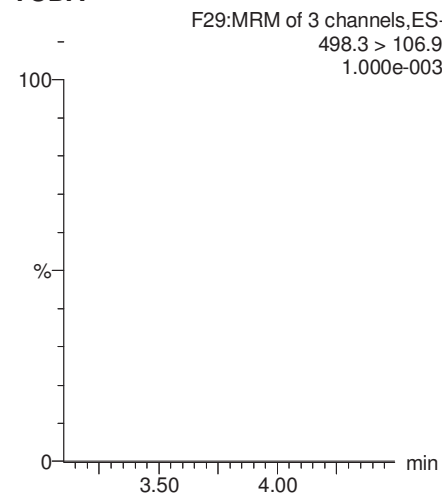
PFTrDA



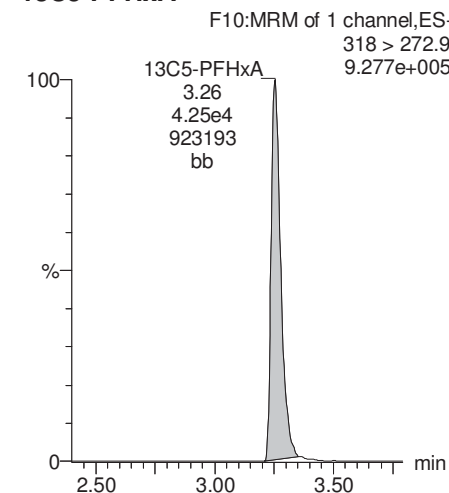
PFTeDA



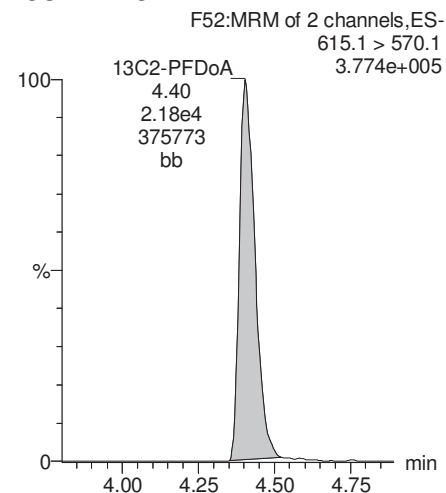
TCDA



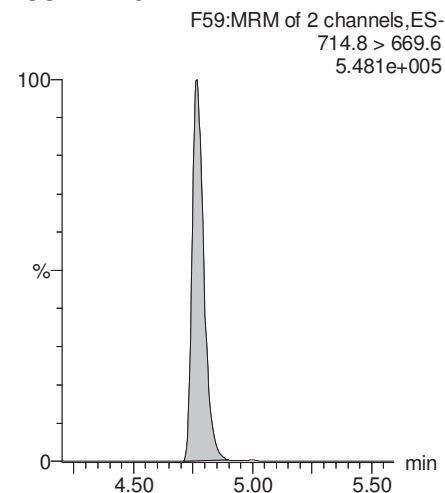
13C5-PFHxA



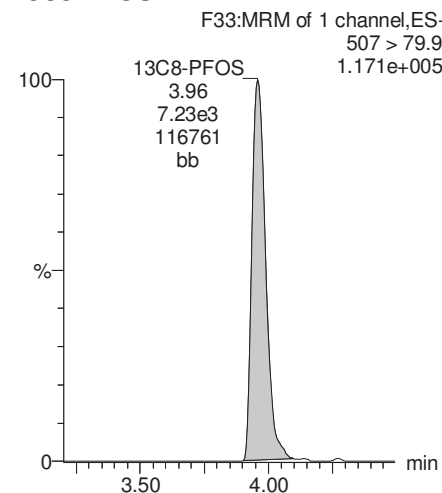
13C2-PFDoA



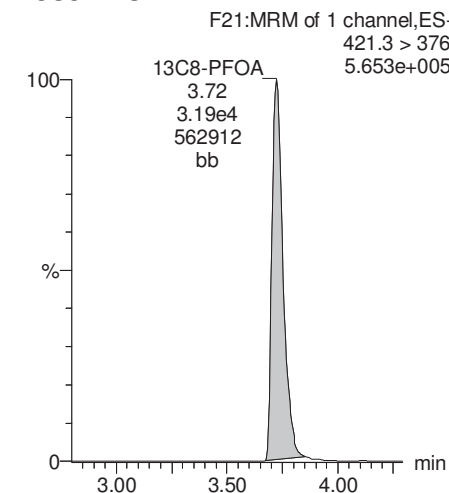
13C2-PFTeDA



13C8-PFOS



13C8-PFOA



Dataset: U:\Q4.PRO\results\171010M1\171010M1-19.qld

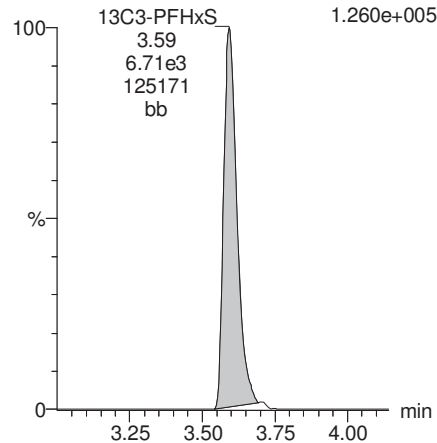
Last Altered: Wednesday, November 01, 2017 09:51:01 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:51:57 Pacific Daylight Time

Name: 171010M1_19, Date: 10-Oct-2017, Time: 19:41:02, ID: 1701353-06 IR09-EB-092817 0.11622, Description: IR09-EB-092817

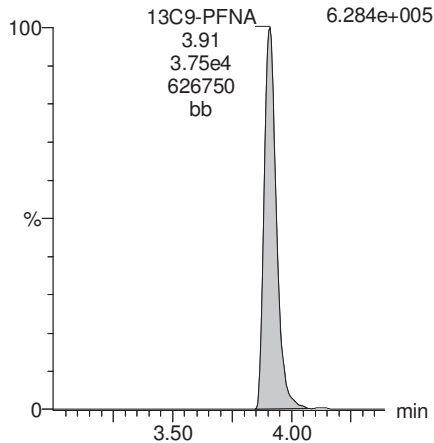
13C3-PFHxS

F17:MRM of 1 channel,ES-
402.1 > 80.0
1.260e+005



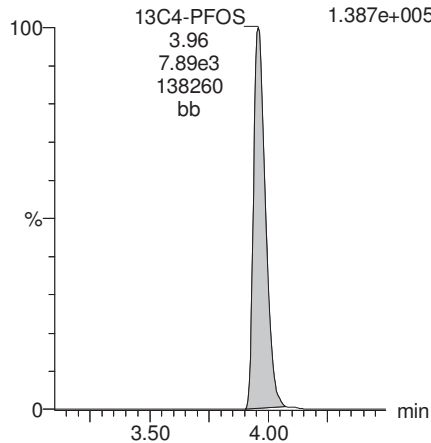
13C9-PFNA

F27:MRM of 1 channel,ES-
472.1 > 427.1
6.284e+005



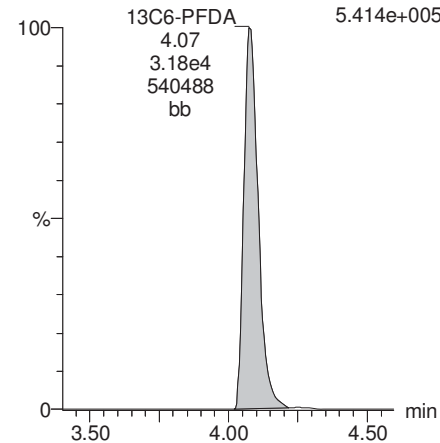
13C4-PFOS

F31:MRM of 1 channel,ES-
503 > 79.9
1.387e+005



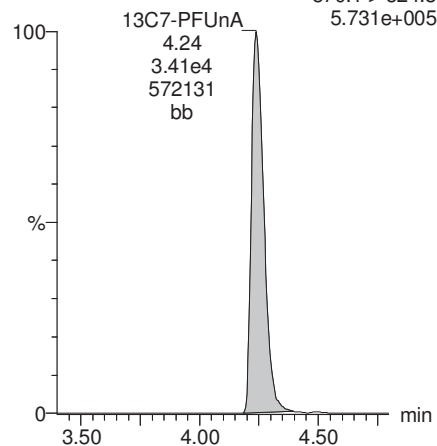
13C6-PFDA

F38:MRM of 1 channel,ES-
519.1 > 473.7
5.414e+005



13C7-PFUnA

F46:MRM of 1 channel,ES-
570.1 > 524.8
5.731e+005



Dataset: U:\Q4.PRO\results\171010M1\171010M1-20.qld

Last Altered: Wednesday, November 01, 2017 09:54:02 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:54:31 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_20, Date: 10-Oct-2017, Time: 19:51:40, ID: 1701353-07 IR09-FB-092817 0.12066, Description: IR09-FB-092817

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	3	PFBS	299.1 > 79.9		8.68e3	0.1207		3.09				
2	4	PFHxA	313.2 > 268.9		1.13e4	0.1207		3.31				
3	5	PFHpA	363.1 > 319.1		4.71e4	0.1207		3.56				
4	6	L-PFHxS	399.0 > 80.0	2.43e1	3.19e3	0.1207		3.63	3.59	0.0949	1.949	
5	9	L-PFOA	413 > 368.7		3.22e4	0.1207		3.68				
6	12	PFNA	463.1 > 419.1		2.80e4	0.1207		3.96				
7	14	L-PFOS	499 > 79.9		8.26e3	0.1207		4.01				
8	16	PFDA	513 > 468.8		2.02e4	0.1207		4.14				
9	18	N-MeFOSAA	570.1 > 419		4.59e3	0.1207		4.17				
10	19	N-EtFOSAA	584.2 > 419		6.12e3	0.1207		4.23				
11	20	PFUnA	562.9 > 518.9		2.41e4	0.1207		4.31				
12	22	PFDoA	613.0 > 569.1		2.49e4	0.1207		4.49				

Dataset: U:\Q4.PRO\results\171010M1\171010M1-20.qld

Last Altered: Wednesday, November 01, 2017 09:54:02 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:57:20 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_20, Date: 10-Oct-2017, Time: 19:51:40, ID: 1701353-07 IR09-FB-092817 0.12066, Description: IR09-FB-092817

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec	
1	24	PFTrDA	662.9 > 618.9	2.49e4	0.1207		4.68					
2	25	PFTeDA	712.9 > 668.8	2.89e4	0.1207		4.88					
3	31	13C3-PFBA	216.1 > 172.1	2.56e4	2.68e4	0.1207	0.944	1.76	1.63	12.0	104.946	101.3
4	32	13C3-PFPeA	266.1 > 222.1	3.53e4	3.85e4	0.1207	0.299	2.91	2.84	4.58	127.076	122.7
5	33	13C3-PFBS	302.1 > 79.9	8.68e3	3.85e4	0.1207	0.070	3.09	3.03	1.13	134.008	129.4
6	34	13C2-PFHxA	315 > 269.8	1.13e4	3.85e4	0.1207	0.295	3.31	3.25	1.47	41.327	99.7
7	35	13C4-PFHpA	367 > 322.1	4.71e4	3.85e4	0.1207	0.592	3.56	3.52	6.11	85.591	82.6
8	36	18O2-PFHxS	403 > 103.0	3.19e3	6.17e3	0.1207	0.497	3.63	3.58	6.47	107.982	104.2
9	37	13C2-6:2 FTS	429.1 > 408.9	3.90e3	3.25e4	0.1207	0.156	3.76	3.71	1.50	79.711	76.9
10	38	13C2-PFOA	414.9 > 369.7	3.22e4	3.25e4	0.1207	1.111	3.77	3.72	12.4	92.507	89.3
11	39	13C5-PFNA	468.1 > 423.1	2.80e4	3.48e4	0.1207	0.934	3.96	3.90	10.1	89.374	86.3
12	40	13C8-PFOA	506.1 > 78.0	1.89e3	3.50e4	0.1207	0.129	3.96	3.91	0.674	43.318	41.8
13	41	13C8-PFOS	507 > 79.9	8.26e3	7.38e3	0.1207	0.995	4.01	3.95	14.0	116.508	112.5
14	42	13C2-PFDA	515.1 > 469.9	2.02e4	3.10e4	0.1207	0.954	4.14	4.07	8.12	70.551	68.1
15	43	13C2-8:2 FTS	529.1 > 508.7	3.19e3	3.10e4	0.1207	0.116	4.14	4.07	1.28	91.866	88.7
16	44	d3-N-MeFOSAA	573.3 > 419	4.59e3	3.50e4	0.1207	0.020	4.17	4.10	1.64	691.167	51.3
17	45	d5-N-EtFOSAA	589.3 > 419	6.12e3	3.50e4	0.1207	0.020	4.23	4.17	2.19	898.180	66.7
18	46	13C2-PFUnA	565 > 519.8	2.41e4	3.50e4	0.1207	1.124	4.31	4.24	8.61	63.495	61.3
19	47	13C2-PFDoA	615.1 > 570.1	2.49e4	3.50e4	0.1207	1.087	4.49	4.40	8.89	67.825	65.5
20	49	13C2-PFTeDA	714.8 > 669.6	2.89e4	3.50e4	0.1207	1.014	4.88	4.76	10.3	84.378	81.4
21	54	13C4-PFBA	217.1 > 172.1	2.68e4	2.68e4	0.1207	1.000	1.76	1.64	12.5	103.597	100.0
22	55	13C5-PFHxA	318 > 272.9	3.85e4	3.85e4	0.1207	1.000	3.31	3.26	5.00	41.439	100.0
23	56	13C3-PFHxS	402.1 > 80.0	6.17e3	6.17e3	0.1207	1.000	3.63	3.58	12.5	103.597	100.0
24	57	13C8-PFOA	421.3 > 376	3.25e4	3.25e4	0.1207	1.000	3.77	3.72	12.5	103.597	100.0
25	58	13C9-PFNA	472.1 > 427.1	3.48e4	3.48e4	0.1207	1.000	3.96	3.90	12.5	103.597	100.0
26	59	13C4-PFOS	503 > 79.9	7.38e3	7.38e3	0.1207	1.000	4.01	3.95	12.5	103.597	100.0
27	60	13C6-PFDA	519.1 > 473.7	3.10e4	3.10e4	0.1207	1.000	4.14	4.07	12.5	103.597	100.0
28	61	13C7-PFUnA	570.1 > 524.8	3.50e4	3.50e4	0.1207	1.000	4.31	4.24	12.5	103.597	100.0
29	62	Total PFHxS	399.0 > 80.0	2.43e1	3.19e3	0.1207		3.63		0.0949	1.949	
30	63	Total PFOA	413 > 368.7	0.00e0		0.1207		3.68		0.000		
31	64	Total PFOS	499 > 79.9	0.00e0		0.1207		4.01		0.000		
32	65	Total N-MeFOSAA	570.1 > 419	0.00e0	4.59e3	0.1207		4.17		0.000		

Dataset: U:\Q4.PRO\results\171010M1\171010M1-20.qld

Last Altered: Wednesday, November 01, 2017 09:54:02 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:57:20 Pacific Daylight Time

Name: 171010M1_20, Date: 10-Oct-2017, Time: 19:51:40, ID: 1701353-07 IR09-FB-092817 0.12066, Description: IR09-FB-092817

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
33	66 Total N-EtFOSAA	584.2 > 419	0.00e0	6.12e3	0.1207		4.23		0.000		
34	68 Total PFOA+PFOS	413 > 368.7;4...	0.00e0		0.1207		0.00		0.000		

Dataset: U:\Q4.PRO\results\171010M1\171010M1-20.qld

Last Altered: Wednesday, November 01, 2017 09:54:02 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 09:57:20 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_20, Date: 10-Oct-2017, Time: 19:51:40, ID: 1701353-07 IR09-FB-092817 0.12066, Description: IR09-FB-092817

Total PFHxS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1	6 L-PFHxS	399.0 > 80.0	3.59	24.253	3194.333	0.095	MM	1.9

Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1								

Total PFOS

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1								

Total N-Me-FOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1								

Total N-EtFOSAA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1								

Total PFOA+PFOS,Total PFOS,Total PFOA

#	Name	Trace	RT	Area	IS Area	Response	Primary Flags	Conc.
1								

Dataset: U:\Q4.PRO\results\171010M1\171010M1-20.qld

Last Altered: Wednesday, November 01, 2017 09:54:02 Pacific Daylight Time

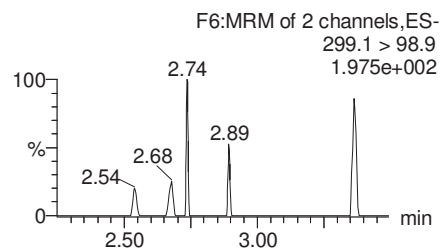
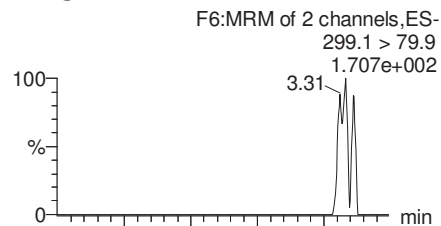
Printed: Wednesday, November 01, 2017 09:57:20 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

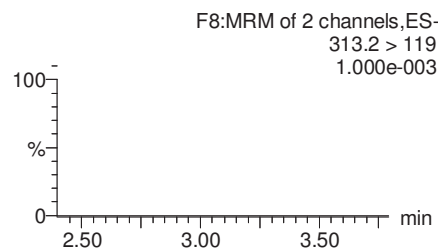
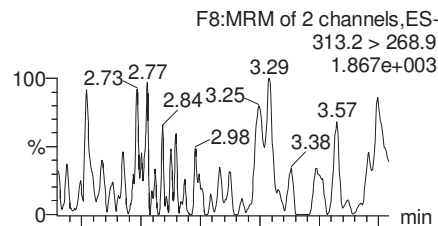
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Name: 171010M1_20, Date: 10-Oct-2017, Time: 19:51:40, ID: 1701353-07 IR09-FB-092817 0.12066, Description: IR09-FB-092817

