



**Off-base Drinking Water Sample Results,
Level 2 Laboratory Report, Level 4 Laboratory Report,
Electronic Data Deliverable, Data Validation Report,
and the Sample Location Figure, SDG 1800407**

*Marine Corps Outlying Landing Field Atlantic
MCAS Cherry Point NC*

February 2019



March 12, 2018

Vista Work Order No. 1800407

Ms. Tiffany Hill
CH2M Hill
1100 NE Circle Blvd. Suite 300
Corvallis, OR 97330

Dear Ms. Hill,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on March 03, 2018. This sample set was analyzed on a rush turn-around time, under your Project Name 'MCOLF ATLANTIC PFAS DW Investigation'.

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,

A handwritten signature in black ink that reads "Martha Maier" with a stylized flourish at the end.

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. 1800407**Case Narrative****Sample Condition on Receipt:**

Eighteen drinking water 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.

Analytical Notes:**EPA Method 537**

Samples "CH-AT1RW173-0218", "CH-AT-1RW174-0218", "CH-AT-1RW175-0218", "CH-AT-1RW177-0218" and "CH-AT-1RW179-0218" contained particulate and were centrifuged prior to extraction.

The samples were extracted and analyzed for a PFBS, PFOA and PFOS using 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 Laboratory Reagent Blank and Laboratory Fortified Blank (LFB) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Laboratory Reagent Blank above 1/2 the LOQ. The LFB recoveries were within the method acceptance criteria.

The labeled standard recoveries outside the acceptance criteria are listed in the table below.

As requested, an MS/MSD was performed on sample "CH-AT1RW171-0218". The MS/MSD recoveries and RPDs were within the acceptance criteria.

QC Anomalies

LabNumber	SampleName	Analysis	Analyte	Flag	%Rec
1800407-11	CH-AT-1RW176-0218	EPA Method 537	13C2-PFDA	H	69.9

H = Recovery was outside laboratory acceptance criteria.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1800407-01	CH-AT-1RW171-0218	MS/MSD27-Feb-18 16:58	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL HDPE Bottle, 250 mL HDPE Bottle, 250 mL HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-02	CH-AT-1FB171-0218	27-Feb-18 16:59	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-03	CH-AT-1RW172-0218	27-Feb-18 17:35	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-04	CH-AT-1FB172-0218	27-Feb-18 17:36	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-05	CH-AT-1RW173-0218	28-Feb-18 10:05	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-06	CH-AT-1FB173-0218	28-Feb-18 10:06	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-07	CH-AT-1RW174-0218	28-Feb-18 10:37	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-08	CH-AT-1FB174-0218	28-Feb-18 10:38	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-09	CH-AT-1RW175-0218	28-Feb-18 10:58	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-10	CH-AT-1FB175-0218	28-Feb-18 10:59	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-11	CH-AT-1RW176-0218	01-Mar-18 11:41	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-12	CH-AT-1FB176-0218	01-Mar-18 11:42	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-13	CH-AT-1RW177-0218	01-Mar-18 12:08	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-14	CH-AT-1FB177-0218	01-Mar-18 12:09	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-15	CH-AT-1RW178-0218	01-Mar-18 12:39	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-16	CH-AT-1FB178-0218	01-Mar-18 12:40	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-17	CH-AT-1RW179-0218	01-Mar-18 13:10	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-18	CH-AT-1FB179-0218	01-Mar-18 13:11	03-Mar-18 10:15	HDPE Bottle, 250 mL

Vista Project: 1800407

Client Project: MCOLF ATLANTIC PFAS DW Investigation

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1800407-18	CH-AT-1FB179-0218	01-Mar-18 13:11	03-Mar-18 10:15	HDPE Bottle, 250 mL

ANALYTICAL RESULTS

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

Sample ID: LFB					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Aqueous					Laboratory Data Lab Sample: B8C0031-BS1 Column: BEH C18					
Analyte	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	78.1	70.8	110	70-130		B8C0031	05-Mar-18	0.250 L	08-Mar-18 21:58	1
PFOA	85.9	80.0	107	70-130		B8C0031	05-Mar-18	0.250 L	08-Mar-18 21:58	1
PFOS	77.6	74.0	105	70-130		B8C0031	05-Mar-18	0.250 L	08-Mar-18 21:58	1
Labeled Standards	Type		% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR		95.4	70- 130		B8C0031	05-Mar-18	0.250 L	08-Mar-18 21:58	1
13C2-PFDA	SURR		86.1	70- 130		B8C0031	05-Mar-18	0.250 L	08-Mar-18 21:58	1

Sample ID: CH-AT-1RW171-0218										EPA Method 537	
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 27-Feb-18 16:58					Laboratory Data Lab Sample: 1800407-01 Date Received: 03-Mar-18 10:15 Column: BEH C18						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
PFBS	ND	0.443	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:13	1	
PFOA	ND	1.08	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:13	1	
PFOS	ND	1.04	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:13	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	92.7	70 - 130			B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:13	1	
13C2-PFDA	SURR	79.4	70 - 130			B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:13	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.
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Matrix Spike Results										EPA Method 537				
Source Client ID: CH-AT-1RW171-0218 Source LabNumber: 1800407-01 Matrix: Aqueous Sample Size: 0.251/0.252 L				QC Batch: B8C0031 Date Extracted: 05-Mar-2018 12:00						Lab Sample: B8C0031-MS1/B8C0031-MSD1 Date Analyzed: 08-Mar-18 22:11 Column: BEH C18 08-Mar-18 22:23 Column: BEH C18				
Analyte	Spike-MS (ng/L)	MS %R	MS Qual.	Spike-MSD (ng/L)	MSD %R	MSD RPD	MSD Qual.	%R Limit	%RPD Limit	Labeled Standard	MS %R	MS Qualifiers	MSD %R	MS Qual.
PFBS	70.7	112		70.3	118	5.22		70 - 130	30	SUR 13C2-PFHxA	85.7		85.1	
PFOA	79.8	83.4		79.5	102	20.1		70 - 130	30	SUR 13C2-PFDA	76.9		82.6	
PFOS	73.8	102		73.5	107	4.78		70 - 130	30					

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

Sample ID: CH-AT-1FB171-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 27-Feb-18 16:59					Laboratory Data Lab Sample: 1800407-02 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:25	1
PFOA	ND	1.08	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:25	1
PFOS	ND	1.04	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:25	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	85.4	70 - 130			B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:25	1
13C2-PFDA	SURR	73.0	70 - 130			B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:25	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.
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Sample ID: CH-AT-1RW172-0218										EPA Method 537
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 27-Feb-18 17:35					Laboratory Data Lab Sample: 1800407-03 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.441	4.98	9.95		B8C0031	05-Mar-18	0.251 L	08-Mar-18 23:38	1
PFOA	ND	1.07	4.98	9.95		B8C0031	05-Mar-18	0.251 L	08-Mar-18 23:38	1
PFOS	ND	1.03	4.98	9.95		B8C0031	05-Mar-18	0.251 L	08-Mar-18 23:38	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	88.0	70 - 130		B8C0031	05-Mar-18	0.251 L	08-Mar-18 23:38	1	
13C2-PFDA	SURR	74.2	70 - 130		B8C0031	05-Mar-18	0.251 L	08-Mar-18 23:38	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.
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Sample ID: CH-AT-1FB172-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 27-Feb-18 17:36					Laboratory Data Lab Sample: 1800407-04 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.437	4.92	9.86		B8C0031	05-Mar-18	0.254 L	08-Mar-18 23:50	1
PFOA	ND	1.06	4.92	9.86		B8C0031	05-Mar-18	0.254 L	08-Mar-18 23:50	1
PFOS	ND	1.03	4.92	9.86		B8C0031	05-Mar-18	0.254 L	08-Mar-18 23:50	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	96.1	70 - 130			B8C0031	05-Mar-18	0.254 L	08-Mar-18 23:50	1
13C2-PFDA	SURR	83.7	70 - 130			B8C0031	05-Mar-18	0.254 L	08-Mar-18 23:50	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.
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Sample ID: CH-AT-1RW173-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 28-Feb-18 10:05					Laboratory Data Lab Sample: 1800407-05 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	0.438	0.426	4.81	9.61	J	B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:02	1
PFOA	7.85	1.04	4.81	9.61	J	B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:02	1
PFOS	32.4	1.00	4.81	9.61		B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:02	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	90.3	70 - 130			B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:02	1
13C2-PFDA	SURR	81.6	70 - 130			B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:02	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.
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Sample ID: CH-AT-1FB173-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 28-Feb-18 10:06					Laboratory Data Lab Sample: 1800407-06 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.432	4.86	9.74		B8C0031	05-Mar-18	0.257 L	09-Mar-18 00:15	1
PFOA	ND	1.05	4.86	9.74		B8C0031	05-Mar-18	0.257 L	09-Mar-18 00:15	1
PFOS	ND	1.01	4.86	9.74		B8C0031	05-Mar-18	0.257 L	09-Mar-18 00:15	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	92.1	70 - 130			B8C0031	05-Mar-18	0.257 L	09-Mar-18 00:15	1
13C2-PFDA	SURR	80.2	70 - 130			B8C0031	05-Mar-18	0.257 L	09-Mar-18 00:15	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.
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Sample ID: CH-AT-1RW174-0218										EPA Method 537
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 28-Feb-18 10:37					Laboratory Data Lab Sample: 1800407-07 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.438	4.94	9.88		B8C0031	05-Mar-18	0.253 L	09-Mar-18 00:27	1
PFOA	ND	1.07	4.94	9.88		B8C0031	05-Mar-18	0.253 L	09-Mar-18 00:27	1
PFOS	ND	1.03	4.94	9.88		B8C0031	05-Mar-18	0.253 L	09-Mar-18 00:27	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	77.6	70 - 130			B8C0031	05-Mar-18	0.253 L	09-Mar-18 00:27	1
13C2-PFDA	SURR	76.9	70 - 130			B8C0031	05-Mar-18	0.253 L	09-Mar-18 00:27	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.
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Sample ID: CH-AT-1FB174-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 28-Feb-18 10:38					Laboratory Data Lab Sample: 1800407-08 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.436	4.92	9.84		B8C0031	05-Mar-18	0.254 L	09-Mar-18 00:40	1
PFOA	ND	1.06	4.92	9.84		B8C0031	05-Mar-18	0.254 L	09-Mar-18 00:40	1
PFOS	ND	1.02	4.92	9.84		B8C0031	05-Mar-18	0.254 L	09-Mar-18 00:40	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	91.3	70 - 130			B8C0031	05-Mar-18	0.254 L	09-Mar-18 00:40	1
13C2-PFDA	SURR	90.5	70 - 130			B8C0031	05-Mar-18	0.254 L	09-Mar-18 00:40	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.
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Sample ID: CH-AT-1RW175-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 28-Feb-18 10:58					Laboratory Data Lab Sample: 1800407-09 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.426	4.81	9.62		B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:52	1
PFOA	ND	1.04	4.81	9.62		B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:52	1
PFOS	ND	1.00	4.81	9.62		B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:52	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	84.8	70 - 130			B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:52	1
13C2-PFDA	SURR	73.9	70 - 130			B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:52	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.
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Sample ID: CH-AT-1FB175-0218					EPA Method 537					
Client Data Name: CH2M Hill										

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.
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Sample ID: CH-AT-1RW176-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 01-Mar-18 11:41					Laboratory Data Lab Sample: 1800407-11 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.440	4.96	9.93		B8C0031	05-Mar-18	0.252 L	09-Mar-18 01:17	1
PFOA	ND	1.07	4.96	9.93		B8C0031	05-Mar-18	0.252 L	09-Mar-18 01:17	1
PFOS	ND	1.03	4.96	9.93		B8C0031	05-Mar-18	0.252 L	09-Mar-18 01:17	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	84.3	70 - 130			B8C0031	05-Mar-18	0.252 L	09-Mar-18 01:17	1
13C2-PFDA	SURR	69.9	70 - 130		H	B8C0031	05-Mar-18	0.252 L	09-Mar-18 01:17	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: CH-AT-1FB176-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 01-Mar-18 11:42					Laboratory Data Lab Sample: 1800407-12 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.449	5.06	10.1		B8C0031	05-Mar-18	0.247 L	09-Mar-18 01:29	1
PFOA	ND	1.10	5.06	10.1		B8C0031	05-Mar-18	0.247 L	09-Mar-18 01:29	1
PFOS	ND	1.05	5.06	10.1		B8C0031	05-Mar-18	0.247 L	09-Mar-18 01:29	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	87.9	70 - 130			B8C0031	05-Mar-18	0.247 L	09-Mar-18 01:29	1
13C2-PFDA	SURR	73.5	70 - 130			B8C0031	05-Mar-18	0.247 L	09-Mar-18 01:29	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.
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Sample ID: CH-AT-1RW177-0218										EPA Method 537	
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 01-Mar-18 12:08					Laboratory Data Lab Sample: 1800407-13 Date Received: 03-Mar-18 10:15 Column: BEH C18						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
PFBS	ND	0.435	4.90	9.82		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:42	1	
PFOA	ND	1.06	4.90	9.82		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:42	1	
PFOS	ND	1.02	4.90	9.82		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:42	1	
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C2-PFHxA	SURR	87.1	70 - 130		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:42	1		
13C2-PFDA	SURR	75.6	70 - 130		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:42	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: CH-AT-1FB177-0218										EPA Method 537	
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 01-Mar-18 12:09					Laboratory Data Lab Sample: 1800407-14 Date Received: 03-Mar-18 10:15 Column: BEH C18						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
PFBS	ND	0.442	5.00	9.98		B8C0031	05-Mar-18	0.250 L	09-Mar-18 01:54	1	
PFOA	ND	1.08	5.00	9.98		B8C0031	05-Mar-18	0.250 L	09-Mar-18 01:54	1	
PFOS	ND	1.04	5.00	9.98		B8C0031	05-Mar-18	0.250 L	09-Mar-18 01:54	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	86.6	70 - 130			B8C0031	05-Mar-18	0.250 L	09-Mar-18 01:54	1	
13C2-PFDA	SURR	77.1	70 - 130			B8C0031	05-Mar-18	0.250 L	09-Mar-18 01:54	1	

DL - Detection Limit
LOD - Limit of Detection
LCL-UCL- Lower control limit - upper control limit

LOQ - Limit of quantitation
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: CH-AT-1RW178-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 01-Mar-18 12:39					Laboratory Data Lab Sample: 1800407-15 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:06	1
PFOA	ND	1.08	5.00	10.0		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:06	1
PFOS	ND	1.04	5.00	10.0		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:06	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	86.2	70 - 130			B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:06	1
13C2-PFDA	SURR	80.0	70 - 130			B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:06	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: CH-AT-1FB178-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 01-Mar-18 12:40					Laboratory Data Lab Sample: 1800407-16 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:19	1
PFOA	ND	1.08	5.00	10.0		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:19	1
PFOS	ND	1.04	5.00	10.0		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:19	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	93.3	70 - 130			B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:19	1
13C2-PFDA	SURR	73.1	70 - 130			B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:19	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.
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Sample ID: CH-AT-1RW179-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 01-Mar-18 13:10					Laboratory Data Lab Sample: 1800407-17 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.439	4.96	9.92		B8C0031	05-Mar-18	0.252 L	09-Mar-18 02:31	1
PFOA	1.13	1.07	4.96	9.92	J	B8C0031	05-Mar-18	0.252 L	09-Mar-18 02:31	1
PFOS	ND	1.03	4.96	9.92		B8C0031	05-Mar-18	0.252 L	09-Mar-18 02:31	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	92.1	70 - 130			B8C0031	05-Mar-18	0.252 L	09-Mar-18 02:31	1
13C2-PFDA	SURR	87.2	70 - 130			B8C0031	05-Mar-18	0.252 L	09-Mar-18 02:31	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.
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Sample ID: CH-AT-1FB179-0218										EPA Method 537	
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 01-Mar-18 13:11					Laboratory Data Lab Sample: 1800407-18 Date Received: 03-Mar-18 10:15 Column: BEH C18						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
PFBS	ND	0.447	5.04	10.1		B8C0031	05-Mar-18	0.248 L	09-Mar-18 02:43	1	
PFOA	ND	1.09	5.04	10.1		B8C0031	05-Mar-18	0.248 L	09-Mar-18 02:43	1	
PFOS	ND	1.05	5.04	10.1		B8C0031	05-Mar-18	0.248 L	09-Mar-18 02:43	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	88.6	70 - 130			B8C0031	05-Mar-18	0.248 L	09-Mar-18 02:43	1	
13C2-PFDA	SURR	83.9	70 - 130			B8C0031	05-Mar-18	0.248 L	09-Mar-18 02:43	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.
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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
Alaska Department of Environmental Conservation	17-013
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	1322288
New Hampshire Environmental Accreditation Program	207717
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-008
Pennsylvania Department of Environmental Protection	014
Texas Commission on Environmental Quality	T104704189-17-8
Virginia Department of General Services	9077
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.



CHAIN OF CUSTODY

For Laboratory Use Only
Work Order #: 1800407 Temp: 0.5 °C
Storage ID: WR-2 Storage Secured: Yes ☒ No ☐

Project ID: CTO-08, MCOLF Atlantic PFAS DW Investigation PO#: 10006-7-106051 Sampler: Mikel Wilmer/K. Smith (name)

TAT (check one): Standard ☐ 21 days
Rush (surcharge may apply) ☐ 14 days ☒ 7 days Specify: _____

Invoice to: Name Tiffany Hill Company CH2M Address 1100 NE Circle Blvd Suite #300 City Corvallis State Oregon Ph# 541-768-3109 Fax# _____

Relinquished by (printed name and signature) Kathryn Smith Date 3/2/18 Time 1300 Received by (printed name and signature) Ian Arguilla Date 3/3/18 Time 1037
Relinquished by (printed name and signature) _____ Date _____ Time _____ Received by (printed name and signature) _____ Date _____ Time _____

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 * Fax (916) 673-0106

Method of Shipment: FEDEX

ATTN: Martha Maier

Tracking No: _____

Add Analysis(es) Requested

Container(s)

Mod EPA Method 537

EPA Method 537 (DW only)

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	PFOA/PFOS	UCMR3 PFAS List 6	537 List 14	Full List of 28	Other: Please List Below	PFOA/PFOS/PFS	UCMR3 PFAS List 6	PFAS List 14	Comments
CH-AT-1RW171-0218	2/27/18	1658		2	P	DW						TZ			
CH-AT-1RW171-0218-MS		1658		2	P	DW						TZ			
CH-AT-1RW171-0218-SD		1658		2	P	DW						TZ			
CH-AT-1FB171-0218		1659		2	P	DW						TZ			
CH-AT-1RW172-0218		1735		2	P	DW						TZ			
CH-AT-1FB172-0218		1736		2	P	DW						TZ			
CH-AT-1RW173-0218	2/28/18	1605		2	P	DW						TZ			
CH-AT-1FB173-0218		1006		2	P	DW						TZ			
CH-AT-1RW174-0218		1037		2	P	DW						TZ			
CH-AT-1FB174-0218		1038		2	P	DW						TZ			

Special Instructions/Comments: 7 DAY TAT
Analysis of Drinking Water samples for PFOA/PFOS/PFS

SEND DOCUMENTATION AND RESULTS TO:

Name: Tiffany Hill
Company: CH2M HILL Inc.
Address: 1100 NE Circle Blvd Suite 300
City: Corvallis State: OR Zip: 97330
Phone: 541-768-3109 Fax: _____
Email: Tiffany.Hill@ch2m.com

Container Types: P = HDPE, PJ = HDPE Jar
O = Other _____

Bottle Preservation Type: T = Thiosulfate,
TZ = Trizma: _____

Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment,
SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other: _____



CHAIN OF CUSTODY

For Laboratory Use Only
Work Order #: 1800407 Temp 0.5 °C
Storage ID WR-2 Storage Secured: Yes ☒ No ☐

Project ID CTO-08, MCOLF Atlantic PFAS DW Investigation PO# 10006-7-106051 Sampler Mike Witmer/K. Smith (name)

TAT (check one): ☐ 21 days ☐ Rush (surcharge may apply) ☐ 14 days ☒ 7 days Specify: _____

Invoice to: Name Tiffany Hill Company CH2M Address 1100 NE Circle Blvd Suite #300 City Corvallis State Oregon Ph# 541-768-3109 Fax# _____

Relinquished by (printed name and signature) Kathryn Smith Date 3/2/18 Time 1300 Received by (printed name and signature) Ian Arguella Date 3/2/18 Time 1033
Relinquished by (printed name and signature) _____ Date _____ Time _____ Received by (printed name and signature) _____ Date _____ Time _____

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 * Fax (916) 673-0106

ATTN: Martha Maier

Method of Shipment: FEDEX
Tracking No: _____

Add Analysis(es) Requested

Container(s)

Mod EPA Method 537

EPA Method 537(DW only)

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	PFOA/PFOS	UCMR3 PFAS List 6	537 List 14	Full List of 28	Other, Please List Below	PFOA/PFOS/PFBS	UCMR3 PFAS List 6	PFAS List 14	Comments
CH-AT-1RW175-0218	2/28/18	1058		2	P	DW						TZ			
CH-AT-1FB175-0218		1059		2	P	DW						TZ			
CH-AT-1RW176-0218	3/1/18	11:41		2	P	DW						TZ			
CH-AT-1FB176-0218		11:42		2	P	DW						TZ			
CH-AT-1RW177-0218		12:08		2	P	DW						TZ			
CH-AT-1FB177-0218		12:09		2	P	DW						TZ			
CH-AT-1RW178-0218		12:39		2	P	DW						TZ			
CH-AT-1FB178-0218		12:40		2	P	DW						TZ			
CH-AT-1RW179-0218		1310		2	P	DW						TZ			
CH-AT-1FB179-0218		1311		2	P	DW						TZ			

Special Instructions/Comments: 7 DAY TAT
Analysis of Drinking Water samples for PFOA/PFOS/PFBS

SEND DOCUMENTATION AND RESULTS TO:

Name: Tiffany Hill
Company: CH2M HILL Inc.
Address: 1100 NE Circle Blvd Suite 300
City: Corvallis State: OR Zip: 97330
Phone: 541-768-3109 Fax: _____
Email: Tiffany.Hill@ch2m.com

Container Types: P= HDPE, PJ= HDPE Jar
O = Other: _____

Bottle Preservation Type: T = Thiosulfate,
TZ = Trizma: _____

Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment,
SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other: _____

Sample Log-in Checklist

Vista Work Order #: 1800407 TAT 7

Samples Arrival:	Date/Time <u>3/3/18 1015</u>	Initials: <u>IA</u>	Location: <u>WR-2</u> Shelf/Rack: <u>N/A</u>
Logged In:	Date/Time <u>3/3/18 1208</u>	Initials: <u>IA</u>	Location: <u>WR-2</u> Shelf/Rack: <u>E-4</u>
Delivered By:	☒ FedEx ☐ UPS ☐ On Trac ☐ GSO ☐ DHL ☐ Hand Delivered ☐ Other		
Preservation:	☒ Ice ☐ Blue Ice ☐ Dry Ice ☐ None		
Temp °C: <u>0.6</u> (uncorrected)	Time: <u>1030</u>		Thermometer ID: <u>IR-4</u>
Temp °C: <u>0.5</u> (corrected)	Probe used: Yes ☐ No ☒		

	YES	NO	NA
Adequate Sample Volume Received?	/		
Holding Time Acceptable?	/		
Shipping Container(s) Intact?	/		
Shipping Custody Seals Intact?	/		
Shipping Documentation Present?	/		
Airbill Trk # <u>7716 9051 7131</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:	$\text{Na}_2\text{S}_2\text{O}_3$ ☒ Trizma ☐ None	☒ Yes ☐ No ☐ NA	
Shipping Container	☒ Vista ☐ Client ☒ Retain	☐ Return ☐ Dispose	

Comments:



March 12, 2018

Vista Work Order No. 1800407

Ms. Tiffany Hill
CH2M Hill
1100 NE Circle Blvd. Suite 300
Corvallis, OR 97330

Dear Ms. Hill,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on March 03, 2018. This sample set was analyzed on a rush turn-around time, under your Project Name 'MCOLF ATLANTIC PFAS DW Investigation'.

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,

A handwritten signature in black ink that reads "Martha Maier" with a stylized flourish at the end.

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. 1800407**Case Narrative****Sample Condition on Receipt:**

Eighteen drinking water 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.

Analytical Notes:**EPA Method 537**

Samples "CH-AT1RW173-0218", "CH-AT-1RW174-0218", "CH-AT-1RW175-0218", "CH-AT-1RW177-0218" and "CH-AT-1RW179-0218" contained particulate and were centrifuged prior to extraction.

The samples were extracted and analyzed for a PFBS, PFOA and PFOS using 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 Laboratory Reagent Blank and Laboratory Fortified Blank (LFB) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Laboratory Reagent Blank above 1/2 the LOQ. The LFB recoveries were within the method acceptance criteria.

The labeled standard recoveries outside the acceptance criteria are listed in the table below.

As requested, an MS/MSD was performed on sample "CH-AT1RW171-0218". The MS/MSD recoveries and RPDs were within the acceptance criteria.

QC Anomalies

LabNumber	SampleName	Analysis	Analyte	Flag	%Rec
1800407-11	CH-AT-1RW176-0218	EPA Method 537	13C2-PFDA	H	69.9

H = Recovery was outside laboratory acceptance criteria.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1800407-01	CH-AT-1RW171-0218	MS/MSD27-Feb-18 16:58	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL HDPE Bottle, 250 mL HDPE Bottle, 250 mL HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-02	CH-AT-1FB171-0218	27-Feb-18 16:59	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-03	CH-AT-1RW172-0218	27-Feb-18 17:35	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-04	CH-AT-1FB172-0218	27-Feb-18 17:36	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-05	CH-AT-1RW173-0218	28-Feb-18 10:05	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-06	CH-AT-1FB173-0218	28-Feb-18 10:06	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-07	CH-AT-1RW174-0218	28-Feb-18 10:37	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-08	CH-AT-1FB174-0218	28-Feb-18 10:38	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-09	CH-AT-1RW175-0218	28-Feb-18 10:58	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-10	CH-AT-1FB175-0218	28-Feb-18 10:59	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-11	CH-AT-1RW176-0218	01-Mar-18 11:41	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-12	CH-AT-1FB176-0218	01-Mar-18 11:42	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-13	CH-AT-1RW177-0218	01-Mar-18 12:08	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-14	CH-AT-1FB177-0218	01-Mar-18 12:09	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-15	CH-AT-1RW178-0218	01-Mar-18 12:39	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-16	CH-AT-1FB178-0218	01-Mar-18 12:40	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-17	CH-AT-1RW179-0218	01-Mar-18 13:10	03-Mar-18 10:15	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800407-18	CH-AT-1FB179-0218	01-Mar-18 13:11	03-Mar-18 10:15	HDPE Bottle, 250 mL

Vista Project: 1800407

Client Project: MCOLF ATLANTIC PFAS DW Investigation

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1800407-18	CH-AT-1FB179-0218	01-Mar-18 13:11	03-Mar-18 10:15	HDPE Bottle, 250 mL

ANALYTICAL RESULTS

Sample ID: LRB					EPA Method 537					
Client Data Name: CH2M Hill Matrix: Aqueous Project: MCOLF ATLANTIC PFAS DW Investigation					Laboratory Data Lab Sample: B8C0031-BLK1 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 21:46	1
PFOA	ND	1.08	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 21:46	1
PFOS	ND	1.04	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 21:46	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	84.7	70 - 130			B8C0031	05-Mar-18	0.250 L	08-Mar-18 21:46	1
13C2-PFDA	SURR	81.6	70 - 130			B8C0031	05-Mar-18	0.250 L	08-Mar-18 21:46	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: LFB					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Aqueous					Laboratory Data Lab Sample: B8C0031-BS1 Column: BEH C18					
Analyte	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	78.1	70.8	110	70-130		B8C0031	05-Mar-18	0.250 L	08-Mar-18 21:58	1
PFOA	85.9	80.0	107	70-130		B8C0031	05-Mar-18	0.250 L	08-Mar-18 21:58	1
PFOS	77.6	74.0	105	70-130		B8C0031	05-Mar-18	0.250 L	08-Mar-18 21:58	1
Labeled Standards	Type		% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR		95.4	70- 130		B8C0031	05-Mar-18	0.250 L	08-Mar-18 21:58	1
13C2-PFDA	SURR		86.1	70- 130		B8C0031	05-Mar-18	0.250 L	08-Mar-18 21:58	1

Sample ID: CH-AT-1RW171-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 27-Feb-18 16:58					Laboratory Data Lab Sample: 1800407-01 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:13	1
PFOA	ND	1.08	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:13	1
PFOS	ND	1.04	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:13	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	92.7	70 - 130			B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:13	1
13C2-PFDA	SURR	79.4	70 - 130			B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:13	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.

Matrix Spike Results										EPA Method 537					
Source Client ID: CH-AT-1RW171-0218 Source LabNumber: 1800407-01 Matrix: Aqueous Sample Size: 0.251/0.252 L				QC Batch: B8C0031 Date Extracted: 05-Mar-2018 12:00						Lab Sample: B8C0031-MS1/B8C0031-MSD1 Date Analyzed: 08-Mar-18 22:11 Column: BEH C18 08-Mar-18 22:23 Column: BEH C18					
Analyte	Spike-MS (ng/L)	MS %R	MS Qual.	Spike-MSD (ng/L)	MSD %R	MSD RPD	MSD Qual.	%R Limit	%RPD Limit	Labeled Standard		MS %R	MS Qualifiers	MSD %R	MS Qual.
PFBS	70.7	112		70.3	118	5.22		70 - 130	30	SUR	13C2-PFHxA	85.7		85.1	
PFOA	79.8	83.4		79.5	102	20.1		70 - 130	30	SUR	13C2-PFDA	76.9		82.6	
PFOS	73.8	102		73.5	107	4.78		70 - 130	30						

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

Sample ID: CH-AT-1FB171-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 27-Feb-18 16:59					Laboratory Data Lab Sample: 1800407-02 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:25	1
PFOA	ND	1.08	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:25	1
PFOS	ND	1.04	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:25	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	85.4	70 - 130			B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:25	1
13C2-PFDA	SURR	73.0	70 - 130			B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:25	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: CH-AT-1RW172-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 27-Feb-18 17:35					Laboratory Data Lab Sample: 1800407-03 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.441	4.98	9.95		B8C0031	05-Mar-18	0.251 L	08-Mar-18 23:38	1
PFOA	ND	1.07	4.98	9.95		B8C0031	05-Mar-18	0.251 L	08-Mar-18 23:38	1
PFOS	ND	1.03	4.98	9.95		B8C0031	05-Mar-18	0.251 L	08-Mar-18 23:38	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	88.0	70 - 130			B8C0031	05-Mar-18	0.251 L	08-Mar-18 23:38	1
13C2-PFDA	SURR	74.2	70 - 130			B8C0031	05-Mar-18	0.251 L	08-Mar-18 23:38	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.
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Sample ID: CH-AT-1FB172-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 27-Feb-18 17:36					Laboratory Data Lab Sample: 1800407-04 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.437	4.92	9.86		B8C0031	05-Mar-18	0.254 L	08-Mar-18 23:50	1
PFOA	ND	1.06	4.92	9.86		B8C0031	05-Mar-18	0.254 L	08-Mar-18 23:50	1
PFOS	ND	1.03	4.92	9.86		B8C0031	05-Mar-18	0.254 L	08-Mar-18 23:50	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	96.1	70 - 130			B8C0031	05-Mar-18	0.254 L	08-Mar-18 23:50	1
13C2-PFDA	SURR	83.7	70 - 130			B8C0031	05-Mar-18	0.254 L	08-Mar-18 23:50	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: CH-AT-1RW173-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 28-Feb-18 10:05					Laboratory Data Lab Sample: 1800407-05 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	0.438	0.426	4.81	9.61	J	B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:02	1
PFOA	7.85	1.04	4.81	9.61	J	B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:02	1
PFOS	32.4	1.00	4.81	9.61		B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:02	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	90.3	70 - 130			B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:02	1
13C2-PFDA	SURR	81.6	70 - 130			B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:02	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: CH-AT-1FB173-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 28-Feb-18 10:06					Laboratory Data Lab Sample: 1800407-06 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.432	4.86	9.74		B8C0031	05-Mar-18	0.257 L	09-Mar-18 00:15	1
PFOA	ND	1.05	4.86	9.74		B8C0031	05-Mar-18	0.257 L	09-Mar-18 00:15	1
PFOS	ND	1.01	4.86	9.74		B8C0031	05-Mar-18	0.257 L	09-Mar-18 00:15	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	92.1	70 - 130		B8C0031	05-Mar-18	0.257 L	09-Mar-18 00:15	1	
13C2-PFDA	SURR	80.2	70 - 130		B8C0031	05-Mar-18	0.257 L	09-Mar-18 00:15	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.
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Sample ID: CH-AT-1RW174-0218										EPA Method 537	
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 28-Feb-18 10:37					Laboratory Data Lab Sample: 1800407-07 Date Received: 03-Mar-18 10:15 Column: BEH C18						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
PFBS	ND	0.438	4.94	9.88		B8C0031	05-Mar-18	0.253 L	09-Mar-18 00:27	1	
PFOA	ND	1.07	4.94	9.88		B8C0031	05-Mar-18	0.253 L	09-Mar-18 00:27	1	
PFOS	ND	1.03	4.94	9.88		B8C0031	05-Mar-18	0.253 L	09-Mar-18 00:27	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	77.6	70 - 130			B8C0031	05-Mar-18	0.253 L	09-Mar-18 00:27	1	
13C2-PFDA	SURR	76.9	70 - 130			B8C0031	05-Mar-18	0.253 L	09-Mar-18 00:27	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.
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Sample ID: CH-AT-1FB174-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 28-Feb-18 10:38					Laboratory Data Lab Sample: 1800407-08 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.436	4.92	9.84		B8C0031	05-Mar-18	0.254 L	09-Mar-18 00:40	1
PFOA	ND	1.06	4.92	9.84		B8C0031	05-Mar-18	0.254 L	09-Mar-18 00:40	1
PFOS	ND	1.02	4.92	9.84		B8C0031	05-Mar-18	0.254 L	09-Mar-18 00:40	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	91.3	70 - 130			B8C0031	05-Mar-18	0.254 L	09-Mar-18 00:40	1
13C2-PFDA	SURR	90.5	70 - 130			B8C0031	05-Mar-18	0.254 L	09-Mar-18 00:40	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.
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Sample ID: CH-AT-1RW175-0218										EPA Method 537	
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 28-Feb-18 10:58					Laboratory Data Lab Sample: 1800407-09 Date Received: 03-Mar-18 10:15 Column: BEH C18						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
PFBS	ND	0.426	4.81	9.62		B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:52	1	
PFOA	ND	1.04	4.81	9.62		B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:52	1	
PFOS	ND	1.00	4.81	9.62		B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:52	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	84.8	70 - 130			B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:52	1	
13C2-PFDA	SURR	73.9	70 - 130			B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:52	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.
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Sample ID: CH-AT-1FB175-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 28-Feb-18 10:59					Laboratory Data Lab Sample: 1800407-10 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.434	4.90	9.79		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:04	1
PFOA	ND	1.06	4.90	9.79		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:04	1
PFOS	ND	1.02	4.90	9.79		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:04	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	92.4	70 - 130			B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:04	1
13C2-PFDA	SURR	83.5	70 - 130			B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:04	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.
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Sample ID: CH-AT-1RW176-0218										EPA Method 537	
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 01-Mar-18 11:41					Laboratory Data Lab Sample: 1800407-11 Date Received: 03-Mar-18 10:15 Column: BEH C18						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
PFBS	ND	0.440	4.96	9.93		B8C0031	05-Mar-18	0.252 L	09-Mar-18 01:17	1	
PFOA	ND	1.07	4.96	9.93		B8C0031	05-Mar-18	0.252 L	09-Mar-18 01:17	1	
PFOS	ND	1.03	4.96	9.93		B8C0031	05-Mar-18	0.252 L	09-Mar-18 01:17	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	84.3	70 - 130			B8C0031	05-Mar-18	0.252 L	09-Mar-18 01:17	1	
13C2-PFDA	SURR	69.9	70 - 130		H	B8C0031	05-Mar-18	0.252 L	09-Mar-18 01:17	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.
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Sample ID: CH-AT-1FB176-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 01-Mar-18 11:42					Laboratory Data Lab Sample: 1800407-12 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.449	5.06	10.1		B8C0031	05-Mar-18	0.247 L	09-Mar-18 01:29	1
PFOA	ND	1.10	5.06	10.1		B8C0031	05-Mar-18	0.247 L	09-Mar-18 01:29	1
PFOS	ND	1.05	5.06	10.1		B8C0031	05-Mar-18	0.247 L	09-Mar-18 01:29	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	87.9	70 - 130			B8C0031	05-Mar-18	0.247 L	09-Mar-18 01:29	1
13C2-PFDA	SURR	73.5	70 - 130			B8C0031	05-Mar-18	0.247 L	09-Mar-18 01:29	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.
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Sample ID: CH-AT-1RW177-0218										EPA Method 537	
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 01-Mar-18 12:08					Laboratory Data Lab Sample: 1800407-13 Date Received: 03-Mar-18 10:15 Column: BEH C18						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
PFBS	ND	0.435	4.90	9.82		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:42	1	
PFOA	ND	1.06	4.90	9.82		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:42	1	
PFOS	ND	1.02	4.90	9.82		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:42	1	
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C2-PFHxA	SURR	87.1	70 - 130		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:42	1		
13C2-PFDA	SURR	75.6	70 - 130		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:42	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: CH-AT-1FB177-0218										EPA Method 537	
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 01-Mar-18 12:09					Laboratory Data Lab Sample: 1800407-14 Date Received: 03-Mar-18 10:15 Column: BEH C18						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
PFBS	ND	0.442	5.00	9.98		B8C0031	05-Mar-18	0.250 L	09-Mar-18 01:54	1	
PFOA	ND	1.08	5.00	9.98		B8C0031	05-Mar-18	0.250 L	09-Mar-18 01:54	1	
PFOS	ND	1.04	5.00	9.98		B8C0031	05-Mar-18	0.250 L	09-Mar-18 01:54	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	86.6	70 - 130			B8C0031	05-Mar-18	0.250 L	09-Mar-18 01:54	1	
13C2-PFDA	SURR	77.1	70 - 130			B8C0031	05-Mar-18	0.250 L	09-Mar-18 01:54	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.
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Sample ID: CH-AT-1RW178-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 01-Mar-18 12:39					Laboratory Data Lab Sample: 1800407-15 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:06	1
PFOA	ND	1.08	5.00	10.0		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:06	1
PFOS	ND	1.04	5.00	10.0		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:06	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	86.2	70 - 130			B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:06	1
13C2-PFDA	SURR	80.0	70 - 130			B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:06	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.
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Sample ID: CH-AT-1FB178-0218					EPA Method 537					
Client Data Name: CH2M Hill										

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.
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Sample ID: CH-AT-1RW179-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 01-Mar-18 13:10					Laboratory Data Lab Sample: 1800407-17 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.439	4.96	9.92		B8C0031	05-Mar-18	0.252 L	09-Mar-18 02:31	1
PFOA	1.13	1.07	4.96	9.92	J	B8C0031	05-Mar-18	0.252 L	09-Mar-18 02:31	1
PFOS	ND	1.03	4.96	9.92		B8C0031	05-Mar-18	0.252 L	09-Mar-18 02:31	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	92.1	70 - 130			B8C0031	05-Mar-18	0.252 L	09-Mar-18 02:31	1
13C2-PFDA	SURR	87.2	70 - 130			B8C0031	05-Mar-18	0.252 L	09-Mar-18 02:31	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.
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Sample ID: CH-AT-1FB179-0218					EPA Method 537					
Client Data Name: CH2M Hill Project: MCOLF ATLANTIC PFAS DW Investigation Matrix: Drinking Water Date Collected: 01-Mar-18 13:11					Laboratory Data Lab Sample: 1800407-18 Date Received: 03-Mar-18 10:15 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.447	5.04	10.1		B8C0031	05-Mar-18	0.248 L	09-Mar-18 02:43	1
PFOA	ND	1.09	5.04	10.1		B8C0031	05-Mar-18	0.248 L	09-Mar-18 02:43	1
PFOS	ND	1.05	5.04	10.1		B8C0031	05-Mar-18	0.248 L	09-Mar-18 02:43	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	88.6	70 - 130			B8C0031	05-Mar-18	0.248 L	09-Mar-18 02:43	1
13C2-PFDA	SURR	83.9	70 - 130			B8C0031	05-Mar-18	0.248 L	09-Mar-18 02:43	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.
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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
Alaska Department of Environmental Conservation	17-013
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	1322288
New Hampshire Environmental Accreditation Program	207717
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-008
Pennsylvania Department of Environmental Protection	014
Texas Commission on Environmental Quality	T104704189-17-8
Virginia Department of General Services	9077
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.



CHAIN OF CUSTODY

For Laboratory Use Only
Work Order #: 1800407 Temp: 0.5 °C
Storage ID: WR-2 Storage Secured Yes ☒ No ☐

Project ID: CTO-08, MCOLF Atlantic PFAS DW Investigation PO#: 10006-7-106051 Sampler: Mikel Witmer/K. Smith (name)

TAT (check one): Standard ☐ 21 days
Rush (surcharge may apply) ☐ 14 days ☒ 7 days Specify: _____

Invoice to: Name Tiffany Hill Company CH2M Address 1100 NE Circle Blvd Suite #300 City Corvallis State Oregon Ph# 541-768-3109 Fax# _____

Relinquished by (printed name and signature) Kathryn Smith Date 3/2/18 Time 1300 Received by (printed name and signature) Ian Arguilla Date 3/3/18 Time 1037
Relinquished by (printed name and signature) _____ Date _____ Time _____ Received by (printed name and signature) _____ Date _____ Time _____

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 * Fax (916) 673-0106

Method of Shipment: FEDEX

ATTN: Martha Maier

Tracking No: _____

Add Analysis(es) Requested

Container(s)

Mod EPA Method 537

EPA Method 537 (DW only)

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	PFOA/PFOS	UCMR3 PFAS List 6	537 List 14	Full List of 28	Other, Please List Below	PFOA/PFOS/PFS	UCMR3 PFAS List 6	PFAS List 14	Comments
CH-AT-1RW171-0218	2/27/18	1658		2	P	DW						TZ			
CH-AT-1RW171-0218-MS		1658		2	P	DW						TZ			
CH-AT-1RW171-0218-SD		1658		2	P	DW						TZ			
CH-AT-1FB171-0218		1659		2	P	DW						TZ			
CH-AT-1RW172-0218		1735		2	P	DW						TZ			
CH-AT-1FB172-0218		1736		2	P	DW						TZ			
CH-AT-1RW173-0218	2/28/18	1605		2	P	DW						TZ			
CH-AT-1FB173-0218		1006		2	P	DW						TZ			
CH-AT-1RW174-0218		1037		2	P	DW						TZ			
CH-AT-1FB174-0218		1038		2	P	DW						TZ			

Special Instructions/Comments: 7 DAY TAT
Analysis of Drinking Water samples for PFOA/PFOS/PFS

SEND DOCUMENTATION AND RESULTS TO:

Name: Tiffany Hill
Company: CH2M HILL Inc.
Address: 1100 NE Circle Blvd Suite 300
City: Corvallis State: OR Zip: 97330
Phone: 541-768-3109 Fax: _____
Email: Tiffany.Hill@ch2m.com

Container Types: P = HDPE, PJ = HDPE Jar
O = Other _____

Bottle Preservation Type: T = Thiosulfate,
TZ = Trizma: _____

Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment,
SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other: _____



CHAIN OF CUSTODY

For Laboratory Use Only
Work Order #: 1800407 Temp 0.5 °C
Storage ID WR-2 Storage Secured: Yes ☒ No ☐

Project ID CTO-08, MCOLF Atlantic PFAS DW Investigation PO# 10006-7-106051 Sampler Mike Witmer/K. Smith (name)

TAT (check one): ☐ 21 days ☐ Rush (surcharge may apply) ☐ 14 days ☒ 7 days Specify: _____

Invoice to: Name Tiffany Hill Company CH2M Address 1100 NE Circle Blvd Suite #300 City Corvallis State Oregon Ph# 541-768-3109 Fax# _____

Relinquished by (printed name and signature) Kathryn Smith Date 3/2/18 Time 1300 Received by (printed name and signature) Ian Arguella Date 3/2/18 Time 1033
Relinquished by (printed name and signature) _____ Date _____ Time _____ Received by (printed name and signature) _____ Date _____ Time _____

SHIP TO: Vista Analytical Laboratory 1104 Windfield Way El Dorado Hills, CA 95762 (916) 673-1520 * Fax (916) 673-0106				Method of Shipment: <u>FEDEX</u>		Tracking No: _____		Add Analysis(es) Requested		Container(s)		Mod EPA Method 537		EPA Method 537(DW only)		Comments
Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	PFOA/PFOS	UCMR3 PFAS List 6	537 List 14	Full List of 28	Other, Please List Below	PFOA/PFOS/PFBS	UCMR3 PFAS List 6	PFAS List 14		
CH-AT-1RW175-0218	2/28/18	1058		2	P	DW							TZ			
CH-AT-1FB175-0218		1059		2	P	DW							TZ			
CH-AT-1RW176-0218	3/1/18	11:41		2	P	DW							TZ			
CH-AT-1FB176-0218		11:42		2	P	DW							TZ			
CH-AT-1RW177-0218		12:08		2	P	DW							TZ			
CH-AT-1FB177-0218		12:09		2	P	DW							TZ			
CH-AT-1RW178-0218		12:39		2	P	DW							TZ			
CH-AT-1FB178-0218		12:40		2	P	DW							TZ			
CH-AT-1RW179-0218		1310		2	P	DW							TZ			
CH-AT-1FB179-0218		1311		2	P	DW							TZ			

Special Instructions/Comments: 7 DAY TAT
Analysis of Drinking Water samples for PFOA/PFOS/PFBS

SEND DOCUMENTATION AND RESULTS TO:

Name: Tiffany Hill
Company: CH2M HILL Inc.
Address: 1100 NE Circle Blvd Suite 300
City: Corvallis State: OR Zip: 97330
Phone: 541-768-3109 Fax: _____
Email: Tiffany.Hill@ch2m.com

Container Types: P= HDPE, PJ= HDPE Jar
O = Other _____

Bottle Preservation Type: T = Thiosulfate,
TZ = Trizma: _____

Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment,
SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other: _____

Sample Log-in Checklist

Vista Work Order #: 1800407 TAT 7

Samples Arrival:	Date/Time <u>3/3/18 1015</u>	Initials: <u>IA</u>	Location: <u>WR-2</u> Shelf/Rack: <u>N/A</u>
Logged In:	Date/Time <u>3/3/18 1208</u>	Initials: <u>IA</u>	Location: <u>WR-2</u> Shelf/Rack: <u>E-4</u>
Delivered By:	☒ FedEx ☐ UPS ☐ On Trac ☐ GSO ☐ DHL ☐ Hand Delivered ☐ Other		
Preservation:	☒ Ice ☐ Blue Ice ☐ Dry Ice ☐ None		
Temp °C: <u>0.6</u> (uncorrected)	Time: <u>1030</u>		Thermometer ID: <u>IR-4</u>
Temp °C: <u>0.5</u> (corrected)	Probe used: Yes ☐ No ☒		

	YES	NO	NA
Adequate Sample Volume Received?	/		
Holding Time Acceptable?	/		
Shipping Container(s) Intact?	/		
Shipping Custody Seals Intact?	/		
Shipping Documentation Present?	/		
Airbill Trk # <u>7716 9051 7131</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:	$\text{Na}_2\text{S}_2\text{O}_3$ ☒ Trizma ☐ None	☒ Yes ☐ No	☐ NA
Shipping Container	☒ Vista ☐ Client ☒ Retain	☐ Return	☐ Dispose

Comments:

EXTRACTION INFORMATION

Process Sheet
Workorder: 1800407



Prep Expiration: 2018-Mar-13
Client: CH2M Hill

Workorder Due: 12-Mar-18 00:00

TAT: 9

Method: 537 PFAS DW DoD Unmodified
Matrix: Aqueous

Prep Batch: B8C0031

Prep Data Entered: 03/07/18 MA
Date and Initials

Version: PFOA, PFOS, PFBS
DoD: DoD QSM 5.1

Initial Sequence: S8C0020

LabSampleID	A/B	Prep Rec	Spike Rec	ClientSampleID	Comments	Location	Container
1800407-01	A, B, C	☒	☒	CH-AT-1RW171-0218	MS/MSD	WR-2 E-4	HDPE Bottle, 250 mL
1800407-02	A	☒	☒	CH-AT-1FB171-0218		WR-2 E-4	HDPE Bottle, 250 mL
1800407-03		☒	☒	CH-AT-1RW172-0218		WR-2 E-4	HDPE Bottle, 250 mL
1800407-04		☒	☒	CH-AT-1FB172-0218		WR-2 E-4	HDPE Bottle, 250 mL
1800407-05		☒	☒	CH-AT-1RW173-0218		WR-2 E-4	HDPE Bottle, 250 mL
1800407-06		☒	☒	CH-AT-1FB173-0218		WR-2 E-4	HDPE Bottle, 250 mL
1800407-07		☒	☒	CH-AT-1RW174-0218		WR-2 E-4	HDPE Bottle, 250 mL
1800407-08		☒	☒	CH-AT-1FB174-0218		WR-2 E-4	HDPE Bottle, 250 mL
1800407-09		☒	☒	CH-AT-1RW175-0218		WR-2 E-4	HDPE Bottle, 250 mL
1800407-10		☒	☒	CH-AT-1FB175-0218		WR-2 E-4	HDPE Bottle, 250 mL
1800407-11		☒	☒	CH-AT-1RW176-0218		WR-2 E-4	HDPE Bottle, 250 mL
1800407-12		☒	☒	CH-AT-1FB176-0218		WR-2 E-4	HDPE Bottle, 250 mL
1800407-13		☒	☒	CH-AT-1RW177-0218		WR-2 E-4	HDPE Bottle, 250 mL
1800407-14		☒	☒	CH-AT-1FB177-0218		WR-2 E-4	HDPE Bottle, 250 mL
1800407-15		☒	☒	CH-AT-1RW178-0218		WR-2 E-4	HDPE Bottle, 250 mL
1800407-16		☒	☒	CH-AT-1FB178-0218		WR-2 E-4	HDPE Bottle, 250 mL
1800407-17		☒	☒	CH-AT-1RW179-0218		WR-2 E-4	HDPE Bottle, 250 mL
1800407-18		☒	☒	CH-AT-1FB179-0218		WR-2 E-4	HDPE Bottle, 250 mL

Pre-Prep Check Out: MA 3/5/18
Pre-Prep Check In: NA

Prep Check Out: NA
Prep Check In: NA

Prep Reconciled Initials/Date: MA 3/5/18
Spike Reconciled Initials/Date: FR 3/5/18
VialBoxID: Stack

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537 PFAS DW DoD Unmodified

B8C0031

Chemist: He

Prep Date/Time: 05-Mar-18 09:42

Prepared using: LCMS - SPE Extraction-LCMS

1200

He

BalanceID: HRMS-8

Cen	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	SS/NS CHEM/WIT DATE	SPE	IS CHEM/WIT DATE
☐	B8C0031-BLK1 (A)	NA	NA	(0.250)	He 7R 3.5.18	7R HN 3.5.18	VC DF 3/6/18
☐	B8C0031-BS1	NA	NA	(0.250)			
☐	B8C0031-MS1 1800407-01 (C)	278.06	27.54	0.25052			
☐	B8C0031-MSD1 1800407-01 (C)	279.06	27.38	0.25168			
☐	1800407-01 (C)	278.07	27.95	0.24990			
☐	1800407-02	277.32	27.42	0.24990			
☐	1800407-03 (C)	279.44	28.19	0.25125			
☐	1800407-04	281.22	27.65	0.25357			
☒	1800407-05	288.38	28.26	0.26012			
☐	1800407-06	283.51	26.95	0.25656			
☒	1800407-07 (C)	281.29	28.33	0.25296			
☐	1800407-08	281.52	27.48	0.25404			
☒	1800407-09 (B) (C)	287.64	27.88	0.25976			
☐	1800407-10	283.23	27.83	0.25540			
☐	1800407-11 (C)	280.05	28.24	0.25181			
☐	1800407-12	274.13	27.58	0.24655			

SS/IS: 18C0103, 20 µL
 NS: 17L2901, 20 µL (V2)
 IS/RS: 18C0104, 20 µL

SPE Chem: Strata X 33 µm 500 mg
 Lot#: 917-005658
 Ele SOLV: MeOH
 Lot#: JB064809
 Final Volume(s) 1 mL

Notes: (A) 1.25 g Trizma added MA 2/5/18
 (B) Sample still yellowish color after centrifuging MA 2/5/18
 (C) final extract final volume was yellow color He 3.6.18

Comments: Assume 1 g = 1 mL

Cen = Centrifuged

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537 PFAS DW DoD Unmodified

B8C0031

Chemist: 7K

Prep Date/Time: 05-Mar-18 09:42

Prepared using: LCMS - SPE Extraction-LCMS

1200
7K

BalanceID: HRMS-8

Cen	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	SS/NS CHEM/WIT DATE	SPE	IS CHEM/WIT DATE
☒	1800407-13 (B) (C)	282.66	28.00	0.25466	7K 7R 3.5.18	7R HN 3.5.18	KCD 3/16/18
☐	1800407-14	277.27	26.88	0.25039	T	T	T
☐	1800407-15 (C)	277.33	27.55	0.24978			
☐	1800407-16	277.34	27.44	0.24990			
☒	1800407-17 (B) (C)	280.25	28.24	0.25201			
☐	1800407-18	275.49	27.61	0.24788	T	T	T

SS/IS: <u>18C0103, 20µl</u> NS: <u>17L2901, 20µl (VZ)</u> IS/RS: <u>18C0104, 20µl</u>	SPE Chem: <u>Strata X 53mm 500mg 6mL</u> Lot#: <u>517-005658</u> Ele SOLV: <u>MeOH</u> Lot#: <u>JB064809</u> Final Volume(s) <u>1mL</u>	Notes:
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Comments: Assume 1 g = 1 mL

Cen = Centrifuged

Batch: B8C0031

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1800407-01	0.2499 ✓	MA	MA	1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
1800407-02	0.2499 ✓			1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
1800407-03	0.25125 ✓			1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
1800407-04	0.25357 ✓			1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
1800407-05	0.26012 ✓			1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
1800407-06	0.25656 ✓			1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
1800407-07	0.25296 ✓			1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
1800407-08	0.25404 ✓			1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
1800407-09	0.25976 ✓			1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
1800407-10	0.2554 ✓			1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
1800407-11	0.25181 ✓			1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
1800407-12	0.24655 ✓			1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
1800407-13	0.25466 ✓			1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
1800407-14	0.25039 ✓			1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
1800407-15	0.24978 ✓			1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
1800407-16	0.2499 ✓			1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
1800407-17	0.25201 ✓			1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
1800407-18	0.24788 ✓			1000	05-Mar-18 12:00	HAC			Drinking Water	537 PFAS DW DoD Unmod
B8C0031-BLK1	0.25 ✓			1000	05-Mar-18 12:00	HAC				QC
B8C0031-BS1	0.25 ✓			1000	05-Mar-18 12:00	HAC	17L2901 ✓	20 ✓		QC
B8C0031-MS1	0.25052 ✓			1000	05-Mar-18 12:00	HAC	17L2901 ✓	20 ✓		QC
B8C0031-MSD1	0.25168 ✓			1000	05-Mar-18 12:00	HAC	17L2901 ✓	20 ✓		QC

✓ MA 03/07/18

SAMPLE DATA –EPA METHOD 537

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-20.qld

Last Altered: Sunday, March 11, 2018 07:43:11 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:13:15 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 10:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 10:59:51

Name: 180308G4_20, Date: 08-Mar-2018, Time: 21:46:30, ID: B8C0031-BLK1 LRB 0.25, Description: LRB

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	2.78e0	1.38e4	0.2500		2.99	2.96	0.00579	0.0324	
2	5 PFOA	413 > 368.7	7.46e1	8.02e3	0.2500		4.27	4.27	0.0930	0.410	
3	7 PFOS	499 >79.9		1.38e4	0.2500		4.68				
4	15 13C2-PFHxA	315 > 269.8	5.50e3	8.02e3	0.2500	0.810	3.42	3.33	6.86	33.9	84.7
5	16 13C2-PFDA	515.1 > 469.9	6.92e3	8.02e3	0.2500	1.057	4.87	4.92	8.63	32.7	81.6
6	18 13C2-PFOA	414.9 > 369.7	8.02e3	8.02e3	0.2500	1.000	4.41	4.27	10.0	40.0	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.38e4	1.38e4	0.2500	1.000	4.81	4.68	28.7	115	100.0

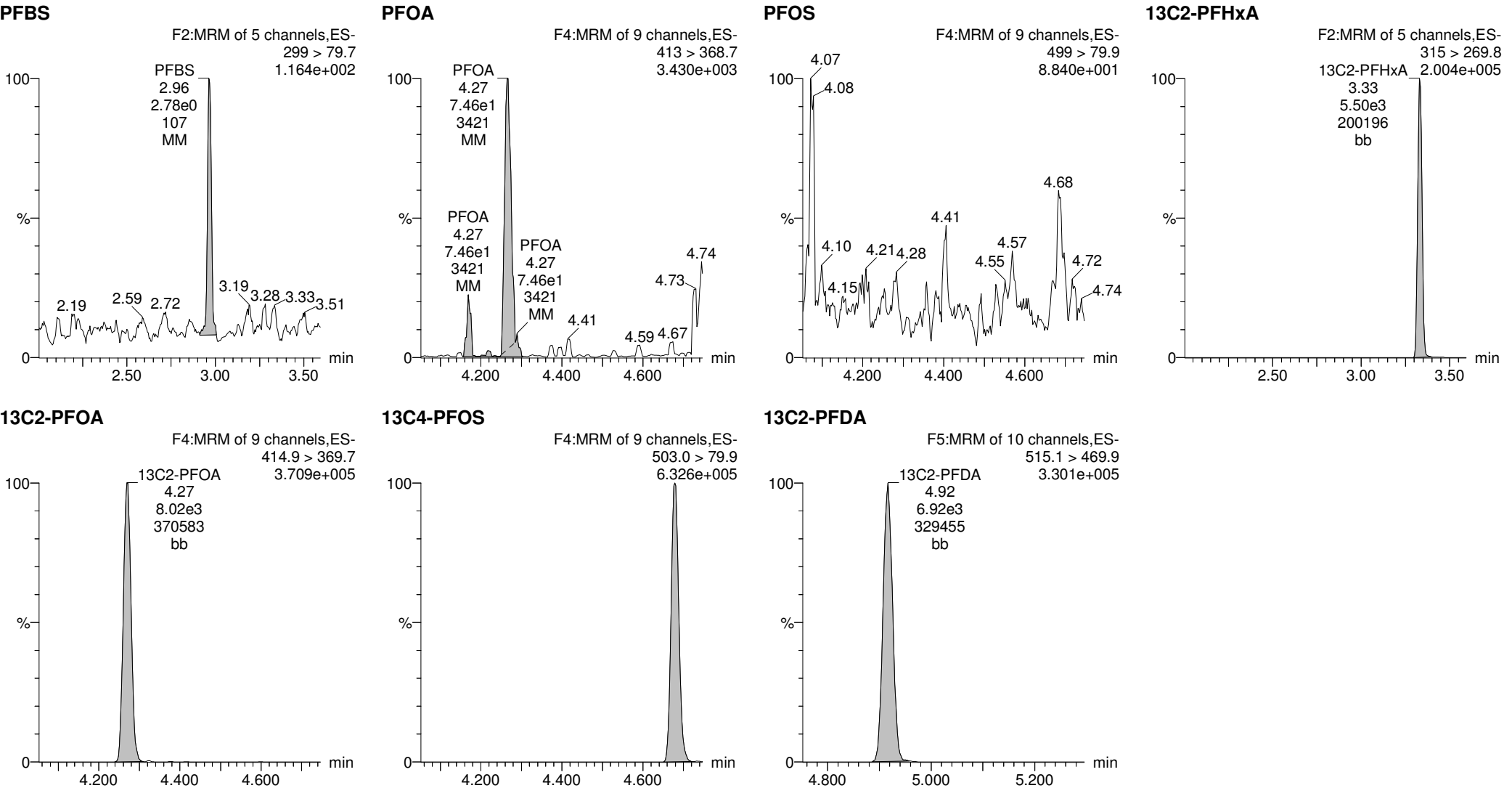
Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-20.qld

Last Altered: Sunday, March 11, 2018 07:43:11 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:13:15 Pacific Daylight Time

Rev'd: MM 3/11/2018

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 10:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 10:59:51

Name: 180308G4_20, Date: 08-Mar-2018, Time: 21:46:30, ID: B8C0031-BLK1 LRB 0.25, Description: LRB



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-21.qld

Last Altered: Sunday, March 11, 2018 07:48:55 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:13:46 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

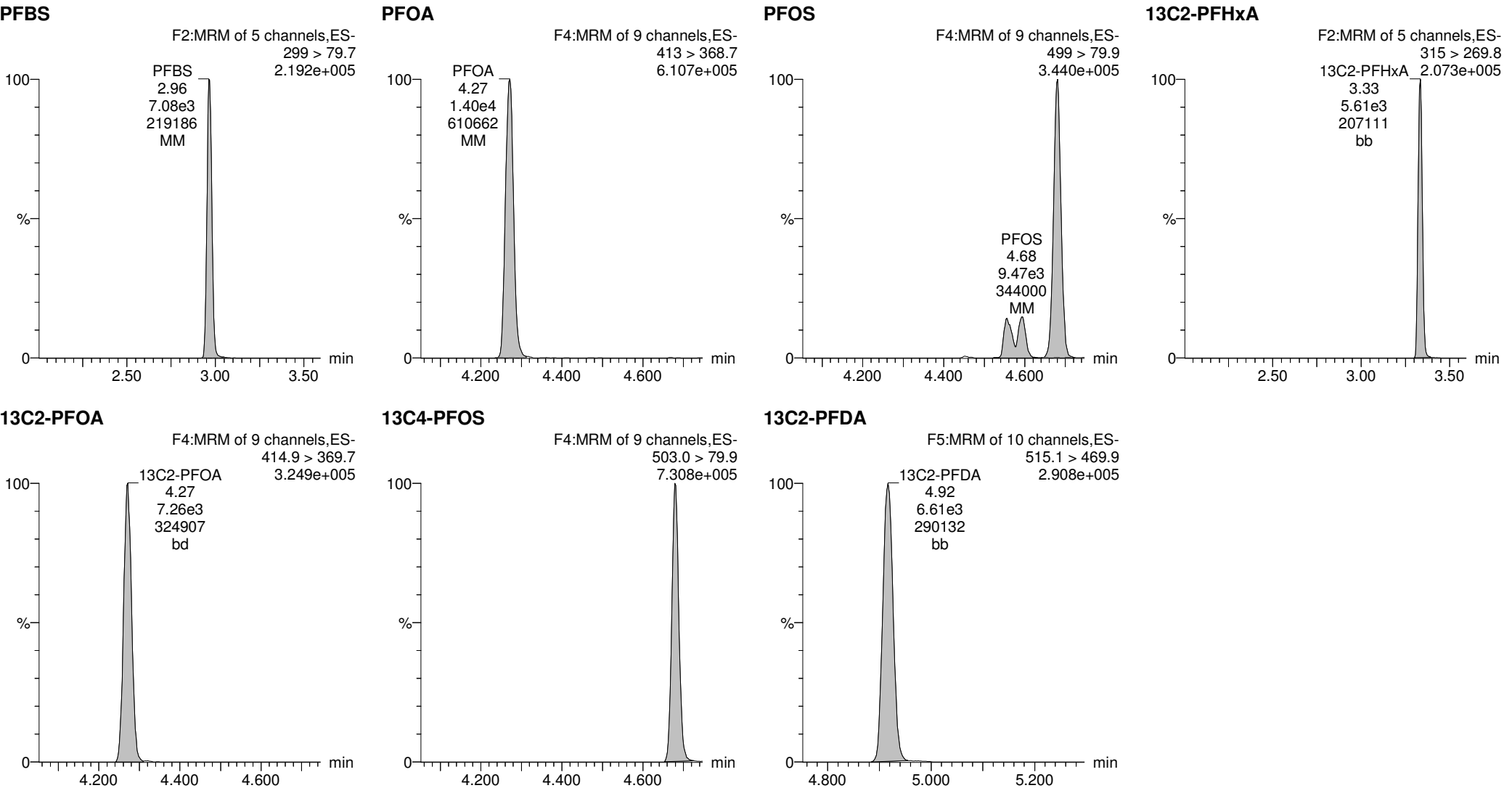
Name: 180308G4_21, Date: 08-Mar-2018, Time: 21:58:51, ID: B8C0031-BS1 LFB 0.25, Description: LFB

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	7.08e3	1.46e4	0.2500		2.99	2.96	14.0	78.1	110.3
2	5 PFOA	413 > 368.7	1.40e4	7.26e3	0.2500		4.27	4.27	19.2	85.9	107.4
3	7 PFOS	499 >79.9	9.47e3	1.46e4	0.2500		4.68	4.68	18.7	77.6	104.9
4	15 13C2-PFHxA	315 > 269.8	5.61e3	7.26e3	0.2500	0.810	3.43	3.33	7.72	38.1	95.4
5	16 13C2-PFDA	515.1 > 469.9	6.61e3	7.26e3	0.2500	1.057	4.87	4.92	9.11	34.5	86.1
6	18 13C2-PFOA	414.9 > 369.7	7.26e3	7.26e3	0.2500	1.000	4.41	4.27	10.0	40.0	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.46e4	1.46e4	0.2500	1.000	4.81	4.68	28.7	115	100.0

Last Altered: Sunday, March 11, 2018 07:48:55 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:13:46 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_21, Date: 08-Mar-2018, Time: 21:58:51, ID: B8C0031-BS1 LFB 0.25, Description: LFB



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-27.qld

Last Altered: Sunday, March 11, 2018 08:01:50 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:15:23 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_27, Date: 08-Mar-2018, Time: 23:13:15, ID: 1800407-01 CH-AT-1RW171-0218 0.2499, Description: CH-AT-1RW171-0218

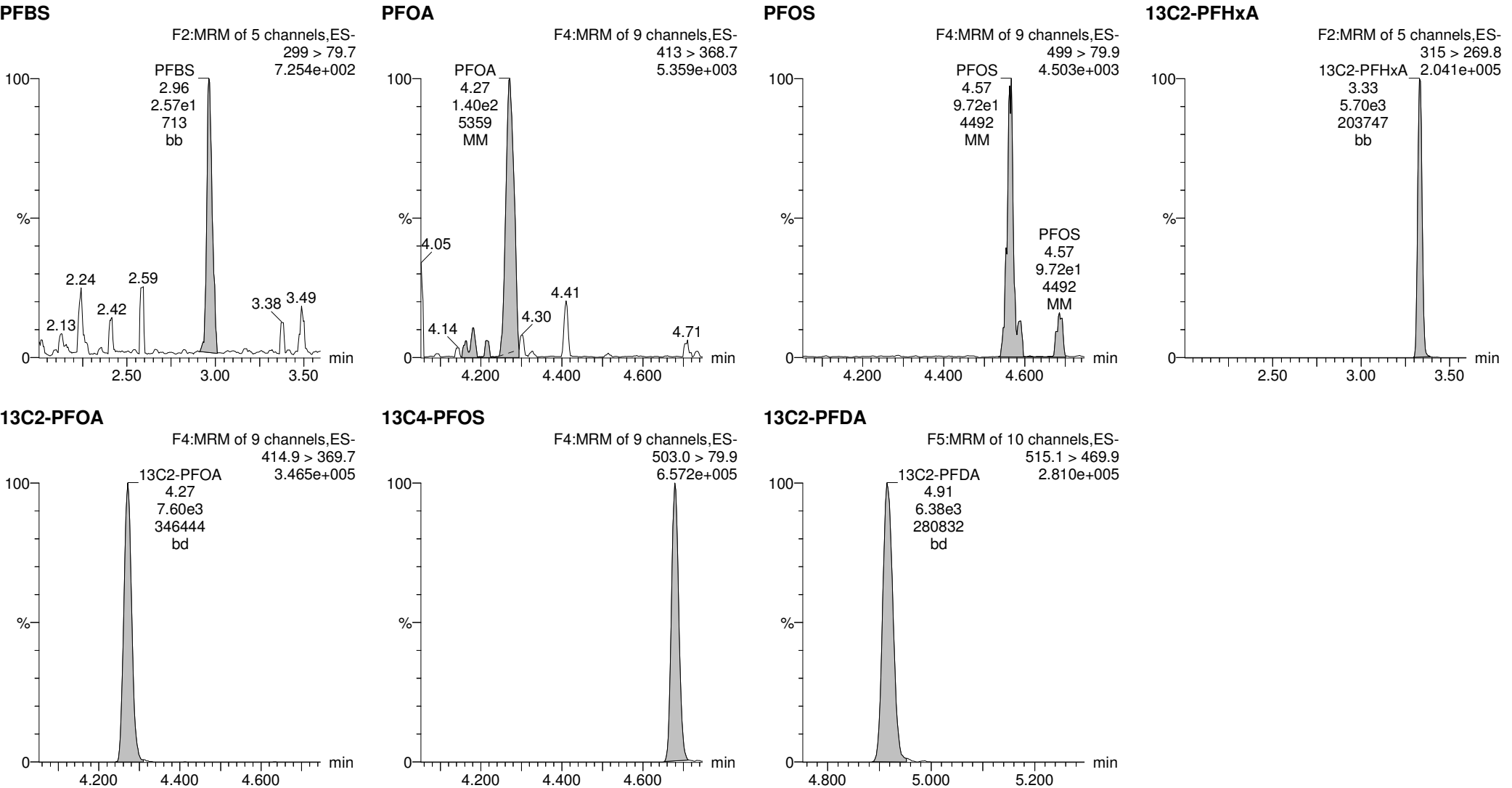
	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	2.57e1	1.37e4	0.2499		2.99	2.96	0.0539	0.301	
2	5 PFOA	413 > 368.7	1.40e2	7.60e3	0.2499		4.27	4.27	0.184	0.813	
3	7 PFOS	499 >79.9	9.72e1	1.37e4	0.2499		4.68	4.57	0.204	0.848	
4	15 13C2-PFHxA	315 > 269.8	5.70e3	7.60e3	0.2499	0.810	3.43	3.33	7.51	37.1	92.7
5	16 13C2-PFDA	515.1 > 469.9	6.38e3	7.60e3	0.2499	1.057	4.87	4.91	8.39	31.8	79.4
6	18 13C2-PFOA	414.9 > 369.7	7.60e3	7.60e3	0.2499	1.000	4.41	4.27	10.0	40.0	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.37e4	1.37e4	0.2499	1.000	4.81	4.68	28.7	115	100.0