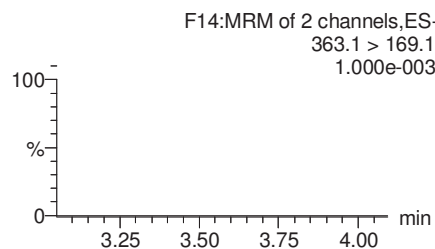
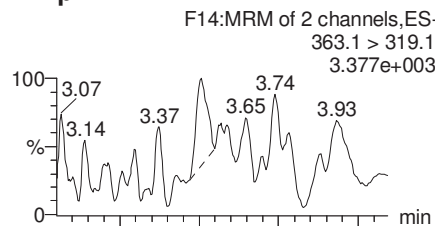
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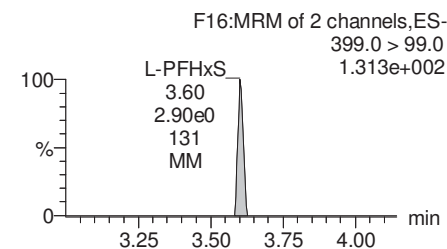
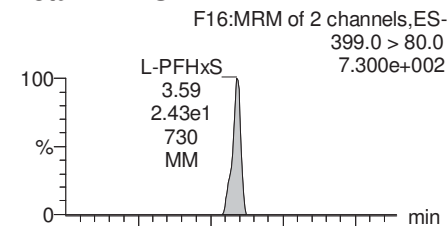
PFHxA



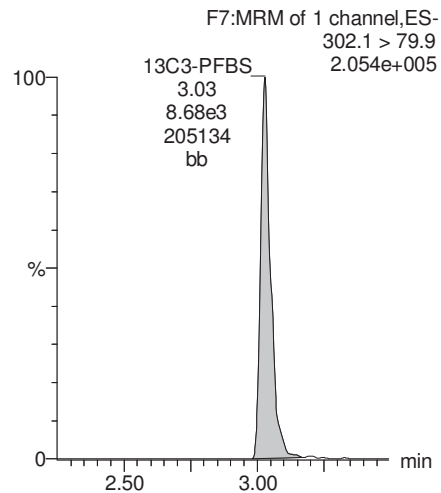
PFHpA



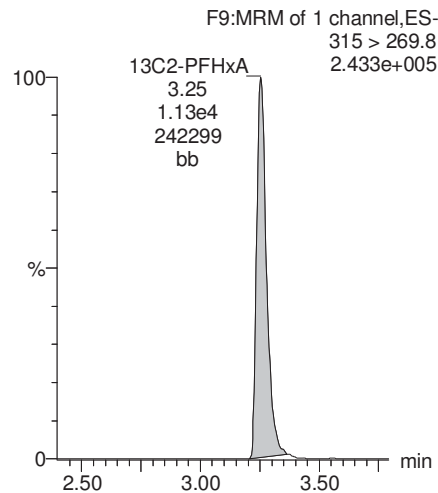
Total PFHxS



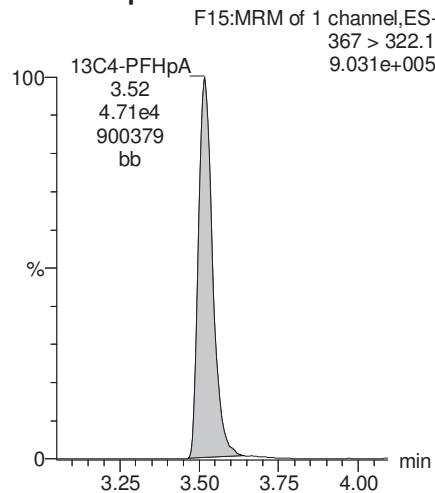
13C3-PFBS



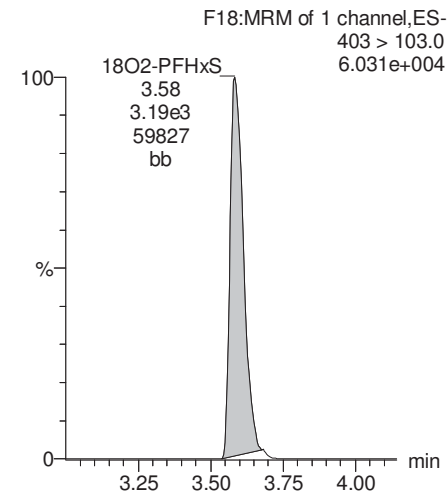
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



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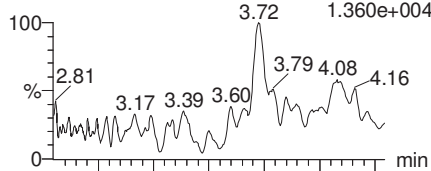
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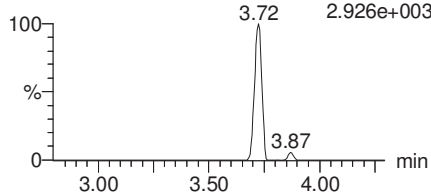
Name: 171010M1_20, Date: 10-Oct-2017, Time: 19:51:40, ID: 1701353-07 IR09-FB-092817 0.12066, Description: IR09-FB-092817

Total PFOA

F19:MRM of 2 channels,ES-
413 > 368.7
1.360e+004

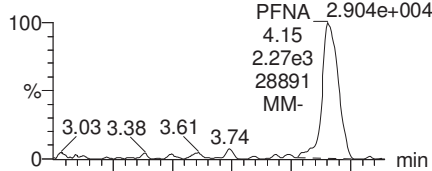


F19:MRM of 2 channels,ES-
413 > 169
2.926e+003

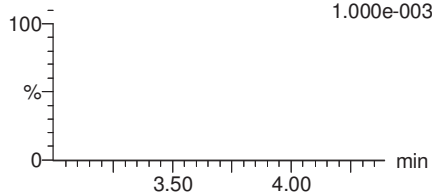


PFNA

F25:MRM of 2 channels,ES-
463.1 > 419.1
2.904e+004

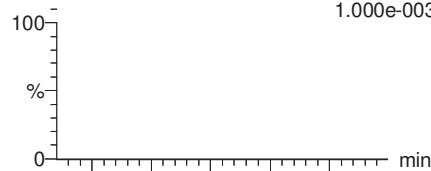


F25:MRM of 2 channels,ES-
463.1 > 219.1
1.000e-003

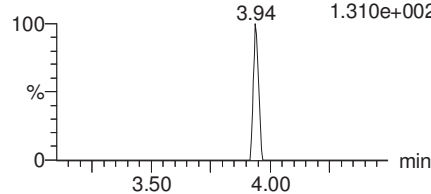


Total PFOS

F30:MRM of 2 channels,ES-
499 > 79.9
1.000e-003

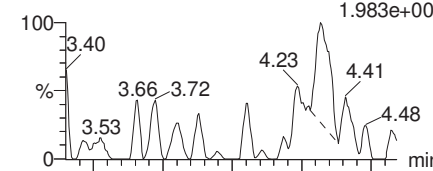


F30:MRM of 2 channels,ES-
499 > 99
1.310e+002

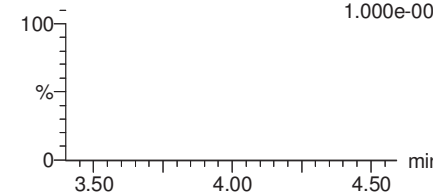


PFDA

F35:MRM of 2 channels,ES-
513 > 468.8
1.983e+003

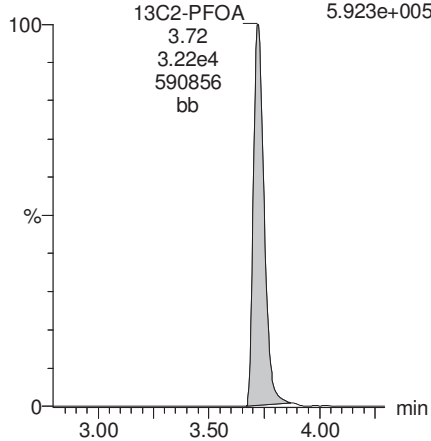


F35:MRM of 2 channels,ES-
513 > 219
1.000e-003



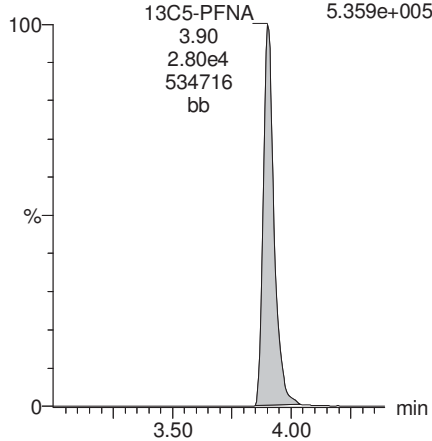
13C2-PFOA

F20:MRM of 1 channel,ES-
414.9 > 369.7
5.923e+005



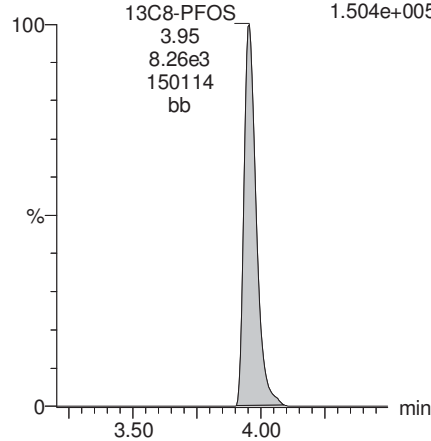
13C5-PFNA

F26:MRM of 1 channel,ES-
468.1 > 423.1
5.359e+005



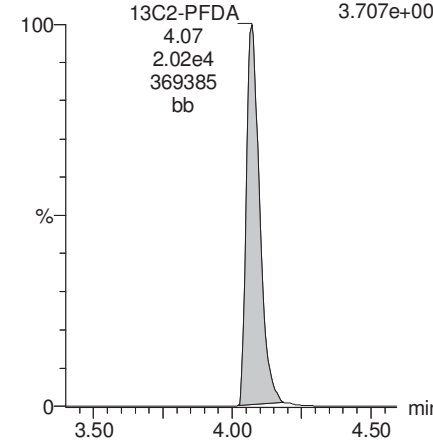
13C8-PFOS

F33:MRM of 1 channel,ES-
507 > 79.9
1.504e+005



13C2-PFDA

F36:MRM of 1 channel,ES-
515.1 > 469.9
3.707e+005



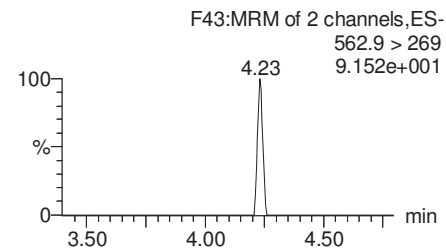
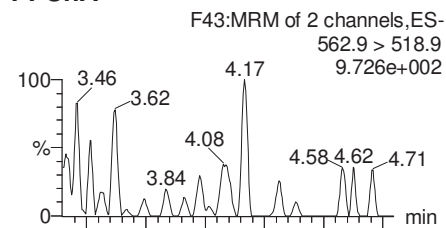
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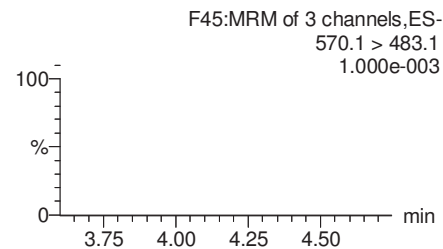
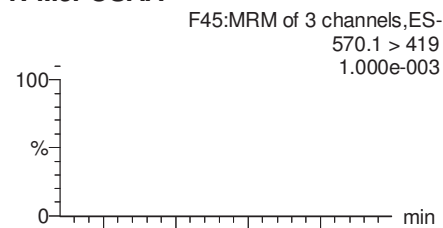
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Name: 171010M1_20, Date: 10-Oct-2017, Time: 19:51:40, ID: 1701353-07 IR09-FB-092817 0.12066, Description: IR09-FB-092817

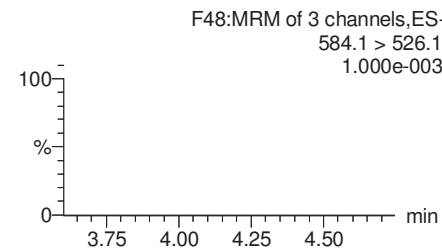
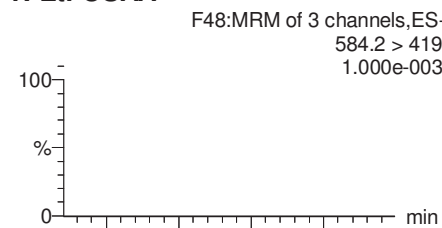
PFUnA



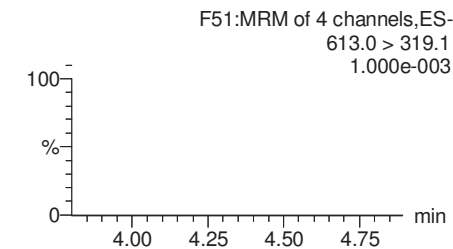
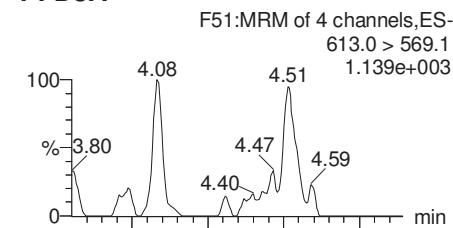
N-MeFOSAA



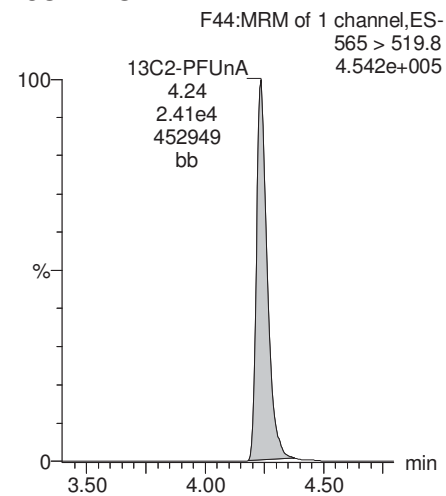
N-EtFOSAA



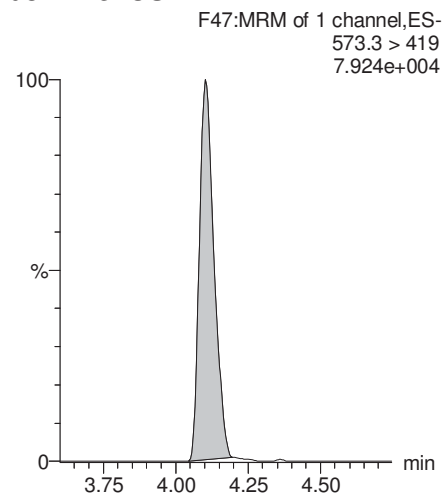
PFDaA



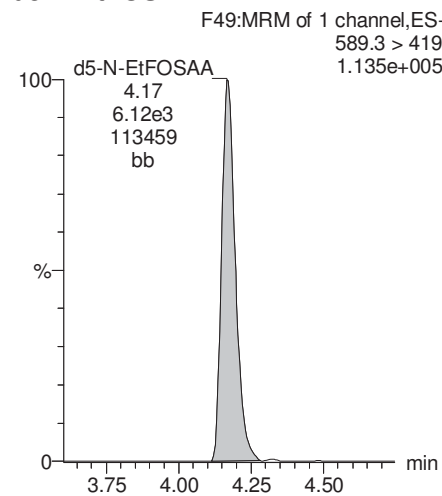
13C2-PFUnA



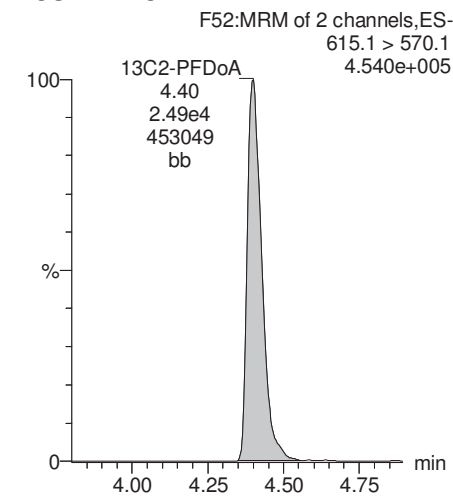
d3-N-MeFOSAA



d5-N-EtFOSAA



13C2-PFDaA



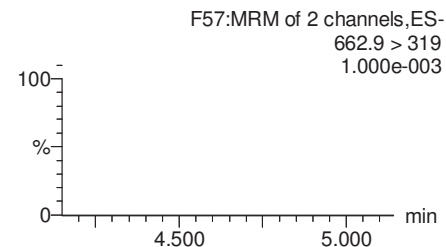
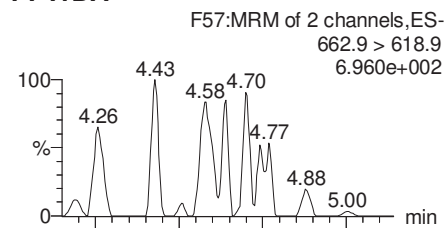
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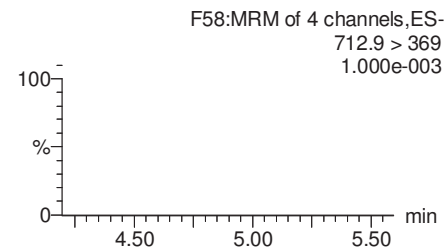
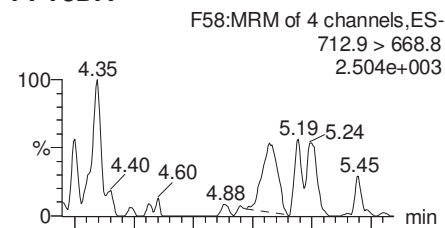
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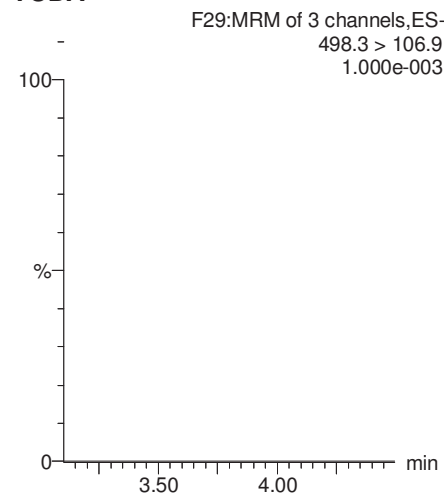
PFTrDA



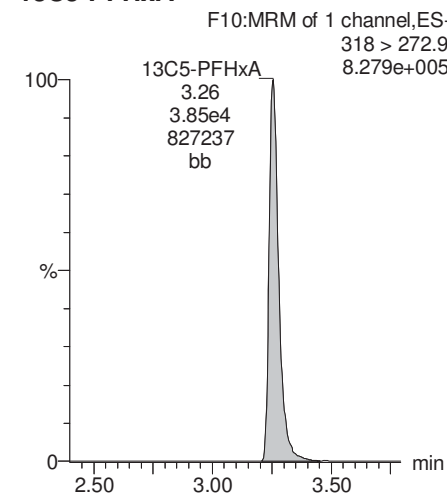
PFTeDA



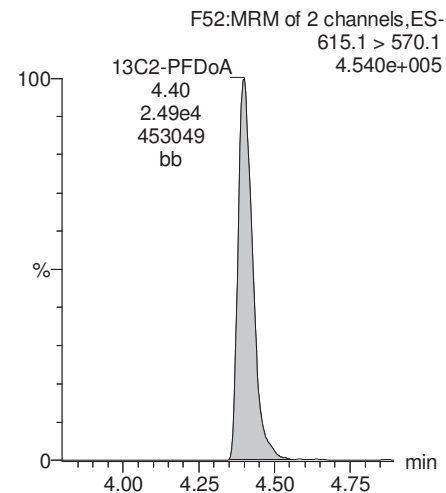
TCDA



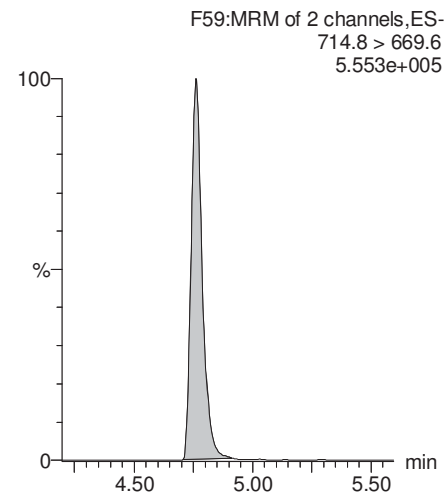
13C5-PFHxA



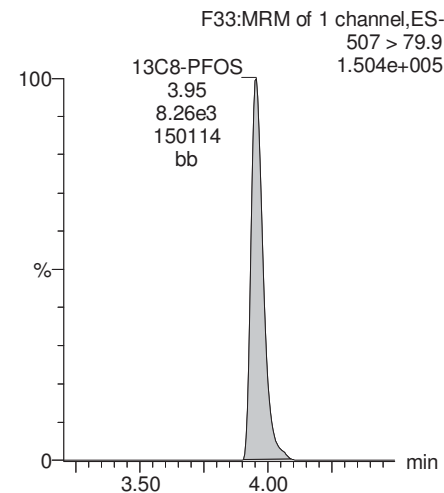
13C2-PFDoA



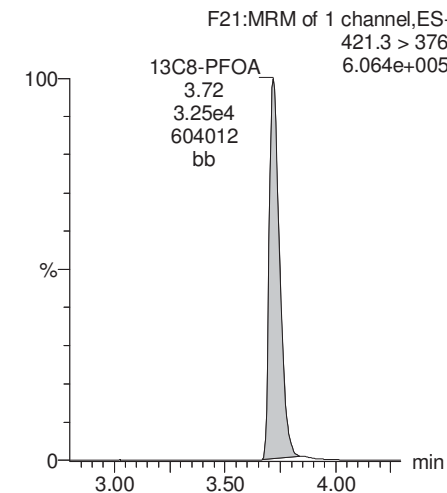
13C2-PFTeDA



13C8-PFOS



13C8-PFOA



Dataset: U:\Q4.PRO\results\171010M1\171010M1-20.qld

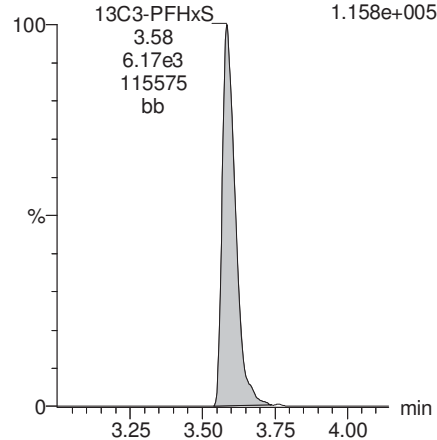
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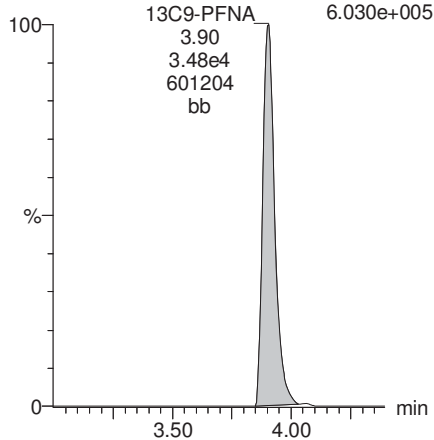
13C3-PFHxS

F17:MRM of 1 channel,ES-
402.1 > 80.0
1.158e+005



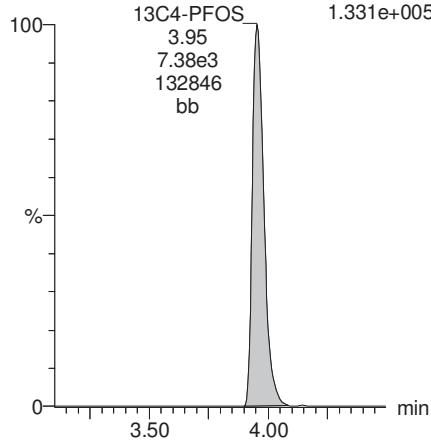
13C9-PFNA

F27:MRM of 1 channel,ES-
472.1 > 427.1
6.030e+005



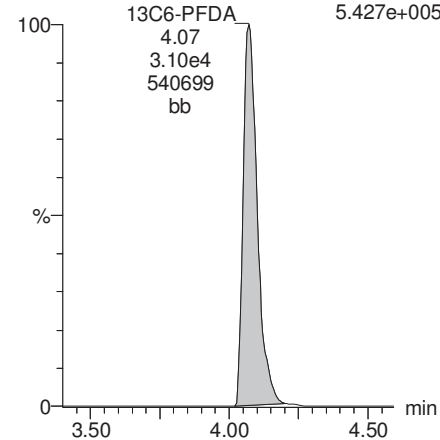
13C4-PFOS

F31:MRM of 1 channel,ES-
503 > 79.9
1.331e+005



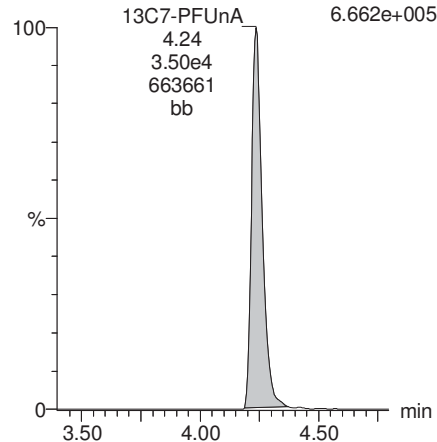
13C6-PFDA

F38:MRM of 1 channel,ES-
519.1 > 473.7
5.427e+005



13C7-PFUnA

F46:MRM of 1 channel,ES-
570.1 > 524.8
6.662e+005



Dataset: U:\Q4.PRO\results\171010M1\171010M1-21.qld

Last Altered: Wednesday, November 01, 2017 10:00:35 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:05:04 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_21, Date: 10-Oct-2017, Time: 20:02:27, ID: 1701353-08 IR09-IDW-AQ-092717 0.11561, Description: IR09-IDW-AQ-092717

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	9 L-PFOA	413 > 368.7	2.26e5	3.10e4	0.1156		3.68	3.72	91.2	850	
2	14 L-PFOS	499 > 79.9	5.65e5	5.10e3	0.1156		4.01	3.96	1380	11300 ^E	
3	38 13C2-PFOA	414.9 > 369.7	3.10e4	3.33e4	0.1156	1.111	3.77	3.72	11.6	90.5	83.7
4	41 13C8-PFOS	507 > 79.9	5.10e3	5.58e3	0.1156	0.995	4.01	3.96	11.4	99.4	92.0
5	57 13C8-PFOA	421.3 > 376	3.33e4	3.33e4	0.1156	1.000	3.77	3.72	12.5	108	100.0
6	59 13C4-PFOS	503 > 79.9	5.58e3	5.58e3	0.1156	1.000	4.01	3.96	12.5	108	100.0
7	63 Total PFOA	413 > 368.7	2.67e5		0.1156		3.68		108	1000	
8	64 Total PFOS	499 > 79.9	5.65e5		0.1156		4.01		1380	11300	

Total PFOA and PFOS: 12,400

Dataset: U:\Q4.PRO\results\171010M1\171010M1-21.qld

Last Altered: Wednesday, November 01, 2017 10:00:35 Pacific Daylight Time

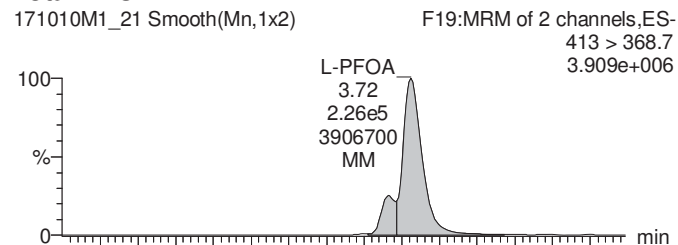
Printed: Wednesday, November 01, 2017 10:05:04 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

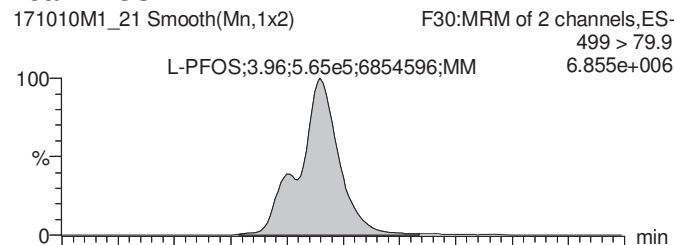
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_21, Date: 10-Oct-2017, Time: 20:02:27, ID: 1701353-08 IR09-IDW-AQ-092717 0.11561, Description: IR09-IDW-AQ-092717

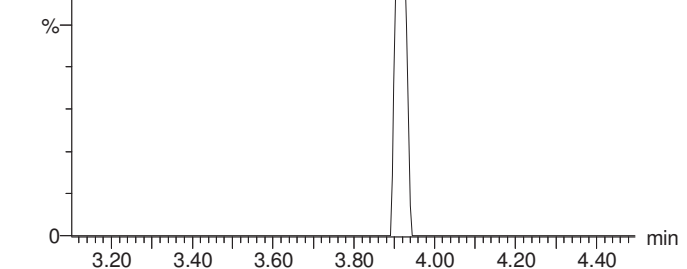
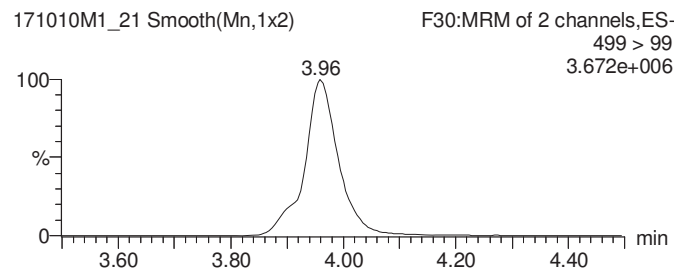
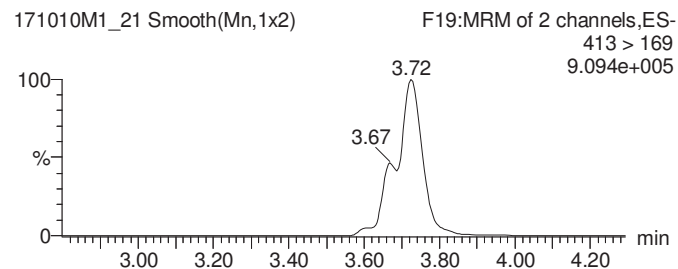
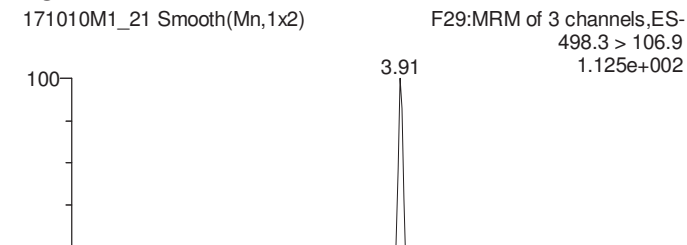
Total PFOA



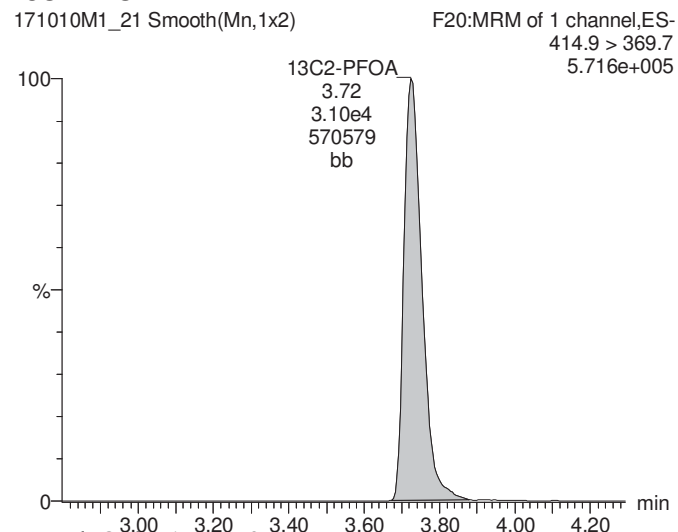
Total PFOS



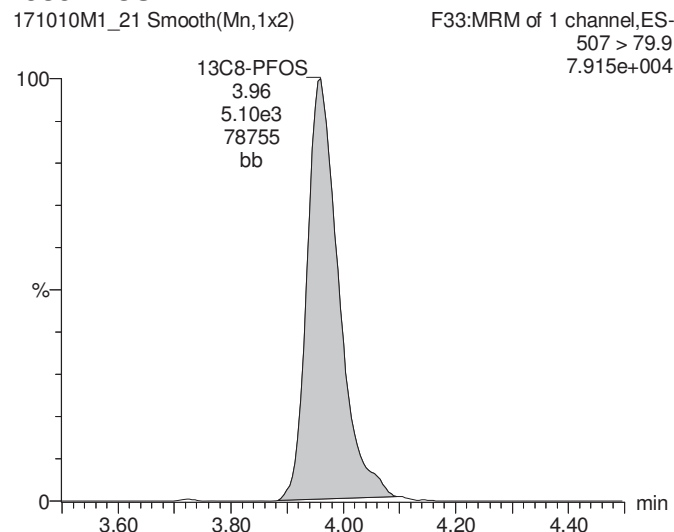
TCDA



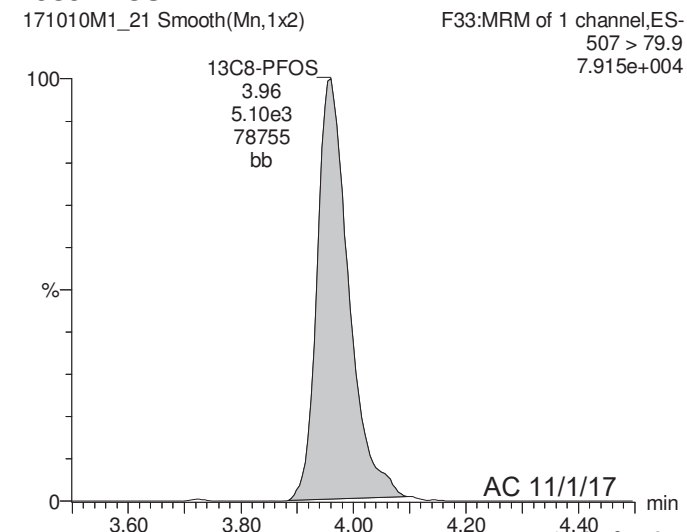
13C2-PFOA



13C8-PFOS



13C8-PFOS



Dataset: U:\Q4.PRO\results\171010M1\171010M1-21.qld

Last Altered: Wednesday, November 01, 2017 10:00:35 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:05:04 Pacific Daylight Time

Name: 171010M1_21, Date: 10-Oct-2017, Time: 20:02:27, ID: 1701353-08 IR09-IDW-AQ-092717 0.11561, Description: IR09-IDW-AQ-092717