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-27.qld

Last Altered: Sunday, March 11, 2018 08:01:50 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:15:23 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_27, Date: 08-Mar-2018, Time: 23:13:15, ID: 1800407-01 CH-AT-1RW171-0218 0.2499, Description: CH-AT-1RW171-0218



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-22.qld

Last Altered: Sunday, March 11, 2018 07:53:15 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:14:06 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_22, Date: 08-Mar-2018, Time: 22:11:07, ID: B8C0031-MS1 LFSM 0.25052, Description: LFSM

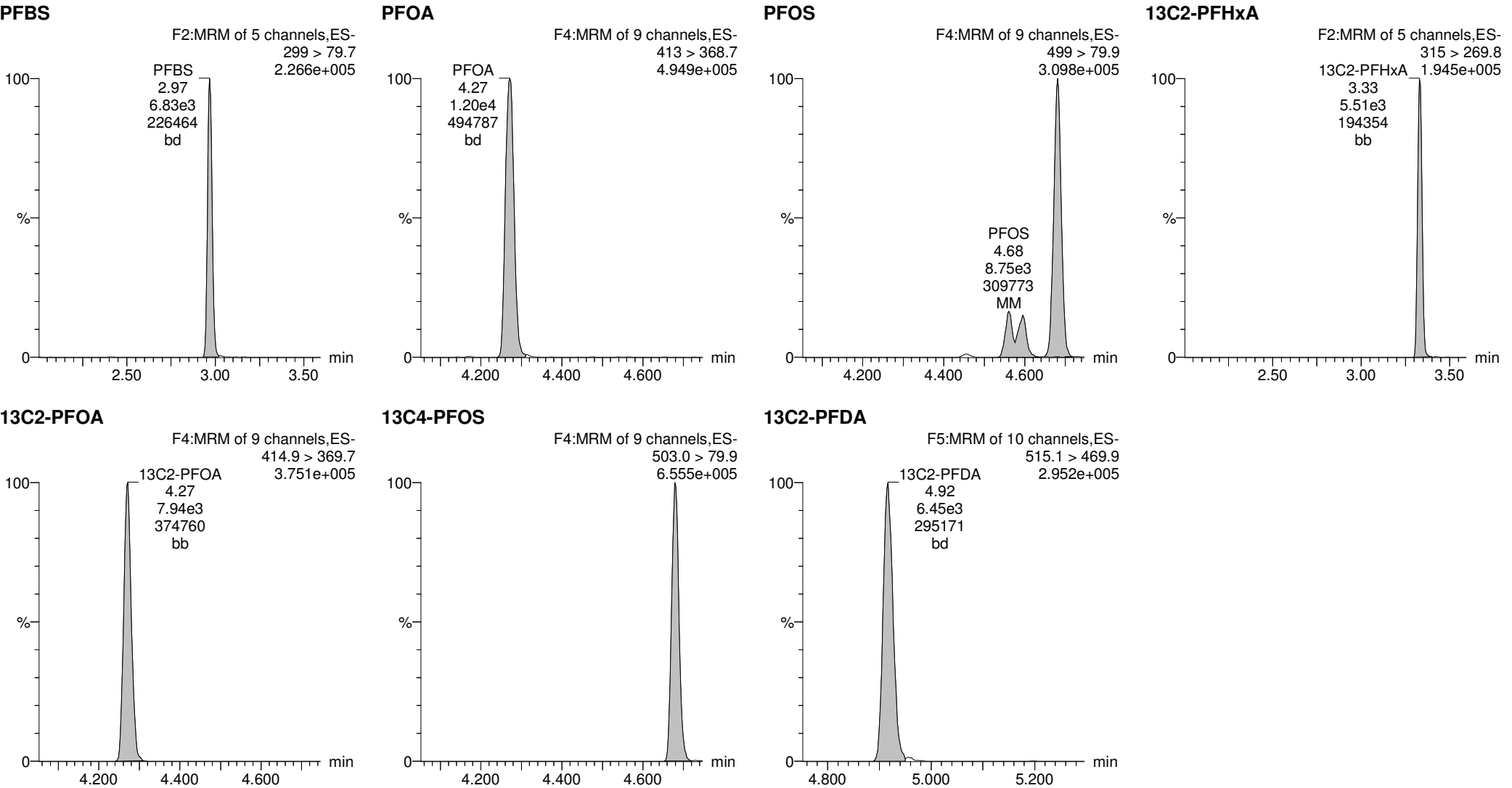
	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	6.83e3	1.37e4	0.2505		2.99	2.97	14.3	79.6	
2	5 PFOA	413 > 368.7	1.20e4	7.94e3	0.2505		4.27	4.27	15.2	67.4	
3	7 PFOS	499 >79.9	8.75e3	1.37e4	0.2505		4.68	4.68	18.3	75.8	
4	15 13C2-PFHxA	315 > 269.8	5.51e3	7.94e3	0.2505	0.810	3.43	3.33	6.94	34.2	85.7
5	16 13C2-PFDA	515.1 > 469.9	6.45e3	7.94e3	0.2505	1.057	4.87	4.92	8.13	30.7	76.9
6	18 13C2-PFOA	414.9 > 369.7	7.94e3	7.94e3	0.2505	1.000	4.41	4.27	10.0	39.9	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.37e4	1.37e4	0.2505	1.000	4.81	4.68	28.7	115	100.0

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-22.qld

Last Altered: Sunday, March 11, 2018 07:53:15 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:14:06 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_22, Date: 08-Mar-2018, Time: 22:11:07, ID: B8C0031-MS1 LFSM 0.25052, Description: LFSM



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-23.qld

Last Altered: Sunday, March 11, 2018 07:56:40 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:14:55 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

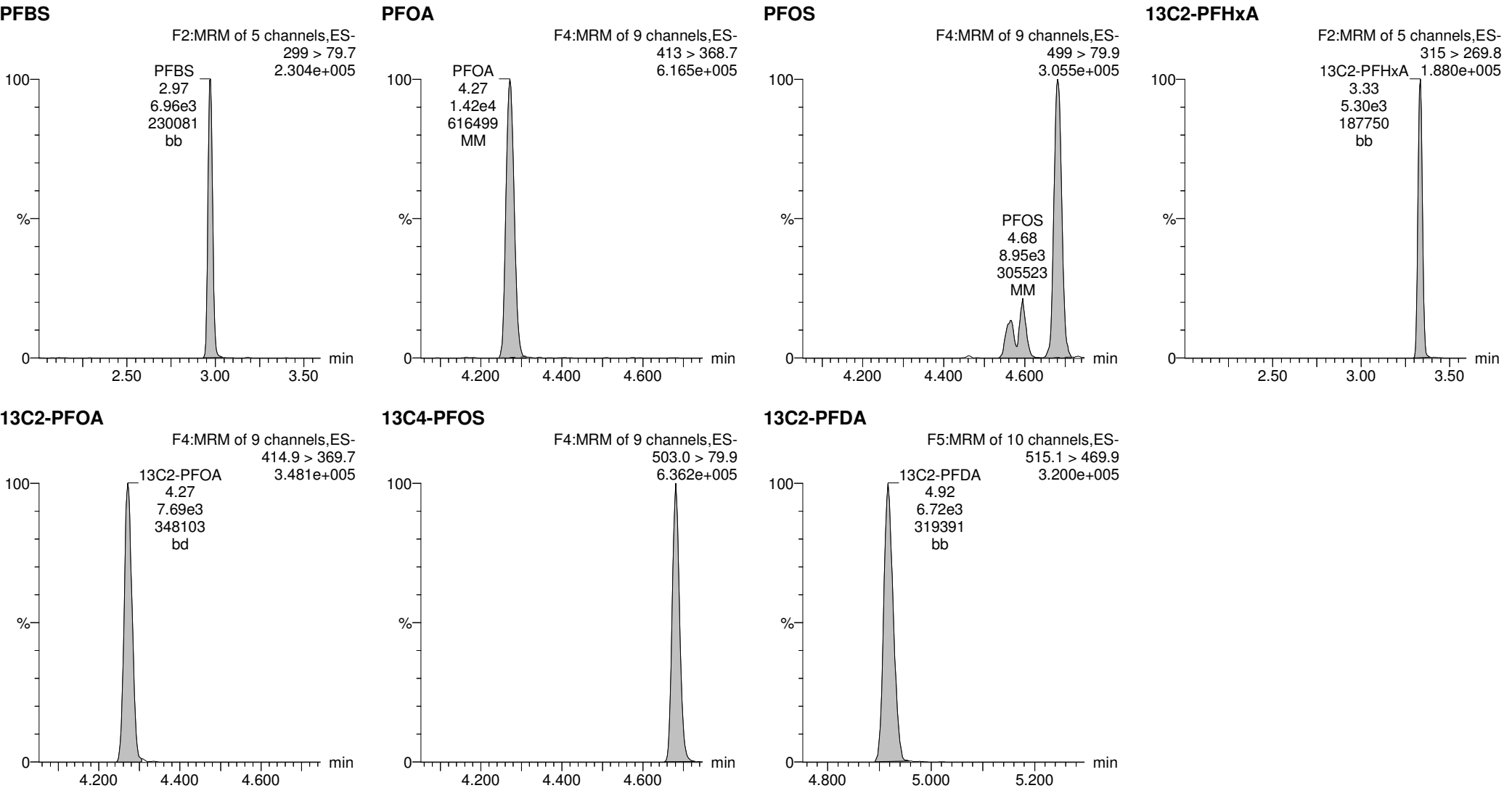
Name: 180308G4_23, Date: 08-Mar-2018, Time: 22:23:33, ID: B8C0031-MSD1 LFSMD 0.25168, Description: LFSMD

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	6.96e3	1.34e4	0.2517		3.00	2.97	14.9	82.9	
2	5 PFOA	413 > 368.7	1.42e4	7.69e3	0.2517		4.27	4.27	18.5	82.0	
3	7 PFOS	499 >79.9	8.95e3	1.34e4	0.2517		4.68	4.68	19.2	79.3	
4	15 13C2-PFHxA	315 > 269.8	5.30e3	7.69e3	0.2517	0.810	3.43	3.33	6.89	33.8	85.1
5	16 13C2-PFDA	515.1 > 469.9	6.72e3	7.69e3	0.2517	1.057	4.87	4.92	8.74	32.8	82.6
6	18 13C2-PFOA	414.9 > 369.7	7.69e3	7.69e3	0.2517	1.000	4.41	4.27	10.0	39.7	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.34e4	1.34e4	0.2517	1.000	4.81	4.68	28.7	114	100.0

Last Altered: Sunday, March 11, 2018 07:56:40 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:14:55 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_23, Date: 08-Mar-2018, Time: 22:23:33, ID: B8C0031-MSD1 LFSMD 0.25168, Description: LFSMD



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-28.qld

Last Altered: Sunday, March 11, 2018 08:04:28 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:15:59 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_28, Date: 08-Mar-2018, Time: 23:25:41, ID: 1800407-02 CH-AT-1FB171-0218 0.2499, Description: CH-AT-1FB171-0218

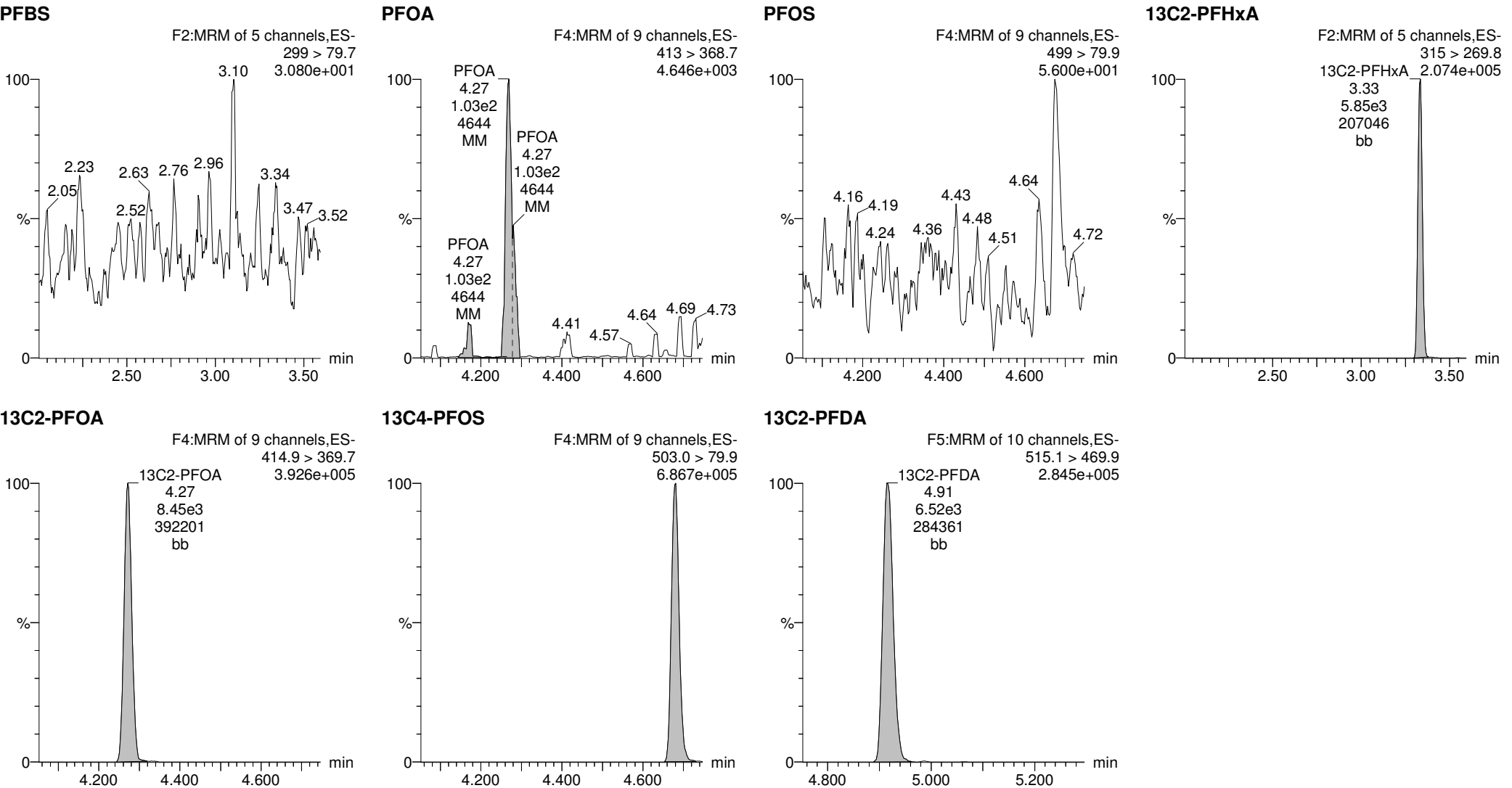
	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.50e4	0.2499		3.00				
2	5 PFOA	413 > 368.7	1.03e2	8.45e3	0.2499		4.27	4.27	0.122	0.540	
3	7 PFOS	499 >79.9		1.50e4	0.2499		4.68				
4	15 13C2-PFHxA	315 > 269.8	5.85e3	8.45e3	0.2499	0.810	3.43	3.33	6.92	34.2	85.4
5	16 13C2-PFDA	515.1 > 469.9	6.52e3	8.45e3	0.2499	1.057	4.87	4.91	7.71	29.2	73.0
6	18 13C2-PFOA	414.9 > 369.7	8.45e3	8.45e3	0.2499	1.000	4.41	4.27	10.0	40.0	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.50e4	1.50e4	0.2499	1.000	4.81	4.68	28.7	115	100.0

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-28.qld

Last Altered: Sunday, March 11, 2018 08:04:28 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:15:59 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_28, Date: 08-Mar-2018, Time: 23:25:41, ID: 1800407-02 CH-AT-1FB171-0218 0.2499, Description: CH-AT-1FB171-0218



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-29.qld

Last Altered: Sunday, March 11, 2018 08:06:31 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:16:25 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_29, Date: 08-Mar-2018, Time: 23:38:03, ID: 1800407-03 CH-AT-1RW172-0218 0.25125, Description: CH-AT-1RW172-0218

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.52e4	0.2512		2.99				
2	5 PFOA	413 > 368.7	1.45e2	8.21e3	0.2512		4.27	4.27	0.177	0.775	
3	7 PFOS	499 >79.9		1.52e4	0.2512		4.68				
4	15 13C2-PFHxA	315 > 269.8	5.85e3	8.21e3	0.2512	0.810	3.42	3.33	7.12	35.0	88.0
5	16 13C2-PFDA	515.1 > 469.9	6.44e3	8.21e3	0.2512	1.057	4.87	4.92	7.84	29.5	74.2
6	18 13C2-PFOA	414.9 > 369.7	8.21e3	8.21e3	0.2512	1.000	4.41	4.27	10.0	39.8	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.52e4	1.52e4	0.2512	1.000	4.81	4.68	28.7	114	100.0

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-29.qld

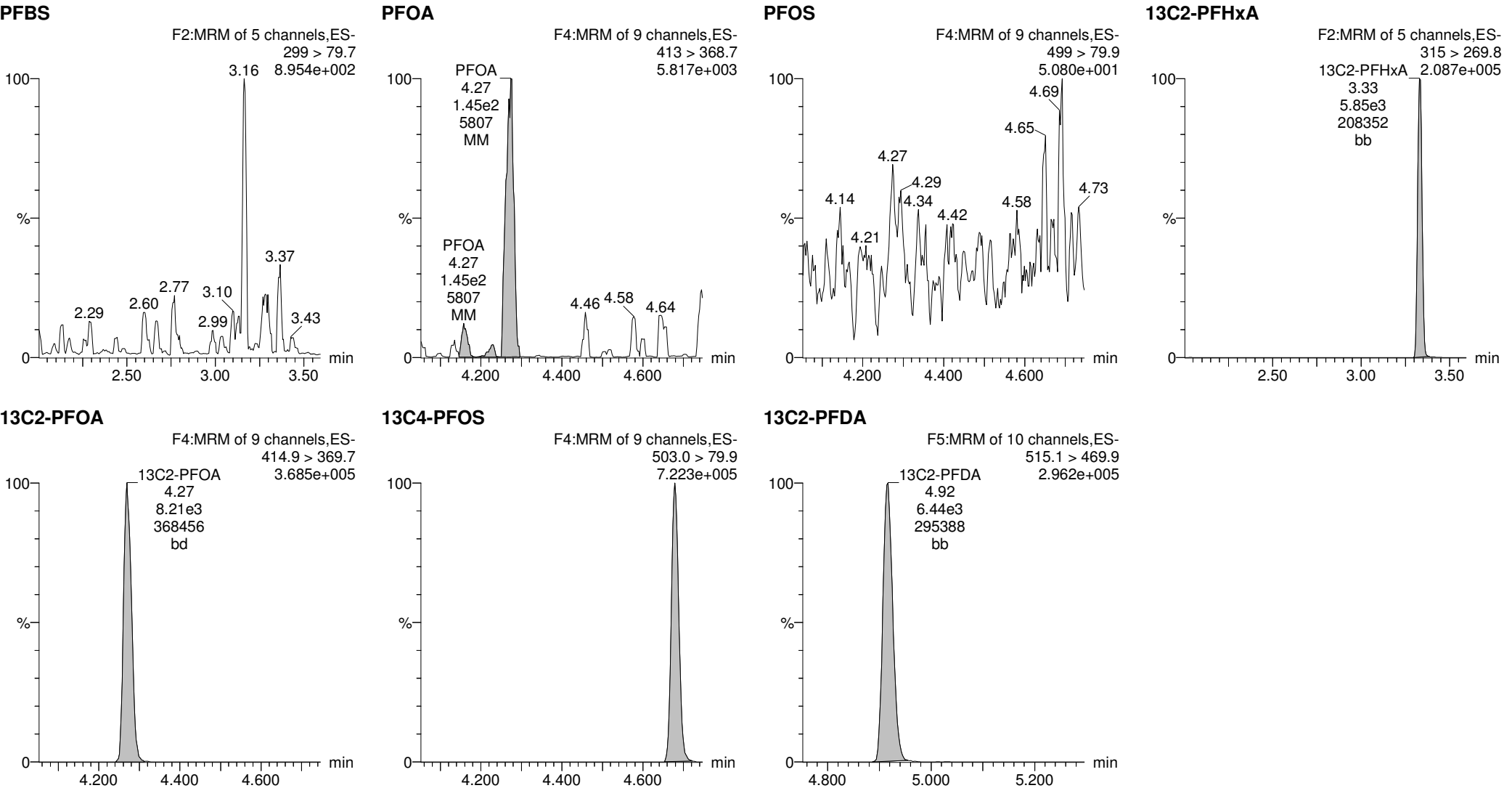
Last Altered: Sunday, March 11, 2018 08:06:31 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:16:25 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_29, Date: 08-Mar-2018, Time: 23:38:03, ID: 1800407-03 CH-AT-1RW172-0218 0.25125, Description: CH-AT-1RW172-0218



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-30.qld

Last Altered: Sunday, March 11, 2018 08:19:18 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:19:34 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_30, Date: 08-Mar-2018, Time: 23:50:28, ID: 1800407-04 CH-AT-1FB172-0218 0.25357, Description: CH-AT-1FB172-0218

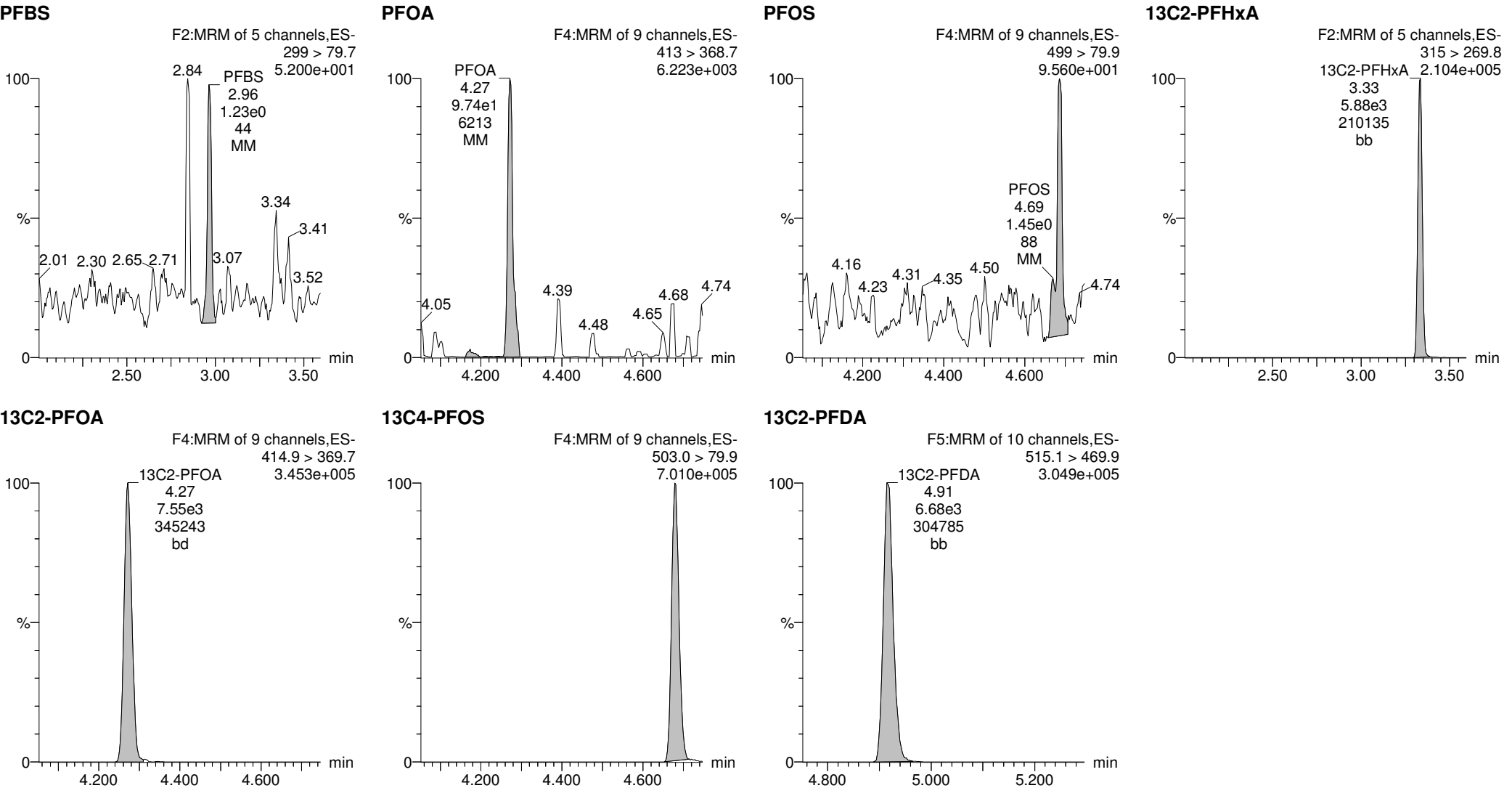
	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.23e0	1.47e4	0.2536		2.99	2.96	0.00241	0.0133	
2	5 PFOA	413 > 368.7	9.74e1	7.55e3	0.2536		4.27	4.27	0.129	0.561	
3	7 PFOS	499 >79.9	1.45e0	1.47e4	0.2536		4.68	4.69	0.00284	0.0116	
4	15 13C2-PFHxA	315 > 269.8	5.88e3	7.55e3	0.2536	0.810	3.43	3.33	7.79	37.9	96.1
5	16 13C2-PFDA	515.1 > 469.9	6.68e3	7.55e3	0.2536	1.057	4.87	4.91	8.85	33.0	83.7
6	18 13C2-PFOA	414.9 > 369.7	7.55e3	7.55e3	0.2536	1.000	4.41	4.27	10.0	39.4	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.47e4	1.47e4	0.2536	1.000	4.81	4.68	28.7	113	100.0

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-30.qld

Last Altered: Sunday, March 11, 2018 08:19:18 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:19:34 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_30, Date: 08-Mar-2018, Time: 23:50:28, ID: 1800407-04 CH-AT-1FB172-0218 0.25357, Description: CH-AT-1FB172-0218



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-31.qld

Last Altered: Sunday, March 11, 2018 08:25:51 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:26:20 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_31, Date: 09-Mar-2018, Time: 00:02:53, ID: 1800407-05 CH-AT-1RW173-0218 0.26012, Description: CH-AT-1RW173-0218

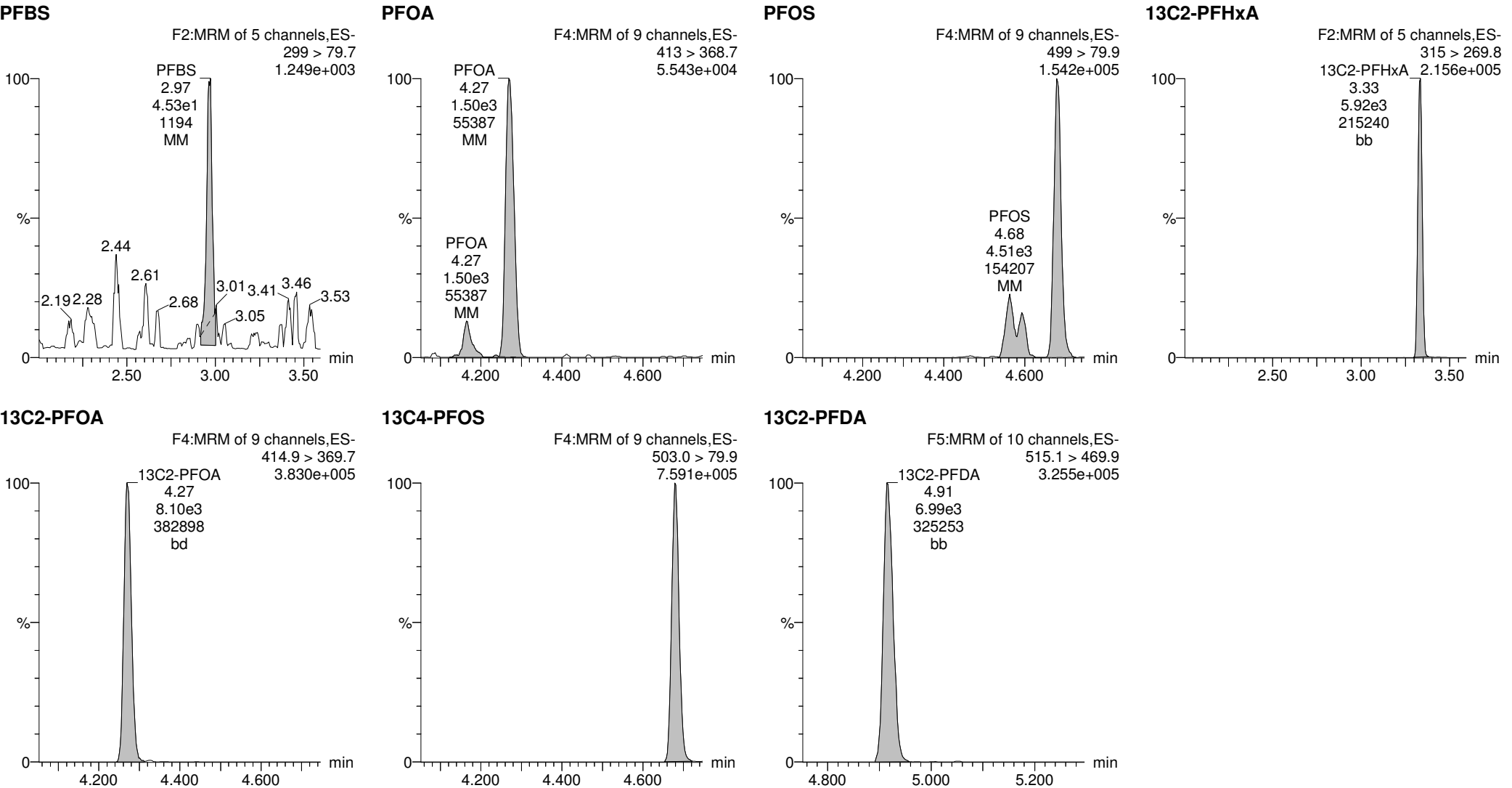
	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	4.53e1	1.59e4	0.2601		2.99	2.97	0.0816	0.438	
2	5 PFOA	413 > 368.7	1.50e3	8.10e3	0.2601		4.27	4.27	1.85	7.85	
3	7 PFOS	499 >79.9	4.51e3	1.59e4	0.2601		4.68	4.68	8.12	32.4	
4	15 13C2-PFHxA	315 > 269.8	5.92e3	8.10e3	0.2601	0.810	3.42	3.33	7.31	34.7	90.3
5	16 13C2-PFDA	515.1 > 469.9	6.99e3	8.10e3	0.2601	1.057	4.87	4.91	8.63	31.4	81.6
6	18 13C2-PFOA	414.9 > 369.7	8.10e3	8.10e3	0.2601	1.000	4.41	4.27	10.0	38.4	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.59e4	1.59e4	0.2601	1.000	4.81	4.68	28.7	110	100.0

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-31.qld

Last Altered: Sunday, March 11, 2018 08:25:51 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:26:20 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_31, Date: 09-Mar-2018, Time: 00:02:53, ID: 1800407-05 CH-AT-1RW173-0218 0.26012, Description: CH-AT-1RW173-0218



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-32.qld

Last Altered: Sunday, March 11, 2018 08:28:14 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:28:50 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_32, Date: 09-Mar-2018, Time: 00:15:14, ID: 1800407-06 CH-AT-1FB173-0218 0.25656, Description: CH-AT-1FB173-0218

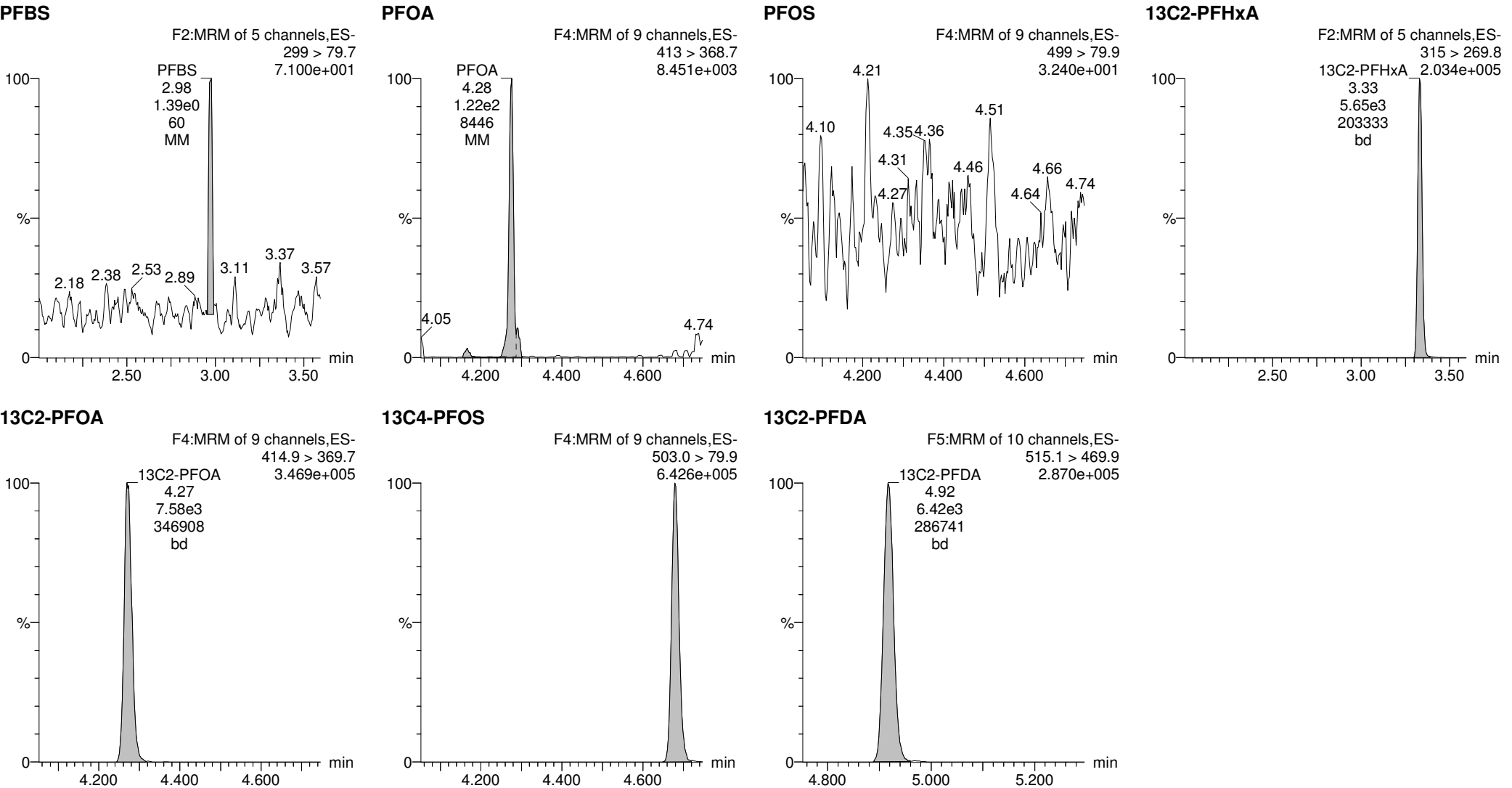
	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.39e0	1.36e4	0.2566		2.99	2.98	0.00294	0.0160	
2	5 PFOA	413 > 368.7	1.22e2	7.58e3	0.2566		4.27	4.28	0.161	0.694	
3	7 PFOS	499 >79.9		1.36e4	0.2566		4.68				
4	15 13C2-PFHxA	315 > 269.8	5.65e3	7.58e3	0.2566	0.810	3.42	3.33	7.46	35.9	92.1
5	16 13C2-PFDA	515.1 > 469.9	6.42e3	7.58e3	0.2566	1.057	4.87	4.92	8.47	31.2	80.2
6	18 13C2-PFOA	414.9 > 369.7	7.58e3	7.58e3	0.2566	1.000	4.41	4.27	10.0	39.0	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.36e4	1.36e4	0.2566	1.000	4.81	4.68	28.7	112	100.0

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-32.qld

Last Altered: Sunday, March 11, 2018 08:28:14 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:28:50 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_32, Date: 09-Mar-2018, Time: 00:15:14, ID: 1800407-06 CH-AT-1FB173-0218 0.25656, Description: CH-AT-1FB173-0218



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-33.qld

Last Altered: Sunday, March 11, 2018 08:30:11 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:30:29 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_33, Date: 09-Mar-2018, Time: 00:27:39, ID: 1800407-07 CH-AT-1RW174-0218 0.25296, Description: CH-AT-1RW174-0218

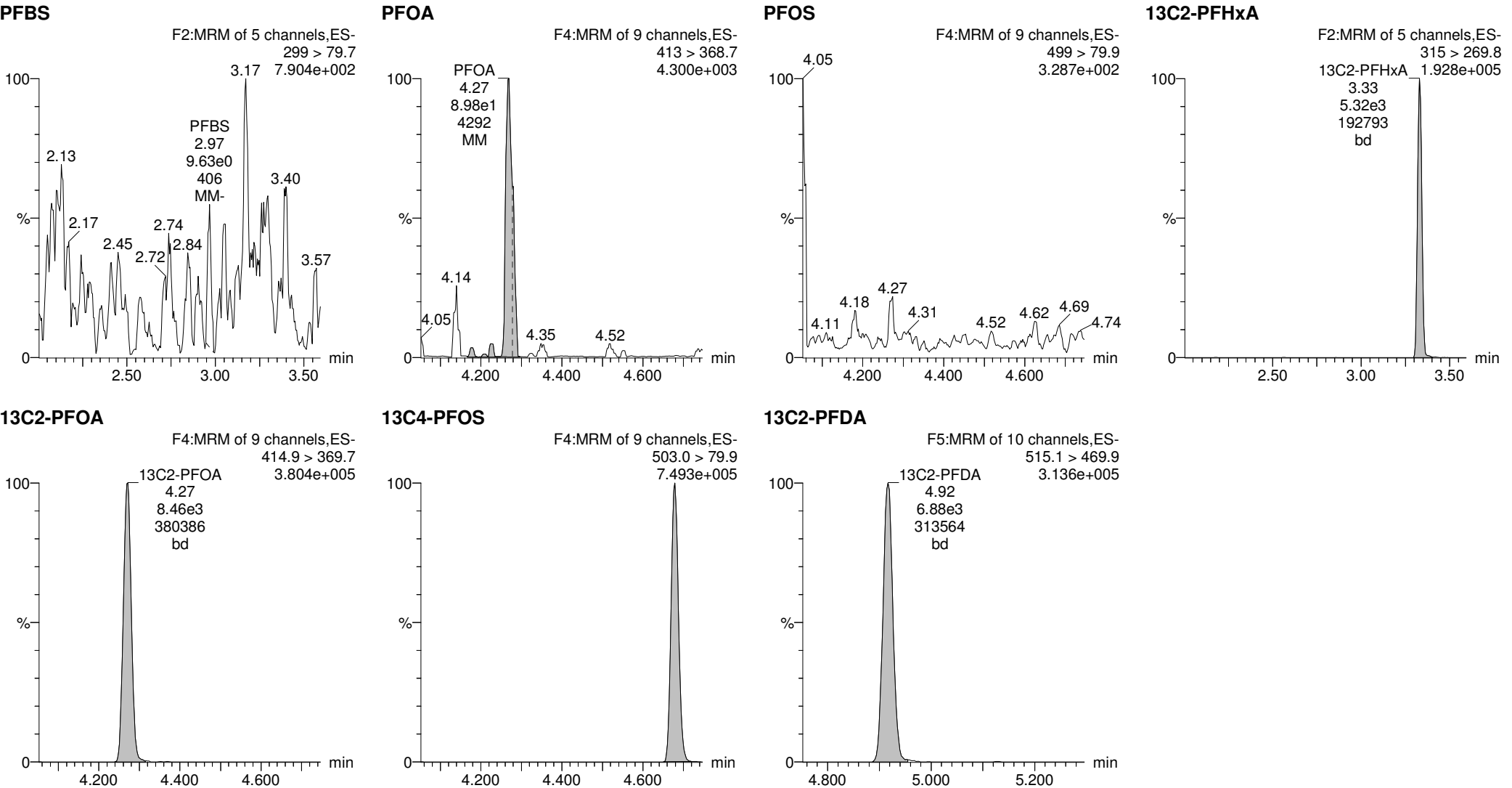
	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.56e4	0.2530		2.99				
2	5 PFOA	413 > 368.7	8.98e1	8.46e3	0.2530		4.27	4.27	0.106	0.462	
3	7 PFOS	499 >79.9		1.56e4	0.2530		4.68				
4	15 13C2-PFHxA	315 > 269.8	5.32e3	8.46e3	0.2530	0.810	3.43	3.33	6.28	30.7	77.6
5	16 13C2-PFDA	515.1 > 469.9	6.88e3	8.46e3	0.2530	1.057	4.87	4.92	8.12	30.4	76.9
6	18 13C2-PFOA	414.9 > 369.7	8.46e3	8.46e3	0.2530	1.000	4.41	4.27	10.0	39.5	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.56e4	1.56e4	0.2530	1.000	4.81	4.68	28.7	113	100.0

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-33.qld

Last Altered: Sunday, March 11, 2018 08:30:11 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:30:29 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_33, Date: 09-Mar-2018, Time: 00:27:39, ID: 1800407-07 CH-AT-1RW174-0218 0.25296, Description: CH-AT-1RW174-0218



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-34.qld

Last Altered: Sunday, March 11, 2018 08:31:54 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:32:19 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_34, Date: 09-Mar-2018, Time: 00:40:04, ID: 1800407-08 CH-AT-1FB174-0218 0.25404, Description: CH-AT-1FB174-0218

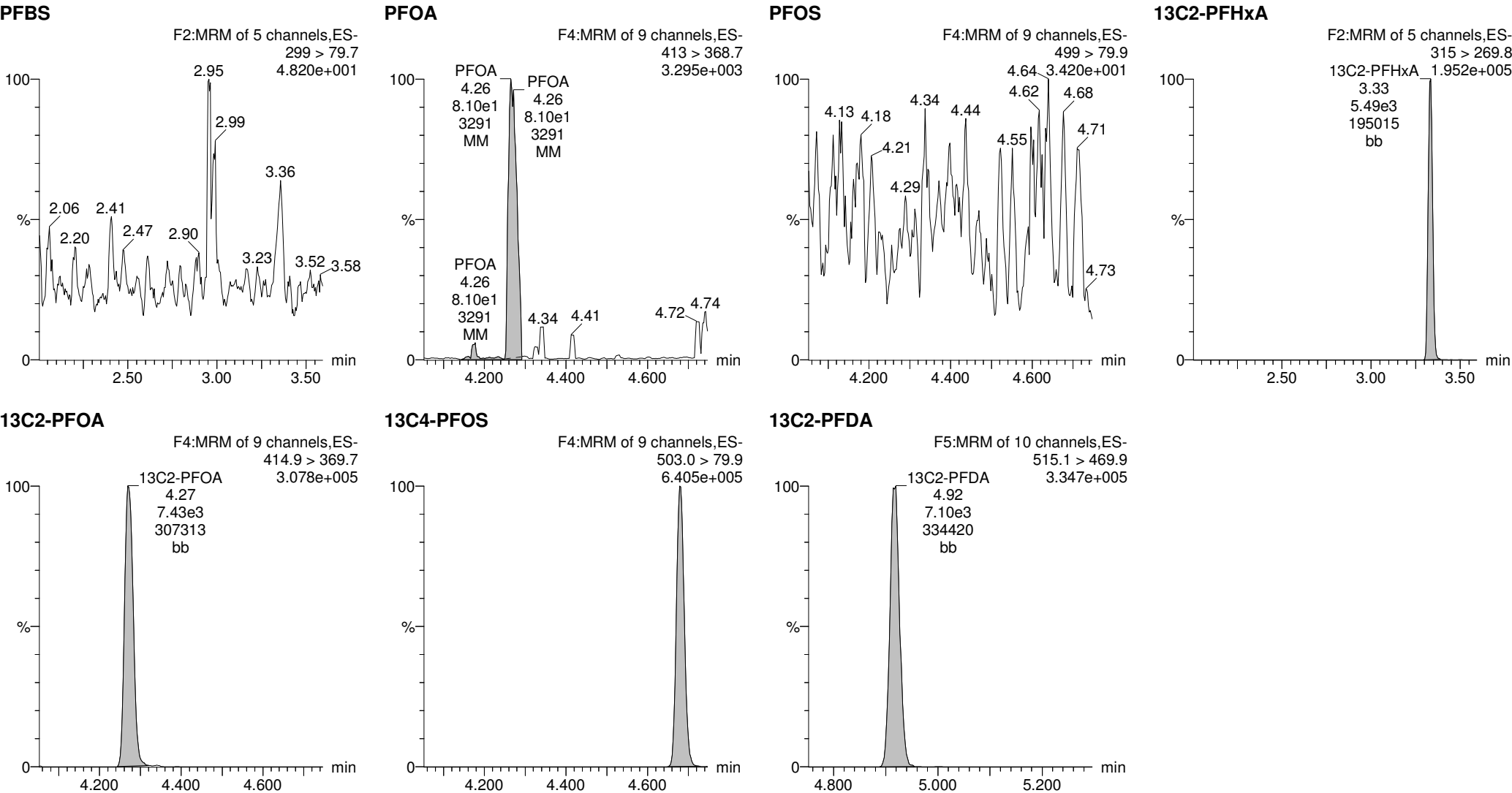
	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.42e4	0.2540		2.99				
2	5 PFOA	413 > 368.7	8.10e1	7.43e3	0.2540		4.27	4.26	0.109	0.473	
3	7 PFOS	499 >79.9		1.42e4	0.2540		4.68				
4	15 13C2-PFHxA	315 > 269.8	5.49e3	7.43e3	0.2540	0.810	3.42	3.33	7.39	35.9	91.3
5	16 13C2-PFDA	515.1 > 469.9	7.10e3	7.43e3	0.2540	1.057	4.87	4.92	9.56	35.6	90.5
6	18 13C2-PFOA	414.9 > 369.7	7.43e3	7.43e3	0.2540	1.000	4.41	4.27	10.0	39.4	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.42e4	1.42e4	0.2540	1.000	4.81	4.68	28.7	113	100.0

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-34.qld

Last Altered: Sunday, March 11, 2018 08:31:54 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:32:19 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_34, Date: 09-Mar-2018, Time: 00:40:04, ID: 1800407-08 CH-AT-1FB174-0218 0.25404, Description: CH-AT-1FB174-0218



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_35.qld

Last Altered: Sunday, March 11, 2018 08:33:34 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:35:13 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_35, Date: 09-Mar-2018, Time: 00:52:30, ID: 1800407-09 CH-AT-1RW175-0218 0.25976, Description: CH-AT-1RW175-0218

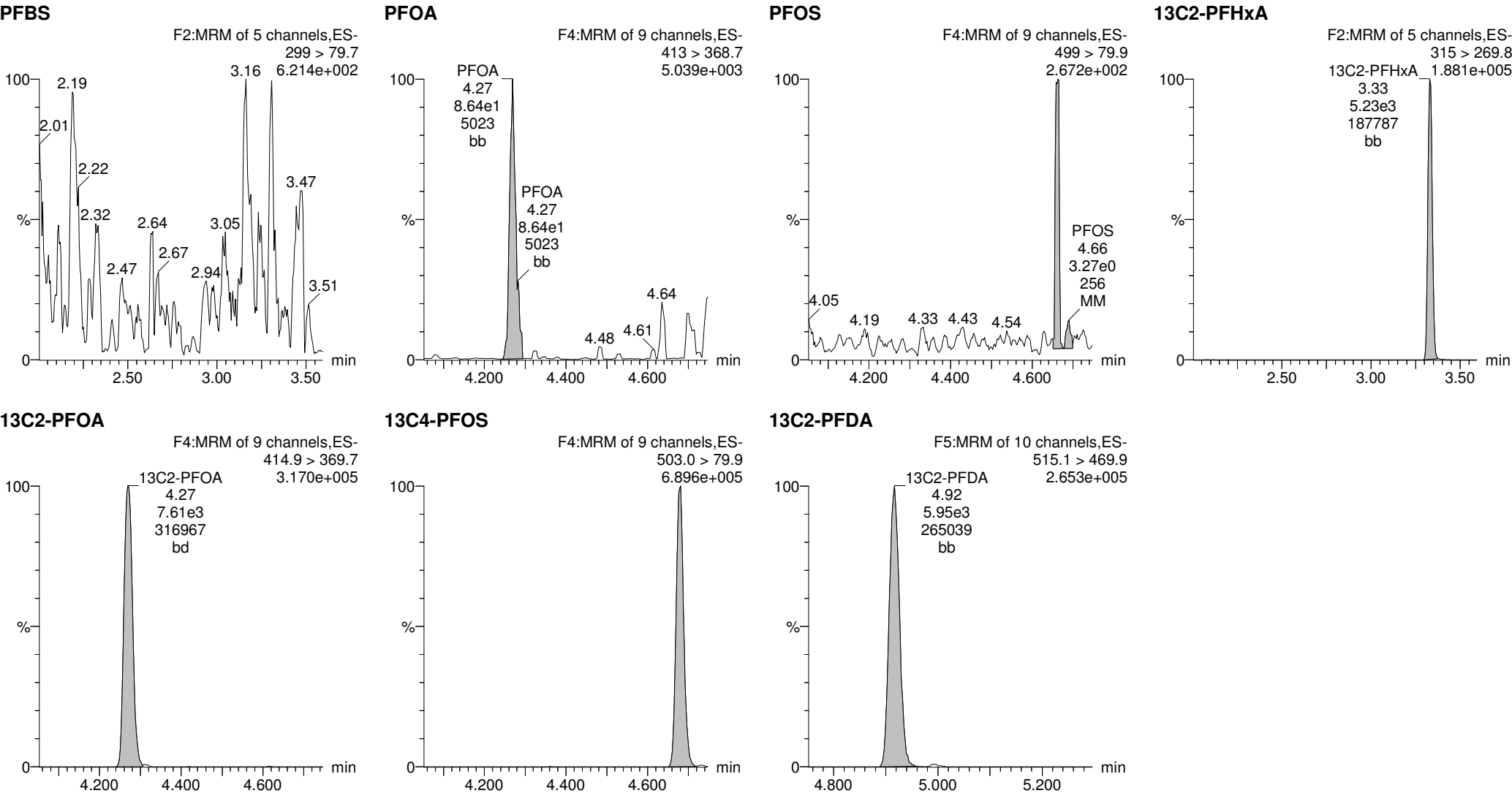
	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.47e4	0.2598		3.00				
2	5 PFOA	413 > 368.7	8.64e1	7.61e3	0.2598		4.27	4.27	0.114	0.482	
3	7 PFOS	499 >79.9	3.27e0	1.47e4	0.2598		4.68	4.66	0.00640	0.0256	
4	15 13C2-PFHxA	315 > 269.8	5.23e3	7.61e3	0.2598	0.810	3.42	3.33	6.87	32.7	84.8
5	16 13C2-PFDA	515.1 > 469.9	5.95e3	7.61e3	0.2598	1.057	4.87	4.92	7.81	28.5	73.9
6	18 13C2-PFOA	414.9 > 369.7	7.61e3	7.61e3	0.2598	1.000	4.41	4.27	10.0	38.5	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.47e4	1.47e4	0.2598	1.000	4.81	4.68	28.7	110	100.0

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_35.qld

Last Altered: Sunday, March 11, 2018 08:33:34 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:35:13 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_35, Date: 09-Mar-2018, Time: 00:52:30, ID: 1800407-09 CH-AT-1RW175-0218 0.25976, Description: CH-AT-1RW175-0218



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_36.qld

Last Altered: Sunday, March 11, 2018 08:36:13 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:36:39 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_36, Date: 09-Mar-2018, Time: 01:04:54, ID: 1800407-10 CH-AT-1FB175-0218 0.2554, Description: CH-AT-1FB175-0218

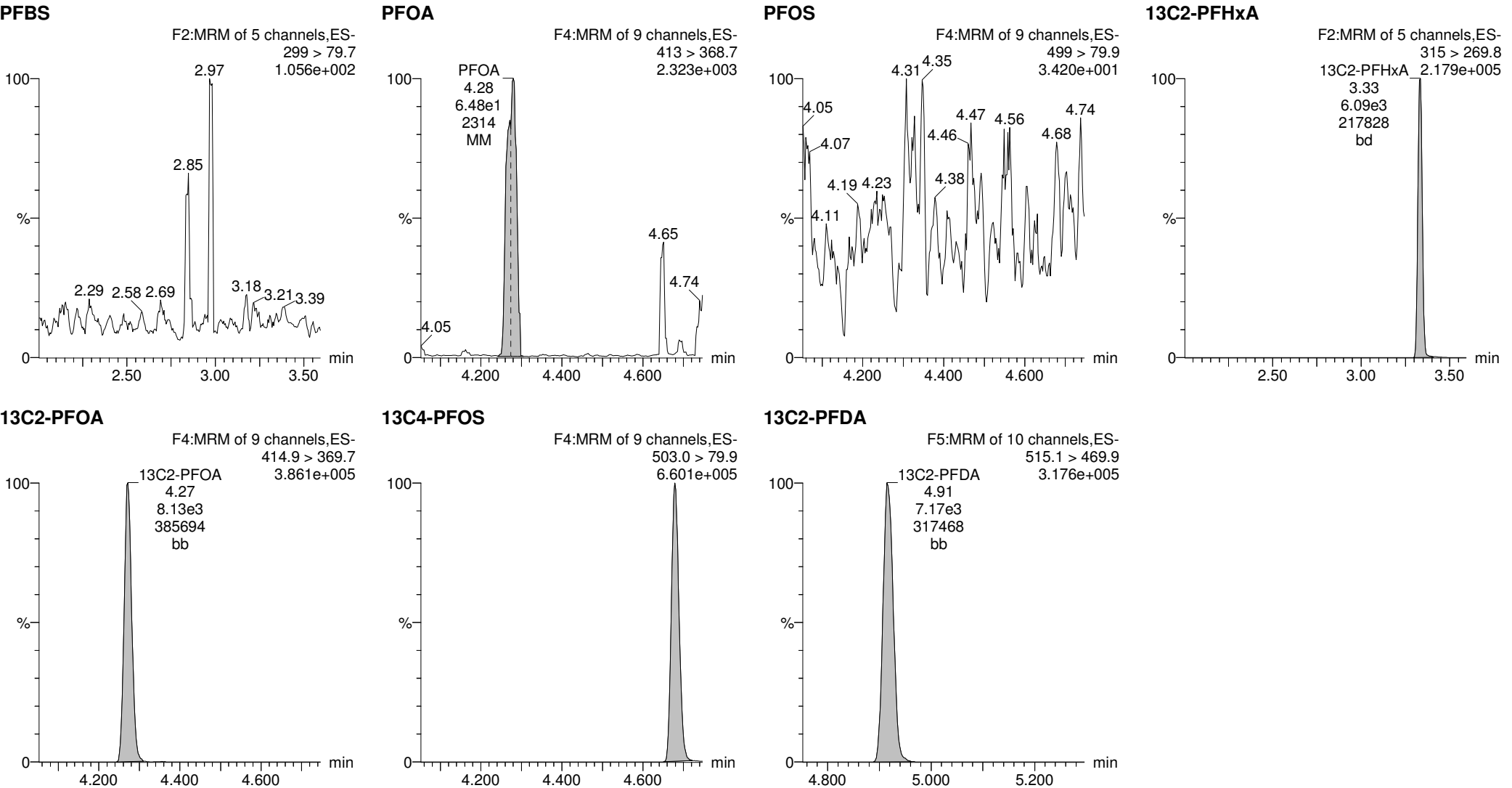
	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.43e4	0.2554		2.99				
2	5 PFOA	413 > 368.7	6.48e1	8.13e3	0.2554		4.27	4.28	0.0797	0.344	
3	7 PFOS	499 >79.9		1.43e4	0.2554		4.68				
4	15 13C2-PFHxA	315 > 269.8	6.09e3	8.13e3	0.2554	0.810	3.43	3.33	7.48	36.2	92.4
5	16 13C2-PFDA	515.1 > 469.9	7.17e3	8.13e3	0.2554	1.057	4.87	4.91	8.82	32.7	83.5
6	18 13C2-PFOA	414.9 > 369.7	8.13e3	8.13e3	0.2554	1.000	4.41	4.27	10.0	39.2	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.43e4	1.43e4	0.2554	1.000	4.81	4.68	28.7	112	100.0

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_36.qld

Last Altered: Sunday, March 11, 2018 08:36:13 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:36:39 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_36, Date: 09-Mar-2018, Time: 01:04:54, ID: 1800407-10 CH-AT-1FB175-0218 0.2554, Description: CH-AT-1FB175-0218



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_37.qld

Last Altered: Sunday, March 11, 2018 08:39:28 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:40:06 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_37, Date: 09-Mar-2018, Time: 01:17:20, ID: 1800407-11 CH-AT-1RW176-0218 0.25181, Description: CH-AT-1RW176-0218

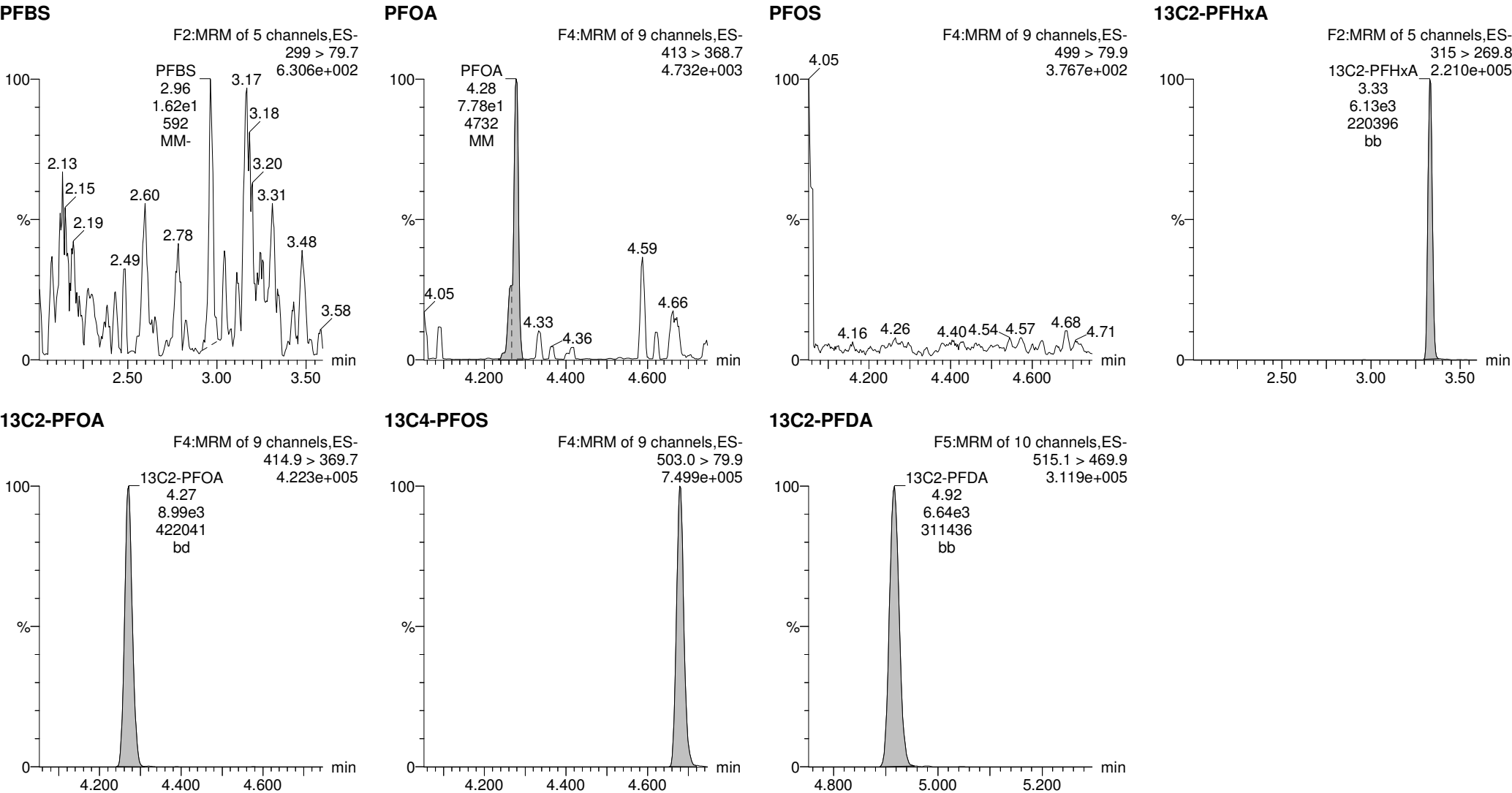
	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.56e4	0.2518		2.99				
2	5 PFOA	413 > 368.7	7.78e1	8.99e3	0.2518		4.27	4.28	0.0865	0.379	
3	7 PFOS	499 >79.9		1.56e4	0.2518		4.68				
4	15 13C2-PFHxA	315 > 269.8	6.13e3	8.99e3	0.2518	0.810	3.43	3.33	6.83	33.5	84.3
5	16 13C2-PFDA	515.1 > 469.9	6.64e3	8.99e3	0.2518	1.057	4.87	4.92	7.39	27.8	69.9
6	18 13C2-PFOA	414.9 > 369.7	8.99e3	8.99e3	0.2518	1.000	4.41	4.27	10.0	39.7	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.56e4	1.56e4	0.2518	1.000	4.81	4.68	28.7	114	100.0

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_37.qld

Last Altered: Sunday, March 11, 2018 08:39:28 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:40:06 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_37, Date: 09-Mar-2018, Time: 01:17:20, ID: 1800407-11 CH-AT-1RW176-0218 0.25181, Description: CH-AT-1RW176-0218



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_38.qld

Last Altered: Sunday, March 11, 2018 08:42:10 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:42:47 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_38, Date: 09-Mar-2018, Time: 01:29:45, ID: 1800407-12 CH-AT-1FB176-0218 0.24655, Description: CH-AT-1FB176-0218

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.42e4	0.2465		2.99				
2	5 PFOA	413 > 368.7	7.02e1	7.67e3	0.2465		4.27	4.27	0.0916	0.410	
3	7 PFOS	499 >79.9		1.42e4	0.2465		4.68				
4	15 13C2-PFHxA	315 > 269.8	5.46e3	7.67e3	0.2465	0.810	3.43	3.33	7.12	35.6	87.9
5	16 13C2-PFDA	515.1 > 469.9	5.96e3	7.67e3	0.2465	1.057	4.87	4.91	7.77	29.8	73.5
6	18 13C2-PFOA	414.9 > 369.7	7.67e3	7.67e3	0.2465	1.000	4.41	4.27	10.0	40.6	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.42e4	1.42e4	0.2465	1.000	4.81	4.68	28.7	116	100.0

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_38.qld

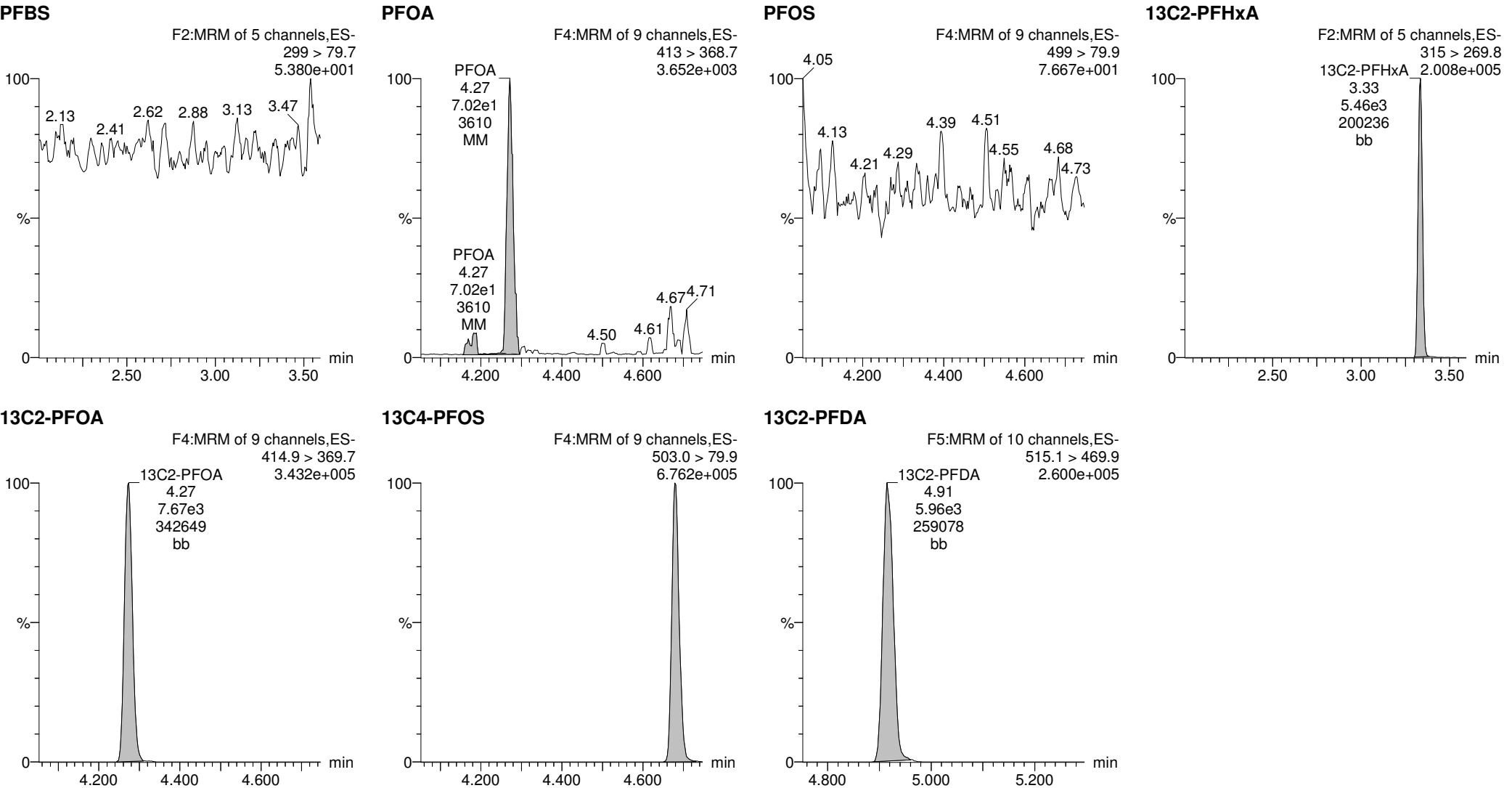
Last Altered: Sunday, March 11, 2018 08:42:10 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:42:47 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_38, Date: 09-Mar-2018, Time: 01:29:45, ID: 1800407-12 CH-AT-1FB176-0218 0.24655, Description: CH-AT-1FB176-0218



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_39.qld

Last Altered: Sunday, March 11, 2018 08:45:11 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:45:27 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_39, Date: 09-Mar-2018, Time: 01:42:10, ID: 1800407-13 CH-AT-1RW177-0218 0.25466, Description: CH-AT-1RW177-0218

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.61e4	0.2547		2.99				
2	5 PFOA	413 > 368.7	1.03e2	8.79e3	0.2547		4.27	4.27	0.118	0.509	
3	7 PFOS	499 >79.9	1.55e1	1.61e4	0.2547		4.68	4.68	0.0276	0.112	
4	15 13C2-PFHxA	315 > 269.8	6.20e3	8.79e3	0.2547	0.810	3.43	3.33	7.05	34.2	87.1
5	16 13C2-PFDA	515.1 > 469.9	7.02e3	8.79e3	0.2547	1.057	4.87	4.92	7.99	29.7	75.6
6	18 13C2-PFOA	414.9 > 369.7	8.79e3	8.79e3	0.2547	1.000	4.41	4.27	10.0	39.3	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.61e4	1.61e4	0.2547	1.000	4.81	4.68	28.7	113	100.0

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_39.qld

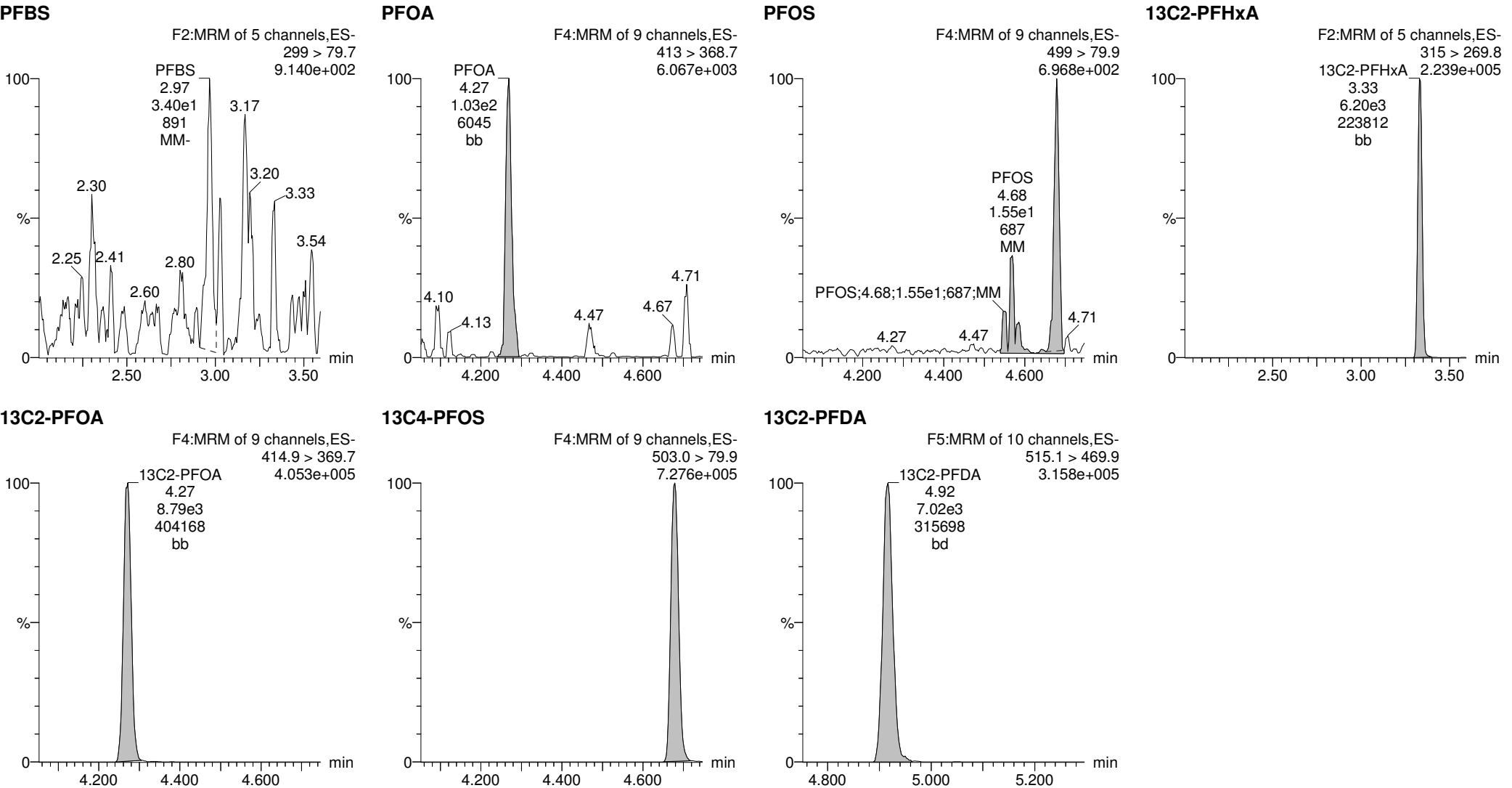
Last Altered: Sunday, March 11, 2018 08:45:11 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:45:27 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_39, Date: 09-Mar-2018, Time: 01:42:10, ID: 1800407-13 CH-AT-1RW177-0218 0.25466, Description: CH-AT-1RW177-0218