13C8-PFOA

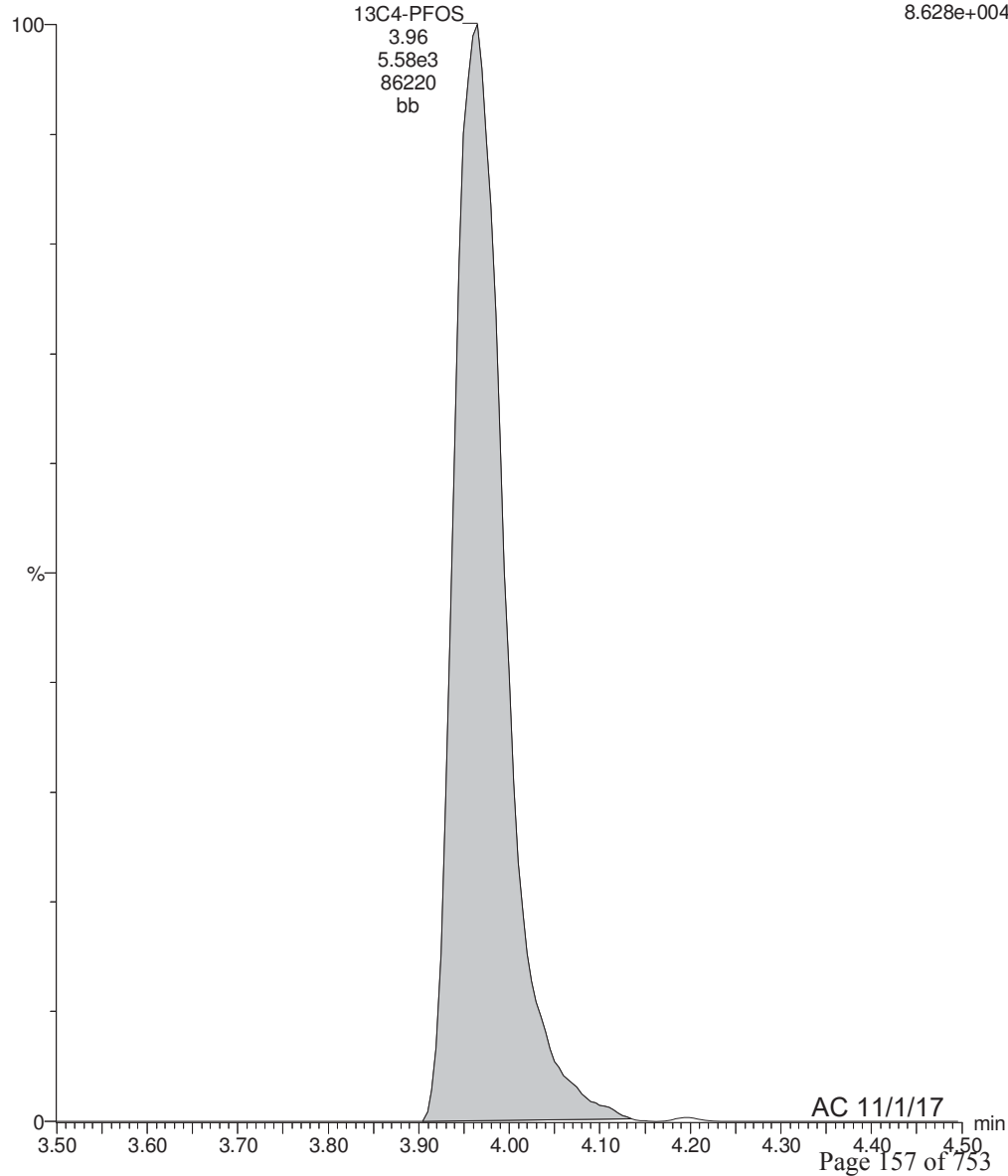
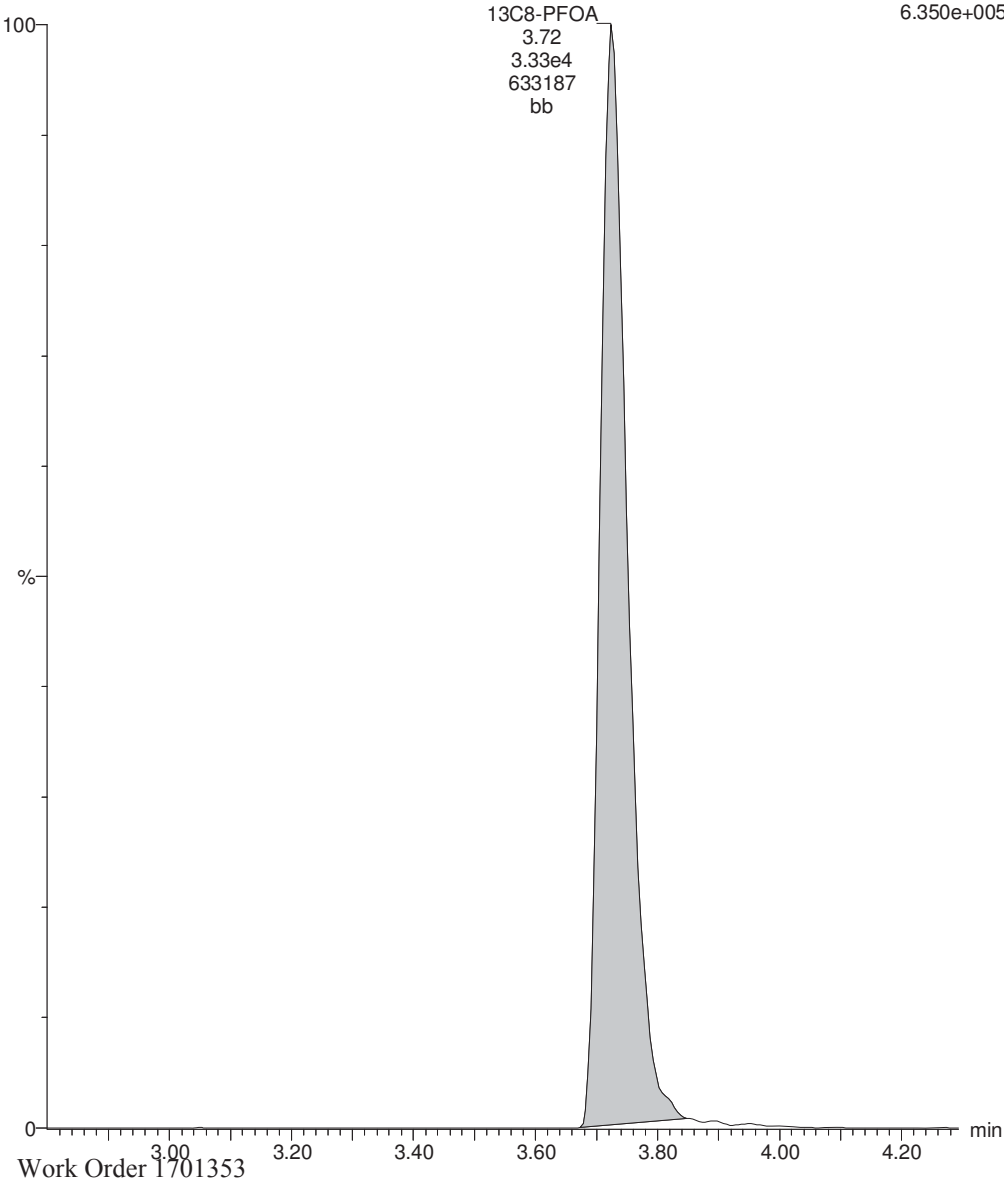
171010M1_21 Smooth(Mn,1x2)
IR09-IDW-AQ-092717 1701353-08 IR09-IDW-AQ-092717 0.11561

F21:MRM of 1 channel,ES-
421.3 > 376
6.350e+005

13C4-PFOS

171010M1_21 Smooth(Mn,1x2)
IR09-IDW-AQ-092717 1701353-08 IR09-IDW-AQ-092717 0.11561

F31:MRM of 1 channel,ES-
503 > 79.9
8.628e+004



Dataset: U:\Q4.PRO\results\171011M1\171011M1-125.qld

Last Altered: Wednesday, November 01, 2017 10:55:15 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:55:51 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-11-17-FULL.cdb 12 Oct 2017 09:33:10

Name: 171011M1_125, Date: 12-Oct-2017, Time: 08:09:57, ID: 1701353-08@10X IR09-IDW-AQ-092717 0.11561, Description: IR09-IDW-AQ-092717

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	14 L-PFOS	499 > 79.9	8.87e4	7.18e2	0.1156		4.01	3.91	1540	11400	
2	41 13C8-PFOS	507 > 79.9	7.18e2	8.93e2	0.1156	1.053	4.01	3.91	10.0	82.6	76.4
3	59 13C4-PFOS	503 > 79.9	8.93e2	8.93e2	0.1156	1.000	4.01	3.90	12.5	108	100.0
4	64 Total PFOS	499 > 79.9	8.87e4		0.1156		4.01		1540	11400	

Dataset: U:\Q4.PRO\results\171011M1\171011M1-125.qld

Last Altered: Wednesday, November 01, 2017 10:55:15 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:55:51 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

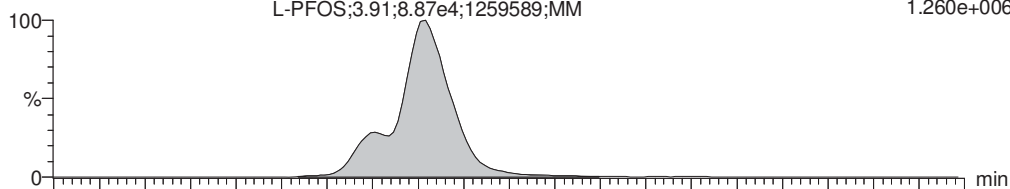
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-11-17-FULL.cdb 12 Oct 2017 09:33:10

Name: 171011M1_125, Date: 12-Oct-2017, Time: 08:09:57, ID: 1701353-08@10X IR09-IDW-AQ-092717 0.11561, Description: IR09-IDW-AQ-092717

Total PFOS

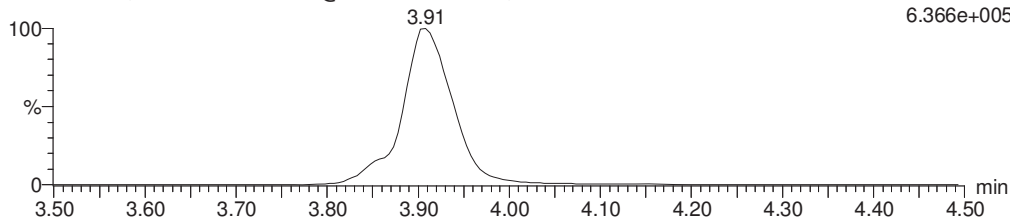
171011M1_125 Smooth(Mn,1x2)
IR09-IDW-AQ-092717 1701353-08@10X IR09-IDW-AQ-092717 0.11561
L-PFOS;3.91;8.87e4;1259589;MM

F30:MRM of 2 channels,ES-
499 > 79.9
1.260e+006



171011M1_125 Smooth(Mn,1x2)
IR09-IDW-AQ-092717 1701353-08@10X IR09-IDW-AQ-092717 0.11561

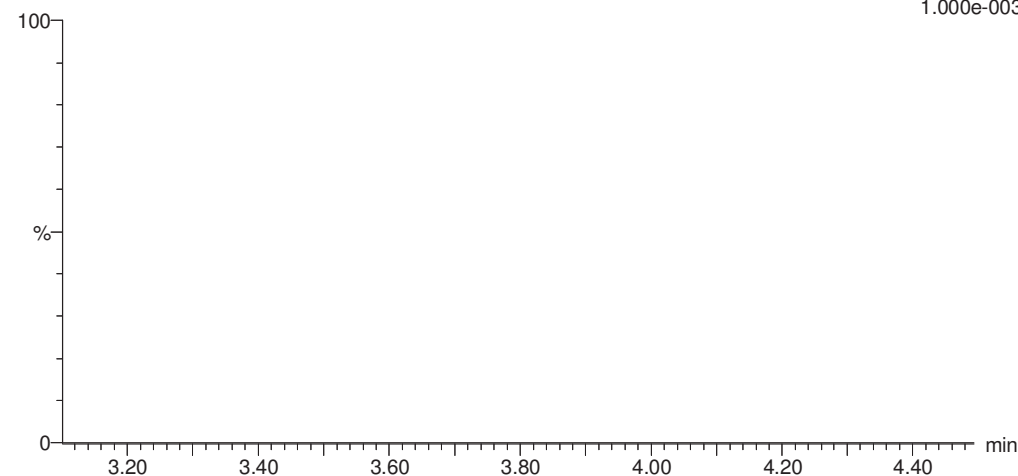
F30:MRM of 2 channels,ES-
499 > 99
6.366e+005



TCDA

171011M1_125 Smooth(Mn,1x2)
IR09-IDW-AQ-092717 1701353-08@10X IR09-IDW-AQ-092717 0.11561

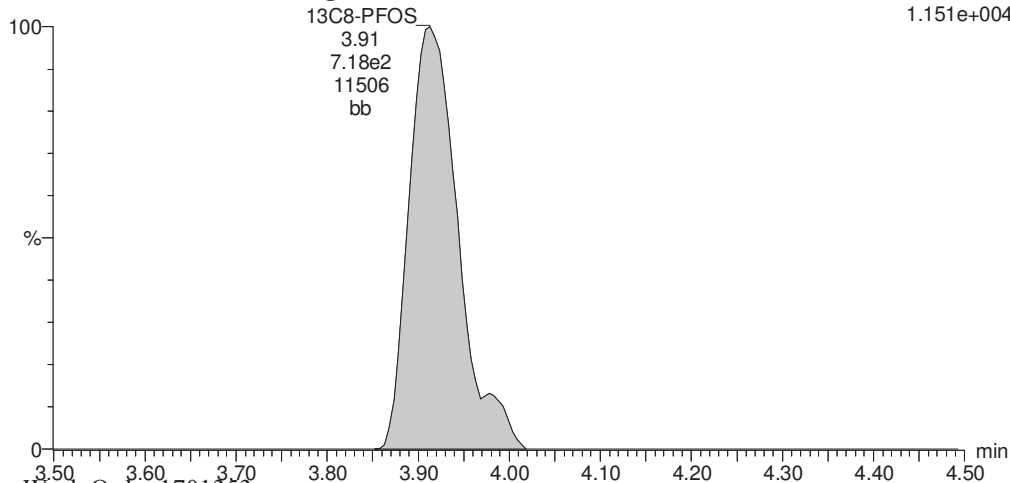
F29:MRM of 3 channels,ES-
498.3 > 106.9
1.000e-003



13C8-PFOS

171011M1_125 Smooth(Mn,1x2)
IR09-IDW-AQ-092717 1701353-08@10X IR09-IDW-AQ-092717 0.11561

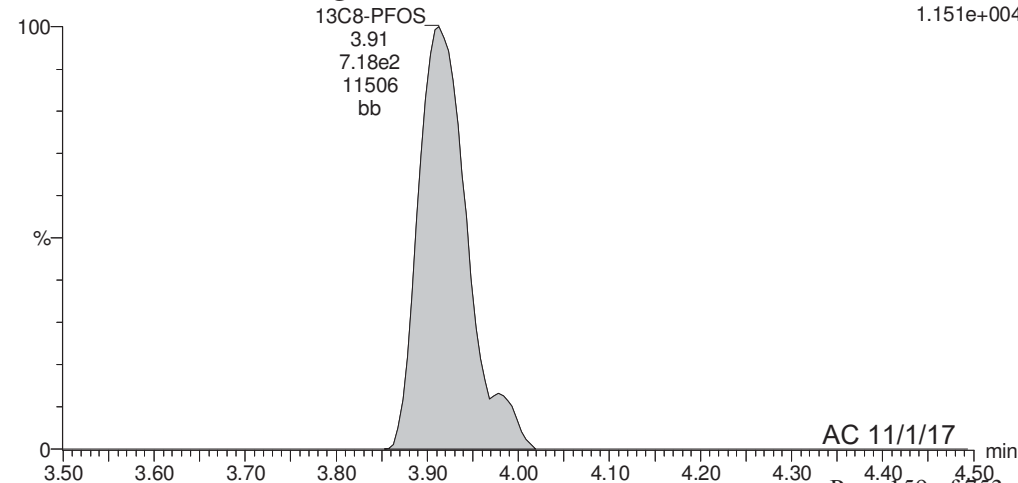
F33:MRM of 1 channel,ES-
507 > 79.9
1.151e+004



13C8-PFOS

171011M1_125 Smooth(Mn,1x2)
IR09-IDW-AQ-092717 1701353-08@10X IR09-IDW-AQ-092717 0.11561

F33:MRM of 1 channel,ES-
507 > 79.9
1.151e+004



Dataset: U:\Q4.PRO\results\171011M1\171011M1-125.qld

Last Altered: Wednesday, November 01, 2017 10:55:15 Pacific Daylight Time

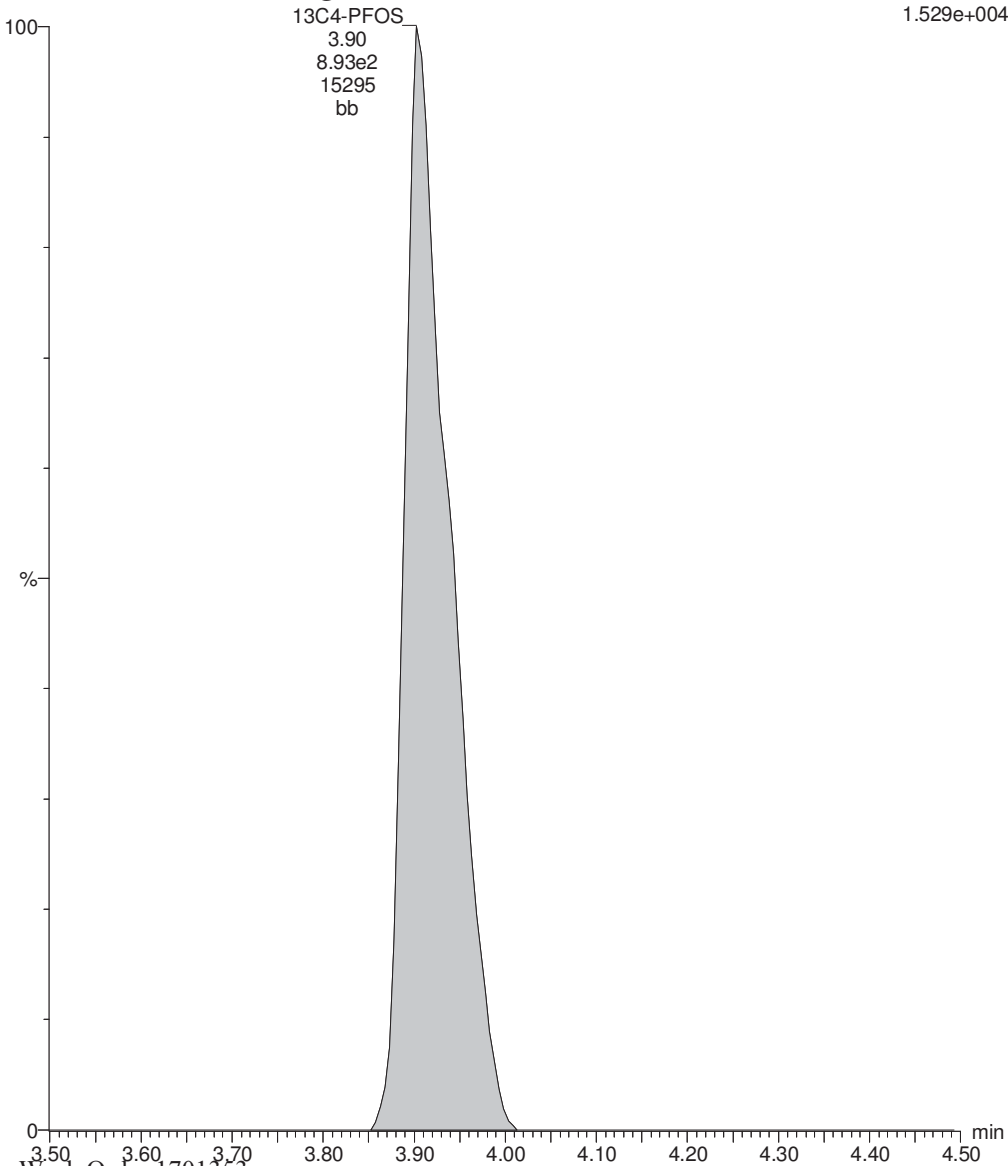
Printed: Wednesday, November 01, 2017 10:55:51 Pacific Daylight Time