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_40.qld

Last Altered: Sunday, March 11, 2018 08:47:52 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:48:06 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_40, Date: 09-Mar-2018, Time: 01:54:31, ID: 1800407-14 CH-AT-1FB177-0218 0.25039, Description: CH-AT-1FB177-0218

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.30e0	1.54e4	0.2504		3.00	2.97	0.00242	0.0135	
2	5 PFOA	413 > 368.7	1.38e2	8.37e3	0.2504		4.27	4.28	0.165	0.726	
3	7 PFOS	499 >79.9		1.54e4	0.2504		4.68				
4	15 13C2-PFHxA	315 > 269.8	5.87e3	8.37e3	0.2504	0.810	3.43	3.33	7.01	34.6	86.6
5	16 13C2-PFDA	515.1 > 469.9	6.82e3	8.37e3	0.2504	1.057	4.87	4.92	8.15	30.8	77.1
6	18 13C2-PFOA	414.9 > 369.7	8.37e3	8.37e3	0.2504	1.000	4.41	4.27	10.0	39.9	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.54e4	1.54e4	0.2504	1.000	4.81	4.68	28.7	115	100.0

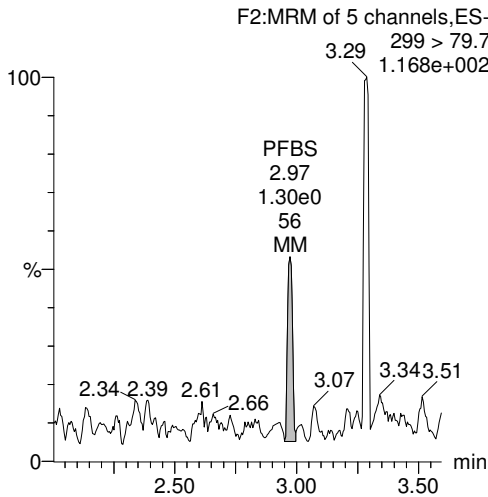
Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_40.qld

Last Altered: Sunday, March 11, 2018 08:47:52 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:48:06 Pacific Daylight Time

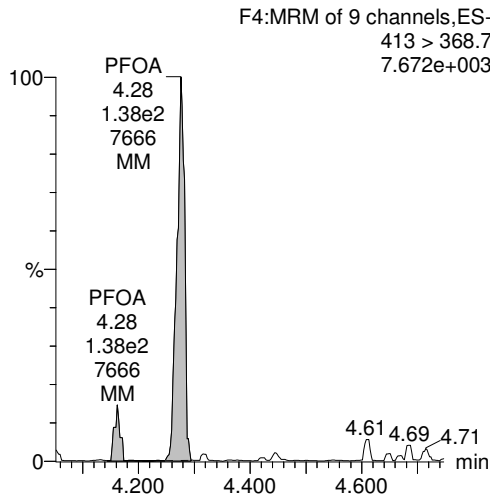
Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_40, Date: 09-Mar-2018, Time: 01:54:31, ID: 1800407-14 CH-AT-1FB177-0218 0.25039, Description: CH-AT-1FB177-0218

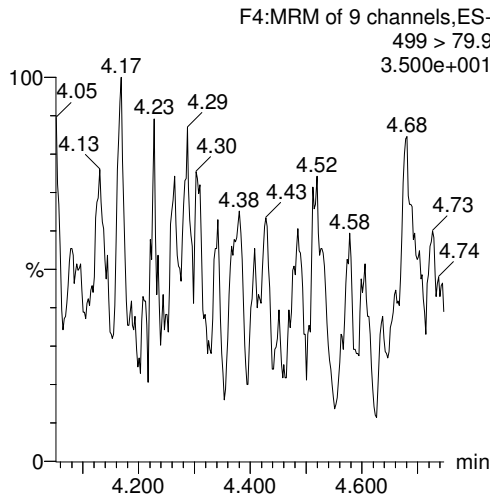
PFBS



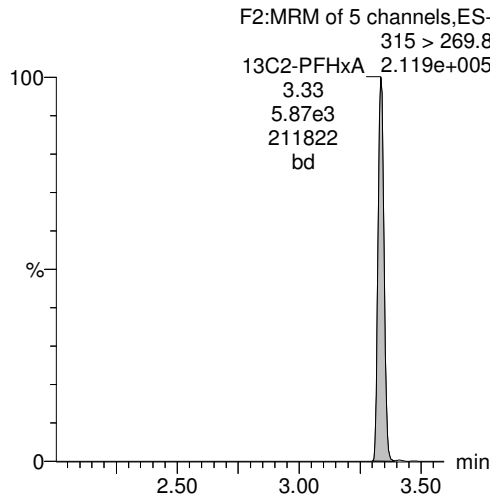
PFOA



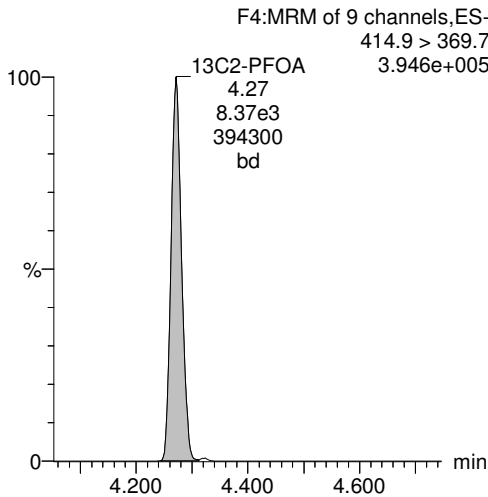
PFOS



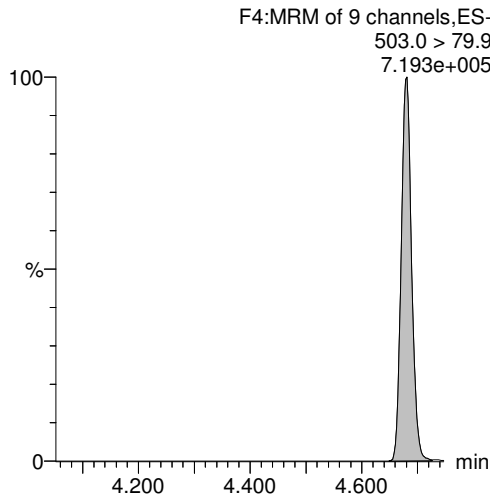
13C2-PFHxA



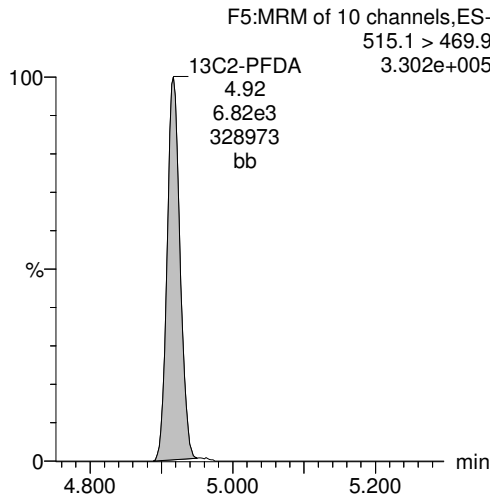
13C2-PFOA



13C4-PFOS



13C2-PFDA



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_41.qld

Last Altered: Sunday, March 11, 2018 08:49:59 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:50:28 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_41, Date: 09-Mar-2018, Time: 02:06:47, ID: 1800407-15 CH-AT-1RW178-0218 0.24978, Description: CH-AT-1RW178-0218

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.46e4	0.2498		2.99				
2	5 PFOA	413 > 368.7	1.52e2	8.38e3	0.2498		4.27	4.27	0.182	0.803	
3	7 PFOS	499 >79.9		1.46e4	0.2498		4.68				
4	15 13C2-PFHxA	315 > 269.8	5.85e3	8.38e3	0.2498	0.810	3.43	3.33	6.98	34.5	86.2
5	16 13C2-PFDA	515.1 > 469.9	7.09e3	8.38e3	0.2498	1.057	4.87	4.92	8.46	32.0	80.0
6	18 13C2-PFOA	414.9 > 369.7	8.38e3	8.38e3	0.2498	1.000	4.41	4.27	10.0	40.0	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.46e4	1.46e4	0.2498	1.000	4.81	4.68	28.7	115	100.0

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_41.qld

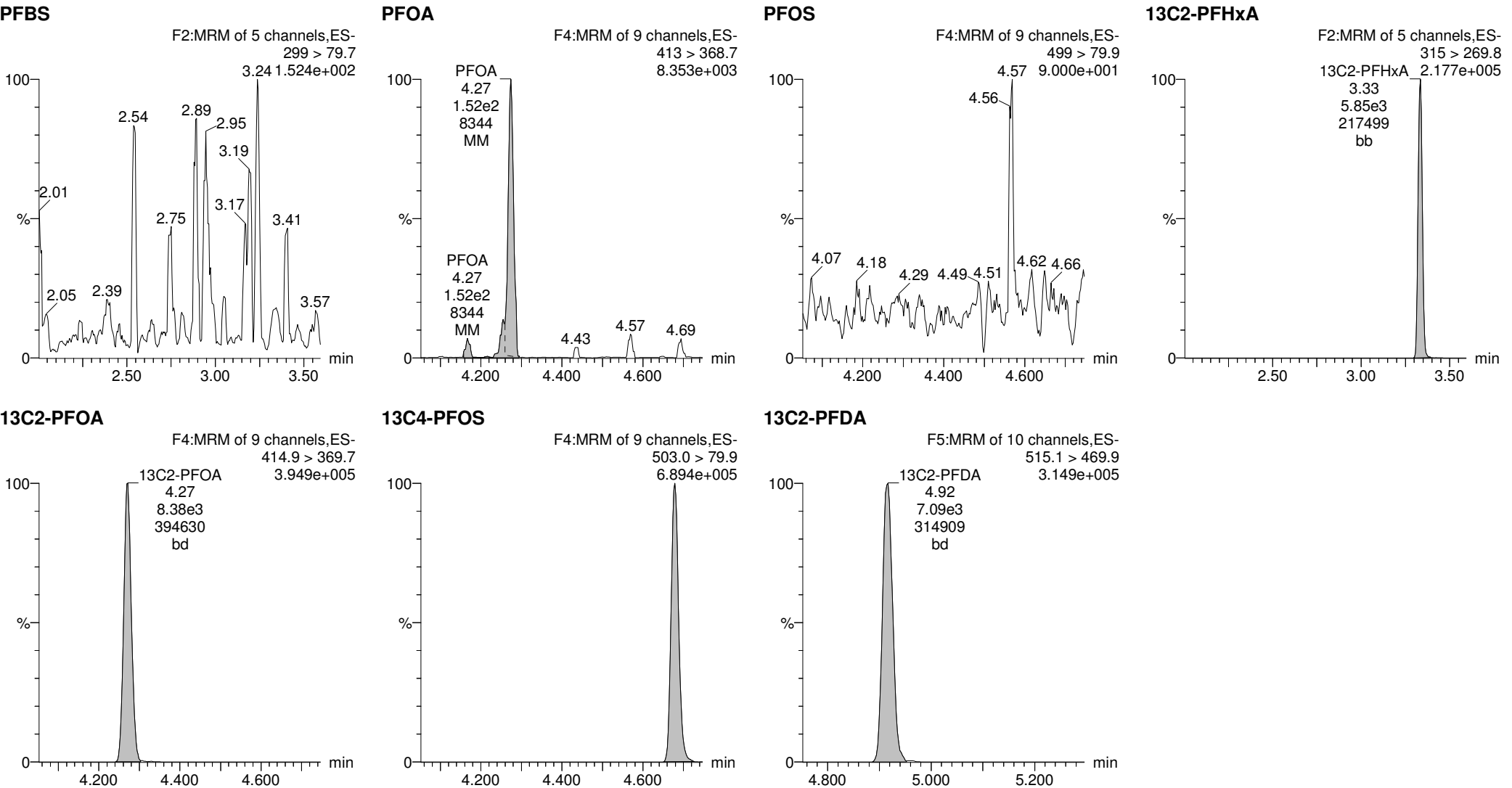
Last Altered: Sunday, March 11, 2018 08:49:59 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:50:28 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_41, Date: 09-Mar-2018, Time: 02:06:47, ID: 1800407-15 CH-AT-1RW178-0218 0.24978, Description: CH-AT-1RW178-0218



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_42.qld

Last Altered: Sunday, March 11, 2018 08:52:12 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:52:34 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_42, Date: 09-Mar-2018, Time: 02:19:05, ID: 1800407-16 CH-AT-1FB178-0218 0.2499, Description: CH-AT-1FB178-0218

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.51e4	0.2499		2.99				
2	5 PFOA	413 > 368.7	5.31e1	7.95e3	0.2499		4.27	4.27	0.0668	0.295	
3	7 PFOS	499 >79.9	1.32e0	1.51e4	0.2499		4.68	4.69	0.00250	0.0104	
4	15 13C2-PFHxA	315 > 269.8	6.01e3	7.95e3	0.2499	0.810	3.43	3.33	7.56	37.3	93.3
5	16 13C2-PFDA	515.1 > 469.9	6.14e3	7.95e3	0.2499	1.057	4.87	4.92	7.73	29.2	73.1
6	18 13C2-PFOA	414.9 > 369.7	7.95e3	7.95e3	0.2499	1.000	4.41	4.27	10.0	40.0	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.51e4	1.51e4	0.2499	1.000	4.81	4.68	28.7	115	100.0

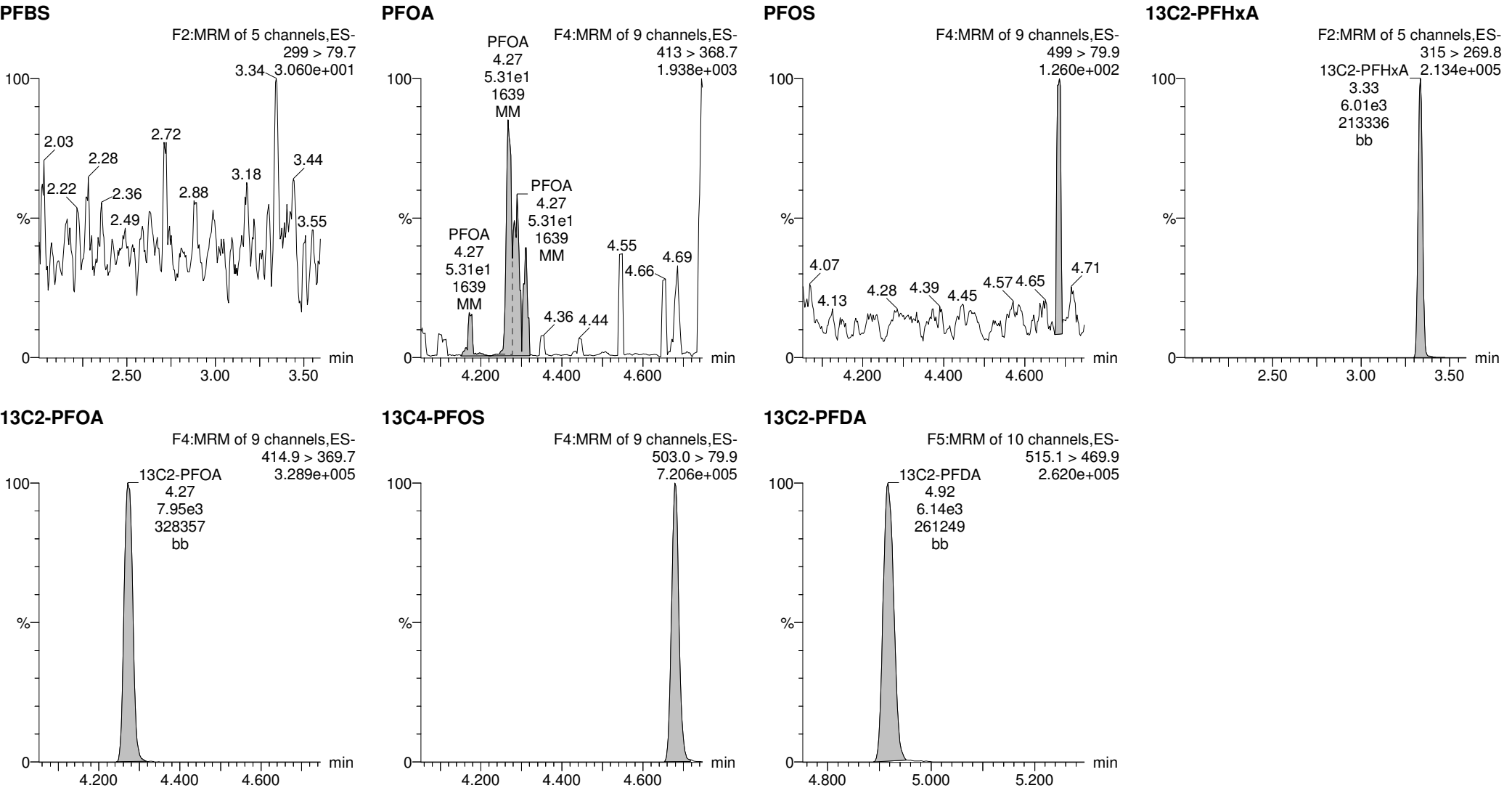
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Rev'd: MM 3/11/2018

Last Altered: Sunday, March 11, 2018 08:52:12 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:52:34 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_42, Date: 09-Mar-2018, Time: 02:19:05, ID: 1800407-16 CH-AT-1FB178-0218 0.2499, Description: CH-AT-1FB178-0218



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_43.qld

Last Altered: Sunday, March 11, 2018 08:54:08 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:54:33 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_43, Date: 09-Mar-2018, Time: 02:31:31, ID: 1800407-17 CH-AT-1RW179-0218 0.25201, Description: CH-AT-1RW179-0218

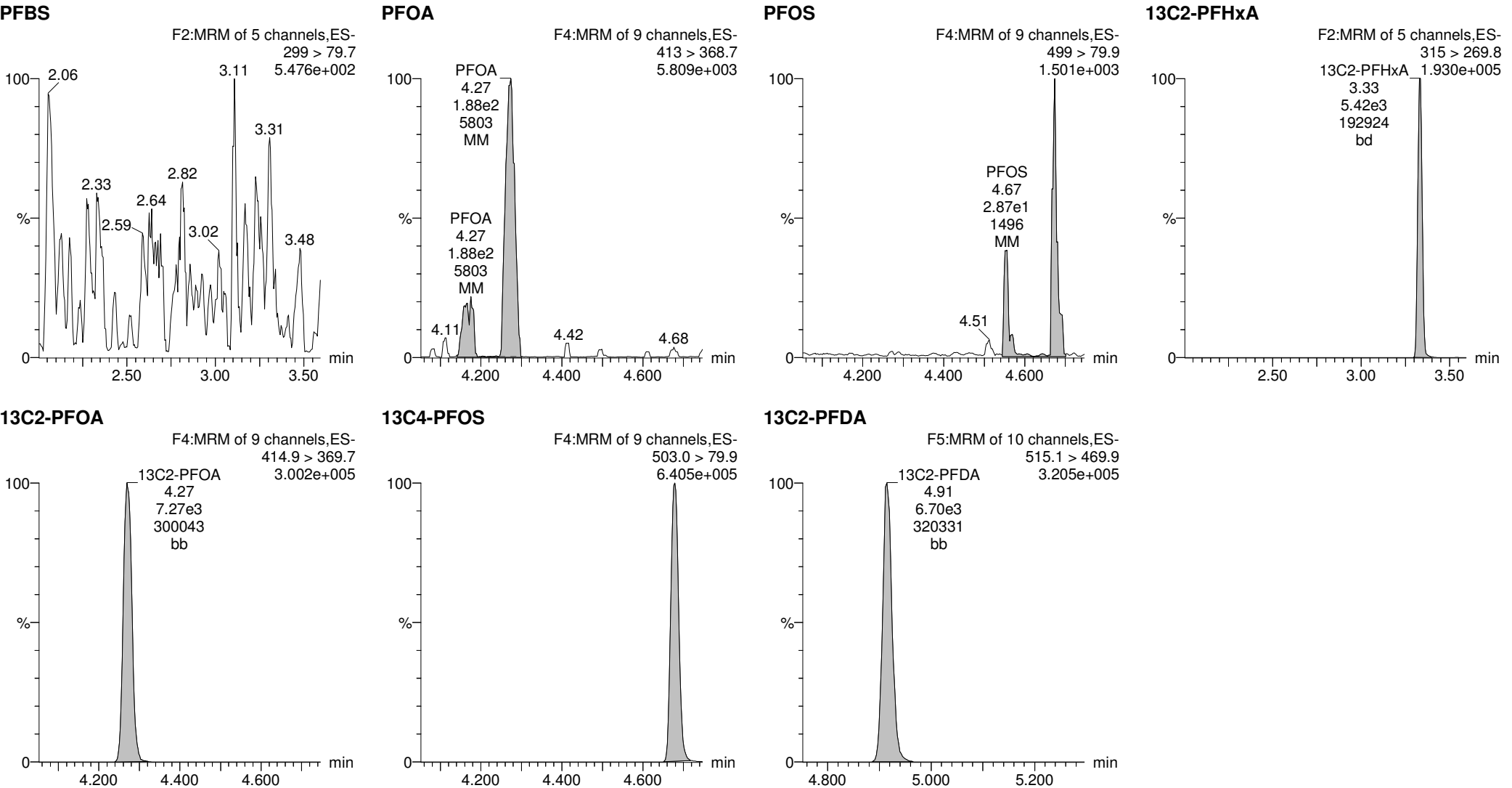
	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.43e4	0.2520		2.99				
2	5 PFOA	413 > 368.7	1.88e2	7.27e3	0.2520		4.27	4.27	0.258	1.13	
3	7 PFOS	499 >79.9	2.87e1	1.43e4	0.2520		4.68	4.67	0.0577	0.238	
4	15 13C2-PFHxA	315 > 269.8	5.42e3	7.27e3	0.2520	0.810	3.42	3.33	7.46	36.5	92.1
5	16 13C2-PFDA	515.1 > 469.9	6.70e3	7.27e3	0.2520	1.057	4.87	4.91	9.22	34.6	87.2
6	18 13C2-PFOA	414.9 > 369.7	7.27e3	7.27e3	0.2520	1.000	4.41	4.27	10.0	39.7	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.43e4	1.43e4	0.2520	1.000	4.81	4.68	28.7	114	100.0

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_43.qld

Last Altered: Sunday, March 11, 2018 08:54:08 Pacific Daylight Time
Printed: Sunday, March 11, 2018 08:54:33 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_43, Date: 09-Mar-2018, Time: 02:31:31, ID: 1800407-17 CH-AT-1RW179-0218 0.25201, Description: CH-AT-1RW179-0218



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_44.qld

Last Altered: Sunday, March 11, 2018 08:54:58 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:55:37 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_44, Date: 09-Mar-2018, Time: 02:43:55, ID: 1800407-18 CH-AT-1FB179-0218 0.24788, Description: CH-AT-1FB179-0218

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.36e4	0.2479		2.99				
2	5 PFOA	413 > 368.7	1.08e2	7.40e3	0.2479		4.27	4.27	0.146	0.649	
3	7 PFOS	499 >79.9		1.36e4	0.2479		4.68				
4	15 13C2-PFHxA	315 > 269.8	5.31e3	7.40e3	0.2479	0.810	3.43	3.33	7.17	35.7	88.6
5	16 13C2-PFDA	515.1 > 469.9	6.56e3	7.40e3	0.2479	1.057	4.87	4.92	8.87	33.9	83.9
6	18 13C2-PFOA	414.9 > 369.7	7.40e3	7.40e3	0.2479	1.000	4.41	4.27	10.0	40.3	100.0
7	19 13C4-PFOS	503.0 > 79.9	1.36e4	1.36e4	0.2479	1.000	4.81	4.68	28.7	116	100.0

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4_44.qld

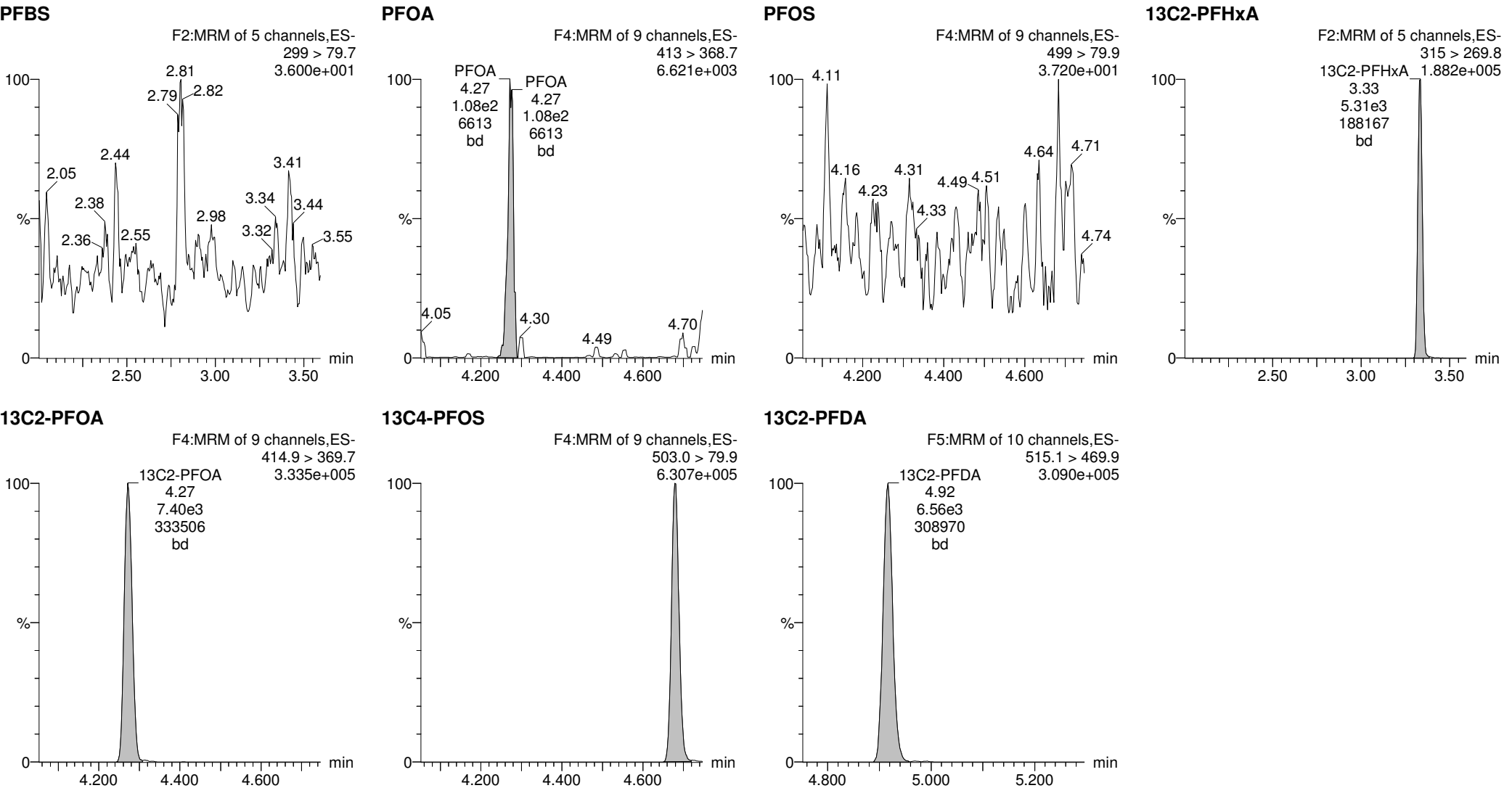
Last Altered: Sunday, March 11, 2018 08:54:58 Pacific Daylight Time

Printed: Sunday, March 11, 2018 08:55:37 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 11:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 11:59:51

Name: 180308G4_44, Date: 09-Mar-2018, Time: 02:43:55, ID: 1800407-18 CH-AT-1FB179-0218 0.24788, Description: CH-AT-1FB179-0218



**INJECTION INTERNAL STANDARD (IIS) AREAS,
INSTRUMENT BLANKS (IB)
AND
CONTINUING CALIBRATION VERIFICATIONS CCV)**

ICAL

Compound 18: 13C2-PFOA

ID	Name	Type	Std. RT	Area	Ical Area	Area %
14 1800405-04 CH-AT-1FB181-0218 0.25861	180308G4_14	Analyte	10 4.27	6895.883	8057.86	85.58
15 1800405-07 CH-AT-1RW183-0218 0.25302	180308G4_15	Analyte	10 4.27	6790.119	8057.86	84.27
16 1800405-12 CH-AT-1FB185-0218 0.26028	180308G4_16	Analyte	10 4.27	7340.062	8057.86	91.09
17 1800405-14 CH-AT-1FB186-0218 0.25507	180308G4_17	Analyte	10 4.27	7433.499	8057.86	92.25
18 1800405-15 CH-AT-1RW187-0218 0.25751	180308G4_18	Analyte	10 4.27	7543.705	8057.86	93.62
19 1800405-16 CH-AT-1FB187-0218 0.25502	180308G4_19	Analyte	10 4.27	7097.87	8057.86	88.09
20 B8C0031-BLK1 LRB 0.25	180308G4_20	Analyte	10 4.27	8015.923	8057.86	99.48
21 B8C0031-BS1 LFB 0.25	180308G4_21	Analyte	10 4.27	7259.88	8057.86	90.10
22 B8C0031-MS1 LFSM 0.25052	180308G4_22	Analyte	10 4.27	7940.628	8057.86	98.55
23 B8C0031-MSD1 LFSMD 0.25168	180308G4_23	Analyte	10 4.27	7694.385	8057.86	95.49
24 IPA	180308G4_24	Analyte	10		8057.86	0.00
25 ST180308G4-10 PFC CS2 537 18B2305	180308G4_25	Analyte	10 4.27	8343.02	8057.86	103.54
26 IPA	180308G4_26	Analyte	10 4.28	7.464	8057.86	0.09
27 1800407-01 CH-AT-1RW171-0218 0.2499	180308G4_27	Analyte	10 4.27	7599.496	8057.86	94.31
28 1800407-02 CH-AT-1FB171-0218 0.2499	180308G4_28	Analyte	10 4.27	8451.056	8057.86	104.88
29 1800407-03 CH-AT-1RW172-0218 0.25125	180308G4_29	Analyte	10 4.27	8209.837	8057.86	101.89
30 1800407-04 CH-AT-1FB172-0218 0.25357	180308G4_30	Analyte	10 4.27	7549.996	8057.86	93.70
31 1800407-05 CH-AT-1RW173-0218 0.26012	180308G4_31	Analyte	10 4.27	8101.225	8057.86	100.54
32 1800407-06 CH-AT-1FB173-0218 0.25656	180308G4_32	Analyte	10 4.27	7578.56	8057.86	94.05
33 1800407-07 CH-AT-1RW174-0218 0.25296	180308G4_33	Analyte	10 4.27	8463.024	8057.86	105.03
34 1800407-08 CH-AT-1FB174-0218 0.25404	180308G4_34	Analyte	10 4.27	7429.209	8057.86	92.20
35 1800407-09 CH-AT-1RW175-0218 0.25976	180308G4_35	Analyte	10 4.27	7612.481	8057.86	94.47
36 1800407-10 CH-AT-1FB175-0218 0.2554	180308G4_36	Analyte	10 4.27	8129.998	8057.86	100.90
37 1800407-11 CH-AT-1RW176-0218 0.25181	180308G4_37	Analyte	10 4.27	8987.971	8057.86	111.54
38 1800407-12 CH-AT-1FB176-0218 0.24655	180308G4_38	Analyte	10 4.27	7666.222	8057.86	95.14
39 1800407-13 CH-AT-1RW177-0218 0.25466	180308G4_39	Analyte	10 4.27	8788.082	8057.86	109.06
40 1800407-14 CH-AT-1FB177-0218 0.25039	180308G4_40	Analyte	10 4.27	8366.242	8057.86	103.83
41 1800407-15 CH-AT-1RW178-0218 0.24978	180308G4_41	Analyte	10 4.27	8381.275	8057.86	104.01
42 1800407-16 CH-AT-1FB178-0218 0.2499	180308G4_42	Analyte	10 4.27	7948.727	8057.86	98.65

43	1800407-17 CH-AT-1RW179-0218 0.25201	180308G4_43	Analyte	10	4.27	7268.468	8057.86	90.20
44	1800407-18 CH-AT-1FB179-0218 0.24788	180308G4_44	Analyte	10	4.27	7398.557	8057.86	91.82
45	IPA	180308G4_45	Analyte	10			8057.86	0.00
46	ST180308G4-11 PFC CS4 537 18B2307	180308G4_46	Analyte	10	4.27	8153.382	8057.86	101.19
47	IPA	180308G4_47	Analyte	10	4.28	8.886	8057.86	0.11

Compound 19: 13C4-PFOS

ID	Name	Type	Std. RT	Area	Ical Area	Area %	
14 1800405-04 CH-AT-1FB181-0218 0.25861	180308G4_14	Analyte	29	4.68	15136.67	17595.32	86.03
15 1800405-07 CH-AT-1RW183-0218 0.25302	180308G4_15	Analyte	29	4.68	14383.48	17595.32	81.75
16 1800405-12 CH-AT-1FB185-0218 0.26028	180308G4_16	Analyte	29	4.68	13686.11	17595.32	77.78
17 1800405-14 CH-AT-1FB186-0218 0.25507	180308G4_17	Analyte	29	4.68	13180.06	17595.32	74.91
18 1800405-15 CH-AT-1RW187-0218 0.25751	180308G4_18	Analyte	29	4.68	14618.4	17595.32	83.08
19 1800405-16 CH-AT-1FB187-0218 0.25502	180308G4_19	Analyte	29	4.68	14599.07	17595.32	82.97
20 B8C0031-BLK1 LRB 0.25	180308G4_20	Analyte	29	4.68	13774.99	17595.32	78.29
21 B8C0031-BS1 LFB 0.25	180308G4_21	Analyte	29	4.68	14558.87	17595.32	82.74
22 B8C0031-MS1 LFSM 0.25052	180308G4_22	Analyte	29	4.68	13743.53	17595.32	78.11
23 B8C0031-MSD1 LFSMD 0.25168	180308G4_23	Analyte	29	4.68	13373.75	17595.32	76.01
24 IPA	180308G4_24	Analyte	29	4.68	9.194	17595.32	0.05
25 ST180308G4-10 PFC CS2 537 18B2305	180308G4_25	Analyte	29	4.68	16386.49	17595.32	93.13
26 IPA	180308G4_26	Analyte	29			17595.32	0.00
27 1800407-01 CH-AT-1RW171-0218 0.2499	180308G4_27	Analyte	29	4.68	13688.48	17595.32	77.80
28 1800407-02 CH-AT-1FB171-0218 0.2499	180308G4_28	Analyte	29	4.68	15018.58	17595.32	85.36
29 1800407-03 CH-AT-1RW172-0218 0.25125	180308G4_29	Analyte	29	4.68	15178.58	17595.32	86.26
30 1800407-04 CH-AT-1FB172-0218 0.25357	180308G4_30	Analyte	29	4.68	14656.66	17595.32	83.30
31 1800407-05 CH-AT-1RW173-0218 0.26012	180308G4_31	Analyte	29	4.68	15946.37	17595.32	90.63
32 1800407-06 CH-AT-1FB173-0218 0.25656	180308G4_32	Analyte	29	4.68	13557.23	17595.32	77.05
33 1800407-07 CH-AT-1RW174-0218 0.25296	180308G4_33	Analyte	29	4.68	15637.41	17595.32	88.87
34 1800407-08 CH-AT-1FB174-0218 0.25404	180308G4_34	Analyte	29	4.68	14193.19	17595.32	80.66
35 1800407-09 CH-AT-1RW175-0218 0.25976	180308G4_35	Analyte	29	4.68	14678.41	17595.32	83.42
36 1800407-10 CH-AT-1FB175-0218 0.2554	180308G4_36	Analyte	29	4.68	14340.85	17595.32	81.50
37 1800407-11 CH-AT-1RW176-0218 0.25181	180308G4_37	Analyte	29	4.68	15639.91	17595.32	88.89
38 1800407-12 CH-AT-1FB176-0218 0.24655	180308G4_38	Analyte	29	4.68	14212.74	17595.32	80.78

39	1800407-13 CH-AT-1RW177-0218 0.25466	180308G4_39	Analyte	29	4.68	16135.49	17595.32	91.70
40	1800407-14 CH-AT-1FB177-0218 0.25039	180308G4_40	Analyte	29	4.68	15400.62	17595.32	87.53
41	1800407-15 CH-AT-1RW178-0218 0.24978	180308G4_41	Analyte	29	4.68	14644.46	17595.32	83.23
42	1800407-16 CH-AT-1FB178-0218 0.2499	180308G4_42	Analyte	29	4.68	15098.53	17595.32	85.81
43	1800407-17 CH-AT-1RW179-0218 0.25201	180308G4_43	Analyte	29	4.68	14289.65	17595.32	81.21
44	1800407-18 CH-AT-1FB179-0218 0.24788	180308G4_44	Analyte	29	4.68	13550.1	17595.32	77.01
45	IPA	180308G4_45	Analyte	29			17595.32	0.00
46	ST180308G4-11 PFC CS4 537 18B2307	180308G4_46	Analyte	29	4.68	15317.96	17595.32	87.06
47	IPA	180308G4_47	Analyte	29			17595.32	0.00

Compound 20: d3-N-MeFOSAA

ID	Name	Type	Std.	RT	Area	Ical Area	Area %	
14	1800405-04 CH-AT-1FB181-0218 0.25861	180308G4_14	Analyte	40	5.04	11779.31	15789.62	74.60
15	1800405-07 CH-AT-1RW183-0218 0.25302	180308G4_15	Analyte	40	5.04	11578.7	15789.62	73.33
16	1800405-12 CH-AT-1FB185-0218 0.26028	180308G4_16	Analyte	40	5.04	12765.26	15789.62	80.85
17	1800405-14 CH-AT-1FB186-0218 0.25507	180308G4_17	Analyte	40	5.04	12542.64	15789.62	79.44
18	1800405-15 CH-AT-1RW187-0218 0.25751	180308G4_18	Analyte	40	5.05	11632.48	15789.62	73.67
19	1800405-16 CH-AT-1FB187-0218 0.25502	180308G4_19	Analyte	40	5.05	12057.94	15789.62	76.37
20	B8C0031-BLK1 LRB 0.25	180308G4_20	Analyte	40	5.04	11728.54	15789.62	74.28
21	B8C0031-BS1 LFB 0.25	180308G4_21	Analyte	40	5.04	13291.73	15789.62	84.18
22	B8C0031-MS1 LFSM 0.25052	180308G4_22	Analyte	40	5.04	11818.53	15789.62	74.85
23	B8C0031-MSD1 LFSMD 0.25168	180308G4_23	Analyte	40	5.04	11947.83	15789.62	75.67
24	IPA	180308G4_24	Analyte	40			15789.62	0.00
25	ST180308G4-10 PFC CS2 537 18B2305	180308G4_25	Analyte	40	5.04	13622.84	15789.62	86.28
26	IPA	180308G4_26	Analyte	40			15789.62	0.00
27	1800407-01 CH-AT-1RW171-0218 0.2499	180308G4_27	Analyte	40	5.04	11527.62	15789.62	73.01
28	1800407-02 CH-AT-1FB171-0218 0.2499	180308G4_28	Analyte	40	5.04	11506.19	15789.62	72.87
29	1800407-03 CH-AT-1RW172-0218 0.25125	180308G4_29	Analyte	40	5.04	11934.41	15789.62	75.58
30	1800407-04 CH-AT-1FB172-0218 0.25357	180308G4_30	Analyte	40	5.05	13245.09	15789.62	83.88
31	1800407-05 CH-AT-1RW173-0218 0.26012	180308G4_31	Analyte	40	5.04	12165.37	15789.62	77.05
32	1800407-06 CH-AT-1FB173-0218 0.25656	180308G4_32	Analyte	40	5.04	11929.74	15789.62	75.55
33	1800407-07 CH-AT-1RW174-0218 0.25296	180308G4_33	Analyte	40	5.04	11961.02	15789.62	75.75
34	1800407-08 CH-AT-1FB174-0218 0.25404	180308G4_34	Analyte	40	5.04	12192.59	15789.62	77.22

35	1800407-09 CH-AT-1RW175-0218 0.25976	180308G4_35	Analyte	40	5.04	11502.77	15789.62	72.85
36	1800407-10 CH-AT-1FB175-0218 0.2554	180308G4_36	Analyte	40	5.04	13168.55	15789.62	83.40
37	1800407-11 CH-AT-1RW176-0218 0.25181	180308G4_37	Analyte	40	5.04	11613.30	15789.62	73.55
38	1800407-12 CH-AT-1FB176-0218 0.24655	180308G4_38	Analyte	40	5.04	10947.85	15789.62	69.34
39	1800407-13 CH-AT-1RW177-0218 0.25466	180308G4_39	Analyte	40	5.05	11746.88	15789.62	74.40
40	1800407-14 CH-AT-1FB177-0218 0.25039	180308G4_40	Analyte	40	5.04	12746.4	15789.62	80.73
41	1800407-15 CH-AT-1RW178-0218 0.24978	180308G4_41	Analyte	40	5.04	13382.59	15789.62	84.76
42	1800407-16 CH-AT-1FB178-0218 0.2499	180308G4_42	Analyte	40	5.04	11973.47	15789.62	75.83
43	1800407-17 CH-AT-1RW179-0218 0.25201	180308G4_43	Analyte	40	5.04	11269.19	15789.62	71.37
44	1800407-18 CH-AT-1FB179-0218 0.24788	180308G4_44	Analyte	40	5.04	10800.51	15789.62	68.40
45	IPA	180308G4_45	Analyte	40			15789.62	0.00
46	ST180308G4-11 PFC CS4 537 18B2307	180308G4_46	Analyte	40	5.04	12728.57	15789.62	80.61
47	IPA	180308G4_47	Analyte	40			15789.62	0.00

CCAL

Compound 18: 13C2-PFOA

ST180308G4-10 PFC CS2 537 18B2305

ID	Name	Type	Std.	RT	Area	Ccal Area	Area %	
25	ST180308G4-10 PFC CS2 537 18B2305	180308G4_25	Analyte	10	4.27	8343.02	8343.02	100.00
26	IPA	180308G4_26	Analyte	10	4.28	7.464	8343.02	0.09
27	1800407-01 CH-AT-1RW171-0218 0.2499	180308G4_27	Analyte	10	4.27	7599.496	8343.02	91.09
28	1800407-02 CH-AT-1FB171-0218 0.2499	180308G4_28	Analyte	10	4.27	8451.056	8343.02	101.29
29	1800407-03 CH-AT-1RW172-0218 0.25125	180308G4_29	Analyte	10	4.27	8209.837	8343.02	98.40
30	1800407-04 CH-AT-1FB172-0218 0.25357	180308G4_30	Analyte	10	4.27	7549.996	8343.02	90.49
31	1800407-05 CH-AT-1RW173-0218 0.26012	180308G4_31	Analyte	10	4.27	8101.225	8343.02	97.10
32	1800407-06 CH-AT-1FB173-0218 0.25656	180308G4_32	Analyte	10	4.27	7578.56	8343.02	90.84
33	1800407-07 CH-AT-1RW174-0218 0.25296	180308G4_33	Analyte	10	4.27	8463.024	8343.02	101.44
34	1800407-08 CH-AT-1FB174-0218 0.25404	180308G4_34	Analyte	10	4.27	7429.209	8343.02	89.05
35	1800407-09 CH-AT-1RW175-0218 0.25976	180308G4_35	Analyte	10	4.27	7612.481	8343.02	91.24
36	1800407-10 CH-AT-1FB175-0218 0.2554	180308G4_36	Analyte	10	4.27	8129.998	8343.02	97.45
37	1800407-11 CH-AT-1RW176-0218 0.25181	180308G4_37	Analyte	10	4.27	8987.971	8343.02	107.73
38	1800407-12 CH-AT-1FB176-0218 0.24655	180308G4_38	Analyte	10	4.27	7666.222	8343.02	91.89
39	1800407-13 CH-AT-1RW177-0218 0.25466	180308G4_39	Analyte	10	4.27	8788.082	8343.02	105.33

40	1800407-14 CH-AT-1FB177-0218 0.25039	180308G4_40	Analyte	10	4.27	8366.242	8343.02	100.28
41	1800407-15 CH-AT-1RW178-0218 0.24978	180308G4_41	Analyte	10	4.27	8381.275	8343.02	100.46
42	1800407-16 CH-AT-1FB178-0218 0.2499	180308G4_42	Analyte	10	4.27	7948.727	8343.02	95.27
43	1800407-17 CH-AT-1RW179-0218 0.25201	180308G4_43	Analyte	10	4.27	7268.468	8343.02	87.12
44	1800407-18 CH-AT-1FB179-0218 0.24788	180308G4_44	Analyte	10	4.27	7398.557	8343.02	88.68
45	IPA	180308G4_45	Analyte	10			8343.02	0.00
46	ST180308G4-11 PFC CS4 537 18B2307	180308G4_46	Analyte	10	4.27	8153.382	8343.02	97.73
47	IPA	180308G4_47	Analyte	10	4.28	8.886	8343.02	0.11

CCAL

Compound 19: 13C4-PFOS

ST180308G4-10 PFC CS2 537 18B2305

ID	Name	Type	Std.	RT	Area	Ccal Area	Area %	
25	ST180308G4-10 PFC CS2 537 18B2305	180308G4_25	Analyte	29	4.68	16386.49	16386.49	100.00
26	IPA	180308G4_26	Analyte	29			16386.49	0.00
27	1800407-01 CH-AT-1RW171-0218 0.2499	180308G4_27	Analyte	29	4.68	13688.48	16386.49	83.54
28	1800407-02 CH-AT-1FB171-0218 0.2499	180308G4_28	Analyte	29	4.68	15018.58	16386.49	91.65
29	1800407-03 CH-AT-1RW172-0218 0.25125	180308G4_29	Analyte	29	4.68	15178.58	16386.49	92.63
30	1800407-04 CH-AT-1FB172-0218 0.25357	180308G4_30	Analyte	29	4.68	14656.66	16386.49	89.44
31	1800407-05 CH-AT-1RW173-0218 0.26012	180308G4_31	Analyte	29	4.68	15946.37	16386.49	97.31
32	1800407-06 CH-AT-1FB173-0218 0.25656	180308G4_32	Analyte	29	4.68	13557.23	16386.49	82.73
33	1800407-07 CH-AT-1RW174-0218 0.25296	180308G4_33	Analyte	29	4.68	15637.41	16386.49	95.43
34	1800407-08 CH-AT-1FB174-0218 0.25404	180308G4_34	Analyte	29	4.68	14193.19	16386.49	86.62
35	1800407-09 CH-AT-1RW175-0218 0.25976	180308G4_35	Analyte	29	4.68	14678.41	16386.49	89.58
36	1800407-10 CH-AT-1FB175-0218 0.2554	180308G4_36	Analyte	29	4.68	14340.85	16386.49	87.52
37	1800407-11 CH-AT-1RW176-0218 0.25181	180308G4_37	Analyte	29	4.68	15639.91	16386.49	95.44
38	1800407-12 CH-AT-1FB176-0218 0.24655	180308G4_38	Analyte	29	4.68	14212.74	16386.49	86.73
39	1800407-13 CH-AT-1RW177-0218 0.25466	180308G4_39	Analyte	29	4.68	16135.49	16386.49	98.47
40	1800407-14 CH-AT-1FB177-0218 0.25039	180308G4_40	Analyte	29	4.68	15400.62	16386.49	93.98
41	1800407-15 CH-AT-1RW178-0218 0.24978	180308G4_41	Analyte	29	4.68	14644.46	16386.49	89.37
42	1800407-16 CH-AT-1FB178-0218 0.2499	180308G4_42	Analyte	29	4.68	15098.53	16386.49	92.14
43	1800407-17 CH-AT-1RW179-0218 0.25201	180308G4_43	Analyte	29	4.68	14289.65	16386.49	87.20
44	1800407-18 CH-AT-1FB179-0218 0.24788	180308G4_44	Analyte	29	4.68	13550.1	16386.49	82.69
45	IPA	180308G4_45	Analyte	29			16386.49	0.00
46	ST180308G4-11 PFC CS4 537 18B2307	180308G4_46	Analyte	29	4.68	15317.96	16386.49	93.48
47	IPA	180308G4_47	Analyte	29			16386.49	0.00

CCAL

Compound 20: d3-N-MeFOSAA

ST180308G4-10 PFC CS2 537 18B2305

ID	Name	Type	Std.	RT	Area	Ccal Area	Area %
25 ST180308G4-10 PFC CS2 537 18B2305	180308G4_25	STANDARD	40	5.04	13622.84	13622.84	100.00
26 IPA	180308G4_26	Analyte	40			13622.84	0.00
27 1800407-01 CH-AT-1RW171-0218 0.2499	180308G4_27	Analyte	40	5.04	11527.62	13622.84	84.62
28 1800407-02 CH-AT-1FB171-0218 0.2499	180308G4_28	Analyte	40	5.04	11506.19	13622.84	84.46
29 1800407-03 CH-AT-1RW172-0218 0.25125	180308G4_29	Analyte	40	5.04	11934.41	13622.84	87.61
30 1800407-04 CH-AT-1FB172-0218 0.25357	180308G4_30	Analyte	40	5.05	13245.09	13622.84	97.23
31 1800407-05 CH-AT-1RW173-0218 0.26012	180308G4_31	Analyte	40	5.04	12165.37	13622.84	89.30
32 1800407-06 CH-AT-1FB173-0218 0.25656	180308G4_32	Analyte	40	5.04	11929.74	13622.84	87.57
33 1800407-07 CH-AT-1RW174-0218 0.25296	180308G4_33	Analyte	40	5.04	11961.02	13622.84	87.80
34 1800407-08 CH-AT-1FB174-0218 0.25404	180308G4_34	Analyte	40	5.04	12192.59	13622.84	89.50
35 1800407-09 CH-AT-1RW175-0218 0.25976	180308G4_35	Analyte	40	5.04	11502.77	13622.84	84.44
36 1800407-10 CH-AT-1FB175-0218 0.2554	180308G4_36	Analyte	40	5.04	13168.55	13622.84	96.67
37 1800407-11 CH-AT-1RW176-0218 0.25181	180308G4_37	Analyte	40	5.04	11613.3	13622.84	85.25
38 1800407-12 CH-AT-1FB176-0218 0.24655	180308G4_38	Analyte	40	5.04	10947.85	13622.84	80.36
39 1800407-13 CH-AT-1RW177-0218 0.25466	180308G4_39	Analyte	40	5.05	11746.88	13622.84	86.23
40 1800407-14 CH-AT-1FB177-0218 0.25039	180308G4_40	Analyte	40	5.04	12746.4	13622.84	93.57
41 1800407-15 CH-AT-1RW178-0218 0.24978	180308G4_41	Analyte	40	5.04	13382.59	13622.84	98.24
42 1800407-16 CH-AT-1FB178-0218 0.2499	180308G4_42	Analyte	40	5.04	11973.47	13622.84	87.89
43 1800407-17 CH-AT-1RW179-0218 0.25201	180308G4_43	Analyte	40	5.04	11269.19	13622.84	82.72
44 1800407-18 CH-AT-1FB179-0218 0.24788	180308G4_44	Analyte	40	5.04	10800.51	13622.84	79.28
45 IPA	180308G4_45	Analyte	40			13622.84	0.00
46 ST180308G4-11 PFC CS4 537 18B2307	180308G4_46	Analyte	40	5.04	12728.57	13622.84	93.44
47 IPA	180308G4_47	Analyte	40			13622.84	0.00

LC Calibration Standards Review Checklist

Q1

Calibration ID:		ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	
ST180308G4-10	L M H	☒	☒	☒	☒	☒	☒	☒
J -11	L M H	☒	☒	☒	☒	☒	☒	☒
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 4.15.17

Run Log Present:

☒

of Samples per Sequence Checked:

☒

Instrument Blank Saved

☒ NA for DW

IIS Area Saved

☒

Reviewed By:

KBF 3/10/18
Initials/Date

Comments:

L14
DW

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-25.qld

Last Altered: Friday, March 09, 2018 12:33:55 Pacific Standard Time

Printed: Friday, March 09, 2018 12:34:46 Pacific Standard Time

✓ KLF 3/10/18
MST 3/9/18

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 10:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 10:59:51

Name: 180308G4_25, Date: 08-Mar-2018, Time: 22:48:25, ID: ST180308G4-10 PFC CS2 537 18B2305, Description: PFC CS2 537 18B2305

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	9.88e3	1.64e4	1.0000		2.99	2.97	17.3	24.2	109.5
2	2 PFHxA	313.2 > 268.9	1.25e4	8.34e3	1.0000		3.33	3.33	15.0	24.6	98.5
3	3 PFHpA	363 > 318.9	2.07e4	8.34e3	1.0000		3.84	3.85	24.8	25.0	100.0
4	4 PFHxS	398.9 > 79.6	1.01e4	1.64e4	1.0000		3.97	3.98	17.6	23.5	103.1
5	5 PFOA	413 > 368.7	1.86e4	8.34e3	1.0000		4.27	4.27	22.2	24.9	99.6
6	6 PFNA	463 > 418.8	2.52e4	8.34e3	1.0000		4.61	4.62	30.2	25.2	101.0
7	7 PFOS	499 > 79.9	1.25e4	1.64e4	1.0000		4.68	4.68	21.9	22.7	98.3
8	8 PFDA	513 > 468.8	2.25e4	8.34e3	1.0000		4.84	4.92	27.0	21.1	84.2
9	9 N-MeFOSAA	570.1 > 419.0	1.14e4	1.36e4	1.0000		4.98	5.05	33.4	26.1	104.3
10	10 N-EtFOSAA	584.2 > 419.0	9.09e3	1.36e4	1.0000		5.16	5.17	26.7	27.3	109.4
11	11 PFUnA	563 > 518.9	2.22e4	8.34e3	1.0000		5.10	5.18	26.7	23.1	92.5
12	12 PFDoA	612.9 > 318.8	3.30e3	8.34e3	1.0000		5.26	5.40	3.95	23.6	94.2
13	13 PFTTrDA	662.9 > 618.9	2.98e4	8.34e3	1.0000		5.53	5.59	35.7	22.9	91.6
14	14 PFTeDA	712.9 > 668.8	2.84e4	8.34e3	1.0000		5.70	5.76	34.1	24.1	96.3
15	15 13C2-PFHxA	315 > 269.8	6.92e3	8.34e3	1.0000	0.810	3.43	3.33	8.29	10.2	102.4
16	16 13C2-PFDA	515.1 > 469.9	8.77e3	8.34e3	1.0000	1.057	4.87	4.92	10.5	9.94	99.4
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.36e4	1.36e4	1.0000	0.971	5.04	5.17	40.0	41.1	102.9
18	18 13C2-PFOA	414.9 > 369.7	8.34e3	8.34e3	1.0000	1.000	4.41	4.27	10.0	10.0	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.64e4	1.64e4	1.0000	1.000	4.81	4.68	28.7	28.7	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.36e4	1.36e4	1.0000	1.000	5.16	5.04	40.0	40.0	100.0

50-150
↓
70-130
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Dataset: Untitled

Last Altered: Friday, March 09, 2018 13:33:54 Pacific Standard Time

Printed: Friday, March 09, 2018 13:34:53 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 10:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 10:59:51

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	180308G4_1	IPA	08-Mar-18	17:51:14
2	180308G4_2	ST180308G4-1 PFC CS-3 537 18B2301	08-Mar-18	18:03:16
3	180308G4_3	ST180308G4-2 PFC CS-2 537 18B2302	08-Mar-18	18:15:37
4	180308G4_4	ST180308G4-3 PFC CS-1 537 18C0806	08-Mar-18	18:28:01 ✓
5	180308G4_5	ST180308G4-4 PFC CS0 537 18B2303	08-Mar-18	18:40:18
6	180308G4_6	ST180308G4-5 PFC CS1 537 18B2304	08-Mar-18	18:52:44
7	180308G4_7	ST180308G4-6 PFC CS2 537 18B2305	08-Mar-18	19:05:09
8	180308G4_8	ST180308G4-7 PFC CS3 537 18B2306	08-Mar-18	19:17:34
9	180308G4_9	ST180308G4-8 PFC CS4 537 18B2307	08-Mar-18	19:29:59
10	180308G4_10	ST180308G4-9 PFC CS5 537 18B2308	08-Mar-18	19:42:25
11	180308G4_11	IPA	08-Mar-18	19:54:45
12	180308G4_12	ICV180308G4-1 PFC ICV 537 18B2309	08-Mar-18	20:07:13
13	180308G4_13	IPA	08-Mar-18	20:19:35
14	180308G4_14	1800405-04 CH-AT-1FB181-0218 0.25861	08-Mar-18	20:32:02
15	180308G4_15	1800405-07 CH-AT-1RW183-0218 0.25302	08-Mar-18	20:44:24
16	180308G4_16	1800405-12 CH-AT-1FB185-0218 0.26028	08-Mar-18	20:56:50
17	180308G4_17	1800405-14 CH-AT-1FB186-0218 0.25507	08-Mar-18	21:09:14
18	180308G4_18	1800405-15 CH-AT-1RW187-0218 0.25751	08-Mar-18	21:21:40
19	180308G4_19	1800405-16 CH-AT-1FB187-0218 0.25502	08-Mar-18	21:34:06
20	180308G4_20	B8C0031-BLK1 LRB 0.25	08-Mar-18	21:46:30
21	180308G4_21	B8C0031-BS1 LFB 0.25	08-Mar-18	21:58:51
22	180308G4_22	B8C0031-MS1 LFSM 0.25052	08-Mar-18	22:11:07
23	180308G4_23	B8C0031-MSD1 LFSMD 0.25168	08-Mar-18	22:23:33
24	180308G4_24	IPA	08-Mar-18	22:36:00
25	180308G4_25	ST180308G4-10 PFC CS2 537 18B2305	08-Mar-18	22:48:25
26	180308G4_26	IPA	08-Mar-18	23:00:49
27	180308G4_27	1800407-01 CH-AT-1RW171-0218 0.2499	08-Mar-18	23:13:15
28	180308G4_28	1800407-02 CH-AT-1FB171-0218 0.2499	08-Mar-18	23:25:41
29	180308G4_29	1800407-03 CH-AT-1RW172-0218 0.25125	08-Mar-18	23:38:03
30	180308G4_30	1800407-04 CH-AT-1FB172-0218 0.25357	08-Mar-18	23:50:28
31	180308G4_31	1800407-05 CH-AT-1RW173-0218 0.26012	09-Mar-18	00:02:53
32	180308G4_32	1800407-06 CH-AT-1FB173-0218 0.25656	09-Mar-18	00:15:14

Dataset: Untitled

Last Altered: Friday, March 09, 2018 13:33:54 Pacific Standard Time
Printed: Friday, March 09, 2018 13:34:53 Pacific Standard Time

Compound name: PFBS

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33	180308G4_33	1800407-07 CH-AT-1RW174-0218 0.25296	09-Mar-18	00:27:39
34	180308G4_34	1800407-08 CH-AT-1FB174-0218 0.25404	09-Mar-18	00:40:04
35	180308G4_35	1800407-09 CH-AT-1RW175-0218 0.25976	09-Mar-18	00:52:30
36	180308G4_36	1800407-10 CH-AT-1FB175-0218 0.2554	09-Mar-18	01:04:54
37	180308G4_37	1800407-11 CH-AT-1RW176-0218 0.25181	09-Mar-18	01:17:20
38	180308G4_38	1800407-12 CH-AT-1FB176-0218 0.24655	09-Mar-18	01:29:45
39	180308G4_39	1800407-13 CH-AT-1RW177-0218 0.25466	09-Mar-18	01:42:10
40	180308G4_40	1800407-14 CH-AT-1FB177-0218 0.25039	09-Mar-18	01:54:31
41	180308G4_41	1800407-15 CH-AT-1RW178-0218 0.24978	09-Mar-18	02:06:47
42	180308G4_42	1800407-16 CH-AT-1FB178-0218 0.2499	09-Mar-18	02:19:05
43	180308G4_43	1800407-17 CH-AT-1RW179-0218 0.25201	09-Mar-18	02:31:31
44	180308G4_44	1800407-18 CH-AT-1FB179-0218 0.24788	09-Mar-18	02:43:55
45	180308G4_45	IPA	09-Mar-18	02:56:21
46	180308G4_46	ST180308G4-11 PFC CS4 537 18B2307	09-Mar-18	03:08:47 ✓
47	180308G4_47	IPA	09-Mar-18	03:21:11 ✓

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-25.qld

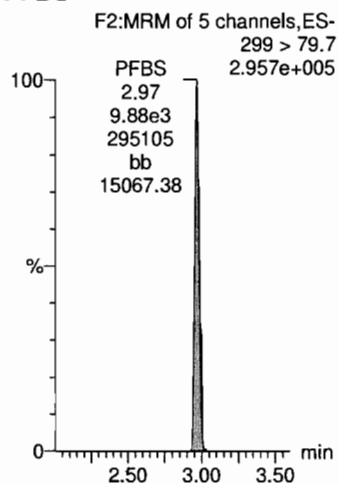
Last Altered: Friday, March 09, 2018 12:33:55 Pacific Standard Time
Printed: Friday, March 09, 2018 12:34:46 Pacific Standard Time

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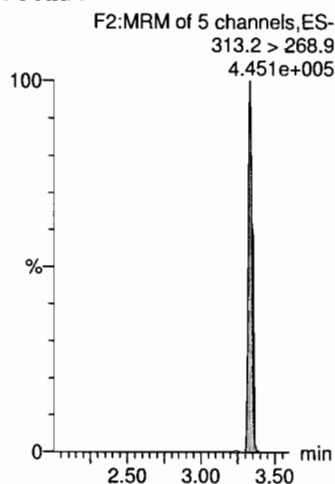
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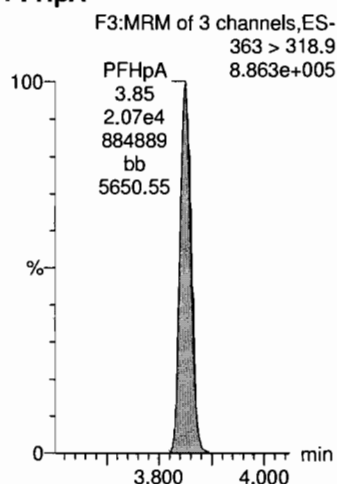
PFBS



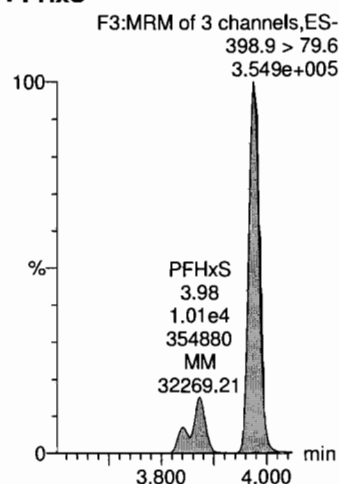
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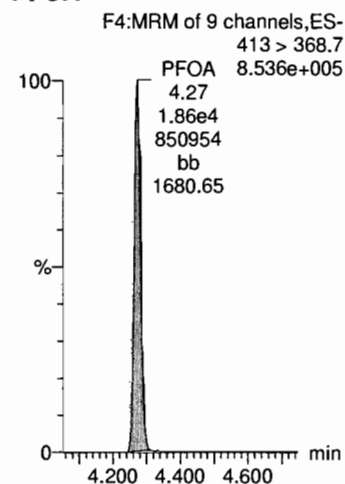
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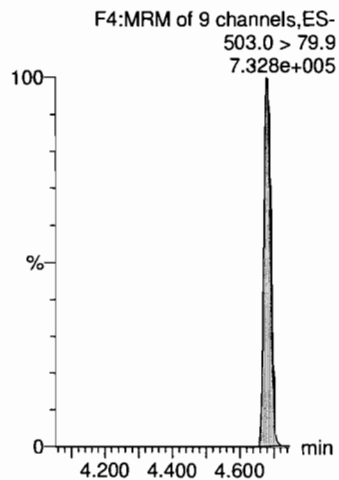
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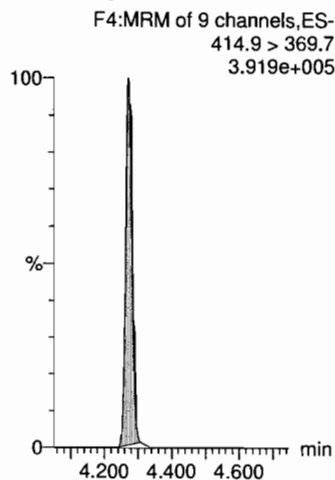
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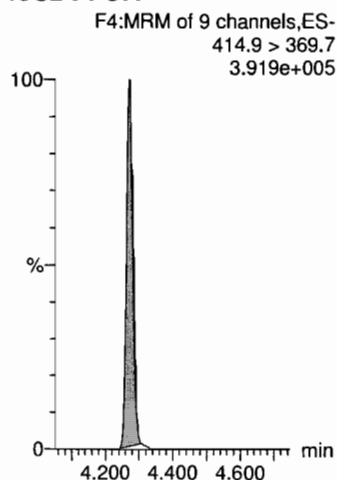
13C4-PFOS



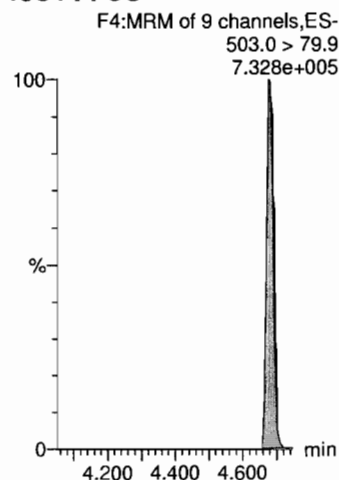
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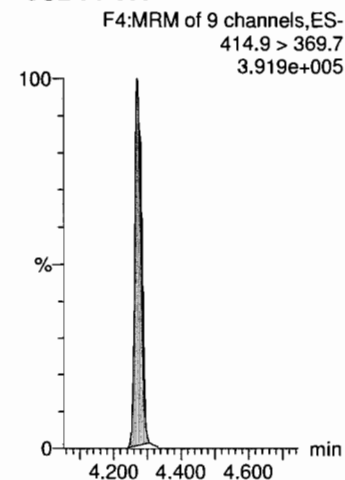
13C2-PFOA