Name: 171011M1_125, Date: 12-Oct-2017, Time: 08:09:57, ID: 1701353-08@10X IR09-IDW-AQ-092717 0.11561, Description: IR09-IDW-AQ-092717

13C4-PFOS

171011M1_125 Smooth(Mn,1x2)
IR09-IDW-AQ-092717 1701353-08@10X IR09-IDW-AQ-092717 0.11561

F31:MRM of 1 channel,ES-
503 > 79.9
1.529e+004



Dataset: U:\Q4.PRO\results\171010M1\171010M1-23.qld

Last Altered: Wednesday, November 01, 2017 10:06:39 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:07:16 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_23, Date: 10-Oct-2017, Time: 20:23:44, ID: 1701353-09 TLZP-IDW-AQ-092817 0.1178, Description: TLZP-IDW-AQ-092817

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	9 L-PFOA	413 > 368.7	8.82e2	3.53e4	0.1178		3.68	3.72	0.312		
2	14 L-PFOS	499 > 79.9	6.03e2	7.94e3	0.1178		4.01	3.96	0.949	7.78	
3	38 13C2-PFOA	414.9 > 369.7	3.53e4	3.55e4	0.1178	1.111	3.77	3.72	12.4	95.1	89.6
4	41 13C8-PFOS	507 > 79.9	7.94e3	7.36e3	0.1178	0.995	4.01	3.96	13.5	115	108.5
5	57 13C8-PFOA	421.3 > 376	3.55e4	3.55e4	0.1178	1.000	3.77	3.72	12.5	106	100.0
6	59 13C4-PFOS	503 > 79.9	7.36e3	7.36e3	0.1178	1.000	4.01	3.96	12.5	106	100.0
7	63 Total PFOA	413 > 368.7	8.82e2		0.1178		3.68		0.000		
8	64 Total PFOS	499 > 79.9	6.03e2		0.1178		4.01		0.949	7.78	

Total PFOA & PFOS: 7.78

Dataset: U:\Q4.PRO\results\171010M1\171010M1-23.qld

Last Altered: Wednesday, November 01, 2017 10:06:39 Pacific Daylight Time

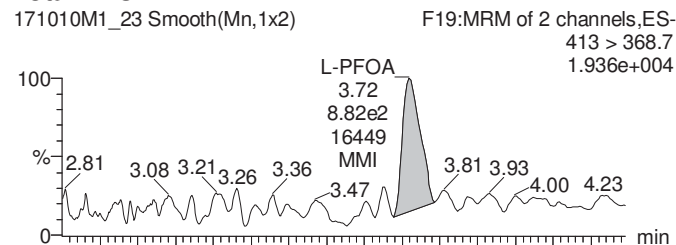
Printed: Wednesday, November 01, 2017 10:07:16 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

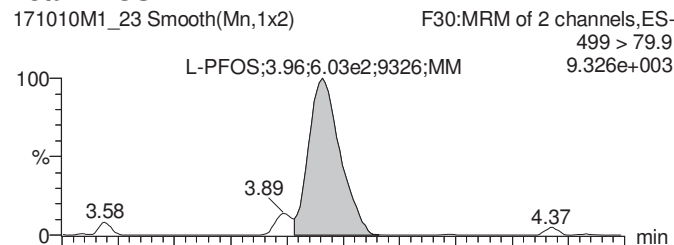
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_23, Date: 10-Oct-2017, Time: 20:23:44, ID: 1701353-09 TLZP-IDW-AQ-092817 0.1178, Description: TLZP-IDW-AQ-092817

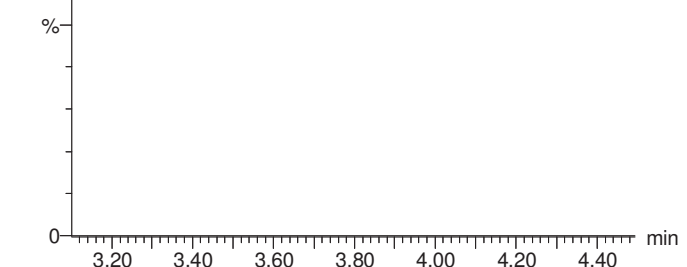
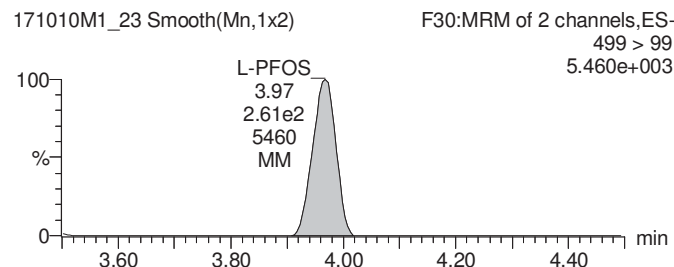
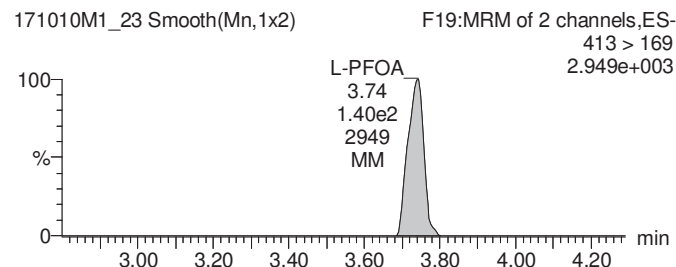
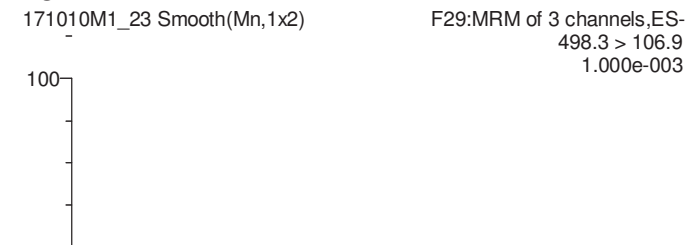
Total PFOA



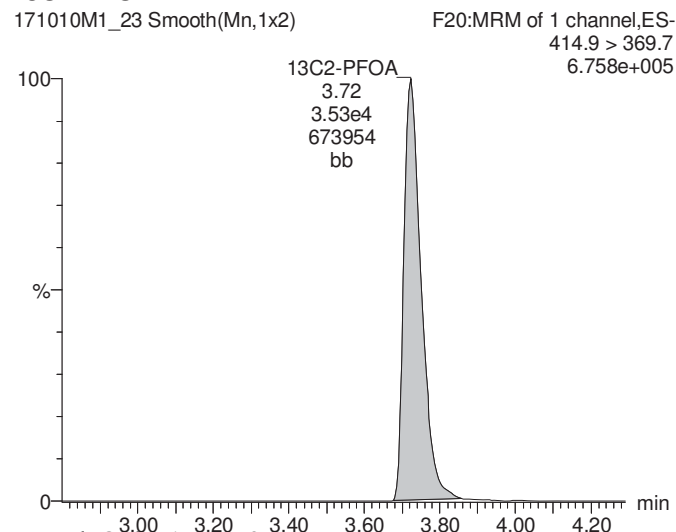
Total PFOS



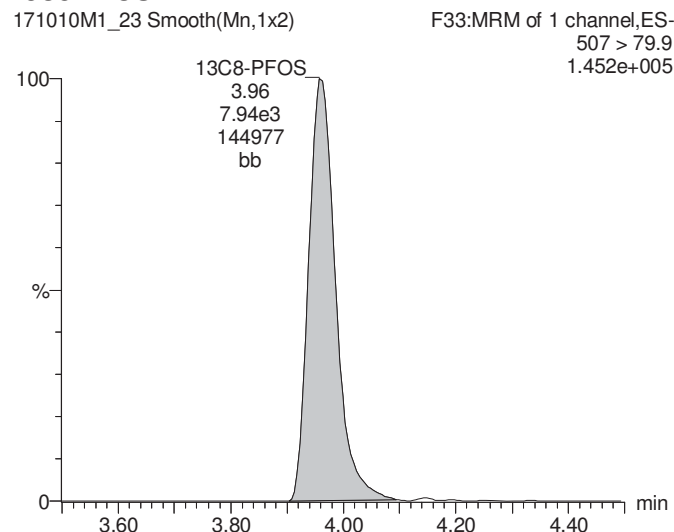
TCDA



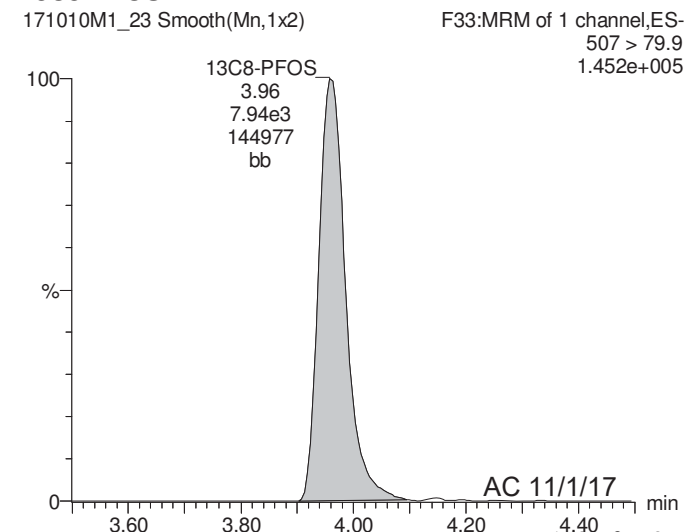
13C2-PFOA



13C8-PFOS



13C8-PFOS



Dataset: U:\Q4.PRO\results\171010M1\171010M1-23.qld

Last Altered: Wednesday, November 01, 2017 10:06:39 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:07:16 Pacific Daylight Time

Name: 171010M1_23, Date: 10-Oct-2017, Time: 20:23:44, ID: 1701353-09 TLZP-IDW-AQ-092817 0.1178, Description: TLZP-IDW-AQ-092817

13C8-PFOA

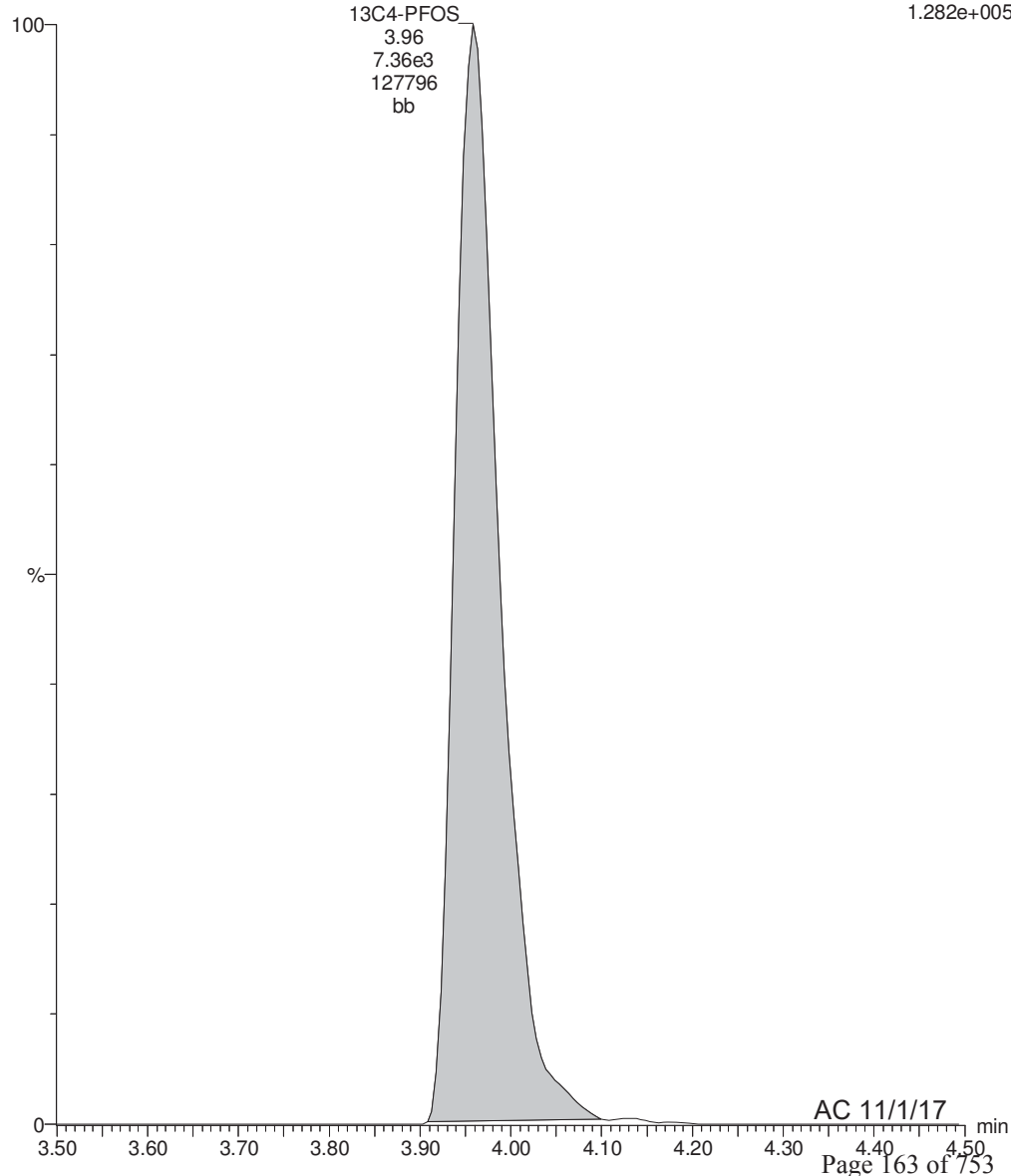
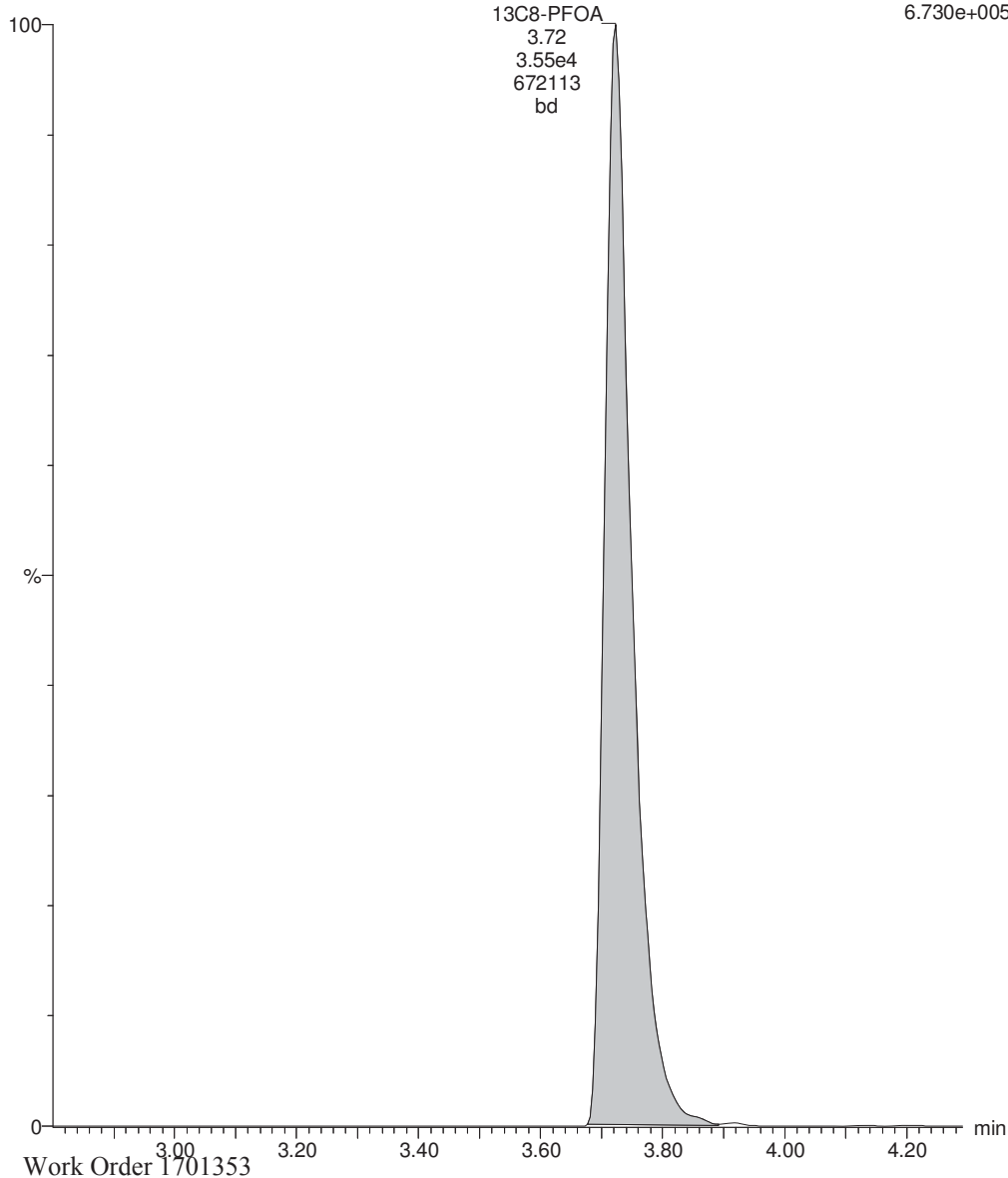
171010M1_23 Smooth(Mn,1x2)
TLZP-IDW-AQ-092817 1701353-09 TLZP-IDW-AQ-092817 0.1178

F21:MRM of 1 channel,ES-
421.3 > 376
6.730e+005

13C4-PFOS

171010M1_23 Smooth(Mn,1x2)
TLZP-IDW-AQ-092817 1701353-09 TLZP-IDW-AQ-092817 0.1178

F31:MRM of 1 channel,ES-
503 > 79.9
1.282e+005



Dataset: U:\Q4.PRO\results\171010M1\171010M1-24.qld

Last Altered: Wednesday, November 01, 2017 10:11:06 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:11:39 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_24, Date: 10-Oct-2017, Time: 20:34:30, ID: 1701353-10 IR09-IDW-AQ-092817 0.12034, Description: IR09-IDW-AQ-092817

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	9 L-PFOA	413 > 368.7	5.41e5	3.05e4	0.1203		3.68	3.72	222	1990	
2	14 L-PFOS	499 > 79.9	1.17e6	4.19e3	0.1203		4.01	3.95	3480	27300 ^E	
3	38 13C2-PFOA	414.9 > 369.7	3.05e4	3.03e4	0.1203	1.111	3.77	3.72	12.6	94.1	90.6
4	41 13C8-PFOS	507 > 79.9	4.19e3	3.94e3	0.1203	0.995	4.01	3.95	13.3	111	106.8
5	57 13C8-PFOA	421.3 > 376	3.03e4	3.03e4	0.1203	1.000	3.77	3.72	12.5	104	100.0
6	59 13C4-PFOS	503 > 79.9	3.94e3	3.94e3	0.1203	1.000	4.01	3.96	12.5	104	100.0
7	63 Total PFOA	413 > 368.7	6.05e5		0.1203		3.68		248	2220	
8	64 Total PFOS	499 > 79.9	1.17e6		0.1203		4.01		3480	27300	

Total PFOA & PFOS: 28,500

Dataset: U:\Q4.PRO\results\171010M1\171010M1-24.qld

Last Altered: Wednesday, November 01, 2017 10:11:06 Pacific Daylight Time

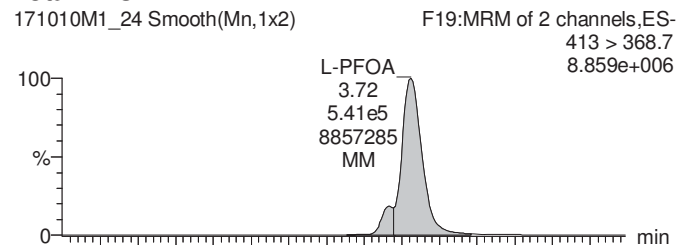
Printed: Wednesday, November 01, 2017 10:11:39 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

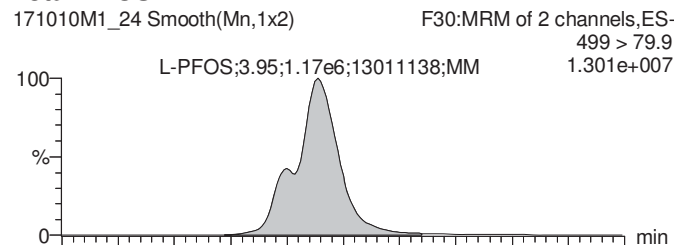
Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-06-17-FULL.cdb 09 Oct 2017 10:27:11

Name: 171010M1_24, Date: 10-Oct-2017, Time: 20:34:30, ID: 1701353-10 IR09-IDW-AQ-092817 0.12034, Description: IR09-IDW-AQ-092817

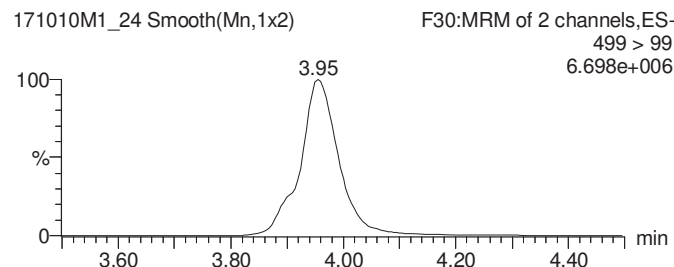
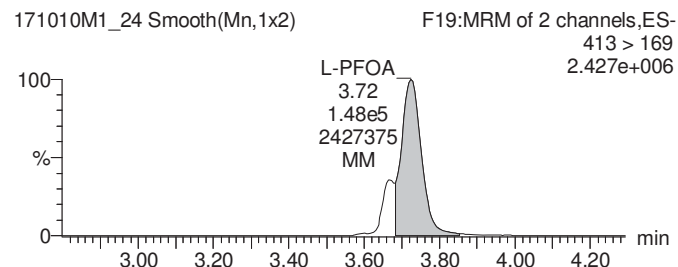
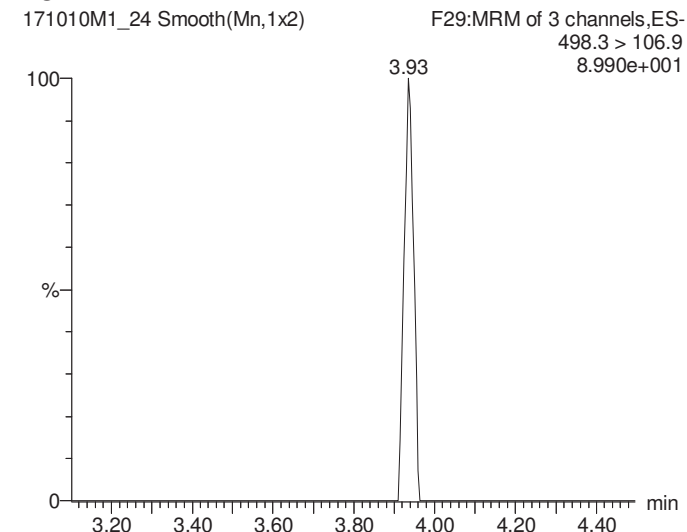
Total PFOA



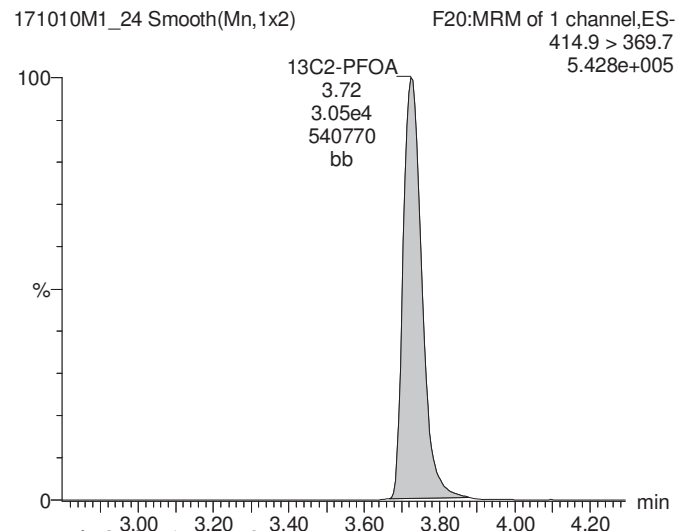
Total PFOS



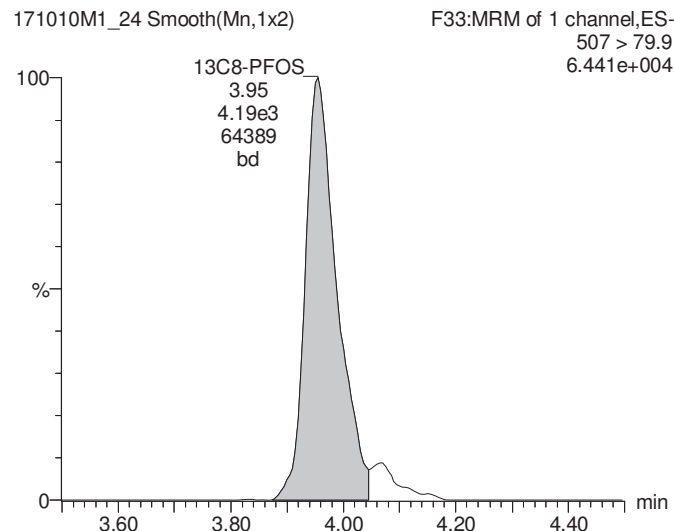
TCDA



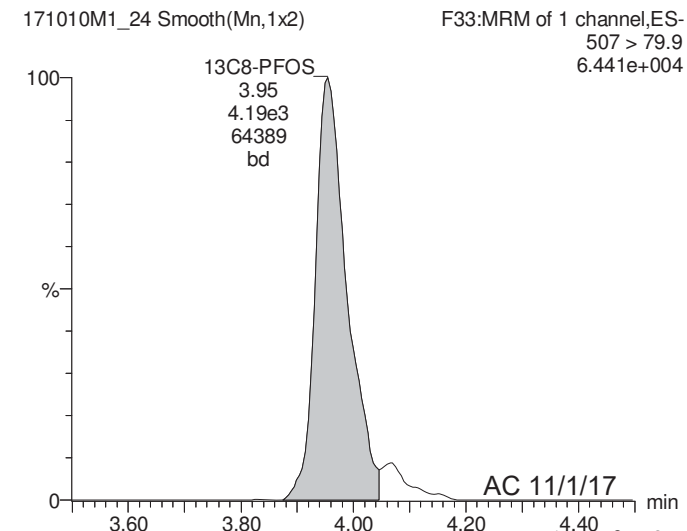
13C2-PFOA



13C8-PFOS



13C8-PFOS



Dataset: U:\Q4.PRO\results\171010M1\171010M1-24.qld

Last Altered: Wednesday, November 01, 2017 10:11:06 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:11:39 Pacific Daylight Time

Name: 171010M1_24, Date: 10-Oct-2017, Time: 20:34:30, ID: 1701353-10 IR09-IDW-AQ-092817 0.12034, Description: IR09-IDW-AQ-092817

13C8-PFOA

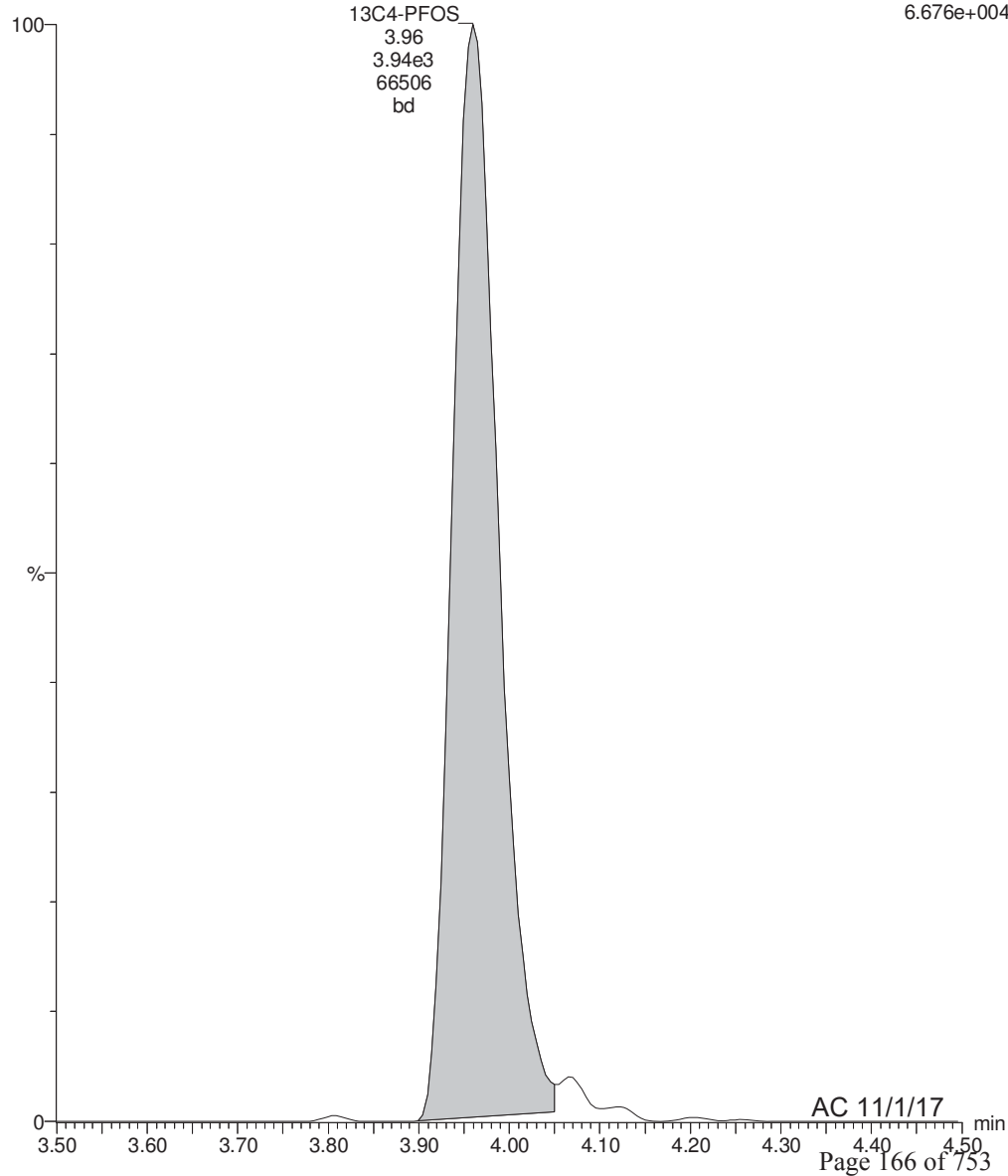
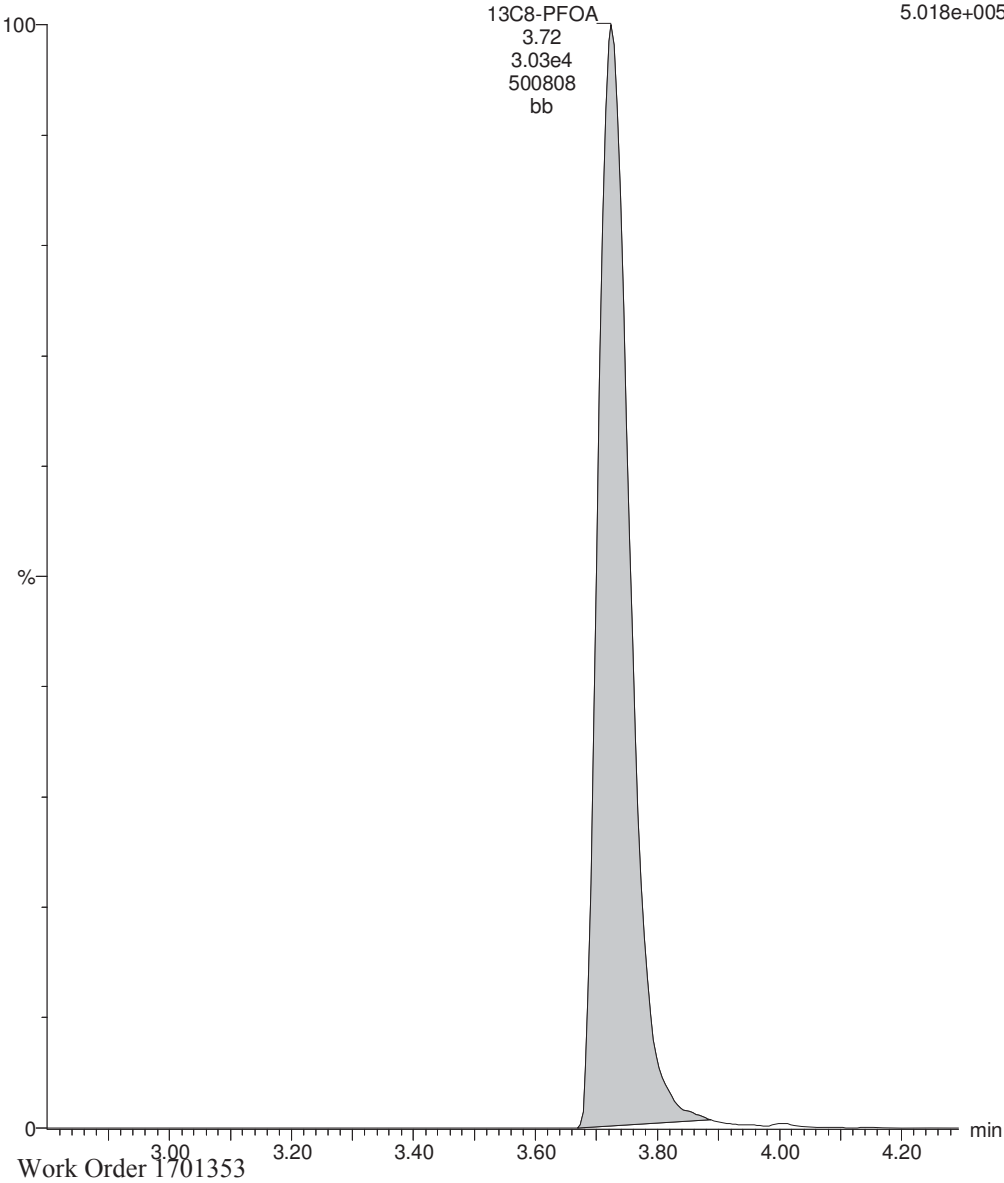
171010M1_24 Smooth(Mn,1x2)
IR09-IDW-AQ-092817 1701353-10 IR09-IDW-AQ-092817 0.12034

F21:MRM of 1 channel,ES-
421.3 > 376
5.018e+005

13C4-PFOS

171010M1_24 Smooth(Mn,1x2)
IR09-IDW-AQ-092817 1701353-10 IR09-IDW-AQ-092817 0.12034

F31:MRM of 1 channel,ES-
503 > 79.9
6.676e+004



Dataset: U:\Q4.PRO\results\171011M1\171011M1-126.qld

Last Altered: Wednesday, November 01, 2017 10:57:11 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:57:37 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-11-17-FULL.cdb 12 Oct 2017 09:33:10

Name: 171011M1_126, Date: 12-Oct-2017, Time: 08:20:37, ID: 1701353-10@20X IR09-IDW-AQ-092817 0.12034, Description: IR09-IDW-AQ-092817