13C4-PFOS



13C2-PFOA

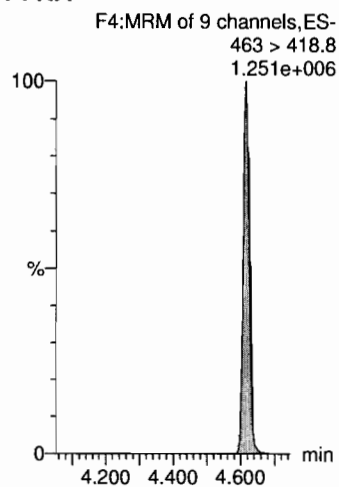


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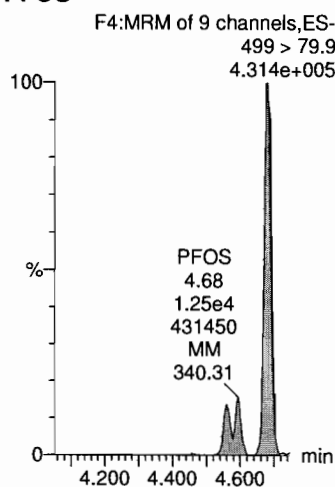
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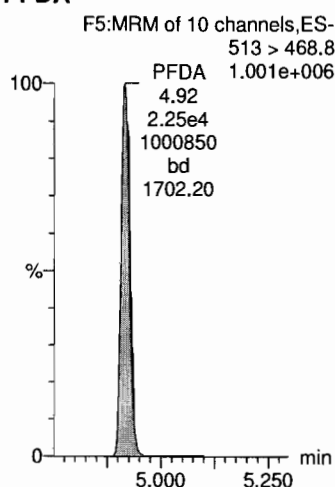
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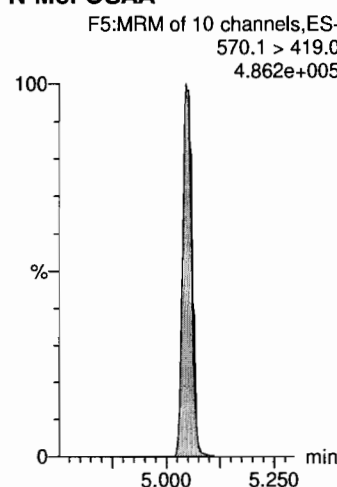
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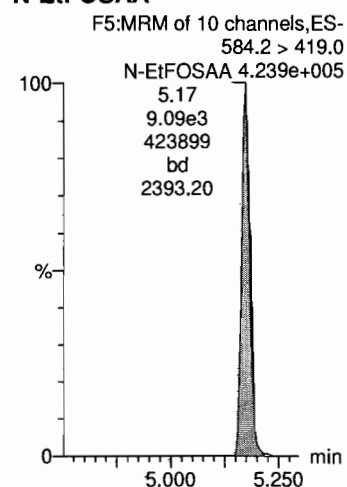
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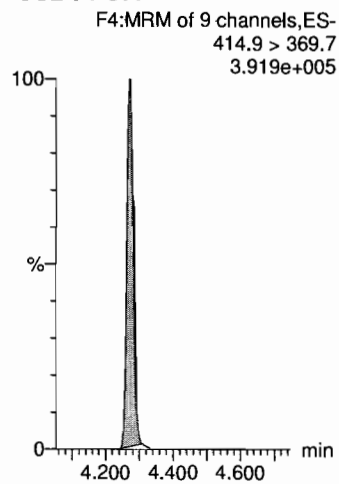
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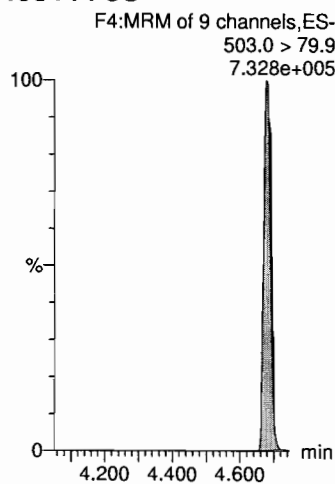
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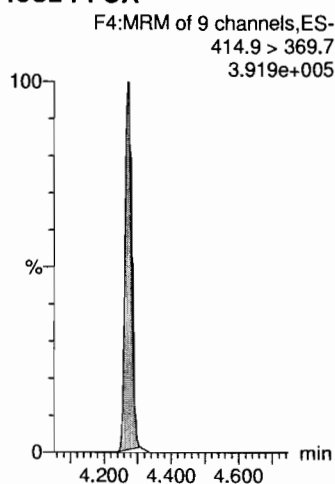
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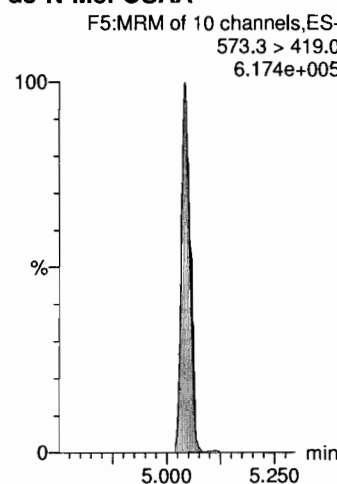
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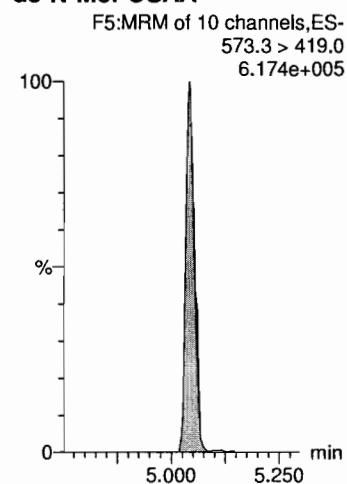
13C2-PFOA



d3-N-MeFOSAA



d3-N-MeFOSAA

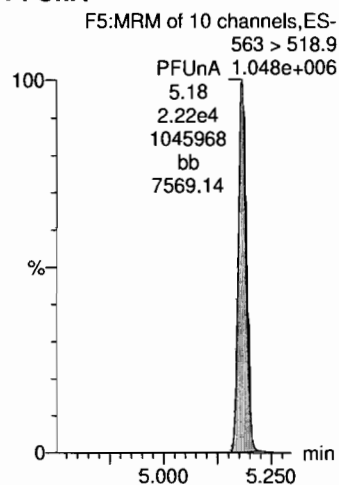


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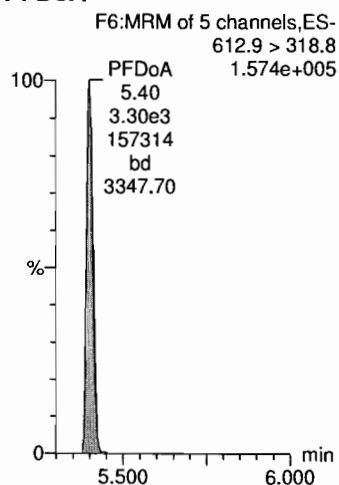
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Name: 180308G4_25, Date: 08-Mar-2018, Time: 22:48:25, ID: ST180308G4-10 PFC CS2 537 18B2305, Description: PFC CS2 537 18B2305

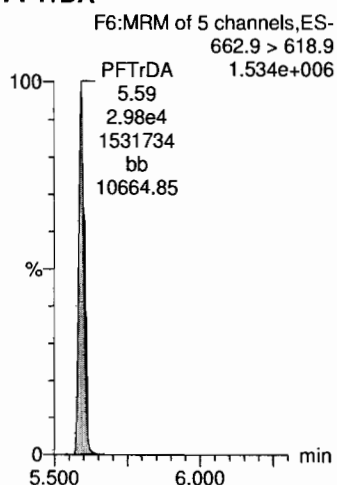
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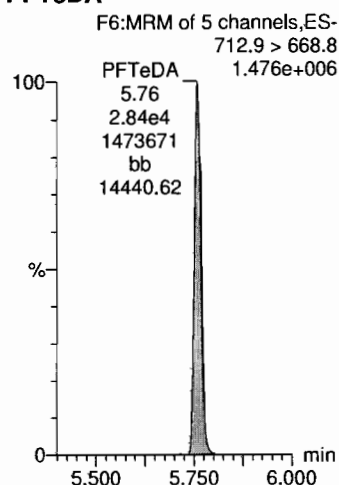
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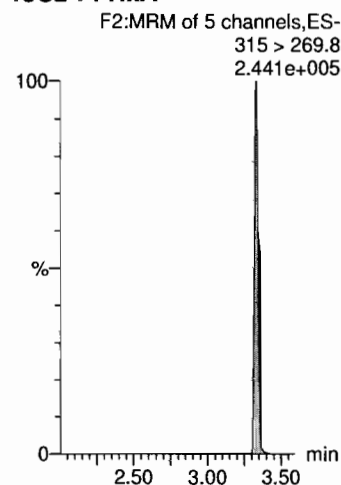
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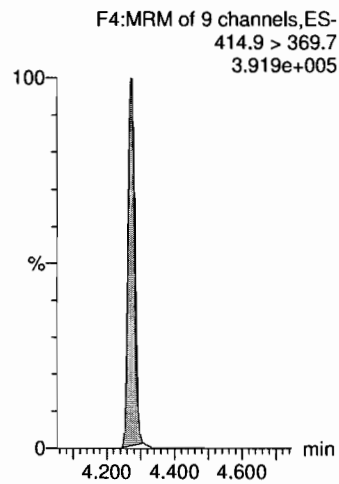
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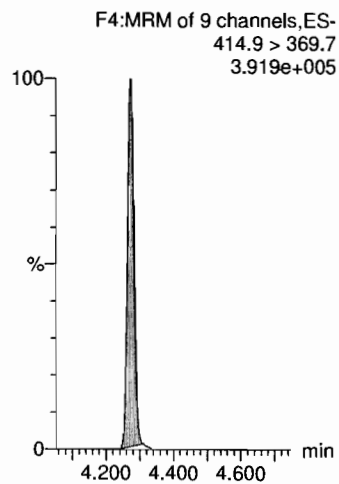
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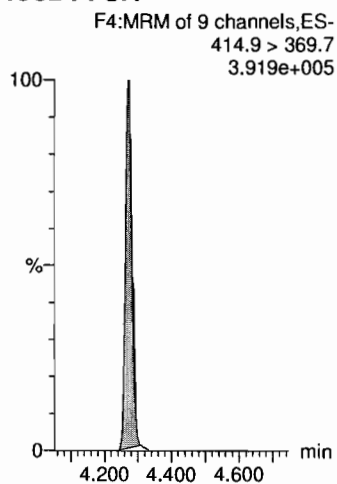
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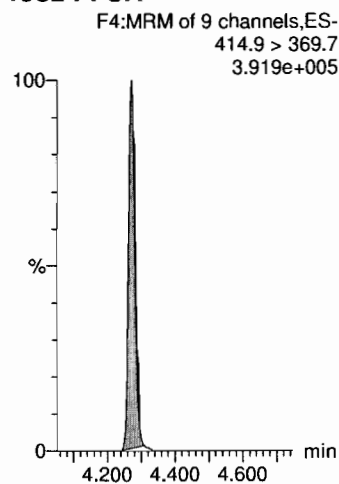
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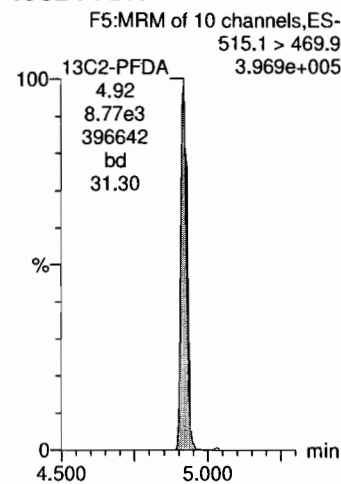
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13C2-PFOA



13C2-PFDA



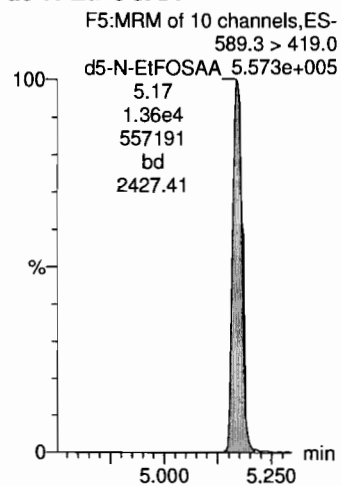
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d5-N-EtFOSAA



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-46.qld

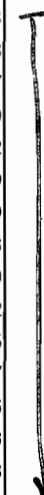
Last Altered: Friday, March 09, 2018 12:35:56 Pacific Standard Time
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Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 10:59:51

Name: 180308G4_46, Date: 09-Mar-2018, Time: 03:08:47, ID: ST180308G4-11 PFC CS4 537 18B2307, Description: PFC CS4 537 18B2307

	#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1	PFBS	299 > 79.7	2.38e4	1.53e4	1.0000		3.00	2.97	44.6	62.3	94.0
2	2	PFHxA	313.2 > 268.9	3.41e4	8.15e3	1.0000		3.33	3.33	41.9	68.9	91.8
3	3	PFHpA	363 > 318.9	5.69e4	8.15e3	1.0000		3.84	3.85	69.8	70.3	93.8
4	4	PFHxS	398.9 > 79.6	2.78e4	1.53e4	1.0000		3.97	3.98	52.1	69.6	101.7
5	5	PFOA	413 > 368.7	4.94e4	8.15e3	1.0000		4.27	4.27	60.6	69.8	93.0
6	6	PFNA	463 > 418.8	6.38e4	8.15e3	1.0000		4.61	4.62	78.2	65.4	87.2
7	7	PFOS	499 > 79.9	3.56e4	1.53e4	1.0000		4.68	4.68	66.6	69.2	99.9
8	8	PFDA	513 > 468.8	6.41e4	8.15e3	1.0000		4.84	4.92	78.6	66.6	88.9
9	9	N-MeFOSAA	570.1 > 419.0	3.39e4	1.27e4	1.0000		4.98	5.05	107	73.3	97.8
10	10	N-EiFOSAA	584.2 > 419.0	2.54e4	1.27e4	1.0000		5.16	5.17	79.7	81.7	108.9
11	11	PFUnA	563 > 518.9	6.08e4	8.15e3	1.0000		5.10	5.18	74.6	64.7	86.2
12	12	PFDoA	612.9 > 318.8	9.59e3	8.15e3	1.0000		5.26	5.40	11.8	70.1	93.5
13	13	PFTTrDA	662.9 > 618.9	8.18e4	8.15e3	1.0000		5.53	5.59	100	64.3	85.7
14	14	PFTeDA	712.9 > 668.8	7.75e4	8.15e3	1.0000		5.70	5.76	95.1	67.2	89.6
15	15	13C2-PFHxA	315 > 269.8	6.29e3	8.15e3	1.0000	0.810	3.43	3.33	7.72	9.53	95.3
16	16	13C2-PFDA	515.1 > 469.9	6.79e3	8.15e3	1.0000	1.057	4.87	4.92	8.33	7.88	78.8
17	17	d5-N-EiFOSAA	589.3 > 419.0	1.24e4	1.27e4	1.0000	0.971	5.04	5.17	39.1	40.2	100.5
18	18	13C2-PFOA	414.9 > 369.7	8.15e3	8.15e3	1.0000	1.000	4.41	4.27	10.0	10.0	100.0
19	19	13C4-PFOS	503.0 > 79.9	1.53e4	1.53e4	1.0000	1.000	4.81	4.68	28.7	28.7	100.0
20	20	d3-N-MeFOSAA	573.3 > 419.0	1.27e4	1.27e4	1.0000	1.000	5.16	5.04	40.0	40.0	100.0

70-130



Handwritten: 106F 3/10/18
MJT 3/9/18

Dataset: Untitled

Last Altered: Friday, March 09, 2018 13:33:54 Pacific Standard Time

Printed: Friday, March 09, 2018 13:34:53 Pacific Standard Time

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Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 10:59:51

Compound name: PFBS

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1	180308G4_1	IPA	08-Mar-18	17:51:14
2	180308G4_2	ST180308G4-1 PFC CS-3 537 18B2301	08-Mar-18	18:03:16
3	180308G4_3	ST180308G4-2 PFC CS-2 537 18B2302	08-Mar-18	18:15:37
4	180308G4_4	ST180308G4-3 PFC CS-1 537 18C0806	08-Mar-18	18:28:01
5	180308G4_5	ST180308G4-4 PFC CS0 537 18B2303	08-Mar-18	18:40:18
6	180308G4_6	ST180308G4-5 PFC CS1 537 18B2304	08-Mar-18	18:52:44
7	180308G4_7	ST180308G4-6 PFC CS2 537 18B2305	08-Mar-18	19:05:09
8	180308G4_8	ST180308G4-7 PFC CS3 537 18B2306	08-Mar-18	19:17:34
9	180308G4_9	ST180308G4-8 PFC CS4 537 18B2307	08-Mar-18	19:29:59
10	180308G4_10	ST180308G4-9 PFC CS5 537 18B2308	08-Mar-18	19:42:25
11	180308G4_11	IPA	08-Mar-18	19:54:45
12	180308G4_12	ICV180308G4-1 PFC ICV 537 18B2309	08-Mar-18	20:07:13
13	180308G4_13	IPA	08-Mar-18	20:19:35
14	180308G4_14	1800405-04 CH-AT-1FB181-0218 0.25861	08-Mar-18	20:32:02
15	180308G4_15	1800405-07 CH-AT-1RW183-0218 0.25302	08-Mar-18	20:44:24
16	180308G4_16	1800405-12 CH-AT-1FB185-0218 0.26028	08-Mar-18	20:56:50
17	180308G4_17	1800405-14 CH-AT-1FB186-0218 0.25507	08-Mar-18	21:09:14
18	180308G4_18	1800405-15 CH-AT-1RW187-0218 0.25751	08-Mar-18	21:21:40
19	180308G4_19	1800405-16 CH-AT-1FB187-0218 0.25502	08-Mar-18	21:34:06
20	180308G4_20	B8C0031-BLK1 LRB 0.25	08-Mar-18	21:46:30
21	180308G4_21	B8C0031-BS1 LFB 0.25	08-Mar-18	21:58:51
22	180308G4_22	B8C0031-MS1 LFSM 0.25052	08-Mar-18	22:11:07
23	180308G4_23	B8C0031-MSD1 LFSMD 0.25168	08-Mar-18	22:23:33
24	180308G4_24	IPA	08-Mar-18	22:36:00
25	180308G4_25	ST180308G4-10 PFC CS2 537 18B2305	08-Mar-18	22:48:25
26	180308G4_26	IPA	08-Mar-18	23:00:49
27	180308G4_27	1800407-01 CH-AT-1RW171-0218 0.2499	08-Mar-18	23:13:15
28	180308G4_28	1800407-02 CH-AT-1FB171-0218 0.2499	08-Mar-18	23:25:41
29	180308G4_29	1800407-03 CH-AT-1RW172-0218 0.25125	08-Mar-18	23:38:03
30	180308G4_30	1800407-04 CH-AT-1FB172-0218 0.25357	08-Mar-18	23:50:28
31	180308G4_31	1800407-05 CH-AT-1RW173-0218 0.26012	09-Mar-18	00:02:53
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Last Altered: Friday, March 09, 2018 13:33:54 Pacific Standard Time
Printed: Friday, March 09, 2018 13:34:53 Pacific Standard Time

Compound name: PFBS

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34	180308G4_34	1800407-08 CH-AT-1FB174-0218 0.25404	09-Mar-18	00:40:04
35	180308G4_35	1800407-09 CH-AT-1RW175-0218 0.25976	09-Mar-18	00:52:30
36	180308G4_36	1800407-10 CH-AT-1FB175-0218 0.2554	09-Mar-18	01:04:54
37	180308G4_37	1800407-11 CH-AT-1RW176-0218 0.25181	09-Mar-18	01:17:20
38	180308G4_38	1800407-12 CH-AT-1FB176-0218 0.24655	09-Mar-18	01:29:45
39	180308G4_39	1800407-13 CH-AT-1RW177-0218 0.25466	09-Mar-18	01:42:10
40	180308G4_40	1800407-14 CH-AT-1FB177-0218 0.25039	09-Mar-18	01:54:31
41	180308G4_41	1800407-15 CH-AT-1RW178-0218 0.24978	09-Mar-18	02:06:47
42	180308G4_42	1800407-16 CH-AT-1FB178-0218 0.2499	09-Mar-18	02:19:05
43	180308G4_43	1800407-17 CH-AT-1RW179-0218 0.25201	09-Mar-18	02:31:31
44	180308G4_44	1800407-18 CH-AT-1FB179-0218 0.24788	09-Mar-18	02:43:55
45	180308G4_45	IPA	09-Mar-18	02:56:21
46	180308G4_46	ST180308G4-11 PFC CS4 537 18B2307	09-Mar-18	03:08:47
47	180308G4_47	IPA	09-Mar-18	03:21:11

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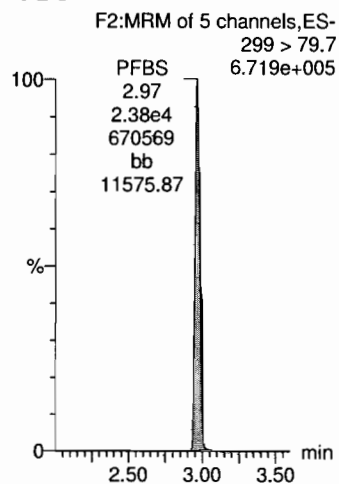
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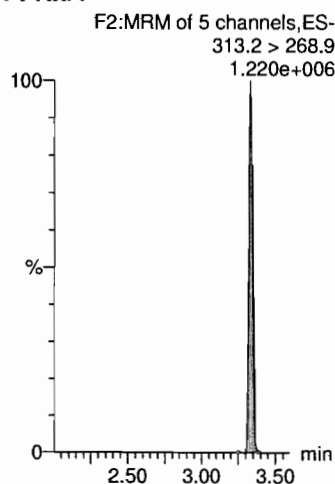
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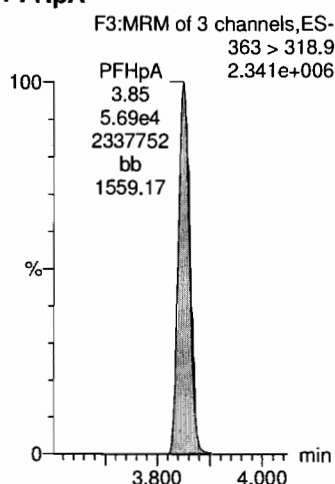
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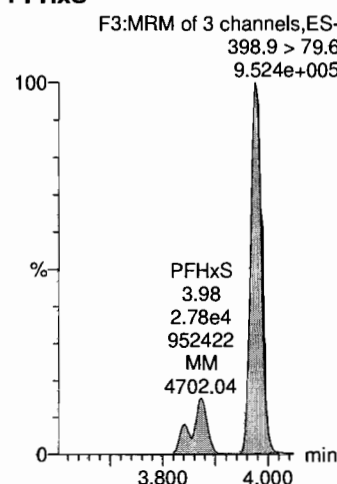
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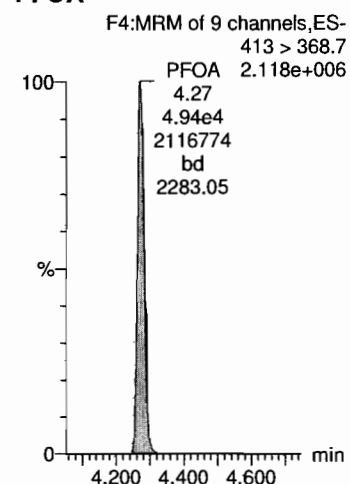
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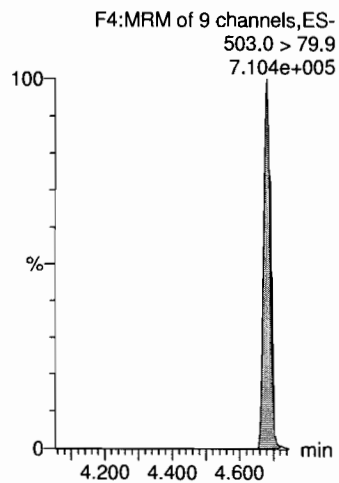
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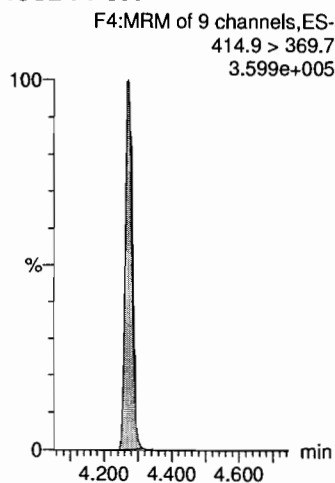
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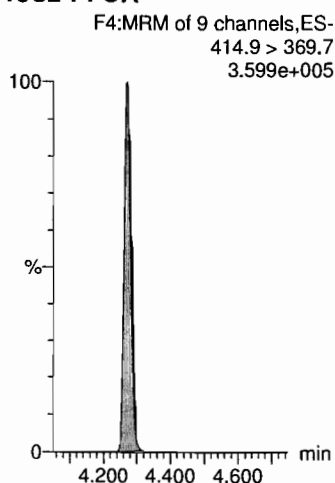
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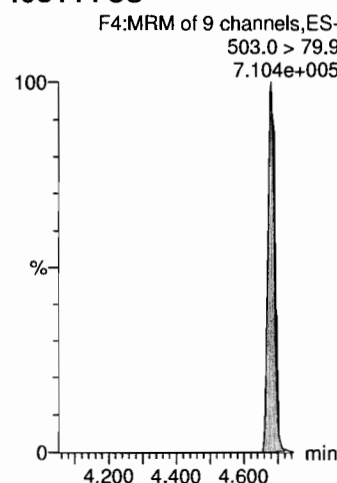
13C2-PFOA



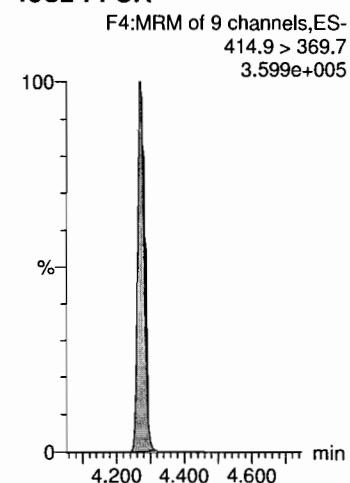
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13C4-PFOS



13C2-PFOA



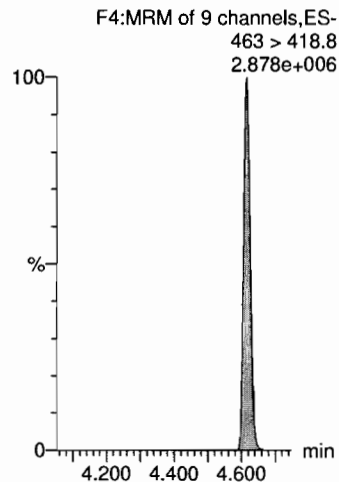
MJT 3/9/2018

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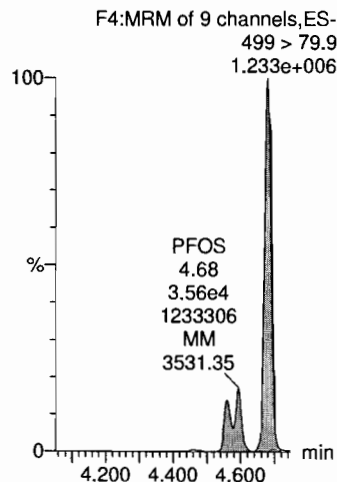
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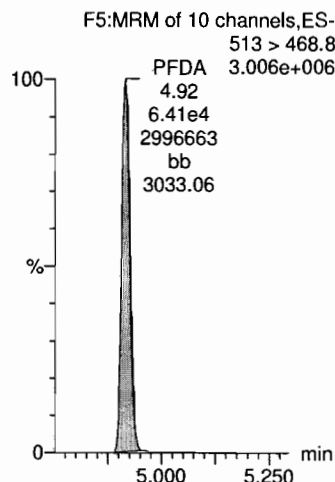
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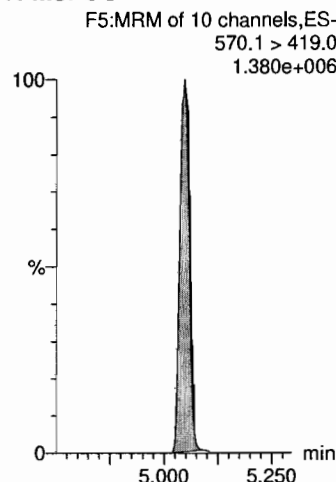
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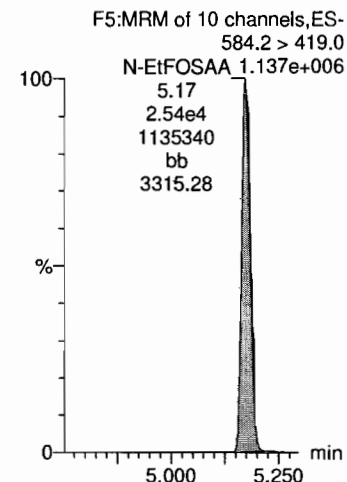
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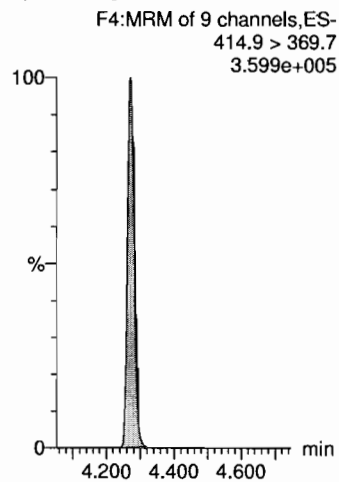
N-MeFOSAA



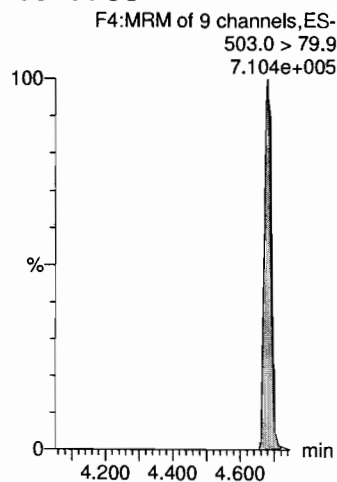
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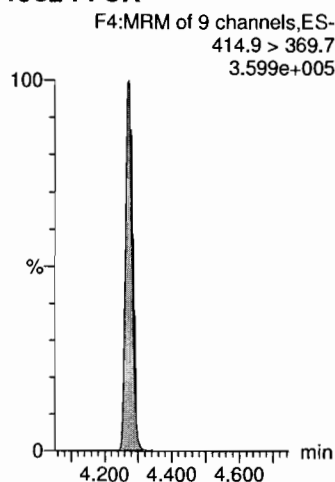
13C2-PFOA



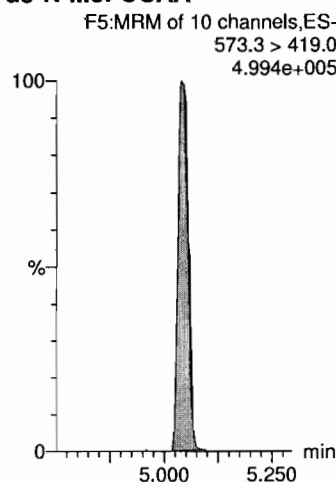
13C4-PFOS



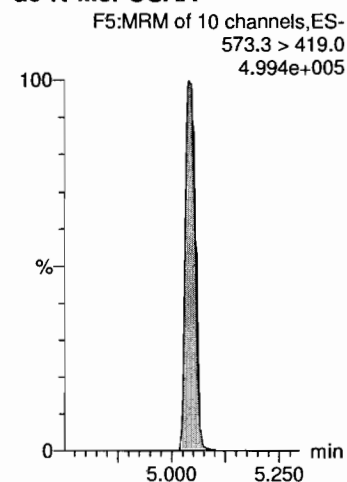
13C2-PFOA



d3-N-MeFOSAA



d3-N-MeFOSAA



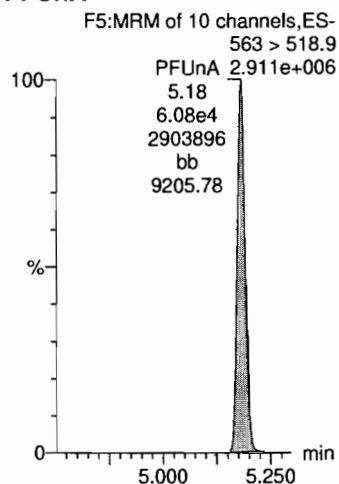
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Last Altered: Friday, March 09, 2018 12:35:56 Pacific Standard Time

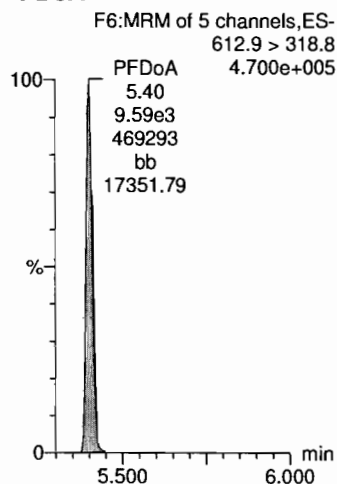
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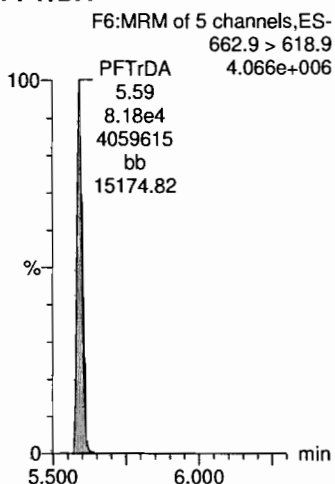
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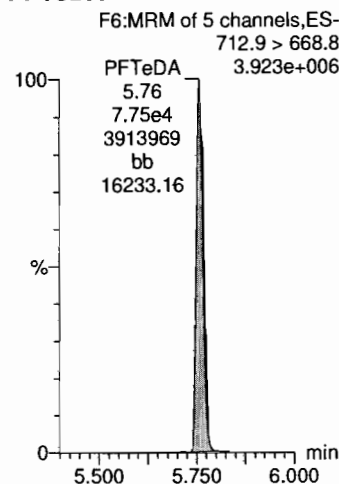
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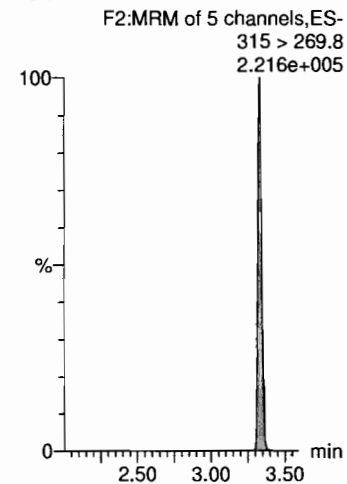
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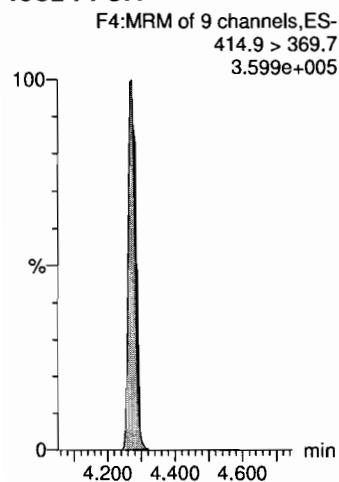
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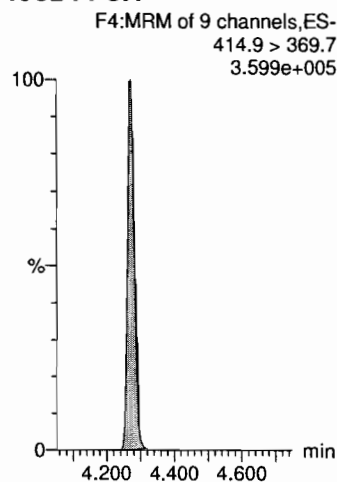
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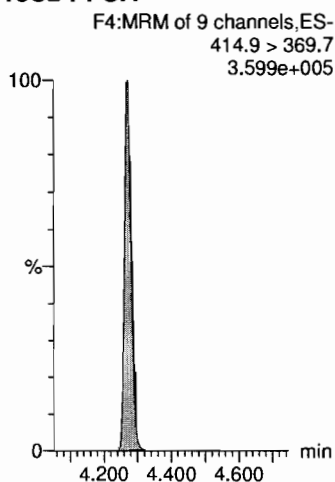
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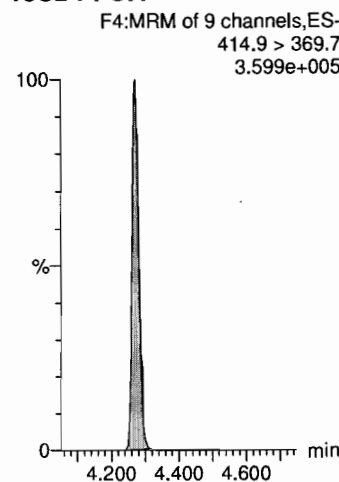
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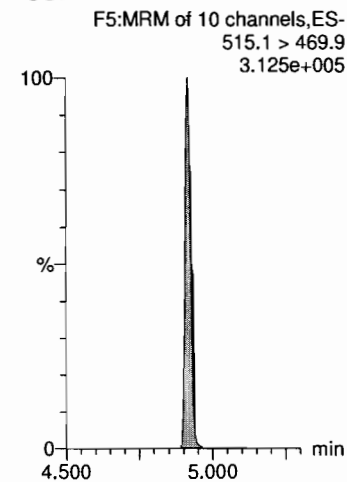
13C2-PFOA



13C2-PFOA



13C2-PFDA



MJT 3/9/2018

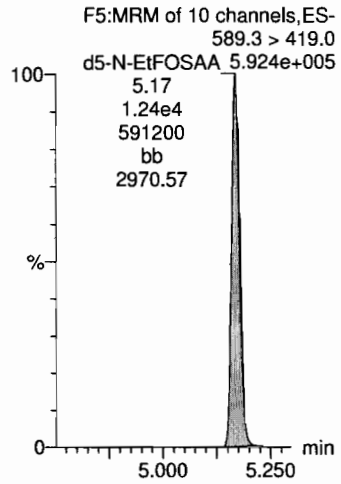
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Printed: Friday, March 09, 2018 12:36:24 Pacific Standard Time

Name: 180308G4_46, Date: 09-Mar-2018, Time: 03:08:47, ID: ST180308G4-11 PFC CS4 537 18B2307, Description: PFC CS4 537 18B2307

d5-N-EtFOSAA



INITIAL CALIBRATION (ICAL)
INCLUDING ASSOCIATED
INITIAL CALIBRATION VERIFICATION (ICV) AND INSTRUMENT BLANK (IB)

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

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Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 10:23:45
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 10:59:51

Compound name: PFBS

Coefficient of Determination: $R^2 = 0.998784$

Calibration curve: $0.715403 * x$

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

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MJT
3/9/18

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	0.443	2.96	233.146	19616.352	0.341	0.5	7.8	NO	0.999	NO	MMX
2	2 180308G4_3	Standard	0.885	2.96	443.104	18982.521	0.670	0.9	5.8	NO	0.999	NO	bb
3	3 180308G4_4	Standard	1.770	2.96	810.944	19149.248	1.215	1.7	-4.0	NO	0.999	NO	bb
4	4 180308G4_5	Standard	4.420	2.96	2075.500	16641.129	3.579	5.0	13.2	NO	0.999	NO	bb
5	5 180308G4_6	Standard	8.850	2.96	4044.766	17975.191	6.458	9.0	2.0	NO	0.999	NO	bd
6	6 180308G4_7	Standard	22.100	2.96	9195.080	17313.006	15.243	21.3	-3.6	NO	0.999	NO	bb
7	7 180308G4_8	Standard	44.200	2.96	19220.955	17057.236	32.341	45.2	2.3	NO	0.999	NO	bb
8	8 180308G4_9	Standard	66.300	2.97	26141.750	16048.904	46.749	65.3	-1.4	NO	0.999	NO	bb
9	9 180308G4_10	Standard	88.400	2.97	33471.086	15601.426	61.573	86.1	-2.6	NO	0.999	NO	bbX

Compound name: PFHxA

Coefficient of Determination: $R^2 = 0.996340$

Calibration curve: $0.608155 * x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	0.500	3.33	370.206	8706.558	0.425	0.7	39.8	NO	0.996	NO	bb
2	2 180308G4_3	Standard	1.000	3.33	656.521	8964.667	0.732	1.2	20.4	NO	0.996	NO	bb
3	3 180308G4_4	Standard	2.000	3.33	1159.051	8566.731	1.353	2.2	11.2	NO	0.996	NO	MM
4	4 180308G4_5	Standard	5.000	3.33	2437.024	7655.677	3.183	5.2	4.7	NO	0.996	NO	bb
5	5 180308G4_6	Standard	10.000	3.33	5374.554	8042.525	6.683	11.0	9.9	NO	0.996	NO	bb
6	6 180308G4_7	Standard	25.000	3.33	12329.196	7999.164	15.413	25.3	1.4	NO	0.996	NO	bb
7	7 180308G4_8	Standard	50.000	3.33	24145.951	7444.763	32.433	53.3	6.7	NO	0.996	NO	bb
8	8 180308G4_9	Standard	75.000	3.33	34506.688	7483.192	46.112	75.8	1.1	NO	0.996	NO	bb
9	9 180308G4_10	Standard	100.000	3.33	43612.594	7657.481	56.954	93.7	-6.3	NO	0.996	NO	bb

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

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Compound name: PFHpA

Coefficient of Determination: $R^2 = 0.996626$

Calibration curve: $0.992283 * x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	0.500	3.84	487.889	8706.558	0.560	0.6	12.9	NO	0.997	NO	bb
2	2 180308G4_3	Standard	1.000	3.84	1011.256	8964.667	1.128	1.1	13.7	NO	0.997	NO	bb
3	3 180308G4_4	Standard	2.000	3.84	1683.133	8566.731	1.965	2.0	-1.0	NO	0.997	NO	bb
4	4 180308G4_5	Standard	5.000	3.84	4254.413	7655.677	5.557	5.6	12.0	NO	0.997	NO	bb
5	5 180308G4_6	Standard	10.000	3.85	8506.402	8042.525	10.577	10.7	6.6	NO	0.997	NO	bb
6	6 180308G4_7	Standard	25.000	3.85	19392.865	7999.164	24.244	24.4	-2.3	NO	0.997	NO	bb
7	7 180308G4_8	Standard	50.000	3.85	39871.070	7444.763	53.556	54.0	7.9	NO	0.997	NO	MM
8	8 180308G4_9	Standard	75.000	3.85	56457.168	7483.192	75.445	76.0	1.4	NO	0.997	NO	MM
9	9 180308G4_10	Standard	100.000	3.85	71517.875	7657.481	93.396	94.1	-5.9	NO	0.997	NO	MM

Compound name: PFHxS

Coefficient of Determination: $R^2 = 0.998175$

Calibration curve: $0.749713 * x$

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	0.455	3.97	241.170	19616.352	0.353	0.5	3.4	NO	0.998	NO	MMX
2	2 180308G4_3	Standard	0.910	3.97	521.291	18982.521	0.788	1.1	15.5	NO	0.998	NO	MM
3	3 180308G4_4	Standard	1.820	3.97	786.423	19149.248	1.179	1.6	-13.6	NO	0.998	NO	MM
4	4 180308G4_5	Standard	4.560	3.97	2196.549	16641.129	3.788	5.1	10.8	NO	0.998	NO	MM
5	5 180308G4_6	Standard	9.120	3.97	4343.800	17975.191	6.936	9.3	1.4	NO	0.998	NO	MM
6	6 180308G4_7	Standard	22.800	3.97	10178.254	17313.006	16.873	22.5	-1.3	NO	0.998	NO	MM
7	7 180308G4_8	Standard	45.600	3.98	19470.936	17057.236	32.761	43.7	-4.2	NO	0.998	NO	MM
8	8 180308G4_9	Standard	68.400	3.98	29379.602	16048.904	52.539	70.1	2.5	NO	0.998	NO	MM
9	9 180308G4_10	Standard	91.200	3.97	36928.949	15601.426	67.934	90.6	-0.6	NO	0.998	NO	MMX

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

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Compound name: PFOA

Coefficient of Determination: $R^2 = 0.997445$

Calibration curve: $-0.000558495 * x^2 + 0.907111 * x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	0.500	4.27	489.083	8706.558	0.562	0.6	23.9	NO	0.997	NO	MM
2	2 180308G4_3	Standard	1.000	4.27	1022.173	8964.667	1.140	1.3	25.8	NO	0.997	NO	MM
3	3 180308G4_4	Standard	2.000	4.27	1493.500	8566.731	1.743	1.9	-3.8	NO	0.997	NO	bb
4	4 180308G4_5	Standard	5.000	4.27	3558.100	7655.677	4.648	5.1	2.8	NO	0.997	NO	bd
5	5 180308G4_6	Standard	10.000	4.27	7526.207	8042.525	9.358	10.4	3.8	NO	0.997	NO	bd
6	6 180308G4_7	Standard	25.000	4.27	16284.916	7999.164	20.358	22.8	-9.0	NO	0.997	NO	MM
7	7 180308G4_8	Standard	50.000	4.27	32540.285	7444.763	43.709	49.7	-0.6	NO	0.997	NO	MM
8	8 180308G4_9	Standard	75.000	4.27	51262.320	7483.192	68.503	79.4	5.9	NO	0.997	NO	MM
9	9 180308G4_10	Standard	100.000	4.27	63551.883	7657.481	82.993	97.3	-2.7	NO	0.997	NO	MM

Compound name: PFNA

Coefficient of Determination: $R^2 = 0.997854$

Calibration curve: $1.1965 * x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	0.500	4.61	555.482	8706.558	0.638	0.5	6.6	NO	0.998	NO	bb
2	2 180308G4_3	Standard	1.000	4.61	1260.879	8964.667	1.406	1.2	17.6	NO	0.998	NO	bb
3	3 180308G4_4	Standard	2.000	4.61	1880.580	8566.731	2.195	1.8	-8.3	NO	0.998	NO	bb
4	4 180308G4_5	Standard	5.000	4.61	5005.364	7655.677	6.538	5.5	9.3	NO	0.998	NO	bd
5	5 180308G4_6	Standard	10.000	4.61	10260.036	8042.525	12.757	10.7	6.6	NO	0.998	NO	bd
6	6 180308G4_7	Standard	25.000	4.61	22951.439	7999.164	28.692	24.0	-4.1	NO	0.998	NO	bd
7	7 180308G4_8	Standard	50.000	4.61	45817.930	7444.763	61.544	51.4	2.9	NO	0.998	NO	bb
8	8 180308G4_9	Standard	75.000	4.62	69746.133	7483.192	93.204	77.9	3.9	NO	0.998	NO	bb
9	9 180308G4_10	Standard	100.000	4.61	87512.836	7657.481	114.284	95.5	-4.5	NO	0.998	NO	bb

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

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Compound name: PFOS

Coefficient of Determination: $R^2 = 0.998192$

Calibration curve: $0.96246 * x$

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	0.464	4.69	221.300	19616.352	0.324	0.3	-27.5	NO	0.998	NO	MMX
2	2 180308G4_3	Standard	0.925	4.68	631.065	18982.521	0.954	1.0	7.2	NO	0.998	NO	MM
3	3 180308G4_4	Standard	1.850	4.68	1027.660	19149.248	1.540	1.6	-13.5	NO	0.998	NO	MM
4	4 180308G4_5	Standard	4.625	4.68	2490.004	16641.129	4.294	4.5	-3.5	NO	0.998	NO	MM
5	5 180308G4_6	Standard	9.250	4.68	5644.277	17975.191	9.012	9.4	1.2	NO	0.998	NO	MM
6	6 180308G4_7	Standard	23.100	4.68	13051.208	17313.006	21.635	22.5	-2.7	NO	0.998	NO	MM
7	7 180308G4_8	Standard	46.200	4.68	25380.271	17057.236	42.704	44.4	-4.0	NO	0.998	NO	MM
8	8 180308G4_9	Standard	69.300	4.68	38742.164	16048.904	69.282	72.0	3.9	NO	0.998	NO	MM
9	9 180308G4_10	Standard	92.400	4.68	47718.473	15601.426	87.782	91.2	-1.3	NO	0.998	NO	MMX

Compound name: PFDA

Coefficient of Determination: $R^2 = 0.999017$

Calibration curve: $-0.00224398 * x^2 + 1.32908 * x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	0.500	4.91	737.364	8706.558	0.847	0.6	27.6	NO	0.999	NO	bb
2	2 180308G4_3	Standard	1.000	4.91	1122.032	8964.667	1.252	0.9	-5.7	NO	0.999	NO	bb
3	3 180308G4_4	Standard	2.000	4.91	2046.182	8566.731	2.389	1.8	-9.9	NO	0.999	NO	bb
4	4 180308G4_5	Standard	5.000	4.92	5569.144	7655.677	7.275	5.5	10.5	NO	0.999	NO	bb
5	5 180308G4_6	Standard	10.000	4.91	10322.051	8042.525	12.834	9.8	-1.8	NO	0.999	NO	bd
6	6 180308G4_7	Standard	25.000	4.91	24389.537	7999.164	30.490	23.9	-4.4	NO	0.999	NO	bd
7	7 180308G4_8	Standard	50.000	4.91	45782.453	7444.763	61.496	50.6	1.2	NO	0.999	NO	bb
8	8 180308G4_9	Standard	75.000	4.92	66286.297	7483.192	88.580	76.5	2.1	NO	0.999	NO	bd
9	9 180308G4_10	Standard	100.000	4.91	83717.883	7657.481	109.328	98.7	-1.3	NO	0.999	NO	bd

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

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Compound name: N-MeFOSAA

Coefficient of Determination: $R^2 = 0.997720$

Calibration curve: $0.0036104 * x^2 + 1.18837 * x$

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	0.500	5.04	217.401	15563.257	0.559	0.5	-6.1	NO	0.998	NO	bb
2	2 180308G4_3	Standard	1.000	5.04	501.114	17151.576	1.169	1.0	-1.9	NO	0.998	NO	bb
3	3 180308G4_4	Standard	2.000	5.04	759.052	16199.471	1.874	1.6	-21.5	NO	0.998	NO	bb
4	4 180308G4_5	Standard	5.000	5.05	2576.918	14850.035	6.941	5.7	14.8	NO	0.998	NO	bd
5	5 180308G4_6	Standard	10.000	5.04	4994.262	16138.044	12.379	10.1	1.1	NO	0.998	NO	bd
6	6 180308G4_7	Standard	25.000	5.04	12167.358	15586.661	31.225	24.5	-2.2	NO	0.998	NO	bd
7	7 180308G4_8	Standard	50.000	5.05	25835.361	15038.320	68.719	50.2	0.4	NO	0.998	NO	bd
8	8 180308G4_9	Standard	75.000	5.05	35536.563	13030.376	109.088	74.8	-0.3	NO	0.998	NO	bdX
9	9 180308G4_10	Standard	100.000	5.05	45696.266	13115.080	139.370	91.7	-8.3	NO	0.998	NO	bbX

Compound name: N-EtFOSAA

Coefficient of Determination: $R^2 = 0.998054$

Calibration curve: $0.975871 * x$

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	0.500	5.17	156.542	15563.257	0.402	0.4	-17.5	NO	0.998	NO	bb
2	2 180308G4_3	Standard	1.000	5.17	413.592	17151.576	0.965	1.0	-1.2	NO	0.998	NO	bb
3	3 180308G4_4	Standard	2.000	5.17	701.598	16199.471	1.732	1.8	-11.2	NO	0.998	NO	bb
4	4 180308G4_5	Standard	5.000	5.17	1593.805	14850.035	4.293	4.4	-12.0	NO	0.998	NO	bd
5	5 180308G4_6	Standard	10.000	5.17	4188.622	16138.044	10.382	10.6	6.4	NO	0.998	NO	bb
6	6 180308G4_7	Standard	25.000	5.17	9653.593	15586.661	24.774	25.4	1.5	NO	0.998	NO	bb
7	7 180308G4_8	Standard	50.000	5.17	18307.518	15038.320	48.696	49.9	-0.2	NO	0.998	NO	bb
8	8 180308G4_9	Standard	75.000	5.17	26149.557	13030.376	80.273	82.3	9.7	NO	0.998	NO	bbX
9	9 180308G4_10	Standard	100.000	5.17	33400.066	13115.080	101.868	104.4	4.4	NO	0.998	NO	bdX

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

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Compound name: PFUnA

Coefficient of Determination: $R^2 = 0.995450$

Calibration curve: $1.15303 * x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	0.500	5.18	626.494	8706.558	0.720	0.6	24.8	NO	0.995	NO	MM
2	2 180308G4_3	Standard	1.000	5.18	1075.974	8964.667	1.200	1.0	4.1	NO	0.995	NO	bb
3	3 180308G4_4	Standard	2.000	5.18	2039.292	8566.731	2.380	2.1	3.2	NO	0.995	NO	bd
4	4 180308G4_5	Standard	5.000	5.18	4734.490	7655.677	6.184	5.4	7.3	NO	0.995	NO	bb
5	5 180308G4_6	Standard	10.000	5.18	9850.028	8042.525	12.247	10.6	6.2	NO	0.995	NO	MM
6	6 180308G4_7	Standard	25.000	5.18	23654.301	7999.164	29.571	25.6	2.6	NO	0.995	NO	bd
7	7 180308G4_8	Standard	50.000	5.18	46537.535	7444.763	62.510	54.2	8.4	NO	0.995	NO	MM
8	8 180308G4_9	Standard	75.000	5.18	66206.539	7483.192	88.474	76.7	2.3	NO	0.995	NO	MM
9	9 180308G4_10	Standard	100.000	5.18	81400.578	7657.481	106.302	92.2	-7.8	NO	0.995	NO	bd

Compound name: PFDoA

Coefficient of Determination: $R^2 = 0.997346$

Calibration curve: $0.167843 * x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	0.500	5.40	66.926	8706.558	0.077	0.5	-8.4	NO	0.997	NO	MM
2	2 180308G4_3	Standard	1.000	5.40	134.402	8964.667	0.150	0.9	-10.7	NO	0.997	NO	MM
3	3 180308G4_4	Standard	2.000	5.40	275.917	8566.731	0.322	1.9	-4.1	NO	0.997	NO	MM
4	4 180308G4_5	Standard	5.000	5.40	683.274	7655.677	0.893	5.3	6.4	NO	0.997	NO	MM
5	5 180308G4_6	Standard	10.000	5.40	1406.645	8042.525	1.749	10.4	4.2	NO	0.997	NO	MM
6	6 180308G4_7	Standard	25.000	5.40	3266.763	7999.164	4.084	24.3	-2.7	NO	0.997	NO	MM
7	7 180308G4_8	Standard	50.000	5.40	6656.438	7444.763	8.941	53.3	6.5	NO	0.997	NO	MM
8	8 180308G4_9	Standard	75.000	5.40	9715.607	7483.192	12.983	77.4	3.1	NO	0.997	NO	MM
9	9 180308G4_10	Standard	100.000	5.40	12150.216	7657.481	15.867	94.5	-5.5	NO	0.997	NO	MM

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

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Compound name: PFTrDA

Coefficient of Determination: $R^2 = 0.999002$

Calibration curve: $1.56071 * x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	0.500	5.59	772.936	8706.558	0.888	0.6	13.8	NO	0.999	NO	bb
2	2 180308G4_3	Standard	1.000	5.59	1453.959	8964.667	1.622	1.0	3.9	NO	0.999	NO	bb
3	3 180308G4_4	Standard	2.000	5.59	2543.679	8566.731	2.969	1.9	-4.9	NO	0.999	NO	bb
4	4 180308G4_5	Standard	5.000	5.59	6647.866	7655.677	8.684	5.6	11.3	NO	0.999	NO	bb
5	5 180308G4_6	Standard	10.000	5.59	13470.743	8042.525	16.749	10.7	7.3	NO	0.999	NO	bd
6	6 180308G4_7	Standard	25.000	5.59	31677.010	7999.164	39.600	25.4	1.5	NO	0.999	NO	bb
7	7 180308G4_8	Standard	50.000	5.59	57701.797	7444.763	77.507	49.7	-0.7	NO	0.999	NO	bd
8	8 180308G4_9	Standard	75.000	5.59	89276.469	7483.192	119.303	76.4	1.9	NO	0.999	NO	MM
9	9 180308G4_10	Standard	100.000	5.59	116187.070	7657.481	151.730	97.2	-2.8	NO	0.999	NO	bd

Compound name: PFTeDA

Coefficient of Determination: $R^2 = 0.995873$

Calibration curve: $1.41495 * x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	0.500	5.76	858.224	8706.558	0.986	0.7	39.3	NO	0.996	NO	MM
2	2 180308G4_3	Standard	1.000	5.76	1369.222	8964.667	1.527	1.1	7.9	NO	0.996	NO	bb
3	3 180308G4_4	Standard	2.000	5.76	2539.990	8566.731	2.965	2.1	4.8	NO	0.996	NO	MM
4	4 180308G4_5	Standard	5.000	5.76	6328.903	7655.677	8.267	5.8	16.9	NO	0.996	NO	bd
5	5 180308G4_6	Standard	10.000	5.76	12423.143	8042.525	15.447	10.9	9.2	NO	0.996	NO	MM
6	6 180308G4_7	Standard	25.000	5.76	27943.932	7999.164	34.934	24.7	-1.2	NO	0.996	NO	MM
7	7 180308G4_8	Standard	50.000	5.76	56237.180	7444.763	75.539	53.4	6.8	NO	0.996	NO	bb
8	8 180308G4_9	Standard	75.000	5.76	80897.297	7483.192	108.105	76.4	1.9	NO	0.996	NO	MM
9	9 180308G4_10	Standard	100.000	5.76	101190.055	7657.481	132.145	93.4	-6.6	NO	0.996	NO	MM

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

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Compound name: 13C2-PFHxA

Response Factor: 0.809778

RRF SD: 0.043821, Relative SD: 5.41149

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	10.000	3.33	6671.333	8706.558	7.662	9.5	-5.4	NO		NO	bb
2	2 180308G4_3	Standard	10.000	3.33	7361.791	8964.667	8.212	10.1	1.4	NO		NO	bb
3	3 180308G4_4	Standard	10.000	3.33	7007.002	8566.731	8.179	10.1	1.0	NO		NO	bb
4	4 180308G4_5	Standard	10.000	3.33	6298.206	7655.677	8.227	10.2	1.6	NO		NO	bb
5	5 180308G4_6	Standard	10.000	3.33	6538.247	8042.525	8.130	10.0	0.4	NO		NO	bb
6	6 180308G4_7	Standard	10.000	3.33	6552.955	7999.164	8.192	10.1	1.2	NO		NO	bb
7	7 180308G4_8	Standard	10.000	3.33	6669.258	7444.763	8.958	11.1	10.6	NO		NO	bb
8	8 180308G4_9	Standard	10.000	3.33	5953.959	7483.192	7.956	9.8	-1.7	NO		NO	bb
9	9 180308G4_10	Standard	10.000	3.33	5638.188	7657.481	7.363	9.1	-9.1	NO		NO	bb

Compound name: 13C2-PFDA

Response Factor: 1.05702

RRF SD: 0.0601094, Relative SD: 5.68668

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	10.000	4.91	9612.754	8706.558	11.041	10.4	4.5	NO		NO	bb
2	2 180308G4_3	Standard	10.000	4.91	8875.748	8964.667	9.901	9.4	-6.3	NO		NO	bb
3	3 180308G4_4	Standard	10.000	4.91	9492.073	8566.731	11.080	10.5	4.8	NO		NO	bb
4	4 180308G4_5	Standard	10.000	4.92	8632.013	7655.677	11.275	10.7	6.7	NO		NO	bb
5	5 180308G4_6	Standard	10.000	4.91	8786.122	8042.525	10.925	10.3	3.4	NO		NO	bb
6	6 180308G4_7	Standard	10.000	4.91	8721.356	7999.164	10.903	10.3	3.1	NO		NO	bb
7	7 180308G4_8	Standard	10.000	4.92	7756.745	7444.763	10.419	9.9	-1.4	NO		NO	bb
8	8 180308G4_9	Standard	10.000	4.92	7337.072	7483.192	9.805	9.3	-7.2	NO		NO	bd
9	9 180308G4_10	Standard	10.000	4.92	7491.791	7657.481	9.784	9.3	-7.4	NO		NO	bd

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

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Compound name: d5-N-EtFOSAA

Response Factor: 0.97146

RRF SD: 0.0651747, Relative SD: 6.70895

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	40.000	5.17	17046.438	15563.257	43.812	45.1	12.7	NO		NO	bd
2	2 180308G4_3	Standard	40.000	5.16	15747.995	17151.576	36.727	37.8	-5.5	NO		NO	bb
3	3 180308G4_4	Standard	40.000	5.17	15647.116	16199.471	38.636	39.8	-0.6	NO		NO	bb
4	4 180308G4_5	Standard	40.000	5.17	13333.662	14850.035	35.916	37.0	-7.6	NO		NO	bd
5	5 180308G4_6	Standard	40.000	5.17	16070.356	16138.044	39.832	41.0	2.5	NO		NO	bd
6	6 180308G4_7	Standard	40.000	5.17	15392.552	15586.661	39.502	40.7	1.7	NO		NO	bd
7	7 180308G4_8	Standard	40.000	5.17	14130.126	15038.320	37.584	38.7	-3.3	NO		NO	bd
8	8 180308G4_9	Standard	40.000	5.17	14467.088	13030.376	44.410	45.7	14.3	NO		NO	bbX
9	9 180308G4_10	Standard	40.000	5.17	13272.534	13115.080	40.480	41.7	4.2	NO		NO	bdX

Compound name: 13C2-PFOA

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	10.000	4.27	8706.558	8706.558	10.000	10.0	0.0	NO		NO	bb
2	2 180308G4_3	Standard	10.000	4.26	8964.667	8964.667	10.000	10.0	0.0	NO		NO	bb
3	3 180308G4_4	Standard	10.000	4.26	8566.731	8566.731	10.000	10.0	0.0	NO		NO	bd
4	4 180308G4_5	Standard	10.000	4.27	7655.677	7655.677	10.000	10.0	0.0	NO		NO	bd
5	5 180308G4_6	Standard	10.000	4.27	8042.525	8042.525	10.000	10.0	0.0	NO		NO	bd
6	6 180308G4_7	Standard	10.000	4.27	7999.164	7999.164	10.000	10.0	0.0	NO		NO	bb
7	7 180308G4_8	Standard	10.000	4.27	7444.763	7444.763	10.000	10.0	0.0	NO		NO	bd
8	8 180308G4_9	Standard	10.000	4.27	7483.192	7483.192	10.000	10.0	0.0	NO		NO	bb
9	9 180308G4_10	Standard	10.000	4.27	7657.481	7657.481	10.000	10.0	0.0	NO		NO	bd

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

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Compound name: 13C4-PFOS

Response Factor: 1

RRF SD: 1.11022e-016, Relative SD: 1.11022e-014

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	28.700	4.68	19616.352	19616.352	28.700	28.7	0.0	NO		NO	bbX
2	2 180308G4_3	Standard	28.700	4.68	18982.521	18982.521	28.700	28.7	0.0	NO		NO	bb
3	3 180308G4_4	Standard	28.700	4.68	19149.248	19149.248	28.700	28.7	0.0	NO		NO	bb
4	4 180308G4_5	Standard	28.700	4.68	16641.129	16641.129	28.700	28.7	0.0	NO		NO	bd
5	5 180308G4_6	Standard	28.700	4.68	17975.191	17975.191	28.700	28.7	0.0	NO		NO	bd
6	6 180308G4_7	Standard	28.700	4.68	17313.006	17313.006	28.700	28.7	0.0	NO		NO	bb
7	7 180308G4_8	Standard	28.700	4.68	17057.236	17057.236	28.700	28.7	0.0	NO		NO	bb
8	8 180308G4_9	Standard	28.700	4.68	16048.904	16048.904	28.700	28.7	0.0	NO		NO	bd
9	9 180308G4_10	Standard	28.700	4.68	15601.426	15601.426	28.700	28.7	0.0	NO		NO	bbX

Compound name: d3-N-MeFOSAA

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180308G4_2	Standard	40.000	5.04	15563.257	15563.257	40.000	40.0	0.0	NO		NO	bb
2	2 180308G4_3	Standard	40.000	5.04	17151.576	17151.576	40.000	40.0	0.0	NO		NO	bd
3	3 180308G4_4	Standard	40.000	5.04	16199.471	16199.471	40.000	40.0	0.0	NO		NO	bb
4	4 180308G4_5	Standard	40.000	5.04	14850.035	14850.035	40.000	40.0	0.0	NO		NO	bb
5	5 180308G4_6	Standard	40.000	5.04	16138.044	16138.044	40.000	40.0	0.0	NO		NO	bd
6	6 180308G4_7	Standard	40.000	5.04	15586.661	15586.661	40.000	40.0	0.0	NO		NO	bd
7	7 180308G4_8	Standard	40.000	5.04	15038.320	15038.320	40.000	40.0	0.0	NO		NO	bb
8	8 180308G4_9	Standard	40.000	5.04	13030.376	13030.376	40.000	40.0	0.0	NO		NO	bdX
9	9 180308G4_10	Standard	40.000	5.04	13115.080	13115.080	40.000	40.0	0.0	NO		NO	bbX

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

Last Altered: Friday, March 09, 2018 10:59:51 Pacific Standard Time

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Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 10:23:45

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 10:59:51

Name: 180308G4_2, Date: 08-Mar-2018, Time: 18:03:16, ID: ST180308G4-1 PFC CS-3 537 18B2301, Description: PFC CS-3 537 18B2301

	# Name	IS#	CoD	CoD Flag	%RSD
1	1 PFBS	19	0.9988	NO	
2	2 PFHxA	18	0.9963	NO	
3	3 PFHpA	18	0.9966	NO	
4	4 PFHxS	19	0.9982	NO	
5	5 PFOA	18	0.9974	NO	
6	6 PFNA	18	0.9979	NO	
7	7 PFOS	19	0.9982	NO	
8	8 PFDA	18	0.9990	NO	
9	9 N-MeFOSAA	20	0.9977	NO	
10	10 N-EtFOSAA	20	0.9981	NO	
11	11 PFUnA	18	0.9954	NO	
12	12 PFDoA	18	0.9973	NO	
13	13 PFTTrDA	18	0.9990	NO	
14	14 PFTeDA	18	0.9959	NO	
15	15 13C2-PFHxA	18		NO	5.411
16	16 13C2-PFDA	18		NO	5.687
17	17 d5-N-EtFOSAA	20		NO	6.709
18	18 13C2-PFOA	18		NO	0.000
19	19 13C4-PFOS	19		NO	0.000
20	20 d3-N-MeFOSAA	20		NO	0.000

Dataset: Untitled

Last Altered: Friday, March 09, 2018 12:11:16 Pacific Standard Time

Printed: Friday, March 09, 2018 12:11:45 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 10:32:26
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 10:59:51

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	180308G4_1	IPA	08-Mar-18	17:51:14
2	180308G4_2	ST180308G4-1 PFC CS-3 537 18B2301	08-Mar-18	18:03:16
3	180308G4_3	ST180308G4-2 PFC CS-2 537 18B2302	08-Mar-18	18:15:37
4	180308G4_4	ST180308G4-3 PFC CS-1 537 18C0806	08-Mar-18	18:28:01
5	180308G4_5	ST180308G4-4 PFC CS0 537 18B2303	08-Mar-18	18:40:18
6	180308G4_6	ST180308G4-5 PFC CS1 537 18B2304	08-Mar-18	18:52:44
7	180308G4_7	ST180308G4-6 PFC CS2 537 18B2305	08-Mar-18	19:05:09
8	180308G4_8	ST180308G4-7 PFC CS3 537 18B2306	08-Mar-18	19:17:34
9	180308G4_9	ST180308G4-8 PFC CS4 537 18B2307	08-Mar-18	19:29:59
10	180308G4_10	ST180308G4-9 PFC CS5 537 18B2308	08-Mar-18	19:42:25
11	180308G4_11	IPA	08-Mar-18	19:54:45
12	180308G4_12	ICV180308G4-1 PFC ICV 537 18B2309	08-Mar-18	20:07:13
13	180308G4_13	IPA	08-Mar-18	20:19:35

ICAL

Compound 18: 13C2-PFOA

high 8964.667 RPD
low 7444.763 18.52

ID	Name	Type	Std. Cor	RT	Area	IS Area	Response	Primary Flags
1 ST180308G4-1 PFC CS-3 537 18B2301	180308G4_2	Standard	10	4.27	8706.558	8706.558	10	bb
2 ST180308G4-2 PFC CS-2 537 18B2302	180308G4_3	Standard	10	4.26	8964.667	8964.667	10	bb
3 ST180308G4-3 PFC CS-1 537 18C0806	180308G4_4	Standard	10	4.26	8566.731	8566.731	10	bd
4 ST180308G4-4 PFC CS0 537 18B2303	180308G4_5	Standard	10	4.27	7655.677	7655.677	10	bd
5 ST180308G4-5 PFC CS1 537 18B2304	180308G4_6	Standard	10	4.27	8042.525	8042.525	10	bd
6 ST180308G4-6 PFC CS2 537 18B2305	180308G4_7	Standard	10	4.27	7999.164	7999.164	10	bb
7 ST180308G4-7 PFC CS3 537 18B2306	180308G4_8	Standard	10	4.27	7444.763	7444.763	10	bd
8 ST180308G4-8 PFC CS4 537 18B2307	180308G4_9	Standard	10	4.27	7483.192	7483.192	10	bb
9 ST180308G4-9 PFC CS5 537 18B2308	180308G4_10	Standard	10	4.27	7657.481	7657.481	10	bd
average							8057.86	

Compound 19: 13C4-PFOS

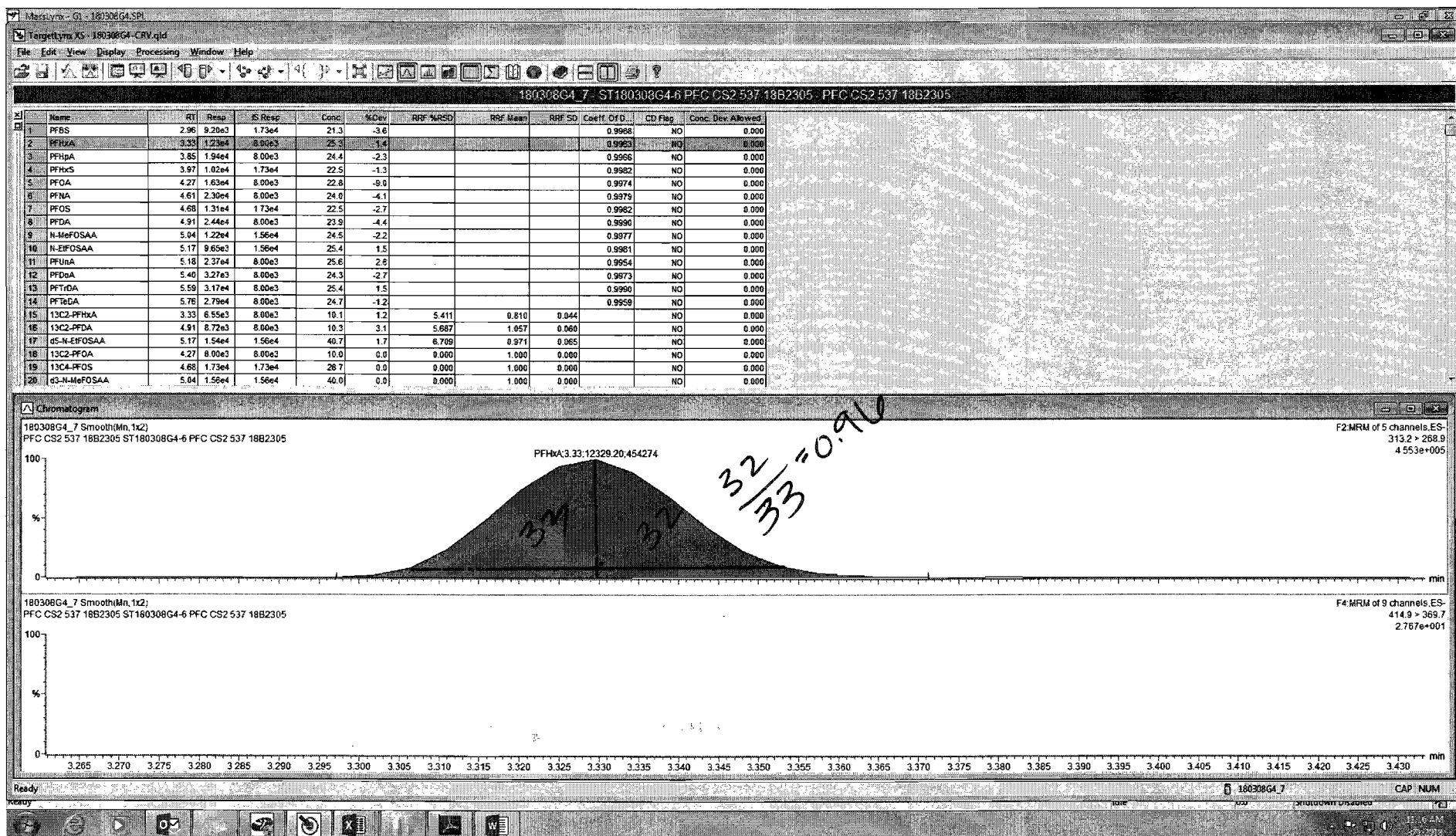
high 19149.248 RPD
low 16048.90 17.62

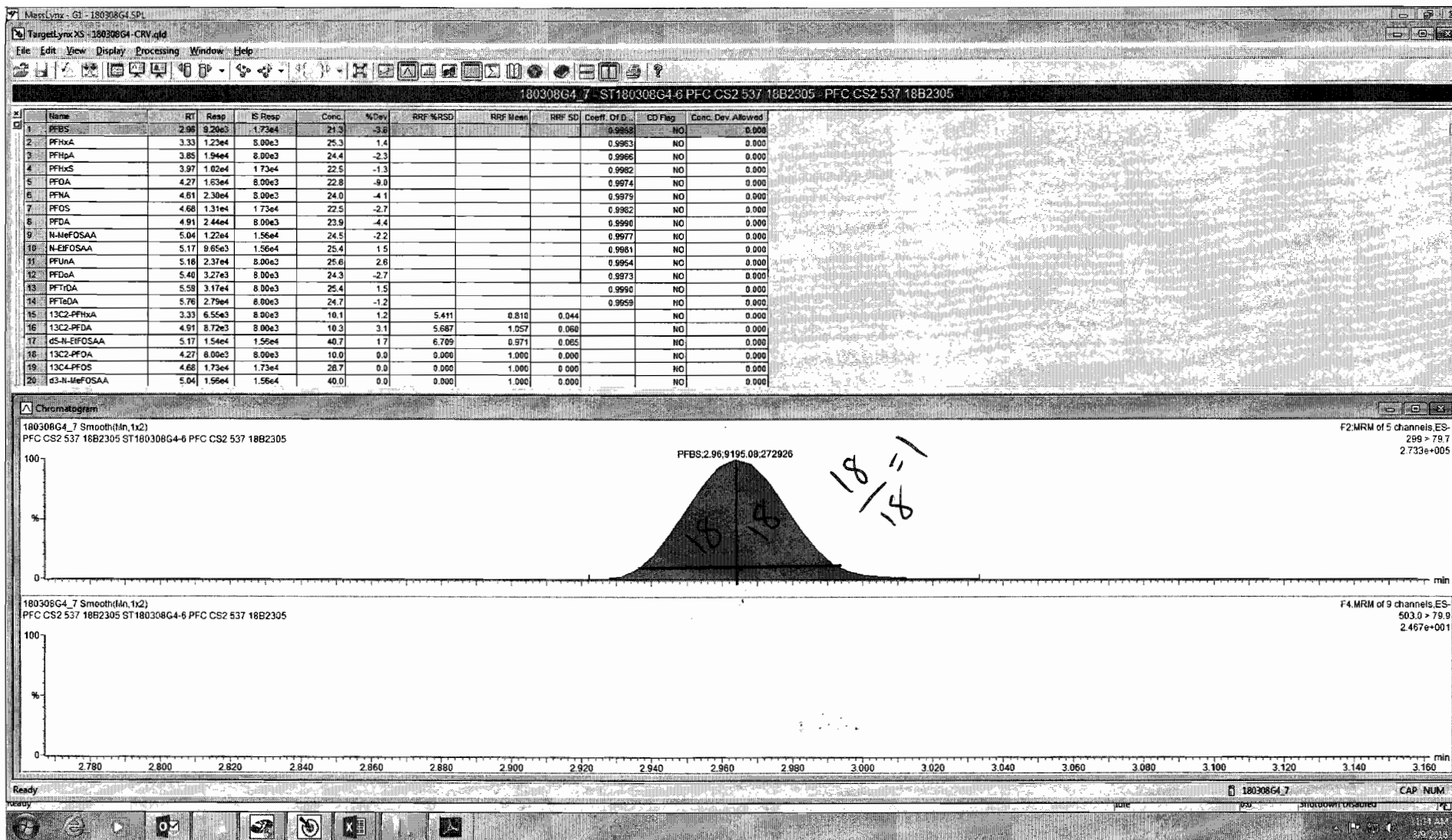
ID	Name	Type	Std. Cor	RT	Area	IS Area	Response	Primary Flags
1 ST180308G4-1 PFC CS-3 537 18B2301	180308G4_2	Standard	28.7	4.68	19616.35	19616.35	28.7	bbx
2 ST180308G4-2 PFC CS-2 537 18B2302	180308G4_3	Standard	28.7	4.68	18982.52	18982.52	28.7	bb
3 ST180308G4-3 PFC CS-1 537 18C0806	180308G4_4	Standard	28.7	4.68	19149.25	19149.25	28.7	bb
4 ST180308G4-4 PFC CS0 537 18B2303	180308G4_5	Standard	28.7	4.68	16641.13	16641.13	28.7	bd
5 ST180308G4-5 PFC CS1 537 18B2304	180308G4_6	Standard	28.7	4.68	17975.19	17975.19	28.7	bd
6 ST180308G4-6 PFC CS2 537 18B2305	180308G4_7	Standard	28.7	4.68	17313.01	17313.01	28.7	bb
7 ST180308G4-7 PFC CS3 537 18B2306	180308G4_8	Standard	28.7	4.68	17057.24	17057.24	28.7	bb
8 ST180308G4-8 PFC CS4 537 18B2307	180308G4_9	Standard	28.7	4.68	16048.9	16048.90	28.7	bd
9 ST180308G4-9 PFC CS5 537 18B2308	180308G4_10	Standard	28.7	4.68	15601.43	15601.43	28.7	bbx
average							17595.32	

Compound 20: d3-N-MeFOSAA

high 17151.576 RPD
low 14850.035 14.38

ID	Name	Type	Std.	Cor RT	Area	IS Area	Response	Primary Flags
1 ST180308G4-1 PFC CS-3 537 18B2301	180308G4_2	Standard	40	5.04	15563.26	15563.26	40 bb	
2 ST180308G4-2 PFC CS-2 537 18B2302	180308G4_3	Standard	40	5.04	17151.58	17151.58	40 bd	
3 ST180308G4-3 PFC CS-1 537 18C0806	180308G4_4	Standard	40	5.04	16199.47	16199.47	40 bb	
4 ST180308G4-4 PFC CS0 537 18B2303	180308G4_5	Standard	40	5.04	14850.04	14850.04	40 bb	
5 ST180308G4-5 PFC CS1 537 18B2304	180308G4_6	Standard	40	5.04	16138.04	16138.04	40 bd	
6 ST180308G4-6 PFC CS2 537 18B2305	180308G4_7	Standard	40	5.04	15586.66	15586.66	40 bd	
7 ST180308G4-7 PFC CS3 537 18B2306	180308G4_8	Standard	40	5.04	15038.32	15038.32	40 bb	
8 ST180308G4-8 PFC CS4 537 18B2307	180308G4_9	Standard	40	5.04	13030.38	13030.38	40 bdx	
9 ST180308G4-9 PFC CS5 537 18B2308	180308G4_10	Standard	40	5.04	13115.08	13115.08	40 bbX	
						average		
						15789.62		



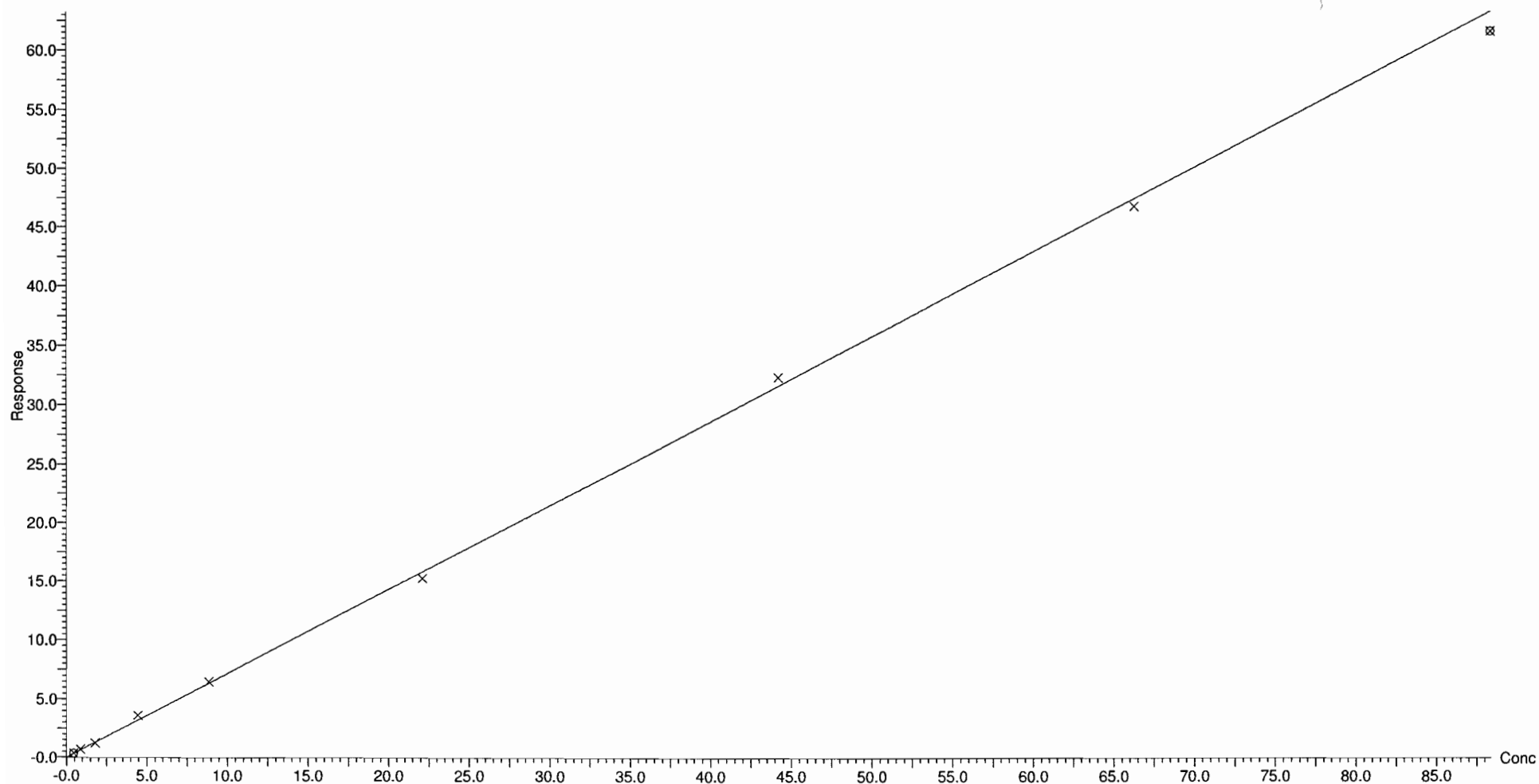


Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

Last Altered: Friday, March 09, 2018 10:59:51 Pacific Standard Time
Printed: Friday, March 09, 2018 11:17:53 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 10:23:45
Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 10:59:51

Compound name: PFBS
Coefficient of Determination: $R^2 = 0.998784$
Calibration curve: $0.715403 \times x$
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

Last Altered: Friday, March 09, 2018 10:59:51 Pacific Standard Time

Printed: Friday, March 09, 2018 11:17:53 Pacific Standard Time

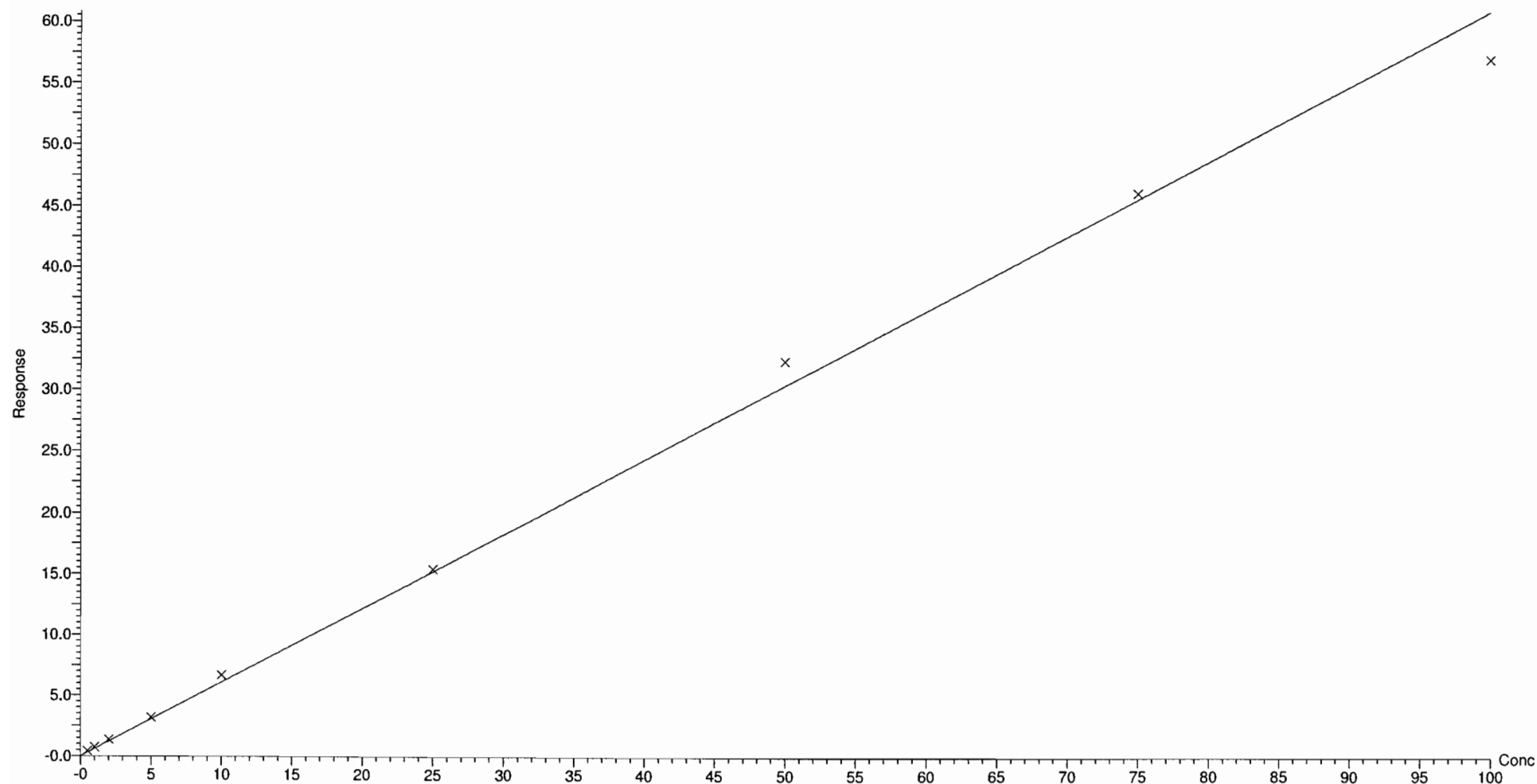
Compound name: PFHxA

Coefficient of Determination: $R^2 = 0.996340$

Calibration curve: $0.608155 * x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

Last Altered: Friday, March 09, 2018 10:59:51 Pacific Standard Time

Printed: Friday, March 09, 2018 11:17:53 Pacific Standard Time

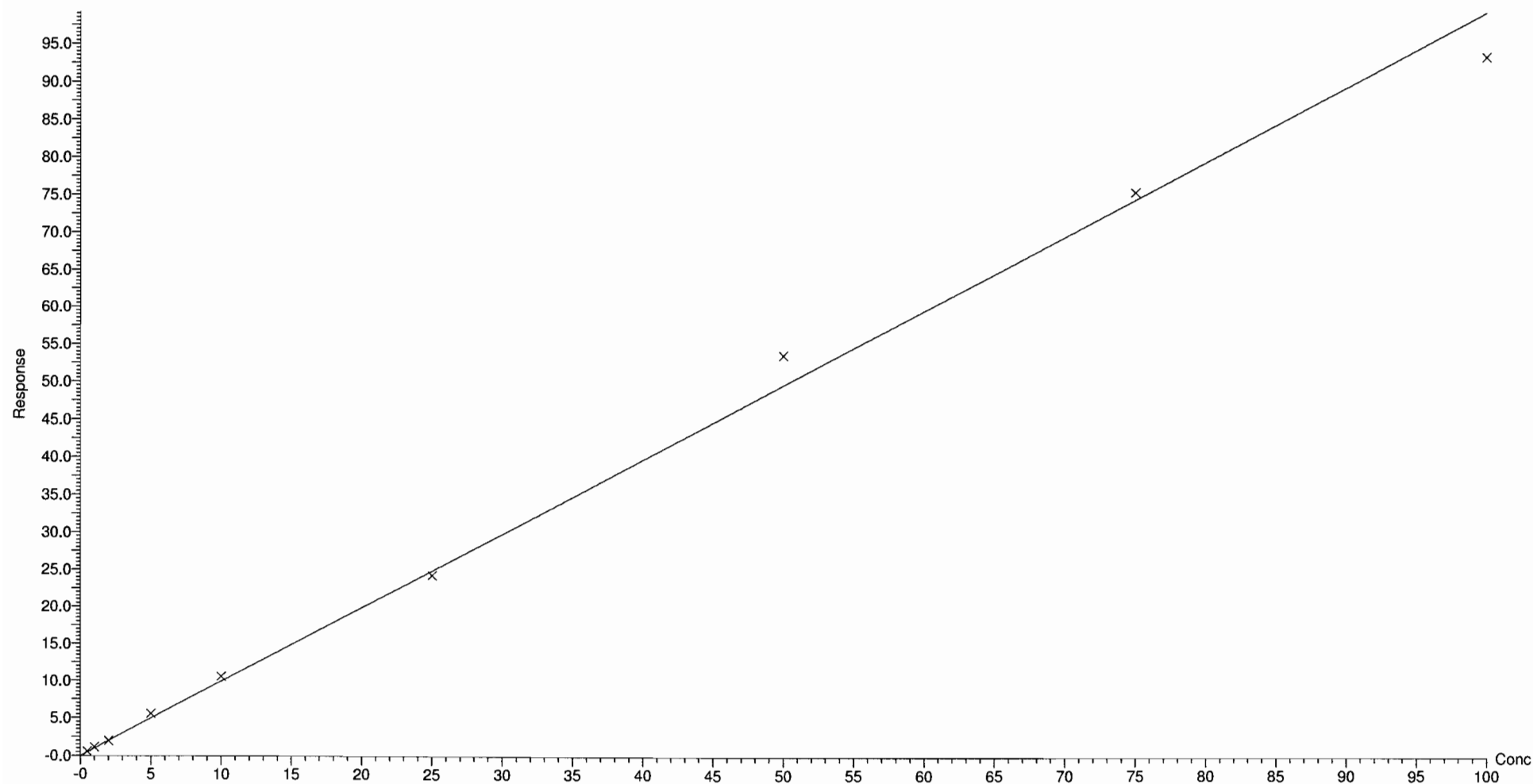
Compound name: PFHpA

Coefficient of Determination: $R^2 = 0.996626$

Calibration curve: $0.992283 * x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

Last Altered: Friday, March 09, 2018 10:59:51 Pacific Standard Time
Printed: Friday, March 09, 2018 11:17:53 Pacific Standard Time

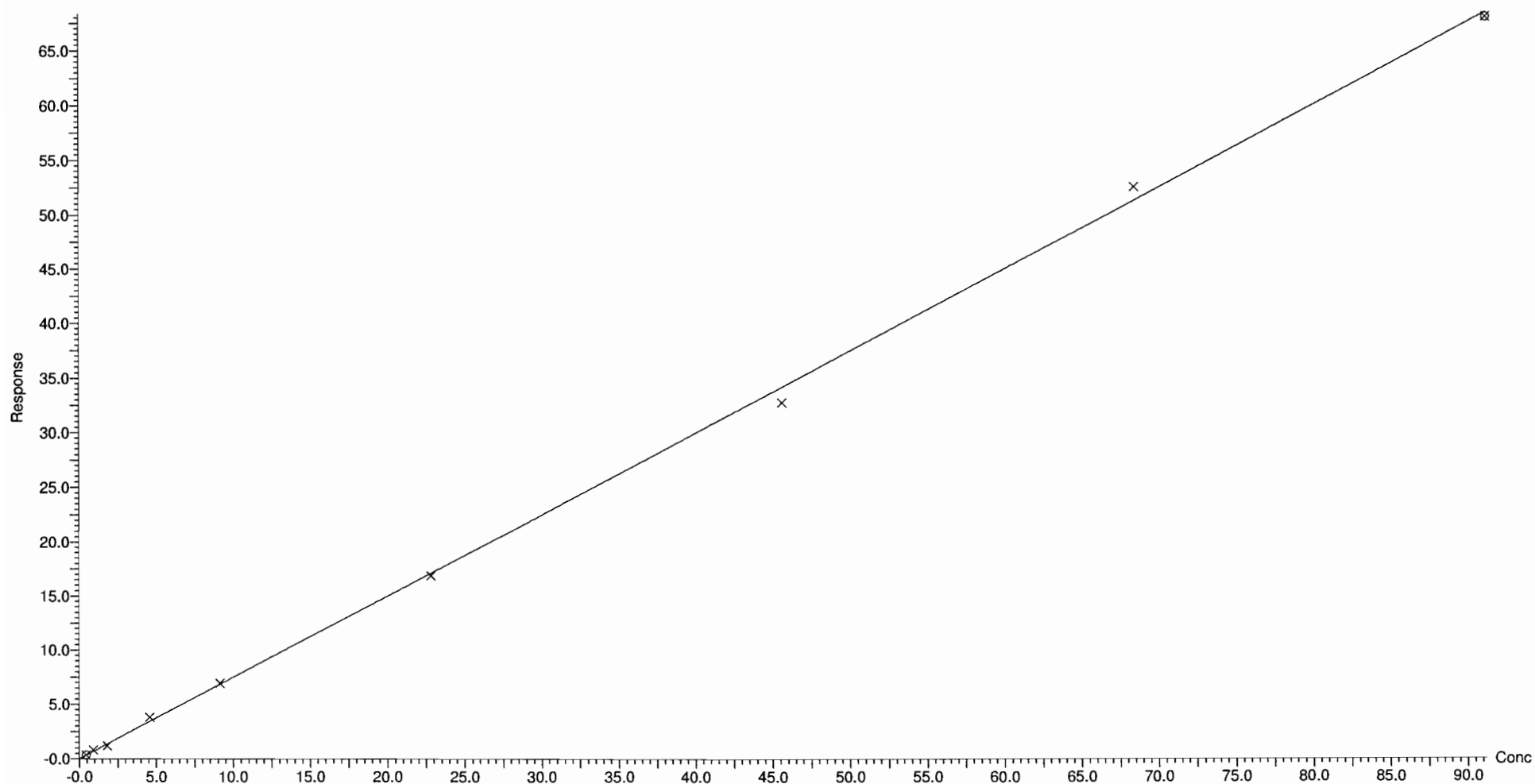
Compound name: PFHxS

Coefficient of Determination: $R^2 = 0.998175$

Calibration curve: $0.749713 * x$

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

Last Altered: Friday, March 09, 2018 10:59:51 Pacific Standard Time

Printed: Friday, March 09, 2018 11:17:53 Pacific Standard Time

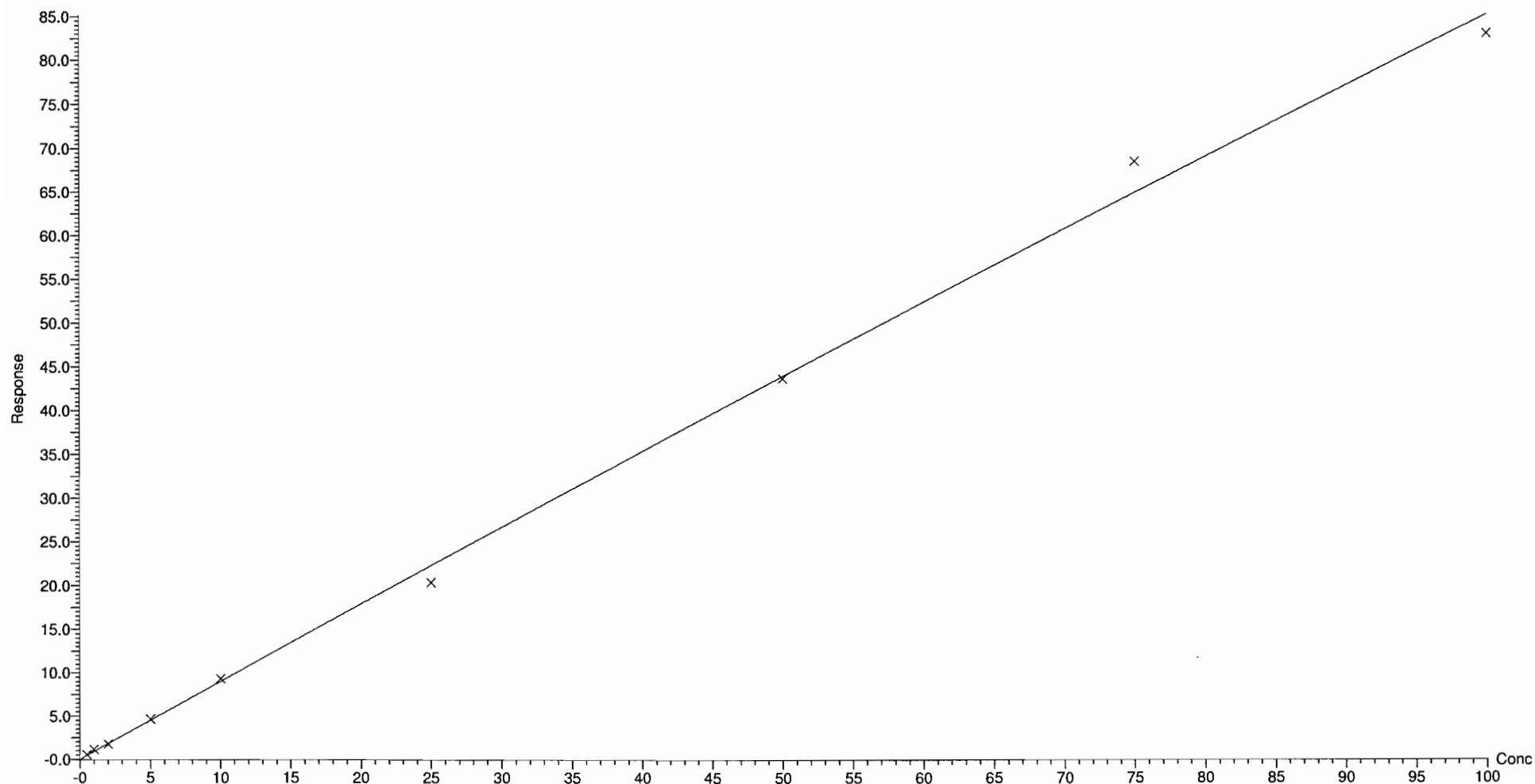
Compound name: PFOA

Coefficient of Determination: $R^2 = 0.997445$

Calibration curve: $-0.000558495 * x^2 + 0.907111 * x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

Last Altered: Friday, March 09, 2018 10:59:51 Pacific Standard Time

Printed: Friday, March 09, 2018 11:17:53 Pacific Standard Time

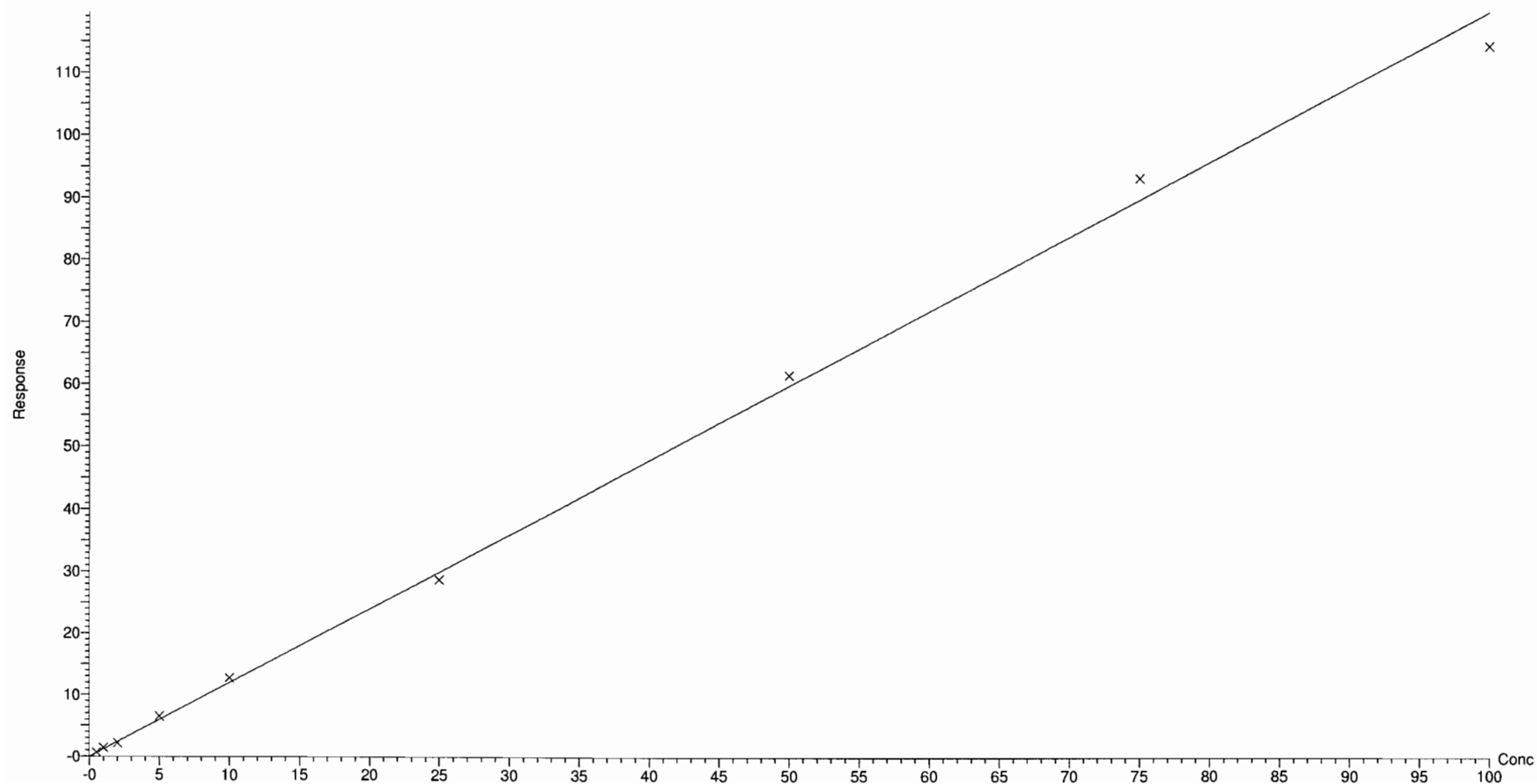
Compound name: PFNA

Coefficient of Determination: $R^2 = 0.997854$

Calibration curve: $1.1965 * x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

Last Altered: Friday, March 09, 2018 10:59:51 Pacific Standard Time

Printed: Friday, March 09, 2018 11:17:53 Pacific Standard Time

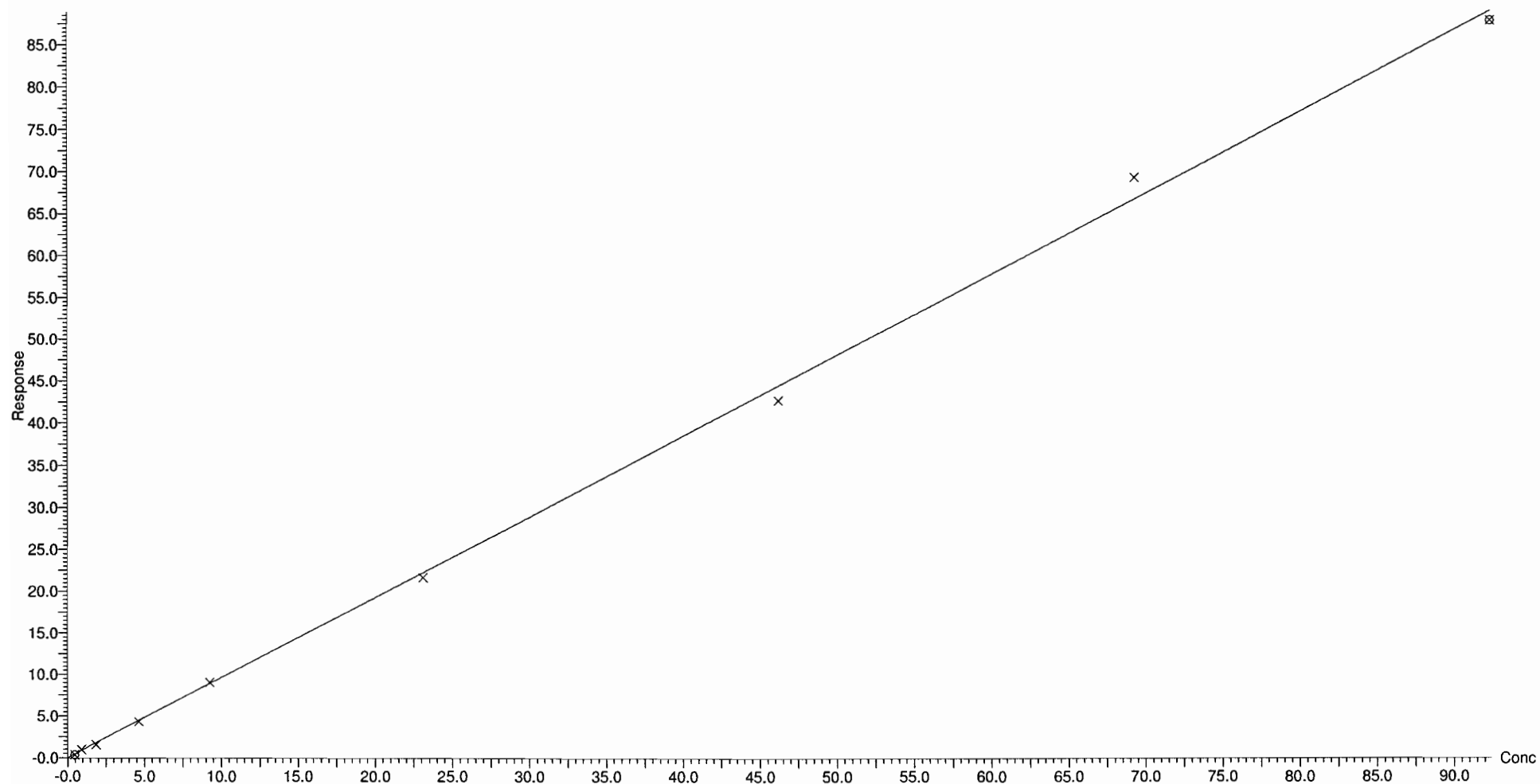
Compound name: PFOS

Coefficient of Determination: $R^2 = 0.998192$

Calibration curve: $0.96246 * x$

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

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Printed: Friday, March 09, 2018 11:17:53 Pacific Standard Time

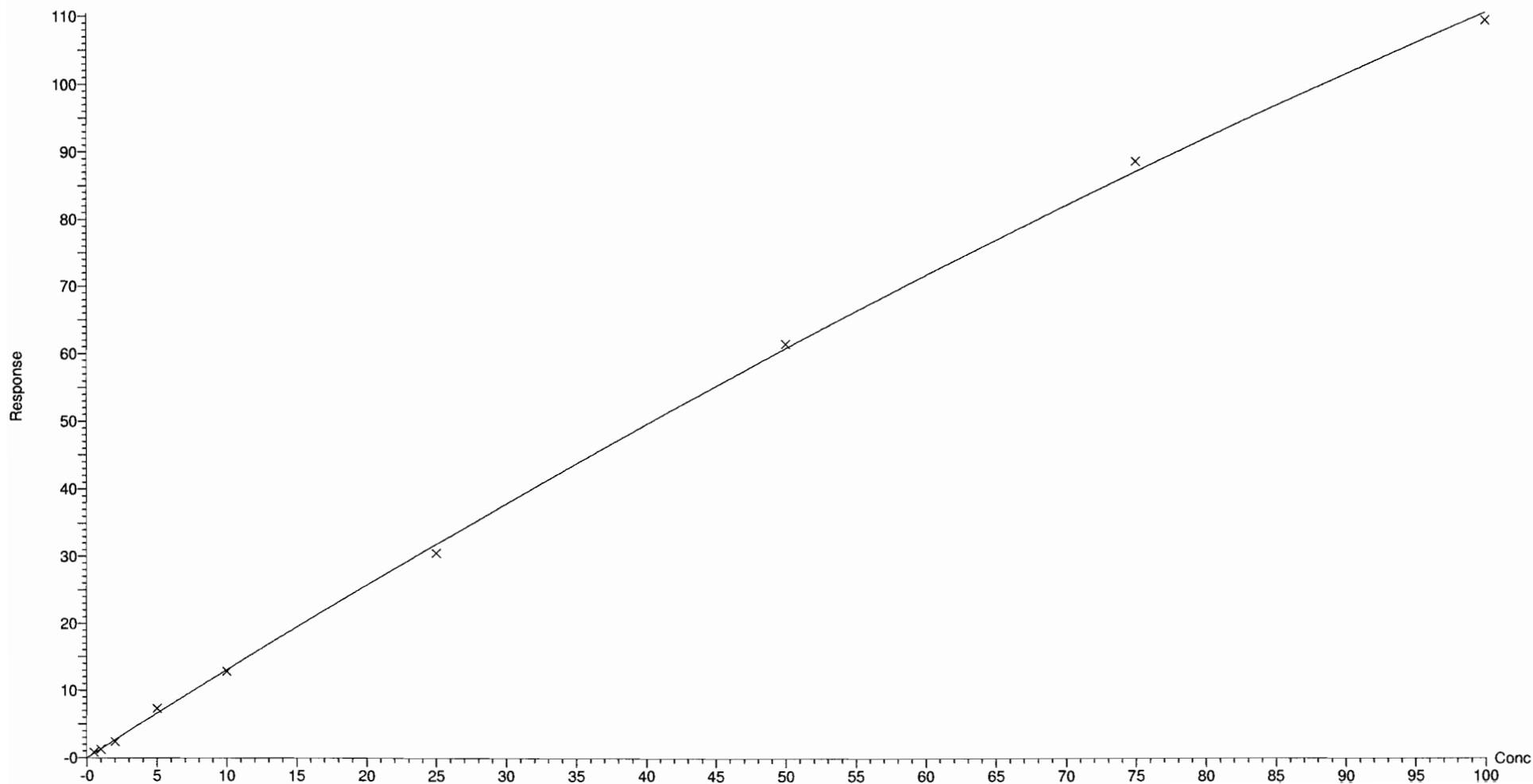
Compound name: PFDA

Coefficient of Determination: $R^2 = 0.999017$

Calibration curve: $-0.00224398 * x^2 + 1.32908 * x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

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Printed: Friday, March 09, 2018 11:17:53 Pacific Standard Time

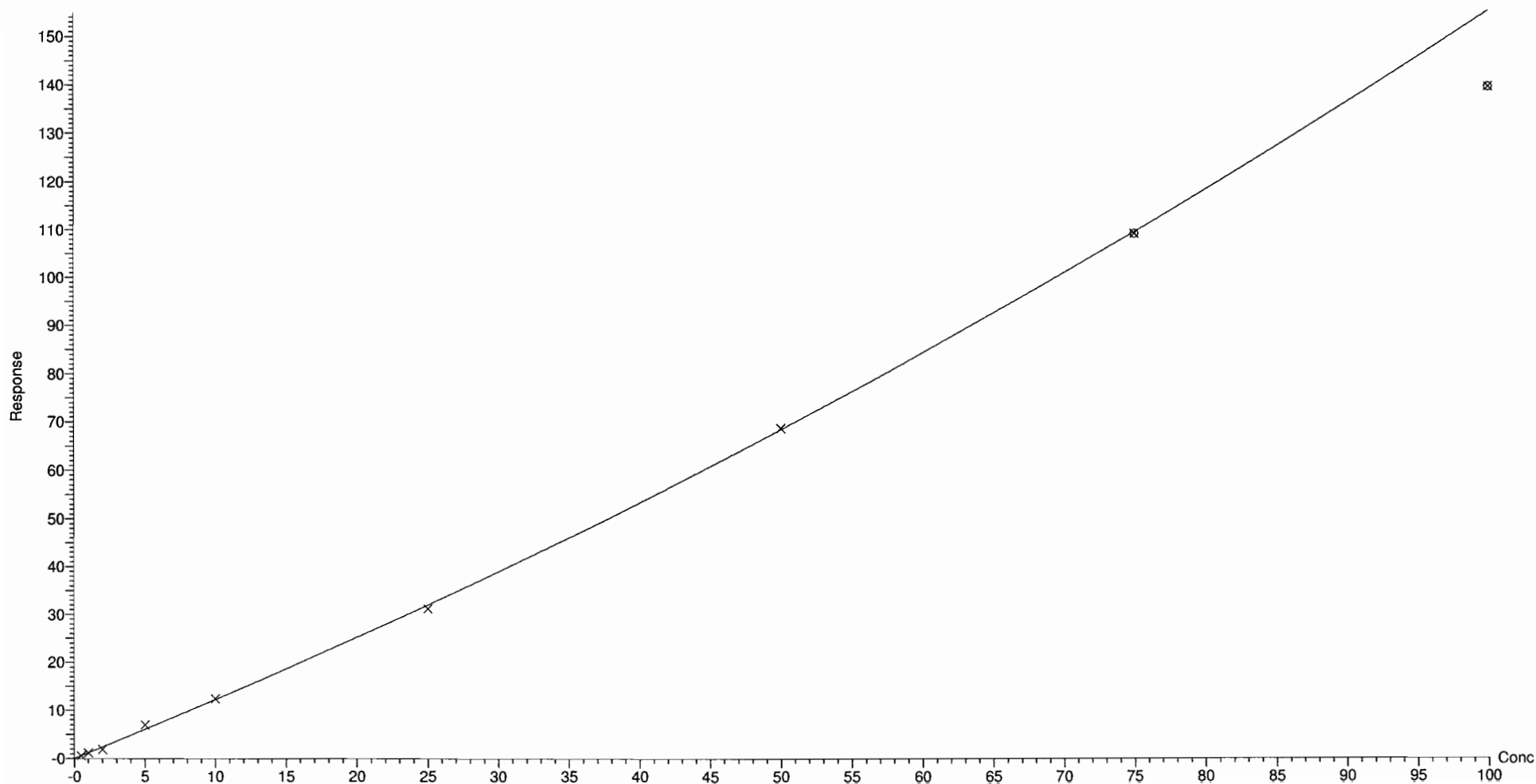
Compound name: N-MeFOSAA

Coefficient of Determination: $R^2 = 0.997720$

Calibration curve: $0.0036104 * x^2 + 1.18837 * x$

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

Last Altered: Friday, March 09, 2018 10:59:51 Pacific Standard Time

Printed: Friday, March 09, 2018 11:17:53 Pacific Standard Time

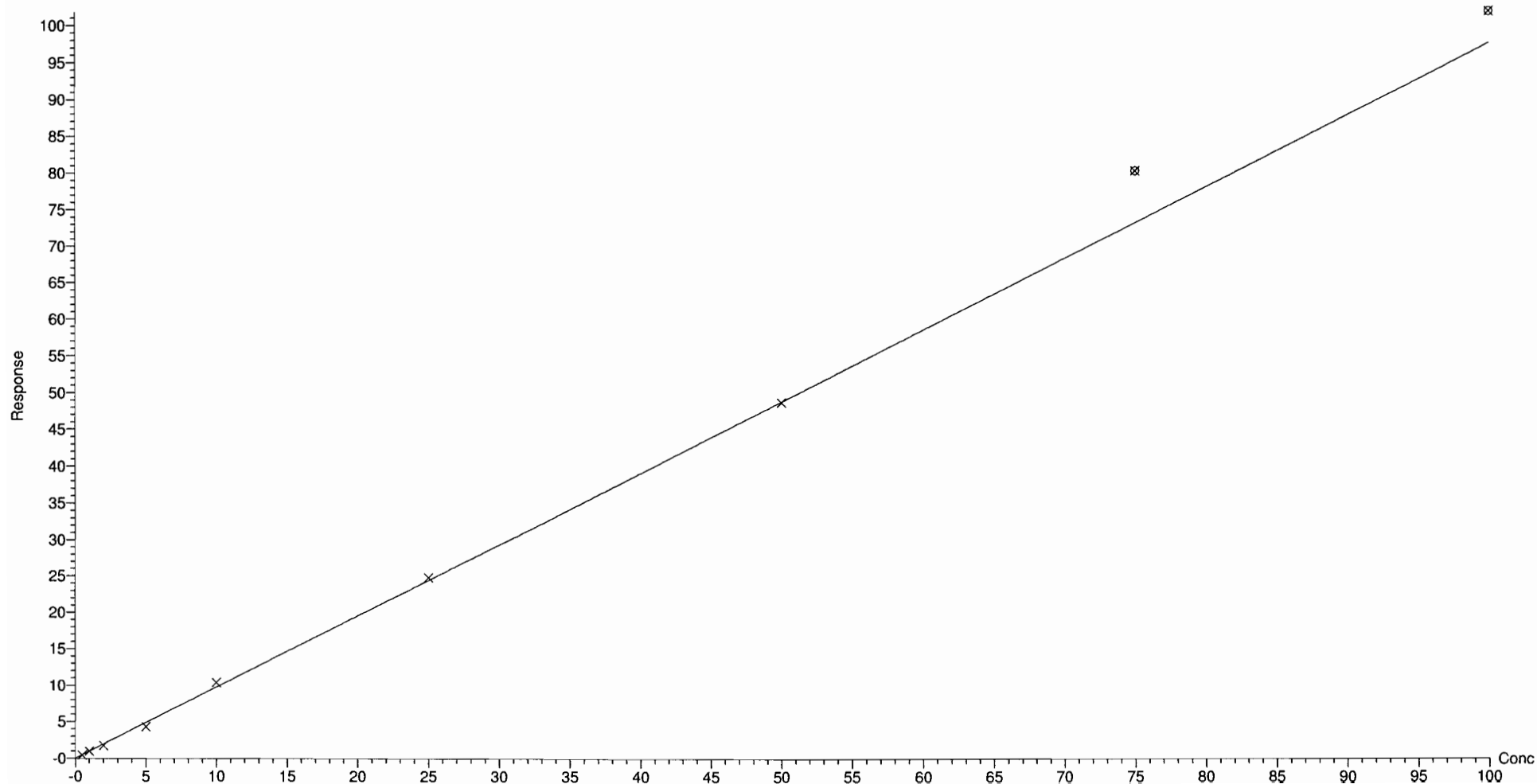
Compound name: N-EtFOSAA

Coefficient of Determination: $R^2 = 0.998054$

Calibration curve: $0.975871 * x$

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

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Printed: Friday, March 09, 2018 11:17:53 Pacific Standard Time

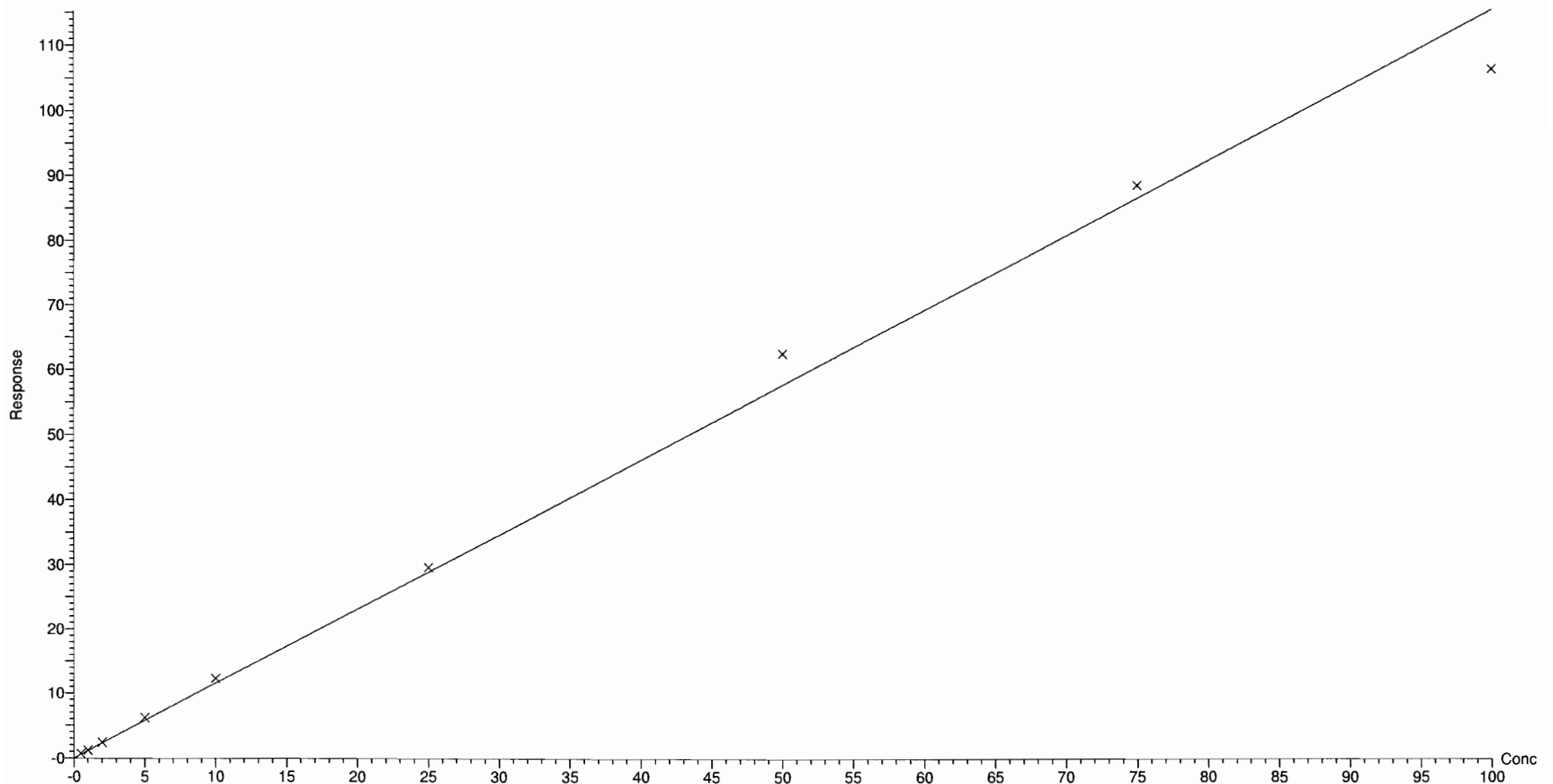
Compound name: PFUnA

Coefficient of Determination: $R^2 = 0.995450$

Calibration curve: $1.15303 * x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

Last Altered: Friday, March 09, 2018 10:59:51 Pacific Standard Time

Printed: Friday, March 09, 2018 11:17:53 Pacific Standard Time

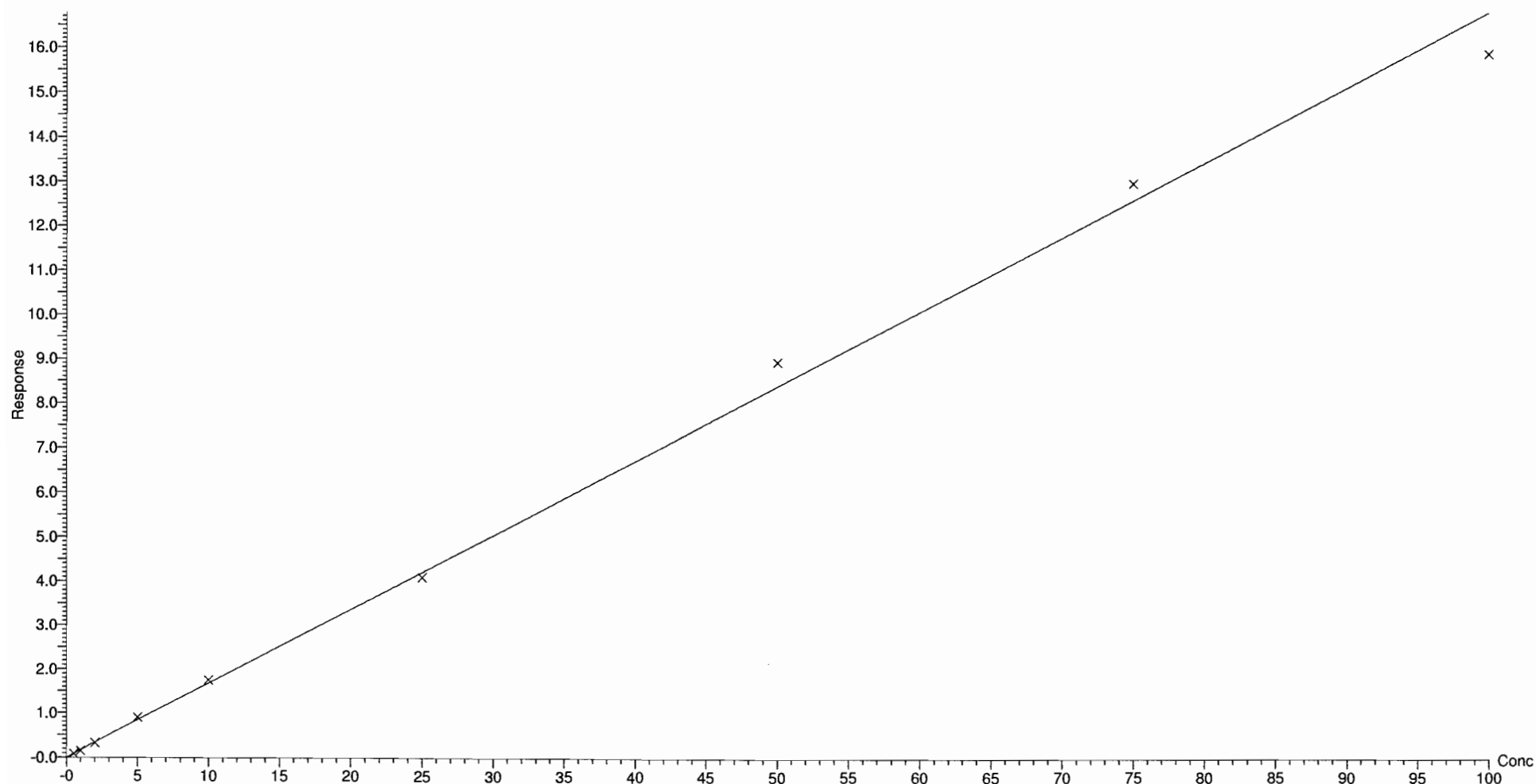
Compound name: PFDoA

Coefficient of Determination: $R^2 = 0.997346$

Calibration curve: $0.167843 \cdot x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

Last Altered: Friday, March 09, 2018 10:59:51 Pacific Standard Time

Printed: Friday, March 09, 2018 11:17:53 Pacific Standard Time

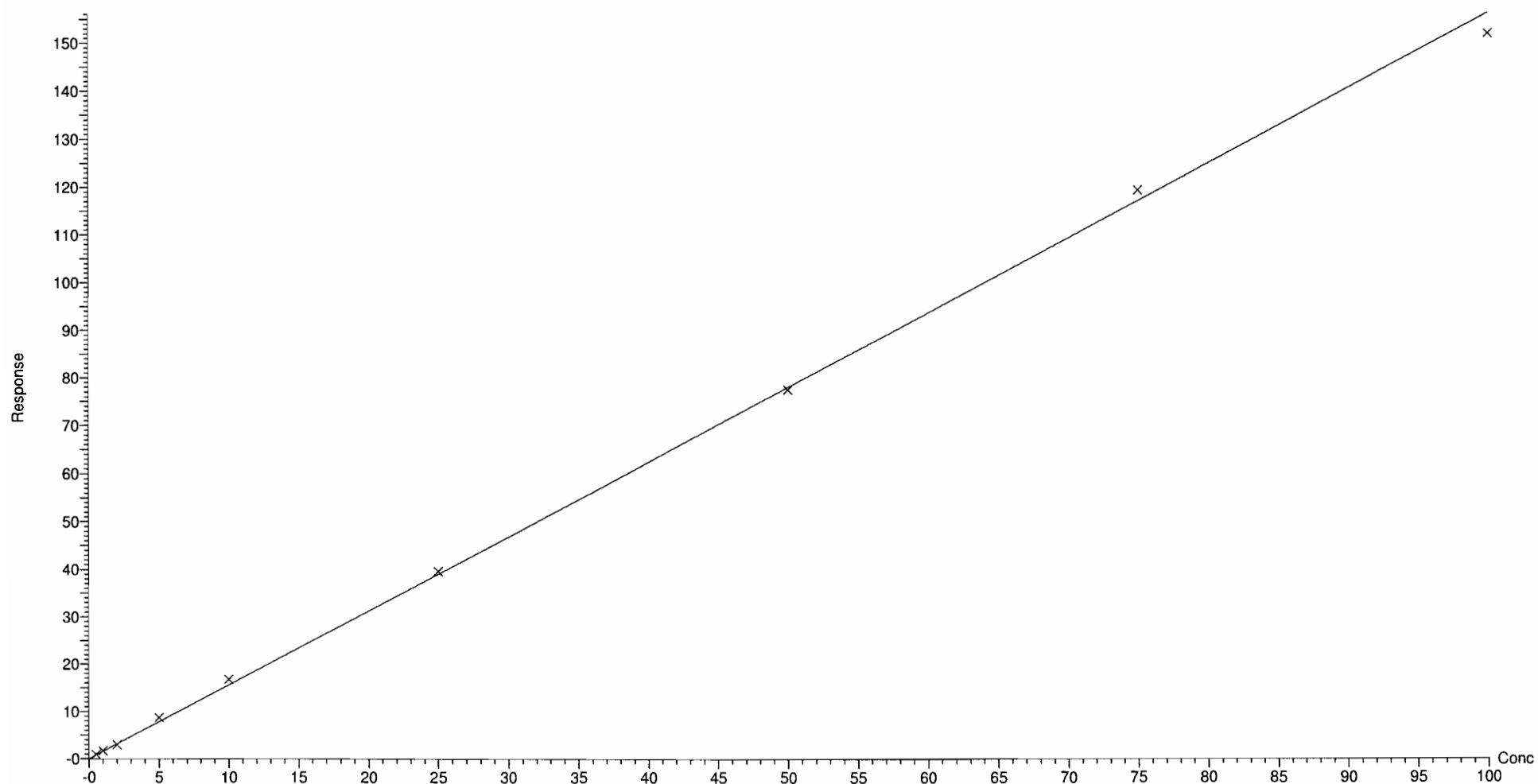
Compound name: PFTTrDA

Coefficient of Determination: $R^2 = 0.999002$

Calibration curve: $1.56071 * x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

Last Altered: Friday, March 09, 2018 10:59:51 Pacific Standard Time

Printed: Friday, March 09, 2018 11:17:53 Pacific Standard Time

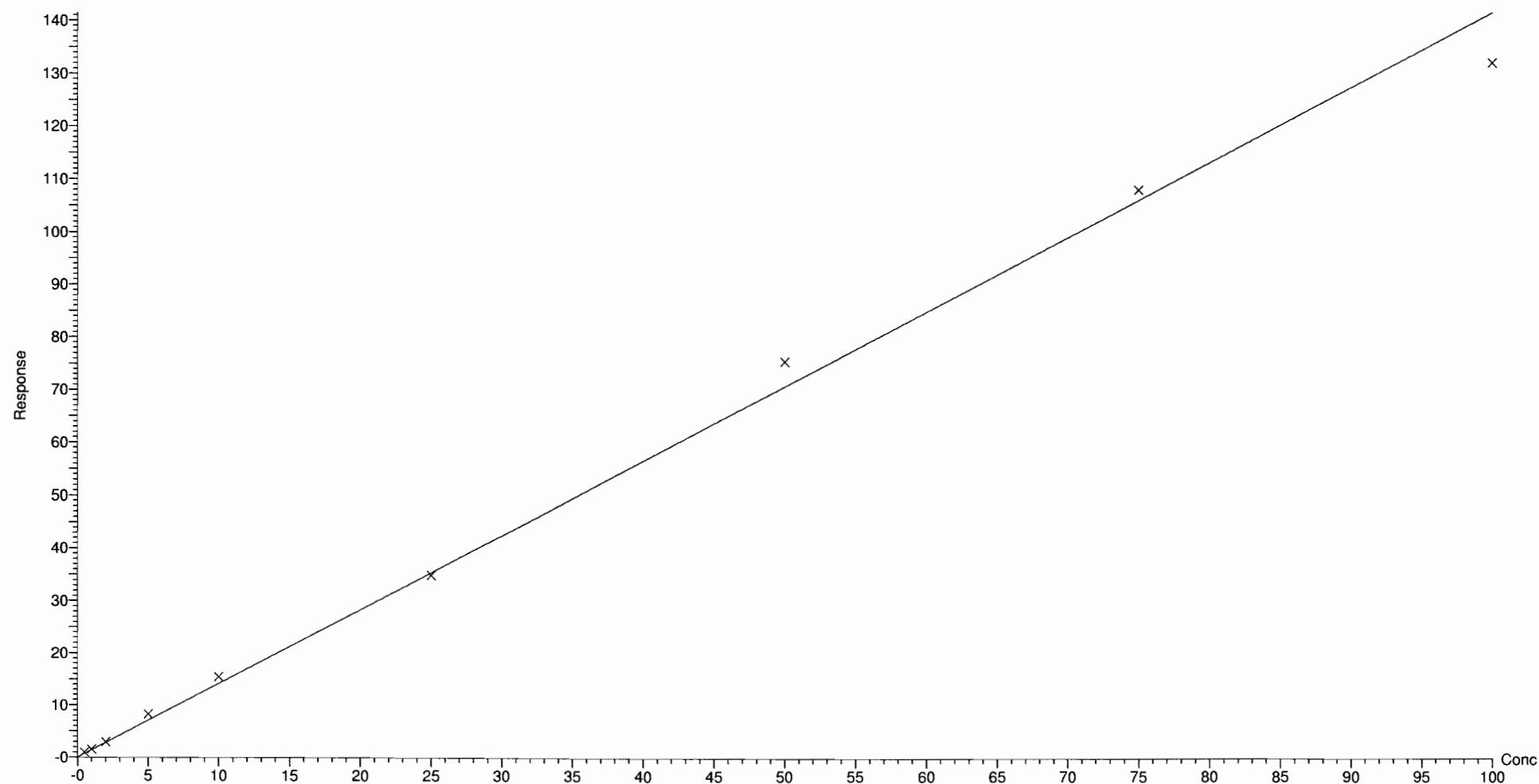
Compound name: PFTeDA

Coefficient of Determination: $R^2 = 0.995873$

Calibration curve: $1.41495 * x$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

Last Altered: Friday, March 09, 2018 10:59:51 Pacific Standard Time

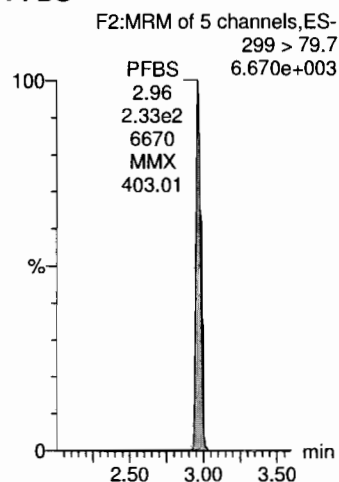
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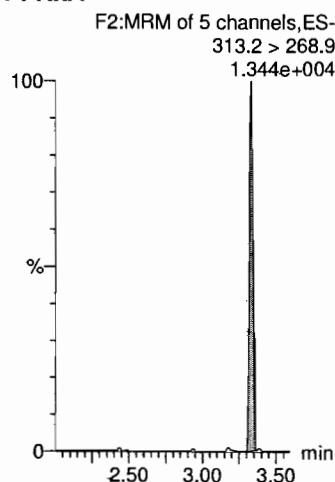
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Name: 180308G4_2, Date: 08-Mar-2018, Time: 18:03:16, ID: ST180308G4-1 PFC CS-3 537 18B2301, Description: PFC CS-3 537 18B2301

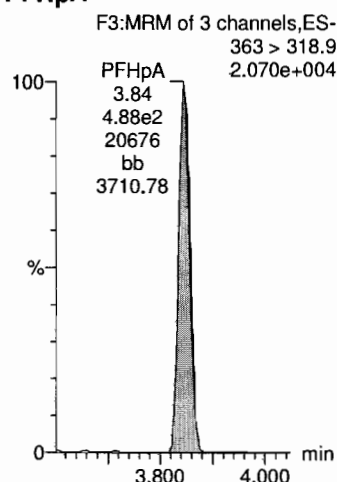
PFBS



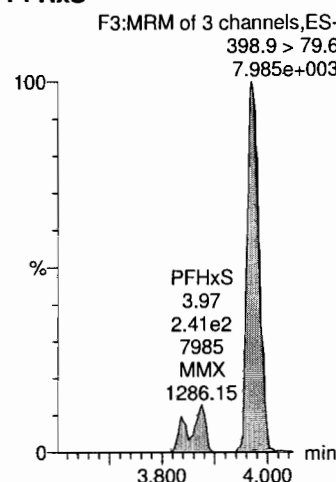
PFHxA



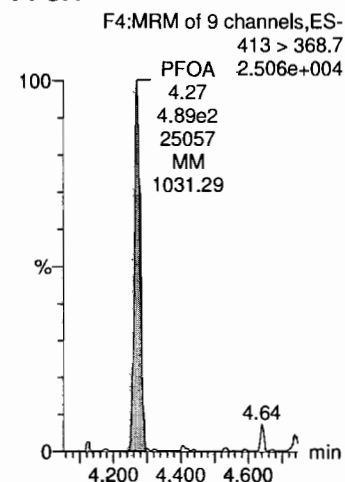
PFHpA



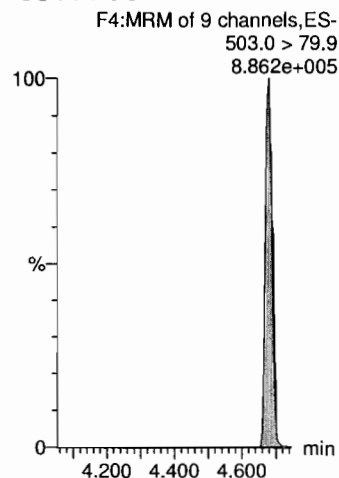
PFHxS



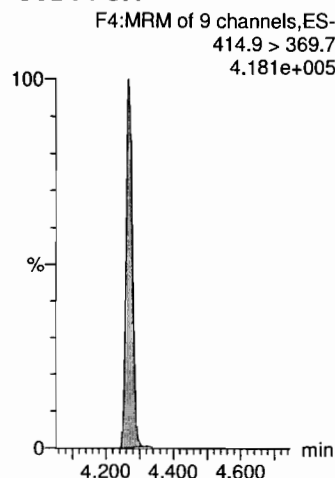
PFOA



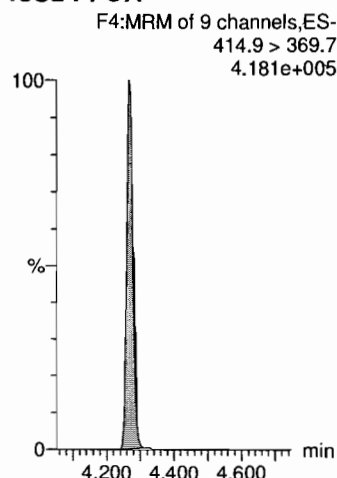
13C4-PFOS



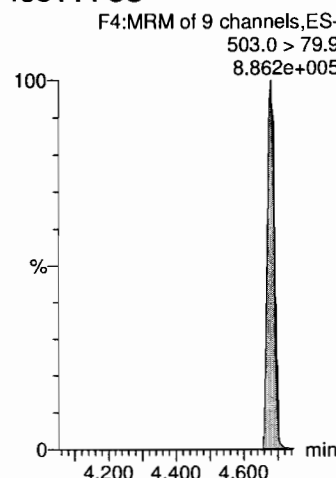
13C2-PFOA



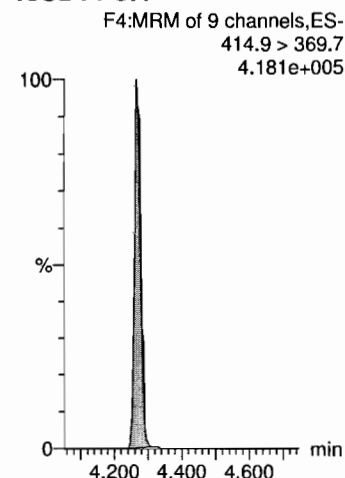
13C2-PFOA



13C4-PFOS



13C2-PFOA



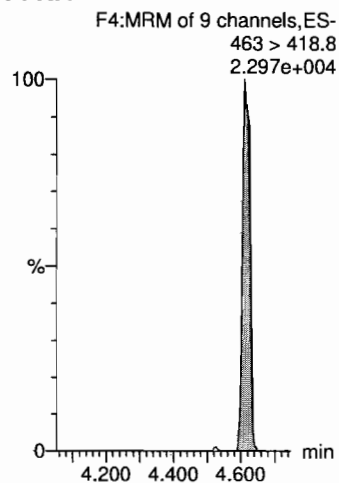
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Last Altered: Friday, March 09, 2018 10:59:51 Pacific Standard Time

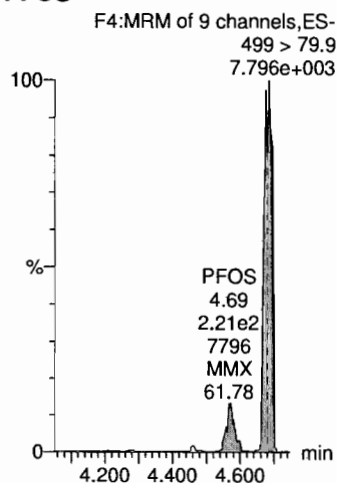
Printed: Friday, March 09, 2018 11:24:48 Pacific Standard Time

Name: 180308G4_2, Date: 08-Mar-2018, Time: 18:03:16, ID: ST180308G4-1 PFC CS-3 537 18B2301, Description: PFC CS-3 537 18B2301