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	14 L-PFOS	499 > 79.9	9.92e4	3.35e2	0.1203		4.01	3.91	3700	26300	
2	41 13C8-PFOS	507 > 79.9	3.35e2	4.35e2	0.1203	1.053	4.01	3.91	9.62	76.0	73.1
3	59 13C4-PFOS	503 > 79.9	4.35e2	4.35e2	0.1203	1.000	4.01	3.91	12.5	104	100.0
4	64 Total PFOS	499 > 79.9	9.92e4		0.1203		4.01		3700	26300	

Dataset: U:\Q4.PRO\results\171011M1\171011M1-126.qld

Last Altered: Wednesday, November 01, 2017 10:57:11 Pacific Daylight Time

Printed: Wednesday, November 01, 2017 10:57:37 Pacific Daylight Time

Method: U:\Q4.PRO\MethDB\PFAS_FULL_10-09-17.mdb 31 Oct 2017 13:49:31

Calibration: U:\Q4.PRO\CurveDB\C18_VAL-PFAS_Q4_10-11-17-FULL.cdb 12 Oct 2017 09:33:10

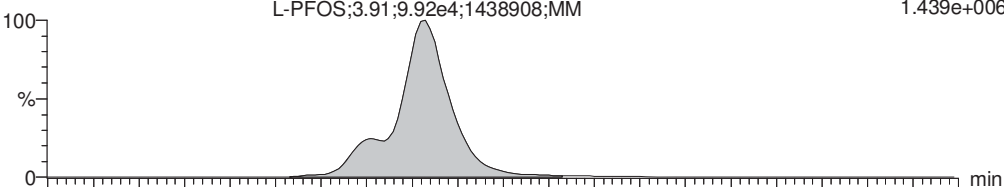
Name: 171011M1_126, Date: 12-Oct-2017, Time: 08:20:37, ID: 1701353-10@20X IR09-IDW-AQ-092817 0.12034, Description: IR09-IDW-AQ-092817

Total PFOS

171011M1_126 Smooth(Mn,1x2)
IR09-IDW-AQ-092817 1701353-10@20X IR09-IDW-AQ-092817 0.12034

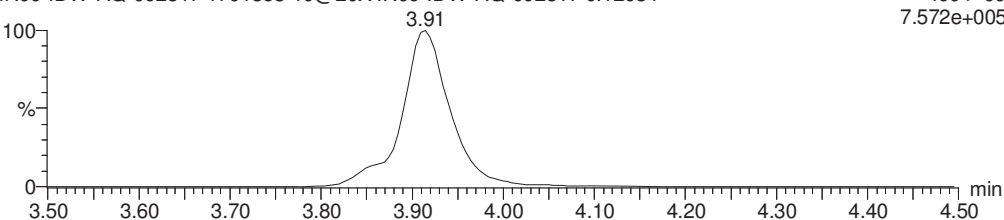
F30:MRM of 2 channels,ES-
499 > 79.9
1.439e+006

L-PFOS;3.91;9.92e4;1438908;MM



171011M1_126 Smooth(Mn,1x2)
IR09-IDW-AQ-092817 1701353-10@20X IR09-IDW-AQ-092817 0.12034

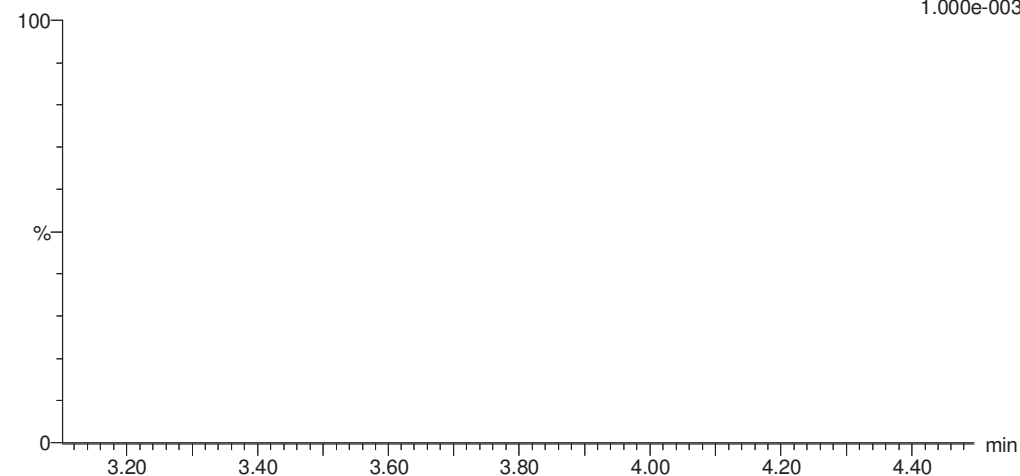
F30:MRM of 2 channels,ES-
499 > 99
7.572e+005



TCDA

171011M1_126 Smooth(Mn,1x2)
IR09-IDW-AQ-092817 1701353-10@20X IR09-IDW-AQ-092817 0.12034

F29:MRM of 3 channels,ES-
498.3 > 106.9
1.000e-003

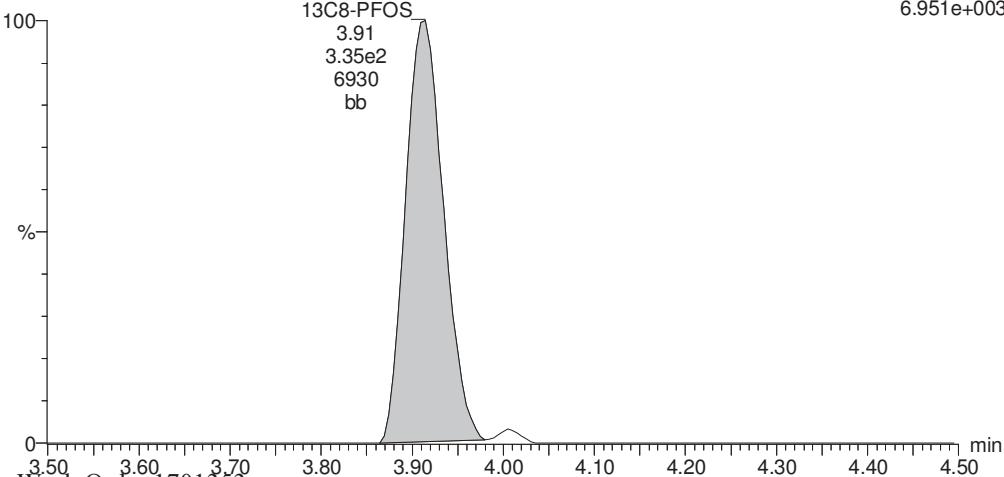


13C8-PFOS

171011M1_126 Smooth(Mn,1x2)
IR09-IDW-AQ-092817 1701353-10@20X IR09-IDW-AQ-092817 0.12034

F33:MRM of 1 channel,ES-
507 > 79.9
6.951e+003

13C8-PFOS
3.91
3.35e2
6930
bb

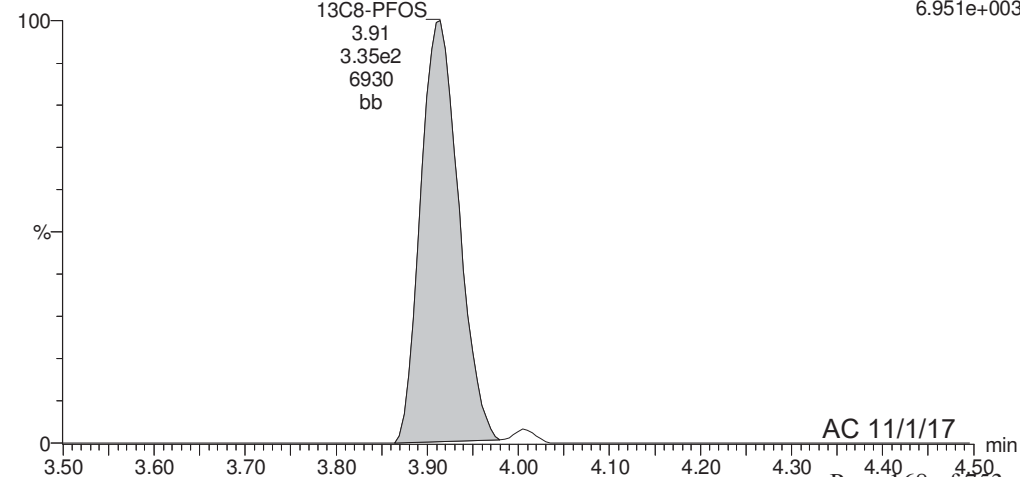


13C8-PFOS

171011M1_126 Smooth(Mn,1x2)
IR09-IDW-AQ-092817 1701353-10@20X IR09-IDW-AQ-092817 0.12034

F33:MRM of 1 channel,ES-
507 > 79.9
6.951e+003

13C8-PFOS
3.91
3.35e2
6930
bb



Dataset: U:\Q4.PRO\results\171011M1\171011M1-126.qld

Last Altered: Wednesday, November 01, 2017 10:57:11 Pacific Daylight Time

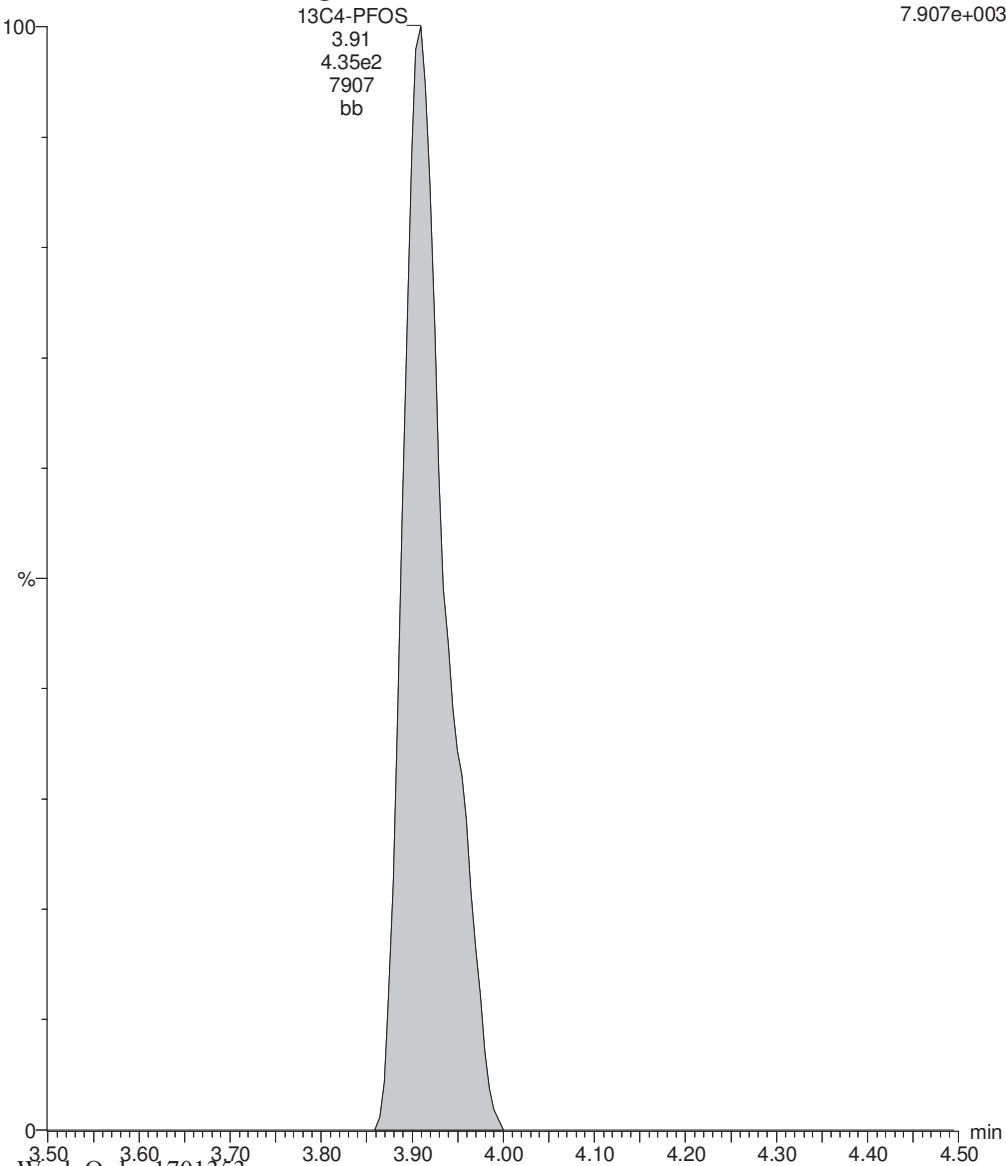
Printed: Wednesday, November 01, 2017 10:57:37 Pacific Daylight Time

Name: 171011M1_126, Date: 12-Oct-2017, Time: 08:20:37, ID: 1701353-10@20X IR09-IDW-AQ-092817 0.12034, Description: IR09-IDW-AQ-092817

13C4-PFOS

171011M1_126 Smooth(Mn,1x2)
IR09-IDW-AQ-092817 1701353-10@20X IR09-IDW-AQ-092817 0.12034

F31:MRM of 1 channel,ES-
503 > 79.9
7.907e+003



**DATA VALIDATION SUMMARY REPORT
MCB CAMP LEJEUNE, NORTH CAROLINA**

Client: CH2M HILL, Inc., Virginia Beach, Virginia
 SDG: 1701353
 Laboratory: Vista Analytical Laboratory, El Dorado Hills, California
 Site: MCB Camp Lejeune, CTO-WE37
 Date: December 18, 2017

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	IR09-GW10-17D	1701353-01	Water
2	IR09-GW10D-17D	1701353-02	Water
3	IR09-FTPGW01-17D	1701353-03	Water
4	IR09-GW11-17D	1701353-04	Water
4MS	IR09-GW11-17DMS	1701353-04MS	Water
4MSD	IR09-GW11-17DMSD	1701353-04MSD	Water
5	IR09-GW09-17D	1701353-05	Water
6	IR09-EB-092817	1701353-06	Water
7	IR09-FB-092817	1701353-07	Water

A full data validation was performed on the analytical data for five water samples, one aqueous equipment blank sample, and one aqueous field blank sample collected on September 26-28, 2017 by CH2M HILL at the MCB Camp Lejeune site in North Carolina. The samples were analyzed under the EPA Method “Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)”.

Specific method references are as follows:

Analysis
PFCs

Method References
USEPA Method 537 Modified

The data have been validated according to the protocols and quality control (QC) requirements of the analytical method, and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM), Version 5.0 (July 2013) and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA “Contract Laboratories Program National Functional Guidelines for Superfund Organic Methods Data Review,” January 2017;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Date Completeness, Case Narrative & Custody Documentation
- Holding times
- Liquid Chromatography/Mass Spectrometry (LC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Field Duplicate sample precision

A full (Level IV) data validation was performed with this review including a recalculation of 10% of the detected results in the samples.

Data Usability Assessment

There were no rejections of data.

Overall the data is acceptable for the intended purposes as qualified for the data quality indicator criteria as detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedances of QC criteria.

Perfluorinated Compounds (PFCs)

Data Completeness, Case Narrative & Custody Documentation

- The case narrative and chain-of-custody documentation were included in the data package as required. All criteria were met.

Holding Times

- All samples were extracted within 14 days for water samples and analyzed within 28 days.

LC/MS Tuning

- All criteria were met.

Initial Calibration

- All correlation coefficient and/or percent recovery (%R) criteria were met.

Continuing Calibration

- All percent recovery (%R) criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
B7J0024-BLK1	PFHxS	1.60	U	7

Field QC Blank

- Field QC samples were free of contamination.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
IR09-FB-092817	None - ND	-	-	-

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable percent recoveries (%R) and RPD values except for the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier	Affected Samples
4	PFHxS	-52.8%/OK/551	None	4X Rule
	PFOA	171%/138%/OK	J	4
	PFOS	OK/-10.3%/256	None	4X Rule

Laboratory Control Samples

- The LCS samples exhibited acceptable percent recoveries (%R).

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions for specific compounds due to high concentrations. The report limits were adjusted accordingly. No action was required.

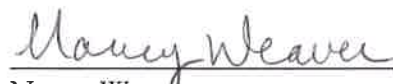
Field Duplicate Sample Precision

- Field duplicate results are summarized below. The precision was unacceptable (>30%) for two compounds and these results have been qualified as estimated (J) in both samples.

Compound	IR09-GW10-17D ng/L	IR09-GW10D-17D ng/L	RPD	Qualifier
PFBS	99.4	96.0	3%	None
PFHxA	1,670	1,660	1%	
PFHpA	560	599	7%	
PFHxS	3,950	3,860	2%	
PFOA	1,190	1,110	7%	
PFOS	21,300	30,900	37%	J
PFNA	77.9	85.8	10%	None
PFDA	15.7	11.6	30%	
Combined PFOA/PFOS	22,500	32,000	35%	J

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed:


Nancy Weaver
Senior Chemist

Dated: 12/19/17

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

Sample ID: IR09-GW10-17D

Modified EPA Method 537

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Aqueous	Lab Sample:	1701353-01	Column:	BEH C18
Project:	Site 9 PFAS	Date Collected:	26-Sep-17 16:10	Date Received:	29-Sep-17 09:36		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	99.4	1.98	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFHxA	1670	2.41	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFHpA	560	0.653	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFHxS	3950	10.5	55.3	88.4	B.D	B7J0024	07-Oct-17	0.113 L	12-Oct-17 06:54	10
PFOA	1190	0.719	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFOS	21300 <i>J</i>	8.92	55.3	88.4	B	B7J0024	07-Oct-17	0.113 L	12-Oct-17 06:54	10 <i>FD</i>
PFNA	77.9	0.895	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFDA	15.7	1.65	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
MeFOSAA	ND	1.82	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFUnA	ND	1.16	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
EtFOSAA	ND	1.51	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFDaA	ND	0.875	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFTrDA	ND	0.546	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
PFTeDA	ND	0.834	5.53	8.84		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
Combined PFOA/PFOS	22500 <i>J</i>	8.92	55.3	88.4	B	B7J0024	07-Oct-17	0.113 L	12-Oct-17 06:54	10 <i>FD</i>

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	143	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C2-PFHxA	IS	94.7	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C4-PFHpA	IS	87.8	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
18O2-PFHxS	IS	101	50 - 150	B	B7J0024	07-Oct-17	0.113 L	12-Oct-17 06:54	10
13C2-PFOA	IS	84.8	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C8-PFOS	IS	78.8	50 - 150	B	B7J0024	07-Oct-17	0.113 L	12-Oct-17 06:54	10
13C5-PFNA	IS	75.5	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C2-PFDA	IS	72.0	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
d3-MeFOSAA	IS	68.2	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C2-PFUnA	IS	56.8	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
d5-EtFOSAA	IS	81.6	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C2-PFDaA	IS	73.6	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1
13C2-PFTeDA	IS	89.1	50 - 150		B7J0024	07-Oct-17	0.113 L	10-Oct-17 17:54	1

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCL - Lower control limit - upper control limit
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers
Only the linear isomer is reported for all other analytes.