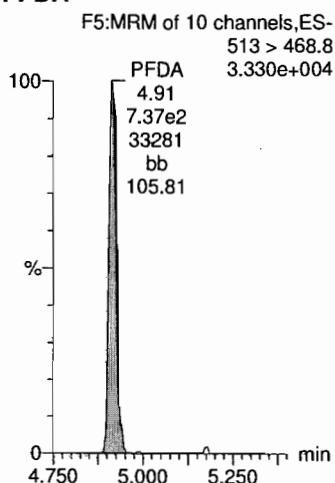
PFNA



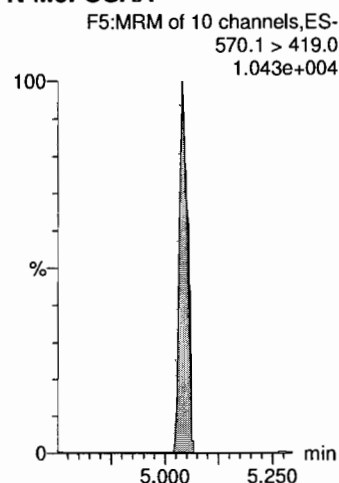
PFOS



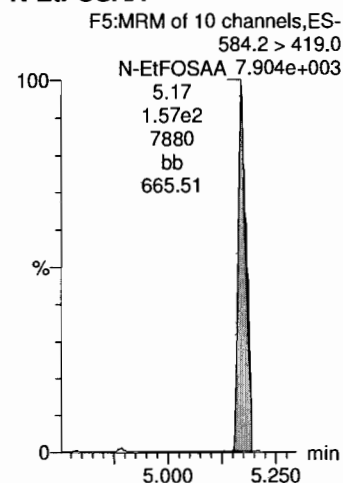
PFDA



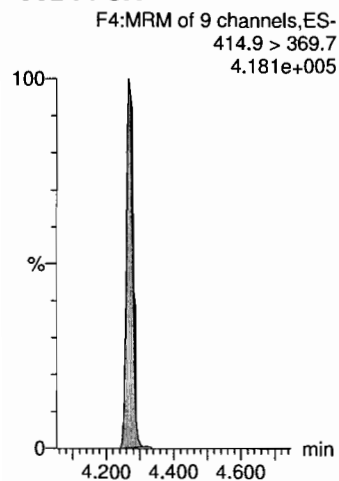
N-MeFOSAA



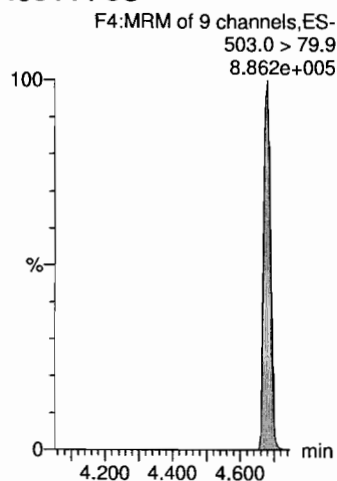
N-EtFOSAA



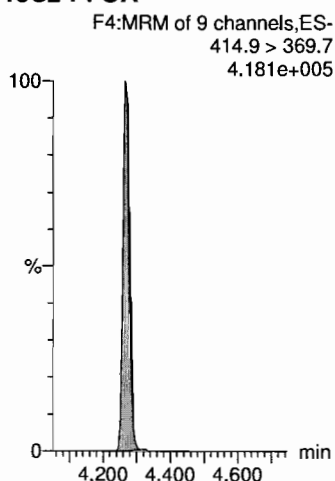
13C2-PFOA



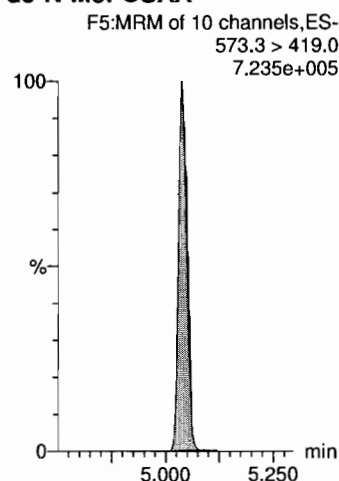
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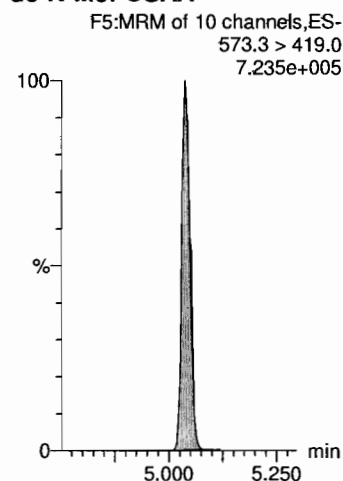
13C2-PFOA



d3-N-MeFOSAA



d3-N-MeFOSAA

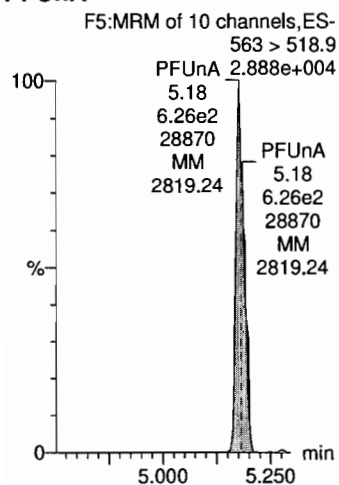


Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

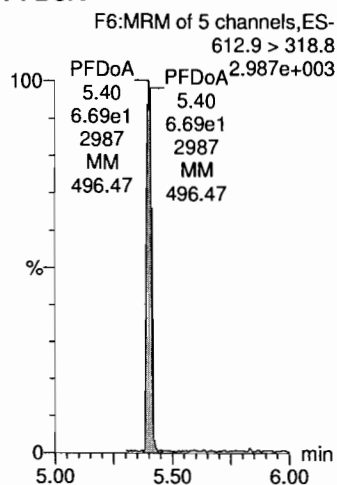
Last Altered: Friday, March 09, 2018 10:59:51 Pacific Standard Time
Printed: Friday, March 09, 2018 11:24:48 Pacific Standard Time

Name: 180308G4_2, Date: 08-Mar-2018, Time: 18:03:16, ID: ST180308G4-1 PFC CS-3 537 18B2301, Description: PFC CS-3 537 18B2301

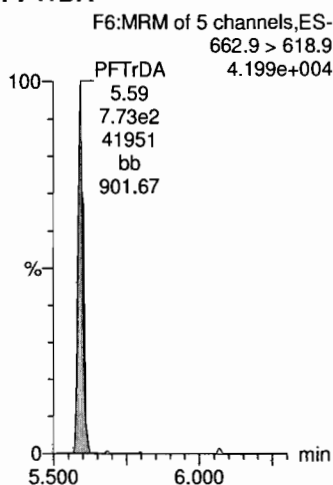
PFUnA



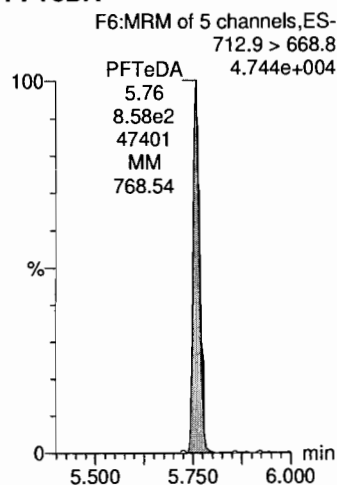
PFDaA



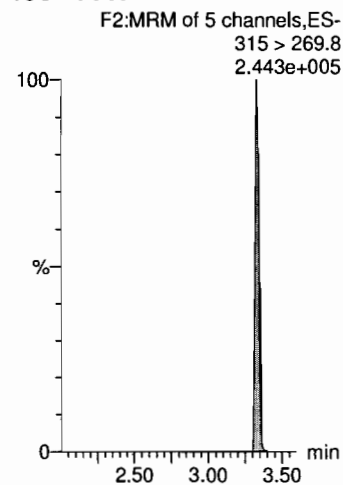
PFTTrDA



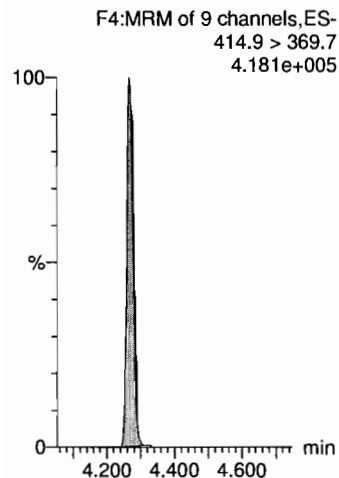
PFTeDA



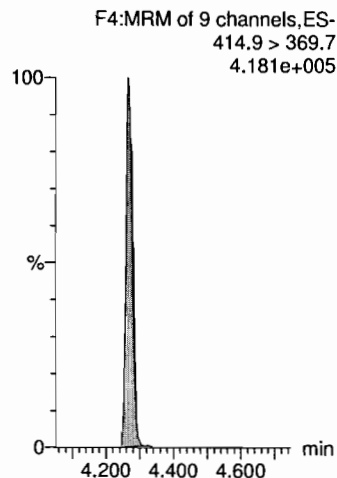
13C2-PFHxA



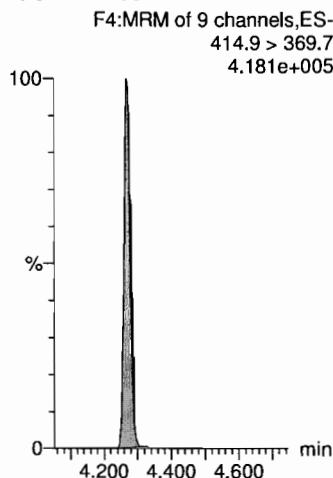
13C2-PFOA



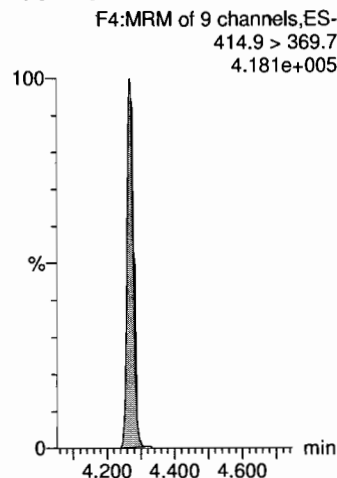
13C2-PFOA



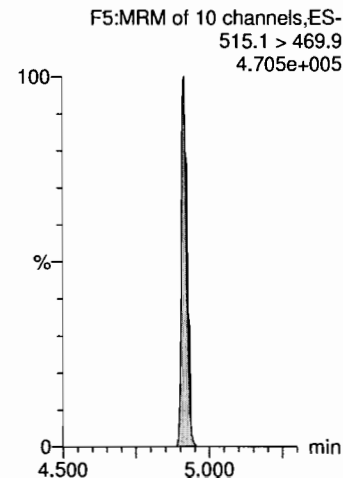
13C2-PFOA



13C2-PFOA



13C2-PFDA



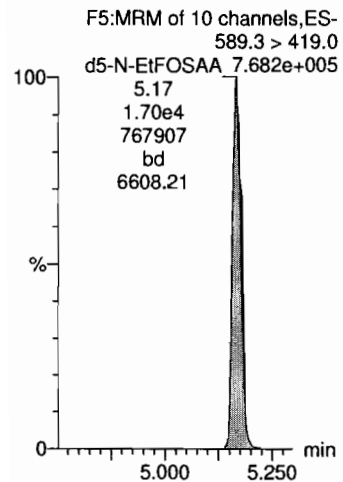
Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-CRV.qld

Last Altered: Friday, March 09, 2018 10:59:51 Pacific Standard Time

Printed: Friday, March 09, 2018 11:24:48 Pacific Standard Time

Name: 180308G4_2, Date: 08-Mar-2018, Time: 18:03:16, ID: ST180308G4-1 PFC CS-3 537 18B2301, Description: PFC CS-3 537 18B2301

d5-N-EtFOSAA

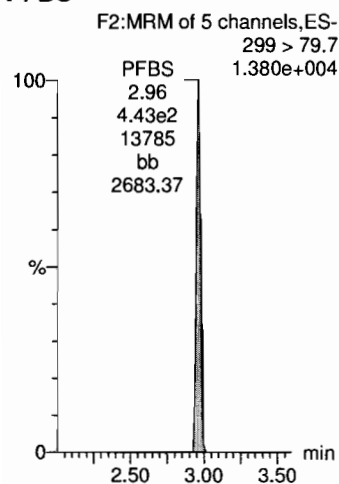


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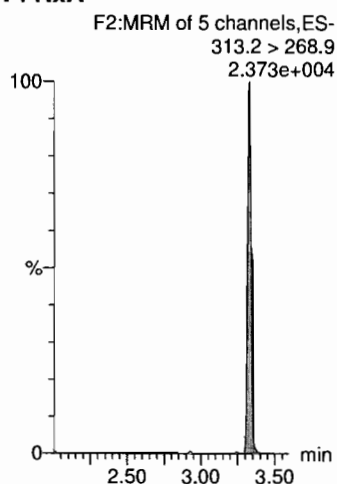
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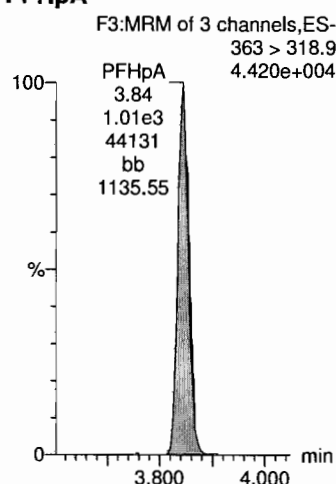
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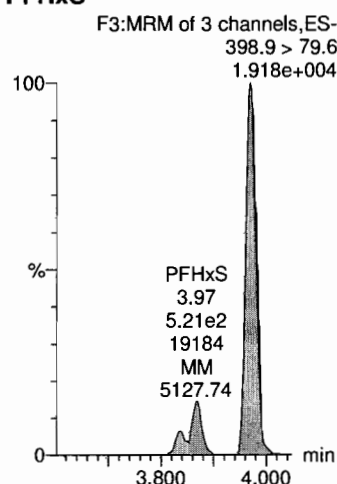
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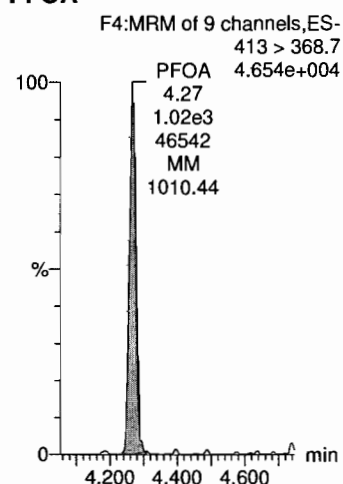
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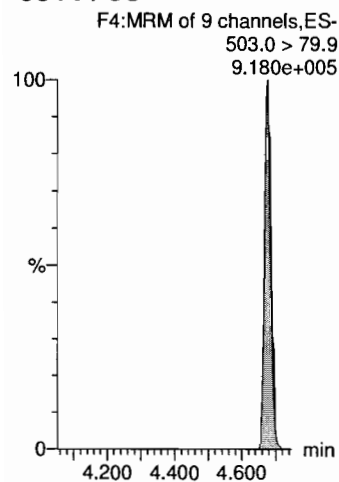
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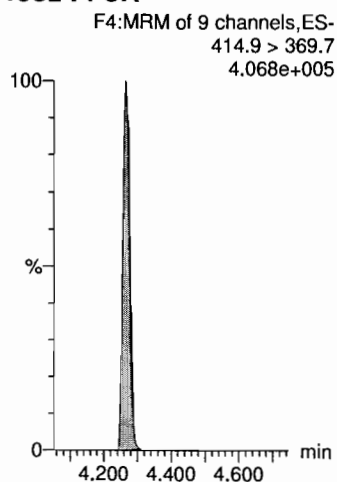
PFOA



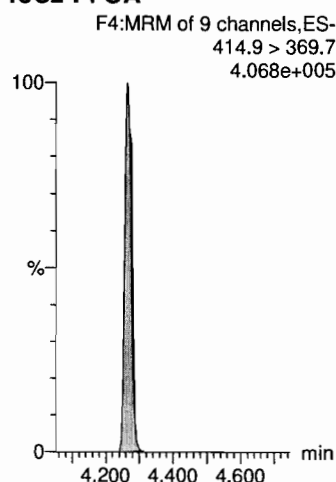
13C4-PFOS



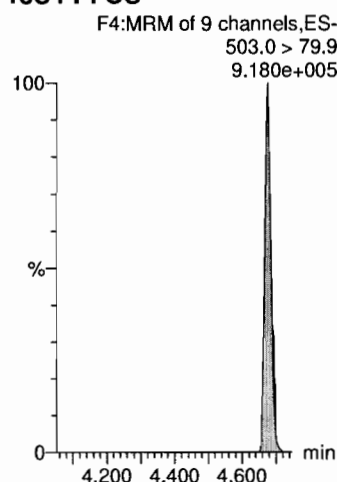
13C2-PFOA



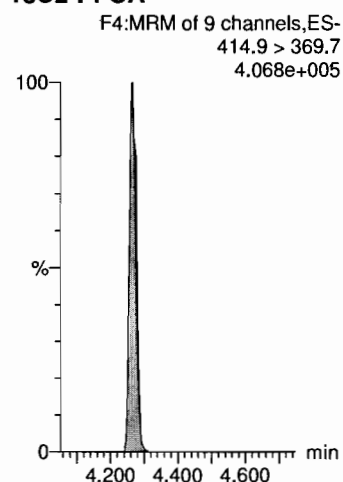
13C2-PFOA



13C4-PFOS



13C2-PFOA

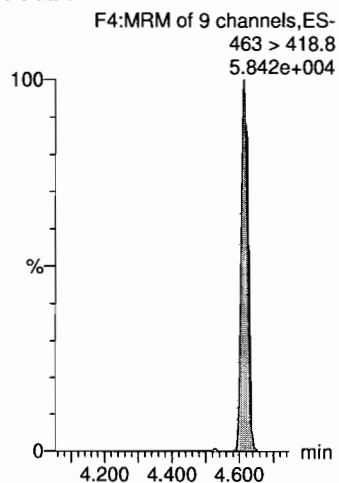


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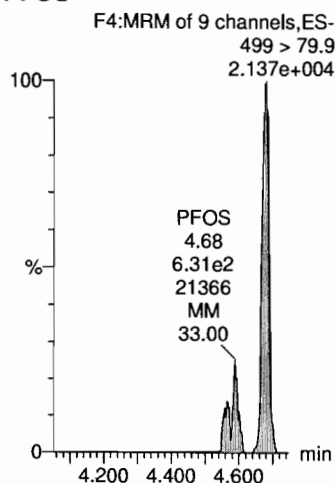
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Name: 180308G4_3, Date: 08-Mar-2018, Time: 18:15:37, ID: ST180308G4-2 PFC CS-2 537 18B2302, Description: PFC CS-2 537 18B2302

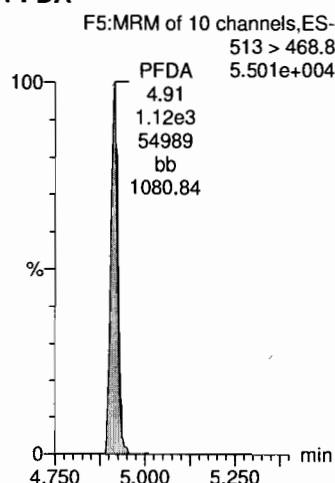
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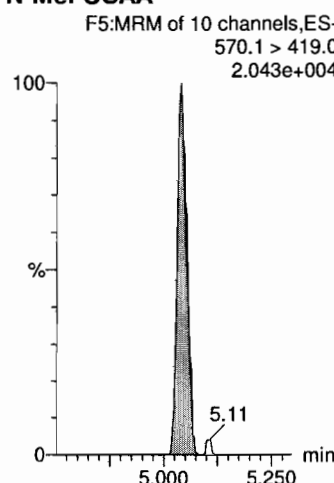
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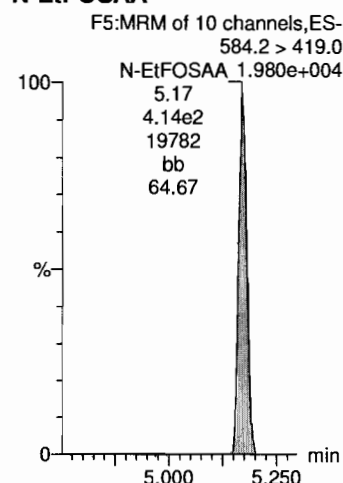
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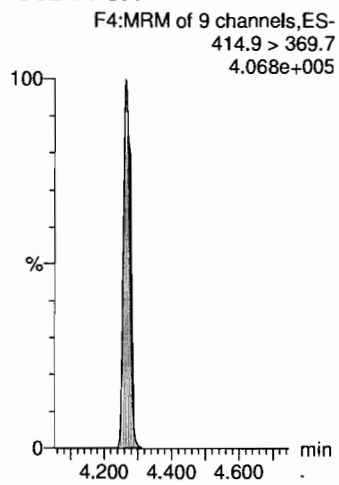
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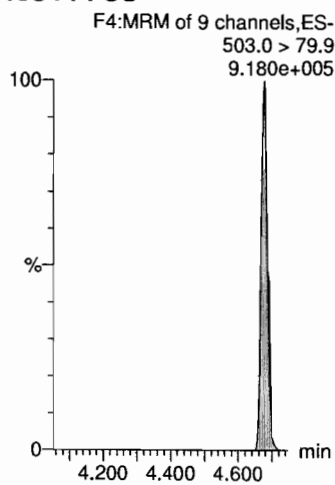
N-EtFOSAA



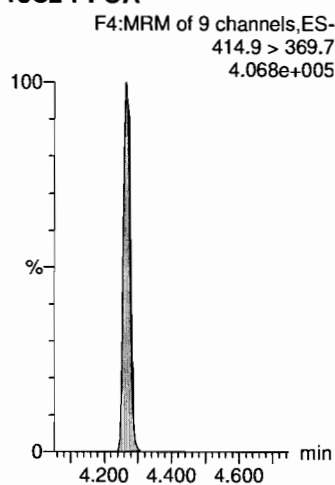
13C2-PFOA



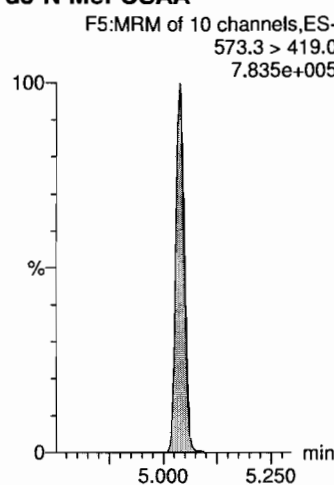
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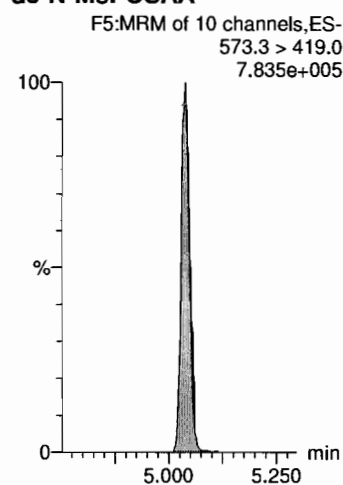
13C2-PFOA



d3-N-MeFOSAA



d3-N-MeFOSAA



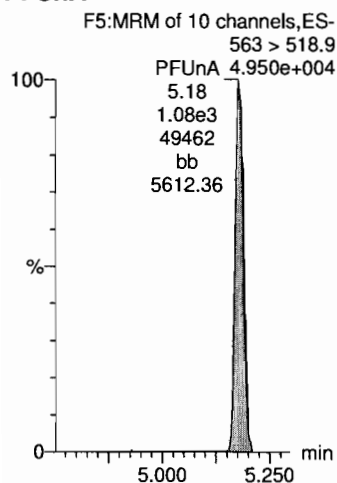
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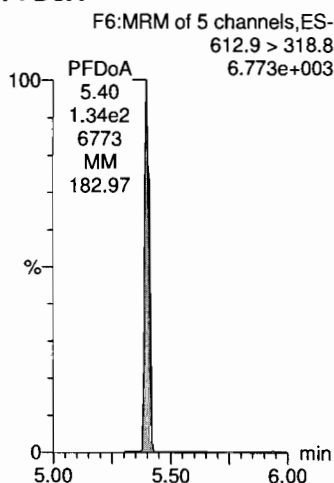
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Name: 180308G4_3, Date: 08-Mar-2018, Time: 18:15:37, ID: ST180308G4-2 PFC CS-2 537 18B2302, Description: PFC CS-2 537 18B2302

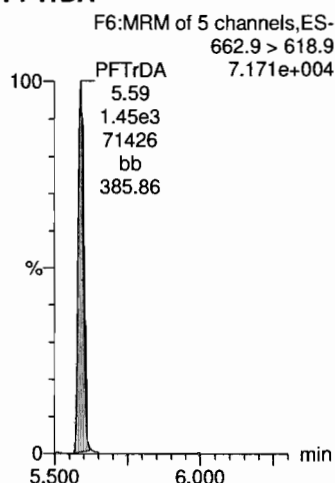
PFUnA



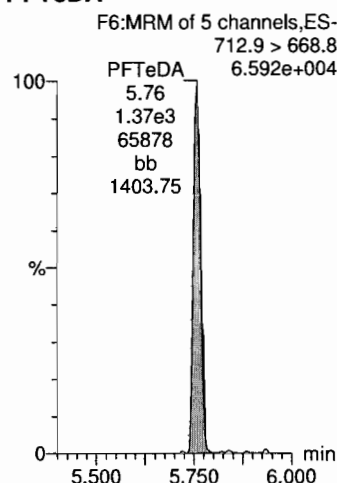
PFDaA



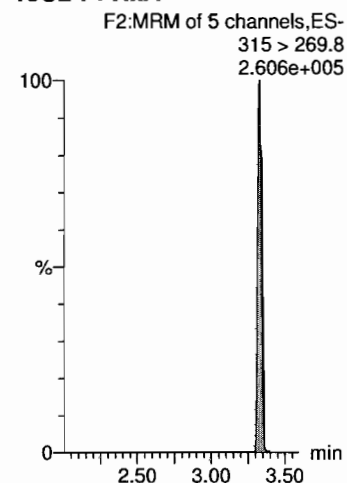
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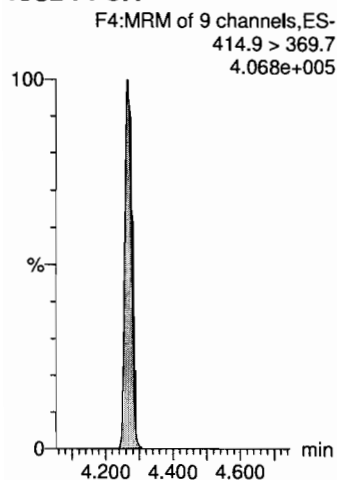
PFTeDA



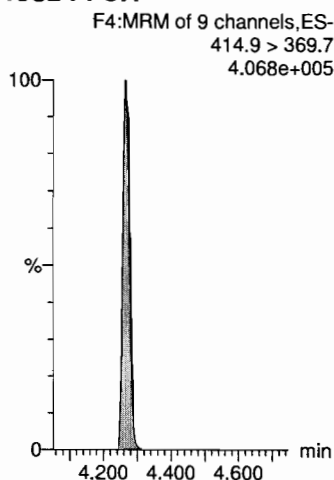
13C2-PFHxA



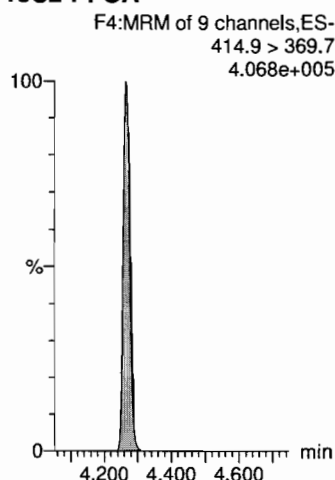
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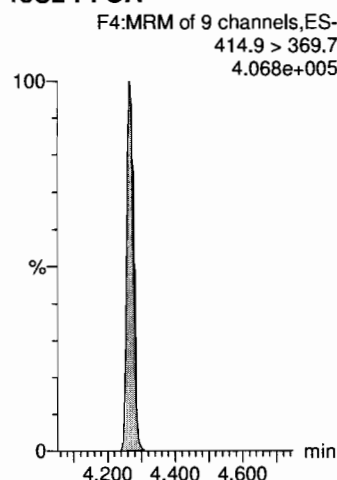
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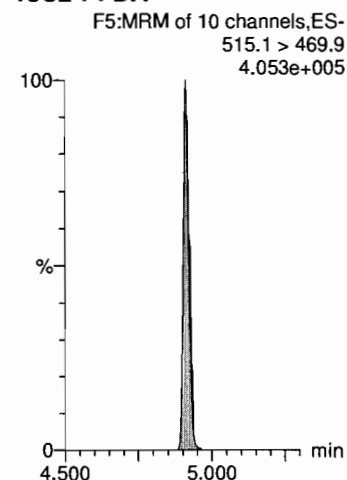
13C2-PFOA



13C2-PFOA



13C2-PFDA



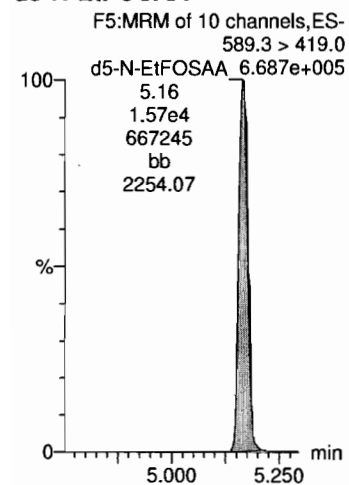
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Last Altered: Friday, March 09, 2018 10:59:51 Pacific Standard Time

Printed: Friday, March 09, 2018 11:24:48 Pacific Standard Time

Name: 180308G4_3, Date: 08-Mar-2018, Time: 18:15:37, ID: ST180308G4-2 PFC CS-2 537 18B2302, Description: PFC CS-2 537 18B2302

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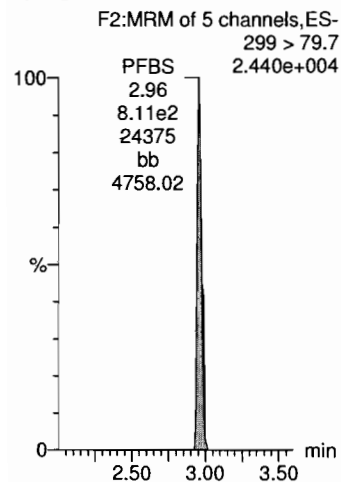
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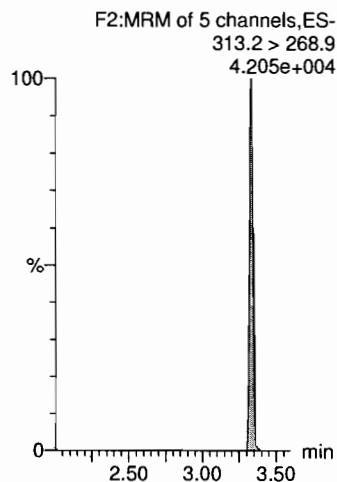
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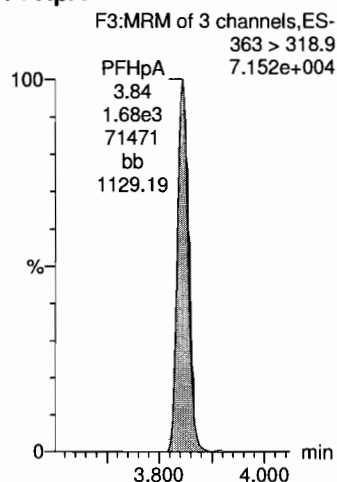
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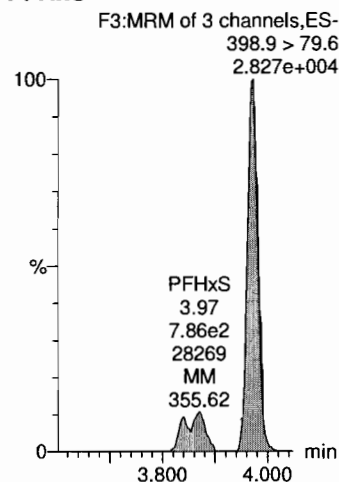
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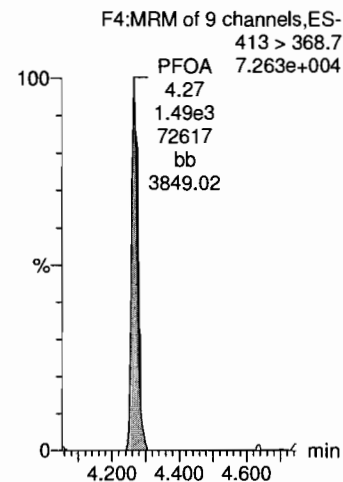
PFHpA



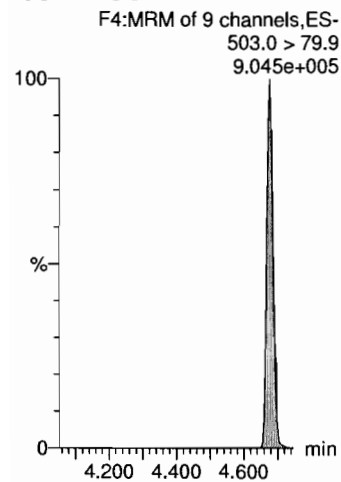
PFHxS



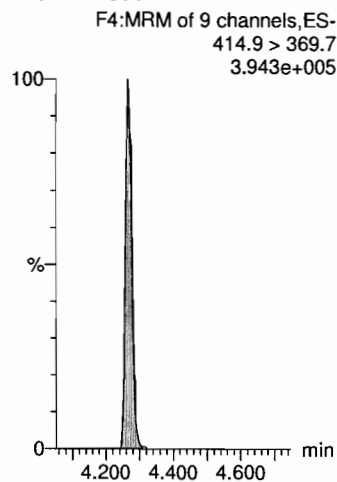
PFOA



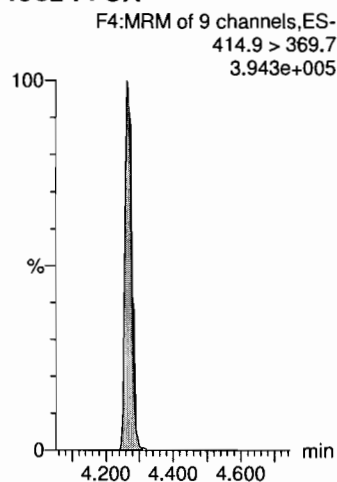
13C4-PFOS



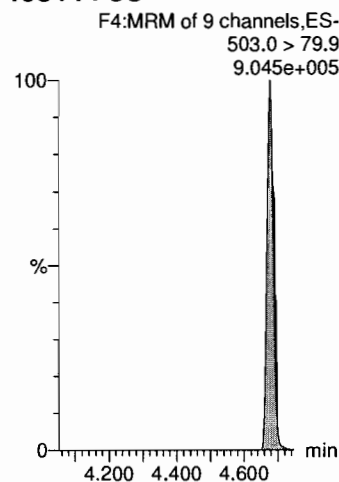
13C2-PFOA



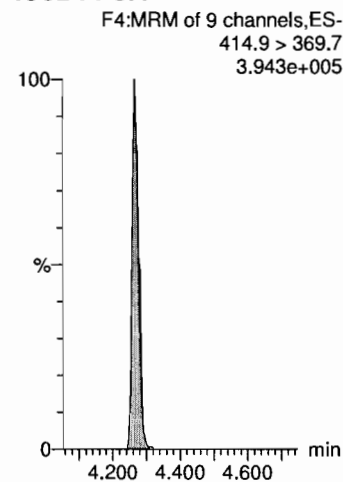
13C2-PFOA



13C4-PFOS



13C2-PFOA



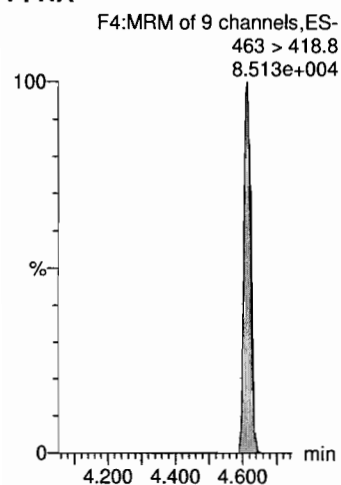
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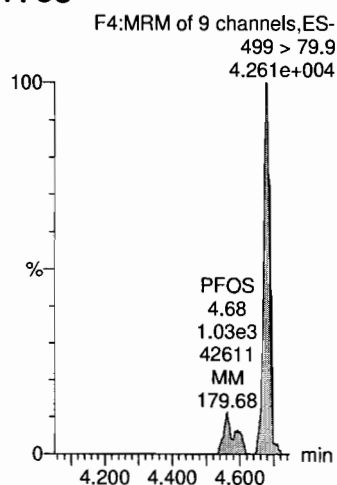
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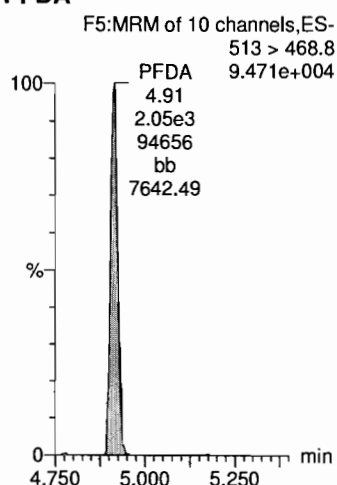
PFNA



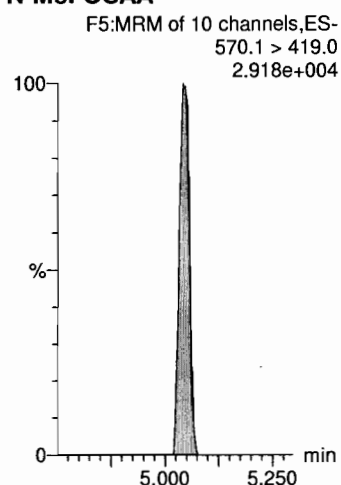
PFOS



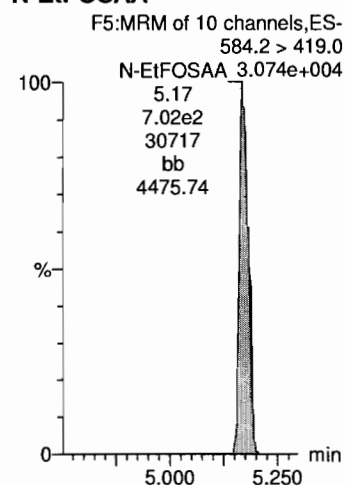
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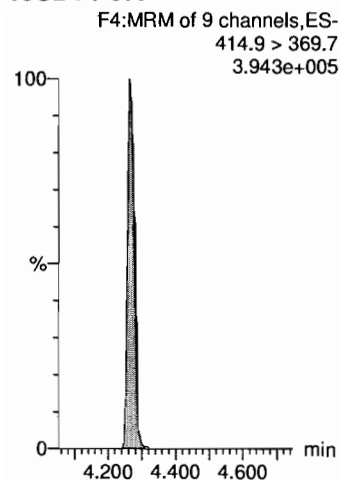
N-MeFOSAA



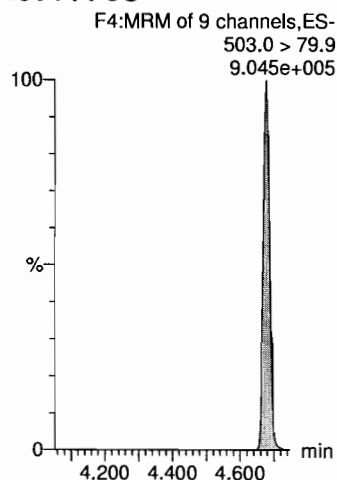
N-EtFOSAA



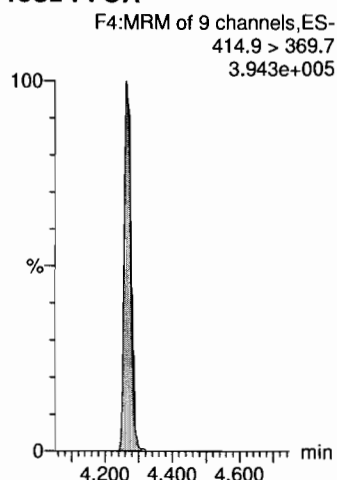
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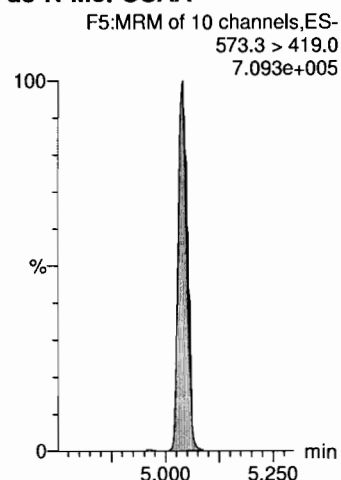
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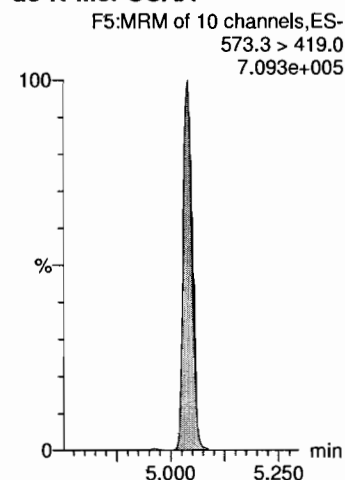
13C2-PFOA



d3-N-MeFOSAA



d3-N-MeFOSAA

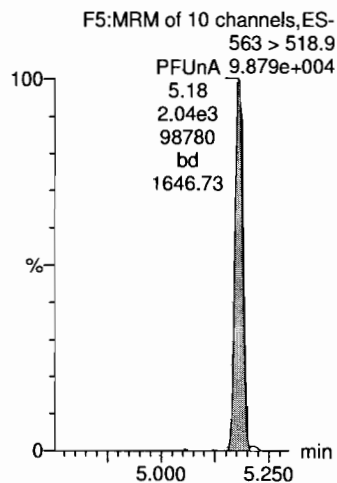


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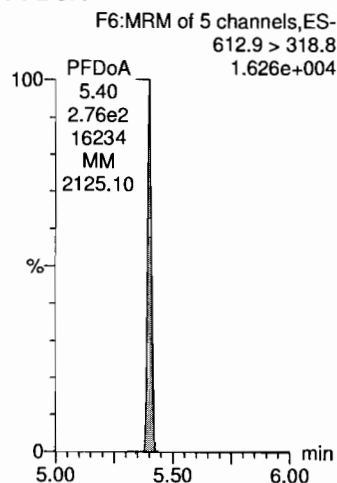
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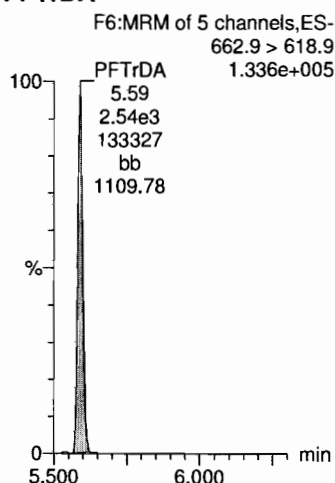
PFUnA



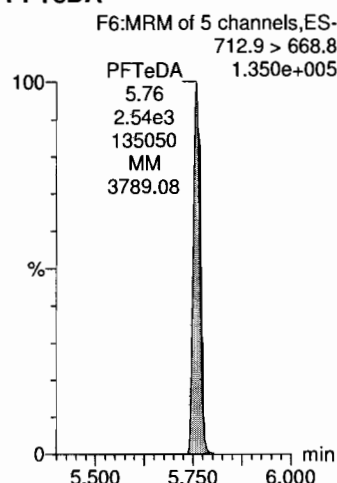
PFDaA



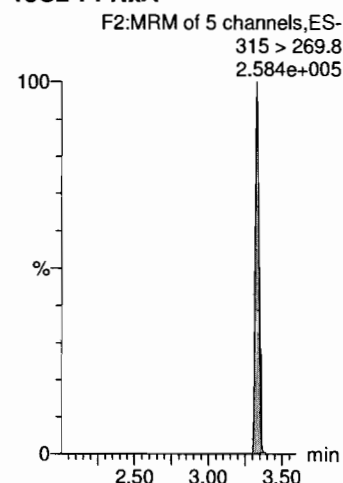
PFTrDA



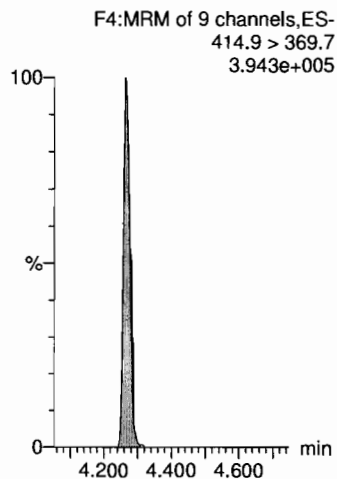
PFTeDA



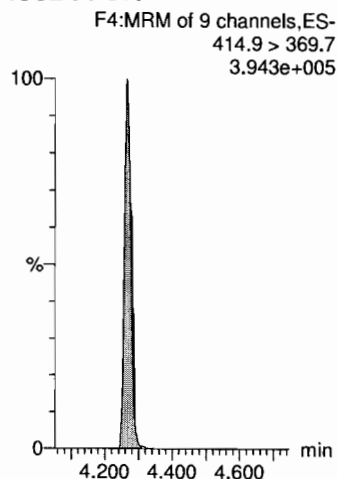
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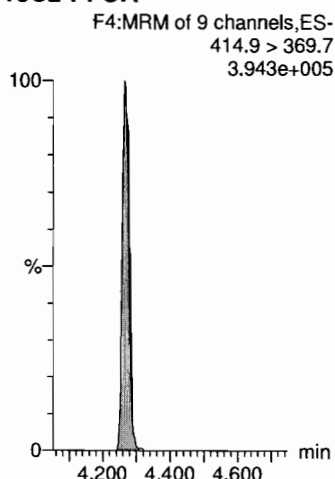
13C2-PFOA



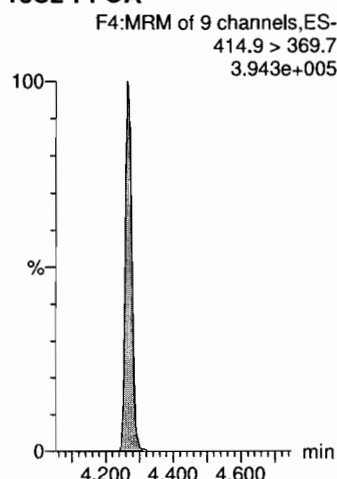
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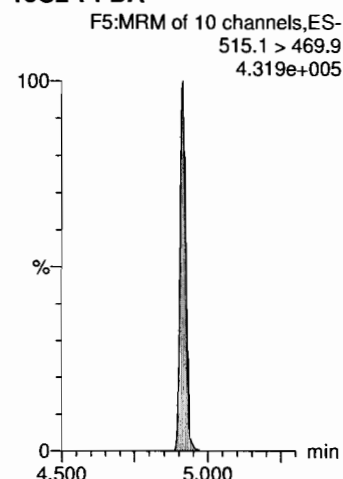
13C2-PFOA



13C2-PFOA



13C2-PFDA



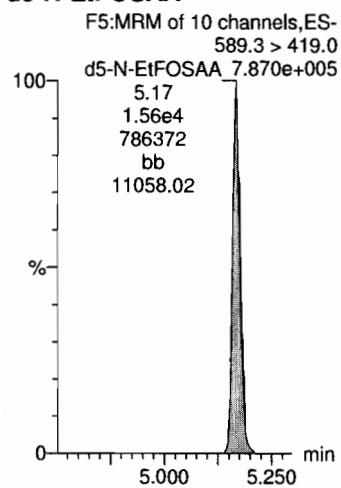
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Name: 180308G4_4, Date: 08-Mar-2018, Time: 18:28:01, ID: ST180308G4-3 PFC CS-1 537 18C0806, Description: PFC CS-1 537 18C0806

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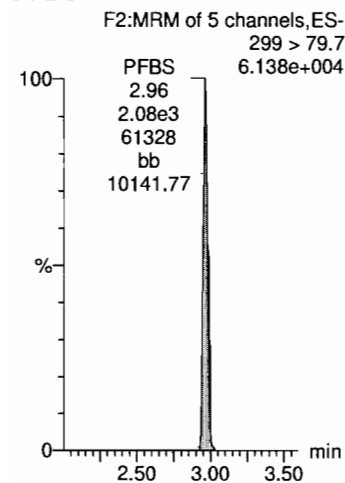
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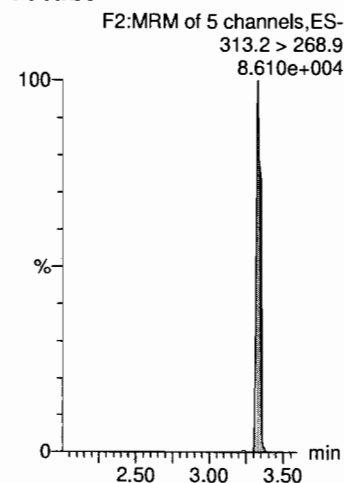
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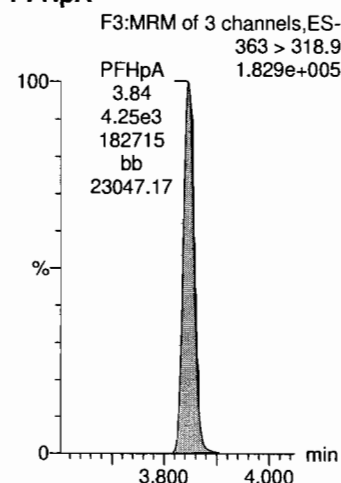
PFBS



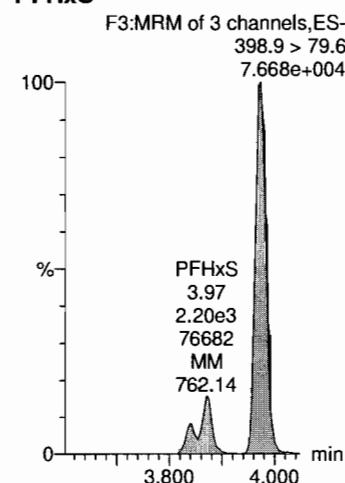
PFHxA



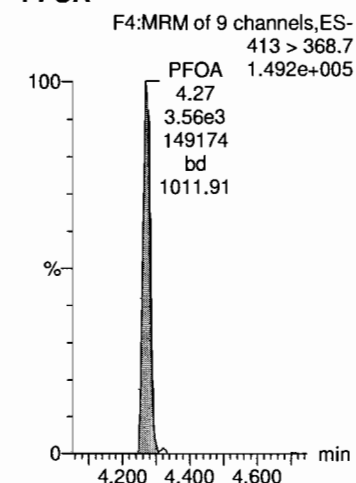
PFHpA



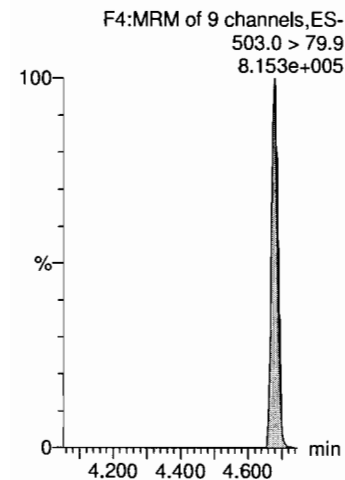
PFHxS



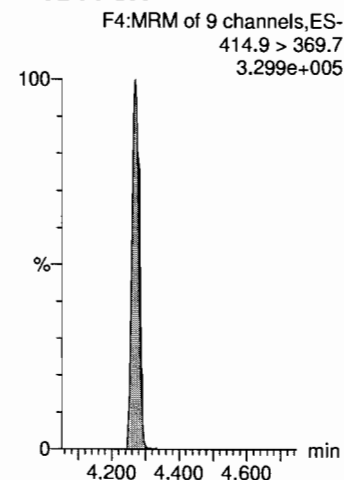
PFOA



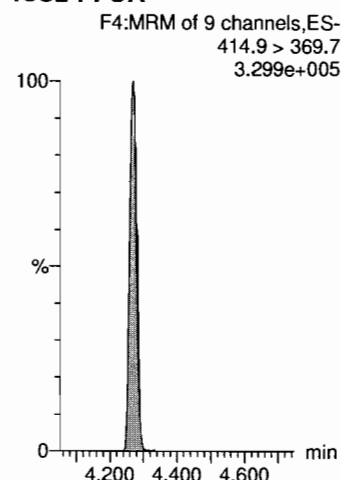
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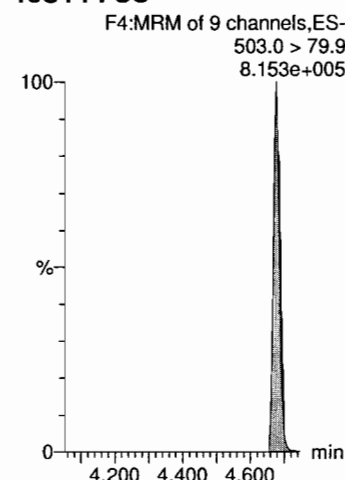
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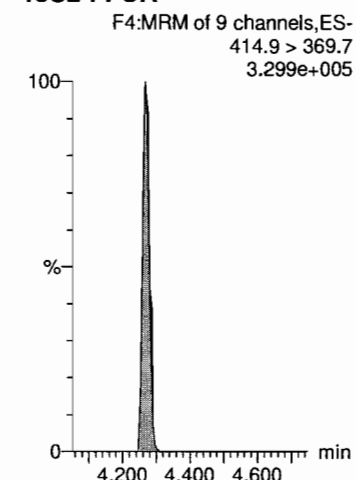
13C2-PFOA



13C4-PFOS



13C2-PFOA



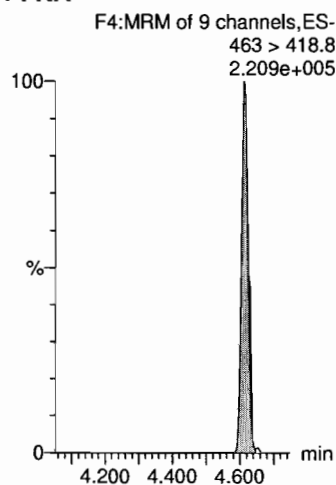
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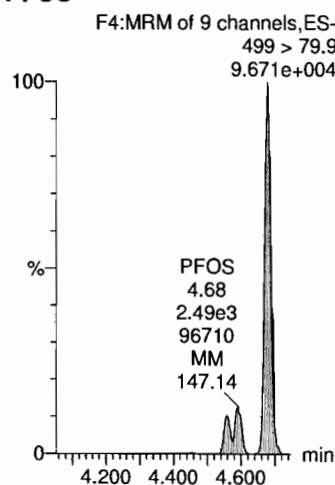
Printed: Friday, March 09, 2018 11:24:48 Pacific Standard Time

Name: 180308G4_5, Date: 08-Mar-2018, Time: 18:40:18, ID: ST180308G4-4 PFC CS0 537 18B2303, Description: PFC CS0 537 18B2303

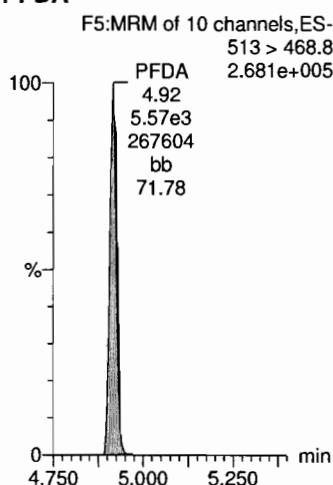
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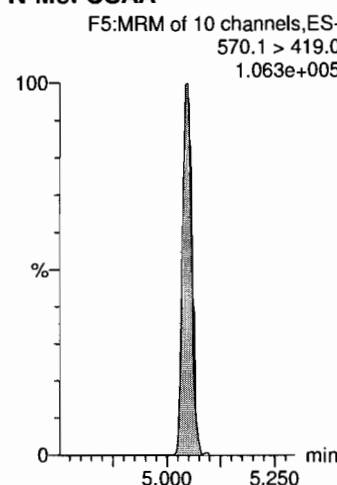
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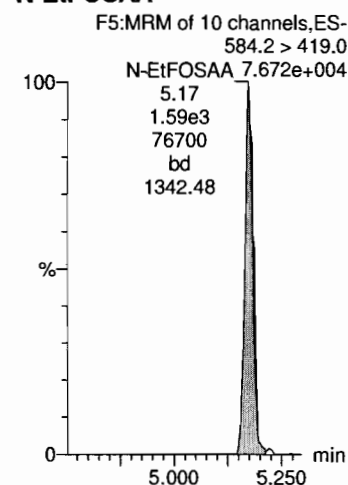
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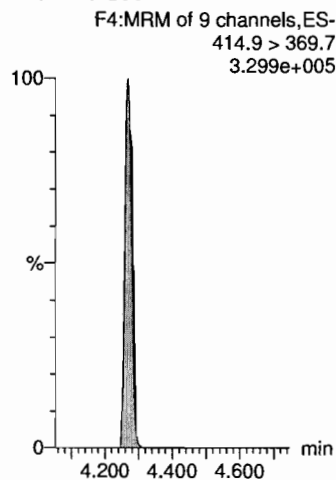
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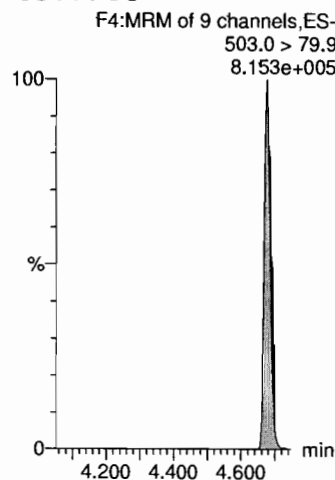
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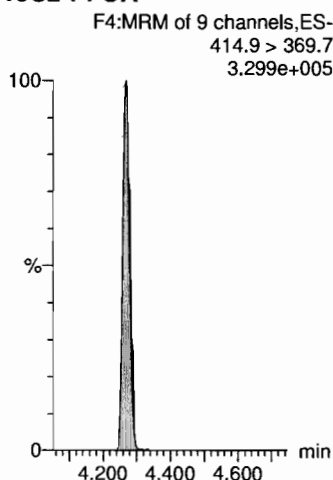
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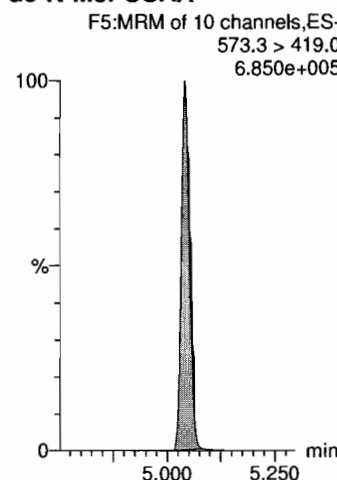
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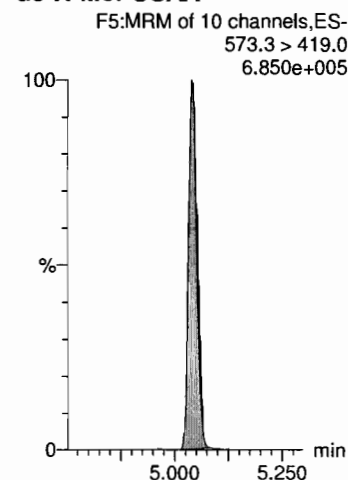
13C2-PFOA



d3-N-MeFOSAA



d3-N-MeFOSAA

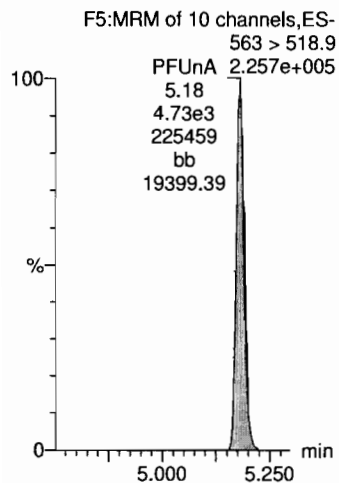


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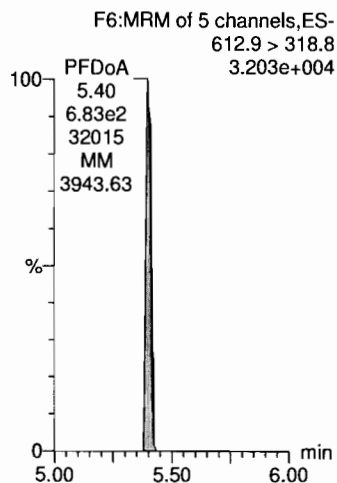
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Printed: Friday, March 09, 2018 11:24:48 Pacific Standard Time

Name: 180308G4_5, Date: 08-Mar-2018, Time: 18:40:18, ID: ST180308G4-4 PFC CS0 537 18B2303, Description: PFC CS0 537 18B2303

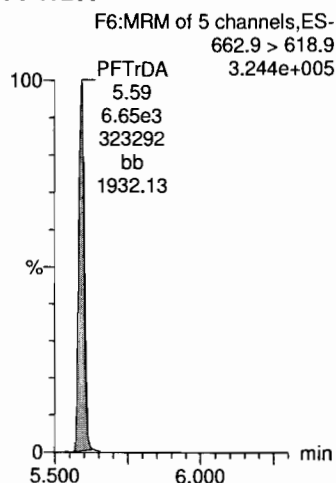
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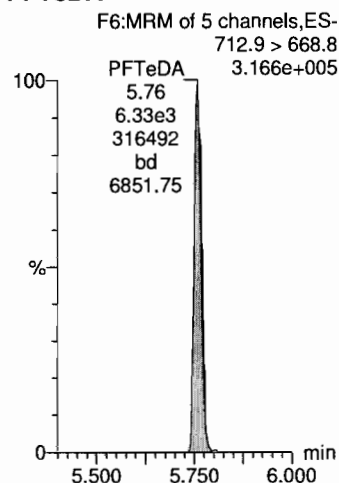
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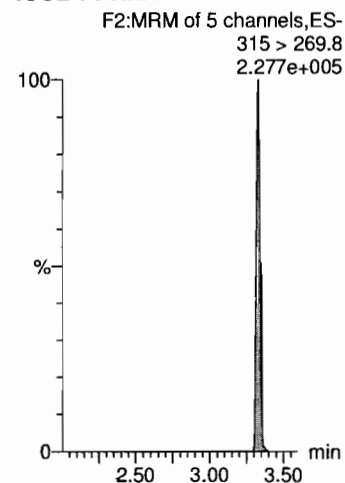
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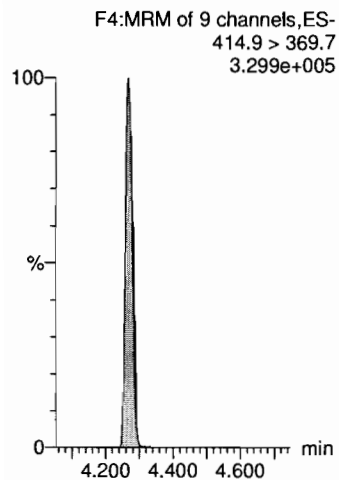
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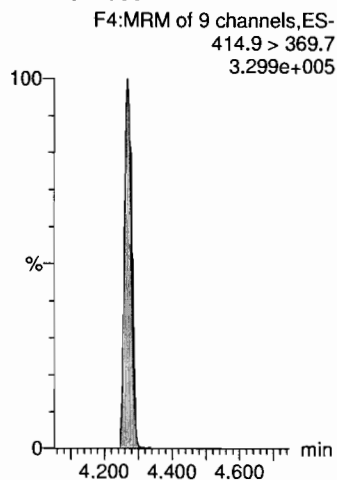
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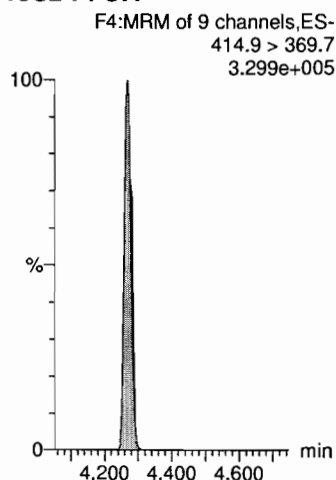
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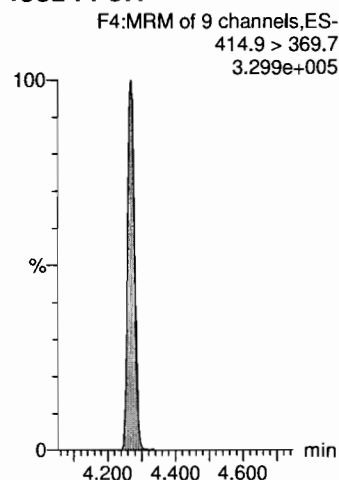
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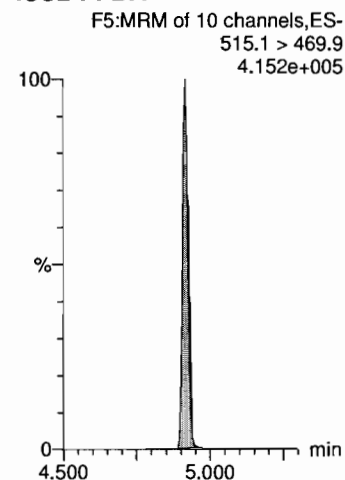
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13C2-PFOA



13C2-PFDA



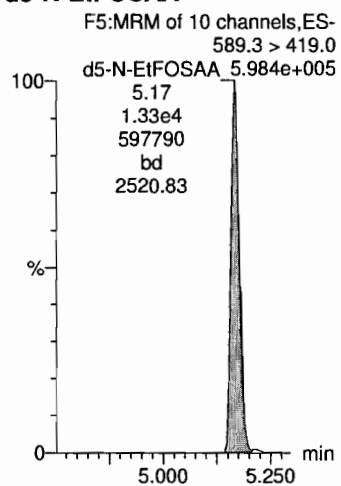
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Name: 180308G4_5, Date: 08-Mar-2018, Time: 18:40:18, ID: ST180308G4-4 PFC CS0 537 18B2303, Description: PFC CS0 537 18B2303

d5-N-EtFOSAA



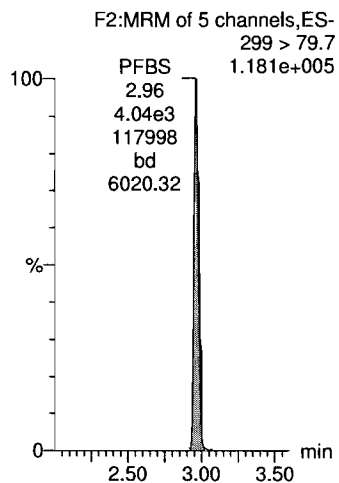
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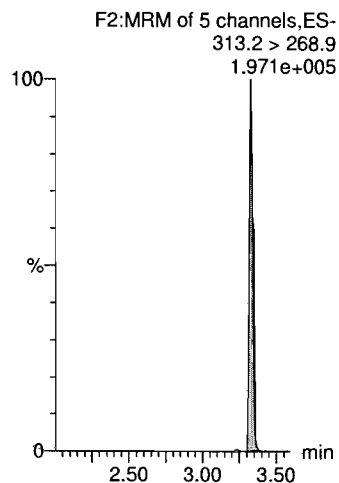
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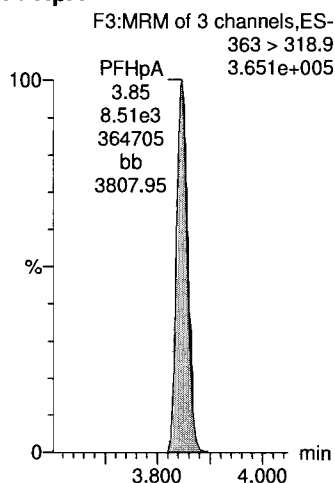
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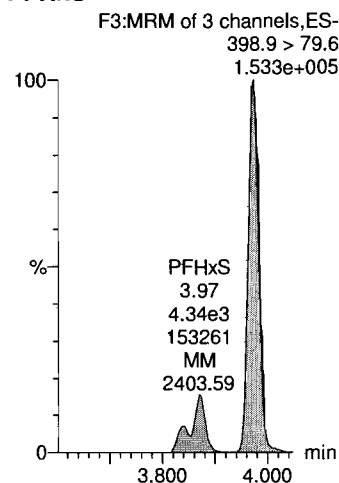
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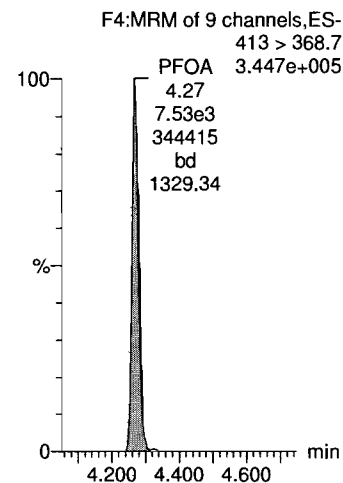
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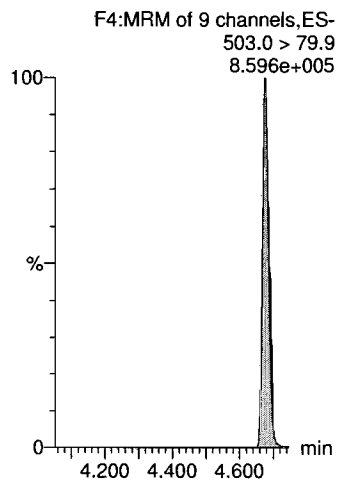
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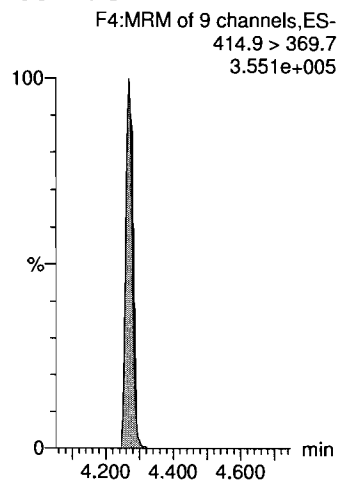
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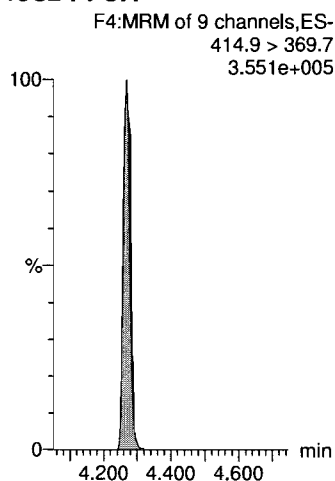
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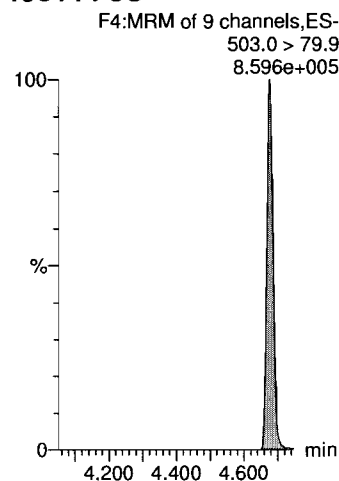
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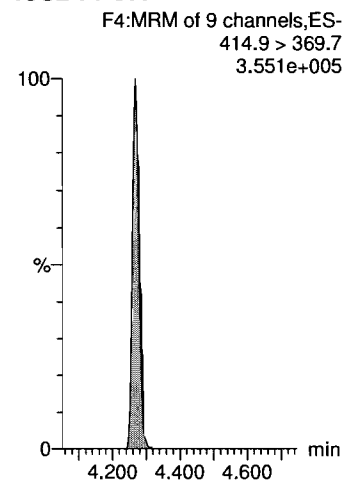
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13C4-PFOS