RAW 12/18/17

Sample ID: IR09-GW10D-17D						Modified EPA Method 537					
Client Data					Laboratory Data						
Name:	CH2M Hill	Matrix:	Aqueous		Lab Sample:	1701353-02	Column:	BEH C18			
Project:	Site 9 PFAS	Date Collected:	26-Sep-17 16:15		Date Received:	29-Sep-17 09:36					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
PFBS	96.0	1.90	5.30	8.51		B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
PFHxA	1660	2.32	5.30	8.51		B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
PFHpA	599	0.629	5.30	8.51		B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
PFHxS	3860	20.1	106	170	B.D	B7J0024	07-Oct-17	0.118 L	12-Oct-17 07:05	20	
PFOA	1110	0.692	5.30	8.51		B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
PFOS	30900 J	17.2	106	170		B7J0024	07-Oct-17	0.118 L	12-Oct-17 07:05	20	
PFNA	85.8	0.861	5.30	8.51		B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
PFDA	11.6	1.58	5.30	8.51		B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
MeFOSAA	ND	1.75	5.30	8.51		B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
PFUnA	ND	1.12	5.30	8.51		B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
EtFOSAA	ND	1.46	5.30	8.51		B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
PFDoA	ND	0.842	5.30	8.51		B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
PFTeDA	ND	0.525	5.30	8.51		B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
Combined PFOA/PFOS	32000 J	17.2	106	170		B7J0024	07-Oct-17	0.118 L	12-Oct-17 07:05	20	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBS	IS	115	50 - 150			B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
13C2-PFHxA	IS	86.0	50 - 150			B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
13C4-PFHpA	IS	72.9	50 - 150			B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
18O2-PFHxS	IS	122	50 - 150			B7J0024	07-Oct-17	0.118 L	12-Oct-17 07:05	20	
13C2-PFOA	IS	92.3	50 - 150			B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
13C8-PFOS	IS	75.6	50 - 150			B7J0024	07-Oct-17	0.118 L	12-Oct-17 07:05	20	
13C5-PFNA	IS	73.6	50 - 150			B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
13C2-PFDA	IS	67.8	50 - 150			B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
d3-MeFOSAA	IS	74.7	50 - 150			B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
13C2-PFUnA	IS	63.5	50 - 150			B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
d5-EtFOSAA	IS	83.3	50 - 150			B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
13C2-PFDoA	IS	72.6	50 - 150			B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	
13C2-PFTeDA	IS	86.4	50 - 150			B7J0024	07-Oct-17	0.118 L	10-Oct-17 18:15	1	

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCL - Lower control limit - upper control limit
Results reported to the DL

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

11/21/17

Sample ID: IR09-FTPGW01-17D

Modified EPA Method 537

Client Data					Laboratory Data					
Name:	CH2M Hill	Matrix:	Aqueous		Lab Sample:	1701353-03	Column:	BEH C18		
Project:	Site 9 PFAS	Date Collected:	26-Sep-17 17:25		Date Received:	29-Sep-17 09:36				

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	61.0	1.96	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFHxA	679	2.38	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFHpA	362	0.646	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFHxS	2410	5.18	27.4	43.7	B.D.	B7J0024	07-Oct-17	0.114 L	12-Oct-17 07:26	5
PFOA	834	0.712	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFOS	7210	4.41	27.4	43.7	D	B7J0024	07-Oct-17	0.114 L	12-Oct-17 07:26	5
PFNA	64.4	0.885	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFDA	26.6	1.63	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
MeFOSAA	ND	1.80	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFUnA	ND	1.15	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
EtFOSAA	ND	1.50	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFDaA	ND	0.866	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFTrDA	ND	0.540	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
PFTeDA	ND	0.825	5.48	8.75		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
Combined PFOA/PFOS	8040	4.41	27.4	43.7	D	B7J0024	07-Oct-17	0.114 L	12-Oct-17 07:26	5

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	110	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C2-PFHxA	IS	92.0	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C4-PFHpA	IS	81.4	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
18O2-PFHxS	IS	80.5	50 - 150	D	B7J0024	07-Oct-17	0.114 L	12-Oct-17 07:26	5
13C2-PFOA	IS	87.8	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C8-PFOS	IS	98.1	50 - 150	D	B7J0024	07-Oct-17	0.114 L	12-Oct-17 07:26	5
13C5-PFNA	IS	83.4	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C2-PFDA	IS	84.1	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
d3-MeFOSAA	IS	83.2	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C2-PFUnA	IS	71.3	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
d5-EtFOSAA	IS	83.9	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C2-PFDaA	IS	82.6	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1
13C2-PFTeDA	IS	95.1	50 - 150		B7J0024	07-Oct-17	0.114 L	10-Oct-17 18:37	1

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCL - Lower control limit - upper control limit
Results reported to the DL

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

11/21/17

Sample ID: IR09-GW11-17D					Modified EPA Method 537						
Client Data					Laboratory Data						
Name:	CH2M Hill	Matrix:	Aqueous	Lab Sample:	1701353-04	Column:	BEH C18				
Project:	Site 9 PFAS	Date Collected:	27-Sep-17 13:05	Date Received:	29-Sep-17 09:36						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
PFBS	13.0	1.93	5.39	8.62		B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
PFHxA	135	2.35	5.39	8.62		B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
PFHpA	68.7	0.637	5.39	8.62		B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
PFHxS	1040	1.02	5.39	8.62	B	B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
PFOA	298 J	0.702	5.39	8.62		B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
PFOS	2620	4.35	26.9	43.1	D	B7J0024	07-Oct-17	0.116 L	12-Oct-17 07:37	5	
PFNA	11.5	0.873	5.39	8.62		B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
PFDA	4.62	1.61	5.39	8.62	J	B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
MeFOSAA	ND	1.78	5.39	8.62		B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
PFUnA	ND	1.13	5.39	8.62		B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
EtFOSAA	ND	1.48	5.39	8.62		B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
PFDoA	ND	0.854	5.39	8.62		B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
PFTTrDA	ND	0.533	5.39	8.62		B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
PFTeDA	ND	0.814	5.39	8.62		B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
Combined PFOA/PFOS	2920	4.35	26.9	43.1	D	B7J0024	07-Oct-17	0.116 L	12-Oct-17 07:37	5	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBS	IS	124	50 - 150			B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
13C2-PFHxA	IS	98.2	50 - 150			B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
13C4-PFHpA	IS	86.8	50 - 150			B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
18O2-PFHxS	IS	83.2	50 - 150			B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
13C2-PFOA	IS	104	50 - 150			B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
13C8-PFOS	IS	96.3	50 - 150		D	B7J0024	07-Oct-17	0.116 L	12-Oct-17 07:37	5	
13C5-PFNA	IS	89.8	50 - 150			B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
13C2-PFDA	IS	76.4	50 - 150			B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
d3-MeFOSAA	IS	78.5	50 - 150			B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
13C2-PFUnA	IS	81.9	50 - 150			B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
d5-EtFOSAA	IS	74.3	50 - 150			B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
13C2-PFDoA	IS	77.3	50 - 150			B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	
13C2-PFTeDA	IS	94.6	50 - 150			B7J0024	07-Oct-17	0.116 L	10-Oct-17 18:58	1	

MSH

ms 2/18/17

DL - Detection Limit LOD - Limit of Detection LCL-UCL- Lower control limit - upper control limit When reported, PFHxS, PFOA and PFOS include both linear and branched isomers
 LOQ - Limit of quantitation Results reported to the DL Only the linear isomer is reported for all other analytes.

Sample ID: IR09-GW09-17D

Modified EPA Method 537

Client Data					Laboratory Data						
Name:	CH2M Hill	Matrix:	Aqueous		Lab Sample:	1701353-05	Column:	BEH C18			
Project:	Site 9 PFAS	Date Collected:	27-Sep-17 16:00		Date Received:	29-Sep-17 09:36					

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	58.6	1.94	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFHxA	3150	47.3	109	173	∅	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
PFHpA	1070	0.641	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFHxS	4710	20.5	109	173	B, D	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
PFOA	3460	14.1	109	173	∅	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
PFOS	35100	17.5	109	173	∅	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
PFNA	165	0.878	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFDA	71.6	1.62	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
MeFOSAA	16.2	1.79	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFUnA	6.78	1.14	5.43	8.67	J	B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
EtFOSAA	17.1	1.49	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFDoA	ND	0.859	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFTTrDA	ND	0.536	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
PFTeDA	ND	0.818	5.43	8.67		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
Combined PFOA/PFOS	38600	17.5	109	173	∅	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	141	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
13C2-PFHxA	IS	70.7	50 - 150	∅	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
13C4-PFHpA	IS	92.1	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
18O2-PFHxS	IS	74.5	50 - 150	∅	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
13C2-PFOA	IS	86.8	50 - 150	∅	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
13C8-PFOS	IS	127	50 - 150	∅	B7J0024	07-Oct-17	0.115 L	12-Oct-17 07:48	20
13C5-PFNA	IS	86.3	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
13C2-PFDA	IS	84.7	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
d3-MeFOSAA	IS	78.6	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
13C2-PFUnA	IS	69.8	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
d5-EtFOSAA	IS	80.4	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
13C2-PFDoA	IS	79.0	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1
13C2-PFTeDA	IS	96.8	50 - 150		B7J0024	07-Oct-17	0.115 L	10-Oct-17 19:19	1

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCL - Lower control limit - upper control limit
Results reported to the DL

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

rwz1817

Sample ID: IR09-EB-092817

Modified EPA Method 537

Client Data					Laboratory Data						
Name:	CH2M Hill	Matrix:	Aqueous		Lab Sample:	1701353-06	Column:	BEH C18			
Project:	Site 9 PFAS	Date Collected:	28-Sep-17 16:00		Date Received:	29-Sep-17 09:36					

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	1.93	5.39	8.60		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
PFHxA	ND	2.34	5.39	8.60		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
PFHpA	ND	0.636	5.39	8.60		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
PFHxS	ND	1.02	5.39	8.60		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
PFOA	ND	0.700	5.39	8.60		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
PFOS	ND	0.868	5.39	8.60		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
PFNA	ND	0.871	5.39	8.60		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
PFDA	ND	1.60	5.39	8.60		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
MeFOSAA	ND	1.77	5.39	8.60		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
PFUnA	ND	1.13	5.39	8.60		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
EtFOSAA	ND	1.47	5.39	8.60		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
PFDaA	ND	0.852	5.39	8.60		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
PFTeDA	ND	0.531	5.39	8.60		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
PFTeDA	ND	0.812	5.39	8.60		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
Combined PFOA/PFOS	ND	0.868	5.39	8.60		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	106	50 - 150		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
13C2-PFHxA	IS	94.0	50 - 150		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
13C4-PFHpA	IS	76.3	50 - 150		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
18O2-PFHxS	IS	94.9	50 - 150		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
13C2-PFOA	IS	89.7	50 - 150		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
13C8-PFOS	IS	92.1	50 - 150		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
13C5-PFNA	IS	81.3	50 - 150		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
13C2-PFDA	IS	66.2	50 - 150		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
d3-MeFOSAA	IS	65.1	50 - 150		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
13C2-PFUnA	IS	59.1	50 - 150		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
d5-EtFOSAA	IS	61.7	50 - 150		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
13C2-PFDaA	IS	58.9	50 - 150		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1
13C2-PFTeDA	IS	87.3	50 - 150		B7J0024	07-Oct-17	0.116 L	10-Oct-17 19:41	1

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit
Results reported to the DL

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers
Only the linear isomer is reported for all other analytes.

IR092817

Sample ID: IR09-FB-092817

Modified EPA Method 537

Client Data					Laboratory Data					
Name:	CH2M Hill	Matrix:	Aqueous		Lab Sample:	1701353-07	Column:	BEH C18		
Project:	Site 9 PFAS	Date Collected:	28-Sep-17 16:10		Date Received:	29-Sep-17 09:36				

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	1.85	5.17	8.29		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
PFHxA	ND	2.26	5.17	8.29		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
PFHpA	ND	0.612	5.17	8.29		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
PFHxS	5.17 1.93 u	0.981	5.17	8.29	L-B	B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
PFOA	ND	0.674	5.17	8.29		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
PFOS	ND	0.836	5.17	8.29		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
PFNA	ND	0.839	5.17	8.29		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
PFDA	ND	1.54	5.17	8.29		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
MeFOSAA	ND	1.71	5.17	8.29		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
PFUnA	ND	1.09	5.17	8.29		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
EtFOSAA	ND	1.42	5.17	8.29		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
PFDoA	ND	0.820	5.17	8.29		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
PFTeDA	ND	0.512	5.17	8.29		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
PFTeDA	ND	0.782	5.17	8.29		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
Combined PFOA/PFOS	ND	0.836	5.17	8.29		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	129	50 - 150		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
13C2-PFHxA	IS	99.7	50 - 150		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
13C4-PFHpA	IS	82.6	50 - 150		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
18O2-PFHxS	IS	104	50 - 150		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
13C2-PFOA	IS	89.3	50 - 150		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
13C8-PFOS	IS	113	50 - 150		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
13C5-PFNA	IS	86.3	50 - 150		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
13C2-PFDA	IS	68.1	50 - 150		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
d3-MeFOSAA	IS	51.3	50 - 150		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
13C2-PFUnA	IS	61.3	50 - 150		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
d5-EtFOSAA	IS	66.7	50 - 150		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
13C2-PFDoA	IS	65.5	50 - 150		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1
13C2-PFTeDA	IS	81.4	50 - 150		B7J0024	07-Oct-17	0.121 L	10-Oct-17 19:51	1

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit
Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

nw12/18/17

LOCATION_NAME	SITE_NAME	INSTALLATION_ID	LOCATION_TYPE	LOCATION_TYPE_DESC	SDG	COORD_X	COORD_Y	ANALYTICAL_METHOD_GRP_DESC	SAMPLE_NAME	SAMPLE_MATRIX	SAMPLE_MATRIX_DESC	COLLECT_DATE
IR09-MW10	SITE 00009	CAMP_LEJEUNE_MCB	WLM	Monitoring well	1701353	2502786.82	343477.7	Perfluoroalkyl Compounds	IR09-GW10D-17D	WG	Ground water	26-Sep-17
IR09-MW09	SITE 00009	CAMP_LEJEUNE_MCB	WLM	Monitoring well	1701353	2502787.38	343258.33	Perfluoroalkyl Compounds	IR09-GW09-17D	WG	Ground water	27-Sep-17
		CAMP_LEJEUNE_MCB			1701353			Perfluoroalkyl Compounds	IR09-FB-092817	WQ	Water for QC samples	28-Sep-17
IR09-MW11	SITE 00009	CAMP_LEJEUNE_MCB	WLM	Monitoring well	1701353	2502779.24	342971	Perfluoroalkyl Compounds	IR09-GW11-17D	WG	Ground water	27-Sep-17
IR09-MW11	SITE 00009	CAMP_LEJEUNE_MCB	WLM	Monitoring well	1701353	2502779.24	342971	Perfluoroalkyl Compounds	IR09-GW11-17D	WG	Ground water	27-Sep-17
FTPMW01	SITE 00009	CAMP_LEJEUNE_MCB	WLM	Monitoring well	1701353	2502752.21	343048.495	Perfluoroalkyl Compounds	IR09-FTPGW01-17D	WG	Ground water	26-Sep-17
IR09-MW10	SITE 00009	CAMP_LEJEUNE_MCB	WLM	Monitoring well	1701353	2502786.82	343477.7	Perfluoroalkyl Compounds	IR09-GW10-17D	WG	Ground water	26-Sep-17
IR09-MW10	SITE 00009	CAMP_LEJEUNE_MCB	WLM	Monitoring well	1701353	2502786.82	343477.7	Perfluoroalkyl Compounds	IR09-GW10D-17D	WG	Ground water	26-Sep-17
IR09-MW10	SITE 00009	CAMP_LEJEUNE_MCB	WLM	Monitoring well	1701353	2502786.82	343477.7	Perfluoroalkyl Compounds	IR09-GW10D-17D	WG	Ground water	26-Sep-17
		CAMP_LEJEUNE_MCB			1701353			Perfluoroalkyl Compounds	IR09-EB-092817	WQ	Water for QC samples	28-Sep-17
		CAMP_LEJEUNE_MCB			1701353			Perfluoroalkyl Compounds	IR09-FB-092817	WQ	Water for QC samples	28-Sep-17
		CAMP_LEJEUNE_MCB			1701353			Perfluoroalkyl Compounds	IR09-FB-092817	WQ	Water for QC samples	28-Sep-17
IR09-MW11	SITE 00009	CAMP_LEJEUNE_MCB	WLM	Monitoring well	1701353	2502779.24	342971	Perfluoroalkyl Compounds	IR09-GW11-17D	WG	Ground water	27-Sep-17
		CAMP_LEJEUNE_MCB			1701353			Perfluoroalkyl Compounds	IR09-EB-092817	WQ	Water for QC samples	28-Sep-17
FTPMW01	SITE 00009	CAMP_LEJEUNE_MCB	WLM	Monitoring well	1701353	2502752.21	343048.495	Perfluoroalkyl Compounds	IR09-FTPGW01-17D	WG	Ground water	26-Sep-17
IR09-MW10	SITE 00009	CAMP_LEJEUNE_MCB	WLM	Monitoring well	1701353	2502786.82	343477.7	Perfluoroalkyl Compounds	IR09-GW10-17D	WG	Ground water	26-Sep-17
IR09-MW10	SITE 00009	CAMP_LEJEUNE_MCB	WLM	Monitoring well	1701353	2502786.82	343477.7	Perfluoroalkyl Compounds	IR09-GW10-17D	WG	Ground water	26-Sep-17
		CAMP_LEJEUNE_MCB			1701353			Perfluoroalkyl Compounds	IR09-EB-092817	WQ	Water for QC samples	28-Sep-17