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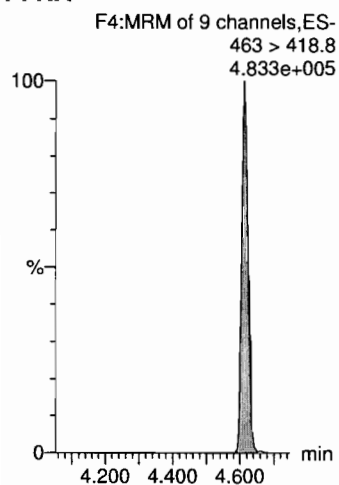


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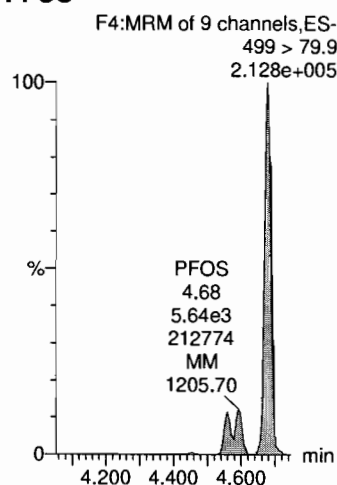
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Name: 180308G4_6, Date: 08-Mar-2018, Time: 18:52:44, ID: ST180308G4-5 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304

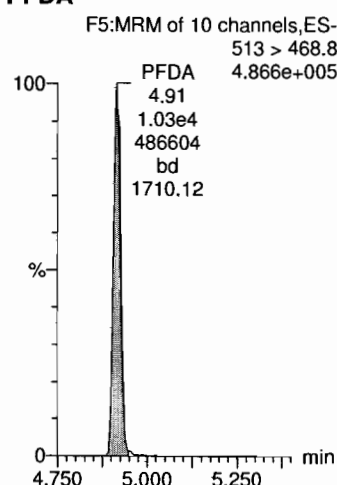
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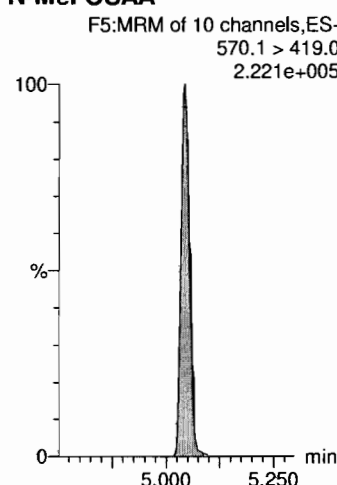
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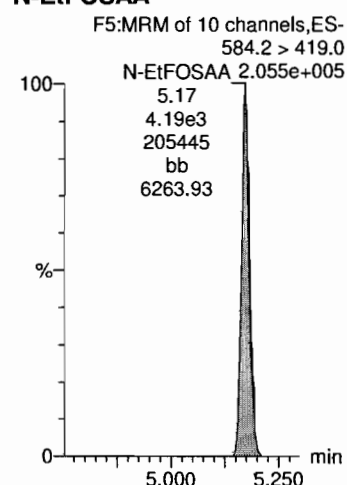
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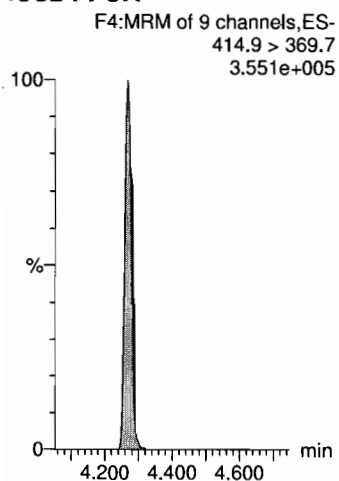
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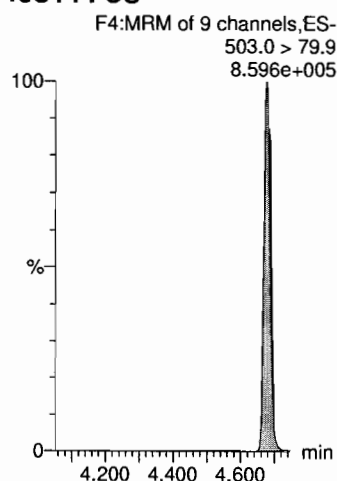
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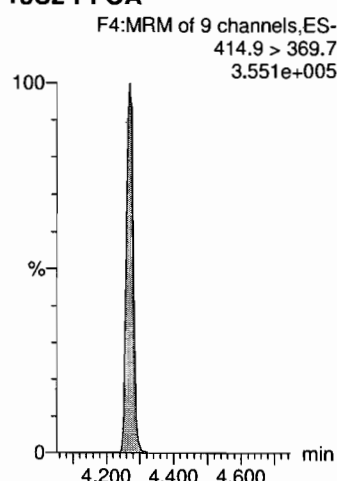
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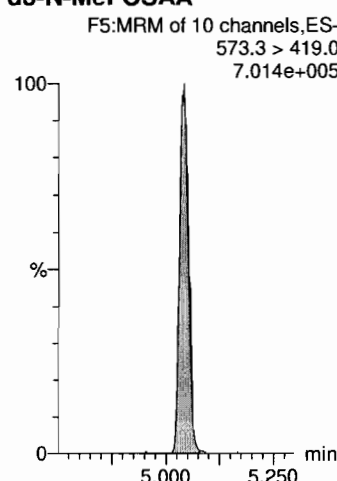
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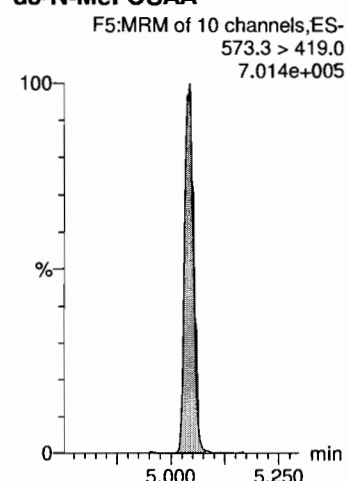
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d3-N-MeFOSAA



d3-N-MeFOSAA



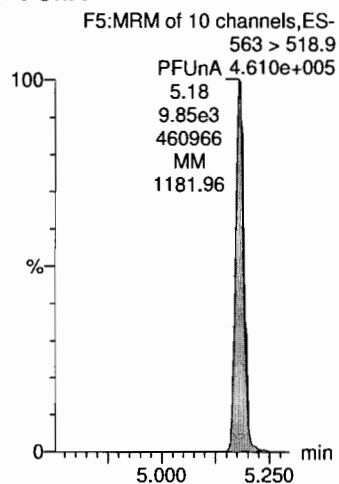
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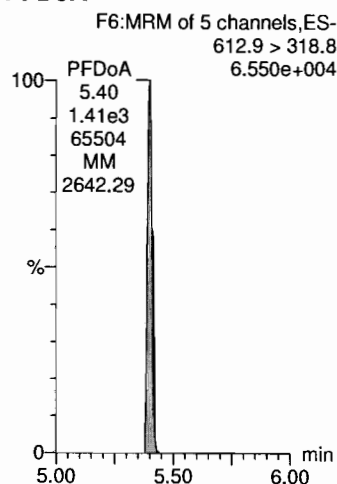
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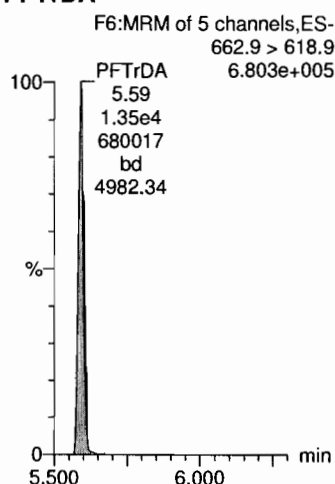
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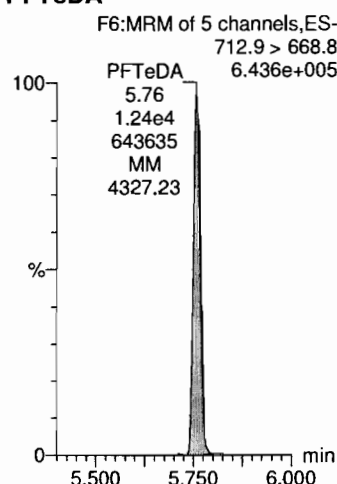
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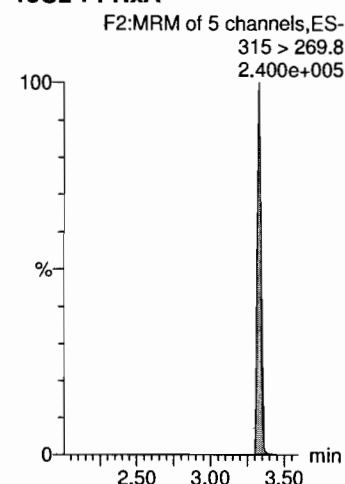
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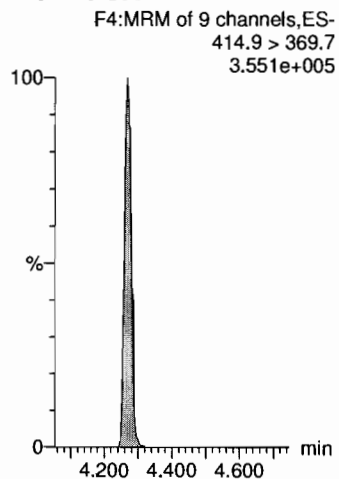
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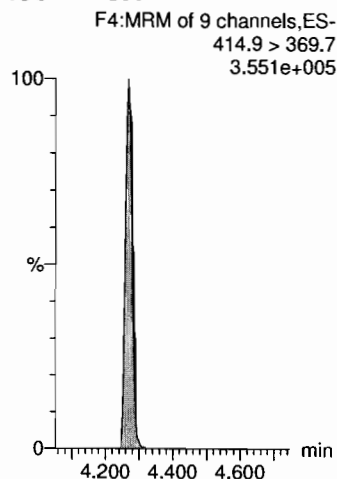
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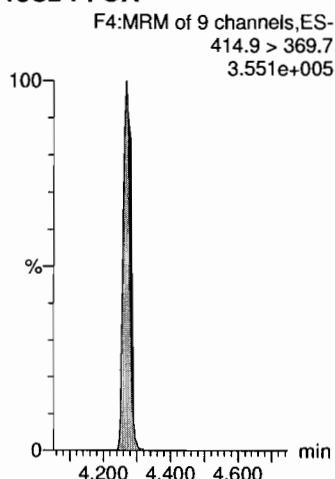
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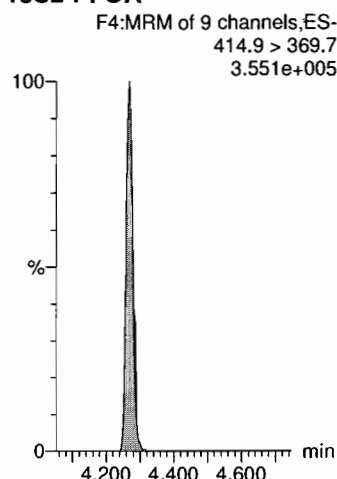
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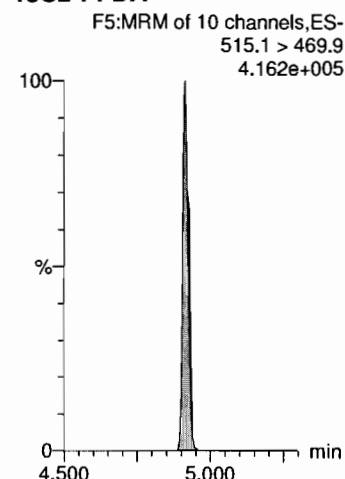
13C2-PFOA



13C2-PFOA



13C2-PFDA



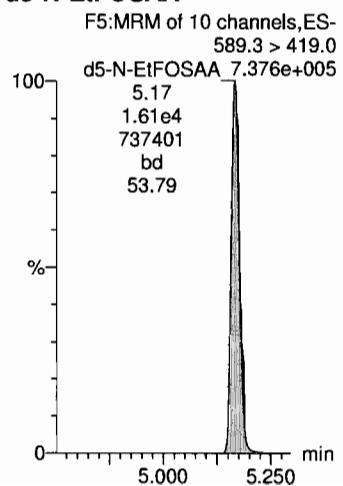
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Printed: Friday, March 09, 2018 11:24:48 Pacific Standard Time

Name: 180308G4_6, Date: 08-Mar-2018, Time: 18:52:44, ID: ST180308G4-5 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304

d5-N-EtFOSAA



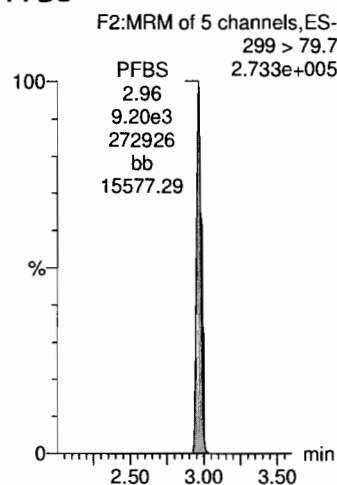
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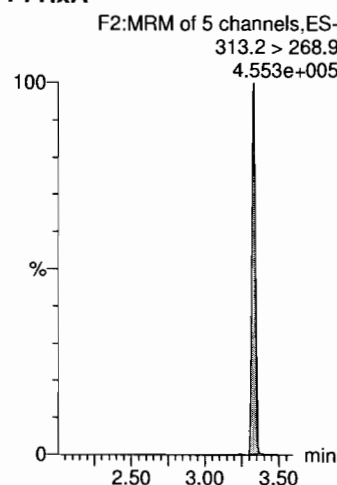
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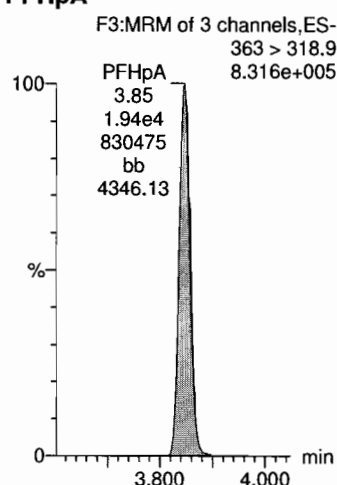
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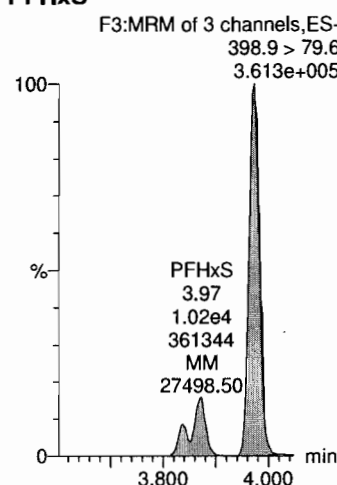
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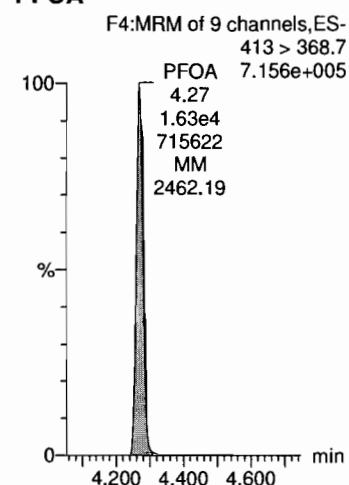
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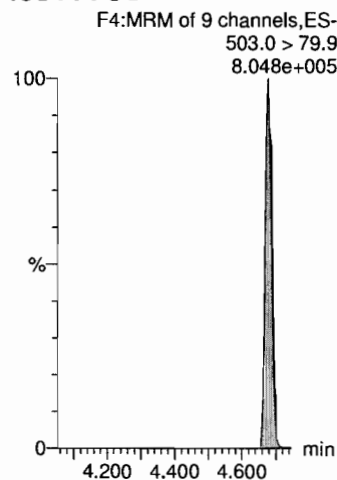
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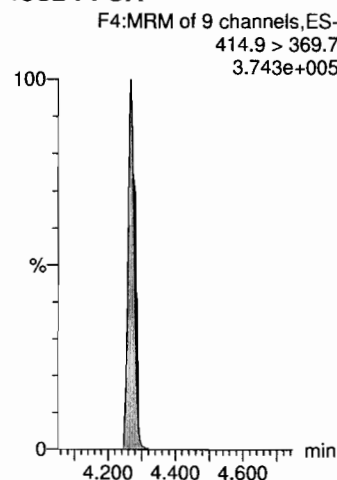
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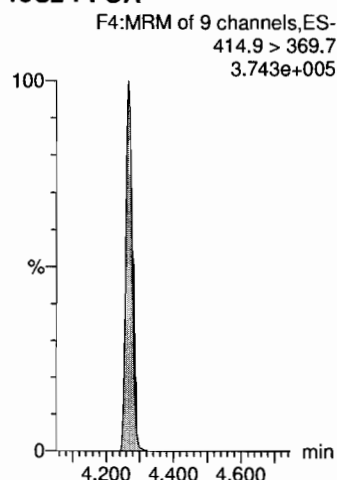
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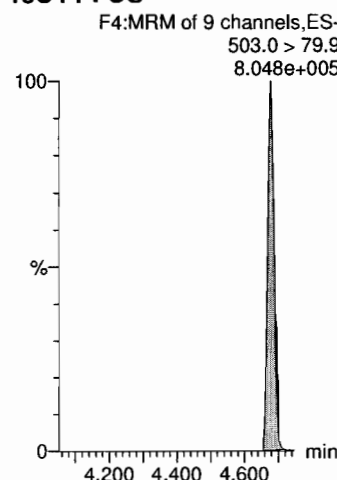
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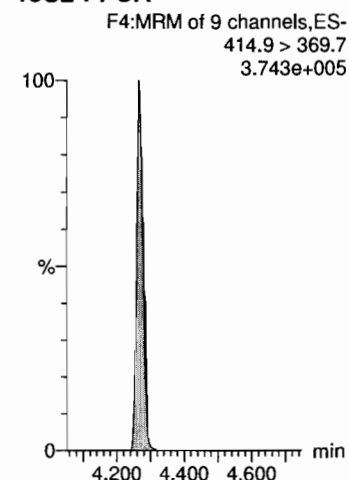
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13C4-PFOS



13C2-PFOA

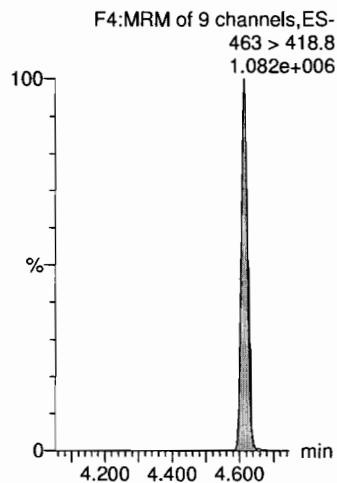


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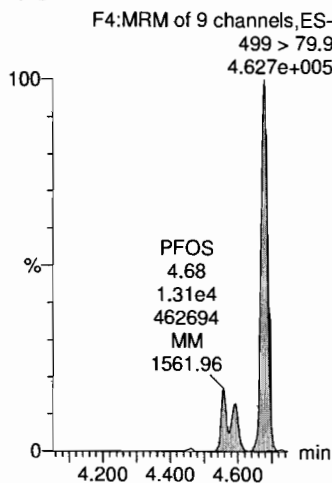
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Name: 180308G4_7, Date: 08-Mar-2018, Time: 19:05:09, ID: ST180308G4-6 PFC CS2 537 18B2305, Description: PFC CS2 537 18B2305

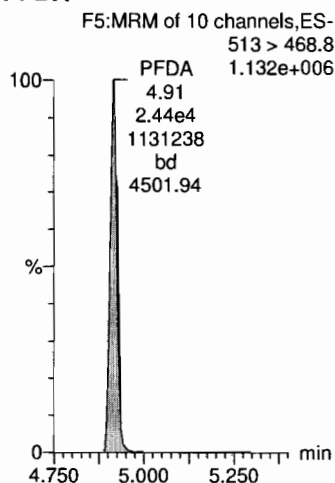
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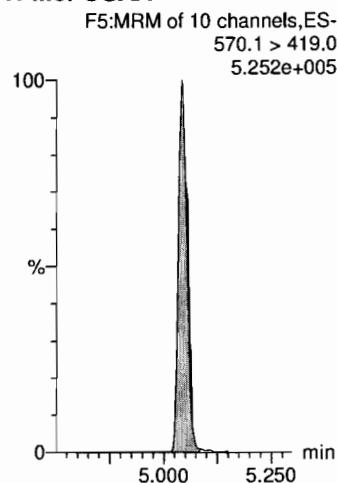
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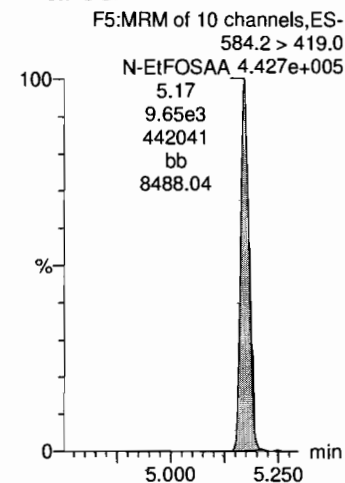
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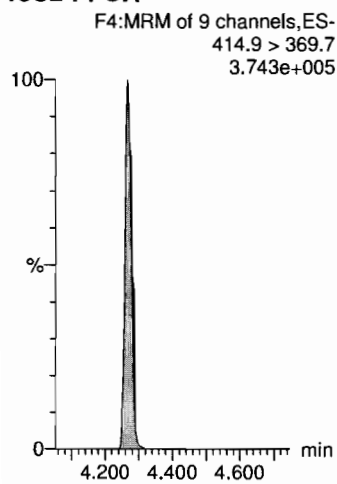
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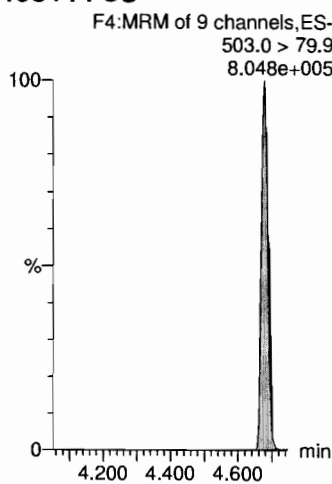
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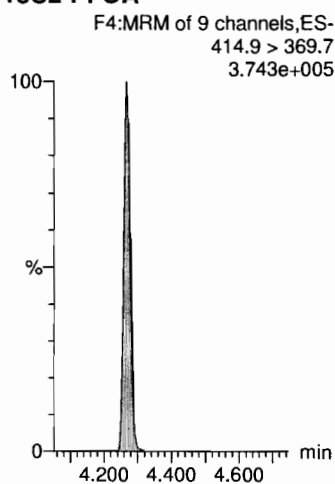
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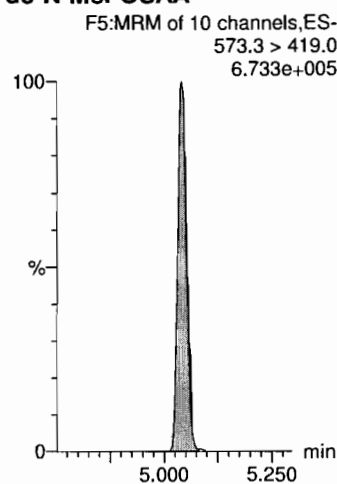
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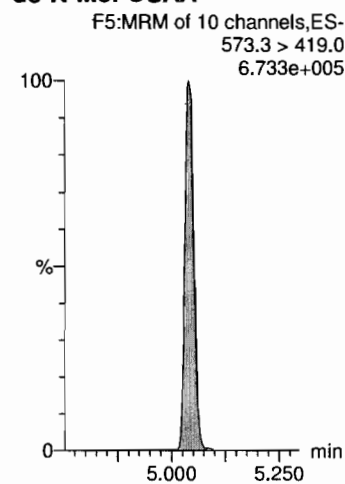
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d3-N-MeFOSAA



d3-N-MeFOSAA



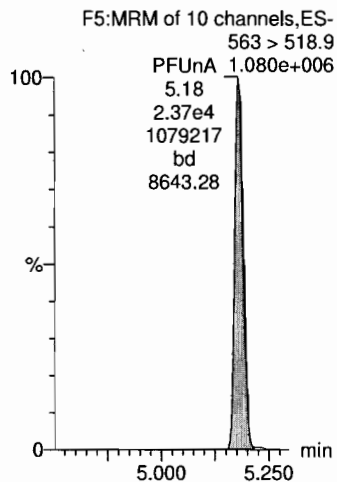
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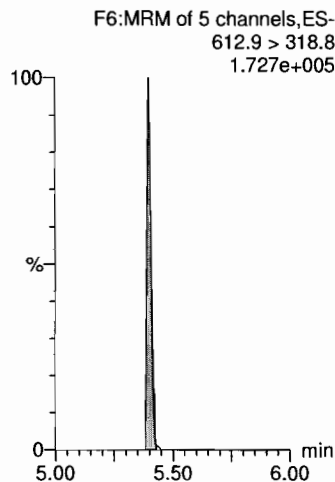
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Name: 180308G4_7, Date: 08-Mar-2018, Time: 19:05:09, ID: ST180308G4-6 PFC CS2 537 18B2305, Description: PFC CS2 537 18B2305

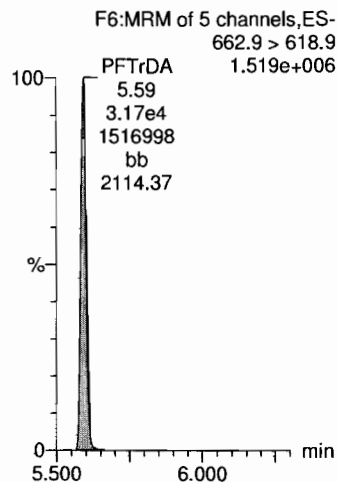
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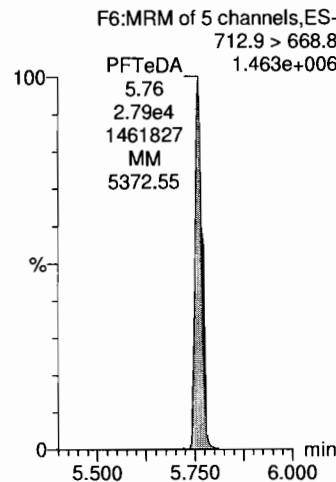
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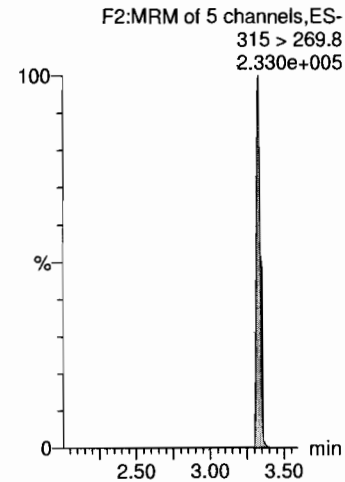
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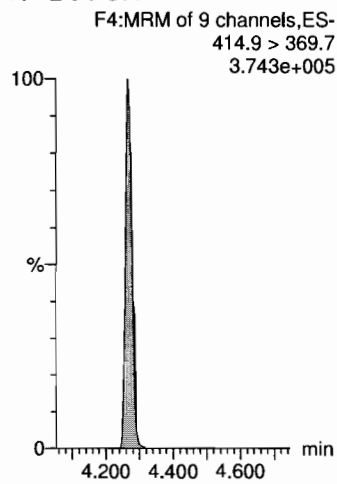
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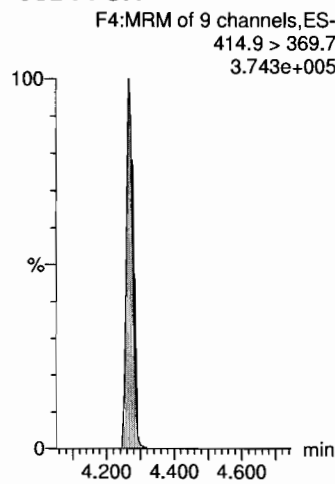
13C2-PFHxA



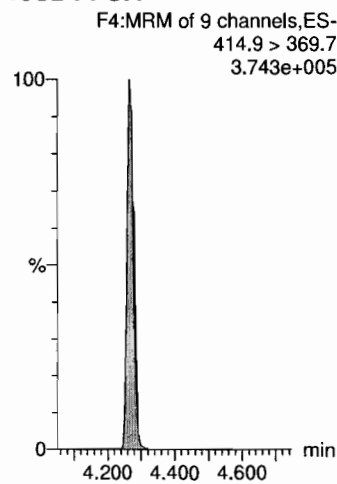
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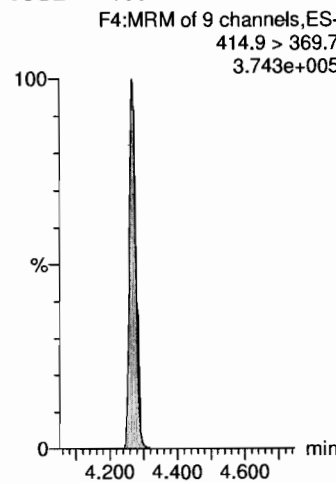
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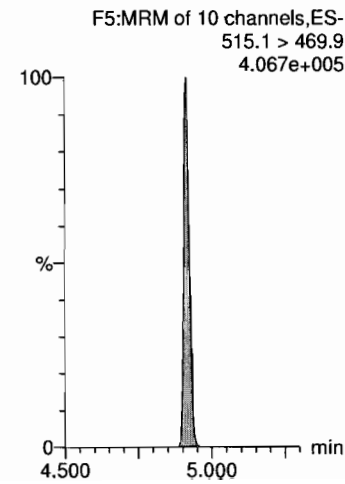
13C2-PFOA



13C2-PFOA



13C2-PFDA



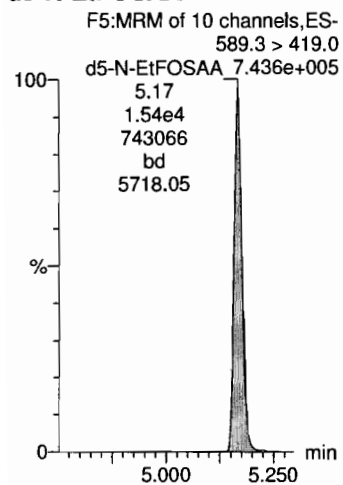
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Name: 180308G4_7, Date: 08-Mar-2018, Time: 19:05:09, ID: ST180308G4-6 PFC CS2 537 18B2305, Description: PFC CS2 537 18B2305

d5-N-EtFOSAA

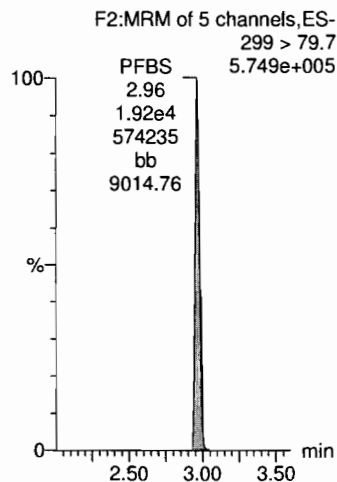


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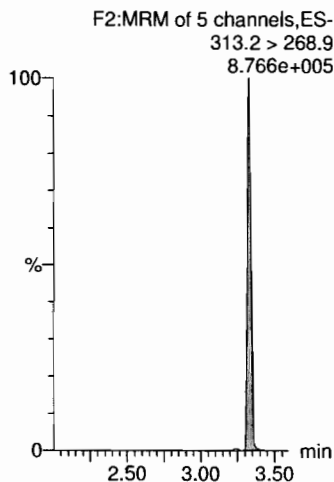
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Name: 180308G4_8, Date: 08-Mar-2018, Time: 19:17:34, ID: ST180308G4-7 PFC CS3 537 18B2306, Description: PFC CS3 537 18B2306

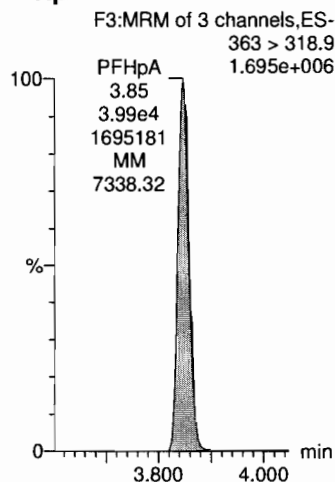
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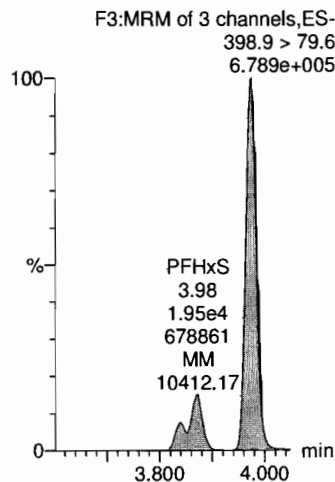
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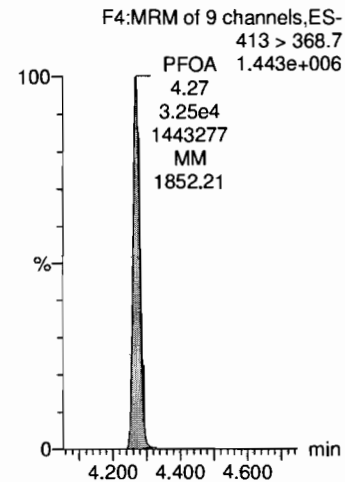
PFHpA



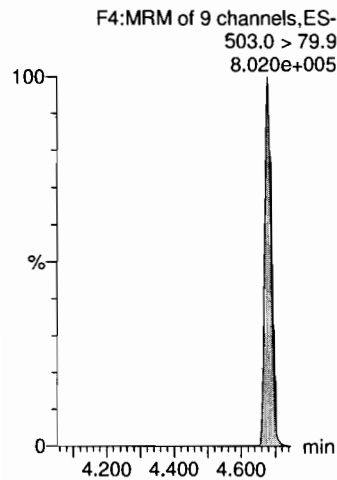
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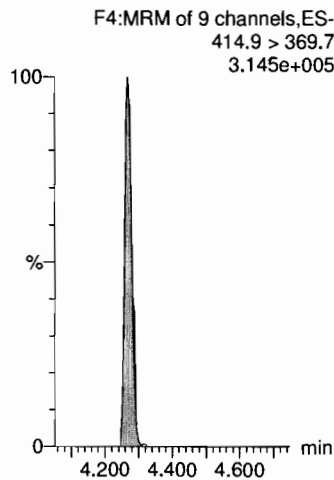
PFOA



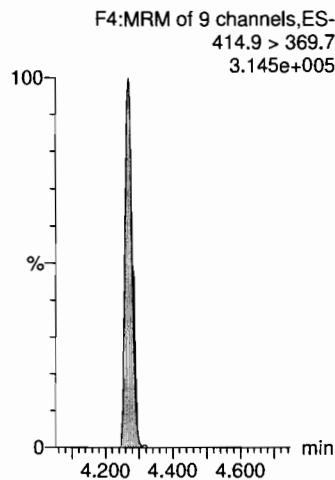
13C4-PFOS



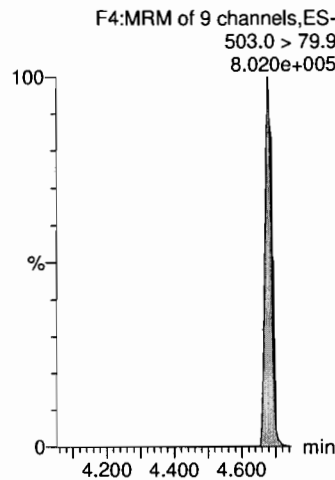
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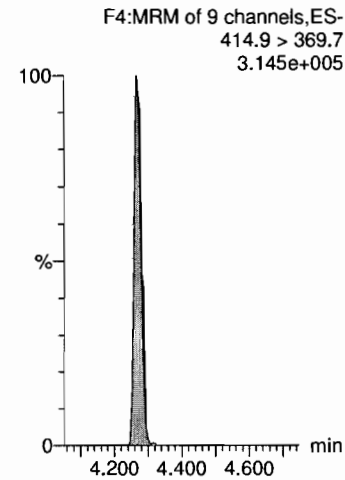
13C2-PFOA



13C4-PFOS



13C2-PFOA

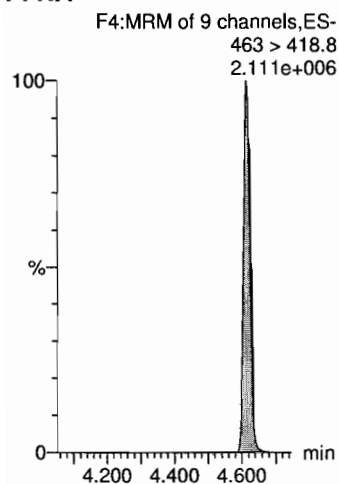


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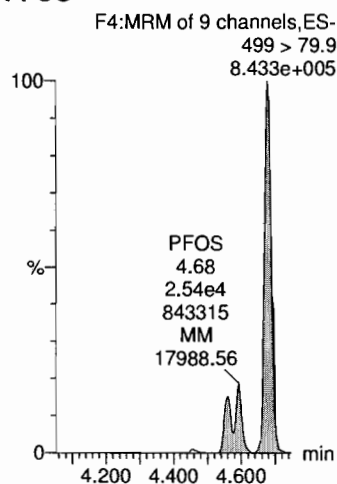
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Name: 180308G4_8, Date: 08-Mar-2018, Time: 19:17:34, ID: ST180308G4-7 PFC CS3 537 18B2306, Description: PFC CS3 537 18B2306

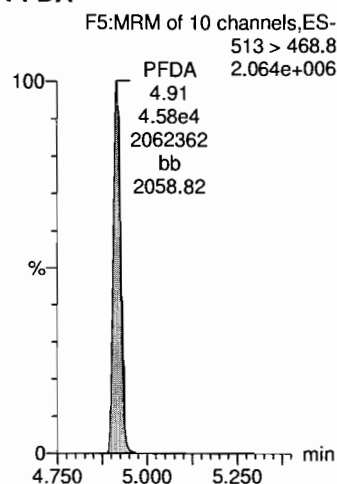
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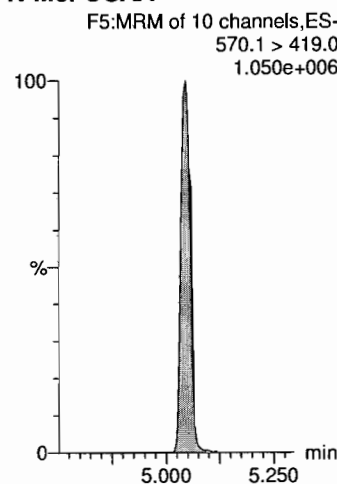
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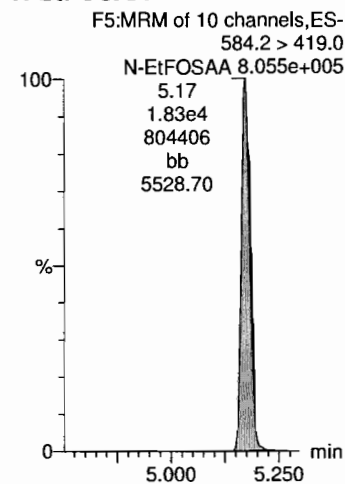
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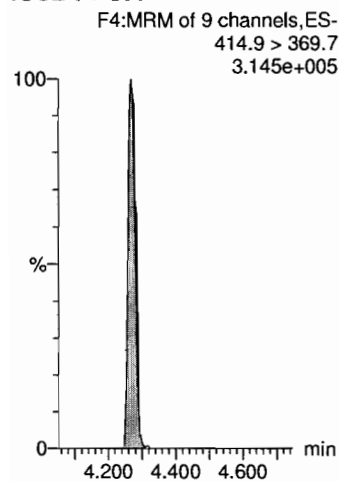
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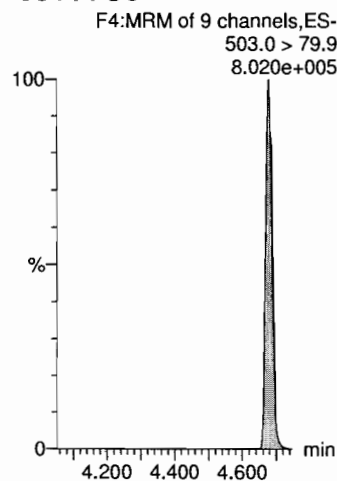
N-EtFOSAA



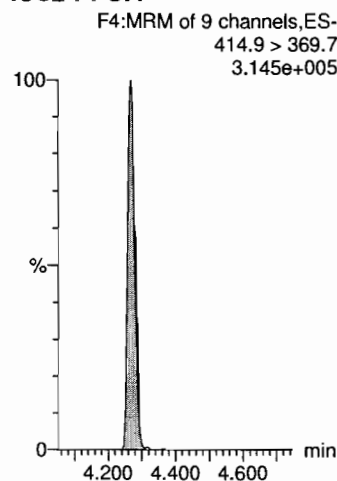
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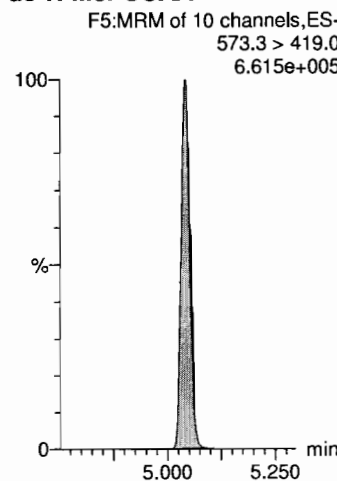
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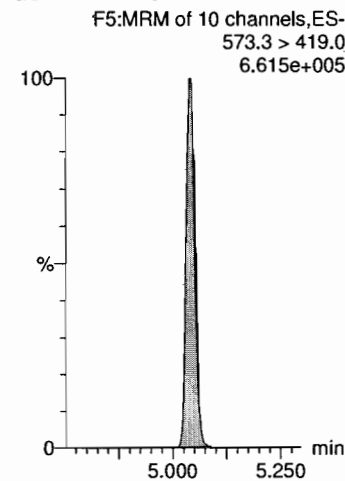
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d3-N-MeFOSAA



d3-N-MeFOSAA

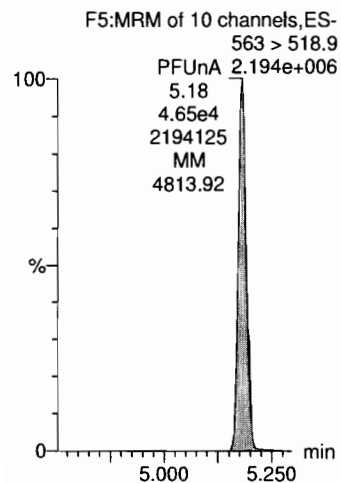


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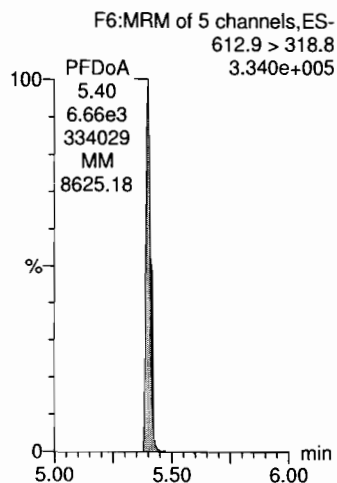
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Name: 180308G4_8, Date: 08-Mar-2018, Time: 19:17:34, ID: ST180308G4-7 PFC CS3 537 18B2306, Description: PFC CS3 537 18B2306

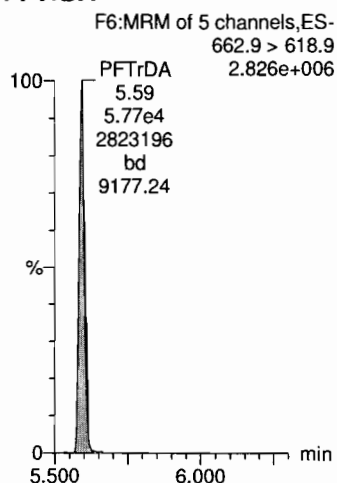
PFUnA



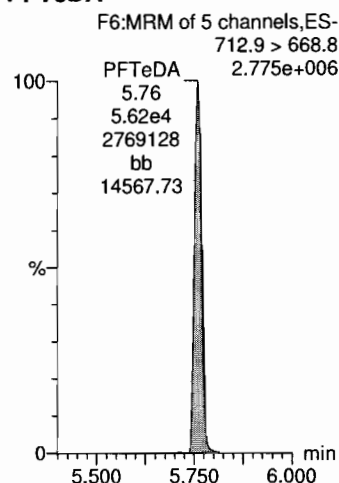
PFDaA



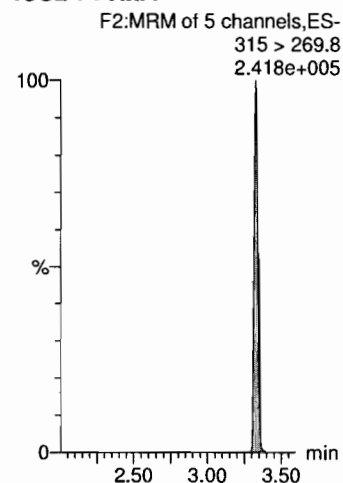
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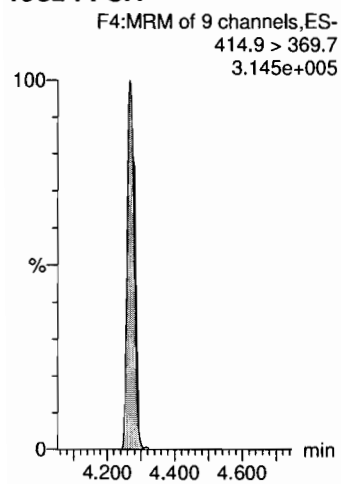
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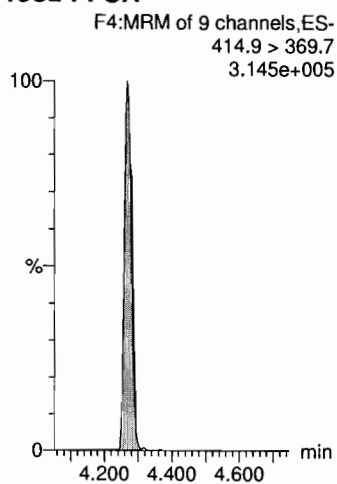
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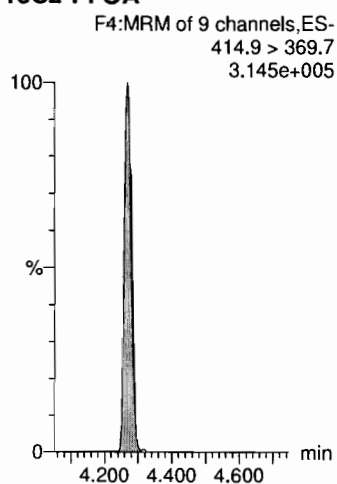
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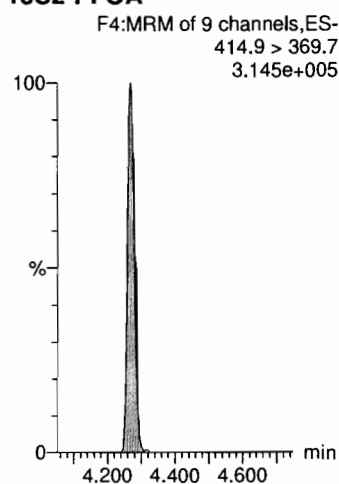
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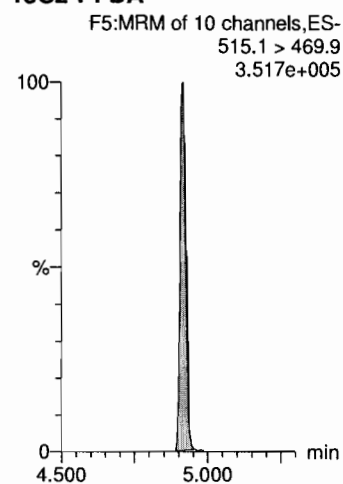
13C2-PFOA



13C2-PFOA



13C2-PFDA

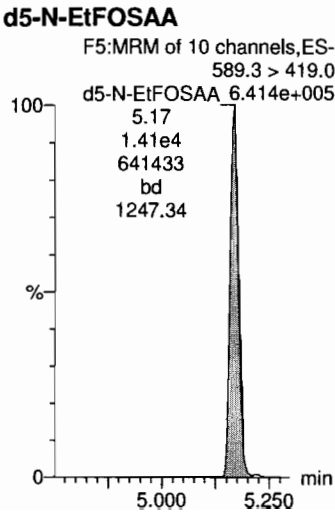


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Name: 180308G4_8, Date: 08-Mar-2018, Time: 19:17:34, ID: ST180308G4-7 PFC CS3 537 18B2306, Description: PFC CS3 537 18B2306



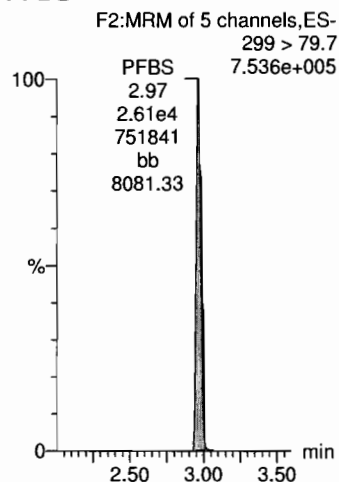
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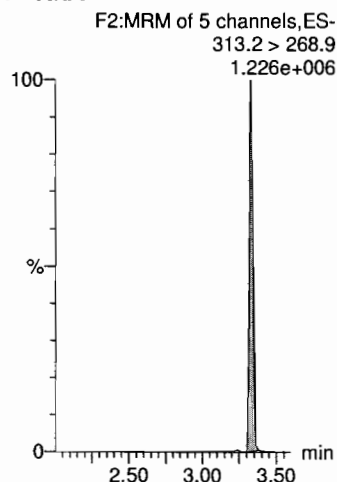
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Name: 180308G4_9, Date: 08-Mar-2018, Time: 19:29:59, ID: ST180308G4-8 PFC CS4 537 18B2307, Description: PFC CS4 537 18B2307

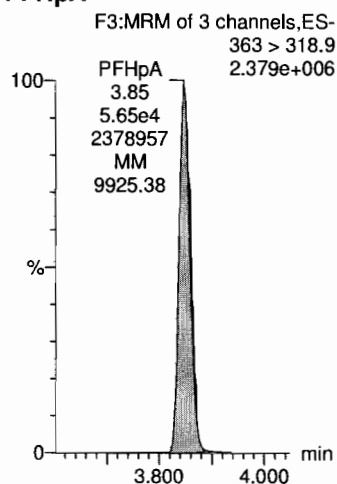
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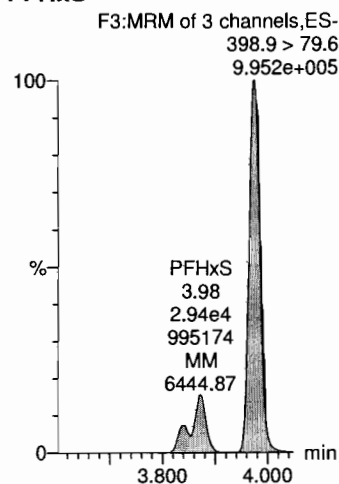
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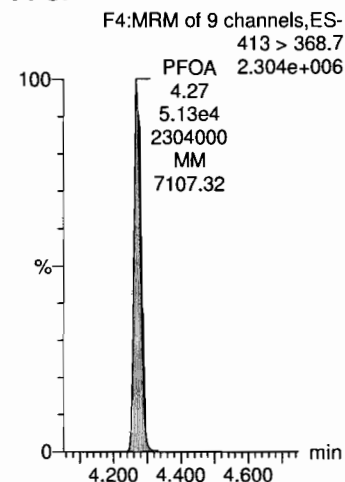
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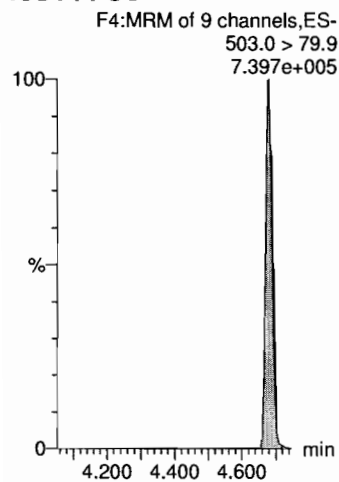
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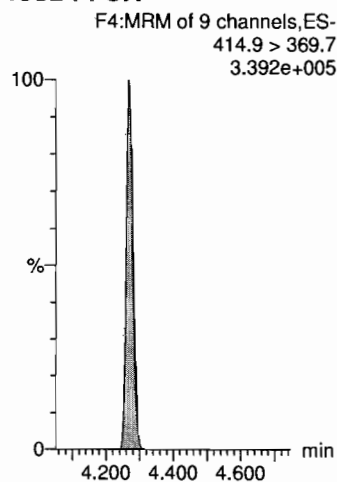
PFOA



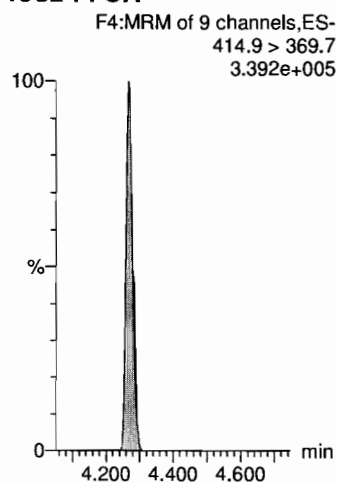
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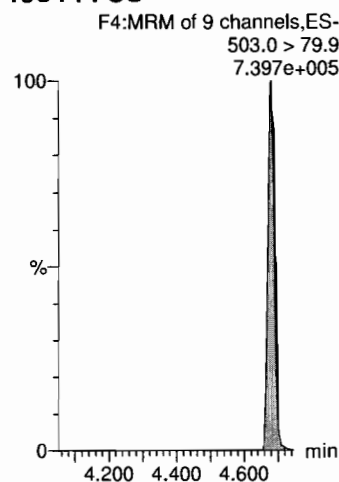
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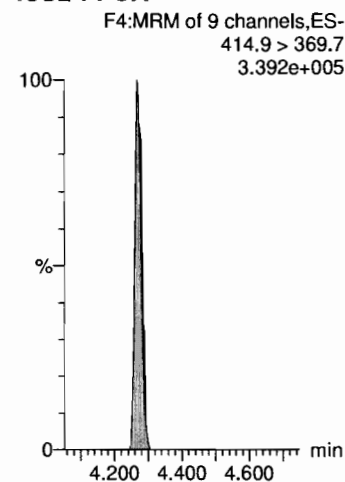
13C2-PFOA



13C4-PFOS



13C2-PFOA

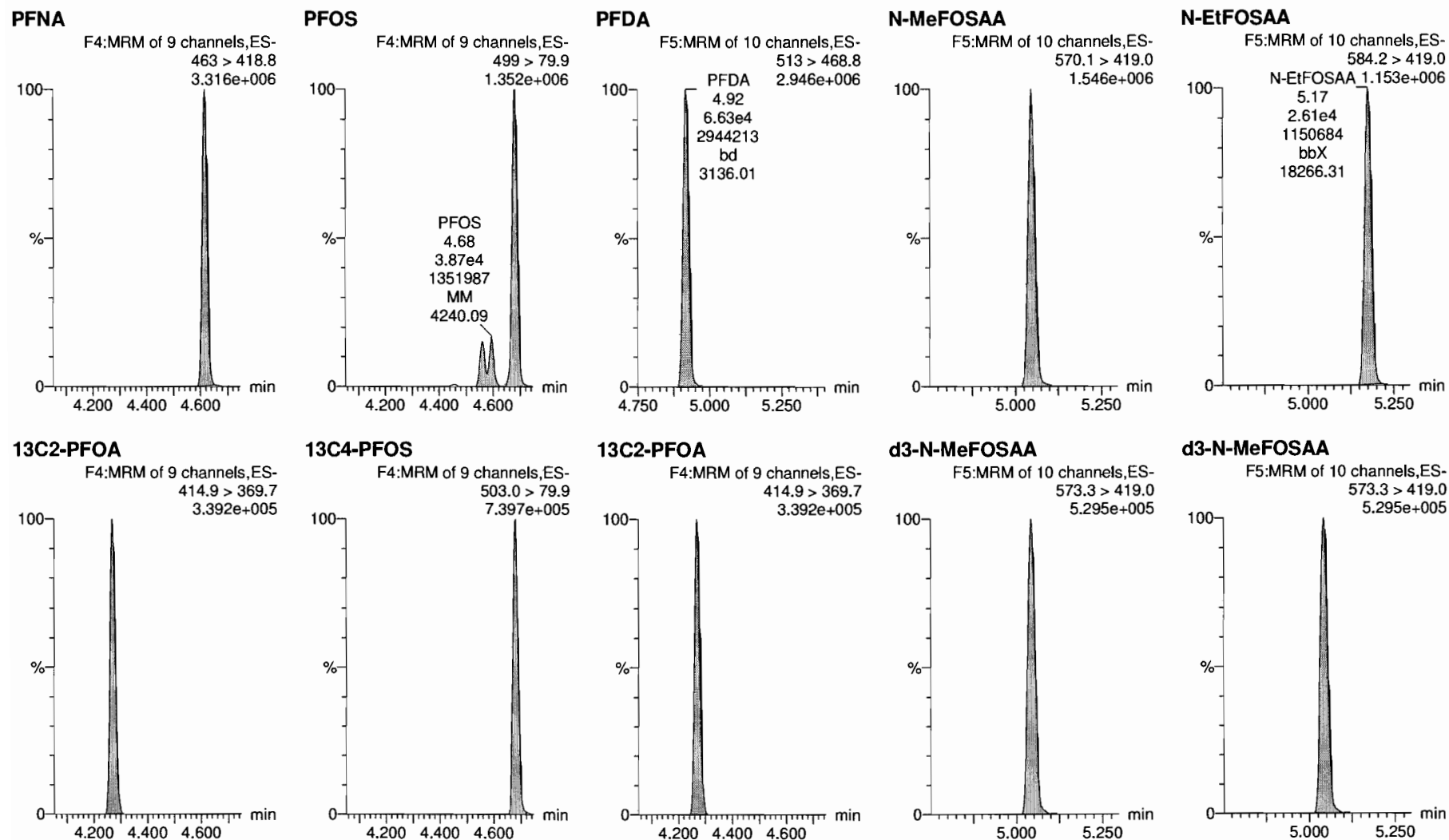


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Name: 180308G4_9, Date: 08-Mar-2018, Time: 19:29:59, ID: ST180308G4-8 PFC CS4 537 18B2307, Description: PFC CS4 537 18B2307



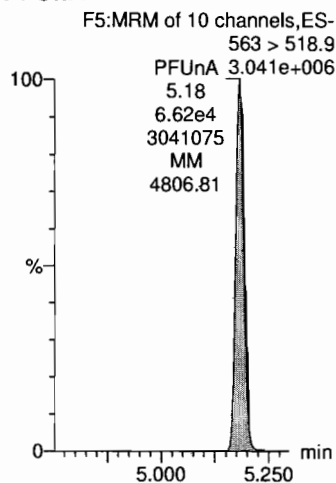
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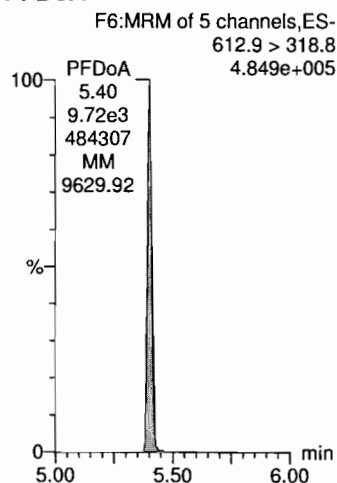
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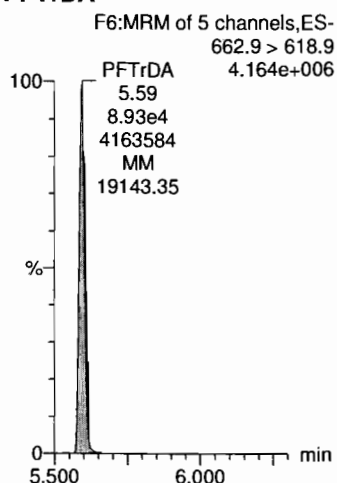
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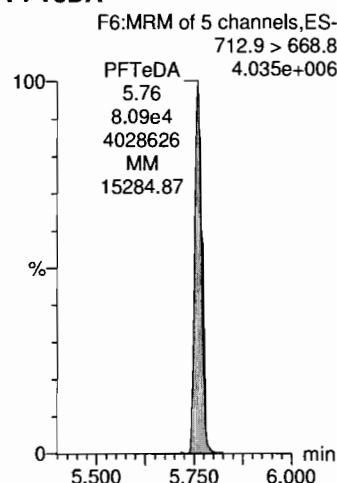
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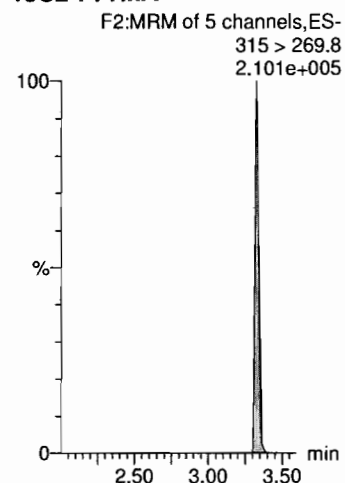
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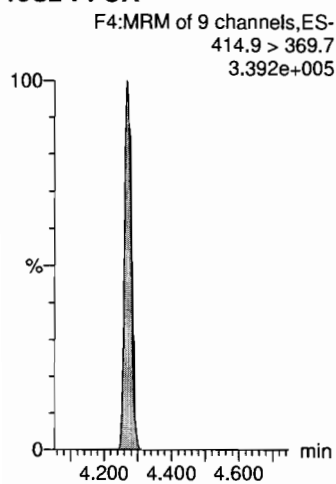
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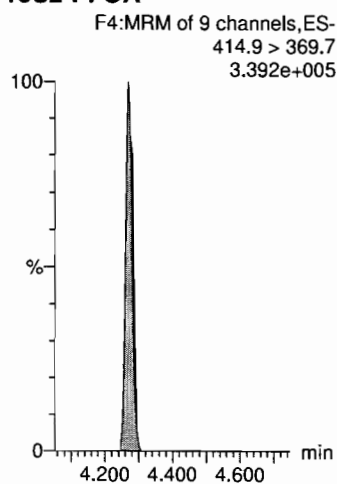
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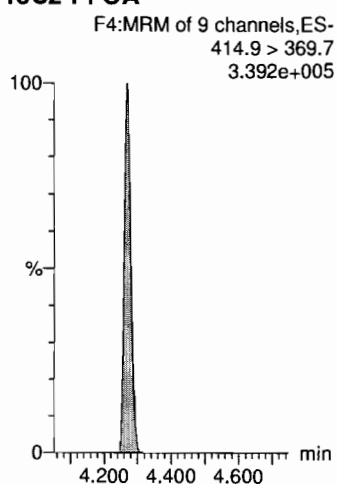
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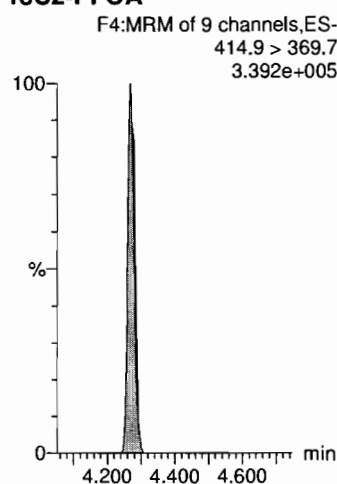
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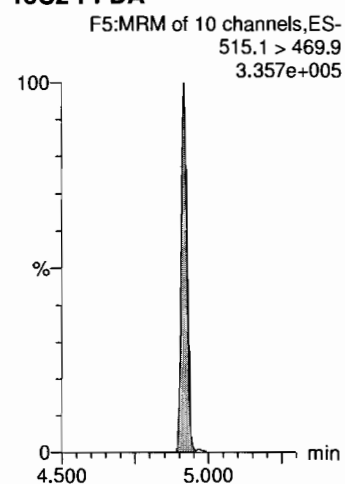
13C2-PFOA



13C2-PFOA



13C2-PFDA

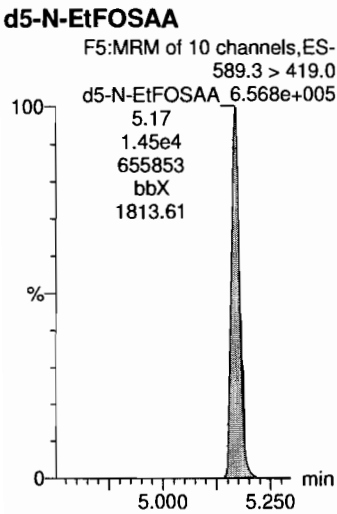


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Name: 180308G4_9, Date: 08-Mar-2018, Time: 19:29:59, ID: ST180308G4-8 PFC CS4 537 18B2307, Description: PFC CS4 537 18B2307



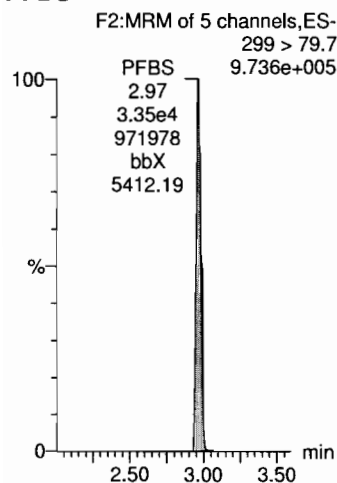
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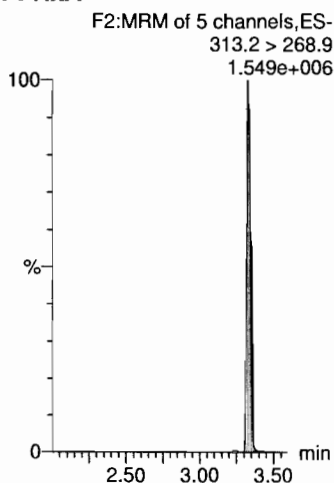
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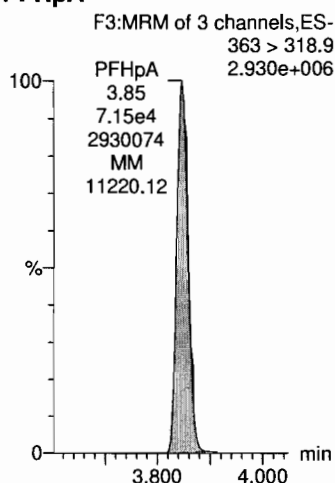
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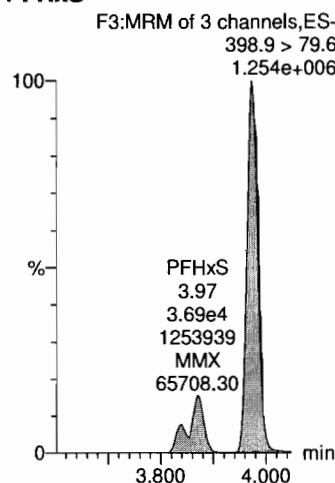
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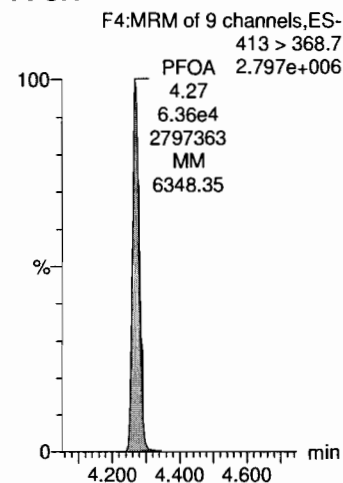
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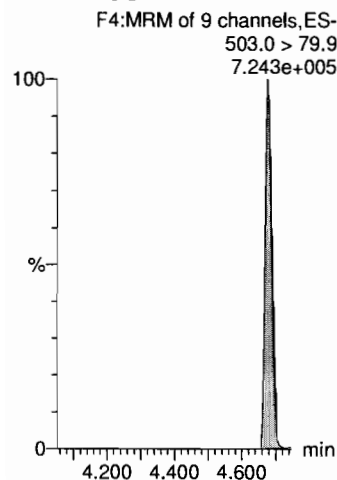
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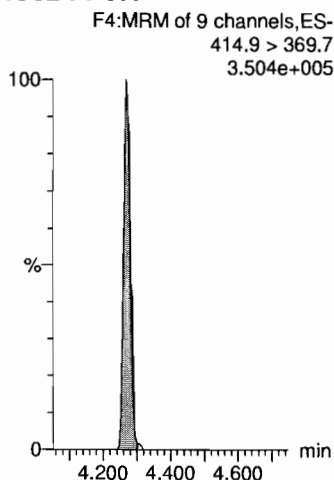
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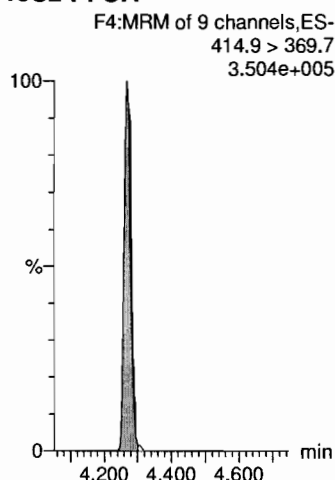
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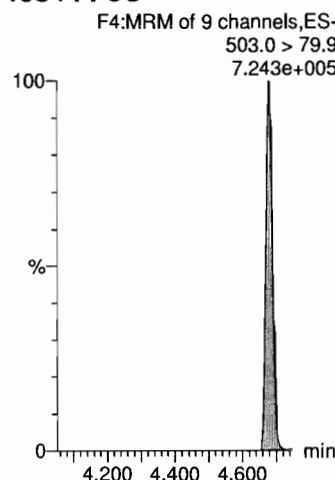
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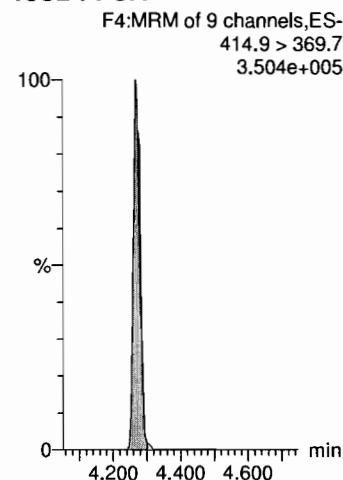
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13C4-PFOS



13C2-PFOA



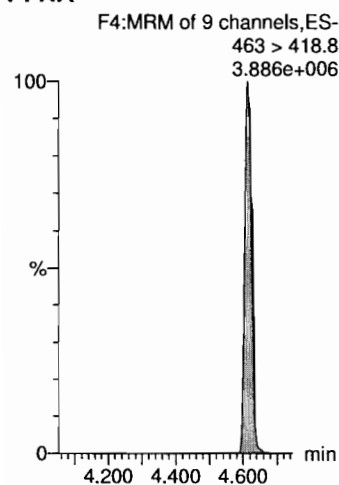
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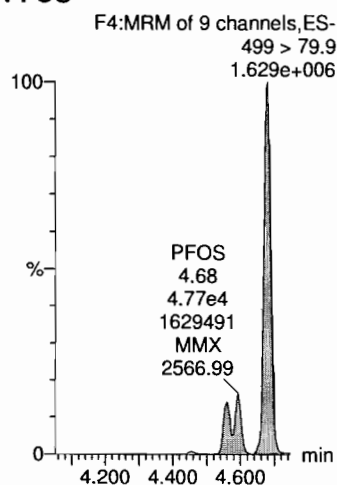
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Name: 180308G4_10, Date: 08-Mar-2018, Time: 19:42:25, ID: ST180308G4-9 PFC CS5 537 18B2308, Description: PFC CS5 537 18B2308

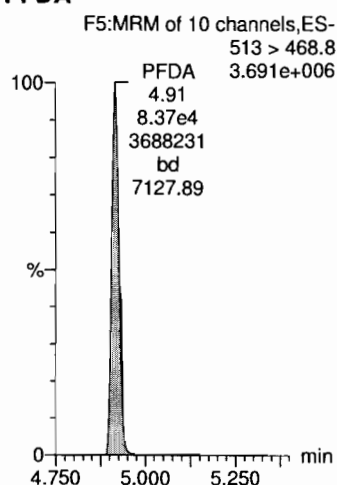
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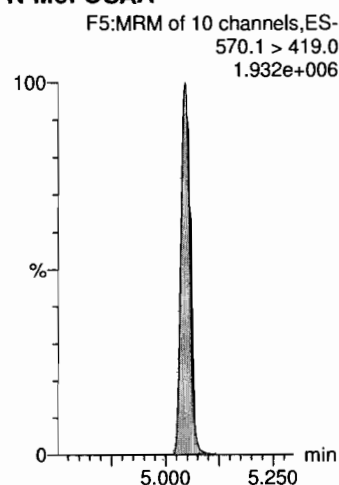
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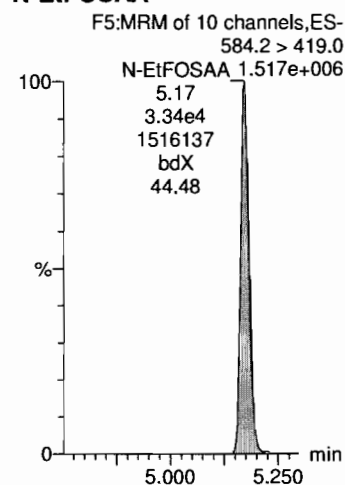
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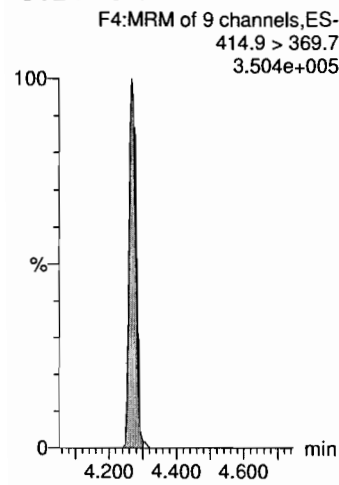
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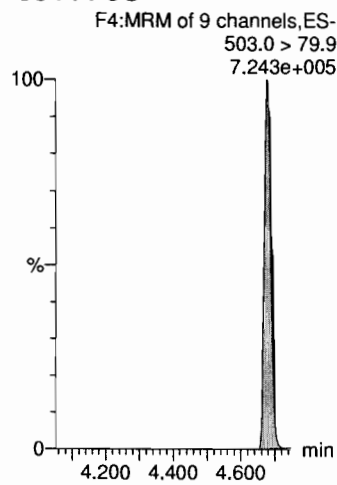
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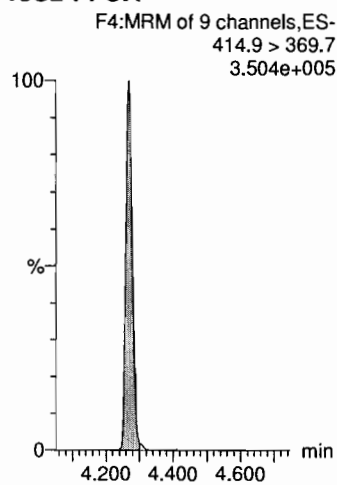
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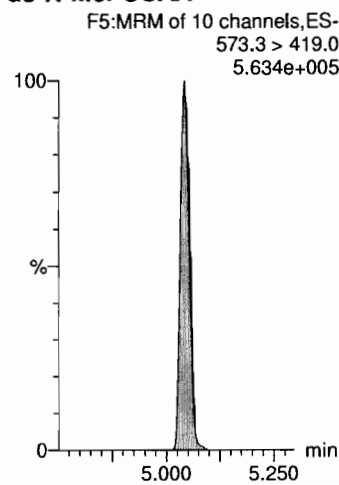
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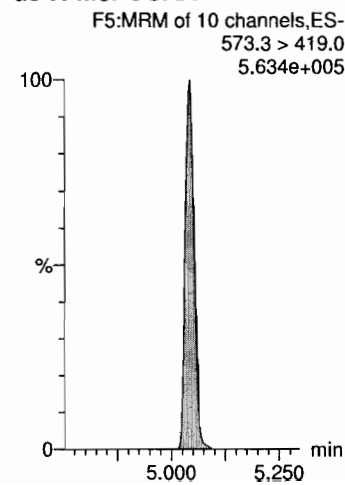
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d3-N-MeFOSAA



d3-N-MeFOSAA



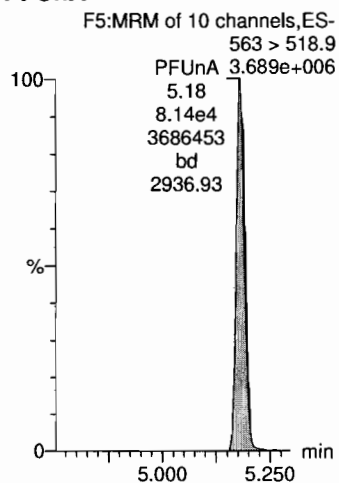
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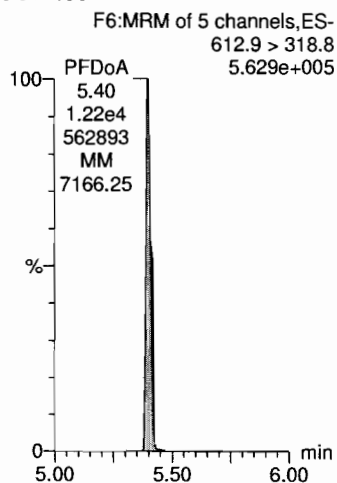
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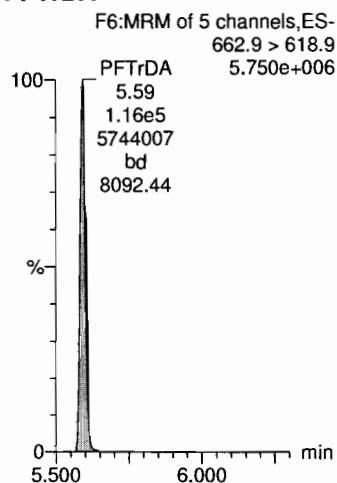
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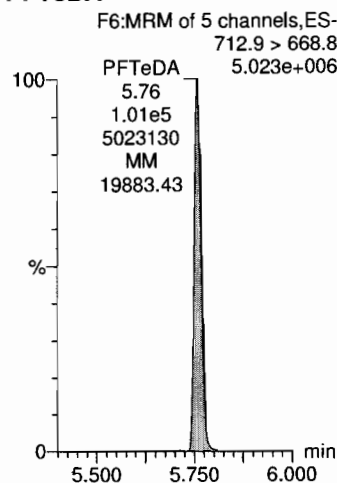
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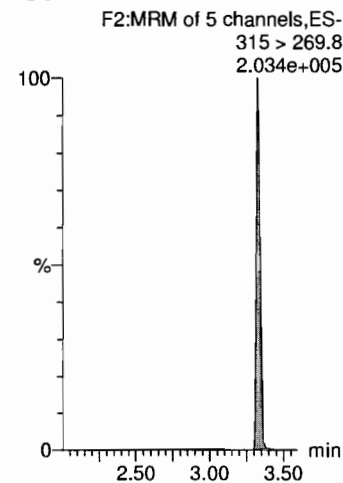
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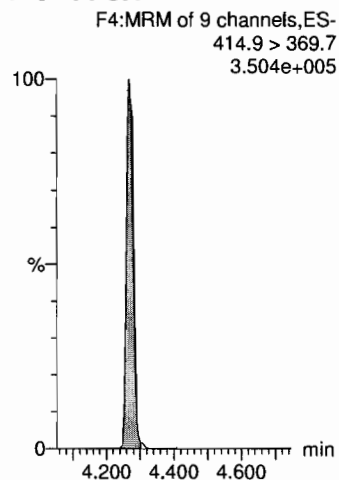
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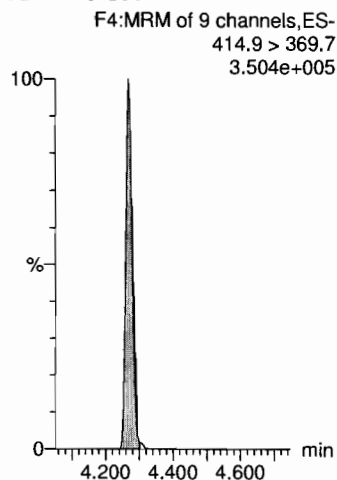
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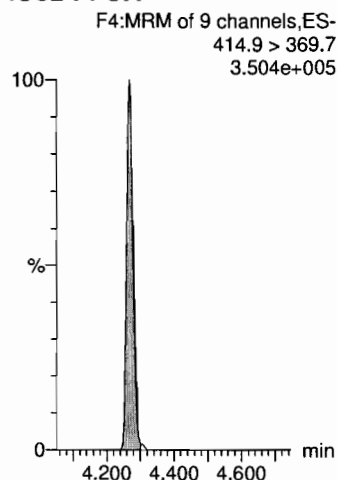
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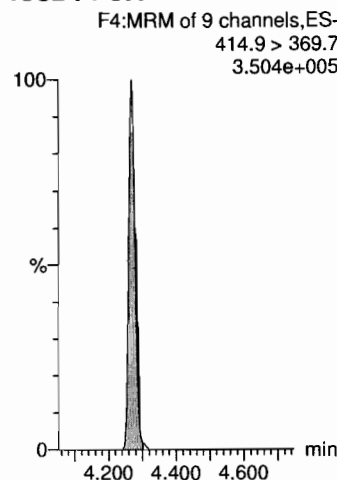
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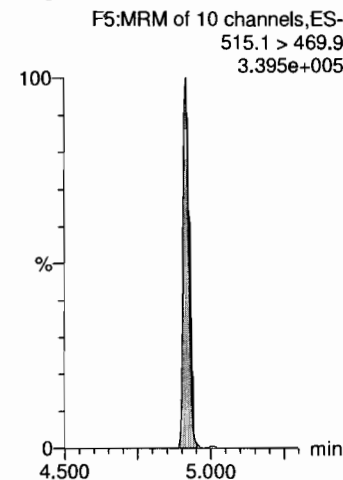
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13C2-PFOA



13C2-PFDA



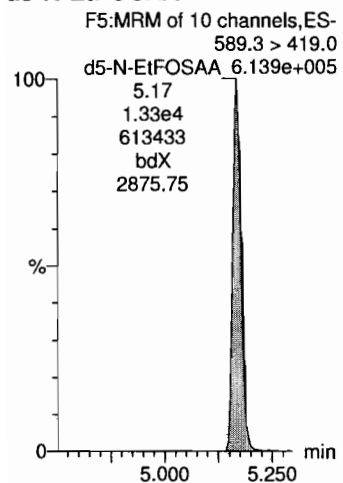
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Name: 180308G4_10, Date: 08-Mar-2018, Time: 19:42:25, ID: ST180308G4-9 PFC CS5 537 18B2308, Description: PFC CS5 537 18B2308

d5-N-EtFOSAA



Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-12.qld

Last Altered: Friday, March 09, 2018 11:33:53 Pacific Standard Time

Printed: Friday, March 09, 2018 12:22:41 Pacific Standard Time

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MJT
3/9/18

Method: X:\G1.PRO\MethDB\PFAS_DW_L14_0308.mdb 09 Mar 2018 10:32:26

Calibration: X:\G1.PRO\CurveDB\C18_537_Q1_03-08-18_L14.cdb 09 Mar 2018 10:59:51

Name: 180308G4_12, Date: 08-Mar-2018, Time: 20:07:13, ID: ICV180308G4-1 PFC ICV 537 18B2309, Description: PFC ICV 537 18B2309

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	4.46e3	1.65e4	1.0000		2.99	2.96	7.77	10.9	108.6
2	2 PFHxA	313.2 > 268.9	5.11e3	8.50e3	1.0000		3.33	3.33	6.01	9.88	98.8
3	3 PFHpA	363 > 318.9	9.00e3	8.50e3	1.0000		3.84	3.85	10.6	10.7	106.7
4	4 PFHxS	398.9 > 79.6	4.91e3	1.65e4	1.0000		3.97	3.97	8.55	11.4	114.0
5	5 PFOA	413 > 368.7	7.88e3	8.50e3	1.0000		4.27	4.27	9.28	10.3	102.9
6	6 PFNA	463 > 418.8	9.16e3	8.50e3	1.0000		4.61	4.61	10.8	9.02	90.2
7	7 PFOS	499 > 79.9	5.87e3	1.65e4	1.0000		4.68	4.68	10.2	10.6	106.2
8	8 PFDA	513 > 468.8	1.04e4	8.50e3	1.0000		4.84	4.91	12.3	9.40	94.0
9	9 N-MeFOSAA	570.1 > 419.0	4.81e3	1.48e4	1.0000		4.98	5.04	13.0	10.6	105.7
10	10 N-EtFOSAA	584.2 > 419.0	3.74e3	1.48e4	1.0000		5.16	5.17	10.1	10.3	103.3
11	11 PFUnA	563 > 518.9	9.97e3	8.50e3	1.0000		5.10	5.18	11.7	10.2	101.8
12	12 PFDoA	612.9 > 318.8	1.44e3	8.50e3	1.0000		5.26	5.40	1.70	10.1	101.1
13	13 PFTTrDA	662.9 > 618.9	1.31e4	8.50e3	1.0000		5.53	5.59	15.4	9.88	98.8
14	14 PFTeDA	712.9 > 668.8	1.25e4	8.50e3	1.0000		5.70	5.76	14.7	10.4	103.9
15	15 13C2-PFHxA	315 > 269.8	6.92e3	8.50e3	1.0000	0.810	3.43	3.33	8.15	10.1	100.7
16	16 13C2-PFDA	515.1 > 469.9	8.01e3	8.50e3	1.0000	1.057	4.87	4.91	9.42	8.92	89.2
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.58e4	1.48e4	1.0000	0.971	5.04	5.17	42.6	43.9	109.7
18	18 13C2-PFOA	414.9 > 369.7	8.50e3	8.50e3	1.0000	1.000	4.41	4.27	10.0	10.0	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.65e4	1.65e4	1.0000	1.000	4.81	4.68	28.7	28.7	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.48e4	1.48e4	1.0000	1.000	5.16	5.04	40.0	40.0	100.0

70-130%
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MJT 3/9/2018

Dataset: X:\G1.PRO\Results\2018\180308G4\180308G4-12.qld

Last Altered: Friday, March 09, 2018 11:33:53 Pacific Standard Time

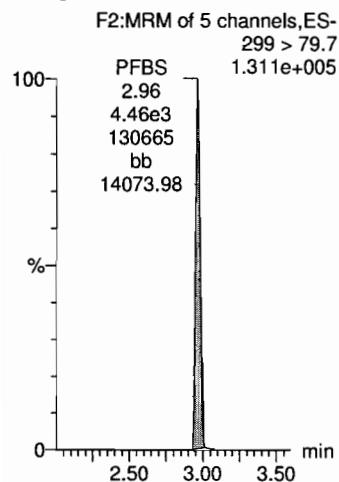
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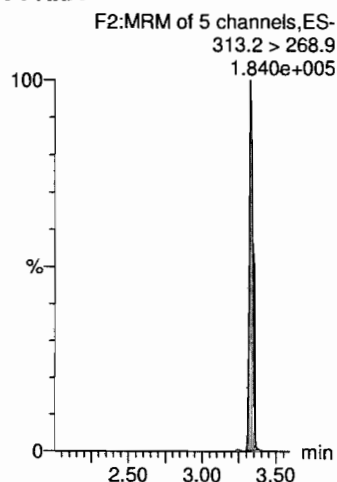
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Name: 180308G4_12, Date: 08-Mar-2018, Time: 20:07:13, ID: ICV180308G4-1 PFC ICV 537 18B2309, Description: PFC ICV 537 18B2309

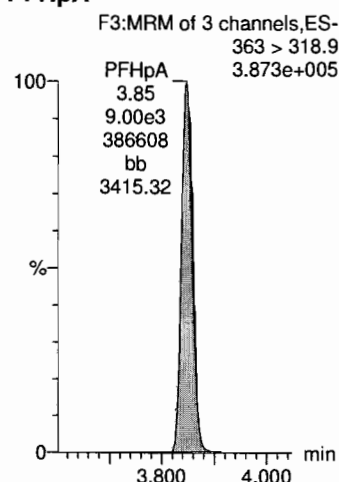
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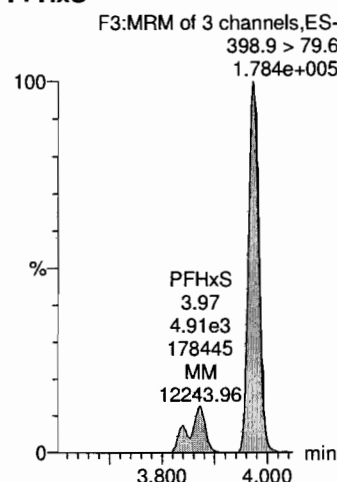
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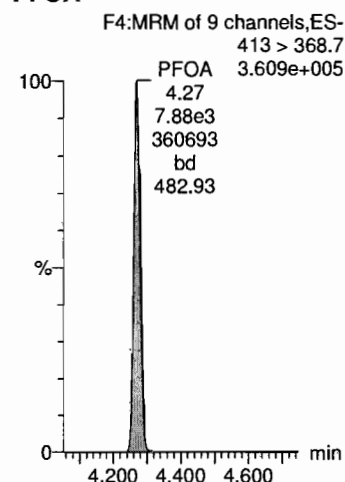
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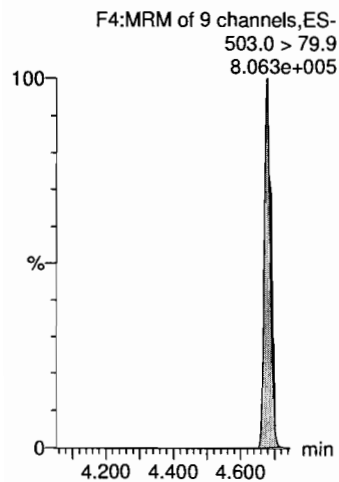
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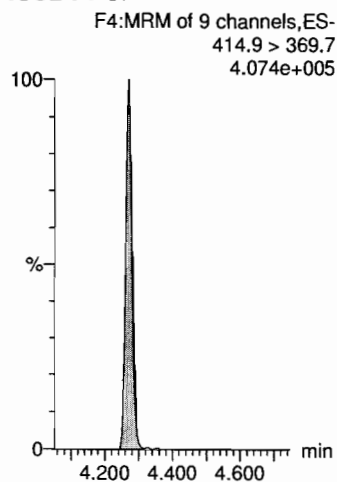
PFOA



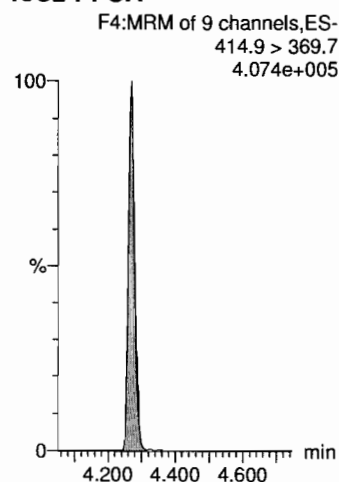
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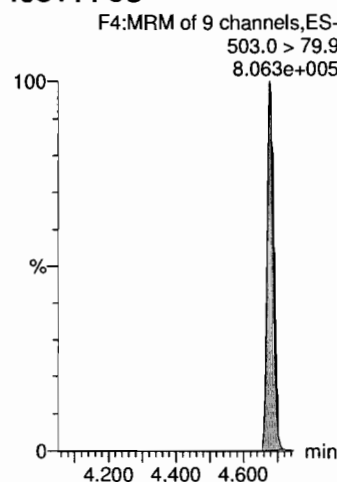
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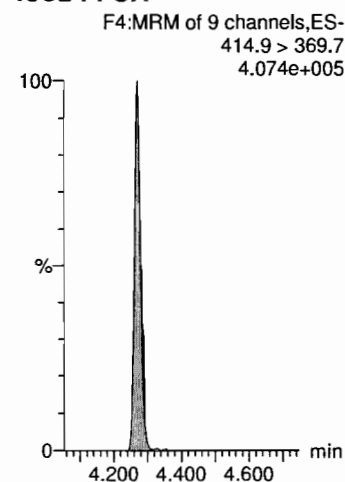
13C2-PFOA



13C4-PFOS



13C2-PFOA

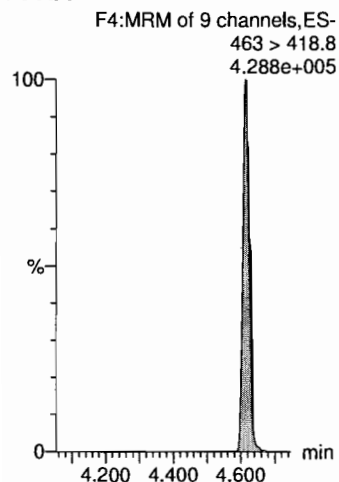


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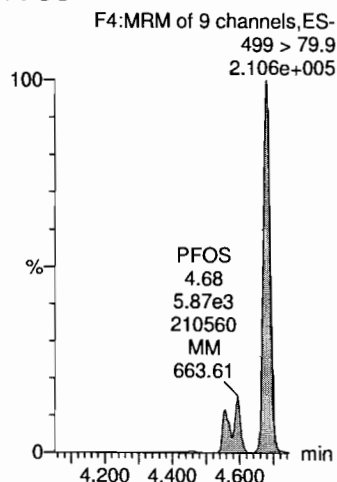
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Name: 180308G4_12, Date: 08-Mar-2018, Time: 20:07:13, ID: ICV180308G4-1 PFC ICV 537 18B2309, Description: PFC ICV 537 18B2309

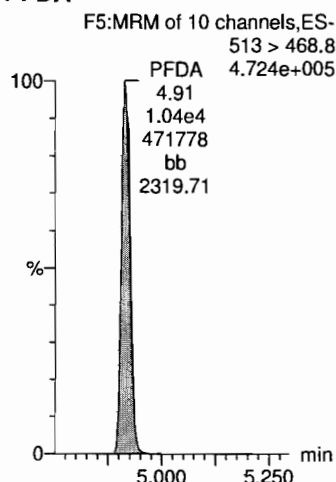
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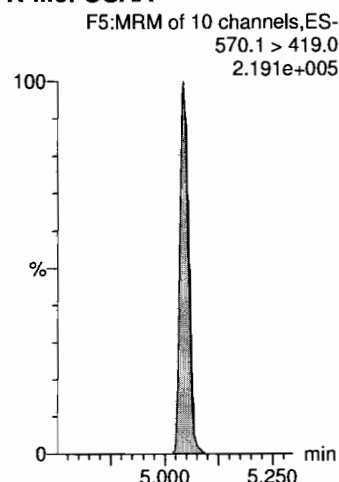
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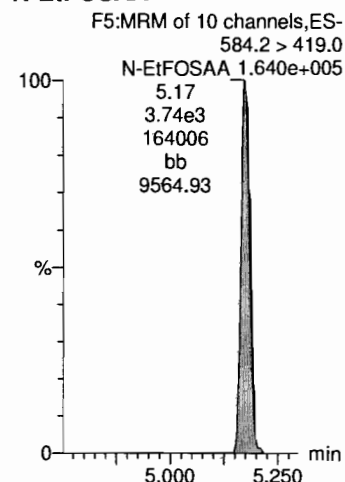
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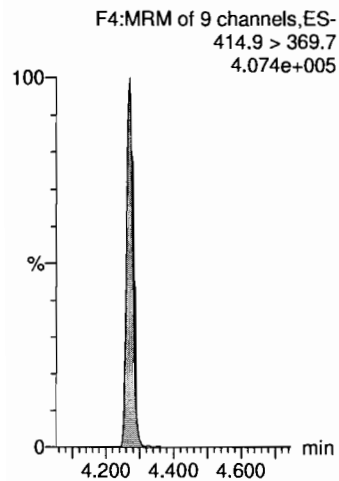
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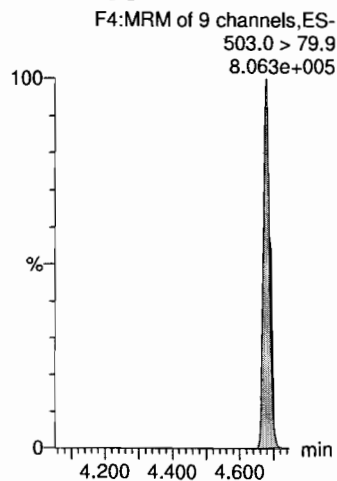
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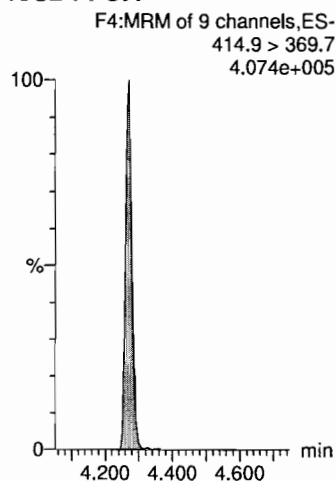
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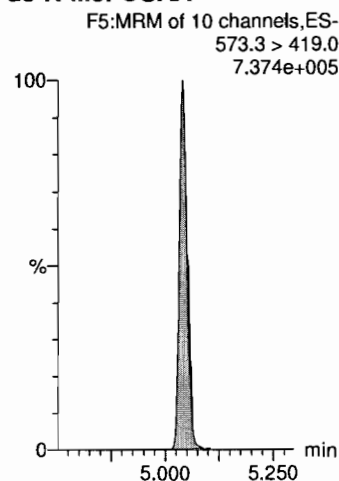
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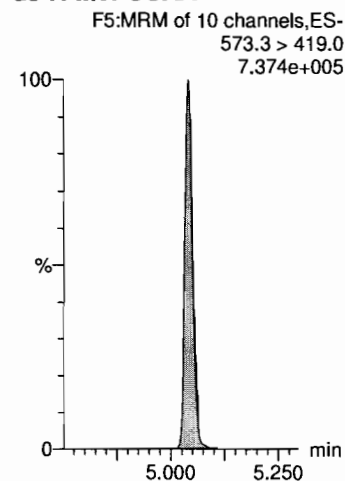
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d3-N-MeFOSAA



d3-N-MeFOSAA



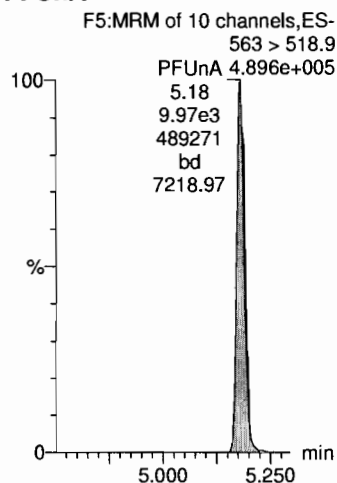
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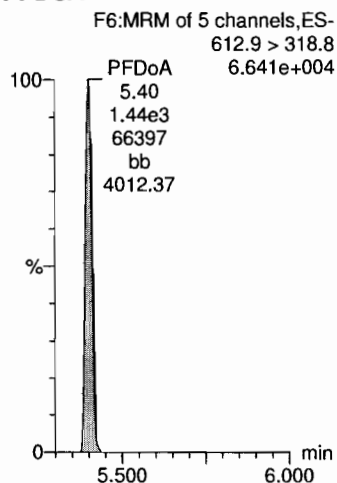
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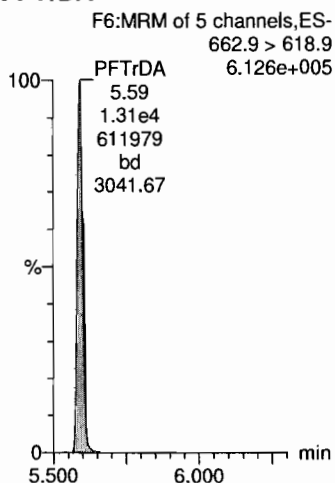
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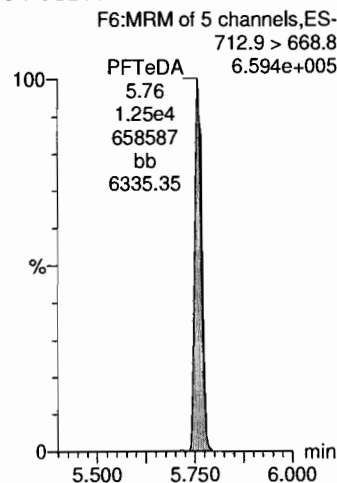
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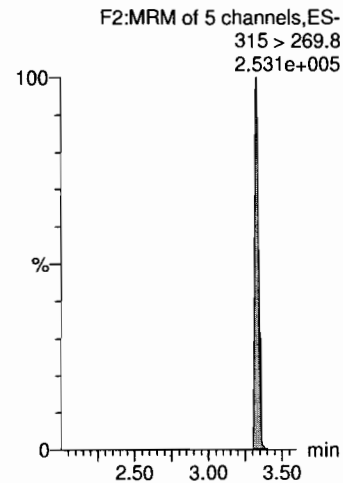
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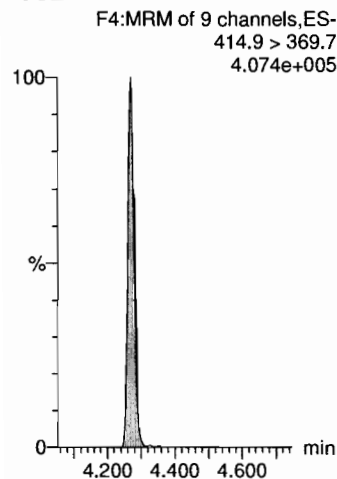
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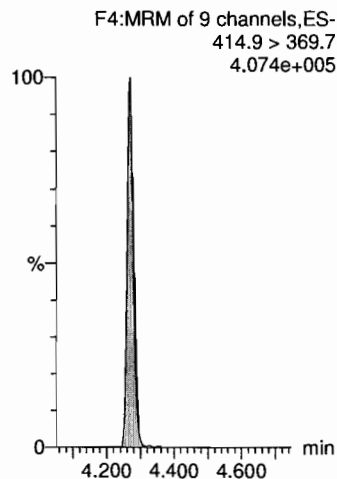
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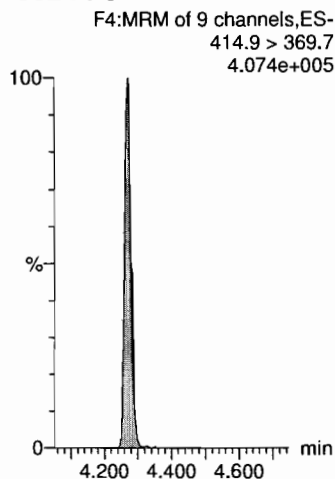
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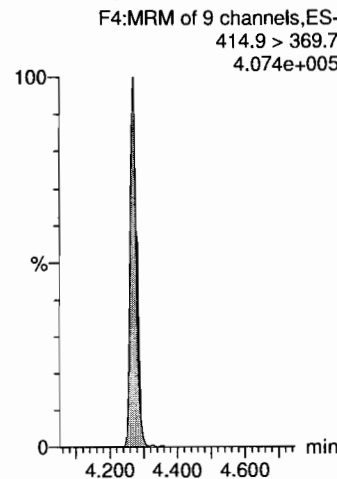
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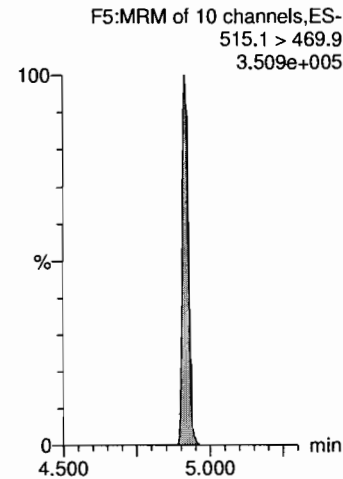
13C2-PFOA



13C2-PFOA



13C2-PFDA



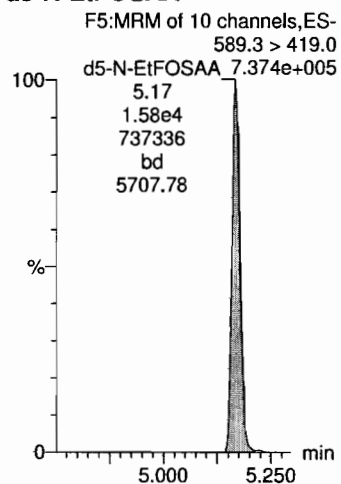
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Name: 180308G4_12, Date: 08-Mar-2018, Time: 20:07:13, ID: ICV180308G4-1 PFC ICV 537 18B2309, Description: PFC ICV 537 18B2309

d5-N-EtFOSAA



MJT 3/9/2018

Results

Contract ID	DO_CTO Number	Phase	Installation_ID	Sample_Name	CH2M Code	Analysis Group	Analytical Method	PRC Code	Lab Code	Lab_Name	Leachate Method	Sample_ Basis	Extraction Method	Result Type	Lab_QC_ Type	Sample_ Medium	QC_Level	DateTime_Collect ed	Date_Recei ved	Leachate Date	Leachate Time	Extraction Date	Extraction Time	Analysis_ Date	Analysis Time	Lab_Sample_ID	Dilution	Run_Nu mber	Percent_ Moisture
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW171-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/27/2018 16:58	03/03/2018			20180305	12:00:00	20180308	23:13:00	1800407-01	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW171-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/27/2018 16:58	03/03/2018			20180305	12:00:00	20180308	23:13:00	1800407-01	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW171-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/27/2018 16:58	03/03/2018			20180305	12:00:00	20180308	23:13:00	1800407-01	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW171-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/27/2018 16:58	03/03/2018			20180305	12:00:00	20180308	23:13:00	1800407-01	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB171-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/27/2018 16:59	03/03/2018			20180305	12:00:00	20180308	23:25:00	1800407-02	1	-999	
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N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB171-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/27/2018 16:59	03/03/2018			20180305	12:00:00	20180308	23:25:00	1800407-02	1	-999	
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N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB172-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/27/2018 17:36	03/03/2018			20180305	12:00:00	20180308	23:50:00	1800407-04	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW173-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:05	03/03/2018			20180305	12:00:00	20180309	00:02:00	1800407-05	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW173-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:05	03/03/2018			20180305	12:00:00	20180309	00:02:00	1800407-05	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB173-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:06	03/03/2018			20180305	12:00:00	20180309	00:15:00	1800407-06	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB173-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:06	03/03/2018			20180305	12:00:00	20180309	00:15:00	1800407-06	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB173-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:06	03/03/2018			20180305	12:00:00	20180309	00:15:00	1800407-06	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB173-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:06	03/03/2018			20180305	12:00:00	20180309	00:15:00	1800407-06	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW174-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:37	03/03/2018			20180305	12:00:00	20180309	00:27:00	1800407-07	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW174-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:37	03/03/2018			20180305	12:00:00	20180309	00:27:00	1800407-07	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW174-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:37	03/03/2018			20180305	12:00:00	20180309	00:27:00	1800407-07	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW174-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:37	03/03/2018			20180305	12:00:00	20180309	00:27:00	1800407-07	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB174-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:38	03/03/2018			20180305	12:00:00	20180309	00:40:00	1800407-08	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB174-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:38	03/03/2018			20180305	12:00:00	20180309	00:40:00	1800407-08	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB174-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:38	03/03/2018			20180305	12:00:00	20180309	00:40:00	1800407-08	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB174-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:38	03/03/2018			20180305	12:00:00	20180309	00:40:00	1800407-08	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW175-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:58	03/03/2018			20180305	12:00:00	20180309	00:52:00	1800407-09	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW175-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:58	03/03/2018			20180305	12:00:00	20180309	00:52:00	1800407-09	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW175-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:58	03/03/2018			20180305	12:00:00	20180309	00:52:00	1800407-09	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW175-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:58	03/03/2018			20180305	12:00:00	20180309	00:52:00	1800407-09	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB175-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:59	03/03/2018			20180305	12:00:00	20180309	01:04:00	1800407-10	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB175-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/28/2018 10:59	03/03/2018			20180305	12:00:00	20180309	01:04:00	1800407-10	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW176-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 11:41	03/03/2018			20180305	12:00:00	20180309	01:17:00	1800407-11	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW176-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 11:41	03/03/2018			20180305	12:00:00	20180309	01:17:00	1800407-11	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW176-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 11:41	03/03/2018			20180305	12:00:00	20180309	01:17:00	1800407-11	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB176-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 11:42	03/03/2018			20180305	12:00:00	20180309	01:29:00	1800407-12	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB176-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 11:42	03/03/2018			20180305	12:00:00	20180309	01:29:00	1800407-12	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB176-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 11:42	03/03/2018			20180305	12:00:00	20180309	01:29:00	1800407-12	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW177-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 12:08	03/03/2018			20180305	12:00:00	20180309	01:42:00	1800407-13	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW177-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 12:08	03/03/2018			20180305	12:00:00	20180309	01:42:00	1800407-13	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1RW177-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 12:08	03/03/2018			20180305	12:00:00	20180309	01:42:00	1800407-13	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB177-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 12:09	03/03/2018			20180305	12:00:00	20180309	01:54:00	1800407-14	1	-999	
N6247016D9000	0008		CHERRY POINT MCAS	CH-AT-1FB177-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 12:09	03/03/2018			2018030							

Contract_ID	DO_CTO Number	Phase	Installation_ID	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	GC_Column_Type	Analysis_Result_Type	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	5.00	NG_L	U			PR	TRG									5.1	0.443	5.00	10.0	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	5.00	NG_L	U			PR	TRG									5.1	1.08	5.00	10.0	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	5.00	NG_L	U			PR	TRG									5.1	1.04	5.00	10.0	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	92.7	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	79.4	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	5.00	NG_L	U			PR	TRG									5.1	0.443	5.00	10.0	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	5.00	NG_L	U			PR	TRG									5.1	1.08	5.00	10.0	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	5.00	NG_L	U			PR	TRG									5.1	1.04	5.00	10.0	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	85.4	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	73.0	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.98	NG_L	U			PR	TRG									5.1	0.441	4.98	9.95	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	4.98	NG_L	U			PR	TRG									5.1	1.07	4.98	9.95	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	4.98	NG_L	U			PR	TRG									5.1	1.03	4.98	9.95	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	88.0	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	74.2	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.92	NG_L	U			PR	TRG									5.1	0.437	4.92	9.86	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	4.92	NG_L	U			PR	TRG									5.1	1.06	4.92	9.86	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	4.92	NG_L	U			PR	TRG									5.1	1.03	4.92	9.86	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	96.1	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	83.7	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.438	NG_L	J			PR	TRG									5.1	0.426	4.81	9.61	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	7.85	NG_L	J			PR	TRG									5.1	1.04	4.81	9.61	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	32.4	NG_L				PR	TRG									5.1	1.00	4.81	9.61	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	90.3	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	81.6	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.86	NG_L	U			PR	TRG									5.1	0.432	4.86	9.74	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	4.86	NG_L	U			PR	TRG									5.1	1.05	4.86	9.74	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	4.86	NG_L	U			PR	TRG									5.1	1.01	4.86	9.74	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	92.1	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	80.2	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.94	NG_L	U			PR	TRG									5.1	0.438	4.94	9.88	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	4.94	NG_L	U			PR	TRG									5.1	1.07	4.94	9.88	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	4.94	NG_L	U			PR	TRG									5.1	1.03	4.94	9.88	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	77.6	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	76.9	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.92	NG_L	U			PR	TRG									5.1	0.436	4.92	9.84	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	4.92	NG_L	U			PR	TRG									5.1	1.06	4.92	9.84	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	4.92	NG_L	U			PR	TRG									5.1	1.02	4.92	9.84	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	91.3	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	90.5	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.81	NG_L	U			PR	TRG									5.1	0.426	4.81	9.62	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	4.81	NG_L	U			PR	TRG									5.1	1.04	4.81	9.62	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	4.81	NG_L	U			PR	TRG									5.1	1.00	4.81	9.62	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	84.8	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	73.9	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.90	NG_L	U			PR	TRG									5.1	0.434	4.90	9.79	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	4.90	NG_L	U			PR	TRG									5.1	1.06	4.90	9.79	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	4.90	NG_L	U			PR	TRG									5.1	1.02	4.90	9.79	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	92.4	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	83.5	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.96	NG_L	U			PR	TRG									5.1	0.440	4.96	9.93	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	4.96	NG_L	U			PR	TRG									5.1	1.07	4.96	9.93	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	4.96	NG_L	U			PR	TRG									5.1	1.03	4.96	9.93	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	84.3	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	69.9	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	5.06	NG_L	U			PR	TRG									5.1	0.449	5.06	10.1	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	5.06	NG_L	U			PR	TRG									5.1	1.10	5.06	10.1	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	5.06	NG_L	U			PR	TRG									5.1	1.05	5.06	10.1	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	87.9	PCT_REC				PR			SLSA	130	70					5.1				1800407	S8C0020</

Contract_ID	DO_CTO Number	Phase	Installation_ID	Sample_Name	CH2M Code	Analysis Group	Analytical Method	PRC_ Code	Lab_ Code	Lab_Name	Leachate Method	Sample_ Basis	Extraction Method	Result_ Type	Lab_QC_ Type	Sample_ Medium	QC_Level	DateTime_Collect ed	Date_Recei ved	Leachate Date	Leachate _Time	Extraction Date	Extraction _Time	Analysis_ Date	Analysis _Time	Lab_Sample_ID	Dilution	Run_Nu mber	Percent_ Moisture
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1RW179-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 13:10	03/03/2018			20180305	12:00:00	20180309	02:31:00	1800407-17	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1RW179-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 13:10	03/03/2018			20180305	12:00:00	20180309	02:31:00	1800407-17	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1RW179-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 13:10	03/03/2018			20180305	12:00:00	20180309	02:31:00	1800407-17	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1RW179-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 13:10	03/03/2018			20180305	12:00:00	20180309	02:31:00	1800407-17	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1RW179-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 13:10	03/03/2018			20180305	12:00:00	20180309	02:31:00	1800407-17	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1FB179-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 13:11	03/03/2018			20180305	12:00:00	20180309	02:43:00	1800407-18	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1FB179-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 13:11	03/03/2018			20180305	12:00:00	20180309	02:43:00	1800407-18	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1FB179-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 13:11	03/03/2018			20180305	12:00:00	20180309	02:43:00	1800407-18	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1FB179-0218	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	03/01/2018 13:11	03/03/2018			20180305	12:00:00	20180309	02:43:00	1800407-18	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	03/05/2018 12:00	03/05/2018			20180305	12:00:00	20180308	21:46:00	B8C0031-BLK1	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	03/05/2018 12:00	03/05/2018			20180305	12:00:00	20180308	21:46:00	B8C0031-BLK1	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	03/05/2018 12:00	03/05/2018			20180305	12:00:00	20180308	21:46:00	B8C0031-BLK1	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	03/05/2018 12:00	03/05/2018			20180305	12:00:00	20180308	21:46:00	B8C0031-BLK1	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	03/05/2018 12:00	03/05/2018			20180305	12:00:00	20180308	21:58:00	B8C0031-BS1	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	03/05/2018 12:00	03/05/2018			20180305	12:00:00	20180308	21:58:00	B8C0031-BS1	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	03/05/2018 12:00	03/05/2018			20180305	12:00:00	20180308	21:58:00	B8C0031-BS1	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	03/05/2018 12:00	03/05/2018			20180305	12:00:00	20180308	21:58:00	B8C0031-BS1	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	Matrix Spike	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	03/05/2018 12:00	03/05/2018			20180305	12:00:00	20180308	22:11:00	B8C0031-MS1	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	Matrix Spike	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	03/05/2018 12:00	03/05/2018			20180305	12:00:00	20180308	22:11:00	B8C0031-MS1	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	Matrix Spike	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	03/05/2018 12:00	03/05/2018			20180305	12:00:00	20180308	22:11:00	B8C0031-MS1	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	Matrix Spike Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	03/05/2018 12:00	03/05/2018			20180305	12:00:00	20180308	22:23:00	B8C0031-MSD1	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	Matrix Spike Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	03/05/2018 12:00	03/05/2018			20180305	12:00:00	20180308	22:23:00	B8C0031-MSD1	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	Matrix Spike Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	03/05/2018 12:00	03/05/2018			20180305	12:00:00	20180308	22:23:00	B8C0031-MSD1	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	Matrix Spike Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	03/05/2018 12:00	03/05/2018			20180305	12:00:00	20180308	22:23:00	B8C0031-MSD1	1	-999	
N6247016D9000	0008		CHERRY_POINT_MCAS	Matrix Spike Dup	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	03/05/2018 12:00	03/05/2018			20180305	12:00:00	20180308	22:23:00	B8C0031-MSD1	1	-999	

Contract_ID	DO_CTO _Number	Phase	Installation_ID	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	GC_Column_Type	Analysis_Result_Type	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.96		NG_L	U		PR	TRG									5.1	0.439	4.96	9.92	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	1.13		NG_L	J		PR	TRG									5.1	1.07	4.96	9.92	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	4.96		NG_L	U		PR	TRG									5.1	1.03	4.96	9.92	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	92.1		PCT_REC			PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	87.2		PCT_REC			PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	5.04		NG_L	U		PR	TRG									5.1	0.447	5.04	10.1	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	5.04		NG_L	U		PR	TRG									5.1	1.09	5.04	10.1	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	5.04		NG_L	U		PR	TRG									5.1	1.05	5.04	10.1	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	88.6		PCT_REC			PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	83.9		PCT_REC			PR			SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	5.00		NG_L	U		PR	TRG									5.1	0.443	5.00	10.0	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	5.00		NG_L	U		PR	TRG									5.1	1.08	5.00	10.0	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	5.00		NG_L	U		PR	TRG									5.1	1.04	5.00	10.0	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	84.7		PCT_REC			PR	SUR		SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	81.6		PCT_REC			PR	SUR		SLSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	78.1		NG_L			PR	TRG		LSA	130	70					5.1	0.443	5.00	10.0	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	85.9		NG_L			PR	TRG		LSA	130	70					5.1	1.08	5.00	10.0	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	77.6		NG_L			PR	TRG		LSA	130	70					5.1	1.04	5.00	10.0	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	95.4		PCT_REC			PR	SUR		LSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	86.1		PCT_REC			PR	SUR		LSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	79.6		NG_L			PR	TRG		LSA	130	70					5.1	0.442	4.98	9.98	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	67.4		NG_L			PR	TRG		LSA	130	70					5.1	1.08	4.98	9.98	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	75.8		NG_L			PR	TRG		LSA	130	70					5.1	1.04	4.98	9.98	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	85.7		PCT_REC			PR	SUR		LSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	76.9		PCT_REC			PR	SUR		LSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	82.9		NG_L			PR	TRG		LSA	130	70					5.1	0.440	4.96	9.93	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	82.0		NG_L			PR	TRG		LSA	130	70					5.1	1.07	4.96	9.93	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	79.3		NG_L			PR	TRG		LSA	130	70					5.1	1.03	4.96	9.93	1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	85.1		PCT_REC			PR	SUR		LSA	130	70					5.1				1800407	S8C0020
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	82.6		PCT_REC			PR	SUR		LSA	130	70					5.1				1800407	S8C0020

**DATA VALIDATION SUMMARY REPORT
MCOF ATLANTIC, NORTH CAROLINA**

Client: CH2M HILL, Inc., Corvallis, Oregon
SDG: 1800407
Laboratory: Vista Analytical Laboratory, El Dorado Hills, California
Site: MCOLF Atlantic, North Carolina
Date: March 16, 2018

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	CH-AT-1RW171-0218	1800407-1	Water
1MS	CH-AT-1RW171-0218MS	1800407-1MS	Water
1MSD	CH-AT-1RW171-0218MSD	1800407-1MSD	Water
2	CH-AT-1FB171-0218	1800407-2	Water
3	CH-AT-1RW172-0218	1800407-3	Water
4	CH-AT-1FB172-0218	1800407-4	Water
5	CH-AT-1RW173-0218	1800407-5	Water
6	CH-AT-1FB173-0218	1800407-6	Water
7	CH-AT-1RW174-0218	1800407-7	Water
8	CH-AT-1FB174-0218	1800407-8	Water
9	CH-AT-1RW175-0218	1800407-9	Water
10	CH-AT-1FB175-0218	1800407-10	Water
11	CH-AT-1RW176-0218	1800407-11	Water
12	CH-AT-1FB176-0218	1800407-12	Water
13	CH-AT-1RW177-0218	1800407-13	Water
14	CH-AT-1FB177-0218	1800407-14	Water
15	CH-AT-1RW178-0218	1800407-15	Water
16	CH-AT-1FB178-0218	1800407-16	Water
17	CH-AT-1RW179-0218	1800407-17	Water
18	CH-AT-1FB179-0218	1800407-18	Water

A full data validation was performed on the analytical data for nine water samples and nine aqueous field blank samples collected on February 27 - March 1, 2018 by CH2M HILL at the MCOLF Atlantic site in Atlantic, 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

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 Organic Superfund 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
- Surrogate Spike recoveries
- 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. There were no qualifications.

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 relative standard deviation (%RSD) and/or correlation coefficients criteria were met.

Continuing Calibration

- All percent recovery (%R) and RRF criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC samples were free of contamination.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
CH-AT-1FB171-0218	None - ND	-	-	-
CH-AT-1FB172-0218	None - ND	-	-	-
CH-AT-1FB173-0218	None - ND	-	-	-
CH-AT-1FB174-0218	None - ND	-	-	-
CH-AT-1FB175-0218	None - ND	-	-	-
CH-AT-1FB176-0218	None - ND	-	-	-
CH-AT-1FB177-0218	None - ND	-	-	-
CH-AT-1FB178-0218	None - ND	-	-	-
CH-AT-1FB179-0218	None - ND	-	-	-

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except for the following.

EDS Sample ID	Surrogate	%R	Qualifier
11	13C2-PFDA	69.9%	None - Reviewer rounded up to 70%

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

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

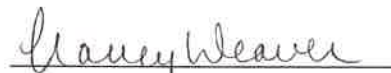
- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed:


Nancy Weaver
Senior Chemist

Dated: 3/17/18

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: CH-AT-1RW171-0218									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1800407-01	Column:	BEH C18	
Project:	MCOLF ATLANTIC PFAS DW Investigation	Date Collected:	27-Feb-18 16:58		Date Received:	03-Mar-18 10:15			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.443	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:13
PFOA	ND	1.08	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:13
PFOS	ND	1.04	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:13
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Dilution
13C2-PFHxA	SURR	92.7	70 - 130			B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:13
13C2-PFDA	SURR	79.4	70 - 130			B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:13

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

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

LOD - Limit of Detection
LOQ - Limit of quantitation

DL - Detection Limit

NW 316118

Sample ID: CH-AT-1FB171-0218					EPA Method 537				
Client Data			Laboratory Data						
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800407-02	Column:	BEH C18		
Project:	MCOLF ATLANTIC PFAS DW Investigation	Date Collected:	27-Feb-18 16:59	Date Received:	03-Mar-18 10:15				
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.443	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:25
PFOA	ND	1.08	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:25
PFOS	ND	1.04	5.00	10.0		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:25
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	85.4	70 - 130		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:25	1
13C2-PFDA	SURR	73.0	70 - 130		B8C0031	05-Mar-18	0.250 L	08-Mar-18 23:25	1
DL - Detection Limit				When reported, PFHxS, PFHxA and PFOS include both linear and branched isomers					
LOD - Limit of Detection				Only the linear isomer is reported for all other analytes					
LOQ - Limit of quantitation									
LCL-UCL - Lower control limit - upper control limit									
Results reported to the DL									

pw 31.6.18

Sample ID: CH-AT-1RW172-0218

Client Data			Laboratory Data							
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800407-03	Column:	BEH C18			
Project:	MCOLF ATLANTIC PFAS DW Investigation	Date Collected:	27-Feb-18 17:35	Date Received:	03-Mar-18 10:15					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.441	4.98	9.95		B8C0031	05-Mar-18	0.251 L	08-Mar-18 23:38	1
PFOA	ND	1.07	4.98	9.95		B8C0031	05-Mar-18	0.251 L	08-Mar-18 23:38	1
PFOS	ND	1.03	4.98	9.95		B8C0031	05-Mar-18	0.251 L	08-Mar-18 23:38	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	88.0	70 - 130			B8C0031	05-Mar-18	0.251 L	08-Mar-18 23:38	1
13C2-PFDA	SURR	74.2	70 - 130			B8C0031	05-Mar-18	0.251 L	08-Mar-18 23:38	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.

$$\frac{2}{3} - \frac{1}{6} = \frac{4}{6} - \frac{1}{6} = \frac{3}{6} = \frac{1}{2}$$

Sample ID: CH-AT-1FB172-0218					EPA Method 537				
Client Data			Laboratory Data						
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800407-04	Column:	BEH C18		
Project:	MCOLF ATLANTIC PFAS DW Investigation	Date Collected:	27-Feb-18 17:36	Date Received:	03-Mar-18 10:15				
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.437	4.92	9.86		B8C0031	05-Mar-18	0.254 L	08-Mar-18 23:50
PFOA	ND	1.06	4.92	9.86		B8C0031	05-Mar-18	0.254 L	08-Mar-18 23:50
PFOS	ND	1.03	4.92	9.86		B8C0031	05-Mar-18	0.254 L	08-Mar-18 23:50
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Dilution	
13C2-PFHxA	SURR	96.1	70 - 130		B8C0031	05-Mar-18	0.254 L	08-Mar-18 23:50	1
13C2-PFDA	SURR	83.7	70 - 130		B8C0031	05-Mar-18	0.254 L	08-Mar-18 23:50	1
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						

rw 31618

Sample ID: CH-AT-1RW173-0218									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1800407-05	Column:	BEH C18	
Project:	MCOLF ATLANTIC PFAS DW Investigation	Date Collected:	28-Feb-18 10:05		Date Received:	03-Mar-18 10:15			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	0.438	0.426	4.81	9.61	J	B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:02
PFOA	7.85	1.04	4.81	9.61	J	B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:02
PFOS	32.4	1.00	4.81	9.61		B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:02
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Dilution
13C2-PFHxA	SURR	90.3	70 - 130			B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:02
13C2-PFDA	SURR	81.6	70 - 130			B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:02

DL - Detection Limit
 LOD - Limit of Detection
 LOQ - Limit of quantitation
 LCL-UCL - Lower control limit - upper control limit
 Result is reported to the DL.
 When reported, PFBS, PFOA and PFOS include both linear and branched isomers.
 Only the linear isomer is reported for all other analytes.

31.61.8

Sample ID: CH-AT-1FB173-0218						EPA Method 537				
Client Data			Laboratory Data							
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800407-06	Column: BEH C18				
Project:	MCOLF ATLANTIC PFAS DW Investigation	Date Collected:	28-Feb-18 10:06	Date Received:	03-Mar-18 10:15					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.432	4.86	9.74		B8C0031	05-Mar-18	0.257 L	09-Mar-18 00:15	1
PFOA	ND	1.05	4.86	9.74		B8C0031	05-Mar-18	0.257 L	09-Mar-18 00:15	1
PFOS	ND	1.01	4.86	9.74		B8C0031	05-Mar-18	0.257 L	09-Mar-18 00:15	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
I3C2-PFHxA	SURR	92.1	70 - 130		B8C0031	05-Mar-18	0.257 L	09-Mar-18 00:15	1	
I3C2-PFDA	SURR	80.2	70 - 130		B8C0031	05-Mar-18	0.257 L	09-Mar-18 00:15	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.

new 3/16/18

Sample ID: CH-AT-1RW174-0218										EPA Method 537			
Client Data					Laboratory Data								
Name:	CH2M Hill			Matrix:	Drinking Water		Lab Sample:	1800407-07		Column:	BEH C18		
Project:	MCOLF ATLANTIC PFAS DW Investigation			Date Collected:	28-Feb-18 10:37		Date Received:	03-Mar-18 10:15					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
PFBS	ND	0.438	4.94	9.88		B8C0031	05-Mar-18	0.253 L	09-Mar-18 00:27	1			
PFOA	ND	1.07	4.94	9.88		B8C0031	05-Mar-18	0.253 L	09-Mar-18 00:27	1			
PFOS	ND	1.03	4.94	9.88		B8C0031	05-Mar-18	0.253 L	09-Mar-18 00:27	1			
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution				
13C2-PFHxA	SURR	77.6	70 - 130		B8C0031	05-Mar-18	0.253 L	09-Mar-18 00:27	1				
13C2-PFDA	SURR	76.9	70 - 130		B8C0031	05-Mar-18	0.253 L	09-Mar-18 00:27	1				

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

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

LOD - Limit of Detection
LOQ - Limit of quantitation

DL - Detection Limit

rev 3/16/18

Sample ID: CH-AT-1FB174-0218					EPA Method 537				
Client Data			Laboratory Data						
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800407-08	Column:	BEH C18		
Project:	MCOLF ATLANTIC PEAS DW Investigation	Date Collected:	28-Feb-18 10:38	Date Received:	03-Mar-18 10:15				
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.436	4.92	9.84		B8C0031	05-Mar-18	0.254 L	09-Mar-18 00:40
PFOA	ND	1.06	4.92	9.84		B8C0031	05-Mar-18	0.254 L	09-Mar-18 00:40
PFOS	ND	1.02	4.92	9.84		B8C0031	05-Mar-18	0.254 L	09-Mar-18 00:40
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Dilution	
13C2-PFHxA	SURR	91.3	70 - 130		B8C0031	05-Mar-18	0.254 L	09-Mar-18 00:40	1
13C2-PFDA	SURR	90.5	70 - 130		B8C0031	05-Mar-18	0.254 L	09-Mar-18 00:40	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						

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

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

LOD - Limit of Detection
LOQ - Limit of quantitation

DL - Detection Limit

mw 314.18

Sample ID: CH-AT-1RW175-0218									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1800407-09	Column:	BEH C18	
Project:	MCOLF ATLANTIC PEAS DW Investigation	Date Collected:	28-Feb-18 10:58		Date Received:	03-Mar-18 10:15			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.426	4.81	9.62		B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:52
PFOA	ND	1.04	4.81	9.62		B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:52
PFOS	ND	1.00	4.81	9.62		B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:52
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Dilution	
13C2-PFHxA	SURR	84.8	70 - 130		B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:52	1
13C2-PFDA	SURR	73.9	70 - 130		B8C0031	05-Mar-18	0.260 L	09-Mar-18 00:52	1

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

3/16/18

Sample ID: CH-AT-1FB175-0218									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1800407-10	Column:	BEH C18	
Project:	MCOLF ATLANTIC PEAS DW Investigation	Date Collected:	28-Feb-18 10:59		Date Received:	03-Mar-18 10:15			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.434	4.90	9.79		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:04
PFOA	ND	1.06	4.90	9.79		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:04
PFOS	ND	1.02	4.90	9.79		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:04
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Dilution	
13C2-PFHxA	SURR	92.4	70 - 130		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:04	1
13C2-PFDA	SURR	83.5	70 - 130		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:04	1

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

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

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

new 3/6/18

Sample ID: CH-AT-1RW176-0218									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1800407-11	Column:	BEH C18	
Project:	MCOLF ATLANTIC PFAS DW Investigation	Date Collected:	01-Mar-18 11:41		Date Received:	03-Mar-18 10:15			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.440	4.96	9.93		B8C0031	05-Mar-18	0.252 L	09-Mar-18 01:17
PFOA	ND	1.07	4.96	9.93		B8C0031	05-Mar-18	0.252 L	09-Mar-18 01:17
PFOS	ND	1.03	4.96	9.93		B8C0031	05-Mar-18	0.252 L	09-Mar-18 01:17
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Dilution	
13C2-PFHxA	SURR	84.3	70 - 130		B8C0031	05-Mar-18	0.252 L	09-Mar-18 01:17	
13C2-PFDA	SURR	69.9	70 - 130		B8C0031	05-Mar-18	0.252 L	09-Mar-18 01:17	

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.

aw 3/16/18

Sample ID: CH-AT-1FB176-0218						EPA Method 537					
Client Data			Laboratory Data								
Name:	CH2M Hill		Matrix:	Drinking Water		Lab Sample:	1800407-12		Column:	BEH C18	
Project:	MCOLF ATLANTIC PFAS DW Investigation		Date Collected:	01-Mar-18 11:42		Date Received:	03-Mar-18 10:15				
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
PFBS	ND	0.449	5.06	10.1		B8C0031	05-Mar-18	0.247 L	09-Mar-18 01:29	1	
PFOA	ND	1.10	5.06	10.1		B8C0031	05-Mar-18	0.247 L	09-Mar-18 01:29	1	
PFOS	ND	1.05	5.06	10.1		B8C0031	05-Mar-18	0.247 L	09-Mar-18 01:29	1	
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C2-PFHxA	SURR	87.9	70 - 130		B8C0031	05-Mar-18	0.247 L	09-Mar-18 01:29	1		
13C2-PFDA	SURR	73.5	70 - 130		B8C0031	05-Mar-18	0.247 L	09-Mar-18 01:29	1		

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

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

LOD - Limit of Detection
LOQ - Limit of quantitation

DL - Detection Limit

rw 3/16/18

Sample ID: CH-AT-1RW177-0218									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1800407-13	Column:	BEH C18	
Project:	MCOLF ATLANTIC PFAS DW Investigation	Date Collected:	01-Mar-18 12:08		Date Received:	03-Mar-18 10:15			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.435	4.90	9.82		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:42
PFOA	ND	1.06	4.90	9.82		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:42
PFOS	ND	1.02	4.90	9.82		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:42
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Dilution	
13C2-PFHxA	SURR	87.1	70 - 130		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:42	1
13C2-PFDA	SURR	75.6	70 - 130		B8C0031	05-Mar-18	0.255 L	09-Mar-18 01:42	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.									

new 31/6/18

Sample ID: CH-AT-1FB177-0218									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1800407-14	Column:	BEH C18	
Project:	MCOLF ATLANTIC PFAS DW Investigation	Date Collected:	01-Mar-18 12:09		Date Received:	03-Mar-18 10:15			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.442	5.00	9.98		B8C0031	05-Mar-18	0.250 L	09-Mar-18 01:54
PFOA	ND	1.08	5.00	9.98		B8C0031	05-Mar-18	0.250 L	09-Mar-18 01:54
PFOS	ND	1.04	5.00	9.98		B8C0031	05-Mar-18	0.250 L	09-Mar-18 01:54
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Dilution	
13C2-PFHxA	SURR	86.6	70 - 130		B8C0031	05-Mar-18	0.250 L	09-Mar-18 01:54	1
13C2-PFDA	SURR	77.1	70 - 130		B8C0031	05-Mar-18	0.250 L	09-Mar-18 01:54	1
DL - Detection Limit LOD - Limit of Detection LOQ - Limit of quantitation LCL-UCI - 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									

mw 316/18

Sample ID: CH-AT-1RW178-0218									
Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	1800407-15	Column:	BEH C18	
Project:	MCOLF ATLANTIC PFAS DW Investigation	Date Collected:	01-Mar-18 12:39		Date Received:	03-Mar-18 10:15			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Dilution
PFBS	ND	0.443	5.00	10.0		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:06
PFOA	ND	1.08	5.00	10.0		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:06
PFOS	ND	1.04	5.00	10.0		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:06
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Dilution	
13C2-PFHxA	SURR	86.2	70 - 130		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:06	1
13C2-PFDA	SURR	80.0	70 - 130		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:06	1

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

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

LOD - Limit of Detection
LOQ - Limit of quantitation

DL - Detection Limit

rw 31 16 118

Sample ID: CH-AT-1FB178-0218					EPA Method 537					
Client Data			Laboratory Data							
Name:	CH2M Hill		Matrix:	Drinking Water		Lab Sample:	1800407-16		Column:	BEH C18
Project:	MCOLF ATLANTIC PFAS DW Investigation		Date Collected:	01-Mar-18 12:40		Date Received:	03-Mar-18 10:15			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:19	1
PFOA	ND	1.08	5.00	10.0		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:19	1
PFOS	ND	1.04	5.00	10.0		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:19	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	93.3	70 - 130		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:19	1	
13C2-PFDA	SURR	73.1	70 - 130		B8C0031	05-Mar-18	0.250 L	09-Mar-18 02:19	1	

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

mw 3116/18

Sample ID: CH-AT-1RW179-0218										EPA Method 537			
Client Data				Laboratory Data									
Name: CH2M Hill		Matrix: Drinking Water		Lab Sample: 1800407-17		Column: BEH C18							
Project: MCOLF ATLANTIC PEAS DW Investigation		Date Collected: 01-Mar-18 13:10		Date Received: 03-Mar-18 10:15									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
PFBS	ND	0.439	4.96	9.92		B8C0031	05-Mar-18	0.252 L	09-Mar-18 02:31	1			
PFOA	1.13	1.07	4.96	9.92	J	B8C0031	05-Mar-18	0.252 L	09-Mar-18 02:31	1			
PFOS	ND	1.03	4.96	9.92		B8C0031	05-Mar-18	0.252 L	09-Mar-18 02:31	1			
Labeled Standards	% Recovery	Limits											
13C2-PFHxA	92.1	70 - 130											
13C2-PFDA	87.2	70 - 130											

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

new 3/16/18

Sample ID: CH-AT-1FB179-0218						EPA Method 537				
Client Data			Laboratory Data							
Name:	CH2M Hill		Matrix:	Drinking Water		Lab Sample:	1800407-18		Column:	BEH C18
Project:	MCOLF ATLANTIC PFAS DW Investigation		Date Collected:	01-Mar-18 13:11		Date Received:	03-Mar-18 10:15			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.447	5.04	10.1		B8C0031	05-Mar-18	0.248 L	09-Mar-18 02:43	1
PFOA	ND	1.09	5.04	10.1		B8C0031	05-Mar-18	0.248 L	09-Mar-18 02:43	1
PFOS	ND	1.05	5.04	10.1		B8C0031	05-Mar-18	0.248 L	09-Mar-18 02:43	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	88.6	70 - 130		B8C0031	05-Mar-18	0.248 L	09-Mar-18 02:43	1	
13C2-PFDA	SURR	83.9	70 - 130		B8C0031	05-Mar-18	0.248 L	09-Mar-18 02:43	1	

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

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

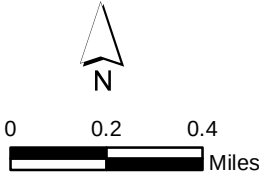
LOD - Limit of Detection
LOQ - Limit of quantitation

DL - Detection Limit

MW 31661.8



- Legend**
- Proposed Sample Location
 - Public Water Supply Well
 - Direction of Groundwater Flow
 - MCOLF Atlantic - 1-mile zone
 - Base Boundary
 - Site Boundary (suspected source)
 - Parcels



1 inch = 0.4 mile
Imagery: Esri, 2016

Figure 3
Proposed Sampling Locations
Marine Corps Outlying Landing Field Atlantic
Atlantic Beach, North Carolina